National Aeronautics and
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November 26, 2024

Reply to Attn of: RE-24-174

Mr. JohnDavid Nance, Bureau Chief
New Mexico Environment Department
Hazardous Waste Bureau
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Subject: NASA White Sands Test Facility (WSTF) 400 Area Supplemental Groundwater and Soil Vapor Monitoring Report – Second Quarter 2024

Enclosed is the *NASA White Sands Test Facility (WSTF) 400 Area Supplemental Groundwater and Soil Vapor Monitoring Report – Second Quarter 2024*. This report is submitted in accordance with NMED's May 2, 2023 approval with modifications of the *400 Area Supplemental Groundwater and Soil Vapor Monitoring Plan*, and the July 31, 2024 approval for rescheduling the submittal date for the second of four quarterly reports to November 30, 2024.

This submittal includes an Executive Summary as Enclosure 1, a printed, bound report (up to Appendix A) as Enclosure 2, and a PDF of the report on a CD-ROM as Enclosure 3.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If you have any questions or comments concerning this submittal, please contact Antonette Doherty of my staff at 575-202-5406.

Sincerely,

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Executive Summary

This 400 Area Supplemental Groundwater and Soil Vapor Monitoring Report – Second Quarter 2024 (Report) summarizes the second quarterly field groundwater and soil vapor sampling activities performed per the New Mexico Environment Department (NMED)-approved 400 Area Supplemental Groundwater and Soil Vapor Monitoring Plan (NASA, 2024b). The data collected from a total of four quarterly sampling events will be used in conjunction with a single dataset collected as a component of the 400 Area Closure Investigation Report (NASA, 2017) to perform trend analyses and to reevaluate and update the human health risk and hazard assessment at the 400 Area closure. The data will also be used to evaluate the need for additional investigation and future development of a Corrective Measures Evaluation encompassing the 400 Area and 300 Area closures.

The second quarter field sampling event was performed between May 28 and 30, 2024. Groundwater zones were accessible at five of the multiport soil vapor and groundwater monitoring (MSVGM) wells (400-EV-131, 400-FV-131, 400-GV-125, 400-HV-147, and 400-JV-150). Well 400-IV-123 was not sampled for the second quarter 2024 event due to the groundwater level falling below the pump intake. The pump intake was subsequently extended below the groundwater level to enable the collection of a groundwater sample during the next sampling event (third quarter 2024). For the 54 available soil vapor ports within the 15 MSVGM and multiport soil vapor monitoring (MSVM) wells, four of the soil vapor ports were reported to be blocked and/or inaccessible. These included the soil vapor ports at 400-FV-131 (104 and 130 feet [ft] below ground surface [bgs]), 400-JV-150 (145 ft bgs), and 400-KV-142 (137 ft bgs).

Twenty-seven analytes were identified above detection limits in groundwater collected from the five MSVGM wells. These comprised of volatile organic compound(s) (VOCs) - six analytes including trichloroethene [TCE]), semi-volatile organic compound(s) (SVOCs) - three analytes; N-Nitrodimethylamine [DMN], N-Nitrosodimethylamine [NDMA], and Bromacil), and metals - 18 analytes. Only NDMA was detected above White Sands Test Facility Groundwater Monitoring Plan cleanup levels (NASA 2023b) within all five of the sampled wells (400-EV-131, 400-FV-131, 400-GV-125, 400-HV-147, and 400-JV-150).

Five soil vapor analytes were identified from the 50 available soil vapor ports above NMED residential vapor intrusion screening levels (VISLs) as identified in the latest Risk Assessment Guidance (NMED, 2022). The following analytes were detected in the listed monitoring well sampling ports:

- 1,2,4-Trimethylbenzene (one location): 400-SV-03-10
- 1,3,5-Trimethylbenzene (one location): 400-SV-03-10
- 1,4-Dioxane (one location): 400-SV-03-50
- Freon 11 (four locations): 400-SV-10-125; 400-GV-125-105; 400-HV-147-130; and 400-IV-123-80
- TCE (two locations): 400-GV-125-120; and 400-IV-123-80

Soil vapor quality control samples indicated that most of the detected analytes were also identified in field blank and/or trip blank samples. Analytical reports from the off-site soil vapor

laboratory using Environmental Protection Agency Method TO-15 also showed that dilutions were necessary for soil vapor samples with elevated concentrations of trichlorofluoromethane and 1,1,2-trichloro-1,2,2-trifluoroethane. This was specific to the soil vapor samples that exceeded the upper calibration limits for the laboratory equipment. This resulted in the method detection limits for other constituents increasing to above the corresponding NMED vapor intrusion screening level.

In addition to the first and second quarterly groundwater and soil vapor sampling field events performed in February and May 2024, a third quarterly sampling event was performed in August 2024 (third quarter) and a fourth quarterly sampling event is scheduled for December 2024 (fourth quarter). Contaminant vertical profiles and a comprehensive statistical evaluation including a trend analysis will be included in the fourth quarterly report when a total of five sets of analytical results are available (the 2017 closure investigation report [NASA, 2017] combined with the four quarterly 2024 reports).

National Aeronautics and Space Administration

400 Area Supplemental Groundwater and Soil Vapor Monitoring Report

Second Quarter 2024

November 2024

NM8800019434

NASA Johnson Space Center White Sands Test Facility

400 Area Supplemental Groundwater and Soil Vapor Monitoring Report

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ANTONETTE Doherty

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Executive Summary

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In addition to the first and second quarterly groundwater and soil vapor sampling field events performed in February and May 2024, a third quarterly sampling event was performed in August 2024 (third quarter) and a fourth quarterly sampling event is scheduled for December 2024 (fourth quarter). Contaminant vertical profiles and a comprehensive statistical evaluation including a trend analysis will be included in the fourth quarterly report when a total of five sets of analytical results are available (the 2017 closure investigation report [NASA, 2017] combined with the four quarterly 2024 reports).

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List of Acronyms

µg/L	Micrograms per litre
µg/m^3	Microgram per cubic meter
bgs	Below ground surface
CoC	Chain of Custody
COPC	Contaminant of Potential Concern
DMN	N-Nitrodimethylamine
EPA	Environmental Protection Agency
Freon 11	Trichlorofluoromethane
Freon 113	1,1,2-Trichloro-1,2,2-Trifluoroethane
Freon 123a	1,2-Dichloro-1,1,2-Trifluoroethane
Freon 21	Dichlorofluoromethane
ft	Feet/foot
GMP	Groundwater Monitoring Plan
GWSVMP	Groundwater and Soil Vapor Monitoring Plan
GWSVMR	Groundwater and Soil Vapor Monitoring Report
HIS	Historical Information Summary
IR	Investigation Report
IWP	Investigation Work Plan
MDL	Method Detection Limit
mi	Miles
MSVGM	Multiport Soil Vapor and Groundwater Monitoring Well
MSVM	Multiport Soil Vapor Monitoring Well
NASA	National Aeronautics and Space Administration
ND	Non-detect
NDMA	N-Nitrosodimethylamine
NMED	New Mexico Environment Department
PCE	Tetrachloroethene
PSI	Pounds per Square Inch
PVC	Polyvinyl Chloride
QA/QC	Quality Assurance/Quality Control
QAR	Quality Assurance Report
RBC	Risk-Based Concentration
SVOC	Semi-volatile Organic Compound(s)
TCE	Trichloroethene
VISL	Vapor Intrusion Screening Level
VOC	Volatile Organic Compound(s)
WSTF	White Sands Test Facility

1.0 Introduction

National Aeronautics and Space Administration (NASA) performed a field investigation of the White Sands Test Facility (WSTF) 400 Area Closure between September 2016 and September 2017. The purpose of the investigation was to determine the nature, extent, and potential migration pathways of contaminant releases at the 400 Area Closure (formerly the 400 Area hazardous waste impoundments). Investigation activities included the installation of soil borings that were subsequently converted to multiport soil vapor and groundwater monitoring (MSVGM) wells and multiport soil vapor monitoring (MSVM) wells, and the collection and analysis of soil, soil vapor, and groundwater samples. An initial comprehensive groundwater and soil vapor sampling event at the newly installed wells was performed as part of the 400 Area closure investigation fieldwork in July and August 2017. NASA submitted the *400 Area Closure Investigation Report* (IR) to the New Mexico Environment Department (NMED) on December 27, 2017 (NASA, 2017). Following comments and revisions, NMED provided the *Approval with Modifications 400 Area Closure Investigation Report – Revision 3* on May 2, 2023 (NMED, 2023b). One of the required components of the approved IR was to provide a minimum four quarterly groundwater and soil vapor monitoring reports (GWSVMR) documenting 400 Area supplemental groundwater and soil vapor monitoring. The *Supplemental Groundwater and Soil Vapor Monitoring Report – First Quarter 2024* was provided to NMED on August 30, 2024 (NASA, 2024b). This *400 Area Supplemental Groundwater and Soil Vapor Monitoring Report – Second Quarter 2024* (Report) is the second of four planned quarterly reports intended to satisfy this requirement.

1.1 Site Location and Description

WSTF, located in Doña Ana County, New Mexico, lies 18 miles (mi) northeast of Las Cruces, New Mexico, and 65 mi north of El Paso, Texas. Access to the site is provided via NASA Road, a paved road with a guarded security gate. NASA Road intersects U.S. Highway 70, 1 mi west of Organ, New Mexico. Figure 1.1 provides a WSTF location map. The location of the WSTF 400 Area and 400 Area closure are provided in Figure 1.2.

1.2 Objective and Scope

This second quarter 2024 report identifies the MSVGM and MSVM monitoring wells utilized for the supplemental monitoring, presents sampling methods performed at the monitoring wells, analytical requirements, and provides the groundwater and soil vapor analytical results collected for the monitoring event performed between May 28 and 30, 2024. The data presented and summarized within the report is intended to supplement data from the initial groundwater and soil vapor event collected during the 400 Area closure investigation (NASA, 2017), and the first quarterly monitoring event (NASA, 2024b). The quarterly groundwater analysis provided includes volatile organic compounds (VOC), semi-volatile organic compounds (SVOC, including nitrosamines), inorganic compounds, and metals. The quarterly soil vapor analysis provided comprises only VOC. These data will be used to support evaluation of the vapor intrusion pathway in the 400 Area as required by NMED (NMED, 2018; Comments 17 and 18) and update the human health risk and hazard assessment at the 400 Area closure. The data collectively comprising the initial sampling event from 2017 and the four quarterly events will also be used to support evaluation for potential additional investigation at the 400 Area closure and future development of a corrective measures evaluation for the 400 and 300 Area closures contaminants of potential concern (COPCs). The fourth quarterly monitoring report will be used to evaluate and present all the 400 Area closure groundwater and soil vapor data collected to date.

Groundwater COPCs for the 400 Area closure includes un-combusted hydrazine; monomethyl hydrazine; unsymmetrical dimethylhydrazine; Aerozine 50 and nitrogen tetroxide from static hot firing rocket engine

tests. In addition, trichlorofluoromethane (Freon®[1] 11), dichlorofluoromethane (Freon 21), 1,1,2-trichloro-1,2,2-trifluoroethane (Freon 113), and isopropyl alcohol were used as referee propellants during early cold flow firings.

Table 1.1 provides the list of COPCs for the 400 Area including chemicals and wastes known to have been released and contaminants that were detected during previous soil, soil vapor, and groundwater investigations (NASA, 2017). The list of COPCs is comprehensive and the only screening applied was to exclude inorganic analytes considered to be non-toxic, not associated with potential contaminants, and essential nutrients (e.g., magnesium, potassium, iron, sodium, and fluoride; NASA, 2017).

2.0 Field Monitoring

2.1 Monitoring Well Network

For the second quarter 2024 report, NASA utilized all accessible ports and well screens in the 15 monitoring wells to collect the groundwater and soil vapor samples required to meet the objectives of the groundwater and soil vapor monitoring plan (GWSVMP; NASA, 2023a). The location of each of the wells in conjunction with other monitoring wells in the immediate vicinity of the 400 Area closure is provided in Figure 2.1, and a summary of the design characteristics of the 15 monitoring wells and current status of the sampling screens and ports is provided in Table 2.1.

2.2 Second Quarter 2024 Field Sampling Event

The second quarter field sampling event was performed at the 400 Area closure between May 28 and 30, 2024. Groundwater zones were accessible for five of the six MSVGM wells. Well 400-IV-123 was not sampled for the second quarter 2024 due to a decline in the water level below the pump intake. A copy of the WSTF external chain of custody (CoC) form for groundwater samples collected during the sampling event is provided in Appendix A.

Of the 54 soil vapor ports within the well network scheduled for sampling, four were reported to be blocked or inaccessible. These included soil vapor ports at well 400-FV-131 (104 and 130 feet [ft] below ground surface [bgs]), well 400-JV-150 (145 ft bgs), and well 400-KV-142 (137 ft bgs). A copy of the WSTF external CoC form for soil vapor samples collected during the sampling event is provided in Appendix A.

2.2.1 Groundwater Field and Sampling Activities

Groundwater samples from 400 Area MSVGM wells were all collected on May 28, 2024 using established site-specific procedures for low-flow sampling and for traditional purge and sample methods. Sampling was performed in accordance with the approved *Groundwater Monitoring Plan Update for 2023* (NMED, 2023d; NASA, 2023b) at wells 400-EV-131, 400-FV-131, 400-GV-125, 400-HV-147, and 400-JV-150 (Table 2.1, Figure 2.1). The pump intake at well 400-IV-123 was subsequently extended below the groundwater level to enable the collection of groundwater samples for the next sampling event (third quarter 2024).

Groundwater field and sampling activities were recorded in the appropriate field logbook (Appendix A). Prior to the collection of the groundwater samples, each well was purged of three well volumes and/or until dry using a dedicated low-flow bladder pump. Each pump is composed of polyvinyl chloride (PVC)

[1] Freon is a registered trademark of The Chemours Company CF, LLC.

with Teflon bladders and has a Teflon-lined ¼-inch outer diameter air supply and groundwater sample tube. The water level was allowed to recover in each MSVGM well before groundwater samples were collected. The groundwater samples were then dispensed into laboratory-provided sample containers, which were uniquely labeled and placed in cold storage. Groundwater samples were preserved in accordance with NASA's contracted off-site analytical laboratories requirements and shipped for analysis.

Groundwater samples collected from the five MSVGM wells were analyzed for the COPCs listed in the original NMED-approved 400 Area closure investigation workplan (IWP) (NASA, 2011a). Appendix B provides the chemical program quality assurance report (QAR) for groundwater sampling.

Groundwater samples were collected for analysis of:

- VOCs by SW-846 Method 8260C.
- SVOCs by SW-846 Method 8270D.
- Nitrosamines by EPA Method 607.
- Several metals by various SW-846 methods in accordance with the NMED-approved Groundwater Monitoring Plan (GMP; NMED 2023c; NASA, 2023b).

2.2.2 Soil Vapor Field and Sampling Activities

Soil vapor samples from 400 Area MSVM and MSVGM wells were collected between May 28 and May 30, 2024. A total of 50 soil vapor ports in the 15 MSVM and MSVGM wells were utilized for the monitoring event. Of the four blocked ports, two of the ports at 400-FV-131-130 (130 ft bgs) and 400-JV-150-145 (145 ft bgs) were located beneath the potentiometric surface at their respective locations and the inability to sample the soil vapor implants is attributed to the groundwater table rising above the implant depths. For both MSVGM well locations, the aquifer is semi-confined, and this layer was breached during drilling. Underlying pressurized groundwater continued to rise gradually until equilibrium was reached, which resulted in submergence of the deepest soil vapor implant at both MSVGM well locations.

Soil vapor sampling at each MSVM or MSVGM well was performed in accordance with established WSTF procedures. Each vapor port at surface is affixed with an aluminum tag engraved with the identification of that port to ensure port identification. The soil vapor sampling sequence began with the shallowest port and continued sequentially until the deepest port had been sampled. The sampling ports and stainless-steel tubing were purged of entrained soil vapor with a non-dedicated surface vacuum pump to evacuate stagnant air below the sample collection fitting. Each port was purged for a minimum of five minutes per zone to evacuate at least three volumes of the ¼ inch tubing and soil vapor implant. Carbon dioxide, oxygen, and methane indicator parameters were monitored during purging to ensure stabilization prior to sampling and recorded in the field logbook (Appendix A).

Soil vapor samples were collected in one-liter stainless steel Summa canisters. The initial pressure for all canisters verified by the analytical laboratory is -14.3 pounds per square inch (psi). The final canister pressure was noted in the field logbook and CoC form (Appendix A). Soil vapor samples were shipped to the laboratory for analysis for VOC using Environmental Protection Agency (EPA) Method TO-15. Soil vapor chemical samples were collected to evaluate as many COPCs as possible from the list originally provided in the NMED-approved 400 Area Closure IWP (NASA, 2011a). Appendix B provides the chemical program QAR for soil vapor sampling.

3.0 Quality Assurance/Quality Control

A total of 12 quality control (QC) samples were collected for groundwater as follows:

- Duplicate samples (6): 400-FV-131 (2405280853A for Method 8260, 2405280856A for Method 607, and 2405280858A for Metals), and 400-GV-125 (2405280841C for Method 8260, 2405280844C for Method 607, and 2405280846C for Metals).

- Field blanks (5): 400-EV-131 (2405281003A for Method 8260), 400-FV-131 (2405280854A for Method 8260), 400-GV-125 (2405280842C for Method 8260), 400-HV-147 (2405281431C for Method 8260), and 400-JV-150 (2405281011C for Method 8260).

- Trip blanks (1): 400-FV-131 (2405280700A for Method 8260).

The chemical program QAR for groundwater sampling is provided in Appendix B.

A total of 17 QC samples were collected for soil vapor as follows:

- Duplicate samples (6) all for Method TO-15: 400-EV-131-130 (2405281032), 400-GV-125-10 (2405280830), 400-IV-123-118 (2405290919), 400-KV-142-12.5 (2405290945), 400-SV-05-50 (2405291025), and 400-SV-10-50 (2405300842).
- Field blanks (8) all for Method TO-15: 400-EV-113-47.5 (2405281011), 400-GV-125-105 (2405280846), 400-HV-147-130 (2405281344), 400-IV-123-45 (2405290859), 400-JV-150-50 (2405280928), 400-KV-142-100 (2405291001), 400-SV-07-100 (2405300928), and 400-SV-15-10 (2405290816).
- Trip blanks (3) all for Method TO-15: 400-JV-150-12.5 (2405280915), 400-HV-147-45 (2405281245), and 400-LV-125-10 (2405291045).

The chemical program QAR for soil vapor sampling is provided in Appendix B.

4.0 Groundwater and Soil Vapor Analytical Results

The results section includes any issues encountered, quality parameter measurements, analytical results, a comparison of analytical results to screening and/or cleanup levels. In addition to the first and second quarterly groundwater and soil vapor sampling field events performed in February and May 2024, a third quarterly sampling event was performed in August 2024 (third quarter) and a fourth quarterly sampling event is scheduled for December 2024 (fourth quarter). Contaminant vertical profiles and a comprehensive statistical evaluation including a trend analysis will be included in the fourth quarterly report when five sets of analytical results are available for evaluation (the 2017 closure investigation report combined with the four quarterly 2024 reports).

4.1 Groundwater Results

4.1.1 Issues Encountered

Well 400-IV-123 was not sampled for the second quarter 2024 due to the groundwater level in the well falling below the pump intake. No issues were encountered during groundwater sampling for the other five available MSVGM wells.

4.1.2 Groundwater Quality Parameter and Depth Measurements

As part of groundwater sample collection for laboratory chemical analyses, four water quality field parameters (temperature; specific conductivity; pH; and turbidity) were measured in each MSVGM well during the purging process and prior to sampling. This was to ensure sufficient purging had been

performed and demonstrate that all groundwater within the well and gravel pack surrounding the screened zone had been removed. Table 4.1 provides the initial groundwater quality parameter measurements for MSVGM wells. The groundwater quality parameters and other sampling records including field/internal CoC forms are provided in Appendix A. The groundwater potentiometric surface based upon second quarter groundwater elevations is provided in Figure 4.1, with groundwater flow from east-northeast to west-southwest at a gradient of approximately 0.05 ft/ft.

4.1.3 Groundwater Chemical Analytical Results

The electronic analytical results for groundwater (Excel spreadsheet) are provided in Attachment 1 to this report. The laboratory analytical reports for groundwater samples are provided in Appendix C. A summary of the groundwater analytical results above laboratory detection limits is provided in Table 4.2. Twenty-seven analytes were identified above detection limits in groundwater samples collected from the MSVGM wells:

- VOCs (6 constituents): Freon 113; 1,2-dichloro-1,1,2-trifluoroethane (Freon 123a); chloroform; Freon 21; trichloroethene (TCE); and Freon 11.
- SVOC Nitrosamines (2 constituents): N-Nitrodimethylamine (DMN; and N-Nitrosodimethylamine (NDMA).
- SVOC Bromacil (1 constituent).
- Metals (18 constituents): antimony; arsenic; barium; boron; calcium; chromium; cobalt; magnesium; manganese; molybdenum; nickel; potassium; selenium; sodium; strontium; thallium; vanadium; and zinc.

A summary of 400 Area groundwater analytical results above WSTF GMP cleanup levels is provided in Table 4.3. The only analyte with detections above its cleanup level was NDMA within the five wells: 400-EV-131; 400-FV-131; 400-GV-125; 400-HV-147; and 400-JV-150 (Figure 4.2).

4.1.4 Groundwater Statistical Trends

For this quarterly report, no statistical evaluations were performed due to an insufficient sample size (<6) to make reliable decisions that affect human health and the environment (EPA, 2022). Therefore, no statistical trends will be performed for 400 Area groundwater during this study until after all four quarterly sampling events have been completed. With the original 400 Area 2017 sampling event presented in the IR and the four proposed quarterly sampling events, the sample size will be five. Statistical trends will be completed following the final (fourth) quarterly sampling event.

4.2 Soil Vapor Results

4.2.1 Issues Encountered

Second quarter soil vapor samples were attempted at 54 available soil vapor ports in the 15 MSVGM and MSVM monitoring wells. Soil vapor samples were collected on the same day as groundwater samples from MSVGM wells, and all MSVGM wells were sampled on the same day (May 28, 2024). All soil vapor samples were collected on schedule between May 28 and 30, 2024 as required by the GWSVMP (NASA, 2023a). Four blocked soil vapor ports were identified at 400-FV-131-104, 400-FV-131-130, 400-JV-150-145, and 400-KV-142-137 and were not sampled for the second quarter event.

4.2.2 Soil Vapor Quality Parameter Measurements

Soil vapor quality parameters are obtained from each sampling port through field measurements. Quality parameters and other specific sampling-related details associated with each monitoring well sampling event are recorded by technicians in the field sampling record. Table 4.4 provides a summary of the soil vapor quality parameter measurements prior to sampling for MSVGM and MSVM wells. Field notes detailing the soil vapor quality parameters and other sampling records including field/internal CoC forms are provided in Appendix A.

4.2.3 Soil Vapor Chemical Analytical Results

The electronic analytical results for soil vapor (Excel spreadsheet) are provided in Attachment 1 to this report. The laboratory analytical reports for soil vapor samples are provided in Appendix C. Soil vapor samples were analyzed for VOCs using EPA Method TO-15. Table 4.5 provides all analytes that were tested. Twenty-three of the analytes analyzed by Method TO-15 are COPCs defined for the 400 Area closure investigation (NASA, 2011a): 1,1,1-trichloroethane; 1,1-dichloroethane; 2-butanone; 2-hexanone; 2-propanol; acetone; bromodichloromethane; bromoform; chlorobenzene; chloroform; chloromethane; dibromochloromethane; Freon 11; Freon 113; Freon 123; Freon 21; m,p-xylene; methyl tert-butyl ether; methylene chloride; tetrachloroethene (PCE); toluene; trans-1,2-dichloroethene; and TCE.

White Sands Test Facility Resource Conservation and Recovery Act Permit, Part 4, Investigation and Sampling Methods and Procedures, Section 4.5, Chemical Analyses, states, " The detection and reporting limits for each method shall be less than applicable background, screening, and regulatory cleanup levels. The preferred method reporting (practical quantitation) limits are a maximum of 20 percent of the cleanup, screening, or background levels. Analyses conducted with detection limits that are greater than applicable background, screening, or regulatory cleanup levels shall be considered data quality exceptions, and the reasons for the elevated detection limits shall be reported to the NMED" (NMED, 2023a). An evaluation of all soil vapor analytical datasets collected during 400 Area monitoring with respect to the impact of sample dilution will be provided in the fourth quarterly Report.

The soil vapor analyte detections and concentration ranges are summarized in Table 4.5. Primary observations from the tabulated data are provided below:

- A total of 65 analytes were tested using EPA Method TO-15.
- 52 analytes were detected above laboratory detection levels for either soil vapor within monitoring well sampling zones or within field blank and trip blank samples.
- 13 analytes were reported as non-detect (ND) within both monitoring well sampling zones and field blank/trip blank samples.
- 25 analytes were detected only in monitoring well sampling zones.
- 27 analytes were detected in both monitoring well sampling zones and field blank/trip blank samples.
- No analytes were detected only in field blank/trip blank samples.
- 26 analytes' detection limits were higher than the regulatory screening level (RSL) due to dilution (bolded on Table 4.5).

Analytical reports from the off-site soil vapor laboratory (ALS Laboratory) indicate that dilutions were necessary for soil vapor samples with elevated concentrations of Freon 11 and Freon 113, which exceeded the upper calibration limits for the laboratory analytical equipment. Dilution is the total number of unit volumes in which the soil vapor was dissolved, calculated by dividing unit volume by the volume of soil vapor analyzed (liters) and multiplying by the container dilution factor. Soil vapor dilutions varied from 3.58 (400-KV-142-12.5) for the lowest concentration sample up to 8,050 for the highest concentration

sample (400-IV-123-80). For the samples with large dilutions and high concentrations reported for Freon 11 and Freon 113, elevated method detection limits (MDL) for other COPCs in the same samples potentially increase to above the corresponding NMED vapor intrusion screening level (VISL).

Based on consultations with the contracted analytical laboratory regarding EPA Method TO-15 sample dilution, NASA understands that there is no practical way to mitigate sample dilution that would remedy the effect on MDL for other COPCs. Each Method TO-15 soil vapor sample is analyzed collectively for the suite of target COPC. If the concentration of a single compound or multiple compounds in any sample exceeds the preliminary calibration range, the sample must be diluted for reanalysis at an optimum volume. The standard laboratory practice is to run at the greatest volume possible based on the matrix sample. There is no option other than multiple injections to analyze the largest volume possible for samples containing high concentrations of specific analytes (in this case Freon 11 and Freon 113). All steps performed in the dilution and analysis of field sample canisters are included in the MDL procedure. It is not possible to sample for specific soil vapor COPCs using Method TO-15 at lower concentrations before diluting the sample. NMED guidance (Comment 4b.; NASA, 2021) indicated that analyses conducted with detection limits that are greater than applicable background screening and regulatory cleanup levels should be considered data quality exceptions and the reasons reported. Furthermore, when detection limits exceed screening levels (VISLs and/or risk-based concentrations [RBCs]), the resulting data cannot be used for statistical analysis or risk assessment. NASA acknowledged this issue (response to Comment 4b.; NASA, 2021), and stated that constituents exhibiting detection limits greater than screening or regulatory cleanup levels will be identified and fully discussed in future reports.

The term “non-detect” is not appropriate for specific COPCs for diluted samples where MDL are above the respective screening levels. The reporting strategy used in Table 4.5 identifies the modified COPC MDL due to dilution and compares it to the corresponding screening level. Bold font indicates where the MDL exceeds the VISL (NMED, 2022)/RSL (EPA, 2024)/RBC (NASA, 2022). Of the 65 analytes detected and reported as non-detect within the EPA Method TO-15 suite, the MDL increased above the corresponding regulatory screening level (either NMED VISL, EPA RSL, or WSTF RBC) for 29 of the analytes identified in bold in Table 4.5.

A summary of 400 Area soil vapor analytical results above NMED residential VISLs is provided in Table 4.6 and Figure 4.3. A total of 11 analytical results for six analytes (1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, 1,4-Dioxane, benzene, Freon 11, and TCE) exceeded the NMED VISLs and are described below.

Detected in monitoring well sampling ports:

- 1,2,4-Trimethylbenzene (one location): 400-SV-03-10.
- 1,3,5-Trimethylbenzene (one location): 400-SV-03-10.
- 1,4-Dioxane (one location): 400-SV-03-50.
- Freon 11 (four locations): 400-SV-10-125; 400-GV-125-105; 400-HV-147-130; and 400-IV-123-80.
- TCE (two locations): 400-GV-125-120 and 400-IV-123-80.

Detected in QC samples (field blanks):

- Benzene (one location): 400-HV-147-130.
- TCE (one location): 400-HV-147-1300.

All analytical results that exceeded the NMED VISLs were below the equivalent depth sensitive WSTF RBC taken from the most recently approved version of the annual WSTF RBC report (NASA, 2022).

Following the disapproval of NASA's 2023 RBC update (NMED, 2023c), NASA responded with a proposal to work with a subcontractor to provide the 2024 RBC update using site-specific parameters to calculate more appropriate attenuation factors for use in RBC calculations (NASA, 2024a).

4.2.4 Soil Vapor Statistical Trends

For this quarterly report, no statistical evaluations were performed due to an insufficient sample size (<6) to make reliable decisions that affect human health and the environment. Therefore, no statistical trends will be performed for 400 Area soil vapor during this study until after all four quarterly sampling events have been completed. With the original 400 Area 2017 sampling event presented in the IR and the four proposed quarterly sampling events, the sample size will be five. Statistical trends will be completed following the final (fourth) quarterly sampling event.

5.0 Conclusions and Recommendations

In addition to the first and second quarterly groundwater and soil vapor sampling field events performed in February and May 2024, a third quarterly sampling event was performed in August 2024 (third quarter) and a fourth quarterly sampling event is scheduled for December 2024 (fourth quarter). NASA recommends providing contaminant vertical profiles and a comprehensive statistical evaluation including a trend analysis in the fourth quarterly Report when a total of five sets of analytical results are available (the 2017 closure investigation report combined with the four quarterly 2024 reports).

6.0 References

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Figures

Figure 1.1 **WSTF Location Map**

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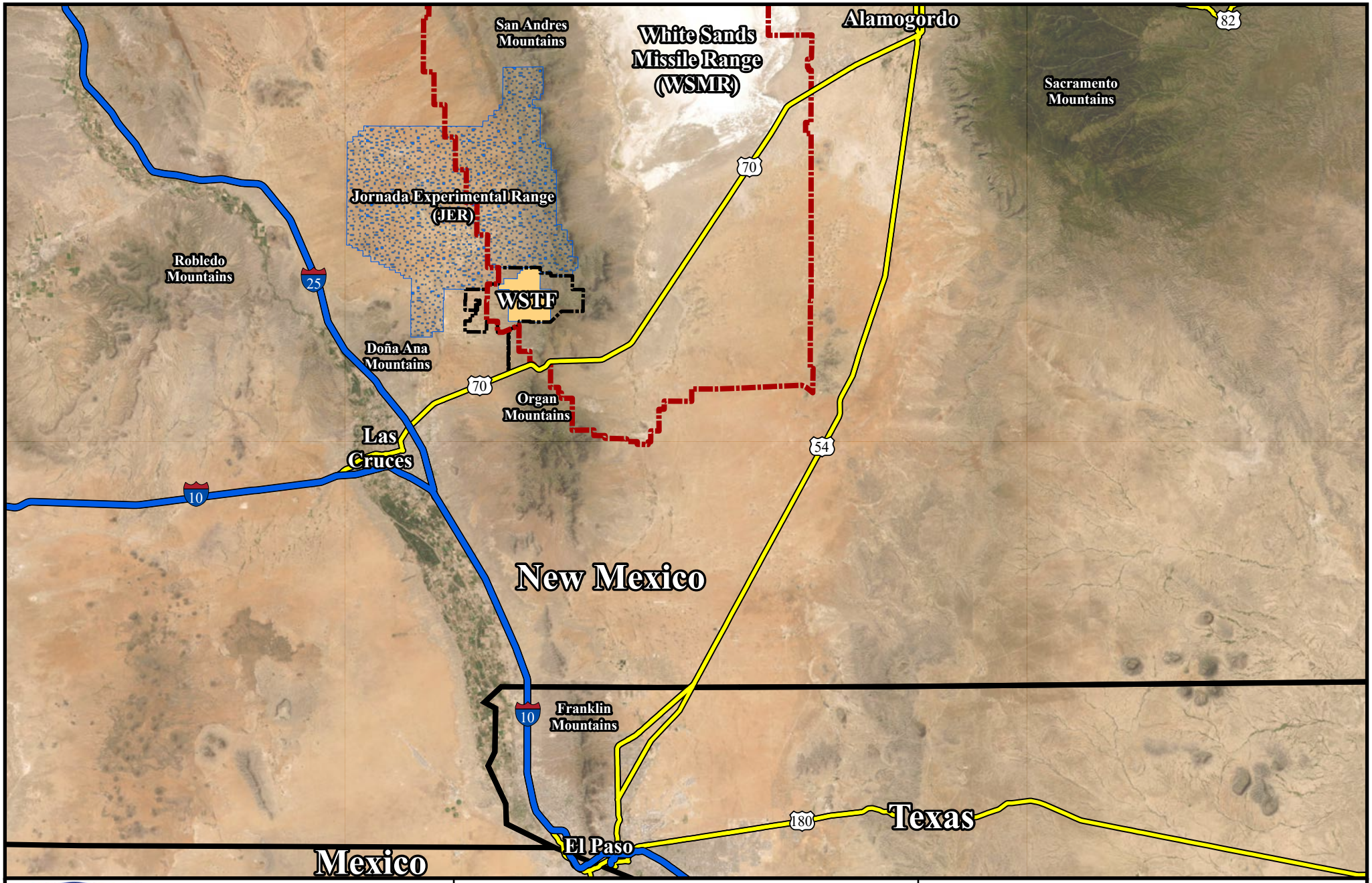

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November 2024
Edited by: srees

- WSMR Boundary
- WSTF Boundary
- Jornada Experimental Range (JER)
- WSTF Industrial Area

WSTF Location Map

NASA Johnson Space Center
White Sands Test Facility
Las Cruces, New Mexico

Coordinate System:
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Figure 1.2 White Sands Test Facility Industrial Area

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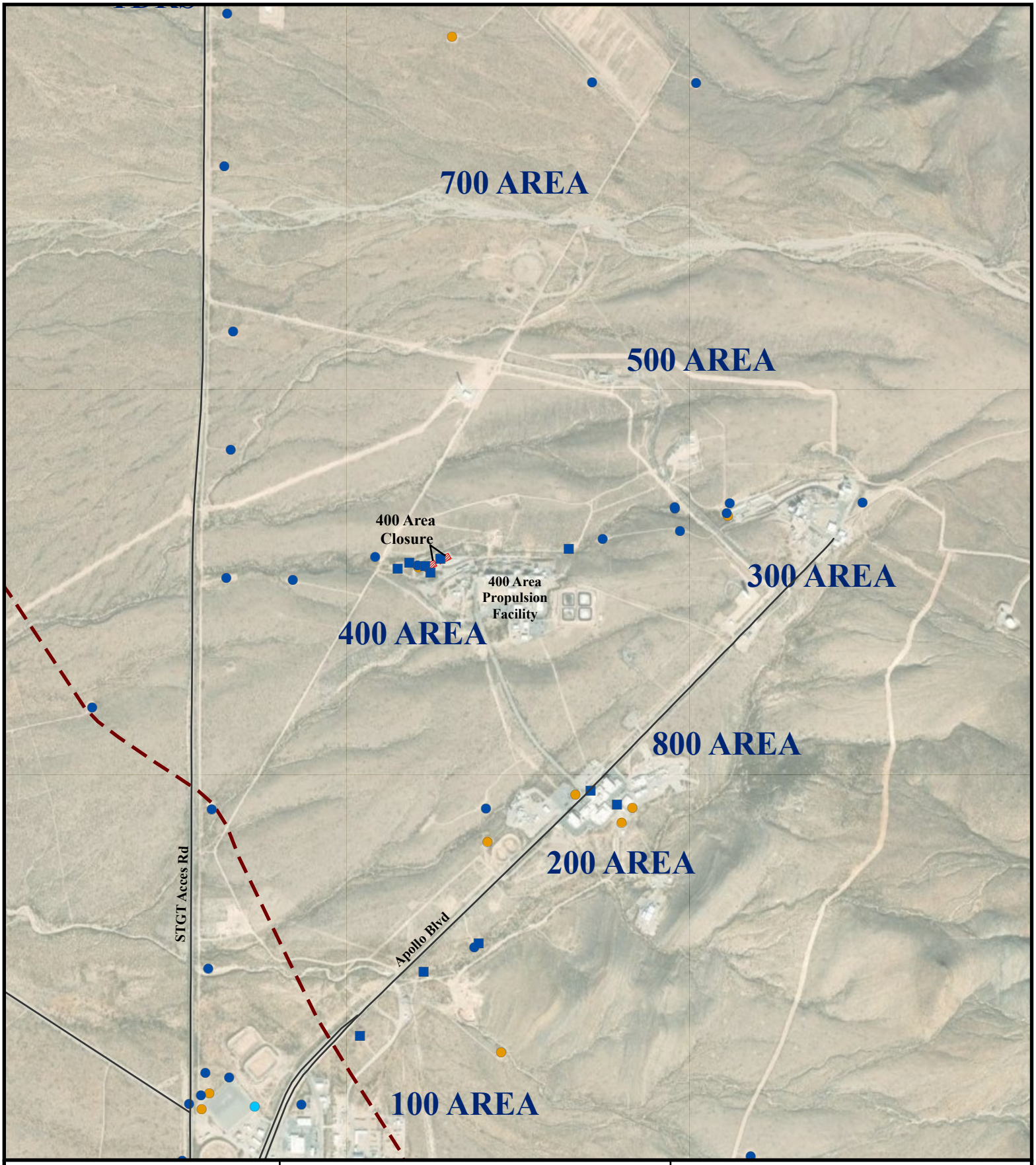

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Prepared by: srees

- Multiport Well
- Conventional Well
- Perched Well
- MSVGM Well
- Inferred Fault
- 400 Area Closure

White Sands Test Facility Industrial Area

NASA Johnson Space Center
White Sands Test Facility Las Cruces, New Mexico

Coordinate System:
NAD 1983 HARN StatePlane New Mexico Central FIPS 3002 Feet

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Figure 2.1 **400 Area Monitoring Well Locations**

(SEE NEXT PAGE)

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November 2024

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Prepared by:srees

- Conventional Well
- Multiport Well
- MSVM Well
- MSVGM Well
- Inferred Fault with Displacement
- 400 Area Closure

400 Area Monitoring Well Locations

NASA Johnson Space Center
White Sands Test Facility Las Cruces, New Mexico

Coordinate System:
NAD 1983 StatePlane New Mexico Central FIPS 3002

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Figure 4.1 **400 Area Potentiometric Surface Map**

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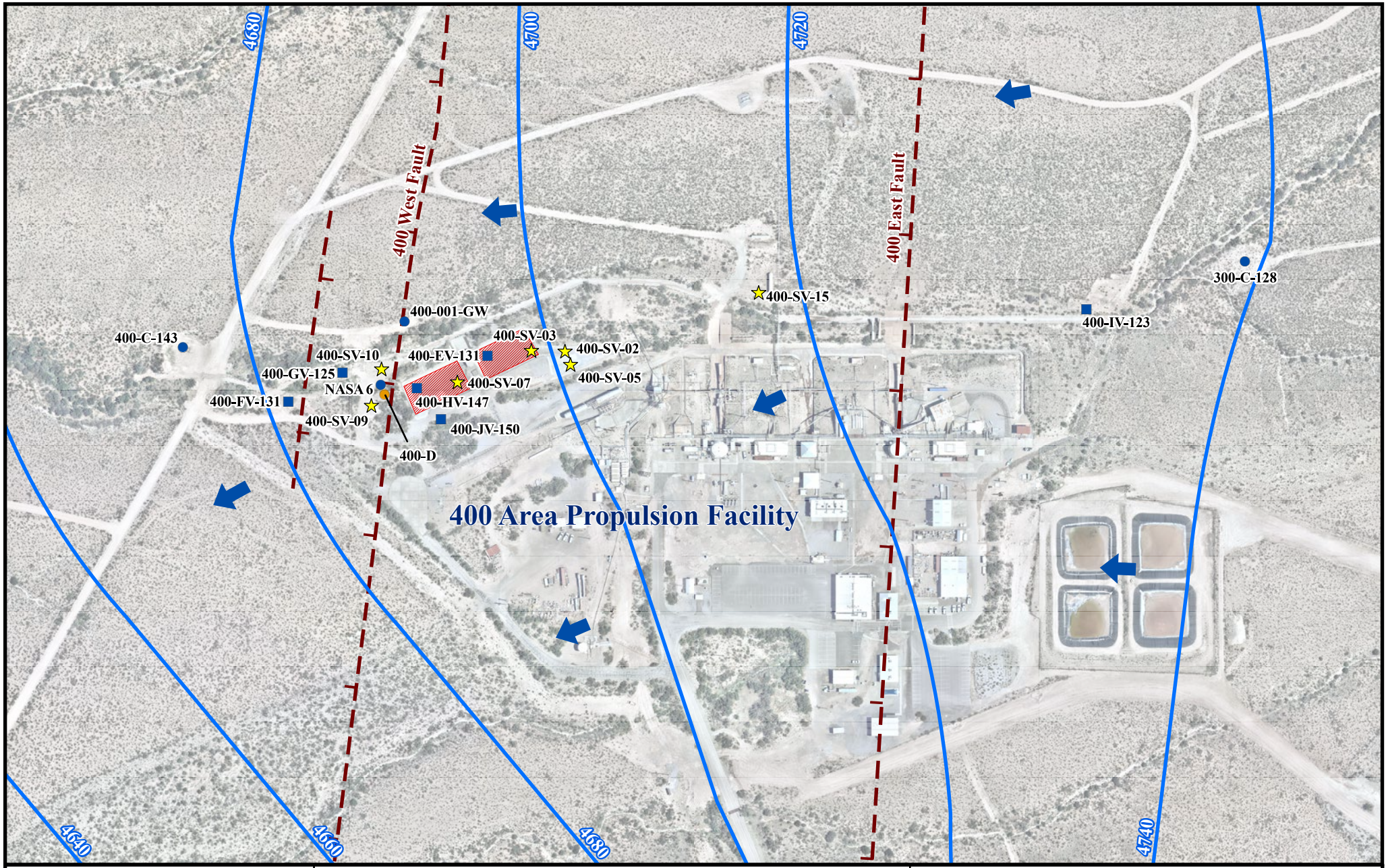

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November 2024

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Prepared by:srees

- Conventional Well
- Multiport Well
- MSVM Well
- MSVGM Well
- General Flow Direction
- Groundwater Elevation 20 Feet Contour
- Inferred Fault with Displacement
- 400 Area Closure

400 Area Potentiometric Surface Map

NASA Johnson Space Center
White Sands Test Facility Las Cruces, New Mexico

Coordinate System:
NAD 1983 StatePlane New Mexico Central FIPS 3002

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Figure 4.2 400 Area Groundwater Analytical Cleanup Level Exceedances

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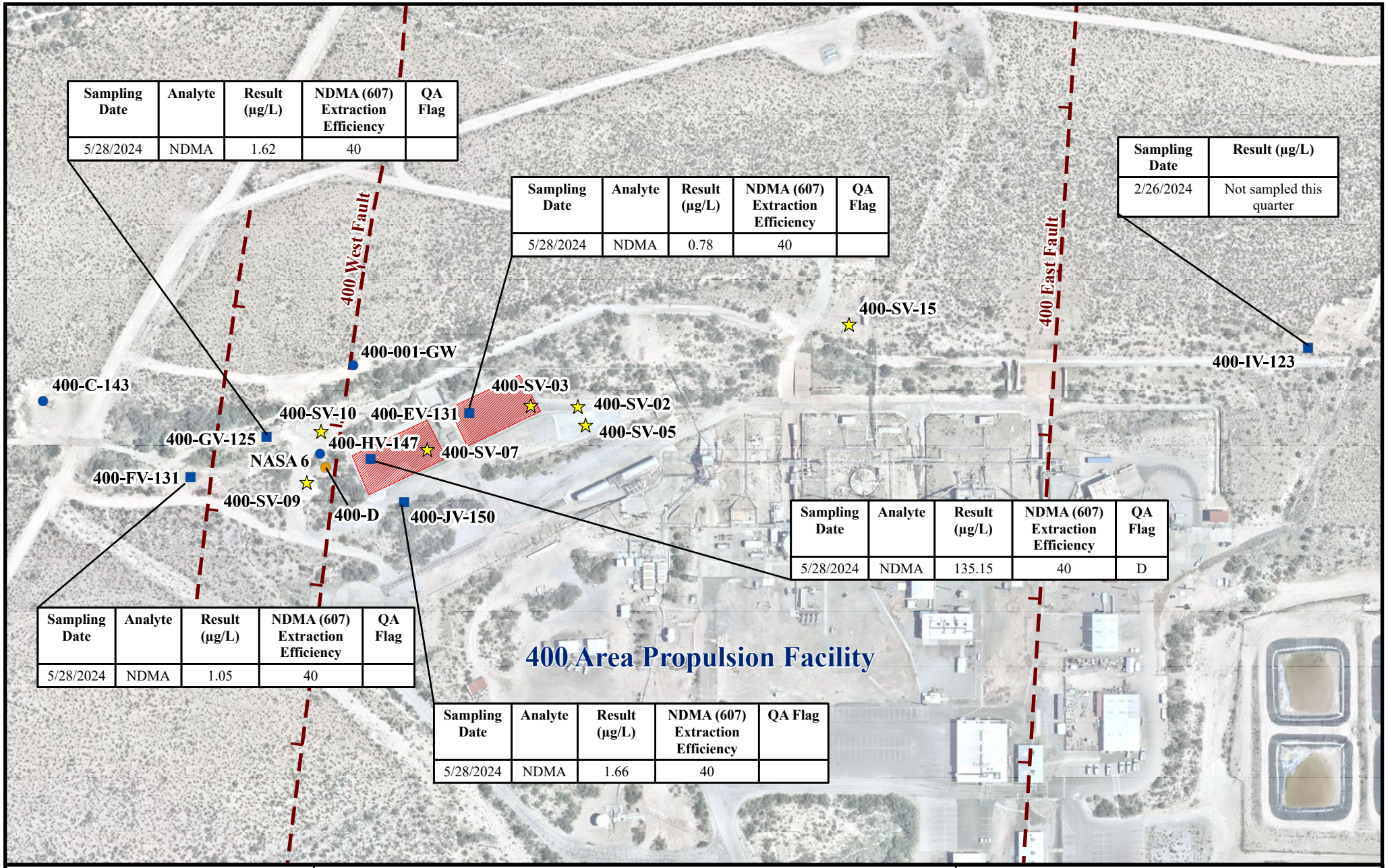

Sampling Date	Analyte	Result (µg/L)	NDMA (607) Extraction Efficiency	QA Flag
5/28/2024	NDMA	1.62	40	

Sampling Date	Analyte	Result (µg/L)	NDMA (607) Extraction Efficiency	QA Flag
5/28/2024	NDMA	0.78	40	

Sampling Date	Result (µg/L)
2/26/2024	Not sampled this quarter

Sampling Date	Analyte	Result (µg/L)	NDMA (607) Extraction Efficiency	QA Flag
5/28/2024	NDMA	135.15	40	D

Sampling Date	Analyte	Result (µg/L)	NDMA (607) Extraction Efficiency	QA Flag
5/28/2024	NDMA	1.05	40	

Sampling Date	Analyte	Result (µg/L)	NDMA (607) Extraction Efficiency	QA Flag
5/28/2024	NDMA	1.66	40	

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November 2024

0 50 100 200 300 Feet

Prepared by:srees

- Conventional Well
- Multiport Well
- MSVM Well
- MSVGM Well
- 400 Area Closure
- Inferred Fault with Displacement

NDMA Cleanup Level = 0.00491 ug/L

Notes:
* = The result, quantitation limit, and/or detection limit may have been affected by matrix interference .
D = The reported result is from a dilution.
J = The result is and estimated value less than the quantitation limit, but greater than or equal to the detection limit.
RB = The analyte was detected in the method blank.
A = The result of an analyte for a laboratory control sample (LCS), initial calibration verification (ICV), or continuing calibration verification (CCV) was outside standard limits.

400 Area Groundwater Analytical Cleanup Level Exceedances

NASA Johnson Space Center
White Sands Test Facility Las Cruces, New Mexico

Coordinate System:
NAD 1983 HARN StatePlane New Mexico Central FIPS 3002 Feet

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Figure 4.3 400 Area Soil Vapor Analytical NMED Residential VISL Exceedances

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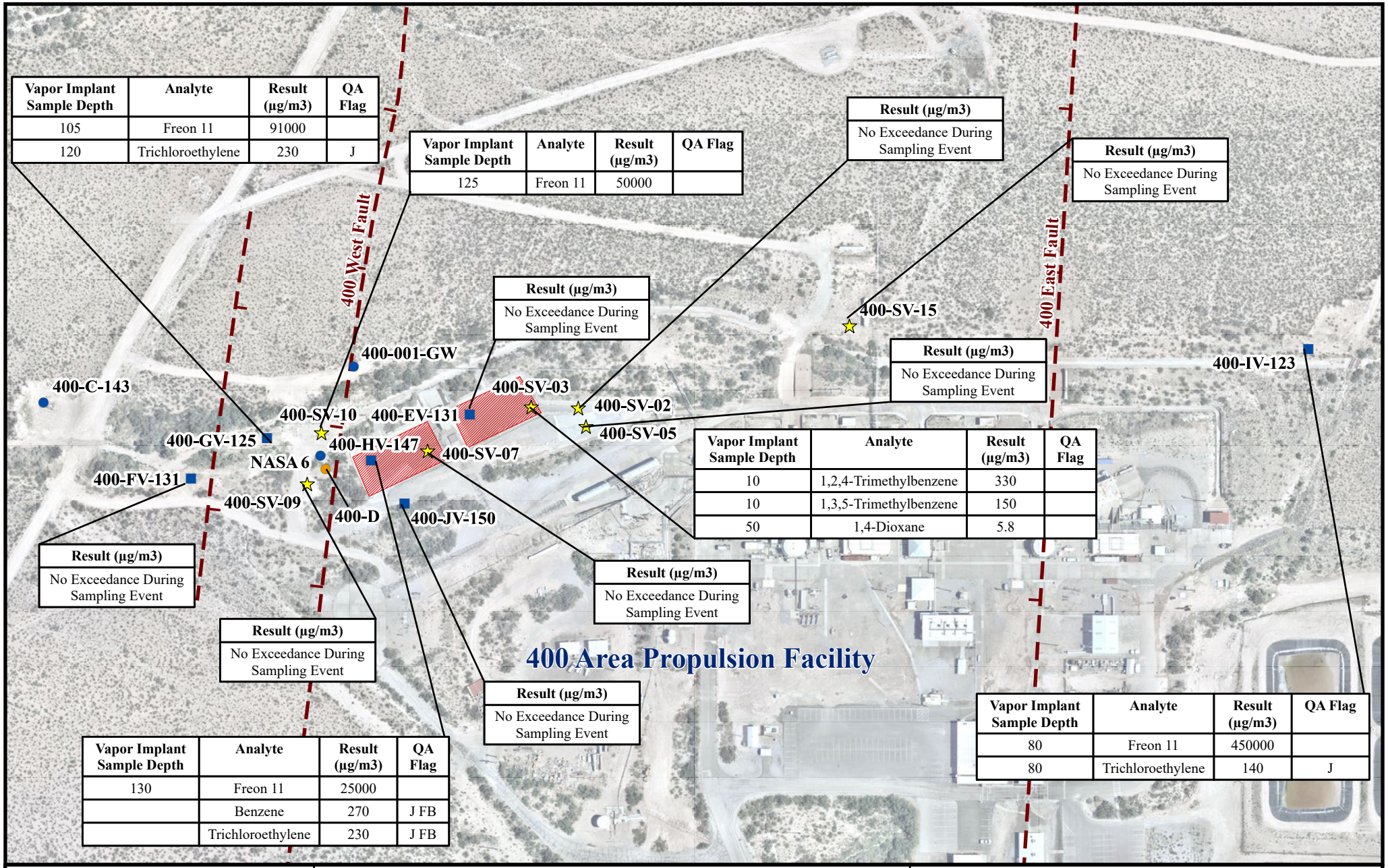

Vapor Implant Sample Depth	Analyte	Result (µg/m3)	QA Flag
105	Freon 11	91000	
120	Trichloroethylene	230	J

Vapor Implant Sample Depth	Analyte	Result (µg/m3)	QA Flag
125	Freon 11	50000	

Result (µg/m3)
No Exceedance During Sampling Event

Result (µg/m3)
No Exceedance During Sampling Event

Result (µg/m3)
No Exceedance During Sampling Event

Result (µg/m3)
No Exceedance During Sampling Event

Result (µg/m3)
No Exceedance During Sampling Event

Result (µg/m3)
No Exceedance During Sampling Event

Result (µg/m3)
No Exceedance During Sampling Event

Vapor Implant Sample Depth	Analyte	Result (µg/m3)	QA Flag
10	1,2,4-Trimethylbenzene	330	
10	1,3,5-Trimethylbenzene	150	
50	1,4-Dioxane	5.8	

Vapor Implant Sample Depth	Analyte	Result (µg/m3)	QA Flag
130	Freon 11	25000	
	Benzene	270	J FB
	Trichloroethylene	230	J FB

Vapor Implant Sample Depth	Analyte	Result (µg/m3)	QA Flag
80	Freon 11	450000	
80	Trichloroethylene	140	J

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November 2024

0 50 100 200 300 Feet

Prepared by:srees

- Conventional Well
- Multiport Well
- MSVM Well
- MSVGM Well
- 400 Area Closure
- Inferred Fault with Displacement

Notes:
FB = indicates a Field Blank sample collected concurrently with the investigation sample
J = The result is and estimated value less than the quantitation limit, but greater than or equal to the detection limit.
A = The result of an analyte for a laboratory control sample (LCS), initial calibration verification (ICV), or continuing calibration verification (CCV) was outside standard limits.

No Samples Exceeded WSTF Residential RBCs
Sample Depths with FB indicate a Quality Control Field Blank Sample

400 Area Soil Vapor Analytical NMED Residential VISL Exceedances

NASA Johnson Space Center
White Sands Test Facility Las Cruces, New Mexico

Coordinate System:
NAD 1983 HARN StatePlane New Mexico Central FIPS 3002 Feet

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Tables

Table 1.1 List of Contaminants of Potential Concern for the 400 Area Closure

Constituent	Sample Type
Chloride	ANION
Cyanide	CYANIDE
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	DIOXINS/FURANS
Heptachlorodibenzo-p-dioxins (HpCDD), Total	DIOXINS/FURANS
Octachlorodibenzofuran (OCDF)	DIOXINS/FURANS
Octachlorodibenzo-p-dioxin (OCDD)	DIOXINS/FURANS
Hydrazine	HYDRAZINE
Monomethylhydrazine (MMH)	HYDRAZINE
Unsymmetrical Dimethylhydrazine (UDMH)	HYDRAZINE
Aluminum	METALS
Antimony	METALS
Arsenic	METALS
Barium	METALS
Beryllium	METALS
Boron	METALS
Cadmium	METALS
Calcium	METALS
Chromium (Total)	METALS
Chromium (VI)	METALS
Cobalt	METALS
Copper	METALS
Lead	METALS
Mercury	METALS
Molybdenum	METALS
Nickel	METALS
Selenium	METALS
Silver	METALS
Strontium	METALS
Thallium	METALS
Tin	METALS
Vanadium	METALS
Zinc	METALS
Bromacil	BROMACIL
N-Nitrodimethylamine	NITROSAMINES
N-Nitrosodimethylamine	NITROSAMINES
Nitrate	NITROGEN
Nitrite	NITROGEN
Perchlorate	PERCHLORATE
Bis(2-ethylhexyl) Phthalate	SVOA
Di-n-butyl Phthalate	SVOA
1,1,1-Trichloroethane	VOA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	VOA
1,1-Dichloroethene	VOA
1,2-Dichloro-1,1,2-trifluoroethane (Freon 123a)	VOA
1,2-Dichloroethane	VOA
2,2-Dichloro-1,1,1-trifluoroethane (Freon 123)	VOA
2-Butanone (Methyl Ethyl Ketone)	VOA
2-Hexanone	VOA

Constituent	Sample Type
2-Propanol	VOA
Acetone	VOA
Bromodichloromethane	VOA
Bromoform	VOA
Chlorobenzene	VOA
Chloroform	VOA
Chloromethane	VOA
Dibromochloromethane	VOA
Dichlorofluoromethane (Freon 21)	VOA
Methyl tert-Butyl Ether	VOA
Methylene Chloride	VOA
m-Xylene & p-Xylene	VOA
Tetrachloroethene (PCE)	VOA
Toluene	VOA
trans-1,2-Dichloroethene	VOA
Trichloroethene (TCE)	VOA
Trichlorofluoromethane (Freon 11)	VOA

Table 2.1 400 Area Monitoring Well Summary

Well ID (Screen ft bgs)	Well Type	SV Port Depths (ft bgs)	Brass Cap Elevation (ft amsl)	Depth to GW (ft bgs)[1]	Groundwater Sampling System	Observations During Second Quarter Sampling
400-EV-131 (131 – 146)	MSVGM	10, 50, 100, 130	4832.08	141.39	Dedicated Low-flow Bladder Pump	
400-FV-131 (130.5 – 145.5)	MSVGM	15, 63, 104, 130	4815.43	129.63	Dedicated Low-flow Bladder Pump	Soil vapor ports at 104’ and 130’ inaccessible
400-GV-125 (125 – 140)	MSVGM	10, 46, 105, 120	4818.86	130.65	Dedicated Low-flow Bladder Pump	
400-HV-147 (147 – 162)	MSVGM	12, 45, 95, 130	4829.26	NA	Dedicated Low-flow Bladder Pump	Transducer in groundwater zone
400-IV-123 (123 – 138)	MSVGM	10, 45, 80, 118	4864.22	131.58	Dedicated Low-flow Bladder Pump	Groundwater dropped below the pump intake at time of sampling
400-JV-150 (150 – 165)	MSVGM	12.5, 50, 100, 145	4835.71	146.92	Dedicated Low-flow Bladder Pump	Soil vapor port at 145’ inaccessible
400-KV-142 (142 – 157)[2]	MSVM[2]	12.5, 50, 100, 137	4839.53	P&A	P&A	Groundwater zone P&A
400-LV-125 (125 – 140)[2]	MSVM[2]	10, 50, 95, 122	4838.68	P&A	P&A	Groundwater zone P&A
400-SV-02	MSVM	10, 50, 100	4836.95	NA	NA	
400-SV-03	MSVM	10, 50, 92	4833.33	NA	NA	
400-SV-05	MSVM	10, 50, 100	4839.33	NA	NA	
400-SV-07	MSVM	10, 45, 100	4828.86	NA	NA	
400-SV-09	MSVM	10, 45, 104	4824.09	NA	NA	
400-SV-10	MSVM	10, 50, 100, 125	4821.69	NA	NA	
400-SV-15	MSVM	10, 50, 90	4845.56	NA	NA	

[1] Depth to groundwater measured pre-purging and sampling at each well on May 28, 2024.

[2] Former groundwater screened interval, well converted from MSVGM to MSVM well on January 7, 2023.

NA Not available.

P&A Well plugged and abandoned. Post-installation development indicated that groundwater recovery following well evacuation was less than 1/10 ft per day.

Table 4.1 MSVGM Well Initial Groundwater Quality Parameters

Well ID (Screen Ft)	Well Type	Date and Time Sampled (yr/mo/day/time)	Temperature (°C)	Conductivity (µmhos/cm)	pH	Turbidity (NTU)	Initial Depth to Water (ft)
400-EV-131 (131-146)	MSVGM	24/05/28/0955 24/05/28/0957 24/05/28/0959	25.17 25.18 25.18	1423 1421 1423	7.55 7.52 7.56	1.95 1.91 1.92	NA NA NA
400-FV-131 (130-5-145.5)	MSVGM	24/05/28/0845 24/05/28/0847 24/05/28/0849	21.05 21.06 21.05	1316 1317 1315	7.36 7.31 7.32	1.43 1.40 1.44	NA NA NA
400-GV-125 (125-140)	MSVGM	24/05/28/0835 24/05/28/0836 24/05/28/0837	21.77 21.74 21.75	1433.9 1432.1 1435.7	7.22 7.22 7.22	3.81 3.70 3.77	130.90 130.90 130.90
400-HV-147 (147-162)	MSVGM	24/05/28/1405 24/05/28/1410 24/05/28/1415	25.23 25.23 25.25	2252.3 2254.4 2242.7	7.23 7.24 7.24	5.01 4.92 4.81	NA NA NA
400-IV-123 (123-138)	MSVGM	NS	NS	NS	NS	NS	NS
400-JV-150 (150-165)	MSVGM	24/05/28/1005 24/05/28/1006 24/05/28/1007	23.76 23.85 23.79	2267.9 2275.9 2277.4	7.19 7.18 7.18	5.55 5.28 5.26	146.50 146.50 146.50
400-KV-142 (142-157)	MSVM	P&A	P&A	P&A	P&A	P&A	P&A
400-LV-125 (125-140)	MSVM	P&A	P&A	P&A	P&A	P&A	P&A

Notes:
NA Not Accessible (transducer in well).
NS Not Sampled (groundwater level reported to have dropped below the pump intake at the time of sampling).
P&A Following the inability to sample groundwater, the groundwater screen was subsequently plugged and abandoned on January 7, 2023.
.

Table 4.2 Groundwater Analytical Results Above Laboratory Detection Limits for Second Quarter 2024

Analyte	Sampling Date	Analytical Method	Concentration Range	Laboratory Detection Limit (DL)	Number of Wells	Maximum Concentration Well	Current WSTF GMP Cleanup Level[1]	Is DL Above Cleanup Level?
Volatile Organic Compounds (VOCs, µg /L)								
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	5/28/24	8260	38 - 110	0.2	5/5	400-JV-150	NA	NA
1,2-Dichloro-1,1,2-trifluoroethane (Freon 123a)	5/28/24	8260	0.59 J – 5.5	0.2	4/5	400-FV-131	NA	NA
Chloroform	5/28/24	8260	0.95 J	0.51	1/5	400-HV-147	100	No
Dichlorofluoromethane (Freon 21)	5/28/24	8260	0.42 J – 4.6	0.2	5/5	400-FV-131	NA	NA
Trichloroethene (TCE)	5/28/24	8260	0.32 J – 1.3	0.2	5/5	400-EV-131 400-GV-125	5	No
Trichlorofluoromethane (Freon 11)	5/28/24	8260	100 – 610 D	0.24 – 0.6	5/5	400-JV-150	1,140	No
Semi-volatile Organic Compounds (SVOCs) and Bromacil/Nitrosamines (µg /L)								
Bromacil	5/28/24	607	0.75 – 7.39 D (Ext Eff 103)	0.0048 – 0.73	5/5	400-EV-131	NA	NA
N-Nitrodimethylamine (DMN)	5/28/24	607	1.58 – 362.62 D (Ext Eff 86)	0.0048 – 0.73	5/5	400-HV-147	NA	NA
N-Nitrosodimethylamine (NDMA)	5/28/24	607	0.78 – 135.15 D (Ext Eff 40)	0.0048 – 0.73	5/5	400-HV-147	0.00491	Yes
Metals (mg/L)								
Antimony	5/28/24	METALS	0.0003 J – 0.0039	0.0002	2/5	400-HV-147	6	No
Arsenic	5/28/24	METALS	0.009 J – 0.0016	0.0004	5/5	400-HV-147	10	No
Barium	5/28/24	METALS	0.029 – 0.076	0.003	5/5	400-HV-147	2,000	No
Boron	5/28/24	METALS	0.23 – 1.13	0.02	5/5	400-JV-150	NA (3,950)[2]	No
Calcium	5/28/24	METALS	102 - 153	0.3	5/5	400-HV-147	NA	NA

Analyte	Sampling Date	Analytical Method	Concentration Range	Laboratory Detection Limit (DL)	Number of Wells	Maximum Concentration Well	Current WSTF GMP Cleanup Level[1]	Is DL Above Cleanup Level?
Chromium	5/28/24	METALS	0.002 J – 0.006 J	0.002	5/5	400-HV-147	50	No
Cobalt	5/28/24	METALS	0.002 J	0.0009	2/5	400-EV-131 400-HV-147	50	No
Magnesium	5/28/24	METALS	77 - 116	0.03	5/5	400-HV-147	NA	NA
Manganese	5/28/24	METALS	0.009 J - 0.016	0.004	4/5	400-FV-131 400-JV-150	NA (2,020)[2]	No
Molybdenum	5/28/24	METALS	0.007 J – 0.01 J	0.003	5/5	400-GV-125	NA (98.7)[2]	No
Nickel	5/28/24	METALS	0.289 J	0.003	1/5	400-EV-131	200	No
Potassium	5/28/24	METALS	2.7 – 4.9	0.4	5/5	400-JV-150	NA	NA
Selenium	5/28/24	METALS	0.008 J – 0.01	0.007	2/5	400-JV-150	50	No
Sodium	5/28/24	METALS	86.8 - 221	0.3 – 3	5/5	400-JV-150	NA	NA
Strontium	5/28/24	METALS	2.23 – 5.88	0.002	5/5	400-HV-147	NA (11,800)[2]	No
Thallium	5/28/24	METALS	0.00004 J – 0.0002 J	0.00004	4/5	400-GV-125	2	No
Vanadium	5/28/24	METALS	0.001 J – 0.003 J	0.0007	3/5	400-HV-147	63.1	No
Zinc	5/28/24	METALS	0.004 J – 0.006 J	0.003	5/5	400-EV-131 400-GV-125	10,000	No

Notes:
[1] From the WSTF Groundwater Monitoring Plan (GMP; NASA, 2023b).
[2] No WSTF cleanup level; Cleanup level listed in parentheses is from the NMED Risk Assessment Guidance (2022).
D The reported result is from a dilution.
J The result is an estimated value less than the quantitation limit, but greater than or equal to the detection limit.
NA Not applicable. No WSTF cleanup level.

Table 4.3 Groundwater Analytical Results Above WSTF Cleanup-Screening Levels for Second Quarter 2024

Well Name	Sampling Date	Analytical Method	Analyte	Result (µg/L)	NDMA (607) Extraction Efficiency	QA Flag	WSTF GMP Cleanup Level[1] (µg /L)
400-EV-131	5/28/24	607	NDMA	0.78	40		0.00491
400-FV-131	5/28/24	607	NDMA	1.05	40		0.00491
400-GV-125	5/28/24	607	NDMA	1.62	40		0.00491
400-HV-147	5/28/24	607	NDMA	135.15	40	D	0.00491
400-JV-150	5/28/24	607	NDMA	1.66	40		0.00491

Notes:
[1] From the WSTF Groundwater Monitoring Plan (GMP; NASA, 2023b).
D The reported result is from a dilution.
Well 400-IV-123 was not sampled for the second quarter 2024 due to the groundwater level in the well being below the pump intake valve.

Table 4.4 MSVM and MSVGM Well Soil Vapor Purge Parameters for Second Quarter 2024

Well Port ID – Depth (ft)	Well Type	Date and Time Sampled (yr/mo/day/time)	CH_4 (%)	CO_2 (%)	O_2 (%)	Laboratory Canister ID	Final Canister Pressure (PSI)[1]
400-EV-131-10’	MSVGM	24/05/28/1000	0.0	2.6	18.2	ALS	0
400-EV-131-50’		24/05/28/1006	0.0	2.0	18.0	ALS	-2
400-EV-131-50’ (FB)		24/05/28/1011	NA	NA	NA	ALS	0
400-EV-131-100’		24/05/28/1017	0.0	1.9	18.2	ALS	-1
400-EV-131-130’		24/05/28/1028	0.0	1.6	17.7	ALS	0
400-EV-131-130’		24/05/28/1032	0.0	1.6	17.9	ALS	-2
400-FV-131-15’	MSVGM	24/05/28/0810	0.0	0.8	20.3	ALS	0
400-FV-131-63’		24/05/28/0816	0.0	2.0	19.0	ALS	0
400-FV-131-104’		NS	NS	NS	NS	NS	NS
400-FV-131-130’		NS	NS	NS	NS	NS	NS
400-GV-125-10’	MSVGM	24/05/28/0826	0.0	1.3	19.1	ALS	0
400-GV-125-10’		24/05/28/0830	0.0	1.3	19.1	ALS	-1
400-GV-125-46’		24/05/28/0836	0.0	1.9	18.5	ALS	-1
400-GV-125-105’		24/05/28/0843	0.0	3.4	13.9	ALS	0
400-GV-125-105’ (FB)		24/05/28/0846	NA	NA	NA	ALS	0
400-GV-125-120’		24/05/28/0853	0.0	2.5	14.6	ALS	-1
400-HV-147-12’	MSVGM	24/05/28/1258	0.0	1.8	19.9	ALS	0
400-HV-147-45’ (TB)		24/05/28/1310	NA	NA	NA	ALS	NA
400-HV-147-45’		24/05/28/1245	0.0	1.3	19.8	ALS	-1
400-HV-147-95’		24/05/28/1326	0.0	2.1	18.5	ALS	0
400-HV-147-130’		24/05/28/1337	0.0	4.8	13.9	ALS	-2
400-HV-147-130’ (FB)		24/05/28/1344	NA	NA	NA	ALS	0
400-IV-123-10’	MSVGM	24/05/29/0850	0.0	0.4	20.4	ALS	-1
400-IV-123-45’		24/05/29/0858	0.0	0.5	20.0	ALS	0
400-IV-123-45’ (FB)		24/05/29/0859	NA	NA	NA	ALS	0
400-IV-123-80’		24/05/29/0905	0.0	0.2	19.1	ALS	-2
400-IV-123-118’		24/05/29/0912	0.0	1.1	18.9	ALS	-1
400-IV-123-118’		24/05/29/0919	0.0	1.1	18.9	ALS	0
400-JV-150-12.5’ (TB)	MSVGM	24/05/28/0915	NA	NA	NA	ALS	NA
400-JV-150-12.5’		24/05/28/0919	0.0	1.8	18.5	ALS	-1
400-JV-150-50’		24/05/28/0925	0.0	2.8	18.0	ALS	0
400-JV-150-50’ (FB)		24/05/28/0928	NA	NA	NA	ALS	0
400-JV-150-100’		24/05/28/0934	0.0	2.7	17.6	ALS	-2
400-JV-150-145’		NS	NS	NS	NS	NS	NS
400-KV-142-12.5’	MSVGM	24/05/29/0940	0.0	0.8	20.2	ALS	-1
400-KV-142-12.5’		24/05/29/0945	0.0	0.8	20.2	ALS	0
400-KV-142-50’		24/05/29/0952	0.0	1.7	19.0	ALS	0
400-KV-142-100’		24/05/29/1000	0.0	2.0	18.2	ALS	-1
400-KV-142-100’ (FB)		24/05/29/1001	NA	NA	NA	ALS	0
400-KV-142-137’		NS	NS	NS	NS	ALS	NS
400-LV-125-10’ (TB)	MSVGM	24/05/29/1045	NA	NA	NA	ALS	NA
400-LV-125-10’		24/05/29/1046	0.0	0.8	20.2	ALS	0
400-LV-125-50’		24/05/29/1053	0.0	1.1	20.0	ALS	0
400-LV-125-95’		24/05/29/1100	0.0	1.3	19.4	ALS	0
400-LV-125-122’		24/05/29/1107	0.0	1.0	19.1	ALS	0
400-SV-02-10’	MSVM	24/05/29/1315	0.0	1.1	19.7	ALS	0
400-SV-02-50’		24/05/29/1321	0.0	1.4	19.1	ALS	-1
400-SV-02-100’		24/05/29/1328	0.0	1.6	18.5	ALS	0

Well Port ID – Depth (ft)	Well Type	Date and Time Sampled (yr/mo/day/time)	CH_4 (%)	CO_2 (%)	O_2 (%)	Laboratory Canister ID	Final Canister Pressure (PSI)[1]
400-SV-03-10’	MSVM	24/05/29/1345	0.0	1.3	18.7	ALS	0
400-SV-03-50’		24/05/29/1352	0.0	1.5	18.3	ALS	0
400-SV-03-92’		24/05/29/1400	0.0	1.8	18.0	ALS	-2
400-SV-05-10’	MSVM	24/05/29/1015	0.0	0.6	20.0	ALS	0
400-SV-05-50’		24/05/29/1021	0.0	1.2	19.2	ALS	0
400-SV-05-50’		24/05/29/1025	0.0	1.2	19.2	ALS	-10
400-SV-05-100’		24/05/29/1031	0.0	1.4	18.8		
400-SV-07-10’	MSVM	24/05/30/0910	0.0	2.2	18.5	ALS	-1
400-SV-07-45’		24/05/30/0916	0.0	2.7	17.9	ALS	-1
400-SV-07-100’		24/05/30/0923	0.0	3.0	17.5	ALS	0
400-SV-07-100’ (FB)		24/05/30/0928	NA	NA	NA	ALS	0
400-SV-09-10’	MSVM	24/05/30/0800	0.0	0.9	20.1	ALS	0
400-SV-09-45’		24/05/30/0808	0.0	1.9	19.2	ALS	0
400-SV-09-104’		24/05/30/0815	0.0	2.3	18.5	ALS	0
400-SV-10-10’	MSVM	24/05/30/0827	0.0	1.0	19.5	ALS	-2
400-SV-10-50’		24/05/30/0834	0.0	1.8	18.5	ALS	-1
400-SV-10-50’		24/05/30/0842	0.0	1.8	18.5	ALS	0
400-SV-10-100’		24/05/30/0850	0.0	2.3	14.5	ALS	0
400-SV-10-125’		24/05/30/0856	0.0	2.9	12.7	ALS	0
400-SV-15-10’	MSVM	24/05/29/0815	0.0	0.5	20.7	ALS	0
400-SV-15-10’ (FB)		24/05/29/0816	NA	NA	NA	ALS	0
400-SV-15-50’		24/05/29/0826	0.0	0.9	20.1	ALS	-1
400-SV-15-90’		24/05/29/0834	0.0	1.3	19.2	ALS	-1

Notes:
NA Not Applicable
NS Not Sampled (port below water level or blocked)
[1] The initial pre-set pressure for all soil vapor canisters at the ALS laboratory is -14.3 PSI. Any initial canister pressure with a different reading will be recorded in the Field Notes (Appendix A) and presented in this table. All initial canister pressures were reported at -14.3 PSI for the 2QTR field event.

Table 4.5 Soil Vapor Analytes and Concentration Ranges for Second Quarter 2024

Analyte	Concentration Range Within Soil Vapor Monitoring Well Sampling Zones		Concentration Range Within Field Blank and Trip Blank Samples		Range of MDL Due to Dilution	VISL[1], RSL[2], or RBC[3]	
	Minimum (µg/m³)	Maximum (µg/m³)	Minimum (µg/m³)	Maximum (µg/m³)	(µg/m³)	Residential (µg/m³)	Industrial (µg/m³)
1,1,1-Trichloroethane*	ND	ND	ND	ND	0.24 - 110	174,000[1]	819,000[1]
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	0.26 – **130**	16.1[1]	79.1[1]
1,1,2-Trichloroethane	ND	0.44 J	ND	ND	0.19 – **93**	6.95[1]	32.8[1]
1,1-Dichloroethane	ND	ND	ND	ND	0.28 – 130	585[1]	2,870[1]
1,1-Dichloroethene*	ND	0.6 J	ND	ND	0.26 – 130	6,950[1]	32,800[1]
1,2,4-Trichlorobenzene	ND	ND	ND	ND	0.46 – **220**	69.5[1]	328[1]
1,2,4-Trimethylbenzene	ND	330	ND	0.24 J TB	0.26 – **130**	63[2]	260[2]
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	0.22 – **110**	1.56[1]	7.65[1]
1,2-Dichlorobenzene	ND	0.41 J	ND	ND	0.28 – 140	6,950[1]	32,800[1]
1,2-Dichloroethane	ND	0.27 J	ND	ND	0.21 – **100**	36[1]	176[1]
1,2-Dichloropropane	ND	7.3	ND	ND	0.24 – **110**	93.6[1]	459[1]
1,3,5-Trimethylbenzene	ND	150	ND	0.32 J TB	0.28 – **130**	63[2]	260[2]
1,3-Butadiene	ND	ND	ND	ND	0.31 – **150**	31.2[1]	153[1]
1,3-Dichlorobenzene	ND	0.59 J	ND	ND	0.29 – 140	NA	NA
1,4-Dichlorobenzene	ND	0.34 J	ND	ND	0.29 – **140**	85.1[1]	417[1]
1,4-Dioxane	ND	5.8	ND	0.5 J FB	0.23 – **110**	5.6[2]	25[2]
2,2,4-Trimethylpentane	ND	1.6 J	ND	ND	0.29 – 140	NA	NA
2-Butanone (MEK)*	ND	65	ND	120 J FB	0.39 – 190	174,000[1]	819,000[1]
2-Hexanone*	ND	19	ND	1.2 J FB	0.24 – **110**	31[2]	130[2]
2-Propanol* (Isopropanol)	ND	100	ND	7.9 FB	0.79 – **380**	210[2]	880[2]
3-Chloropropene (Allyl Chloride)	ND	ND	ND	ND	0.26 – **120**	4.7[2]	20[2]
4-Ethyltoluene	ND	26	ND	0.22 J TB	0.30 – 150	NA	NA
4-Methyl-2-pentanone	ND	5.9	ND	ND	0.26 – 130	104,000[1]	492,000[1]
Acetone*	ND	1,600	ND	30 FB	4.3 – 2,100	1,080,000[1]	5,080,000[1]

Analyte	Concentration Range Within Soil Vapor Monitoring Well Sampling Zones		Concentration Range Within Field Blank and Trip Blank Samples		Range of MDL Due to Dilution	VISL[1], RSL[2], or RBC[3]	
	Minimum (µg/m³)	Maximum (µg/m³)	Minimum (µg/m³)	Maximum (µg/m³)	(µg/m³)	Residential (µg/m³)	Industrial (µg/m³)
alpha-Chlorotoluene (benzyl chloride)	ND	ND	ND	ND	0.43 – **210**	0.57[2]	2.5[2]
Benzene	ND	95	ND	270 J FB	0.28 – **130**	120[1]	588[1]
Bromodichloromethane*	ND	2.2 J	ND	ND	0.28 – **130**	25.3[1]	124[1]
Bromoform*	ND	0.73 J	ND	ND	0.39 – **190**	26[2]	110[2]
Bromomethane	ND	0.76 J	ND	ND	0.26 – 130	174[1]	819[1]
Carbon Disulfide	ND	280	ND	6.3 J FB	0.57 – 280	24,300[1]	115,000[1]
Carbon Tetrachloride	ND	0.43 J	ND	0.44 J FB	0.26 – 130	156[1]	765[1]
Chlorobenzene*	ND	0.6 J	ND	ND	0.25 – 120	1,740[1]	8,190[1]
Chloroethane (ethyl chloride)	ND	0.81 J	ND	ND	0.24 – 110	4,200[2]	18,000[2]
Chloroform*	ND	25	ND	0.36 FB	0.25 – **120**	40.7[1]	199[1]
Chloromethane*	ND	7.8	ND	1.6 J FB	0.31 – 150	520[1]	2,550[1]
cis-1,2-Dichloroethene	ND	ND	ND	ND	0.27 – **130**	42[2]	180[2]
cis-1,3-Dichloropropene	ND	ND	ND	ND	0.3 – 140	NA	NA
Cumene	ND	4.9	ND	ND	0.28 – 130	13,900[1]	65,500[1]
Cyclohexane	ND	6.8	ND	0.76 J FB	0.54 – 260	6,300[2]	26,000[2]
Dibromochloromethane*	ND	0.35 J	ND	ND	0.25 – **120**	34.7[1]	170[1]
Ethanol	ND	290	ND	1,200 J FB	1.3 – 640	85,000,000[3]	1,500,000,000[3]
Ethyl Benzene	ND	6.8	ND	0.8 J FB	0.27 - 130	374[1]	1,840[1]
Freon 11*	1.1 J	450,000	ND	23,000 FB	0.29 - 650	24,300[1]	115,000[1]
Freon 113*	0.51	170,000	ND	45,000 FB	0.27 - 290	1,040,000[1]	4,920,000[1]
Freon 114	ND	0.49 J	ND	ND	0.30 - 150	NA	NA
Freon 12	ND	1,100	ND	2.5 FB	0.31 - 150	3,480[1]	16,400[1]
Freon 123*	ND	620 J TIC	ND	520 TIC FB	0.86 - 420	21,000,000[3]	240,000,000[3]
Freon 123a	ND	3,100 TIC	ND	ND	NA	NA	NA
Freon 21*	ND	ND	ND	ND	0.86 - 420	76,000[3]	910,000[3]

Analyte	Concentration Range Within Soil Vapor Monitoring Well Sampling Zones		Concentration Range Within Field Blank and Trip Blank Samples		Range of MDL Due to Dilution	VISL[1], RSL[2], or RBC[3]	
	Minimum (µg/m³)	Maximum (µg/m³)	Minimum (µg/m³)	Maximum (µg/m³)	(µg/m³)	Residential (µg/m³)	Industrial (µg/m³)
Heptane	ND	15 J	ND	0.81 J FB	0.30 - 150	420[2]	1,800[2]
Hexachlorobutadiene	ND	ND	ND	ND	0.39 - **190**	1.3[2]	5.6[2]
Hexane	ND	7.7	ND	1.6 J FB	0.39 - 190	24,300[1]	115,000[1]
m,p-Xylene*	ND	34	ND	1.1 J FB	0.5 - 240	3,480[1]	16,400[1]
Methyl tert-butyl ether*	ND	0.9 J	ND	ND	0.23 - 110	3,600[1]	17,600[1]
Methylene Chloride*	ND	5.2	ND	ND	0.54 - 260	20,900[1]	98,300[1]
o-Xylene	ND	7.5	ND	0.39 J FB	0.28 - 130	3,480[1]	16,400[1]
Propylbenzene	ND	9.9	ND	ND	0.28 - 130	1,000[2]	4,400[2]
Styrene	ND	7.5	ND	ND	0.310 - 150	34,800[1]	164,000[1]
Tetrachloroethene (PCE)*	ND	3.6 J	ND	ND	0.25 - 120	1,390[1]	6,550[1]
Tetrahydrofuran	ND	3.3	ND	5.5 FB	0.24 - 120	2,100[2]	8,800[2]
Toluene*	ND	410	ND	950 FB	0.23 - 110	174,000[1]	819,000[1]
trans-1,2-Dichloroethene*	ND	0.46 J	ND	ND	0.26 - **130**	42[2]	180[2]
trans-1,3-Dichloropropene	ND	ND	ND	ND	0.39 - **190**	7[2]	31[2]
Trichloroethene (TCE)*	ND	230 J	ND	230 J FB	0.26 - **120**	69.5[1]	328[1]
Vinyl Chloride	ND	0.56 J	ND	ND	0.20 - **99**	55.9[1]	1,040[1]

Notes:
Shaded analytes are ND for sampling zone and field blank/trip blank samples for dataset.
Bold indicates MDL due to dilution was greater than the VISL/RSL/RBC for the constituent (residential, industrial, or both).
* = Analyte is on list of potential 400 Area COPCs identified in the IWP (NASA, 2011b – 400 Area IWP).
A = The result of an analyte for a laboratory control sample (LCS), initial calibration verification (ICV) or continuing calibration verification (CCV) was outside standard limits.
FB = The analyte was detected in the field blank.
J = The result is an estimated value less than the quantitation limit, but greater than or equal to the detection limit.
ND = The analyte was not detected above the detection limit.
[1] VISL from NMED Risk Assessment Guidance (NMED, 2022).
[2] From RSL EPA (EPA, 2024).
[3] From latest approved version of WSTF RBCs (NASA, 2022).

Table 4.6 Soil Vapor Analytical Results Compared to Residential NMED VISLs and WSTF RBCs for Second Quarter 2024

Well ID	Vapor Implant Sample Depth (ft bgs)	Sampling Date	Analyte	Result[1] (µg/m^3)	QA Flag	NMED Residential VISL[2] or EPA RSL[3] (µg/m^3)	WSTF RBC[4] Residential (µg/m^3)	Factor, Result: RBC[5] (dimensionless)
Monitoring Well Soil Vapor Sampling Zones								
400-SV-03	10	5/29/24	1,2,4-Trimethylbenzene	330		63	NA	NA
400-SV-03	10	5/29/24	1,3,5-Trimethylbenzene	150		63	NA	NA
400-SV-03	50	5/29/24	1,4-Dioxane	5.8		5.6	NA	NA
400-SV-10	125	5/30/24	Freon 11	50,000		24,300	6,400,000 @ 100’ bgs	128
400-GV-125	105	5/28/24	Freon 11	91,000		24,300	6,400,000 @ 100’ bgs	70
400-HV-147	130	5/28/24	Freon 11	25,000		24,300	6,400,000 @ 100’ bgs	256
400-IV-123	80	5/29/24	Freon 11	450,000		24,300	3,300,000 @ 50’ bgs	7.3
400-GV-125	120	5/28/24	Trichloroethene	230	J	69.5	18,000 @ 100’ bgs	78
400-IV-123	80	5/29/24	Trichloroethene	140	J	69.5	9,100 @ 50’ bgs	65
QA Samples								
400-HV-147	130	5/28/24	Benzene	270	J FB	120	24,000 @ 100’ bgs	89
400-HV-147	130	5/28/24	Trichloroethene	230	J FB	69.5	18,000 @ 100’ bgs	78

Notes:
NA = Not available.
FB = The analyte was detected in the field blank.
J = The result is an estimated value less than the quantitation limit, but greater than or equal to the detection limit.
[1] Results are provided for all analyte occurrences that exceed the equivalent NMED VISL.
[2] VISL from NMED Risk Assessment Guidance (NMED, 2022).
[3] RSL from EPA Regional Screening Levels (EPA, 2024).
[4] From latest approved version of WSTF RBCs (NASA, 2022). Value taken from nearest available RBC calculation depth above port depth for more conservative value.
[5] This value reflects the ratio of the soil vapor result (µg/m^3) to the equivalent RBC (µg/m^3). This is the factor by which the equivalent RBC exceeds the result.

Appendix A
Logbook Entries and CoC Forms

PROJECT 400-FV-131 ENV-0053

Notebook No. D32 # 133 A

Continued from page ____

Matt Garcia & Dan Halvorsen present. Weather is Clear and Warm. This well will be purged and sampled using a dedicated bladder pump. Samples will be collected using a new Teflon discharge hose. Water quality parameters will be monitored using an In-Situ Aqua Troll 500. Carboy 63 in use.

Calibrations:

Do Sensor: In 100% Saturated air.

PH " : using 4, 7, 10 Buffers

Conductivity: using a 1413 us/cm STD.

Turbidity: using a 10 NTU STD.

Trip Blanks

Sample #	Analysis	Preserve	Container	Lot	Lab
240528070004	VOC by 8260	Ice/HCl	(3) 40 ml Vial	2718	ALS

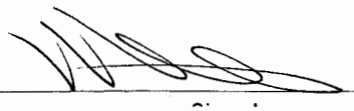
Parameters (Time)	Temp	Cond	Do	PH	ORP	Turb	ORN
240528084504	21.05	1316	0.93	7.36	95.8	1.43	
0847 A	21.06	1317	0.92	7.31	95.7	1.40	
0849 A	21.05	1315	0.94	7.32	95.6	1.44	

Samples

Sample #	Analysis	Preserve	Container	Lot	Lab
240528085204	VOC by 8260	Ice/HCl	(3) 40 ml Vial	2718	ALS
0853 A	" " (Dup)	"	"	"	"
0854 A	" " (EB)	"	"	"	"
0855 A	NDMA/1,4-Dioxane Bromate by 6807	Ice	(1) 1 L Amber		SRL
0856 A	" " (Dup)	"	"		"
0857 A	Total Metals	Ice/HNO3	(2) 125 ml Poly		ALS
0858 A	" " (Dup)	"	"		"

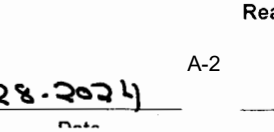
Continued from page

Read and Understood By



5-28-2024

Date



Signed

5-29-24

Date

PROJECT 400-EV-131 ENV-0073

Notebook No. D32 #133 A

Continued from page _____

MATT Garcia & Dan Hawksen present. Weather is clear and hot. This well will be purged and sampled using a dedicated bladder pump. Samples will be collected using a new Teflon discharge hose. Water quality parameters will be monitored using an In-Situ Aqua Troll 500 Gamboy 63 in use.

Cal. Checks:

DO sensor = in 100 % saturated air.

PH " = using 4, 7, 10 Buffers

Conductivity = using a 1413 µs/cm STD.

Turbidity = using a 10 NTU STD.

Parameters (TIME)	TEMP	COND	DO	pH	ORP	TURB	DTW
240528 0955 A	25.17	1423	6.33	7.55	61.9	1.95	
—— 0957 A	25.18	1421	6.31	7.53	61.6	1.91	
—— 0959 A	25.18	1423	6.32	7.56	61.6	1.92	

SAMPLES

SAMPLE #	Analysis	Preservative	Containers	LOT	LAB
240528/1002 A	VOA by 8260	ICE/HCl	(3) 40 ml VOA		ALS
—— 1003 A	" " (FB)	"	"		"
—— 1004 A	VOMS/DMW Bromide/Cl by EPA	ICE	(1) 1L Amber		SRL
—— 1005 A	Total Metals	ICE/HNO3	(2) 125 ml Poly		ALS

Continued from page

Read and Understood By

Signed _____ Date 5-28-2024

Signed _____ Date 5-29-24

PROJECT 400·GW·125 WJI ENV·0053

Notebook No. D32 H 134(C)

Continued from page ____

Marcus Avalos & Al Montes present. Weather is clear & hot. This well will be purged & sampled using a dedicated bladder pump. Samples will be collected using a dedicated sample tube. Water quality parameters will be monitored using an In-Situ Aqua Troll 500. Carboy Gal: 3

Calibrations:
DO: Calibrated in 100% saturation
PH: " using 4, 7, 10 Buffers
Conductivity: 1413 us/cm STD.
Turbidity: 10 NTU STD.

Parameters (time)	Temp(C)	Cond(us/cm)	PH	DO	ORP	Turb(NTU)	DTW(ft)
1) 240528 0835C	21.77	1433.9	7.22	5.88	187.8	3.81	131.45'
2) —— 0836C	21.74	1432.1	7.22	5.85	187.7	3.70	"
3) —— 0837C	21.75	1435.7	7.22	5.86	187.3	3.77	"

Samples

Sample #	Analysis	Preserve	Container	lot	lab
240528 0840C	VOA by 8260	HCl/Ice	(3) 40 ml vials	27501	ALS
—— 0841C	" (Dup)	"	"	"	"
—— 0842C	" (FB)	"	"	"	"
—— 0843C	607/Bromacil	Ice	(1) 1L Amber	0113601I	SRL
—— 0844C	" (Dup)	"	"	"	"
—— 0845C	Total Metals	HNO3/Ice	(2) 125 ml poly	0124242AES	ALS
—— 0846C	" (Dup)	"	"	"	"

Initial DTW - 130.90'

Total Gallons Purged - 0.5 gal

Continued from page

Read and Understood By

5.28.24 Date

Signed

5-29-24 Date

Marcus Avalos & Al Montes present. Weather is clear & hot. This well will be purged & sampled using a dedicated bladder pump. Samples will be collected using a dedicated sample tube. Water quality parameters will be monitored using an In-Situ Aqua Troll 500. Carboy CG-3

Calibrations
DO - Calibrated in 100% Saturation
pH - = using 4, 7, 10 Buffers
Conductivity = 1413 uS/cm STD.
Turbidity = 10 NTU STD.

Parameters (Time)	Temp (°C)	Cond (uS/cm)	PH	DO	ORP	Turb (NTU)	DTW (ft)
1) 240528 1005C	23.76	2267.9	7.19	4.98	153.7	5.55	147.70'
2) ——— 1006C	23.85	2275.9	7.18	4.82	153.6	5.28	=
3) ——— 1007C	23.79	2277.4	7.18	4.75	155.9	5.26	=

Samples

Sample #	Analysis	Preserve	Container	lot	lab
240528 1010C	VOA by 8260	HCl/Ice	(3) 40ml vials	17501	ALS
——— 1011C	= (FB)	=	=	=	=
——— 1012C	607/Bromacil	Ice	(1) 1L Amber	0113601I	SIZI
——— 1013C	Total Metals	HNO3/Ice	(2) 125ml poly	0129242AES	ALS

Initial DTW - 146.50'

Total Gallons Purged - 0.5 gal

Continued from page

Read and Understood By

MA Signed 5.28.24 Date

Jon Munch Signed 5-29-24 Date

PROJECT 400.HV.147 WSI:ENV0053

Notebook No. D32#134C

Continued from page NA

AT MONTES & CRAIG DELCARAO PRESENT. WEATHER IS HOT & BREEZY. THIS WELL WILL BE PURGED W/ A DEDICATED BLADDER PUMP. SAMPLES WILL BE GRABBED FROM DEDICATED TUBE. PARAMETERS WILL MONITOR W/ AQUA TROLL 500. CARBOY G-3

CALIBRATIONS

IDW: .5 gal

DO - 100% SATURATION
PH - W/ BUFFER 4,7,10
COND - IN 1413 uS/cm STD
TURB - 10 NTU STD

PARAMETERS	TEMP (C)	COND mS/cm	PH	DO	ORP (MV)	TURB NTU	DTW/E
240528 1405 C	25.23	2252.3	7.23	5.18	178.1	5.01	NA
1410 C	25.23	2254.4	7.24	4.99	175.0	4.92	NA
1415 C	25.25	2242.7	7.24	4.79	178.5	4.81	NA

SAMPLES

SAMPLE #	ANALYSIS	PRESERV	CONTAINER	LOT #	LAB
240528 1430 C	8260	ICE. HCL	3 VOMC VIALS	27501	AL
1431 C	8260 (FB)	"	"		"
1440 C	607	ICE. HN	1 LT AMBER	01126101	SRL
1450 C	TOTAL METALS	ICE. HNO_3	2-125 mL Poly	21792622	AL

Continued from page NA

Read and Understood By

5-28-24

A-6

5-29-24

Date 5-30-24

WSTF CHAIN OF CUSTODY RECORD

Laboratory: ALS PO# 23EC002B

Address shipping questions to:
- ☐ Lori Minnick, 575-524-5119
- ☐ Other _____, 575-524-_____

Send sample receipt confirmation and analytical reports to:
- ☒ Stephanie Portillo stephanie.portillo@nasa.gov
- ☐ Other
- ☐ Other

Analytical Requirements: Method 8260D VOA

Special Instructions

Return coolers and reusable packaging materials within 14 days as required in statement of work to:

Return Address:

NASA WSTF Environmental Department
12600 NASA Road; Bldg. 120
Las Cruces, NM 88012
Attn: Lori Minnick

Sample Number	Sample Location	# of Containers	Sample Matrix*	Analytical Requirements	Charge Number (WSTF Use Only)	Comments
240528084OC	400-GV-125	3	A	X	HWMU	
240528041C	"	3	A	X	"	
240528042C	"	3	A	X	"	
240528070OA	400-FV-131	3	A	X	"	
240528052A	"	3	A	X	"	
240528053A	"	3	A	X	"	
240528054A	"	3	A	X	"	
240528102A	400-EV-131	3	A	X	"	
240528103A	"	3	A	X	"	
240528101OC	400-JV-150	3	A	X	"	
240528101IC	"	3	A	X	"	
240528143OC	400-HV-147	3	A	X	"	Bubbles: 2 of 3

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
[signature]	5-30-24 / 1100 HRS	[signature]	5/31/24 0715

* Sample Matrix: A – Aqueous; G – Gaseous; S – Solid

R2404650 5
NASA/WSTF/Navarro
White Sands Test Facility

Date 5-30-24

WSTF CHAIN OF CUSTODY RECORD

Laboratory: ALS PO# 23EC002B

Address shipping questions to:
- ☐ Lori Minnick, 575-524-5119
- ☐ Other _____, 575-524-_____

Send sample receipt confirmation and analytical reports to:
- ☒ Stephanie Portillo stephanie.portillo@nasa.gov
- ☐ Other
- ☐ Other

Analytical Requirements: Method 8260 VOA

Special Instructions

Return coolers and reusable packaging materials within 14 days as required in statement of work to:

Return Address:

NASA WSTF Environmental Department
12600 NASA Road; Bldg. 120
Las Cruces, NM 88012
Attn: Lori Minnick

Sample Number	Sample Location	# of Containers	Sample Matrix*	Analytical Requirements	Charge Number (WSTF Use Only)	Comments
240528143IC	400-HV-147	3	A	X	HWMU	Bubbles: A113
240529070OA	PL-12-570	3	A	X	X008	
240529093 2A	"	3	A	X	"	
240529093 3A	"	3	A	X	"	
240529141 0A	PL-12-800	3	A	X	"	
240529141 1A	"	3	A	X	"	

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
[signature]	5-30-24 / 1100 Hrs	[signature]	5/31/24 0715

* Sample Matrix: A – Aqueous; G – Gaseous; S – Solid

R2404650 5
NASA/WSTF/Navarro
White Sands Test Facility

WSTF CHAIN OF CUSTODY RECORD

Date 5-29-24

Laboratory: SwRI PO# 23EC004B

Address shipping questions to:
- ☐ Lori Minnick, 575-524-5119
- ☐ Other _____, 575-524-_____

Send sample receipt confirmation and analytical reports to:
- ☒ Stephanie Portillo stephanie.portillo@nasa.gov
- ☐ Other
- ☐ Other

Analytical Requirements: Analytes NDMA/DMN Method 1607 BROMACIL

Special Instructions

Return coolers and reusable packaging materials within 14 days as required in statement of work to:

Return Address:

NASA WSTF Environmental Department
12600 NASA Road; Bldg. 120
Las Cruces, NM 88012
Attn: Lori Minnick

Sample Number	Sample Location	# of Containers	Sample Matrix*	Analytes NDMA/DMN Method 1607 BROMACIL	Charge Number (WSTF Use Only)	Comments
240528084 3C	400-GV-125	1	A	X	HWMU	
240528084 4C	"	1	A	X	"	
240528085 5A	400-FV-131	1	A	X	"	
240528085 6A	"	1	A	X	"	
240528100 4A	400-EV-131	1	A	X	"	
240528101 2C	400-JV-150	1	A	X	"	
240528144 0C	400-HV-147	1	A	X	"	

Client: Navarro Research and Engineering Inc.
SRR # 71222
Project # 26040.07.012
Case: 23EC004B
VTSR: 05/30/24
Sample(s) Received: Intact
Temperature: 1.8°C SN # 029926

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
[signature]	5-29-24 1100 HRS	[signature] SwRI	05.30.24 08:30

* Sample Matrix: A – Aqueous; G – Gaseous; S – Solid

A-9

WSTF CHAIN OF CUSTODY RECORD

Date 5-30-24

Laboratory: ALS PO# 23EC002B

Address shipping questions to:

☑ Lori Minnick, 575-524-5119

☐ Other _____, 575-524-_____

Send sample receipt confirmation and analytical reports to:

☒ Stephanie Portillo stephanie.portillo@nasa.gov

☐ Other

☐ Other

Special Instructions

Return coolers and reusable packaging materials within 14 days as required in statement of work to:

Return Address:

NASA WSTF Environmental Department
12600 NASA Road; Bldg. 120
Las Cruces, NM 88012
Attn: Lori Minnick

Sample Number	Sample Location	# of Containers	Sample Matrix*	Analytical Requirements: Analytes / Method: TOTAL VOCs						Charge Number (WSTF Use Only)	Comments
2405280845C	400-GV-125	2	A	X						HWMU	
2405280846C	"	2	A	X						"	
2405280857A	400-FV-131	2	A	X						"	
2405280858A	"	2	A	X						"	
2405281005A	400-EV-131	2	A	X						"	
2405281013C	400-JV-150	2	A	X						"	
2405281450C	400-HV-147	2	A	X						"	

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	5-30-24 / 1100HRS	[signature]	5/31/24 07:15

* Sample Matrix: A – Aqueous; G – Gaseous; S – Solid

R2404651 5
NASA/WSTF/Navarro
White Sands Test Facility

Craig Del Ferraro present. Weather is clear & warm. Soil/Vapor samples will collected from various well locations throughout the 400 area. Gas sample will be collected using Summa canisters. Parameters will be monitored using the Landtech GA5000 gas instrument. This instrument was calibrated prior to use.

Atmospheric reading: 12.45

400-EV-131-10'
Time - 2405281000
CH_4 - 0.0%
CO_2 - 2.6%
O_2 - 18.2%
Canister # 15501414
Final canister pressure: 0

400-EV-131-50'
Time - 2405281006
CH_4 - 0.0%
CO_2 - 2.0%
O_2 - 18.0%
Canister # 15500194
Final canister pressure: -2

400-EV-131-50' (FB)
Time - 2405281011
Canister # 15501107
Final canister pressure: 0

400-EV-131-100'
Time - 2405281017
CH_4 - 0.0%
CO_2 - 1.9%
O_2 - 18.2%
Canister # 15500982
Final canister pressure: -1

400-EV-131-130'
Time - 2405281028
CH_4 - 0.0%
CO_2 - 1.6%
O_2 - 17.7%
Canister # 15C00302
Final canister pressure: 0

Continued from page N/A

Read and Understood By

Craig Del Ferraro 5/28/24 A-11 5/30/24
Signed Date Signed Date

400-EV-131-130' (Dup.)
Time - 2405281032
CH_4 - 0.0%
CO_2 - 1.6%
O_2 - 17.9%

Canister # 1SC00485
Final canister pressure: -2

400-HV-147-45' (TB)
Time - 2405281245

Canister # 1SC01366
Final canister pressure: N/A

400-HV-147-45'
Time - 2405281310
CH_4 - 0.0%
CO_2 - 1.3%
O_2 - 19.8%

Canister # 1SS00902
Final canister pressure: -1

400-HV-147-12'
Time - 2405281258
CH_4 - 0.0%
CO_2 - 1.8%
O_2 - 19.9%

Canister # 1SS00597
Final canister pressure: Ø

400-HV-147-95'
Time - 2405281326
CH_4 - 0.0%
CO_2 - 2.1%
O_2 - 18.5%

Canister # 1SS01012
Final canister pressure: Ø

400-HV-147-130'
Time - 2405281337
CH_4 - 0.0%
CO_2 - 4.8%
O_2 - 13.9%

Canister # 1SS00078
Final canister pressure: -2

Continued from page 63

Read and Understood By

Craig Del Terzo 5/28/24 Date
Signed

5/30/2 Date
Signed

PROJECT 400 Area Soil/Vapor sampling 5/28/24 Notebook No. D32#132(B) 6

Continued from page 64

400-HV-147-130' (FB)
Time - 2405281344
Canister # 1SC01055
Final canister pressure: Ø

400-GV-125-10'
Time - 2405280826
CH_4 - 0.0%
CO_2 - 1.3%
O_2 - 19.1%
Canister # 1SS01570
Final canister pressure: Ø

400-GV-125-10' (Dupl.)
Time - 2405280830
CH_4 - 0.0%
CO_2 - 1.3%
O_2 - 19.1%
Canister # 1SC01032
Final canister pressure: -1

400-GV-125-46'
Time - 2405280836
CH_4 - 0.0%
CO_2 - 1.9%
O_2 - 18.5%
Canister # 1SS01292
Final canister pressure: -1

400-GV-125-105'
Time - 2405280843
CH_4 - 0.0%
CO_2 - 3.4%
O_2 - 13.9%
Canister # 1SC00368
Final canister pressure: Ø

400-GV-125-105' (FB)
Time - 2405280846
Canister # 1SC00428
Final canister pressure: Ø

400-GV-125-120'
Time - 2405280853
CH_4 - 0.0%
CO_2 - 2.5%
O_2 - 14.6%
Canister # 1SS00155
Final canister pressure: -1

Continued from page 64

Read and Understood By

Craig Del Favero 5/28/24 A-13 5/30/24

Signed Date Date

400-IV-123-10'
Time - 2405290850
CH_4 - 0.0%
CO_2 - 0.4%
O_2 - 20.4%

Canister # 1SS01692
Final canister pressure: -1

400-IV-123-45'
Time - 2405290858
CH_4 - 0.0%
CO_2 - 0.5%
O_2 - 20.0%

Canister # 1SS01312
Final canister pressure: 0

400-IV-123-45' (FB)
Time - 2405290859

Canister # 1SS01289
Final canister pressure: 0

400-IV-123-80'
Time - 2405290905
CH_4 - 0.0%
CO_2 - 0.2%
O_2 - 19.1%

Canister # 1SS01398
Final canister pressure: -2

400-IV-123-118'
Time - 2405290912
CH_4 - 0.0%
CO_2 - 1.1%
O_2 - 18.9%

Canister # 1SS01407
Final canister pressure: -1

400-IV-123-118' (Dup.)
Time - 2405290919
CH_4 - 0.0%
CO_2 - 1.1%
O_2 - 18.9%

Canister # 1SS01614
Final canister pressure: 0

Continued from page 65

Read and Understood By

Craig DelTorro
Signed
5/29/24
Date
A-14

Signed
5/30
Date

400-JV-150-12.5' (TB)
Time - 2405280915

Canister # 1SC01217
Final canister pressure: ~~-6~~ N/A

400-JV-150-12.5'
Time - 2405280919
CH_4 - 0.0%
CO_2 - 1.8%
O_2 - 18.5%

Canister # 1SC01141
Final canister pressure: -1

400-JV-150-50'
Time - 2405280925
CH_4 - 0.0%
CO_2 - 2.8%
O_2 - 18.0%

Canister # 1SS01584
Final canister pressure: 0

400-JV-150-50' (FB)
Time - 2405280928

Canister # 1SC00134
Final canister pressure: 0

400-JV-150-100'
Time - 2405280934
CH_4 - 0.0%
CO_2 - 2.7%
O_2 - 17.6%

Canister # 1SS00934
Final canister pressure: -2

400-JV-150-145'
*N/A - well blocked or obstructed. Unable to obtain any readings from the Landtech.

400-FV-131-15'
Time - 2405280810
CH_4 - 0.0%
CO_2 - 0.8%
O_2 - 20.3%

Canister # 1SCC0242
Final canister pressure: 0

Continued from page 66

Read and Understood By

Craig DelTerzo Signed 5/28/24 Date A-15

Signed 5/30/2: Date

400-FV-131-63'
Time - 2405280816
CH_4 - 0.0%
CO_2 - 2.0%
O_2 - 19.0%

Canister #1SS00168
Final canister pressure: 0

*400-FV zones 104' and 130' were blocked and/or obstructed, - unable to obtain any readings from the pump.

400-KV-142-12.5'
Time - 2405290940
CH_4 - 0.0%
CO_2 - 0.8%
O_2 - 20.2%

Canister #1SC00810
Final canister pressure: -1

400-KV-142-12.5' (Dupl.)
Time - 2405290945
CH_4 - 0.0%
CO_2 - 0.8%
O_2 - 20.2%

Canister #1SC01279
Final canister pressure: 0

400-KV-142-50'
Time - 2405290952
CH_4 - 0.0%
CO_2 - 1.7%
O_2 - 19.0%

Canister #1SS00848
Final canister pressure: 0

400-KV-142-100'
Time - 2405291000
CH_4 - 0.0%
CO_2 - 2.0%
O_2 - 18.2%

Canister #1SS01006
Final canister pressure: -1

400-KV-142-100' (FB)
Time - 2405291001

Canister #1SS00145
Final canister pressure: 0

Continued from page 67

Read and Understood By

Craig DelZenno 5/29/24
Signed Date

A-16

5/30/24
Date

400-KV-~~137~~ CO 142-137'
Time - ~~2405291007~~ CO
CH4 - N/A
CO2 - N/A } well plugged or blocked
O2 - N/A } unable to obtain any readings.

Canister # 1SC00114
Final canister pressure: N/A

400-LV-125-10' (TB)
Time - 2405291045

Canister # 1SS00958
Final canister pressure: N/A

400-LV-125-10'
Time - 2405291046
CH4 - 0.0%
CO2 - 0.8%
O2 - 20.2%

Canister # 1SS01681
Final canister pressure: Ø

400-LV-125-50'
Time - 2405291053
CH4 - 0.0%
CO2 - 1.1%
O2 - 20.0%

Canister # 1SS01699
Final canister pressure: Ø

400-LV-125-95'
Time - 2405291100
CH4 - 0.0%
CO2 - 1.3%
O2 - 19.4%

Canister # 1SS01447
Final canister pressure: Ø

400-LV-125-122'
Time - 2405291107
CH4 - 0.0%
CO2 - 1.0%
O2 - 19.1%

Canister # 1SS01327
Final canister pressure: Ø

Continued from page 68

Read and Understood By

Craig Del Terzo Signed 5/29/24 Date A-17 Signed 5/30/2 Date

400-SV-05-10'
Time - 2405291015
CH_4 - 0.0%
CO_2 - 0.6%
O_2 - 20.0%

Canister #1SS00999
Final canister pressure: Ø

400-SV-05-50'
Time - 2405291021
CH_4 - 0.0%
CO_2 - 1.2%
O_2 - 19.2%

Canister #1SS00074
Final canister pressure: Ø

400-SV-05-50' (Dupl.)
Time - 2405291025
CH_4 - 0.0%
CO_2 - 1.2%
O_2 - 19.2%

Canister #1SS00881
Final canister pressure: -1

400-SV-05-100'
Time - 2405291031
CH_4 - 0.0%
CO_2 - 1.4%
O_2 - 18.8%

Canister #1SS00508
Final canister pressure: Ø

400-SV-02-10'
Time - 2405291315
CH_4 - 0.0%
CO_2 - 1.1%
O_2 - 19.7%

Canister #1SS01554
Final canister pressure: Ø

400-SV-02-50'
Time - 2405291321
CH_4 - 0.0%
CO_2 - 1.4%
O_2 - 19.1%

Canister #1SS01282
Final canister pressure: -1

Continued from page 69

Read and Understood By

Craig Del Zenno 5/29/24 A-18 [signature] 5/30/2
Signed Date Signed Date

400-SV-02-100'
Time - 2405291328
CH_4 - 0.0%
CO_2 - 1.6%
O_2 - 18.5%

Canister # 1SS01544
Final canister pressure: 0

400-SV-03-10'
Time - 2405291345
CH_4 - 0.0%
CO_2 - 1.3%
O_2 - 18.7%

Canister # 1SS01563
Final canister pressure: 0

400-SV-03-50'
Time - 2405291352
CH_4 - 0.0%
CO_2 - 1.5%
O_2 - 18.3%

Canister # 1SS00784
Final canister pressure: 0

400-SV-03-92'
Time - 2405291400
CH_4 - 0.0%
CO_2 - 1.8%
O_2 - 18.0%

Canister # 1SC00687
Final canister pressure: -2

400-SV-07-10'
Time - 2405300910
CH_4 - 0.0%
CO_2 - 2.2%
O_2 - 18.5%

Canister # 1SS00494
Final canister pressure: -1

400-SV-07-45'
Time - 2405300916
CH_4 - 0.0%
CO_2 - 2.7%
O_2 - 17.9%

Canister # 1SS00584
Final canister pressure: -1

Continued from page 70

Read and Understood By

Craig Del Favero 5/30/24 A-19 [signature] 5/30/24
Signed Date Signed Date

400-SV-07-100'
Time - 2405300923
CH_4 - 0.0%
CO_2 - 3.0%
O_2 - 17.5%
Canister # 1SS00263
Final canister pressure: Ø

400-SV-07-100' (FB)
Time - 2405300928
Canister # 1SS01200
Final canister pressure: Ø

400-SV-09-10'
Time - 2405300800
CH_4 - 0.0%
CO_2 - 0.9%
O_2 - 20.1%
Canister # 1SC00886
Final canister pressure: Ø

400-SV-09-45'
Time - 2405300808
CH_4 - 0.0%
CO_2 - 1.9%
O_2 - 19.2%
Canister # 1SS00253
Final canister pressure: Ø

400-SV-09-104'
Time - 2405300815
CH_4 - 0.0%
CO_2 - 2.3%
O_2 - 18.5%
Canister # 1SS00517
Final canister pressure: Ø

400-SV-10-10'
Time - 2405300827
CH_4 - 0.0%
CO_2 - 1.0%
O_2 - 19.5%
Canister # 1SS00522
Final canister pressure: -2

Continued from page 71

Read and Understood By

Craig Del Zenno 5/30/24 A-20 5/30/24
Signed Date Date

400-SV-10-50'
Time - 2405300834
CH_4 - 0.0%
CO_2 - 1.8%
O_2 - 18.5%

Canister # 1SC00864
Final canister pressure: -1

400-SV-10-50' (Dupl.)
Time - 2405300842
CH_4 - 0.0%
CO_2 - 1.8%
O_2 - 18.5%

Canister # 1SS00072
Final canister pressure: 0

400-SV-10-100'
Time - 2405300850
CH_4 - 0.0%
CO_2 - 2.3%
O_2 - 14.5%

Canister # 1SC00803
Final canister pressure: 0

400-SV-10-125'
Time - 2405300856
CH_4 - 0.0%
CO_2 - 2.9%
O_2 - 12.7%

Canister # 1SC00312
Final canister pressure: 0

400-SV-15-10'
Time - 2405290815
CH_4 - 0.0%
CO_2 - 0.5%
O_2 - 20.7%

Canister # 1SS00860
Final canister pressure: 0

400-SV-15-10' (FB)
Time - 2405290816

Canister # 1SC01438
Final canister pressure: 0

Continued from page 72

Read and Understood By

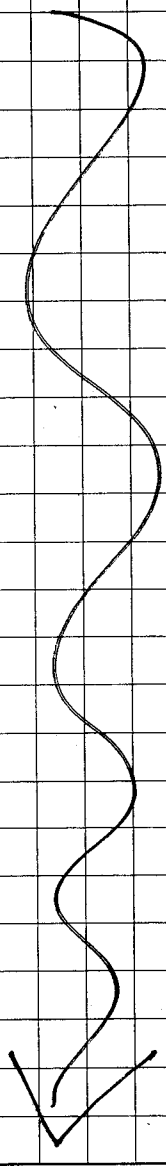
Craig Del Zenno 5/30/24 A-21 5/30/24
Signed Date Signed Date

400-SV-15-50'
Time- 2405290826
CH4 - 0.0%
CO2 - 0.9%
O2 - 20.1%

Canister # 1SC01125
Final canister pressure: -1

400-SV-15-90'
Time- 2405290834
CH4 - 0.0%
CO2 - 1.3%
O2 - 19.2%

Canister # 1SS01302
Final canister pressure: -1



Continued from page 73

Read and Understood By

Craig Delzeno
Signed
5/29/24
Date

A-22

Signed
5/30/24
Date

WSTF CHAIN OF CUSTODY RECORD

Date 5/30/24 P2402249 Page 1 of 7

Laboratory: ALS PO# 23EC017B

Address shipping questions to:
☐ Lori Minnick, 575-524-5119
☑ Other GEOFF GILES, 575-524-5352 575-635-1284

Send sample receipt confirmation and analytical reports to:
☒ Stephanie Portillo stephanie.portillo@nasa.gov
☐ Other
☐ Other

Special Instructions
Return coolers and reusable packaging materials within 14 days as required in statement of work to:
Return Address:
NASA WSTF Environmental Department
12600 NASA Road; Bldg. 120
Las Cruces, NM 88012
Attn: Lori Minnick

	Sample Number	Sample Location	# of Containers	Sample Matrix*	Analytical Requirements: Method 10-15 / Analytes VOC	Charge Number (WSTF Use Only)	Comments
1	2405280810	400-FV-131 15'	1	G	X	23EE1HWKU	1SC00242 CANISTER FINAL PRESSURE = 0
2	2405280816	400-FV-131 63'	1	G	X		1SS00168 " " " = 0
3	2405280826	400-GV-125 10'	1	G	X		1SS01570 " " " = 0
4	2405280830	400-GV-125 10'	1	G	X		1SC01032 " " " = -1
5	2405280836	400-GV-125 46'	1	G	X		1SS01292 " " " = -1
6	2405280843	400-GV-125 105'	1	G	X		1SC00368 " " " = 0
7	2405280846	400-GV-125 105'	1	G	X		1SC00428 " " " = 0
8	2405280853	400-GV-125 120'	1	G	X		1SS00155 " " " = -1

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
	5/30/24 1330		
			6.5.24 / 1082

* Sample Matrix: A – Aqueous; G – Gaseous; S – Solid

WSTF CHAIN OF CUSTODY RECORD

Date 5/30/24 — P2402249 — Page 2 of 7

Laboratory: ALS — PO# 23ECO17B

Address shipping questions to:
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- ☑ Other GEOFF GILES 575-635-1284, 575-524-5352

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- ☐ Other
- ☐ Other

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12600 NASA Road; Bldg. 120
Las Cruces, NM 88012
Attn: Lori Minnick

	Sample Number	Sample Location	# of Containers	Sample Matrix*	Analytical Requirements: Method TO-15, Analytes VOC	Charge Number (WSTF Use Only)	Comments
9	2405280915	400 -JV-150 12.5'	1	G	X	23EEHWMV	1SC01217 CANISTER FINAL PRESSURE = N/A
10	2405280919	400-JV-150 12.5'	1	G	X		1SC01141 " " " = -1
11	2405280925	400 -JV-150 50'	1	G	X		1SS01584 " " " = 0
12	2405280928	400 -JV-150 50'	1	G	X		1SC00136 " " " = 0
13	2405280934	400 -JV-150 100'	1	G	X		1SS00934 " " " = -2
14	2405281000	400 -EV-131 10'	1	G	X		1SS01414 " " " = 0
15	2405281006	400-EV-131 50'	1	G	X		1SS00194 " " " = -2
16	2405281011	400 -EV-131 50'	1	G	X		1SS01107 " " " = 0
17	2405281017	400 -EV-131 100'	1	G	X		1SS00982 " " " = -1
18	2405281028	400 -EV-131 130'	1	G	X		1SC00485 " " " = 0
19	2405281032	400 -EV-131 130'	1	G	X	↓	1SC00302 " " " = -2

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
[signature]	5/30/24 1330	[signature]	6.5.24 / 1002

* Sample Matrix: A – Aqueous; G – Gaseous; S – Solid

WSTF CHAIN OF CUSTODY RECORD

Date 5/30/24 — P2402249 — Page 3 of 7

Laboratory: ALS — PO# 23EC017B

Address shipping questions to:
- ☐ Lori Minnick, 575-524-5119
- ☑ Other GEOFF GILES, 575-524-5352 — 575-635-1284

Send sample receipt confirmation and analytical reports to:
- ☒ Stephanie Portillo stephanie.portillo@nasa.gov
- ☐ Other
- ☐ Other

Analytical Requirements: Analytes VOC; Method TO-15

Special Instructions

Return coolers and reusable packaging materials within 14 days as required in statement of work to:

Return Address:

NASA WSTF Environmental Department
12600 NASA Road; Bldg. 120
Las Cruces, NM 88012
Attn: Lori Minnick

	Sample Number	Sample Location	# of Containers	Sample Matrix*	Charge Number (WSTF Use Only)	Comments
20	2405281245	400-HV-147 45'	1	G	23EIHWMU	1SC01366 CANISTER FINAL PRESSURE = N/A
21	2405281310	400-HV-147 45'	1	G		1SS00902 " " " = -1
22	2405281258	400-HV-147 12'	1	G		1SS00597 " " " = 0
23	2405281326	400-HV-147 95'	1	G		1SS01012 " " " = 0
24	2405281337	400-HV-147 130'	1	G		1SS00078 " " " = -2
25	2405281344	400-HV-147 130'	1	G		1SC01055 " " " = 0
26	2405290815	400-SV-15 10'	1	G		1SS00860 " " " = 0
27	2405290816	400-SV-15 10'	1	G		1SC01438 " " " = 0
28	2405290826	400-SV-15 50'	1	G		1SC01125 " " " = -1
29	2405290834	400-SV-15 90'	1	G		1SS01302 " " " = -1

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
	5/30/24 1330		05.24/1002

* Sample Matrix: A – Aqueous; G – Gaseous; S – Solid

WSTF CHAIN OF CUSTODY RECORD

Date 5/30/24 — 2402249 — Page 4 of 7

Laboratory: ALS — PO# 23EC017B

Address shipping questions to:
- ☐ Lori Minnick, 575-524-5119
- ☒ Other GEOFF GILES, 575-524-5352 — 575-635-1284

Send sample receipt confirmation and analytical reports to:
- ☒ Stephanie Portillo stephanie.portillo@nasa.gov
- ☐ Other
- ☐ Other

Analytical Requirements: Method TO-15; Analytes 100

Special Instructions

Return coolers and reusable packaging materials within 14 days as required in statement of work to:

Return Address:

NASA WSTF Environmental Department
12600 NASA Road; Bldg. 120
Las Cruces, NM 88012
Attn: Lori Minnick

	Sample Number	Sample Location	# of Containers	Sample Matrix*	Charge Number (WSTF Use Only)	Comments
30	2405290850	400-IV-123 10'	1	G	23EEHWMU	15501692 CANISTER FINAL PRESSURE = -1
31	2405290858	400-IV-123 45'	1	G		15501312 " " " = 0
32	2405290859	400-IV-123 45'	1	G		15501289 " " " = 0
33	2405290905	400-IV-123 80'	1	G		15501398 " " " = -2
34	2405290912	400-IV-123 118'	1	G		15501407 " " " = -1
35	2405290919	400-IV-123 118'	1	G		15501614 " " " = 0
36	2405290940	400-KV-142 12.5'	1	G		15C00810 " " " = -1
37	2405290945	400-KV-142 12.5'	1	G		15C01279 " " " = 0
38	2405290952	400-KV-142 50'	1	G		15500848 " " " = 0
39	2405291000	400-KV-142 100'	1	G		15501006 " " " = -1
40	2405291001	400-KV-142 100'	1	G		15500145 " " " = 0

A26

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
[signature]	5/30/24 1330	[signature]	6.5.24 / 1002

* Sample Matrix: A – Aqueous; G – Gaseous; S – Solid

WSTF CHAIN OF CUSTODY RECORD

Date 5/30/24 — P2402249 — Page 5 of 7

Laboratory: ALS — PO# 23EC017B

Address shipping questions to:
- ☐ Lori Minnick, 575-524-5119
- ☑ Other GEOFF GILES, 575-524-5352 — 575-635-1284

Send sample receipt confirmation and analytical reports to:
- ☒ Stephanie Portillo stephanie.portillo@nasa.gov
- ☐ Other
- ☐ Other

Analytical Requirements: Analytes VOC; Method TO-15

Special Instructions

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Return Address:

NASA WSTF Environmental Department
12600 NASA Road; Bldg. 120
Las Cruces, NM 88012
Attn: Lori Minnick

	Sample Number	Sample Location	# of Containers	Sample Matrix*	Charge Number (WSTF Use Only)	Comments
41	2405291015	400-SV-05 10'	1	G	23EEHWMU	1SS00999 CANISTER FINAL PRESSURE = 0
42	2405291021	400-SV-05 50'	1	G		1SS00074 " " " = 0
43	2405291025	400-SV-05 50'	1	G		1SS00881 " " " = -1
44	2405291031	400-SV-05 100'	1	G		1SS00508 " " " = 0
45	2405291045	400-LV-125 10'	1	G		1SS00958 " " " = N/A
46	2405291046	400-LV-125 10'	1	G		1SS01681 " " " = 0
47	2405291053	400-LV-125 50'	1	G		1SS01699 " " " = 0
48	2405291100	400-LV-125 95'	1	G		1SS01447 " " " = 0
49	2405291107	400-LV-125 122'	1	G		1SS01327 " " " = 0
50	2405291315	400-SV-02 10'	1	G		1SS01554 " " " = 0
51	2405291321	400-SV-02 50'	1	G		1SS01282 " " " = -1
52	2405291328	400-SV-02 100'	1	G		1SS01544 " " " = 0

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
[signature]	5/30/24 1330	[signature]	05.24/ 1002

* Sample Matrix: A – Aqueous; G – Gaseous; S – Solid

WSTF CHAIN OF CUSTODY RECORD

Date 5/30/24 — 2402249 — Page 6 of 7

Laboratory: ALS — PO# 23EC017B

Address shipping questions to:
- ☐ Lori Minnick, 575-524-5119
- ☑ Other GEOFF GILES, 575-524-5352 — 575-635-1284

Send sample receipt confirmation and analytical reports to:
- ☒ Stephanie Portillo stephanie.portillo@nasa.gov
- ☐ Other
- ☐ Other

Analytical Requirements: Method TO-15; Analytes VOC

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Return Address:

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12600 NASA Road; Bldg. 120
Las Cruces, NM 88012
Attn: Lori Minnick

	Sample Number	Sample Location	# of Containers	Sample Matrix*	Charge Number (WSTF Use Only)	Comments
53	2405291345	400-SV-03 10'	1	G	23EEHWMU	1SS01563 CANISTER FINAL PRESSURE = 0
54	2405291352	400-SV-03 50'	1	G		1SS00784 " " " = 0
55	2405291400	400-SV-03 92'	1	G		1SC00687 " " " = -2
56	2405300800	400-SV-09 10'	1	G		1SC00886 " " " = 0
57	2405300808	400-SV-09 45'	1	G		1SS00252 " " " = 0
58	2405300815	400-SV-09 104'	1	G		1SS00517 " " " = 0
59	2405300827	400-SV-10 10'	1	G		1SS00522 " " " = -2
60	2405300834	400-SV-10 50'	1	G		1SC00864 " " " = -1
61	2405300842	400-SV-10 50'	1	G		1SS00072 " " " = 0
62	2405300850	400-SV-10 100'	1	G		1SC00803 " " " = 0
63	2405300856	400-SV-10 125'	1	G		1SC00312 " " " = 0

A-28

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
	5/30/24 1330		6.5.24 / 1002

* Sample Matrix: A – Aqueous; G – Gaseous; S – Solid

WSTF CHAIN OF CUSTODY RECORD

Date 5/30/24

P2402249 Page 7 of 7

Laboratory: ALS PO# 23EC017B

Address shipping questions to:

☐ Lori Minnick, 575-524-5119

☑ Other GEOFF GILES 575-635-1284, 575-524-5352

Send sample receipt confirmation and analytical reports to:

☒ Stephanie Portillo stephanie.portillo@nasa.gov

☐ Other

☐ Other

Analytical Requirements: Method TO-15; Analytes VOC

Special Instructions

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Return Address:

NASA WSTF Environmental Department
12600 NASA Road; Bldg. 120
Las Cruces, NM 88012
Attn: Lori Minnick

	Sample Number	Sample Location	# of Containers	Sample Matrix*	Charge Number (WSTF Use Only)	Comments
64	2405300910	400-SV-07 10'	1	G	23EECHW4U	1SS00494 CANISTER FINAL PRESSURE = -1
65	2405300916	400-SV-07 45'	1	G		1SS00584 " " " = -1
66	2405300923	400-SV-07 100'	1	G		1SS00263 " " " = 0
67 A29	2405300928	400-SV-07 100'	1	G		1SS01200 " " " = 0

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
	5/30/24 1330		6.5.24 / 1002

* Sample Matrix: A – Aqueous; G – Gaseous; S – Solid

Appendix B
Quality Assurance Report

National Aeronautics and Space Administration

Quality Assurance Report for White Sands Test Facility
400 Area Supplemental Groundwater and Soil Vapor Monitoring Report

Second Quarter 2024

November 2024

NM 8800019434

Report Submitted: November 2024

Report Prepared by:
Stephanie M. Portillo
Environmental Scientist IV, Quality Assurance Manager
Navarro Research and Engineering, Inc.

1.0 Introduction

The 400 Area Supplemental Groundwater and Soil Vapor Monitoring Report (400 Area GWSVMR) requires the preparation of an investigation report that includes soil analytical data reported. The Quality Assurance Report (QAR) prepared and reviewed by responsible environmental contractor data management personnel provides the following information:

- A summary of notable anomalies.
- A summary of notable data quality issues by analytical method, if any.
- A list of the sample events for soil vapor and groundwater samples collected in May 2024.
- The quantity and type of quality control samples collected or prepared in May 2024.
- Definitions of data qualifiers used in WSTF analytical data reporting.
- The quantity and type of data qualifiers applied to individual analytical results.
- A list of quality assurance narratives arranged by analytical method.
- A summary table of blank sample detections.

2.0 Data Quality

Samples collected during the second quarter of 2024 included soil vapor samples, groundwater samples, duplicates, field blanks, and trip blanks in accordance with the NMED approved 400 Area GWSVMP. Soil vapor samples and duplicates were obtained by evacuating three tubing volumes of stagnant vapor from soil vapor implants and stainless steel tubing prior to sample collection into laboratory-provided SUMMA canisters. Groundwater samples and duplicates were obtained by using low-flow purging procedures prior to sample collection from the dedicated low-flow bladder pump and disposable discharge tubing into laboratory-provided containers. Evacuation and purging procedures were completed in accordance with the 400 Area GWSVMP and the NMED-approved Groundwater Monitoring Plan.

2.1 Notable Anomalies

The following notable anomalies were identified:

- No field blanks were collected for nitrosamines by Environmental Protection Agency (EPA) Method 607 for this investigation inconsistent to the NMED-approved monitoring plan (GWSVMR).
- No field blanks were collected for total metals for this investigation inconsistent to the NMED-approved GWSVMR.
- Nine results for nitrosamines by EPA Method 607 were identified for reanalysis due to calibration exceedances for N-nitrosodimethylamine (NDMA), N-nitrodimethylamine (DMN), and bromacil. Only one result is retained for each sample specific analyte. Results for original or diluted samples, identified in the laboratory report case narrative (SwRI M607-035) were qualified as rejected accordingly and received an “R” flag. Affected samples area as follows:
    - 2405281004A (400-EV-131)
    - 2405280843C (400-GV-125)
    - 2405280844C (400-GV-125)
- 400-IV-123 groundwater was not sampled due to insufficient water.

No other notable anomalies are associated with the soil vapor or groundwater analytical data in this QAR.

3.0 Data Tables

Table 1 summarizes the soil vapor and groundwater sample events for the second quarter collected in May 2024. This report is based on data quality issues related to the sample events listed in Table 1. Table 2 through Table 7 contain information related to the sample events identified in Table 1. As specified by the GWSVMR, specific quality control samples are utilized to assess the quality of analytical data. Table 2 presents the quantity of quality control samples collected for each analytical method. Table 3 compares the quality control sample percentages collected to the requirements in the GWSVMR. When data quality criteria are not met, data qualifiers are applied to the data. Definitions of data qualifiers used for WSTF chemical analytical data are listed in Table 4. Table 5 and Table 6 present the total number of individual result records and summarize the quantity of field and laboratory data qualifiers assigned to individual analyte result records in the White Sands Test Facility analytical database. Table 7 provides all quality assurance narratives associated with the sample events in Table 1. Narratives associated with qualified data are identified by bold text in Table 7.

Table 1 – Sample Events for May 2024

Sample Location	Depth (ft bgs)	Event Date	Sample Type
400-EV	10	05/28/24	SV
	7.5	05/28/24	SV
	100	05/28/24	SV
	130	05/28/24	SV
	131	05/28/24	GW
400-FV	15	05/28/24	SV
	63	05/28/24	SV
	131	05/28/24	GW
400-GV	10	05/28/24	SV
	46	05/28/24	SV
	105	05/28/24	SV
	120	05/28/24	SV
	125	05/28/24	GW
400-HV	12	05/28/24	SV
	45	05/28/24	SV
	95	05/28/24	SV
	130	05/28/24	SV
	147	05/28/24	GW
400-IV	10	05/29/24	SV
	45	05/29/24	SV
	80	05/29/24	SV
	118	05/29/24	SV
400-JV	2.5	05/28/24	SV
	50	05/28/24	SV
	100	05/28/24	SV
	150	05/28/24	GW
400-KV	2.5	05/29/24	SV
	50	05/29/24	SV
400-KV	100	05/29/24	SV
400-LV	10	05/29/24	SV
	50	05/29/24	SV
	95	05/29/24	SV
	122	05/29/24	SV
400-SV-02	10	05/29/24	SV
	50	05/29/24	SV
	100	05/29/24	SV
400-SV-05	10	05/29/24	SV
	50	05/29/24	SV
	92	05/29/24	SV
400-SV-03	10	05/29/24	SV
	50	05/29/24	SV
	100	05/29/24	SV
400-SV-07	10	05/30/24	SV
	45	05/30/24	SV
	100	05/30/24	SV
400-SV-09	10	05/30/24	SV
	45	05/30/24	SV
	104	05/30/24	SV
400-SV-10	10	05/30/24	SV
	50	05/30/24	SV
	100	05/30/24	SV
	125	05/30/24	SV
400-SV-15	10	05/29/24	SV
	50	05/29/24	SV
	90	05/29/24	SV

Table 2 – Quantity of Quality Control Samples

Method	Sample Type	Samples	Field Blanks	Trip Blanks	Duplicates	Matrix Spikes
Nitrosamines by EPA Method 607	**GW**	**5**	**---**	**---**	**2**	**---**
Volatile Organics by SW-846 Method 8260C	**GW**	**5**	**5**	**1**	**2**	**---**
Total Metals by Various SW-846 Methods	**GW**	**5**	**---**	**---**	**2**	**---**
Soil Gas - Volatile Organic Compounds	**SV**	**50**	**8**	**3**	**6**	**---**

Table 3 – Quality Control Sample Percentages

Quality Control Requirement	Requirement	Samp. Qty.	QC Qty.	QC %
Nitrosamines Field Blanks	2%	5	---	**---**
Nitrosamines Trip Blanks	N/A	5	---	**N/A**
Nitrosamines Duplicates	10%	5	2	**40%**
Volatile Organics Field Blanks	1 per sample event	5	5	**100%**
Volatile Organics Trip Blanks	1 per shipment	5	1	**N/A**
Volatile Organics Duplicates	10%	5	2	**40%**
Total Metals Field Blanks	5%	5	---	**---**
Total Metals Trip Blanks	N/A	5	---	**N/A**
Total Metals Duplicates	10%	5	2	**40%**
Soil Gas Field Blanks	NA	50	8	**16%**
Soil Gas Trip Blanks	NA	50	3	**6%**
Soil Gas Duplicates	NA	50	6	**12%**

Table 4 – Definitions of Data Qualifiers

Qualifier	Definition
*	User defined qualifier. See quality assurance narrative.
A	The result of an analyte for a laboratory control sample (LCS), initial calibration verification (ICV) or continuing calibration verification (CCV) was outside standard limits.
AD	Relative percent difference for analyst (laboratory) duplicates was outside standard limits.
D	The reported result is from a dilution.
EB	The analyte was detected in the equipment blank.
FB	The analyte was detected in the field blank.
G	The result is an estimated value greater than the upper calibration limit.
i	The result, quantitation limit, and/or detection limit may have been affected by matrix interference.
J	The result is an estimated value less than the quantitation limit, but greater than or equal to the detection limit.
NA	The value/result was either not analyzed for or not applicable.
ND	The analyte was not detected above the detection limit.
Q	The result for a blind control sample was outside standard limits.
QD	The relative percent difference for a field duplicate was outside standard limits.
R	The result is rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.
RB	The analyte was detected in the method blank.

Qualifier	Definition
S	The result was determined by the method of standard addition.
SP	The matrix spike recovery and/or the relative percent difference for matrix spike duplicates was outside standard limits.
T	The sample was analyzed outside the specified holding time or temperature.
TB	The analyte was detected in the trip blank.
TIC	The analyte was tentatively identified by a GC/MS library search and the amount reported is an estimated value.

Table 5 – Quantity of Field Based Data Qualifiers Assigned to Individual Result Records

Method	Total Result Records	FB	EB	TB	Q	QD	SP	R
Nitrosamines by EPA Method 607	**30**	**---**	**---**	**---**	**---**	**---**	**---**	**9**
Volatile Organics by SW-846 Method 8260C	**462**	**---**	**---**	**---**	**---**	**---**	**---**	**---**
Total Metals by Various SW-846 Methods	**189**	**---**	**---**	**---**	**---**	**---**	**---**	**---**
Soil Gas - Volatile Organic Compounds	**3640**	**33**	**---**	**2**	**---**	**---**	**---**	**---**

Table 6 – Quantity of Laboratory-Based Data Qualifiers Assigned to Individual Result Records

Method	Total Result Records	*	A	AD	G	RB	T	D	i	J
Nitrosamines by EPA Method 607	**30**	**---**	**---**	**---**	**3**	**---**	**---**	**12**	**---**	**1**
Volatile Organics by SW-846 Method 8260C	**462**	**---**	**---**	**---**	**---**	**---**	**---**	**4**	**---**	**14**
Total Metals by Various SW-846 Methods	**189**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**41**
Soil Gas - Volatile Organic Compounds	**3640**	**---**	**---**	**---**	**---**	**12**	**---**	**30**	**---**	**466**

Table 7 – Quality Assurance Narratives

Location Sample ID	Event Date	Modified EPA Method 607
400-EV-131	05/28/24	For Total Metals, an incorrect sample number (1405281005A) was used by the analytical laboratory that does not match the logbook or the chain of custody. 2405281005A is the correct sample number from the field notes and is used in the database.
400-EV-131	**05/28/24**	**For Modified EPA Method 607, Samples 2405280843C (400-GV-125), 2405280844C (400-GV-125) and 2405281004A (400-EV-131) were all diluted 5-fold due to Bromacil exceeding calibration curve in the initial analysis. Original NDMA and DMN samples are retained and the diluted samples are flagged with an "R" and maintained in the Q_disk only.**
400-EV-131	**05/28/24**	**For Modified EPA Method 607, Samples 2405280843C (400-GV-125), 2405280844C (400-GV-125) and 2405281004A (400-EV-131) were all diluted 5-fold due to Bromacil exceeding calibration curve in the initial analysis. Diluted Bromacil samples are retained and the original samples are flagged with an "R" and maintained in the Q_disk only.**
400-FV-131	05/28/24	For Modified EPA Method 607, relative percent differences (RPD) for duplicate samples 2405280855A and 2405280856A were within control limits or below the calculable range.
400-GV-125	**05/28/24**	**For Modified EPA Method 607, Samples 2405280843C (400-GV-125), 2405280844C (400-GV-125) and 2405281004A (400-EV- 131) were all diluted 5-fold due to**

Location Sample ID	Event Date	Modified EPA Method 607
		Bromacil exceeding calibration curve in the initial analysis. Diluted Bromacil samples are retained and the original samples are flagged with an "R" and maintained in the Q_disk only.
400-GV-125	05/28/24	For Modified EPA Method 607, relative percent differences (RPD) for duplicate samples 2405280843C and 2405280844C were within control limits or below the calculable range.
400-GV-125	**05/28/24**	**For Modified EPA Method 607, Samples 2405280843C (400-GV-125), 2405280844C (400-GV-125) and 2405281004A (400-EV- 131) were all diluted 5-fold due to Bromacil exceeding calibration curve in the initial analysis. Original NDMA and DMN samples are retained and the diluted samples are flagged with an "R" and maintained in the Q_disk only.**
400-HV-147	**05/28/24**	**For Modified EPA Method 607, Sample 2405281440C (400-HV-147) was diluted 150-fold due to NDMA and DMN exceeding calibration curve. Due to the high dilution factor, surrogate result was not reported in the dilution analysis.**

Location Sample ID	Event Date	SW-846 Method 8260C
400-EV-131	05/28/24	For SW-846 Method 8260C, The upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
400-EV-131	05/28/24	For SW-846 Method 8260C, The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
400-EV-131	**05/28/24**	**For SW-846 Method 8260C, Unknown was detected in the field blank (2405281003A) at 9.8 ug/L.**
400-EV-131	**05/28/24**	**For SW-846 Method 8260C, CFC 21 (0.42 ug/L) in sample 2405281002A is an estimated value less than the quantitation limit, but greater than or equal to the detection limit.**
400-EV-131	**05/28/24**	**For SW-846 Method 8260C, one unknown compound is an estimated value and tentatively identified by a GC/MS library search in samples 2405281002A and 2405281003A.**
400-EV-131	05/28/24	For SW-846 Method 8260C, The upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
400-EV-131	**05/28/24**	**For SW-846 Method 8260C, CFC 11 (410 ug/L) in sample 2405281002A is a result of a 5-fold dilution.**
400-FV-131	05/28/24	For SW-846 Method 8260C, relative percent differences (RPD) for duplicate samples 2405280852A and 2405280853A were within control limits or below the calculable range.
400-FV-131	**05/28/24**	**For SW-846 Method 8260C, Unknown was detected in the trip blank (2405280700A) at 9.3 ug/L.**
400-FV-131	**05/28/24**	**For SW-846 Method 8260C, one unknown compound is an estimated value and tentatively identified by a GC/MS library search in samples 2405280700A, 2405280852A ,2405280853A, 2405280853A.**
400-FV-131	**05/28/24**	**For SW-846 Method 8260C, Unknown was detected in the field blank (2405280854A) at 11.0 ug/L.**
400-FV-131	**05/28/24**	**For SW-846 Method 8260C, TCE (0.65 ug/L and 0.63 ug/L) in samples 2405280852A and 2405280853A is an estimated value less than the quantitation limit, but greater than or equal to the detection limit.**
400-FV-131	05/28/24	For SW-846 Method 8260C, The upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the

Location Sample ID	Event Date	SW-846 Method 8260C
		analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
400-FV-131	05/28/24	For SW-846 Method 8260C, The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
400-FV-131	05/28/24	For SW-846 Method 8260C, The upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
400-GV-125	05/28/24	For SW-846 Method 8260C, relative percent differences (RPD) for duplicate samples 2405280840C and 2405280841C were within control limits or below the calculable range.
400-GV-125	**05/28/24**	**For SW-846 Method 8260C, Unknown was detected in the field blank (2405280842C) at 10.0 ug/L.**
400-GV-125	**05/28/24**	**For SW-846 Method 8260C, CFC 11 (200 ug/L and 190 ug/L) in samples 2405280840C and 2405280841C is a result of a 2.5-fold dilution.**
400-GV-125	**05/28/24**	**For SW-846 Method 8260C, one unknown compound is an estimated value and tentatively identified by a GC/MS library search in samples 2405280840C, 2405280841C, and 2405280842C.**
400-GV-125	05/28/24	For SW-846 Method 8260C, The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
400-GV-125	05/28/24	For SW-846 Method 8260C, The upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
400-GV-125	05/28/24	For SW-846 Method 8260C, The upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
400-GV-125	**05/28/24**	**For SW-846 Method 8260C, CFC 21 (0.42 ug/L) in sample 2405281002A is an estimated value less than the quantitation limit, but greater than or equal to the detection limit.**
400-HV-147	**05/28/24**	**For SW-846 Method 8260C, Unknown was detected in the field blank (2405281431C) at 9.7 ug/L.**
400-HV-147	05/28/24	For SW-846 Method 8260C, The upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
400-HV-147	05/28/24	For SW-846 Method 8260C, The upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
400-HV-147	05/28/24	For SW-846 Method 8260C, The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
400-HV-147	**05/28/24**	**For SW-846 Method 8260C, Chloroform (0.95 ug/L) and TCE (0.32 ug/L) in sample 2405281430C are estimated values less than the quantitation limit, but greater than**

Location Sample ID	Event Date	SW-846 Method 8260C
		or equal to the detection limit.
400-HV-147	**05/28/24**	**For SW-846 Method 8260C, one unknown compound is an estimated value and tentatively identified by a GC/MS library search in samples 2405281430C and 2405281431C.**
400-JV-150	**05/28/24**	**For SW-846 Method 8260C, CFC 11 (610 ug/L) in sample 2405281010C is a result of a 5-fold dilution.**
400-JV-150	**05/28/24**	**For SW-846 Method 8260C, Unknown was detected in the field blank (2405281011C) at 10.0 ug/L.**
400-JV-150	05/28/24	For SW-846 Method 8260C, The upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.
400-JV-150	05/28/24	For SW-846 Method 8260C, The upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.
400-JV-150	05/28/24	For SW-846 Method 8260C, The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
400-JV-150	**05/28/24**	**For SW-846 Method 8260C, CFC 123a (0.59 ug/L) and TCE (0.39 ug/L) in sample 2405281430C are estimated values less than the quantitation limit, but greater than or equal to the detection limit.**
400-JV-150	**05/28/24**	**For SW-846 Method 8260C, one unknown compound is an estimated value and tentatively identified by a GC/MS library search in samples 2405281010C and 2405281011C.**

Location Sample ID	Event Date	Total Metals
400-EV-131	**05/28/24**	**For Total Metals, multiple compounds in sample 2405281005A are estimated values less than the quantitation limit, but greater than or equal to the detection limit.**
400-FV-131	**05/28/24**	**For Total Metals, multiple compounds in samples 2405280857A and 2405280858A are estimated values less than the quantitation limit, but greater than or equal to the detection limit.**
400-FV-131	05/28/24	For Total Metals, an incorrect sample number (1405280857A) was used by the analytical laboratory that does not match the logbook or the chain of custody. 2405280857A is the correct sample number from the field notes and is used in the database.
400-FV-131	05/28/24	For Total Metals, an incorrect sample number (1405280858A) was used by the analytical laboratory that does not match the logbook or the chain of custody. 2405280858A is the correct sample number from the field notes and is used in the database.
400-FV-131	05/28/24	For Total Metals, relative percent differences (RPD) for duplicate samples 2405280857A and 2405280858A were within control limits or below the calculable range.
400-GV-125	05/28/24	For Total Metals, an incorrect sample number (1405280845C) was used by the analytical laboratory that does not match the logbook or the chain of custody. 2405280845C is the correct sample number from the field notes and is used in the database.
400-GV-125	05/28/24	For Total Metals, an incorrect sample number (1405280846C) was used by the analytical laboratory that does not match the logbook or the chain of custody. 2405280846C is the correct sample number from the field notes and is used in the database.
400-GV-125	**05/28/24**	**For Total Metals, multiple compounds in samples 2405280845C and 2405280846C are estimated values less than the quantitation limit, but greater than or equal to the detection limit.**
400-HV-147	05/28/24	For Total Metals, an incorrect sample number (1405281450C) was used by the analytical laboratory that does not match the logbook or the chain of custody. 2405281450C is the correct sample number from the field notes and is used in the database.

Location Sample ID	Event Date	Total Metals
400-HV-147	**05/28/24**	**For Total Metals, multiple compounds in sample 2405281450C are estimated values less than the quantitation limit, but greater than or equal to the detection limit.**
400-JV-150	**05/28/24**	**For Total Metals, multiple compounds in samples 2405281013C are estimated values less than the quantitation limit, but greater than or equal to the detection limit.**
400-JV-150	05/28/24	For Total Metals, an incorrect sample number (1405281013C) was used by the analytical laboratory that does not match the logbook or the chain of custody. 2405281013C is the correct sample number from the field notes and is used in the database.

Location Sample ID	Event Date	EPA Method TO-15 for Air
400-EV-010	05/28/24	For SW-846 Method TO-15 (Air) for sample (2405281000) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-EV-010	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405281000), the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-EV-010	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405281000) the analyte Freon 123a was searched for, but not found.**
400-EV-047.5	05/28/24	For SW-846 Method TO-15 (Air) for sample (2405281006) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-EV-047.5	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405281006), the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-EV-047.5	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405281006) the analyte Freon 123a was searched for, but not found.**
400-EV-047.5	05/28/24	For SW-846 Method TO-15 (Air) for sample (2405281011) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-EV-047.5	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405281011), the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-EV-047.5	**05/28/24**	**For the Soil Gas Method, 2-Butanone (Methyl Ethyl Ketone) was detected in the field blank (2405281011) at 0.5 ng/L. 2-Propanol was detected in the field blank (2405281011) at 7.5 ng/L. Acetone was detected in the field blank (2405281011) at 16.0 ng/L. Benzene was detected in the field blank (2405281011) at 0.73 ng/L. Carbon Disulfide was detected in the field blank (2405281011) at 1.7 ng/L. Carbon Tetrachloride was detected in the field blank (2405281011) at 0.42 ng/L. Chloromethane was detected in the field blank (2405281011) at 1.2 ng/L. Ethanol was detected in the field blank (2405281011) at 8.3 ng/L. Ethyl Benzene was detected in the field blank (2405281011) at 0.8 ng/L. Freon 11 was detected in the field blank (2405281011) at 1.3 ng/L. Freon 113 was detected in the field blank (2405281011) at 0.85 ng/L. Freon 12 was detected in the field blank (2405281011) at 2.4 ng/L.**

Location Sample ID	Event Date	EPA Method TO-15 for Air
400-EV-047.5	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405281011) the analyte Freon 123a was searched for, but not found.**
400-EV-100	05/28/24	For SW-846 Method TO-15 (Air) for sample (2405281017) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-EV-100	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405281017) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-EV-100	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405281017) the analyte Freon 123a was searched for, but not found.**
400-EV-100	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405281017) for analytes Freon 113 and Freon 11, the reported result is from a dilution.**
400-EV-130	05/28/24	For SW-846 Method TO-15 (Air) for sample (2405281028) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-EV-130	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405281028) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-EV-130	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405281028) the analyte Freon 123a was searched for, but not found.**
400-EV-130	05/28/24	For SW-846 Method TO-15 (Air) for sample (2405281032) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-EV-130	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405281032) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-EV-130	05/28/24	For SW-846 Method 8021B, relative percent differences (RPD) for duplicate samples 2405281028 and 2405281032 were within control limits or below the calculable range.
400-EV-130	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405281032) the analyte Freon 123a was searched for, but not found.**
400-FV-015	05/28/24	For SW-846 Method TO-15 (Air) for sample (2405280810) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-FV-015	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405280810) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-FV-015	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405280810) the analyte Freon 123a was searched for, but not found.**

Location Sample ID	Event Date	EPA Method TO-15 for Air
400-FV-063	05/28/24	For SW-846 Method TO-15 (Air) for sample (2405280816) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-FV-063	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405280816) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-FV-063	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405280816) the analyte Freon 123a was searched for, but not found.**
400-GV-010	05/28/24	For SW-846 Method TO-15 (Air) for sample (2405280826) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-GV-010	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405280826) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-GV-010	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405280826) the analyte Freon 123a was searched for, but not found.**
400-GV-010	05/28/24	For SW-846 Method TO-15 (Air) for sample (2405280830) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-GV-010	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405280830) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-GV-010	05/28/24	For SW-846 Method 8021B, relative percent differences (RPD) for duplicate samples 2405280826 and 2405280830 were within control limits or below the calculable range.
400-GV-010	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405280830) the analyte Freon 123a was searched for, but not found.**
400-GV-046	05/28/24	For SW-846 Method TO-15 (Air) for sample (2405280836) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-GV-046	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405280836) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-GV-046	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405280836) the analyte Freon 123a was searched for, but not found.**

Location Sample ID	Event Date	EPA Method TO-15 for Air
400-GV-105	05/28/24	For SW-846 Method TO-15 (Air) for sample (2405280843) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-GV-105	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405280843) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-GV-105	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405280843) the analyte Freon 123a was searched for, but not found.**
400-GV-105	05/28/24	For SW-846 Method TO-15 (Air) for sample (2405280846) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-GV-105	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405280846) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-GV-105	**05/28/24**	**For the Soil Gas Method, 2-Butanone (Methyl Ethyl Ketone) was detected in the field blank (2405280846) at 4.6 ng/L. 2-Hexanone was detected in the field blank (2405280846) at 0.83 ng/L. 2-Propanol was detected in the field blank (2405280846) at 4.5 ng/L. Acetone was detected in the field blank (2405280846) at 18.0 ng/L. Chloromethane was detected in the field blank (2405280846) at 1.5 ng/L. Ethanol was detected in the field blank (2405280846) at 3.7 ng/L. Freon 11 was detected in the field blank (2405280846) at 2.3 ng/L. Freon 113 was detected in the field blank (2405280846) at 1.6 ng/L. Freon 12 was detected in the field blank (2405280846) at 2.4 ng/L. Freon 123 was detected in the field blank (2405280846) at 2.6 ng/L. Toluene was detected in the field blank (2405280846) at 1.4 ng/L.**
400-GV-105	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405280846) the analyte Freon 123a was searched for, but not found.**
400-GV-120	05/28/24	For SW-846 Method TO-15 (Air) for sample (2405280853) analyte Freon 12 (230 ug/M3) results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-GV-120	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405280853) the samples were analyzed for volatile organic compounds and Freon 123, Freon 21 and Freon 123a as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-HV-012	05/28/24	For SW-846 Method TO-15 (Air) for sample (2405281258) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified. No

Location Sample ID	Event Date	EPA Method TO-15 for Air
400-HV-012	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405281258) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-HV-012	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405281258) the analyte Freon 123a was searched for, but not found.**
400-HV-045	05/28/24	For SW-846 Method TO-15 (Air) for sample (2405281245) analyte Trichloroethene (0.19 ug/M3) results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-HV-045	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405281245) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-HV-045	**05/28/24**	**For the Soil Gas Method, Trichloroethene was detected in the trip blank (2405281245) at 0.19 ng/L.**
400-HV-045	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405281245) the analyte Freon 123a was searched for, but not found.**
400-HV-045	05/28/24	For SW-846 Method TO-15 (Air) for sample (2405281310) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-HV-045	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405281310) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-HV-045	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405281310) the analyte Freon 123a was searched for, but not found.**
400-HV-095	05/28/24	For SW-846 Method TO-15 (Air) for sample (2405281326) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-HV-095	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405281326) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-HV-095	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405281326) the analyte Freon 123a was searched for, but not found.**
400-HV-095	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405281326) for analytes Freon 113 and Freon 11, the reported result is from a dilution.**

Location Sample ID	Event Date	EPA Method TO-15 for Air
400-HV-130	05/28/24	For SW-846 Method TO-15 (Air) for sample (2405281337) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-HV-130	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405281337) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-HV-130	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405281337) the analyte Freon 123a was searched for, but not found.**
400-HV-130	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405281337) for analytes Freon 113 and Freon 11, the reported result is from a dilution.**
400-HV-130	05/28/24	For SW-846 Method TO-15 (Air) for sample (2405281344) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-HV-130	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405281344) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-HV-130	**05/28/24**	**For the Soil Gas Method, 2-Butanone (Methyl Ethyl Ketone) was detected in the field blank (2405281344) at 120.0 ng/L. Benzene was detected in the field blank (2405281344) at 270.0 ng/L. Ethanol was detected in the field blank (2405281344) at 1200.0 ng/L. Freon 11 was detected in the field blank (2405281344) at 23000.0 ng/L. Freon 113 was detected in the field blank (2405281344) at 45000.0 ng/L. Freon 123 was detected in the field blank (2405281344) at 520.0 ng/L. Toluene was detected in the field blank (2405281344) at 950.0 ng/L. Trichloroethene was detected in the field blank (2405281344) at 230.0 ng/L.**
400-HV-130	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405281344) the analyte Freon 123a was searched for, but not found.**
400-IV-010	05/29/24	For SW-846 Method TO-15 (Air) for sample (2405290850) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-IV-010	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405290850) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified**
400-IV-010	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405290850) the analyte Freon 123a was searched for, but not found.**
400-IV-045	05/29/24	For SW-846 Method TO-15 (Air) for sample (2405290858) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-IV-045	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405281344) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**

Location Sample ID	Event Date	EPA Method TO-15 for Air
400-IV-045	05/29/24	For SW-846 Method TO-15 (Air) for sample (2405290858) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-IV-045	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405290858) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-IV-045	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405290858) the analyte Freon 123a was searched for, but not found.**
400-IV-045	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405290858) for analyte Freon 11, the reported result is from a dilution.**
400-IV-045	05/29/24	For SW-846 Method TO-15 (Air) for sample (2405290859) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-IV-045	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405290859) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-IV-045	**05/29/24**	**For the Soil Gas Method, 1,4-Dioxane was detected in the field blank (2405290859) at 0.5 ng/L. 2-Butanone (Methyl Ethyl Ketone) was detected in the field blank (2405290859) at 2.3 ng/L. Acetone was detected in the field blank (2405290859) at 22.0 ng/L. Benzene was detected in the field blank (2405290859) at 0.72 ng/L. Carbon Disulfide was detected in the field blank (2405290859) at 6.1 ng/L. Carbon Tetrachloride was detected in the field blank (2405290859) at 0.41 ng/L. Chloroform was detected in the field blank (2405290859) at 0.36 ng/L. Chloromethane was detected in the field blank (2405290859) at 1.2 ng/L. Cyclohexane was detected in the field blank (2405290859) at 0.76 ng/L. Ethanol was detected in the field blank (2405290859) at 6.2 ng/L. Freon 11 was detected in the field blank (2405290859) at 39.0 ng/L. Freon 113 was detected in the field blank (2405290859) at 3.3 ng/**
400-IV-045	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405290859) the analyte Freon 123a was searched for, but not found.**
400-IV-080	05/29/24	For SW-846 Method TO-15 (Air) for sample (2405290905) the analytes Freon 123 and Trichloroethene results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-IV-080	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405290905) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-IV-080	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405290905) the analyte Freon 123a was searched for, but not found.**
400-IV-080	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405290905) for the analyte Freon 11, the reported result is from a dilution.**

Location Sample ID	Event Date	EPA Method TO-15 for Air
400-IV-118	05/29/24	For SW-846 Method TO-15 (Air) for sample (2405290912) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-IV-118	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405290912) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-IV-118	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405290912) the analyte Freon 123a was searched for, but not found.**
400-IV-118	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405290912) for the analyte Freon 11, the reported result is from a dilution.**
400-IV-118	05/29/24	For SW-846 Method TO-15 (Air) for sample (2405290919) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-IV-118	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405290919) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-IV-118	05/29/24	For SW-846 Method 8021B, relative percent differences (RPD) for duplicate samples 2405290912 and 2405290919 were within control limits or below the calculable range.
400-IV-118	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405290919) the analyte Freon 123a was searched for, but not found.**
400-JV-012.5	05/28/24	For SW-846 Method TO-15 (Air) for sample (2405280915) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-JV-012.5	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405280915) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-JV-012.5	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405280915) the analyte Freon 123a was searched for, but not found.**
400-JV-012.5	**05/28/24**	**For the Soil Gas Method, 1,2,4-Trimethylbenzene was detected in the trip blank (2405280915) at 0.24 ng/L. 1,3,5-Trimethylbenzene was detected in the trip blank (2405280915) at 0.32 ng/L. 2-Propanol was detected in the trip blank (2405280915) at 1.9 ng/L. 4-Ethyltoluene was detected in the trip blank (2405280915) at 0.22 ng/L. Acetone was detected in the trip blank (2405280915) at 4.5 ng/L. Chloroform was detected in the trip blank (2405280915) at 0.19 ng/L.**
400-JV-012.5	05/28/24	For SW-846 Method TO-15 (Air) for sample (2405280919) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.

Location Sample ID	Event Date	EPA Method TO-15 for Air
400-JV-012.5	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405280919) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-JV-012.5	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405280919) the analyte Freon 123a was searched for, but not found.**
400-JV-050	05/28/24	For SW-846 Method TO-15 (Air) for sample (2405280925) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-JV-050	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405280925) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-JV-050	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405280925) the analyte Freon 123a was searched for, but not found.**
400-JV-050	05/28/24	For SW-846 Method TO-15 (Air) for sample (2405280928) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-JV-050	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405280928) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-JV-050	**05/28/24**	**For the Soil Gas Method, 2-Butanone (Methyl Ethyl Ketone) was detected in the field blank (2405280928) at 5.6 ng/L. 2-Hexanone was detected in the field blank (2405280928) at 1.2 ng/L. Acetone was detected in the field blank (2405280928) at 23.0 ng/L. Chloromethane was detected in the field blank (2405280928) at 1.6 ng/L. Ethanol was detected in the field blank (2405280928) at 4.1 ng/L. Freon 11 was detected in the field blank (2405280928) at 1.2 ng/L. Freon 113 was detected in the field blank (2405280928) at 0.57 ng/L. Freon 12 was detected in the field blank (2405280928) at 2.4 ng/L. Freon 123 was detected in the field blank (2405280928) at 2.1 ng/L.**
400-JV-050	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405280928) the analyte Freon 123a was searched for, but not found.**
400-JV-100	05/28/24	For SW-846 Method TO-15 (Air) for sample (2405280934) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.

Location Sample ID	Event Date	EPA Method TO-15 for Air
400-JV-100	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405280934) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-JV-100	**05/28/24**	**For SW-846 Method TO-15 (Air) for sample (2405280934) the analyte Freon 123a was searched for, but not found.**
400-KV-012.5	05/29/24	For SW-846 Method TO-15 (Air) for sample (2405290940) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-KV-012.5	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405290940) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-KV-012.5	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405290940) the analyte Freon 123a was searched for, but not found.**
400-KV-012.5	05/29/24	For SW-846 Method TO-15 (Air) for sample (2405290945) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-KV-012.5	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405290945) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-KV-012.5	05/29/24	For SW-846 Method 8021B, relative percent differences (RPD) for duplicate samples 2405290940 and 2405290945 were within control limits or below the calculable range.
400-KV-012.5	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405290945) the analyte Freon 123a was searched for, but not found.**
400-KV-050	05/29/24	For SW-846 Method TO-15 (Air) for sample (2405290952) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-KV-050	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405290952) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-KV-050	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405290952) the analyte Freon 123a was searched for, but not found.**
400-KV-100	05/29/24	For SW-846 Method TO-15 (Air) for sample (2405291000) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.

Location Sample ID	Event Date	EPA Method TO-15 for Air
400-KV-100	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405291000) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-KV-100	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405291000) the analyte Freon 123a was searched for, but not found.**
400-KV-100	05/29/24	For SW-846 Method TO-15 (Air) for sample (2405291001) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-KV-100	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405291001) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-KV-100	**05/29/24**	**For the Soil Gas Method, 1,4-Dioxane was detected in the field blank (2405291001) at 0.42 ng/L. 2-Butanone (Methyl Ethyl Ketone) was detected in the field blank (2405291001) at 2.5 ng/L. 2-Propanol was detected in the field blank (2405291001) at 7.9 ng/L. Acetone was detected in the field blank (2405291001) at 26.0 ng/L. Benzene was detected in the field blank (2405291001) at 2.1 ng/L. Carbon Tetrachloride was detected in the field blank (2405291001) at 0.38 ng/L. Chloromethane was detected in the field blank (2405291001) at 1.4 ng/L. Cyclohexane was detected in the field blank (2405291001) at 0.76 ng/L. Ethanol was detected in the field blank (2405291001) at 14.0 ng/L. Freon 11 was detected in the field blank (2405291001) at 2.5 ng/L. Freon 113 was detected in the field blank (2405291001) at 0.97 ng/L. Freon 12 was detected in the field blank (2405291001) at 2.4 ng/L. Freo**
400-KV-100	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405291001) the analyte Freon 123a was searched for, but not found.**
400-LV-010	**05/29/24**	**For the Soil Gas Method, Freon 11 was detected in the trip blank (2405291045) at 0.31 ng/L. Freon 113 was detected in the trip blank (2405291045) at 0.58 ng/L.**
400-LV-010	05/29/24	For SW-846 Method TO-15 (Air) for sample (2405291045) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-LV-010	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405291045) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-LV-010	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405291045) the analyte Freon 123a was searched for, but not found.**
400-LV-010	05/29/24	For SW-846 Method TO-15 (Air) for sample (2405291046) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.

Location Sample ID	Event Date	EPA Method TO-15 for Air
400-LV-010	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405291046) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-LV-010	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405291046) the analyte Freon 123a was searched for, but not found.**
400-LV-050	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405291053) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-LV-050	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405291053) the analyte Freon 123a was searched for, but not found.**
400-LV-050	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405291053) for analytes Freon 113 and Freon 11, the reported result is from a dilution.**
400-LV-050	05/29/24	For SW-846 Method TO-15 (Air) for sample (2405291053) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-LV-095	05/29/24	For SW-846 Method TO-15 (Air) for sample (2405291100) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-LV-095	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405291100) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-LV-095	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405291100) for analyte Freon 113, the reported result is from a dilution.**
400-LV-122	05/29/24	For SW-846 Method TO-15 (Air) for sample (2405291107) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-LV-122	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405291107) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-LV-122	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405291107) the analyte Freon 123a was searched for, but not found.**
400-SV-02-010	05/29/24	For SW-846 Method TO-15 (Air) for sample (2405291315) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.

Location Sample ID	Event Date	EPA Method TO-15 for Air
400-SV-02-010	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405291315) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-SV-02-010	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405291315) the analyte Freon 123a was searched for, but not found.**
400-SV-02-050	05/29/24	For SW-846 Method TO-15 (Air) for sample (2405291321) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-SV-02-050	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405291321) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-SV-02-050	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405291321) the analyte Freon 123a was searched for, but not found.**
400-SV-02-050	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405291321) for analyte Freon 113, the reported result is from a dilution.**
400-SV-02-100	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405291328) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-SV-02-100	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405291328) the analyte Freon 123a was searched for, but not found.**
400-SV-03-010	05/29/24	For SW-846 Method TO-15 (Air) for sample (2405291345) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-SV-03-010	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405291345) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-SV-03-010	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405291345) the analyte Freon 123a was searched for, but not found.**
400-SV-03-050	05/29/24	For SW-846 Method TO-15 (Air) for sample (2405291352) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.

Location Sample ID	Event Date	EPA Method TO-15 for Air
400-SV-03-050	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405291352) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-SV-03-050	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405291352) the analyte Freon 123a was searched for, but not found.**
400-SV-03-050	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405291352) for analytes Freon 113 and Freon 11, the reported result is from a dilution.**
400-SV-03-092	05/29/24	For SW-846 Method TO-15 (Air) for sample (2405291400) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-SV-03-092	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405291400) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-SV-03-092	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405291400) the analyte Freon 123a was searched for, but not found.**
400-SV-03-092	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405291400) for analyte Freon 113, the reported result is from a dilution.**
400-SV-05-010	05/29/24	For SW-846 Method TO-15 (Air) for sample (2405291015) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-SV-05-010	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405291015) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-SV-05-010	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405291015) the analyte Freon 123a was searched for, but not found.**
400-SV-05-050	05/29/24	For SW-846 Method TO-15 (Air) for sample (2405291021) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-SV-05-050	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405291021) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-SV-05-050	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405291021) the analyte Freon 123a was searched for, but not found.**
400-SV-05-050	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405291021) for analyte Freon 113, the reported result is from a dilution.**

Location Sample ID	Event Date	EPA Method TO-15 for Air
400-SV-05-050	05/29/24	For SW-846 Method TO-15 (Air) for sample (2405291025) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-SV-05-050	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405291025) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-SV-05-050	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405291025) the analyte Freon 123a was searched for, but not found.**
400-SV-05-050	05/29/24	For SW-846 Method 8021B, relative percent differences (RPD) for duplicate samples 2405291021 and 2405291025 were within control limits or below the calculable range.
400-SV-05-050	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405291025) for analytes Freon 113 and Freon 11, the reported result is from a dilution.**
400-SV-05-100	05/29/24	For SW-846 Method TO-15 (Air) for sample (2405291031) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-SV-05-100	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405291031) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-SV-05-100	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405291031) the analyte Freon 123a was searched for, but not found.**
400-SV-05-100	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405291031) for analytes Freon 113 and Freon 11, the reported result is from a dilution.**
400-SV-07-010	05/30/24	For SW-846 Method TO-15 (Air) for sample (2405300910) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-SV-07-010	**05/30/24**	**For SW-846 Method TO-15 (Air) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-SV-07-045	05/30/24	For SW-846 Method TO-15 (Air) for sample (2405300916) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-SV-07-045	05/30/24	For EPA Method TO-15 (air), for sample (2405300916) 2-Butanone, m,p-Xylene, Ethyl Benzine, and Tetrachloroethene were detected in the method blank. Affected data are appropriately qualified.
400-SV-07-100	05/30/24	For SW-846 Method TO-15 (Air) for sample (2405300923) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.

Location Sample ID	Event Date	EPA Method TO-15 for Air
400-SV-07-100	05/30/24	For SW-846 Method TO-15 (Air) for sample (2405300923), 2-Butanone and Trichloroethene were detected in the method blank. Affected data are appropriately qualified.
400-SV-07-100	**05/30/24**	**For the Soil Gas Method, 1,4-Dioxane was detected in the field blank (2405300928) at 0.31 ng/L. 2-Butanone (Methyl Ethyl Ketone) was detected in the field blank (2405300928) at 1.4 ng/L. 2-Propanol was detected in the field blank (2405300928) at 1.0 ng/L. Acetone was detected in the field blank (2405300928) at 30.0 ng/L. Carbon Disulfide was detected in the field blank (2405300928) at 6.3 ng/L. Carbon Tetrachloride was detected in the field blank (2405300928) at 0.38 ng/L. Chloromethane was detected in the field blank (2405300928) at 1.5 ng/L. Ethanol was detected in the field blank (2405300928) at 19.0 ng/L. Freon 11 was detected in the field blank (2405300928) at 1.1 ng/L. Freon 113 was detected in the field blank (2405300928) at 0.59 ng/L. Freon 12 was detected in the field blank (2405300928) at 2.3 ng/L. Freon 123 was detected in the field blank (2405300928) at 1.0 ng/L.**
400-SV-07-100	**05/30/24**	**For EPA Method TO-15 (air), for sample (2405300923) for analyte Freon 113, the reported result is from a dilution.**
400-SV-07-100	05/30/24	For SW-846 Method TO-15 (Air) for sample (2405300928) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-SV-07-100	**05/30/24**	**For SW-846 Method TO-15 (Air) for sample (2405300928), 2-Butanone and Toluene were detected in the method blank. Affected data are appropriately qualified.**
400-SV-09-010	05/30/24	For SW-846 Method TO-15 (Air) for sample (2405300800) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-SV-09-010	**05/30/24**	**For SW-846 Method TO-15 (Air) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-SV-09-010	05/30/24	For SW-846 Method TO-15 (Air) for sample (2405300808) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-SV-09-104	05/30/24	For SW-846 Method TO-15 (Air) for sample (2405300815) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-SV-10-010	05/30/24	For SW-846 Method TO-15 (Air) for sample (2405300827) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-SV-10-010	**05/30/24**	**For SW-846 Method TO-15 (Air) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-SV-10-050	05/30/24	For SW-846 Method TO-15 (Air) for sample (2405300834) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.

Location Sample ID	Event Date	EPA Method TO-15 for Air
400-SV-10-050	05/30/24	For SW-846 Method TO-15 (Air) for sample (2405300842) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-SV-10-050	05/30/24	For SW-846 Method 8021B, relative percent differences (RPD) for duplicate samples 2405300834 and 2405300842 were within control limits or below the calculable range.
400-SV-10-050	05/30/24	For EPA Method TO-15 (air), for sample (2405300842) 2-Butanone, Toluene and Trichloroethene were detected in the method blank. Affected data are appropriately qualified.
400-SV-10-100	05/30/24	For SW-846 Method TO-15 (Air) for sample (2405300850) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-SV-10-100	05/30/24	For EPA Method TO-15 (air), for sample (2405300850) 2-Butanone, Toluene and Trichloroethene were detected in the method blank. Affected data are appropriately qualified.
400-SV-10-100	**05/30/24**	**For EPA Method TO-15 (air), for sample (2405300850) for analyte Freon 113, the reported result is from a dilution.**
400-SV-10-125	**05/30/24**	**For EPA Method TO-15 (air), for sample (2405300856) for analyte Freon 113, the reported result is from a dilution.**
400-SV-10-125	05/30/24	For SW-846 Method TO-15 (Air) for sample (2405300856) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-SV-15-010	05/29/24	For SW-846 Method TO-15 (Air) for sample (2405290815) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-SV-15-010	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405290815) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-SV-15-010	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405290815) the analyte Freon 123a was searched for, but not found.**
400-SV-15-010	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405290815) for analytes Freon 113 and Freon 11, the reported result is from a dilution.**
400-SV-15-010	05/29/24	For SW-846 Method TO-15 (Air) for sample (2405290816) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-SV-15-010	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405290816) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**

Location Sample ID	Event Date	EPA Method TO-15 for Air
400-SV-15-010	**05/29/24**	**For the Soil Gas Method, 2-Butanone (Methyl Ethyl Ketone) was detected in the field blank (2405290816) at 3.2 ng/L. 2-Hexanone was detected in the field blank (2405290816) at 0.48 ng/L. Acetone was detected in the field blank (2405290816) at 24.0 ng/L. Benzene was detected in the field blank (2405290816) at 0.53 ng/L. Carbon Tetrachloride was detected in the field blank (2405290816) at 0.44 ng/L. Chloromethane was detected in the field blank (2405290816) at 1.6 ng/L. Ethanol was detected in the field blank (2405290816) at 4.0 ng/L. Freon 11 was detected in the field blank (2405290816) at 1.2 ng/L. Freon 113 was detected in the field blank (2405290816) at 0.69 ng/L. Freon 12 was detected in the field blank (2405290816) at 2.5 ng/L. Freon 123 was detected in the field blank (2405290816) at 3.4 ng/L. Heptane was detected in the field blank (2405290816) at 0.54 ng/L. Hexane was**
400-SV-15-010	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405290816) the analyte Freon 123a was searched for, but not found.**
400-SV-15-050	05/29/24	For SW-846 Method TO-15 (Air) for sample (2405290826) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-SV-15-050	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405290826) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-SV-15-050	05/29/24	For SW-846 Method TO-15 (Air) for sample (2405290826) the analyte Freon 123a was searched for, but not found.
400-SV-15-050	05/29/24	For SW-846 Method TO-15 (Air) for sample (2405290826) for analytes Freon 113 and Freon 11, the reported result is from a dilution.
400-SV-15-090	05/29/24	For SW-846 Method TO-15 (Air) for sample (2405290834) multiple analyte results are estimated values less than the quantitation limit, but greater than or equal to the detection limit. Affected data are appropriately qualified.
400-SV-15-090	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405290834) the samples were analyzed for volatile organic compounds and Freon 123 and Freon 21 as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.**
400-SV-15-090	**05/29/24**	**For SW-846 Method TO-15 (Air) for sample (2405290834) the analyte Freon 123a was searched for, but not found.**

Appendix C Analytical Laboratory Reports

June 5, 2024

Test Report

SwRI Project #:	26040.07.012
SwRI Task Order:	240524-2, 240530-1
Batch Number:	M607-944
Date Received:	05/24/2024, 05/30/2024
Purchase Order:	23EC004B

Prepared by:

Southwest Research Institute®
Department of Analytical and Environmental Chemistry
6220 Culebra Road
San Antonio, Texas 78238

Prepared for:

Navarro Research and Engineering Inc.
NASA-JSC - White Sands Test Facility
Transportation Officer, Building 120
12600 NASA Road
Las Cruces, NM 88012
Attn: Ms. Stephanie Portillo
Phone: 575-524-5267

Authorized for Release
06/05/2024 4:00PM
Alice Yau, Project Manager
Alice.Yau@swri.org
210-522-5042

Mike Dammann
Laboratory Director

"I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed within this report. This report shall not be reproduced except in full without the written approval of SwRI."

Results relate only to the items tested and the samples/materials received by the laboratory.

CLIENT: Navarro Research and Engineering Inc.
SwRI PROJECT #: 26040.07.012
TASK ORDERS: 240524-2 and 240530-1
NAVARRO PO #: 23EC004B

NARRATIVE

(M607-944)

CLIENT: **Navarro Research and Engineering Inc.**
SwRI PROJECT #: **26040.07.012**
BATCH #: **M607-944**
TASK ORDERS: **240524-2 and 240530-1**
REPORT DATE: **06/06/2024**

NARRATIVE FOR NDMA/DMN/BROMACIL ANALYSIS

1. Samples were extracted with dichloromethane (DCM) and analyzed by GC/MS in selective ion monitoring mode for N-Nitrosodimethylamine (NDMA), N-Nitrodimethylamine (DMN) and Bromacil according to the modified Method 607.

2. All aqueous samples were extracted within 7 days of collection date and were analyzed within 28 days from extraction date.

3. The sample reporting limit is 0.01 ppb for 1-L aqueous extraction of samples. All targets were quantified within the calibration curve range 0.01 - 5 µg/L.

4. Laboratory control sample (LCS) and matrix spike samples (if any) were spiked at 0.50 ppb based on 1000 mL, then extracted and analyzed. The recoveries for all target compounds were within method recovery criteria of 13-110% for NDMA, 30-150% for DMN, and 40-190% for Bromacil.

5. N-Nitroso-di-n-propylamine-d14 (surrogate) was spiked into every sample before extraction at 0.50 µg/mL in extract. The surrogate recoveries for all samples were within method recovery criteria of 40-160%.

6. Laboratory process blanks (PB) were extracted and analyzed with every extraction batch.

7. A "J" value was reported if the associated value was below reporting limits but above the MDL value.

8. All analyte concentrations are expressed in µg/L (ppb). Sample calculation:

$$\text{Concentration (µg/L)} = \frac{C\left(\frac{\mu g}{mL}\right) \times FV\ (mL) \times DF}{Vsamp(L)}$$

where:
C = result of GC/MS analysis in µg/mL for water samples
FV = final volume of sample in mL
V_{samp} = sample volume taken for extraction in L
DF = dilution factor, if any

9. Samples 2405280843C (400-GV-125), 2405280844C (400-GV-125) and 2405281004A (400-EV-131) were all diluted 5-fold due to Bromacil exceeding calibration curve in the initial analysis. Sample 2405281440C (400-HV-147) was diluted 150-fold due to NDMA and DMN exceeding calibration curve. Due to the high dilution factor, surrogate result was not reported in the dilution analysis.

CLIENT: Navarro Research and Engineering Inc.
SwRI PROJECT #: 26040.07.012
TASK ORDERS: 240524-2 and 240530-1
NAVARRO PO #: 23EC004B

TASK ORDER AND CHAIN OF CUSTODY

(M607-944)

Southwest Research Institute

Laboratory Task Order

TO #: 240524-2 Revision: 1

Project(s): 26040.07.012
Manager(s): Yau, Alice
To Client: 06/17/24

SDG: M607-944

SRR #'s: 71200

Client(s): Navarro Research and Engineering Inc.

Instructions

Email results to Stephanie Portillo (Stephanie.Portillo@nasa.gov) and cc Troy Wiebe (donavon.t.wiebe@nasa.gov).
Rev 1: Update SDG to M607-944.

Documents Related to this task order: 395392[COC for SRR 71200], 395393[Paperwork for SRR 71200]

Deliverables --> Hard Copy: no EDD: -YES- PDF: -YES-

Test: E607W Holding: 7 days from CED
Section: EXTLAB **EXTRACTION BY METHOD 607** Cnt: 3

System ID	Type	Cont	Matrix	Customer ID	CED	Method Date
720555		1	Aqueous	2405221251X (WB-1-200)	22 May 24	29 May 24
720556		1	Aqueous	2405221452C (BLM-22-570)	22 May 24	29 May 24
720557	MS	1	Aqueous	2405221453C (BLM-22-570)	22 May 24	29 May 24

Test: T607W Holding: 40 days from VTSR
Section: TDG **NDMA/DMN ANALYSIS BY GC/MS/SIM** Cnt: 3

System ID	Type	Cont	Matrix	Customer ID	VTSR	Method Date
720555		1	Aqueous	2405221251X (WB-1-200)	24 May 24	03 Jul 24
720556		1	Aqueous	2405221452C (BLM-22-570)	24 May 24	03 Jul 24
720557	MS	1	Aqueous	2405221453C (BLM-22-570)	24 May 24	03 Jul 24

Date 5-23-24

WSTF CHAIN OF CUSTODY RECORD

Page 1 of 1

Laboratory: SWRI PO# 23EC004B

Address shipping questions to:
- [x] Lori Minnick, 575-524-5119
- [ ] Other _____, 575-524-_____

Send sample receipt confirmation and analytical reports to:
- [x] Stephanie Portillo stephanie.portillo@nasa.gov
- [ ] Other
- [ ] Other

Special Instructions

Return coolers and reusable packaging materials within 14 days as required in statement of work to:

Return Address:

NASA WSTF Environmental Department
12600 NASA Road; Bldg. 120
Las Cruces, NM 88012
Attn: Lori Minnick

Sample Number	Sample Location	# of Containers	Sample Matrix*	Analytical Requirements: Analytes NDMA/DMN Method BROMACIL						Charge Number (WSTF Use Only)	Comments
240522125 1X	WB-1-200	1	A	X						X008	
240522145 2C	Blm-22-570	1	A	X						"	
240522145 3C	"	1	A	X						"	*MATRIX SPIKE FOR # 240522145 2C

Client: Navarro Research and Engineering Inc.
SRR # 71200
Project # 26040.07.012
Case: 23EC004B
VTSR: 05/24/24
Sample(s) Received: Intact
Temperature: NOTES SN # 029926

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
[signature]	5-23-24 / 1100 HRS	David Marin / SwRI	05.24.24 08:15

* Sample Matrix: A – Aqueous; G – Gaseous; S – Solid

2 BLUE B28 / MB2

NASA-WSTF SHIPPING DOCUMENT

SHIPPED FROM:	WSTF ORIGINATOR/MAIL CODE/TELEPHONE NO.			
NASA JSC WHITE SANDS TEST FACILITY	Deb Smith/Purchasing Dept. /(575) 524-5023		Stephanie Portillo 524-5267	
12600 NASA ROAD; BLDG. 120	ORDER OR CONTRACT NUMBER		SHIPMENT CONTROL NO	
LAS CRUCES, NEW MEXICO 88012	23EC004B			
SHIP TO: (ADDRESS, PHONE#, POINT OF CONTACT)	PROJECT or TASK NUMBER		SHIP VIA	
Southwest Research Institute	X008 505-005		Navarro Third Party Billing	
6220 Culebra Road	Contain Batteries	NO. PKG.	DATE SHIPPED	AirBill/ PRO #/Bol #
San Antonio, TX 78238	NO		5-23-24	
Alice Yau	Battery Type-Part #	AUTHORIZED BY:	DEPT.	
210-522-5042				

ITEM NO.	EQUIPMENT CONTROL NO.	MODEL NO./ STOCK NO./ PART NO.	ITEM NAME - MANUFACTURER'S NAME AND SERIAL NO.	UNIT OF ISSUE	QTY.
1			Groudwater Sample NDMN, DMN & bromacil Modified EPA Method 607 21 Day TAT	EA	3
2			Groundwater Sample NDMN, DMN & bromacil Modified EPA Method 607 7 Day TAT	EA	

JUSTIFICATION FOR SHIPMENT: (MDR #, Return Authorization #'s, Warranty Replacement, Repair, Overage/Shortage, Damage, Recycling)

Groundwater samples for analysis per SOW

DOT HAZARDOUS MATERIALS INFO; EMERGENCY PHONE NUMBER AND GUIDE NUMBER:

PROPERTY REVIEW: ☐ REMOVE EQUIPMENT TAG ☐ DO NOT REMOVE EQUIPMENT TAG

PACKED BY:	# CONTAINERS	TYPE CONTAINERS	DIMENSIONS	WEIGHT
Please check off the applicable labels!				
☐ FRAGILE				
☐ GLASS				
☐ DELICATE				
☐ DO NOT XRAY				
☐ REFRIGERATE				
☐ OTHER				
	TOTAL			TOTAL
☐ BUBBLEWRAP	CONTAINERS			WEIGHT
☐ FOAM				

RECEIVED BY: David Marcus

REPRESENTING: SwRI

SHIPPERS CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked, labeled, and are in proper condition for transportation according to the regulations of the D.O.T. _____ Date _____

Client: Navarro Research and Engineering Inc.
SRR # 71200
Project # 26040.07.012
Case: 23EC004B
VTSR: 05/24/24
Sample(s) Received: Intact C-8
Temperature: NOTES SN # 029926

WSTF 196 (1/06)

G

Southwest Research Institute

Laboratory Task Order

TO #: 240530-1 Revision: 1

Project(s): 26040.07.012
Manager(s): Yau, Alice
To Client: 06/20/24

SDG: M607-944

SRR #'s: 71221, 71222
Client(s): Navarro Research and Engineering Inc.

Instructions

Email results to Stephanie Portillo (Stephanie.Portillo@nasa.gov) and cc Troy Wiebe (donavon.t.wiebe@nasa.gov).
Rev 1: Samples from SRR 71222 added to this task order.

Documents Related to this task order: 395598[COC for SRR 71221], 395599[Paperwork for SRR 71221], 395600[COC for SRR 71222], 395601[Paperwork for SRR 71222]

Deliverables --> Hard Copy: -YES- EDD: no PDF: no

Test: E607W Holding: 7 days from CED
Section: EXTLAB **EXTRACTION BY METHOD 607** Cnt: 14

System ID	Type	Cont	Matrix	Customer ID	CED	Method Date
720665		1	Aqueous	2405230942X (WB-1-330)	23 May 24	30 May 24
720666		1	Aqueous	2405231037C (ST-1-630)	23 May 24	30 May 24
720667		1	Aqueous	2405231111C (ST-1-630)	23 May 24	30 May 24
720668		1	Aqueous	2405231408C (ST-1-541)	23 May 24	30 May 24
720669		1	Aqueous	2405240830X (WB-1-255)	24 May 23	31 May 23
720670		1	Aqueous	2405241002C (ST-1-473)	24 May 23	31 May 23
720671		1	Aqueous	2405241003C (ST-1-473)	24 May 23	31 May 23
720672		1	Aqueous	2405280843C (400-GV-125)	28 May 24	04 Jun 24
720673		1	Aqueous	2405280844C (400-GV-125)	28 May 24	04 Jun 24
720674		1	Aqueous	2405280855A (400-FV-131)	28 May 24	04 Jun 24
720675		1	Aqueous	2405280856A (400-FV-131)	28 May 24	04 Jun 24
720676		1	Aqueous	2405281004A (400-EV-131)	28 May 24	04 Jun 24
720677		1	Aqueous	2405281012C (400-JV-150)	28 May 24	04 Jun 24
720678		1	Aqueous	2405281440C (400-HV-147)	28 May 24	04 Jun 24

Test: T607W Holding: 40 days from VTSR
Section: TDG **NDMA/DMN ANALYSIS BY GC/MS/SIM** Cnt: 14

System ID	Type	Cont	Matrix	Customer ID	VTSR	Method Date
720665		1	Aqueous	2405230942X (WB-1-330)	30 May 24	09 Jul 24
720666		1	Aqueous	2405231037C (ST-1-630)	30 May 24	09 Jul 24
720667		1	Aqueous	2405231111C (ST-1-630)	30 May 24	09 Jul 24
720668		1	Aqueous	2405231408C (ST-1-541)	30 May 24	09 Jul 24
720669		1	Aqueous	2405240830X (WB-1-255)	30 May 24	09 Jul 24
720670		1	Aqueous	2405241002C (ST-1-473)	30 May 24	09 Jul 24
720671		1	Aqueous	2405241003C (ST-1-473)	30 May 24	09 Jul 24
720672		1	Aqueous	2405280843C (400-GV-125)	30 May 24	09 Jul 24
720673		1	Aqueous	2405280844C (400-GV-125)	30 May 24	09 Jul 24
720674		1	Aqueous	2405280855A (400-FV-131)	30 May 24	09 Jul 24
720675		1	Aqueous	2405280856A (400-FV-131)	30 May 24	09 Jul 24
720676		1	Aqueous	2405281004A (400-EV-131)	30 May 24	09 Jul 24
720677		1	Aqueous	2405281012C (400-JV-150)	30 May 24	09 Jul 24
720678		1	Aqueous	2405281440C (400-HV-147)	30 May 24	09 Jul 24

WSTF CHAIN OF CUSTODY RECORD

Date 5-28-24

Laboratory: SWRI PO# 23EC004B

Address shipping questions to:
- ☐ Lori Minnick, 575-524-5119
- ☐ Other _____, 575-524-_____

Send sample receipt confirmation and analytical reports to:
- ☒ Stephanie Portillo stephanie.portillo@nasa.gov
- ☐ Other
- ☐ Other

Analytical Requirements: Method 6017 BROMIDE; Analytes NDMA/DMA

Special Instructions

Return coolers and reusable packaging materials within 14 days as required in statement of work to:

Return Address:

NASA WSTF Environmental Department
12600 NASA Road; Bldg. 120
Las Cruces, NM 88012
Attn: Lori Minnick

Sample Number	Sample Location	# of Containers	Sample Matrix*	Analytes NDMA/DMA	Charge Number (WSTF Use Only)	Comments
240523094 2X	WB-1-330	1	A	X	X008	
240523103 7C	ST-1-630	1	A	X	"	
240523111 1C	ST-1-630	1	A	X	"	
240523140 8C	ST-1-641	1	A	X	"	
240524083 0X	WB-1-255	1	A	X	"	
240524100 2C	ST-1-473	1	A	X	"	
240524100 3C	"	1	A	X	"	

Client: Navarro Research and Engineering Inc.
SRR # 71221
Project # 26040.07.012
Case: 23EC004B
VTSR: 05/30/24
Sample(s) Received: Intact
Temperature: 4.5°C SN # 029926

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	5-28-24 / 1100 HRS	David Mora	05.30.24 08:30

* Sample Matrix: A – Aqueous; G – Gaseous; S – Solid

1 BLUE TAIO

NASA-WSTF SHIPPING DOCUMENT

SHIPPED FROM:	WSTF ORIGINATOR/MAIL CODE/TELEPHONE NO.			
NASA JSC WHITE SANDS TEST FACILITY	Deb Smith/Purchasing Dept. /(575) 524-5023		Stephanie Portillo 524-5267	
12600 NASA ROAD; BLDG. 120	ORDER OR CONTRACT NUMBER		SHIPMENT CONTROL NO	
LAS CRUCES, NEW MEXICO 88012	23EC004B		WS 24 149 C	
SHIP TO: (ADDRESS, PHONE#, POINT OF CONTACT)	PROJECT or TASK NUMBER		SHIP VIA	
Southwest Research Institute	X008 505-005		Navarro Third Party Billing	
6220 Culebra Road	Contain Batteries	NO. PKG.	DATE SHIPPED	AirBill/ PRO #/Bol #
San Antonio, TX 78238	NO		5-28-24	
Alice Yau	Battery Type-Part #	AUTHORIZED BY:		DEPT.
210-522-5042				

ITEM NO.	EQUIPMENT CONTROL NO.	MODEL NO./ STOCK NO./ PART NO.	ITEM NAME - MANUFACTURER'S NAME AND SERIAL NO.	UNIT OF ISSUE	QTY.
1			Groudwater Sample NDMN, DMN & bromacil Modified EPA Method 607 21 Day TAT	EA	7
2			Groundwater Sample NDMN, DMN & bromacil Modified EPA Method 607 7 Day TAT	EA	

JUSTIFICATION FOR SHIPMENT: (MDR #, Return Authorization #'s, Warranty Replacement, Repair, Overage/Shortage, Damage, Recycling)
Groundwater samples for analysis per SOW

DOT HAZARDOUS MATERIALS INFO; EMERGENCY PHONE NUMBER AND GUIDE NUMBER:

PROPERTY REVIEW: ☐ REMOVE EQUIPMENT TAG ☐ DO NOT REMOVE EQUIPMENT TAG

PACKED BY:	# CONTAINERS	TYPE CONTAINERS	DIMENSIONS	WEIGHT
Please check off the applicable labels!				
☐ FRAGILE			25X15X15	40.25
☐ GLASS				
☐ DELICATE				
☐ DO NOT XRAY				
☐ REFRIGERATE				
☐ OTHER				
	TOTAL			TOTAL
☐ BUBBLEWRAP	CONTAINERS			WEIGHT
☐ FOAM				

RECEIVED BY: David Marcus
REPRESENTING: SwRI

SHIPPERS CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked, labeled, and are in proper condition for transportation according to the regulations of the D.O.T. _____ Date_____

Client: Navarro Research and Engineering Inc.
SRR # 71221
Project # 26040.07.012
Case: 23EC004B
VTSR: 05/30/24
Sample(s) Received: Intact
Temperature: 4.5°C SN # 029926

WSTF 196 (1/06)

G

Date 5-29-24

WSTF CHAIN OF CUSTODY RECORD

Laboratory: SwRI PO# 23EC004B

Address shipping questions to:
- ☐ Lori Minnick, 575-524-5119
- ☐ Other _____, 575-524-_____

Send sample receipt confirmation and analytical reports to:
- ☒ Stephanie Portillo stephanie.portillo@nasa.gov
- ☐ Other
- ☐ Other

Analytical Requirements: Analytes NDMA/DMN/BROMACIL Method 1607

Special Instructions

Return coolers and reusable packaging materials within 14 days as required in statement of work to:

Return Address:

NASA WSTF Environmental Department
12600 NASA Road; Bldg. 120
Las Cruces, NM 88012
Attn: Lori Minnick

Sample Number	Sample Location	# of Containers	Sample Matrix*	Analytical Requirements	Charge Number (WSTF Use Only)	Comments
240528084 3C	400-GV-125	1	A	X	HWMU	
240528084 4C	"	1	A	X	"	
240528085 5A	400-FV-131	1	A	X	"	
240528085 6A	"	1	A	X	"	
240528100 4A	400-EV-131	1	A	X	"	
240528101 2C	400-JV-150	1	A	X	"	
240528144 0C	400-HV-147	1	A	X	"	

Client: Navarro Research and Engineering Inc.
SRR # 71222
Project # 26040.07.012
Case: 23EC004B
VTSR: 05/30/24
Sample(s) Received: Intact
Temperature: 1.8°C SN # 029926

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
[signature]	5-29-24 1100HRS	[signature] SwRI	05.30.24 08:30

* Sample Matrix: A – Aqueous; G – Gaseous; S – Solid

1 Deep Blue 0B7

NASA-WSTF SHIPPING DOCUMENT

SHIPPED FROM:	WSTF ORIGINATOR/MAIL CODE/TELEPHONE NO.			
NASA JSC WHITE SANDS TEST FACILITY	Deb Smith/Purchasing Dept. /(575) 524-5023		Stephanie Portillo 524-5267	
12600 NASA ROAD; BLDG. 120	ORDER OR CONTRACT NUMBER		SHIPMENT CONTROL NO	
LAS CRUCES, NEW MEXICO 88012	23EC004B			
SHIP TO: (ADDRESS, PHONE#, POINT OF CONTACT)	PROJECT or TASK NUMBER		SHIP VIA	
Southwest Research Institute	X008	505-005	Navarro Third Party Billing	
6220 Culebra Road	Contain Batteries	NO. PKG.	DATE SHIPPED	AirBill/ PRO #/Bol #
San Antonio, TX 78238	NO		5-29-24	
Alice Yau	Battery Type-Part #	AUTHORIZED BY:		DEPT.
210-522-5042				

ITEM NO.	EQUIPMENT CONTROL NO.	MODEL NO./ STOCK NO./ PART NO.	ITEM NAME - MANUFACTURER'S NAME AND SERIAL NO.	UNIT OF ISSUE	QTY.
1			Groudwater Sample NDMN, DMN & bromacil Modified EPA Method 607 21 Day TAT	EA	7
2			Groundwater Sample NDMN, DMN & bromacil Modified EPA Method 607 7 Day TAT	EA	

JUSTIFICATION FOR SHIPMENT: (MDR #, Return Authorization #'s, Warranty Replacement, Repair, Overage/Shortage, Damage, Recycling)
Groundwater samples for analysis per SOW

DOT HAZARDOUS MATERIALS INFO; EMERGENCY PHONE NUMBER AND GUIDE NUMBER:

PROPERTY REVIEW: ☐ REMOVE EQUIPMENT TAG ☐ DO NOT REMOVE EQUIPMENT TAG

PACKED BY:	# CONTAINERS	TYPE CONTAINERS	DIMENSIONS	WEIGHT
Please check off the applicable labels!				
☐ FRAGILE				
☐ GLASS				
☐ DELICATE				
☐ DO NOT XRAY				
☐ REFRIGERATE				
☐ OTHER				
	TOTAL			TOTAL
☐ BUBBLEWRAP	CONTAINERS			WEIGHT
☐ FOAM				

RECEIVED BY: Daniel Lara
REPRESENTING: SwRI

SHIPPERS CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked, labeled, and are in proper condition for transportation according to the regulations of the D.O.T. _____ Date_____

Client: Navarro Research and Engineering Inc.
SRR # 71222
Project # 26040.07.012
Case: 23EC004B
VTSR: 05/30/24
Sample(s) Received: Intact
Temperature: 1.8°C SN # 029926

WSTF 196 (1/06)

CLIENT:	**Navarro Research and Engineering Inc.**
SwRI PROJECT #:	**26040.07.012**
TASK ORDERS:	**240524-2 and 240530-1**
NAVARRO PO #:	**23EC004B**

ANALYTICAL DATA REPORT SHEETS

(M607-944)

Southwest Research Institute

Method 607 Analysis Data Sheet

Sample ID

2405221251X (WB-1-200)

Client: Navarro Research and Engineering Inc.
Project: 26040.07.012
Lab Sample ID: 720555

Batch: M607-944
Date Received: 5/24/2024
Lab File Name: A06032414.txt

Task Order: 240524-2
Date Extracted: 5/29/2024
Final Extraction Vol: 1000 uL

Matrix: Aqueous
Date Analyzed: 6/3/2024
Dilution Factor: 1

Sample Wt/Vol: 990 mL
Date Reported: 6/6/2024
Reporting Unit: µg/L

Method: TAP 01-0408-031

CAS No.	ANALYTE	RESULT	Q
62-75-9	N-Nitrosodimethylamine	<0.01	U
4164-28-7	N-Nitrodimethylamine	<0.01	U
314-40-9	Bromacil	<0.01	U

E - Concentration detected above calibration curve

D - Results from dilution analysis

U - Undetected, indicates not found above the detection limit

J - Estimated value, greater than the MDL but less than the PQL

Southwest Research Institute

Method 607 Analysis Data Sheet

Sample ID

2405221452C (BLM-22-570)

Client: Navarro Research and Engineering Inc.
Project: 26040.07.012
Lab Sample ID: 720556

Batch: M607-944
Date Received: 5/24/2024
Lab File Name: A06032413.txt

Task Order: 240524-2
Date Extracted: 5/29/2024
Final Extraction Vol: 1000 uL

Matrix: Aqueous
Date Analyzed: 6/3/2024
Dilution Factor: 1

Sample Wt/Vol: 1050 mL
Date Reported: 6/6/2024
Reporting Unit: µg/L

Method: TAP 01-0408-031

CAS No.	ANALYTE	RESULT	Q
62-75-9	N-Nitrosodimethylamine	<0.01	U
4164-28-7	N-Nitrodimethylamine	<0.01	U
314-40-9	Bromacil	<0.01	U

E - Concentration detected above calibration curve

D - Results from dilution analysis

U - Undetected, indicates not found above the detection limit

J - Estimated value, greater than the MDL but less than the PQL

Southwest Research Institute

Method 607 Analysis Data Sheet

Sample ID

2405221453C (BLM-22-570)

Client: Navarro Research and Engineering Inc.
Batch: M607-944
Task Order: 240524-2
Matrix: Aqueous
Sample Wt/Vol: 1050 mL

Project: 26040.07.012
Date Received: 5/24/2024
Date Extracted: 5/29/2024
Date Analyzed: 6/3/2024
Date Reported: 6/6/2024

Lab Sample ID: 720557
Lab File Name: A06032412.txt
Final Extraction Vol: 1000 uL
Dilution Factor: 1
Reporting Unit: µg/L
Method: TAP 01-0408-031

CAS No.	ANALYTE	RESULT	Q
62-75-9	N-Nitrosodimethylamine	0.17	
4164-28-7	N-Nitrodimethylamine	0.33	
314-40-9	Bromacil	0.48	

E - Concentration detected above calibration curve

D - Results from dilution analysis

U - Undetected, indicates not found above the detection limit

J - Estimated value, greater than the MDL but less than the PQL

Southwest Research Institute

Method 607 Analysis Data Sheet

Sample ID

2405230942X (WB-1-330)

Client: Navarro Research and Engineering Inc.
Project: 26040.07.012
Lab Sample ID: 720665

Batch: M607-944
Date Received: 5/30/2024
Lab File Name: A06032416.txt

Task Order: 240530-1
Date Extracted: 5/30/2024
Final Extraction Vol: 1000 uL

Matrix: Aqueous
Date Analyzed: 6/3/2024
Dilution Factor: 1

Sample Wt/Vol: 1020 mL
Date Reported: 6/6/2024
Reporting Unit: µg/L

Method: TAP 01-0408-031

CAS No.	ANALYTE	RESULT	Q
62-75-9	N-Nitrosodimethylamine	<0.01	U
4164-28-7	N-Nitrodimethylamine	<0.01	U
314-40-9	Bromacil	<0.01	U

E - Concentration detected above calibration curve

D - Results from dilution analysis

U - Undetected, indicates not found above the detection limit

J - Estimated value, greater than the MDL but less than the PQL

Southwest Research Institute

Method 607 Analysis Data Sheet

Sample ID

2405231037C (ST-1-630)

Client: Navarro Research and Engineering Inc.
Batch: M607-944
Task Order: 240530-1
Matrix: Aqueous
Sample Wt/Vol: 1040 mL

Project: 26040.07.012
Date Received: 5/30/2024
Date Extracted: 5/30/2024
Date Analyzed: 6/3/2024
Date Reported: 6/6/2024

Lab Sample ID: 720666
Lab File Name: A06032417.txt
Final Extraction Vol: 1000 uL
Dilution Factor: 1
Reporting Unit: µg/L
Method: TAP 01-0408-031

CAS No.	ANALYTE	RESULT	Q
62-75-9	N-Nitrosodimethylamine	0.23	
4164-28-7	N-Nitrodimethylamine	0.19	
314-40-9	Bromacil	0.03	

E - Concentration detected above calibration curve

D - Results from dilution analysis

U - Undetected, indicates not found above the detection limit

J - Estimated value, greater than the MDL but less than the PQL

Southwest Research Institute

Method 607 Analysis Data Sheet

Sample ID

2405231111C (ST-1-630)

Client: Navarro Research and Engineering Inc.
Project: 26040.07.012
Lab Sample ID: 720667

Batch: M607-944
Date Received: 5/30/2024
Lab File Name: A06032418.txt

Task Order: 240530-1
Date Extracted: 5/30/2024
Final Extraction Vol: 1000 uL

Matrix: Aqueous
Date Analyzed: 6/3/2024
Dilution Factor: 1

Sample Wt/Vol: 1000 mL
Date Reported: 6/6/2024
Reporting Unit: µg/L

Method: TAP 01-0408-031

CAS No.	ANALYTE	RESULT	Q
62-75-9	N-Nitrosodimethylamine	0.20	
4164-28-7	N-Nitrodimethylamine	<0.01	U
314-40-9	Bromacil	0.54	

E - Concentration detected above calibration curve

D - Results from dilution analysis

U - Undetected, indicates not found above the detection limit

J - Estimated value, greater than the MDL but less than the PQL

Southwest Research Institute

Method 607 Analysis Data Sheet

Sample ID

2405231408C (ST-1-541)

Client: Navarro Research and Engineering Inc.
Batch: M607-944
Task Order: 240530-1
Matrix: Aqueous
Sample Wt/Vol: 1060 mL

Project: 26040.07.012
Date Received: 5/30/2024
Date Extracted: 5/30/2024
Date Analyzed: 6/3/2024
Date Reported: 6/6/2024

Lab Sample ID: 720668
Lab File Name: A06032419.txt
Final Extraction Vol: 1000 uL
Dilution Factor: 1
Reporting Unit: µg/L
Method: TAP 01-0408-031

CAS No.	ANALYTE	RESULT	Q
62-75-9	N-Nitrosodimethylamine	1.38	
4164-28-7	N-Nitrodimethylamine	1.28	
314-40-9	Bromacil	0.29	

E - Concentration detected above calibration curve

D - Results from dilution analysis

U - Undetected, indicates not found above the detection limit

J - Estimated value, greater than the MDL but less than the PQL

Southwest Research Institute

Method 607 Analysis Data Sheet

Sample ID

2405240830X (WB-1-255)

Client: Navarro Research and Engineering Inc.
Project: 26040.07.012
Lab Sample ID: 720669

Batch: M607-944
Date Received: 5/30/2024
Lab File Name: A06032420.txt

Task Order: 240530-1
Date Extracted: 5/30/2024
Final Extraction Vol: 1000 uL

Matrix: Aqueous
Date Analyzed: 6/3/2024
Dilution Factor: 1

Sample Wt/Vol: 1000 mL
Date Reported: 6/6/2024
Reporting Unit: µg/L

Method: TAP 01-0408-031

CAS No.	ANALYTE	RESULT	Q
62-75-9	N-Nitrosodimethylamine	<0.01	U
4164-28-7	N-Nitrodimethylamine	<0.01	U
314-40-9	Bromacil	<0.01	U

E - Concentration detected above calibration curve

D - Results from dilution analysis

U - Undetected, indicates not found above the detection limit

J - Estimated value, greater than the MDL but less than the PQL

Southwest Research Institute

Method 607 Analysis Data Sheet

Sample ID

2405241002C (ST-1-473)

Client: Navarro Research and Engineering Inc.
Batch: M607-944
Task Order: 240530-1
Matrix: Aqueous
Sample Wt/Vol: 1050 mL

Project: 26040.07.012
Date Received: 5/30/2024
Date Extracted: 5/30/2024
Date Analyzed: 6/3/2024
Date Reported: 6/6/2024

Lab Sample ID: 720670
Lab File Name: A06032409.txt
Final Extraction Vol: 1000 uL
Dilution Factor: 1
Reporting Unit: µg/L
Method: TAP 01-0408-031

CAS No.	ANALYTE	RESULT	Q
62-75-9	N-Nitrosodimethylamine	0.25	
4164-28-7	N-Nitrodimethylamine	0.13	
314-40-9	Bromacil	0.02	

E - Concentration detected above calibration curve

D - Results from dilution analysis

U - Undetected, indicates not found above the detection limit

J - Estimated value, greater than the MDL but less than the PQL

Southwest Research Institute

Method 607 Analysis Data Sheet

Sample ID

2405241003C (ST-1-473)

Client: Navarro Research and Engineering Inc.
Project: 26040.07.012
Lab Sample ID: 720671

Batch: M607-944
Date Received: 5/30/2024
Lab File Name: A06032410.txt

Task Order: 240530-1
Date Extracted: 5/30/2024
Final Extraction Vol: 1000 uL

Matrix: Aqueous
Date Analyzed: 6/3/2024
Dilution Factor: 1

Sample Wt/Vol: 1060 mL
Date Reported: 6/6/2024
Reporting Unit: µg/L

Method: TAP 01-0408-031

CAS No.	ANALYTE	RESULT	Q
62-75-9	N-Nitrosodimethylamine	0.25	
4164-28-7	N-Nitrodimethylamine	0.14	
314-40-9	Bromacil	0.01	

E - Concentration detected above calibration curve

D - Results from dilution analysis

U - Undetected, indicates not found above the detection limit

J - Estimated value, greater than the MDL but less than the PQL

Southwest Research Institute

Method 607 Analysis Data Sheet

Sample ID

2405280843C (400-GV-125)

Client: Navarro Research and Engineering Inc.
Project: 26040.07.012
Lab Sample ID: 720672

Batch: M607-944
Date Received: 5/30/2024
Lab File Name: A06032407.txt

Task Order: 240530-1
Date Extracted: 5/30/2024
Final Extraction Vol: 1000 uL

Matrix: Aqueous
Date Analyzed: 6/3/2024
Dilution Factor: 1

Sample Wt/Vol: 1010 mL
Date Reported: 6/6/2024
Reporting Unit: µg/L

Method: TAP 01-0408-031

CAS No.	ANALYTE	RESULT	Q
62-75-9	N-Nitrosodimethylamine	1.58	
4164-28-7	N-Nitrodimethylamine	3.58	
314-40-9	Bromacil	6.14	E

E - Concentration detected above calibration curve

D - Results from dilution analysis

U - Undetected, indicates not found above the detection limit

J - Estimated value, greater than the MDL but less than the PQL

Southwest Research Institute

Method 607 Analysis Data Sheet

Sample ID

2405280843C (400-GV-125) DL

Client: Navarro Research and Engineering Inc.
Batch: M607-944
Task Order: 240530-1
Matrix: Aqueous
Sample Wt/Vol: 1010 mL

Project: 26040.07.012
Date Received: 5/30/2024
Date Extracted: 5/30/2024
Date Analyzed: 6/4/2024
Date Reported: 6/6/2024

Lab Sample ID: 720672 DL
Lab File Name: A06042401.txt
Final Extraction Vol: 1000 uL
Dilution Factor: 5
Reporting Unit: µg/L
Method: TAP 01-0408-031

CAS No.	ANALYTE	RESULT	Q
62-75-9	N-Nitrosodimethylamine	1.52	D
4164-28-7	N-Nitrodimethylamine	3.45	D
314-40-9	Bromacil	5.22	D

E - Concentration detected above calibration curve

D - Results from dilution analysis

U - Undetected, indicates not found above the detection limit

J - Estimated value, greater than the MDL but less than the PQL

Southwest Research Institute

Method 607 Analysis Data Sheet

Sample ID

2405280844C (400-GV-125)

Client: Navarro Research and Engineering Inc.
Project: 26040.07.012
Lab Sample ID: 720673

Batch: M607-944
Date Received: 5/30/2024
Lab File Name: A06032408.txt

Task Order: 240530-1
Date Extracted: 5/30/2024
Final Extraction Vol: 1000 uL

Matrix: Aqueous
Date Analyzed: 6/3/2024
Dilution Factor: 1

Sample Wt/Vol: 1020 mL
Date Reported: 6/6/2024
Reporting Unit: µg/L

Method: TAP 01-0408-031

CAS No.	ANALYTE	RESULT	Q
62-75-9	N-Nitrosodimethylamine	1.62	
4164-28-7	N-Nitrodimethylamine	3.71	
314-40-9	Bromacil	6.06	E

E - Concentration detected above calibration curve

D - Results from dilution analysis

U - Undetected, indicates not found above the detection limit

J - Estimated value, greater than the MDL but less than the PQL

Southwest Research Institute

Method 607 Analysis Data Sheet

Sample ID

2405280844C (400-GV-125) DL

Client: Navarro Research and Engineering Inc.
Project: 26040.07.012
Lab Sample ID: 720673 DL

Batch: M607-944
Date Received: 5/30/2024
Lab File Name: A06042402.txt

Task Order: 240530-1
Date Extracted: 5/30/2024
Final Extraction Vol: 1000 uL

Matrix: Aqueous
Date Analyzed: 6/4/2024
Dilution Factor: 5

Sample Wt/Vol: 1020 mL
Date Reported: 6/6/2024
Reporting Unit: µg/L

Method: TAP 01-0408-031

CAS No.	ANALYTE	RESULT	Q
62-75-9	N-Nitrosodimethylamine	1.57	D
4164-28-7	N-Nitrodimethylamine	3.61	D
314-40-9	Bromacil	5.22	D

E - Concentration detected above calibration curve

D - Results from dilution analysis

U - Undetected, indicates not found above the detection limit

J - Estimated value, greater than the MDL but less than the PQL

Southwest Research Institute

Method 607 Analysis Data Sheet

Sample ID

2405280855A (400-FV-131)

Client: Navarro Research and Engineering Inc.
Project: 26040.07.012
Lab Sample ID: 720674

Batch: M607-944
Date Received: 5/30/2024
Lab File Name: A06032423.txt

Task Order: 240530-1
Date Extracted: 5/30/2024
Final Extraction Vol: 1000 uL

Matrix: Aqueous
Date Analyzed: 6/3/2024
Dilution Factor: 1

Sample Wt/Vol: 1060 mL
Date Reported: 6/6/2024
Reporting Unit: µg/L

Method: TAP 01-0408-031

CAS No.	ANALYTE	RESULT	Q
62-75-9	N-Nitrosodimethylamine	1.05	
4164-28-7	N-Nitrodimethylamine	1.73	
314-40-9	Bromacil	2.43	

E - Concentration detected above calibration curve

D - Results from dilution analysis

U - Undetected, indicates not found above the detection limit

J - Estimated value, greater than the MDL but less than the PQL

Southwest Research Institute

Method 607 Analysis Data Sheet

Sample ID

2405280856A (400-FV-131)

Client: Navarro Research and Engineering Inc.
Batch: M607-944
Task Order: 240530-1
Matrix: Aqueous
Sample Wt/Vol: 1050 mL

Project: 26040.07.012
Date Received: 5/30/2024
Date Extracted: 5/30/2024
Date Analyzed: 6/3/2024
Date Reported: 6/6/2024

Lab Sample ID: 720675
Lab File Name: A06032406.txt
Final Extraction Vol: 1000 uL
Dilution Factor: 1
Reporting Unit: µg/L
Method: TAP 01-0408-031

CAS No.	ANALYTE	RESULT	Q
62-75-9	N-Nitrosodimethylamine	0.97	
4164-28-7	N-Nitrodimethylamine	1.58	
314-40-9	Bromacil	2.54	

E - Concentration detected above calibration curve

D - Results from dilution analysis

U - Undetected, indicates not found above the detection limit

J - Estimated value, greater than the MDL but less than the PQL

Southwest Research Institute

Method 607 Analysis Data Sheet

Sample ID

2405281004A (400-EV-131)

Client: Navarro Research and Engineering Inc.
Batch: M607-944
Task Order: 240530-1
Matrix: Aqueous
Sample Wt/Vol: 1040 mL

Project: 26040.07.012
Date Received: 5/30/2024
Date Extracted: 5/30/2024
Date Analyzed: 6/3/2024
Date Reported: 6/6/2024

Lab Sample ID: 720676
Lab File Name: A06032424.txt
Final Extraction Vol: 1000 uL
Dilution Factor: 1
Reporting Unit: µg/L
Method: TAP 01-0408-031

CAS No.	ANALYTE	RESULT	Q
62-75-9	N-Nitrosodimethylamine	0.78	
4164-28-7	N-Nitrodimethylamine	1.95	
314-40-9	Bromacil	7.80	E

E - Concentration detected above calibration curve

D - Results from dilution analysis

U - Undetected, indicates not found above the detection limit

J - Estimated value, greater than the MDL but less than the PQL

Southwest Research Institute

Method 607 Analysis Data Sheet

Sample ID

2405281004A (400-EV-131) DL

Client: Navarro Research and Engineering Inc.
Batch: M607-944
Task Order: 240530-1
Matrix: Aqueous
Sample Wt/Vol: 1040 mL

Project: 26040.07.012
Date Received: 5/30/2024
Date Extracted: 5/30/2024
Date Analyzed: 6/4/2024
Date Reported: 6/6/2024

Lab Sample ID: 720676 DL
Lab File Name: A06042403.txt
Final Extraction Vol: 1000 uL
Dilution Factor: 5
Reporting Unit: µg/L
Method: TAP 01-0408-031

CAS No.	ANALYTE	RESULT	Q
62-75-9	N-Nitrosodimethylamine	0.75	D
4164-28-7	N-Nitrodimethylamine	1.86	D
314-40-9	Bromacil	7.39	D

E - Concentration detected above calibration curve

D - Results from dilution analysis

U - Undetected, indicates not found above the detection limit

J - Estimated value, greater than the MDL but less than the PQL

Southwest Research Institute

Method 607 Analysis Data Sheet

Sample ID

2405281012C (400-JV-150)

Client: Navarro Research and Engineering Inc.
Project: 26040.07.012
Lab Sample ID: 720677

Batch: M607-944
Date Received: 5/30/2024
Lab File Name: A06032415.txt

Task Order: 240530-1
Date Extracted: 5/30/2024
Final Extraction Vol: 1000 uL

Matrix: Aqueous
Date Analyzed: 6/3/2024
Dilution Factor: 1

Sample Wt/Vol: 1050 mL
Date Reported: 6/6/2024
Reporting Unit: µg/L

Method: TAP 01-0408-031

CAS No.	ANALYTE	RESULT	Q
62-75-9	N-Nitrosodimethylamine	1.66	
4164-28-7	N-Nitrodimethylamine	3.99	
314-40-9	Bromacil	0.75	

E - Concentration detected above calibration curve

D - Results from dilution analysis

U - Undetected, indicates not found above the detection limit

J - Estimated value, greater than the MDL but less than the PQL

Southwest Research Institute

Method 607 Analysis Data Sheet

Sample ID

2405281440C (400-HV-147)

Client: Navarro Research and Engineering Inc.
Project: 26040.07.012
Lab Sample ID: 720678

Batch: M607-944
Date Received: 5/30/2024
Lab File Name: A06032405.txt

Task Order: 240530-1
Date Extracted: 5/30/2024
Final Extraction Vol: 1000 uL

Matrix: Aqueous
Date Analyzed: 6/3/2024
Dilution Factor: 1

Sample Wt/Vol: 1030 mL
Date Reported: 6/6/2024
Reporting Unit: µg/L

Method: TAP 01-0408-031

CAS No.	ANALYTE	RESULT	Q
62-75-9	N-Nitrosodimethylamine	61.26	E
4164-28-7	N-Nitrodimethylamine	210.82	E
314-40-9	Bromacil	1.43	

E - Concentration detected above calibration curve

D - Results from dilution analysis

U - Undetected, indicates not found above the detection limit

J - Estimated value, greater than the MDL but less than the PQL

Southwest Research Institute

Method 607 Analysis Data Sheet

Sample ID

2405281440C (400-HV-147) DL

Client: Navarro Research and Engineering Inc.
Batch: M607-944
Task Order: 240530-1
Matrix: Aqueous
Sample Wt/Vol: 1030 mL

Project: 26040.07.012
Date Received: 5/30/2024
Date Extracted: 5/30/2024
Date Analyzed: 6/3/2024
Date Reported: 6/6/2024

Lab Sample ID: 720678 DL
Lab File Name: A06032425.txt
Final Extraction Vol: 1000 uL
Dilution Factor: 150
Reporting Unit: µg/L
Method: TAP 01-0408-031

CAS No.	ANALYTE	RESULT	Q
62-75-9	N-Nitrosodimethylamine	135.15	D
4164-28-7	N-Nitrodimethylamine	362.62	D
314-40-9	Bromacil	1.31	JD

E - Concentration detected above calibration curve

D - Results from dilution analysis

U - Undetected, indicates not found above the detection limit

J - Estimated value, greater than the MDL but less than the PQL

CLIENT: Navarro Research and Engineering Inc.
SwRI PROJECT #: 26040.07.012
TASK ORDERS: 240524-2 and 240530-1
NAVARRO PO #: 23EC004B

QA DATA SHEETS

(BLANK, MATRIX SPIKE, SURROGATE, CALIBRATION)

(M607-944)

Southwest Research Institute

Method 607 Surrogate Recovery Summary

Client: Navarro Research and Engineering Inc.

Matrix: Aqueous SDG: M607-944

Project: 26040.07.012

	Client Sample ID	Lab Sample ID	N-Nitroso-di-n-propylamine-d14	
			% Recovery	Recovery Limits
1	PB24E29HE2	PB24E29HE2	110	40-160
2	PB24E30HE1	PB24E30HE1	109	40-160
3	LCS24E29HE2	LCS24E29HE2	108	40-160
4	LCS24E30HE1	LCS24E30HE1	109	40-160
5	2405281440C (400-HV-147)	720678	107	40-160
6	2405280856A (400-FV-131)	720675	94	40-160
7	2405280843C (400-GV-125)	720672	105	40-160
8	2405280844C (400-GV-125)	720673	105	40-160
9	2405241002C (ST-1-473)	720670	99	40-160
10	2405241003C (ST-1-473)	720671	108	40-160
11	2405221453C (BLM-22-570)	720557	112	40-160
12	2405221452C (BLM-22-570)	720556	118	40-160
13	2405221251X (WB-1-200)	720555	92	40-160
14	2405281012C (400-JV-150)	720677	98	40-160
15	2405230942X (WB-1-330)	720665	93	40-160
16	2405231037C (ST-1-630)	720666	115	40-160
17	2405231111C (ST-1-630)	720667	111	40-160
18	2405231408C (ST-1-541)	720668	112	40-160
19	2405240830X (WB-1-255)	720669	96	40-160
20	2405280855A (400-FV-131)	720674	111	40-160
21	2405281004A (400-EV-131)	720676	115	40-160
22	2405280843C (400-GV-125)	720672 DL	81	40-160
23	2405280844C (400-GV-125)	720673 DL	83	40-160
24	2405281004A (400-EV-131)	720676 DL	88	40-160

Southwest Research Institute

Method 607 Matrix Spike Recovery Report

Sample ID

2405221453C (BLM-22-570)

Client: Navarro Research and Engineering Inc.
Project: 26040.07.012
Lab Sample ID: 720557
Batch: M607-944
Date Received: 5/24/2024
Unfortified Sample ID:
Task Order: 240524-2
Date Extracted: 5/29/2024
2405221452C (BLM-22-570)
Matrix: Aqueous
Date Analyzed: 6/3/2024
Sample Wt/Vol: 1050 mL
Date Reported: 6/6/2024

ANALYTE	Spike Added µg/L	Sample Conc µg/L	MS Conc µg/L	% Recovery	QC % Recovery Limits
N-Nitrosodimethylamine	0.476	0	0.174	37	13 - 110
N-Nitrodimethylamine	0.476	0	0.332	70	30 - 150
Bromacil	0.476	0	0.477	100	40 - 190

Southwest Research Institute

Method 607 Blank Spike Recovery Report

Sample ID: LCS24E29HE2

Client: Navarro Research and Engineering Inc.
Project: 26040.07.012
Lab Sample ID: LCS24E29HE2
Batch: M607-944
Date Received: N/A
Blank ID: PB24E29HE2
Task Order: N/A
Date Extracted: 5/29/2024
Matrix: Aqueous
Date Analyzed: 6/3/2024
Sample Wt/Vol: 1000 mL
Date Reported: 6/6/2024

ANALYTE	Spike Added µg/L	Blank Conc µg/L	LCS Conc µg/L	% Recovery	QC % Recovery Limits
N-Nitrosodimethylamine	0.500	0	0.204	41	13 - 110
N-Nitrodimethylamine	0.500	0	0.363	73	30 - 150
Bromacil	0.500	0	0.514	103	40 - 190

Southwest Research Institute

Method 607 Blank Spike Recovery Report

Sample ID: LCS24E30HE1

Client: Navarro Research and Engineering Inc.
Project: 26040.07.012
Lab Sample ID: LCS24E30HE1
Batch: M607-944
Date Received: N/A
Blank ID: PB24E30HE1
Task Order: N/A
Date Extracted: 5/30/2024
Matrix: Aqueous
Date Analyzed: 6/3/2024
Sample Wt/Vol: 1000 mL
Date Reported: 6/6/2024

ANALYTE	Spike Added µg/L	Blank Conc µg/L	LCS Conc µg/L	% Recovery	QC % Recovery Limits
N-Nitrosodimethylamine	0.500	0	0.202	40	13 - 110
N-Nitrodimethylamine	0.500	0	0.362	72	30 - 150
Bromacil	0.500	0	0.515	103	40 - 190

Southwest Research Institute

Method 607 Blank Summary

Blank ID: PB24E29HE2 Project: 26040.07.012

Client: Navarro Research and Engineering Inc. SDG: M607-944

Matrix: Aqueous

This method blank applies to the following samples, MS, and MSD's

Client Sample ID	Lab Sample ID	Date Acquired	Time Acquired
LCS24E29HE2	LCS24E29HE2	6/3/2024	14:46:00
2405221453C (BLM-22-570)	720557	6/3/2024	18:20:00
2405221452C (BLM-22-570)	720556	6/3/2024	18:48:00
2405221251X (WB-1-200)	720555	6/3/2024	19:15:00

Southwest Research Institute

Method 607 Blank Summary

Blank ID: PB24E30HE1 Project: 26040.07.012

Client: Navarro Research and Engineering Inc. SDG: M607-944

Matrix: Aqueous

This method blank applies to the following samples, MS, and MSD's

Client Sample ID	Lab Sample ID	Date Acquired	Time Acquired
LCS24E30HE1	LCS24E30HE1	6/3/2024	15:14:00
2405281440C (400-HV-147)	720678	6/3/2024	15:41:00
2405280856A (400-FV-131)	720675	6/3/2024	16:07:00
2405280843C (400-GV-125)	720672	6/3/2024	16:32:00
2405280844C (400-GV-125)	720673	6/3/2024	16:59:00
2405241002C (ST-1-473)	720670	6/3/2024	17:26:00
2405241003C (ST-1-473)	720671	6/3/2024	17:53:00
2405281012C (400-JV-150)	720677	6/3/2024	19:42:00
2405230942X (WB-1-330)	720665	6/3/2024	20:09:00
2405231037C (ST-1-630)	720666	6/3/2024	20:36:00
2405231111C (ST-1-630)	720667	6/3/2024	21:03:00
2405231408C (ST-1-541)	720668	6/3/2024	21:30:00
2405240830X (WB-1-255)	720669	6/3/2024	21:57:00
2405280855A (400-FV-131)	720674	6/3/2024	22:24:00
2405281004A (400-EV-131)	720676	6/3/2024	22:50:00
2405281440C (400-HV-147) DL	720678 DL	6/3/2024	23:17:00
2405280843C (400-GV-125) DL	720672 DL	6/4/2024	09:32:00
2405280844C (400-GV-125) DL	720673 DL	6/4/2024	09:59:00
2405281004A (400-EV-131) DL	720676 DL	6/4/2024	10:26:00

Southwest Research Institute

Continuing Calibration Check Sheet

SwRI Project #:	26040.07.012	Calibration Date:	06/03/2024
Sponsor:	Navarro Research and Engineering Inc.	Analytical Method:	TAP 01-0408-031
SwRI Standard ID:	257250	Std Concentration:	0.5 µg/mL
File ID #:	A060324S1	Initial Calibration Date:	04/23/2024

ANALYTE	Mean RRF	CC RRF	% Dev
N-Nitrosodimethylamine	0.370	0.342	7.7
N-Nitrodimethylamine	0.136	0.124	8.8
N-Nitroso-di-n-propylamine-d14	0.119	0.091	23.5
Bromacil	2.063	1.671	19.0

Southwest Research Institute

Continuing Calibration Check Sheet

SwRI Project #:	26040.07.012	Calibration Date:	06/04/2024
Sponsor:	Navarro Research and Engineering Inc.	Analytical Method:	TAP 01-0408-031
SwRI Standard ID:	257250	Std Concentration:	0.5 µg/mL
File ID #:	A060424S1	Initial Calibration Date:	04/23/2024

ANALYTE	Mean RRF	CC RRF	% Dev
N-Nitrosodimethylamine	0.370	0.363	1.9
N-Nitrodimethylamine	0.136	0.130	4.0
N-Nitroso-di-n-propylamine-d14	0.119	0.110	7.5
Bromacil	2.063	1.780	13.7

Southwest Research Institute

Initial Calibration Data Sheet

SwRI Project #:	26040.07.XXX	Calibration Date:	04/23/2024
Sponsor:	Navarro Research and Engineering Inc.	Analytical Method:	TAP-01-0408-031
SwRI Standard IDs:	257248 - 257253	Std Concentration:	0.01 - 5.0 µg/mL

ANALYTE	RRF 0.01	RRF 0.05	RRF 0.2	RRF 0.5	RRF 2	RRF 5	Avg	% RSD
N-Nitrosodimethylamine	0.359	0.354	0.357	0.380	0.366	0.406	0.370	5.35
N-Nitrodimethylamine	0.134	0.135	0.133	0.138	0.130	0.143	0.136	3.39
N-Nitroso-di-n-propylamine-d14	0.114	0.121	0.113	0.123	0.116	0.126	0.119	4.58
Bromacil	1.978	2.004	2.050	2.053	2.047	2.243	2.063	4.54

Southwest Research Institute

Method 607 Internal Standard Summary

Filename: A060324S1.txt
Standard ID: 257250
Project: 26040.07.012

Date Analyzed: 06/03/2024
Time Analyzed: 12:47:00
Client: Navarro Research and Engineering Inc.

		IS1		IS2	
		Area	RT	Area	RT
Mid Point Standard		520073	8.63	129834	15.2
Upper Limit		1040146	8.96	259668	15.53
Lower Limit		260036.5	8.3	64917	14.87
Client Sample ID	**Lab Sample ID**				
PB24E29HE2	PB24E29HE2	408748	8.63	98693	15.20
PB24E30HE1	PB24E30HE1	411324	8.63	104684	15.20
LCS24E29HE2	LCS24E29HE2	399178	8.63	94143	15.20
LCS24E30HE1	LCS24E30HE1	406534	8.63	97247	15.20
2405281440C (400-HV-147)	720678	414589	8.65	118595	15.20
2405280856A (400-FV-131)	720675	400934	8.63	112531	15.20
2405280843C (400-GV-125)	720672	404155	8.63	110143	15.20
2405280844C (400-GV-125)	720673	405521	8.63	110781	15.20
2405241002C (ST-1-473)	720670	408600	8.63	114315	15.20
2405241003C (ST-1-473)	720671	418424	8.63	125032	15.20
2405221453C (BLM-22-570)	720557	414137	8.63	114699	15.20
2405221452C (BLM-22-570)	720556	404749	8.63	107622	15.20
2405221251X (WB-1-200)	720555	418667	8.63	135710	15.20
2405281012C (400-JV-150)	720677	446825	8.63	137140	15.20
2405230942X (WB-1-330)	720665	423378	8.63	131936	15.20
2405231037C (ST-1-630)	720666	440570	8.63	122592	15.20
2405231111C (ST-1-630)	720667	439335	8.63	128965	15.20
2405231408C (ST-1-541)	720668	469888	8.63	127704	15.20
2405240830X (WB-1-255)	720669	454574	8.63	145417	15.20
2405280855A (400-FV-131)	720674	469401	8.63	135867	15.20
2405281004A (400-EV-131)	720676	481609	8.63	137375	15.20
2405281440C (400-HV-147) DL	720678 DL	475851	8.63	124524	15.20

IS1 = 1,4-Dichlorobenzene-D4

IS2 = Atrazine-D5

* Flag indicating value is outside QC limits

Southwest Research Institute

Method 607 Internal Standard Summary

Filename: A060424S1.txt
Standard ID: 257250
Project: 26040.07.012

Date Analyzed: 06/04/2024
Time Analyzed: 09:07:00
Client: Navarro Research and Engineering Inc.

		IS1		IS2	
		Area	RT	Area	RT
Mid Point Standard		500484	8.63	132051	15.2
Upper Limit		1000968	8.96	264102	15.53
Lower Limit		250242	8.3	66025.5	14.87
Client Sample ID	**Lab Sample ID**				
2405280843C (400-GV-125) DL	720672 DL	453827	8.63	115527	15.20
2405280844C (400-GV-125) DL	720673 DL	453139	8.63	117520	15.20
2405281004A (400-EV-131) DL	720676 DL	437321	8.63	114783	15.20

IS1 = 1,4-Dichlorobenzene-D4

IS2 = Atrazine-D5

* Flag indicating value is outside QC limits

Southwest Research Institute

Method 607 Analysis Data Sheet

Sample ID

PB24E29HE2

Client: Navarro Research and Engineering Inc.
Batch: M607-944
Task Order: N/A
Matrix: Aqueous
Sample Wt/Vol: 1000 mL

Project: 26040.07.012
Date Received: N/A
Date Extracted: 5/29/2024
Date Analyzed: 6/3/2024
Date Reported: 6/6/2024

Lab Sample ID: PB24E29HE2
Lab File Name: A06032401.txt
Final Extraction Vol: 1000 uL
Dilution Factor: 1
Reporting Unit: µg/L
Method: TAP 01-0408-031

CAS No.	ANALYTE	RESULT	Q
62-75-9	N-Nitrosodimethylamine	<0.01	U
4164-28-7	N-Nitrodimethylamine	<0.01	U
314-40-9	Bromacil	<0.01	U

E - Concentration detected above calibration curve

D - Results from dilution analysis

U - Undetected, indicates not found above the detection limit

J - Estimated value, greater than the MDL but less than the PQL

Southwest Research Institute

Method 607 Analysis Data Sheet

Sample ID

PB24E30HE1

Client: Navarro Research and Engineering Inc.
Batch: M607-944
Task Order: N/A
Matrix: Aqueous
Sample Wt/Vol: 1000 mL

Project: 26040.07.012
Date Received: N/A
Date Extracted: 5/30/2024
Date Analyzed: 6/3/2024
Date Reported: 6/6/2024

Lab Sample ID: PB24E30HE1
Lab File Name: A06032402.txt
Final Extraction Vol: 1000 uL
Dilution Factor: 1
Reporting Unit: µg/L
Method: TAP 01-0408-031

CAS No.	ANALYTE	RESULT	Q
62-75-9	N-Nitrosodimethylamine	<0.01	U
4164-28-7	N-Nitrodimethylamine	<0.01	U
314-40-9	Bromacil	<0.01	U

E - Concentration detected above calibration curve

D - Results from dilution analysis

U - Undetected, indicates not found above the detection limit

J - Estimated value, greater than the MDL but less than the PQL

Southwest Research Institute

Method 607 Analysis Data Sheet

Sample ID

LCS24E29HE2

Client: Navarro Research and Engineering Inc.
Batch: M607-944
Task Order: N/A
Matrix: Aqueous
Sample Wt/Vol: 1000 mL

Project: 26040.07.012
Date Received: N/A
Date Extracted: 5/29/2024
Date Analyzed: 6/3/2024
Date Reported: 6/6/2024

Lab Sample ID: LCS24E29HE2
Lab File Name: A06032403.txt
Final Extraction Vol: 1000 uL
Dilution Factor: 1
Reporting Unit: µg/L
Method: TAP 01-0408-031

CAS No.	ANALYTE	RESULT	Q
62-75-9	N-Nitrosodimethylamine	0.20	
4164-28-7	N-Nitrodimethylamine	0.36	
314-40-9	Bromacil	0.51	

E - Concentration detected above calibration curve

D - Results from dilution analysis

U - Undetected, indicates not found above the detection limit

J - Estimated value, greater than the MDL but less than the PQL

Southwest Research Institute

Method 607 Analysis Data Sheet

Sample ID

LCS24E30HE1

Client: Navarro Research and Engineering Inc.
Batch: M607-944
Task Order: N/A
Matrix: Aqueous
Sample Wt/Vol: 1000 mL

Project: 26040.07.012
Date Received: N/A
Date Extracted: 5/30/2024
Date Analyzed: 6/3/2024
Date Reported: 6/6/2024

Lab Sample ID: LCS24E30HE1
Lab File Name: A06032404.txt
Final Extraction Vol: 1000 uL
Dilution Factor: 1
Reporting Unit: µg/L
Method: TAP 01-0408-031

CAS No.	ANALYTE	RESULT	Q
62-75-9	N-Nitrosodimethylamine	0.20	
4164-28-7	N-Nitrodimethylamine	0.36	
314-40-9	Bromacil	0.52	

E - Concentration detected above calibration curve

D - Results from dilution analysis

U - Undetected, indicates not found above the detection limit

J - Estimated value, greater than the MDL but less than the PQL

CLIENT: Navarro Research and Engineering Inc.
SwRI PROJECT #: 26040.07.012
TASK ORDERS: 240524-2 and 240530-1
NAVARRO PO #: 23EC004B

EXTRACTION AND INJECTION LOG

(M607-944)

Preparation Log

Semi-volatiles

A38205

Southwest Research Institute
San Antonio, Texas 78238

Batch: 20240529-P002 (Ver. 1)
Status: APPROVED

Client(s): Navarro Research and Engineering Inc.
Task Order(s): 240524-2
SDG(s): M607-944
Case(s): 23EC004B
Project(s): 26040.07.012
Method(s): Water Extraction By Sep-Funnel 3510C (TAP: TAP 01-0402-015)
Matrix(s): Aqueous
Reagent(s): DCM Optima CIMS#256405, Organic Free Water CIMS#262010, Sodium Sulfate CIMS#262008
Wiretrol(s): 50-100uL CIMS#218870
pH Paper: CIMS#250768 (6.0-8.0)
Notes: Emulsion:C=Centrigfuge, W=Wired, T=Tilted
Reference Book(s): 23-0406.018p116

Location: Box I FREEZER 75

Sample Identification	Client Identification	pH	Sample Vol (mL)	FV DCM (uL)	Emulsion
PB24E29HE2 ①	NA	6.4	1000	1000	NO
LCS24E29HE2 ②	NA	6.4	1000	1000	NO
720555 ①	2405221251X (WB-1-200)	6.4	990	1000	NO
720556 ①	2405221452C (BLM-22-570)	6.4	1050	1000	NO
720557 ②	2405221453C (BLM-22-570)	6.4	1050	1000	NO

① spiked 0.1 mL of CI# 254622 M607 surrogate (Lot# 062422, Source: Absolute Standards, Inc., Exp: 06/24/2027)
② spiked 0.05 mL of CI# 226098 607 MS/LCS solution (Lot# 224743, 070722, 041922, SDGI-021, Source: Fisher Scientific, Absolute Standards, Inc., Cambridge Isotope Laboratories, Exp: 01/09/2025) and
0.1 mL of CI# 254622 M607 surrogate (Lot# 062422, Source: Absolute Standards, Inc., Exp: 06/24/2027)

Comments:
Hamed Edrisi:Set-Up, Spike,Extract, Final Volume
Marina Lebron:Set-Up, Extract, Concentrate, Qualitative Transfer
Christina Menn: Blow Down, Qualitative Transfer

CGL - 06/04/2024

Prepared by: EDRISI, HAMED Date: 05/29/2024

Reviewed by: YAU, ALICE Date: 06/01/2024

Disposal Int/Date/Loc: _____

Preparation Log

Semi-volatiles

A38205

Southwest Research Institute
San Antonio, Texas 78238

Batch: 20240529-P002 (Ver. 1)
Status: APPROVED

Client(s): Navarro Research and Engineering Inc.
Task Order(s): 240524-2
SDG(s): M607-944
Case(s): 23EC004B
Project(s): 26040.07.012
Method(s): Water Extraction By Sep-Funnel 3510C (TAP: TAP 01-0402-015)
Matrix(s): Aqueous
Reagent(s): DCM Optima CIMS#256405, Organic Free Water CIMS#262010, Sodium Sulfate CIMS#262008
Wiretrol(s): 50-100uL CIMS#218870
pH Paper: CIMS#250768 (6.0-8.0)
Notes: Emulsion:C=Centrigfuge, W=Wired, T=Tilted
Reference Book(s): 23-0406.018p116

Location: Box I FREEZER 75

XmL —> ext 3x w/DCM ——> concentrated ——> FV 1000uL DCM for analysis

Prepared by: EDRISI, HAMED Date: 05/29/2024

Reviewed by: YAU, ALICE Date: 06/01/2024

Disposal Int/Date/Loc:

Preparation Log

Semi-volatiles

A38235

Southwest Research Institute
San Antonio, Texas 78238

Batch: 20240530-P009 (Ver. 1)
Status: APPROVED

Client(s): Navarro Research and Engineering Inc.
Task Order(s): 240530-1
SDG(s): M607-944
Case(s): 23EC004B
Project(s): 26040.07.012
Method(s): Water Extraction By Sep-Funnel 3510C (TAP: TAP 01-0402-015)
Matrix(s): Aqueous
Reagent(s): DCM Optima CIMS#256405, Organic Free Water CIMS#262010, Sodium Sulfate CIMS#262008
Wiretrol(s): 50-100uL CIMS#218870
pH Paper: CIMS#250768
Notes: Emulsion:C=Centrigfuge, W=Wired, T=Tilted
Reference Book(s): 23-0406-.018p118

Location: Box 1 FREEZER 75

Sample Identification	Client Identification	pH	Sample Vol (mL)	FV DCM (uL)	Emulsion
PB24E30HE1 ①	NA	6.4	1000	1000	NO
LCS24E30HE1 ②	NA	6.4	1000	1000	NO
720665 ①	2405230942X (WB-1-330)	6.4	1020	1000	NO
720666 ①	2405231037C (ST-1-630)	6.4	1040	1000	NO
720667 ①	2405231111C (ST-1-630)	6.0	1000	1000	NO
720668 ①	2405231408C (ST-1-541)	6.4	1060	1000	NO
720669 ①	2405240830X (WB-1-255)	6.4	1000	1000	NO
720670 ①	2405241002C (ST-1-473)	6.4	1050	1000	NO
720671 ①	2405241003C (ST-1-473)	6.4	1060	1000	NO
720672 ①	2405280843C (400-GV-125)	6.4	1010	1000	NO
720673 ①	2405280844C (400-GV-125)	6.4	1020	1000	NO
720674 ①	2405280855A (400-FV-131)	6.4	1060	1000	NO
720675 ①	2405280856A (400-FV-131)	6.4	1050	1000	NO
720676 ①	2405281004A (400-EV-131)	6.4	1040	1000	NO
720677 ①	2405281012C (400-JV-150)	6.4	1050	1000	NO
720678 ①	2405281440C (400-HV-147)	6.4	1030	1000	NO

① spiked 0.1 mL of CI# 254622 M607 surrogate (Lot# 062422, Source: Absolute Standards, Inc., Exp: 06/24/2027)
② spiked 0.05 mL of CI# 226098 607 MS/LCS solution (Lot# 224743, 070722, 041922, SDGI-021, Source: Fisher Scientific, Absolute Standards, Inc., Cambridge Isotope Laboratories, Exp: 01/09/2025) and
0.1 mL of CI# 254622 M607 surrogate (Lot# 062422, Source: Absolute Standards, Inc., Exp: 06/24/2027)

Comments:
Hamed Edrisi:Set-Up, Spike,Extract,Blow Down, Qualitative Transfer, Final Volume
Marina Lebron:Set-Up, Extract, Concentrate, Qualitative Transfer
Christina Menn:Set-Up, Spike Witness,Extract,

CGL - 06/04/2024

Prepared by: EDRISI, HAMED Date: 05/30/2024

Reviewed by: YAU, ALICE Date: 06/01/2024

Disposal Int/Date/Loc: _____

Preparation Log

Semi-volatiles

A38235

Southwest Research Institute
San Antonio, Texas 78238

Batch: 20240530-P009 (Ver. 1)
Status: APPROVED

Client(s): Navarro Research and Engineering Inc.
Task Order(s): 240530-1
SDG(s): M607-944
Case(s): 23EC004B
Project(s): 26040.07.012
Method(s): Water Extraction By Sep-Funnel 3510C (TAP: TAP 01-0402-015)
Matrix(s): Aqueous
Reagent(s): DCM Optima CIMS#256405, Organic Free Water CIMS#262010, Sodium Sulfate CIMS#262008
Wiretrol(s): 50-100uL CIMS#218870
pH Paper: CIMS#250768
Notes: Emulsion:C=Centrigfuge, W=Wired, T=Tilted
Reference Book(s): 23-0406-.018p118

Location: Box 1 FREEZER 75

XmL —> ext 3x w/DCM ——> concentrated ——> FV 1000uL DCM for analysis

Prepared by: EDRISI, HAMED Date: 05/30/2024

Reviewed by: YAU, ALICE Date: 06/01/2024

Disposal Int/Date/Loc:

Southwest Research Institute GC/MS Injection Log

OPERATOR: AYY SEQUENCE DATE: 6/3/2024 INSTRUMENT: Amidala
COLUMN: Agilent DB-1701 (30 m;0.25 mm;0.25 µm film)
DETECTOR TYPE: MS INJECTION TYPE: Pulsed splitless
CARRIER GAS: Helium SOLVENT: DCM
METHOD FILE: MET_607C.M
CLIENT NAME: Navarro Research and Engineering Inc. PROJECT NUMBER: 26040.07.012
TASK ORDERS: 240524-2 and 240530-1 MATRIX: Aqueous
DATA PATH: C:\MassHunter\GCMS\1\data\2024\060324.sequence

OVEN PROGRAM:
Initial temp: 40 'C (On) Maximum temp: 340 'C
Initial time: 4.00 min Equilibration time: 0.50 min
Ramps:
Rate Final temp Final time
1 15.00 150 0.00
2 25.00 270 3.00
3 0.0(Off)
Post temp: 0 'C
Post time: 0.00 min
Run time: 19.13 min

FILENAME	VIAL	DATE/TIME	METHOD	SAMPLE DESCRIPTION
A060324S1	100	6/3/2024 12:47	MET_607C	M607 CC Std4 0.5 ug/mL CIMS: 257250
A06032401	1	6/3/2024 13:54	MET_607C	PB24E29HE2 IS=0.2NG/UL
A06032402	2	6/3/2024 14:20	MET_607C	PB24E30HE1 IS=0.2NG/UL
A06032403	3	6/3/2024 14:46	MET_607C	LCS24E29HE2 IS=0.2NG/UL
A06032404	4	6/3/2024 15:14	MET_607C	LCS24E30HE1 IS=0.2NG/UL
A06032405	21	6/3/2024 15:41	MET_607C	2405281440C (400-HV-147) IS=0.2NG/UL 720678
A06032406	19	6/3/2024 16:07	MET_607C	2405280856A (400-FV-131) IS=0.2NG/UL 720675
A06032407	16	6/3/2024 16:32	MET_607C	2405280843C (400-GV-125) IS=0.2NG/UL 720672
A06032408	17	6/3/2024 16:59	MET_607C	2405280844C (400-GV-125) IS=0.2NG/UL 720673
A06032409	14	6/3/2024 17:26	MET_607C	2405241002C (ST-1-473) IS=0.2NG/UL 720670
A06032410	15	6/3/2024 17:53	MET_607C	2405241003C (ST-1-473) IS=0.2NG/UL 720671
A06032412	7	6/3/2024 18:20	MET_607C	2405221453C (BLM-22-570) MS IS=0.2NG/UL 720557
A06032413	6	6/3/2024 18:48	MET_607C	2405221452C (BLM-22-570) IS=0.2NG/UL 720556
A06032414	5	6/3/2024 19:15	MET_607C	2405221251X (WB-1-200) IS=0.2NG/UL 720555
A06032415	8	6/3/2024 19:42	MET_607C	2405281012C (400-JV-150) IS=0.2NG/UL 720677
A06032416	9	6/3/2024 20:09	MET_607C	2405230942X (WB-1-330) IS=0.2NG/UL 720665
A06032417	10	6/3/2024 20:36	MET_607C	2405231037C (ST-1-630) IS=0.2NG/UL 720666
A06032418	11	6/3/2024 21:03	MET_607C	2405231111C (ST-1-630) IS=0.2NG/UL 720667
A06032419	12	6/3/2024 21:30	MET_607C	2405231408C (ST-1-541) IS=0.2NG/UL 720668
A06032420	13	6/3/2024 21:57	MET_607C	2405240830X (WB-1-255) IS=0.2NG/UL 720669
A06032423	18	6/3/2024 22:24	MET_607C	2405280855A (400-FV-131) IS=0.2NG/UL 720674
A06032424	20	6/3/2024 22:50	MET_607C	2405281004A (400-EV-131) IS=0.2NG/UL 720676
A06032425	21	6/3/2024 23:17	MET_607C	2405281440C (400-HV-147) DL150 IS=0.2NG/UL 720678

END OF SEQUENCE
Page 1 of 1

Southwest Research Institute GC/MS Injection Log

OPERATOR: AYY SEQUENCE DATE: 6/4/2024 INSTRUMENT: Amidala
COLUMN: Agilent DB-1701 (30 m;0.25 mm;0.25 µm film)
DETECTOR TYPE: MS INJECTION TYPE: Pulsed splitless
CARRIER GAS: Helium SOLVENT: DCM
METHOD FILE: MET_607C.M
CLIENT NAME: Navarro Research and Engineering Inc. PROJECT NUMBER: 26040.07.012
TASK ORDER: 240530-1 MATRIX: Aqueous
DATA PATH: C:\MassHunter\GCMS\1\data\2024\060424.sequence

OVEN PROGRAM:
Initial temp: 40 'C (On) Maximum temp: 340 'C
Initial time: 4.00 min Equilibration time: 0.50 min
Ramps:
Rate Final temp Final time
1 15.00 150 0.00
2 25.00 270 3.00
3 0.0(Off)
Post temp: 0 'C
Post time: 0.00 min
Run time: 19.13 min

FILENAME	VIAL	DATE/TIME	METHOD	SAMPLE DESCRIPTION
A060424S1	100	6/4/2024 09:07	MET_607C	M607 CC Std4 0.5 ug/mL CIMS: 257250
A06042401	96	6/4/2024 09:32	MET_607C	2405280843C (400-GV-125) DL5 IS=0.2NG/UL 720672
A06042402	97	6/4/2024 09:59	MET_607C	2405280844C (400-GV-125) DL5 IS=0.2NG/UL 720673
A06042403	98	6/4/2024 10:26	MET_607C	2405281004A (400-EV-131) DL5 IS=0.2NG/UL 720676

END OF SEQUENCE
Page 1 of 1

ALS Environmental
2655 Park Center Dr., Suite A
Simi Valley, CA 93065
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LABORATORY REPORT

July 2, 2024

Stephanie Portillo
NASA White Sands Test Facility
12600 NASA Rd., Bldg. 120
Las Cruces, NM 88012

RE: NASA White Sands Test Facility (WSTF)

Dear Stephanie:

Enclosed are the results of the samples submitted to our laboratory on June 5, 2024. For your reference, these analyses have been assigned our service request number P2402249.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

ALS | Environmental

By Sue Anderson at 3:16 pm, Jul 02, 2024

For Denise Posada
Project Manager

ALS Environmental
2655 Park Center Dr., Suite A
Simi Valley, CA 93065
T +1 805 526 7161

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Client: NASA White Sands Test Facility
Project: NASA White Sands Test Facility (WSTF)

Service Request No: P2402249

CASE NARRATIVE

The samples were received intact under chain of custody on June 5, 2024 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Volatile Organic Compound Analysis

The samples were analyzed for volatile organic compounds and Freon 123a as a tentatively identified compound in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator. This method is included on the laboratory's NELAP and DoD-ELAP scope of accreditation. Any analytes flagged with an X are not included on the NELAP or DoD-ELAP accreditation.

The Method Blank associated with the samples analyzed on June 22, 2024 contained concentrations of 1,1,1-Trichloroethane, 2,2,4-Trimethylpentane, 2-Butanone (Methyl Ethyl Ketone), Ethyl Benzene, Hexane, m,p-Xylene, Tetrachloroethene, Toluene, and Trichloroethene above the Method Detection Limit (MDL) but below the Method Reporting Limit (MRL). The data has been qualified accordingly. No further corrective action was taken.

The containers were cleaned, prior to sampling, down to the method reporting limit (MRL) reported for this project. For projects requiring DoD QSM 5.4 compliance canisters were cleaned to <1/2 the MRL. Please note, projects which require reporting below the MRL could have results between the MRL and method detection limit (MDL) that are biased high.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

ALS Environmental
2655 Park Center Dr., Suite A
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CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Alaska DEC	https://dec.alaska.gov/spar/csp/lab-approval/list-of-approved-labs	17-019
Arizona DHS	http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home	AZ0694
Florida DOH (NELAP)	http://www.floridahealth.gov/licensing-and-regulation/environmental-laboratories/index.html	E871020
Louisiana DEQ (NELAP)	https://internet.deq.louisiana.gov/portal/divisions/lelap/accredited-laboratories	05071
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/professionals/labCert.shtm	2022028
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	006-999-456
New Jersey DEP (NELAP)	https://dep.nj.gov/dsr/oqa/certified-laboratories/	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oklahoma DEQ (NELAP)	labaccreditation.deq.ok.gov/labaccreditation/	2207
Oregon PHD (NELAP)	http://www.oregon.gov/oha/ph/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-012
Pennsylvania DEP	hhttp://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx	68-03307 (Registration)
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/agency/qa/env_lab_accreditation.html	T104704413-23-14
Utah DOH (NELAP)	https://uphl.utah.gov/certifications/environmental-laboratory-certification/	CA016272023-15
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: NASA White Sands Test Facility Service Request: P2402249
Project ID: NASA White Sands Test Facility (WSTF)

Date Received: 6/5/2024
Time Received: 10:02

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pfl (psig)	TO-15 - VOC Cans
2405280810	P2402249-001	Soil Gas	5/28/2024	08:10	1SC00242	-2.22	6.23	X
2405280816	P2402249-002	Soil Gas	5/28/2024	08:16	1SS00168	-2.20	5.95	X
2405280826	P2402249-003	Soil Gas	5/28/2024	08:26	1SS01570	-2.57	5.70	X
2405280830	P2402249-004	Soil Gas	5/28/2024	08:30	1SC01032	-2.32	5.55	X
2405280836	P2402249-005	Soil Gas	5/28/2024	08:36	1SS01292	-2.20	6.88	X
2405280843	P2402249-006	Soil Gas	5/28/2024	08:43	1SC00368	-2.40	6.63	X
2405280846	P2402249-007	Soil Gas	5/28/2024	08:46	1SC00428	-2.19	6.73	X
2405280853	P2402249-008	Soil Gas	5/28/2024	08:53	1SS00155	-2.63	6.72	X
2405280915	P2402249-009	Soil Gas	5/28/2024	09:15	1SC01217	6.28	6.28	X
2405280919	P2402249-010	Soil Gas	5/28/2024	09:19	1SC01141	-2.46	7.13	X
2405280925	P2402249-011	Soil Gas	5/28/2024	09:25	1SS01584	-2.64	6.38	X
2405280928	P2402249-012	Soil Gas	5/28/2024	09:28	1SC00136	-2.27	7.42	X
2405280934	P2402249-013	Soil Gas	5/28/2024	09:34	1SS00934	-2.45	6.10	X
2405281000	P2402249-014	Soil Gas	5/28/2024	10:00	1SS01414	-2.37	6.00	X
2405281006	P2402249-015	Soil Gas	5/28/2024	10:06	1SS00194	-2.59	6.22	X
2405281011	P2402249-016	Soil Gas	5/28/2024	10:11	1SS01107	-2.36	6.30	X
2405281017	P2402249-017	Soil Gas	5/28/2024	10:17	1SS00982	-2.47	6.12	X
2405281028	P2402249-018	Soil Gas	5/28/2024	10:28	1SC00485	-2.35	5.70	X
2405281032	P2402249-019	Soil Gas	5/28/2024	10:32	1SC00302	-2.58	6.58	X
2405281245	P2402249-020	Soil Gas	5/28/2024	12:45	1SC01366	6.76	6.76	X
2405281310	P2402249-021	Soil Gas	5/28/2024	13:10	1SS00902	-2.76	6.28	X
2405281258	P2402249-022	Soil Gas	5/28/2024	12:58	1SS00597	-2.64	7.06	X
2405281326	P2402249-023	Soil Gas	5/28/2024	13:26	1SS01012	-2.87	6.80	X
2405281337	P2402249-024	Soil Gas	5/28/2024	13:37	1SS00078	-2.75	6.50	X
2405281344	P2402249-025	Soil Gas	5/28/2024	13:44	1SC01055	-2.55	6.42	X
2405290815	P2402249-026	Soil Gas	5/29/2024	08:15	1SS00860	-1.99	6.06	X
2405290816	P2402249-027	Soil Gas	5/29/2024	08:16	1SC01438	-2.26	7.13	X
2405290826	P2402249-028	Soil Gas	5/29/2024	08:26	1SC01125	-2.03	6.72	X
2405290834	P2402249-029	Soil Gas	5/29/2024	08:34	1SS01302	-1.62	6.83	X
2405290850	P2402249-030	Soil Gas	5/29/2024	08:50	1SS01692	-2.06	7.21	X
2405290858	P2402249-031	Soil Gas	5/29/2024	08:58	1SS01312	-2.16	6.93	X
2405290859	P2402249-032	Soil Gas	5/29/2024	08:59	1SS01289	-2.41	7.40	X
2405290905	P2402249-033	Soil Gas	5/29/2024	09:05	1SS01398	-1.65	6.30	X
2405290912	P2402249-034	Soil Gas	5/29/2024	09:12	1SS01407	0.02	8.47	X
2405290919	P2402249-035	Soil Gas	5/29/2024	09:19	1SS01614	-2.09	6.57	X
2405290940	P2402249-036	Soil Gas	5/29/2024	09:40	1SC00810	-2.13	6.46	X
2405290945	P2402249-037	Soil Gas	5/29/2024	09:45	1SC01279	0.01	6.30	X
2405290952	P2402249-038	Soil Gas	5/29/2024	09:52	1SS00848	-0.37	6.50	X
2405291000	P2402249-039	Soil Gas	5/29/2024	10:00	1SS01006	-2.80	7.58	X
2405291001	P2402249-040	Soil Gas	5/29/2024	10:01	1SS00145	-2.56	6.63	X

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: NASA White Sands Test Facility Service Request: P2402249

Project ID: NASA White Sands Test Facility (WSTF)

Date Received: 6/5/2024

Time Received: 10:02

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pfl (psig)	TO-15 - VOC Cans
2405291015	P2402249-041	Soil Gas	5/29/2024	10:15	1SS00999	-2.31	6.60	X
2405291021	P2402249-042	Soil Gas	5/29/2024	10:21	1SS00074	0.05	6.65	X
2405291025	P2402249-043	Soil Gas	5/29/2024	10:25	1SS00881	-2.37	6.74	X
2405291031	P2402249-044	Soil Gas	5/29/2024	10:31	1SS00508	-2.18	6.76	X
2405291045	P2402249-045	Soil Gas	5/29/2024	10:45	1SS00958	6.49	6.49	X
2405291046	P2402249-046	Soil Gas	5/29/2024	10:46	1SS01681	-2.38	6.70	X
2405291053	P2402249-047	Soil Gas	5/29/2024	10:53	1SS01699	-2.41	6.45	X
2405291100	P2402249-048	Soil Gas	5/29/2024	11:00	1SS01447	-2.26	7.43	X
2405291107	P2402249-049	Soil Gas	5/29/2024	11:07	1SS01327	-2.37	6.40	X
2405291315	P2402249-050	Soil Gas	5/29/2024	13:15	1SS01554	-2.74	7.13	X
2405291321	P2402249-051	Soil Gas	5/29/2024	13:21	1SS01282	-3.00	6.23	X
2405291328	P2402249-052	Soil Gas	5/29/2024	13:28	1SS01544	-3.26	6.30	X
2405291345	P2402249-053	Soil Gas	5/29/2024	13:45	1SS01563	-2.90	6.40	X
2405291352	P2402249-054	Soil Gas	5/29/2024	13:52	1SS00784	-1.96	7.40	X
2405291400	P2402249-055	Soil Gas	5/29/2024	14:00	1SC00687	-2.94	7.30	X
2405300800	P2402249-056	Soil Gas	5/30/2024	08:00	1SC00886	-1.94	6.34	X
2405300808	P2402249-057	Soil Gas	5/30/2024	08:08	1SS00252	-0.02	7.47	X
2405300815	P2402249-058	Soil Gas	5/30/2024	08:15	1SS00517	-1.93	6.90	X
2405300827	P2402249-059	Soil Gas	5/30/2024	08:27	1SS00522	-2.05	6.76	X
2405300834	P2402249-060	Soil Gas	5/30/2024	08:34	1SC00864	-2.24	6.37	X
2405300842	P2402249-061	Soil Gas	5/30/2024	08:42	1SS00072	-2.57	6.68	X
2405300850	P2402249-062	Soil Gas	5/30/2024	08:50	1SC00803	-2.98	7.13	X
2405300856	P2402249-063	Soil Gas	5/30/2024	08:56	1SC00312	-3.32	7.00	X
2405300910	P2402249-064	Soil Gas	5/30/2024	09:10	1SS00494	-0.11	6.45	X
2405300916	P2402249-065	Soil Gas	5/30/2024	09:16	1SS00584	-1.85	6.52	X
2405300923	P2402249-066	Soil Gas	5/30/2024	09:23	1SS00263	-2.77	7.00	X
2405300928	P2402249-067	Soil Gas	5/30/2024	09:28	1SS01200	-2.18	6.44	X

WSTF CHAIN OF CUSTODY RECORD

Date 5/30/24 P2402249 Page 1 of 7

Laboratory: ALS PO# 23EC017B

Address shipping questions to:
☐ Lori Minnick, 575-524-5119
☑ Other GEOFF GILES, 575-524-5352 575-635-1284

Send sample receipt confirmation and analytical reports to:
☒ Stephanie Portillo stephanie.portillo@nasa.gov
☐ Other
☐ Other

Analytical Requirements: Method 10-15; Analytes VOC

Special Instructions
Return coolers and reusable packaging materials within 14 days as required in statement of work to:
Return Address:
NASA WSTF Environmental Department
12600 NASA Road; Bldg. 120
Las Cruces, NM 88012
Attn: Lori Minnick

	Sample Number	Sample Location	# of Containers	Sample Matrix*	Charge Number (WSTF Use Only)	Comments
1	2405280810	400-FV-131 15'	1	G	23EEITWKU	1SC00242 CANISTER FINAL PRESSURE = 0
2	2405280816	400-FV-131 63'	1	G		1SS00168 " " " = 0
3	2405280826	400-GV-125 10'	1	G		1SS01570 " " " = 0
4	2405280830	400-GV-125 10'	1	G		1SC01032 " " " = -1
5	2405280836	400-GV-125 46'	1	G		1SS01292 " " " = -1
6	2405280843	400-GV-125 105'	1	G		1SC00368 " " " = 0
7	2405280846	400-GV-125 105'	1	G		1SC00428 " " " = 0
8	2405280853	400-GV-125 120'	1	G		1SS00155 " " " = -1

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
	5/30/24 1330	FEDEX	
FEDEX			6.5.24 / 1082

* Sample Matrix: A – Aqueous; G – Gaseous; S – Solid

WSTF CHAIN OF CUSTODY RECORD

Date 5/30/24 — P2402249 — Page 2 of 7

Laboratory: ALS — PO# 23EC017B

Address shipping questions to:
- ☐ Lori Minnick, 575-524-5119
- ☑ Other GEOFF GILES, 575-524-5352 — 575-635-1284

Send sample receipt confirmation and analytical reports to:
- ☒ Stephanie Portillo stephanie.portillo@nasa.gov
- ☐ Other
- ☐ Other

Analytical Requirements: Method TO-15; Analytes VOC

Special Instructions

Return coolers and reusable packaging materials within 14 days as required in statement of work to:

Return Address:

NASA WSTF Environmental Department
12600 NASA Road; Bldg. 120
Las Cruces, NM 88012
Attn: Lori Minnick

	Sample Number	Sample Location	# of Containers	Sample Matrix*	Charge Number (WSTF Use Only)	Comments
9	2405280915	400-JV-150 12.5'	1	G	23EEHWMU	1SC01217 CANISTER FINAL PRESSURE = N/A
10	2405280919	400-JV-150 12.5'	1	G		1SC01141 " " " = -1
11	2405280925	400-JV-150 50'	1	G		1SS01584 " " " = 0
12	2405280928	400-JV-150 50'	1	G		1SC00136 " " " = 0
13	2405280934	400-JV-150 100'	1	G		1SS00934 " " " = -2
14	2405281000	400-EV-131 10'	1	G		1SS01414 " " " = 0
15	2405281006	400-EV-131 50'	1	G		1SS00194 " " " = -2
16	2405281011	400-EV-131 50'	1	G		1SS01107 " " " = 0
17	2405281017	400-EV-131 100'	1	G		1SS00982 " " " = -1
18	2405281028	400-EV-131 130'	1	G		1SC00485 " " " = 0
19	2405281032	400-EV-131 130'	1	G		1SC00302 " " " = -2

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
[signature]	5/30/24 1330	[signature]	6.5.24 / 1002

* Sample Matrix: A – Aqueous; G – Gaseous; S – Solid

WSTF CHAIN OF CUSTODY RECORD

Date 5/30/24 — P2402249 — Page 3 of 7

Laboratory: ALS — PO# 23EC017B

Address shipping questions to:
- ☐ Lori Minnick, 575-524-5119
- ☑ Other GEOFF GILES, 575-524-5352 — 575-635-1284

Send sample receipt confirmation and analytical reports to:
- ☒ Stephanie Portillo stephanie.portillo@nasa.gov
- ☐ Other
- ☐ Other

Analytical Requirements: Analytes VOC; Method TO-15

Special Instructions

Return coolers and reusable packaging materials within 14 days as required in statement of work to:

Return Address:

NASA WSTF Environmental Department
12600 NASA Road; Bldg. 120
Las Cruces, NM 88012
Attn: Lori Minnick

	Sample Number	Sample Location	# of Containers	Sample Matrix*	Charge Number (WSTF Use Only)	Comments
20	2405281245	400-HV-147 45'	1	G	23EIHWMU	1SC01366 CANISTER FINAL PRESSURE = N/A
21	2405281310	400-HV-147 45'	1	G		1SS00902 " " " = -1
22	2405281258	400-HV-147 12'	1	G		1SS00597 " " " = 0
23	2405281326	400-HV-147 95'	1	G		1SS01012 " " " = 0
24	2405281337	400-HV-147 130'	1	G		1SS00078 " " " = -2
25	2405281344	400-HV-147 130'	1	G		1SC01055 " " " = 0
26	2405290815	400-SV-15 10'	1	G		1SS00860 " " " = 0
27	2405290816	400-SV-15 10'	1	G		1SC01438 " " " = 0
28	2405290826	400-SV-15 50'	1	G		1SC01125 " " " = -1
29	2405290834	400-SV-15 96'	1	G		1SS01302 " " " = -1

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
[signature]	5/30/24 1330	[signature]	05.24/1002

* Sample Matrix: A – Aqueous; G – Gaseous; S – Solid

WSTF CHAIN OF CUSTODY RECORD

Date 5/30/24 — R2402249 — Page 4 of 7

Laboratory: ALS — PO# 23EC017B

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- ☐ Other

Analytical Requirements: Method TO-15; Analytes 101

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12600 NASA Road; Bldg. 120
Las Cruces, NM 88012
Attn: Lori Minnick

	Sample Number	Sample Location	# of Containers	Sample Matrix*	Charge Number (WSTF Use Only)	Comments
30	2405290850	400-IV-123 10'	1	G	23EEHWMU	15501692 CANISTER FINAL PRESSURE = -1
31	2405290858	400-IV-123 45'	1	G		15501312 " " " = 0
32	2405290859	400-IV-123 45'	1	G		15501289 " " " = 0
33	2405290905	400-IV-123 80'	1	G		15501398 " " " = -2
34	2405290912	400-IV-123 118'	1	G		15501407 " " " = -1
35	2405290919	400-IV-123 118'	1	G		15501614 " " " = 0
36	2405290940	400-KV-142 12.5'	1	G		15C00810 " " " = -1
37	2405290945	400-KV-142 12.5'	1	G		15C01279 " " " = 0
38	2405290952	400-KV-142 50'	1	G		15500848 " " " = 0
39	2405291000	400-KV-142 100'	1	G		15501006 " " " = -1
40	2405291001	400-KV-142 100'	1	G		15500145 " " " = 0

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
	5/30/24 1330		6.5.24 / 1002

* Sample Matrix: A – Aqueous; G – Gaseous; S – Solid

WSTF CHAIN OF CUSTODY RECORD

Date 5/30/24 — P2402249 — Page 5 of 7

Laboratory: ALS — PO# 23EC017B

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- ☐ Other

Analytical Requirements: Analytes VOC; Method TO-15

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NASA WSTF Environmental Department
12600 NASA Road; Bldg. 120
Las Cruces, NM 88012
Attn: Lori Minnick

	Sample Number	Sample Location	# of Containers	Sample Matrix*	Charge Number (WSTF Use Only)	Comments
41	2405291015	400-SV-05 10'	1	G	23EEHWMU	1SS00999 CANISTER FINAL PRESSURE = 0
42	2405291021	400-SV-05 50'	1	G		1SS00074 " " " = 0
43	2405291025	400-SV-05 50'	1	G		1SS00881 " " " = -1
44	2405291031	400-SV-05 100'	1	G		1SS00508 " " " = 0
45	2405291045	400-LV-125 10'	1	G		1SS00958 " " " = N/A
46	2405291046	400-LV-125 10'	1	G		1SS01681 " " " = 0
47	2405291053	400-LV-125 50'	1	G		1SS01699 " " " = 0
48	2405291100	400-LV-125 95'	1	G		1SS01447 " " " = 0
49	2405291107	400-LV-125 122'	1	G		1SS01327 " " " = 0
50	2405291315	400-SV-02 10'	1	G		1SS01554 " " " = 0
51	2405291321	400-SV-02 50'	1	G		1SS01282 " " " = -1
52	2405291328	400-SV-02 100'	1	G		1SS01544 " " " = 0

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
	5/30/24 1330		05.24 1002

* Sample Matrix: A – Aqueous; G – Gaseous; S – Solid

WSTF CHAIN OF CUSTODY RECORD

Date 5/30/24 — P2402249 — Page 6 of 7

Laboratory: ALS — PO# 23EC017B

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- ☐ Other

Analytical Requirements: Method TO-15; Analytes VOC

Special Instructions

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Return Address:

NASA WSTF Environmental Department
12600 NASA Road; Bldg. 120
Las Cruces, NM 88012
Attn: Lori Minnick

	Sample Number	Sample Location	# of Containers	Sample Matrix*	Charge Number (WSTF Use Only)	Comments
53	2405291345	400-SV-03 10'	1	G	23EECHWHU	1SS01563 CANISTER FINAL PRESSURE = 0
54	2405291352	400-SV-03 50'	1	G		1SS00784 " " " = 0
55	2405291400	400-SV-03 92'	1	G		1SC00687 " " " = -2
56	2405300800	400-SV-09 10'	1	G		1SC00886 " " " = 0
57	2405300808	400-SV-09 45'	1	G		1SS00252 " " " = 0
58	2405300815	400-SV-09 104'	1	G		1SS00517 " " " = 0
59	2405300827	400-SV-10 10'	1	G		1SS00522 " " " = -2
60	2405300834	400-SV-10 50'	1	G		1SC00864 " " " = -1
61	2405300842	400-SV-10 50'	1	G		1SS00072 " " " = 0
62	2405300850	400-SV-10 100'	1	G		1SC00803 " " " = 0
63	2405300856	400-SV-10 125'	1	G		1SC00312 " " " = 0

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
	5/30/24 1330		6.5.24 / 1002

* Sample Matrix: A – Aqueous; G – Gaseous; S – Solid

WSTF CHAIN OF CUSTODY RECORD

Date 5/30/24 — P2402249 — Page 7 of 7

Laboratory: ALS — PO# 23EC017B

Address shipping questions to:
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- ☐ Other
- ☐ Other

Analytical Requirements: Analytes VOC — Method TO-15

Special Instructions

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Return Address:

NASA WSTF Environmental Department
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Las Cruces, NM 88012
Attn: Lori Minnick

	Sample Number	Sample Location	# of Containers	Sample Matrix*	Charge Number (WSTF Use Only)	Comments
64	2405300910	400-SV-07 10'	1	G	23EEETHW4U	1SS00494 CANISTER FINAL PRESSURE = -1
65	2405300916	400-SV-07 45'	1	G		1SS00584 " " " = -1
66	2405300923	400-SV-07 100'	1	G		1SS00263 " " " = 0
67	2405300928	400-SV-07 100'	1	G		1SS01200 " " " = 0

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
	5/30/24 1330		6.5.24 / 1002

* Sample Matrix: A – Aqueous; G – Gaseous; S – Solid

ALS Environmental
Sample Acceptance Check Form

Client: NASA White Sands Test Facility Work order: P2402249

Project: NASA White Sands Test Facility (WSTF)

Sample(s) received on: 6/5/24 Date opened: 6/5/24 by: DENISE.POSADA

Note: This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Did **sample containers** arrive in good condition?	☒	☐	☐
3	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
4	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
5	Was **sample volume** received adequate for analysis?	☒	☐	☐
6	Are samples within specified holding times?	☒	☐	☐
7	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☐	☐	☒
8	Were **custody seals** on outside of cooler/Box/Container?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
9	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☐	☐	☒
	Is there a client indication that the submitted samples are **pH** preserved?	☐	☐	☒
	Were **VOA vials** checked for presence/absence of air bubbles?	☐	☐	☒
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☐	☒
10	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
11	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒
12	Lab Notification: Analyst and PM were alerted of Short HT or RUSH samples?	☐	☐	☒
13	Client Notification: Client has been notified regarding HT exceedances and/or other CoC discrepancies?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P2402249-001.01	1.0 L Source Can					
P2402249-002.01	1.0 L Source Silonite Canister					
P2402249-003.01	1.0 L Source Silonite Canister					
P2402249-004.01	1.0 L Source Can					
P2402249-005.01	1.0 L Source Silonite Canister					
P2402249-006.01	1.0 L Source Can					
P2402249-007.01	1.0 L Source Can					
P2402249-008.01	1.0 L Source Silonite Canister					
P2402249-009.01	1.0 L Source Can					
P2402249-010.01	1.0 L Source Can					
P2402249-011.01	1.0 L Source Silonite Canister					
P2402249-012.01	1.0 L Source Can					
P2402249-013.01	1.0 L Source Silonite Canister					

Explain any discrepancies: (include lab sample ID numbers):

Sulfur (pH>4)

ALS Environmental
Sample Acceptance Check Form

Client: NASA White Sands Test Facility Work order: P2402249

Project: NASA White Sands Test Facility (WSTF)

Sample(s) received on: 6/5/24 Date opened: 6/5/24 by: DENISE.POSADA

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P2402249-014.01	1.0 L Source Silonite Canister					
P2402249-015.01	1.0 L Source Silonite Canister					
P2402249-016.01	1.0 L Source Silonite Canister					
P2402249-017.01	1.0 L Source Silonite Canister					
P2402249-018.01	1.0 L Source Can					
P2402249-019.01	1.0 L Source Can					
P2402249-020.01	1.0 L Source Can					
P2402249-021.01	1.0 L Source Silonite Canister					
P2402249-022.01	1.0 L Source Silonite Canister					
P2402249-023.01	1.0 L Source Silonite Canister					
P2402249-024.01	1.0 L Source Silonite Canister					
P2402249-025.01	1.0 L Source Can					
P2402249-026.01	1.0 L Source Silonite Canister					
P2402249-027.01	1.0 L Source Can					
P2402249-028.01	1.0 L Source Can					
P2402249-029.01	1.0 L Source Silonite Canister					
P2402249-030.01	1.0 L Source Silonite Canister					
P2402249-031.01	1.0 L Source Silonite Canister					
P2402249-032.01	1.0 L Source Silonite Canister					
P2402249-033.01	1.0 L Source Silonite Canister					
P2402249-034.01	1.0 L Source Silonite Canister					
P2402249-035.01	1.0 L Source Silonite Canister					
P2402249-036.01	1.0 L Source Can					
P2402249-037.01	1.0 L Source Can					
P2402249-038.01	1.0 L Source Silonite Canister					
P2402249-039.01	1.0 L Source Silonite Canister					
P2402249-040.01	1.0 L Source Silonite Canister					
P2402249-041.01	1.0 L Source Silonite Canister					
P2402249-042.01	1.0 L Source Silonite Canister					
P2402249-043.01	1.0 L Source Silonite Canister					
P2402249-044.01	1.0 L Source Silonite Canister					
P2402249-045.01	1.0 L Source Silonite Canister					
P2402249-046.01	1.0 L Source Silonite Canister					
P2402249-047.01	1.0 L Source Silonite Canister					
P2402249-048.01	1.0 L Source Silonite Canister					
P2402249-049.01	1.0 L Source Silonite Canister					
P2402249-050.01	1.0 L Source Silonite Canister					
P2402249-051.01	1.0 L Source Silonite Canister					
P2402249-052.01	1.0 L Source Silonite Canister					
P2402249-053.01	1.0 L Source Silonite Canister					

Explain any discrepancies: (include lab sample ID numbers):

Sulfur (pH>4)

ALS Environmental
Sample Acceptance Check Form

Client: NASA White Sands Test Facility Work order: P2402249

Project: NASA White Sands Test Facility (WSTF)

Sample(s) received on: 6/5/24 Date opened: 6/5/24 by: DENISE.POSADA

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P2402249-054.01	1.0 L Source Silonite Canister					
P2402249-055.01	1.0 L Source Can					
P2402249-056.01	1.0 L Source Can					
P2402249-057.01	1.0 L Source Silonite Canister					
P2402249-058.01	1.0 L Source Silonite Canister					
P2402249-059.01	1.0 L Source Silonite Canister					
P2402249-060.01	1.0 L Source Can					
P2402249-061.01	1.0 L Source Silonite Canister					
P2402249-062.01	1.0 L Source Can					
P2402249-063.01	1.0 L Source Can					
P2402249-064.01	1.0 L Source Silonite Canister					
P2402249-065.01	1.0 L Source Silonite Canister					
P2402249-066.01	1.0 L Source Silonite Canister					
P2402249-067.01	1.0 L Source Silonite Canister					
P2402249-068.01	1.0 L Source Silonite Canister					Return Unused
P2402249-069.01	1.0 L Source Silonite Canister					Return Unused
P2402249-070.01	1.0 L Source Silonite Canister					Return Unused
P2402249-071.01	1.0 L Source Can					Return Unused

Explain any discrepancies: (include lab sample ID numbers):

Sulfur (pH>4)

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405280810** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-001

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/17/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00242

Initial Pressure (psig): -2.22 Final Pressure (psig): 6.23

Container Dilution Factor: 1.68

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	2.1	0.28	ND	0.39	0.051	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.1	0.31	ND	0.31	0.045	
79-00-5	1,1,2-Trichloroethane	ND	2.1	0.23	ND	0.39	0.042	
75-34-3	1,1-Dichloroethane	ND	2.1	0.33	ND	0.52	0.081	
75-35-4	1,1-Dichloroethene	ND	2.1	0.31	ND	0.53	0.078	
120-82-1	1,2,4-Trichlorobenzene	ND	2.1	0.55	ND	0.28	0.074	
95-63-6	1,2,4-Trimethylbenzene	**0.48**	2.1	0.31	**0.098**	0.43	0.063	**J**
106-93-4	1,2-Dibromoethane (EDB)	ND	2.1	0.26	ND	0.27	0.034	
95-50-1	1,2-Dichlorobenzene	**0.41**	2.1	0.33	**0.068**	0.35	0.055	**J**
107-06-2	1,2-Dichloroethane	ND	2.1	0.25	ND	0.52	0.061	
78-87-5	1,2-Dichloropropane	ND	2.1	0.28	ND	0.45	0.060	
108-67-8	1,3,5-Trimethylbenzene	ND	2.1	0.32	ND	0.43	0.066	
106-99-0	1,3-Butadiene	ND	2.1	0.37	ND	0.95	0.17	
541-73-1	1,3-Dichlorobenzene	ND	2.1	0.34	ND	0.35	0.056	
106-46-7	1,4-Dichlorobenzene	ND	2.1	0.34	ND	0.35	0.057	
123-91-1	1,4-Dioxane	**0.47**	2.1	0.26	**0.13**	0.58	0.073	**J**
540-84-1	2,2,4-Trimethylpentane	ND	2.1	0.34	ND	0.45	0.072	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	ND	21	0.46	ND	7.1	0.16	
591-78-6	2-Hexanone	**1.1**	2.1	0.28	**0.27**	0.51	0.068	**J**
67-63-0	2-Propanol	**1.7**	4.2	0.92	**0.70**	1.7	0.38	**J**
107-05-1	3-Chloropropene	ND	2.1	0.30	ND	0.67	0.097	
622-96-8	4-Ethyltoluene	ND	2.1	0.36	ND	0.43	0.073	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405280810** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-001

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/17/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00242

Initial Pressure (psig): -2.22 Final Pressure (psig): 6.23

Container Dilution Factor: 1.68

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	**0.39**	2.1	0.31	**0.095**	0.51	0.075	**J**
67-64-1	Acetone	**28**	21	5.0	**12**	8.8	2.1	
100-44-7	alpha-Chlorotoluene	ND	2.1	0.50	ND	0.41	0.097	
71-43-2	Benzene	ND	2.1	0.32	ND	0.66	0.10	
75-27-4	Bromodichloromethane	ND	2.1	0.32	ND	0.31	0.048	
75-25-2	Bromoform	ND	2.1	0.46	ND	0.20	0.045	
74-83-9	Bromomethane	ND	2.1	0.31	ND	0.54	0.080	
75-15-0	Carbon Disulfide	**37**	21	0.67	**12**	6.7	0.22	
56-23-5	Carbon Tetrachloride	ND	2.1	0.31	ND	0.33	0.049	
108-90-7	Chlorobenzene	ND	2.1	0.30	ND	0.46	0.065	
75-00-3	Chloroethane	ND	2.1	0.28	ND	0.80	0.11	
67-66-3	Chloroform	**0.64**	2.1	0.30	**0.13**	0.43	0.061	**J**
74-87-3	Chloromethane	ND	2.1	0.36	ND	1.0	0.17	
156-59-2	cis-1,2-Dichloroethene	ND	2.1	0.32	ND	0.53	0.079	
10061-01-5	cis-1,3-Dichloropropene	ND	2.1	0.35	ND	0.46	0.077	
98-82-8	Cumene	ND	2.1	0.32	ND	0.43	0.066	
110-82-7	Cyclohexane	ND	4.2	0.63	ND	1.2	0.18	
124-48-1	Dibromochloromethane	ND	2.1	0.29	ND	0.25	0.035	
64-17-5	Ethanol	**7.0**	21	1.6	**3.7**	11	0.83	**J**
100-41-4	Ethyl Benzene	ND	2.1	0.32	ND	0.48	0.073	
75-69-4	Freon 11	**2.3**	2.1	0.34	**0.41**	0.37	0.061	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405280810** ALS Sample ID: P2402249-001
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/17/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00242

Initial Pressure (psig): -2.22 Final Pressure (psig): 6.23

Container Dilution Factor: 1.68

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**1.5**	2.1	0.32	**0.19**	0.27	0.042	**J**
76-14-2	Freon 114	ND	2.1	0.35	ND	0.30	0.050	
75-71-8	Freon 12	**2.3**	2.1	0.37	**0.46**	0.42	0.074	
306-83-2	Freon 123	**1.5**	2.1	1.0	**0.23**	0.34	0.16	**J, X**
75-43-4	Freon 21	ND	2.1	1.0	ND	0.50	0.24	**X**
142-82-5	Heptane	ND	2.1	0.36	ND	0.51	0.087	
87-68-3	Hexachlorobutadiene	ND	2.1	0.46	ND	0.20	0.043	
110-54-3	Hexane	ND	2.1	0.46	ND	0.60	0.13	
179601-23-1	m,p-Xylene	ND	4.2	0.59	ND	0.97	0.14	
1634-04-4	Methyl tert-butyl ether	ND	2.1	0.26	ND	0.58	0.073	
75-09-2	Methylene Chloride	ND	2.1	0.63	ND	0.60	0.18	
95-47-6	o-Xylene	ND	2.1	0.32	ND	0.48	0.074	
103-65-1	Propylbenzene	ND	2.1	0.32	ND	0.43	0.066	
100-42-5	Styrene	ND	2.1	0.36	ND	0.49	0.085	
127-18-4	Tetrachloroethene	ND	2.1	0.29	ND	0.31	0.043	
109-99-9	Tetrahydrofuran	ND	2.1	0.28	ND	0.71	0.095	
108-88-3	Toluene	ND	2.1	0.27	ND	0.56	0.072	
156-60-5	trans-1,2-Dichloroethene	ND	2.1	0.31	ND	0.53	0.078	
10061-02-6	trans-1,3-Dichloropropene	ND	2.1	0.46	ND	0.46	0.10	
79-01-6	Trichloroethene	ND	2.1	0.30	ND	0.39	0.056	
75-01-4	Vinyl Chloride	ND	2.1	0.24	ND	0.82	0.094	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405280810** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-001

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/28/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/17/24
Sampling Media:	1.0 L Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			
Container ID:	1SC00242		

Initial Pressure (psig): -2.22 Final Pressure (psig): 6.23

Container Dilution Factor: 1.68

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405280816** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-002

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/17/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SS00168

Initial Pressure (psig): -2.20 Final Pressure (psig): 5.95

Container Dilution Factor: 1.65

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	2.1	0.27	ND	0.38	0.050	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.1	0.31	ND	0.30	0.044	
79-00-5	1,1,2-Trichloroethane	ND	2.1	0.22	ND	0.38	0.041	
75-34-3	1,1-Dichloroethane	ND	2.1	0.32	ND	0.51	0.080	
75-35-4	1,1-Dichloroethene	ND	2.1	0.31	ND	0.52	0.077	
120-82-1	1,2,4-Trichlorobenzene	ND	2.1	0.54	ND	0.28	0.072	
95-63-6	1,2,4-Trimethylbenzene	ND	2.1	0.31	ND	0.42	0.062	
106-93-4	1,2-Dibromoethane (EDB)	ND	2.1	0.26	ND	0.27	0.033	
95-50-1	1,2-Dichlorobenzene	ND	2.1	0.33	ND	0.34	0.054	
107-06-2	1,2-Dichloroethane	ND	2.1	0.24	ND	0.51	0.060	
78-87-5	1,2-Dichloropropane	ND	2.1	0.27	ND	0.45	0.059	
108-67-8	1,3,5-Trimethylbenzene	ND	2.1	0.32	ND	0.42	0.065	
106-99-0	1,3-Butadiene	ND	2.1	0.36	ND	0.93	0.16	
541-73-1	1,3-Dichlorobenzene	ND	2.1	0.33	ND	0.34	0.055	
106-46-7	1,4-Dichlorobenzene	ND	2.1	0.34	ND	0.34	0.056	
123-91-1	1,4-Dioxane	ND	2.1	0.26	ND	0.57	0.072	
540-84-1	2,2,4-Trimethylpentane	ND	2.1	0.33	ND	0.44	0.071	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**15**	21	0.45	**5.1**	7.0	0.15	**J**
591-78-6	2-Hexanone	**0.71**	2.1	0.27	**0.17**	0.50	0.066	**J**
67-63-0	2-Propanol	**1.5**	4.1	0.91	**0.59**	1.7	0.37	**J**
107-05-1	3-Chloropropene	ND	2.1	0.30	ND	0.66	0.095	
622-96-8	4-Ethyltoluene	ND	2.1	0.35	ND	0.42	0.071	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405280816** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-002

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/17/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SS00168

Initial Pressure (psig): -2.20 Final Pressure (psig): 5.95

Container Dilution Factor: 1.65

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	**0.62**	2.1	0.30	**0.15**	0.50	0.074	**J**
67-64-1	Acetone	**23**	21	5.0	**9.6**	8.7	2.1	
100-44-7	alpha-Chlorotoluene	ND	2.1	0.50	ND	0.40	0.096	
71-43-2	Benzene	**3.3**	2.1	0.32	**1.0**	0.65	0.099	
75-27-4	Bromodichloromethane	ND	2.1	0.32	ND	0.31	0.047	
75-25-2	Bromoform	ND	2.1	0.45	ND	0.20	0.044	
74-83-9	Bromomethane	ND	2.1	0.31	ND	0.53	0.079	
75-15-0	Carbon Disulfide	**110**	21	0.66	**35**	6.6	0.21	
56-23-5	Carbon Tetrachloride	ND	2.1	0.31	ND	0.33	0.049	
108-90-7	Chlorobenzene	ND	2.1	0.29	ND	0.45	0.064	
75-00-3	Chloroethane	ND	2.1	0.27	ND	0.78	0.10	
67-66-3	Chloroform	**0.35**	2.1	0.29	**0.073**	0.42	0.060	**J**
74-87-3	Chloromethane	**0.42**	2.1	0.35	**0.20**	1.0	0.17	**J**
156-59-2	cis-1,2-Dichloroethene	ND	2.1	0.31	ND	0.52	0.078	
10061-01-5	cis-1,3-Dichloropropene	ND	2.1	0.34	ND	0.45	0.075	
98-82-8	Cumene	ND	2.1	0.32	ND	0.42	0.065	
110-82-7	Cyclohexane	ND	4.1	0.62	ND	1.2	0.18	
124-48-1	Dibromochloromethane	ND	2.1	0.29	ND	0.24	0.034	
64-17-5	Ethanol	**5.8**	21	1.5	**3.1**	11	0.81	**J**
100-41-4	Ethyl Benzene	**0.39**	2.1	0.31	**0.090**	0.48	0.071	**J**
75-69-4	Freon 11	**14**	2.1	0.33	**2.5**	0.37	0.059	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405280816** ALS Sample ID: P2402249-002
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/17/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SS00168

Initial Pressure (psig): -2.20 Final Pressure (psig): 5.95

Container Dilution Factor: 1.65

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**15**	2.1	0.31	**1.9**	0.27	0.041	
76-14-2	Freon 114	ND	2.1	0.35	ND	0.30	0.050	
75-71-8	Freon 12	**2.3**	2.1	0.36	**0.47**	0.42	0.073	
306-83-2	Freon 123	**1.4**	2.1	0.99	**0.22**	0.33	0.16	**J, X**
75-43-4	Freon 21	ND	2.1	0.99	ND	0.49	0.24	**X**
142-82-5	Heptane	ND	2.1	0.35	ND	0.50	0.086	
87-68-3	Hexachlorobutadiene	ND	2.1	0.45	ND	0.19	0.043	
110-54-3	Hexane	ND	2.1	0.45	ND	0.59	0.13	
179601-23-1	m,p-Xylene	**0.71**	4.1	0.58	**0.16**	0.95	0.13	**J**
1634-04-4	Methyl tert-butyl ether	**0.57**	2.1	0.26	**0.16**	0.57	0.072	**J**
75-09-2	Methylene Chloride	ND	2.1	0.62	ND	0.59	0.18	
95-47-6	o-Xylene	ND	2.1	0.32	ND	0.48	0.073	
103-65-1	Propylbenzene	ND	2.1	0.32	ND	0.42	0.065	
100-42-5	Styrene	ND	2.1	0.35	ND	0.48	0.083	
127-18-4	Tetrachloroethene	ND	2.1	0.28	ND	0.30	0.042	
109-99-9	Tetrahydrofuran	**0.96**	2.1	0.28	**0.32**	0.70	0.094	**J**
108-88-3	Toluene	**0.77**	2.1	0.27	**0.20**	0.55	0.071	**J**
156-60-5	trans-1,2-Dichloroethene	ND	2.1	0.31	ND	0.52	0.077	
10061-02-6	trans-1,3-Dichloropropene	ND	2.1	0.45	ND	0.45	0.10	
79-01-6	Trichloroethene	**0.41**	2.1	0.30	**0.076**	0.38	0.055	**J**
75-01-4	Vinyl Chloride	ND	2.1	0.24	ND	0.81	0.092	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405280816** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-002

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/28/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/17/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			
Container ID:	1SS00168		

Initial Pressure (psig): -2.20 Final Pressure (psig): 5.95

Container Dilution Factor: 1.65

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405280826** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-003

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/17/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SS01570

Initial Pressure (psig): -2.57 Final Pressure (psig): 5.70

Container Dilution Factor: 1.68

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	2.1	0.28	ND	0.39	0.051	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.1	0.31	ND	0.31	0.045	
79-00-5	1,1,2-Trichloroethane	ND	2.1	0.23	ND	0.39	0.042	
75-34-3	1,1-Dichloroethane	ND	2.1	0.33	ND	0.52	0.081	
75-35-4	1,1-Dichloroethene	ND	2.1	0.31	ND	0.53	0.078	
120-82-1	1,2,4-Trichlorobenzene	ND	2.1	0.55	ND	0.28	0.074	
95-63-6	1,2,4-Trimethylbenzene	ND	2.1	0.31	ND	0.43	0.063	
106-93-4	1,2-Dibromoethane (EDB)	ND	2.1	0.26	ND	0.27	0.034	
95-50-1	1,2-Dichlorobenzene	ND	2.1	0.33	ND	0.35	0.055	
107-06-2	1,2-Dichloroethane	ND	2.1	0.25	ND	0.52	0.061	
78-87-5	1,2-Dichloropropane	ND	2.1	0.28	ND	0.45	0.060	
108-67-8	1,3,5-Trimethylbenzene	ND	2.1	0.32	ND	0.43	0.066	
106-99-0	1,3-Butadiene	ND	2.1	0.37	ND	0.95	0.17	
541-73-1	1,3-Dichlorobenzene	ND	2.1	0.34	ND	0.35	0.056	
106-46-7	1,4-Dichlorobenzene	ND	2.1	0.34	ND	0.35	0.057	
123-91-1	1,4-Dioxane	ND	2.1	0.26	ND	0.58	0.073	
540-84-1	2,2,4-Trimethylpentane	ND	2.1	0.34	ND	0.45	0.072	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**23**	21	0.46	**7.9**	7.1	0.16	
591-78-6	2-Hexanone	**0.80**	2.1	0.28	**0.20**	0.51	0.068	**J**
67-63-0	2-Propanol	**1.6**	4.2	0.92	**0.64**	1.7	0.38	**J**
107-05-1	3-Chloropropene	ND	2.1	0.30	ND	0.67	0.097	
622-96-8	4-Ethyltoluene	ND	2.1	0.36	ND	0.43	0.073	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405280826** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-003

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/17/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SS01570

Initial Pressure (psig): -2.57 Final Pressure (psig): 5.70

Container Dilution Factor: 1.68

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	**0.71**	2.1	0.31	**0.17**	0.51	0.075	**J**
67-64-1	Acetone	**120**	21	5.0	**52**	8.8	2.1	
100-44-7	alpha-Chlorotoluene	ND	2.1	0.50	ND	0.41	0.097	
71-43-2	Benzene	ND	2.1	0.32	ND	0.66	0.10	
75-27-4	Bromodichloromethane	ND	2.1	0.32	ND	0.31	0.048	
75-25-2	Bromoform	ND	2.1	0.46	ND	0.20	0.045	
74-83-9	Bromomethane	**0.66**	2.1	0.31	**0.17**	0.54	0.080	**J**
75-15-0	Carbon Disulfide	**3.7**	21	0.67	**1.2**	6.7	0.22	**J**
56-23-5	Carbon Tetrachloride	ND	2.1	0.31	ND	0.33	0.049	
108-90-7	Chlorobenzene	ND	2.1	0.30	ND	0.46	0.065	
75-00-3	Chloroethane	ND	2.1	0.28	ND	0.80	0.11	
67-66-3	Chloroform	**1.2**	2.1	0.30	**0.25**	0.43	0.061	**J**
74-87-3	Chloromethane	**2.0**	2.1	0.36	**0.97**	1.0	0.17	**J**
156-59-2	cis-1,2-Dichloroethene	ND	2.1	0.32	ND	0.53	0.079	
10061-01-5	cis-1,3-Dichloropropene	ND	2.1	0.35	ND	0.46	0.077	
98-82-8	Cumene	ND	2.1	0.32	ND	0.43	0.066	
110-82-7	Cyclohexane	ND	4.2	0.63	ND	1.2	0.18	
124-48-1	Dibromochloromethane	ND	2.1	0.29	ND	0.25	0.035	
64-17-5	Ethanol	**14**	21	1.6	**7.4**	11	0.83	**J**
100-41-4	Ethyl Benzene	ND	2.1	0.32	ND	0.48	0.073	
75-69-4	Freon 11	**4.4**	2.1	0.34	**0.79**	0.37	0.061	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405280826** ALS Sample ID: P2402249-003
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/17/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SS01570

Initial Pressure (psig): -2.57 Final Pressure (psig): 5.70

Container Dilution Factor: 1.68

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**1.3**	2.1	0.32	**0.16**	0.27	0.042	**J**
76-14-2	Freon 114	ND	2.1	0.35	ND	0.30	0.050	
75-71-8	Freon 12	**2.2**	2.1	0.37	**0.45**	0.42	0.074	
306-83-2	Freon 123	**2.3**	2.1	1.0	**0.37**	0.34	0.16	**X**
75-43-4	Freon 21	ND	2.1	1.0	ND	0.50	0.24	**X**
142-82-5	Heptane	ND	2.1	0.36	ND	0.51	0.087	
87-68-3	Hexachlorobutadiene	ND	2.1	0.46	ND	0.20	0.043	
110-54-3	Hexane	ND	2.1	0.46	ND	0.60	0.13	
179601-23-1	m,p-Xylene	ND	4.2	0.59	ND	0.97	0.14	
1634-04-4	Methyl tert-butyl ether	ND	2.1	0.26	ND	0.58	0.073	
75-09-2	Methylene Chloride	ND	2.1	0.63	ND	0.60	0.18	
95-47-6	o-Xylene	ND	2.1	0.32	ND	0.48	0.074	
103-65-1	Propylbenzene	ND	2.1	0.32	ND	0.43	0.066	
100-42-5	Styrene	ND	2.1	0.36	ND	0.49	0.085	
127-18-4	Tetrachloroethene	ND	2.1	0.29	ND	0.31	0.043	
109-99-9	Tetrahydrofuran	ND	2.1	0.28	ND	0.71	0.095	
108-88-3	Toluene	ND	2.1	0.27	ND	0.56	0.072	
156-60-5	trans-1,2-Dichloroethene	ND	2.1	0.31	ND	0.53	0.078	
10061-02-6	trans-1,3-Dichloropropene	ND	2.1	0.46	ND	0.46	0.10	
79-01-6	Trichloroethene	ND	2.1	0.30	ND	0.39	0.056	
75-01-4	Vinyl Chloride	ND	2.1	0.24	ND	0.82	0.094	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405280826** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-003

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/28/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/17/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			
Container ID:	1SS01570		

Initial Pressure (psig): -2.57 Final Pressure (psig): 5.70

Container Dilution Factor: 1.68

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405280830** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-004

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/17/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01032

Initial Pressure (psig): -2.32 Final Pressure (psig): 5.55

Container Dilution Factor: 1.64

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	2.1	0.27	ND	0.38	0.050	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.1	0.30	ND	0.30	0.044	
79-00-5	1,1,2-Trichloroethane	ND	2.1	0.22	ND	0.38	0.041	
75-34-3	1,1-Dichloroethane	ND	2.1	0.32	ND	0.51	0.079	
75-35-4	1,1-Dichloroethene	ND	2.1	0.30	ND	0.52	0.077	
120-82-1	1,2,4-Trichlorobenzene	ND	2.1	0.53	ND	0.28	0.072	
95-63-6	1,2,4-Trimethylbenzene	ND	2.1	0.30	ND	0.42	0.062	
106-93-4	1,2-Dibromoethane (EDB)	ND	2.1	0.25	ND	0.27	0.033	
95-50-1	1,2-Dichlorobenzene	ND	2.1	0.32	ND	0.34	0.054	
107-06-2	1,2-Dichloroethane	ND	2.1	0.24	ND	0.51	0.060	
78-87-5	1,2-Dichloropropane	ND	2.1	0.27	ND	0.44	0.059	
108-67-8	1,3,5-Trimethylbenzene	ND	2.1	0.32	ND	0.42	0.064	
106-99-0	1,3-Butadiene	ND	2.1	0.36	ND	0.93	0.16	
541-73-1	1,3-Dichlorobenzene	ND	2.1	0.33	ND	0.34	0.055	
106-46-7	1,4-Dichlorobenzene	ND	2.1	0.34	ND	0.34	0.056	
123-91-1	1,4-Dioxane	ND	2.1	0.26	ND	0.57	0.072	
540-84-1	2,2,4-Trimethylpentane	ND	2.1	0.33	ND	0.44	0.070	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**1.2**	21	0.45	**0.41**	7.0	0.15	**J**
591-78-6	2-Hexanone	ND	2.1	0.27	ND	0.50	0.066	
67-63-0	2-Propanol	**2.6**	4.1	0.90	**1.1**	1.7	0.37	**J**
107-05-1	3-Chloropropene	ND	2.1	0.30	ND	0.66	0.094	
622-96-8	4-Ethyltoluene	ND	2.1	0.35	ND	0.42	0.071	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405280830** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-004

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/17/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01032

Initial Pressure (psig): -2.32 Final Pressure (psig): 5.55

Container Dilution Factor: 1.64

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	2.1	0.30	ND	0.50	0.073	
67-64-1	Acetone	**7.8**	21	4.9	**3.3**	8.6	2.1	**J**
100-44-7	alpha-Chlorotoluene	ND	2.1	0.49	ND	0.40	0.095	
71-43-2	Benzene	ND	2.1	0.32	ND	0.64	0.099	
75-27-4	Bromodichloromethane	ND	2.1	0.32	ND	0.31	0.047	
75-25-2	Bromoform	ND	2.1	0.45	ND	0.20	0.044	
74-83-9	Bromomethane	ND	2.1	0.30	ND	0.53	0.078	
75-15-0	Carbon Disulfide	**1.5**	21	0.66	**0.47**	6.6	0.21	**J**
56-23-5	Carbon Tetrachloride	ND	2.1	0.30	ND	0.33	0.048	
108-90-7	Chlorobenzene	ND	2.1	0.29	ND	0.45	0.063	
75-00-3	Chloroethane	ND	2.1	0.27	ND	0.78	0.10	
67-66-3	Chloroform	**1.1**	2.1	0.29	**0.23**	0.42	0.060	**J**
74-87-3	Chloromethane	ND	2.1	0.35	ND	0.99	0.17	
156-59-2	cis-1,2-Dichloroethene	ND	2.1	0.31	ND	0.52	0.078	
10061-01-5	cis-1,3-Dichloropropene	ND	2.1	0.34	ND	0.45	0.075	
98-82-8	Cumene	ND	2.1	0.32	ND	0.42	0.064	
110-82-7	Cyclohexane	ND	4.1	0.62	ND	1.2	0.18	
124-48-1	Dibromochloromethane	ND	2.1	0.29	ND	0.24	0.034	
64-17-5	Ethanol	**4.8**	21	1.5	**2.6**	11	0.81	**J**
100-41-4	Ethyl Benzene	ND	2.1	0.31	ND	0.47	0.071	
75-69-4	Freon 11	**4.4**	2.1	0.33	**0.78**	0.36	0.059	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405280830** ALS Sample ID: P2402249-004
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/17/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01032

Initial Pressure (psig): -2.32 Final Pressure (psig): 5.55

Container Dilution Factor: 1.64

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**1.1**	2.1	0.31	**0.15**	0.27	0.041	**J**
76-14-2	Freon 114	ND	2.1	0.34	ND	0.29	0.049	
75-71-8	Freon 12	**2.3**	2.1	0.36	**0.47**	0.41	0.072	
306-83-2	Freon 123	**6.2**	2.1	0.98	**0.99**	0.33	0.16	**X**
75-43-4	Freon 21	ND	2.1	0.98	ND	0.49	0.23	**X**
142-82-5	Heptane	ND	2.1	0.35	ND	0.50	0.085	
87-68-3	Hexachlorobutadiene	ND	2.1	0.45	ND	0.19	0.042	
110-54-3	Hexane	ND	2.1	0.45	ND	0.58	0.13	
179601-23-1	m,p-Xylene	ND	4.1	0.57	ND	0.94	0.13	
1634-04-4	Methyl tert-butyl ether	ND	2.1	0.26	ND	0.57	0.072	
75-09-2	Methylene Chloride	ND	2.1	0.62	ND	0.59	0.18	
95-47-6	o-Xylene	ND	2.1	0.32	ND	0.47	0.073	
103-65-1	Propylbenzene	ND	2.1	0.32	ND	0.42	0.064	
100-42-5	Styrene	ND	2.1	0.35	ND	0.48	0.083	
127-18-4	Tetrachloroethene	ND	2.1	0.28	ND	0.30	0.042	
109-99-9	Tetrahydrofuran	ND	2.1	0.27	ND	0.70	0.093	
108-88-3	Toluene	**0.93**	2.1	0.27	**0.25**	0.54	0.071	**J**
156-60-5	trans-1,2-Dichloroethene	ND	2.1	0.30	ND	0.52	0.077	
10061-02-6	trans-1,3-Dichloropropene	ND	2.1	0.45	ND	0.45	0.099	
79-01-6	Trichloroethene	**0.34**	2.1	0.30	**0.063**	0.38	0.055	**J**
75-01-4	Vinyl Chloride	ND	2.1	0.23	ND	0.80	0.091	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405280830** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-004

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/28/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/17/24
Sampling Media:	1.0 L Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			
Container ID:	1SC01032		

Initial Pressure (psig): -2.32 Final Pressure (psig): 5.55

Container Dilution Factor: 1.64

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405280836** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-005

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/17/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SS01292

Initial Pressure (psig): -2.20 Final Pressure (psig): 6.88

Container Dilution Factor: 1.73

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	2.2	0.29	ND	0.40	0.052	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.2	0.32	ND	0.32	0.047	
79-00-5	1,1,2-Trichloroethane	ND	2.2	0.23	ND	0.40	0.043	
75-34-3	1,1-Dichloroethane	ND	2.2	0.34	ND	0.53	0.083	
75-35-4	1,1-Dichloroethene	ND	2.2	0.32	ND	0.55	0.081	
120-82-1	1,2,4-Trichlorobenzene	ND	2.2	0.56	ND	0.29	0.076	
95-63-6	1,2,4-Trimethylbenzene	ND	2.2	0.32	ND	0.44	0.065	
106-93-4	1,2-Dibromoethane (EDB)	ND	2.2	0.27	ND	0.28	0.035	
95-50-1	1,2-Dichlorobenzene	ND	2.2	0.34	ND	0.36	0.057	
107-06-2	1,2-Dichloroethane	ND	2.2	0.26	ND	0.53	0.063	
78-87-5	1,2-Dichloropropane	ND	2.2	0.29	ND	0.47	0.062	
108-67-8	1,3,5-Trimethylbenzene	ND	2.2	0.33	ND	0.44	0.068	
106-99-0	1,3-Butadiene	ND	2.2	0.38	ND	0.98	0.17	
541-73-1	1,3-Dichlorobenzene	ND	2.2	0.35	ND	0.36	0.058	
106-46-7	1,4-Dichlorobenzene	ND	2.2	0.35	ND	0.36	0.059	
123-91-1	1,4-Dioxane	**0.29**	2.2	0.27	**0.080**	0.60	0.076	**J**
540-84-1	2,2,4-Trimethylpentane	ND	2.2	0.35	ND	0.46	0.074	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	ND	22	0.48	ND	7.3	0.16	
591-78-6	2-Hexanone	ND	2.2	0.29	ND	0.53	0.070	
67-63-0	2-Propanol	ND	4.3	0.95	ND	1.8	0.39	
107-05-1	3-Chloropropene	ND	2.2	0.31	ND	0.69	0.10	
622-96-8	4-Ethyltoluene	ND	2.2	0.37	ND	0.44	0.075	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405280836** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-005

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/17/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SS01292

Initial Pressure (psig): -2.20 Final Pressure (psig): 6.88

Container Dilution Factor: 1.73

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	2.2	0.32	ND	0.53	0.077	
67-64-1	Acetone	**23**	22	5.2	**9.5**	9.1	2.2	
100-44-7	alpha-Chlorotoluene	ND	2.2	0.52	ND	0.42	0.10	
71-43-2	Benzene	ND	2.2	0.33	ND	0.68	0.10	
75-27-4	Bromodichloromethane	ND	2.2	0.33	ND	0.32	0.050	
75-25-2	Bromoform	ND	2.2	0.48	ND	0.21	0.046	
74-83-9	Bromomethane	ND	2.2	0.32	ND	0.56	0.082	
75-15-0	Carbon Disulfide	**2.8**	22	0.69	**0.89**	6.9	0.22	**J**
56-23-5	Carbon Tetrachloride	**0.38**	2.2	0.32	**0.061**	0.34	0.051	**J**
108-90-7	Chlorobenzene	ND	2.2	0.31	ND	0.47	0.067	
75-00-3	Chloroethane	ND	2.2	0.29	ND	0.82	0.11	
67-66-3	Chloroform	ND	2.2	0.31	ND	0.44	0.063	
74-87-3	Chloromethane	**1.4**	2.2	0.37	**0.69**	1.0	0.18	**J**
156-59-2	cis-1,2-Dichloroethene	ND	2.2	0.32	ND	0.55	0.082	
10061-01-5	cis-1,3-Dichloropropene	ND	2.2	0.36	ND	0.48	0.079	
98-82-8	Cumene	ND	2.2	0.33	ND	0.44	0.068	
110-82-7	Cyclohexane	ND	4.3	0.65	ND	1.3	0.19	
124-48-1	Dibromochloromethane	ND	2.2	0.30	ND	0.25	0.036	
64-17-5	Ethanol	**7.2**	22	1.6	**3.8**	11	0.85	**J**
100-41-4	Ethyl Benzene	ND	2.2	0.32	ND	0.50	0.075	
75-69-4	Freon 11	**1.1**	2.2	0.35	**0.19**	0.38	0.062	**J**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405280836** ALS Sample ID: P2402249-005
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/17/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SS01292

Initial Pressure (psig): -2.20 Final Pressure (psig): 6.88

Container Dilution Factor: 1.73

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**0.51**	2.2	0.33	**0.066**	0.28	0.043	**J**
76-14-2	Freon 114	ND	2.2	0.36	ND	0.31	0.052	
75-71-8	Freon 12	**2.4**	2.2	0.38	**0.48**	0.44	0.076	
306-83-2	Freon 123	**3.1**	2.2	1.0	**0.49**	0.35	0.17	**X**
75-43-4	Freon 21	ND	2.2	1.0	ND	0.51	0.25	**X**
142-82-5	Heptane	ND	2.2	0.37	ND	0.53	0.090	
87-68-3	Hexachlorobutadiene	ND	2.2	0.48	ND	0.20	0.045	
110-54-3	Hexane	ND	2.2	0.48	ND	0.61	0.14	
179601-23-1	m,p-Xylene	ND	4.3	0.61	ND	1.0	0.14	
1634-04-4	Methyl tert-butyl ether	ND	2.2	0.27	ND	0.60	0.076	
75-09-2	Methylene Chloride	ND	2.2	0.65	ND	0.62	0.19	
95-47-6	o-Xylene	ND	2.2	0.33	ND	0.50	0.077	
103-65-1	Propylbenzene	ND	2.2	0.33	ND	0.44	0.068	
100-42-5	Styrene	ND	2.2	0.37	ND	0.51	0.087	
127-18-4	Tetrachloroethene	ND	2.2	0.30	ND	0.32	0.044	
109-99-9	Tetrahydrofuran	ND	2.2	0.29	ND	0.73	0.098	
108-88-3	Toluene	ND	2.2	0.28	ND	0.57	0.075	
156-60-5	trans-1,2-Dichloroethene	ND	2.2	0.32	ND	0.55	0.081	
10061-02-6	trans-1,3-Dichloropropene	ND	2.2	0.48	ND	0.48	0.10	
79-01-6	Trichloroethene	**0.31**	2.2	0.31	**0.058**	0.40	0.058	**J**
75-01-4	Vinyl Chloride	ND	2.2	0.25	ND	0.85	0.096	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405280836** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-005

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/28/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/17/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			
Container ID:	1SS01292		

Initial Pressure (psig): -2.20 Final Pressure (psig): 6.88

Container Dilution Factor: 1.73

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405280843** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-006

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/17/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.0010 Liter(s)
Test Notes:
Container ID: 1SC00368

Initial Pressure (psig): -2.40 Final Pressure (psig): 6.63

Container Dilution Factor: 1.73

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	870	110	ND	160	21	
79-34-5	1,1,2,2-Tetrachloroethane	ND	870	130	ND	130	19	
79-00-5	1,1,2-Trichloroethane	ND	870	93	ND	160	17	
75-34-3	1,1-Dichloroethane	ND	870	130	ND	210	33	
75-35-4	1,1-Dichloroethene	ND	870	130	ND	220	32	
120-82-1	1,2,4-Trichlorobenzene	ND	870	220	ND	120	30	
95-63-6	1,2,4-Trimethylbenzene	ND	870	130	ND	180	26	
106-93-4	1,2-Dibromoethane (EDB)	ND	870	110	ND	110	14	
95-50-1	1,2-Dichlorobenzene	ND	870	140	ND	140	23	
107-06-2	1,2-Dichloroethane	ND	870	100	ND	210	25	
78-87-5	1,2-Dichloropropane	ND	870	110	ND	190	25	
108-67-8	1,3,5-Trimethylbenzene	ND	870	130	ND	180	27	
106-99-0	1,3-Butadiene	ND	870	150	ND	390	69	
541-73-1	1,3-Dichlorobenzene	ND	870	140	ND	140	23	
106-46-7	1,4-Dichlorobenzene	ND	870	140	ND	140	24	
123-91-1	1,4-Dioxane	ND	870	110	ND	240	30	
540-84-1	2,2,4-Trimethylpentane	ND	870	140	ND	190	30	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	ND	8,700	190	ND	2,900	65	
591-78-6	2-Hexanone	ND	870	110	ND	210	28	
67-63-0	2-Propanol	ND	1,700	380	ND	700	150	
107-05-1	3-Chloropropene	ND	870	120	ND	280	40	
622-96-8	4-Ethyltoluene	ND	870	150	ND	180	30	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405280843** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-006

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/17/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.0010 Liter(s)
Test Notes:
Container ID: 1SC00368

Initial Pressure (psig): -2.40 Final Pressure (psig): 6.63

Container Dilution Factor: 1.73

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	870	130	ND	210	31	
67-64-1	Acetone	ND	8,700	2,100	ND	3,600	870	
100-44-7	alpha-Chlorotoluene	ND	870	210	ND	170	40	
71-43-2	Benzene	ND	870	130	ND	270	42	
75-27-4	Bromodichloromethane	ND	870	130	ND	130	20	
75-25-2	Bromoform	ND	870	190	ND	84	18	
74-83-9	Bromomethane	ND	870	130	ND	220	33	
75-15-0	Carbon Disulfide	ND	8,700	280	ND	2,800	89	
56-23-5	Carbon Tetrachloride	ND	870	130	ND	140	20	
108-90-7	Chlorobenzene	ND	870	120	ND	190	27	
75-00-3	Chloroethane	ND	870	110	ND	330	43	
67-66-3	Chloroform	ND	870	120	ND	180	25	
74-87-3	Chloromethane	ND	870	150	ND	420	72	
156-59-2	cis-1,2-Dichloroethene	ND	870	130	ND	220	33	
10061-01-5	cis-1,3-Dichloropropene	ND	870	140	ND	190	32	
98-82-8	Cumene	ND	870	130	ND	180	27	
110-82-7	Cyclohexane	ND	1,700	260	ND	500	75	
124-48-1	Dibromochloromethane	ND	870	120	ND	100	14	
64-17-5	Ethanol	ND	8,700	640	ND	4,600	340	
100-41-4	Ethyl Benzene	ND	870	130	ND	200	30	
75-69-4	Freon 11	**91,000**	870	140	**16,000**	150	25	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405280843** ALS Sample ID: P2402249-006
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/17/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.0010 Liter(s)
Test Notes:
Container ID: 1SC00368

Initial Pressure (psig): -2.40 Final Pressure (psig): 6.63

Container Dilution Factor: 1.73

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**170,000**	870	130	**23,000**	110	17	**E**
76-14-2	Freon 114	ND	870	150	ND	120	21	
75-71-8	Freon 12	**1,100**	870	150	**210**	180	30	
306-83-2	Freon 123	**620**	870	420	**100**	140	66	**J, X**
75-43-4	Freon 21	ND	870	420	ND	210	99	**X**
142-82-5	Heptane	ND	870	150	ND	210	36	
87-68-3	Hexachlorobutadiene	ND	870	190	ND	81	18	
110-54-3	Hexane	ND	870	190	ND	250	54	
179601-23-1	m,p-Xylene	ND	1,700	240	ND	400	56	
1634-04-4	Methyl tert-butyl ether	ND	870	110	ND	240	30	
75-09-2	Methylene Chloride	ND	870	260	ND	250	75	
95-47-6	o-Xylene	ND	870	130	ND	200	31	
103-65-1	Propylbenzene	ND	870	130	ND	180	27	
100-42-5	Styrene	ND	870	150	ND	200	35	
127-18-4	Tetrachloroethene	ND	870	120	ND	130	18	
109-99-9	Tetrahydrofuran	ND	870	120	ND	290	39	
108-88-3	Toluene	ND	870	110	ND	230	30	
156-60-5	trans-1,2-Dichloroethene	ND	870	130	ND	220	32	
10061-02-6	trans-1,3-Dichloropropene	ND	870	190	ND	190	42	
79-01-6	Trichloroethene	**230**	870	120	**43**	160	23	**J**
75-01-4	Vinyl Chloride	ND	870	99	ND	340	39	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405280843** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-006

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/28/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/17/24
Sampling Media:	1.0 L Summa Canister	Volume(s) Analyzed:	0.0010 Liter(s)
Test Notes:			
Container ID:	1SC00368		

Initial Pressure (psig): -2.40 Final Pressure (psig): 6.63

Container Dilution Factor: 1.73

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405280846** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-007

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00428

Initial Pressure (psig): -2.19 Final Pressure (psig): 6.73

Container Dilution Factor: 1.71

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	2.1	0.28	ND	0.39	0.052	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.1	0.32	ND	0.31	0.046	
79-00-5	1,1,2-Trichloroethane	ND	2.1	0.23	ND	0.39	0.042	
75-34-3	1,1-Dichloroethane	ND	2.1	0.33	ND	0.53	0.082	
75-35-4	1,1-Dichloroethene	ND	2.1	0.32	ND	0.54	0.080	
120-82-1	1,2,4-Trichlorobenzene	ND	2.1	0.56	ND	0.29	0.075	
95-63-6	1,2,4-Trimethylbenzene	ND	2.1	0.32	ND	0.43	0.064	
106-93-4	1,2-Dibromoethane (EDB)	ND	2.1	0.27	ND	0.28	0.035	
95-50-1	1,2-Dichlorobenzene	ND	2.1	0.34	ND	0.36	0.056	
107-06-2	1,2-Dichloroethane	ND	2.1	0.25	ND	0.53	0.062	
78-87-5	1,2-Dichloropropane	ND	2.1	0.28	ND	0.46	0.061	
108-67-8	1,3,5-Trimethylbenzene	ND	2.1	0.33	ND	0.43	0.067	
106-99-0	1,3-Butadiene	ND	2.1	0.38	ND	0.97	0.17	
541-73-1	1,3-Dichlorobenzene	ND	2.1	0.34	ND	0.36	0.057	
106-46-7	1,4-Dichlorobenzene	ND	2.1	0.35	ND	0.36	0.058	
123-91-1	1,4-Dioxane	ND	2.1	0.27	ND	0.59	0.075	
540-84-1	2,2,4-Trimethylpentane	ND	2.1	0.34	ND	0.46	0.073	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**4.6**	21	0.47	**1.6**	7.3	0.16	**J**
591-78-6	2-Hexanone	**0.83**	2.1	0.28	**0.20**	0.52	0.069	**J**
67-63-0	2-Propanol	**4.5**	4.3	0.94	**1.8**	1.7	0.38	
107-05-1	3-Chloropropene	ND	2.1	0.31	ND	0.68	0.098	
622-96-8	4-Ethyltoluene	ND	2.1	0.36	ND	0.43	0.074	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405280846** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-007

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00428

Initial Pressure (psig): -2.19 Final Pressure (psig): 6.73

Container Dilution Factor: 1.71

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	2.1	0.31	ND	0.52	0.076	
67-64-1	Acetone	**18**	21	5.1	**7.7**	9.0	2.2	**J**
100-44-7	alpha-Chlorotoluene	ND	2.1	0.51	ND	0.41	0.099	
71-43-2	Benzene	ND	2.1	0.33	ND	0.67	0.10	
75-27-4	Bromodichloromethane	ND	2.1	0.33	ND	0.32	0.049	
75-25-2	Bromoform	ND	2.1	0.47	ND	0.21	0.045	
74-83-9	Bromomethane	ND	2.1	0.32	ND	0.55	0.082	
75-15-0	Carbon Disulfide	ND	21	0.68	ND	6.9	0.22	
56-23-5	Carbon Tetrachloride	ND	2.1	0.32	ND	0.34	0.050	
108-90-7	Chlorobenzene	ND	2.1	0.30	ND	0.46	0.066	
75-00-3	Chloroethane	ND	2.1	0.28	ND	0.81	0.11	
67-66-3	Chloroform	ND	2.1	0.30	ND	0.44	0.062	
74-87-3	Chloromethane	**1.5**	2.1	0.37	**0.74**	1.0	0.18	**J**
156-59-2	cis-1,2-Dichloroethene	ND	2.1	0.32	ND	0.54	0.081	
10061-01-5	cis-1,3-Dichloropropene	ND	2.1	0.35	ND	0.47	0.078	
98-82-8	Cumene	ND	2.1	0.33	ND	0.43	0.067	
110-82-7	Cyclohexane	ND	4.3	0.64	ND	1.2	0.19	
124-48-1	Dibromochloromethane	ND	2.1	0.30	ND	0.25	0.035	
64-17-5	Ethanol	**3.7**	21	1.6	**2.0**	11	0.84	**J**
100-41-4	Ethyl Benzene	ND	2.1	0.32	ND	0.49	0.074	
75-69-4	Freon 11	**2.3**	2.1	0.35	**0.41**	0.38	0.062	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405280846** ALS Sample ID: P2402249-007
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00428

Initial Pressure (psig): -2.19 Final Pressure (psig): 6.73

Container Dilution Factor: 1.71

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**1.6**	2.1	0.32	**0.21**	0.28	0.042	**J**
76-14-2	Freon 114	ND	2.1	0.36	ND	0.31	0.051	
75-71-8	Freon 12	**2.4**	2.1	0.37	**0.49**	0.43	0.075	
306-83-2	Freon 123	**2.6**	2.1	1.0	**0.42**	0.34	0.16	**X**
75-43-4	Freon 21	ND	2.1	1.0	ND	0.51	0.24	**X**
142-82-5	Heptane	ND	2.1	0.36	ND	0.52	0.089	
87-68-3	Hexachlorobutadiene	ND	2.1	0.47	ND	0.20	0.044	
110-54-3	Hexane	ND	2.1	0.47	ND	0.61	0.13	
179601-23-1	m,p-Xylene	ND	4.3	0.60	ND	0.98	0.14	
1634-04-4	Methyl tert-butyl ether	ND	2.1	0.27	ND	0.59	0.075	
75-09-2	Methylene Chloride	ND	2.1	0.64	ND	0.62	0.18	
95-47-6	o-Xylene	ND	2.1	0.33	ND	0.49	0.076	
103-65-1	Propylbenzene	ND	2.1	0.33	ND	0.43	0.067	
100-42-5	Styrene	ND	2.1	0.37	ND	0.50	0.086	
127-18-4	Tetrachloroethene	ND	2.1	0.29	ND	0.32	0.044	
109-99-9	Tetrahydrofuran	ND	2.1	0.29	ND	0.73	0.097	
108-88-3	Toluene	**1.4**	2.1	0.28	**0.38**	0.57	0.074	**J**
156-60-5	trans-1,2-Dichloroethene	ND	2.1	0.32	ND	0.54	0.080	
10061-02-6	trans-1,3-Dichloropropene	ND	2.1	0.47	ND	0.47	0.10	
79-01-6	Trichloroethene	ND	2.1	0.31	ND	0.40	0.057	
75-01-4	Vinyl Chloride	ND	2.1	0.24	ND	0.84	0.095	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405280846** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-007

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/28/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/18/24
Sampling Media:	1.0 L Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			
Container ID:	1SC00428		

Initial Pressure (psig): -2.19 Final Pressure (psig): 6.73

Container Dilution Factor: 1.71

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405280853** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-008

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.0030 Liter(s)
Test Notes:
Container ID: 1SS00155

Initial Pressure (psig): -2.63 Final Pressure (psig): 6.72

Container Dilution Factor: 1.77

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	300	39	ND	54	7.1	
79-34-5	1,1,2,2-Tetrachloroethane	ND	300	44	ND	43	6.4	
79-00-5	1,1,2-Trichloroethane	ND	300	32	ND	54	5.8	
75-34-3	1,1-Dichloroethane	ND	300	46	ND	73	11	
75-35-4	1,1-Dichloroethene	ND	300	44	ND	74	11	
120-82-1	1,2,4-Trichlorobenzene	ND	300	77	ND	40	10	
95-63-6	1,2,4-Trimethylbenzene	ND	300	44	ND	60	8.9	
106-93-4	1,2-Dibromoethane (EDB)	ND	300	37	ND	38	4.8	
95-50-1	1,2-Dichlorobenzene	ND	300	47	ND	49	7.8	
107-06-2	1,2-Dichloroethane	ND	300	35	ND	73	8.6	
78-87-5	1,2-Dichloropropane	ND	300	39	ND	64	8.4	
108-67-8	1,3,5-Trimethylbenzene	ND	300	45	ND	60	9.2	
106-99-0	1,3-Butadiene	ND	300	52	ND	130	23	
541-73-1	1,3-Dichlorobenzene	ND	300	47	ND	49	7.9	
106-46-7	1,4-Dichlorobenzene	ND	300	48	ND	49	8.1	
123-91-1	1,4-Dioxane	ND	300	37	ND	82	10	
540-84-1	2,2,4-Trimethylpentane	ND	300	47	ND	63	10	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	ND	3,000	65	ND	1,000	22	
591-78-6	2-Hexanone	ND	300	39	ND	72	9.5	
67-63-0	2-Propanol	ND	590	130	ND	240	53	
107-05-1	3-Chloropropene	ND	300	42	ND	94	14	
622-96-8	4-Ethyltoluene	ND	300	50	ND	60	10	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405280853** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-008

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.0030 Liter(s)
Test Notes:
Container ID: 1SS00155

Initial Pressure (psig): -2.63 Final Pressure (psig): 6.72

Container Dilution Factor: 1.77

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	300	43	ND	72	11	
67-64-1	Acetone	ND	3,000	710	ND	1,200	300	
100-44-7	alpha-Chlorotoluene	ND	300	71	ND	57	14	
71-43-2	Benzene	ND	300	45	ND	92	14	
75-27-4	Bromodichloromethane	ND	300	45	ND	44	6.8	
75-25-2	Bromoform	ND	300	65	ND	29	6.3	
74-83-9	Bromomethane	ND	300	44	ND	76	11	
75-15-0	Carbon Disulfide	ND	3,000	94	ND	950	30	
56-23-5	Carbon Tetrachloride	ND	300	44	ND	47	6.9	
108-90-7	Chlorobenzene	ND	300	42	ND	64	9.1	
75-00-3	Chloroethane	ND	300	39	ND	110	15	
67-66-3	Chloroform	ND	300	42	ND	60	8.6	
74-87-3	Chloromethane	ND	300	51	ND	140	25	
156-59-2	cis-1,2-Dichloroethene	ND	300	44	ND	74	11	
10061-01-5	cis-1,3-Dichloropropene	ND	300	49	ND	65	11	
98-82-8	Cumene	ND	300	45	ND	60	9.2	
110-82-7	Cyclohexane	ND	590	89	ND	170	26	
124-48-1	Dibromochloromethane	ND	300	41	ND	35	4.8	
64-17-5	Ethanol	ND	3,000	220	ND	1,600	120	
100-41-4	Ethyl Benzene	ND	300	44	ND	68	10	
75-69-4	Freon 11	**22,000**	300	48	**3,900**	53	8.5	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405280853** ALS Sample ID: P2402249-008
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.0030 Liter(s)
Test Notes:
Container ID: 1SS00155

Initial Pressure (psig): -2.63 Final Pressure (psig): 6.72

Container Dilution Factor: 1.77

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**43,000**	300	45	**5,600**	39	5.9	
76-14-2	Freon 114	ND	300	50	ND	42	7.1	
75-71-8	Freon 12	**230**	300	51	**46**	60	10	**J**
306-83-2	Freon 123	ND	300	140	ND	47	23	**X**
75-43-4	Freon 21	ND	300	140	ND	70	34	**X**
142-82-5	Heptane	ND	300	50	ND	72	12	
87-68-3	Hexachlorobutadiene	ND	300	65	ND	28	6.1	
110-54-3	Hexane	ND	300	65	ND	84	18	
179601-23-1	m,p-Xylene	ND	590	83	ND	140	19	
1634-04-4	Methyl tert-butyl ether	ND	300	37	ND	82	10	
75-09-2	Methylene Chloride	ND	300	89	ND	85	25	
95-47-6	o-Xylene	ND	300	45	ND	68	10	
103-65-1	Propylbenzene	ND	300	45	ND	60	9.2	
100-42-5	Styrene	ND	300	51	ND	69	12	
127-18-4	Tetrachloroethene	ND	300	41	ND	44	6.0	
109-99-9	Tetrahydrofuran	ND	300	40	ND	100	13	
108-88-3	Toluene	ND	300	38	ND	78	10	
156-60-5	trans-1,2-Dichloroethene	ND	300	44	ND	74	11	
10061-02-6	trans-1,3-Dichloropropene	ND	300	65	ND	65	14	
79-01-6	Trichloroethene	ND	300	42	ND	55	7.9	
75-01-4	Vinyl Chloride	ND	300	34	ND	120	13	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405280853** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-008

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/28/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/18/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.0030 Liter(s)
Test Notes:	**T**		
Container ID:	1SS00155		

Initial Pressure (psig): -2.63 Final Pressure (psig): 6.72

Container Dilution Factor: 1.77

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
4.60	Freon 123a	**3,100**	

T = Analyte is a tentatively identified compound, result is estimated.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405280915** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-009

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/17/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01217

Initial Pressure (psig): 6.28 Final Pressure (psig): 6.28

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	1.3	0.17	ND	0.23	0.030	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.3	0.19	ND	0.18	0.027	
79-00-5	1,1,2-Trichloroethane	ND	1.3	0.14	ND	0.23	0.025	
75-34-3	1,1-Dichloroethane	ND	1.3	0.20	ND	0.31	0.048	
75-35-4	1,1-Dichloroethene	ND	1.3	0.19	ND	0.32	0.047	
120-82-1	1,2,4-Trichlorobenzene	ND	1.3	0.33	ND	0.17	0.044	
95-63-6	1,2,4-Trimethylbenzene	**0.24**	1.3	0.19	**0.048**	0.25	0.038	**J**
106-93-4	1,2-Dibromoethane (EDB)	ND	1.3	0.16	ND	0.16	0.020	
95-50-1	1,2-Dichlorobenzene	ND	1.3	0.20	ND	0.21	0.033	
107-06-2	1,2-Dichloroethane	ND	1.3	0.15	ND	0.31	0.036	
78-87-5	1,2-Dichloropropane	ND	1.3	0.17	ND	0.27	0.036	
108-67-8	1,3,5-Trimethylbenzene	**0.32**	1.3	0.19	**0.065**	0.25	0.039	**J**
106-99-0	1,3-Butadiene	ND	1.3	0.22	ND	0.57	0.099	
541-73-1	1,3-Dichlorobenzene	ND	1.3	0.20	ND	0.21	0.033	
106-46-7	1,4-Dichlorobenzene	ND	1.3	0.21	ND	0.21	0.034	
123-91-1	1,4-Dioxane	ND	1.3	0.16	ND	0.35	0.044	
540-84-1	2,2,4-Trimethylpentane	ND	1.3	0.20	ND	0.27	0.043	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	ND	13	0.28	ND	4.2	0.093	
591-78-6	2-Hexanone	ND	1.3	0.17	ND	0.31	0.040	
67-63-0	2-Propanol	**1.9**	2.5	0.55	**0.78**	1.0	0.22	**J**
107-05-1	3-Chloropropene	ND	1.3	0.18	ND	0.40	0.058	
622-96-8	4-Ethyltoluene	**0.22**	1.3	0.21	**0.044**	0.25	0.043	**J**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405280915** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-009

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/17/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01217

Initial Pressure (psig): 6.28 Final Pressure (psig): 6.28

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	1.3	0.18	ND	0.31	0.045	
67-64-1	Acetone	**4.5**	13	3.0	**1.9**	5.3	1.3	**J**
100-44-7	alpha-Chlorotoluene	ND	1.3	0.30	ND	0.24	0.058	
71-43-2	Benzene	ND	1.3	0.19	ND	0.39	0.060	
75-27-4	Bromodichloromethane	ND	1.3	0.19	ND	0.19	0.029	
75-25-2	Bromoform	ND	1.3	0.28	ND	0.12	0.027	
74-83-9	Bromomethane	ND	1.3	0.19	ND	0.32	0.048	
75-15-0	Carbon Disulfide	ND	13	0.40	ND	4.0	0.13	
56-23-5	Carbon Tetrachloride	ND	1.3	0.19	ND	0.20	0.029	
108-90-7	Chlorobenzene	ND	1.3	0.18	ND	0.27	0.039	
75-00-3	Chloroethane	ND	1.3	0.17	ND	0.47	0.063	
67-66-3	Chloroform	**0.19**	1.3	0.18	**0.038**	0.26	0.036	**J**
74-87-3	Chloromethane	ND	1.3	0.22	ND	0.61	0.10	
156-59-2	cis-1,2-Dichloroethene	ND	1.3	0.19	ND	0.32	0.047	
10061-01-5	cis-1,3-Dichloropropene	ND	1.3	0.21	ND	0.28	0.046	
98-82-8	Cumene	ND	1.3	0.19	ND	0.25	0.039	
110-82-7	Cyclohexane	ND	2.5	0.38	ND	0.73	0.11	
124-48-1	Dibromochloromethane	ND	1.3	0.18	ND	0.15	0.021	
64-17-5	Ethanol	ND	13	0.93	ND	6.6	0.49	
100-41-4	Ethyl Benzene	ND	1.3	0.19	ND	0.29	0.043	
75-69-4	Freon 11	ND	1.3	0.20	ND	0.22	0.036	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405280915** ALS Sample ID: P2402249-009
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/17/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01217

Initial Pressure (psig): 6.28 Final Pressure (psig): 6.28

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	ND	1.3	0.19	ND	0.16	0.025	
76-14-2	Freon 114	ND	1.3	0.21	ND	0.18	0.030	
75-71-8	Freon 12	ND	1.3	0.22	ND	0.25	0.044	
306-83-2	Freon 123	ND	1.3	0.60	ND	0.20	0.096	**X**
75-43-4	Freon 21	ND	1.3	0.60	ND	0.30	0.14	**X**
142-82-5	Heptane	ND	1.3	0.21	ND	0.31	0.052	
87-68-3	Hexachlorobutadiene	ND	1.3	0.28	ND	0.12	0.026	
110-54-3	Hexane	ND	1.3	0.28	ND	0.35	0.078	
179601-23-1	m,p-Xylene	ND	2.5	0.35	ND	0.58	0.081	
1634-04-4	Methyl tert-butyl ether	ND	1.3	0.16	ND	0.35	0.044	
75-09-2	Methylene Chloride	ND	1.3	0.38	ND	0.36	0.11	
95-47-6	o-Xylene	ND	1.3	0.19	ND	0.29	0.044	
103-65-1	Propylbenzene	ND	1.3	0.19	ND	0.25	0.039	
100-42-5	Styrene	ND	1.3	0.22	ND	0.29	0.051	
127-18-4	Tetrachloroethene	ND	1.3	0.17	ND	0.18	0.025	
109-99-9	Tetrahydrofuran	ND	1.3	0.17	ND	0.42	0.057	
108-88-3	Toluene	ND	1.3	0.16	ND	0.33	0.043	
156-60-5	trans-1,2-Dichloroethene	ND	1.3	0.19	ND	0.32	0.047	
10061-02-6	trans-1,3-Dichloropropene	ND	1.3	0.28	ND	0.28	0.061	
79-01-6	Trichloroethene	ND	1.3	0.18	ND	0.23	0.034	
75-01-4	Vinyl Chloride	ND	1.3	0.14	ND	0.49	0.056	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405280915** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-009

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/28/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/17/24
Sampling Media:	1.0 L Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			
Container ID:	1SC01217		

Initial Pressure (psig): 6.28 Final Pressure (psig): 6.28

Container Dilution Factor: 1.00

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405280919** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-010

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/17/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01141

Initial Pressure (psig): -2.46 Final Pressure (psig): 7.13

Container Dilution Factor: 1.78

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	2.2	0.29	ND	0.41	0.054	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.2	0.33	ND	0.32	0.048	
79-00-5	1,1,2-Trichloroethane	ND	2.2	0.24	ND	0.41	0.044	
75-34-3	1,1-Dichloroethane	ND	2.2	0.35	ND	0.55	0.086	
75-35-4	1,1-Dichloroethene	ND	2.2	0.33	ND	0.56	0.083	
120-82-1	1,2,4-Trichlorobenzene	ND	2.2	0.58	ND	0.30	0.078	
95-63-6	1,2,4-Trimethylbenzene	ND	2.2	0.33	ND	0.45	0.067	
106-93-4	1,2-Dibromoethane (EDB)	ND	2.2	0.28	ND	0.29	0.036	
95-50-1	1,2-Dichlorobenzene	ND	2.2	0.35	ND	0.37	0.058	
107-06-2	1,2-Dichloroethane	ND	2.2	0.26	ND	0.55	0.065	
78-87-5	1,2-Dichloropropane	ND	2.2	0.29	ND	0.48	0.064	
108-67-8	1,3,5-Trimethylbenzene	ND	2.2	0.34	ND	0.45	0.070	
106-99-0	1,3-Butadiene	ND	2.2	0.39	ND	1.0	0.18	
541-73-1	1,3-Dichlorobenzene	ND	2.2	0.36	ND	0.37	0.059	
106-46-7	1,4-Dichlorobenzene	ND	2.2	0.36	ND	0.37	0.061	
123-91-1	1,4-Dioxane	ND	2.2	0.28	ND	0.62	0.078	
540-84-1	2,2,4-Trimethylpentane	ND	2.2	0.36	ND	0.48	0.076	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**3.0**	22	0.49	**1.0**	7.5	0.17	**J**
591-78-6	2-Hexanone	**0.80**	2.2	0.29	**0.20**	0.54	0.072	**J**
67-63-0	2-Propanol	ND	4.5	0.98	ND	1.8	0.40	
107-05-1	3-Chloropropene	ND	2.2	0.32	ND	0.71	0.10	
622-96-8	4-Ethyltoluene	ND	2.2	0.38	ND	0.45	0.077	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405280919** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-010

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/17/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01141

Initial Pressure (psig): -2.46 Final Pressure (psig): 7.13

Container Dilution Factor: 1.78

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	2.2	0.32	ND	0.54	0.079	
67-64-1	Acetone	**15**	22	5.3	**6.1**	9.4	2.2	**J**
100-44-7	alpha-Chlorotoluene	ND	2.2	0.53	ND	0.43	0.10	
71-43-2	Benzene	ND	2.2	0.34	ND	0.70	0.11	
75-27-4	Bromodichloromethane	ND	2.2	0.34	ND	0.33	0.051	
75-25-2	Bromoform	ND	2.2	0.49	ND	0.22	0.047	
74-83-9	Bromomethane	ND	2.2	0.33	ND	0.57	0.085	
75-15-0	Carbon Disulfide	**8.2**	22	0.71	**2.6**	7.1	0.23	**J**
56-23-5	Carbon Tetrachloride	ND	2.2	0.33	ND	0.35	0.052	
108-90-7	Chlorobenzene	ND	2.2	0.32	ND	0.48	0.069	
75-00-3	Chloroethane	ND	2.2	0.29	ND	0.84	0.11	
67-66-3	Chloroform	**1.1**	2.2	0.32	**0.23**	0.46	0.065	**J**
74-87-3	Chloromethane	**0.63**	2.2	0.38	**0.30**	1.1	0.19	**J**
156-59-2	cis-1,2-Dichloroethene	ND	2.2	0.33	ND	0.56	0.084	
10061-01-5	cis-1,3-Dichloropropene	ND	2.2	0.37	ND	0.49	0.081	
98-82-8	Cumene	ND	2.2	0.34	ND	0.45	0.070	
110-82-7	Cyclohexane	ND	4.5	0.67	ND	1.3	0.19	
124-48-1	Dibromochloromethane	ND	2.2	0.31	ND	0.26	0.037	
64-17-5	Ethanol	ND	22	1.6	ND	12	0.87	
100-41-4	Ethyl Benzene	ND	2.2	0.33	ND	0.51	0.077	
75-69-4	Freon 11	**52**	2.2	0.36	**9.2**	0.40	0.064	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405280919** ALS Sample ID: P2402249-010
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/17/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01141

Initial Pressure (psig): -2.46 Final Pressure (psig): 7.13

Container Dilution Factor: 1.78

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**78**	2.2	0.34	**10**	0.29	0.044	
76-14-2	Freon 114	ND	2.2	0.37	ND	0.32	0.053	
75-71-8	Freon 12	**2.4**	2.2	0.39	**0.48**	0.45	0.078	
306-83-2	Freon 123	ND	2.2	1.1	ND	0.36	0.17	**X**
75-43-4	Freon 21	ND	2.2	1.1	ND	0.53	0.25	**X**
142-82-5	Heptane	ND	2.2	0.38	ND	0.54	0.092	
87-68-3	Hexachlorobutadiene	ND	2.2	0.49	ND	0.21	0.046	
110-54-3	Hexane	ND	2.2	0.49	ND	0.63	0.14	
179601-23-1	m,p-Xylene	ND	4.5	0.62	ND	1.0	0.14	
1634-04-4	Methyl tert-butyl ether	ND	2.2	0.28	ND	0.62	0.078	
75-09-2	Methylene Chloride	ND	2.2	0.67	ND	0.64	0.19	
95-47-6	o-Xylene	ND	2.2	0.34	ND	0.51	0.079	
103-65-1	Propylbenzene	ND	2.2	0.34	ND	0.45	0.070	
100-42-5	Styrene	ND	2.2	0.38	ND	0.52	0.090	
127-18-4	Tetrachloroethene	ND	2.2	0.31	ND	0.33	0.045	
109-99-9	Tetrahydrofuran	ND	2.2	0.30	ND	0.75	0.10	
108-88-3	Toluene	**0.45**	2.2	0.29	**0.12**	0.59	0.077	**J**
156-60-5	trans-1,2-Dichloroethene	ND	2.2	0.33	ND	0.56	0.083	
10061-02-6	trans-1,3-Dichloropropene	ND	2.2	0.49	ND	0.49	0.11	
79-01-6	Trichloroethene	**0.43**	2.2	0.32	**0.080**	0.41	0.060	**J**
75-01-4	Vinyl Chloride	ND	2.2	0.25	ND	0.87	0.099	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405280919** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-010

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/28/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/17/24
Sampling Media:	1.0 L Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			
Container ID:	1SC01141		

Initial Pressure (psig): -2.46 Final Pressure (psig): 7.13

Container Dilution Factor: 1.78

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405280925** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-011

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/17/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SS01584

Initial Pressure (psig): -2.64 Final Pressure (psig): 6.38

Container Dilution Factor: 1.75

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	2.2	0.29	ND	0.40	0.053	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.2	0.32	ND	0.32	0.047	
79-00-5	1,1,2-Trichloroethane	ND	2.2	0.24	ND	0.40	0.043	
75-34-3	1,1-Dichloroethane	ND	2.2	0.34	ND	0.54	0.084	
75-35-4	1,1-Dichloroethene	ND	2.2	0.32	ND	0.55	0.082	
120-82-1	1,2,4-Trichlorobenzene	ND	2.2	0.57	ND	0.29	0.077	
95-63-6	1,2,4-Trimethylbenzene	ND	2.2	0.32	ND	0.45	0.066	
106-93-4	1,2-Dibromoethane (EDB)	ND	2.2	0.27	ND	0.28	0.035	
95-50-1	1,2-Dichlorobenzene	ND	2.2	0.35	ND	0.36	0.058	
107-06-2	1,2-Dichloroethane	ND	2.2	0.26	ND	0.54	0.064	
78-87-5	1,2-Dichloropropane	ND	2.2	0.29	ND	0.47	0.063	
108-67-8	1,3,5-Trimethylbenzene	ND	2.2	0.34	ND	0.45	0.069	
106-99-0	1,3-Butadiene	ND	2.2	0.39	ND	0.99	0.17	
541-73-1	1,3-Dichlorobenzene	ND	2.2	0.35	ND	0.36	0.058	
106-46-7	1,4-Dichlorobenzene	ND	2.2	0.36	ND	0.36	0.060	
123-91-1	1,4-Dioxane	ND	2.2	0.28	ND	0.61	0.077	
540-84-1	2,2,4-Trimethylpentane	ND	2.2	0.35	ND	0.47	0.075	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**3.9**	22	0.48	**1.3**	7.4	0.16	**J**
591-78-6	2-Hexanone	**0.77**	2.2	0.29	**0.19**	0.53	0.071	**J**
67-63-0	2-Propanol	ND	4.4	0.96	ND	1.8	0.39	
107-05-1	3-Chloropropene	ND	2.2	0.32	ND	0.70	0.10	
622-96-8	4-Ethyltoluene	ND	2.2	0.37	ND	0.45	0.076	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405280925** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-011

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/17/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SS01584

Initial Pressure (psig): -2.64 Final Pressure (psig): 6.38

Container Dilution Factor: 1.75

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	2.2	0.32	ND	0.53	0.078	
67-64-1	Acetone	**12**	22	5.3	**5.1**	9.2	2.2	**J**
100-44-7	alpha-Chlorotoluene	ND	2.2	0.53	ND	0.42	0.10	
71-43-2	Benzene	**0.47**	2.2	0.34	**0.15**	0.69	0.11	**J**
75-27-4	Bromodichloromethane	ND	2.2	0.34	ND	0.33	0.050	
75-25-2	Bromoform	ND	2.2	0.48	ND	0.21	0.047	
74-83-9	Bromomethane	ND	2.2	0.32	ND	0.56	0.083	
75-15-0	Carbon Disulfide	ND	22	0.70	ND	7.0	0.22	
56-23-5	Carbon Tetrachloride	ND	2.2	0.32	ND	0.35	0.051	
108-90-7	Chlorobenzene	ND	2.2	0.31	ND	0.48	0.067	
75-00-3	Chloroethane	ND	2.2	0.29	ND	0.83	0.11	
67-66-3	Chloroform	**4.8**	2.2	0.31	**0.99**	0.45	0.064	
74-87-3	Chloromethane	**0.42**	2.2	0.38	**0.20**	1.1	0.18	**J**
156-59-2	cis-1,2-Dichloroethene	ND	2.2	0.33	ND	0.55	0.083	
10061-01-5	cis-1,3-Dichloropropene	ND	2.2	0.36	ND	0.48	0.080	
98-82-8	Cumene	ND	2.2	0.34	ND	0.45	0.069	
110-82-7	Cyclohexane	ND	4.4	0.66	ND	1.3	0.19	
124-48-1	Dibromochloromethane	ND	2.2	0.31	ND	0.26	0.036	
64-17-5	Ethanol	**10**	22	1.6	**5.3**	12	0.86	**J**
100-41-4	Ethyl Benzene	ND	2.2	0.33	ND	0.50	0.076	
75-69-4	Freon 11	**120**	2.2	0.35	**21**	0.39	0.063	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405280925** ALS Sample ID: P2402249-011
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/17/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SS01584

Initial Pressure (psig): -2.64 Final Pressure (psig): 6.38

Container Dilution Factor: 1.75

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**110**	2.2	0.33	**14**	0.29	0.043	
76-14-2	Freon 114	ND	2.2	0.37	ND	0.31	0.053	
75-71-8	Freon 12	**2.3**	2.2	0.38	**0.46**	0.44	0.077	
306-83-2	Freon 123	**1.1**	2.2	1.1	**0.17**	0.35	0.17	**J, X**
75-43-4	Freon 21	ND	2.2	1.1	ND	0.52	0.25	**X**
142-82-5	Heptane	ND	2.2	0.37	ND	0.53	0.091	
87-68-3	Hexachlorobutadiene	ND	2.2	0.48	ND	0.21	0.045	
110-54-3	Hexane	ND	2.2	0.48	ND	0.62	0.14	
179601-23-1	m,p-Xylene	ND	4.4	0.61	ND	1.0	0.14	
1634-04-4	Methyl tert-butyl ether	ND	2.2	0.28	ND	0.61	0.076	
75-09-2	Methylene Chloride	ND	2.2	0.66	ND	0.63	0.19	
95-47-6	o-Xylene	ND	2.2	0.34	ND	0.50	0.078	
103-65-1	Propylbenzene	ND	2.2	0.34	ND	0.45	0.069	
100-42-5	Styrene	ND	2.2	0.38	ND	0.51	0.088	
127-18-4	Tetrachloroethene	**0.58**	2.2	0.30	**0.086**	0.32	0.045	**J**
109-99-9	Tetrahydrofuran	ND	2.2	0.29	ND	0.74	0.099	
108-88-3	Toluene	ND	2.2	0.28	ND	0.58	0.075	
156-60-5	trans-1,2-Dichloroethene	ND	2.2	0.32	ND	0.55	0.082	
10061-02-6	trans-1,3-Dichloropropene	ND	2.2	0.48	ND	0.48	0.11	
79-01-6	Trichloroethene	**4.9**	2.2	0.32	**0.91**	0.41	0.059	
75-01-4	Vinyl Chloride	ND	2.2	0.25	ND	0.86	0.098	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405280925** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-011

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/28/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/17/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			
Container ID:	1SS01584		

Initial Pressure (psig): -2.64 Final Pressure (psig): 6.38

Container Dilution Factor: 1.75

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405280928** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-012

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.27 Final Pressure (psig): 7.42

Container Dilution Factor: 1.78

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	2.2	0.29	ND	0.41	0.054	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.2	0.33	ND	0.32	0.048	
79-00-5	1,1,2-Trichloroethane	ND	2.2	0.24	ND	0.41	0.044	
75-34-3	1,1-Dichloroethane	ND	2.2	0.35	ND	0.55	0.086	
75-35-4	1,1-Dichloroethene	ND	2.2	0.33	ND	0.56	0.083	
120-82-1	1,2,4-Trichlorobenzene	ND	2.2	0.58	ND	0.30	0.078	
95-63-6	1,2,4-Trimethylbenzene	ND	2.2	0.33	ND	0.45	0.067	
106-93-4	1,2-Dibromoethane (EDB)	ND	2.2	0.28	ND	0.29	0.036	
95-50-1	1,2-Dichlorobenzene	ND	2.2	0.35	ND	0.37	0.058	
107-06-2	1,2-Dichloroethane	ND	2.2	0.26	ND	0.55	0.065	
78-87-5	1,2-Dichloropropane	ND	2.2	0.29	ND	0.48	0.064	
108-67-8	1,3,5-Trimethylbenzene	ND	2.2	0.34	ND	0.45	0.070	
106-99-0	1,3-Butadiene	ND	2.2	0.39	ND	1.0	0.18	
541-73-1	1,3-Dichlorobenzene	ND	2.2	0.36	ND	0.37	0.059	
106-46-7	1,4-Dichlorobenzene	ND	2.2	0.36	ND	0.37	0.061	
123-91-1	1,4-Dioxane	ND	2.2	0.28	ND	0.62	0.078	
540-84-1	2,2,4-Trimethylpentane	ND	2.2	0.36	ND	0.48	0.076	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**5.6**	22	0.49	**1.9**	7.5	0.17	**J**
591-78-6	2-Hexanone	**1.2**	2.2	0.29	**0.29**	0.54	0.072	**J**
67-63-0	2-Propanol	ND	4.5	0.98	ND	1.8	0.40	
107-05-1	3-Chloropropene	ND	2.2	0.32	ND	0.71	0.10	
622-96-8	4-Ethyltoluene	ND	2.2	0.38	ND	0.45	0.077	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405280928** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-012

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.27 Final Pressure (psig): 7.42

Container Dilution Factor: 1.78

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	2.2	0.32	ND	0.54	0.079	
67-64-1	Acetone	**23**	22	5.3	**9.9**	9.4	2.2	
100-44-7	alpha-Chlorotoluene	ND	2.2	0.53	ND	0.43	0.10	
71-43-2	Benzene	ND	2.2	0.34	ND	0.70	0.11	
75-27-4	Bromodichloromethane	ND	2.2	0.34	ND	0.33	0.051	
75-25-2	Bromoform	ND	2.2	0.49	ND	0.22	0.047	
74-83-9	Bromomethane	ND	2.2	0.33	ND	0.57	0.085	
75-15-0	Carbon Disulfide	ND	22	0.71	ND	7.1	0.23	
56-23-5	Carbon Tetrachloride	ND	2.2	0.33	ND	0.35	0.052	
108-90-7	Chlorobenzene	ND	2.2	0.32	ND	0.48	0.069	
75-00-3	Chloroethane	ND	2.2	0.29	ND	0.84	0.11	
67-66-3	Chloroform	ND	2.2	0.32	ND	0.46	0.065	
74-87-3	Chloromethane	**1.6**	2.2	0.38	**0.77**	1.1	0.19	**J**
156-59-2	cis-1,2-Dichloroethene	ND	2.2	0.33	ND	0.56	0.084	
10061-01-5	cis-1,3-Dichloropropene	ND	2.2	0.37	ND	0.49	0.081	
98-82-8	Cumene	ND	2.2	0.34	ND	0.45	0.070	
110-82-7	Cyclohexane	ND	4.5	0.67	ND	1.3	0.19	
124-48-1	Dibromochloromethane	ND	2.2	0.31	ND	0.26	0.037	
64-17-5	Ethanol	**4.1**	22	1.6	**2.2**	12	0.87	**J**
100-41-4	Ethyl Benzene	ND	2.2	0.33	ND	0.51	0.077	
75-69-4	Freon 11	**1.2**	2.2	0.36	**0.21**	0.40	0.064	**J**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405280928** ALS Sample ID: P2402249-012
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.27 Final Pressure (psig): 7.42

Container Dilution Factor: 1.78

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**0.57**	2.2	0.34	**0.075**	0.29	0.044	**J**
76-14-2	Freon 114	ND	2.2	0.37	ND	0.32	0.053	
75-71-8	Freon 12	**2.4**	2.2	0.39	**0.49**	0.45	0.078	
306-83-2	Freon 123	**2.1**	2.2	1.1	**0.34**	0.36	0.17	**J, X**
75-43-4	Freon 21	ND	2.2	1.1	ND	0.53	0.25	**X**
142-82-5	Heptane	ND	2.2	0.38	ND	0.54	0.092	
87-68-3	Hexachlorobutadiene	ND	2.2	0.49	ND	0.21	0.046	
110-54-3	Hexane	ND	2.2	0.49	ND	0.63	0.14	
179601-23-1	m,p-Xylene	ND	4.5	0.62	ND	1.0	0.14	
1634-04-4	Methyl tert-butyl ether	ND	2.2	0.28	ND	0.62	0.078	
75-09-2	Methylene Chloride	ND	2.2	0.67	ND	0.64	0.19	
95-47-6	o-Xylene	ND	2.2	0.34	ND	0.51	0.079	
103-65-1	Propylbenzene	ND	2.2	0.34	ND	0.45	0.070	
100-42-5	Styrene	ND	2.2	0.38	ND	0.52	0.090	
127-18-4	Tetrachloroethene	ND	2.2	0.31	ND	0.33	0.045	
109-99-9	Tetrahydrofuran	ND	2.2	0.30	ND	0.75	0.10	
108-88-3	Toluene	ND	2.2	0.29	ND	0.59	0.077	
156-60-5	trans-1,2-Dichloroethene	ND	2.2	0.33	ND	0.56	0.083	
10061-02-6	trans-1,3-Dichloropropene	ND	2.2	0.49	ND	0.49	0.11	
79-01-6	Trichloroethene	ND	2.2	0.32	ND	0.41	0.060	
75-01-4	Vinyl Chloride	ND	2.2	0.25	ND	0.87	0.099	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405280928** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-012

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/28/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/18/24
Sampling Media:	1.0 L Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			

Initial Pressure (psig): -2.27 Final Pressure (psig): 7.42

Container Dilution Factor: 1.78

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405280934** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-013

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.040 Liter(s)

Initial Pressure (psig): -2.45 Final Pressure (psig): 6.10

Container Dilution Factor: 1.70

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	2.1	0.28	ND	0.39	0.051	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.1	0.31	ND	0.31	0.046	
79-00-5	1,1,2-Trichloroethane	ND	2.1	0.23	ND	0.39	0.042	
75-34-3	1,1-Dichloroethane	ND	2.1	0.33	ND	0.53	0.082	
75-35-4	1,1-Dichloroethene	ND	2.1	0.31	ND	0.54	0.079	
120-82-1	1,2,4-Trichlorobenzene	ND	2.1	0.55	ND	0.29	0.074	
95-63-6	1,2,4-Trimethylbenzene	ND	2.1	0.31	ND	0.43	0.064	
106-93-4	1,2-Dibromoethane (EDB)	ND	2.1	0.26	ND	0.28	0.034	
95-50-1	1,2-Dichlorobenzene	ND	2.1	0.34	ND	0.35	0.056	
107-06-2	1,2-Dichloroethane	ND	2.1	0.25	ND	0.53	0.062	
78-87-5	1,2-Dichloropropane	ND	2.1	0.28	ND	0.46	0.061	
108-67-8	1,3,5-Trimethylbenzene	ND	2.1	0.33	ND	0.43	0.067	
106-99-0	1,3-Butadiene	ND	2.1	0.37	ND	0.96	0.17	
541-73-1	1,3-Dichlorobenzene	ND	2.1	0.34	ND	0.35	0.057	
106-46-7	1,4-Dichlorobenzene	ND	2.1	0.35	ND	0.35	0.058	
123-91-1	1,4-Dioxane	**0.47**	2.1	0.27	**0.13**	0.59	0.074	**J**
540-84-1	2,2,4-Trimethylpentane	ND	2.1	0.34	ND	0.46	0.073	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**1.4**	21	0.47	**0.49**	7.2	0.16	**J**
591-78-6	2-Hexanone	**0.38**	2.1	0.28	**0.092**	0.52	0.069	**J**
67-63-0	2-Propanol	**4.9**	4.3	0.94	**2.0**	1.7	0.38	
107-05-1	3-Chloropropene	ND	2.1	0.31	ND	0.68	0.098	
622-96-8	4-Ethyltoluene	ND	2.1	0.36	ND	0.43	0.074	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405280934** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-013

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.040 Liter(s)

Initial Pressure (psig): -2.45 Final Pressure (psig): 6.10

Container Dilution Factor: 1.70

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	2.1	0.31	ND	0.52	0.076	
67-64-1	Acetone	**8.4**	21	5.1	**3.5**	8.9	2.1	**J**
100-44-7	alpha-Chlorotoluene	ND	2.1	0.51	ND	0.41	0.099	
71-43-2	Benzene	**0.65**	2.1	0.33	**0.20**	0.67	0.10	**J**
75-27-4	Bromodichloromethane	ND	2.1	0.33	ND	0.32	0.049	
75-25-2	Bromoform	ND	2.1	0.47	ND	0.21	0.045	
74-83-9	Bromomethane	ND	2.1	0.31	ND	0.55	0.081	
75-15-0	Carbon Disulfide	**17**	21	0.68	**5.5**	6.8	0.22	**J**
56-23-5	Carbon Tetrachloride	ND	2.1	0.31	ND	0.34	0.050	
108-90-7	Chlorobenzene	ND	2.1	0.30	ND	0.46	0.066	
75-00-3	Chloroethane	ND	2.1	0.28	ND	0.81	0.11	
67-66-3	Chloroform	**8.1**	2.1	0.30	**1.7**	0.44	0.062	
74-87-3	Chloromethane	ND	2.1	0.37	ND	1.0	0.18	
156-59-2	cis-1,2-Dichloroethene	ND	2.1	0.32	ND	0.54	0.080	
10061-01-5	cis-1,3-Dichloropropene	ND	2.1	0.35	ND	0.47	0.078	
98-82-8	Cumene	ND	2.1	0.33	ND	0.43	0.067	
110-82-7	Cyclohexane	ND	4.3	0.64	ND	1.2	0.19	
124-48-1	Dibromochloromethane	ND	2.1	0.30	ND	0.25	0.035	
64-17-5	Ethanol	**4.1**	21	1.6	**2.2**	11	0.83	**J**
100-41-4	Ethyl Benzene	**0.33**	2.1	0.32	**0.075**	0.49	0.073	**J**
75-69-4	Freon 11	**1,300**	21	3.4	**230**	3.8	0.61	**D**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
D = The reported result is from a dilution.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405280934** ALS Sample ID: P2402249-013
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.040 Liter(s)

Initial Pressure (psig): -2.45 Final Pressure (psig): 6.10

Container Dilution Factor: 1.70

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**1,200**	21	3.2	**160**	2.8	0.42	**D**
76-14-2	Freon 114	ND	2.1	0.36	ND	0.30	0.051	
75-71-8	Freon 12	**2.4**	2.1	0.37	**0.49**	0.43	0.075	
306-83-2	Freon 123	**7.7**	2.1	1.0	**1.2**	0.34	0.16	**X**
75-43-4	Freon 21	ND	2.1	1.0	ND	0.51	0.24	**X**
142-82-5	Heptane	ND	2.1	0.36	ND	0.52	0.088	
87-68-3	Hexachlorobutadiene	ND	2.1	0.47	ND	0.20	0.044	
110-54-3	Hexane	ND	2.1	0.47	ND	0.60	0.13	
179601-23-1	m,p-Xylene	ND	4.3	0.60	ND	0.98	0.14	
1634-04-4	Methyl tert-butyl ether	ND	2.1	0.27	ND	0.59	0.074	
75-09-2	Methylene Chloride	ND	2.1	0.64	ND	0.61	0.18	
95-47-6	o-Xylene	ND	2.1	0.33	ND	0.49	0.075	
103-65-1	Propylbenzene	ND	2.1	0.33	ND	0.43	0.067	
100-42-5	Styrene	ND	2.1	0.37	ND	0.50	0.086	
127-18-4	Tetrachloroethene	ND	2.1	0.29	ND	0.31	0.043	
109-99-9	Tetrahydrofuran	ND	2.1	0.28	ND	0.72	0.097	
108-88-3	Toluene	**0.93**	2.1	0.28	**0.25**	0.56	0.073	**J**
156-60-5	trans-1,2-Dichloroethene	ND	2.1	0.31	ND	0.54	0.079	
10061-02-6	trans-1,3-Dichloropropene	ND	2.1	0.47	ND	0.47	0.10	
79-01-6	Trichloroethene	**1.3**	2.1	0.31	**0.24**	0.40	0.057	**J**
75-01-4	Vinyl Chloride	ND	2.1	0.24	ND	0.83	0.095	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
D = The reported result is from a dilution.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405280934** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-013

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/28/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/18/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			0.040 Liter(s)

Initial Pressure (psig): -2.45 Final Pressure (psig): 6.10

Container Dilution Factor: 1.70

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405281000** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-014

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.37 Final Pressure (psig): 6.00

Container Dilution Factor: 1.68

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	2.1	0.28	ND	0.39	0.051	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.1	0.31	ND	0.31	0.045	
79-00-5	1,1,2-Trichloroethane	ND	2.1	0.23	ND	0.39	0.042	
75-34-3	1,1-Dichloroethane	ND	2.1	0.33	ND	0.52	0.081	
75-35-4	1,1-Dichloroethene	ND	2.1	0.31	ND	0.53	0.078	
120-82-1	1,2,4-Trichlorobenzene	ND	2.1	0.55	ND	0.28	0.074	
95-63-6	1,2,4-Trimethylbenzene	ND	2.1	0.31	ND	0.43	0.063	
106-93-4	1,2-Dibromoethane (EDB)	ND	2.1	0.26	ND	0.27	0.034	
95-50-1	1,2-Dichlorobenzene	ND	2.1	0.33	ND	0.35	0.055	
107-06-2	1,2-Dichloroethane	ND	2.1	0.25	ND	0.52	0.061	
78-87-5	1,2-Dichloropropane	ND	2.1	0.28	ND	0.45	0.060	
108-67-8	1,3,5-Trimethylbenzene	ND	2.1	0.32	ND	0.43	0.066	
106-99-0	1,3-Butadiene	ND	2.1	0.37	ND	0.95	0.17	
541-73-1	1,3-Dichlorobenzene	ND	2.1	0.34	ND	0.35	0.056	
106-46-7	1,4-Dichlorobenzene	ND	2.1	0.34	ND	0.35	0.057	
123-91-1	1,4-Dioxane	ND	2.1	0.26	ND	0.58	0.073	
540-84-1	2,2,4-Trimethylpentane	ND	2.1	0.34	ND	0.45	0.072	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**2.1**	21	0.46	**0.70**	7.1	0.16	**J**
591-78-6	2-Hexanone	**0.48**	2.1	0.28	**0.12**	0.51	0.068	**J**
67-63-0	2-Propanol	ND	4.2	0.92	ND	1.7	0.38	
107-05-1	3-Chloropropene	ND	2.1	0.30	ND	0.67	0.097	
622-96-8	4-Ethyltoluene	ND	2.1	0.36	ND	0.43	0.073	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405281000** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-014

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.37 Final Pressure (psig): 6.00

Container Dilution Factor: 1.68

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	2.1	0.31	ND	0.51	0.075	
67-64-1	Acetone	**10**	21	5.0	**4.3**	8.8	2.1	**J**
100-44-7	alpha-Chlorotoluene	ND	2.1	0.50	ND	0.41	0.097	
71-43-2	Benzene	ND	2.1	0.32	ND	0.66	0.10	
75-27-4	Bromodichloromethane	ND	2.1	0.32	ND	0.31	0.048	
75-25-2	Bromoform	ND	2.1	0.46	ND	0.20	0.045	
74-83-9	Bromomethane	ND	2.1	0.31	ND	0.54	0.080	
75-15-0	Carbon Disulfide	**2.0**	21	0.67	**0.64**	6.7	0.22	**J**
56-23-5	Carbon Tetrachloride	ND	2.1	0.31	ND	0.33	0.049	
108-90-7	Chlorobenzene	ND	2.1	0.30	ND	0.46	0.065	
75-00-3	Chloroethane	ND	2.1	0.28	ND	0.80	0.11	
67-66-3	Chloroform	**2.0**	2.1	0.30	**0.41**	0.43	0.061	**J**
74-87-3	Chloromethane	ND	2.1	0.36	ND	1.0	0.17	
156-59-2	cis-1,2-Dichloroethene	ND	2.1	0.32	ND	0.53	0.079	
10061-01-5	cis-1,3-Dichloropropene	ND	2.1	0.35	ND	0.46	0.077	
98-82-8	Cumene	ND	2.1	0.32	ND	0.43	0.066	
110-82-7	Cyclohexane	ND	4.2	0.63	ND	1.2	0.18	
124-48-1	Dibromochloromethane	ND	2.1	0.29	ND	0.25	0.035	
64-17-5	Ethanol	**6.9**	21	1.6	**3.7**	11	0.83	**J**
100-41-4	Ethyl Benzene	ND	2.1	0.32	ND	0.48	0.073	
75-69-4	Freon 11	**74**	2.1	0.34	**13**	0.37	0.061	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405281000** ALS Sample ID: P2402249-014
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.37 Final Pressure (psig): 6.00

Container Dilution Factor: 1.68

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**150**	2.1	0.32	**20**	0.27	0.042	
76-14-2	Freon 114	ND	2.1	0.35	ND	0.30	0.050	
75-71-8	Freon 12	**2.4**	2.1	0.37	**0.48**	0.42	0.074	
306-83-2	Freon 123	**1.5**	2.1	1.0	**0.23**	0.34	0.16	**J, X**
75-43-4	Freon 21	ND	2.1	1.0	ND	0.50	0.24	**X**
142-82-5	Heptane	ND	2.1	0.36	ND	0.51	0.087	
87-68-3	Hexachlorobutadiene	ND	2.1	0.46	ND	0.20	0.043	
110-54-3	Hexane	ND	2.1	0.46	ND	0.60	0.13	
179601-23-1	m,p-Xylene	ND	4.2	0.59	ND	0.97	0.14	
1634-04-4	Methyl tert-butyl ether	ND	2.1	0.26	ND	0.58	0.073	
75-09-2	Methylene Chloride	ND	2.1	0.63	ND	0.60	0.18	
95-47-6	o-Xylene	ND	2.1	0.32	ND	0.48	0.074	
103-65-1	Propylbenzene	ND	2.1	0.32	ND	0.43	0.066	
100-42-5	Styrene	ND	2.1	0.36	ND	0.49	0.085	
127-18-4	Tetrachloroethene	ND	2.1	0.29	ND	0.31	0.043	
109-99-9	Tetrahydrofuran	ND	2.1	0.28	ND	0.71	0.095	
108-88-3	Toluene	ND	2.1	0.27	ND	0.56	0.072	
156-60-5	trans-1,2-Dichloroethene	ND	2.1	0.31	ND	0.53	0.078	
10061-02-6	trans-1,3-Dichloropropene	ND	2.1	0.46	ND	0.46	0.10	
79-01-6	Trichloroethene	ND	2.1	0.30	ND	0.39	0.056	
75-01-4	Vinyl Chloride	ND	2.1	0.24	ND	0.82	0.094	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405281000** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-014

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/28/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/18/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			

Initial Pressure (psig): -2.37 Final Pressure (psig): 6.00

Container Dilution Factor: 1.68

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405281006** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-015

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.59 Final Pressure (psig): 6.22

Container Dilution Factor: 1.73

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	2.2	0.29	ND	0.40	0.052	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.2	0.32	ND	0.32	0.047	
79-00-5	1,1,2-Trichloroethane	ND	2.2	0.23	ND	0.40	0.043	
75-34-3	1,1-Dichloroethane	ND	2.2	0.34	ND	0.53	0.083	
75-35-4	1,1-Dichloroethene	ND	2.2	0.32	ND	0.55	0.081	
120-82-1	1,2,4-Trichlorobenzene	ND	2.2	0.56	ND	0.29	0.076	
95-63-6	1,2,4-Trimethylbenzene	ND	2.2	0.32	ND	0.44	0.065	
106-93-4	1,2-Dibromoethane (EDB)	ND	2.2	0.27	ND	0.28	0.035	
95-50-1	1,2-Dichlorobenzene	ND	2.2	0.34	ND	0.36	0.057	
107-06-2	1,2-Dichloroethane	ND	2.2	0.26	ND	0.53	0.063	
78-87-5	1,2-Dichloropropane	ND	2.2	0.29	ND	0.47	0.062	
108-67-8	1,3,5-Trimethylbenzene	ND	2.2	0.33	ND	0.44	0.068	
106-99-0	1,3-Butadiene	ND	2.2	0.38	ND	0.98	0.17	
541-73-1	1,3-Dichlorobenzene	ND	2.2	0.35	ND	0.36	0.058	
106-46-7	1,4-Dichlorobenzene	ND	2.2	0.35	ND	0.36	0.059	
123-91-1	1,4-Dioxane	**0.47**	2.2	0.27	**0.13**	0.60	0.076	**J**
540-84-1	2,2,4-Trimethylpentane	ND	2.2	0.35	ND	0.46	0.074	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**2.0**	22	0.48	**0.68**	7.3	0.16	**J**
591-78-6	2-Hexanone	**0.46**	2.2	0.29	**0.11**	0.53	0.070	**J**
67-63-0	2-Propanol	**3.5**	4.3	0.95	**1.4**	1.8	0.39	**J**
107-05-1	3-Chloropropene	ND	2.2	0.31	ND	0.69	0.10	
622-96-8	4-Ethyltoluene	ND	2.2	0.37	ND	0.44	0.075	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405281006** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-015

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.59 Final Pressure (psig): 6.22

Container Dilution Factor: 1.73

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	2.2	0.32	ND	0.53	0.077	
67-64-1	Acetone	**14**	22	5.2	**5.9**	9.1	2.2	**J**
100-44-7	alpha-Chlorotoluene	ND	2.2	0.52	ND	0.42	0.10	
71-43-2	Benzene	**1.2**	2.2	0.33	**0.36**	0.68	0.10	**J**
75-27-4	Bromodichloromethane	ND	2.2	0.33	ND	0.32	0.050	
75-25-2	Bromoform	ND	2.2	0.48	ND	0.21	0.046	
74-83-9	Bromomethane	ND	2.2	0.32	ND	0.56	0.082	
75-15-0	Carbon Disulfide	**43**	22	0.69	**14**	6.9	0.22	
56-23-5	Carbon Tetrachloride	ND	2.2	0.32	ND	0.34	0.051	
108-90-7	Chlorobenzene	ND	2.2	0.31	ND	0.47	0.067	
75-00-3	Chloroethane	ND	2.2	0.29	ND	0.82	0.11	
67-66-3	Chloroform	**3.6**	2.2	0.31	**0.74**	0.44	0.063	
74-87-3	Chloromethane	**0.45**	2.2	0.37	**0.22**	1.0	0.18	**J**
156-59-2	cis-1,2-Dichloroethene	ND	2.2	0.32	ND	0.55	0.082	
10061-01-5	cis-1,3-Dichloropropene	ND	2.2	0.36	ND	0.48	0.079	
98-82-8	Cumene	ND	2.2	0.33	ND	0.44	0.068	
110-82-7	Cyclohexane	ND	4.3	0.65	ND	1.3	0.19	
124-48-1	Dibromochloromethane	ND	2.2	0.30	ND	0.25	0.036	
64-17-5	Ethanol	**9.2**	22	1.6	**4.9**	11	0.85	**J**
100-41-4	Ethyl Benzene	**0.33**	2.2	0.32	**0.076**	0.50	0.075	**J**
75-69-4	Freon 11	**190**	2.2	0.35	**34**	0.38	0.062	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405281006** ALS Sample ID: P2402249-015
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.59 Final Pressure (psig): 6.22

Container Dilution Factor: 1.73

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**240**	2.2	0.33	**31**	0.28	0.043	
76-14-2	Freon 114	ND	2.2	0.36	ND	0.31	0.052	
75-71-8	Freon 12	**2.5**	2.2	0.38	**0.50**	0.44	0.076	
306-83-2	Freon 123	**6.5**	2.2	1.0	**1.0**	0.35	0.17	**X**
75-43-4	Freon 21	ND	2.2	1.0	ND	0.51	0.25	**X**
142-82-5	Heptane	ND	2.2	0.37	ND	0.53	0.090	
87-68-3	Hexachlorobutadiene	ND	2.2	0.48	ND	0.20	0.045	
110-54-3	Hexane	**0.54**	2.2	0.48	**0.15**	0.61	0.14	**J**
179601-23-1	m,p-Xylene	ND	4.3	0.61	ND	1.0	0.14	
1634-04-4	Methyl tert-butyl ether	ND	2.2	0.27	ND	0.60	0.076	
75-09-2	Methylene Chloride	**0.82**	2.2	0.65	**0.24**	0.62	0.19	**J**
95-47-6	o-Xylene	ND	2.2	0.33	ND	0.50	0.077	
103-65-1	Propylbenzene	ND	2.2	0.33	ND	0.44	0.068	
100-42-5	Styrene	ND	2.2	0.37	ND	0.51	0.087	
127-18-4	Tetrachloroethene	ND	2.2	0.30	ND	0.32	0.044	
109-99-9	Tetrahydrofuran	ND	2.2	0.29	ND	0.73	0.098	
108-88-3	Toluene	**0.90**	2.2	0.28	**0.24**	0.57	0.075	**J**
156-60-5	trans-1,2-Dichloroethene	ND	2.2	0.32	ND	0.55	0.081	
10061-02-6	trans-1,3-Dichloropropene	ND	2.2	0.48	ND	0.48	0.10	
79-01-6	Trichloroethene	**0.31**	2.2	0.31	**0.058**	0.40	0.058	**J**
75-01-4	Vinyl Chloride	ND	2.2	0.25	ND	0.85	0.096	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405281006** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-015

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/28/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/18/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			

Initial Pressure (psig): -2.59 Final Pressure (psig): 6.22

Container Dilution Factor: 1.73

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405281011** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-016

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.36 Final Pressure (psig): 6.30

Container Dilution Factor: 1.70

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	2.1	0.28	ND	0.39	0.051	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.1	0.31	ND	0.31	0.046	
79-00-5	1,1,2-Trichloroethane	ND	2.1	0.23	ND	0.39	0.042	
75-34-3	1,1-Dichloroethane	ND	2.1	0.33	ND	0.53	0.082	
75-35-4	1,1-Dichloroethene	ND	2.1	0.31	ND	0.54	0.079	
120-82-1	1,2,4-Trichlorobenzene	ND	2.1	0.55	ND	0.29	0.074	
95-63-6	1,2,4-Trimethylbenzene	ND	2.1	0.31	ND	0.43	0.064	
106-93-4	1,2-Dibromoethane (EDB)	ND	2.1	0.26	ND	0.28	0.034	
95-50-1	1,2-Dichlorobenzene	ND	2.1	0.34	ND	0.35	0.056	
107-06-2	1,2-Dichloroethane	ND	2.1	0.25	ND	0.53	0.062	
78-87-5	1,2-Dichloropropane	ND	2.1	0.28	ND	0.46	0.061	
108-67-8	1,3,5-Trimethylbenzene	ND	2.1	0.33	ND	0.43	0.067	
106-99-0	1,3-Butadiene	ND	2.1	0.37	ND	0.96	0.17	
541-73-1	1,3-Dichlorobenzene	ND	2.1	0.34	ND	0.35	0.057	
106-46-7	1,4-Dichlorobenzene	ND	2.1	0.35	ND	0.35	0.058	
123-91-1	1,4-Dioxane	ND	2.1	0.27	ND	0.59	0.074	
540-84-1	2,2,4-Trimethylpentane	ND	2.1	0.34	ND	0.46	0.073	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**0.50**	21	0.47	**0.17**	7.2	0.16	**J**
591-78-6	2-Hexanone	ND	2.1	0.28	ND	0.52	0.069	
67-63-0	2-Propanol	**7.5**	4.3	0.94	**3.1**	1.7	0.38	
107-05-1	3-Chloropropene	ND	2.1	0.31	ND	0.68	0.098	
622-96-8	4-Ethyltoluene	ND	2.1	0.36	ND	0.43	0.074	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405281011** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-016

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.36 Final Pressure (psig): 6.30

Container Dilution Factor: 1.70

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	2.1	0.31	ND	0.52	0.076	
67-64-1	Acetone	**16**	21	5.1	**6.7**	8.9	2.1	**J**
100-44-7	alpha-Chlorotoluene	ND	2.1	0.51	ND	0.41	0.099	
71-43-2	Benzene	**0.73**	2.1	0.33	**0.23**	0.67	0.10	**J**
75-27-4	Bromodichloromethane	ND	2.1	0.33	ND	0.32	0.049	
75-25-2	Bromoform	ND	2.1	0.47	ND	0.21	0.045	
74-83-9	Bromomethane	ND	2.1	0.31	ND	0.55	0.081	
75-15-0	Carbon Disulfide	**1.7**	21	0.68	**0.56**	6.8	0.22	**J**
56-23-5	Carbon Tetrachloride	**0.42**	2.1	0.31	**0.067**	0.34	0.050	**J**
108-90-7	Chlorobenzene	ND	2.1	0.30	ND	0.46	0.066	
75-00-3	Chloroethane	ND	2.1	0.28	ND	0.81	0.11	
67-66-3	Chloroform	ND	2.1	0.30	ND	0.44	0.062	
74-87-3	Chloromethane	**1.2**	2.1	0.37	**0.56**	1.0	0.18	**J**
156-59-2	cis-1,2-Dichloroethene	ND	2.1	0.32	ND	0.54	0.080	
10061-01-5	cis-1,3-Dichloropropene	ND	2.1	0.35	ND	0.47	0.078	
98-82-8	Cumene	ND	2.1	0.33	ND	0.43	0.067	
110-82-7	Cyclohexane	ND	4.3	0.64	ND	1.2	0.19	
124-48-1	Dibromochloromethane	ND	2.1	0.30	ND	0.25	0.035	
64-17-5	Ethanol	**8.3**	21	1.6	**4.4**	11	0.83	**J**
100-41-4	Ethyl Benzene	**0.80**	2.1	0.32	**0.19**	0.49	0.073	**J**
75-69-4	Freon 11	**1.3**	2.1	0.34	**0.24**	0.38	0.061	**J**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405281011** ALS Sample ID: P2402249-016
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.36 Final Pressure (psig): 6.30

Container Dilution Factor: 1.70

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**0.85**	2.1	0.32	**0.11**	0.28	0.042	**J**
76-14-2	Freon 114	ND	2.1	0.36	ND	0.30	0.051	
75-71-8	Freon 12	**2.4**	2.1	0.37	**0.49**	0.43	0.075	
306-83-2	Freon 123	**21**	2.1	1.0	**3.3**	0.34	0.16	**X**
75-43-4	Freon 21	ND	2.1	1.0	ND	0.51	0.24	**X**
142-82-5	Heptane	ND	2.1	0.36	ND	0.52	0.088	
87-68-3	Hexachlorobutadiene	ND	2.1	0.47	ND	0.20	0.044	
110-54-3	Hexane	ND	2.1	0.47	ND	0.60	0.13	
179601-23-1	m,p-Xylene	**1.1**	4.3	0.60	**0.25**	0.98	0.14	**J**
1634-04-4	Methyl tert-butyl ether	ND	2.1	0.27	ND	0.59	0.074	
75-09-2	Methylene Chloride	ND	2.1	0.64	ND	0.61	0.18	
95-47-6	o-Xylene	**0.39**	2.1	0.33	**0.089**	0.49	0.075	**J**
103-65-1	Propylbenzene	ND	2.1	0.33	ND	0.43	0.067	
100-42-5	Styrene	ND	2.1	0.37	ND	0.50	0.086	
127-18-4	Tetrachloroethene	ND	2.1	0.29	ND	0.31	0.043	
109-99-9	Tetrahydrofuran	ND	2.1	0.28	ND	0.72	0.097	
108-88-3	Toluene	**3.2**	2.1	0.28	**0.84**	0.56	0.073	
156-60-5	trans-1,2-Dichloroethene	ND	2.1	0.31	ND	0.54	0.079	
10061-02-6	trans-1,3-Dichloropropene	ND	2.1	0.47	ND	0.47	0.10	
79-01-6	Trichloroethene	ND	2.1	0.31	ND	0.40	0.057	
75-01-4	Vinyl Chloride	ND	2.1	0.24	ND	0.83	0.095	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405281011** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-016

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/28/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/18/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			

Initial Pressure (psig): -2.36 Final Pressure (psig): 6.30

Container Dilution Factor: 1.70

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405281017** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-017

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18 - 6/19/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.040 Liter(s)

Initial Pressure (psig): -2.47 Final Pressure (psig): 6.12

Container Dilution Factor: 1.70

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	2.1	0.28	ND	0.39	0.051	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.1	0.31	ND	0.31	0.046	
79-00-5	1,1,2-Trichloroethane	ND	2.1	0.23	ND	0.39	0.042	
75-34-3	1,1-Dichloroethane	ND	2.1	0.33	ND	0.53	0.082	
75-35-4	1,1-Dichloroethene	ND	2.1	0.31	ND	0.54	0.079	
120-82-1	1,2,4-Trichlorobenzene	ND	2.1	0.55	ND	0.29	0.074	
95-63-6	1,2,4-Trimethylbenzene	ND	2.1	0.31	ND	0.43	0.064	
106-93-4	1,2-Dibromoethane (EDB)	ND	2.1	0.26	ND	0.28	0.034	
95-50-1	1,2-Dichlorobenzene	ND	2.1	0.34	ND	0.35	0.056	
107-06-2	1,2-Dichloroethane	ND	2.1	0.25	ND	0.53	0.062	
78-87-5	1,2-Dichloropropane	ND	2.1	0.28	ND	0.46	0.061	
108-67-8	1,3,5-Trimethylbenzene	ND	2.1	0.33	ND	0.43	0.067	
106-99-0	1,3-Butadiene	ND	2.1	0.37	ND	0.96	0.17	
541-73-1	1,3-Dichlorobenzene	ND	2.1	0.34	ND	0.35	0.057	
106-46-7	1,4-Dichlorobenzene	ND	2.1	0.35	ND	0.35	0.058	
123-91-1	1,4-Dioxane	ND	2.1	0.27	ND	0.59	0.074	
540-84-1	2,2,4-Trimethylpentane	ND	2.1	0.34	ND	0.46	0.073	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**3.4**	21	0.47	**1.1**	7.2	0.16	**J**
591-78-6	2-Hexanone	**0.40**	2.1	0.28	**0.099**	0.52	0.069	**J**
67-63-0	2-Propanol	ND	4.3	0.94	ND	1.7	0.38	
107-05-1	3-Chloropropene	ND	2.1	0.31	ND	0.68	0.098	
622-96-8	4-Ethyltoluene	ND	2.1	0.36	ND	0.43	0.074	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405281017** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-017

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18 - 6/19/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.040 Liter(s)

Initial Pressure (psig): -2.47 Final Pressure (psig): 6.12

Container Dilution Factor: 1.70

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	2.1	0.31	ND	0.52	0.076	
67-64-1	Acetone	**11**	21	5.1	**4.6**	8.9	2.1	**J**
100-44-7	alpha-Chlorotoluene	ND	2.1	0.51	ND	0.41	0.099	
71-43-2	Benzene	**1.1**	2.1	0.33	**0.33**	0.67	0.10	**J**
75-27-4	Bromodichloromethane	**0.45**	2.1	0.33	**0.068**	0.32	0.049	**J**
75-25-2	Bromoform	ND	2.1	0.47	ND	0.21	0.045	
74-83-9	Bromomethane	ND	2.1	0.31	ND	0.55	0.081	
75-15-0	Carbon Disulfide	ND	21	0.68	ND	6.8	0.22	
56-23-5	Carbon Tetrachloride	ND	2.1	0.31	ND	0.34	0.050	
108-90-7	Chlorobenzene	ND	2.1	0.30	ND	0.46	0.066	
75-00-3	Chloroethane	ND	2.1	0.28	ND	0.81	0.11	
67-66-3	Chloroform	**8.3**	2.1	0.30	**1.7**	0.44	0.062	
74-87-3	Chloromethane	ND	2.1	0.37	ND	1.0	0.18	
156-59-2	cis-1,2-Dichloroethene	ND	2.1	0.32	ND	0.54	0.080	
10061-01-5	cis-1,3-Dichloropropene	ND	2.1	0.35	ND	0.47	0.078	
98-82-8	Cumene	ND	2.1	0.33	ND	0.43	0.067	
110-82-7	Cyclohexane	ND	4.3	0.64	ND	1.2	0.19	
124-48-1	Dibromochloromethane	ND	2.1	0.30	ND	0.25	0.035	
64-17-5	Ethanol	ND	21	1.6	ND	11	0.83	
100-41-4	Ethyl Benzene	ND	2.1	0.32	ND	0.49	0.073	
75-69-4	Freon 11	**1,000**	21	3.4	**180**	3.8	0.61	**D**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
D = The reported result is from a dilution.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405281017** ALS Sample ID: P2402249-017
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18 - 6/19/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.040 Liter(s)

Initial Pressure (psig): -2.47 Final Pressure (psig): 6.12

Container Dilution Factor: 1.70

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**1,300**	21	3.2	**170**	2.8	0.42	**D**
76-14-2	Freon 114	ND	2.1	0.36	ND	0.30	0.051	
75-71-8	Freon 12	**2.4**	2.1	0.37	**0.49**	0.43	0.075	
306-83-2	Freon 123	**8.7**	2.1	1.0	**1.4**	0.34	0.16	**X**
75-43-4	Freon 21	ND	2.1	1.0	ND	0.51	0.24	**X**
142-82-5	Heptane	**1.1**	2.1	0.36	**0.28**	0.52	0.088	**J**
87-68-3	Hexachlorobutadiene	ND	2.1	0.47	ND	0.20	0.044	
110-54-3	Hexane	**7.7**	2.1	0.47	**2.2**	0.60	0.13	
179601-23-1	m,p-Xylene	ND	4.3	0.60	ND	0.98	0.14	
1634-04-4	Methyl tert-butyl ether	ND	2.1	0.27	ND	0.59	0.074	
75-09-2	Methylene Chloride	ND	2.1	0.64	ND	0.61	0.18	
95-47-6	o-Xylene	ND	2.1	0.33	ND	0.49	0.075	
103-65-1	Propylbenzene	ND	2.1	0.33	ND	0.43	0.067	
100-42-5	Styrene	ND	2.1	0.37	ND	0.50	0.086	
127-18-4	Tetrachloroethene	ND	2.1	0.29	ND	0.31	0.043	
109-99-9	Tetrahydrofuran	ND	2.1	0.28	ND	0.72	0.097	
108-88-3	Toluene	**0.43**	2.1	0.28	**0.11**	0.56	0.073	**J**
156-60-5	trans-1,2-Dichloroethene	ND	2.1	0.31	ND	0.54	0.079	
10061-02-6	trans-1,3-Dichloropropene	ND	2.1	0.47	ND	0.47	0.10	
79-01-6	Trichloroethene	**1.2**	2.1	0.31	**0.22**	0.40	0.057	**J**
75-01-4	Vinyl Chloride	ND	2.1	0.24	ND	0.83	0.095	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
D = The reported result is from a dilution.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405281017** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-017

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/28/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/18 - 6/19/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			0.040 Liter(s)

Initial Pressure (psig): -2.47 Final Pressure (psig): 6.12

Container Dilution Factor: 1.70

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405281028** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-018

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.35 Final Pressure (psig): 5.70

Container Dilution Factor: 1.65

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	2.1	0.27	ND	0.38	0.050	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.1	0.31	ND	0.30	0.044	
79-00-5	1,1,2-Trichloroethane	ND	2.1	0.22	ND	0.38	0.041	
75-34-3	1,1-Dichloroethane	ND	2.1	0.32	ND	0.51	0.080	
75-35-4	1,1-Dichloroethene	ND	2.1	0.31	ND	0.52	0.077	
120-82-1	1,2,4-Trichlorobenzene	ND	2.1	0.54	ND	0.28	0.072	
95-63-6	1,2,4-Trimethylbenzene	**1.1**	2.1	0.31	**0.23**	0.42	0.062	**J**
106-93-4	1,2-Dibromoethane (EDB)	ND	2.1	0.26	ND	0.27	0.033	
95-50-1	1,2-Dichlorobenzene	ND	2.1	0.33	ND	0.34	0.054	
107-06-2	1,2-Dichloroethane	ND	2.1	0.24	ND	0.51	0.060	
78-87-5	1,2-Dichloropropane	**0.36**	2.1	0.27	**0.079**	0.45	0.059	**J**
108-67-8	1,3,5-Trimethylbenzene	**0.37**	2.1	0.32	**0.075**	0.42	0.065	**J**
106-99-0	1,3-Butadiene	ND	2.1	0.36	ND	0.93	0.16	
541-73-1	1,3-Dichlorobenzene	ND	2.1	0.33	ND	0.34	0.055	
106-46-7	1,4-Dichlorobenzene	ND	2.1	0.34	ND	0.34	0.056	
123-91-1	1,4-Dioxane	ND	2.1	0.26	ND	0.57	0.072	
540-84-1	2,2,4-Trimethylpentane	ND	2.1	0.33	ND	0.44	0.071	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**9.5**	21	0.45	**3.2**	7.0	0.15	**J**
591-78-6	2-Hexanone	**1.6**	2.1	0.27	**0.38**	0.50	0.066	**J**
67-63-0	2-Propanol	**23**	4.1	0.91	**9.3**	1.7	0.37	
107-05-1	3-Chloropropene	ND	2.1	0.30	ND	0.66	0.095	
622-96-8	4-Ethyltoluene	ND	2.1	0.35	ND	0.42	0.071	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405281028** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-018

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.35 Final Pressure (psig): 5.70

Container Dilution Factor: 1.65

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	**0.87**	2.1	0.30	**0.21**	0.50	0.074	**J**
67-64-1	Acetone	**40**	21	5.0	**17**	8.7	2.1	
100-44-7	alpha-Chlorotoluene	ND	2.1	0.50	ND	0.40	0.096	
71-43-2	Benzene	**3.6**	2.1	0.32	**1.1**	0.65	0.099	
75-27-4	Bromodichloromethane	ND	2.1	0.32	ND	0.31	0.047	
75-25-2	Bromoform	ND	2.1	0.45	ND	0.20	0.044	
74-83-9	Bromomethane	**0.72**	2.1	0.31	**0.18**	0.53	0.079	**J**
75-15-0	Carbon Disulfide	**4.3**	21	0.66	**1.4**	6.6	0.21	**J**
56-23-5	Carbon Tetrachloride	**0.43**	2.1	0.31	**0.068**	0.33	0.049	**J**
108-90-7	Chlorobenzene	ND	2.1	0.29	ND	0.45	0.064	
75-00-3	Chloroethane	ND	2.1	0.27	ND	0.78	0.10	
67-66-3	Chloroform	ND	2.1	0.29	ND	0.42	0.060	
74-87-3	Chloromethane	**1.4**	2.1	0.35	**0.69**	1.0	0.17	**J**
156-59-2	cis-1,2-Dichloroethene	ND	2.1	0.31	ND	0.52	0.078	
10061-01-5	cis-1,3-Dichloropropene	ND	2.1	0.34	ND	0.45	0.075	
98-82-8	Cumene	ND	2.1	0.32	ND	0.42	0.065	
110-82-7	Cyclohexane	**1.8**	4.1	0.62	**0.54**	1.2	0.18	**J**
124-48-1	Dibromochloromethane	ND	2.1	0.29	ND	0.24	0.034	
64-17-5	Ethanol	**110**	21	1.5	**59**	11	0.81	
100-41-4	Ethyl Benzene	**2.5**	2.1	0.31	**0.57**	0.48	0.071	
75-69-4	Freon 11	**1.3**	2.1	0.33	**0.23**	0.37	0.059	**J**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405281028** ALS Sample ID: P2402249-018
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.35 Final Pressure (psig): 5.70

Container Dilution Factor: 1.65

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**0.81**	2.1	0.31	**0.11**	0.27	0.041	**J**
76-14-2	Freon 114	ND	2.1	0.35	ND	0.30	0.050	
75-71-8	Freon 12	**2.2**	2.1	0.36	**0.44**	0.42	0.073	
306-83-2	Freon 123	**82**	2.1	0.99	**13**	0.33	0.16	**X**
75-43-4	Freon 21	ND	2.1	0.99	ND	0.49	0.24	**X**
142-82-5	Heptane	**1.2**	2.1	0.35	**0.29**	0.50	0.086	**J**
87-68-3	Hexachlorobutadiene	ND	2.1	0.45	ND	0.19	0.043	
110-54-3	Hexane	**2.2**	2.1	0.45	**0.62**	0.59	0.13	
179601-23-1	m,p-Xylene	**5.8**	4.1	0.58	**1.3**	0.95	0.13	
1634-04-4	Methyl tert-butyl ether	ND	2.1	0.26	ND	0.57	0.072	
75-09-2	Methylene Chloride	**4.8**	2.1	0.62	**1.4**	0.59	0.18	
95-47-6	o-Xylene	**2.2**	2.1	0.32	**0.51**	0.48	0.073	
103-65-1	Propylbenzene	**0.33**	2.1	0.32	**0.067**	0.42	0.065	**J**
100-42-5	Styrene	**0.58**	2.1	0.35	**0.14**	0.48	0.083	**J**
127-18-4	Tetrachloroethene	ND	2.1	0.28	ND	0.30	0.042	
109-99-9	Tetrahydrofuran	**1.5**	2.1	0.28	**0.52**	0.70	0.094	**J**
108-88-3	Toluene	**51**	2.1	0.27	**13**	0.55	0.071	
156-60-5	trans-1,2-Dichloroethene	**0.36**	2.1	0.31	**0.091**	0.52	0.077	**J**
10061-02-6	trans-1,3-Dichloropropene	ND	2.1	0.45	ND	0.45	0.10	
79-01-6	Trichloroethene	ND	2.1	0.30	ND	0.38	0.055	
75-01-4	Vinyl Chloride	ND	2.1	0.24	ND	0.81	0.092	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405281028** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-018

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/28/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/18/24
Sampling Media:	1.0 L Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			

Initial Pressure (psig): -2.35 Final Pressure (psig): 5.70

Container Dilution Factor: 1.65

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405281032** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-019

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.58 Final Pressure (psig): 6.58

Container Dilution Factor: 1.76

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	2.2	0.29	ND	0.40	0.053	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.2	0.33	ND	0.32	0.047	
79-00-5	1,1,2-Trichloroethane	ND	2.2	0.24	ND	0.40	0.044	
75-34-3	1,1-Dichloroethane	ND	2.2	0.34	ND	0.54	0.085	
75-35-4	1,1-Dichloroethene	ND	2.2	0.33	ND	0.56	0.082	
120-82-1	1,2,4-Trichlorobenzene	ND	2.2	0.57	ND	0.30	0.077	
95-63-6	1,2,4-Trimethylbenzene	ND	2.2	0.33	ND	0.45	0.066	
106-93-4	1,2-Dibromoethane (EDB)	ND	2.2	0.27	ND	0.29	0.036	
95-50-1	1,2-Dichlorobenzene	ND	2.2	0.35	ND	0.37	0.058	
107-06-2	1,2-Dichloroethane	ND	2.2	0.26	ND	0.54	0.064	
78-87-5	1,2-Dichloropropane	ND	2.2	0.29	ND	0.48	0.063	
108-67-8	1,3,5-Trimethylbenzene	ND	2.2	0.34	ND	0.45	0.069	
106-99-0	1,3-Butadiene	ND	2.2	0.39	ND	0.99	0.18	
541-73-1	1,3-Dichlorobenzene	ND	2.2	0.35	ND	0.37	0.059	
106-46-7	1,4-Dichlorobenzene	ND	2.2	0.36	ND	0.37	0.060	
123-91-1	1,4-Dioxane	ND	2.2	0.28	ND	0.61	0.077	
540-84-1	2,2,4-Trimethylpentane	ND	2.2	0.35	ND	0.47	0.075	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	ND	22	0.48	ND	7.5	0.16	
591-78-6	2-Hexanone	**1.2**	2.2	0.29	**0.28**	0.54	0.071	**J**
67-63-0	2-Propanol	**1.1**	4.4	0.97	**0.45**	1.8	0.39	**J**
107-05-1	3-Chloropropene	ND	2.2	0.32	ND	0.70	0.10	
622-96-8	4-Ethyltoluene	ND	2.2	0.37	ND	0.45	0.076	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405281032** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-019

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.58 Final Pressure (psig): 6.58

Container Dilution Factor: 1.76

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	2.2	0.32	ND	0.54	0.078	
67-64-1	Acetone	**27**	22	5.3	**11**	9.3	2.2	
100-44-7	alpha-Chlorotoluene	ND	2.2	0.53	ND	0.43	0.10	
71-43-2	Benzene	**0.54**	2.2	0.34	**0.17**	0.69	0.11	**J**
75-27-4	Bromodichloromethane	ND	2.2	0.34	ND	0.33	0.051	
75-25-2	Bromoform	ND	2.2	0.48	ND	0.21	0.047	
74-83-9	Bromomethane	**0.48**	2.2	0.33	**0.12**	0.57	0.084	**J**
75-15-0	Carbon Disulfide	**3.2**	22	0.70	**1.0**	7.1	0.23	**J**
56-23-5	Carbon Tetrachloride	ND	2.2	0.33	ND	0.35	0.052	
108-90-7	Chlorobenzene	ND	2.2	0.31	ND	0.48	0.068	
75-00-3	Chloroethane	ND	2.2	0.29	ND	0.83	0.11	
67-66-3	Chloroform	**4.1**	2.2	0.31	**0.84**	0.45	0.064	
74-87-3	Chloromethane	**0.46**	2.2	0.38	**0.22**	1.1	0.18	**J**
156-59-2	cis-1,2-Dichloroethene	ND	2.2	0.33	ND	0.56	0.083	
10061-01-5	cis-1,3-Dichloropropene	ND	2.2	0.37	ND	0.48	0.080	
98-82-8	Cumene	ND	2.2	0.34	ND	0.45	0.069	
110-82-7	Cyclohexane	ND	4.4	0.66	ND	1.3	0.19	
124-48-1	Dibromochloromethane	ND	2.2	0.31	ND	0.26	0.036	
64-17-5	Ethanol	**4.6**	22	1.6	**2.4**	12	0.86	**J**
100-41-4	Ethyl Benzene	ND	2.2	0.33	ND	0.51	0.076	
75-69-4	Freon 11	**260**	2.2	0.36	**47**	0.39	0.063	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405281032** ALS Sample ID: P2402249-019
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.58 Final Pressure (psig): 6.58

Container Dilution Factor: 1.76

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**310**	2.2	0.33	**40**	0.29	0.044	
76-14-2	Freon 114	ND	2.2	0.37	ND	0.31	0.053	
75-71-8	Freon 12	**2.4**	2.2	0.38	**0.48**	0.45	0.077	
306-83-2	Freon 123	**2.4**	2.2	1.1	**0.39**	0.35	0.17	**X**
75-43-4	Freon 21	ND	2.2	1.1	ND	0.52	0.25	**X**
142-82-5	Heptane	ND	2.2	0.37	ND	0.54	0.091	
87-68-3	Hexachlorobutadiene	ND	2.2	0.48	ND	0.21	0.045	
110-54-3	Hexane	**0.58**	2.2	0.48	**0.16**	0.62	0.14	**J**
179601-23-1	m,p-Xylene	ND	4.4	0.62	ND	1.0	0.14	
1634-04-4	Methyl tert-butyl ether	ND	2.2	0.28	ND	0.61	0.077	
75-09-2	Methylene Chloride	ND	2.2	0.66	ND	0.63	0.19	
95-47-6	o-Xylene	ND	2.2	0.34	ND	0.51	0.078	
103-65-1	Propylbenzene	ND	2.2	0.34	ND	0.45	0.069	
100-42-5	Styrene	ND	2.2	0.38	ND	0.52	0.089	
127-18-4	Tetrachloroethene	ND	2.2	0.30	ND	0.32	0.045	
109-99-9	Tetrahydrofuran	ND	2.2	0.29	ND	0.75	0.10	
108-88-3	Toluene	**0.37**	2.2	0.29	**0.097**	0.58	0.076	**J**
156-60-5	trans-1,2-Dichloroethene	ND	2.2	0.33	ND	0.56	0.082	
10061-02-6	trans-1,3-Dichloropropene	ND	2.2	0.48	ND	0.48	0.11	
79-01-6	Trichloroethene	**0.59**	2.2	0.32	**0.11**	0.41	0.059	**J**
75-01-4	Vinyl Chloride	ND	2.2	0.25	ND	0.86	0.098	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405281032** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-019

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/28/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/18/24
Sampling Media:	1.0 L Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			

Initial Pressure (psig): -2.58 Final Pressure (psig): 6.58

Container Dilution Factor: 1.76

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405281245** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-020

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): 6.76 Final Pressure (psig): 6.76

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	1.3	0.17	ND	0.23	0.030	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.3	0.19	ND	0.18	0.027	
79-00-5	1,1,2-Trichloroethane	ND	1.3	0.14	ND	0.23	0.025	
75-34-3	1,1-Dichloroethane	ND	1.3	0.20	ND	0.31	0.048	
75-35-4	1,1-Dichloroethene	ND	1.3	0.19	ND	0.32	0.047	
120-82-1	1,2,4-Trichlorobenzene	ND	1.3	0.33	ND	0.17	0.044	
95-63-6	1,2,4-Trimethylbenzene	ND	1.3	0.19	ND	0.25	0.038	
106-93-4	1,2-Dibromoethane (EDB)	ND	1.3	0.16	ND	0.16	0.020	
95-50-1	1,2-Dichlorobenzene	ND	1.3	0.20	ND	0.21	0.033	
107-06-2	1,2-Dichloroethane	ND	1.3	0.15	ND	0.31	0.036	
78-87-5	1,2-Dichloropropane	ND	1.3	0.17	ND	0.27	0.036	
108-67-8	1,3,5-Trimethylbenzene	ND	1.3	0.19	ND	0.25	0.039	
106-99-0	1,3-Butadiene	ND	1.3	0.22	ND	0.57	0.099	
541-73-1	1,3-Dichlorobenzene	ND	1.3	0.20	ND	0.21	0.033	
106-46-7	1,4-Dichlorobenzene	ND	1.3	0.21	ND	0.21	0.034	
123-91-1	1,4-Dioxane	ND	1.3	0.16	ND	0.35	0.044	
540-84-1	2,2,4-Trimethylpentane	ND	1.3	0.20	ND	0.27	0.043	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	ND	13	0.28	ND	4.2	0.093	
591-78-6	2-Hexanone	ND	1.3	0.17	ND	0.31	0.040	
67-63-0	2-Propanol	ND	2.5	0.55	ND	1.0	0.22	
107-05-1	3-Chloropropene	ND	1.3	0.18	ND	0.40	0.058	
622-96-8	4-Ethyltoluene	ND	1.3	0.21	ND	0.25	0.043	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405281245** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-020

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): 6.76 Final Pressure (psig): 6.76

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	1.3	0.18	ND	0.31	0.045	
67-64-1	Acetone	ND	13	3.0	ND	5.3	1.3	
100-44-7	alpha-Chlorotoluene	ND	1.3	0.30	ND	0.24	0.058	
71-43-2	Benzene	ND	1.3	0.19	ND	0.39	0.060	
75-27-4	Bromodichloromethane	ND	1.3	0.19	ND	0.19	0.029	
75-25-2	Bromoform	ND	1.3	0.28	ND	0.12	0.027	
74-83-9	Bromomethane	ND	1.3	0.19	ND	0.32	0.048	
75-15-0	Carbon Disulfide	ND	13	0.40	ND	4.0	0.13	
56-23-5	Carbon Tetrachloride	ND	1.3	0.19	ND	0.20	0.029	
108-90-7	Chlorobenzene	ND	1.3	0.18	ND	0.27	0.039	
75-00-3	Chloroethane	ND	1.3	0.17	ND	0.47	0.063	
67-66-3	Chloroform	ND	1.3	0.18	ND	0.26	0.036	
74-87-3	Chloromethane	ND	1.3	0.22	ND	0.61	0.10	
156-59-2	cis-1,2-Dichloroethene	ND	1.3	0.19	ND	0.32	0.047	
10061-01-5	cis-1,3-Dichloropropene	ND	1.3	0.21	ND	0.28	0.046	
98-82-8	Cumene	ND	1.3	0.19	ND	0.25	0.039	
110-82-7	Cyclohexane	ND	2.5	0.38	ND	0.73	0.11	
124-48-1	Dibromochloromethane	ND	1.3	0.18	ND	0.15	0.021	
64-17-5	Ethanol	ND	13	0.93	ND	6.6	0.49	
100-41-4	Ethyl Benzene	ND	1.3	0.19	ND	0.29	0.043	
75-69-4	Freon 11	ND	1.3	0.20	ND	0.22	0.036	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405281245** ALS Sample ID: P2402249-020
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): 6.76 Final Pressure (psig): 6.76

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	ND	1.3	0.19	ND	0.16	0.025	
76-14-2	Freon 114	ND	1.3	0.21	ND	0.18	0.030	
75-71-8	Freon 12	ND	1.3	0.22	ND	0.25	0.044	
306-83-2	Freon 123	ND	1.3	0.60	ND	0.20	0.096	**X**
75-43-4	Freon 21	ND	1.3	0.60	ND	0.30	0.14	**X**
142-82-5	Heptane	ND	1.3	0.21	ND	0.31	0.052	
87-68-3	Hexachlorobutadiene	ND	1.3	0.28	ND	0.12	0.026	
110-54-3	Hexane	ND	1.3	0.28	ND	0.35	0.078	
179601-23-1	m,p-Xylene	ND	2.5	0.35	ND	0.58	0.081	
1634-04-4	Methyl tert-butyl ether	ND	1.3	0.16	ND	0.35	0.044	
75-09-2	Methylene Chloride	ND	1.3	0.38	ND	0.36	0.11	
95-47-6	o-Xylene	ND	1.3	0.19	ND	0.29	0.044	
103-65-1	Propylbenzene	ND	1.3	0.19	ND	0.25	0.039	
100-42-5	Styrene	ND	1.3	0.22	ND	0.29	0.051	
127-18-4	Tetrachloroethene	ND	1.3	0.17	ND	0.18	0.025	
109-99-9	Tetrahydrofuran	ND	1.3	0.17	ND	0.42	0.057	
108-88-3	Toluene	ND	1.3	0.16	ND	0.33	0.043	
156-60-5	trans-1,2-Dichloroethene	ND	1.3	0.19	ND	0.32	0.047	
10061-02-6	trans-1,3-Dichloropropene	ND	1.3	0.28	ND	0.28	0.061	
79-01-6	Trichloroethene	**0.19**	1.3	0.18	**0.034**	0.23	0.034	**J**
75-01-4	Vinyl Chloride	ND	1.3	0.14	ND	0.49	0.056	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405281245** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-020

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/28/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/18/24
Sampling Media:	1.0 L Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			

Initial Pressure (psig): 6.76 Final Pressure (psig): 6.76

Container Dilution Factor: 1.00

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405281310** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-021

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.76 Final Pressure (psig): 6.28

Container Dilution Factor: 1.76

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	2.2	0.29	ND	0.40	0.053	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.2	0.33	ND	0.32	0.047	
79-00-5	1,1,2-Trichloroethane	ND	2.2	0.24	ND	0.40	0.044	
75-34-3	1,1-Dichloroethane	ND	2.2	0.34	ND	0.54	0.085	
75-35-4	1,1-Dichloroethene	ND	2.2	0.33	ND	0.56	0.082	
120-82-1	1,2,4-Trichlorobenzene	ND	2.2	0.57	ND	0.30	0.077	
95-63-6	1,2,4-Trimethylbenzene	ND	2.2	0.33	ND	0.45	0.066	
106-93-4	1,2-Dibromoethane (EDB)	ND	2.2	0.27	ND	0.29	0.036	
95-50-1	1,2-Dichlorobenzene	ND	2.2	0.35	ND	0.37	0.058	
107-06-2	1,2-Dichloroethane	ND	2.2	0.26	ND	0.54	0.064	
78-87-5	1,2-Dichloropropane	ND	2.2	0.29	ND	0.48	0.063	
108-67-8	1,3,5-Trimethylbenzene	ND	2.2	0.34	ND	0.45	0.069	
106-99-0	1,3-Butadiene	ND	2.2	0.39	ND	0.99	0.18	
541-73-1	1,3-Dichlorobenzene	ND	2.2	0.35	ND	0.37	0.059	
106-46-7	1,4-Dichlorobenzene	ND	2.2	0.36	ND	0.37	0.060	
123-91-1	1,4-Dioxane	ND	2.2	0.28	ND	0.61	0.077	
540-84-1	2,2,4-Trimethylpentane	ND	2.2	0.35	ND	0.47	0.075	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**1.6**	22	0.48	**0.54**	7.5	0.16	**J**
591-78-6	2-Hexanone	ND	2.2	0.29	ND	0.54	0.071	
67-63-0	2-Propanol	ND	4.4	0.97	ND	1.8	0.39	
107-05-1	3-Chloropropene	ND	2.2	0.32	ND	0.70	0.10	
622-96-8	4-Ethyltoluene	ND	2.2	0.37	ND	0.45	0.076	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405281310** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-021

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.76 Final Pressure (psig): 6.28

Container Dilution Factor: 1.76

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	2.2	0.32	ND	0.54	0.078	
67-64-1	Acetone	**9.8**	22	5.3	**4.1**	9.3	2.2	**J**
100-44-7	alpha-Chlorotoluene	ND	2.2	0.53	ND	0.43	0.10	
71-43-2	Benzene	**0.62**	2.2	0.34	**0.19**	0.69	0.11	**J**
75-27-4	Bromodichloromethane	ND	2.2	0.34	ND	0.33	0.051	
75-25-2	Bromoform	ND	2.2	0.48	ND	0.21	0.047	
74-83-9	Bromomethane	ND	2.2	0.33	ND	0.57	0.084	
75-15-0	Carbon Disulfide	**5.6**	22	0.70	**1.8**	7.1	0.23	**J**
56-23-5	Carbon Tetrachloride	ND	2.2	0.33	ND	0.35	0.052	
108-90-7	Chlorobenzene	ND	2.2	0.31	ND	0.48	0.068	
75-00-3	Chloroethane	ND	2.2	0.29	ND	0.83	0.11	
67-66-3	Chloroform	**5.6**	2.2	0.31	**1.2**	0.45	0.064	
74-87-3	Chloromethane	**0.76**	2.2	0.38	**0.37**	1.1	0.18	**J**
156-59-2	cis-1,2-Dichloroethene	ND	2.2	0.33	ND	0.56	0.083	
10061-01-5	cis-1,3-Dichloropropene	ND	2.2	0.37	ND	0.48	0.080	
98-82-8	Cumene	ND	2.2	0.34	ND	0.45	0.069	
110-82-7	Cyclohexane	ND	4.4	0.66	ND	1.3	0.19	
124-48-1	Dibromochloromethane	ND	2.2	0.31	ND	0.26	0.036	
64-17-5	Ethanol	**3.0**	22	1.6	**1.6**	12	0.86	**J**
100-41-4	Ethyl Benzene	ND	2.2	0.33	ND	0.51	0.076	
75-69-4	Freon 11	**100**	2.2	0.36	**18**	0.39	0.063	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405281310** ALS Sample ID: P2402249-021
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.76 Final Pressure (psig): 6.28

Container Dilution Factor: 1.76

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**90**	2.2	0.33	**12**	0.29	0.044	
76-14-2	Freon 114	ND	2.2	0.37	ND	0.31	0.053	
75-71-8	Freon 12	**2.4**	2.2	0.38	**0.49**	0.45	0.077	
306-83-2	Freon 123	**5.5**	2.2	1.1	**0.88**	0.35	0.17	**X**
75-43-4	Freon 21	ND	2.2	1.1	ND	0.52	0.25	**X**
142-82-5	Heptane	ND	2.2	0.37	ND	0.54	0.091	
87-68-3	Hexachlorobutadiene	ND	2.2	0.48	ND	0.21	0.045	
110-54-3	Hexane	ND	2.2	0.48	ND	0.62	0.14	
179601-23-1	m,p-Xylene	ND	4.4	0.62	ND	1.0	0.14	
1634-04-4	Methyl tert-butyl ether	ND	2.2	0.28	ND	0.61	0.077	
75-09-2	Methylene Chloride	ND	2.2	0.66	ND	0.63	0.19	
95-47-6	o-Xylene	ND	2.2	0.34	ND	0.51	0.078	
103-65-1	Propylbenzene	ND	2.2	0.34	ND	0.45	0.069	
100-42-5	Styrene	ND	2.2	0.38	ND	0.52	0.089	
127-18-4	Tetrachloroethene	ND	2.2	0.30	ND	0.32	0.045	
109-99-9	Tetrahydrofuran	ND	2.2	0.29	ND	0.75	0.10	
108-88-3	Toluene	**0.66**	2.2	0.29	**0.18**	0.58	0.076	**J**
156-60-5	trans-1,2-Dichloroethene	ND	2.2	0.33	ND	0.56	0.082	
10061-02-6	trans-1,3-Dichloropropene	ND	2.2	0.48	ND	0.48	0.11	
79-01-6	Trichloroethene	ND	2.2	0.32	ND	0.41	0.059	
75-01-4	Vinyl Chloride	ND	2.2	0.25	ND	0.86	0.098	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405281310** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-021

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/28/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/18/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			

Initial Pressure (psig): -2.76 Final Pressure (psig): 6.28

Container Dilution Factor: 1.76

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405281258** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-022

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.64 Final Pressure (psig): 7.06

Container Dilution Factor: 1.80

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	2.3	0.30	ND	0.41	0.054	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.3	0.33	ND	0.33	0.049	
79-00-5	1,1,2-Trichloroethane	ND	2.3	0.24	ND	0.41	0.045	
75-34-3	1,1-Dichloroethane	ND	2.3	0.35	ND	0.56	0.087	
75-35-4	1,1-Dichloroethene	ND	2.3	0.33	ND	0.57	0.084	
120-82-1	1,2,4-Trichlorobenzene	ND	2.3	0.59	ND	0.30	0.079	
95-63-6	1,2,4-Trimethylbenzene	ND	2.3	0.33	ND	0.46	0.068	
106-93-4	1,2-Dibromoethane (EDB)	ND	2.3	0.28	ND	0.29	0.036	
95-50-1	1,2-Dichlorobenzene	ND	2.3	0.36	ND	0.37	0.059	
107-06-2	1,2-Dichloroethane	ND	2.3	0.27	ND	0.56	0.066	
78-87-5	1,2-Dichloropropane	ND	2.3	0.30	ND	0.49	0.064	
108-67-8	1,3,5-Trimethylbenzene	ND	2.3	0.35	ND	0.46	0.071	
106-99-0	1,3-Butadiene	ND	2.3	0.40	ND	1.0	0.18	
541-73-1	1,3-Dichlorobenzene	**0.59**	2.3	0.36	**0.099**	0.37	0.060	**J**
106-46-7	1,4-Dichlorobenzene	ND	2.3	0.37	ND	0.37	0.061	
123-91-1	1,4-Dioxane	ND	2.3	0.28	ND	0.62	0.079	
540-84-1	2,2,4-Trimethylpentane	ND	2.3	0.36	ND	0.48	0.077	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**1.4**	23	0.50	**0.46**	7.6	0.17	**J**
591-78-6	2-Hexanone	ND	2.3	0.30	ND	0.55	0.073	
67-63-0	2-Propanol	ND	4.5	0.99	ND	1.8	0.40	
107-05-1	3-Chloropropene	ND	2.3	0.32	ND	0.72	0.10	
622-96-8	4-Ethyltoluene	ND	2.3	0.38	ND	0.46	0.078	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405281258** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-022

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.64 Final Pressure (psig): 7.06

Container Dilution Factor: 1.80

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	2.3	0.33	ND	0.55	0.080	
67-64-1	Acetone	**14**	23	5.4	**5.9**	9.5	2.3	**J**
100-44-7	alpha-Chlorotoluene	ND	2.3	0.54	ND	0.43	0.10	
71-43-2	Benzene	**0.54**	2.3	0.35	**0.17**	0.70	0.11	**J**
75-27-4	Bromodichloromethane	ND	2.3	0.35	ND	0.34	0.052	
75-25-2	Bromoform	ND	2.3	0.50	ND	0.22	0.048	
74-83-9	Bromomethane	ND	2.3	0.33	ND	0.58	0.086	
75-15-0	Carbon Disulfide	**2.4**	23	0.72	**0.76**	7.2	0.23	**J**
56-23-5	Carbon Tetrachloride	ND	2.3	0.33	ND	0.36	0.053	
108-90-7	Chlorobenzene	ND	2.3	0.32	ND	0.49	0.069	
75-00-3	Chloroethane	ND	2.3	0.30	ND	0.85	0.11	
67-66-3	Chloroform	**2.1**	2.3	0.32	**0.44**	0.46	0.065	**J**
74-87-3	Chloromethane	ND	2.3	0.39	ND	1.1	0.19	
156-59-2	cis-1,2-Dichloroethene	ND	2.3	0.34	ND	0.57	0.085	
10061-01-5	cis-1,3-Dichloropropene	ND	2.3	0.37	ND	0.50	0.082	
98-82-8	Cumene	ND	2.3	0.35	ND	0.46	0.071	
110-82-7	Cyclohexane	ND	4.5	0.68	ND	1.3	0.20	
124-48-1	Dibromochloromethane	ND	2.3	0.32	ND	0.26	0.037	
64-17-5	Ethanol	**4.3**	23	1.7	**2.3**	12	0.88	**J**
100-41-4	Ethyl Benzene	ND	2.3	0.34	ND	0.52	0.078	
75-69-4	Freon 11	**25**	2.3	0.36	**4.5**	0.40	0.065	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405281258** ALS Sample ID: P2402249-022
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.64 Final Pressure (psig): 7.06

Container Dilution Factor: 1.80

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**32**	2.3	0.34	**4.2**	0.29	0.045	
76-14-2	Freon 114	ND	2.3	0.38	ND	0.32	0.054	
75-71-8	Freon 12	**2.4**	2.3	0.39	**0.49**	0.46	0.079	
306-83-2	Freon 123	**2.2**	2.3	1.1	**0.35**	0.36	0.17	**J, X**
75-43-4	Freon 21	ND	2.3	1.1	ND	0.53	0.26	**X**
142-82-5	Heptane	ND	2.3	0.38	ND	0.55	0.093	
87-68-3	Hexachlorobutadiene	ND	2.3	0.50	ND	0.21	0.046	
110-54-3	Hexane	ND	2.3	0.50	ND	0.64	0.14	
179601-23-1	m,p-Xylene	ND	4.5	0.63	ND	1.0	0.15	
1634-04-4	Methyl tert-butyl ether	ND	2.3	0.28	ND	0.62	0.079	
75-09-2	Methylene Chloride	ND	2.3	0.68	ND	0.65	0.19	
95-47-6	o-Xylene	ND	2.3	0.35	ND	0.52	0.080	
103-65-1	Propylbenzene	ND	2.3	0.35	ND	0.46	0.071	
100-42-5	Styrene	ND	2.3	0.39	ND	0.53	0.091	
127-18-4	Tetrachloroethene	ND	2.3	0.31	ND	0.33	0.046	
109-99-9	Tetrahydrofuran	ND	2.3	0.30	ND	0.76	0.10	
108-88-3	Toluene	**1.3**	2.3	0.29	**0.34**	0.60	0.078	**J**
156-60-5	trans-1,2-Dichloroethene	ND	2.3	0.33	ND	0.57	0.084	
10061-02-6	trans-1,3-Dichloropropene	ND	2.3	0.50	ND	0.50	0.11	
79-01-6	Trichloroethene	ND	2.3	0.32	ND	0.42	0.060	
75-01-4	Vinyl Chloride	ND	2.3	0.26	ND	0.88	0.10	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405281258** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-022

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/28/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/18/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			

Initial Pressure (psig): -2.64 Final Pressure (psig): 7.06

Container Dilution Factor: 1.80

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405281326** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-023

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/19/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.040 Liter(s)

Initial Pressure (psig): -2.87 Final Pressure (psig): 6.80

Container Dilution Factor: 1.82

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	2.3	0.30	ND	0.42	0.055	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.3	0.34	ND	0.33	0.049	
79-00-5	1,1,2-Trichloroethane	ND	2.3	0.25	ND	0.42	0.045	
75-34-3	1,1-Dichloroethane	ND	2.3	0.35	ND	0.56	0.088	
75-35-4	1,1-Dichloroethene	ND	2.3	0.34	ND	0.57	0.085	
120-82-1	1,2,4-Trichlorobenzene	ND	2.3	0.59	ND	0.31	0.080	
95-63-6	1,2,4-Trimethylbenzene	ND	2.3	0.34	ND	0.46	0.069	
106-93-4	1,2-Dibromoethane (EDB)	ND	2.3	0.28	ND	0.30	0.037	
95-50-1	1,2-Dichlorobenzene	ND	2.3	0.36	ND	0.38	0.060	
107-06-2	1,2-Dichloroethane	ND	2.3	0.27	ND	0.56	0.066	
78-87-5	1,2-Dichloropropane	ND	2.3	0.30	ND	0.49	0.065	
108-67-8	1,3,5-Trimethylbenzene	ND	2.3	0.35	ND	0.46	0.071	
106-99-0	1,3-Butadiene	ND	2.3	0.40	ND	1.0	0.18	
541-73-1	1,3-Dichlorobenzene	ND	2.3	0.36	ND	0.38	0.061	
106-46-7	1,4-Dichlorobenzene	ND	2.3	0.37	ND	0.38	0.062	
123-91-1	1,4-Dioxane	**0.43**	2.3	0.29	**0.12**	0.63	0.080	**J**
540-84-1	2,2,4-Trimethylpentane	ND	2.3	0.36	ND	0.49	0.078	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**3.0**	23	0.50	**1.0**	7.7	0.17	**J**
591-78-6	2-Hexanone	ND	2.3	0.30	ND	0.56	0.073	
67-63-0	2-Propanol	ND	4.6	1.0	ND	1.9	0.41	
107-05-1	3-Chloropropene	ND	2.3	0.33	ND	0.73	0.10	
622-96-8	4-Ethyltoluene	ND	2.3	0.39	ND	0.46	0.079	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405281326** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-023

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/19/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.040 Liter(s)

Initial Pressure (psig): -2.87 Final Pressure (psig): 6.80

Container Dilution Factor: 1.82

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	2.3	0.33	ND	0.56	0.081	
67-64-1	Acetone	**18**	23	5.5	**7.6**	9.6	2.3	**J**
100-44-7	alpha-Chlorotoluene	ND	2.3	0.55	ND	0.44	0.11	
71-43-2	Benzene	**0.66**	2.3	0.35	**0.21**	0.71	0.11	**J**
75-27-4	Bromodichloromethane	ND	2.3	0.35	ND	0.34	0.052	
75-25-2	Bromoform	**0.73**	2.3	0.50	**0.071**	0.22	0.048	**J**
74-83-9	Bromomethane	ND	2.3	0.34	ND	0.59	0.087	
75-15-0	Carbon Disulfide	**6.4**	23	0.73	**2.1**	7.3	0.23	**J**
56-23-5	Carbon Tetrachloride	ND	2.3	0.34	ND	0.36	0.054	
108-90-7	Chlorobenzene	ND	2.3	0.32	ND	0.49	0.070	
75-00-3	Chloroethane	ND	2.3	0.30	ND	0.86	0.11	
67-66-3	Chloroform	**8.5**	2.3	0.32	**1.8**	0.47	0.066	
74-87-3	Chloromethane	ND	2.3	0.39	ND	1.1	0.19	
156-59-2	cis-1,2-Dichloroethene	ND	2.3	0.34	ND	0.57	0.086	
10061-01-5	cis-1,3-Dichloropropene	ND	2.3	0.38	ND	0.50	0.083	
98-82-8	Cumene	ND	2.3	0.35	ND	0.46	0.071	
110-82-7	Cyclohexane	ND	4.6	0.68	ND	1.3	0.20	
124-48-1	Dibromochloromethane	ND	2.3	0.32	ND	0.27	0.037	
64-17-5	Ethanol	ND	23	1.7	ND	12	0.89	
100-41-4	Ethyl Benzene	ND	2.3	0.34	ND	0.52	0.079	
75-69-4	Freon 11	**1,300**	23	3.7	**220**	4.0	0.66	**D**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
D = The reported result is from a dilution.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405281326** ALS Sample ID: P2402249-023
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/19/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.040 Liter(s)

Initial Pressure (psig): -2.87 Final Pressure (psig): 6.80

Container Dilution Factor: 1.82

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**1,100**	23	3.5	**150**	3.0	0.45	**D**
76-14-2	Freon 114	ND	2.3	0.38	ND	0.33	0.055	
75-71-8	Freon 12	**2.5**	2.3	0.40	**0.50**	0.46	0.080	
306-83-2	Freon 123	**5.4**	2.3	1.1	**0.86**	0.36	0.17	**X**
75-43-4	Freon 21	ND	2.3	1.1	ND	0.54	0.26	**X**
142-82-5	Heptane	ND	2.3	0.39	ND	0.56	0.094	
87-68-3	Hexachlorobutadiene	ND	2.3	0.50	ND	0.21	0.047	
110-54-3	Hexane	ND	2.3	0.50	ND	0.65	0.14	
179601-23-1	m,p-Xylene	ND	4.6	0.64	ND	1.0	0.15	
1634-04-4	Methyl tert-butyl ether	ND	2.3	0.29	ND	0.63	0.080	
75-09-2	Methylene Chloride	ND	2.3	0.68	ND	0.66	0.20	
95-47-6	o-Xylene	ND	2.3	0.35	ND	0.52	0.081	
103-65-1	Propylbenzene	ND	2.3	0.35	ND	0.46	0.071	
100-42-5	Styrene	ND	2.3	0.39	ND	0.53	0.092	
127-18-4	Tetrachloroethene	ND	2.3	0.31	ND	0.34	0.046	
109-99-9	Tetrahydrofuran	ND	2.3	0.30	ND	0.77	0.10	
108-88-3	Toluene	**0.47**	2.3	0.30	**0.12**	0.60	0.079	**J**
156-60-5	trans-1,2-Dichloroethene	ND	2.3	0.34	ND	0.57	0.085	
10061-02-6	trans-1,3-Dichloropropene	ND	2.3	0.50	ND	0.50	0.11	
79-01-6	Trichloroethene	**2.8**	2.3	0.33	**0.52**	0.42	0.061	
75-01-4	Vinyl Chloride	ND	2.3	0.26	ND	0.89	0.10	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
D = The reported result is from a dilution.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405281326** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-023

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/28/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/19/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			0.040 Liter(s)

Initial Pressure (psig): -2.87 Final Pressure (psig): 6.80

Container Dilution Factor: 1.82

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
#VALUE!	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405281337** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-024

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/20/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.0060 Liter(s)
Test Notes: 0.00050 Liter(s)

Initial Pressure (psig): -2.75 Final Pressure (psig): 6.50

Container Dilution Factor: 1.77

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	150	19	ND	27	3.6	
79-34-5	1,1,2,2-Tetrachloroethane	ND	150	22	ND	21	3.2	
79-00-5	1,1,2-Trichloroethane	ND	150	16	ND	27	2.9	
75-34-3	1,1-Dichloroethane	ND	150	23	ND	36	5.7	
75-35-4	1,1-Dichloroethene	ND	150	22	ND	37	5.5	
120-82-1	1,2,4-Trichlorobenzene	ND	150	38	ND	20	5.2	
95-63-6	1,2,4-Trimethylbenzene	ND	150	22	ND	30	4.4	
106-93-4	1,2-Dibromoethane (EDB)	ND	150	18	ND	19	2.4	
95-50-1	1,2-Dichlorobenzene	ND	150	23	ND	25	3.9	
107-06-2	1,2-Dichloroethane	ND	150	17	ND	36	4.3	
78-87-5	1,2-Dichloropropane	ND	150	19	ND	32	4.2	
108-67-8	1,3,5-Trimethylbenzene	ND	150	23	ND	30	4.6	
106-99-0	1,3-Butadiene	ND	150	26	ND	67	12	
541-73-1	1,3-Dichlorobenzene	ND	150	24	ND	25	3.9	
106-46-7	1,4-Dichlorobenzene	ND	150	24	ND	25	4.0	
123-91-1	1,4-Dioxane	ND	150	19	ND	41	5.2	
540-84-1	2,2,4-Trimethylpentane	ND	150	24	ND	32	5.1	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	ND	1,500	32	ND	500	11	
591-78-6	2-Hexanone	ND	150	19	ND	36	4.8	
67-63-0	2-Propanol	ND	300	65	ND	120	26	
107-05-1	3-Chloropropene	ND	150	21	ND	47	6.8	
622-96-8	4-Ethyltoluene	ND	150	25	ND	30	5.1	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405281337** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-024

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/20/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.0060 Liter(s)
Test Notes: 0.00050 Liter(s)

Initial Pressure (psig): -2.75 Final Pressure (psig): 6.50

Container Dilution Factor: 1.77

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	150	22	ND	36	5.3	
67-64-1	Acetone	ND	1,500	350	ND	620	150	
100-44-7	alpha-Chlorotoluene	ND	150	35	ND	29	6.8	
71-43-2	Benzene	ND	150	23	ND	46	7.1	
75-27-4	Bromodichloromethane	ND	150	23	ND	22	3.4	
75-25-2	Bromoform	ND	150	32	ND	14	3.1	
74-83-9	Bromomethane	ND	150	22	ND	38	5.6	
75-15-0	Carbon Disulfide	ND	1,500	47	ND	470	15	
56-23-5	Carbon Tetrachloride	ND	150	22	ND	23	3.5	
108-90-7	Chlorobenzene	ND	150	21	ND	32	4.5	
75-00-3	Chloroethane	ND	150	19	ND	56	7.4	
67-66-3	Chloroform	**25**	150	21	**5.2**	30	4.3	**J**
74-87-3	Chloromethane	ND	150	25	ND	71	12	
156-59-2	cis-1,2-Dichloroethene	ND	150	22	ND	37	5.6	
10061-01-5	cis-1,3-Dichloropropene	ND	150	24	ND	33	5.4	
98-82-8	Cumene	ND	150	23	ND	30	4.6	
110-82-7	Cyclohexane	ND	300	44	ND	86	13	
124-48-1	Dibromochloromethane	ND	150	21	ND	17	2.4	
64-17-5	Ethanol	ND	1,500	110	ND	780	58	
100-41-4	Ethyl Benzene	ND	150	22	ND	34	5.1	
75-69-4	Freon 11	**25,000**	1,800	290	**4,400**	320	51	**D**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
D = The reported result is from a dilution.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405281337** ALS Sample ID: P2402249-024
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/20/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.0060 Liter(s)
Test Notes: 0.00050 Liter(s)

Initial Pressure (psig): -2.75 Final Pressure (psig): 6.50

Container Dilution Factor: 1.77

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**61,000**	1,800	270	**8,000**	230	35	**D**
76-14-2	Freon 114	ND	150	25	ND	21	3.5	
75-71-8	Freon 12	ND	150	26	ND	30	5.2	
306-83-2	Freon 123	**130**	150	71	**20**	24	11	**J, X**
75-43-4	Freon 21	ND	150	71	ND	35	17	**X**
142-82-5	Heptane	ND	150	25	ND	36	6.1	
87-68-3	Hexachlorobutadiene	ND	150	32	ND	14	3.0	
110-54-3	Hexane	ND	150	32	ND	42	9.2	
179601-23-1	m,p-Xylene	ND	300	41	ND	68	9.5	
1634-04-4	Methyl tert-butyl ether	ND	150	19	ND	41	5.2	
75-09-2	Methylene Chloride	ND	150	44	ND	42	13	
95-47-6	o-Xylene	ND	150	23	ND	34	5.2	
103-65-1	Propylbenzene	ND	150	23	ND	30	4.6	
100-42-5	Styrene	ND	150	25	ND	35	6.0	
127-18-4	Tetrachloroethene	ND	150	20	ND	22	3.0	
109-99-9	Tetrahydrofuran	ND	150	20	ND	50	6.7	
108-88-3	Toluene	ND	150	19	ND	39	5.1	
156-60-5	trans-1,2-Dichloroethene	ND	150	22	ND	37	5.5	
10061-02-6	trans-1,3-Dichloropropene	ND	150	32	ND	33	7.2	
79-01-6	Trichloroethene	**27**	150	21	**5.1**	27	4.0	**J**
75-01-4	Vinyl Chloride	ND	150	17	ND	58	6.6	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
D = The reported result is from a dilution.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405281337** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-024

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/28/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/20/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.0060 Liter(s)
Test Notes:			0.00050 Liter(s)

Initial Pressure (psig): -2.75 Final Pressure (psig): 6.50

Container Dilution Factor: 1.77

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405281344** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-025

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/21/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.0020 Liter(s)
Test Notes:

Initial Pressure (psig): -2.55 Final Pressure (psig): 6.42

Container Dilution Factor: 1.74

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	440	57	ND	80	11	
79-34-5	1,1,2,2-Tetrachloroethane	ND	440	64	ND	63	9.4	
79-00-5	1,1,2-Trichloroethane	ND	440	47	ND	80	8.6	
75-34-3	1,1-Dichloroethane	ND	440	68	ND	110	17	
75-35-4	1,1-Dichloroethene	ND	440	64	ND	110	16	
120-82-1	1,2,4-Trichlorobenzene	ND	440	110	ND	59	15	
95-63-6	1,2,4-Trimethylbenzene	ND	440	64	ND	89	13	
106-93-4	1,2-Dibromoethane (EDB)	ND	440	54	ND	57	7.0	
95-50-1	1,2-Dichlorobenzene	ND	440	69	ND	72	11	
107-06-2	1,2-Dichloroethane	ND	440	51	ND	110	13	
78-87-5	1,2-Dichloropropane	ND	440	57	ND	94	12	
108-67-8	1,3,5-Trimethylbenzene	ND	440	67	ND	89	14	
106-99-0	1,3-Butadiene	ND	440	77	ND	200	35	
541-73-1	1,3-Dichlorobenzene	ND	440	70	ND	72	12	
106-46-7	1,4-Dichlorobenzene	ND	440	71	ND	72	12	
123-91-1	1,4-Dioxane	ND	440	55	ND	120	15	
540-84-1	2,2,4-Trimethylpentane	ND	440	70	ND	93	15	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**120**	4,400	96	**40**	1,500	32	**J**
591-78-6	2-Hexanone	ND	440	57	ND	110	14	
67-63-0	2-Propanol	ND	870	190	ND	350	78	
107-05-1	3-Chloropropene	ND	440	63	ND	140	20	
622-96-8	4-Ethyltoluene	ND	440	74	ND	89	15	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405281344** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-025

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/21/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.0020 Liter(s)
Test Notes:

Initial Pressure (psig): -2.55 Final Pressure (psig): 6.42

Container Dilution Factor: 1.74

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	440	64	ND	110	16	
67-64-1	Acetone	ND	4,400	1,000	ND	1,800	440	
100-44-7	alpha-Chlorotoluene	ND	440	100	ND	84	20	
71-43-2	Benzene	**270**	440	67	**84**	140	21	**J**
75-27-4	Bromodichloromethane	ND	440	67	ND	65	10	
75-25-2	Bromoform	ND	440	96	ND	42	9.3	
74-83-9	Bromomethane	ND	440	64	ND	110	17	
75-15-0	Carbon Disulfide	ND	4,400	140	ND	1,400	45	
56-23-5	Carbon Tetrachloride	ND	440	64	ND	69	10	
108-90-7	Chlorobenzene	ND	440	62	ND	94	13	
75-00-3	Chloroethane	ND	440	57	ND	160	22	
67-66-3	Chloroform	ND	440	62	ND	89	13	
74-87-3	Chloromethane	ND	440	75	ND	210	36	
156-59-2	cis-1,2-Dichloroethene	ND	440	65	ND	110	16	
10061-01-5	cis-1,3-Dichloropropene	ND	440	72	ND	96	16	
98-82-8	Cumene	ND	440	67	ND	89	14	
110-82-7	Cyclohexane	ND	870	130	ND	250	38	
124-48-1	Dibromochloromethane	ND	440	61	ND	51	7.2	
64-17-5	Ethanol	**1,200**	4,400	320	**650**	2,300	170	**J**
100-41-4	Ethyl Benzene	ND	440	65	ND	100	15	
75-69-4	Freon 11	**23,000**	440	70	**4,100**	77	13	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405281344** ALS Sample ID: P2402249-025
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/28/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/21/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.0020 Liter(s)
Test Notes:

Initial Pressure (psig): -2.55 Final Pressure (psig): 6.42

Container Dilution Factor: 1.74

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**45,000**	440	66	**5,900**	57	8.6	
76-14-2	Freon 114	ND	440	73	ND	62	10	
75-71-8	Freon 12	ND	440	76	ND	88	15	
306-83-2	Freon 123	**520**	440	210	**83**	70	33	**X**
75-43-4	Freon 21	ND	440	210	ND	100	50	**X**
142-82-5	Heptane	ND	440	74	ND	110	18	
87-68-3	Hexachlorobutadiene	ND	440	96	ND	41	9.0	
110-54-3	Hexane	ND	440	96	ND	120	27	
179601-23-1	m,p-Xylene	ND	870	120	ND	200	28	
1634-04-4	Methyl tert-butyl ether	ND	440	55	ND	120	15	
75-09-2	Methylene Chloride	ND	440	130	ND	130	38	
95-47-6	o-Xylene	ND	440	67	ND	100	15	
103-65-1	Propylbenzene	ND	440	67	ND	89	14	
100-42-5	Styrene	ND	440	75	ND	100	18	
127-18-4	Tetrachloroethene	ND	440	60	ND	64	8.9	
109-99-9	Tetrahydrofuran	ND	440	58	ND	150	20	
108-88-3	Toluene	**950**	440	57	**250**	120	15	
156-60-5	trans-1,2-Dichloroethene	ND	440	64	ND	110	16	
10061-02-6	trans-1,3-Dichloropropene	ND	440	96	ND	96	21	
79-01-6	Trichloroethene	**230**	440	63	**43**	81	12	**J**
75-01-4	Vinyl Chloride	ND	440	50	ND	170	19	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405281344** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-025

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/28/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/21/24
Sampling Media:	1.0 L Summa Canister	Volume(s) Analyzed:	0.0020 Liter(s)
Test Notes:			

Initial Pressure (psig): -2.55 Final Pressure (psig): 6.42

Container Dilution Factor: 1.74

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405290815** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-026

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18 - 6/19/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.040 Liter(s)

Initial Pressure (psig): -1.99 Final Pressure (psig): 6.06

Container Dilution Factor: 1.63

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	2.0	0.27	ND	0.37	0.049	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	0.30	ND	0.30	0.044	
79-00-5	1,1,2-Trichloroethane	ND	2.0	0.22	ND	0.37	0.040	
75-34-3	1,1-Dichloroethane	ND	2.0	0.32	ND	0.50	0.079	
75-35-4	1,1-Dichloroethene	ND	2.0	0.30	ND	0.51	0.076	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.53	ND	0.27	0.071	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.30	ND	0.41	0.061	
106-93-4	1,2-Dibromoethane (EDB)	ND	2.0	0.25	ND	0.27	0.033	
95-50-1	1,2-Dichlorobenzene	ND	2.0	0.32	ND	0.34	0.054	
107-06-2	1,2-Dichloroethane	ND	2.0	0.24	ND	0.50	0.059	
78-87-5	1,2-Dichloropropane	ND	2.0	0.27	ND	0.44	0.058	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.31	ND	0.41	0.064	
106-99-0	1,3-Butadiene	ND	2.0	0.36	ND	0.92	0.16	
541-73-1	1,3-Dichlorobenzene	ND	2.0	0.33	ND	0.34	0.054	
106-46-7	1,4-Dichlorobenzene	ND	2.0	0.33	ND	0.34	0.056	
123-91-1	1,4-Dioxane	ND	2.0	0.26	ND	0.57	0.071	
540-84-1	2,2,4-Trimethylpentane	ND	2.0	0.33	ND	0.44	0.070	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**1.1**	20	0.45	**0.39**	6.9	0.15	**J**
591-78-6	2-Hexanone	ND	2.0	0.27	ND	0.50	0.066	
67-63-0	2-Propanol	ND	4.1	0.90	ND	1.7	0.36	
107-05-1	3-Chloropropene	ND	2.0	0.29	ND	0.65	0.094	
622-96-8	4-Ethyltoluene	ND	2.0	0.35	ND	0.41	0.070	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405290815** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-026

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18 - 6/19/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.040 Liter(s)

Initial Pressure (psig): -1.99 Final Pressure (psig): 6.06

Container Dilution Factor: 1.63

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	2.0	0.30	ND	0.50	0.073	
67-64-1	Acetone	**8.1**	20	4.9	**3.4**	8.6	2.1	**J**
100-44-7	alpha-Chlorotoluene	ND	2.0	0.49	ND	0.39	0.094	
71-43-2	Benzene	ND	2.0	0.31	ND	0.64	0.098	
75-27-4	Bromodichloromethane	ND	2.0	0.31	ND	0.30	0.047	
75-25-2	Bromoform	ND	2.0	0.45	ND	0.20	0.043	
74-83-9	Bromomethane	ND	2.0	0.30	ND	0.52	0.078	
75-15-0	Carbon Disulfide	ND	20	0.65	ND	6.5	0.21	
56-23-5	Carbon Tetrachloride	**0.32**	2.0	0.30	**0.051**	0.32	0.048	**J**
108-90-7	Chlorobenzene	ND	2.0	0.29	ND	0.44	0.063	
75-00-3	Chloroethane	ND	2.0	0.27	ND	0.77	0.10	
67-66-3	Chloroform	**0.48**	2.0	0.29	**0.098**	0.42	0.059	**J**
74-87-3	Chloromethane	ND	2.0	0.35	ND	0.99	0.17	
156-59-2	cis-1,2-Dichloroethene	ND	2.0	0.31	ND	0.51	0.077	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	0.34	ND	0.45	0.075	
98-82-8	Cumene	ND	2.0	0.31	ND	0.41	0.064	
110-82-7	Cyclohexane	ND	4.1	0.61	ND	1.2	0.18	
124-48-1	Dibromochloromethane	ND	2.0	0.29	ND	0.24	0.033	
64-17-5	Ethanol	**2.3**	20	1.5	**1.2**	11	0.80	**J**
100-41-4	Ethyl Benzene	ND	2.0	0.31	ND	0.47	0.070	
75-69-4	Freon 11	**510**	20	3.3	**91**	3.6	0.59	**D**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
D = The reported result is from a dilution.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405290815** ALS Sample ID: P2402249-026
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18 - 6/19/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.040 Liter(s)

Initial Pressure (psig): -1.99 Final Pressure (psig): 6.06

Container Dilution Factor: 1.63

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**1,400**	20	3.1	**190**	2.7	0.40	**D**
76-14-2	Freon 114	ND	2.0	0.34	ND	0.29	0.049	
75-71-8	Freon 12	**2.4**	2.0	0.35	**0.48**	0.41	0.072	
306-83-2	Freon 123	**1.5**	2.0	0.98	**0.24**	0.33	0.16	**J, X**
75-43-4	Freon 21	ND	2.0	0.98	ND	0.48	0.23	**X**
142-82-5	Heptane	ND	2.0	0.35	ND	0.50	0.085	
87-68-3	Hexachlorobutadiene	ND	2.0	0.45	ND	0.19	0.042	
110-54-3	Hexane	ND	2.0	0.45	ND	0.58	0.13	
179601-23-1	m,p-Xylene	ND	4.1	0.57	ND	0.94	0.13	
1634-04-4	Methyl tert-butyl ether	ND	2.0	0.26	ND	0.57	0.071	
75-09-2	Methylene Chloride	ND	2.0	0.61	ND	0.59	0.18	
95-47-6	o-Xylene	ND	2.0	0.31	ND	0.47	0.072	
103-65-1	Propylbenzene	ND	2.0	0.31	ND	0.41	0.064	
100-42-5	Styrene	ND	2.0	0.35	ND	0.48	0.082	
127-18-4	Tetrachloroethene	ND	2.0	0.28	ND	0.30	0.041	
109-99-9	Tetrahydrofuran	ND	2.0	0.27	ND	0.69	0.093	
108-88-3	Toluene	**0.48**	2.0	0.26	**0.13**	0.54	0.070	**J**
156-60-5	trans-1,2-Dichloroethene	ND	2.0	0.30	ND	0.51	0.076	
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	0.45	ND	0.45	0.099	
79-01-6	Trichloroethene	**0.73**	2.0	0.29	**0.14**	0.38	0.055	**J**
75-01-4	Vinyl Chloride	ND	2.0	0.23	ND	0.80	0.091	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
D = The reported result is from a dilution.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405290815** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-026

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/29/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/18 - 6/19/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			0.040 Liter(s)

Initial Pressure (psig): -1.99 Final Pressure (psig): 6.06

Container Dilution Factor: 1.63

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405290816** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-027

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.26 Final Pressure (psig): 7.13

Container Dilution Factor: 1.75

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	2.2	0.29	ND	0.40	0.053	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.2	0.32	ND	0.32	0.047	
79-00-5	1,1,2-Trichloroethane	ND	2.2	0.24	ND	0.40	0.043	
75-34-3	1,1-Dichloroethane	ND	2.2	0.34	ND	0.54	0.084	
75-35-4	1,1-Dichloroethene	ND	2.2	0.32	ND	0.55	0.082	
120-82-1	1,2,4-Trichlorobenzene	ND	2.2	0.57	ND	0.29	0.077	
95-63-6	1,2,4-Trimethylbenzene	ND	2.2	0.32	ND	0.45	0.066	
106-93-4	1,2-Dibromoethane (EDB)	ND	2.2	0.27	ND	0.28	0.035	
95-50-1	1,2-Dichlorobenzene	ND	2.2	0.35	ND	0.36	0.058	
107-06-2	1,2-Dichloroethane	ND	2.2	0.26	ND	0.54	0.064	
78-87-5	1,2-Dichloropropane	ND	2.2	0.29	ND	0.47	0.063	
108-67-8	1,3,5-Trimethylbenzene	ND	2.2	0.34	ND	0.45	0.069	
106-99-0	1,3-Butadiene	ND	2.2	0.39	ND	0.99	0.17	
541-73-1	1,3-Dichlorobenzene	ND	2.2	0.35	ND	0.36	0.058	
106-46-7	1,4-Dichlorobenzene	ND	2.2	0.36	ND	0.36	0.060	
123-91-1	1,4-Dioxane	ND	2.2	0.28	ND	0.61	0.077	
540-84-1	2,2,4-Trimethylpentane	ND	2.2	0.35	ND	0.47	0.075	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**3.2**	22	0.48	**1.1**	7.4	0.16	**J**
591-78-6	2-Hexanone	**0.48**	2.2	0.29	**0.12**	0.53	0.071	**J**
67-63-0	2-Propanol	ND	4.4	0.96	ND	1.8	0.39	
107-05-1	3-Chloropropene	ND	2.2	0.32	ND	0.70	0.10	
622-96-8	4-Ethyltoluene	ND	2.2	0.37	ND	0.45	0.076	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405290816** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-027

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.26 Final Pressure (psig): 7.13

Container Dilution Factor: 1.75

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	2.2	0.32	ND	0.53	0.078	
67-64-1	Acetone	**24**	22	5.3	**10**	9.2	2.2	
100-44-7	alpha-Chlorotoluene	ND	2.2	0.53	ND	0.42	0.10	
71-43-2	Benzene	**0.53**	2.2	0.34	**0.17**	0.69	0.11	**J**
75-27-4	Bromodichloromethane	ND	2.2	0.34	ND	0.33	0.050	
75-25-2	Bromoform	ND	2.2	0.48	ND	0.21	0.047	
74-83-9	Bromomethane	ND	2.2	0.32	ND	0.56	0.083	
75-15-0	Carbon Disulfide	ND	22	0.70	ND	7.0	0.22	
56-23-5	Carbon Tetrachloride	**0.44**	2.2	0.32	**0.070**	0.35	0.051	**J**
108-90-7	Chlorobenzene	ND	2.2	0.31	ND	0.48	0.067	
75-00-3	Chloroethane	ND	2.2	0.29	ND	0.83	0.11	
67-66-3	Chloroform	ND	2.2	0.31	ND	0.45	0.064	
74-87-3	Chloromethane	**1.6**	2.2	0.38	**0.75**	1.1	0.18	**J**
156-59-2	cis-1,2-Dichloroethene	ND	2.2	0.33	ND	0.55	0.083	
10061-01-5	cis-1,3-Dichloropropene	ND	2.2	0.36	ND	0.48	0.080	
98-82-8	Cumene	ND	2.2	0.34	ND	0.45	0.069	
110-82-7	Cyclohexane	ND	4.4	0.66	ND	1.3	0.19	
124-48-1	Dibromochloromethane	ND	2.2	0.31	ND	0.26	0.036	
64-17-5	Ethanol	**4.0**	22	1.6	**2.1**	12	0.86	**J**
100-41-4	Ethyl Benzene	ND	2.2	0.33	ND	0.50	0.076	
75-69-4	Freon 11	**1.2**	2.2	0.35	**0.21**	0.39	0.063	**J**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405290816** ALS Sample ID: P2402249-027
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.26 Final Pressure (psig): 7.13

Container Dilution Factor: 1.75

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**0.69**	2.2	0.33	**0.090**	0.29	0.043	**J**
76-14-2	Freon 114	ND	2.2	0.37	ND	0.31	0.053	
75-71-8	Freon 12	**2.5**	2.2	0.38	**0.50**	0.44	0.077	
306-83-2	Freon 123	**3.4**	2.2	1.1	**0.54**	0.35	0.17	**X**
75-43-4	Freon 21	ND	2.2	1.1	ND	0.52	0.25	**X**
142-82-5	Heptane	**0.54**	2.2	0.37	**0.13**	0.53	0.091	**J**
87-68-3	Hexachlorobutadiene	ND	2.2	0.48	ND	0.21	0.045	
110-54-3	Hexane	**1.2**	2.2	0.48	**0.35**	0.62	0.14	**J**
179601-23-1	m,p-Xylene	ND	4.4	0.61	ND	1.0	0.14	
1634-04-4	Methyl tert-butyl ether	ND	2.2	0.28	ND	0.61	0.076	
75-09-2	Methylene Chloride	ND	2.2	0.66	ND	0.63	0.19	
95-47-6	o-Xylene	ND	2.2	0.34	ND	0.50	0.078	
103-65-1	Propylbenzene	ND	2.2	0.34	ND	0.45	0.069	
100-42-5	Styrene	ND	2.2	0.38	ND	0.51	0.088	
127-18-4	Tetrachloroethene	ND	2.2	0.30	ND	0.32	0.045	
109-99-9	Tetrahydrofuran	ND	2.2	0.29	ND	0.74	0.099	
108-88-3	Toluene	**0.62**	2.2	0.28	**0.16**	0.58	0.075	**J**
156-60-5	trans-1,2-Dichloroethene	ND	2.2	0.32	ND	0.55	0.082	
10061-02-6	trans-1,3-Dichloropropene	ND	2.2	0.48	ND	0.48	0.11	
79-01-6	Trichloroethene	ND	2.2	0.32	ND	0.41	0.059	
75-01-4	Vinyl Chloride	ND	2.2	0.25	ND	0.86	0.098	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405290816** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-027

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/29/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/18/24
Sampling Media:	1.0 L Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			

Initial Pressure (psig): -2.26 Final Pressure (psig): 7.13

Container Dilution Factor: 1.75

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405290826** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-028

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18 - 6/19/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.040 Liter(s)

Initial Pressure (psig): -2.03 Final Pressure (psig): 6.72

Container Dilution Factor: 1.69

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	2.1	0.28	ND	0.39	0.051	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.1	0.31	ND	0.31	0.046	
79-00-5	1,1,2-Trichloroethane	ND	2.1	0.23	ND	0.39	0.042	
75-34-3	1,1-Dichloroethane	ND	2.1	0.33	ND	0.52	0.081	
75-35-4	1,1-Dichloroethene	ND	2.1	0.31	ND	0.53	0.079	
120-82-1	1,2,4-Trichlorobenzene	ND	2.1	0.55	ND	0.28	0.074	
95-63-6	1,2,4-Trimethylbenzene	ND	2.1	0.31	ND	0.43	0.064	
106-93-4	1,2-Dibromoethane (EDB)	ND	2.1	0.26	ND	0.27	0.034	
95-50-1	1,2-Dichlorobenzene	ND	2.1	0.33	ND	0.35	0.056	
107-06-2	1,2-Dichloroethane	ND	2.1	0.25	ND	0.52	0.062	
78-87-5	1,2-Dichloropropane	ND	2.1	0.28	ND	0.46	0.060	
108-67-8	1,3,5-Trimethylbenzene	ND	2.1	0.33	ND	0.43	0.066	
106-99-0	1,3-Butadiene	ND	2.1	0.37	ND	0.96	0.17	
541-73-1	1,3-Dichlorobenzene	ND	2.1	0.34	ND	0.35	0.056	
106-46-7	1,4-Dichlorobenzene	ND	2.1	0.35	ND	0.35	0.058	
123-91-1	1,4-Dioxane	**2.2**	2.1	0.27	**0.61**	0.59	0.074	
540-84-1	2,2,4-Trimethylpentane	ND	2.1	0.34	ND	0.45	0.072	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**8.2**	21	0.46	**2.8**	7.2	0.16	**J**
591-78-6	2-Hexanone	**1.6**	2.1	0.28	**0.39**	0.52	0.068	**J**
67-63-0	2-Propanol	**1.6**	4.2	0.93	**0.66**	1.7	0.38	**J**
107-05-1	3-Chloropropene	ND	2.1	0.30	ND	0.68	0.097	
622-96-8	4-Ethyltoluene	ND	2.1	0.36	ND	0.43	0.073	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405290826** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-028

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18 - 6/19/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.040 Liter(s)

Initial Pressure (psig): -2.03 Final Pressure (psig): 6.72

Container Dilution Factor: 1.69

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	2.1	0.31	ND	0.52	0.075	
67-64-1	Acetone	**35**	21	5.1	**15**	8.9	2.1	
100-44-7	alpha-Chlorotoluene	ND	2.1	0.51	ND	0.41	0.098	
71-43-2	Benzene	**0.85**	2.1	0.33	**0.26**	0.66	0.10	**J**
75-27-4	Bromodichloromethane	**1.2**	2.1	0.33	**0.19**	0.32	0.049	**J**
75-25-2	Bromoform	ND	2.1	0.46	ND	0.20	0.045	
74-83-9	Bromomethane	ND	2.1	0.31	ND	0.54	0.081	
75-15-0	Carbon Disulfide	**25**	21	0.68	**7.9**	6.8	0.22	
56-23-5	Carbon Tetrachloride	ND	2.1	0.31	ND	0.34	0.050	
108-90-7	Chlorobenzene	ND	2.1	0.30	ND	0.46	0.065	
75-00-3	Chloroethane	ND	2.1	0.28	ND	0.80	0.11	
67-66-3	Chloroform	**4.4**	2.1	0.30	**0.90**	0.43	0.061	
74-87-3	Chloromethane	**0.37**	2.1	0.36	**0.18**	1.0	0.18	**J**
156-59-2	cis-1,2-Dichloroethene	ND	2.1	0.32	ND	0.53	0.080	
10061-01-5	cis-1,3-Dichloropropene	ND	2.1	0.35	ND	0.47	0.077	
98-82-8	Cumene	ND	2.1	0.33	ND	0.43	0.066	
110-82-7	Cyclohexane	ND	4.2	0.63	ND	1.2	0.18	
124-48-1	Dibromochloromethane	ND	2.1	0.30	ND	0.25	0.035	
64-17-5	Ethanol	**9.1**	21	1.6	**4.8**	11	0.83	**J**
100-41-4	Ethyl Benzene	ND	2.1	0.32	ND	0.49	0.073	
75-69-4	Freon 11	**3,300**	21	3.4	**590**	3.8	0.61	**D**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
D = The reported result is from a dilution.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405290826** ALS Sample ID: P2402249-028
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/18 - 6/19/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.040 Liter(s)

Initial Pressure (psig): -2.03 Final Pressure (psig): 6.72

Container Dilution Factor: 1.69

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**1,200**	21	3.2	**160**	2.8	0.42	**D**
76-14-2	Freon 114	ND	2.1	0.35	ND	0.30	0.051	
75-71-8	Freon 12	**2.5**	2.1	0.37	**0.51**	0.43	0.074	
306-83-2	Freon 123	**1.6**	2.1	1.0	**0.25**	0.34	0.16	**J, X**
75-43-4	Freon 21	ND	2.1	1.0	ND	0.50	0.24	**X**
142-82-5	Heptane	ND	2.1	0.36	ND	0.52	0.088	
87-68-3	Hexachlorobutadiene	ND	2.1	0.46	ND	0.20	0.044	
110-54-3	Hexane	ND	2.1	0.46	ND	0.60	0.13	
179601-23-1	m,p-Xylene	ND	4.2	0.59	ND	0.97	0.14	
1634-04-4	Methyl tert-butyl ether	ND	2.1	0.27	ND	0.59	0.074	
75-09-2	Methylene Chloride	ND	2.1	0.63	ND	0.61	0.18	
95-47-6	o-Xylene	ND	2.1	0.33	ND	0.49	0.075	
103-65-1	Propylbenzene	ND	2.1	0.33	ND	0.43	0.066	
100-42-5	Styrene	ND	2.1	0.36	ND	0.50	0.085	
127-18-4	Tetrachloroethene	**0.43**	2.1	0.29	**0.064**	0.31	0.043	**J**
109-99-9	Tetrahydrofuran	**0.34**	2.1	0.28	**0.11**	0.72	0.096	**J**
108-88-3	Toluene	**0.61**	2.1	0.27	**0.16**	0.56	0.073	**J**
156-60-5	trans-1,2-Dichloroethene	ND	2.1	0.31	ND	0.53	0.079	
10061-02-6	trans-1,3-Dichloropropene	ND	2.1	0.46	ND	0.47	0.10	
79-01-6	Trichloroethene	**1.1**	2.1	0.30	**0.20**	0.39	0.057	**J**
75-01-4	Vinyl Chloride	ND	2.1	0.24	ND	0.83	0.094	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
D = The reported result is from a dilution.
X = See case narrative.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405290826** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-028

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/29/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/18 - 6/19/24
Sampling Media:	1.0 L Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			0.040 Liter(s)

Initial Pressure (psig): -2.03 Final Pressure (psig): 6.72

Container Dilution Factor: 1.69

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405290834** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-029

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/19/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.050 Liter(s)
Test Notes:

Initial Pressure (psig): -1.62 Final Pressure (psig): 6.83

Container Dilution Factor: 1.65

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	17	2.2	ND	3.0	0.40	
79-34-5	1,1,2,2-Tetrachloroethane	ND	17	2.4	ND	2.4	0.36	
79-00-5	1,1,2-Trichloroethane	ND	17	1.8	ND	3.0	0.33	
75-34-3	1,1-Dichloroethane	ND	17	2.6	ND	4.1	0.64	
75-35-4	1,1-Dichloroethene	ND	17	2.4	ND	4.2	0.62	
120-82-1	1,2,4-Trichlorobenzene	ND	17	4.3	ND	2.2	0.58	
95-63-6	1,2,4-Trimethylbenzene	ND	17	2.4	ND	3.4	0.50	
106-93-4	1,2-Dibromoethane (EDB)	ND	17	2.0	ND	2.1	0.27	
95-50-1	1,2-Dichlorobenzene	ND	17	2.6	ND	2.7	0.43	
107-06-2	1,2-Dichloroethane	ND	17	1.9	ND	4.1	0.48	
78-87-5	1,2-Dichloropropane	ND	17	2.2	ND	3.6	0.47	
108-67-8	1,3,5-Trimethylbenzene	ND	17	2.5	ND	3.4	0.52	
106-99-0	1,3-Butadiene	ND	17	2.9	ND	7.5	1.3	
541-73-1	1,3-Dichlorobenzene	ND	17	2.6	ND	2.7	0.44	
106-46-7	1,4-Dichlorobenzene	ND	17	2.7	ND	2.7	0.45	
123-91-1	1,4-Dioxane	ND	17	2.1	ND	4.6	0.58	
540-84-1	2,2,4-Trimethylpentane	ND	17	2.6	ND	3.5	0.57	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**3.9**	170	3.6	**1.3**	56	1.2	**J**
591-78-6	2-Hexanone	ND	17	2.2	ND	4.0	0.53	
67-63-0	2-Propanol	ND	33	7.3	ND	13	3.0	
107-05-1	3-Chloropropene	ND	17	2.4	ND	5.3	0.76	
622-96-8	4-Ethyltoluene	ND	17	2.8	ND	3.4	0.57	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405290834** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-029

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/19/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.050 Liter(s)
Test Notes:

Initial Pressure (psig): -1.62 Final Pressure (psig): 6.83

Container Dilution Factor: 1.65

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	17	2.4	ND	4.0	0.59	
67-64-1	Acetone	**110**	170	40	**45**	69	17	**J**
100-44-7	alpha-Chlorotoluene	ND	17	4.0	ND	3.2	0.77	
71-43-2	Benzene	ND	17	2.5	ND	5.2	0.80	
75-27-4	Bromodichloromethane	ND	17	2.5	ND	2.5	0.38	
75-25-2	Bromoform	ND	17	3.6	ND	1.6	0.35	
74-83-9	Bromomethane	ND	17	2.4	ND	4.3	0.63	
75-15-0	Carbon Disulfide	ND	170	5.3	ND	53	1.7	
56-23-5	Carbon Tetrachloride	ND	17	2.4	ND	2.6	0.39	
108-90-7	Chlorobenzene	ND	17	2.3	ND	3.6	0.51	
75-00-3	Chloroethane	ND	17	2.2	ND	6.3	0.83	
67-66-3	Chloroform	**3.8**	17	2.3	**0.77**	3.4	0.48	**J**
74-87-3	Chloromethane	ND	17	2.8	ND	8.0	1.4	
156-59-2	cis-1,2-Dichloroethene	ND	17	2.5	ND	4.2	0.62	
10061-01-5	cis-1,3-Dichloropropene	ND	17	2.7	ND	3.6	0.60	
98-82-8	Cumene	ND	17	2.5	ND	3.4	0.52	
110-82-7	Cyclohexane	ND	33	5.0	ND	9.6	1.4	
124-48-1	Dibromochloromethane	ND	17	2.3	ND	1.9	0.27	
64-17-5	Ethanol	ND	170	12	ND	88	6.5	
100-41-4	Ethyl Benzene	ND	17	2.5	ND	3.8	0.57	
75-69-4	Freon 11	**3,000**	17	2.7	**530**	2.9	0.48	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405290834** ALS Sample ID: P2402249-029
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/19/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.050 Liter(s)
Test Notes:

Initial Pressure (psig): -1.62 Final Pressure (psig): 6.83

Container Dilution Factor: 1.65

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**1,100**	17	2.5	**140**	2.2	0.33	
76-14-2	Freon 114	ND	17	2.8	ND	2.4	0.40	
75-71-8	Freon 12	ND	17	2.9	ND	3.3	0.58	
306-83-2	Freon 123	**8.1**	17	7.9	**1.3**	2.6	1.3	**J, X**
75-43-4	Freon 21	ND	17	7.9	ND	3.9	1.9	**X**
142-82-5	Heptane	ND	17	2.8	ND	4.0	0.68	
87-68-3	Hexachlorobutadiene	ND	17	3.6	ND	1.5	0.34	
110-54-3	Hexane	ND	17	3.6	ND	4.7	1.0	
179601-23-1	m,p-Xylene	ND	33	4.6	ND	7.6	1.1	
1634-04-4	Methyl tert-butyl ether	ND	17	2.1	ND	4.6	0.58	
75-09-2	Methylene Chloride	ND	17	5.0	ND	4.8	1.4	
95-47-6	o-Xylene	ND	17	2.5	ND	3.8	0.59	
103-65-1	Propylbenzene	ND	17	2.5	ND	3.4	0.52	
100-42-5	Styrene	ND	17	2.8	ND	3.9	0.67	
127-18-4	Tetrachloroethene	ND	17	2.3	ND	2.4	0.34	
109-99-9	Tetrahydrofuran	ND	17	2.2	ND	5.6	0.75	
108-88-3	Toluene	**16**	17	2.1	**4.2**	4.4	0.57	**J**
156-60-5	trans-1,2-Dichloroethene	ND	17	2.4	ND	4.2	0.62	
10061-02-6	trans-1,3-Dichloropropene	ND	17	3.6	ND	3.6	0.80	
79-01-6	Trichloroethene	ND	17	2.4	ND	3.1	0.44	
75-01-4	Vinyl Chloride	ND	17	1.9	ND	6.5	0.74	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405290834** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-029

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/29/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/19/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.050 Liter(s)
Test Notes:			

Initial Pressure (psig): -1.62 Final Pressure (psig): 6.83

Container Dilution Factor: 1.65

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405290850** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-030

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/19/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.050 Liter(s)
Test Notes:

Initial Pressure (psig): -2.06 Final Pressure (psig): 7.21

Container Dilution Factor: 1.73

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	17	2.3	ND	3.2	0.42	
79-34-5	1,1,2,2-Tetrachloroethane	ND	17	2.6	ND	2.5	0.37	
79-00-5	1,1,2-Trichloroethane	ND	17	1.9	ND	3.2	0.34	
75-34-3	1,1-Dichloroethane	ND	17	2.7	ND	4.3	0.67	
75-35-4	1,1-Dichloroethene	ND	17	2.6	ND	4.4	0.65	
120-82-1	1,2,4-Trichlorobenzene	ND	17	4.5	ND	2.3	0.61	
95-63-6	1,2,4-Trimethylbenzene	ND	17	2.6	ND	3.5	0.52	
106-93-4	1,2-Dibromoethane (EDB)	ND	17	2.1	ND	2.3	0.28	
95-50-1	1,2-Dichlorobenzene	ND	17	2.7	ND	2.9	0.45	
107-06-2	1,2-Dichloroethane	ND	17	2.0	ND	4.3	0.50	
78-87-5	1,2-Dichloropropane	ND	17	2.3	ND	3.7	0.49	
108-67-8	1,3,5-Trimethylbenzene	ND	17	2.7	ND	3.5	0.54	
106-99-0	1,3-Butadiene	ND	17	3.0	ND	7.8	1.4	
541-73-1	1,3-Dichlorobenzene	ND	17	2.8	ND	2.9	0.46	
106-46-7	1,4-Dichlorobenzene	ND	17	2.8	ND	2.9	0.47	
123-91-1	1,4-Dioxane	ND	17	2.2	ND	4.8	0.61	
540-84-1	2,2,4-Trimethylpentane	ND	17	2.8	ND	3.7	0.59	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**34**	170	3.8	**11**	59	1.3	**J**
591-78-6	2-Hexanone	**3.8**	17	2.3	**0.94**	4.2	0.56	**J**
67-63-0	2-Propanol	ND	35	7.6	ND	14	3.1	
107-05-1	3-Chloropropene	ND	17	2.5	ND	5.5	0.80	
622-96-8	4-Ethyltoluene	ND	17	2.9	ND	3.5	0.60	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405290850** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-030

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/19/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.050 Liter(s)
Test Notes:

Initial Pressure (psig): -2.06 Final Pressure (psig): 7.21

Container Dilution Factor: 1.73

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	17	2.5	ND	4.2	0.62	
67-64-1	Acetone	**220**	170	42	**92**	73	17	
100-44-7	alpha-Chlorotoluene	ND	17	4.2	ND	3.3	0.80	
71-43-2	Benzene	ND	17	2.7	ND	5.4	0.83	
75-27-4	Bromodichloromethane	ND	17	2.7	ND	2.6	0.40	
75-25-2	Bromoform	ND	17	3.8	ND	1.7	0.37	
74-83-9	Bromomethane	ND	17	2.6	ND	4.5	0.66	
75-15-0	Carbon Disulfide	**120**	170	5.5	**40**	56	1.8	**J**
56-23-5	Carbon Tetrachloride	ND	17	2.6	ND	2.8	0.41	
108-90-7	Chlorobenzene	ND	17	2.5	ND	3.8	0.53	
75-00-3	Chloroethane	ND	17	2.3	ND	6.6	0.87	
67-66-3	Chloroform	ND	17	2.5	ND	3.5	0.50	
74-87-3	Chloromethane	ND	17	3.0	ND	8.4	1.4	
156-59-2	cis-1,2-Dichloroethene	ND	17	2.6	ND	4.4	0.65	
10061-01-5	cis-1,3-Dichloropropene	ND	17	2.9	ND	3.8	0.63	
98-82-8	Cumene	ND	17	2.7	ND	3.5	0.54	
110-82-7	Cyclohexane	ND	35	5.2	ND	10	1.5	
124-48-1	Dibromochloromethane	ND	17	2.4	ND	2.0	0.28	
64-17-5	Ethanol	ND	170	13	ND	92	6.8	
100-41-4	Ethyl Benzene	ND	17	2.6	ND	4.0	0.60	
75-69-4	Freon 11	**420**	17	2.8	**75**	3.1	0.50	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405290850** ALS Sample ID: P2402249-030
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/19/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.050 Liter(s)
Test Notes:

Initial Pressure (psig): -2.06 Final Pressure (psig): 7.21

Container Dilution Factor: 1.73

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**820**	17	2.6	**110**	2.3	0.34	
76-14-2	Freon 114	ND	17	2.9	ND	2.5	0.42	
75-71-8	Freon 12	**19**	17	3.0	**3.7**	3.5	0.61	
306-83-2	Freon 123	**13**	17	8.3	**2.1**	2.8	1.3	**J, X**
75-43-4	Freon 21	ND	17	8.3	ND	4.1	2.0	**X**
142-82-5	Heptane	ND	17	2.9	ND	4.2	0.72	
87-68-3	Hexachlorobutadiene	ND	17	3.8	ND	1.6	0.36	
110-54-3	Hexane	ND	17	3.8	ND	4.9	1.1	
179601-23-1	m,p-Xylene	ND	35	4.8	ND	8.0	1.1	
1634-04-4	Methyl tert-butyl ether	ND	17	2.2	ND	4.8	0.60	
75-09-2	Methylene Chloride	ND	17	5.2	ND	5.0	1.5	
95-47-6	o-Xylene	ND	17	2.7	ND	4.0	0.61	
103-65-1	Propylbenzene	ND	17	2.7	ND	3.5	0.54	
100-42-5	Styrene	ND	17	3.0	ND	4.1	0.70	
127-18-4	Tetrachloroethene	ND	17	2.4	ND	2.6	0.35	
109-99-9	Tetrahydrofuran	ND	17	2.3	ND	5.9	0.79	
108-88-3	Toluene	**7.8**	17	2.2	**2.1**	4.6	0.60	**J**
156-60-5	trans-1,2-Dichloroethene	ND	17	2.6	ND	4.4	0.65	
10061-02-6	trans-1,3-Dichloropropene	ND	17	3.8	ND	3.8	0.84	
79-01-6	Trichloroethene	ND	17	2.5	ND	3.2	0.46	
75-01-4	Vinyl Chloride	ND	17	2.0	ND	6.8	0.77	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405290850** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-030

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/29/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/19/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.050 Liter(s)
Test Notes:			

Initial Pressure (psig): -2.06 Final Pressure (psig): 7.21

Container Dilution Factor: 1.73

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405290858** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-031

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/19 - 6/20/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.10 Liter(s)
Test Notes: 0.050 Liter(s)

Initial Pressure (psig): -2.16 Final Pressure (psig): 6.93

Container Dilution Factor: 1.72

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	8.6	1.1	ND	1.6	0.21	
79-34-5	1,1,2,2-Tetrachloroethane	ND	8.6	1.3	ND	1.3	0.19	
79-00-5	1,1,2-Trichloroethane	ND	8.6	0.93	ND	1.6	0.17	
75-34-3	1,1-Dichloroethane	ND	8.6	1.3	ND	2.1	0.33	
75-35-4	1,1-Dichloroethene	ND	8.6	1.3	ND	2.2	0.32	
120-82-1	1,2,4-Trichlorobenzene	ND	8.6	2.2	ND	1.2	0.30	
95-63-6	1,2,4-Trimethylbenzene	ND	8.6	1.3	ND	1.8	0.26	
106-93-4	1,2-Dibromoethane (EDB)	ND	8.6	1.1	ND	1.1	0.14	
95-50-1	1,2-Dichlorobenzene	ND	8.6	1.4	ND	1.4	0.23	
107-06-2	1,2-Dichloroethane	ND	8.6	1.0	ND	2.1	0.25	
78-87-5	1,2-Dichloropropane	ND	8.6	1.1	ND	1.9	0.25	
108-67-8	1,3,5-Trimethylbenzene	ND	8.6	1.3	ND	1.8	0.27	
106-99-0	1,3-Butadiene	ND	8.6	1.5	ND	3.9	0.68	
541-73-1	1,3-Dichlorobenzene	ND	8.6	1.4	ND	1.4	0.23	
106-46-7	1,4-Dichlorobenzene	ND	8.6	1.4	ND	1.4	0.23	
123-91-1	1,4-Dioxane	ND	8.6	1.1	ND	2.4	0.30	
540-84-1	2,2,4-Trimethylpentane	ND	8.6	1.4	ND	1.8	0.29	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**7.1**	86	1.9	**2.4**	29	0.64	**J**
591-78-6	2-Hexanone	ND	8.6	1.1	ND	2.1	0.28	
67-63-0	2-Propanol	ND	17	3.8	ND	7.0	1.5	
107-05-1	3-Chloropropene	ND	8.6	1.2	ND	2.7	0.40	
622-96-8	4-Ethyltoluene	ND	8.6	1.5	ND	1.8	0.30	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405290858** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-031

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/19 - 6/20/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.10 Liter(s)
Test Notes: 0.050 Liter(s)

Initial Pressure (psig): -2.16 Final Pressure (psig): 6.93

Container Dilution Factor: 1.72

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	8.6	1.3	ND	2.1	0.31	
67-64-1	Acetone	**22**	86	21	**9.1**	36	8.7	**J**
100-44-7	alpha-Chlorotoluene	ND	8.6	2.1	ND	1.7	0.40	
71-43-2	Benzene	ND	8.6	1.3	ND	2.7	0.41	
75-27-4	Bromodichloromethane	ND	8.6	1.3	ND	1.3	0.20	
75-25-2	Bromoform	ND	8.6	1.9	ND	0.83	0.18	
74-83-9	Bromomethane	ND	8.6	1.3	ND	2.2	0.33	
75-15-0	Carbon Disulfide	ND	86	2.8	ND	28	0.88	
56-23-5	Carbon Tetrachloride	ND	8.6	1.3	ND	1.4	0.20	
108-90-7	Chlorobenzene	ND	8.6	1.2	ND	1.9	0.27	
75-00-3	Chloroethane	ND	8.6	1.1	ND	3.3	0.43	
67-66-3	Chloroform	**1.7**	8.6	1.2	**0.36**	1.8	0.25	**J**
74-87-3	Chloromethane	ND	8.6	1.5	ND	4.2	0.72	
156-59-2	cis-1,2-Dichloroethene	ND	8.6	1.3	ND	2.2	0.33	
10061-01-5	cis-1,3-Dichloropropene	ND	8.6	1.4	ND	1.9	0.31	
98-82-8	Cumene	ND	8.6	1.3	ND	1.8	0.27	
110-82-7	Cyclohexane	ND	17	2.6	ND	5.0	0.75	
124-48-1	Dibromochloromethane	ND	8.6	1.2	ND	1.0	0.14	
64-17-5	Ethanol	ND	86	6.4	ND	46	3.4	
100-41-4	Ethyl Benzene	ND	8.6	1.3	ND	2.0	0.30	
75-69-4	Freon 11	**2,300**	17	2.8	**400**	3.1	0.50	**D**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
D = The reported result is from a dilution.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405290858** ALS Sample ID: P2402249-031
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/19 - 6/20/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.10 Liter(s)
Test Notes: 0.050 Liter(s)

Initial Pressure (psig): -2.16 Final Pressure (psig): 6.93

Container Dilution Factor: 1.72

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**420**	8.6	1.3	**55**	1.1	0.17	
76-14-2	Freon 114	ND	8.6	1.4	ND	1.2	0.21	
75-71-8	Freon 12	**2.5**	8.6	1.5	**0.50**	1.7	0.30	**J**
306-83-2	Freon 123	ND	8.6	4.1	ND	1.4	0.66	**X**
75-43-4	Freon 21	ND	8.6	4.1	ND	2.0	0.98	**X**
142-82-5	Heptane	ND	8.6	1.5	ND	2.1	0.36	
87-68-3	Hexachlorobutadiene	ND	8.6	1.9	ND	0.81	0.18	
110-54-3	Hexane	ND	8.6	1.9	ND	2.4	0.54	
179601-23-1	m,p-Xylene	ND	17	2.4	ND	4.0	0.55	
1634-04-4	Methyl tert-butyl ether	ND	8.6	1.1	ND	2.4	0.30	
75-09-2	Methylene Chloride	ND	8.6	2.6	ND	2.5	0.74	
95-47-6	o-Xylene	ND	8.6	1.3	ND	2.0	0.31	
103-65-1	Propylbenzene	ND	8.6	1.3	ND	1.8	0.27	
100-42-5	Styrene	ND	8.6	1.5	ND	2.0	0.35	
127-18-4	Tetrachloroethene	ND	8.6	1.2	ND	1.3	0.18	
109-99-9	Tetrahydrofuran	ND	8.6	1.2	ND	2.9	0.39	
108-88-3	Toluene	**2.1**	8.6	1.1	**0.56**	2.3	0.30	**J**
156-60-5	trans-1,2-Dichloroethene	ND	8.6	1.3	ND	2.2	0.32	
10061-02-6	trans-1,3-Dichloropropene	ND	8.6	1.9	ND	1.9	0.42	
79-01-6	Trichloroethene	ND	8.6	1.2	ND	1.6	0.23	
75-01-4	Vinyl Chloride	ND	8.6	0.98	ND	3.4	0.38	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405290858** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-031

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/29/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/19 - 6/20/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.10 Liter(s)
Test Notes:			0.050 Liter(s)

Initial Pressure (psig): -2.16 Final Pressure (psig): 6.93

Container Dilution Factor: 1.72

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405290859** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-032

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/20/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.41 Final Pressure (psig): 7.40

Container Dilution Factor: 1.80

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	2.3	0.30	ND	0.41	0.054	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.3	0.33	ND	0.33	0.049	
79-00-5	1,1,2-Trichloroethane	ND	2.3	0.24	ND	0.41	0.045	
75-34-3	1,1-Dichloroethane	ND	2.3	0.35	ND	0.56	0.087	
75-35-4	1,1-Dichloroethene	ND	2.3	0.33	ND	0.57	0.084	
120-82-1	1,2,4-Trichlorobenzene	ND	2.3	0.59	ND	0.30	0.079	
95-63-6	1,2,4-Trimethylbenzene	ND	2.3	0.33	ND	0.46	0.068	
106-93-4	1,2-Dibromoethane (EDB)	ND	2.3	0.28	ND	0.29	0.036	
95-50-1	1,2-Dichlorobenzene	ND	2.3	0.36	ND	0.37	0.059	
107-06-2	1,2-Dichloroethane	ND	2.3	0.27	ND	0.56	0.066	
78-87-5	1,2-Dichloropropane	ND	2.3	0.30	ND	0.49	0.064	
108-67-8	1,3,5-Trimethylbenzene	ND	2.3	0.35	ND	0.46	0.071	
106-99-0	1,3-Butadiene	ND	2.3	0.40	ND	1.0	0.18	
541-73-1	1,3-Dichlorobenzene	ND	2.3	0.36	ND	0.37	0.060	
106-46-7	1,4-Dichlorobenzene	ND	2.3	0.37	ND	0.37	0.061	
123-91-1	1,4-Dioxane	**0.50**	2.3	0.28	**0.14**	0.62	0.079	**J**
540-84-1	2,2,4-Trimethylpentane	ND	2.3	0.36	ND	0.48	0.077	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**2.3**	23	0.50	**0.78**	7.6	0.17	**J**
591-78-6	2-Hexanone	ND	2.3	0.30	ND	0.55	0.073	
67-63-0	2-Propanol	ND	4.5	0.99	ND	1.8	0.40	
107-05-1	3-Chloropropene	ND	2.3	0.32	ND	0.72	0.10	
622-96-8	4-Ethyltoluene	ND	2.3	0.38	ND	0.46	0.078	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405290859** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-032

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/20/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.41 Final Pressure (psig): 7.40

Container Dilution Factor: 1.80

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	2.3	0.33	ND	0.55	0.080	
67-64-1	Acetone	**22**	23	5.4	**9.3**	9.5	2.3	**J**
100-44-7	alpha-Chlorotoluene	ND	2.3	0.54	ND	0.43	0.10	
71-43-2	Benzene	**0.72**	2.3	0.35	**0.23**	0.70	0.11	**J**
75-27-4	Bromodichloromethane	ND	2.3	0.35	ND	0.34	0.052	
75-25-2	Bromoform	ND	2.3	0.50	ND	0.22	0.048	
74-83-9	Bromomethane	ND	2.3	0.33	ND	0.58	0.086	
75-15-0	Carbon Disulfide	**6.1**	23	0.72	**2.0**	7.2	0.23	**J**
56-23-5	Carbon Tetrachloride	**0.41**	2.3	0.33	**0.064**	0.36	0.053	**J**
108-90-7	Chlorobenzene	ND	2.3	0.32	ND	0.49	0.069	
75-00-3	Chloroethane	ND	2.3	0.30	ND	0.85	0.11	
67-66-3	Chloroform	**0.36**	2.3	0.32	**0.073**	0.46	0.065	**J**
74-87-3	Chloromethane	**1.2**	2.3	0.39	**0.60**	1.1	0.19	**J**
156-59-2	cis-1,2-Dichloroethene	ND	2.3	0.34	ND	0.57	0.085	
10061-01-5	cis-1,3-Dichloropropene	ND	2.3	0.37	ND	0.50	0.082	
98-82-8	Cumene	ND	2.3	0.35	ND	0.46	0.071	
110-82-7	Cyclohexane	**0.76**	4.5	0.68	**0.22**	1.3	0.20	**J**
124-48-1	Dibromochloromethane	ND	2.3	0.32	ND	0.26	0.037	
64-17-5	Ethanol	**6.2**	23	1.7	**3.3**	12	0.88	**J**
100-41-4	Ethyl Benzene	ND	2.3	0.34	ND	0.52	0.078	
75-69-4	Freon 11	**39**	2.3	0.36	**7.0**	0.40	0.065	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405290859** ALS Sample ID: P2402249-032
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/20/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.41 Final Pressure (psig): 7.40

Container Dilution Factor: 1.80

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**3.3**	2.3	0.34	**0.43**	0.29	0.045	
76-14-2	Freon 114	ND	2.3	0.38	ND	0.32	0.054	
75-71-8	Freon 12	**2.4**	2.3	0.39	**0.48**	0.46	0.079	
306-83-2	Freon 123	**4.1**	2.3	1.1	**0.66**	0.36	0.17	**X**
75-43-4	Freon 21	ND	2.3	1.1	ND	0.53	0.26	**X**
142-82-5	Heptane	**0.72**	2.3	0.38	**0.17**	0.55	0.093	**J**
87-68-3	Hexachlorobutadiene	ND	2.3	0.50	ND	0.21	0.046	
110-54-3	Hexane	**1.6**	2.3	0.50	**0.46**	0.64	0.14	**J**
179601-23-1	m,p-Xylene	ND	4.5	0.63	ND	1.0	0.15	
1634-04-4	Methyl tert-butyl ether	ND	2.3	0.28	ND	0.62	0.079	
75-09-2	Methylene Chloride	ND	2.3	0.68	ND	0.65	0.19	
95-47-6	o-Xylene	ND	2.3	0.35	ND	0.52	0.080	
103-65-1	Propylbenzene	ND	2.3	0.35	ND	0.46	0.071	
100-42-5	Styrene	ND	2.3	0.39	ND	0.53	0.091	
127-18-4	Tetrachloroethene	ND	2.3	0.31	ND	0.33	0.046	
109-99-9	Tetrahydrofuran	**0.33**	2.3	0.30	**0.11**	0.76	0.10	**J**
108-88-3	Toluene	**1.1**	2.3	0.29	**0.30**	0.60	0.078	**J**
156-60-5	trans-1,2-Dichloroethene	ND	2.3	0.33	ND	0.57	0.084	
10061-02-6	trans-1,3-Dichloropropene	ND	2.3	0.50	ND	0.50	0.11	
79-01-6	Trichloroethene	ND	2.3	0.32	ND	0.42	0.060	
75-01-4	Vinyl Chloride	ND	2.3	0.26	ND	0.88	0.10	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405290859** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-032

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/29/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/20/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			

Initial Pressure (psig): -2.41 Final Pressure (psig): 7.40

Container Dilution Factor: 1.80

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405290905** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-033

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/20/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.0010 Liter(s)
Test Notes: 0.00020 Liter(s)

Initial Pressure (psig): -1.65 Final Pressure (psig): 6.30

Container Dilution Factor: 1.61

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	810	110	ND	150	19	
79-34-5	1,1,2,2-Tetrachloroethane	ND	810	120	ND	120	17	
79-00-5	1,1,2-Trichloroethane	ND	810	87	ND	150	16	
75-34-3	1,1-Dichloroethane	ND	810	130	ND	200	31	
75-35-4	1,1-Dichloroethene	ND	810	120	ND	200	30	
120-82-1	1,2,4-Trichlorobenzene	ND	810	210	ND	110	28	
95-63-6	1,2,4-Trimethylbenzene	ND	810	120	ND	160	24	
106-93-4	1,2-Dibromoethane (EDB)	ND	810	100	ND	100	13	
95-50-1	1,2-Dichlorobenzene	ND	810	130	ND	130	21	
107-06-2	1,2-Dichloroethane	ND	810	95	ND	200	23	
78-87-5	1,2-Dichloropropane	ND	810	110	ND	170	23	
108-67-8	1,3,5-Trimethylbenzene	ND	810	120	ND	160	25	
106-99-0	1,3-Butadiene	ND	810	140	ND	360	64	
541-73-1	1,3-Dichlorobenzene	ND	810	130	ND	130	21	
106-46-7	1,4-Dichlorobenzene	ND	810	130	ND	130	22	
123-91-1	1,4-Dioxane	ND	810	100	ND	220	28	
540-84-1	2,2,4-Trimethylpentane	ND	810	130	ND	170	28	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	ND	8,100	180	ND	2,700	60	
591-78-6	2-Hexanone	ND	810	110	ND	200	26	
67-63-0	2-Propanol	ND	1,600	350	ND	660	140	
107-05-1	3-Chloropropene	ND	810	120	ND	260	37	
622-96-8	4-Ethyltoluene	ND	810	140	ND	160	28	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405290905** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-033

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/20/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.0010 Liter(s)
Test Notes: 0.00020 Liter(s)

Initial Pressure (psig): -1.65 Final Pressure (psig): 6.30

Container Dilution Factor: 1.61

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	810	120	ND	200	29	
67-64-1	Acetone	ND	8,100	1,900	ND	3,400	810	
100-44-7	alpha-Chlorotoluene	ND	810	190	ND	160	37	
71-43-2	Benzene	ND	810	120	ND	250	39	
75-27-4	Bromodichloromethane	ND	810	120	ND	120	19	
75-25-2	Bromoform	ND	810	180	ND	78	17	
74-83-9	Bromomethane	ND	810	120	ND	210	31	
75-15-0	Carbon Disulfide	ND	8,100	260	ND	2,600	83	
56-23-5	Carbon Tetrachloride	ND	810	120	ND	130	19	
108-90-7	Chlorobenzene	ND	810	110	ND	170	25	
75-00-3	Chloroethane	ND	810	110	ND	310	40	
67-66-3	Chloroform	ND	810	110	ND	160	23	
74-87-3	Chloromethane	ND	810	140	ND	390	67	
156-59-2	cis-1,2-Dichloroethene	ND	810	120	ND	200	30	
10061-01-5	cis-1,3-Dichloropropene	ND	810	130	ND	180	29	
98-82-8	Cumene	ND	810	120	ND	160	25	
110-82-7	Cyclohexane	ND	1,600	240	ND	470	70	
124-48-1	Dibromochloromethane	ND	810	110	ND	95	13	
64-17-5	Ethanol	ND	8,100	600	ND	4,300	320	
100-41-4	Ethyl Benzene	ND	810	120	ND	190	28	
75-69-4	Freon 11	**450,000**	4,000	650	**81,000**	720	120	**D**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
D = The reported result is from a dilution.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405290905** ALS Sample ID: P2402249-033
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/20/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.0010 Liter(s)
Test Notes: 0.00020 Liter(s)

Initial Pressure (psig): -1.65 Final Pressure (psig): 6.30

Container Dilution Factor: 1.61

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**33,000**	810	120	**4,400**	110	16	
76-14-2	Freon 114	ND	810	140	ND	120	19	
75-71-8	Freon 12	ND	810	140	ND	160	28	
306-83-2	Freon 123	**440**	810	390	**70**	130	62	**J, X**
75-43-4	Freon 21	ND	810	390	ND	190	92	**X**
142-82-5	Heptane	ND	810	140	ND	200	33	
87-68-3	Hexachlorobutadiene	ND	810	180	ND	75	17	
110-54-3	Hexane	ND	810	180	ND	230	50	
179601-23-1	m,p-Xylene	ND	1,600	230	ND	370	52	
1634-04-4	Methyl tert-butyl ether	ND	810	100	ND	220	28	
75-09-2	Methylene Chloride	ND	810	240	ND	230	70	
95-47-6	o-Xylene	ND	810	120	ND	190	29	
103-65-1	Propylbenzene	ND	810	120	ND	160	25	
100-42-5	Styrene	ND	810	140	ND	190	33	
127-18-4	Tetrachloroethene	ND	810	110	ND	120	16	
109-99-9	Tetrahydrofuran	ND	810	110	ND	270	37	
108-88-3	Toluene	ND	810	100	ND	210	28	
156-60-5	trans-1,2-Dichloroethene	ND	810	120	ND	200	30	
10061-02-6	trans-1,3-Dichloropropene	ND	810	180	ND	180	39	
79-01-6	Trichloroethene	**140**	810	120	**26**	150	22	**J**
75-01-4	Vinyl Chloride	ND	810	92	ND	320	36	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405290905** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-033

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/29/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/20/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.0010 Liter(s)
Test Notes:			0.00020 Liter(s)

Initial Pressure (psig): -1.65 Final Pressure (psig): 6.30

Container Dilution Factor: 1.61

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405290912** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-034

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/19/24 & 6/24/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.040 Liter(s)
Test Notes: 0.0040 Liter(s)

Initial Pressure (psig): 0.02 Final Pressure (psig): 8.47

Container Dilution Factor: 1.57

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	20	2.6	ND	3.6	0.47	
79-34-5	1,1,2,2-Tetrachloroethane	ND	20	2.9	ND	2.9	0.42	
79-00-5	1,1,2-Trichloroethane	ND	20	2.1	ND	3.6	0.39	
75-34-3	1,1-Dichloroethane	ND	20	3.1	ND	4.9	0.76	
75-35-4	1,1-Dichloroethene	ND	20	2.9	ND	5.0	0.73	
120-82-1	1,2,4-Trichlorobenzene	ND	20	5.1	ND	2.6	0.69	
95-63-6	1,2,4-Trimethylbenzene	ND	20	2.9	ND	4.0	0.59	
106-93-4	1,2-Dibromoethane (EDB)	ND	20	2.4	ND	2.6	0.32	
95-50-1	1,2-Dichlorobenzene	ND	20	3.1	ND	3.3	0.52	
107-06-2	1,2-Dichloroethane	ND	20	2.3	ND	4.9	0.57	
78-87-5	1,2-Dichloropropane	**3.2**	20	2.6	**0.69**	4.2	0.56	**J**
108-67-8	1,3,5-Trimethylbenzene	ND	20	3.0	ND	4.0	0.62	
106-99-0	1,3-Butadiene	ND	20	3.5	ND	8.9	1.6	
541-73-1	1,3-Dichlorobenzene	ND	20	3.1	ND	3.3	0.52	
106-46-7	1,4-Dichlorobenzene	ND	20	3.2	ND	3.3	0.54	
123-91-1	1,4-Dioxane	ND	20	2.5	ND	5.4	0.69	
540-84-1	2,2,4-Trimethylpentane	ND	20	3.1	ND	4.2	0.67	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**11**	200	4.3	**3.6**	67	1.5	**J**
591-78-6	2-Hexanone	ND	20	2.6	ND	4.8	0.63	
67-63-0	2-Propanol	**19**	39	8.6	**7.7**	16	3.5	**J**
107-05-1	3-Chloropropene	ND	20	2.8	ND	6.3	0.90	
622-96-8	4-Ethyltoluene	ND	20	3.3	ND	4.0	0.68	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405290912** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-034

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/19/24 & 6/24/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.040 Liter(s)
Test Notes: 0.0040 Liter(s)

Initial Pressure (psig): 0.02 Final Pressure (psig): 8.47

Container Dilution Factor: 1.57

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	**3.1**	20	2.9	**0.75**	4.8	0.70	**J**
67-64-1	Acetone	**1,600**	200	47	**680**	83	20	
100-44-7	alpha-Chlorotoluene	ND	20	4.7	ND	3.8	0.91	
71-43-2	Benzene	ND	20	3.0	ND	6.1	0.95	
75-27-4	Bromodichloromethane	ND	20	3.0	ND	2.9	0.45	
75-25-2	Bromoform	ND	20	4.3	ND	1.9	0.42	
74-83-9	Bromomethane	ND	20	2.9	ND	5.1	0.75	
75-15-0	Carbon Disulfide	ND	200	6.3	ND	63	2.0	
56-23-5	Carbon Tetrachloride	ND	20	2.9	ND	3.1	0.46	
108-90-7	Chlorobenzene	ND	20	2.8	ND	4.3	0.61	
75-00-3	Chloroethane	ND	20	2.6	ND	7.4	0.98	
67-66-3	Chloroform	ND	20	2.8	ND	4.0	0.57	
74-87-3	Chloromethane	ND	20	3.4	ND	9.5	1.6	
156-59-2	cis-1,2-Dichloroethene	ND	20	2.9	ND	5.0	0.74	
10061-01-5	cis-1,3-Dichloropropene	ND	20	3.3	ND	4.3	0.72	
98-82-8	Cumene	ND	20	3.0	ND	4.0	0.62	
110-82-7	Cyclohexane	ND	39	5.9	ND	11	1.7	
124-48-1	Dibromochloromethane	ND	20	2.7	ND	2.3	0.32	
64-17-5	Ethanol	**55**	200	15	**29**	100	7.7	**J**
100-41-4	Ethyl Benzene	ND	20	2.9	ND	4.5	0.68	
75-69-4	Freon 11	**7,400**	200	32	**1,300**	35	5.7	**D**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
D = The reported result is from a dilution.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405290912** ALS Sample ID: P2402249-034
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/19/24 & 6/24/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.040 Liter(s)
Test Notes: 0.0040 Liter(s)

Initial Pressure (psig): 0.02 Final Pressure (psig): 8.47

Container Dilution Factor: 1.57

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**1,600**	20	3.0	**210**	2.6	0.39	
76-14-2	Freon 114	ND	20	3.3	ND	2.8	0.47	
75-71-8	Freon 12	ND	20	3.4	ND	4.0	0.69	
306-83-2	Freon 123	**71**	20	9.4	**11**	3.1	1.5	**X**
75-43-4	Freon 21	ND	20	9.4	ND	4.7	2.2	**X**
142-82-5	Heptane	**15**	20	3.3	**3.7**	4.8	0.81	**J**
87-68-3	Hexachlorobutadiene	ND	20	4.3	ND	1.8	0.40	
110-54-3	Hexane	ND	20	4.3	ND	5.6	1.2	
179601-23-1	m,p-Xylene	**8.7**	39	5.5	**2.0**	9.0	1.3	**J**
1634-04-4	Methyl tert-butyl ether	ND	20	2.5	ND	5.4	0.69	
75-09-2	Methylene Chloride	ND	20	5.9	ND	5.7	1.7	
95-47-6	o-Xylene	**4.8**	20	3.0	**1.1**	4.5	0.70	**J**
103-65-1	Propylbenzene	ND	20	3.0	ND	4.0	0.62	
100-42-5	Styrene	ND	20	3.4	ND	4.6	0.79	
127-18-4	Tetrachloroethene	**3.6**	20	2.7	**0.53**	2.9	0.40	**J**
109-99-9	Tetrahydrofuran	ND	20	2.6	ND	6.7	0.89	
108-88-3	Toluene	**54**	20	2.6	**14**	5.2	0.68	
156-60-5	trans-1,2-Dichloroethene	ND	20	2.9	ND	5.0	0.73	
10061-02-6	trans-1,3-Dichloropropene	ND	20	4.3	ND	4.3	0.95	
79-01-6	Trichloroethene	**3.0**	20	2.8	**0.56**	3.7	0.53	**J**
75-01-4	Vinyl Chloride	ND	20	2.2	ND	7.7	0.88	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405290912** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-034

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/29/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/19/24 & 6/24/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.040 Liter(s)
Test Notes:			0.0040 Liter(s)

Initial Pressure (psig): 0.02 Final Pressure (psig): 8.47

Container Dilution Factor: 1.57

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405290919** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-035

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/19/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.040 Liter(s)
Test Notes:

Initial Pressure (psig): -2.09 Final Pressure (psig): 6.57

Container Dilution Factor: 1.69

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	21	2.8	ND	3.9	0.51	
79-34-5	1,1,2,2-Tetrachloroethane	ND	21	3.1	ND	3.1	0.46	
79-00-5	1,1,2-Trichloroethane	ND	21	2.3	ND	3.9	0.42	
75-34-3	1,1-Dichloroethane	ND	21	3.3	ND	5.2	0.81	
75-35-4	1,1-Dichloroethene	ND	21	3.1	ND	5.3	0.79	
120-82-1	1,2,4-Trichlorobenzene	ND	21	5.5	ND	2.8	0.74	
95-63-6	1,2,4-Trimethylbenzene	ND	21	3.1	ND	4.3	0.64	
106-93-4	1,2-Dibromoethane (EDB)	ND	21	2.6	ND	2.7	0.34	
95-50-1	1,2-Dichlorobenzene	ND	21	3.3	ND	3.5	0.56	
107-06-2	1,2-Dichloroethane	ND	21	2.5	ND	5.2	0.62	
78-87-5	1,2-Dichloropropane	ND	21	2.8	ND	4.6	0.60	
108-67-8	1,3,5-Trimethylbenzene	ND	21	3.3	ND	4.3	0.66	
106-99-0	1,3-Butadiene	ND	21	3.7	ND	9.6	1.7	
541-73-1	1,3-Dichlorobenzene	ND	21	3.4	ND	3.5	0.56	
106-46-7	1,4-Dichlorobenzene	ND	21	3.5	ND	3.5	0.58	
123-91-1	1,4-Dioxane	ND	21	2.7	ND	5.9	0.74	
540-84-1	2,2,4-Trimethylpentane	ND	21	3.4	ND	4.5	0.72	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	ND	210	4.6	ND	72	1.6	
591-78-6	2-Hexanone	ND	21	2.8	ND	5.2	0.68	
67-63-0	2-Propanol	**15**	42	9.3	**6.0**	17	3.8	**J**
107-05-1	3-Chloropropene	ND	21	3.0	ND	6.8	0.97	
622-96-8	4-Ethyltoluene	ND	21	3.6	ND	4.3	0.73	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405290919** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-035

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/19/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.040 Liter(s)
Test Notes:

Initial Pressure (psig): -2.09 Final Pressure (psig): 6.57

Container Dilution Factor: 1.69

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	21	3.1	ND	5.2	0.75	
67-64-1	Acetone	**67**	210	51	**28**	89	21	**J**
100-44-7	alpha-Chlorotoluene	ND	21	5.1	ND	4.1	0.98	
71-43-2	Benzene	ND	21	3.3	ND	6.6	1.0	
75-27-4	Bromodichloromethane	ND	21	3.3	ND	3.2	0.49	
75-25-2	Bromoform	ND	21	4.6	ND	2.0	0.45	
74-83-9	Bromomethane	ND	21	3.1	ND	5.4	0.81	
75-15-0	Carbon Disulfide	ND	210	6.8	ND	68	2.2	
56-23-5	Carbon Tetrachloride	ND	21	3.1	ND	3.4	0.50	
108-90-7	Chlorobenzene	ND	21	3.0	ND	4.6	0.65	
75-00-3	Chloroethane	ND	21	2.8	ND	8.0	1.1	
67-66-3	Chloroform	ND	21	3.0	ND	4.3	0.61	
74-87-3	Chloromethane	ND	21	3.6	ND	10	1.8	
156-59-2	cis-1,2-Dichloroethene	ND	21	3.2	ND	5.3	0.80	
10061-01-5	cis-1,3-Dichloropropene	ND	21	3.5	ND	4.7	0.77	
98-82-8	Cumene	ND	21	3.3	ND	4.3	0.66	
110-82-7	Cyclohexane	ND	42	6.3	ND	12	1.8	
124-48-1	Dibromochloromethane	ND	21	3.0	ND	2.5	0.35	
64-17-5	Ethanol	**47**	210	16	**25**	110	8.3	**J**
100-41-4	Ethyl Benzene	ND	21	3.2	ND	4.9	0.73	
75-69-4	Freon 11	**2,700**	21	3.4	**480**	3.8	0.61	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405290919** ALS Sample ID: P2402249-035
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/19/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.040 Liter(s)
Test Notes:

Initial Pressure (psig): -2.09 Final Pressure (psig): 6.57

Container Dilution Factor: 1.69

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**760**	21	3.2	**100**	2.8	0.42	
76-14-2	Freon 114	ND	21	3.5	ND	3.0	0.51	
75-71-8	Freon 12	ND	21	3.7	ND	4.3	0.74	
306-83-2	Freon 123	**33**	21	10	**5.3**	3.4	1.6	**X**
75-43-4	Freon 21	ND	21	10	ND	5.0	2.4	**X**
142-82-5	Heptane	ND	21	3.6	ND	5.2	0.88	
87-68-3	Hexachlorobutadiene	ND	21	4.6	ND	2.0	0.44	
110-54-3	Hexane	ND	21	4.6	ND	6.0	1.3	
179601-23-1	m,p-Xylene	ND	42	5.9	ND	9.7	1.4	
1634-04-4	Methyl tert-butyl ether	ND	21	2.7	ND	5.9	0.74	
75-09-2	Methylene Chloride	ND	21	6.3	ND	6.1	1.8	
95-47-6	o-Xylene	ND	21	3.3	ND	4.9	0.75	
103-65-1	Propylbenzene	ND	21	3.3	ND	4.3	0.66	
100-42-5	Styrene	ND	21	3.6	ND	5.0	0.85	
127-18-4	Tetrachloroethene	ND	21	2.9	ND	3.1	0.43	
109-99-9	Tetrahydrofuran	ND	21	2.8	ND	7.2	0.96	
108-88-3	Toluene	**23**	21	2.7	**6.0**	5.6	0.73	
156-60-5	trans-1,2-Dichloroethene	ND	21	3.1	ND	5.3	0.79	
10061-02-6	trans-1,3-Dichloropropene	ND	21	4.6	ND	4.7	1.0	
79-01-6	Trichloroethene	ND	21	3.0	ND	3.9	0.57	
75-01-4	Vinyl Chloride	ND	21	2.4	ND	8.3	0.94	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405290919** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-035

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/29/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/19/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.040 Liter(s)
Test Notes:			

Initial Pressure (psig): -2.09 Final Pressure (psig): 6.57

Container Dilution Factor: 1.69

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405290940** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-036

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/19/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.13 Final Pressure (psig): 6.46

Container Dilution Factor: 1.68

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	2.1	0.28	ND	0.39	0.051	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.1	0.31	ND	0.31	0.045	
79-00-5	1,1,2-Trichloroethane	ND	2.1	0.23	ND	0.39	0.042	
75-34-3	1,1-Dichloroethane	ND	2.1	0.33	ND	0.52	0.081	
75-35-4	1,1-Dichloroethene	ND	2.1	0.31	ND	0.53	0.078	
120-82-1	1,2,4-Trichlorobenzene	ND	2.1	0.55	ND	0.28	0.074	
95-63-6	1,2,4-Trimethylbenzene	ND	2.1	0.31	ND	0.43	0.063	
106-93-4	1,2-Dibromoethane (EDB)	ND	2.1	0.26	ND	0.27	0.034	
95-50-1	1,2-Dichlorobenzene	ND	2.1	0.33	ND	0.35	0.055	
107-06-2	1,2-Dichloroethane	ND	2.1	0.25	ND	0.52	0.061	
78-87-5	1,2-Dichloropropane	ND	2.1	0.28	ND	0.45	0.060	
108-67-8	1,3,5-Trimethylbenzene	ND	2.1	0.32	ND	0.43	0.066	
106-99-0	1,3-Butadiene	ND	2.1	0.37	ND	0.95	0.17	
541-73-1	1,3-Dichlorobenzene	ND	2.1	0.34	ND	0.35	0.056	
106-46-7	1,4-Dichlorobenzene	ND	2.1	0.34	ND	0.35	0.057	
123-91-1	1,4-Dioxane	ND	2.1	0.26	ND	0.58	0.073	
540-84-1	2,2,4-Trimethylpentane	ND	2.1	0.34	ND	0.45	0.072	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**4.6**	21	0.46	**1.6**	7.1	0.16	**J**
591-78-6	2-Hexanone	**0.93**	2.1	0.28	**0.23**	0.51	0.068	**J**
67-63-0	2-Propanol	ND	4.2	0.92	ND	1.7	0.38	
107-05-1	3-Chloropropene	ND	2.1	0.30	ND	0.67	0.097	
622-96-8	4-Ethyltoluene	ND	2.1	0.36	ND	0.43	0.073	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405290940** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-036

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/19/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.13 Final Pressure (psig): 6.46

Container Dilution Factor: 1.68

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	2.1	0.31	ND	0.51	0.075	
67-64-1	Acetone	**31**	21	5.0	**13**	8.8	2.1	
100-44-7	alpha-Chlorotoluene	ND	2.1	0.50	ND	0.41	0.097	
71-43-2	Benzene	**0.37**	2.1	0.32	**0.12**	0.66	0.10	**J**
75-27-4	Bromodichloromethane	ND	2.1	0.32	ND	0.31	0.048	
75-25-2	Bromoform	ND	2.1	0.46	ND	0.20	0.045	
74-83-9	Bromomethane	ND	2.1	0.31	ND	0.54	0.080	
75-15-0	Carbon Disulfide	ND	21	0.67	ND	6.7	0.22	
56-23-5	Carbon Tetrachloride	ND	2.1	0.31	ND	0.33	0.049	
108-90-7	Chlorobenzene	ND	2.1	0.30	ND	0.46	0.065	
75-00-3	Chloroethane	ND	2.1	0.28	ND	0.80	0.11	
67-66-3	Chloroform	**0.48**	2.1	0.30	**0.098**	0.43	0.061	**J**
74-87-3	Chloromethane	**0.45**	2.1	0.36	**0.22**	1.0	0.17	**J**
156-59-2	cis-1,2-Dichloroethene	ND	2.1	0.32	ND	0.53	0.079	
10061-01-5	cis-1,3-Dichloropropene	ND	2.1	0.35	ND	0.46	0.077	
98-82-8	Cumene	ND	2.1	0.32	ND	0.43	0.066	
110-82-7	Cyclohexane	ND	4.2	0.63	ND	1.2	0.18	
124-48-1	Dibromochloromethane	ND	2.1	0.29	ND	0.25	0.035	
64-17-5	Ethanol	**6.6**	21	1.6	**3.5**	11	0.83	**J**
100-41-4	Ethyl Benzene	ND	2.1	0.32	ND	0.48	0.073	
75-69-4	Freon 11	**170**	2.1	0.34	**31**	0.37	0.061	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405290940** ALS Sample ID: P2402249-036
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/19/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.13 Final Pressure (psig): 6.46

Container Dilution Factor: 1.68

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**150**	2.1	0.32	**19**	0.27	0.042	
76-14-2	Freon 114	ND	2.1	0.35	ND	0.30	0.050	
75-71-8	Freon 12	**2.3**	2.1	0.37	**0.47**	0.42	0.074	
306-83-2	Freon 123	**2.4**	2.1	1.0	**0.38**	0.34	0.16	**X**
75-43-4	Freon 21	ND	2.1	1.0	ND	0.50	0.24	**X**
142-82-5	Heptane	ND	2.1	0.36	ND	0.51	0.087	
87-68-3	Hexachlorobutadiene	ND	2.1	0.46	ND	0.20	0.043	
110-54-3	Hexane	ND	2.1	0.46	ND	0.60	0.13	
179601-23-1	m,p-Xylene	ND	4.2	0.59	ND	0.97	0.14	
1634-04-4	Methyl tert-butyl ether	ND	2.1	0.26	ND	0.58	0.073	
75-09-2	Methylene Chloride	ND	2.1	0.63	ND	0.60	0.18	
95-47-6	o-Xylene	ND	2.1	0.32	ND	0.48	0.074	
103-65-1	Propylbenzene	ND	2.1	0.32	ND	0.43	0.066	
100-42-5	Styrene	ND	2.1	0.36	ND	0.49	0.085	
127-18-4	Tetrachloroethene	ND	2.1	0.29	ND	0.31	0.043	
109-99-9	Tetrahydrofuran	ND	2.1	0.28	ND	0.71	0.095	
108-88-3	Toluene	**0.41**	2.1	0.27	**0.11**	0.56	0.072	**J**
156-60-5	trans-1,2-Dichloroethene	ND	2.1	0.31	ND	0.53	0.078	
10061-02-6	trans-1,3-Dichloropropene	ND	2.1	0.46	ND	0.46	0.10	
79-01-6	Trichloroethene	ND	2.1	0.30	ND	0.39	0.056	
75-01-4	Vinyl Chloride	ND	2.1	0.24	ND	0.82	0.094	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405290940** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-036

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/29/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/19/24
Sampling Media:	1.0 L Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			

Initial Pressure (psig): -2.13 Final Pressure (psig): 6.46

Container Dilution Factor: 1.68

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405290945** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-037

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/19/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): 0.01 Final Pressure (psig): 6.30

Container Dilution Factor: 1.43

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	1.8	0.24	ND	0.33	0.043	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.8	0.26	ND	0.26	0.039	
79-00-5	1,1,2-Trichloroethane	ND	1.8	0.19	ND	0.33	0.035	
75-34-3	1,1-Dichloroethane	ND	1.8	0.28	ND	0.44	0.069	
75-35-4	1,1-Dichloroethene	ND	1.8	0.26	ND	0.45	0.067	
120-82-1	1,2,4-Trichlorobenzene	ND	1.8	0.46	ND	0.24	0.063	
95-63-6	1,2,4-Trimethylbenzene	**0.46**	1.8	0.26	**0.095**	0.36	0.054	**J**
106-93-4	1,2-Dibromoethane (EDB)	ND	1.8	0.22	ND	0.23	0.029	
95-50-1	1,2-Dichlorobenzene	ND	1.8	0.28	ND	0.30	0.047	
107-06-2	1,2-Dichloroethane	**0.23**	1.8	0.21	**0.057**	0.44	0.052	**J**
78-87-5	1,2-Dichloropropane	**5.2**	1.8	0.24	**1.1**	0.39	0.051	
108-67-8	1,3,5-Trimethylbenzene	ND	1.8	0.28	ND	0.36	0.056	
106-99-0	1,3-Butadiene	ND	1.8	0.31	ND	0.81	0.14	
541-73-1	1,3-Dichlorobenzene	ND	1.8	0.29	ND	0.30	0.048	
106-46-7	1,4-Dichlorobenzene	ND	1.8	0.29	ND	0.30	0.049	
123-91-1	1,4-Dioxane	ND	1.8	0.23	ND	0.50	0.063	
540-84-1	2,2,4-Trimethylpentane	ND	1.8	0.29	ND	0.38	0.061	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**14**	18	0.39	**4.8**	6.1	0.13	**J**
591-78-6	2-Hexanone	ND	1.8	0.24	ND	0.44	0.058	
67-63-0	2-Propanol	**11**	3.6	0.79	**4.6**	1.5	0.32	
107-05-1	3-Chloropropene	ND	1.8	0.26	ND	0.57	0.082	
622-96-8	4-Ethyltoluene	ND	1.8	0.30	ND	0.36	0.062	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405290945** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-037

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/19/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): 0.01 Final Pressure (psig): 6.30

Container Dilution Factor: 1.43

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	**3.6**	1.8	0.26	**0.87**	0.44	0.064	
67-64-1	Acetone	**370**	18	4.3	**160**	7.5	1.8	
100-44-7	alpha-Chlorotoluene	ND	1.8	0.43	ND	0.35	0.083	
71-43-2	Benzene	**1.1**	1.8	0.28	**0.36**	0.56	0.086	**J**
75-27-4	Bromodichloromethane	ND	1.8	0.28	ND	0.27	0.041	
75-25-2	Bromoform	ND	1.8	0.39	ND	0.17	0.038	
74-83-9	Bromomethane	**0.42**	1.8	0.26	**0.11**	0.46	0.068	**J**
75-15-0	Carbon Disulfide	ND	18	0.57	ND	5.7	0.18	
56-23-5	Carbon Tetrachloride	**0.42**	1.8	0.26	**0.067**	0.28	0.042	**J**
108-90-7	Chlorobenzene	**0.46**	1.8	0.25	**0.10**	0.39	0.055	**J**
75-00-3	Chloroethane	ND	1.8	0.24	ND	0.68	0.089	
67-66-3	Chloroform	**0.99**	1.8	0.25	**0.20**	0.37	0.052	**J**
74-87-3	Chloromethane	**0.64**	1.8	0.31	**0.31**	0.87	0.15	**J**
156-59-2	cis-1,2-Dichloroethene	ND	1.8	0.27	ND	0.45	0.068	
10061-01-5	cis-1,3-Dichloropropene	ND	1.8	0.30	ND	0.39	0.065	
98-82-8	Cumene	ND	1.8	0.28	ND	0.36	0.056	
110-82-7	Cyclohexane	**2.6**	3.6	0.54	**0.77**	1.0	0.16	**J**
124-48-1	Dibromochloromethane	ND	1.8	0.25	ND	0.21	0.029	
64-17-5	Ethanol	**59**	18	1.3	**31**	9.5	0.70	
100-41-4	Ethyl Benzene	**3.2**	1.8	0.27	**0.73**	0.41	0.062	
75-69-4	Freon 11	**48**	1.8	0.29	**8.5**	0.32	0.052	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405290945** ALS Sample ID: P2402249-037
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/19/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): 0.01 Final Pressure (psig): 6.30

Container Dilution Factor: 1.43

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**41**	1.8	0.27	**5.3**	0.23	0.035	
76-14-2	Freon 114	ND	1.8	0.30	ND	0.26	0.043	
75-71-8	Freon 12	**2.6**	1.8	0.31	**0.52**	0.36	0.063	
306-83-2	Freon 123	**47**	1.8	0.86	**7.6**	0.29	0.14	**X**
75-43-4	Freon 21	ND	1.8	0.86	ND	0.42	0.20	**X**
142-82-5	Heptane	**3.7**	1.8	0.30	**0.89**	0.44	0.074	
87-68-3	Hexachlorobutadiene	ND	1.8	0.39	ND	0.17	0.037	
110-54-3	Hexane	**1.4**	1.8	0.39	**0.40**	0.51	0.11	**J**
179601-23-1	m,p-Xylene	**12**	3.6	0.50	**2.8**	0.82	0.12	
1634-04-4	Methyl tert-butyl ether	ND	1.8	0.23	ND	0.50	0.062	
75-09-2	Methylene Chloride	**1.9**	1.8	0.54	**0.55**	0.51	0.15	
95-47-6	o-Xylene	**6.5**	1.8	0.28	**1.5**	0.41	0.063	
103-65-1	Propylbenzene	ND	1.8	0.28	ND	0.36	0.056	
100-42-5	Styrene	**2.2**	1.8	0.31	**0.52**	0.42	0.072	
127-18-4	Tetrachloroethene	**0.65**	1.8	0.25	**0.097**	0.26	0.036	**J**
109-99-9	Tetrahydrofuran	ND	1.8	0.24	ND	0.61	0.081	
108-88-3	Toluene	**81**	1.8	0.23	**22**	0.47	0.062	
156-60-5	trans-1,2-Dichloroethene	ND	1.8	0.26	ND	0.45	0.067	
10061-02-6	trans-1,3-Dichloropropene	ND	1.8	0.39	ND	0.39	0.087	
79-01-6	Trichloroethene	**0.40**	1.8	0.26	**0.075**	0.33	0.048	**J**
75-01-4	Vinyl Chloride	ND	1.8	0.20	ND	0.70	0.080	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405290945** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-037

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/29/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/19/24
Sampling Media:	1.0 L Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			

Initial Pressure (psig): 0.01 Final Pressure (psig): 6.30

Container Dilution Factor: 1.43

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405290952** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-038

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/19/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -0.37 Final Pressure (psig): 6.50

Container Dilution Factor: 1.48

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	1.9	0.24	ND	0.34	0.045	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.9	0.27	ND	0.27	0.040	
79-00-5	1,1,2-Trichloroethane	ND	1.9	0.20	ND	0.34	0.037	
75-34-3	1,1-Dichloroethane	ND	1.9	0.29	ND	0.46	0.071	
75-35-4	1,1-Dichloroethene	ND	1.9	0.27	ND	0.47	0.069	
120-82-1	1,2,4-Trichlorobenzene	ND	1.9	0.48	ND	0.25	0.065	
95-63-6	1,2,4-Trimethylbenzene	**0.51**	1.9	0.27	**0.10**	0.38	0.056	**J**
106-93-4	1,2-Dibromoethane (EDB)	ND	1.9	0.23	ND	0.24	0.030	
95-50-1	1,2-Dichlorobenzene	ND	1.9	0.29	ND	0.31	0.049	
107-06-2	1,2-Dichloroethane	**0.23**	1.9	0.22	**0.057**	0.46	0.054	**J**
78-87-5	1,2-Dichloropropane	**7.3**	1.9	0.24	**1.6**	0.40	0.053	
108-67-8	1,3,5-Trimethylbenzene	ND	1.9	0.28	ND	0.38	0.058	
106-99-0	1,3-Butadiene	ND	1.9	0.33	ND	0.84	0.15	
541-73-1	1,3-Dichlorobenzene	ND	1.9	0.30	ND	0.31	0.049	
106-46-7	1,4-Dichlorobenzene	ND	1.9	0.30	ND	0.31	0.050	
123-91-1	1,4-Dioxane	**0.75**	1.9	0.23	**0.21**	0.51	0.065	**J**
540-84-1	2,2,4-Trimethylpentane	ND	1.9	0.30	ND	0.40	0.063	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**23**	19	0.41	**7.8**	6.3	0.14	
591-78-6	2-Hexanone	**0.63**	1.9	0.24	**0.15**	0.45	0.060	**J**
67-63-0	2-Propanol	**10**	3.7	0.81	**4.2**	1.5	0.33	
107-05-1	3-Chloropropene	ND	1.9	0.27	ND	0.59	0.085	
622-96-8	4-Ethyltoluene	ND	1.9	0.31	ND	0.38	0.064	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405290952** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-038

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/19/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -0.37 Final Pressure (psig): 6.50

Container Dilution Factor: 1.48

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	**2.0**	1.9	0.27	**0.49**	0.45	0.066	
67-64-1	Acetone	**760**	19	4.4	**320**	7.8	1.9	
100-44-7	alpha-Chlorotoluene	ND	1.9	0.44	ND	0.36	0.086	
71-43-2	Benzene	**0.87**	1.9	0.28	**0.27**	0.58	0.089	**J**
75-27-4	Bromodichloromethane	ND	1.9	0.28	ND	0.28	0.043	
75-25-2	Bromoform	ND	1.9	0.41	ND	0.18	0.039	
74-83-9	Bromomethane	**0.36**	1.9	0.27	**0.092**	0.48	0.071	**J**
75-15-0	Carbon Disulfide	**110**	19	0.59	**34**	5.9	0.19	
56-23-5	Carbon Tetrachloride	ND	1.9	0.27	ND	0.29	0.044	
108-90-7	Chlorobenzene	**0.60**	1.9	0.26	**0.13**	0.40	0.057	**J**
75-00-3	Chloroethane	**0.30**	1.9	0.24	**0.11**	0.70	0.093	**J**
67-66-3	Chloroform	**3.5**	1.9	0.26	**0.72**	0.38	0.054	
74-87-3	Chloromethane	**0.91**	1.9	0.32	**0.44**	0.90	0.15	**J**
156-59-2	cis-1,2-Dichloroethene	ND	1.9	0.28	ND	0.47	0.070	
10061-01-5	cis-1,3-Dichloropropene	ND	1.9	0.31	ND	0.41	0.068	
98-82-8	Cumene	ND	1.9	0.28	ND	0.38	0.058	
110-82-7	Cyclohexane	**2.2**	3.7	0.56	**0.65**	1.1	0.16	**J**
124-48-1	Dibromochloromethane	ND	1.9	0.26	ND	0.22	0.030	
64-17-5	Ethanol	**45**	19	1.4	**24**	9.8	0.73	
100-41-4	Ethyl Benzene	**3.4**	1.9	0.28	**0.78**	0.43	0.064	
75-69-4	Freon 11	**280**	1.9	0.30	**51**	0.33	0.053	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405290952** ALS Sample ID: P2402249-038
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/19/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -0.37 Final Pressure (psig): 6.50

Container Dilution Factor: 1.48

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**320**	1.9	0.28	**42**	0.24	0.037	
76-14-2	Freon 114	ND	1.9	0.31	ND	0.26	0.044	
75-71-8	Freon 12	**2.3**	1.9	0.32	**0.46**	0.37	0.065	
306-83-2	Freon 123	**37**	1.9	0.89	**5.9**	0.30	0.14	**X**
75-43-4	Freon 21	ND	1.9	0.89	ND	0.44	0.21	**X**
142-82-5	Heptane	**7.8**	1.9	0.31	**1.9**	0.45	0.077	
87-68-3	Hexachlorobutadiene	ND	1.9	0.41	ND	0.17	0.038	
110-54-3	Hexane	**2.4**	1.9	0.41	**0.67**	0.53	0.12	
179601-23-1	m,p-Xylene	**13**	3.7	0.52	**3.1**	0.85	0.12	
1634-04-4	Methyl tert-butyl ether	ND	1.9	0.23	ND	0.51	0.065	
75-09-2	Methylene Chloride	**2.2**	1.9	0.56	**0.65**	0.53	0.16	
95-47-6	o-Xylene	**7.5**	1.9	0.28	**1.7**	0.43	0.066	
103-65-1	Propylbenzene	ND	1.9	0.28	ND	0.38	0.058	
100-42-5	Styrene	**1.7**	1.9	0.32	**0.41**	0.43	0.075	**J**
127-18-4	Tetrachloroethene	**0.79**	1.9	0.26	**0.12**	0.27	0.038	**J**
109-99-9	Tetrahydrofuran	ND	1.9	0.25	ND	0.63	0.084	
108-88-3	Toluene	**99**	1.9	0.24	**26**	0.49	0.064	
156-60-5	trans-1,2-Dichloroethene	ND	1.9	0.27	ND	0.47	0.069	
10061-02-6	trans-1,3-Dichloropropene	ND	1.9	0.41	ND	0.41	0.090	
79-01-6	Trichloroethene	**0.95**	1.9	0.27	**0.18**	0.34	0.050	**J**
75-01-4	Vinyl Chloride	ND	1.9	0.21	ND	0.72	0.083	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405290952** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-038

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/29/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/19/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			

Initial Pressure (psig): -0.37 Final Pressure (psig): 6.50

Container Dilution Factor: 1.48

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405291000** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-039

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/19/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:

Initial Pressure (psig): -2.80 Final Pressure (psig): 7.58

Container Dilution Factor: 1.87

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	9.4	1.2	ND	1.7	0.23	
79-34-5	1,1,2,2-Tetrachloroethane	ND	9.4	1.4	ND	1.4	0.20	
79-00-5	1,1,2-Trichloroethane	ND	9.4	1.0	ND	1.7	0.19	
75-34-3	1,1-Dichloroethane	ND	9.4	1.5	ND	2.3	0.36	
75-35-4	1,1-Dichloroethene	ND	9.4	1.4	ND	2.4	0.35	
120-82-1	1,2,4-Trichlorobenzene	ND	9.4	2.4	ND	1.3	0.33	
95-63-6	1,2,4-Trimethylbenzene	ND	9.4	1.4	ND	1.9	0.28	
106-93-4	1,2-Dibromoethane (EDB)	ND	9.4	1.2	ND	1.2	0.15	
95-50-1	1,2-Dichlorobenzene	ND	9.4	1.5	ND	1.6	0.25	
107-06-2	1,2-Dichloroethane	ND	9.4	1.1	ND	2.3	0.27	
78-87-5	1,2-Dichloropropane	ND	9.4	1.2	ND	2.0	0.27	
108-67-8	1,3,5-Trimethylbenzene	ND	9.4	1.4	ND	1.9	0.29	
106-99-0	1,3-Butadiene	ND	9.4	1.6	ND	4.2	0.74	
541-73-1	1,3-Dichlorobenzene	ND	9.4	1.5	ND	1.6	0.25	
106-46-7	1,4-Dichlorobenzene	ND	9.4	1.5	ND	1.6	0.26	
123-91-1	1,4-Dioxane	ND	9.4	1.2	ND	2.6	0.33	
540-84-1	2,2,4-Trimethylpentane	ND	9.4	1.5	ND	2.0	0.32	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	ND	94	2.1	ND	32	0.70	
591-78-6	2-Hexanone	ND	9.4	1.2	ND	2.3	0.30	
67-63-0	2-Propanol	ND	19	4.1	ND	7.6	1.7	
107-05-1	3-Chloropropene	ND	9.4	1.3	ND	3.0	0.43	
622-96-8	4-Ethyltoluene	ND	9.4	1.6	ND	1.9	0.32	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405291000** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-039

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/19/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:

Initial Pressure (psig): -2.80 Final Pressure (psig): 7.58

Container Dilution Factor: 1.87

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	9.4	1.4	ND	2.3	0.33	
67-64-1	Acetone	ND	94	22	ND	39	9.5	
100-44-7	alpha-Chlorotoluene	ND	9.4	2.2	ND	1.8	0.43	
71-43-2	Benzene	ND	9.4	1.4	ND	2.9	0.45	
75-27-4	Bromodichloromethane	ND	9.4	1.4	ND	1.4	0.22	
75-25-2	Bromoform	ND	9.4	2.1	ND	0.90	0.20	
74-83-9	Bromomethane	ND	9.4	1.4	ND	2.4	0.36	
75-15-0	Carbon Disulfide	ND	94	3.0	ND	30	0.96	
56-23-5	Carbon Tetrachloride	ND	9.4	1.4	ND	1.5	0.22	
108-90-7	Chlorobenzene	ND	9.4	1.3	ND	2.0	0.29	
75-00-3	Chloroethane	ND	9.4	1.2	ND	3.5	0.47	
67-66-3	Chloroform	**10**	9.4	1.3	**2.1**	1.9	0.27	
74-87-3	Chloromethane	**1.8**	9.4	1.6	**0.89**	4.5	0.78	**J**
156-59-2	cis-1,2-Dichloroethene	ND	9.4	1.4	ND	2.4	0.35	
10061-01-5	cis-1,3-Dichloropropene	ND	9.4	1.6	ND	2.1	0.34	
98-82-8	Cumene	ND	9.4	1.4	ND	1.9	0.29	
110-82-7	Cyclohexane	ND	19	2.8	ND	5.4	0.82	
124-48-1	Dibromochloromethane	ND	9.4	1.3	ND	1.1	0.15	
64-17-5	Ethanol	ND	94	6.9	ND	50	3.7	
100-41-4	Ethyl Benzene	ND	9.4	1.4	ND	2.2	0.32	
75-69-4	Freon 11	**1,200**	9.4	1.5	**220**	1.7	0.27	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405291000** ALS Sample ID: P2402249-039
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/19/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:

Initial Pressure (psig): -2.80 Final Pressure (psig): 7.58

Container Dilution Factor: 1.87

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**1,700**	9.4	1.4	**220**	1.2	0.19	
76-14-2	Freon 114	ND	9.4	1.6	ND	1.3	0.22	
75-71-8	Freon 12	**2.3**	9.4	1.6	**0.47**	1.9	0.33	**J**
306-83-2	Freon 123	**9.3**	9.4	4.5	**1.5**	1.5	0.72	**J, X**
75-43-4	Freon 21	ND	9.4	4.5	ND	2.2	1.1	**X**
142-82-5	Heptane	ND	9.4	1.6	ND	2.3	0.39	
87-68-3	Hexachlorobutadiene	ND	9.4	2.1	ND	0.88	0.19	
110-54-3	Hexane	ND	9.4	2.1	ND	2.7	0.58	
179601-23-1	m,p-Xylene	ND	19	2.6	ND	4.3	0.60	
1634-04-4	Methyl tert-butyl ether	ND	9.4	1.2	ND	2.6	0.33	
75-09-2	Methylene Chloride	ND	9.4	2.8	ND	2.7	0.81	
95-47-6	o-Xylene	ND	9.4	1.4	ND	2.2	0.33	
103-65-1	Propylbenzene	ND	9.4	1.4	ND	1.9	0.29	
100-42-5	Styrene	ND	9.4	1.6	ND	2.2	0.38	
127-18-4	Tetrachloroethene	ND	9.4	1.3	ND	1.4	0.19	
109-99-9	Tetrahydrofuran	ND	9.4	1.3	ND	3.2	0.42	
108-88-3	Toluene	ND	9.4	1.2	ND	2.5	0.32	
156-60-5	trans-1,2-Dichloroethene	ND	9.4	1.4	ND	2.4	0.35	
10061-02-6	trans-1,3-Dichloropropene	ND	9.4	2.1	ND	2.1	0.45	
79-01-6	Trichloroethene	ND	9.4	1.3	ND	1.7	0.25	
75-01-4	Vinyl Chloride	ND	9.4	1.1	ND	3.7	0.42	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405291000** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-039

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/29/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/19/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.10 Liter(s)
Test Notes:			

Initial Pressure (psig): -2.80 Final Pressure (psig): 7.58

Container Dilution Factor: 1.87

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405291001** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-040

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/20/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.56 Final Pressure (psig): 6.63

Container Dilution Factor: 1.76

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	2.2	0.29	ND	0.40	0.053	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.2	0.33	ND	0.32	0.047	
79-00-5	1,1,2-Trichloroethane	ND	2.2	0.24	ND	0.40	0.044	
75-34-3	1,1-Dichloroethane	ND	2.2	0.34	ND	0.54	0.085	
75-35-4	1,1-Dichloroethene	ND	2.2	0.33	ND	0.56	0.082	
120-82-1	1,2,4-Trichlorobenzene	ND	2.2	0.57	ND	0.30	0.077	
95-63-6	1,2,4-Trimethylbenzene	ND	2.2	0.33	ND	0.45	0.066	
106-93-4	1,2-Dibromoethane (EDB)	ND	2.2	0.27	ND	0.29	0.036	
95-50-1	1,2-Dichlorobenzene	ND	2.2	0.35	ND	0.37	0.058	
107-06-2	1,2-Dichloroethane	ND	2.2	0.26	ND	0.54	0.064	
78-87-5	1,2-Dichloropropane	ND	2.2	0.29	ND	0.48	0.063	
108-67-8	1,3,5-Trimethylbenzene	ND	2.2	0.34	ND	0.45	0.069	
106-99-0	1,3-Butadiene	ND	2.2	0.39	ND	0.99	0.18	
541-73-1	1,3-Dichlorobenzene	ND	2.2	0.35	ND	0.37	0.059	
106-46-7	1,4-Dichlorobenzene	ND	2.2	0.36	ND	0.37	0.060	
123-91-1	1,4-Dioxane	**0.42**	2.2	0.28	**0.12**	0.61	0.077	**J**
540-84-1	2,2,4-Trimethylpentane	ND	2.2	0.35	ND	0.47	0.075	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**2.5**	22	0.48	**0.85**	7.5	0.16	**J**
591-78-6	2-Hexanone	ND	2.2	0.29	ND	0.54	0.071	
67-63-0	2-Propanol	**7.9**	4.4	0.97	**3.2**	1.8	0.39	
107-05-1	3-Chloropropene	ND	2.2	0.32	ND	0.70	0.10	
622-96-8	4-Ethyltoluene	ND	2.2	0.37	ND	0.45	0.076	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405291001** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-040

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/20/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.56 Final Pressure (psig): 6.63

Container Dilution Factor: 1.76

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	2.2	0.32	ND	0.54	0.078	
67-64-1	Acetone	**26**	22	5.3	**11**	9.3	2.2	
100-44-7	alpha-Chlorotoluene	ND	2.2	0.53	ND	0.43	0.10	
71-43-2	Benzene	**2.1**	2.2	0.34	**0.66**	0.69	0.11	**J**
75-27-4	Bromodichloromethane	ND	2.2	0.34	ND	0.33	0.051	
75-25-2	Bromoform	ND	2.2	0.48	ND	0.21	0.047	
74-83-9	Bromomethane	ND	2.2	0.33	ND	0.57	0.084	
75-15-0	Carbon Disulfide	ND	22	0.70	ND	7.1	0.23	
56-23-5	Carbon Tetrachloride	**0.38**	2.2	0.33	**0.061**	0.35	0.052	**J**
108-90-7	Chlorobenzene	ND	2.2	0.31	ND	0.48	0.068	
75-00-3	Chloroethane	ND	2.2	0.29	ND	0.83	0.11	
67-66-3	Chloroform	ND	2.2	0.31	ND	0.45	0.064	
74-87-3	Chloromethane	**1.4**	2.2	0.38	**0.68**	1.1	0.18	**J**
156-59-2	cis-1,2-Dichloroethene	ND	2.2	0.33	ND	0.56	0.083	
10061-01-5	cis-1,3-Dichloropropene	ND	2.2	0.37	ND	0.48	0.080	
98-82-8	Cumene	ND	2.2	0.34	ND	0.45	0.069	
110-82-7	Cyclohexane	**0.76**	4.4	0.66	**0.22**	1.3	0.19	**J**
124-48-1	Dibromochloromethane	ND	2.2	0.31	ND	0.26	0.036	
64-17-5	Ethanol	**14**	22	1.6	**7.4**	12	0.86	**J**
100-41-4	Ethyl Benzene	ND	2.2	0.33	ND	0.51	0.076	
75-69-4	Freon 11	**2.5**	2.2	0.36	**0.45**	0.39	0.063	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405291001** ALS Sample ID: P2402249-040
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/20/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.56 Final Pressure (psig): 6.63

Container Dilution Factor: 1.76

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**0.97**	2.2	0.33	**0.13**	0.29	0.044	**J**
76-14-2	Freon 114	ND	2.2	0.37	ND	0.31	0.053	
75-71-8	Freon 12	**2.4**	2.2	0.38	**0.48**	0.45	0.077	
306-83-2	Freon 123	**7.5**	2.2	1.1	**1.2**	0.35	0.17	**X**
75-43-4	Freon 21	ND	2.2	1.1	ND	0.52	0.25	**X**
142-82-5	Heptane	**0.81**	2.2	0.37	**0.20**	0.54	0.091	**J**
87-68-3	Hexachlorobutadiene	ND	2.2	0.48	ND	0.21	0.045	
110-54-3	Hexane	**1.6**	2.2	0.48	**0.45**	0.62	0.14	**J**
179601-23-1	m,p-Xylene	ND	4.4	0.62	ND	1.0	0.14	
1634-04-4	Methyl tert-butyl ether	ND	2.2	0.28	ND	0.61	0.077	
75-09-2	Methylene Chloride	ND	2.2	0.66	ND	0.63	0.19	
95-47-6	o-Xylene	ND	2.2	0.34	ND	0.51	0.078	
103-65-1	Propylbenzene	ND	2.2	0.34	ND	0.45	0.069	
100-42-5	Styrene	ND	2.2	0.38	ND	0.52	0.089	
127-18-4	Tetrachloroethene	ND	2.2	0.30	ND	0.32	0.045	
109-99-9	Tetrahydrofuran	**5.5**	2.2	0.29	**1.9**	0.75	0.10	
108-88-3	Toluene	**4.1**	2.2	0.29	**1.1**	0.58	0.076	
156-60-5	trans-1,2-Dichloroethene	ND	2.2	0.33	ND	0.56	0.082	
10061-02-6	trans-1,3-Dichloropropene	ND	2.2	0.48	ND	0.48	0.11	
79-01-6	Trichloroethene	**0.46**	2.2	0.32	**0.085**	0.41	0.059	**J**
75-01-4	Vinyl Chloride	ND	2.2	0.25	ND	0.86	0.098	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405291001** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-040

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/29/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/20/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			

Initial Pressure (psig): -2.56 Final Pressure (psig): 6.63

Container Dilution Factor: 1.76

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405291015** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-041

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/19/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.31 Final Pressure (psig): 6.60

Container Dilution Factor: 1.72

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	2.2	0.28	ND	0.39	0.052	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.2	0.32	ND	0.31	0.046	
79-00-5	1,1,2-Trichloroethane	ND	2.2	0.23	ND	0.39	0.043	
75-34-3	1,1-Dichloroethane	ND	2.2	0.34	ND	0.53	0.083	
75-35-4	1,1-Dichloroethene	ND	2.2	0.32	ND	0.54	0.080	
120-82-1	1,2,4-Trichlorobenzene	ND	2.2	0.56	ND	0.29	0.075	
95-63-6	1,2,4-Trimethylbenzene	ND	2.2	0.32	ND	0.44	0.065	
106-93-4	1,2-Dibromoethane (EDB)	ND	2.2	0.27	ND	0.28	0.035	
95-50-1	1,2-Dichlorobenzene	ND	2.2	0.34	ND	0.36	0.057	
107-06-2	1,2-Dichloroethane	ND	2.2	0.25	ND	0.53	0.063	
78-87-5	1,2-Dichloropropane	ND	2.2	0.28	ND	0.47	0.061	
108-67-8	1,3,5-Trimethylbenzene	ND	2.2	0.33	ND	0.44	0.067	
106-99-0	1,3-Butadiene	ND	2.2	0.38	ND	0.97	0.17	
541-73-1	1,3-Dichlorobenzene	ND	2.2	0.34	ND	0.36	0.057	
106-46-7	1,4-Dichlorobenzene	ND	2.2	0.35	ND	0.36	0.059	
123-91-1	1,4-Dioxane	**0.44**	2.2	0.27	**0.12**	0.60	0.075	**J**
540-84-1	2,2,4-Trimethylpentane	ND	2.2	0.34	ND	0.46	0.074	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**1.7**	22	0.47	**0.57**	7.3	0.16	**J**
591-78-6	2-Hexanone	ND	2.2	0.28	ND	0.53	0.069	
67-63-0	2-Propanol	ND	4.3	0.95	ND	1.8	0.39	
107-05-1	3-Chloropropene	ND	2.2	0.31	ND	0.69	0.099	
622-96-8	4-Ethyltoluene	ND	2.2	0.37	ND	0.44	0.074	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405291015** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-041

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/19/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.31 Final Pressure (psig): 6.60

Container Dilution Factor: 1.72

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	2.2	0.31	ND	0.52	0.077	
67-64-1	Acetone	**10**	22	5.2	**4.2**	9.1	2.2	**J**
100-44-7	alpha-Chlorotoluene	ND	2.2	0.52	ND	0.42	0.10	
71-43-2	Benzene	ND	2.2	0.33	ND	0.67	0.10	
75-27-4	Bromodichloromethane	ND	2.2	0.33	ND	0.32	0.049	
75-25-2	Bromoform	ND	2.2	0.47	ND	0.21	0.046	
74-83-9	Bromomethane	ND	2.2	0.32	ND	0.55	0.082	
75-15-0	Carbon Disulfide	ND	22	0.69	ND	6.9	0.22	
56-23-5	Carbon Tetrachloride	**0.36**	2.2	0.32	**0.057**	0.34	0.051	**J**
108-90-7	Chlorobenzene	ND	2.2	0.31	ND	0.47	0.066	
75-00-3	Chloroethane	ND	2.2	0.28	ND	0.82	0.11	
67-66-3	Chloroform	**0.35**	2.2	0.31	**0.072**	0.44	0.063	**J**
74-87-3	Chloromethane	ND	2.2	0.37	ND	1.0	0.18	
156-59-2	cis-1,2-Dichloroethene	ND	2.2	0.32	ND	0.54	0.081	
10061-01-5	cis-1,3-Dichloropropene	ND	2.2	0.36	ND	0.47	0.079	
98-82-8	Cumene	ND	2.2	0.33	ND	0.44	0.067	
110-82-7	Cyclohexane	ND	4.3	0.65	ND	1.2	0.19	
124-48-1	Dibromochloromethane	ND	2.2	0.30	ND	0.25	0.035	
64-17-5	Ethanol	ND	22	1.6	ND	11	0.84	
100-41-4	Ethyl Benzene	ND	2.2	0.32	ND	0.50	0.074	
75-69-4	Freon 11	**67**	2.2	0.35	**12**	0.38	0.062	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405291015** ALS Sample ID: P2402249-041
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/19/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.31 Final Pressure (psig): 6.60

Container Dilution Factor: 1.72

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**81**	2.2	0.33	**11**	0.28	0.043	
76-14-2	Freon 114	ND	2.2	0.36	ND	0.31	0.052	
75-71-8	Freon 12	**2.3**	2.2	0.37	**0.47**	0.43	0.076	
306-83-2	Freon 123	ND	2.2	1.0	ND	0.34	0.17	**X**
75-43-4	Freon 21	ND	2.2	1.0	ND	0.51	0.25	**X**
142-82-5	Heptane	ND	2.2	0.37	ND	0.52	0.089	
87-68-3	Hexachlorobutadiene	ND	2.2	0.47	ND	0.20	0.044	
110-54-3	Hexane	ND	2.2	0.47	ND	0.61	0.13	
179601-23-1	m,p-Xylene	ND	4.3	0.60	ND	0.99	0.14	
1634-04-4	Methyl tert-butyl ether	ND	2.2	0.27	ND	0.60	0.075	
75-09-2	Methylene Chloride	ND	2.2	0.65	ND	0.62	0.19	
95-47-6	o-Xylene	ND	2.2	0.33	ND	0.50	0.076	
103-65-1	Propylbenzene	ND	2.2	0.33	ND	0.44	0.067	
100-42-5	Styrene	ND	2.2	0.37	ND	0.51	0.087	
127-18-4	Tetrachloroethene	ND	2.2	0.30	ND	0.32	0.044	
109-99-9	Tetrahydrofuran	ND	2.2	0.29	ND	0.73	0.098	
108-88-3	Toluene	ND	2.2	0.28	ND	0.57	0.074	
156-60-5	trans-1,2-Dichloroethene	ND	2.2	0.32	ND	0.54	0.080	
10061-02-6	trans-1,3-Dichloropropene	ND	2.2	0.47	ND	0.47	0.10	
79-01-6	Trichloroethene	**0.51**	2.2	0.31	**0.094**	0.40	0.058	**J**
75-01-4	Vinyl Chloride	ND	2.2	0.25	ND	0.84	0.096	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405291015** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-041

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/29/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/19/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			

Initial Pressure (psig): -2.31 Final Pressure (psig): 6.60

Container Dilution Factor: 1.72

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405291021** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-042

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/20 - 6/21/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.10 Liter(s)
Test Notes: 0.050 Liter(s)

Initial Pressure (psig): 0.05 Final Pressure (psig): 6.65

Container Dilution Factor: 1.45

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	7.3	0.96	ND	1.3	0.18	
79-34-5	1,1,2,2-Tetrachloroethane	ND	7.3	1.1	ND	1.1	0.16	
79-00-5	1,1,2-Trichloroethane	ND	7.3	0.78	ND	1.3	0.14	
75-34-3	1,1-Dichloroethane	ND	7.3	1.1	ND	1.8	0.28	
75-35-4	1,1-Dichloroethene	ND	7.3	1.1	ND	1.8	0.27	
120-82-1	1,2,4-Trichlorobenzene	ND	7.3	1.9	ND	0.98	0.25	
95-63-6	1,2,4-Trimethylbenzene	**1.4**	7.3	1.1	**0.29**	1.5	0.22	**J**
106-93-4	1,2-Dibromoethane (EDB)	ND	7.3	0.90	ND	0.94	0.12	
95-50-1	1,2-Dichlorobenzene	ND	7.3	1.1	ND	1.2	0.19	
107-06-2	1,2-Dichloroethane	ND	7.3	0.86	ND	1.8	0.21	
78-87-5	1,2-Dichloropropane	**4.1**	7.3	0.96	**0.89**	1.6	0.21	**J**
108-67-8	1,3,5-Trimethylbenzene	ND	7.3	1.1	ND	1.5	0.23	
106-99-0	1,3-Butadiene	ND	7.3	1.3	ND	3.3	0.58	
541-73-1	1,3-Dichlorobenzene	ND	7.3	1.2	ND	1.2	0.19	
106-46-7	1,4-Dichlorobenzene	ND	7.3	1.2	ND	1.2	0.20	
123-91-1	1,4-Dioxane	ND	7.3	0.91	ND	2.0	0.25	
540-84-1	2,2,4-Trimethylpentane	ND	7.3	1.2	ND	1.6	0.25	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**14**	73	1.6	**4.8**	25	0.54	**J**
591-78-6	2-Hexanone	ND	7.3	0.96	ND	1.8	0.23	
67-63-0	2-Propanol	**28**	15	3.2	**11**	5.9	1.3	
107-05-1	3-Chloropropene	ND	7.3	1.0	ND	2.3	0.33	
622-96-8	4-Ethyltoluene	ND	7.3	1.2	ND	1.5	0.25	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405291021** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-042

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/20 - 6/21/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.10 Liter(s)
Test Notes: 0.050 Liter(s)

Initial Pressure (psig): 0.05 Final Pressure (psig): 6.65

Container Dilution Factor: 1.45

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	**4.3**	7.3	1.1	**1.1**	1.8	0.26	**J**
67-64-1	Acetone	**500**	73	17	**210**	31	7.3	
100-44-7	alpha-Chlorotoluene	ND	7.3	1.7	ND	1.4	0.34	
71-43-2	Benzene	ND	7.3	1.1	ND	2.3	0.35	
75-27-4	Bromodichloromethane	ND	7.3	1.1	ND	1.1	0.17	
75-25-2	Bromoform	ND	7.3	1.6	ND	0.70	0.15	
74-83-9	Bromomethane	ND	7.3	1.1	ND	1.9	0.28	
75-15-0	Carbon Disulfide	ND	73	2.3	ND	23	0.75	
56-23-5	Carbon Tetrachloride	ND	7.3	1.1	ND	1.2	0.17	
108-90-7	Chlorobenzene	ND	7.3	1.0	ND	1.6	0.22	
75-00-3	Chloroethane	ND	7.3	0.96	ND	2.7	0.36	
67-66-3	Chloroform	**4.8**	7.3	1.0	**0.98**	1.5	0.21	**J**
74-87-3	Chloromethane	ND	7.3	1.2	ND	3.5	0.60	
156-59-2	cis-1,2-Dichloroethene	ND	7.3	1.1	ND	1.8	0.27	
10061-01-5	cis-1,3-Dichloropropene	ND	7.3	1.2	ND	1.6	0.27	
98-82-8	Cumene	ND	7.3	1.1	ND	1.5	0.23	
110-82-7	Cyclohexane	**3.4**	15	2.2	**0.98**	4.2	0.63	**J**
124-48-1	Dibromochloromethane	ND	7.3	1.0	ND	0.85	0.12	
64-17-5	Ethanol	**120**	73	5.4	**65**	38	2.8	
100-41-4	Ethyl Benzene	**4.0**	7.3	1.1	**0.92**	1.7	0.25	**J**
75-69-4	Freon 11	**1,400**	7.3	1.2	**240**	1.3	0.21	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405291021** ALS Sample ID: P2402249-042
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/20 - 6/21/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.10 Liter(s)
Test Notes: 0.050 Liter(s)

Initial Pressure (psig): 0.05 Final Pressure (psig): 6.65

Container Dilution Factor: 1.45

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**1,500**	15	2.2	**200**	1.9	0.29	**D**
76-14-2	Freon 114	ND	7.3	1.2	ND	1.0	0.17	
75-71-8	Freon 12	**2.5**	7.3	1.3	**0.51**	1.5	0.26	**J**
306-83-2	Freon 123	**48**	7.3	3.5	**7.7**	1.2	0.56	**X**
75-43-4	Freon 21	ND	7.3	3.5	ND	1.7	0.83	**X**
142-82-5	Heptane	**4.5**	7.3	1.2	**1.1**	1.8	0.30	**J**
87-68-3	Hexachlorobutadiene	ND	7.3	1.6	ND	0.68	0.15	
110-54-3	Hexane	**2.3**	7.3	1.6	**0.64**	2.1	0.45	**J**
179601-23-1	m,p-Xylene	**11**	15	2.0	**2.6**	3.3	0.47	**J**
1634-04-4	Methyl tert-butyl ether	ND	7.3	0.91	ND	2.0	0.25	
75-09-2	Methylene Chloride	ND	7.3	2.2	ND	2.1	0.63	
95-47-6	o-Xylene	**5.9**	7.3	1.1	**1.4**	1.7	0.26	**J**
103-65-1	Propylbenzene	**1.2**	7.3	1.1	**0.25**	1.5	0.23	**J**
100-42-5	Styrene	**2.9**	7.3	1.2	**0.68**	1.7	0.29	**J**
127-18-4	Tetrachloroethene	ND	7.3	1.0	ND	1.1	0.15	
109-99-9	Tetrahydrofuran	ND	7.3	0.97	ND	2.5	0.33	
108-88-3	Toluene	**65**	7.3	0.94	**17**	1.9	0.25	
156-60-5	trans-1,2-Dichloroethene	ND	7.3	1.1	ND	1.8	0.27	
10061-02-6	trans-1,3-Dichloropropene	ND	7.3	1.6	ND	1.6	0.35	
79-01-6	Trichloroethene	**1.8**	7.3	1.0	**0.33**	1.3	0.19	**J**
75-01-4	Vinyl Chloride	ND	7.3	0.83	ND	2.8	0.32	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
D = The reported result is from a dilution.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405291021** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-042

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/29/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/20 - 6/21/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.10 Liter(s)
Test Notes:			0.050 Liter(s)

Initial Pressure (psig): 0.05 Final Pressure (psig): 6.65

Container Dilution Factor: 1.45

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405291025** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-043

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/20 - 6/21/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.10 Liter(s)
Test Notes: 0.050 Liter(s)

Initial Pressure (psig): -2.37 Final Pressure (psig): 6.74

Container Dilution Factor: 1.74

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	8.7	1.1	ND	1.6	0.21	
79-34-5	1,1,2,2-Tetrachloroethane	ND	8.7	1.3	ND	1.3	0.19	
79-00-5	1,1,2-Trichloroethane	ND	8.7	0.94	ND	1.6	0.17	
75-34-3	1,1-Dichloroethane	ND	8.7	1.4	ND	2.2	0.34	
75-35-4	1,1-Dichloroethene	ND	8.7	1.3	ND	2.2	0.32	
120-82-1	1,2,4-Trichlorobenzene	ND	8.7	2.3	ND	1.2	0.30	
95-63-6	1,2,4-Trimethylbenzene	ND	8.7	1.3	ND	1.8	0.26	
106-93-4	1,2-Dibromoethane (EDB)	ND	8.7	1.1	ND	1.1	0.14	
95-50-1	1,2-Dichlorobenzene	ND	8.7	1.4	ND	1.4	0.23	
107-06-2	1,2-Dichloroethane	ND	8.7	1.0	ND	2.2	0.25	
78-87-5	1,2-Dichloropropane	ND	8.7	1.1	ND	1.9	0.25	
108-67-8	1,3,5-Trimethylbenzene	ND	8.7	1.3	ND	1.8	0.27	
106-99-0	1,3-Butadiene	ND	8.7	1.5	ND	3.9	0.69	
541-73-1	1,3-Dichlorobenzene	ND	8.7	1.4	ND	1.4	0.23	
106-46-7	1,4-Dichlorobenzene	ND	8.7	1.4	ND	1.4	0.24	
123-91-1	1,4-Dioxane	**1.7**	8.7	1.1	**0.46**	2.4	0.30	**J**
540-84-1	2,2,4-Trimethylpentane	ND	8.7	1.4	ND	1.9	0.30	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**7.6**	87	1.9	**2.6**	30	0.65	**J**
591-78-6	2-Hexanone	ND	8.7	1.1	ND	2.1	0.28	
67-63-0	2-Propanol	ND	17	3.8	ND	7.1	1.6	
107-05-1	3-Chloropropene	ND	8.7	1.3	ND	2.8	0.40	
622-96-8	4-Ethyltoluene	ND	8.7	1.5	ND	1.8	0.30	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405291025** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-043

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/20 - 6/21/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.10 Liter(s)
Test Notes: 0.050 Liter(s)

Initial Pressure (psig): -2.37 Final Pressure (psig): 6.74

Container Dilution Factor: 1.74

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	8.7	1.3	ND	2.1	0.31	
67-64-1	Acetone	**63**	87	21	**27**	37	8.8	**J**
100-44-7	alpha-Chlorotoluene	ND	8.7	2.1	ND	1.7	0.40	
71-43-2	Benzene	ND	8.7	1.3	ND	2.7	0.42	
75-27-4	Bromodichloromethane	ND	8.7	1.3	ND	1.3	0.20	
75-25-2	Bromoform	ND	8.7	1.9	ND	0.84	0.19	
74-83-9	Bromomethane	ND	8.7	1.3	ND	2.2	0.33	
75-15-0	Carbon Disulfide	ND	87	2.8	ND	28	0.89	
56-23-5	Carbon Tetrachloride	ND	8.7	1.3	ND	1.4	0.20	
108-90-7	Chlorobenzene	ND	8.7	1.2	ND	1.9	0.27	
75-00-3	Chloroethane	ND	8.7	1.1	ND	3.3	0.44	
67-66-3	Chloroform	**5.6**	8.7	1.2	**1.2**	1.8	0.25	**J**
74-87-3	Chloromethane	**4.0**	8.7	1.5	**1.9**	4.2	0.72	**J**
156-59-2	cis-1,2-Dichloroethene	ND	8.7	1.3	ND	2.2	0.33	
10061-01-5	cis-1,3-Dichloropropene	ND	8.7	1.4	ND	1.9	0.32	
98-82-8	Cumene	ND	8.7	1.3	ND	1.8	0.27	
110-82-7	Cyclohexane	ND	17	2.6	ND	5.1	0.76	
124-48-1	Dibromochloromethane	ND	8.7	1.2	ND	1.0	0.14	
64-17-5	Ethanol	ND	87	6.4	ND	46	3.4	
100-41-4	Ethyl Benzene	ND	8.7	1.3	ND	2.0	0.30	
75-69-4	Freon 11	**1,600**	17	2.8	**280**	3.1	0.50	**D**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
D = The reported result is from a dilution.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405291025** ALS Sample ID: P2402249-043
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/20 - 6/21/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.10 Liter(s)
Test Notes: 0.050 Liter(s)

Initial Pressure (psig): -2.37 Final Pressure (psig): 6.74

Container Dilution Factor: 1.74

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**1,900**	17	2.6	**250**	2.3	0.35	**D**
76-14-2	Freon 114	ND	8.7	1.5	ND	1.2	0.21	
75-71-8	Freon 12	**2.5**	8.7	1.5	**0.51**	1.8	0.31	**J**
306-83-2	Freon 123	ND	8.7	4.2	ND	1.4	0.67	**X**
75-43-4	Freon 21	ND	8.7	4.2	ND	2.1	0.99	**X**
142-82-5	Heptane	ND	8.7	1.5	ND	2.1	0.36	
87-68-3	Hexachlorobutadiene	ND	8.7	1.9	ND	0.82	0.18	
110-54-3	Hexane	ND	8.7	1.9	ND	2.5	0.54	
179601-23-1	m,p-Xylene	ND	17	2.4	ND	4.0	0.56	
1634-04-4	Methyl tert-butyl ether	ND	8.7	1.1	ND	2.4	0.30	
75-09-2	Methylene Chloride	ND	8.7	2.6	ND	2.5	0.75	
95-47-6	o-Xylene	ND	8.7	1.3	ND	2.0	0.31	
103-65-1	Propylbenzene	ND	8.7	1.3	ND	1.8	0.27	
100-42-5	Styrene	ND	8.7	1.5	ND	2.0	0.35	
127-18-4	Tetrachloroethene	ND	8.7	1.2	ND	1.3	0.18	
109-99-9	Tetrahydrofuran	ND	8.7	1.2	ND	3.0	0.40	
108-88-3	Toluene	**1.5**	8.7	1.1	**0.39**	2.3	0.30	**J**
156-60-5	trans-1,2-Dichloroethene	ND	8.7	1.3	ND	2.2	0.32	
10061-02-6	trans-1,3-Dichloropropene	ND	8.7	1.9	ND	1.9	0.42	
79-01-6	Trichloroethene	**2.3**	8.7	1.3	**0.44**	1.6	0.23	**J**
75-01-4	Vinyl Chloride	ND	8.7	0.99	ND	3.4	0.39	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
D = The reported result is from a dilution.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405291025** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-043

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/29/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/20 - 6/21/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.10 Liter(s)
Test Notes:			0.050 Liter(s)

Initial Pressure (psig): -2.37 Final Pressure (psig): 6.74

Container Dilution Factor: 1.74

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405291031** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-044

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/20 - 6/21/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.020 Liter(s)

Initial Pressure (psig): -2.18 Final Pressure (psig): 6.76

Container Dilution Factor: 1.71

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	2.1	0.28	ND	0.39	0.052	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.1	0.32	ND	0.31	0.046	
79-00-5	1,1,2-Trichloroethane	ND	2.1	0.23	ND	0.39	0.042	
75-34-3	1,1-Dichloroethane	ND	2.1	0.33	ND	0.53	0.082	
75-35-4	1,1-Dichloroethene	ND	2.1	0.32	ND	0.54	0.080	
120-82-1	1,2,4-Trichlorobenzene	ND	2.1	0.56	ND	0.29	0.075	
95-63-6	1,2,4-Trimethylbenzene	ND	2.1	0.32	ND	0.43	0.064	
106-93-4	1,2-Dibromoethane (EDB)	ND	2.1	0.27	ND	0.28	0.035	
95-50-1	1,2-Dichlorobenzene	ND	2.1	0.34	ND	0.36	0.056	
107-06-2	1,2-Dichloroethane	ND	2.1	0.25	ND	0.53	0.062	
78-87-5	1,2-Dichloropropane	ND	2.1	0.28	ND	0.46	0.061	
108-67-8	1,3,5-Trimethylbenzene	ND	2.1	0.33	ND	0.43	0.067	
106-99-0	1,3-Butadiene	ND	2.1	0.38	ND	0.97	0.17	
541-73-1	1,3-Dichlorobenzene	ND	2.1	0.34	ND	0.36	0.057	
106-46-7	1,4-Dichlorobenzene	ND	2.1	0.35	ND	0.36	0.058	
123-91-1	1,4-Dioxane	ND	2.1	0.27	ND	0.59	0.075	
540-84-1	2,2,4-Trimethylpentane	ND	2.1	0.34	ND	0.46	0.073	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**1.6**	21	0.47	**0.54**	7.3	0.16	**J**
591-78-6	2-Hexanone	ND	2.1	0.28	ND	0.52	0.069	
67-63-0	2-Propanol	ND	4.3	0.94	ND	1.7	0.38	
107-05-1	3-Chloropropene	ND	2.1	0.31	ND	0.68	0.098	
622-96-8	4-Ethyltoluene	ND	2.1	0.36	ND	0.43	0.074	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405291031** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-044

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/20 - 6/21/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.020 Liter(s)

Initial Pressure (psig): -2.18 Final Pressure (psig): 6.76

Container Dilution Factor: 1.71

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	2.1	0.31	ND	0.52	0.076	
67-64-1	Acetone	**12**	21	5.1	**5.1**	9.0	2.2	**J**
100-44-7	alpha-Chlorotoluene	ND	2.1	0.51	ND	0.41	0.099	
71-43-2	Benzene	ND	2.1	0.33	ND	0.67	0.10	
75-27-4	Bromodichloromethane	ND	2.1	0.33	ND	0.32	0.049	
75-25-2	Bromoform	ND	2.1	0.47	ND	0.21	0.045	
74-83-9	Bromomethane	ND	2.1	0.32	ND	0.55	0.082	
75-15-0	Carbon Disulfide	ND	21	0.68	ND	6.9	0.22	
56-23-5	Carbon Tetrachloride	ND	2.1	0.32	ND	0.34	0.050	
108-90-7	Chlorobenzene	ND	2.1	0.30	ND	0.46	0.066	
75-00-3	Chloroethane	ND	2.1	0.28	ND	0.81	0.11	
67-66-3	Chloroform	**7.7**	2.1	0.30	**1.6**	0.44	0.062	
74-87-3	Chloromethane	**0.44**	2.1	0.37	**0.22**	1.0	0.18	**J**
156-59-2	cis-1,2-Dichloroethene	ND	2.1	0.32	ND	0.54	0.081	
10061-01-5	cis-1,3-Dichloropropene	ND	2.1	0.35	ND	0.47	0.078	
98-82-8	Cumene	ND	2.1	0.33	ND	0.43	0.067	
110-82-7	Cyclohexane	ND	4.3	0.64	ND	1.2	0.19	
124-48-1	Dibromochloromethane	ND	2.1	0.30	ND	0.25	0.035	
64-17-5	Ethanol	**2.4**	21	1.6	**1.3**	11	0.84	**J**
100-41-4	Ethyl Benzene	ND	2.1	0.32	ND	0.49	0.074	
75-69-4	Freon 11	**4,000**	43	6.9	**710**	7.6	1.2	**D**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
D = The reported result is from a dilution.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405291031** ALS Sample ID: P2402249-044
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/20 - 6/21/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.020 Liter(s)

Initial Pressure (psig): -2.18 Final Pressure (psig): 6.76

Container Dilution Factor: 1.71

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**5,400**	43	6.5	**700**	5.6	0.85	**D**
76-14-2	Freon 114	ND	2.1	0.36	ND	0.31	0.051	
75-71-8	Freon 12	**2.9**	2.1	0.37	**0.58**	0.43	0.075	
306-83-2	Freon 123	**1.9**	2.1	1.0	**0.30**	0.34	0.16	**J, X**
75-43-4	Freon 21	ND	2.1	1.0	ND	0.51	0.24	**X**
142-82-5	Heptane	**0.37**	2.1	0.36	**0.090**	0.52	0.089	**J**
87-68-3	Hexachlorobutadiene	ND	2.1	0.47	ND	0.20	0.044	
110-54-3	Hexane	ND	2.1	0.47	ND	0.61	0.13	
179601-23-1	m,p-Xylene	ND	4.3	0.60	ND	0.98	0.14	
1634-04-4	Methyl tert-butyl ether	ND	2.1	0.27	ND	0.59	0.075	
75-09-2	Methylene Chloride	**0.71**	2.1	0.64	**0.20**	0.62	0.18	**J**
95-47-6	o-Xylene	ND	2.1	0.33	ND	0.49	0.076	
103-65-1	Propylbenzene	ND	2.1	0.33	ND	0.43	0.067	
100-42-5	Styrene	ND	2.1	0.37	ND	0.50	0.086	
127-18-4	Tetrachloroethene	ND	2.1	0.29	ND	0.32	0.044	
109-99-9	Tetrahydrofuran	ND	2.1	0.29	ND	0.73	0.097	
108-88-3	Toluene	ND	2.1	0.28	ND	0.57	0.074	
156-60-5	trans-1,2-Dichloroethene	ND	2.1	0.32	ND	0.54	0.080	
10061-02-6	trans-1,3-Dichloropropene	ND	2.1	0.47	ND	0.47	0.10	
79-01-6	Trichloroethene	**1.8**	2.1	0.31	**0.33**	0.40	0.057	**J**
75-01-4	Vinyl Chloride	ND	2.1	0.24	ND	0.84	0.095	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
D = The reported result is from a dilution.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405291031** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-044

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/29/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/20 - 6/21/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			0.020 Liter(s)

Initial Pressure (psig): -2.18 Final Pressure (psig): 6.76

Container Dilution Factor: 1.71

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405291045** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-045

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/20/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): 6.49 Final Pressure (psig): 6.49

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	1.3	0.17	ND	0.23	0.030	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.3	0.19	ND	0.18	0.027	
79-00-5	1,1,2-Trichloroethane	ND	1.3	0.14	ND	0.23	0.025	
75-34-3	1,1-Dichloroethane	ND	1.3	0.20	ND	0.31	0.048	
75-35-4	1,1-Dichloroethene	ND	1.3	0.19	ND	0.32	0.047	
120-82-1	1,2,4-Trichlorobenzene	ND	1.3	0.33	ND	0.17	0.044	
95-63-6	1,2,4-Trimethylbenzene	ND	1.3	0.19	ND	0.25	0.038	
106-93-4	1,2-Dibromoethane (EDB)	ND	1.3	0.16	ND	0.16	0.020	
95-50-1	1,2-Dichlorobenzene	ND	1.3	0.20	ND	0.21	0.033	
107-06-2	1,2-Dichloroethane	ND	1.3	0.15	ND	0.31	0.036	
78-87-5	1,2-Dichloropropane	ND	1.3	0.17	ND	0.27	0.036	
108-67-8	1,3,5-Trimethylbenzene	ND	1.3	0.19	ND	0.25	0.039	
106-99-0	1,3-Butadiene	ND	1.3	0.22	ND	0.57	0.099	
541-73-1	1,3-Dichlorobenzene	ND	1.3	0.20	ND	0.21	0.033	
106-46-7	1,4-Dichlorobenzene	ND	1.3	0.21	ND	0.21	0.034	
123-91-1	1,4-Dioxane	ND	1.3	0.16	ND	0.35	0.044	
540-84-1	2,2,4-Trimethylpentane	ND	1.3	0.20	ND	0.27	0.043	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	ND	13	0.28	ND	4.2	0.093	
591-78-6	2-Hexanone	ND	1.3	0.17	ND	0.31	0.040	
67-63-0	2-Propanol	ND	2.5	0.55	ND	1.0	0.22	
107-05-1	3-Chloropropene	ND	1.3	0.18	ND	0.40	0.058	
622-96-8	4-Ethyltoluene	ND	1.3	0.21	ND	0.25	0.043	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405291045** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-045

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/20/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): 6.49 Final Pressure (psig): 6.49

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	1.3	0.18	ND	0.31	0.045	
67-64-1	Acetone	ND	13	3.0	ND	5.3	1.3	
100-44-7	alpha-Chlorotoluene	ND	1.3	0.30	ND	0.24	0.058	
71-43-2	Benzene	ND	1.3	0.19	ND	0.39	0.060	
75-27-4	Bromodichloromethane	ND	1.3	0.19	ND	0.19	0.029	
75-25-2	Bromoform	ND	1.3	0.28	ND	0.12	0.027	
74-83-9	Bromomethane	ND	1.3	0.19	ND	0.32	0.048	
75-15-0	Carbon Disulfide	ND	13	0.40	ND	4.0	0.13	
56-23-5	Carbon Tetrachloride	ND	1.3	0.19	ND	0.20	0.029	
108-90-7	Chlorobenzene	ND	1.3	0.18	ND	0.27	0.039	
75-00-3	Chloroethane	ND	1.3	0.17	ND	0.47	0.063	
67-66-3	Chloroform	ND	1.3	0.18	ND	0.26	0.036	
74-87-3	Chloromethane	ND	1.3	0.22	ND	0.61	0.10	
156-59-2	cis-1,2-Dichloroethene	ND	1.3	0.19	ND	0.32	0.047	
10061-01-5	cis-1,3-Dichloropropene	ND	1.3	0.21	ND	0.28	0.046	
98-82-8	Cumene	ND	1.3	0.19	ND	0.25	0.039	
110-82-7	Cyclohexane	ND	2.5	0.38	ND	0.73	0.11	
124-48-1	Dibromochloromethane	ND	1.3	0.18	ND	0.15	0.021	
64-17-5	Ethanol	ND	13	0.93	ND	6.6	0.49	
100-41-4	Ethyl Benzene	ND	1.3	0.19	ND	0.29	0.043	
75-69-4	Freon 11	**0.31**	1.3	0.20	**0.054**	0.22	0.036	**J**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405291045** ALS Sample ID: P2402249-045
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/20/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): 6.49 Final Pressure (psig): 6.49

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**0.58**	1.3	0.19	**0.075**	0.16	0.025	**J**
76-14-2	Freon 114	ND	1.3	0.21	ND	0.18	0.030	
75-71-8	Freon 12	ND	1.3	0.22	ND	0.25	0.044	
306-83-2	Freon 123	ND	1.3	0.60	ND	0.20	0.096	**X**
75-43-4	Freon 21	ND	1.3	0.60	ND	0.30	0.14	**X**
142-82-5	Heptane	ND	1.3	0.21	ND	0.31	0.052	
87-68-3	Hexachlorobutadiene	ND	1.3	0.28	ND	0.12	0.026	
110-54-3	Hexane	ND	1.3	0.28	ND	0.35	0.078	
179601-23-1	m,p-Xylene	ND	2.5	0.35	ND	0.58	0.081	
1634-04-4	Methyl tert-butyl ether	ND	1.3	0.16	ND	0.35	0.044	
75-09-2	Methylene Chloride	ND	1.3	0.38	ND	0.36	0.11	
95-47-6	o-Xylene	ND	1.3	0.19	ND	0.29	0.044	
103-65-1	Propylbenzene	ND	1.3	0.19	ND	0.25	0.039	
100-42-5	Styrene	ND	1.3	0.22	ND	0.29	0.051	
127-18-4	Tetrachloroethene	ND	1.3	0.17	ND	0.18	0.025	
109-99-9	Tetrahydrofuran	ND	1.3	0.17	ND	0.42	0.057	
108-88-3	Toluene	ND	1.3	0.16	ND	0.33	0.043	
156-60-5	trans-1,2-Dichloroethene	ND	1.3	0.19	ND	0.32	0.047	
10061-02-6	trans-1,3-Dichloropropene	ND	1.3	0.28	ND	0.28	0.061	
79-01-6	Trichloroethene	ND	1.3	0.18	ND	0.23	0.034	
75-01-4	Vinyl Chloride	ND	1.3	0.14	ND	0.49	0.056	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405291045** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-045

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/29/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/20/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			

Initial Pressure (psig): 6.49 Final Pressure (psig): 6.49

Container Dilution Factor: 1.00

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405291046** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-046

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/20/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.38 Final Pressure (psig): 6.70

Container Dilution Factor: 1.74

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	2.2	0.29	ND	0.40	0.053	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.2	0.32	ND	0.32	0.047	
79-00-5	1,1,2-Trichloroethane	ND	2.2	0.23	ND	0.40	0.043	
75-34-3	1,1-Dichloroethane	ND	2.2	0.34	ND	0.54	0.084	
75-35-4	1,1-Dichloroethene	ND	2.2	0.32	ND	0.55	0.081	
120-82-1	1,2,4-Trichlorobenzene	ND	2.2	0.57	ND	0.29	0.076	
95-63-6	1,2,4-Trimethylbenzene	ND	2.2	0.32	ND	0.44	0.066	
106-93-4	1,2-Dibromoethane (EDB)	ND	2.2	0.27	ND	0.28	0.035	
95-50-1	1,2-Dichlorobenzene	ND	2.2	0.34	ND	0.36	0.057	
107-06-2	1,2-Dichloroethane	ND	2.2	0.26	ND	0.54	0.063	
78-87-5	1,2-Dichloropropane	ND	2.2	0.29	ND	0.47	0.062	
108-67-8	1,3,5-Trimethylbenzene	ND	2.2	0.33	ND	0.44	0.068	
106-99-0	1,3-Butadiene	ND	2.2	0.38	ND	0.98	0.17	
541-73-1	1,3-Dichlorobenzene	ND	2.2	0.35	ND	0.36	0.058	
106-46-7	1,4-Dichlorobenzene	ND	2.2	0.36	ND	0.36	0.059	
123-91-1	1,4-Dioxane	ND	2.2	0.27	ND	0.60	0.076	
540-84-1	2,2,4-Trimethylpentane	ND	2.2	0.35	ND	0.47	0.075	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**2.8**	22	0.48	**0.95**	7.4	0.16	**J**
591-78-6	2-Hexanone	**0.44**	2.2	0.29	**0.11**	0.53	0.070	**J**
67-63-0	2-Propanol	ND	4.4	0.96	ND	1.8	0.39	
107-05-1	3-Chloropropene	ND	2.2	0.31	ND	0.70	0.10	
622-96-8	4-Ethyltoluene	ND	2.2	0.37	ND	0.44	0.075	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405291046** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-046

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/20/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.38 Final Pressure (psig): 6.70

Container Dilution Factor: 1.74

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	2.2	0.32	ND	0.53	0.078	
67-64-1	Acetone	**9.8**	22	5.2	**4.1**	9.2	2.2	**J**
100-44-7	alpha-Chlorotoluene	ND	2.2	0.52	ND	0.42	0.10	
71-43-2	Benzene	ND	2.2	0.33	ND	0.68	0.10	
75-27-4	Bromodichloromethane	ND	2.2	0.33	ND	0.32	0.050	
75-25-2	Bromoform	ND	2.2	0.48	ND	0.21	0.046	
74-83-9	Bromomethane	ND	2.2	0.32	ND	0.56	0.083	
75-15-0	Carbon Disulfide	ND	22	0.70	ND	7.0	0.22	
56-23-5	Carbon Tetrachloride	ND	2.2	0.32	ND	0.35	0.051	
108-90-7	Chlorobenzene	ND	2.2	0.31	ND	0.47	0.067	
75-00-3	Chloroethane	ND	2.2	0.29	ND	0.82	0.11	
67-66-3	Chloroform	**0.88**	2.2	0.31	**0.18**	0.45	0.063	**J**
74-87-3	Chloromethane	ND	2.2	0.37	ND	1.1	0.18	
156-59-2	cis-1,2-Dichloroethene	ND	2.2	0.33	ND	0.55	0.082	
10061-01-5	cis-1,3-Dichloropropene	ND	2.2	0.36	ND	0.48	0.080	
98-82-8	Cumene	ND	2.2	0.33	ND	0.44	0.068	
110-82-7	Cyclohexane	ND	4.4	0.65	ND	1.3	0.19	
124-48-1	Dibromochloromethane	ND	2.2	0.30	ND	0.26	0.036	
64-17-5	Ethanol	**8.0**	22	1.6	**4.3**	12	0.85	**J**
100-41-4	Ethyl Benzene	ND	2.2	0.33	ND	0.50	0.075	
75-69-4	Freon 11	**310**	2.2	0.35	**55**	0.39	0.063	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405291046** ALS Sample ID: P2402249-046
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/20/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.38 Final Pressure (psig): 6.70

Container Dilution Factor: 1.74

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**340**	2.2	0.33	**45**	0.28	0.043	
76-14-2	Freon 114	ND	2.2	0.37	ND	0.31	0.052	
75-71-8	Freon 12	**2.3**	2.2	0.38	**0.47**	0.44	0.077	
306-83-2	Freon 123	ND	2.2	1.0	ND	0.35	0.17	**X**
75-43-4	Freon 21	ND	2.2	1.0	ND	0.52	0.25	**X**
142-82-5	Heptane	ND	2.2	0.37	ND	0.53	0.090	
87-68-3	Hexachlorobutadiene	ND	2.2	0.48	ND	0.20	0.045	
110-54-3	Hexane	ND	2.2	0.48	ND	0.62	0.14	
179601-23-1	m,p-Xylene	ND	4.4	0.61	ND	1.0	0.14	
1634-04-4	Methyl tert-butyl ether	ND	2.2	0.27	ND	0.60	0.076	
75-09-2	Methylene Chloride	ND	2.2	0.65	ND	0.63	0.19	
95-47-6	o-Xylene	ND	2.2	0.33	ND	0.50	0.077	
103-65-1	Propylbenzene	ND	2.2	0.33	ND	0.44	0.068	
100-42-5	Styrene	ND	2.2	0.37	ND	0.51	0.088	
127-18-4	Tetrachloroethene	ND	2.2	0.30	ND	0.32	0.044	
109-99-9	Tetrahydrofuran	ND	2.2	0.29	ND	0.74	0.099	
108-88-3	Toluene	ND	2.2	0.28	ND	0.58	0.075	
156-60-5	trans-1,2-Dichloroethene	ND	2.2	0.32	ND	0.55	0.081	
10061-02-6	trans-1,3-Dichloropropene	ND	2.2	0.48	ND	0.48	0.11	
79-01-6	Trichloroethene	ND	2.2	0.31	ND	0.40	0.058	
75-01-4	Vinyl Chloride	ND	2.2	0.25	ND	0.85	0.097	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
X = See case narrative.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405291046** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-046

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/29/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/20/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			

Initial Pressure (psig): -2.38 Final Pressure (psig): 6.70

Container Dilution Factor: 1.74

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405291053** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-047

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/20/24 & 6/22/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.10 Liter(s)
Test Notes: 0.050 Liter(s)

Initial Pressure (psig): -2.41 Final Pressure (psig): 6.45

Container Dilution Factor: 1.72

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	8.6	1.1	ND	1.6	0.21	
79-34-5	1,1,2,2-Tetrachloroethane	ND	8.6	1.3	ND	1.3	0.19	
79-00-5	1,1,2-Trichloroethane	ND	8.6	0.93	ND	1.6	0.17	
75-34-3	1,1-Dichloroethane	ND	8.6	1.3	ND	2.1	0.33	
75-35-4	1,1-Dichloroethene	ND	8.6	1.3	ND	2.2	0.32	
120-82-1	1,2,4-Trichlorobenzene	ND	8.6	2.2	ND	1.2	0.30	
95-63-6	1,2,4-Trimethylbenzene	ND	8.6	1.3	ND	1.8	0.26	
106-93-4	1,2-Dibromoethane (EDB)	ND	8.6	1.1	ND	1.1	0.14	
95-50-1	1,2-Dichlorobenzene	ND	8.6	1.4	ND	1.4	0.23	
107-06-2	1,2-Dichloroethane	ND	8.6	1.0	ND	2.1	0.25	
78-87-5	1,2-Dichloropropane	ND	8.6	1.1	ND	1.9	0.25	
108-67-8	1,3,5-Trimethylbenzene	ND	8.6	1.3	ND	1.8	0.27	
106-99-0	1,3-Butadiene	ND	8.6	1.5	ND	3.9	0.68	
541-73-1	1,3-Dichlorobenzene	ND	8.6	1.4	ND	1.4	0.23	
106-46-7	1,4-Dichlorobenzene	ND	8.6	1.4	ND	1.4	0.23	
123-91-1	1,4-Dioxane	ND	8.6	1.1	ND	2.4	0.30	
540-84-1	2,2,4-Trimethylpentane	ND	8.6	1.4	ND	1.8	0.29	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**3.5**	86	1.9	**1.2**	29	0.64	**J**
591-78-6	2-Hexanone	ND	8.6	1.1	ND	2.1	0.28	
67-63-0	2-Propanol	ND	17	3.8	ND	7.0	1.5	
107-05-1	3-Chloropropene	ND	8.6	1.2	ND	2.7	0.40	
622-96-8	4-Ethyltoluene	ND	8.6	1.5	ND	1.8	0.30	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405291053** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-047

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/20/24 & 6/22/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.10 Liter(s)
Test Notes: 0.050 Liter(s)

Initial Pressure (psig): -2.41 Final Pressure (psig): 6.45

Container Dilution Factor: 1.72

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	8.6	1.3	ND	2.1	0.31	
67-64-1	Acetone	**22**	86	21	**9.1**	36	8.7	**J**
100-44-7	alpha-Chlorotoluene	ND	8.6	2.1	ND	1.7	0.40	
71-43-2	Benzene	ND	8.6	1.3	ND	2.7	0.41	
75-27-4	Bromodichloromethane	ND	8.6	1.3	ND	1.3	0.20	
75-25-2	Bromoform	ND	8.6	1.9	ND	0.83	0.18	
74-83-9	Bromomethane	ND	8.6	1.3	ND	2.2	0.33	
75-15-0	Carbon Disulfide	ND	86	2.8	ND	28	0.88	
56-23-5	Carbon Tetrachloride	ND	8.6	1.3	ND	1.4	0.20	
108-90-7	Chlorobenzene	ND	8.6	1.2	ND	1.9	0.27	
75-00-3	Chloroethane	ND	8.6	1.1	ND	3.3	0.43	
67-66-3	Chloroform	**4.9**	8.6	1.2	**1.0**	1.8	0.25	**J**
74-87-3	Chloromethane	ND	8.6	1.5	ND	4.2	0.72	
156-59-2	cis-1,2-Dichloroethene	ND	8.6	1.3	ND	2.2	0.33	
10061-01-5	cis-1,3-Dichloropropene	ND	8.6	1.4	ND	1.9	0.31	
98-82-8	Cumene	ND	8.6	1.3	ND	1.8	0.27	
110-82-7	Cyclohexane	ND	17	2.6	ND	5.0	0.75	
124-48-1	Dibromochloromethane	ND	8.6	1.2	ND	1.0	0.14	
64-17-5	Ethanol	ND	86	6.4	ND	46	3.4	
100-41-4	Ethyl Benzene	ND	8.6	1.3	ND	2.0	0.30	
75-69-4	Freon 11	**2,000**	17	2.8	**350**	3.1	0.50	**D**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
D = The reported result is from a dilution.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405291053** ALS Sample ID: P2402249-047
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/20/24 & 6/22/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.10 Liter(s)
Test Notes: 0.050 Liter(s)

Initial Pressure (psig): -2.41 Final Pressure (psig): 6.45

Container Dilution Factor: 1.72

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**2,300**	17	2.6	**300**	2.2	0.34	**D**
76-14-2	Freon 114	ND	8.6	1.4	ND	1.2	0.21	
75-71-8	Freon 12	**2.6**	8.6	1.5	**0.53**	1.7	0.30	**J**
306-83-2	Freon 123	ND	8.6	4.1	ND	1.4	0.66	**X**
75-43-4	Freon 21	ND	8.6	4.1	ND	2.0	0.98	**X**
142-82-5	Heptane	ND	8.6	1.5	ND	2.1	0.36	
87-68-3	Hexachlorobutadiene	ND	8.6	1.9	ND	0.81	0.18	
110-54-3	Hexane	ND	8.6	1.9	ND	2.4	0.54	
179601-23-1	m,p-Xylene	ND	17	2.4	ND	4.0	0.55	
1634-04-4	Methyl tert-butyl ether	ND	8.6	1.1	ND	2.4	0.30	
75-09-2	Methylene Chloride	ND	8.6	2.6	ND	2.5	0.74	
95-47-6	o-Xylene	ND	8.6	1.3	ND	2.0	0.31	
103-65-1	Propylbenzene	ND	8.6	1.3	ND	1.8	0.27	
100-42-5	Styrene	ND	8.6	1.5	ND	2.0	0.35	
127-18-4	Tetrachloroethene	ND	8.6	1.2	ND	1.3	0.18	
109-99-9	Tetrahydrofuran	ND	8.6	1.2	ND	2.9	0.39	
108-88-3	Toluene	ND	8.6	1.1	ND	2.3	0.30	
156-60-5	trans-1,2-Dichloroethene	ND	8.6	1.3	ND	2.2	0.32	
10061-02-6	trans-1,3-Dichloropropene	ND	8.6	1.9	ND	1.9	0.42	
79-01-6	Trichloroethene	**38**	8.6	1.2	**7.1**	1.6	0.23	
75-01-4	Vinyl Chloride	ND	8.6	0.98	ND	3.4	0.38	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
D = The reported result is from a dilution.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405291053** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-047

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/29/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/20/24 & 6/22/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.10 Liter(s)
Test Notes:			0.050 Liter(s)

Initial Pressure (psig): -2.41 Final Pressure (psig): 6.45

Container Dilution Factor: 1.72

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405291100** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-048

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: #N/A Date Analyzed: 6/20/24 & 6/22/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.020 Liter(s)
Test Notes: 0.015 Liter(s)

Initial Pressure (psig): -2.26 Final Pressure (psig): 7.43

Container Dilution Factor: 1.78

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	45	5.9	ND	8.2	1.1	
79-34-5	1,1,2,2-Tetrachloroethane	ND	45	6.6	ND	6.5	0.96	
79-00-5	1,1,2-Trichloroethane	ND	45	4.8	ND	8.2	0.88	
75-34-3	1,1-Dichloroethane	ND	45	6.9	ND	11	1.7	
75-35-4	1,1-Dichloroethene	ND	45	6.6	ND	11	1.7	
120-82-1	1,2,4-Trichlorobenzene	ND	45	12	ND	6.0	1.6	
95-63-6	1,2,4-Trimethylbenzene	ND	45	6.6	ND	9.1	1.3	
106-93-4	1,2-Dibromoethane (EDB)	ND	45	5.5	ND	5.8	0.72	
95-50-1	1,2-Dichlorobenzene	ND	45	7.0	ND	7.4	1.2	
107-06-2	1,2-Dichloroethane	ND	45	5.3	ND	11	1.3	
78-87-5	1,2-Dichloropropane	ND	45	5.9	ND	9.6	1.3	
108-67-8	1,3,5-Trimethylbenzene	ND	45	6.9	ND	9.1	1.4	
106-99-0	1,3-Butadiene	ND	45	7.8	ND	20	3.5	
541-73-1	1,3-Dichlorobenzene	ND	45	7.1	ND	7.4	1.2	
106-46-7	1,4-Dichlorobenzene	ND	45	7.3	ND	7.4	1.2	
123-91-1	1,4-Dioxane	ND	45	5.6	ND	12	1.6	
540-84-1	2,2,4-Trimethylpentane	ND	45	7.1	ND	9.5	1.5	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	ND	450	9.8	ND	150	3.3	
591-78-6	2-Hexanone	ND	45	5.9	ND	11	1.4	
67-63-0	2-Propanol	ND	89	20	ND	36	8.0	
107-05-1	3-Chloropropene	ND	45	6.4	ND	14	2.0	
622-96-8	4-Ethyltoluene	ND	45	7.6	ND	9.1	1.5	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405291100** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-048

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: #N/A Date Analyzed: 6/20/24 & 6/22/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.020 Liter(s)
Test Notes: 0.015 Liter(s)

Initial Pressure (psig): -2.26 Final Pressure (psig): 7.43

Container Dilution Factor: 1.78

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	45	6.5	ND	11	1.6	
67-64-1	Acetone	ND	450	110	ND	190	45	
100-44-7	alpha-Chlorotoluene	ND	45	11	ND	8.6	2.1	
71-43-2	Benzene	ND	45	6.9	ND	14	2.1	
75-27-4	Bromodichloromethane	ND	45	6.9	ND	6.6	1.0	
75-25-2	Bromoform	ND	45	9.8	ND	4.3	0.95	
74-83-9	Bromomethane	ND	45	6.6	ND	11	1.7	
75-15-0	Carbon Disulfide	ND	450	14	ND	140	4.6	
56-23-5	Carbon Tetrachloride	ND	45	6.6	ND	7.1	1.0	
108-90-7	Chlorobenzene	ND	45	6.3	ND	9.7	1.4	
75-00-3	Chloroethane	ND	45	5.9	ND	17	2.2	
67-66-3	Chloroform	**10**	45	6.3	**2.1**	9.1	1.3	**J**
74-87-3	Chloromethane	ND	45	7.7	ND	22	3.7	
156-59-2	cis-1,2-Dichloroethene	ND	45	6.7	ND	11	1.7	
10061-01-5	cis-1,3-Dichloropropene	ND	45	7.4	ND	9.8	1.6	
98-82-8	Cumene	ND	45	6.9	ND	9.1	1.4	
110-82-7	Cyclohexane	ND	89	13	ND	26	3.9	
124-48-1	Dibromochloromethane	ND	45	6.2	ND	5.2	0.73	
64-17-5	Ethanol	ND	450	33	ND	240	17	
100-41-4	Ethyl Benzene	ND	45	6.7	ND	10	1.5	
75-69-4	Freon 11	**6,500**	45	7.2	**1,200**	7.9	1.3	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405291100** ALS Sample ID: P2402249-048
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: #N/A Date Analyzed: 6/20/24 & 6/22/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.020 Liter(s)
Test Notes: 0.015 Liter(s)

Initial Pressure (psig): -2.26 Final Pressure (psig): 7.43

Container Dilution Factor: 1.78

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**6,900**	59	9.0	**900**	7.7	1.2	**D**
76-14-2	Freon 114	ND	45	7.5	ND	6.4	1.1	
75-71-8	Freon 12	ND	45	7.7	ND	9.0	1.6	
306-83-2	Freon 123	ND	45	21	ND	7.1	3.4	**X**
75-43-4	Freon 21	ND	45	21	ND	11	5.1	**X**
142-82-5	Heptane	ND	45	7.6	ND	11	1.8	
87-68-3	Hexachlorobutadiene	ND	45	9.8	ND	4.2	0.92	
110-54-3	Hexane	ND	45	9.8	ND	13	2.8	
179601-23-1	m,p-Xylene	ND	89	12	ND	20	2.9	
1634-04-4	Methyl tert-butyl ether	ND	45	5.6	ND	12	1.6	
75-09-2	Methylene Chloride	ND	45	13	ND	13	3.8	
95-47-6	o-Xylene	ND	45	6.9	ND	10	1.6	
103-65-1	Propylbenzene	ND	45	6.9	ND	9.1	1.4	
100-42-5	Styrene	ND	45	7.7	ND	10	1.8	
127-18-4	Tetrachloroethene	ND	45	6.1	ND	6.6	0.91	
109-99-9	Tetrahydrofuran	ND	45	6.0	ND	15	2.0	
108-88-3	Toluene	ND	45	5.8	ND	12	1.5	
156-60-5	trans-1,2-Dichloroethene	ND	45	6.6	ND	11	1.7	
10061-02-6	trans-1,3-Dichloropropene	ND	45	9.8	ND	9.8	2.2	
79-01-6	Trichloroethene	**6.8**	45	6.4	**1.3**	8.3	1.2	**J**
75-01-4	Vinyl Chloride	ND	45	5.1	ND	17	2.0	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
D = The reported result is from a dilution.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405291100** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-048

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/29/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	#N/A	Date Analyzed:	6/20/24 & 6/22/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.020 Liter(s)
Test Notes:			0.015 Liter(s)

Initial Pressure (psig): -2.26 Final Pressure (psig): 7.43

Container Dilution Factor: 1.78

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405291107** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-049

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/20/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:

Initial Pressure (psig): -2.37 Final Pressure (psig): 6.40

Container Dilution Factor: 1.71

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	8.6	1.1	ND	1.6	0.21	
79-34-5	1,1,2,2-Tetrachloroethane	ND	8.6	1.3	ND	1.2	0.18	
79-00-5	1,1,2-Trichloroethane	ND	8.6	0.92	ND	1.6	0.17	
75-34-3	1,1-Dichloroethane	ND	8.6	1.3	ND	2.1	0.33	
75-35-4	1,1-Dichloroethene	ND	8.6	1.3	ND	2.2	0.32	
120-82-1	1,2,4-Trichlorobenzene	ND	8.6	2.2	ND	1.2	0.30	
95-63-6	1,2,4-Trimethylbenzene	ND	8.6	1.3	ND	1.7	0.26	
106-93-4	1,2-Dibromoethane (EDB)	ND	8.6	1.1	ND	1.1	0.14	
95-50-1	1,2-Dichlorobenzene	ND	8.6	1.4	ND	1.4	0.22	
107-06-2	1,2-Dichloroethane	ND	8.6	1.0	ND	2.1	0.25	
78-87-5	1,2-Dichloropropane	ND	8.6	1.1	ND	1.9	0.24	
108-67-8	1,3,5-Trimethylbenzene	ND	8.6	1.3	ND	1.7	0.27	
106-99-0	1,3-Butadiene	ND	8.6	1.5	ND	3.9	0.68	
541-73-1	1,3-Dichlorobenzene	ND	8.6	1.4	ND	1.4	0.23	
106-46-7	1,4-Dichlorobenzene	ND	8.6	1.4	ND	1.4	0.23	
123-91-1	1,4-Dioxane	ND	8.6	1.1	ND	2.4	0.30	
540-84-1	2,2,4-Trimethylpentane	ND	8.6	1.4	ND	1.8	0.29	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**6.6**	86	1.9	**2.2**	29	0.64	**J**
591-78-6	2-Hexanone	ND	8.6	1.1	ND	2.1	0.28	
67-63-0	2-Propanol	ND	17	3.8	ND	7.0	1.5	
107-05-1	3-Chloropropene	ND	8.6	1.2	ND	2.7	0.39	
622-96-8	4-Ethyltoluene	ND	8.6	1.5	ND	1.7	0.30	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405291107** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-049

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/20/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:

Initial Pressure (psig): -2.37 Final Pressure (psig): 6.40

Container Dilution Factor: 1.71

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	8.6	1.2	ND	2.1	0.30	
67-64-1	Acetone	**23**	86	21	**9.7**	36	8.6	**J**
100-44-7	alpha-Chlorotoluene	ND	8.6	2.1	ND	1.7	0.40	
71-43-2	Benzene	**1.3**	8.6	1.3	**0.42**	2.7	0.41	**J**
75-27-4	Bromodichloromethane	ND	8.6	1.3	ND	1.3	0.20	
75-25-2	Bromoform	ND	8.6	1.9	ND	0.83	0.18	
74-83-9	Bromomethane	ND	8.6	1.3	ND	2.2	0.33	
75-15-0	Carbon Disulfide	ND	86	2.7	ND	27	0.88	
56-23-5	Carbon Tetrachloride	ND	8.6	1.3	ND	1.4	0.20	
108-90-7	Chlorobenzene	ND	8.6	1.2	ND	1.9	0.26	
75-00-3	Chloroethane	ND	8.6	1.1	ND	3.2	0.43	
67-66-3	Chloroform	**1.5**	8.6	1.2	**0.31**	1.8	0.25	**J**
74-87-3	Chloromethane	ND	8.6	1.5	ND	4.1	0.71	
156-59-2	cis-1,2-Dichloroethene	ND	8.6	1.3	ND	2.2	0.32	
10061-01-5	cis-1,3-Dichloropropene	ND	8.6	1.4	ND	1.9	0.31	
98-82-8	Cumene	ND	8.6	1.3	ND	1.7	0.27	
110-82-7	Cyclohexane	ND	17	2.6	ND	5.0	0.75	
124-48-1	Dibromochloromethane	ND	8.6	1.2	ND	1.0	0.14	
64-17-5	Ethanol	ND	86	6.3	ND	45	3.4	
100-41-4	Ethyl Benzene	ND	8.6	1.3	ND	2.0	0.30	
75-69-4	Freon 11	**1,300**	8.6	1.4	**240**	1.5	0.25	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405291107** ALS Sample ID: P2402249-049
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/20/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:

Initial Pressure (psig): -2.37 Final Pressure (psig): 6.40

Container Dilution Factor: 1.71

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**1,300**	8.6	1.3	**170**	1.1	0.17	
76-14-2	Freon 114	ND	8.6	1.4	ND	1.2	0.21	
75-71-8	Freon 12	**2.4**	8.6	1.5	**0.48**	1.7	0.30	**J**
306-83-2	Freon 123	**5.0**	8.6	4.1	**0.79**	1.4	0.66	**J, X**
75-43-4	Freon 21	ND	8.6	4.1	ND	2.0	0.98	**X**
142-82-5	Heptane	ND	8.6	1.5	ND	2.1	0.35	
87-68-3	Hexachlorobutadiene	ND	8.6	1.9	ND	0.80	0.18	
110-54-3	Hexane	**2.4**	8.6	1.9	**0.67**	2.4	0.53	**J**
179601-23-1	m,p-Xylene	ND	17	2.4	ND	3.9	0.55	
1634-04-4	Methyl tert-butyl ether	ND	8.6	1.1	ND	2.4	0.30	
75-09-2	Methylene Chloride	ND	8.6	2.6	ND	2.5	0.74	
95-47-6	o-Xylene	ND	8.6	1.3	ND	2.0	0.30	
103-65-1	Propylbenzene	ND	8.6	1.3	ND	1.7	0.27	
100-42-5	Styrene	ND	8.6	1.5	ND	2.0	0.35	
127-18-4	Tetrachloroethene	**1.2**	8.6	1.2	**0.18**	1.3	0.17	**J**
109-99-9	Tetrahydrofuran	ND	8.6	1.1	ND	2.9	0.39	
108-88-3	Toluene	**2.9**	8.6	1.1	**0.76**	2.3	0.30	**J**
156-60-5	trans-1,2-Dichloroethene	ND	8.6	1.3	ND	2.2	0.32	
10061-02-6	trans-1,3-Dichloropropene	ND	8.6	1.9	ND	1.9	0.41	
79-01-6	Trichloroethene	ND	8.6	1.2	ND	1.6	0.23	
75-01-4	Vinyl Chloride	ND	8.6	0.97	ND	3.3	0.38	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405291107** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-049

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/29/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/20/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.10 Liter(s)
Test Notes:			

Initial Pressure (psig): -2.37 Final Pressure (psig): 6.40

Container Dilution Factor: 1.71

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405291315** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-050

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/20/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.74 Final Pressure (psig): 7.13

Container Dilution Factor: 1.83

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	2.3	0.30	ND	0.42	0.055	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.3	0.34	ND	0.33	0.049	
79-00-5	1,1,2-Trichloroethane	ND	2.3	0.25	ND	0.42	0.045	
75-34-3	1,1-Dichloroethane	ND	2.3	0.36	ND	0.57	0.088	
75-35-4	1,1-Dichloroethene	ND	2.3	0.34	ND	0.58	0.085	
120-82-1	1,2,4-Trichlorobenzene	ND	2.3	0.59	ND	0.31	0.080	
95-63-6	1,2,4-Trimethylbenzene	ND	2.3	0.34	ND	0.47	0.069	
106-93-4	1,2-Dibromoethane (EDB)	ND	2.3	0.28	ND	0.30	0.037	
95-50-1	1,2-Dichlorobenzene	ND	2.3	0.36	ND	0.38	0.060	
107-06-2	1,2-Dichloroethane	ND	2.3	0.27	ND	0.57	0.067	
78-87-5	1,2-Dichloropropane	ND	2.3	0.30	ND	0.50	0.065	
108-67-8	1,3,5-Trimethylbenzene	ND	2.3	0.35	ND	0.47	0.072	
106-99-0	1,3-Butadiene	ND	2.3	0.40	ND	1.0	0.18	
541-73-1	1,3-Dichlorobenzene	ND	2.3	0.37	ND	0.38	0.061	
106-46-7	1,4-Dichlorobenzene	ND	2.3	0.38	ND	0.38	0.062	
123-91-1	1,4-Dioxane	ND	2.3	0.29	ND	0.64	0.080	
540-84-1	2,2,4-Trimethylpentane	ND	2.3	0.37	ND	0.49	0.078	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**4.5**	23	0.50	**1.5**	7.8	0.17	**J**
591-78-6	2-Hexanone	**0.42**	2.3	0.30	**0.10**	0.56	0.074	**J**
67-63-0	2-Propanol	ND	4.6	1.0	ND	1.9	0.41	
107-05-1	3-Chloropropene	ND	2.3	0.33	ND	0.73	0.11	
622-96-8	4-Ethyltoluene	ND	2.3	0.39	ND	0.47	0.079	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405291315** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-050

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/20/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.74 Final Pressure (psig): 7.13

Container Dilution Factor: 1.83

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	2.3	0.33	ND	0.56	0.082	
67-64-1	Acetone	**13**	23	5.5	**5.4**	9.6	2.3	**J**
100-44-7	alpha-Chlorotoluene	ND	2.3	0.55	ND	0.44	0.11	
71-43-2	Benzene	ND	2.3	0.35	ND	0.72	0.11	
75-27-4	Bromodichloromethane	ND	2.3	0.35	ND	0.34	0.053	
75-25-2	Bromoform	ND	2.3	0.50	ND	0.22	0.049	
74-83-9	Bromomethane	ND	2.3	0.34	ND	0.59	0.087	
75-15-0	Carbon Disulfide	ND	23	0.73	ND	7.3	0.24	
56-23-5	Carbon Tetrachloride	ND	2.3	0.34	ND	0.36	0.054	
108-90-7	Chlorobenzene	ND	2.3	0.32	ND	0.50	0.071	
75-00-3	Chloroethane	ND	2.3	0.30	ND	0.87	0.11	
67-66-3	Chloroform	**1.3**	2.3	0.32	**0.27**	0.47	0.067	**J**
74-87-3	Chloromethane	ND	2.3	0.39	ND	1.1	0.19	
156-59-2	cis-1,2-Dichloroethene	ND	2.3	0.34	ND	0.58	0.087	
10061-01-5	cis-1,3-Dichloropropene	ND	2.3	0.38	ND	0.50	0.084	
98-82-8	Cumene	ND	2.3	0.35	ND	0.47	0.072	
110-82-7	Cyclohexane	ND	4.6	0.69	ND	1.3	0.20	
124-48-1	Dibromochloromethane	ND	2.3	0.32	ND	0.27	0.038	
64-17-5	Ethanol	**11**	23	1.7	**6.1**	12	0.90	**J**
100-41-4	Ethyl Benzene	ND	2.3	0.34	ND	0.53	0.079	
75-69-4	Freon 11	**280**	2.3	0.37	**49**	0.41	0.066	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405291315** ALS Sample ID: P2402249-050
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/20/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.74 Final Pressure (psig): 7.13

Container Dilution Factor: 1.83

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**280**	2.3	0.35	**36**	0.30	0.045	
76-14-2	Freon 114	ND	2.3	0.38	ND	0.33	0.055	
75-71-8	Freon 12	**2.4**	2.3	0.40	**0.48**	0.46	0.081	
306-83-2	Freon 123	ND	2.3	1.1	ND	0.37	0.18	**X**
75-43-4	Freon 21	ND	2.3	1.1	ND	0.54	0.26	**X**
142-82-5	Heptane	ND	2.3	0.39	ND	0.56	0.095	
87-68-3	Hexachlorobutadiene	ND	2.3	0.50	ND	0.21	0.047	
110-54-3	Hexane	ND	2.3	0.50	ND	0.65	0.14	
179601-23-1	m,p-Xylene	ND	4.6	0.64	ND	1.1	0.15	
1634-04-4	Methyl tert-butyl ether	ND	2.3	0.29	ND	0.63	0.080	
75-09-2	Methylene Chloride	ND	2.3	0.69	ND	0.66	0.20	
95-47-6	o-Xylene	ND	2.3	0.35	ND	0.53	0.081	
103-65-1	Propylbenzene	ND	2.3	0.35	ND	0.47	0.072	
100-42-5	Styrene	ND	2.3	0.39	ND	0.54	0.092	
127-18-4	Tetrachloroethene	ND	2.3	0.32	ND	0.34	0.047	
109-99-9	Tetrahydrofuran	ND	2.3	0.31	ND	0.78	0.10	
108-88-3	Toluene	ND	2.3	0.30	ND	0.61	0.079	
156-60-5	trans-1,2-Dichloroethene	ND	2.3	0.34	ND	0.58	0.085	
10061-02-6	trans-1,3-Dichloropropene	ND	2.3	0.50	ND	0.50	0.11	
79-01-6	Trichloroethene	**0.40**	2.3	0.33	**0.075**	0.43	0.061	**J**
75-01-4	Vinyl Chloride	ND	2.3	0.26	ND	0.90	0.10	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405291315** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-050

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/29/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/20/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			

Initial Pressure (psig): -2.74 Final Pressure (psig): 7.13

Container Dilution Factor: 1.83

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405291321** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-051

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: #N/A Date Analyzed: 6/20/24 & 6/22/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.10 Liter(s)
Test Notes: 0.050 Liter(s)

Initial Pressure (psig): -3.00 Final Pressure (psig): 6.23

Container Dilution Factor: 1.79

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	9.0	1.2	ND	1.6	0.22	
79-34-5	1,1,2,2-Tetrachloroethane	ND	9.0	1.3	ND	1.3	0.19	
79-00-5	1,1,2-Trichloroethane	ND	9.0	0.97	ND	1.6	0.18	
75-34-3	1,1-Dichloroethane	ND	9.0	1.4	ND	2.2	0.35	
75-35-4	1,1-Dichloroethene	ND	9.0	1.3	ND	2.3	0.33	
120-82-1	1,2,4-Trichlorobenzene	ND	9.0	2.3	ND	1.2	0.31	
95-63-6	1,2,4-Trimethylbenzene	ND	9.0	1.3	ND	1.8	0.27	
106-93-4	1,2-Dibromoethane (EDB)	ND	9.0	1.1	ND	1.2	0.14	
95-50-1	1,2-Dichlorobenzene	ND	9.0	1.4	ND	1.5	0.24	
107-06-2	1,2-Dichloroethane	ND	9.0	1.1	ND	2.2	0.26	
78-87-5	1,2-Dichloropropane	ND	9.0	1.2	ND	1.9	0.26	
108-67-8	1,3,5-Trimethylbenzene	ND	9.0	1.4	ND	1.8	0.28	
106-99-0	1,3-Butadiene	ND	9.0	1.6	ND	4.0	0.71	
541-73-1	1,3-Dichlorobenzene	ND	9.0	1.4	ND	1.5	0.24	
106-46-7	1,4-Dichlorobenzene	ND	9.0	1.5	ND	1.5	0.24	
123-91-1	1,4-Dioxane	ND	9.0	1.1	ND	2.5	0.31	
540-84-1	2,2,4-Trimethylpentane	ND	9.0	1.4	ND	1.9	0.31	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**5.5**	90	2.0	**1.9**	30	0.67	**J**
591-78-6	2-Hexanone	ND	9.0	1.2	ND	2.2	0.29	
67-63-0	2-Propanol	ND	18	3.9	ND	7.3	1.6	
107-05-1	3-Chloropropene	ND	9.0	1.3	ND	2.9	0.41	
622-96-8	4-Ethyltoluene	ND	9.0	1.5	ND	1.8	0.31	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405291321** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-051

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: #N/A Date Analyzed: 6/20/24 & 6/22/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.10 Liter(s)
Test Notes: 0.050 Liter(s)

Initial Pressure (psig): -3.00 Final Pressure (psig): 6.23

Container Dilution Factor: 1.79

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	9.0	1.3	ND	2.2	0.32	
67-64-1	Acetone	**24**	90	21	**10**	38	9.0	**J**
100-44-7	alpha-Chlorotoluene	ND	9.0	2.1	ND	1.7	0.42	
71-43-2	Benzene	ND	9.0	1.4	ND	2.8	0.43	
75-27-4	Bromodichloromethane	ND	9.0	1.4	ND	1.3	0.21	
75-25-2	Bromoform	ND	9.0	2.0	ND	0.87	0.19	
74-83-9	Bromomethane	ND	9.0	1.3	ND	2.3	0.34	
75-15-0	Carbon Disulfide	ND	90	2.9	ND	29	0.92	
56-23-5	Carbon Tetrachloride	ND	9.0	1.3	ND	1.4	0.21	
108-90-7	Chlorobenzene	ND	9.0	1.3	ND	1.9	0.28	
75-00-3	Chloroethane	ND	9.0	1.2	ND	3.4	0.45	
67-66-3	Chloroform	**4.6**	9.0	1.3	**0.94**	1.8	0.26	**J**
74-87-3	Chloromethane	ND	9.0	1.5	ND	4.3	0.75	
156-59-2	cis-1,2-Dichloroethene	ND	9.0	1.3	ND	2.3	0.34	
10061-01-5	cis-1,3-Dichloropropene	ND	9.0	1.5	ND	2.0	0.33	
98-82-8	Cumene	ND	9.0	1.4	ND	1.8	0.28	
110-82-7	Cyclohexane	ND	18	2.7	ND	5.2	0.78	
124-48-1	Dibromochloromethane	ND	9.0	1.3	ND	1.1	0.15	
64-17-5	Ethanol	ND	90	6.6	ND	48	3.5	
100-41-4	Ethyl Benzene	ND	9.0	1.3	ND	2.1	0.31	
75-69-4	Freon 11	**1,500**	9.0	1.4	**260**	1.6	0.26	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405291321** ALS Sample ID: P2402249-051
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: #N/A Date Analyzed: 6/20/24 & 6/22/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.10 Liter(s)
Test Notes: 0.050 Liter(s)

Initial Pressure (psig): -3.00 Final Pressure (psig): 6.23

Container Dilution Factor: 1.79

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**1,500**	18	2.7	**190**	2.3	0.36	**D**
76-14-2	Freon 114	ND	9.0	1.5	ND	1.3	0.22	
75-71-8	Freon 12	**2.3**	9.0	1.6	**0.47**	1.8	0.32	**J**
306-83-2	Freon 123	ND	9.0	4.3	ND	1.4	0.69	**X**
75-43-4	Freon 21	ND	9.0	4.3	ND	2.1	1.0	**X**
142-82-5	Heptane	ND	9.0	1.5	ND	2.2	0.37	
87-68-3	Hexachlorobutadiene	ND	9.0	2.0	ND	0.84	0.18	
110-54-3	Hexane	ND	9.0	2.0	ND	2.5	0.56	
179601-23-1	m,p-Xylene	ND	18	2.5	ND	4.1	0.58	
1634-04-4	Methyl tert-butyl ether	ND	9.0	1.1	ND	2.5	0.31	
75-09-2	Methylene Chloride	ND	9.0	2.7	ND	2.6	0.77	
95-47-6	o-Xylene	ND	9.0	1.4	ND	2.1	0.32	
103-65-1	Propylbenzene	ND	9.0	1.4	ND	1.8	0.28	
100-42-5	Styrene	ND	9.0	1.5	ND	2.1	0.36	
127-18-4	Tetrachloroethene	ND	9.0	1.2	ND	1.3	0.18	
109-99-9	Tetrahydrofuran	ND	9.0	1.2	ND	3.0	0.41	
108-88-3	Toluene	ND	9.0	1.2	ND	2.4	0.31	
156-60-5	trans-1,2-Dichloroethene	ND	9.0	1.3	ND	2.3	0.33	
10061-02-6	trans-1,3-Dichloropropene	ND	9.0	2.0	ND	2.0	0.43	
79-01-6	Trichloroethene	**1.7**	9.0	1.3	**0.32**	1.7	0.24	**J**
75-01-4	Vinyl Chloride	ND	9.0	1.0	ND	3.5	0.40	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
D = The reported result is from a dilution.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405291321** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-051

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/29/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	#N/A	Date Analyzed:	6/20/24 & 6/22/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.10 Liter(s)
Test Notes:			0.050 Liter(s)

Initial Pressure (psig): -3.00 Final Pressure (psig): 6.23

Container Dilution Factor: 1.79

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405291328** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-052

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/24/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.0050 Liter(s)
Test Notes:

Initial Pressure (psig): -3.26 Final Pressure (psig): 6.30

Container Dilution Factor: 1.84

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	180	24	ND	34	4.5	
79-34-5	1,1,2,2-Tetrachloroethane	ND	180	27	ND	27	4.0	
79-00-5	1,1,2-Trichloroethane	ND	180	20	ND	34	3.6	
75-34-3	1,1-Dichloroethane	ND	180	29	ND	45	7.1	
75-35-4	1,1-Dichloroethene	ND	180	27	ND	46	6.9	
120-82-1	1,2,4-Trichlorobenzene	ND	180	48	ND	25	6.4	
95-63-6	1,2,4-Trimethylbenzene	ND	180	27	ND	37	5.5	
106-93-4	1,2-Dibromoethane (EDB)	ND	180	23	ND	24	3.0	
95-50-1	1,2-Dichlorobenzene	ND	180	29	ND	31	4.8	
107-06-2	1,2-Dichloroethane	ND	180	22	ND	45	5.4	
78-87-5	1,2-Dichloropropane	ND	180	24	ND	40	5.3	
108-67-8	1,3,5-Trimethylbenzene	ND	180	28	ND	37	5.8	
106-99-0	1,3-Butadiene	ND	180	32	ND	83	15	
541-73-1	1,3-Dichlorobenzene	ND	180	29	ND	31	4.9	
106-46-7	1,4-Dichlorobenzene	ND	180	30	ND	31	5.0	
123-91-1	1,4-Dioxane	ND	180	23	ND	51	6.4	
540-84-1	2,2,4-Trimethylpentane	ND	180	29	ND	39	6.3	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	ND	1,800	40	ND	620	14	
591-78-6	2-Hexanone	ND	180	24	ND	45	5.9	
67-63-0	2-Propanol	ND	370	81	ND	150	33	
107-05-1	3-Chloropropene	ND	180	26	ND	59	8.5	
622-96-8	4-Ethyltoluene	ND	180	31	ND	37	6.4	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405291328** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-052

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/24/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.0050 Liter(s)
Test Notes:

Initial Pressure (psig): -3.26 Final Pressure (psig): 6.30

Container Dilution Factor: 1.84

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	180	27	ND	45	6.6	
67-64-1	Acetone	ND	1,800	440	ND	770	190	
100-44-7	alpha-Chlorotoluene	ND	180	44	ND	36	8.5	
71-43-2	Benzene	ND	180	28	ND	58	8.9	
75-27-4	Bromodichloromethane	ND	180	28	ND	27	4.2	
75-25-2	Bromoform	ND	180	40	ND	18	3.9	
74-83-9	Bromomethane	ND	180	27	ND	47	7.0	
75-15-0	Carbon Disulfide	ND	1,800	59	ND	590	19	
56-23-5	Carbon Tetrachloride	ND	180	27	ND	29	4.3	
108-90-7	Chlorobenzene	ND	180	26	ND	40	5.7	
75-00-3	Chloroethane	ND	180	24	ND	70	9.2	
67-66-3	Chloroform	ND	180	26	ND	38	5.4	
74-87-3	Chloromethane	ND	180	32	ND	89	15	
156-59-2	cis-1,2-Dichloroethene	ND	180	28	ND	46	7.0	
10061-01-5	cis-1,3-Dichloropropene	ND	180	31	ND	41	6.7	
98-82-8	Cumene	ND	180	28	ND	37	5.8	
110-82-7	Cyclohexane	ND	370	55	ND	110	16	
124-48-1	Dibromochloromethane	ND	180	26	ND	22	3.0	
64-17-5	Ethanol	ND	1,800	140	ND	980	72	
100-41-4	Ethyl Benzene	ND	180	28	ND	42	6.4	
75-69-4	Freon 11	**14,000**	180	30	**2,500**	33	5.3	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405291328** ALS Sample ID: P2402249-052
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/24/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.0050 Liter(s)
Test Notes:

Initial Pressure (psig): -3.26 Final Pressure (psig): 6.30

Container Dilution Factor: 1.84

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**19,000**	180	28	**2,500**	24	3.7	
76-14-2	Freon 114	ND	180	31	ND	26	4.4	
75-71-8	Freon 12	ND	180	32	ND	37	6.5	
306-83-2	Freon 123	ND	180	88	ND	29	14	**X**
75-43-4	Freon 21	ND	180	88	ND	44	21	**X**
142-82-5	Heptane	ND	180	31	ND	45	7.6	
87-68-3	Hexachlorobutadiene	ND	180	40	ND	17	3.8	
110-54-3	Hexane	ND	180	40	ND	52	11	
179601-23-1	m,p-Xylene	ND	370	52	ND	85	12	
1634-04-4	Methyl tert-butyl ether	ND	180	23	ND	51	6.4	
75-09-2	Methylene Chloride	ND	180	55	ND	53	16	
95-47-6	o-Xylene	ND	180	28	ND	42	6.5	
103-65-1	Propylbenzene	ND	180	28	ND	37	5.8	
100-42-5	Styrene	ND	180	32	ND	43	7.4	
127-18-4	Tetrachloroethene	ND	180	25	ND	27	3.7	
109-99-9	Tetrahydrofuran	ND	180	25	ND	62	8.4	
108-88-3	Toluene	ND	180	24	ND	49	6.3	
156-60-5	trans-1,2-Dichloroethene	ND	180	27	ND	46	6.9	
10061-02-6	trans-1,3-Dichloropropene	ND	180	40	ND	41	8.9	
79-01-6	Trichloroethene	ND	180	26	ND	34	4.9	
75-01-4	Vinyl Chloride	ND	180	21	ND	72	8.2	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405291328** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-052

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/29/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/24/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.0050 Liter(s)
Test Notes:			

Initial Pressure (psig): -3.26 Final Pressure (psig): 6.30

Container Dilution Factor: 1.84

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405291345** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-053

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/20/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.90 Final Pressure (psig): 6.40

Container Dilution Factor: 1.79

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	2.2	0.30	ND	0.41	0.054	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.2	0.33	ND	0.33	0.048	
79-00-5	1,1,2-Trichloroethane	**0.44**	2.2	0.24	**0.080**	0.41	0.044	**J**
75-34-3	1,1-Dichloroethane	ND	2.2	0.35	ND	0.55	0.086	
75-35-4	1,1-Dichloroethene	ND	2.2	0.33	ND	0.56	0.084	
120-82-1	1,2,4-Trichlorobenzene	ND	2.2	0.58	ND	0.30	0.078	
95-63-6	1,2,4-Trimethylbenzene	**330**	2.2	0.33	**68**	0.46	0.067	
106-93-4	1,2-Dibromoethane (EDB)	ND	2.2	0.28	ND	0.29	0.036	
95-50-1	1,2-Dichlorobenzene	ND	2.2	0.35	ND	0.37	0.059	
107-06-2	1,2-Dichloroethane	ND	2.2	0.26	ND	0.55	0.065	
78-87-5	1,2-Dichloropropane	ND	2.2	0.30	ND	0.48	0.064	
108-67-8	1,3,5-Trimethylbenzene	**150**	2.2	0.34	**31**	0.46	0.070	
106-99-0	1,3-Butadiene	ND	2.2	0.39	ND	1.0	0.18	
541-73-1	1,3-Dichlorobenzene	ND	2.2	0.36	ND	0.37	0.060	
106-46-7	1,4-Dichlorobenzene	ND	2.2	0.37	ND	0.37	0.061	
123-91-1	1,4-Dioxane	**4.0**	2.2	0.28	**1.1**	0.62	0.078	
540-84-1	2,2,4-Trimethylpentane	ND	2.2	0.36	ND	0.48	0.077	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**65**	22	0.49	**22**	7.6	0.17	
591-78-6	2-Hexanone	**19**	2.2	0.30	**4.6**	0.55	0.072	
67-63-0	2-Propanol	**27**	4.5	0.98	**11**	1.8	0.40	
107-05-1	3-Chloropropene	ND	2.2	0.32	ND	0.72	0.10	
622-96-8	4-Ethyltoluene	**26**	2.2	0.38	**5.3**	0.46	0.077	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405291345** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-053

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/20/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.90 Final Pressure (psig): 6.40

Container Dilution Factor: 1.79

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	**5.7**	2.2	0.33	**1.4**	0.55	0.080	
67-64-1	Acetone	**180**	22	5.4	**76**	9.4	2.3	
100-44-7	alpha-Chlorotoluene	ND	2.2	0.54	ND	0.43	0.10	
71-43-2	Benzene	**0.85**	2.2	0.34	**0.26**	0.70	0.11	**J**
75-27-4	Bromodichloromethane	ND	2.2	0.34	ND	0.33	0.051	
75-25-2	Bromoform	ND	2.2	0.49	ND	0.22	0.048	
74-83-9	Bromomethane	**0.59**	2.2	0.33	**0.15**	0.58	0.085	**J**
75-15-0	Carbon Disulfide	ND	22	0.72	ND	7.2	0.23	
56-23-5	Carbon Tetrachloride	ND	2.2	0.33	ND	0.36	0.053	
108-90-7	Chlorobenzene	ND	2.2	0.32	ND	0.49	0.069	
75-00-3	Chloroethane	**0.42**	2.2	0.30	**0.16**	0.85	0.11	**J**
67-66-3	Chloroform	**1.6**	2.2	0.32	**0.33**	0.46	0.065	**J**
74-87-3	Chloromethane	**1.5**	2.2	0.38	**0.75**	1.1	0.19	**J**
156-59-2	cis-1,2-Dichloroethene	ND	2.2	0.34	ND	0.56	0.085	
10061-01-5	cis-1,3-Dichloropropene	ND	2.2	0.37	ND	0.49	0.082	
98-82-8	Cumene	**4.9**	2.2	0.34	**1.0**	0.46	0.070	
110-82-7	Cyclohexane	ND	4.5	0.67	ND	1.3	0.20	
124-48-1	Dibromochloromethane	ND	2.2	0.31	ND	0.26	0.037	
64-17-5	Ethanol	ND	22	1.7	ND	12	0.88	
100-41-4	Ethyl Benzene	**6.8**	2.2	0.34	**1.6**	0.52	0.077	
75-69-4	Freon 11	**320**	2.2	0.36	**56**	0.40	0.065	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405291345** ALS Sample ID: P2402249-053
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/20/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.90 Final Pressure (psig): 6.40

Container Dilution Factor: 1.79

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**370**	2.2	0.34	**48**	0.29	0.044	
76-14-2	Freon 114	ND	2.2	0.38	ND	0.32	0.054	
75-71-8	Freon 12	**2.3**	2.2	0.39	**0.46**	0.45	0.079	
306-83-2	Freon 123	**10**	2.2	1.1	**1.6**	0.36	0.17	**X**
75-43-4	Freon 21	ND	2.2	1.1	ND	0.53	0.26	**X**
142-82-5	Heptane	**2.3**	2.2	0.38	**0.56**	0.55	0.093	
87-68-3	Hexachlorobutadiene	ND	2.2	0.49	ND	0.21	0.046	
110-54-3	Hexane	**1.2**	2.2	0.49	**0.33**	0.64	0.14	**J**
179601-23-1	m,p-Xylene	**34**	4.5	0.63	**7.8**	1.0	0.14	
1634-04-4	Methyl tert-butyl ether	**0.90**	2.2	0.28	**0.25**	0.62	0.078	**J**
75-09-2	Methylene Chloride	ND	2.2	0.67	ND	0.64	0.19	
95-47-6	o-Xylene	**7.2**	2.2	0.34	**1.7**	0.52	0.079	
103-65-1	Propylbenzene	**9.9**	2.2	0.34	**2.0**	0.46	0.070	
100-42-5	Styrene	**1.2**	2.2	0.38	**0.28**	0.53	0.090	**J**
127-18-4	Tetrachloroethene	**1.7**	2.2	0.31	**0.25**	0.33	0.046	**J**
109-99-9	Tetrahydrofuran	**3.3**	2.2	0.30	**1.1**	0.76	0.10	
108-88-3	Toluene	**3.3**	2.2	0.29	**0.88**	0.59	0.077	
156-60-5	trans-1,2-Dichloroethene	ND	2.2	0.33	ND	0.56	0.084	
10061-02-6	trans-1,3-Dichloropropene	ND	2.2	0.49	ND	0.49	0.11	
79-01-6	Trichloroethene	**0.39**	2.2	0.32	**0.072**	0.42	0.060	**J**
75-01-4	Vinyl Chloride	ND	2.2	0.26	ND	0.88	0.10	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405291345** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-053

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/29/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/20/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			

Initial Pressure (psig): -2.90 Final Pressure (psig): 6.40

Container Dilution Factor: 1.79

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405291352** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-054

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: #N/A Date Analyzed: 6/20/24 & 6/22/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.040 Liter(s)

Initial Pressure (psig): -1.96 Final Pressure (psig): 7.40

Container Dilution Factor: 1.73

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	2.2	0.29	ND	0.40	0.052	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.2	0.32	ND	0.32	0.047	
79-00-5	1,1,2-Trichloroethane	ND	2.2	0.23	ND	0.40	0.043	
75-34-3	1,1-Dichloroethane	ND	2.2	0.34	ND	0.53	0.083	
75-35-4	1,1-Dichloroethene	ND	2.2	0.32	ND	0.55	0.081	
120-82-1	1,2,4-Trichlorobenzene	ND	2.2	0.56	ND	0.29	0.076	
95-63-6	1,2,4-Trimethylbenzene	**0.81**	2.2	0.32	**0.17**	0.44	0.065	**J**
106-93-4	1,2-Dibromoethane (EDB)	ND	2.2	0.27	ND	0.28	0.035	
95-50-1	1,2-Dichlorobenzene	ND	2.2	0.34	ND	0.36	0.057	
107-06-2	1,2-Dichloroethane	ND	2.2	0.26	ND	0.53	0.063	
78-87-5	1,2-Dichloropropane	ND	2.2	0.29	ND	0.47	0.062	
108-67-8	1,3,5-Trimethylbenzene	ND	2.2	0.33	ND	0.44	0.068	
106-99-0	1,3-Butadiene	ND	2.2	0.38	ND	0.98	0.17	
541-73-1	1,3-Dichlorobenzene	ND	2.2	0.35	ND	0.36	0.058	
106-46-7	1,4-Dichlorobenzene	ND	2.2	0.35	ND	0.36	0.059	
123-91-1	1,4-Dioxane	**5.8**	2.2	0.27	**1.6**	0.60	0.076	
540-84-1	2,2,4-Trimethylpentane	ND	2.2	0.35	ND	0.46	0.074	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**5.9**	22	0.48	**2.0**	7.3	0.16	**J**
591-78-6	2-Hexanone	**1.0**	2.2	0.29	**0.24**	0.53	0.070	**J**
67-63-0	2-Propanol	**6.7**	4.3	0.95	**2.7**	1.8	0.39	
107-05-1	3-Chloropropene	ND	2.2	0.31	ND	0.69	0.10	
622-96-8	4-Ethyltoluene	ND	2.2	0.37	ND	0.44	0.075	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405291352** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-054

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: #N/A Date Analyzed: 6/20/24 & 6/22/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.040 Liter(s)

Initial Pressure (psig): -1.96 Final Pressure (psig): 7.40

Container Dilution Factor: 1.73

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	**1.8**	2.2	0.32	**0.44**	0.53	0.077	**J**
67-64-1	Acetone	**38**	22	5.2	**16**	9.1	2.2	
100-44-7	alpha-Chlorotoluene	ND	2.2	0.52	ND	0.42	0.10	
71-43-2	Benzene	**1.6**	2.2	0.33	**0.51**	0.68	0.10	**J**
75-27-4	Bromodichloromethane	ND	2.2	0.33	ND	0.32	0.050	
75-25-2	Bromoform	ND	2.2	0.48	ND	0.21	0.046	
74-83-9	Bromomethane	ND	2.2	0.32	ND	0.56	0.082	
75-15-0	Carbon Disulfide	**280**	22	0.69	**89**	6.9	0.22	
56-23-5	Carbon Tetrachloride	ND	2.2	0.32	ND	0.34	0.051	
108-90-7	Chlorobenzene	ND	2.2	0.31	ND	0.47	0.067	
75-00-3	Chloroethane	ND	2.2	0.29	ND	0.82	0.11	
67-66-3	Chloroform	**3.9**	2.2	0.31	**0.79**	0.44	0.063	
74-87-3	Chloromethane	ND	2.2	0.37	ND	1.0	0.18	
156-59-2	cis-1,2-Dichloroethene	ND	2.2	0.32	ND	0.55	0.082	
10061-01-5	cis-1,3-Dichloropropene	ND	2.2	0.36	ND	0.48	0.079	
98-82-8	Cumene	ND	2.2	0.33	ND	0.44	0.068	
110-82-7	Cyclohexane	**0.76**	4.3	0.65	**0.22**	1.3	0.19	**J**
124-48-1	Dibromochloromethane	ND	2.2	0.30	ND	0.25	0.036	
64-17-5	Ethanol	**25**	22	1.6	**14**	11	0.85	
100-41-4	Ethyl Benzene	**0.74**	2.2	0.32	**0.17**	0.50	0.075	**J**
75-69-4	Freon 11	**520**	22	3.5	**93**	3.8	0.62	**D**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
D = The reported result is from a dilution.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405291352** ALS Sample ID: P2402249-054
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: #N/A Date Analyzed: 6/20/24 & 6/22/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.040 Liter(s)

Initial Pressure (psig): -1.96 Final Pressure (psig): 7.40

Container Dilution Factor: 1.73

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**870**	22	3.3	**110**	2.8	0.43	**D**
76-14-2	Freon 114	ND	2.2	0.36	ND	0.31	0.052	
75-71-8	Freon 12	**2.3**	2.2	0.38	**0.47**	0.44	0.076	
306-83-2	Freon 123	**15**	2.2	1.0	**2.4**	0.35	0.17	**X**
75-43-4	Freon 21	ND	2.2	1.0	ND	0.51	0.25	**X**
142-82-5	Heptane	**0.77**	2.2	0.37	**0.19**	0.53	0.090	**J**
87-68-3	Hexachlorobutadiene	ND	2.2	0.48	ND	0.20	0.045	
110-54-3	Hexane	ND	2.2	0.48	ND	0.61	0.14	
179601-23-1	m,p-Xylene	**2.4**	4.3	0.61	**0.56**	1.0	0.14	**J**
1634-04-4	Methyl tert-butyl ether	ND	2.2	0.27	ND	0.60	0.076	
75-09-2	Methylene Chloride	**1.3**	2.2	0.65	**0.38**	0.62	0.19	**J**
95-47-6	o-Xylene	**1.2**	2.2	0.33	**0.28**	0.50	0.077	**J**
103-65-1	Propylbenzene	ND	2.2	0.33	ND	0.44	0.068	
100-42-5	Styrene	ND	2.2	0.37	ND	0.51	0.087	
127-18-4	Tetrachloroethene	**0.42**	2.2	0.30	**0.061**	0.32	0.044	**J**
109-99-9	Tetrahydrofuran	**0.47**	2.2	0.29	**0.16**	0.73	0.098	**J**
108-88-3	Toluene	**14**	2.2	0.28	**3.6**	0.57	0.075	
156-60-5	trans-1,2-Dichloroethene	ND	2.2	0.32	ND	0.55	0.081	
10061-02-6	trans-1,3-Dichloropropene	ND	2.2	0.48	ND	0.48	0.10	
79-01-6	Trichloroethene	**0.67**	2.2	0.31	**0.12**	0.40	0.058	**J**
75-01-4	Vinyl Chloride	ND	2.2	0.25	ND	0.85	0.096	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
D = The reported result is from a dilution.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405291352** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-054

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/29/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	#N/A	Date Analyzed:	6/20/24 & 6/22/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			0.040 Liter(s)

Initial Pressure (psig): -1.96 Final Pressure (psig): 7.40

Container Dilution Factor: 1.73

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405291400** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-055

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: #N/A Date Analyzed: 6/20/24 & 6/22/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.050 Liter(s)
Test Notes: 0.025 Liter(s)

Initial Pressure (psig): -2.94 Final Pressure (psig): 7.30

Container Dilution Factor: 1.87

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	19	2.5	ND	3.4	0.45	
79-34-5	1,1,2,2-Tetrachloroethane	ND	19	2.8	ND	2.7	0.40	
79-00-5	1,1,2-Trichloroethane	ND	19	2.0	ND	3.4	0.37	
75-34-3	1,1-Dichloroethane	ND	19	2.9	ND	4.6	0.72	
75-35-4	1,1-Dichloroethene	ND	19	2.8	ND	4.7	0.70	
120-82-1	1,2,4-Trichlorobenzene	ND	19	4.9	ND	2.5	0.66	
95-63-6	1,2,4-Trimethylbenzene	ND	19	2.8	ND	3.8	0.56	
106-93-4	1,2-Dibromoethane (EDB)	ND	19	2.3	ND	2.4	0.30	
95-50-1	1,2-Dichlorobenzene	ND	19	3.0	ND	3.1	0.49	
107-06-2	1,2-Dichloroethane	ND	19	2.2	ND	4.6	0.55	
78-87-5	1,2-Dichloropropane	ND	19	2.5	ND	4.0	0.53	
108-67-8	1,3,5-Trimethylbenzene	ND	19	2.9	ND	3.8	0.59	
106-99-0	1,3-Butadiene	ND	19	3.3	ND	8.5	1.5	
541-73-1	1,3-Dichlorobenzene	ND	19	3.0	ND	3.1	0.50	
106-46-7	1,4-Dichlorobenzene	ND	19	3.1	ND	3.1	0.51	
123-91-1	1,4-Dioxane	ND	19	2.4	ND	5.2	0.65	
540-84-1	2,2,4-Trimethylpentane	ND	19	3.0	ND	4.0	0.64	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**35**	190	4.1	**12**	63	1.4	**J**
591-78-6	2-Hexanone	ND	19	2.5	ND	4.6	0.60	
67-63-0	2-Propanol	ND	37	8.2	ND	15	3.3	
107-05-1	3-Chloropropene	ND	19	2.7	ND	6.0	0.86	
622-96-8	4-Ethyltoluene	ND	19	3.2	ND	3.8	0.65	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405291400** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-055

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: #N/A Date Analyzed: 6/20/24 & 6/22/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.050 Liter(s)
Test Notes: 0.025 Liter(s)

Initial Pressure (psig): -2.94 Final Pressure (psig): 7.30

Container Dilution Factor: 1.87

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	19	2.7	ND	4.6	0.67	
67-64-1	Acetone	**180**	190	45	**74**	79	19	**J**
100-44-7	alpha-Chlorotoluene	ND	19	4.5	ND	3.6	0.87	
71-43-2	Benzene	ND	19	2.9	ND	5.9	0.90	
75-27-4	Bromodichloromethane	ND	19	2.9	ND	2.8	0.43	
75-25-2	Bromoform	ND	19	4.1	ND	1.8	0.40	
74-83-9	Bromomethane	ND	19	2.8	ND	4.8	0.71	
75-15-0	Carbon Disulfide	ND	190	6.0	ND	60	1.9	
56-23-5	Carbon Tetrachloride	ND	19	2.8	ND	3.0	0.44	
108-90-7	Chlorobenzene	ND	19	2.7	ND	4.1	0.58	
75-00-3	Chloroethane	ND	19	2.5	ND	7.1	0.94	
67-66-3	Chloroform	**10**	19	2.7	**2.1**	3.8	0.54	**J**
74-87-3	Chloromethane	ND	19	3.2	ND	9.1	1.6	
156-59-2	cis-1,2-Dichloroethene	ND	19	2.8	ND	4.7	0.71	
10061-01-5	cis-1,3-Dichloropropene	ND	19	3.1	ND	4.1	0.68	
98-82-8	Cumene	ND	19	2.9	ND	3.8	0.59	
110-82-7	Cyclohexane	ND	37	5.6	ND	11	1.6	
124-48-1	Dibromochloromethane	ND	19	2.6	ND	2.2	0.31	
64-17-5	Ethanol	ND	190	14	ND	99	7.3	
100-41-4	Ethyl Benzene	ND	19	2.8	ND	4.3	0.65	
75-69-4	Freon 11	**3,200**	19	3.0	**560**	3.3	0.54	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405291400** ALS Sample ID: P2402249-055
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: #N/A Date Analyzed: 6/20/24 & 6/22/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.050 Liter(s)
Test Notes: 0.025 Liter(s)

Initial Pressure (psig): -2.94 Final Pressure (psig): 7.30

Container Dilution Factor: 1.87

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**4,000**	37	5.7	**520**	4.9	0.74	**D**
76-14-2	Freon 114	ND	19	3.1	ND	2.7	0.45	
75-71-8	Freon 12	ND	19	3.3	ND	3.8	0.66	
306-83-2	Freon 123	**10**	19	9.0	**1.6**	3.0	1.4	**J, X**
75-43-4	Freon 21	ND	19	9.0	ND	4.4	2.1	**X**
142-82-5	Heptane	ND	19	3.2	ND	4.6	0.78	
87-68-3	Hexachlorobutadiene	ND	19	4.1	ND	1.8	0.39	
110-54-3	Hexane	ND	19	4.1	ND	5.3	1.2	
179601-23-1	m,p-Xylene	ND	37	5.2	ND	8.6	1.2	
1634-04-4	Methyl tert-butyl ether	ND	19	2.4	ND	5.2	0.65	
75-09-2	Methylene Chloride	ND	19	5.6	ND	5.4	1.6	
95-47-6	o-Xylene	ND	19	2.9	ND	4.3	0.66	
103-65-1	Propylbenzene	ND	19	2.9	ND	3.8	0.59	
100-42-5	Styrene	ND	19	3.2	ND	4.4	0.76	
127-18-4	Tetrachloroethene	ND	19	2.6	ND	2.8	0.38	
109-99-9	Tetrahydrofuran	ND	19	2.5	ND	6.3	0.85	
108-88-3	Toluene	**4.0**	19	2.4	**1.1**	5.0	0.65	**J**
156-60-5	trans-1,2-Dichloroethene	ND	19	2.8	ND	4.7	0.70	
10061-02-6	trans-1,3-Dichloropropene	ND	19	4.1	ND	4.1	0.91	
79-01-6	Trichloroethene	**11**	19	2.7	**2.1**	3.5	0.50	**J**
75-01-4	Vinyl Chloride	ND	19	2.1	ND	7.3	0.83	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
D = The reported result is from a dilution.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405291400** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-055

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/29/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	#N/A	Date Analyzed:	6/20/24 & 6/22/24
Sampling Media:	1.0 L Summa Canister	Volume(s) Analyzed:	0.050 Liter(s)
Test Notes:			0.025 Liter(s)

Initial Pressure (psig): -2.94 Final Pressure (psig): 7.30

Container Dilution Factor: 1.87

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405300800** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-056

Test Code: EPA TO-15 Date Collected: 5/30/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/21/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -1.94 Final Pressure (psig): 6.34

Container Dilution Factor: 1.65

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	2.1	0.27	ND	0.38	0.050	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.1	0.31	ND	0.30	0.044	
79-00-5	1,1,2-Trichloroethane	ND	2.1	0.22	ND	0.38	0.041	
75-34-3	1,1-Dichloroethane	ND	2.1	0.32	ND	0.51	0.080	
75-35-4	1,1-Dichloroethene	ND	2.1	0.31	ND	0.52	0.077	
120-82-1	1,2,4-Trichlorobenzene	ND	2.1	0.54	ND	0.28	0.072	
95-63-6	1,2,4-Trimethylbenzene	ND	2.1	0.31	ND	0.42	0.062	
106-93-4	1,2-Dibromoethane (EDB)	ND	2.1	0.26	ND	0.27	0.033	
95-50-1	1,2-Dichlorobenzene	ND	2.1	0.33	ND	0.34	0.054	
107-06-2	1,2-Dichloroethane	ND	2.1	0.24	ND	0.51	0.060	
78-87-5	1,2-Dichloropropane	ND	2.1	0.27	ND	0.45	0.059	
108-67-8	1,3,5-Trimethylbenzene	ND	2.1	0.32	ND	0.42	0.065	
106-99-0	1,3-Butadiene	ND	2.1	0.36	ND	0.93	0.16	
541-73-1	1,3-Dichlorobenzene	ND	2.1	0.33	ND	0.34	0.055	
106-46-7	1,4-Dichlorobenzene	ND	2.1	0.34	ND	0.34	0.056	
123-91-1	1,4-Dioxane	**0.41**	2.1	0.26	**0.11**	0.57	0.072	**J**
540-84-1	2,2,4-Trimethylpentane	ND	2.1	0.33	ND	0.44	0.071	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**11**	21	0.45	**3.8**	7.0	0.15	**J**
591-78-6	2-Hexanone	**2.0**	2.1	0.27	**0.48**	0.50	0.066	**J**
67-63-0	2-Propanol	**3.8**	4.1	0.91	**1.5**	1.7	0.37	**J**
107-05-1	3-Chloropropene	ND	2.1	0.30	ND	0.66	0.095	
622-96-8	4-Ethyltoluene	ND	2.1	0.35	ND	0.42	0.071	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405300800** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-056

Test Code: EPA TO-15 Date Collected: 5/30/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/21/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -1.94 Final Pressure (psig): 6.34

Container Dilution Factor: 1.65

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	**0.57**	2.1	0.30	**0.14**	0.50	0.074	**J**
67-64-1	Acetone	**58**	21	5.0	**24**	8.7	2.1	
100-44-7	alpha-Chlorotoluene	ND	2.1	0.50	ND	0.40	0.096	
71-43-2	Benzene	**1.1**	2.1	0.32	**0.35**	0.65	0.099	**J**
75-27-4	Bromodichloromethane	ND	2.1	0.32	ND	0.31	0.047	
75-25-2	Bromoform	ND	2.1	0.45	ND	0.20	0.044	
74-83-9	Bromomethane	ND	2.1	0.31	ND	0.53	0.079	
75-15-0	Carbon Disulfide	**5.0**	21	0.66	**1.6**	6.6	0.21	**J**
56-23-5	Carbon Tetrachloride	ND	2.1	0.31	ND	0.33	0.049	
108-90-7	Chlorobenzene	ND	2.1	0.29	ND	0.45	0.064	
75-00-3	Chloroethane	ND	2.1	0.27	ND	0.78	0.10	
67-66-3	Chloroform	**0.98**	2.1	0.29	**0.20**	0.42	0.060	**J**
74-87-3	Chloromethane	**1.1**	2.1	0.35	**0.52**	1.0	0.17	**J**
156-59-2	cis-1,2-Dichloroethene	ND	2.1	0.31	ND	0.52	0.078	
10061-01-5	cis-1,3-Dichloropropene	ND	2.1	0.34	ND	0.45	0.075	
98-82-8	Cumene	ND	2.1	0.32	ND	0.42	0.065	
110-82-7	Cyclohexane	ND	4.1	0.62	ND	1.2	0.18	
124-48-1	Dibromochloromethane	ND	2.1	0.29	ND	0.24	0.034	
64-17-5	Ethanol	**14**	21	1.5	**7.5**	11	0.81	**J**
100-41-4	Ethyl Benzene	ND	2.1	0.31	ND	0.48	0.071	
75-69-4	Freon 11	**16**	2.1	0.33	**2.8**	0.37	0.059	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405300800** ALS Sample ID: P2402249-056
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/30/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/21/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -1.94 Final Pressure (psig): 6.34

Container Dilution Factor: 1.65

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**33**	2.1	0.31	**4.3**	0.27	0.041	
76-14-2	Freon 114	ND	2.1	0.35	ND	0.30	0.050	
75-71-8	Freon 12	**2.3**	2.1	0.36	**0.46**	0.42	0.073	
306-83-2	Freon 123	**5.4**	2.1	0.99	**0.87**	0.33	0.16	**X**
75-43-4	Freon 21	ND	2.1	0.99	ND	0.49	0.24	**X**
142-82-5	Heptane	**0.59**	2.1	0.35	**0.14**	0.50	0.086	**J**
87-68-3	Hexachlorobutadiene	ND	2.1	0.45	ND	0.19	0.043	
110-54-3	Hexane	ND	2.1	0.45	ND	0.59	0.13	
179601-23-1	m,p-Xylene	ND	4.1	0.58	ND	0.95	0.13	
1634-04-4	Methyl tert-butyl ether	ND	2.1	0.26	ND	0.57	0.072	
75-09-2	Methylene Chloride	ND	2.1	0.62	ND	0.59	0.18	
95-47-6	o-Xylene	ND	2.1	0.32	ND	0.48	0.073	
103-65-1	Propylbenzene	ND	2.1	0.32	ND	0.42	0.065	
100-42-5	Styrene	ND	2.1	0.35	ND	0.48	0.083	
127-18-4	Tetrachloroethene	ND	2.1	0.28	ND	0.30	0.042	
109-99-9	Tetrahydrofuran	ND	2.1	0.28	ND	0.70	0.094	
108-88-3	Toluene	**3.3**	2.1	0.27	**0.87**	0.55	0.071	
156-60-5	trans-1,2-Dichloroethene	ND	2.1	0.31	ND	0.52	0.077	
10061-02-6	trans-1,3-Dichloropropene	ND	2.1	0.45	ND	0.45	0.10	
79-01-6	Trichloroethene	ND	2.1	0.30	ND	0.38	0.055	
75-01-4	Vinyl Chloride	ND	2.1	0.24	ND	0.81	0.092	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405300800** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-056

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/30/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/21/24
Sampling Media:	1.0 L Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			

Initial Pressure (psig): -1.94 Final Pressure (psig): 6.34

Container Dilution Factor: 1.65

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405300808** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-057

Test Code: EPA TO-15 Date Collected: 5/30/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/21/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -0.02 Final Pressure (psig): 7.47

Container Dilution Factor: 1.51

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	1.9	0.25	ND	0.35	0.046	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.9	0.28	ND	0.27	0.041	
79-00-5	1,1,2-Trichloroethane	ND	1.9	0.20	ND	0.35	0.037	
75-34-3	1,1-Dichloroethane	ND	1.9	0.29	ND	0.47	0.073	
75-35-4	1,1-Dichloroethene	ND	1.9	0.28	ND	0.48	0.070	
120-82-1	1,2,4-Trichlorobenzene	ND	1.9	0.49	ND	0.25	0.066	
95-63-6	1,2,4-Trimethylbenzene	**2.2**	1.9	0.28	**0.44**	0.38	0.057	
106-93-4	1,2-Dibromoethane (EDB)	ND	1.9	0.23	ND	0.25	0.030	
95-50-1	1,2-Dichlorobenzene	ND	1.9	0.30	ND	0.31	0.050	
107-06-2	1,2-Dichloroethane	**0.27**	1.9	0.22	**0.067**	0.47	0.055	**J**
78-87-5	1,2-Dichloropropane	**0.25**	1.9	0.25	**0.054**	0.41	0.054	**J**
108-67-8	1,3,5-Trimethylbenzene	**0.83**	1.9	0.29	**0.17**	0.38	0.059	**J**
106-99-0	1,3-Butadiene	ND	1.9	0.33	ND	0.85	0.15	
541-73-1	1,3-Dichlorobenzene	ND	1.9	0.30	ND	0.31	0.050	
106-46-7	1,4-Dichlorobenzene	**0.34**	1.9	0.31	**0.057**	0.31	0.052	**J**
123-91-1	1,4-Dioxane	ND	1.9	0.24	ND	0.52	0.066	
540-84-1	2,2,4-Trimethylpentane	**1.6**	1.9	0.30	**0.34**	0.40	0.065	**J**
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**17**	19	0.42	**5.7**	6.4	0.14	**J**
591-78-6	2-Hexanone	**0.74**	1.9	0.25	**0.18**	0.46	0.061	**J**
67-63-0	2-Propanol	**100**	3.8	0.83	**42**	1.5	0.34	
107-05-1	3-Chloropropene	ND	1.9	0.27	ND	0.60	0.087	
622-96-8	4-Ethyltoluene	**0.65**	1.9	0.32	**0.13**	0.38	0.065	**J**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405300808** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-057

Test Code: EPA TO-15 Date Collected: 5/30/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/21/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -0.02 Final Pressure (psig): 7.47

Container Dilution Factor: 1.51

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	**5.9**	1.9	0.28	**1.4**	0.46	0.067	
67-64-1	Acetone	**160**	19	4.5	**66**	7.9	1.9	
100-44-7	alpha-Chlorotoluene	ND	1.9	0.45	ND	0.36	0.088	
71-43-2	Benzene	**17**	1.9	0.29	**5.4**	0.59	0.091	
75-27-4	Bromodichloromethane	ND	1.9	0.29	ND	0.28	0.043	
75-25-2	Bromoform	ND	1.9	0.42	ND	0.18	0.040	
74-83-9	Bromomethane	ND	1.9	0.28	ND	0.49	0.072	
75-15-0	Carbon Disulfide	**1.2**	19	0.60	**0.37**	6.1	0.19	**J**
56-23-5	Carbon Tetrachloride	**0.36**	1.9	0.28	**0.058**	0.30	0.044	**J**
108-90-7	Chlorobenzene	ND	1.9	0.27	ND	0.41	0.058	
75-00-3	Chloroethane	ND	1.9	0.25	ND	0.72	0.094	
67-66-3	Chloroform	**0.34**	1.9	0.27	**0.070**	0.39	0.055	**J**
74-87-3	Chloromethane	**1.7**	1.9	0.32	**0.82**	0.91	0.16	**J**
156-59-2	cis-1,2-Dichloroethene	ND	1.9	0.28	ND	0.48	0.071	
10061-01-5	cis-1,3-Dichloropropene	ND	1.9	0.31	ND	0.42	0.069	
98-82-8	Cumene	**0.30**	1.9	0.29	**0.061**	0.38	0.059	**J**
110-82-7	Cyclohexane	**6.8**	3.8	0.57	**2.0**	1.1	0.16	
124-48-1	Dibromochloromethane	ND	1.9	0.26	ND	0.22	0.031	
64-17-5	Ethanol	**290**	19	1.4	**150**	10	0.74	
100-41-4	Ethyl Benzene	**3.1**	1.9	0.28	**0.71**	0.43	0.065	
75-69-4	Freon 11	**1.3**	1.9	0.31	**0.24**	0.34	0.054	**J**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405300808** ALS Sample ID: P2402249-057
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/30/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/21/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -0.02 Final Pressure (psig): 7.47

Container Dilution Factor: 1.51

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**1.4**	1.9	0.29	**0.18**	0.25	0.037	**J**
76-14-2	Freon 114	ND	1.9	0.32	ND	0.27	0.045	
75-71-8	Freon 12	**2.3**	1.9	0.33	**0.46**	0.38	0.066	
306-83-2	Freon 123	**160**	1.9	0.91	**26**	0.30	0.14	**X**
75-43-4	Freon 21	ND	1.9	0.91	ND	0.45	0.22	**X**
142-82-5	Heptane	**7.7**	1.9	0.32	**1.9**	0.46	0.078	
87-68-3	Hexachlorobutadiene	ND	1.9	0.42	ND	0.18	0.039	
110-54-3	Hexane	ND	1.9	0.42	ND	0.54	0.12	
179601-23-1	m,p-Xylene	**8.0**	3.8	0.53	**1.9**	0.87	0.12	
1634-04-4	Methyl tert-butyl ether	**0.68**	1.9	0.24	**0.19**	0.52	0.066	**J**
75-09-2	Methylene Chloride	**5.2**	1.9	0.57	**1.5**	0.54	0.16	
95-47-6	o-Xylene	**3.9**	1.9	0.29	**0.89**	0.43	0.067	
103-65-1	Propylbenzene	**0.54**	1.9	0.29	**0.11**	0.38	0.059	**J**
100-42-5	Styrene	**7.5**	1.9	0.32	**1.8**	0.44	0.076	
127-18-4	Tetrachloroethene	**1.1**	1.9	0.26	**0.16**	0.28	0.038	**J**
109-99-9	Tetrahydrofuran	**1.4**	1.9	0.25	**0.46**	0.64	0.086	**J**
108-88-3	Toluene	**140**	1.9	0.25	**38**	0.50	0.065	
156-60-5	trans-1,2-Dichloroethene	ND	1.9	0.28	ND	0.48	0.070	
10061-02-6	trans-1,3-Dichloropropene	ND	1.9	0.42	ND	0.42	0.092	
79-01-6	Trichloroethene	ND	1.9	0.27	ND	0.35	0.051	
75-01-4	Vinyl Chloride	ND	1.9	0.22	ND	0.74	0.084	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405300808** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-057

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/30/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/21/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			

Initial Pressure (psig): -0.02 Final Pressure (psig): 7.47

Container Dilution Factor: 1.51

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405300815** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-058

Test Code: EPA TO-15 Date Collected: 5/30/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/21/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -1.93 Final Pressure (psig): 6.90

Container Dilution Factor: 1.69

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	2.1	0.28	ND	0.39	0.051	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.1	0.31	ND	0.31	0.046	
79-00-5	1,1,2-Trichloroethane	ND	2.1	0.23	ND	0.39	0.042	
75-34-3	1,1-Dichloroethane	ND	2.1	0.33	ND	0.52	0.081	
75-35-4	1,1-Dichloroethene	ND	2.1	0.31	ND	0.53	0.079	
120-82-1	1,2,4-Trichlorobenzene	ND	2.1	0.55	ND	0.28	0.074	
95-63-6	1,2,4-Trimethylbenzene	**0.49**	2.1	0.31	**0.10**	0.43	0.064	**J**
106-93-4	1,2-Dibromoethane (EDB)	ND	2.1	0.26	ND	0.27	0.034	
95-50-1	1,2-Dichlorobenzene	ND	2.1	0.33	ND	0.35	0.056	
107-06-2	1,2-Dichloroethane	ND	2.1	0.25	ND	0.52	0.062	
78-87-5	1,2-Dichloropropane	ND	2.1	0.28	ND	0.46	0.060	
108-67-8	1,3,5-Trimethylbenzene	ND	2.1	0.33	ND	0.43	0.066	
106-99-0	1,3-Butadiene	ND	2.1	0.37	ND	0.96	0.17	
541-73-1	1,3-Dichlorobenzene	ND	2.1	0.34	ND	0.35	0.056	
106-46-7	1,4-Dichlorobenzene	ND	2.1	0.35	ND	0.35	0.058	
123-91-1	1,4-Dioxane	ND	2.1	0.27	ND	0.59	0.074	
540-84-1	2,2,4-Trimethylpentane	**1.3**	2.1	0.34	**0.28**	0.45	0.072	**J**
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**14**	21	0.46	**4.7**	7.2	0.16	**J**
591-78-6	2-Hexanone	**1.0**	2.1	0.28	**0.25**	0.52	0.068	**J**
67-63-0	2-Propanol	**65**	4.2	0.93	**26**	1.7	0.38	
107-05-1	3-Chloropropene	ND	2.1	0.30	ND	0.68	0.097	
622-96-8	4-Ethyltoluene	ND	2.1	0.36	ND	0.43	0.073	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405300815** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-058

Test Code: EPA TO-15 Date Collected: 5/30/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/21/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -1.93 Final Pressure (psig): 6.90

Container Dilution Factor: 1.69

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	**0.55**	2.1	0.31	**0.13**	0.52	0.075	**J**
67-64-1	Acetone	**60**	21	5.1	**25**	8.9	2.1	
100-44-7	alpha-Chlorotoluene	ND	2.1	0.51	ND	0.41	0.098	
71-43-2	Benzene	**95**	2.1	0.33	**30**	0.66	0.10	
75-27-4	Bromodichloromethane	ND	2.1	0.33	ND	0.32	0.049	
75-25-2	Bromoform	ND	2.1	0.46	ND	0.20	0.045	
74-83-9	Bromomethane	ND	2.1	0.31	ND	0.54	0.081	
75-15-0	Carbon Disulfide	**0.98**	21	0.68	**0.31**	6.8	0.22	**J**
56-23-5	Carbon Tetrachloride	**0.38**	2.1	0.31	**0.060**	0.34	0.050	**J**
108-90-7	Chlorobenzene	**0.31**	2.1	0.30	**0.067**	0.46	0.065	**J**
75-00-3	Chloroethane	ND	2.1	0.28	ND	0.80	0.11	
67-66-3	Chloroform	ND	2.1	0.30	ND	0.43	0.061	
74-87-3	Chloromethane	**1.7**	2.1	0.36	**0.84**	1.0	0.18	**J**
156-59-2	cis-1,2-Dichloroethene	ND	2.1	0.32	ND	0.53	0.080	
10061-01-5	cis-1,3-Dichloropropene	ND	2.1	0.35	ND	0.47	0.077	
98-82-8	Cumene	ND	2.1	0.33	ND	0.43	0.066	
110-82-7	Cyclohexane	**3.3**	4.2	0.63	**0.97**	1.2	0.18	**J**
124-48-1	Dibromochloromethane	ND	2.1	0.30	ND	0.25	0.035	
64-17-5	Ethanol	**270**	21	1.6	**140**	11	0.83	
100-41-4	Ethyl Benzene	**1.6**	2.1	0.32	**0.37**	0.49	0.073	**J**
75-69-4	Freon 11	**1.6**	2.1	0.34	**0.29**	0.38	0.061	**J**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405300815** ALS Sample ID: P2402249-058
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/30/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/21/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -1.93 Final Pressure (psig): 6.90

Container Dilution Factor: 1.69

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**1.3**	2.1	0.32	**0.17**	0.28	0.042	**J**
76-14-2	Freon 114	ND	2.1	0.35	ND	0.30	0.051	
75-71-8	Freon 12	**2.7**	2.1	0.37	**0.55**	0.43	0.074	
306-83-2	Freon 123	**71**	2.1	1.0	**11**	0.34	0.16	**X**
75-43-4	Freon 21	ND	2.1	1.0	ND	0.50	0.24	**X**
142-82-5	Heptane	**4.2**	2.1	0.36	**1.0**	0.52	0.088	
87-68-3	Hexachlorobutadiene	ND	2.1	0.46	ND	0.20	0.044	
110-54-3	Hexane	ND	2.1	0.46	ND	0.60	0.13	
179601-23-1	m,p-Xylene	**3.8**	4.2	0.59	**0.88**	0.97	0.14	**J**
1634-04-4	Methyl tert-butyl ether	**0.63**	2.1	0.27	**0.17**	0.59	0.074	**J**
75-09-2	Methylene Chloride	**4.6**	2.1	0.63	**1.3**	0.61	0.18	
95-47-6	o-Xylene	**1.5**	2.1	0.33	**0.35**	0.49	0.075	**J**
103-65-1	Propylbenzene	ND	2.1	0.33	ND	0.43	0.066	
100-42-5	Styrene	**0.85**	2.1	0.36	**0.20**	0.50	0.085	**J**
127-18-4	Tetrachloroethene	**0.30**	2.1	0.29	**0.044**	0.31	0.043	**J**
109-99-9	Tetrahydrofuran	ND	2.1	0.28	ND	0.72	0.096	
108-88-3	Toluene	**410**	2.1	0.27	**110**	0.56	0.073	
156-60-5	trans-1,2-Dichloroethene	ND	2.1	0.31	ND	0.53	0.079	
10061-02-6	trans-1,3-Dichloropropene	ND	2.1	0.46	ND	0.47	0.10	
79-01-6	Trichloroethene	ND	2.1	0.30	ND	0.39	0.057	
75-01-4	Vinyl Chloride	ND	2.1	0.24	ND	0.83	0.094	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405300815** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-058

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/30/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/21/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			

Initial Pressure (psig): -1.93 Final Pressure (psig): 6.90

Container Dilution Factor: 1.69

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405300827** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-059

Test Code: EPA TO-15 Date Collected: 5/30/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/22/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.05 Final Pressure (psig): 6.76

Container Dilution Factor: 1.70

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	2.1	0.28	ND	0.39	0.051	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.1	0.31	ND	0.31	0.046	
79-00-5	1,1,2-Trichloroethane	ND	2.1	0.23	ND	0.39	0.042	
75-34-3	1,1-Dichloroethane	ND	2.1	0.33	ND	0.53	0.082	
75-35-4	1,1-Dichloroethene	**0.60**	2.1	0.31	**0.15**	0.54	0.079	**J**
120-82-1	1,2,4-Trichlorobenzene	ND	2.1	0.55	ND	0.29	0.074	
95-63-6	1,2,4-Trimethylbenzene	**0.47**	2.1	0.31	**0.095**	0.43	0.064	**J**
106-93-4	1,2-Dibromoethane (EDB)	ND	2.1	0.26	ND	0.28	0.034	
95-50-1	1,2-Dichlorobenzene	ND	2.1	0.34	ND	0.35	0.056	
107-06-2	1,2-Dichloroethane	ND	2.1	0.25	ND	0.53	0.062	
78-87-5	1,2-Dichloropropane	ND	2.1	0.28	ND	0.46	0.061	
108-67-8	1,3,5-Trimethylbenzene	ND	2.1	0.33	ND	0.43	0.067	
106-99-0	1,3-Butadiene	ND	2.1	0.37	ND	0.96	0.17	
541-73-1	1,3-Dichlorobenzene	ND	2.1	0.34	ND	0.35	0.057	
106-46-7	1,4-Dichlorobenzene	ND	2.1	0.35	ND	0.35	0.058	
123-91-1	1,4-Dioxane	**0.48**	2.1	0.27	**0.13**	0.59	0.074	**J**
540-84-1	2,2,4-Trimethylpentane	ND	2.1	0.34	ND	0.46	0.073	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**1.6**	21	0.47	**0.54**	7.2	0.16	**J**
591-78-6	2-Hexanone	**0.34**	2.1	0.28	**0.083**	0.52	0.069	**J**
67-63-0	2-Propanol	ND	4.3	0.94	ND	1.7	0.38	
107-05-1	3-Chloropropene	ND	2.1	0.31	ND	0.68	0.098	
622-96-8	4-Ethyltoluene	ND	2.1	0.36	ND	0.43	0.074	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405300827** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-059

Test Code: EPA TO-15 Date Collected: 5/30/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/22/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.05 Final Pressure (psig): 6.76

Container Dilution Factor: 1.70

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	2.1	0.31	ND	0.52	0.076	
67-64-1	Acetone	**11**	21	5.1	**4.5**	8.9	2.1	**J**
100-44-7	alpha-Chlorotoluene	ND	2.1	0.51	ND	0.41	0.099	
71-43-2	Benzene	**0.66**	2.1	0.33	**0.21**	0.67	0.10	**J**
75-27-4	Bromodichloromethane	**0.56**	2.1	0.33	**0.084**	0.32	0.049	**J**
75-25-2	Bromoform	ND	2.1	0.47	ND	0.21	0.045	
74-83-9	Bromomethane	ND	2.1	0.31	ND	0.55	0.081	
75-15-0	Carbon Disulfide	**27**	21	0.68	**8.5**	6.8	0.22	
56-23-5	Carbon Tetrachloride	ND	2.1	0.31	ND	0.34	0.050	
108-90-7	Chlorobenzene	ND	2.1	0.30	ND	0.46	0.066	
75-00-3	Chloroethane	**0.48**	2.1	0.28	**0.18**	0.81	0.11	**J**
67-66-3	Chloroform	**3.4**	2.1	0.30	**0.70**	0.44	0.062	
74-87-3	Chloromethane	**0.51**	2.1	0.37	**0.25**	1.0	0.18	**J**
156-59-2	cis-1,2-Dichloroethene	ND	2.1	0.32	ND	0.54	0.080	
10061-01-5	cis-1,3-Dichloropropene	ND	2.1	0.35	ND	0.47	0.078	
98-82-8	Cumene	ND	2.1	0.33	ND	0.43	0.067	
110-82-7	Cyclohexane	**0.65**	4.3	0.64	**0.19**	1.2	0.19	**J**
124-48-1	Dibromochloromethane	ND	2.1	0.30	ND	0.25	0.035	
64-17-5	Ethanol	**3.5**	21	1.6	**1.8**	11	0.83	**J**
100-41-4	Ethyl Benzene	ND	2.1	0.32	ND	0.49	0.073	
75-69-4	Freon 11	**16**	2.1	0.34	**2.9**	0.38	0.061	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405300827** ALS Sample ID: P2402249-059
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/30/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/22/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.05 Final Pressure (psig): 6.76

Container Dilution Factor: 1.70

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**9.7**	2.1	0.32	**1.3**	0.28	0.042	
76-14-2	Freon 114	**0.49**	2.1	0.36	**0.071**	0.30	0.051	**J**
75-71-8	Freon 12	**2.7**	2.1	0.37	**0.54**	0.43	0.075	
306-83-2	Freon 123	**1.1**	2.1	1.0	**0.18**	0.34	0.16	**J, X**
75-43-4	Freon 21	ND	2.1	1.0	ND	0.51	0.24	**X**
142-82-5	Heptane	ND	2.1	0.36	ND	0.52	0.088	
87-68-3	Hexachlorobutadiene	ND	2.1	0.47	ND	0.20	0.044	
110-54-3	Hexane	ND	2.1	0.47	ND	0.60	0.13	
179601-23-1	m,p-Xylene	ND	4.3	0.60	ND	0.98	0.14	
1634-04-4	Methyl tert-butyl ether	ND	2.1	0.27	ND	0.59	0.074	
75-09-2	Methylene Chloride	ND	2.1	0.64	ND	0.61	0.18	
95-47-6	o-Xylene	ND	2.1	0.33	ND	0.49	0.075	
103-65-1	Propylbenzene	ND	2.1	0.33	ND	0.43	0.067	
100-42-5	Styrene	ND	2.1	0.37	ND	0.50	0.086	
127-18-4	Tetrachloroethene	ND	2.1	0.29	ND	0.31	0.043	
109-99-9	Tetrahydrofuran	ND	2.1	0.28	ND	0.72	0.097	
108-88-3	Toluene	**1.0**	2.1	0.28	**0.27**	0.56	0.073	**J**
156-60-5	trans-1,2-Dichloroethene	**0.46**	2.1	0.31	**0.12**	0.54	0.079	**J**
10061-02-6	trans-1,3-Dichloropropene	ND	2.1	0.47	ND	0.47	0.10	
79-01-6	Trichloroethene	**0.61**	2.1	0.31	**0.11**	0.40	0.057	**J**
75-01-4	Vinyl Chloride	**0.56**	2.1	0.24	**0.22**	0.83	0.095	**J**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405300827** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-059

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/30/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/22/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			

Initial Pressure (psig): -2.05 Final Pressure (psig): 6.76

Container Dilution Factor: 1.70

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405300834** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-060

Test Code: EPA TO-15 Date Collected: 5/30/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/22/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.24 Final Pressure (psig): 6.37

Container Dilution Factor: 1.69

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	2.1	0.28	ND	0.39	0.051	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.1	0.31	ND	0.31	0.046	
79-00-5	1,1,2-Trichloroethane	ND	2.1	0.23	ND	0.39	0.042	
75-34-3	1,1-Dichloroethane	ND	2.1	0.33	ND	0.52	0.081	
75-35-4	1,1-Dichloroethene	ND	2.1	0.31	ND	0.53	0.079	
120-82-1	1,2,4-Trichlorobenzene	ND	2.1	0.55	ND	0.28	0.074	
95-63-6	1,2,4-Trimethylbenzene	**0.48**	2.1	0.31	**0.098**	0.43	0.064	**J**
106-93-4	1,2-Dibromoethane (EDB)	ND	2.1	0.26	ND	0.27	0.034	
95-50-1	1,2-Dichlorobenzene	ND	2.1	0.33	ND	0.35	0.056	
107-06-2	1,2-Dichloroethane	ND	2.1	0.25	ND	0.52	0.062	
78-87-5	1,2-Dichloropropane	ND	2.1	0.28	ND	0.46	0.060	
108-67-8	1,3,5-Trimethylbenzene	ND	2.1	0.33	ND	0.43	0.066	
106-99-0	1,3-Butadiene	ND	2.1	0.37	ND	0.96	0.17	
541-73-1	1,3-Dichlorobenzene	ND	2.1	0.34	ND	0.35	0.056	
106-46-7	1,4-Dichlorobenzene	ND	2.1	0.35	ND	0.35	0.058	
123-91-1	1,4-Dioxane	**0.34**	2.1	0.27	**0.094**	0.59	0.074	**J**
540-84-1	2,2,4-Trimethylpentane	ND	2.1	0.34	ND	0.45	0.072	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**20**	21	0.46	**6.8**	7.2	0.16	**J**
591-78-6	2-Hexanone	**3.0**	2.1	0.28	**0.72**	0.52	0.068	
67-63-0	2-Propanol	**3.3**	4.2	0.93	**1.3**	1.7	0.38	**J**
107-05-1	3-Chloropropene	ND	2.1	0.30	ND	0.68	0.097	
622-96-8	4-Ethyltoluene	ND	2.1	0.36	ND	0.43	0.073	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405300834** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-060

Test Code: EPA TO-15 Date Collected: 5/30/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/22/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.24 Final Pressure (psig): 6.37

Container Dilution Factor: 1.69

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	**0.92**	2.1	0.31	**0.22**	0.52	0.075	**J**
67-64-1	Acetone	**120**	21	5.1	**53**	8.9	2.1	
100-44-7	alpha-Chlorotoluene	ND	2.1	0.51	ND	0.41	0.098	
71-43-2	Benzene	**1.1**	2.1	0.33	**0.34**	0.66	0.10	**J**
75-27-4	Bromodichloromethane	ND	2.1	0.33	ND	0.32	0.049	
75-25-2	Bromoform	ND	2.1	0.46	ND	0.20	0.045	
74-83-9	Bromomethane	**0.76**	2.1	0.31	**0.20**	0.54	0.081	**J**
75-15-0	Carbon Disulfide	**3.8**	21	0.68	**1.2**	6.8	0.22	**J**
56-23-5	Carbon Tetrachloride	ND	2.1	0.31	ND	0.34	0.050	
108-90-7	Chlorobenzene	ND	2.1	0.30	ND	0.46	0.065	
75-00-3	Chloroethane	**0.81**	2.1	0.28	**0.31**	0.80	0.11	**J**
67-66-3	Chloroform	**7.6**	2.1	0.30	**1.5**	0.43	0.061	
74-87-3	Chloromethane	**7.8**	2.1	0.36	**3.8**	1.0	0.18	
156-59-2	cis-1,2-Dichloroethene	ND	2.1	0.32	ND	0.53	0.080	
10061-01-5	cis-1,3-Dichloropropene	ND	2.1	0.35	ND	0.47	0.077	
98-82-8	Cumene	ND	2.1	0.33	ND	0.43	0.066	
110-82-7	Cyclohexane	ND	4.2	0.63	ND	1.2	0.18	
124-48-1	Dibromochloromethane	ND	2.1	0.30	ND	0.25	0.035	
64-17-5	Ethanol	**19**	21	1.6	**9.9**	11	0.83	**J**
100-41-4	Ethyl Benzene	ND	2.1	0.32	ND	0.49	0.073	
75-69-4	Freon 11	**27**	2.1	0.34	**4.9**	0.38	0.061	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405300834** ALS Sample ID: P2402249-060
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/30/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/22/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.24 Final Pressure (psig): 6.37

Container Dilution Factor: 1.69

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**31**	2.1	0.32	**4.1**	0.28	0.042	
76-14-2	Freon 114	ND	2.1	0.35	ND	0.30	0.051	
75-71-8	Freon 12	**2.4**	2.1	0.37	**0.48**	0.43	0.074	
306-83-2	Freon 123	**6.1**	2.1	1.0	**0.98**	0.34	0.16	**X**
75-43-4	Freon 21	ND	2.1	1.0	ND	0.50	0.24	**X**
142-82-5	Heptane	**0.40**	2.1	0.36	**0.097**	0.52	0.088	**J**
87-68-3	Hexachlorobutadiene	ND	2.1	0.46	ND	0.20	0.044	
110-54-3	Hexane	ND	2.1	0.46	ND	0.60	0.13	
179601-23-1	m,p-Xylene	**1.1**	4.2	0.59	**0.25**	0.97	0.14	**J**
1634-04-4	Methyl tert-butyl ether	ND	2.1	0.27	ND	0.59	0.074	
75-09-2	Methylene Chloride	**1.2**	2.1	0.63	**0.36**	0.61	0.18	**J**
95-47-6	o-Xylene	**0.48**	2.1	0.33	**0.11**	0.49	0.075	**J**
103-65-1	Propylbenzene	ND	2.1	0.33	ND	0.43	0.066	
100-42-5	Styrene	ND	2.1	0.36	ND	0.50	0.085	
127-18-4	Tetrachloroethene	**0.30**	2.1	0.29	**0.045**	0.31	0.043	**J**
109-99-9	Tetrahydrofuran	**0.68**	2.1	0.28	**0.23**	0.72	0.096	**J**
108-88-3	Toluene	**3.3**	2.1	0.27	**0.88**	0.56	0.073	
156-60-5	trans-1,2-Dichloroethene	ND	2.1	0.31	ND	0.53	0.079	
10061-02-6	trans-1,3-Dichloropropene	ND	2.1	0.46	ND	0.47	0.10	
79-01-6	Trichloroethene	ND	2.1	0.30	ND	0.39	0.057	
75-01-4	Vinyl Chloride	ND	2.1	0.24	ND	0.83	0.094	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405300834** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-060

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/30/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/22/24
Sampling Media:	1.0 L Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			

Initial Pressure (psig): -2.24 Final Pressure (psig): 6.37

Container Dilution Factor: 1.69

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405300842** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-061

Test Code: EPA TO-15 Date Collected: 5/30/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Marlow Cobian/Meghry Jilakian Date Analyzed: 6/22/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.57 Final Pressure (psig): 6.68

Container Dilution Factor: 1.76

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	2.2	0.29	ND	0.40	0.053	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.2	0.33	ND	0.32	0.047	
79-00-5	1,1,2-Trichloroethane	ND	2.2	0.24	ND	0.40	0.044	
75-34-3	1,1-Dichloroethane	ND	2.2	0.34	ND	0.54	0.085	
75-35-4	1,1-Dichloroethene	ND	2.2	0.33	ND	0.56	0.082	
120-82-1	1,2,4-Trichlorobenzene	ND	2.2	0.57	ND	0.30	0.077	
95-63-6	1,2,4-Trimethylbenzene	ND	2.2	0.33	ND	0.45	0.066	
106-93-4	1,2-Dibromoethane (EDB)	ND	2.2	0.27	ND	0.29	0.036	
95-50-1	1,2-Dichlorobenzene	ND	2.2	0.35	ND	0.37	0.058	
107-06-2	1,2-Dichloroethane	ND	2.2	0.26	ND	0.54	0.064	
78-87-5	1,2-Dichloropropane	ND	2.2	0.29	ND	0.48	0.063	
108-67-8	1,3,5-Trimethylbenzene	ND	2.2	0.34	ND	0.45	0.069	
106-99-0	1,3-Butadiene	ND	2.2	0.39	ND	0.99	0.18	
541-73-1	1,3-Dichlorobenzene	ND	2.2	0.35	ND	0.37	0.059	
106-46-7	1,4-Dichlorobenzene	ND	2.2	0.36	ND	0.37	0.060	
123-91-1	1,4-Dioxane	ND	2.2	0.28	ND	0.61	0.077	
540-84-1	2,2,4-Trimethylpentane	ND	2.2	0.35	ND	0.47	0.075	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**1.9**	22	0.48	**0.63**	7.5	0.16	**J, B**
591-78-6	2-Hexanone	**0.35**	2.2	0.29	**0.086**	0.54	0.071	**J**
67-63-0	2-Propanol	ND	4.4	0.97	ND	1.8	0.39	
107-05-1	3-Chloropropene	ND	2.2	0.32	ND	0.70	0.10	
622-96-8	4-Ethyltoluene	ND	2.2	0.37	ND	0.45	0.076	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
B = Analyte detected in both the sample and the associated method blank.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405300842** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-061

Test Code: EPA TO-15 Date Collected: 5/30/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Marlow Cobian/Meghry Jilakian Date Analyzed: 6/22/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.57 Final Pressure (psig): 6.68

Container Dilution Factor: 1.76

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	2.2	0.32	ND	0.54	0.078	
67-64-1	Acetone	**11**	22	5.3	**4.7**	9.3	2.2	**J**
100-44-7	alpha-Chlorotoluene	ND	2.2	0.53	ND	0.43	0.10	
71-43-2	Benzene	**0.42**	2.2	0.34	**0.13**	0.69	0.11	**J**
75-27-4	Bromodichloromethane	ND	2.2	0.34	ND	0.33	0.051	
75-25-2	Bromoform	ND	2.2	0.48	ND	0.21	0.047	
74-83-9	Bromomethane	ND	2.2	0.33	ND	0.57	0.084	
75-15-0	Carbon Disulfide	**69**	22	0.70	**22**	7.1	0.23	
56-23-5	Carbon Tetrachloride	ND	2.2	0.33	ND	0.35	0.052	
108-90-7	Chlorobenzene	ND	2.2	0.31	ND	0.48	0.068	
75-00-3	Chloroethane	ND	2.2	0.29	ND	0.83	0.11	
67-66-3	Chloroform	**7.6**	2.2	0.31	**1.6**	0.45	0.064	
74-87-3	Chloromethane	ND	2.2	0.38	ND	1.1	0.18	
156-59-2	cis-1,2-Dichloroethene	ND	2.2	0.33	ND	0.56	0.083	
10061-01-5	cis-1,3-Dichloropropene	ND	2.2	0.37	ND	0.48	0.080	
98-82-8	Cumene	ND	2.2	0.34	ND	0.45	0.069	
110-82-7	Cyclohexane	ND	4.4	0.66	ND	1.3	0.19	
124-48-1	Dibromochloromethane	ND	2.2	0.31	ND	0.26	0.036	
64-17-5	Ethanol	ND	22	1.6	ND	12	0.86	
100-41-4	Ethyl Benzene	ND	2.2	0.33	ND	0.51	0.076	
75-69-4	Freon 11	**30**	2.2	0.36	**5.3**	0.39	0.063	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405300842** ALS Sample ID: P2402249-061
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/30/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Marlow Cobian/Meghry Jilakian Date Analyzed: 6/22/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.57 Final Pressure (psig): 6.68

Container Dilution Factor: 1.76

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**41**	2.2	0.33	**5.3**	0.29	0.044	
76-14-2	Freon 114	ND	2.2	0.37	ND	0.31	0.053	
75-71-8	Freon 12	**2.4**	2.2	0.38	**0.48**	0.45	0.077	
306-83-2	Freon 123	ND	2.2	1.1	ND	0.35	0.17	**X**
75-43-4	Freon 21	ND	2.2	1.1	ND	0.52	0.25	**X**
142-82-5	Heptane	ND	2.2	0.37	ND	0.54	0.091	
87-68-3	Hexachlorobutadiene	ND	2.2	0.48	ND	0.21	0.045	
110-54-3	Hexane	ND	2.2	0.48	ND	0.62	0.14	
179601-23-1	m,p-Xylene	ND	4.4	0.62	ND	1.0	0.14	
1634-04-4	Methyl tert-butyl ether	ND	2.2	0.28	ND	0.61	0.077	
75-09-2	Methylene Chloride	ND	2.2	0.66	ND	0.63	0.19	
95-47-6	o-Xylene	ND	2.2	0.34	ND	0.51	0.078	
103-65-1	Propylbenzene	ND	2.2	0.34	ND	0.45	0.069	
100-42-5	Styrene	ND	2.2	0.38	ND	0.52	0.089	
127-18-4	Tetrachloroethene	ND	2.2	0.30	ND	0.32	0.045	
109-99-9	Tetrahydrofuran	ND	2.2	0.29	ND	0.75	0.10	
108-88-3	Toluene	**0.59**	2.2	0.29	**0.16**	0.58	0.076	**J, B**
156-60-5	trans-1,2-Dichloroethene	ND	2.2	0.33	ND	0.56	0.082	
10061-02-6	trans-1,3-Dichloropropene	ND	2.2	0.48	ND	0.48	0.11	
79-01-6	Trichloroethene	**0.45**	2.2	0.32	**0.084**	0.41	0.059	**J, B**
75-01-4	Vinyl Chloride	ND	2.2	0.25	ND	0.86	0.098	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.
B = Analyte detected in both the sample and the associated method blank.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405300842** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-061

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/30/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Marlow Cobian/Meghry Jilakian	Date Analyzed:	6/22/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			

Initial Pressure (psig): -2.57 Final Pressure (psig): 6.68

Container Dilution Factor: 1.76

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405300850** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-062

Test Code: EPA TO-15 Date Collected: 5/30/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Marlow Cobian/Meghry Jilakian Date Analyzed: 6/22/24 & 6/24/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.040 Liter(s)

Initial Pressure (psig): -2.98 Final Pressure (psig): 7.13

Container Dilution Factor: 1.86

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	2.3	0.31	ND	0.43	0.056	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.3	0.34	ND	0.34	0.050	
79-00-5	1,1,2-Trichloroethane	ND	2.3	0.25	ND	0.43	0.046	
75-34-3	1,1-Dichloroethane	ND	2.3	0.36	ND	0.57	0.090	
75-35-4	1,1-Dichloroethene	ND	2.3	0.34	ND	0.59	0.087	
120-82-1	1,2,4-Trichlorobenzene	ND	2.3	0.60	ND	0.31	0.081	
95-63-6	1,2,4-Trimethylbenzene	ND	2.3	0.34	ND	0.47	0.070	
106-93-4	1,2-Dibromoethane (EDB)	ND	2.3	0.29	ND	0.30	0.038	
95-50-1	1,2-Dichlorobenzene	ND	2.3	0.37	ND	0.39	0.061	
107-06-2	1,2-Dichloroethane	ND	2.3	0.27	ND	0.57	0.068	
78-87-5	1,2-Dichloropropane	ND	2.3	0.31	ND	0.50	0.066	
108-67-8	1,3,5-Trimethylbenzene	ND	2.3	0.36	ND	0.47	0.073	
106-99-0	1,3-Butadiene	ND	2.3	0.41	ND	1.1	0.19	
541-73-1	1,3-Dichlorobenzene	ND	2.3	0.37	ND	0.39	0.062	
106-46-7	1,4-Dichlorobenzene	ND	2.3	0.38	ND	0.39	0.063	
123-91-1	1,4-Dioxane	ND	2.3	0.29	ND	0.65	0.081	
540-84-1	2,2,4-Trimethylpentane	ND	2.3	0.37	ND	0.50	0.080	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**10**	23	0.51	**3.5**	7.9	0.17	**J, B**
591-78-6	2-Hexanone	**1.9**	2.3	0.31	**0.46**	0.57	0.075	**J**
67-63-0	2-Propanol	ND	4.7	1.0	ND	1.9	0.42	
107-05-1	3-Chloropropene	ND	2.3	0.33	ND	0.74	0.11	
622-96-8	4-Ethyltoluene	ND	2.3	0.40	ND	0.47	0.080	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
B = Analyte detected in both the sample and the associated method blank.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405300850** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-062

Test Code: EPA TO-15 Date Collected: 5/30/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Marlow Cobian/Meghry Jilakian Date Analyzed: 6/22/24 & 6/24/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.040 Liter(s)

Initial Pressure (psig): -2.98 Final Pressure (psig): 7.13

Container Dilution Factor: 1.86

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	2.3	0.34	ND	0.57	0.083	
67-64-1	Acetone	**47**	23	5.6	**20**	9.8	2.3	
100-44-7	alpha-Chlorotoluene	ND	2.3	0.56	ND	0.45	0.11	
71-43-2	Benzene	**0.50**	2.3	0.36	**0.16**	0.73	0.11	**J**
75-27-4	Bromodichloromethane	**2.2**	2.3	0.36	**0.33**	0.35	0.053	**J**
75-25-2	Bromoform	ND	2.3	0.51	ND	0.22	0.049	
74-83-9	Bromomethane	**0.39**	2.3	0.34	**0.10**	0.60	0.089	**J**
75-15-0	Carbon Disulfide	ND	23	0.74	ND	7.5	0.24	
56-23-5	Carbon Tetrachloride	ND	2.3	0.34	ND	0.37	0.055	
108-90-7	Chlorobenzene	ND	2.3	0.33	ND	0.51	0.072	
75-00-3	Chloroethane	ND	2.3	0.31	ND	0.88	0.12	
67-66-3	Chloroform	**23**	2.3	0.33	**4.6**	0.48	0.068	
74-87-3	Chloromethane	**1.3**	2.3	0.40	**0.65**	1.1	0.19	**J**
156-59-2	cis-1,2-Dichloroethene	ND	2.3	0.35	ND	0.59	0.088	
10061-01-5	cis-1,3-Dichloropropene	ND	2.3	0.39	ND	0.51	0.085	
98-82-8	Cumene	ND	2.3	0.36	ND	0.47	0.073	
110-82-7	Cyclohexane	ND	4.7	0.70	ND	1.4	0.20	
124-48-1	Dibromochloromethane	**0.35**	2.3	0.33	**0.041**	0.27	0.038	**J**
64-17-5	Ethanol	**11**	23	1.7	**6.0**	12	0.91	**J**
100-41-4	Ethyl Benzene	ND	2.3	0.35	ND	0.54	0.080	
75-69-4	Freon 11	**190**	2.3	0.38	**34**	0.41	0.067	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405300850** ALS Sample ID: P2402249-062
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/30/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Marlow Cobian/Meghry Jilakian Date Analyzed: 6/22/24 & 6/24/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.040 Liter(s)

Initial Pressure (psig): -2.98 Final Pressure (psig): 7.13

Container Dilution Factor: 1.86

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**1,200**	23	3.5	**160**	3.0	0.46	**D**
76-14-2	Freon 114	ND	2.3	0.39	ND	0.33	0.056	
75-71-8	Freon 12	**2.4**	2.3	0.40	**0.49**	0.47	0.082	
306-83-2	Freon 123	**3.6**	2.3	1.1	**0.57**	0.37	0.18	**X**
75-43-4	Freon 21	ND	2.3	1.1	ND	0.55	0.27	**X**
142-82-5	Heptane	ND	2.3	0.40	ND	0.57	0.096	
87-68-3	Hexachlorobutadiene	ND	2.3	0.51	ND	0.22	0.048	
110-54-3	Hexane	ND	2.3	0.51	ND	0.66	0.15	
179601-23-1	m,p-Xylene	ND	4.7	0.65	ND	1.1	0.15	
1634-04-4	Methyl tert-butyl ether	ND	2.3	0.29	ND	0.65	0.081	
75-09-2	Methylene Chloride	ND	2.3	0.70	ND	0.67	0.20	
95-47-6	o-Xylene	ND	2.3	0.36	ND	0.54	0.082	
103-65-1	Propylbenzene	ND	2.3	0.36	ND	0.47	0.073	
100-42-5	Styrene	ND	2.3	0.40	ND	0.55	0.094	
127-18-4	Tetrachloroethene	ND	2.3	0.32	ND	0.34	0.047	
109-99-9	Tetrahydrofuran	ND	2.3	0.31	ND	0.79	0.11	
108-88-3	Toluene	**0.91**	2.3	0.30	**0.24**	0.62	0.080	**J, B**
156-60-5	trans-1,2-Dichloroethene	ND	2.3	0.34	ND	0.59	0.087	
10061-02-6	trans-1,3-Dichloropropene	ND	2.3	0.51	ND	0.51	0.11	
79-01-6	Trichloroethene	**0.86**	2.3	0.33	**0.16**	0.43	0.062	**J, B**
75-01-4	Vinyl Chloride	ND	2.3	0.27	ND	0.91	0.10	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
B = Analyte detected in both the sample and the associated method blank.

X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405300850** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-062

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/30/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Marlow Cobian/Meghry Jilakian	Date Analyzed:	6/22/24 & 6/24/24
Sampling Media:	1.0 L Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			0.040 Liter(s)

Initial Pressure (psig): -2.98 Final Pressure (psig): 7.13

Container Dilution Factor: 1.86

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405300856** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-063

Test Code: EPA TO-15 Date Collected: 5/30/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/24/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.0020 Liter(s)
Test Notes: 0.00050 Liter(s)

Initial Pressure (psig): -3.32 Final Pressure (psig): 7.00

Container Dilution Factor: 1.91

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	480	63	ND	88	12	
79-34-5	1,1,2,2-Tetrachloroethane	ND	480	71	ND	70	10	
79-00-5	1,1,2-Trichloroethane	ND	480	52	ND	88	9.5	
75-34-3	1,1-Dichloroethane	ND	480	74	ND	120	18	
75-35-4	1,1-Dichloroethene	ND	480	71	ND	120	18	
120-82-1	1,2,4-Trichlorobenzene	ND	480	120	ND	64	17	
95-63-6	1,2,4-Trimethylbenzene	ND	480	71	ND	97	14	
106-93-4	1,2-Dibromoethane (EDB)	ND	480	59	ND	62	7.7	
95-50-1	1,2-Dichlorobenzene	ND	480	75	ND	79	13	
107-06-2	1,2-Dichloroethane	ND	480	56	ND	120	14	
78-87-5	1,2-Dichloropropane	ND	480	63	ND	100	14	
108-67-8	1,3,5-Trimethylbenzene	ND	480	74	ND	97	15	
106-99-0	1,3-Butadiene	ND	480	84	ND	220	38	
541-73-1	1,3-Dichlorobenzene	ND	480	76	ND	79	13	
106-46-7	1,4-Dichlorobenzene	ND	480	78	ND	79	13	
123-91-1	1,4-Dioxane	ND	480	60	ND	130	17	
540-84-1	2,2,4-Trimethylpentane	ND	480	76	ND	100	16	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	ND	4,800	110	ND	1,600	36	
591-78-6	2-Hexanone	ND	480	63	ND	120	15	
67-63-0	2-Propanol	ND	960	210	ND	390	86	
107-05-1	3-Chloropropene	ND	480	69	ND	150	22	
622-96-8	4-Ethyltoluene	ND	480	81	ND	97	17	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405300856** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-063

Test Code: EPA TO-15 Date Collected: 5/30/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/24/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.0020 Liter(s)
Test Notes: 0.00050 Liter(s)

Initial Pressure (psig): -3.32 Final Pressure (psig): 7.00

Container Dilution Factor: 1.91

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	480	70	ND	120	17	
67-64-1	Acetone	ND	4,800	1,100	ND	2,000	480	
100-44-7	alpha-Chlorotoluene	ND	480	110	ND	92	22	
71-43-2	Benzene	ND	480	74	ND	150	23	
75-27-4	Bromodichloromethane	ND	480	74	ND	71	11	
75-25-2	Bromoform	ND	480	110	ND	46	10	
74-83-9	Bromomethane	ND	480	71	ND	120	18	
75-15-0	Carbon Disulfide	ND	4,800	150	ND	1,500	49	
56-23-5	Carbon Tetrachloride	ND	480	71	ND	76	11	
108-90-7	Chlorobenzene	ND	480	68	ND	100	15	
75-00-3	Chloroethane	ND	480	63	ND	180	24	
67-66-3	Chloroform	ND	480	68	ND	98	14	
74-87-3	Chloromethane	ND	480	82	ND	230	40	
156-59-2	cis-1,2-Dichloroethene	ND	480	72	ND	120	18	
10061-01-5	cis-1,3-Dichloropropene	ND	480	79	ND	110	17	
98-82-8	Cumene	ND	480	74	ND	97	15	
110-82-7	Cyclohexane	ND	960	140	ND	280	42	
124-48-1	Dibromochloromethane	ND	480	67	ND	56	7.8	
64-17-5	Ethanol	ND	4,800	350	ND	2,500	190	
100-41-4	Ethyl Benzene	ND	480	72	ND	110	16	
75-69-4	Freon 11	**50,000**	480	77	**8,900**	85	14	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405300856** ALS Sample ID: P2402249-063
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/30/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/24/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.0020 Liter(s)
Test Notes: 0.00050 Liter(s)

Initial Pressure (psig): -3.32 Final Pressure (psig): 7.00

Container Dilution Factor: 1.91

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**100,000**	1,900	290	**13,000**	250	38	**D**
76-14-2	Freon 114	ND	480	80	ND	68	11	
75-71-8	Freon 12	**84**	480	83	**17**	97	17	**J**
306-83-2	Freon 123	**250**	480	230	**39**	76	37	**J, X**
75-43-4	Freon 21	ND	480	230	ND	110	54	**X**
142-82-5	Heptane	ND	480	81	ND	120	20	
87-68-3	Hexachlorobutadiene	ND	480	110	ND	45	9.9	
110-54-3	Hexane	ND	480	110	ND	140	30	
179601-23-1	m,p-Xylene	ND	960	130	ND	220	31	
1634-04-4	Methyl tert-butyl ether	ND	480	60	ND	130	17	
75-09-2	Methylene Chloride	ND	480	140	ND	140	41	
95-47-6	o-Xylene	ND	480	74	ND	110	17	
103-65-1	Propylbenzene	ND	480	74	ND	97	15	
100-42-5	Styrene	ND	480	82	ND	110	19	
127-18-4	Tetrachloroethene	ND	480	66	ND	70	9.7	
109-99-9	Tetrahydrofuran	ND	480	64	ND	160	22	
108-88-3	Toluene	ND	480	62	ND	130	16	
156-60-5	trans-1,2-Dichloroethene	ND	480	71	ND	120	18	
10061-02-6	trans-1,3-Dichloropropene	ND	480	110	ND	110	23	
79-01-6	Trichloroethene	ND	480	69	ND	89	13	
75-01-4	Vinyl Chloride	ND	480	54	ND	190	21	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
D = The reported result is from a dilution.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405300856** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-063

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/30/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/24/24
Sampling Media:	1.0 L Summa Canister	Volume(s) Analyzed:	0.0020 Liter(s)
Test Notes:			0.00050 Liter(s)

Initial Pressure (psig): -3.32 Final Pressure (psig): 7.00

Container Dilution Factor: 1.91

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405300910** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-064

Test Code: EPA TO-15 Date Collected: 5/30/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/24/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -0.11 Final Pressure (psig): 6.45

Container Dilution Factor: 1.45

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	1.8	0.24	ND	0.33	0.044	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.8	0.27	ND	0.26	0.039	
79-00-5	1,1,2-Trichloroethane	ND	1.8	0.20	ND	0.33	0.036	
75-34-3	1,1-Dichloroethane	ND	1.8	0.28	ND	0.45	0.070	
75-35-4	1,1-Dichloroethene	ND	1.8	0.27	ND	0.46	0.068	
120-82-1	1,2,4-Trichlorobenzene	ND	1.8	0.47	ND	0.24	0.064	
95-63-6	1,2,4-Trimethylbenzene	**0.67**	1.8	0.27	**0.14**	0.37	0.055	**J**
106-93-4	1,2-Dibromoethane (EDB)	ND	1.8	0.22	ND	0.24	0.029	
95-50-1	1,2-Dichlorobenzene	ND	1.8	0.29	ND	0.30	0.048	
107-06-2	1,2-Dichloroethane	ND	1.8	0.21	ND	0.45	0.053	
78-87-5	1,2-Dichloropropane	**0.34**	1.8	0.24	**0.075**	0.39	0.052	**J**
108-67-8	1,3,5-Trimethylbenzene	ND	1.8	0.28	ND	0.37	0.057	
106-99-0	1,3-Butadiene	ND	1.8	0.32	ND	0.82	0.14	
541-73-1	1,3-Dichlorobenzene	ND	1.8	0.29	ND	0.30	0.048	
106-46-7	1,4-Dichlorobenzene	ND	1.8	0.30	ND	0.30	0.049	
123-91-1	1,4-Dioxane	ND	1.8	0.23	ND	0.50	0.063	
540-84-1	2,2,4-Trimethylpentane	ND	1.8	0.29	ND	0.39	0.062	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**4.6**	18	0.40	**1.6**	6.1	0.14	**J**
591-78-6	2-Hexanone	**0.38**	1.8	0.24	**0.094**	0.44	0.058	**J**
67-63-0	2-Propanol	**8.7**	3.6	0.80	**3.6**	1.5	0.32	
107-05-1	3-Chloropropene	ND	1.8	0.26	ND	0.58	0.083	
622-96-8	4-Ethyltoluene	ND	1.8	0.31	ND	0.37	0.063	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405300910** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-064

Test Code: EPA TO-15 Date Collected: 5/30/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/24/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -0.11 Final Pressure (psig): 6.45

Container Dilution Factor: 1.45

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	**3.6**	1.8	0.26	**0.87**	0.44	0.065	
67-64-1	Acetone	**23**	18	4.4	**9.6**	7.6	1.8	
100-44-7	alpha-Chlorotoluene	ND	1.8	0.44	ND	0.35	0.084	
71-43-2	Benzene	**0.68**	1.8	0.28	**0.21**	0.57	0.087	**J**
75-27-4	Bromodichloromethane	ND	1.8	0.28	ND	0.27	0.042	
75-25-2	Bromoform	ND	1.8	0.40	ND	0.18	0.039	
74-83-9	Bromomethane	ND	1.8	0.27	ND	0.47	0.069	
75-15-0	Carbon Disulfide	ND	18	0.58	ND	5.8	0.19	
56-23-5	Carbon Tetrachloride	ND	1.8	0.27	ND	0.29	0.043	
108-90-7	Chlorobenzene	ND	1.8	0.26	ND	0.39	0.056	
75-00-3	Chloroethane	ND	1.8	0.24	ND	0.69	0.091	
67-66-3	Chloroform	**0.99**	1.8	0.26	**0.20**	0.37	0.053	**J**
74-87-3	Chloromethane	**0.51**	1.8	0.31	**0.25**	0.88	0.15	**J**
156-59-2	cis-1,2-Dichloroethene	ND	1.8	0.27	ND	0.46	0.069	
10061-01-5	cis-1,3-Dichloropropene	ND	1.8	0.30	ND	0.40	0.066	
98-82-8	Cumene	ND	1.8	0.28	ND	0.37	0.057	
110-82-7	Cyclohexane	**1.0**	3.6	0.54	**0.30**	1.1	0.16	**J**
124-48-1	Dibromochloromethane	ND	1.8	0.25	ND	0.21	0.030	
64-17-5	Ethanol	**30**	18	1.3	**16**	9.6	0.71	
100-41-4	Ethyl Benzene	**1.1**	1.8	0.27	**0.24**	0.42	0.063	**J**
75-69-4	Freon 11	**19**	1.8	0.29	**3.4**	0.32	0.052	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405300910** ALS Sample ID: P2402249-064
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/30/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/24/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -0.11 Final Pressure (psig): 6.45

Container Dilution Factor: 1.45

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**76**	1.8	0.28	**9.9**	0.24	0.036	
76-14-2	Freon 114	ND	1.8	0.30	ND	0.26	0.044	
75-71-8	Freon 12	**2.0**	1.8	0.32	**0.40**	0.37	0.064	
306-83-2	Freon 123	**24**	1.8	0.87	**3.9**	0.29	0.14	**X**
75-43-4	Freon 21	ND	1.8	0.87	ND	0.43	0.21	**X**
142-82-5	Heptane	**3.8**	1.8	0.31	**0.93**	0.44	0.075	
87-68-3	Hexachlorobutadiene	ND	1.8	0.40	ND	0.17	0.037	
110-54-3	Hexane	**2.4**	1.8	0.40	**0.68**	0.51	0.11	
179601-23-1	m,p-Xylene	**3.1**	3.6	0.51	**0.71**	0.83	0.12	**J**
1634-04-4	Methyl tert-butyl ether	ND	1.8	0.23	ND	0.50	0.063	
75-09-2	Methylene Chloride	**1.6**	1.8	0.54	**0.47**	0.52	0.16	**J**
95-47-6	o-Xylene	**1.6**	1.8	0.28	**0.37**	0.42	0.064	**J**
103-65-1	Propylbenzene	ND	1.8	0.28	ND	0.37	0.057	
100-42-5	Styrene	**1.0**	1.8	0.31	**0.24**	0.43	0.073	**J**
127-18-4	Tetrachloroethene	**1.0**	1.8	0.25	**0.15**	0.27	0.037	**J**
109-99-9	Tetrahydrofuran	**0.86**	1.8	0.24	**0.29**	0.61	0.082	**J**
108-88-3	Toluene	**41**	1.8	0.24	**11**	0.48	0.063	
156-60-5	trans-1,2-Dichloroethene	ND	1.8	0.27	ND	0.46	0.068	
10061-02-6	trans-1,3-Dichloropropene	ND	1.8	0.40	ND	0.40	0.088	
79-01-6	Trichloroethene	ND	1.8	0.26	ND	0.34	0.049	
75-01-4	Vinyl Chloride	ND	1.8	0.21	ND	0.71	0.081	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405300910** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-064

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/30/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/24/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			

Initial Pressure (psig): -0.11 Final Pressure (psig): 6.45

Container Dilution Factor: 1.45

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405300916** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-065

Test Code: EPA TO-15 Date Collected: 5/30/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Marlow Cobian/Meghry Jilakian Date Analyzed: 6/22/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -1.85 Final Pressure (psig): 6.52

Container Dilution Factor: 1.65

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	2.1	0.27	ND	0.38	0.050	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.1	0.31	ND	0.30	0.044	
79-00-5	1,1,2-Trichloroethane	ND	2.1	0.22	ND	0.38	0.041	
75-34-3	1,1-Dichloroethane	ND	2.1	0.32	ND	0.51	0.080	
75-35-4	1,1-Dichloroethene	ND	2.1	0.31	ND	0.52	0.077	
120-82-1	1,2,4-Trichlorobenzene	ND	2.1	0.54	ND	0.28	0.072	
95-63-6	1,2,4-Trimethylbenzene	**0.71**	2.1	0.31	**0.14**	0.42	0.062	**J**
106-93-4	1,2-Dibromoethane (EDB)	ND	2.1	0.26	ND	0.27	0.033	
95-50-1	1,2-Dichlorobenzene	ND	2.1	0.33	ND	0.34	0.054	
107-06-2	1,2-Dichloroethane	ND	2.1	0.24	ND	0.51	0.060	
78-87-5	1,2-Dichloropropane	ND	2.1	0.27	ND	0.45	0.059	
108-67-8	1,3,5-Trimethylbenzene	ND	2.1	0.32	ND	0.42	0.065	
106-99-0	1,3-Butadiene	ND	2.1	0.36	ND	0.93	0.16	
541-73-1	1,3-Dichlorobenzene	ND	2.1	0.33	ND	0.34	0.055	
106-46-7	1,4-Dichlorobenzene	ND	2.1	0.34	ND	0.34	0.056	
123-91-1	1,4-Dioxane	**1.6**	2.1	0.26	**0.45**	0.57	0.072	**J**
540-84-1	2,2,4-Trimethylpentane	ND	2.1	0.33	ND	0.44	0.071	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**7.8**	21	0.45	**2.6**	7.0	0.15	**J, B**
591-78-6	2-Hexanone	**0.52**	2.1	0.27	**0.13**	0.50	0.066	**J**
67-63-0	2-Propanol	**5.6**	4.1	0.91	**2.3**	1.7	0.37	
107-05-1	3-Chloropropene	ND	2.1	0.30	ND	0.66	0.095	
622-96-8	4-Ethyltoluene	ND	2.1	0.35	ND	0.42	0.071	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
B = Analyte detected in both the sample and the associated method blank.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405300916** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-065

Test Code: EPA TO-15 Date Collected: 5/30/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Marlow Cobian/Meghry Jilakian Date Analyzed: 6/22/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -1.85 Final Pressure (psig): 6.52

Container Dilution Factor: 1.65

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	**0.97**	2.1	0.30	**0.24**	0.50	0.074	**J**
67-64-1	Acetone	**33**	21	5.0	**14**	8.7	2.1	
100-44-7	alpha-Chlorotoluene	ND	2.1	0.50	ND	0.40	0.096	
71-43-2	Benzene	**0.68**	2.1	0.32	**0.21**	0.65	0.099	**J**
75-27-4	Bromodichloromethane	ND	2.1	0.32	ND	0.31	0.047	
75-25-2	Bromoform	ND	2.1	0.45	ND	0.20	0.044	
74-83-9	Bromomethane	ND	2.1	0.31	ND	0.53	0.079	
75-15-0	Carbon Disulfide	ND	21	0.66	ND	6.6	0.21	
56-23-5	Carbon Tetrachloride	ND	2.1	0.31	ND	0.33	0.049	
108-90-7	Chlorobenzene	ND	2.1	0.29	ND	0.45	0.064	
75-00-3	Chloroethane	ND	2.1	0.27	ND	0.78	0.10	
67-66-3	Chloroform	**3.8**	2.1	0.29	**0.77**	0.42	0.060	
74-87-3	Chloromethane	**0.48**	2.1	0.35	**0.23**	1.0	0.17	**J**
156-59-2	cis-1,2-Dichloroethene	ND	2.1	0.31	ND	0.52	0.078	
10061-01-5	cis-1,3-Dichloropropene	ND	2.1	0.34	ND	0.45	0.075	
98-82-8	Cumene	ND	2.1	0.32	ND	0.42	0.065	
110-82-7	Cyclohexane	ND	4.1	0.62	ND	1.2	0.18	
124-48-1	Dibromochloromethane	ND	2.1	0.29	ND	0.24	0.034	
64-17-5	Ethanol	**18**	21	1.5	**9.3**	11	0.81	**J**
100-41-4	Ethyl Benzene	**0.71**	2.1	0.31	**0.16**	0.48	0.071	**J, B**
75-69-4	Freon 11	**83**	2.1	0.33	**15**	0.37	0.059	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
B = Analyte detected in both the sample and the associated method blank.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405300916** ALS Sample ID: P2402249-065
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/30/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Marlow Cobian/Meghry Jilakian Date Analyzed: 6/22/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -1.85 Final Pressure (psig): 6.52

Container Dilution Factor: 1.65

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**150**	2.1	0.31	**19**	0.27	0.041	
76-14-2	Freon 114	ND	2.1	0.35	ND	0.30	0.050	
75-71-8	Freon 12	**2.1**	2.1	0.36	**0.43**	0.42	0.073	
306-83-2	Freon 123	**9.5**	2.1	0.99	**1.5**	0.33	0.16	**X**
75-43-4	Freon 21	ND	2.1	0.99	ND	0.49	0.24	**X**
142-82-5	Heptane	**3.1**	2.1	0.35	**0.77**	0.50	0.086	
87-68-3	Hexachlorobutadiene	ND	2.1	0.45	ND	0.19	0.043	
110-54-3	Hexane	**2.7**	2.1	0.45	**0.77**	0.59	0.13	**B**
179601-23-1	m,p-Xylene	**1.7**	4.1	0.58	**0.38**	0.95	0.13	**J, B**
1634-04-4	Methyl tert-butyl ether	ND	2.1	0.26	ND	0.57	0.072	
75-09-2	Methylene Chloride	**1.5**	2.1	0.62	**0.42**	0.59	0.18	**J**
95-47-6	o-Xylene	**0.72**	2.1	0.32	**0.17**	0.48	0.073	**J**
103-65-1	Propylbenzene	ND	2.1	0.32	ND	0.42	0.065	
100-42-5	Styrene	**0.61**	2.1	0.35	**0.14**	0.48	0.083	**J**
127-18-4	Tetrachloroethene	**0.67**	2.1	0.28	**0.099**	0.30	0.042	**J, B**
109-99-9	Tetrahydrofuran	**1.9**	2.1	0.28	**0.63**	0.70	0.094	**J**
108-88-3	Toluene	**31**	2.1	0.27	**8.2**	0.55	0.071	**B**
156-60-5	trans-1,2-Dichloroethene	ND	2.1	0.31	ND	0.52	0.077	
10061-02-6	trans-1,3-Dichloropropene	ND	2.1	0.45	ND	0.45	0.10	
79-01-6	Trichloroethene	ND	2.1	0.30	ND	0.38	0.055	
75-01-4	Vinyl Chloride	ND	2.1	0.24	ND	0.81	0.092	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.
B = Analyte detected in both the sample and the associated method blank.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405300916** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-065

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/30/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Marlow Cobian/Meghry Jilakian	Date Analyzed:	6/22/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			

Initial Pressure (psig): -1.85 Final Pressure (psig): 6.52

Container Dilution Factor: 1.65

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405300923** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-066

Test Code: EPA TO-15 Date Collected: 5/30/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Marlow Cobian/Meghry Jilakian Date Analyzed: 6/22/24 & 6/24/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.10 Liter(s)
Test Notes: 0.050 Liter(s)

Initial Pressure (psig): -2.77 Final Pressure (psig): 7.00

Container Dilution Factor: 1.82

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	9.1	1.2	ND	1.7	0.22	
79-34-5	1,1,2,2-Tetrachloroethane	ND	9.1	1.3	ND	1.3	0.20	
79-00-5	1,1,2-Trichloroethane	ND	9.1	0.98	ND	1.7	0.18	
75-34-3	1,1-Dichloroethane	ND	9.1	1.4	ND	2.2	0.35	
75-35-4	1,1-Dichloroethene	ND	9.1	1.3	ND	2.3	0.34	
120-82-1	1,2,4-Trichlorobenzene	ND	9.1	2.4	ND	1.2	0.32	
95-63-6	1,2,4-Trimethylbenzene	ND	9.1	1.3	ND	1.9	0.27	
106-93-4	1,2-Dibromoethane (EDB)	ND	9.1	1.1	ND	1.2	0.15	
95-50-1	1,2-Dichlorobenzene	ND	9.1	1.4	ND	1.5	0.24	
107-06-2	1,2-Dichloroethane	ND	9.1	1.1	ND	2.2	0.27	
78-87-5	1,2-Dichloropropane	ND	9.1	1.2	ND	2.0	0.26	
108-67-8	1,3,5-Trimethylbenzene	ND	9.1	1.4	ND	1.9	0.29	
106-99-0	1,3-Butadiene	ND	9.1	1.6	ND	4.1	0.72	
541-73-1	1,3-Dichlorobenzene	ND	9.1	1.5	ND	1.5	0.24	
106-46-7	1,4-Dichlorobenzene	ND	9.1	1.5	ND	1.5	0.25	
123-91-1	1,4-Dioxane	ND	9.1	1.1	ND	2.5	0.32	
540-84-1	2,2,4-Trimethylpentane	ND	9.1	1.5	ND	1.9	0.31	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**3.4**	91	2.0	**1.2**	31	0.68	**J, B**
591-78-6	2-Hexanone	ND	9.1	1.2	ND	2.2	0.29	
67-63-0	2-Propanol	ND	18	4.0	ND	7.4	1.6	
107-05-1	3-Chloropropene	ND	9.1	1.3	ND	2.9	0.42	
622-96-8	4-Ethyltoluene	ND	9.1	1.5	ND	1.9	0.31	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
B = Analyte detected in both the sample and the associated method blank.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405300923** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-066

Test Code: EPA TO-15 Date Collected: 5/30/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Marlow Cobian/Meghry Jilakian Date Analyzed: 6/22/24 & 6/24/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.10 Liter(s)
Test Notes: 0.050 Liter(s)

Initial Pressure (psig): -2.77 Final Pressure (psig): 7.00

Container Dilution Factor: 1.82

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	9.1	1.3	ND	2.2	0.32	
67-64-1	Acetone	**23**	91	22	**9.5**	38	9.2	**J**
100-44-7	alpha-Chlorotoluene	ND	9.1	2.2	ND	1.8	0.42	
71-43-2	Benzene	ND	9.1	1.4	ND	2.8	0.44	
75-27-4	Bromodichloromethane	ND	9.1	1.4	ND	1.4	0.21	
75-25-2	Bromoform	ND	9.1	2.0	ND	0.88	0.19	
74-83-9	Bromomethane	ND	9.1	1.3	ND	2.3	0.35	
75-15-0	Carbon Disulfide	ND	91	2.9	ND	29	0.94	
56-23-5	Carbon Tetrachloride	ND	9.1	1.3	ND	1.4	0.21	
108-90-7	Chlorobenzene	ND	9.1	1.3	ND	2.0	0.28	
75-00-3	Chloroethane	ND	9.1	1.2	ND	3.4	0.46	
67-66-3	Chloroform	**11**	9.1	1.3	**2.2**	1.9	0.26	
74-87-3	Chloromethane	ND	9.1	1.6	ND	4.4	0.76	
156-59-2	cis-1,2-Dichloroethene	ND	9.1	1.4	ND	2.3	0.34	
10061-01-5	cis-1,3-Dichloropropene	ND	9.1	1.5	ND	2.0	0.33	
98-82-8	Cumene	ND	9.1	1.4	ND	1.9	0.29	
110-82-7	Cyclohexane	ND	18	2.7	ND	5.3	0.79	
124-48-1	Dibromochloromethane	ND	9.1	1.3	ND	1.1	0.15	
64-17-5	Ethanol	ND	91	6.7	ND	48	3.6	
100-41-4	Ethyl Benzene	ND	9.1	1.4	ND	2.1	0.31	
75-69-4	Freon 11	**1,800**	9.1	1.5	**310**	1.6	0.26	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405300923** ALS Sample ID: P2402249-066
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/30/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Marlow Cobian/Meghry Jilakian Date Analyzed: 6/22/24 & 6/24/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.10 Liter(s)
Test Notes: 0.050 Liter(s)

Initial Pressure (psig): -2.77 Final Pressure (psig): 7.00

Container Dilution Factor: 1.82

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**1,800**	18	2.8	**240**	2.4	0.36	**D**
76-14-2	Freon 114	ND	9.1	1.5	ND	1.3	0.22	
75-71-8	Freon 12	**2.2**	9.1	1.6	**0.45**	1.8	0.32	**J**
306-83-2	Freon 123	ND	9.1	4.4	ND	1.5	0.70	**X**
75-43-4	Freon 21	ND	9.1	4.4	ND	2.2	1.0	**X**
142-82-5	Heptane	ND	9.1	1.5	ND	2.2	0.38	
87-68-3	Hexachlorobutadiene	ND	9.1	2.0	ND	0.85	0.19	
110-54-3	Hexane	ND	9.1	2.0	ND	2.6	0.57	
179601-23-1	m,p-Xylene	ND	18	2.5	ND	4.2	0.59	
1634-04-4	Methyl tert-butyl ether	ND	9.1	1.1	ND	2.5	0.32	
75-09-2	Methylene Chloride	ND	9.1	2.7	ND	2.6	0.79	
95-47-6	o-Xylene	ND	9.1	1.4	ND	2.1	0.32	
103-65-1	Propylbenzene	ND	9.1	1.4	ND	1.9	0.29	
100-42-5	Styrene	ND	9.1	1.6	ND	2.1	0.37	
127-18-4	Tetrachloroethene	ND	9.1	1.3	ND	1.3	0.19	
109-99-9	Tetrahydrofuran	ND	9.1	1.2	ND	3.1	0.41	
108-88-3	Toluene	ND	9.1	1.2	ND	2.4	0.31	
156-60-5	trans-1,2-Dichloroethene	ND	9.1	1.3	ND	2.3	0.34	
10061-02-6	trans-1,3-Dichloropropene	ND	9.1	2.0	ND	2.0	0.44	
79-01-6	Trichloroethene	**1.6**	9.1	1.3	**0.29**	1.7	0.24	**J, B**
75-01-4	Vinyl Chloride	ND	9.1	1.0	ND	3.6	0.41	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
B = Analyte detected in both the sample and the associated method blank.

X = See case narrative.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405300923** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-066

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/30/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Marlow Cobian/Meghry Jilakian	Date Analyzed:	6/22/24 & 6/24/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.10 Liter(s)
Test Notes:			0.050 Liter(s)

Initial Pressure (psig): -2.77 Final Pressure (psig): 7.00

Container Dilution Factor: 1.82

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405300928** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-067

Test Code: EPA TO-15 Date Collected: 5/30/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/24/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.18 Final Pressure (psig): 6.44

Container Dilution Factor: 1.69

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	2.1	0.28	ND	0.39	0.051	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.1	0.31	ND	0.31	0.046	
79-00-5	1,1,2-Trichloroethane	ND	2.1	0.23	ND	0.39	0.042	
75-34-3	1,1-Dichloroethane	ND	2.1	0.33	ND	0.52	0.081	
75-35-4	1,1-Dichloroethene	ND	2.1	0.31	ND	0.53	0.079	
120-82-1	1,2,4-Trichlorobenzene	ND	2.1	0.55	ND	0.28	0.074	
95-63-6	1,2,4-Trimethylbenzene	ND	2.1	0.31	ND	0.43	0.064	
106-93-4	1,2-Dibromoethane (EDB)	ND	2.1	0.26	ND	0.27	0.034	
95-50-1	1,2-Dichlorobenzene	ND	2.1	0.33	ND	0.35	0.056	
107-06-2	1,2-Dichloroethane	ND	2.1	0.25	ND	0.52	0.062	
78-87-5	1,2-Dichloropropane	ND	2.1	0.28	ND	0.46	0.060	
108-67-8	1,3,5-Trimethylbenzene	ND	2.1	0.33	ND	0.43	0.066	
106-99-0	1,3-Butadiene	ND	2.1	0.37	ND	0.96	0.17	
541-73-1	1,3-Dichlorobenzene	ND	2.1	0.34	ND	0.35	0.056	
106-46-7	1,4-Dichlorobenzene	ND	2.1	0.35	ND	0.35	0.058	
123-91-1	1,4-Dioxane	**0.31**	2.1	0.27	**0.086**	0.59	0.074	**J**
540-84-1	2,2,4-Trimethylpentane	ND	2.1	0.34	ND	0.45	0.072	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**1.4**	21	0.46	**0.47**	7.2	0.16	**J, B**
591-78-6	2-Hexanone	ND	2.1	0.28	ND	0.52	0.068	
67-63-0	2-Propanol	**1.0**	4.2	0.93	**0.41**	1.7	0.38	**J**
107-05-1	3-Chloropropene	ND	2.1	0.30	ND	0.68	0.097	
622-96-8	4-Ethyltoluene	ND	2.1	0.36	ND	0.43	0.073	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
B = Analyte detected in both the sample and the associated method blank.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405300928** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-067

Test Code: EPA TO-15 Date Collected: 5/30/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/24/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.18 Final Pressure (psig): 6.44

Container Dilution Factor: 1.69

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	2.1	0.31	ND	0.52	0.075	
67-64-1	Acetone	**30**	21	5.1	**12**	8.9	2.1	
100-44-7	alpha-Chlorotoluene	ND	2.1	0.51	ND	0.41	0.098	
71-43-2	Benzene	ND	2.1	0.33	ND	0.66	0.10	
75-27-4	Bromodichloromethane	ND	2.1	0.33	ND	0.32	0.049	
75-25-2	Bromoform	ND	2.1	0.46	ND	0.20	0.045	
74-83-9	Bromomethane	ND	2.1	0.31	ND	0.54	0.081	
75-15-0	Carbon Disulfide	**6.3**	21	0.68	**2.0**	6.8	0.22	**J**
56-23-5	Carbon Tetrachloride	**0.38**	2.1	0.31	**0.060**	0.34	0.050	**J**
108-90-7	Chlorobenzene	ND	2.1	0.30	ND	0.46	0.065	
75-00-3	Chloroethane	ND	2.1	0.28	ND	0.80	0.11	
67-66-3	Chloroform	ND	2.1	0.30	ND	0.43	0.061	
74-87-3	Chloromethane	**1.5**	2.1	0.36	**0.72**	1.0	0.18	**J**
156-59-2	cis-1,2-Dichloroethene	ND	2.1	0.32	ND	0.53	0.080	
10061-01-5	cis-1,3-Dichloropropene	ND	2.1	0.35	ND	0.47	0.077	
98-82-8	Cumene	ND	2.1	0.33	ND	0.43	0.066	
110-82-7	Cyclohexane	ND	4.2	0.63	ND	1.2	0.18	
124-48-1	Dibromochloromethane	ND	2.1	0.30	ND	0.25	0.035	
64-17-5	Ethanol	**19**	21	1.6	**10**	11	0.83	**J**
100-41-4	Ethyl Benzene	ND	2.1	0.32	ND	0.49	0.073	
75-69-4	Freon 11	**1.1**	2.1	0.34	**0.20**	0.38	0.061	**J**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **2405300928** ALS Sample ID: P2402249-067
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: 5/30/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/24/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:

Initial Pressure (psig): -2.18 Final Pressure (psig): 6.44

Container Dilution Factor: 1.69

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	**0.59**	2.1	0.32	**0.077**	0.28	0.042	**J**
76-14-2	Freon 114	ND	2.1	0.35	ND	0.30	0.051	
75-71-8	Freon 12	**2.3**	2.1	0.37	**0.47**	0.43	0.074	
306-83-2	Freon 123	**1.0**	2.1	1.0	**0.17**	0.34	0.16	**J, X**
75-43-4	Freon 21	ND	2.1	1.0	ND	0.50	0.24	**X**
142-82-5	Heptane	ND	2.1	0.36	ND	0.52	0.088	
87-68-3	Hexachlorobutadiene	ND	2.1	0.46	ND	0.20	0.044	
110-54-3	Hexane	ND	2.1	0.46	ND	0.60	0.13	
179601-23-1	m,p-Xylene	ND	4.2	0.59	ND	0.97	0.14	
1634-04-4	Methyl tert-butyl ether	ND	2.1	0.27	ND	0.59	0.074	
75-09-2	Methylene Chloride	ND	2.1	0.63	ND	0.61	0.18	
95-47-6	o-Xylene	ND	2.1	0.33	ND	0.49	0.075	
103-65-1	Propylbenzene	ND	2.1	0.33	ND	0.43	0.066	
100-42-5	Styrene	ND	2.1	0.36	ND	0.50	0.085	
127-18-4	Tetrachloroethene	ND	2.1	0.29	ND	0.31	0.043	
109-99-9	Tetrahydrofuran	ND	2.1	0.28	ND	0.72	0.096	
108-88-3	Toluene	**0.44**	2.1	0.27	**0.12**	0.56	0.073	**J, B**
156-60-5	trans-1,2-Dichloroethene	ND	2.1	0.31	ND	0.53	0.079	
10061-02-6	trans-1,3-Dichloropropene	ND	2.1	0.46	ND	0.47	0.10	
79-01-6	Trichloroethene	ND	2.1	0.30	ND	0.39	0.057	
75-01-4	Vinyl Chloride	ND	2.1	0.24	ND	0.83	0.094	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.
B = Analyte detected in both the sample and the associated method blank.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405300928** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-067

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/30/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/24/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			

Initial Pressure (psig): -2.18 Final Pressure (psig): 6.44

Container Dilution Factor: 1.69

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

Client: **NASA White Sands Test Facility**
Client Sample ID: **Method Blank** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P240617-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 6/17/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.066	ND	0.092	0.012	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.074	ND	0.073	0.011	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.054	ND	0.092	0.0099	
75-34-3	1,1-Dichloroethane	ND	0.50	0.078	ND	0.12	0.019	
75-35-4	1,1-Dichloroethene	ND	0.50	0.074	ND	0.13	0.019	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ND	0.067	0.018	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.074	ND	0.10	0.015	
106-93-4	1,2-Dibromoethane (EDB)	ND	0.50	0.062	ND	0.065	0.0081	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.079	ND	0.083	0.013	
107-06-2	1,2-Dichloroethane	ND	0.50	0.059	ND	0.12	0.015	
78-87-5	1,2-Dichloropropane	ND	0.50	0.066	ND	0.11	0.014	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.077	ND	0.10	0.016	
106-99-0	1,3-Butadiene	ND	0.50	0.088	ND	0.23	0.040	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.080	ND	0.083	0.013	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.082	ND	0.083	0.014	
123-91-1	1,4-Dioxane	ND	0.50	0.063	ND	0.14	0.017	
540-84-1	2,2,4-Trimethylpentane	ND	0.50	0.080	ND	0.11	0.017	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	ND	5.0	0.11	ND	1.7	0.037	
591-78-6	2-Hexanone	ND	0.50	0.066	ND	0.12	0.016	
67-63-0	2-Propanol	ND	1.0	0.22	ND	0.41	0.090	
107-05-1	3-Chloropropene	ND	0.50	0.072	ND	0.16	0.023	
622-96-8	4-Ethyltoluene	ND	0.50	0.085	ND	0.10	0.017	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **NASA White Sands Test Facility**
Client Sample ID: **Method Blank** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P240617-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 6/17/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	0.50	0.073	ND	0.12	0.018	
67-64-1	Acetone	ND	5.0	1.2	ND	2.1	0.51	
100-44-7	alpha-Chlorotoluene	ND	0.50	0.12	ND	0.097	0.023	
71-43-2	Benzene	ND	0.50	0.077	ND	0.16	0.024	
75-27-4	Bromodichloromethane	ND	0.50	0.077	ND	0.075	0.011	
75-25-2	Bromoform	ND	0.50	0.11	ND	0.048	0.011	
74-83-9	Bromomethane	ND	0.50	0.074	ND	0.13	0.019	
75-15-0	Carbon Disulfide	ND	5.0	0.16	ND	1.6	0.051	
56-23-5	Carbon Tetrachloride	ND	0.50	0.074	ND	0.080	0.012	
108-90-7	Chlorobenzene	ND	0.50	0.071	ND	0.11	0.015	
75-00-3	Chloroethane	ND	0.50	0.066	ND	0.19	0.025	
67-66-3	Chloroform	ND	0.50	0.071	ND	0.10	0.015	
74-87-3	Chloromethane	ND	0.50	0.086	ND	0.24	0.042	
156-59-2	cis-1,2-Dichloroethene	ND	0.50	0.075	ND	0.13	0.019	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.083	ND	0.11	0.018	
98-82-8	Cumene	ND	0.50	0.077	ND	0.10	0.016	
110-82-7	Cyclohexane	ND	1.0	0.15	ND	0.29	0.044	
124-48-1	Dibromochloromethane	ND	0.50	0.070	ND	0.059	0.0082	
64-17-5	Ethanol	ND	5.0	0.37	ND	2.7	0.20	
100-41-4	Ethyl Benzene	ND	0.50	0.075	ND	0.12	0.017	
75-69-4	Freon 11	ND	0.50	0.081	ND	0.089	0.014	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **Method Blank** ALS Sample ID: P240617-MB
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 6/17/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	ND	0.50	0.076	ND	0.065	0.0099	
76-14-2	Freon 114	ND	0.50	0.084	ND	0.072	0.012	
75-71-8	Freon 12	ND	0.50	0.087	ND	0.10	0.018	
306-83-2	Freon 123	ND	0.50	0.24	ND	0.080	0.038	**X**
75-43-4	Freon 21	ND	0.50	0.24	ND	0.12	0.057	**X**
142-82-5	Heptane	ND	0.50	0.085	ND	0.12	0.021	
87-68-3	Hexachlorobutadiene	ND	0.50	0.11	ND	0.047	0.010	
110-54-3	Hexane	ND	0.50	0.11	ND	0.14	0.031	
179601-23-1	m,p-Xylene	ND	1.0	0.14	ND	0.23	0.032	
1634-04-4	Methyl tert-butyl ether	ND	0.50	0.063	ND	0.14	0.017	
75-09-2	Methylene Chloride	ND	0.50	0.15	ND	0.14	0.043	
95-47-6	o-Xylene	ND	0.50	0.077	ND	0.12	0.018	
103-65-1	Propylbenzene	ND	0.50	0.077	ND	0.10	0.016	
100-42-5	Styrene	ND	0.50	0.086	ND	0.12	0.020	
127-18-4	Tetrachloroethene	ND	0.50	0.069	ND	0.074	0.010	
109-99-9	Tetrahydrofuran	ND	0.50	0.067	ND	0.17	0.023	
108-88-3	Toluene	ND	0.50	0.065	ND	0.13	0.017	
156-60-5	trans-1,2-Dichloroethene	ND	0.50	0.074	ND	0.13	0.019	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.11	ND	0.11	0.024	
79-01-6	Trichloroethene	ND	0.50	0.072	ND	0.093	0.013	
75-01-4	Vinyl Chloride	ND	0.50	0.057	ND	0.20	0.022	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
X = See case narrative.

Client:	**NASA White Sands Test Facility**		
Client Sample ID:	**Method Blank**	ALS Project ID:	P2402249
Client Project ID:	**NASA White Sands Test Facility (WSTF)**	ALS Sample ID:	P240617-MB

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	NA
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	NA
Analyst:	Simon Cao	Date Analyzed:	6/17/24
Sampling Media:	1.0 L Summa Canister	Volume(s) Analyzed:	1.00 Liter(s)
Test Notes:			

Container Dilution Factor: 1.00

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **NASA White Sands Test Facility**
Client Sample ID: **Method Blank** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P240618-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.066	ND	0.092	0.012	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.074	ND	0.073	0.011	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.054	ND	0.092	0.0099	
75-34-3	1,1-Dichloroethane	ND	0.50	0.078	ND	0.12	0.019	
75-35-4	1,1-Dichloroethene	ND	0.50	0.074	ND	0.13	0.019	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ND	0.067	0.018	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.074	ND	0.10	0.015	
106-93-4	1,2-Dibromoethane (EDB)	ND	0.50	0.062	ND	0.065	0.0081	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.079	ND	0.083	0.013	
107-06-2	1,2-Dichloroethane	ND	0.50	0.059	ND	0.12	0.015	
78-87-5	1,2-Dichloropropane	ND	0.50	0.066	ND	0.11	0.014	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.077	ND	0.10	0.016	
106-99-0	1,3-Butadiene	ND	0.50	0.088	ND	0.23	0.040	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.080	ND	0.083	0.013	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.082	ND	0.083	0.014	
123-91-1	1,4-Dioxane	ND	0.50	0.063	ND	0.14	0.017	
540-84-1	2,2,4-Trimethylpentane	ND	0.50	0.080	ND	0.11	0.017	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	ND	5.0	0.11	ND	1.7	0.037	
591-78-6	2-Hexanone	ND	0.50	0.066	ND	0.12	0.016	
67-63-0	2-Propanol	ND	1.0	0.22	ND	0.41	0.090	
107-05-1	3-Chloropropene	ND	0.50	0.072	ND	0.16	0.023	
622-96-8	4-Ethyltoluene	ND	0.50	0.085	ND	0.10	0.017	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **NASA White Sands Test Facility**
Client Sample ID: **Method Blank** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P240618-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	0.50	0.073	ND	0.12	0.018	
67-64-1	Acetone	ND	5.0	1.2	ND	2.1	0.51	
100-44-7	alpha-Chlorotoluene	ND	0.50	0.12	ND	0.097	0.023	
71-43-2	Benzene	ND	0.50	0.077	ND	0.16	0.024	
75-27-4	Bromodichloromethane	ND	0.50	0.077	ND	0.075	0.011	
75-25-2	Bromoform	ND	0.50	0.11	ND	0.048	0.011	
74-83-9	Bromomethane	ND	0.50	0.074	ND	0.13	0.019	
75-15-0	Carbon Disulfide	ND	5.0	0.16	ND	1.6	0.051	
56-23-5	Carbon Tetrachloride	ND	0.50	0.074	ND	0.080	0.012	
108-90-7	Chlorobenzene	ND	0.50	0.071	ND	0.11	0.015	
75-00-3	Chloroethane	ND	0.50	0.066	ND	0.19	0.025	
67-66-3	Chloroform	ND	0.50	0.071	ND	0.10	0.015	
74-87-3	Chloromethane	ND	0.50	0.086	ND	0.24	0.042	
156-59-2	cis-1,2-Dichloroethene	ND	0.50	0.075	ND	0.13	0.019	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.083	ND	0.11	0.018	
98-82-8	Cumene	ND	0.50	0.077	ND	0.10	0.016	
110-82-7	Cyclohexane	ND	1.0	0.15	ND	0.29	0.044	
124-48-1	Dibromochloromethane	ND	0.50	0.070	ND	0.059	0.0082	
64-17-5	Ethanol	ND	5.0	0.37	ND	2.7	0.20	
100-41-4	Ethyl Benzene	ND	0.50	0.075	ND	0.12	0.017	
75-69-4	Freon 11	ND	0.50	0.081	ND	0.089	0.014	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **Method Blank** ALS Sample ID: P240618-MB
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	ND	0.50	0.076	ND	0.065	0.0099	
76-14-2	Freon 114	ND	0.50	0.084	ND	0.072	0.012	
75-71-8	Freon 12	ND	0.50	0.087	ND	0.10	0.018	
306-83-2	Freon 123	ND	0.50	0.24	ND	0.080	0.038	**X**
75-43-4	Freon 21	ND	0.50	0.24	ND	0.12	0.057	**X**
142-82-5	Heptane	ND	0.50	0.085	ND	0.12	0.021	
87-68-3	Hexachlorobutadiene	ND	0.50	0.11	ND	0.047	0.010	
110-54-3	Hexane	ND	0.50	0.11	ND	0.14	0.031	
179601-23-1	m,p-Xylene	ND	1.0	0.14	ND	0.23	0.032	
1634-04-4	Methyl tert-butyl ether	ND	0.50	0.063	ND	0.14	0.017	
75-09-2	Methylene Chloride	ND	0.50	0.15	ND	0.14	0.043	
95-47-6	o-Xylene	ND	0.50	0.077	ND	0.12	0.018	
103-65-1	Propylbenzene	ND	0.50	0.077	ND	0.10	0.016	
100-42-5	Styrene	ND	0.50	0.086	ND	0.12	0.020	
127-18-4	Tetrachloroethene	ND	0.50	0.069	ND	0.074	0.010	
109-99-9	Tetrahydrofuran	ND	0.50	0.067	ND	0.17	0.023	
108-88-3	Toluene	ND	0.50	0.065	ND	0.13	0.017	
156-60-5	trans-1,2-Dichloroethene	ND	0.50	0.074	ND	0.13	0.019	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.11	ND	0.11	0.024	
79-01-6	Trichloroethene	ND	0.50	0.072	ND	0.093	0.013	
75-01-4	Vinyl Chloride	ND	0.50	0.057	ND	0.20	0.022	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
X = See case narrative.

Client:	**NASA White Sands Test Facility**		
Client Sample ID:	**Method Blank**	ALS Project ID:	P2402249
Client Project ID:	**NASA White Sands Test Facility (WSTF)**	ALS Sample ID:	P240618-MB

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	NA
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	NA
Analyst:	Simon Cao	Date Analyzed:	6/18/24
Sampling Media:	1.0 L Summa Canister	Volume(s) Analyzed:	1.00 Liter(s)
Test Notes:			

Container Dilution Factor: 1.00

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

Client: **NASA White Sands Test Facility**
Client Sample ID: **Method Blank** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P240619-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 6/19/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.066	ND	0.092	0.012	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.074	ND	0.073	0.011	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.054	ND	0.092	0.0099	
75-34-3	1,1-Dichloroethane	ND	0.50	0.078	ND	0.12	0.019	
75-35-4	1,1-Dichloroethene	ND	0.50	0.074	ND	0.13	0.019	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ND	0.067	0.018	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.074	ND	0.10	0.015	
106-93-4	1,2-Dibromoethane (EDB)	ND	0.50	0.062	ND	0.065	0.0081	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.079	ND	0.083	0.013	
107-06-2	1,2-Dichloroethane	ND	0.50	0.059	ND	0.12	0.015	
78-87-5	1,2-Dichloropropane	ND	0.50	0.066	ND	0.11	0.014	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.077	ND	0.10	0.016	
106-99-0	1,3-Butadiene	ND	0.50	0.088	ND	0.23	0.040	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.080	ND	0.083	0.013	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.082	ND	0.083	0.014	
123-91-1	1,4-Dioxane	ND	0.50	0.063	ND	0.14	0.017	
540-84-1	2,2,4-Trimethylpentane	ND	0.50	0.080	ND	0.11	0.017	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	ND	5.0	0.11	ND	1.7	0.037	
591-78-6	2-Hexanone	ND	0.50	0.066	ND	0.12	0.016	
67-63-0	2-Propanol	ND	1.0	0.22	ND	0.41	0.090	
107-05-1	3-Chloropropene	ND	0.50	0.072	ND	0.16	0.023	
622-96-8	4-Ethyltoluene	ND	0.50	0.085	ND	0.10	0.017	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **NASA White Sands Test Facility**
Client Sample ID: **Method Blank** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P240619-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 6/19/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	0.50	0.073	ND	0.12	0.018	
67-64-1	Acetone	ND	5.0	1.2	ND	2.1	0.51	
100-44-7	alpha-Chlorotoluene	ND	0.50	0.12	ND	0.097	0.023	
71-43-2	Benzene	ND	0.50	0.077	ND	0.16	0.024	
75-27-4	Bromodichloromethane	ND	0.50	0.077	ND	0.075	0.011	
75-25-2	Bromoform	ND	0.50	0.11	ND	0.048	0.011	
74-83-9	Bromomethane	ND	0.50	0.074	ND	0.13	0.019	
75-15-0	Carbon Disulfide	ND	5.0	0.16	ND	1.6	0.051	
56-23-5	Carbon Tetrachloride	ND	0.50	0.074	ND	0.080	0.012	
108-90-7	Chlorobenzene	ND	0.50	0.071	ND	0.11	0.015	
75-00-3	Chloroethane	ND	0.50	0.066	ND	0.19	0.025	
67-66-3	Chloroform	ND	0.50	0.071	ND	0.10	0.015	
74-87-3	Chloromethane	ND	0.50	0.086	ND	0.24	0.042	
156-59-2	cis-1,2-Dichloroethene	ND	0.50	0.075	ND	0.13	0.019	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.083	ND	0.11	0.018	
98-82-8	Cumene	ND	0.50	0.077	ND	0.10	0.016	
110-82-7	Cyclohexane	ND	1.0	0.15	ND	0.29	0.044	
124-48-1	Dibromochloromethane	ND	0.50	0.070	ND	0.059	0.0082	
64-17-5	Ethanol	ND	5.0	0.37	ND	2.7	0.20	
100-41-4	Ethyl Benzene	ND	0.50	0.075	ND	0.12	0.017	
75-69-4	Freon 11	ND	0.50	0.081	ND	0.089	0.014	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **Method Blank** ALS Sample ID: P240619-MB
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 6/19/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	ND	0.50	0.076	ND	0.065	0.0099	
76-14-2	Freon 114	ND	0.50	0.084	ND	0.072	0.012	
75-71-8	Freon 12	ND	0.50	0.087	ND	0.10	0.018	
306-83-2	Freon 123	ND	0.50	0.24	ND	0.080	0.038	**X**
75-43-4	Freon 21	ND	0.50	0.24	ND	0.12	0.057	**X**
142-82-5	Heptane	ND	0.50	0.085	ND	0.12	0.021	
87-68-3	Hexachlorobutadiene	ND	0.50	0.11	ND	0.047	0.010	
110-54-3	Hexane	ND	0.50	0.11	ND	0.14	0.031	
179601-23-1	m,p-Xylene	ND	1.0	0.14	ND	0.23	0.032	
1634-04-4	Methyl tert-butyl ether	ND	0.50	0.063	ND	0.14	0.017	
75-09-2	Methylene Chloride	ND	0.50	0.15	ND	0.14	0.043	
95-47-6	o-Xylene	ND	0.50	0.077	ND	0.12	0.018	
103-65-1	Propylbenzene	ND	0.50	0.077	ND	0.10	0.016	
100-42-5	Styrene	ND	0.50	0.086	ND	0.12	0.020	
127-18-4	Tetrachloroethene	ND	0.50	0.069	ND	0.074	0.010	
109-99-9	Tetrahydrofuran	ND	0.50	0.067	ND	0.17	0.023	
108-88-3	Toluene	ND	0.50	0.065	ND	0.13	0.017	
156-60-5	trans-1,2-Dichloroethene	ND	0.50	0.074	ND	0.13	0.019	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.11	ND	0.11	0.024	
79-01-6	Trichloroethene	ND	0.50	0.072	ND	0.093	0.013	
75-01-4	Vinyl Chloride	ND	0.50	0.057	ND	0.20	0.022	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
X = See case narrative.

Client:	**NASA White Sands Test Facility**		
Client Sample ID:	**Method Blank**	ALS Project ID:	P2402249
Client Project ID:	**NASA White Sands Test Facility (WSTF)**	ALS Sample ID:	P240619-MB

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	NA
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	NA
Analyst:	Simon Cao	Date Analyzed:	6/19/24
Sampling Media:	1.0 L Summa Canister	Volume(s) Analyzed:	1.00 Liter(s)
Test Notes:			

Container Dilution Factor: 1.00

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

Client: **NASA White Sands Test Facility**
Client Sample ID: **Method Blank** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P240620-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 6/20/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.066	ND	0.092	0.012	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.074	ND	0.073	0.011	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.054	ND	0.092	0.0099	
75-34-3	1,1-Dichloroethane	ND	0.50	0.078	ND	0.12	0.019	
75-35-4	1,1-Dichloroethene	ND	0.50	0.074	ND	0.13	0.019	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ND	0.067	0.018	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.074	ND	0.10	0.015	
106-93-4	1,2-Dibromoethane (EDB)	ND	0.50	0.062	ND	0.065	0.0081	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.079	ND	0.083	0.013	
107-06-2	1,2-Dichloroethane	ND	0.50	0.059	ND	0.12	0.015	
78-87-5	1,2-Dichloropropane	ND	0.50	0.066	ND	0.11	0.014	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.077	ND	0.10	0.016	
106-99-0	1,3-Butadiene	ND	0.50	0.088	ND	0.23	0.040	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.080	ND	0.083	0.013	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.082	ND	0.083	0.014	
123-91-1	1,4-Dioxane	ND	0.50	0.063	ND	0.14	0.017	
540-84-1	2,2,4-Trimethylpentane	ND	0.50	0.080	ND	0.11	0.017	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	ND	5.0	0.11	ND	1.7	0.037	
591-78-6	2-Hexanone	ND	0.50	0.066	ND	0.12	0.016	
67-63-0	2-Propanol	ND	1.0	0.22	ND	0.41	0.090	
107-05-1	3-Chloropropene	ND	0.50	0.072	ND	0.16	0.023	
622-96-8	4-Ethyltoluene	ND	0.50	0.085	ND	0.10	0.017	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **NASA White Sands Test Facility**
Client Sample ID: **Method Blank** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P240620-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 6/20/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	0.50	0.073	ND	0.12	0.018	
67-64-1	Acetone	ND	5.0	1.2	ND	2.1	0.51	
100-44-7	alpha-Chlorotoluene	ND	0.50	0.12	ND	0.097	0.023	
71-43-2	Benzene	ND	0.50	0.077	ND	0.16	0.024	
75-27-4	Bromodichloromethane	ND	0.50	0.077	ND	0.075	0.011	
75-25-2	Bromoform	ND	0.50	0.11	ND	0.048	0.011	
74-83-9	Bromomethane	ND	0.50	0.074	ND	0.13	0.019	
75-15-0	Carbon Disulfide	ND	5.0	0.16	ND	1.6	0.051	
56-23-5	Carbon Tetrachloride	ND	0.50	0.074	ND	0.080	0.012	
108-90-7	Chlorobenzene	ND	0.50	0.071	ND	0.11	0.015	
75-00-3	Chloroethane	ND	0.50	0.066	ND	0.19	0.025	
67-66-3	Chloroform	ND	0.50	0.071	ND	0.10	0.015	
74-87-3	Chloromethane	ND	0.50	0.086	ND	0.24	0.042	
156-59-2	cis-1,2-Dichloroethene	ND	0.50	0.075	ND	0.13	0.019	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.083	ND	0.11	0.018	
98-82-8	Cumene	ND	0.50	0.077	ND	0.10	0.016	
110-82-7	Cyclohexane	ND	1.0	0.15	ND	0.29	0.044	
124-48-1	Dibromochloromethane	ND	0.50	0.070	ND	0.059	0.0082	
64-17-5	Ethanol	ND	5.0	0.37	ND	2.7	0.20	
100-41-4	Ethyl Benzene	ND	0.50	0.075	ND	0.12	0.017	
75-69-4	Freon 11	ND	0.50	0.081	ND	0.089	0.014	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **Method Blank** ALS Sample ID: P240620-MB
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 6/20/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	ND	0.50	0.076	ND	0.065	0.0099	
76-14-2	Freon 114	ND	0.50	0.084	ND	0.072	0.012	
75-71-8	Freon 12	ND	0.50	0.087	ND	0.10	0.018	
306-83-2	Freon 123	ND	0.50	0.24	ND	0.080	0.038	**X**
75-43-4	Freon 21	ND	0.50	0.24	ND	0.12	0.057	**X**
142-82-5	Heptane	ND	0.50	0.085	ND	0.12	0.021	
87-68-3	Hexachlorobutadiene	ND	0.50	0.11	ND	0.047	0.010	
110-54-3	Hexane	ND	0.50	0.11	ND	0.14	0.031	
179601-23-1	m,p-Xylene	ND	1.0	0.14	ND	0.23	0.032	
1634-04-4	Methyl tert-butyl ether	ND	0.50	0.063	ND	0.14	0.017	
75-09-2	Methylene Chloride	ND	0.50	0.15	ND	0.14	0.043	
95-47-6	o-Xylene	ND	0.50	0.077	ND	0.12	0.018	
103-65-1	Propylbenzene	ND	0.50	0.077	ND	0.10	0.016	
100-42-5	Styrene	ND	0.50	0.086	ND	0.12	0.020	
127-18-4	Tetrachloroethene	ND	0.50	0.069	ND	0.074	0.010	
109-99-9	Tetrahydrofuran	ND	0.50	0.067	ND	0.17	0.023	
108-88-3	Toluene	ND	0.50	0.065	ND	0.13	0.017	
156-60-5	trans-1,2-Dichloroethene	ND	0.50	0.074	ND	0.13	0.019	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.11	ND	0.11	0.024	
79-01-6	Trichloroethene	ND	0.50	0.072	ND	0.093	0.013	
75-01-4	Vinyl Chloride	ND	0.50	0.057	ND	0.20	0.022	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
X = See case narrative.

Client:	**NASA White Sands Test Facility**		
Client Sample ID:	**Method Blank**	ALS Project ID:	P2402249
Client Project ID:	**NASA White Sands Test Facility (WSTF)**	ALS Sample ID:	P240620-MB

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	NA
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	NA
Analyst:	Simon Cao	Date Analyzed:	6/20/24
Sampling Media:	1.0 L Summa Canister	Volume(s) Analyzed:	1.00 Liter(s)
Test Notes:			

Container Dilution Factor: 1.00

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

Client: **NASA White Sands Test Facility**
Client Sample ID: **Method Blank** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P240621-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 6/21/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.066	ND	0.092	0.012	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.074	ND	0.073	0.011	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.054	ND	0.092	0.0099	
75-34-3	1,1-Dichloroethane	ND	0.50	0.078	ND	0.12	0.019	
75-35-4	1,1-Dichloroethene	ND	0.50	0.074	ND	0.13	0.019	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ND	0.067	0.018	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.074	ND	0.10	0.015	
106-93-4	1,2-Dibromoethane (EDB)	ND	0.50	0.062	ND	0.065	0.0081	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.079	ND	0.083	0.013	
107-06-2	1,2-Dichloroethane	ND	0.50	0.059	ND	0.12	0.015	
78-87-5	1,2-Dichloropropane	ND	0.50	0.066	ND	0.11	0.014	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.077	ND	0.10	0.016	
106-99-0	1,3-Butadiene	ND	0.50	0.088	ND	0.23	0.040	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.080	ND	0.083	0.013	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.082	ND	0.083	0.014	
123-91-1	1,4-Dioxane	ND	0.50	0.063	ND	0.14	0.017	
540-84-1	2,2,4-Trimethylpentane	ND	0.50	0.080	ND	0.11	0.017	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	ND	5.0	0.11	ND	1.7	0.037	
591-78-6	2-Hexanone	ND	0.50	0.066	ND	0.12	0.016	
67-63-0	2-Propanol	ND	1.0	0.22	ND	0.41	0.090	
107-05-1	3-Chloropropene	ND	0.50	0.072	ND	0.16	0.023	
622-96-8	4-Ethyltoluene	ND	0.50	0.085	ND	0.10	0.017	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **NASA White Sands Test Facility**
Client Sample ID: **Method Blank** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P240621-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 6/21/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	0.50	0.073	ND	0.12	0.018	
67-64-1	Acetone	ND	5.0	1.2	ND	2.1	0.51	
100-44-7	alpha-Chlorotoluene	ND	0.50	0.12	ND	0.097	0.023	
71-43-2	Benzene	ND	0.50	0.077	ND	0.16	0.024	
75-27-4	Bromodichloromethane	ND	0.50	0.077	ND	0.075	0.011	
75-25-2	Bromoform	ND	0.50	0.11	ND	0.048	0.011	
74-83-9	Bromomethane	ND	0.50	0.074	ND	0.13	0.019	
75-15-0	Carbon Disulfide	ND	5.0	0.16	ND	1.6	0.051	
56-23-5	Carbon Tetrachloride	ND	0.50	0.074	ND	0.080	0.012	
108-90-7	Chlorobenzene	ND	0.50	0.071	ND	0.11	0.015	
75-00-3	Chloroethane	ND	0.50	0.066	ND	0.19	0.025	
67-66-3	Chloroform	ND	0.50	0.071	ND	0.10	0.015	
74-87-3	Chloromethane	ND	0.50	0.086	ND	0.24	0.042	
156-59-2	cis-1,2-Dichloroethene	ND	0.50	0.075	ND	0.13	0.019	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.083	ND	0.11	0.018	
98-82-8	Cumene	ND	0.50	0.077	ND	0.10	0.016	
110-82-7	Cyclohexane	ND	1.0	0.15	ND	0.29	0.044	
124-48-1	Dibromochloromethane	ND	0.50	0.070	ND	0.059	0.0082	
64-17-5	Ethanol	ND	5.0	0.37	ND	2.7	0.20	
100-41-4	Ethyl Benzene	ND	0.50	0.075	ND	0.12	0.017	
75-69-4	Freon 11	ND	0.50	0.081	ND	0.089	0.014	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **Method Blank** ALS Sample ID: P240621-MB
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 6/21/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	ND	0.50	0.076	ND	0.065	0.0099	
76-14-2	Freon 114	ND	0.50	0.084	ND	0.072	0.012	
75-71-8	Freon 12	ND	0.50	0.087	ND	0.10	0.018	
306-83-2	Freon 123	ND	0.50	0.24	ND	0.080	0.038	**X**
75-43-4	Freon 21	ND	0.50	0.24	ND	0.12	0.057	**X**
142-82-5	Heptane	ND	0.50	0.085	ND	0.12	0.021	
87-68-3	Hexachlorobutadiene	ND	0.50	0.11	ND	0.047	0.010	
110-54-3	Hexane	ND	0.50	0.11	ND	0.14	0.031	
179601-23-1	m,p-Xylene	ND	1.0	0.14	ND	0.23	0.032	
1634-04-4	Methyl tert-butyl ether	ND	0.50	0.063	ND	0.14	0.017	
75-09-2	Methylene Chloride	ND	0.50	0.15	ND	0.14	0.043	
95-47-6	o-Xylene	ND	0.50	0.077	ND	0.12	0.018	
103-65-1	Propylbenzene	ND	0.50	0.077	ND	0.10	0.016	
100-42-5	Styrene	ND	0.50	0.086	ND	0.12	0.020	
127-18-4	Tetrachloroethene	ND	0.50	0.069	ND	0.074	0.010	
109-99-9	Tetrahydrofuran	ND	0.50	0.067	ND	0.17	0.023	
108-88-3	Toluene	ND	0.50	0.065	ND	0.13	0.017	
156-60-5	trans-1,2-Dichloroethene	ND	0.50	0.074	ND	0.13	0.019	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.11	ND	0.11	0.024	
79-01-6	Trichloroethene	ND	0.50	0.072	ND	0.093	0.013	
75-01-4	Vinyl Chloride	ND	0.50	0.057	ND	0.20	0.022	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
X = See case narrative.

Client:	**NASA White Sands Test Facility**		
Client Sample ID:	**Method Blank**	ALS Project ID:	P2402249
Client Project ID:	**NASA White Sands Test Facility (WSTF)**	ALS Sample ID:	P240621-MB

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	NA
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	NA
Analyst:	Simon Cao	Date Analyzed:	6/21/24
Sampling Media:	1.0 L Summa Canister	Volume(s) Analyzed:	1.00 Liter(s)
Test Notes:			

Container Dilution Factor: 1.00

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

Client: **NASA White Sands Test Facility**
Client Sample ID: **Method Blank** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P240622-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 6/22/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	**0.15**	0.50	0.066	**0.027**	0.092	0.012	**J**
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.074	ND	0.073	0.011	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.054	ND	0.092	0.0099	
75-34-3	1,1-Dichloroethane	ND	0.50	0.078	ND	0.12	0.019	
75-35-4	1,1-Dichloroethene	ND	0.50	0.074	ND	0.13	0.019	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ND	0.067	0.018	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.074	ND	0.10	0.015	
106-93-4	1,2-Dibromoethane (EDB)	ND	0.50	0.062	ND	0.065	0.0081	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.079	ND	0.083	0.013	
107-06-2	1,2-Dichloroethane	ND	0.50	0.059	ND	0.12	0.015	
78-87-5	1,2-Dichloropropane	ND	0.50	0.066	ND	0.11	0.014	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.077	ND	0.10	0.016	
106-99-0	1,3-Butadiene	ND	0.50	0.088	ND	0.23	0.040	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.080	ND	0.083	0.013	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.082	ND	0.083	0.014	
123-91-1	1,4-Dioxane	ND	0.50	0.063	ND	0.14	0.017	
540-84-1	2,2,4-Trimethylpentane	**0.23**	0.50	0.080	**0.049**	0.11	0.017	**J**
78-93-3	2-Butanone (Methyl Ethyl Ketone)	**0.26**	5.0	0.11	**0.089**	1.7	0.037	**J**
591-78-6	2-Hexanone	ND	0.50	0.066	ND	0.12	0.016	
67-63-0	2-Propanol	ND	1.0	0.22	ND	0.41	0.090	
107-05-1	3-Chloropropene	ND	0.50	0.072	ND	0.16	0.023	
622-96-8	4-Ethyltoluene	ND	0.50	0.085	ND	0.10	0.017	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **Method Blank** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P240622-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 6/22/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	0.50	0.073	ND	0.12	0.018	
67-64-1	Acetone	ND	5.0	1.2	ND	2.1	0.51	
100-44-7	alpha-Chlorotoluene	ND	0.50	0.12	ND	0.097	0.023	
71-43-2	Benzene	ND	0.50	0.077	ND	0.16	0.024	
75-27-4	Bromodichloromethane	ND	0.50	0.077	ND	0.075	0.011	
75-25-2	Bromoform	ND	0.50	0.11	ND	0.048	0.011	
74-83-9	Bromomethane	ND	0.50	0.074	ND	0.13	0.019	
75-15-0	Carbon Disulfide	ND	5.0	0.16	ND	1.6	0.051	
56-23-5	Carbon Tetrachloride	ND	0.50	0.074	ND	0.080	0.012	
108-90-7	Chlorobenzene	ND	0.50	0.071	ND	0.11	0.015	
75-00-3	Chloroethane	ND	0.50	0.066	ND	0.19	0.025	
67-66-3	Chloroform	ND	0.50	0.071	ND	0.10	0.015	
74-87-3	Chloromethane	ND	0.50	0.086	ND	0.24	0.042	
156-59-2	cis-1,2-Dichloroethene	ND	0.50	0.075	ND	0.13	0.019	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.083	ND	0.11	0.018	
98-82-8	Cumene	ND	0.50	0.077	ND	0.10	0.016	
110-82-7	Cyclohexane	ND	1.0	0.15	ND	0.29	0.044	
124-48-1	Dibromochloromethane	ND	0.50	0.070	ND	0.059	0.0082	
64-17-5	Ethanol	ND	5.0	0.37	ND	2.7	0.20	
100-41-4	Ethyl Benzene	**0.24**	0.50	0.075	**0.055**	0.12	0.017	**J**
75-69-4	Freon 11	ND	0.50	0.081	ND	0.089	0.014	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **Method Blank** ALS Sample ID: P240622-MB
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 6/22/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	ND	0.50	0.076	ND	0.065	0.0099	
76-14-2	Freon 114	ND	0.50	0.084	ND	0.072	0.012	
75-71-8	Freon 12	ND	0.50	0.087	ND	0.10	0.018	
306-83-2	Freon 123	ND	0.50	0.24	ND	0.080	0.038	**X**
75-43-4	Freon 21	ND	0.50	0.24	ND	0.12	0.057	**X**
142-82-5	Heptane	ND	0.50	0.085	ND	0.12	0.021	
87-68-3	Hexachlorobutadiene	ND	0.50	0.11	ND	0.047	0.010	
110-54-3	Hexane	**0.17**	0.50	0.11	**0.048**	0.14	0.031	**J**
179601-23-1	m,p-Xylene	**0.20**	1.0	0.14	**0.047**	0.23	0.032	**J**
1634-04-4	Methyl tert-butyl ether	ND	0.50	0.063	ND	0.14	0.017	
75-09-2	Methylene Chloride	ND	0.50	0.15	ND	0.14	0.043	
95-47-6	o-Xylene	ND	0.50	0.077	ND	0.12	0.018	
103-65-1	Propylbenzene	ND	0.50	0.077	ND	0.10	0.016	
100-42-5	Styrene	ND	0.50	0.086	ND	0.12	0.020	
127-18-4	Tetrachloroethene	**0.16**	0.50	0.069	**0.024**	0.074	0.010	**J**
109-99-9	Tetrahydrofuran	ND	0.50	0.067	ND	0.17	0.023	
108-88-3	Toluene	**0.32**	0.50	0.065	**0.084**	0.13	0.017	**J**
156-60-5	trans-1,2-Dichloroethene	ND	0.50	0.074	ND	0.13	0.019	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.11	ND	0.11	0.024	
79-01-6	Trichloroethene	**0.33**	0.50	0.072	**0.061**	0.093	0.013	**J**
75-01-4	Vinyl Chloride	ND	0.50	0.057	ND	0.20	0.022	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
X = See case narrative.

Client:	**NASA White Sands Test Facility**		
Client Sample ID:	**Method Blank**	ALS Project ID:	P2402249
Client Project ID:	**NASA White Sands Test Facility (WSTF)**	ALS Sample ID:	P240622-MB

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	NA
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	NA
Analyst:	Simon Cao	Date Analyzed:	6/22/24
Sampling Media:	1.0 L Summa Canister	Volume(s) Analyzed:	1.00 Liter(s)
Test Notes:			

Container Dilution Factor: 1.00

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

Client: **NASA White Sands Test Facility**
Client Sample ID: **Method Blank** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P240624-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Marlow Cobian/Meghry Jilakian Date Analyzed: 6/24/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.066	ND	0.092	0.012	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.074	ND	0.073	0.011	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.054	ND	0.092	0.0099	
75-34-3	1,1-Dichloroethane	ND	0.50	0.078	ND	0.12	0.019	
75-35-4	1,1-Dichloroethene	ND	0.50	0.074	ND	0.13	0.019	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.13	ND	0.067	0.018	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.074	ND	0.10	0.015	
106-93-4	1,2-Dibromoethane (EDB)	ND	0.50	0.062	ND	0.065	0.0081	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.079	ND	0.083	0.013	
107-06-2	1,2-Dichloroethane	ND	0.50	0.059	ND	0.12	0.015	
78-87-5	1,2-Dichloropropane	ND	0.50	0.066	ND	0.11	0.014	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.077	ND	0.10	0.016	
106-99-0	1,3-Butadiene	ND	0.50	0.088	ND	0.23	0.040	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.080	ND	0.083	0.013	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.082	ND	0.083	0.014	
123-91-1	1,4-Dioxane	ND	0.50	0.063	ND	0.14	0.017	
540-84-1	2,2,4-Trimethylpentane	ND	0.50	0.080	ND	0.11	0.017	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	ND	5.0	0.11	ND	1.7	0.037	
591-78-6	2-Hexanone	ND	0.50	0.066	ND	0.12	0.016	
67-63-0	2-Propanol	ND	1.0	0.22	ND	0.41	0.090	
107-05-1	3-Chloropropene	ND	0.50	0.072	ND	0.16	0.023	
622-96-8	4-Ethyltoluene	ND	0.50	0.085	ND	0.10	0.017	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **NASA White Sands Test Facility**
Client Sample ID: **Method Blank** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P240624-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Marlow Cobian/Meghry Jilakian Date Analyzed: 6/24/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
108-10-1	4-Methyl-2-pentanone	ND	0.50	0.073	ND	0.12	0.018	
67-64-1	Acetone	ND	5.0	1.2	ND	2.1	0.51	
100-44-7	alpha-Chlorotoluene	ND	0.50	0.12	ND	0.097	0.023	
71-43-2	Benzene	ND	0.50	0.077	ND	0.16	0.024	
75-27-4	Bromodichloromethane	ND	0.50	0.077	ND	0.075	0.011	
75-25-2	Bromoform	ND	0.50	0.11	ND	0.048	0.011	
74-83-9	Bromomethane	ND	0.50	0.074	ND	0.13	0.019	
75-15-0	Carbon Disulfide	ND	5.0	0.16	ND	1.6	0.051	
56-23-5	Carbon Tetrachloride	ND	0.50	0.074	ND	0.080	0.012	
108-90-7	Chlorobenzene	ND	0.50	0.071	ND	0.11	0.015	
75-00-3	Chloroethane	ND	0.50	0.066	ND	0.19	0.025	
67-66-3	Chloroform	ND	0.50	0.071	ND	0.10	0.015	
74-87-3	Chloromethane	ND	0.50	0.086	ND	0.24	0.042	
156-59-2	cis-1,2-Dichloroethene	ND	0.50	0.075	ND	0.13	0.019	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.083	ND	0.11	0.018	
98-82-8	Cumene	ND	0.50	0.077	ND	0.10	0.016	
110-82-7	Cyclohexane	ND	1.0	0.15	ND	0.29	0.044	
124-48-1	Dibromochloromethane	ND	0.50	0.070	ND	0.059	0.0082	
64-17-5	Ethanol	ND	5.0	0.37	ND	2.7	0.20	
100-41-4	Ethyl Benzene	ND	0.50	0.075	ND	0.12	0.017	
75-69-4	Freon 11	ND	0.50	0.081	ND	0.089	0.014	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Sample ID: **Method Blank** ALS Sample ID: P240624-MB
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Marlow Cobian/Meghry Jilakian Date Analyzed: 6/24/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
76-13-1	Freon 113	ND	0.50	0.076	ND	0.065	0.0099	
76-14-2	Freon 114	ND	0.50	0.084	ND	0.072	0.012	
75-71-8	Freon 12	ND	0.50	0.087	ND	0.10	0.018	
306-83-2	Freon 123	ND	0.50	0.24	ND	0.080	0.038	**X**
75-43-4	Freon 21	ND	0.50	0.24	ND	0.12	0.057	**X**
142-82-5	Heptane	ND	0.50	0.085	ND	0.12	0.021	
87-68-3	Hexachlorobutadiene	ND	0.50	0.11	ND	0.047	0.010	
110-54-3	Hexane	ND	0.50	0.11	ND	0.14	0.031	
179601-23-1	m,p-Xylene	ND	1.0	0.14	ND	0.23	0.032	
1634-04-4	Methyl tert-butyl ether	ND	0.50	0.063	ND	0.14	0.017	
75-09-2	Methylene Chloride	ND	0.50	0.15	ND	0.14	0.043	
95-47-6	o-Xylene	ND	0.50	0.077	ND	0.12	0.018	
103-65-1	Propylbenzene	ND	0.50	0.077	ND	0.10	0.016	
100-42-5	Styrene	ND	0.50	0.086	ND	0.12	0.020	
127-18-4	Tetrachloroethene	ND	0.50	0.069	ND	0.074	0.010	
109-99-9	Tetrahydrofuran	ND	0.50	0.067	ND	0.17	0.023	
108-88-3	Toluene	ND	0.50	0.065	ND	0.13	0.017	
156-60-5	trans-1,2-Dichloroethene	ND	0.50	0.074	ND	0.13	0.019	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.11	ND	0.11	0.024	
79-01-6	Trichloroethene	ND	0.50	0.072	ND	0.093	0.013	
75-01-4	Vinyl Chloride	ND	0.50	0.057	ND	0.20	0.022	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
X = See case narrative.

Client:	**NASA White Sands Test Facility**		
Client Sample ID:	**Method Blank**	ALS Project ID:	P2402249
Client Project ID:	**NASA White Sands Test Facility (WSTF)**	ALS Sample ID:	P240624-MB

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	NA
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	NA
Analyst:	Marlow Cobian/Meghry Jilakian	Date Analyzed:	6/24/24
Sampling Media:	1.0 L Summa Canister	Volume(s) Analyzed:	1.00 Liter(s)
Test Notes:			

Container Dilution Factor: 1.00

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

SURROGATE SPIKE RECOVERY RESULTS

Client: **NASA White Sands Test Facility**
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Project ID: P2402249

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date(s) Collected: 5/28 - 5/29/24
Analyst: Simon Cao Date(s) Received: 6/5/24
Sampling Media: 1.0 L Summa Canister(s) Date(s) Analyzed: 6/17 - 6/24/24
Test Notes:

Client Sample ID	ALS Sample ID	1,2-Dichloroethane-d4 Percent Recovered	Toluene-d8 Percent Recovered	Bromofluorobenzene Percent Recovered	Acceptance Limits	Data Qualifier
Method Blank	P240617-MB	**98**	**105**	**95**	70-130	
Method Blank	P240618-MB	**101**	**103**	**101**	70-130	
Method Blank	P240619-MB	**100**	**101**	**103**	70-130	
Method Blank	P240620-MB	**98**	**102**	**97**	70-130	
Method Blank	P240621-MB	**97**	**104**	**98**	70-130	
Method Blank	P240622-MB	**99**	**102**	**102**	70-130	
Method Blank	P240624-MB	**96**	**105**	**97**	70-130	
Lab Control Sample	P240617-LCS	**97**	**102**	**97**	70-130	
Lab Control Sample	P240618-LCS	**98**	**100**	**101**	70-130	
Lab Control Sample	P240619-LCS	**99**	**98**	**103**	70-130	
Lab Control Sample	P240620-LCS	**96**	**100**	**97**	70-130	
Lab Control Sample	P240621-LCS	**96**	**100**	**97**	70-130	
Lab Control Sample	P240622-LCS	**99**	**99**	**100**	70-130	
Lab Control Sample	P240624-LCS	**95**	**103**	**97**	70-130	
Duplicate Lab Control Sample	P240617-DLCS	**97**	**102**	**97**	70-130	
Duplicate Lab Control Sample	P240618-DLCS	**99**	**100**	**98**	70-130	
Duplicate Lab Control Sample	P240619-DLCS	**99**	**99**	**101**	70-130	
Duplicate Lab Control Sample	P240620-DLCS	**96**	**101**	**97**	70-130	
Duplicate Lab Control Sample	P240621-DLCS	**97**	**100**	**96**	70-130	
Duplicate Lab Control Sample	P240622-DLCS	**98**	**99**	**99**	70-130	
Duplicate Lab Control Sample	P240624-DLCS	**96**	**103**	**96**	70-130	
2405280810	P2402249-001	**96**	**103**	**98**	70-130	
2405280816	P2402249-002	**96**	**103**	**98**	70-130	
2405280826	P2402249-003	**98**	**101**	**97**	70-130	
2405280830	P2402249-004	**98**	**101**	**100**	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.

Client: **NASA White Sands Test Facility**
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Project ID: P2402249

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date(s) Collected: 5/28 - 5/29/24
Analyst: Simon Cao Date(s) Received: 6/5/24
Sampling Media: 1.0 L Summa Canister(s) Date(s) Analyzed: 6/17 - 6/24/24
Test Notes:

Client Sample ID	ALS Sample ID	1,2-Dichloroethane-d4 Percent Recovered	Toluene-d8 Percent Recovered	Bromofluorobenzene Percent Recovered	Acceptance Limits	Data Qualifier
2405280836	P2402249-005	**99**	**101**	**101**	70-130	
2405280843	P2402249-006	**96**	**104**	**95**	70-130	
2405280846	P2402249-007	**99**	**100**	**101**	70-130	
2405280853	P2402249-008	**99**	**103**	**98**	70-130	
2405280915	P2402249-009	**99**	**100**	**100**	70-130	
2405280919	P2402249-010	**99**	**100**	**101**	70-130	
2405280925	P2402249-011	**100**	**100**	**101**	70-130	
2405280928	P2402249-012	**99**	**103**	**99**	70-130	
2405280934	P2402249-013	**99**	**102**	**101**	70-130	
2405281000	P2402249-014	**100**	**101**	**100**	70-130	
2405281006	P2402249-015	**99**	**101**	**100**	70-130	
2405281011	P2402249-016	**102**	**97**	**102**	70-130	
2405281017	P2402249-017	**103**	**97**	**106**	70-130	
2405281028	P2402249-018	**101**	**96**	**105**	70-130	
2405281032	P2402249-019	**103**	**95**	**104**	70-130	
2405281245	P2402249-020	**102**	**97**	**104**	70-130	
2405281310	P2402249-021	**104**	**94**	**104**	70-130	
2405281258	P2402249-022	**103**	**97**	**106**	70-130	
2405281326	P2402249-023	**103**	**97**	**106**	70-130	
2405281337	P2402249-024	**97**	**104**	**99**	70-130	
2405281344	P2402249-025	**98**	**102**	**97**	70-130	
2405290815	P2402249-026	**101**	**99**	**102**	70-130	
2405290816	P2402249-027	**102**	**100**	**103**	70-130	
2405290826	P2402249-028	**101**	**99**	**103**	70-130	
2405290834	P2402249-029	**100**	**100**	**103**	70-130	
2405290834	P2402249-029DUP	**101**	**99**	**104**	70-130	
2405290850	P2402249-030	**100**	**102**	**96**	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.

Client: **NASA White Sands Test Facility**

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Project ID: P2402249

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date(s) Collected: 5/29 - 5/30/24

Analyst: Simon Cao Date(s) Received: 6/5/24

Sampling Media: 1.0 L Silonite Summa Canister(s) Date(s) Analyzed: 6/17 - 6/24/24

Test Notes:

Client Sample ID	ALS Sample ID	1,2-Dichloroethane-d4 Percent Recovered	Toluene-d8 Percent Recovered	Bromofluorobenzene Percent Recovered	Acceptance Limits	Data Qualifier
2405290858	P2402249-031	**99**	**102**	**97**	70-130	
2405290859	P2402249-032	**98**	**103**	**100**	70-130	
2405290905	P2402249-033	**99**	**102**	**99**	70-130	
2405290912	P2402249-034	**98**	**102**	**99**	70-130	
2405290919	P2402249-035	**98**	**102**	**101**	70-130	
2405290940	P2402249-036	**99**	**98**	**100**	70-130	
2405290945	P2402249-037	**100**	**99**	**103**	70-130	
2405290952	P2402249-038	**99**	**98**	**102**	70-130	
2405291000	P2402249-039	**99**	**100**	**101**	70-130	
2405291001	P2402249-040	**99**	**102**	**98**	70-130	
2405291015	P2402249-041	**102**	**99**	**104**	70-130	
2405291021	P2402249-042	**99**	**101**	**101**	70-130	
2405291025	P2402249-043	**99**	**102**	**99**	70-130	
2405291031	P2402249-044	**99**	**101**	**101**	70-130	
2405291045	P2402249-045	**100**	**102**	**101**	70-130	
2405291046	P2402249-046	**99**	**101**	**101**	70-130	
2405291053	P2402249-047	**99**	**99**	**100**	70-130	
2405291100	P2402249-048	**100**	**101**	**101**	70-130	
2405291100	P2402249-048DUP	**100**	**100**	**103**	70-130	
2405291107	P2402249-049	**101**	**98**	**102**	70-130	
2405291315	P2402249-050	**101**	**98**	**105**	70-130	
2405291321	P2402249-051	**101**	**99**	**105**	70-130	
2405291328	P2402249-052	**97**	**103**	**98**	70-130	
2405291345	P2402249-053	**101**	**92**	**103**	70-130	
2405291352	P2402249-054	**100**	**100**	**101**	70-130	
2405291400	P2402249-055	**98**	**101**	**101**	70-130	
2405300800	P2402249-056	**98**	**102**	**98**	70-130	
2405300808	P2402249-057	**99**	**101**	**98**	70-130	
2405300815	P2402249-058	**126**	**102**	**97**	70-130	
2405300827	P2402249-059	**96**	**100**	**98**	70-130	
2405300834	P2402249-060	**99**	**101**	**98**	70-130	
2405300842	P2402249-061	**100**	**97**	**103**	70-130	
2405300850	P2402249-062	**101**	**96**	**103**	70-130	
2405300856	P2402249-063	**95**	**104**	**96**	70-130	
2405300910	P2402249-064	**96**	**103**	**99**	70-130	
2405300916	P2402249-065	**96**	**99**	**103**	70-130	
2405300923	P2402249-066	**96**	**101**	**103**	70-130	
2405300928	P2402249-067	**97**	**103**	**98**	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.

Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **NASA White Sands Test Facility**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P240617-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 6/17/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount LCS / DLCS µg/m³	Result LCS µg/m³	Result DLCS µg/m³	% Recovery LCS	% Recovery DLCS	ALS Acceptance Limits	RPD	RPD Limit	Data Qualifier
71-55-6	1,1,1-Trichloroethane	210	182	182	**87**	**87**	67-125	0	25	
79-34-5	1,1,2,2-Tetrachloroethane	216	203	207	**94**	**96**	71-128	2	25	
79-00-5	1,1,2-Trichloroethane	216	202	204	**94**	**94**	71-119	0	25	
75-34-3	1,1-Dichloroethane	216	214	216	**99**	**100**	66-120	1	25	
75-35-4	1,1-Dichloroethene	208	207	208	**100**	**100**	75-120	0	25	
120-82-1	1,2,4-Trichlorobenzene	440	339	345	**77**	**78**	50-137	1	25	
95-63-6	1,2,4-Trimethylbenzene	212	201	202	**95**	**95**	67-130	0	25	
106-93-4	1,2-Dibromoethane (EDB)	206	197	200	**96**	**97**	69-129	1	25	
95-50-1	1,2-Dichlorobenzene	212	173	174	**82**	**82**	57-138	0	25	
107-06-2	1,2-Dichloroethane	206	184	186	**89**	**90**	64-138	1	25	
78-87-5	1,2-Dichloropropane	214	213	215	**100**	**100**	68-121	0	25	
108-67-8	1,3,5-Trimethylbenzene	218	206	207	**94**	**95**	66-125	1	25	
106-99-0	1,3-Butadiene	212	215	222	**101**	**105**	62-132	4	25	
541-73-1	1,3-Dichlorobenzene	214	170	171	**79**	**80**	57-135	1	25	
106-46-7	1,4-Dichlorobenzene	214	167	168	**78**	**79**	56-129	1	25	
123-91-1	1,4-Dioxane	214	219	223	**102**	**104**	76-127	2	25	
540-84-1	2,2,4-Trimethylpentane	214	220	224	**103**	**105**	62-124	2	25	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	414	421	424	**102**	**102**	70-125	0	25	
591-78-6	2-Hexanone	426	466	476	**109**	**112**	70-136	3	25	
67-63-0	2-Propanol	418	438	448	**105**	**107**	59-132	2	25	
107-05-1	3-Chloropropene	214	208	209	**97**	**98**	50-118	1	25	
622-96-8	4-Ethyltoluene	218	206	207	**94**	**95**	67-128	1	25	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

Client: **NASA White Sands Test Facility**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P240617-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 6/17/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount LCS / DLCS µg/m³	Result LCS µg/m³	Result DLCS µg/m³	% Recovery LCS	% Recovery DLCS	ALS Acceptance Limits	RPD	RPD Limit	Data Qualifier
108-10-1	4-Methyl-2-pentanone	426	468	473	**110**	**111**	67-137	0.9	25	
67-64-1	Acetone	1,060	1010	1020	**95**	**96**	61-120	1	25	
100-44-7	alpha-Chlorotoluene	430	437	444	**102**	**103**	58-151	1	25	
71-43-2	Benzene	206	188	190	**91**	**92**	73-128	1	25	
75-27-4	Bromodichloromethane	218	198	199	**91**	**91**	70-125	0	25	
75-25-2	Bromoform	218	200	201	**92**	**92**	63-132	0	25	
74-83-9	Bromomethane	210	217	212	**103**	**101**	72-120	2	25	
75-15-0	Carbon Disulfide	430	425	427	**99**	**99**	69-115	0	25	
56-23-5	Carbon Tetrachloride	210	183	183	**87**	**87**	71-134	0	25	
108-90-7	Chlorobenzene	218	189	191	**87**	**88**	63-124	1	25	
75-00-3	Chloroethane	212	213	212	**100**	**100**	67-123	0	25	
67-66-3	Chloroform	216	199	201	**92**	**93**	64-121	1	25	
74-87-3	Chloromethane	208	212	217	**102**	**104**	56-131	2	25	
156-59-2	cis-1,2-Dichloroethene	216	208	211	**96**	**98**	64-120	2	25	
10061-01-5	cis-1,3-Dichloropropene	212	219	221	**103**	**104**	87-137	1	25	
98-82-8	Cumene	212	197	198	**93**	**93**	66-126	0	25	
110-82-7	Cyclohexane	428	435	440	**102**	**103**	71-118	1	25	
124-48-1	Dibromochloromethane	214	190	191	**89**	**89**	67-128	0	25	
64-17-5	Ethanol	1,110	1050	1070	**95**	**96**	52-120	1	25	
100-41-4	Ethyl Benzene	218	209	211	**96**	**97**	64-119	1	25	
75-69-4	Freon 11	210	177	177	**84**	**84**	65-122	0	25	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

Client: **NASA White Sands Test Facility**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P240617-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 6/17/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount LCS / DLCS µg/m³	Result LCS µg/m³	Result DLCS µg/m³	% Recovery LCS	% Recovery DLCS	ALS Acceptance Limits	RPD	RPD Limit	Data Qualifier
76-13-1	Freon 113	210	191	190	**91**	**90**	65-121	1	25	
76-14-2	Freon 114	208	197	192	**95**	**92**	63-120	3	25	
75-71-8	Freon 12	204	176	178	**86**	**87**	66-122	1	25	
142-82-5	Heptane	214	221	225	**103**	**105**	72-121	2	25	
87-68-3	Hexachlorobutadiene	214	156	159	**73**	**74**	50-133	1	25	
110-54-3	Hexane	212	224	226	**106**	**107**	60-125	0.9	25	
179601-23-1	m,p-Xylene	432	410	415	**95**	**96**	64-121	1	25	
1634-04-4	Methyl tert-butyl ether	216	240	242	**111**	**112**	65-124	0.9	25	
75-09-2	Methylene Chloride	208	182	185	**88**	**89**	71-123	1	25	
95-47-6	o-Xylene	216	204	206	**94**	**95**	66-122	1	25	
103-65-1	Propylbenzene	214	201	202	**94**	**94**	67-126	0	25	
100-42-5	Styrene	214	211	213	**99**	**100**	71-125	1	25	
127-18-4	Tetrachloroethene	214	184	185	**86**	**86**	55-132	0	25	
109-99-9	Tetrahydrofuran	404	414	421	**102**	**104**	67-117	2	25	
108-88-3	Toluene	214	200	202	**93**	**94**	64-121	1	25	
156-60-5	trans-1,2-Dichloroethene	218	216	220	**99**	**101**	67-123	2	25	
10061-02-6	trans-1,3-Dichloropropene	196	200	204	**102**	**104**	73-127	2	25	
79-01-6	Trichloroethene	214	182	182	**85**	**85**	68-124	0	25	
75-01-4	Vinyl Chloride	212	209	203	**99**	**96**	57-129	3	25	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **NASA White Sands Test Facility**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P240618-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount LCS / DLCS µg/m³	Result LCS µg/m³	Result DLCS µg/m³	% Recovery LCS	% Recovery DLCS	ALS Acceptance Limits	RPD	RPD Limit	Data Qualifier
71-55-6	1,1,1-Trichloroethane	210	188	186	**90**	**89**	67-125	1	25	
79-34-5	1,1,2,2-Tetrachloroethane	216	197	195	**91**	**90**	71-128	1	25	
79-00-5	1,1,2-Trichloroethane	216	200	199	**93**	**92**	71-119	1	25	
75-34-3	1,1-Dichloroethane	216	203	206	**94**	**95**	66-120	1	25	
75-35-4	1,1-Dichloroethene	208	199	200	**96**	**96**	75-120	0	25	
120-82-1	1,2,4-Trichlorobenzene	440	357	347	**81**	**79**	50-137	3	25	
95-63-6	1,2,4-Trimethylbenzene	212	202	199	**95**	**94**	67-130	1	25	
106-93-4	1,2-Dibromoethane (EDB)	206	193	191	**94**	**93**	69-129	1	25	
95-50-1	1,2-Dichlorobenzene	212	177	172	**83**	**81**	57-138	2	25	
107-06-2	1,2-Dichloroethane	206	185	185	**90**	**90**	64-138	0	25	
78-87-5	1,2-Dichloropropane	214	200	204	**93**	**95**	68-121	2	25	
108-67-8	1,3,5-Trimethylbenzene	218	206	202	**94**	**93**	66-125	1	25	
106-99-0	1,3-Butadiene	212	193	192	**91**	**91**	62-132	0	25	
541-73-1	1,3-Dichlorobenzene	214	173	169	**81**	**79**	57-135	3	25	
106-46-7	1,4-Dichlorobenzene	214	170	166	**79**	**78**	56-129	1	25	
123-91-1	1,4-Dioxane	214	215	215	**100**	**100**	76-127	0	25	
540-84-1	2,2,4-Trimethylpentane	214	209	212	**98**	**99**	62-124	1	25	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	414	396	401	**96**	**97**	70-125	1	25	
591-78-6	2-Hexanone	426	433	440	**102**	**103**	70-136	1	25	
67-63-0	2-Propanol	418	395	407	**94**	**97**	59-132	3	25	
107-05-1	3-Chloropropene	214	187	194	**87**	**91**	50-118	4	25	
622-96-8	4-Ethyltoluene	218	204	201	**94**	**92**	67-128	2	25	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

Client: **NASA White Sands Test Facility**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P240618-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount LCS / DLCS µg/m³	Result LCS µg/m³	Result DLCS µg/m³	% Recovery LCS	% Recovery DLCS	ALS Acceptance Limits	RPD	RPD Limit	Data Qualifier
108-10-1	4-Methyl-2-pentanone	426	446	454	**105**	**107**	67-137	2	25	
67-64-1	Acetone	1,060	931	947	**88**	**89**	61-120	1	25	
100-44-7	alpha-Chlorotoluene	430	438	432	**102**	**100**	58-151	2	25	
71-43-2	Benzene	206	182	183	**88**	**89**	73-128	1	25	
75-27-4	Bromodichloromethane	218	199	198	**91**	**91**	70-125	0	25	
75-25-2	Bromoform	218	205	200	**94**	**92**	63-132	2	25	
74-83-9	Bromomethane	210	203	203	**97**	**97**	72-120	0	25	
75-15-0	Carbon Disulfide	430	405	409	**94**	**95**	69-115	1	25	
56-23-5	Carbon Tetrachloride	210	192	188	**91**	**90**	71-134	1	25	
108-90-7	Chlorobenzene	218	185	183	**85**	**84**	63-124	1	25	
75-00-3	Chloroethane	212	194	197	**92**	**93**	67-123	1	25	
67-66-3	Chloroform	216	198	197	**92**	**91**	64-121	1	25	
74-87-3	Chloromethane	208	192	198	**92**	**95**	56-131	3	25	
156-59-2	cis-1,2-Dichloroethene	216	200	202	**93**	**94**	64-120	1	25	
10061-01-5	cis-1,3-Dichloropropene	212	213	214	**100**	**101**	87-137	1	25	
98-82-8	Cumene	212	195	192	**92**	**91**	66-126	1	25	
110-82-7	Cyclohexane	428	425	427	**99**	**100**	71-118	1	25	
124-48-1	Dibromochloromethane	214	189	187	**88**	**87**	67-128	1	25	
64-17-5	Ethanol	1,110	936	967	**84**	**87**	52-120	4	25	
100-41-4	Ethyl Benzene	218	203	202	**93**	**93**	64-119	0	25	
75-69-4	Freon 11	210	181	180	**86**	**86**	65-122	0	25	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

Client: **NASA White Sands Test Facility**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P240618-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount LCS / DLCS µg/m³	Result LCS µg/m³	Result DLCS µg/m³	% Recovery LCS	% Recovery DLCS	ALS Acceptance Limits	RPD	RPD Limit	Data Qualifier
76-13-1	Freon 113	210	193	189	**92**	**90**	65-121	2	25	
76-14-2	Freon 114	208	203	196	**98**	**94**	63-120	4	25	
75-71-8	Freon 12	204	181	179	**89**	**88**	66-122	1	25	
142-82-5	Heptane	214	213	216	**100**	**101**	72-121	1	25	
87-68-3	Hexachlorobutadiene	214	167	162	**78**	**76**	50-133	3	25	
110-54-3	Hexane	212	210	213	**99**	**100**	60-125	1	25	
179601-23-1	m,p-Xylene	432	403	399	**93**	**92**	64-121	1	25	
1634-04-4	Methyl tert-butyl ether	216	237	238	**110**	**110**	65-124	0	25	
75-09-2	Methylene Chloride	208	173	175	**83**	**84**	71-123	1	25	
95-47-6	o-Xylene	216	202	199	**94**	**92**	66-122	2	25	
103-65-1	Propylbenzene	214	197	196	**92**	**92**	67-126	0	25	
100-42-5	Styrene	214	207	205	**97**	**96**	71-125	1	25	
127-18-4	Tetrachloroethene	214	185	181	**86**	**85**	55-132	1	25	
109-99-9	Tetrahydrofuran	404	394	399	**98**	**99**	67-117	1	25	
108-88-3	Toluene	214	191	191	**89**	**89**	64-121	0	25	
156-60-5	trans-1,2-Dichloroethene	218	206	209	**94**	**96**	67-123	2	25	
10061-02-6	trans-1,3-Dichloropropene	196	199	199	**102**	**102**	73-127	0	25	
79-01-6	Trichloroethene	214	181	181	**85**	**85**	68-124	0	25	
75-01-4	Vinyl Chloride	212	202	195	**95**	**92**	57-129	3	25	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **NASA White Sands Test Facility**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P240619-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 6/19/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount LCS / DLCS µg/m³	Result LCS µg/m³	Result DLCS µg/m³	% Recovery LCS	% Recovery DLCS	ALS Acceptance Limits	RPD	RPD Limit	Data Qualifier
71-55-6	1,1,1-Trichloroethane	210	191	182	**91**	**87**	67-125	4	25	
79-34-5	1,1,2,2-Tetrachloroethane	216	190	188	**88**	**87**	71-128	1	25	
79-00-5	1,1,2-Trichloroethane	216	197	189	**91**	**88**	71-119	3	25	
75-34-3	1,1-Dichloroethane	216	197	193	**91**	**89**	66-120	2	25	
75-35-4	1,1-Dichloroethene	208	195	190	**94**	**91**	75-120	3	25	
120-82-1	1,2,4-Trichlorobenzene	440	360	343	**82**	**78**	50-137	5	25	
95-63-6	1,2,4-Trimethylbenzene	212	202	194	**95**	**92**	67-130	3	25	
106-93-4	1,2-Dibromoethane (EDB)	206	187	184	**91**	**89**	69-129	2	25	
95-50-1	1,2-Dichlorobenzene	212	177	169	**83**	**80**	57-138	4	25	
107-06-2	1,2-Dichloroethane	206	188	180	**91**	**87**	64-138	4	25	
78-87-5	1,2-Dichloropropane	214	194	192	**91**	**90**	68-121	1	25	
108-67-8	1,3,5-Trimethylbenzene	218	205	197	**94**	**90**	66-125	4	25	
106-99-0	1,3-Butadiene	212	203	207	**96**	**98**	62-132	2	25	
541-73-1	1,3-Dichlorobenzene	214	174	167	**81**	**78**	57-135	4	25	
106-46-7	1,4-Dichlorobenzene	214	170	163	**79**	**76**	56-129	4	25	
123-91-1	1,4-Dioxane	214	209	206	**98**	**96**	76-127	2	25	
540-84-1	2,2,4-Trimethylpentane	214	202	200	**94**	**93**	62-124	1	25	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	414	385	378	**93**	**91**	70-125	2	25	
591-78-6	2-Hexanone	426	416	417	**98**	**98**	70-136	0	25	
67-63-0	2-Propanol	418	380	385	**91**	**92**	59-132	1	25	
107-05-1	3-Chloropropene	214	179	183	**84**	**86**	50-118	2	25	
622-96-8	4-Ethyltoluene	218	203	196	**93**	**90**	67-128	3	25	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

Client: **NASA White Sands Test Facility**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P240619-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 6/19/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount LCS / DLCS µg/m³	Result LCS µg/m³	Result DLCS µg/m³	% Recovery LCS	% Recovery DLCS	ALS Acceptance Limits	RPD	RPD Limit	Data Qualifier
108-10-1	4-Methyl-2-pentanone	426	431	427	**101**	**100**	67-137	1	25	
67-64-1	Acetone	1,060	901	893	**85**	**84**	61-120	1	25	
100-44-7	alpha-Chlorotoluene	430	437	422	**102**	**98**	58-151	4	25	
71-43-2	Benzene	206	178	173	**86**	**84**	73-128	2	25	
75-27-4	Bromodichloromethane	218	198	192	**91**	**88**	70-125	3	25	
75-25-2	Bromoform	218	210	199	**96**	**91**	63-132	5	25	
74-83-9	Bromomethane	210	199	192	**95**	**91**	72-120	4	25	
75-15-0	Carbon Disulfide	430	394	386	**92**	**90**	69-115	2	25	
56-23-5	Carbon Tetrachloride	210	197	185	**94**	**88**	71-134	7	25	
108-90-7	Chlorobenzene	218	182	177	**83**	**81**	63-124	2	25	
75-00-3	Chloroethane	212	186	184	**88**	**87**	67-123	1	25	
67-66-3	Chloroform	216	196	191	**91**	**88**	64-121	3	25	
74-87-3	Chloromethane	208	182	185	**88**	**89**	56-131	1	25	
156-59-2	cis-1,2-Dichloroethene	216	195	192	**90**	**89**	64-120	1	25	
10061-01-5	cis-1,3-Dichloropropene	212	208	204	**98**	**96**	87-137	2	25	
98-82-8	Cumene	212	194	187	**92**	**88**	66-126	4	25	
110-82-7	Cyclohexane	428	418	407	**98**	**95**	71-118	3	25	
124-48-1	Dibromochloromethane	214	189	182	**88**	**85**	67-128	3	25	
64-17-5	Ethanol	1,110	903	909	**81**	**82**	52-120	1	25	
100-41-4	Ethyl Benzene	218	201	196	**92**	**90**	64-119	2	25	
75-69-4	Freon 11	210	184	175	**88**	**83**	65-122	6	25	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

Client: **NASA White Sands Test Facility**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P240619-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 6/19/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount LCS / DLCS µg/m³	Result LCS µg/m³	Result DLCS µg/m³	% Recovery LCS	% Recovery DLCS	ALS Acceptance Limits	RPD	RPD Limit	Data Qualifier
76-13-1	Freon 113	210	193	185	**92**	**88**	65-121	4	25	
76-14-2	Freon 114	208	201	184	**97**	**88**	63-120	10	25	
75-71-8	Freon 12	204	176	172	**86**	**84**	66-122	2	25	
142-82-5	Heptane	214	208	204	**97**	**95**	72-121	2	25	
87-68-3	Hexachlorobutadiene	214	172	163	**80**	**76**	50-133	5	25	
110-54-3	Hexane	212	203	200	**96**	**94**	60-125	2	25	
179601-23-1	m,p-Xylene	432	401	389	**93**	**90**	64-121	3	25	
1634-04-4	Methyl tert-butyl ether	216	234	226	**108**	**105**	65-124	3	25	
75-09-2	Methylene Chloride	208	170	165	**82**	**79**	71-123	4	25	
95-47-6	o-Xylene	216	199	193	**92**	**89**	66-122	3	25	
103-65-1	Propylbenzene	214	195	190	**91**	**89**	67-126	2	25	
100-42-5	Styrene	214	204	198	**95**	**93**	71-125	2	25	
127-18-4	Tetrachloroethene	214	187	178	**87**	**83**	55-132	5	25	
109-99-9	Tetrahydrofuran	404	381	376	**94**	**93**	67-117	1	25	
108-88-3	Toluene	214	188	185	**88**	**86**	64-121	2	25	
156-60-5	trans-1,2-Dichloroethene	218	201	197	**92**	**90**	67-123	2	25	
10061-02-6	trans-1,3-Dichloropropene	196	195	190	**99**	**97**	73-127	2	25	
79-01-6	Trichloroethene	214	183	175	**86**	**82**	68-124	5	25	
75-01-4	Vinyl Chloride	212	195	184	**92**	**87**	57-129	6	25	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **NASA White Sands Test Facility**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P240620-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 6/20/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount LCS / DLCS µg/m³	Result LCS µg/m³	Result DLCS µg/m³	% Recovery LCS	% Recovery DLCS	ALS Acceptance Limits	RPD	RPD Limit	Data Qualifier
71-55-6	1,1,1-Trichloroethane	210	175	178	**83**	**85**	67-125	2	25	
79-34-5	1,1,2,2-Tetrachloroethane	216	190	196	**88**	**91**	71-128	3	25	
79-00-5	1,1,2-Trichloroethane	216	193	197	**89**	**91**	71-119	2	25	
75-34-3	1,1-Dichloroethane	216	202	206	**94**	**95**	66-120	1	25	
75-35-4	1,1-Dichloroethene	208	195	199	**94**	**96**	75-120	2	25	
120-82-1	1,2,4-Trichlorobenzene	440	320	323	**73**	**73**	50-137	0	25	
95-63-6	1,2,4-Trimethylbenzene	212	187	192	**88**	**91**	67-130	3	25	
106-93-4	1,2-Dibromoethane (EDB)	206	184	187	**89**	**91**	69-129	2	25	
95-50-1	1,2-Dichlorobenzene	212	161	165	**76**	**78**	57-138	3	25	
107-06-2	1,2-Dichloroethane	206	175	178	**85**	**86**	64-138	1	25	
78-87-5	1,2-Dichloropropane	214	204	208	**95**	**97**	68-121	2	25	
108-67-8	1,3,5-Trimethylbenzene	218	191	197	**88**	**90**	66-125	2	25	
106-99-0	1,3-Butadiene	212	206	211	**97**	**100**	62-132	3	25	
541-73-1	1,3-Dichlorobenzene	214	158	163	**74**	**76**	57-135	3	25	
106-46-7	1,4-Dichlorobenzene	214	155	159	**72**	**74**	56-129	3	25	
123-91-1	1,4-Dioxane	214	209	215	**98**	**100**	76-127	2	25	
540-84-1	2,2,4-Trimethylpentane	214	211	216	**99**	**101**	62-124	2	25	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	414	396	406	**96**	**98**	70-125	2	25	
591-78-6	2-Hexanone	426	426	444	**100**	**104**	70-136	4	25	
67-63-0	2-Propanol	418	408	422	**98**	**101**	59-132	3	25	
107-05-1	3-Chloropropene	214	195	200	**91**	**93**	50-118	2	25	
622-96-8	4-Ethyltoluene	218	191	197	**88**	**90**	67-128	2	25	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

Client: **NASA White Sands Test Facility**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P240620-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 6/20/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount LCS / DLCS µg/m³	Result LCS µg/m³	Result DLCS µg/m³	% Recovery LCS	% Recovery DLCS	ALS Acceptance Limits	RPD	RPD Limit	Data Qualifier
108-10-1	4-Methyl-2-pentanone	426	443	457	**104**	**107**	67-137	3	25	
67-64-1	Acetone	1,060	954	974	**90**	**92**	61-120	2	25	
100-44-7	alpha-Chlorotoluene	430	401	414	**93**	**96**	58-151	3	25	
71-43-2	Benzene	206	180	184	**87**	**89**	73-128	2	25	
75-27-4	Bromodichloromethane	218	191	194	**88**	**89**	70-125	1	25	
75-25-2	Bromoform	218	188	193	**86**	**89**	63-132	3	25	
74-83-9	Bromomethane	210	204	204	**97**	**97**	72-120	0	25	
75-15-0	Carbon Disulfide	430	401	407	**93**	**95**	69-115	2	25	
56-23-5	Carbon Tetrachloride	210	176	179	**84**	**85**	71-134	1	25	
108-90-7	Chlorobenzene	218	176	181	**81**	**83**	63-124	2	25	
75-00-3	Chloroethane	212	202	202	**95**	**95**	67-123	0	25	
67-66-3	Chloroform	216	189	193	**88**	**89**	64-121	1	25	
74-87-3	Chloromethane	208	199	204	**96**	**98**	56-131	2	25	
156-59-2	cis-1,2-Dichloroethene	216	197	201	**91**	**93**	64-120	2	25	
10061-01-5	cis-1,3-Dichloropropene	212	207	212	**98**	**100**	87-137	2	25	
98-82-8	Cumene	212	184	188	**87**	**89**	66-126	2	25	
110-82-7	Cyclohexane	428	416	425	**97**	**99**	71-118	2	25	
124-48-1	Dibromochloromethane	214	177	182	**83**	**85**	67-128	2	25	
64-17-5	Ethanol	1,110	987	1020	**89**	**92**	52-120	3	25	
100-41-4	Ethyl Benzene	218	194	200	**89**	**92**	64-119	3	25	
75-69-4	Freon 11	210	170	172	**81**	**82**	65-122	1	25	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

Client: **NASA White Sands Test Facility**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P240620-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 6/20/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount LCS / DLCS µg/m³	Result LCS µg/m³	Result DLCS µg/m³	% Recovery LCS	% Recovery DLCS	ALS Acceptance Limits	RPD	RPD Limit	Data Qualifier
76-13-1	Freon 113	210	181	182	**86**	**87**	65-121	1	25	
76-14-2	Freon 114	208	187	185	**90**	**89**	63-120	1	25	
75-71-8	Freon 12	204	168	168	**82**	**82**	66-122	0	25	
142-82-5	Heptane	214	212	216	**99**	**101**	72-121	2	25	
87-68-3	Hexachlorobutadiene	214	147	151	**69**	**71**	50-133	3	25	
110-54-3	Hexane	212	210	215	**99**	**101**	60-125	2	25	
179601-23-1	m,p-Xylene	432	383	394	**89**	**91**	64-121	2	25	
1634-04-4	Methyl tert-butyl ether	216	229	231	**106**	**107**	65-124	0.9	25	
75-09-2	Methylene Chloride	208	173	176	**83**	**85**	71-123	2	25	
95-47-6	o-Xylene	216	191	196	**88**	**91**	66-122	3	25	
103-65-1	Propylbenzene	214	187	192	**87**	**90**	67-126	3	25	
100-42-5	Styrene	214	195	202	**91**	**94**	71-125	3	25	
127-18-4	Tetrachloroethene	214	172	176	**80**	**82**	55-132	2	25	
109-99-9	Tetrahydrofuran	404	395	402	**98**	**100**	67-117	2	25	
108-88-3	Toluene	214	186	192	**87**	**90**	64-121	3	25	
156-60-5	trans-1,2-Dichloroethene	218	203	209	**93**	**96**	67-123	3	25	
10061-02-6	trans-1,3-Dichloropropene	196	187	193	**95**	**98**	73-127	3	25	
79-01-6	Trichloroethene	214	174	177	**81**	**83**	68-124	2	25	
75-01-4	Vinyl Chloride	212	200	194	**94**	**92**	57-129	2	25	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **NASA White Sands Test Facility**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P240621-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 6/21/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount LCS / DLCS µg/m³	Result LCS µg/m³	Result DLCS µg/m³	% Recovery LCS	% Recovery DLCS	ALS Acceptance Limits	RPD	RPD Limit	Data Qualifier
71-55-6	1,1,1-Trichloroethane	210	176	181	**84**	**86**	67-125	2	25	
79-34-5	1,1,2,2-Tetrachloroethane	216	193	198	**89**	**92**	71-128	3	25	
79-00-5	1,1,2-Trichloroethane	216	197	201	**91**	**93**	71-119	2	25	
75-34-3	1,1-Dichloroethane	216	203	212	**94**	**98**	66-120	4	25	
75-35-4	1,1-Dichloroethene	208	197	203	**95**	**98**	75-120	3	25	
120-82-1	1,2,4-Trichlorobenzene	440	318	325	**72**	**74**	50-137	3	25	
95-63-6	1,2,4-Trimethylbenzene	212	188	193	**89**	**91**	67-130	2	25	
106-93-4	1,2-Dibromoethane (EDB)	206	185	189	**90**	**92**	69-129	2	25	
95-50-1	1,2-Dichlorobenzene	212	161	165	**76**	**78**	57-138	3	25	
107-06-2	1,2-Dichloroethane	206	175	183	**85**	**89**	64-138	5	25	
78-87-5	1,2-Dichloropropane	214	205	212	**96**	**99**	68-121	3	25	
108-67-8	1,3,5-Trimethylbenzene	218	192	198	**88**	**91**	66-125	3	25	
106-99-0	1,3-Butadiene	212	212	218	**100**	**103**	62-132	3	25	
541-73-1	1,3-Dichlorobenzene	214	159	163	**74**	**76**	57-135	3	25	
106-46-7	1,4-Dichlorobenzene	214	156	160	**73**	**75**	56-129	3	25	
123-91-1	1,4-Dioxane	214	212	220	**99**	**103**	76-127	4	25	
540-84-1	2,2,4-Trimethylpentane	214	215	221	**100**	**103**	62-124	3	25	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	414	402	419	**97**	**101**	70-125	4	25	
591-78-6	2-Hexanone	426	430	447	**101**	**105**	70-136	4	25	
67-63-0	2-Propanol	418	418	428	**100**	**102**	59-132	2	25	
107-05-1	3-Chloropropene	214	199	204	**93**	**95**	50-118	2	25	
622-96-8	4-Ethyltoluene	218	192	197	**88**	**90**	67-128	2	25	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

Client: **NASA White Sands Test Facility**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P240621-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 6/21/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount LCS / DLCS µg/m³	Result LCS µg/m³	Result DLCS µg/m³	% Recovery LCS	% Recovery DLCS	ALS Acceptance Limits	RPD	RPD Limit	Data Qualifier
108-10-1	4-Methyl-2-pentanone	426	452	467	**106**	**110**	67-137	4	25	
67-64-1	Acetone	1,060	966	1000	**91**	**94**	61-120	3	25	
100-44-7	alpha-Chlorotoluene	430	399	414	**93**	**96**	58-151	3	25	
71-43-2	Benzene	206	182	188	**88**	**91**	73-128	3	25	
75-27-4	Bromodichloromethane	218	192	197	**88**	**90**	70-125	2	25	
75-25-2	Bromoform	218	188	192	**86**	**88**	63-132	2	25	
74-83-9	Bromomethane	210	206	207	**98**	**99**	72-120	1	25	
75-15-0	Carbon Disulfide	430	404	418	**94**	**97**	69-115	3	25	
56-23-5	Carbon Tetrachloride	210	177	182	**84**	**87**	71-134	4	25	
108-90-7	Chlorobenzene	218	178	183	**82**	**84**	63-124	2	25	
75-00-3	Chloroethane	212	204	208	**96**	**98**	67-123	2	25	
67-66-3	Chloroform	216	191	198	**88**	**92**	64-121	4	25	
74-87-3	Chloromethane	208	201	210	**97**	**101**	56-131	4	25	
156-59-2	cis-1,2-Dichloroethene	216	200	208	**93**	**96**	64-120	3	25	
10061-01-5	cis-1,3-Dichloropropene	212	210	216	**99**	**102**	87-137	3	25	
98-82-8	Cumene	212	185	190	**87**	**90**	66-126	3	25	
110-82-7	Cyclohexane	428	423	435	**99**	**102**	71-118	3	25	
124-48-1	Dibromochloromethane	214	179	183	**84**	**86**	67-128	2	25	
64-17-5	Ethanol	1,110	1000	1050	**90**	**95**	52-120	5	25	
100-41-4	Ethyl Benzene	218	196	202	**90**	**93**	64-119	3	25	
75-69-4	Freon 11	210	169	175	**80**	**83**	65-122	4	25	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

Client: **NASA White Sands Test Facility**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P240621-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 6/21/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount LCS / DLCS µg/m³	Result LCS µg/m³	Result DLCS µg/m³	% Recovery LCS	% Recovery DLCS	ALS Acceptance Limits	RPD	RPD Limit	Data Qualifier
76-13-1	Freon 113	210	181	186	**86**	**89**	65-121	3	25	
76-14-2	Freon 114	208	188	191	**90**	**92**	63-120	2	25	
75-71-8	Freon 12	204	166	177	**81**	**87**	66-122	7	25	
142-82-5	Heptane	214	215	222	**100**	**104**	72-121	4	25	
87-68-3	Hexachlorobutadiene	214	148	152	**69**	**71**	50-133	3	25	
110-54-3	Hexane	212	212	222	**100**	**105**	60-125	5	25	
179601-23-1	m,p-Xylene	432	387	397	**90**	**92**	64-121	2	25	
1634-04-4	Methyl tert-butyl ether	216	229	239	**106**	**111**	65-124	5	25	
75-09-2	Methylene Chloride	208	175	180	**84**	**87**	71-123	4	25	
95-47-6	o-Xylene	216	192	198	**89**	**92**	66-122	3	25	
103-65-1	Propylbenzene	214	188	194	**88**	**91**	67-126	3	25	
100-42-5	Styrene	214	197	203	**92**	**95**	71-125	3	25	
127-18-4	Tetrachloroethene	214	172	176	**80**	**82**	55-132	2	25	
109-99-9	Tetrahydrofuran	404	397	413	**98**	**102**	67-117	4	25	
108-88-3	Toluene	214	188	194	**88**	**91**	64-121	3	25	
156-60-5	trans-1,2-Dichloroethene	218	206	214	**94**	**98**	67-123	4	25	
10061-02-6	trans-1,3-Dichloropropene	196	189	197	**96**	**101**	73-127	5	25	
79-01-6	Trichloroethene	214	175	180	**82**	**84**	68-124	2	25	
75-01-4	Vinyl Chloride	212	201	201	**95**	**95**	57-129	0	25	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

Client: **NASA White Sands Test Facility**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P240622-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 6/22/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount LCS / DLCS µg/m³	Result LCS µg/m³	Result DLCS µg/m³	% Recovery LCS	% Recovery DLCS	ALS Acceptance Limits	RPD	RPD Limit	Data Qualifier
71-55-6	1,1,1-Trichloroethane	210	181	177	**86**	**84**	67-125	2	25	
79-34-5	1,1,2,2-Tetrachloroethane	216	187	187	**87**	**87**	71-128	0	25	
79-00-5	1,1,2-Trichloroethane	216	193	192	**89**	**89**	71-119	0	25	
75-34-3	1,1-Dichloroethane	216	198	198	**92**	**92**	66-120	0	25	
75-35-4	1,1-Dichloroethene	208	194	193	**93**	**93**	75-120	0	25	
120-82-1	1,2,4-Trichlorobenzene	440	333	328	**76**	**75**	50-137	1	25	
95-63-6	1,2,4-Trimethylbenzene	212	192	189	**91**	**89**	67-130	2	25	
106-93-4	1,2-Dibromoethane (EDB)	206	183	183	**89**	**89**	69-129	0	25	
95-50-1	1,2-Dichlorobenzene	212	167	163	**79**	**77**	57-138	3	25	
107-06-2	1,2-Dichloroethane	206	182	177	**88**	**86**	64-138	2	25	
78-87-5	1,2-Dichloropropane	214	197	198	**92**	**93**	68-121	1	25	
108-67-8	1,3,5-Trimethylbenzene	218	195	193	**89**	**89**	66-125	0	25	
106-99-0	1,3-Butadiene	212	210	215	**99**	**101**	62-132	2	25	
541-73-1	1,3-Dichlorobenzene	214	163	160	**76**	**75**	57-135	1	25	
106-46-7	1,4-Dichlorobenzene	214	159	156	**74**	**73**	56-129	1	25	
123-91-1	1,4-Dioxane	214	209	208	**98**	**97**	76-127	1	25	
540-84-1	2,2,4-Trimethylpentane	214	204	205	**95**	**96**	62-124	1	25	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	414	390	390	**94**	**94**	70-125	0	25	
591-78-6	2-Hexanone	426	423	425	**99**	**100**	70-136	1	25	
67-63-0	2-Propanol	418	402	409	**96**	**98**	59-132	2	25	
107-05-1	3-Chloropropene	214	190	194	**89**	**91**	50-118	2	25	
622-96-8	4-Ethyltoluene	218	194	195	**89**	**89**	67-128	0	25	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

Client: **NASA White Sands Test Facility**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P240622-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 6/22/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount LCS / DLCS µg/m³	Result LCS µg/m³	Result DLCS µg/m³	% Recovery LCS	% Recovery DLCS	ALS Acceptance Limits	RPD	RPD Limit	Data Qualifier
108-10-1	4-Methyl-2-pentanone	426	437	438	**103**	**103**	67-137	0	25	
67-64-1	Acetone	1,060	923	932	**87**	**88**	61-120	1	25	
100-44-7	alpha-Chlorotoluene	430	414	410	**96**	**95**	58-151	1	25	
71-43-2	Benzene	206	177	177	**86**	**86**	73-128	0	25	
75-27-4	Bromodichloromethane	218	192	189	**88**	**87**	70-125	1	25	
75-25-2	Bromoform	218	195	191	**89**	**88**	63-132	1	25	
74-83-9	Bromomethane	210	197	201	**94**	**96**	72-120	2	25	
75-15-0	Carbon Disulfide	430	397	394	**92**	**92**	69-115	0	25	
56-23-5	Carbon Tetrachloride	210	183	181	**87**	**86**	71-134	1	25	
108-90-7	Chlorobenzene	218	178	175	**82**	**80**	63-124	2	25	
75-00-3	Chloroethane	212	193	193	**91**	**91**	67-123	0	25	
67-66-3	Chloroform	216	192	190	**89**	**88**	64-121	1	25	
74-87-3	Chloromethane	208	191	194	**92**	**93**	56-131	1	25	
156-59-2	cis-1,2-Dichloroethene	216	196	195	**91**	**90**	64-120	1	25	
10061-01-5	cis-1,3-Dichloropropene	212	208	206	**98**	**97**	87-137	1	25	
98-82-8	Cumene	212	186	184	**88**	**87**	66-126	1	25	
110-82-7	Cyclohexane	428	413	411	**96**	**96**	71-118	0	25	
124-48-1	Dibromochloromethane	214	181	178	**85**	**83**	67-128	2	25	
64-17-5	Ethanol	1,110	945	958	**85**	**86**	52-120	1	25	
100-41-4	Ethyl Benzene	218	195	193	**89**	**89**	64-119	0	25	
75-69-4	Freon 11	210	175	172	**83**	**82**	65-122	1	25	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

Client: **NASA White Sands Test Facility**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P240622-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 6/22/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount LCS / DLCS µg/m³	Result LCS µg/m³	Result DLCS µg/m³	% Recovery LCS	% Recovery DLCS	ALS Acceptance Limits	RPD	RPD Limit	Data Qualifier
76-13-1	Freon 113	210	186	183	**89**	**87**	65-121	2	25	
76-14-2	Freon 114	208	192	185	**92**	**89**	63-120	3	25	
75-71-8	Freon 12	204	170	169	**83**	**83**	66-122	0	25	
142-82-5	Heptane	214	208	208	**97**	**97**	72-121	0	25	
87-68-3	Hexachlorobutadiene	214	158	154	**74**	**72**	50-133	3	25	
110-54-3	Hexane	212	207	206	**98**	**97**	60-125	1	25	
179601-23-1	m,p-Xylene	432	387	383	**90**	**89**	64-121	1	25	
1634-04-4	Methyl tert-butyl ether	216	234	232	**108**	**107**	65-124	0.9	25	
75-09-2	Methylene Chloride	208	171	170	**82**	**82**	71-123	0	25	
95-47-6	o-Xylene	216	192	190	**89**	**88**	66-122	1	25	
103-65-1	Propylbenzene	214	188	187	**88**	**87**	67-126	1	25	
100-42-5	Styrene	214	197	195	**92**	**91**	71-125	1	25	
127-18-4	Tetrachloroethene	214	177	173	**83**	**81**	55-132	2	25	
109-99-9	Tetrahydrofuran	404	386	386	**96**	**96**	67-117	0	25	
108-88-3	Toluene	214	185	185	**86**	**86**	64-121	0	25	
156-60-5	trans-1,2-Dichloroethene	218	202	202	**93**	**93**	67-123	0	25	
10061-02-6	trans-1,3-Dichloropropene	196	192	191	**98**	**97**	73-127	1	25	
79-01-6	Trichloroethene	214	177	173	**83**	**81**	68-124	2	25	
75-01-4	Vinyl Chloride	212	199	190	**94**	**90**	57-129	4	25	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **NASA White Sands Test Facility**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P240624-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Marlow Cobian/Meghry Jilakian Date Analyzed: 6/24/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount LCS / DLCS µg/m³	Result LCS µg/m³	Result DLCS µg/m³	% Recovery LCS	% Recovery DLCS	ALS Acceptance Limits	RPD	RPD Limit	Data Qualifier
71-55-6	1,1,1-Trichloroethane	210	174	176	**83**	**84**	67-125	1	25	
79-34-5	1,1,2,2-Tetrachloroethane	216	199	204	**92**	**94**	71-128	2	25	
79-00-5	1,1,2-Trichloroethane	216	196	199	**91**	**92**	71-119	1	25	
75-34-3	1,1-Dichloroethane	216	204	210	**94**	**97**	66-120	3	25	
75-35-4	1,1-Dichloroethene	208	197	203	**95**	**98**	75-120	3	25	
120-82-1	1,2,4-Trichlorobenzene	440	312	331	**71**	**75**	50-137	5	25	
95-63-6	1,2,4-Trimethylbenzene	212	194	198	**92**	**93**	67-130	1	25	
106-93-4	1,2-Dibromoethane (EDB)	206	190	195	**92**	**95**	69-129	3	25	
95-50-1	1,2-Dichlorobenzene	212	165	170	**78**	**80**	57-138	3	25	
107-06-2	1,2-Dichloroethane	206	175	179	**85**	**87**	64-138	2	25	
78-87-5	1,2-Dichloropropane	214	207	211	**97**	**99**	68-121	2	25	
108-67-8	1,3,5-Trimethylbenzene	218	198	203	**91**	**93**	66-125	2	25	
106-99-0	1,3-Butadiene	212	214	218	**101**	**103**	62-132	2	25	
541-73-1	1,3-Dichlorobenzene	214	162	167	**76**	**78**	57-135	3	25	
106-46-7	1,4-Dichlorobenzene	214	159	163	**74**	**76**	56-129	3	25	
123-91-1	1,4-Dioxane	214	213	217	**100**	**101**	76-127	1	25	
540-84-1	2,2,4-Trimethylpentane	214	215	220	**100**	**103**	62-124	3	25	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	414	402	410	**97**	**99**	70-125	2	25	
591-78-6	2-Hexanone	426	450	465	**106**	**109**	70-136	3	25	
67-63-0	2-Propanol	418	416	426	**100**	**102**	59-132	2	25	
107-05-1	3-Chloropropene	214	199	206	**93**	**96**	50-118	3	25	
622-96-8	4-Ethyltoluene	218	202	203	**93**	**93**	67-128	0	25	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

Client: **NASA White Sands Test Facility**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P240624-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Marlow Cobian/Meghry Jilakian Date Analyzed: 6/24/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount LCS / DLCS µg/m³	Result LCS µg/m³	Result DLCS µg/m³	% Recovery LCS	% Recovery DLCS	ALS Acceptance Limits	RPD	RPD Limit	Data Qualifier
108-10-1	4-Methyl-2-pentanone	426	454	466	**107**	**109**	67-137	2	25	
67-64-1	Acetone	1,060	965	999	**91**	**94**	61-120	3	25	
100-44-7	alpha-Chlorotoluene	430	406	418	**94**	**97**	58-151	3	25	
71-43-2	Benzene	206	183	186	**89**	**90**	73-128	1	25	
75-27-4	Bromodichloromethane	218	191	194	**88**	**89**	70-125	1	25	
75-25-2	Bromoform	218	193	197	**89**	**90**	63-132	1	25	
74-83-9	Bromomethane	210	202	207	**96**	**99**	72-120	3	25	
75-15-0	Carbon Disulfide	430	406	415	**94**	**97**	69-115	3	25	
56-23-5	Carbon Tetrachloride	210	175	177	**83**	**84**	71-134	1	25	
108-90-7	Chlorobenzene	218	183	188	**84**	**86**	63-124	2	25	
75-00-3	Chloroethane	212	204	206	**96**	**97**	67-123	1	25	
67-66-3	Chloroform	216	190	194	**88**	**90**	64-121	2	25	
74-87-3	Chloromethane	208	202	209	**97**	**100**	56-131	3	25	
156-59-2	cis-1,2-Dichloroethene	216	201	206	**93**	**95**	64-120	2	25	
10061-01-5	cis-1,3-Dichloropropene	212	210	215	**99**	**101**	87-137	2	25	
98-82-8	Cumene	212	191	195	**90**	**92**	66-126	2	25	
110-82-7	Cyclohexane	428	423	431	**99**	**101**	71-118	2	25	
124-48-1	Dibromochloromethane	214	183	188	**86**	**88**	67-128	2	25	
64-17-5	Ethanol	1,110	1010	1040	**91**	**94**	52-120	3	25	
100-41-4	Ethyl Benzene	218	202	207	**93**	**95**	64-119	2	25	
75-69-4	Freon 11	210	168	171	**80**	**81**	65-122	1	25	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

Client: **NASA White Sands Test Facility**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P240624-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Marlow Cobian/Meghry Jilakian Date Analyzed: 6/24/24
Sampling Media: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount LCS / DLCS µg/m³	Result LCS µg/m³	Result DLCS µg/m³	% Recovery LCS	% Recovery DLCS	ALS Acceptance Limits	RPD	RPD Limit	Data Qualifier
76-13-1	Freon 113	210	181	185	**86**	**88**	65-121	2	25	
76-14-2	Freon 114	208	191	188	**92**	**90**	63-120	2	25	
75-71-8	Freon 12	204	169	173	**83**	**85**	66-122	2	25	
142-82-5	Heptane	214	216	220	**101**	**103**	72-121	2	25	
87-68-3	Hexachlorobutadiene	214	146	153	**68**	**71**	50-133	4	25	
110-54-3	Hexane	212	215	222	**101**	**105**	60-125	4	25	
179601-23-1	m,p-Xylene	432	397	406	**92**	**94**	64-121	2	25	
1634-04-4	Methyl tert-butyl ether	216	230	235	**106**	**109**	65-124	3	25	
75-09-2	Methylene Chloride	208	174	179	**84**	**86**	71-123	2	25	
95-47-6	o-Xylene	216	198	203	**92**	**94**	66-122	2	25	
103-65-1	Propylbenzene	214	194	199	**91**	**93**	67-126	2	25	
100-42-5	Styrene	214	205	209	**96**	**98**	71-125	2	25	
127-18-4	Tetrachloroethene	214	177	181	**83**	**85**	55-132	2	25	
109-99-9	Tetrahydrofuran	404	397	408	**98**	**101**	67-117	3	25	
108-88-3	Toluene	214	194	199	**91**	**93**	64-121	2	25	
156-60-5	trans-1,2-Dichloroethene	218	206	213	**94**	**98**	67-123	4	25	
10061-02-6	trans-1,3-Dichloropropene	196	190	194	**97**	**99**	73-127	2	25	
79-01-6	Trichloroethene	214	176	178	**82**	**83**	68-124	1	25	
75-01-4	Vinyl Chloride	212	203	198	**96**	**93**	57-129	3	25	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY DUPLICATE SUMMARY RESULTS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405290834** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-029DUP

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/19/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.050 Liter(s)
Test Notes:

Initial Pressure (psig): -1.62 Final Pressure (psig): 6.83

Container Dilution Factor: 1.65

Compound	Sample Result µg/m³	Sample Result ppbV	Duplicate Sample Result µg/m³	Duplicate Sample Result ppbV	Average µg/m³	% RPD	RPD Limit	Data Qualifier
1,1,1-Trichloroethane	ND	ND	ND	ND	-	-	25	
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	-	-	25	
1,1,2-Trichloroethane	ND	ND	ND	ND	-	-	25	
1,1-Dichloroethane	ND	ND	ND	ND	-	-	25	
1,1-Dichloroethene	ND	ND	ND	ND	-	-	25	
1,2,4-Trichlorobenzene	ND	ND	ND	ND	-	-	25	
1,2,4-Trimethylbenzene	ND	ND	ND	ND	-	-	25	
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	-	-	25	
1,2-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
1,2-Dichloroethane	ND	ND	ND	ND	-	-	25	
1,2-Dichloropropane	ND	ND	ND	ND	-	-	25	
1,3,5-Trimethylbenzene	ND	ND	ND	ND	-	-	25	
1,3-Butadiene	ND	ND	ND	ND	-	-	25	
1,3-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
1,4-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
1,4-Dioxane	ND	ND	ND	ND	-	-	25	
2,2,4-Trimethylpentane	ND	ND	ND	ND	-	-	25	
2-Butanone (Methyl Ethyl Ketone)	3.89	1.32	3.93	1.33	3.91	**1**	25	**J**
2-Hexanone	ND	ND	ND	ND	-	-	25	
2-Propanol	ND	ND	ND	ND	-	-	25	
3-Chloropropene	ND	ND	ND	ND	-	-	25	
4-Ethyltoluene	ND	ND	ND	ND	-	-	25	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405290834** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-029DUP

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/19/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.050 Liter(s)
Test Notes:

Initial Pressure (psig): -1.62 Final Pressure (psig): 6.83

Container Dilution Factor: 1.65

Compound	Sample Result µg/m³	Sample Result ppbV	Duplicate Sample Result µg/m³	Duplicate Sample Result ppbV	Average µg/m³	% RPD	RPD Limit	Data Qualifier
4-Methyl-2-pentanone	ND	ND	ND	ND	-	-	25	
Acetone	106	44.6	101	42.5	103.5	**5**	25	**J**
alpha-Chlorotoluene	ND	ND	ND	ND	-	-	25	
Benzene	ND	ND	ND	ND	-	-	25	
Bromodichloromethane	ND	ND	ND	ND	-	-	25	
Bromoform	ND	ND	ND	ND	-	-	25	
Bromomethane	ND	ND	ND	ND	-	-	25	
Carbon Disulfide	ND	ND	ND	ND	-	-	25	
Carbon Tetrachloride	ND	ND	ND	ND	-	-	25	
Chlorobenzene	ND	ND	ND	ND	-	-	25	
Chloroethane	ND	ND	ND	ND	-	-	25	
Chloroform	3.76	0.771	3.86	0.791	3.81	**3**	25	**J**
Chloromethane	ND	ND	ND	ND	-	-	25	
cis-1,2-Dichloroethene	ND	ND	ND	ND	-	-	25	
cis-1,3-Dichloropropene	ND	ND	ND	ND	-	-	25	
Cumene	ND	ND	ND	ND	-	-	25	
Cyclohexane	ND	ND	ND	ND	-	-	25	
Dibromochloromethane	ND	ND	ND	ND	-	-	25	
Ethanol	ND	ND	ND	ND	-	-	25	
Ethyl Benzene	ND	ND	ND	ND	-	-	25	
Freon 11	2,990	532	3,080	548	3035	**3**	25	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405290834** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-029DUP

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: Simon Cao Date Analyzed: 6/19/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.050 Liter(s)
Test Notes:

Initial Pressure (psig): -1.62 Final Pressure (psig): 6.83

Container Dilution Factor: 1.65

Compound	Sample Result µg/m³	Sample Result ppbV	Duplicate Sample Result µg/m³	Duplicate Sample Result ppbV	Average µg/m³	% RPD	RPD Limit	Data Qualifier
Freon 113	1,110	144	1,120	146	1115	**0.9**	25	
Freon 114	ND	ND	ND	ND	-	-	25	
Freon 12	ND	ND	ND	ND	-	-	25	
Freon 123	8.05	1.29	ND	ND	-	-	25	**X**
Freon 21	ND	ND	ND	ND	-	-	25	**X**
Heptane	ND	ND	ND	ND	-	-	25	
Hexachlorobutadiene	ND	ND	ND	ND	-	-	25	
Hexane	ND	ND	ND	ND	-	-	25	
m,p-Xylenes	ND	ND	ND	ND	-	-	25	
Methyl tert-butyl ether	ND	ND	ND	ND	-	-	25	
Methylene Chloride	ND	ND	ND	ND	-	-	25	
o-Xylene	ND	ND	ND	ND	-	-	25	
Propylbenzene	ND	ND	ND	ND	-	-	25	
Styrene	ND	ND	ND	ND	-	-	25	
Tetrachloroethene	ND	ND	ND	ND	-	-	25	
Tetrahydrofuran	ND	ND	ND	ND	-	-	25	
Toluene	15.9	4.21	15.7	4.18	15.8	**1**	25	**J**
trans-1,2-Dichloroethene	ND	ND	ND	ND	-	-	25	
trans-1,3-Dichloropropene	ND	ND	ND	ND	-	-	25	
Trichloroethene	ND	ND	ND	ND	-	-	25	
Vinyl Chloride	ND	ND	ND	ND	-	-	25	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405290834** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-029DUP

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/29/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	Simon Cao	Date Analyzed:	6/19/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.050 Liter(s)
Test Notes:			

Initial Pressure (psig): -1.62 Final Pressure (psig): 6.83

Container Dilution Factor: 1.65

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

LABORATORY DUPLICATE SUMMARY RESULTS

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405291100** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-048DUP

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: #N/A Date Analyzed: 6/20/24 & 6/22/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.020 Liter(s)
Test Notes: 0.015 Liter(s)

Initial Pressure (psig): -2.26 Final Pressure (psig): 7.43

Container Dilution Factor: 1.78

Compound	Sample Result µg/m³	Sample Result ppbV	Duplicate Sample Result µg/m³	Duplicate Sample Result ppbV	Average µg/m³	% RPD	RPD Limit	Data Qualifier
1,1,1-Trichloroethane	ND	ND	ND	ND	-	-	25	
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	-	-	25	
1,1,2-Trichloroethane	ND	ND	ND	ND	-	-	25	
1,1-Dichloroethane	ND	ND	ND	ND	-	-	25	
1,1-Dichloroethene	ND	ND	ND	ND	-	-	25	
1,2,4-Trichlorobenzene	ND	ND	ND	ND	-	-	25	
1,2,4-Trimethylbenzene	ND	ND	ND	ND	-	-	25	
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	-	-	25	
1,2-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
1,2-Dichloroethane	ND	ND	ND	ND	-	-	25	
1,2-Dichloropropane	ND	ND	ND	ND	-	-	25	
1,3,5-Trimethylbenzene	ND	ND	ND	ND	-	-	25	
1,3-Butadiene	ND	ND	ND	ND	-	-	25	
1,3-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
1,4-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
1,4-Dioxane	ND	ND	ND	ND	-	-	25	
2,2,4-Trimethylpentane	ND	ND	ND	ND	-	-	25	
2-Butanone (Methyl Ethyl Ketone)	ND	ND	ND	ND	-	-	25	
2-Hexanone	ND	ND	ND	ND	-	-	25	
2-Propanol	ND	ND	ND	ND	-	-	25	
3-Chloropropene	ND	ND	ND	ND	-	-	25	
4-Ethyltoluene	ND	ND	ND	ND	-	-	25	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405291100** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-048DUP

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: #N/A Date Analyzed: 6/20/24 & 6/22/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.020 Liter(s)
Test Notes: 0.015 Liter(s)

Initial Pressure (psig): -2.26 Final Pressure (psig): 7.43

Container Dilution Factor: 1.78

Compound	Sample Result µg/m³	Sample Result ppbV	Duplicate Sample Result µg/m³	Duplicate Sample Result ppbV	Average µg/m³	% RPD	RPD Limit	Data Qualifier
4-Methyl-2-pentanone	ND	ND	ND	ND	-	-	25	
Acetone	ND	ND	ND	ND	-	-	25	
alpha-Chlorotoluene	ND	ND	ND	ND	-	-	25	
Benzene	ND	ND	ND	ND	-	-	25	
Bromodichloromethane	ND	ND	ND	ND	-	-	25	
Bromoform	ND	ND	ND	ND	-	-	25	
Bromomethane	ND	ND	ND	ND	-	-	25	
Carbon Disulfide	ND	ND	ND	ND	-	-	25	
Carbon Tetrachloride	ND	ND	ND	ND	-	-	25	
Chlorobenzene	ND	ND	ND	ND	-	-	25	
Chloroethane	ND	ND	ND	ND	-	-	25	
Chloroform	10.1	2.08	9.79	2.01	9.945	**3**	25	**J**
Chloromethane	ND	ND	ND	ND	-	-	25	
cis-1,2-Dichloroethene	ND	ND	ND	ND	-	-	25	
cis-1,3-Dichloropropene	ND	ND	ND	ND	-	-	25	
Cumene	ND	ND	ND	ND	-	-	25	
Cyclohexane	ND	ND	ND	ND	-	-	25	
Dibromochloromethane	ND	ND	ND	ND	-	-	25	
Ethanol	ND	ND	ND	ND	-	-	25	
Ethyl Benzene	ND	ND	ND	ND	-	-	25	
Freon 11	6,510	1,160	6,510	1,160	6510	**0**	25	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**
Client Sample ID: **2405291100** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-048DUP

Test Code: EPA TO-15 Date Collected: 5/29/24
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 6/5/24
Analyst: #N/A Date Analyzed: 6/20/24 & 6/22/24
Sampling Media: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.020 Liter(s)
Test Notes: 0.015 Liter(s)

Initial Pressure (psig): -2.26 Final Pressure (psig): 7.43

Container Dilution Factor: 1.78

Compound	Sample Result µg/m³	Sample Result ppbV	Duplicate Sample Result µg/m³	Duplicate Sample Result ppbV	Average µg/m³	% RPD	RPD Limit	Data Qualifier
Freon 113	6,870	897	6,830	891	6850	**0.6**	25	
Freon 114	ND	ND	ND	ND	-	-	25	
Freon 12	ND	ND	ND	ND	-	-	25	
Freon 123	ND	ND	ND	ND	-	-	25	**X**
Freon 21	ND	ND	ND	ND	-	-	25	**X**
Heptane	ND	ND	ND	ND	-	-	25	
Hexachlorobutadiene	ND	ND	ND	ND	-	-	25	
Hexane	ND	ND	ND	ND	-	-	25	
m,p-Xylenes	ND	ND	ND	ND	-	-	25	
Methyl tert-butyl ether	ND	ND	ND	ND	-	-	25	
Methylene Chloride	ND	ND	ND	ND	-	-	25	
o-Xylene	ND	ND	ND	ND	-	-	25	
Propylbenzene	ND	ND	ND	ND	-	-	25	
Styrene	ND	ND	ND	ND	-	-	25	
Tetrachloroethene	ND	ND	ND	ND	-	-	25	
Tetrahydrofuran	ND	ND	ND	ND	-	-	25	
Toluene	ND	ND	ND	ND	-	-	25	
trans-1,2-Dichloroethene	ND	ND	ND	ND	-	-	25	
trans-1,3-Dichloropropene	ND	ND	ND	ND	-	-	25	
Trichloroethene	6.76	1.26	6.76	1.26	6.76	**0**	25	**J**
Vinyl Chloride	ND	ND	ND	ND	-	-	25	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **NASA White Sands Test Facility**

Client Sample ID: **2405291100** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)** ALS Sample ID: P2402249-048DUP

Tentatively Identified Compounds

Test Code:	EPA TO-15	Date Collected:	5/29/24
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	6/5/24
Analyst:	#N/A	Date Analyzed:	6/20/24 & 6/22/24
Sampling Media:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.020 Liter(s)
Test Notes:			0.015 Liter(s)

Initial Pressure (psig): -2.26 Final Pressure (psig): 7.43

Container Dilution Factor: 1.78

GC/MS Retention Time	**Compound Identification**	**Concentration µg/m³**	**Data Qualifier**
	Freon 123a	NF	

NF = Compound was searched for, but not found.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Method Blank Summary

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Lab File ID: 06172404.D
Analyst: Simon Cao Date Analyzed: 6/17/24
Sampling Media: 1.0 L Summa Canister(s) Time Analyzed: 10:26
Test Notes:

Client Sample ID	ALS Sample ID	Lab File ID	Time Analyzed
Lab Control Sample	P240617-LCS	06172405.D	10:58
Duplicate Lab Control Sample	P240617-DLCS	06172406.D	11:31
2405280843	P2402249-006	06172413.D	15:46
2405280810	P2402249-001	06172420.D	19:31
2405280816	P2402249-002	06172421.D	20:03
2405280826	P2402249-003	06172422.D	20:36
2405280830	P2402249-004	06172423.D	21:09
2405280836	P2402249-005	06172424.D	21:41
2405280915	P2402249-009	06172425.D	22:13
2405280919	P2402249-010	06172426.D	22:46
2405280925	P2402249-011	06172427.D	23:18

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Method Blank Summary

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Lab File ID: 06182404.D
Analyst: Simon Cao Date Analyzed: 6/18/24
Sampling Media: 1.0 L Summa Canister(s) Time Analyzed: 10:57
Test Notes:

Client Sample ID	ALS Sample ID	Lab File ID	Time Analyzed
Lab Control Sample	P240618-LCS	06182405.D	11:29
Duplicate Lab Control Sample	P240618-DLCS	06182406.D	12:01
2405280853	P2402249-008	06182407.D	12:49
2405280928	P2402249-012	06182408.D	13:22
2405280934	P2402249-013	06182409.D	13:54
2405281000	P2402249-014	06182410.D	14:26
2405281006	P2402249-015	06182411.D	14:58
2405280934 (Dilution)	P2402249-013	06182413.D	16:03
2405280846	P2402249-007	06182415.D	17:24
2405290815	P2402249-026	06182416.D	17:56
2405290816	P2402249-027	06182417.D	18:29
2405290826	P2402249-028	06182418.D	19:01
2405281011	P2402249-016	06182421.D	20:38
2405281017	P2402249-017	06182422.D	21:11
2405281028	P2402249-018	06182423.D	21:43
2405281032	P2402249-019	06182424.D	22:15
2405281245	P2402249-020	06182425.D	22:48
2405281310	P2402249-021	06182426.D	23:20
2405281258	P2402249-022	06182427.D	23:52
2405281326	P2402249-023	06182428.D	00:24

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Method Blank Summary

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Lab File ID: 06192404.D
Analyst: Simon Cao Date Analyzed: 6/19/24
Sampling Media: 1.0 L Summa Canister(s) Time Analyzed: 10:28
Test Notes:

Client Sample ID	ALS Sample ID	Lab File ID	Time Analyzed
Lab Control Sample	P240619-LCS	06192405.D	11:00
Duplicate Lab Control Sample	P240619-DLCS	06192406.D	11:32
2405290815 (Dilution)	P2402249-026	06192408.D	12:37
2405290826 (Dilution)	P2402249-028	06192409.D	13:10
2405290834	P2402249-029	06192411.D	14:14
2405281017 (Dilution)	P2402249-017	06192412.D	14:46
2405281326 (Dilution)	P2402249-023	06192413.D	15:19
2405290834 (Lab Duplicate)	P2402249-029DUP	06192414.D	15:51
2405290850	P2402249-030	06192417.D	17:54
2405290858	P2402249-031	06192418.D	18:26
2405290912	P2402249-034	06192421.D	20:03
2405290919	P2402249-035	06192422.D	20:36
2405290940	P2402249-036	06192423.D	21:08
2405290945	P2402249-037	06192424.D	21:41
2405290952	P2402249-038	06192425.D	22:13
2405291000	P2402249-039	06192426.D	22:46
2405291015	P2402249-041	06192428.D	23:50

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Method Blank Summary

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Lab File ID: 06202404.D
Analyst: Simon Cao Date Analyzed: 6/20/24
Sampling Media: 1.0 L Summa Canister(s) Time Analyzed: 11:20
Test Notes:

Client Sample ID	ALS Sample ID	Lab File ID	Time Analyzed
Lab Control Sample	P240620-LCS	06202405.D	11:52
Duplicate Lab Control Sample	P240620-DLCS	06202406.D	12:24
2405281337 (Dilution)	P2402249-024	06202407.D	12:56
2405290858 (Dilution)	P2402249-031	06202408.D	13:28
2405290859	P2402249-032	06202409.D	14:01
2405291001	P2402249-040	06202410.D	14:33
2405290905	P2402249-033	06202411.D	15:05
2405281337	P2402249-024	06202412.D	15:37
2405290905 (Dilution)	P2402249-033	06202413.D	16:27
2405291021	P2402249-042	06202414.D	16:59
2405291025	P2402249-043	06202415.D	17:31
2405291031	P2402249-044	06202416.D	18:04
2405291045	P2402249-045	06202417.D	18:36
2405291046	P2402249-046	06202418.D	19:08
2405291053	P2402249-047	06202419.D	19:40
2405291100	P2402249-048	06202420.D	20:12
2405291100 (Lab Duplicate)	P2402249-048DUP	06202421.D	20:45
2405291107	P2402249-049	06202422.D	21:17
2405291315	P2402249-050	06202423.D	21:50
2405291321	P2402249-051	06202424.D	22:22
2405291345	P2402249-053	06202425.D	22:54
2405291352	P2402249-054	06202426.D	23:27
2405291400	P2402249-055	06202427.D	23:59

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Method Blank Summary

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Lab File ID: 06212404.D
Analyst: Simon Cao Date Analyzed: 6/21/24
Sampling Media: 1.0 L Summa Canister(s) Time Analyzed: 12:01
Test Notes:

Client Sample ID	ALS Sample ID	Lab File ID	Time Analyzed
Lab Control Sample	P240621-LCS	06212405.D	12:33
Duplicate Lab Control Sample	P240621-DLCS	06212406.D	13:05
2405291021 (Dilution)	P2402249-042	06212407.D	13:38
2405291025 (Dilution)	P2402249-043	06212408.D	14:10
2405291031 (Dilution)	P2402249-044	06212409.D	14:42
2405281344	P2402249-025	06212413.D	17:01
2405300800	P2402249-056	06212414.D	17:34
2405300808	P2402249-057	06212415.D	18:06
2405300815	P2402249-058	06212416.D	18:38
2405300827	P2402249-059	06212417.D	08:11
2405300834	P2402249-060	06212418.D	08:43
2405291053 (Dilution)	P2402249-047	06212419.D	09:15

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Method Blank Summary

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Lab File ID: 06222403.D
Analyst: Simon Cao Date Analyzed: 6/22/24
Sampling Media: 1.0 L Summa Canister(s) Time Analyzed: 11:38
Test Notes:

Client Sample ID	ALS Sample ID	Lab File ID	Time Analyzed
Lab Control Sample	P240622-LCS	06222404.D	12:10
Duplicate Lab Control Sample	P240622-DLCS	06222405.D	12:43
2405291100 (Dilution)	P2402249-048	06222406.D	15:55
2405291100 (Lab Duplicate - Dilution)	P2402249-048DUP	06222407.D	16:27
2405300842	P2402249-061	06222408.D	17:00
2405300850	P2402249-062	06222409.D	17:32
2405291321 (Dilution)	P2402249-051	06222410.D	18:05
2405291352 (Dilution)	P2402249-054	06222412.D	19:10
2405291400 (Dilution)	P2402249-055	06222413.D	19:42
2405300916	P2402249-065	06222414.D	20:15
2405300923	P2402249-066	06222415.D	20:47

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249
Client Project ID: **NASA White Sands Test Facility (WSTF)**

Method Blank Summary

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Lab File ID: 06242404.D
Analyst: Marlow Cobian/Meghry Jilakian Date Analyzed: 6/24/24
Sampling Media: 1.0 L Summa Canister(s) Time Analyzed: 09:02
Test Notes:

Client Sample ID	ALS Sample ID	Lab File ID	Time Analyzed
Lab Control Sample	P240624-LCS	06242405.D	09:35
Duplicate Lab Control Sample	P240624-DLCS	06242406.D	10:07
2405300856	P2402249-063	06242407.D	10:50
2405300856 (Dilution)	P2402249-063	06242408.D	11:23
2405290912 (Dilution)	P2402249-034	06242409.D	11:55
2405300910	P2402249-064	06242410.D	12:27
2405300928	P2402249-067	06242411.D	12:59
2405291328	P2402249-052	06242412.D	13:41
2405300850 (Dilution)	P2402249-062	06242413.D	14:13
2405300923 (Dilution)	P2402249-066	06242414.D	14:45

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)**

Internal Standard Area and RT Summary

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Lab File ID: 06172402.D

Analyst: Simon Cao Date Analyzed: 6/17/24

Sampling Media: 1.0 L Summa Canister(s) Time Analyzed: 09:22

Test Notes:

		IS1 (BCM)		IS2 (DFB)		IS3 (CBZ)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	24 Hour Standard	181362	7.28	800359	9.33	178868	14.85
	Upper Limit	253907	7.61	1120503	9.66	250415	15.18
	Lower Limit	108817	6.95	480215	9.00	107321	14.52
	Client Sample ID						
01	Method Blank	170356	7.23	758532	9.30	167268	14.84
02	Lab Control Sample	178083	7.28	785782	9.34	178840	14.85
03	Duplicate Lab Control Sample	178847	7.28	788405	9.34	179600	14.85
04	2405280843	188008	7.23	838880	9.30	189672	14.84
05	2405280810	166054	7.22	735091	9.30	167871	14.84
06	2405280816	163879	7.23	727090	9.30	164853	14.84
07	2405280826	160575	7.23	708791	9.30	165417	14.85
08	2405280830	156712	7.23	694434	9.30	160830	14.84
09	2405280836	149620	7.23	661321	9.30	153048	14.84
10	2405280915	142780	7.22	630866	9.30	147958	14.84
11	2405280919	140334	7.22	615996	9.30	143215	14.84
12	2405280925	137439	7.22	609391	9.30	142606	14.84
13							
14							
15							
16							
17							
18							
19							
20							

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = 140% of internal standard area
AREA LOWER LIMIT = 60% of internal standard area
RT UPPER LIMIT = 0.33 minutes of internal standard RT
RT LOWER LIMIT = 0.33 minutes of internal standard RT

# Column used to flag values outside QC limits with an I.
I = Internal standard not within the speicified limits.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)**

Internal Standard Area and RT Summary

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Lab File ID: 06182402.D

Analyst: Simon Cao Date Analyzed: 6/18/24

Sampling Media: 1.0 L Summa Canister(s) Time Analyzed: 09:52

Test Notes:

		IS1 (BCM)		IS2 (DFB)		IS3 (CBZ)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	24 Hour Standard	142361	7.28	624540	9.33	145001	14.85
	Upper Limit	199305	7.61	874356	9.66	203001	15.18
	Lower Limit	85417	6.95	374724	9.00	87001	14.52
	Client Sample ID						
01	Method Blank	137927	7.23	609777	9.30	137507	14.84
02	Lab Control Sample	145213	7.27	632223	9.33	148375	14.85
03	Duplicate Lab Control Sample	151175	7.27	659300	9.33	155227	14.85
04	2405280853	163562	7.23	726138	9.30	165757	14.84
05	2405280928	145316	7.23	636690	9.30	145616	14.84
06	2405280934	143339	7.23	628970	9.30	143764	14.84
07	2405281000	142084	7.23	622480	9.30	145430	14.84
08	2405281006	138244	7.23	604493	9.30	140207	14.84
09	2405280934 (Dilution)	137081	7.23	589067	9.30	134869	14.84
10	2405280846	128829	7.23	554666	9.30	128823	14.84
11	2405290815	125566	7.23	547482	9.30	129021	14.84
12	2405290816	123397	7.23	539353	9.30	124502	14.84
13	2405290826	121703	7.23	526719	9.30	123843	14.84
14	2405281011	119271	7.23	513583	9.30	122644	14.84
15	2405281017	116216	7.23	505554	9.30	122013	14.84
16	2405281028	118400	7.25	505122	9.32	123263	14.85
17	2405281032	118005	7.23	514533	9.30	127678	14.84
18	2405281245	120118	7.22	520258	9.30	125225	14.84
19	2405281310	114425	7.23	499676	9.30	123388	14.84
20	2405281258	115945	7.23	505560	9.30	122417	14.84
21	2405281326	116239	7.23	503345	9.30	121381	14.84

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = 140% of internal standard area
AREA LOWER LIMIT = 60% of internal standard area
RT UPPER LIMIT = 0.33 minutes of internal standard RT
RT LOWER LIMIT = 0.33 minutes of internal standard RT

# Column used to flag values outside QC limits with an I.
I = Internal standard not within the speicified limits.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)**

Internal Standard Area and RT Summary

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Lab File ID: 06192402.D

Analyst: Simon Cao Date Analyzed: 6/19/24

Sampling Media: 1.0 L Summa Canister(s) Time Analyzed: 09:23

Test Notes:

		IS1 (BCM)		IS2 (DFB)		IS3 (CBZ)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	24 Hour Standard	144569	7.27	623668	9.33	149579	14.85
	Upper Limit	202397	7.60	873135	9.66	209411	15.18
	Lower Limit	86741	6.94	374201	9.00	89747	14.52
	Client Sample ID						
01	Method Blank	147452	7.23	639041	9.30	146689	14.84
02	Lab Control Sample	151516	7.28	656263	9.33	155570	14.85
03	Duplicate Lab Control Sample	166649	7.27	724520	9.33	169324	14.85
04	2405290815 (Dilution)	155617	7.22	675662	9.30	154980	14.84
05	2405290826 (Dilution)	148667	7.23	643708	9.30	147699	14.84
06	2405290834	145674	7.23	629829	9.30	143914	14.84
07	2405281017 (Dilution)	140588	7.23	606242	9.30	140401	14.84
08	2405281326 (Dilution)	134427	7.23	579043	9.30	133086	14.84
09	2405290834 (Lab Duplicate)	133582	7.23	572045	9.30	132996	14.84
10	2405290850	166175	7.23	743065	9.30	173085	14.84
11	2405290858	166915	7.22	736430	9.30	169026	14.84
12	2405290912	163202	7.23	704282	9.30	162065	14.84
13	2405290919	160838	7.23	688284	9.30	158470	14.84
14	2405290940	157304	7.23	679884	9.30	163718	14.84
15	2405290945	157841	7.24	685259	9.31	162539	14.85
16	2405290952	159064	7.25	686337	9.31	164580	14.85
17	2405291000	159652	7.22	688589	9.30	161191	14.84
18	2405291015	147608	7.23	649931	9.30	153139	14.84
19							
20							

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = 140% of internal standard area
AREA LOWER LIMIT = 60% of internal standard area
RT UPPER LIMIT = 0.33 minutes of internal standard RT
RT LOWER LIMIT = 0.33 minutes of internal standard RT

# Column used to flag values outside QC limits with an I.
I = Internal standard not within the speicified limits.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)**

Internal Standard Area and RT Summary

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Lab File ID: 06202402.D

Analyst: Simon Cao Date Analyzed: 6/20/24

Sampling Media: 1.0 L Summa Canister(s) Time Analyzed: 10:15

Test Notes:

		IS1 (BCM)		IS2 (DFB)		IS3 (CBZ)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	24 Hour Standard	186495	7.27	810970	9.33	188993	14.85
	Upper Limit	261093	7.60	1135358	9.66	264590	15.18
	Lower Limit	111897	6.94	486582	9.00	113396	14.52
	Client Sample ID						
01	Method Blank	174073	7.23	768403	9.30	177806	14.84
02	Lab Control Sample	185769	7.28	808795	9.33	189530	14.85
03	Duplicate Lab Control Sample	187127	7.27	813029	9.33	188863	14.85
04	2405281337 (Dilution)	189343	7.22	847518	9.30	194880	14.84
05	2405290858 (Dilution)	173760	7.22	762722	9.30	175622	14.84
06	2405290859	170941	7.23	757507	9.30	174094	14.84
07	2405291001	168160	7.23	742689	9.30	170794	14.84
08	2405290905	173480	7.23	757702	9.30	174153	14.84
09	2405281337	177761	7.23	771767	9.30	174127	14.84
10	2405290905 (Dilution)	168228	7.23	731521	9.30	166196	14.84
11	2405291021	161570	7.24	700296	9.30	161982	14.84
12	2405291025	156799	7.23	685496	9.30	157885	14.84
13	2405291031	159314	7.24	695380	9.31	160983	14.84
14	2405291045	155217	7.22	685101	9.30	155601	14.84
15	2405291046	151930	7.23	661901	9.30	153965	14.84
16	2405291053	153585	7.22	656628	9.30	153770	14.84
17	2405291100	149858	7.22	644242	9.30	148611	14.84
18	2405291100 (Lab Duplicate)	145042	7.23	622500	9.30	144169	14.84
19	2405291107	144502	7.22	615538	9.30	148409	14.84
20	2405291315	142446	7.23	615267	9.30	147399	14.84
21	2405291321	139281	7.23	594427	9.30	140876	14.84
22	2405291345	138785	7.24	595220	9.31	152376	14.85
23	2405291352	161516	7.24	717137	9.31	170647	14.84
24	2405291400	171760	7.22	755911	9.30	175655	14.84

IS1 (BCM) = Bromochloromethane
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IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = 140% of internal standard area
AREA LOWER LIMIT = 60% of internal standard area
RT UPPER LIMIT = 0.33 minutes of internal standard RT
RT LOWER LIMIT = 0.33 minutes of internal standard RT

# Column used to flag values outside QC limits with an I.
I = Internal standard not within the speicified limits.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)**

Internal Standard Area and RT Summary

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Lab File ID: 06212402.D

Analyst: Simon Cao Date Analyzed: 6/21/24

Sampling Media: 1.0 L Summa Canister(s) Time Analyzed: 10:56

Test Notes:

		IS1 (BCM)			IS2 (DFB)			IS3 (CBZ)		
		AREA	#	RT	#	AREA	#	RT	#	AREA	#	RT	#
	24 Hour Standard	191796		7.27		834750		9.33		192286		14.85	
	Upper Limit	268514		7.60		1168650		9.66		269200		15.18	
	Lower Limit	115078		6.94		500850		9.00		115372		14.52	
	Client Sample ID												
01	Method Blank	175811		7.23		778052		9.30		177159		14.84	
02	Lab Control Sample	814406	I	7.28		814406		9.33		191111		14.85	
03	Duplicate Lab Control Sample	183279		7.28		802798		9.33		188262		14.85	
04	2405291021 (Dilution)	175956		7.23		772154		9.30		177377		14.84	
05	2405291025 (Dilution)	176548		7.23		770809		9.30		177546		14.84	
06	2405291031 (Dilution)	174645		7.23		767799		9.30		175582		14.84	
07	2405281344	179983		7.23		785308		9.30		180753		14.84	
08	2405300800	173165		7.23		760804		9.30		177408		14.84	
09	2405300808	173577		7.29		771563		9.34		178684		14.85	
10	2405300815	138472		7.36		774822		9.36		180401		14.85	
11	2405300827	205189		7.22		882244		9.30		205304		14.84	
12	2405300834	181908		7.23		795958		9.30		181779		14.84	
13	2405291053 (Dilution)	171860		7.23		754868		9.30		172613		14.84	
14													
15													
16													
17													
18													
19													
20													

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = 140% of internal standard area
AREA LOWER LIMIT = 60% of internal standard area
RT UPPER LIMIT = 0.33 minutes of internal standard RT
RT LOWER LIMIT = 0.33 minutes of internal standard RT

# Column used to flag values outside QC limits with an I.
I = Internal standard not within the speicified limits. See case narrative.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)**

Internal Standard Area and RT Summary

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Lab File ID: 06222401.D

Analyst: Simon Cao Date Analyzed: 6/22/24

Sampling Media: 1.0 L Summa Canister(s) Time Analyzed: 09:47

Test Notes:

		IS1 (BCM)			IS2 (DFB)			IS3 (CBZ)		
		AREA	#	RT	AREA	#	RT	AREA	#	RT
	24 Hour Standard	178731		7.28	771512		9.33	179926		14.85
	Upper Limit	250223		7.61	1080117		9.66	251896		15.18
	Lower Limit	107239		6.95	462907		9.00	107956		14.52
	Client Sample ID									
01	Method Blank	759315	I	7.23	759315		9.30	173918		14.84
02	Lab Control Sample	178257		7.28	778177		9.33	184042		14.85
03	Duplicate Lab Control Sample	812299	I	7.28	812299		9.33	191650		14.85
04	2405291100 (Dilution)	174460		7.22	767760		9.30	181235		14.84
05	2405300842	166474		7.23	737169		9.30	179826		14.84
06	2405300850	164963		7.23	717712		9.30	178304		14.84
07	2405290912 (Dilution)	192602		7.23	853577		9.30	190487		14.84
08	2405291100 (Dilution)	204189		7.22	892956		9.30	210722		14.84
09	2405291321 (Lab Dup - Dilution)	169390		7.22	733255		9.30	175364		14.84
10	2405291352 (Dilution)	185018		7.23	803736		9.30	189642		14.84
11	2405291400 (Dilution)	179300		7.23	791586		9.30	186030		14.84
12	2405300916	179219		7.23	790370		9.30	187881		14.84
13	2405300923	177363		7.23	773064		9.30	181880		14.84
14										
15										
16										
17										
18										
19										
20										

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = 140% of internal standard area
AREA LOWER LIMIT = 60% of internal standard area
RT UPPER LIMIT = 0.33 minutes of internal standard RT
RT LOWER LIMIT = 0.33 minutes of internal standard RT

# Column used to flag values outside QC limits with an I.
I = Internal standard not within the speicified limits. See case narrative.

Client: **NASA White Sands Test Facility** ALS Project ID: P2402249

Client Project ID: **NASA White Sands Test Facility (WSTF)**

Internal Standard Area and RT Summary

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Lab File ID: 06242402.D

Analyst: Marlow Cobian/Meghry Jilakian Date Analyzed: 6/24/24

Sampling Media: 1.0 L Summa Canister(s) Time Analyzed: 07:58

Test Notes:

		IS1 (BCM)		IS2 (DFB)		IS3 (CBZ)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	24 Hour Standard	199039	7.28	878410	9.33	197285	14.85
	Upper Limit	278655	7.61	1229774	9.66	276199	15.18
	Lower Limit	119423	6.95	527046	9.00	118371	14.52
	Client Sample ID						
01	Method Blank	184282	7.23	835953	9.30	184282	14.84
02	Lab Control Sample	197490	7.27	868049	9.33	197490	14.85
03	Duplicate Lab Control Sample	196130	7.28	866637	9.34	196130	14.85
04	2405300856	211503	7.22	924695	9.30	207327	14.84
05	2405290905 (Dilution)	209439	7.23	924223	9.30	207081	14.84
06	2405290912 (Dilution)	192602	7.23	853577	9.30	190487	14.84
07	2405300910	187950	7.23	821946	9.30	188403	14.84
08	2405300928	182934	7.23	802984	9.30	183505	14.84
09	2405291328	188144	7.23	819448	9.30	184989	14.84
10	2405290859 (Dilution)	180603	7.23	788510	9.30	178311	14.84
11	2405290940 (Dilution)	173303	7.23	755083	9.30	167857	14.84
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
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AREA UPPER LIMIT = 140% of internal standard area
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# Column used to flag values outside QC limits with an I.
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Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\17\06172420.D Vial: 9
Acq On : 17 Jun 2024 19:31 Operator: SC
Sample : P2402249-001 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 27 14:47:18 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.22	130	166054	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	735091	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	167871	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	353150	11.966	ng		0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 95.76%				
57) Toluene-d8 (SS2)	12.43	98	827434	12.880	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.04%				
73) Bromofluorobenzene (SS3)	16.83	174	282781	12.190	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.52%				
Target Compounds							Qvalue
2) Propene	3.29	42	5090	0.239	ng		98
3) Dichlorodifluoromethan...	3.36	85	21100	0.540	ng		99
4) Chloromethane	3.45	50	780	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	3.60	135	429	N.D.			
6) Vinyl Chloride	3.56	62	122	N.D.			
7) 1,3-Butadiene	3.77	54	153	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	4.14	64	162	N.D.			
10) Ethanol	4.28	45	27065	1.677	ng		76
11) Acetonitrile	0.00	41	0	N.D.	d		
12) Acrolein	4.52	56	6915	0.579	ng		92
13) Acetone	4.62	58	85907	6.660	ng	#	58
14) Trichlorofluoromethane	4.75	101	21590	0.546	ng		100
15) 2-Propanol (Isopropanol)	4.85	45	21250	0.409	ng		93
16) Acrylonitrile	4.98	53	984	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	0.00	59	0	N.D.	d		
19) Methylene Chloride	5.34	84	1296	0.071	ng		94
20) 3-Chloro-1-propene (Al...	5.45	41	714	N.D.			
21) Trichlorotrifluoroethane	5.58	151	5916	0.354	ng		91
22) Carbon Disulfide	5.59	76	516657	8.779	ng		99
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	6.31	63	362	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.	d		
26) Vinyl Acetate	0.00	86	0	N.D.	d		
27) 2-Butanone (MEK)	0.00	72	0	N.D.	d		
28) cis-1,2-Dichloroethene	7.07	61	164	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.			
30) Ethyl Acetate	7.28	61	4455	0.715	ng		94
31) n-Hexane	7.30	57	498	N.D.			
32) Chloroform	7.34	83	4988	0.153	ng		97
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.	d		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	111	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	9.58	61	7768	No Calib		#	
40) 1-Butanol	8.82	56	13883	No Calib		#	
41) Benzene	8.89	78	3788	0.056	ng		99
42) Carbon Tetrachloride	9.06	117	684	N.D.			
43) Cyclohexane	0.00	84	0	N.D.	d		
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.	d		
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.08	83	653	N.D.			
47) Trichloroethene	10.15	130	610	N.D.			
48) 1,4-Dioxane	10.12	88	1401	0.112	ng		100
49) 2,2,4-Trimethylpentane...	10.22	57	1279	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172420.D Vial: 9
Acq On : 17 Jun 2024 19:31 Operator: SC
Sample : P2402249-001 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 27 14:47:18 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

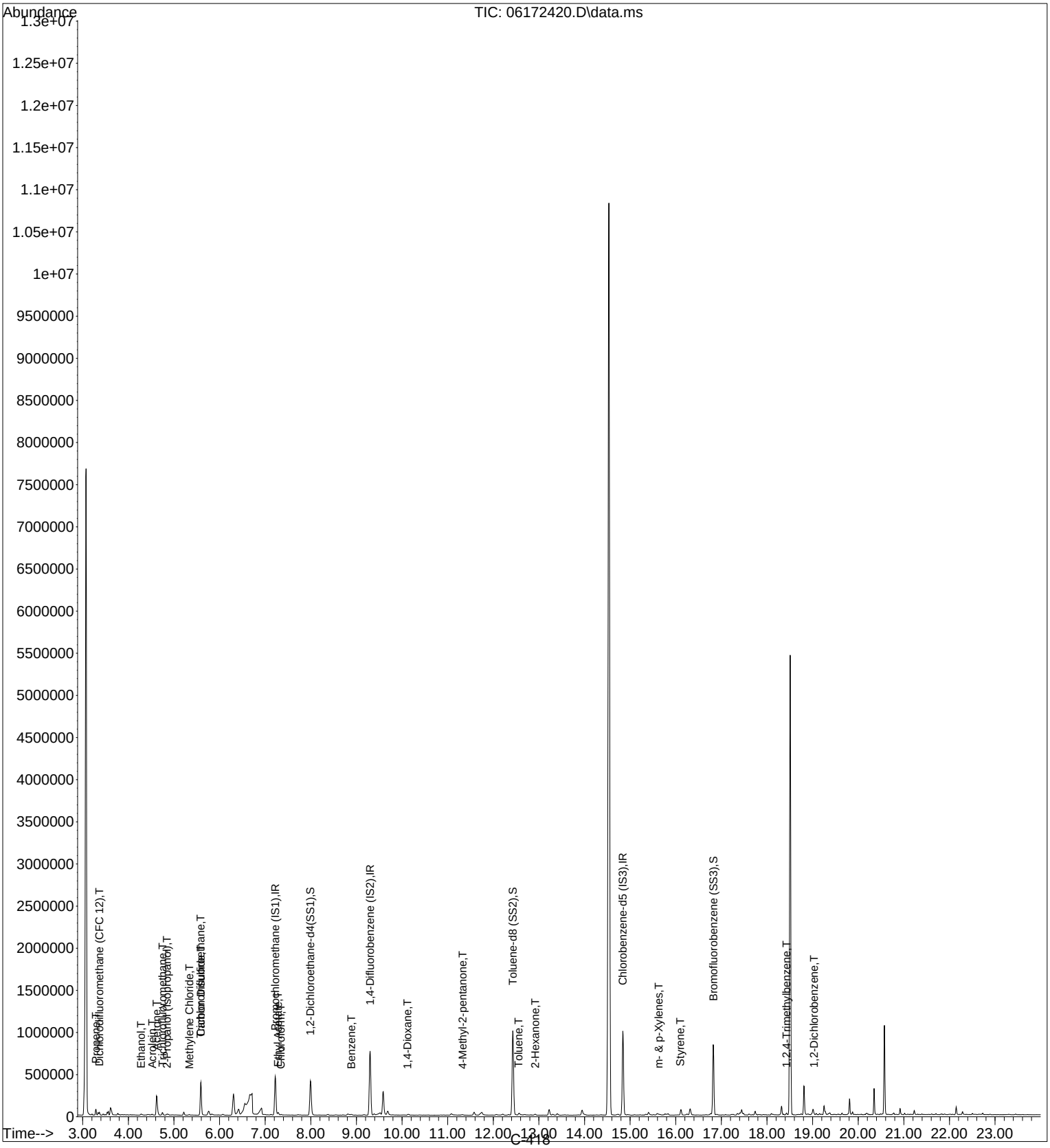
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	10.57	71	288	N.D.		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	11.33	58	1380	0.093 ng	#	18
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	12.56	91	4083	0.061 ng		100
59) 2-Hexanone	12.92	43	11069	0.263 ng		96
60) Dibromochloromethane	13.06	129	541	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	0.00	43	0	N.D. d		
63) n-Octane	13.93	57	467	N.D.		
64) Tetrachloroethene	14.03	166	471	N.D.		
65) Chlorobenzene	14.90	112	758	N.D.		
66) Ethylbenzene	15.41	91	1791	N.D.		
67) m- & p-Xylenes	15.63	91	3923	0.061 ng		86
68) Bromoform	15.67	173	743	N.D.		
69) Styrene	16.10	104	2210	0.051 ng		96
70) o-Xylene	16.24	91	2193	N.D.		
71) n-Nonane	16.62	43	750	N.D.		
72) 1,1,2,2-Tetrachloroethane	16.21	83	628	N.D.		
74) Cumene	17.03	105	2465	N.D.		
75) alpha-Pinene	0.00	93	0	N.D.		
76) n-Propylbenzene	17.68	91	1831	N.D.		
77) 3-Ethyltoluene	17.03	105	2465	No Calib		
78) 4-Ethyltoluene	17.86	105	1157	N.D.		
79) 1,3,5-Trimethylbenzene	17.95	105	877	N.D.		
80) alpha-Methylstyrene	0.00	118	0	N.D.		
81) 2-Ethyltoluene	17.03	105	2465	No Calib		
82) 1,2,4-Trimethylbenzene	18.43	105	8058	0.115 ng		94
83) n-Decane	17.09	58	781	No Calib	#	
84) Benzyl Chloride	18.57	91	246	N.D.		
85) 1,3-Dichlorobenzene	18.58	146	731	N.D.		
86) 1,4-Dichlorobenzene	18.66	146	979	N.D.		
87) sec-Butylbenzene	18.74	105	1648	N.D.		
88) 4-Isopropyltoluene (p-...	18.93	119	2239	N.D.		
89) 1,2,3-Trimethylbenzene	17.03	105	2465	No Calib		
90) 1,2-Dichlorobenzene	19.03	146	4349	0.097 ng		100
91) d-Limonene	19.08	68	860	N.D.		
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	17.88	58	193	No Calib	#	
94) 1,2,4-Trichlorobenzene	20.84	180	907	N.D.		
95) Naphthalene	20.94	128	3436	N.D.		
96) n-Dodecane	18.89	58	828	No Calib	#	
97) Hexachlorobutadiene	21.30	225	695	N.D.		
98) Cyclohexanone	15.52	55	1474	No Calib	#	
99) tert-Butylbenzene	18.42	119	1976	N.D.		
100) n-Butylbenzene	0.00	91	0	N.D. d		
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172420.D Vial: 9
Acq On : 17 Jun 2024 19:31 Operator: SC
Sample : P2402249-001 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 27 14:47:18 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172420.D Vial: 9
Acq On : 17 Jun 2024 19:31 Operator: SC
Sample : P2402249-001 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 27 14:47:18 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.22	130	166054	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	735091	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	167871	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	353150	11.966	ng		0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 95.76%				
57) Toluene-d8 (SS2)	12.43	98	827434	12.880	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.04%				
73) Bromofluorobenzene (SS3)	16.83	174	282781	12.190	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.52%				
Target Compounds							Qvalue
2) Propene	3.29	42	5090	0.239	ng		98
3) Dichlorodifluoromethan...	3.36	85	21100	0.540	ng		99
10) Ethanol	4.28	45	27065	1.677	ng		76
12) Acrolein	4.52	56	6915	0.579	ng		92
13) Acetone	4.62	58	85907	6.660	ng	#	58
14) Trichlorofluoromethane	4.75	101	21590	0.546	ng		100
15) 2-Propanol (Isopropanol)	4.85	45	21250	0.409	ng		93
19) Methylene Chloride	5.34	84	1296	0.071	ng		94
21) Trichlorotrifluoroethane	5.58	151	5916	0.354	ng		91
22) Carbon Disulfide	5.59	76	516657	8.779	ng		99
30) Ethyl Acetate	7.28	61	4455	0.715	ng		94
32) Chloroform	7.34	83	4988	0.153	ng		97
41) Benzene	8.89	78	3788	0.056	ng		99
48) 1,4-Dioxane	10.12	88	1401	0.112	ng		100
53) 4-Methyl-2-pentanone	11.33	58	1380	0.093	ng	#	18
58) Toluene	12.56	91	4083	0.061	ng		100
59) 2-Hexanone	12.92	43	11069	0.263	ng		96
67) m- & p-Xylenes	15.63	91	3923	0.061	ng		86
69) Styrene	16.10	104	2210	0.051	ng		96
82) 1,2,4-Trimethylbenzene	18.43	105	8058	0.115	ng		94
90) 1,2-Dichlorobenzene	19.03	146	4349	0.097	ng		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172420.D Vial: 9
Acq On : 17 Jun 2024 19:31 Operator: SC
Sample : P2402249-001 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 27 14:47:18 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
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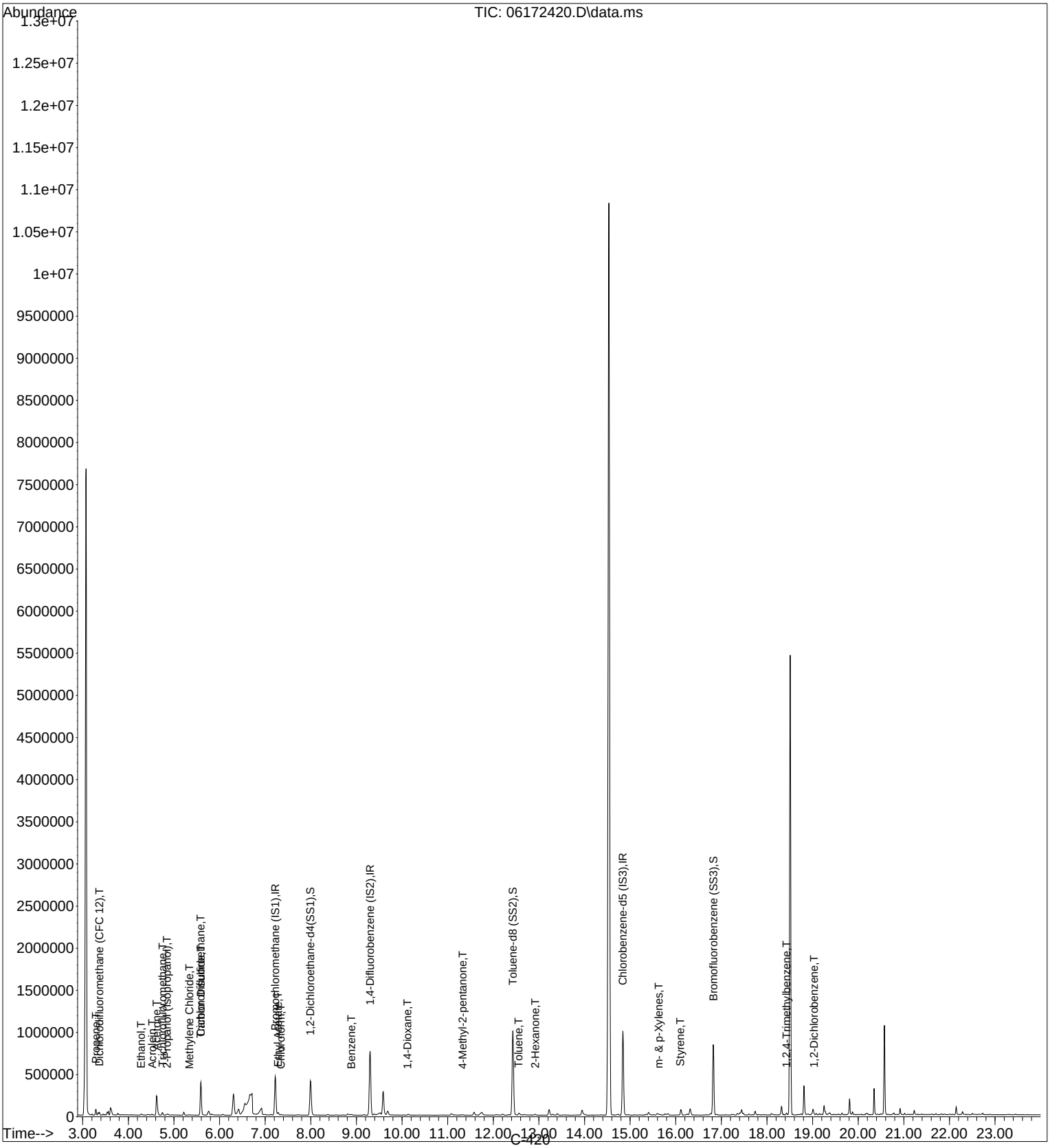
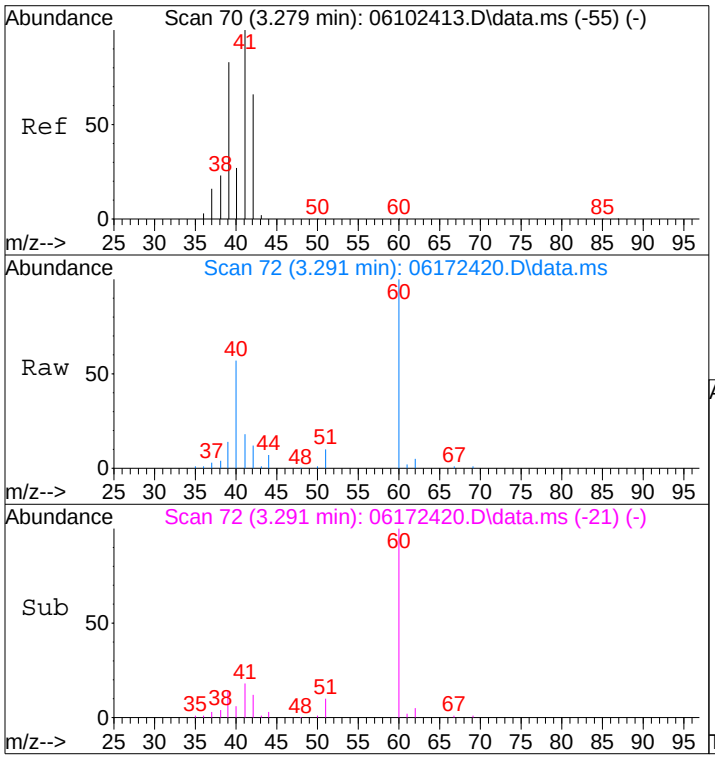
DataAcq Meth:TO15.M

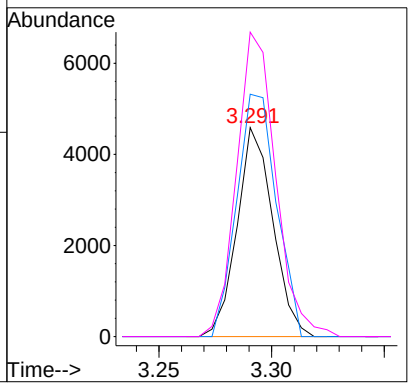


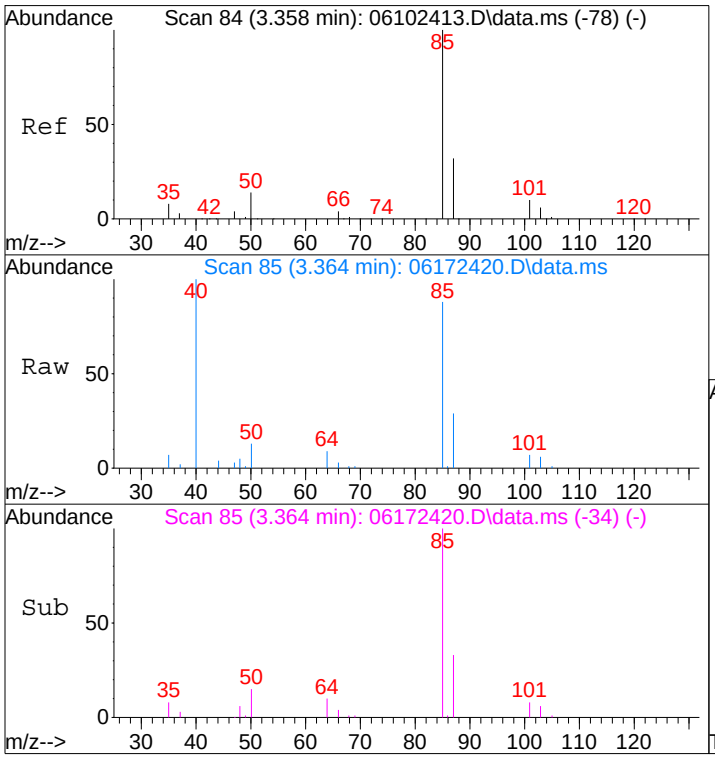


#2
Propene
Concen: 0.24 ng
RT: 3.29 min Scan# 72
Delta R.T. 0.041 min
Lab File: 06172420.D
Acq: 17 Jun 2024 19:31

Tgt Ion: 42 Resp: 5090

Ion	Ratio	Lower	Upper
42	100		
39	128.6	107.3	147.3
41	158.7	134.3	174.3

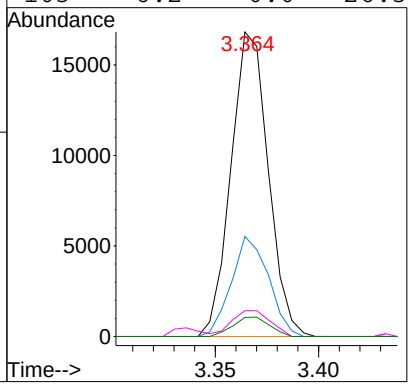


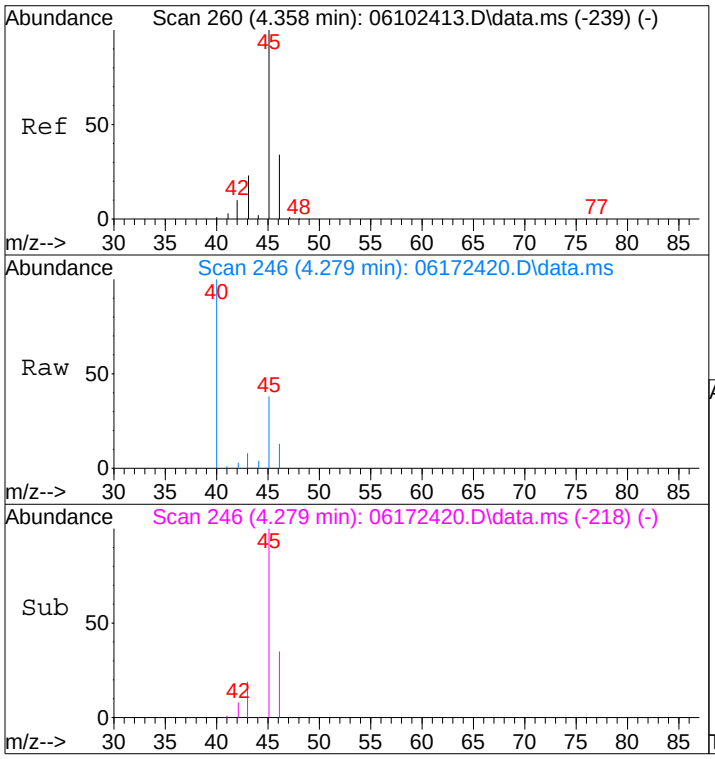


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.54 ng
RT: 3.36 min Scan# 85
Delta R.T. 0.042 min
Lab File: 06172420.D
Acq: 17 Jun 2024 19:31

Tgt Ion: 85 Resp: 21100

Ion	Ratio	Lower	Upper
85	100		
87	32.8	12.2	52.2
101	8.8	0.0	29.8
103	6.2	0.0	26.3

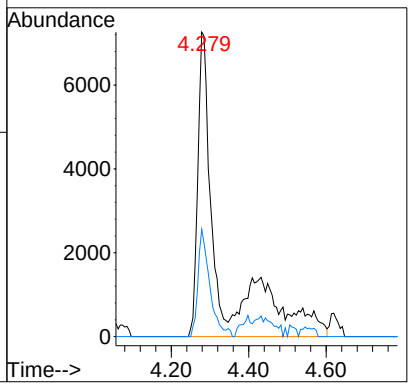


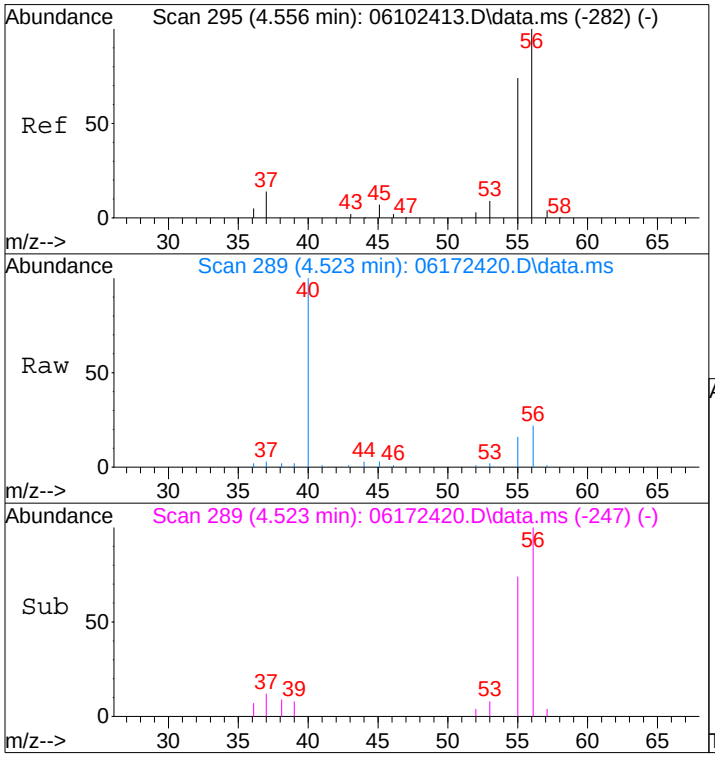


#10
Ethanol
Concen: 1.68 ng
RT: 4.28 min Scan# 246
Delta R.T. -0.088 min
Lab File: 06172420.D
Acq: 17 Jun 2024 19:31

Tgt Ion: 45 Resp: 27065

Ion	Ratio	Lower	Upper
45	100		
46	20.1	13.5	53.5

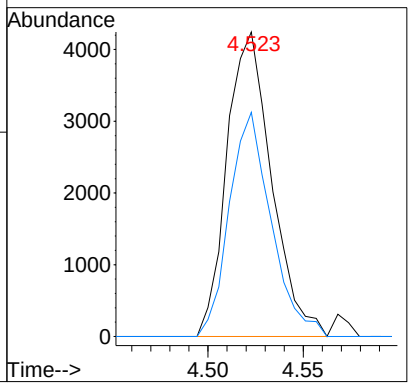


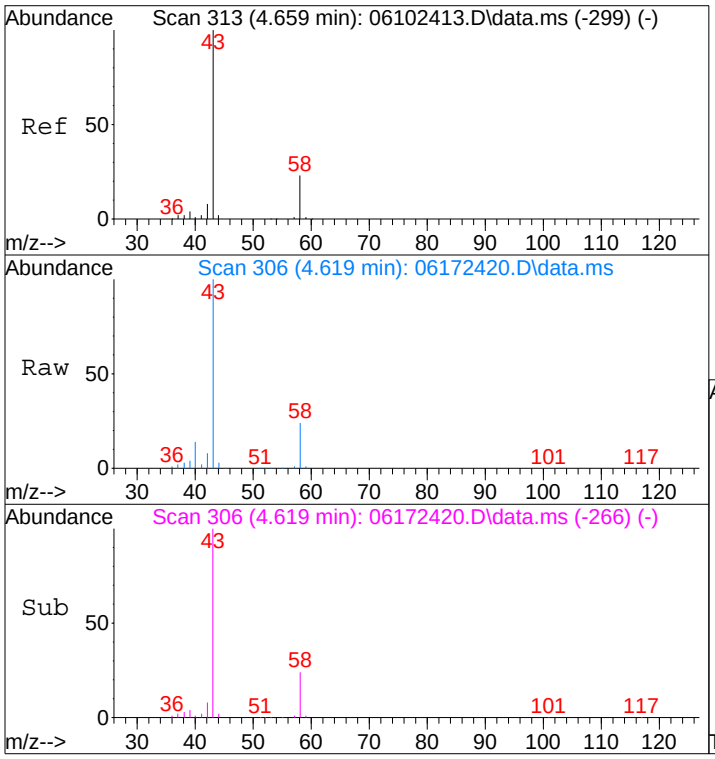


#12
Acrolein
Concen: 0.58 ng
RT: 4.52 min Scan# 289
Delta R.T. -0.013 min
Lab File: 06172420.D
Acq: 17 Jun 2024 19:31

Tgt Ion: 56 Resp: 6915

Ion	Ratio	Lower	Upper
56	100		
55	68.9	55.5	95.5

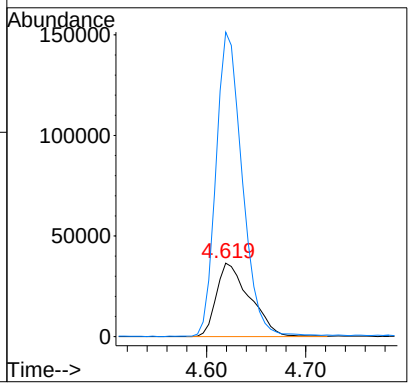


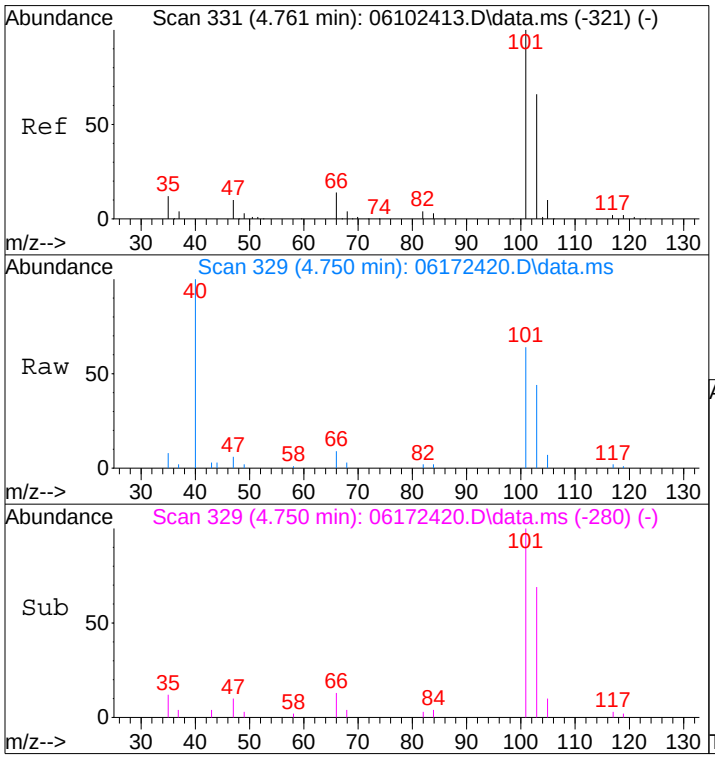


#13
Acetone
Concen: 6.66 ng
RT: 4.62 min Scan# 306
Delta R.T. -0.023 min
Lab File: 06172420.D
Acq: 17 Jun 2024 19:31

Tgt Ion: 58 Resp: 85907

Ion	Ratio	Lower	Upper
58	100		
43	327.0	400.7	460.7#

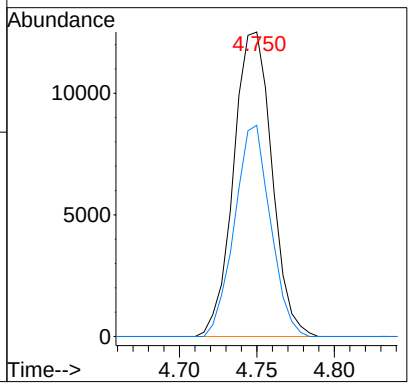


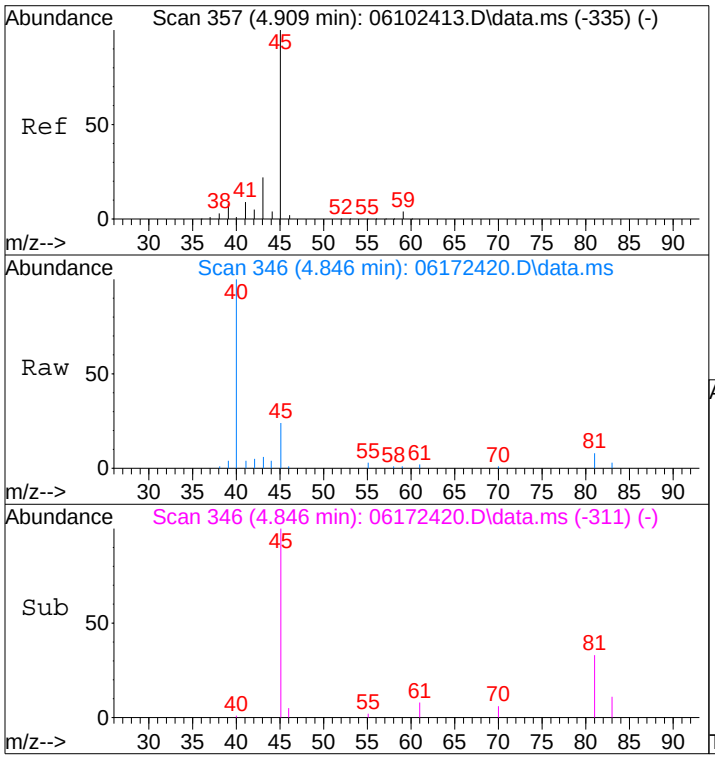


#14
Trichlorofluoromethane
Concen: 0.55 ng
RT: 4.75 min Scan# 329
Delta R.T. 0.029 min
Lab File: 06172420.D
Acq: 17 Jun 2024 19:31

Tgt Ion:101 Resp: 21590

Ion	Ratio	Lower	Upper
101	100		
103	64.9	44.9	84.9

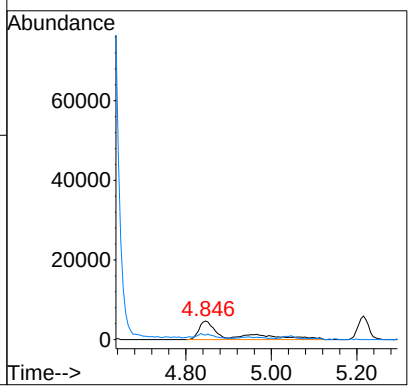


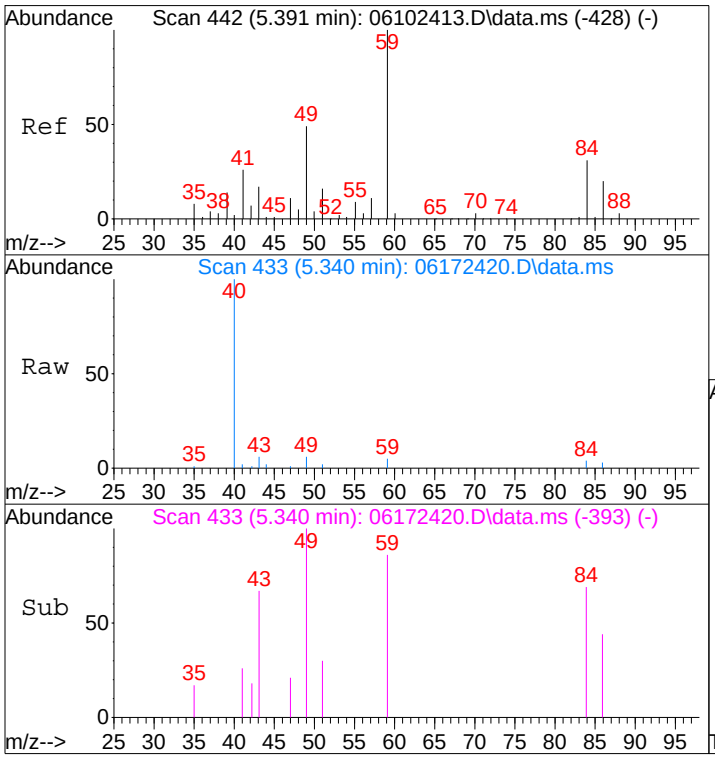


#15
2-Propanol (Isopropanol)
Concen: 0.41 ng
RT: 4.85 min Scan# 346
Delta R.T. -0.054 min
Lab File: 06172420.D
Acq: 17 Jun 2024 19:31

Tgt Ion: 45 Resp: 21250

Ion	Ratio	Lower	Upper
45	100		
43	19.0	2.5	42.5

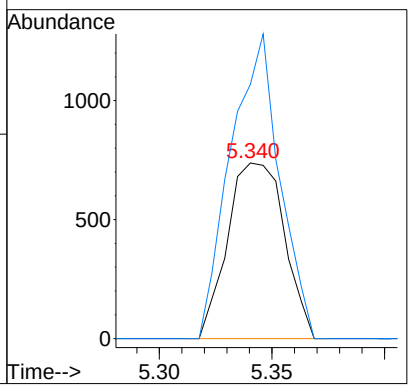


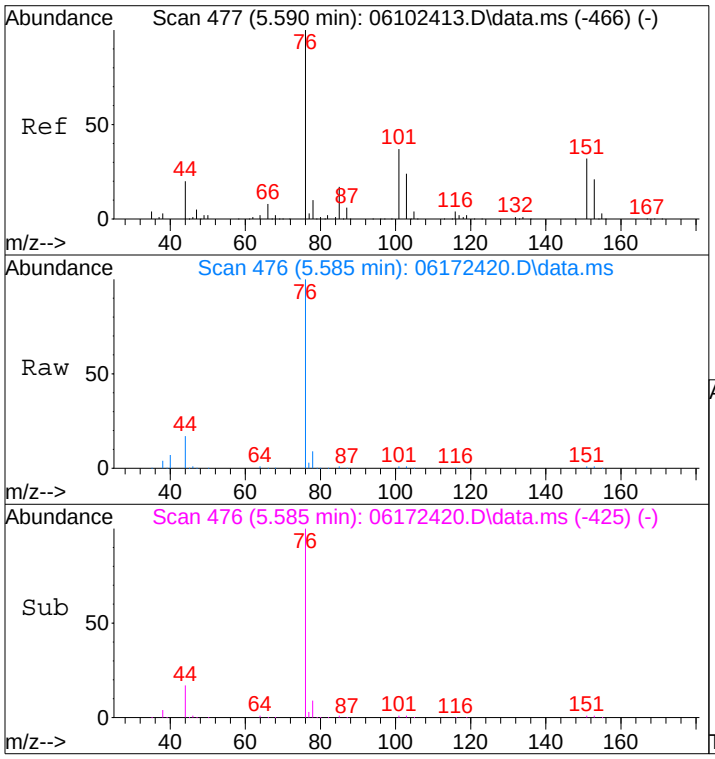


#19
Methylene Chloride
Concen: 0.07 ng
RT: 5.34 min Scan# 433
Delta R.T. -0.021 min
Lab File: 06172420.D
Acq: 17 Jun 2024 19:31

Tgt Ion: 84 Resp: 1296

Ion	Ratio	Lower	Upper
84	100		
49	149.6	132.9	182.9

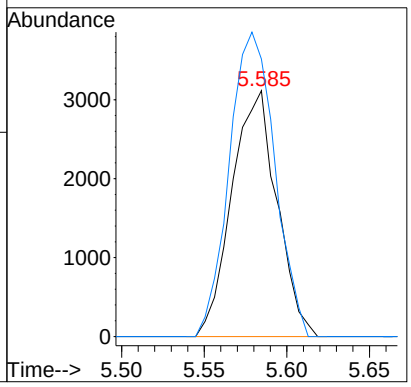


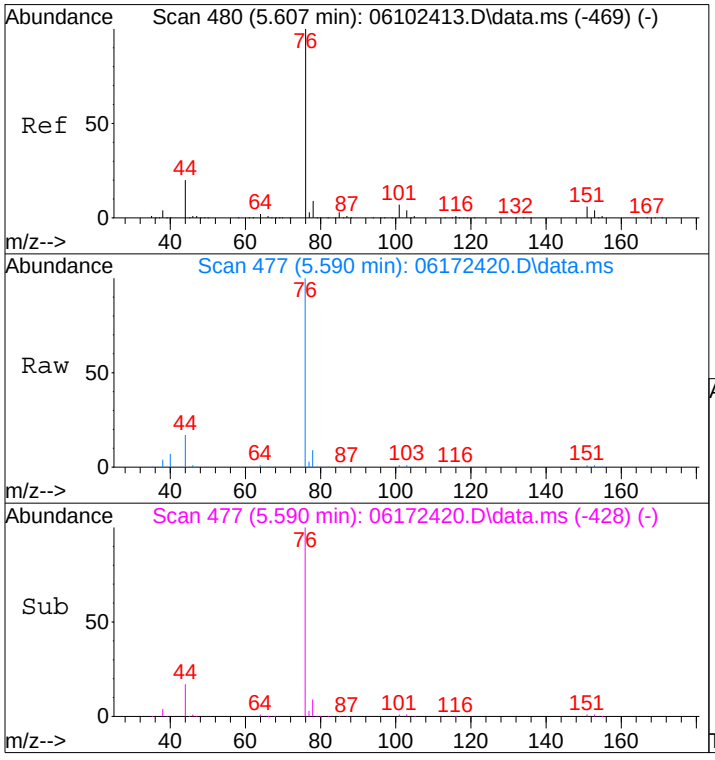


#21
Trichlorotrifluoroethane
Concen: 0.35 ng
RT: 5.58 min Scan# 476
Delta R.T. 0.038 min
Lab File: 06172420.D
Acq: 17 Jun 2024 19:31

Tgt Ion:151 Resp: 5916

Ion	Ratio	Lower	Upper
151	100		
101	124.9	95.0	135.0

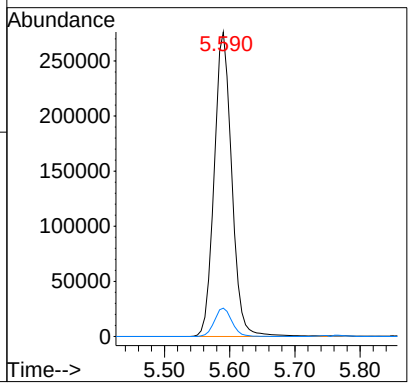


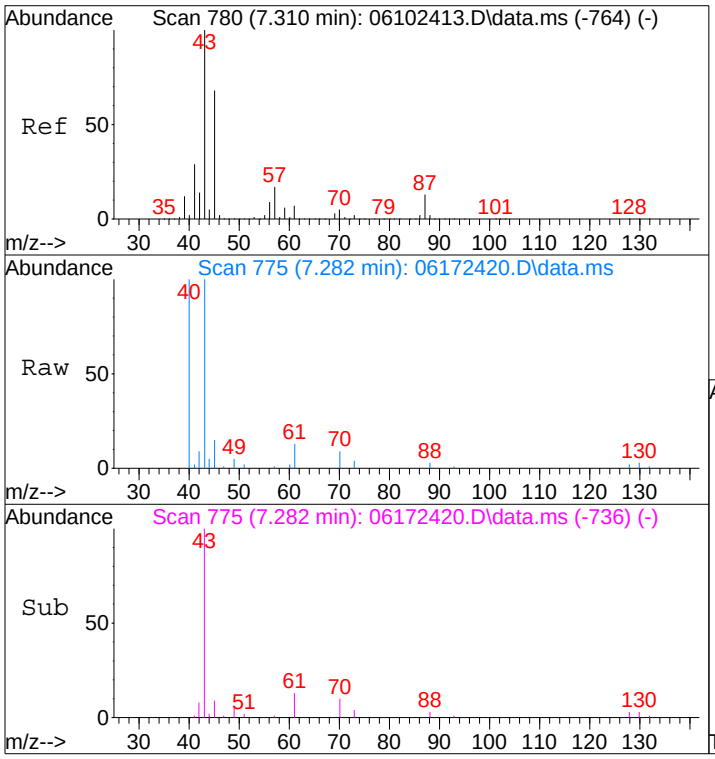


#22
Carbon Disulfide
Concen: 8.78 ng
RT: 5.59 min Scan# 477
Delta R.T. 0.027 min
Lab File: 06172420.D
Acq: 17 Jun 2024 19:31

Tgt Ion: 76 Resp: 516657

Ion	Ratio	Lower	Upper
76	100		
78	9.3	0.0	29.6

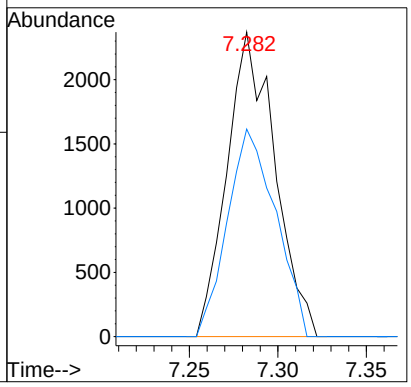


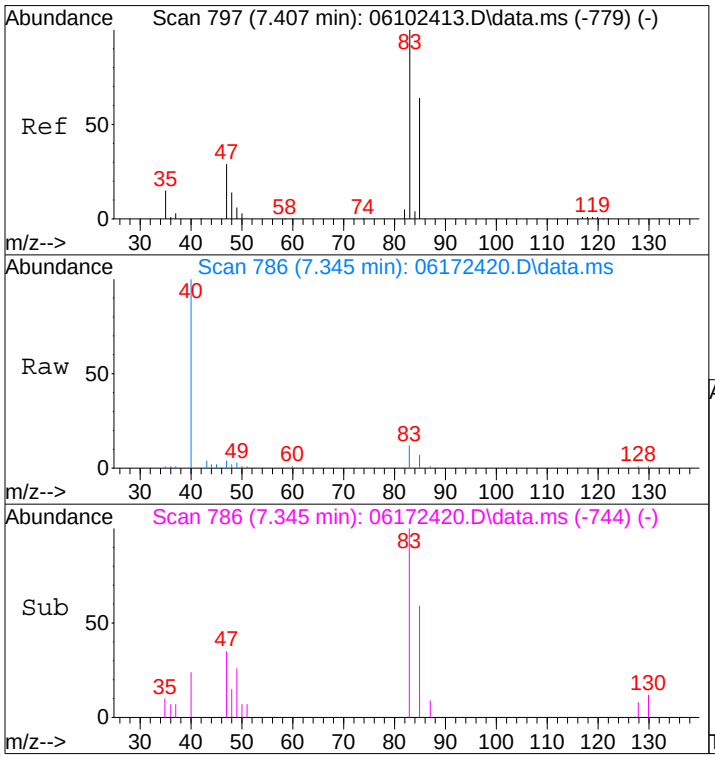


#30
Ethyl Acetate
Concen: 0.71 ng
RT: 7.28 min Scan# 775
Delta R.T. 0.023 min
Lab File: 06172420.D
Acq: 17 Jun 2024 19:31

Tgt Ion: 61 Resp: 4455

Ion	Ratio	Lower	Upper
61	100		
70	68.7	53.5	93.5

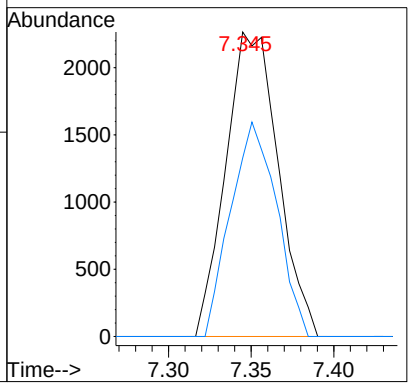


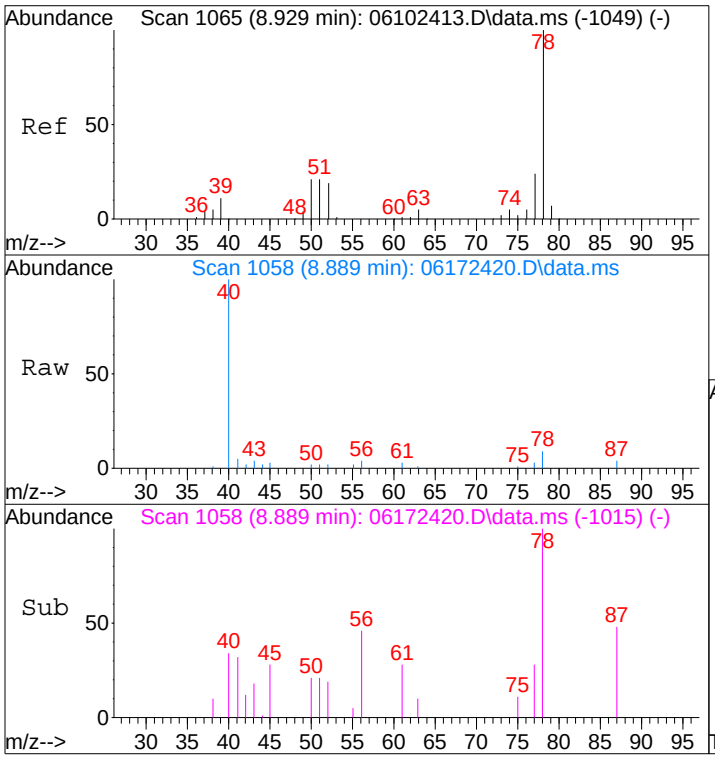


#32
Chloroform
Concen: 0.15 ng
RT: 7.34 min Scan# 786
Delta R.T. -0.010 min
Lab File: 06172420.D
Acq: 17 Jun 2024 19:31

Tgt Ion: 83 Resp: 4988

Ion	Ratio	Lower	Upper
83	100		
85	62.1	44.4	84.4

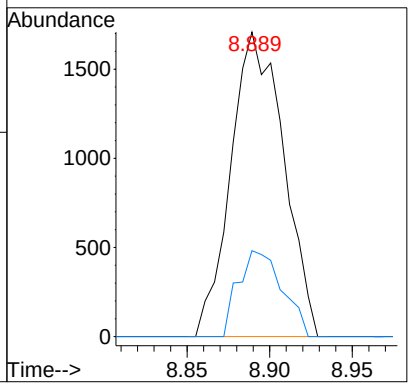


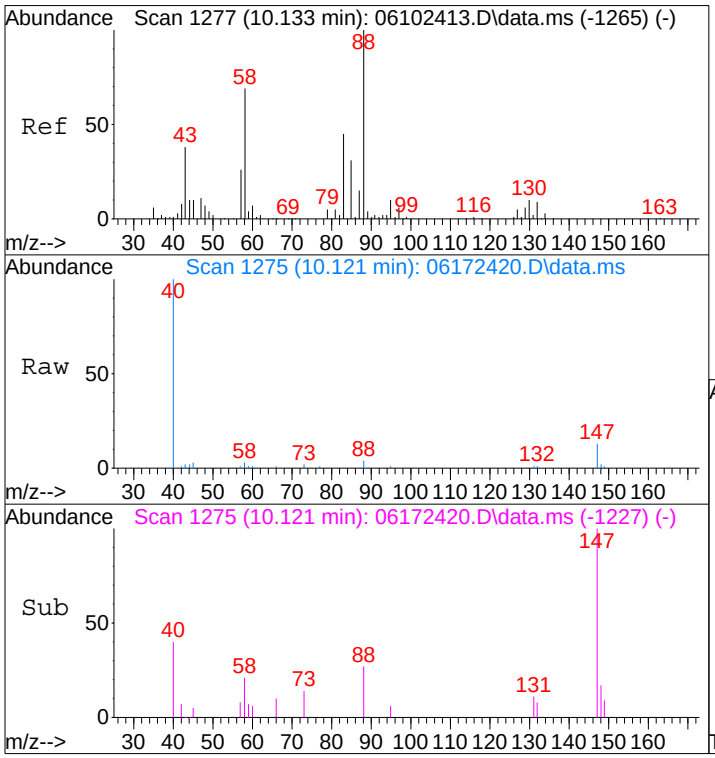


#41
Benzene
Concen: 0.06 ng
RT: 8.89 min Scan# 1058
Delta R.T. -0.008 min
Lab File: 06172420.D
Acq: 17 Jun 2024 19:31

Tgt Ion: 78 Resp: 3788

Ion	Ratio	Lower	Upper
78	100		
77	23.5	4.0	44.0

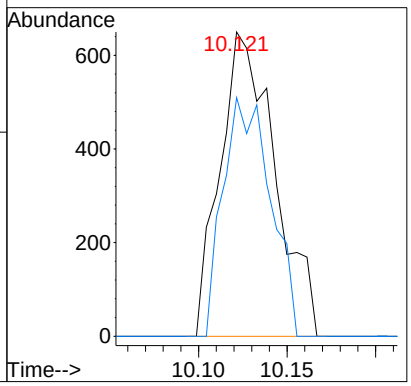


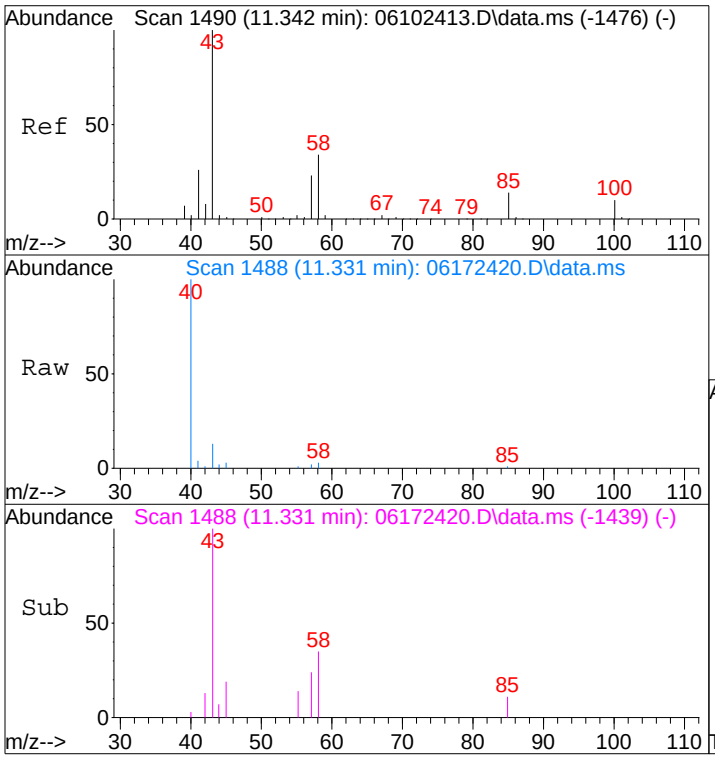


#48
1,4-Dioxane
Concen: 0.11 ng
RT: 10.12 min Scan# 1275
Delta R.T. 0.021 min
Lab File: 06172420.D
Acq: 17 Jun 2024 19:31

Tgt Ion: 88 Resp: 1401

Ion	Ratio	Lower	Upper
88	100		
58	67.8	47.6	87.6

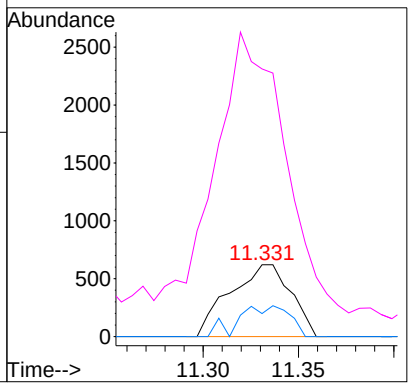


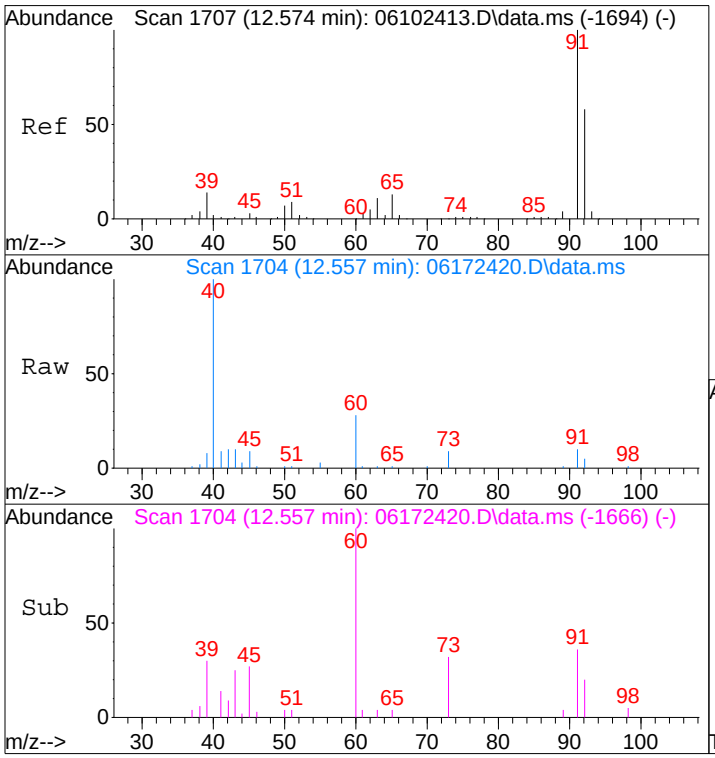


#53
4-Methyl-2-pentanone
Concen: 0.09 ng
RT: 11.33 min Scan# 1488
Delta R.T. 0.028 min
Lab File: 06172420.D
Acq: 17 Jun 2024 19:31

Tgt Ion: 58 Resp: 1380

Ion	Ratio	Lower	Upper
58	100		
85	35.9	34.5	51.7
43	474.0	236.1	354.1#

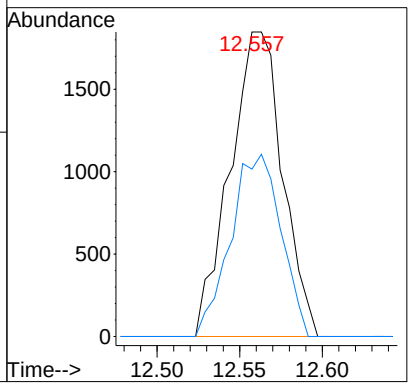


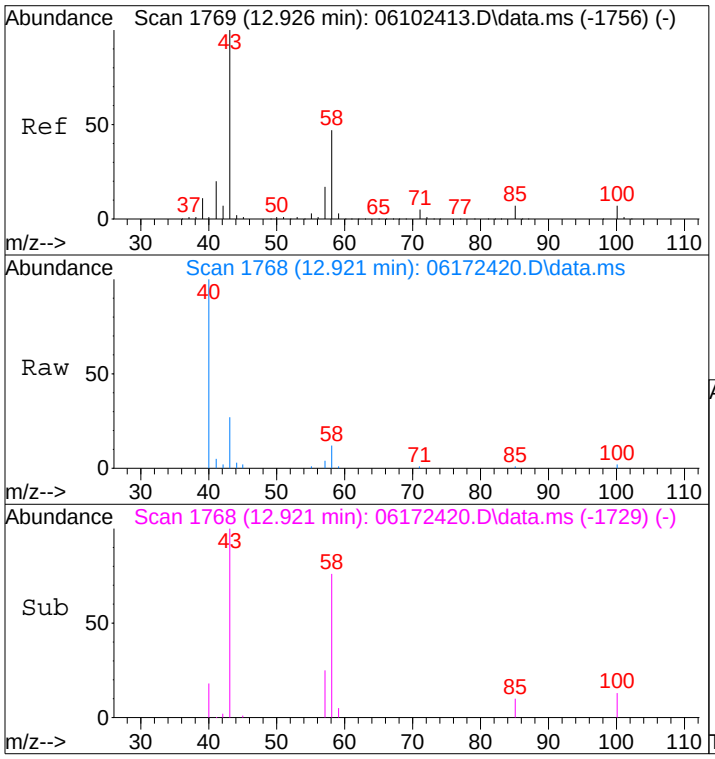


#58
Toluene
Concen: 0.06 ng
RT: 12.56 min Scan# 1704
Delta R.T. -0.034 min
Lab File: 06172420.D
Acq: 17 Jun 2024 19:31

Tgt Ion: 91 Resp: 4083

Ion	Ratio	Lower	Upper
91	100		
92	57.2	37.4	77.4

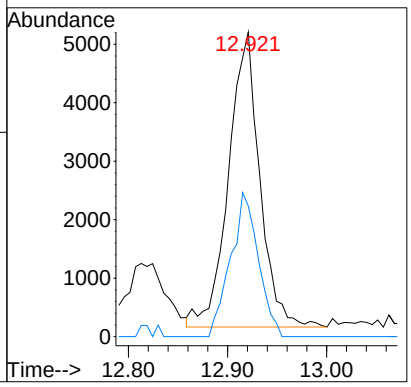


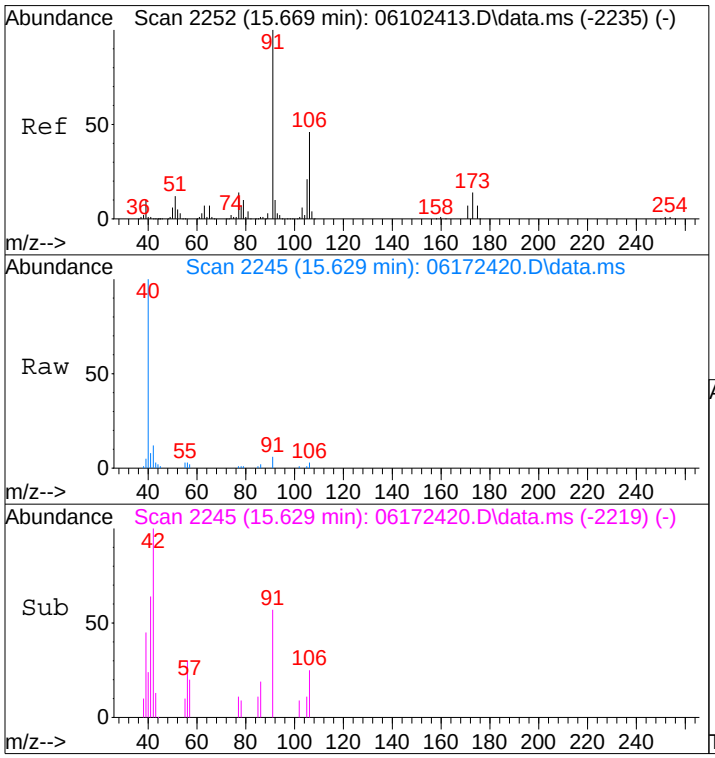


#59
2-Hexanone
Concen: 0.26 ng
RT: 12.92 min Scan# 1768
Delta R.T. -0.028 min
Lab File: 06172420.D
Acq: 17 Jun 2024 19:31

Tgt Ion: 43 Resp: 11069

Ion	Ratio	Lower	Upper
43	100		
58	43.2	25.9	65.9

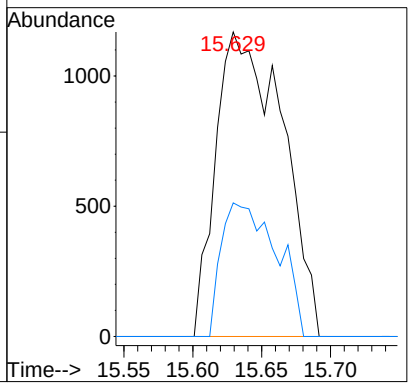


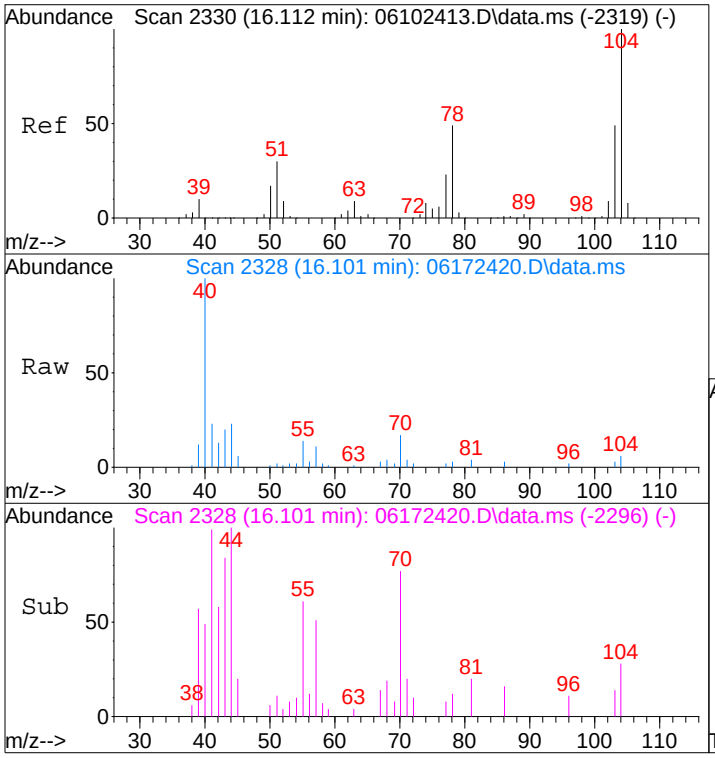


#67
m- & p-Xylenes
Concen: 0.06 ng
RT: 15.63 min Scan# 2245
Delta R.T. -0.051 min
Lab File: 06172420.D
Acq: 17 Jun 2024 19:31

Tgt Ion: 91 Resp: 3923

Ion	Ratio	Lower	Upper
91	100		
106	36.5	25.9	65.9

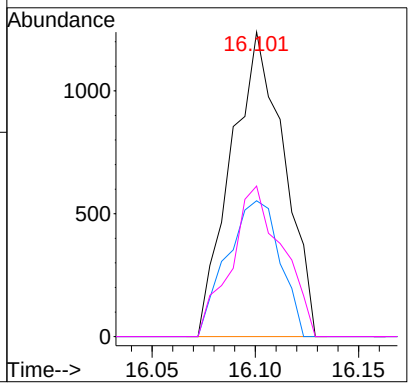


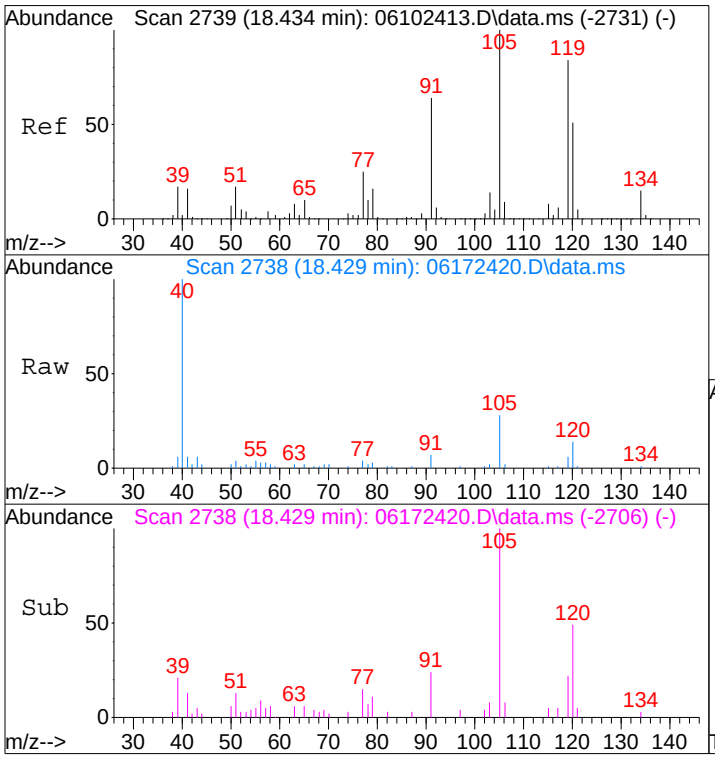


#69
Styrene
Concen: 0.05 ng
RT: 16.10 min Scan# 2328
Delta R.T. -0.017 min
Lab File: 06172420.D
Acq: 17 Jun 2024 19:31

Tgt Ion:104 Resp: 2210

Ion	Ratio	Lower	Upper
104	100		
78	44.7	29.2	69.2
103	47.9	29.4	69.4

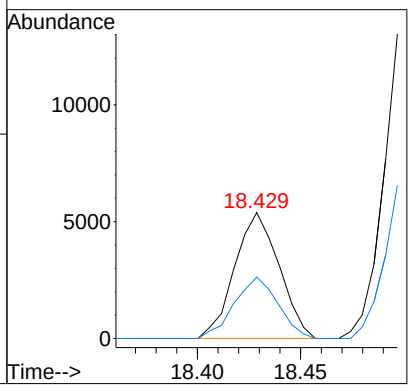


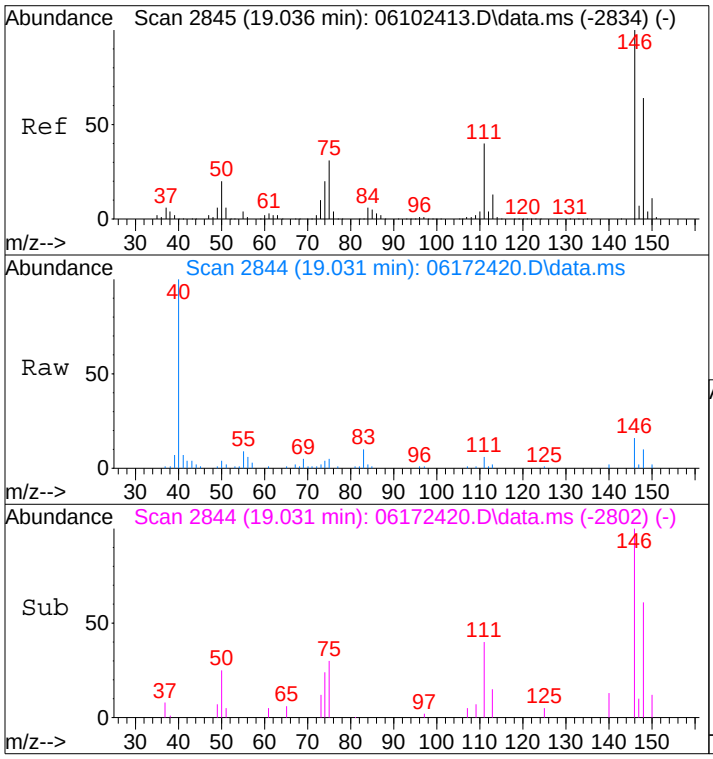


#82
1,2,4-Trimethylbenzene
Concen: 0.12 ng
RT: 18.43 min Scan# 2738
Delta R.T. -0.017 min
Lab File: 06172420.D
Acq: 17 Jun 2024 19:31

Tgt Ion:105 Resp: 8058

Ion	Ratio	Lower	Upper
105	100		
120	48.0	31.9	71.9

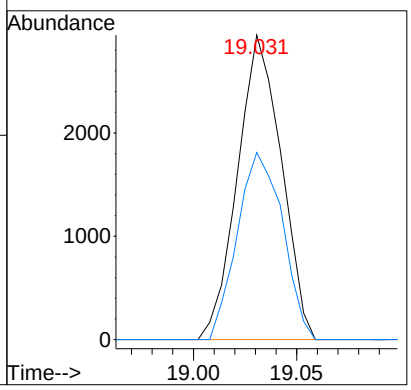




#90
1,2-Dichlorobenzene
Concen: 0.10 ng
RT: 19.03 min Scan# 2844
Delta R.T. -0.011 min
Lab File: 06172420.D
Acq: 17 Jun 2024 19:31

Tgt Ion:146 Resp: 4349

Ion	Ratio	Lower	Upper
146	100		
148	63.6	43.5	83.5



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172420.D Vial: 9
Acq On : 17 Jun 2024 19:31 Operator: SC
Sample : P2402249-001 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 14:49:12 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

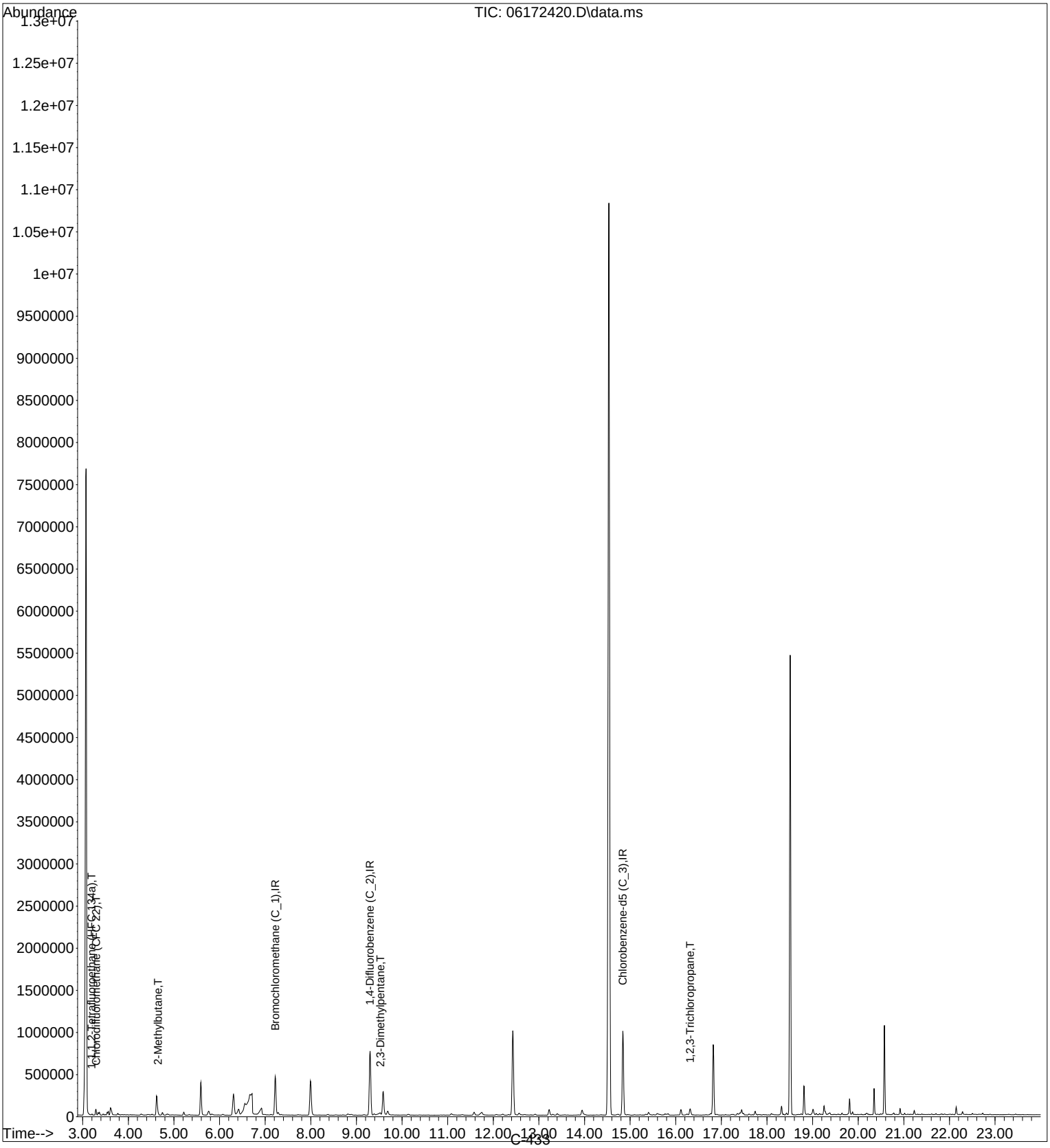
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.22	130	166054	12.500	ng		-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	736585	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	167871	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	3.14	85	220	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.19	83	2156	0.127	ng	#	1
4) 1,1-Difluoroethane	3.25	65	371	N.D.			
5) Chlorodifluoromethane ...	3.30	67	616	0.109	ng	#	40
6) 1-Chloro-1,1-Difluoroe...	3.49	65	599	N.D.			
7) Dichlorofluoromethane ...	0.00	67	0	N.D.			
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	0.00	83	0	N.D.			
10) 2-Methylbutane	4.65	57	6916	0.349	ng	#	1
11) Methyl Acetate	5.32	43	3546	N.D.			
12) 2-Methylpentane	6.41	71	55	N.D.			
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	9.03	84	58	N.D.			
17) 2,3-Dimethylpentane	9.53	56	5772	0.162	ng	#	30
18) Dibromomethane	9.80	174	66	N.D.			
20) Methyl Cyclohexane	11.38	55	114	N.D.			
21) 1,3-Dichloropropane	0.00	76	0	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	16.32	75	4007	0.179	ng	#	46
25) Bromobenzene	17.03	77	436	N.D.			
26) 2-Chlorotoluene	17.61	91	1022	N.D.			
27) 4-Chlorotoluene	17.68	91	1831	N.D.			
28) Indane	0.00	117	0	N.D.			
29) Indene	0.00	115	0	N.D.			
30) 1,2,4,5-Tetramethylben...	20.18	119	170	N.D.			
31) 1,2,3,4-Tetramethylben...	20.23	119	632	N.D.			
32) 1,2,3,5-Tetramethylben...	20.58	119	5091	N.D.			
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172420.D Vial: 9
Acq On : 17 Jun 2024 19:31 Operator: SC
Sample : P2402249-001 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:49:12 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



LSC Area Percent Report

MJ 6/28/24

Data Path : I:\MS09\DATA\2024 06\17\
Data File : 06172420.D
Acq On : 17 Jun 2024 19:31
Operator : SC
Sample : P2402249-001 (400mL)
Misc : S37-06062402
ALS Vial : 9 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06172420.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.075	20	34	52	rBV	7671476	14228304	100.00%	62.243%
2	3.205	52	57	61	rVB3	12099	17745	0.12%	0.078%
3	3.285	66	71	76	rVV2	68790	95722	0.67%	0.419%
4	3.336	76	80	83	rVV3	28579	40985	0.29%	0.179%
5	3.364	83	85	90	rVV	33050	37739	0.27%	0.165%
6	3.450	92	100	104	rBV3	13501	20095	0.14%	0.088%
7	3.535	111	115	117	rBV	30877	35732	0.25%	0.156%
8	3.557	117	119	123	rVB	41497	45577	0.32%	0.199%
9	3.609	123	128	142	rBV	85002	194782	1.37%	0.852%
10	3.768	151	156	160	rBV2	19865	28302	0.20%	0.124%
11	4.279	241	246	252	rBV	12228	24533	0.17%	0.107%
12	4.432	266	273	274	rBV5	5785	10230	0.07%	0.045%
13	4.523	285	289	298	rVB2	10386	18873	0.13%	0.083%
14	4.619	298	306	319	rBV	227668	449213	3.16%	1.965%
15	4.750	322	329	336	rVB	30707	51992	0.37%	0.227%
16	4.852	340	347	356	rVB7	13108	34175	0.24%	0.150%
17	5.215	404	411	418	rBV2	36646	64652	0.45%	0.283%
18	5.335	426	432	439	rVB5	5535	12438	0.09%	0.054%
19	5.590	469	477	491	rBV	390312	734159	5.16%	3.212%
20	5.761	498	507	514	rBV	46386	119523	0.84%	0.523%
21	5.829	514	519	528	rVB4	11974	26853	0.19%	0.117%
22	6.067	556	561	570	rVB3	9973	22766	0.16%	0.100%
23	6.306	592	603	612	rBV	249110	635131	4.46%	2.778%
24	6.419	612	623	629	rVB3	57877	146134	1.03%	0.639%
25	6.556	629	647	653	rBV2	127142	527452	3.71%	2.307%
26	6.663	662	666	672	rBV2	59379	164240	1.15%	0.718%
27	6.919	694	711	721	rVB	76897	267213	1.88%	1.169%
28	7.129	742	748	755	rVB5	7121	13642	0.10%	0.060%
29	7.220	755	764	772	rBV	457932	991648	6.97%	4.338%
30	7.282	772	775	782	rVV	29009	58095	0.41%	0.254%
31	7.350	782	787	793	rVB2	6279	11010	0.08%	0.048%
32	7.720	846	852	857	rBV3	5455	10476	0.07%	0.046%
33	7.992	889	900	915	rBV	404223	947329	6.66%	4.144%
34	8.378	960	968	973	rBV3	8604	17925	0.13%	0.078%
35	8.815	1036	1045	1053	rBV4	14699	46172	0.32%	0.202%
36	8.889	1053	1058	1069	rVB5	8562	24294	0.17%	0.106%
37	9.168	1100	1107	1110	rBV3	5171	10228	0.07%	0.045%
38	9.298	1119	1130	1141	rBV	761791	1773478	12.46%	7.758%
39	9.389	1141	1146	1151	rVV2	16283	34938	0.25%	0.153%
40	9.525	1151	1170	1173	rVV2	27699	116331	0.82%	0.509%

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\17\
Data File : 06172420.D
Acq On : 17 Jun 2024 19:31
Operator : SC
Sample : P2402249-001 (400mL)
Misc : S37-06062402
ALS Vial : 9 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

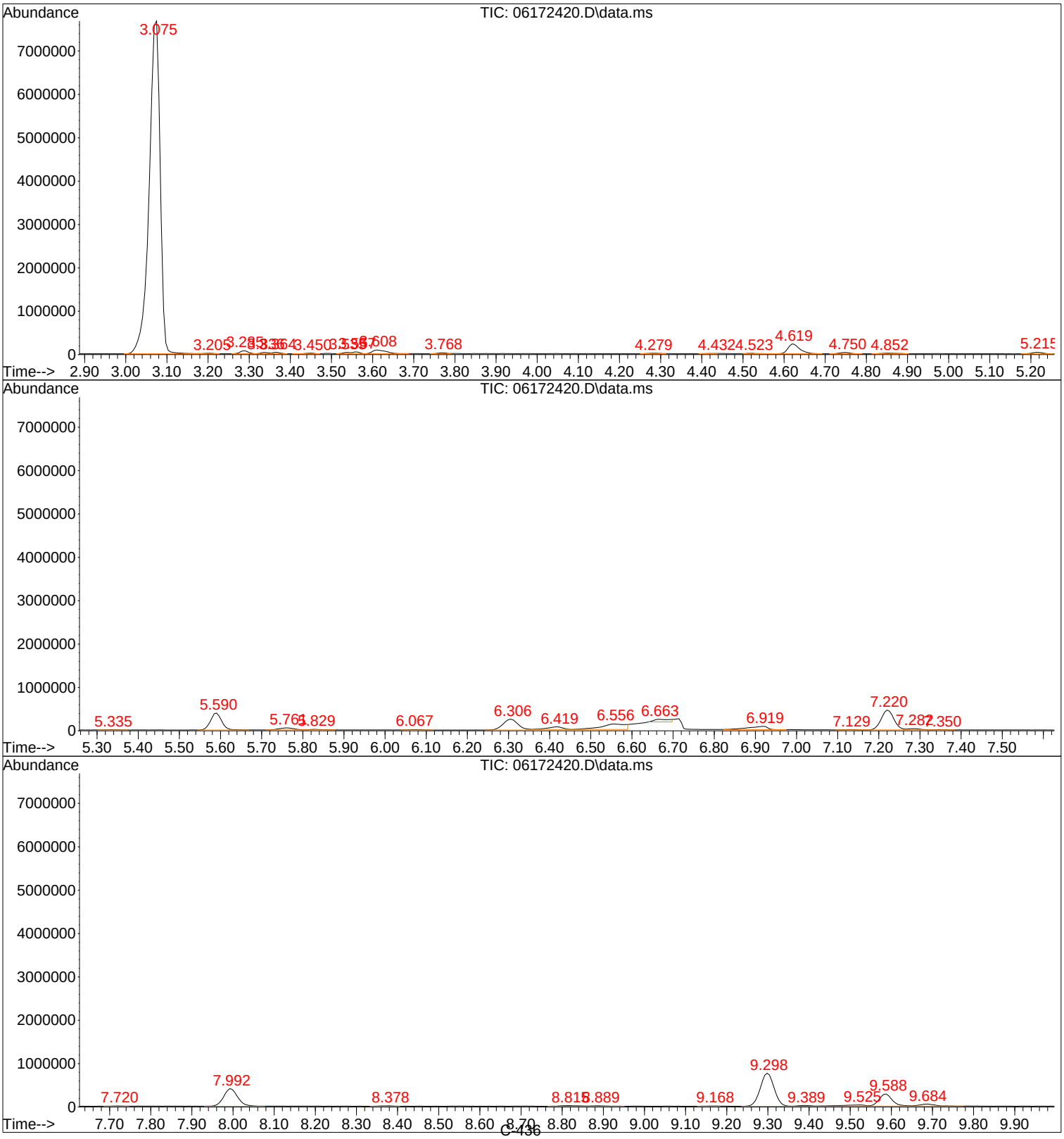
41	9.588	1173	1181	1192	rVV	279124	629227	4.42%	2.753%
42	9.684	1192	1198	1214	rVB	46306	119862	0.84%	0.524%

Sum of corrected areas: 22859215

Data Path : I:\MS09\DATA\2024 06\17\
Data File : 06172420.D
Acq On : 17 Jun 2024 19:31
Operator : SC
Sample : P2402249-001 (400mL)
Misc : S37-06062402
ALS Vial : 9 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\17\\
Data File : 06172420.D
Acq On : 17 Jun 2024 19:311
Operator : SCC
Sample : P2402249-001 (400mL))
Misc : S37-060624022
ALS Vial : 9 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\17\06172421.D Vial: 10
Acq On : 17 Jun 2024 20:03 Operator: SC
Sample : P2402249-002 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 10:39:57 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	163879	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	727090	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	164853	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	349413	11.996	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.00%				
57) Toluene-d8 (SS2)	12.43	98	814884	12.917	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.36%				
73) Bromofluorobenzene (SS3)	16.83	174	278997	12.247	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.00%				
Target Compounds							Qvalue
2) Propene	3.29	42	10113	0.482	ng		89
3) Dichlorodifluoromethan...	3.36	85	21655	0.561	ng		98
4) Chloromethane	3.49	50	2679	0.102	ng		92
5) 1,2-Dichloro-1,1,2,2-t...	3.61	135	457	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	3.77	54	377	N.D.			
8) Bromomethane	4.01	94	253	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.28	45	22534	1.414	ng		71
11) Acetonitrile	0.00	41	0	N.D.	d		
12) Acrolein	4.52	56	4998	0.424	ng		97
13) Acetone	4.62	58	70045	5.502	ng	#	80
14) Trichlorofluoromethane	4.75	101	132907	3.407	ng		99
15) 2-Propanol (Isopropanol)	4.85	45	18132	0.353	ng		94
16) Acrylonitrile	4.98	53	964	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.33	59	14524	0.355	ng		81
19) Methylene Chloride	5.35	84	1915	0.106	ng		94
20) 3-Chloro-1-propene (Al...	5.45	41	1140	N.D.			
21) Trichlorotrifluoroethane	5.58	151	58397	3.538	ng		96
22) Carbon Disulfide	5.60	76	1533664	26.407	ng		99
23) trans-1,2-Dichloroethene	6.13	61	186	N.D.			
24) 1,1-Dichloroethane	6.31	63	545	N.D.			
25) Methyl tert-Butyl Ether	6.31	73	5848	0.137	ng		71
26) Vinyl Acetate	0.00	86	0	N.D.	d		
27) 2-Butanone (MEK)	6.66	72	36720	3.645	ng	#	93
28) cis-1,2-Dichloroethene	7.07	61	613	N.D.			
29) Diisopropyl Ether	7.34	87	177	N.D.			
30) Ethyl Acetate	7.29	61	1891	0.307	ng		89
31) n-Hexane	0.00	57	0	N.D.	d		
32) Chloroform	7.35	83	2759	0.086	ng		95
34) Tetrahydrofuran (THF)	7.76	72	2132	0.232	ng	#	70
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.10	62	198	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	9.58	61	2422	No Calib		#	
40) 1-Butanol	8.81	56	23356	No Calib		#	
41) Benzene	8.89	78	53096	0.791	ng		98
42) Carbon Tetrachloride	9.07	117	630	N.D.			
43) Cyclohexane	9.30	84	723	N.D.			
44) tert-Amyl Methyl Ether	9.59	73	884	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.08	83	619	N.D.			
47) Trichloroethene	10.15	130	1932	0.099	ng		100
48) 1,4-Dioxane	0.00	88	0	N.D.	d		
49) 2,2,4-Trimethylpentane...	10.23	57	2239	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172421.D Vial: 10
Acq On : 17 Jun 2024 20:03 Operator: SC
Sample : P2402249-002 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 10:39:57 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

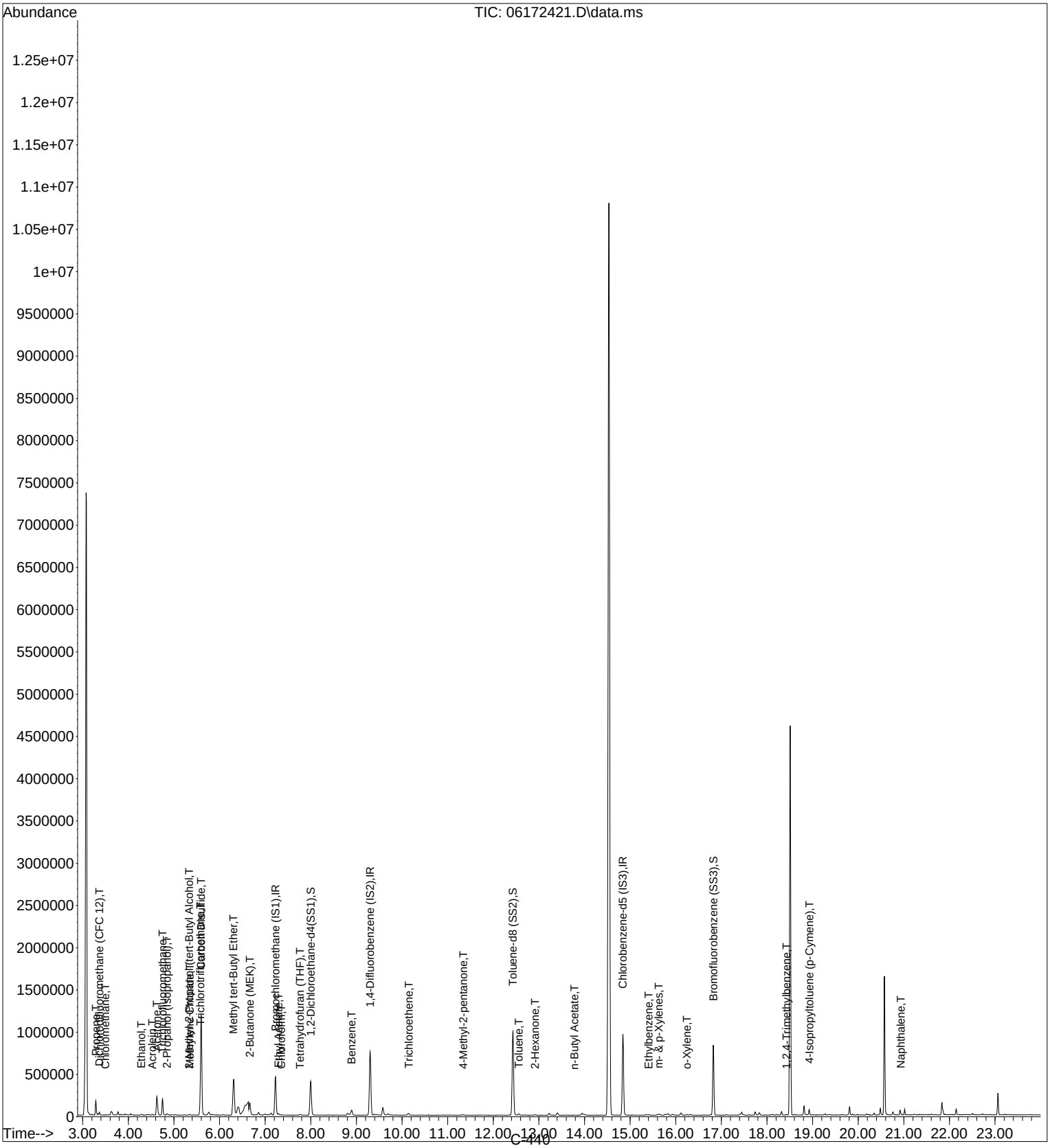
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	10.56	71	420	N.D.		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	11.34	58	2230	0.151 ng		73
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	12.56	91	12328	0.187 ng		97
59) 2-Hexanone	12.92	43	7083	0.171 ng		92
60) Dibromochloromethane	13.06	129	490	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	13.78	43	2433	0.056 ng		79
63) n-Octane	13.93	57	553	N.D.		
64) Tetrachloroethene	14.05	166	875	N.D.		
65) Chlorobenzene	14.90	112	1098	N.D.		
66) Ethylbenzene	15.41	91	7146	0.095 ng		100
67) m- & p-Xylenes	15.63	91	10826	0.171 ng		96
68) Bromoform	15.67	173	762	N.D.		
69) Styrene	16.10	104	2006	N.D.		
70) o-Xylene	16.25	91	4135	0.066 ng		99
71) n-Nonane	0.00	43	0	N.D. d		
72) 1,1,2,2-Tetrachloroethane	16.21	83	514	N.D.		
74) Cumene	17.03	105	1660	N.D.		
75) alpha-Pinene	17.53	93	347	N.D.		
76) n-Propylbenzene	17.68	91	2453	N.D.		
77) 3-Ethyltoluene	17.03	105	1660	No Calib		
78) 4-Ethyltoluene	17.86	105	1733	N.D.		
79) 1,3,5-Trimethylbenzene	17.96	105	1313	N.D.		
80) alpha-Methylstyrene	0.00	118	0	N.D.		
81) 2-Ethyltoluene	17.03	105	1660	No Calib		
82) 1,2,4-Trimethylbenzene	18.43	105	3618	0.053 ng		91
83) n-Decane	17.09	58	201	No Calib	#	
84) Benzyl Chloride	18.50	91	2588	N.D.		
85) 1,3-Dichlorobenzene	18.58	146	628	N.D.		
86) 1,4-Dichlorobenzene	18.66	146	1446	N.D.		
87) sec-Butylbenzene	18.74	105	1290	N.D.		
88) 4-Isopropyltoluene (p-...	18.93	119	35016	0.449 ng		96
89) 1,2,3-Trimethylbenzene	17.03	105	1660	No Calib		
90) 1,2-Dichlorobenzene	19.03	146	604	N.D.		
91) d-Limonene	0.00	68	0	N.D.		
92) 1,2-Dibromo-3-Chloropr...	19.51	157	107	N.D.		
93) n-Undecane	0.00	58	0	N.D.		
94) 1,2,4-Trichlorobenzene	20.84	180	756	N.D.		
95) Naphthalene	20.94	128	6056	0.069 ng		97
96) n-Dodecane	18.92	58	988	No Calib	#	
97) Hexachlorobutadiene	21.30	225	557	N.D.		
98) Cyclohexanone	15.50	55	266	No Calib	#	
99) tert-Butylbenzene	18.42	119	1571	N.D.		
100) n-Butylbenzene	19.38	91	1344	N.D.		
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172421.D Vial: 10
Acq On : 17 Jun 2024 20:03 Operator: SC
Sample : P2402249-002 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 10:39:57 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\17\06172421.D Vial: 10
Acq On : 17 Jun 2024 20:03 Operator: SC
Sample : P2402249-002 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 10:39:57 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

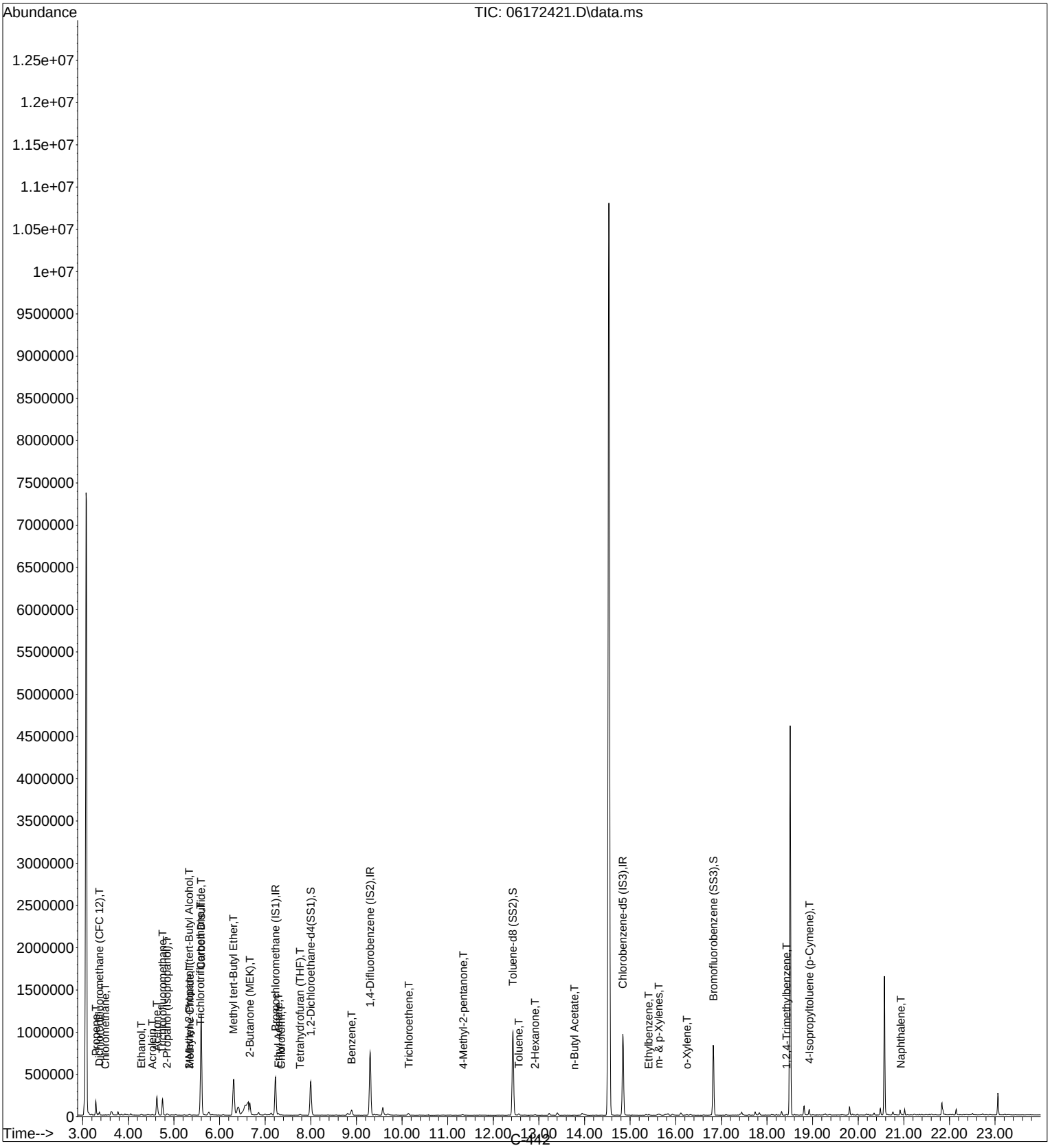
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	163879	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	727090	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	164853	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	349413	11.996	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.00%				
57) Toluene-d8 (SS2)	12.43	98	814884	12.917	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.36%				
73) Bromofluorobenzene (SS3)	16.83	174	278997	12.247	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.00%				
Target Compounds							Qvalue
2) Propene	3.29	42	10113	0.482	ng		89
3) Dichlorodifluoromethan...	3.36	85	21655	0.561	ng		98
4) Chloromethane	3.49	50	2679	0.102	ng		92
10) Ethanol	4.28	45	22534	1.414	ng		71
12) Acrolein	4.52	56	4998	0.424	ng		97
13) Acetone	4.62	58	70045	5.502	ng	#	80
14) Trichlorofluoromethane	4.75	101	132907	3.407	ng		99
15) 2-Propanol (Isopropanol)	4.85	45	18132	0.353	ng		94
18) 2-Methyl-2-Propanol (t...	5.33	59	14524	0.355	ng		81
19) Methylene Chloride	5.35	84	1915	0.106	ng		94
21) Trichlorotrifluoroethane	5.58	151	58397	3.538	ng		96
22) Carbon Disulfide	5.60	76	1533664	26.407	ng		99
25) Methyl tert-Butyl Ether	6.31	73	5848	0.137	ng		71
27) 2-Butanone (MEK)	6.66	72	36720	3.645	ng	#	93
30) Ethyl Acetate	7.29	61	1891	0.307	ng		89
32) Chloroform	7.35	83	2759	0.086	ng		95
34) Tetrahydrofuran (THF)	7.76	72	2132	0.232	ng	#	70
41) Benzene	8.89	78	53096	0.791	ng		98
47) Trichloroethene	10.15	130	1932	0.099	ng		100
53) 4-Methyl-2-pentanone	11.34	58	2230	0.151	ng		73
58) Toluene	12.56	91	12328	0.187	ng		97
59) 2-Hexanone	12.92	43	7083	0.171	ng		92
62) n-Butyl Acetate	13.78	43	2433	0.056	ng		79
66) Ethylbenzene	15.41	91	7146	0.095	ng		100
67) m- & p-Xylenes	15.63	91	10826	0.171	ng		96
70) o-Xylene	16.25	91	4135	0.066	ng		99
82) 1,2,4-Trimethylbenzene	18.43	105	3618	0.053	ng		91
88) 4-Isopropyltoluene (p-...	18.93	119	35016	0.449	ng		96
95) Naphthalene	20.94	128	6056	0.069	ng		97

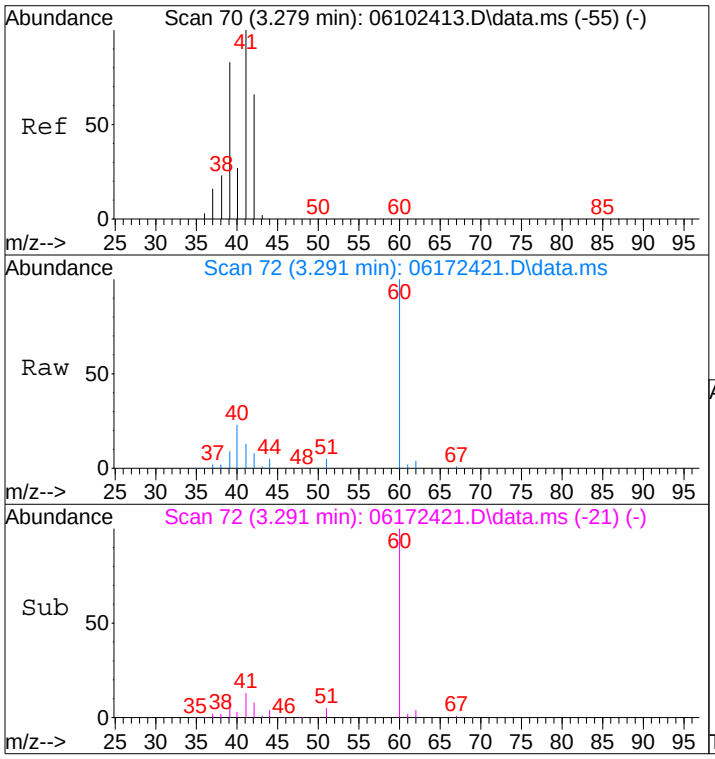
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172421.D Vial: 10
Acq On : 17 Jun 2024 20:03 Operator: SC
Sample : P2402249-002 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 10:39:57 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

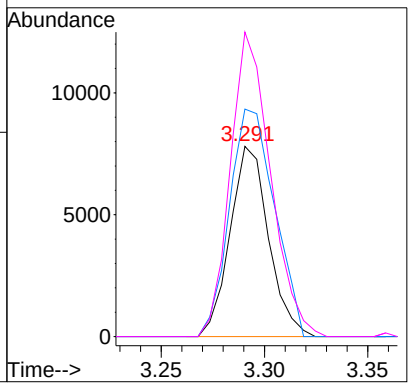


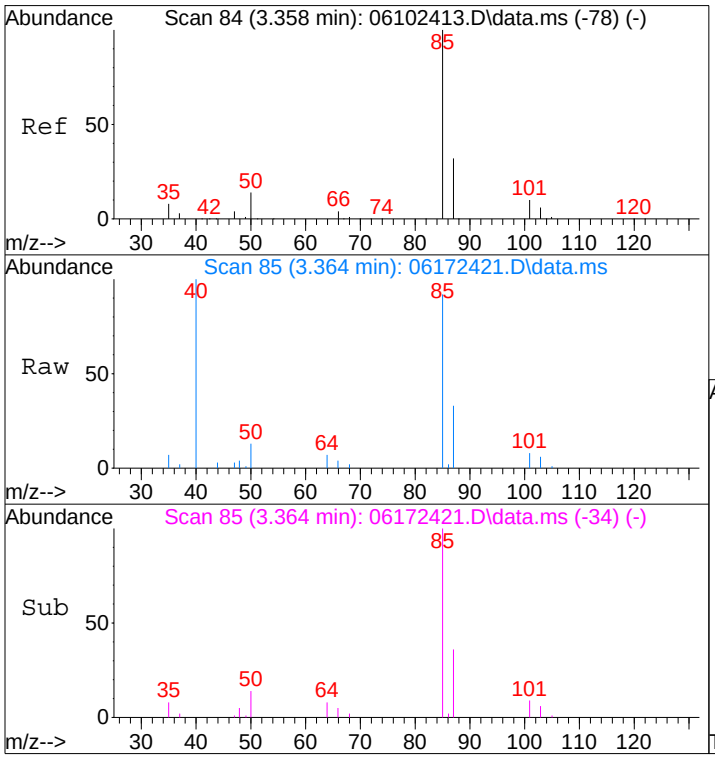


#2
Propene
Concen: 0.48 ng
RT: 3.29 min Scan# 72
Delta R.T. 0.041 min
Lab File: 06172421.D
Acq: 17 Jun 2024 20:03

Tgt Ion: 42 Resp: 10113

Ion	Ratio	Lower	Upper
42	100		
39	140.2	107.3	147.3
41	167.2	134.3	174.3

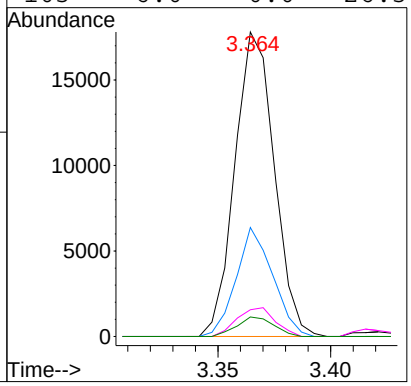


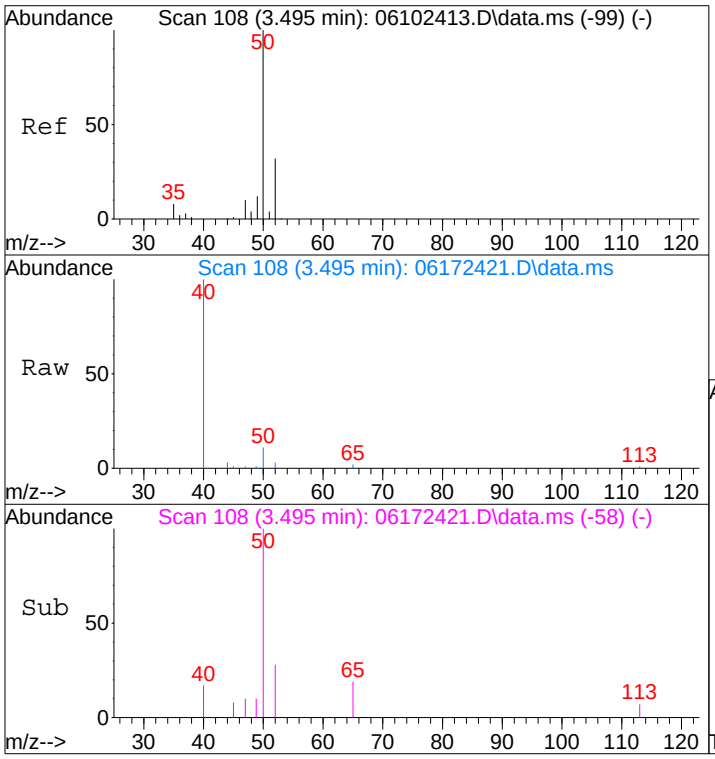


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.56 ng
RT: 3.36 min Scan# 85
Delta R.T. 0.042 min
Lab File: 06172421.D
Acq: 17 Jun 2024 20:03

Tgt Ion: 85 Resp: 21655

Ion	Ratio	Lower	Upper
85	100		
87	33.3	12.2	52.2
101	9.2	0.0	29.8
103	6.0	0.0	26.3

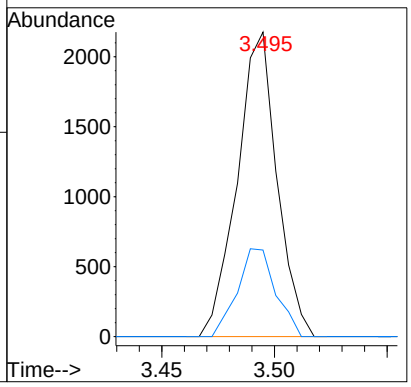


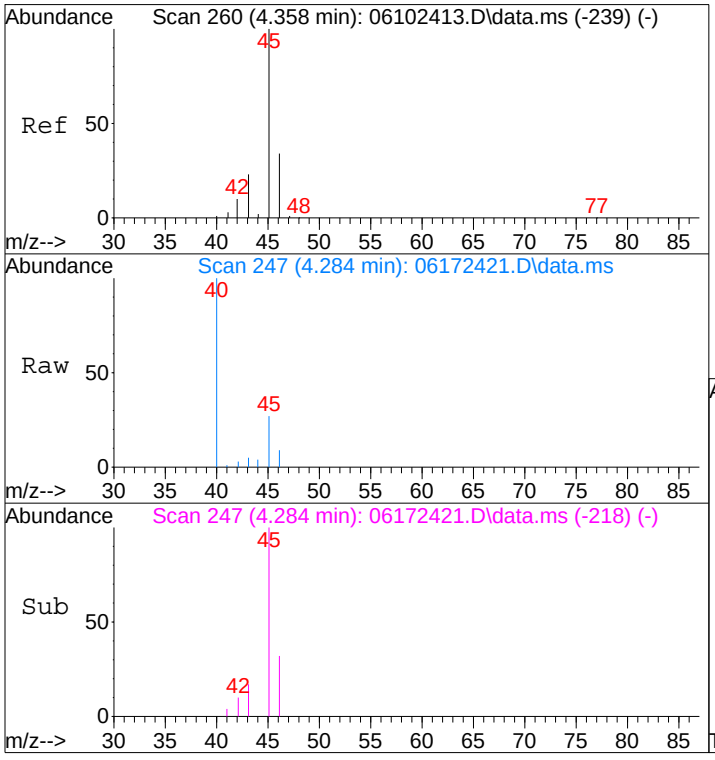


#4
Chloromethane
Concen: 0.10 ng
RT: 3.49 min Scan# 108
Delta R.T. 0.032 min
Lab File: 06172421.D
Acq: 17 Jun 2024 20:03

Tgt Ion: 50 Resp: 2679

Ion	Ratio	Lower	Upper
50	100		
52	27.8	12.4	52.4

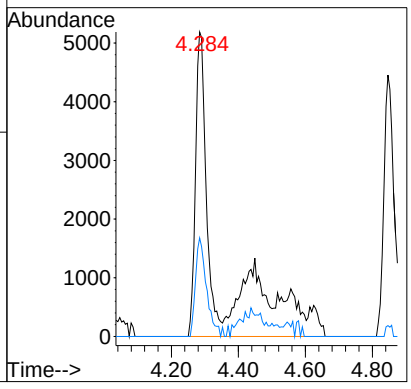


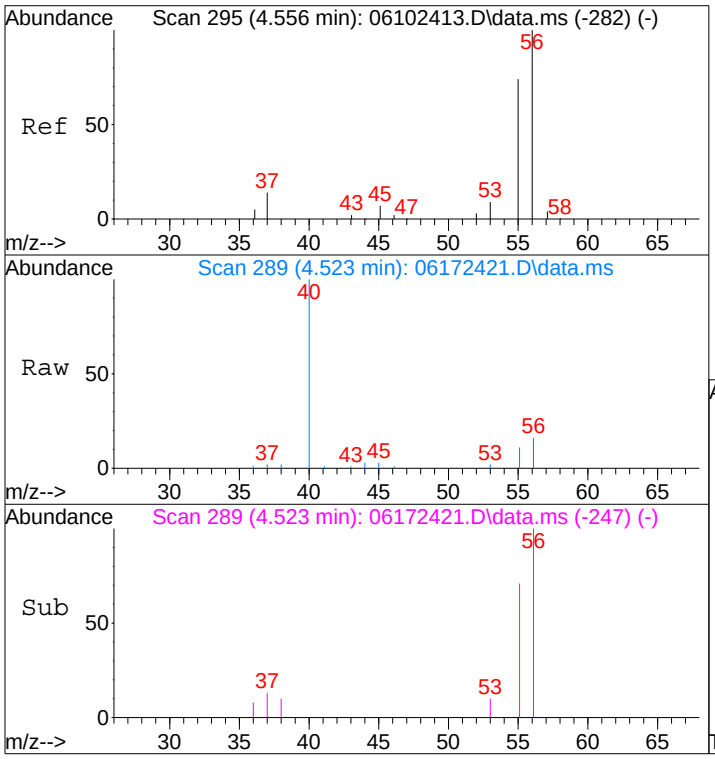


#10
Ethanol
Concen: 1.41 ng
RT: 4.28 min Scan# 247
Delta R.T. -0.083 min
Lab File: 06172421.D
Acq: 17 Jun 2024 20:03

Tgt Ion: 45 Resp: 22534

Ion	Ratio	Lower	Upper
45	100		
46	17.1	13.5	53.5

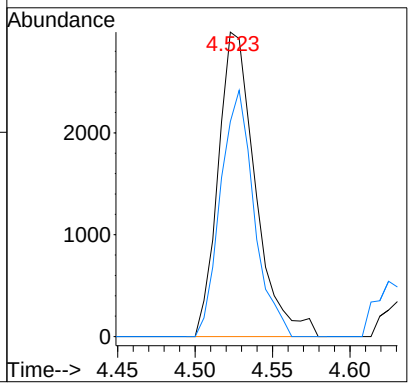


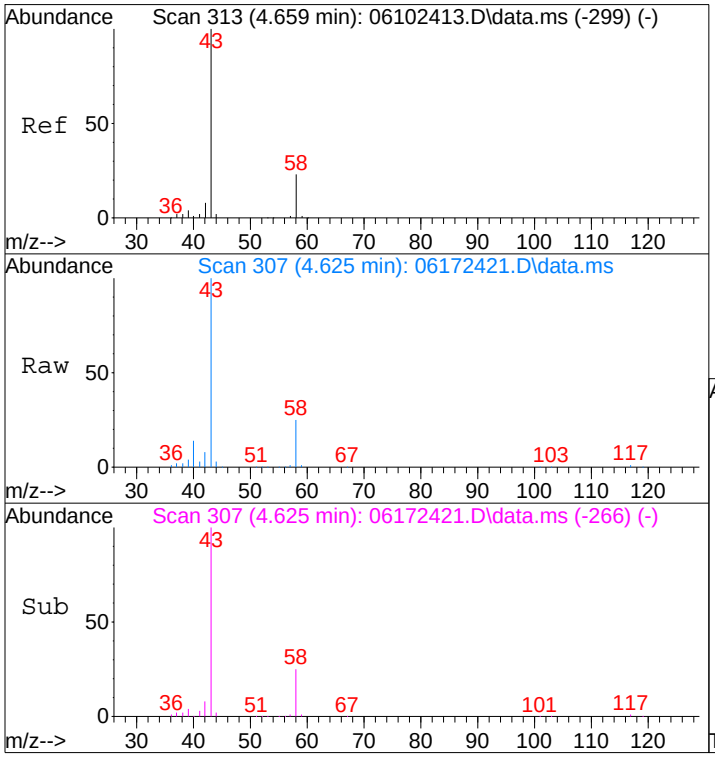


#12
Acrolein
Concen: 0.42 ng
RT: 4.52 min Scan# 289
Delta R.T. -0.013 min
Lab File: 06172421.D
Acq: 17 Jun 2024 20:03

Tgt Ion: 56 Resp: 4998

Ion	Ratio	Lower	Upper
56	100		
55	72.9	55.5	95.5

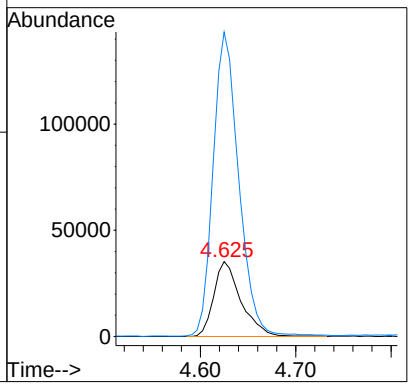


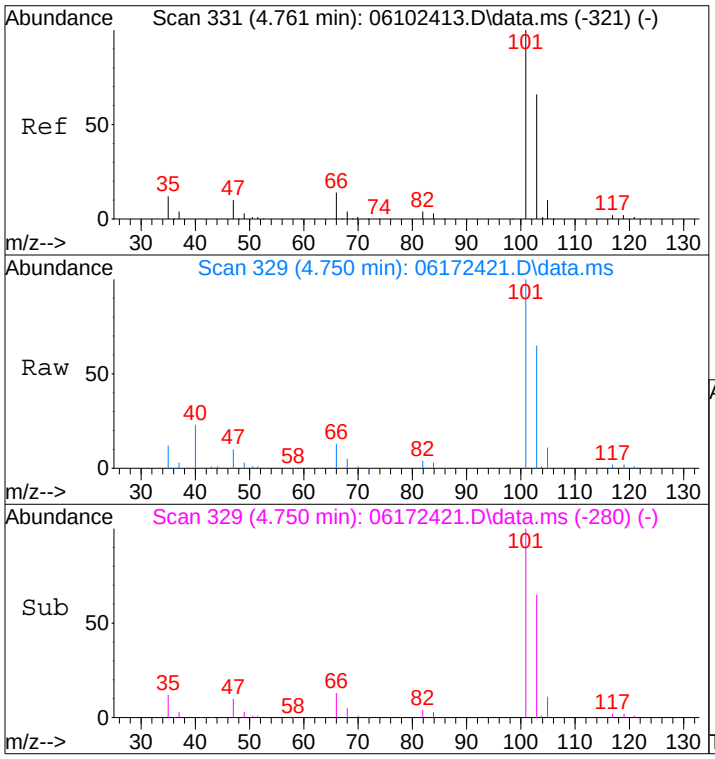


#13
Acetone
Concen: 5.50 ng
RT: 4.62 min Scan# 307
Delta R.T. -0.017 min
Lab File: 06172421.D
Acq: 17 Jun 2024 20:03

Tgt Ion: 58 Resp: 70045

Ion	Ratio	Lower	Upper
58	100		
43	381.9	400.7	460.7#

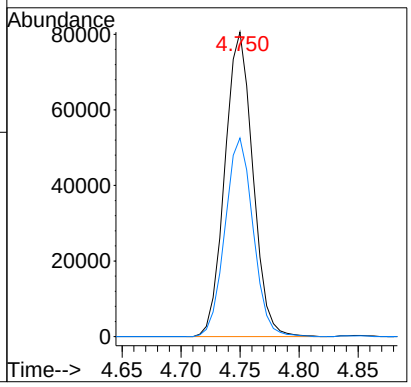


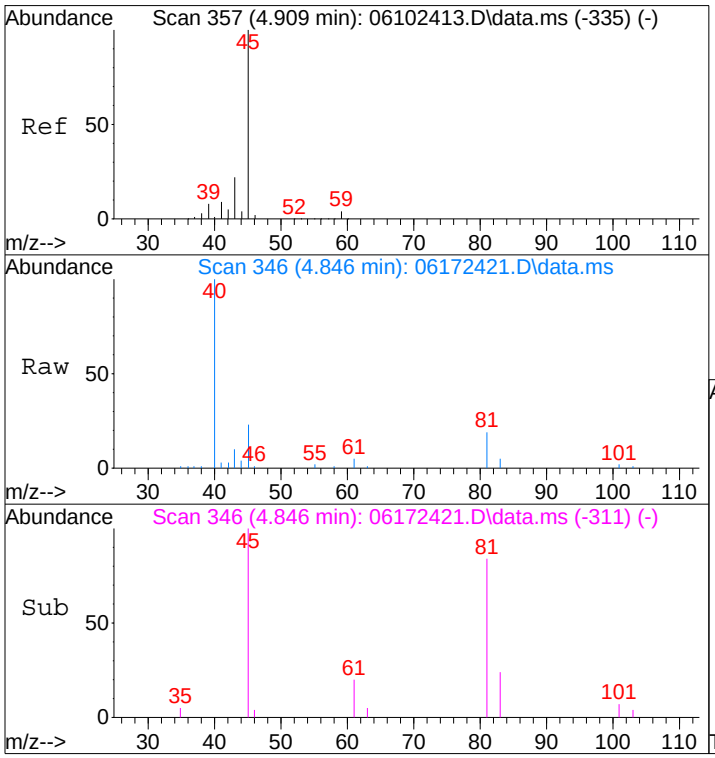


#14
Trichlorofluoromethane
Concen: 3.41 ng
RT: 4.75 min Scan# 329
Delta R.T. 0.029 min
Lab File: 06172421.D
Acq: 17 Jun 2024 20:03

Tgt Ion:101 Resp: 132907

Ion	Ratio	Lower	Upper
101	100		
103	65.4	44.9	84.9

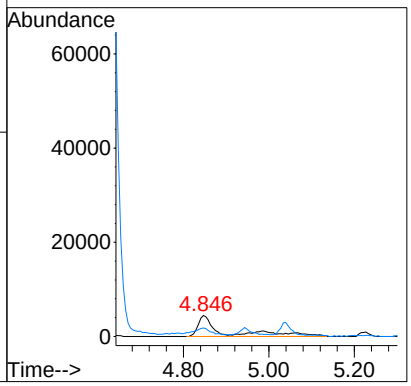


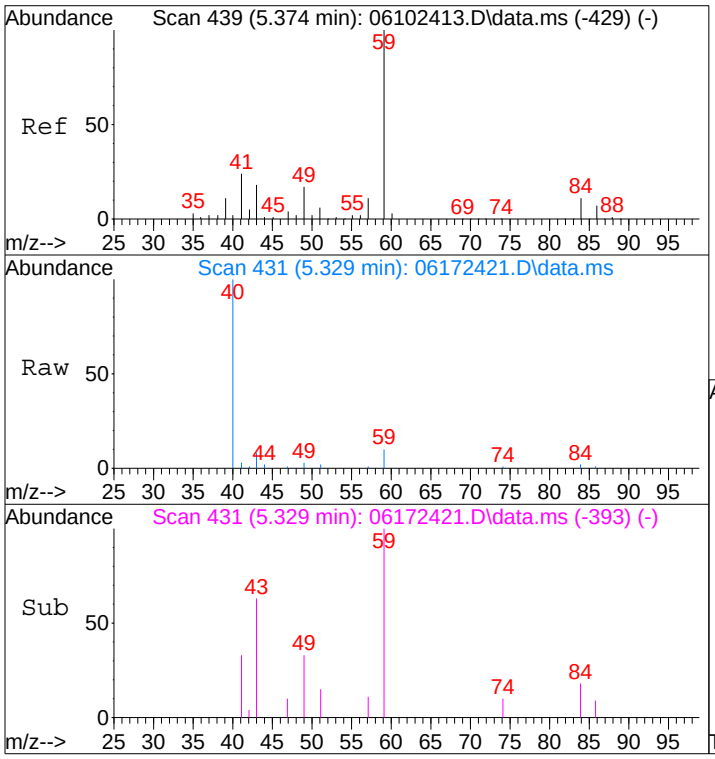


#15
2-Propanol (Isopropanol)
Concen: 0.35 ng
RT: 4.85 min Scan# 346
Delta R.T. -0.054 min
Lab File: 06172421.D
Acq: 17 Jun 2024 20:03

Tgt Ion: 45 Resp: 18132

Ion	Ratio	Lower	Upper
45	100		
43	25.2	2.5	42.5

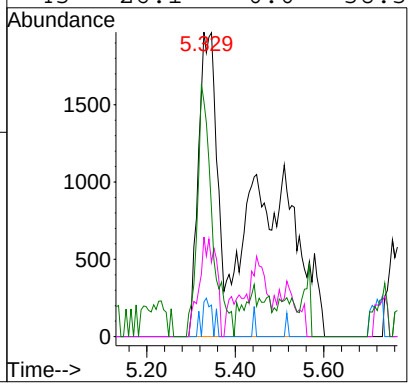


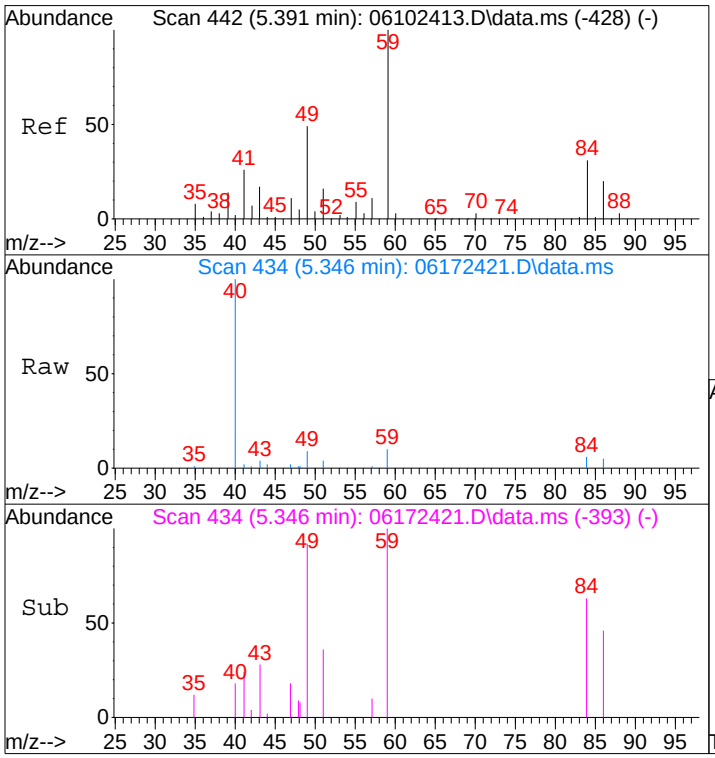


#18
2-Methyl-2-Propanol (tert-Butyl Alcohol
Concen: 0.35 ng
RT: 5.33 min Scan# 431
Delta R.T. -0.032 min
Lab File: 06172421.D
Acq: 17 Jun 2024 20:03

Tgt Ion: 59 Resp: 14524

Ion	Ratio	Lower	Upper
59	100		
57	2.9	0.0	30.9
41	11.8	0.9	40.9
43	26.1	0.0	38.3

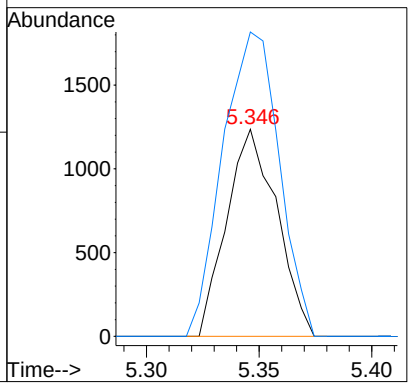


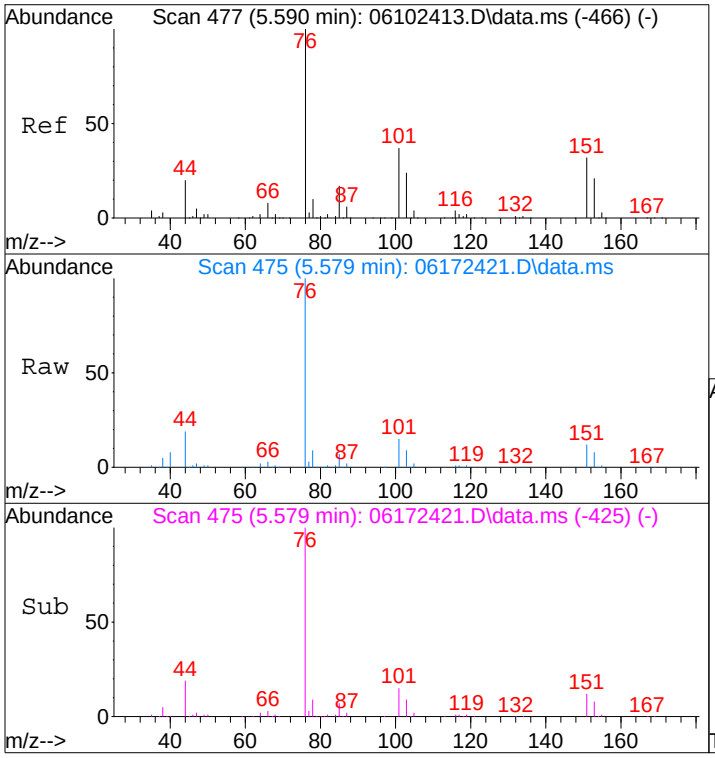


#19
Methylene Chloride
Concen: 0.11 ng
RT: 5.35 min Scan# 434
Delta R.T. -0.015 min
Lab File: 06172421.D
Acq: 17 Jun 2024 20:03

Tgt Ion: 84 Resp: 1915

Ion	Ratio	Lower	Upper
84	100		
49	165.8	132.9	182.9

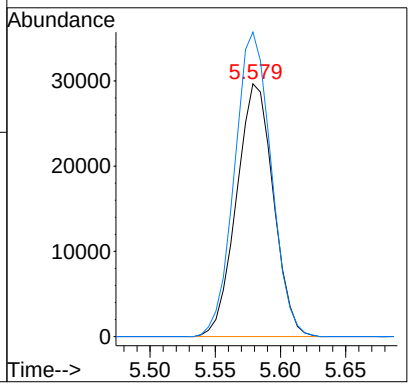


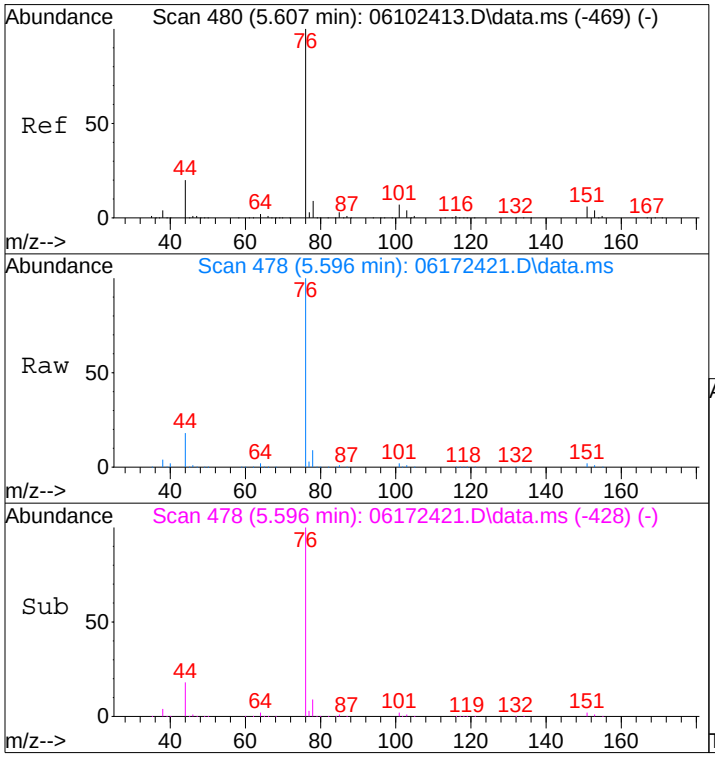


#21
Trichlorotrifluoroethane
Concen: 3.54 ng
RT: 5.58 min Scan# 475
Delta R.T. 0.033 min
Lab File: 06172421.D
Acq: 17 Jun 2024 20:03

Tgt Ion:151 Resp: 58397

Ion	Ratio	Lower	Upper
151	100		
101	119.5	95.0	135.0

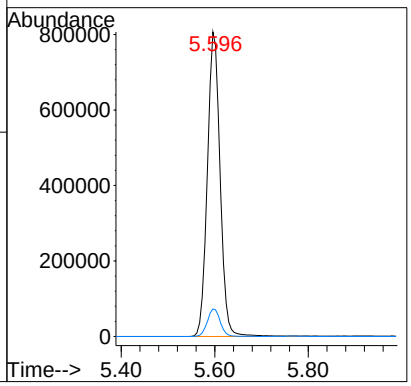


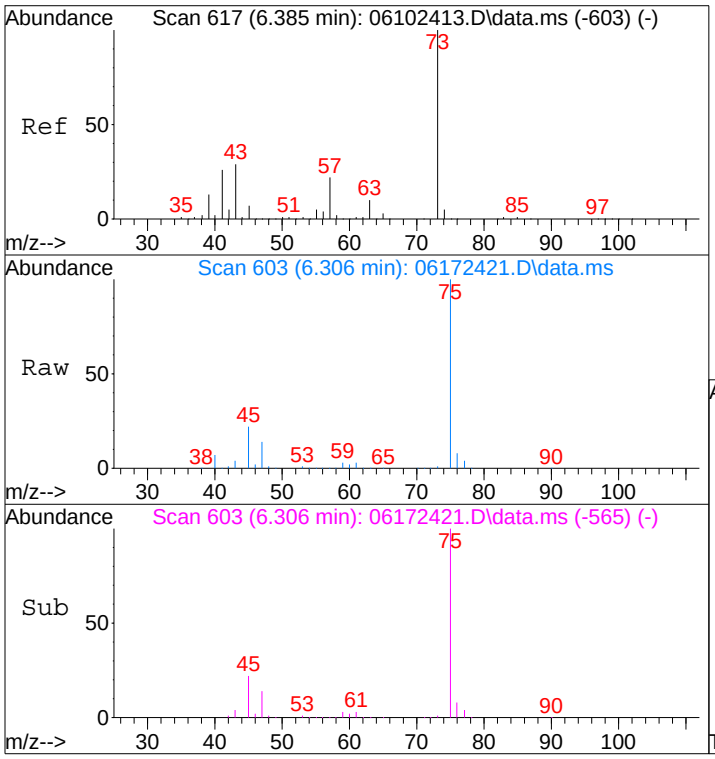


#22
Carbon Disulfide
Concen: 26.41 ng
RT: 5.60 min Scan# 478
Delta R.T. 0.033 min
Lab File: 06172421.D
Acq: 17 Jun 2024 20:03

Tgt Ion: 76 Resp: 1533664

Ion	Ratio	Lower	Upper
76	100		
78	9.2	0.0	29.6

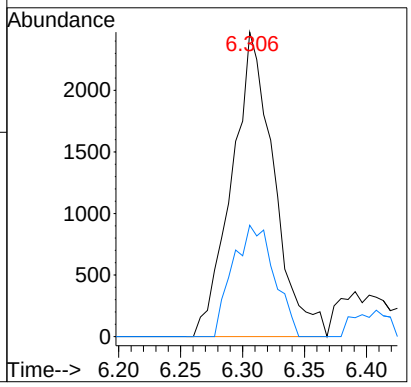


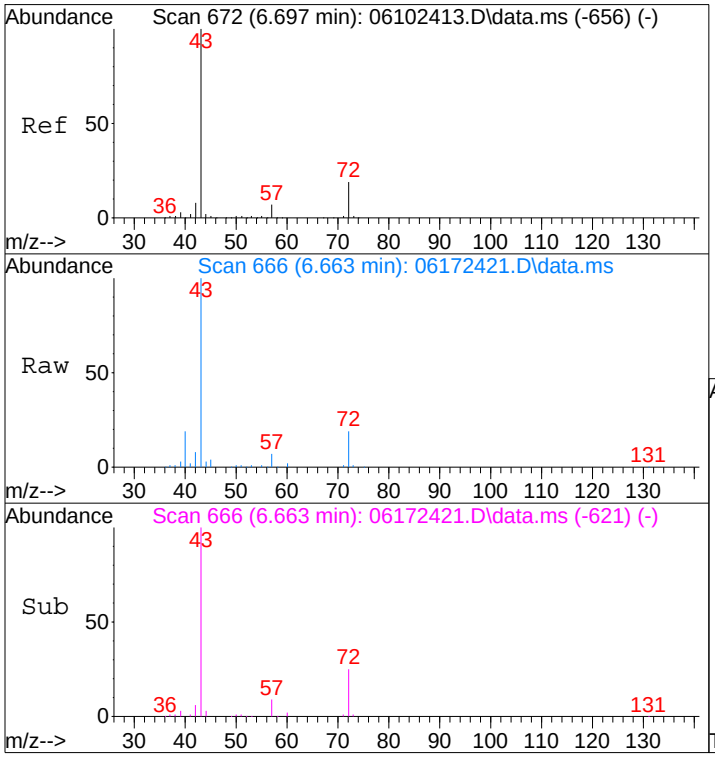


#25
Methyl tert-Butyl Ether
Concen: 0.14 ng
RT: 6.31 min Scan# 603
Delta R.T. -0.033 min
Lab File: 06172421.D
Acq: 17 Jun 2024 20:03

Tgt Ion: 73 Resp: 5848

Ion	Ratio	Lower	Upper
73	100		
57	36.1	2.3	42.3

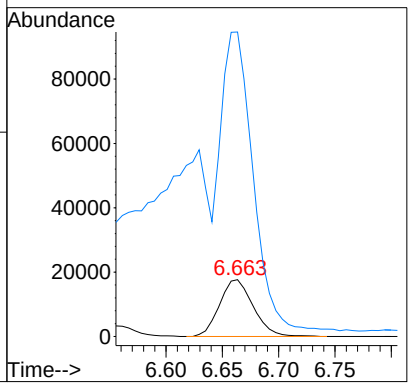


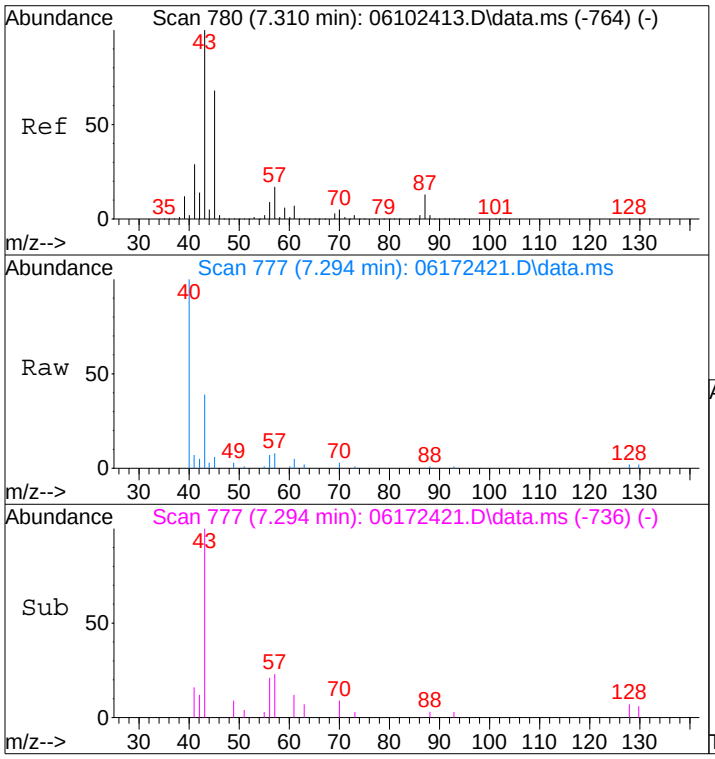


#27
2-Butanone (MEK)
Concen: 3.64 ng
RT: 6.66 min Scan# 666
Delta R.T. 0.005 min
Lab File: 06172421.D
Acq: 17 Jun 2024 20:03

Tgt Ion: 72 Resp: 36720

Ion	Ratio	Lower	Upper
72	100		
43	505.8	506.8	546.8#

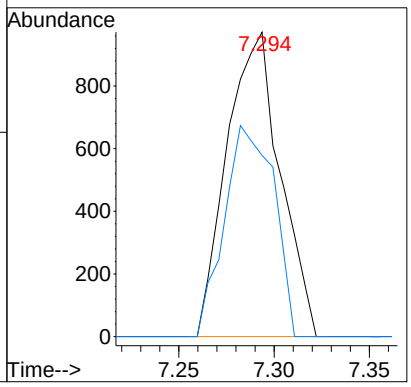


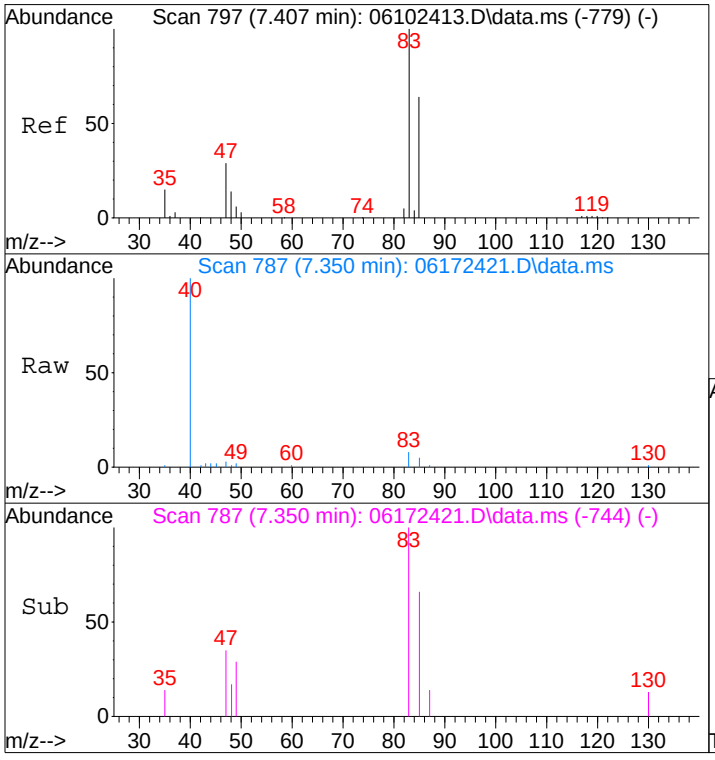


#30
Ethyl Acetate
Concen: 0.31 ng
RT: 7.29 min Scan# 777
Delta R.T. 0.034 min
Lab File: 06172421.D
Acq: 17 Jun 2024 20:03

Tgt Ion: 61 Resp: 1891

Ion	Ratio	Lower	Upper
61	100		
70	64.5	53.5	93.5

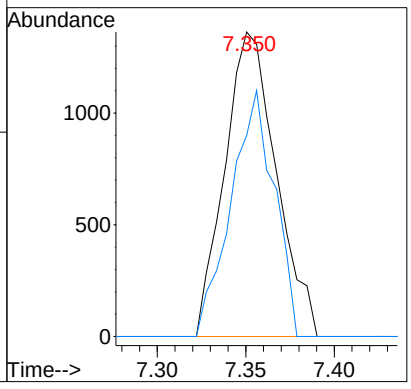


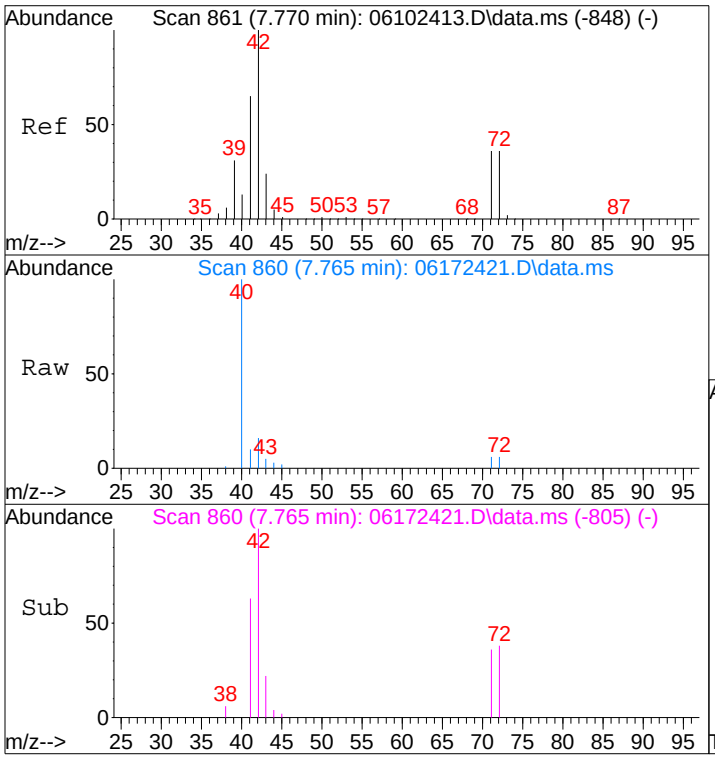


#32
Chloroform
Concen: 0.09 ng
RT: 7.35 min Scan# 787
Delta R.T. -0.004 min
Lab File: 06172421.D
Acq: 17 Jun 2024 20:03

Tgt Ion: 83 Resp: 2759

Ion	Ratio	Lower	Upper
83	100		
85	68.0	44.4	84.4

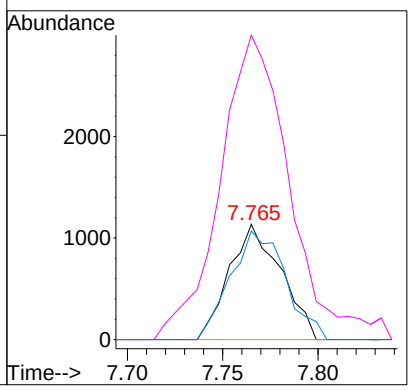


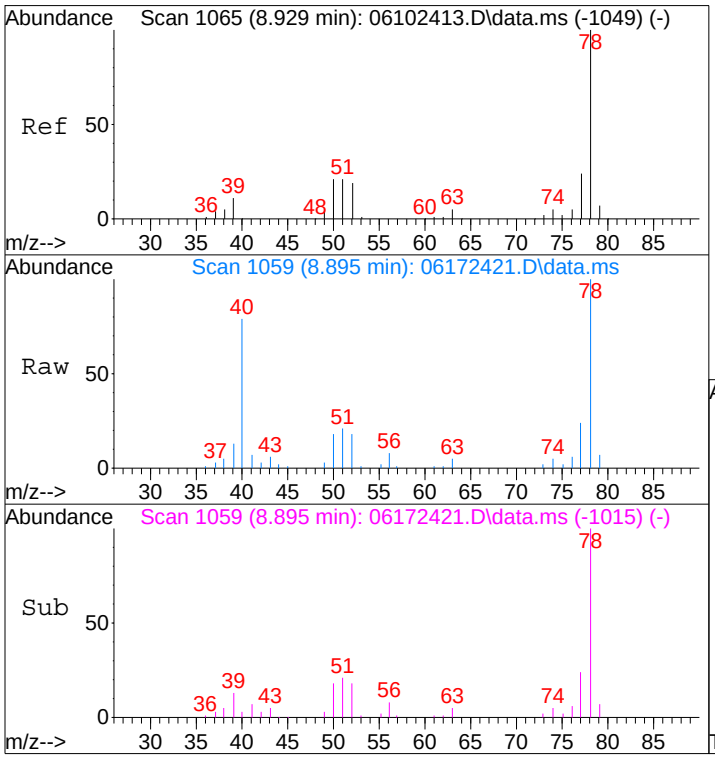


#34
Tetrahydrofuran (THF)
Concen: 0.23 ng
RT: 7.76 min Scan# 860
Delta R.T. 0.062 min
Lab File: 06172421.D
Acq: 17 Jun 2024 20:03

Tgt Ion: 72 Resp: 2132

Ion	Ratio	Lower	Upper
72	100		
71	100.6	79.4	119.4
42	357.2	260.8	300.8#

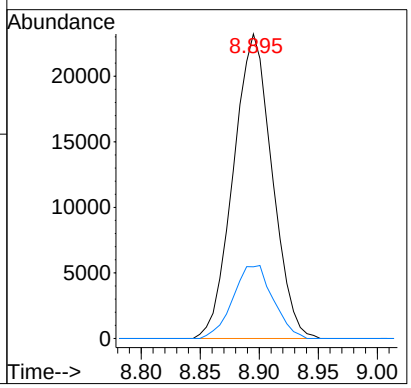


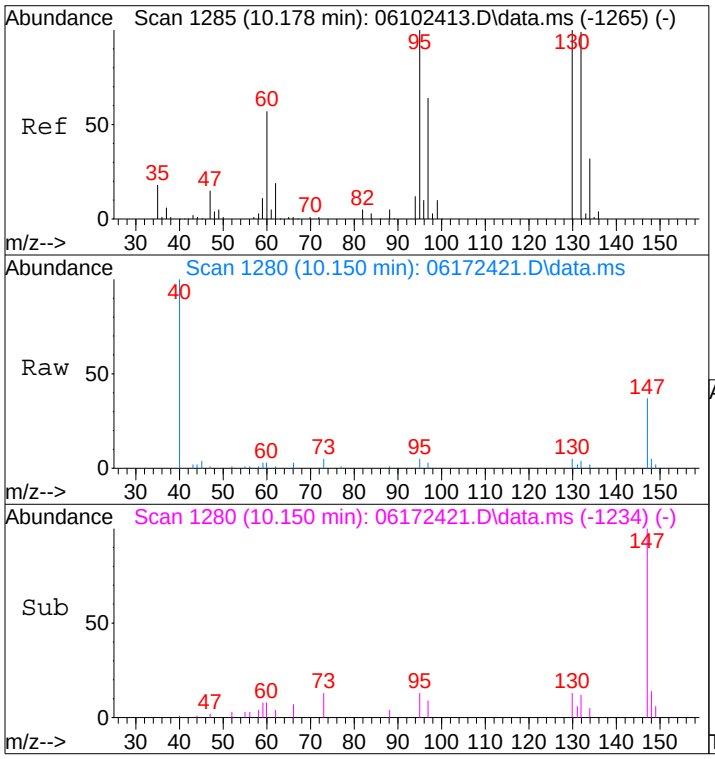


#41
Benzene
Concen: 0.79 ng
RT: 8.89 min Scan# 1059
Delta R.T. -0.002 min
Lab File: 06172421.D
Acq: 17 Jun 2024 20:03

Tgt Ion: 78 Resp: 53096

Ion	Ratio	Lower	Upper
78	100		
77	24.8	4.0	44.0

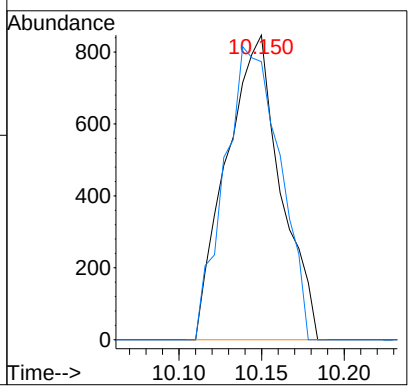


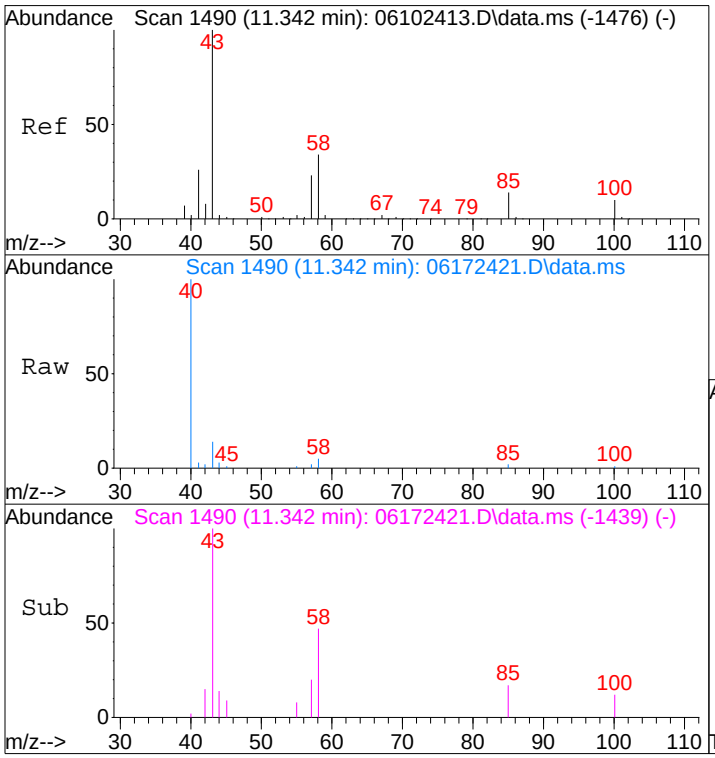


#47
Trichloroethene
Concen: 0.10 ng
RT: 10.15 min Scan# 1280
Delta R.T. 0.010 min
Lab File: 06172421.D
Acq: 17 Jun 2024 20:03

Tgt Ion:130 Resp: 1932

Ion	Ratio	Lower	Upper
130	100		
132	98.2	77.9	117.9

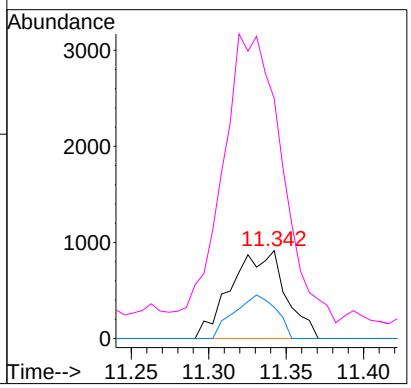


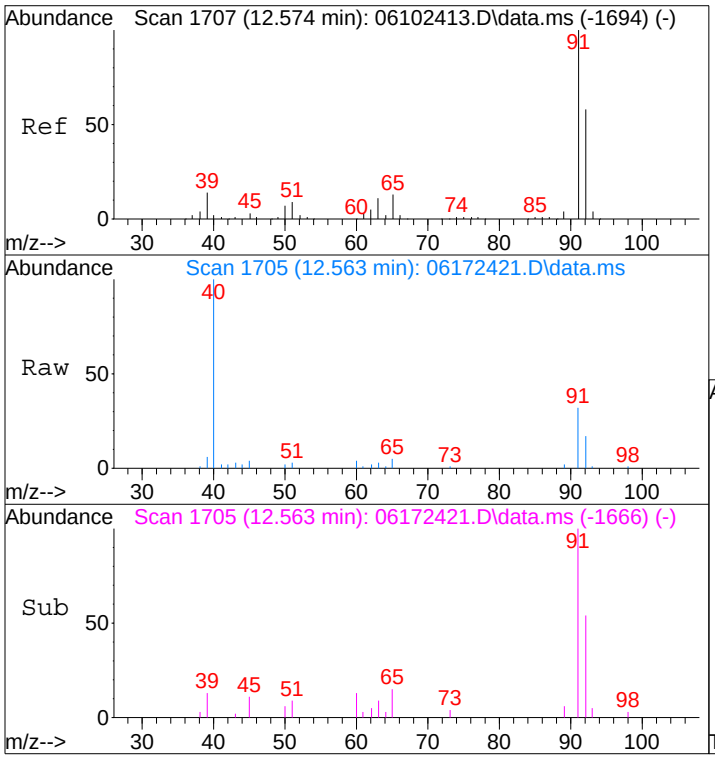


#53
4-Methyl-2-pentanone
Concen: 0.15 ng
RT: 11.34 min Scan# 1490
Delta R.T. 0.039 min
Lab File: 06172421.D
Acq: 17 Jun 2024 20:03

Tgt Ion: 58 Resp: 2230

Ion	Ratio	Lower	Upper
58	100		
85	38.4	34.5	51.7
43	352.8	236.1	354.1

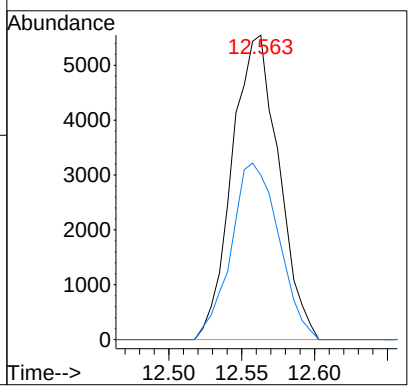


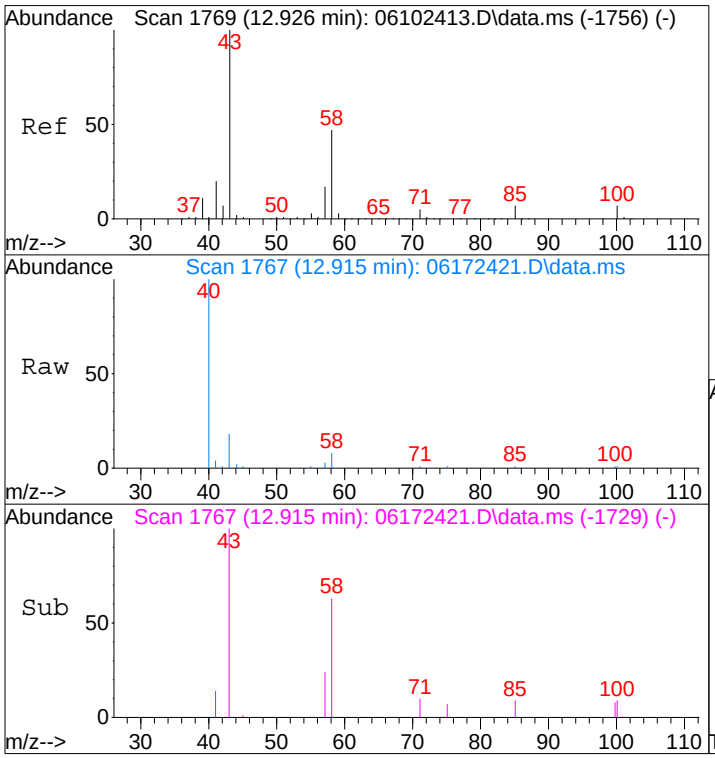


#58
Toluene
Concen: 0.19 ng
RT: 12.56 min Scan# 1705
Delta R.T. -0.028 min
Lab File: 06172421.D
Acq: 17 Jun 2024 20:03

Tgt Ion: 91 Resp: 12328

Ion	Ratio	Lower	Upper
91	100		
92	59.4	37.4	77.4

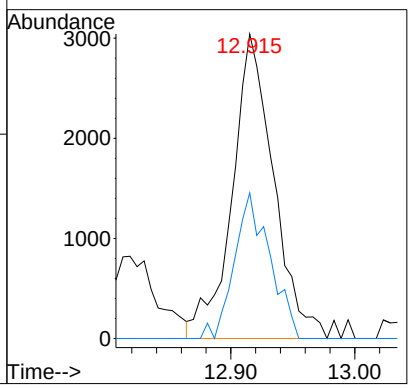


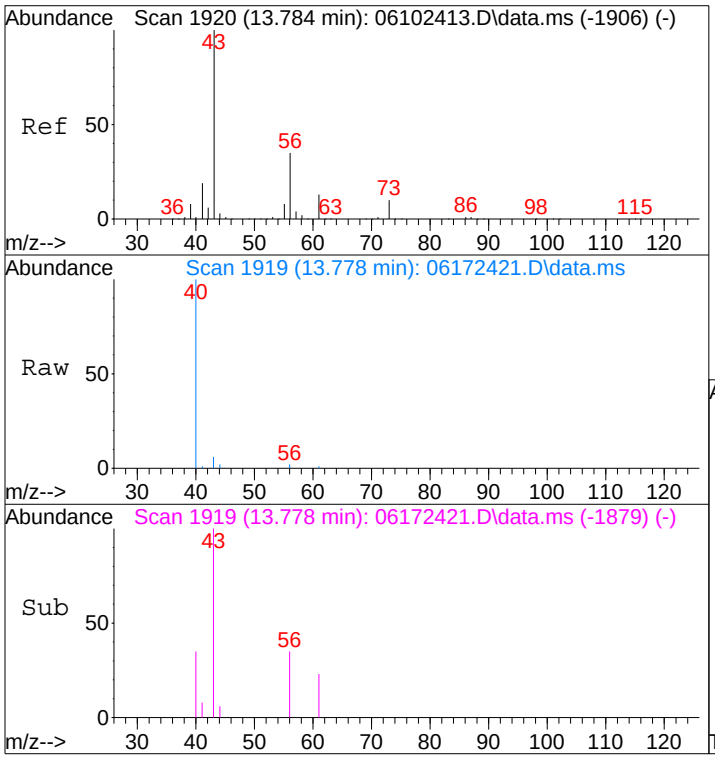


#59
2-Hexanone
Concen: 0.17 ng
RT: 12.92 min Scan# 1767
Delta R.T. -0.034 min
Lab File: 06172421.D
Acq: 17 Jun 2024 20:03

Tgt Ion: 43 Resp: 7083

Ion	Ratio	Lower	Upper
43	100		
58	40.8	25.9	65.9

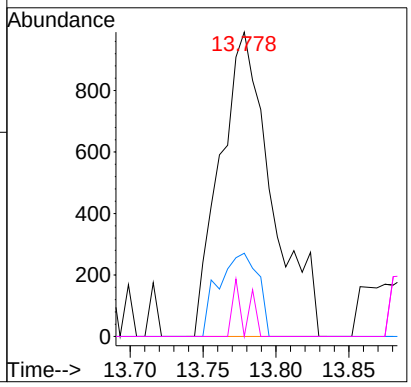


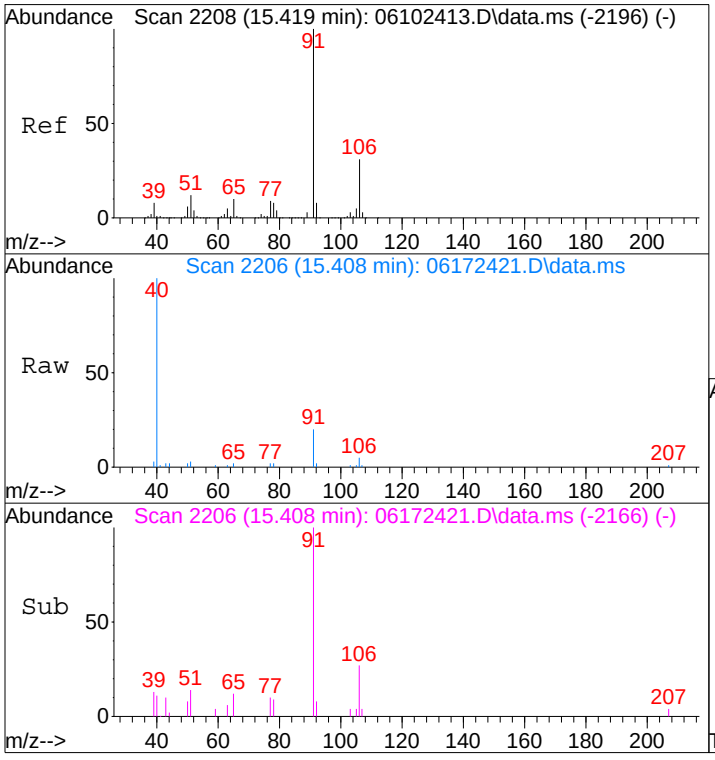


#62
n-Butyl Acetate
Concen: 0.06 ng
RT: 13.78 min Scan# 1919
Delta R.T. -0.023 min
Lab File: 06172421.D
Acq: 17 Jun 2024 20:03

Tgt Ion: 43 Resp: 2433

Ion	Ratio	Lower	Upper
43	100		
56	21.0	14.3	54.3
73	4.7	0.0	30.4

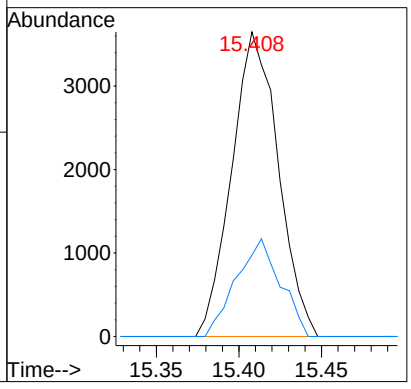


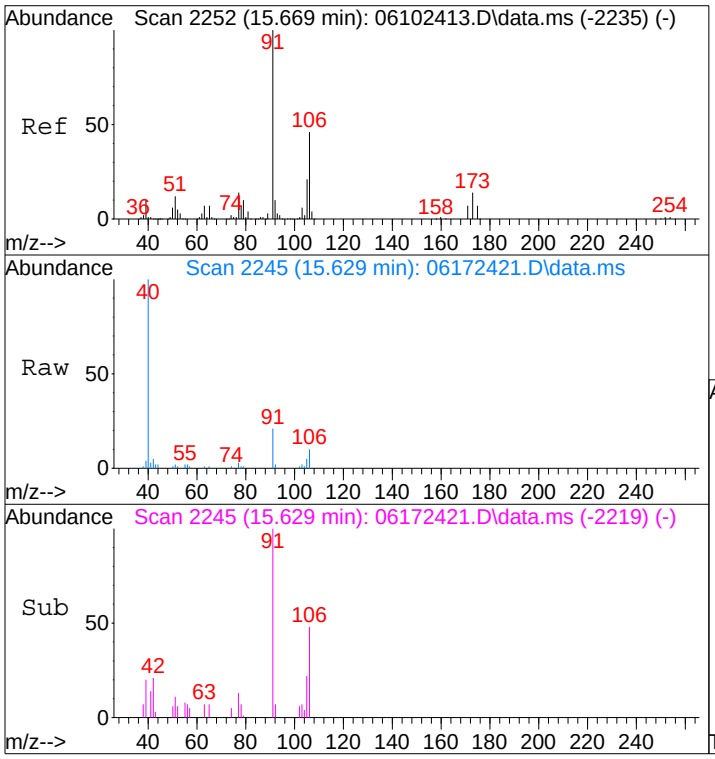


#66
Ethylbenzene
Concen: 0.09 ng
RT: 15.41 min Scan# 2206
Delta R.T. -0.023 min
Lab File: 06172421.D
Acq: 17 Jun 2024 20:03

Tgt Ion: 91 Resp: 7146

Ion	Ratio	Lower	Upper
91	100		
106	30.5	10.7	50.7

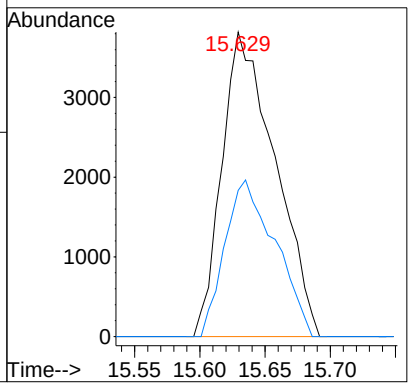


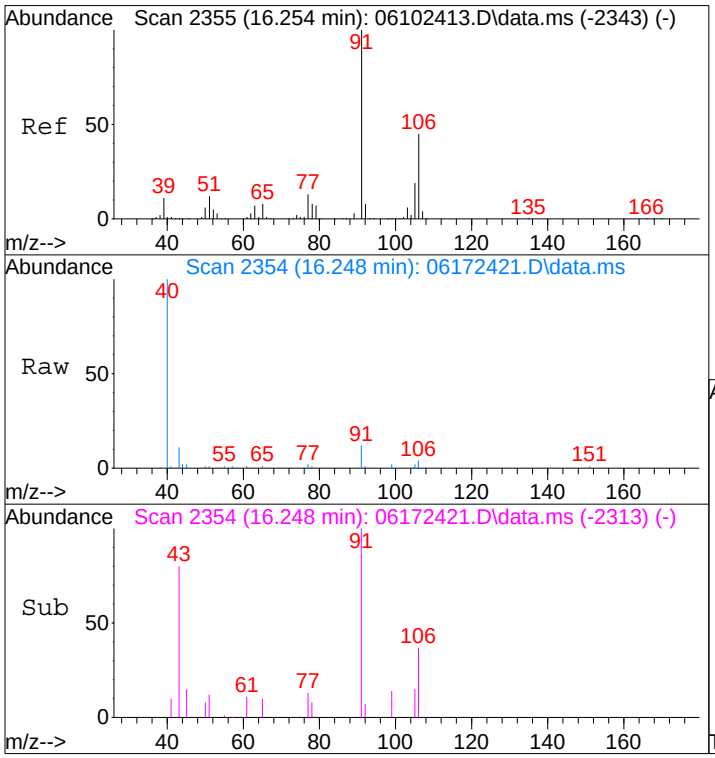


#67
m- & p-Xylenes
Concen: 0.17 ng
RT: 15.63 min Scan# 2245
Delta R.T. -0.051 min
Lab File: 06172421.D
Acq: 17 Jun 2024 20:03

Tgt Ion: 91 Resp: 10826

Ion	Ratio	Lower	Upper
91	100		
106	48.6	25.9	65.9

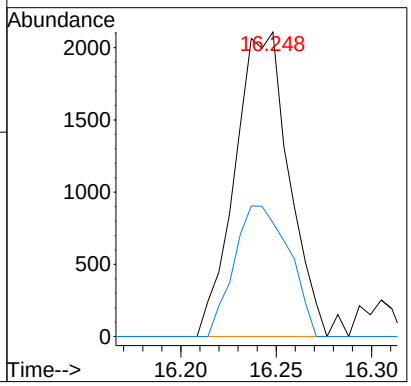


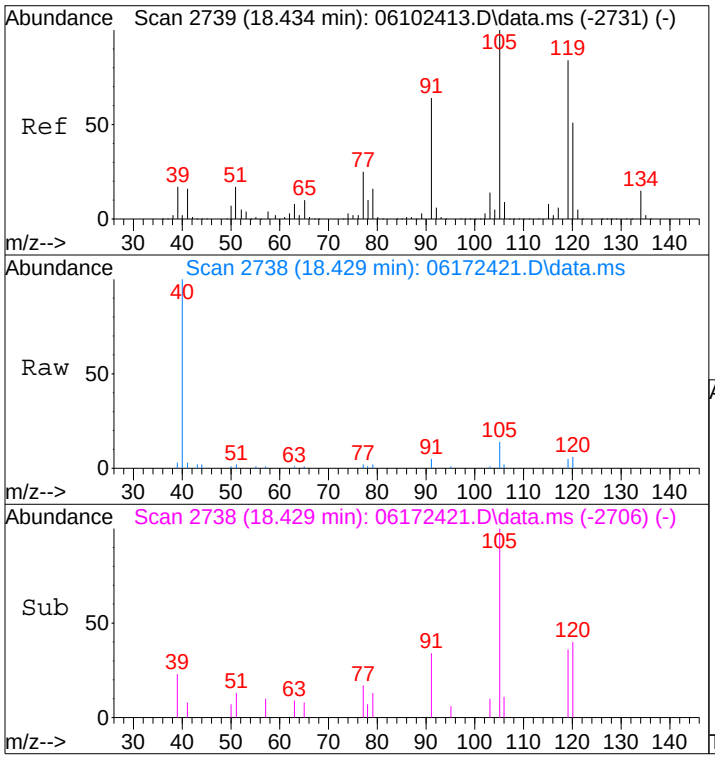


#70
o-Xylene
Concen: 0.07 ng
RT: 16.25 min Scan# 2354
Delta R.T. -0.017 min
Lab File: 06172421.D
Acq: 17 Jun 2024 20:03

Tgt Ion: 91 Resp: 4135

Ion	Ratio	Lower	Upper
91	100		
106	43.8	24.5	64.5

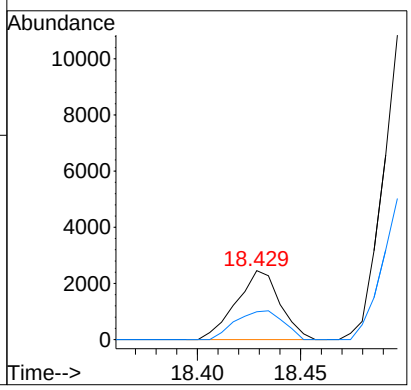


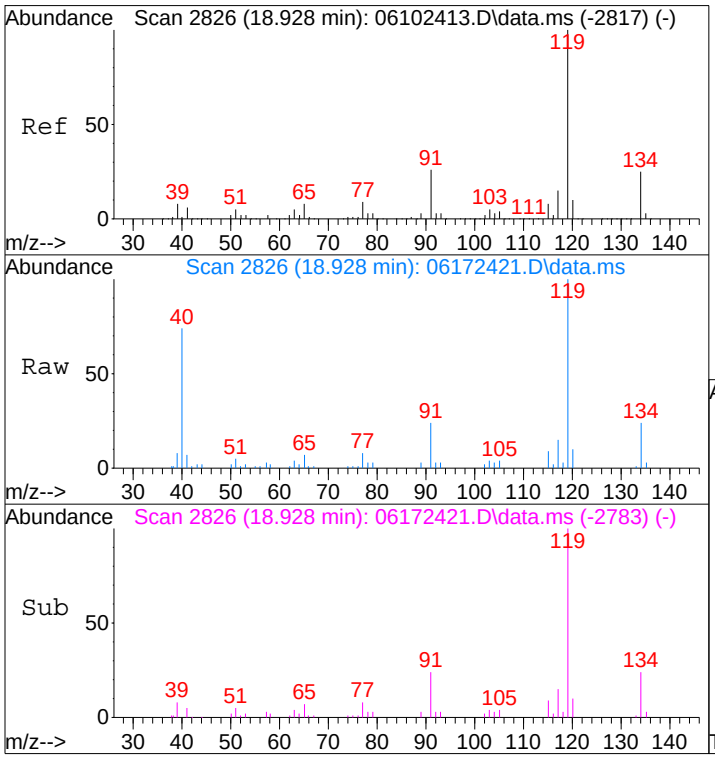


#82
1,2,4-Trimethylbenzene
Concen: 0.05 ng
RT: 18.43 min Scan# 2738
Delta R.T. -0.017 min
Lab File: 06172421.D
Acq: 17 Jun 2024 20:03

Tgt Ion:105 Resp: 3618

Ion	Ratio	Lower	Upper
105	100		
120	45.7	31.9	71.9

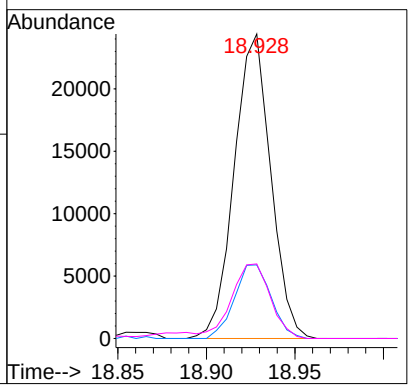


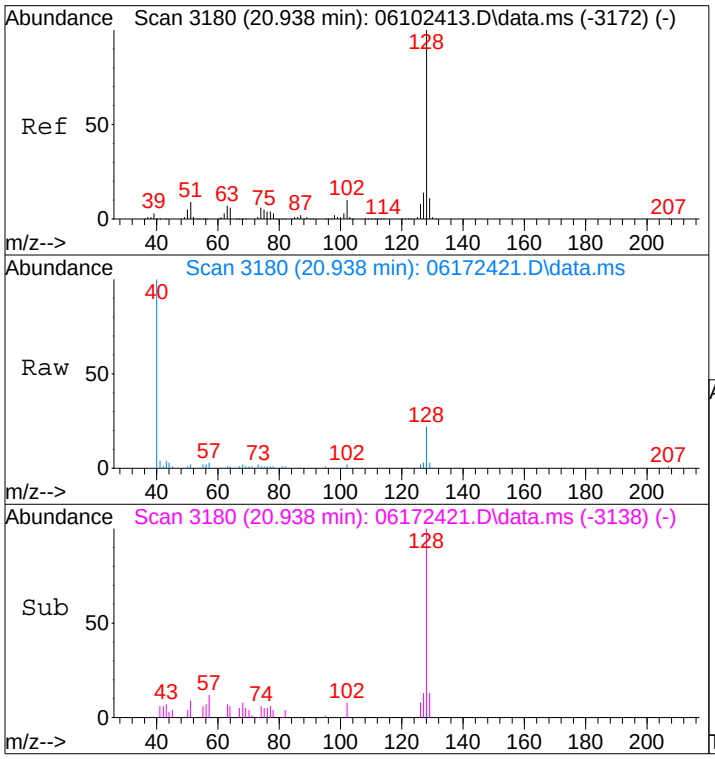


#88
4-Isopropyltoluene (p-Cymene)
Concen: 0.45 ng
RT: 18.93 min Scan# 2826
Delta R.T. -0.006 min
Lab File: 06172421.D
Acq: 17 Jun 2024 20:03

Tgt Ion:119 Resp: 35016

Ion	Ratio	Lower	Upper
119	100		
134	24.3	4.9	44.9
91	28.8	5.8	45.8

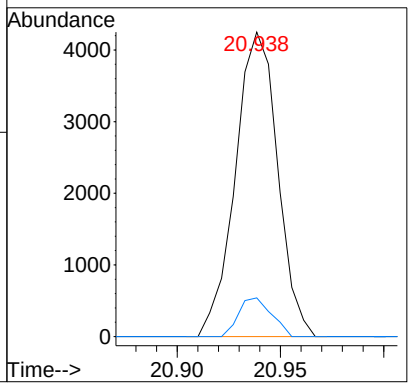




#95
Naphthalene
Concen: 0.07 ng
RT: 20.94 min Scan# 3180
Delta R.T. -0.011 min
Lab File: 06172421.D
Acq: 17 Jun 2024 20:03

Tgt Ion:128 Resp: 6056

Ion	Ratio	Lower	Upper
128	100		
129	9.9	0.0	31.2



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172421.D Vial: 10
Acq On : 17 Jun 2024 20:03 Operator: SC
Sample : P2402249-002 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 14:49:13 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

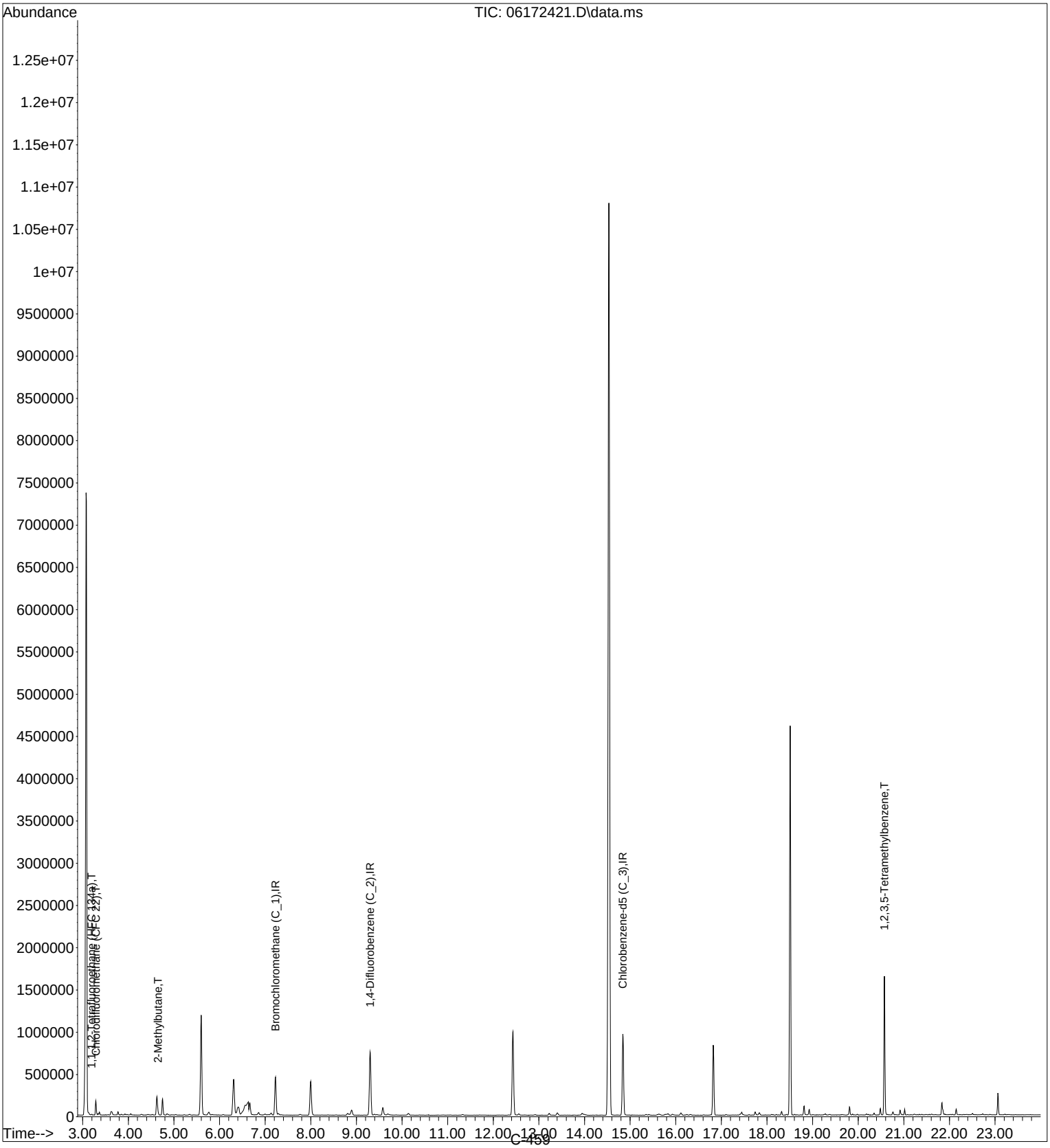
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	164146	12.500	ng		-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	728033	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	164853	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	3.14	85	159	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.19	83	1748	0.104	ng	#	1
4) 1,1-Difluoroethane	3.25	65	409	N.D.			
5) Chlorodifluoromethane ...	3.29	67	766	0.137	ng		98
6) 1-Chloro-1,1-Difluoroe...	3.50	65	515	N.D.			
7) Dichlorofluoromethane ...	0.00	67	0	N.D.			
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	4.60	83	51	N.D.			
10) 2-Methylbutane	4.65	57	6576	0.336	ng	#	40
11) Methyl Acetate	5.32	43	3798	N.D.			
12) 2-Methylpentane	6.49	71	704	N.D.			
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	9.04	84	708	N.D.			
17) 2,3-Dimethylpentane	9.54	56	51	N.D.			
18) Dibromomethane	9.79	174	194	N.D.			
20) Methyl Cyclohexane	11.40	55	185	N.D.			
21) 1,3-Dichloropropane	0.00	76	0	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	16.33	75	613	N.D.			
25) Bromobenzene	17.04	77	257	N.D.			
26) 2-Chlorotoluene	17.61	91	823	N.D.			
27) 4-Chlorotoluene	17.68	91	2453	N.D.			
28) Indane	19.12	117	429	N.D.			
29) Indene	19.11	115	185	N.D.			
30) 1,2,4,5-Tetramethylben...	20.22	119	652	N.D.			
31) 1,2,3,4-Tetramethylben...	20.22	119	652	N.D.			
32) 1,2,3,5-Tetramethylben...	20.58	119	7248	0.134	ng	#	84
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172421.D Vial: 10
Acq On : 17 Jun 2024 20:03 Operator: SC
Sample : P2402249-002 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:49:13 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



LSC Area Percent Report

MJ 6/28/24

Data Path : I:\MS09\DATA\2024 06\17\
Data File : 06172421.D
Acq On : 17 Jun 2024 20:03
Operator : SC
Sample : P2402249-002 (400mL)
Misc : S37-06062402
ALS Vial : 10 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06172421.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.075	21	34	50	rBV	7363029	13410594	100.00%	56.619%
2	3.200	53	56	59	rVB3	9458	11531	0.09%	0.049%
3	3.285	66	71	77	rBV	169467	237603	1.77%	1.003%
4	3.336	77	80	82	rVV	16558	21773	0.16%	0.092%
5	3.364	82	85	90	rVB	35602	44926	0.34%	0.190%
6	3.626	124	131	141	rBV3	42562	107627	0.80%	0.454%
7	3.773	152	157	165	rVB	39244	53726	0.40%	0.227%
8	3.847	165	170	174	rBV	8950	12020	0.09%	0.051%
9	3.926	180	184	188	rVB2	11804	15431	0.12%	0.065%
10	4.051	202	206	220	rVB3	15748	28343	0.21%	0.120%
11	4.284	242	247	255	rBV2	8918	19717	0.15%	0.083%
12	4.432	268	273	281	rVB4	6309	13331	0.10%	0.056%
13	4.625	299	307	319	rVV	218070	429445	3.20%	1.813%
14	4.750	322	329	340	rVV	190520	315927	2.36%	1.334%
15	4.846	340	346	358	rVB4	15217	36490	0.27%	0.154%
16	5.039	375	380	388	rVB3	6764	13082	0.10%	0.055%
17	5.227	407	413	420	rVB5	5848	11204	0.08%	0.047%
18	5.346	425	434	439	rVB5	9690	20618	0.15%	0.087%
19	5.596	468	478	499	rBV	1182801	2421776	18.06%	10.225%
20	5.766	499	508	516	rVV	32867	80969	0.60%	0.342%
21	6.079	557	563	568	rBV5	5680	11695	0.09%	0.049%
22	6.311	592	604	612	rBV	422638	1098570	8.19%	4.638%
23	6.408	613	621	629	rVB3	82830	261475	1.95%	1.104%
24	6.567	629	649	651	rBV3	105085	381164	2.84%	1.609%
25	6.658	662	665	685	rVB	142979	289566	2.16%	1.223%
26	6.856	691	700	714	rVB2	30822	77917	0.58%	0.329%
27	6.998	717	725	731	rBV2	11806	26568	0.20%	0.112%
28	7.129	742	748	756	rVB2	24264	52290	0.39%	0.221%
29	7.226	756	765	773	rBV	449377	974469	7.27%	4.114%
30	7.288	773	776	784	rVB3	15846	31876	0.24%	0.135%
31	7.771	851	861	869	rBV3	8678	22889	0.17%	0.097%
32	7.998	891	901	917	rBV	399120	924026	6.89%	3.901%
33	8.810	1037	1044	1049	rBV	21247	50510	0.38%	0.213%
34	8.895	1049	1059	1070	rVB2	61903	167791	1.25%	0.708%
35	9.298	1117	1130	1141	rBV	750044	1751091	13.06%	7.393%
36	9.395	1141	1147	1151	rVV2	10692	21934	0.16%	0.093%
37	9.446	1154	1156	1164	rVB5	6086	11673	0.09%	0.049%
38	9.576	1171	1179	1192	rBV	88235	197015	1.47%	0.832%
39	9.690	1192	1199	1205	rVV3	12108	26842	0.20%	0.113%

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\17\
Data File : 06172421.D
Acq On : 17 Jun 2024 20:03
Operator : SC
Sample : P2402249-002 (400mL)
Misc : S37-06062402
ALS Vial : 10 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

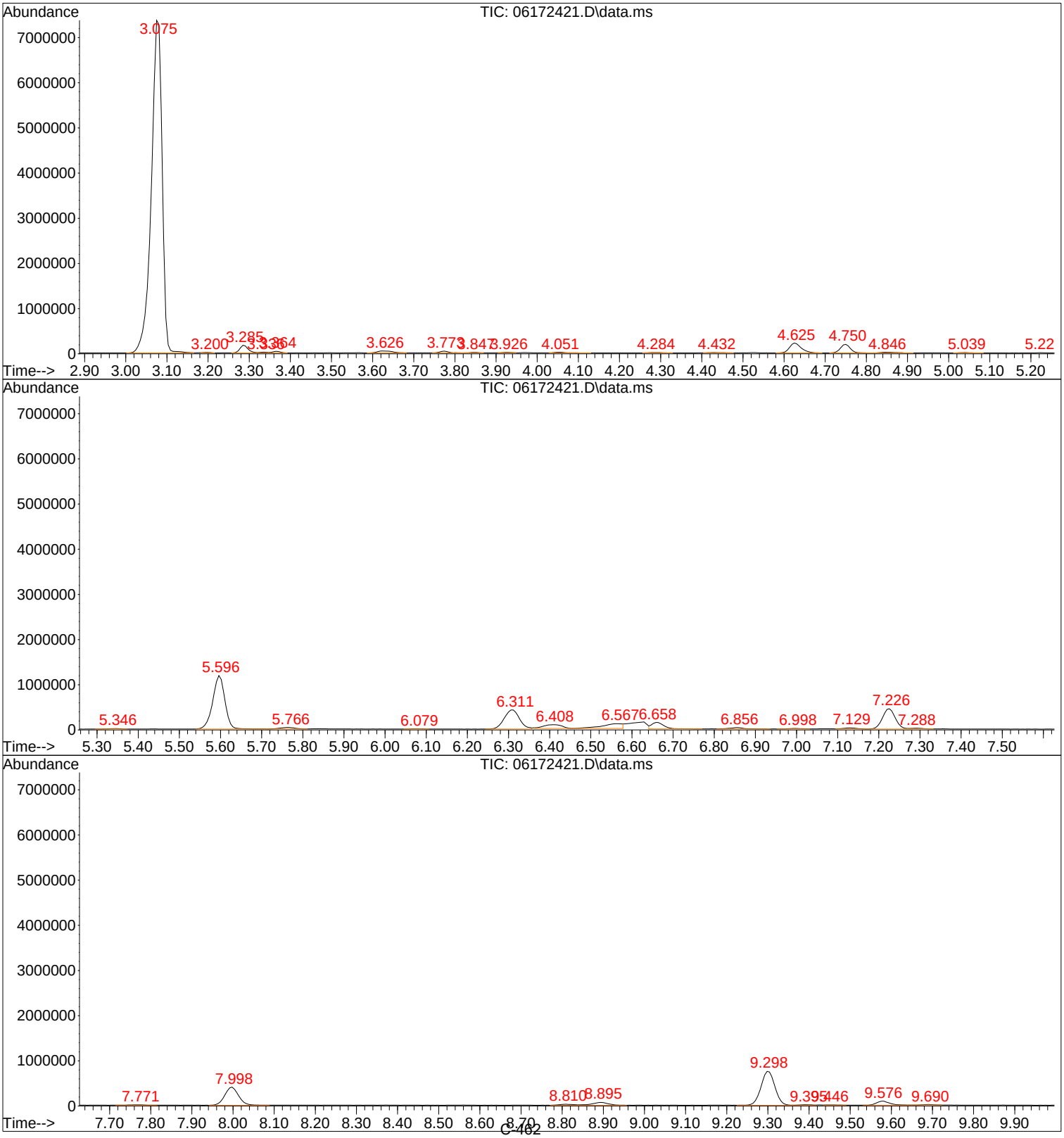
Sum of corrected areas: 23685494

LSC Report - Integrated Chromatogram

Data Path : I:\MS09\DATA\2024 06\17\
Data File : 06172421.D
Acq On : 17 Jun 2024 20:03
Operator : SC
Sample : P2402249-002 (400mL)
Misc : S37-06062402
ALS Vial : 10 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\17\\
Data File : 06172421.D
Acq On : 17 Jun 2024 20:033
Operator : SCC
Sample : P2402249-002 (400mL))
Misc : S37-060624022
ALS Vial : 10 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172422.D Vial: 11
Acq On : 17 Jun 2024 20:36 Operator: SC
Sample : P2402249-003 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 14:12:21 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	160575	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	708791	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.85	54	165417	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	349668	12.252	ng		0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.00%				
57) Toluene-d8 (SS2)	12.43	98	799919	12.637	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.12%				
73) Bromofluorobenzene (SS3)	16.83	174	277888	12.157	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.28%				
Target Compounds							Qvalue
2) Propene	3.30	42	13477	0.656	ng		97
3) Dichlorodifluoromethan...	3.37	85	19974m	0.529	ng		
4) Chloromethane	3.50	50	12273	0.475	ng		94
5) 1,2-Dichloro-1,1,2,2-t...	3.61	135	318	N.D.			
6) Vinyl Chloride	3.70	62	201	N.D.			
7) 1,3-Butadiene	3.77	54	289	N.D.			
8) Bromomethane	4.01	94	2061	0.157	ng		99
9) Chloroethane	0.00	64	0	N.D.	d		
10) Ethanol	4.30	45	51964	3.329	ng		82
11) Acetonitrile	4.44	41	69433	1.772	ng		88
12) Acrolein	4.52	56	9098	0.787	ng		98
13) Acetone	4.62	58	370020	29.663	ng	#	84
14) Trichlorofluoromethane	4.76	101	40188	1.051	ng		100
15) 2-Propanol (Isopropanol)	4.85	45	18786	0.374	ng	#	1
16) Acrylonitrile	4.99	53	1514	0.065	ng		86
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.33	59	3014	0.075	ng	#	1
19) Methylene Chloride	5.35	84	1010	0.057	ng		99
20) 3-Chloro-1-propene (Al...	5.45	41	542	N.D.			
21) Trichlorotrifluoroethane	5.58	151	4844	0.300	ng		96
22) Carbon Disulfide	5.59	76	49893	0.877	ng		99
23) trans-1,2-Dichloroethene	6.15	61	228	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	6.30	73	722	N.D.			
26) Vinyl Acetate	6.44	86	38087	13.232	ng	#	1
27) 2-Butanone (MEK)	6.67	72	54951	5.567	ng		99
28) cis-1,2-Dichloroethene	7.08	61	400	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.			
30) Ethyl Acetate	7.29	61	855	0.142	ng		96
31) n-Hexane	7.31	57	593	N.D.			
32) Chloroform	7.36	83	9003	0.286	ng		98
34) Tetrahydrofuran (THF)	7.77	72	351	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.12	62	254	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	9.59	61	117	No Calib		#	
40) 1-Butanol	8.80	56	23671	No Calib		#	
41) Benzene	8.89	78	4797	0.073	ng		94
42) Carbon Tetrachloride	9.07	117	585	N.D.			
43) Cyclohexane	9.18	84	633	N.D.			
44) tert-Amyl Methyl Ether	9.53	73	1992	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.07	83	605	N.D.			
47) Trichloroethene	10.14	130	1123	0.059	ng		89
48) 1,4-Dioxane	0.00	88	0	N.D.	d		
49) 2,2,4-Trimethylpentane...	10.22	57	809	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172422.D Vial: 11
Acq On : 17 Jun 2024 20:36 Operator: SC
Sample : P2402249-003 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:12:21 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

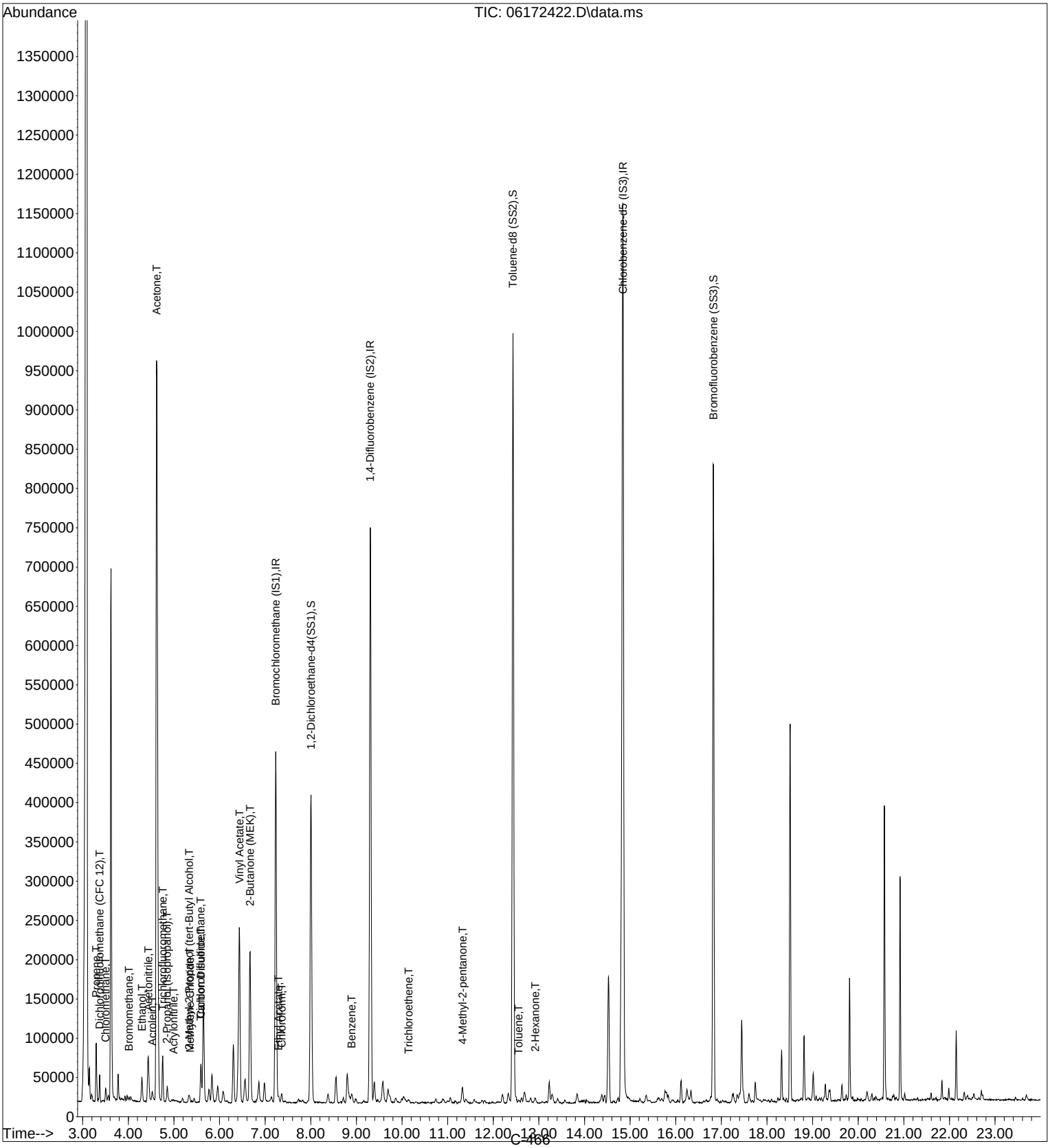
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	10.57	71	171	N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	11.33	58	2426	0.169 ng #	1
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
58) Toluene	12.56	91	4134	0.062 ng	98
59) 2-Hexanone	12.92	43	7903	0.191 ng	86
60) Dibromochloromethane	13.08	129	562	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	13.78	43	1990	N.D.	
63) n-Octane	13.92	57	363	N.D.	
64) Tetrachloroethene	14.04	166	518	N.D.	
65) Chlorobenzene	14.90	112	772	N.D.	
66) Ethylbenzene	15.41	91	1543	N.D.	
67) m- & p-Xylenes	15.64	91	2458	N.D.	
68) Bromoform	15.67	173	646	N.D.	
69) Styrene	16.11	104	760	N.D.	
70) o-Xylene	16.25	91	1163	N.D.	
71) n-Nonane	16.62	43	1619	N.D.	
72) 1,1,2,2-Tetrachloroethane	16.21	83	533	N.D.	
74) Cumene	17.03	105	1259	N.D.	
75) alpha-Pinene	0.00	93	0	N.D.	
76) n-Propylbenzene	17.68	91	1728	N.D.	
77) 3-Ethyltoluene	17.03	105	1259	No Calib	
78) 4-Ethyltoluene	17.86	105	949	N.D.	
79) 1,3,5-Trimethylbenzene	17.96	105	822	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.03	105	1259	No Calib	
82) 1,2,4-Trimethylbenzene	18.43	105	971	N.D.	
83) n-Decane	0.00	58	0	N.D.	
84) Benzyl Chloride	18.56	91	731	N.D.	
85) 1,3-Dichlorobenzene	18.58	146	618	N.D.	
86) 1,4-Dichlorobenzene	18.66	146	638	N.D.	
87) sec-Butylbenzene	18.74	105	1298	N.D.	
88) 4-Isopropyltoluene (p-...	18.93	119	1578	N.D.	
89) 1,2,3-Trimethylbenzene	17.03	105	1259	No Calib	
90) 1,2-Dichlorobenzene	19.03	146	567	N.D.	
91) d-Limonene	19.09	68	125	N.D.	
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	808	N.D.	
95) Naphthalene	20.92	128	2077	N.D.	
96) n-Dodecane	0.00	58	0	N.D.	
97) Hexachlorobutadiene	21.30	225	745	N.D.	
98) Cyclohexanone	15.44	55	303	No Calib #	
99) tert-Butylbenzene	18.42	119	961	N.D.	
100) n-Butylbenzene	19.38	91	1287	N.D.	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172422.D Vial: 11
Acq On : 17 Jun 2024 20:36 Operator: SC
Sample : P2402249-003 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:12:21 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172422.D Vial: 11
Acq On : 17 Jun 2024 20:36 Operator: SC
Sample : P2402249-003 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 14:12:21 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

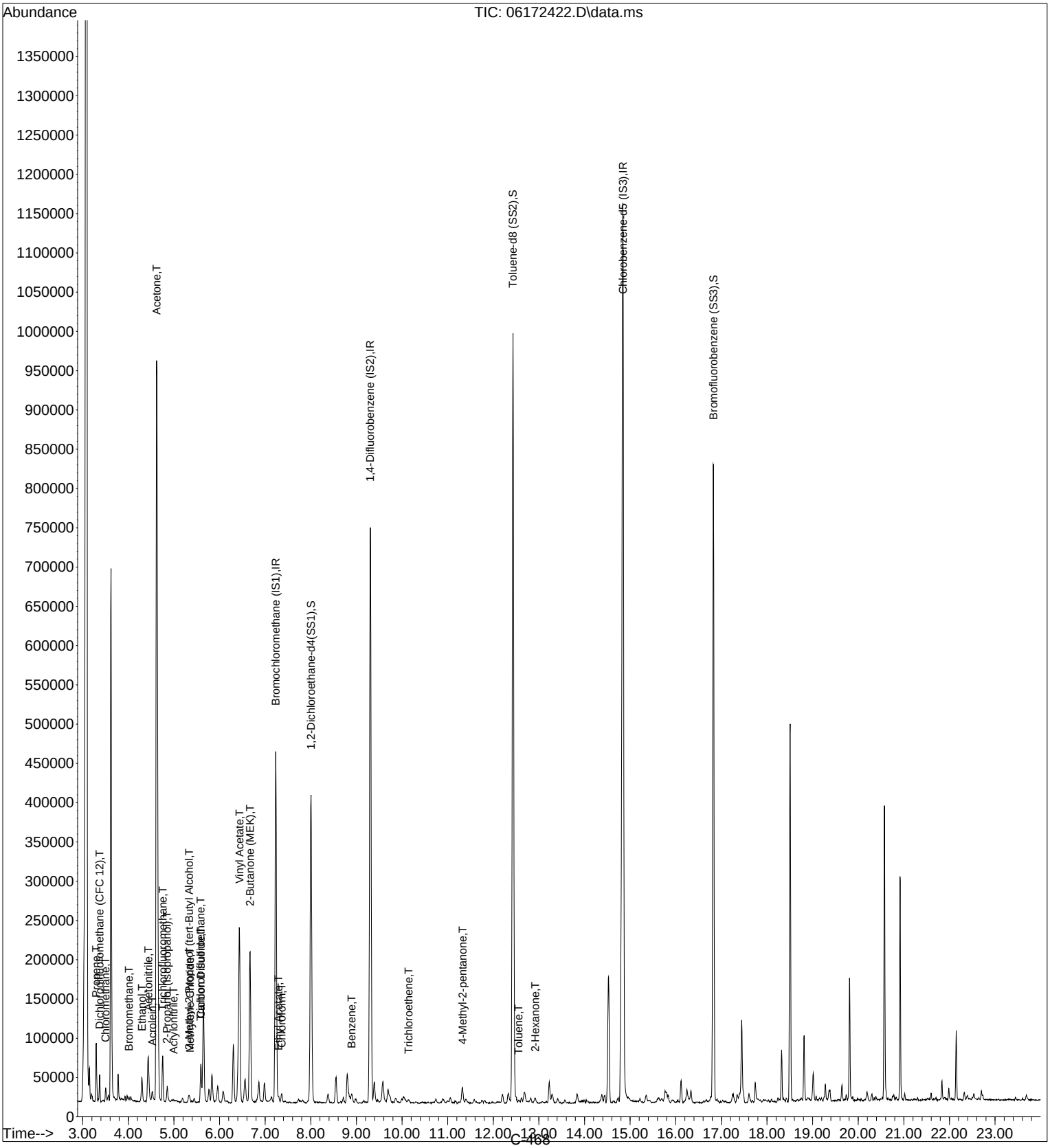
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	160575	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	708791	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.85	54	165417	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	349668	12.252	ng		0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.00%				
57) Toluene-d8 (SS2)	12.43	98	799919	12.637	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.12%				
73) Bromofluorobenzene (SS3)	16.83	174	277888	12.157	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.28%				
Target Compounds							Qvalue
2) Propene	3.30	42	13477	0.656	ng		97
3) Dichlorodifluoromethan...	3.37	85	19974m	0.529	ng		
4) Chloromethane	3.50	50	12273	0.475	ng		94
8) Bromomethane	4.01	94	2061	0.157	ng		99
10) Ethanol	4.30	45	51964	3.329	ng		82
11) Acetonitrile	4.44	41	69433	1.772	ng		88
12) Acrolein	4.52	56	9098	0.787	ng		98
13) Acetone	4.62	58	370020	29.663	ng	#	84
14) Trichlorofluoromethane	4.76	101	40188	1.051	ng		100
15) 2-Propanol (Isopropanol)	4.85	45	18786	0.374	ng	#	1
16) Acrylonitrile	4.99	53	1514	0.065	ng		86
18) 2-Methyl-2-Propanol (t...	5.33	59	3014	0.075	ng	#	1
19) Methylene Chloride	5.35	84	1010	0.057	ng		99
21) Trichlorotrifluoroethane	5.58	151	4844	0.300	ng		96
22) Carbon Disulfide	5.59	76	49893	0.877	ng		99
26) Vinyl Acetate	6.44	86	38087	13.232	ng	#	1
27) 2-Butanone (MEK)	6.67	72	54951	5.567	ng		99
30) Ethyl Acetate	7.29	61	855	0.142	ng		96
32) Chloroform	7.36	83	9003	0.286	ng		98
41) Benzene	8.89	78	4797	0.073	ng		94
47) Trichloroethene	10.14	130	1123	0.059	ng		89
53) 4-Methyl-2-pentanone	11.33	58	2426	0.169	ng	#	1
58) Toluene	12.56	91	4134	0.062	ng		98
59) 2-Hexanone	12.92	43	7903	0.191	ng		86

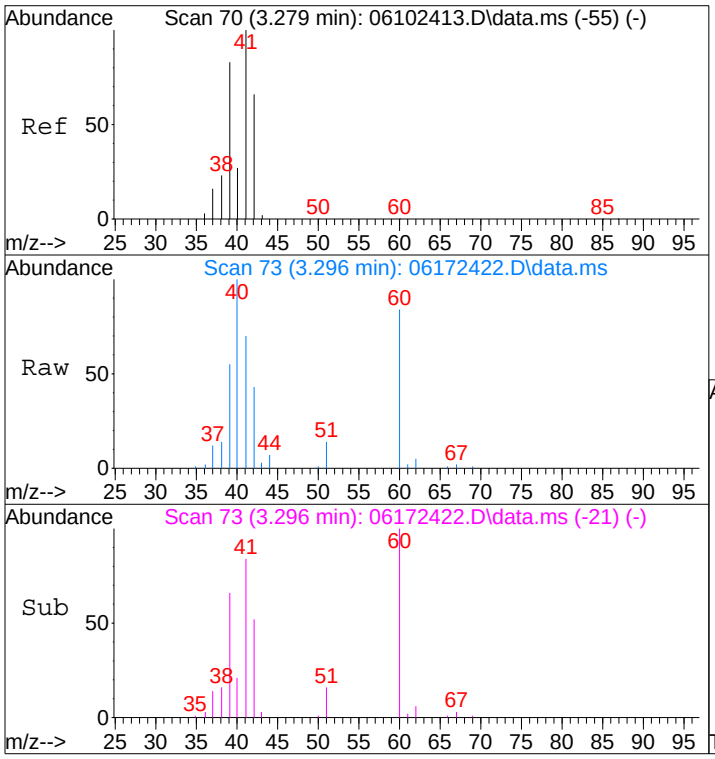
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172422.D Vial: 11
Acq On : 17 Jun 2024 20:36 Operator: SC
Sample : P2402249-003 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:12:21 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

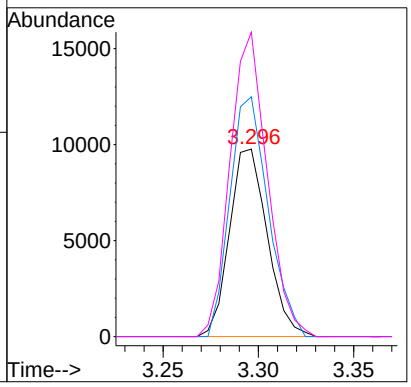


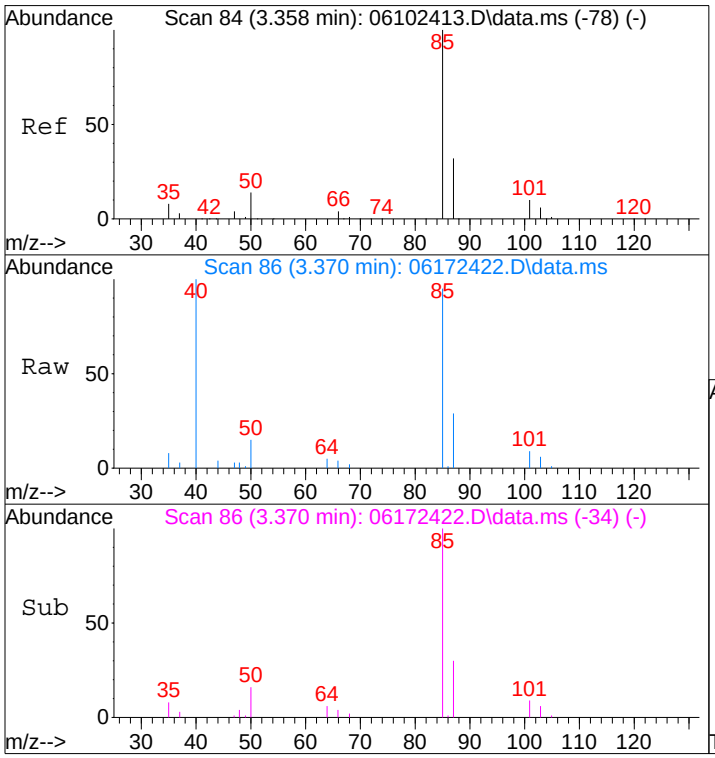


#2
Propene
Concen: 0.66 ng
RT: 3.30 min Scan# 73
Delta R.T. 0.047 min
Lab File: 06172422.D
Acq: 17 Jun 2024 20:36

Tgt Ion: 42 Resp: 13477

Ion	Ratio	Lower	Upper
42	100		
39	130.0	107.3	147.3
41	159.6	134.3	174.3

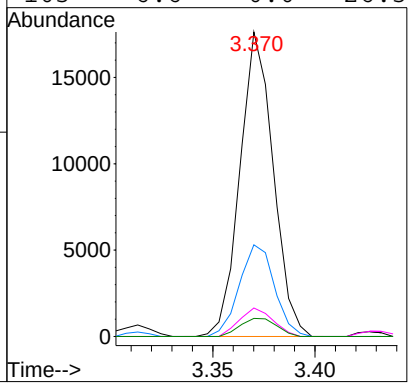


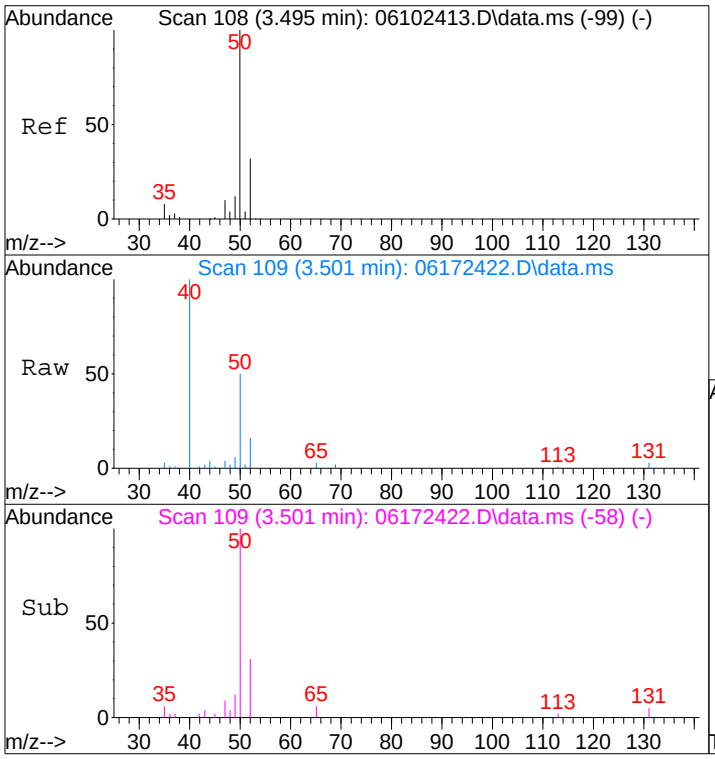


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.53 ng m
RT: 3.37 min Scan# 86
Delta R.T. 0.048 min
Lab File: 06172422.D
Acq: 17 Jun 2024 20:36

Tgt Ion: 85 Resp: 19974

Ion	Ratio	Lower	Upper
85	100		
87	31.8	12.2	52.2
101	9.4	0.0	29.8
103	6.6	0.0	26.3

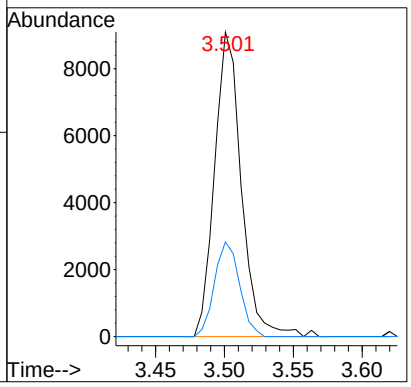


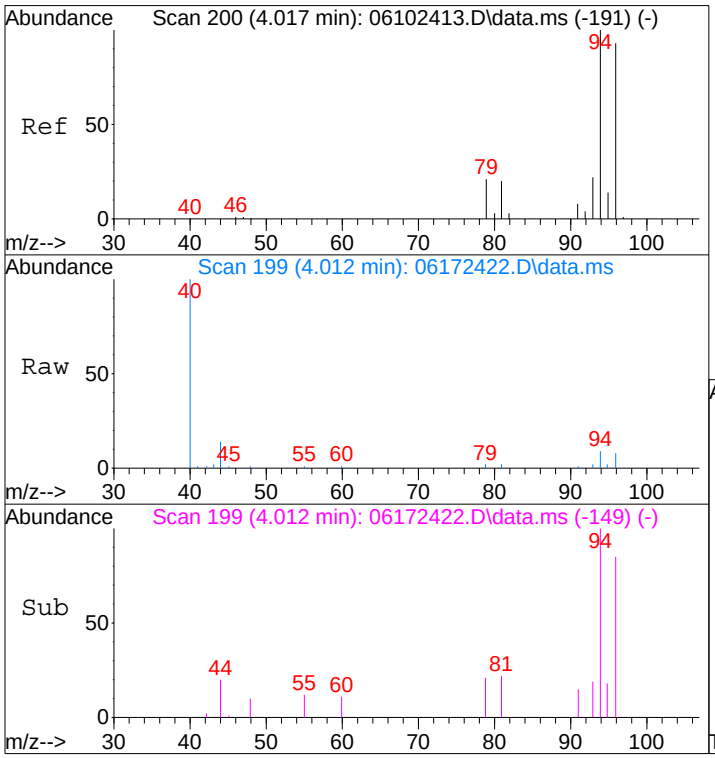


#4
Chloromethane
Concen: 0.48 ng
RT: 3.50 min Scan# 109
Delta R.T. 0.038 min
Lab File: 06172422.D
Acq: 17 Jun 2024 20:36

Tgt Ion: 50 Resp: 12273

Ion	Ratio	Lower	Upper
50	100		
52	29.0	12.4	52.4

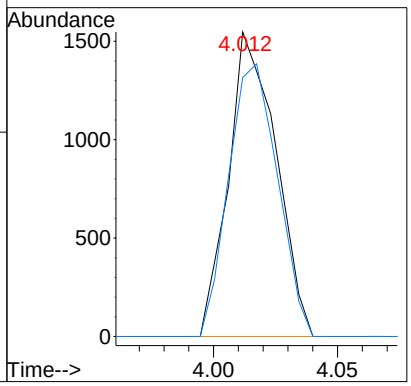


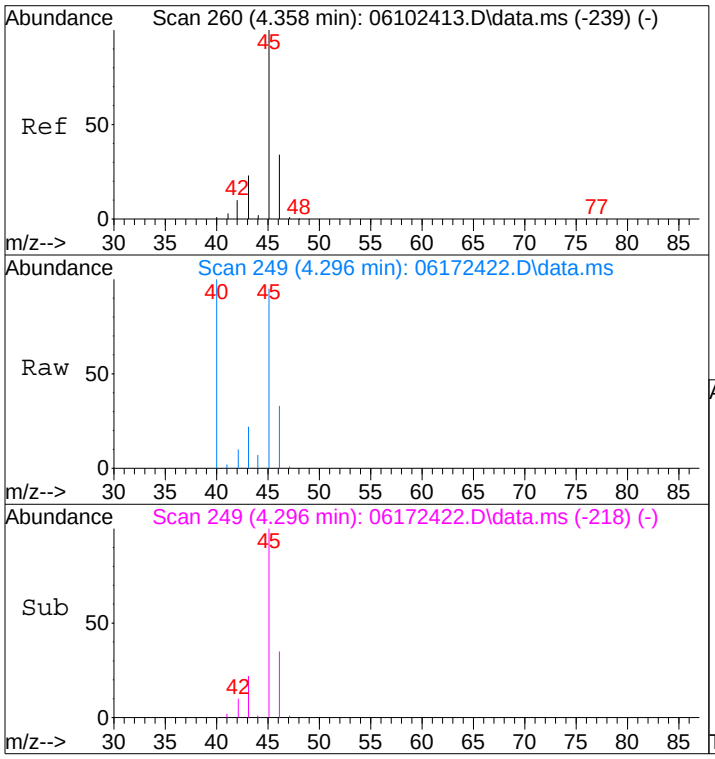


#8
Bromomethane
Concen: 0.16 ng
RT: 4.01 min Scan# 199
Delta R.T. 0.032 min
Lab File: 06172422.D
Acq: 17 Jun 2024 20:36

Tgt Ion: 94 Resp: 2061

Ion	Ratio	Lower	Upper
94	100		
96	92.7	73.2	113.2

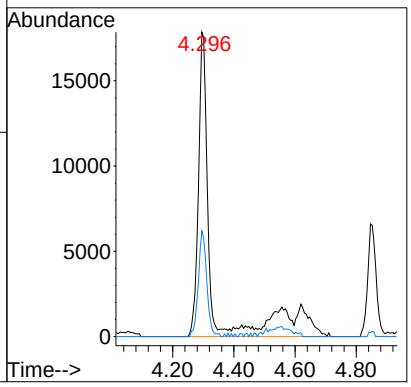


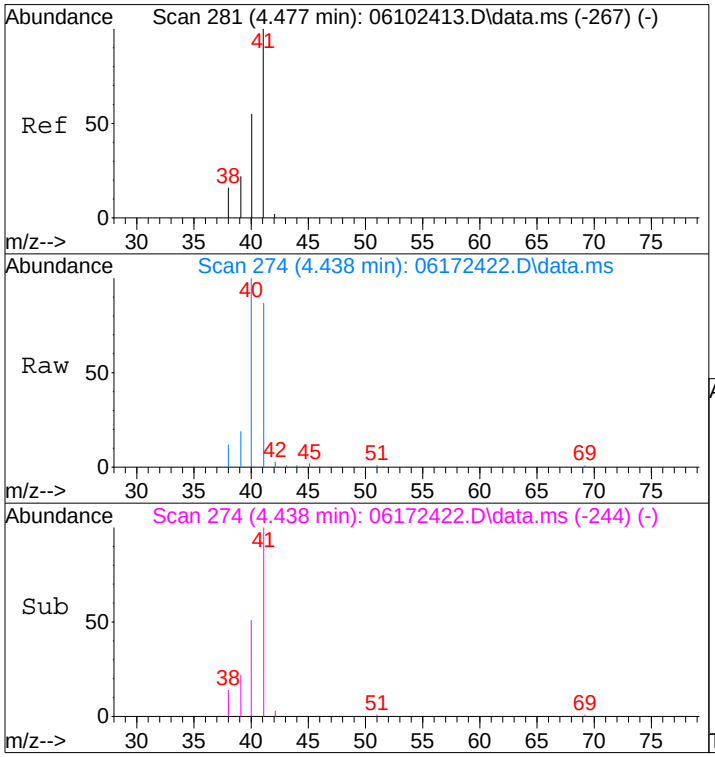


#10
Ethanol
Concen: 3.33 ng
RT: 4.30 min Scan# 249
Delta R.T. -0.071 min
Lab File: 06172422.D
Acq: 17 Jun 2024 20:36

Tgt Ion: 45 Resp: 51964

Ion	Ratio	Lower	Upper
45	100		
46	23.0	13.5	53.5

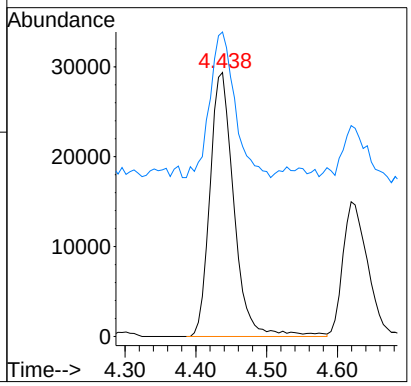


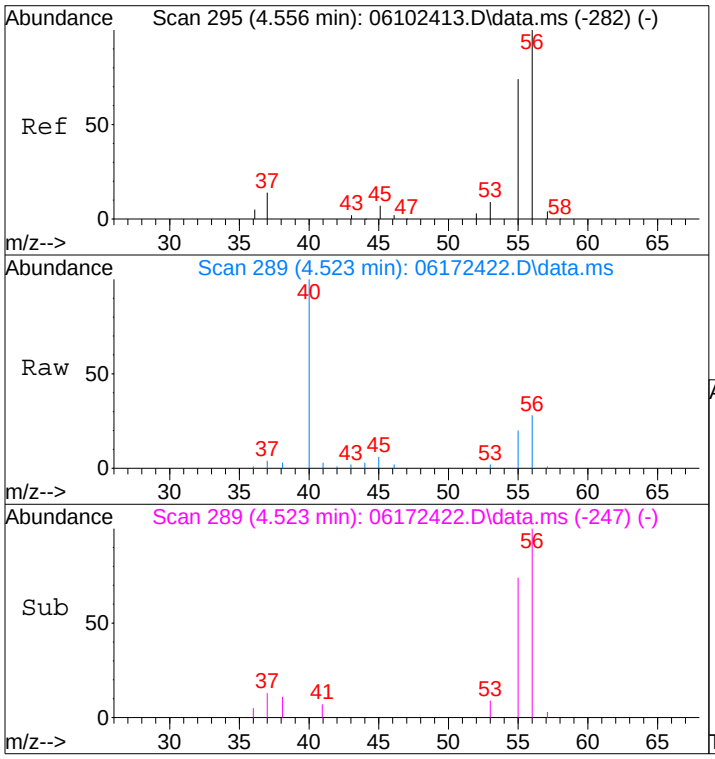


#11
Acetonitrile
Concen: 1.77 ng
RT: 4.44 min Scan# 274
Delta R.T. -0.030 min
Lab File: 06172422.D
Acq: 17 Jun 2024 20:36

Tgt Ion: 41 Resp: 69433

Ion	Ratio	Lower	Upper
41	100		
40	63.2	34.7	74.7

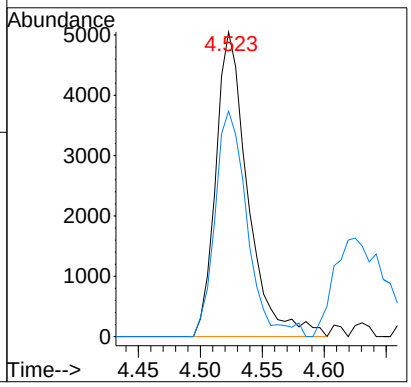


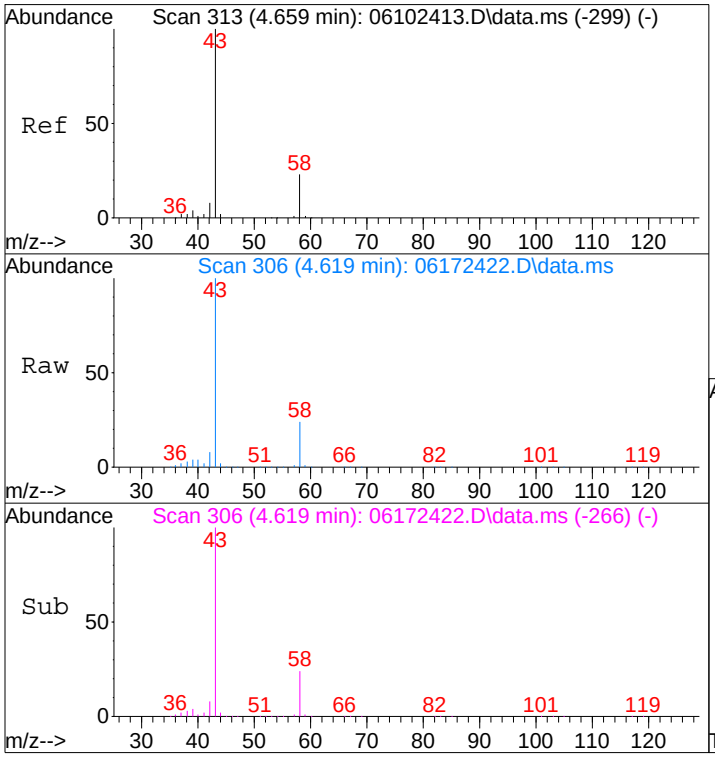


#12
Acrolein
Concen: 0.79 ng
RT: 4.52 min Scan# 289
Delta R.T. -0.013 min
Lab File: 06172422.D
Acq: 17 Jun 2024 20:36

Tgt Ion: 56 Resp: 9098

Ion	Ratio	Lower	Upper
56	100		
55	74.0	55.5	95.5

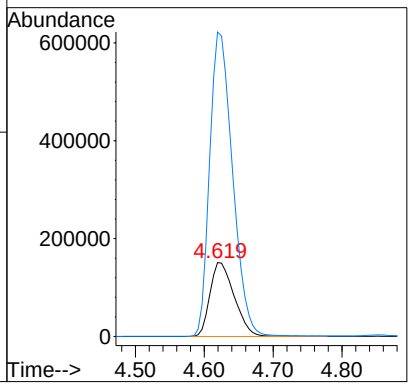


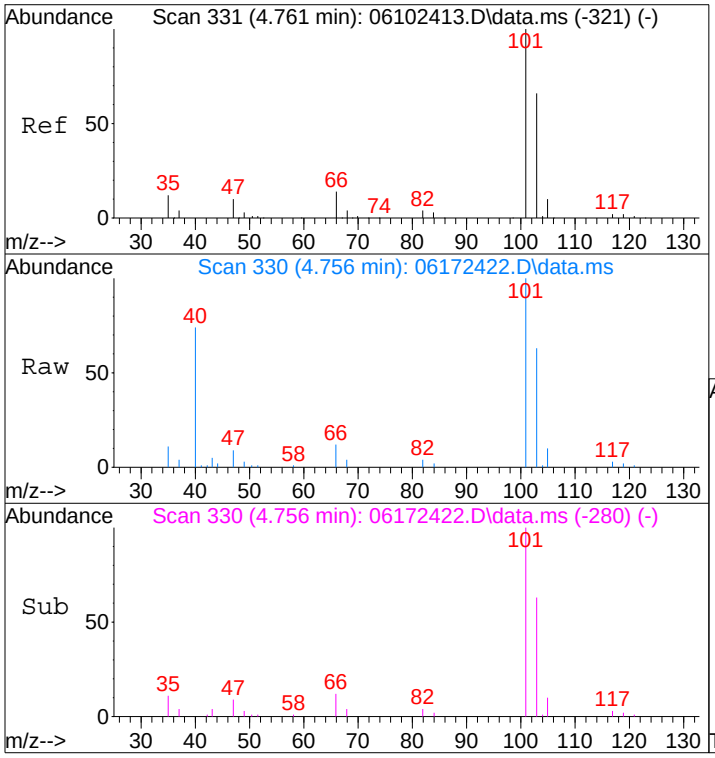


#13
Acetone
Concen: 29.66 ng
RT: 4.62 min Scan# 306
Delta R.T. -0.023 min
Lab File: 06172422.D
Acq: 17 Jun 2024 20:36

Tgt Ion: 58 Resp: 370020

Ion	Ratio	Lower	Upper
58	100		
43	389.8	400.7	460.7#

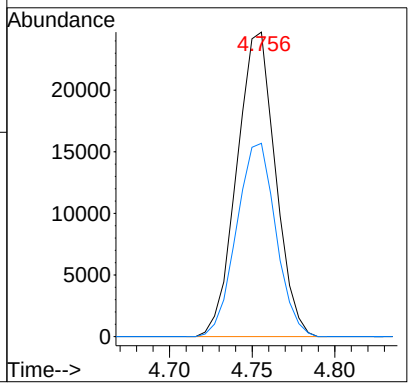


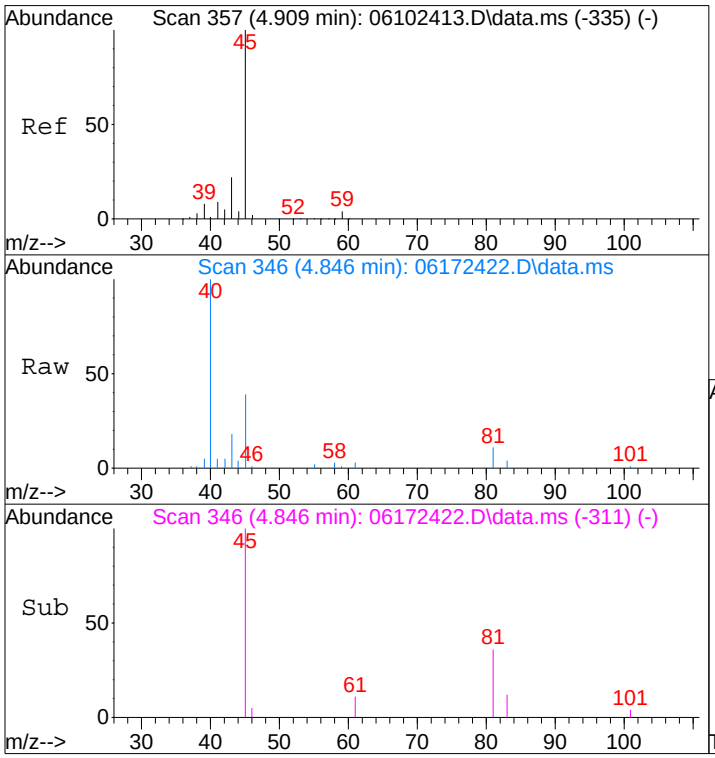


#14
Trichlorofluoromethane
Concen: 1.05 ng
RT: 4.76 min Scan# 330
Delta R.T. 0.035 min
Lab File: 06172422.D
Acq: 17 Jun 2024 20:36

Tgt Ion:101 Resp: 40188

Ion	Ratio	Lower	Upper
101	100		
103	64.8	44.9	84.9

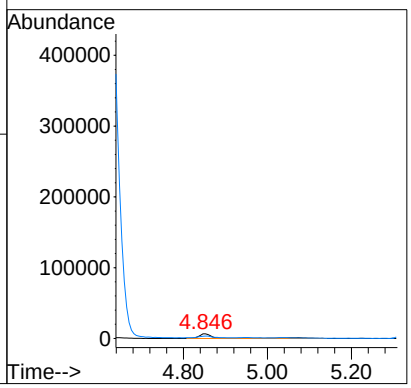


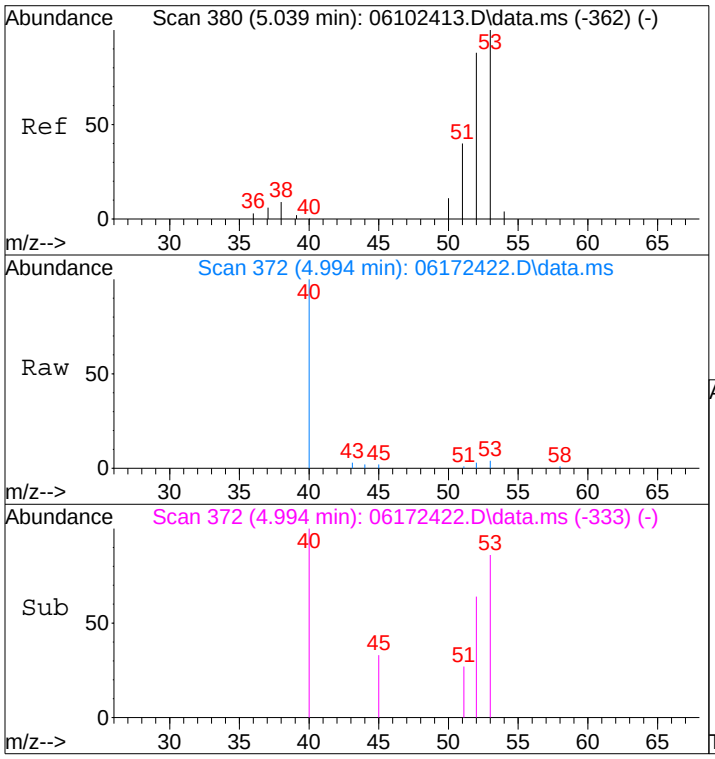


#15
2-Propanol (Isopropanol)
Concen: 0.37 ng
RT: 4.85 min Scan# 346
Delta R.T. -0.054 min
Lab File: 06172422.D
Acq: 17 Jun 2024 20:36

Tgt Ion: 45 Resp: 18786

Ion	Ratio	Lower	Upper
45	100		
43	82.9	2.5	42.5#

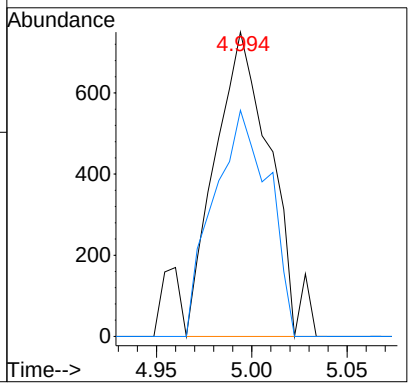


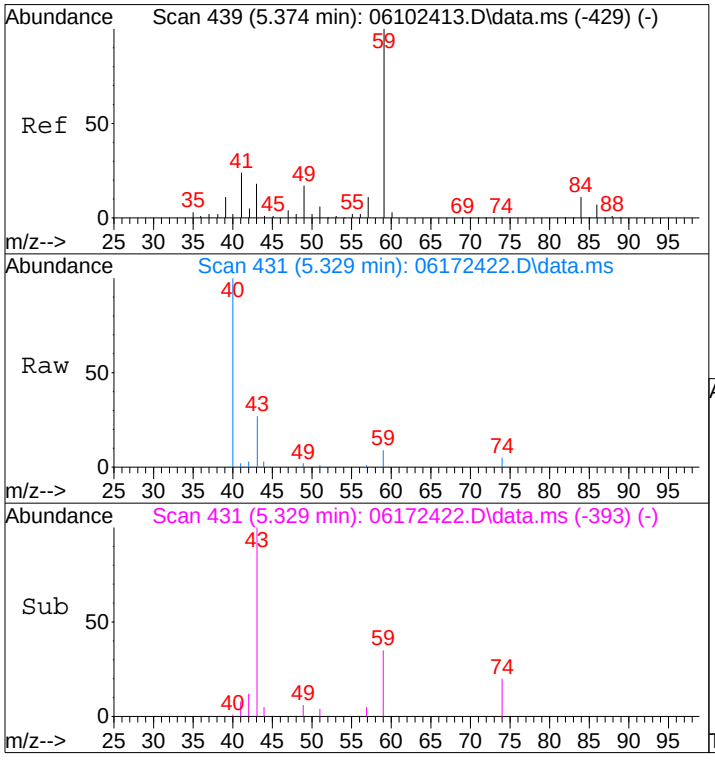


#16
Acrylonitrile
Concen: 0.06 ng
RT: 4.99 min Scan# 372
Delta R.T. -0.030 min
Lab File: 06172422.D
Acq: 17 Jun 2024 20:36

Tgt Ion: 53 Resp: 1514

Ion	Ratio	Lower	Upper
53	100		
52	74.3	67.3	107.3

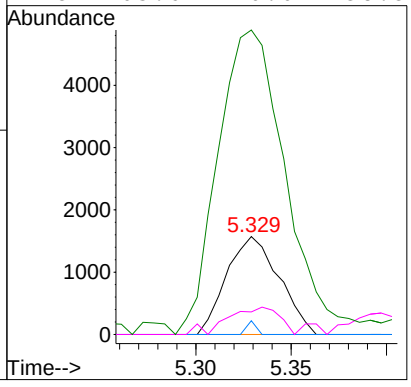


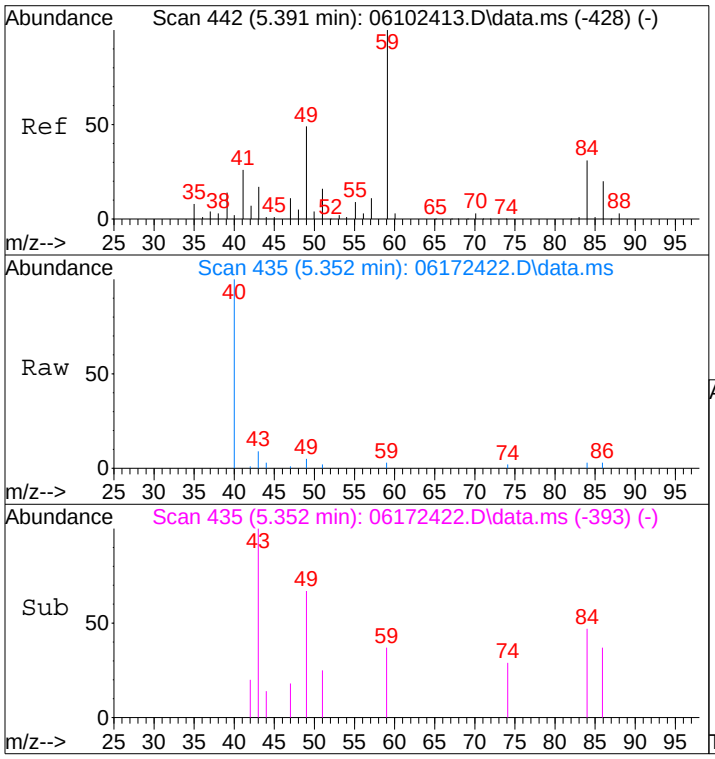


#18
2-Methyl-2-Propanol (tert-Butyl Alcohol
Concen: 0.08 ng
RT: 5.33 min Scan# 431
Delta R.T. -0.032 min
Lab File: 06172422.D
Acq: 17 Jun 2024 20:36

Tgt Ion: 59 Resp: 3014

Ion	Ratio	Lower	Upper
59	100		
57	2.5	0.0	30.9
41	27.7	0.9	40.9
43	405.6	0.0	38.3#

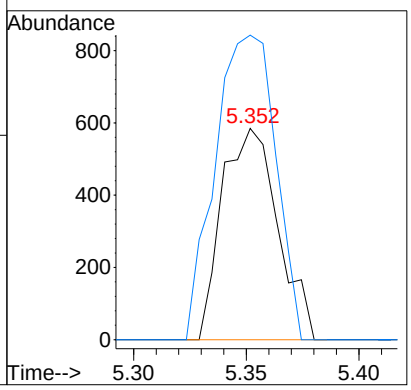


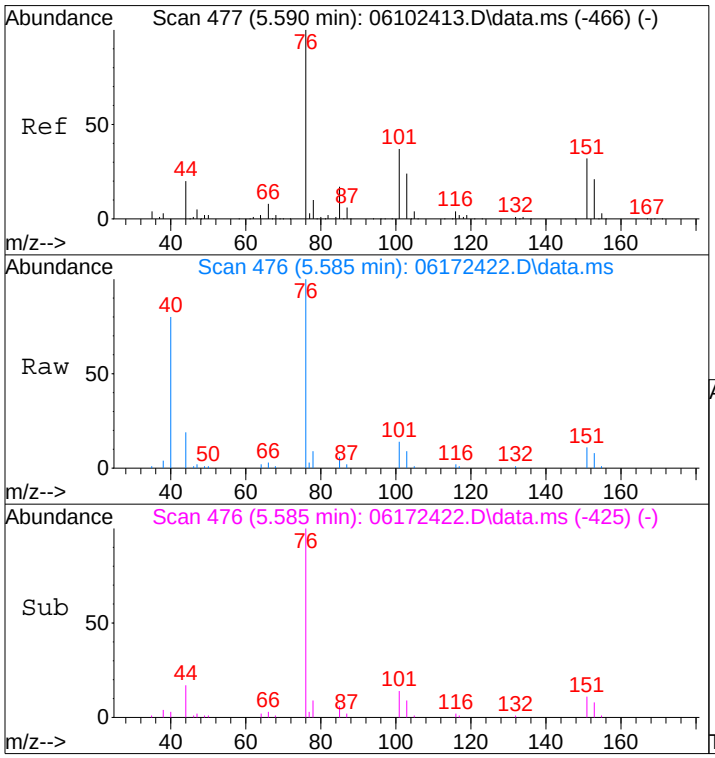


#19
Methylene Chloride
Concen: 0.06 ng
RT: 5.35 min Scan# 435
Delta R.T. -0.009 min
Lab File: 06172422.D
Acq: 17 Jun 2024 20:36

Tgt Ion: 84 Resp: 1010

Ion	Ratio	Lower	Upper
84	100		
49	156.0	132.9	182.9

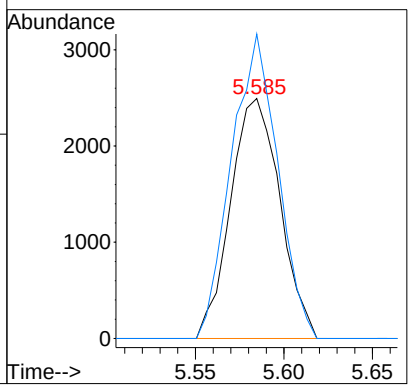


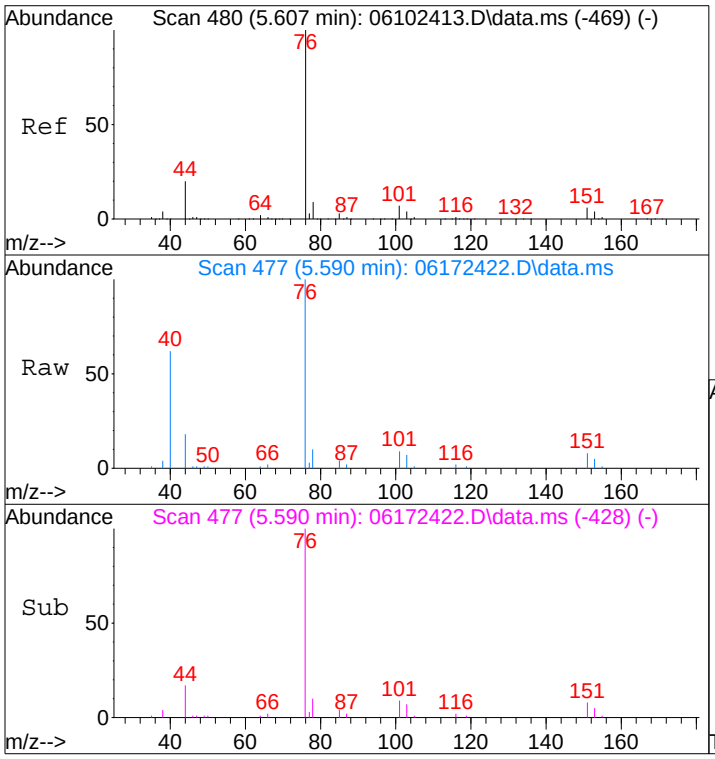


#21
Trichlorotrifluoroethane
Concen: 0.30 ng
RT: 5.58 min Scan# 476
Delta R.T. 0.038 min
Lab File: 06172422.D
Acq: 17 Jun 2024 20:36

Tgt Ion:151 Resp: 4844

Ion	Ratio	Lower	Upper
151	100		
101	118.9	95.0	135.0

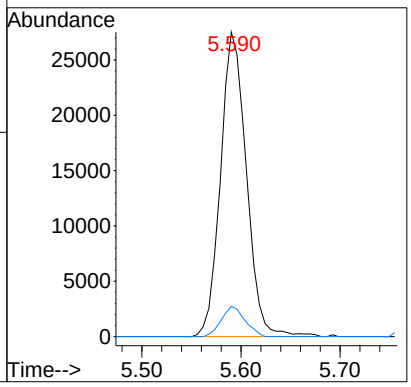


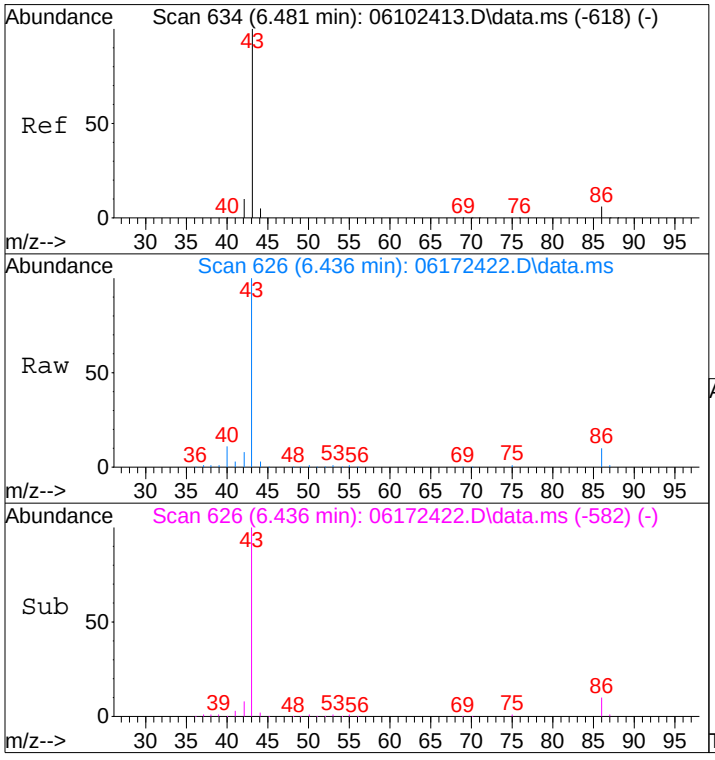


#22
Carbon Disulfide
Concen: 0.88 ng
RT: 5.59 min Scan# 477
Delta R.T. 0.027 min
Lab File: 06172422.D
Acq: 17 Jun 2024 20:36

Tgt Ion: 76 Resp: 49893

Ion	Ratio	Lower	Upper
76	100		
78	9.1	0.0	29.6

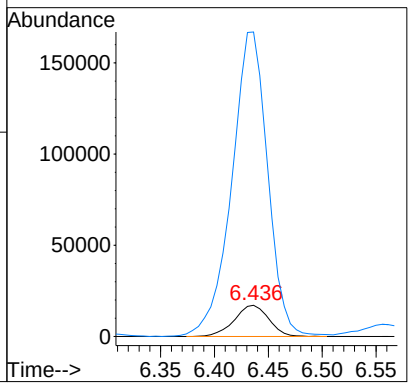


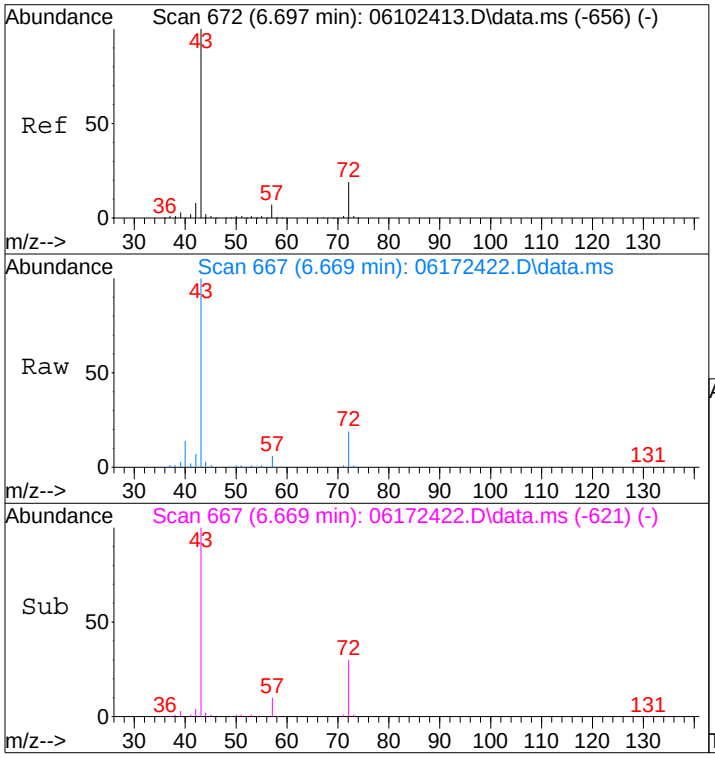


#26
Vinyl Acetate
Concen: 13.23 ng
RT: 6.44 min Scan# 626
Delta R.T. -0.003 min
Lab File: 06172422.D
Acq: 17 Jun 2024 20:36

Tgt Ion: 86 Resp: 38087

Ion	Ratio	Lower	Upper
86	100		
43	1020.1	1668.9	1708.9#

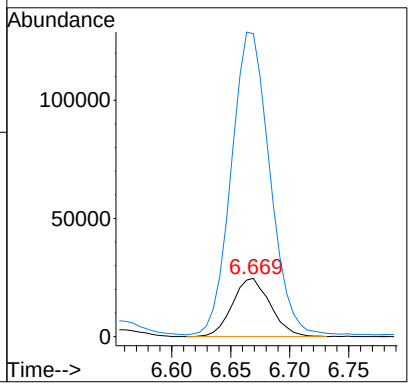


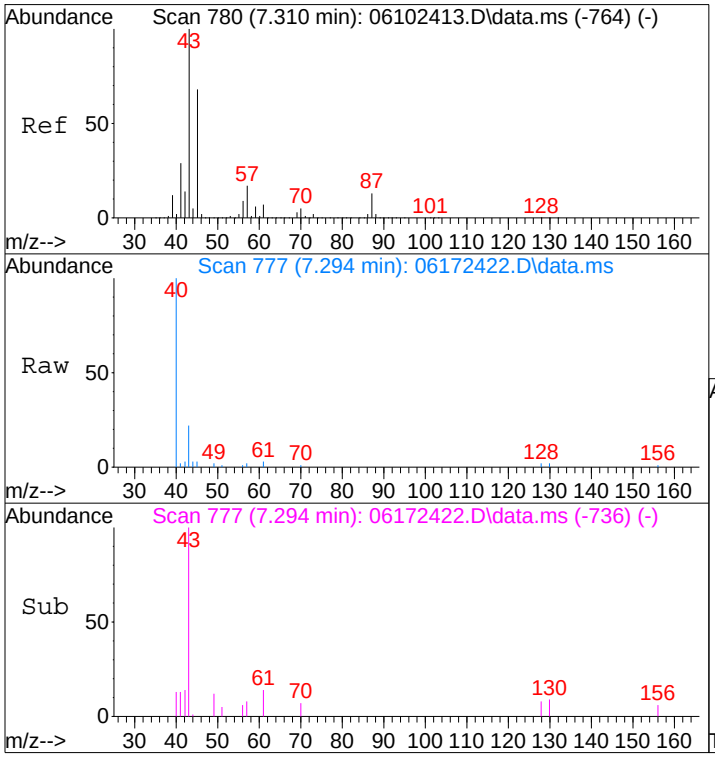


#27
2-Butanone (MEK)
Concen: 5.57 ng
RT: 6.67 min Scan# 667
Delta R.T. 0.011 min
Lab File: 06172422.D
Acq: 17 Jun 2024 20:36

Tgt Ion: 72 Resp: 54951

Ion	Ratio	Lower	Upper
72	100		
43	528.3	506.8	546.8

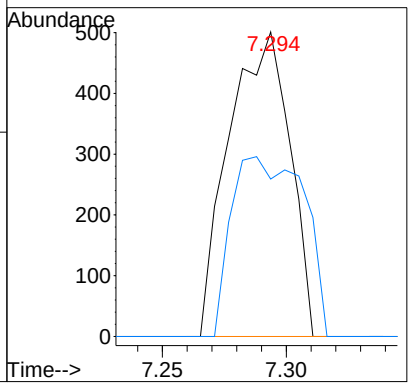


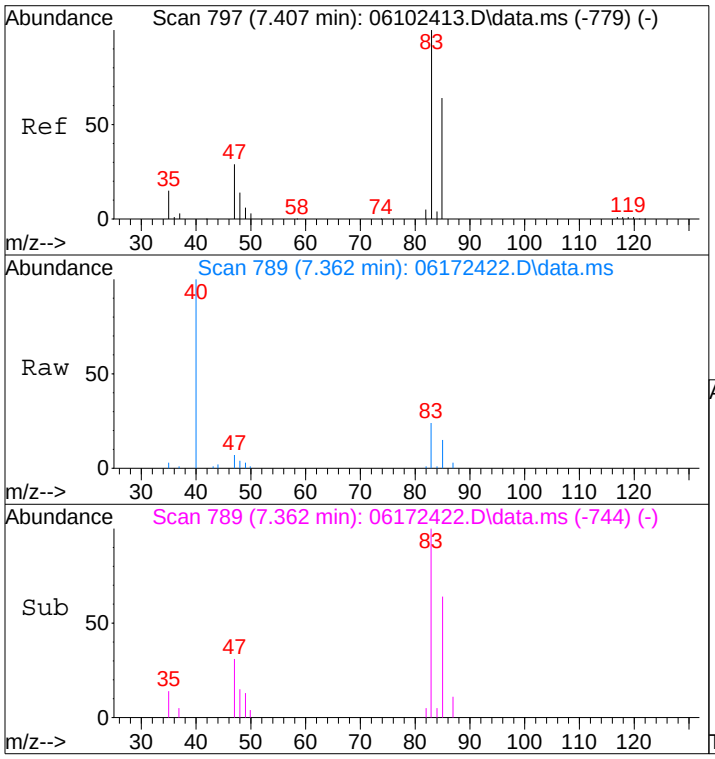


#30
Ethyl Acetate
Concen: 0.14 ng
RT: 7.29 min Scan# 777
Delta R.T. 0.034 min
Lab File: 06172422.D
Acq: 17 Jun 2024 20:36

Tgt Ion: 61 Resp: 855

Ion	Ratio	Lower	Upper
61	100		
70	70.4	53.5	93.5

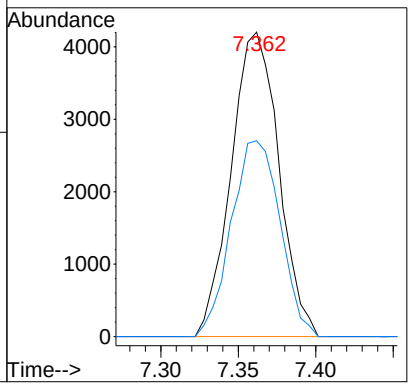


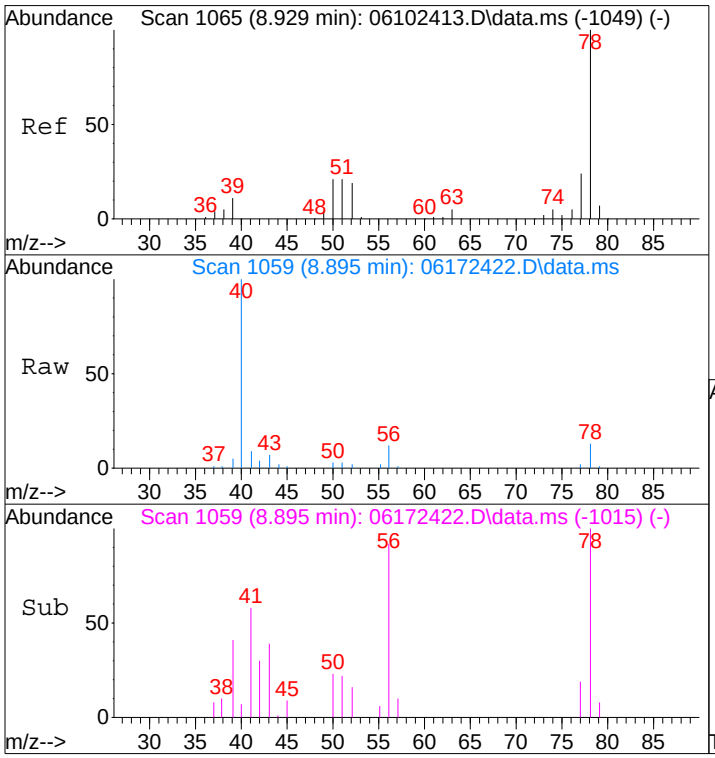


#32
Chloroform
Concen: 0.29 ng
RT: 7.36 min Scan# 789
Delta R.T. 0.007 min
Lab File: 06172422.D
Acq: 17 Jun 2024 20:36

Tgt Ion: 83 Resp: 9003

Ion	Ratio	Lower	Upper
83	100		
85	66.0	44.4	84.4

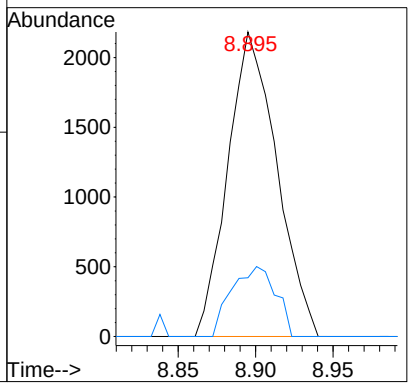


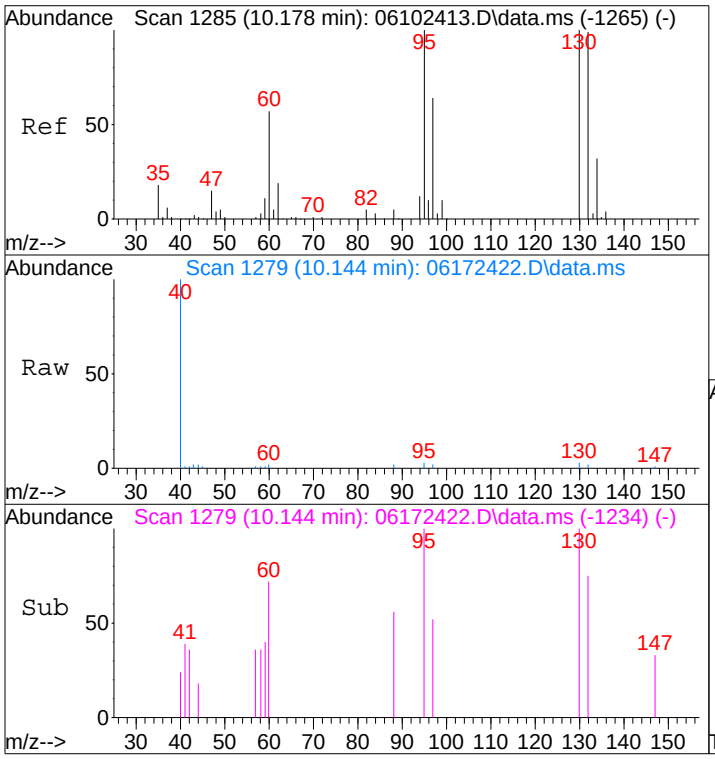


#41
Benzene
Concen: 0.07 ng
RT: 8.89 min Scan# 1059
Delta R.T. -0.002 min
Lab File: 06172422.D
Acq: 17 Jun 2024 20:36

Tgt Ion: 78 Resp: 4797

Ion	Ratio	Lower	Upper
78	100		
77	20.8	4.0	44.0

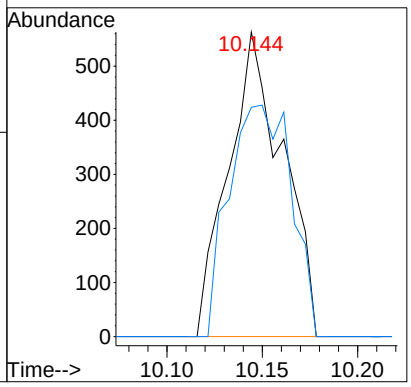


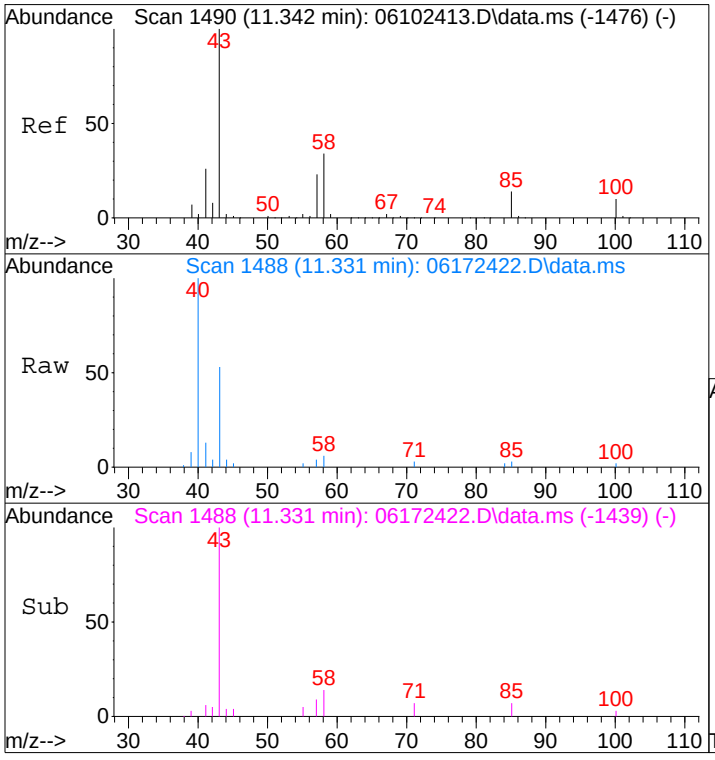


#47
Trichloroethene
Concen: 0.06 ng
RT: 10.14 min Scan# 1279
Delta R.T. 0.005 min
Lab File: 06172422.D
Acq: 17 Jun 2024 20:36

Tgt Ion:130 Resp: 1123

Ion	Ratio	Lower	Upper
130	100		
132	87.2	77.9	117.9

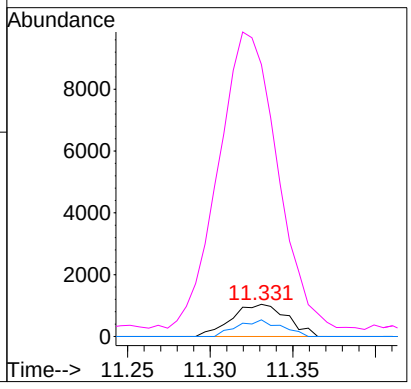


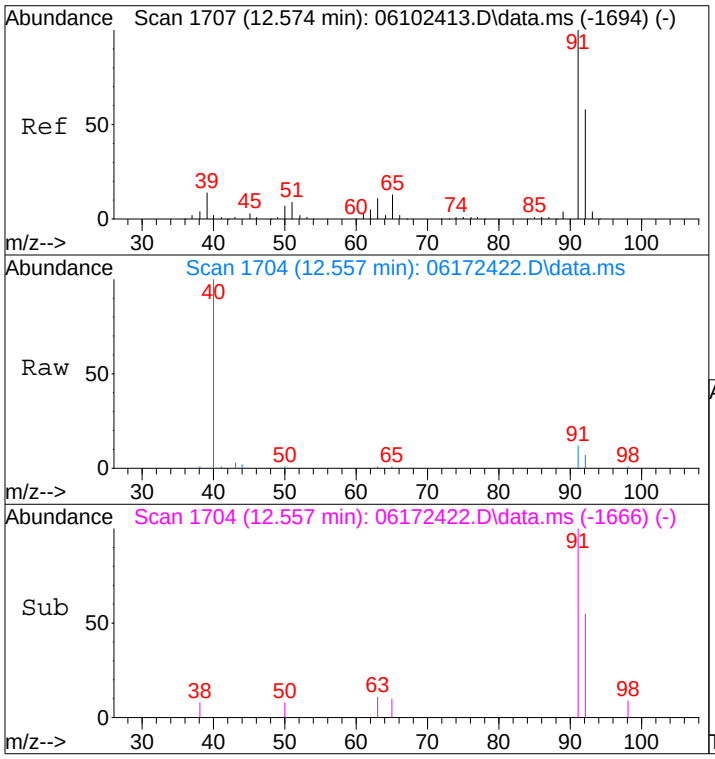


#53
4-Methyl-2-pentanone
Concen: 0.17 ng
RT: 11.33 min Scan# 1488
Delta R.T. 0.028 min
Lab File: 06172422.D
Acq: 17 Jun 2024 20:36

Tgt Ion: 58 Resp: 2426

Ion	Ratio	Lower	Upper
58	100		
85	40.8	34.5	51.7
43	1028.2	236.1	354.1#

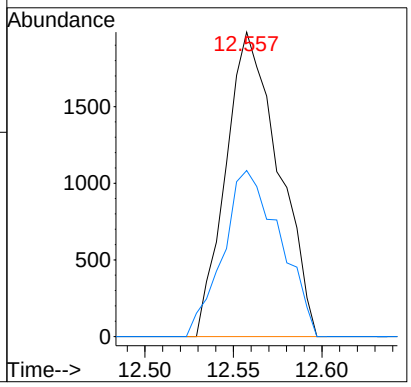


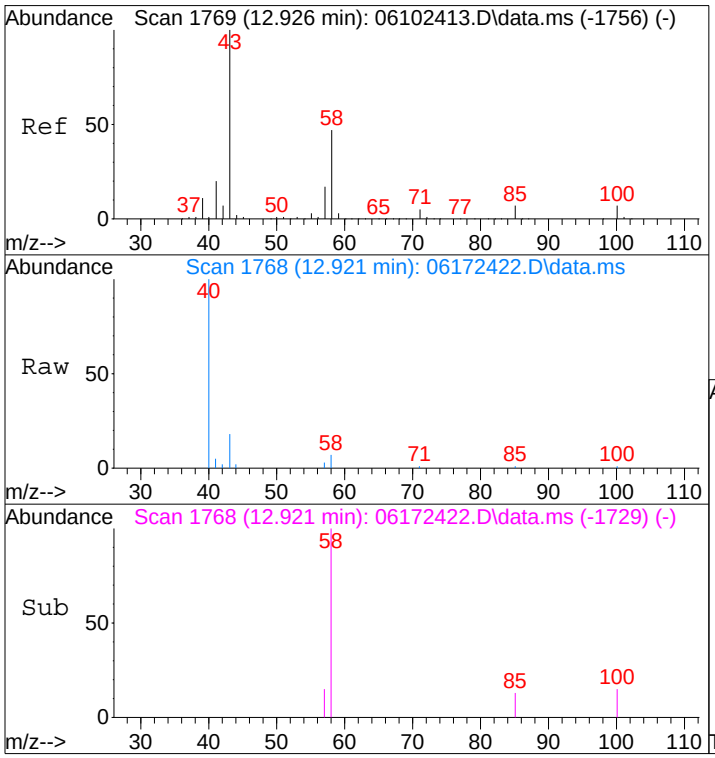


#58
Toluene
Concen: 0.06 ng
RT: 12.56 min Scan# 1704
Delta R.T. -0.034 min
Lab File: 06172422.D
Acq: 17 Jun 2024 20:36

Tgt Ion: 91 Resp: 4134

Ion	Ratio	Lower	Upper
91	100		
92	58.7	37.4	77.4

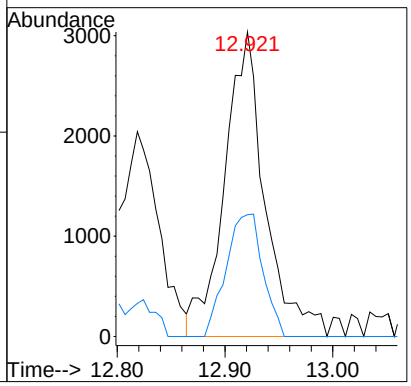




#59
2-Hexanone
Concen: 0.19 ng
RT: 12.92 min Scan# 1768
Delta R.T. -0.028 min
Lab File: 06172422.D
Acq: 17 Jun 2024 20:36

Tgt Ion: 43 Resp: 7903

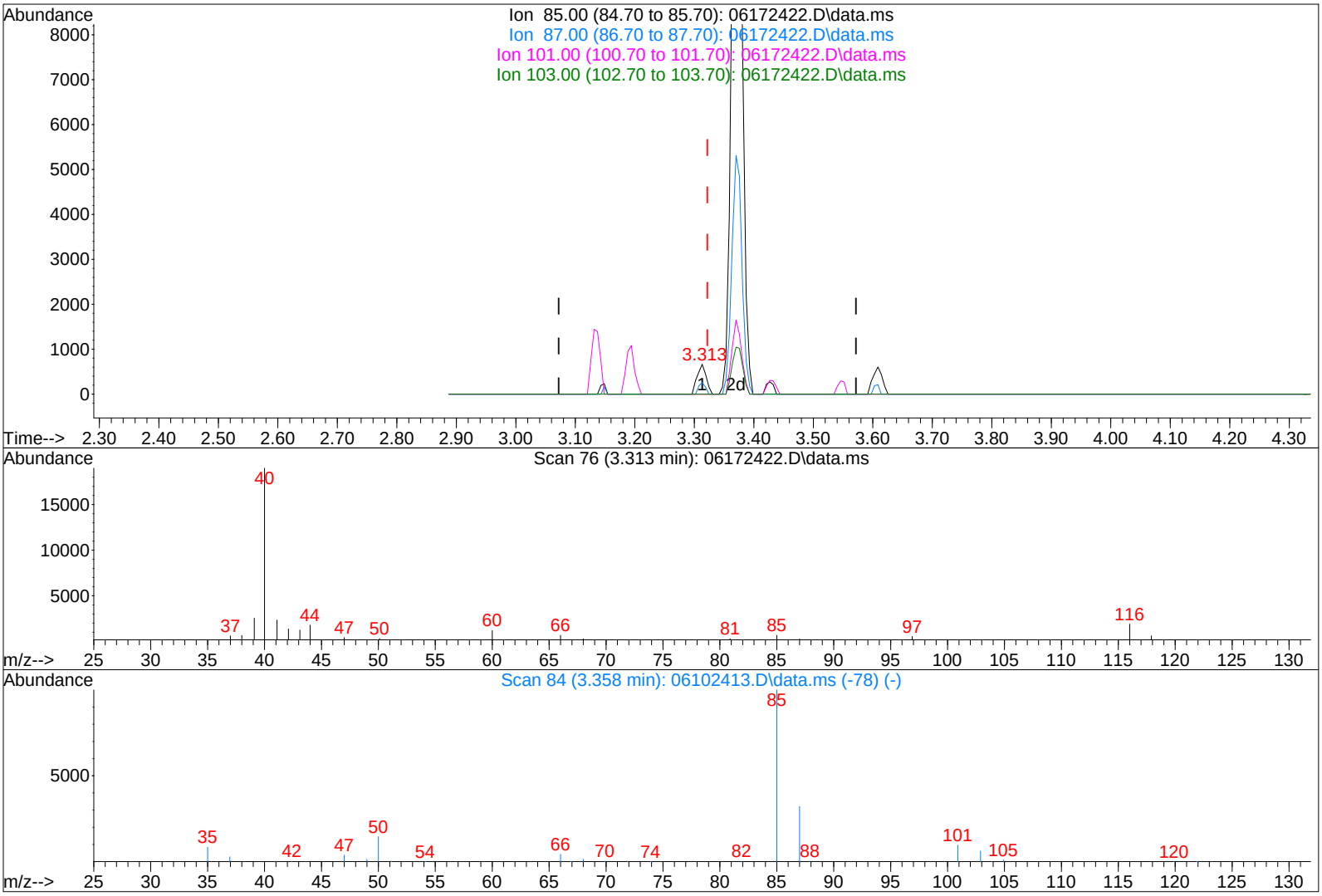
Ion	Ratio	Lower	Upper
43	100		
58	36.6	25.9	65.9



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\17\06172422.D Vial: 11
Acq On : 17 Jun 2024 20:36 Operator: SC
Sample : P2402249-003 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 10:43:28 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06172422.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.313min (-0.009) 0.02ng

response 698

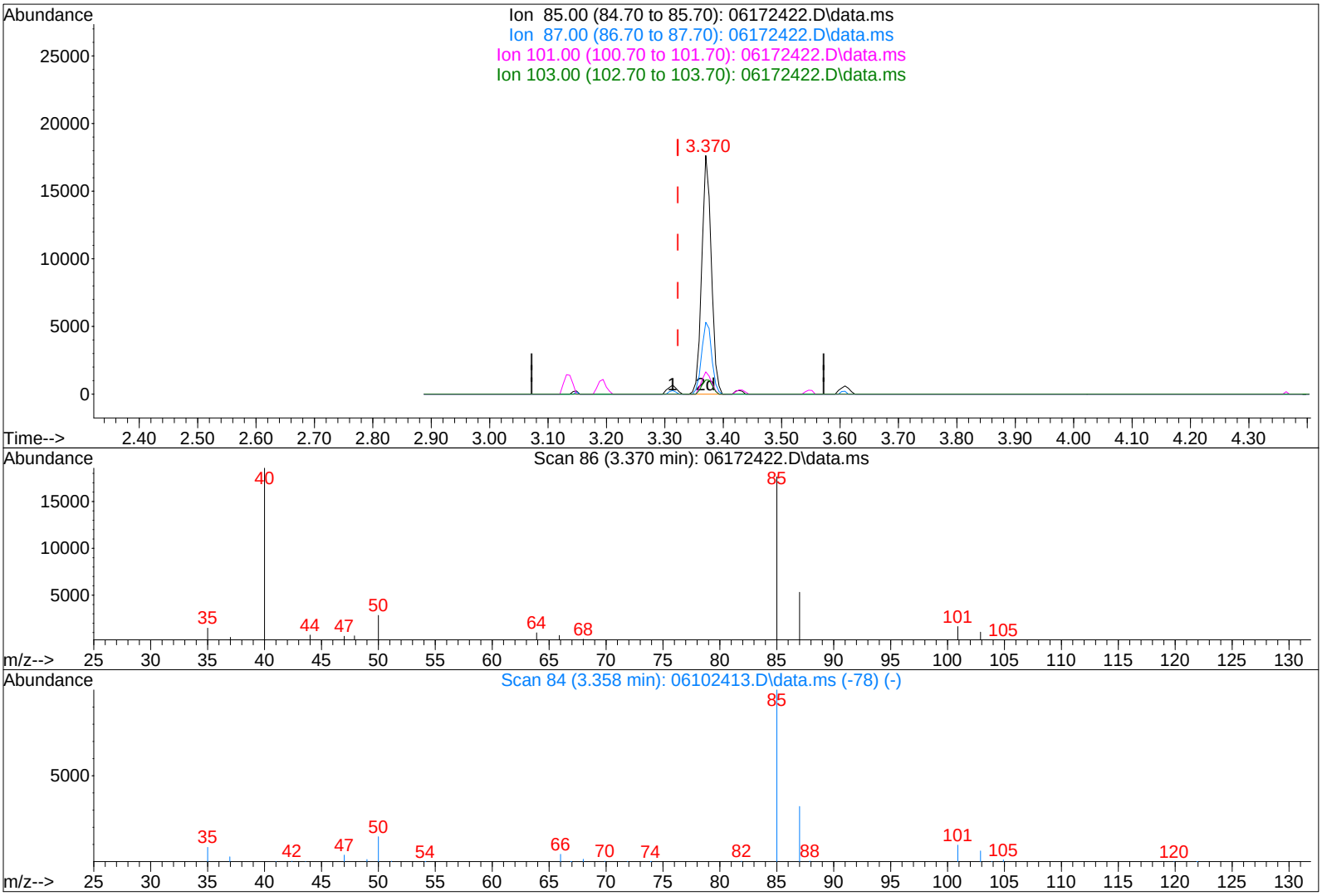
Ion	Exp%	Act%
85.00	100	100
87.00	32.20	28.94
101.00	9.80	0.00
103.00	6.30	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\17\06172422.D Vial: 11
Acq On : 17 Jun 2024 20:36 Operator: SC
Sample : P2402249-003 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 10:43:28 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06172422.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.370min (+0.048) 0.53ng m

response 19974

MJ 6/28/24

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	31.81
101.00	9.80	9.42
103.00	6.30	6.56

MP

CG 6/29/24

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172422.D Vial: 11
Acq On : 17 Jun 2024 20:36 Operator: SC
Sample : P2402249-003 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 14:49:15 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

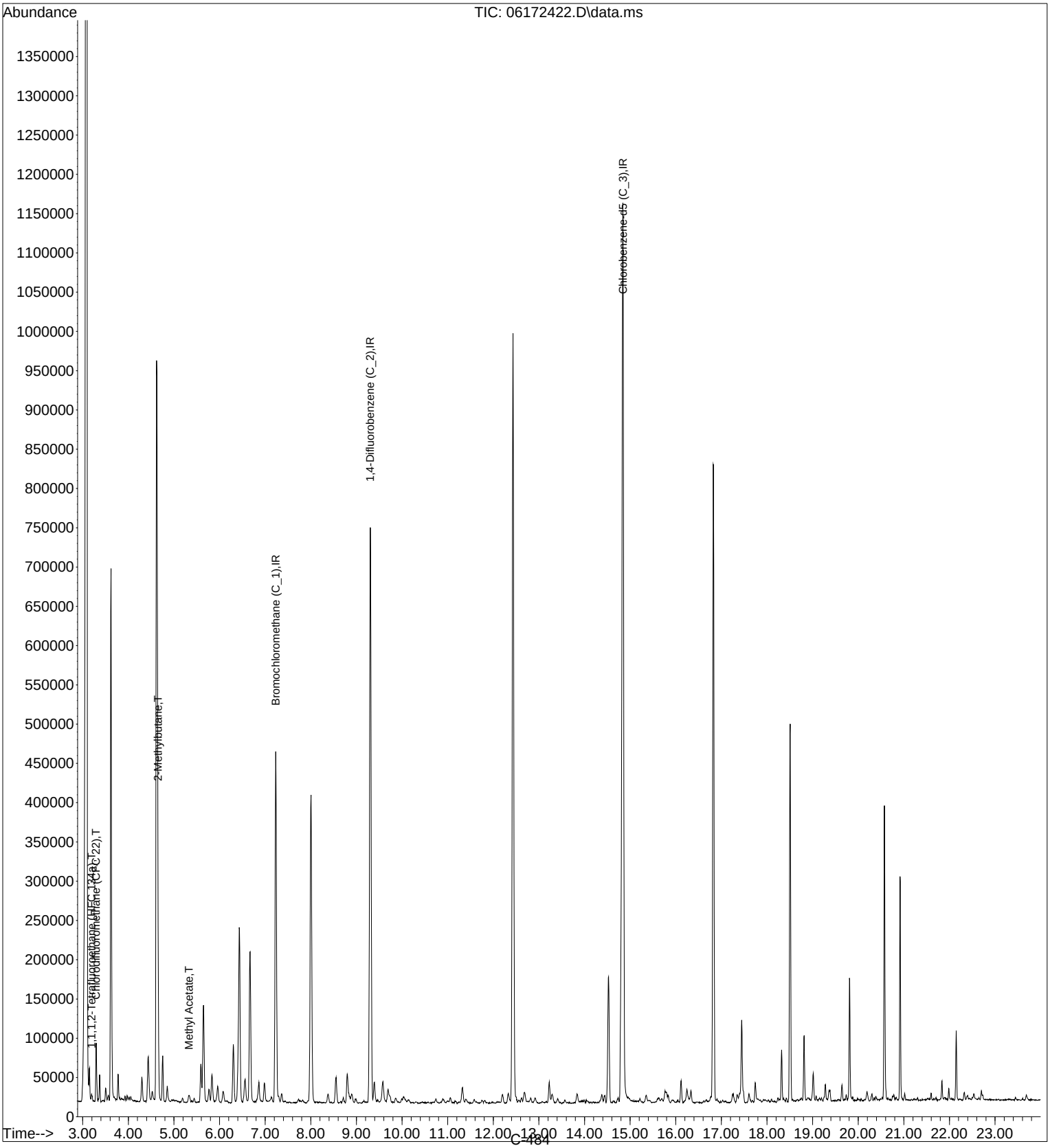
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	160575	12.500	ng		-0.02
16) 1,4-Difluorobenzene (C 2)	9.30	114	709948	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.85	54	165417	12.500	ng		0.00
Target Compounds							Qvalue
2) Chloropentafluoroethane	3.15	85	144	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.19	83	1940	0.118	ng	#	1
4) 1,1-Difluoroethane	0.00	65	0	N.D.			
5) Chlorodifluoromethane ...	3.29	67	656	0.120	ng	#	23
6) 1-Chloro-1,1-Difluoroe...	3.50	65	580	N.D.			
7) Dichlorofluoromethane ...	0.00	67	0	N.D.			
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	4.61	83	310	N.D.			
10) 2-Methylbutane	4.65	57	10592	0.553	ng	#	1
11) Methyl Acetate	5.33	43	12226	0.226	ng	#	82
12) 2-Methylpentane	6.41	71	238	N.D.			
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	8.98	84	917	N.D.			
17) 2,3-Dimethylpentane	9.57	56	227	N.D.			
18) Dibromomethane	9.81	174	70	N.D.			
20) Methyl Cyclohexane	11.40	55	802	N.D.			
21) 1,3-Dichloropropane	0.00	76	0	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	0.00	75	0	N.D.			
25) Bromobenzene	17.03	77	107	N.D.			
26) 2-Chlorotoluene	17.61	91	893	N.D.			
27) 4-Chlorotoluene	17.68	91	1728	N.D.			
28) Indane	19.01	117	1741	N.D.			
29) Indene	0.00	115	0	N.D.			
30) 1,2,4,5-Tetramethylben...	20.22	119	197	N.D.			
31) 1,2,3,4-Tetramethylben...	20.22	119	197	N.D.			
32) 1,2,3,5-Tetramethylben...	20.61	119	566	N.D.			
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172422.D Vial: 11
Acq On : 17 Jun 2024 20:36 Operator: SC
Sample : P2402249-003 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:49:15 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\17\
Data File : 06172422.D
Acq On : 17 Jun 2024 20:36
Operator : SC
Sample : P2402249-003 (400mL)
Misc : S37-06062402
ALS Vial : 11 Sample Multiplier: 1

MJ 6/28/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06172422.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.080	15	35	44	rBV	6891836	12230834	100.00%	55.190%
2	3.149	44	47	52	rVV	42378	53746	0.44%	0.243%
3	3.194	52	55	61	rVB3	8974	14797	0.12%	0.067%
4	3.296	68	73	80	rBV	74656	109039	0.89%	0.492%
5	3.370	82	86	91	rVB	34998	42587	0.35%	0.192%
6	3.501	104	109	115	rBV2	17440	30614	0.25%	0.138%
7	3.563	115	120	124	rVV3	7481	13375	0.11%	0.060%
8	3.620	124	130	148	rVV	677518	1034378	8.46%	4.667%
9	3.773	153	157	163	rBV	32295	45581	0.37%	0.206%
10	4.296	241	249	258	rBV	31489	58939	0.48%	0.266%
11	4.438	265	274	284	rBV	57845	138326	1.13%	0.624%
12	4.523	284	289	299	rVV3	13172	32772	0.27%	0.148%
13	4.619	299	306	323	rVV	943358	2205237	18.03%	9.951%
14	4.756	323	330	337	rVB	57802	97456	0.80%	0.440%
15	4.852	339	347	355	rBV2	19988	37617	0.31%	0.170%
16	5.187	398	406	412	rVB2	5649	11480	0.09%	0.052%
17	5.329	423	431	438	rBV4	9105	24049	0.20%	0.109%
18	5.590	471	477	481	rBV	48597	93156	0.76%	0.420%
19	5.647	481	487	500	rVV	123392	268967	2.20%	1.214%
20	5.766	500	508	514	rVV	16298	36457	0.30%	0.165%
21	5.834	514	520	530	rVV	34802	77035	0.63%	0.348%
22	5.959	533	542	550	rVB4	19980	47180	0.39%	0.213%
23	6.079	555	563	570	rBV5	14332	36456	0.30%	0.165%
24	6.300	595	602	610	rBV	74151	156966	1.28%	0.708%
25	6.431	613	625	639	rVV	223142	556063	4.55%	2.509%
26	6.561	639	648	658	rVV2	29317	78012	0.64%	0.352%
27	6.669	658	667	680	rVB	191287	437987	3.58%	1.976%
28	6.862	693	701	713	rVB	24968	58173	0.48%	0.262%
29	6.981	715	722	731	rBV	23594	49540	0.41%	0.224%
30	7.135	742	749	757	rVB5	6370	14982	0.12%	0.068%
31	7.231	757	766	775	rBV	446265	972965	7.96%	4.390%
32	7.362	783	789	794	rBV3	10249	20293	0.17%	0.092%
33	8.004	892	902	917	rVB	391850	925684	7.57%	4.177%
34	8.378	958	968	975	rBV4	11383	27037	0.22%	0.122%
35	8.554	990	999	1006	rBV	32592	73765	0.60%	0.333%
36	8.713	1020	1027	1034	rVB3	7176	15012	0.12%	0.068%
37	8.798	1034	1042	1050	rBV2	36897	95698	0.78%	0.432%
38	8.895	1055	1059	1069	rVB6	10909	27011	0.22%	0.122%
39	9.304	1121	1131	1141	rBV	731760	1710623	13.99%	7.719%
40	9.395	1141	1147	1155	rVB	25140	55092	0.45%	0.249%

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\17\
Data File : 06172422.D
Acq On : 17 Jun 2024 20:36
Operator : SC
Sample : P2402249-003 (400mL)
Misc : S37-06062402
ALS Vial : 11 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

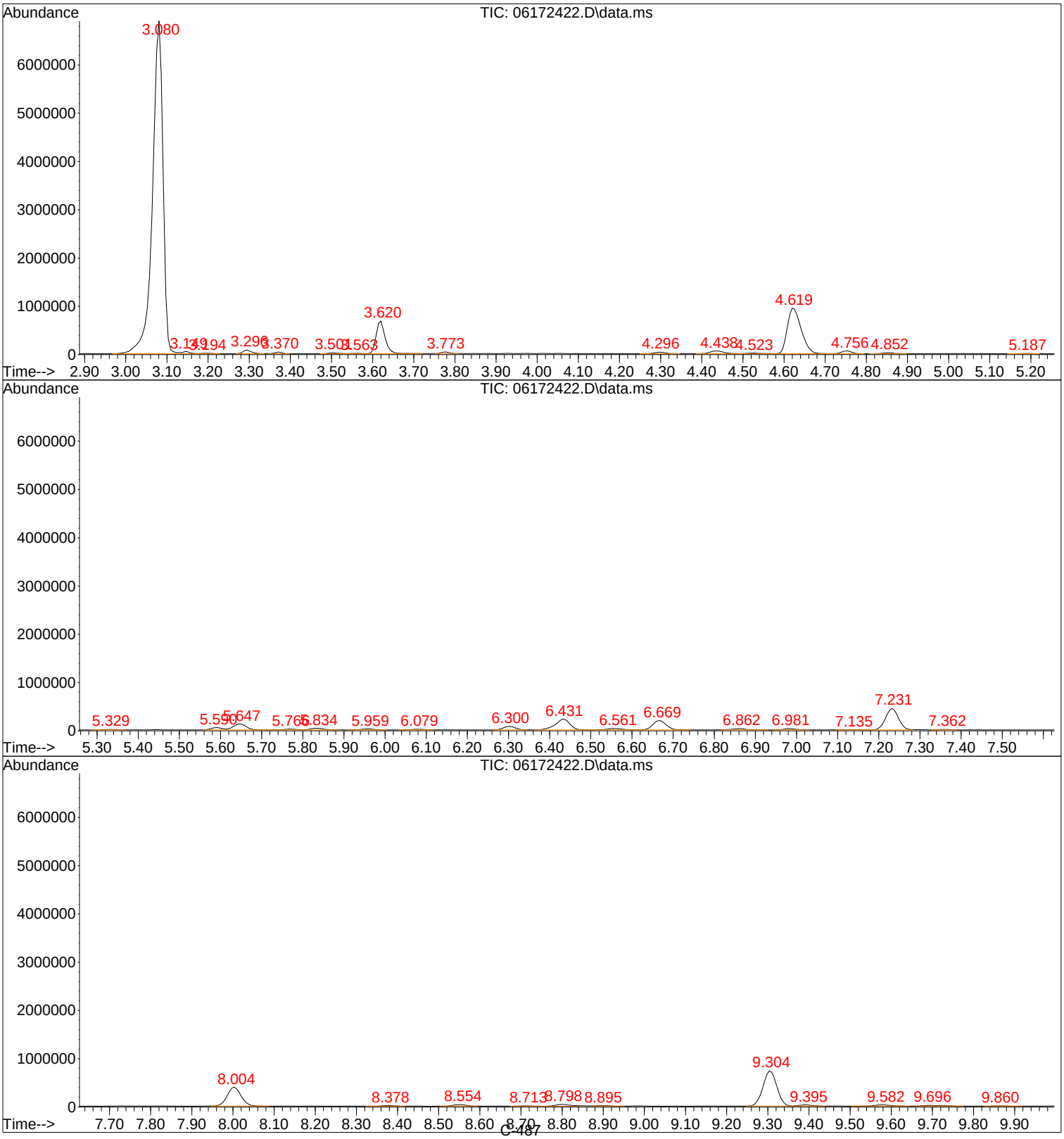
41	9.582	1166	1180	1191	rBV2	26291	74778	0.61%	0.337%
42	9.696	1193	1200	1214	rVB6	16539	55335	0.45%	0.250%
43	9.860	1223	1229	1239	rBV3	5964	16332	0.13%	0.074%

Sum of corrected areas: 22161426

Data Path : I:\MS09\DATA\2024 06\17\
Data File : 06172422.D
Acq On : 17 Jun 2024 20:36
Operator : SC
Sample : P2402249-003 (400mL)
Misc : S37-06062402
ALS Vial : 11 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\17\\
Data File : 06172422.D
Acq On : 17 Jun 2024 20:366
Operator : SCC
Sample : P2402249-003 (400mL))
Misc : S37-060624022
ALS Vial : 11 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

					|--Internal Standard---|		
TIC Top Hit name	RT	EstConc	Units	Response	# RT Resp Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172423.D Vial: 12
Acq On : 17 Jun 2024 21:09 Operator: SC
Sample : P2402249-004 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 10:44:56 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	156712	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	694434	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	160830	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	341990	12.279	ng		0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.24%				
57) Toluene-d8 (SS2)	12.43	98	774551	12.585	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.64%				
73) Bromofluorobenzene (SS3)	16.83	174	276627	12.447	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.60%				
Target Compounds							Qvalue
2) Propene	3.30	42	4567	0.228	ng	#	87
3) Dichlorodifluoromethan...	3.37	85	20673	0.561	ng		97
4) Chloromethane	3.49	50	1419	0.056	ng		91
5) 1,2-Dichloro-1,1,2,2-t...	3.61	135	415	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	4.02	94	152	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.28	45	17960	1.179	ng		70
11) Acetonitrile	0.00	41	0	N.D.	d		
12) Acrolein	4.53	56	2154	0.191	ng		94
13) Acetone	4.63	58	23173	1.903	ng	#	55
14) Trichlorofluoromethane	4.75	101	39741	1.065	ng		99
15) 2-Propanol (Isopropanol)	4.85	45	31223	0.636	ng		94
16) Acrylonitrile	0.00	53	0	N.D.	d		
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.33	59	641	N.D.			
19) Methylene Chloride	5.35	84	1310	0.076	ng		94
20) 3-Chloro-1-propene (Al...	5.45	41	289	N.D.			
21) Trichlorotrifluoroethane	5.59	151	4388	0.278	ng		93
22) Carbon Disulfide	5.60	76	19859	0.358	ng		100
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	6.29	73	188	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D.	d		
27) 2-Butanone (MEK)	6.67	72	2823	0.293	ng	#	84
28) cis-1,2-Dichloroethene	7.06	61	533	N.D.			
29) Diisopropyl Ether	7.28	87	120	N.D.			
30) Ethyl Acetate	7.28	61	24335	4.137	ng		96
31) n-Hexane	7.30	57	672	N.D.			
32) Chloroform	7.35	83	8477	0.276	ng		99
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	172	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	9.59	61	12660	No Calib		#	
40) 1-Butanol	8.80	56	4669	No Calib		#	
41) Benzene	8.89	78	4871	0.076	ng		94
42) Carbon Tetrachloride	9.07	117	735	N.D.			
43) Cyclohexane	0.00	84	0	N.D.			
44) tert-Amyl Methyl Ether	9.61	73	659	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.07	83	535	N.D.			
47) Trichloroethene	10.14	130	1550	0.083	ng		98
48) 1,4-Dioxane	10.13	88	560	N.D.			
49) 2,2,4-Trimethylpentane...	10.24	57	164	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172423.D Vial: 12
Acq On : 17 Jun 2024 21:09 Operator: SC
Sample : P2402249-004 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 10:44:56 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

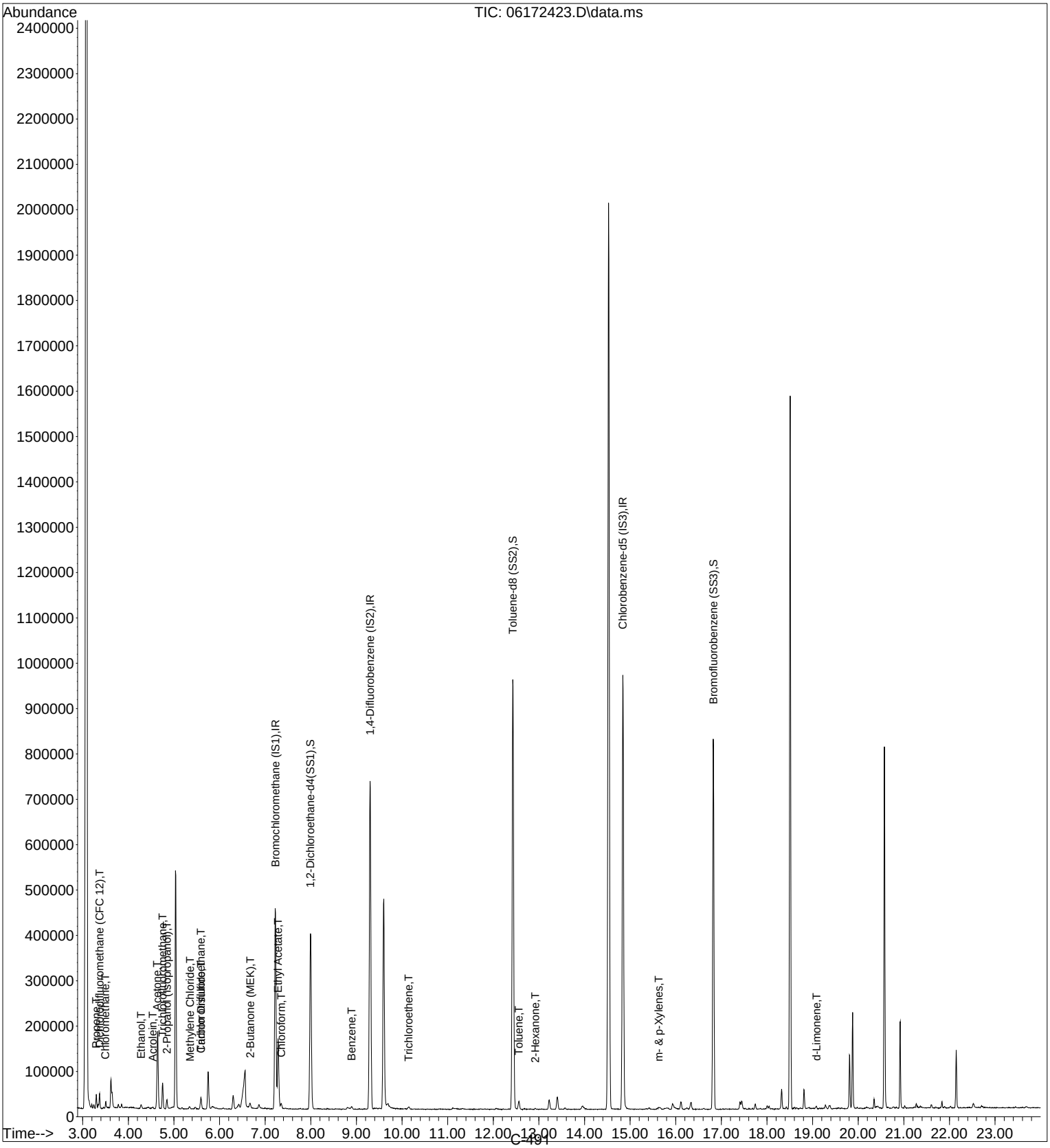
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	10.58	71	168	N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	11.33	58	376	N.D.	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
58) Toluene	12.56	91	14556	0.226 ng	99
59) 2-Hexanone	12.92	43	2555	0.063 ng	76
60) Dibromochloromethane	13.06	129	558	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	13.78	43	886	N.D.	
63) n-Octane	13.93	57	126	N.D.	
64) Tetrachloroethene	14.03	166	648	N.D.	
65) Chlorobenzene	14.90	112	768	N.D.	
66) Ethylbenzene	15.41	91	3592	N.D.	
67) m- & p-Xylenes	15.63	91	4864	0.079 ng	99
68) Bromoform	15.67	173	647	N.D.	
69) Styrene	16.11	104	1460	N.D.	
70) o-Xylene	16.24	91	2056	N.D.	
71) n-Nonane	16.61	43	1430	N.D.	
72) 1,1,2,2-Tetrachloroethane	16.21	83	379	N.D.	
74) Cumene	17.03	105	1015	N.D.	
75) alpha-Pinene	17.53	93	1021	N.D.	
76) n-Propylbenzene	17.68	91	1593	N.D.	
77) 3-Ethyltoluene	17.03	105	1015	No Calib	
78) 4-Ethyltoluene	17.86	105	1115	N.D.	
79) 1,3,5-Trimethylbenzene	17.96	105	701	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.03	105	1015	No Calib	
82) 1,2,4-Trimethylbenzene	18.43	105	1090	N.D.	
83) n-Decane	0.00	58	0	N.D.	
84) Benzyl Chloride	18.56	91	222	N.D.	
85) 1,3-Dichlorobenzene	18.57	146	644	N.D.	
86) 1,4-Dichlorobenzene	18.66	146	644	N.D.	
87) sec-Butylbenzene	18.74	105	1260	N.D.	
88) 4-Isopropyltoluene (p-...	18.92	119	1644	N.D.	
89) 1,2,3-Trimethylbenzene	17.03	105	1015	No Calib	
90) 1,2-Dichlorobenzene	19.03	146	573	N.D.	
91) d-Limonene	19.09	68	1169	0.051 ng	89
92) 1,2-Dibromo-3-Chloropr...	19.51	157	119	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	821	N.D.	
95) Naphthalene	20.93	128	1520	N.D.	
96) n-Dodecane	0.00	58	0	N.D.	
97) Hexachlorobutadiene	21.30	225	699	N.D.	
98) Cyclohexanone	15.37	55	181	No Calib #	
99) tert-Butylbenzene	18.43	119	1083	N.D.	
100) n-Butylbenzene	19.39	91	1445	N.D.	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172423.D Vial: 12
Acq On : 17 Jun 2024 21:09 Operator: SC
Sample : P2402249-004 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 10:44:56 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172423.D Vial: 12
Acq On : 17 Jun 2024 21:09 Operator: SC
Sample : P2402249-004 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 10:44:56 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

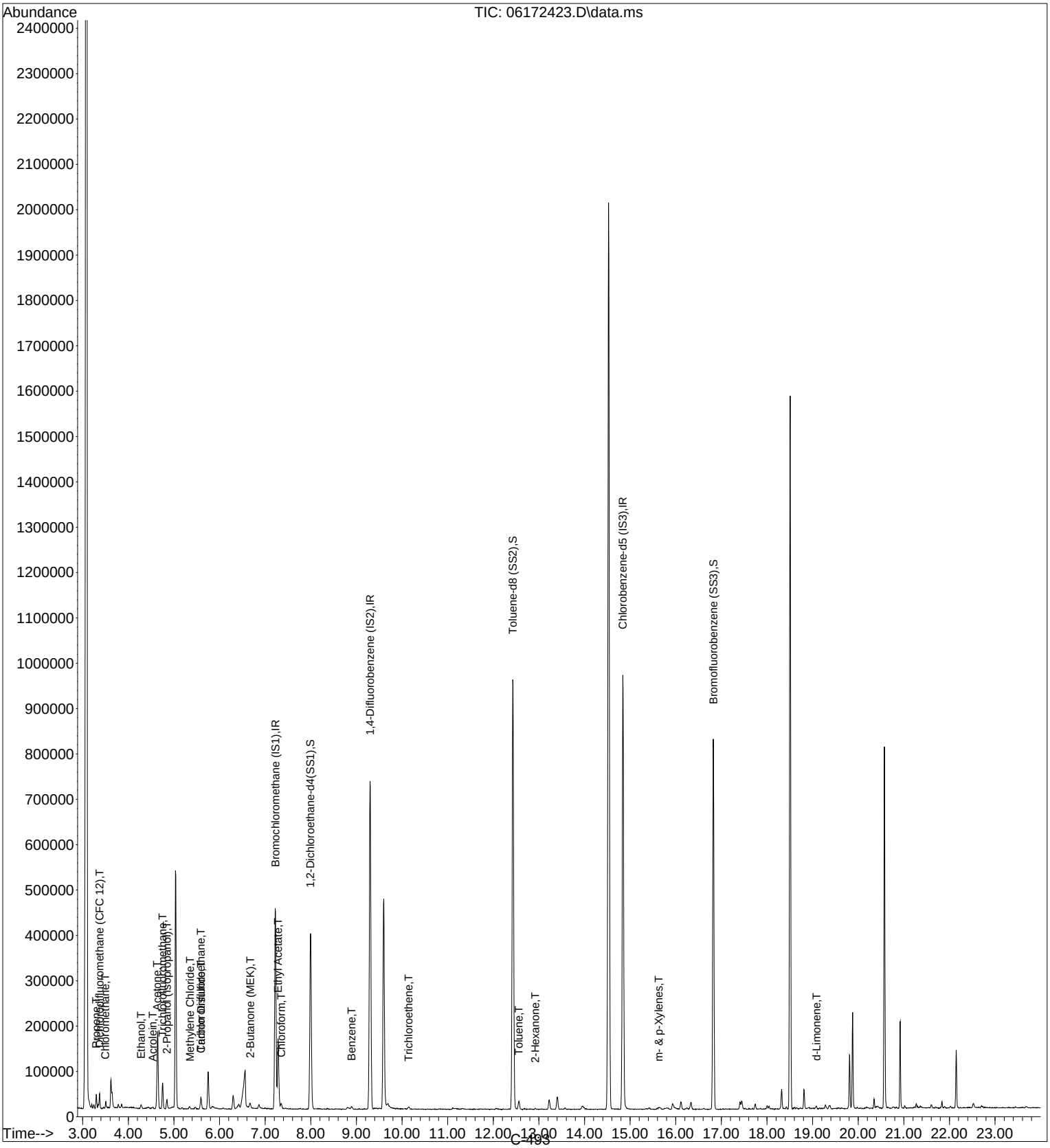
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	156712	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	694434	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	160830	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	341990	12.279	ng		0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.24%				
57) Toluene-d8 (SS2)	12.43	98	774551	12.585	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.64%				
73) Bromofluorobenzene (SS3)	16.83	174	276627	12.447	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.60%				
Target Compounds							Qvalue
2) Propene	3.30	42	4567	0.228	ng	#	87
3) Dichlorodifluoromethan...	3.37	85	20673	0.561	ng		97
4) Chloromethane	3.49	50	1419	0.056	ng		91
10) Ethanol	4.28	45	17960	1.179	ng		70
12) Acrolein	4.53	56	2154	0.191	ng		94
13) Acetone	4.63	58	23173	1.903	ng	#	55
14) Trichlorofluoromethane	4.75	101	39741	1.065	ng		99
15) 2-Propanol (Isopropanol)	4.85	45	31223	0.636	ng		94
19) Methylene Chloride	5.35	84	1310	0.076	ng		94
21) Trichlorotrifluoroethane	5.59	151	4388	0.278	ng		93
22) Carbon Disulfide	5.60	76	19859	0.358	ng		100
27) 2-Butanone (MEK)	6.67	72	2823	0.293	ng	#	84
30) Ethyl Acetate	7.28	61	24335	4.137	ng		96
32) Chloroform	7.35	83	8477	0.276	ng		99
41) Benzene	8.89	78	4871	0.076	ng		94
47) Trichloroethene	10.14	130	1550	0.083	ng		98
58) Toluene	12.56	91	14556	0.226	ng		99
59) 2-Hexanone	12.92	43	2555	0.063	ng		76
67) m- & p-Xylenes	15.63	91	4864	0.079	ng		99
91) d-Limonene	19.09	68	1169	0.051	ng		89

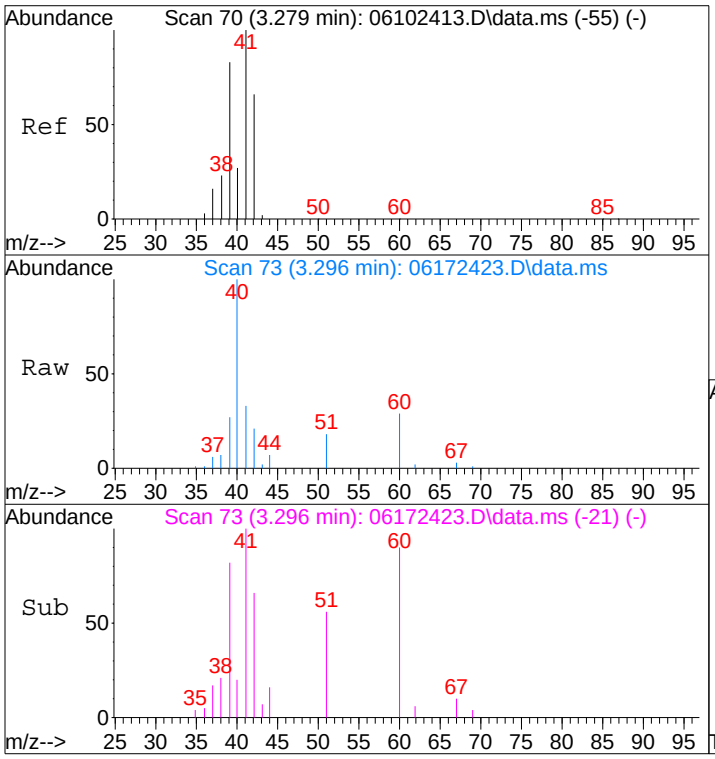
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172423.D Vial: 12
Acq On : 17 Jun 2024 21:09 Operator: SC
Sample : P2402249-004 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 10:44:56 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

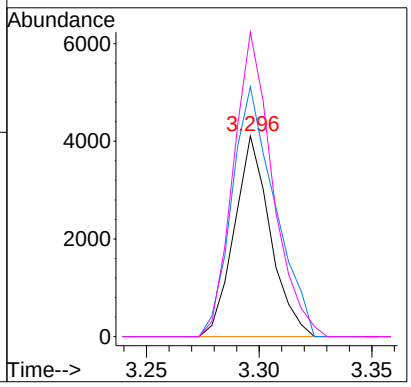


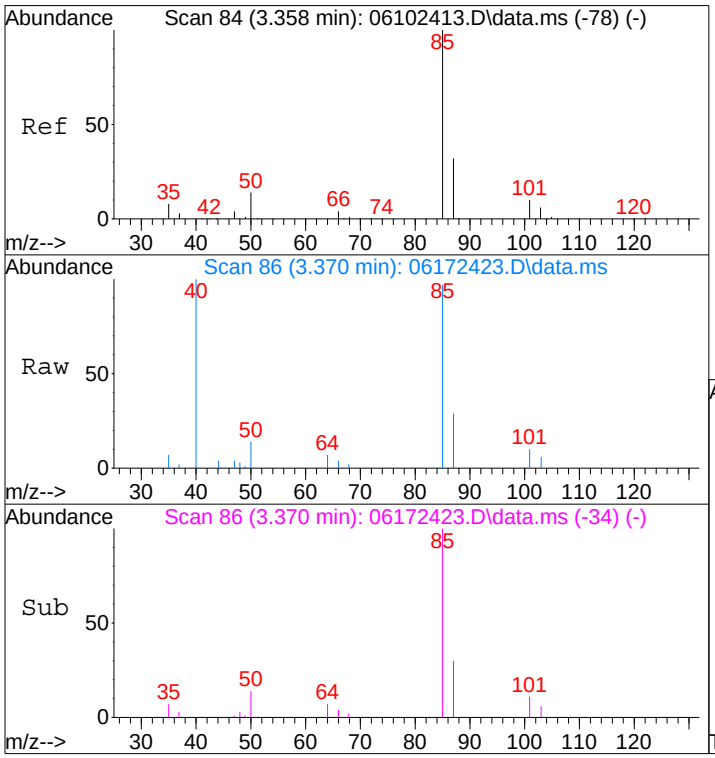


#2
Propene
Concen: 0.23 ng
RT: 3.30 min Scan# 73
Delta R.T. 0.047 min
Lab File: 06172423.D
Acq: 17 Jun 2024 21:09

Tgt Ion: 42 Resp: 4567

Ion	Ratio	Lower	Upper
42	100		
39	148.7	107.3	147.3#
41	164.9	134.3	174.3

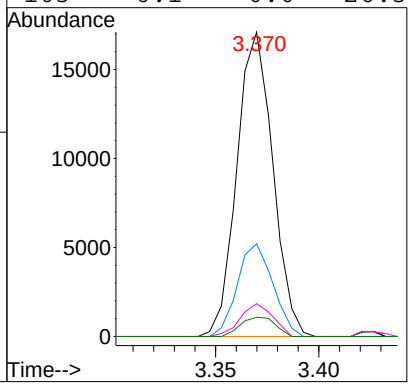


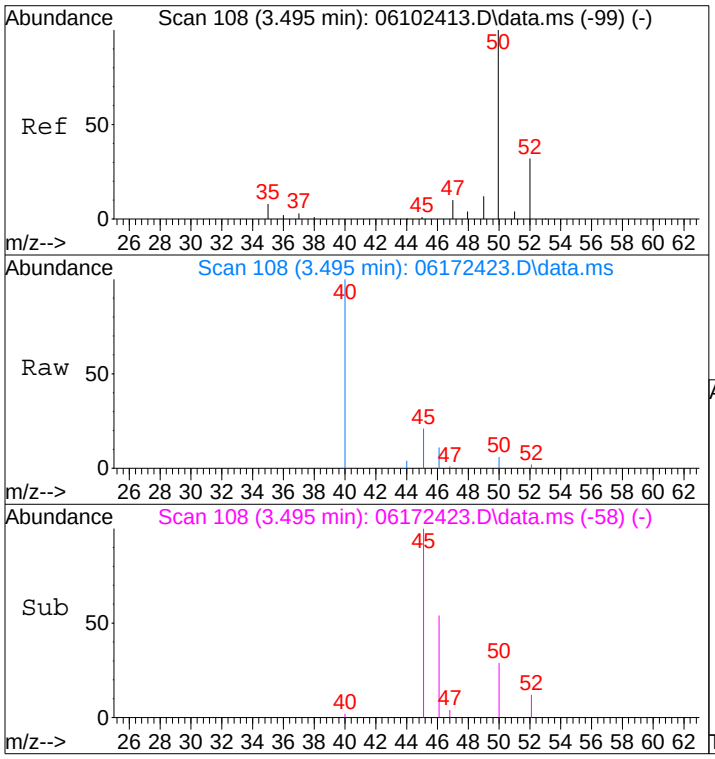


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.56 ng
RT: 3.37 min Scan# 86
Delta R.T. 0.048 min
Lab File: 06172423.D
Acq: 17 Jun 2024 21:09

Tgt Ion: 85 Resp: 20673

Ion	Ratio	Lower	Upper
85	100		
87	30.1	12.2	52.2
101	9.8	0.0	29.8
103	6.1	0.0	26.3

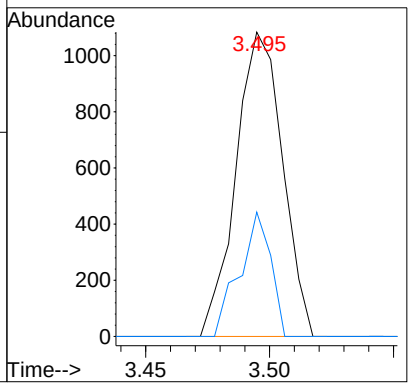


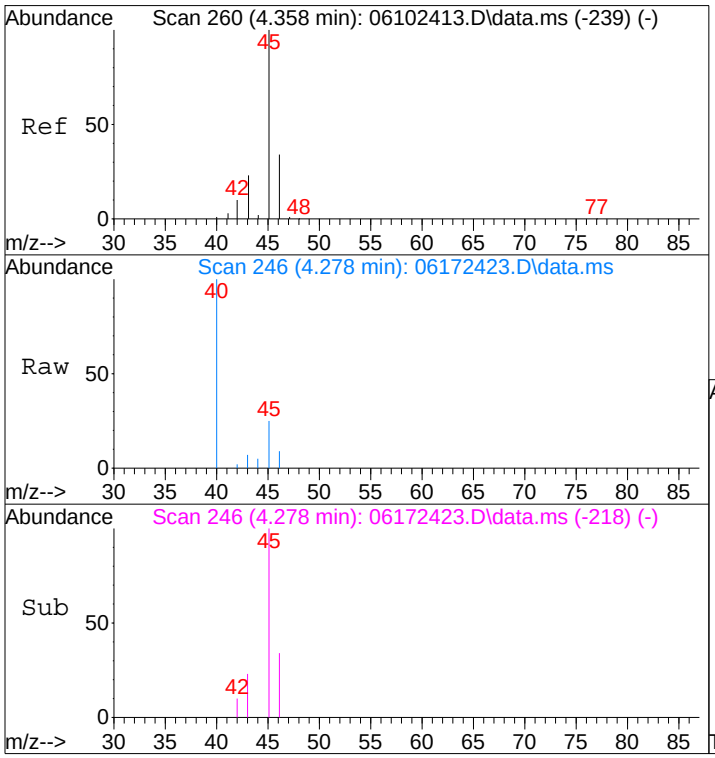


#4
Chloromethane
Concen: 0.06 ng
RT: 3.49 min Scan# 108
Delta R.T. 0.032 min
Lab File: 06172423.D
Acq: 17 Jun 2024 21:09

Tgt Ion: 50 Resp: 1419

Ion	Ratio	Lower	Upper
50	100		
52	27.3	12.4	52.4

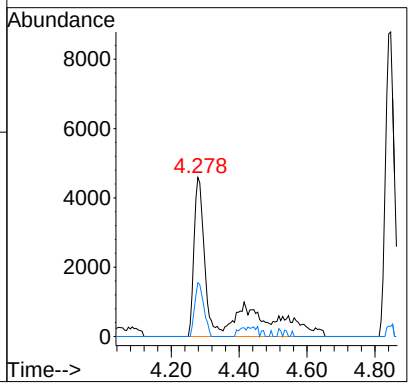


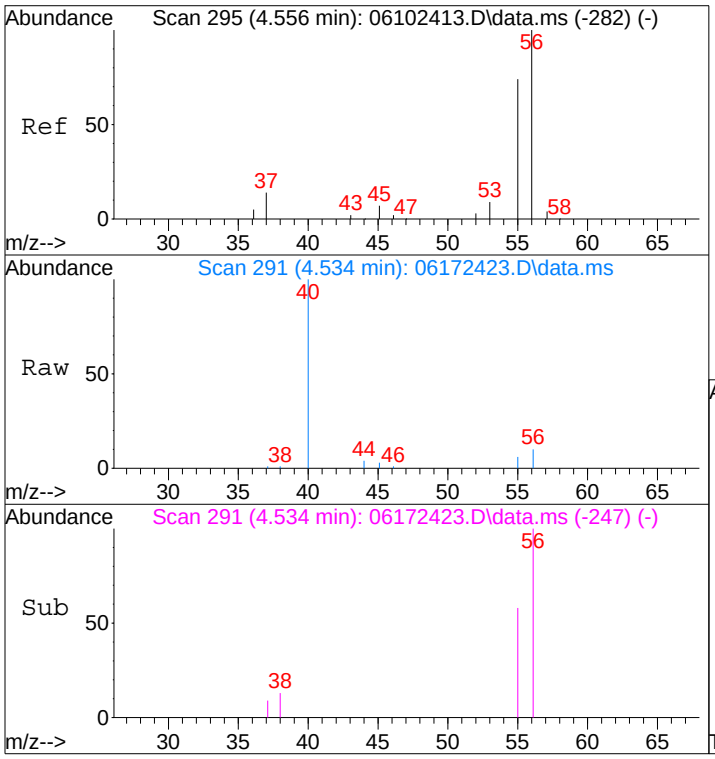


#10
Ethanol
Concen: 1.18 ng
RT: 4.28 min Scan# 246
Delta R.T. -0.088 min
Lab File: 06172423.D
Acq: 17 Jun 2024 21:09

Tgt Ion: 45 Resp: 17960

Ion	Ratio	Lower	Upper
45	100		
46	16.2	13.5	53.5

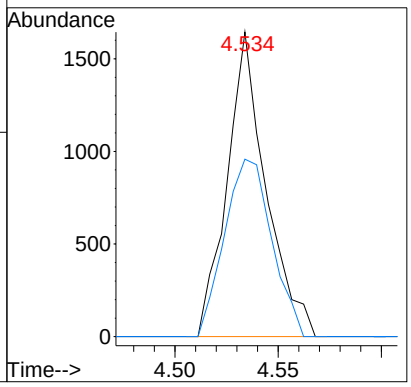


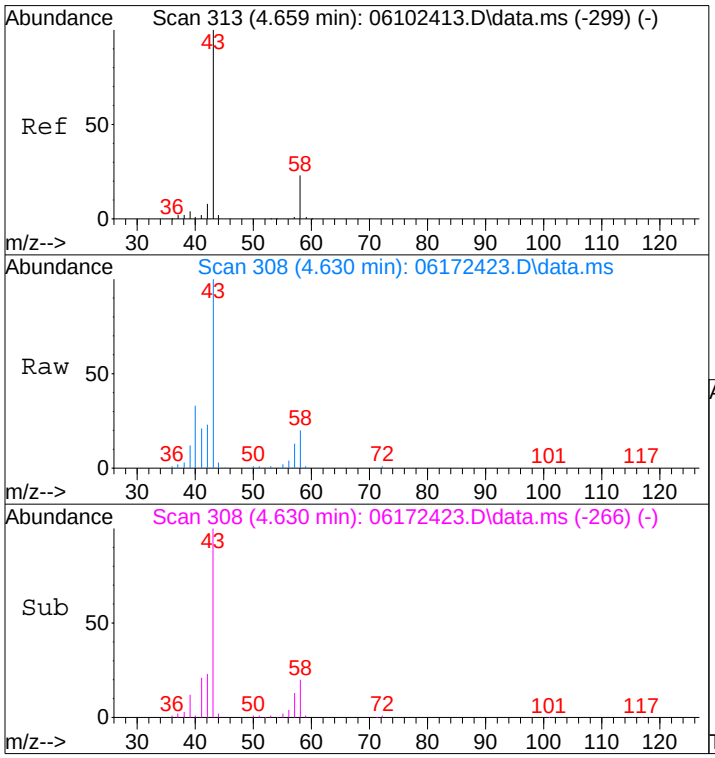


#12
Acrolein
Concen: 0.19 ng
RT: 4.53 min Scan# 291
Delta R.T. -0.001 min
Lab File: 06172423.D
Acq: 17 Jun 2024 21:09

Tgt Ion: 56 Resp: 2154

Ion	Ratio	Lower	Upper
56	100		
55	70.7	55.5	95.5

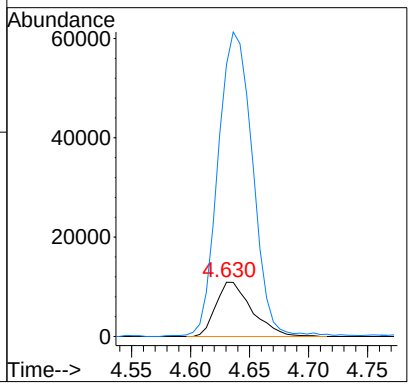


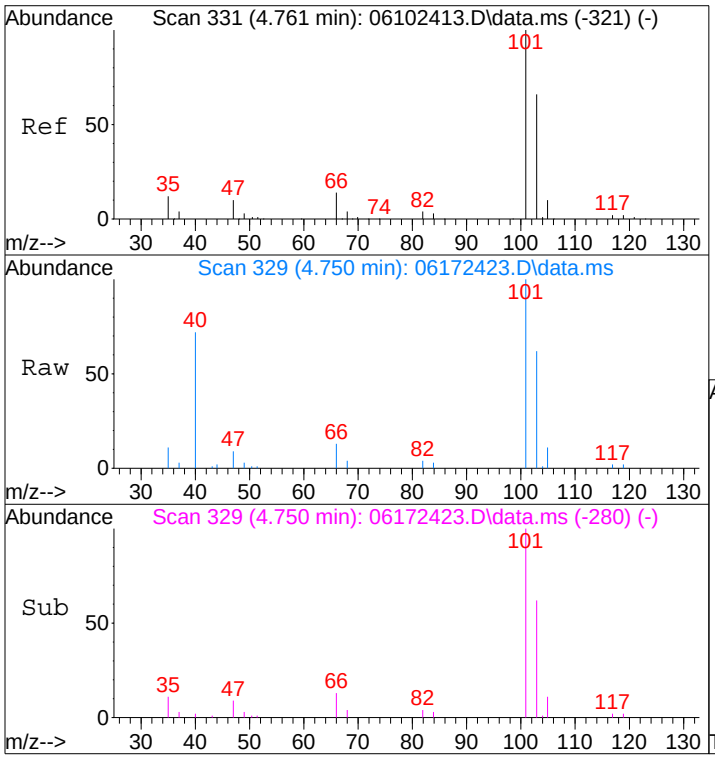


#13
Acetone
Concen: 1.90 ng
RT: 4.63 min Scan# 308
Delta R.T. -0.012 min
Lab File: 06172423.D
Acq: 17 Jun 2024 21:09

Tgt Ion: 58 Resp: 23173

Ion	Ratio	Lower	Upper
58	100		
43	542.7	400.7	460.7#

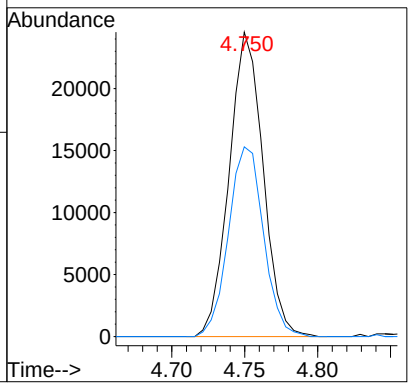


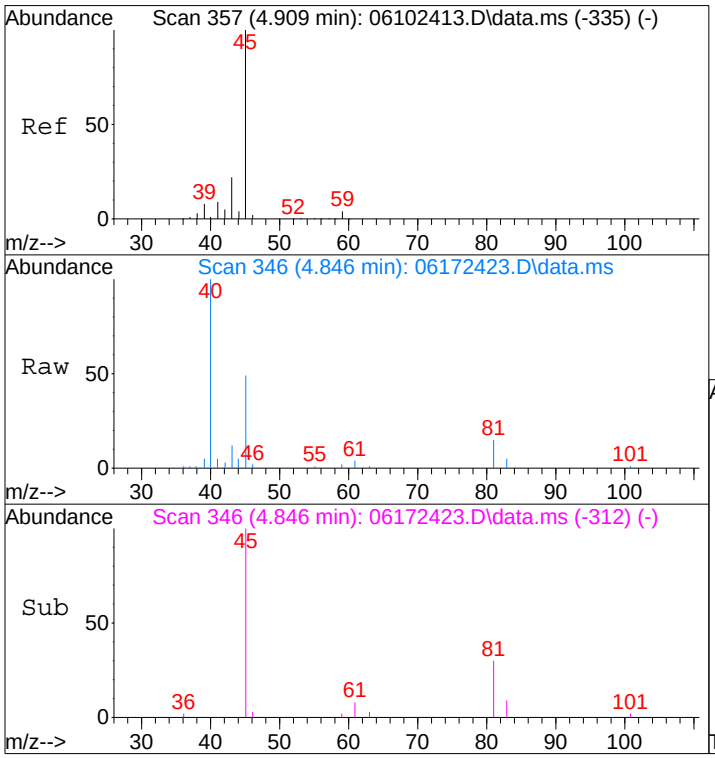


#14
Trichlorofluoromethane
Concen: 1.07 ng
RT: 4.75 min Scan# 329
Delta R.T. 0.029 min
Lab File: 06172423.D
Acq: 17 Jun 2024 21:09

Tgt Ion:101 Resp: 39741

Ion	Ratio	Lower	Upper
101	100		
103	64.4	44.9	84.9

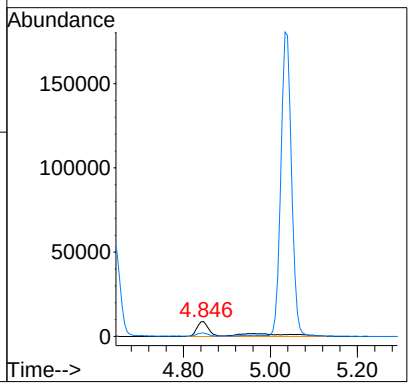


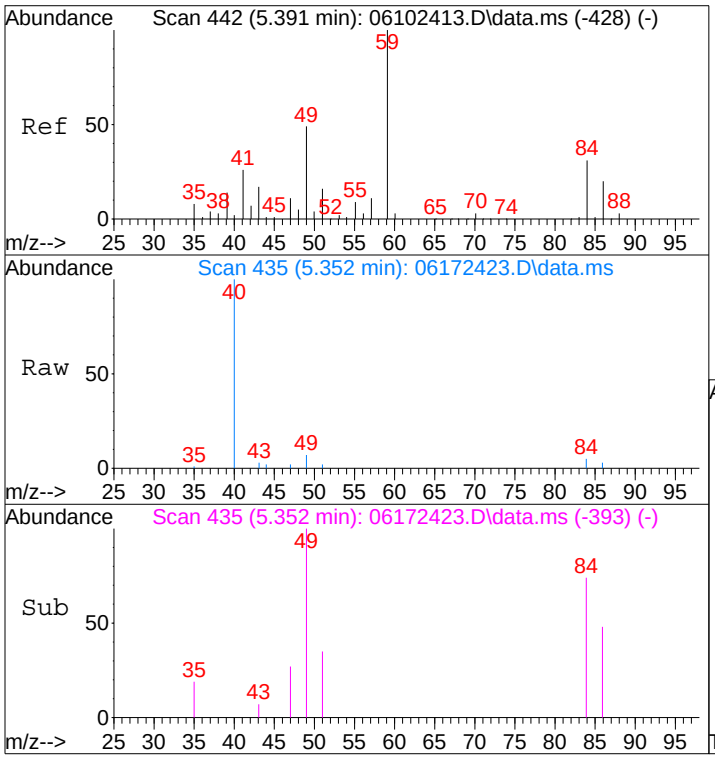


#15
2-Propanol (Isopropanol)
Concen: 0.64 ng
RT: 4.85 min Scan# 346
Delta R.T. -0.054 min
Lab File: 06172423.D
Acq: 17 Jun 2024 21:09

Tgt Ion: 45 Resp: 31223

Ion	Ratio	Lower	Upper
45	100		
43	19.8	2.5	42.5

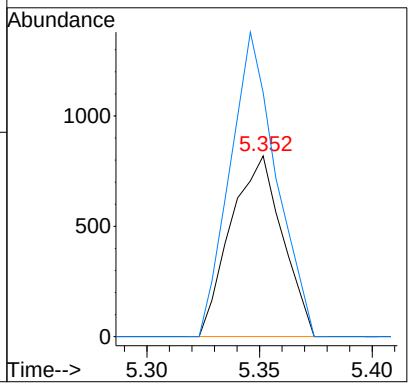


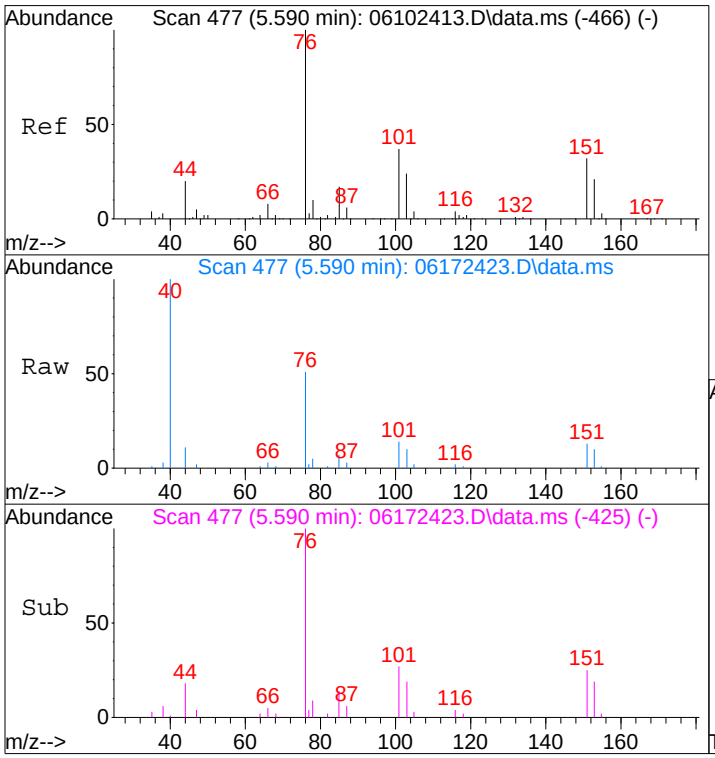


#19
Methylene Chloride
Concen: 0.08 ng
RT: 5.35 min Scan# 435
Delta R.T. -0.009 min
Lab File: 06172423.D
Acq: 17 Jun 2024 21:09

Tgt Ion: 84 Resp: 1310

Ion	Ratio	Lower	Upper
84	100		
49	150.5	132.9	182.9

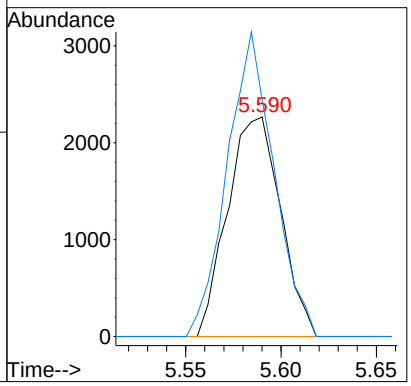


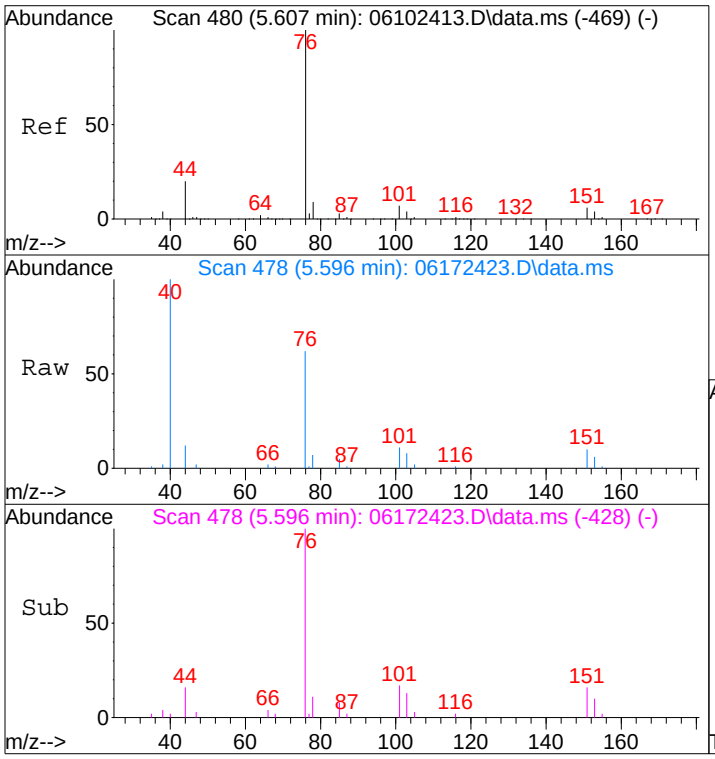


#21
Trichlorotrifluoroethane
Concen: 0.28 ng
RT: 5.59 min Scan# 477
Delta R.T. 0.044 min
Lab File: 06172423.D
Acq: 17 Jun 2024 21:09

Tgt Ion:151 Resp: 4388

Ion	Ratio	Lower	Upper
151	100		
101	122.4	95.0	135.0

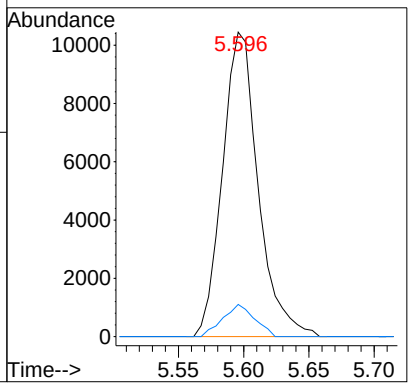


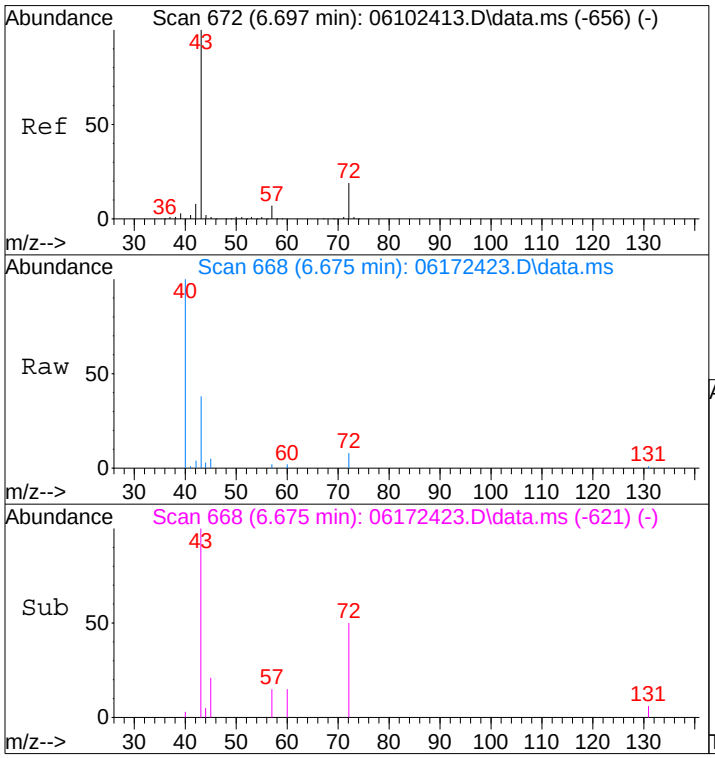


#22
Carbon Disulfide
Concen: 0.36 ng
RT: 5.60 min Scan# 478
Delta R.T. 0.033 min
Lab File: 06172423.D
Acq: 17 Jun 2024 21:09

Tgt Ion: 76 Resp: 19859

Ion	Ratio	Lower	Upper
76	100		
78	9.4	0.0	29.6

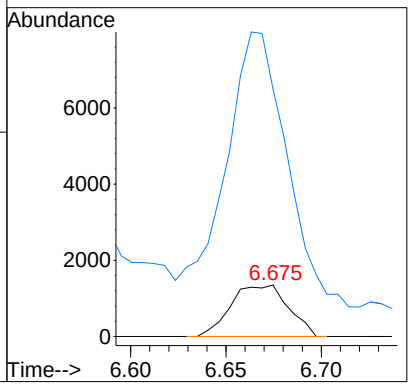


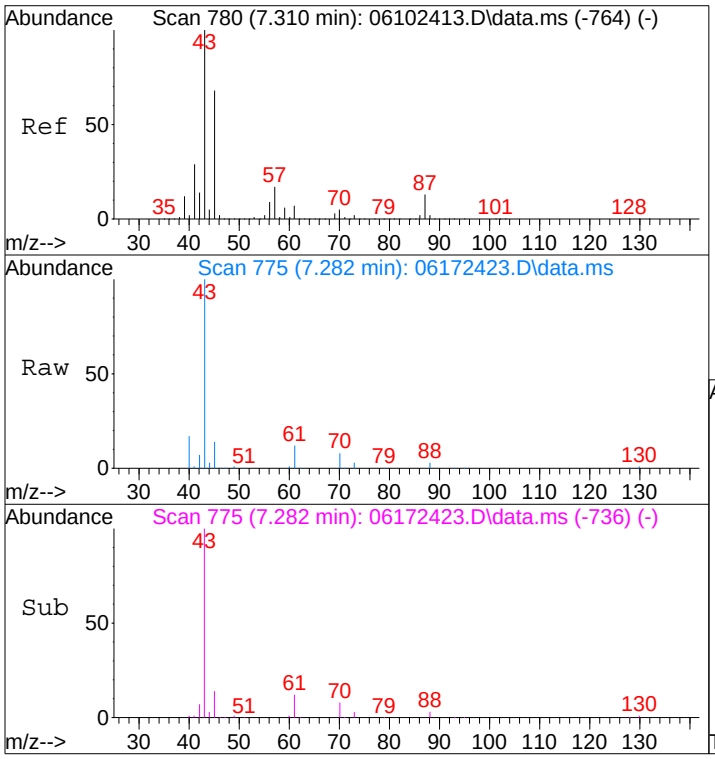


#27
2-Butanone (MEK)
Concen: 0.29 ng
RT: 6.67 min Scan# 668
Delta R.T. 0.016 min
Lab File: 06172423.D
Acq: 17 Jun 2024 21:09

Tgt Ion: 72 Resp: 2823

Ion	Ratio	Lower	Upper
72	100		
43	573.9	506.8	546.8#

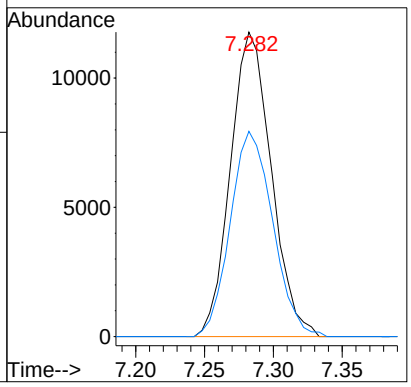


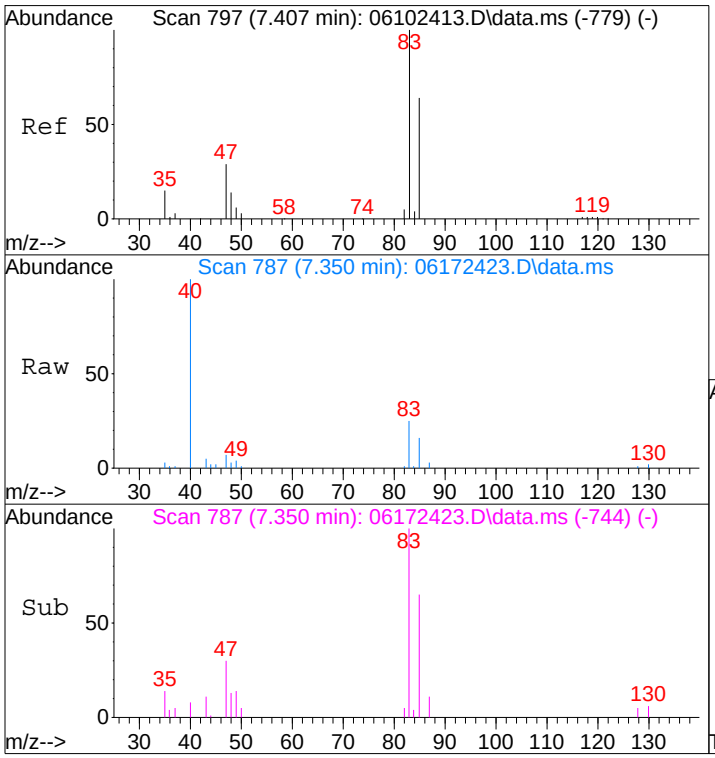


#30
Ethyl Acetate
Concen: 4.14 ng
RT: 7.28 min Scan# 775
Delta R.T. 0.023 min
Lab File: 06172423.D
Acq: 17 Jun 2024 21:09

Tgt Ion: 61 Resp: 24335

Ion	Ratio	Lower	Upper
61	100		
70	70.2	53.5	93.5

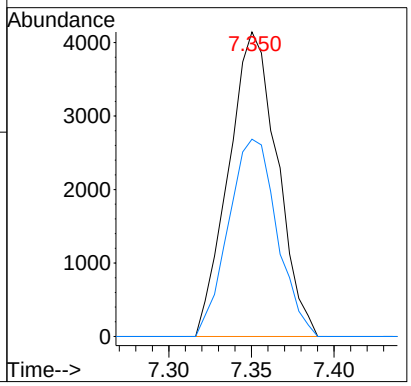


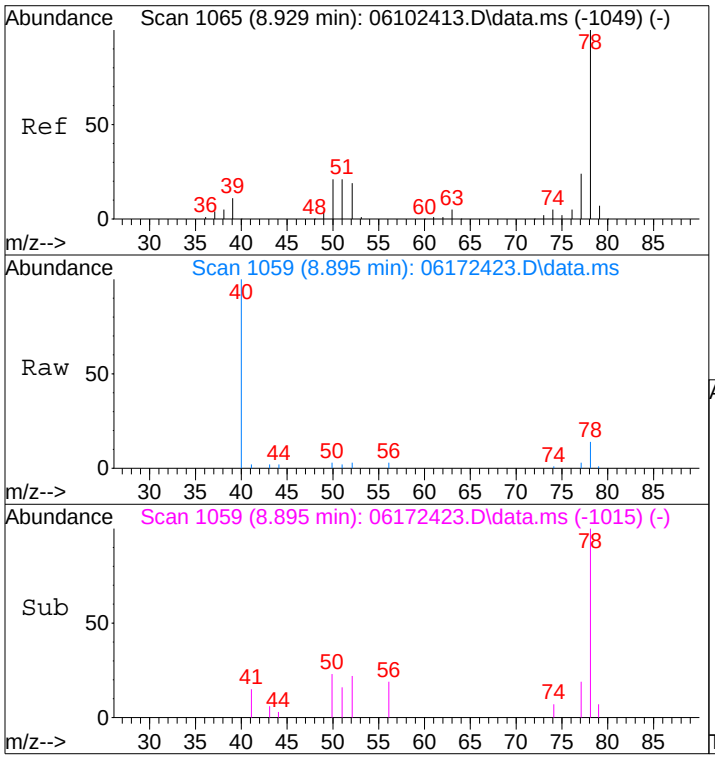


#32
Chloroform
Concen: 0.28 ng
RT: 7.35 min Scan# 787
Delta R.T. -0.004 min
Lab File: 06172423.D
Acq: 17 Jun 2024 21:09

Tgt Ion: 83 Resp: 8477

Ion	Ratio	Lower	Upper
83	100		
85	64.9	44.4	84.4

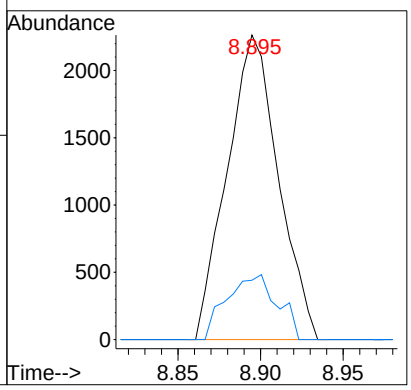


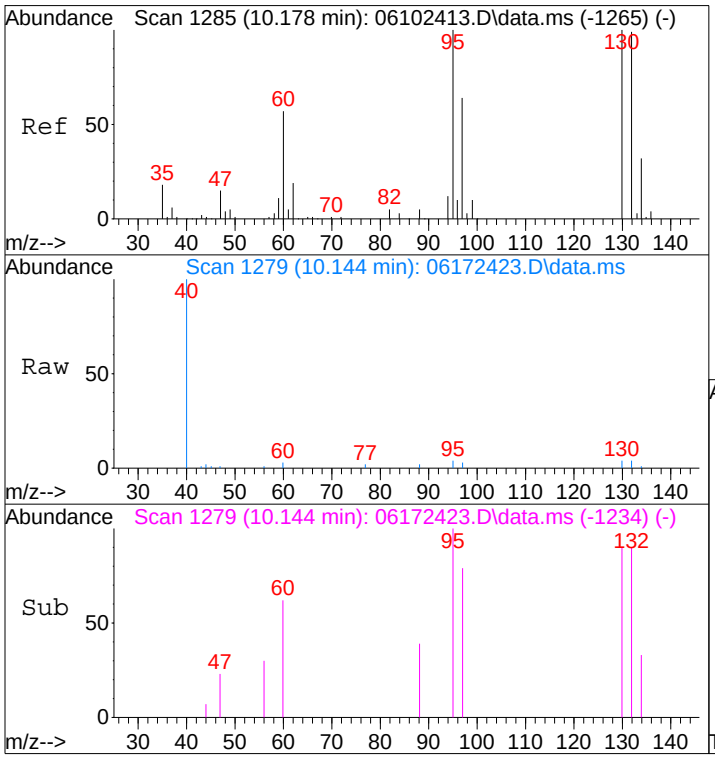


#41
Benzene
Concen: 0.08 ng
RT: 8.89 min Scan# 1059
Delta R.T. -0.002 min
Lab File: 06172423.D
Acq: 17 Jun 2024 21:09

Tgt Ion: 78 Resp: 4871

Ion	Ratio	Lower	Upper
78	100		
77	21.0	4.0	44.0

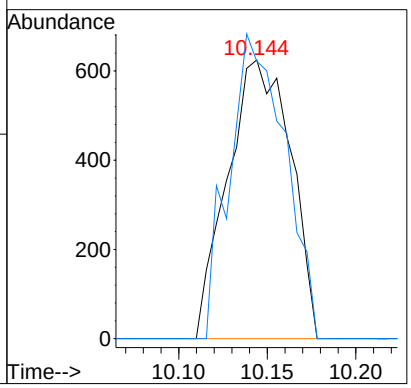


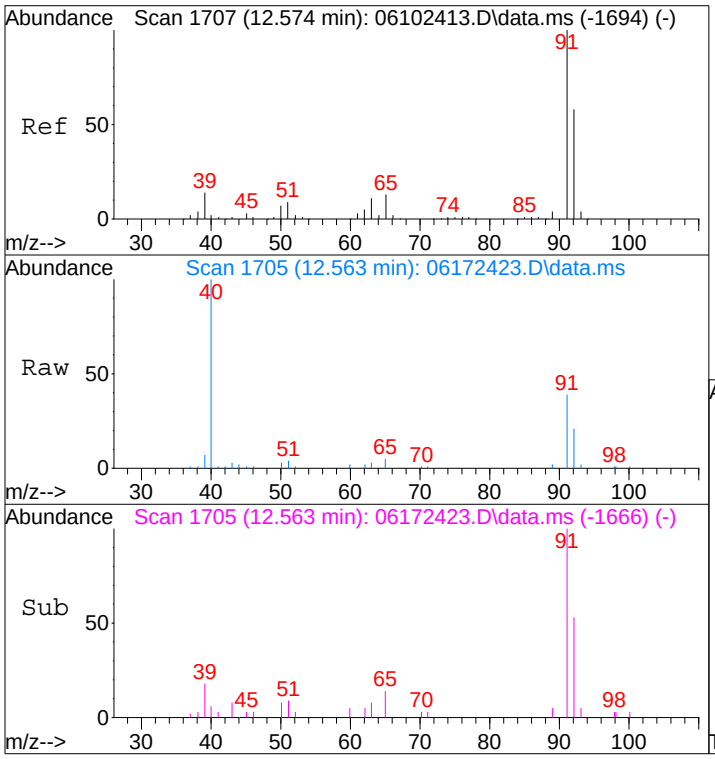


#47
Trichloroethene
Concen: 0.08 ng
RT: 10.14 min Scan# 1279
Delta R.T. 0.004 min
Lab File: 06172423.D
Acq: 17 Jun 2024 21:09

Tgt Ion:130 Resp: 1550

Ion	Ratio	Lower	Upper
130	100		
132	96.3	77.9	117.9

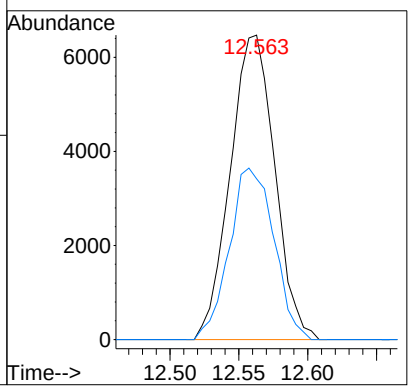


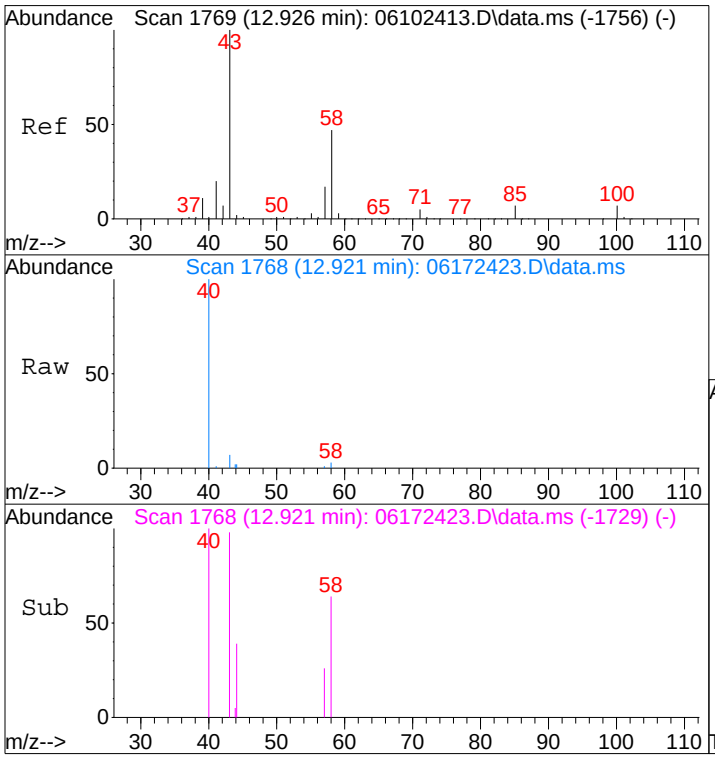


#58
Toluene
Concen: 0.23 ng
RT: 12.56 min Scan# 1705
Delta R.T. -0.029 min
Lab File: 06172423.D
Acq: 17 Jun 2024 21:09

Tgt Ion: 91 Resp: 14556

Ion	Ratio	Lower	Upper
91	100		
92	56.4	37.4	77.4

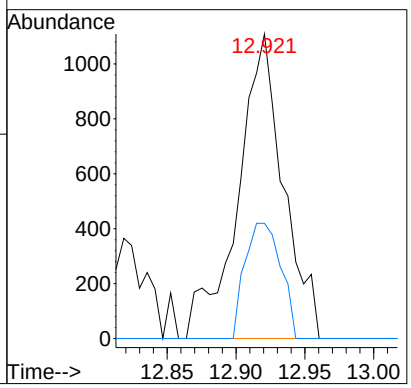


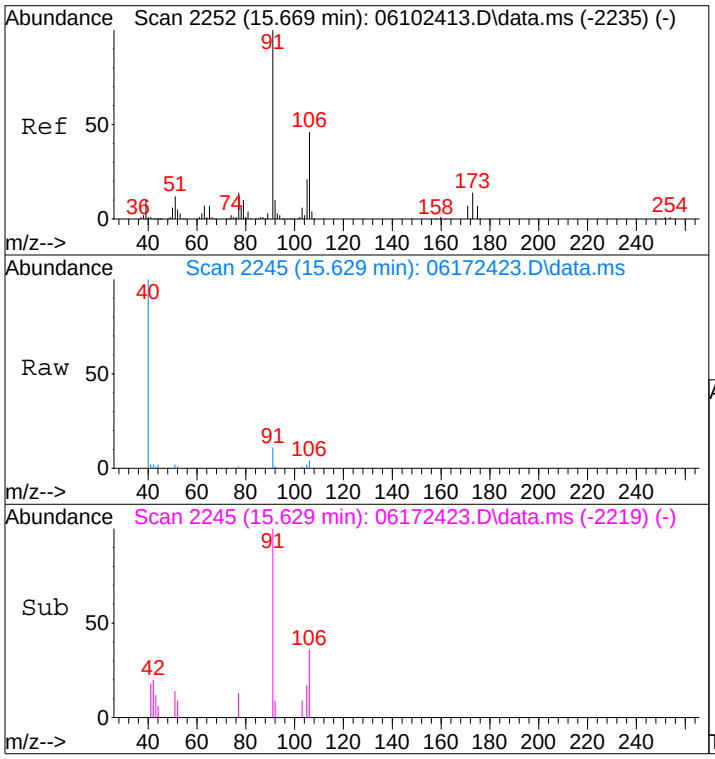


#59
2-Hexanone
Concen: 0.06 ng
RT: 12.92 min Scan# 1768
Delta R.T. -0.028 min
Lab File: 06172423.D
Acq: 17 Jun 2024 21:09

Tgt Ion: 43 Resp: 2555

Ion	Ratio	Lower	Upper
43	100		
58	29.8	25.9	65.9

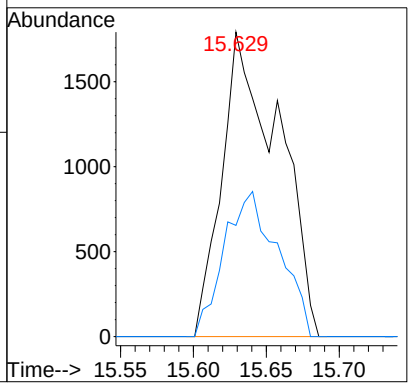


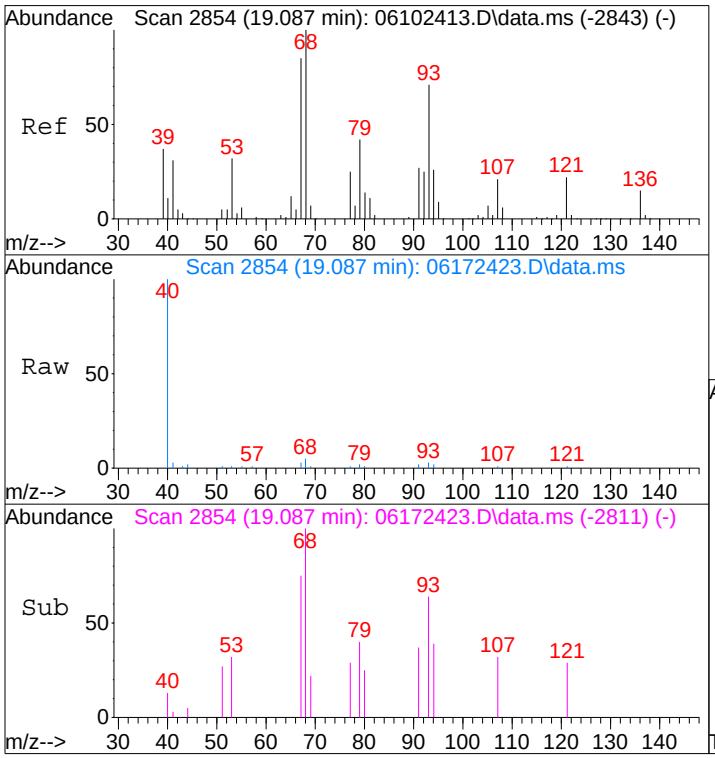


#67
m- & p-Xylenes
Concen: 0.08 ng
RT: 15.63 min Scan# 2245
Delta R.T. -0.051 min
Lab File: 06172423.D
Acq: 17 Jun 2024 21:09

Tgt Ion: 91 Resp: 4864

Ion	Ratio	Lower	Upper
91	100		
106	45.1	25.9	65.9

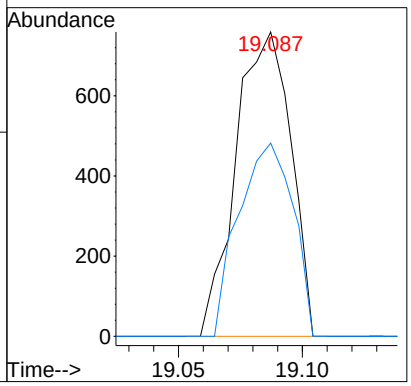




#91
d-Limonene
Concen: 0.05 ng
RT: 19.09 min Scan# 2854
Delta R.T. -0.006 min
Lab File: 06172423.D
Acq: 17 Jun 2024 21:09

Tgt Ion: 68 Resp: 1169

Ion	Ratio	Lower	Upper
68	100		
93	63.1	52.2	92.2



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172423.D Vial: 12
Acq On : 17 Jun 2024 21:09 Operator: SC
Sample : P2402249-004 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 14:49:16 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

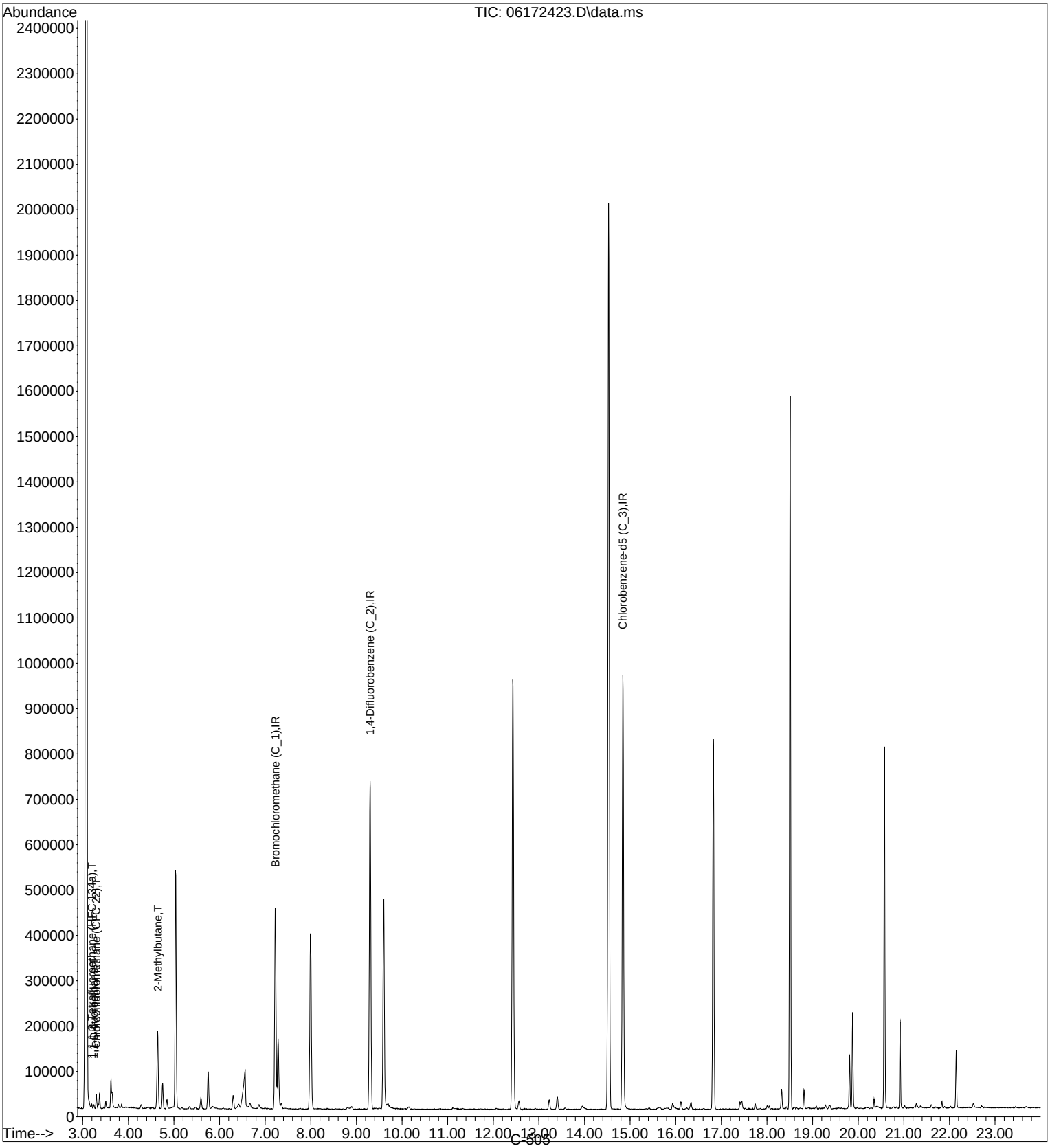
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	157875	12.500	ng		-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	695846	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	160830	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	3.14	85	258	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.20	83	1937	0.120	ng	#	1
4) 1,1-Difluoroethane	3.24	65	2309	0.168	ng	#	80
5) Chlorodifluoromethane ...	3.30	67	738	0.137	ng		92
6) 1-Chloro-1,1-Difluoroe...	3.51	65	559	N.D.			
7) Dichlorofluoromethane ...	0.00	67	0	N.D.			
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	0.00	83	0	N.D.			
10) 2-Methylbutane	4.65	57	28307	1.503	ng		93
11) Methyl Acetate	5.33	43	3115	N.D.			
12) 2-Methylpentane	0.00	71	0	N.D.			
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	0.00	84	0	N.D.			
17) 2,3-Dimethylpentane	9.60	56	1117	N.D.			
18) Dibromomethane	9.80	174	127	N.D.			
20) Methyl Cyclohexane	11.59	55	52	N.D.			
21) 1,3-Dichloropropane	0.00	76	0	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	16.33	75	182	N.D.			
25) Bromobenzene	17.03	77	112	N.D.			
26) 2-Chlorotoluene	17.61	91	838	N.D.			
27) 4-Chlorotoluene	17.68	91	1593	N.D.			
28) Indane	0.00	117	0	N.D.			
29) Indene	0.00	115	0	N.D.			
30) 1,2,4,5-Tetramethylben...	0.00	119	0	N.D.			
31) 1,2,3,4-Tetramethylben...	20.34	119	69	N.D.			
32) 1,2,3,5-Tetramethylben...	20.57	119	2960	N.D.			
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172423.D Vial: 12
Acq On : 17 Jun 2024 21:09 Operator: SC
Sample : P2402249-004 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:49:16 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



LSC Area Percent Report

MJ 6/28/24

Data Path : I:\MS09\DATA\2024 06\17\
Data File : 06172423.D
Acq On : 17 Jun 2024 21:09
Operator : SC
Sample : P2402249-004 (400mL)
Misc : S37-06062402
ALS Vial : 12 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06172423.D\data.ms

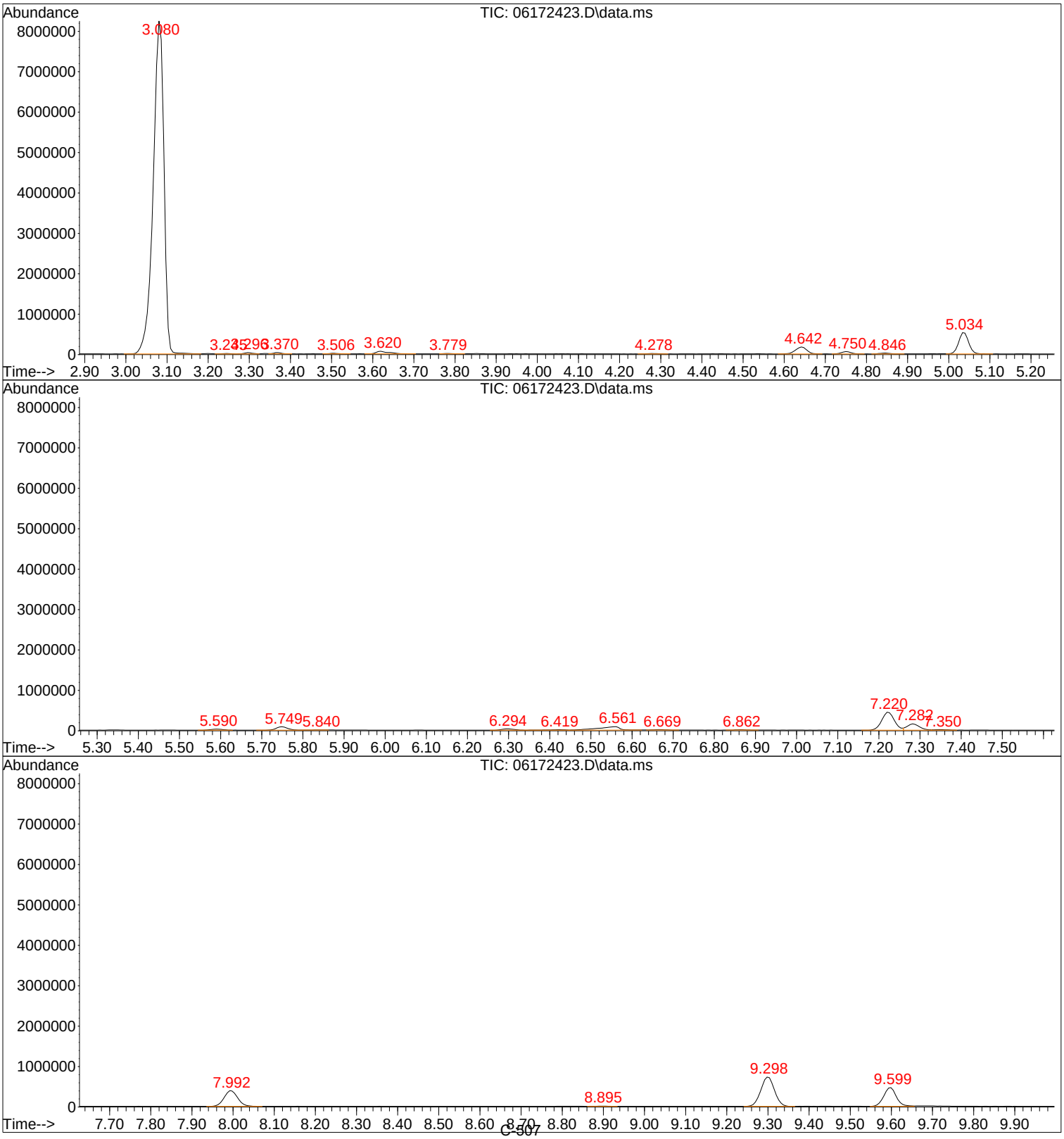
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.080	20	35	53	rBV	8237395	14968619	100.00%	67.655%
2	3.245	59	64	68	rVB2	8305	11940	0.08%	0.054%
3	3.296	68	73	78	rBV2	31386	41649	0.28%	0.188%
4	3.370	82	86	92	rVB	32837	42781	0.29%	0.193%
5	3.506	105	110	117	rBV	15215	23626	0.16%	0.107%
6	3.620	123	130	145	rBV2	63655	142920	0.95%	0.646%
7	3.779	155	158	166	rVB3	7333	10448	0.07%	0.047%
8	4.278	240	246	253	rBV	8509	16003	0.11%	0.072%
9	4.642	300	310	319	rBV3	171092	327206	2.19%	1.479%
10	4.750	323	329	337	rBV	56828	91565	0.61%	0.414%
11	4.846	340	346	354	rBV	20742	37709	0.25%	0.170%
12	5.034	372	379	392	rVB	524614	891664	5.96%	4.030%
13	5.590	469	477	484	rBV2	25567	51998	0.35%	0.235%
14	5.749	494	505	514	rBV	82768	159675	1.07%	0.722%
15	5.840	514	521	525	rBV4	4706	10257	0.07%	0.046%
16	6.294	594	601	610	rBV2	30529	66298	0.44%	0.300%
17	6.419	610	623	628	rVV2	10577	33586	0.22%	0.152%
18	6.561	628	648	659	rVV	83996	315017	2.10%	1.424%
19	6.669	661	667	675	rVB2	11213	26511	0.18%	0.120%
20	6.862	695	701	709	rBV2	8222	16790	0.11%	0.076%
21	7.220	753	764	771	rBV	442855	948197	6.33%	4.286%
22	7.282	771	775	783	rVV	154507	310210	2.07%	1.402%
23	7.350	783	787	794	rVB3	11462	23990	0.16%	0.108%
24	7.992	890	900	914	rBV	387410	887285	5.93%	4.010%
25	8.895	1053	1059	1066	rVB4	6157	15249	0.10%	0.069%
26	9.298	1120	1130	1142	rVB	723010	1670405	11.16%	7.550%
27	9.599	1174	1183	1193	rBV	462462	983474	6.57%	4.445%

Sum of corrected areas: 22125072

Data Path : I:\MS09\DATA\2024 06\17\
Data File : 06172423.D
Acq On : 17 Jun 2024 21:09
Operator : SC
Sample : P2402249-004 (400mL)
Misc : S37-06062402
ALS Vial : 12 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\17\\
Data File : 06172423.D
Acq On : 17 Jun 2024 21:099
Operator : SCC
Sample : P2402249-004 (400mL))
Misc : S37-060624022
ALS Vial : 12 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

					|--Internal Standard---|		
TIC Top Hit name	RT	EstConc	Units	Response	# RT Resp Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172424.D Vial: 13
Acq On : 17 Jun 2024 21:41 Operator: SC
Sample : P2402249-005 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 10:47:12 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	149620	12.500	ng	0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	661321	12.500	ng	0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	153048	12.500	ng	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4(...	7.99	65	327625	12.320	ng	0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.56%			
57) Toluene-d8 (SS2)	12.43	98	740890	12.650	ng	-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.20%			
73) Bromofluorobenzene (SS3)	16.83	174	266295	12.591	ng	-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.72%			
Target Compounds						Qvalue
2) Propene	0.00	42	0	N.D. d		
3) Dichlorodifluoromethan...	3.38	85	19459	0.553	ng	99
4) Chloromethane	3.51	50	7929	0.329	ng	99
5) 1,2-Dichloro-1,1,2,2-t...	3.61	135	440	N.D.		
6) Vinyl Chloride	0.00	62	0	N.D.		
7) 1,3-Butadiene	0.00	54	0	N.D.		
8) Bromomethane	0.00	94	0	N.D.		
9) Chloroethane	0.00	64	0	N.D.		
10) Ethanol	4.27	45	24058	1.654	ng	75
11) Acetonitrile	0.00	41	0	N.D. d		
12) Acrolein	4.53	56	851	0.079	ng	97
13) Acetone	4.62	58	60928	5.242	ng	99
14) Trichlorofluoromethane	4.76	101	8988	0.252	ng	99
15) 2-Propanol (Isopropanol)	0.00	45	0	N.D. d		
16) Acrylonitrile	0.00	53	0	N.D. d		
17) 1,1-Dichloroethene	0.00	96	0	N.D.		
18) 2-Methyl-2-Propanol (t...	5.32	59	482	N.D.		
19) Methylene Chloride	5.35	84	2041	0.124	ng	90
20) 3-Chloro-1-propene (Al...	5.44	41	117	N.D.		
21) Trichlorotrifluoroethane	5.59	151	1764	0.117	ng	99
22) Carbon Disulfide	5.60	76	34128	0.644	ng	98
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.		
24) 1,1-Dichloroethane	0.00	63	0	N.D.		
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.		
26) Vinyl Acetate	0.00	86	0	N.D. d		
27) 2-Butanone (MEK)	0.00	72	0	N.D. d		
28) cis-1,2-Dichloroethene	7.08	61	126	N.D.		
29) Diisopropyl Ether	0.00	87	0	N.D.		
30) Ethyl Acetate	7.29	61	2453	0.437	ng	97
31) n-Hexane	0.00	57	0	N.D.		
32) Chloroform	7.36	83	754	N.D.		
34) Tetrahydrofuran (THF)	0.00	72	0	N.D. d		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	8.11	62	565	N.D.		
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	8.80	56	2189	No Calib	#	
41) Benzene	8.89	78	2725	N.D.		
42) Carbon Tetrachloride	9.07	117	2499	0.088	ng	97
43) Cyclohexane	9.29	84	787	N.D.		
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	0.00	63	0	N.D.		
46) Bromodichloromethane	10.08	83	398	N.D.		
47) Trichloroethene	10.14	130	1277	0.072	ng	95
48) 1,4-Dioxane	10.13	88	759	0.067	ng	99
49) 2,2,4-Trimethylpentane...	0.00	57	0	N.D.		
50) Methyl Methacrylate	0.00	100	0	N.D.		

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172424.D Vial: 13
Acq On : 17 Jun 2024 21:41 Operator: SC
Sample : P2402249-005 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 10:47:12 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

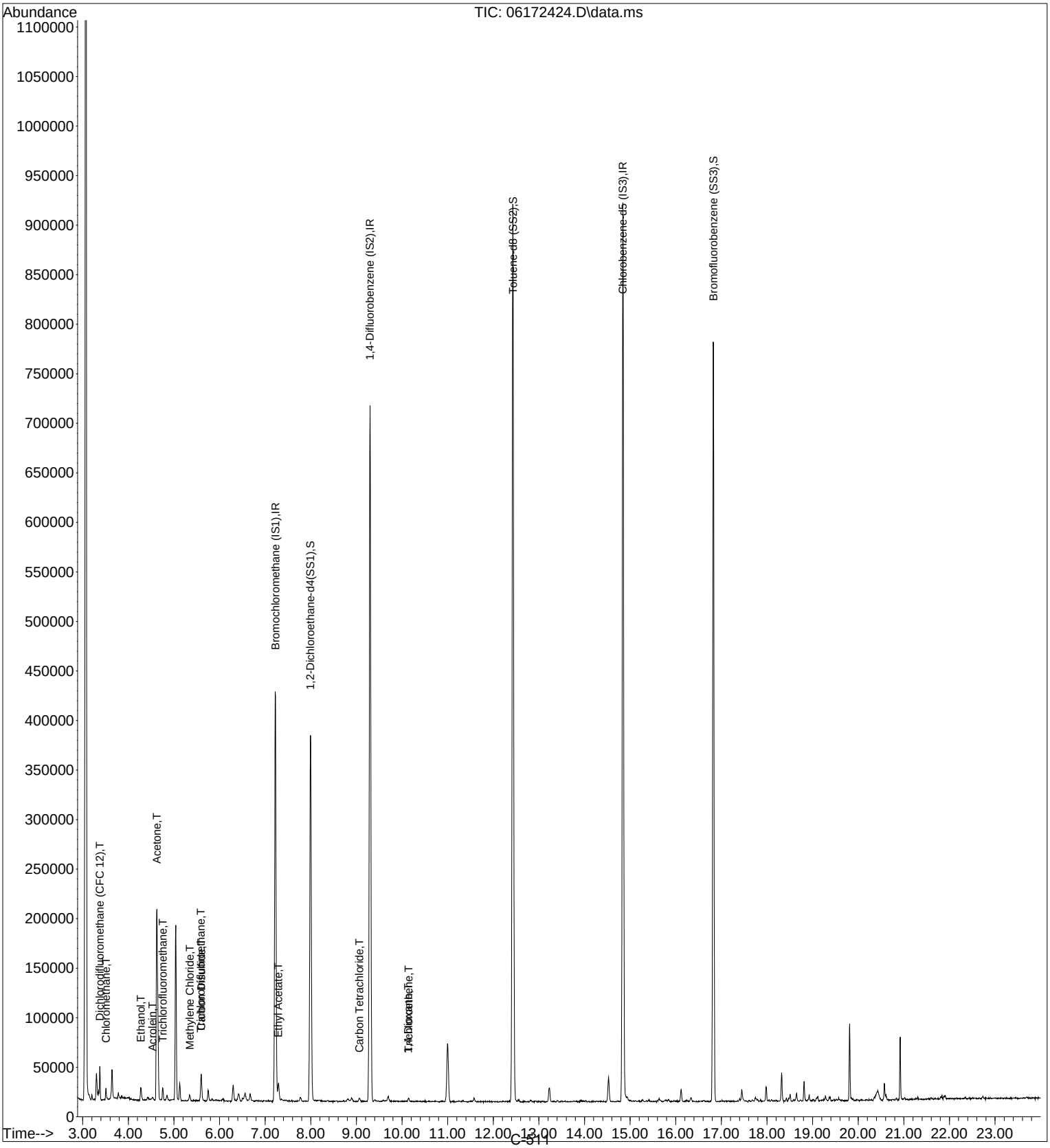
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
51) n-Heptane	0.00	71	0	N.D.		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	12.56	91	2637	N.D.		
59) 2-Hexanone	12.92	43	1392	N.D.		
60) Dibromochloromethane	13.08	129	474	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	13.78	43	144	N.D.		
63) n-Octane	0.00	57	0	N.D.		
64) Tetrachloroethene	14.03	166	441	N.D.		
65) Chlorobenzene	14.90	112	571	N.D.		
66) Ethylbenzene	15.41	91	1702	N.D.		
67) m- & p-Xylenes	15.64	91	2693	N.D.		
68) Bromoform	15.68	173	660	N.D.		
69) Styrene	0.00	104	0	N.D.		
70) o-Xylene	16.24	91	1043	N.D.		
71) n-Nonane	16.61	43	748	N.D.		
72) 1,1,2,2-Tetrachloroethane	16.21	83	325	N.D.		
74) Cumene	17.04	105	833	N.D.		
75) alpha-Pinene	17.52	93	466	N.D.		
76) n-Propylbenzene	17.68	91	1304	N.D.		
77) 3-Ethyltoluene	17.04	105	833	No Calib		#
78) 4-Ethyltoluene	17.86	105	840	N.D.		
79) 1,3,5-Trimethylbenzene	17.96	105	576	N.D.		
80) alpha-Methylstyrene	0.00	118	0	N.D.		
81) 2-Ethyltoluene	17.04	105	833	No Calib		#
82) 1,2,4-Trimethylbenzene	18.43	105	865	N.D.		
83) n-Decane	0.00	58	0	N.D.		
84) Benzyl Chloride	0.00	91	0	N.D.		
85) 1,3-Dichlorobenzene	18.58	146	577	N.D.		
86) 1,4-Dichlorobenzene	18.66	146	571	N.D.		
87) sec-Butylbenzene	18.74	105	1023	N.D.		
88) 4-Isopropyltoluene (p-...	18.93	119	3216	N.D.		
89) 1,2,3-Trimethylbenzene	17.04	105	833	No Calib		#
90) 1,2-Dichlorobenzene	19.03	146	506	N.D.		
91) d-Limonene	19.08	68	777	N.D.		
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	0.00	58	0	N.D.		
94) 1,2,4-Trichlorobenzene	20.84	180	814	N.D.		
95) Naphthalene	20.94	128	1006	N.D.		
96) n-Dodecane	0.00	58	0	N.D.		
97) Hexachlorobutadiene	21.30	225	774	N.D.		
98) Cyclohexanone	15.36	55	329	No Calib		#
99) tert-Butylbenzene	18.43	119	1079	N.D.		
100) n-Butylbenzene	19.39	91	1106	N.D.		
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172424.D Vial: 13
Acq On : 17 Jun 2024 21:41 Operator: SC
Sample : P2402249-005 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 10:47:12 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\17\06172424.D Vial: 13
Acq On : 17 Jun 2024 21:41 Operator: SC
Sample : P2402249-005 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 10:47:12 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

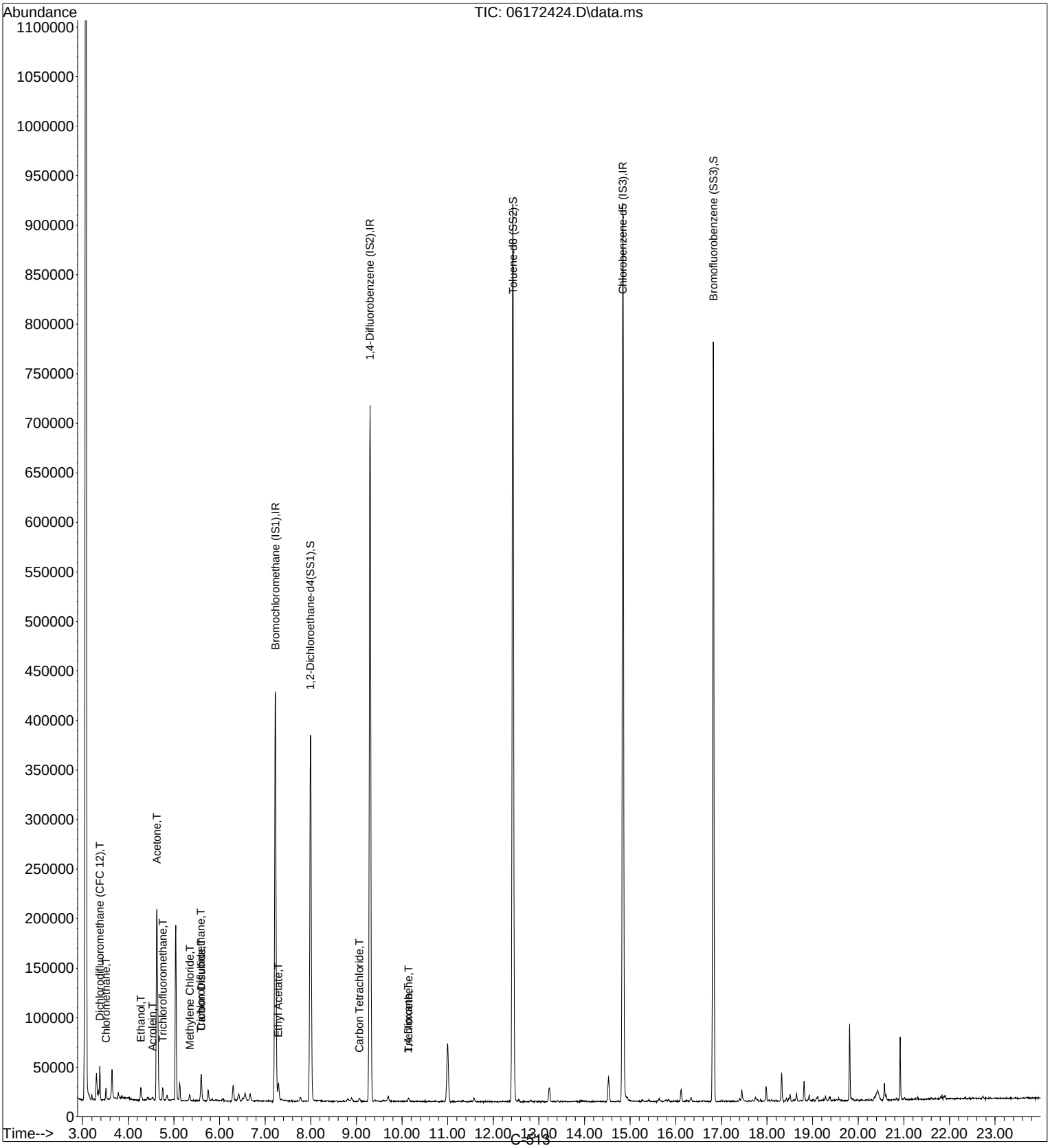
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	149620	12.500	ng	0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	661321	12.500	ng	0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	153048	12.500	ng	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4(...	7.99	65	327625	12.320	ng	0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.56%			
57) Toluene-d8 (SS2)	12.43	98	740890	12.650	ng	-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.20%			
73) Bromofluorobenzene (SS3)	16.83	174	266295	12.591	ng	-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.72%			
Target Compounds						Qvalue
3) Dichlorodifluoromethan...	3.38	85	19459	0.553	ng	99
4) Chloromethane	3.51	50	7929	0.329	ng	99
10) Ethanol	4.27	45	24058	1.654	ng	75
12) Acrolein	4.53	56	851	0.079	ng	97
13) Acetone	4.62	58	60928	5.242	ng	99
14) Trichlorofluoromethane	4.76	101	8988	0.252	ng	99
19) Methylene Chloride	5.35	84	2041	0.124	ng	90
21) Trichlorotrifluoroethane	5.59	151	1764	0.117	ng	99
22) Carbon Disulfide	5.60	76	34128	0.644	ng	98
30) Ethyl Acetate	7.29	61	2453	0.437	ng	97
42) Carbon Tetrachloride	9.07	117	2499	0.088	ng	97
47) Trichloroethene	10.14	130	1277	0.072	ng	95
48) 1,4-Dioxane	10.13	88	759	0.067	ng	99

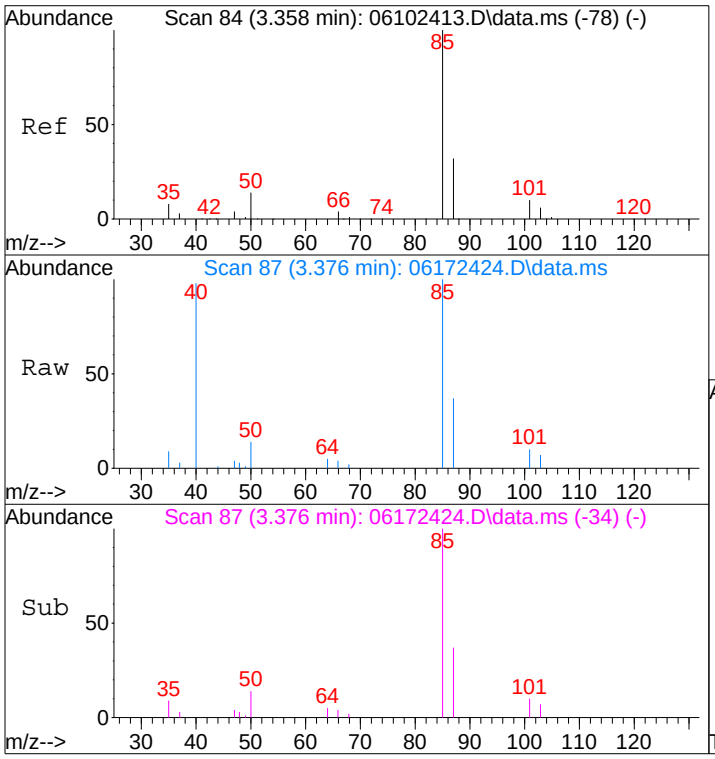
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172424.D Vial: 13
Acq On : 17 Jun 2024 21:41 Operator: SC
Sample : P2402249-005 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 10:47:12 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

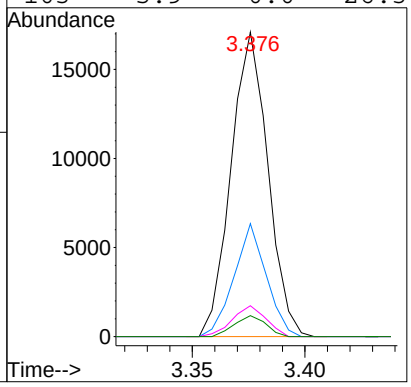


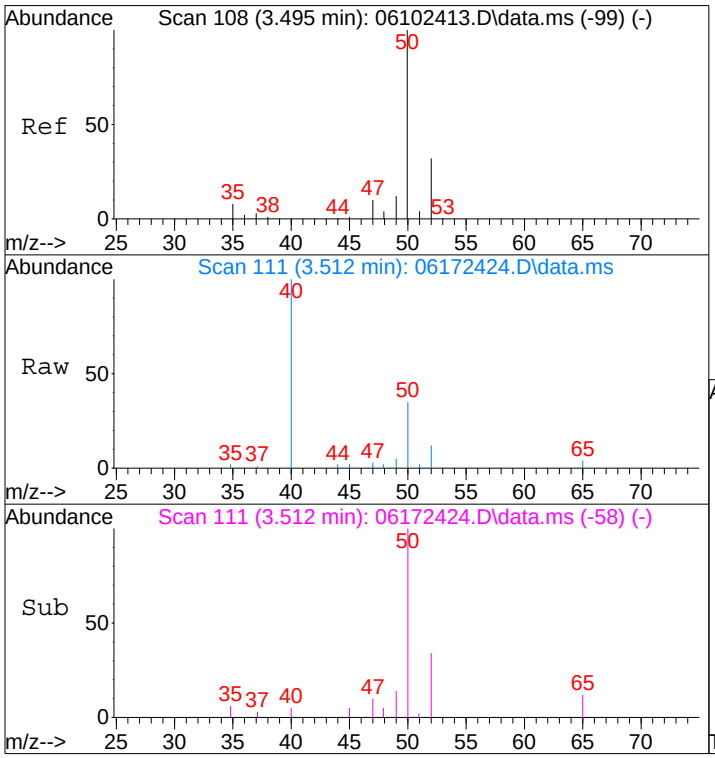


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.55 ng
RT: 3.38 min Scan# 87
Delta R.T. 0.054 min
Lab File: 06172424.D
Acq: 17 Jun 2024 21:41

Tgt Ion: 85 Resp: 19459

Ion	Ratio	Lower	Upper
85	100		
87	32.6	12.2	52.2
101	9.3	0.0	29.8
103	5.9	0.0	26.3

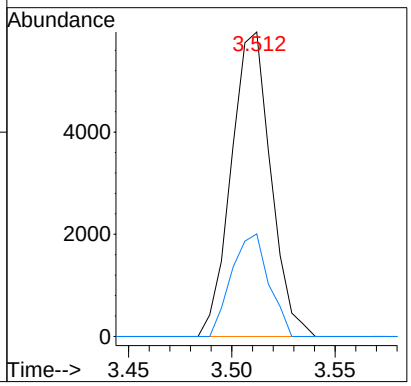


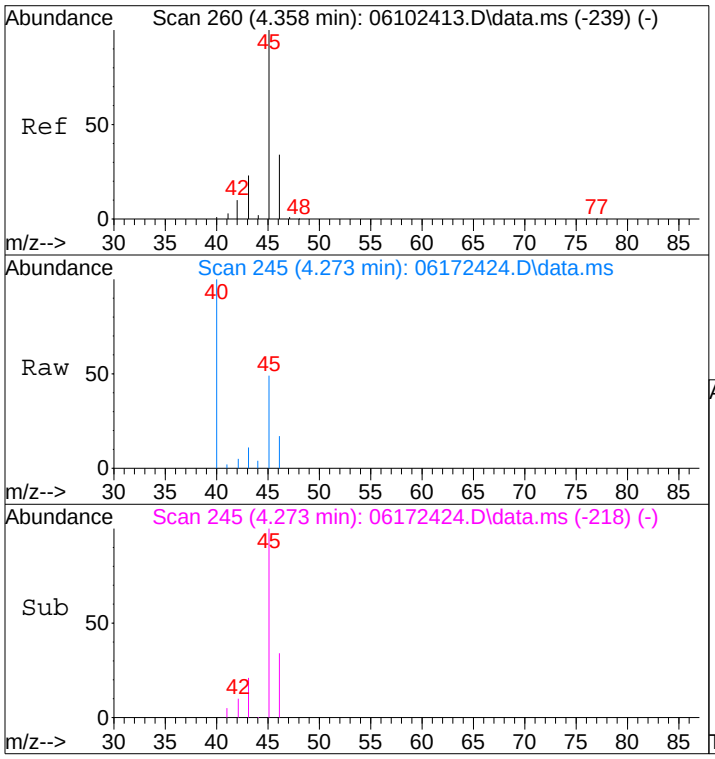


#4
Chloromethane
Concen: 0.33 ng
RT: 3.51 min Scan# 111
Delta R.T. 0.050 min
Lab File: 06172424.D
Acq: 17 Jun 2024 21:41

Tgt Ion: 50 Resp: 7929

Ion	Ratio	Lower	Upper
50	100		
52	31.8	12.4	52.4

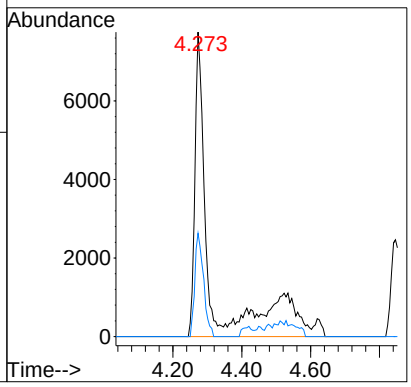


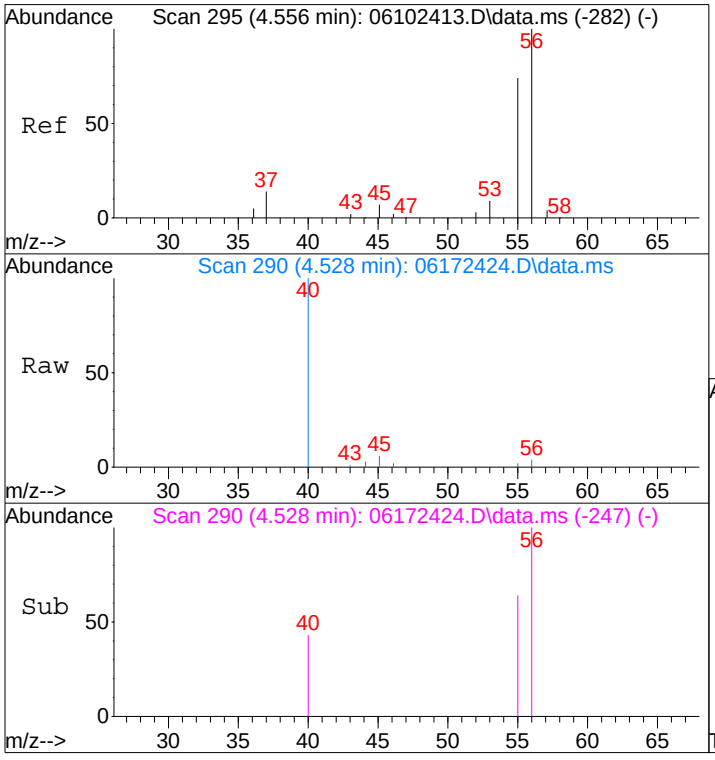


#10
Ethanol
Concen: 1.65 ng
RT: 4.27 min Scan# 245
Delta R.T. -0.094 min
Lab File: 06172424.D
Acq: 17 Jun 2024 21:41

Tgt Ion: 45 Resp: 24058

Ion	Ratio	Lower	Upper
45	100		
46	19.3	13.5	53.5

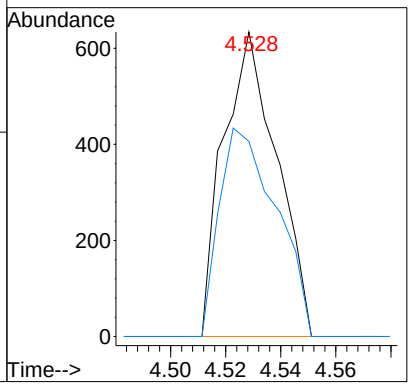


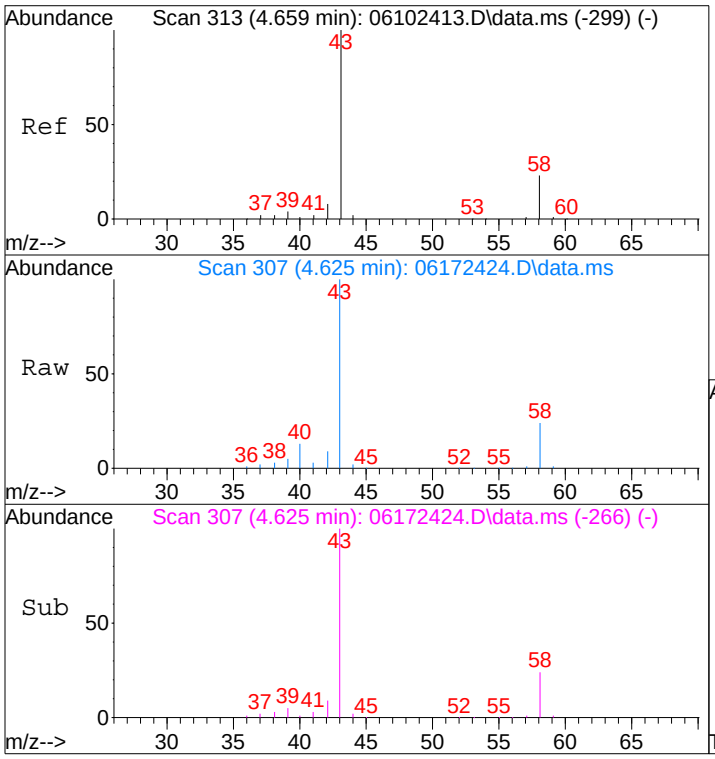


#12
Acrolein
Concen: 0.08 ng
RT: 4.53 min Scan# 290
Delta R.T. -0.007 min
Lab File: 06172424.D
Acq: 17 Jun 2024 21:41

Tgt Ion: 56 Resp: 851

Ion	Ratio	Lower	Upper
56	100		
55	73.3	55.5	95.5

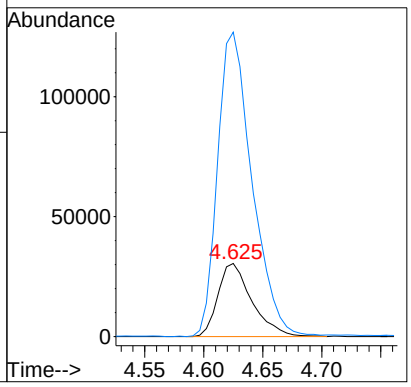


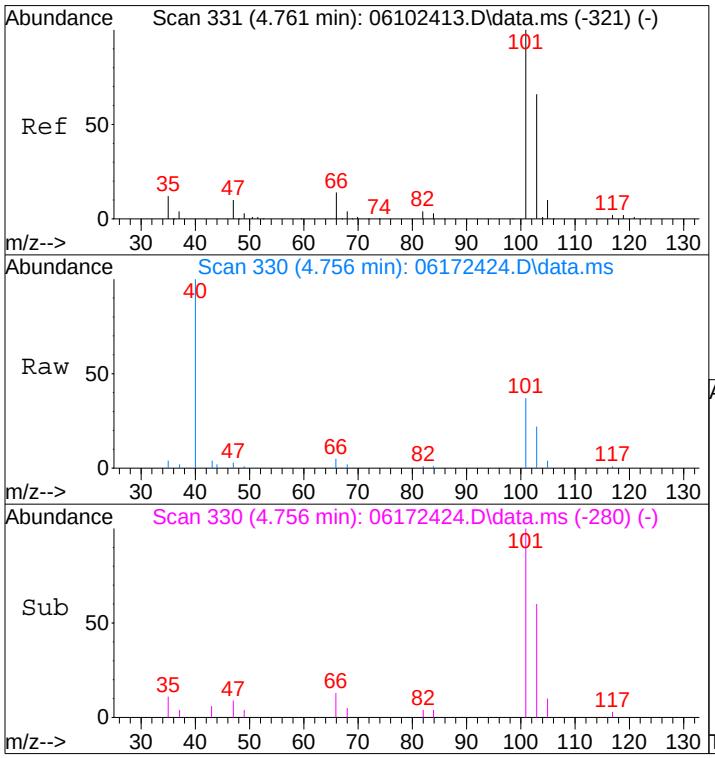


#13
Acetone
Concen: 5.24 ng
RT: 4.62 min Scan# 307
Delta R.T. -0.017 min
Lab File: 06172424.D
Acq: 17 Jun 2024 21:41

Tgt Ion: 58 Resp: 60928

Ion	Ratio	Lower	Upper
58	100		
43	427.6	400.7	460.7

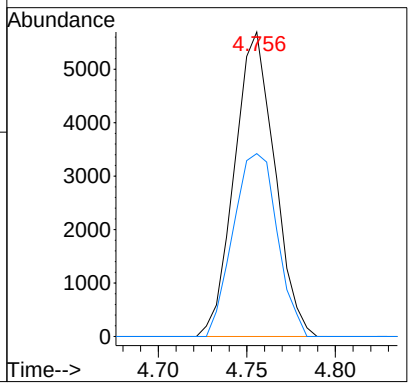


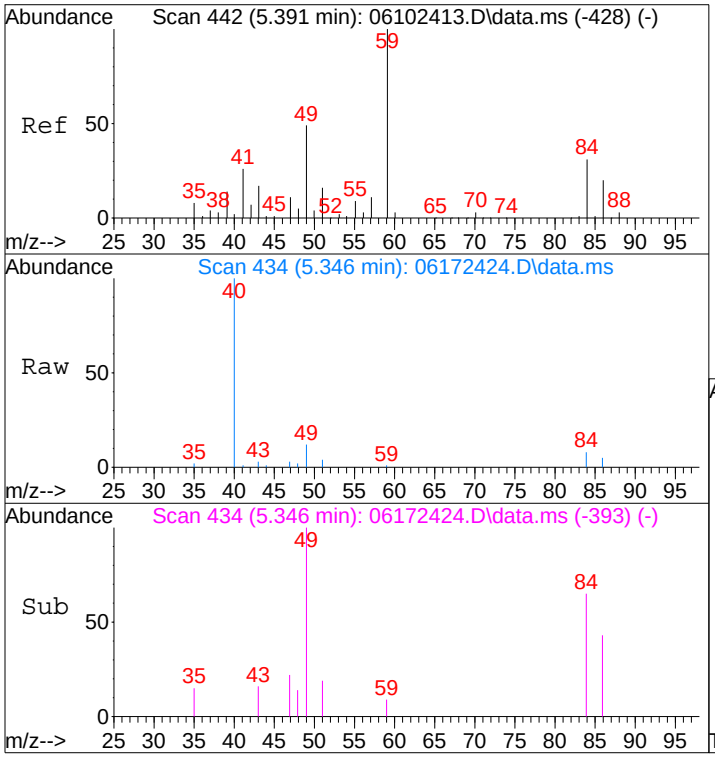


#14
Trichlorofluoromethane
Concen: 0.25 ng
RT: 4.76 min Scan# 330
Delta R.T. 0.035 min
Lab File: 06172424.D
Acq: 17 Jun 2024 21:41

Tgt Ion:101 Resp: 8988

Ion	Ratio	Lower	Upper
101	100		
103	66.0	44.9	84.9

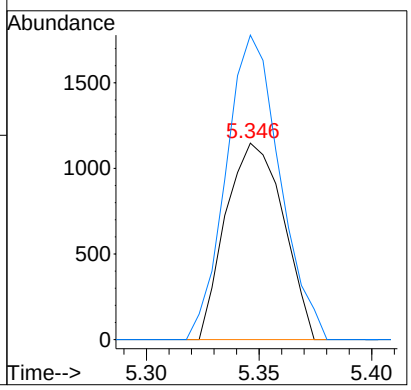


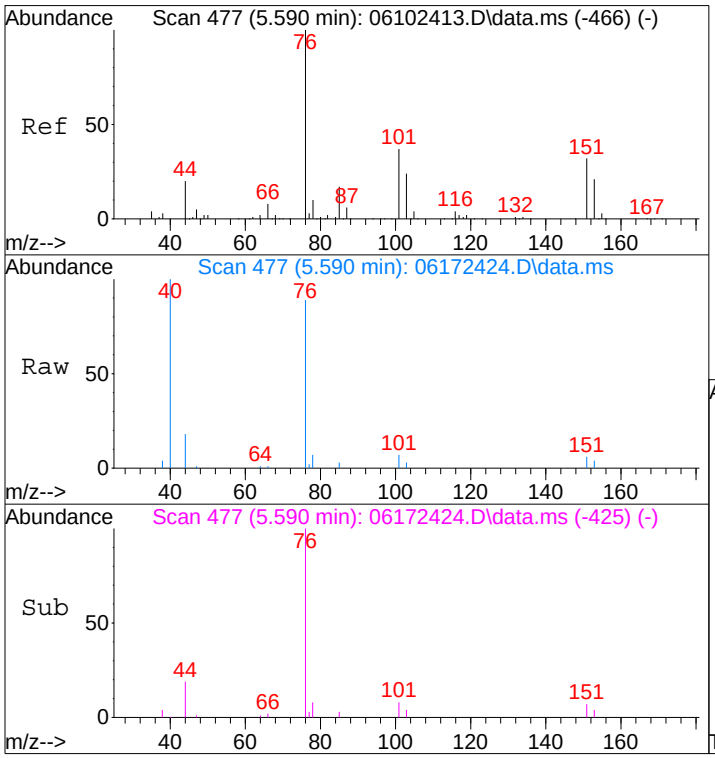


#19
Methylene Chloride
Concen: 0.12 ng
RT: 5.35 min Scan# 434
Delta R.T. -0.015 min
Lab File: 06172424.D
Acq: 17 Jun 2024 21:41

Tgt Ion: 84 Resp: 2041

Ion	Ratio	Lower	Upper
84	100		
49	145.0	132.9	182.9

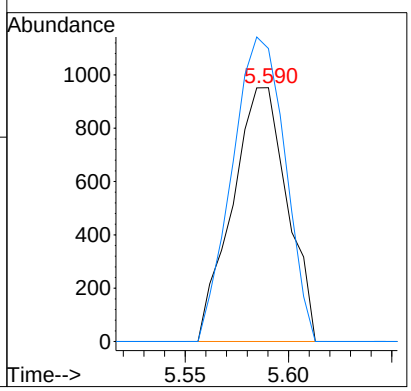


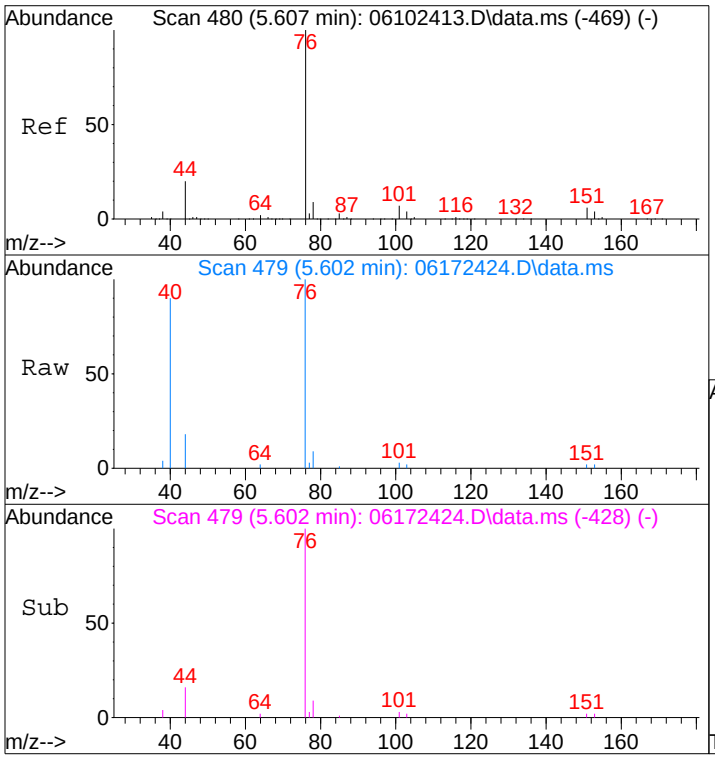


#21
Trichlorotrifluoroethane
Concen: 0.12 ng
RT: 5.59 min Scan# 477
Delta R.T. 0.044 min
Lab File: 06172424.D
Acq: 17 Jun 2024 21:41

Tgt Ion:151 Resp: 1764

Ion	Ratio	Lower	Upper
151	100		
101	115.6	95.0	135.0

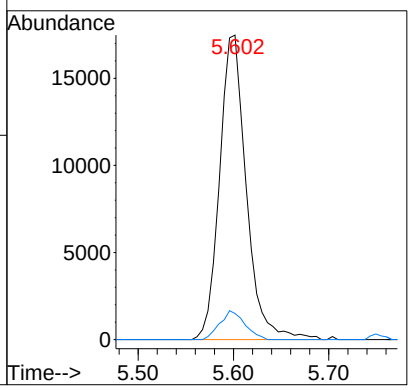


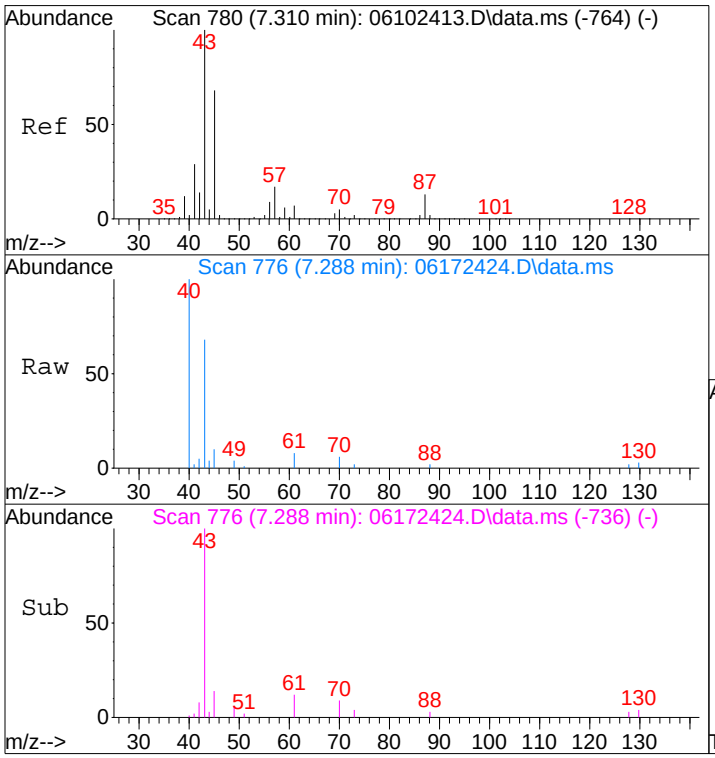


#22
Carbon Disulfide
Concen: 0.64 ng
RT: 5.60 min Scan# 479
Delta R.T. 0.038 min
Lab File: 06172424.D
Acq: 17 Jun 2024 21:41

Tgt Ion: 76 Resp: 34128

Ion	Ratio	Lower	Upper
76	100		
78	8.8	0.0	29.6

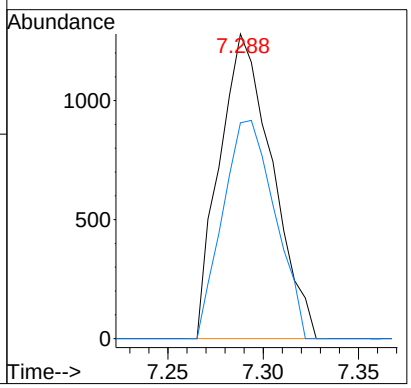


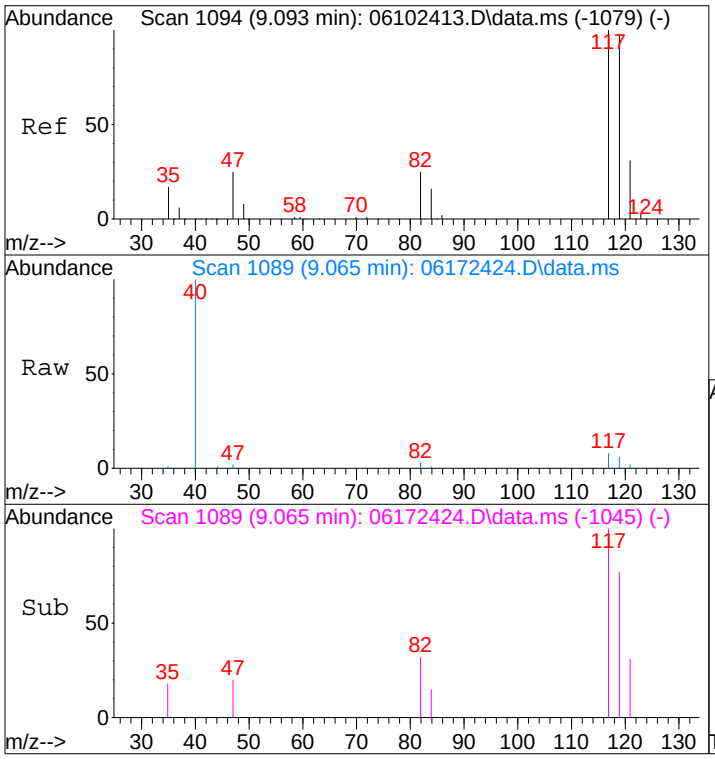


#30
Ethyl Acetate
Concen: 0.44 ng
RT: 7.29 min Scan# 776
Delta R.T. 0.029 min
Lab File: 06172424.D
Acq: 17 Jun 2024 21:41

Tgt Ion: 61 Resp: 2453

Ion	Ratio	Lower	Upper
61	100		
70	71.2	53.5	93.5

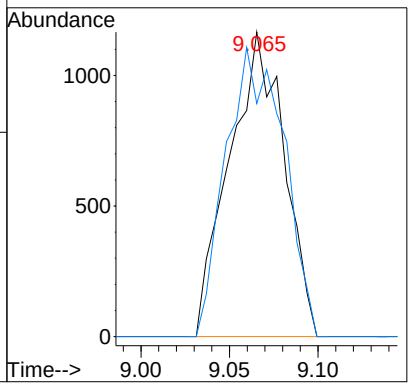


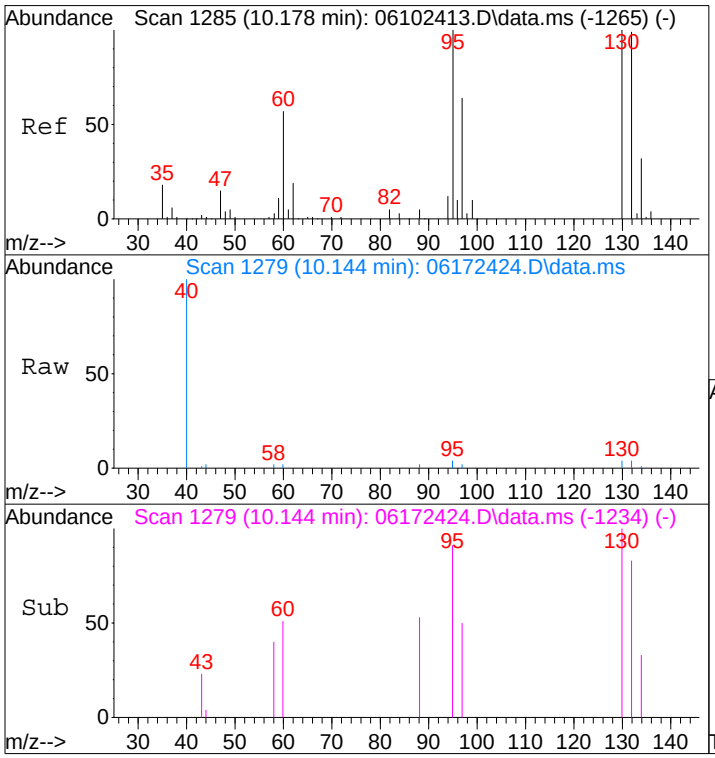


#42
Carbon Tetrachloride
Concen: 0.09 ng
RT: 9.07 min Scan# 1089
Delta R.T. -0.001 min
Lab File: 06172424.D
Acq: 17 Jun 2024 21:41

Tgt Ion:117 Resp: 2499

Ion	Ratio	Lower	Upper
117	100		
119	100.6	77.3	117.3

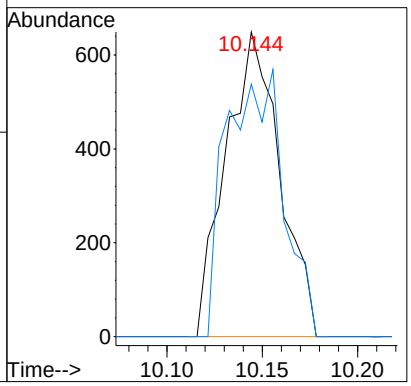


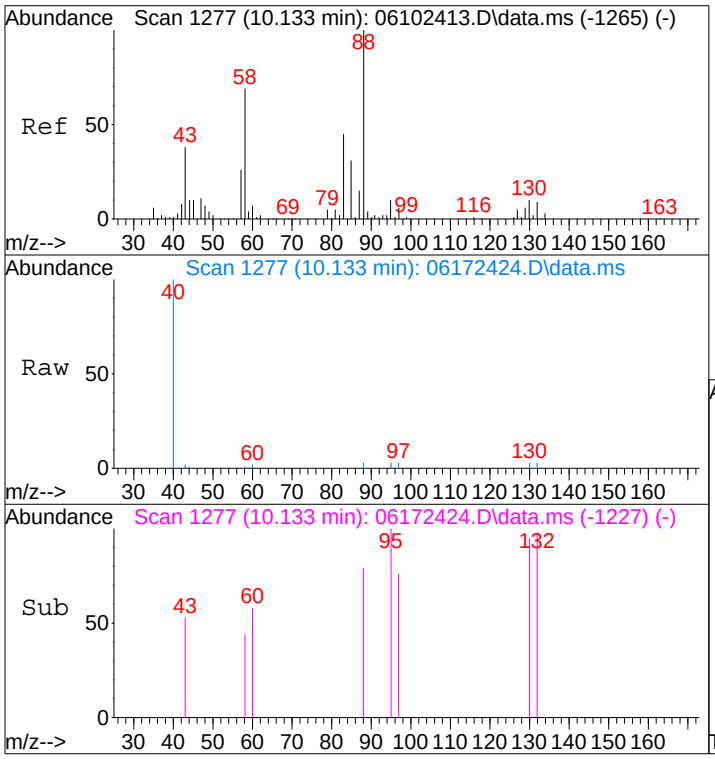


#47
Trichloroethene
Concen: 0.07 ng
RT: 10.14 min Scan# 1279
Delta R.T. 0.005 min
Lab File: 06172424.D
Acq: 17 Jun 2024 21:41

Tgt Ion:130 Resp: 1277

Ion	Ratio	Lower	Upper
130	100		
132	92.6	77.9	117.9

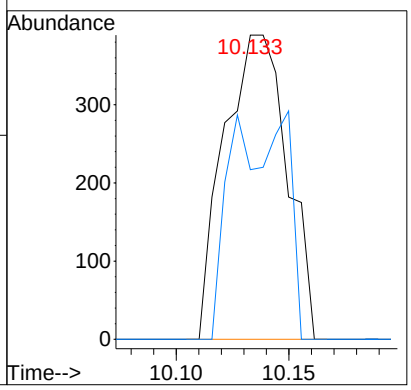




#48
1,4-Dioxane
Concen: 0.07 ng
RT: 10.13 min Scan# 1277
Delta R.T. 0.033 min
Lab File: 06172424.D
Acq: 17 Jun 2024 21:41

Tgt Ion: 88 Resp: 759

Ion	Ratio	Lower	Upper
88	100		
58	66.4	47.6	87.6



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172424.D Vial: 13
Acq On : 17 Jun 2024 21:41 Operator: SC
Sample : P2402249-005 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 14:49:18 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

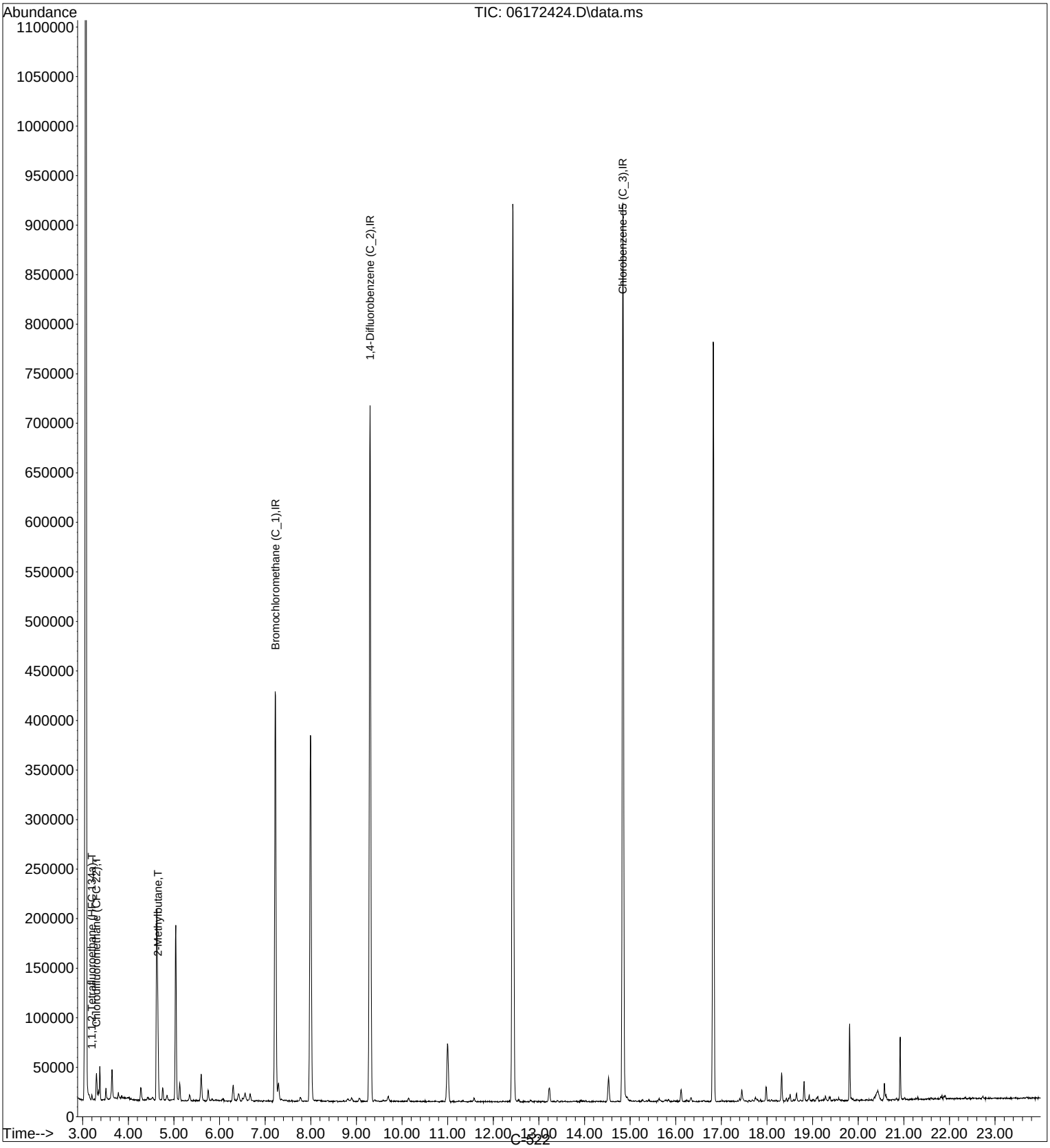
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	150232	12.500	ng		-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	662399	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	153048	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	3.15	85	161	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.20	83	2339	0.152	ng		94
4) 1,1-Difluoroethane	3.25	65	251	N.D.			
5) Chlorodifluoromethane ...	3.30	67	1148	0.224	ng		94
6) 1-Chloro-1,1-Difluoroe...	3.51	65	674	N.D.			
7) Dichlorofluoromethane ...	0.00	67	0	N.D.			
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	0.00	83	0	N.D.			
10) 2-Methylbutane	4.65	57	12648	0.706	ng	#	57
11) Methyl Acetate	5.33	43	2109	N.D.			
12) 2-Methylpentane	0.00	71	0	N.D.			
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	9.06	84	262	N.D.			
17) 2,3-Dimethylpentane	0.00	56	0	N.D.			
18) Dibromomethane	9.80	174	170	N.D.			
20) Methyl Cyclohexane	11.58	55	2090	N.D.			
21) 1,3-Dichloropropane	0.00	76	0	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	16.33	75	55	N.D.			
25) Bromobenzene	0.00	77	0	N.D.			
26) 2-Chlorotoluene	17.61	91	824	N.D.			
27) 4-Chlorotoluene	17.68	91	1304	N.D.			
28) Indane	0.00	117	0	N.D.			
29) Indene	0.00	115	0	N.D.			
30) 1,2,4,5-Tetramethylben...	0.00	119	0	N.D.			
31) 1,2,3,4-Tetramethylben...	0.00	119	0	N.D.			
32) 1,2,3,5-Tetramethylben...	0.00	119	0	N.D.			
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172424.D Vial: 13
Acq On : 17 Jun 2024 21:41 Operator: SC
Sample : P2402249-005 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:49:18 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



LSC Area Percent Report

MJ 6/28/24

Data Path : I:\MS09\DATA\2024 06\17\
Data File : 06172424.D
Acq On : 17 Jun 2024 21:41
Operator : SC
Sample : P2402249-005 (400mL)
Misc : S37-06062402
ALS Vial : 13 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06172424.D\data.ms

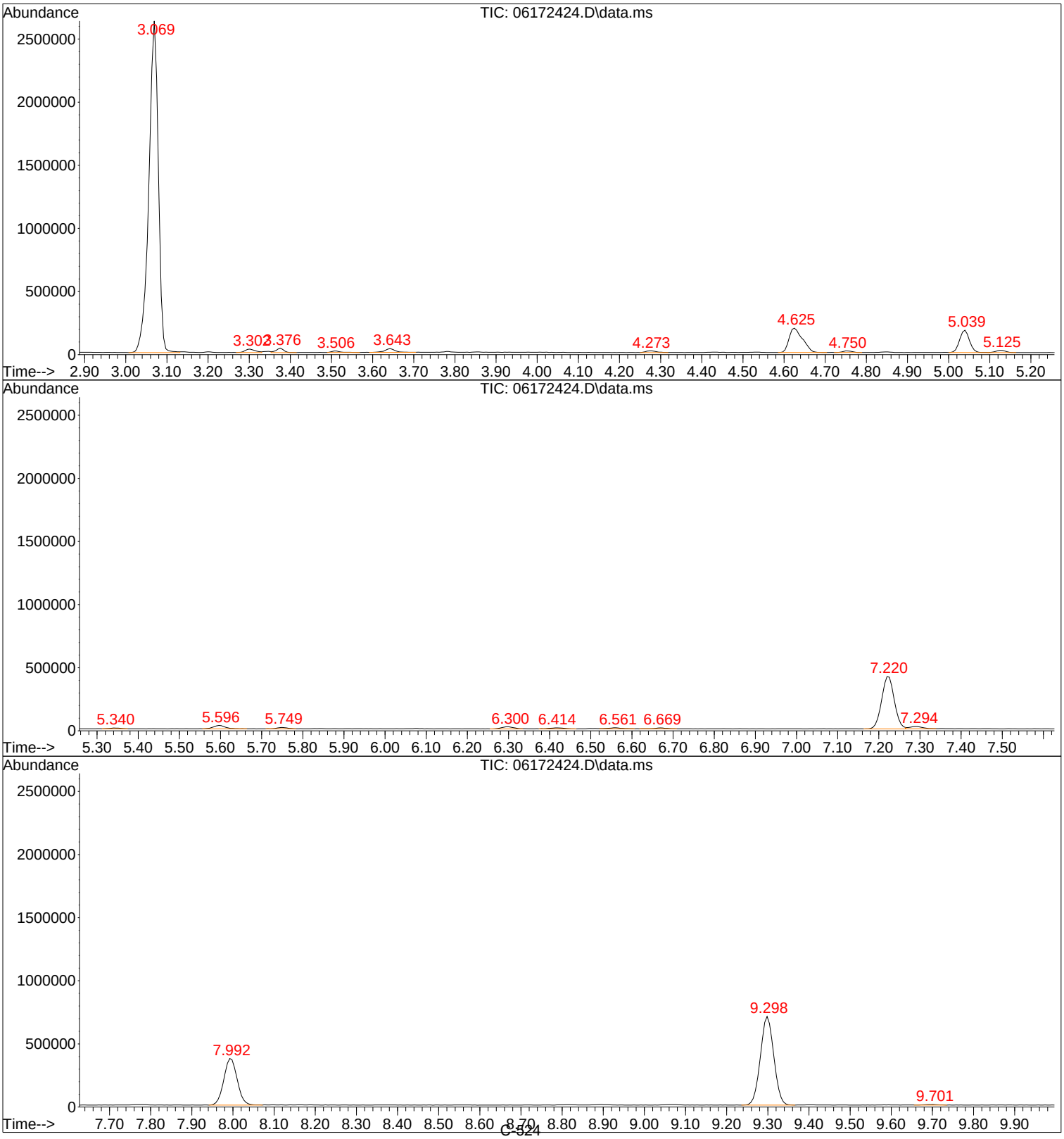
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.069	22	33	44	rBV	2626438	4179740	100.00%	48.167%
2	3.302	68	74	79	rBV	27370	47117	1.13%	0.543%
3	3.376	83	87	94	rVB	34368	42911	1.03%	0.495%
4	3.506	107	110	121	rBV2	11483	16832	0.40%	0.194%
5	3.643	125	134	145	rBV	29978	53829	1.29%	0.620%
6	4.273	241	245	253	rBV	12923	24352	0.58%	0.281%
7	4.625	300	307	321	rBV	192752	438269	10.49%	5.051%
8	4.750	324	329	336	rVB	12502	20147	0.48%	0.232%
9	5.039	373	380	390	rBV	176299	294179	7.04%	3.390%
10	5.125	390	395	402	rVB	17988	30664	0.73%	0.353%
11	5.340	428	433	439	rVB4	6059	11418	0.27%	0.132%
12	5.596	471	478	490	rBV	26996	53205	1.27%	0.613%
13	5.749	498	505	511	rBV2	11119	19669	0.47%	0.227%
14	6.300	594	602	608	rBV	16387	33639	0.80%	0.388%
15	6.414	615	622	631	rVB3	7641	19579	0.47%	0.226%
16	6.561	641	648	656	rVB4	7588	17225	0.41%	0.199%
17	6.669	658	667	674	rVB3	6729	12853	0.31%	0.148%
18	7.220	754	764	772	rBV	414142	890365	21.30%	10.261%
19	7.294	772	777	785	rVB	17316	37596	0.90%	0.433%
20	7.992	891	900	914	rBV	369317	833908	19.95%	9.610%
21	9.298	1119	1130	1142	rVB	702480	1588360	38.00%	18.304%
22	9.701	1193	1201	1207	rVB6	5162	11691	0.28%	0.135%

Sum of corrected areas: 8677548

Data Path : I:\MS09\DATA\2024 06\17\
Data File : 06172424.D
Acq On : 17 Jun 2024 21:41
Operator : SC
Sample : P2402249-005 (400mL)
Misc : S37-06062402
ALS Vial : 13 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\17\\
Data File : 06172424.D
Acq On : 17 Jun 2024 21:411
Operator : SCC
Sample : P2402249-005 (400mL))
Misc : S37-060624022
ALS Vial : 13 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172413.D Vial: 1
Acq On : 17 Jun 2024 15:46 Operator: SC
Sample : P2402249-006 (1.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 17 16:09:30 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/17/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	188008	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	838880	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	189672	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	401263	12.008	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.08%				
57) Toluene-d8 (SS2)	12.43	98	939693	12.946	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.60%				
73) Bromofluorobenzene (SS3)	16.83	174	310774	11.857	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 94.88%				
Target Compounds							Qvalue
2) Propene	3.31	42	1371	0.057	ng		94
3) Dichlorodifluoromethan...	3.32	85	26873	0.607	ng	#	92
4) Chloromethane	0.00	50	0	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	3.81	54	196	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.36	45	55	N.D.			
11) Acetonitrile	4.45	41	123	N.D.			
12) Acrolein	4.55	56	352	N.D.			
13) Acetone	4.66	58	5798	0.397	ng	#	65
14) Trichlorofluoromethane	4.76	101	2346781	52.432	ng		100
15) 2-Propanol (Isopropanol)	4.89	45	1172	N.D.			
16) Acrylonitrile	5.00	53	715	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	0.00	59	0	N.D.			
19) Methylene Chloride	5.35	84	1087	0.053	ng		98
20) 3-Chloro-1-propene (Al...	5.45	41	459	N.D.			
21) Trichlorotrifluoroethane	5.58	151	1910438	100.898	ng		92
22) Carbon Disulfide	5.60	76	1323	N.D.			
23) trans-1,2-Dichloroethene	6.13	61	113	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D.			
27) 2-Butanone (MEK)	6.69	72	1033	0.089	ng	#	75
28) cis-1,2-Dichloroethene	7.07	61	465	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.			
30) Ethyl Acetate	0.00	61	0	N.D.			
31) n-Hexane	7.30	57	1345	N.D.			
32) Chloroform	7.34	83	630	N.D.			
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	331	N.D.			
38) 1,1,1-Trichloroethane	8.40	97	1125	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.85	56	1004	No Calib		#	
41) Benzene	8.89	78	2982	N.D.			
42) Carbon Tetrachloride	0.00	117	0	N.D.			
43) Cyclohexane	9.23	84	319	N.D.			
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.07	83	458	N.D.			
47) Trichloroethene	10.14	130	3034	0.134	ng		99
48) 1,4-Dioxane	10.15	88	274	N.D.			
49) 2,2,4-Trimethylpentane...	10.25	57	2949	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172413.D Vial: 1
Acq On : 17 Jun 2024 15:46 Operator: SC
Sample : P2402249-006 (1.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 17 16:09:30 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

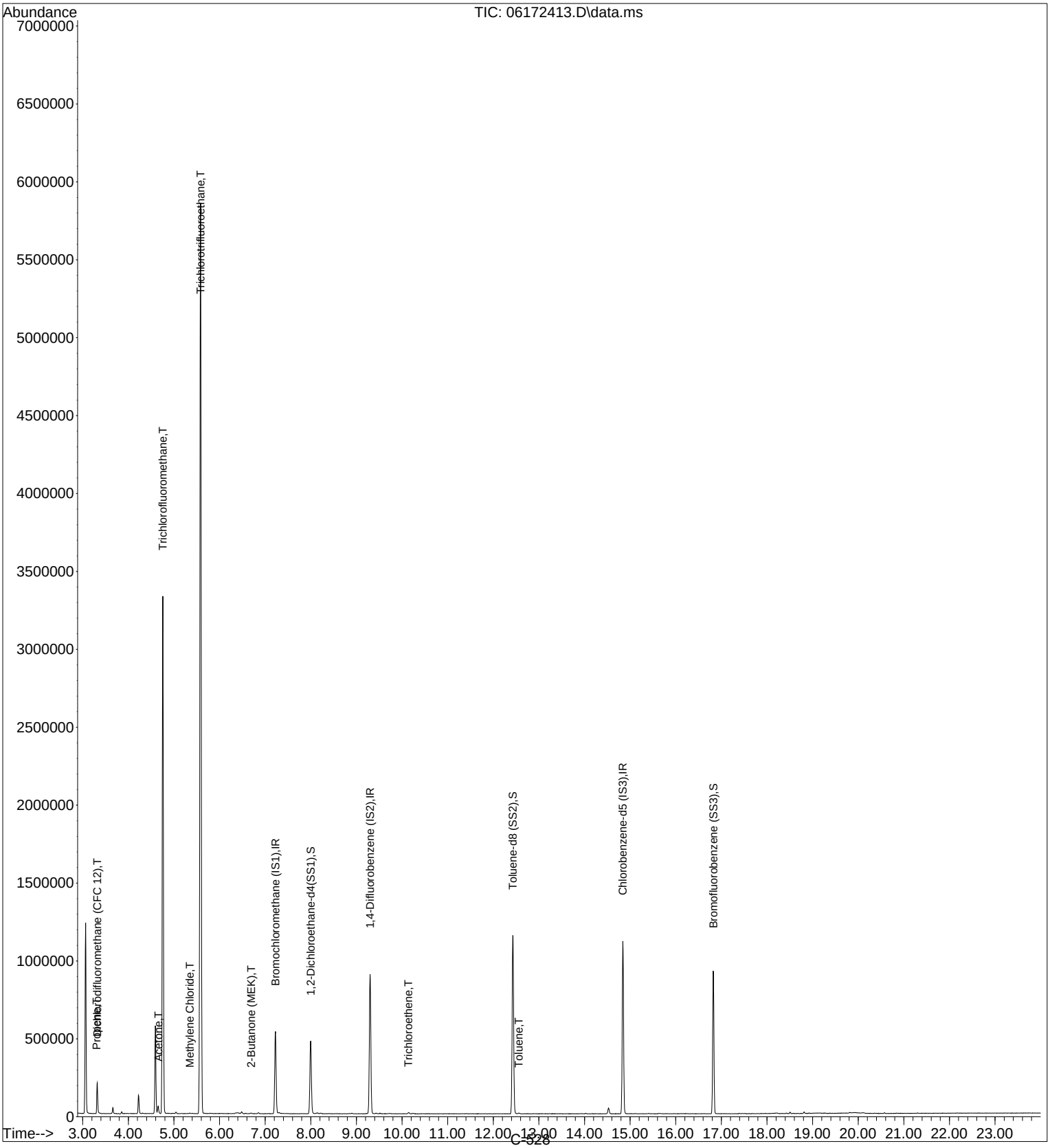
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	0.00	71	0	N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
58) Toluene	12.56	91	4353	0.057 ng	98
59) 2-Hexanone	12.94	43	1141	N.D.	
60) Dibromochloromethane	13.08	129	666	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	0.00	43	0	N.D.	
63) n-Octane	13.93	57	180	N.D.	
64) Tetrachloroethene	14.03	166	1011	N.D.	
65) Chlorobenzene	14.89	112	772	N.D.	
66) Ethylbenzene	15.41	91	2911	N.D.	
67) m- & p-Xylenes	15.63	91	3344	N.D.	
68) Bromoform	15.67	173	573	N.D.	
69) Styrene	16.11	104	188	N.D.	
70) o-Xylene	16.24	91	1282	N.D.	
71) n-Nonane	16.61	43	301	N.D.	
72) 1,1,2,2-Tetrachloroethane	16.21	83	458	N.D.	
74) Cumene	17.03	105	991	N.D.	
75) alpha-Pinene	17.52	93	1107	N.D.	
76) n-Propylbenzene	17.68	91	1315	N.D.	
77) 3-Ethyltoluene	17.03	105	991	No Calib	
78) 4-Ethyltoluene	17.87	105	923	N.D.	
79) 1,3,5-Trimethylbenzene	17.96	105	627	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.03	105	991	No Calib	
82) 1,2,4-Trimethylbenzene	18.43	105	768	N.D.	
83) n-Decane	0.00	58	0	N.D.	
84) Benzyl Chloride	0.00	91	0	N.D.	
85) 1,3-Dichlorobenzene	18.58	146	570	N.D.	
86) 1,4-Dichlorobenzene	18.66	146	682	N.D.	
87) sec-Butylbenzene	18.74	105	1214	N.D.	
88) 4-Isopropyltoluene (p-...	18.92	119	840	N.D.	
89) 1,2,3-Trimethylbenzene	17.03	105	991	No Calib	
90) 1,2-Dichlorobenzene	19.03	146	512	N.D.	
91) d-Limonene	0.00	68	0	N.D.	
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	696	N.D.	
95) Naphthalene	20.94	128	386	N.D.	
96) n-Dodecane	0.00	58	0	N.D.	
97) Hexachlorobutadiene	21.30	225	620	N.D.	
98) Cyclohexanone	15.51	55	129	No Calib	#
99) tert-Butylbenzene	18.42	119	1055	N.D.	
100) n-Butylbenzene	19.38	91	765	N.D.	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172413.D Vial: 1
Acq On : 17 Jun 2024 15:46 Operator: SC
Sample : P2402249-006 (1.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 17 16:09:30 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172413.D Vial: 1
Acq On : 17 Jun 2024 15:46 Operator: SC
Sample : P2402249-006 (1.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 17 16:09:30 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/17/24

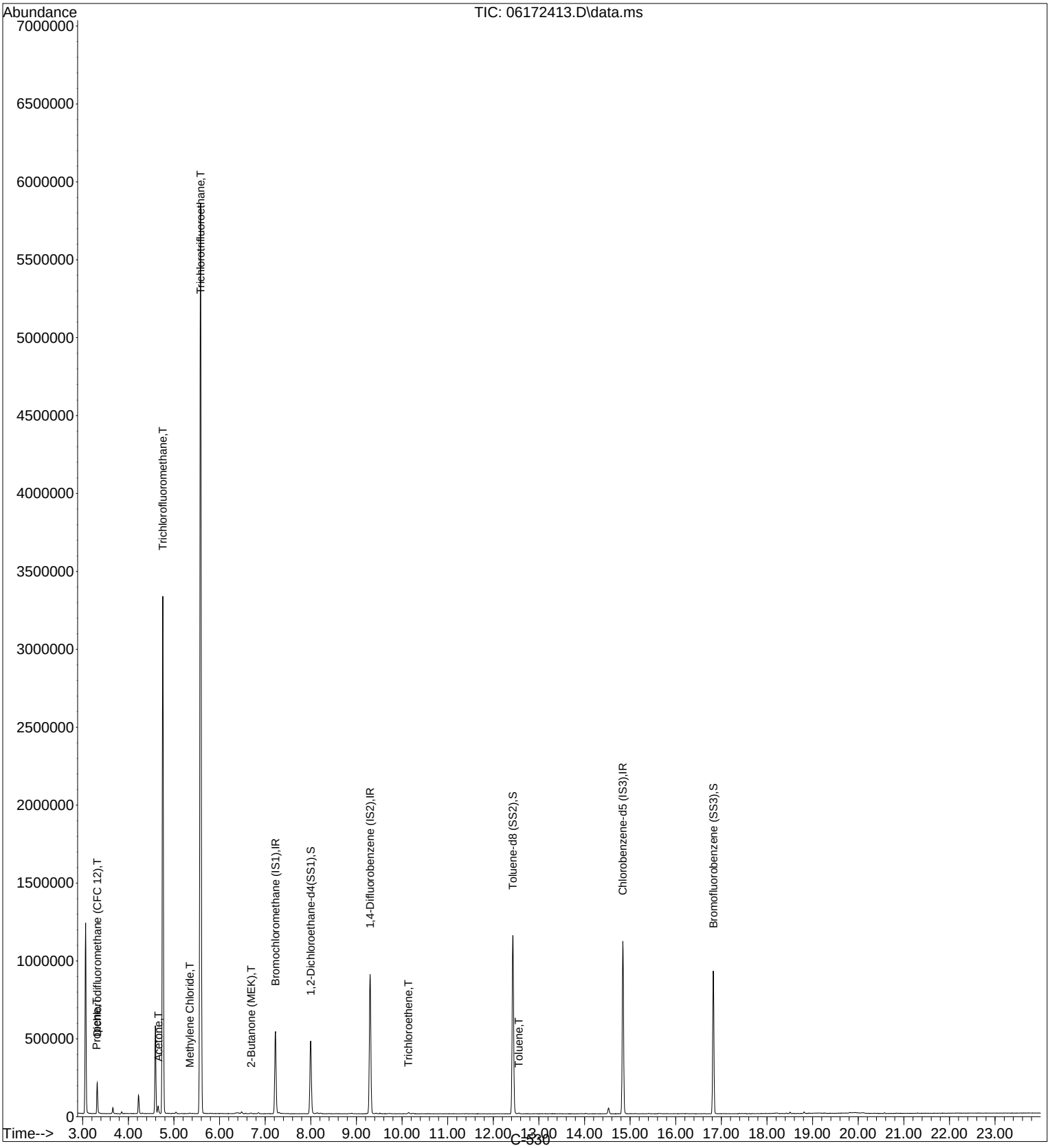
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	188008	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	838880	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	189672	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	401263	12.008	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.08%				
57) Toluene-d8 (SS2)	12.43	98	939693	12.946	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.60%				
73) Bromofluorobenzene (SS3)	16.83	174	310774	11.857	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 94.88%				
Target Compounds							Qvalue
2) Propene	3.31	42	1371	0.057	ng		94
3) Dichlorodifluoromethan...	3.32	85	26873	0.607	ng	#	92
13) Acetone	4.66	58	5798	0.397	ng	#	65
14) Trichlorofluoromethane	4.76	101	2346781	52.432	ng		100
19) Methylene Chloride	5.35	84	1087	0.053	ng		98
21) Trichlorotrifluoroethane	5.58	151	1910438	100.898	ng		92
27) 2-Butanone (MEK)	6.69	72	1033	0.089	ng	#	75
47) Trichloroethene	10.14	130	3034	0.134	ng		99
58) Toluene	12.56	91	4353	0.057	ng		98

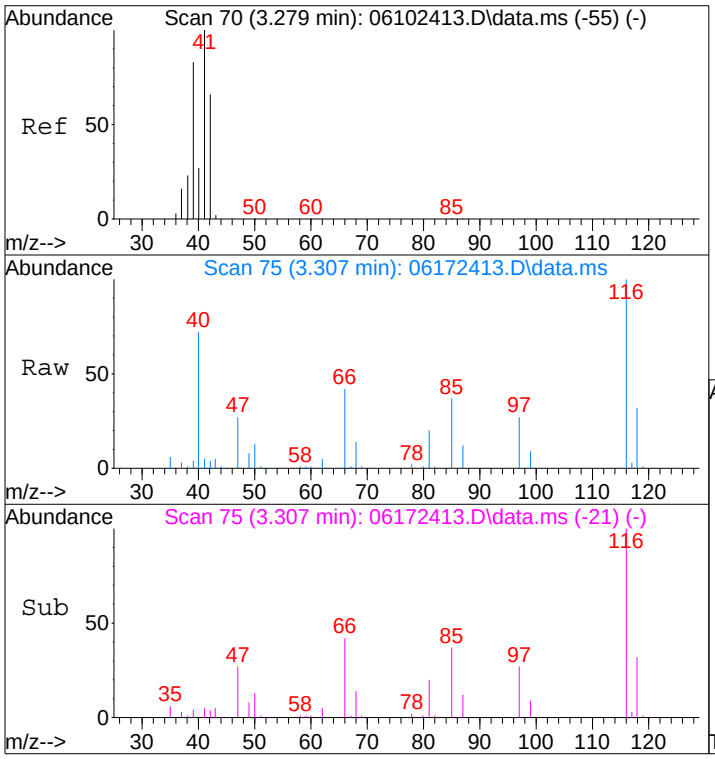
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172413.D Vial: 1
Acq On : 17 Jun 2024 15:46 Operator: SC
Sample : P2402249-006 (1.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 17 16:09:30 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

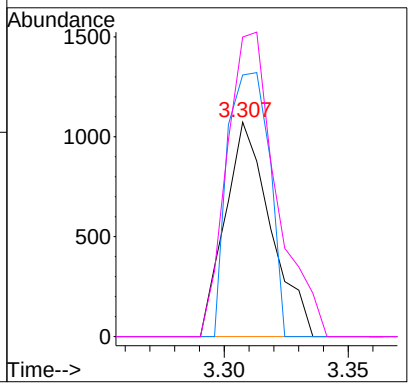


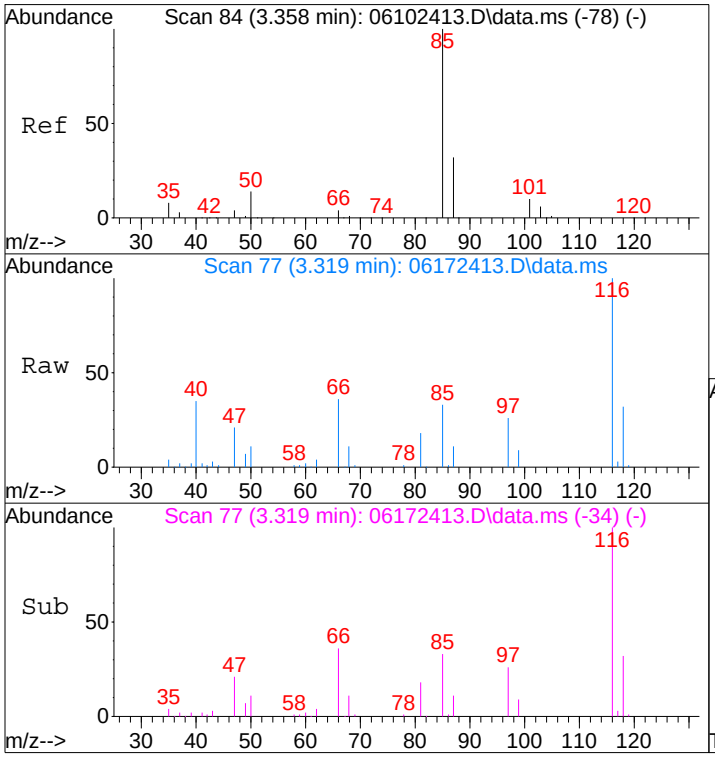


#2
Propene
Concen: 0.06 ng
RT: 3.31 min Scan# 75
Delta R.T. 0.058 min
Lab File: 06172413.D
Acq: 17 Jun 2024 15:46

Tgt Ion: 42 Resp: 1371

Ion	Ratio	Lower	Upper
42	100		
39	113.4	107.3	147.3
41	154.4	134.3	174.3

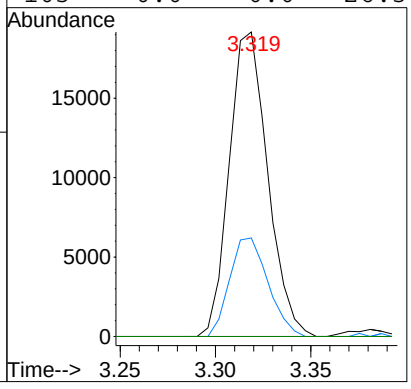


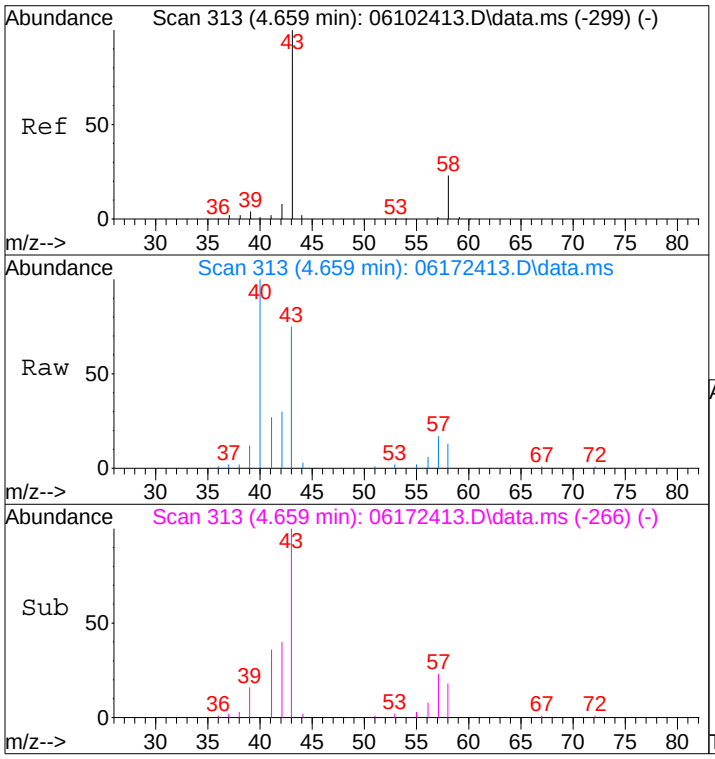


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.61 ng
RT: 3.32 min Scan# 77
Delta R.T. -0.003 min
Lab File: 06172413.D
Acq: 17 Jun 2024 15:46

Tgt Ion: 85 Resp: 26873

Ion	Ratio	Lower	Upper
85	100		
87	32.3	12.2	52.2
101	0.0	0.0	29.8
103	0.0	0.0	26.3

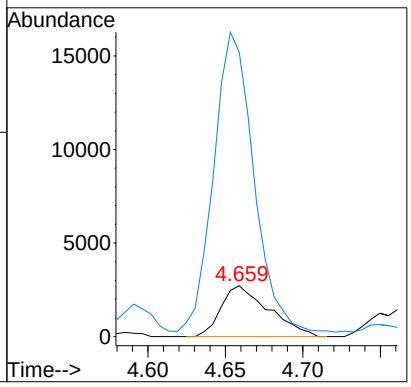


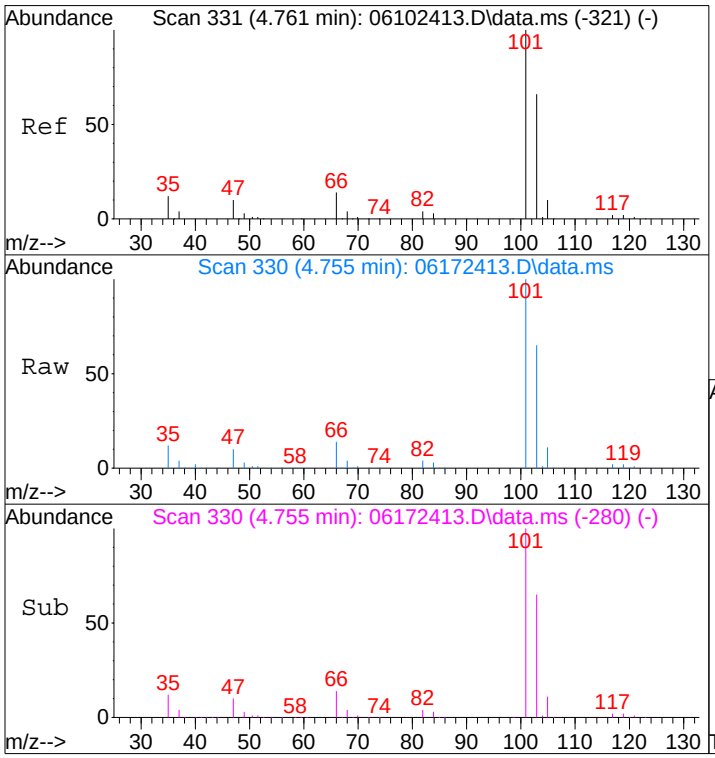


#13
Acetone
Concen: 0.40 ng
RT: 4.66 min Scan# 313
Delta R.T. 0.017 min
Lab File: 06172413.D
Acq: 17 Jun 2024 15:46

Tgt Ion: 58 Resp: 5798

Ion	Ratio	Lower	Upper
58	100		
43	518.7	400.7	460.7#

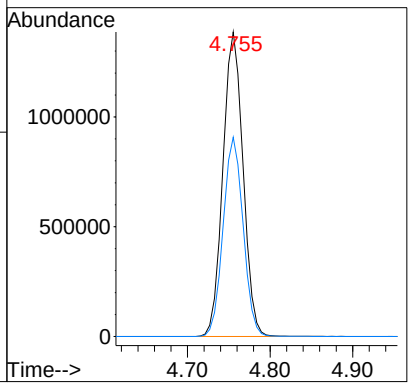


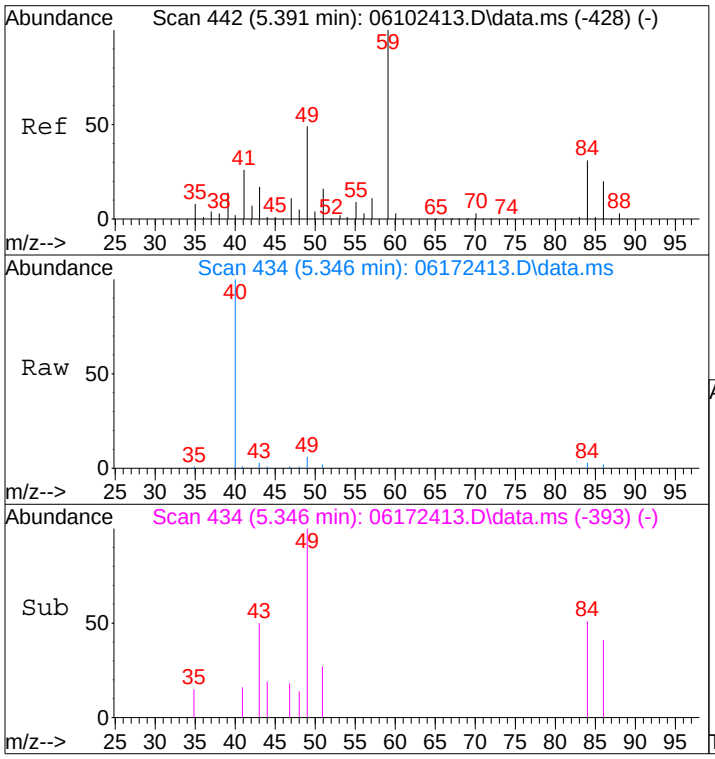


#14
Trichlorofluoromethane
Concen: 52.43 ng
RT: 4.76 min Scan# 330
Delta R.T. 0.035 min
Lab File: 06172413.D
Acq: 17 Jun 2024 15:46

Tgt Ion:101 Resp: 2346781

Ion	Ratio	Lower	Upper
101	100		
103	64.9	44.9	84.9

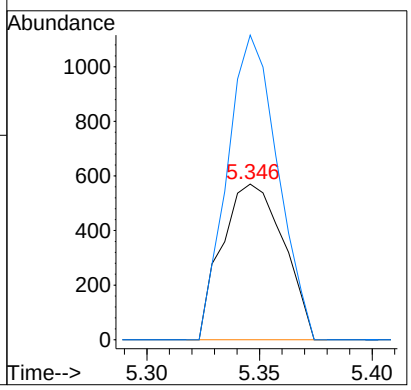


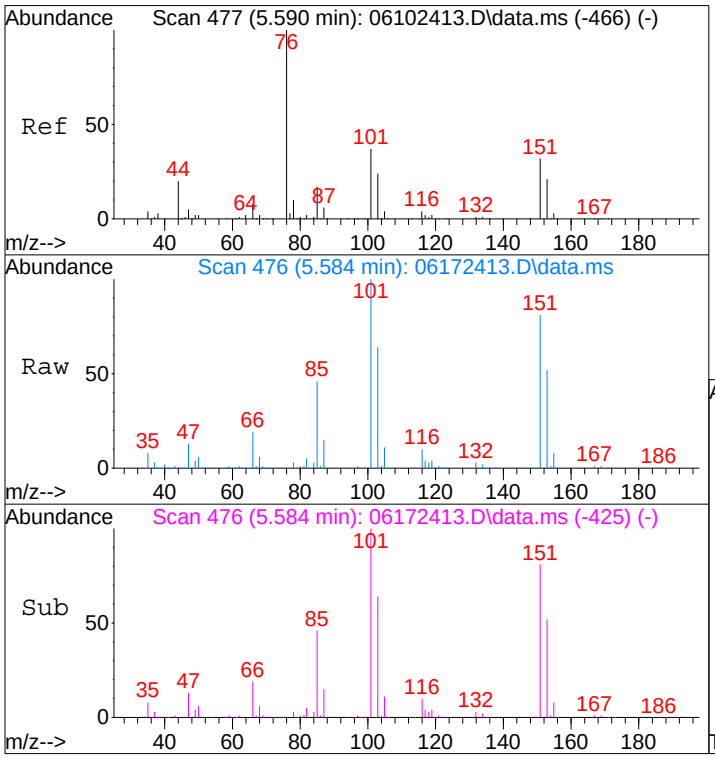


#19
Methylene Chloride
Concen: 0.05 ng
RT: 5.35 min Scan# 434
Delta R.T. -0.015 min
Lab File: 06172413.D
Acq: 17 Jun 2024 15:46

Tgt Ion: 84 Resp: 1087

Ion	Ratio	Lower	Upper
84	100		
49	160.8	132.9	182.9

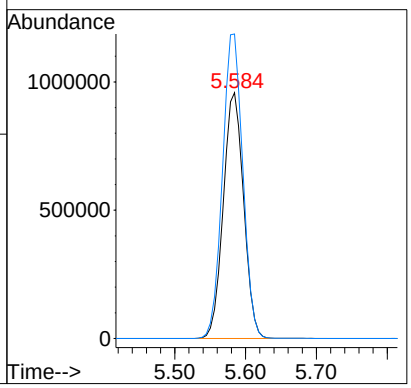


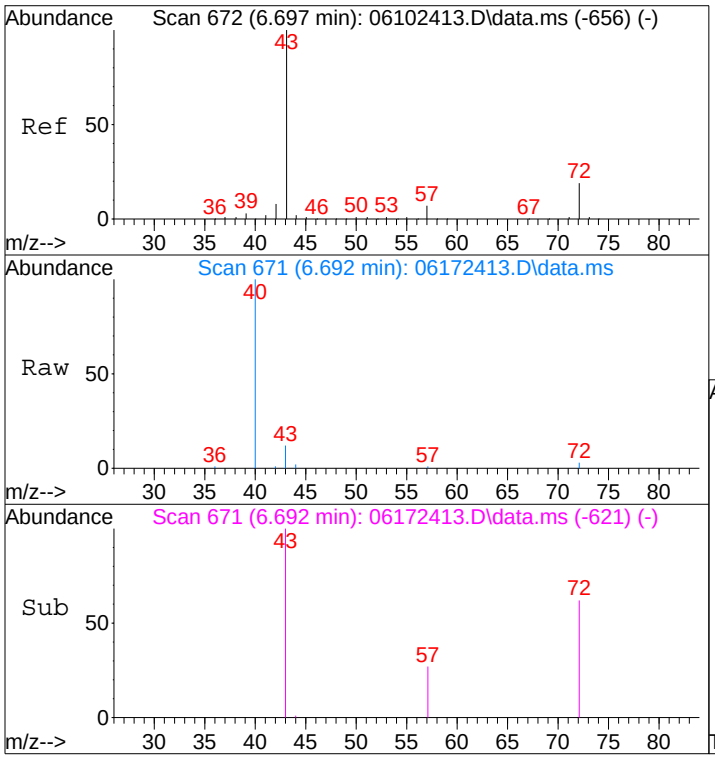


#21
Trichlorotrifluoroethane
Concen: 100.90 ng
RT: 5.58 min Scan# 476
Delta R.T. 0.038 min
Lab File: 06172413.D
Acq: 17 Jun 2024 15:46

Tgt Ion:151 Resp: 1910438

Ion	Ratio	Lower	Upper
151	100		
101	123.8	95.0	135.0

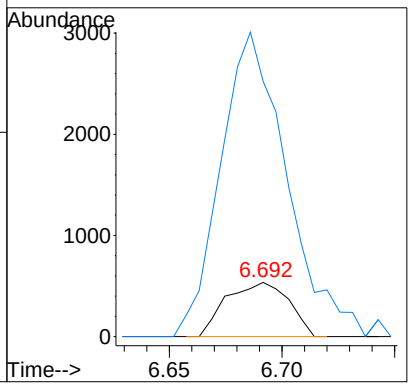


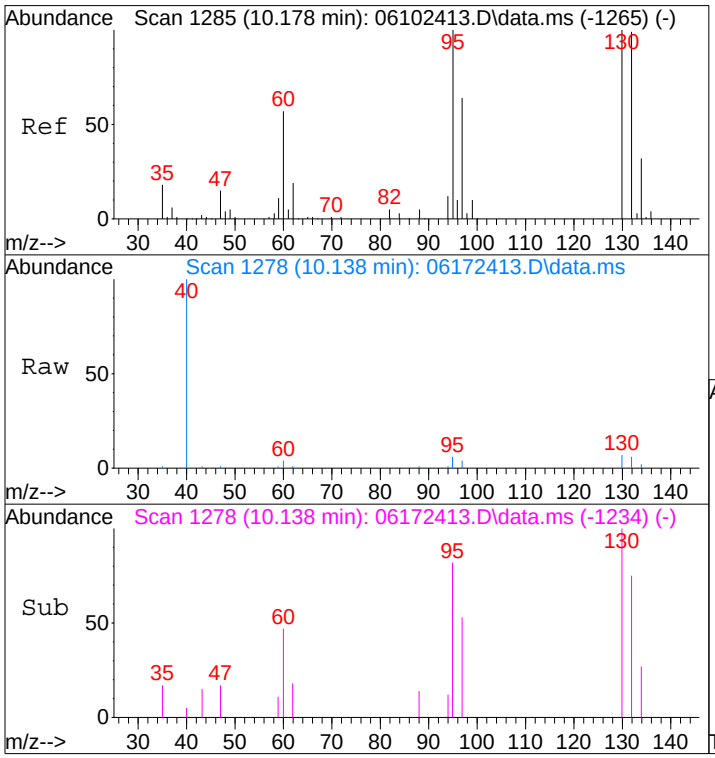


#27
2-Butanone (MEK)
Concen: 0.09 ng
RT: 6.69 min Scan# 671
Delta R.T. 0.033 min
Lab File: 06172413.D
Acq: 17 Jun 2024 15:46

Tgt Ion: 72 Resp: 1033

Ion	Ratio	Lower	Upper
72	100		
43	599.5	506.8	546.8#

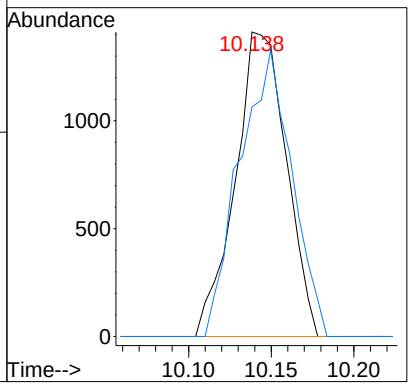


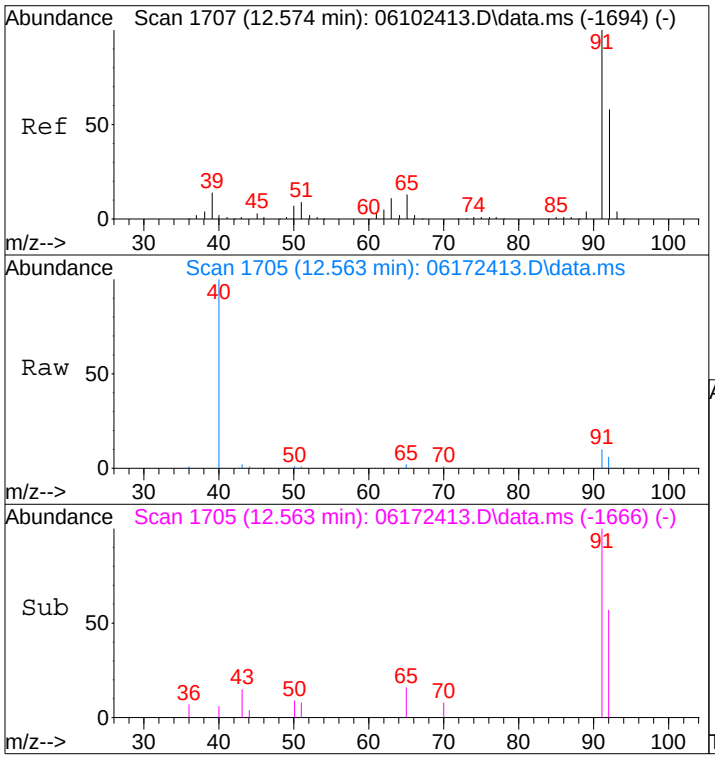


#47
Trichloroethene
Concen: 0.13 ng
RT: 10.14 min Scan# 1278
Delta R.T. -0.001 min
Lab File: 06172413.D
Acq: 17 Jun 2024 15:46

Tgt Ion:130 Resp: 3034

Ion	Ratio	Lower	Upper
130	100		
132	96.7	77.9	117.9

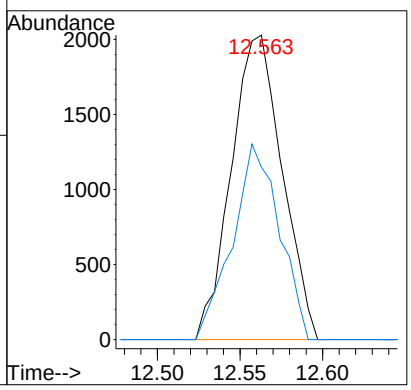




#58
Toluene
Concen: 0.06 ng
RT: 12.56 min Scan# 1705
Delta R.T. -0.029 min
Lab File: 06172413.D
Acq: 17 Jun 2024 15:46

Tgt Ion: 91 Resp: 4353

Ion	Ratio	Lower	Upper
91	100		
92	59.0	37.4	77.4



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172413.D Vial: 1
Acq On : 17 Jun 2024 15:46 Operator: SC
Sample : P2402249-006 (1.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 17 16:11:34 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

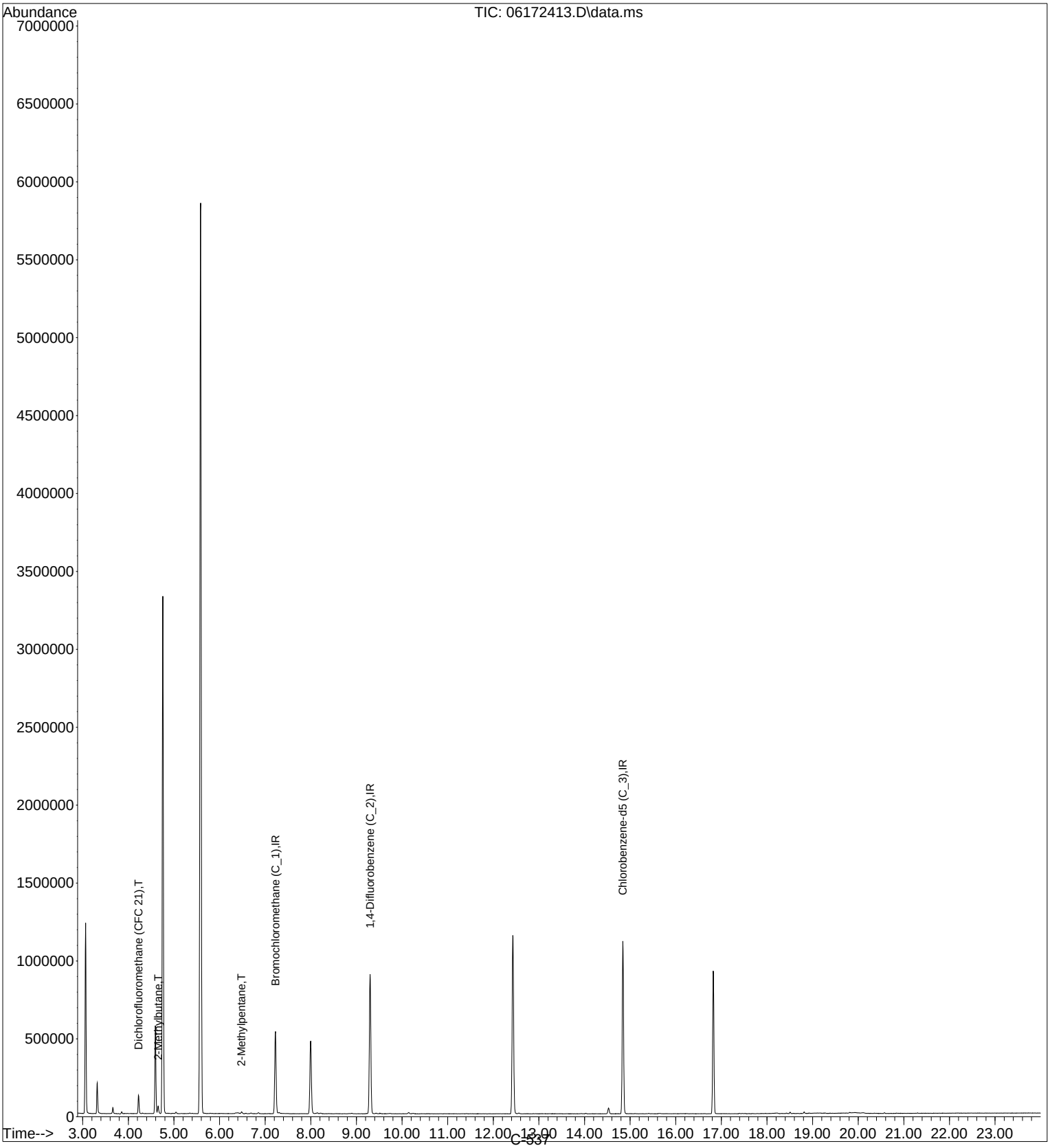
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	190661	12.500 ng	-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	841206	12.500 ng	-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	189672	12.500 ng	-0.01
Target Compounds					Qvalue
2) Chloropentafluoroethane	0.00	85	0	N.D.	
3) 1,1,1,2-Tetrafluoroeth...	0.00	83	0	N.D.	
4) 1,1-Difluoroethane	0.00	65	0	N.D.	
5) Chlorodifluoromethane ...	3.32	67	254	N.D.	
6) 1-Chloro-1,1-Difluoroe...	0.00	65	0	N.D.	
7) Dichlorofluoromethane ...	4.22	67	97167	2.222 ng	99
8) Vinylbromide	0.00	108	0	N.D.	
9) 2,2-Dichloro-1,1,1-tri...	0.00	83	0	N.D. d	
10) 2-Methylbutane	4.65	57	8218	0.361 ng	91
11) Methyl Acetate	5.35	43	1936	N.D.	
12) 2-Methylpentane	6.48	71	2014	0.122 ng	91
13) 2,2-Dichloropropane	0.00	77	0	N.D.	
14) 1,1-Dichloropropene	0.00	75	0	N.D.	
15) Thiophene	0.00	84	0	N.D.	
17) 2,3-Dimethylpentane	9.53	56	1479	N.D.	
18) Dibromomethane	9.80	174	274	N.D.	
20) Methyl Cyclohexane	11.42	55	434	N.D.	
21) 1,3-Dichloropropane	0.00	76	0	N.D.	
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	
23) 1-Chlorohexane	0.00	91	0	N.D.	
24) 1,2,3-Trichloropropane	0.00	75	0	N.D.	
25) Bromobenzene	17.03	77	51	N.D.	
26) 2-Chlorotoluene	17.61	91	987	N.D.	
27) 4-Chlorotoluene	17.68	91	1315	N.D.	
28) Indane	0.00	117	0	N.D.	
29) Indene	0.00	115	0	N.D.	
30) 1,2,4,5-Tetramethylben...	0.00	119	0	N.D.	
31) 1,2,3,4-Tetramethylben...	0.00	119	0	N.D.	
32) 1,2,3,5-Tetramethylben...	0.00	119	0	N.D.	
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172413.D Vial: 1
Acq On : 17 Jun 2024 15:46 Operator: SC
Sample : P2402249-006 (1.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 17 16:11:34 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

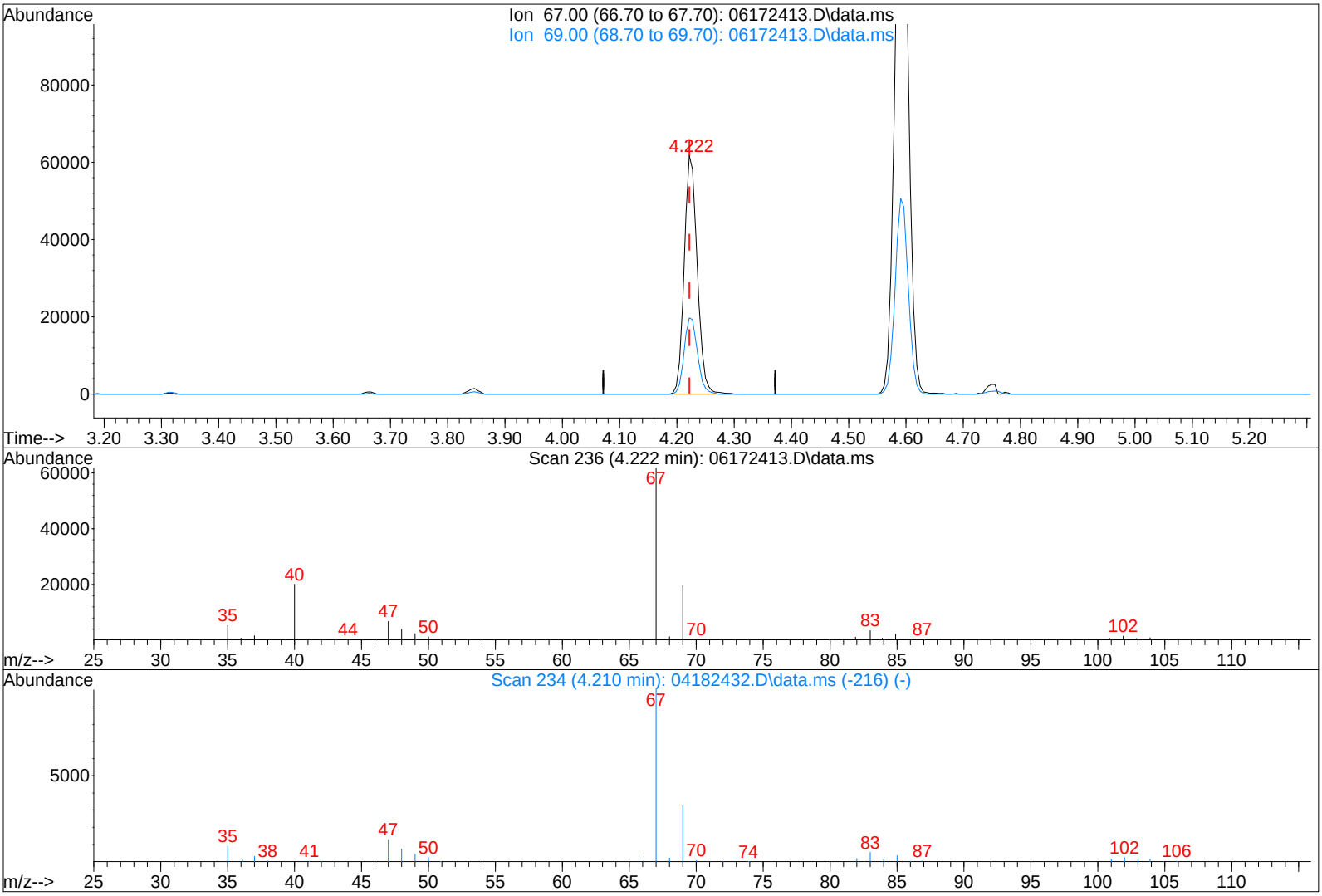


Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\17\06172413.D Vial: 1
Acq On : 17 Jun 2024 15:46 Operator: SC
Sample : P2402249-006 (1.0mL) Inst : MS09
Misc : S37-06062402

MJ 6/29/24

Quant Time: Jun 17 16:11:34 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06172413.D\data.ms

(7) Dichlorofluoromethane (CFC 21) (T)

4.222min (-0.000) 2.22ng

response 97167

Ion	Exp%	Act%
67.00	100	100
69.00	32.40	32.79
0.00	0.00	0.00
0.00	0.00	0.00

LSC Area Percent Report

MJ 6/28/24

Data Path : I:\MS09\DATA\2024 06\17\
Data File : 06172413.D
Acq On : 17 Jun 2024 15:46
Operator : SC
Sample : P2402249-006 (1.0mL)
Misc : S37-06062402
ALS Vial : 1 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06172413.D\data.ms

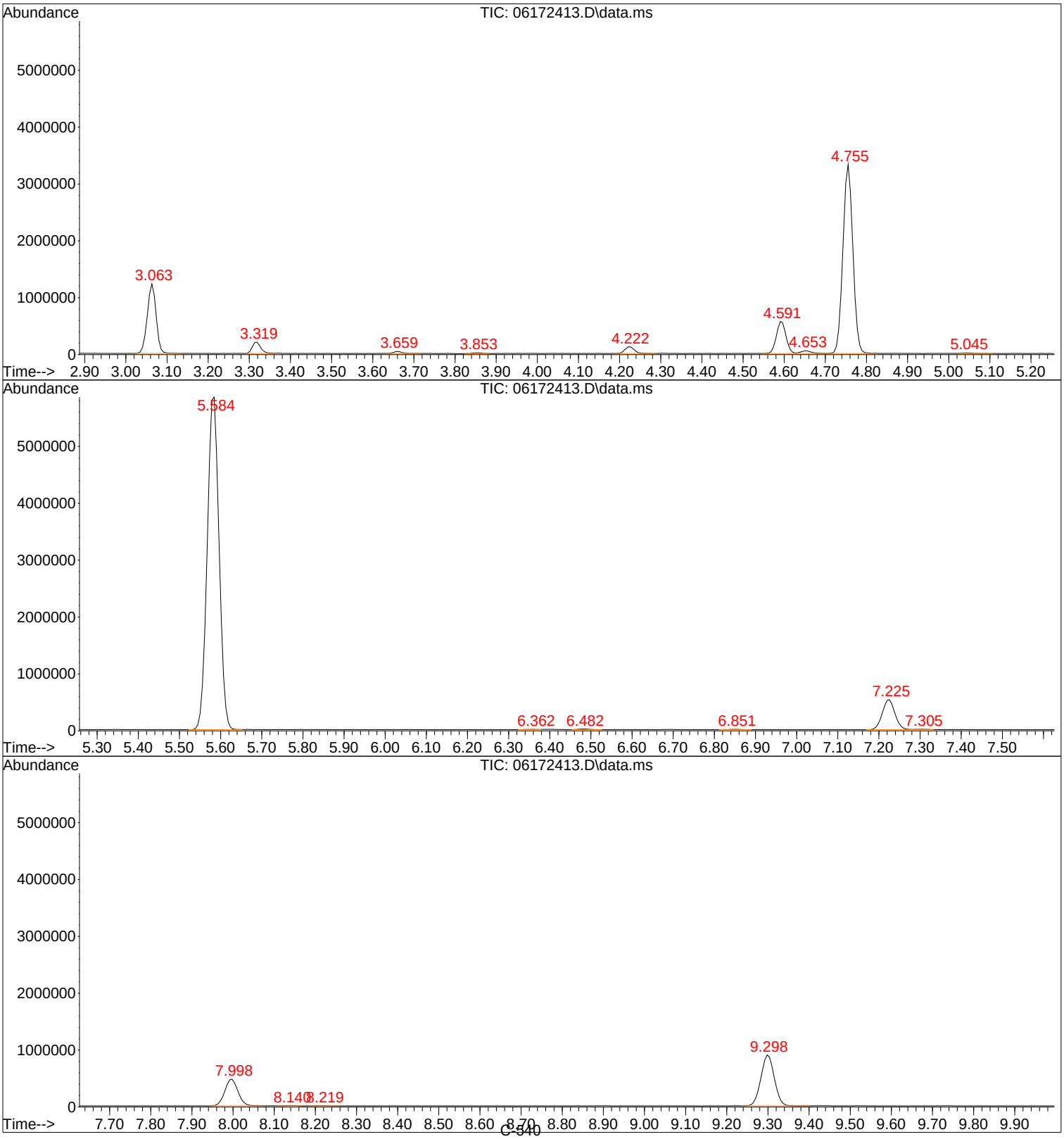
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.063	24	32	45	rBV	1222014	1822798	15.59%	7.306%
2	3.319	72	77	85	rBV	197440	287151	2.46%	1.151%
3	3.659	133	137	147	rVB2	37026	50424	0.43%	0.202%
4	3.853	166	171	176	rBV2	13095	21303	0.18%	0.085%
5	4.222	230	236	248	rVB	117511	185153	1.58%	0.742%
6	4.591	293	301	308	rBV	563998	908794	7.77%	3.643%
7	4.653	308	312	321	rVB2	47255	78706	0.67%	0.315%
8	4.755	321	330	341	rBV	3320051	5596404	47.86%	22.431%
9	5.045	377	381	392	rVB2	10198	18600	0.16%	0.075%
10	5.584	465	476	488	rBV	5845054	11692305	100.00%	46.865%
11	6.362	606	613	616	rBV3	4533	10798	0.09%	0.043%
12	6.482	629	634	642	rVB3	12024	24270	0.21%	0.097%
13	6.851	692	699	706	rBV3	6534	14684	0.13%	0.059%
14	7.225	755	765	775	rBV	528098	1130373	9.67%	4.531%
15	7.305	775	779	784	rVB2	5812	10663	0.09%	0.043%
16	7.998	891	901	915	rBV	466805	1043087	8.92%	4.181%
17	8.140	920	926	931	rVV3	6370	15280	0.13%	0.061%
18	8.219	934	940	947	rVB6	4455	12534	0.11%	0.050%
19	9.298	1119	1130	1148	rVB	895452	2025842	17.33%	8.120%

Sum of corrected areas: 24949169

Data Path : I:\MS09\DATA\2024 06\17\
Data File : 06172413.D
Acq On : 17 Jun 2024 15:46
Operator : SC
Sample : P2402249-006 (1.0mL)
Misc : S37-06062402
ALS Vial : 1 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\17\\
Data File : 06172413.D
Acq On : 17 Jun 2024 15:466
Operator : SCC
Sample : P2402249-006 (1.0mL))
Misc : S37-060624022
ALS Vial : 1 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

						Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected

****

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182415.D Vial: 4
Acq On : 18 Jun 2024 17:24 Operator: SC
Sample : P2402249-007 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 13:44:34 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/19/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	128829	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	554666	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	128823	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	283806	12.395	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.12%				
57) Toluene-d8 (SS2)	12.43	98	615448	12.484	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.84%				
73) Bromofluorobenzene (SS3)	16.83	174	225135	12.647	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.20%				
Target Compounds							Qvalue
2) Propene	3.30	42	5380	0.326	ng	#	82
3) Dichlorodifluoromethan...	3.36	85	17256	0.569	ng		99
4) Chloromethane	3.49	50	7451	0.359	ng		97
5) 1,2-Dichloro-1,1,2,2-t...	3.60	135	258	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	3.81	54	115	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	4.14	64	115	N.D.			
10) Ethanol	4.28	45	10864	0.867	ng		97
11) Acetonitrile	0.00	41	0	N.D.	d		
12) Acrolein	4.53	56	2895	0.312	ng		96
13) Acetone	4.62	58	43017m	4.298	ng		
14) Trichlorofluoromethane	4.76	101	16594	0.541	ng		100
15) 2-Propanol (Isopropanol)	4.83	45	42403	1.051	ng		92
16) Acrylonitrile	5.04	53	298	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.33	59	1128	N.D.			
19) Methylene Chloride	5.35	84	1916	0.135	ng		93
20) 3-Chloro-1-propene (Al...	5.46	41	130	N.D.			
21) Trichlorotrifluoroethane	5.58	151	4992	0.385	ng		100
22) Carbon Disulfide	5.60	76	3269	0.072	ng		99
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	6.42	86	1931	0.836	ng	#	12
27) 2-Butanone (MEK)	6.66	72	8541	1.078	ng		97
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.			
30) Ethyl Acetate	7.28	61	16802	3.475	ng		98
31) n-Hexane	7.30	57	717	N.D.			
32) Chloroform	7.34	83	523	N.D.			
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	511	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.81	56	2853	No Calib			
41) Benzene	8.89	78	3361	0.066	ng		86
42) Carbon Tetrachloride	9.07	117	334	N.D.			
43) Cyclohexane	9.29	84	582	N.D.			
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.08	83	291	N.D.			
47) Trichloroethene	10.14	130	571	N.D.			
48) 1,4-Dioxane	10.15	88	115	N.D.			
49) 2,2,4-Trimethylpentane...	10.23	57	217	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182415.D Vial: 4
Acq On : 18 Jun 2024 17:24 Operator: SC
Sample : P2402249-007 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 13:44:34 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

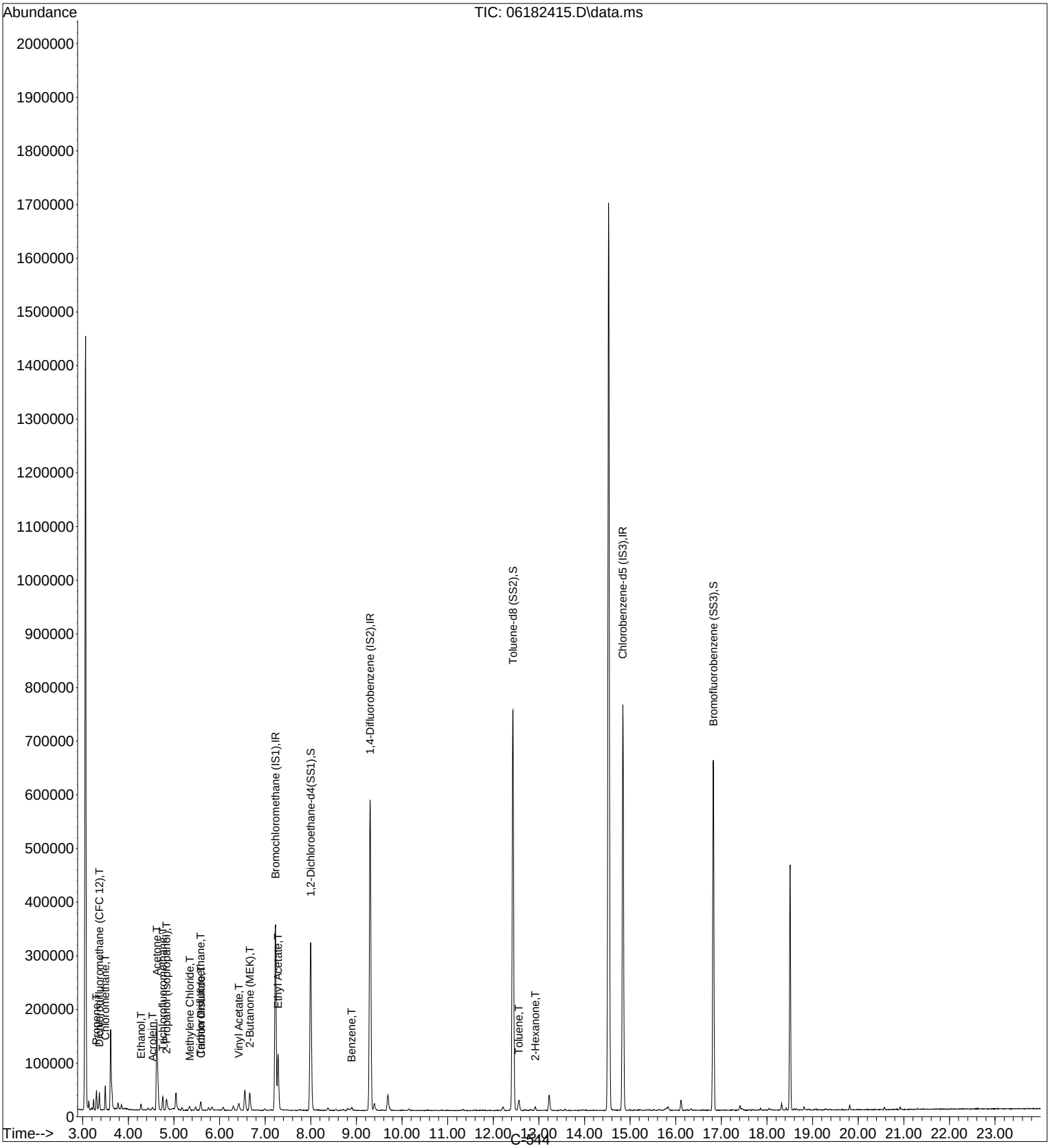
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	0.00	71	0	N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	11.34	58	561	N.D.	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
58) Toluene	12.56	91	17035	0.331 ng	99
59) 2-Hexanone	12.92	43	6264	0.194 ng	91
60) Dibromochloromethane	13.08	129	331	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	13.78	43	400	N.D.	
63) n-Octane	0.00	57	0	N.D.	
64) Tetrachloroethene	14.03	166	378	N.D.	
65) Chlorobenzene	14.89	112	499	N.D.	
66) Ethylbenzene	15.41	91	1309	N.D.	
67) m- & p-Xylenes	15.63	91	2312	N.D.	
68) Bromoform	15.68	173	456	N.D.	
69) Styrene	0.00	104	0	N.D.	
70) o-Xylene	16.25	91	899	N.D.	
71) n-Nonane	16.61	43	517	N.D.	
72) 1,1,2,2-Tetrachloroethane	16.21	83	247	N.D.	
74) Cumene	17.03	105	842	N.D.	
75) alpha-Pinene	17.53	93	235	N.D.	
76) n-Propylbenzene	17.68	91	1662	N.D.	
77) 3-Ethyltoluene	17.03	105	842	No Calib	#
78) 4-Ethyltoluene	17.86	105	580	N.D.	
79) 1,3,5-Trimethylbenzene	17.96	105	501	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.03	105	842	No Calib	#
82) 1,2,4-Trimethylbenzene	18.42	105	536	N.D.	
83) n-Decane	0.00	58	0	N.D.	
84) Benzyl Chloride	0.00	91	0	N.D.	
85) 1,3-Dichlorobenzene	18.58	146	484	N.D.	
86) 1,4-Dichlorobenzene	18.66	146	467	N.D.	
87) sec-Butylbenzene	18.74	105	769	N.D.	
88) 4-Isopropyltoluene (p-...	18.93	119	1324	N.D.	
89) 1,2,3-Trimethylbenzene	17.03	105	842	No Calib	#
90) 1,2-Dichlorobenzene	19.04	146	395	N.D.	
91) d-Limonene	19.09	68	295	N.D.	
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.83	180	633	N.D.	
95) Naphthalene	20.94	128	389	N.D.	
96) n-Dodecane	0.00	58	0	N.D.	
97) Hexachlorobutadiene	21.30	225	482	N.D.	
98) Cyclohexanone	15.38	55	256	No Calib	#
99) tert-Butylbenzene	18.42	119	793	N.D.	
100) n-Butylbenzene	19.39	91	692	N.D.	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182415.D Vial: 4
Acq On : 18 Jun 2024 17:24 Operator: SC
Sample : P2402249-007 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 13:44:34 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



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DataAcq Meth:TO15.M

6/19/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	128829	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	554666	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	128823	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	283806	12.395	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.12%				
57) Toluene-d8 (SS2)	12.43	98	615448	12.484	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.84%				
73) Bromofluorobenzene (SS3)	16.83	174	225135	12.647	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.20%				
Target Compounds							Qvalue
2) Propene	3.30	42	5380	0.326	ng	#	82
3) Dichlorodifluoromethan...	3.36	85	17256	0.569	ng		99
4) Chloromethane	3.49	50	7451	0.359	ng		97
10) Ethanol	4.28	45	10864	0.867	ng		97
12) Acrolein	4.53	56	2895	0.312	ng		96
13) Acetone	4.62	58	43017m	4.298	ng		
14) Trichlorofluoromethane	4.76	101	16594	0.541	ng		100
15) 2-Propanol (Isopropanol)	4.83	45	42403	1.051	ng		92
19) Methylene Chloride	5.35	84	1916	0.135	ng		93
21) Trichlorotrifluoroethane	5.58	151	4992	0.385	ng		100
22) Carbon Disulfide	5.60	76	3269	0.072	ng		99
26) Vinyl Acetate	6.42	86	1931	0.836	ng	#	12
27) 2-Butanone (MEK)	6.66	72	8541	1.078	ng		97
30) Ethyl Acetate	7.28	61	16802	3.475	ng		98
41) Benzene	8.89	78	3361	0.066	ng		86
58) Toluene	12.56	91	17035	0.331	ng		99
59) 2-Hexanone	12.92	43	6264	0.194	ng		91

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

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Acq On : 18 Jun 2024 17:24 Operator: SC
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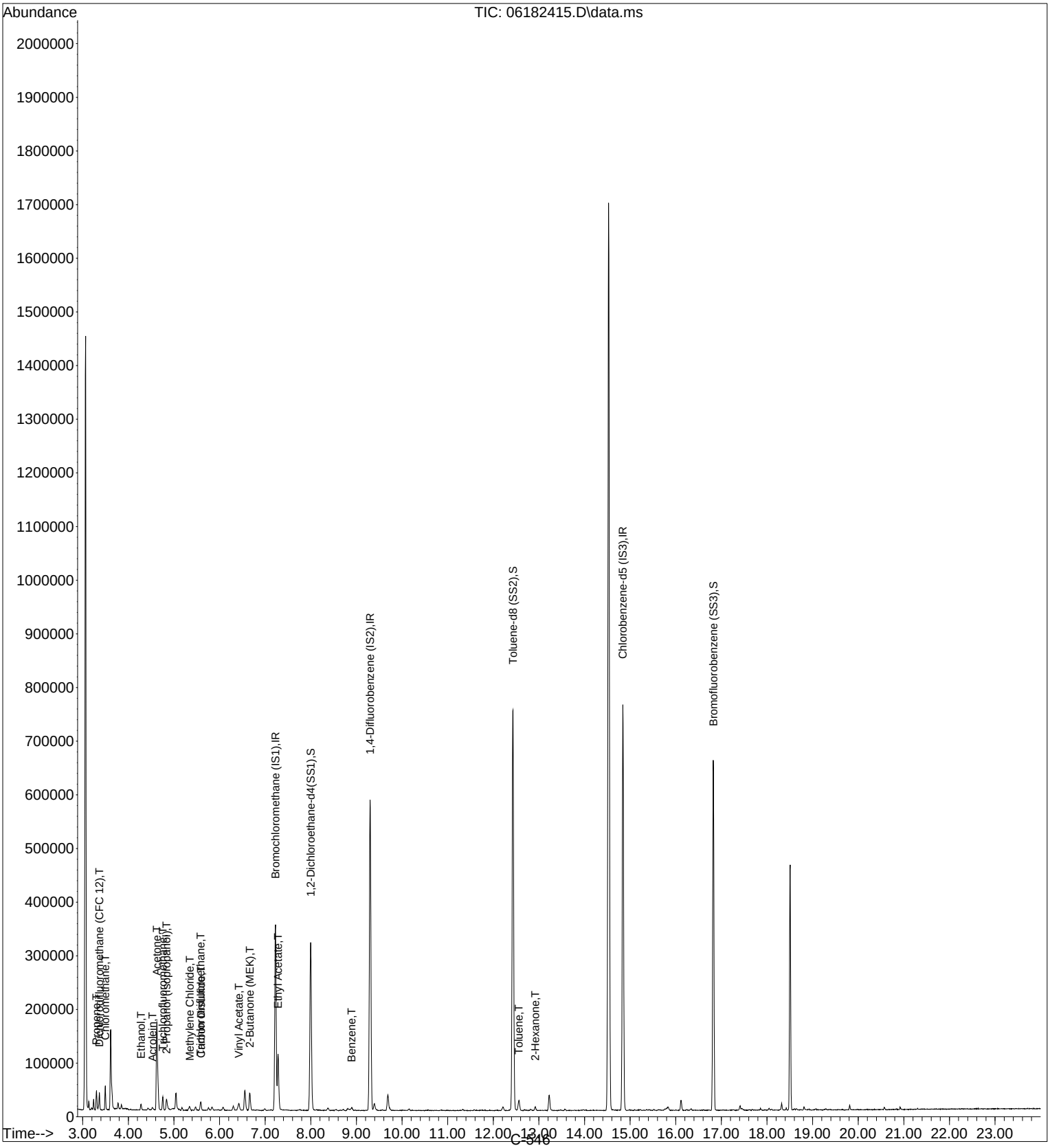
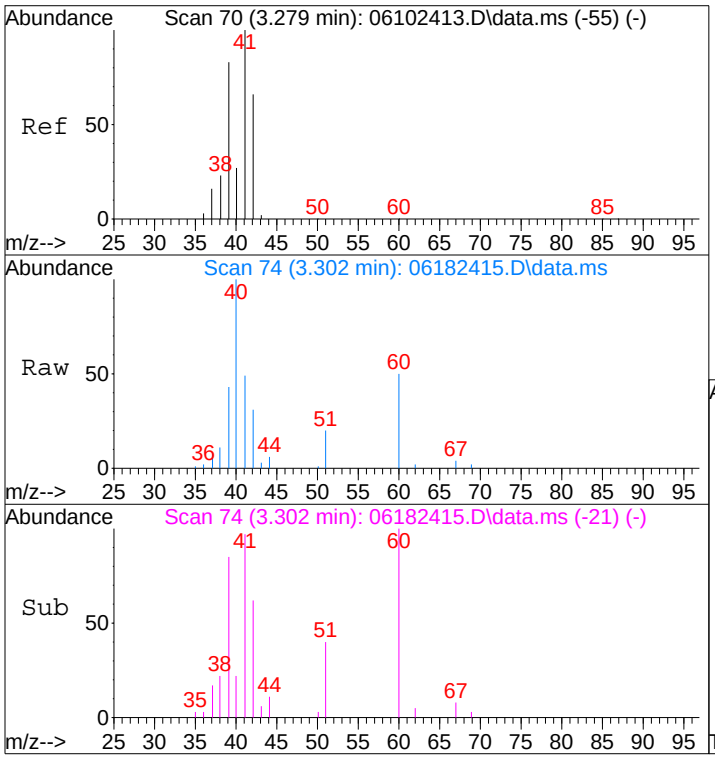
DataAcq Meth:TO15.M

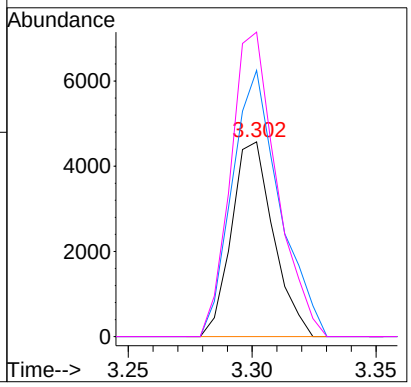


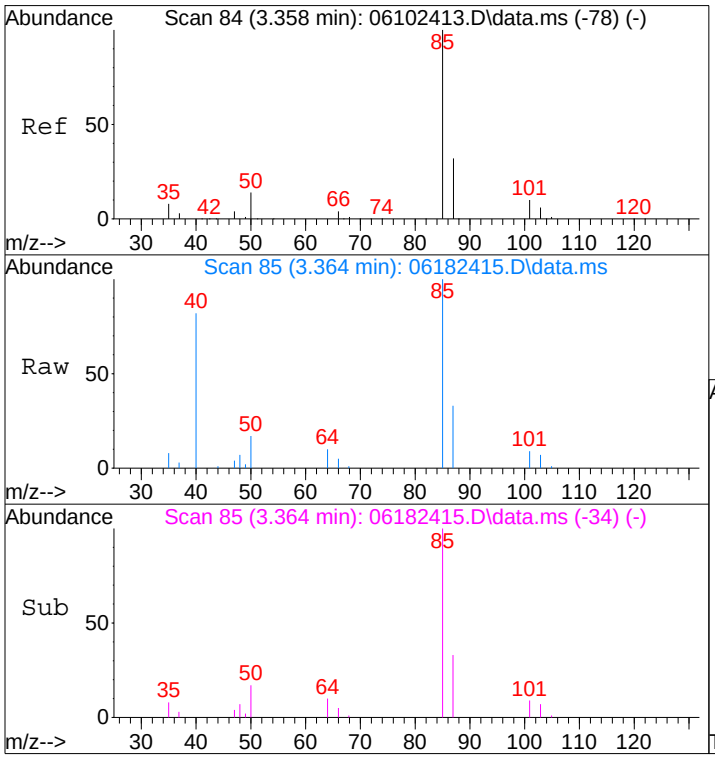


#2
Propene
Concen: 0.33 ng
RT: 3.30 min Scan# 74
Delta R.T. 0.053 min
Lab File: 06182415.D
Acq: 18 Jun 2024 17:24

Tgt Ion: 42 Resp: 5380

Ion	Ratio	Lower	Upper
42	100		
39	154.9	107.3	147.3#
41	171.6	134.3	174.3

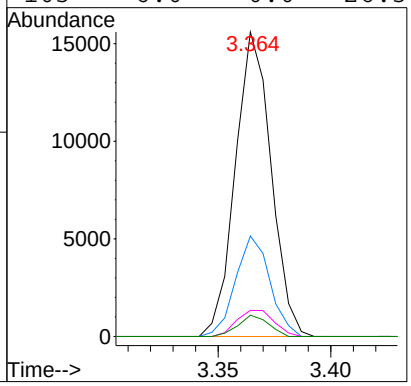


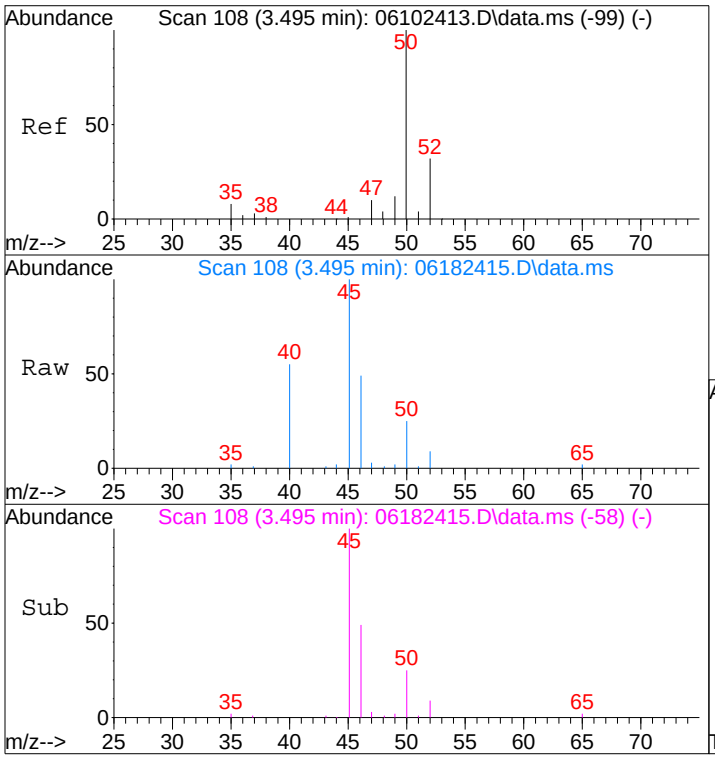


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.57 ng
RT: 3.36 min Scan# 85
Delta R.T. 0.042 min
Lab File: 06182415.D
Acq: 18 Jun 2024 17:24

Tgt Ion: 85 Resp: 17256

Ion	Ratio	Lower	Upper
85	100		
87	31.7	12.2	52.2
101	9.1	0.0	29.8
103	6.0	0.0	26.3

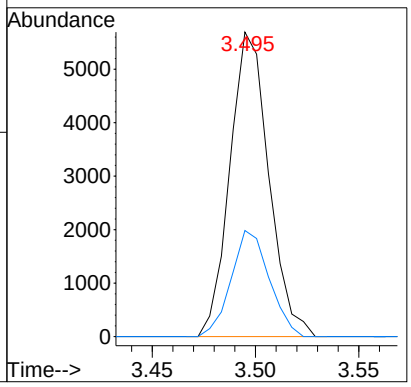


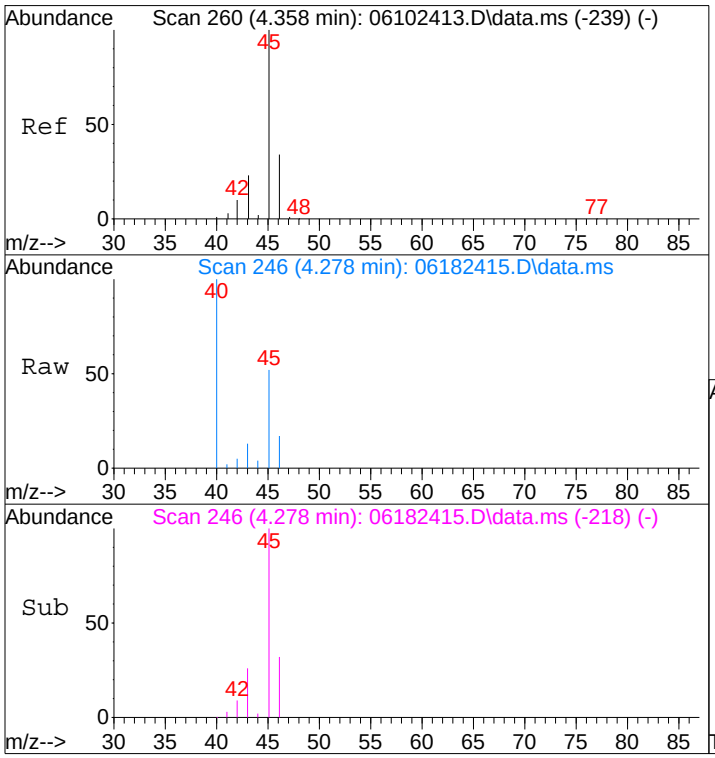


#4
Chloromethane
Concen: 0.36 ng
RT: 3.49 min Scan# 108
Delta R.T. 0.032 min
Lab File: 06182415.D
Acq: 18 Jun 2024 17:24

Tgt Ion: 50 Resp: 7451

Ion	Ratio	Lower	Upper
50	100		
52	34.2	12.4	52.4

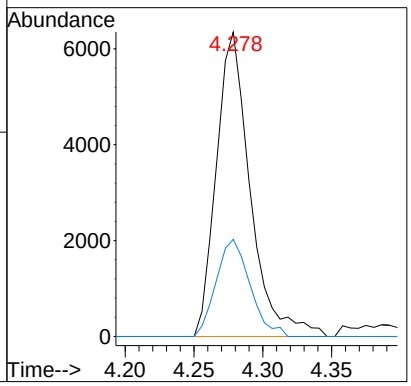


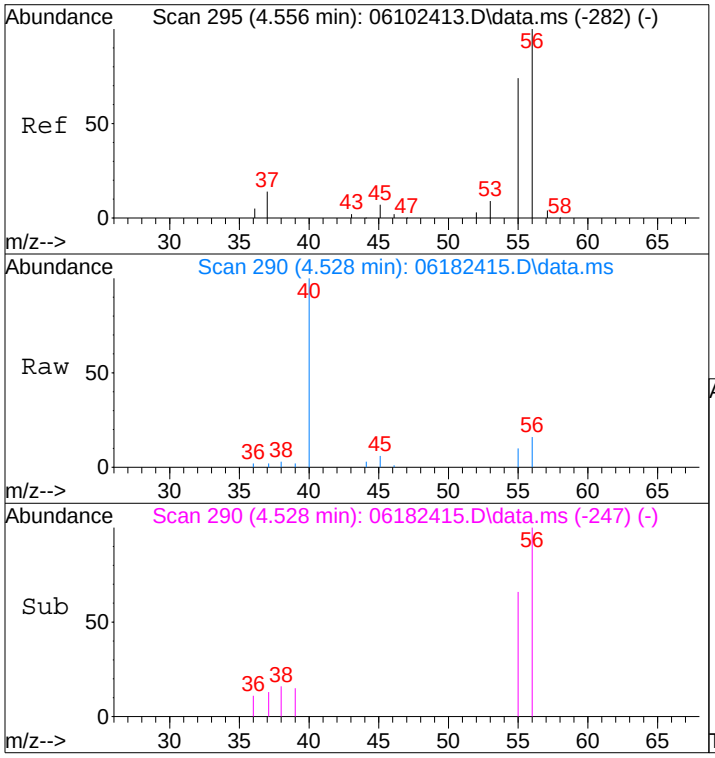


#10
Ethanol
Concen: 0.87 ng
RT: 4.28 min Scan# 246
Delta R.T. -0.088 min
Lab File: 06182415.D
Acq: 18 Jun 2024 17:24

Tgt Ion: 45 Resp: 10864

Ion	Ratio	Lower	Upper
45	100		
46	31.7	13.5	53.5

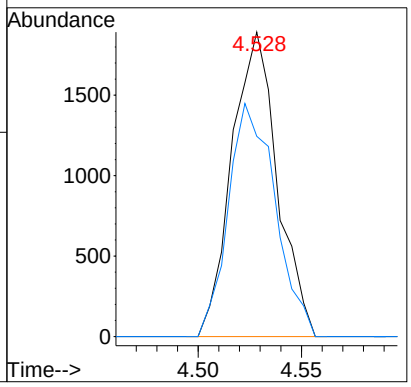


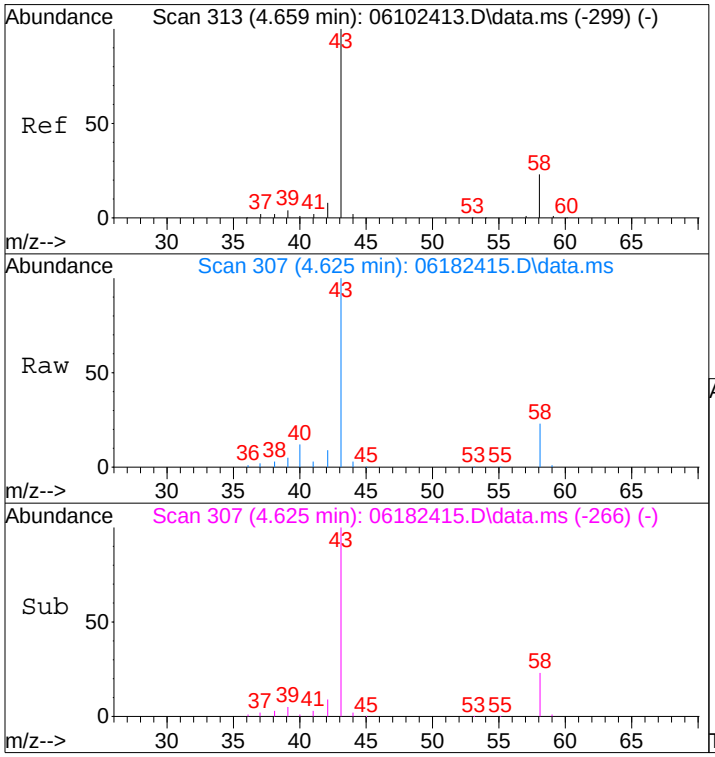


#12
Acrolein
Concen: 0.31 ng
RT: 4.53 min Scan# 290
Delta R.T. -0.007 min
Lab File: 06182415.D
Acq: 18 Jun 2024 17:24

Tgt Ion: 56 Resp: 2895

Ion	Ratio	Lower	Upper
56	100		
55	78.9	55.5	95.5

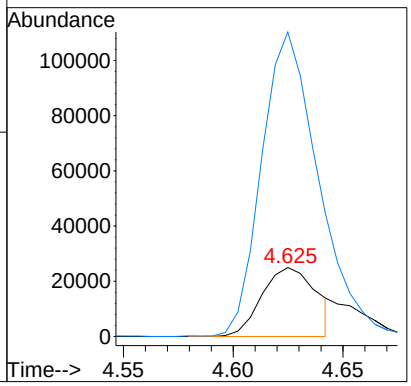


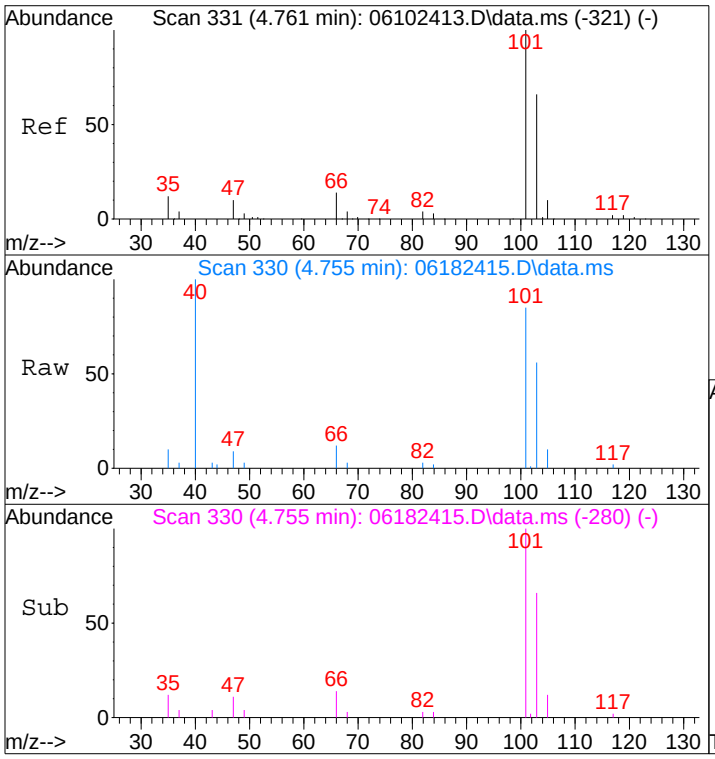


#13
Acetone
Concen: 4.30 ng m
RT: 4.62 min Scan# 307
Delta R.T. -0.017 min
Lab File: 06182415.D
Acq: 18 Jun 2024 17:24

Tgt Ion: 58 Resp: 43017

Ion	Ratio	Lower	Upper
58	100		
43	469.1	400.7	460.7#

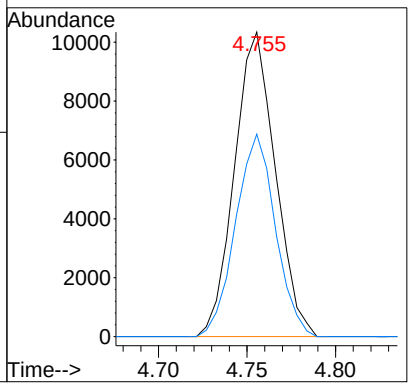


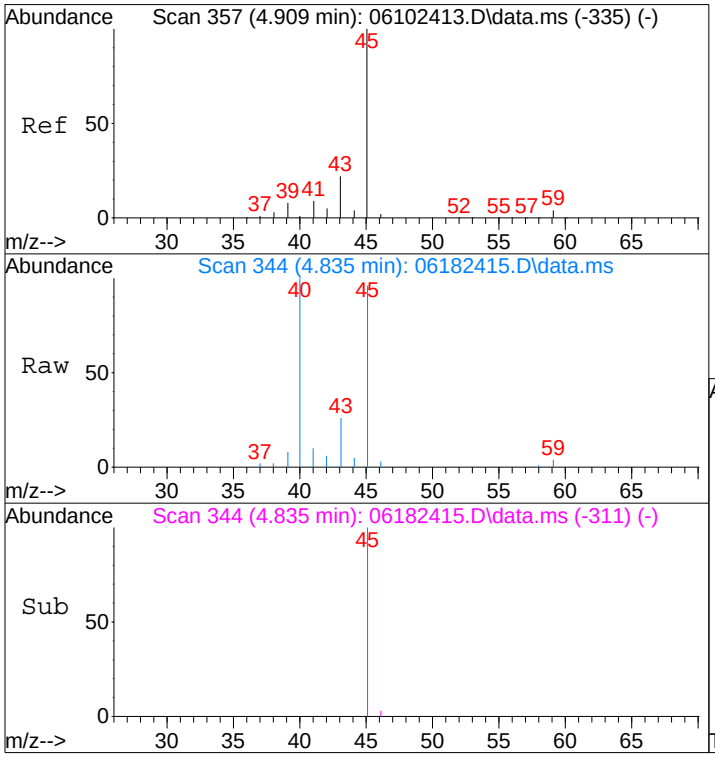


#14
Trichlorofluoromethane
Concen: 0.54 ng
RT: 4.76 min Scan# 330
Delta R.T. 0.035 min
Lab File: 06182415.D
Acq: 18 Jun 2024 17:24

Tgt Ion:101 Resp: 16594

Ion	Ratio	Lower	Upper
101	100		
103	64.9	44.9	84.9

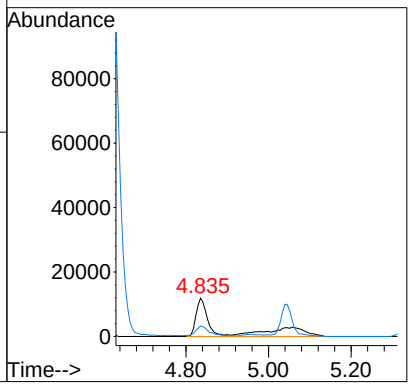


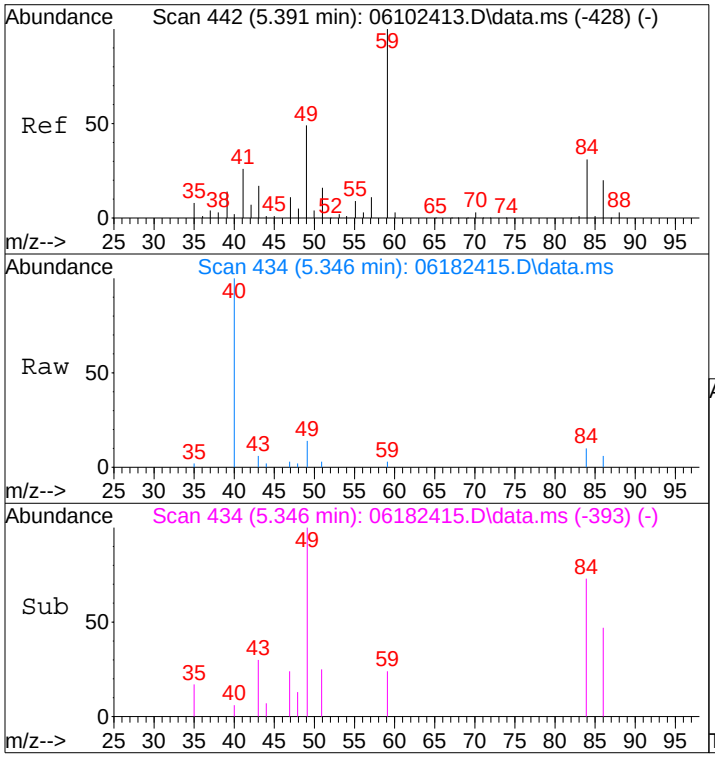


#15
2-Propanol (Isopropanol)
Concen: 1.05 ng
RT: 4.83 min Scan# 344
Delta R.T. -0.065 min
Lab File: 06182415.D
Acq: 18 Jun 2024 17:24

Tgt Ion: 45 Resp: 42403

Ion	Ratio	Lower	Upper
45	100		
43	18.7	2.5	42.5

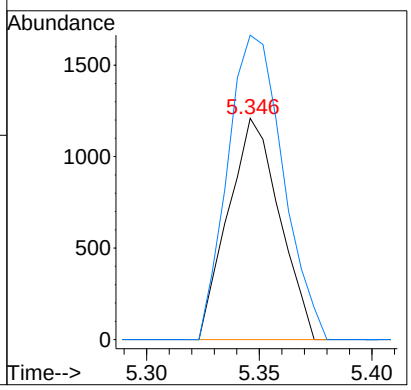


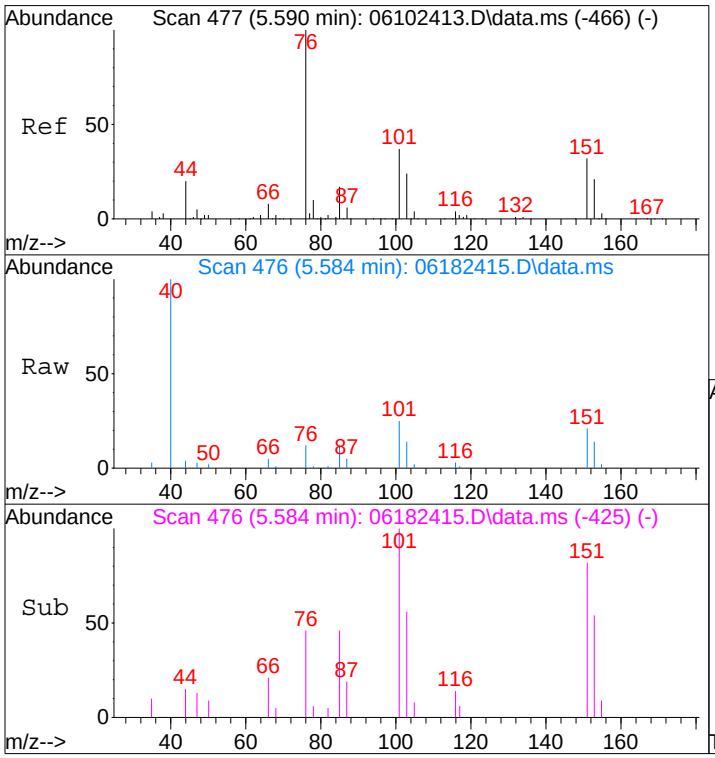


#19
Methylene Chloride
Concen: 0.14 ng
RT: 5.35 min Scan# 434
Delta R.T. -0.015 min
Lab File: 06182415.D
Acq: 18 Jun 2024 17:24

Tgt Ion: 84 Resp: 1916

Ion	Ratio	Lower	Upper
84	100		
49	148.6	132.9	182.9

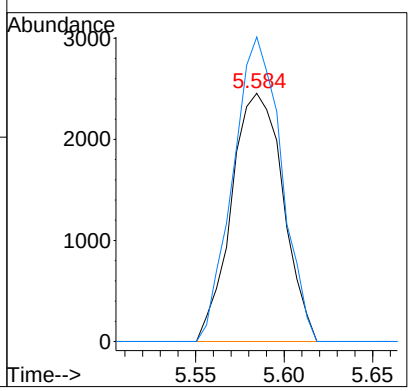


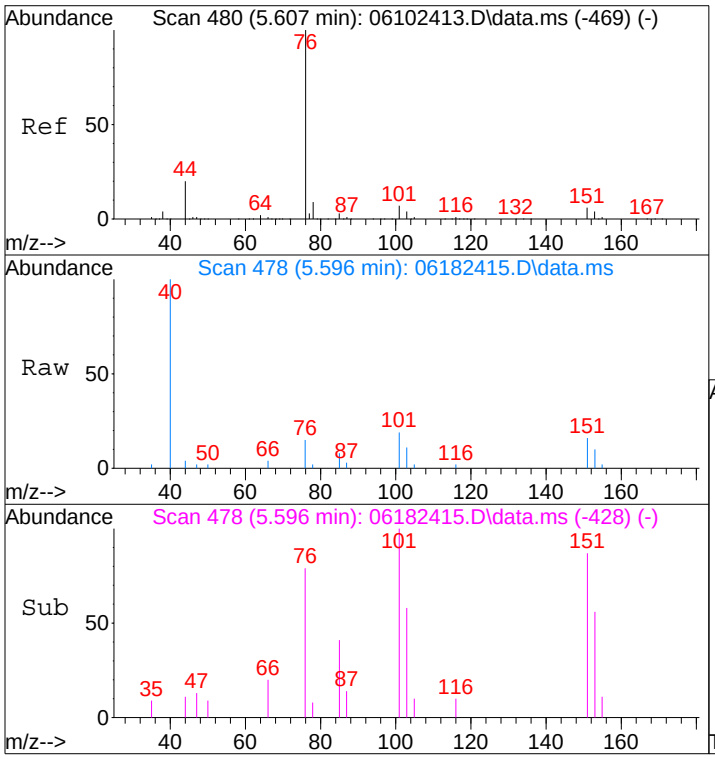


#21
Trichlorotrifluoroethane
Concen: 0.38 ng
RT: 5.58 min Scan# 476
Delta R.T. 0.038 min
Lab File: 06182415.D
Acq: 18 Jun 2024 17:24

Tgt Ion:151 Resp: 4992

Ion	Ratio	Lower	Upper
151	100		
101	114.9	95.0	135.0

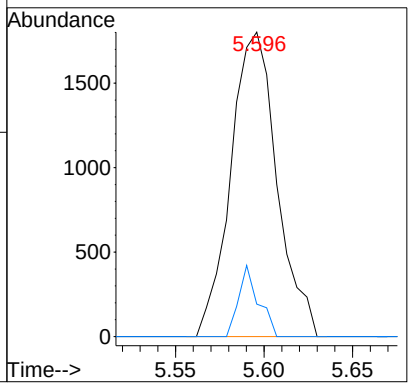


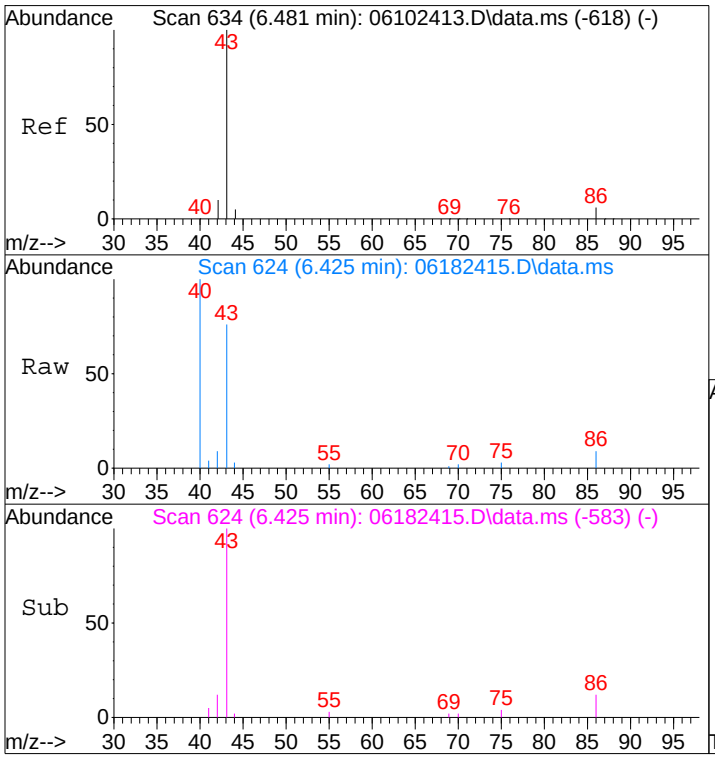


#22
Carbon Disulfide
Concen: 0.07 ng
RT: 5.60 min Scan# 478
Delta R.T. 0.033 min
Lab File: 06182415.D
Acq: 18 Jun 2024 17:24

Tgt Ion: 76 Resp: 3269

Ion	Ratio	Lower	Upper
76	100		
78	10.0	0.0	29.6

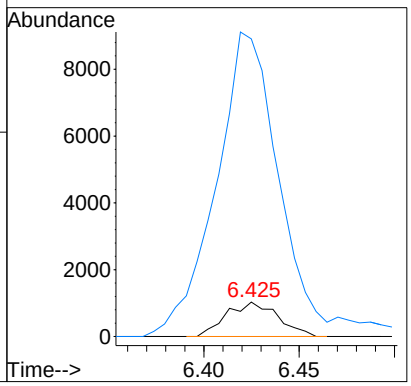


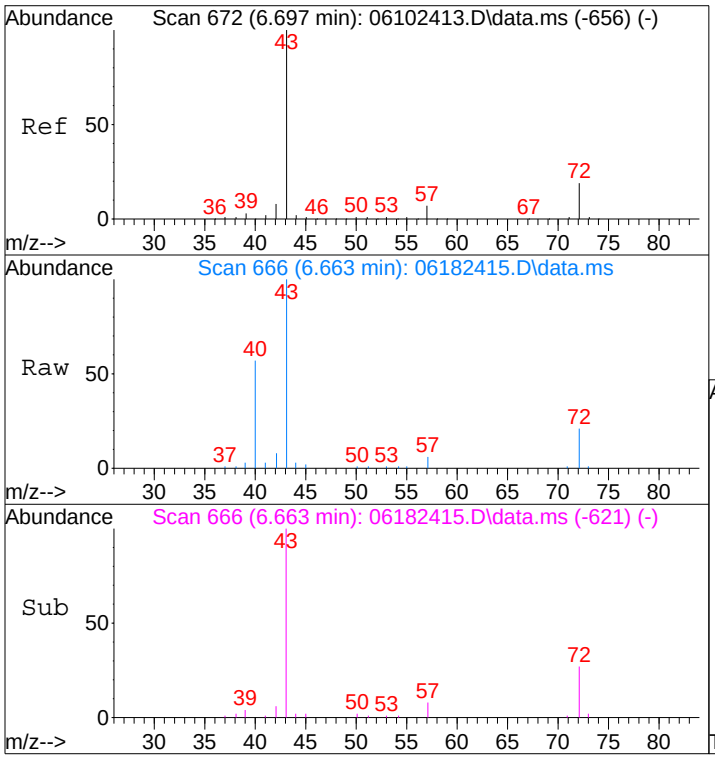


#26
Vinyl Acetate
Concen: 0.84 ng
RT: 6.42 min Scan# 624
Delta R.T. -0.014 min
Lab File: 06182415.D
Acq: 18 Jun 2024 17:24

Tgt Ion: 86 Resp: 1931

Ion	Ratio	Lower	Upper
86	100		
43	1116.8	1668.9	1708.9#

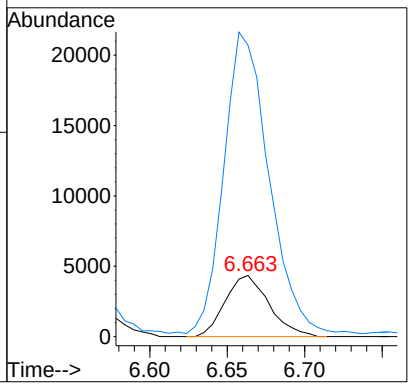


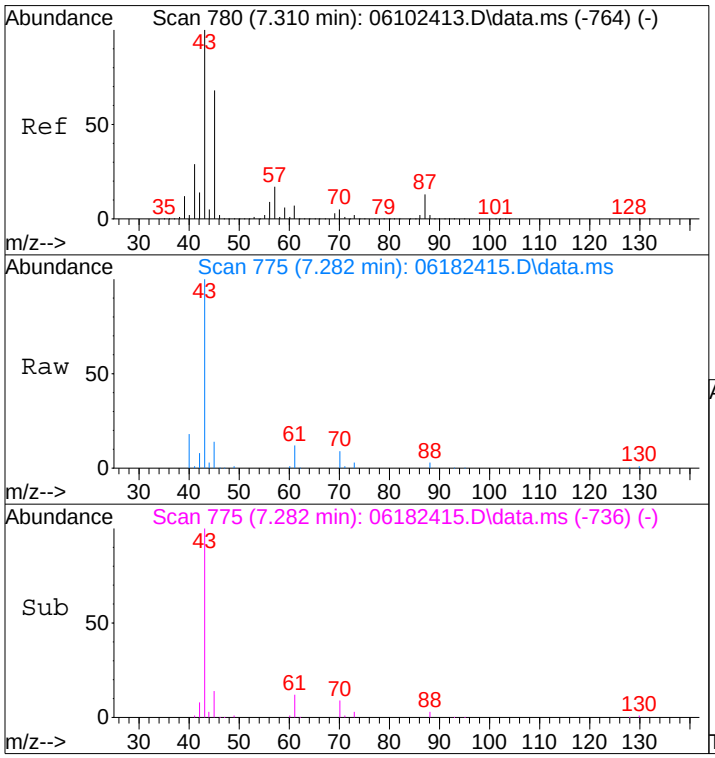


#27
2-Butanone (MEK)
Concen: 1.08 ng
RT: 6.66 min Scan# 666
Delta R.T. 0.005 min
Lab File: 06182415.D
Acq: 18 Jun 2024 17:24

Tgt Ion: 72 Resp: 8541

Ion	Ratio	Lower	Upper
72	100		
43	518.2	506.8	546.8

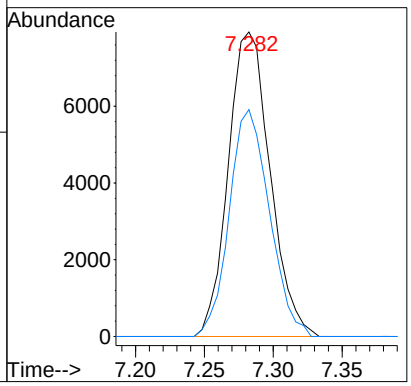


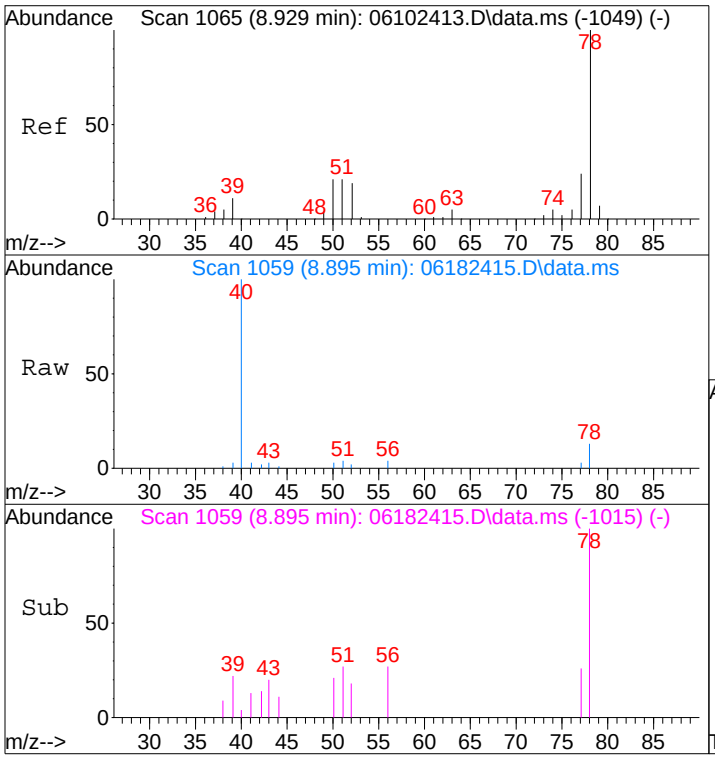


#30
Ethyl Acetate
Concen: 3.47 ng
RT: 7.28 min Scan# 775
Delta R.T. 0.023 min
Lab File: 06182415.D
Acq: 18 Jun 2024 17:24

Tgt Ion: 61 Resp: 16802

Ion	Ratio	Lower	Upper
61	100		
70	71.4	53.5	93.5

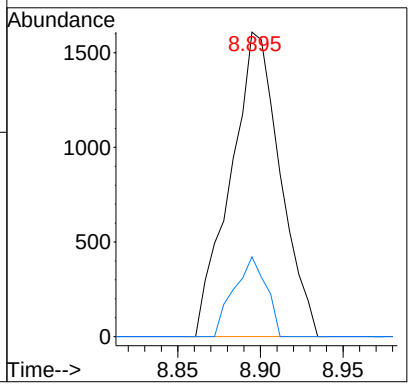


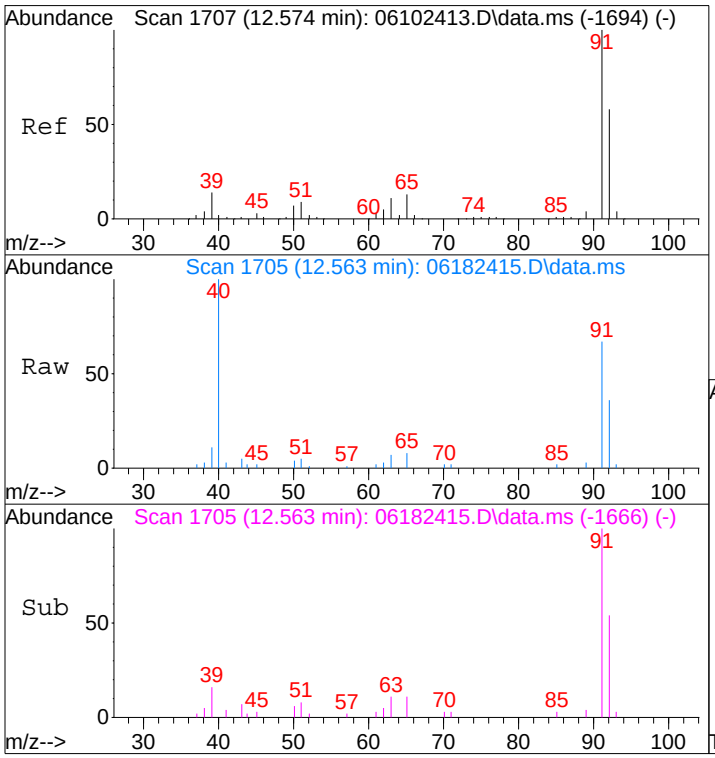


#41
Benzene
Concen: 0.07 ng
RT: 8.89 min Scan# 1059
Delta R.T. -0.002 min
Lab File: 06182415.D
Acq: 18 Jun 2024 17:24

Tgt Ion: 78 Resp: 3361

Ion	Ratio	Lower	Upper
78	100		
77	17.1	4.0	44.0

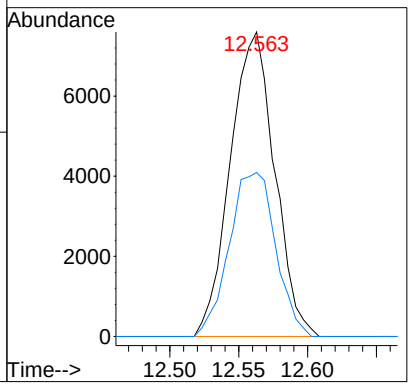


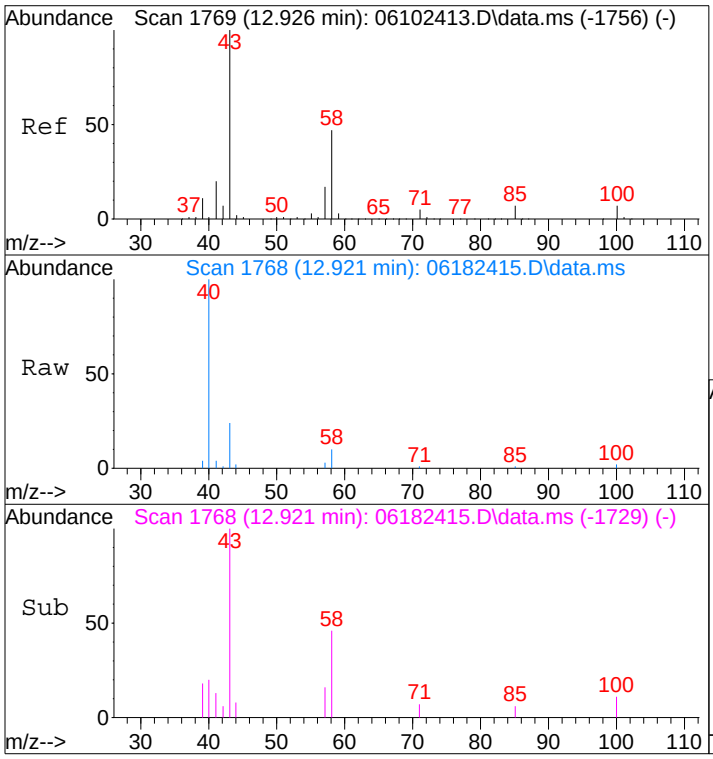


#58
Toluene
Concen: 0.33 ng
RT: 12.56 min Scan# 1705
Delta R.T. -0.028 min
Lab File: 06182415.D
Acq: 18 Jun 2024 17:24

Tgt Ion: 91 Resp: 17035

Ion	Ratio	Lower	Upper
91	100		
92	56.3	37.4	77.4

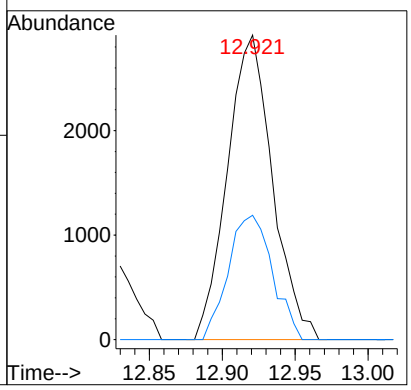




#59
2-Hexanone
Concen: 0.19 ng
RT: 12.92 min Scan# 1768
Delta R.T. -0.028 min
Lab File: 06182415.D
Acq: 18 Jun 2024 17:24

Tgt Ion: 43 Resp: 6264

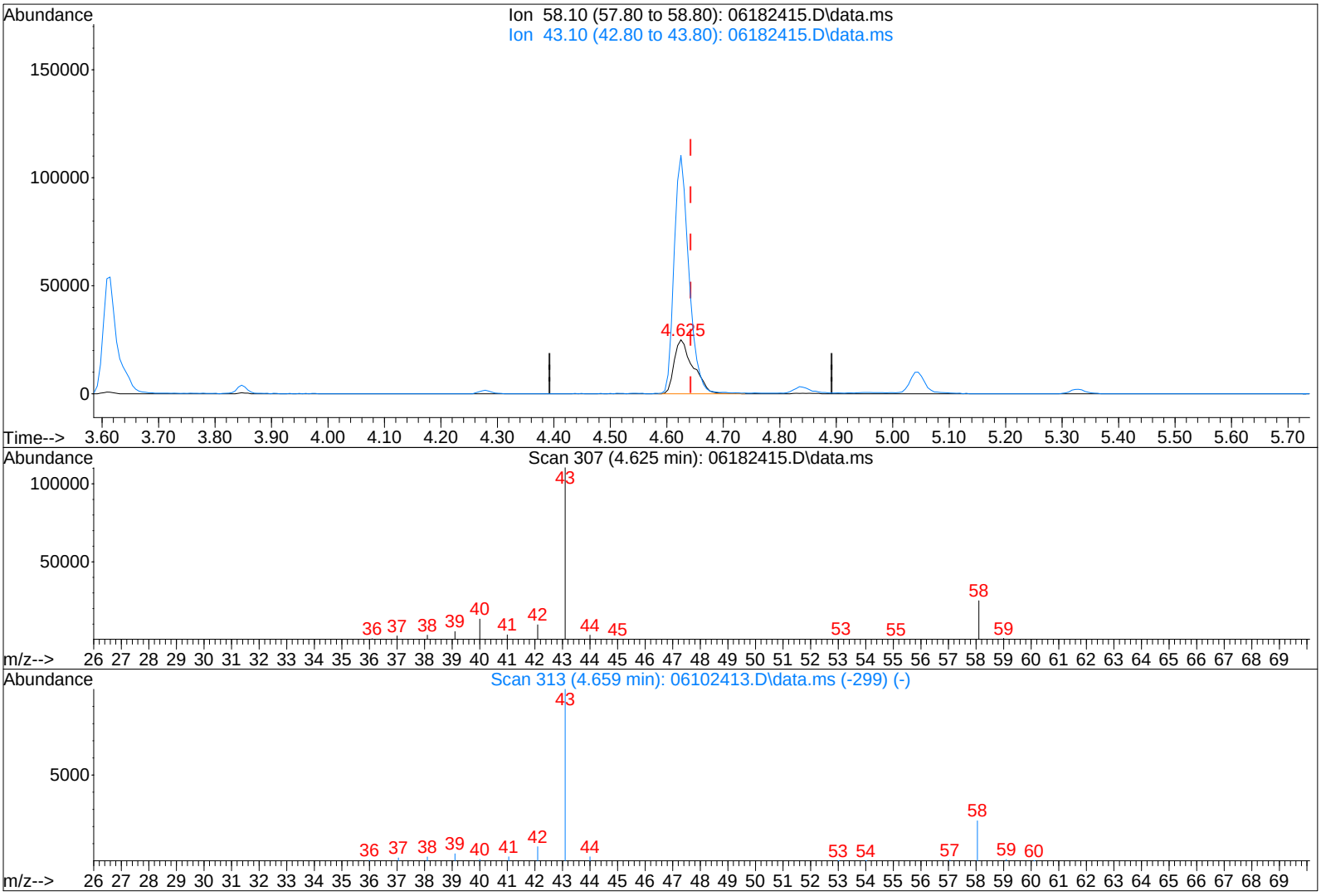
Ion	Ratio	Lower	Upper
43	100		
58	39.9	25.9	65.9



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182415.D Vial: 4
Acq On : 18 Jun 2024 17:24 Operator: SC
Sample : P2402249-007 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 08:25:12 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182415.D\data.ms

(13) Acetone (T)

4.625min (-0.017) 5.79ng

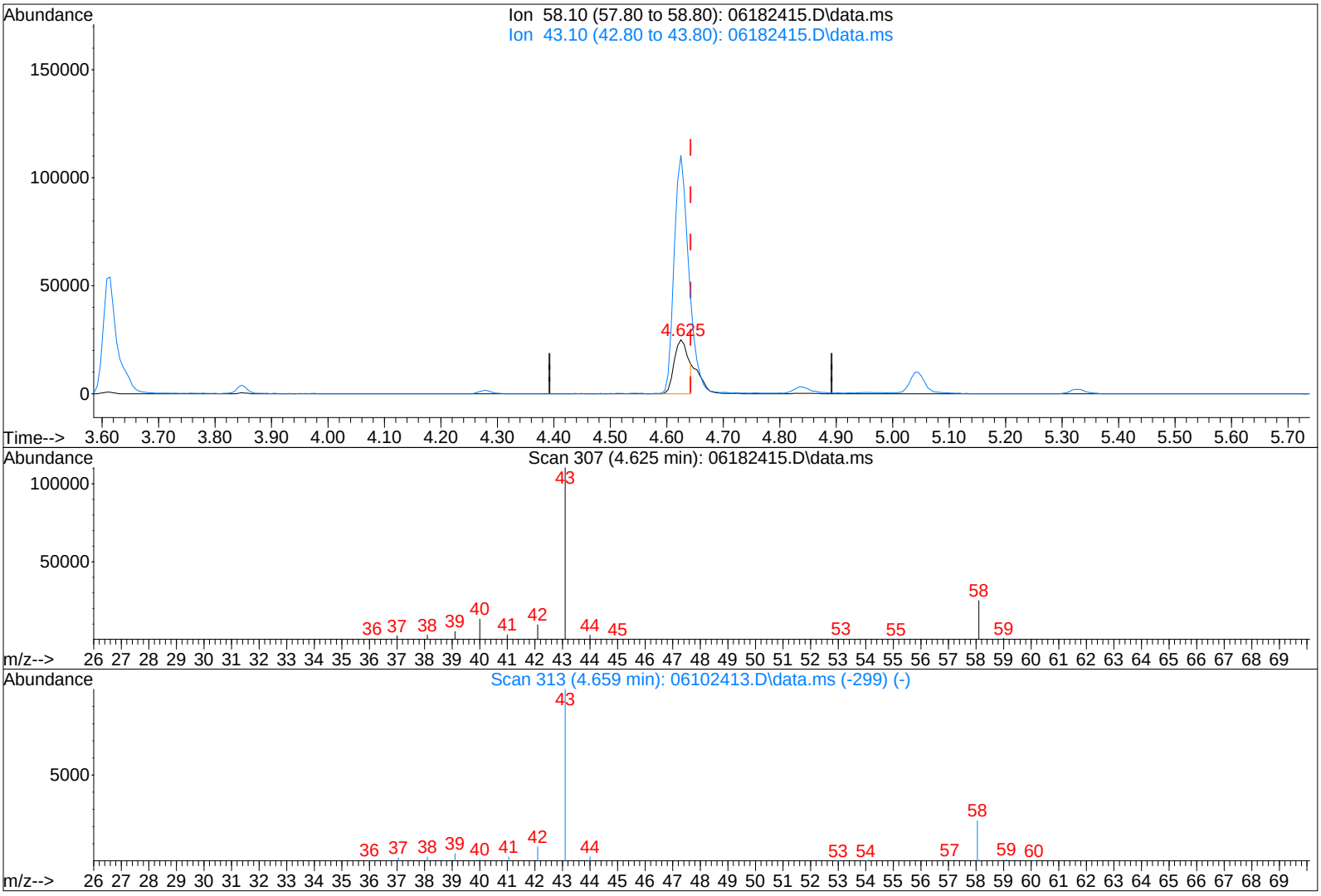
response 57930

Ion	Exp%	Act%
58.10	100	100
43.10	430.70	348.35#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182415.D Vial: 4
Acq On : 18 Jun 2024 17:24 Operator: SC
Sample : P2402249-007 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 08:25:12 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182415.D\data.ms

(13) Acetone (T)

4.625min (-0.017) 4.30ng m

response 43017

Ion	Exp%	Act%
58.10	100	100
43.10	430.70	469.11#
0.00	0.00	0.00
0.00	0.00	0.00

IPC

6/19/24

6/29/24

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182415.D Vial: 4
Acq On : 18 Jun 2024 17:24 Operator: SC
Sample : P2402249-007 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 14:59:45 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

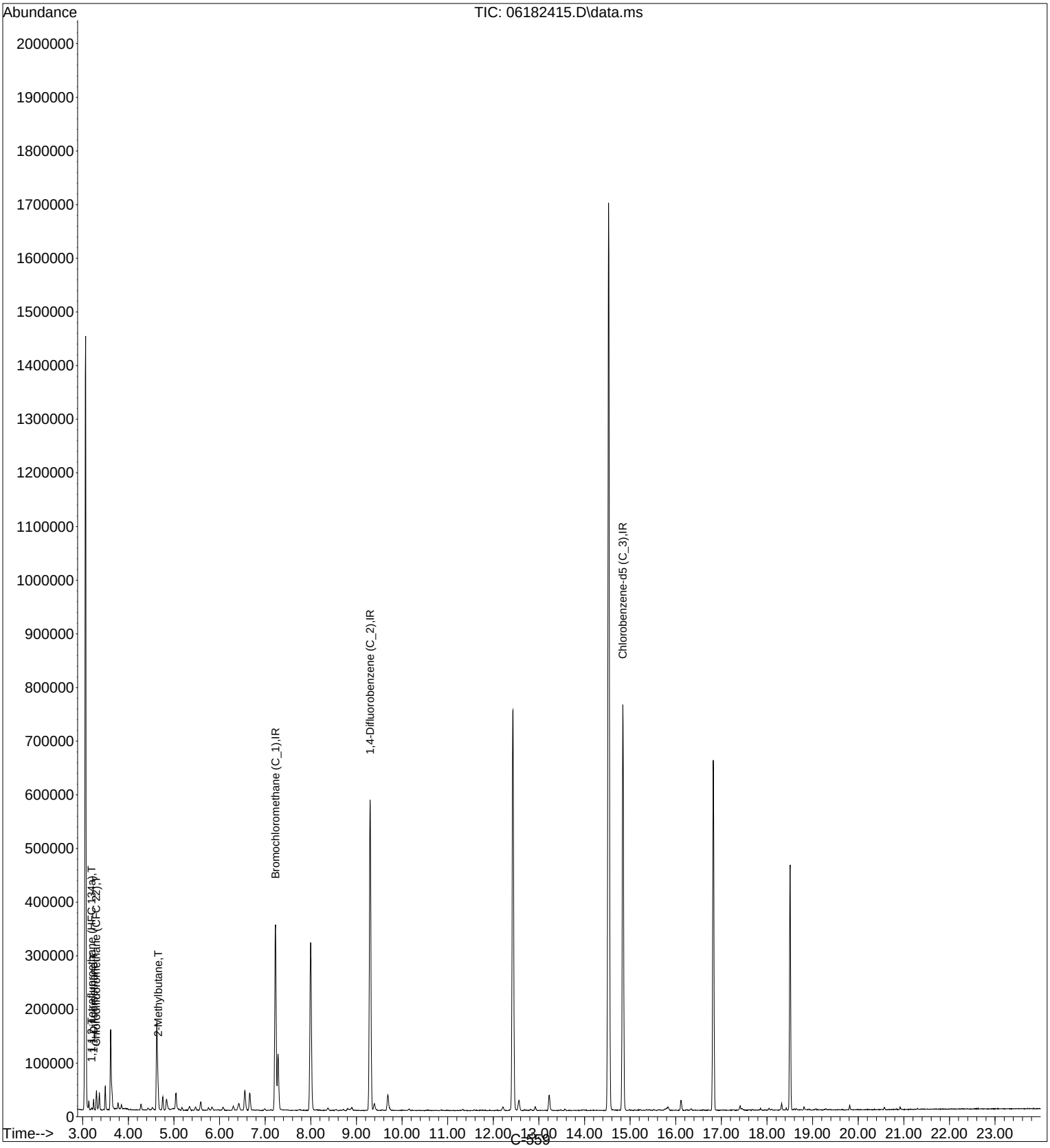
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	128829	12.500	ng		-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	556149	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	128823	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	3.14	85	190	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.19	83	2101	0.159	ng		89
4) 1,1-Difluoroethane	3.24	65	4885	0.434	ng		92
5) Chlorodifluoromethane ...	3.30	67	992	0.226	ng		98
6) 1-Chloro-1,1-Difluoroe...	3.50	65	582	N.D.			
7) Dichlorofluoromethane ...	0.00	67	0	N.D.			
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	0.00	83	0	N.D.			
10) 2-Methylbutane	4.65	57	9418	0.613	ng	#	29
11) Methyl Acetate	5.33	43	3967	N.D.			
12) 2-Methylpentane	6.56	71	747	N.D.			
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	0.00	84	0	N.D.			
17) 2,3-Dimethylpentane	0.00	56	0	N.D.			
18) Dibromomethane	9.81	174	188	N.D.			
20) Methyl Cyclohexane	11.40	55	52	N.D.			
21) 1,3-Dichloropropane	0.00	76	0	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	0.00	75	0	N.D.			
25) Bromobenzene	0.00	77	0	N.D.			
26) 2-Chlorotoluene	17.61	91	720	N.D.			
27) 4-Chlorotoluene	17.68	91	1662	N.D.			
28) Indane	0.00	117	0	N.D.			
29) Indene	0.00	115	0	N.D.			
30) 1,2,4,5-Tetramethylben...	0.00	119	0	N.D.			
31) 1,2,3,4-Tetramethylben...	0.00	119	0	N.D.			
32) 1,2,3,5-Tetramethylben...	0.00	119	0	N.D.			
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182415.D Vial: 4
Acq On : 18 Jun 2024 17:24 Operator: SC
Sample : P2402249-007 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:59:45 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



LSC Area Percent Report

MJ 6/29/24

Data Path : I:\MS09\DATA\2024 06\18\
Data File : 06182415.D
Acq On : 18 Jun 2024 17:24
Operator : SC
Sample : P2402249-007 (400mL)
Misc : S37-06062402
ALS Vial : 4 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06182415.D\data.ms

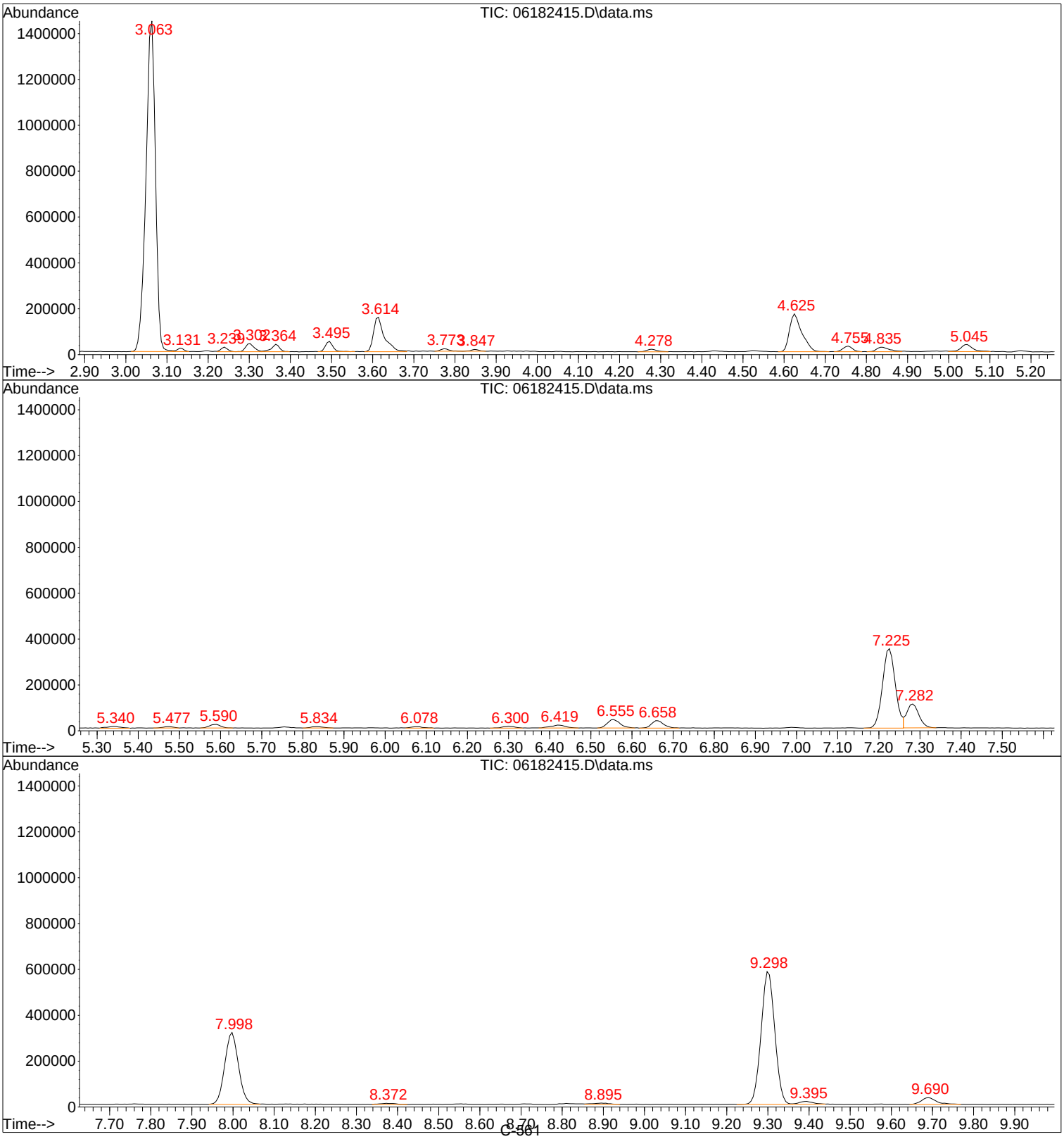
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.063	23	32	41	rBV	1441421	2309218	100.00%	34.232%
2	3.131	41	44	48	rVB2	15422	16759	0.73%	0.248%
3	3.239	60	63	68	rVB	20467	22628	0.98%	0.335%
4	3.302	68	74	79	rBV3	36157	52667	2.28%	0.781%
5	3.364	79	85	91	rVB2	32229	43184	1.87%	0.640%
6	3.495	103	108	119	rBV2	44812	55739	2.41%	0.826%
7	3.614	123	129	141	rBV2	149690	275531	11.93%	4.084%
8	3.773	153	157	165	rVB2	11211	16376	0.71%	0.243%
9	3.847	165	170	175	rBV2	8256	11094	0.48%	0.164%
10	4.278	240	246	253	rBV	11095	18760	0.81%	0.278%
11	4.625	300	307	322	rVB	164993	344688	14.93%	5.110%
12	4.755	324	330	336	rVB	24544	39234	1.70%	0.582%
13	4.835	338	344	353	rBV	19720	42280	1.83%	0.627%
14	5.045	373	381	391	rVB2	30839	60240	2.61%	0.893%
15	5.340	427	433	440	rVB4	7727	17860	0.77%	0.265%
16	5.477	450	457	461	rBV2	6208	11138	0.48%	0.165%
17	5.590	470	477	484	rVB4	15633	30340	1.31%	0.450%
18	5.834	514	520	527	rVB3	6173	12924	0.56%	0.192%
19	6.078	558	563	570	rVB4	6152	13389	0.58%	0.198%
20	6.300	594	602	608	rBV2	8307	16715	0.72%	0.248%
21	6.419	615	623	632	rVB2	12672	31364	1.36%	0.465%
22	6.555	640	647	656	rBV2	36967	78764	3.41%	1.168%
23	6.658	658	665	675	rBV	32594	67655	2.93%	1.003%
24	7.225	754	765	771	rBV	346333	757026	32.78%	11.222%
25	7.282	771	775	785	rVB	103559	208433	9.03%	3.090%
26	7.998	891	901	913	rBV	313097	724910	31.39%	10.746%
27	8.372	961	967	976	rVB4	5261	12635	0.55%	0.187%
28	8.895	1052	1059	1067	rVB5	5522	14011	0.61%	0.208%
29	9.298	1117	1130	1141	rBV	578892	1339288	58.00%	19.853%
30	9.395	1141	1147	1155	rVB	12115	27147	1.18%	0.402%
31	9.690	1191	1199	1213	rBV3	29391	73872	3.20%	1.095%

Sum of corrected areas: 6745869

Data Path : I:\MS09\DATA\2024 06\18\
Data File : 06182415.D
Acq On : 18 Jun 2024 17:24
Operator : SC
Sample : P2402249-007 (400mL)
Misc : S37-06062402
ALS Vial : 4 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\18\\
Data File : 06182415.D
Acq On : 18 Jun 2024 17:244
Operator : SCC
Sample : P2402249-007 (400mL))
Misc : S37-060624022
ALS Vial : 4 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

						--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182407.D Vial: 1
Acq On : 18 Jun 2024 12:49 Operator: SC
Sample : P2402249-008 (3.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 18 13:36:30 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/19/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	163562	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	726138	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	165757	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	361313	12.429	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.44%				
57) Toluene-d8 (SS2)	12.43	98	812920	12.816	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.56%				
73) Bromofluorobenzene (SS3)	16.83	174	281783	12.302	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.40%				
Target Compounds							Qvalue
2) Propene	3.31	42	417	N.D.			
3) Dichlorodifluoromethan...	3.32	85	14762	0.383	ng	#	92
4) Chloromethane	0.00	50	0	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.37	45	121	N.D.			
11) Acetonitrile	4.45	41	464	N.D.			
12) Acrolein	4.55	56	55	N.D.			
13) Acetone	4.66	58	3804	0.299	ng	#	67
14) Trichlorofluoromethane	4.76	101	1446859	37.157	ng		99
15) 2-Propanol (Isopropanol)	4.89	45	983	N.D.			
16) Acrylonitrile	5.01	53	761	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	0.00	59	0	N.D.			
19) Methylene Chloride	5.35	84	936	0.052	ng		99
20) 3-Chloro-1-propene (Al...	5.45	41	268	N.D.			
21) Trichlorotrifluoroethane	5.58	151	1202534	73.003	ng		95
22) Carbon Disulfide	5.61	76	1149	N.D.			
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D.			
27) 2-Butanone (MEK)	6.69	72	490	N.D.			
28) cis-1,2-Dichloroethene	7.07	61	309	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.			
30) Ethyl Acetate	0.00	61	0	N.D.			
31) n-Hexane	7.31	57	724	N.D.			
32) Chloroform	7.35	83	617	N.D.			
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	209	N.D.			
38) 1,1,1-Trichloroethane	8.40	97	743	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.85	56	262	No Calib		#	
41) Benzene	8.89	78	2320	N.D.			
42) Carbon Tetrachloride	0.00	117	0	N.D.			
43) Cyclohexane	9.24	84	106	N.D.			
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.07	83	321	N.D.			
47) Trichloroethene	10.14	130	1354	0.069	ng		91
48) 1,4-Dioxane	10.15	88	287	N.D.			
49) 2,2,4-Trimethylpentane...	10.25	57	1636	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182407.D Vial: 1
Acq On : 18 Jun 2024 12:49 Operator: SC
Sample : P2402249-008 (3.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 18 13:36:30 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

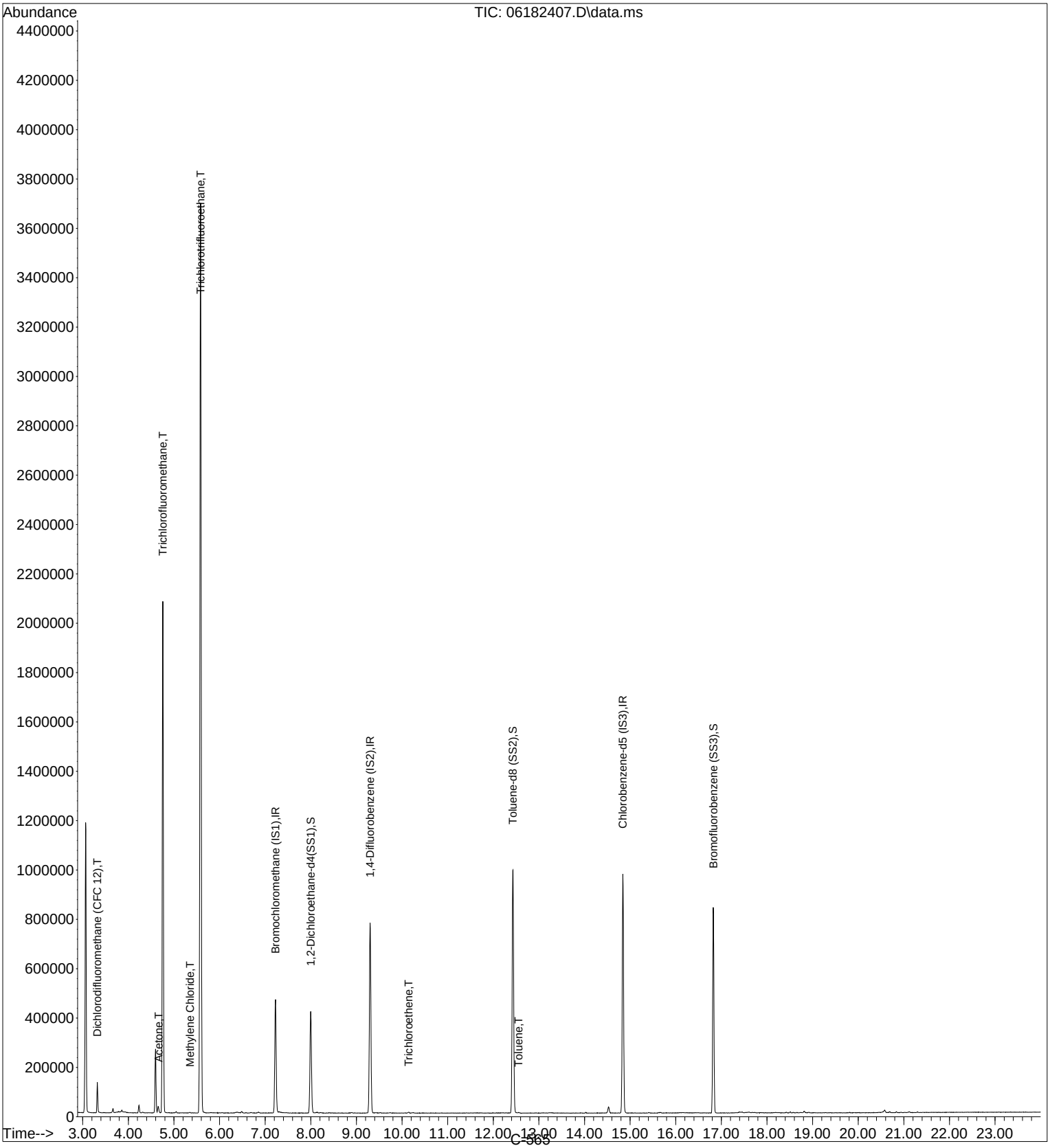
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	0.00	71	0	N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
58) Toluene	12.56	91	3333	0.050 ng	90
59) 2-Hexanone	12.93	43	809	N.D.	
60) Dibromochloromethane	13.06	129	567	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	0.00	43	0	N.D.	
63) n-Octane	0.00	57	0	N.D.	
64) Tetrachloroethene	14.03	166	694	N.D.	
65) Chlorobenzene	14.90	112	744	N.D.	
66) Ethylbenzene	15.41	91	2654	N.D.	
67) m- & p-Xylenes	15.72	91	434	N.D.	
68) Bromoform	15.67	173	493	N.D.	
69) Styrene	16.10	104	135	N.D.	
70) o-Xylene	16.24	91	1374	N.D.	
71) n-Nonane	16.61	43	127	N.D.	
72) 1,1,2,2-Tetrachloroethane	16.21	83	370	N.D.	
74) Cumene	17.03	105	1195	N.D.	
75) alpha-Pinene	17.52	93	560	N.D.	
76) n-Propylbenzene	17.68	91	1589	N.D.	
77) 3-Ethyltoluene	17.03	105	1195	No Calib	
78) 4-Ethyltoluene	17.86	105	1292	N.D.	
79) 1,3,5-Trimethylbenzene	17.96	105	647	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.03	105	1195	No Calib	
82) 1,2,4-Trimethylbenzene	18.43	105	714	N.D.	
83) n-Decane	0.00	58	0	N.D.	
84) Benzyl Chloride	18.56	91	869	N.D.	
85) 1,3-Dichlorobenzene	18.58	146	774	N.D.	
86) 1,4-Dichlorobenzene	18.66	146	923	N.D.	
87) sec-Butylbenzene	18.74	105	1180	N.D.	
88) 4-Isopropyltoluene (p-...	18.93	119	878	N.D.	
89) 1,2,3-Trimethylbenzene	17.03	105	1195	No Calib	
90) 1,2-Dichlorobenzene	19.03	146	600	N.D.	
91) d-Limonene	0.00	68	0	N.D.	
92) 1,2-Dibromo-3-Chloropr...	19.51	157	125	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	1256	N.D.	
95) Naphthalene	20.94	128	1687	N.D.	
96) n-Dodecane	0.00	58	0	N.D.	
97) Hexachlorobutadiene	21.30	225	816	N.D.	
98) Cyclohexanone	0.00	55	0	N.D.	
99) tert-Butylbenzene	18.43	119	934	N.D.	
100) n-Butylbenzene	19.39	91	796	N.D.	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182407.D Vial: 1
Acq On : 18 Jun 2024 12:49 Operator: SC
Sample : P2402249-008 (3.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 18 13:36:30 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182407.D Vial: 1
Acq On : 18 Jun 2024 12:49 Operator: SC
Sample : P2402249-008 (3.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 18 13:36:30 2024 6/19/24
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

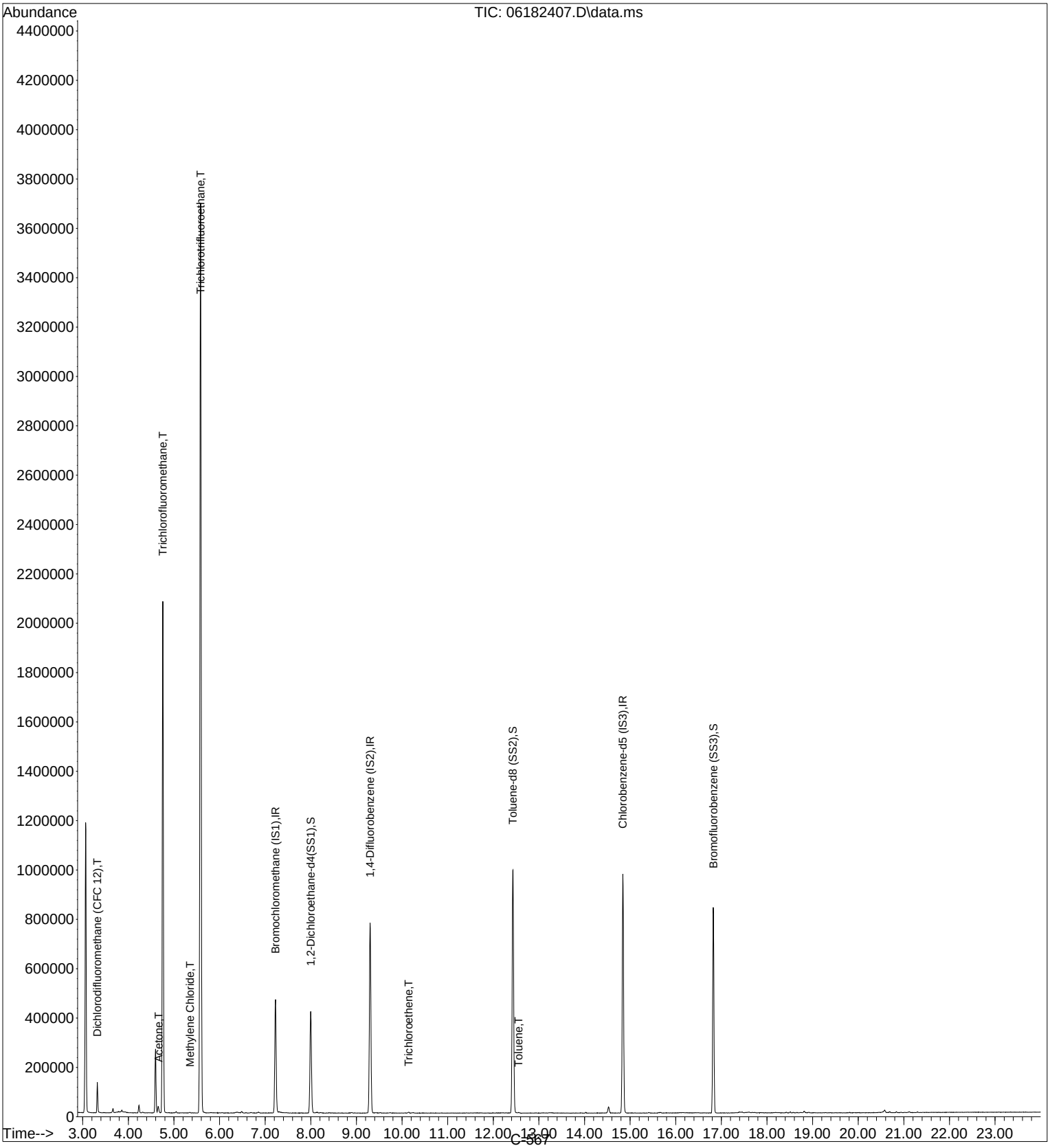
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	163562	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	726138	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	165757	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	361313	12.429	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.44%				
57) Toluene-d8 (SS2)	12.43	98	812920	12.816	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.56%				
73) Bromofluorobenzene (SS3)	16.83	174	281783	12.302	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.40%				
Target Compounds							Qvalue
3) Dichlorodifluoromethan...	3.32	85	14762	0.383	ng	#	92
13) Acetone	4.66	58	3804	0.299	ng	#	67
14) Trichlorofluoromethane	4.76	101	1446859	37.157	ng		99
19) Methylene Chloride	5.35	84	936	0.052	ng		99
21) Trichlorotrifluoroethane	5.58	151	1202534	73.003	ng		95
47) Trichloroethene	10.14	130	1354	0.069	ng		91
58) Toluene	12.56	91	3333	0.050	ng		90

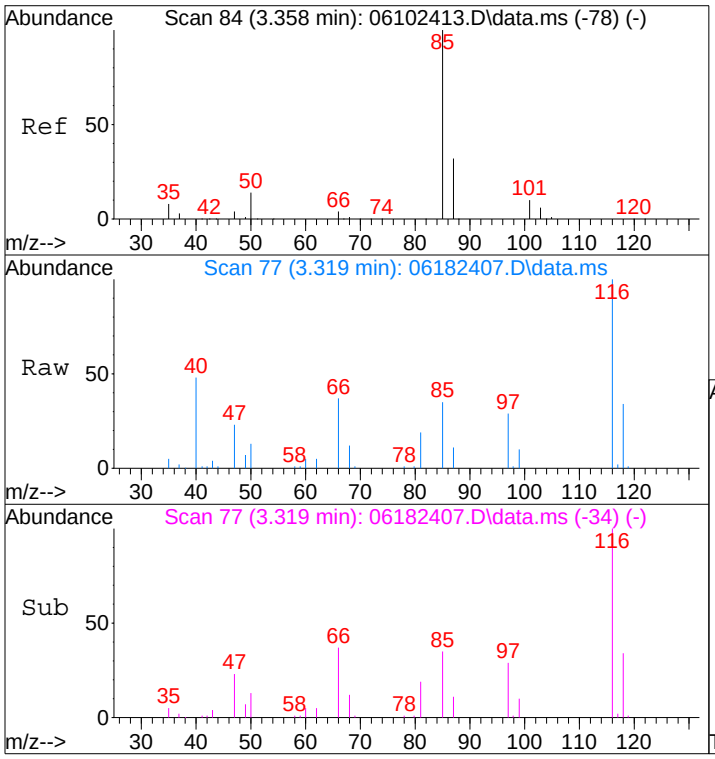
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182407.D Vial: 1
Acq On : 18 Jun 2024 12:49 Operator: SC
Sample : P2402249-008 (3.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 18 13:36:30 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

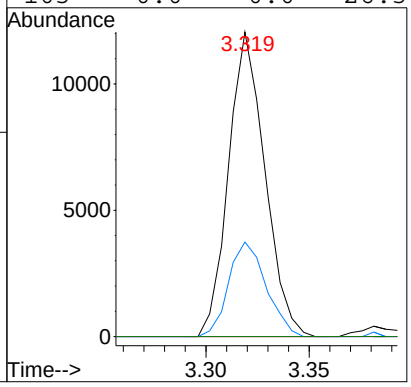


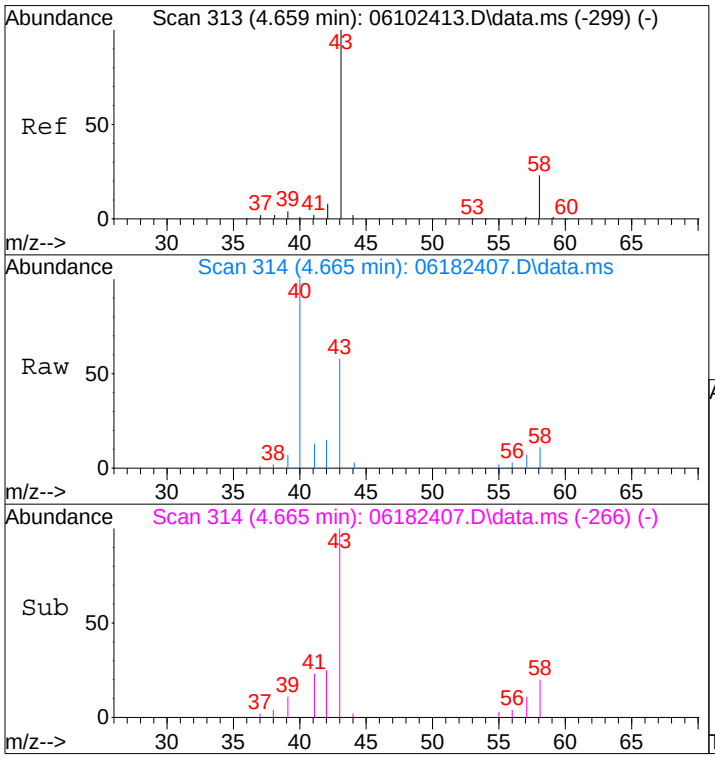


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.38 ng
RT: 3.32 min Scan# 77
Delta R.T. -0.003 min
Lab File: 06182407.D
Acq: 18 Jun 2024 12:49

Tgt Ion: 85 Resp: 14762

Ion	Ratio	Lower	Upper
85	100		
87	32.0	12.2	52.2
101	0.0	0.0	29.8
103	0.0	0.0	26.3

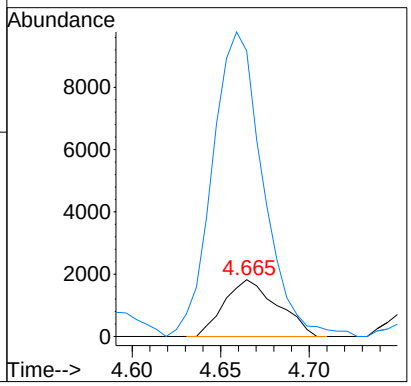


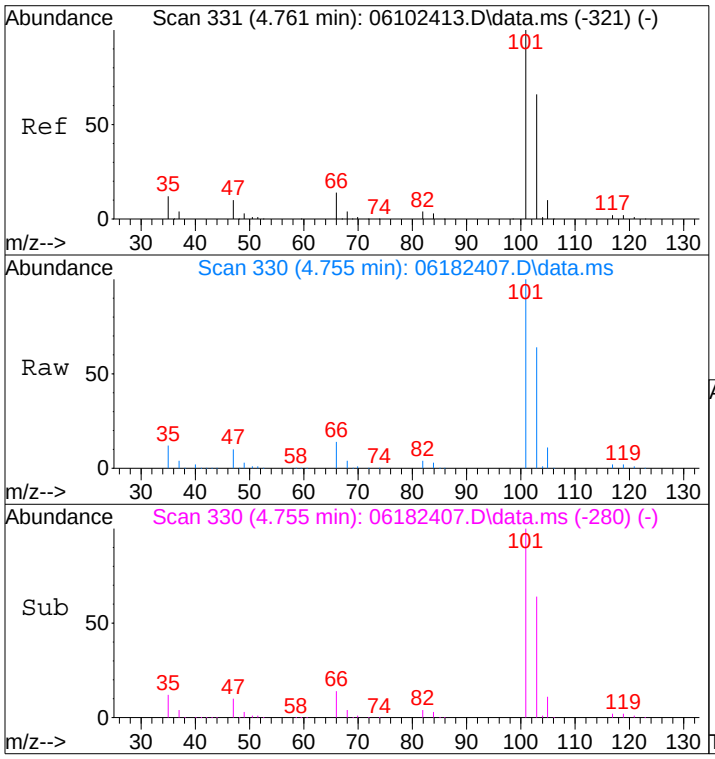


#13
Acetone
Concen: 0.30 ng
RT: 4.66 min Scan# 314
Delta R.T. 0.023 min
Lab File: 06182407.D
Acq: 18 Jun 2024 12:49

Tgt Ion: 58 Resp: 3804

Ion	Ratio	Lower	Upper
58	100		
43	512.0	400.7	460.7#

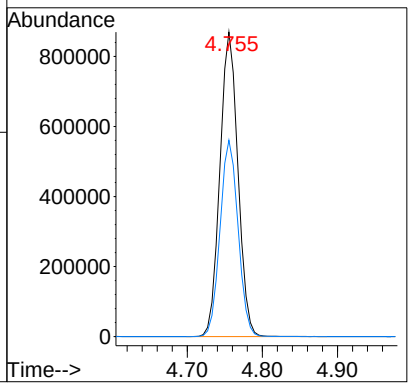


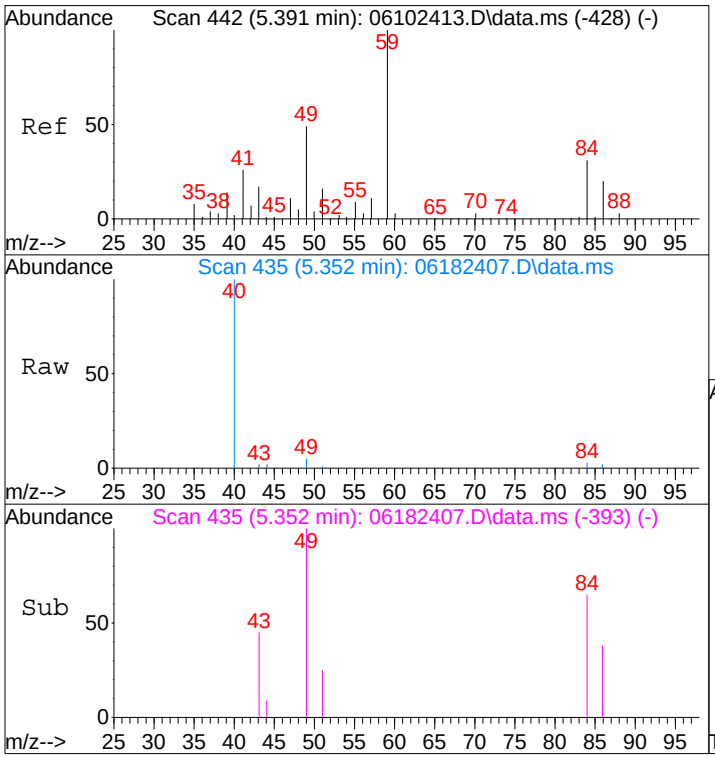


#14
Trichlorofluoromethane
Concen: 37.16 ng
RT: 4.76 min Scan# 330
Delta R.T. 0.035 min
Lab File: 06182407.D
Acq: 18 Jun 2024 12:49

Tgt Ion:101 Resp: 1446859

Ion	Ratio	Lower	Upper
101	100		
103	64.5	44.9	84.9

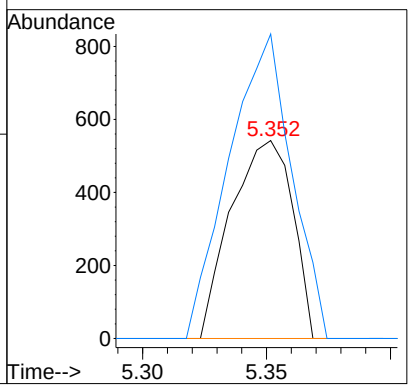


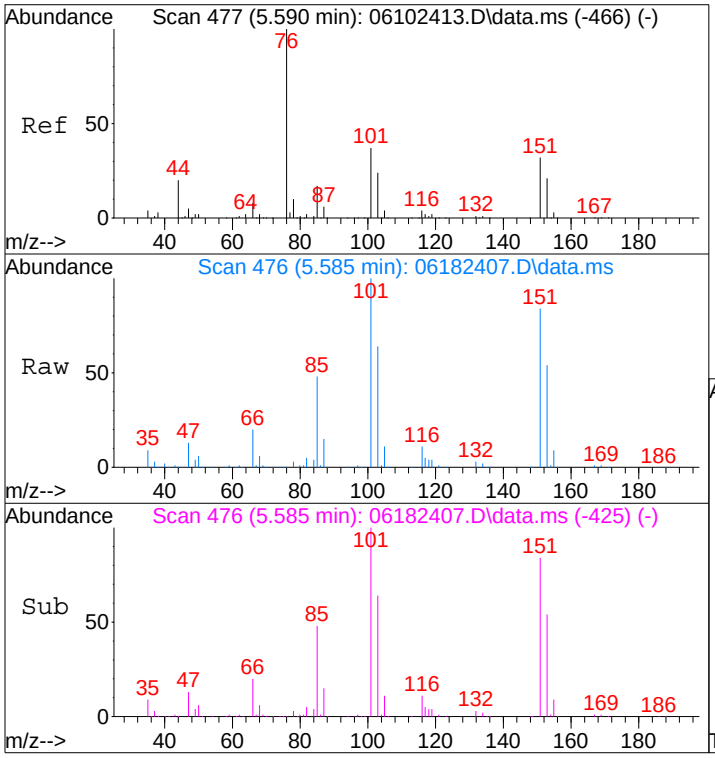


#19
Methylene Chloride
Concen: 0.05 ng
RT: 5.35 min Scan# 435
Delta R.T. -0.009 min
Lab File: 06182407.D
Acq: 18 Jun 2024 12:49

Tgt Ion: 84 Resp: 936

Ion	Ratio	Lower	Upper
84	100		
49	156.8	132.9	182.9

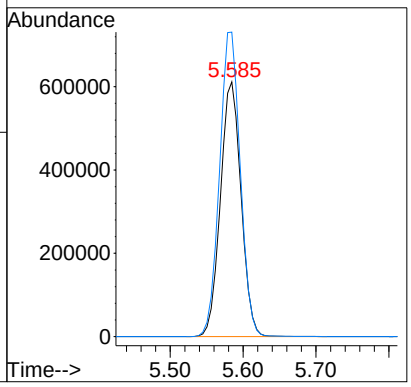


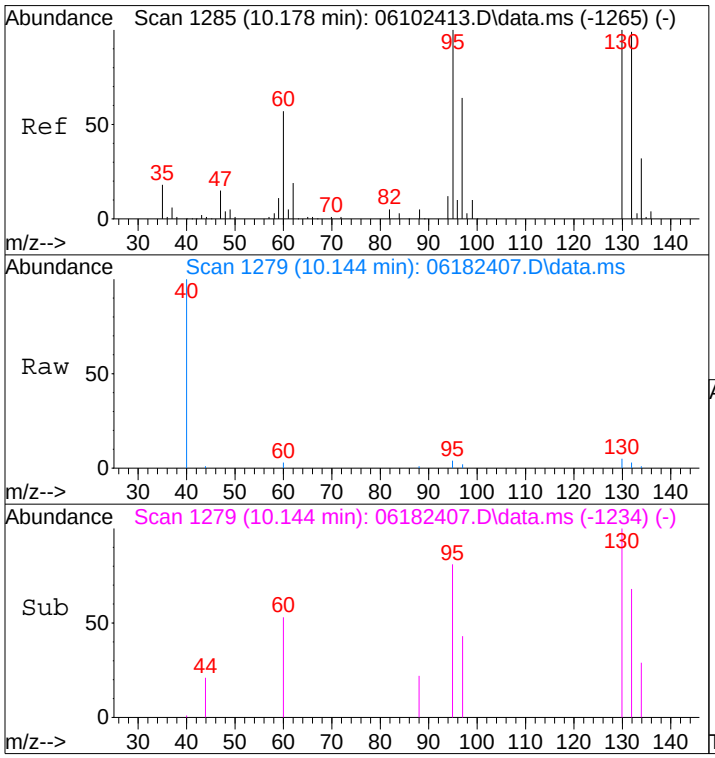


#21
Trichlorotrifluoroethane
Concen: 73.00 ng
RT: 5.58 min Scan# 476
Delta R.T. 0.038 min
Lab File: 06182407.D
Acq: 18 Jun 2024 12:49

Tgt Ion:151 Resp: 1202534

Ion	Ratio	Lower	Upper
151	100		
101	120.2	95.0	135.0

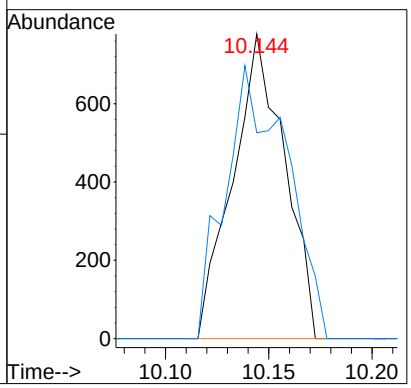


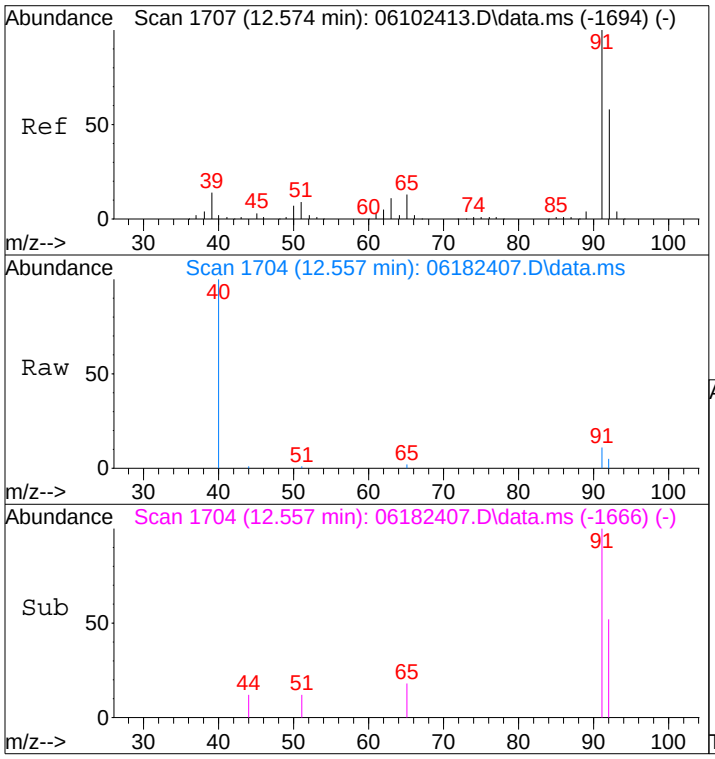


#47
Trichloroethene
Concen: 0.07 ng
RT: 10.14 min Scan# 1279
Delta R.T. 0.005 min
Lab File: 06182407.D
Acq: 18 Jun 2024 12:49

Tgt Ion:130 Resp: 1354

Ion	Ratio	Lower	Upper
130	100		
132	106.8	77.9	117.9

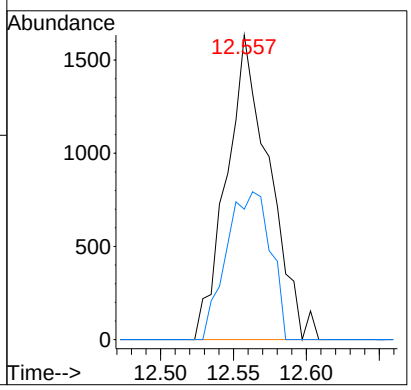




#58
Toluene
Concen: 0.05 ng
RT: 12.56 min Scan# 1704
Delta R.T. -0.034 min
Lab File: 06182407.D
Acq: 18 Jun 2024 12:49

Tgt Ion: 91 Resp: 3333

Ion	Ratio	Lower	Upper
91	100		
92	50.1	37.4	77.4



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182407.D Vial: 1
Acq On : 18 Jun 2024 12:49 Operator: SC
Sample : P2402249-008 (3.0mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 15:00:48 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

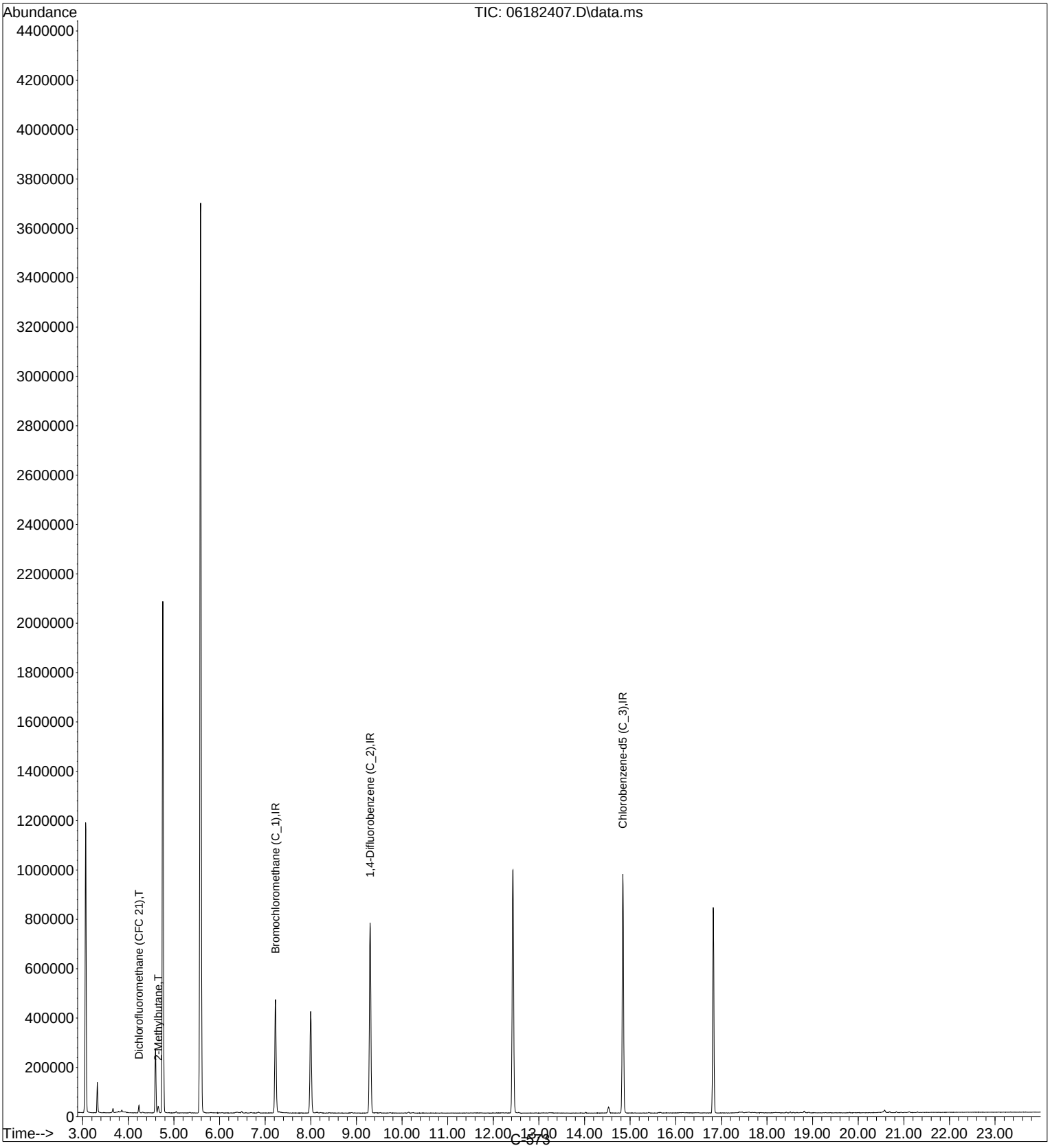
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	165460	12.500	ng	-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	728186	12.500	ng	-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	165757	12.500	ng	-0.01
Target Compounds						Qvalue
2) Chloropentafluoroethane	0.00	85	0	N.D.		
3) 1,1,1,2-Tetrafluoroeth...	0.00	83	0	N.D.		
4) 1,1-Difluoroethane	3.27	65	52	N.D.		
5) Chlorodifluoromethane ...	0.00	67	0	N.D.		
6) 1-Chloro-1,1-Difluoroe...	0.00	65	0	N.D.		
7) Dichlorofluoromethane ...	4.23	67	25003	0.659	ng	99
8) Vinylbromide	0.00	108	0	N.D.		
9) 2,2-Dichloro-1,1,1-tri...	0.00	83	0	N.D.	d	
10) 2-Methylbutane	4.65	57	4141	0.210	ng	94
11) Methyl Acetate	5.36	43	723	N.D.		
12) 2-Methylpentane	6.48	71	1168	N.D.		
13) 2,2-Dichloropropane	0.00	77	0	N.D.		
14) 1,1-Dichloropropene	0.00	75	0	N.D.		
15) Thiophene	0.00	84	0	N.D.		
17) 2,3-Dimethylpentane	9.51	56	987	N.D.		
18) Dibromomethane	9.80	174	56	N.D.		
20) Methyl Cyclohexane	11.42	55	160	N.D.		
21) 1,3-Dichloropropane	0.00	76	0	N.D.		
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		
23) 1-Chlorohexane	0.00	91	0	N.D.		
24) 1,2,3-Trichloropropane	0.00	75	0	N.D.		
25) Bromobenzene	0.00	77	0	N.D.		
26) 2-Chlorotoluene	17.61	91	1895	N.D.		
27) 4-Chlorotoluene	17.68	91	1589	N.D.		
28) Indane	0.00	117	0	N.D.		
29) Indene	0.00	115	0	N.D.		
30) 1,2,4,5-Tetramethylben...	0.00	119	0	N.D.		
31) 1,2,3,4-Tetramethylben...	0.00	119	0	N.D.		
32) 1,2,3,5-Tetramethylben...	0.00	119	0	N.D.		
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182407.D Vial: 1
Acq On : 18 Jun 2024 12:49 Operator: SC
Sample : P2402249-008 (3.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:00:48 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

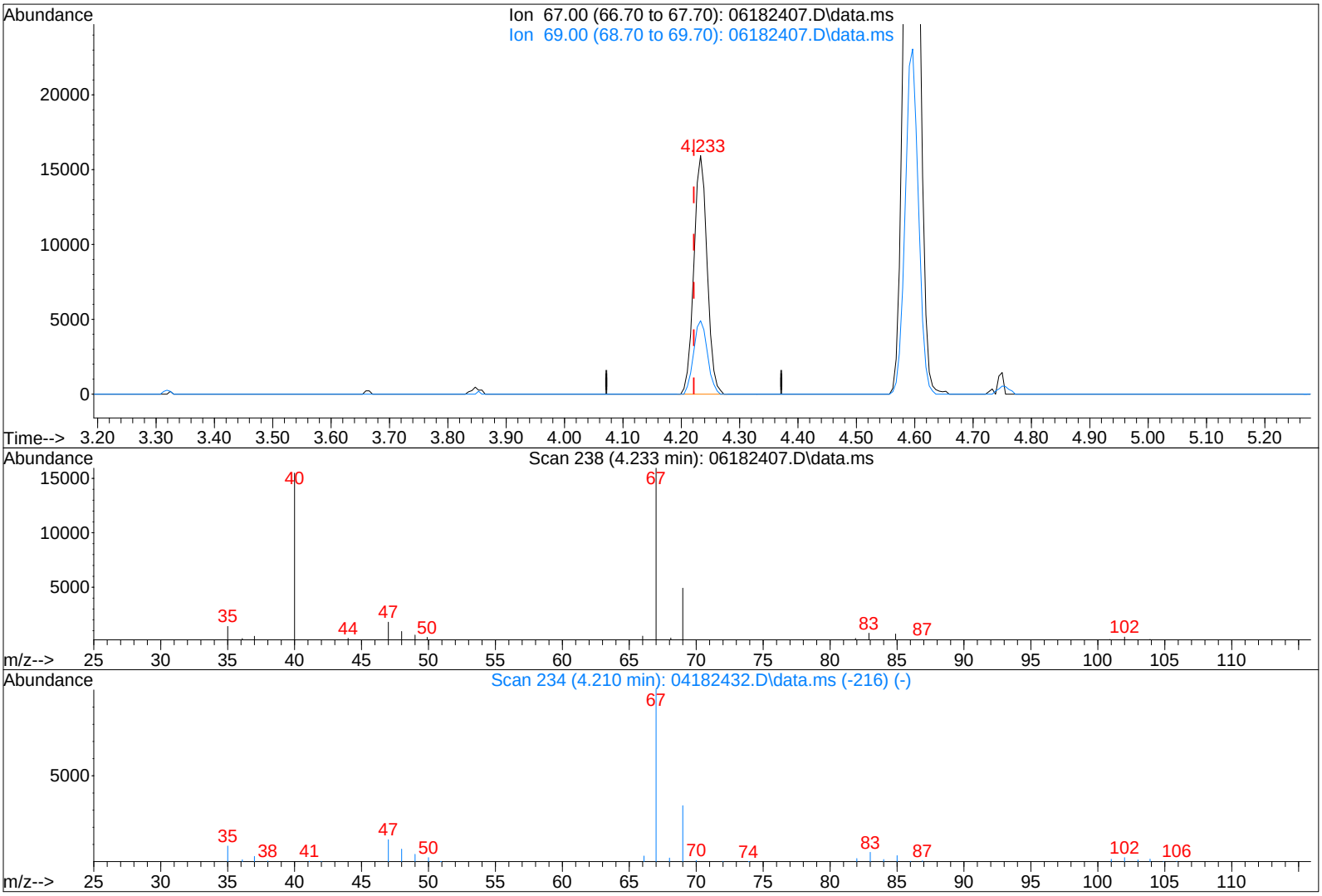


Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182407.D Vial: 1
Acq On : 18 Jun 2024 12:49 Operator: SC
Sample : P2402249-008 (3.0mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 14:59:32 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182407.D\data.ms

(7) Dichlorofluoromethane (CFC 21) (T)

4.233min (+0.011) 0.66ng

response 25003

Ion	Exp%	Act%
67.00	100	100
69.00	32.40	32.07
0.00	0.00	0.00
0.00	0.00	0.00

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\18\
Data File : 06182407.D
Acq On : 18 Jun 2024 12:49
Operator : SC
Sample : P2402249-008 (3.0mL)
Misc : S37-06062402
ALS Vial : 1 Sample Multiplier: 1

MJ 6/28/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06182407.D\data.ms

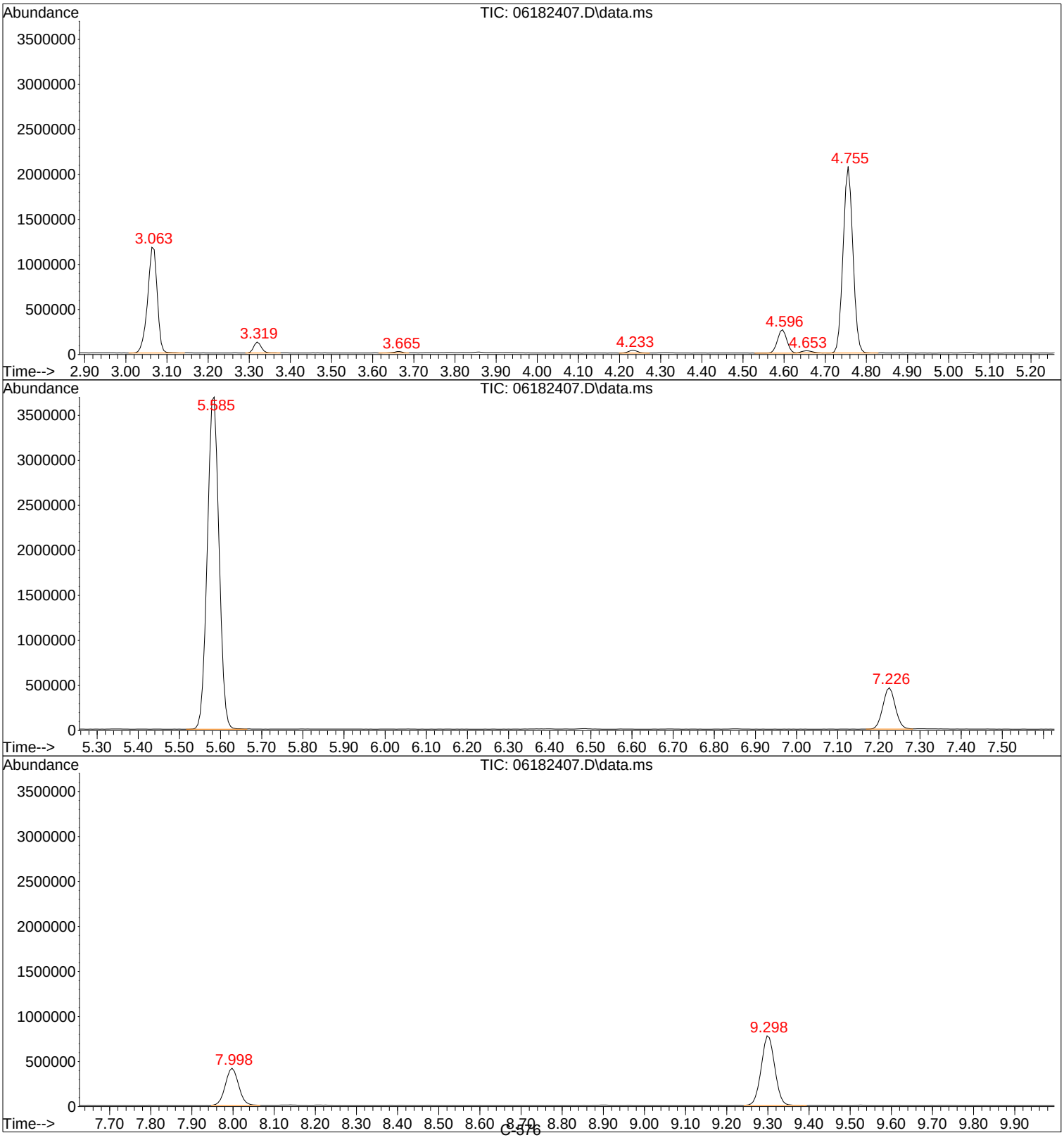
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.063	22	32	46	rBV	1175953	1902513	26.10%	11.216%
2	3.319	72	77	87	rBV	122486	158469	2.17%	0.934%
3	3.665	129	138	142	rBV3	16636	25400	0.35%	0.150%
4	4.233	232	238	245	rBV	31067	49772	0.68%	0.293%
5	4.596	290	302	308	rBV	259448	412430	5.66%	2.431%
6	4.653	308	312	322	rVV3	25680	47786	0.66%	0.282%
7	4.755	322	330	343	rVV	2072120	3437880	47.17%	20.267%
8	5.585	464	476	490	rBV	3687743	7288594	100.00%	42.968%
9	7.226	755	765	775	rBV	459680	972645	13.34%	5.734%
10	7.998	892	901	913	rBV	411573	916497	12.57%	5.403%
11	9.298	1120	1130	1147	rVB	770545	1750751	24.02%	10.321%

Sum of corrected areas: 16962737

Data Path : I:\MS09\DATA\2024 06\18\
Data File : 06182407.D
Acq On : 18 Jun 2024 12:49
Operator : SC
Sample : P2402249-008 (3.0mL)
Misc : S37-06062402
ALS Vial : 1 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Data Path : I:\MS09\DATA\2024 06\18\
Data File : 06182407.D
Acq On : 18 Jun 2024 12:49
Operator : SC
Sample : P2402249-008 (3.0mL)
Misc : S37-06062402
ALS Vial : 1 Sample Multiplier: 1

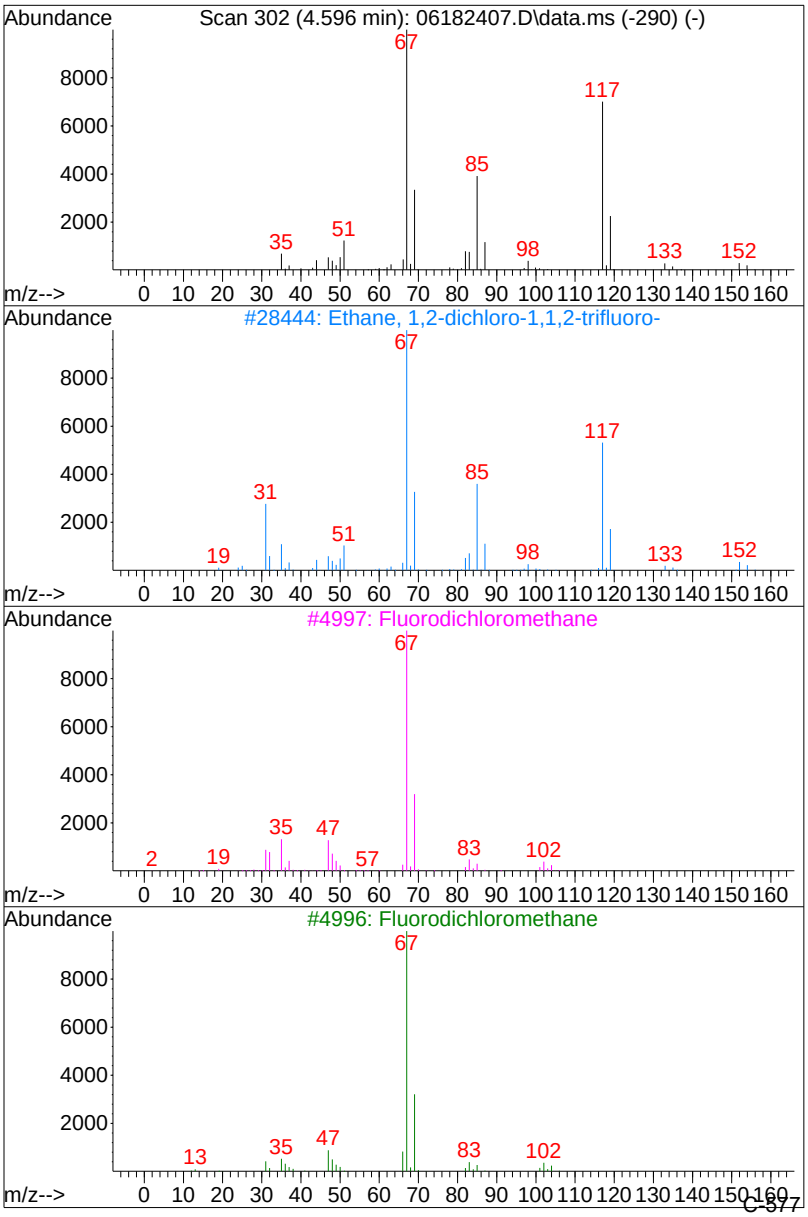
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

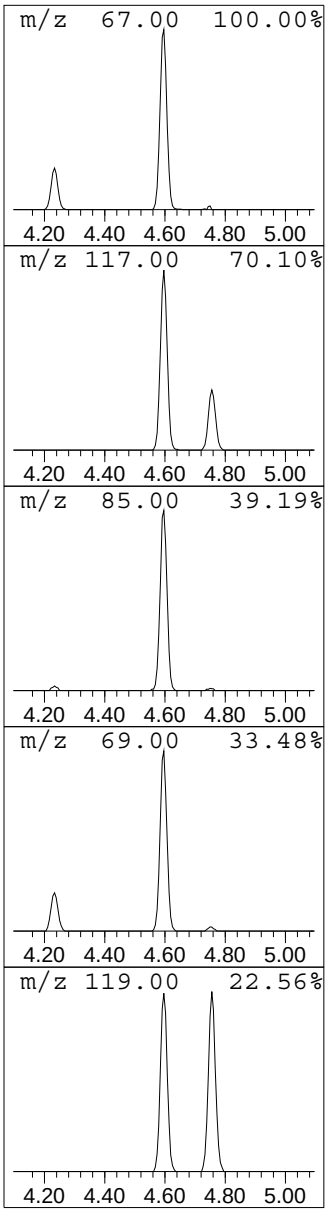
TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P

****
Peak Number 2 Ethane, 1,2-dichloro-1,1,2-... Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.596	5.30 ng	412430	Bromochloromethane (IS1)	7.226

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Ethane, 1,2-dichloro-1,1,2-trifl...	152	C2HCl2F3	000354-23-4	91
2	Fluorodichloromethane	102	CHCl2F	000075-43-4	25
3	Fluorodichloromethane	102	CHCl2F	000075-43-4	25
4	Fluorodichloromethane	102	CHCl2F	000075-43-4	17
5	Cyclopropane, 1,2-dimethyl-3-met...	82	C6H10	062338-02-7	16





Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024_06\18\
Data File : 06182407.D
Acq On : 18 Jun 2024 12:49
Operator : SC
Sample : P2402249-008 (3.0mL)
Misc : S37-06062402
ALS Vial : 1 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Ethane, 1,2-dic...	4.596	5.3	ng	412430	1	7.226	972645	12.5

Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\17\06172425.D Vial: 14
Acq On : 17 Jun 2024 22:13 Operator: SC
Sample : P2402249-009 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 10:49:39 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.22	130	142780	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	630866	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	147958	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	315181	12.420	ng		0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.36%				
57) Toluene-d8 (SS2)	12.43	98	709088	12.524	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.16%				
73) Bromofluorobenzene (SS3)	16.83	174	256213	12.532	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.24%				
Target Compounds							Qvalue
2) Propene	3.31	42	3347	0.183	ng		96
3) Dichlorodifluoromethan...	0.00	85	0	N.D.			
4) Chloromethane	3.52	50	301	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.37	45	52	N.D.			
11) Acetonitrile	4.43	41	926	N.D.			
12) Acrolein	4.53	56	582	0.057	ng		93
13) Acetone	4.63	58	19812	1.786	ng	#	80
14) Trichlorofluoromethane	0.00	101	0	N.D.			
15) 2-Propanol (Isopropanol)	4.84	45	34137	0.764	ng		83
16) Acrylonitrile	4.99	53	869	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.35	59	115	N.D.			
19) Methylene Chloride	5.35	84	780	N.D.			
20) 3-Chloro-1-propene (Al...	5.45	41	117	N.D.			
21) Trichlorotrifluoroethane	0.00	151	0	N.D.			
22) Carbon Disulfide	5.61	76	2328	N.D.			
23) trans-1,2-Dichloroethene	6.14	61	423	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	6.43	86	127	N.D.			
27) 2-Butanone (MEK)	0.00	72	0	N.D. d			
28) cis-1,2-Dichloroethene	7.06	61	277	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.			
30) Ethyl Acetate	7.30	61	1361	0.254	ng		94
31) n-Hexane	0.00	57	0	N.D.			
32) Chloroform	7.35	83	2061	0.074	ng		96
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	118	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.83	56	1850	No Calib		#	
41) Benzene	8.89	78	3102	0.053	ng		99
42) Carbon Tetrachloride	0.00	117	0	N.D.			
43) Cyclohexane	9.29	84	443	N.D.			
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.06	83	310	N.D.			
47) Trichloroethene	10.15	130	642	N.D.			
48) 1,4-Dioxane	10.14	88	297	N.D.			
49) 2,2,4-Trimethylpentane...	0.00	57	0	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172425.D Vial: 14
Acq On : 17 Jun 2024 22:13 Operator: SC
Sample : P2402249-009 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 10:49:39 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

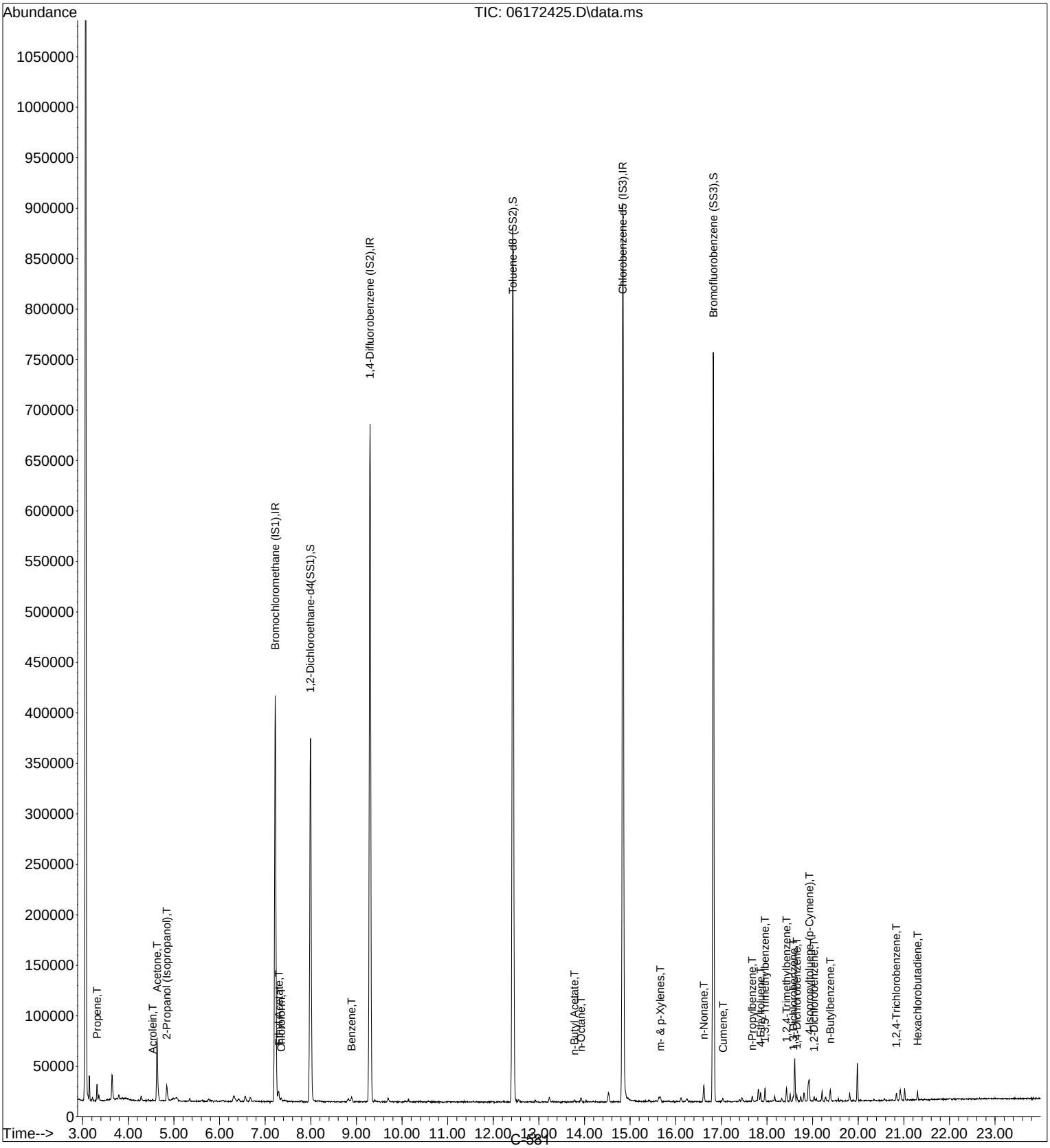
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
51) n-Heptane	0.00	71	0	N.D.			
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.			
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.			
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.			
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.			
58) Toluene	12.56	91	2774	N.D.			
59) 2-Hexanone	12.91	43	1162	N.D.			
60) Dibromochloromethane	13.07	129	418	N.D.			
61) 1,2-Dibromoethane	0.00	107	0	N.D.			
62) n-Butyl Acetate	13.78	43	2243	0.058	ng	#	75
63) n-Octane	13.93	57	755	0.062	ng		91
64) Tetrachloroethene	14.02	166	490	N.D.			
65) Chlorobenzene	14.90	112	1537	N.D.			
66) Ethylbenzene	15.41	91	2386	N.D.			
67) m- & p-Xylenes	15.66	91	6585	0.116	ng		92
68) Bromoform	15.67	173	629	N.D.			
69) Styrene	16.11	104	653	N.D.			
70) o-Xylene	16.25	91	2664	N.D.			
71) n-Nonane	16.62	43	7246	0.222	ng		99
72) 1,1,2,2-Tetrachloroethane	16.20	83	402	N.D.			
74) Cumene	17.04	105	3532	0.050	ng		89
75) alpha-Pinene	0.00	93	0	N.D.			
76) n-Propylbenzene	17.68	91	5418	0.064	ng		97
77) 3-Ethyltoluene	17.04	105	3532	No Calib			
78) 4-Ethyltoluene	17.86	105	5768	0.086	ng		97
79) 1,3,5-Trimethylbenzene	17.96	105	7459	0.128	ng		98
80) alpha-Methylstyrene	0.00	118	0	N.D.			
81) 2-Ethyltoluene	17.04	105	3532	No Calib			
82) 1,2,4-Trimethylbenzene	18.43	105	5802	0.094	ng		90
83) n-Decane	0.00	58	0	N.D.			
84) Benzyl Chloride	0.00	91	0	N.D.			
85) 1,3-Dichlorobenzene	18.58	146	2324	0.057	ng		99
86) 1,4-Dichlorobenzene	18.66	146	2768	0.070	ng		95
87) sec-Butylbenzene	18.74	105	3674	N.D.			
88) 4-Isopropyltoluene (p-...	18.93	119	11394	0.163	ng		90
89) 1,2,3-Trimethylbenzene	17.04	105	3532	No Calib			
90) 1,2-Dichlorobenzene	19.03	146	2252	0.057	ng		98
91) d-Limonene	19.08	68	609	N.D.			
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.			
93) n-Undecane	0.00	58	0	N.D.			
94) 1,2,4-Trichlorobenzene	20.84	180	2642	0.085	ng		88
95) Naphthalene	20.94	128	3622	N.D.			
96) n-Dodecane	18.92	58	521	No Calib		#	
97) Hexachlorobutadiene	21.30	225	1678	0.066	ng		93
98) Cyclohexanone	0.00	55	0	N.D.			
99) tert-Butylbenzene	18.43	119	2387	N.D.			
100) n-Butylbenzene	19.39	91	6279	0.096	ng		98
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172425.D Vial: 14
Acq On : 17 Jun 2024 22:13 Operator: SC
Sample : P2402249-009 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 10:49:39 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172425.D Vial: 14
Acq On : 17 Jun 2024 22:13 Operator: SC
Sample : P2402249-009 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 10:49:39 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

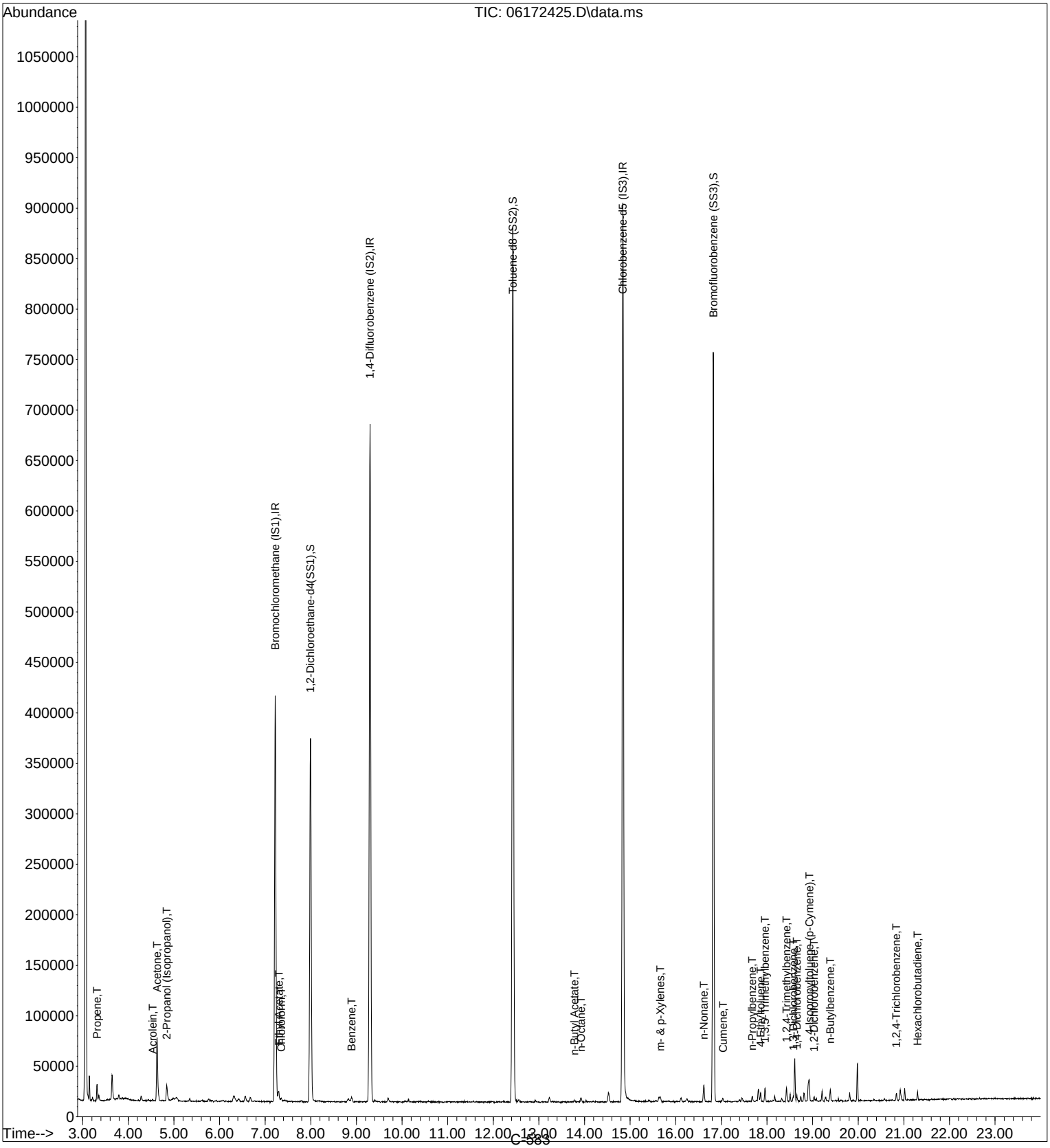
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.22	130	142780	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	630866	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	147958	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	315181	12.420	ng		0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.36%				
57) Toluene-d8 (SS2)	12.43	98	709088	12.524	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.16%				
73) Bromofluorobenzene (SS3)	16.83	174	256213	12.532	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.24%				
Target Compounds							Qvalue
2) Propene	3.31	42	3347	0.183	ng		96
12) Acrolein	4.53	56	582	0.057	ng		93
13) Acetone	4.63	58	19812	1.786	ng	#	80
15) 2-Propanol (Isopropanol)	4.84	45	34137	0.764	ng		83
30) Ethyl Acetate	7.30	61	1361	0.254	ng		94
32) Chloroform	7.35	83	2061	0.074	ng		96
41) Benzene	8.89	78	3102	0.053	ng		99
62) n-Butyl Acetate	13.78	43	2243	0.058	ng	#	75
63) n-Octane	13.93	57	755	0.062	ng		91
67) m- & p-Xylenes	15.66	91	6585	0.116	ng		92
71) n-Nonane	16.62	43	7246	0.222	ng		99
74) Cumene	17.04	105	3532	0.050	ng		89
76) n-Propylbenzene	17.68	91	5418	0.064	ng		97
78) 4-Ethyltoluene	17.86	105	5768	0.086	ng		97
79) 1,3,5-Trimethylbenzene	17.96	105	7459	0.128	ng		98
82) 1,2,4-Trimethylbenzene	18.43	105	5802	0.094	ng		90
85) 1,3-Dichlorobenzene	18.58	146	2324	0.057	ng		99
86) 1,4-Dichlorobenzene	18.66	146	2768	0.070	ng		95
88) 4-Isopropyltoluene (p-...	18.93	119	11394	0.163	ng		90
90) 1,2-Dichlorobenzene	19.03	146	2252	0.057	ng		98
94) 1,2,4-Trichlorobenzene	20.84	180	2642	0.085	ng		88
97) Hexachlorobutadiene	21.30	225	1678	0.066	ng		93
100) n-Butylbenzene	19.39	91	6279	0.096	ng		98

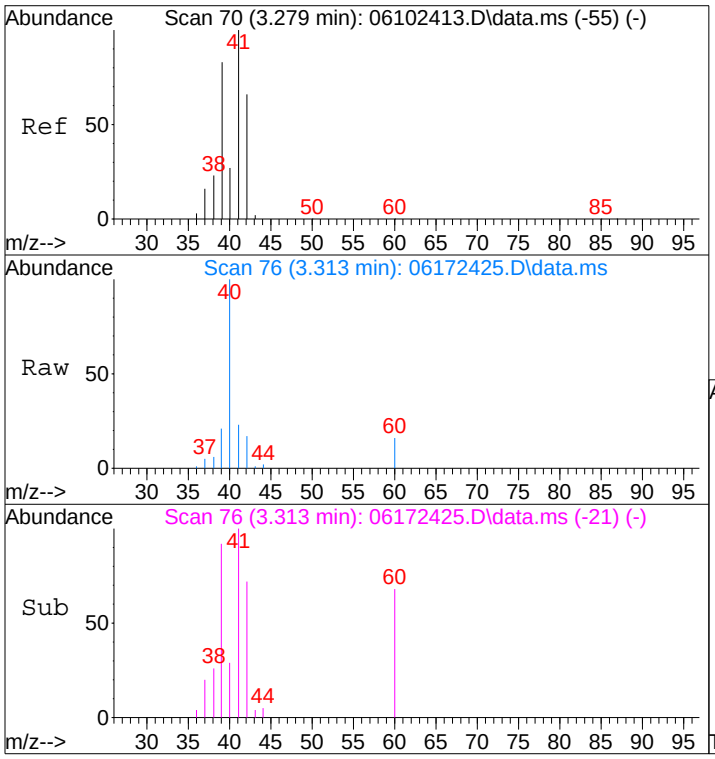
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172425.D Vial: 14
Acq On : 17 Jun 2024 22:13 Operator: SC
Sample : P2402249-009 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 10:49:39 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

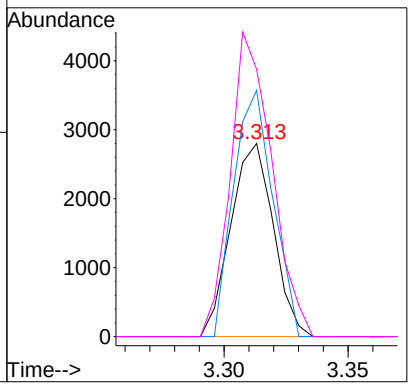


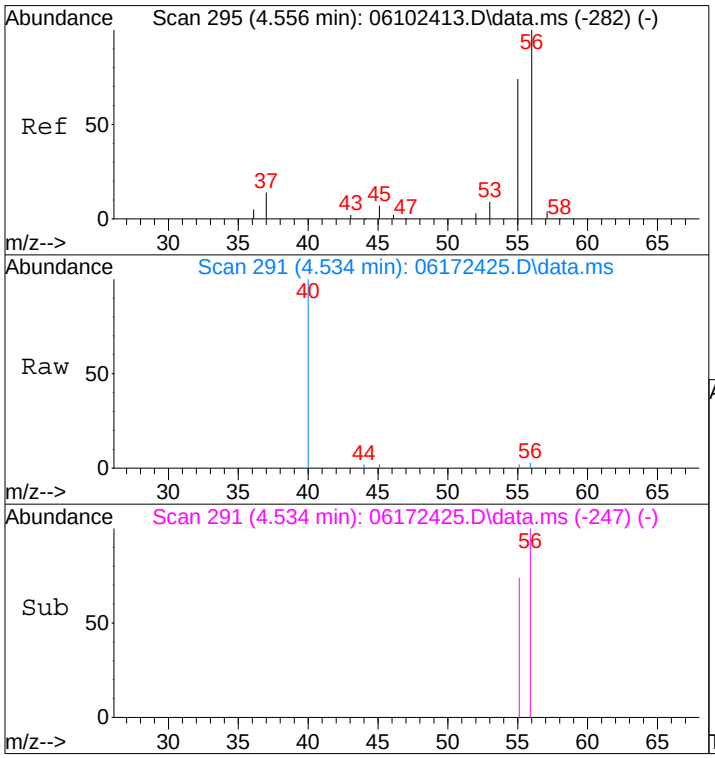


#2
Propene
Concen: 0.18 ng
RT: 3.31 min Scan# 76
Delta R.T. 0.064 min
Lab File: 06172425.D
Acq: 17 Jun 2024 22:13

Tgt Ion: 42 Resp: 3347

Ion	Ratio	Lower	Upper
42	100		
39	118.2	107.3	147.3
41	153.8	134.3	174.3

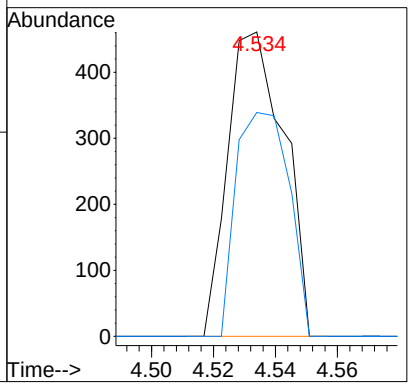


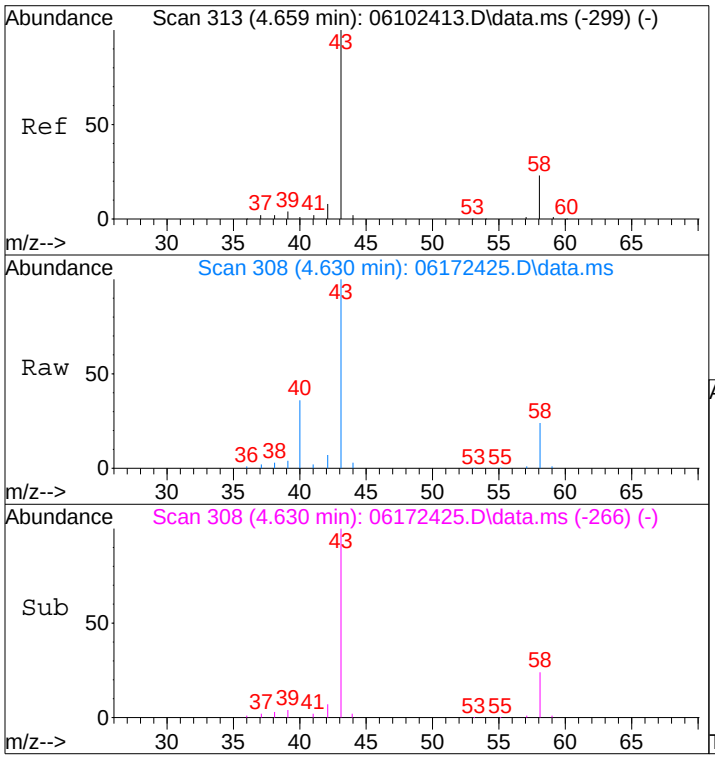


#12
Acrolein
Concen: 0.06 ng
RT: 4.53 min Scan# 291
Delta R.T. -0.001 min
Lab File: 06172425.D
Acq: 17 Jun 2024 22:13

Tgt Ion: 56 Resp: 582

Ion	Ratio	Lower	Upper
56	100		
55	69.6	55.5	95.5

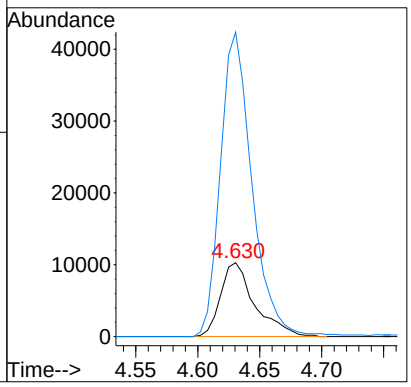


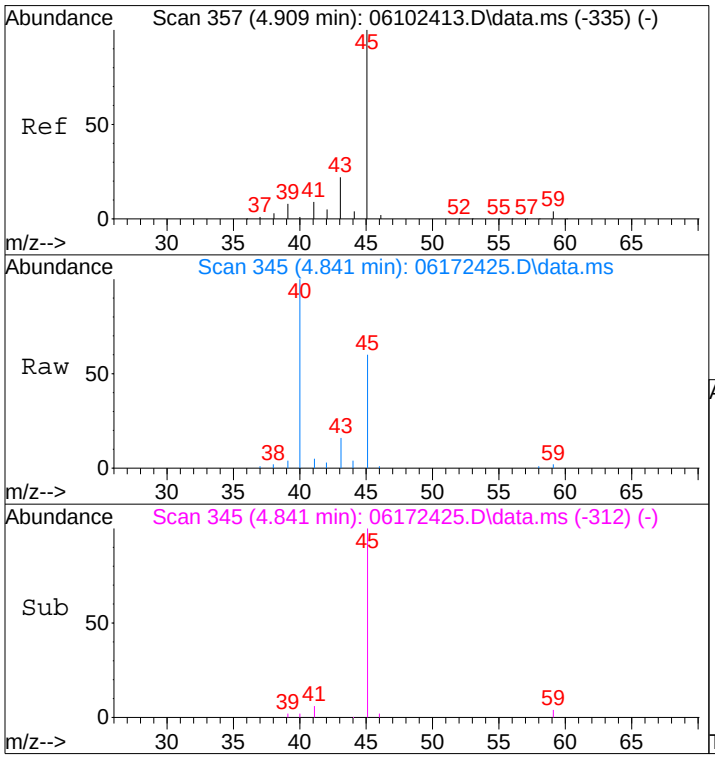


#13
Acetone
Concen: 1.79 ng
RT: 4.63 min Scan# 308
Delta R.T. -0.012 min
Lab File: 06172425.D
Acq: 17 Jun 2024 22:13

Tgt Ion: 58 Resp: 19812

Ion	Ratio	Lower	Upper
58	100		
43	380.9	400.7	460.7#

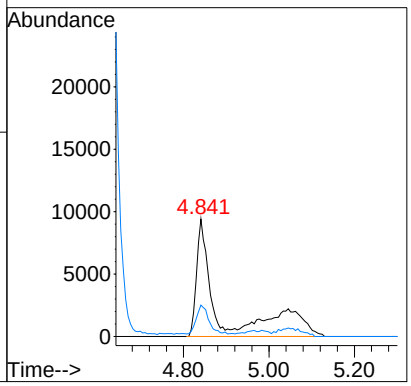


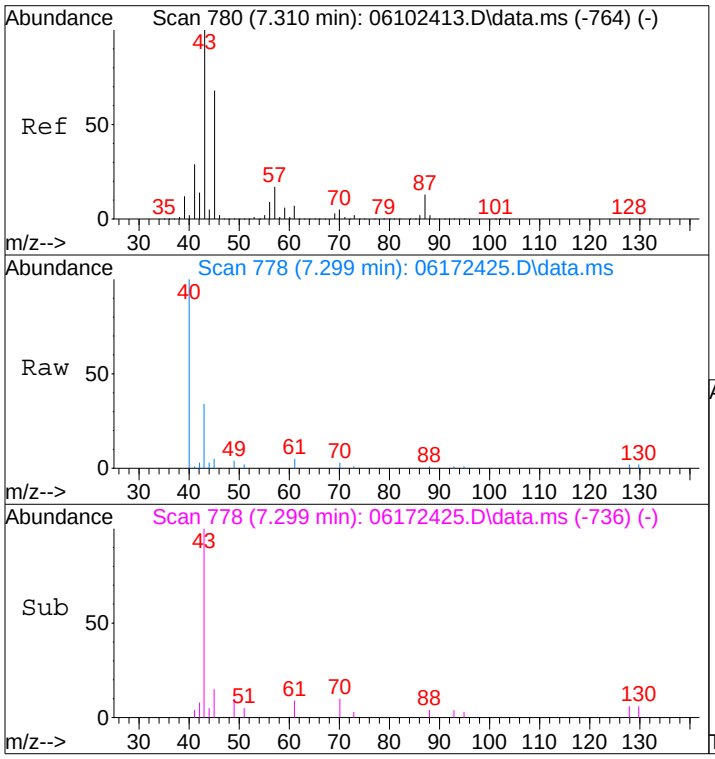


#15
2-Propanol (Isopropanol)
Concen: 0.76 ng
RT: 4.84 min Scan# 345
Delta R.T. -0.060 min
Lab File: 06172425.D
Acq: 17 Jun 2024 22:13

Tgt Ion: 45 Resp: 34137

Ion	Ratio	Lower	Upper
45	100		
43	30.7	2.5	42.5

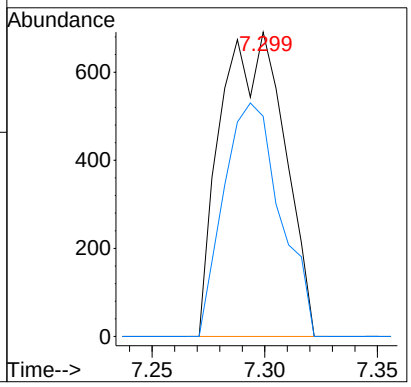


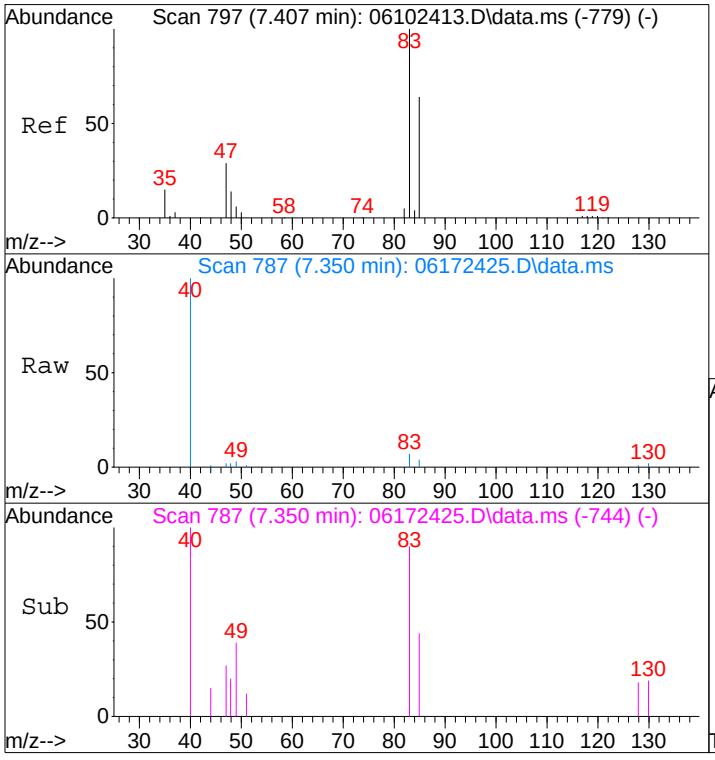


#30
Ethyl Acetate
Concen: 0.25 ng
RT: 7.30 min Scan# 778
Delta R.T. 0.040 min
Lab File: 06172425.D
Acq: 17 Jun 2024 22:13

Tgt Ion: 61 Resp: 1361

Ion	Ratio	Lower	Upper
61	100		
70	68.1	53.5	93.5

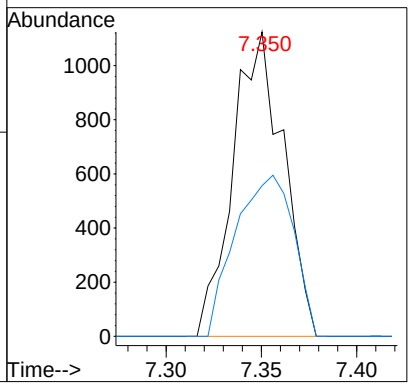


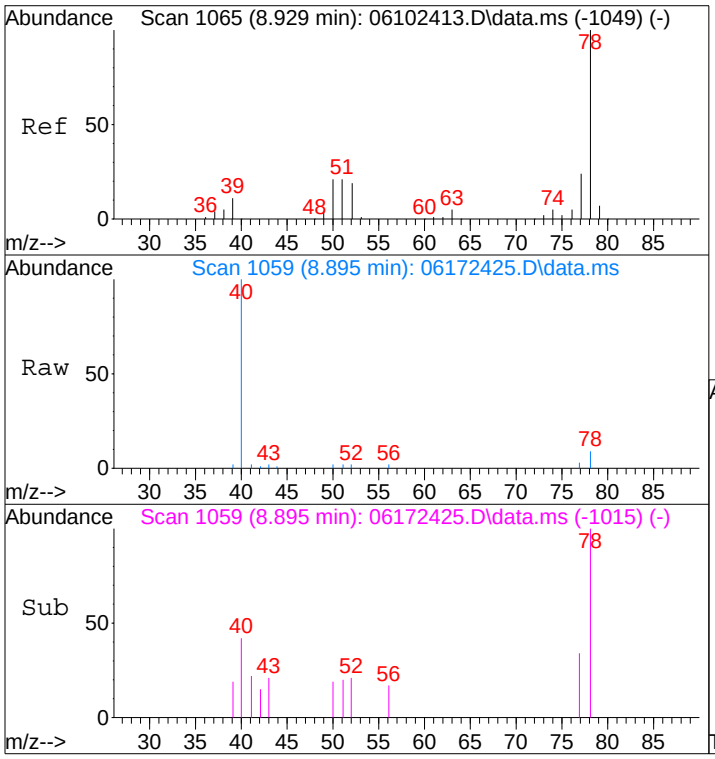


#32
Chloroform
Concen: 0.07 ng
RT: 7.35 min Scan# 787
Delta R.T. -0.004 min
Lab File: 06172425.D
Acq: 17 Jun 2024 22:13

Tgt Ion: 83 Resp: 2061

Ion	Ratio	Lower	Upper
83	100		
85	61.5	44.4	84.4

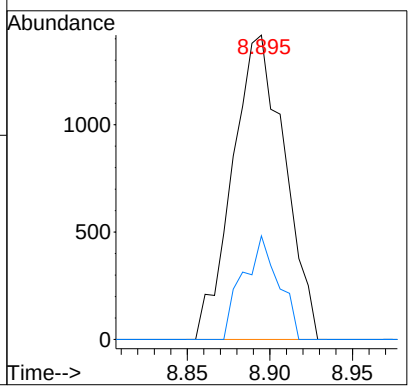


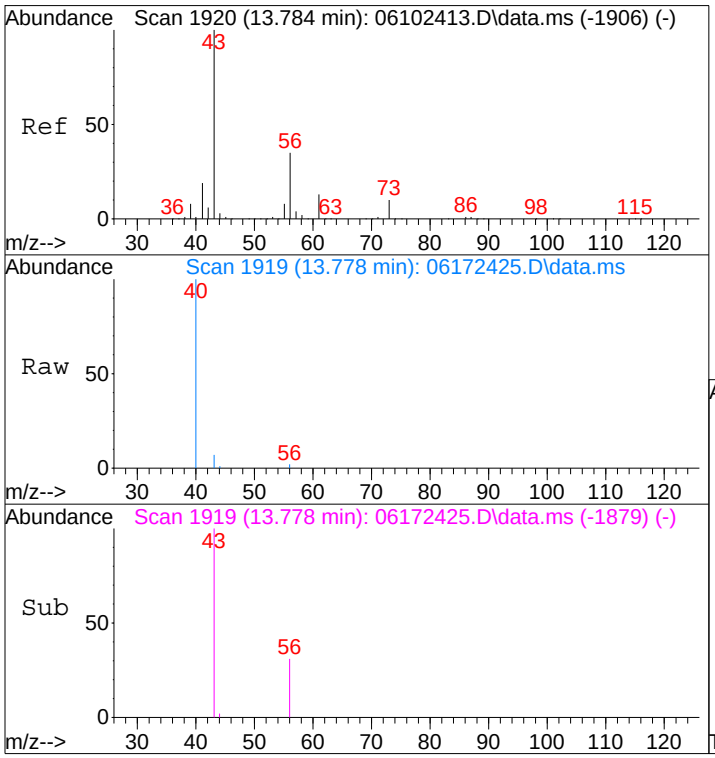


#41
Benzene
Concen: 0.05 ng
RT: 8.89 min Scan# 1059
Delta R.T. -0.002 min
Lab File: 06172425.D
Acq: 17 Jun 2024 22:13

Tgt Ion: 78 Resp: 3102

Ion	Ratio	Lower	Upper
78	100		
77	23.3	4.0	44.0

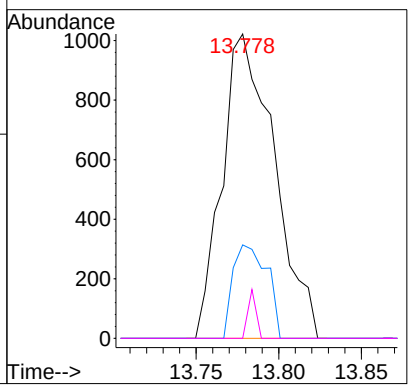


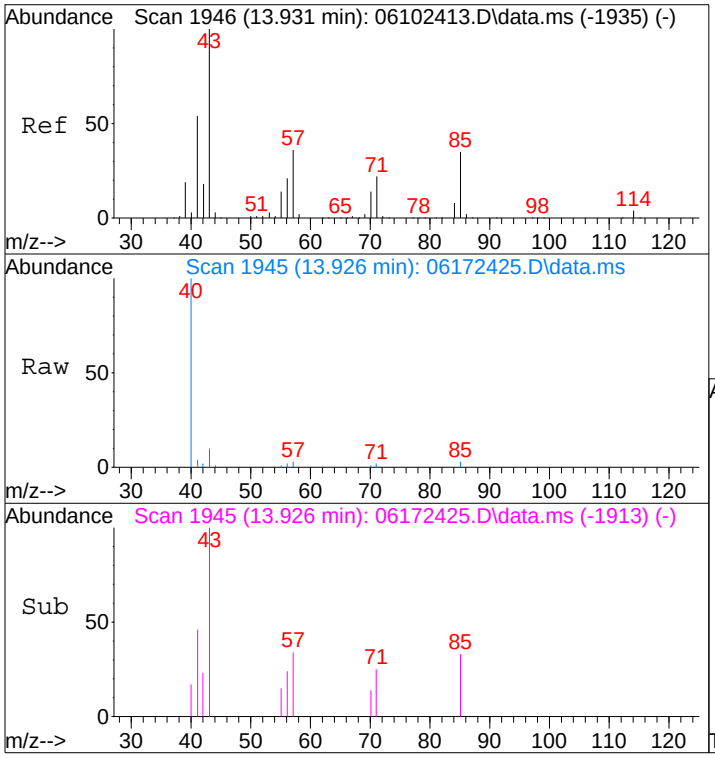


#62
n-Butyl Acetate
Concen: 0.06 ng
RT: 13.78 min Scan# 1919
Delta R.T. -0.023 min
Lab File: 06172425.D
Acq: 17 Jun 2024 22:13

Tgt Ion: 43 Resp: 2243

Ion	Ratio	Lower	Upper
43	100		
56	20.1	14.3	54.3
73	0.0	0.0	30.4

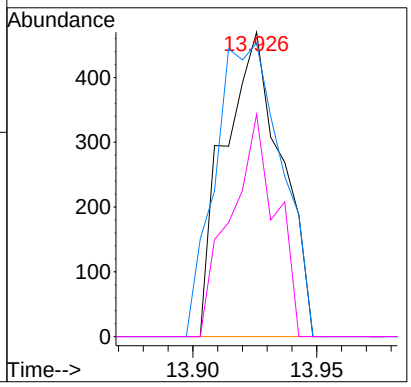


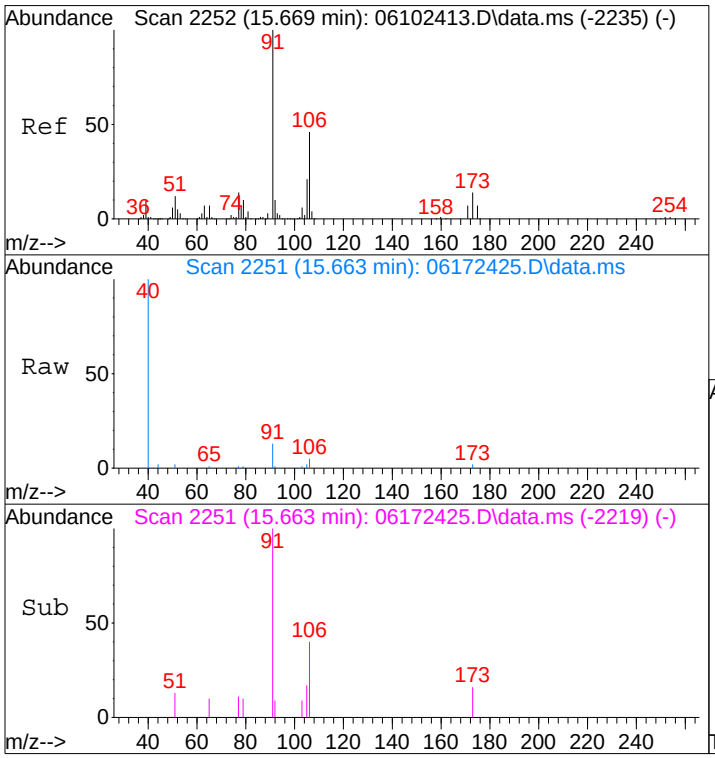


#63
n-Octane
Concen: 0.06 ng
RT: 13.93 min Scan# 1945
Delta R.T. -0.017 min
Lab File: 06172425.D
Acq: 17 Jun 2024 22:13

Tgt Ion: 57 Resp: 755

Ion	Ratio	Lower	Upper
57	100		
85	111.8	79.8	119.6
71	57.9	49.0	73.4

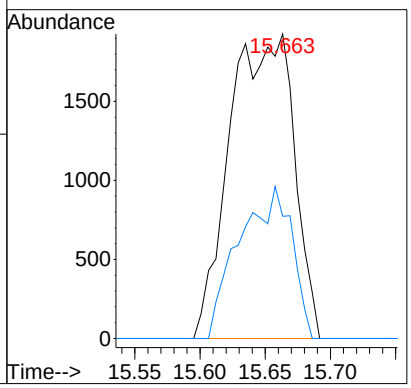


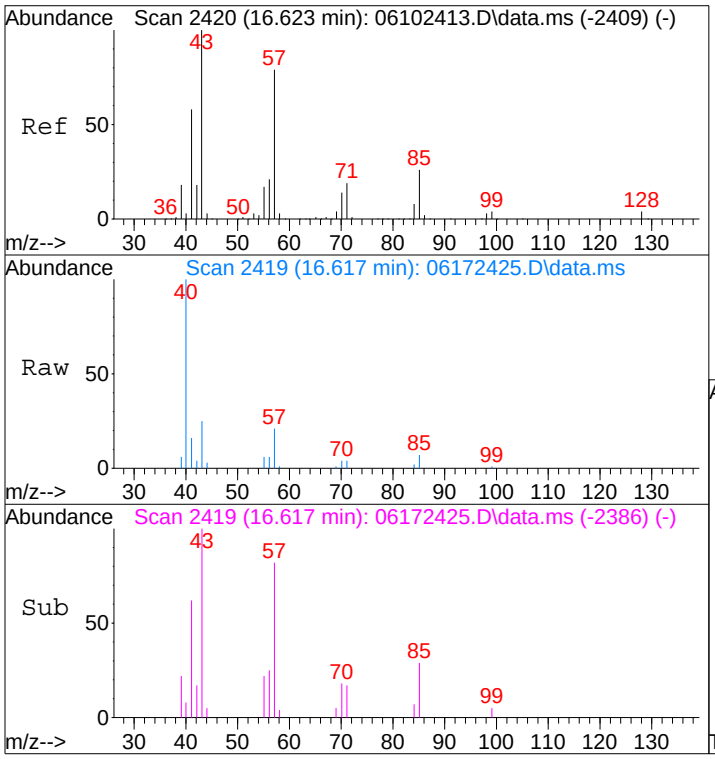


#67
m- & p-Xylenes
Concen: 0.12 ng
RT: 15.66 min Scan# 2251
Delta R.T. -0.017 min
Lab File: 06172425.D
Acq: 17 Jun 2024 22:13

Tgt Ion: 91 Resp: 6585

Ion	Ratio	Lower	Upper
91	100		
106	40.9	25.9	65.9

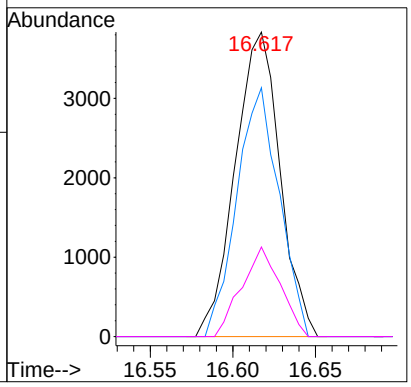


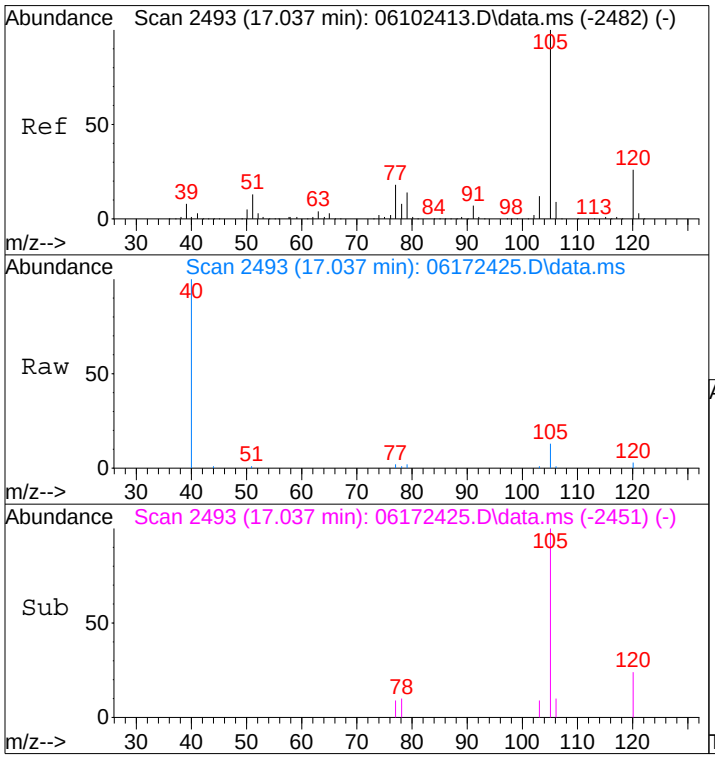


#71
n-Nonane
Concen: 0.22 ng
RT: 16.62 min Scan# 2419
Delta R.T. -0.011 min
Lab File: 06172425.D
Acq: 17 Jun 2024 22:13

Tgt Ion: 43 Resp: 7246

Ion	Ratio	Lower	Upper
43	100		
57	77.2	58.2	98.2
85	25.4	5.9	45.9

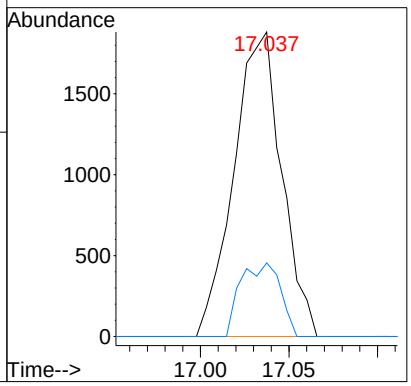


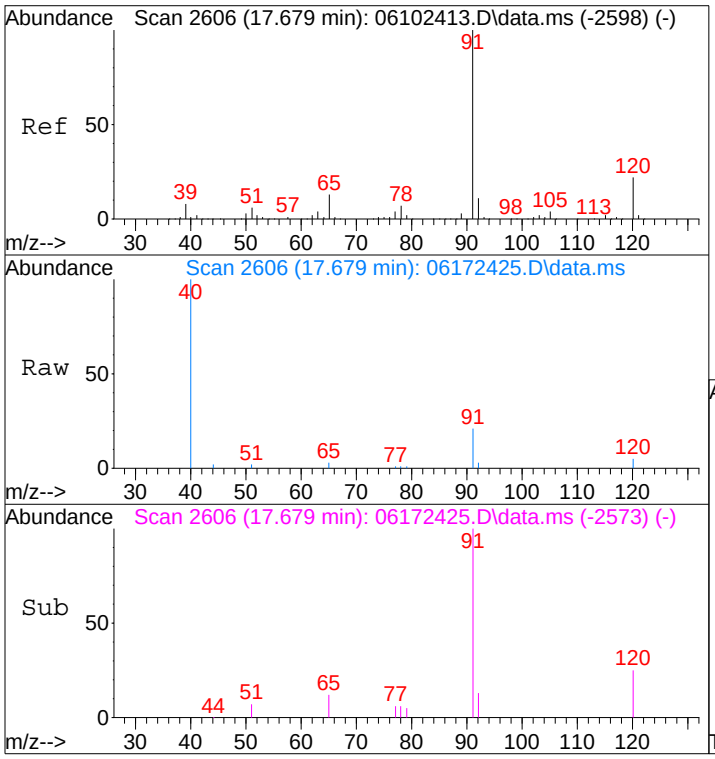


#74
Cumene
Concen: 0.05 ng
RT: 17.04 min Scan# 2493
Delta R.T. -0.011 min
Lab File: 06172425.D
Acq: 17 Jun 2024 22:13

Tgt Ion:105 Resp: 3532

Ion	Ratio	Lower	Upper
105	100		
120	20.2	6.0	46.0

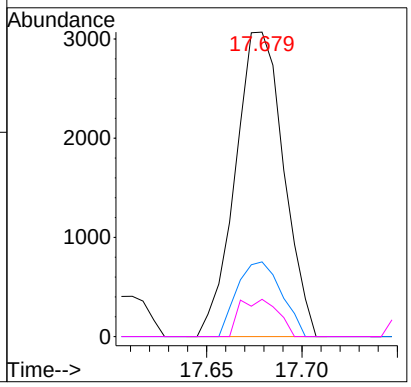


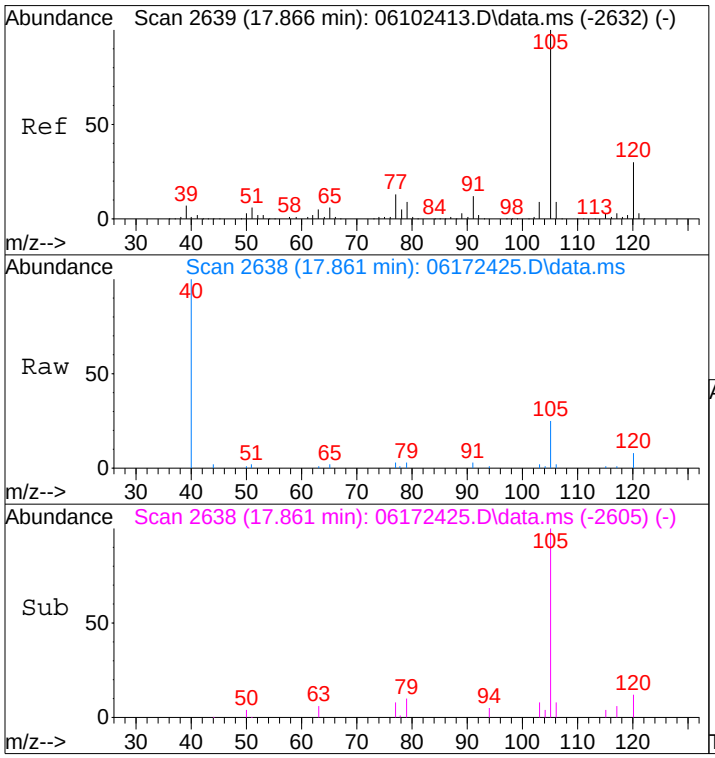


#76
n-Propylbenzene
Concen: 0.06 ng
RT: 17.68 min Scan# 2606
Delta R.T. -0.011 min
Lab File: 06172425.D
Acq: 17 Jun 2024 22:13

Tgt Ion: 91 Resp: 5418

Ion	Ratio	Lower	Upper
91	100		
120	22.5	2.7	42.7
65	9.7	0.0	32.7

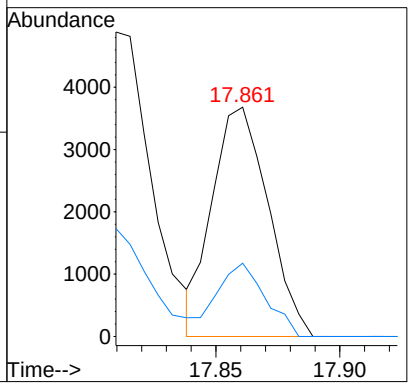


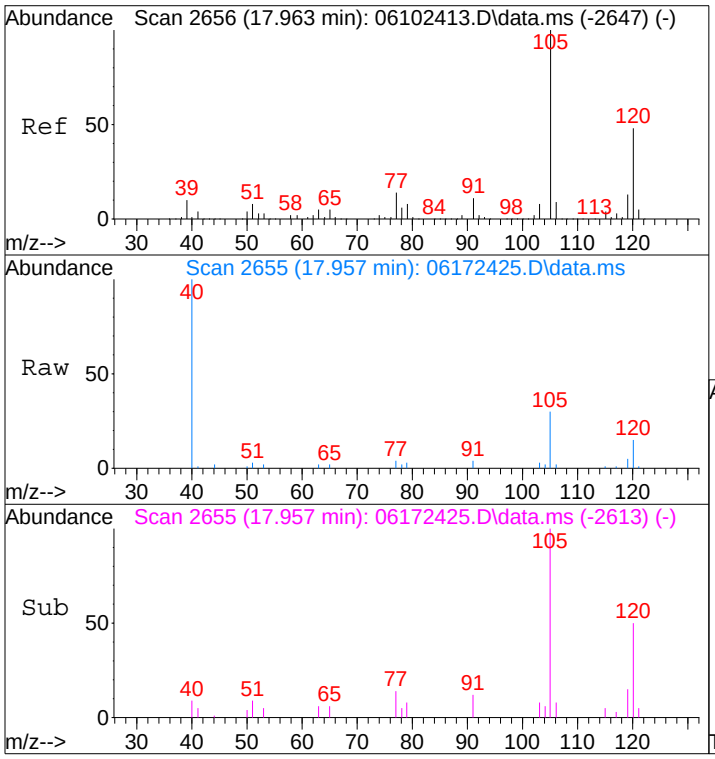


#78
4-Ethyltoluene
Concen: 0.09 ng
RT: 17.86 min Scan# 2638
Delta R.T. -0.011 min
Lab File: 06172425.D
Acq: 17 Jun 2024 22:13

Tgt Ion:105 Resp: 5768

Ion	Ratio	Lower	Upper
105	100		
120	28.3	9.9	49.9

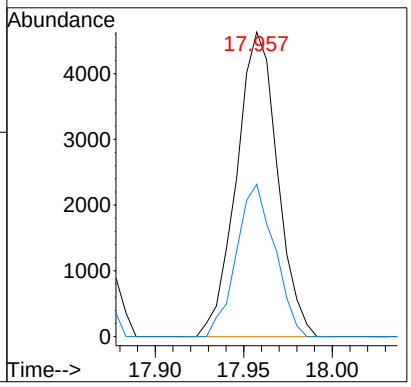


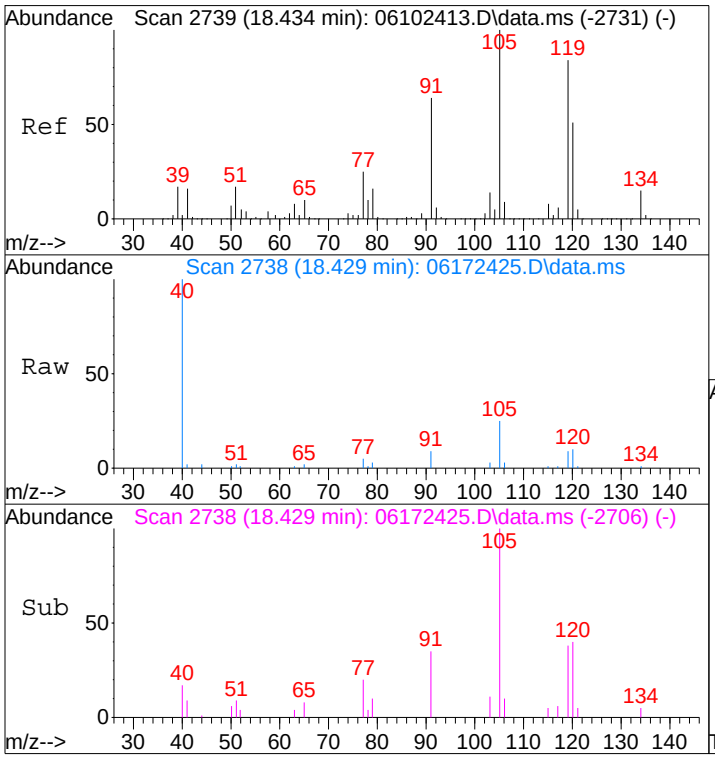


#79
1,3,5-Trimethylbenzene
Concen: 0.13 ng
RT: 17.96 min Scan# 2655
Delta R.T. -0.011 min
Lab File: 06172425.D
Acq: 17 Jun 2024 22:13

Tgt Ion:105 Resp: 7459

Ion	Ratio	Lower	Upper
105	100		
120	46.8	28.0	68.0

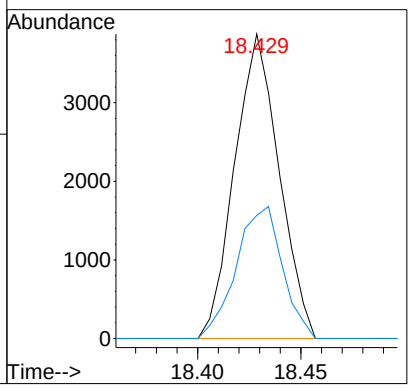


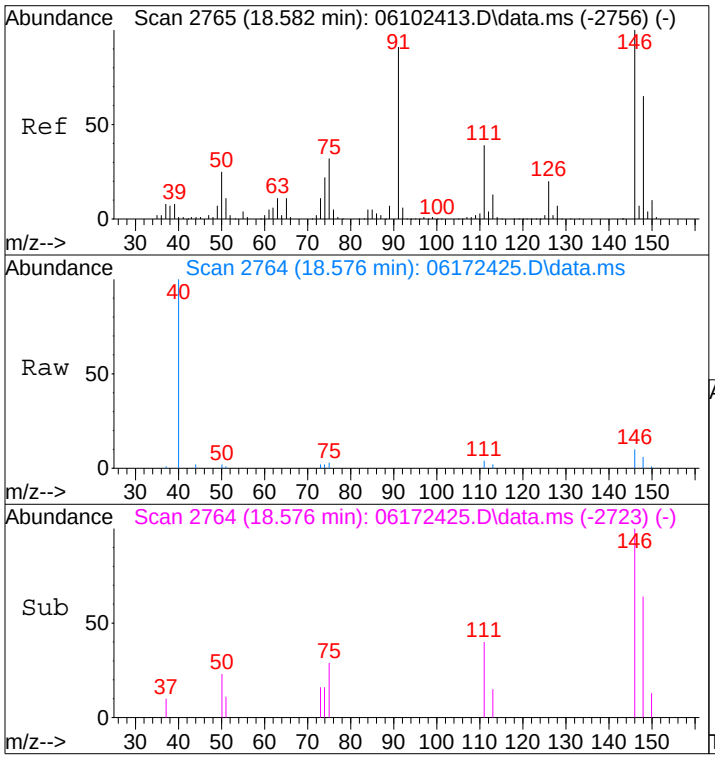


#82
1,2,4-Trimethylbenzene
Concen: 0.09 ng
RT: 18.43 min Scan# 2738
Delta R.T. -0.017 min
Lab File: 06172425.D
Acq: 17 Jun 2024 22:13

Tgt Ion:105 Resp: 5802

Ion	Ratio	Lower	Upper
105	100		
120	44.9	31.9	71.9

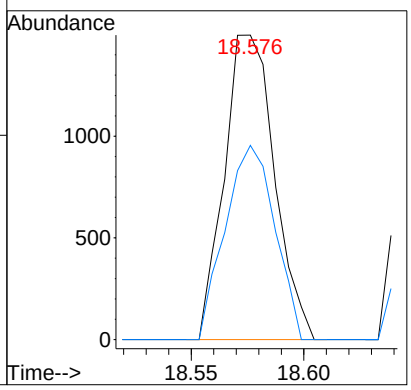


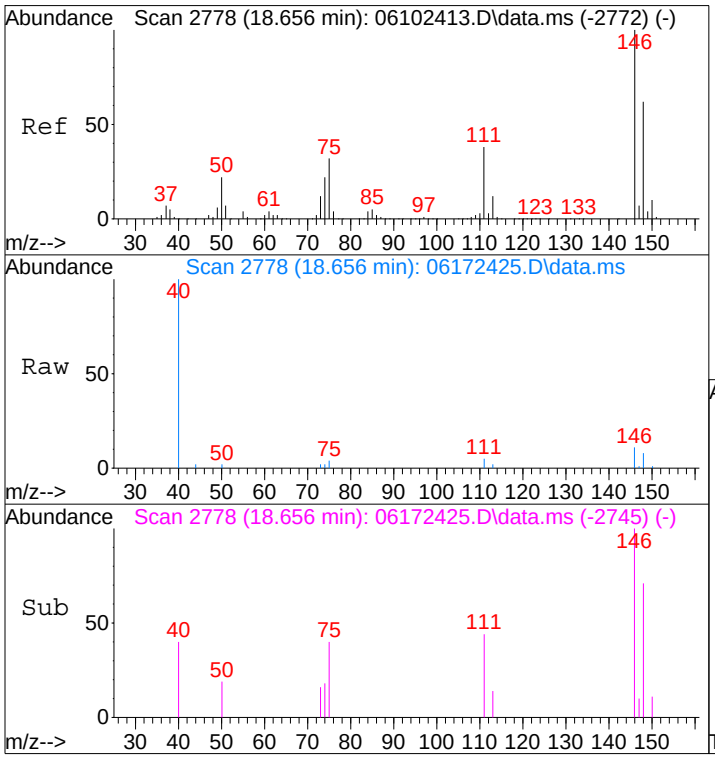


#85
1,3-Dichlorobenzene
Concen: 0.06 ng
RT: 18.58 min Scan# 2764
Delta R.T. -0.017 min
Lab File: 06172425.D
Acq: 17 Jun 2024 22:13

Tgt Ion:146 Resp: 2324

Ion	Ratio	Lower	Upper
146	100		
148	63.0	44.2	84.2

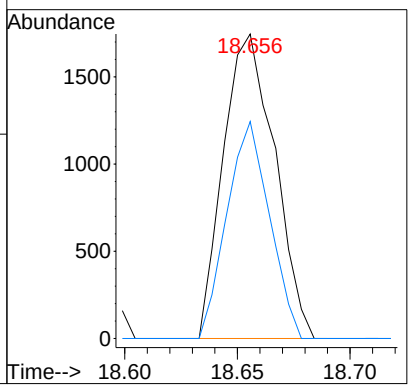


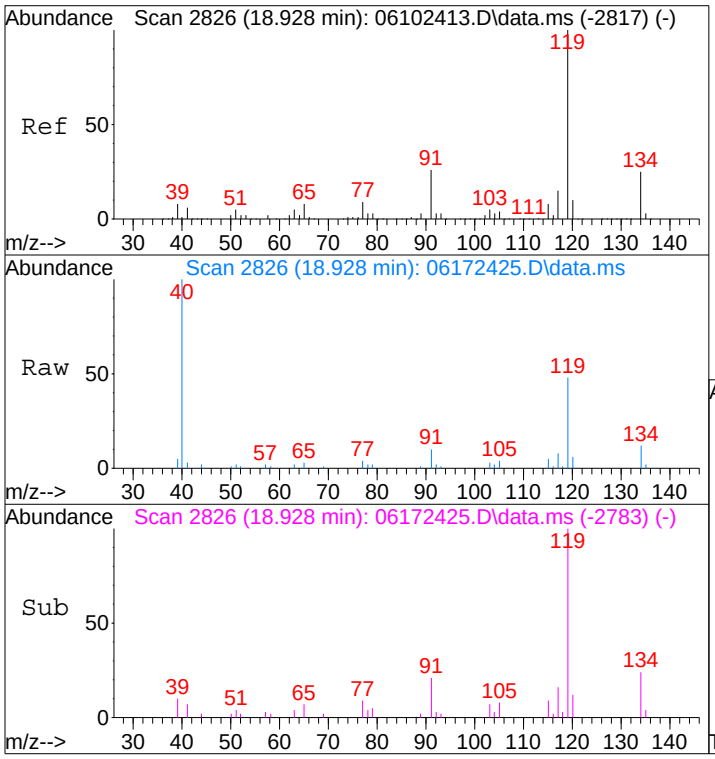


#86
1,4-Dichlorobenzene
Concen: 0.07 ng
RT: 18.66 min Scan# 2778
Delta R.T. -0.011 min
Lab File: 06172425.D
Acq: 17 Jun 2024 22:13

Tgt Ion:146 Resp: 2768

Ion	Ratio	Lower	Upper
146	100		
148	59.2	43.3	83.3

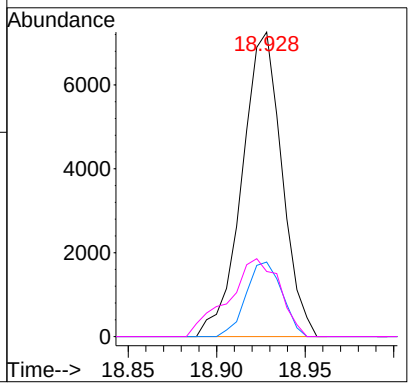


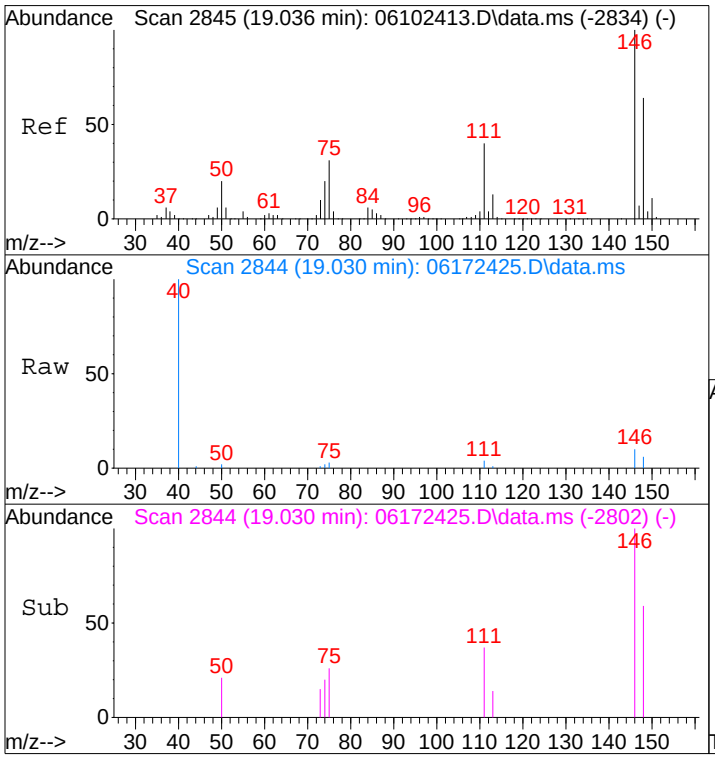


#88
4-Isopropyltoluene (p-Cymene)
Concen: 0.16 ng
RT: 18.93 min Scan# 2826
Delta R.T. -0.006 min
Lab File: 06172425.D
Acq: 17 Jun 2024 22:13

Tgt Ion:119 Resp: 11394

Ion	Ratio	Lower	Upper
119	100		
134	22.1	4.9	44.9
91	32.9	5.8	45.8

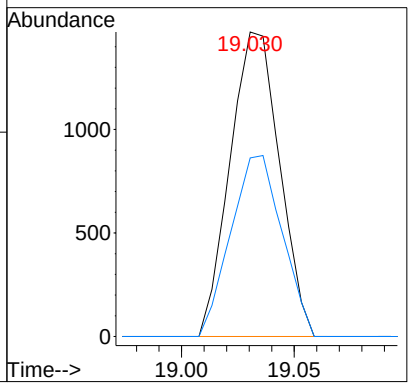


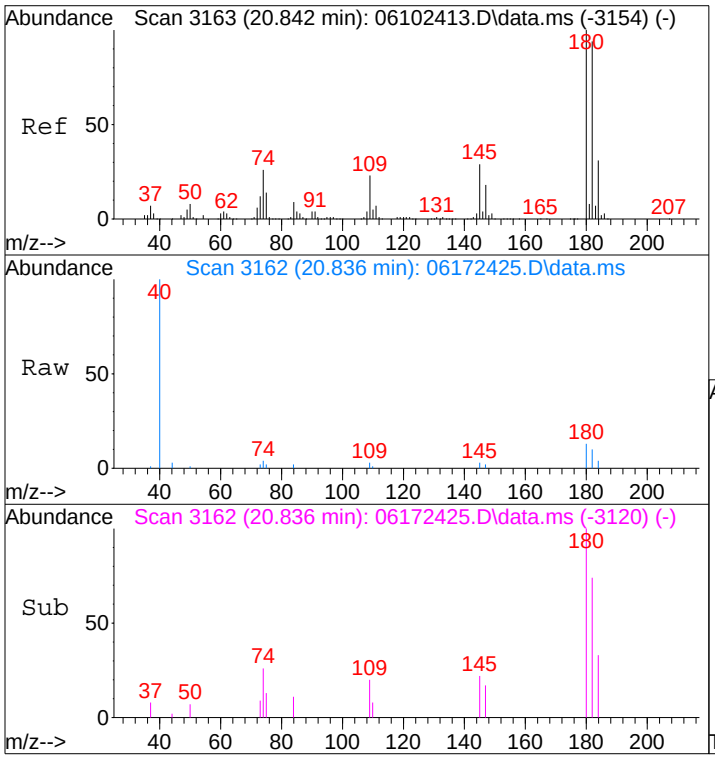


#90
1,2-Dichlorobenzene
Concen: 0.06 ng
RT: 19.03 min Scan# 2844
Delta R.T. -0.011 min
Lab File: 06172425.D
Acq: 17 Jun 2024 22:13

Tgt Ion:146 Resp: 2252

Ion	Ratio	Lower	Upper
146	100		
148	61.8	43.5	83.5

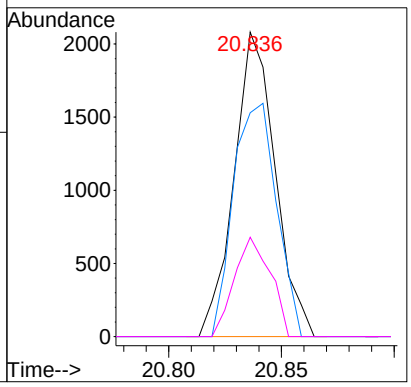


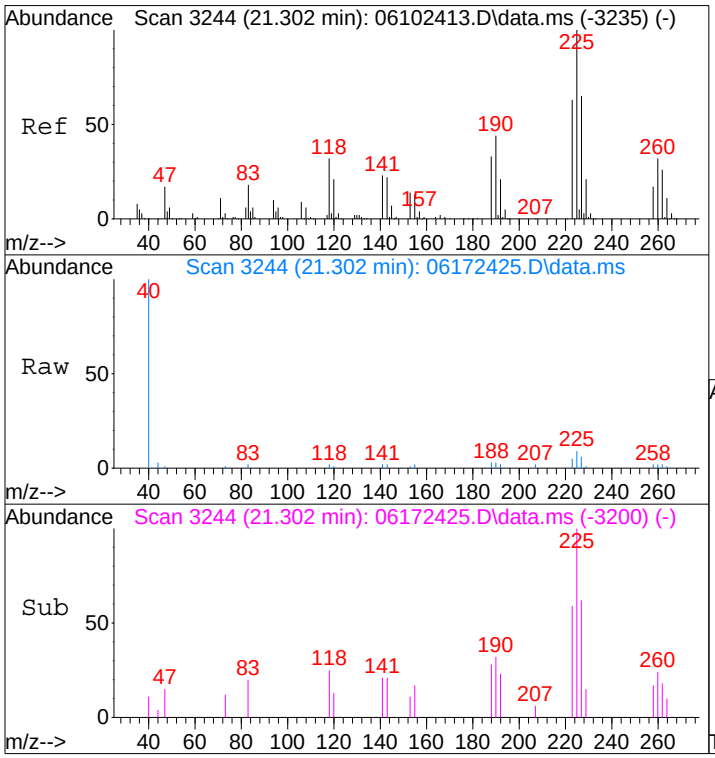


#94
1,2,4-Trichlorobenzene
Concen: 0.09 ng
RT: 20.84 min Scan# 3162
Delta R.T. -0.011 min
Lab File: 06172425.D
Acq: 17 Jun 2024 22:13

Tgt Ion:180 Resp: 2642

Ion	Ratio	Lower	Upper
180	100		
182	80.5	75.9	113.9
184	28.7	24.6	37.0

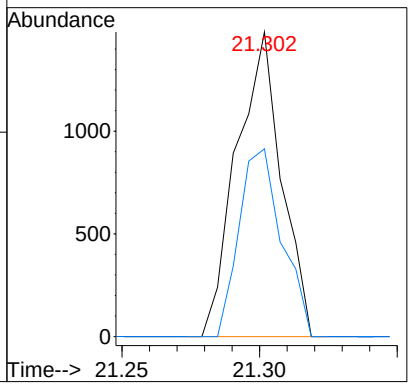


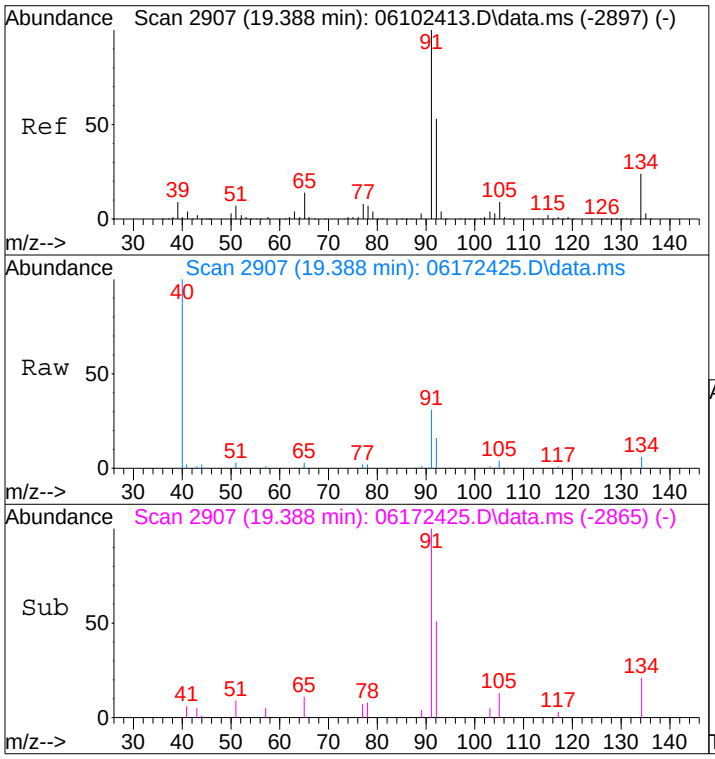


#97
Hexachlorobutadiene
Concen: 0.07 ng
RT: 21.30 min Scan# 3244
Delta R.T. -0.000 min
Lab File: 06172425.D
Acq: 17 Jun 2024 22:13

Tgt Ion:225 Resp: 1678

Ion	Ratio	Lower	Upper
225	100		
227	58.9	44.1	84.1

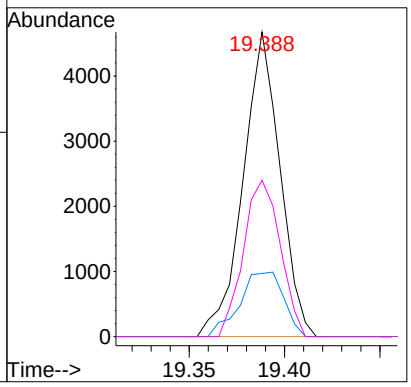




#100
n-Butylbenzene
Concen: 0.10 ng
RT: 19.39 min Scan# 2907
Delta R.T. -0.011 min
Lab File: 06172425.D
Acq: 17 Jun 2024 22:13

Tgt Ion: 91 Resp: 6279

Ion	Ratio	Lower	Upper
91	100		
134	25.4	19.8	29.6
92	51.4	42.6	64.0



Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\17\06172425.D Vial: 14
Acq On : 17 Jun 2024 22:13 Operator: SC
Sample : P2402249-009 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:49:19 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

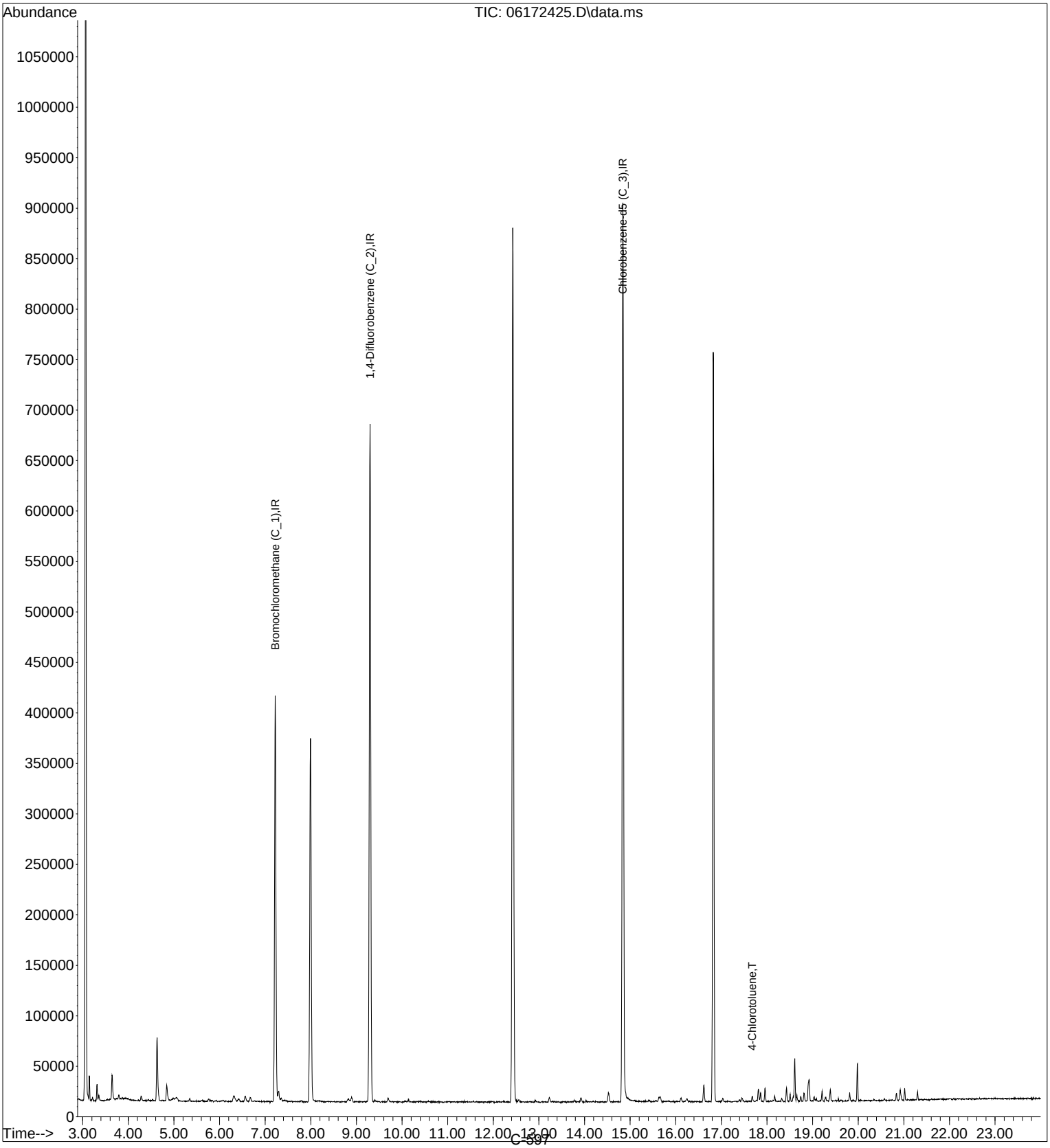
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.22	130	143310	12.500	ng		-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	631975	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	147958	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	0.00	85	0	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	0.00	83	0	N.D.			
4) 1,1-Difluoroethane	0.00	65	0	N.D.			
5) Chlorodifluoromethane ...	0.00	67	0	N.D.			
6) 1-Chloro-1,1-Difluoroe...	0.00	65	0	N.D.			
7) Dichlorofluoromethane ...	0.00	67	0	N.D.			
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	0.00	83	0	N.D.			
10) 2-Methylbutane	4.63	57	215	N.D.			
11) Methyl Acetate	5.33	43	1229	N.D.			
12) 2-Methylpentane	0.00	71	0	N.D.			
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	0.00	84	0	N.D.			
17) 2,3-Dimethylpentane	0.00	56	0	N.D.			
18) Dibromomethane	0.00	174	0	N.D.			
20) Methyl Cyclohexane	0.00	55	0	N.D.			
21) 1,3-Dichloropropane	0.00	76	0	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	0.00	75	0	N.D.			
25) Bromobenzene	17.03	77	546	N.D.			
26) 2-Chlorotoluene	17.61	91	665	N.D.			
27) 4-Chlorotoluene	17.68	91	5418	0.125	ng	#	41
28) Indane	19.11	117	59	N.D.			
29) Indene	0.00	115	0	N.D.			
30) 1,2,4,5-Tetramethylben...	0.00	119	0	N.D.			
31) 1,2,3,4-Tetramethylben...	0.00	119	0	N.D.			
32) 1,2,3,5-Tetramethylben...	0.00	119	0	N.D.			
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172425.D Vial: 14
Acq On : 17 Jun 2024 22:13 Operator: SC
Sample : P2402249-009 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:49:19 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



LSC Area Percent Report

MJ 6/28/24

Data Path : I:\MS09\DATA\2024 06\17\
Data File : 06172425.D
Acq On : 17 Jun 2024 22:13
Operator : SC
Sample : P2402249-009 (400mL)
Misc : S37-06062402
ALS Vial : 14 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06172425.D\data.ms

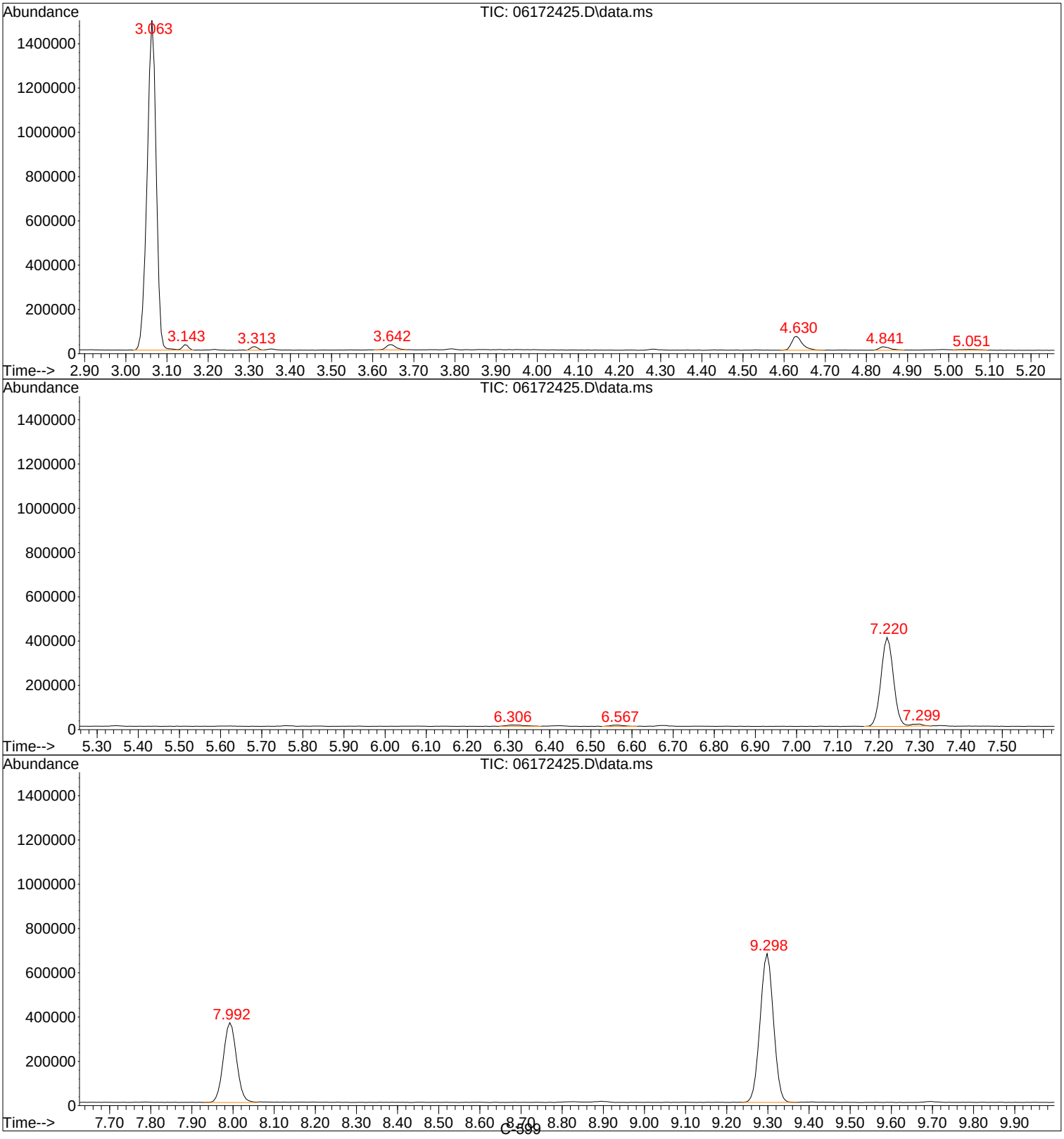
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.063	24	32	43	rBV	1489906	2279962	100.00%	39.732%
2	3.143	43	46	50	rVB	24602	25495	1.12%	0.444%
3	3.313	72	76	80	rBV2	16550	20494	0.90%	0.357%
4	3.642	127	134	141	rBV	24064	40141	1.76%	0.700%
5	4.630	301	308	320	rBV	62652	114513	5.02%	1.996%
6	4.841	341	345	354	rBV2	15392	28667	1.26%	0.500%
7	5.051	375	382	390	rVB3	3617	13013	0.57%	0.227%
8	6.306	598	603	616	rVB3	5788	18542	0.81%	0.323%
9	6.567	642	649	657	rBV3	5619	13017	0.57%	0.227%
10	7.220	754	764	773	rBV	402251	844402	37.04%	14.715%
11	7.299	773	778	783	rVB3	8383	16618	0.73%	0.290%
12	7.992	889	900	912	rBV	360508	805467	35.33%	14.037%
13	9.298	1119	1130	1143	rVB	671623	1518019	66.58%	26.454%

Sum of corrected areas: 5738350

Data Path : I:\MS09\DATA\2024 06\17\
Data File : 06172425.D
Acq On : 17 Jun 2024 22:13
Operator : SC
Sample : P2402249-009 (400mL)
Misc : S37-06062402
ALS Vial : 14 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\17\\
Data File : 06172425.D
Acq On : 17 Jun 2024 22:133
Operator : SCC
Sample : P2402249-009 (400mL))
Misc : S37-060624022
ALS Vial : 14 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

						--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172426.D Vial: 15
Acq On : 17 Jun 2024 22:46 Operator: SC
Sample : P2402249-010 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 14:23:57 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.22	130	140334	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	615996	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	143215	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	308612	12.373	ng		0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.96%				
57) Toluene-d8 (SS2)	12.43	98	687571	12.546	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.40%				
73) Bromofluorobenzene (SS3)	16.83	174	250334	12.649	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.20%				
Target Compounds							Qvalue
2) Propene	3.29	42	3060	0.170	ng	#	82
3) Dichlorodifluoromethan...	3.36	85	17553m	0.531	ng		
4) Chloromethane	3.48	50	3175	0.141	ng		95
5) 1,2-Dichloro-1,1,2,2-t...	3.60	135	274	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	4.01	94	129	N.D.			
9) Chloroethane	4.14	64	250	N.D.			
10) Ethanol	0.00	45	0	N.D. d			
11) Acetonitrile	0.00	41	0	N.D. d			
12) Acrolein	4.52	56	5448	0.539	ng		94
13) Acetone	4.62	58	35727	3.277	ng	#	77
14) Trichlorofluoromethane	4.74	101	388751	11.636	ng		99
15) 2-Propanol (Isopropanol)	0.00	45	0	N.D. d			
16) Acrylonitrile	4.98	53	708	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.33	59	689	N.D.			
19) Methylene Chloride	5.34	84	1064	0.069	ng		93
20) 3-Chloro-1-propene (Al...	5.44	41	256	N.D.			
21) Trichlorotrifluoroethane	5.57	151	247500	17.512	ng		97
22) Carbon Disulfide	5.59	76	91245	1.835	ng		75
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	6.42	86	3318	1.319	ng	#	17
27) 2-Butanone (MEK)	6.67	72	5850	0.678	ng	#	85
28) cis-1,2-Dichloroethene	7.07	61	335	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.			
30) Ethyl Acetate	7.29	61	617	0.117	ng		80
31) n-Hexane	7.30	57	1033	N.D.			
32) Chloroform	7.34	83	6785	0.247	ng		99
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	169	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	9.62	61	27918	No Calib		#	
40) 1-Butanol	8.80	56	3811	No Calib		#	
41) Benzene	8.89	78	3409	0.060	ng		95
42) Carbon Tetrachloride	9.07	117	388	N.D.			
43) Cyclohexane	9.16	84	656	N.D.			
44) tert-Amyl Methyl Ether	9.62	73	766	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.07	83	458	N.D.			
47) Trichloroethene	10.14	130	1592	0.096	ng		98
48) 1,4-Dioxane	0.00	88	0	N.D. d			
49) 2,2,4-Trimethylpentane...	0.00	57	0	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172426.D Vial: 15
Acq On : 17 Jun 2024 22:46 Operator: SC
Sample : P2402249-010 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:23:57 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

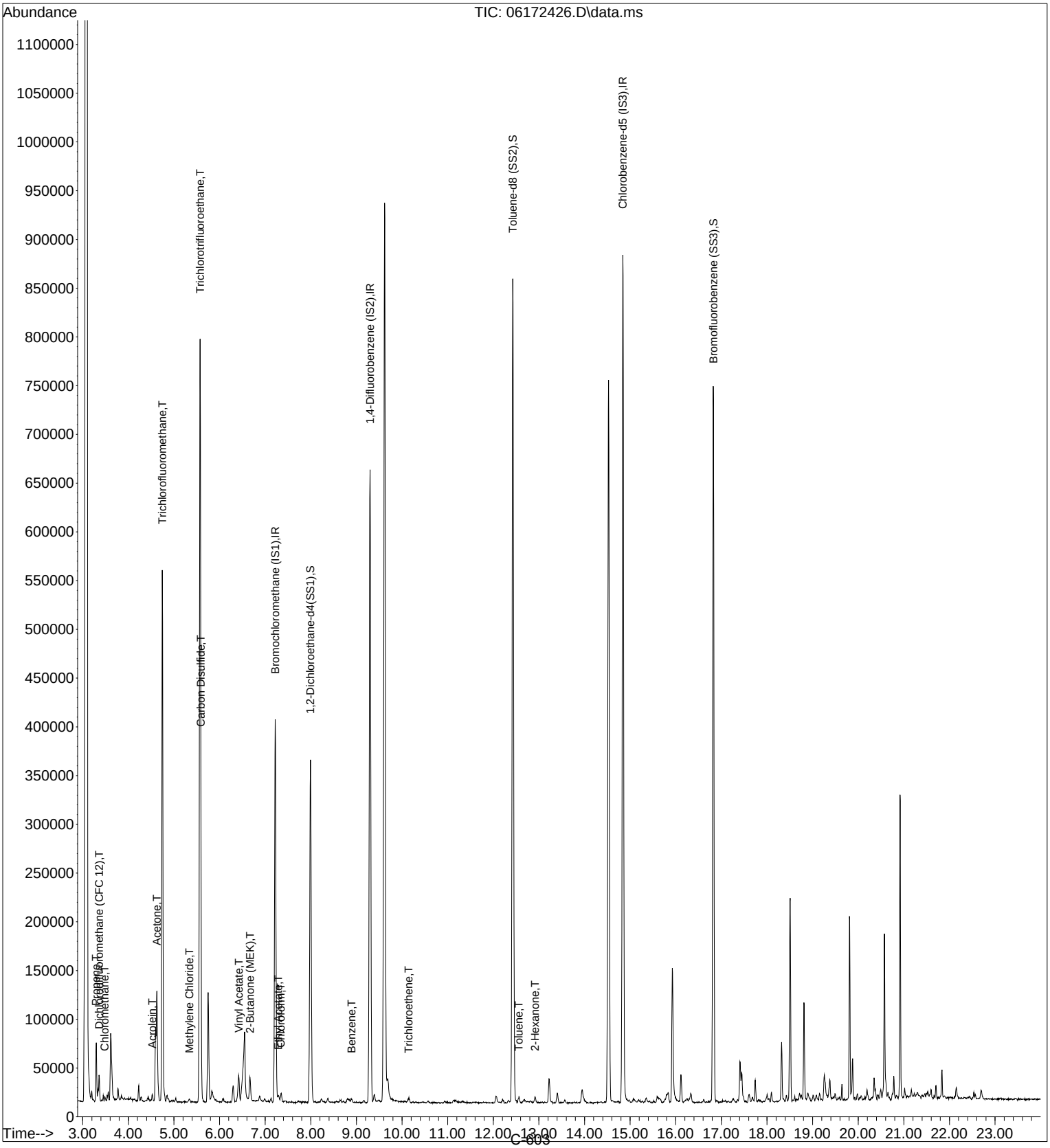
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	10.58	71	330	N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	11.33	58	534	N.D.	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
58) Toluene	12.56	91	5784	0.101 ng	94
59) 2-Hexanone	12.91	43	6476	0.180 ng	92
60) Dibromochloromethane	13.07	129	450	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	13.82	43	126	N.D.	
63) n-Octane	13.93	57	394	N.D.	
64) Tetrachloroethene	14.02	166	537	N.D.	
65) Chlorobenzene	14.90	112	609	N.D.	
66) Ethylbenzene	15.41	91	1459	N.D.	
67) m- & p-Xylenes	15.62	91	2737	N.D.	
68) Bromoform	15.67	173	642	N.D.	
69) Styrene	16.11	104	699	N.D.	
70) o-Xylene	16.24	91	1200	N.D.	
71) n-Nonane	0.00	43	0	N.D. d	
72) 1,1,2,2-Tetrachloroethane	16.21	83	556	N.D.	
74) Cumene	17.03	105	902	N.D.	
75) alpha-Pinene	17.53	93	547	N.D.	
76) n-Propylbenzene	17.67	91	1618	N.D.	
77) 3-Ethyltoluene	17.03	105	902	No Calib	#
78) 4-Ethyltoluene	17.86	105	916	N.D.	
79) 1,3,5-Trimethylbenzene	17.96	105	703	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.03	105	902	No Calib	#
82) 1,2,4-Trimethylbenzene	18.43	105	998	N.D.	
83) n-Decane	0.00	58	0	N.D.	
84) Benzyl Chloride	18.56	91	442	N.D.	
85) 1,3-Dichlorobenzene	18.58	146	587	N.D.	
86) 1,4-Dichlorobenzene	18.66	146	575	N.D.	
87) sec-Butylbenzene	18.74	105	1077	N.D.	
88) 4-Isopropyltoluene (p-...	18.92	119	1513	N.D.	
89) 1,2,3-Trimethylbenzene	17.03	105	902	No Calib	#
90) 1,2-Dichlorobenzene	19.04	146	608	N.D.	
91) d-Limonene	19.09	68	932	N.D.	
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	770	N.D.	
95) Naphthalene	20.92	128	2172	N.D.	
96) n-Dodecane	18.89	58	245	No Calib	#
97) Hexachlorobutadiene	21.30	225	764	N.D.	
98) Cyclohexanone	15.35	55	1574	No Calib	#
99) tert-Butylbenzene	18.43	119	922	N.D.	
100) n-Butylbenzene	19.39	91	1568	N.D.	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172426.D Vial: 15
Acq On : 17 Jun 2024 22:46 Operator: SC
Sample : P2402249-010 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:23:57 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172426.D Vial: 15
Acq On : 17 Jun 2024 22:46 Operator: SC
Sample : P2402249-010 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 14:23:57 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

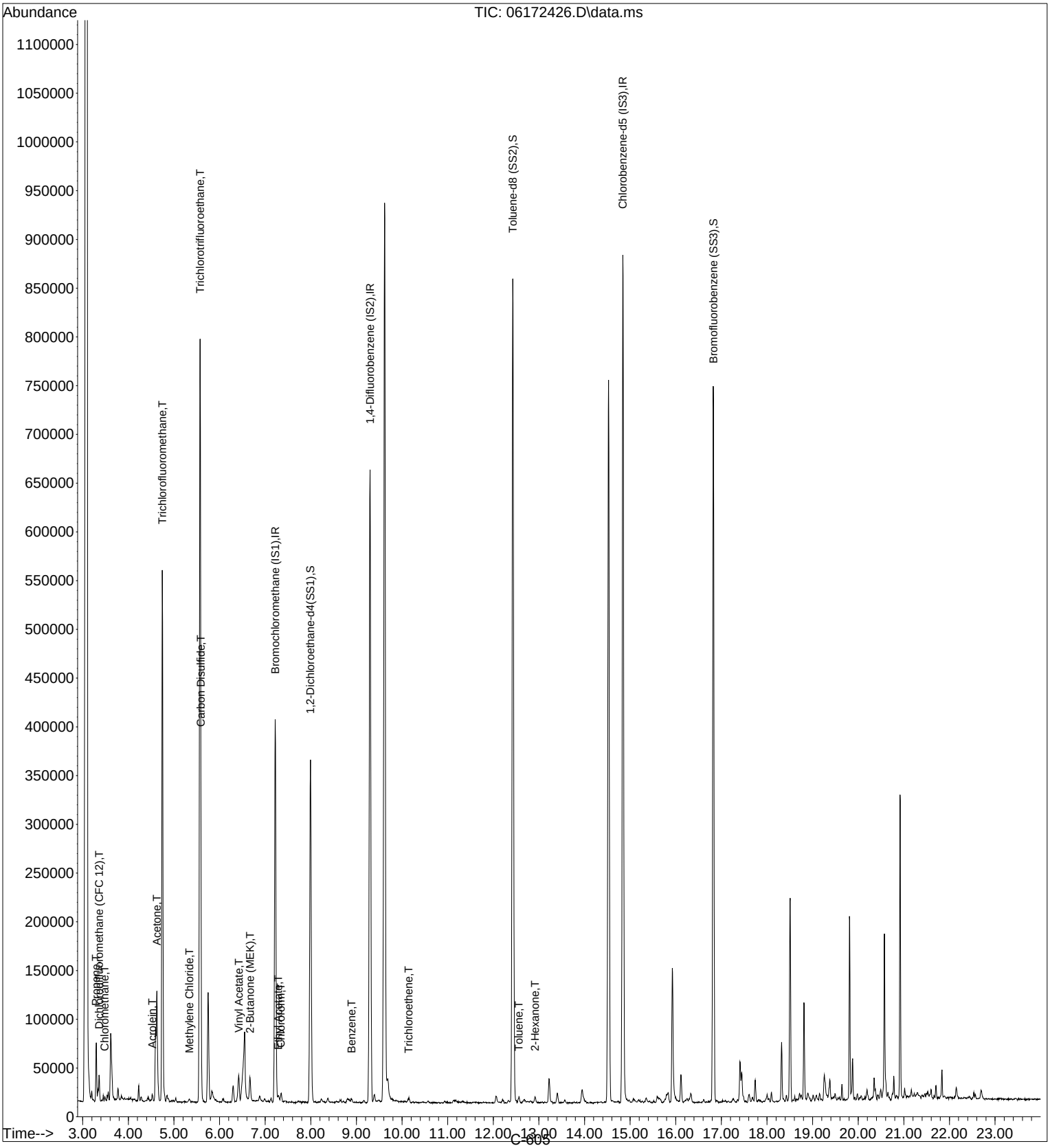
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.22	130	140334	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	615996	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	143215	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	308612	12.373	ng		0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.96%				
57) Toluene-d8 (SS2)	12.43	98	687571	12.546	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.40%				
73) Bromofluorobenzene (SS3)	16.83	174	250334	12.649	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.20%				
Target Compounds							Qvalue
2) Propene	3.29	42	3060	0.170	ng	#	82
3) Dichlorodifluoromethan...	3.36	85	17553m	0.531	ng		
4) Chloromethane	3.48	50	3175	0.141	ng		95
12) Acrolein	4.52	56	5448	0.539	ng		94
13) Acetone	4.62	58	35727	3.277	ng	#	77
14) Trichlorofluoromethane	4.74	101	388751	11.636	ng		99
19) Methylene Chloride	5.34	84	1064	0.069	ng		93
21) Trichlorotrifluoroethane	5.57	151	247500	17.512	ng		97
22) Carbon Disulfide	5.59	76	91245	1.835	ng		75
26) Vinyl Acetate	6.42	86	3318	1.319	ng	#	17
27) 2-Butanone (MEK)	6.67	72	5850	0.678	ng	#	85
30) Ethyl Acetate	7.29	61	617	0.117	ng		80
32) Chloroform	7.34	83	6785	0.247	ng		99
41) Benzene	8.89	78	3409	0.060	ng		95
47) Trichloroethene	10.14	130	1592	0.096	ng		98
58) Toluene	12.56	91	5784	0.101	ng		94
59) 2-Hexanone	12.91	43	6476	0.180	ng		92

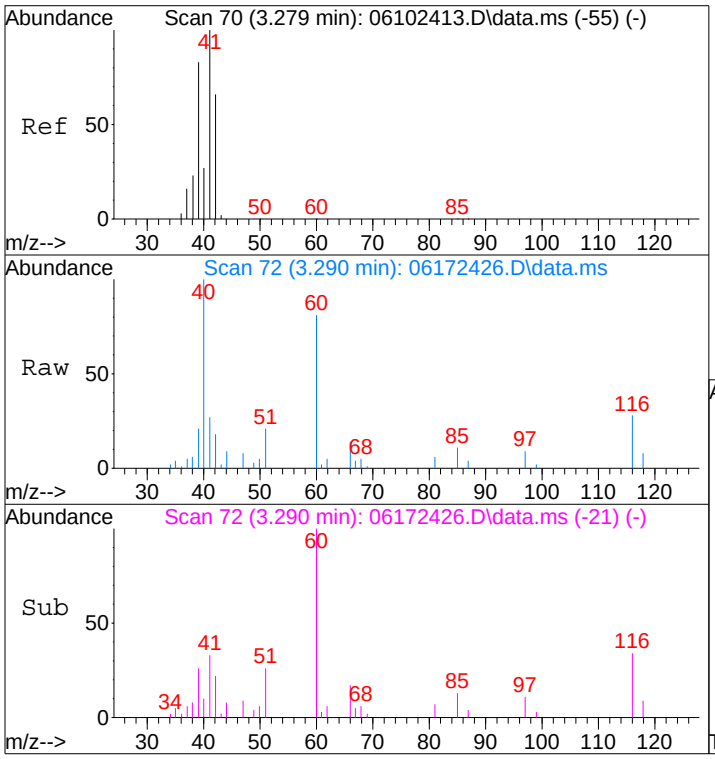
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172426.D Vial: 15
Acq On : 17 Jun 2024 22:46 Operator: SC
Sample : P2402249-010 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:23:57 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

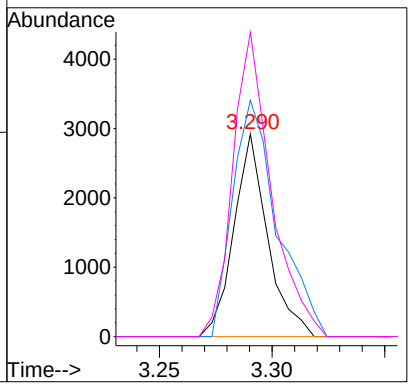


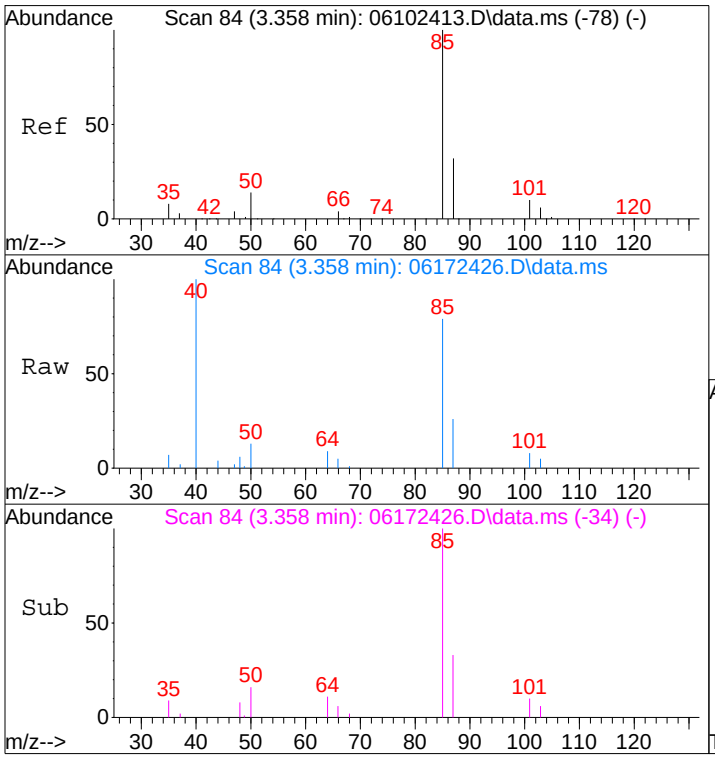


#2
Propene
Concen: 0.17 ng
RT: 3.29 min Scan# 72
Delta R.T. 0.041 min
Lab File: 06172426.D
Acq: 17 Jun 2024 22:46

Tgt Ion: 42 Resp: 3060

Ion	Ratio	Lower	Upper
42	100		
39	154.2	107.3	147.3#
41	171.4	134.3	174.3

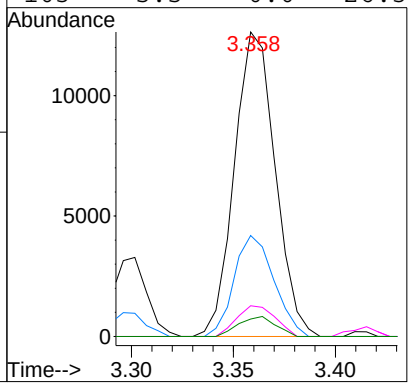


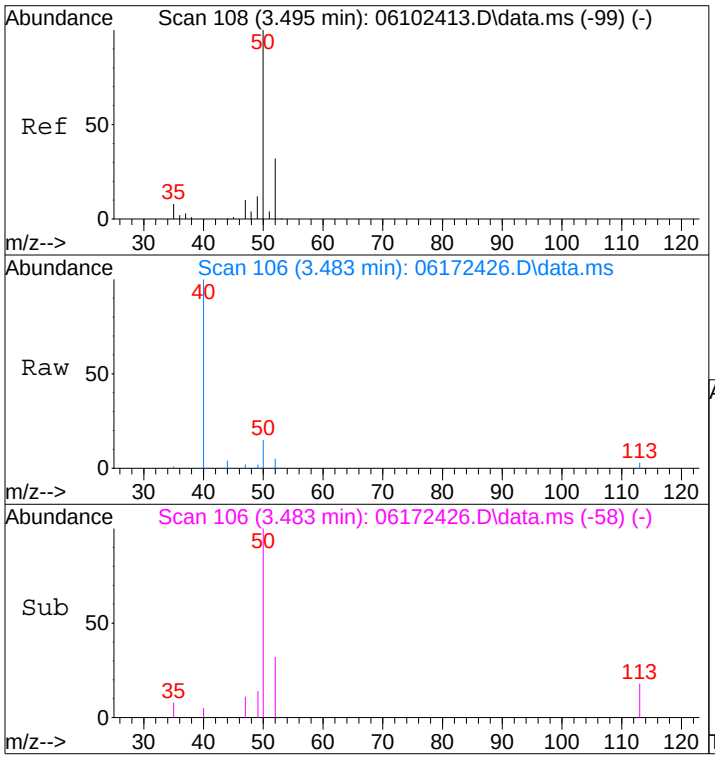


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.53 ng m
RT: 3.36 min Scan# 84
Delta R.T. 0.036 min
Lab File: 06172426.D
Acq: 17 Jun 2024 22:46

Tgt Ion: 85 Resp: 17553

Ion	Ratio	Lower	Upper
85	100		
87	32.4	12.2	52.2
101	9.6	0.0	29.8
103	5.5	0.0	26.3

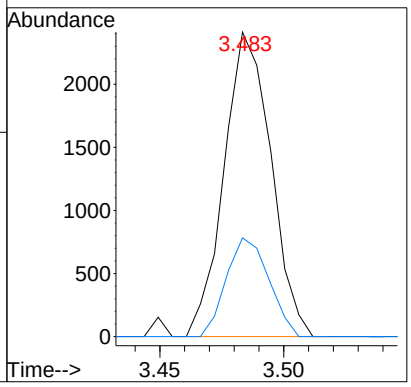


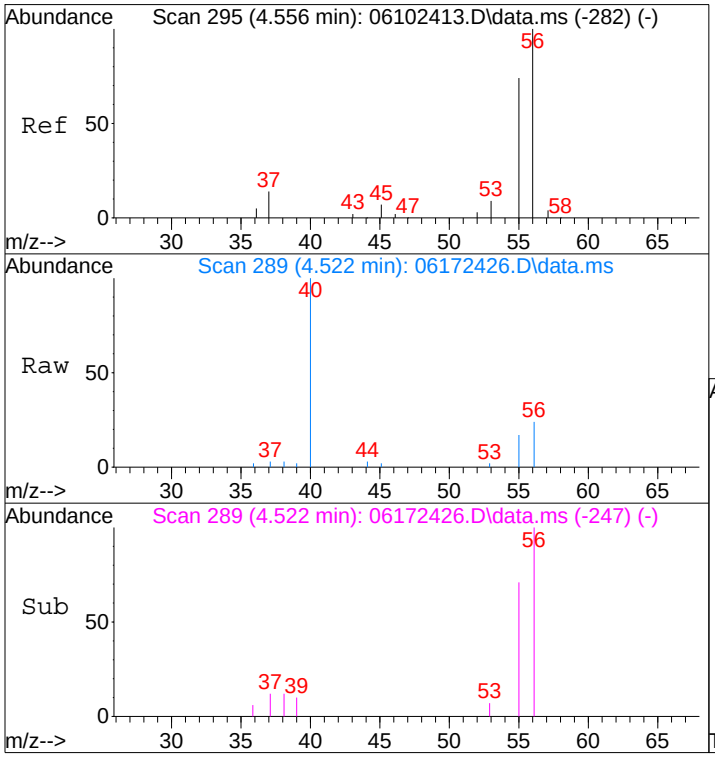


#4
Chloromethane
Concen: 0.14 ng
RT: 3.48 min Scan# 106
Delta R.T. 0.021 min
Lab File: 06172426.D
Acq: 17 Jun 2024 22:46

Tgt Ion: 50 Resp: 3175

Ion	Ratio	Lower	Upper
50	100		
52	29.4	12.4	52.4

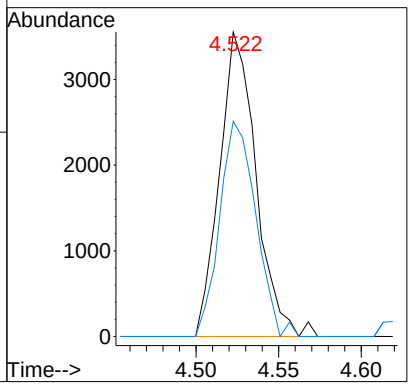


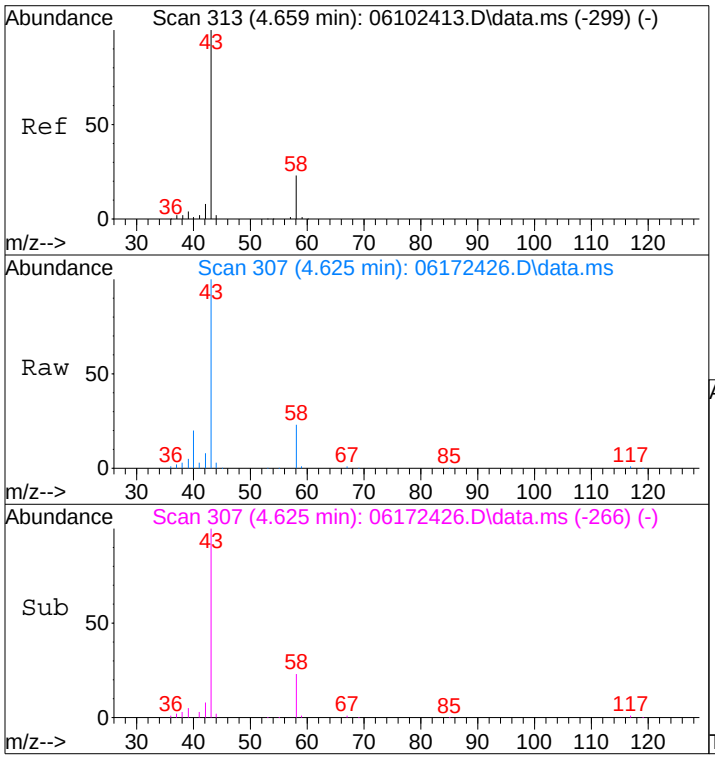


#12
Acrolein
Concen: 0.54 ng
RT: 4.52 min Scan# 289
Delta R.T. -0.013 min
Lab File: 06172426.D
Acq: 17 Jun 2024 22:46

Tgt Ion: 56 Resp: 5448

Ion	Ratio	Lower	Upper
56	100		
55	70.1	55.5	95.5

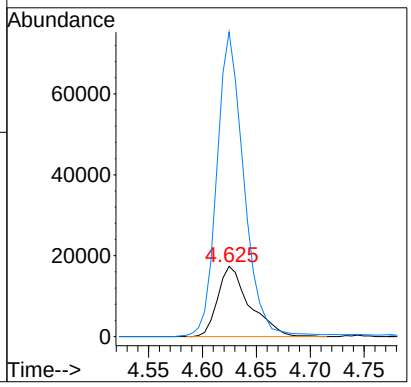


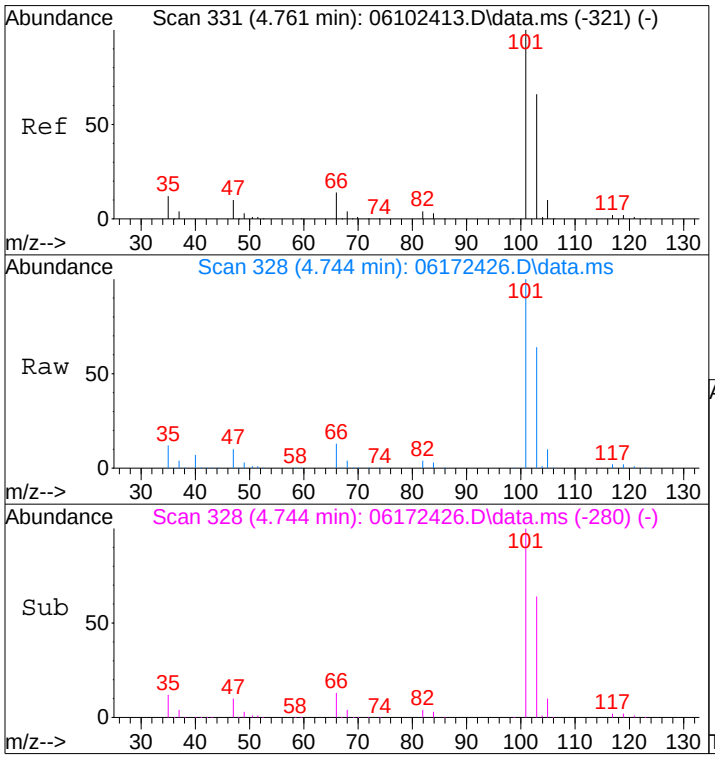


#13
Acetone
Concen: 3.28 ng
RT: 4.62 min Scan# 307
Delta R.T. -0.017 min
Lab File: 06172426.D
Acq: 17 Jun 2024 22:46

Tgt Ion: 58 Resp: 35727

Ion	Ratio	Lower	Upper
58	100		
43	374.3	400.7	460.7#

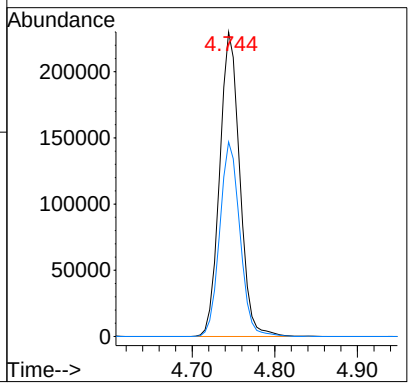


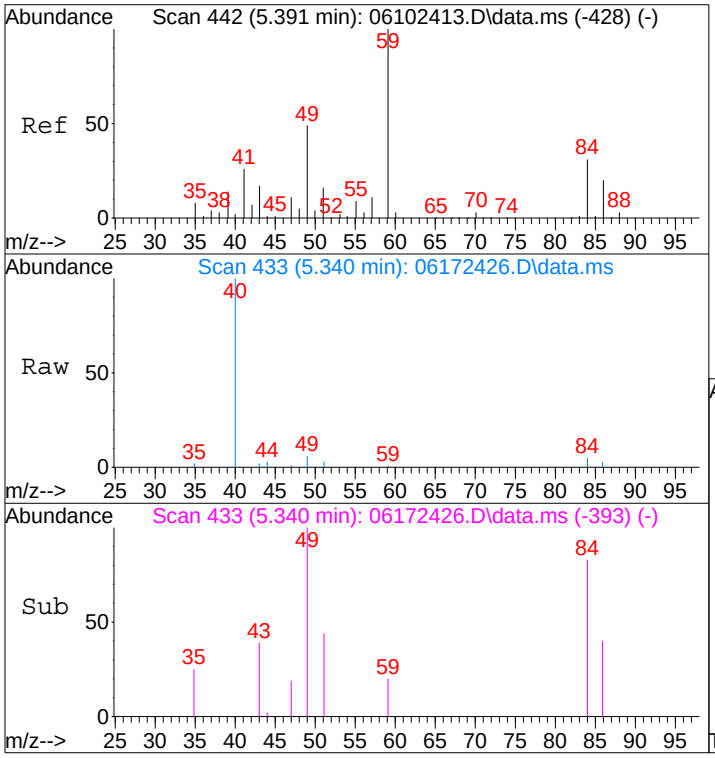


#14
Trichlorofluoromethane
Concen: 11.64 ng
RT: 4.74 min Scan# 328
Delta R.T. 0.023 min
Lab File: 06172426.D
Acq: 17 Jun 2024 22:46

Tgt Ion:101 Resp: 388751

Ion	Ratio	Lower	Upper
101	100		
103	64.1	44.9	84.9

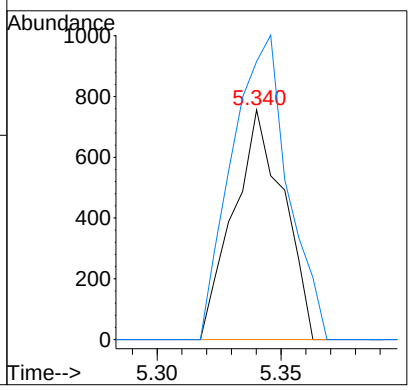


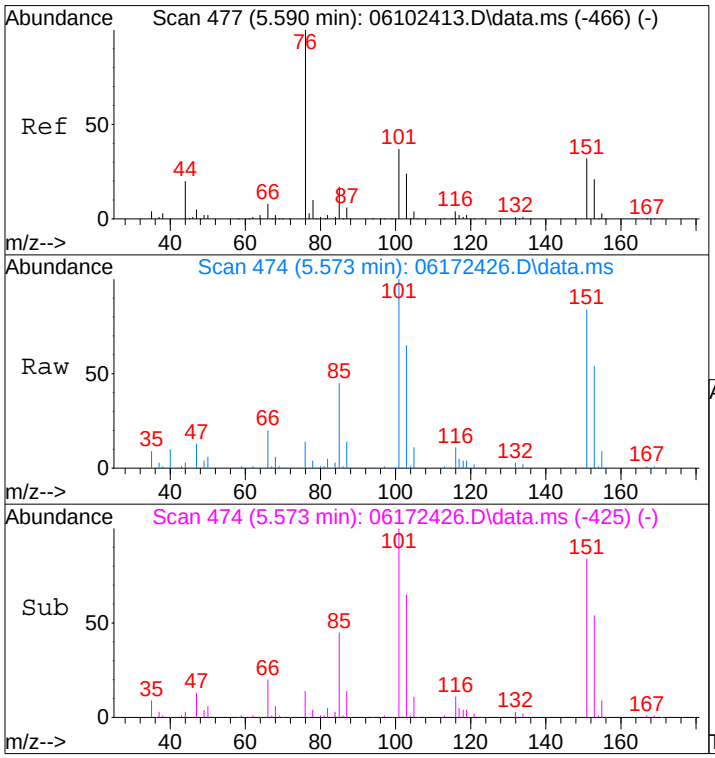


#19
Methylene Chloride
Concen: 0.07 ng
RT: 5.34 min Scan# 433
Delta R.T. -0.021 min
Lab File: 06172426.D
Acq: 17 Jun 2024 22:46

Tgt Ion: 84 Resp: 1064

Ion	Ratio	Lower	Upper
84	100		
49	148.1	132.9	182.9

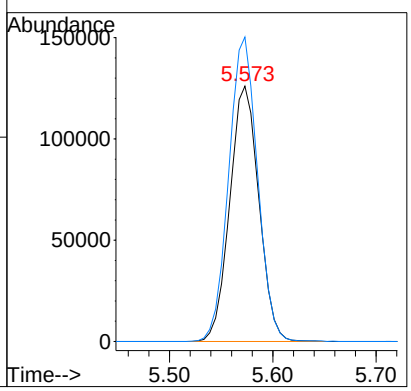


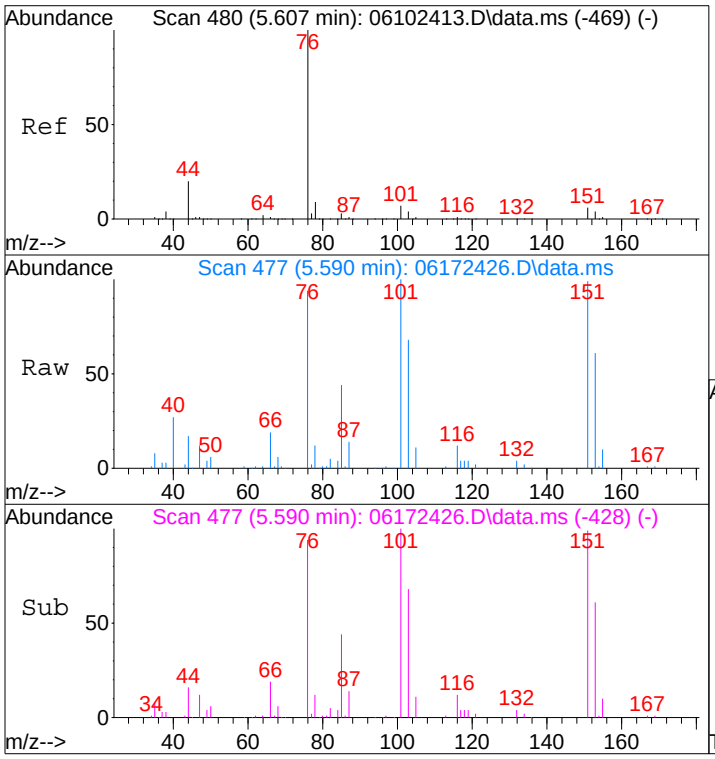


#21
Trichlorotrifluoroethane
Concen: 17.51 ng
RT: 5.57 min Scan# 474
Delta R.T. 0.027 min
Lab File: 06172426.D
Acq: 17 Jun 2024 22:46

Tgt Ion:151 Resp: 247500

Ion	Ratio	Lower	Upper
151	100		
101	117.9	95.0	135.0

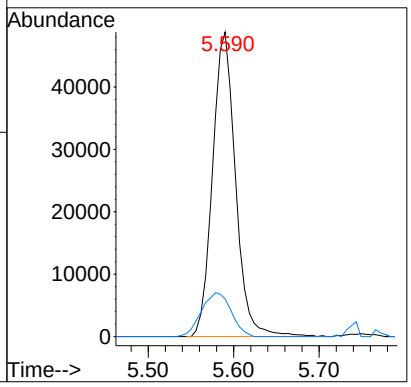


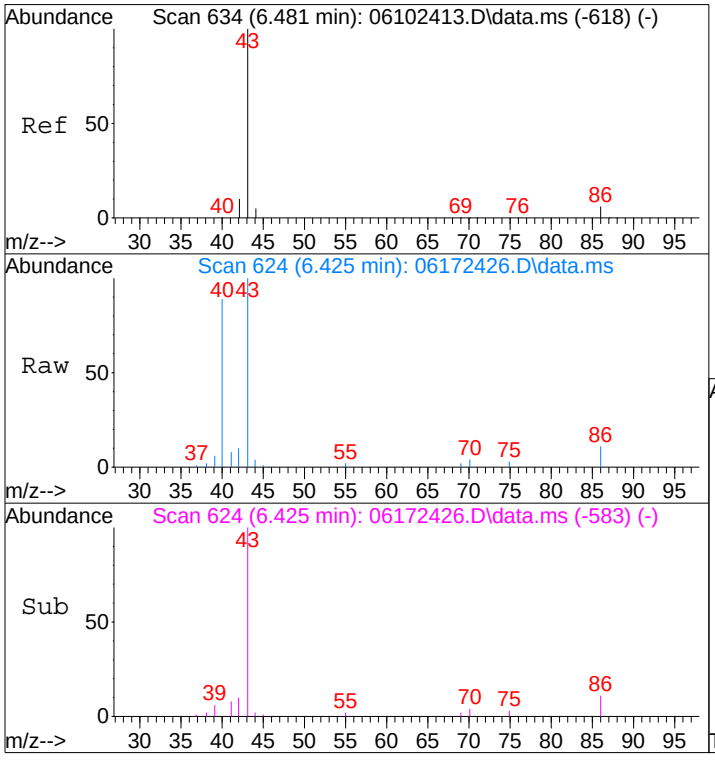


#22
Carbon Disulfide
Concen: 1.83 ng
RT: 5.59 min Scan# 477
Delta R.T. 0.027 min
Lab File: 06172426.D
Acq: 17 Jun 2024 22:46

Tgt Ion: 76 Resp: 91245

Ion	Ratio	Lower	Upper
76	100		
78	18.6	0.0	29.6

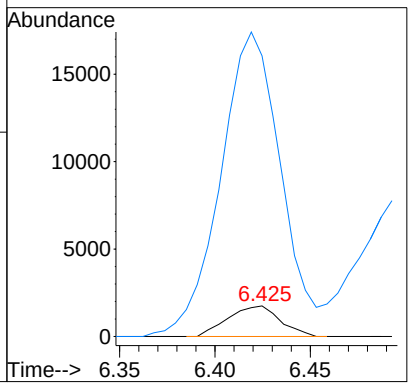


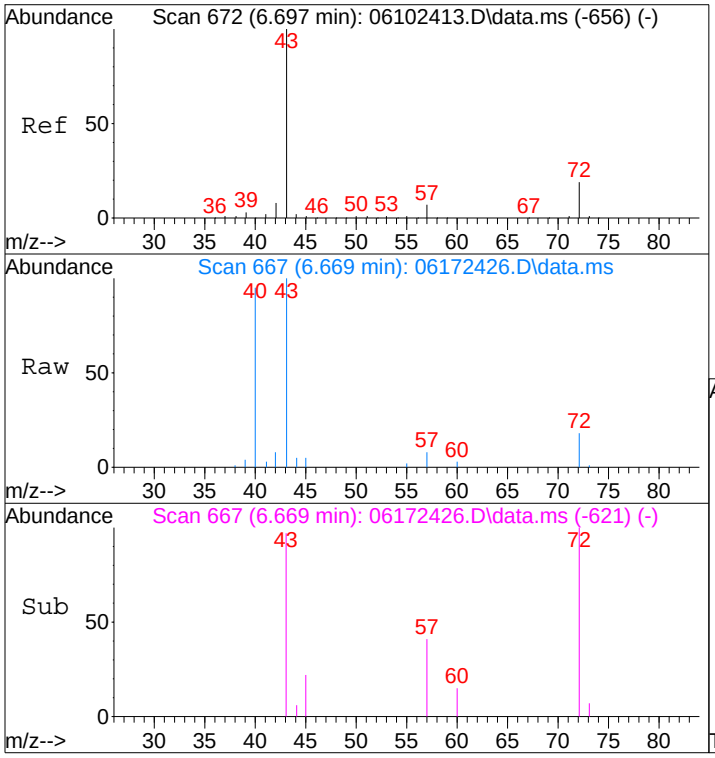


#26
Vinyl Acetate
Concen: 1.32 ng
RT: 6.42 min Scan# 624
Delta R.T. -0.015 min
Lab File: 06172426.D
Acq: 17 Jun 2024 22:46

Tgt Ion: 86 Resp: 3318

Ion	Ratio	Lower	Upper
86	100		
43	1147.3	1668.9	1708.9#

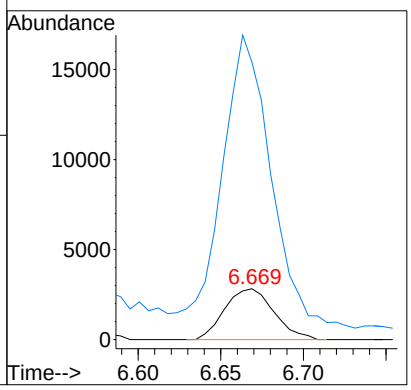


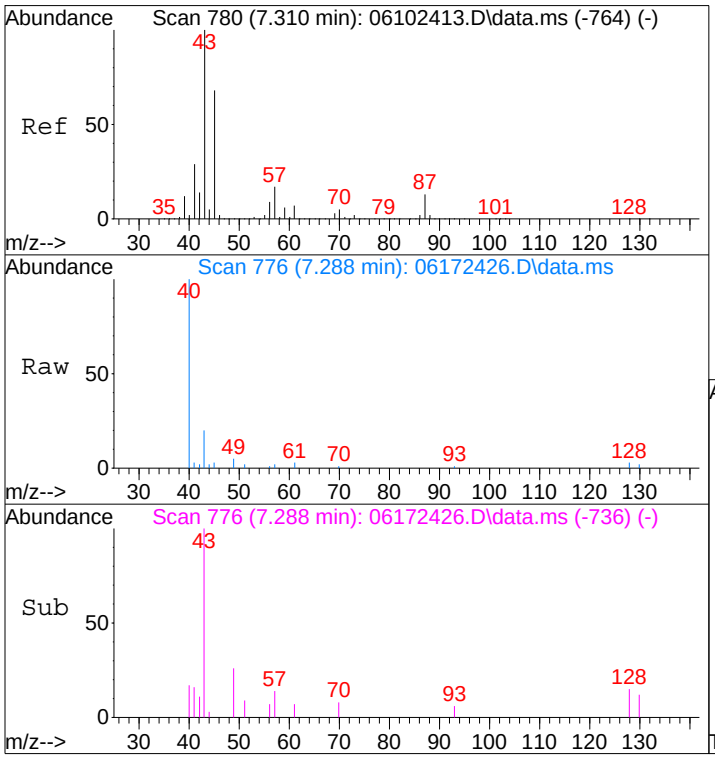


#27
2-Butanone (MEK)
Concen: 0.68 ng
RT: 6.67 min Scan# 667
Delta R.T. 0.011 min
Lab File: 06172426.D
Acq: 17 Jun 2024 22:46

Tgt Ion: 72 Resp: 5850

Ion	Ratio	Lower	Upper
72	100		
43	570.4	506.8	546.8#

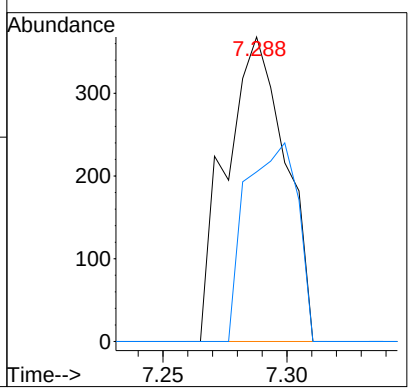


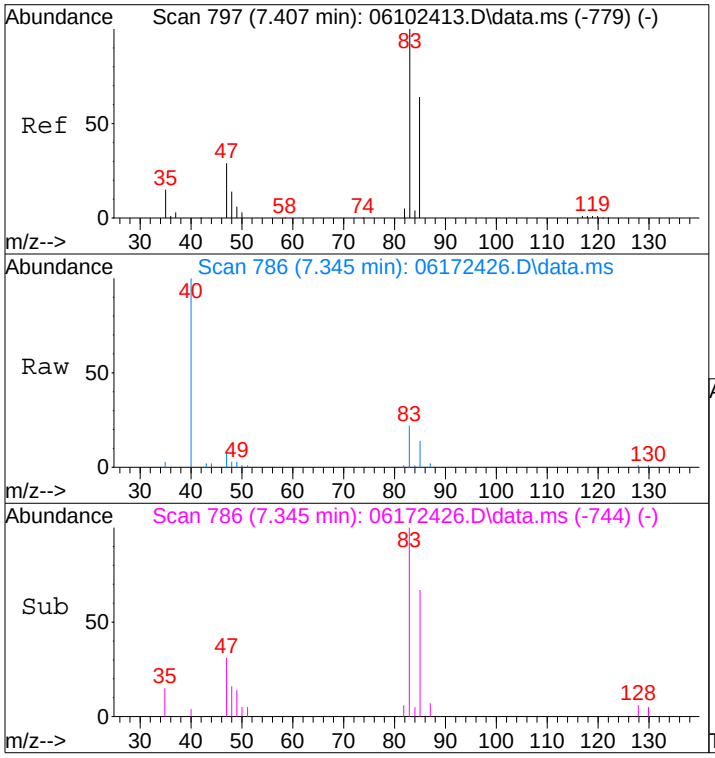


#30
Ethyl Acetate
Concen: 0.12 ng
RT: 7.29 min Scan# 776
Delta R.T. 0.029 min
Lab File: 06172426.D
Acq: 17 Jun 2024 22:46

Tgt Ion: 61 Resp: 617

Ion	Ratio	Lower	Upper
61	100		
70	56.7	53.5	93.5

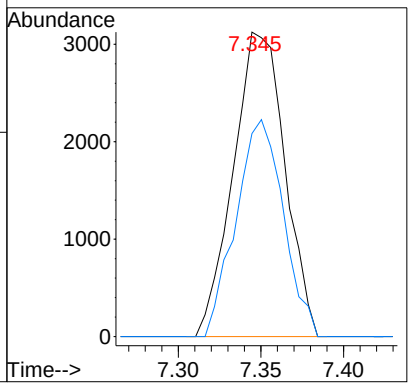


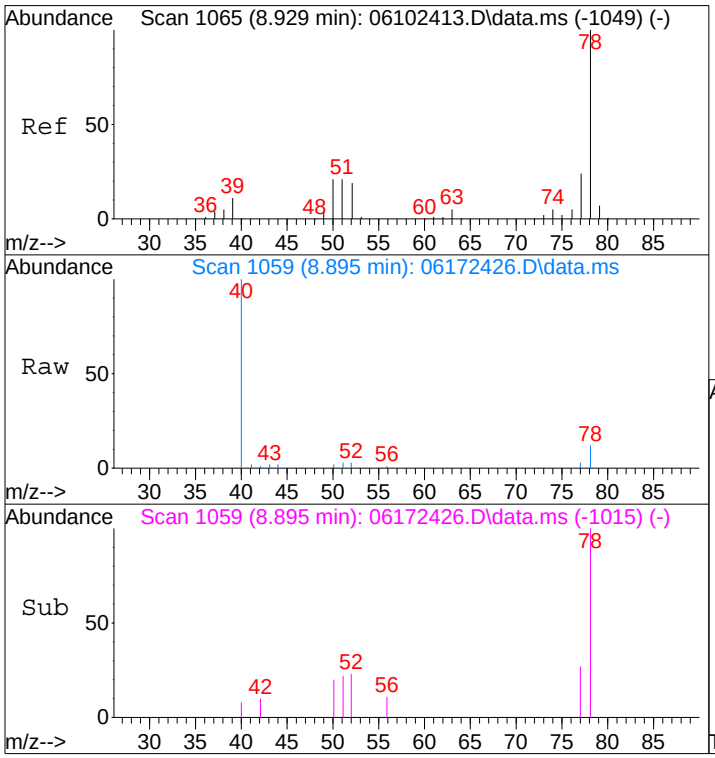


#32
Chloroform
Concen: 0.25 ng
RT: 7.34 min Scan# 786
Delta R.T. -0.010 min
Lab File: 06172426.D
Acq: 17 Jun 2024 22:46

Tgt Ion: 83 Resp: 6785

Ion	Ratio	Lower	Upper
83	100		
85	65.5	44.4	84.4

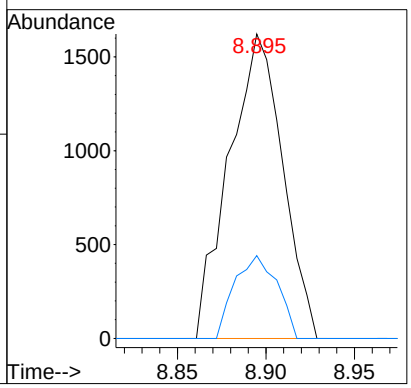


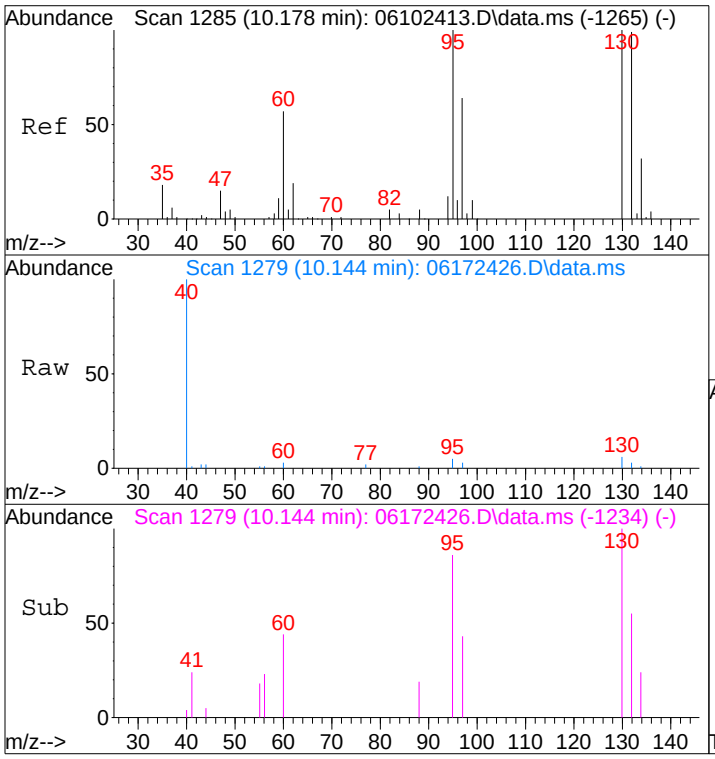


#41
Benzene
Concen: 0.06 ng
RT: 8.89 min Scan# 1059
Delta R.T. -0.002 min
Lab File: 06172426.D
Acq: 17 Jun 2024 22:46

Tgt Ion: 78 Resp: 3409

Ion	Ratio	Lower	Upper
78	100		
77	21.7	4.0	44.0

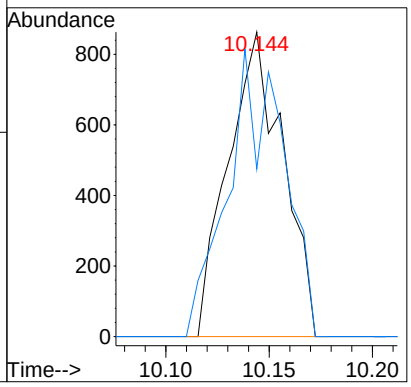


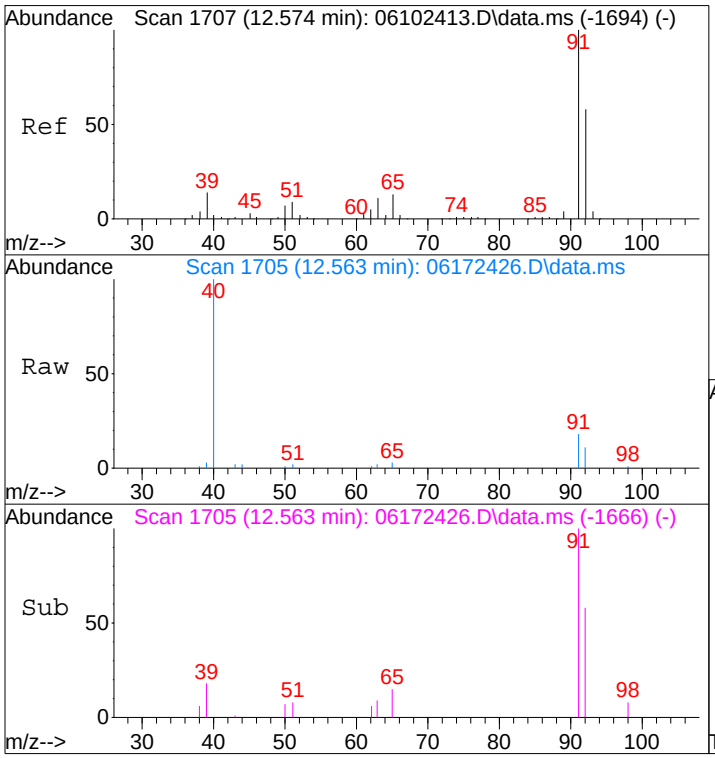


#47
Trichloroethene
Concen: 0.10 ng
RT: 10.14 min Scan# 1279
Delta R.T. 0.004 min
Lab File: 06172426.D
Acq: 17 Jun 2024 22:46

Tgt Ion:130 Resp: 1592

Ion	Ratio	Lower	Upper
130	100		
132	96.2	77.9	117.9

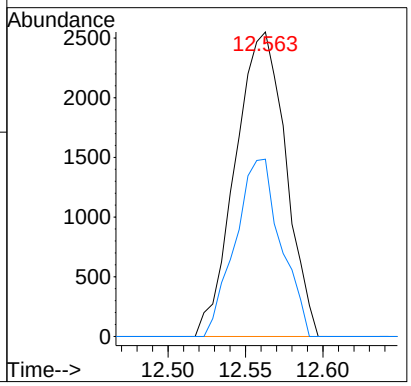


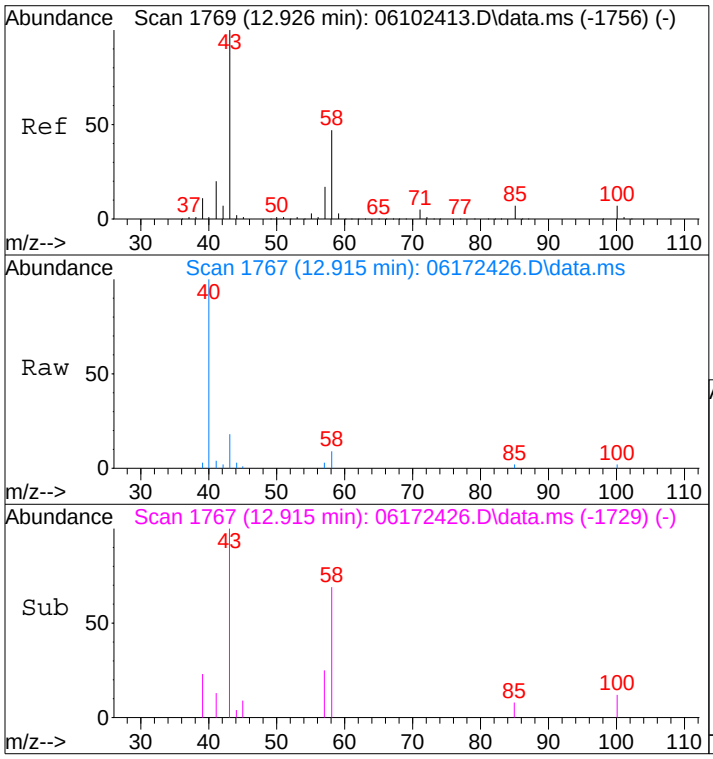


#58
Toluene
Concen: 0.10 ng
RT: 12.56 min Scan# 1705
Delta R.T. -0.029 min
Lab File: 06172426.D
Acq: 17 Jun 2024 22:46

Tgt Ion: 91 Resp: 5784

Ion	Ratio	Lower	Upper
91	100		
92	52.7	37.4	77.4

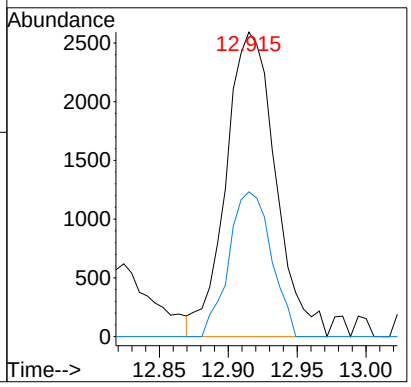




#59
2-Hexanone
Concen: 0.18 ng
RT: 12.91 min Scan# 1767
Delta R.T. -0.034 min
Lab File: 06172426.D
Acq: 17 Jun 2024 22:46

Tgt Ion: 43 Resp: 6476

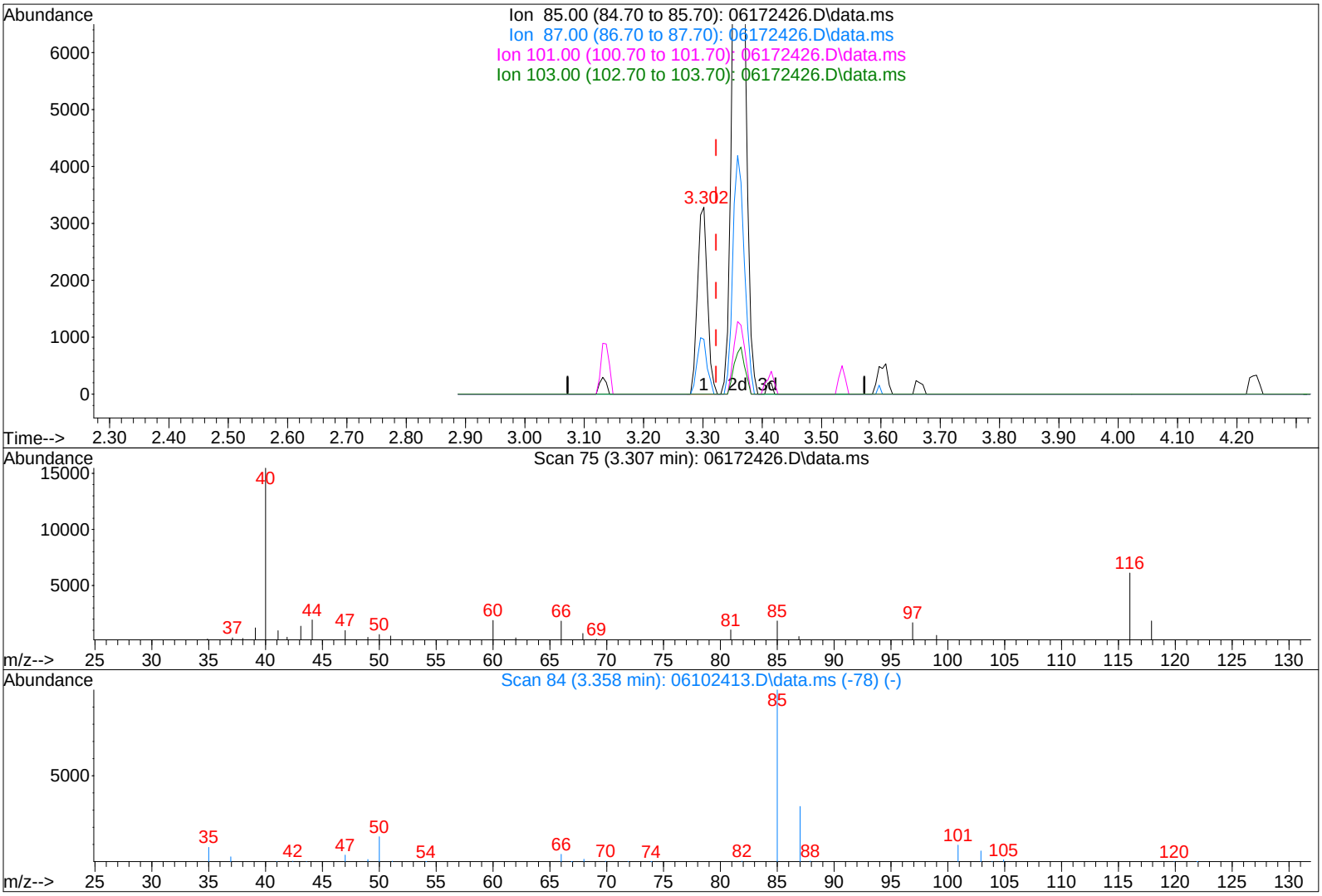
Ion	Ratio	Lower	Upper
43	100		
58	40.8	25.9	65.9



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\17\06172426.D Vial: 15
Acq On : 17 Jun 2024 22:46 Operator: SC
Sample : P2402249-010 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 10:57:41 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06172426.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.302min (-0.020) 0.12ng

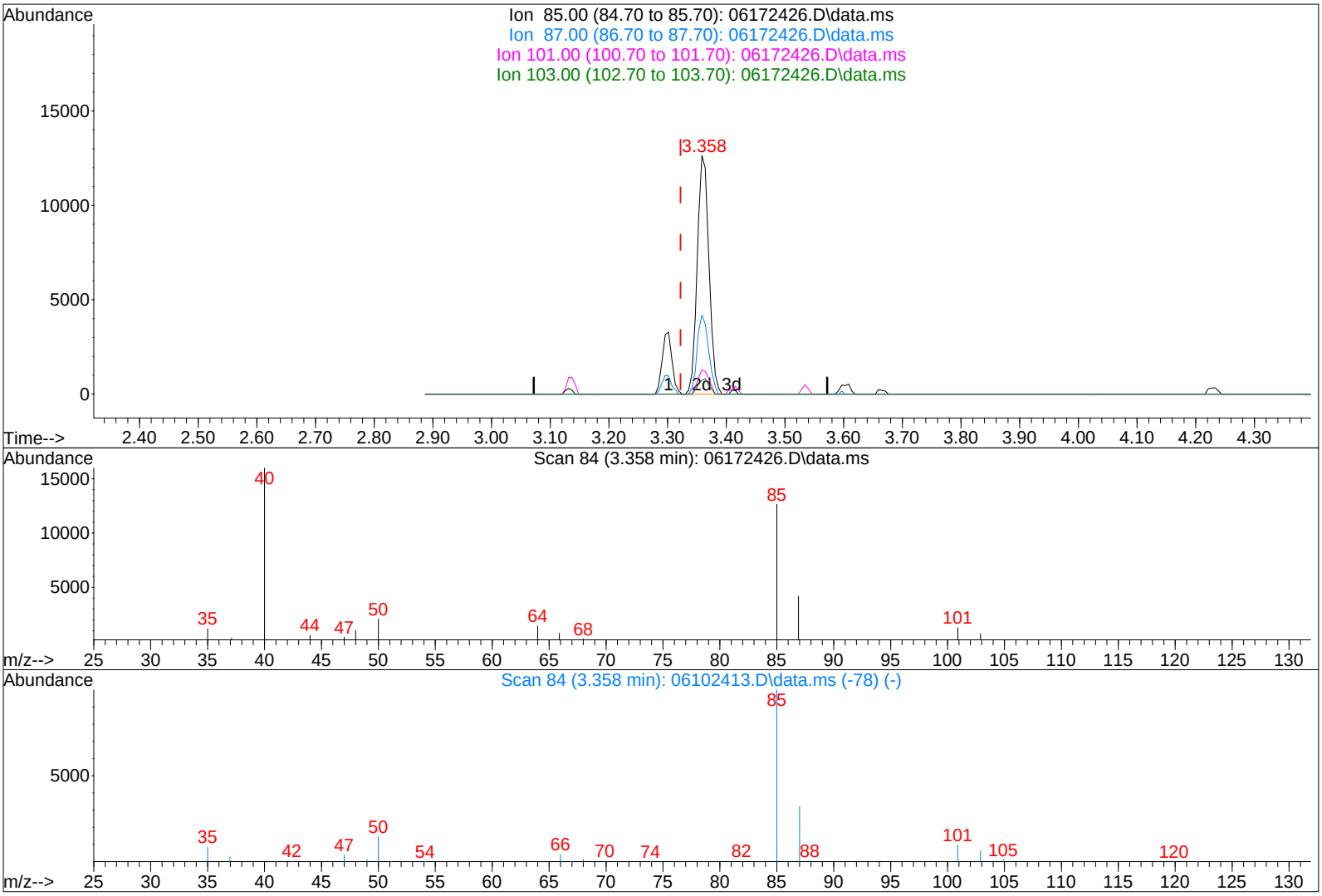
response 3805

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	30.25
101.00	9.80	0.00
103.00	6.30	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\17\06172426.D Vial: 15
Acq On : 17 Jun 2024 22:46 Operator: SC
Sample : P2402249-010 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 10:57:41 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06172426.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.358min (+0.036) 0.53ng m

response 17553

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	32.42
101.00	9.80	9.59
103.00	6.30	5.52

MJ 6/28/24

WP

CG 6/29/24

Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\17\06172426.D Vial: 15
Acq On : 17 Jun 2024 22:46 Operator: SC
Sample : P2402249-010 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:56:18 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

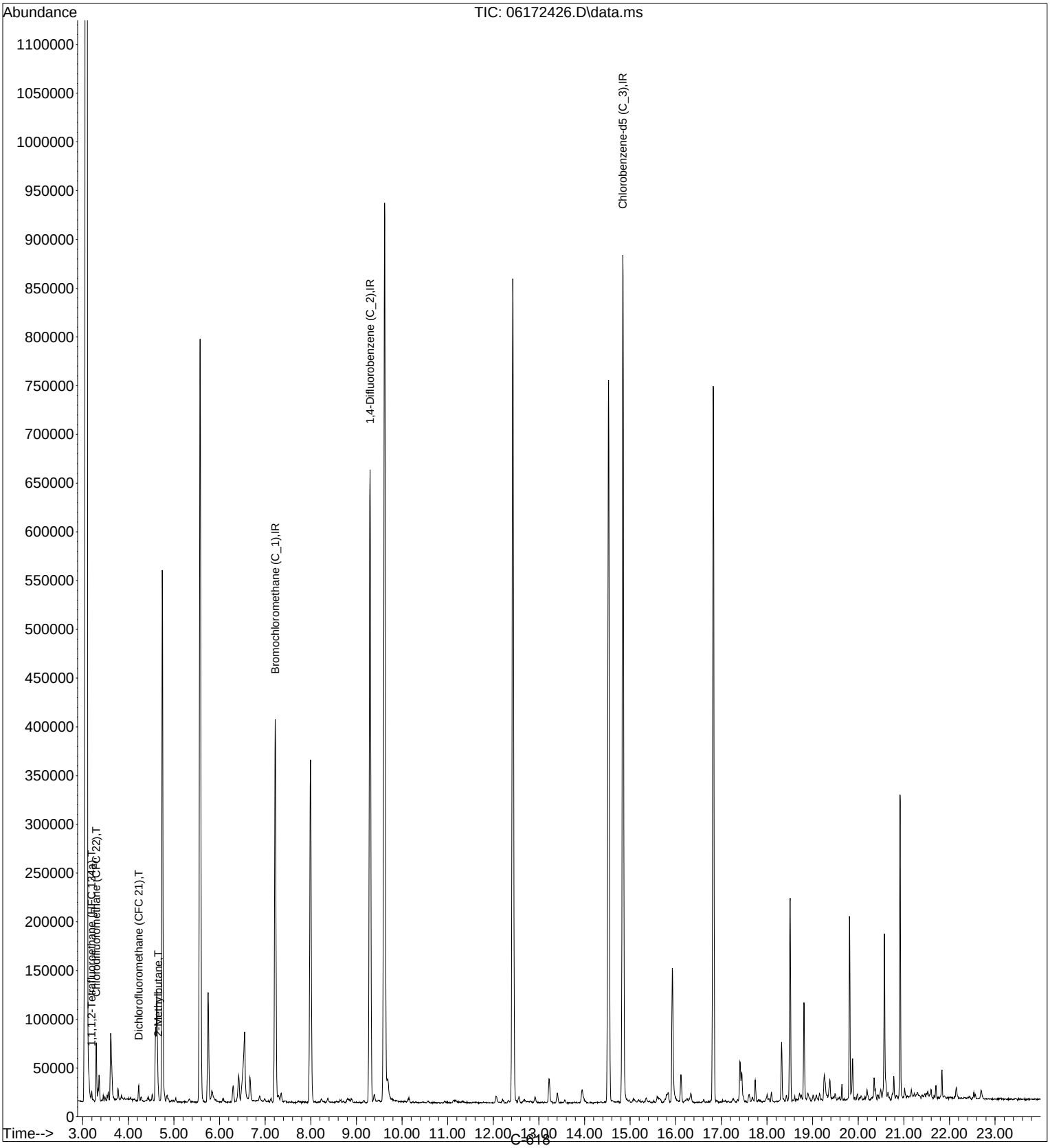
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.22	130	140334	12.500	ng		-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	617318	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	143215	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	3.13	85	236	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.19	83	1501	0.104	ng	#	1
4) 1,1-Difluoroethane	0.00	65	0	N.D.			
5) Chlorodifluoromethane ...	3.30	67	702	0.147	ng	#	77
6) 1-Chloro-1,1-Difluoroe...	3.50	65	466	N.D.			
7) Dichlorofluoromethane ...	4.23	67	11744	0.365	ng		98
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	0.00	83	0	N.D.	d		
10) 2-Methylbutane	4.65	57	2691	0.161	ng	#	1
11) Methyl Acetate	5.33	43	1533	N.D.			
12) 2-Methylpentane	6.48	71	52	N.D.			
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	0.00	84	0	N.D.			
17) 2,3-Dimethylpentane	9.62	56	2433	N.D.			
18) Dibromomethane	9.79	174	57	N.D.			
20) Methyl Cyclohexane	11.57	55	59	N.D.			
21) 1,3-Dichloropropane	0.00	76	0	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	16.32	75	60	N.D.			
25) Bromobenzene	17.03	77	56	N.D.			
26) 2-Chlorotoluene	17.61	91	881	N.D.			
27) 4-Chlorotoluene	17.67	91	1618	N.D.			
28) Indane	0.00	117	0	N.D.			
29) Indene	0.00	115	0	N.D.			
30) 1,2,4,5-Tetramethylben...	20.22	119	81	N.D.			
31) 1,2,3,4-Tetramethylben...	20.22	119	81	N.D.			
32) 1,2,3,5-Tetramethylben...	20.61	119	246	N.D.			
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172426.D Vial: 15
Acq On : 17 Jun 2024 22:46 Operator: SC
Sample : P2402249-010 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:56:18 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

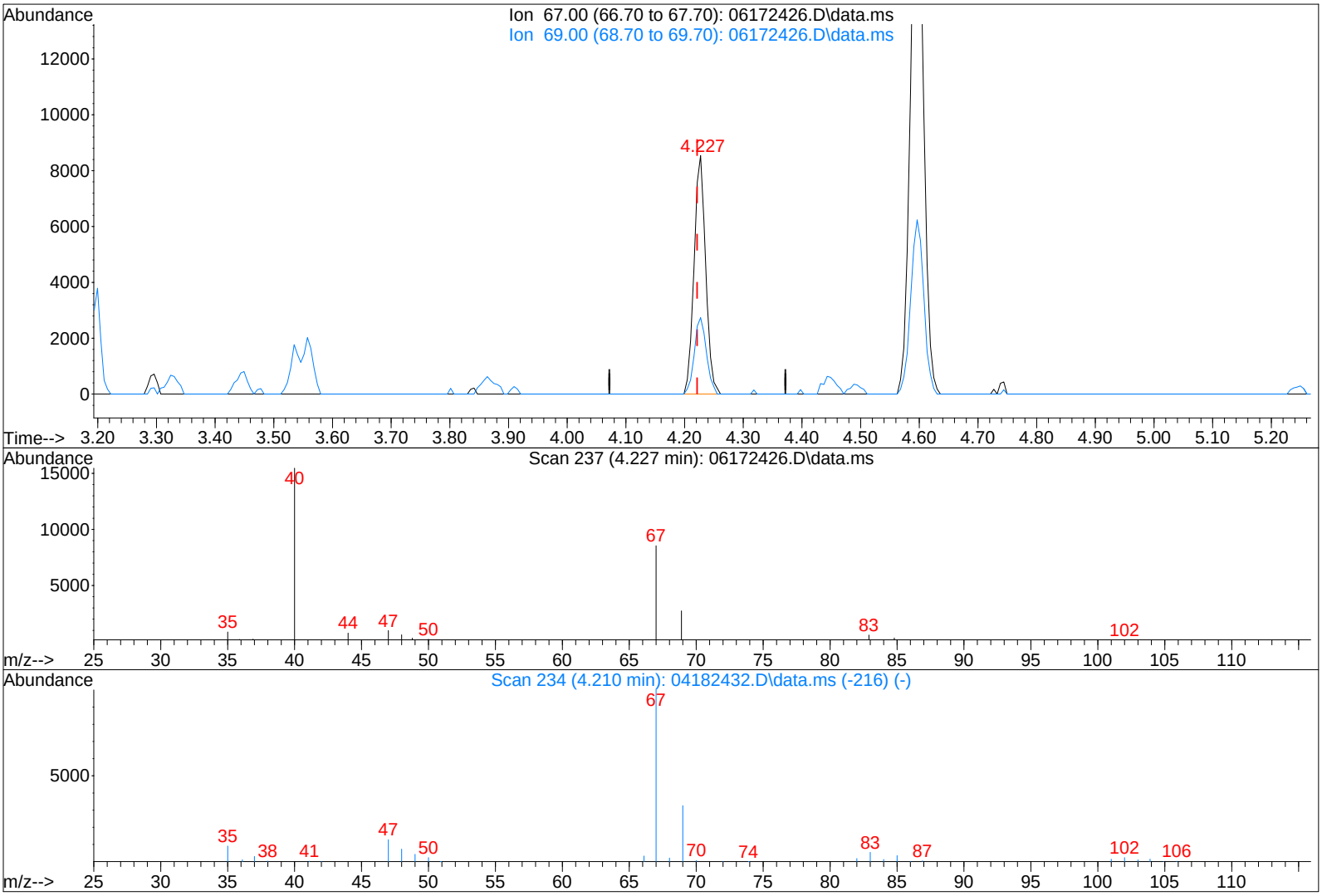


Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\17\06172426.D Vial: 15
Acq On : 17 Jun 2024 22:46 Operator: SC
Sample : P2402249-010 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 14:49:20 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06172426.D\data.ms

(7) Dichlorofluoromethane (CFC 21) (T)

4.227min (+0.006) 0.36ng

response 11744

Ion	Exp%	Act%
67.00	100	100
69.00	32.40	33.42
0.00	0.00	0.00
0.00	0.00	0.00

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\17\
Data File : 06172426.D
Acq On : 17 Jun 2024 22:46
Operator : SC
Sample : P2402249-010 (400mL)
Misc : S37-06062402
ALS Vial : 15 Sample Multiplier: 1

MJ 6/28/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06172426.D\data.ms

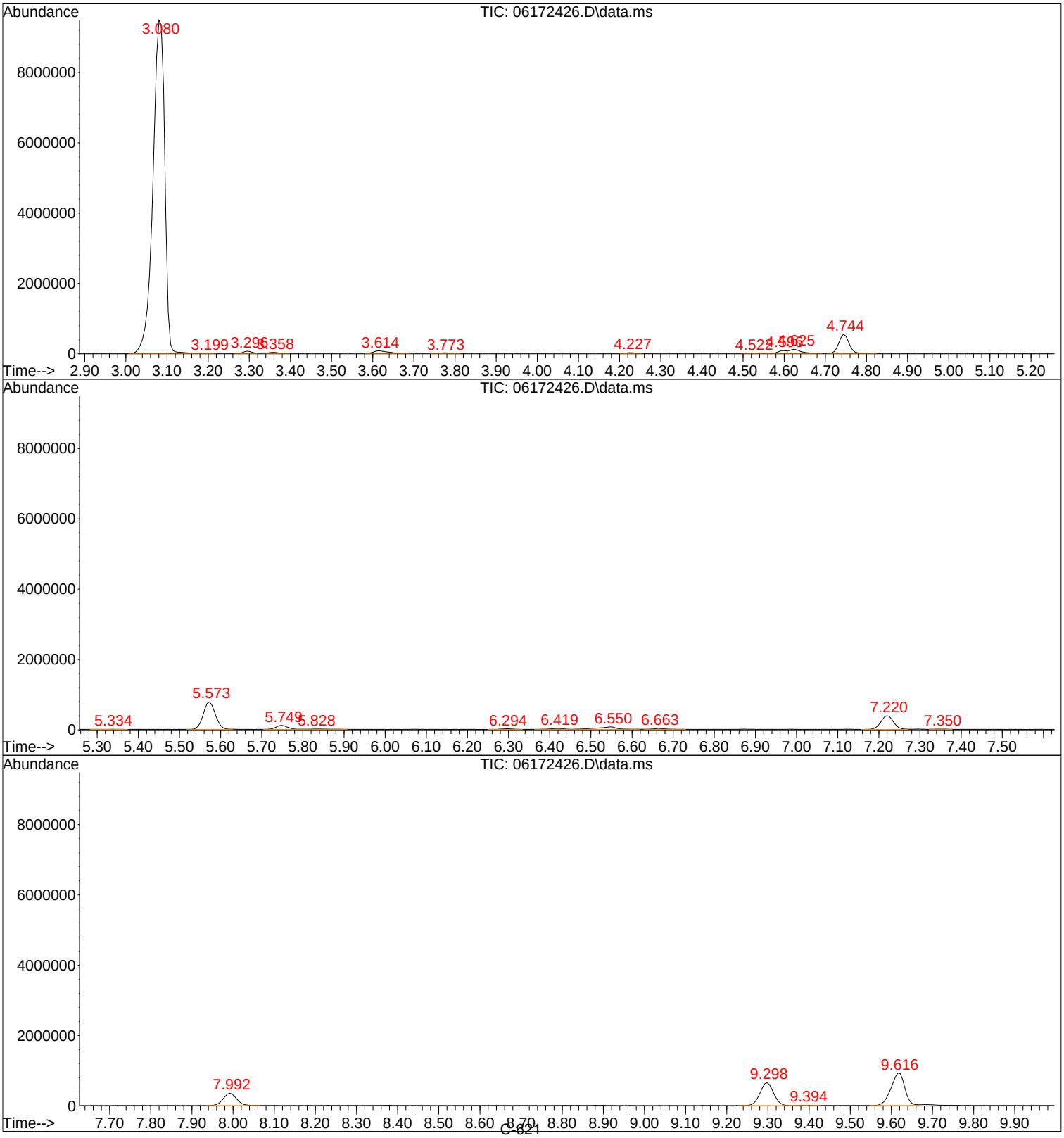
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.080	22	35	52	rBV	9464770	18851763	100.00%	67.445%
2	3.199	52	56	60	rVB2	8671	10620	0.06%	0.038%
3	3.296	67	73	77	rBV3	60432	83330	0.44%	0.298%
4	3.358	81	84	91	rVB	27064	37525	0.20%	0.134%
5	3.614	123	129	143	rBV	68463	155538	0.83%	0.556%
6	3.773	151	157	164	rVB3	11595	18016	0.10%	0.064%
7	4.227	232	237	242	rBV	15910	21669	0.11%	0.078%
8	4.522	284	289	295	rVB2	6922	10754	0.06%	0.038%
9	4.596	295	302	304	rBV	75905	115009	0.61%	0.411%
10	4.625	304	307	319	rVB	112567	196208	1.04%	0.702%
11	4.744	321	328	342	rVB	544646	913762	4.85%	3.269%
12	5.334	423	432	439	rVB5	3873	10115	0.05%	0.036%
13	5.573	464	474	484	rBV2	783043	1595707	8.46%	5.709%
14	5.749	497	505	513	rBV	112374	226069	1.20%	0.809%
15	5.828	513	519	533	rVB4	9781	29211	0.15%	0.105%
16	6.294	593	601	608	rBV	17081	37131	0.20%	0.133%
17	6.419	613	623	629	rVV	27380	62820	0.33%	0.225%
18	6.550	629	646	658	rVV2	71461	244624	1.30%	0.875%
19	6.663	660	666	678	rVB	24378	52764	0.28%	0.189%
20	7.220	753	764	773	rBV	392942	829138	4.40%	2.966%
21	7.350	782	787	792	rVB3	8959	17386	0.09%	0.062%
22	7.992	890	900	913	rBV	351597	787903	4.18%	2.819%
23	9.298	1118	1130	1140	rBV	649378	1483018	7.87%	5.306%
24	9.394	1140	1147	1153	rVV	7384	15959	0.08%	0.057%
25	9.616	1174	1186	1195	rBV	921869	2145468	11.38%	7.676%

Sum of corrected areas: 27951507

Data Path : I:\MS09\DATA\2024 06\17\
Data File : 06172426.D
Acq On : 17 Jun 2024 22:46
Operator : SC
Sample : P2402249-010 (400mL)
Misc : S37-06062402
ALS Vial : 15 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\17\\
Data File : 06172426.D
Acq On : 17 Jun 2024 22:466
Operator : SCC
Sample : P2402249-010 (400mL))
Misc : S37-060624022
ALS Vial : 15 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

					|--Internal Standard---|		
TIC Top Hit name	RT	EstConc	Units	Response	# RT Resp Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172427.D Vial: 16
Acq On : 17 Jun 2024 23:18 Operator: SC
Sample : P2402249-011 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 14:24:49 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.22	130	137439	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	609391	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	142606	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	304623	12.471	ng		0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.76%				
57) Toluene-d8 (SS2)	12.43	98	678922	12.441	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.52%				
73) Bromofluorobenzene (SS3)	16.83	174	249746	12.674	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.36%				
Target Compounds							Qvalue
2) Propene	0.00	42	0	N.D. d			
3) Dichlorodifluoromethan...	3.36	85	16944m	0.524	ng		
4) Chloromethane	3.49	50	2110	0.095	ng		99
5) 1,2-Dichloro-1,1,2,2-t...	3.60	135	272	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	4.01	94	219	N.D.			
9) Chloroethane	4.14	64	311	N.D.			
10) Ethanol	4.28	45	30771	2.303	ng		77
11) Acetonitrile	0.00	41	0	N.D. d			
12) Acrolein	4.53	56	2570	0.260	ng		98
13) Acetone	4.62	58	29458	2.759	ng	#	75
14) Trichlorofluoromethane	4.74	101	896296	27.393	ng		99
15) 2-Propanol (Isopropanol)	4.84	45	4759	0.111	ng		60
16) Acrylonitrile	4.98	53	686	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.33	59	1244	N.D.			
19) Methylene Chloride	5.35	84	1192	0.079	ng		98
20) 3-Chloro-1-propene (Al...	5.45	41	277	N.D.			
21) Trichlorotrifluoroethane	5.57	151	332949	24.054	ng		99
22) Carbon Disulfide	0.00	76	0	N.D. d			
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	6.29	73	861	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D. d			
27) 2-Butanone (MEK)	6.66	72	7600	0.900	ng	#	79
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D. d			
30) Ethyl Acetate	7.28	61	911	0.177	ng		97
31) n-Hexane	7.30	57	433	N.D.			
32) Chloroform	7.34	83	29762	1.105	ng		98
34) Tetrahydrofuran (THF)	7.76	72	270	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	275	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	9.59	61	18391	No Calib		#	
40) 1-Butanol	8.80	56	16874	No Calib		#	
41) Benzene	8.89	78	6025	0.107	ng		96
42) Carbon Tetrachloride	0.00	117	0	N.D.			
43) Cyclohexane	9.17	84	165	N.D.			
44) tert-Amyl Methyl Ether	9.60	73	323	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.07	83	635	N.D.			
47) Trichloroethene	10.14	130	18425	1.122	ng		97
48) 1,4-Dioxane	10.13	88	214	N.D.			
49) 2,2,4-Trimethylpentane...	10.23	57	2797	0.050	ng		87
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172427.D Vial: 16
Acq On : 17 Jun 2024 23:18 Operator: SC
Sample : P2402249-011 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:24:49 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

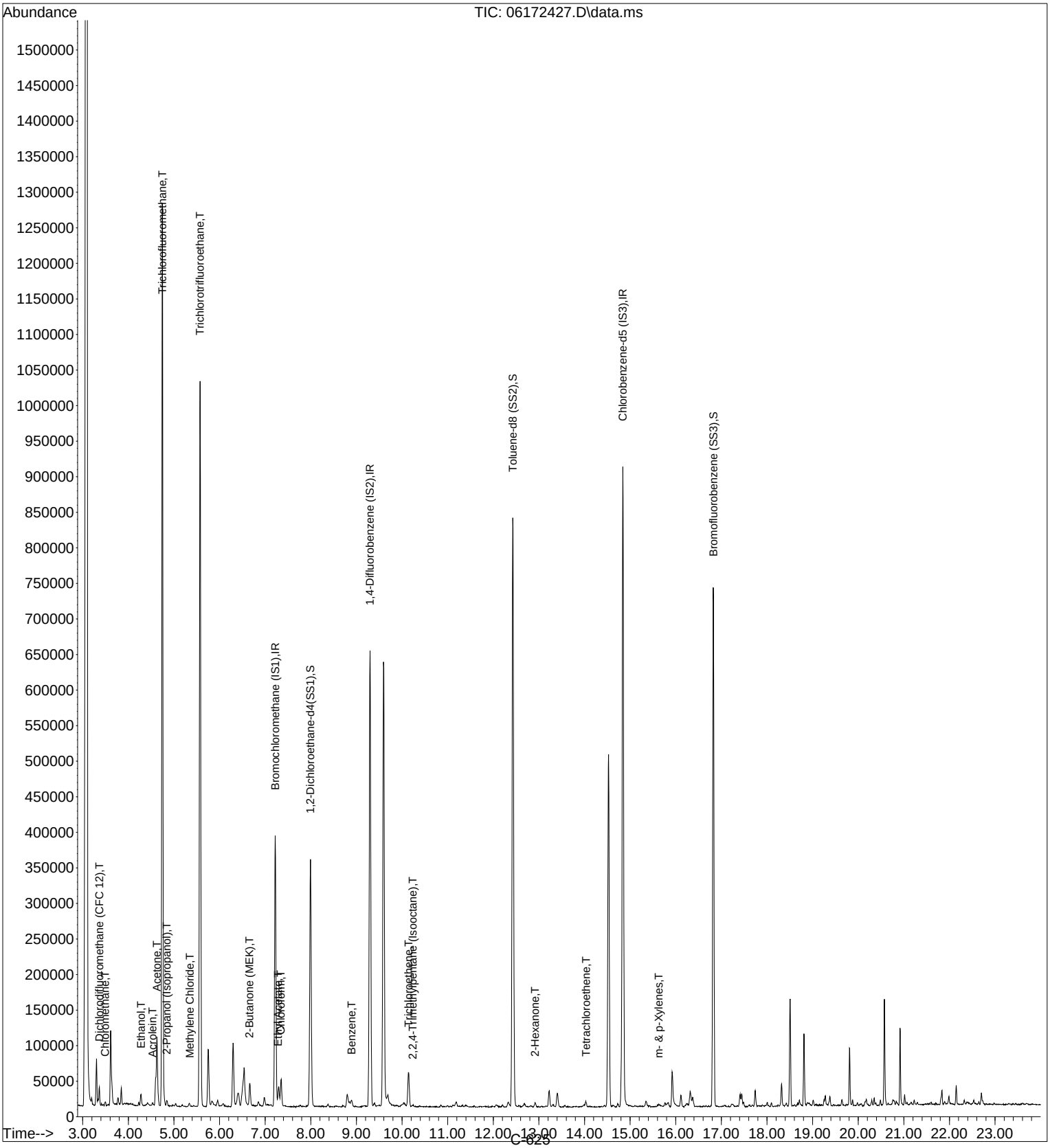
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
51) n-Heptane	0.00	71	0	N.D.		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	11.33	58	320	N.D.		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	12.56	91	2116	N.D.		
59) 2-Hexanone	12.92	43	6313	0.177	ng	89
60) Dibromochloromethane	13.07	129	460	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	13.79	43	910	N.D.		
63) n-Octane	0.00	57	0	N.D.		
64) Tetrachloroethene	14.03	166	2603	0.133	ng	93
65) Chlorobenzene	14.89	112	544	N.D.		
66) Ethylbenzene	15.41	91	1458	N.D.		
67) m- & p-Xylenes	15.63	91	3214	0.059	ng	92
68) Bromoform	15.67	173	609	N.D.		
69) Styrene	16.10	104	1154	N.D.		
70) o-Xylene	16.24	91	1336	N.D.		
71) n-Nonane	16.61	43	1306	N.D.		
72) 1,1,2,2-Tetrachloroethane	16.21	83	356	N.D.		
74) Cumene	17.03	105	844	N.D.		
75) alpha-Pinene	0.00	93	0	N.D.		
76) n-Propylbenzene	17.68	91	1593	N.D.		
77) 3-Ethyltoluene	17.03	105	844	No Calib		
78) 4-Ethyltoluene	17.87	105	957	N.D.		
79) 1,3,5-Trimethylbenzene	17.95	105	795	N.D.		
80) alpha-Methylstyrene	0.00	118	0	N.D.		
81) 2-Ethyltoluene	17.03	105	844	No Calib		
82) 1,2,4-Trimethylbenzene	18.43	105	1510	N.D.		
83) n-Decane	0.00	58	0	N.D.		
84) Benzyl Chloride	18.56	91	270	N.D.		
85) 1,3-Dichlorobenzene	18.58	146	606	N.D.		
86) 1,4-Dichlorobenzene	18.66	146	679	N.D.		
87) sec-Butylbenzene	18.74	105	1027	N.D.		
88) 4-Isopropyltoluene (p-...	18.92	119	2214	N.D.		
89) 1,2,3-Trimethylbenzene	17.03	105	844	No Calib		
90) 1,2-Dichlorobenzene	19.03	146	522	N.D.		
91) d-Limonene	19.08	68	124	N.D.		
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	0.00	58	0	N.D.		
94) 1,2,4-Trichlorobenzene	20.84	180	778	N.D.		
95) Naphthalene	20.94	128	2023	N.D.		
96) n-Dodecane	0.00	58	0	N.D.		
97) Hexachlorobutadiene	21.30	225	611	N.D.		
98) Cyclohexanone	15.51	55	166	No Calib	#	
99) tert-Butylbenzene	0.00	119	0	N.D.	d	
100) n-Butylbenzene	19.39	91	1200	N.D.		
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172427.D Vial: 16
Acq On : 17 Jun 2024 23:18 Operator: SC
Sample : P2402249-011 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:24:49 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\17\06172427.D Vial: 16
Acq On : 17 Jun 2024 23:18 Operator: SC
Sample : P2402249-011 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:24:49 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

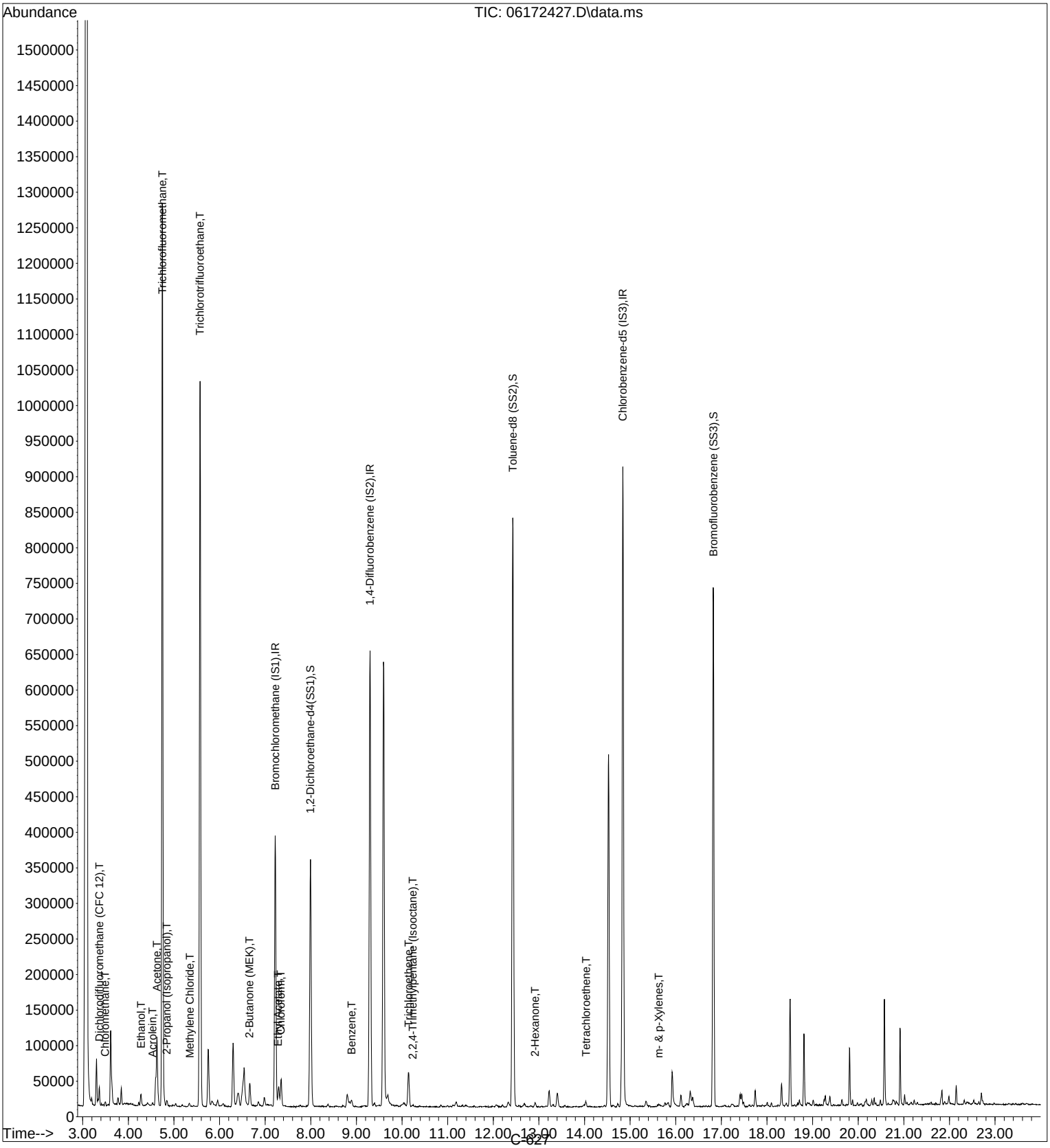
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.22	130	137439	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	609391	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	142606	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	304623	12.471	ng		0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.76%				
57) Toluene-d8 (SS2)	12.43	98	678922	12.441	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.52%				
73) Bromofluorobenzene (SS3)	16.83	174	249746	12.674	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.36%				
Target Compounds							Qvalue
3) Dichlorodifluoromethan...	3.36	85	16944m	0.524	ng		
4) Chloromethane	3.49	50	2110	0.095	ng		99
10) Ethanol	4.28	45	30771	2.303	ng		77
12) Acrolein	4.53	56	2570	0.260	ng		98
13) Acetone	4.62	58	29458	2.759	ng	#	75
14) Trichlorofluoromethane	4.74	101	896296	27.393	ng		99
15) 2-Propanol (Isopropanol)	4.84	45	4759	0.111	ng		60
19) Methylene Chloride	5.35	84	1192	0.079	ng		98
21) Trichlorotrifluoroethane	5.57	151	332949	24.054	ng		99
27) 2-Butanone (MEK)	6.66	72	7600	0.900	ng	#	79
30) Ethyl Acetate	7.28	61	911	0.177	ng		97
32) Chloroform	7.34	83	29762	1.105	ng		98
41) Benzene	8.89	78	6025	0.107	ng		96
47) Trichloroethene	10.14	130	18425	1.122	ng		97
49) 2,2,4-Trimethylpentane...	10.23	57	2797	0.050	ng		87
59) 2-Hexanone	12.92	43	6313	0.177	ng		89
64) Tetrachloroethene	14.03	166	2603	0.133	ng		93
67) m- & p-Xylenes	15.63	91	3214	0.059	ng		92

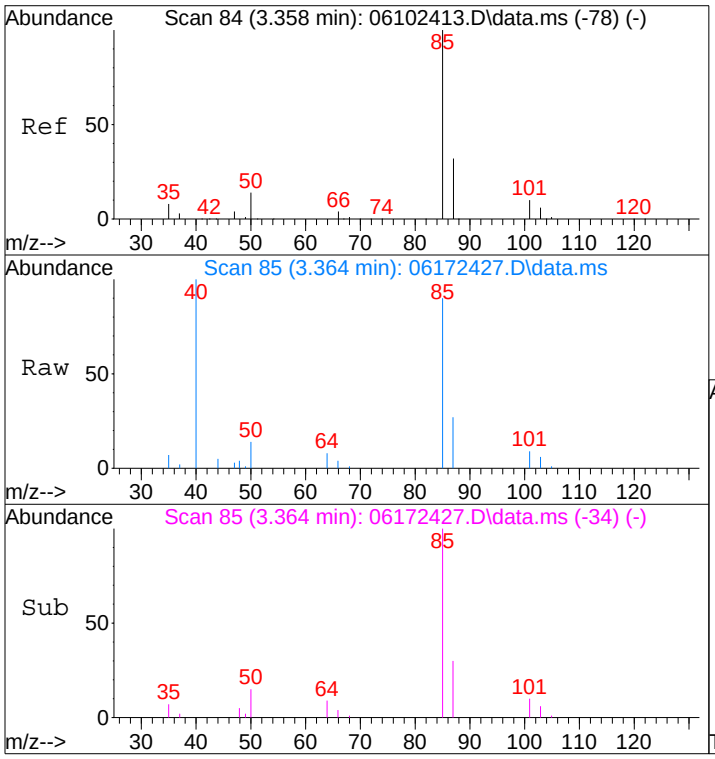
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172427.D Vial: 16
Acq On : 17 Jun 2024 23:18 Operator: SC
Sample : P2402249-011 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:24:49 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

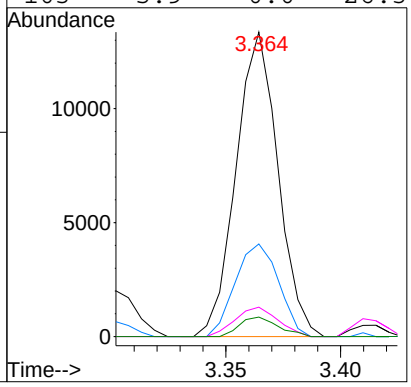


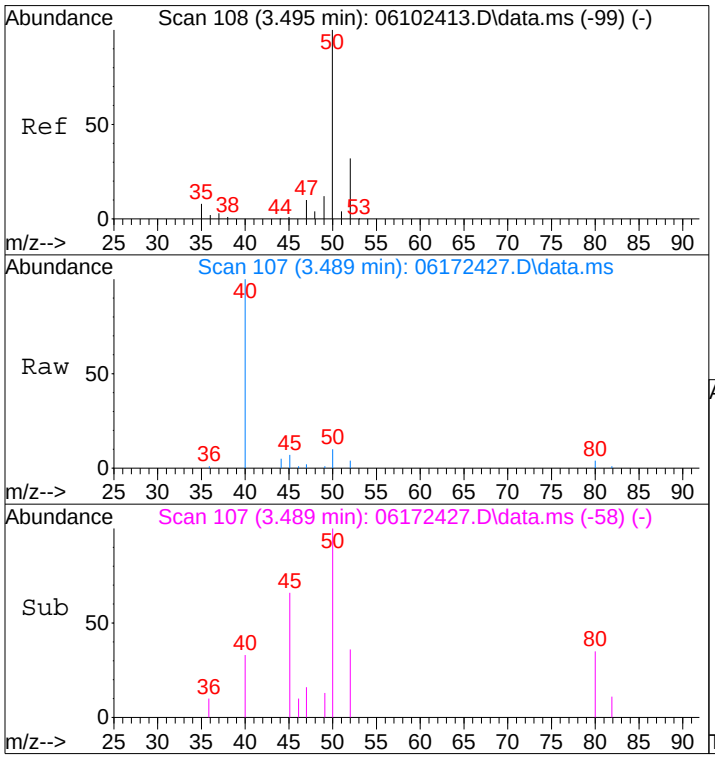


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.52 ng m
RT: 3.36 min Scan# 85
Delta R.T. 0.042 min
Lab File: 06172427.D
Acq: 17 Jun 2024 23:18

Tgt Ion: 85 Resp: 16944

Ion	Ratio	Lower	Upper
85	100		
87	31.5	12.2	52.2
101	9.4	0.0	29.8
103	5.9	0.0	26.3

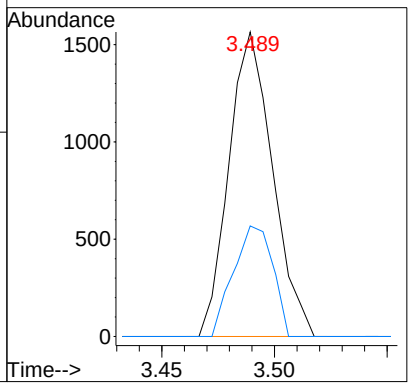


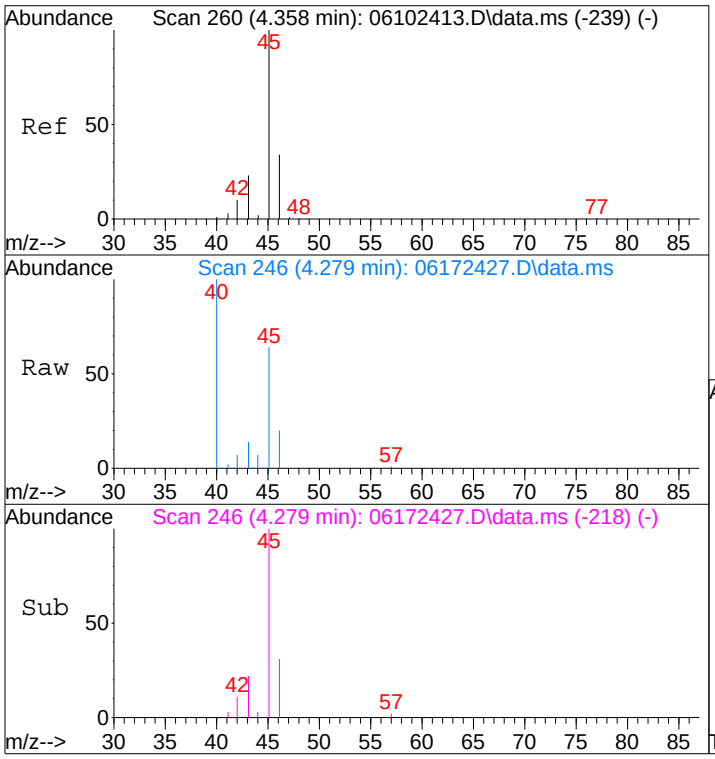


#4
Chloromethane
Concen: 0.10 ng
RT: 3.49 min Scan# 107
Delta R.T. 0.027 min
Lab File: 06172427.D
Acq: 17 Jun 2024 23:18

Tgt Ion: 50 Resp: 2110

Ion	Ratio	Lower	Upper
50	100		
52	32.7	12.4	52.4

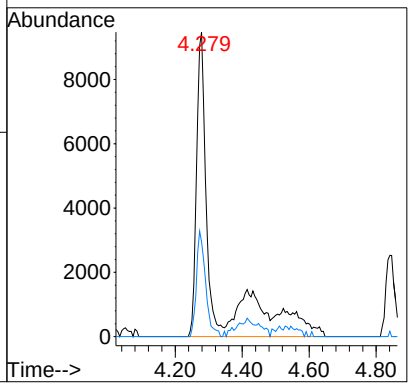


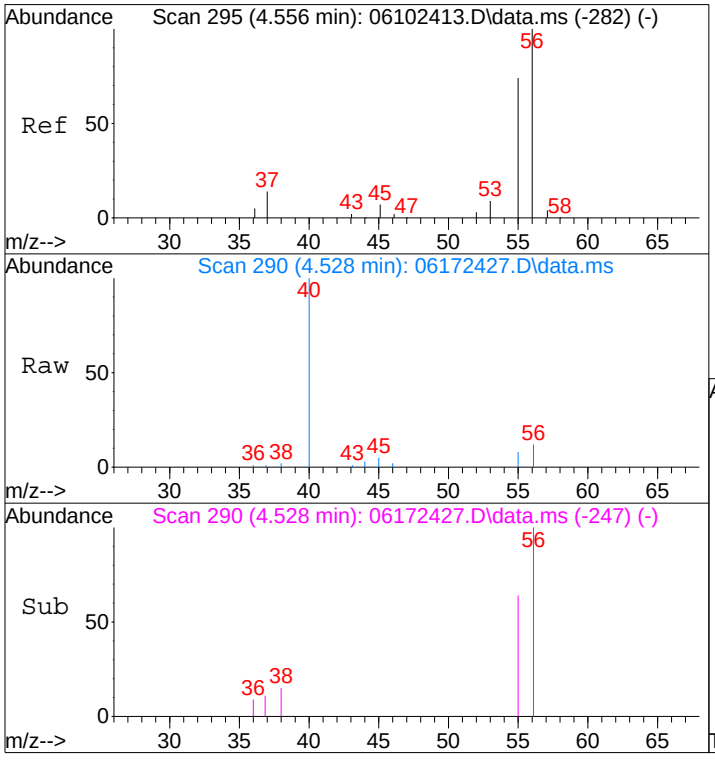


#10
Ethanol
Concen: 2.30 ng
RT: 4.28 min Scan# 246
Delta R.T. -0.088 min
Lab File: 06172427.D
Acq: 17 Jun 2024 23:18

Tgt Ion: 45 Resp: 30771

Ion	Ratio	Lower	Upper
45	100		
46	20.2	13.5	53.5

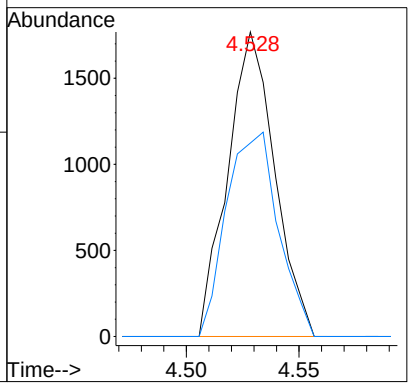


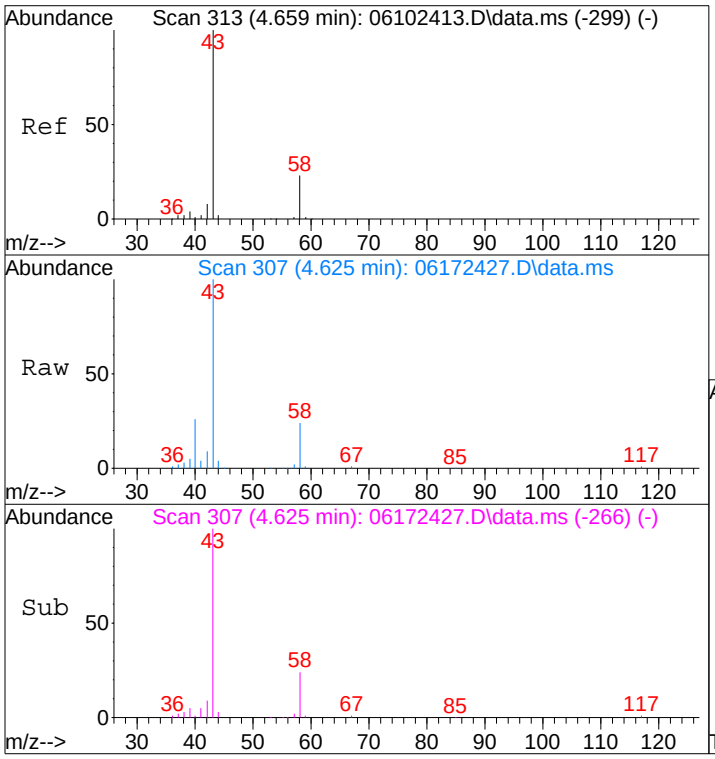


#12
Acrolein
Concen: 0.26 ng
RT: 4.53 min Scan# 290
Delta R.T. -0.007 min
Lab File: 06172427.D
Acq: 17 Jun 2024 23:18

Tgt Ion: 56 Resp: 2570

Ion	Ratio	Lower	Upper
56	100		
55	74.1	55.5	95.5

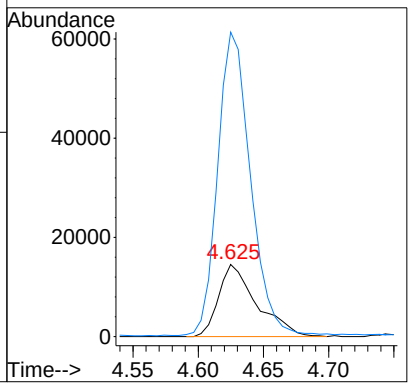


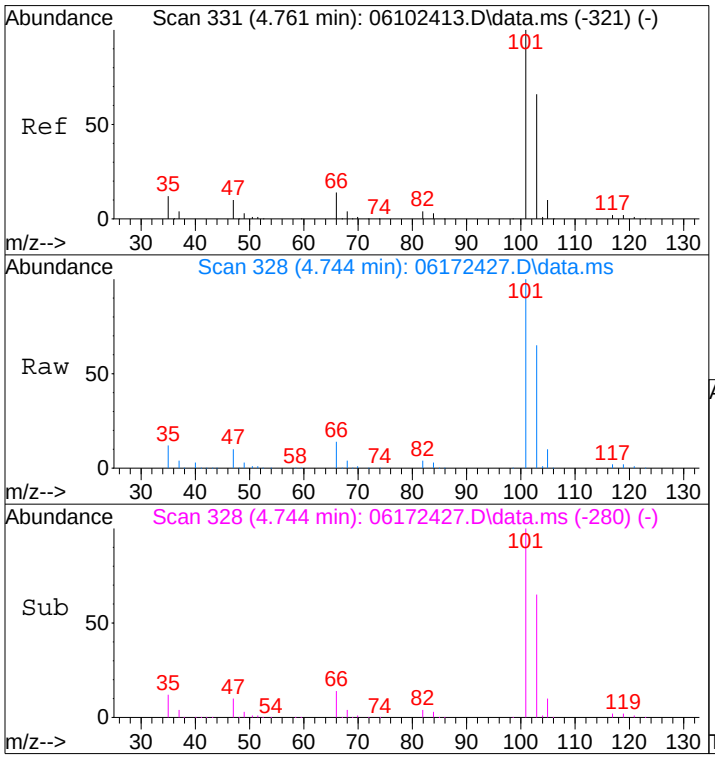


#13
Acetone
Concen: 2.76 ng
RT: 4.62 min Scan# 307
Delta R.T. -0.017 min
Lab File: 06172427.D
Acq: 17 Jun 2024 23:18

Tgt Ion: 58 Resp: 29458

Ion	Ratio	Lower	Upper
58	100		
43	367.7	400.7	460.7#

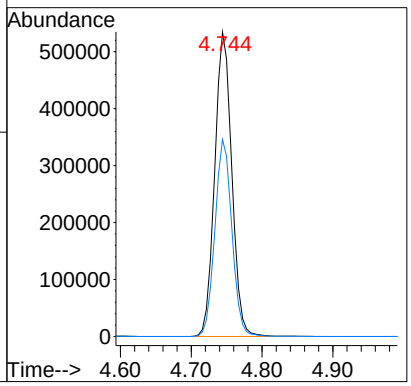


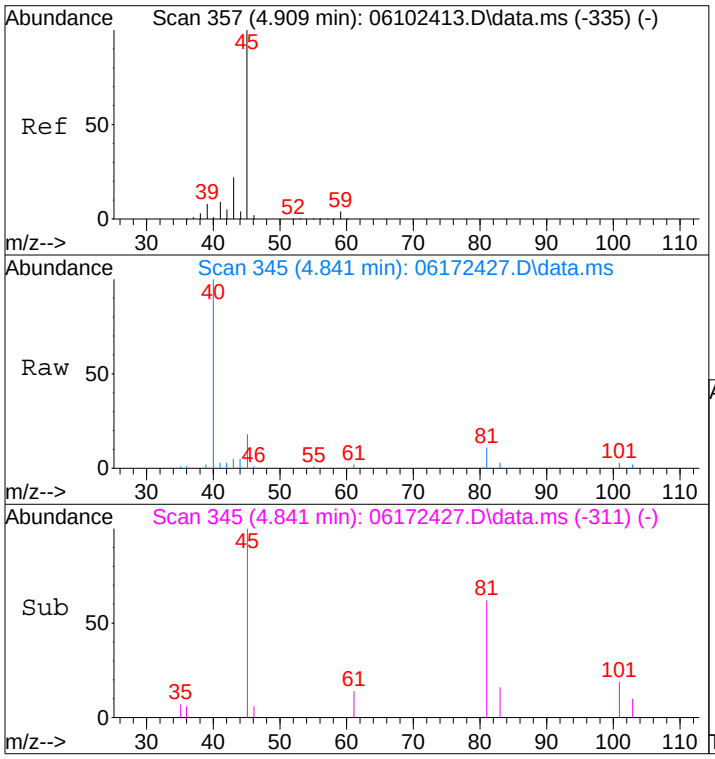


#14
Trichlorofluoromethane
Concen: 27.39 ng
RT: 4.74 min Scan# 328
Delta R.T. 0.023 min
Lab File: 06172427.D
Acq: 17 Jun 2024 23:18

Tgt Ion:101 Resp: 896296

Ion	Ratio	Lower	Upper
101	100		
103	64.4	44.9	84.9

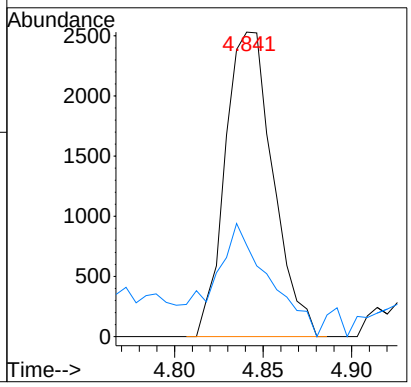


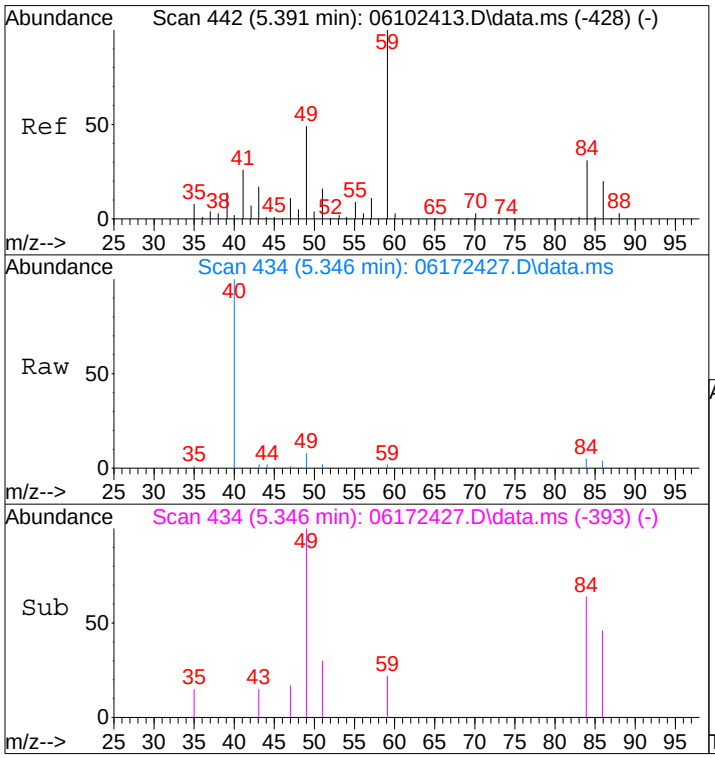


#15
2-Propanol (Isopropanol)
Concen: 0.11 ng
RT: 4.84 min Scan# 345
Delta R.T. -0.060 min
Lab File: 06172427.D
Acq: 17 Jun 2024 23:18

Tgt Ion: 45 Resp: 4759

Ion	Ratio	Lower	Upper
45	100		
43	41.6	2.5	42.5

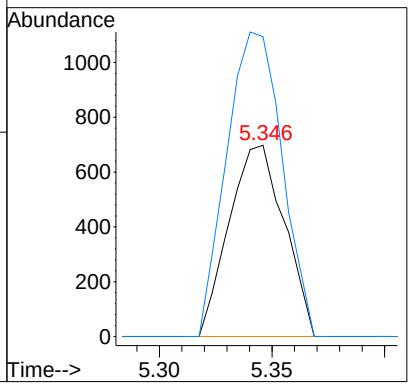


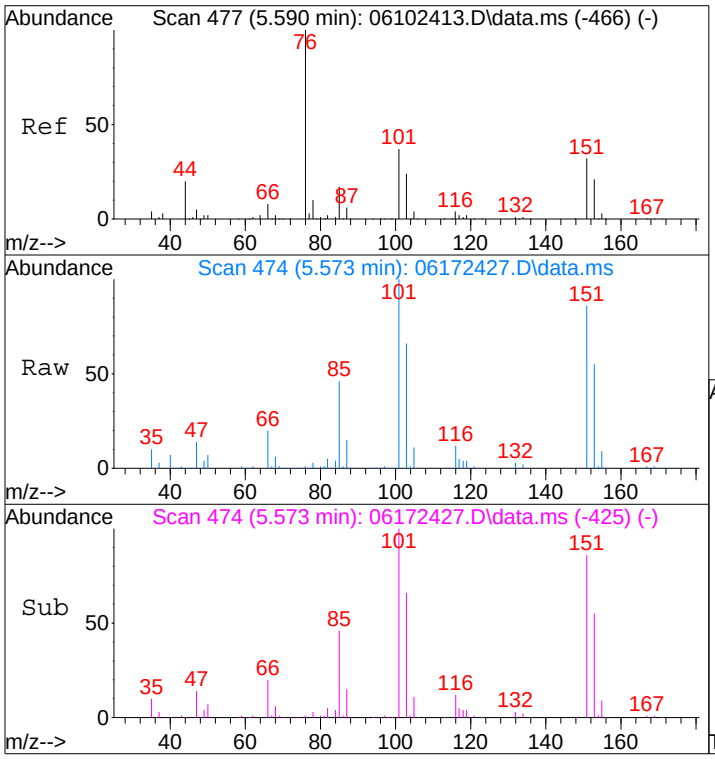


#19
Methylene Chloride
Concen: 0.08 ng
RT: 5.35 min Scan# 434
Delta R.T. -0.015 min
Lab File: 06172427.D
Acq: 17 Jun 2024 23:18

Tgt Ion: 84 Resp: 1192

Ion	Ratio	Lower	Upper
84	100		
49	160.0	132.9	182.9

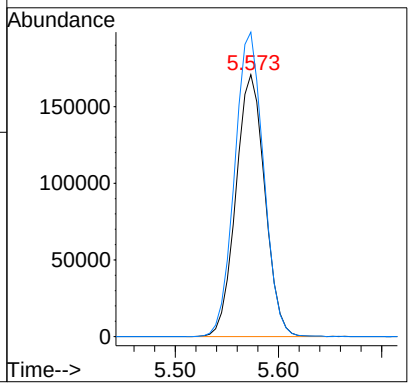


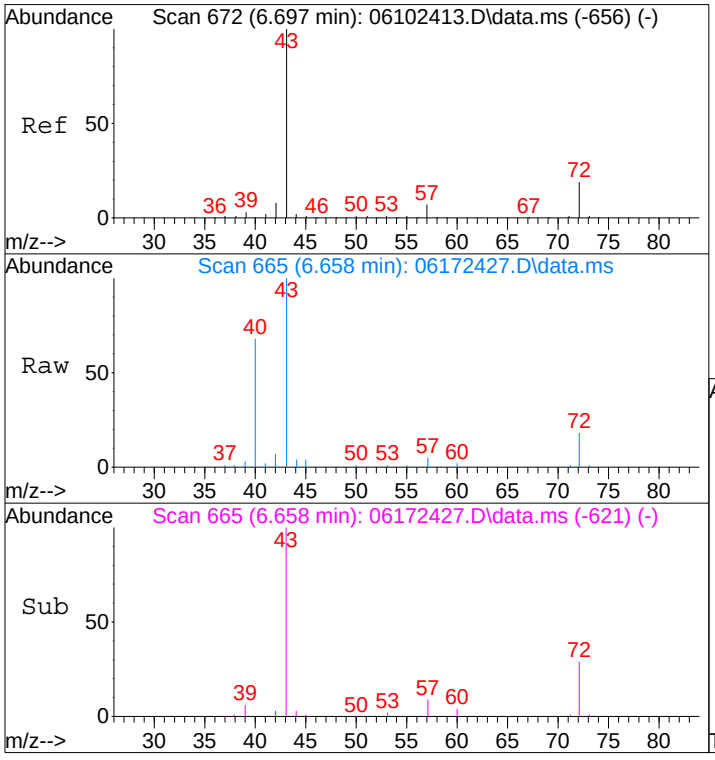


#21
Trichlorotrifluoroethane
Concen: 24.05 ng
RT: 5.57 min Scan# 474
Delta R.T. 0.027 min
Lab File: 06172427.D
Acq: 17 Jun 2024 23:18

Tgt Ion:151 Resp: 332949

Ion	Ratio	Lower	Upper
151	100		
101	116.1	95.0	135.0

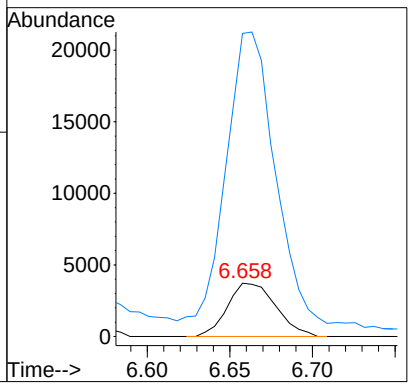


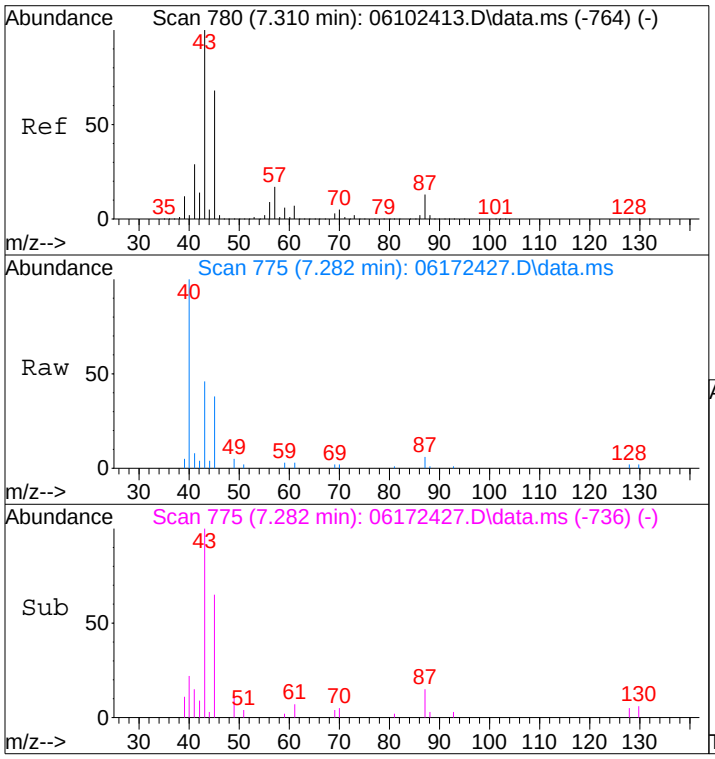


#27
2-Butanone (MEK)
Concen: 0.90 ng
RT: 6.66 min Scan# 665
Delta R.T. -0.001 min
Lab File: 06172427.D
Acq: 17 Jun 2024 23:18

Tgt Ion: 72 Resp: 7600

Ion	Ratio	Lower	Upper
72	100		
43	587.8	506.8	546.8#

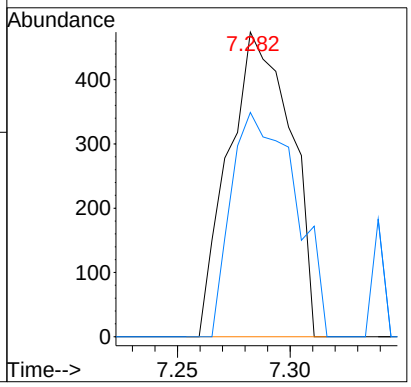


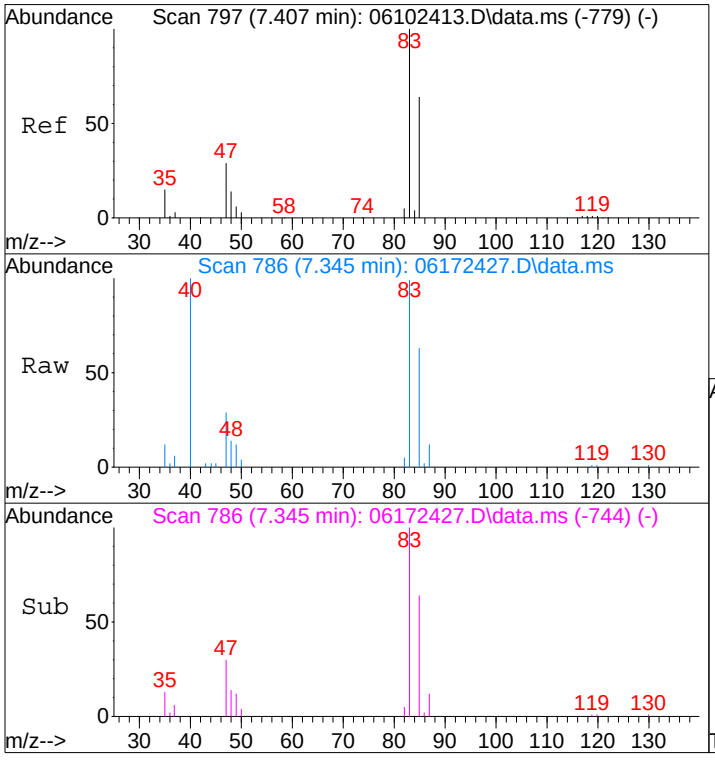


#30
Ethyl Acetate
Concen: 0.18 ng
RT: 7.28 min Scan# 775
Delta R.T. 0.023 min
Lab File: 06172427.D
Acq: 17 Jun 2024 23:18

Tgt Ion: 61 Resp: 911

Ion	Ratio	Lower	Upper
61	100		
70	76.0	53.5	93.5

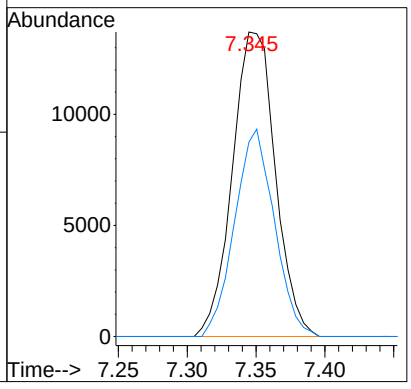


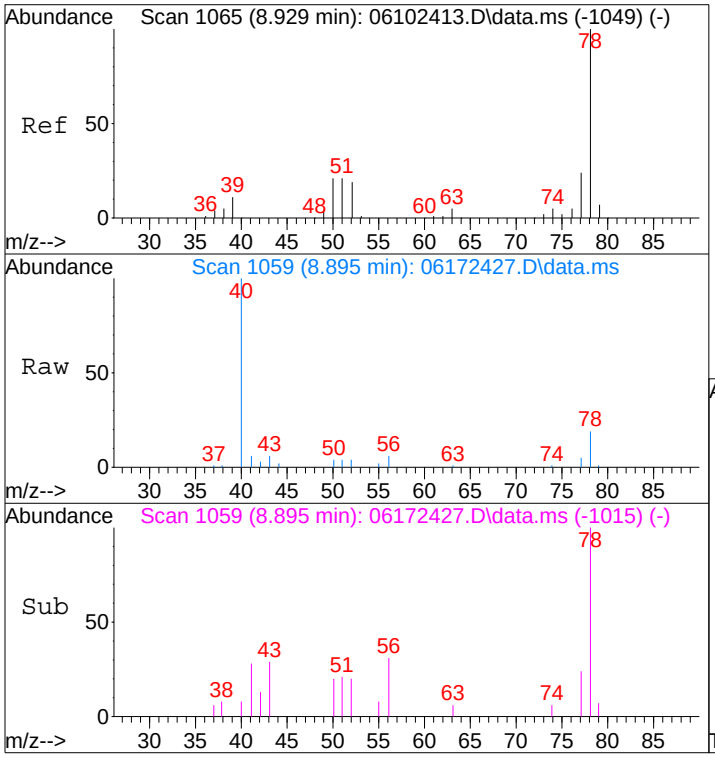


#32
Chloroform
Concen: 1.11 ng
RT: 7.34 min Scan# 786
Delta R.T. -0.010 min
Lab File: 06172427.D
Acq: 17 Jun 2024 23:18

Tgt Ion: 83 Resp: 29762

Ion	Ratio	Lower	Upper
83	100		
85	62.9	44.4	84.4

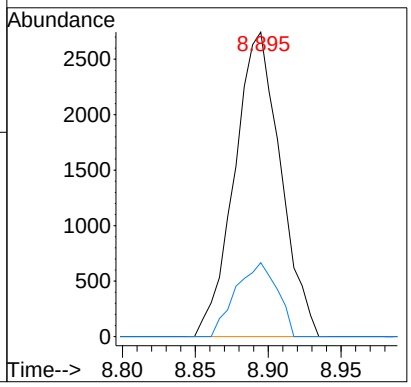


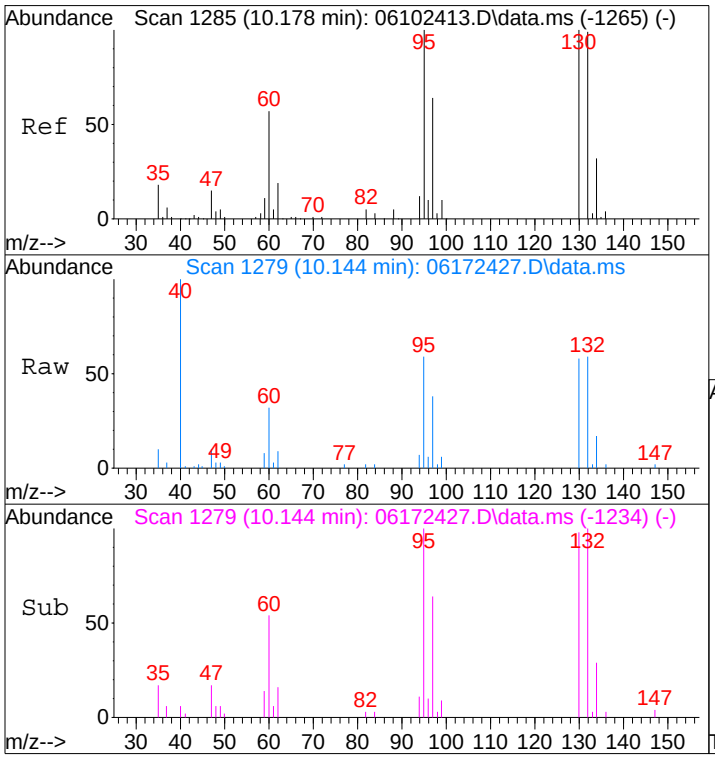


#41
Benzene
Concen: 0.11 ng
RT: 8.89 min Scan# 1059
Delta R.T. -0.002 min
Lab File: 06172427.D
Acq: 17 Jun 2024 23:18

Tgt Ion: 78 Resp: 6025

Ion	Ratio	Lower	Upper
78	100		
77	21.9	4.0	44.0

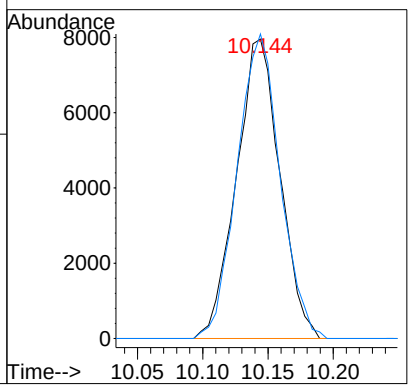


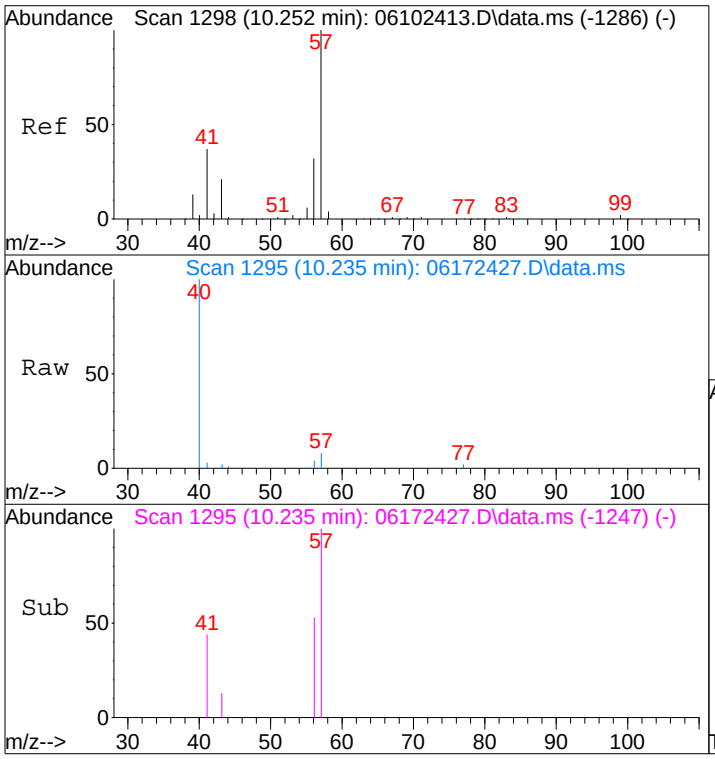


#47
Trichloroethene
Concen: 1.12 ng
RT: 10.14 min Scan# 1279
Delta R.T. 0.005 min
Lab File: 06172427.D
Acq: 17 Jun 2024 23:18

Tgt Ion:130 Resp: 18425

Ion	Ratio	Lower	Upper
130	100		
132	100.6	77.9	117.9

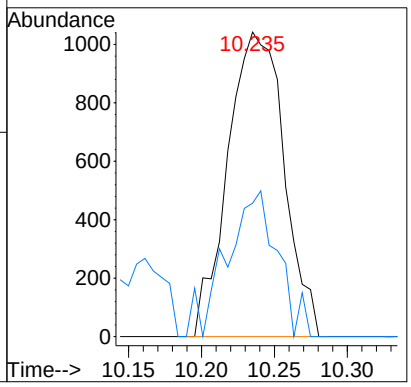


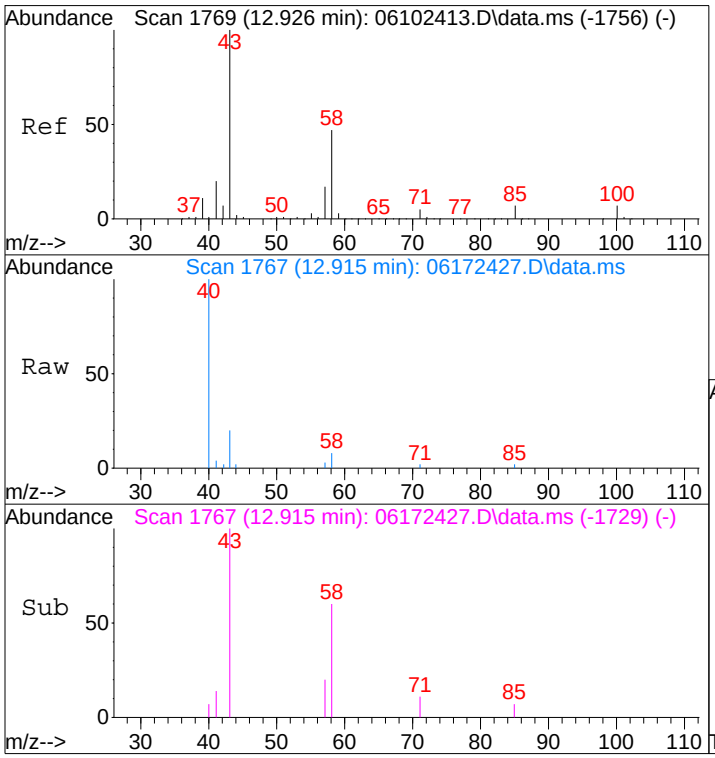


#49
2,2,4-Trimethylpentane (Isooctane)
Concen: 0.05 ng
RT: 10.23 min Scan# 1295
Delta R.T. 0.022 min
Lab File: 06172427.D
Acq: 17 Jun 2024 23:18

Tgt Ion: 57 Resp: 2797

Ion	Ratio	Lower	Upper
57	100		
41	43.6	16.1	56.1

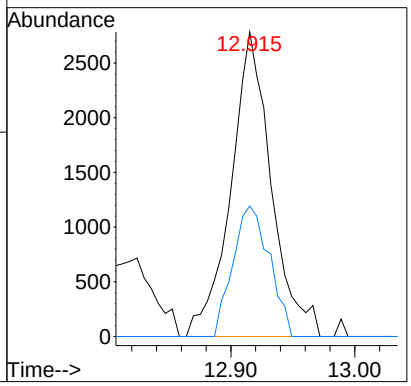


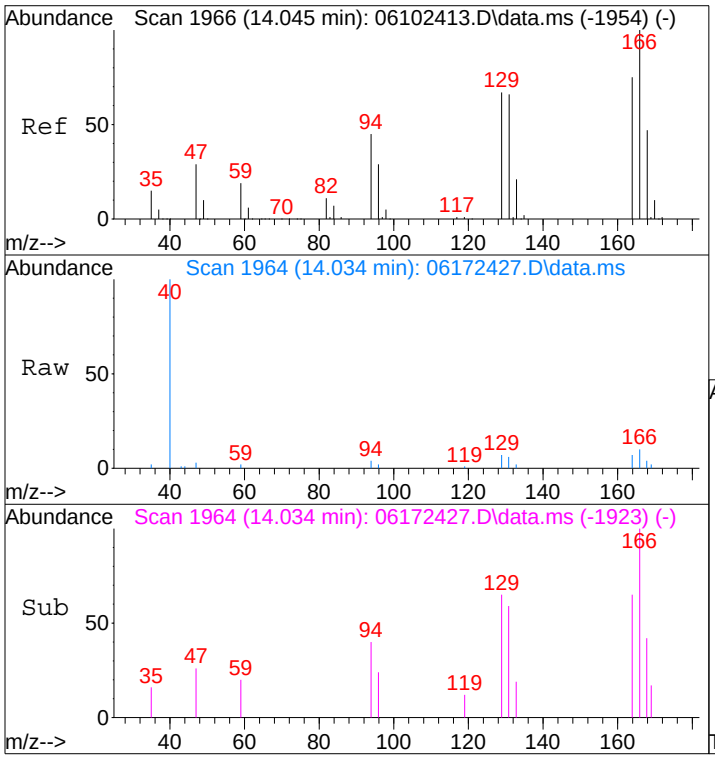


#59
2-Hexanone
Concen: 0.18 ng
RT: 12.92 min Scan# 1767
Delta R.T. -0.034 min
Lab File: 06172427.D
Acq: 17 Jun 2024 23:18

Tgt Ion: 43 Resp: 6313

Ion	Ratio	Lower	Upper
43	100		
58	38.8	25.9	65.9

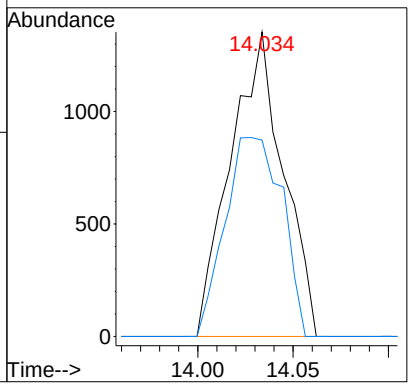


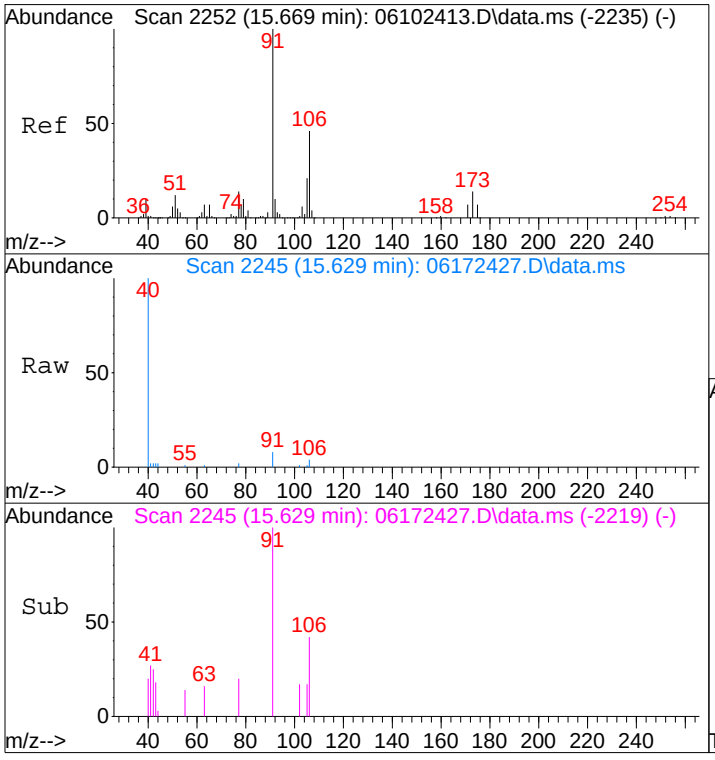


#64
Tetrachloroethene
Concen: 0.13 ng
RT: 14.03 min Scan# 1964
Delta R.T. -0.017 min
Lab File: 06172427.D
Acq: 17 Jun 2024 23:18

Tgt Ion:166 Resp: 2603

Ion	Ratio	Lower	Upper
166	100		
164	70.8	56.9	96.9

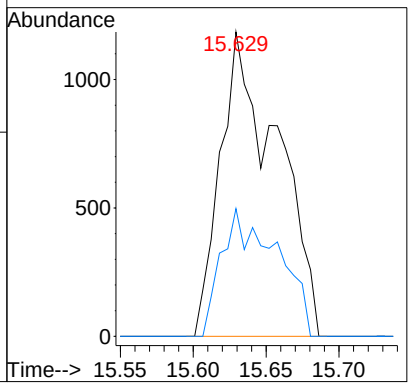




#67
m- & p-Xylenes
Concen: 0.06 ng
RT: 15.63 min Scan# 2245
Delta R.T. -0.051 min
Lab File: 06172427.D
Acq: 17 Jun 2024 23:18

Tgt Ion: 91 Resp: 3214

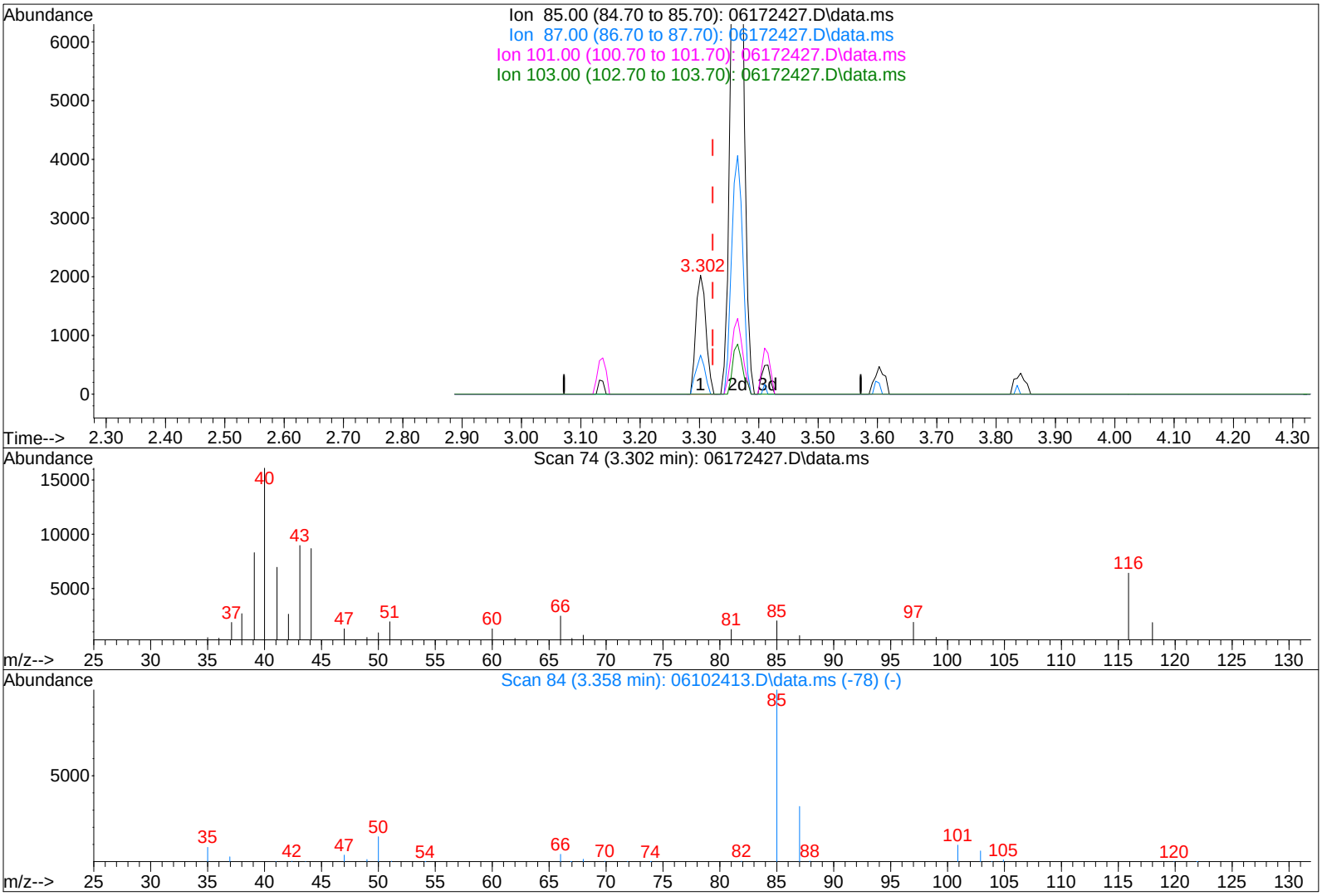
Ion	Ratio	Lower	Upper
91	100		
106	40.9	25.9	65.9



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\17\06172427.D Vial: 16
Acq On : 17 Jun 2024 23:18 Operator: SC
Sample : P2402249-011 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 10:59:42 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06172427.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.302min (-0.020) 0.07ng

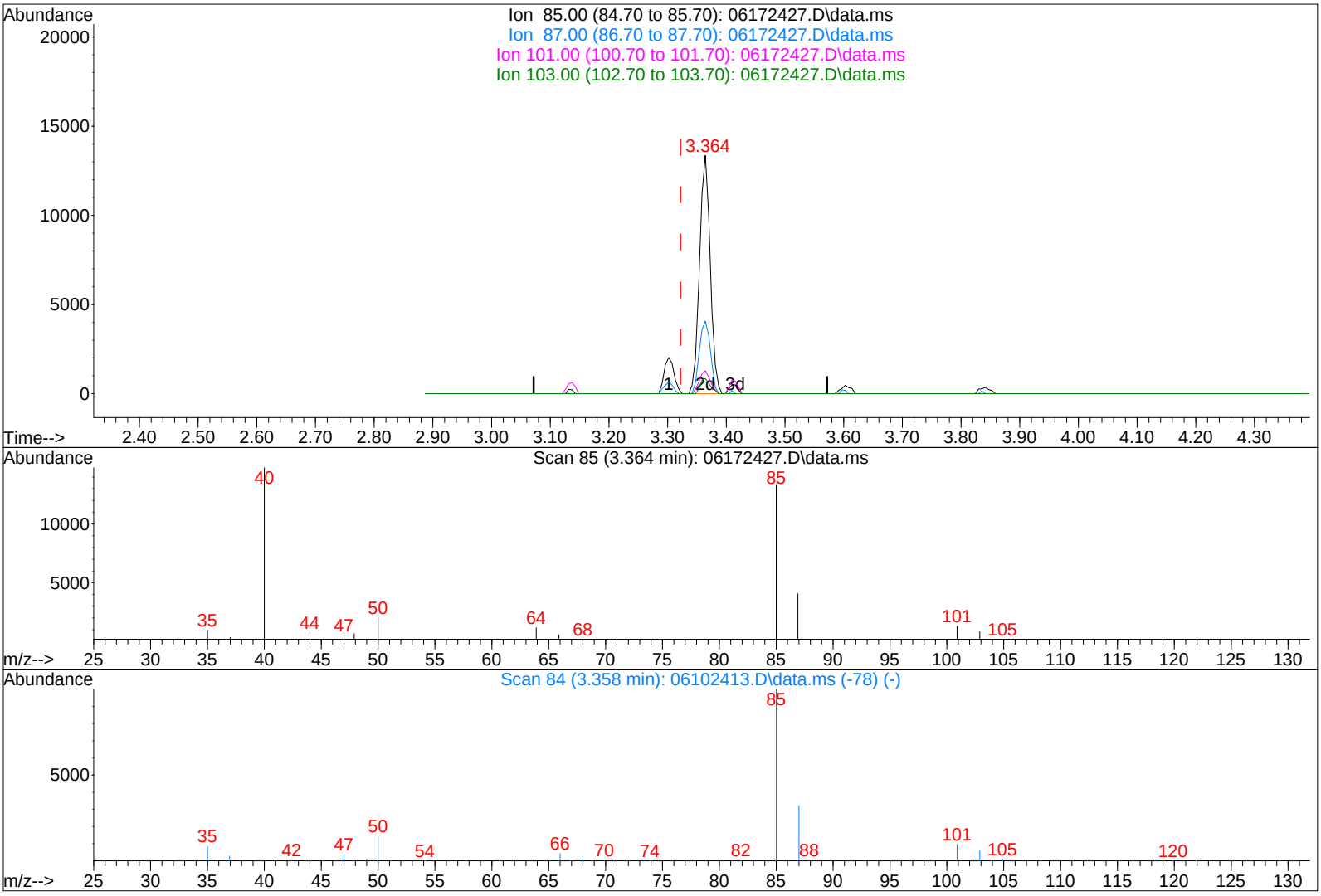
response 2381

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	29.74
101.00	9.80	0.00
103.00	6.30	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\17\06172427.D Vial: 16
Acq On : 17 Jun 2024 23:18 Operator: SC
Sample : P2402249-011 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 10:59:42 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06172427.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.364min (+0.042) 0.52ng m

response 16944

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	31.50
101.00	9.80	9.43
103.00	6.30	5.89

WP

MJ 6/28/24

CG 6/29/24

Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\17\06172427.D Vial: 16
Acq On : 17 Jun 2024 23:18 Operator: SC
Sample : P2402249-011 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:49:22 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

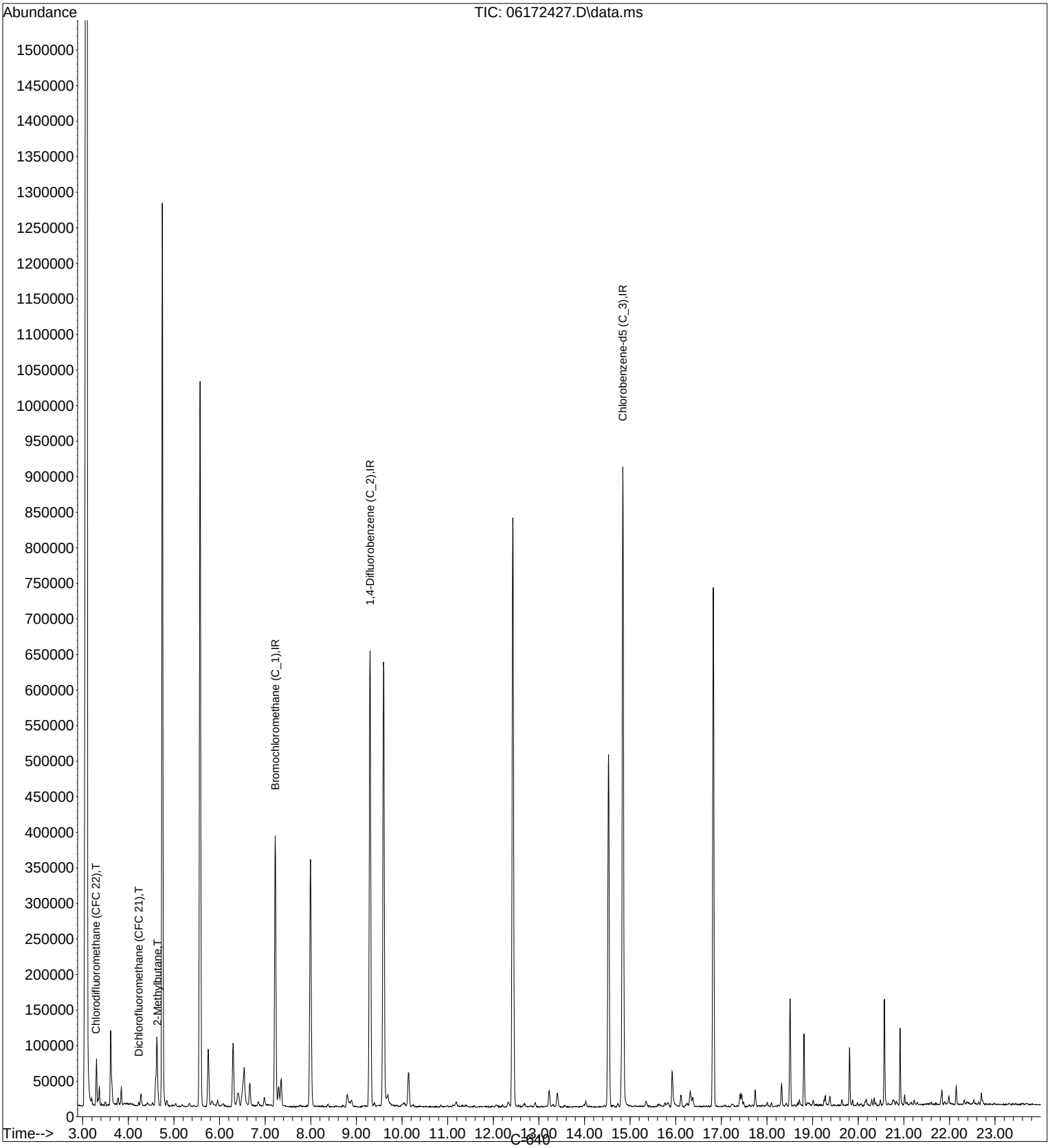
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.22	130	137439	12.500	ng		-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	610213	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	142606	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	3.13	85	157	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.19	83	1336	N.D.			
4) 1,1-Difluoroethane	0.00	65	0	N.D.			
5) Chlorodifluoromethane ...	3.29	67	957	0.204	ng		89
6) 1-Chloro-1,1-Difluoroe...	3.50	65	422	N.D.			
7) Dichlorofluoromethane ...	4.23	67	4223	0.134	ng		100
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	4.56	83	429	N.D.			
10) 2-Methylbutane	4.64	57	4019	0.245	ng	#	47
11) Methyl Acetate	5.33	43	1922	N.D.			
12) 2-Methylpentane	6.40	71	53	N.D.			
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	0.00	84	0	N.D.			
17) 2,3-Dimethylpentane	9.52	56	53	N.D.			
18) Dibromomethane	9.80	174	112	N.D.			
20) Methyl Cyclohexane	11.41	55	279	N.D.			
21) 1,3-Dichloropropane	0.00	76	0	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	16.32	75	928	N.D.			
25) Bromobenzene	0.00	77	0	N.D.			
26) 2-Chlorotoluene	17.61	91	654	N.D.			
27) 4-Chlorotoluene	17.68	91	1593	N.D.			
28) Indane	19.12	117	52	N.D.			
29) Indene	0.00	115	0	N.D.			
30) 1,2,4,5-Tetramethylben...	20.22	119	224	N.D.			
31) 1,2,3,4-Tetramethylben...	20.22	119	224	N.D.			
32) 1,2,3,5-Tetramethylben...	20.60	119	68	N.D.			
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172427.D Vial: 16
Acq On : 17 Jun 2024 23:18 Operator: SC
Sample : P2402249-011 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:49:22 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

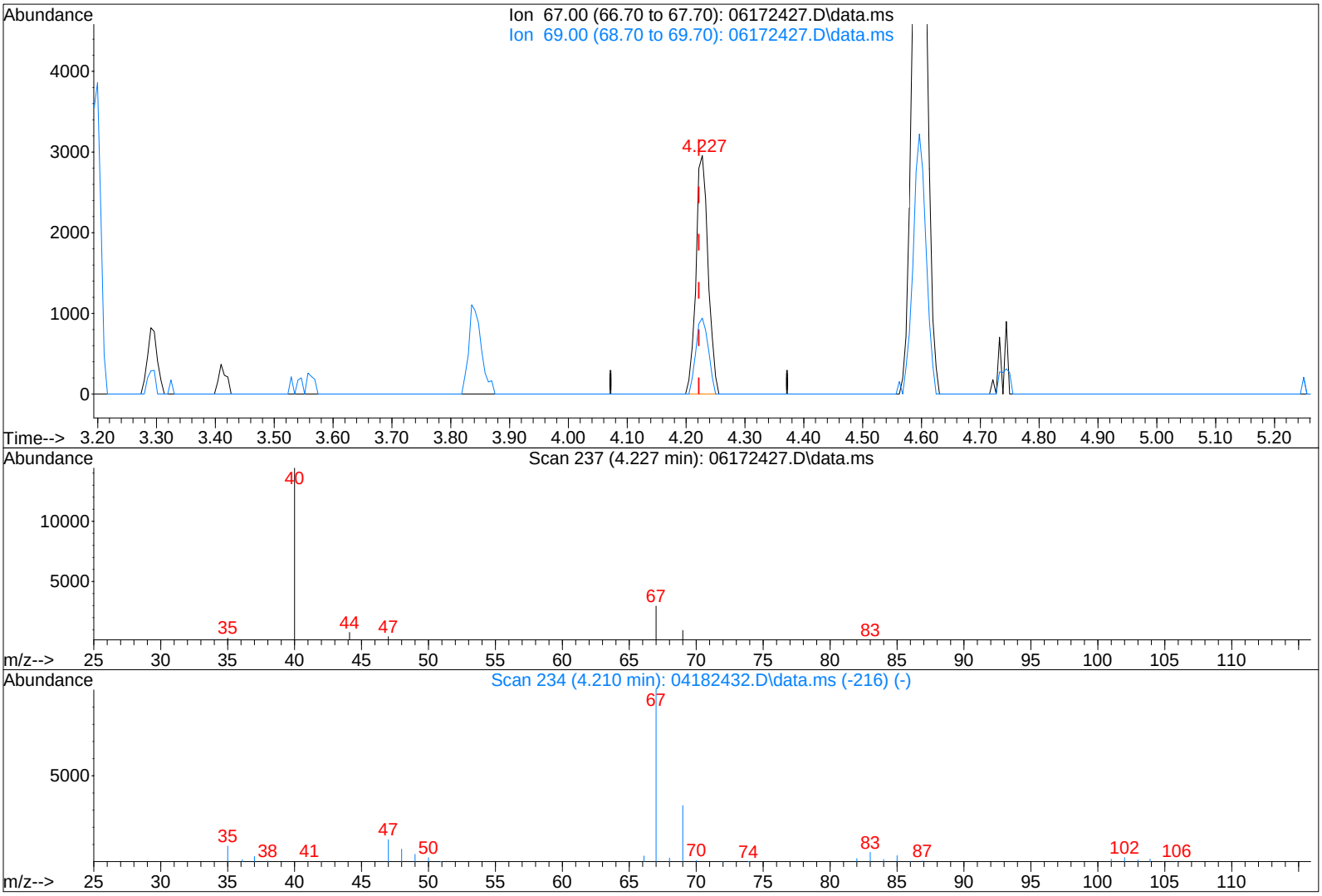


Quantitation Report (Qedit)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\17\06172427.D Vial: 16
Acq On : 17 Jun 2024 23:18 Operator: SC
Sample : P2402249-011 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:49:22 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06172427.D\data.ms

(7) Dichlorofluoromethane (CFC 21) (T)

4.227min (+0.006) 0.13ng

response 4223

Ion	Exp%	Act%
67.00	100	100
69.00	32.40	32.54
0.00	0.00	0.00
0.00	0.00	0.00

LSC Area Percent Report

MJ 6/28/24

Data Path : I:\MS09\DATA\2024 06\17\
Data File : 06172427.D
Acq On : 17 Jun 2024 23:18
Operator : SC
Sample : P2402249-011 (400mL)
Misc : S37-06062402
ALS Vial : 16 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06172427.D\data.ms

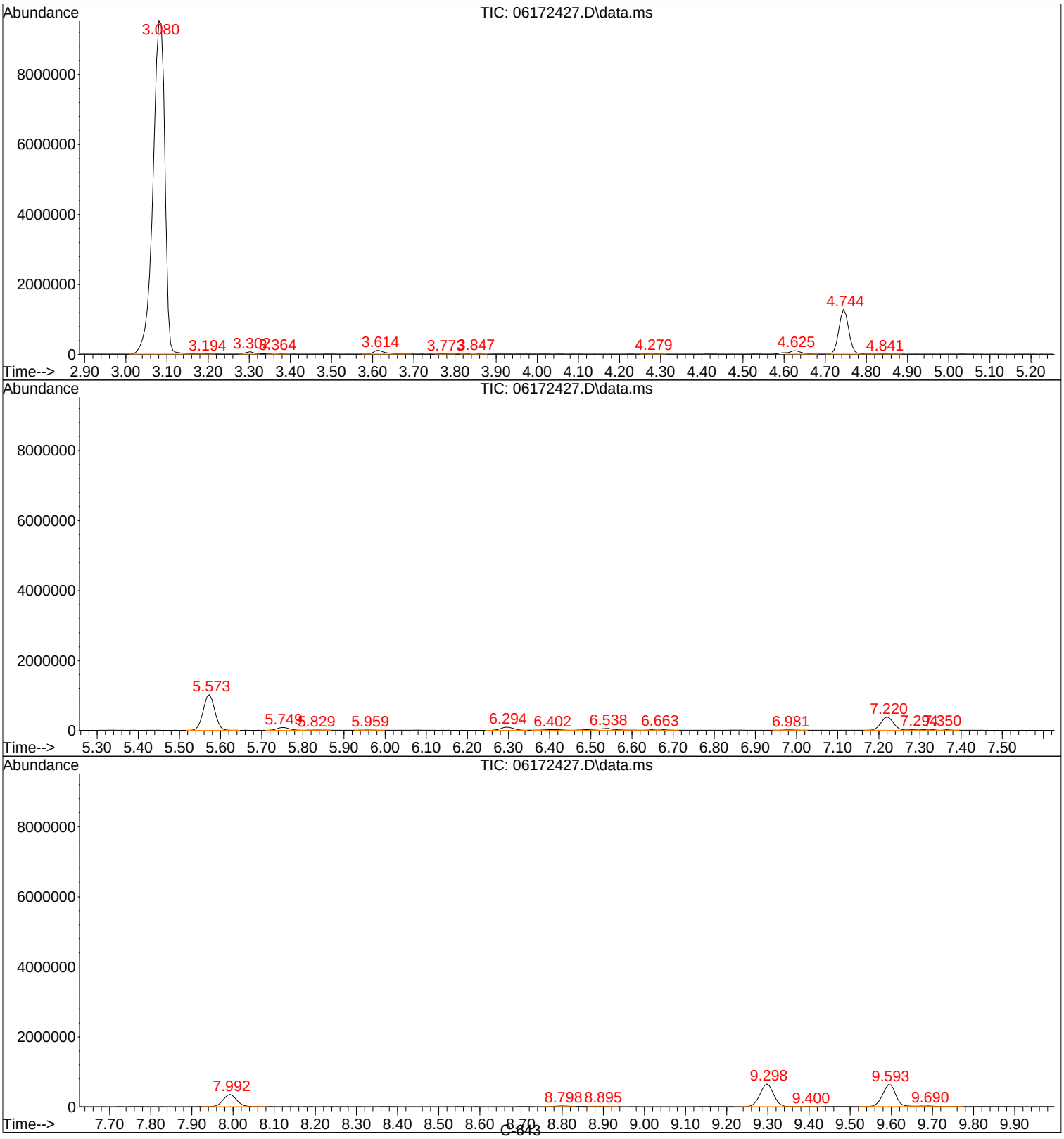
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.080	22	35	53	rBV	9507373	19090124	100.00%	65.174%
2	3.194	53	55	59	rVB2	9187	10278	0.05%	0.035%
3	3.302	69	74	78	rBV3	64949	91405	0.48%	0.312%
4	3.364	81	85	91	rVB	25995	36308	0.19%	0.124%
5	3.614	122	129	143	rBV	105579	209920	1.10%	0.717%
6	3.773	153	157	162	rBV3	9747	15544	0.08%	0.053%
7	3.847	164	170	176	rVB2	23556	32376	0.17%	0.111%
8	4.279	241	246	252	rVB	15535	27074	0.14%	0.092%
9	4.625	303	307	317	rVB	96071	185740	0.97%	0.634%
10	4.744	320	328	341	rBV	1269393	2118602	11.10%	7.233%
11	4.841	341	345	353	rVB5	7855	15411	0.08%	0.053%
12	5.573	464	474	487	rVB	1019908	1997941	10.47%	6.821%
13	5.749	498	505	515	rBV	80407	172531	0.90%	0.589%
14	5.829	515	519	526	rVV4	5253	13200	0.07%	0.045%
15	5.959	536	542	549	rVB3	8188	16692	0.09%	0.057%
16	6.294	592	601	610	rBV	89848	199344	1.04%	0.681%
17	6.402	612	620	629	rVV2	18753	61658	0.32%	0.211%
18	6.538	629	644	658	rVV2	53956	187788	0.98%	0.641%
19	6.663	658	666	675	rVB	30927	64764	0.34%	0.221%
20	6.981	715	722	730	rBV2	12131	27049	0.14%	0.092%
21	7.220	754	764	772	rBV	380163	805530	4.22%	2.750%
22	7.294	772	777	782	rVV	27164	62352	0.33%	0.213%
23	7.350	782	787	795	rVB	37605	76578	0.40%	0.261%
24	7.992	888	900	915	rVB	347531	786326	4.12%	2.685%
25	8.798	1035	1042	1048	rBV2	17969	47215	0.25%	0.161%
26	8.895	1053	1059	1066	rVB3	8760	23076	0.12%	0.079%
27	9.298	1119	1130	1141	rBV	640674	1463286	7.67%	4.996%
28	9.400	1141	1148	1153	rVB2	4958	10624	0.06%	0.036%
29	9.593	1169	1182	1194	rBV	624474	1397033	7.32%	4.769%
30	9.690	1194	1199	1214	rVB6	15152	45329	0.24%	0.155%

Sum of corrected areas: 29291098

Data Path : I:\MS09\DATA\2024 06\17\
Data File : 06172427.D
Acq On : 17 Jun 2024 23:18
Operator : SC
Sample : P2402249-011 (400mL)
Misc : S37-06062402
ALS Vial : 16 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\17\\
Data File : 06172427.D
Acq On : 17 Jun 2024 23:188
Operator : SCC
Sample : P2402249-011 (400mL))
Misc : S37-060624022
ALS Vial : 16 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

						--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182408.D Vial: 5
Acq On : 18 Jun 2024 13:22 Operator: SC
Sample : P2402249-012 (400mL) Inst : MS09
Misc : S37-06062402

6/19/24

Quant Time: Jun 19 14:08:44 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	145316	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	636690	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	145616	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	318554	12.334	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.64%				
57) Toluene-d8 (SS2)	12.43	98	715458	12.839	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.72%				
73) Bromofluorobenzene (SS3)	16.83	174	249959	12.422	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.36%				
Target Compounds							Qvalue
2) Propene	3.31	42	3482	0.187	ng		92
3) Dichlorodifluoromethan...	3.38	85	18554	0.543	ng		98
4) Chloromethane	3.51	50	8341	0.357	ng		99
5) 1,2-Dichloro-1,1,2,2-t...	3.61	135	332	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	3.81	54	227	N.D.			
8) Bromomethane	4.02	94	169	N.D.			
9) Chloroethane	4.15	64	251	N.D.			
10) Ethanol	4.28	45	12970	0.918	ng		84
11) Acetonitrile	0.00	41	0	N.D. d			
12) Acrolein	4.53	56	6461	0.618	ng		92
13) Acetone	4.63	58	59404m	5.262	ng		
14) Trichlorofluoromethane	4.76	101	9128	0.264	ng		99
15) 2-Propanol (Isopropanol)	4.85	45	5548	0.122	ng	#	4
16) Acrylonitrile	5.04	53	121	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.33	59	1616	N.D.			
19) Methylene Chloride	5.35	84	2120	0.133	ng		98
20) 3-Chloro-1-propene (Al...	5.46	41	313	N.D.			
21) Trichlorotrifluoroethane	5.59	151	1889	0.129	ng		97
22) Carbon Disulfide	5.60	76	4228	0.082	ng		88
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	6.42	86	3270	1.255	ng	#	18
27) 2-Butanone (MEK)	6.67	72	11251	1.259	ng		98
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.			
30) Ethyl Acetate	7.29	61	848	0.155	ng		85
31) n-Hexane	7.30	57	242	N.D.			
32) Chloroform	7.36	83	606	N.D.			
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.12	62	696	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.81	56	3247	No Calib		#	
41) Benzene	8.90	78	2798	N.D.			
42) Carbon Tetrachloride	9.07	117	1158	N.D.			
43) Cyclohexane	9.29	84	829	N.D.			
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.08	83	292	N.D.			
47) Trichloroethene	10.14	130	305	N.D.			
48) 1,4-Dioxane	10.14	88	278	N.D.			
49) 2,2,4-Trimethylpentane...	10.23	57	151	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182408.D Vial: 5
Acq On : 18 Jun 2024 13:22 Operator: SC
Sample : P2402249-012 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 14:08:44 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

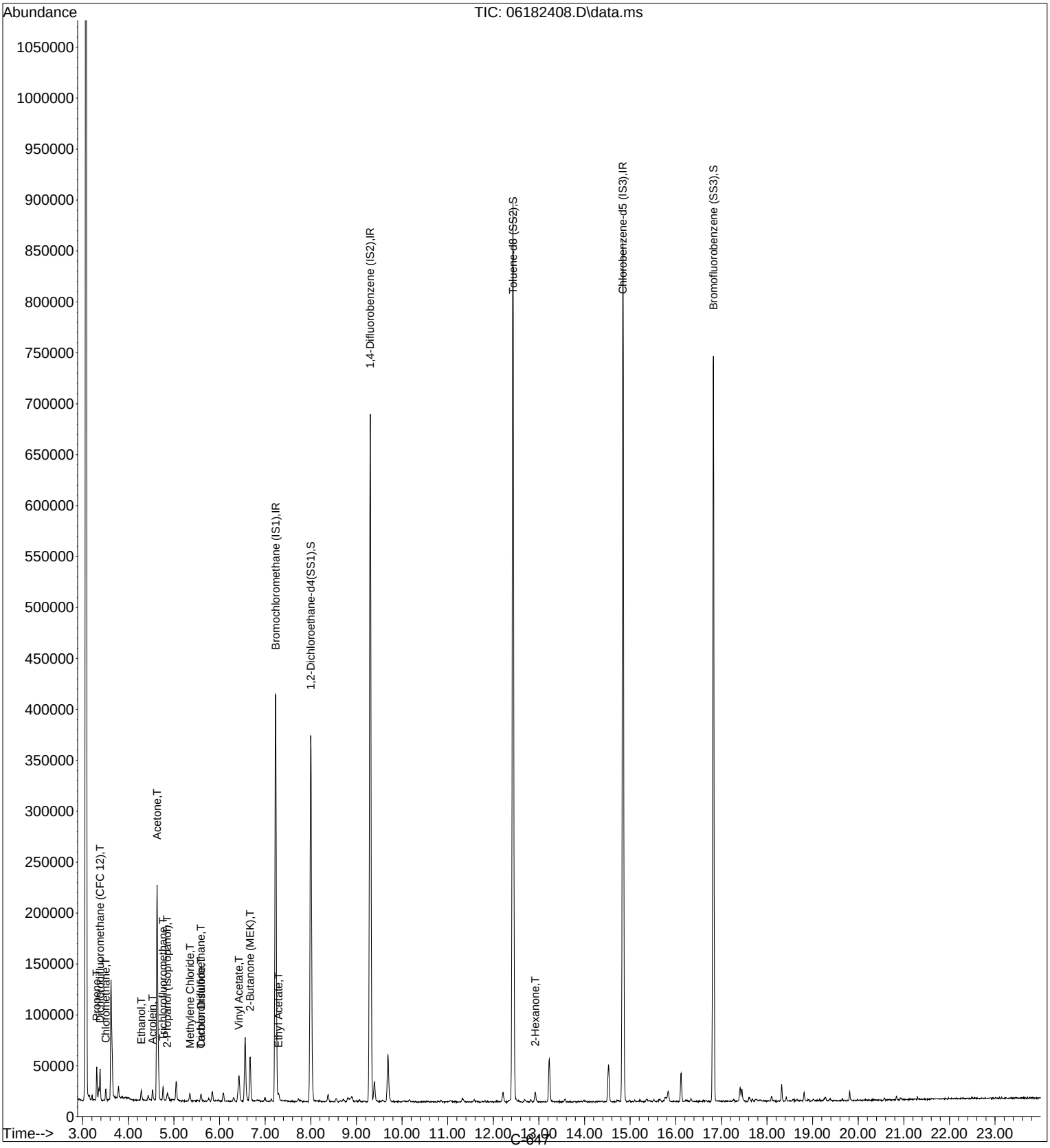
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	0.00	71	0	N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	0.00	58	0	N.D. d	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
58) Toluene	12.56	91	1743	N.D.	
59) 2-Hexanone	12.92	43	9839	0.270 ng	95
60) Dibromochloromethane	13.08	129	405	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	13.78	43	736	N.D.	
63) n-Octane	0.00	57	0	N.D.	
64) Tetrachloroethene	14.03	166	400	N.D.	
65) Chlorobenzene	14.90	112	725	N.D.	
66) Ethylbenzene	15.41	91	999	N.D.	
67) m- & p-Xylenes	15.65	91	2052	N.D.	
68) Bromoform	15.67	173	631	N.D.	
69) Styrene	16.10	104	193	N.D.	
70) o-Xylene	16.24	91	880	N.D.	
71) n-Nonane	16.61	43	493	N.D.	
72) 1,1,2,2-Tetrachloroethane	16.21	83	381	N.D.	
74) Cumene	17.03	105	874	N.D.	
75) alpha-Pinene	0.00	93	0	N.D.	
76) n-Propylbenzene	17.68	91	1591	N.D.	
77) 3-Ethyltoluene	17.03	105	874	No Calib	#
78) 4-Ethyltoluene	17.86	105	829	N.D.	
79) 1,3,5-Trimethylbenzene	17.96	105	536	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.03	105	874	No Calib	#
82) 1,2,4-Trimethylbenzene	18.43	105	824	N.D.	
83) n-Decane	17.09	58	130	No Calib	#
84) Benzyl Chloride	18.57	91	393	N.D.	
85) 1,3-Dichlorobenzene	18.58	146	784	N.D.	
86) 1,4-Dichlorobenzene	18.66	146	779	N.D.	
87) sec-Butylbenzene	18.74	105	969	N.D.	
88) 4-Isopropyltoluene (p-...	18.92	119	1073	N.D.	
89) 1,2,3-Trimethylbenzene	17.03	105	874	No Calib	#
90) 1,2-Dichlorobenzene	19.04	146	535	N.D.	
91) d-Limonene	0.00	68	0	N.D.	
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	1316	N.D.	
95) Naphthalene	20.94	128	1632	N.D.	
96) n-Dodecane	0.00	58	0	N.D.	
97) Hexachlorobutadiene	21.30	225	542	N.D.	
98) Cyclohexanone	15.36	55	1069	No Calib	#
99) tert-Butylbenzene	18.42	119	837	N.D.	
100) n-Butylbenzene	19.39	91	1035	N.D.	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182408.D Vial: 5
Acq On : 18 Jun 2024 13:22 Operator: SC
Sample : P2402249-012 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 14:08:44 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

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Acq On : 18 Jun 2024 13:22 Operator: SC
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Misc : S37-06062402

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Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/19/24

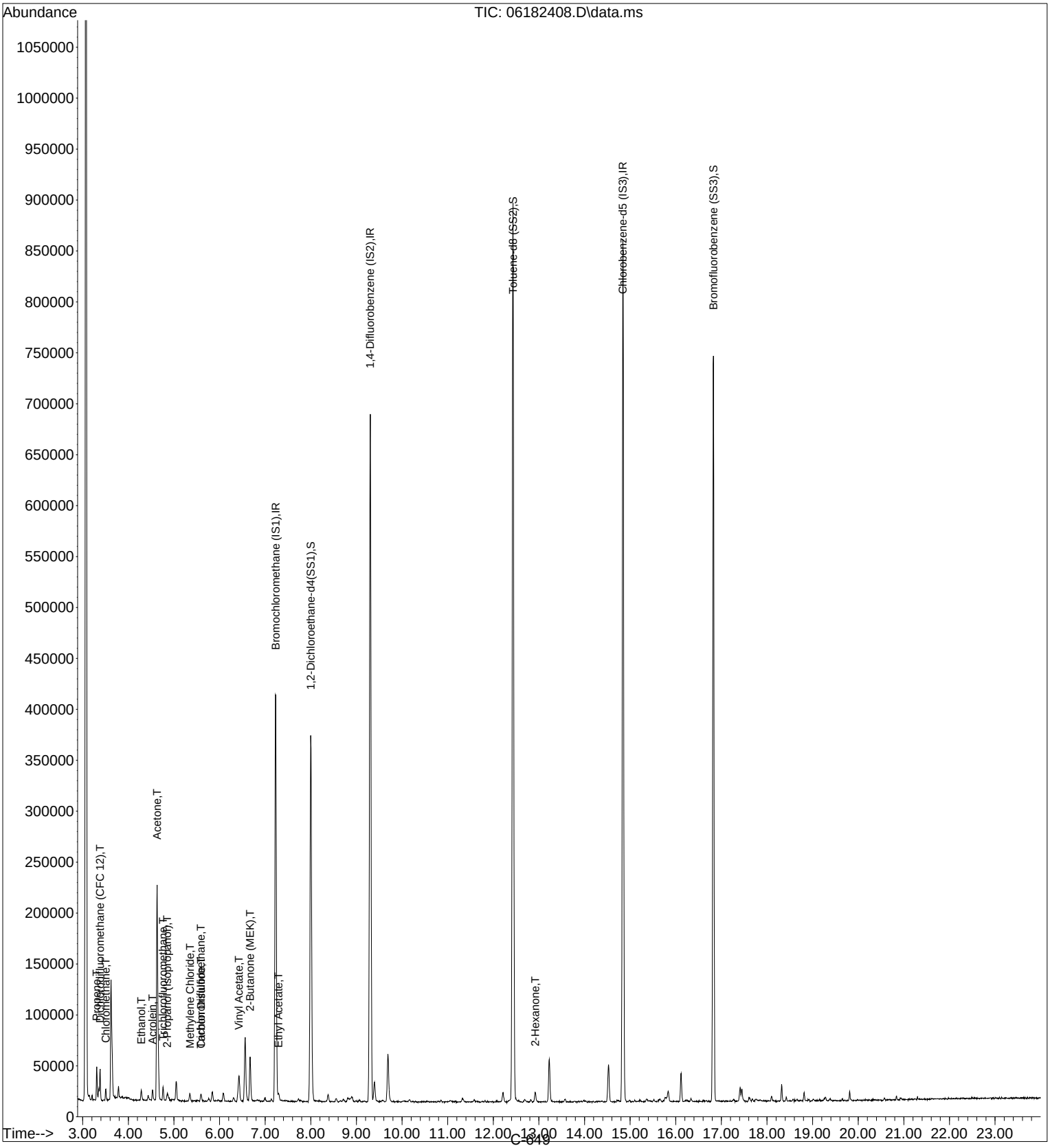
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	145316	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	636690	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	145616	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	318554	12.334	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.64%				
57) Toluene-d8 (SS2)	12.43	98	715458	12.839	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.72%				
73) Bromofluorobenzene (SS3)	16.83	174	249959	12.422	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.36%				
Target Compounds							Qvalue
2) Propene	3.31	42	3482	0.187	ng		92
3) Dichlorodifluoromethan...	3.38	85	18554	0.543	ng		98
4) Chloromethane	3.51	50	8341	0.357	ng		99
10) Ethanol	4.28	45	12970	0.918	ng		84
12) Acrolein	4.53	56	6461	0.618	ng		92
13) Acetone	4.63	58	59404m	5.262	ng		
14) Trichlorofluoromethane	4.76	101	9128	0.264	ng		99
15) 2-Propanol (Isopropanol)	4.85	45	5548	0.122	ng	#	4
19) Methylene Chloride	5.35	84	2120	0.133	ng		98
21) Trichlorotrifluoroethane	5.59	151	1889	0.129	ng		97
22) Carbon Disulfide	5.60	76	4228	0.082	ng		88
26) Vinyl Acetate	6.42	86	3270	1.255	ng	#	18
27) 2-Butanone (MEK)	6.67	72	11251	1.259	ng		98
30) Ethyl Acetate	7.29	61	848	0.155	ng		85
59) 2-Hexanone	12.92	43	9839	0.270	ng		95

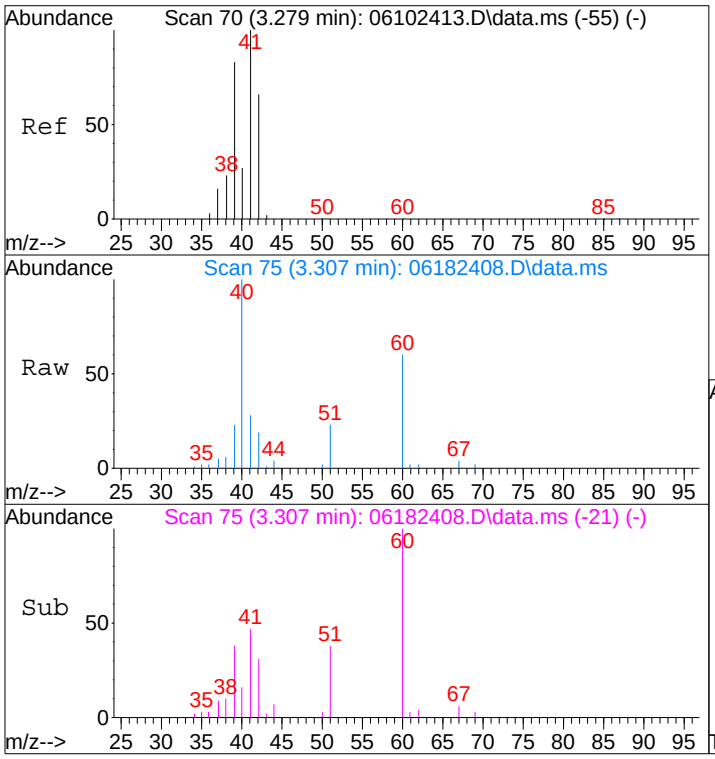
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182408.D Vial: 5
Acq On : 18 Jun 2024 13:22 Operator: SC
Sample : P2402249-012 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 14:08:44 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

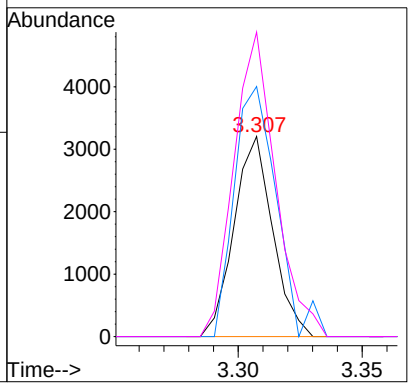


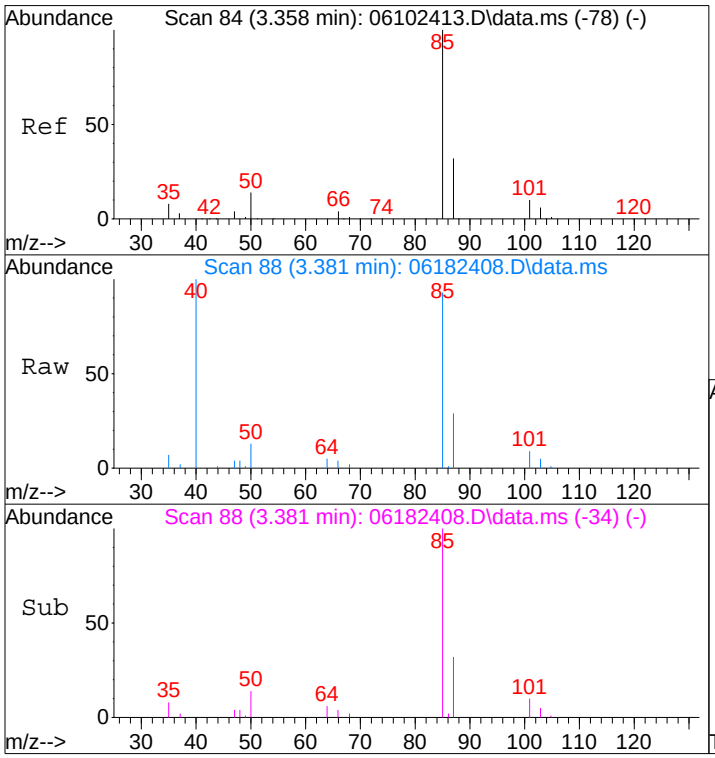


#2
Propene
Concen: 0.19 ng
RT: 3.31 min Scan# 75
Delta R.T. 0.058 min
Lab File: 06182408.D
Acq: 18 Jun 2024 13:22

Tgt Ion: 42 Resp: 3482

Ion	Ratio	Lower	Upper
42	100		
39	137.1	107.3	147.3
41	164.2	134.3	174.3

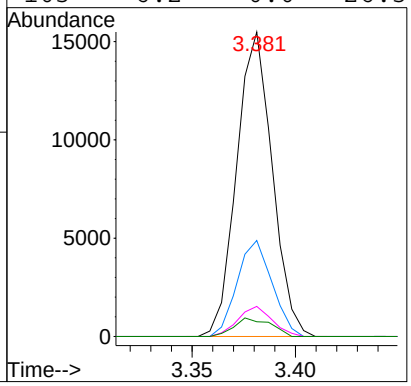


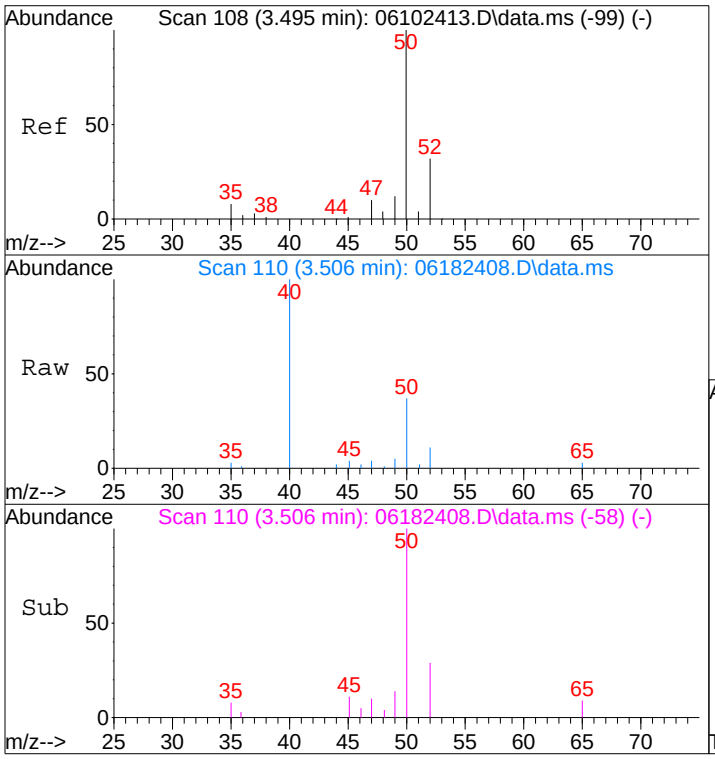


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.54 ng
RT: 3.38 min Scan# 88
Delta R.T. 0.059 min
Lab File: 06182408.D
Acq: 18 Jun 2024 13:22

Tgt Ion: 85 Resp: 18554

Ion	Ratio	Lower	Upper
85	100		
87	30.9	12.2	52.2
101	9.5	0.0	29.8
103	6.2	0.0	26.3

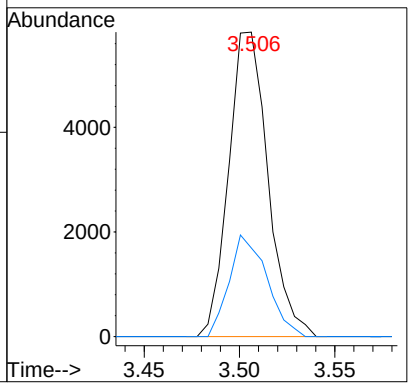


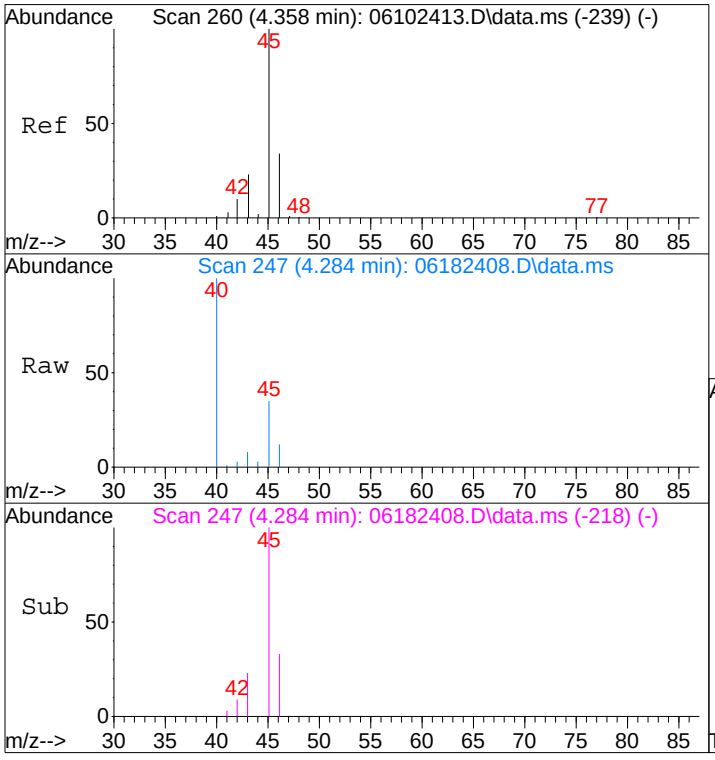


#4
Chloromethane
Concen: 0.36 ng
RT: 3.51 min Scan# 110
Delta R.T. 0.044 min
Lab File: 06182408.D
Acq: 18 Jun 2024 13:22

Tgt Ion: 50 Resp: 8341

Ion	Ratio	Lower	Upper
50	100		
52	32.0	12.4	52.4

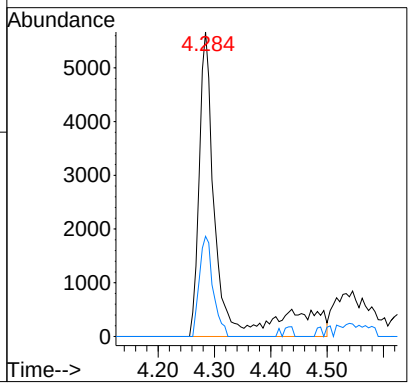


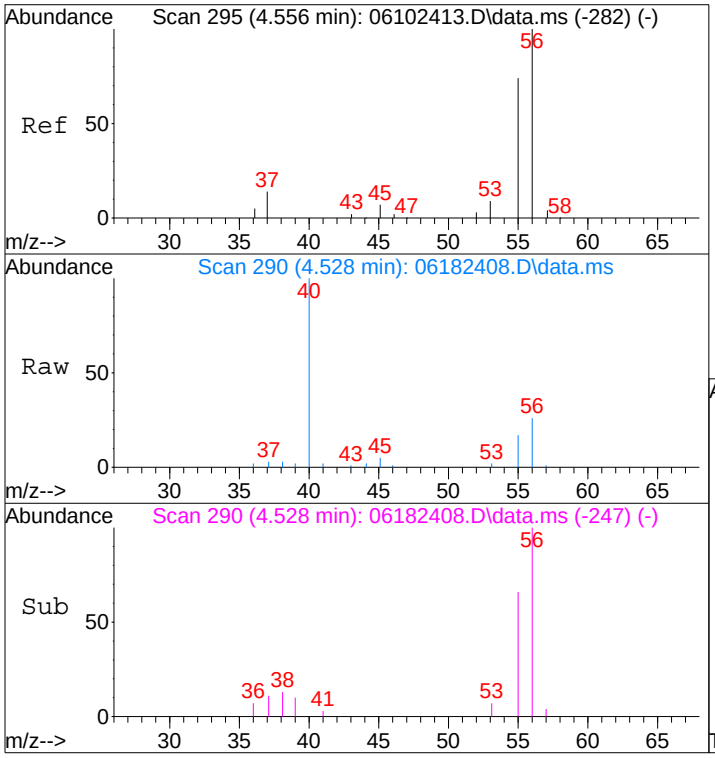


#10
Ethanol
Concen: 0.92 ng
RT: 4.28 min Scan# 247
Delta R.T. -0.083 min
Lab File: 06182408.D
Acq: 18 Jun 2024 13:22

Tgt Ion: 45 Resp: 12970

Ion	Ratio	Lower	Upper
45	100		
46	24.3	13.5	53.5

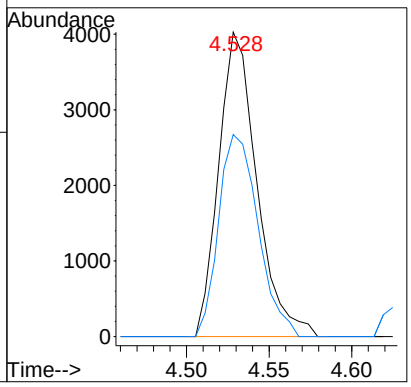


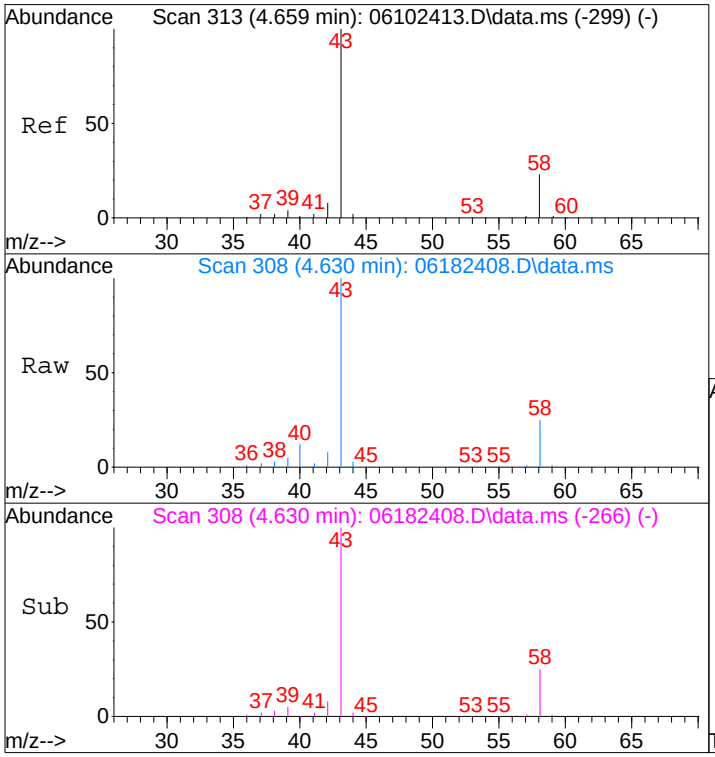


#12
Acrolein
Concen: 0.62 ng
RT: 4.53 min Scan# 290
Delta R.T. -0.007 min
Lab File: 06182408.D
Acq: 18 Jun 2024 13:22

Tgt Ion: 56 Resp: 6461

Ion	Ratio	Lower	Upper
56	100		
55	68.7	55.5	95.5

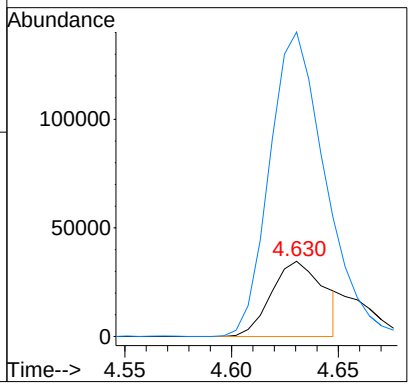


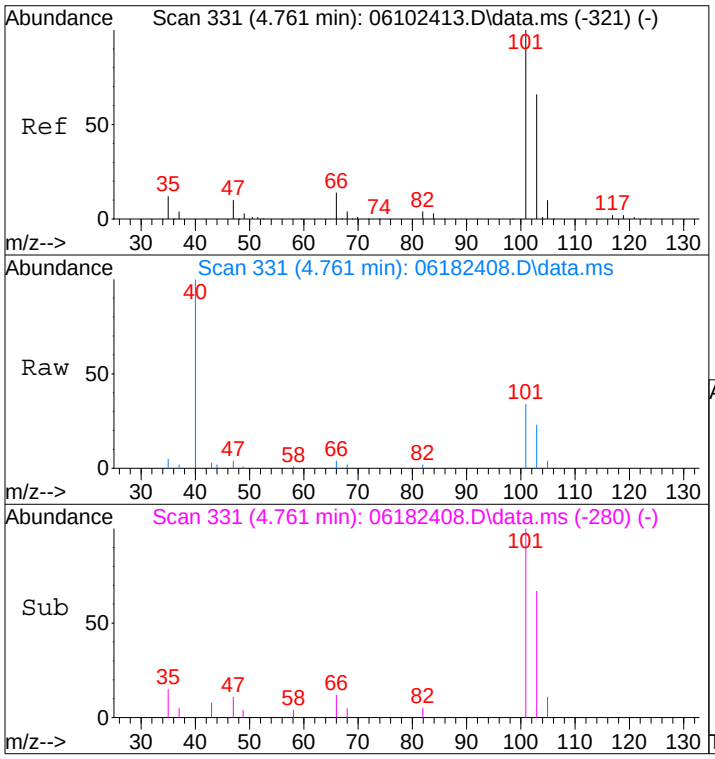


#13
Acetone
Concen: 5.26 ng m
RT: 4.63 min Scan# 308
Delta R.T. -0.012 min
Lab File: 06182408.D
Acq: 18 Jun 2024 13:22

Tgt Ion: 58 Resp: 59404

Ion	Ratio	Lower	Upper
58	100		
43	436.3	400.7	460.7

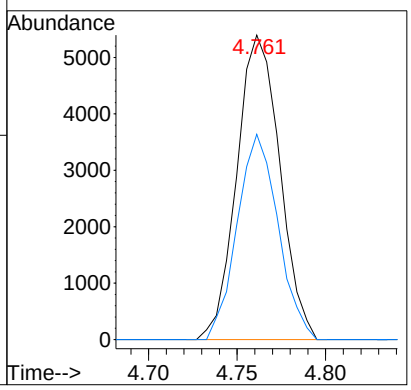


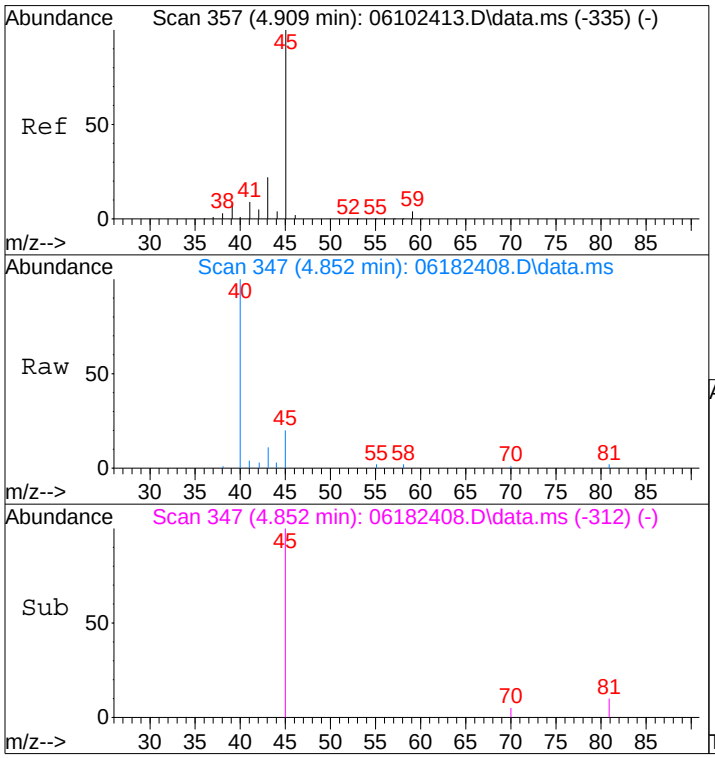


#14
Trichlorofluoromethane
Concen: 0.26 ng
RT: 4.76 min Scan# 331
Delta R.T. 0.040 min
Lab File: 06182408.D
Acq: 18 Jun 2024 13:22

Tgt Ion:101 Resp: 9128

Ion	Ratio	Lower	Upper
101	100		
103	64.1	44.9	84.9

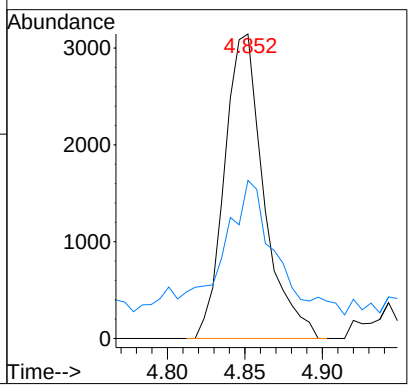


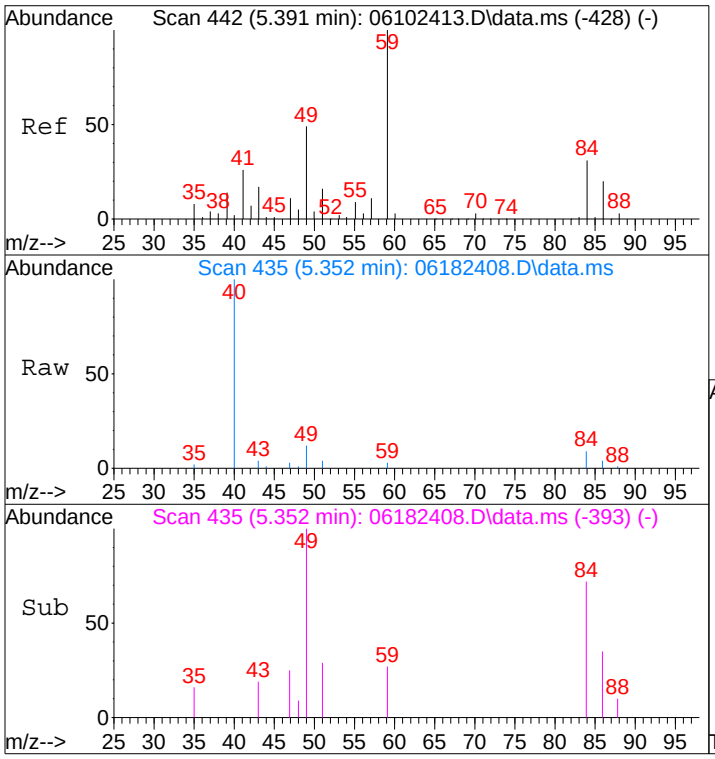


#15
2-Propanol (Isopropanol)
Concen: 0.12 ng
RT: 4.85 min Scan# 347
Delta R.T. -0.048 min
Lab File: 06182408.D
Acq: 18 Jun 2024 13:22

Tgt Ion: 45 Resp: 5548

Ion	Ratio	Lower	Upper
45	100		
43	68.7	2.5	42.5#

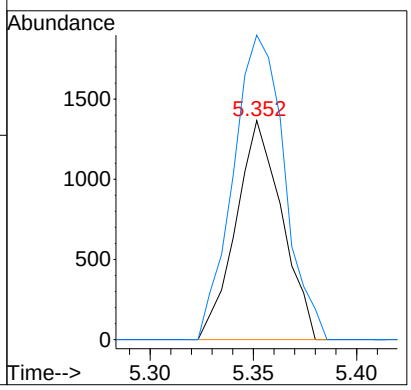


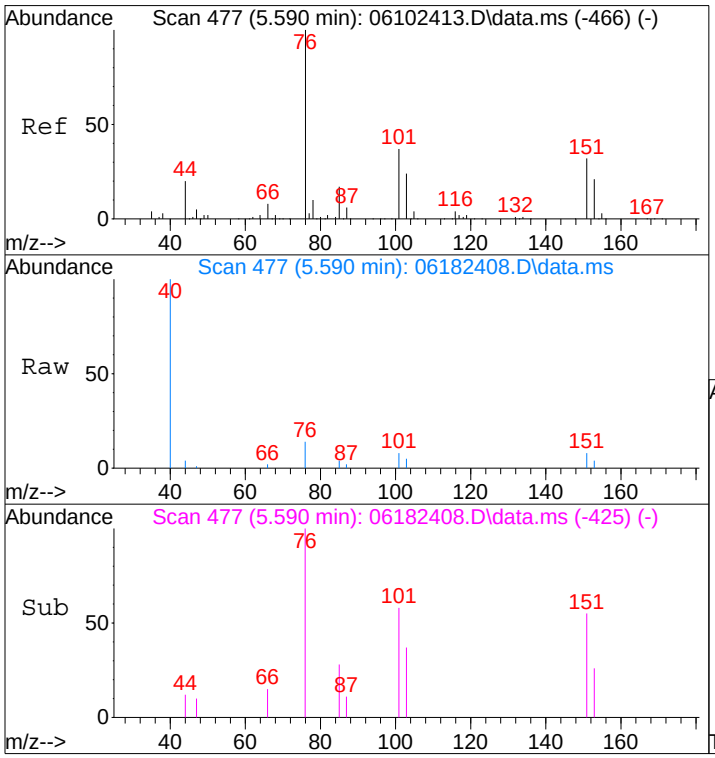


#19
Methylene Chloride
Concen: 0.13 ng
RT: 5.35 min Scan# 435
Delta R.T. -0.009 min
Lab File: 06182408.D
Acq: 18 Jun 2024 13:22

Tgt Ion: 84 Resp: 2120

Ion	Ratio	Lower	Upper
84	100		
49	155.0	132.9	182.9

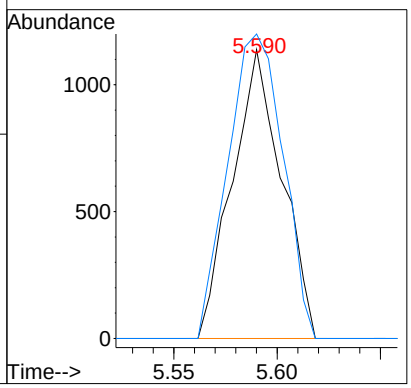


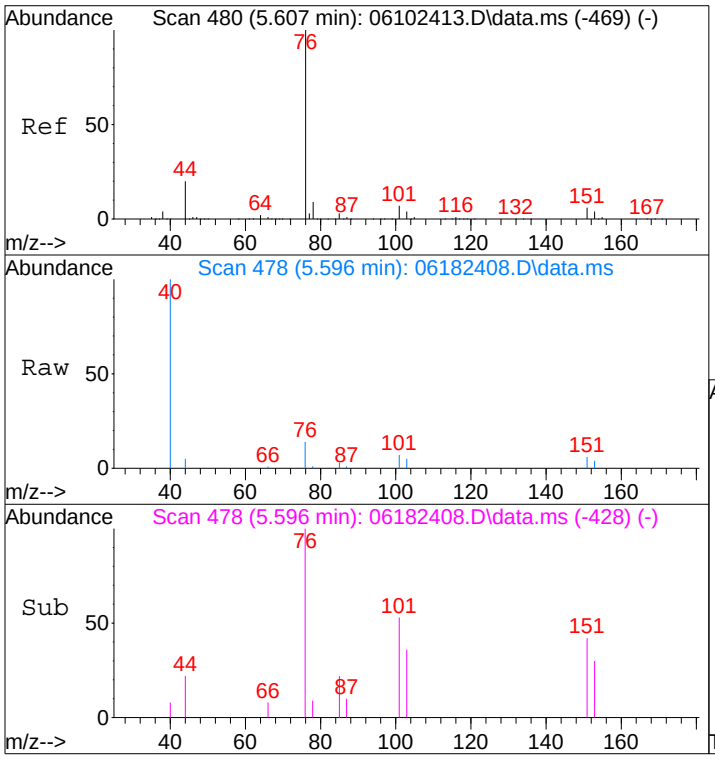


#21
Trichlorotrifluoroethane
Concen: 0.13 ng
RT: 5.59 min Scan# 477
Delta R.T. 0.044 min
Lab File: 06182408.D
Acq: 18 Jun 2024 13:22

Tgt Ion:151 Resp: 1889

Ion	Ratio	Lower	Upper
151	100		
101	118.2	95.0	135.0

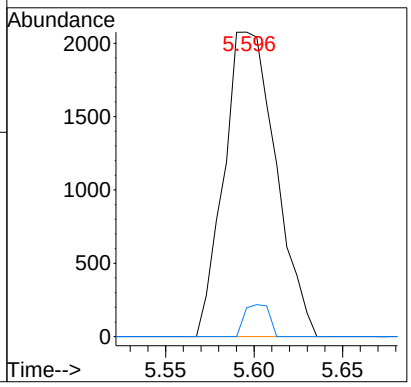


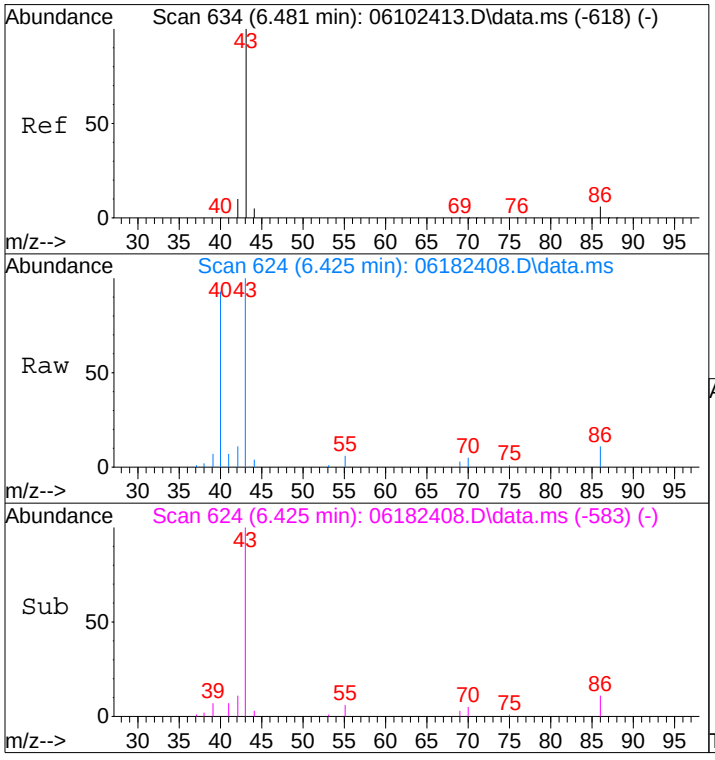


#22
Carbon Disulfide
Concen: 0.08 ng
RT: 5.60 min Scan# 478
Delta R.T. 0.033 min
Lab File: 06182408.D
Acq: 18 Jun 2024 13:22

Tgt Ion: 76 Resp: 4228

Ion	Ratio	Lower	Upper
76	100		
78	5.0	0.0	29.6

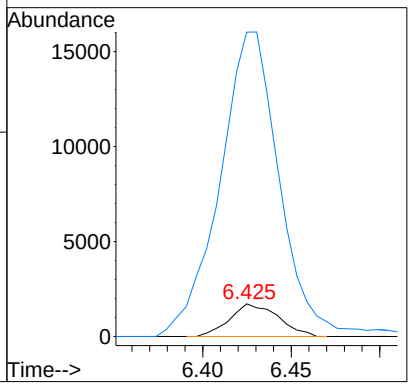


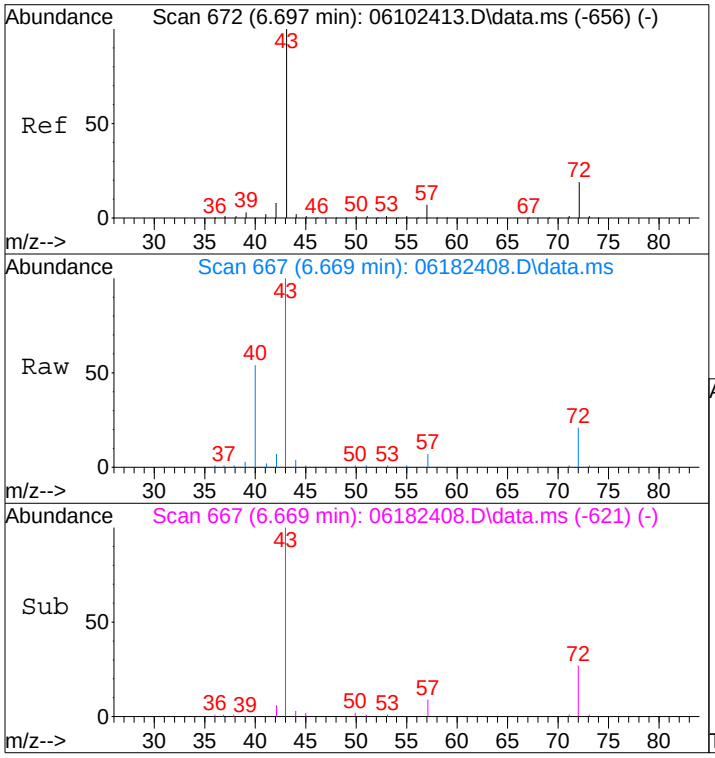


#26
Vinyl Acetate
Concen: 1.26 ng
RT: 6.42 min Scan# 624
Delta R.T. -0.014 min
Lab File: 06182408.D
Acq: 18 Jun 2024 13:22

Tgt Ion: 86 Resp: 3270

Ion	Ratio	Lower	Upper
86	100		
43	1157.7	1668.9	1708.9#

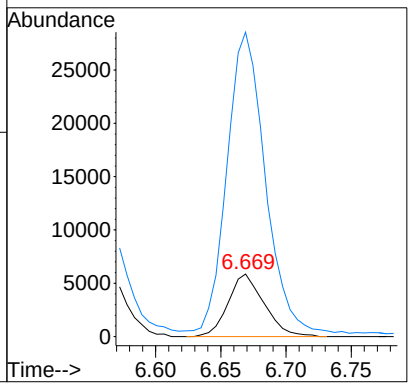


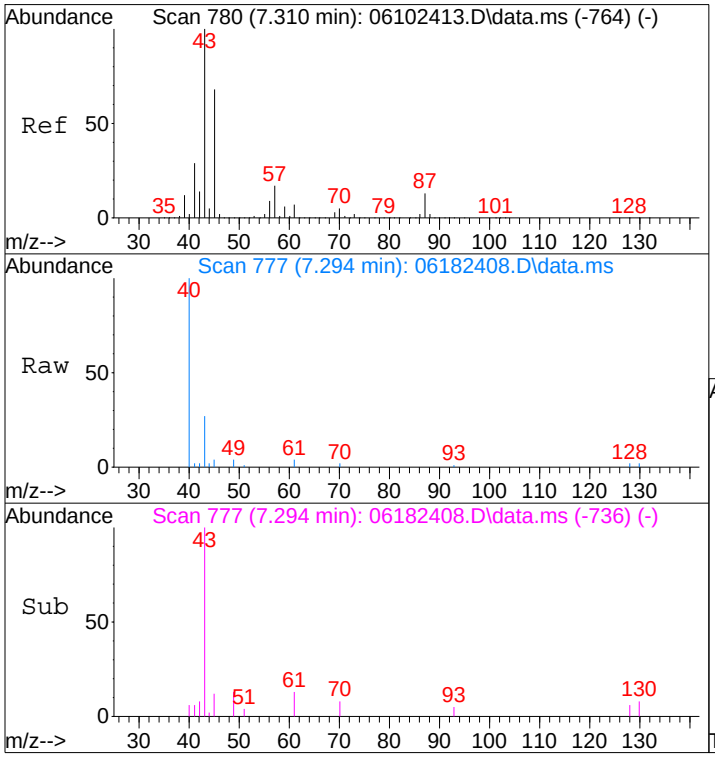


#27
2-Butanone (MEK)
Concen: 1.26 ng
RT: 6.67 min Scan# 667
Delta R.T. 0.011 min
Lab File: 06182408.D
Acq: 18 Jun 2024 13:22

Tgt Ion: 72 Resp: 11251

Ion	Ratio	Lower	Upper
72	100		
43	521.1	506.8	546.8

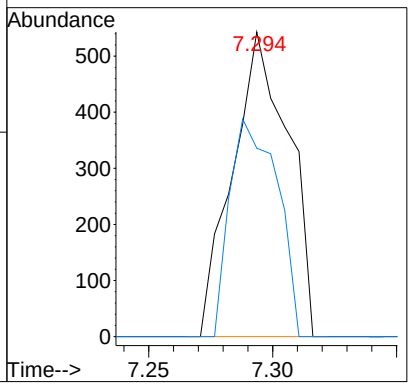


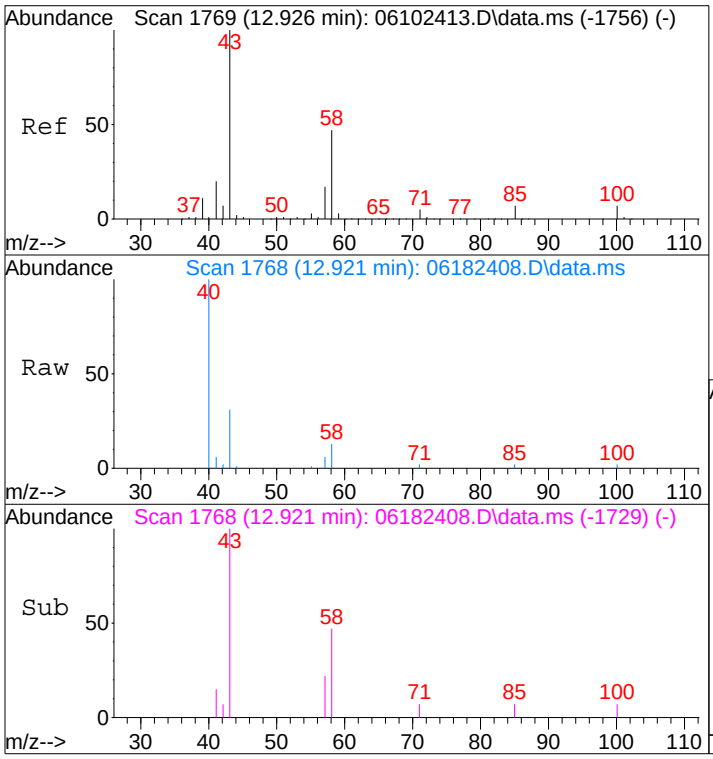


#30
Ethyl Acetate
Concen: 0.16 ng
RT: 7.29 min Scan# 777
Delta R.T. 0.034 min
Lab File: 06182408.D
Acq: 18 Jun 2024 13:22

Tgt Ion: 61 Resp: 848

Ion	Ratio	Lower	Upper
61	100		
70	61.1	53.5	93.5

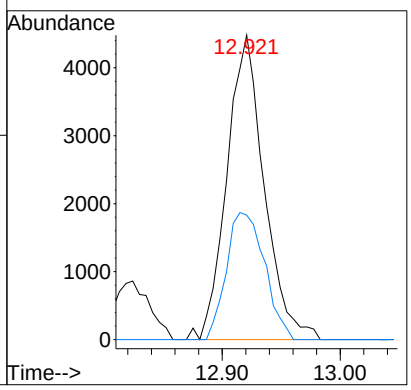




#59
2-Hexanone
Concen: 0.27 ng
RT: 12.92 min Scan# 1768
Delta R.T. -0.028 min
Lab File: 06182408.D
Acq: 18 Jun 2024 13:22

Tgt Ion: 43 Resp: 9839

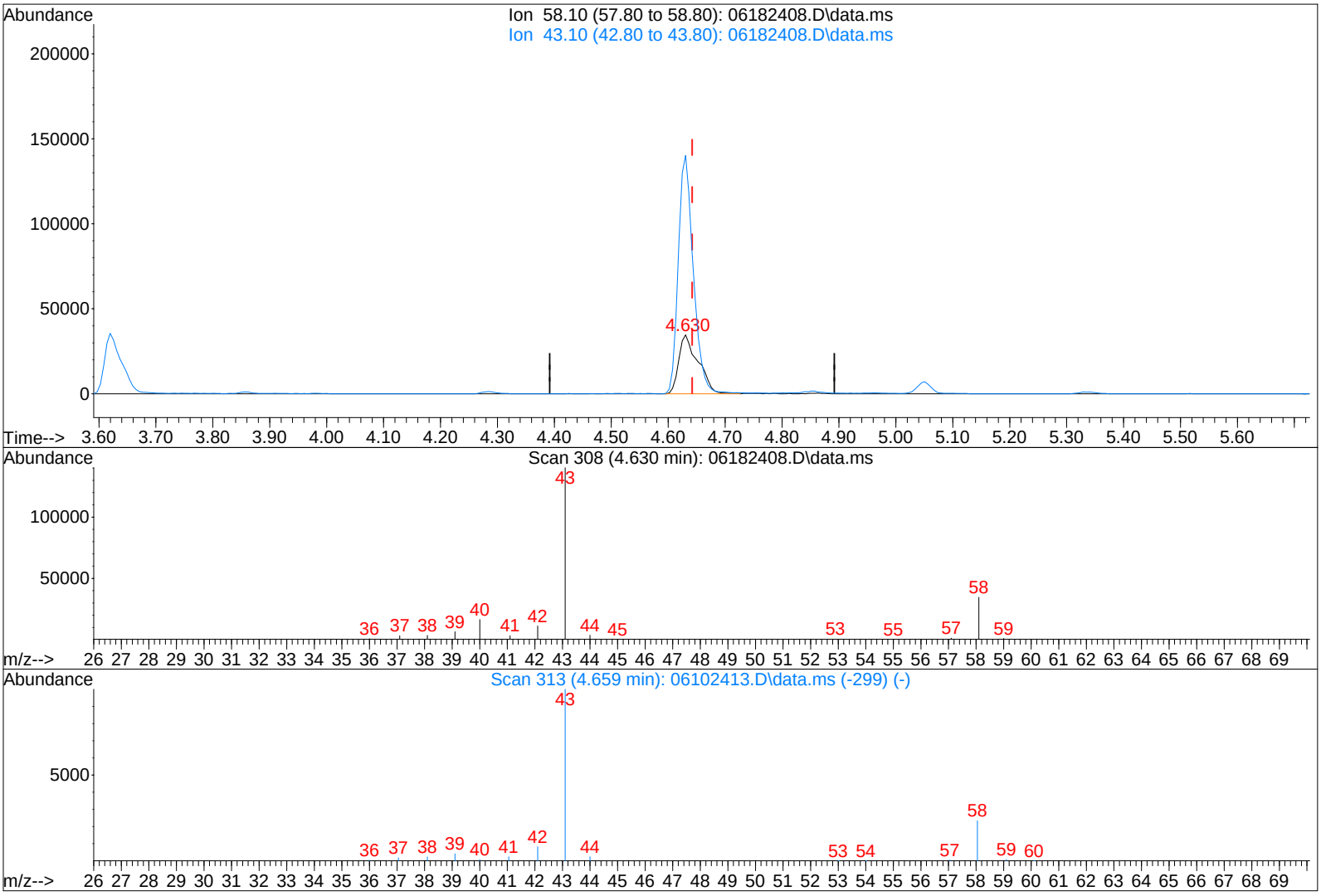
Ion	Ratio	Lower	Upper
43	100		
58	42.7	25.9	65.9



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182408.D Vial: 5
Acq On : 18 Jun 2024 13:22 Operator: SC
Sample : P2402249-012 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 18 13:47:54 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182408.D\data.ms

(13) Acetone (T)

4.630min (-0.012) 7.20ng

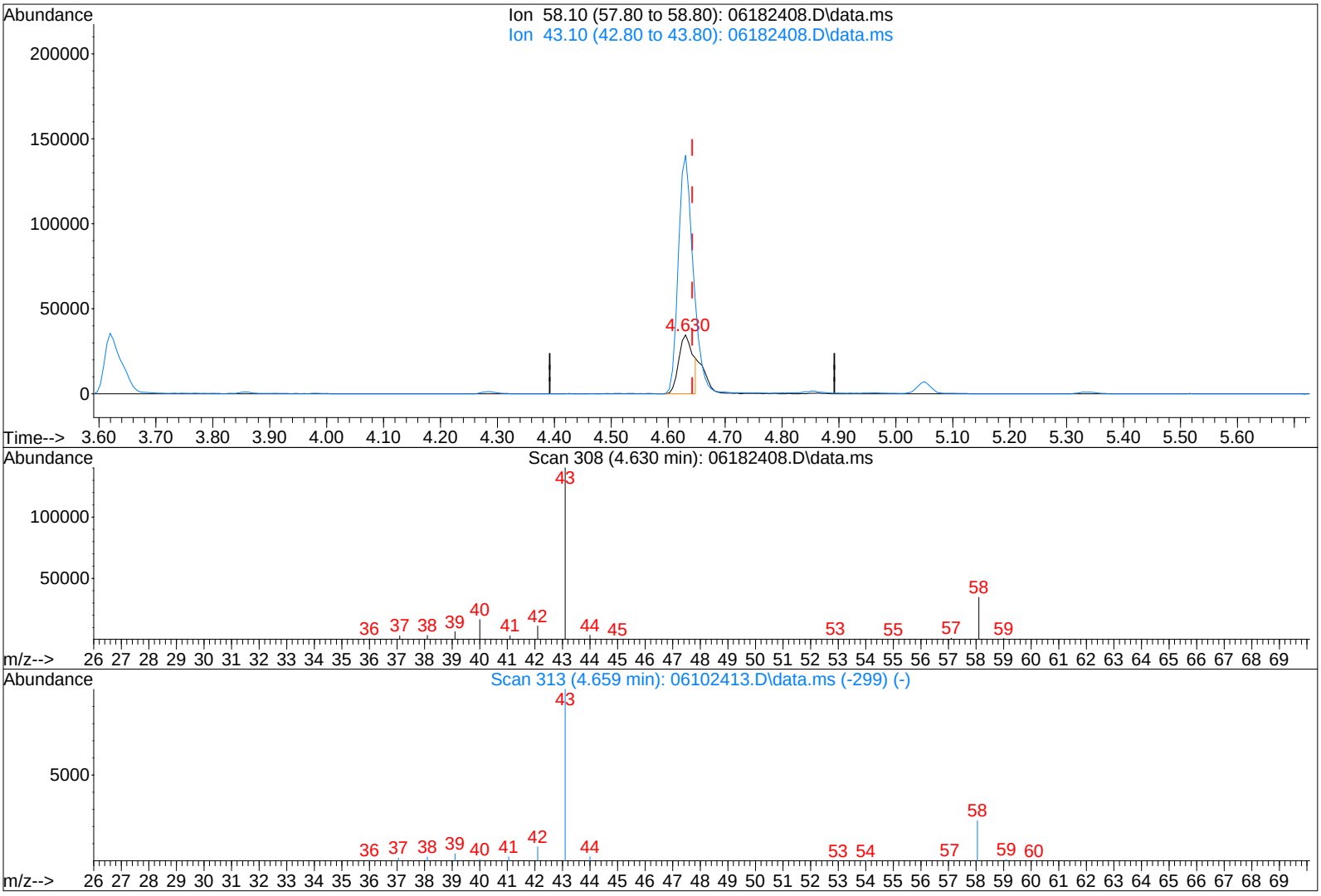
response 81335

Ion	Exp%	Act%
58.10	100	100
43.10	430.70	318.66#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182408.D Vial: 5
Acq On : 18 Jun 2024 13:22 Operator: SC
Sample : P2402249-012 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 18 13:47:54 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182408.D\data.ms

(13) Acetone (T)

4.630min (-0.012) 5.26ng m

response 59404

Ion	Exp%	Act%
58.10	100	100
43.10	430.70	436.31
0.00	0.00	0.00
0.00	0.00	0.00

IPC

6/19/24

6/29/24

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182408.D Vial: 5
Acq On : 18 Jun 2024 13:22 Operator: SC
Sample : P2402249-012 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 14:59:36 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

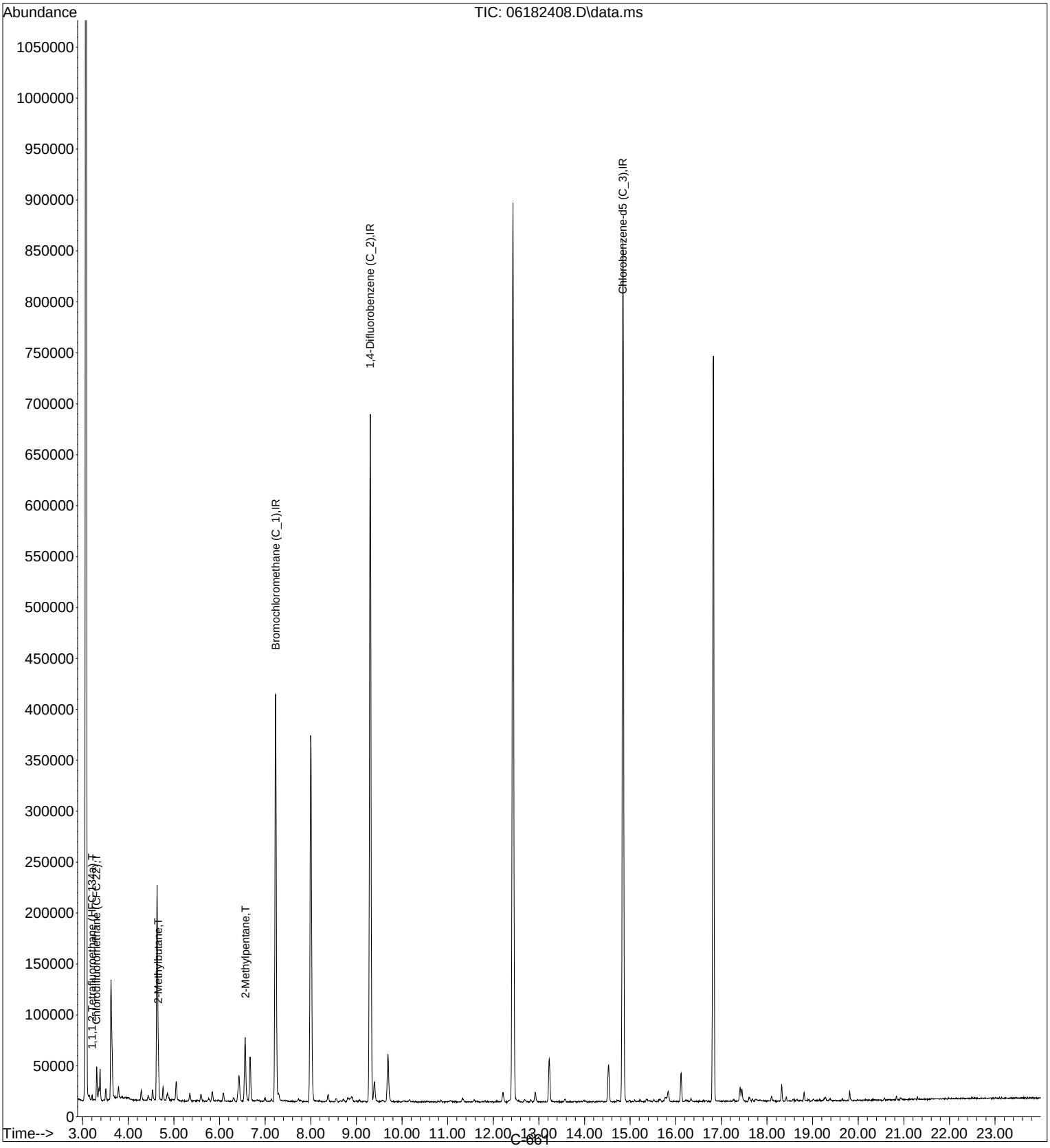
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	145316	12.500	ng		-0.02
16) 1,4-Difluorobenzene (C 2)	9.30	114	638290	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	145616	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	3.15	85	177	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.21	83	2025	0.136	ng		90
4) 1,1-Difluoroethane	3.26	65	149	N.D.			
5) Chlorodifluoromethane ...	3.30	67	971	0.196	ng		94
6) 1-Chloro-1,1-Difluoroe...	3.51	65	568	N.D.			
7) Dichlorofluoromethane ...	0.00	67	0	N.D.			
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	0.00	83	0	N.D.			
10) 2-Methylbutane	4.66	57	8293	0.478	ng	#	1
11) Methyl Acetate	5.33	43	2159	N.D.			
12) 2-Methylpentane	6.57	71	1365	0.108	ng	#	1
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	9.08	84	52	N.D.			
17) 2,3-Dimethylpentane	0.00	56	0	N.D.			
18) Dibromomethane	9.80	174	66	N.D.			
20) Methyl Cyclohexane	11.31	55	378	N.D.			
21) 1,3-Dichloropropane	0.00	76	0	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	0.00	75	0	N.D.			
25) Bromobenzene	0.00	77	0	N.D.			
26) 2-Chlorotoluene	17.61	91	790	N.D.			
27) 4-Chlorotoluene	17.68	91	1591	N.D.			
28) Indane	0.00	117	0	N.D.			
29) Indene	0.00	115	0	N.D.			
30) 1,2,4,5-Tetramethylben...	0.00	119	0	N.D.			
31) 1,2,3,4-Tetramethylben...	0.00	119	0	N.D.			
32) 1,2,3,5-Tetramethylben...	0.00	119	0	N.D.			
33) 1,2,3-Trichlorobenzene	21.19	180	56	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182408.D Vial: 5
Acq On : 18 Jun 2024 13:22 Operator: SC
Sample : P2402249-012 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:59:36 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



LSC Area Percent Report

MJ 6/28/24

Data Path : I:\MS09\DATA\2024 06\18\
Data File : 06182408.D
Acq On : 18 Jun 2024 13:22
Operator : SC
Sample : P2402249-012 (400mL)
Misc : S37-06062402
ALS Vial : 5 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06182408.D\data.ms

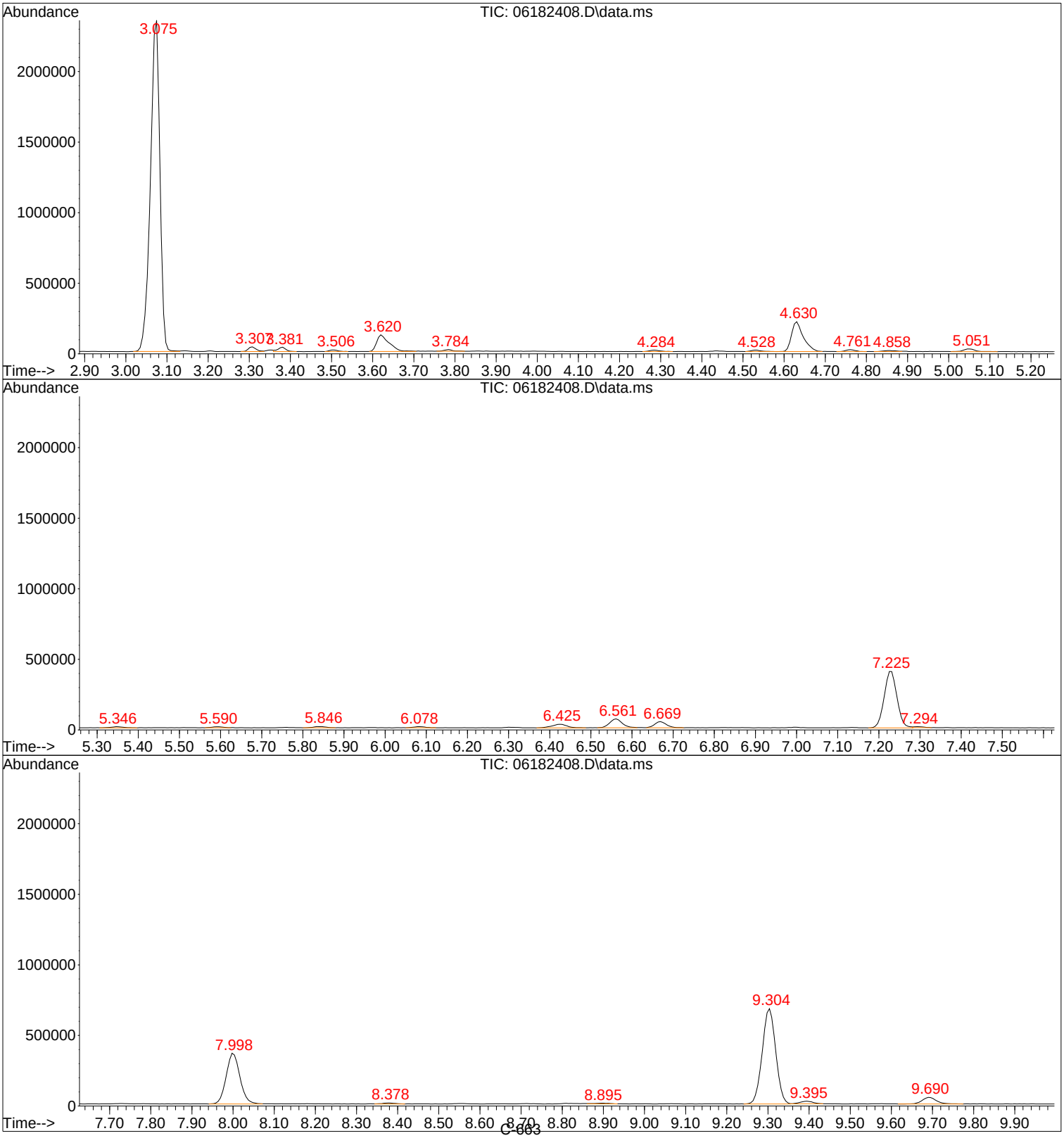
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.075	24	34	44	rBV	2346827	3761039	100.00%	44.530%
2	3.307	70	75	80	rBV2	32735	43818	1.17%	0.519%
3	3.381	84	88	94	rVB	30901	40062	1.07%	0.474%
4	3.506	106	110	116	rVB2	11501	16866	0.45%	0.200%
5	3.620	125	130	145	rBV	117555	245621	6.53%	2.908%
6	3.784	154	159	166	rVB2	11755	16619	0.44%	0.197%
7	4.284	242	247	255	rVB	10168	17414	0.46%	0.206%
8	4.528	286	290	299	rBV2	10197	17017	0.45%	0.201%
9	4.630	299	308	319	rBV	211335	420167	11.17%	4.975%
10	4.761	325	331	338	rBV	13196	20436	0.54%	0.242%
11	4.858	341	348	353	rBV5	7285	15175	0.40%	0.180%
12	5.051	374	382	394	rVB2	18998	38134	1.01%	0.452%
13	5.346	427	434	443	rVB4	8434	18271	0.49%	0.216%
14	5.590	472	477	483	rBV3	7275	14613	0.39%	0.173%
15	5.846	514	522	528	rBV4	9262	19608	0.52%	0.232%
16	6.078	558	563	571	rBV2	8251	16732	0.44%	0.198%
17	6.425	614	624	635	rBV2	25640	66725	1.77%	0.790%
18	6.561	640	648	657	rVV2	62989	136069	3.62%	1.611%
19	6.669	661	667	677	rVB	43315	86515	2.30%	1.024%
20	7.225	756	765	775	rBV	399723	866505	23.04%	10.259%
21	7.294	775	777	783	rVB	6910	11057	0.29%	0.131%
22	7.998	891	901	914	rBV	360168	837237	22.26%	9.913%
23	8.378	962	968	975	rVB2	7195	14634	0.39%	0.173%
24	8.895	1053	1059	1066	rVB5	4886	13139	0.35%	0.156%
25	9.304	1120	1131	1140	rBV	675126	1539092	40.92%	18.223%
26	9.395	1140	1147	1154	rVB	18367	40555	1.08%	0.480%
27	9.690	1186	1199	1214	rVB	47000	112904	3.00%	1.337%

Sum of corrected areas: 8446024

Data Path : I:\MS09\DATA\2024 06\18\
Data File : 06182408.D
Acq On : 18 Jun 2024 13:22
Operator : SC
Sample : P2402249-012 (400mL)
Misc : S37-06062402
ALS Vial : 5 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\18\\
Data File : 06182408.D
Acq On : 18 Jun 2024 13:222
Operator : SCC
Sample : P2402249-012 (400mL))
Misc : S37-060624022
ALS Vial : 5 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

					|--Internal Standard---|		
TIC Top Hit name	RT	EstConc	Units	Response	# RT Resp Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182409.D Vial: 6
Acq On : 18 Jun 2024 13:54 Operator: SC
Sample : P2402249-013 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 14:29:33 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	143339	12.500 ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	628970	12.500 ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	143764	12.500 ng		0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4(...	8.00	65	316033	12.405 ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.28%			
57) Toluene-d8 (SS2)	12.43	98	703130	12.781 ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.24%			
73) Bromofluorobenzene (SS3)	16.83	174	249757	12.572 ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.56%			
Target Compounds						Qvalue
2) Propene	0.00	42	0	N.D. d		
3) Dichlorodifluoromethan...	3.37	85	19200m	0.569 ng		
4) Chloromethane	3.49	50	1288	0.056 ng		99
5) 1,2-Dichloro-1,1,2,2-t...	3.61	135	563	N.D.		
6) Vinyl Chloride	0.00	62	0	N.D.		
7) 1,3-Butadiene	0.00	54	0	N.D.		
8) Bromomethane	4.02	94	171	N.D.		
9) Chloroethane	4.16	64	214	N.D.		
10) Ethanol	4.28	45	13390m	0.961 ng		
11) Acetonitrile	0.00	41	0	N.D. d		
12) Acrolein	4.54	56	1417	0.137 ng		98
13) Acetone	4.64	58	21888	1.966 ng	#	40
14) Trichlorofluoromethane	4.77	101	11045133m	323.672 ng		
15) 2-Propanol (Isopropanol)	4.85	45	51339	1.144 ng		76
16) Acrylonitrile	0.00	53	0	N.D. d		
17) 1,1-Dichloroethene	0.00	96	0	N.D.		
18) 2-Methyl-2-Propanol (t...	5.33	59	880	N.D.		
19) Methylene Chloride	5.35	84	1898	0.120 ng		98
20) 3-Chloro-1-propene (Al...	5.47	41	379	N.D.		
21) Trichlorotrifluoroethane	5.59	151	4880773	338.103 ng		92
22) Carbon Disulfide	5.61	76	202859	3.993 ng	#	1
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.		
24) 1,1-Dichloroethane	0.00	63	0	N.D.		
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.		
26) Vinyl Acetate	6.42	86	1800	0.701 ng	#	18
27) 2-Butanone (MEK)	6.67	72	2992	0.340 ng	#	70
28) cis-1,2-Dichloroethene	7.07	61	111	N.D.		
29) Diisopropyl Ether	0.00	87	0	N.D. d		
30) Ethyl Acetate	7.29	61	14297	2.657 ng		98
31) n-Hexane	7.31	57	1645	0.070 ng	#	83
32) Chloroform	7.36	83	53796	1.916 ng		99
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	8.11	62	938	N.D.		
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.		
39) Isopropyl Acetate	9.59	61	9875	No Calib	#	
40) 1-Butanol	8.80	56	5692	No Calib		
41) Benzene	8.90	78	8916	0.154 ng		100
42) Carbon Tetrachloride	9.08	117	358	N.D.		
43) Cyclohexane	9.30	84	734	N.D.		
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	0.00	63	0	N.D.		
46) Bromodichloromethane	10.07	83	1575	0.067 ng		86
47) Trichloroethene	10.15	130	5099	0.301 ng		97
48) 1,4-Dioxane	10.13	88	1193	0.111 ng		100
49) 2,2,4-Trimethylpentane...	10.24	57	592	N.D.		
50) Methyl Methacrylate	0.00	100	0	N.D.		

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182409.D Vial: 6
Acq On : 18 Jun 2024 13:54 Operator: SC
Sample : P2402249-013 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:29:33 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

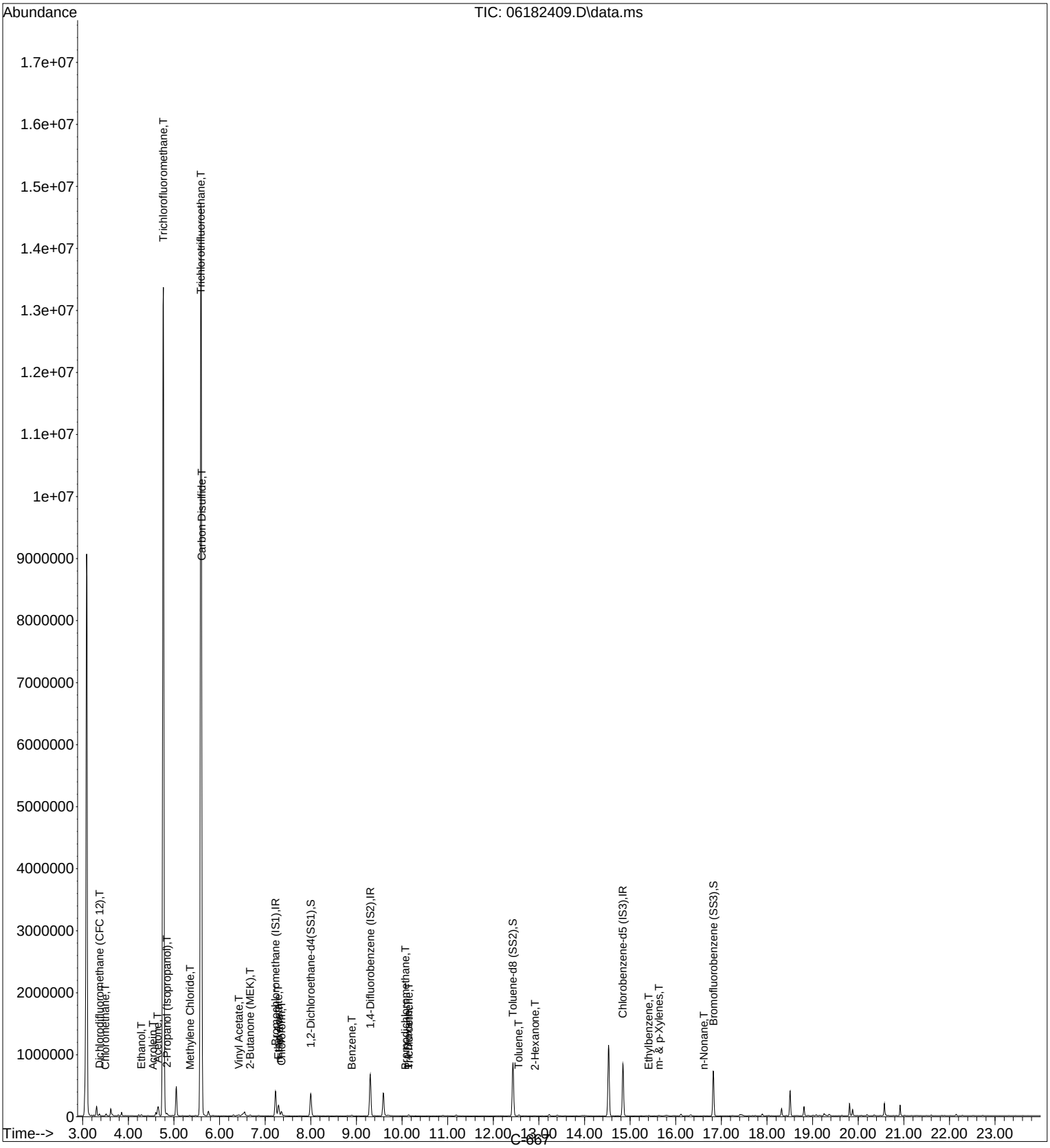
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
51) n-Heptane	10.58	71	192	N.D.		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	11.34	58	307	N.D.		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	12.18	97	310	N.D.		
58) Toluene	12.56	91	12504	0.218	ng	100
59) 2-Hexanone	12.92	43	3197	0.089	ng	86
60) Dibromochloromethane	13.07	129	528	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	13.78	43	906	N.D.		
63) n-Octane	13.92	57	286	N.D.		
64) Tetrachloroethene	14.02	166	846	N.D.		
65) Chlorobenzene	14.90	112	829	N.D.		
66) Ethylbenzene	15.41	91	5054	0.077	ng	98
67) m- & p-Xylenes	15.64	91	6767	0.122	ng	100
68) Bromoform	15.67	173	499	N.D.		
69) Styrene	16.10	104	1771	N.D.		
70) o-Xylene	16.24	91	2575	N.D.		
71) n-Nonane	16.62	43	2070	0.065	ng	79
72) 1,1,2,2-Tetrachloroethane	16.21	83	354	N.D.		
74) Cumene	17.04	105	1099	N.D.		
75) alpha-Pinene	17.53	93	466	N.D.		
76) n-Propylbenzene	17.68	91	2689	N.D.		
77) 3-Ethyltoluene	17.04	105	1099	No Calib		
78) 4-Ethyltoluene	17.86	105	1250	N.D.		
79) 1,3,5-Trimethylbenzene	17.96	105	808	N.D.		
80) alpha-Methylstyrene	0.00	118	0	N.D.		
81) 2-Ethyltoluene	17.04	105	1099	No Calib		
82) 1,2,4-Trimethylbenzene	18.43	105	2110	N.D.		
83) n-Decane	0.00	58	0	N.D.		
84) Benzyl Chloride	18.56	91	485	N.D.		
85) 1,3-Dichlorobenzene	18.57	146	741	N.D.		
86) 1,4-Dichlorobenzene	18.66	146	744	N.D.		
87) sec-Butylbenzene	18.74	105	1135	N.D.		
88) 4-Isopropyltoluene (p-...	18.92	119	1475	N.D.		
89) 1,2,3-Trimethylbenzene	17.04	105	1099	No Calib		
90) 1,2-Dichlorobenzene	19.03	146	666	N.D.		
91) d-Limonene	19.08	68	655	N.D.		
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	0.00	58	0	N.D.		
94) 1,2,4-Trichlorobenzene	20.84	180	1276	N.D.		
95) Naphthalene	20.94	128	2723	N.D.		
96) n-Dodecane	18.89	58	339	No Calib	#	
97) Hexachlorobutadiene	21.30	225	604	N.D.		
98) Cyclohexanone	15.35	55	1307	No Calib	#	
99) tert-Butylbenzene	18.43	119	1105	N.D.		
100) n-Butylbenzene	0.00	91	0	N.D.	d	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182409.D Vial: 6
Acq On : 18 Jun 2024 13:54 Operator: SC
Sample : P2402249-013 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:29:33 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



C-007

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182409.D Vial: 6
Acq On : 18 Jun 2024 13:54 Operator: SC
Sample : P2402249-013 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 14:29:33 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

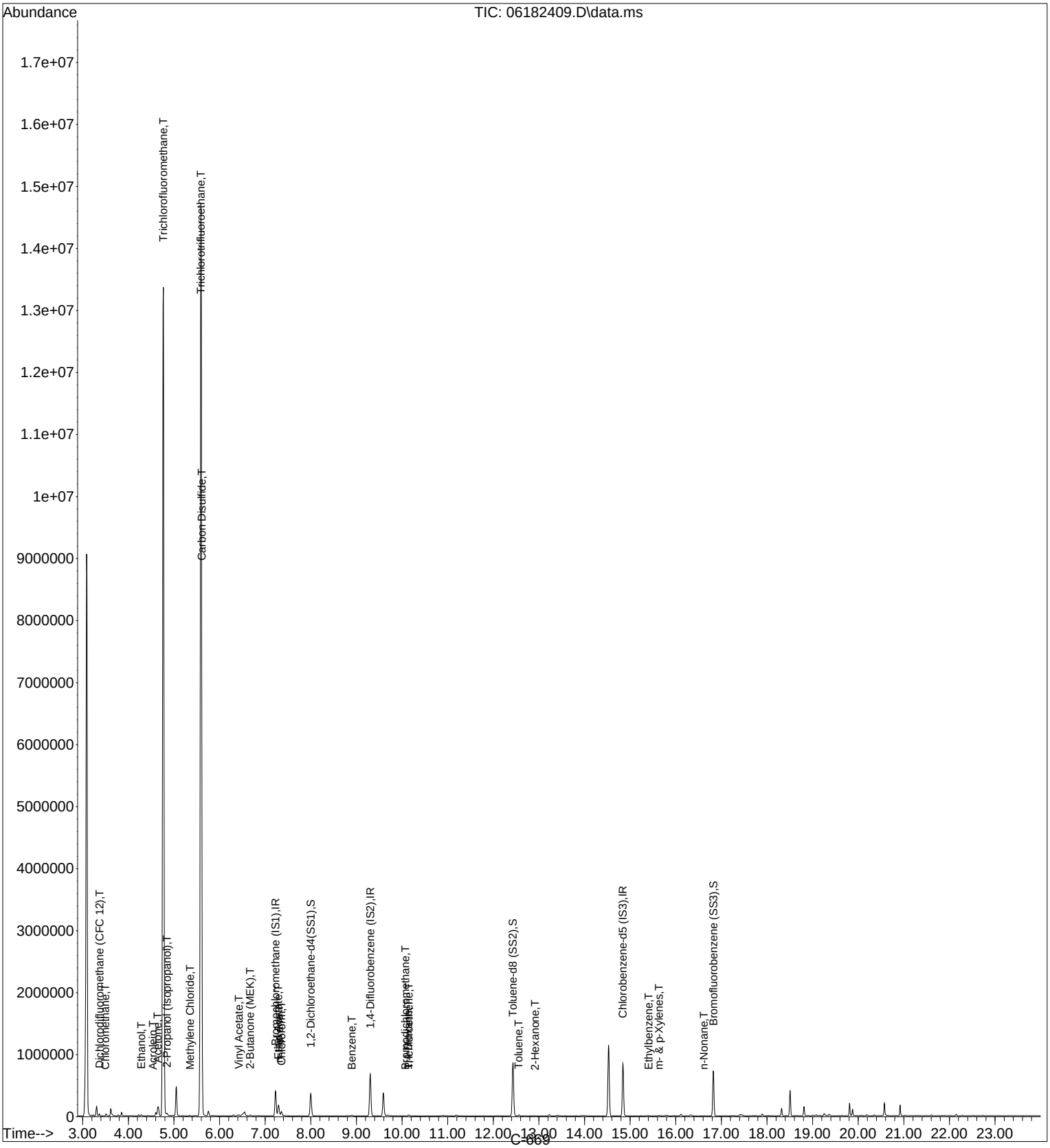
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	143339	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	628970	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	143764	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	316033	12.405	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.28%				
57) Toluene-d8 (SS2)	12.43	98	703130	12.781	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.24%				
73) Bromofluorobenzene (SS3)	16.83	174	249757	12.572	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.56%				
Target Compounds							Qvalue
3) Dichlorodifluoromethan...	3.37	85	19200m	0.569	ng		
4) Chloromethane	3.49	50	1288	0.056	ng		99
10) Ethanol	4.28	45	13390m	0.961	ng		
12) Acrolein	4.54	56	1417	0.137	ng		98
13) Acetone	4.64	58	21888	1.966	ng	#	40
14) Trichlorofluoromethane	4.77	101	11045133m	323.672	ng		
15) 2-Propanol (Isopropanol)	4.85	45	51339	1.144	ng		76
19) Methylene Chloride	5.35	84	1898	0.120	ng		98
21) Trichlorotrifluoroethane	5.59	151	4880773	338.103	ng		92
22) Carbon Disulfide	5.61	76	202859	3.993	ng	#	1
26) Vinyl Acetate	6.42	86	1800	0.701	ng	#	18
27) 2-Butanone (MEK)	6.67	72	2992	0.340	ng	#	70
30) Ethyl Acetate	7.29	61	14297	2.657	ng		98
31) n-Hexane	7.31	57	1645	0.070	ng	#	83
32) Chloroform	7.36	83	53796	1.916	ng		99
41) Benzene	8.90	78	8916	0.154	ng		100
46) Bromodichloromethane	10.07	83	1575	0.067	ng		86
47) Trichloroethene	10.15	130	5099	0.301	ng		97
48) 1,4-Dioxane	10.13	88	1193	0.111	ng		100
58) Toluene	12.56	91	12504	0.218	ng		100
59) 2-Hexanone	12.92	43	3197	0.089	ng		86
66) Ethylbenzene	15.41	91	5054	0.077	ng		98
67) m- & p-Xylenes	15.64	91	6767	0.122	ng		100
71) n-Nonane	16.62	43	2070	0.065	ng		79

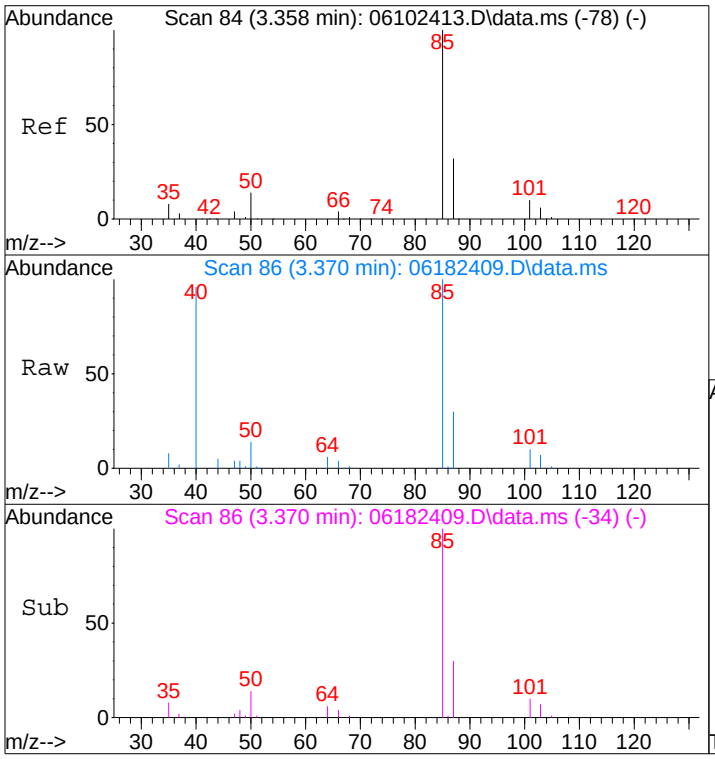
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182409.D Vial: 6
Acq On : 18 Jun 2024 13:54 Operator: SC
Sample : P2402249-013 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:29:33 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

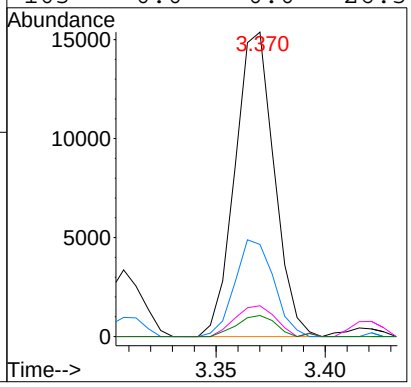


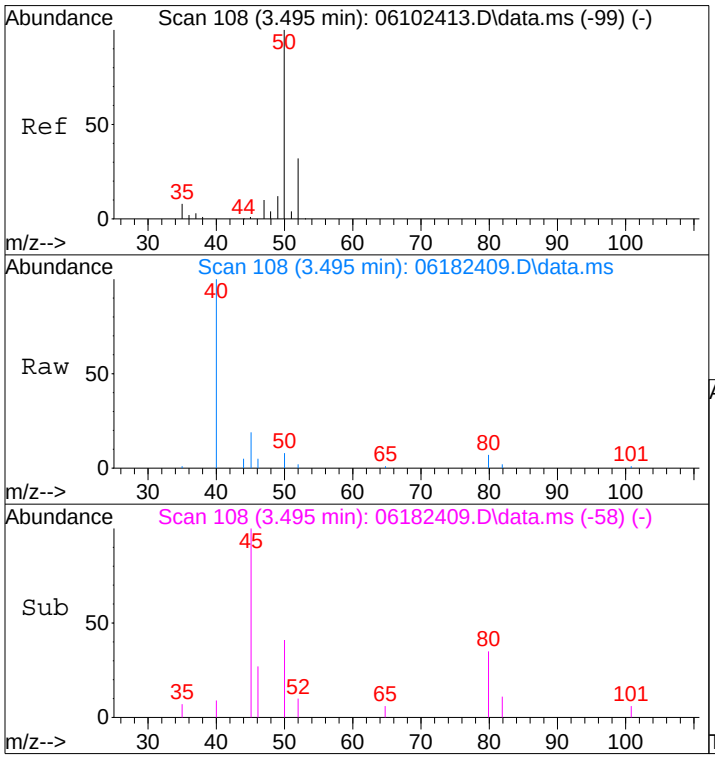


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.57 ng m
RT: 3.37 min Scan# 86
Delta R.T. 0.048 min
Lab File: 06182409.D
Acq: 18 Jun 2024 13:54

Tgt Ion: 85 Resp: 19200

Ion	Ratio	Lower	Upper
85	100		
87	5.7	12.2	52.2#
101	0.0	0.0	29.8
103	0.0	0.0	26.3

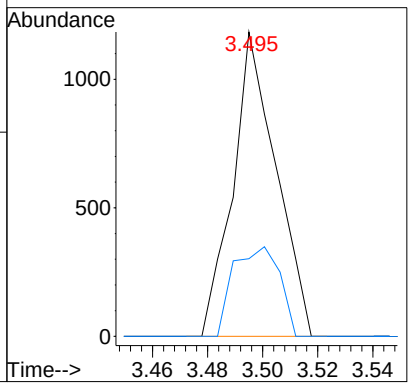


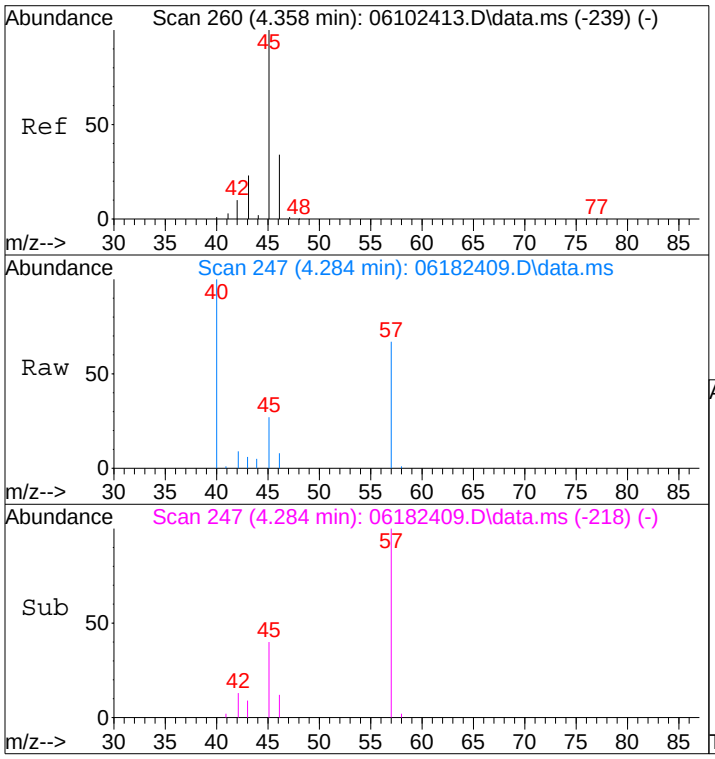


#4
Chloromethane
Concen: 0.06 ng
RT: 3.49 min Scan# 108
Delta R.T. 0.032 min
Lab File: 06182409.D
Acq: 18 Jun 2024 13:54

Tgt Ion: 50 Resp: 1288

Ion	Ratio	Lower	Upper
50	100		
52	31.6	12.4	52.4

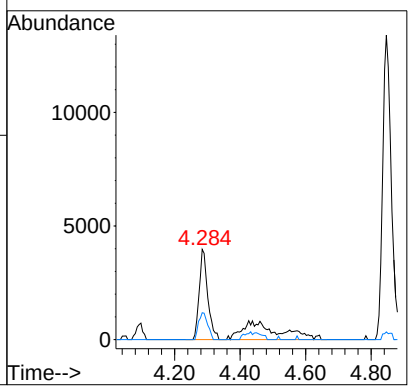


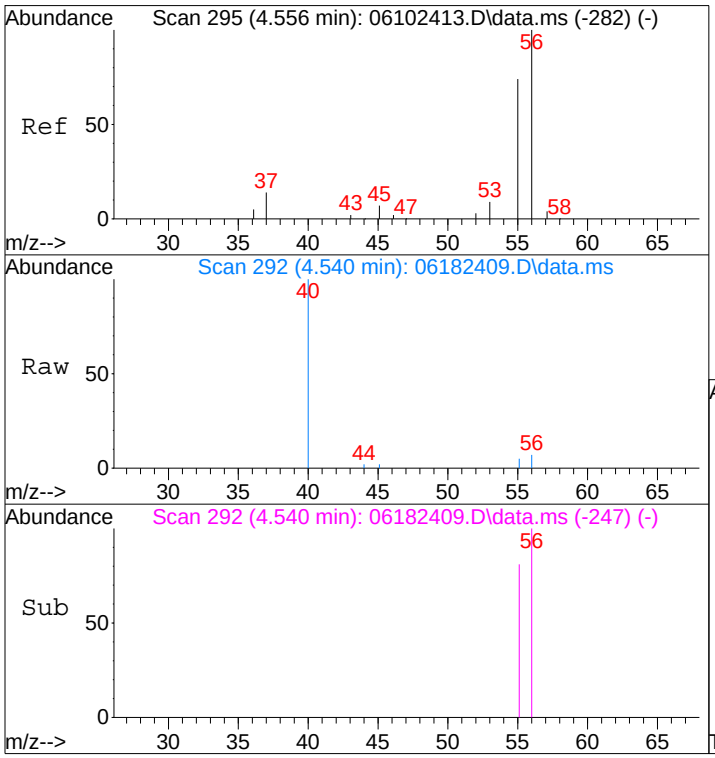


#10
Ethanol
Concen: 0.96 ng m
RT: 4.28 min Scan# 247
Delta R.T. -0.083 min
Lab File: 06182409.D
Acq: 18 Jun 2024 13:54

Tgt Ion: 45 Resp: 13390

Ion	Ratio	Lower	Upper
45	100		
46	8.5	13.5	53.5#

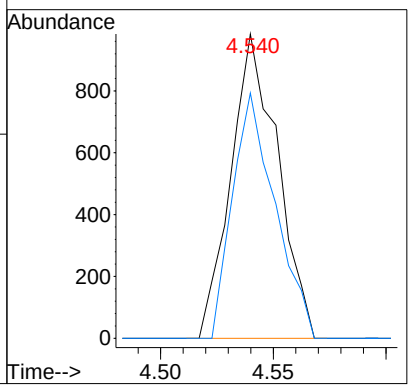


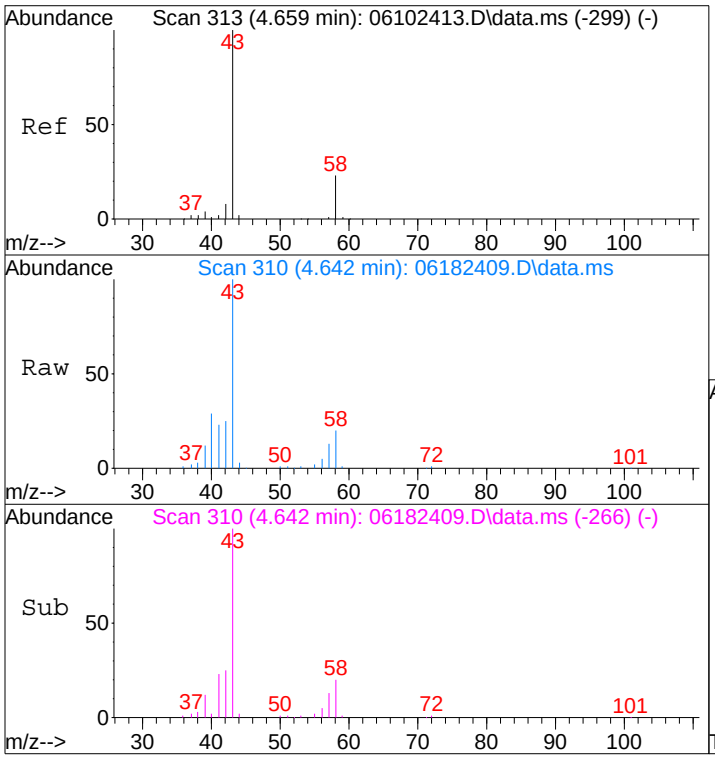


#12
Acrolein
Concen: 0.14 ng
RT: 4.54 min Scan# 292
Delta R.T. 0.005 min
Lab File: 06182409.D
Acq: 18 Jun 2024 13:54

Tgt Ion: 56 Resp: 1417

Ion	Ratio	Lower	Upper
56	100		
55	73.5	55.5	95.5

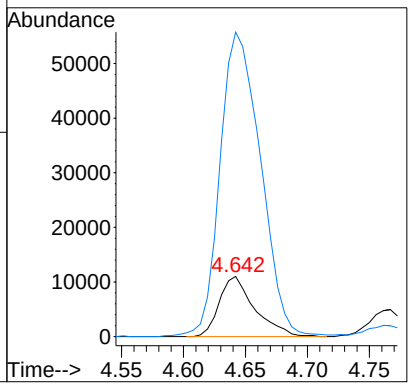


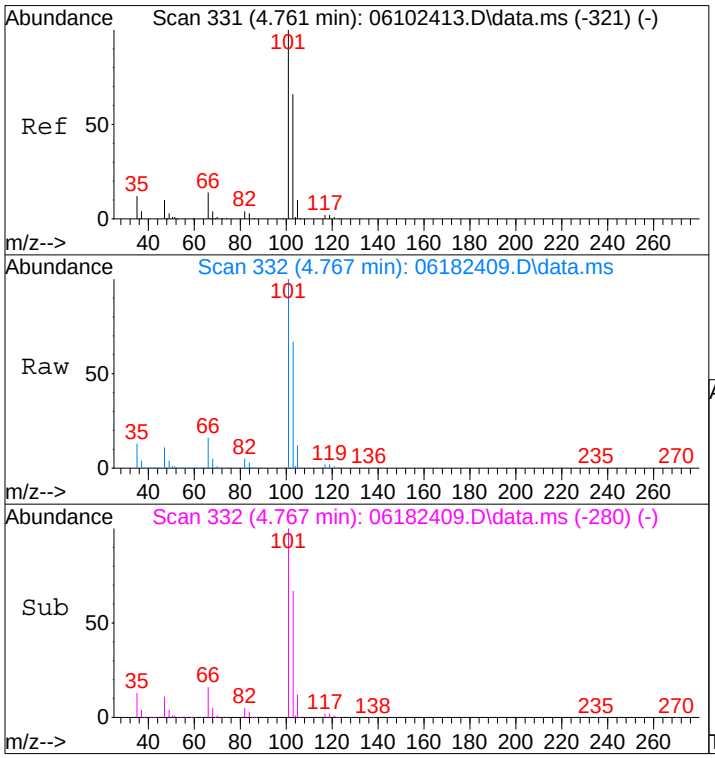


#13
Acetone
Concen: 1.97 ng
RT: 4.64 min Scan# 310
Delta R.T. 0.000 min
Lab File: 06182409.D
Acq: 18 Jun 2024 13:54

Tgt Ion: 58 Resp: 21888

Ion	Ratio	Lower	Upper
58	100		
43	580.7	400.7	460.7#

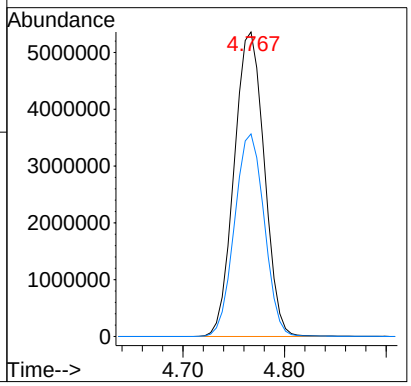


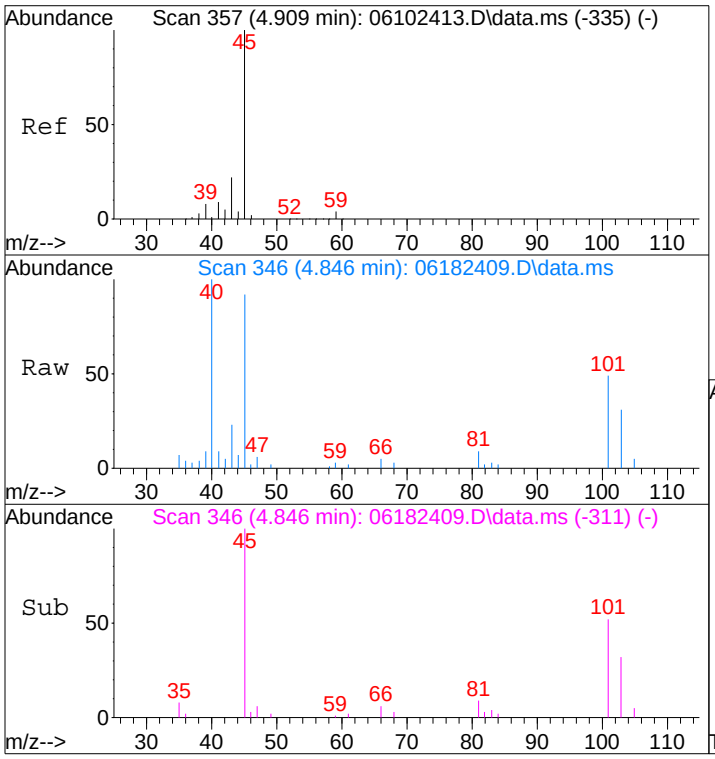


#14
Trichlorofluoromethane
Concen: 323.67 ng m
RT: 4.77 min Scan# 332
Delta R.T. 0.046 min
Lab File: 06182409.D
Acq: 18 Jun 2024 13:54

Tgt Ion:101 Resp:11045133

Ion	Ratio	Lower	Upper
101	100		
103	65.8	44.9	84.9

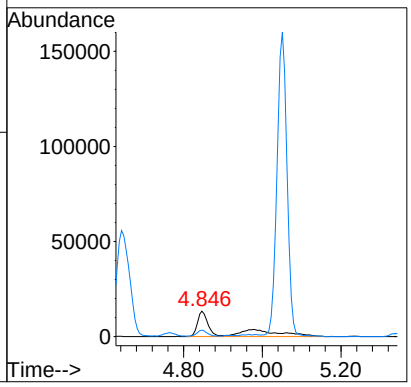


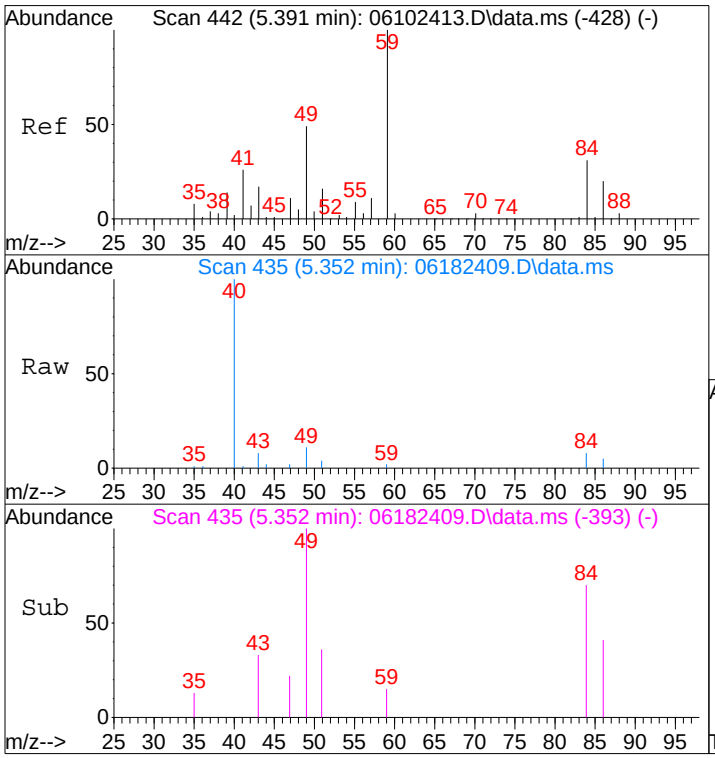


#15
2-Propanol (Isopropanol)
Concen: 1.14 ng
RT: 4.85 min Scan# 346
Delta R.T. -0.054 min
Lab File: 06182409.D
Acq: 18 Jun 2024 13:54

Tgt Ion: 45 Resp: 51339

Ion	Ratio	Lower	Upper
45	100		
43	11.0	2.5	42.5

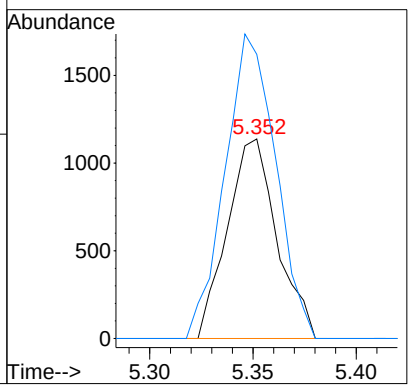


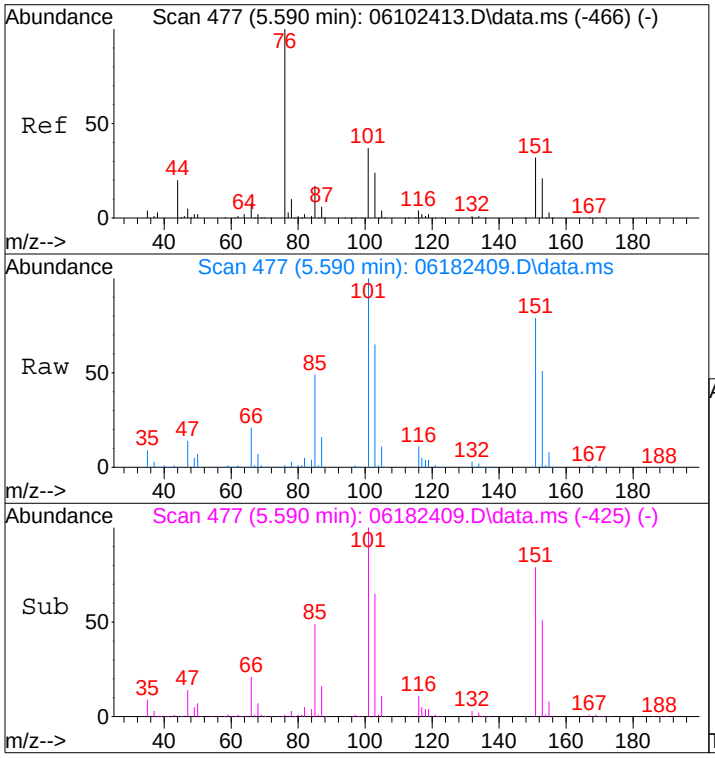


#19
Methylene Chloride
Concen: 0.12 ng
RT: 5.35 min Scan# 435
Delta R.T. -0.009 min
Lab File: 06182409.D
Acq: 18 Jun 2024 13:54

Tgt Ion: 84 Resp: 1898

Ion	Ratio	Lower	Upper
84	100		
49	155.8	132.9	182.9

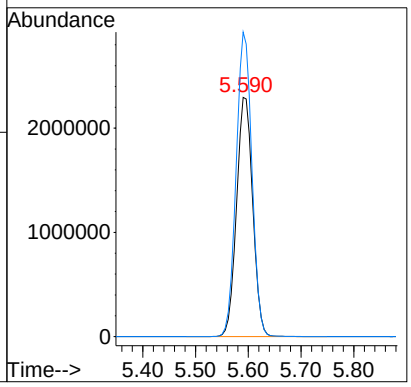


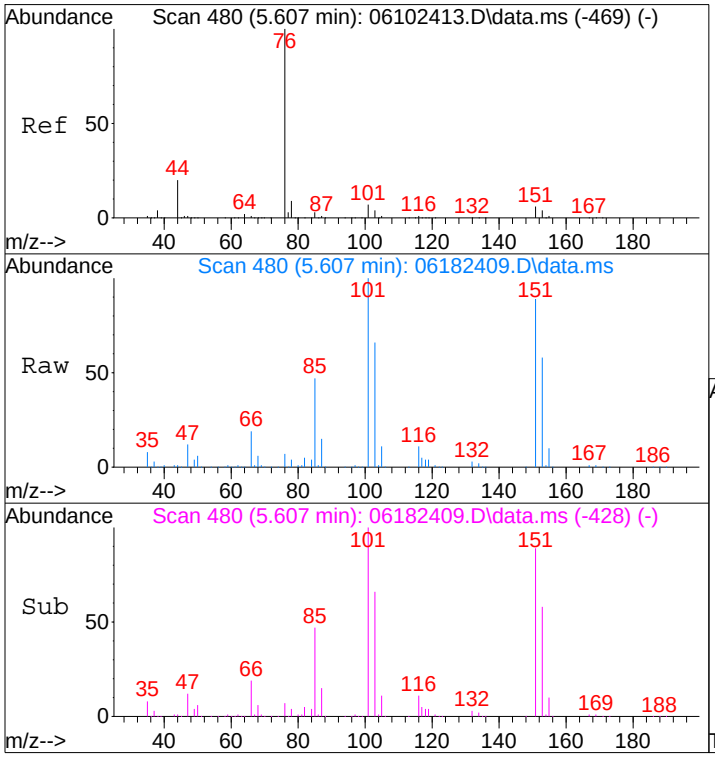


#21
Trichlorotrifluoroethane
Concen: 338.10 ng
RT: 5.59 min Scan# 477
Delta R.T. 0.044 min
Lab File: 06182409.D
Acq: 18 Jun 2024 13:54

Tgt Ion:151 Resp: 4880773

Ion	Ratio	Lower	Upper
151	100		
101	124.1	95.0	135.0

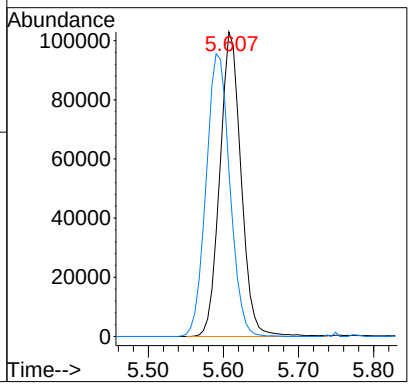


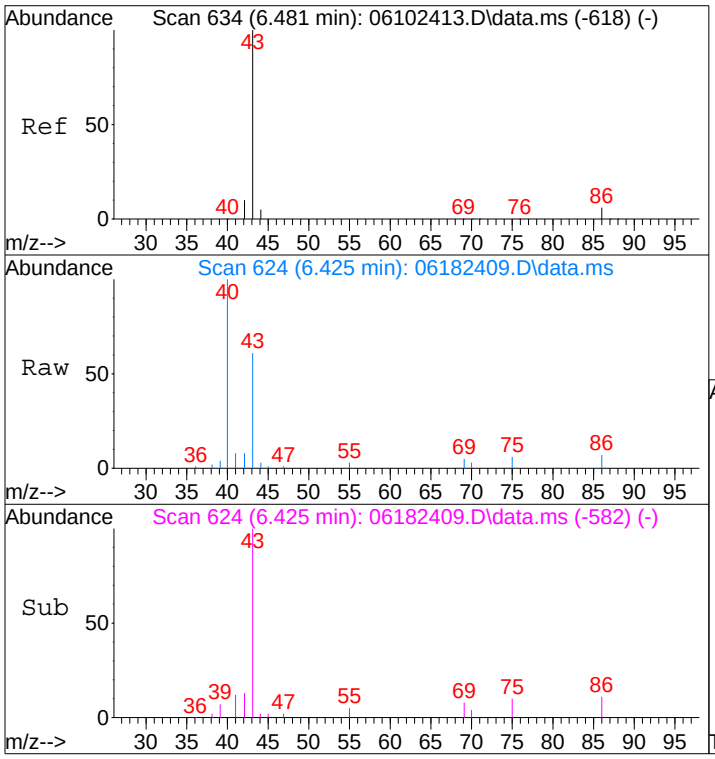


#22
Carbon Disulfide
Concen: 3.99 ng
RT: 5.61 min Scan# 480
Delta R.T. 0.044 min
Lab File: 06182409.D
Acq: 18 Jun 2024 13:54

Tgt Ion: 76 Resp: 202859

Ion	Ratio	Lower	Upper
76	100		
78	103.0	0.0	29.6#

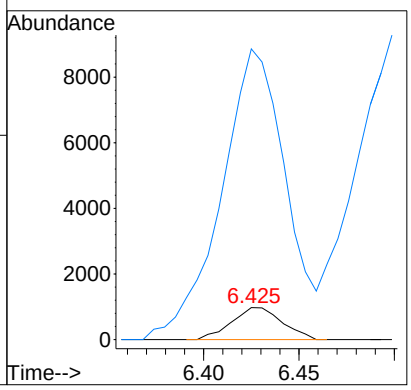


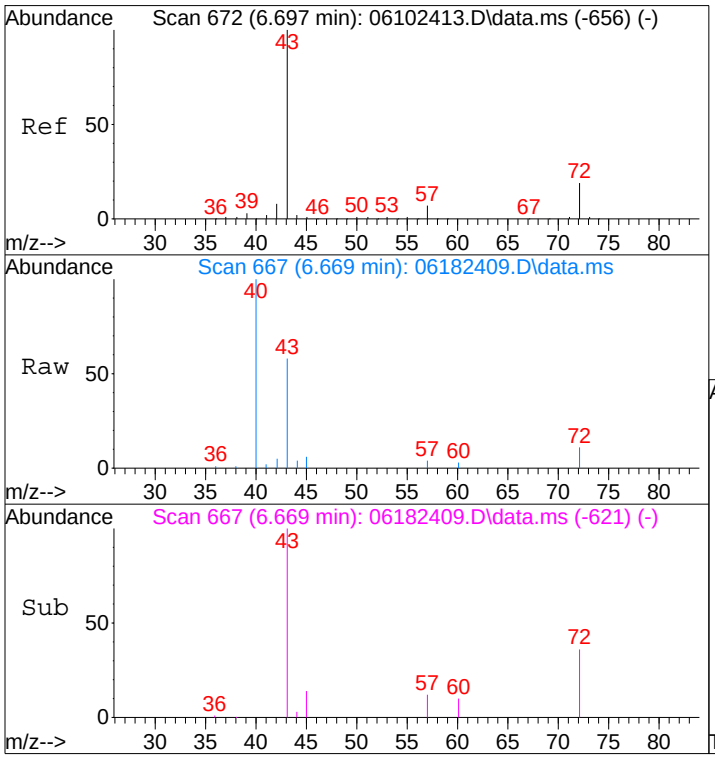


#26
Vinyl Acetate
Concen: 0.70 ng
RT: 6.42 min Scan# 624
Delta R.T. -0.014 min
Lab File: 06182409.D
Acq: 18 Jun 2024 13:54

Tgt Ion: 86 Resp: 1800

Ion	Ratio	Lower	Upper
86	100		
43	1155.9	1668.9	1708.9#

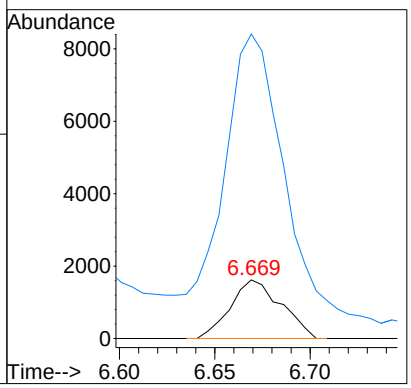


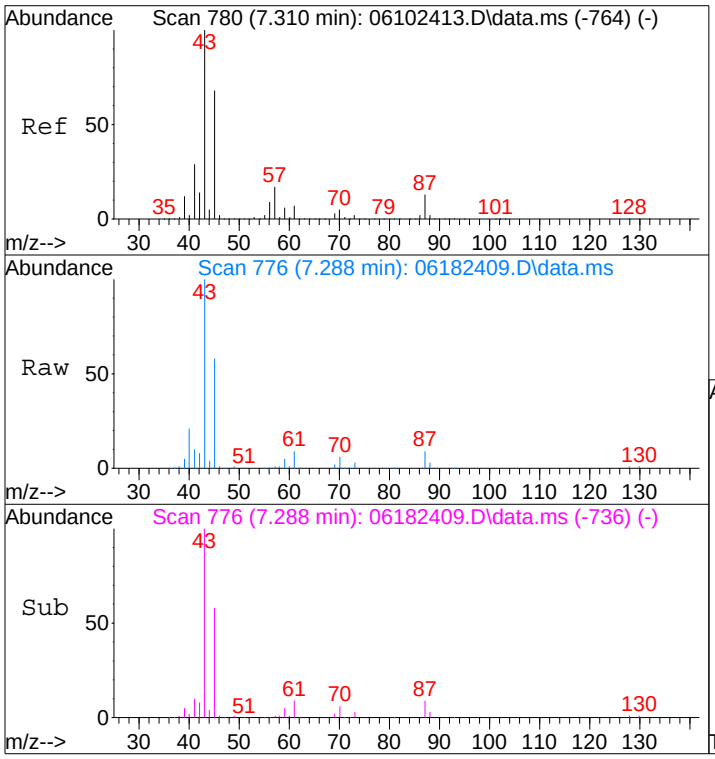


#27
2-Butanone (MEK)
Concen: 0.34 ng
RT: 6.67 min Scan# 667
Delta R.T. 0.011 min
Lab File: 06182409.D
Acq: 18 Jun 2024 13:54

Tgt Ion: 72 Resp: 2992

Ion	Ratio	Lower	Upper
72	100		
43	613.8	506.8	546.8#

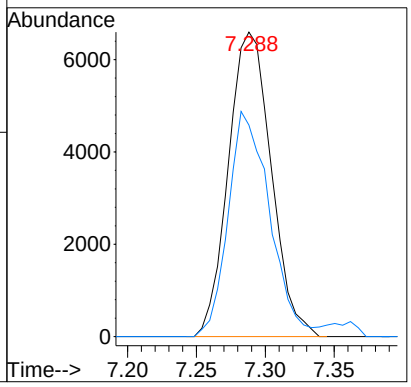


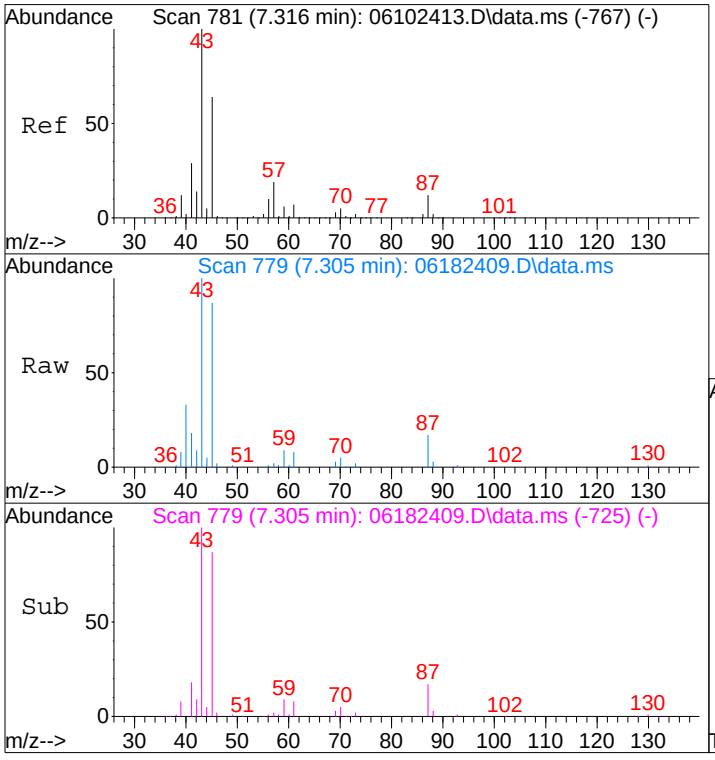


#30
Ethyl Acetate
Concen: 2.66 ng
RT: 7.29 min Scan# 776
Delta R.T. 0.029 min
Lab File: 06182409.D
Acq: 18 Jun 2024 13:54

Tgt Ion: 61 Resp: 14297

Ion	Ratio	Lower	Upper
61	100		
70	71.7	53.5	93.5

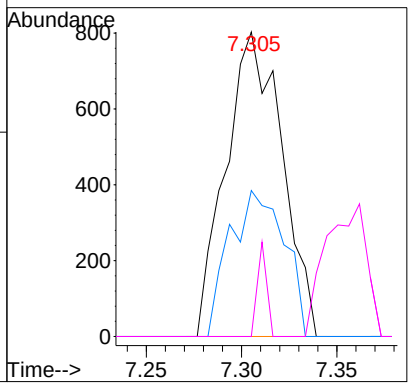


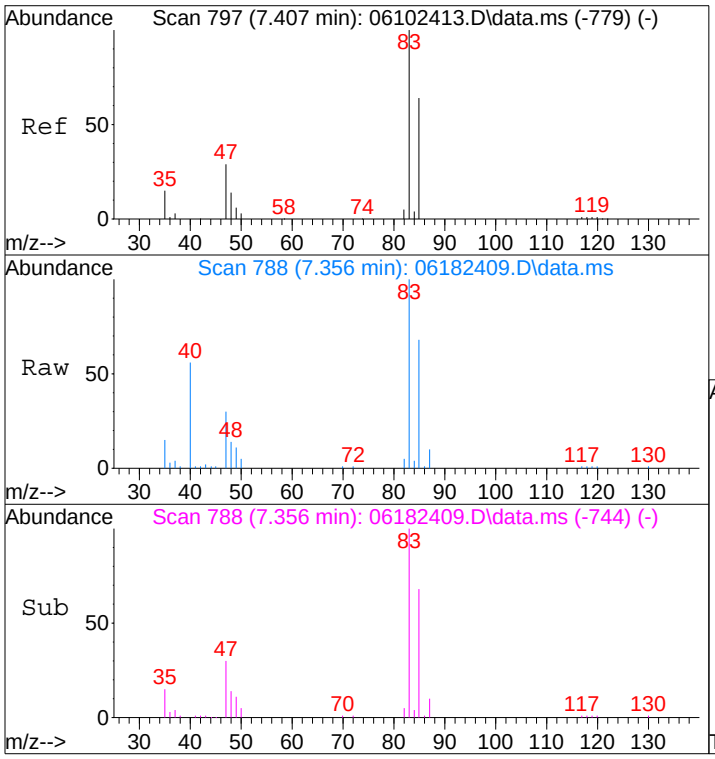


#31
n-Hexane
Concen: 0.07 ng
RT: 7.31 min Scan# 779
Delta R.T. 0.057 min
Lab File: 06182409.D
Acq: 18 Jun 2024 13:54

Tgt Ion: 57 Resp: 1645

Ion	Ratio	Lower	Upper
57	100		
56	46.6	42.5	63.7
86	31.6	9.5	14.3#

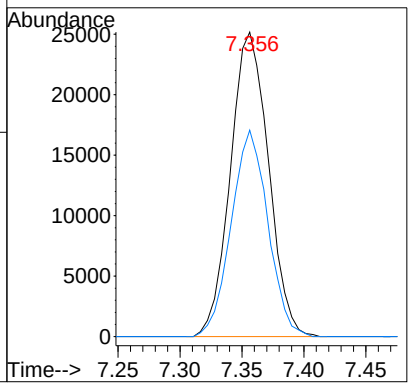


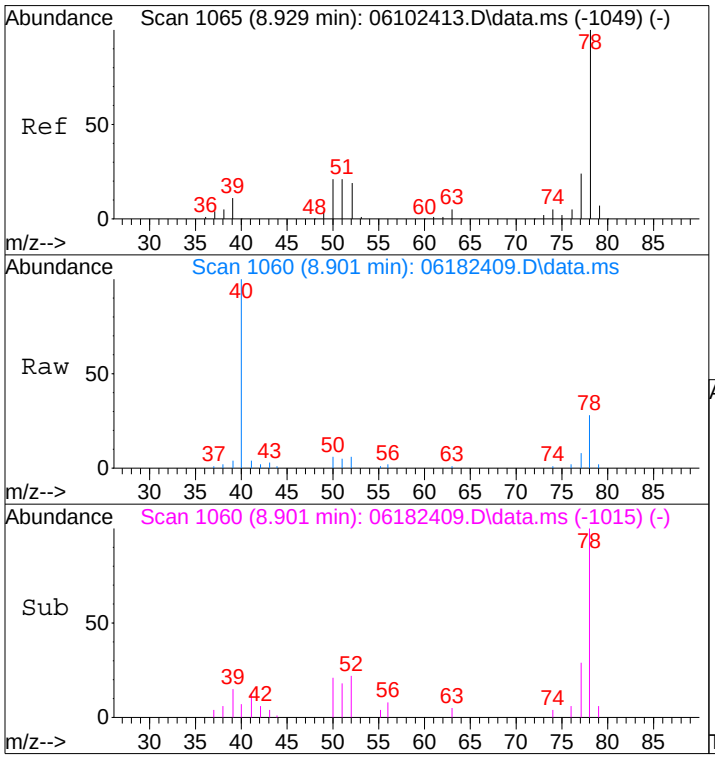


#32
Chloroform
Concen: 1.92 ng
RT: 7.36 min Scan# 788
Delta R.T. 0.001 min
Lab File: 06182409.D
Acq: 18 Jun 2024 13:54

Tgt Ion: 83 Resp: 53796

Ion	Ratio	Lower	Upper
83	100		
85	65.4	44.4	84.4

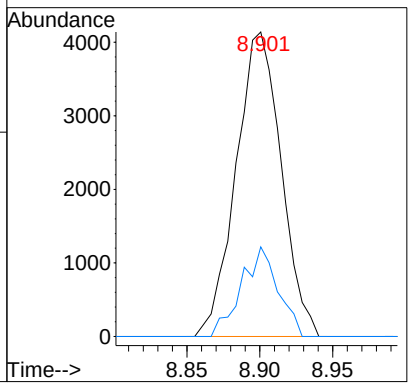


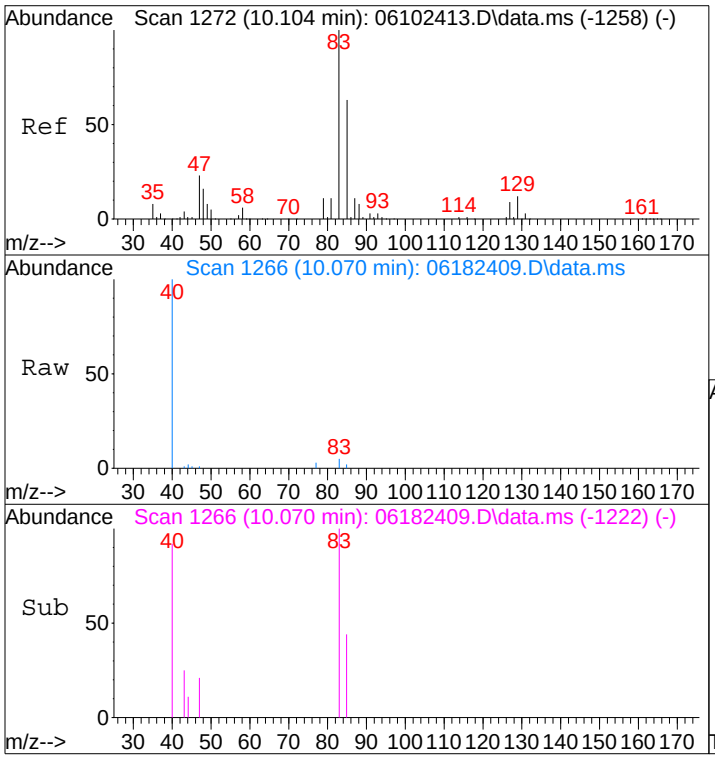


#41
Benzene
Concen: 0.15 ng
RT: 8.90 min Scan# 1060
Delta R.T. 0.003 min
Lab File: 06182409.D
Acq: 18 Jun 2024 13:54

Tgt Ion: 78 Resp: 8916

Ion	Ratio	Lower	Upper
78	100		
77	23.9	4.0	44.0

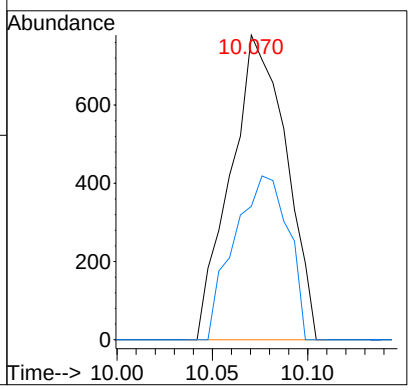


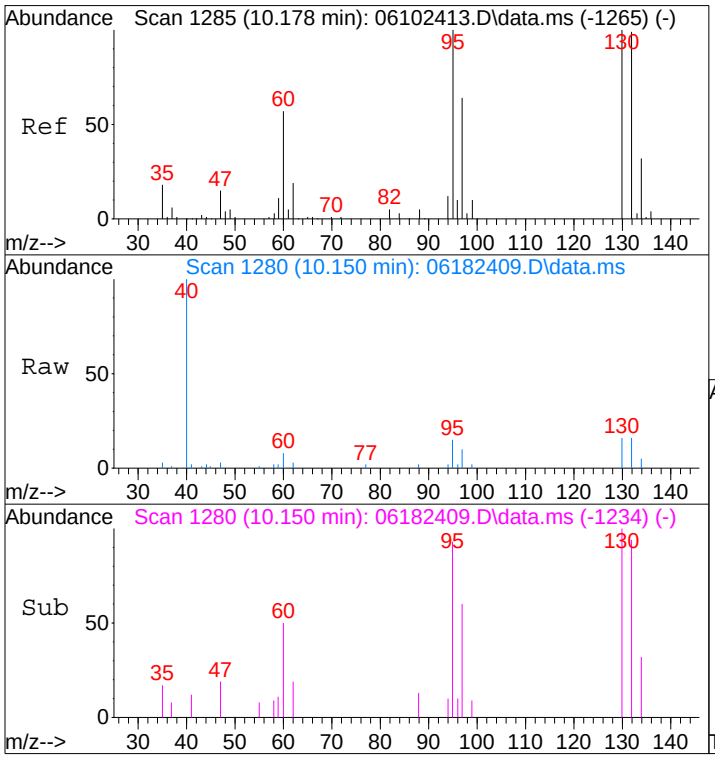


#46
Bromodichloromethane
Concen: 0.07 ng
RT: 10.07 min Scan# 1266
Delta R.T. -0.001 min
Lab File: 06182409.D
Acq: 18 Jun 2024 13:54

Tgt Ion: 83 Resp: 1575

Ion	Ratio	Lower	Upper
83	100		
85	52.5	43.8	83.8

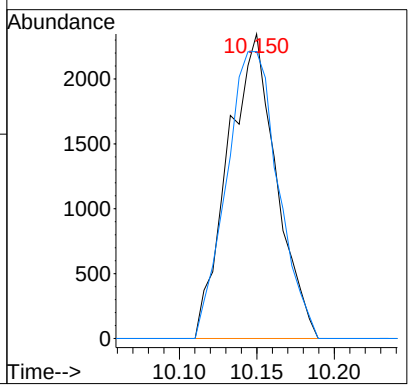


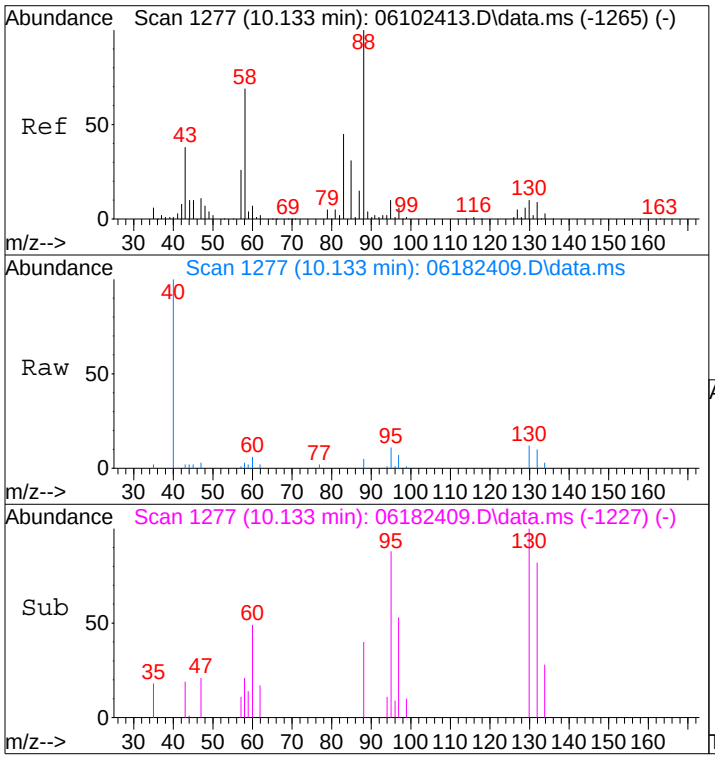


#47
Trichloroethene
Concen: 0.30 ng
RT: 10.15 min Scan# 1280
Delta R.T. 0.010 min
Lab File: 06182409.D
Acq: 18 Jun 2024 13:54

Tgt Ion:130 Resp: 5099

Ion	Ratio	Lower	Upper
130	100		
132	100.8	77.9	117.9

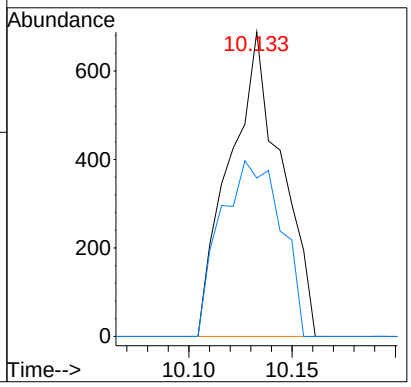


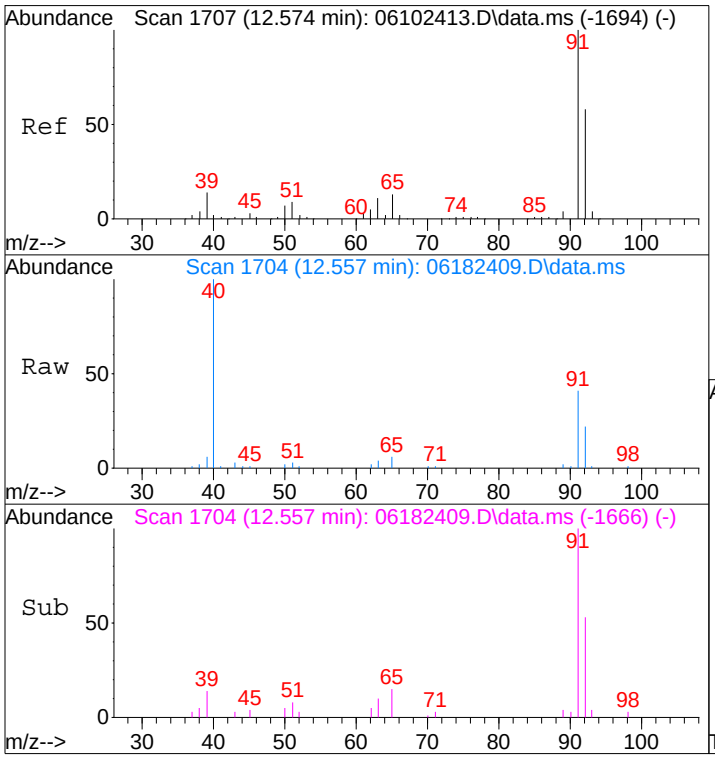


#48
1,4-Dioxane
Concen: 0.11 ng
RT: 10.13 min Scan# 1277
Delta R.T. 0.033 min
Lab File: 06182409.D
Acq: 18 Jun 2024 13:54

Tgt Ion: 88 Resp: 1193

Ion	Ratio	Lower	Upper
88	100		
58	67.7	47.6	87.6

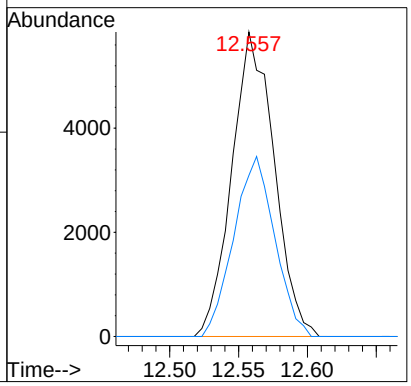


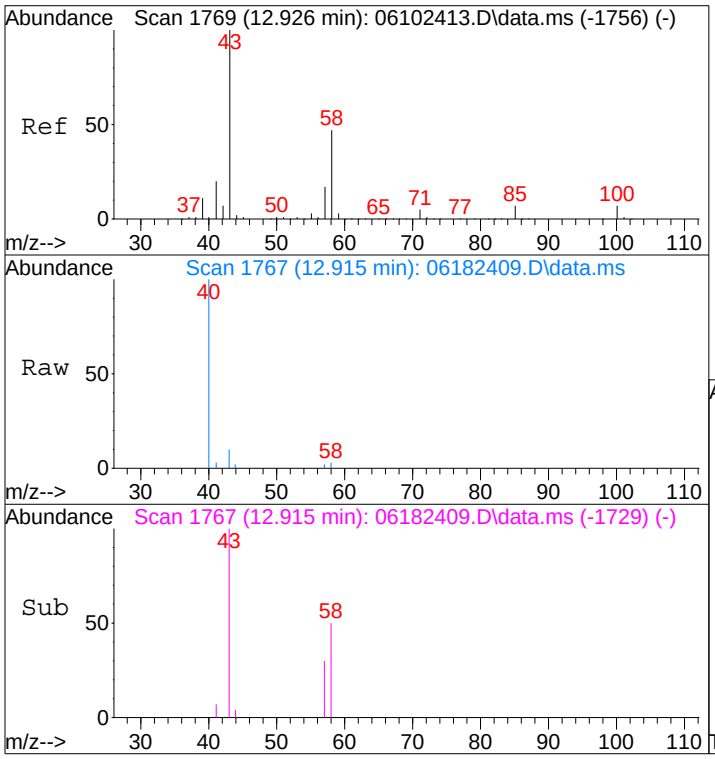


#58
Toluene
Concen: 0.22 ng
RT: 12.56 min Scan# 1704
Delta R.T. -0.034 min
Lab File: 06182409.D
Acq: 18 Jun 2024 13:54

Tgt Ion: 91 Resp: 12504

Ion	Ratio	Lower	Upper
91	100		
92	57.3	37.4	77.4

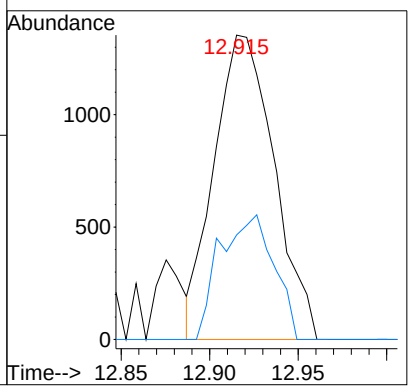


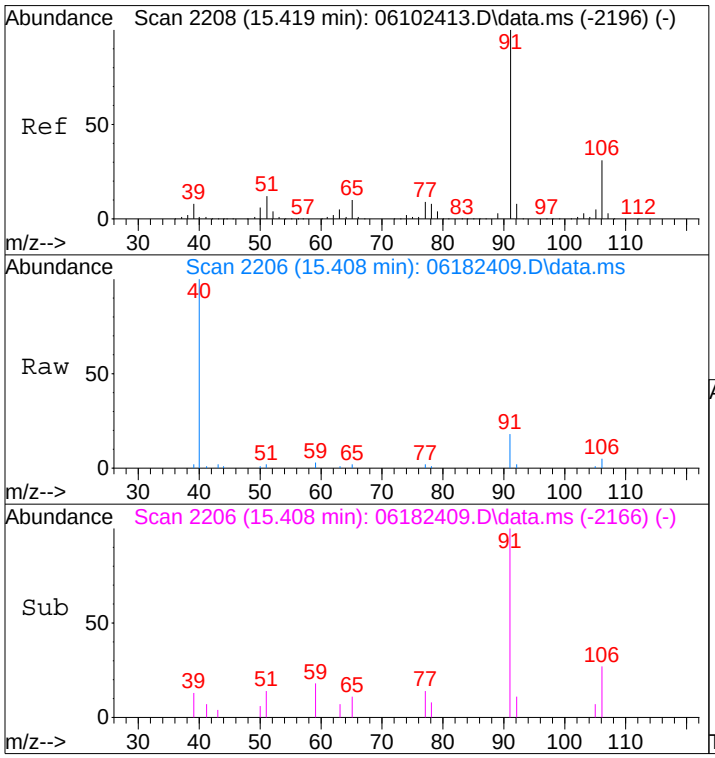


#59
2-Hexanone
Concen: 0.09 ng
RT: 12.92 min Scan# 1767
Delta R.T. -0.034 min
Lab File: 06182409.D
Acq: 18 Jun 2024 13:54

Tgt Ion: 43 Resp: 3197

Ion	Ratio	Lower	Upper
43	100		
58	36.8	25.9	65.9

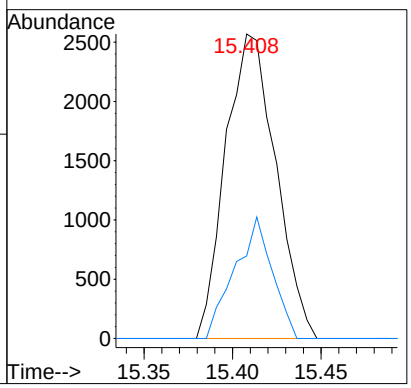


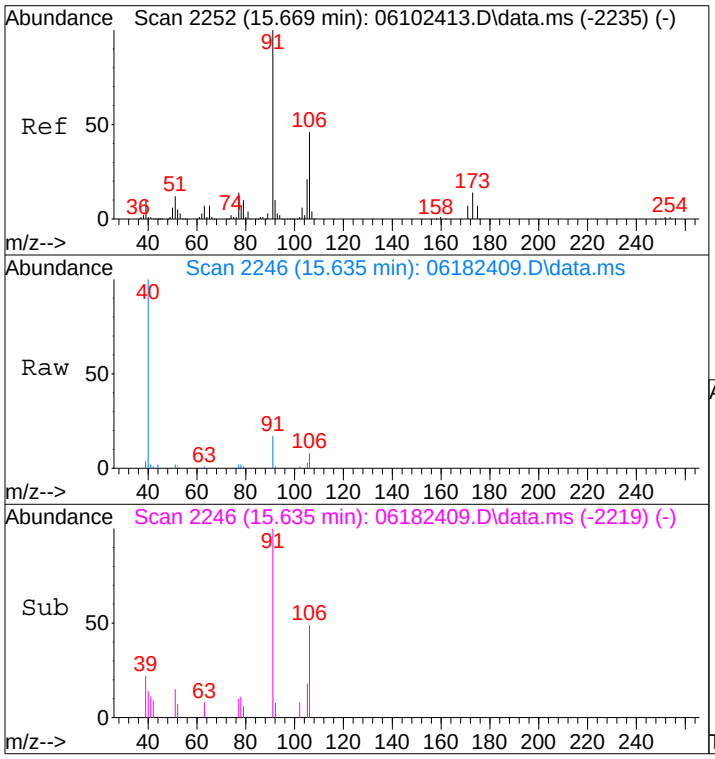


#66
Ethylbenzene
Concen: 0.08 ng
RT: 15.41 min Scan# 2206
Delta R.T. -0.023 min
Lab File: 06182409.D
Acq: 18 Jun 2024 13:54

Tgt Ion: 91 Resp: 5054

Ion	Ratio	Lower	Upper
91	100		
106	29.9	10.7	50.7

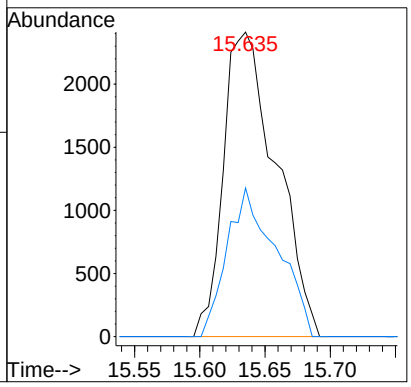


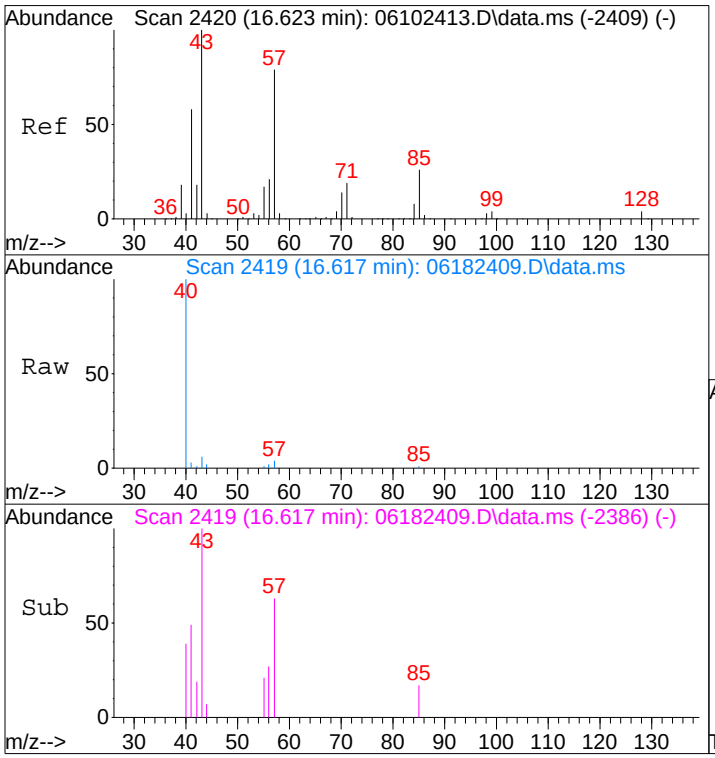


#67
m- & p-Xylenes
Concen: 0.12 ng
RT: 15.64 min Scan# 2246
Delta R.T. -0.045 min
Lab File: 06182409.D
Acq: 18 Jun 2024 13:54

Tgt Ion: 91 Resp: 6767

Ion	Ratio	Lower	Upper
91	100		
106	46.0	25.9	65.9

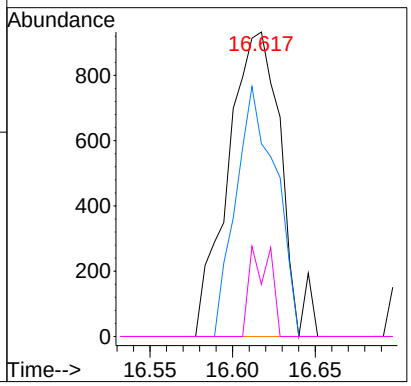




#71
n-Nonane
Concen: 0.07 ng
RT: 16.62 min Scan# 2419
Delta R.T. -0.011 min
Lab File: 06182409.D
Acq: 18 Jun 2024 13:54

Tgt Ion: 43 Resp: 2070

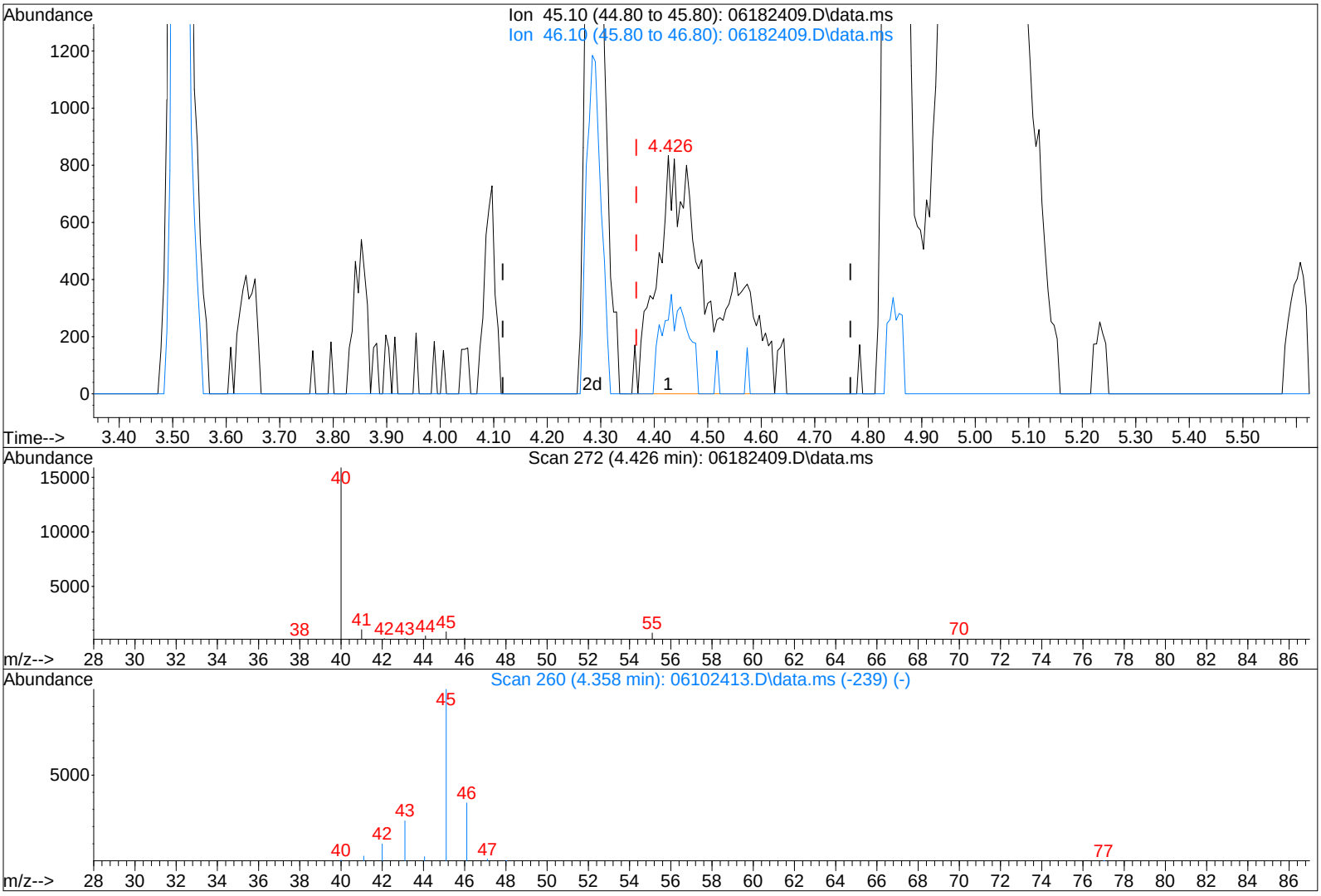
Ion	Ratio	Lower	Upper
43	100		
57	62.2	58.2	98.2
85	11.6	5.9	45.9



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182409.D Vial: 6
Acq On : 18 Jun 2024 13:54 Operator: SC
Sample : P2402249-013 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 18 14:20:51 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182409.D\data.ms

(10) Ethanol (T)

4.426min (+0.059) 0.44ng

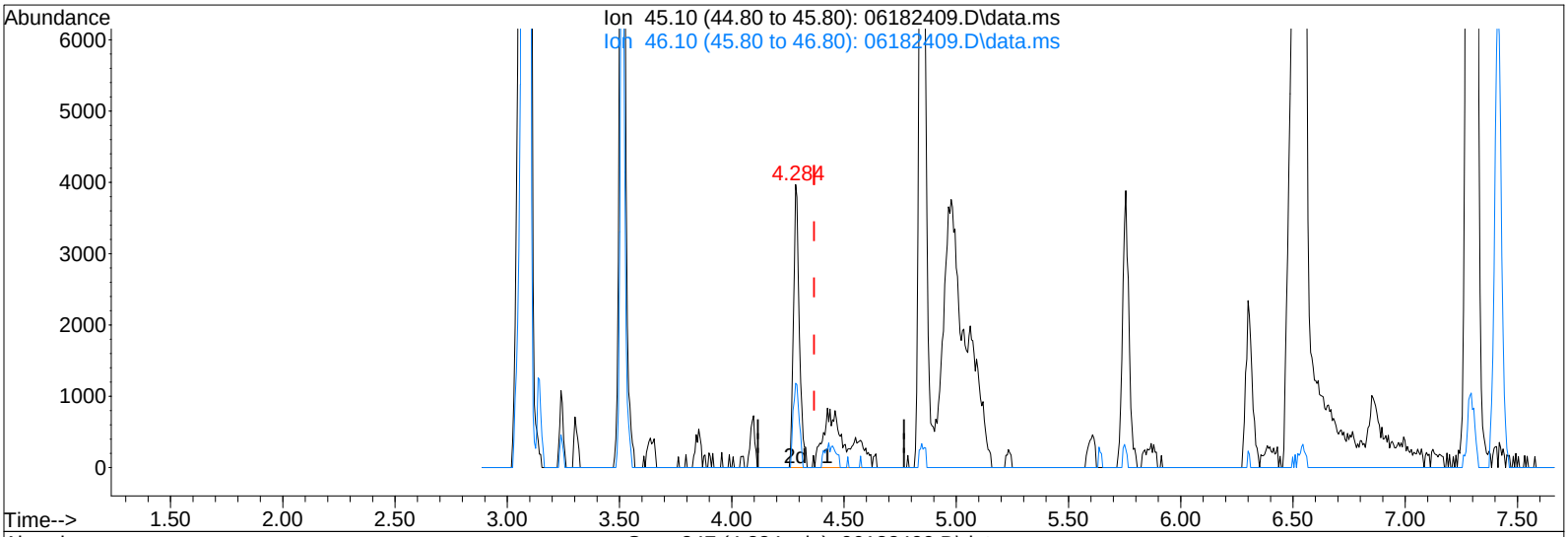
response 6072

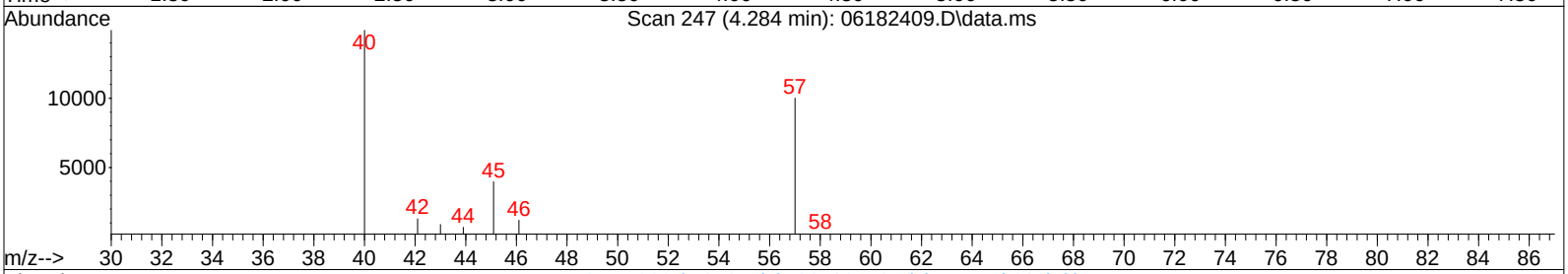
Ion	Exp%	Act%
45.10	100	100
46.10	33.50	18.73
0.00	0.00	0.00
0.00	0.00	0.00

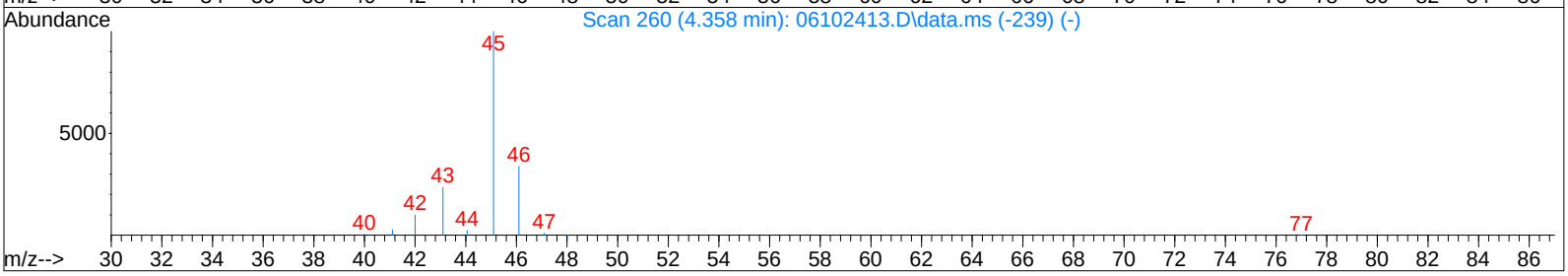
Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182409.D Vial: 6
Acq On : 18 Jun 2024 13:54 Operator: SC
Sample : P2402249-013 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 18 14:20:51 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M







TIC: 06182409.D\data.ms

(10) Ethanol (T)

4.284min (-0.083) 0.96ng m

response 13390

Ion	Exp%	Act%
45.10	100	100
46.10	33.50	8.49#
0.00	0.00	0.00
0.00	0.00	0.00

WP

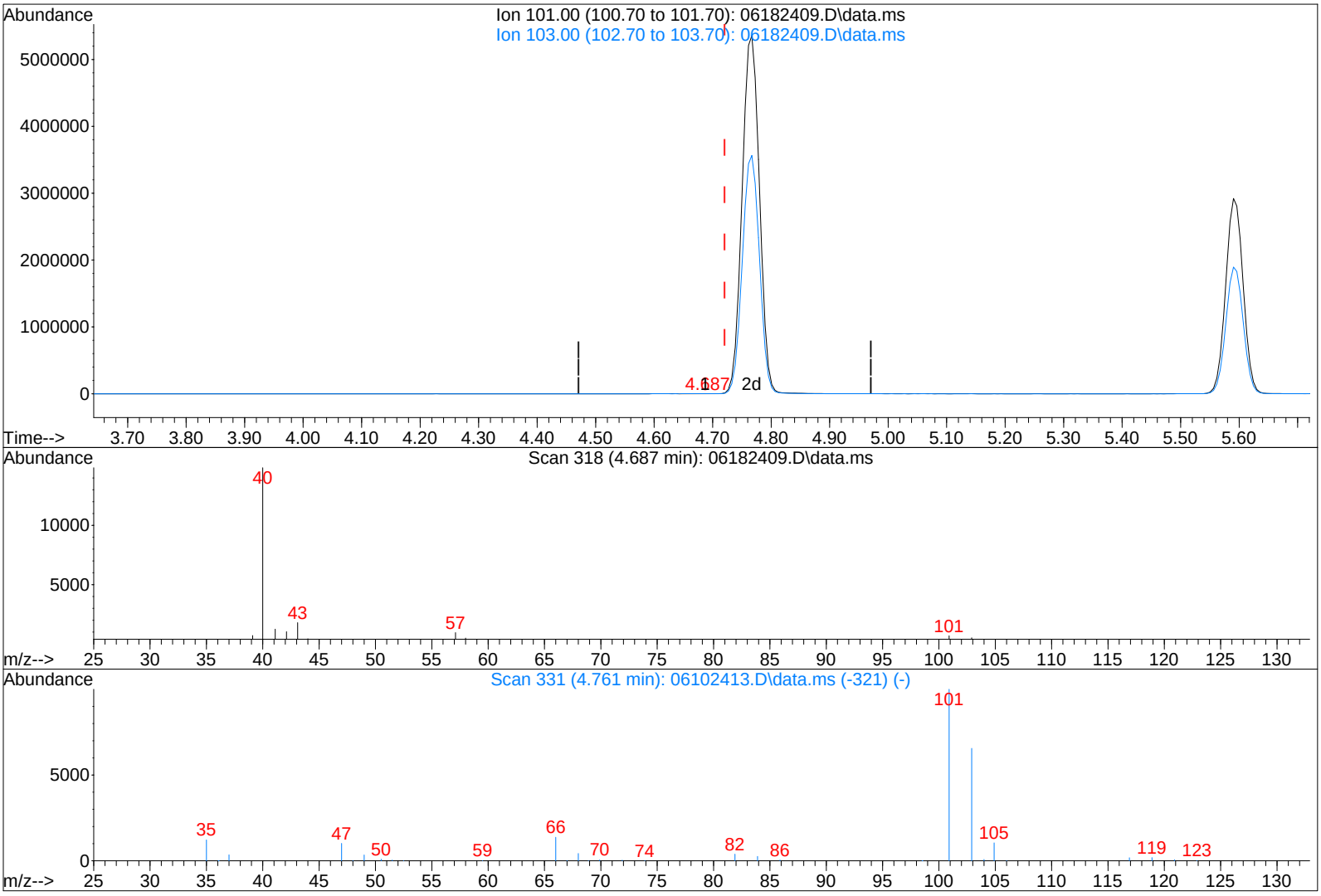
6/19/24

6/29/24

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182409.D Vial: 6
Acq On : 18 Jun 2024 13:54 Operator: SC
Sample : P2402249-013 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 14:06:10 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182409.D\data.ms

(14) Trichlorofluoromethane (T)

4.687min (-0.033) 0.04ng

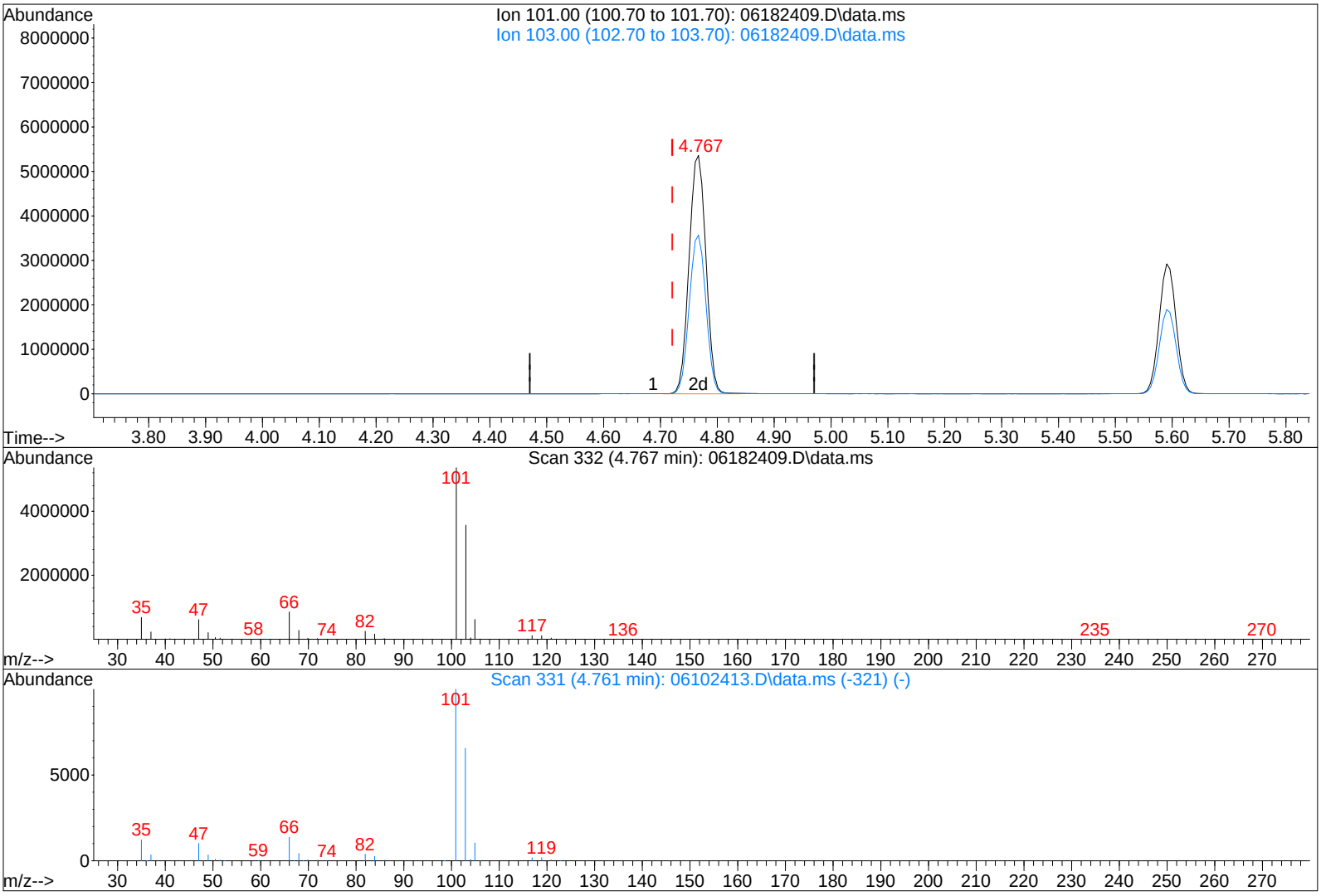
response 1408

Ion	Exp%	Act%
101.00	100	100
103.00	64.90	86.15#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182409.D Vial: 6
Acq On : 18 Jun 2024 13:54 Operator: SC
Sample : P2402249-013 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 14:06:10 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182409.D\data.ms

(14) Trichlorofluoromethane (T)

4.767min (+0.046) 323.67ng m

response 11045133

Ion	Exp%	Act%
101.00	100	100
103.00	64.90	65.85
0.00	0.00	0.00
0.00	0.00	0.00

MJ 6/28/24

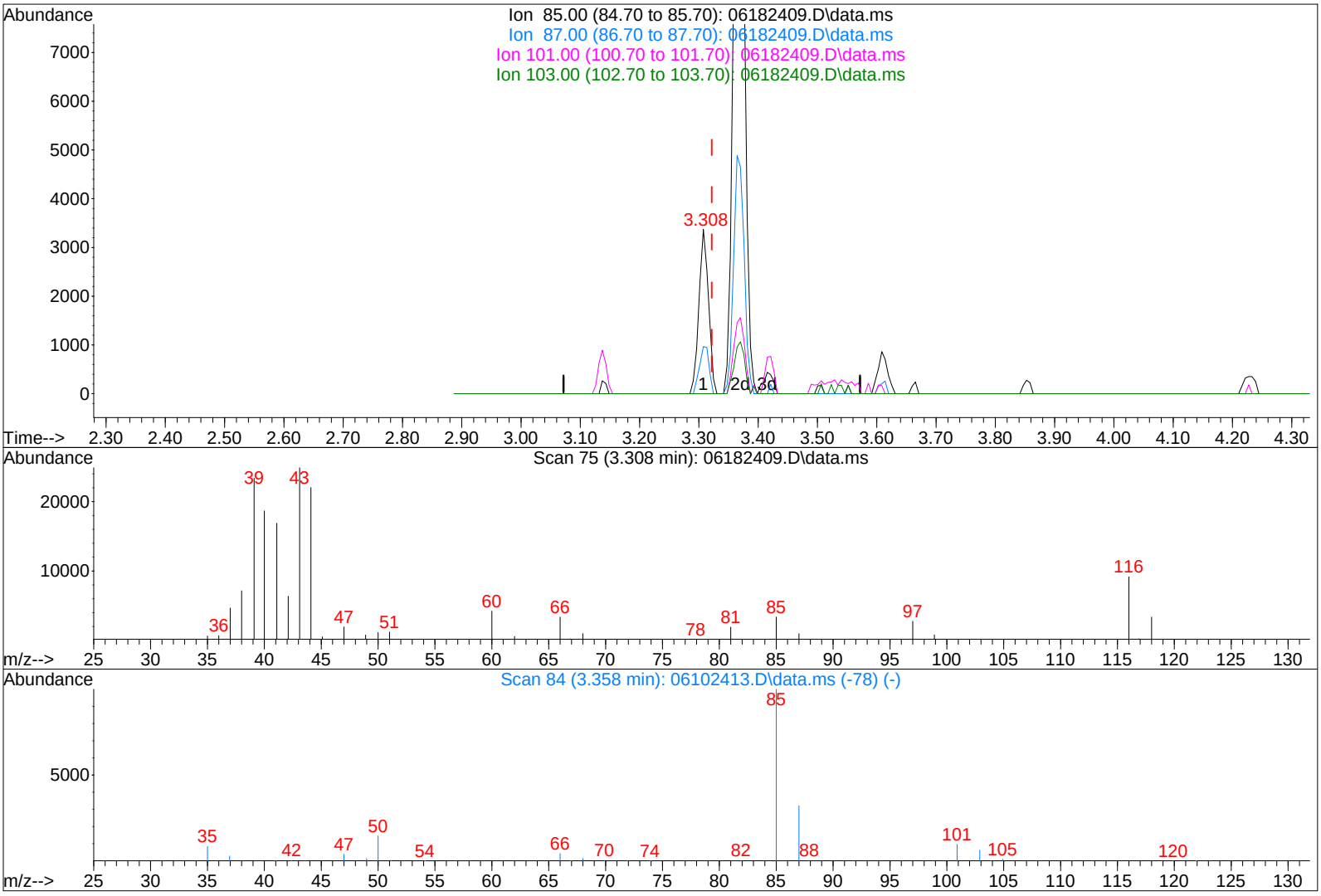
MP

CG 6/29/24

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182409.D Vial: 6
Acq On : 18 Jun 2024 13:54 Operator: SC
Sample : P2402249-013 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 18 14:20:51 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182409.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.308min (-0.014) 0.11ng

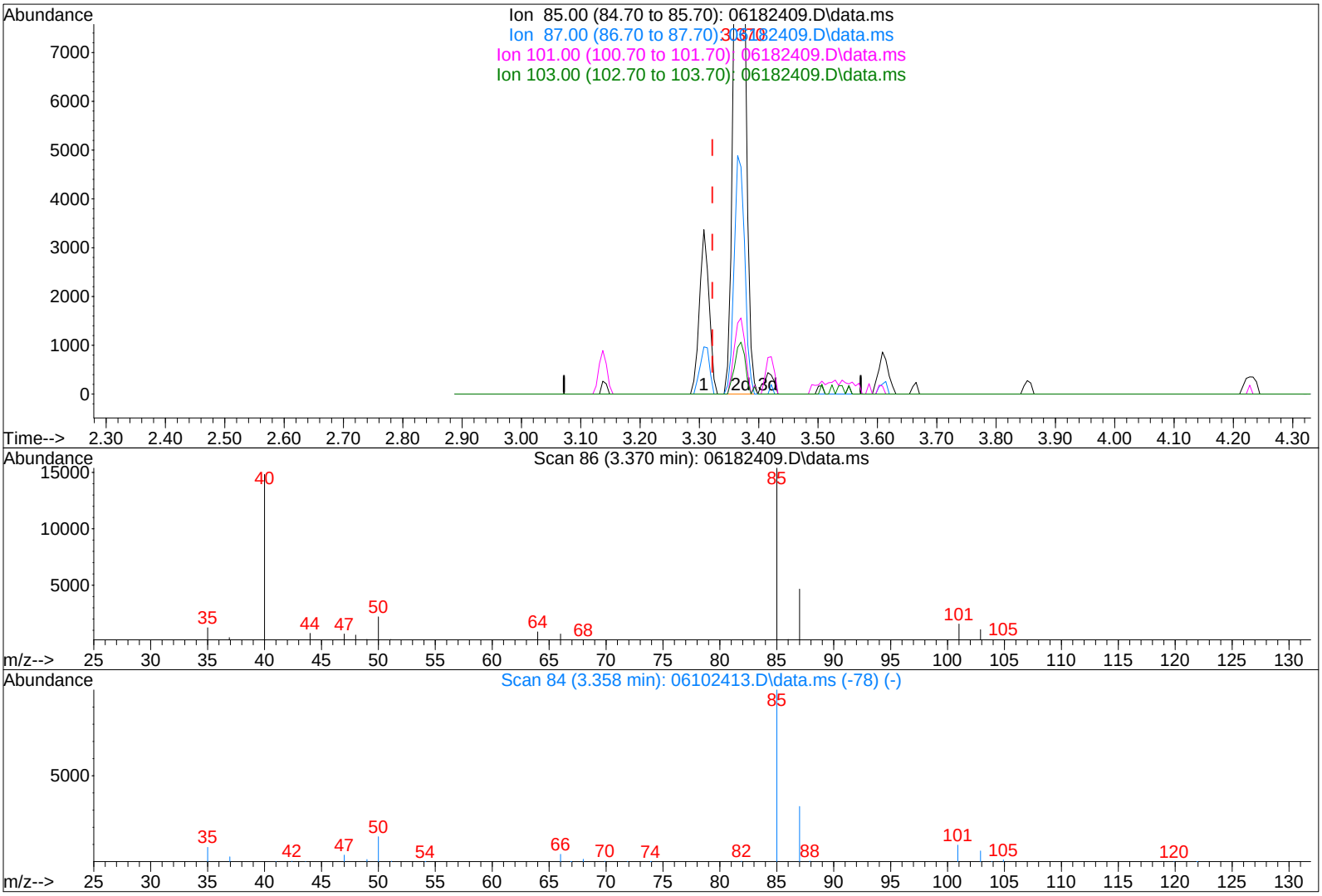
response 3781

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	28.83
101.00	9.80	0.00
103.00	6.30	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182409.D Vial: 6
Acq On : 18 Jun 2024 13:54 Operator: SC
Sample : P2402249-013 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 18 14:20:51 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182409.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.370min (+0.048) 0.57ng m

response 19200

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	5.68#
101.00	9.80	0.00
103.00	6.30	0.00

WP

6/19/24

CG 6/29/24

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182409.D Vial: 6
Acq On : 18 Jun 2024 13:54 Operator: SC
Sample : P2402249-013 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 14:59:38 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

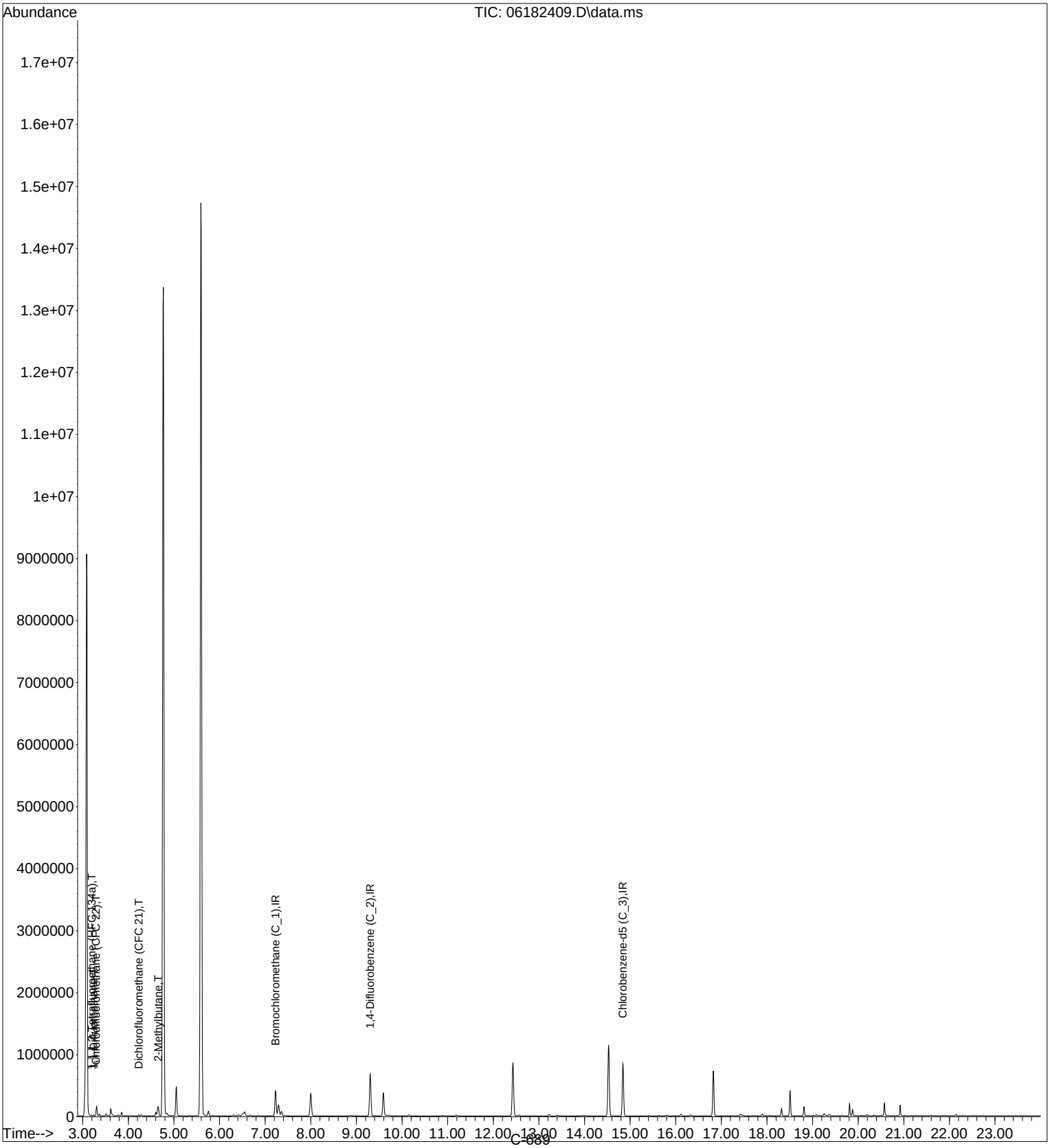
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	144012	12.500	ng		-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	630070	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	143764	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	3.14	85	163	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.20	83	1653	0.112	ng	#	1
4) 1,1-Difluoroethane	3.24	65	2435	0.194	ng		99
5) Chlorodifluoromethane ...	3.29	67	991	0.202	ng		89
6) 1-Chloro-1,1-Difluoroe...	3.51	65	542	N.D.			
7) Dichlorofluoromethane ...	4.23	67	12279	0.372	ng		99
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	4.56	83	1055	N.D.			
10) 2-Methylbutane	4.66	57	31178	1.815	ng		96
11) Methyl Acetate	5.35	43	3394	N.D.			
12) 2-Methylpentane	6.49	71	723	N.D.			
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	0.00	84	0	N.D.			
17) 2,3-Dimethylpentane	9.53	56	69	N.D.			
18) Dibromomethane	9.80	174	135	N.D.			
20) Methyl Cyclohexane	0.00	55	0	N.D.			
21) 1,3-Dichloropropane	0.00	76	0	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	16.33	75	411	N.D.			
25) Bromobenzene	17.03	77	71	N.D.			
26) 2-Chlorotoluene	17.61	91	783	N.D.			
27) 4-Chlorotoluene	17.61	91	783	N.D.			
28) Indane	19.11	117	178	N.D.			
29) Indene	19.20	115	58	N.D.			
30) 1,2,4,5-Tetramethylben...	20.18	119	195	N.D.			
31) 1,2,3,4-Tetramethylben...	20.23	119	451	N.D.			
32) 1,2,3,5-Tetramethylben...	20.57	119	1119	N.D.			
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182409.D Vial: 6
Acq On : 18 Jun 2024 13:54 Operator: SC
Sample : P2402249-013 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:59:38 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



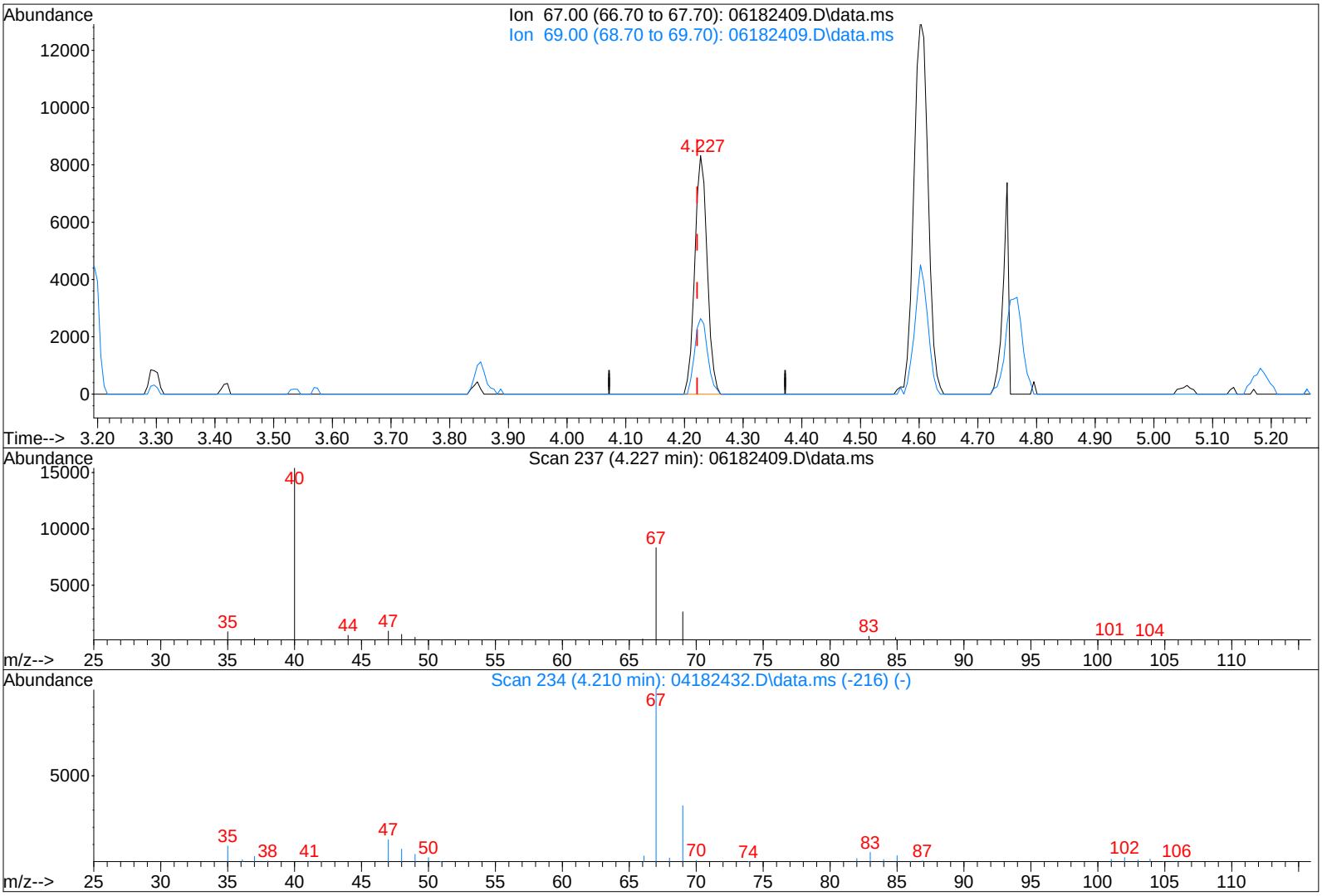
C-089

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182409.D Vial: 6
Acq On : 18 Jun 2024 13:54 Operator: SC
Sample : P2402249-013 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 14:59:38 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182409.D\data.ms

(7) Dichlorofluoromethane (CFC 21) (T)

4.227min (+0.006) 0.37ng

response 12279

Ion	Exp%	Act%
67.00	100	100
69.00	32.40	33.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182413.D Vial: 6
Acq On : 18 Jun 2024 16:03 Operator: SC
Sample : P2402249-013Dil (40mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 13:49:09 2024 6/19/24
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	137081	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	589067	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	134869	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	299074	12.275	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.24%				
57) Toluene-d8 (SS2)	12.43	98	655552	12.702	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.60%				
73) Bromofluorobenzene (SS3)	16.83	174	234917	12.605	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.88%				
Target Compounds							Qvalue
2) Propene	0.00	42	0	N.D.	d		
3) Dichlorodifluoromethan...	3.33	85	274	N.D.			
4) Chloromethane	3.53	50	134	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.30	45	1810	0.136	ng		94
11) Acetonitrile	4.45	41	108	N.D.			
12) Acrolein	0.00	56	0	N.D.			
13) Acetone	4.66	58	2755	0.259	ng	#	73
14) Trichlorofluoromethane	4.75	101	991177	30.372	ng		100
15) 2-Propanol (Isopropanol)	4.87	45	3637	0.085	ng		93
16) Acrylonitrile	5.04	53	424	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	0.00	59	0	N.D.			
19) Methylene Chloride	5.36	84	698	N.D.			
20) 3-Chloro-1-propene (Al...	0.00	41	0	N.D.			
21) Trichlorotrifluoroethane	5.58	151	403831	29.251	ng		99
22) Carbon Disulfide	0.00	76	0	N.D.	d		
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D.			
27) 2-Butanone (MEK)	6.69	72	182	N.D.			
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.	d		
30) Ethyl Acetate	7.29	61	1010	0.196	ng		99
31) n-Hexane	0.00	57	0	N.D.			
32) Chloroform	7.36	83	4566	0.170	ng		98
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	330	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.84	56	297	No Calib		#	
41) Benzene	8.89	78	1880	N.D.			
42) Carbon Tetrachloride	0.00	117	0	N.D.			
43) Cyclohexane	0.00	84	0	N.D.			
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.08	83	437	N.D.			
47) Trichloroethene	10.14	130	683	N.D.			
48) 1,4-Dioxane	10.14	88	124	N.D.			
49) 2,2,4-Trimethylpentane...	0.00	57	0	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182413.D Vial: 6
Acq On : 18 Jun 2024 16:03 Operator: SC
Sample : P2402249-013Dil (40mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 13:49:09 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

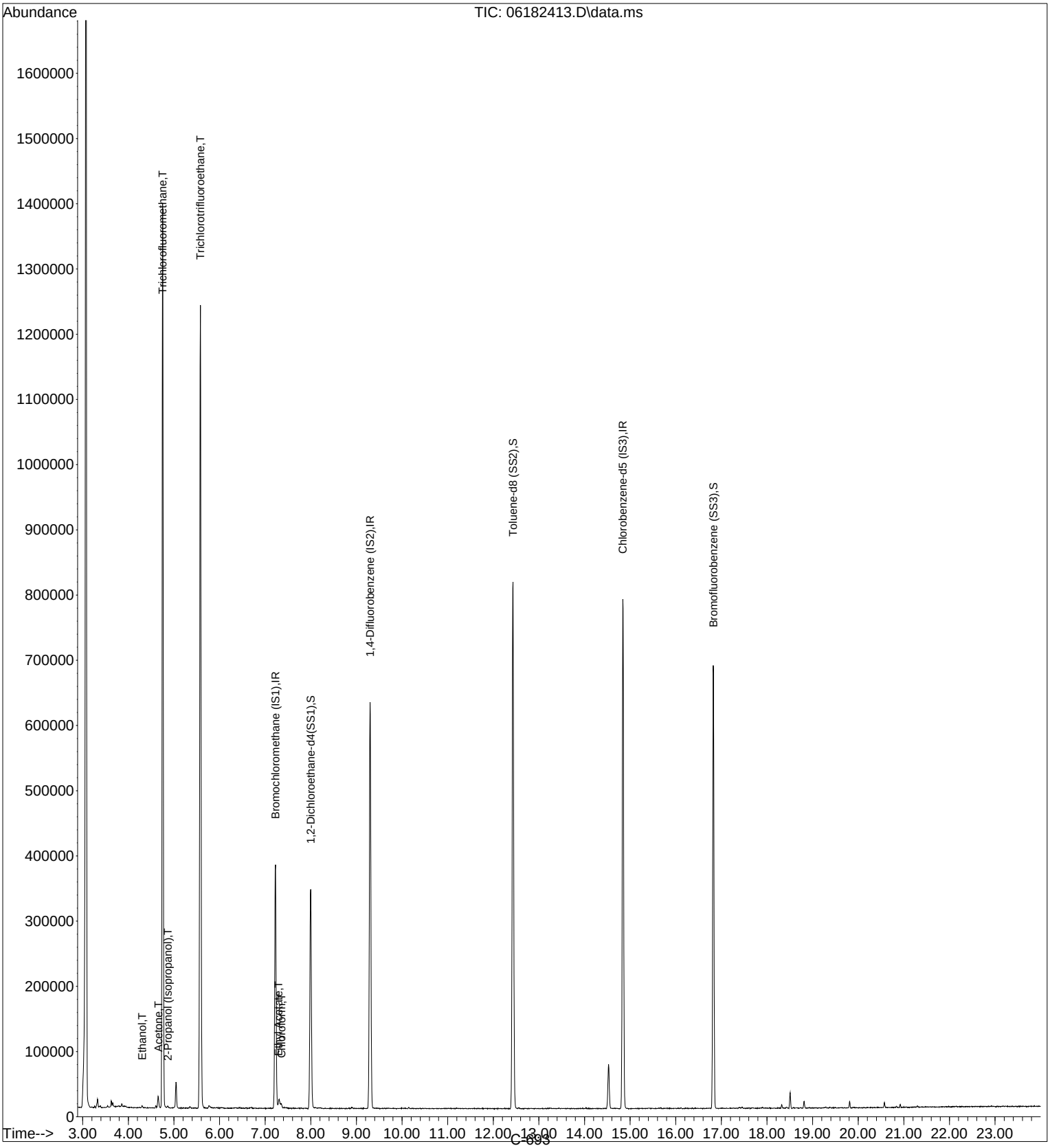
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
51) n-Heptane	0.00	71	0	N.D.		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	12.56	91	1521	N.D.		
59) 2-Hexanone	0.00	43	0	N.D.		
60) Dibromochloromethane	13.07	129	265	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	0.00	43	0	N.D.		
63) n-Octane	0.00	57	0	N.D.		
64) Tetrachloroethene	14.03	166	353	N.D.		
65) Chlorobenzene	14.90	112	492	N.D.		
66) Ethylbenzene	15.42	91	1027	N.D.		
67) m- & p-Xylenes	15.66	91	644	N.D.		
68) Bromoform	15.67	173	590	N.D.		
69) Styrene	0.00	104	0	N.D.		
70) o-Xylene	16.25	91	588	N.D.		
71) n-Nonane	0.00	43	0	N.D.		
72) 1,1,2,2-Tetrachloroethane	16.21	83	341	N.D.		
74) Cumene	17.04	105	665	N.D.		
75) alpha-Pinene	0.00	93	0	N.D.		
76) n-Propylbenzene	17.67	91	969	N.D.		
77) 3-Ethyltoluene	17.04	105	665	No Calib		#
78) 4-Ethyltoluene	17.86	105	611	N.D.		
79) 1,3,5-Trimethylbenzene	17.96	105	334	N.D.		
80) alpha-Methylstyrene	0.00	118	0	N.D.		
81) 2-Ethyltoluene	17.04	105	665	No Calib		#
82) 1,2,4-Trimethylbenzene	18.43	105	587	N.D.		
83) n-Decane	0.00	58	0	N.D.		
84) Benzyl Chloride	0.00	91	0	N.D.		
85) 1,3-Dichlorobenzene	18.58	146	558	N.D.		
86) 1,4-Dichlorobenzene	18.66	146	519	N.D.		
87) sec-Butylbenzene	18.75	105	756	N.D.		
88) 4-Isopropyltoluene (p-...	18.93	119	610	N.D.		
89) 1,2,3-Trimethylbenzene	17.04	105	665	No Calib		#
90) 1,2-Dichlorobenzene	19.04	146	383	N.D.		
91) d-Limonene	0.00	68	0	N.D.		
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	0.00	58	0	N.D.		
94) 1,2,4-Trichlorobenzene	20.84	180	581	N.D.		
95) Naphthalene	20.94	128	388	N.D.		
96) n-Dodecane	0.00	58	0	N.D.		
97) Hexachlorobutadiene	21.30	225	642	N.D.		
98) Cyclohexanone	0.00	55	0	N.D.		
99) tert-Butylbenzene	18.42	119	789	N.D.		
100) n-Butylbenzene	19.39	91	533	N.D.		
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182413.D Vial: 6
Acq On : 18 Jun 2024 16:03 Operator: SC
Sample : P2402249-013Dil (40mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 13:49:09 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

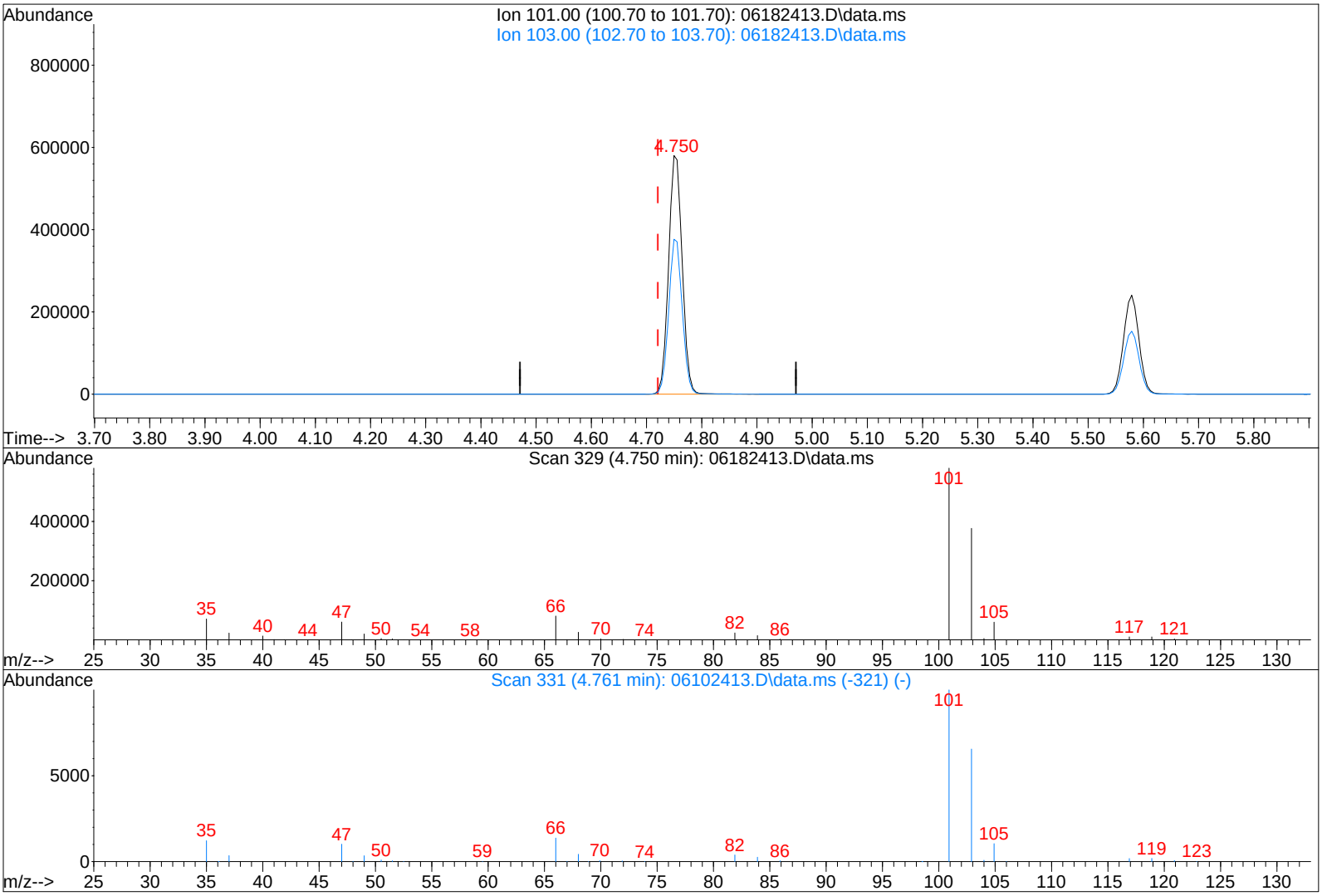


Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182413.D Vial: 6
Acq On : 18 Jun 2024 16:03 Operator: SC
Sample : P2402249-013Dil (40mL) Inst : MS09
Misc : S37-06062402

MJ 6/29/24

Quant Time: Jun 19 13:49:09 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182413.D\data.ms

(14) Trichlorofluoromethane (T)

4.750min (+0.029) 30.37ng

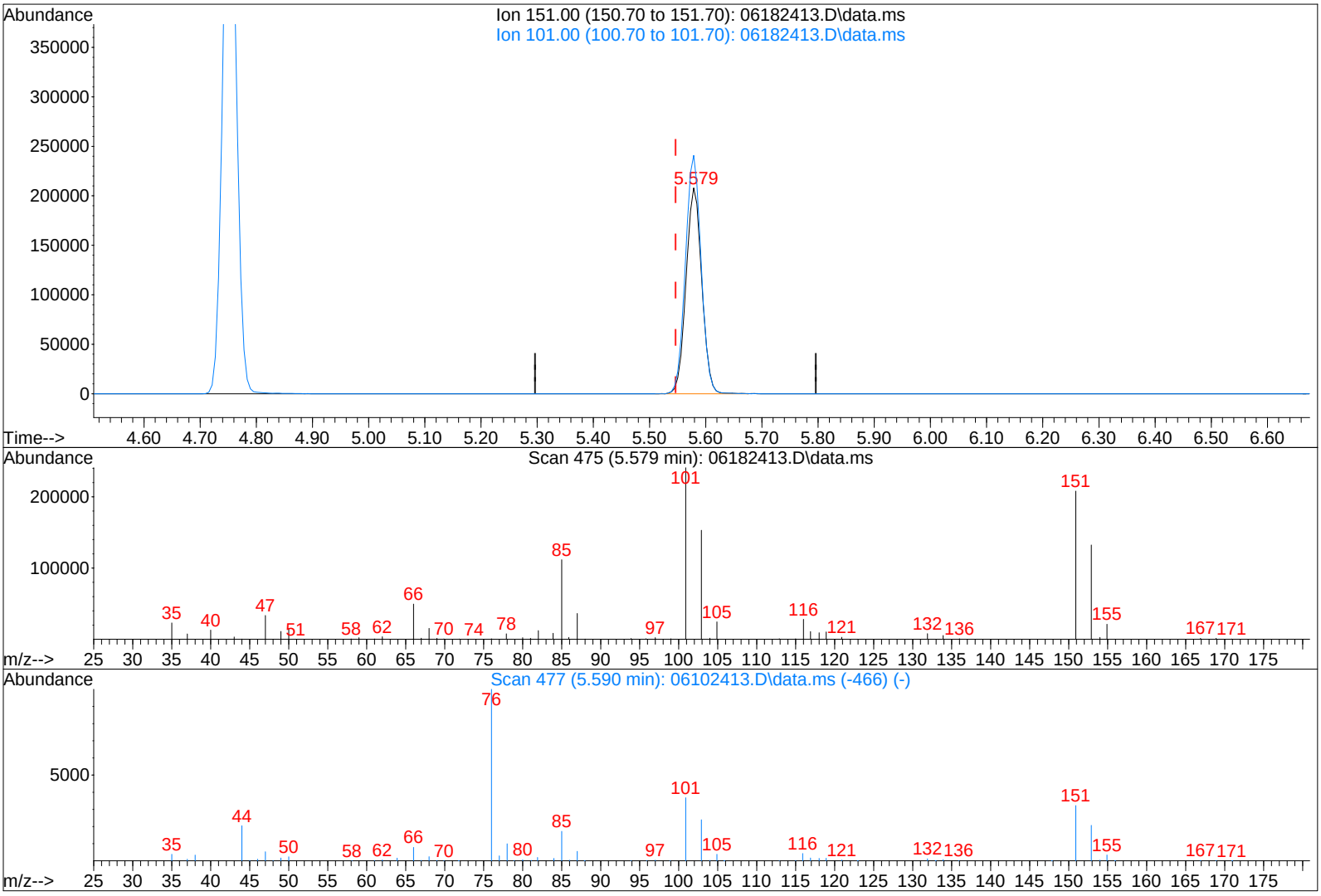
response 991177

Ion	Exp%	Act%
101.00	100	100
103.00	64.90	64.66
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182413.D Vial: 6
Acq On : 18 Jun 2024 16:03 Operator: SC
Sample : P2402249-013Dil (40mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 18 16:46:43 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182413.D\data.ms

(21) Trichlorotrifluoroethane (T)

5.579min (+0.032) 29.25ng

response 403831

Ion	Exp%	Act%
151.00	100	100
101.00	115.00	115.77
0.00	0.00	0.00
0.00	0.00	0.00

LSC Area Percent Report

MJ 6/28/24

Data Path : I:\MS09\DATA\2024 06\18\
Data File : 06182409.D
Acq On : 18 Jun 2024 13:54
Operator : SC
Sample : P2402249-013 (400mL)
Misc : S37-06062402
ALS Vial : 6 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06182409.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.086	20	36	52	rBV	9058945	17521116	56.78%	21.174%
2	3.194	52	55	59	rVV	11304	13855	0.04%	0.017%
3	3.239	59	63	68	rVV2	11460	13724	0.04%	0.017%
4	3.302	68	74	79	rVV3	152569	241305	0.78%	0.292%
5	3.364	82	85	92	rVB	29962	37889	0.12%	0.046%
6	3.512	104	111	122	rBV	31215	51389	0.17%	0.062%
7	3.614	124	129	142	rVV2	113545	195314	0.63%	0.236%
8	3.779	153	158	165	rBV2	12361	17290	0.06%	0.021%
9	3.853	165	171	179	rBV	53578	69005	0.22%	0.083%
10	4.227	230	237	242	rBV	16439	23821	0.08%	0.029%
11	4.284	242	247	259	rVB	17986	35426	0.11%	0.043%
12	4.602	298	303	306	rBV	52229	82873	0.27%	0.100%
13	4.653	306	312	321	rVV2	147852	337771	1.09%	0.408%
14	4.767	321	332	343	rVV	13357279	27209824	88.18%	32.882%
15	4.846	343	346	359	rVV2	39728	88624	0.29%	0.107%
16	4.977	362	369	374	rVV6	7635	22174	0.07%	0.027%
17	5.051	374	382	392	rVB	470759	828246	2.68%	1.001%
18	5.346	429	434	441	rVB4	8026	13244	0.04%	0.016%
19	5.477	452	457	463	rVB4	6683	12267	0.04%	0.015%
20	5.590	463	477	500	rBV	14717656	30857640	100.00%	37.290%
21	5.755	500	506	516	rVB	73433	143106	0.46%	0.173%
22	5.851	516	523	525	rBV5	5426	10505	0.03%	0.013%
23	6.306	596	603	611	rBV	15552	32194	0.10%	0.039%
24	6.425	611	624	629	rVV4	15558	50983	0.17%	0.062%
25	6.550	629	646	659	rVV2	63738	225043	0.73%	0.272%
26	6.669	662	667	676	rVB	11882	24862	0.08%	0.030%
27	6.857	692	700	707	rBV3	6612	14365	0.05%	0.017%
28	7.226	756	765	772	rBV	396333	854270	2.77%	1.032%
29	7.294	772	777	783	rVV2	173471	383863	1.24%	0.464%
30	7.356	783	788	795	rVV	70303	149917	0.49%	0.181%
31	7.413	795	798	808	rVB	9000	18691	0.06%	0.023%
32	7.998	892	901	913	rBV	359042	806093	2.61%	0.974%
33	8.804	1034	1043	1048	rBV2	6052	13140	0.04%	0.016%
34	8.901	1054	1060	1068	rVB3	11605	24452	0.08%	0.030%
35	9.304	1121	1131	1142	rVB	669521	1513410	4.90%	1.829%
36	9.588	1173	1181	1195	rBV	367946	783170	2.54%	0.946%
37	9.696	1195	1200	1210	rVB4	10258	28728	0.09%	0.035%

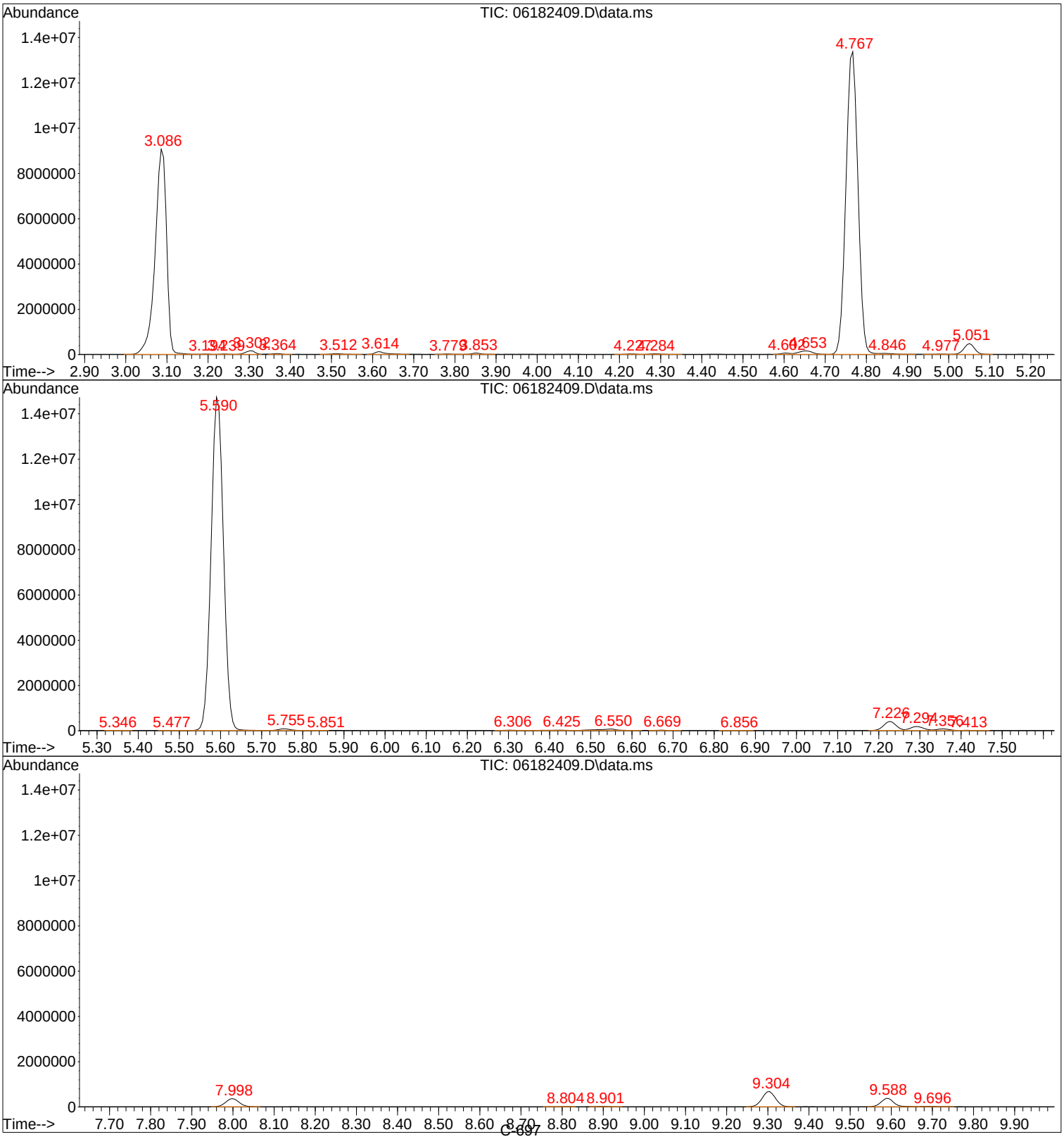
Sum of corrected areas: 82749589

LSC Report - Integrated Chromatogram

Data Path : I:\MS09\DATA\2024 06\18\
Data File : 06182409.D
Acq On : 18 Jun 2024 13:54
Operator : SC
Sample : P2402249-013 (400mL)
Misc : S37-06062402
ALS Vial : 6 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\18\\
Data File : 06182409.D
Acq On : 18 Jun 2024 13:544
Operator : SCC
Sample : P2402249-013 (400mL))
Misc : S37-060624022
ALS Vial : 6 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

						Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected

****

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182410.D Vial: 7
Acq On : 18 Jun 2024 14:26 Operator: SC
Sample : P2402249-014 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 14:02:12 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/19/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	142084	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	622480	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	145430	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	314452	12.452	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.60%				
57) Toluene-d8 (SS2)	12.43	98	701173	12.599	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.80%				
73) Bromofluorobenzene (SS3)	16.83	174	251444	12.512	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.08%				
Target Compounds							Qvalue
2) Propene	0.00	42	0	N.D. d			
3) Dichlorodifluoromethan...	3.36	85	19074m	0.570	ng		
4) Chloromethane	3.45	50	125	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	3.61	135	399	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.30	45	22685	1.642	ng		75
11) Acetonitrile	0.00	41	0	N.D. d			
12) Acrolein	4.54	56	2271	0.222	ng		94
13) Acetone	4.64	58	26953	2.442	ng		91
14) Trichlorofluoromethane	4.75	101	592775	17.524	ng		99
15) 2-Propanol (Isopropanol)	4.84	45	7558	0.170	ng		68
16) Acrylonitrile	4.99	53	919	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.33	59	684	N.D.			
19) Methylene Chloride	5.34	84	1064	0.068	ng		94
20) 3-Chloro-1-propene (Al...	5.45	41	274	N.D.			
21) Trichlorotrifluoroethane	5.58	151	527230	36.845	ng		97
22) Carbon Disulfide	5.60	76	23791	0.472	ng	#	1
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	6.43	86	1928	0.757	ng	#	33
27) 2-Butanone (MEK)	6.67	72	4319	0.494	ng	#	66
28) cis-1,2-Dichloroethene	7.07	61	126	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.			
30) Ethyl Acetate	0.00	61	0	N.D. d			
31) n-Hexane	7.32	57	730	N.D.			
32) Chloroform	7.35	83	13339	0.479	ng		97
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	264	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	9.58	61	2908	No Calib		#	
40) 1-Butanol	8.81	56	15325	No Calib		#	
41) Benzene	8.90	78	4088	0.071	ng		98
42) Carbon Tetrachloride	9.07	117	452	N.D.			
43) Cyclohexane	9.21	84	581	N.D.			
44) tert-Amyl Methyl Ether	9.59	73	158	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.08	83	757	N.D.			
47) Trichloroethene	10.15	130	402	N.D.			
48) 1,4-Dioxane	10.13	88	568	0.054	ng		87
49) 2,2,4-Trimethylpentane...	10.22	57	122	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182410.D Vial: 7
Acq On : 18 Jun 2024 14:26 Operator: SC
Sample : P2402249-014 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 14:02:12 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

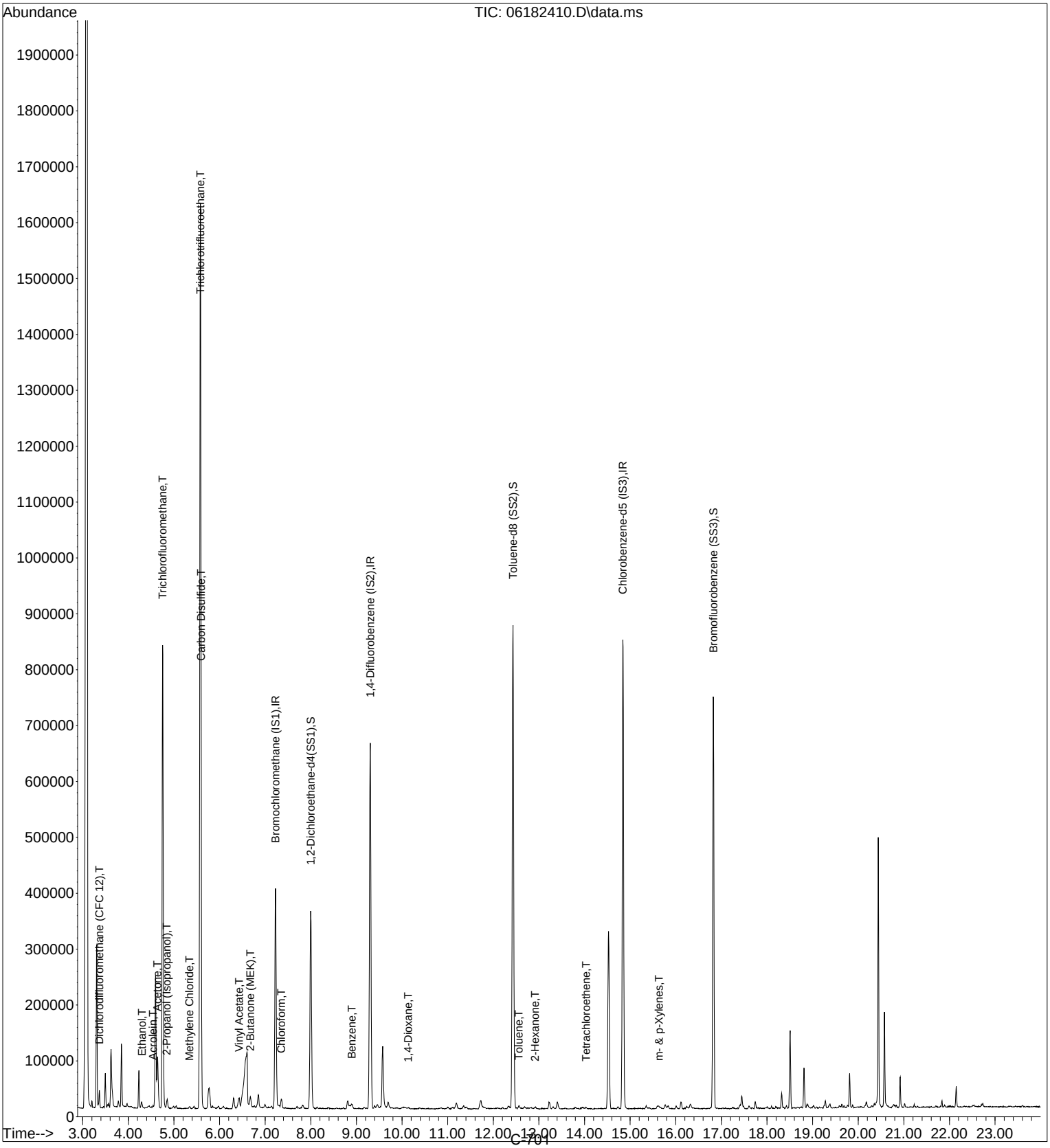
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	10.58	71	217	N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	11.34	58	387	N.D.	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
58) Toluene	12.56	91	3527	0.061 ng	98
59) 2-Hexanone	12.91	43	4142	0.114 ng	80
60) Dibromochloromethane	13.07	129	485	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	13.80	43	1443	N.D.	
63) n-Octane	13.93	57	231	N.D.	
64) Tetrachloroethene	14.03	166	1035	0.052 ng	98
65) Chlorobenzene	14.90	112	595	N.D.	
66) Ethylbenzene	15.41	91	1309	N.D.	
67) m- & p-Xylenes	15.63	91	3329	0.060 ng	95
68) Bromoform	15.68	173	564	N.D.	
69) Styrene	16.10	104	338	N.D.	
70) o-Xylene	16.24	91	1295	N.D.	
71) n-Nonane	16.62	43	1150	N.D.	
72) 1,1,2,2-Tetrachloroethane	16.21	83	300	N.D.	
74) Cumene	17.03	105	827	N.D.	
75) alpha-Pinene	0.00	93	0	N.D.	
76) n-Propylbenzene	17.68	91	1390	N.D.	
77) 3-Ethyltoluene	17.03	105	827	No Calib	
78) 4-Ethyltoluene	17.86	105	771	N.D.	
79) 1,3,5-Trimethylbenzene	17.96	105	953	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.03	105	827	No Calib	
82) 1,2,4-Trimethylbenzene	18.43	105	1475	N.D.	
83) n-Decane	0.00	58	0	N.D.	
84) Benzyl Chloride	18.56	91	519	N.D.	
85) 1,3-Dichlorobenzene	18.58	146	585	N.D.	
86) 1,4-Dichlorobenzene	18.66	146	717	N.D.	
87) sec-Butylbenzene	18.74	105	1115	N.D.	
88) 4-Isopropyltoluene (p-...	18.93	119	1282	N.D.	
89) 1,2,3-Trimethylbenzene	17.03	105	827	No Calib	
90) 1,2-Dichlorobenzene	19.03	146	621	N.D.	
91) d-Limonene	0.00	68	0	N.D.	
92) 1,2-Dibromo-3-Chloropr...	19.51	157	144	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	1064	N.D.	
95) Naphthalene	20.94	128	2162	N.D.	
96) n-Dodecane	0.00	58	0	N.D.	
97) Hexachlorobutadiene	21.30	225	607	N.D.	
98) Cyclohexanone	15.50	55	143	No Calib #	
99) tert-Butylbenzene	18.42	119	1054	N.D.	
100) n-Butylbenzene	19.39	91	1125	N.D.	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182410.D Vial: 7
Acq On : 18 Jun 2024 14:26 Operator: SC
Sample : P2402249-014 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 14:02:12 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182410.D Vial: 7
Acq On : 18 Jun 2024 14:26 Operator: SC
Sample : P2402249-014 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 14:02:12 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/19/24

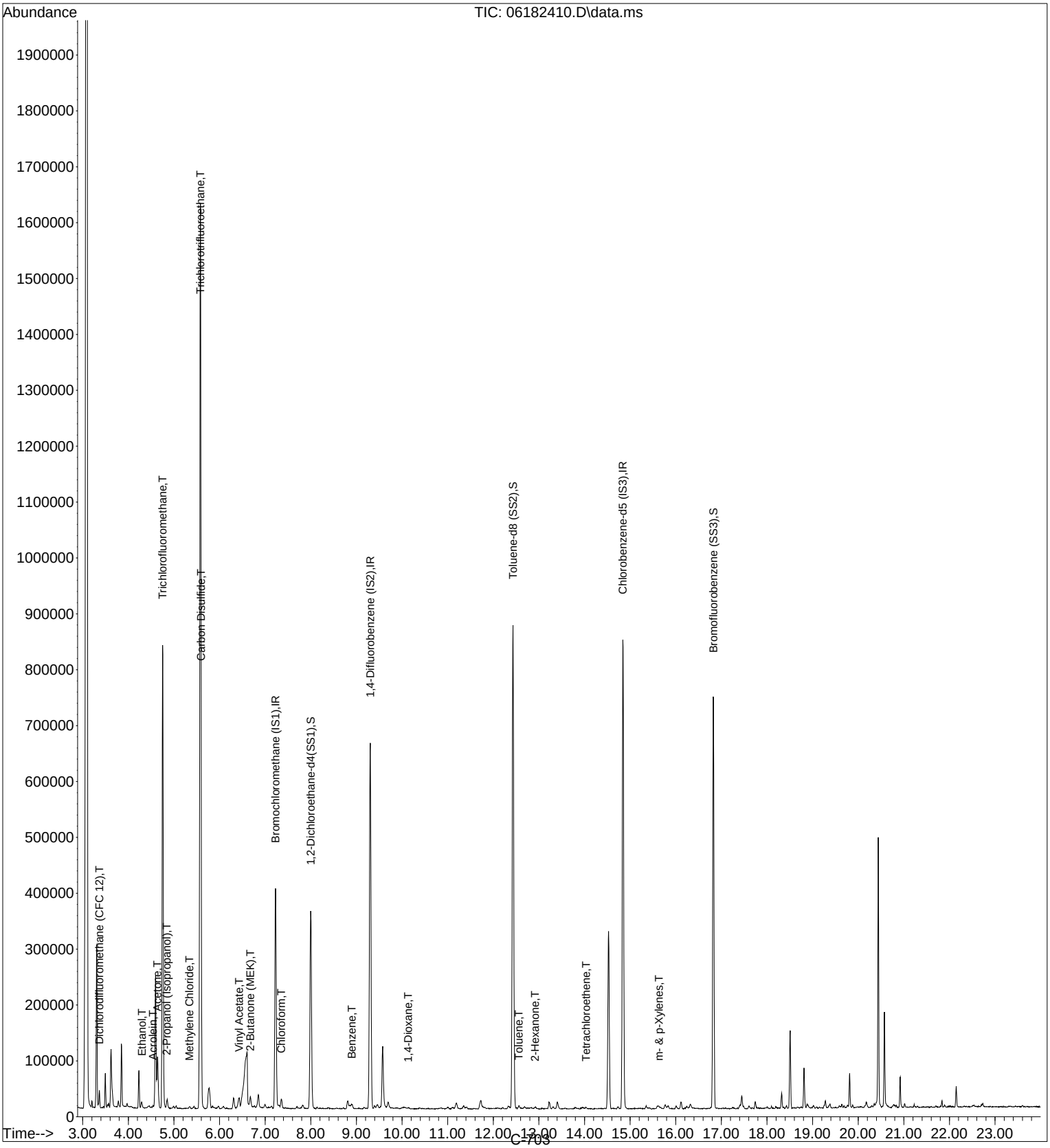
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	142084	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	622480	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	145430	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	314452	12.452	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.60%				
57) Toluene-d8 (SS2)	12.43	98	701173	12.599	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.80%				
73) Bromofluorobenzene (SS3)	16.83	174	251444	12.512	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.08%				
Target Compounds							Qvalue
3) Dichlorodifluoromethan...	3.36	85	19074m	0.570	ng		
10) Ethanol	4.30	45	22685	1.642	ng		75
12) Acrolein	4.54	56	2271	0.222	ng		94
13) Acetone	4.64	58	26953	2.442	ng		91
14) Trichlorofluoromethane	4.75	101	592775	17.524	ng		99
15) 2-Propanol (Isopropanol)	4.84	45	7558	0.170	ng		68
19) Methylene Chloride	5.34	84	1064	0.068	ng		94
21) Trichlorotrifluoroethane	5.58	151	527230	36.845	ng		97
22) Carbon Disulfide	5.60	76	23791	0.472	ng	#	1
26) Vinyl Acetate	6.43	86	1928	0.757	ng	#	33
27) 2-Butanone (MEK)	6.67	72	4319	0.494	ng	#	66
32) Chloroform	7.35	83	13339	0.479	ng		97
41) Benzene	8.90	78	4088	0.071	ng		98
48) 1,4-Dioxane	10.13	88	568	0.054	ng		87
58) Toluene	12.56	91	3527	0.061	ng		98
59) 2-Hexanone	12.91	43	4142	0.114	ng		80
64) Tetrachloroethene	14.03	166	1035	0.052	ng		98
67) m- & p-Xylenes	15.63	91	3329	0.060	ng		95

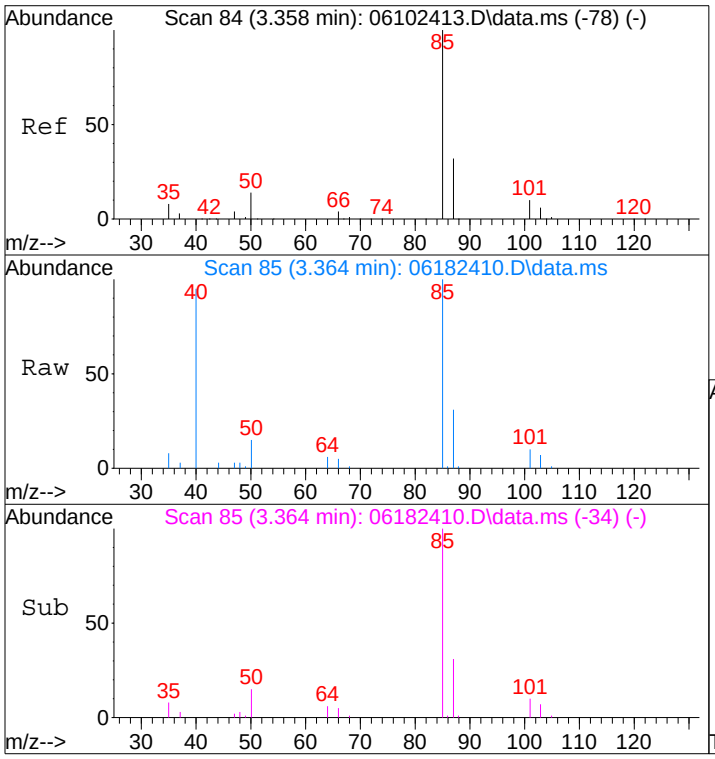
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182410.D Vial: 7
Acq On : 18 Jun 2024 14:26 Operator: SC
Sample : P2402249-014 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 14:02:12 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

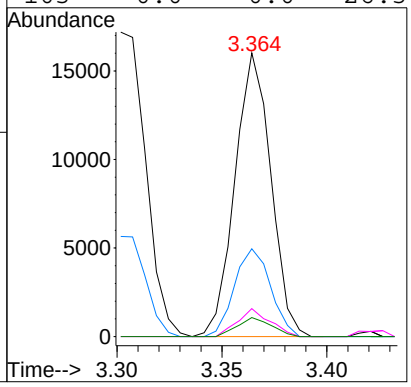


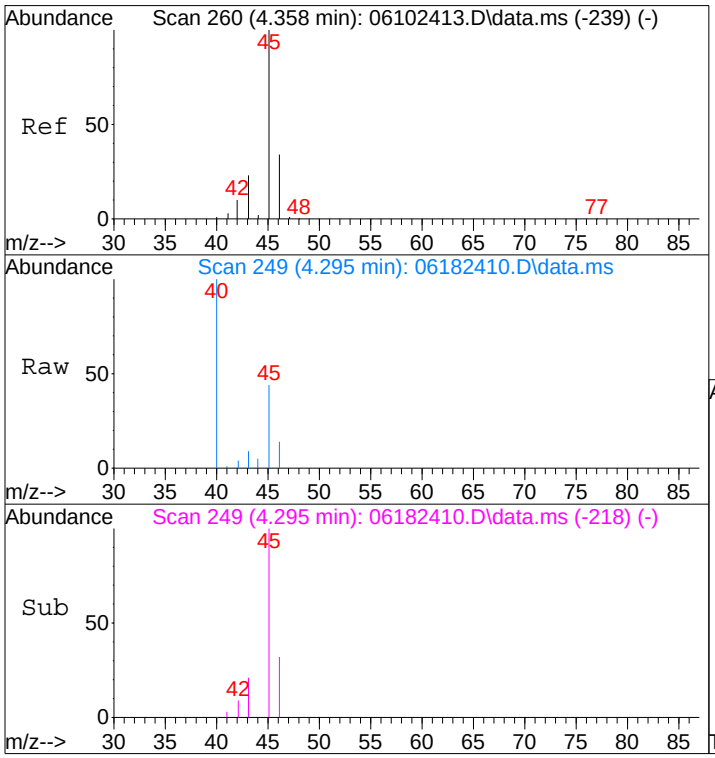


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.57 ng m
RT: 3.36 min Scan# 85
Delta R.T. 0.042 min
Lab File: 06182410.D
Acq: 18 Jun 2024 14:26

Tgt Ion: 85 Resp: 19074

Ion	Ratio	Lower	Upper
85	100		
87	35.6	12.2	52.2
101	0.0	0.0	29.8
103	0.0	0.0	26.3

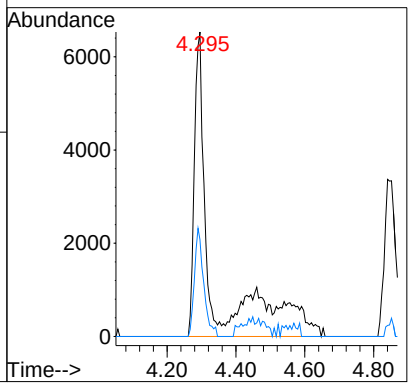


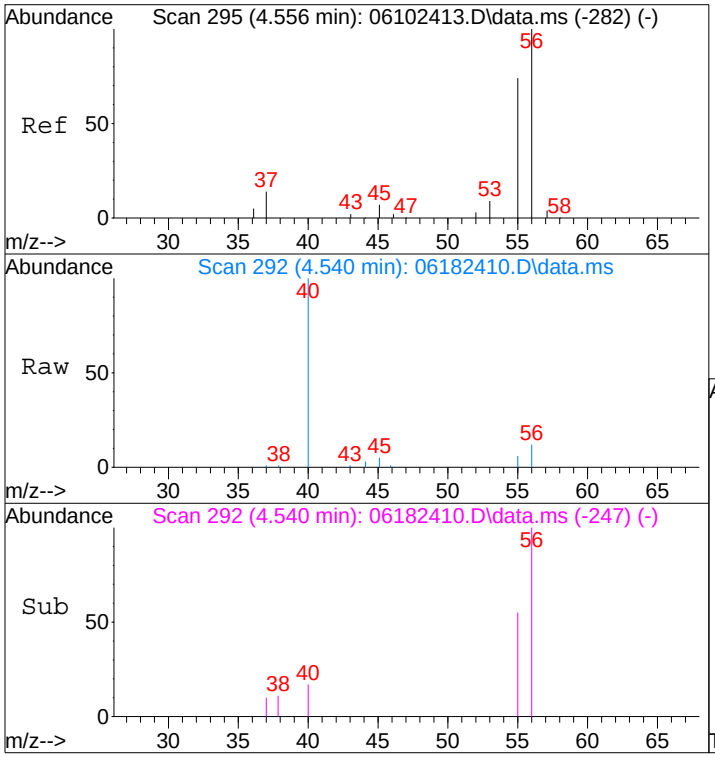


#10
Ethanol
Concen: 1.64 ng
RT: 4.30 min Scan# 249
Delta R.T. -0.071 min
Lab File: 06182410.D
Acq: 18 Jun 2024 14:26

Tgt Ion: 45 Resp: 22685

Ion	Ratio	Lower	Upper
45	100		
46	19.2	13.5	53.5

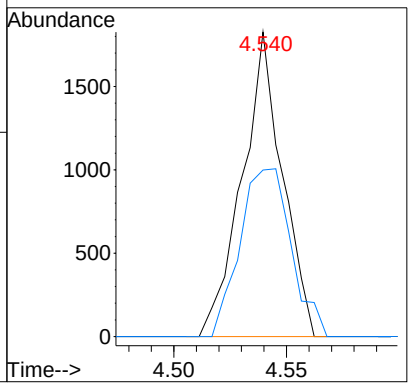


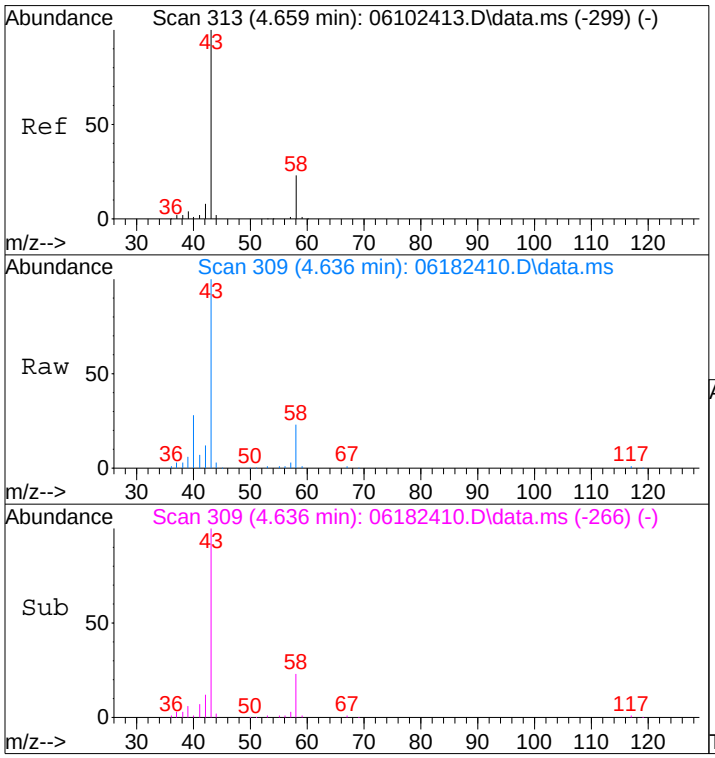


#12
Acrolein
Concen: 0.22 ng
RT: 4.54 min Scan# 292
Delta R.T. 0.004 min
Lab File: 06182410.D
Acq: 18 Jun 2024 14:26

Tgt Ion: 56 Resp: 2271

Ion	Ratio	Lower	Upper
56	100		
55	70.2	55.5	95.5

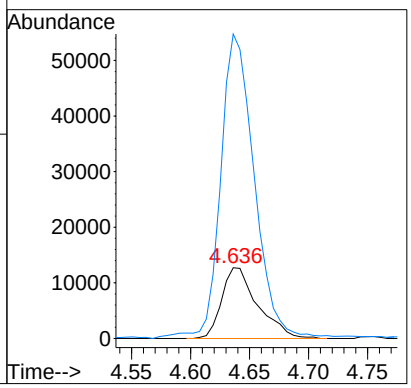


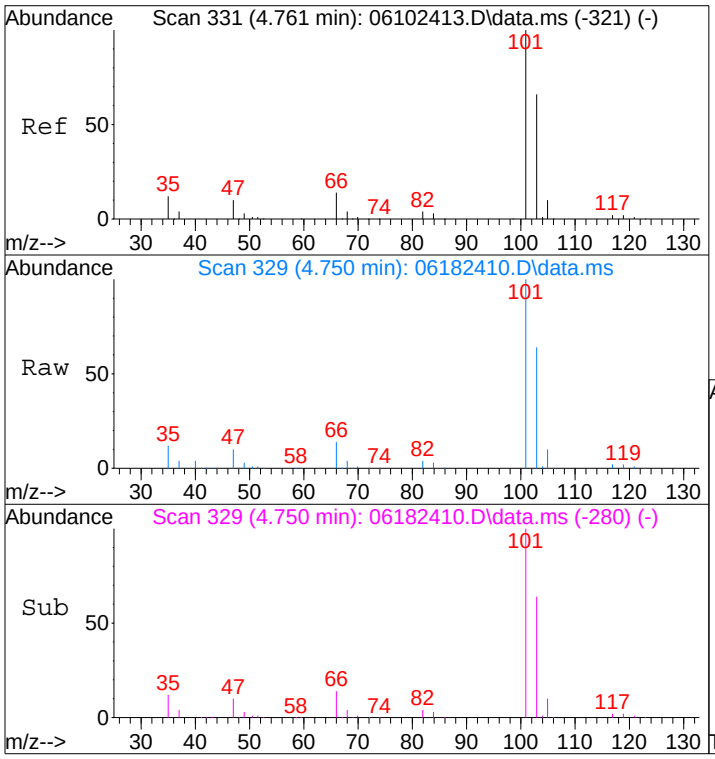


#13
Acetone
Concen: 2.44 ng
RT: 4.64 min Scan# 309
Delta R.T. -0.006 min
Lab File: 06182410.D
Acq: 18 Jun 2024 14:26

Tgt Ion: 58 Resp: 26953

Ion	Ratio	Lower	Upper
58	100		
43	408.8	400.7	460.7

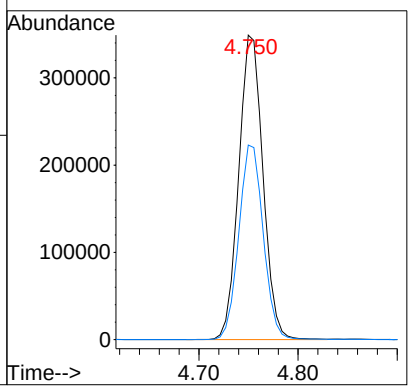


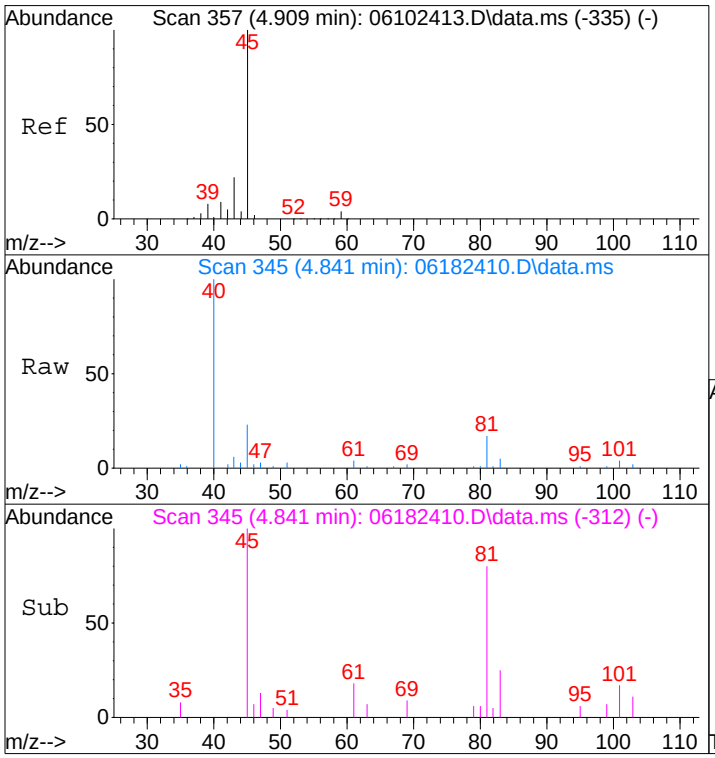


#14
Trichlorofluoromethane
Concen: 17.52 ng
RT: 4.75 min Scan# 329
Delta R.T. 0.029 min
Lab File: 06182410.D
Acq: 18 Jun 2024 14:26

Tgt Ion:101 Resp: 592775

Ion	Ratio	Lower	Upper
101	100		
103	64.4	44.9	84.9

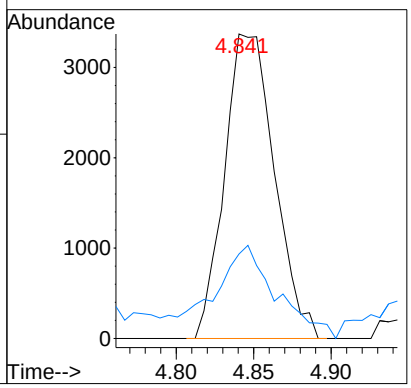


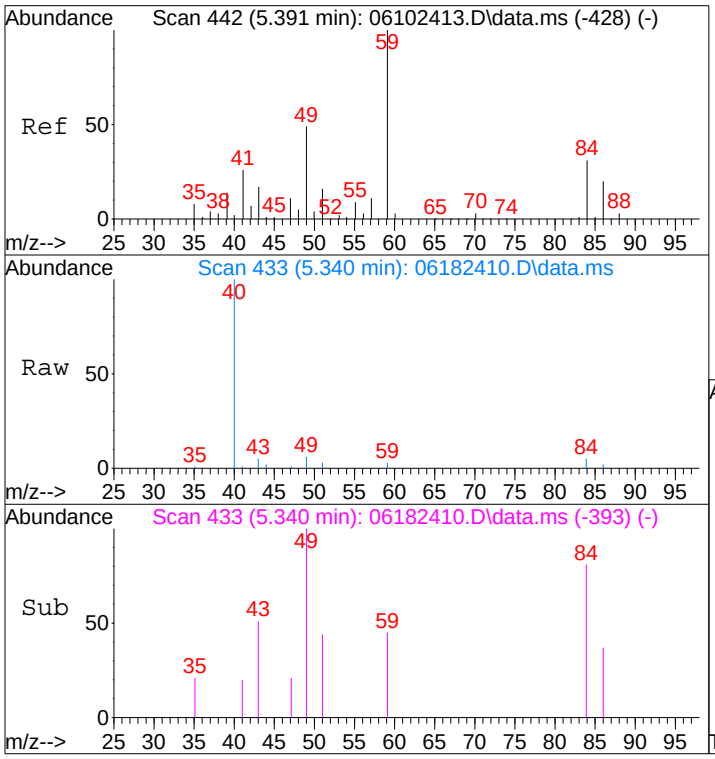


#15
2-Propanol (Isopropanol)
Concen: 0.17 ng
RT: 4.84 min Scan# 345
Delta R.T. -0.060 min
Lab File: 06182410.D
Acq: 18 Jun 2024 14:26

Tgt Ion: 45 Resp: 7558

Ion	Ratio	Lower	Upper
45	100		
43	37.7	2.5	42.5

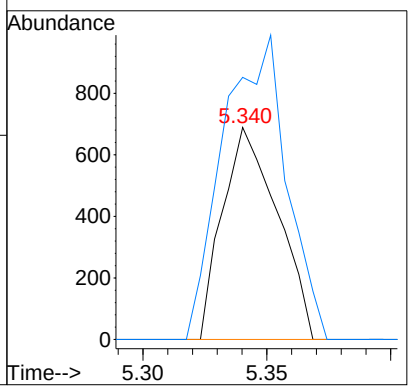


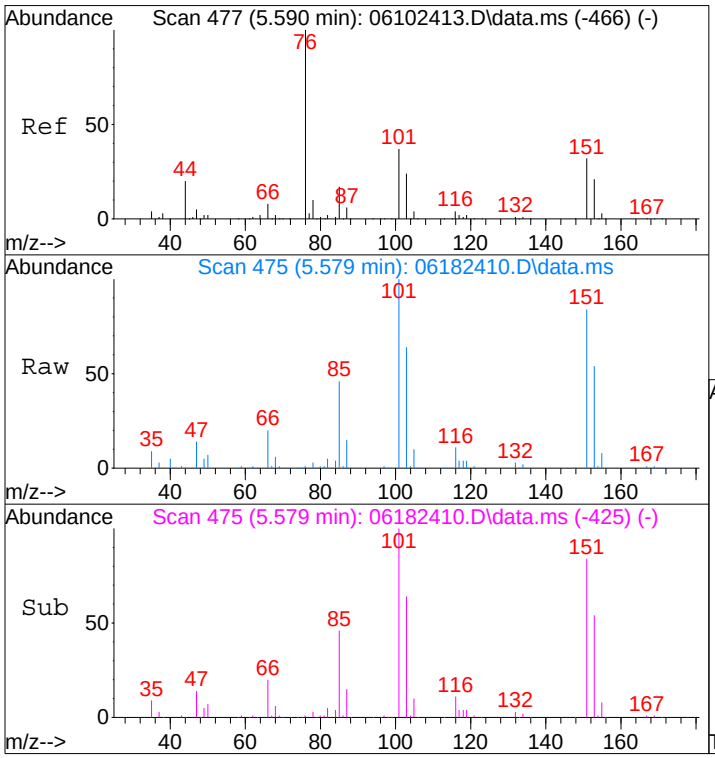


#19
Methylene Chloride
Concen: 0.07 ng
RT: 5.34 min Scan# 433
Delta R.T. -0.021 min
Lab File: 06182410.D
Acq: 18 Jun 2024 14:26

Tgt Ion: 84 Resp: 1064

Ion	Ratio	Lower	Upper
84	100		
49	166.0	132.9	182.9

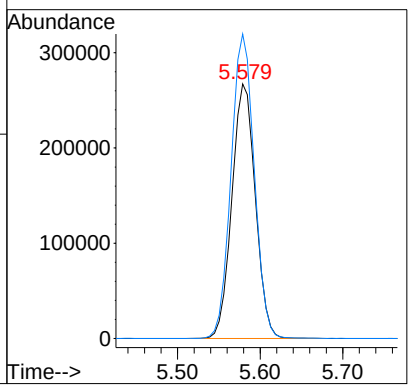


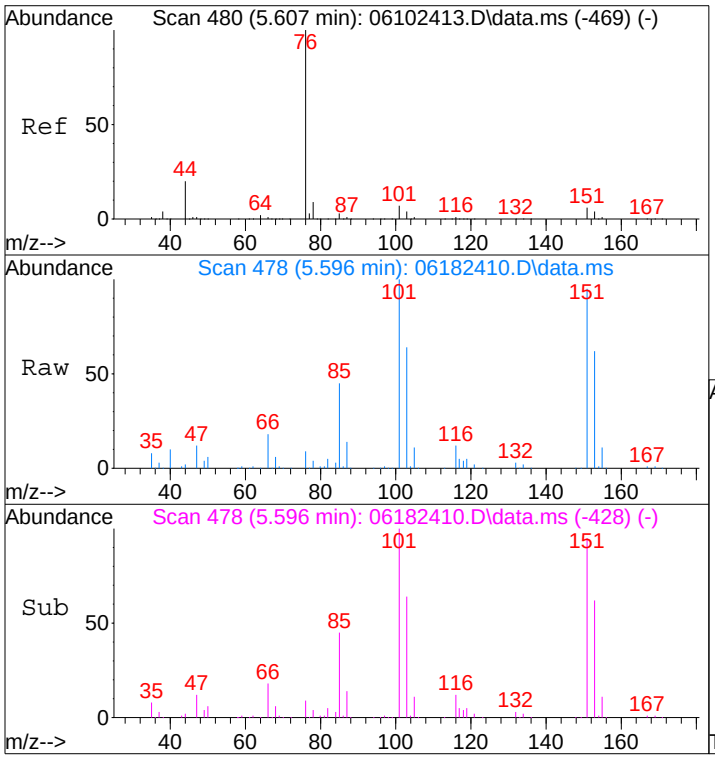


#21
Trichlorotrifluoroethane
Concen: 36.85 ng
RT: 5.58 min Scan# 475
Delta R.T. 0.032 min
Lab File: 06182410.D
Acq: 18 Jun 2024 14:26

Tgt Ion:151 Resp: 527230

Ion	Ratio	Lower	Upper
151	100		
101	118.3	95.0	135.0

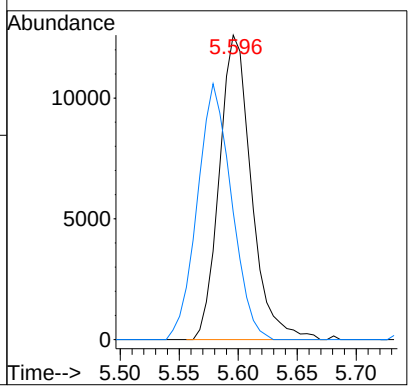


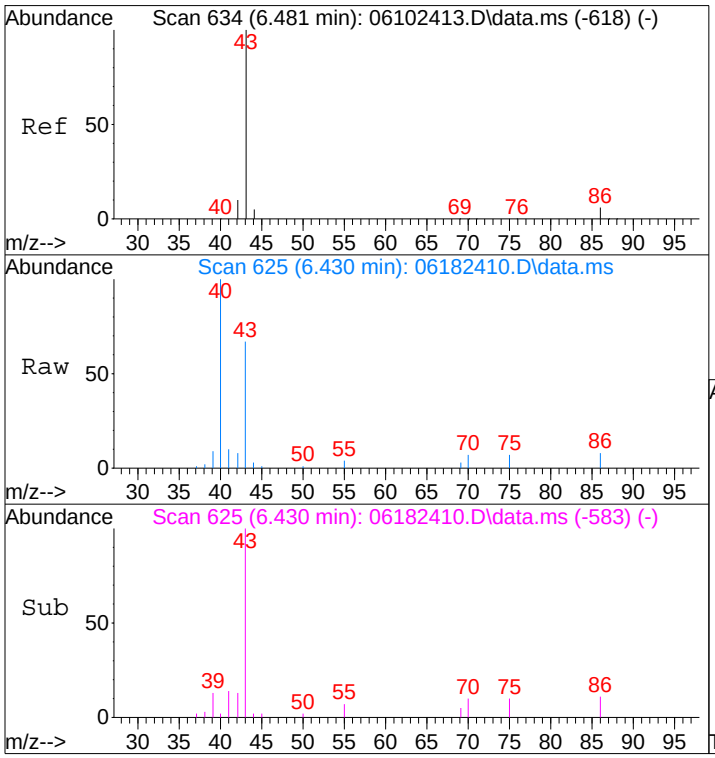


#22
Carbon Disulfide
Concen: 0.47 ng
RT: 5.60 min Scan# 478
Delta R.T. 0.033 min
Lab File: 06182410.D
Acq: 18 Jun 2024 14:26

Tgt Ion: 76 Resp: 23791

Ion	Ratio	Lower	Upper
76	100		
78	89.9	0.0	29.6#

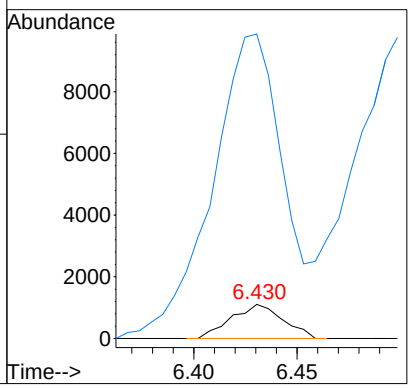


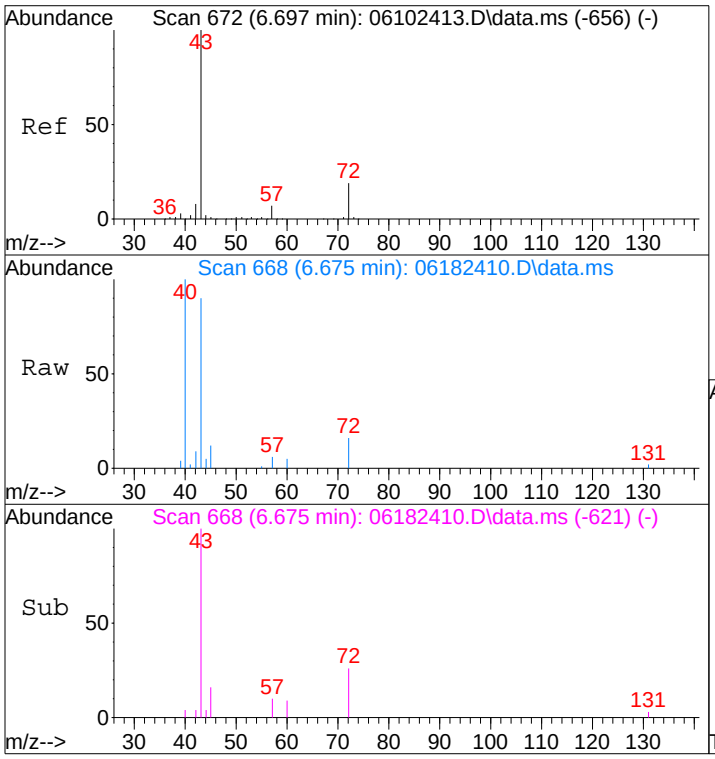


#26
Vinyl Acetate
Concen: 0.76 ng
RT: 6.43 min Scan# 625
Delta R.T. -0.009 min
Lab File: 06182410.D
Acq: 18 Jun 2024 14:26

Tgt Ion: 86 Resp: 1928

Ion	Ratio	Lower	Upper
86	100		
43	1251.0	1668.9	1708.9#

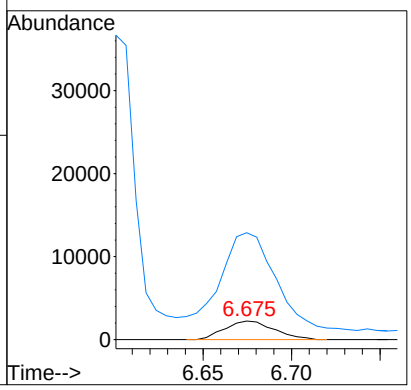


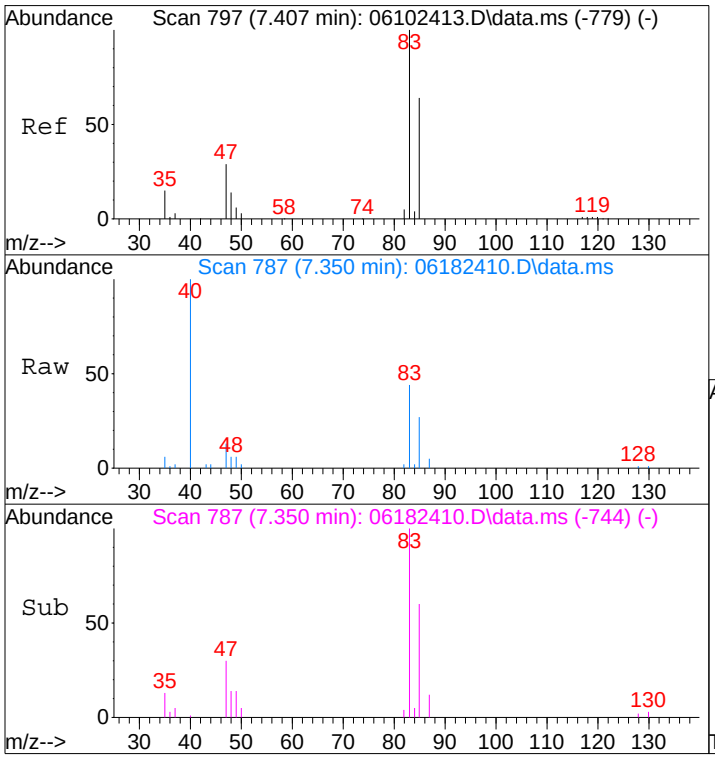


#27
2-Butanone (MEK)
Concen: 0.49 ng
RT: 6.67 min Scan# 668
Delta R.T. 0.016 min
Lab File: 06182410.D
Acq: 18 Jun 2024 14:26

Tgt Ion: 72 Resp: 4319

Ion	Ratio	Lower	Upper
72	100		
43	625.3	506.8	546.8#

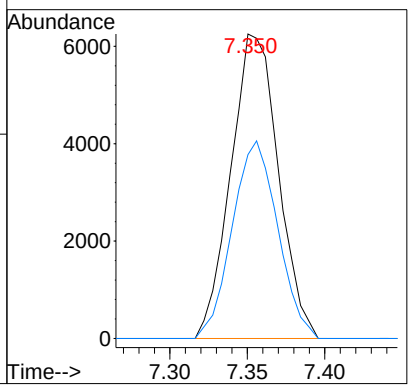


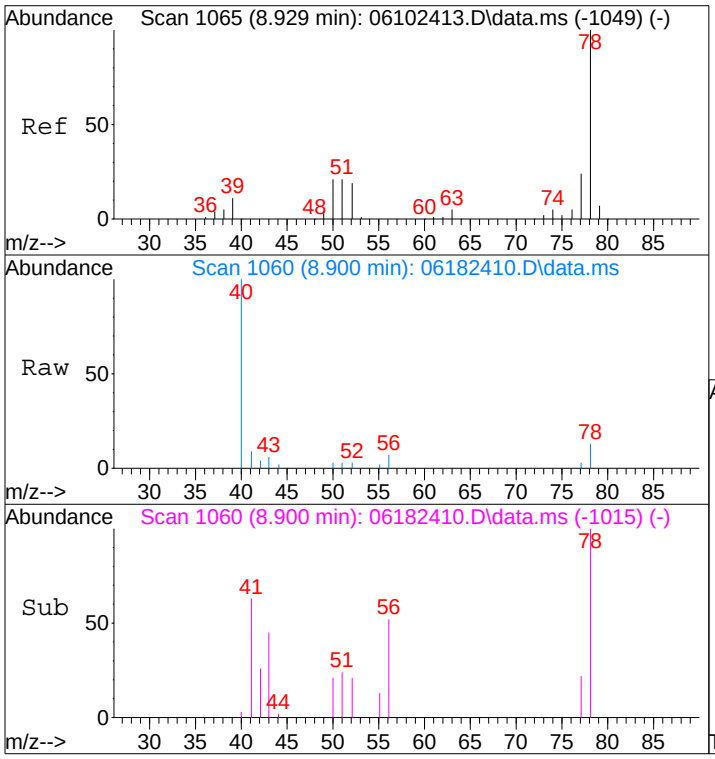


#32
Chloroform
Concen: 0.48 ng
RT: 7.35 min Scan# 787
Delta R.T. -0.004 min
Lab File: 06182410.D
Acq: 18 Jun 2024 14:26

Tgt Ion: 83 Resp: 13339

Ion	Ratio	Lower	Upper
83	100		
85	62.2	44.4	84.4

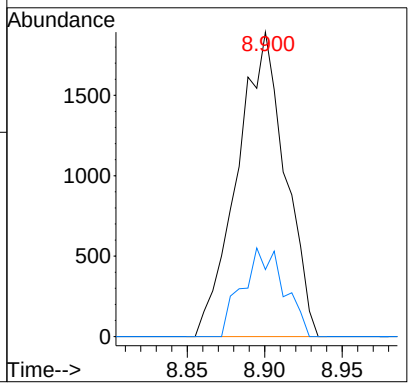


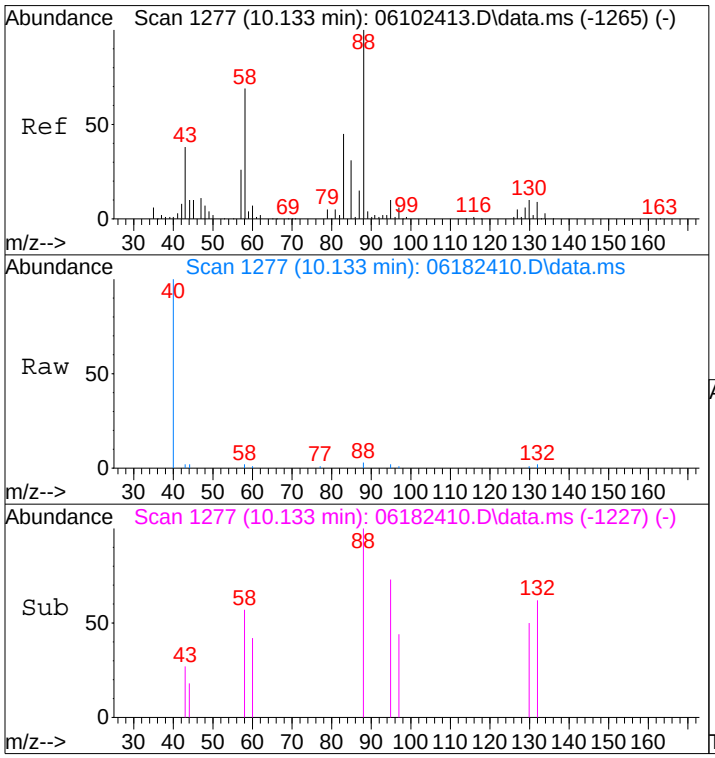


#41
Benzene
Concen: 0.07 ng
RT: 8.90 min Scan# 1060
Delta R.T. 0.003 min
Lab File: 06182410.D
Acq: 18 Jun 2024 14:26

Tgt Ion: 78 Resp: 4088

Ion	Ratio	Lower	Upper
78	100		
77	25.2	4.0	44.0

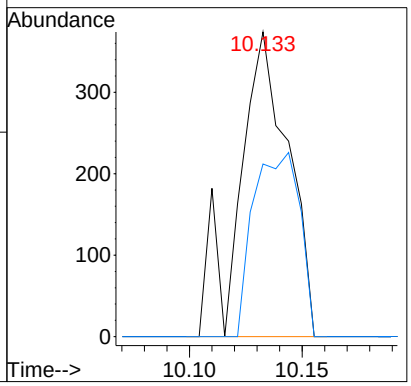


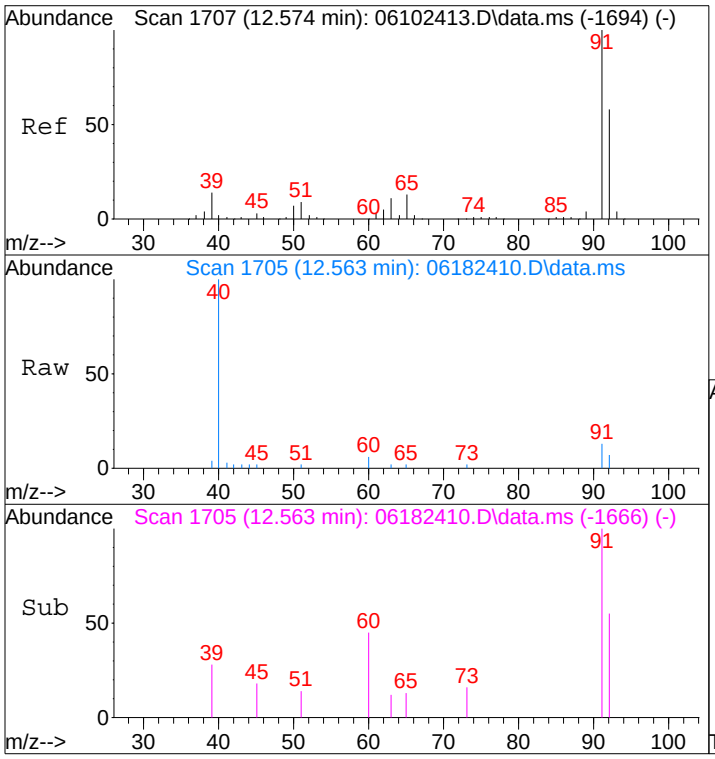


#48
1,4-Dioxane
Concen: 0.05 ng
RT: 10.13 min Scan# 1277
Delta R.T. 0.033 min
Lab File: 06182410.D
Acq: 18 Jun 2024 14:26

Tgt Ion: 88 Resp: 568

Ion	Ratio	Lower	Upper
88	100		
58	57.0	47.6	87.6

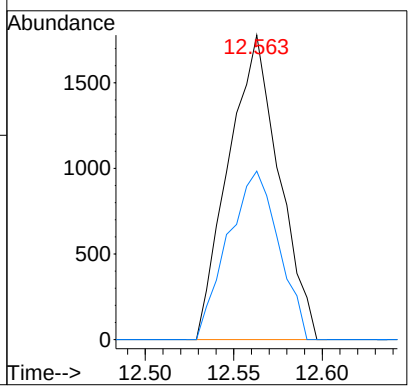


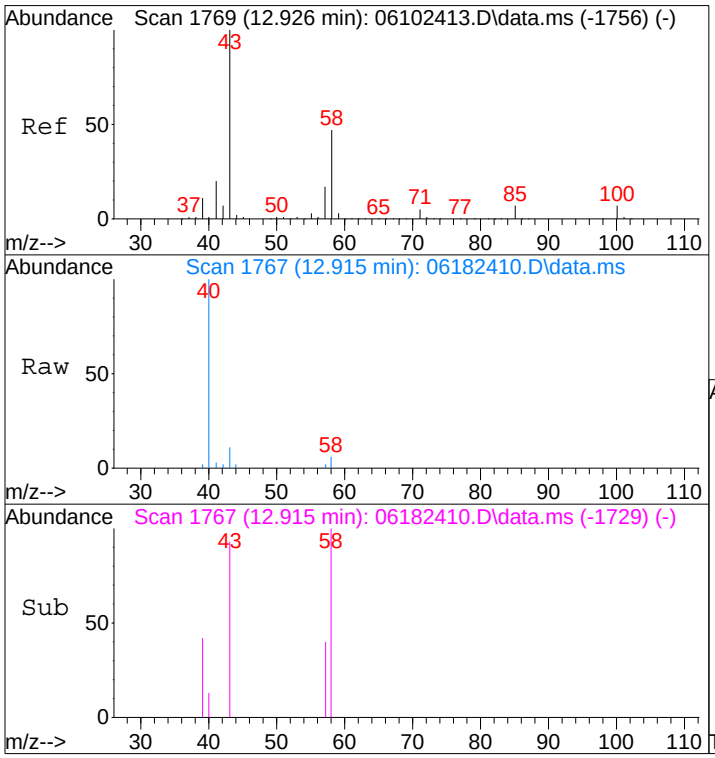


#58
Toluene
Concen: 0.06 ng
RT: 12.56 min Scan# 1705
Delta R.T. -0.028 min
Lab File: 06182410.D
Acq: 18 Jun 2024 14:26

Tgt Ion: 91 Resp: 3527

Ion	Ratio	Lower	Upper
91	100		
92	55.7	37.4	77.4

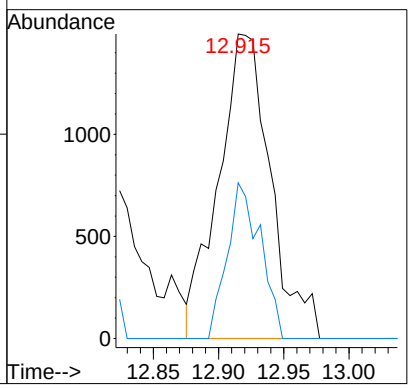


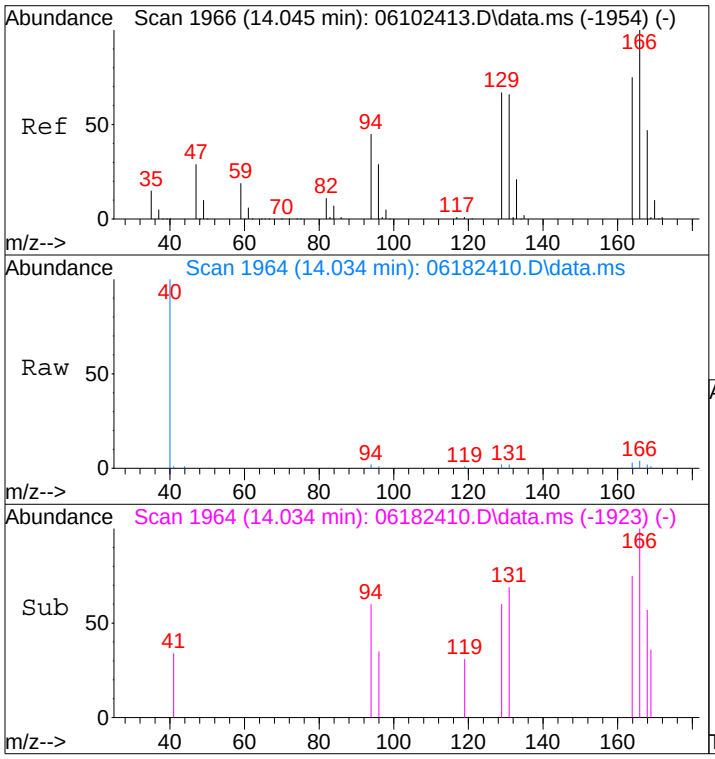


#59
2-Hexanone
Concen: 0.11 ng
RT: 12.91 min Scan# 1767
Delta R.T. -0.034 min
Lab File: 06182410.D
Acq: 18 Jun 2024 14:26

Tgt Ion: 43 Resp: 4142

Ion	Ratio	Lower	Upper
43	100		
58	32.5	25.9	65.9

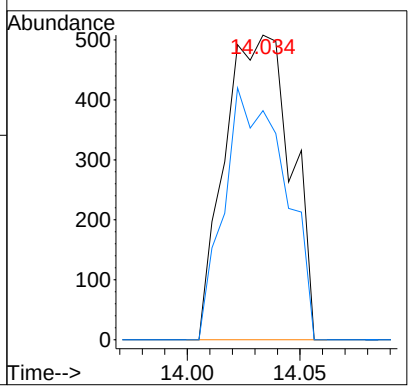


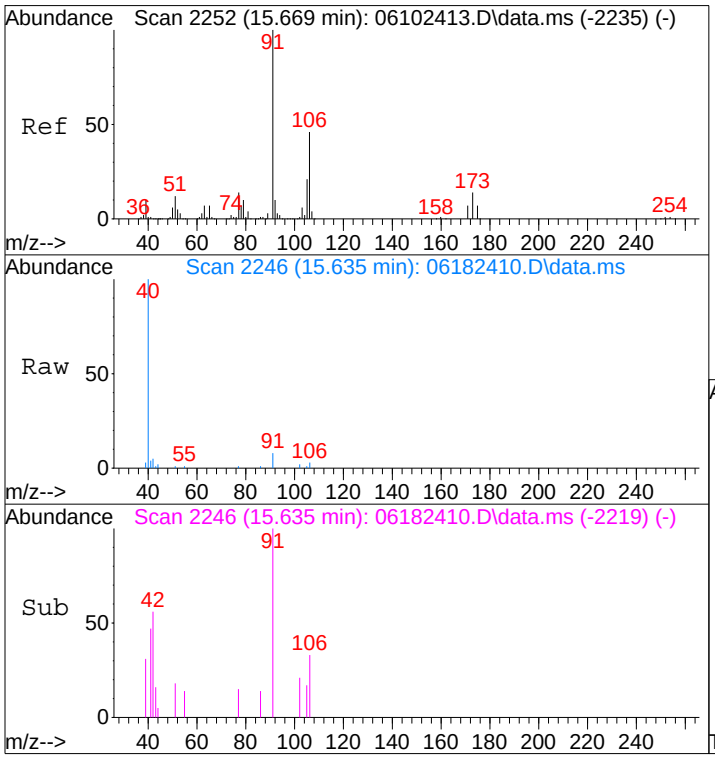


#64
Tetrachloroethene
Concen: 0.05 ng
RT: 14.03 min Scan# 1964
Delta R.T. -0.017 min
Lab File: 06182410.D
Acq: 18 Jun 2024 14:26

Tgt Ion:166 Resp: 1035

Ion	Ratio	Lower	Upper
166	100		
164	75.6	56.9	96.9

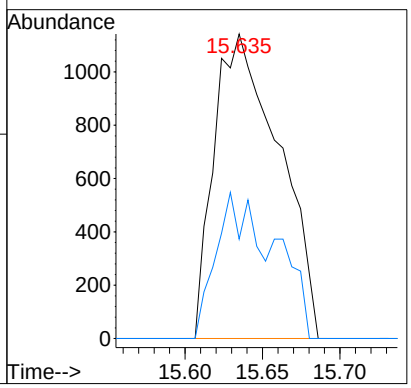




#67
m- & p-Xylenes
Concen: 0.06 ng
RT: 15.63 min Scan# 2246
Delta R.T. -0.046 min
Lab File: 06182410.D
Acq: 18 Jun 2024 14:26

Tgt Ion: 91 Resp: 3329

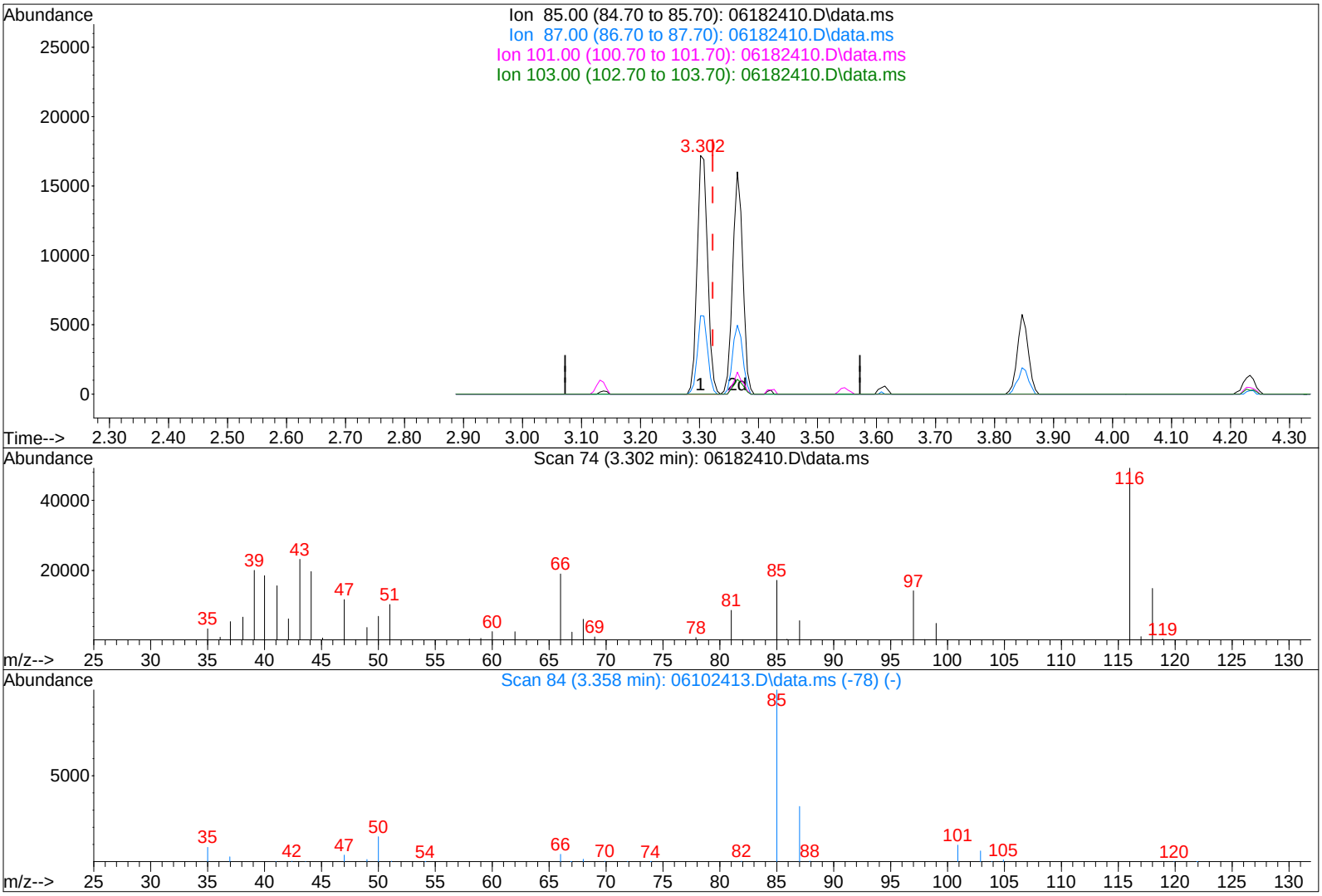
Ion	Ratio	Lower	Upper
91	100		
106	42.8	25.9	65.9



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182410.D Vial: 7
Acq On : 18 Jun 2024 14:26 Operator: SC
Sample : P2402249-014 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 18 14:47:56 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182410.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.302min (-0.020) 0.63ng

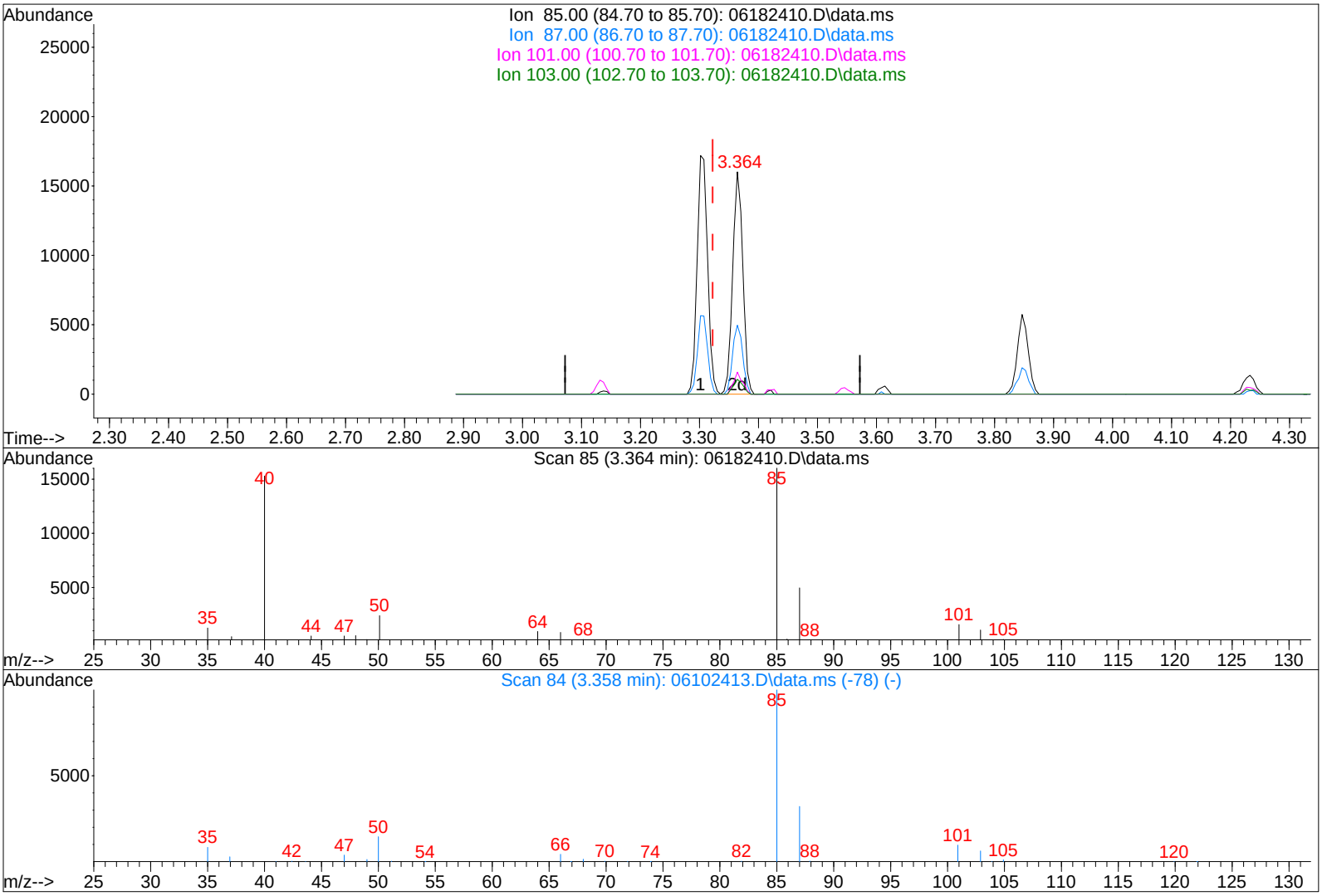
response 21224

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	31.97
101.00	9.80	0.00
103.00	6.30	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182410.D Vial: 7
Acq On : 18 Jun 2024 14:26 Operator: SC
Sample : P2402249-014 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 18 14:47:56 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182410.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.364min (+0.042) 0.57ng m

response 19074

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	35.57
101.00	9.80	0.00
103.00	6.30	0.00

WP

6/19/24

6/29/24

Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\18\06182410.D Vial: 7
Acq On : 18 Jun 2024 14:26 Operator: SC
Sample : P2402249-014 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:01:50 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

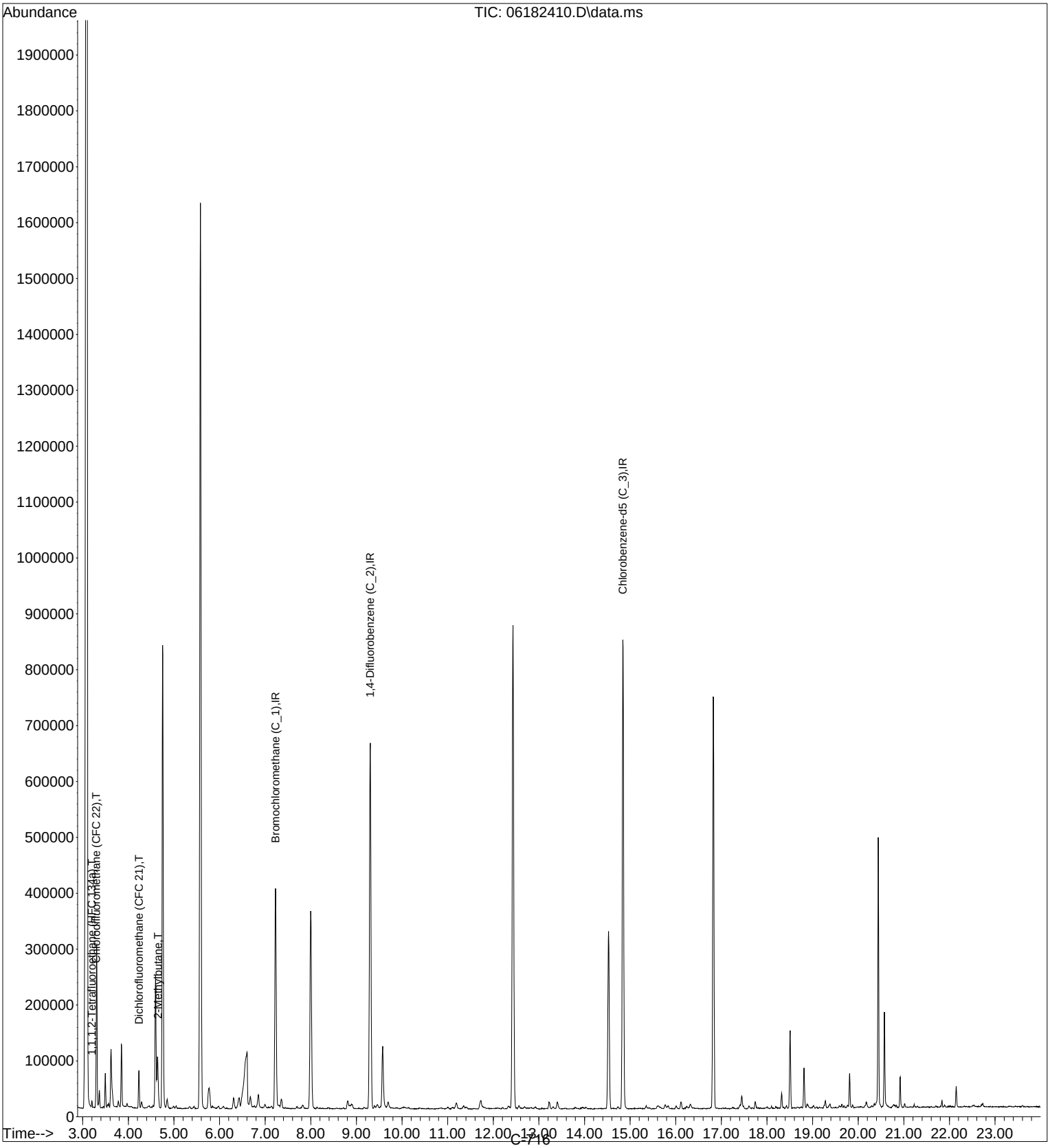
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	142084	12.500	ng		-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	623549	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	145430	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	3.14	85	192	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.20	83	2061	0.141	ng	#	1
4) 1,1-Difluoroethane	3.24	65	331	N.D.			
5) Chlorodifluoromethane ...	3.30	67	4457	0.921	ng		88
6) 1-Chloro-1,1-Difluoroe...	3.51	65	603	N.D.			
7) Dichlorofluoromethane ...	4.23	67	49937	1.533	ng		98
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	0.00	83	0	N.D.	d		
10) 2-Methylbutane	4.65	57	5912	0.349	ng	#	63
11) Methyl Acetate	5.34	43	1326	N.D.			
12) 2-Methylpentane	6.49	71	824	N.D.			
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	0.00	84	0	N.D.			
17) 2,3-Dimethylpentane	9.52	56	1164	N.D.			
18) Dibromomethane	9.80	174	56	N.D.			
20) Methyl Cyclohexane	11.42	55	794	N.D.			
21) 1,3-Dichloropropane	0.00	76	0	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	16.33	75	198	N.D.			
25) Bromobenzene	0.00	77	0	N.D.			
26) 2-Chlorotoluene	17.61	91	816	N.D.			
27) 4-Chlorotoluene	17.68	91	1390	N.D.			
28) Indane	19.11	117	64	N.D.			
29) Indene	0.00	115	0	N.D.			
30) 1,2,4,5-Tetramethylben...	20.22	119	202	N.D.			
31) 1,2,3,4-Tetramethylben...	20.22	119	202	N.D.			
32) 1,2,3,5-Tetramethylben...	20.57	119	1226	N.D.			
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182410.D Vial: 7
Acq On : 18 Jun 2024 14:26 Operator: SC
Sample : P2402249-014 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:01:50 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

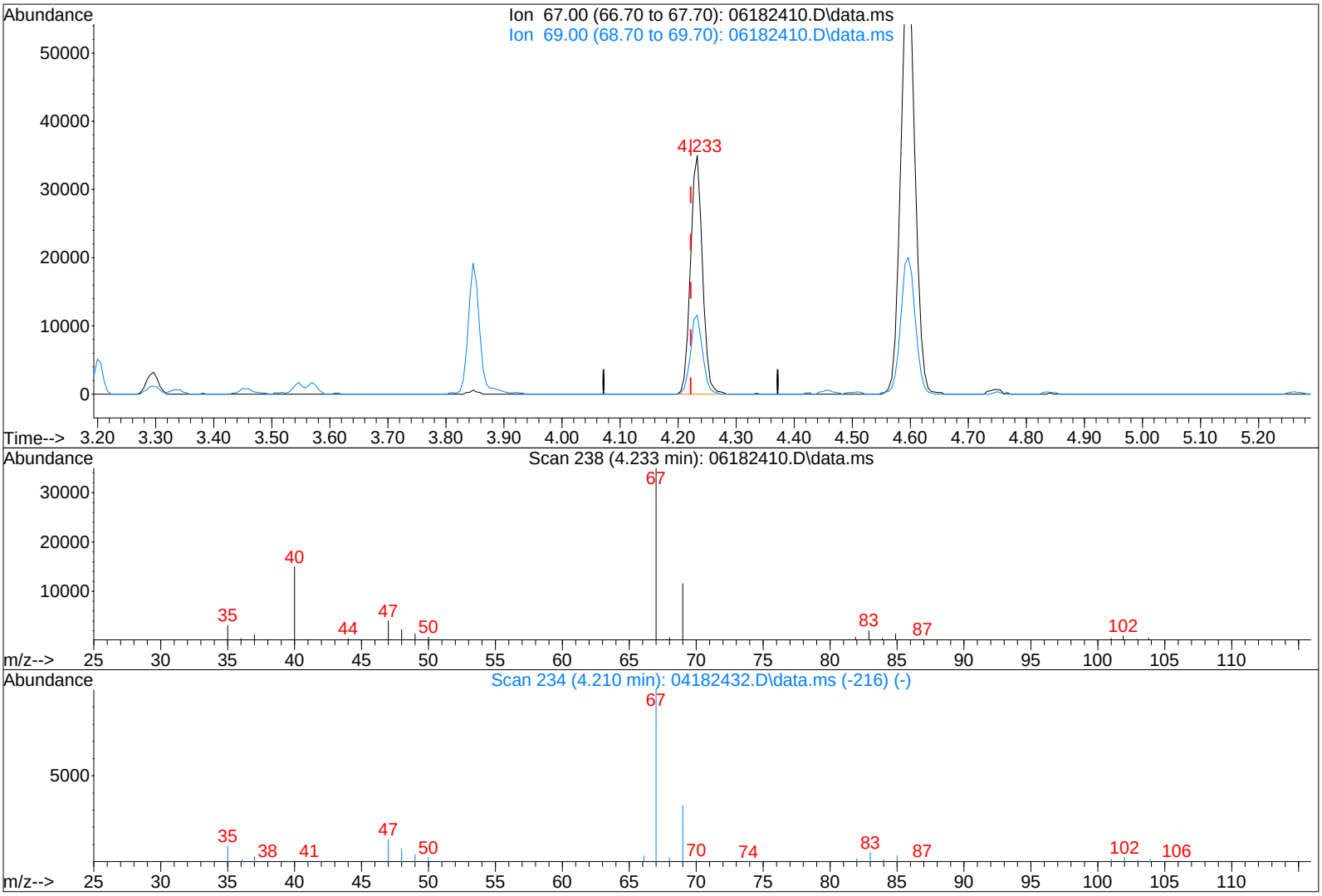


Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182410.D Vial: 7
Acq On : 18 Jun 2024 14:26 Operator: SC
Sample : P2402249-014 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 14:59:42 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182410.D\data.ms

(7) Dichlorofluoromethane (CFC 21) (T)

4.233min (+0.011) 1.53ng

response 49937

Ion	Exp%	Act%
67.00	100	100
69.00	32.40	33.28
0.00	0.00	0.00
0.00	0.00	0.00

LSC Area Percent Report

MJ 6/28/24

Data Path : I:\MS09\DATA\2024 06\18\
Data File : 06182410.D
Acq On : 18 Jun 2024 14:26
Operator : SC
Sample : P2402249-014 (400mL)
Misc : S37-06062402
ALS Vial : 7 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06182410.D\data.ms

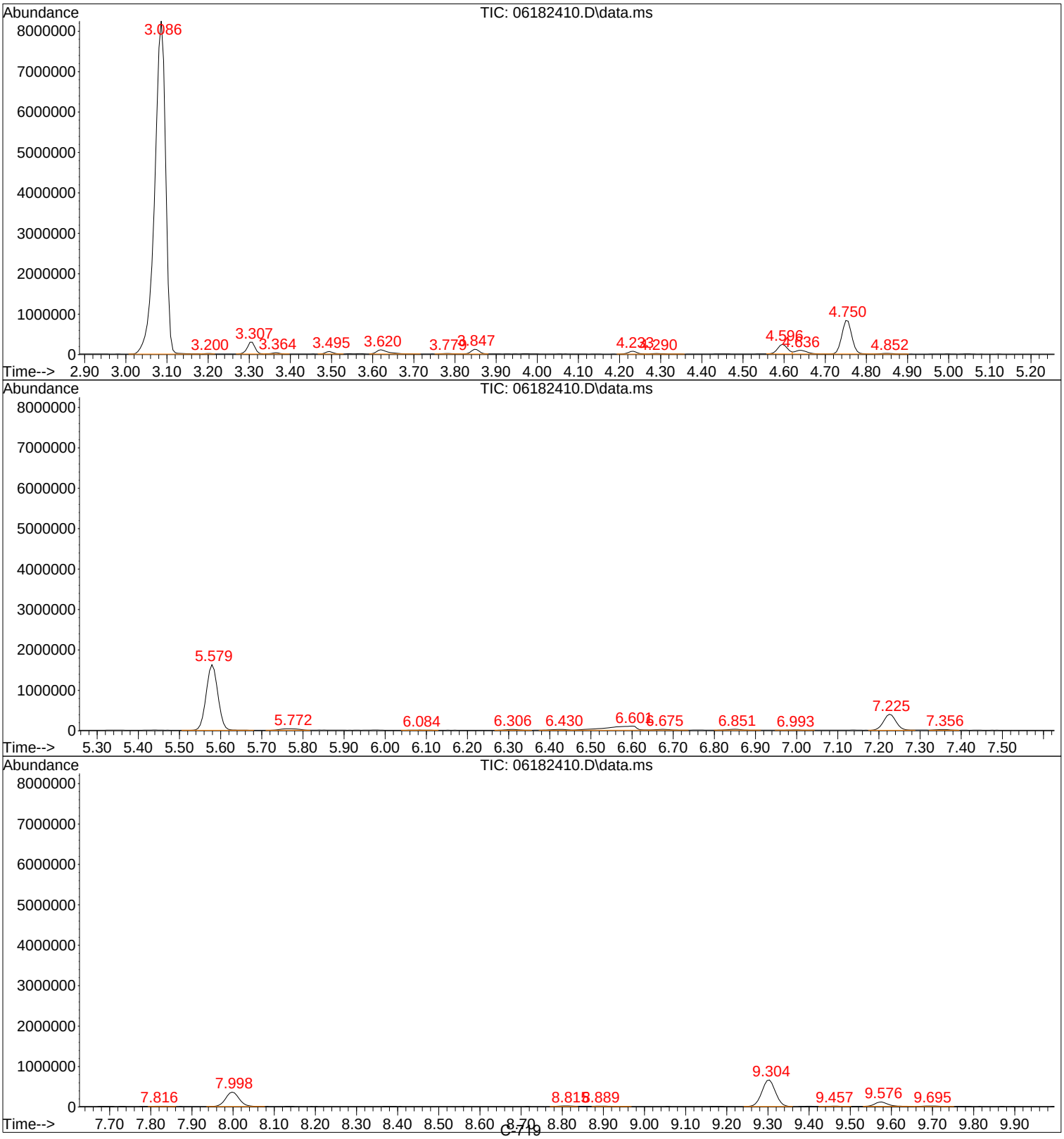
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.086	22	36	53	rBV	8237348	15150011	100.00%	58.815%
2	3.200	53	56	59	rVB2	11747	12792	0.08%	0.050%
3	3.307	68	75	80	rBV2	291188	391267	2.58%	1.519%
4	3.364	80	85	91	rVB	31470	42445	0.28%	0.165%
5	3.495	103	108	114	rBV	61679	77191	0.51%	0.300%
6	3.620	125	130	147	rBV2	104106	206470	1.36%	0.802%
7	3.779	153	158	165	rBV2	10686	16382	0.11%	0.064%
8	3.847	165	170	176	rBV2	112620	157179	1.04%	0.610%
9	4.233	231	238	243	rBV	67801	97351	0.64%	0.378%
10	4.290	243	248	260	rVB	11369	23320	0.15%	0.091%
11	4.596	295	302	306	rBV	234444	396275	2.62%	1.538%
12	4.636	306	309	322	rVB2	91167	180011	1.19%	0.699%
13	4.750	322	329	341	rBV	828108	1403475	9.26%	5.449%
14	4.852	341	347	356	rVB2	16425	32374	0.21%	0.126%
15	5.579	462	475	493	rVB	1621153	3195322	21.09%	12.405%
16	5.772	498	509	517	rBV2	36577	109234	0.72%	0.424%
17	6.084	556	564	572	rVB4	4423	10857	0.07%	0.042%
18	6.306	596	603	612	rBV2	19598	44437	0.29%	0.173%
19	6.430	615	625	629	rVV3	18794	50050	0.33%	0.194%
20	6.601	629	655	662	rVV	99439	514315	3.39%	1.997%
21	6.675	662	668	679	rVB	18624	42997	0.28%	0.167%
22	6.851	690	699	710	rVB3	22989	52966	0.35%	0.206%
23	6.993	716	724	733	rVB2	6473	14027	0.09%	0.054%
24	7.225	756	765	776	rBV	393395	838812	5.54%	3.256%
25	7.356	782	788	795	rVB2	16278	34779	0.23%	0.135%
26	7.816	865	869	877	rVB3	5745	12548	0.08%	0.049%
27	7.998	890	901	915	rBV	353621	811880	5.36%	3.152%
28	8.815	1037	1045	1049	rBV3	13892	33513	0.22%	0.130%
29	8.889	1055	1058	1072	rVB6	8529	22152	0.15%	0.086%
30	9.304	1120	1131	1141	rBV	654107	1500472	9.90%	5.825%
31	9.457	1152	1158	1166	rVB4	5626	13304	0.09%	0.052%
32	9.576	1171	1179	1193	rVV	110234	243438	1.61%	0.945%
33	9.695	1193	1200	1210	rVB6	10905	27124	0.18%	0.105%

Sum of corrected areas: 25758770

Data Path : I:\MS09\DATA\2024 06\18\
Data File : 06182410.D
Acq On : 18 Jun 2024 14:26
Operator : SC
Sample : P2402249-014 (400mL)
Misc : S37-06062402
ALS Vial : 7 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\18\\
Data File : 06182410.D
Acq On : 18 Jun 2024 14:266
Operator : SCC
Sample : P2402249-014 (400mL))
Misc : S37-060624022
ALS Vial : 7 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

						--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182411.D Vial: 8
Acq On : 18 Jun 2024 14:58 Operator: SC
Sample : P2402249-015 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 13:50:56 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/19/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	138244	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	604493	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	140207	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	305473	12.433	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.44%				
57) Toluene-d8 (SS2)	12.43	98	677380	12.625	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.96%				
73) Bromofluorobenzene (SS3)	16.83	174	242894	12.537	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.32%				
Target Compounds							Qvalue
2) Propene	0.00	42	0	N.D. d			
3) Dichlorodifluoromethan...	3.36	85	18558m	0.570	ng		
4) Chloromethane	3.49	50	2283	0.103	ng		93
5) 1,2-Dichloro-1,1,2,2-t...	3.61	135	343	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	4.02	94	202	N.D.			
9) Chloroethane	4.15	64	148	N.D.			
10) Ethanol	4.28	45	28629	2.130	ng		72
11) Acetonitrile	0.00	41	0	N.D. d			
12) Acrolein	4.53	56	2574	0.259	ng		96
13) Acetone	4.63	58	34825	3.243	ng	#	81
14) Trichlorofluoromethane	4.76	101	1458895	44.328	ng		99
15) 2-Propanol (Isopropanol)	4.85	45	35287	0.815	ng		93
16) Acrylonitrile	0.00	53	0	N.D. d			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.34	59	1250	N.D.			
19) Methylene Chloride	5.35	84	2877	0.189	ng		95
20) 3-Chloro-1-propene (Al...	5.45	41	141	N.D.			
21) Trichlorotrifluoroethane	5.58	151	775626	55.710	ng		97
22) Carbon Disulfide	5.60	76	481874	9.836	ng		86
23) trans-1,2-Dichloroethene	6.13	61	113	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	6.31	73	645	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D. d			
27) 2-Butanone (MEK)	6.66	72	3927	0.462	ng	#	65
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	7.29	87	480	N.D.			
30) Ethyl Acetate	7.29	61	15234	2.936	ng		99
31) n-Hexane	7.30	57	2842	0.125	ng	#	89
32) Chloroform	7.36	83	22635	0.836	ng		99
34) Tetrahydrofuran (THF)	7.78	72	296	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	548	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	9.60	61	4343	No Calib		#	
40) 1-Butanol	8.81	56	10218	No Calib		#	
41) Benzene	8.90	78	14837	0.266	ng		98
42) Carbon Tetrachloride	9.07	117	538	N.D.			
43) Cyclohexane	9.22	84	595	N.D.			
44) tert-Amyl Methyl Ether	9.62	73	323	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.07	83	949	N.D.			
47) Trichloroethene	10.14	130	1166	0.072	ng		99
48) 1,4-Dioxane	10.12	88	1122	0.109	ng		96
49) 2,2,4-Trimethylpentane...	10.24	57	1063	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182411.D Vial: 8
Acq On : 18 Jun 2024 14:58 Operator: SC
Sample : P2402249-015 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 13:50:56 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

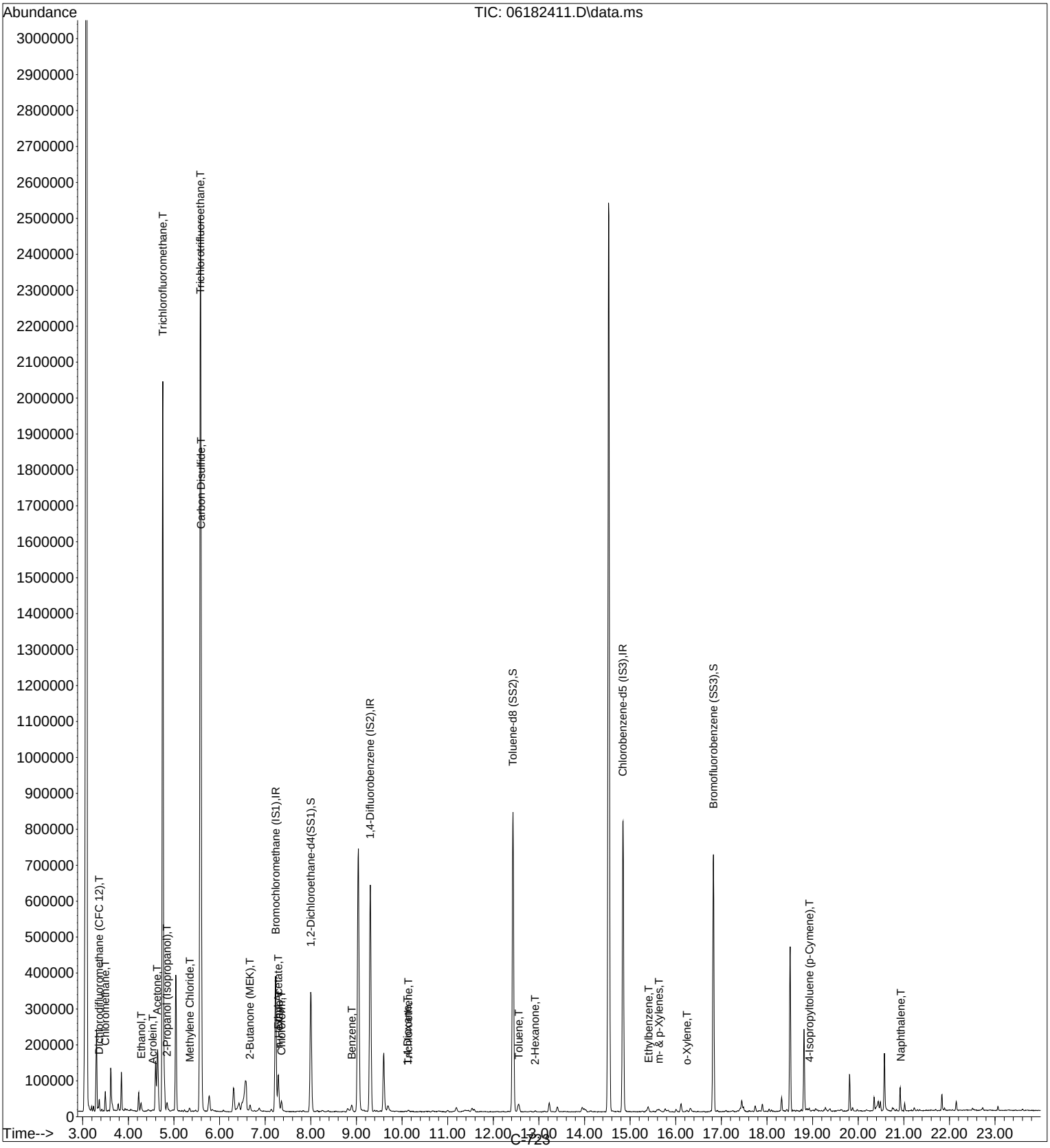
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	10.58	71	226	N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	11.33	58	415	N.D.	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	12.17	97	112	N.D.	
58) Toluene	12.56	91	11704	0.209 ng	100
59) 2-Hexanone	12.91	43	3761	0.107 ng	78
60) Dibromochloromethane	13.08	129	293	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	13.79	43	779	N.D.	
63) n-Octane	0.00	57	0	N.D.	
64) Tetrachloroethene	14.03	166	860	N.D.	
65) Chlorobenzene	14.90	112	1077	N.D.	
66) Ethylbenzene	15.41	91	4845	0.076 ng	98
67) m- & p-Xylenes	15.63	91	6582	0.122 ng	96
68) Bromoform	15.67	173	564	N.D.	
69) Styrene	16.09	104	1396	N.D.	
70) o-Xylene	16.25	91	2677	0.050 ng	100
71) n-Nonane	16.62	43	991	N.D.	
72) 1,1,2,2-Tetrachloroethane	16.20	83	475	N.D.	
74) Cumene	17.04	105	1139	N.D.	
75) alpha-Pinene	17.52	93	874	N.D.	
76) n-Propylbenzene	17.68	91	1804	N.D.	
77) 3-Ethyltoluene	17.04	105	1139	No Calib	
78) 4-Ethyltoluene	17.86	105	1097	N.D.	
79) 1,3,5-Trimethylbenzene	17.95	105	770	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.04	105	1139	No Calib	
82) 1,2,4-Trimethylbenzene	18.43	105	1572	N.D.	
83) n-Decane	0.00	58	0	N.D.	
84) Benzyl Chloride	18.56	91	472	N.D.	
85) 1,3-Dichlorobenzene	18.58	146	611	N.D.	
86) 1,4-Dichlorobenzene	18.66	146	965	N.D.	
87) sec-Butylbenzene	18.74	105	1239	N.D.	
88) 4-Isopropyltoluene (p-...	18.93	119	4084	0.062 ng	92
89) 1,2,3-Trimethylbenzene	17.04	105	1139	No Calib	
90) 1,2-Dichlorobenzene	19.04	146	473	N.D.	
91) d-Limonene	19.09	68	611	N.D.	
92) 1,2-Dibromo-3-Chloropr...	19.51	157	188	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	1070	N.D.	
95) Naphthalene	20.94	128	4672	0.063 ng	95
96) n-Dodecane	0.00	58	0	N.D.	
97) Hexachlorobutadiene	21.30	225	566	N.D.	
98) Cyclohexanone	15.36	55	1742	No Calib #	
99) tert-Butylbenzene	18.43	119	1050	N.D.	
100) n-Butylbenzene	19.38	91	1009	N.D.	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182411.D Vial: 8
Acq On : 18 Jun 2024 14:58 Operator: SC
Sample : P2402249-015 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 13:50:56 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182411.D Vial: 8
Acq On : 18 Jun 2024 14:58 Operator: SC
Sample : P2402249-015 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 13:50:56 2024 6/19/24
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

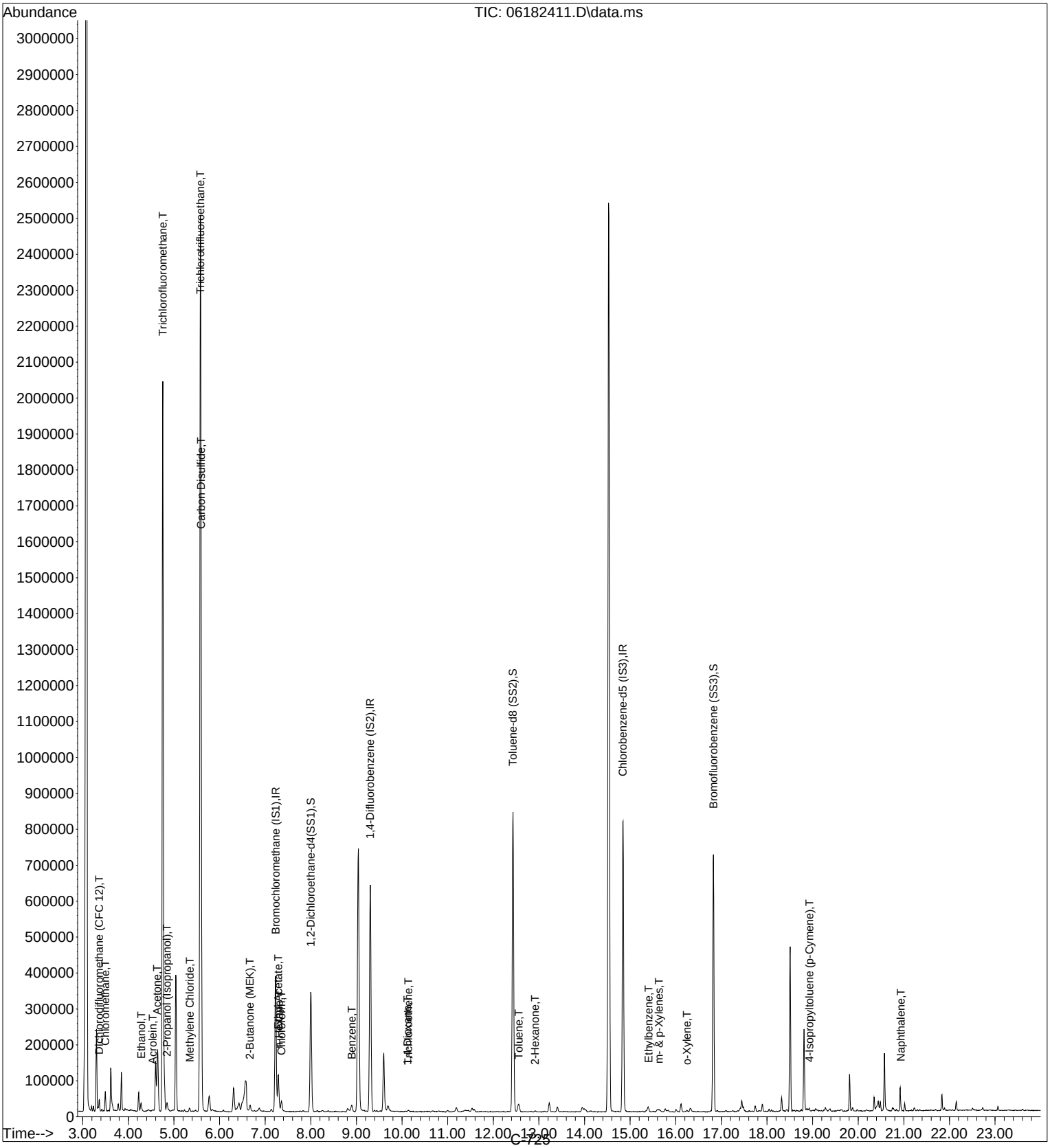
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	138244	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	604493	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	140207	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	305473	12.433	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.44%				
57) Toluene-d8 (SS2)	12.43	98	677380	12.625	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.96%				
73) Bromofluorobenzene (SS3)	16.83	174	242894	12.537	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.32%				
Target Compounds							Qvalue
3) Dichlorodifluoromethan...	3.36	85	18558m	0.570	ng		
4) Chloromethane	3.49	50	2283	0.103	ng		93
10) Ethanol	4.28	45	28629	2.130	ng		72
12) Acrolein	4.53	56	2574	0.259	ng		96
13) Acetone	4.63	58	34825	3.243	ng	#	81
14) Trichlorofluoromethane	4.76	101	1458895	44.328	ng		99
15) 2-Propanol (Isopropanol)	4.85	45	35287	0.815	ng		93
19) Methylene Chloride	5.35	84	2877	0.189	ng		95
21) Trichlorotrifluoroethane	5.58	151	775626	55.710	ng		97
22) Carbon Disulfide	5.60	76	481874	9.836	ng		86
27) 2-Butanone (MEK)	6.66	72	3927	0.462	ng	#	65
30) Ethyl Acetate	7.29	61	15234	2.936	ng		99
31) n-Hexane	7.30	57	2842	0.125	ng	#	89
32) Chloroform	7.36	83	22635	0.836	ng		99
41) Benzene	8.90	78	14837	0.266	ng		98
47) Trichloroethene	10.14	130	1166	0.072	ng		99
48) 1,4-Dioxane	10.12	88	1122	0.109	ng		96
58) Toluene	12.56	91	11704	0.209	ng		100
59) 2-Hexanone	12.91	43	3761	0.107	ng		78
66) Ethylbenzene	15.41	91	4845	0.076	ng		98
67) m- & p-Xylenes	15.63	91	6582	0.122	ng		96
70) o-Xylene	16.25	91	2677	0.050	ng		100
88) 4-Isopropyltoluene (p-...	18.93	119	4084	0.062	ng		92
95) Naphthalene	20.94	128	4672	0.063	ng		95

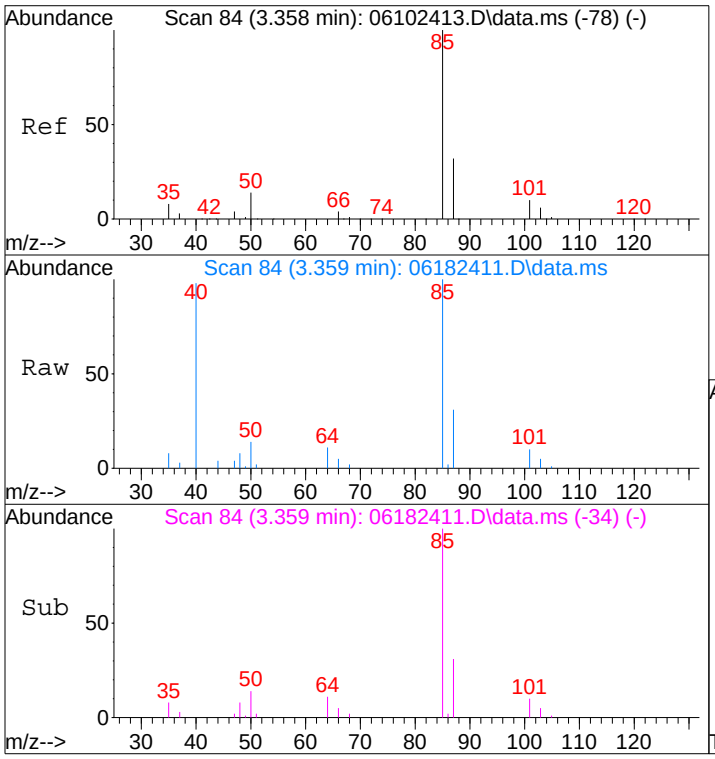
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182411.D Vial: 8
Acq On : 18 Jun 2024 14:58 Operator: SC
Sample : P2402249-015 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 13:50:56 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

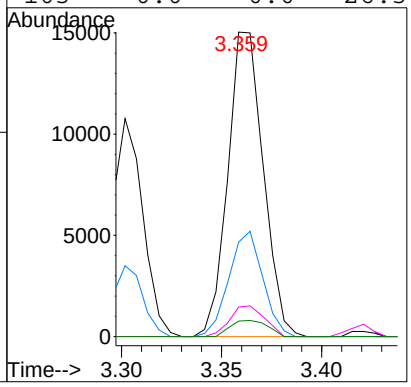


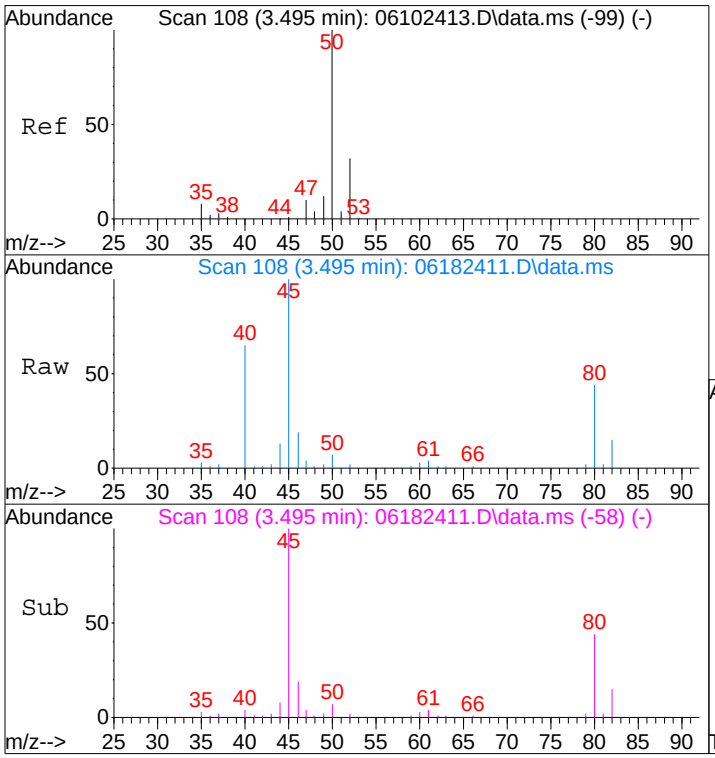


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.57 ng m
RT: 3.36 min Scan# 84
Delta R.T. 0.036 min
Lab File: 06182411.D
Acq: 18 Jun 2024 14:58

Tgt Ion: 85 Resp: 18558

Ion	Ratio	Lower	Upper
85	100		
87	20.1	12.2	52.2
101	0.0	0.0	29.8
103	0.0	0.0	26.3

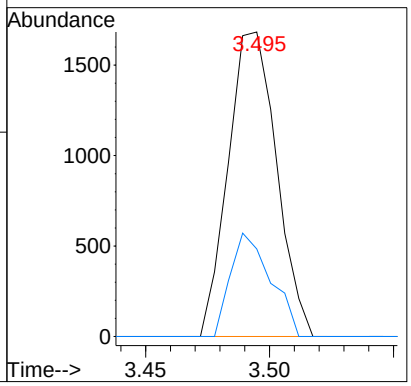


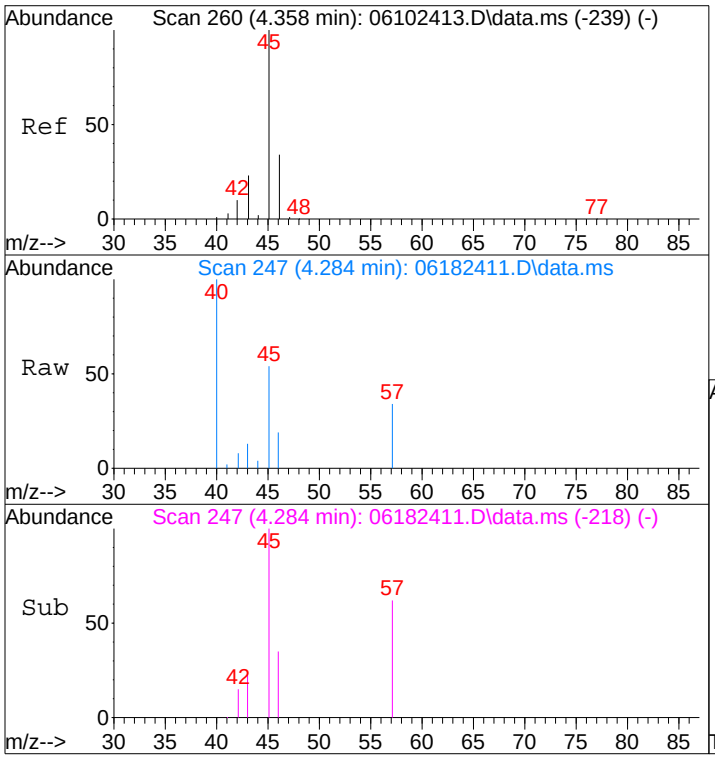


#4
Chloromethane
Concen: 0.10 ng
RT: 3.49 min Scan# 108
Delta R.T. 0.032 min
Lab File: 06182411.D
Acq: 18 Jun 2024 14:58

Tgt Ion: 50 Resp: 2283

Ion	Ratio	Lower	Upper
50	100		
52	28.3	12.4	52.4

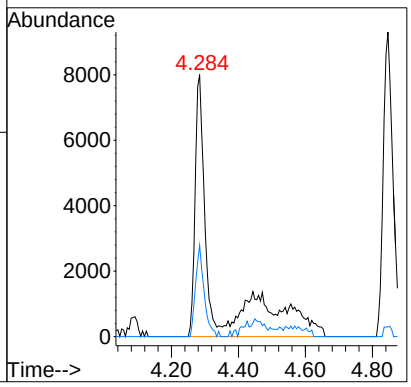


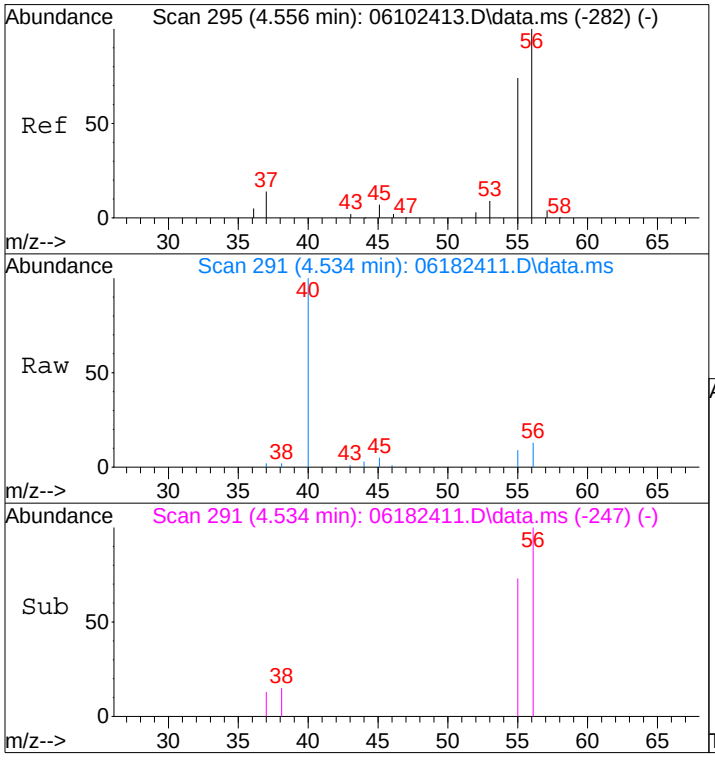


#10
Ethanol
Concen: 2.13 ng
RT: 4.28 min Scan# 247
Delta R.T. -0.083 min
Lab File: 06182411.D
Acq: 18 Jun 2024 14:58

Tgt Ion: 45 Resp: 28629

Ion	Ratio	Lower	Upper
45	100		
46	17.4	13.5	53.5

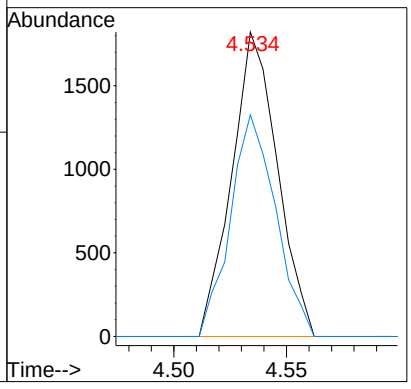


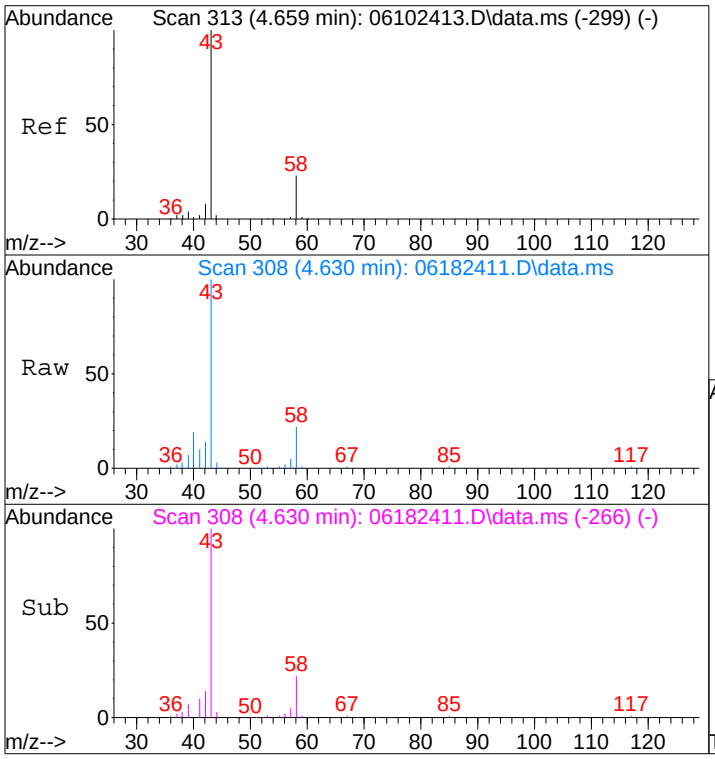


#12
Acrolein
Concen: 0.26 ng
RT: 4.53 min Scan# 291
Delta R.T. -0.001 min
Lab File: 06182411.D
Acq: 18 Jun 2024 14:58

Tgt Ion: 56 Resp: 2574

Ion	Ratio	Lower	Upper
56	100		
55	72.1	55.5	95.5

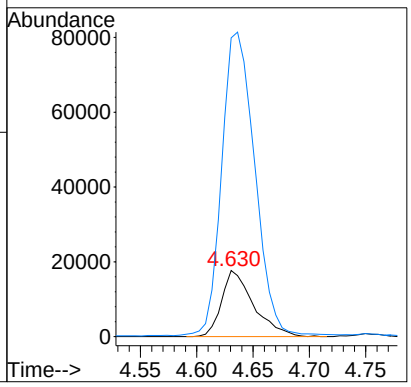


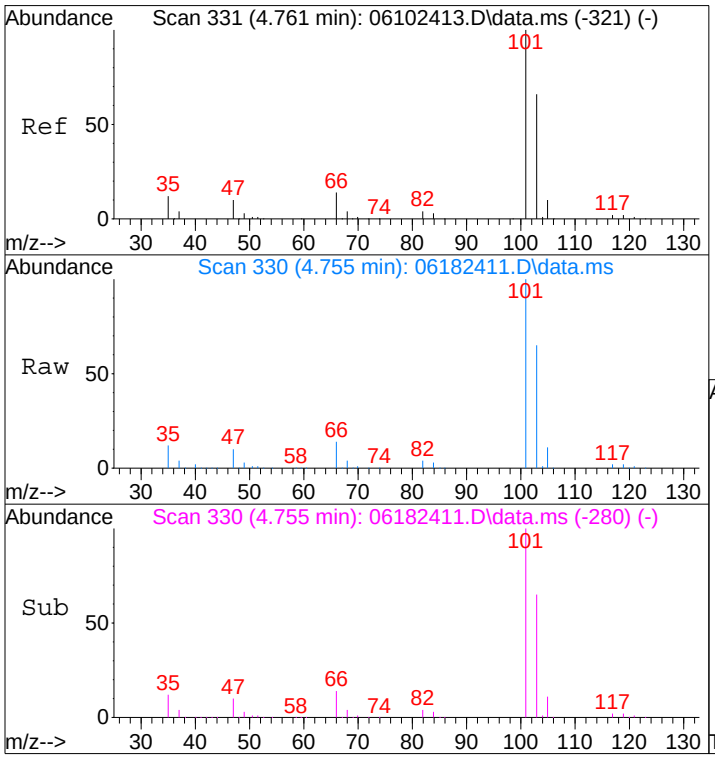


#13
Acetone
Concen: 3.24 ng
RT: 4.63 min Scan# 308
Delta R.T. -0.012 min
Lab File: 06182411.D
Acq: 18 Jun 2024 14:58

Tgt Ion: 58 Resp: 34825

Ion	Ratio	Lower	Upper
58	100		
43	478.8	400.7	460.7#

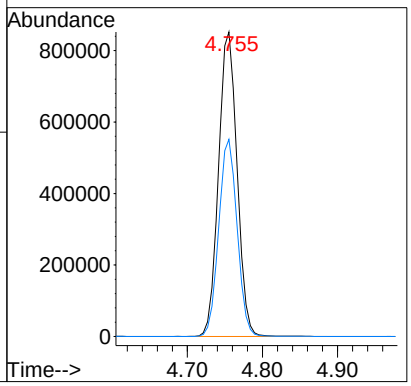


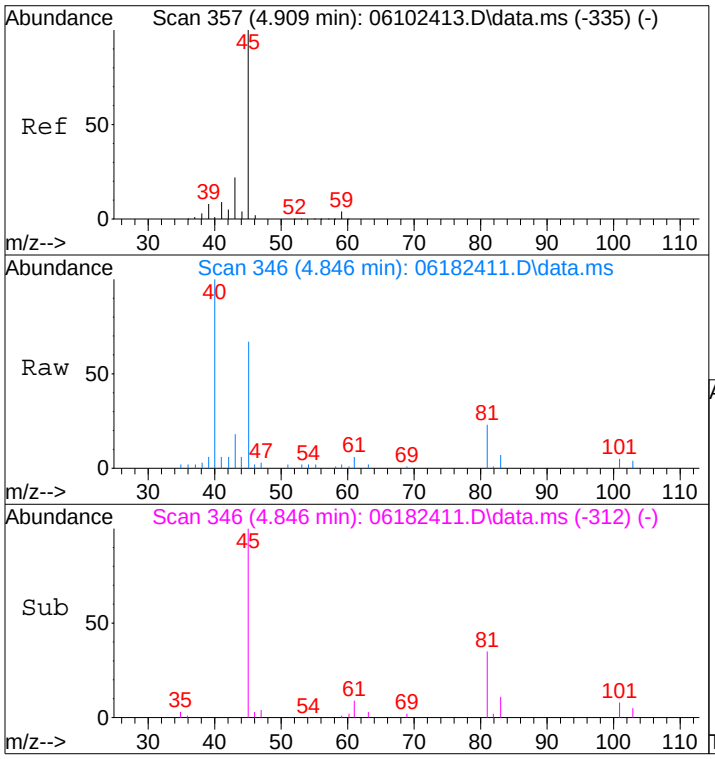


#14
Trichlorofluoromethane
Concen: 44.33 ng
RT: 4.76 min Scan# 330
Delta R.T. 0.035 min
Lab File: 06182411.D
Acq: 18 Jun 2024 14:58

Tgt Ion:101 Resp: 1458895

Ion	Ratio	Lower	Upper
101	100		
103	64.2	44.9	84.9

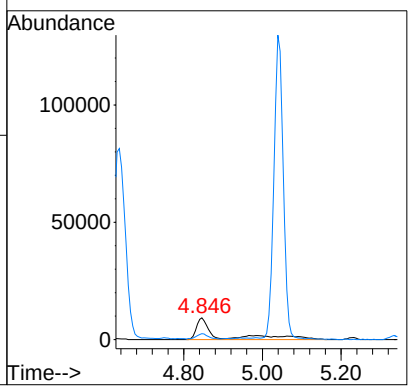


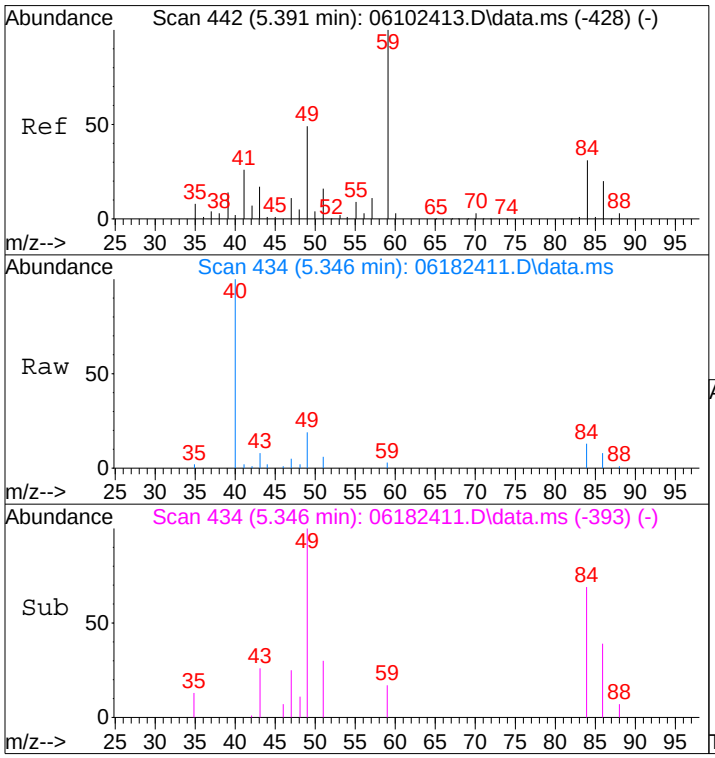


#15
2-Propanol (Isopropanol)
Concen: 0.82 ng
RT: 4.85 min Scan# 346
Delta R.T. -0.054 min
Lab File: 06182411.D
Acq: 18 Jun 2024 14:58

Tgt Ion: 45 Resp: 35287

Ion	Ratio	Lower	Upper
45	100		
43	19.1	2.5	42.5

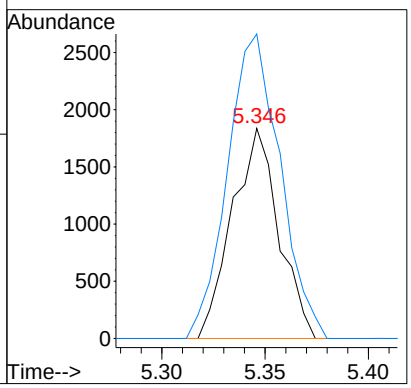


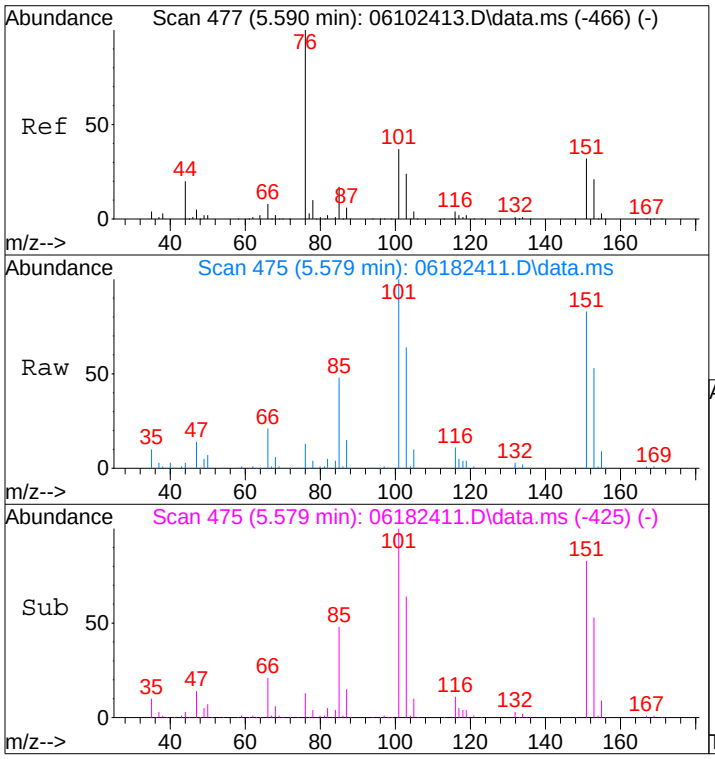


#19
Methylene Chloride
Concen: 0.19 ng
RT: 5.35 min Scan# 434
Delta R.T. -0.015 min
Lab File: 06182411.D
Acq: 18 Jun 2024 14:58

Tgt Ion: 84 Resp: 2877

Ion	Ratio	Lower	Upper
84	100		
49	164.0	132.9	182.9

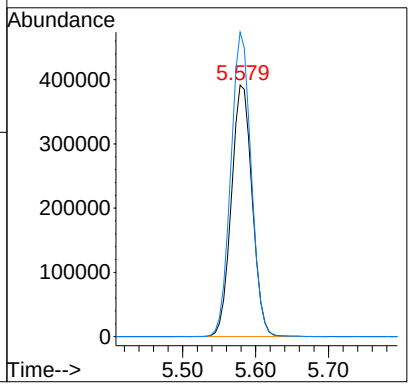


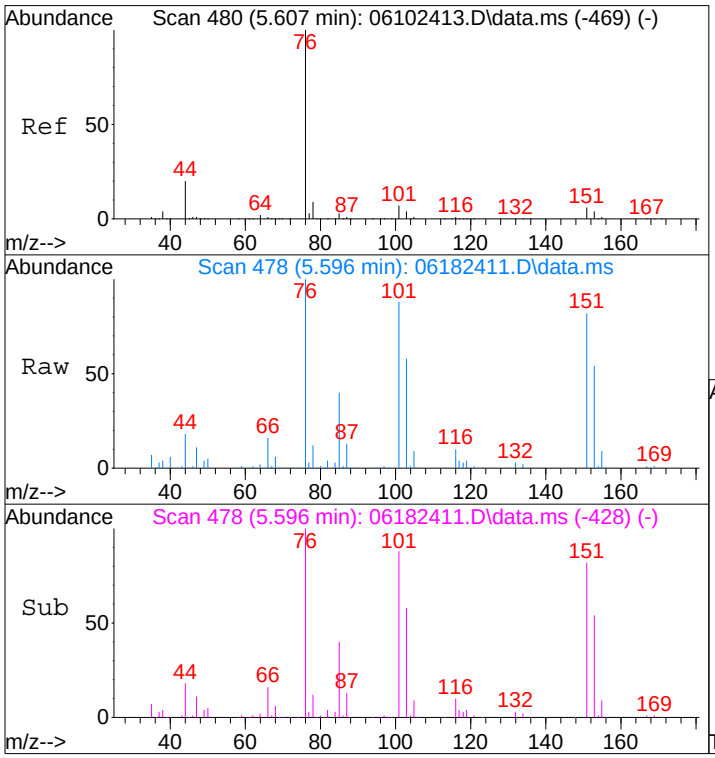


#21
Trichlorotrifluoroethane
Concen: 55.71 ng
RT: 5.58 min Scan# 475
Delta R.T. 0.032 min
Lab File: 06182411.D
Acq: 18 Jun 2024 14:58

Tgt Ion:151 Resp: 775626

Ion	Ratio	Lower	Upper
151	100		
101	118.6	95.0	135.0

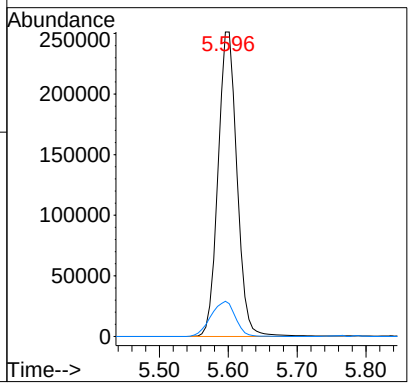


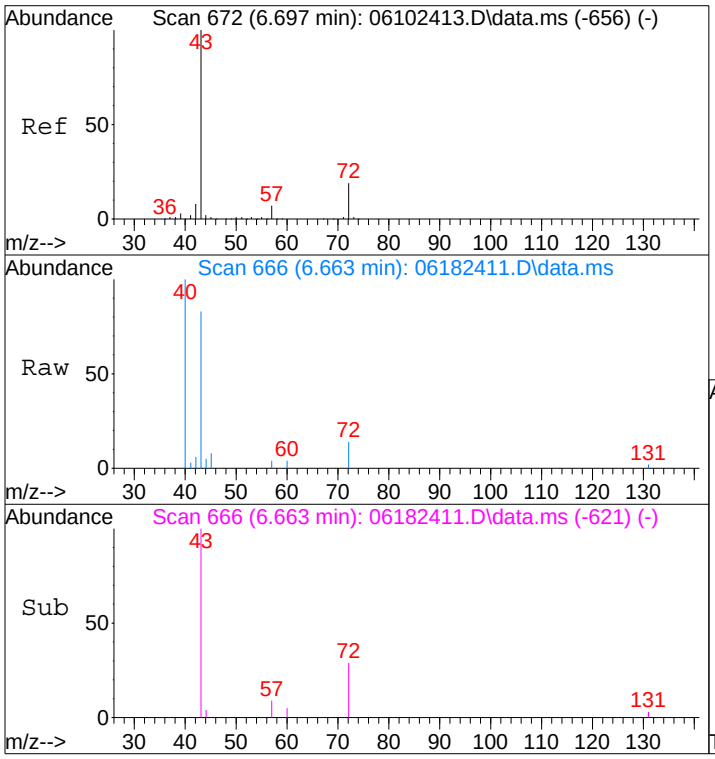


#22
Carbon Disulfide
Concen: 9.84 ng
RT: 5.60 min Scan# 478
Delta R.T. 0.033 min
Lab File: 06182411.D
Acq: 18 Jun 2024 14:58

Tgt Ion: 76 Resp: 481874

Ion	Ratio	Lower	Upper
76	100		
78	14.9	0.0	29.6

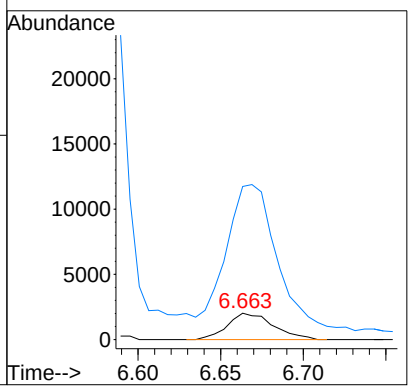


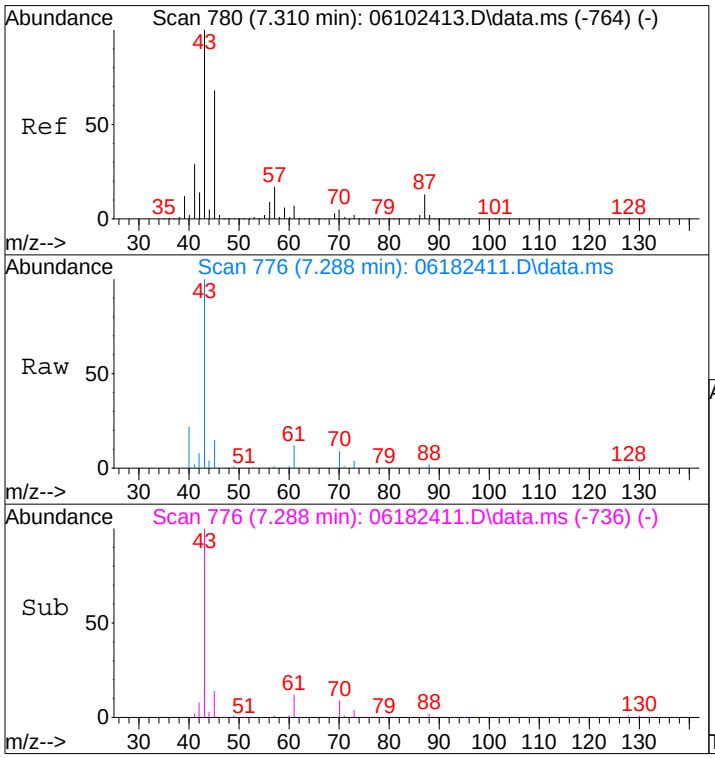


#27
2-Butanone (MEK)
Concen: 0.46 ng
RT: 6.66 min Scan# 666
Delta R.T. 0.005 min
Lab File: 06182411.D
Acq: 18 Jun 2024 14:58

Tgt Ion: 72 Resp: 3927

Ion	Ratio	Lower	Upper
72	100		
43	626.7	506.8	546.8#

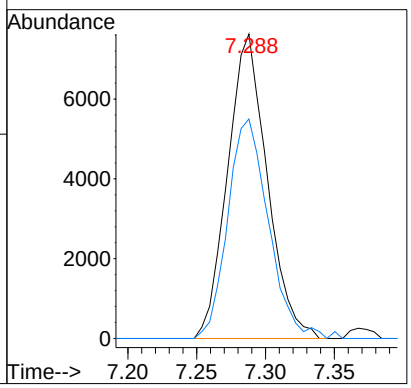


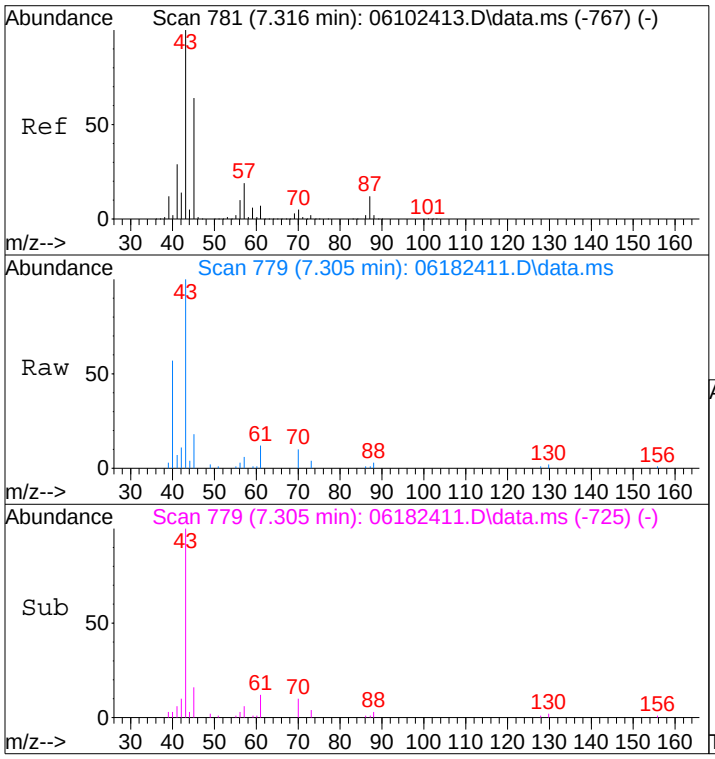


#30
Ethyl Acetate
Concen: 2.94 ng
RT: 7.29 min Scan# 776
Delta R.T. 0.029 min
Lab File: 06182411.D
Acq: 18 Jun 2024 14:58

Tgt Ion: 61 Resp: 15234

Ion	Ratio	Lower	Upper
61	100		
70	74.4	53.5	93.5

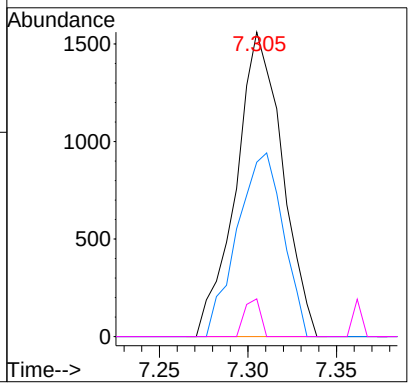


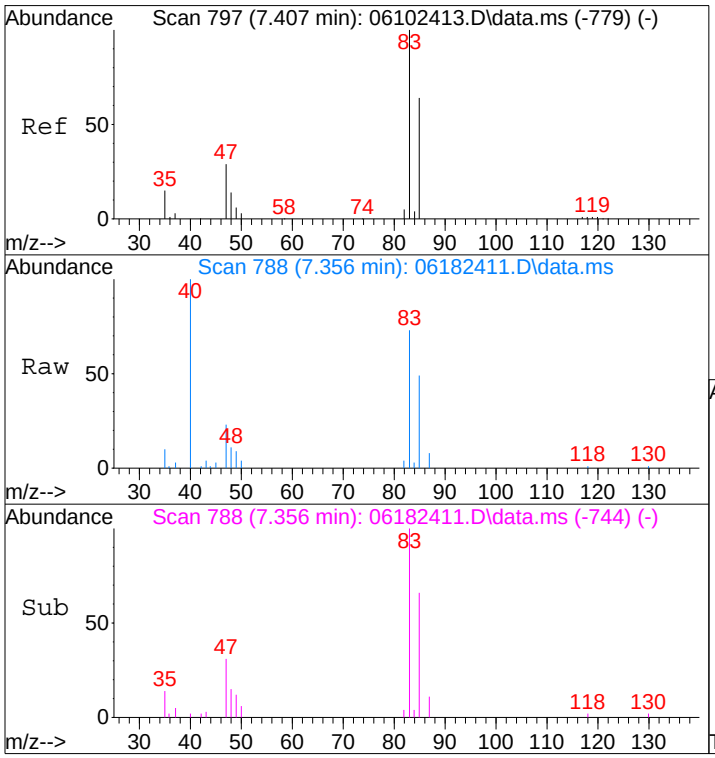


#31
n-Hexane
Concen: 0.13 ng
RT: 7.30 min Scan# 779
Delta R.T. 0.057 min
Lab File: 06182411.D
Acq: 18 Jun 2024 14:58

Tgt Ion: 57 Resp: 2842

Ion	Ratio	Lower	Upper
57	100		
56	59.8	42.5	63.7
86	4.3	9.5	14.3#

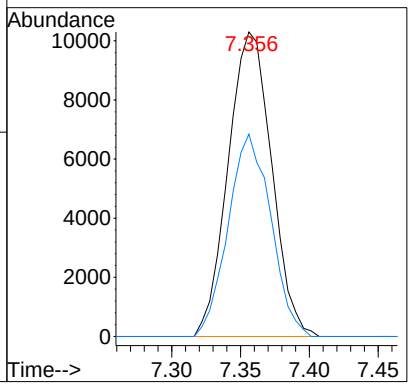


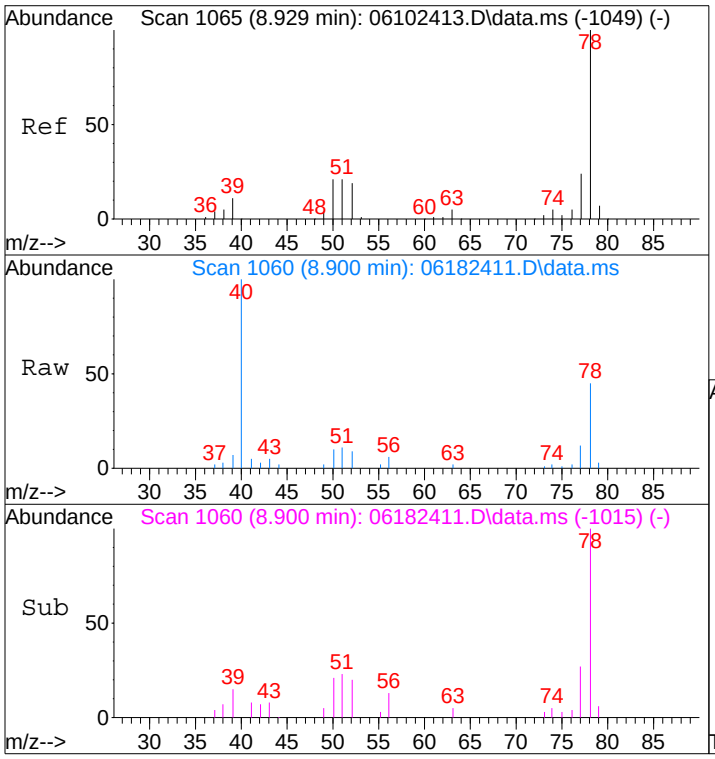


#32
Chloroform
Concen: 0.84 ng
RT: 7.36 min Scan# 788
Delta R.T. 0.001 min
Lab File: 06182411.D
Acq: 18 Jun 2024 14:58

Tgt Ion: 83 Resp: 22635

Ion	Ratio	Lower	Upper
83	100		
85	65.2	44.4	84.4

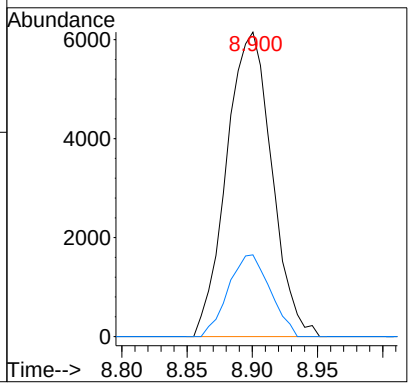


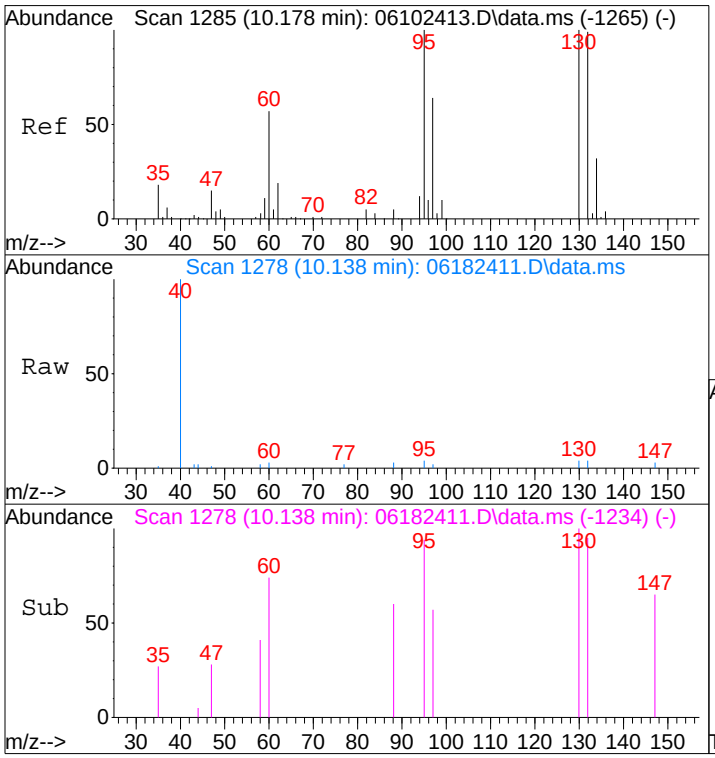


#41
Benzene
Concen: 0.27 ng
RT: 8.90 min Scan# 1060
Delta R.T. 0.003 min
Lab File: 06182411.D
Acq: 18 Jun 2024 14:58

Tgt Ion: 78 Resp: 14837

Ion	Ratio	Lower	Upper
78	100		
77	24.9	4.0	44.0

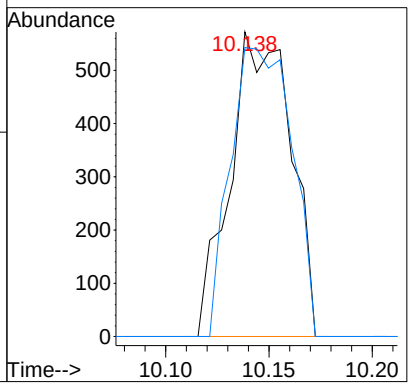


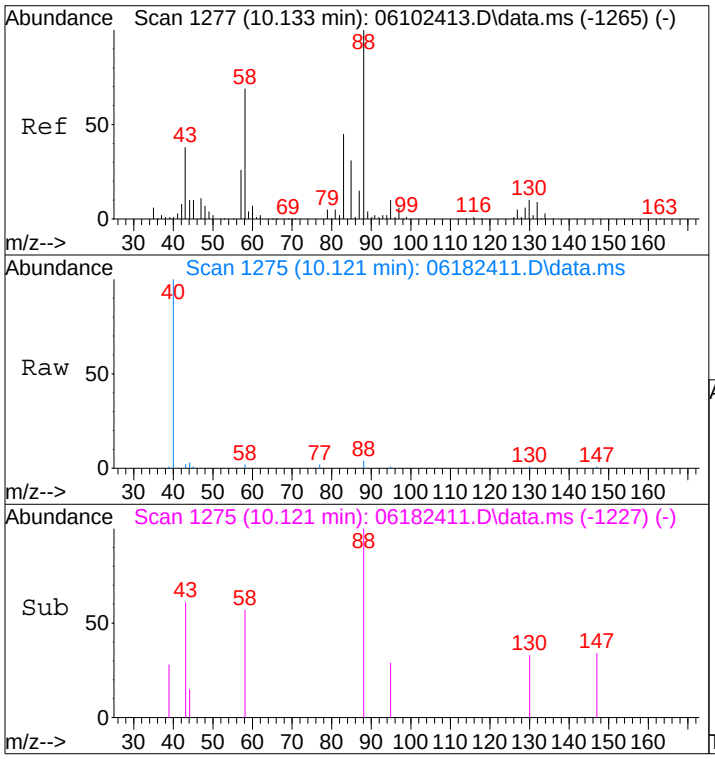


#47
Trichloroethene
Concen: 0.07 ng
RT: 10.14 min Scan# 1278
Delta R.T. -0.001 min
Lab File: 06182411.D
Acq: 18 Jun 2024 14:58

Tgt Ion:130 Resp: 1166

Ion	Ratio	Lower	Upper
130	100		
132	96.6	77.9	117.9

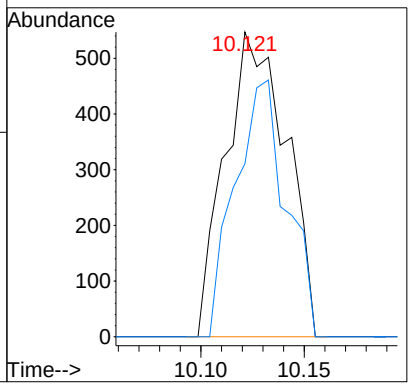


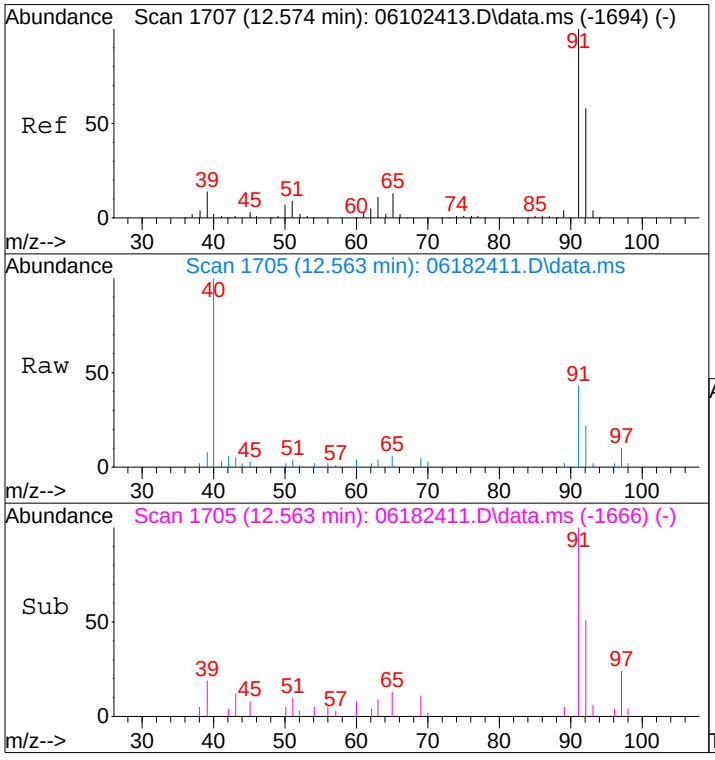


#48
1,4-Dioxane
Concen: 0.11 ng
RT: 10.12 min Scan# 1275
Delta R.T. 0.021 min
Lab File: 06182411.D
Acq: 18 Jun 2024 14:58

Tgt Ion: 88 Resp: 1122

Ion	Ratio	Lower	Upper
88	100		
58	70.7	47.6	87.6

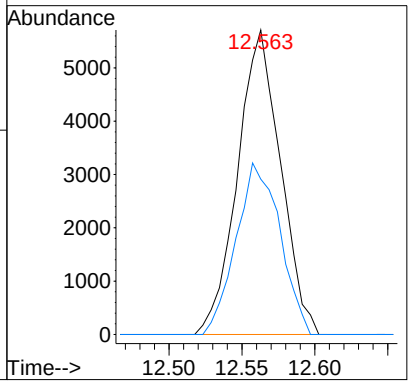


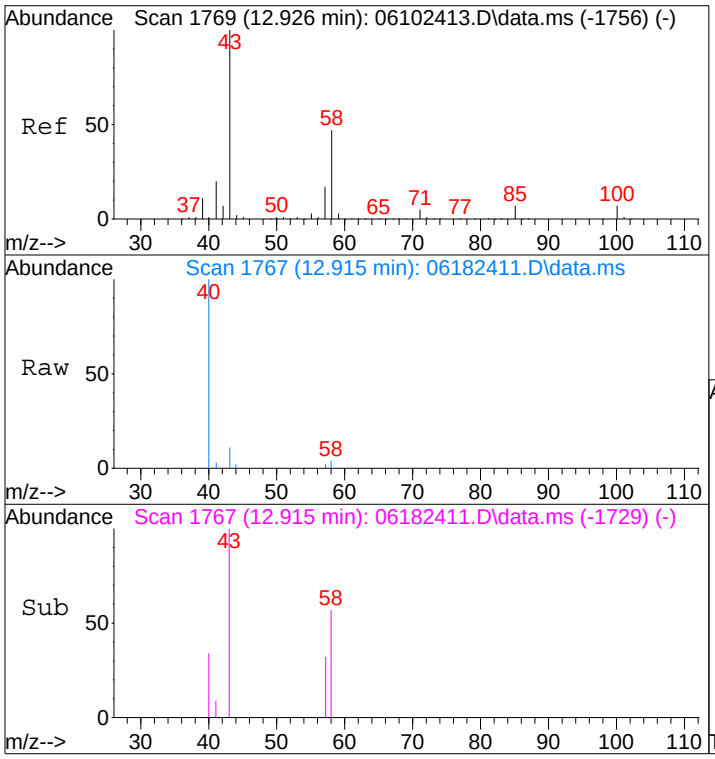


#58
Toluene
Concen: 0.21 ng
RT: 12.56 min Scan# 1705
Delta R.T. -0.028 min
Lab File: 06182411.D
Acq: 18 Jun 2024 14:58

Tgt Ion: 91 Resp: 11704

Ion	Ratio	Lower	Upper
91	100		
92	57.5	37.4	77.4

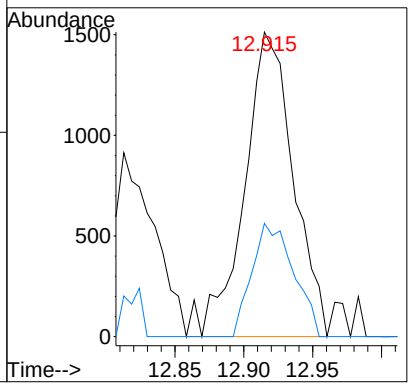


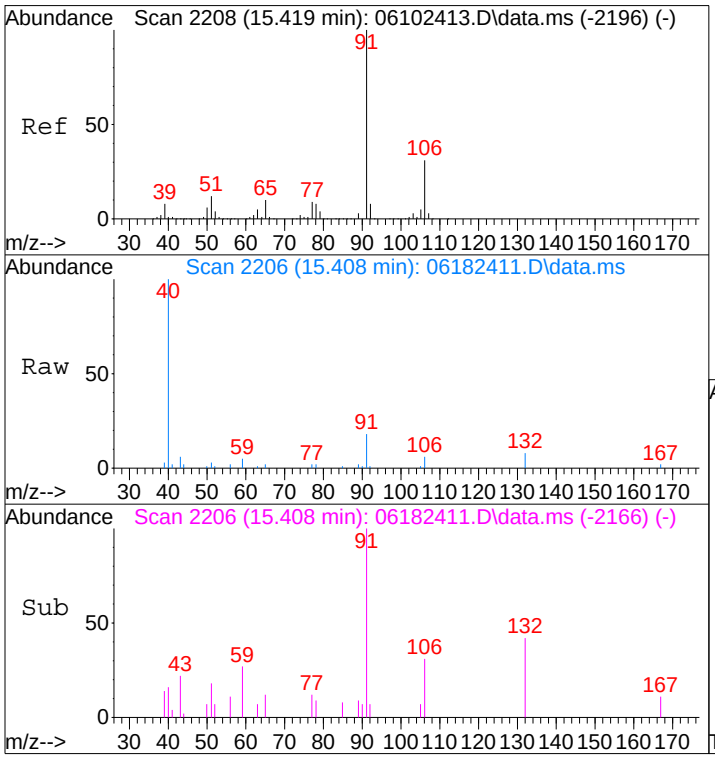


#59
2-Hexanone
Concen: 0.11 ng
RT: 12.91 min Scan# 1767
Delta R.T. -0.034 min
Lab File: 06182411.D
Acq: 18 Jun 2024 14:58

Tgt Ion: 43 Resp: 3761

Ion	Ratio	Lower	Upper
43	100		
58	31.6	25.9	65.9

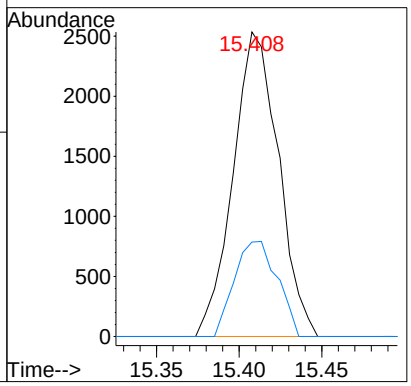


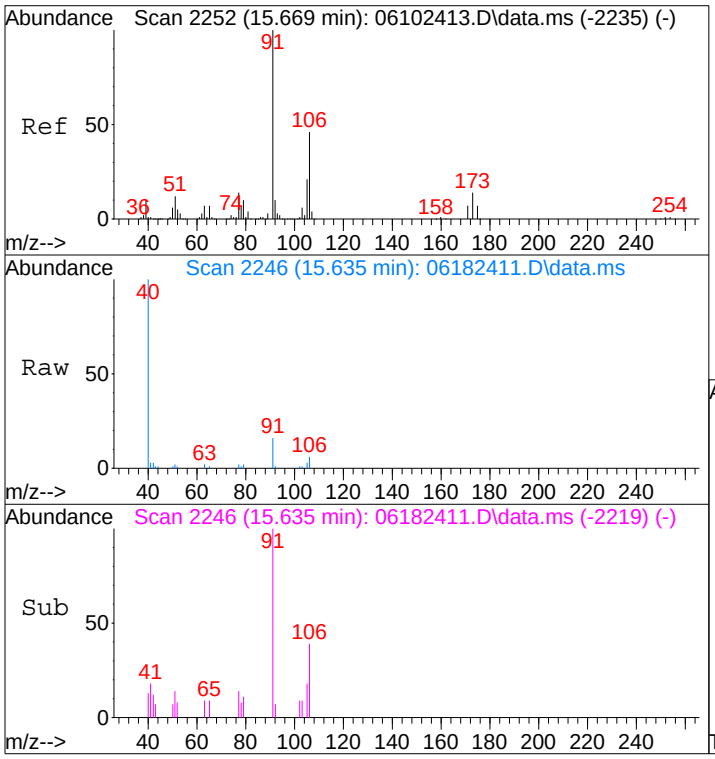


#66
Ethylbenzene
Concen: 0.08 ng
RT: 15.41 min Scan# 2206
Delta R.T. -0.023 min
Lab File: 06182411.D
Acq: 18 Jun 2024 14:58

Tgt Ion: 91 Resp: 4845

Ion	Ratio	Lower	Upper
91	100		
106	29.5	10.7	50.7

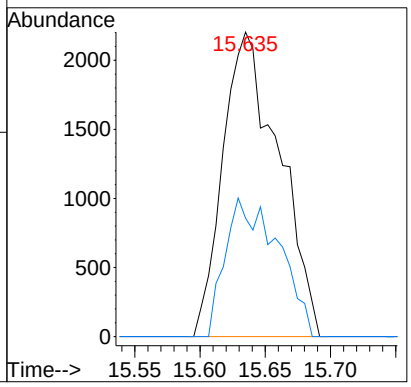


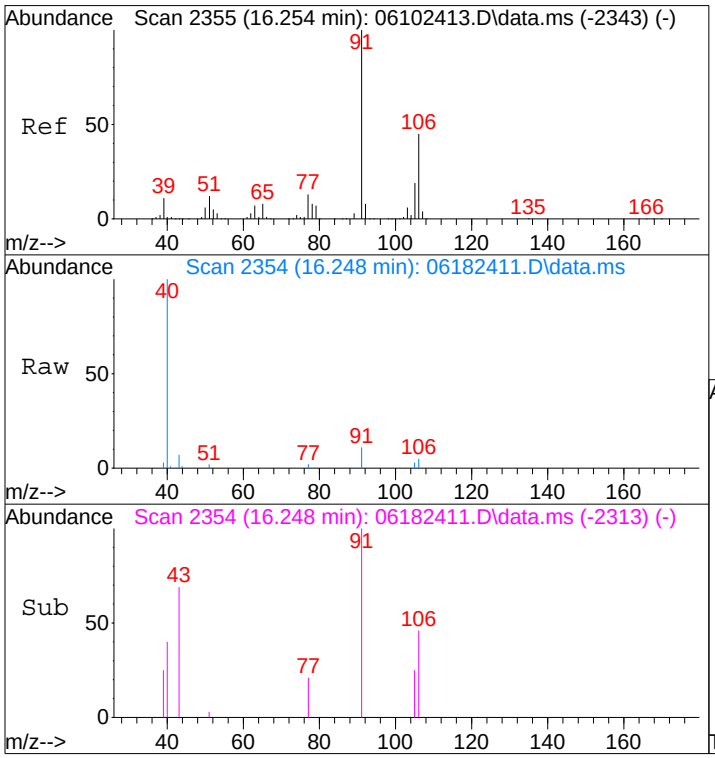


#67
m- & p-Xylenes
Concen: 0.12 ng
RT: 15.63 min Scan# 2246
Delta R.T. -0.046 min
Lab File: 06182411.D
Acq: 18 Jun 2024 14:58

Tgt Ion: 91 Resp: 6582

Ion	Ratio	Lower	Upper
91	100		
106	42.9	25.9	65.9

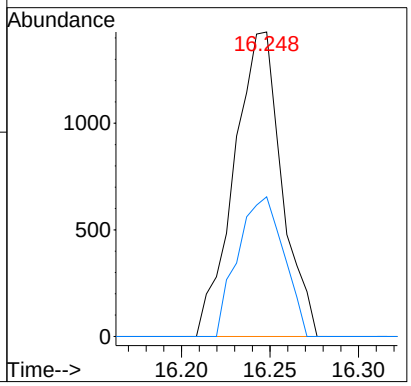


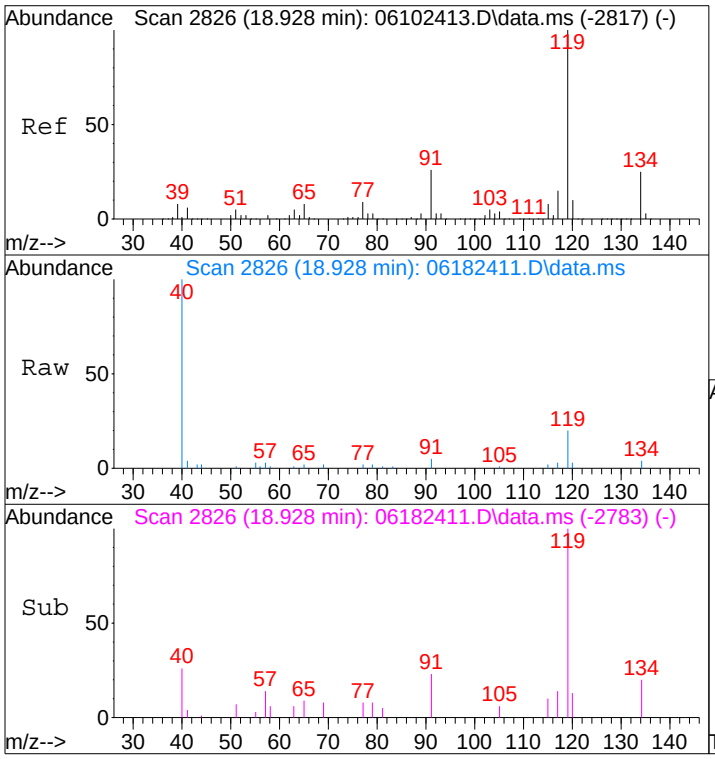


#70
o-Xylene
Concen: 0.05 ng
RT: 16.25 min Scan# 2354
Delta R.T. -0.017 min
Lab File: 06182411.D
Acq: 18 Jun 2024 14:58

Tgt Ion: 91 Resp: 2677

Ion	Ratio	Lower	Upper
91	100		
106	44.2	24.5	64.5

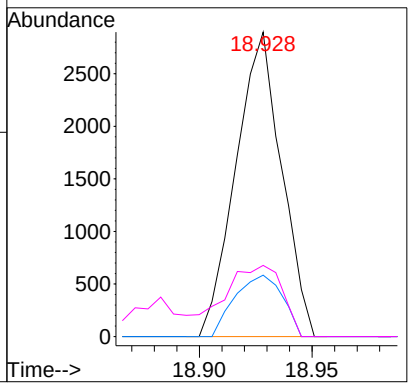


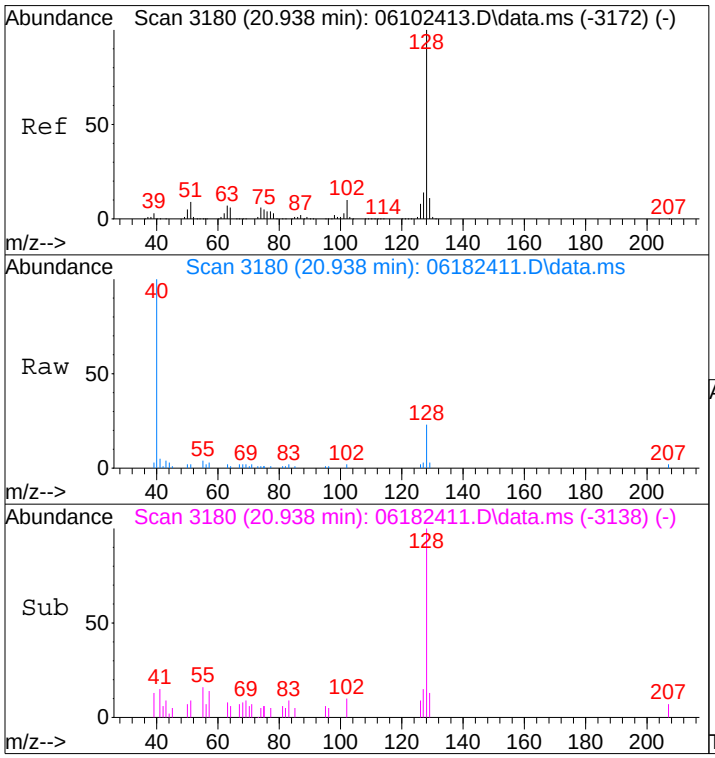


#88
4-Isopropyltoluene (p-Cymene)
Concen: 0.06 ng
RT: 18.93 min Scan# 2826
Delta R.T. -0.006 min
Lab File: 06182411.D
Acq: 18 Jun 2024 14:58

Tgt Ion:119 Resp: 4084

Ion	Ratio	Lower	Upper
119	100		
134	21.1	4.9	44.9
91	30.5	5.8	45.8

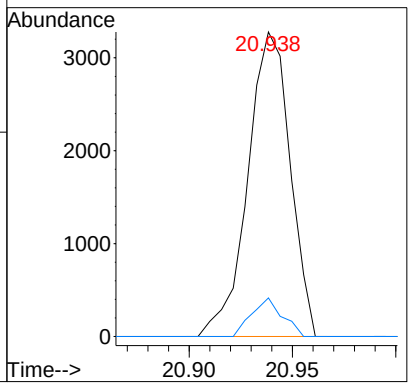




#95
Naphthalene
Concen: 0.06 ng
RT: 20.94 min Scan# 3180
Delta R.T. -0.011 min
Lab File: 06182411.D
Acq: 18 Jun 2024 14:58

Tgt Ion:128 Resp: 4672

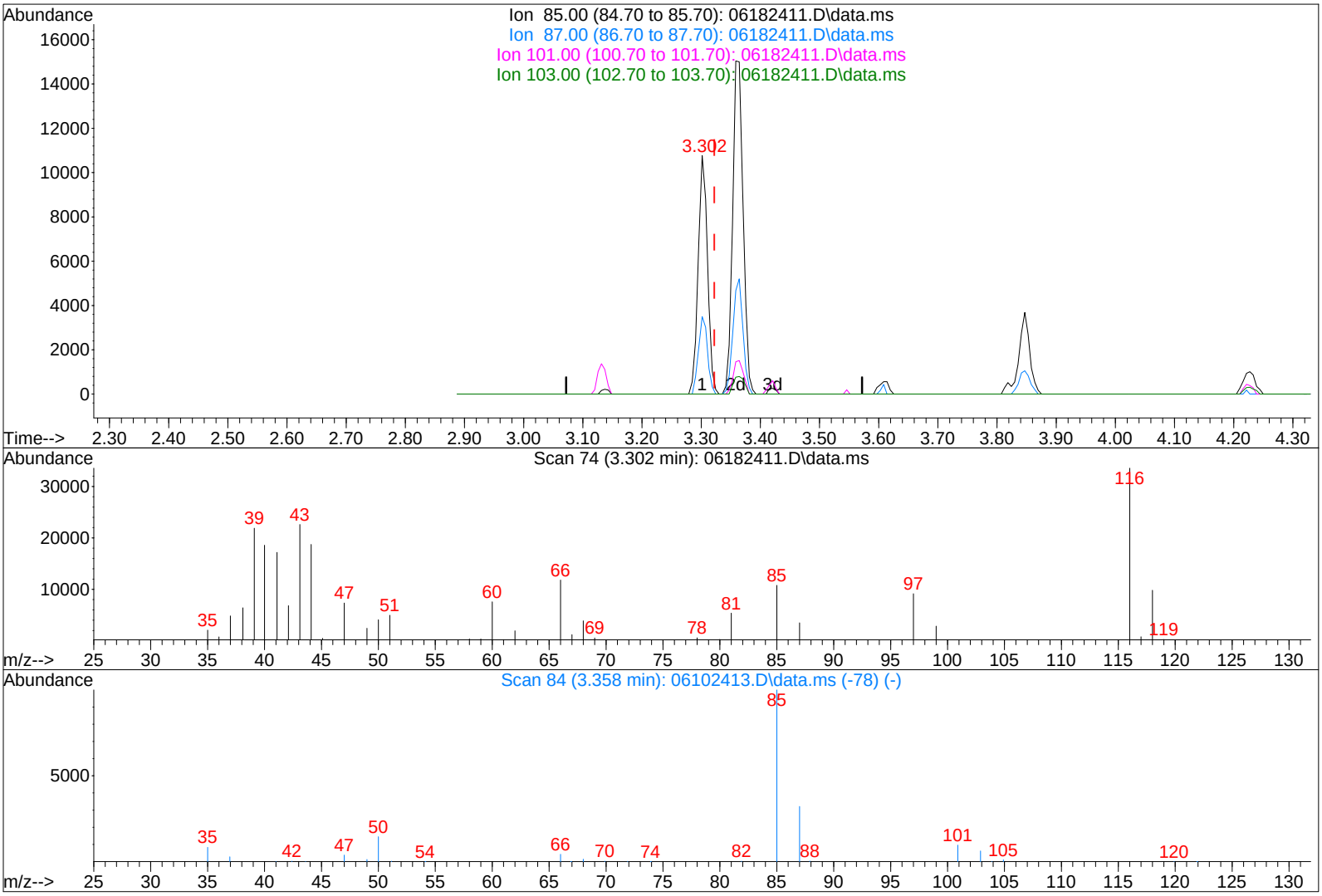
Ion	Ratio	Lower	Upper
128	100		
129	9.2	0.0	31.2



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182411.D Vial: 8
Acq On : 18 Jun 2024 14:58 Operator: SC
Sample : P2402249-015 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 18 15:20:06 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182411.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.302min (-0.020) 0.36ng

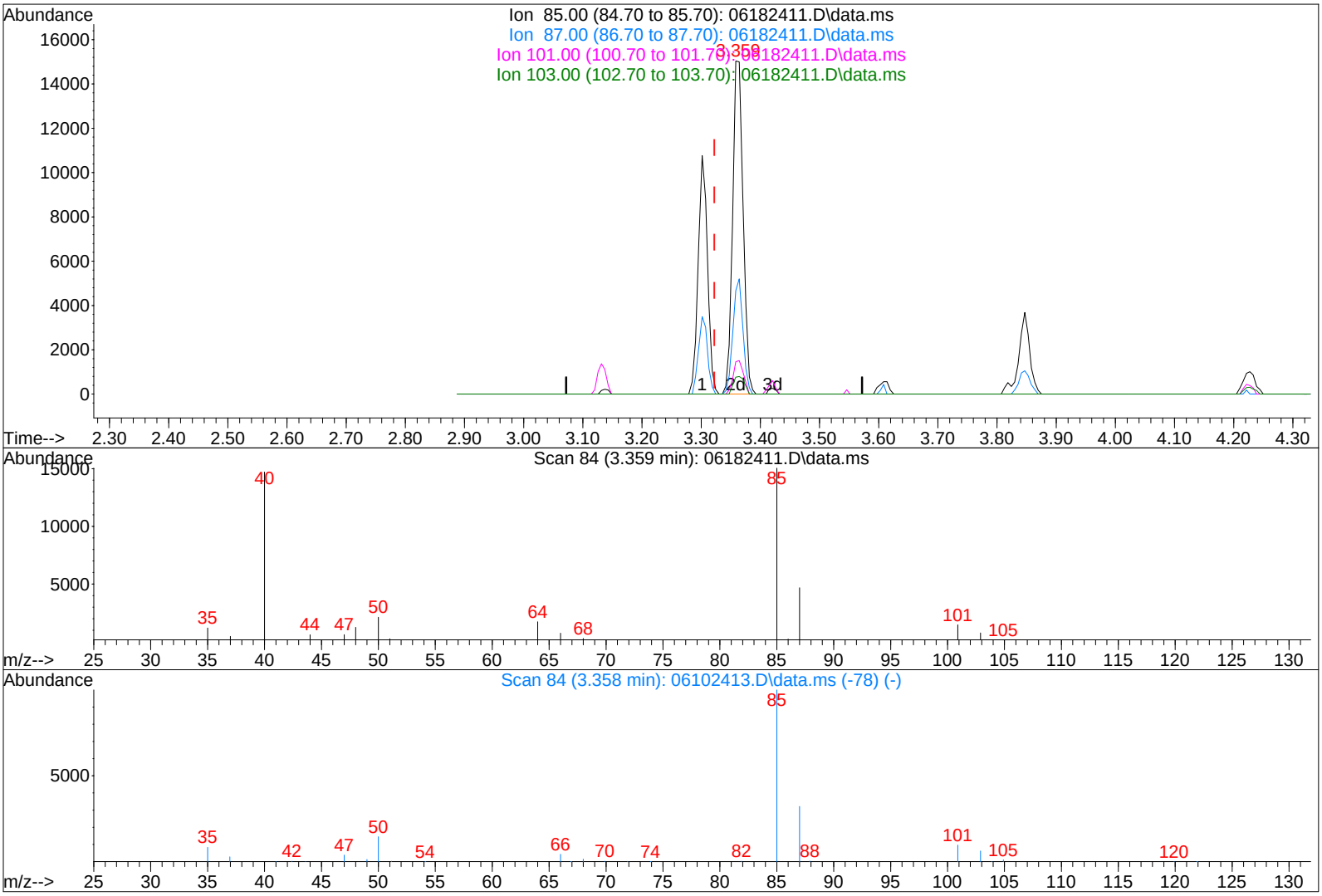
response 11826

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	31.48
101.00	9.80	0.00
103.00	6.30	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182411.D Vial: 8
Acq On : 18 Jun 2024 14:58 Operator: SC
Sample : P2402249-015 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 18 15:20:06 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182411.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.359min (+0.036) 0.57ng m

response 18558

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	20.06
101.00	9.80	0.00
103.00	6.30	0.00

MP

6/19/24

6/29/24

Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\18\06182411.D Vial: 8
Acq On : 18 Jun 2024 14:58 Operator: SC
Sample : P2402249-015 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:02:15 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

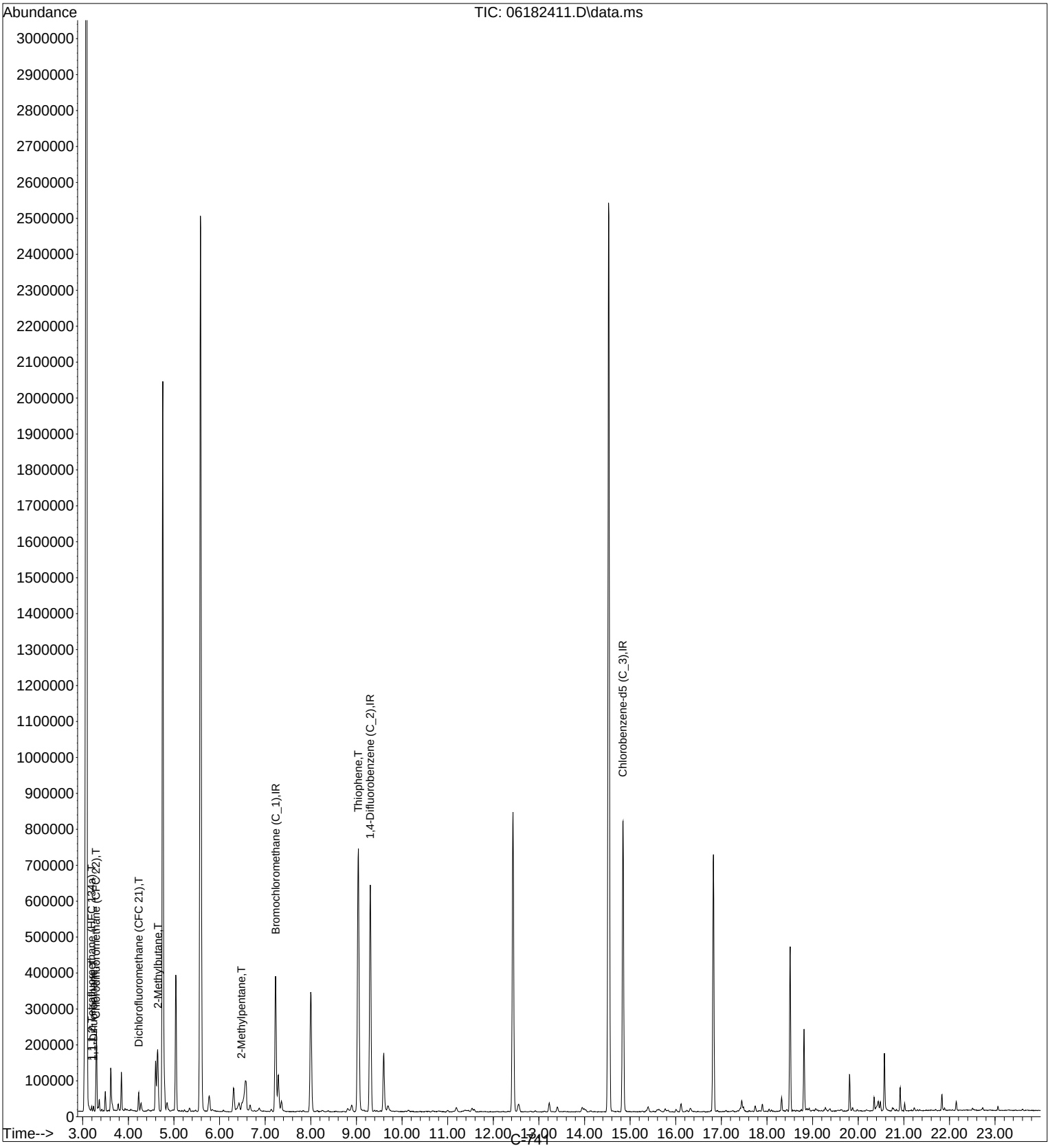
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	138244	12.500 ng		-0.02
16) 1,4-Difluorobenzene (C 2)	9.30	114	605295	12.500 ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	140207	12.500 ng		-0.01
Target Compounds						Qvalue
2) Chloropentafluoroethane	3.14	85	194	N.D.		
3) 1,1,1,2-Tetrafluoroeth...	3.19	83	2284	0.161 ng	#	1
4) 1,1-Difluoroethane	3.23	65	2821	0.234 ng		99
5) Chlorodifluoromethane ...	3.29	67	3105	0.659 ng		96
6) 1-Chloro-1,1-Difluoroe...	3.51	65	497	N.D.		
7) Dichlorofluoromethane ...	4.23	67	39808	1.256 ng		98
8) Vinylbromide	0.00	108	0	N.D.		
9) 2,2-Dichloro-1,1,1-tri...	0.00	83	0	N.D. d		
10) 2-Methylbutane	4.65	57	24665	1.496 ng		89
11) Methyl Acetate	5.33	43	3039	N.D.		
12) 2-Methylpentane	6.48	71	1920	0.160 ng	#	1
13) 2,2-Dichloropropane	0.00	77	0	N.D.		
14) 1,1-Dichloropropene	0.00	75	0	N.D.		
15) Thiophene	9.04	84	40847	1.450 ng	#	19
17) 2,3-Dimethylpentane	9.51	56	977	N.D.		
18) Dibromomethane	9.80	174	67	N.D.		
20) Methyl Cyclohexane	11.42	55	1412	N.D.		
21) 1,3-Dichloropropane	0.00	76	0	N.D.		
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		
23) 1-Chlorohexane	0.00	91	0	N.D.		
24) 1,2,3-Trichloropropane	16.32	75	309	N.D.		
25) Bromobenzene	17.03	77	53	N.D.		
26) 2-Chlorotoluene	17.61	91	754	N.D.		
27) 4-Chlorotoluene	17.68	91	1804	N.D.		
28) Indane	19.12	117	142	N.D.		
29) Indene	19.21	115	62	N.D.		
30) 1,2,4,5-Tetramethylben...	20.18	119	123	N.D.		
31) 1,2,3,4-Tetramethylben...	20.22	119	206	N.D.		
32) 1,2,3,5-Tetramethylben...	20.57	119	1106	N.D.		
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182411.D Vial: 8
Acq On : 18 Jun 2024 14:58 Operator: SC
Sample : P2402249-015 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:02:15 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

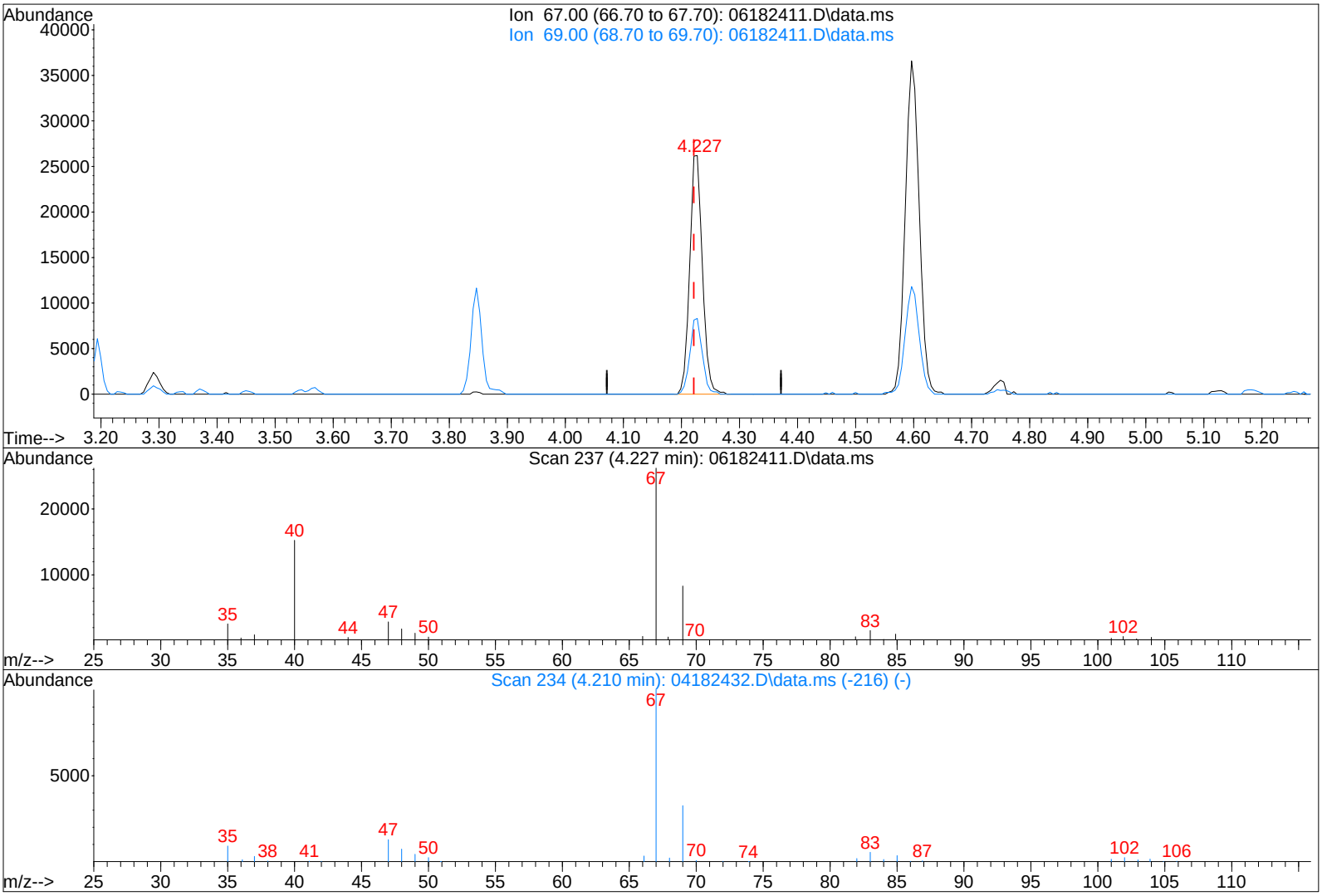


Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182411.D Vial: 8
Acq On : 18 Jun 2024 14:58 Operator: SC
Sample : P2402249-015 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 14:59:43 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182411.D\data.ms

(7) Dichlorofluoromethane (CFC 21) (T)

4.227min (+0.006) 1.26ng

response 39808

Ion	Exp%	Act%
67.00	100	100
69.00	32.40	31.08
0.00	0.00	0.00
0.00	0.00	0.00

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\18\
Data File : 06182411.D
Acq On : 18 Jun 2024 14:58
Operator : SC
Sample : P2402249-015 (400mL)
Misc : S37-06062402
ALS Vial : 8 Sample Multiplier: 1

MJ 6/29/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06182411.D\data.ms

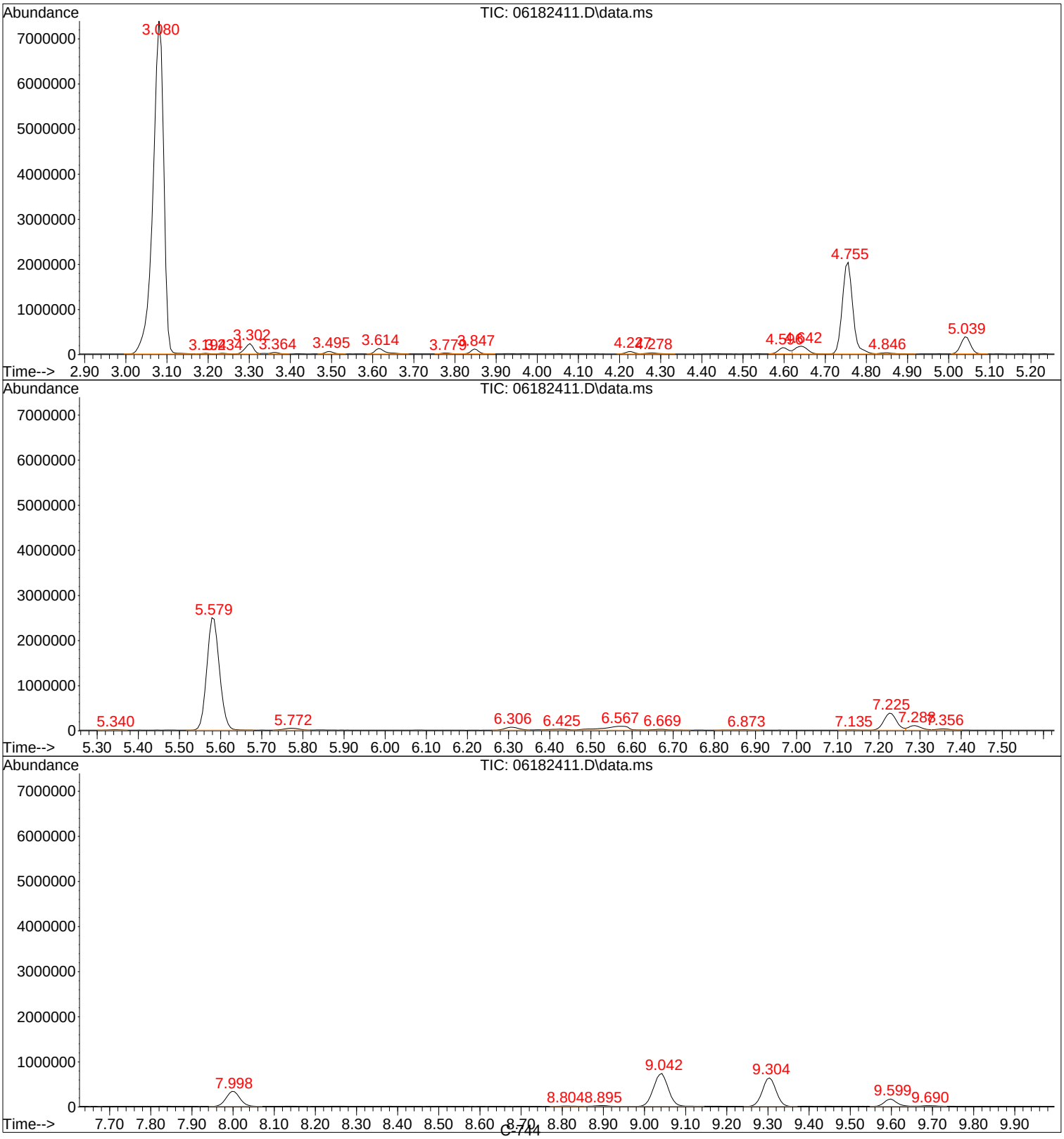
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.080	20	35	51	rBV	7381790	13432375	100.00%	43.333%
2	3.194	51	55	58	rVV2	13691	15573	0.12%	0.050%
3	3.234	58	62	67	rVB	14028	17493	0.13%	0.056%
4	3.302	67	74	78	rBV3	228889	326162	2.43%	1.052%
5	3.364	82	85	91	rVB	31958	39315	0.29%	0.127%
6	3.495	103	108	115	rVB3	54720	72319	0.54%	0.233%
7	3.614	124	129	142	rBV2	119643	208400	1.55%	0.672%
8	3.779	153	158	165	rBV	18052	24662	0.18%	0.080%
9	3.847	165	170	179	rVB	107051	140210	1.04%	0.452%
10	4.227	231	237	241	rBV	51939	74454	0.55%	0.240%
11	4.278	241	246	256	rVB3	22828	44349	0.33%	0.143%
12	4.596	296	302	306	rBV	137228	245916	1.83%	0.793%
13	4.642	306	310	322	rVB2	171736	346430	2.58%	1.118%
14	4.755	322	330	342	rBV	2030722	3591709	26.74%	11.587%
15	4.846	342	346	359	rVB3	23748	52208	0.39%	0.168%
16	5.039	374	380	390	rVB	377982	624060	4.65%	2.013%
17	5.340	426	433	439	rBV4	9996	20243	0.15%	0.065%
18	5.579	464	475	493	rBV2	2492182	5327801	39.66%	17.188%
19	5.772	501	509	517	rBV	42200	102322	0.76%	0.330%
20	6.306	595	603	611	rBV	66169	157071	1.17%	0.507%
21	6.425	616	624	630	rVV3	23753	70599	0.53%	0.228%
22	6.567	630	649	661	rVV2	85347	379215	2.82%	1.223%
23	6.669	661	667	680	rVB	17167	39846	0.30%	0.129%
24	6.873	690	703	710	rBV4	8861	24909	0.19%	0.080%
25	7.135	743	749	756	rVB5	6592	12149	0.09%	0.039%
26	7.225	756	765	772	rBV	376888	823886	6.13%	2.658%
27	7.288	772	776	783	rVV	100234	204398	1.52%	0.659%
28	7.356	783	788	796	rVB	27031	56940	0.42%	0.184%
29	7.998	891	901	914	rBV	332687	780577	5.81%	2.518%
30	8.804	1037	1043	1052	rBV3	9523	29641	0.22%	0.096%
31	8.895	1052	1059	1069	rVB	18795	48516	0.36%	0.157%
32	9.042	1069	1085	1103	rBV	731817	1833279	13.65%	5.914%
33	9.304	1120	1131	1143	rBV	630650	1453933	10.82%	4.690%
34	9.599	1174	1183	1194	rBV	162614	344398	2.56%	1.111%
35	9.690	1194	1199	1207	rVB4	13239	32365	0.24%	0.104%

Sum of corrected areas: 30997723

Data Path : I:\MS09\DATA\2024 06\18\
Data File : 06182411.D
Acq On : 18 Jun 2024 14:58
Operator : SC
Sample : P2402249-015 (400mL)
Misc : S37-06062402
ALS Vial : 8 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\18\\
Data File : 06182411.D
Acq On : 18 Jun 2024 14:588
Operator : SCC
Sample : P2402249-015 (400mL))
Misc : S37-060624022
ALS Vial : 8 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182421.D Vial: 9
Acq On : 18 Jun 2024 20:38 Operator: SC
Sample : P2402249-016 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 12:50:33 2024 6/19/24
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	119271	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	513583	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	122644	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	269677	12.722	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.76%				
57) Toluene-d8 (SS2)	12.43	98	570418	12.154	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.20%				
73) Bromofluorobenzene (SS3)	16.83	174	216848	12.795	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.40%				
Target Compounds							Qvalue
2) Propene	3.30	42	6310	0.413	ng	#	84
3) Dichlorodifluoromethan...	3.37	85	15967	0.569	ng		100
4) Chloromethane	3.50	50	5260	0.274	ng		99
5) 1,2-Dichloro-1,1,2,2-t...	3.61	135	252	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.28	45	22569	1.946	ng		78
11) Acetonitrile	0.00	41	0	N.D.	d		
12) Acrolein	4.53	56	499	0.058	ng		98
13) Acetone	4.63	58	34734	3.749	ng	#	1
14) Trichlorofluoromethane	4.76	101	8944	0.315	ng		96
15) 2-Propanol (Isopropanol)	4.83	45	66187	1.773	ng		90
16) Acrylonitrile	0.00	53	0	N.D.	d		
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.33	59	772	N.D.			
19) Methylene Chloride	5.36	84	1629	0.124	ng		94
20) 3-Chloro-1-propene (Al...	5.46	41	116	N.D.			
21) Trichlorotrifluoroethane	5.58	151	2419	0.201	ng		93
22) Carbon Disulfide	5.60	76	17285	0.409	ng		98
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D.	d		
27) 2-Butanone (MEK)	6.67	72	855	0.117	ng	#	16
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.	d		
30) Ethyl Acetate	7.28	61	79877	17.843	ng		100
31) n-Hexane	7.30	57	994	0.051	ng	#	88
32) Chloroform	7.36	83	571	N.D.			
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	468	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	9.55	61	148	No Calib		#	
40) 1-Butanol	8.82	56	1747	No Calib		#	
41) Benzene	8.89	78	8175	0.172	ng		97
42) Carbon Tetrachloride	9.07	117	2183	0.099	ng		98
43) Cyclohexane	0.00	84	0	N.D.	d		
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.09	83	237	N.D.			
47) Trichloroethene	10.15	130	260	N.D.			
48) 1,4-Dioxane	0.00	88	0	N.D.			
49) 2,2,4-Trimethylpentane...	10.23	57	576	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182421.D Vial: 9
Acq On : 18 Jun 2024 20:38 Operator: SC
Sample : P2402249-016 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 12:50:33 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

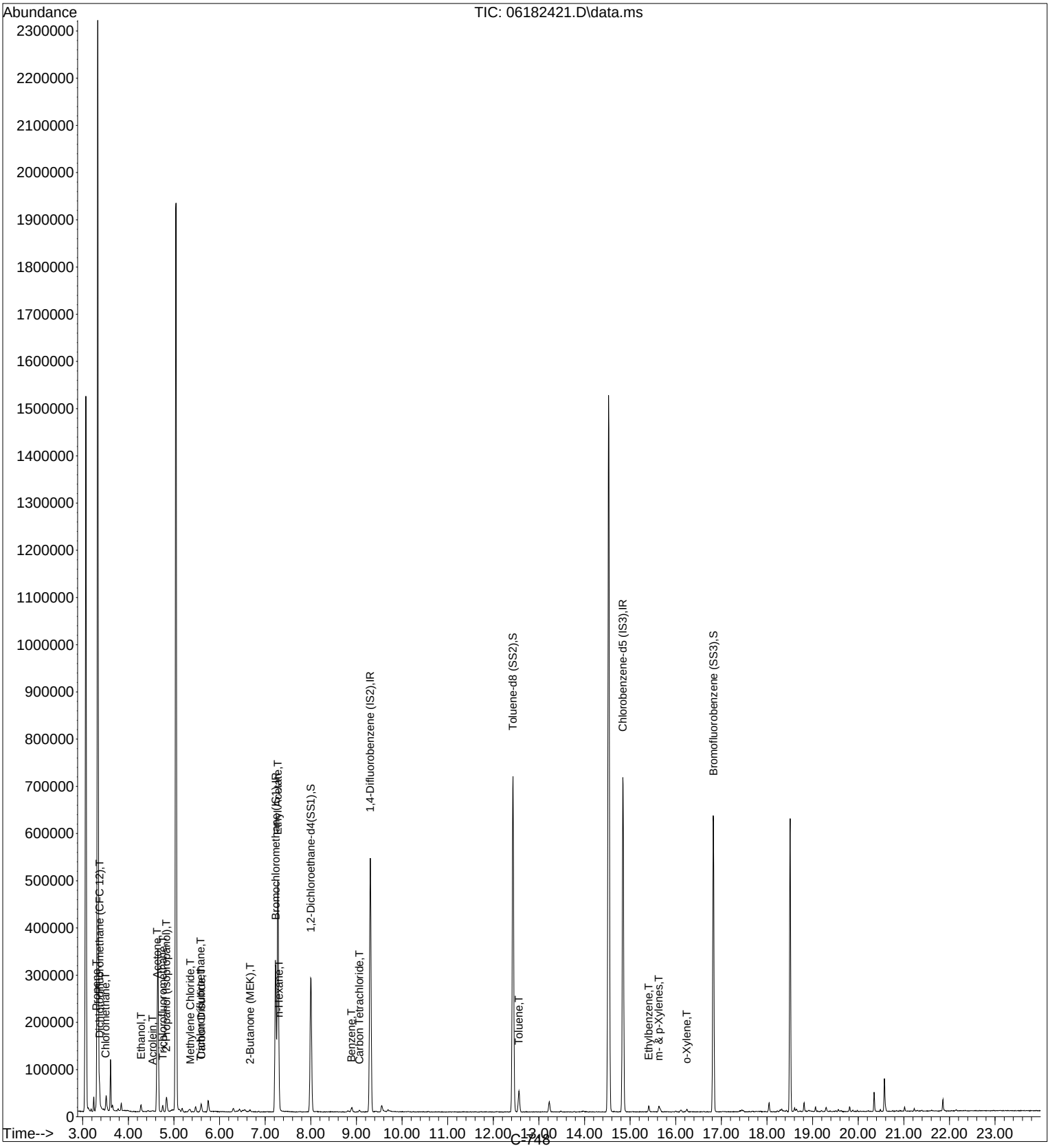
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	10.58	71	128	N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
58) Toluene	12.56	91	36658	0.747 ng	99
59) 2-Hexanone	12.94	43	384	N.D.	
60) Dibromochloromethane	13.08	129	268	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	13.78	43	606	N.D.	
63) n-Octane	0.00	57	0	N.D.	
64) Tetrachloroethene	14.03	166	363	N.D.	
65) Chlorobenzene	14.90	112	513	N.D.	
66) Ethylbenzene	15.41	91	10577	0.189 ng	100
67) m- & p-Xylenes	15.63	91	11933	0.253 ng	98
68) Bromoform	15.67	173	513	N.D.	
69) Styrene	16.10	104	569	N.D.	
70) o-Xylene	16.24	91	4211	0.091 ng	93
71) n-Nonane	16.62	43	460	N.D.	
72) 1,1,2,2-Tetrachloroethane	16.20	83	192	N.D.	
74) Cumene	17.03	105	974	N.D.	
75) alpha-Pinene	0.00	93	0	N.D.	
76) n-Propylbenzene	17.68	91	1485	N.D.	
77) 3-Ethyltoluene	17.03	105	974	No Calib	
78) 4-Ethyltoluene	17.86	105	904	N.D.	
79) 1,3,5-Trimethylbenzene	17.96	105	582	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.03	105	974	No Calib	
82) 1,2,4-Trimethylbenzene	18.43	105	1578	N.D.	
83) n-Decane	0.00	58	0	N.D.	
84) Benzyl Chloride	18.50	91	196	N.D.	
85) 1,3-Dichlorobenzene	18.58	146	528	N.D.	
86) 1,4-Dichlorobenzene	18.65	146	566	N.D.	
87) sec-Butylbenzene	18.74	105	823	N.D.	
88) 4-Isopropyltoluene (p-...	18.92	119	1389	N.D.	
89) 1,2,3-Trimethylbenzene	17.03	105	974	No Calib	
90) 1,2-Dichlorobenzene	19.03	146	364	N.D.	
91) d-Limonene	0.00	68	0	N.D.	
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	491	N.D.	
95) Naphthalene	20.94	128	330	N.D.	
96) n-Dodecane	0.00	58	0	N.D.	
97) Hexachlorobutadiene	21.30	225	548	N.D.	
98) Cyclohexanone	0.00	55	0	N.D.	
99) tert-Butylbenzene	18.42	119	818	N.D.	
100) n-Butylbenzene	19.38	91	570	N.D.	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182421.D Vial: 9
Acq On : 18 Jun 2024 20:38 Operator: SC
Sample : P2402249-016 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 12:50:33 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182421.D Vial: 9
Acq On : 18 Jun 2024 20:38 Operator: SC
Sample : P2402249-016 (400mL) Inst : MS09
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Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/19/24

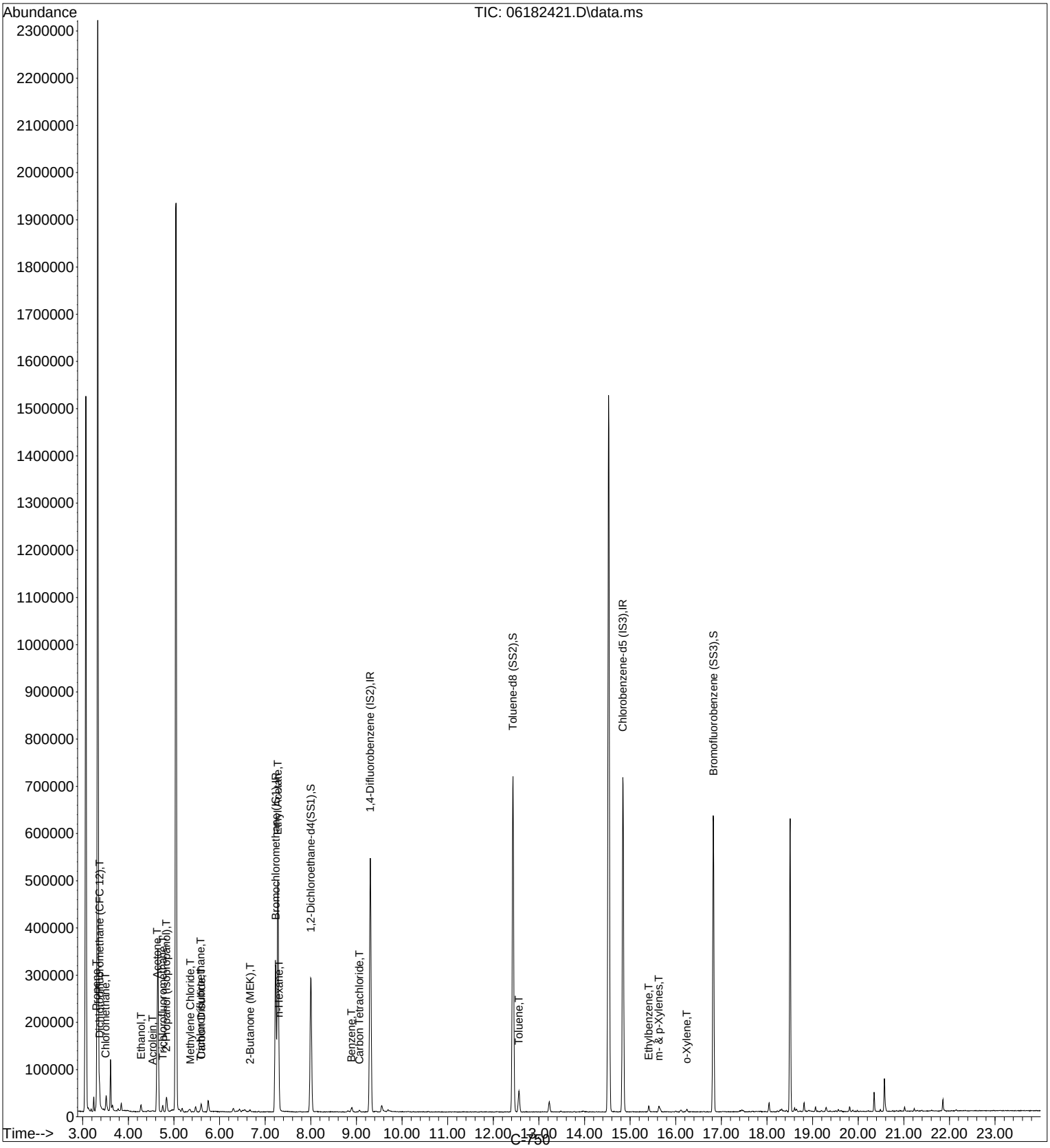
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	119271	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	513583	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	122644	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	269677	12.722	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.76%				
57) Toluene-d8 (SS2)	12.43	98	570418	12.154	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.20%				
73) Bromofluorobenzene (SS3)	16.83	174	216848	12.795	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.40%				
Target Compounds							Qvalue
2) Propene	3.30	42	6310	0.413	ng	#	84
3) Dichlorodifluoromethan...	3.37	85	15967	0.569	ng		100
4) Chloromethane	3.50	50	5260	0.274	ng		99
10) Ethanol	4.28	45	22569	1.946	ng		78
12) Acrolein	4.53	56	499	0.058	ng		98
13) Acetone	4.63	58	34734	3.749	ng	#	1
14) Trichlorofluoromethane	4.76	101	8944	0.315	ng		96
15) 2-Propanol (Isopropanol)	4.83	45	66187	1.773	ng		90
19) Methylene Chloride	5.36	84	1629	0.124	ng		94
21) Trichlorotrifluoroethane	5.58	151	2419	0.201	ng		93
22) Carbon Disulfide	5.60	76	17285	0.409	ng		98
27) 2-Butanone (MEK)	6.67	72	855	0.117	ng	#	16
30) Ethyl Acetate	7.28	61	79877	17.843	ng		100
31) n-Hexane	7.30	57	994	0.051	ng	#	88
41) Benzene	8.89	78	8175	0.172	ng		97
42) Carbon Tetrachloride	9.07	117	2183	0.099	ng		98
58) Toluene	12.56	91	36658	0.747	ng		99
66) Ethylbenzene	15.41	91	10577	0.189	ng		100
67) m- & p-Xylenes	15.63	91	11933	0.253	ng		98
70) o-Xylene	16.24	91	4211	0.091	ng		93

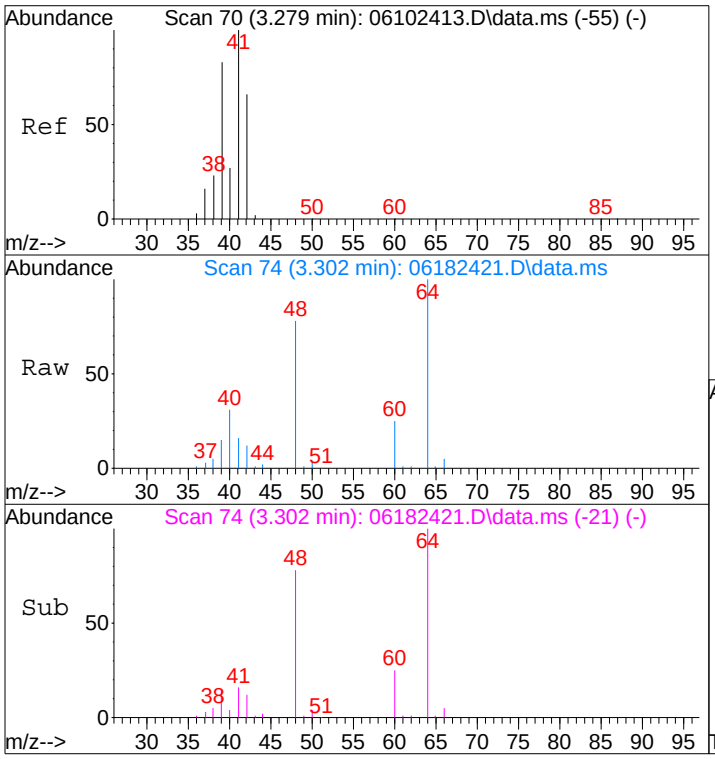
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182421.D Vial: 9
Acq On : 18 Jun 2024 20:38 Operator: SC
Sample : P2402249-016 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 12:50:33 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

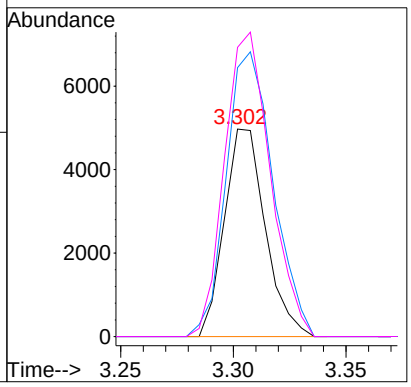


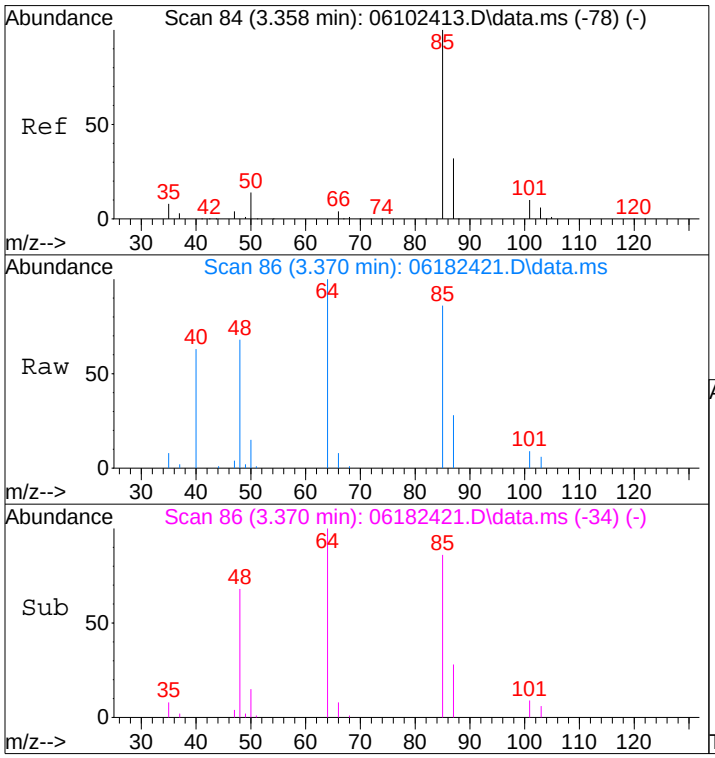


#2
Propene
Concen: 0.41 ng
RT: 3.30 min Scan# 74
Delta R.T. 0.053 min
Lab File: 06182421.D
Acq: 18 Jun 2024 20:38

Tgt Ion: 42 Resp: 6310

Ion	Ratio	Lower	Upper
42	100		
39	157.1	107.3	147.3#
41	163.5	134.3	174.3

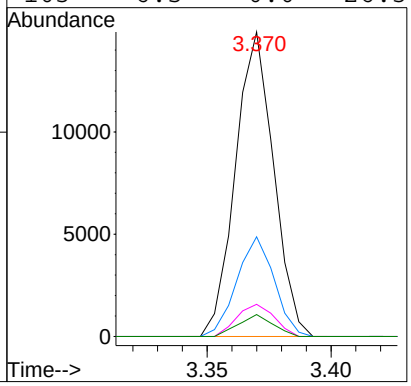


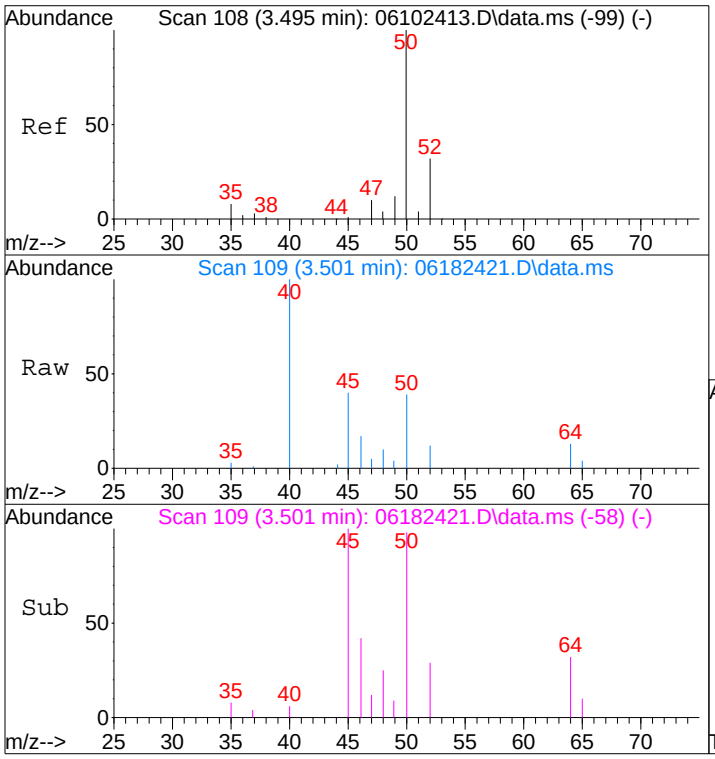


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.57 ng
RT: 3.37 min Scan# 86
Delta R.T. 0.048 min
Lab File: 06182421.D
Acq: 18 Jun 2024 20:38

Tgt Ion: 85 Resp: 15967

Ion	Ratio	Lower	Upper
85	100		
87	32.1	12.2	52.2
101	10.3	0.0	29.8
103	6.5	0.0	26.3

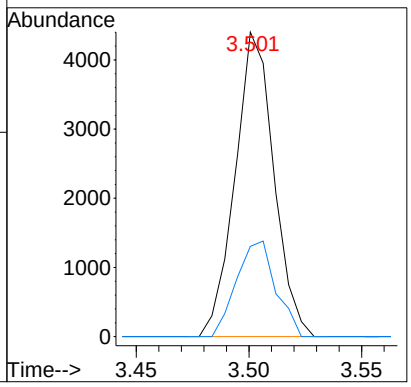


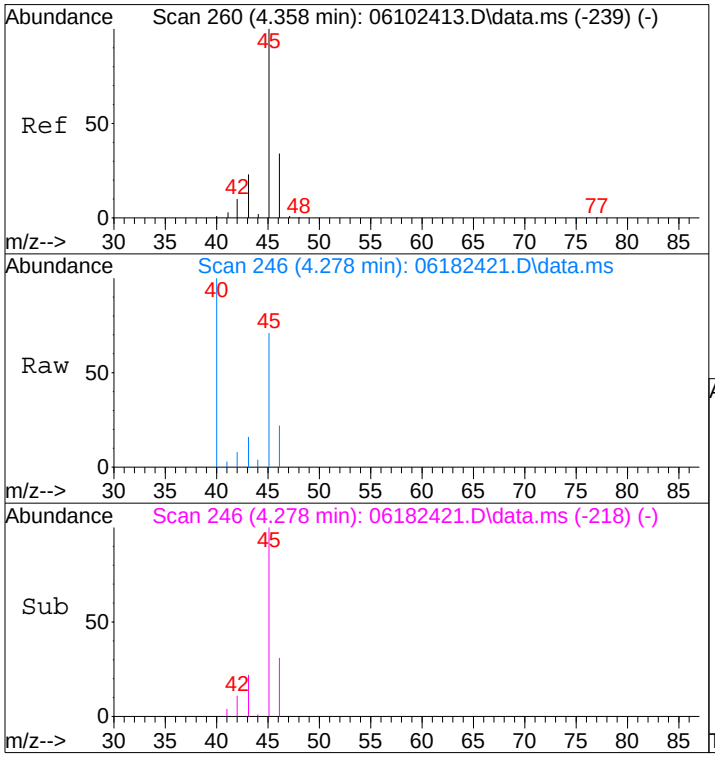


#4
Chloromethane
Concen: 0.27 ng
RT: 3.50 min Scan# 109
Delta R.T. 0.038 min
Lab File: 06182421.D
Acq: 18 Jun 2024 20:38

Tgt Ion: 50 Resp: 5260

Ion	Ratio	Lower	Upper
50	100		
52	31.8	12.4	52.4

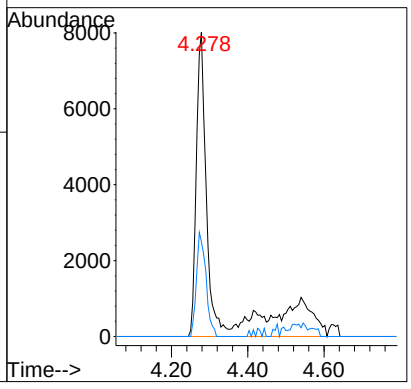


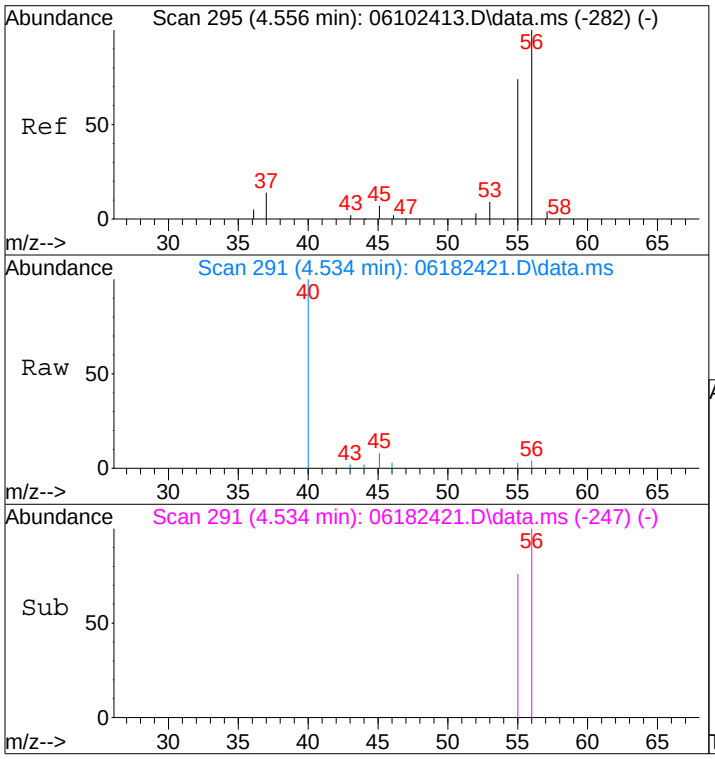


#10
Ethanol
Concen: 1.95 ng
RT: 4.28 min Scan# 246
Delta R.T. -0.088 min
Lab File: 06182421.D
Acq: 18 Jun 2024 20:38

Tgt Ion: 45 Resp: 22569

Ion	Ratio	Lower	Upper
45	100		
46	21.0	13.5	53.5

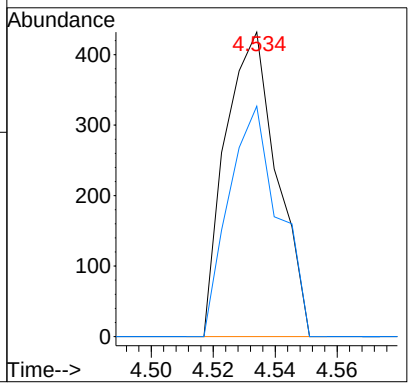


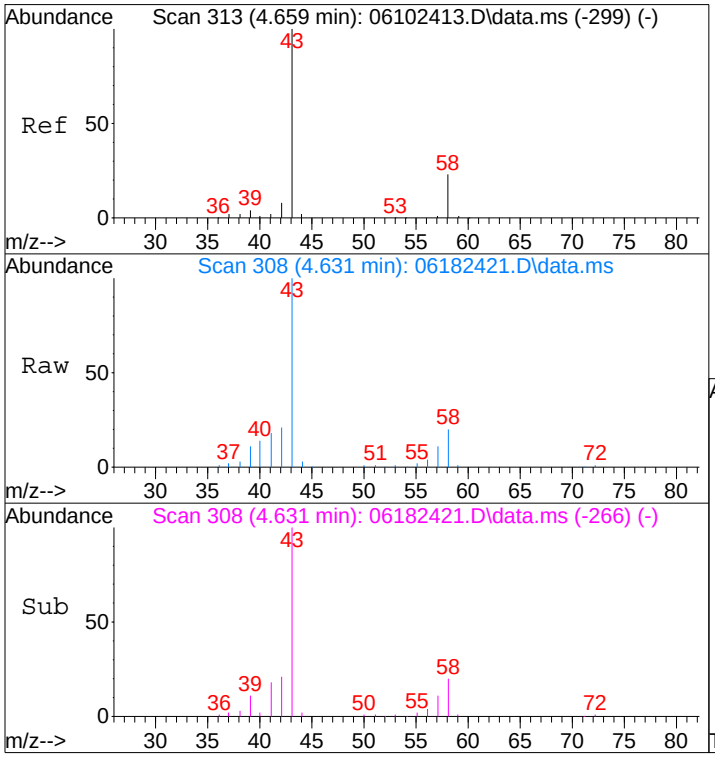


#12
Acrolein
Concen: 0.06 ng
RT: 4.53 min Scan# 291
Delta R.T. -0.001 min
Lab File: 06182421.D
Acq: 18 Jun 2024 20:38

Tgt Ion: 56 Resp: 499

Ion	Ratio	Lower	Upper
56	100		
55	73.5	55.5	95.5

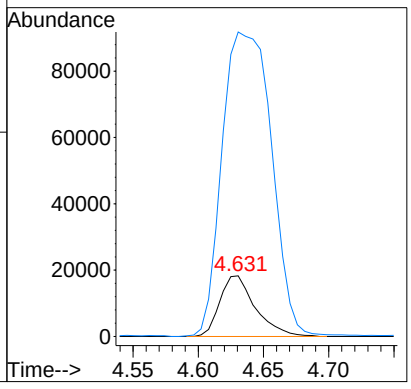


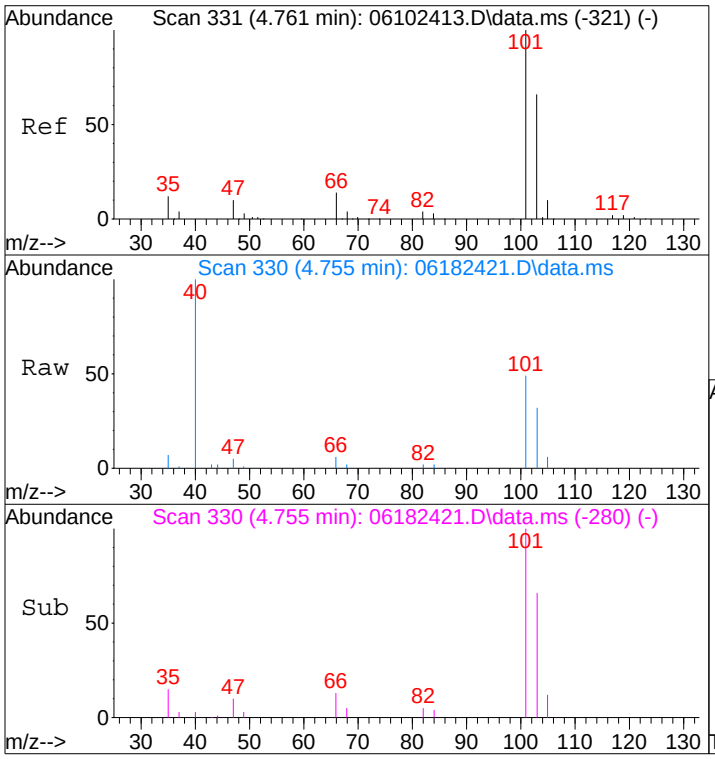


#13
Acetone
Concen: 3.75 ng
RT: 4.63 min Scan# 308
Delta R.T. -0.011 min
Lab File: 06182421.D
Acq: 18 Jun 2024 20:38

Tgt Ion: 58 Resp: 34734

Ion	Ratio	Lower	Upper
58	100		
43	700.6	400.7	460.7#

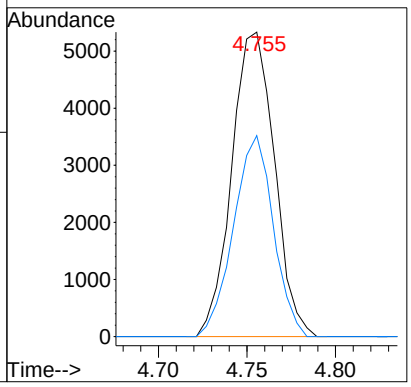


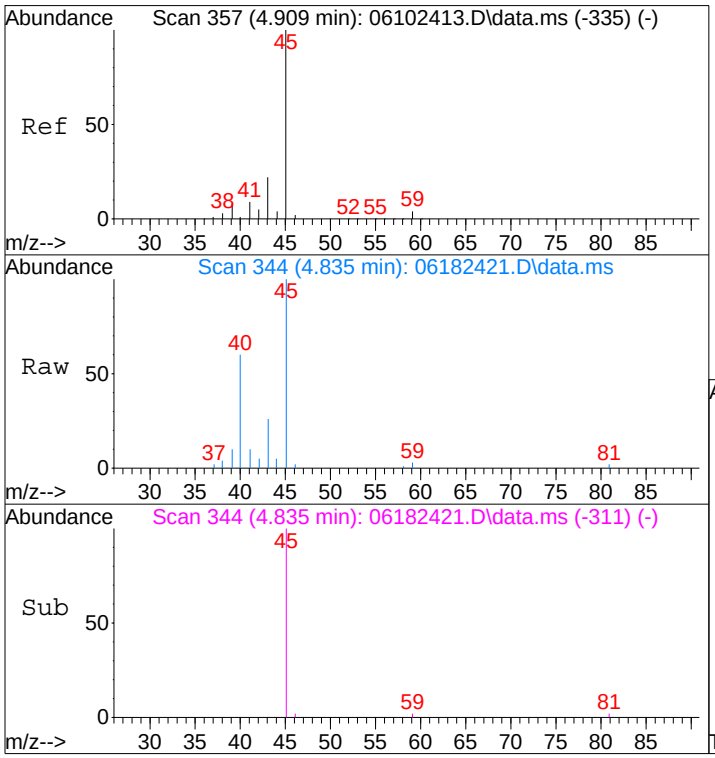


#14
Trichlorofluoromethane
Concen: 0.31 ng
RT: 4.76 min Scan# 330
Delta R.T. 0.035 min
Lab File: 06182421.D
Acq: 18 Jun 2024 20:38

Tgt Ion:101 Resp: 8944

Ion	Ratio	Lower	Upper
101	100		
103	61.6	44.9	84.9

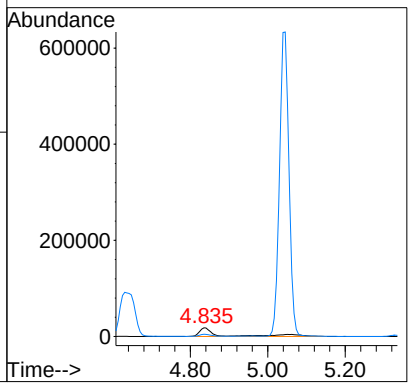


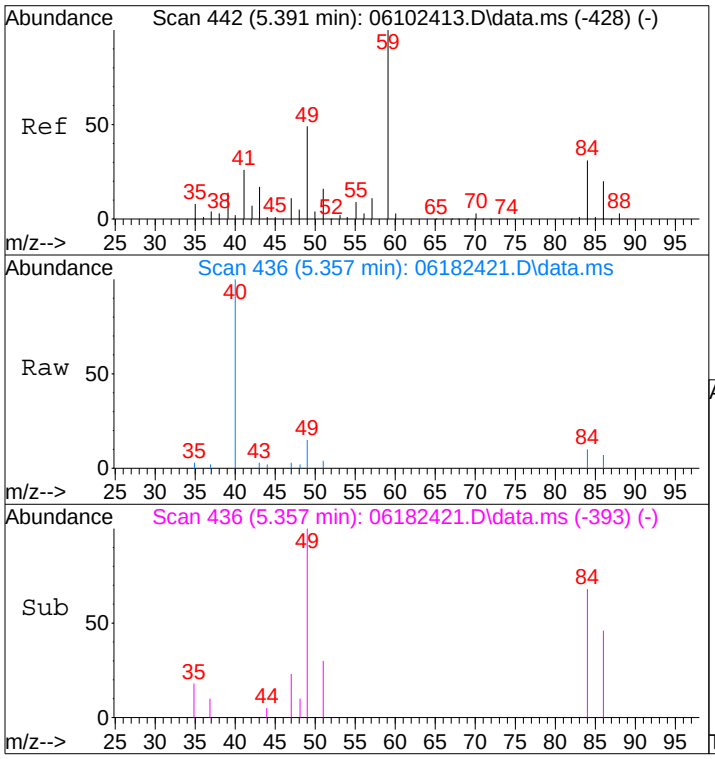


#15
2-Propanol (Isopropanol)
Concen: 1.77 ng
RT: 4.83 min Scan# 344
Delta R.T. -0.065 min
Lab File: 06182421.D
Acq: 18 Jun 2024 20:38

Tgt Ion: 45 Resp: 66187

Ion	Ratio	Lower	Upper
45	100		
43	17.7	2.5	42.5

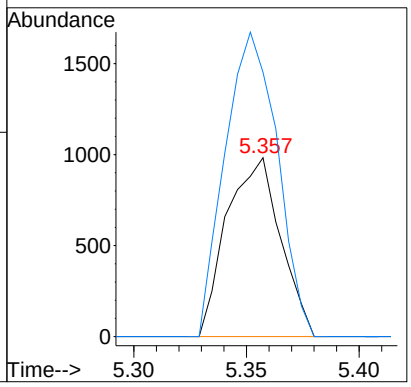


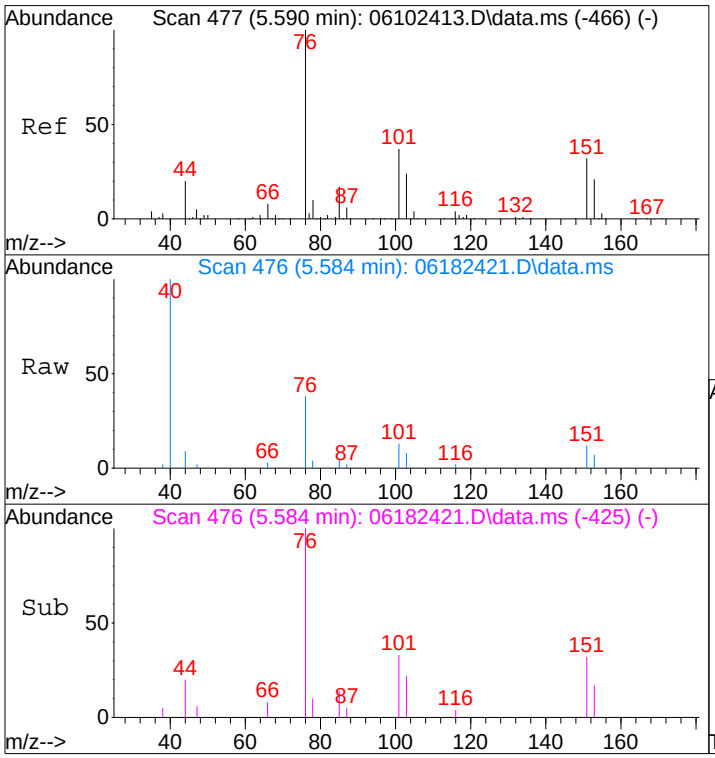


#19
Methylene Chloride
Concen: 0.12 ng
RT: 5.36 min Scan# 436
Delta R.T. -0.004 min
Lab File: 06182421.D
Acq: 18 Jun 2024 20:38

Tgt Ion: 84 Resp: 1629

Ion	Ratio	Lower	Upper
84	100		
49	165.9	132.9	182.9

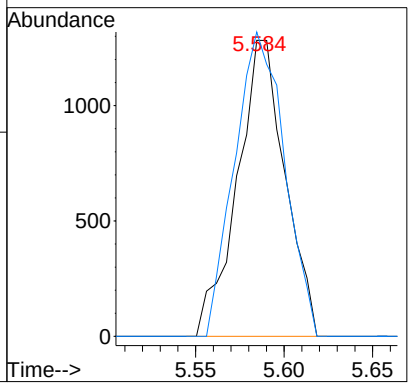


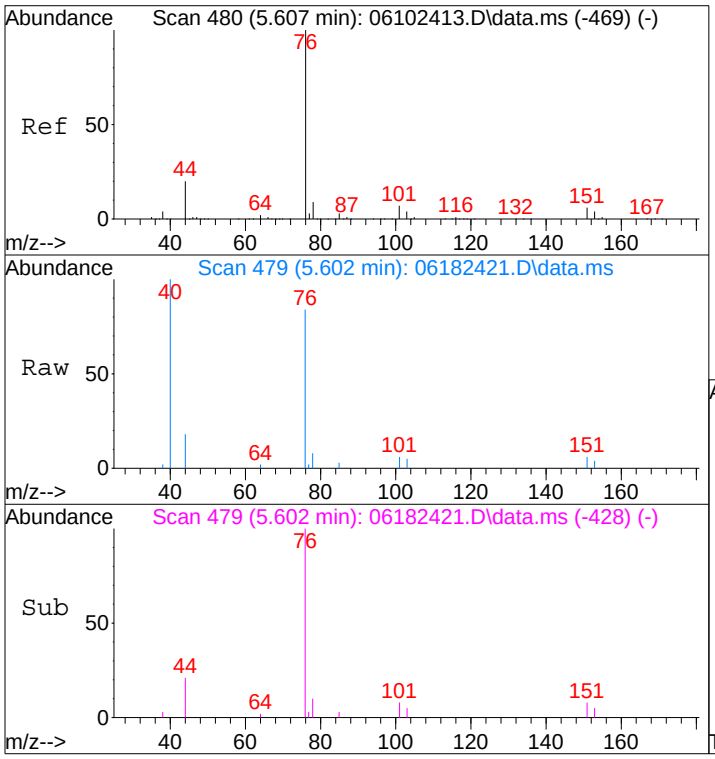


#21
Trichlorotrifluoroethane
Concen: 0.20 ng
RT: 5.58 min Scan# 476
Delta R.T. 0.038 min
Lab File: 06182421.D
Acq: 18 Jun 2024 20:38

Tgt Ion:151 Resp: 2419

Ion	Ratio	Lower	Upper
151	100		
101	107.2	95.0	135.0

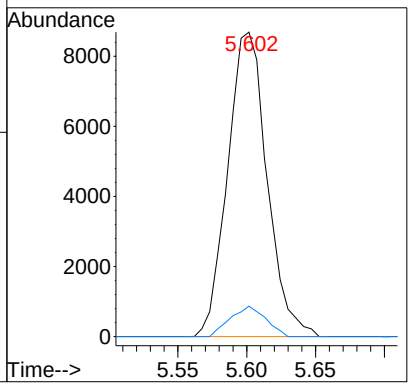


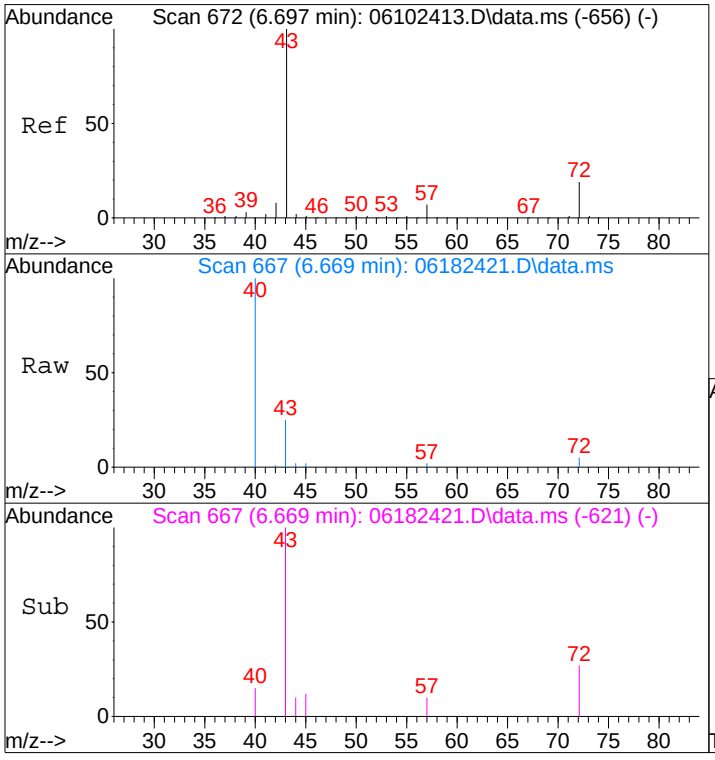


#22
Carbon Disulfide
Concen: 0.41 ng
RT: 5.60 min Scan# 479
Delta R.T. 0.038 min
Lab File: 06182421.D
Acq: 18 Jun 2024 20:38

Tgt Ion: 76 Resp: 17285

Ion	Ratio	Lower	Upper
76	100		
78	9.0	0.0	29.6

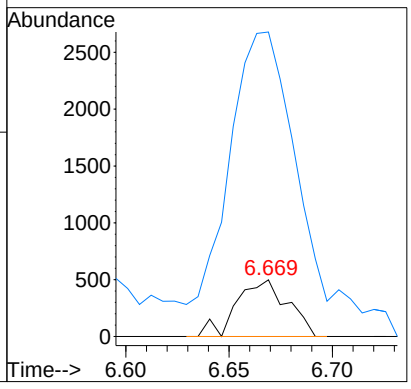


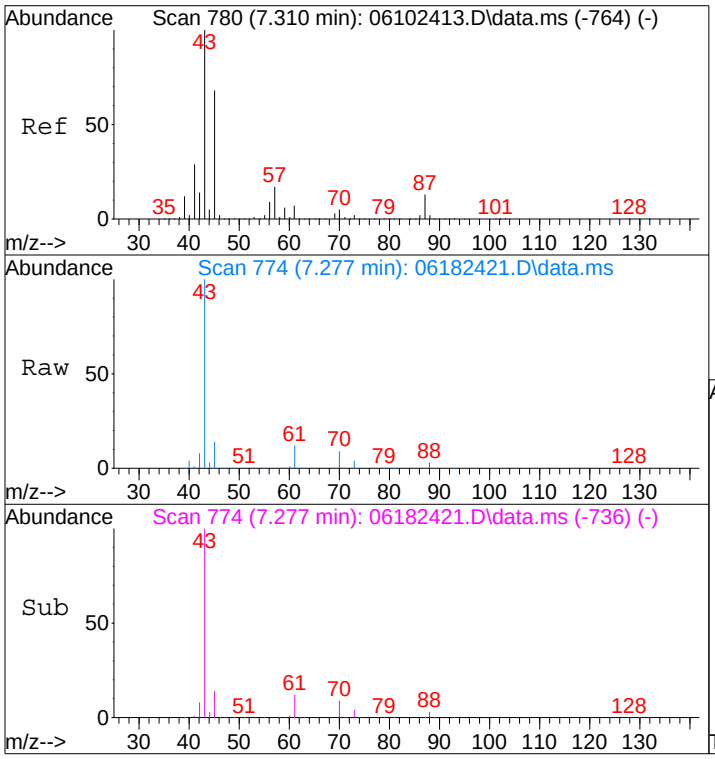


#27
2-Butanone (MEK)
Concen: 0.12 ng
RT: 6.67 min Scan# 667
Delta R.T. 0.011 min
Lab File: 06182421.D
Acq: 18 Jun 2024 20:38

Tgt Ion: 72 Resp: 855

Ion	Ratio	Lower	Upper
72	100		
43	766.5	506.8	546.8#

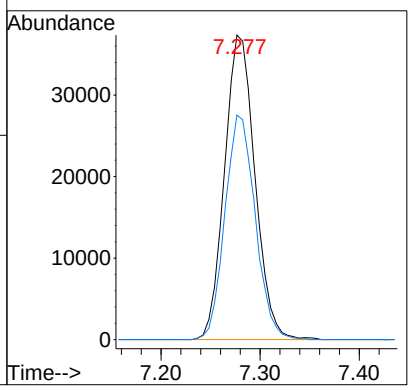


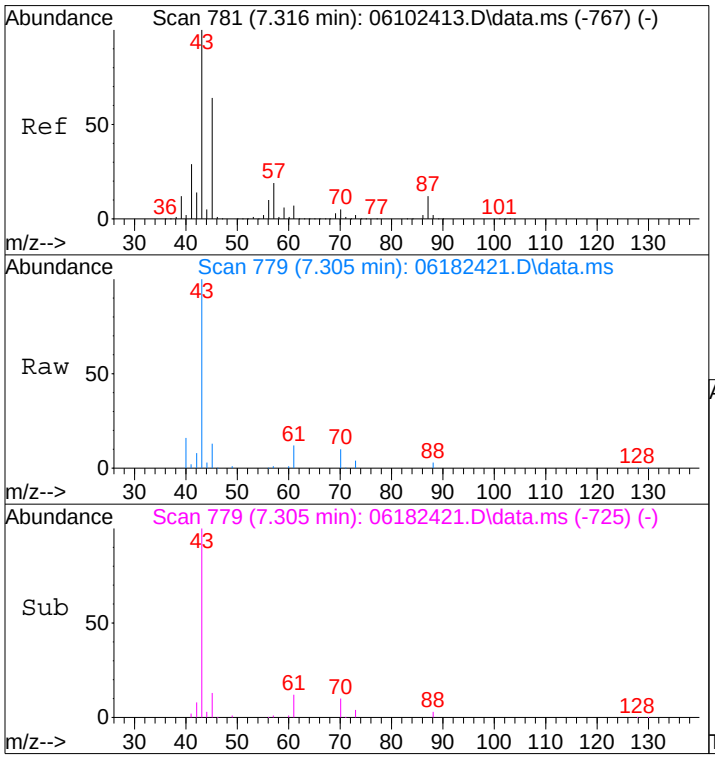


#30
Ethyl Acetate
Concen: 17.84 ng
RT: 7.28 min Scan# 774
Delta R.T. 0.017 min
Lab File: 06182421.D
Acq: 18 Jun 2024 20:38

Tgt Ion: 61 Resp: 79877

Ion	Ratio	Lower	Upper
61	100		
70	73.3	53.5	93.5

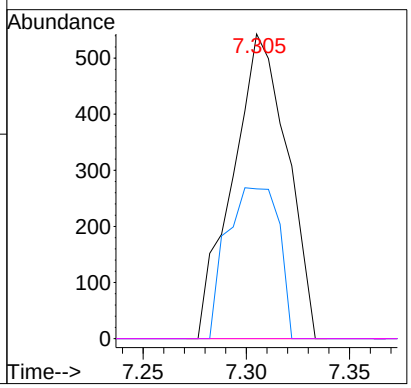


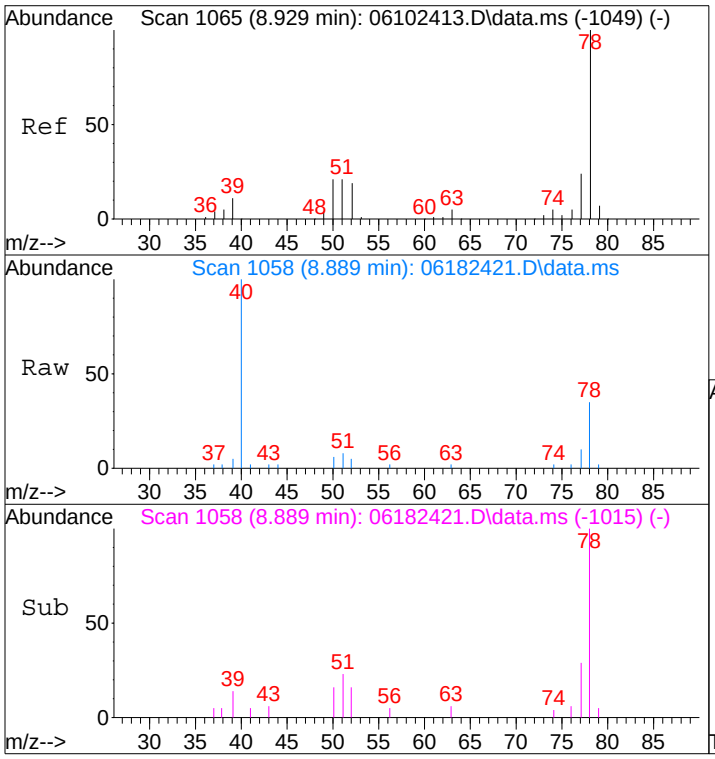


#31
n-Hexane
Concen: 0.05 ng
RT: 7.30 min Scan# 779
Delta R.T. 0.057 min
Lab File: 06182421.D
Acq: 18 Jun 2024 20:38

Tgt Ion: 57 Resp: 994

Ion	Ratio	Lower	Upper
57	100		
56	47.6	42.5	63.7
86	0.0	9.5	14.3#

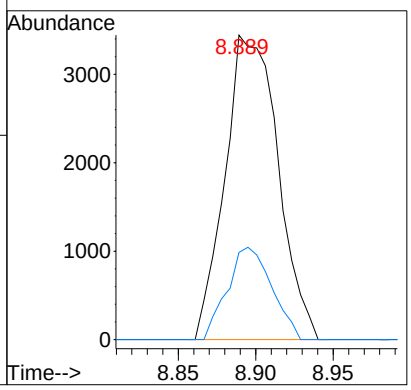


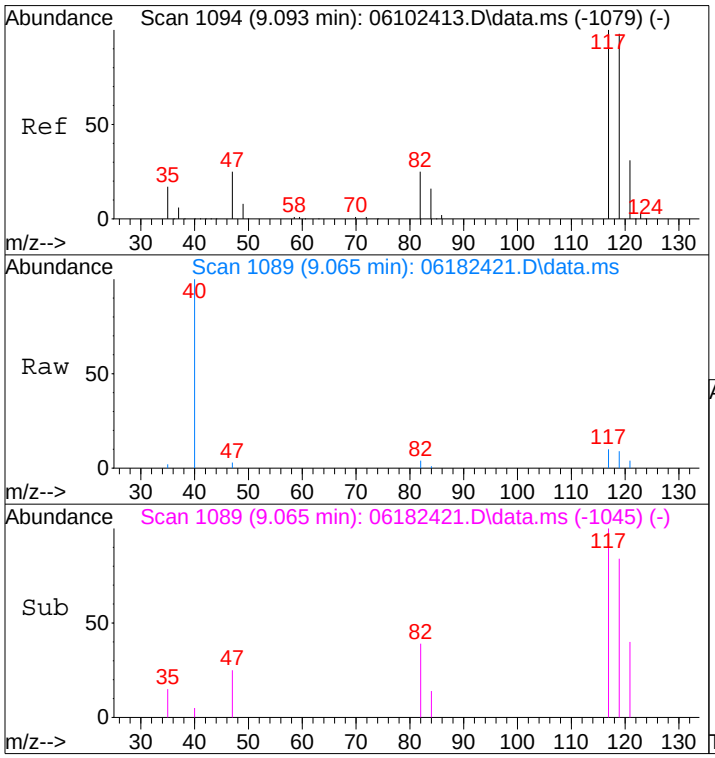


#41
Benzene
Concen: 0.17 ng
RT: 8.89 min Scan# 1058
Delta R.T. -0.008 min
Lab File: 06182421.D
Acq: 18 Jun 2024 20:38

Tgt Ion: 78 Resp: 8175

Ion	Ratio	Lower	Upper
78	100		
77	25.5	4.0	44.0

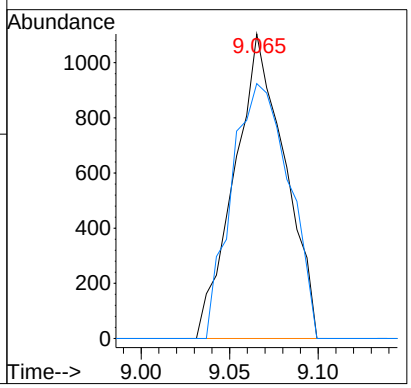


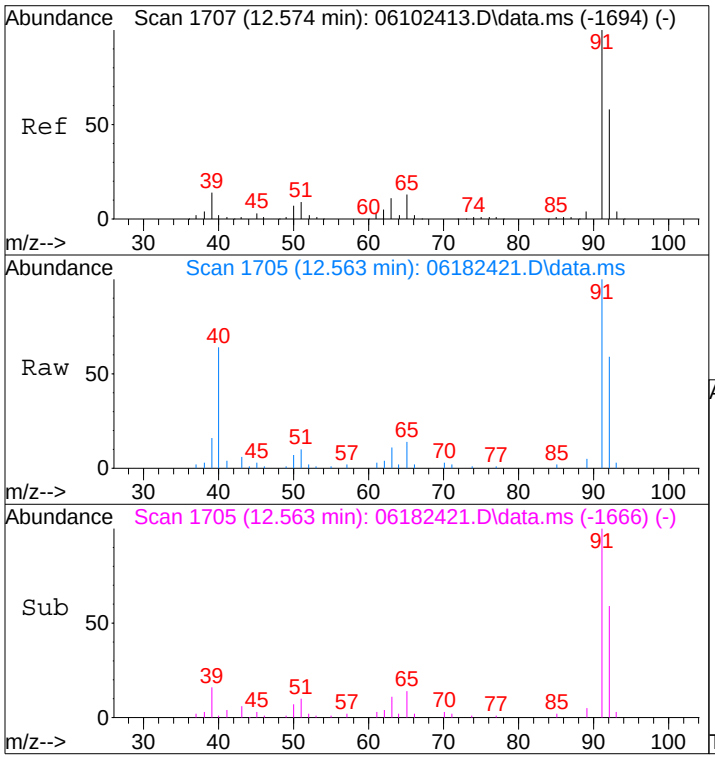


#42
Carbon Tetrachloride
Concen: 0.10 ng
RT: 9.07 min Scan# 1089
Delta R.T. -0.001 min
Lab File: 06182421.D
Acq: 18 Jun 2024 20:38

Tgt Ion:117 Resp: 2183

Ion	Ratio	Lower	Upper
117	100		
119	95.4	77.3	117.3

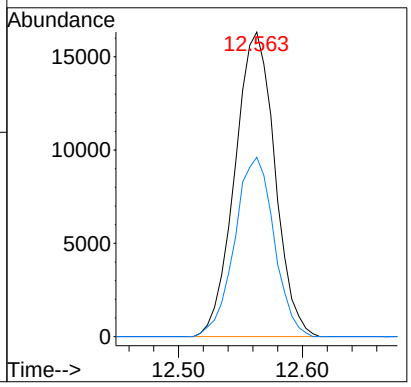


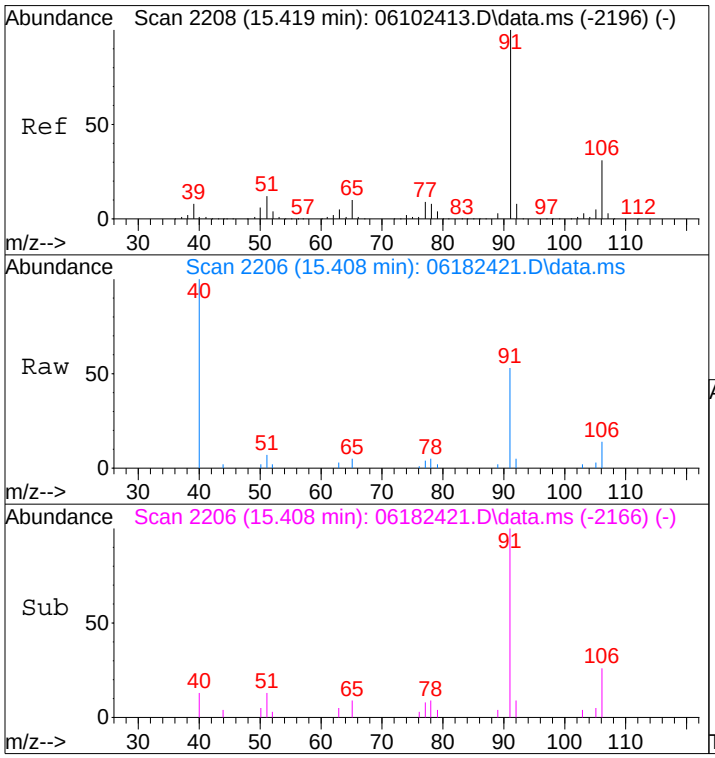


#58
Toluene
Concen: 0.75 ng
RT: 12.56 min Scan# 1705
Delta R.T. -0.028 min
Lab File: 06182421.D
Acq: 18 Jun 2024 20:38

Tgt Ion: 91 Resp: 36658

Ion	Ratio	Lower	Upper
91	100		
92	58.0	37.4	77.4

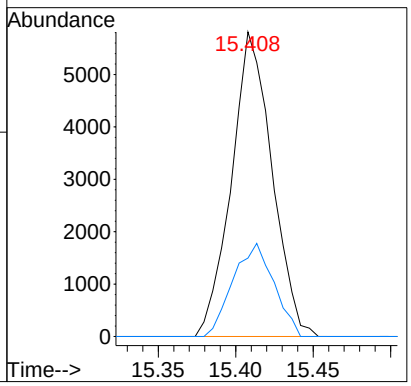


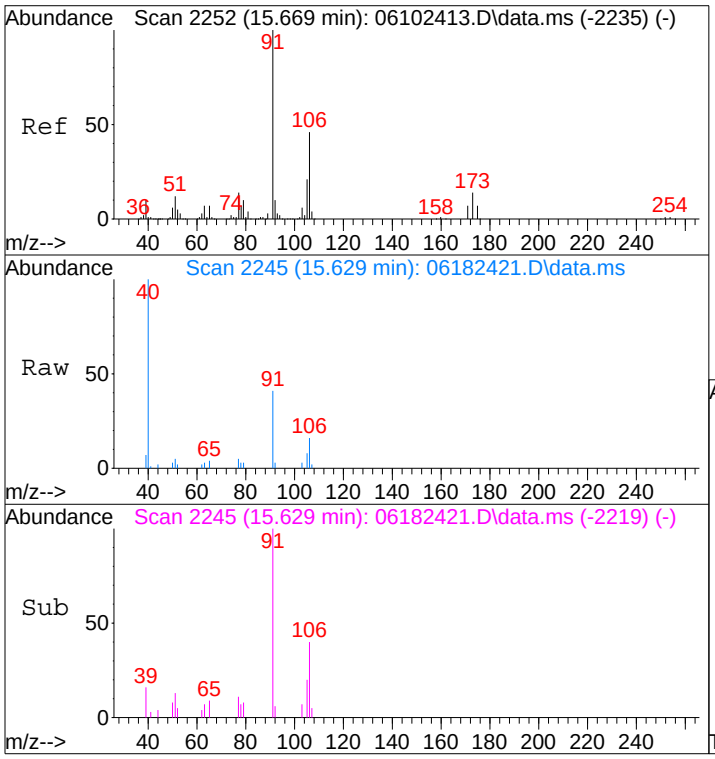


#66
Ethylbenzene
Concen: 0.19 ng
RT: 15.41 min Scan# 2206
Delta R.T. -0.023 min
Lab File: 06182421.D
Acq: 18 Jun 2024 20:38

Tgt Ion: 91 Resp: 10577

Ion	Ratio	Lower	Upper
91	100		
106	30.8	10.7	50.7

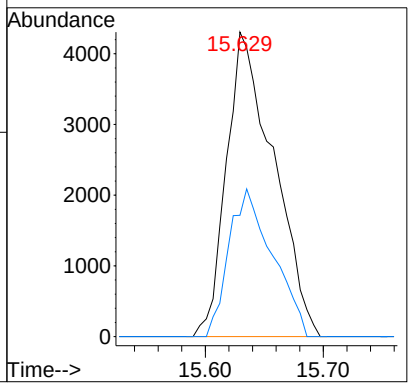


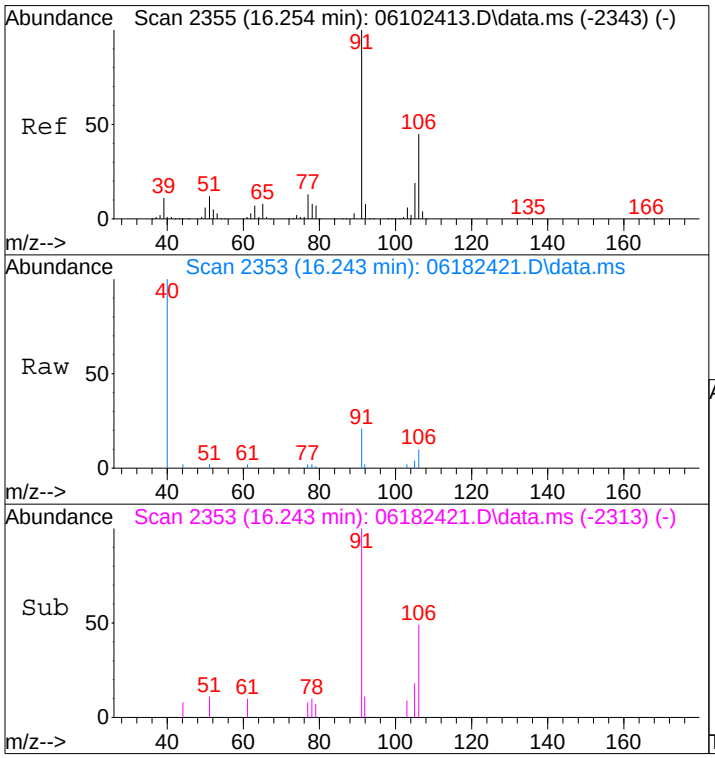


#67
m- & p-Xylenes
Concen: 0.25 ng
RT: 15.63 min Scan# 2245
Delta R.T. -0.051 min
Lab File: 06182421.D
Acq: 18 Jun 2024 20:38

Tgt Ion: 91 Resp: 11933

Ion	Ratio	Lower	Upper
91	100		
106	44.9	25.9	65.9

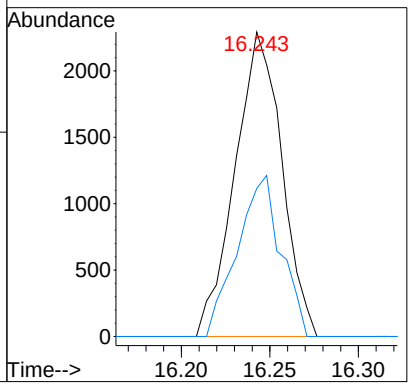




#70
o-Xylene
Concen: 0.09 ng
RT: 16.24 min Scan# 2353
Delta R.T. -0.023 min
Lab File: 06182421.D
Acq: 18 Jun 2024 20:38

Tgt Ion: 91 Resp: 4211

Ion	Ratio	Lower	Upper
91	100		
106	49.2	24.5	64.5



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182421.D Vial: 9
Acq On : 18 Jun 2024 20:38 Operator: SC
Sample : P2402249-016 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 14:59:56 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

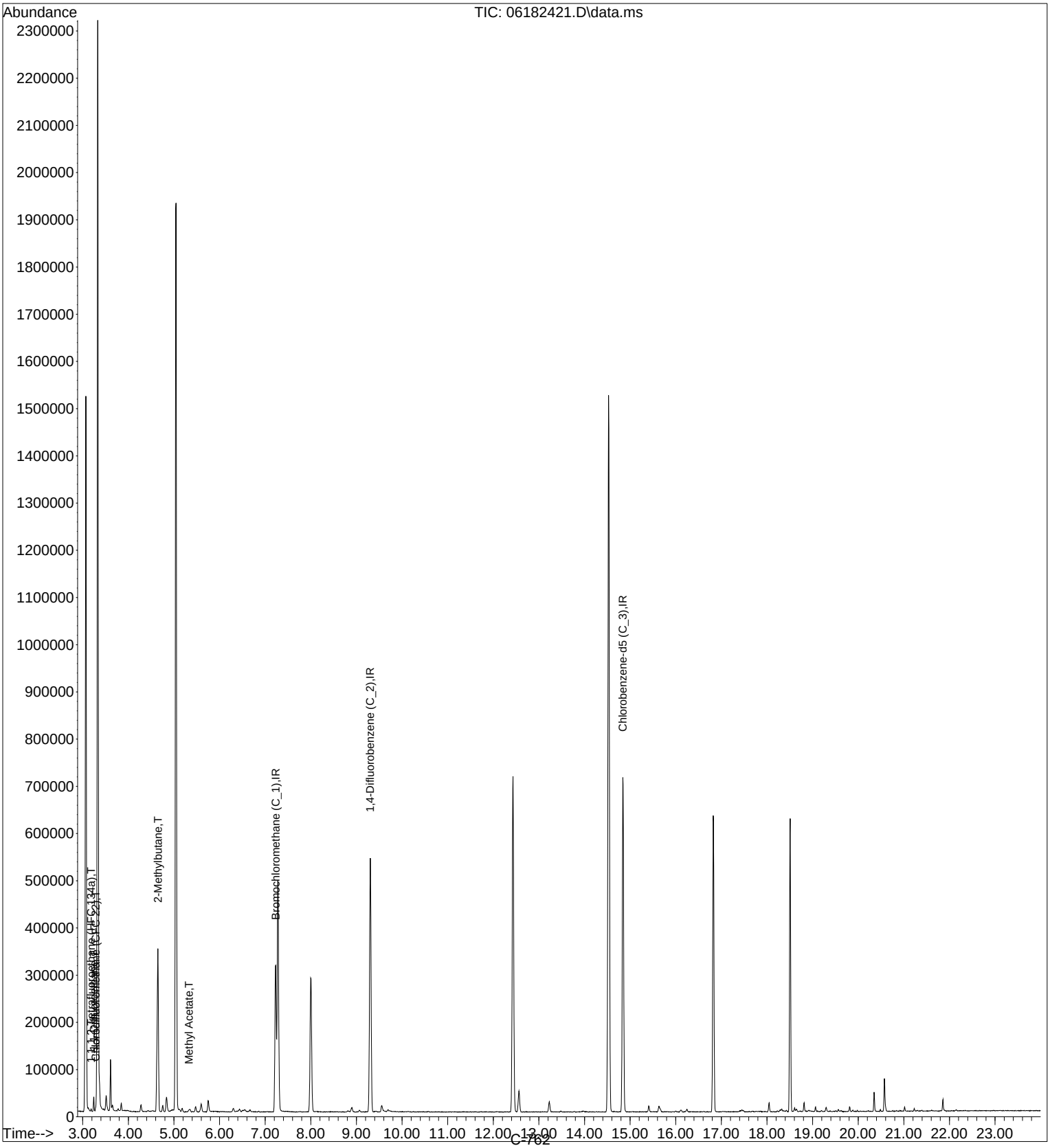
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	119271	12.500	ng		-0.02
16) 1,4-Difluorobenzene (C 2)	9.30	114	514058	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	122644	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	3.15	85	64	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.18	83	2336	0.191	ng		94
4) 1,1-Difluoroethane	3.25	65	7350	0.706	ng		95
5) Chlorodifluoromethane ...	3.28	67	826	0.203	ng		94
6) 1-Chloro-1,1-Difluoroe...	3.49	65	659	N.D.			
7) Dichlorofluoromethane ...	0.00	67	0	N.D.			
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	0.00	83	0	N.D.			
10) 2-Methylbutane	4.65	57	69211	4.865	ng		96
11) Methyl Acetate	5.33	43	4914	0.122	ng	#	87
12) 2-Methylpentane	0.00	71	0	N.D.			
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	9.07	84	160	N.D.			
17) 2,3-Dimethylpentane	9.51	56	54	N.D.			
18) Dibromomethane	0.00	174	0	N.D.			
20) Methyl Cyclohexane	0.00	55	0	N.D.			
21) 1,3-Dichloropropane	0.00	76	0	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	0.00	75	0	N.D.			
25) Bromobenzene	17.03	77	111	N.D.			
26) 2-Chlorotoluene	17.61	91	535	N.D.			
27) 4-Chlorotoluene	17.68	91	1485	N.D.			
28) Indane	19.11	117	52	N.D.			
29) Indene	0.00	115	0	N.D.			
30) 1,2,4,5-Tetramethylben...	20.22	119	54	N.D.			
31) 1,2,3,4-Tetramethylben...	20.22	119	54	N.D.			
32) 1,2,3,5-Tetramethylben...	20.58	119	301	N.D.			
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182421.D Vial: 9
Acq On : 18 Jun 2024 20:38 Operator: SC
Sample : P2402249-016 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:59:56 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\18\
Data File : 06182421.D
Acq On : 18 Jun 2024 20:38
Operator : SC
Sample : P2402249-016 (400mL)
Misc : S37-06062402
ALS Vial : 9 Sample Multiplier: 1

MJ 6/28/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06182421.D\data.ms

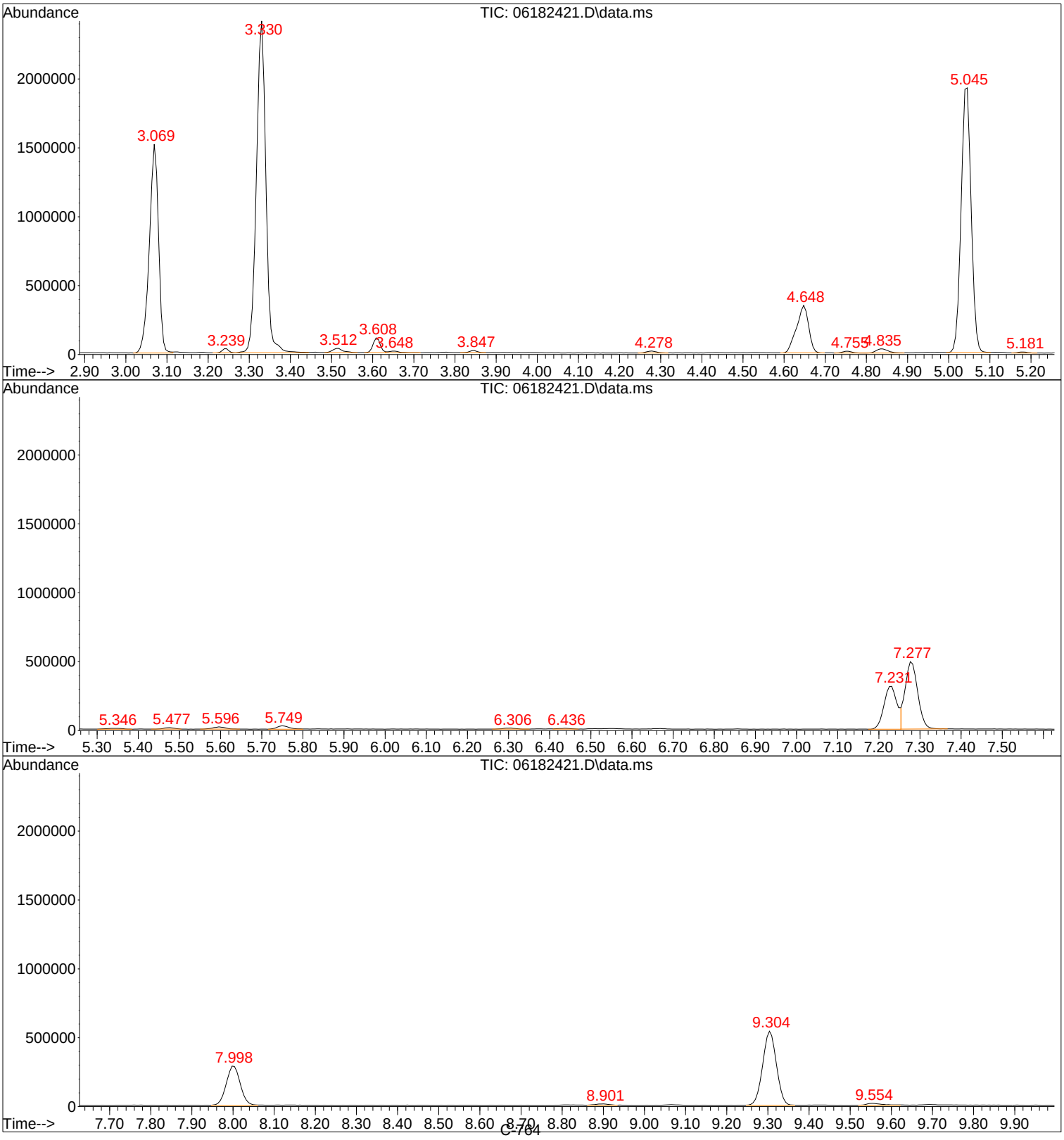
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.069	24	33	41	rBV	1515529	2350889	60.69%	16.313%
2	3.239	58	63	68	rBV	30624	35759	0.92%	0.248%
3	3.330	68	79	99	rVV	2408699	3873737	100.00%	26.880%
4	3.512	106	111	120	rVB2	31478	57485	1.48%	0.399%
5	3.608	123	128	132	rVV	108574	131837	3.40%	0.915%
6	3.648	132	135	147	rVB	11904	21074	0.54%	0.146%
7	3.847	164	170	175	rVB	15518	20418	0.53%	0.142%
8	4.278	240	246	253	rBV	14337	24810	0.64%	0.172%
9	4.648	301	311	320	rVB3	345189	706570	18.24%	4.903%
10	4.755	324	330	336	rVB2	13289	21472	0.55%	0.149%
11	4.835	336	344	354	rBV	30475	62631	1.62%	0.435%
12	5.045	372	381	391	rBV	1921669	3257432	84.09%	22.604%
13	5.181	400	405	411	rVB2	7661	13185	0.34%	0.091%
14	5.346	426	434	441	rVB5	5683	16426	0.42%	0.114%
15	5.477	449	457	462	rBV3	11065	19863	0.51%	0.138%
16	5.596	470	478	487	rVB2	16688	33919	0.88%	0.235%
17	5.749	499	505	514	rBV	24212	49742	1.28%	0.345%
18	6.306	595	603	611	rBV3	7168	15723	0.41%	0.109%
19	6.436	621	626	632	rVB3	5608	10923	0.28%	0.076%
20	7.231	756	766	770	rBV	310723	712580	18.40%	4.945%
21	7.277	770	774	790	rVB	488862	1017367	26.26%	7.060%
22	7.998	892	901	912	rBV	283678	668168	17.25%	4.637%
23	8.901	1053	1060	1066	rBV3	9056	19250	0.50%	0.134%
24	9.304	1121	1131	1142	rVB	537575	1236964	31.93%	8.583%
25	9.554	1169	1175	1187	rBV	13207	32770	0.85%	0.227%

Sum of corrected areas: 14410994

Data Path : I:\MS09\DATA\2024 06\18\
Data File : 06182421.D
Acq On : 18 Jun 2024 20:38
Operator : SC
Sample : P2402249-016 (400mL)
Misc : S37-06062402
ALS Vial : 9 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\18\\
Data File : 06182421.D
Acq On : 18 Jun 2024 20:388
Operator : SCC
Sample : P2402249-016 (400mL))
Misc : S37-060624022
ALS Vial : 9 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

						--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\18\06182422.D Vial: 10
Acq On : 18 Jun 2024 21:11 Operator: SC
Sample : P2402249-017 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 12:47:58 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	116216	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	505554	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	122013	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	265581	12.858	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.88%				
57) Toluene-d8 (SS2)	12.43	98	566067	12.124	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.96%				
73) Bromofluorobenzene (SS3)	16.83	174	223379	13.249	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 106.00%				
Target Compounds							Qvalue
2) Propene	3.27	42	45423m	3.053	ng		
3) Dichlorodifluoromethan...	3.36	85	15733m	0.575	ng		
4) Chloromethane	3.49	50	1249	0.067	ng		81
5) 1,2-Dichloro-1,1,2,2-t...	3.60	135	423	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.	d		
8) Bromomethane	4.01	94	311	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.28	45	3844m	0.340	ng		
11) Acetonitrile	0.00	41	0	N.D.	d		
12) Acrolein	4.53	56	2012	0.241	ng		94
13) Acetone	4.63	58	23161	2.565	ng	#	49
14) Trichlorofluoromethane	4.76	101	7596953	274.582	ng		99
15) 2-Propanol (Isopropanol)	4.83	45	6113	0.168	ng		80
16) Acrylonitrile	0.00	53	0	N.D.	d		
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.33	59	653	N.D.			
19) Methylene Chloride	5.35	84	1264	0.099	ng		99
20) 3-Chloro-1-propene (Al...	5.45	41	114	N.D.			
21) Trichlorotrifluoroethane	5.58	151	4284314	366.050	ng		95
22) Carbon Disulfide	0.00	76	0	N.D.	d		
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	6.39	73	119	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D.	d		
27) 2-Butanone (MEK)	6.66	72	5690	0.796	ng		93
28) cis-1,2-Dichloroethene	7.08	61	178	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.	d		
30) Ethyl Acetate	7.29	61	110	N.D.			
31) n-Hexane	7.30	57	34624	1.812	ng		94
32) Chloroform	7.36	83	44677	1.962	ng		99
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	180	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	9.60	61	12690	No Calib		#	
40) 1-Butanol	8.80	56	4488	No Calib		#	
41) Benzene	8.89	78	11556	0.248	ng		98
42) Carbon Tetrachloride	9.06	117	266	N.D.			
43) Cyclohexane	9.21	84	137	N.D.			
44) tert-Amyl Methyl Ether	9.60	73	148	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.07	83	2014	0.107	ng		99
47) Trichloroethene	10.15	130	3798	0.279	ng		100
48) 1,4-Dioxane	0.00	88	0	N.D.			
49) 2,2,4-Trimethylpentane...	10.31	57	799	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182422.D Vial: 10
Acq On : 18 Jun 2024 21:11 Operator: SC
Sample : P2402249-017 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 12:47:58 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

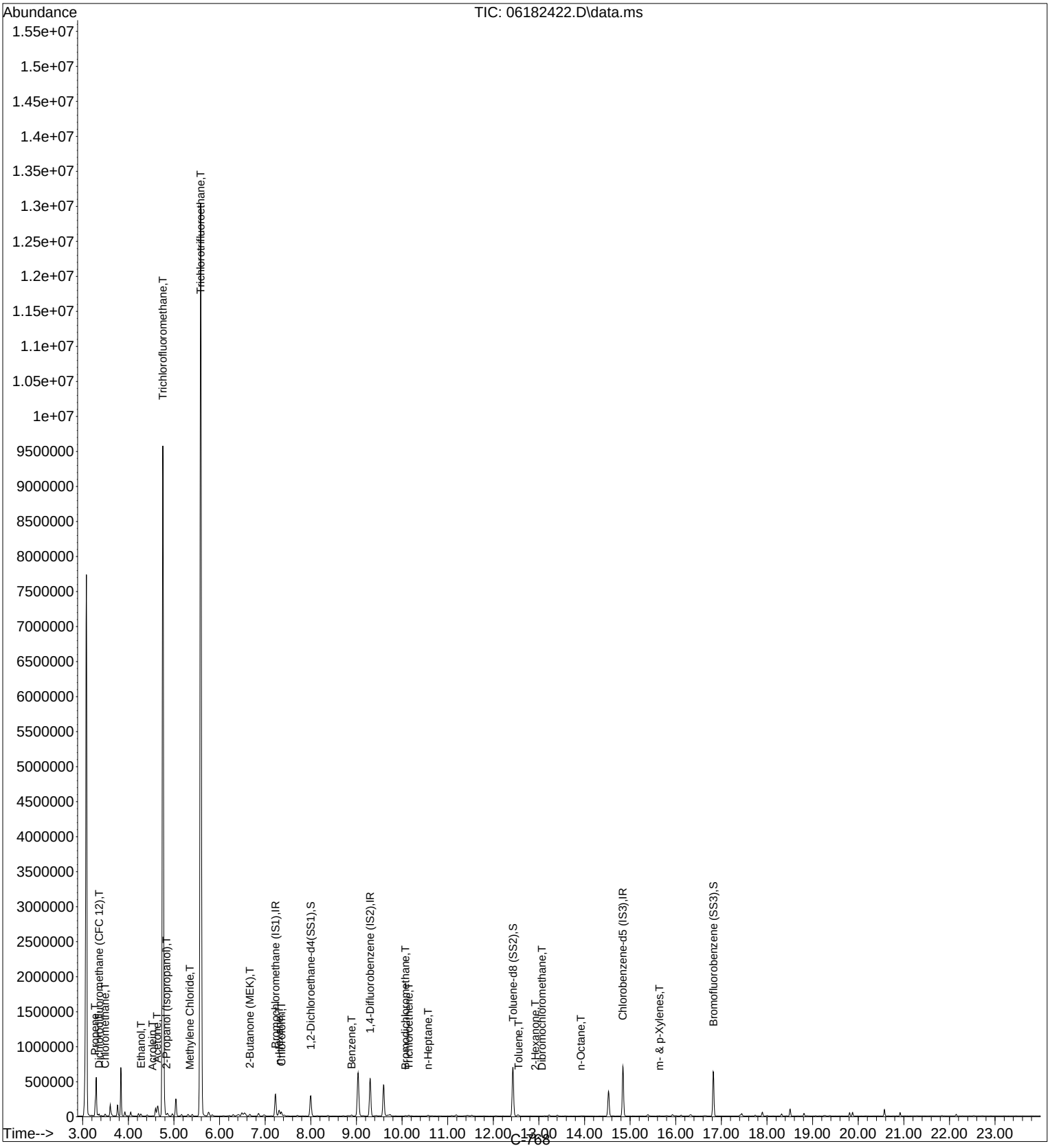
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	10.57	71	2630	0.267 ng		94
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	12.17	97	260	N.D.		
58) Toluene	12.56	91	4870	0.100 ng		95
59) 2-Hexanone	12.92	43	2917	0.095 ng	#	56
60) Dibromochloromethane	13.07	129	860	0.051 ng		81
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	13.78	43	538	N.D.		
63) n-Octane	13.92	57	693	0.068 ng	#	74
64) Tetrachloroethene	14.03	166	727	N.D.		
65) Chlorobenzene	14.89	112	1056	N.D.		
66) Ethylbenzene	15.41	91	1995	N.D.		
67) m- & p-Xylenes	15.64	91	2760	0.059 ng		82
68) Bromoform	15.68	173	632	N.D.		
69) Styrene	16.10	104	380	N.D.		
70) o-Xylene	16.24	91	1541	N.D.		
71) n-Nonane	16.62	43	1178	N.D.		
72) 1,1,2,2-Tetrachloroethane	16.21	83	258	N.D.		
74) Cumene	17.04	105	936	N.D.		
75) alpha-Pinene	0.00	93	0	N.D.		
76) n-Propylbenzene	17.68	91	1123	N.D.		
77) 3-Ethyltoluene	17.04	105	936	No Calib	#	
78) 4-Ethyltoluene	17.87	105	787	N.D.		
79) 1,3,5-Trimethylbenzene	17.96	105	372	N.D.		
80) alpha-Methylstyrene	0.00	118	0	N.D.		
81) 2-Ethyltoluene	17.04	105	936	No Calib	#	
82) 1,2,4-Trimethylbenzene	18.42	105	799	N.D.		
83) n-Decane	0.00	58	0	N.D.		
84) Benzyl Chloride	18.55	91	688	N.D.		
85) 1,3-Dichlorobenzene	18.58	146	378	N.D.		
86) 1,4-Dichlorobenzene	18.65	146	536	N.D.		
87) sec-Butylbenzene	18.74	105	811	N.D.		
88) 4-Isopropyltoluene (p-...	18.92	119	789	N.D.		
89) 1,2,3-Trimethylbenzene	17.04	105	936	No Calib	#	
90) 1,2-Dichlorobenzene	19.04	146	458	N.D.		
91) d-Limonene	0.00	68	0	N.D.		
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	0.00	58	0	N.D.		
94) 1,2,4-Trichlorobenzene	20.84	180	652	N.D.		
95) Naphthalene	20.94	128	746	N.D.		
96) n-Dodecane	0.00	58	0	N.D.		
97) Hexachlorobutadiene	21.30	225	572	N.D.		
98) Cyclohexanone	15.39	55	1310	No Calib	#	
99) tert-Butylbenzene	18.42	119	781	N.D.		
100) n-Butylbenzene	19.39	91	908	N.D.		
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182422.D Vial: 10
Acq On : 18 Jun 2024 21:11 Operator: SC
Sample : P2402249-017 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 12:47:58 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182422.D Vial: 10
Acq On : 18 Jun 2024 21:11 Operator: SC
Sample : P2402249-017 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 19 12:47:58 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

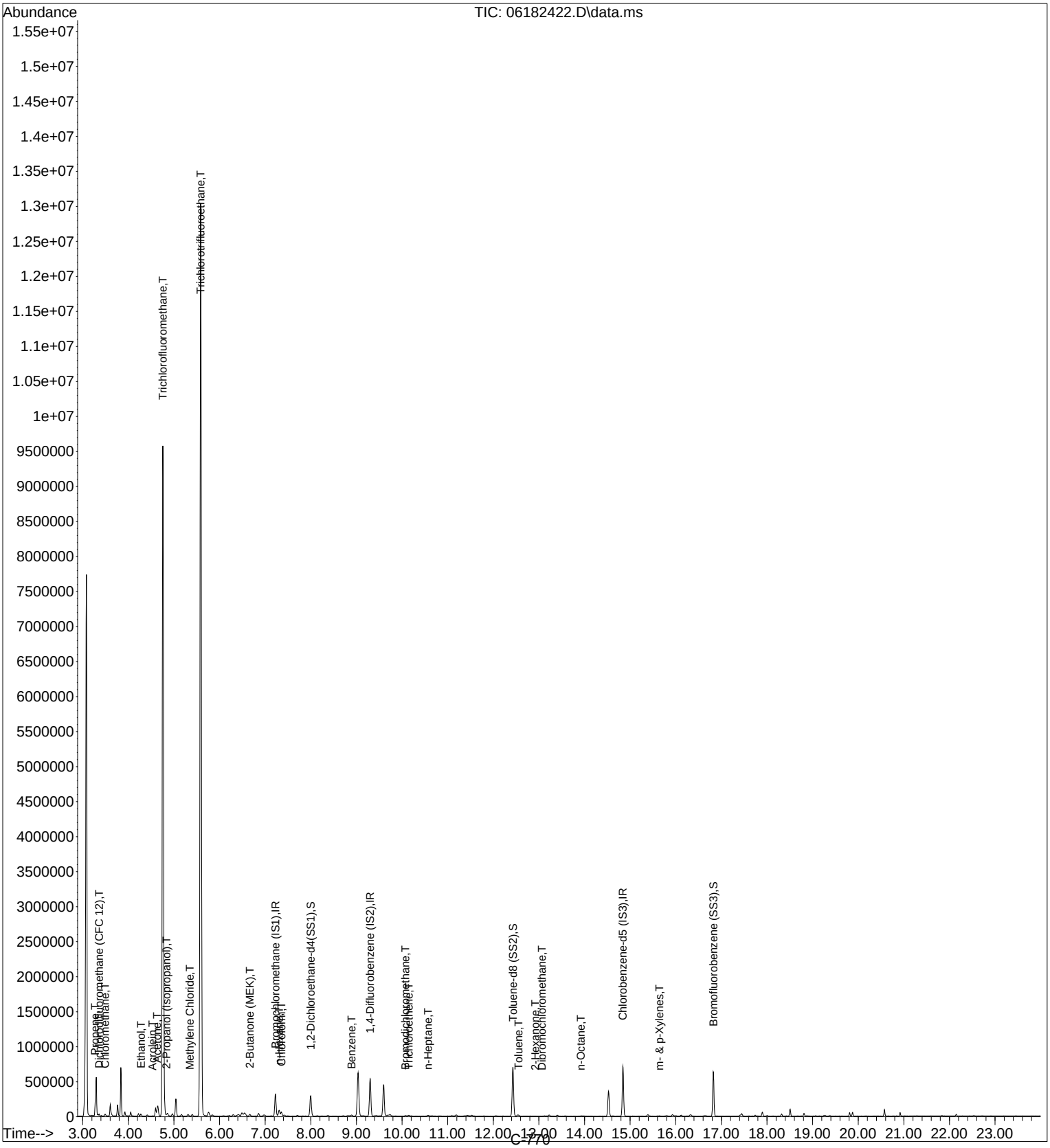
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	116216	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	505554	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	122013	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	265581	12.858	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.88%				
57) Toluene-d8 (SS2)	12.43	98	566067	12.124	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.96%				
73) Bromofluorobenzene (SS3)	16.83	174	223379	13.249	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 106.00%				
Target Compounds							Qvalue
2) Propene	3.27	42	45423m	3.053	ng		
3) Dichlorodifluoromethan...	3.36	85	15733m	0.575	ng		
4) Chloromethane	3.49	50	1249	0.067	ng		81
10) Ethanol	4.28	45	3844m	0.340	ng		
12) Acrolein	4.53	56	2012	0.241	ng		94
13) Acetone	4.63	58	23161	2.565	ng	#	49
14) Trichlorofluoromethane	4.76	101	7596953	274.582	ng		99
15) 2-Propanol (Isopropanol)	4.83	45	6113	0.168	ng		80
19) Methylene Chloride	5.35	84	1264	0.099	ng		99
21) Trichlorotrifluoroethane	5.58	151	4284314	366.050	ng		95
27) 2-Butanone (MEK)	6.66	72	5690	0.796	ng		93
31) n-Hexane	7.30	57	34624	1.812	ng		94
32) Chloroform	7.36	83	44677	1.962	ng		99
41) Benzene	8.89	78	11556	0.248	ng		98
46) Bromodichloromethane	10.07	83	2014	0.107	ng		99
47) Trichloroethene	10.15	130	3798	0.279	ng		100
51) n-Heptane	10.57	71	2630	0.267	ng		94
58) Toluene	12.56	91	4870	0.100	ng		95
59) 2-Hexanone	12.92	43	2917	0.095	ng	#	56
60) Dibromochloromethane	13.07	129	860	0.051	ng		81
63) n-Octane	13.92	57	693	0.068	ng	#	74
67) m- & p-Xylenes	15.64	91	2760	0.059	ng		82

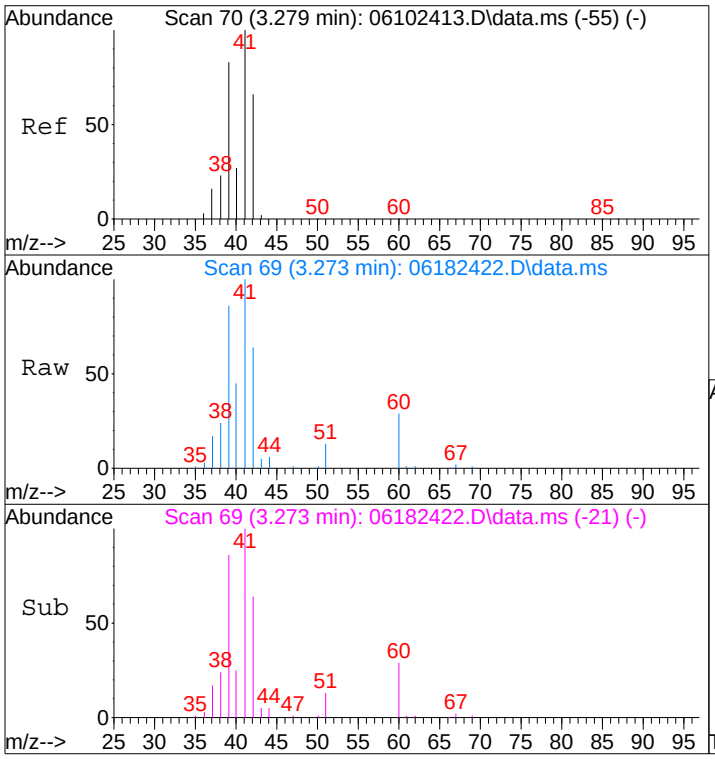
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182422.D Vial: 10
Acq On : 18 Jun 2024 21:11 Operator: SC
Sample : P2402249-017 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 12:47:58 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

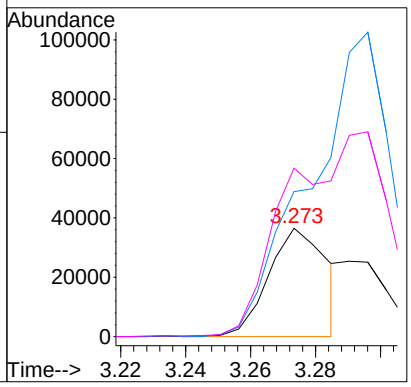


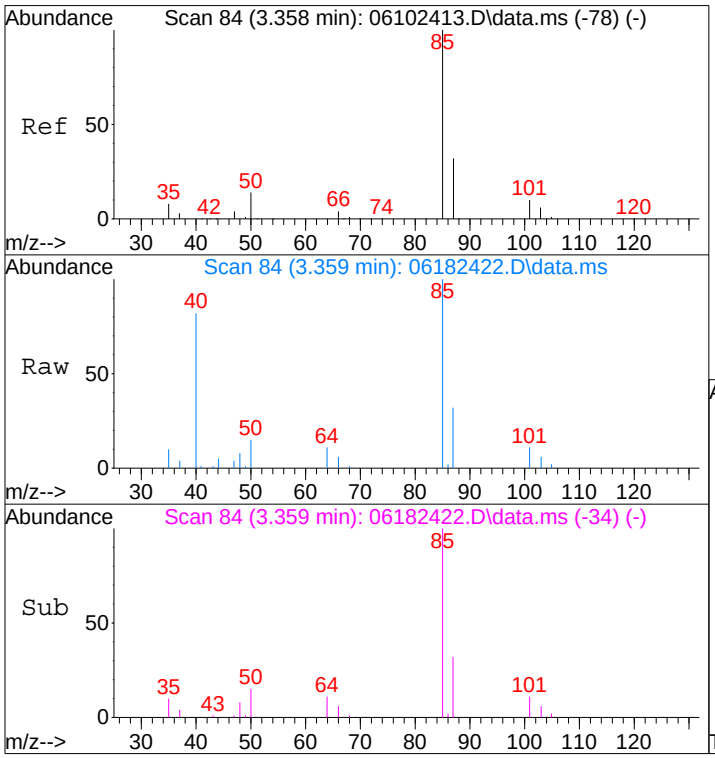


#2
Propene
Concen: 3.05 ng m
RT: 3.27 min Scan# 69
Delta R.T. 0.024 min
Lab File: 06182422.D
Acq: 18 Jun 2024 21:11

Tgt Ion: 42 Resp: 45423

Ion	Ratio	Lower	Upper
42	100		
39	389.9	107.3	147.3#
41	327.2	134.3	174.3#

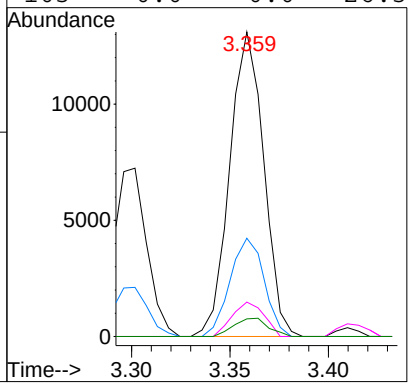


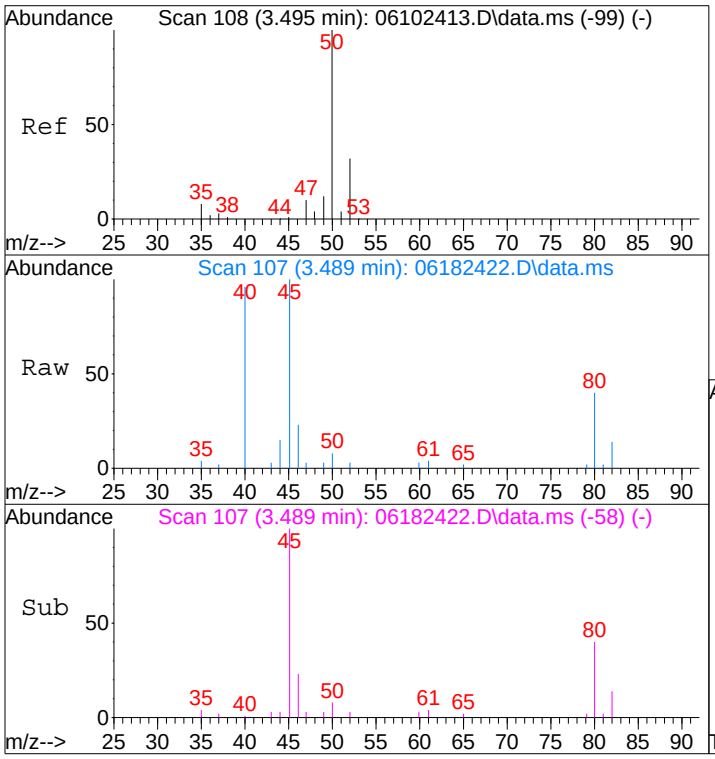


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.58 ng m
RT: 3.36 min Scan# 84
Delta R.T. 0.036 min
Lab File: 06182422.D
Acq: 18 Jun 2024 21:11

Tgt Ion: 85 Resp: 15733

Ion	Ratio	Lower	Upper
85	100		
87	16.4	12.2	52.2
101	0.0	0.0	29.8
103	0.0	0.0	26.3

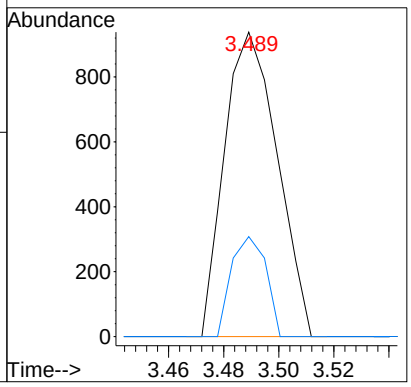


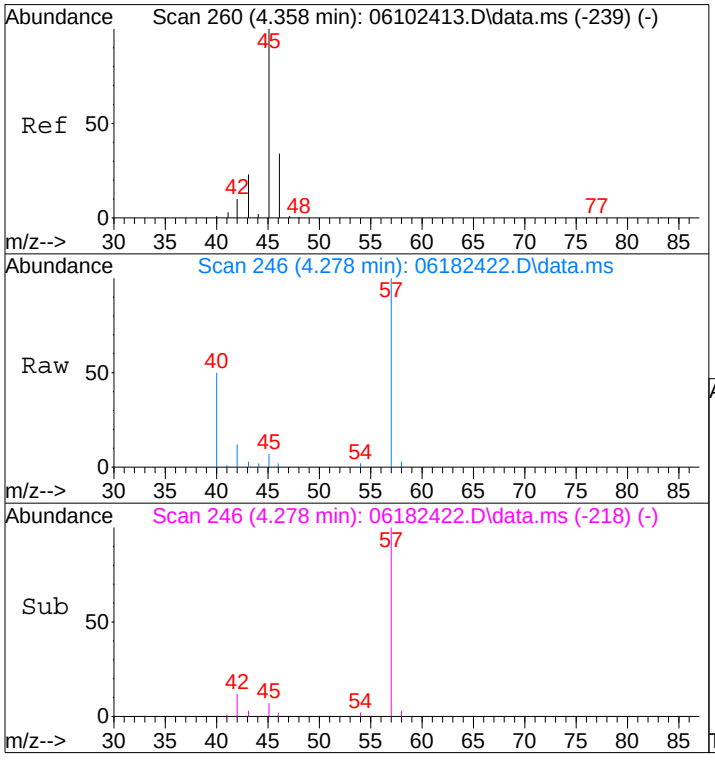


#4
Chloromethane
Concen: 0.07 ng
RT: 3.49 min Scan# 107
Delta R.T. 0.027 min
Lab File: 06182422.D
Acq: 18 Jun 2024 21:11

Tgt Ion: 50 Resp: 1249

Ion	Ratio	Lower	Upper
50	100		
52	21.6	12.4	52.4

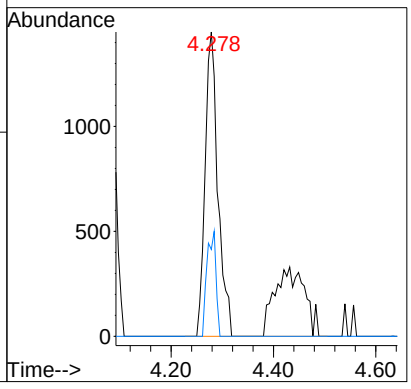


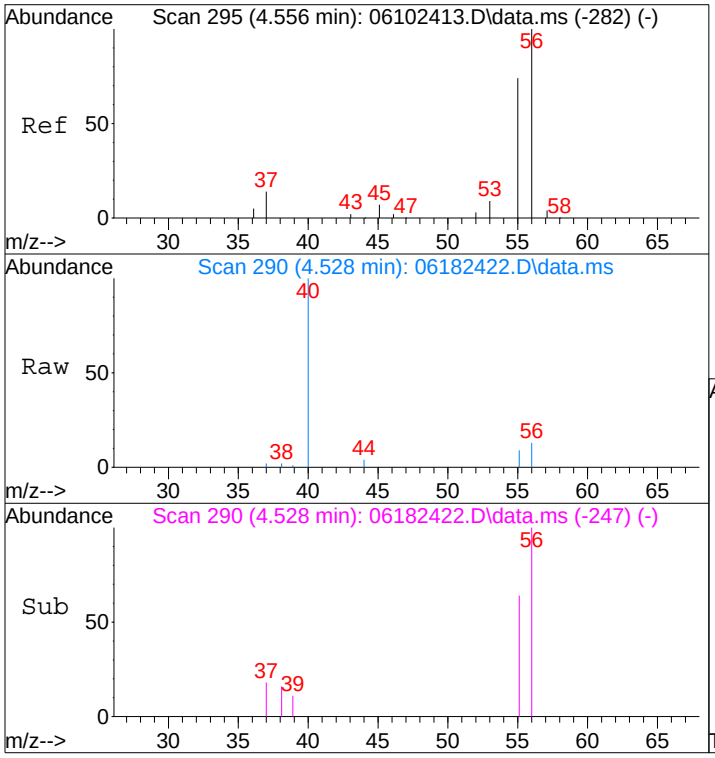


#10
Ethanol
Concen: 0.34 ng m
RT: 4.28 min Scan# 246
Delta R.T. -0.088 min
Lab File: 06182422.D
Acq: 18 Jun 2024 21:11

Tgt Ion: 45 Resp: 3844

Ion	Ratio	Lower	Upper
45	100		
46	0.0	13.5	53.5#

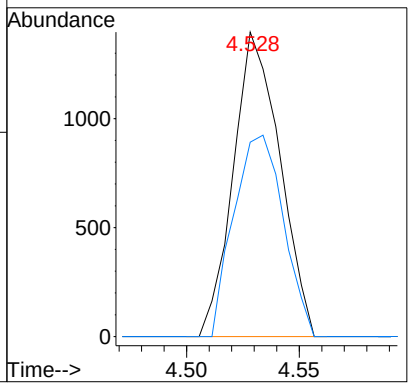


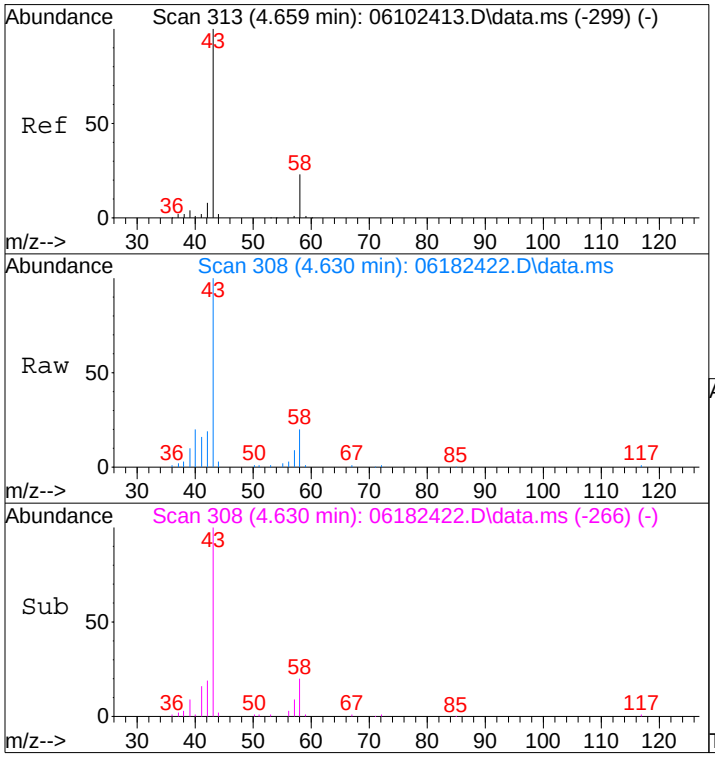


#12
Acrolein
Concen: 0.24 ng
RT: 4.53 min Scan# 290
Delta R.T. -0.007 min
Lab File: 06182422.D
Acq: 18 Jun 2024 21:11

Tgt Ion: 56 Resp: 2012

Ion	Ratio	Lower	Upper
56	100		
55	70.5	55.5	95.5

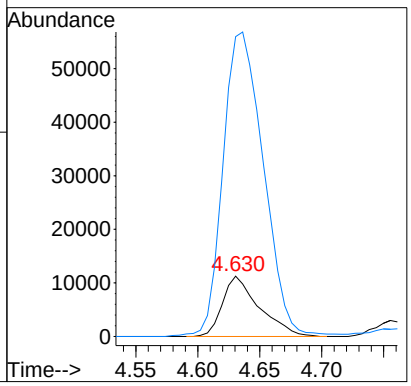


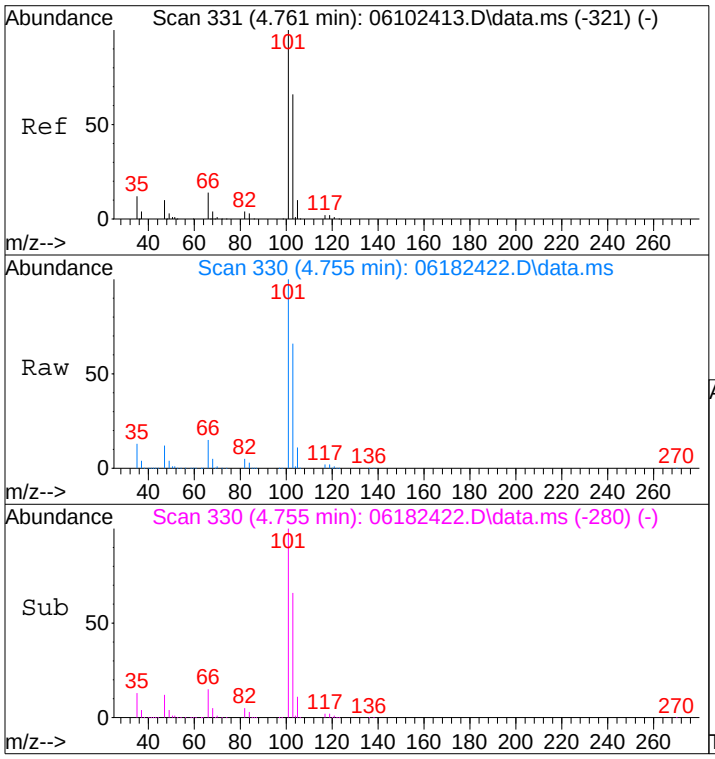


#13
Acetone
Concen: 2.57 ng
RT: 4.63 min Scan# 308
Delta R.T. -0.012 min
Lab File: 06182422.D
Acq: 18 Jun 2024 21:11

Tgt Ion: 58 Resp: 23161

Ion	Ratio	Lower	Upper
58	100		
43	558.6	400.7	460.7#

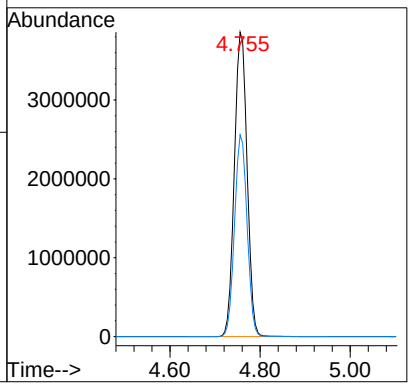


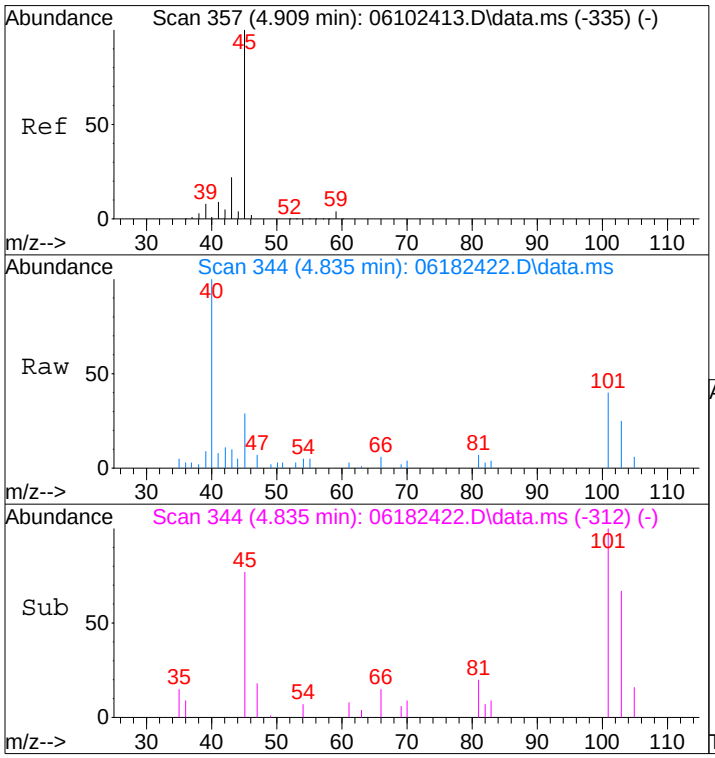


#14
Trichlorofluoromethane
Concen: 274.58 ng
RT: 4.76 min Scan# 330
Delta R.T. 0.035 min
Lab File: 06182422.D
Acq: 18 Jun 2024 21:11

Tgt Ion:101 Resp: 7596953

Ion	Ratio	Lower	Upper
101	100		
103	65.5	44.9	84.9

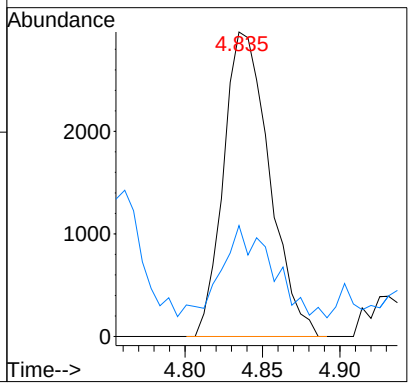


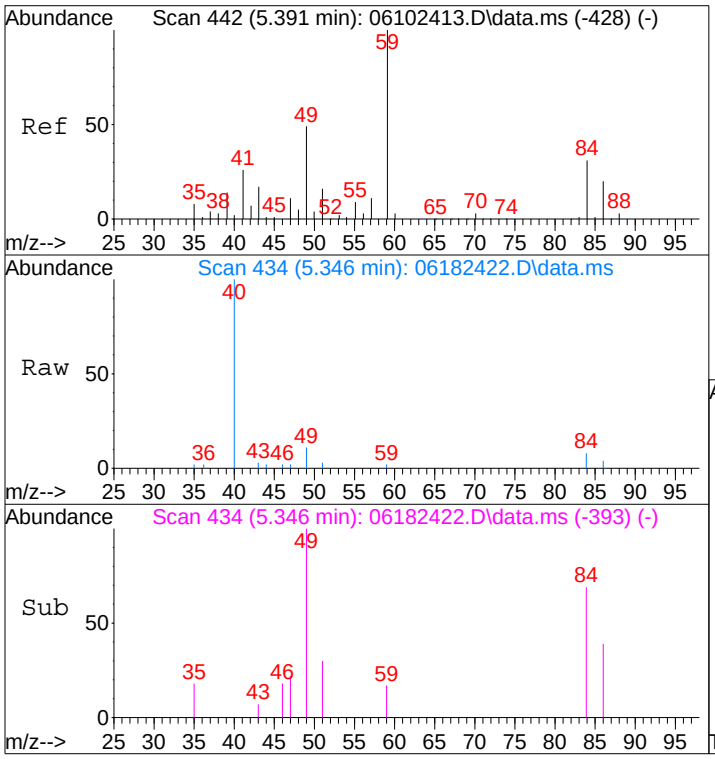


#15
2-Propanol (Isopropanol)
Concen: 0.17 ng
RT: 4.83 min Scan# 344
Delta R.T. -0.065 min
Lab File: 06182422.D
Acq: 18 Jun 2024 21:11

Tgt Ion: 45 Resp: 6113

Ion	Ratio	Lower	Upper
45	100		
43	32.1	2.5	42.5

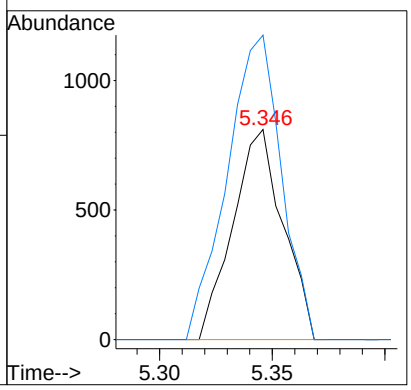


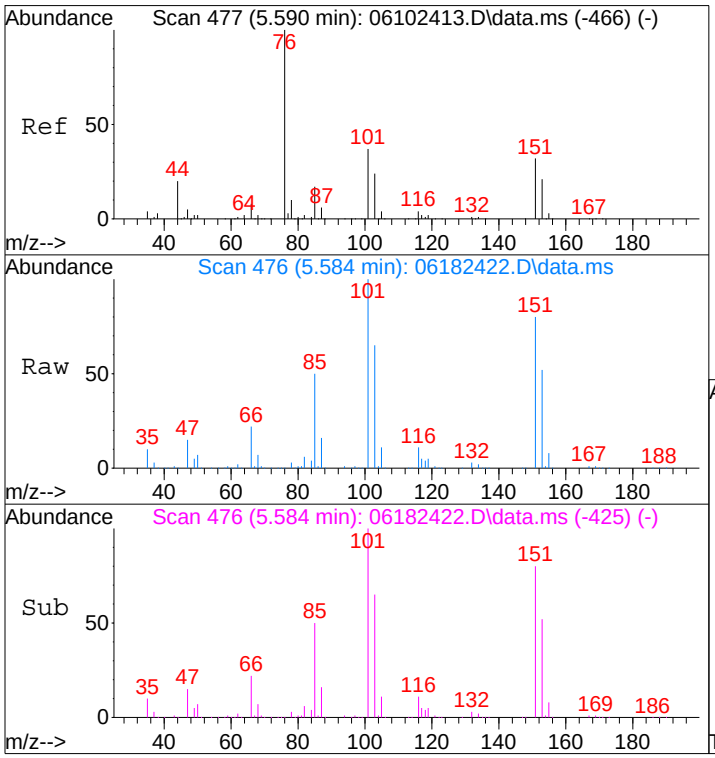


#19
Methylene Chloride
Concen: 0.10 ng
RT: 5.35 min Scan# 434
Delta R.T. -0.015 min
Lab File: 06182422.D
Acq: 18 Jun 2024 21:11

Tgt Ion: 84 Resp: 1264

Ion	Ratio	Lower	Upper
84	100		
49	156.3	132.9	182.9

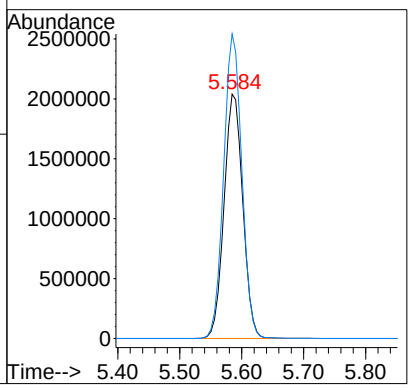


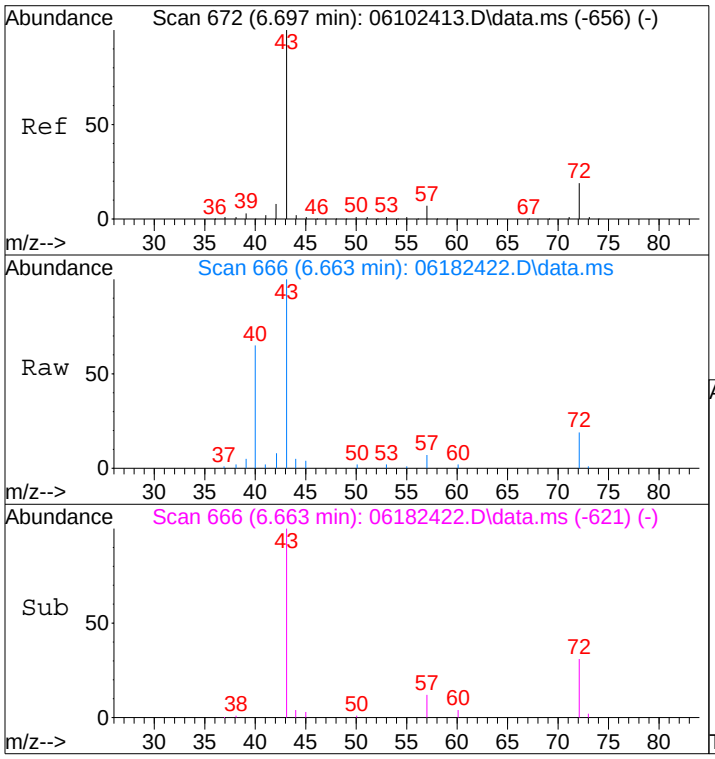


#21
Trichlorotrifluoroethane
Concen: 366.05 ng
RT: 5.58 min Scan# 476
Delta R.T. 0.038 min
Lab File: 06182422.D
Acq: 18 Jun 2024 21:11

Tgt Ion:151 Resp: 4284314

Ion	Ratio	Lower	Upper
151	100		
101	120.8	95.0	135.0

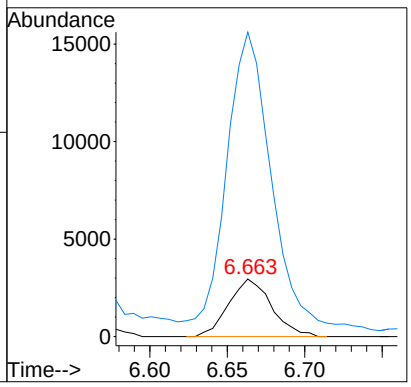


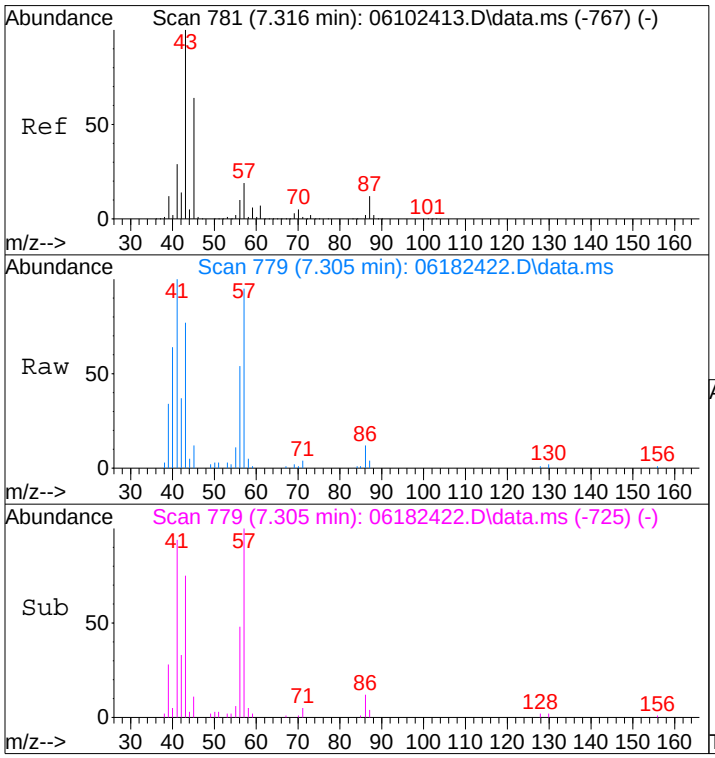


#27
2-Butanone (MEK)
Concen: 0.80 ng
RT: 6.66 min Scan# 666
Delta R.T. 0.005 min
Lab File: 06182422.D
Acq: 18 Jun 2024 21:11

Tgt Ion: 72 Resp: 5690

Ion	Ratio	Lower	Upper
72	100		
43	546.5	506.8	546.8

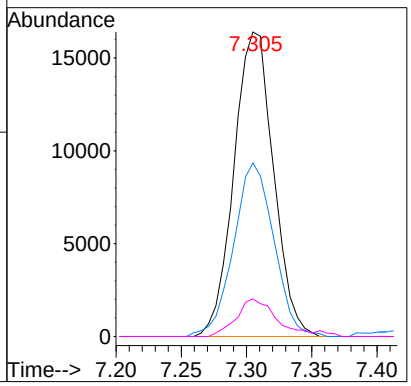


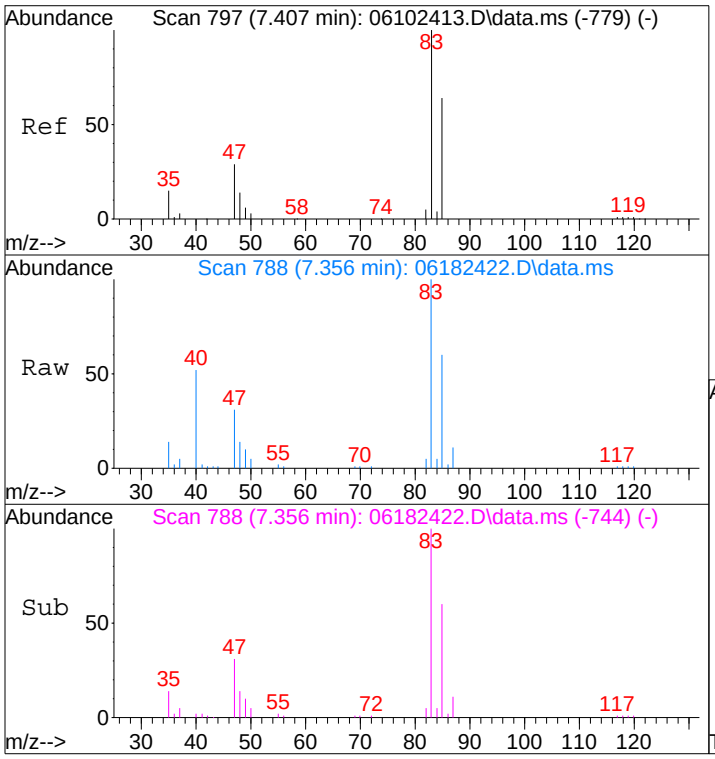


#31
n-Hexane
Concen: 1.81 ng
RT: 7.30 min Scan# 779
Delta R.T. 0.057 min
Lab File: 06182422.D
Acq: 18 Jun 2024 21:11

Tgt Ion: 57 Resp: 34624

Ion	Ratio	Lower	Upper
57	100		
56	57.8	42.5	63.7
86	13.0	9.5	14.3

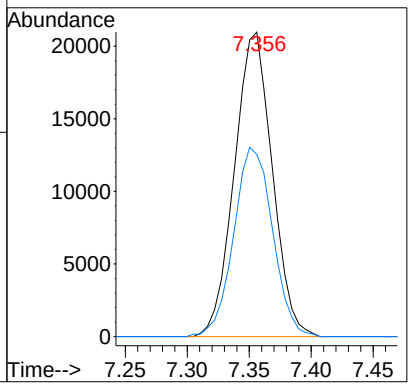


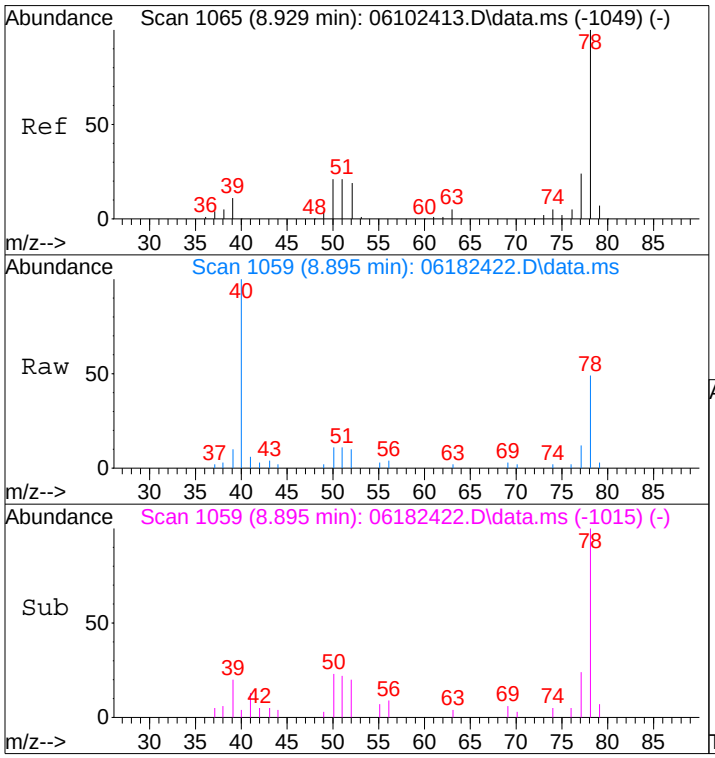


#32
Chloroform
Concen: 1.96 ng
RT: 7.36 min Scan# 788
Delta R.T. 0.001 min
Lab File: 06182422.D
Acq: 18 Jun 2024 21:11

Tgt Ion: 83 Resp: 44677

Ion	Ratio	Lower	Upper
83	100		
85	63.9	44.4	84.4

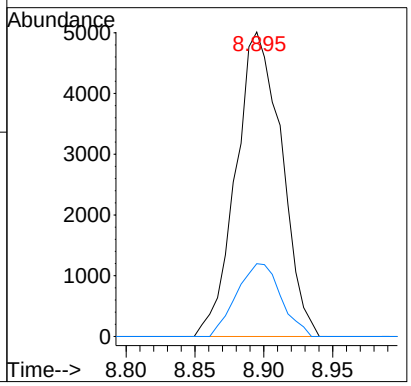


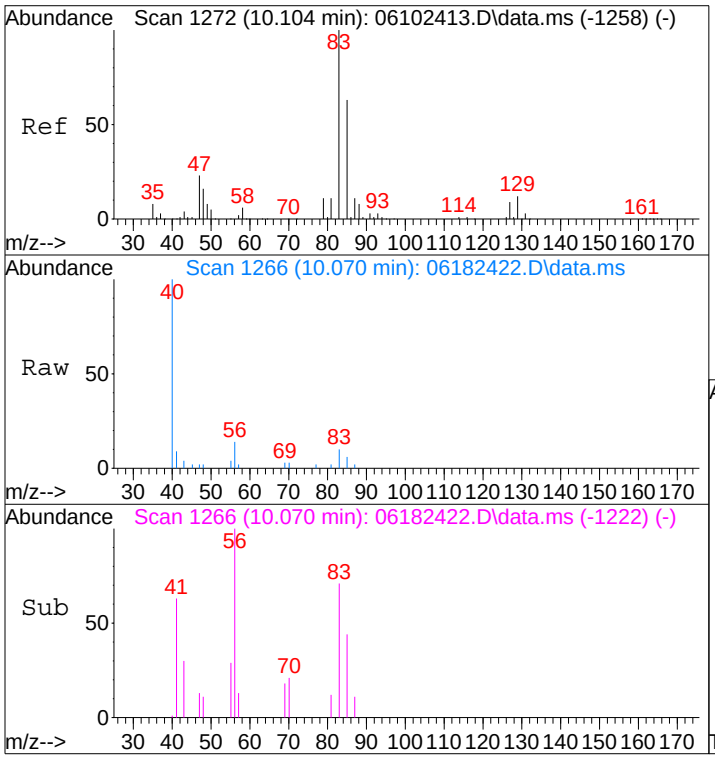


#41
Benzene
Concen: 0.25 ng
RT: 8.89 min Scan# 1059
Delta R.T. -0.002 min
Lab File: 06182422.D
Acq: 18 Jun 2024 21:11

Tgt Ion: 78 Resp: 11556

Ion	Ratio	Lower	Upper
78	100		
77	23.2	4.0	44.0

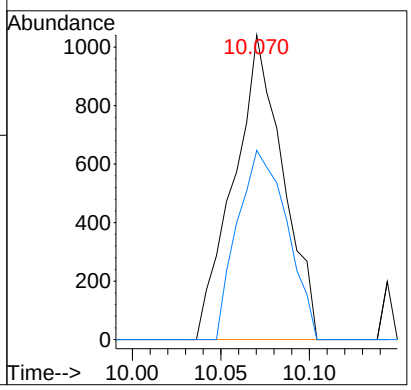


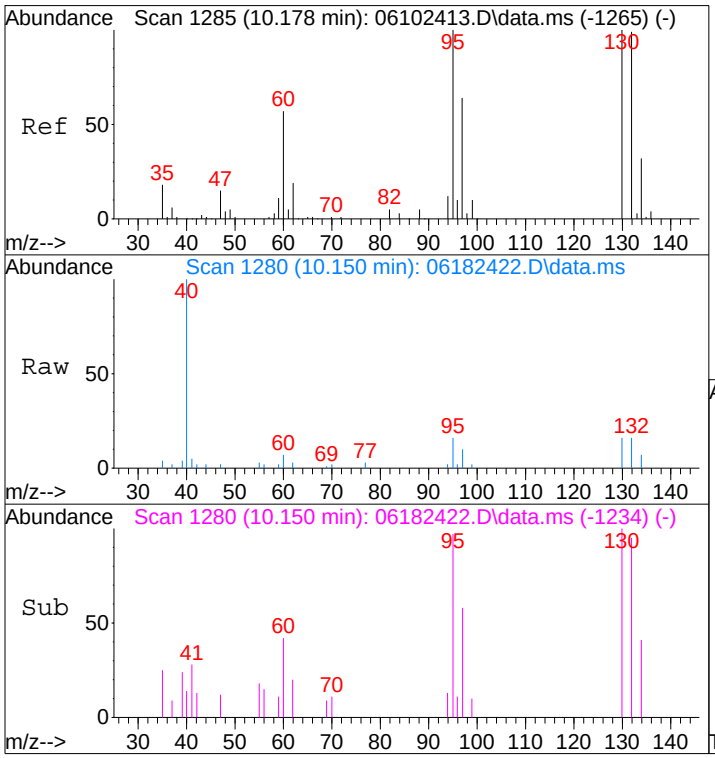


#46
Bromodichloromethane
Concen: 0.11 ng
RT: 10.07 min Scan# 1266
Delta R.T. -0.002 min
Lab File: 06182422.D
Acq: 18 Jun 2024 21:11

Tgt Ion: 83 Resp: 2014

Ion	Ratio	Lower	Upper
83	100		
85	62.8	43.8	83.8

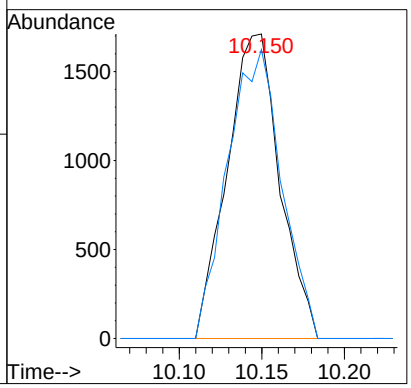


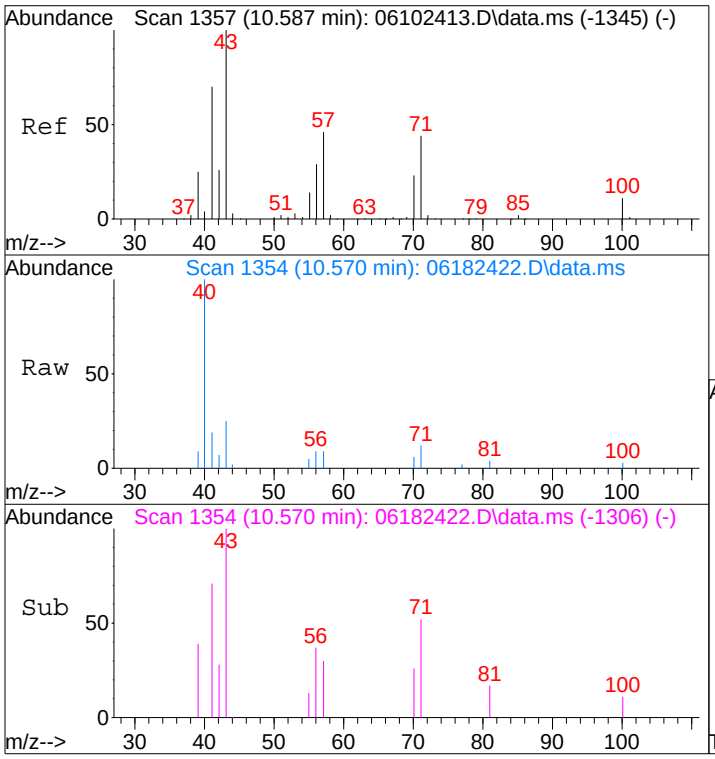


#47
Trichloroethene
Concen: 0.28 ng
RT: 10.15 min Scan# 1280
Delta R.T. 0.010 min
Lab File: 06182422.D
Acq: 18 Jun 2024 21:11

Tgt Ion:130 Resp: 3798

Ion	Ratio	Lower	Upper
130	100		
132	97.6	77.9	117.9

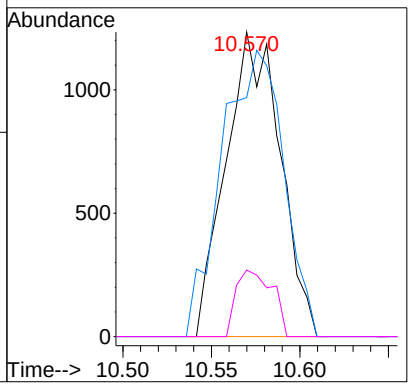


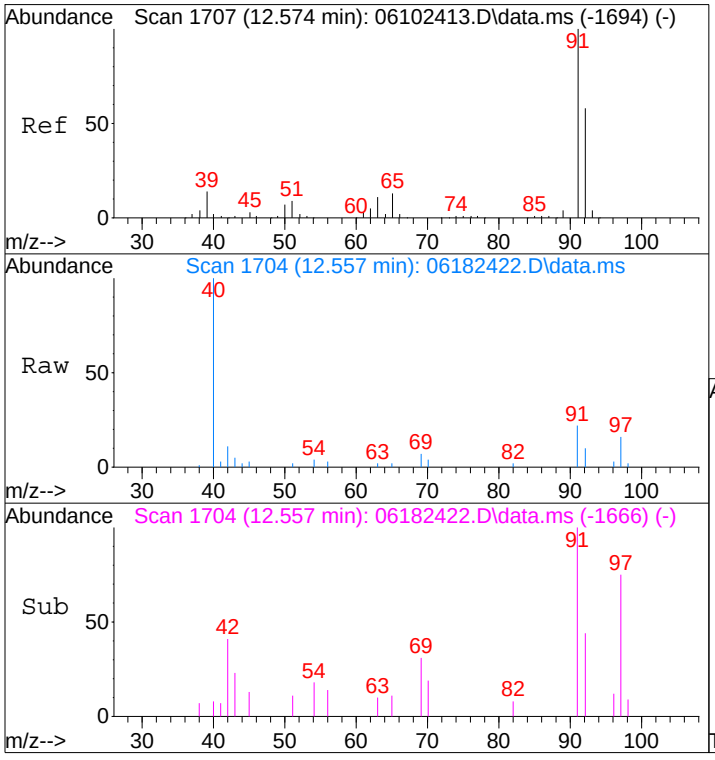


#51
n-Heptane
Concen: 0.27 ng
RT: 10.57 min Scan# 1354
Delta R.T. 0.024 min
Lab File: 06182422.D
Acq: 18 Jun 2024 21:11

Tgt Ion: 71 Resp: 2630

Ion	Ratio	Lower	Upper
71	100		
57	106.9	83.9	123.9
100	14.6	4.8	44.8

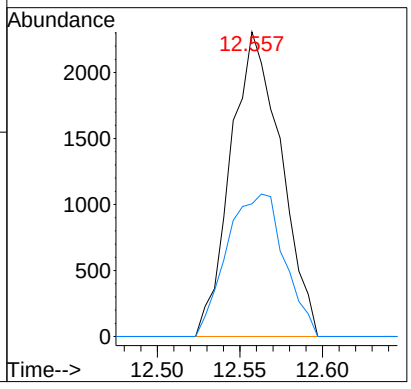


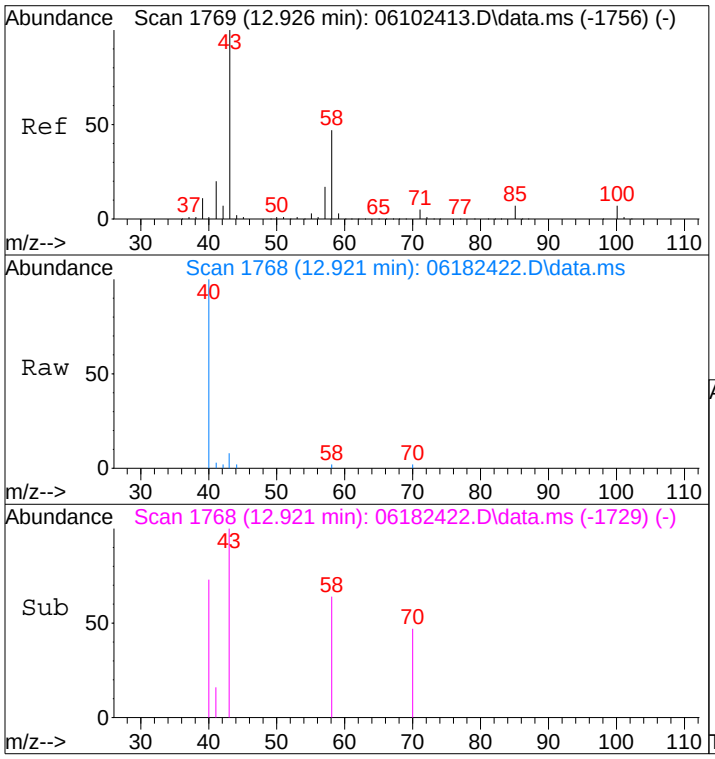


#58
Toluene
Concen: 0.10 ng
RT: 12.56 min Scan# 1704
Delta R.T. -0.034 min
Lab File: 06182422.D
Acq: 18 Jun 2024 21:11

Tgt Ion: 91 Resp: 4870

Ion	Ratio	Lower	Upper
91	100		
92	53.6	37.4	77.4

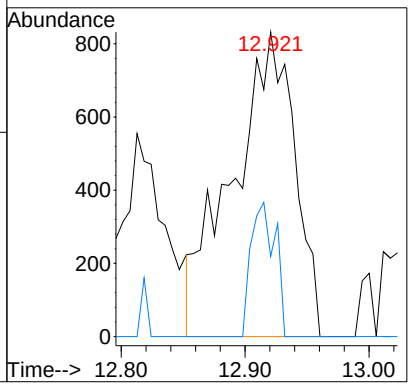


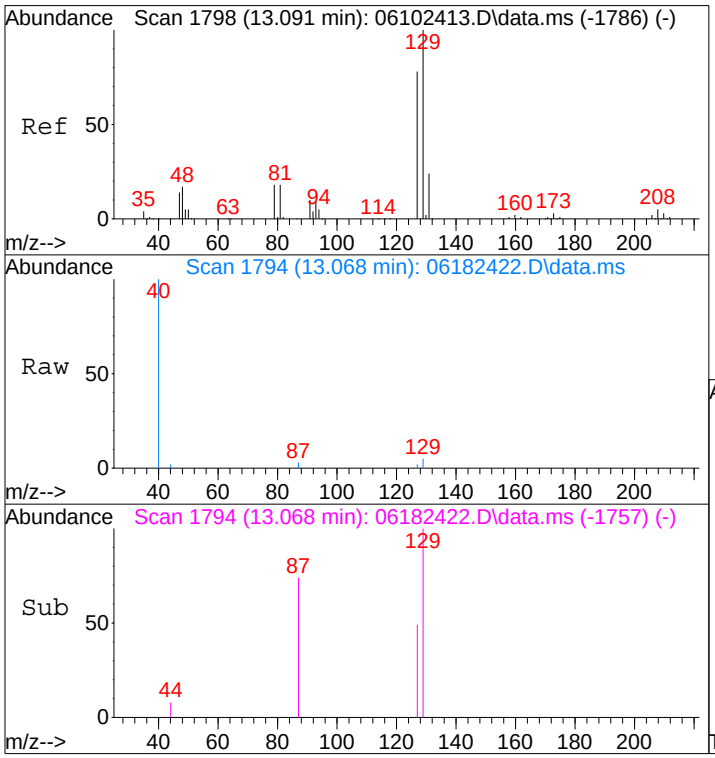


#59
2-Hexanone
Concen: 0.10 ng
RT: 12.92 min Scan# 1768
Delta R.T. -0.028 min
Lab File: 06182422.D
Acq: 18 Jun 2024 21:11

Tgt Ion: 43 Resp: 2917

Ion	Ratio	Lower	Upper
43	100		
58	17.1	25.9	65.9#

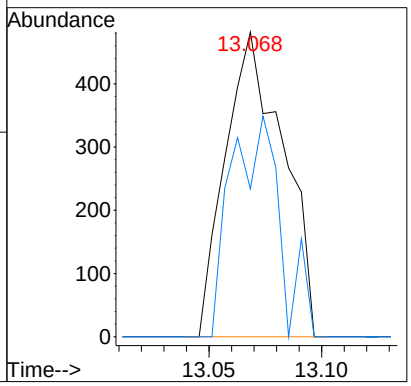


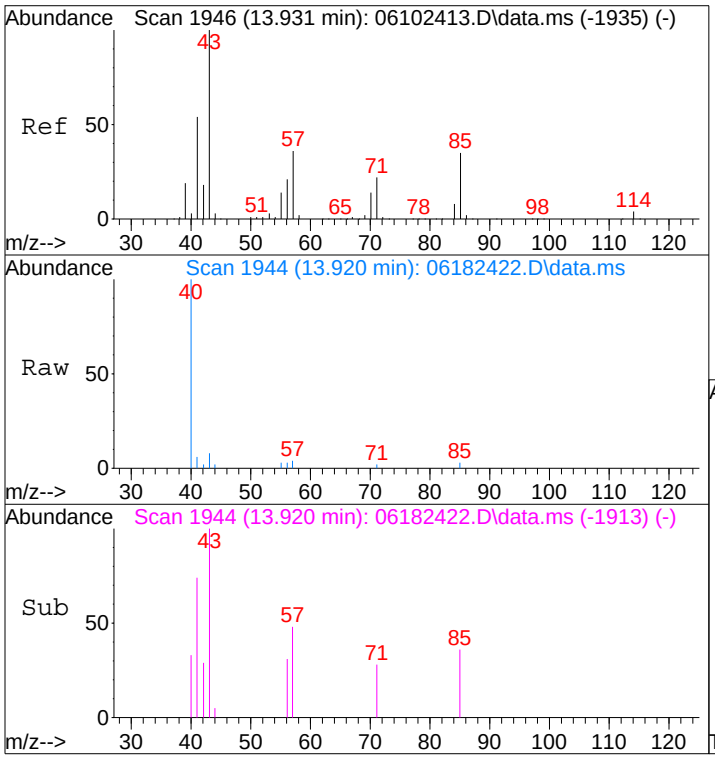


#60
Dibromochloromethane
Concen: 0.05 ng
RT: 13.07 min Scan# 1794
Delta R.T. -0.040 min
Lab File: 06182422.D
Acq: 18 Jun 2024 21:11

Tgt Ion:129 Resp: 860

Ion	Ratio	Lower	Upper
129	100		
127	61.6	58.1	98.1

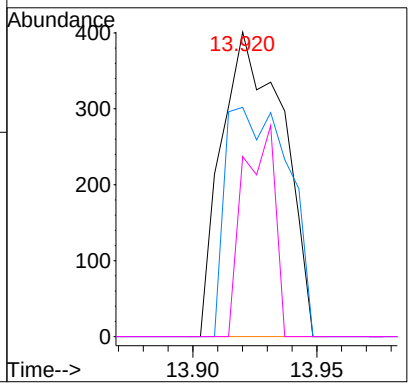


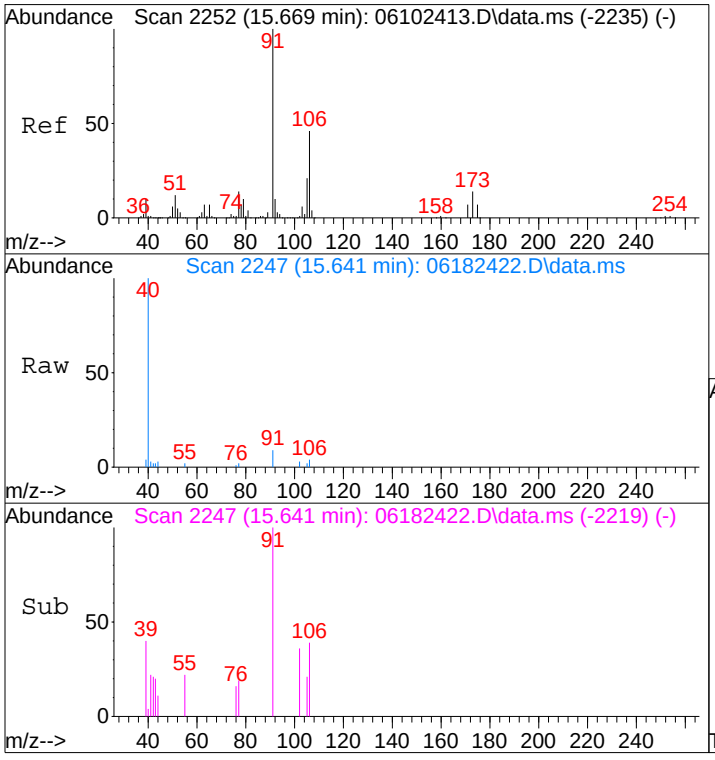


#63
n-Octane
Concen: 0.07 ng
RT: 13.92 min Scan# 1944
Delta R.T. -0.023 min
Lab File: 06182422.D
Acq: 18 Jun 2024 21:11

Tgt Ion: 57 Resp: 693

Ion	Ratio	Lower	Upper
57	100		
85	77.6	79.8	119.6#
71	35.8	49.0	73.4#

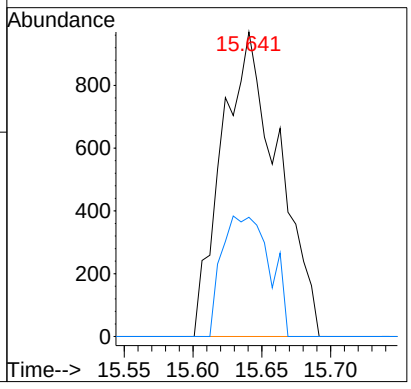




#67
m- & p-Xylenes
Concen: 0.06 ng
RT: 15.64 min Scan# 2247
Delta R.T. -0.040 min
Lab File: 06182422.D
Acq: 18 Jun 2024 21:11

Tgt Ion: 91 Resp: 2760

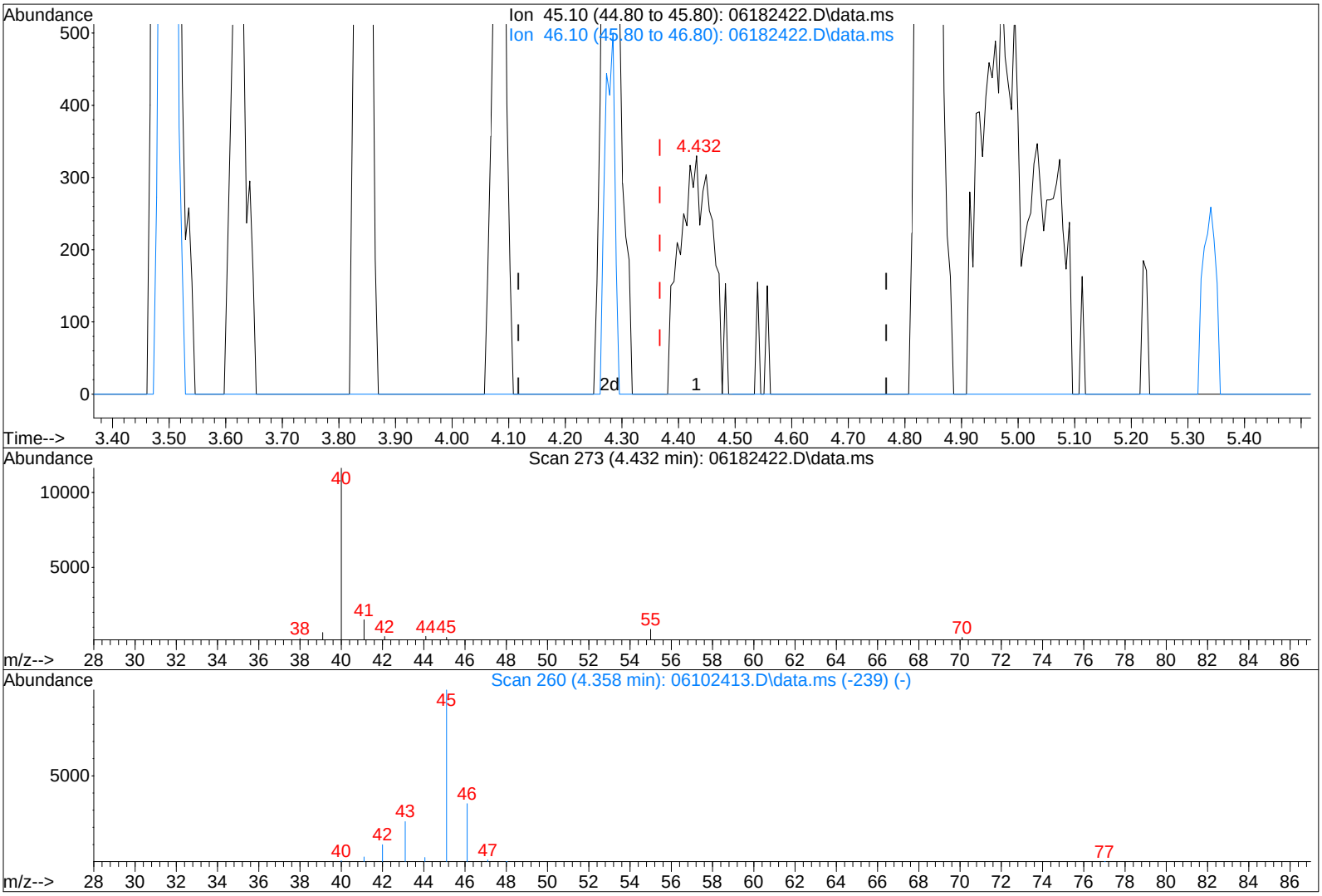
Ion	Ratio	Lower	Upper
91	100		
106	33.8	25.9	65.9



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182422.D Vial: 10
Acq On : 18 Jun 2024 21:11 Operator: SC
Sample : P2402249-017 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 08:26:47 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182422.D\data.ms

(10) Ethanol (T)

4.432min (+0.065) 0.12ng

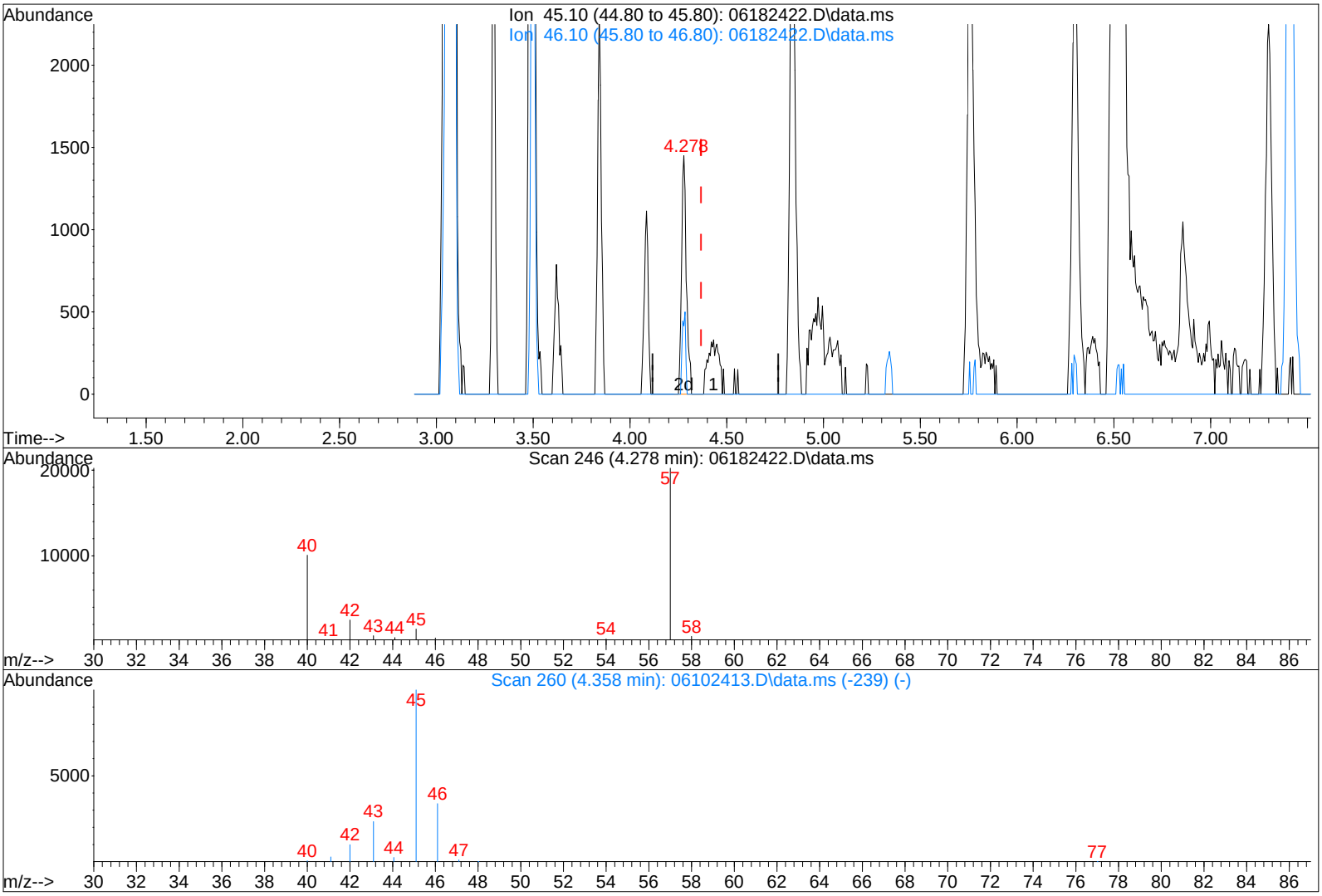
response 1341

Ion	Exp%	Act%
45.10	100	100
46.10	33.50	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182422.D Vial: 10
Acq On : 18 Jun 2024 21:11 Operator: SC
Sample : P2402249-017 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 08:26:47 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182422.D\data.ms

(10) Ethanol (T)

4.278min (-0.088) 0.34ng m

response 3844

Ion	Exp%	Act%
45.10	100	100
46.10	33.50	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

WP

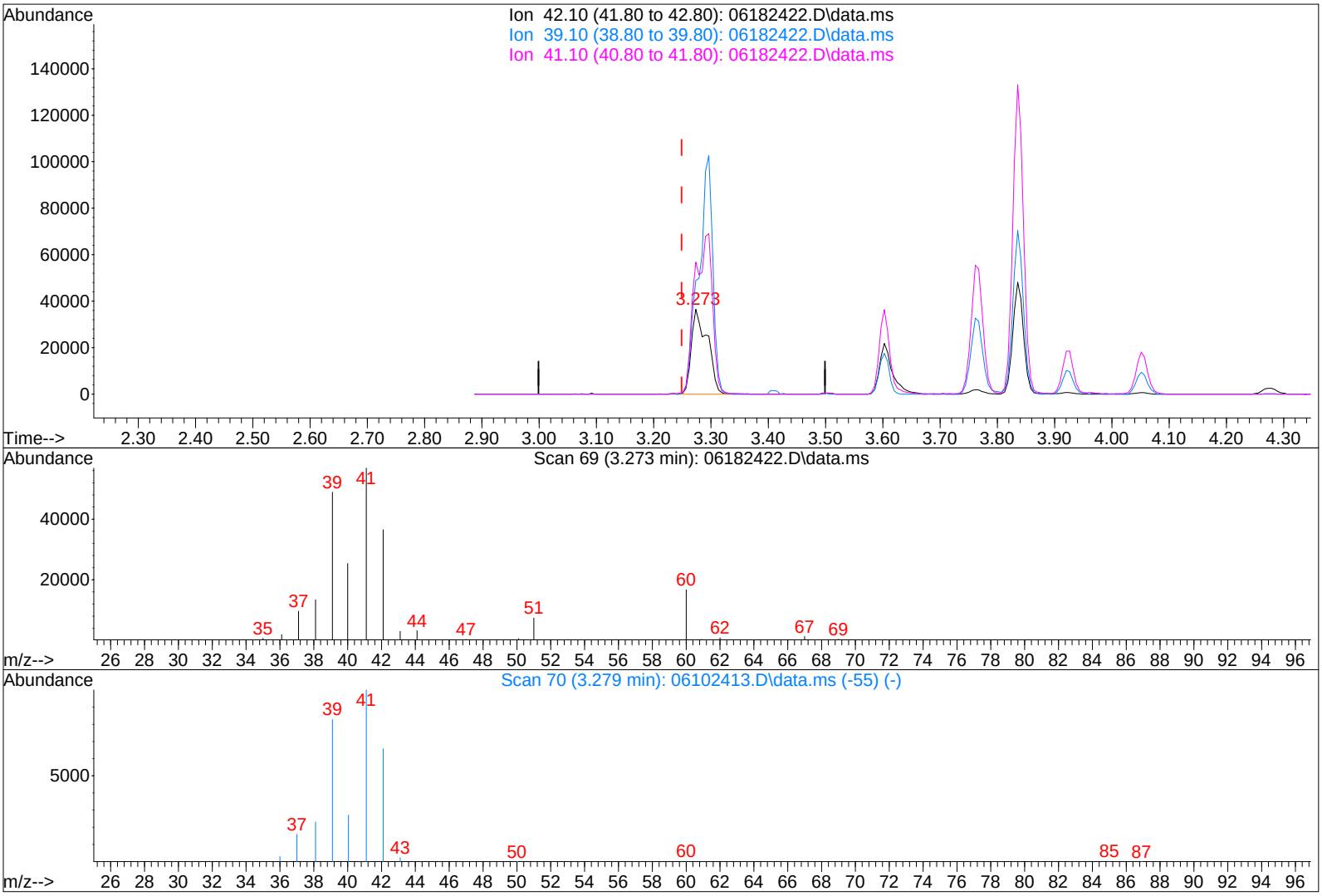
6/19/24

6/29/24

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182422.D Vial: 10
Acq On : 18 Jun 2024 21:11 Operator: SC
Sample : P2402249-017 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 08:26:47 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182422.D\data.ms

(2) Propene (T)

3.273min (+0.024) 4.78ng

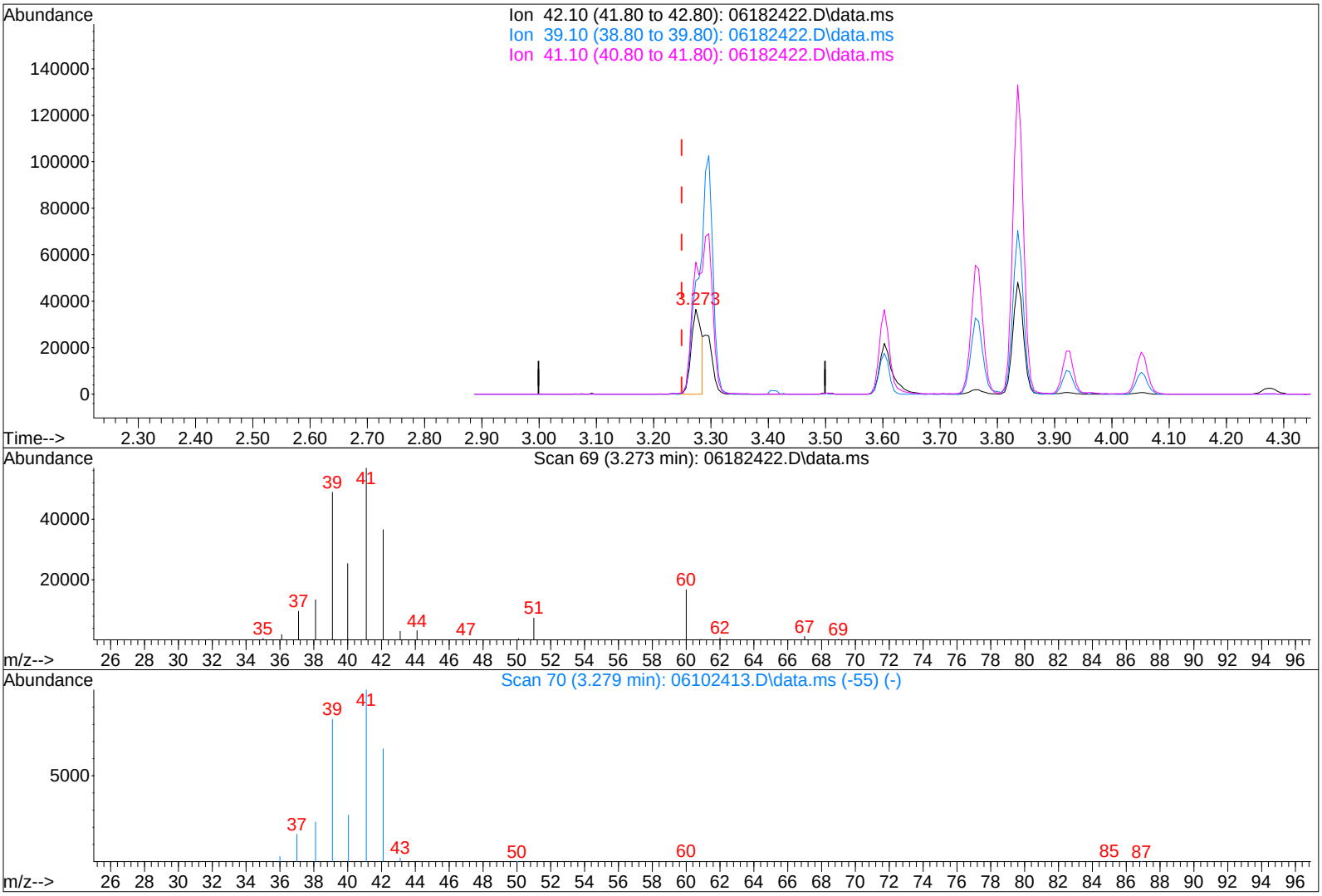
response 71131

Ion	Exp%	Act%
42.10	100	100
39.10	127.30	248.99#
41.10	154.30	208.93#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182422.D Vial: 10
Acq On : 18 Jun 2024 21:11 Operator: SC
Sample : P2402249-017 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 08:26:47 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182422.D\data.ms

(2) Propene (T)

3.273min (+0.024) 3.05ng m

response 45423

Ion	Exp%	Act%
42.10	100	100
39.10	127.30	389.91#
41.10	154.30	327.18#
0.00	0.00	0.00

IPC

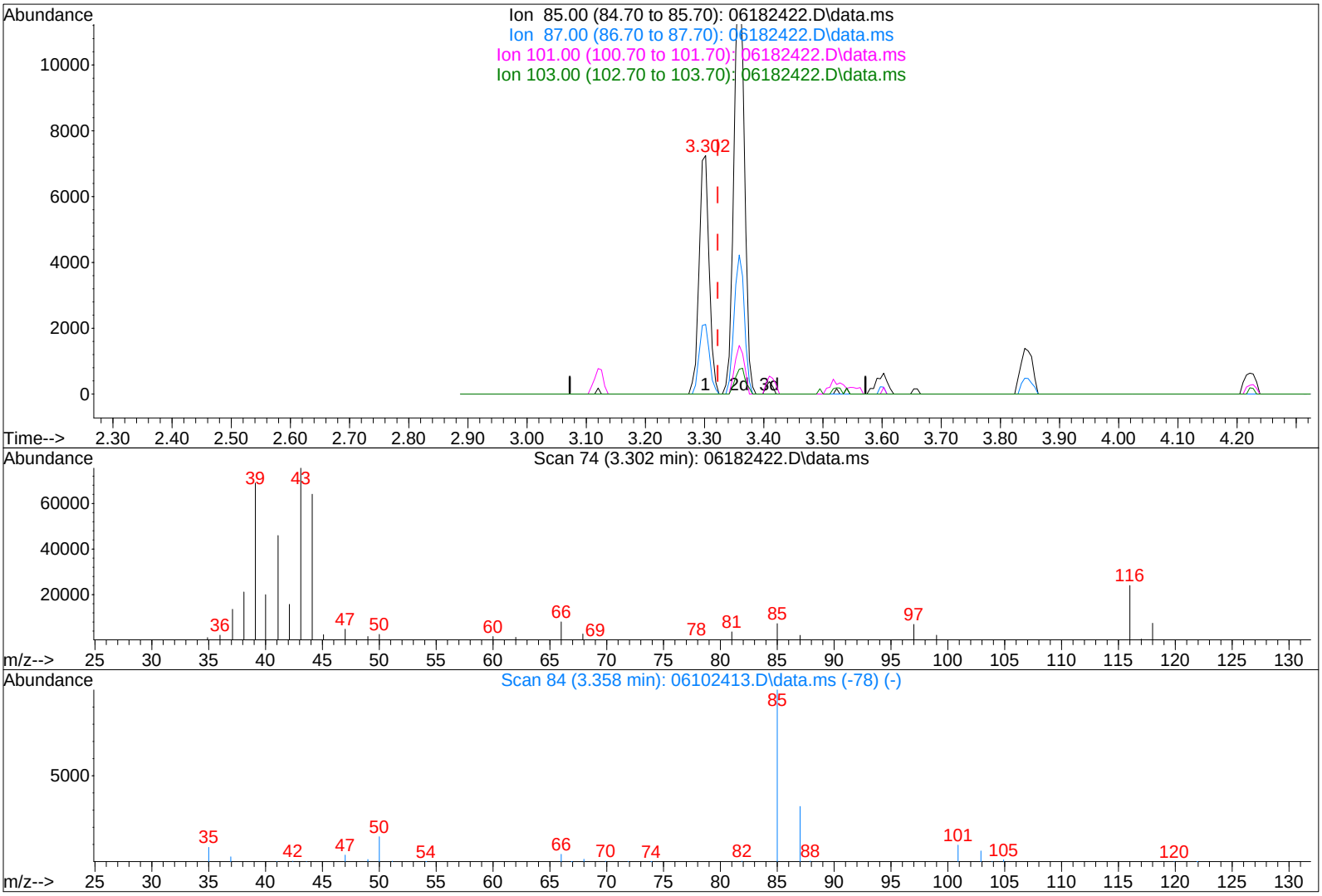
6/19/24

6/29/24

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182422.D Vial: 10
Acq On : 18 Jun 2024 21:11 Operator: SC
Sample : P2402249-017 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 08:26:47 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182422.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.302min (-0.020) 0.31ng

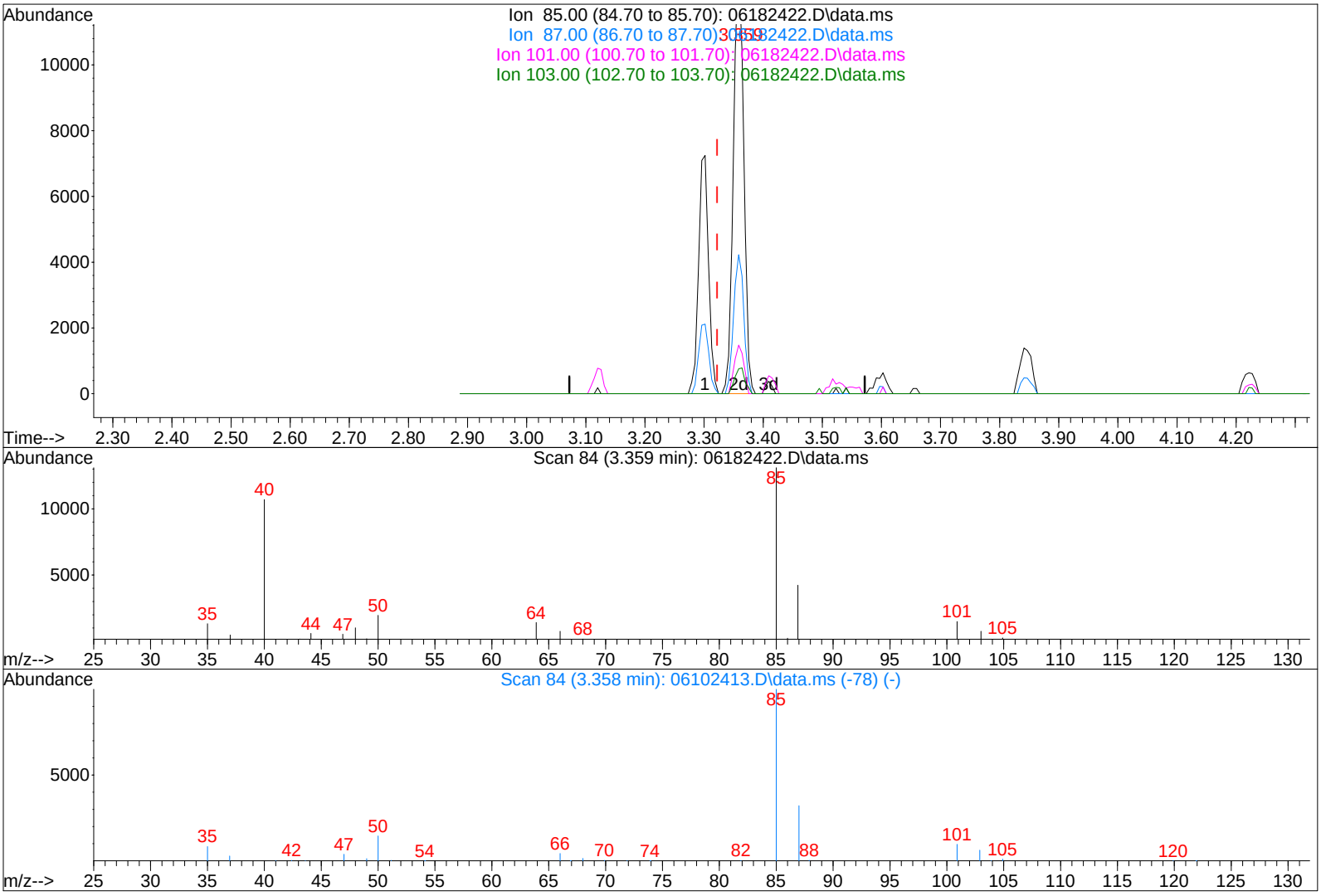
response 8562

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	30.10
101.00	9.80	0.00
103.00	6.30	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182422.D Vial: 10
Acq On : 18 Jun 2024 21:11 Operator: SC
Sample : P2402249-017 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 08:26:47 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182422.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.359min (+0.036) 0.58ng m

response 15733

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	16.38
101.00	9.80	0.00
103.00	6.30	0.00

WP

6/19/24

6/29/24

Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\18\06182422.D Vial: 10
Acq On : 18 Jun 2024 21:11 Operator: SC
Sample : P2402249-017 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:00:00 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

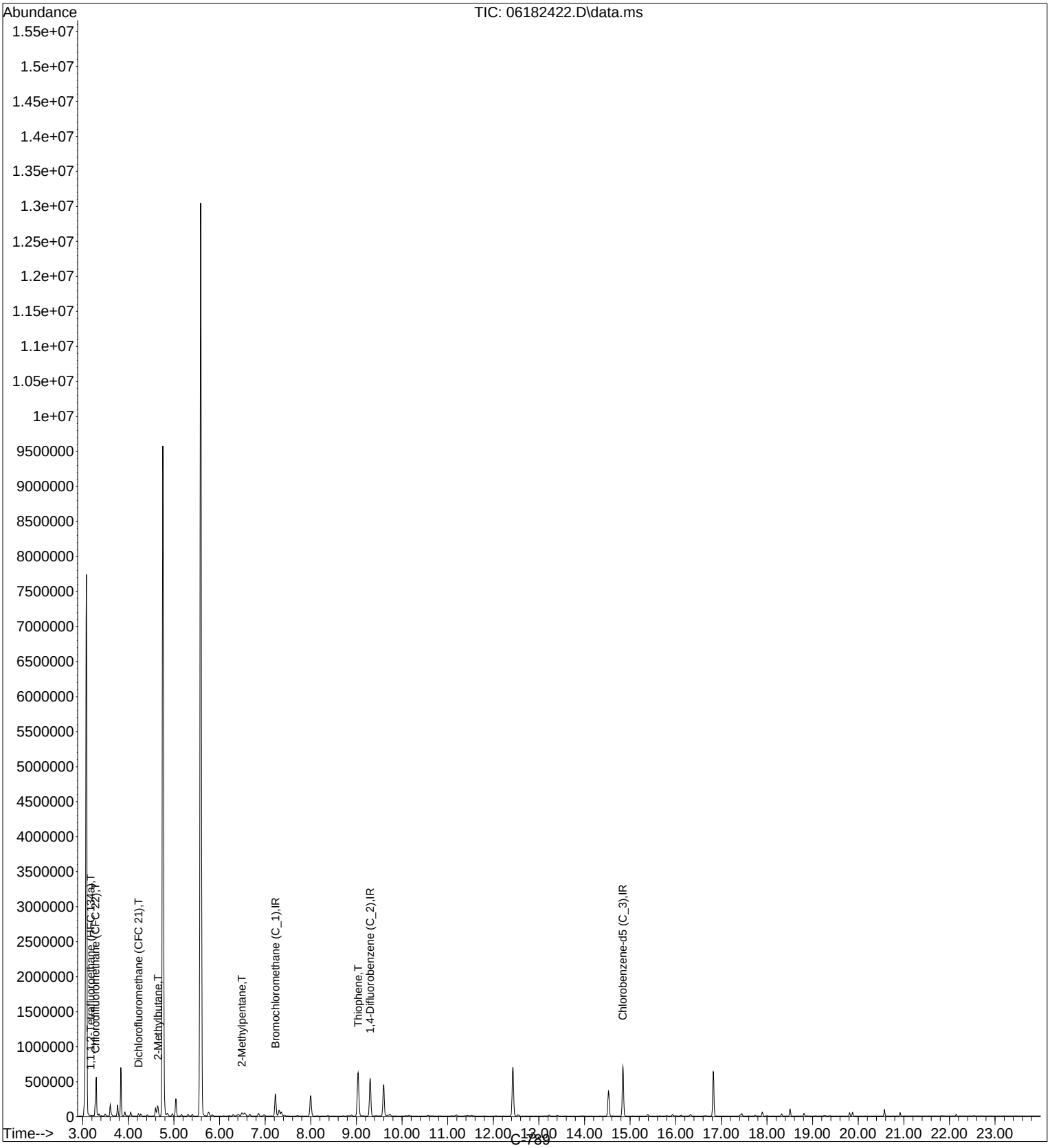
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	116216	12.500	ng		-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	506222	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	122013	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	3.12	85	63	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.18	83	1282	0.108	ng	#	1
4) 1,1-Difluoroethane	3.23	65	255	N.D.			
5) Chlorodifluoromethane ...	3.28	67	1744	0.440	ng		86
6) 1-Chloro-1,1-Difluoroe...	3.48	65	371	N.D.			
7) Dichlorofluoromethane ...	4.22	67	26316	0.987	ng		99
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	4.55	83	1137	N.D.			
10) 2-Methylbutane	4.65	57	28305	2.042	ng		96
11) Methyl Acetate	5.33	43	1108	N.D.			
12) 2-Methylpentane	6.49	71	6863	0.682	ng	#	1
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	9.04	84	34125	1.441	ng	#	18
17) 2,3-Dimethylpentane	9.52	56	2077	N.D.			
18) Dibromomethane	9.79	174	53	N.D.			
20) Methyl Cyclohexane	11.42	55	1567	N.D.			
21) 1,3-Dichloropropane	0.00	76	0	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	16.32	75	681	N.D.			
25) Bromobenzene	17.03	77	56	N.D.			
26) 2-Chlorotoluene	17.61	91	566	N.D.			
27) 4-Chlorotoluene	17.68	91	1123	N.D.			
28) Indane	19.12	117	57	N.D.			
29) Indene	0.00	115	0	N.D.			
30) 1,2,4,5-Tetramethylben...	0.00	119	0	N.D.			
31) 1,2,3,4-Tetramethylben...	0.00	119	0	N.D.			
32) 1,2,3,5-Tetramethylben...	20.57	119	228	N.D.			
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182422.D Vial: 10
Acq On : 18 Jun 2024 21:11 Operator: SC
Sample : P2402249-017 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:00:00 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

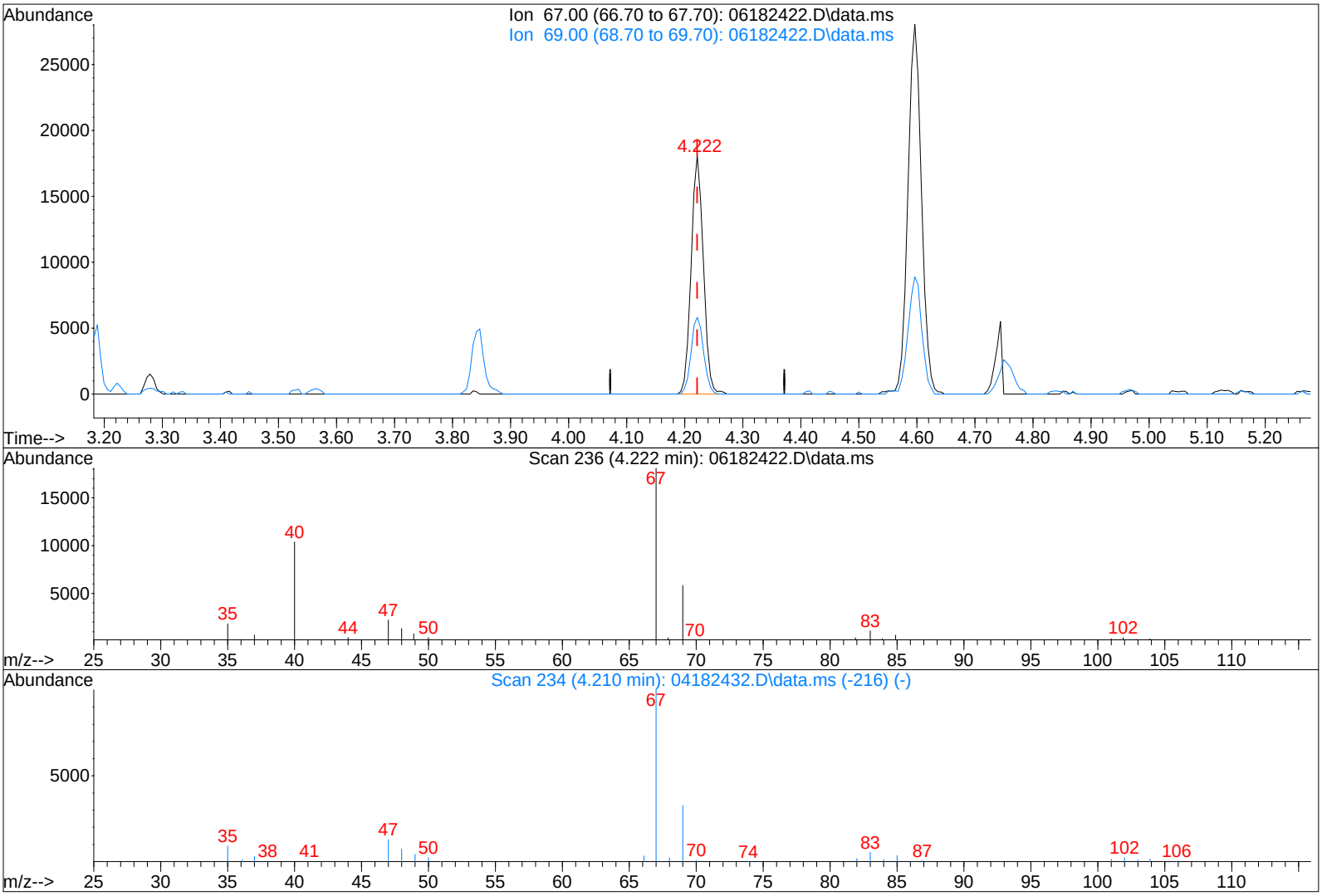


Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182422.D Vial: 10
Acq On : 18 Jun 2024 21:11 Operator: SC
Sample : P2402249-017 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 15:00:00 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182422.D\data.ms

(7) Dichlorofluoromethane (CFC 21) (T)

4.222min (-0.000) 0.99ng

response 26316

Ion	Exp%	Act%
67.00	100	100
69.00	32.40	33.11
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192412.D Vial: 10
Acq On : 19 Jun 2024 14:46 Operator: SC
Sample : P2402249-017Dil (40mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 15:40:53 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/19/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	140588	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	606242	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	140401	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	315141	12.612	ng		0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.88%				
57) Toluene-d8 (SS2)	12.43	98	665468	12.386	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.12%				
73) Bromofluorobenzene (SS3)	16.83	174	248016	12.784	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.24%				
Target Compounds							Qvalue
2) Propene	0.00	42	0	N.D.	d		
3) Dichlorodifluoromethan...	3.32	85	959	N.D.			
4) Chloromethane	3.52	50	234	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.30	45	1487	0.109	ng		89
11) Acetonitrile	4.45	41	270	N.D.			
12) Acrolein	0.00	56	0	N.D.			
13) Acetone	4.65	58	4046	0.370	ng		91
14) Trichlorofluoromethane	4.75	101	798771	23.866	ng		99
15) 2-Propanol (Isopropanol)	4.87	45	1365	N.D.			
16) Acrylonitrile	5.04	53	279	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	0.00	59	0	N.D.			
19) Methylene Chloride	5.35	84	733	N.D.			
20) 3-Chloro-1-propene (Al...	5.39	41	341	N.D.			
21) Trichlorotrifluoroethane	5.58	151	433693	30.631	ng		99
22) Carbon Disulfide	5.60	76	1531	N.D.			
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D.			
27) 2-Butanone (MEK)	6.69	72	546	0.063	ng	#	43
28) cis-1,2-Dichloroethene	7.05	61	102	N.D.			
29) Diisopropyl Ether	7.36	87	360	N.D.			
30) Ethyl Acetate	0.00	61	0	N.D.			
31) n-Hexane	7.30	57	3405	0.147	ng	#	93
32) Chloroform	7.34	83	4539	0.165	ng		85
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	0.00	62	0	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.83	56	178	No Calib		#	
41) Benzene	8.89	78	1879	N.D.			
42) Carbon Tetrachloride	0.00	117	0	N.D.			
43) Cyclohexane	9.29	84	807	N.D.			
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.06	83	478	N.D.			
47) Trichloroethene	10.14	130	934	0.057	ng		91
48) 1,4-Dioxane	0.00	88	0	N.D.			
49) 2,2,4-Trimethylpentane...	0.00	57	0	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192412.D Vial: 10
Acq On : 19 Jun 2024 14:46 Operator: SC
Sample : P2402249-017Dil (40mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 15:40:53 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

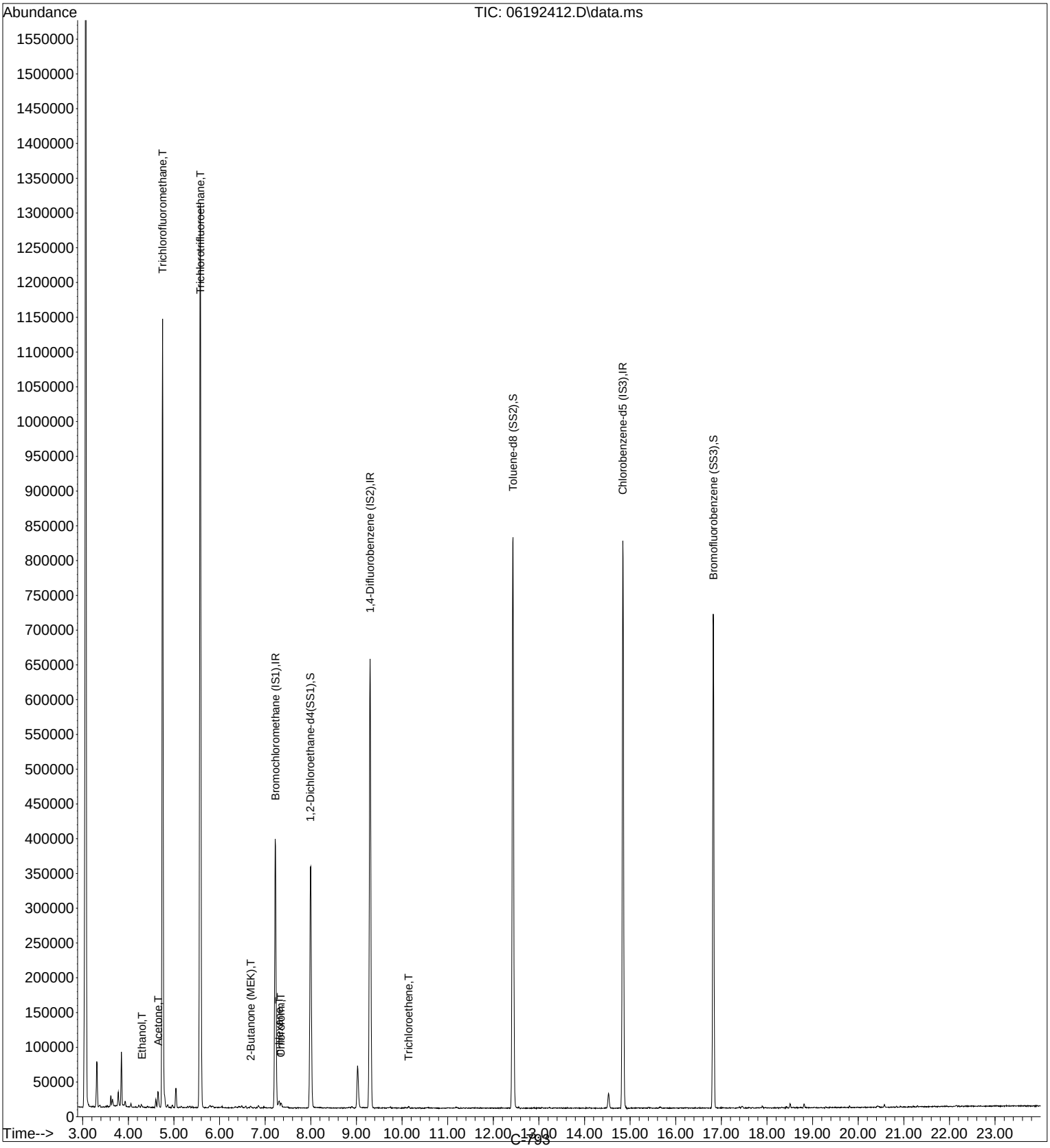
Internal Standards	R.T.	QIon	Response	Conc Units Dev(Min)
51) n-Heptane	0.00	71	0	N.D.
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.
58) Toluene	12.56	91	1027	N.D.
59) 2-Hexanone	0.00	43	0	N.D.
60) Dibromochloromethane	13.07	129	462	N.D.
61) 1,2-Dibromoethane	0.00	107	0	N.D.
62) n-Butyl Acetate	0.00	43	0	N.D.
63) n-Octane	0.00	57	0	N.D.
64) Tetrachloroethene	14.03	166	292	N.D.
65) Chlorobenzene	14.91	112	643	N.D.
66) Ethylbenzene	15.41	91	846	N.D.
67) m- & p-Xylenes	15.66	91	1274	N.D.
68) Bromoform	15.67	173	615	N.D.
69) Styrene	0.00	104	0	N.D.
70) o-Xylene	16.24	91	605	N.D.
71) n-Nonane	0.00	43	0	N.D.
72) 1,1,2,2-Tetrachloroethane	16.21	83	251	N.D.
74) Cumene	17.03	105	899	N.D.
75) alpha-Pinene	0.00	93	0	N.D.
76) n-Propylbenzene	17.68	91	1090	N.D.
77) 3-Ethyltoluene	17.03	105	899	No Calib
78) 4-Ethyltoluene	17.86	105	600	N.D.
79) 1,3,5-Trimethylbenzene	17.96	105	494	N.D.
80) alpha-Methylstyrene	0.00	118	0	N.D.
81) 2-Ethyltoluene	17.03	105	899	No Calib
82) 1,2,4-Trimethylbenzene	18.42	105	447	N.D.
83) n-Decane	0.00	58	0	N.D.
84) Benzyl Chloride	0.00	91	0	N.D.
85) 1,3-Dichlorobenzene	18.58	146	535	N.D.
86) 1,4-Dichlorobenzene	18.65	146	440	N.D.
87) sec-Butylbenzene	18.74	105	778	N.D.
88) 4-Isopropyltoluene (p-...	18.92	119	530	N.D.
89) 1,2,3-Trimethylbenzene	17.03	105	899	No Calib
90) 1,2-Dichlorobenzene	19.03	146	388	N.D.
91) d-Limonene	0.00	68	0	N.D.
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.
93) n-Undecane	0.00	58	0	N.D.
94) 1,2,4-Trichlorobenzene	20.84	180	612	N.D.
95) Naphthalene	20.94	128	554	N.D.
96) n-Dodecane	0.00	58	0	N.D.
97) Hexachlorobutadiene	21.30	225	659	N.D.
98) Cyclohexanone	0.00	55	0	N.D.
99) tert-Butylbenzene	18.43	119	758	N.D.
100) n-Butylbenzene	19.38	91	530	N.D.
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192412.D Vial: 10
Acq On : 19 Jun 2024 14:46 Operator: SC
Sample : P2402249-017Dil (40mL) Inst : MS09
Misc : S37-06062402

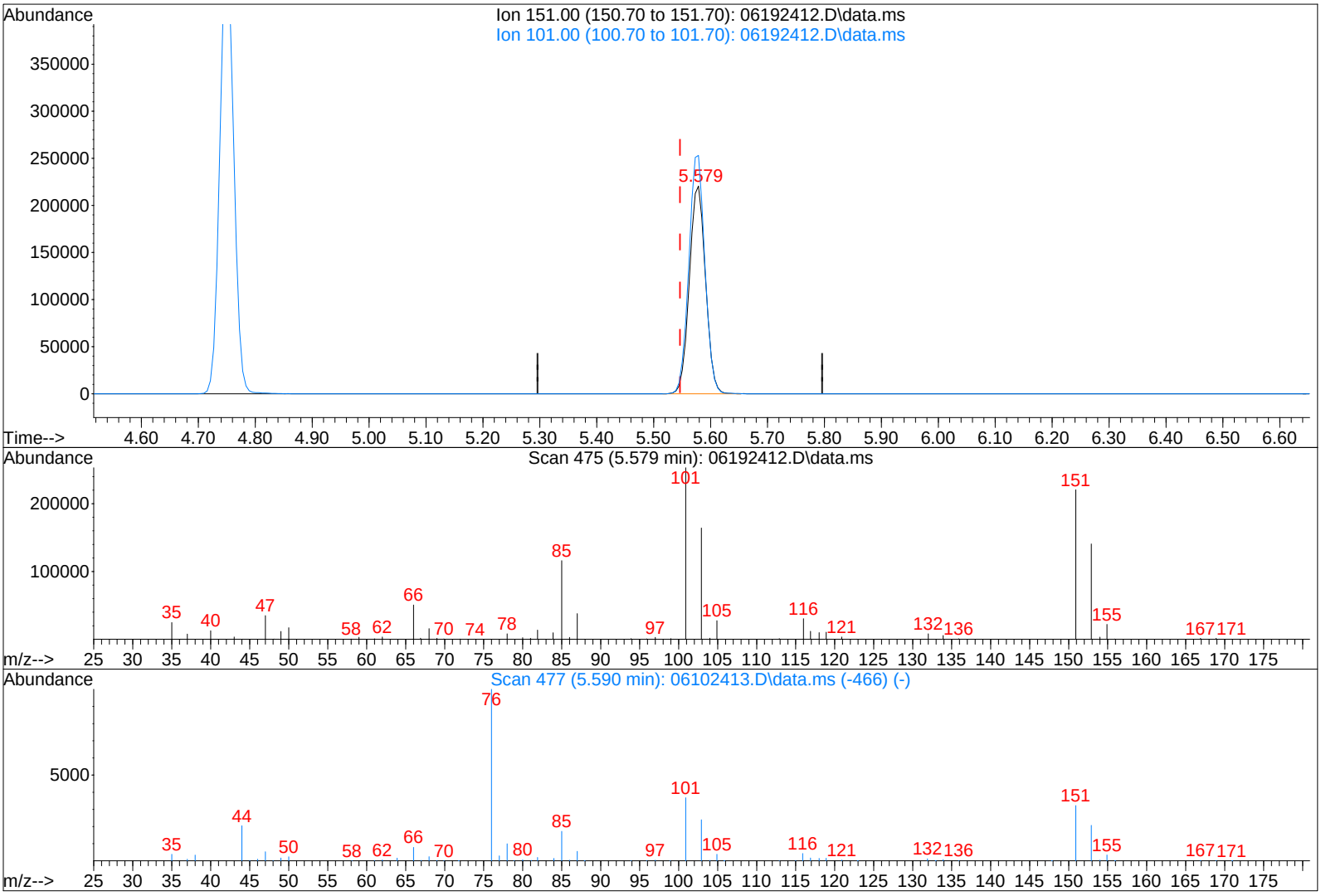
Quant Time: Jun 19 15:40:53 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\19\06192412.D Vial: 10
Acq On : 19 Jun 2024 14:46 Operator: SC
Sample : P2402249-017Dil (40mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 15:40:44 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06192412.D\data.ms

(21) Trichlorotrifluoroethane (T)

5.579min (+0.032) 30.63ng

response 433693

Ion	Exp%	Act%
151.00	100	100
101.00	115.00	114.27
0.00	0.00	0.00
0.00	0.00	0.00

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\18\
Data File : 06182422.D
Acq On : 18 Jun 2024 21:11
Operator : SC
Sample : P2402249-017 (400mL)
Misc : S37-06062402
ALS Vial : 10 Sample Multiplier: 1

MJ 6/28/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06182422.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.080	19	35	50	rBV	7729720	13881305	51.76%	19.918%
2	3.188	50	54	57	rVB3	9389	10789	0.04%	0.015%
3	3.296	64	73	78	rBV4	551714	914947	3.41%	1.313%
4	3.359	81	84	88	rVB	27171	32941	0.12%	0.047%
5	3.489	102	107	114	rBV3	25971	44287	0.17%	0.064%
6	3.603	121	127	142	rBV2	161128	264160	0.98%	0.379%
7	3.762	150	155	163	rBV	154908	233249	0.87%	0.335%
8	3.836	163	168	176	rVB	691272	909679	3.39%	1.305%
9	3.926	179	184	188	rBV	54522	73215	0.27%	0.105%
10	4.051	201	206	220	rVB	55520	84895	0.32%	0.122%
11	4.222	230	236	240	rBV	35005	50946	0.19%	0.073%
12	4.273	240	245	254	rVB	27941	47028	0.18%	0.067%
13	4.415	263	270	277	rBV4	16043	32651	0.12%	0.047%
14	4.596	296	302	305	rBV	109989	178431	0.67%	0.256%
15	4.647	305	311	320	rVV2	141536	326059	1.22%	0.468%
16	4.755	320	330	342	rVV	9569459	18733539	69.85%	26.880%
17	4.858	342	348	359	rVV3	39338	93571	0.35%	0.134%
18	4.965	360	367	373	rVV	31606	57800	0.22%	0.083%
19	5.039	373	380	392	rVV	244512	432717	1.61%	0.621%
20	5.164	396	402	410	rVB	23488	40887	0.15%	0.059%
21	5.306	421	427	437	rBV3	23903	50450	0.19%	0.072%
22	5.397	437	443	455	rVB2	23080	46635	0.17%	0.067%
23	5.584	460	476	499	rBV	13038331	26820983	100.00%	38.484%
24	5.760	499	507	515	rVV	54204	131332	0.49%	0.188%
25	5.840	515	521	533	rVB	17420	39280	0.15%	0.056%
26	6.078	557	563	573	rVB5	5184	13725	0.05%	0.020%
27	6.215	582	587	593	rVB2	8182	15678	0.06%	0.022%
28	6.300	593	602	608	rBV	21229	44390	0.17%	0.064%
29	6.413	608	622	629	rVV6	19166	72972	0.27%	0.105%
30	6.487	629	635	641	rVV	44882	120515	0.45%	0.173%
31	6.544	641	645	658	rVV4	43481	126082	0.47%	0.181%
32	6.663	659	666	675	rVB	23516	45447	0.17%	0.065%
33	6.856	692	700	709	rBV	35585	76194	0.28%	0.109%
34	6.970	713	720	733	rVB4	15928	46041	0.17%	0.066%
35	7.225	756	765	773	rBV	313055	679110	2.53%	0.974%
36	7.305	773	779	784	rVV2	82512	188606	0.70%	0.271%
37	7.350	784	787	794	rVV	58247	117528	0.44%	0.169%
38	7.413	794	798	808	rVB4	13108	34409	0.13%	0.049%
39	7.708	843	850	857	rBV5	11248	25297	0.09%	0.036%
40	7.998	890	901	917	rVB	289688	664190	2.48%	0.953%

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\18\
Data File : 06182422.D
Acq On : 18 Jun 2024 21:11
Operator : SC
Sample : P2402249-017 (400mL)
Misc : S37-06062402
ALS Vial : 10 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

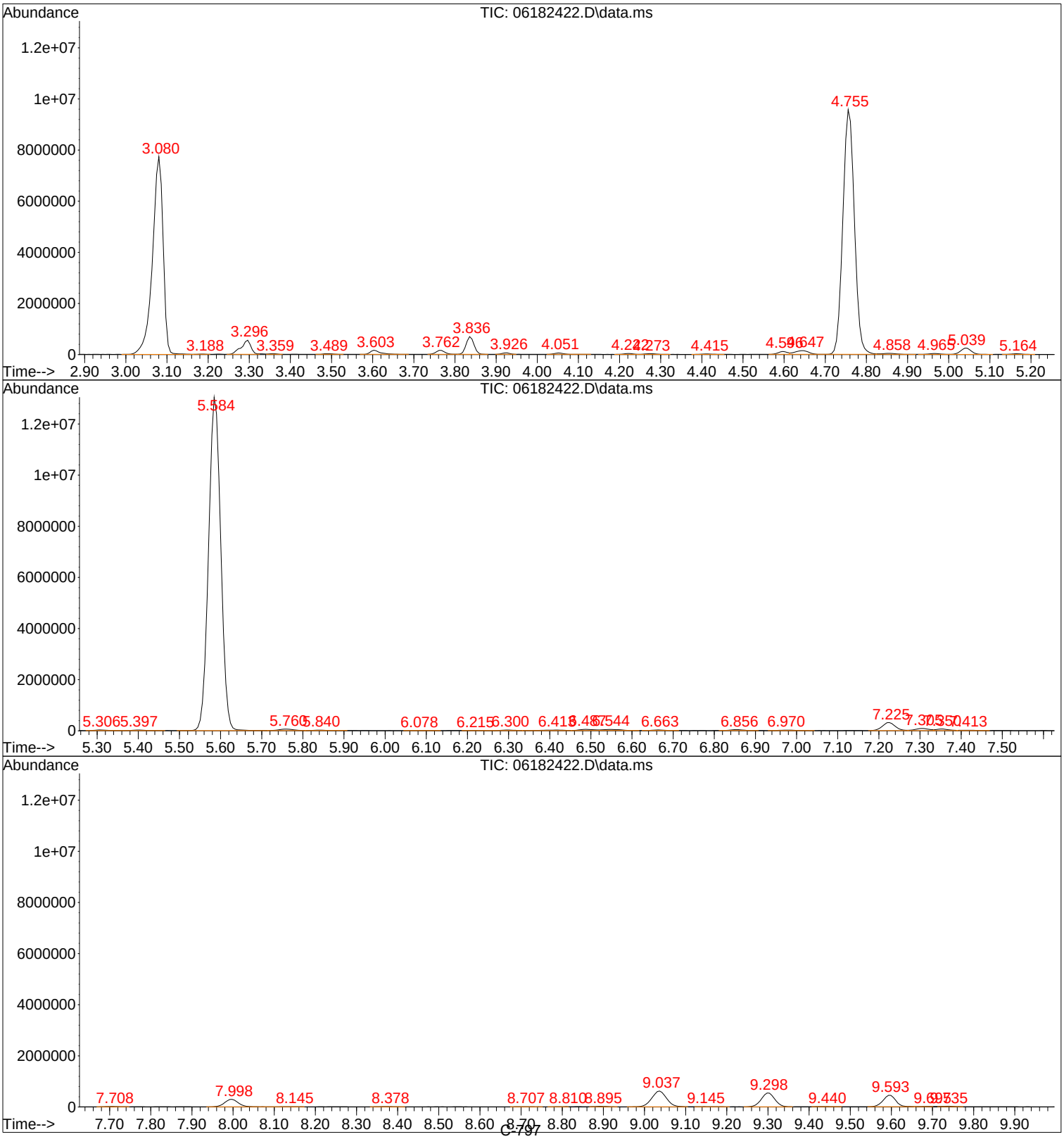
41	8.145	917	927	932	rBV3	5038	12243	0.05%	0.018%
42	8.378	960	968	975	rVB2	8680	19652	0.07%	0.028%
43	8.707	1020	1026	1034	rBV5	5490	13483	0.05%	0.019%
44	8.810	1036	1044	1045	rBV3	5925	11303	0.04%	0.016%
45	8.895	1054	1059	1066	rVB4	15468	36757	0.14%	0.053%
46	9.037	1070	1084	1096	rVV	617705	1523796	5.68%	2.186%
47	9.145	1099	1103	1114	rVB6	5074	13161	0.05%	0.019%
48	9.298	1120	1130	1141	rVB	535917	1225475	4.57%	1.758%
49	9.440	1149	1155	1162	rVB7	5831	13861	0.05%	0.020%
50	9.593	1173	1182	1193	rBV	444583	958633	3.57%	1.375%
51	9.695	1193	1200	1201	rVV5	11265	23777	0.09%	0.034%
52	9.735	1203	1207	1214	rVB2	18225	39439	0.15%	0.057%

Sum of corrected areas: 69693540

Data Path : I:\MS09\DATA\2024 06\18\
Data File : 06182422.D
Acq On : 18 Jun 2024 21:11
Operator : SC
Sample : P2402249-017 (400mL)
Misc : S37-06062402
ALS Vial : 10 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\18\\
Data File : 06182422.D
Acq On : 18 Jun 2024 21:111
Operator : SCC
Sample : P2402249-017 (400mL))
Misc : S37-060624022
ALS Vial : 10 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

						Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182423.D Vial: 11
Acq On : 18 Jun 2024 21:43 Operator: SC
Sample : P2402249-018 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 12:27:43 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/19/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.25	130	118400	12.500	ng		0.03
37) 1,4-Difluorobenzene (IS2)	9.32	114	505122	12.500	ng		0.02
56) Chlorobenzene-d5 (IS3)	14.85	54	123263	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.02	65	266540	12.666	ng		0.04
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.36%				
57) Toluene-d8 (SS2)	12.44	98	565801	11.995	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 95.92%				
73) Bromofluorobenzene (SS3)	16.83	174	224385	13.174	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 105.36%				
Target Compounds							Qvalue
2) Propene	3.29	42	19611	1.294	ng	#	73
3) Dichlorodifluoromethan...	3.36	85	14674	0.527	ng		98
4) Chloromethane	3.49	50	6527	0.343	ng		98
5) 1,2-Dichloro-1,1,2,2-t...	3.61	135	374	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	3.77	54	534	N.D.			
8) Bromomethane	4.01	94	1682	0.174	ng		98
9) Chloroethane	4.15	64	363	N.D.			
10) Ethanol	4.32	45	308164	26.772	ng		99
11) Acetonitrile	4.51	41	1142	N.D.			
12) Acrolein	4.53	56	9045	1.062	ng		93
13) Acetone	4.62	58	88458m	9.617	ng		
14) Trichlorofluoromethane	4.76	101	8895	0.316	ng		98
15) 2-Propanol (Isopropanol)	4.86	45	205381	5.542	ng		96
16) Acrylonitrile	0.00	53	0	N.D. d			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	0.00	59	0	N.D. d			
19) Methylene Chloride	5.36	84	14995	1.152	ng		98
20) 3-Chloro-1-propene (Al...	5.51	41	927	N.D.			
21) Trichlorotrifluoroethane	5.58	151	2342	0.196	ng		95
22) Carbon Disulfide	5.61	76	43881	1.046	ng		97
23) trans-1,2-Dichloroethene	6.15	61	1618	0.087	ng		99
24) 1,1-Dichloroethane	0.00	63	0	N.D. d			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D. d			
26) Vinyl Acetate	6.45	86	11614	5.472	ng	#	63
27) 2-Butanone (MEK)	6.68	72	16786	2.306	ng		97
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D. d			
30) Ethyl Acetate	7.29	61	701406	157.830	ng		97
31) n-Hexane	7.31	57	10309	0.529	ng	#	71
32) Chloroform	7.39	83	1139	N.D.			
34) Tetrahydrofuran (THF)	7.76	72	2465	0.371	ng	#	72
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.13	62	1307	0.056	ng		86
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	9.56	61	678	No Calib		#	
40) 1-Butanol	8.81	56	30561	No Calib		#	
41) Benzene	8.91	78	40927	0.878	ng		100
42) Carbon Tetrachloride	9.08	117	2259	0.104	ng		93
43) Cyclohexane	9.22	84	6762	0.448	ng		99
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	9.87	63	985	0.088	ng		95
46) Bromodichloromethane	10.10	83	326	N.D.			
47) Trichloroethene	10.17	130	650	N.D.			
48) 1,4-Dioxane	0.00	88	0	N.D. d			
49) 2,2,4-Trimethylpentane...	0.00	57	0	N.D. d			
50) Methyl Methacrylate	10.41	100	1731	0.438	ng		100

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182423.D Vial: 11
Acq On : 18 Jun 2024 21:43 Operator: SC
Sample : P2402249-018 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 12:27:43 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

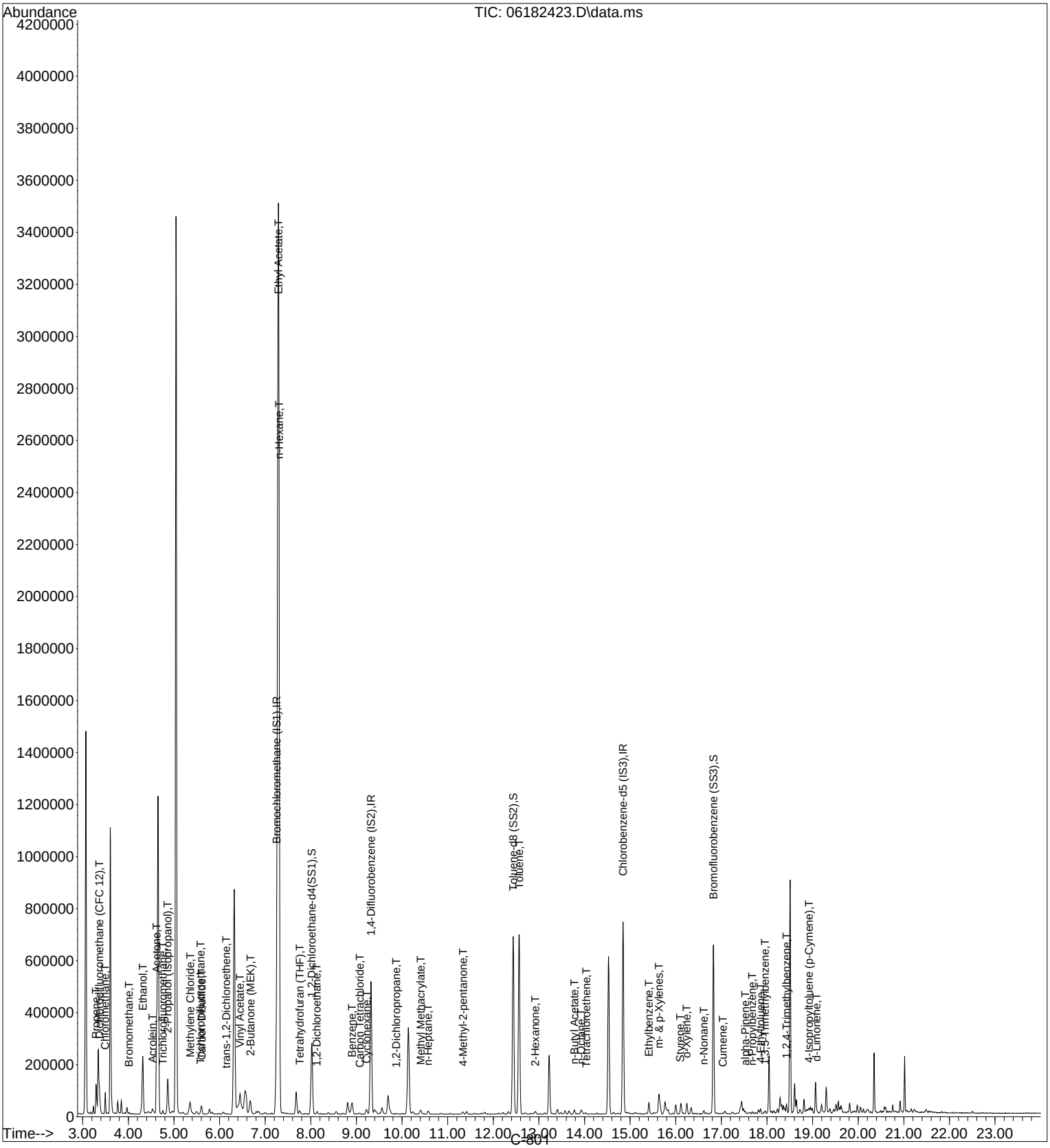
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	10.57	71	2844	0.289 ng		95
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	11.34	58	2152	0.210 ng	#	50
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	12.57	91	607607	12.327 ng		100
59) 2-Hexanone	12.92	43	11605	0.376 ng		79
60) Dibromochloromethane	13.07	129	287	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	13.78	43	15741	0.485 ng		97
63) n-Octane	13.93	57	2497	0.244 ng		100
64) Tetrachloroethene	14.04	166	1036	0.061 ng		96
65) Chlorobenzene	14.90	112	912	N.D.		
66) Ethylbenzene	15.41	91	33582	0.596 ng		99
67) m- & p-Xylenes	15.64	91	67259	1.418 ng		97
68) Bromoform	15.68	173	566	N.D.		
69) Styrene	16.10	104	4511	0.141 ng		97
70) o-Xylene	16.24	91	25334	0.542 ng		99
71) n-Nonane	16.62	43	6031	0.222 ng		95
72) 1,1,2,2-Tetrachloroethane	16.20	83	185	N.D.		
74) Cumene	17.03	105	3451	0.059 ng		95
75) alpha-Pinene	17.53	93	3314	0.122 ng		93
76) n-Propylbenzene	17.68	91	5604	0.080 ng		94
77) 3-Ethyltoluene	17.03	105	3451	No Calib		
78) 4-Ethyltoluene	17.86	105	4200	0.075 ng		99
79) 1,3,5-Trimethylbenzene	17.96	105	4305	0.089 ng		96
80) alpha-Methylstyrene	0.00	118	0	N.D.		
81) 2-Ethyltoluene	17.03	105	3451	No Calib		
82) 1,2,4-Trimethylbenzene	18.43	105	13868	0.271 ng		88
83) n-Decane	17.11	58	466	No Calib	#	
84) Benzyl Chloride	18.51	91	423	N.D.		
85) 1,3-Dichlorobenzene	18.58	146	565	N.D.		
86) 1,4-Dichlorobenzene	18.66	146	1229	N.D.		
87) sec-Butylbenzene	18.74	105	1443	N.D.		
88) 4-Isopropyltoluene (p-...	18.92	119	5049	0.087 ng		81
89) 1,2,3-Trimethylbenzene	17.03	105	3451	No Calib		
90) 1,2-Dichlorobenzene	19.04	146	591	N.D.		
91) d-Limonene	19.09	68	2405	0.138 ng		97
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	17.86	58	253	No Calib	#	
94) 1,2,4-Trichlorobenzene	20.84	180	900	N.D.		
95) Naphthalene	20.94	128	1416	N.D.		
96) n-Dodecane	18.96	58	657	No Calib	#	
97) Hexachlorobutadiene	21.30	225	614	N.D.		
98) Cyclohexanone	15.52	55	1330	No Calib	#	
99) tert-Butylbenzene	0.00	119	0	N.D. d		
100) n-Butylbenzene	0.00	91	0	N.D. d		
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182423.D Vial: 11
Acq On : 18 Jun 2024 21:43 Operator: SC
Sample : P2402249-018 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 12:27:43 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182423.D Vial: 11
Acq On : 18 Jun 2024 21:43 Operator: SC
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Response via : Initial Calibration
DataAcq Meth:TO15.M

6/19/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.25	130	118400	12.500	ng		0.03
37) 1,4-Difluorobenzene (IS2)	9.32	114	505122	12.500	ng		0.02
56) Chlorobenzene-d5 (IS3)	14.85	54	123263	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.02	65	266540	12.666	ng		0.04
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.36%				
57) Toluene-d8 (SS2)	12.44	98	565801	11.995	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 95.92%				
73) Bromofluorobenzene (SS3)	16.83	174	224385	13.174	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 105.36%				
Target Compounds							Qvalue
2) Propene	3.29	42	19611	1.294	ng	#	73
3) Dichlorodifluoromethan...	3.36	85	14674	0.527	ng		98
4) Chloromethane	3.49	50	6527	0.343	ng		98
8) Bromomethane	4.01	94	1682	0.174	ng		98
10) Ethanol	4.32	45	308164	26.772	ng		99
12) Acrolein	4.53	56	9045	1.062	ng		93
13) Acetone	4.62	58	88458m	9.617	ng		
14) Trichlorofluoromethane	4.76	101	8895	0.316	ng		98
15) 2-Propanol (Isopropanol)	4.86	45	205381	5.542	ng		96
19) Methylene Chloride	5.36	84	14995	1.152	ng		98
21) Trichlorotrifluoroethane	5.58	151	2342	0.196	ng		95
22) Carbon Disulfide	5.61	76	43881	1.046	ng		97
23) trans-1,2-Dichloroethene	6.15	61	1618	0.087	ng		99
26) Vinyl Acetate	6.45	86	11614	5.472	ng	#	63
27) 2-Butanone (MEK)	6.68	72	16786	2.306	ng		97
30) Ethyl Acetate	7.29	61	701406	157.830	ng		97
31) n-Hexane	7.31	57	10309	0.529	ng	#	71
34) Tetrahydrofuran (THF)	7.76	72	2465	0.371	ng	#	72
36) 1,2-Dichloroethane	8.13	62	1307	0.056	ng		86
41) Benzene	8.91	78	40927	0.878	ng		100
42) Carbon Tetrachloride	9.08	117	2259	0.104	ng		93
43) Cyclohexane	9.22	84	6762	0.448	ng		99
45) 1,2-Dichloropropane	9.87	63	985	0.088	ng		95
50) Methyl Methacrylate	10.41	100	1731	0.438	ng		100
51) n-Heptane	10.57	71	2844	0.289	ng		95
53) 4-Methyl-2-pentanone	11.34	58	2152	0.210	ng	#	50
58) Toluene	12.57	91	607607	12.327	ng		100
59) 2-Hexanone	12.92	43	11605	0.376	ng		79
62) n-Butyl Acetate	13.78	43	15741	0.485	ng		97
63) n-Octane	13.93	57	2497	0.244	ng		100
64) Tetrachloroethene	14.04	166	1036	0.061	ng		96
66) Ethylbenzene	15.41	91	33582	0.596	ng		99
67) m- & p-Xylenes	15.64	91	67259	1.418	ng		97
69) Styrene	16.10	104	4511	0.141	ng		97
70) o-Xylene	16.24	91	25334	0.542	ng		99
71) n-Nonane	16.62	43	6031	0.222	ng		95
74) Cumene	17.03	105	3451	0.059	ng		95
75) alpha-Pinene	17.53	93	3314	0.122	ng		93
76) n-Propylbenzene	17.68	91	5604	0.080	ng		94
78) 4-Ethyltoluene	17.86	105	4200	0.075	ng		99
79) 1,3,5-Trimethylbenzene	17.96	105	4305	0.089	ng		96
82) 1,2,4-Trimethylbenzene	18.43	105	13868	0.271	ng		88
88) 4-Isopropyltoluene (p-...	18.92	119	5049	0.087	ng		81
91) d-Limonene	19.09	68	2405	0.138	ng		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

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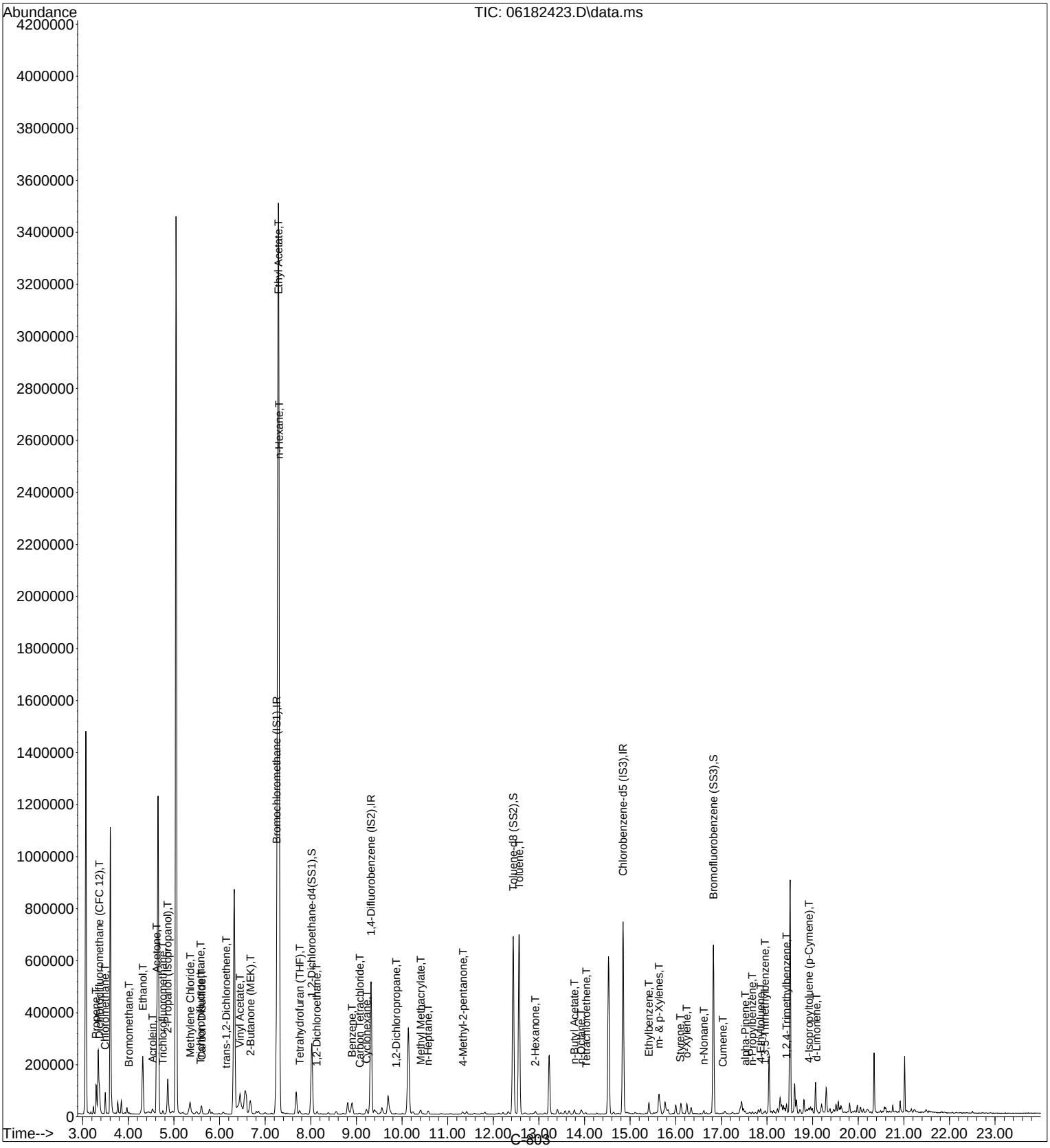
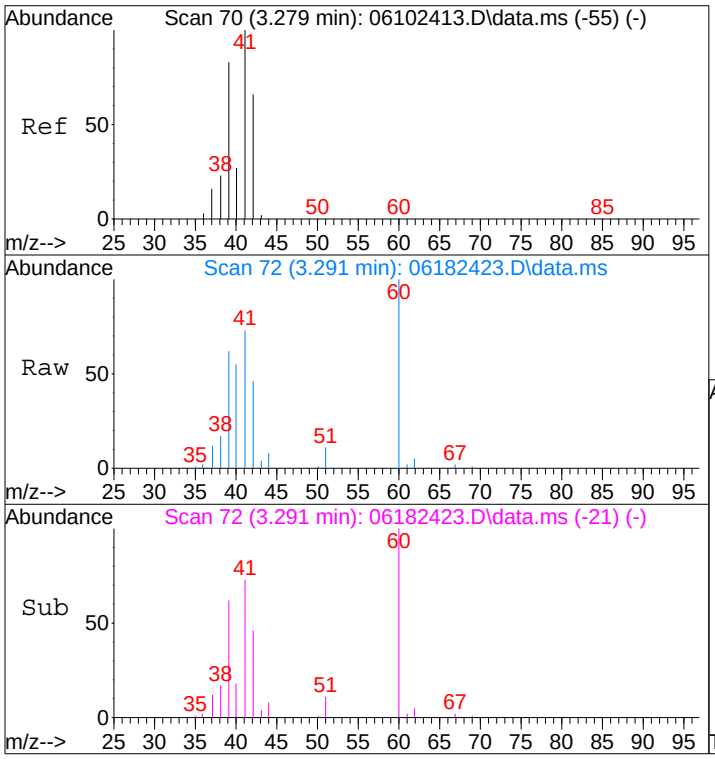
Acq On : 18 Jun 2024 21:43 Operator: SC
Sample : P2402249-018 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 12:27:43 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

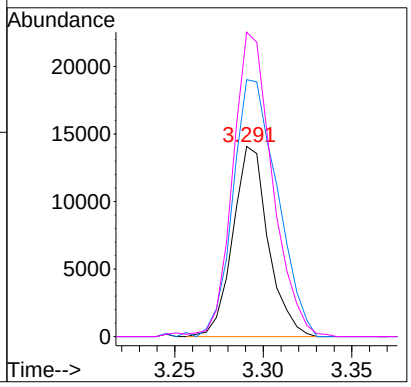


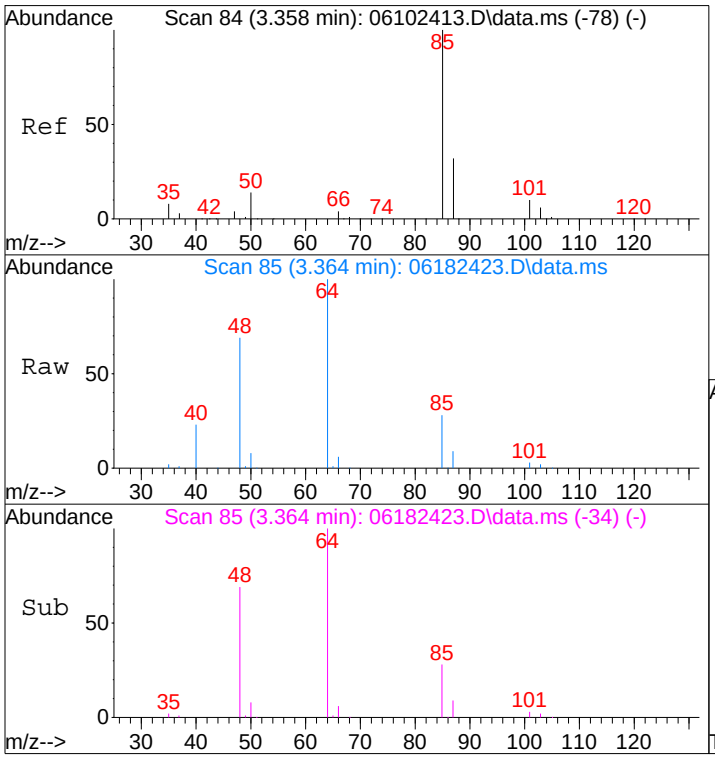


#2
Propene
Concen: 1.29 ng
RT: 3.29 min Scan# 72
Delta R.T. 0.041 min
Lab File: 06182423.D
Acq: 18 Jun 2024 21:43

Tgt Ion: 42 Resp: 19611

Ion	Ratio	Lower	Upper
42	100		
39	168.8	107.3	147.3#
41	179.0	134.3	174.3#

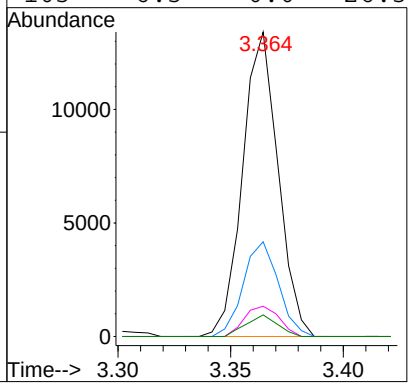


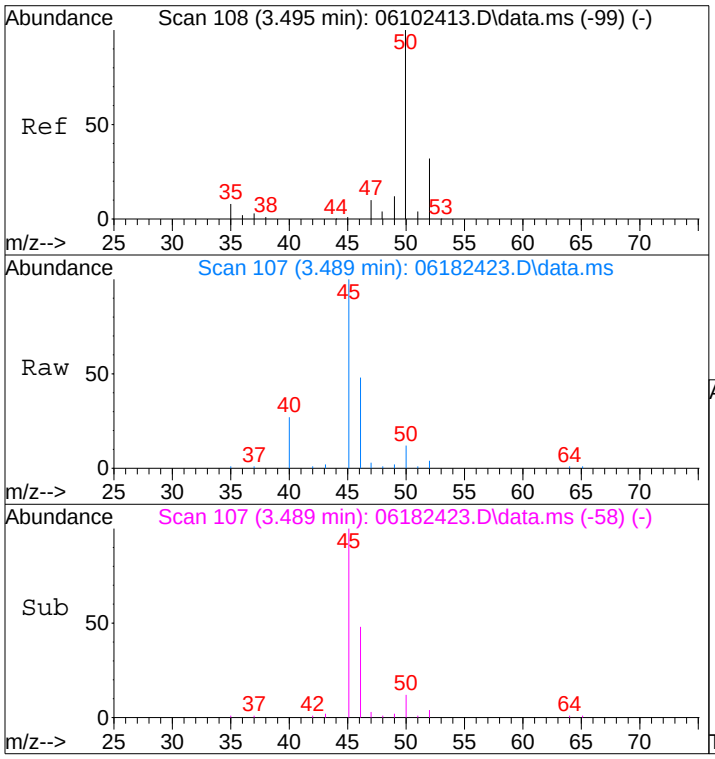


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.53 ng
RT: 3.36 min Scan# 85
Delta R.T. 0.042 min
Lab File: 06182423.D
Acq: 18 Jun 2024 21:43

Tgt Ion: 85 Resp: 14674

Ion	Ratio	Lower	Upper
85	100		
87	30.8	12.2	52.2
101	9.8	0.0	29.8
103	6.3	0.0	26.3

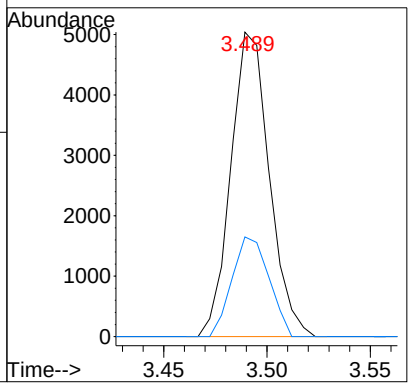


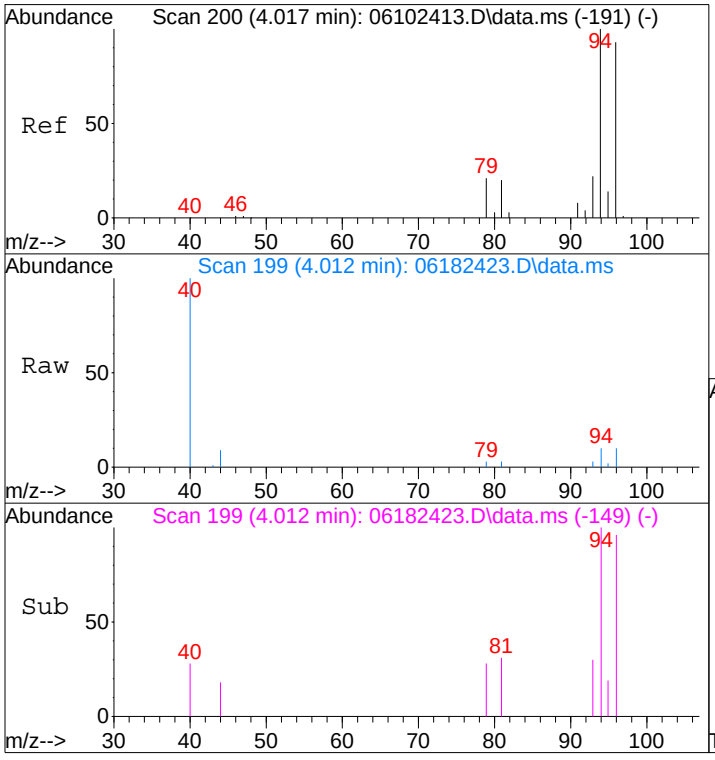


#4
Chloromethane
Concen: 0.34 ng
RT: 3.49 min Scan# 107
Delta R.T. 0.027 min
Lab File: 06182423.D
Acq: 18 Jun 2024 21:43

Tgt Ion: 50 Resp: 6527

Ion	Ratio	Lower	Upper
50	100		
52	31.5	12.4	52.4

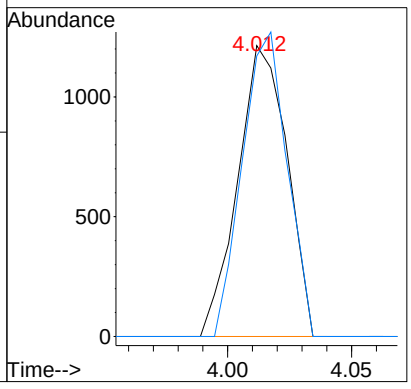


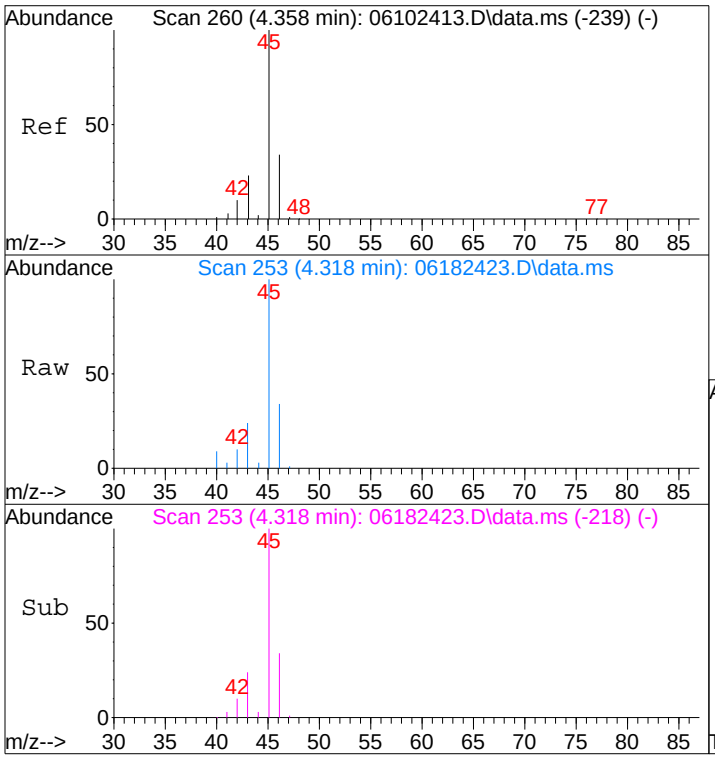


#8
Bromomethane
Concen: 0.17 ng
RT: 4.01 min Scan# 199
Delta R.T. 0.032 min
Lab File: 06182423.D
Acq: 18 Jun 2024 21:43

Tgt Ion: 94 Resp: 1682

Ion	Ratio	Lower	Upper
94	100		
96	94.8	73.2	113.2

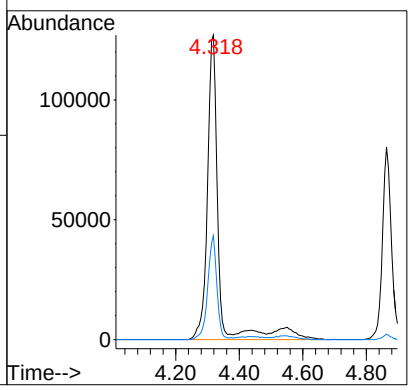


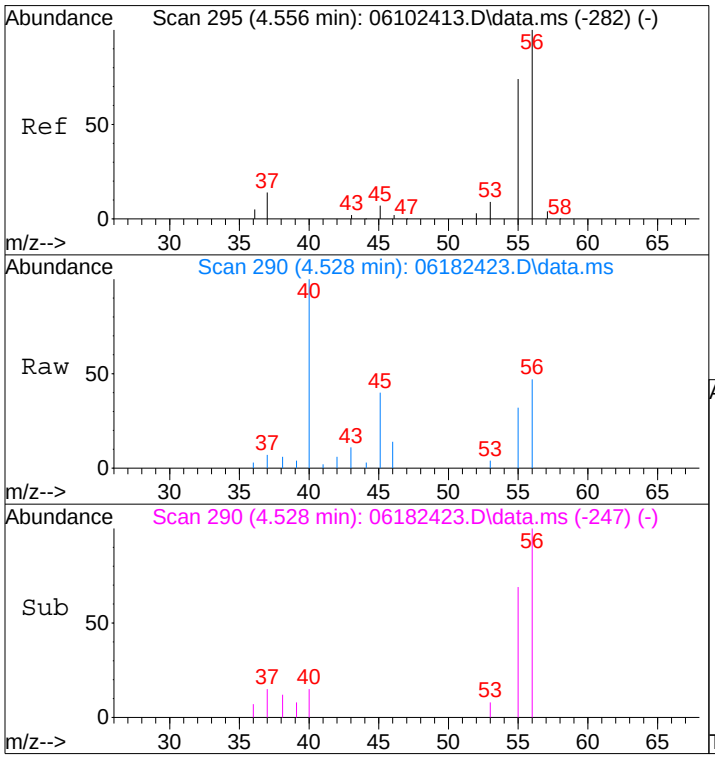


#10
Ethanol
Concen: 26.77 ng
RT: 4.32 min Scan# 253
Delta R.T. -0.048 min
Lab File: 06182423.D
Acq: 18 Jun 2024 21:43

Tgt Ion: 45 Resp: 308164

Ion	Ratio	Lower	Upper
45	100		
46	32.9	13.5	53.5

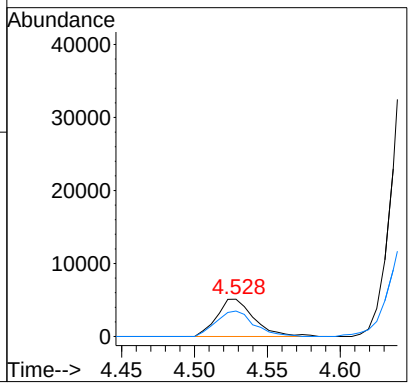


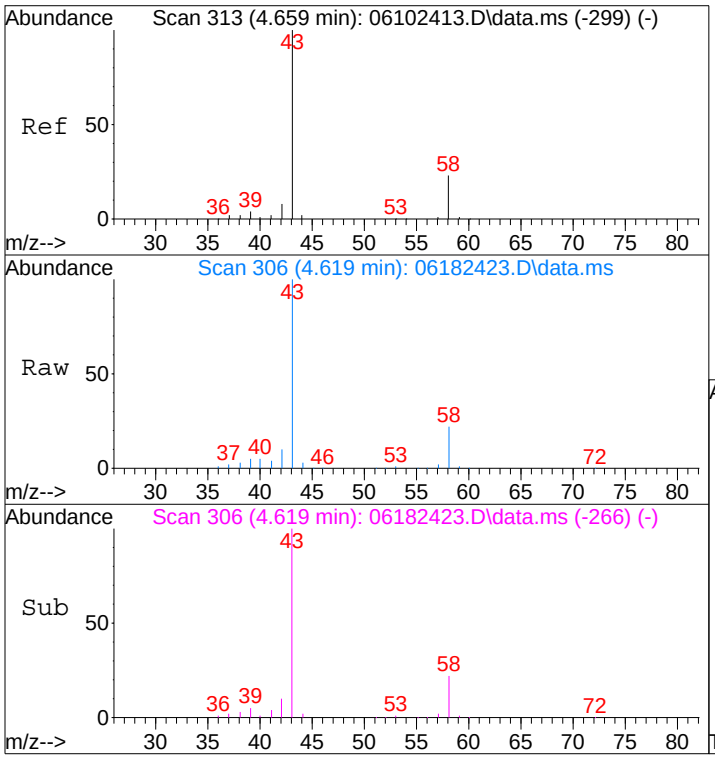


#12
Acrolein
Concen: 1.06 ng
RT: 4.53 min Scan# 290
Delta R.T. -0.007 min
Lab File: 06182423.D
Acq: 18 Jun 2024 21:43

Tgt Ion: 56 Resp: 9045

Ion	Ratio	Lower	Upper
56	100		
55	69.5	55.5	95.5

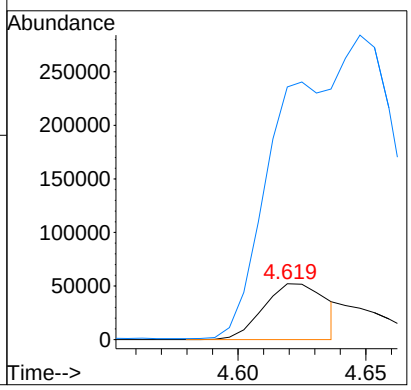


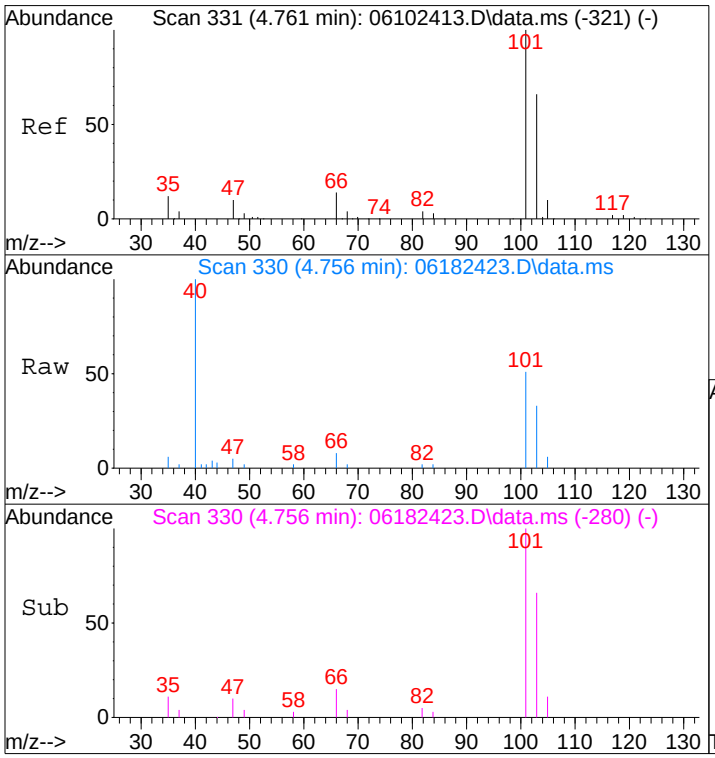


#13
Acetone
Concen: 9.62 ng m
RT: 4.62 min Scan# 306
Delta R.T. -0.023 min
Lab File: 06182423.D
Acq: 18 Jun 2024 21:43

Tgt Ion: 58 Resp: 88458

Ion	Ratio	Lower	Upper
58	100		
43	996.4	400.7	460.7#

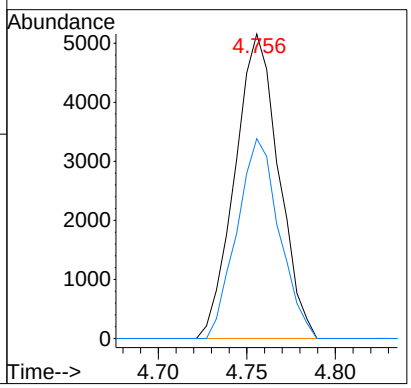


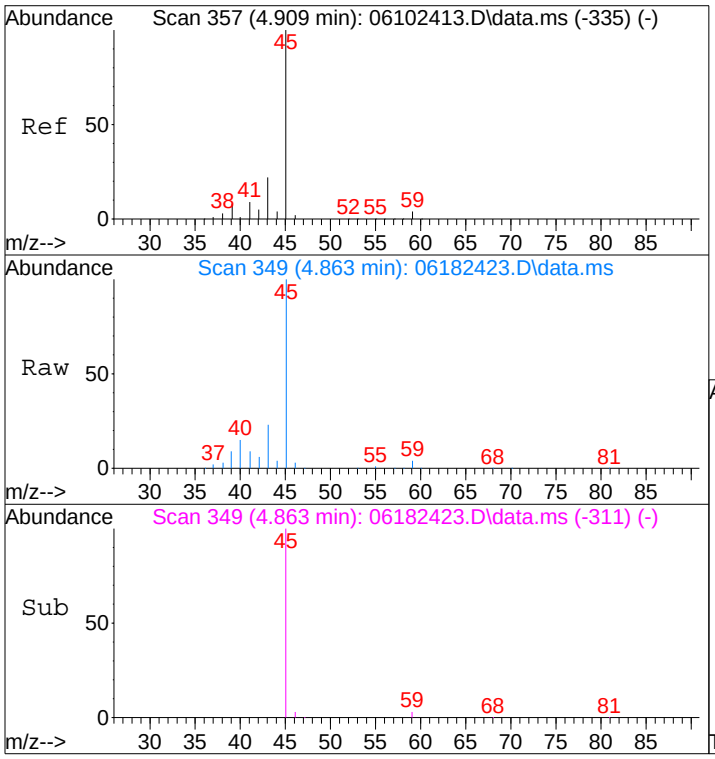


#14
Trichlorofluoromethane
Concen: 0.32 ng
RT: 4.76 min Scan# 330
Delta R.T. 0.035 min
Lab File: 06182423.D
Acq: 18 Jun 2024 21:43

Tgt Ion:101 Resp: 8895

Ion	Ratio	Lower	Upper
101	100		
103	63.4	44.9	84.9

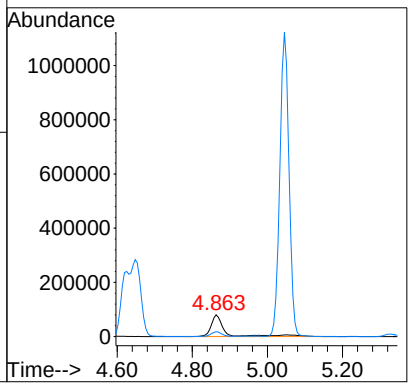


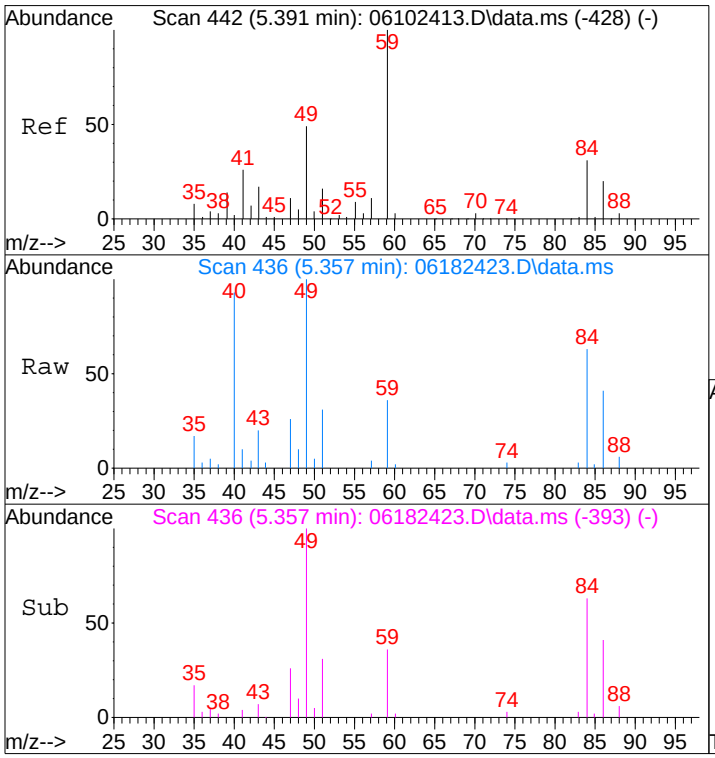


#15
2-Propanol (Isopropanol)
Concen: 5.54 ng
RT: 4.86 min Scan# 349
Delta R.T. -0.037 min
Lab File: 06182423.D
Acq: 18 Jun 2024 21:43

Tgt Ion: 45 Resp: 205381

Ion	Ratio	Lower	Upper
45	100		
43	20.6	2.5	42.5

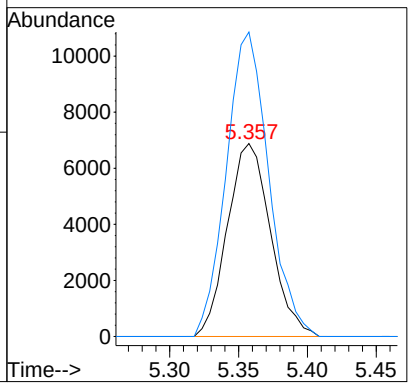


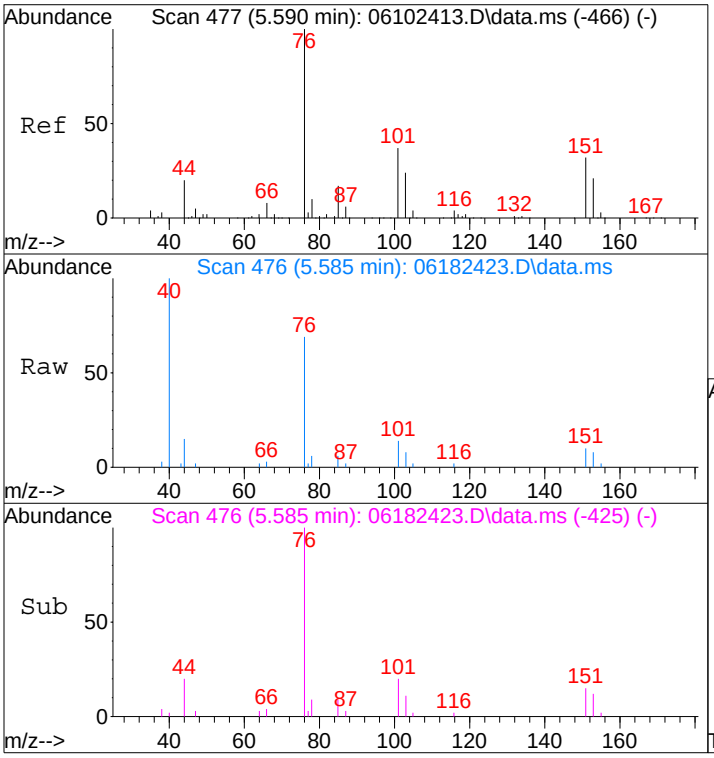


#19
Methylene Chloride
Concen: 1.15 ng
RT: 5.36 min Scan# 436
Delta R.T. -0.003 min
Lab File: 06182423.D
Acq: 18 Jun 2024 21:43

Tgt Ion: 84 Resp: 14995

Ion	Ratio	Lower	Upper
84	100		
49	155.1	132.9	182.9

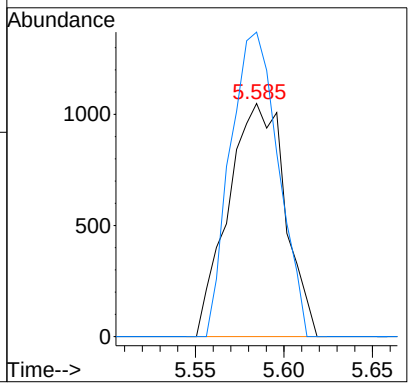


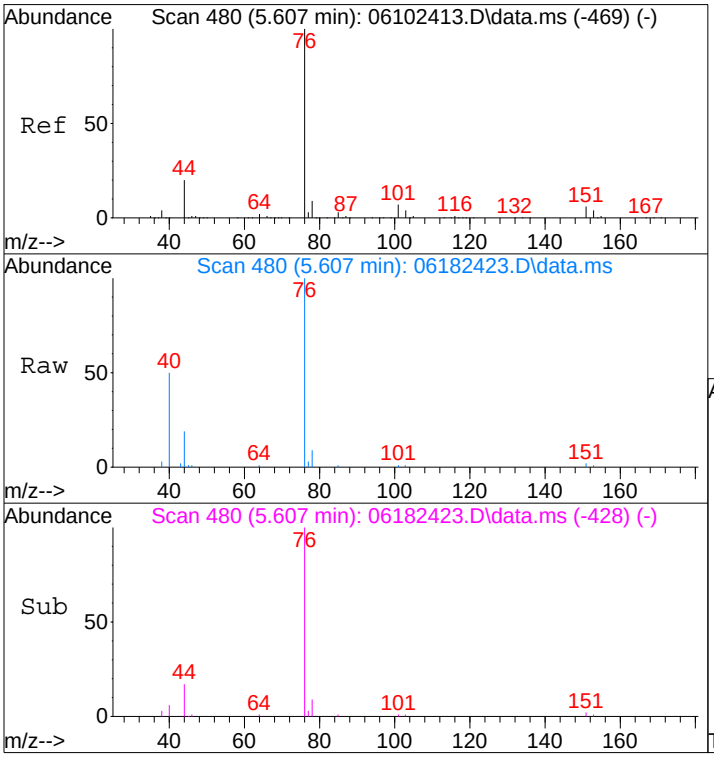


#21
Trichlorotrifluoroethane
Concen: 0.20 ng
RT: 5.58 min Scan# 476
Delta R.T. 0.038 min
Lab File: 06182423.D
Acq: 18 Jun 2024 21:43

Tgt Ion:151 Resp: 2342

Ion	Ratio	Lower	Upper
151	100		
101	110.1	95.0	135.0

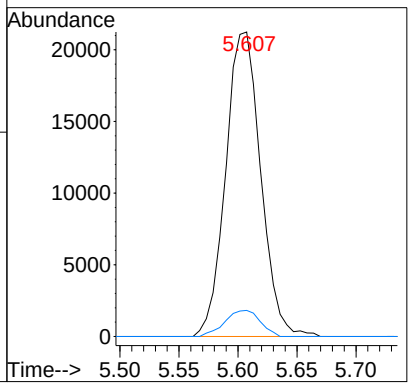


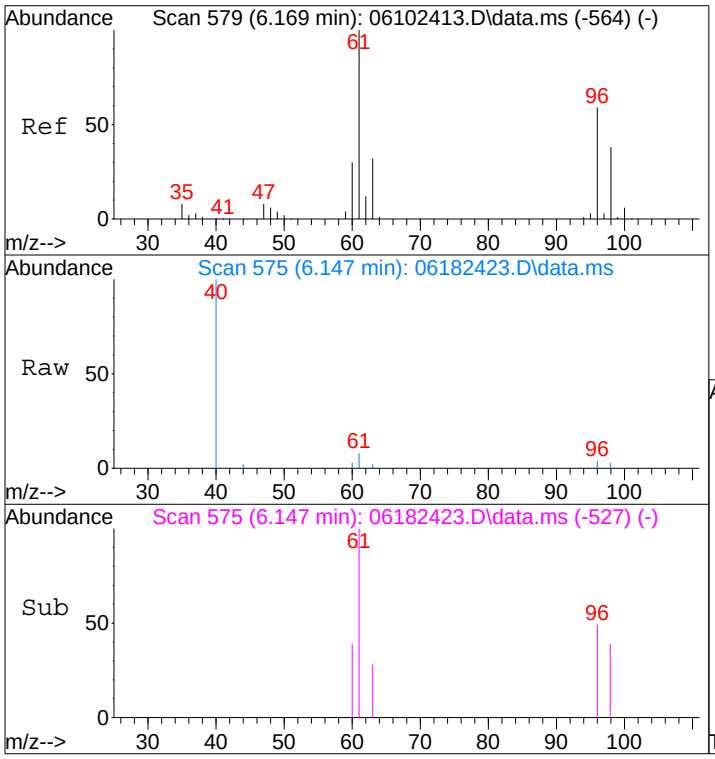


#22
Carbon Disulfide
Concen: 1.05 ng
RT: 5.61 min Scan# 480
Delta R.T. 0.044 min
Lab File: 06182423.D
Acq: 18 Jun 2024 21:43

Tgt Ion: 76 Resp: 43881

Ion	Ratio	Lower	Upper
76	100		
78	8.7	0.0	29.6

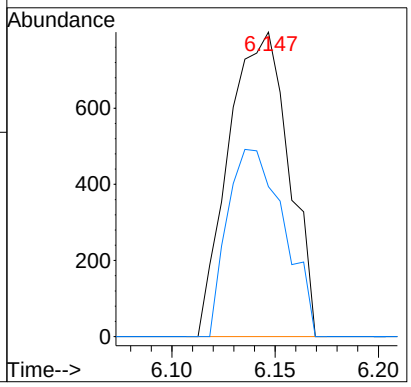


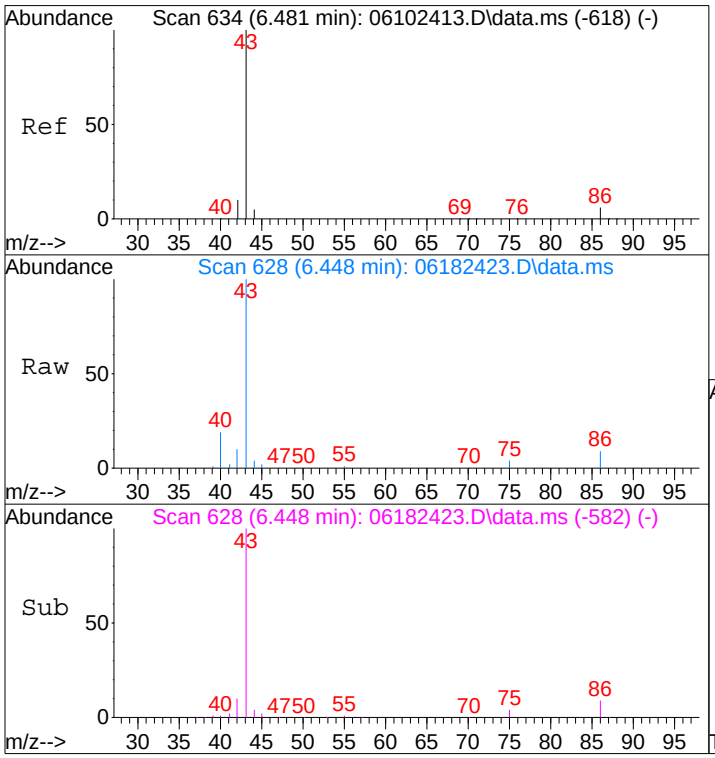


#23
trans-1,2-Dichloroethene
Concen: 0.09 ng
RT: 6.15 min Scan# 575
Delta R.T. 0.022 min
Lab File: 06182423.D
Acq: 18 Jun 2024 21:43

Tgt Ion: 61 Resp: 1618

Ion	Ratio	Lower	Upper
61	100		
96	58.0	39.0	79.0

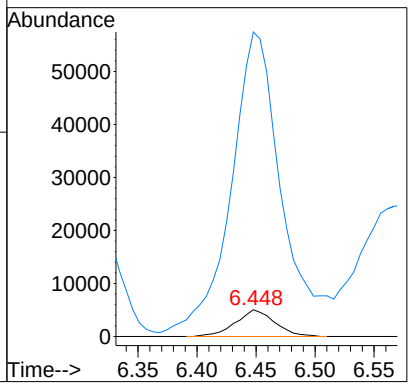


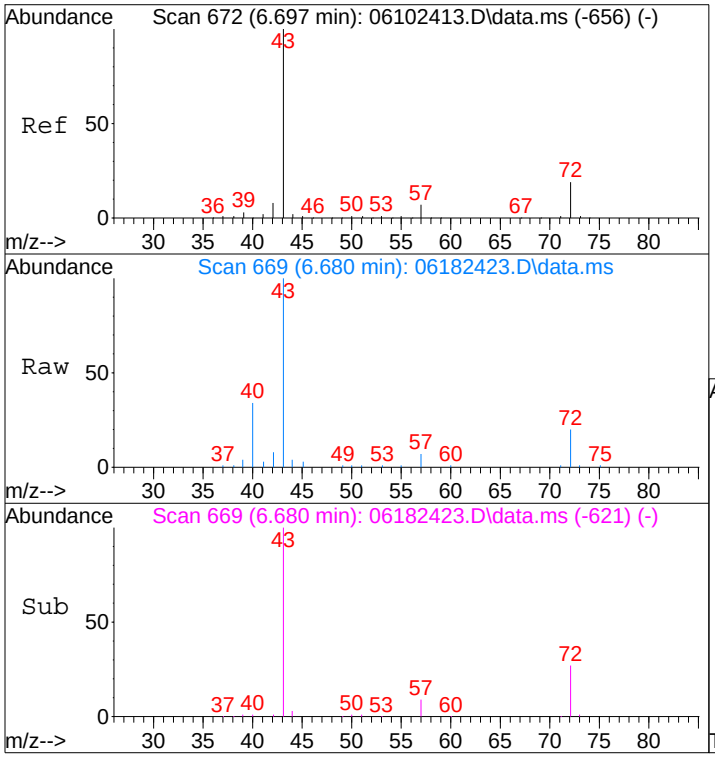


#26
Vinyl Acetate
Concen: 5.47 ng
RT: 6.45 min Scan# 628
Delta R.T. 0.008 min
Lab File: 06182423.D
Acq: 18 Jun 2024 21:43

Tgt Ion: 86 Resp: 11614

Ion	Ratio	Lower	Upper
86	100		
43	1451.2	1668.9	1708.9#

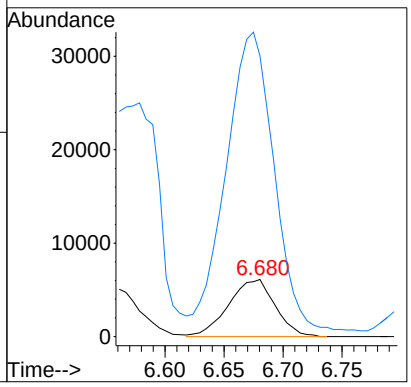


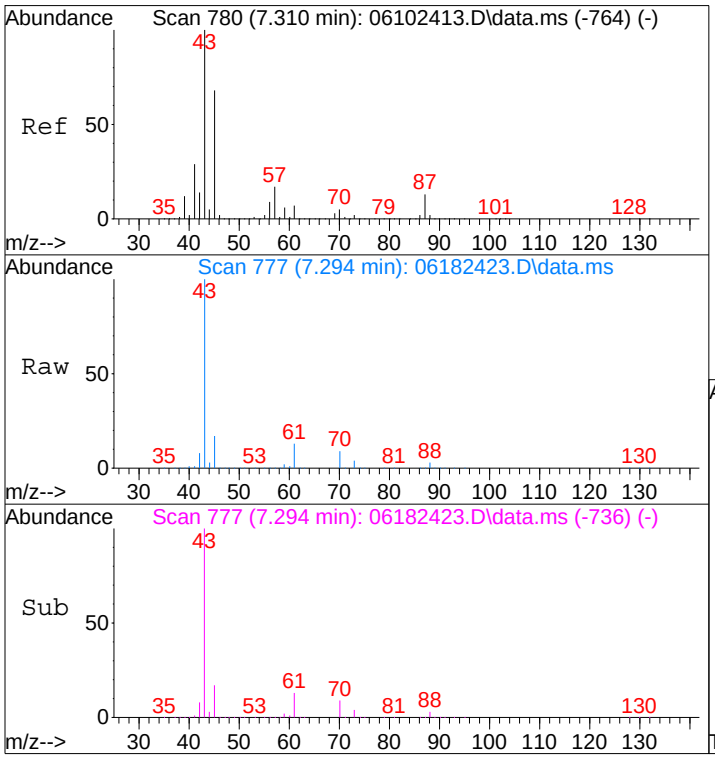


#27
2-Butanone (MEK)
Concen: 2.31 ng
RT: 6.68 min Scan# 669
Delta R.T. 0.022 min
Lab File: 06182423.D
Acq: 18 Jun 2024 21:43

Tgt Ion: 72 Resp: 16786

Ion	Ratio	Lower	Upper
72	100		
43	535.2	506.8	546.8

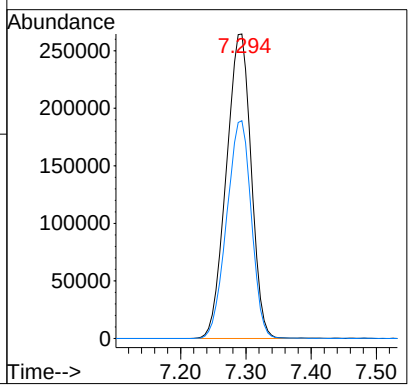


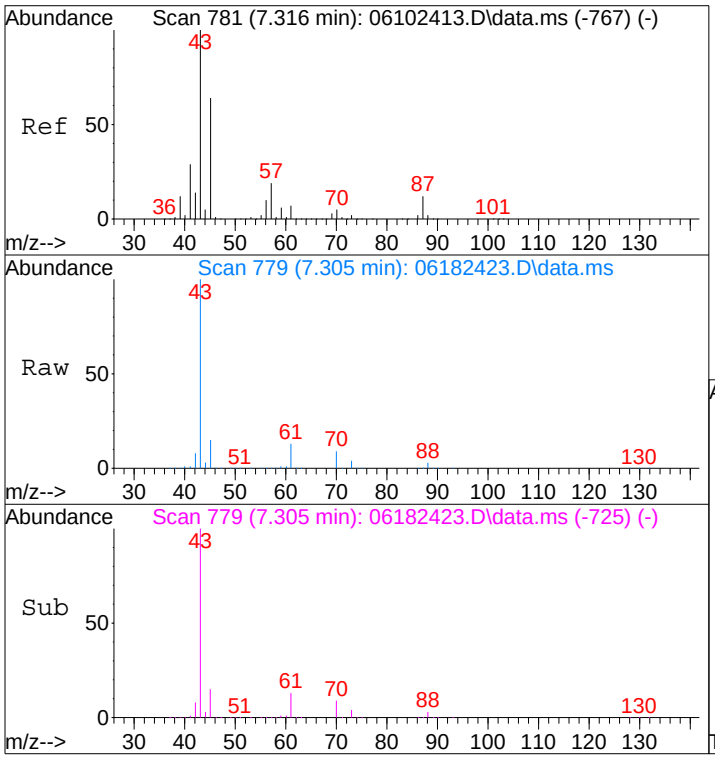


#30
Ethyl Acetate
Concen: 157.83 ng
RT: 7.29 min Scan# 777
Delta R.T. 0.034 min
Lab File: 06182423.D
Acq: 18 Jun 2024 21:43

Tgt Ion: 61 Resp: 701406

Ion	Ratio	Lower	Upper
61	100		
70	71.0	53.5	93.5

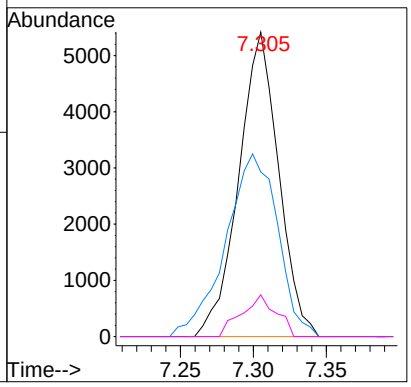


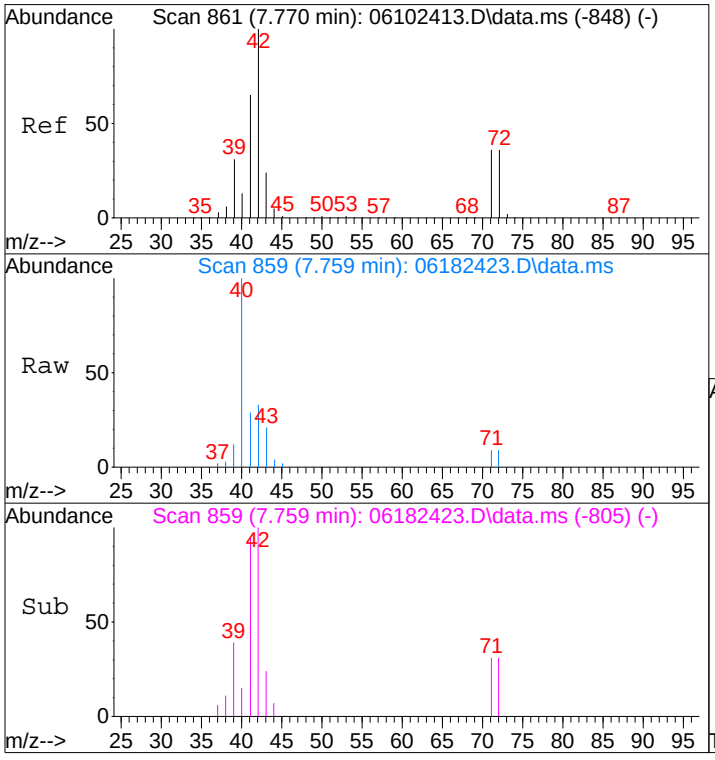


#31
n-Hexane
Concen: 0.53 ng
RT: 7.31 min Scan# 779
Delta R.T. 0.057 min
Lab File: 06182423.D
Acq: 18 Jun 2024 21:43

Tgt Ion: 57 Resp: 10309

Ion	Ratio	Lower	Upper
57	100		
56	78.0	42.5	63.7#
86	11.9	9.5	14.3

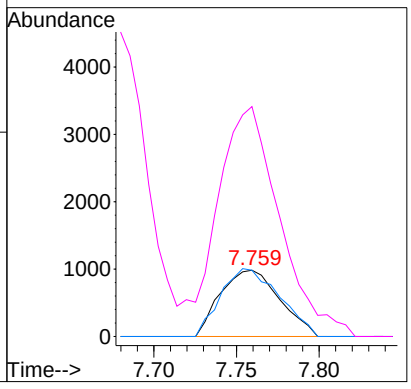


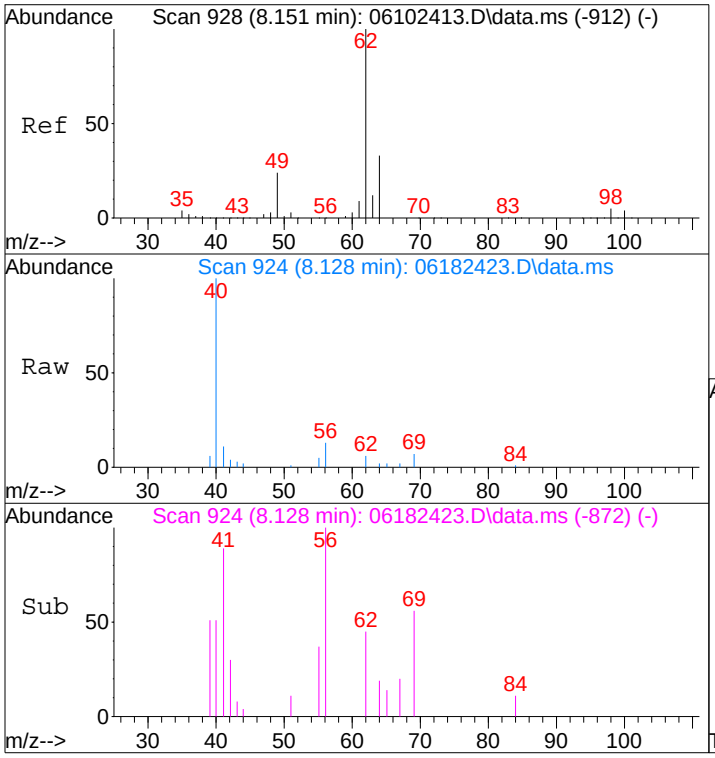


#34
Tetrahydrofuran (THF)
Concen: 0.37 ng
RT: 7.76 min Scan# 859
Delta R.T. 0.056 min
Lab File: 06182423.D
Acq: 18 Jun 2024 21:43

Tgt Ion: 72 Resp: 2465

Ion	Ratio	Lower	Upper
72	100		
71	100.9	79.4	119.4
42	351.4	260.8	300.8#

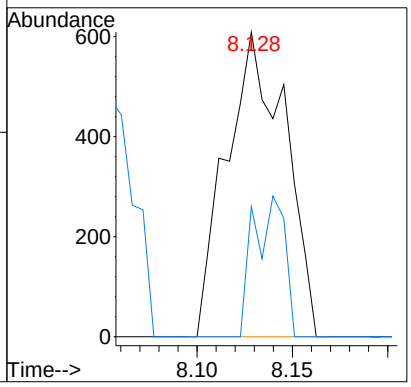


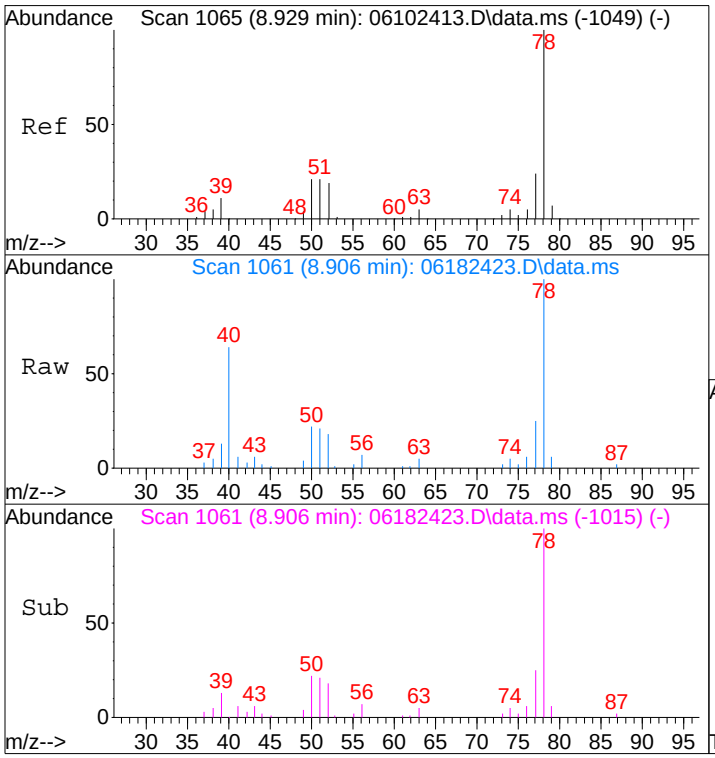


#36
1,2-Dichloroethane
Concen: 0.06 ng
RT: 8.13 min Scan# 924
Delta R.T. 0.043 min
Lab File: 06182423.D
Acq: 18 Jun 2024 21:43

Tgt Ion: 62 Resp: 1307

Ion	Ratio	Lower	Upper
62	100		
64	24.3	12.0	52.0

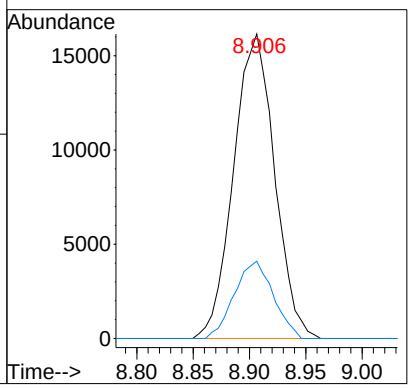


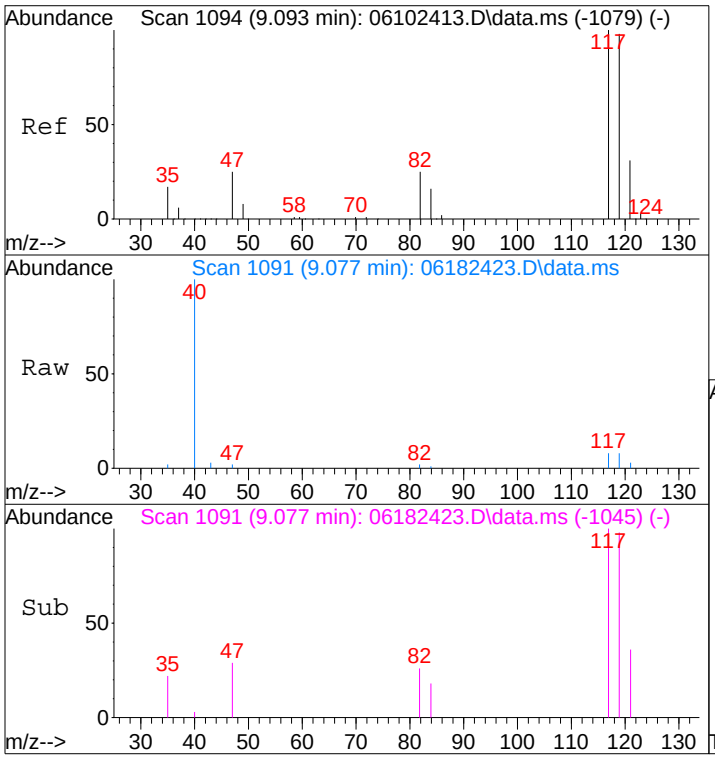


#41
Benzene
Concen: 0.88 ng
RT: 8.91 min Scan# 1061
Delta R.T. 0.009 min
Lab File: 06182423.D
Acq: 18 Jun 2024 21:43

Tgt Ion: 78 Resp: 40927

Ion	Ratio	Lower	Upper
78	100		
77	24.1	4.0	44.0

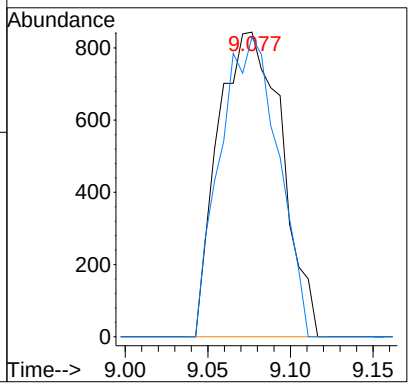


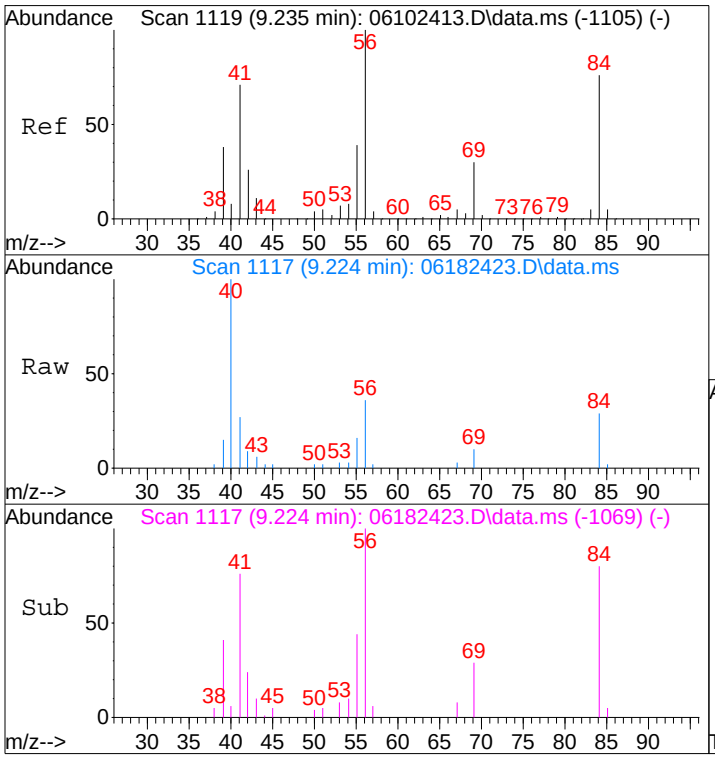


#42
Carbon Tetrachloride
Concen: 0.10 ng
RT: 9.08 min Scan# 1091
Delta R.T. 0.010 min
Lab File: 06182423.D
Acq: 18 Jun 2024 21:43

Tgt Ion:117 Resp: 2259

Ion	Ratio	Lower	Upper
117	100		
119	90.0	77.3	117.3

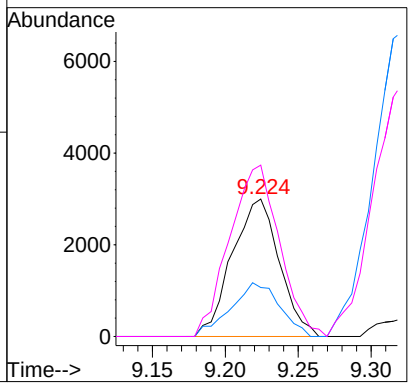


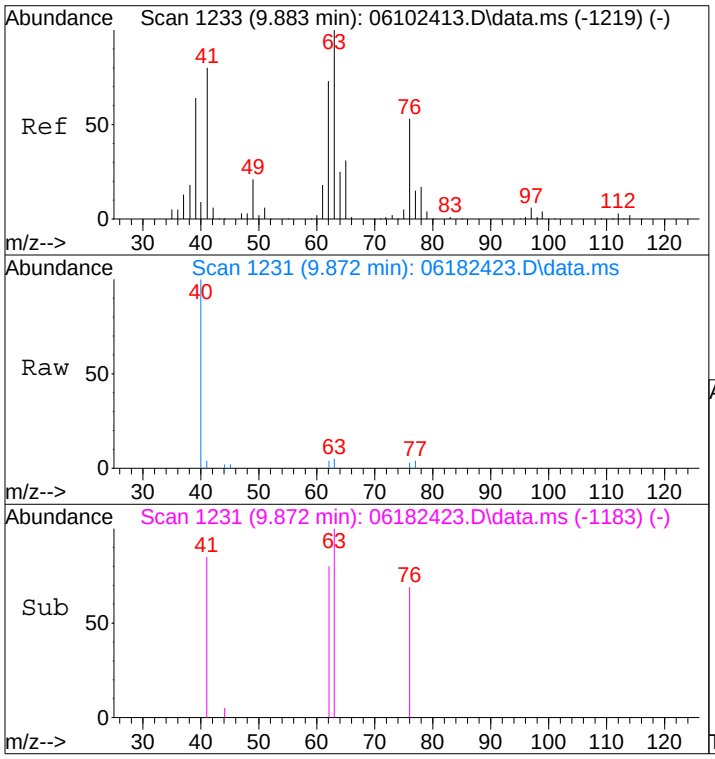


#43
Cyclohexane
Concen: 0.45 ng
RT: 9.22 min Scan# 1117
Delta R.T. 0.022 min
Lab File: 06182423.D
Acq: 18 Jun 2024 21:43

Tgt Ion: 84 Resp: 6762

Ion	Ratio	Lower	Upper
84	100		
69	40.3	18.8	58.8
56	131.4	111.5	151.5

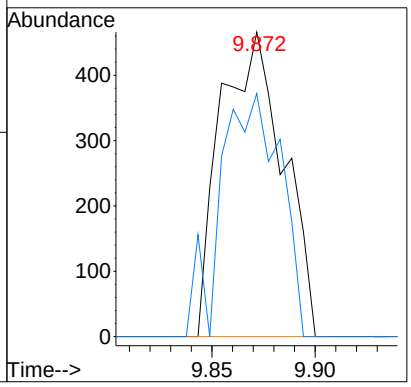


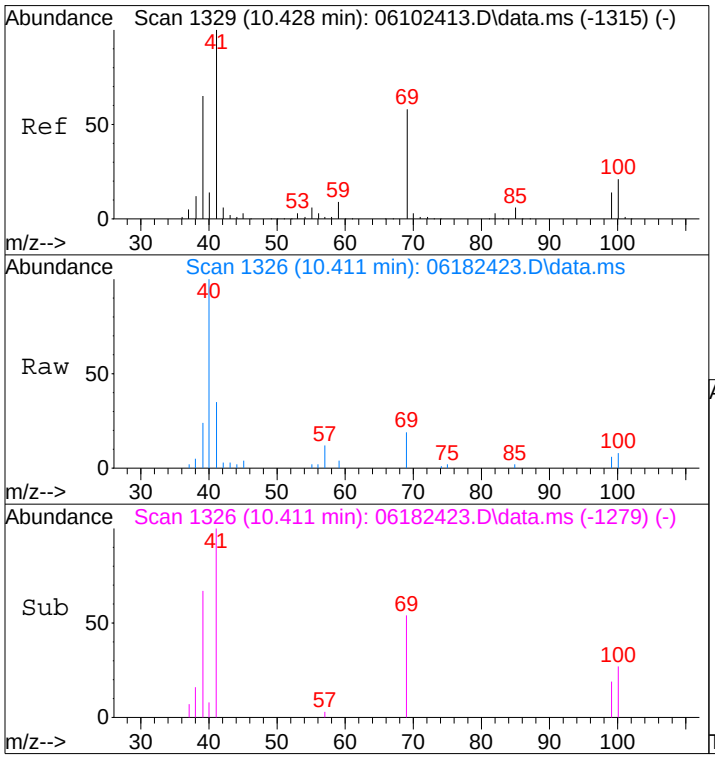


#45
1,2-Dichloropropane
Concen: 0.09 ng
RT: 9.87 min Scan# 1231
Delta R.T. 0.020 min
Lab File: 06182423.D
Acq: 18 Jun 2024 21:43

Tgt Ion: 63 Resp: 985

Ion	Ratio	Lower	Upper
63	100		
62	76.4	52.4	92.4

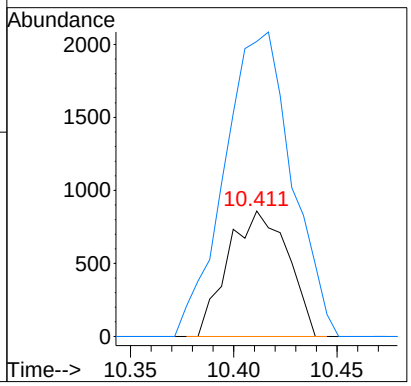


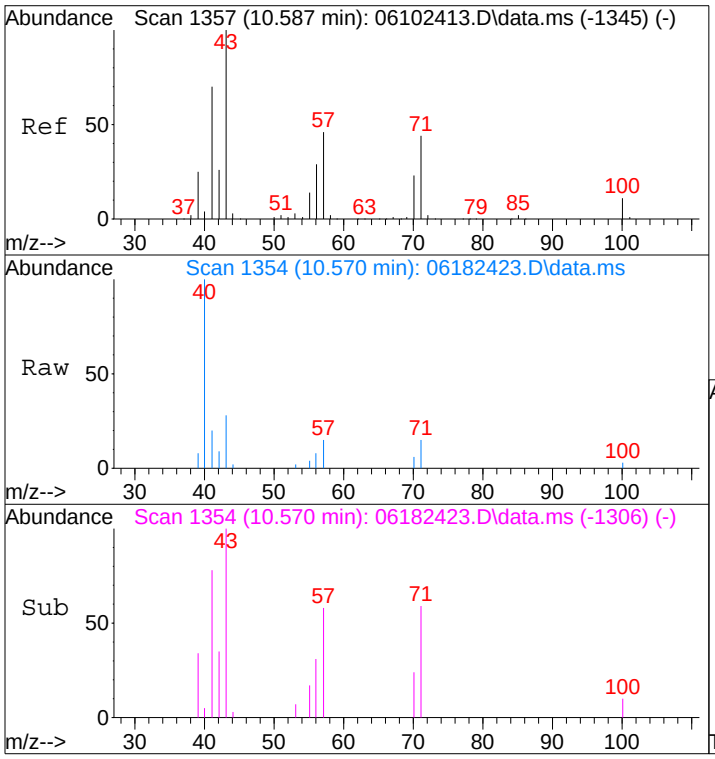


#50
Methyl Methacrylate
Concen: 0.44 ng
RT: 10.41 min Scan# 1326
Delta R.T. 0.017 min
Lab File: 06182423.D
Acq: 18 Jun 2024 21:43

Tgt Ion:100 Resp: 1731

Ion	Ratio	Lower	Upper
100	100		
69	273.7	254.2	294.2

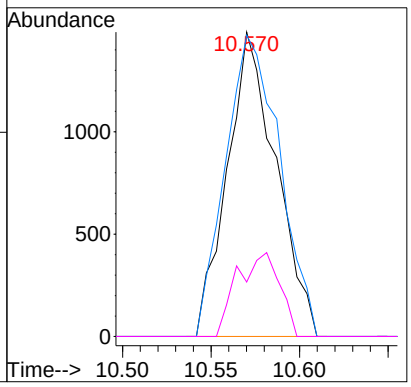


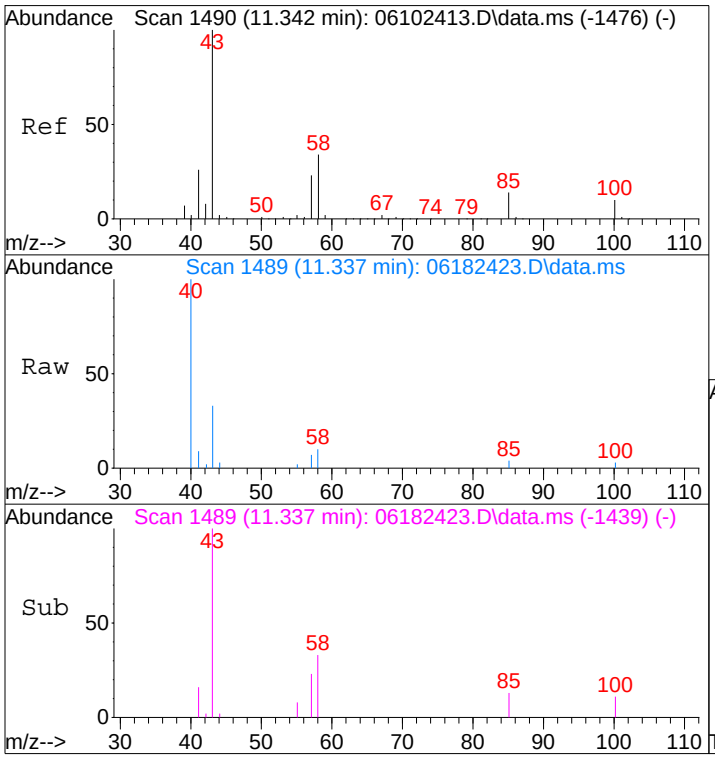


#51
n-Heptane
Concen: 0.29 ng
RT: 10.57 min Scan# 1354
Delta R.T. 0.024 min
Lab File: 06182423.D
Acq: 18 Jun 2024 21:43

Tgt Ion: 71 Resp: 2844

Ion	Ratio	Lower	Upper
71	100		
57	110.1	83.9	123.9
100	24.1	4.8	44.8

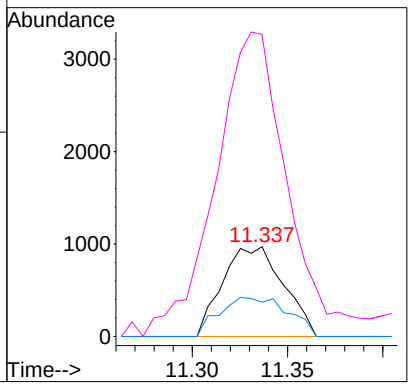


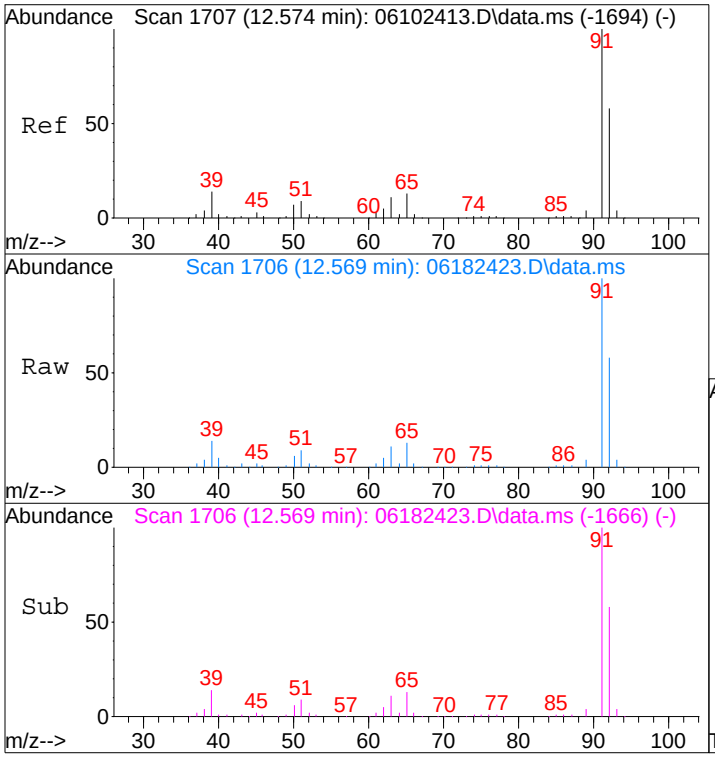


#53
4-Methyl-2-pentanone
Concen: 0.21 ng
RT: 11.34 min Scan# 1489
Delta R.T. 0.034 min
Lab File: 06182423.D
Acq: 18 Jun 2024 21:43

Tgt Ion: 58 Resp: 2152

Ion	Ratio	Lower	Upper
58	100		
85	48.7	34.5	51.7
43	404.9	236.1	354.1#

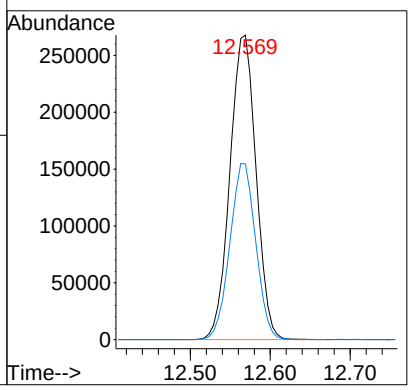


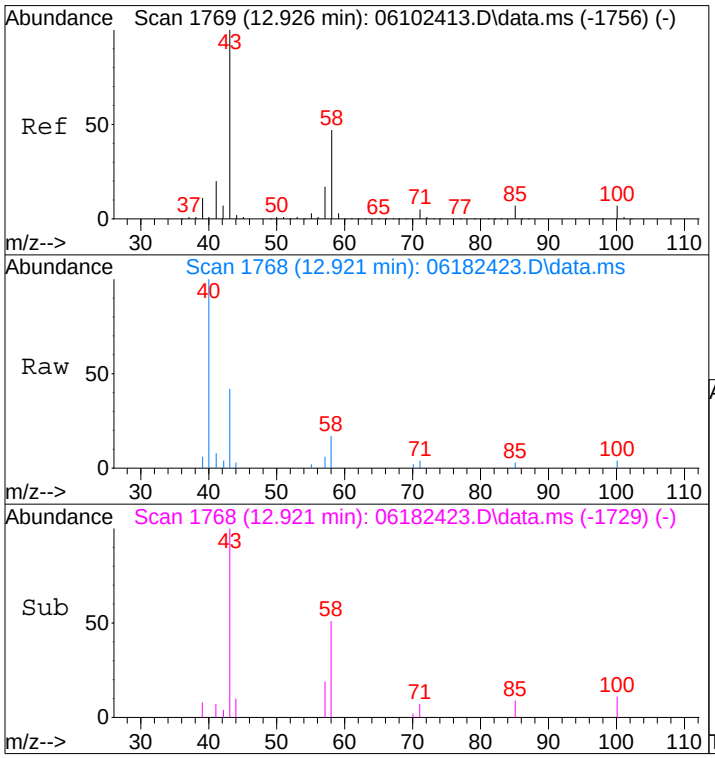


#58
Toluene
Concen: 12.33 ng
RT: 12.57 min Scan# 1706
Delta R.T. -0.023 min
Lab File: 06182423.D
Acq: 18 Jun 2024 21:43

Tgt Ion: 91 Resp: 607607

Ion	Ratio	Lower	Upper
91	100		
92	57.3	37.4	77.4

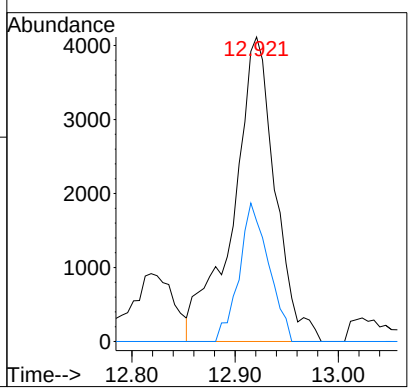


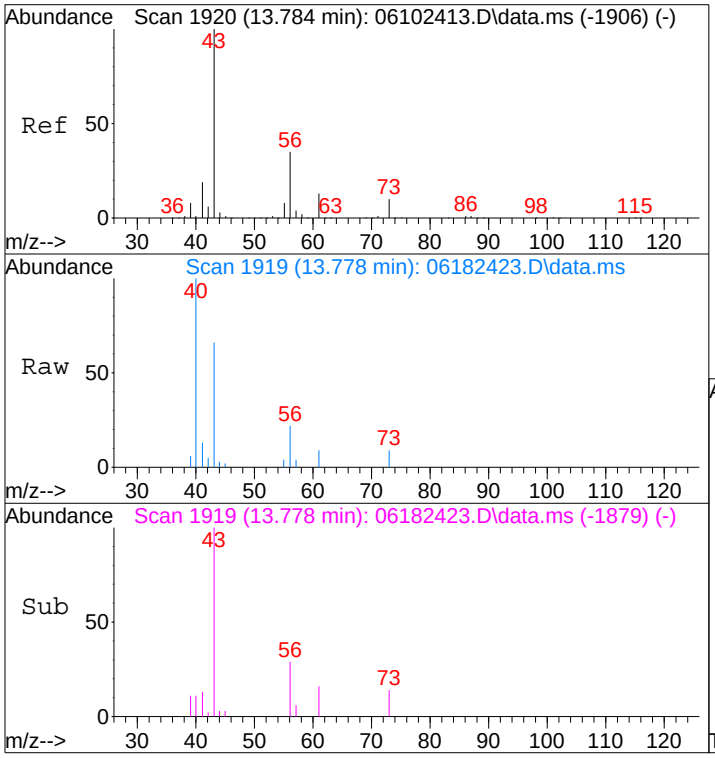


#59
2-Hexanone
Concen: 0.38 ng
RT: 12.92 min Scan# 1768
Delta R.T. -0.028 min
Lab File: 06182423.D
Acq: 18 Jun 2024 21:43

Tgt Ion: 43 Resp: 11605

Ion	Ratio	Lower	Upper
43	100		
58	32.0	25.9	65.9

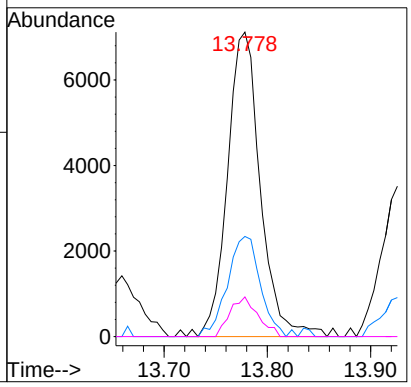


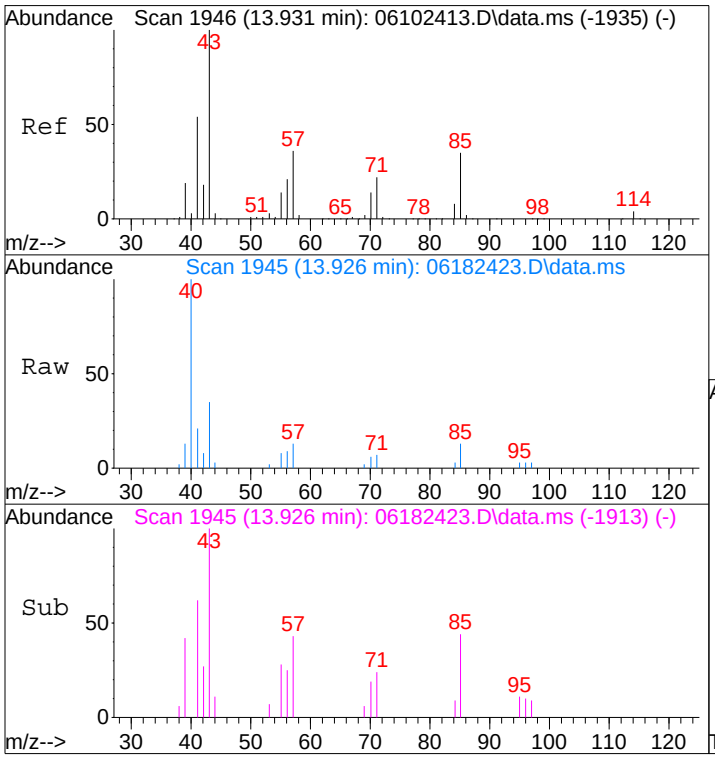


#62
n-Butyl Acetate
Concen: 0.48 ng
RT: 13.78 min Scan# 1919
Delta R.T. -0.023 min
Lab File: 06182423.D
Acq: 18 Jun 2024 21:43

Tgt Ion: 43 Resp: 15741

Ion	Ratio	Lower	Upper
43	100		
56	32.7	14.3	54.3
73	11.1	0.0	30.4

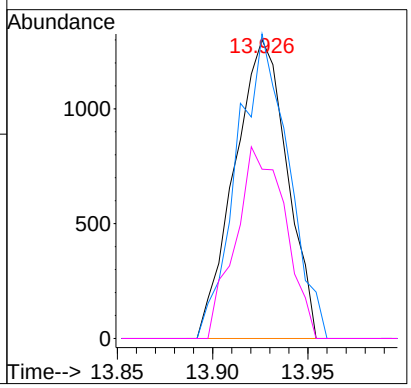


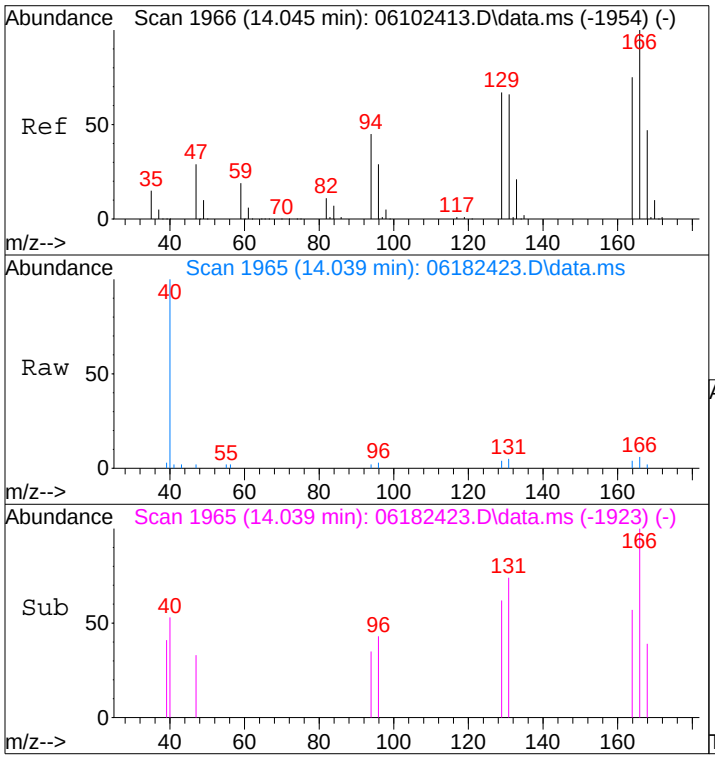


#63
n-Octane
Concen: 0.24 ng
RT: 13.93 min Scan# 1945
Delta R.T. -0.017 min
Lab File: 06182423.D
Acq: 18 Jun 2024 21:43

Tgt Ion: 57 Resp: 2497

Ion	Ratio	Lower	Upper
57	100		
85	99.7	79.8	119.6
71	60.3	49.0	73.4

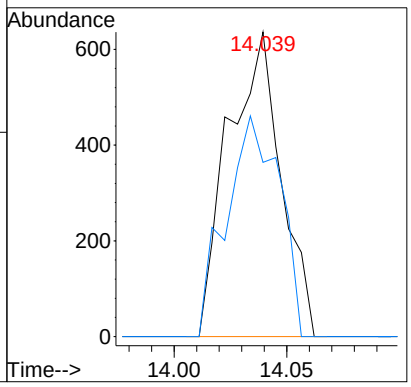


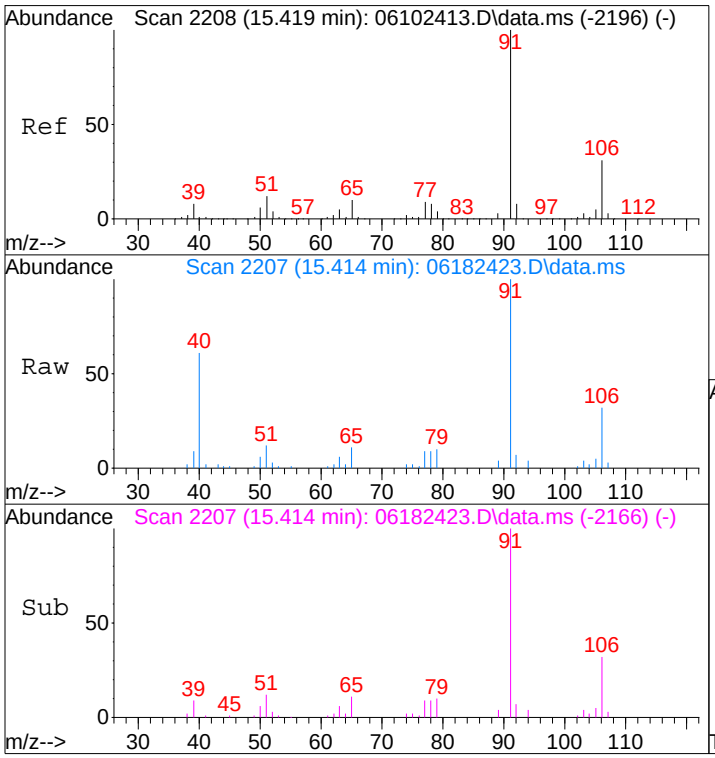


#64
Tetrachloroethene
Concen: 0.06 ng
RT: 14.04 min Scan# 1965
Delta R.T. -0.011 min
Lab File: 06182423.D
Acq: 18 Jun 2024 21:43

Tgt Ion:166 Resp: 1036

Ion	Ratio	Lower	Upper
166	100		
164	73.4	56.9	96.9

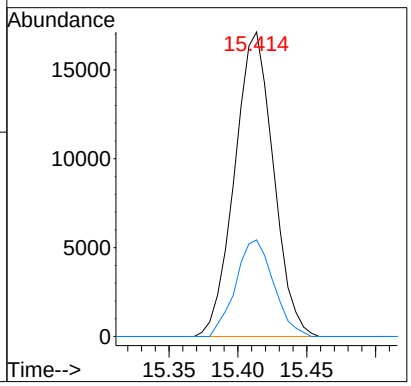


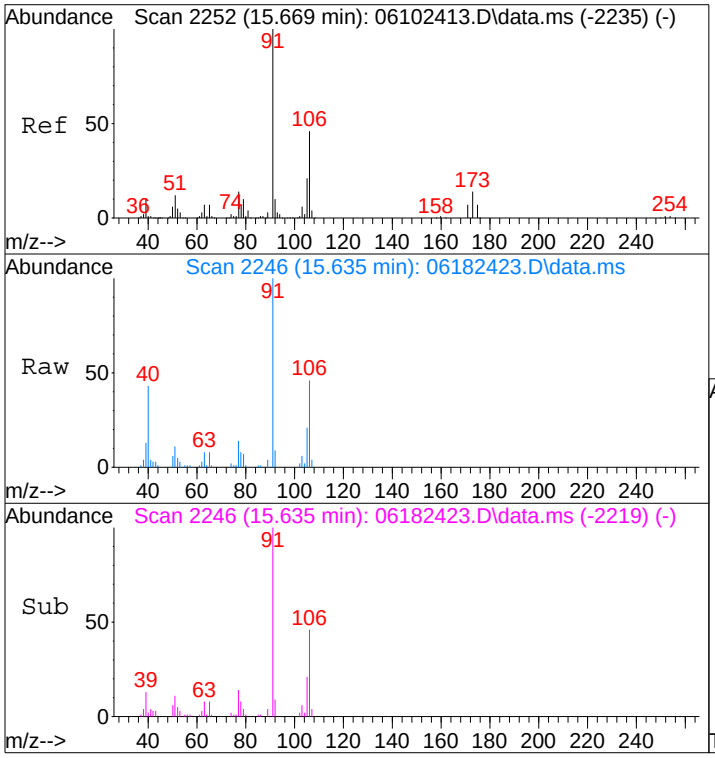


#66
Ethylbenzene
Concen: 0.60 ng
RT: 15.41 min Scan# 2207
Delta R.T. -0.017 min
Lab File: 06182423.D
Acq: 18 Jun 2024 21:43

Tgt Ion: 91 Resp: 33582

Ion	Ratio	Lower	Upper
91	100		
106	31.0	10.7	50.7

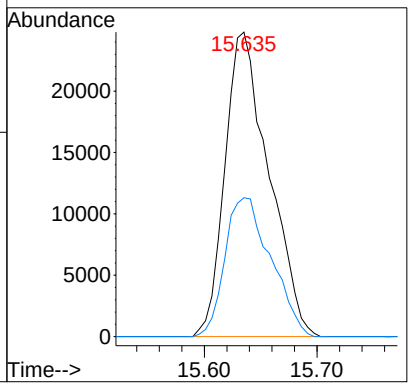


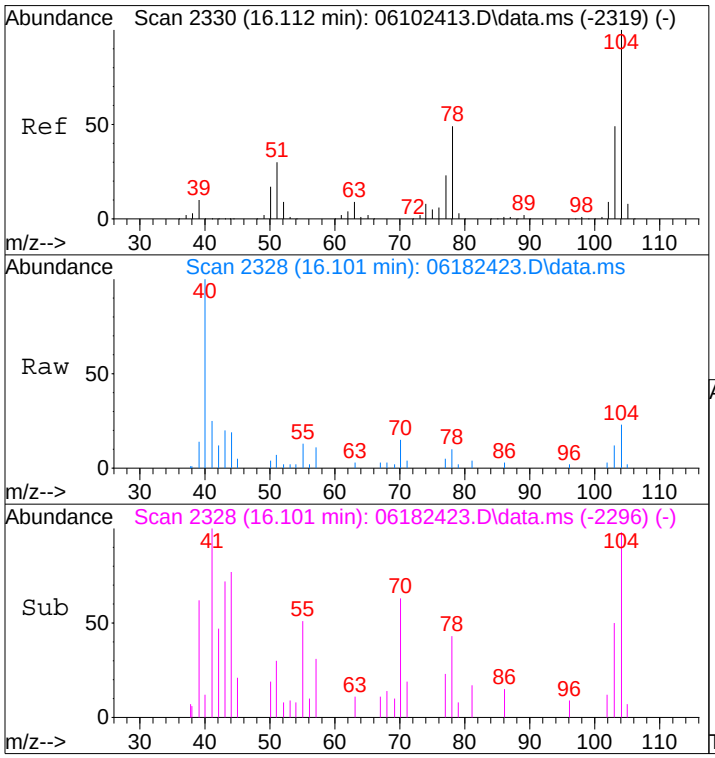


#67
m- & p-Xylenes
Concen: 1.42 ng
RT: 15.64 min Scan# 2246
Delta R.T. -0.045 min
Lab File: 06182423.D
Acq: 18 Jun 2024 21:43

Tgt Ion: 91 Resp: 67259

Ion	Ratio	Lower	Upper
91	100		
106	47.7	25.9	65.9

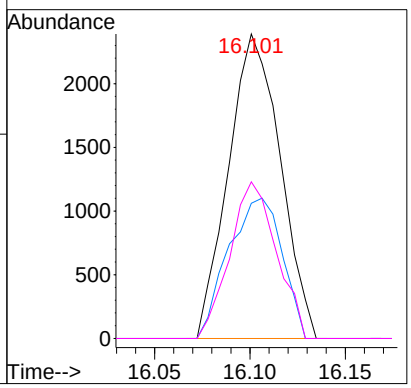


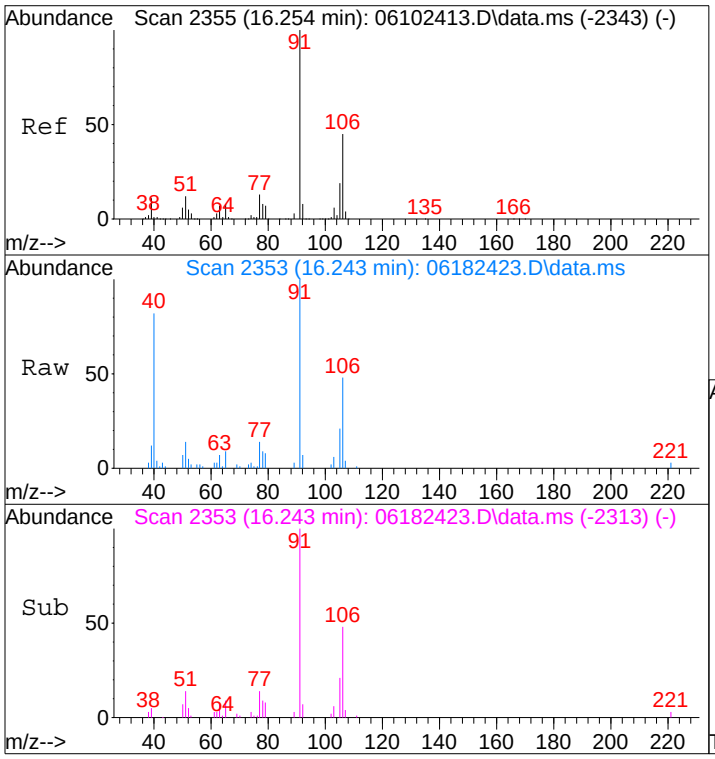


#69
Styrene
Concen: 0.14 ng
RT: 16.10 min Scan# 2328
Delta R.T. -0.017 min
Lab File: 06182423.D
Acq: 18 Jun 2024 21:43

Tgt Ion:104 Resp: 4511

Ion	Ratio	Lower	Upper
104	100		
78	47.8	29.2	69.2
103	46.3	29.4	69.4

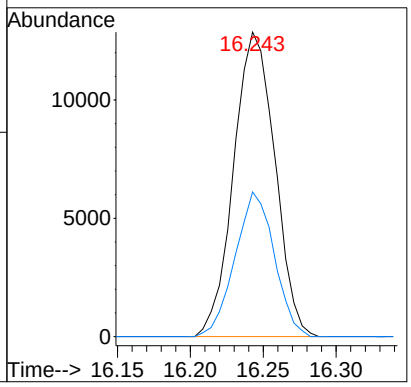


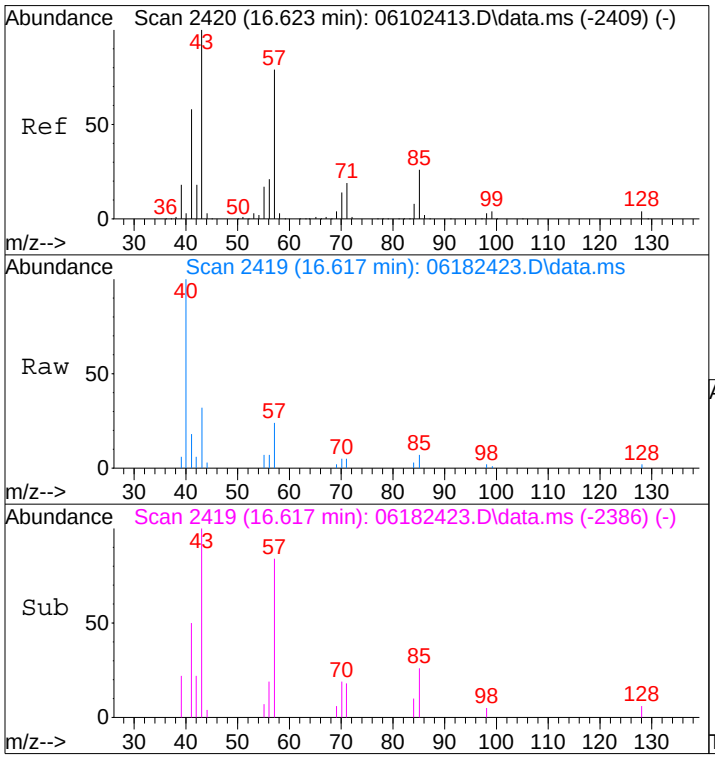


#70
o-Xylene
Concen: 0.54 ng
RT: 16.24 min Scan# 2353
Delta R.T. -0.023 min
Lab File: 06182423.D
Acq: 18 Jun 2024 21:43

Tgt Ion: 91 Resp: 25334

Ion	Ratio	Lower	Upper
91	100		
106	45.2	24.5	64.5

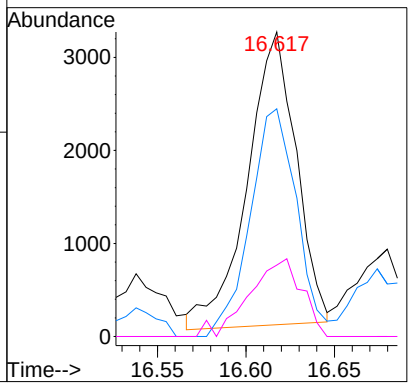


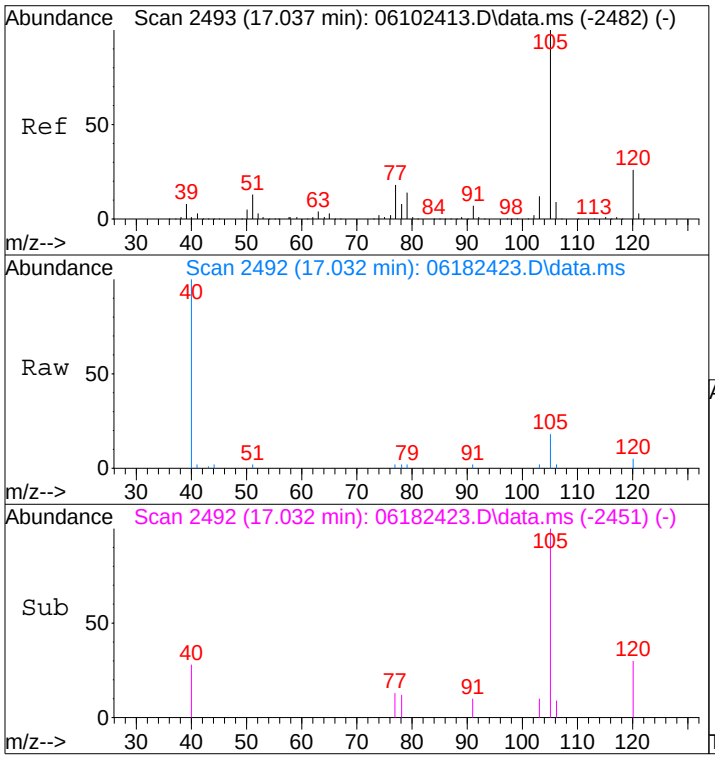


#71
n-Nonane
Concen: 0.22 ng
RT: 16.62 min Scan# 2419
Delta R.T. -0.011 min
Lab File: 06182423.D
Acq: 18 Jun 2024 21:43

Tgt Ion: 43 Resp: 6031

Ion	Ratio	Lower	Upper
43	100		
57	74.3	58.2	98.2
85	28.5	5.9	45.9

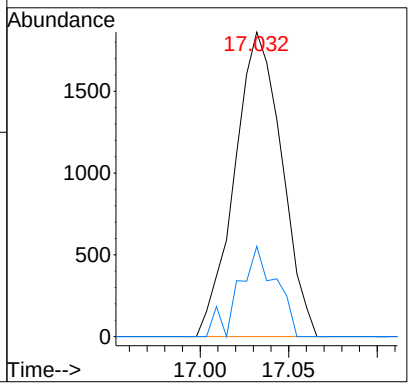


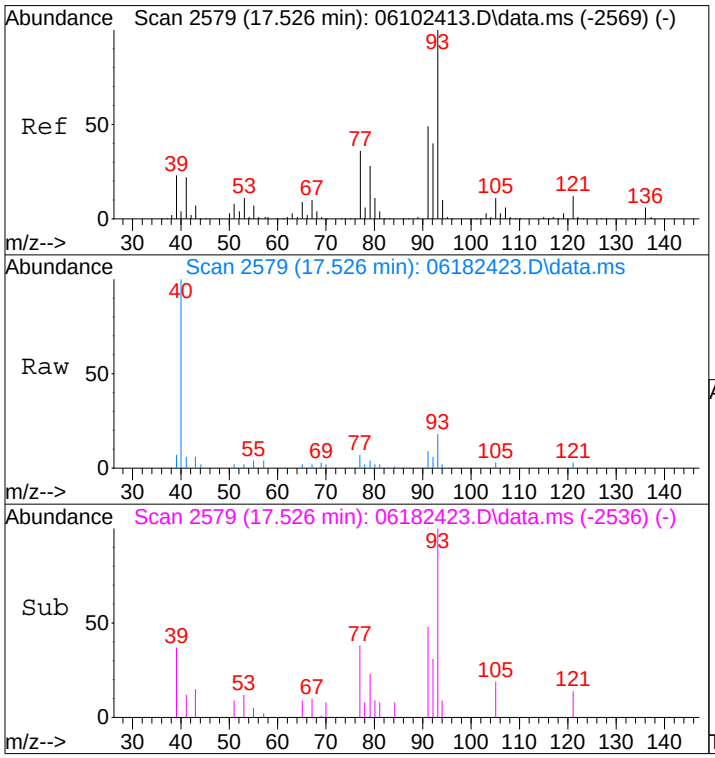


#74
Cumene
Concen: 0.06 ng
RT: 17.03 min Scan# 2492
Delta R.T. -0.017 min
Lab File: 06182423.D
Acq: 18 Jun 2024 21:43

Tgt Ion:105 Resp: 3451

Ion	Ratio	Lower	Upper
105	100		
120	23.3	6.0	46.0

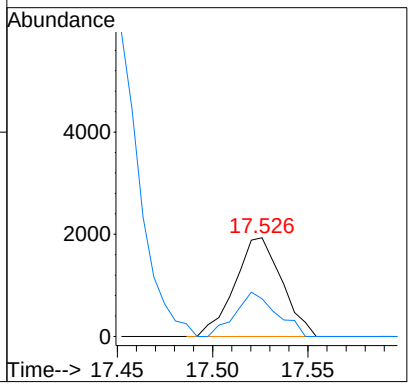


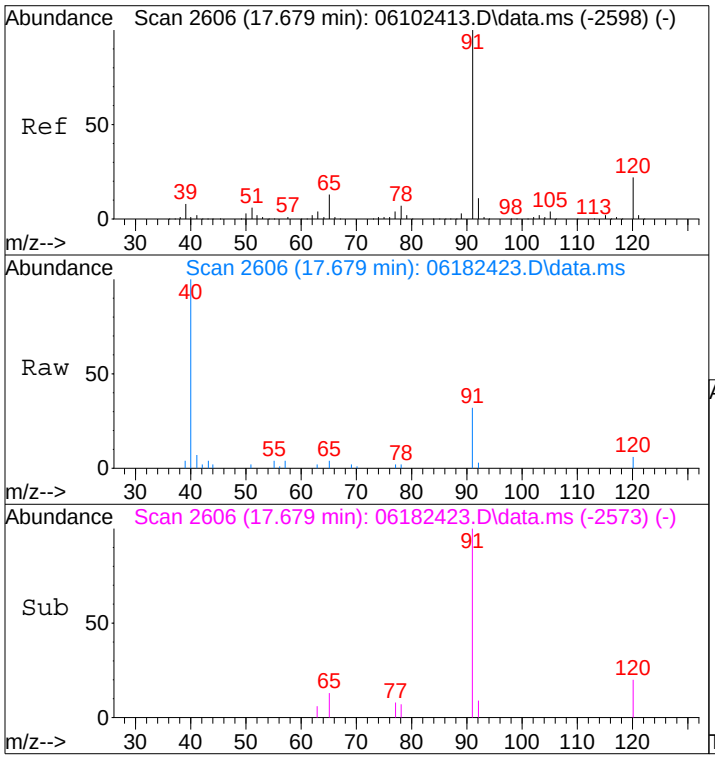


#75
alpha-Pinene
Concen: 0.12 ng
RT: 17.53 min Scan# 2579
Delta R.T. -0.006 min
Lab File: 06182423.D
Acq: 18 Jun 2024 21:43

Tgt Ion: 93 Resp: 3314

Ion	Ratio	Lower	Upper
93	100		
77	39.3	15.3	55.3

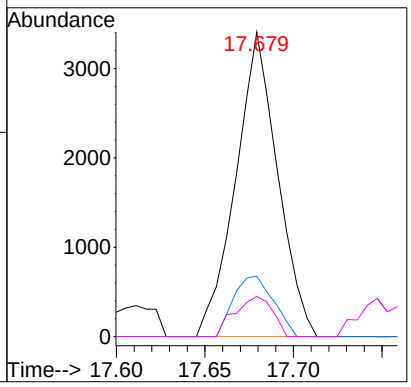


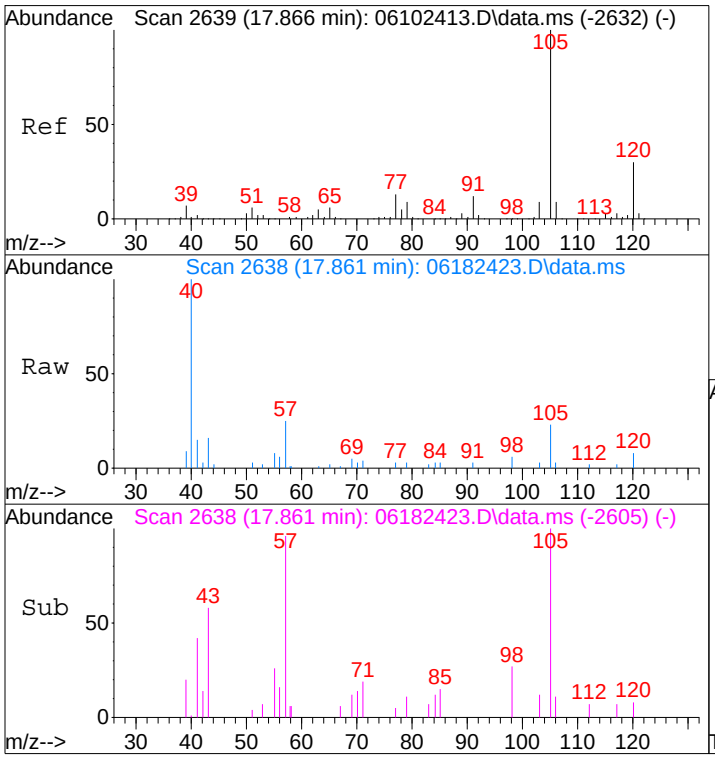


#76
n-Propylbenzene
Concen: 0.08 ng
RT: 17.68 min Scan# 2606
Delta R.T. -0.011 min
Lab File: 06182423.D
Acq: 18 Jun 2024 21:43

Tgt Ion: 91 Resp: 5604

Ion	Ratio	Lower	Upper
91	100		
120	19.0	2.7	42.7
65	11.8	0.0	32.7

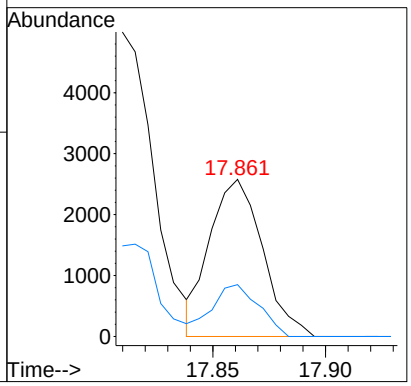


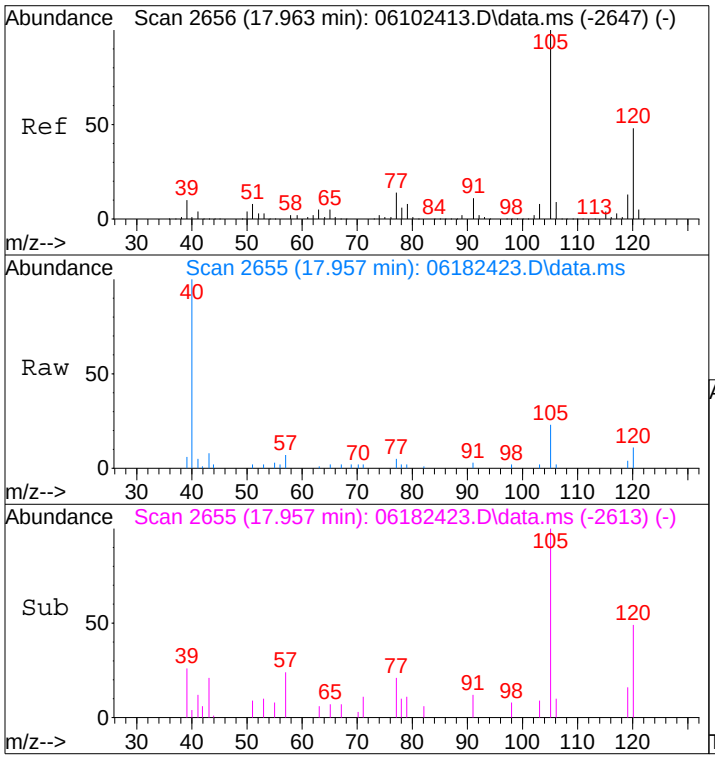


#78
4-Ethyltoluene
Concen: 0.08 ng
RT: 17.86 min Scan# 2638
Delta R.T. -0.011 min
Lab File: 06182423.D
Acq: 18 Jun 2024 21:43

Tgt Ion:105 Resp: 4200

Ion	Ratio	Lower	Upper
105	100		
120	29.5	9.9	49.9

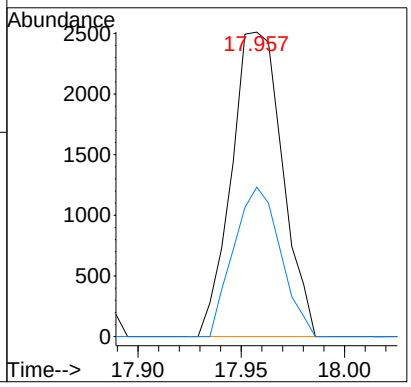


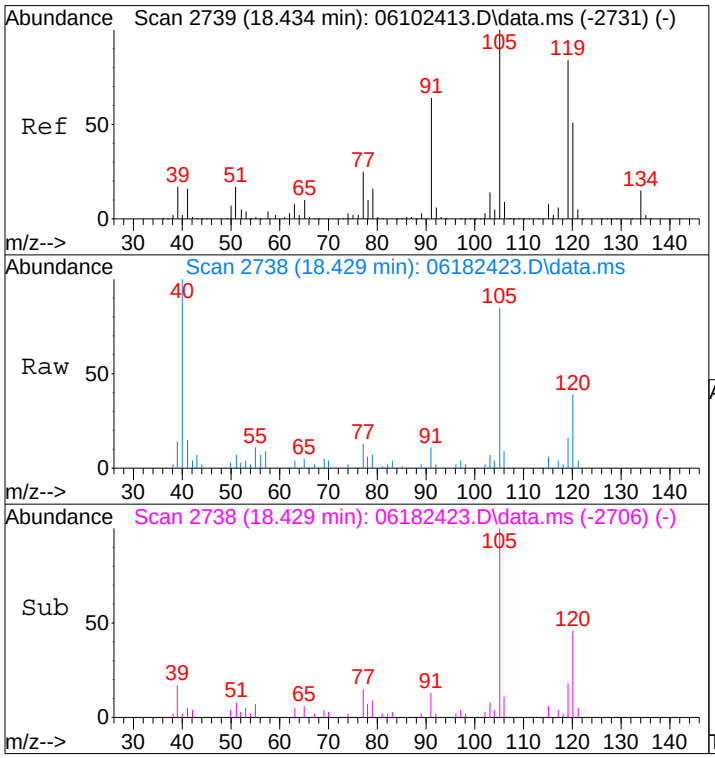


#79
1,3,5-Trimethylbenzene
Concen: 0.09 ng
RT: 17.96 min Scan# 2655
Delta R.T. -0.011 min
Lab File: 06182423.D
Acq: 18 Jun 2024 21:43

Tgt Ion:105 Resp: 4305

Ion	Ratio	Lower	Upper
105	100		
120	45.2	28.0	68.0

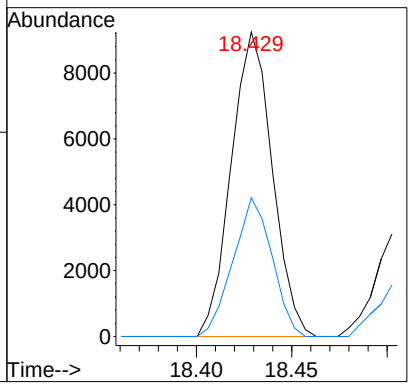


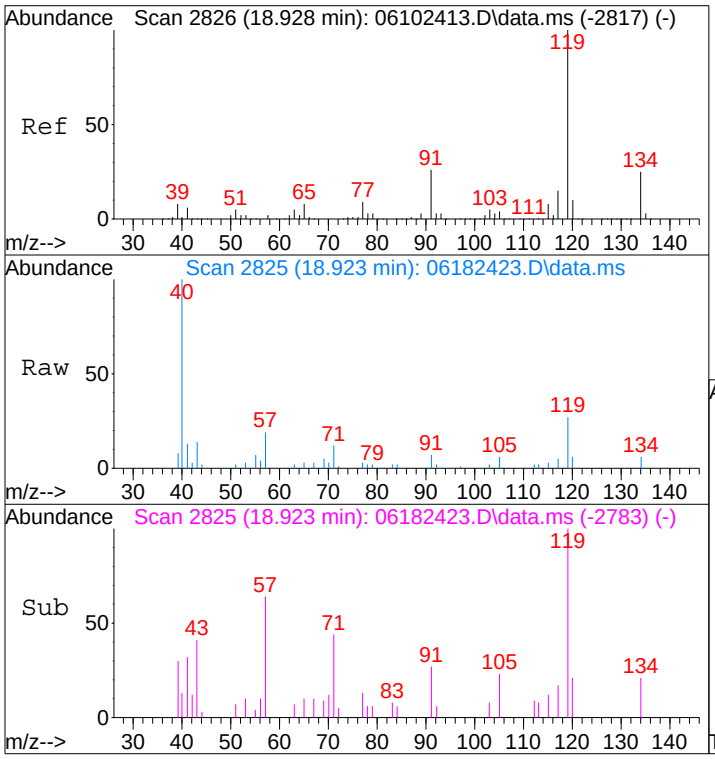


#82
1,2,4-Trimethylbenzene
Concen: 0.27 ng
RT: 18.43 min Scan# 2738
Delta R.T. -0.017 min
Lab File: 06182423.D
Acq: 18 Jun 2024 21:43

Tgt Ion:105 Resp: 13868

Ion	Ratio	Lower	Upper
105	100		
120	43.2	31.9	71.9

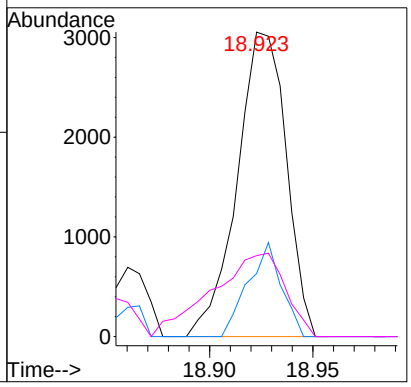


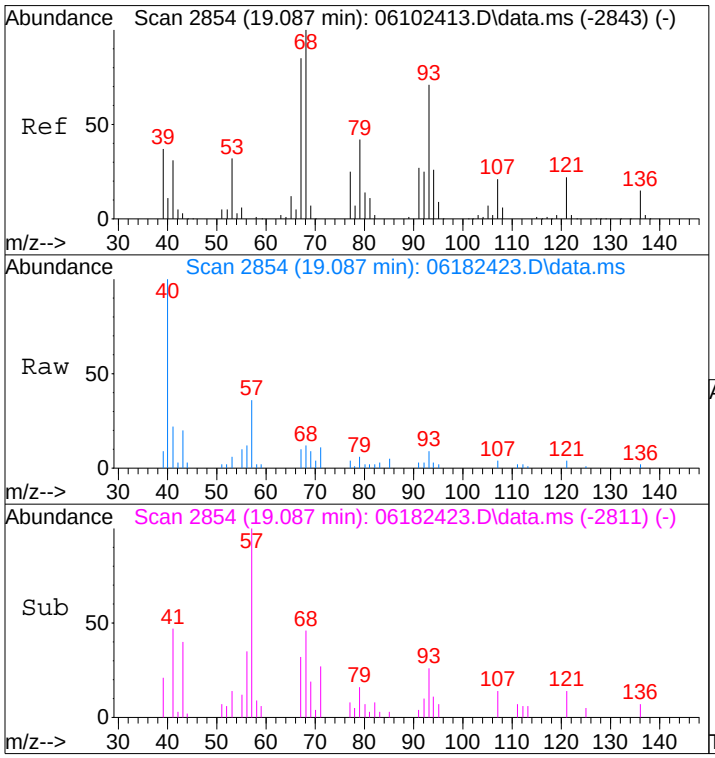


#88
4-Isopropyltoluene (p-Cymene)
Concen: 0.09 ng
RT: 18.92 min Scan# 2825
Delta R.T. -0.011 min
Lab File: 06182423.D
Acq: 18 Jun 2024 21:43

Tgt Ion:119 Resp: 5049

Ion	Ratio	Lower	Upper
119	100		
134	21.1	4.9	44.9
91	40.7	5.8	45.8

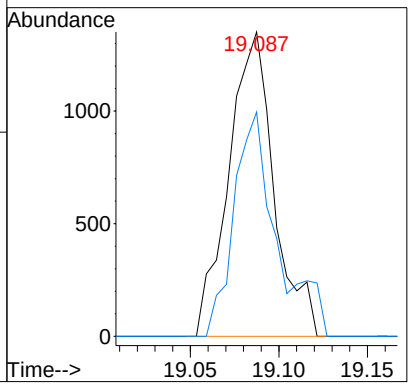




#91
d-Limonene
Concen: 0.14 ng
RT: 19.09 min Scan# 2854
Delta R.T. -0.006 min
Lab File: 06182423.D
Acq: 18 Jun 2024 21:43

Tgt Ion: 68 Resp: 2405

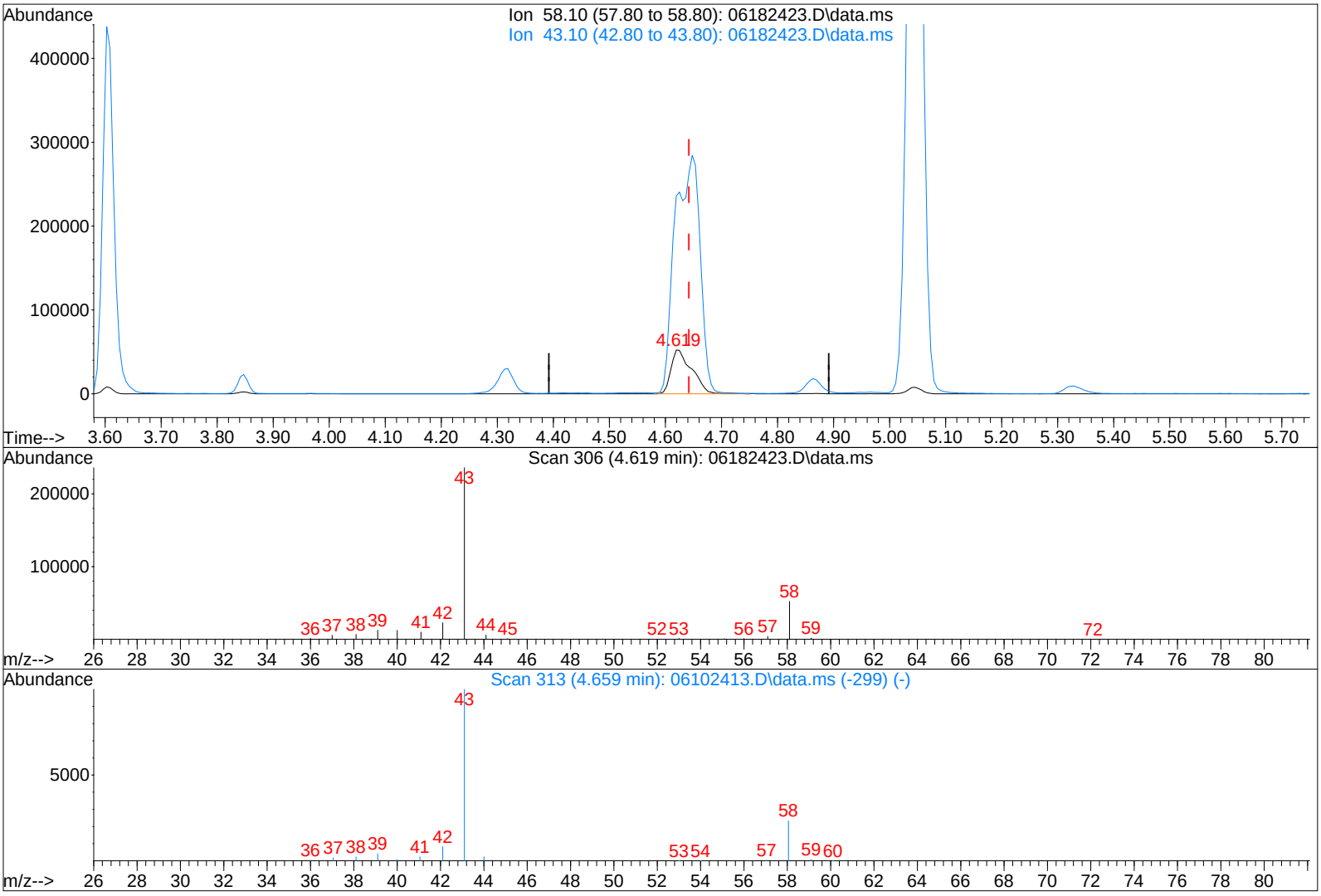
Ion	Ratio	Lower	Upper
68	100		
93	69.6	52.2	92.2



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182423.D Vial: 11
Acq On : 18 Jun 2024 21:43 Operator: SC
Sample : P2402249-018 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 08:26:58 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182423.D\data.ms

(13) Acetone (T)

4.619min (-0.023) 14.52ng

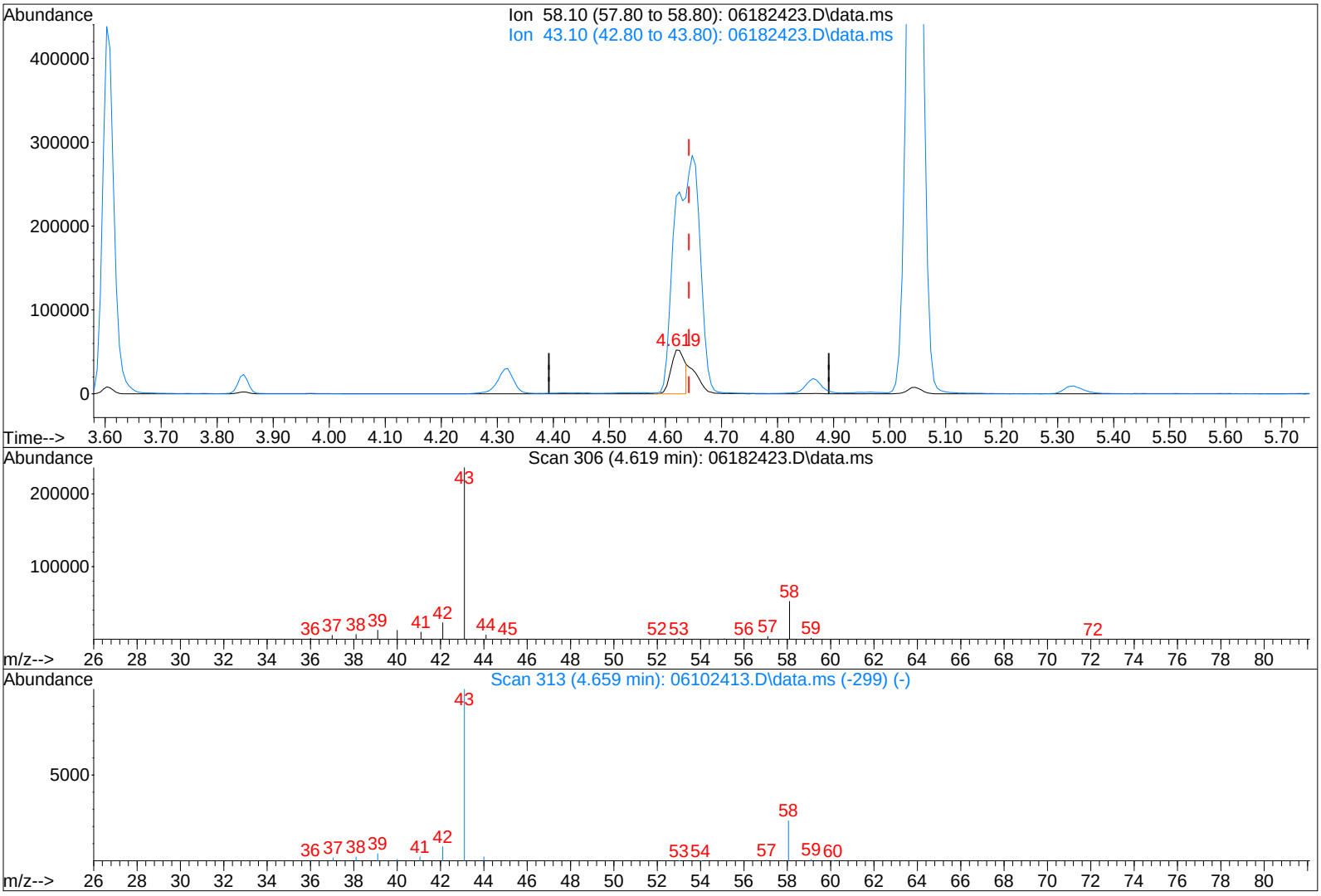
response 133532

Ion	Exp%	Act%
58.10	100	100
43.10	430.70	660.07#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182423.D Vial: 11
Acq On : 18 Jun 2024 21:43 Operator: SC
Sample : P2402249-018 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 08:26:58 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182423.D\data.ms

(13) Acetone (T)

4.619min (-0.023) 9.62ng m

response 88458

Ion	Exp%	Act%
58.10	100	100
43.10	430.70	996.41#
0.00	0.00	0.00
0.00	0.00	0.00

IPC

6/19/24

6/29/24

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182423.D Vial: 11
Acq On : 18 Jun 2024 21:43 Operator: SC
Sample : P2402249-018 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 15:00:03 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

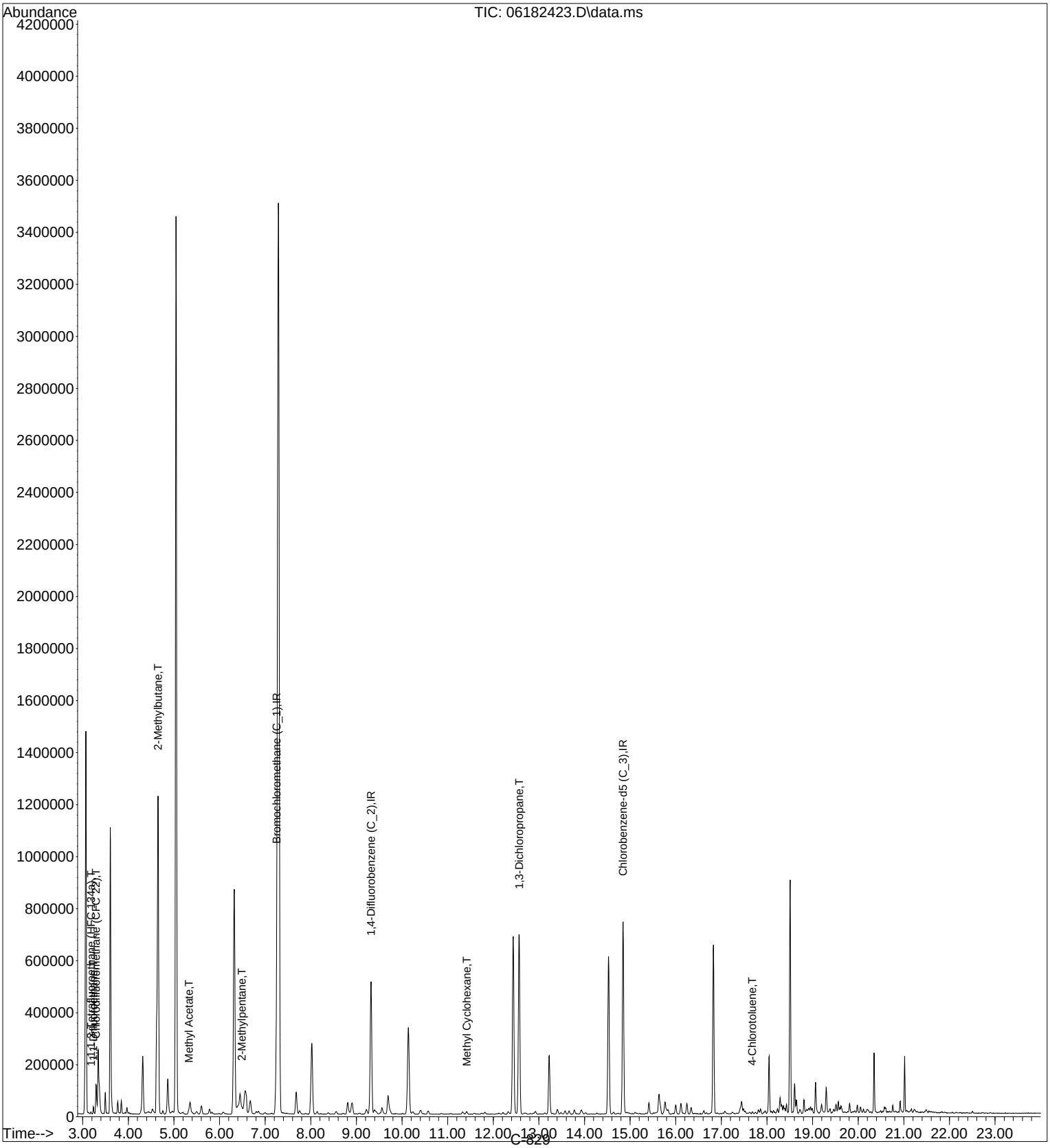
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.25	130	118400	12.500	ng		0.00
16) 1,4-Difluorobenzene (C 2)	9.32	114	505122	12.500	ng		0.00
19) Chlorobenzene-d5 (C_3)	14.85	54	123263	12.500	ng		0.00
Target Compounds							Qvalue
2) Chloropentafluoroethane	3.14	85	64	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.18	83	3829	0.315	ng		96
4) 1,1-Difluoroethane	3.23	65	5896	0.570	ng		90
5) Chlorodifluoromethane ...	3.29	67	933	0.231	ng	#	78
6) 1-Chloro-1,1-Difluoroe...	3.50	65	628	N.D.			
7) Dichlorofluoromethane ...	0.00	67	0	N.D.			
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	0.00	83	0	N.D.			
10) 2-Methylbutane	4.65	57	280701	19.877	ng		93
11) Methyl Acetate	5.33	43	23101	0.579	ng	#	49
12) 2-Methylpentane	6.49	71	3173	0.310	ng	#	1
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	9.07	84	238	N.D.			
17) 2,3-Dimethylpentane	9.53	56	2198	N.D.			
18) Dibromomethane	9.80	174	122	N.D.			
20) Methyl Cyclohexane	11.42	55	4070	0.192	ng		96
21) 1,3-Dichloropropane	12.57	76	3539	0.215	ng	#	1
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	15.20	91	66	N.D.			
24) 1,2,3-Trichloropropane	16.34	75	1285	N.D.			
25) Bromobenzene	17.04	77	487	N.D.			
26) 2-Chlorotoluene	17.61	91	614	N.D.			
27) 4-Chlorotoluene	17.68	91	5604	0.155	ng	#	41
28) Indane	19.12	117	1107	N.D.			
29) Indene	19.11	115	483	N.D.			
30) 1,2,4,5-Tetramethylben...	20.23	119	1349	N.D.			
31) 1,2,3,4-Tetramethylben...	20.23	119	1349	N.D.			
32) 1,2,3,5-Tetramethylben...	20.60	119	694	N.D.			
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182423.D Vial: 11
Acq On : 18 Jun 2024 21:43 Operator: SC
Sample : P2402249-018 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:00:03 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



LSC Area Percent Report

MJ 6/28/24

Data Path : I:\MS09\DATA\2024 06\18\
Data File : 06182423.D
Acq On : 18 Jun 2024 21:43
Operator : SC
Sample : P2402249-018 (400mL)
Misc : S37-06062402
ALS Vial : 11 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06182423.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.069	23	33	41	rBV	1471188	2301691	22.98%	7.612%
2	3.234	58	62	67	rBV	27682	32355	0.32%	0.107%
3	3.291	67	72	77	rVV2	112118	184577	1.84%	0.610%
4	3.342	77	81	95	rVB	244707	522277	5.22%	1.727%
5	3.495	103	108	113	rBV	81401	98728	0.99%	0.327%
6	3.603	121	127	143	rBV2	1098726	1587019	15.85%	5.248%
7	3.768	151	156	161	rBV	45116	59747	0.60%	0.198%
8	3.847	165	170	177	rVB	48330	63664	0.64%	0.211%
9	3.972	187	192	197	rBV	21831	30437	0.30%	0.101%
10	4.318	238	253	261	rBV	222354	454789	4.54%	1.504%
11	4.432	271	273	283	rVB4	4671	10405	0.10%	0.034%
12	4.528	285	290	300	rVV3	15736	35100	0.35%	0.116%
13	4.653	300	312	322	rVB2	1221397	2735792	27.32%	9.048%
14	4.756	325	330	337	rVB	12485	19139	0.19%	0.063%
15	4.863	337	349	359	rBV	134535	273305	2.73%	0.904%
16	4.966	359	367	372	rVV6	8500	22532	0.22%	0.075%
17	5.045	372	381	399	rVB	3449136	5819406	58.11%	19.245%
18	5.198	406	408	417	rVB4	7292	11783	0.12%	0.039%
19	5.352	424	435	450	rBV5	46001	138519	1.38%	0.458%
20	5.494	453	460	470	rVB4	9405	25425	0.25%	0.084%
21	5.602	470	479	488	rBV	31198	69862	0.70%	0.231%
22	5.778	504	510	516	rBV	17145	34022	0.34%	0.113%
23	5.834	516	520	530	rVB2	7052	13613	0.14%	0.045%
24	6.079	556	563	570	rBV2	7293	16948	0.17%	0.056%
25	6.323	591	606	615	rBV	864813	2032467	20.30%	6.722%
26	6.448	618	628	639	rVV	77982	303955	3.04%	1.005%
27	6.561	639	648	659	rVV3	89402	337382	3.37%	1.116%
28	6.675	659	668	680	rVB2	50302	144125	1.44%	0.477%
29	6.805	685	691	695	rVV2	9062	18514	0.18%	0.061%
30	6.851	695	699	707	rVB3	9423	20005	0.20%	0.066%
31	6.998	716	725	731	rBV5	5056	11913	0.12%	0.039%
32	7.288	758	776	790	rBV2	3502438	10014492	100.00%	33.119%
33	7.680	836	845	853	rBV2	83595	190282	1.90%	0.629%
34	7.754	853	858	869	rVB3	12950	33106	0.33%	0.109%
35	8.021	893	905	917	rBV	272954	694344	6.93%	2.296%
36	8.140	917	926	933	rBV2	10408	22205	0.22%	0.073%
37	8.378	958	968	975	rBV5	5880	14675	0.15%	0.049%
38	8.554	990	999	1010	rBV3	10389	27528	0.27%	0.091%
39	8.810	1036	1044	1052	rBV2	44130	109847	1.10%	0.363%
40	8.906	1052	1061	1071	rVB	43444	120351	1.20%	0.398%

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\18\
Data File : 06182423.D
Acq On : 18 Jun 2024 21:43
Operator : SC
Sample : P2402249-018 (400mL)
Misc : S37-06062402
ALS Vial : 11 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

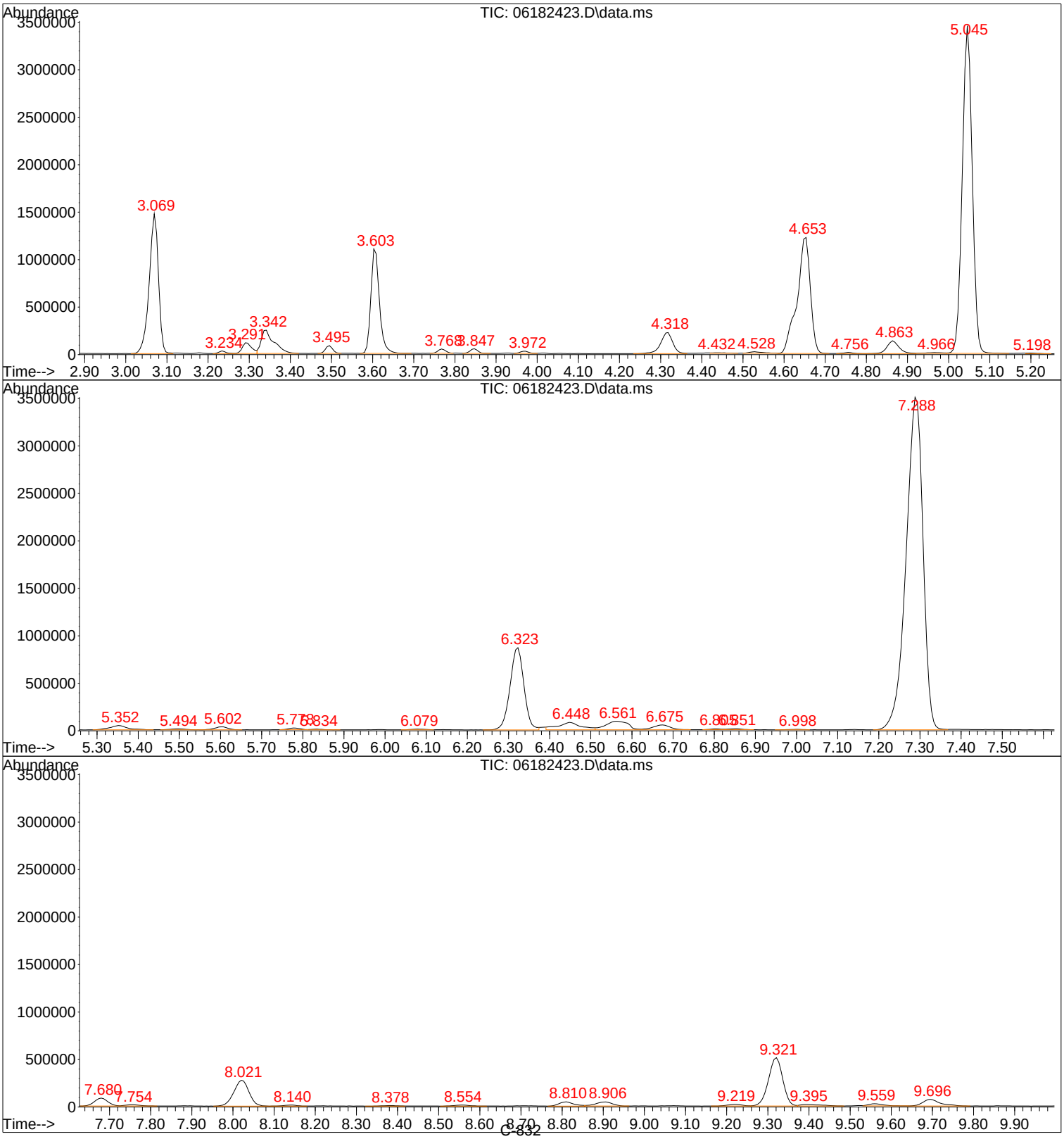
41	9.219	1106	1116	1123	rBV3	18202	45085	0.45%	0.149%
42	9.321	1123	1134	1143	rVV	508987	1229818	12.28%	4.067%
43	9.395	1143	1147	1163	rVB3	15444	53680	0.54%	0.178%
44	9.559	1171	1176	1190	rVB	22872	52601	0.53%	0.174%
45	9.696	1190	1200	1217	rVB2	69810	200513	2.00%	0.663%

Sum of corrected areas: 30238023

Data Path : I:\MS09\DATA\2024 06\18\
Data File : 06182423.D
Acq On : 18 Jun 2024 21:43
Operator : SC
Sample : P2402249-018 (400mL)
Misc : S37-06062402
ALS Vial : 11 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\18\\
Data File : 06182423.D
Acq On : 18 Jun 2024 21:433
Operator : SCC
Sample : P2402249-018 (400mL))
Misc : S37-060624022
ALS Vial : 11 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

						--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182424.D Vial: 12
Acq On : 18 Jun 2024 22:15 Operator: SC
Sample : P2402249-019 (400mL) Inst : MS09
Misc : S37-06062402

6/19/24

Quant Time: Jun 19 12:24:08 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	118005	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	514533	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	127678	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	270865	12.915	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.28%				
57) Toluene-d8 (SS2)	12.43	98	580042	11.872	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 94.96%				
73) Bromofluorobenzene (SS3)	16.83	174	228700	12.963	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.68%				
Target Compounds							Qvalue
2) Propene	0.00	42	0	N.D. d			
3) Dichlorodifluoromethan...	3.36	85	15105m	0.544	ng		
4) Chloromethane	3.49	50	1988	0.105	ng		84
5) 1,2-Dichloro-1,1,2,2-t...	3.60	135	248	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	3.80	54	211	N.D.			
8) Bromomethane	4.02	94	1043	0.108	ng		92
9) Chloroethane	4.14	64	303	N.D.			
10) Ethanol	4.28	45	11924m	1.039	ng		
11) Acetonitrile	0.00	41	0	N.D. d			
12) Acrolein	4.52	56	4961	0.584	ng		90
13) Acetone	4.62	58	55721	6.078	ng	#	84
14) Trichlorofluoromethane	4.75	101	1675130	59.627	ng		100
15) 2-Propanol (Isopropanol)	4.84	45	9210	0.249	ng		62
16) Acrylonitrile	5.03	53	58	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.33	59	1320	N.D.			
19) Methylene Chloride	5.34	84	1056	0.081	ng		99
20) 3-Chloro-1-propene (Al...	5.44	41	303	N.D.			
21) Trichlorotrifluoroethane	5.58	151	837118	70.439	ng		100
22) Carbon Disulfide	5.59	76	30778	0.736	ng	#	1
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	6.43	86	6809	3.219	ng	#	46
27) 2-Butanone (MEK)	0.00	72	0	N.D. d			
28) cis-1,2-Dichloroethene	7.07	61	438	N.D.			
29) Diisopropyl Ether	7.30	87	207	N.D.			
30) Ethyl Acetate	0.00	61	0	N.D. d			
31) n-Hexane	7.30	57	2542	0.131	ng	#	93
32) Chloroform	7.36	83	21581	0.933	ng		98
34) Tetrahydrofuran (THF)	7.77	72	191	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	0.00	62	0	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	9.60	61	5727	No Calib		#	
40) 1-Butanol	8.81	56	8078	No Calib		#	
41) Benzene	8.89	78	5819	0.123	ng		95
42) Carbon Tetrachloride	9.07	117	196	N.D.			
43) Cyclohexane	9.29	84	429	N.D.			
44) tert-Amyl Methyl Ether	9.58	73	1220	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	0.00	83	0	N.D. d			
47) Trichloroethene	10.15	130	1845	0.133	ng		97
48) 1,4-Dioxane	0.00	88	0	N.D. d			
49) 2,2,4-Trimethylpentane...	10.22	57	483	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182424.D Vial: 12
Acq On : 18 Jun 2024 22:15 Operator: SC
Sample : P2402249-019 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 12:24:08 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

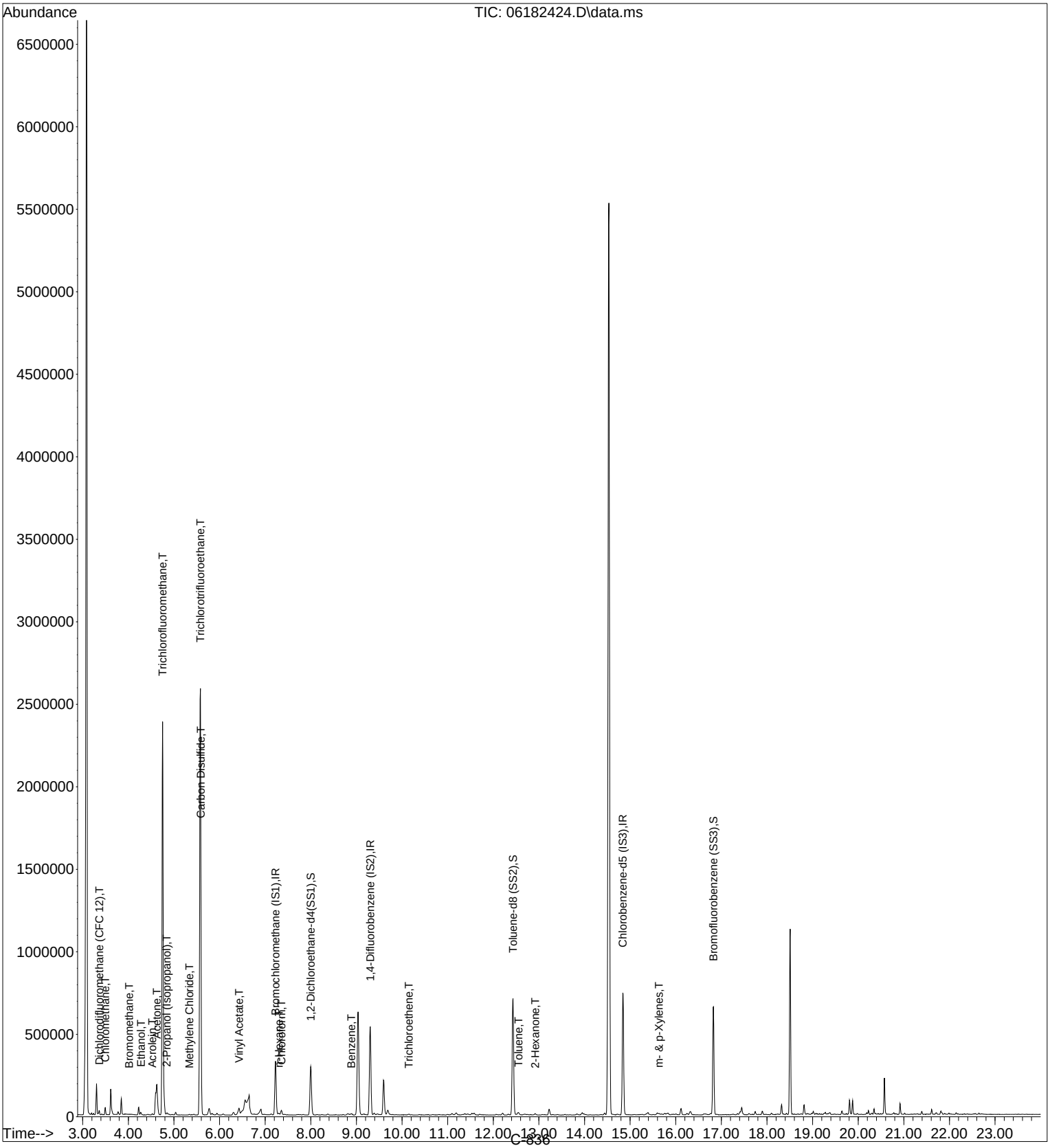
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	10.58	71	199	N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	0.00	58	0	N.D. d	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
58) Toluene	12.56	91	4254	0.083 ng	98
59) 2-Hexanone	12.92	43	8418	0.263 ng	85
60) Dibromochloromethane	13.07	129	397	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	13.78	43	1259	N.D.	
63) n-Octane	0.00	57	0	N.D. d	
64) Tetrachloroethene	14.03	166	801	N.D.	
65) Chlorobenzene	14.90	112	818	N.D.	
66) Ethylbenzene	15.41	91	2536	N.D.	
67) m- & p-Xylenes	15.64	91	4791	0.098 ng	98
68) Bromoform	15.67	173	524	N.D.	
69) Styrene	16.11	104	601	N.D.	
70) o-Xylene	16.24	91	2167	N.D.	
71) n-Nonane	0.00	43	0	N.D. d	
72) 1,1,2,2-Tetrachloroethane	16.22	83	354	N.D.	
74) Cumene	17.03	105	951	N.D.	
75) alpha-Pinene	0.00	93	0	N.D.	
76) n-Propylbenzene	17.68	91	2101	N.D.	
77) 3-Ethyltoluene	17.03	105	951	No Calib	
78) 4-Ethyltoluene	17.86	105	1106	N.D.	
79) 1,3,5-Trimethylbenzene	17.96	105	861	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.03	105	951	No Calib	
82) 1,2,4-Trimethylbenzene	18.43	105	2122	N.D.	
83) n-Decane	17.08	58	109	No Calib	#
84) Benzyl Chloride	18.55	91	668	N.D.	
85) 1,3-Dichlorobenzene	18.57	146	544	N.D.	
86) 1,4-Dichlorobenzene	18.66	146	573	N.D.	
87) sec-Butylbenzene	18.74	105	1110	N.D.	
88) 4-Isopropyltoluene (p-...	18.92	119	1356	N.D.	
89) 1,2,3-Trimethylbenzene	17.03	105	951	No Calib	
90) 1,2-Dichlorobenzene	19.03	146	548	N.D.	
91) d-Limonene	19.10	68	252	N.D.	
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.	
93) n-Undecane	17.87	58	112	No Calib	#
94) 1,2,4-Trichlorobenzene	20.84	180	876	N.D.	
95) Naphthalene	20.93	128	2548	N.D.	
96) n-Dodecane	18.89	58	269	No Calib	#
97) Hexachlorobutadiene	21.30	225	546	N.D.	
98) Cyclohexanone	15.49	55	726	No Calib	#
99) tert-Butylbenzene	18.42	119	1010	N.D.	
100) n-Butylbenzene	19.39	91	1392	N.D.	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182424.D Vial: 12
Acq On : 18 Jun 2024 22:15 Operator: SC
Sample : P2402249-019 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 12:24:08 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182424.D Vial: 12
Acq On : 18 Jun 2024 22:15 Operator: SC
Sample : P2402249-019 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 12:24:08 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/19/24

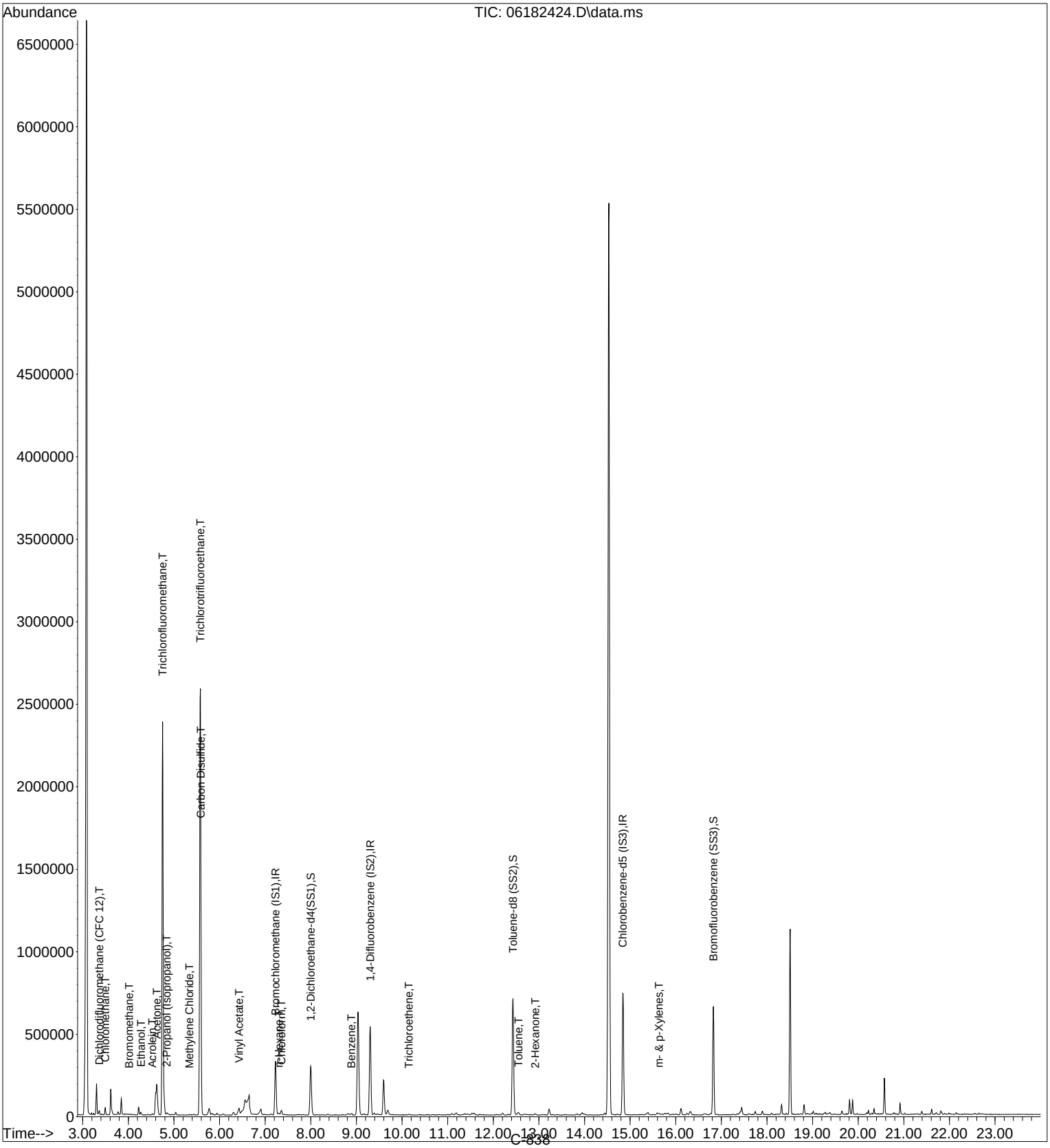
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	118005	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	514533	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	127678	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	270865	12.915	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.28%				
57) Toluene-d8 (SS2)	12.43	98	580042	11.872	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 94.96%				
73) Bromofluorobenzene (SS3)	16.83	174	228700	12.963	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.68%				
Target Compounds							Qvalue
3) Dichlorodifluoromethan...	3.36	85	15105m	0.544	ng		
4) Chloromethane	3.49	50	1988	0.105	ng		84
8) Bromomethane	4.02	94	1043	0.108	ng		92
10) Ethanol	4.28	45	11924m	1.039	ng		
12) Acrolein	4.52	56	4961	0.584	ng		90
13) Acetone	4.62	58	55721	6.078	ng	#	84
14) Trichlorofluoromethane	4.75	101	1675130	59.627	ng		100
15) 2-Propanol (Isopropanol)	4.84	45	9210	0.249	ng		62
19) Methylene Chloride	5.34	84	1056	0.081	ng		99
21) Trichlorotrifluoroethane	5.58	151	837118	70.439	ng		100
22) Carbon Disulfide	5.59	76	30778	0.736	ng	#	1
26) Vinyl Acetate	6.43	86	6809	3.219	ng	#	46
31) n-Hexane	7.30	57	2542	0.131	ng	#	93
32) Chloroform	7.36	83	21581	0.933	ng		98
41) Benzene	8.89	78	5819	0.123	ng		95
47) Trichloroethene	10.15	130	1845	0.133	ng		97
58) Toluene	12.56	91	4254	0.083	ng		98
59) 2-Hexanone	12.92	43	8418	0.263	ng		85
67) m- & p-Xylenes	15.64	91	4791	0.098	ng		98

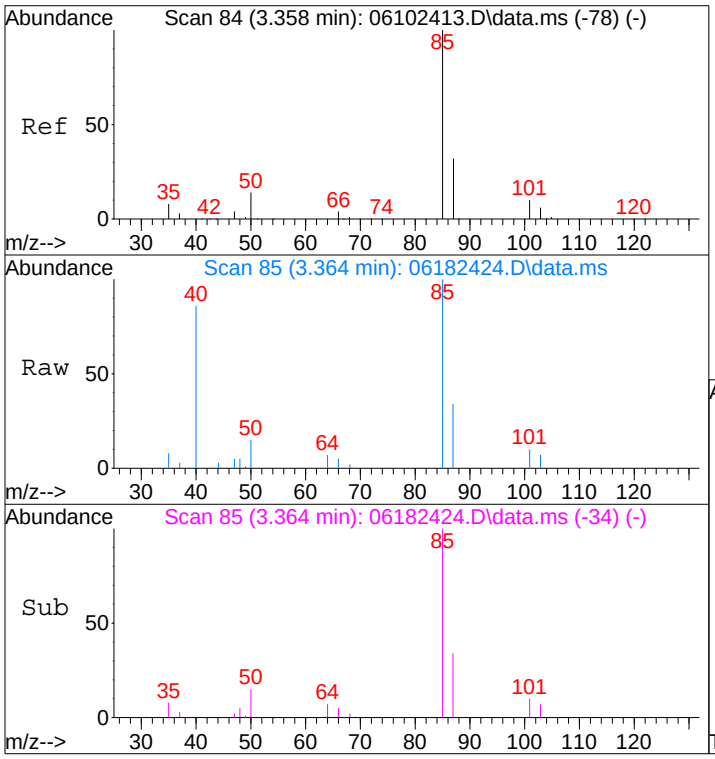
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182424.D Vial: 12
Acq On : 18 Jun 2024 22:15 Operator: SC
Sample : P2402249-019 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 12:24:08 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

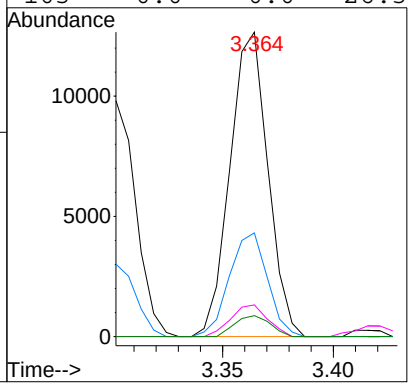


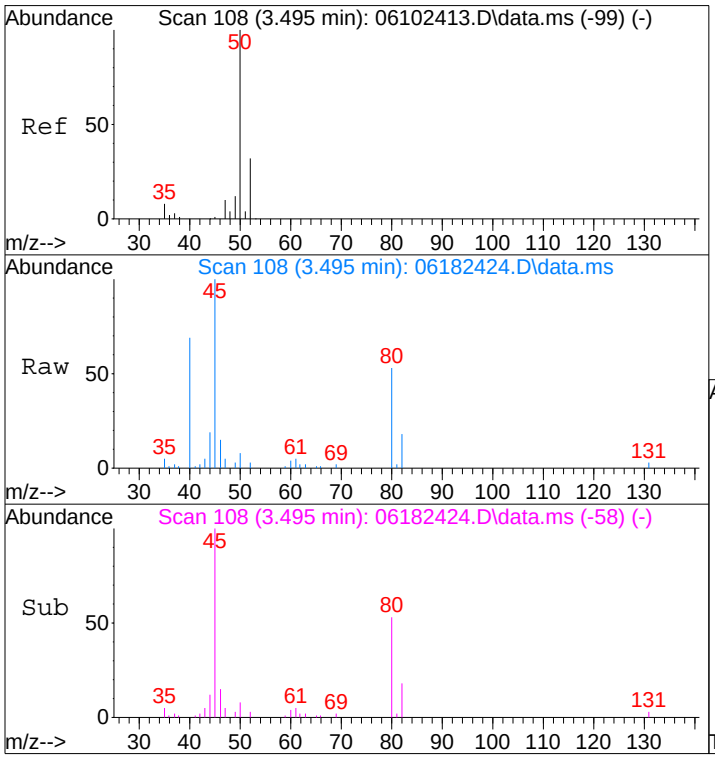


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.54 ng m
RT: 3.36 min Scan# 85
Delta R.T. 0.042 min
Lab File: 06182424.D
Acq: 18 Jun 2024 22:15

Tgt Ion: 85 Resp: 15105

Ion	Ratio	Lower	Upper
85	100		
87	22.2	12.2	52.2
101	0.0	0.0	29.8
103	0.0	0.0	26.3

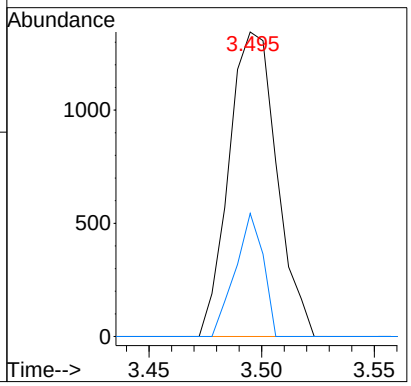


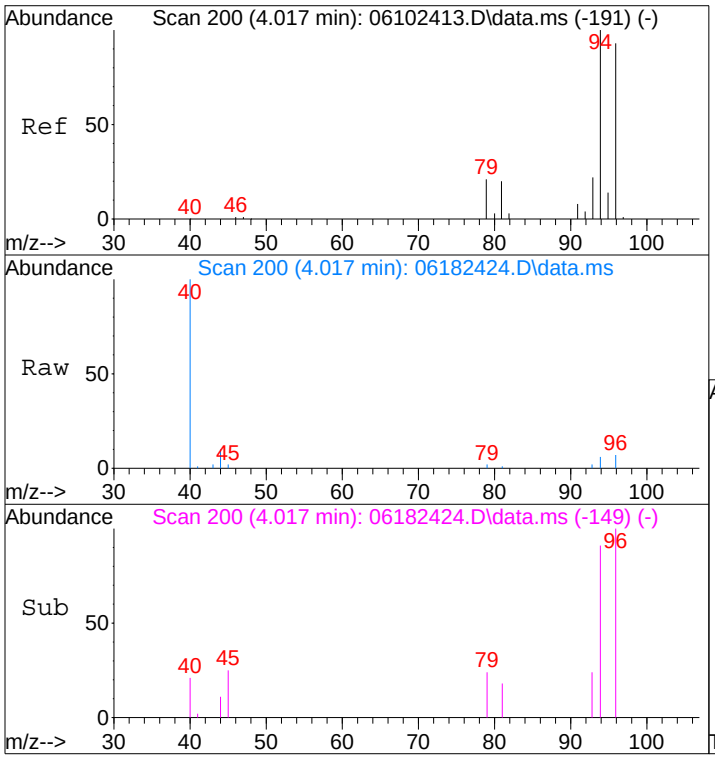


#4
Chloromethane
Concen: 0.10 ng
RT: 3.49 min Scan# 108
Delta R.T. 0.032 min
Lab File: 06182424.D
Acq: 18 Jun 2024 22:15

Tgt Ion: 50 Resp: 1988

Ion	Ratio	Lower	Upper
50	100		
52	23.7	12.4	52.4

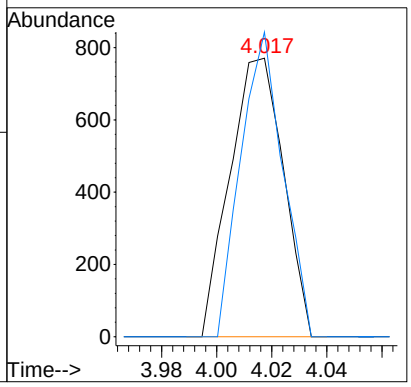


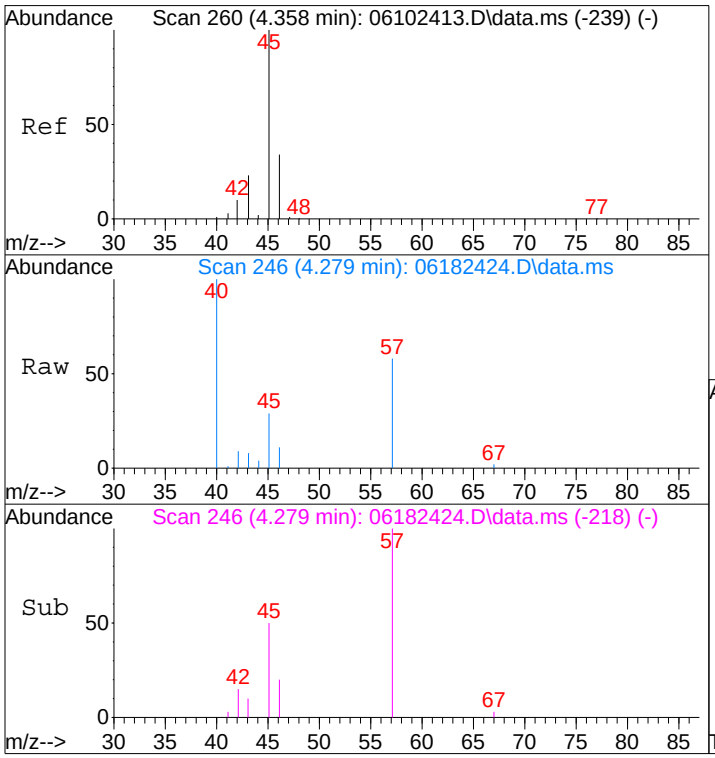


#8
Bromomethane
Concen: 0.11 ng
RT: 4.02 min Scan# 200
Delta R.T. 0.038 min
Lab File: 06182424.D
Acq: 18 Jun 2024 22:15

Tgt Ion: 94 Resp: 1043

Ion	Ratio	Lower	Upper
94	100		
96	85.9	73.2	113.2

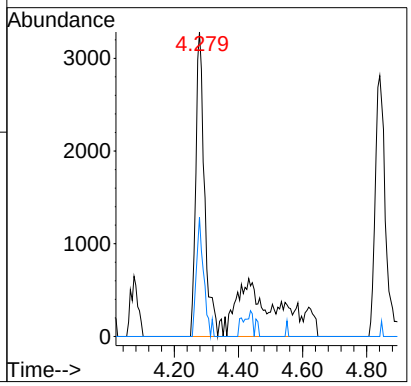


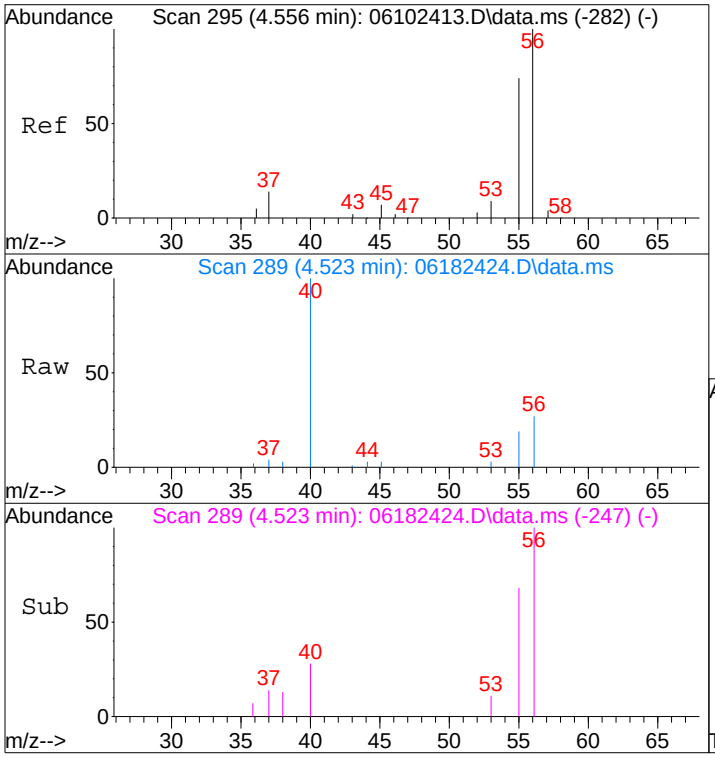


#10
Ethanol
Concen: 1.04 ng m
RT: 4.28 min Scan# 246
Delta R.T. -0.088 min
Lab File: 06182424.D
Acq: 18 Jun 2024 22:15

Tgt Ion: 45 Resp: 11924

Ion	Ratio	Lower	Upper
45	100		
46	0.0	13.5	53.5#

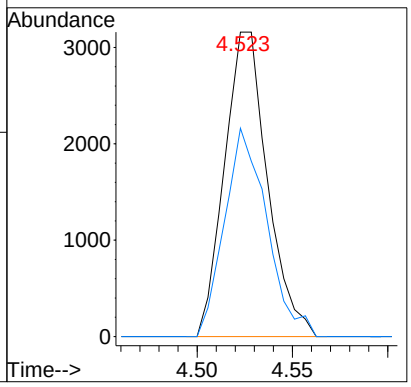


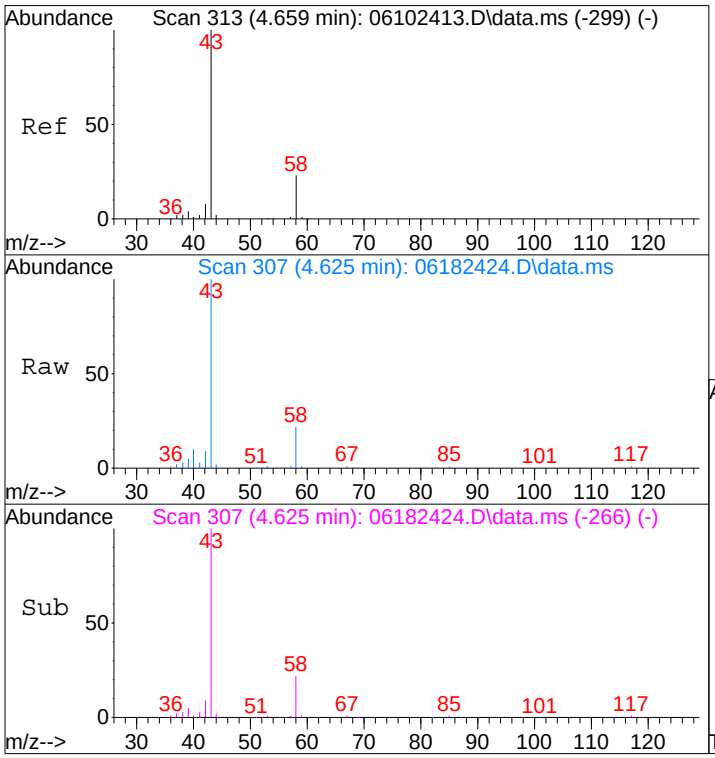


#12
Acrolein
Concen: 0.58 ng
RT: 4.52 min Scan# 289
Delta R.T. -0.013 min
Lab File: 06182424.D
Acq: 18 Jun 2024 22:15

Tgt Ion: 56 Resp: 4961

Ion	Ratio	Lower	Upper
56	100		
55	67.3	55.5	95.5

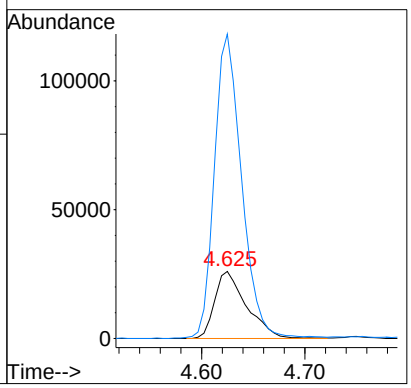


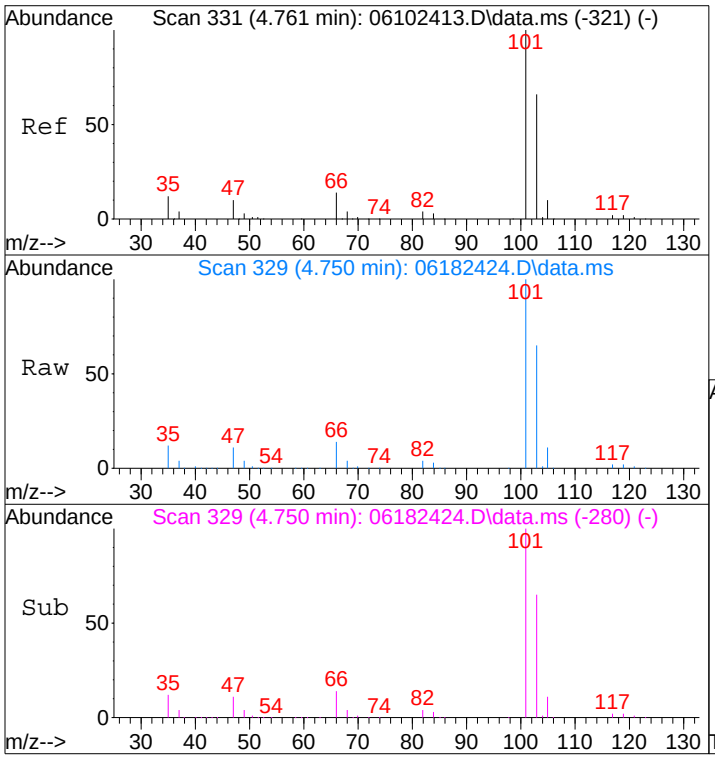


#13
Acetone
Concen: 6.08 ng
RT: 4.62 min Scan# 307
Delta R.T. -0.017 min
Lab File: 06182424.D
Acq: 18 Jun 2024 22:15

Tgt Ion: 58 Resp: 55721

Ion	Ratio	Lower	Upper
58	100		
43	390.2	400.7	460.7#

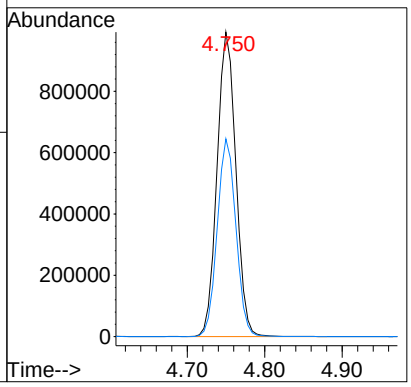


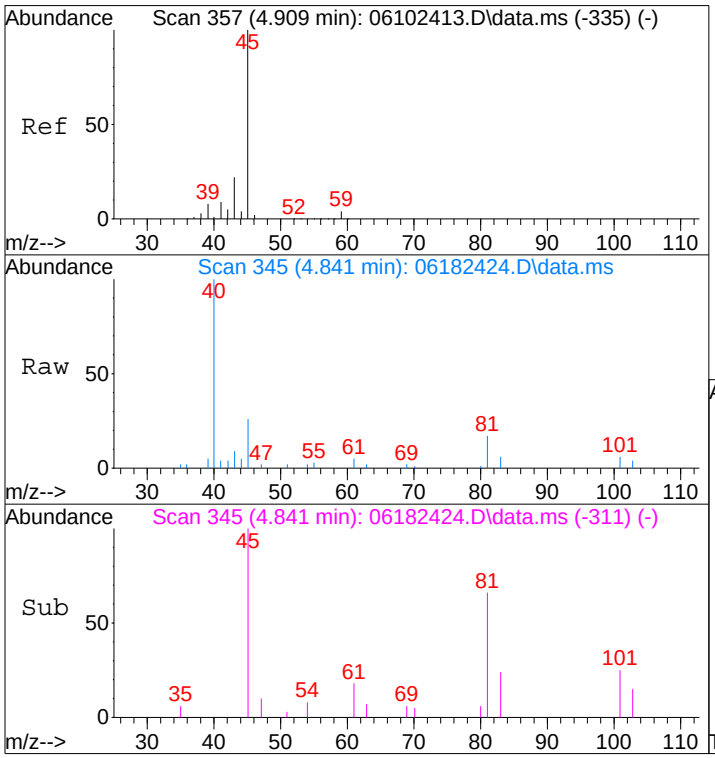


#14
Trichlorofluoromethane
Concen: 59.63 ng
RT: 4.75 min Scan# 329
Delta R.T. 0.029 min
Lab File: 06182424.D
Acq: 18 Jun 2024 22:15

Tgt Ion:101 Resp: 1675130

Ion	Ratio	Lower	Upper
101	100		
103	64.5	44.9	84.9

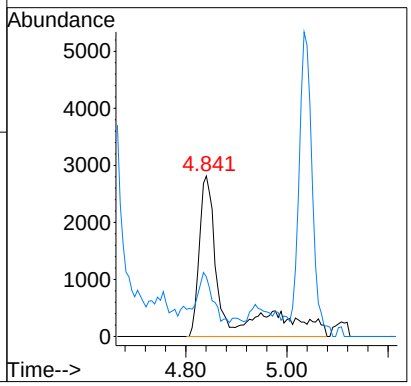


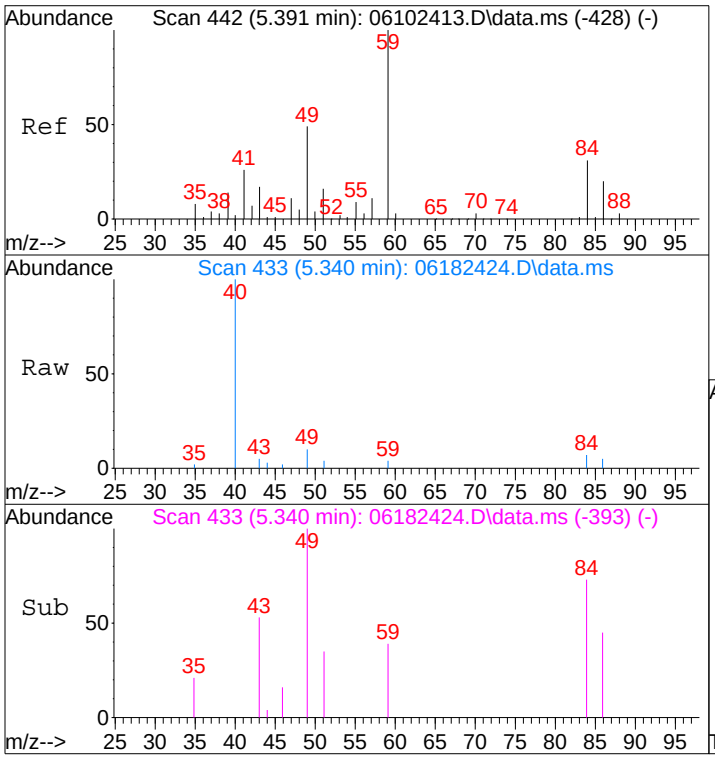


#15
2-Propanol (Isopropanol)
Concen: 0.25 ng
RT: 4.84 min Scan# 345
Delta R.T. -0.060 min
Lab File: 06182424.D
Acq: 18 Jun 2024 22:15

Tgt Ion: 45 Resp: 9210

Ion	Ratio	Lower	Upper
45	100		
43	40.5	2.5	42.5

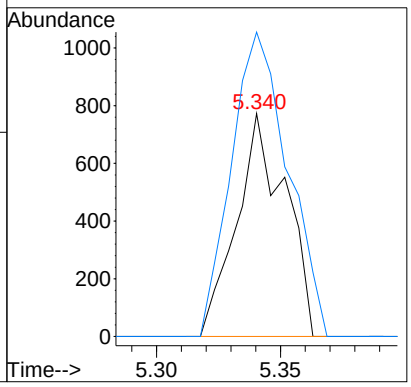


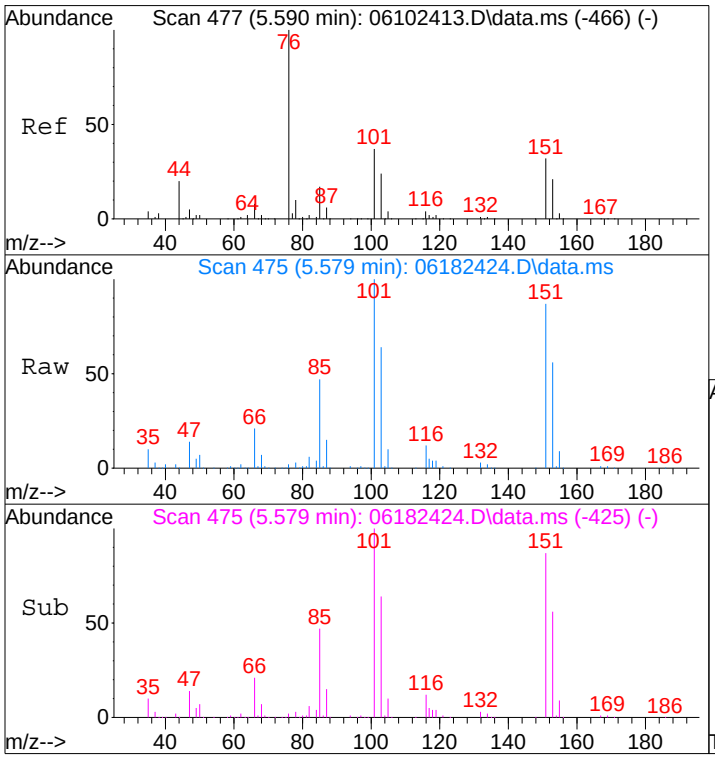


#19
Methylene Chloride
Concen: 0.08 ng
RT: 5.34 min Scan# 433
Delta R.T. -0.021 min
Lab File: 06182424.D
Acq: 18 Jun 2024 22:15

Tgt Ion: 84 Resp: 1056

Ion	Ratio	Lower	Upper
84	100		
49	158.9	132.9	182.9

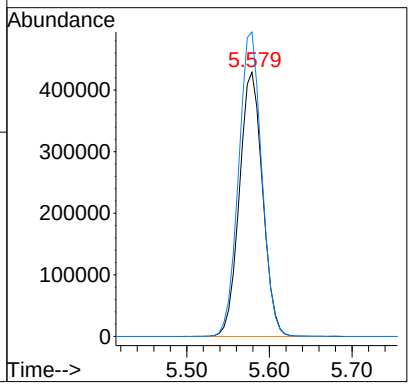


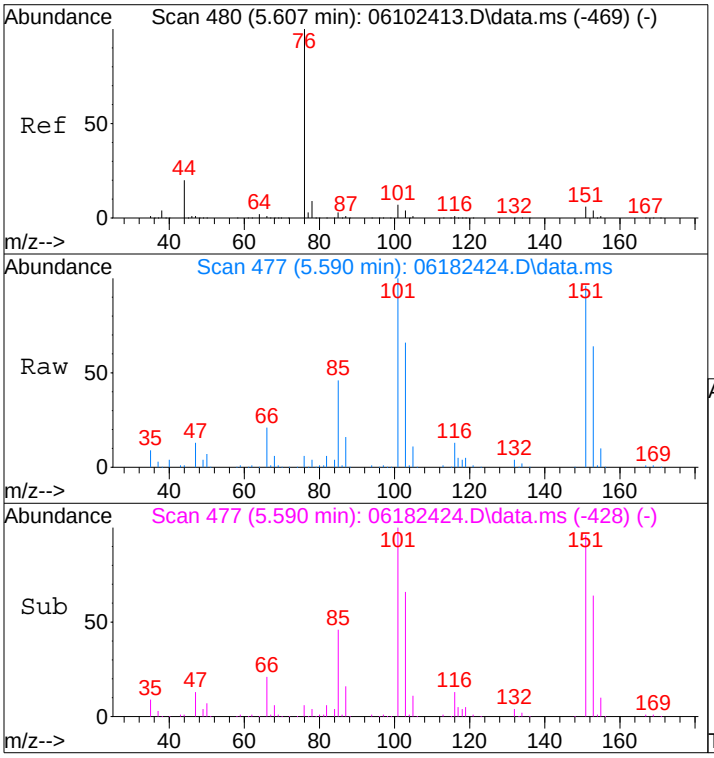


#21
Trichlorotrifluoroethane
Concen: 70.44 ng
RT: 5.58 min Scan# 475
Delta R.T. 0.033 min
Lab File: 06182424.D
Acq: 18 Jun 2024 22:15

Tgt Ion:151 Resp: 837118

Ion	Ratio	Lower	Upper
151	100		
101	114.8	95.0	135.0

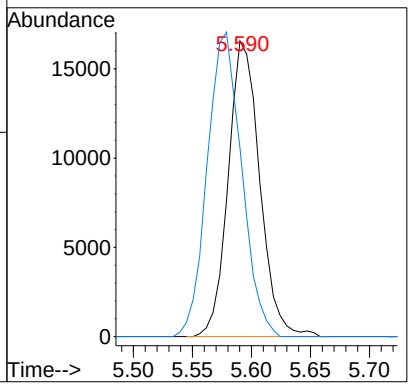


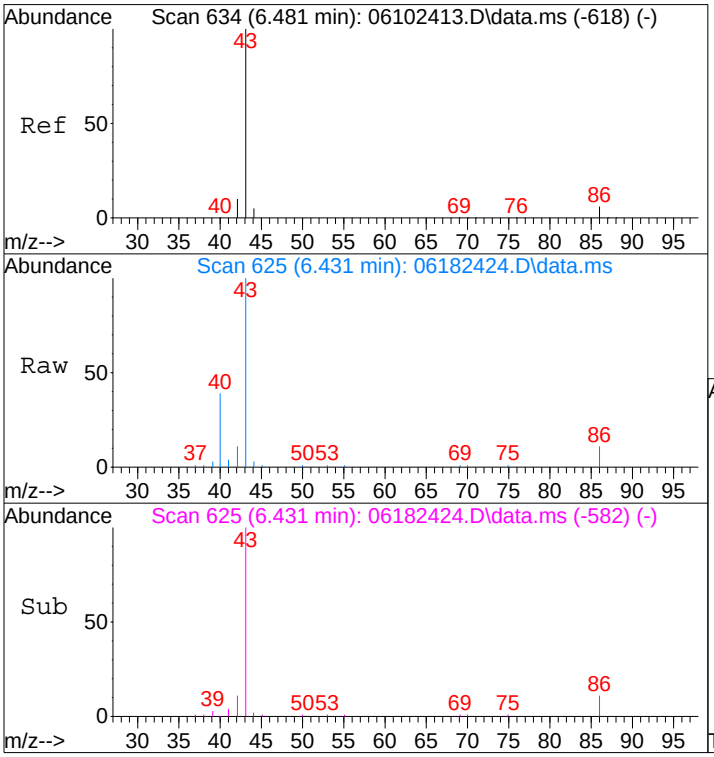


#22
Carbon Disulfide
Concen: 0.74 ng
RT: 5.59 min Scan# 477
Delta R.T. 0.027 min
Lab File: 06182424.D
Acq: 18 Jun 2024 22:15

Tgt Ion: 76 Resp: 30778

Ion	Ratio	Lower	Upper
76	100		
78	112.1	0.0	29.6#

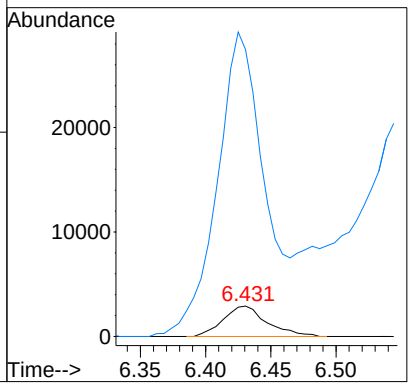


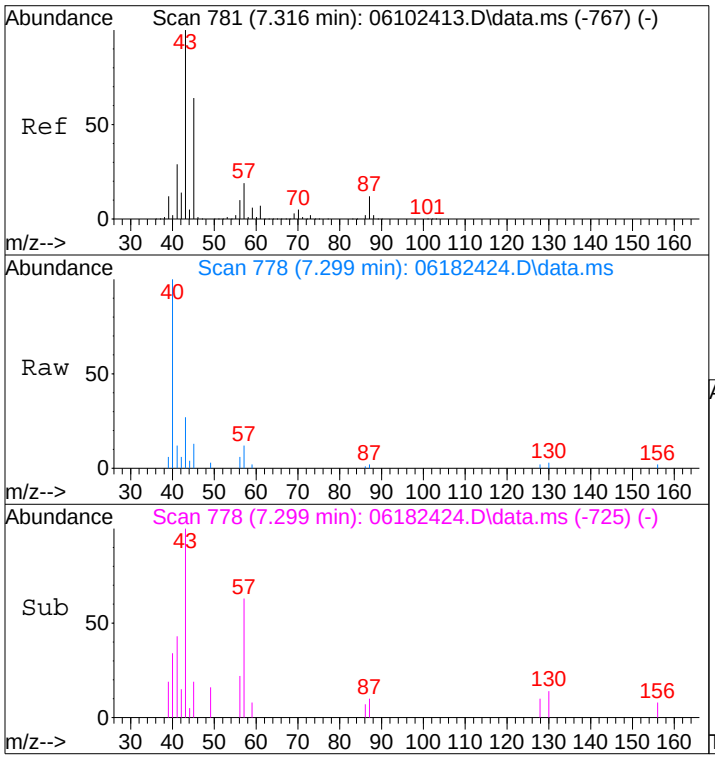


#26
Vinyl Acetate
Concen: 3.22 ng
RT: 6.43 min Scan# 625
Delta R.T. -0.009 min
Lab File: 06182424.D
Acq: 18 Jun 2024 22:15

Tgt Ion: 86 Resp: 6809

Ion	Ratio	Lower	Upper
86	100		
43	1337.0	1668.9	1708.9#

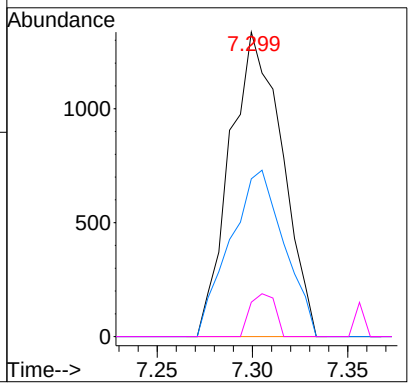


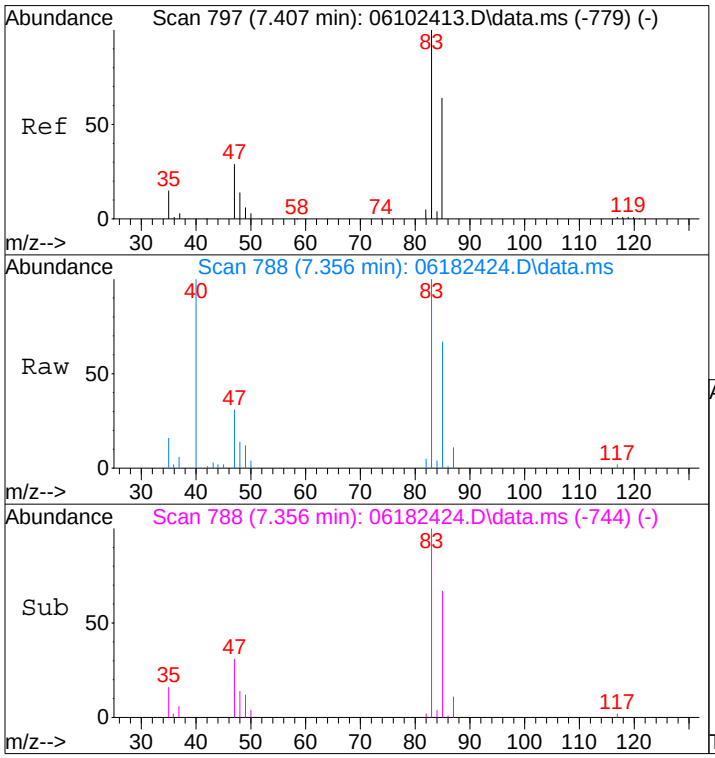


#31
n-Hexane
Concen: 0.13 ng
RT: 7.30 min Scan# 778
Delta R.T. 0.051 min
Lab File: 06182424.D
Acq: 18 Jun 2024 22:15

Tgt Ion: 57 Resp: 2542

Ion	Ratio	Lower	Upper
57	100		
56	56.7	42.5	63.7
86	6.8	9.5	14.3#

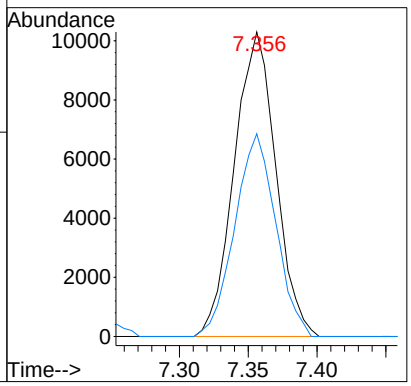


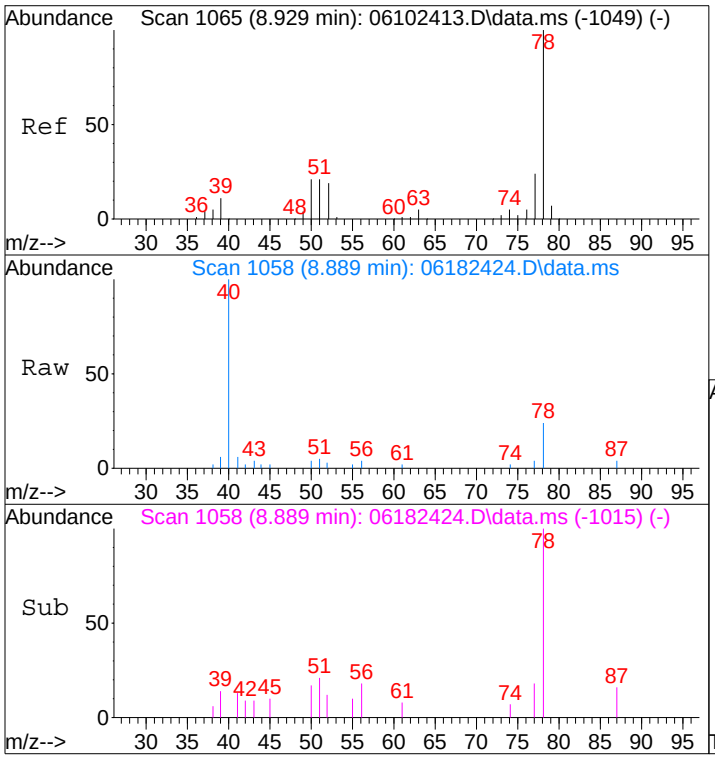


#32
Chloroform
Concen: 0.93 ng
RT: 7.36 min Scan# 788
Delta R.T. 0.001 min
Lab File: 06182424.D
Acq: 18 Jun 2024 22:15

Tgt Ion: 83 Resp: 21581

Ion	Ratio	Lower	Upper
83	100		
85	65.7	44.4	84.4

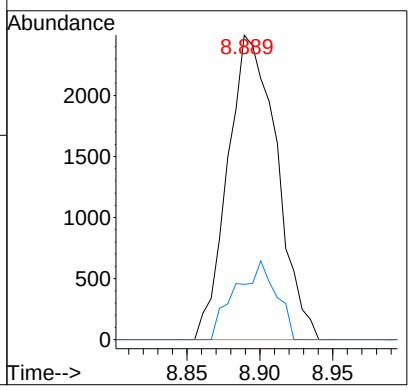


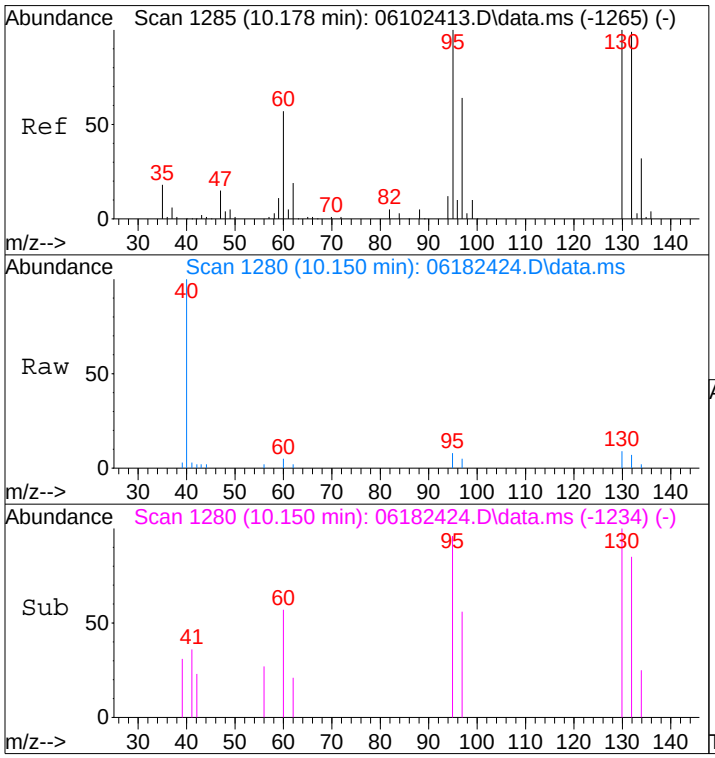


#41
Benzene
Concen: 0.12 ng
RT: 8.89 min Scan# 1058
Delta R.T. -0.008 min
Lab File: 06182424.D
Acq: 18 Jun 2024 22:15

Tgt Ion: 78 Resp: 5819

Ion	Ratio	Lower	Upper
78	100		
77	21.5	4.0	44.0

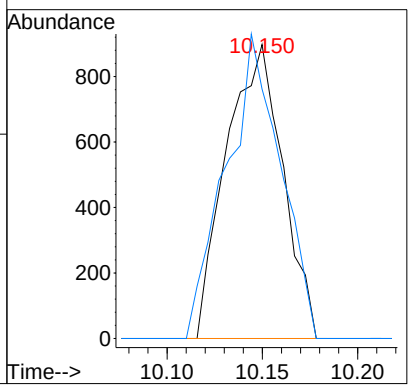


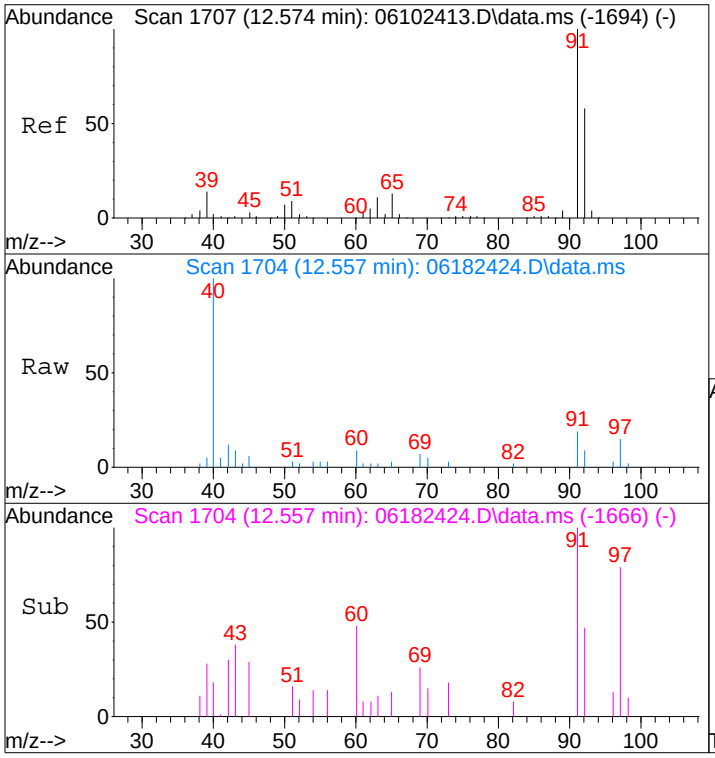


#47
Trichloroethene
Concen: 0.13 ng
RT: 10.15 min Scan# 1280
Delta R.T. 0.010 min
Lab File: 06182424.D
Acq: 18 Jun 2024 22:15

Tgt Ion:130 Resp: 1845

Ion	Ratio	Lower	Upper
130	100		
132	100.4	77.9	117.9

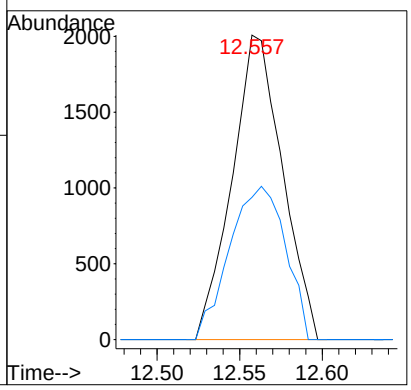


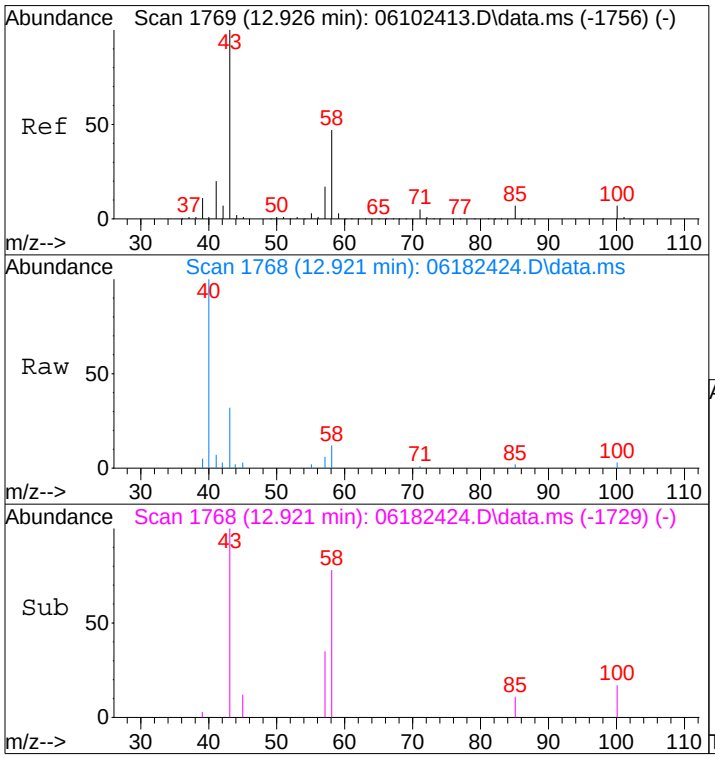


#58
Toluene
Concen: 0.08 ng
RT: 12.56 min Scan# 1704
Delta R.T. -0.034 min
Lab File: 06182424.D
Acq: 18 Jun 2024 22:15

Tgt Ion: 91 Resp: 4254

Ion	Ratio	Lower	Upper
91	100		
92	55.9	37.4	77.4

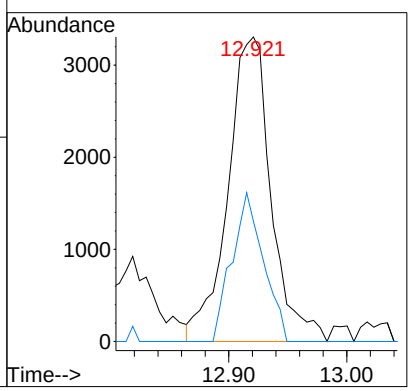


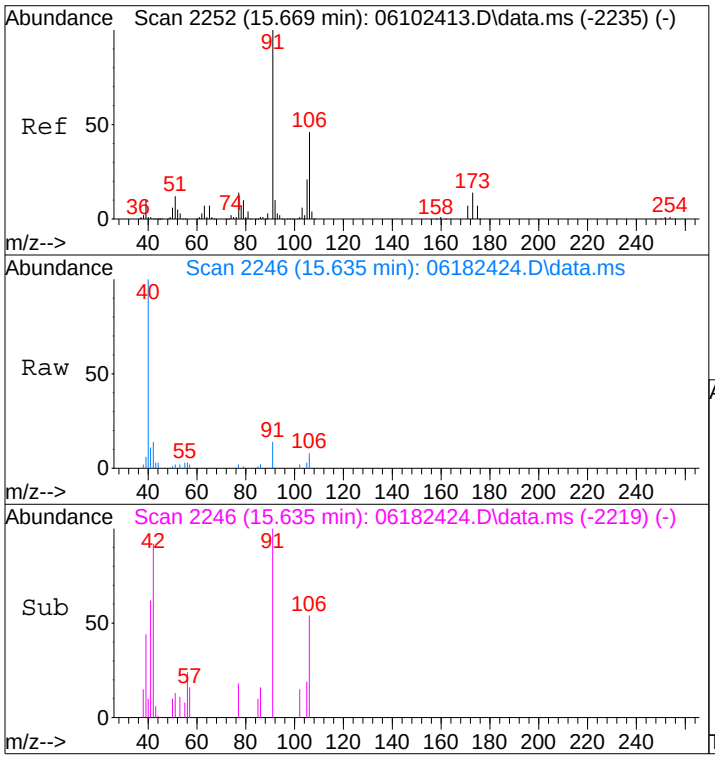


#59
2-Hexanone
Concen: 0.26 ng
RT: 12.92 min Scan# 1768
Delta R.T. -0.028 min
Lab File: 06182424.D
Acq: 18 Jun 2024 22:15

Tgt Ion: 43 Resp: 8418

Ion	Ratio	Lower	Upper
43	100		
58	35.7	25.9	65.9

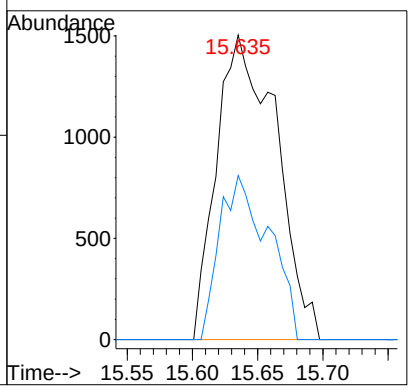




#67
m- & p-Xylenes
Concen: 0.10 ng
RT: 15.64 min Scan# 2246
Delta R.T. -0.045 min
Lab File: 06182424.D
Acq: 18 Jun 2024 22:15

Tgt Ion: 91 Resp: 4791

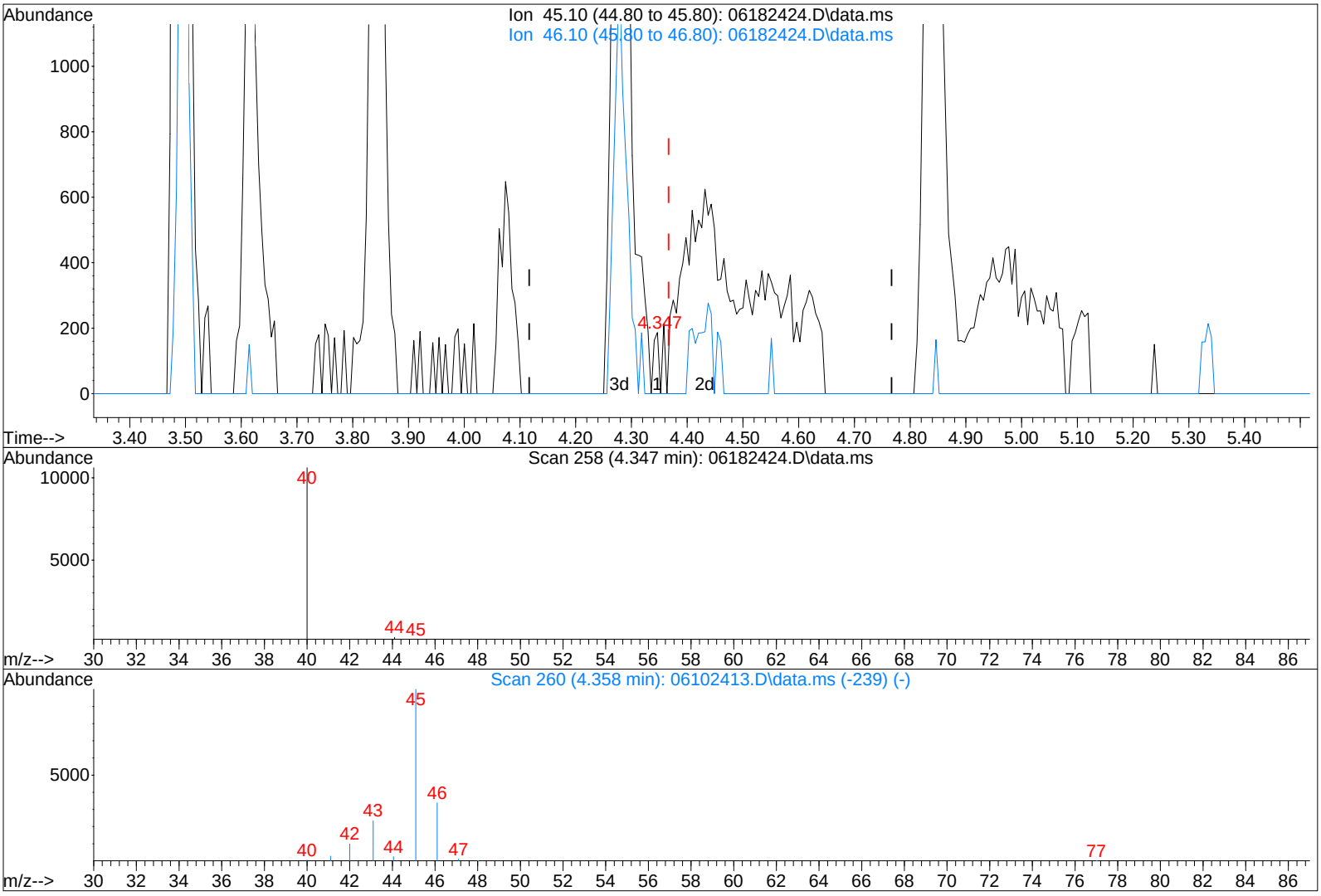
Ion	Ratio	Lower	Upper
91	100		
106	44.5	25.9	65.9



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182424.D Vial: 12
Acq On : 18 Jun 2024 22:15 Operator: SC
Sample : P2402249-019 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 08:27:08 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182424.D\data.ms

(10) Ethanol (T)

4.347min (-0.020) 0.01ng

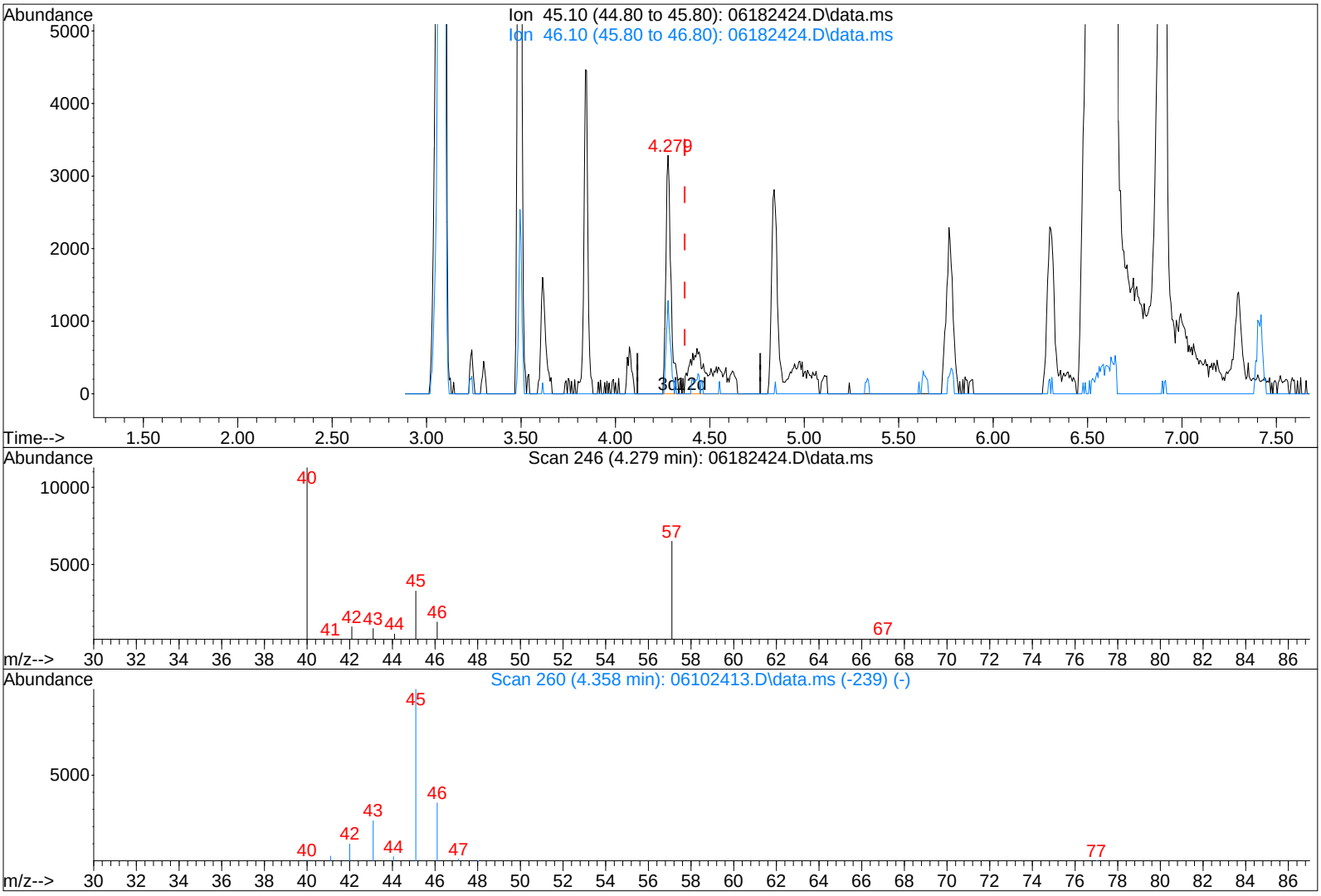
response 119

Ion	Exp%	Act%
45.10	100	100
46.10	33.50	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182424.D Vial: 12
Acq On : 18 Jun 2024 22:15 Operator: SC
Sample : P2402249-019 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 08:27:08 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182424.D\data.ms

(10) Ethanol (T)

4.279min (-0.088) 1.04ng m

response 11924

Ion	Exp%	Act%
45.10	100	100
46.10	33.50	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

MP

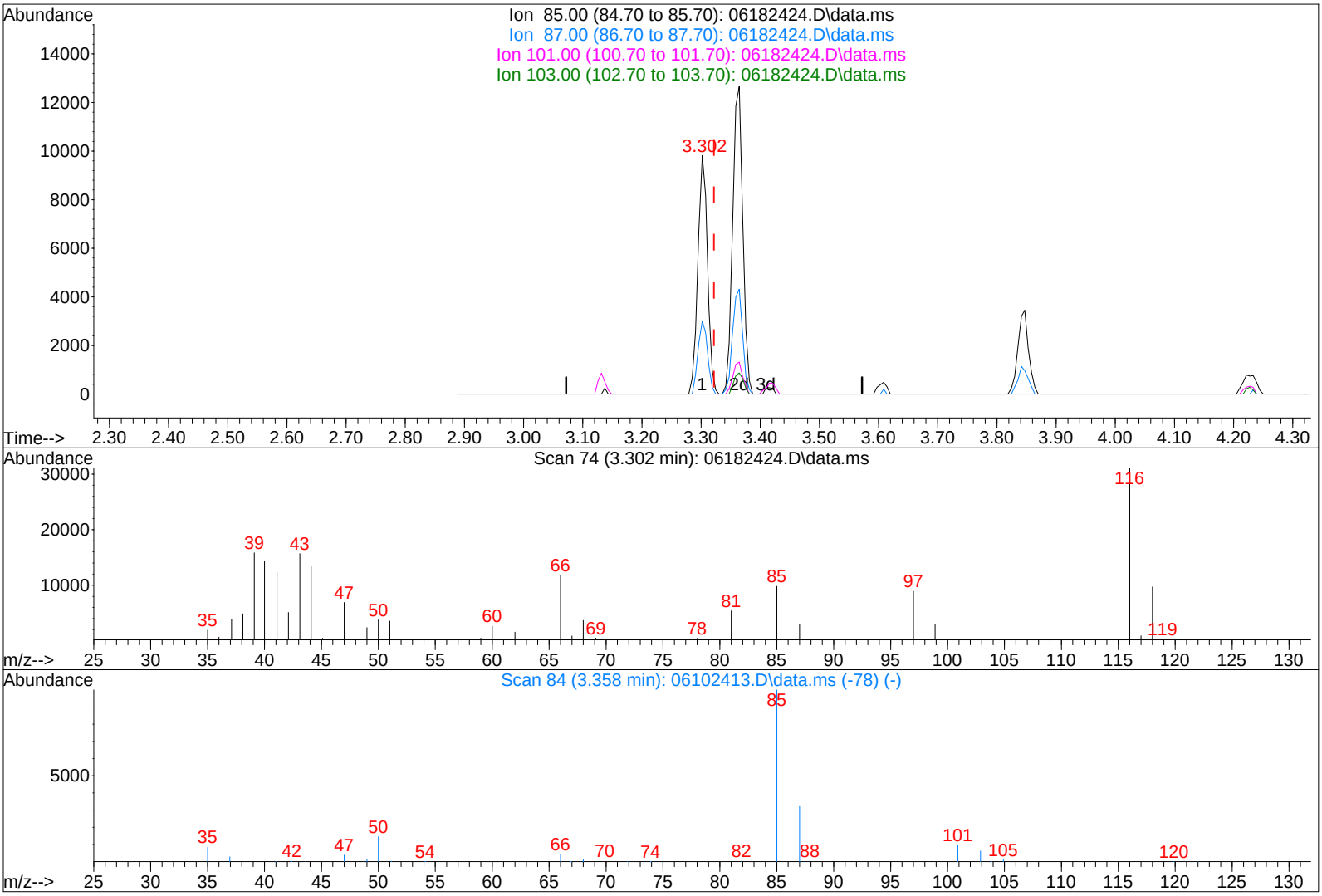
6/19/24

6/29/24

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182424.D Vial: 12
Acq On : 18 Jun 2024 22:15 Operator: SC
Sample : P2402249-019 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 08:27:08 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182424.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.302min (-0.020) 0.40ng

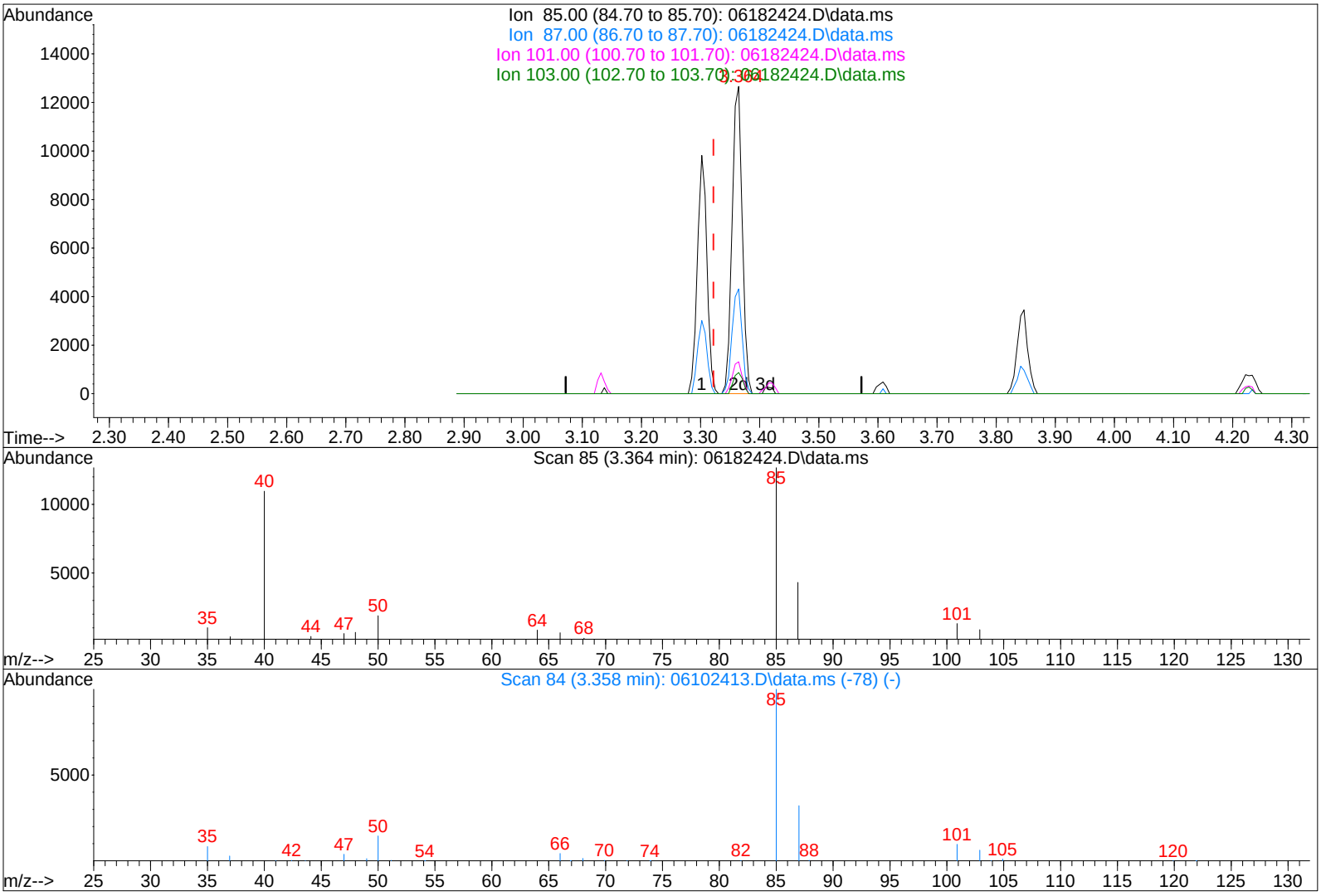
response 11100

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	30.24
101.00	9.80	0.00
103.00	6.30	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182424.D Vial: 12
Acq On : 18 Jun 2024 22:15 Operator: SC
Sample : P2402249-019 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 08:27:08 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182424.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.364min (+0.042) 0.54ng m

response 15105

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	22.22
101.00	9.80	0.00
103.00	6.30	0.00

WP

6/19/24

CG 6/29/24

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182424.D Vial: 12
Acq On : 18 Jun 2024 22:15 Operator: SC
Sample : P2402249-019 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 15:05:41 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

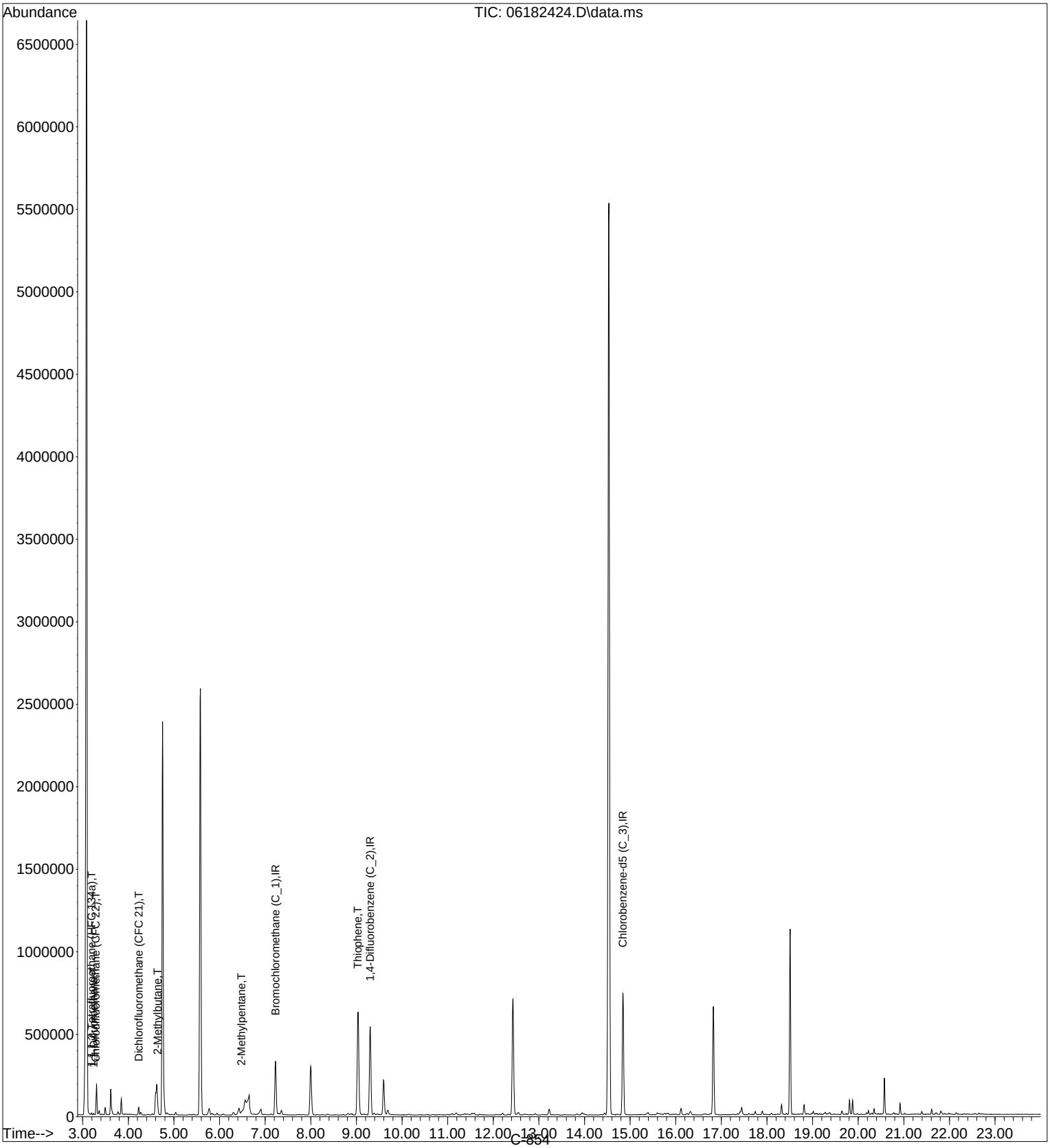
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	118005	12.500	ng		-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	514533	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	127678	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	3.14	85	84	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.19	83	1367	0.113	ng	#	1
4) 1,1-Difluoroethane	3.24	65	1581	0.153	ng		92
5) Chlorodifluoromethane ...	3.28	67	2808	0.698	ng		89
6) 1-Chloro-1,1-Difluoroe...	3.51	65	531	N.D.			
7) Dichlorofluoromethane ...	4.23	67	34774	1.285	ng		100
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	0.00	83	0	N.D.	d		
10) 2-Methylbutane	4.64	57	7746	0.550	ng	#	44
11) Methyl Acetate	5.33	43	1456	N.D.			
12) 2-Methylpentane	6.48	71	1531	0.150	ng	#	1
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	9.03	84	34433	1.432	ng	#	19
17) 2,3-Dimethylpentane	9.52	56	772	N.D.			
18) Dibromomethane	9.79	174	121	N.D.			
20) Methyl Cyclohexane	11.42	55	1602	N.D.			
21) 1,3-Dichloropropane	0.00	76	0	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	16.32	75	1009	N.D.			
25) Bromobenzene	0.00	77	0	N.D.			
26) 2-Chlorotoluene	17.60	91	680	N.D.			
27) 4-Chlorotoluene	17.60	91	680	N.D.			
28) Indane	19.12	117	383	N.D.			
29) Indene	0.00	115	0	N.D.			
30) 1,2,4,5-Tetramethylben...	20.22	119	760	N.D.			
31) 1,2,3,4-Tetramethylben...	20.22	119	760	N.D.			
32) 1,2,3,5-Tetramethylben...	20.58	119	1459	N.D.			
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182424.D Vial: 12
Acq On : 18 Jun 2024 22:15 Operator: SC
Sample : P2402249-019 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:05:41 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

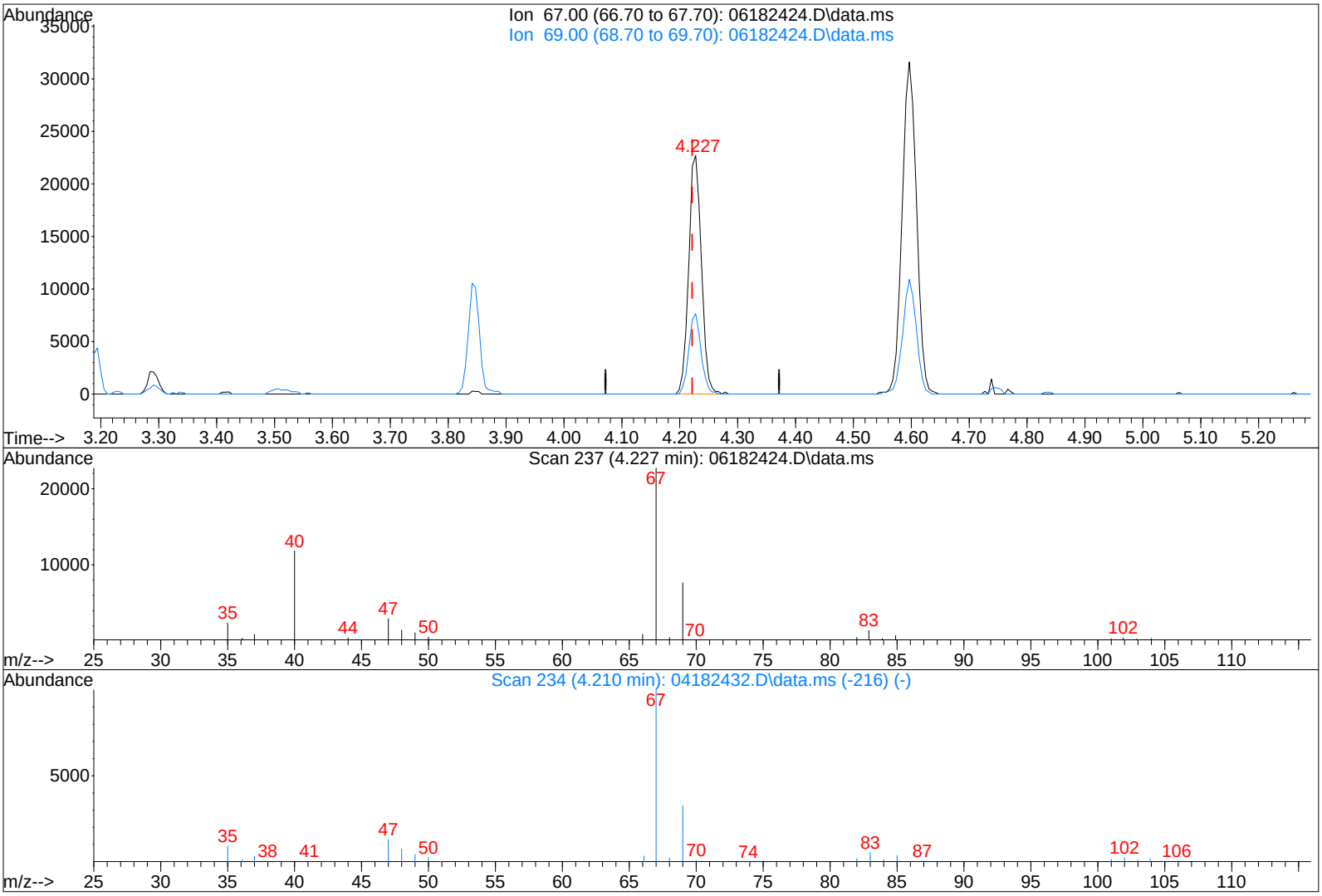


Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182424.D Vial: 12
Acq On : 18 Jun 2024 22:15 Operator: SC
Sample : P2402249-019 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 15:00:04 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182424.D\data.ms

(7) Dichlorofluoromethane (CFC 21) (T)

4.227min (+0.006) 1.29ng

response 34774

Ion	Exp%	Act%
67.00	100	100
69.00	32.40	32.59
0.00	0.00	0.00
0.00	0.00	0.00

LSC Area Percent Report

MJ 6/28/24

Data Path : I:\MS09\DATA\2024 06\18\
Data File : 06182424.D
Acq On : 18 Jun 2024 22:15
Operator : SC
Sample : P2402249-019 (400mL)
Misc : S37-06062402
ALS Vial : 12 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06182424.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.086	22	36	51	rBV	7212537	12841818	100.00%	44.008%
2	3.194	51	55	59	rVV	11083	12572	0.10%	0.043%
3	3.302	67	74	78	rBV3	187587	247338	1.93%	0.848%
4	3.359	81	84	90	rVB	25233	33424	0.26%	0.115%
5	3.495	103	108	114	rBV2	43901	59420	0.46%	0.204%
6	3.614	123	129	143	rBV	155851	247577	1.93%	0.848%
7	3.773	153	157	162	rBV2	15513	21572	0.17%	0.074%
8	3.847	165	170	180	rVB	96648	129070	1.01%	0.442%
9	4.227	230	237	241	rBV	46989	68964	0.54%	0.236%
10	4.273	241	245	252	rVB2	15692	26025	0.20%	0.089%
11	4.523	284	289	293	rBV	7935	11615	0.09%	0.040%
12	4.597	296	302	303	rVV	133808	172382	1.34%	0.591%
13	4.625	303	307	320	rVV	184649	400690	3.12%	1.373%
14	4.750	321	329	342	rVV	2383266	4119955	32.08%	14.119%
15	4.846	342	346	358	rVB8	12940	32689	0.25%	0.112%
16	5.034	374	379	385	rVB	15400	25278	0.20%	0.087%
17	5.579	462	475	491	rBV	2585838	5065108	39.44%	17.358%
18	5.772	497	509	516	rBV	38745	96725	0.75%	0.331%
19	5.834	516	520	531	rVV4	9420	20368	0.16%	0.070%
20	5.942	531	539	549	rVV2	10499	19947	0.16%	0.068%
21	6.079	553	563	570	rBV5	5705	13733	0.11%	0.047%
22	6.300	594	602	611	rBV2	17094	43286	0.34%	0.148%
23	6.425	611	624	629	rBV2	40203	105294	0.82%	0.361%
24	6.493	629	636	637	rBV4	12518	21499	0.17%	0.074%
25	6.561	638	648	653	rBV3	65144	196922	1.53%	0.675%
26	6.646	661	663	680	rVB2	116684	174859	1.36%	0.599%
27	6.908	694	709	715	rVB	32047	91738	0.71%	0.314%
28	7.129	743	748	754	rVB4	6095	11969	0.09%	0.041%
29	7.226	754	765	774	rBV	325603	710202	5.53%	2.434%
30	7.299	774	778	782	rVV3	9374	18567	0.14%	0.064%
31	7.356	782	788	795	rVB	26266	53115	0.41%	0.182%
32	7.998	891	901	917	rVB	293270	695194	5.41%	2.382%
33	8.367	960	966	973	rBV5	5762	13435	0.10%	0.046%
34	8.815	1037	1045	1051	rBV5	7947	24036	0.19%	0.082%
35	8.884	1051	1057	1065	rVB6	8106	23214	0.18%	0.080%
36	9.037	1072	1084	1099	rBV	624989	1553139	12.09%	5.323%
37	9.304	1120	1131	1140	rBV	533955	1247712	9.72%	4.276%
38	9.389	1140	1146	1153	rVB	10247	20532	0.16%	0.070%
39	9.593	1172	1182	1192	rBV	209840	448319	3.49%	1.536%
40	9.684	1192	1198	1207	rVB2	25719	61050	0.48%	0.209%

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\18\
Data File : 06182424.D
Acq On : 18 Jun 2024 22:15
Operator : SC
Sample : P2402249-019 (400mL)
Misc : S37-06062402
ALS Vial : 12 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

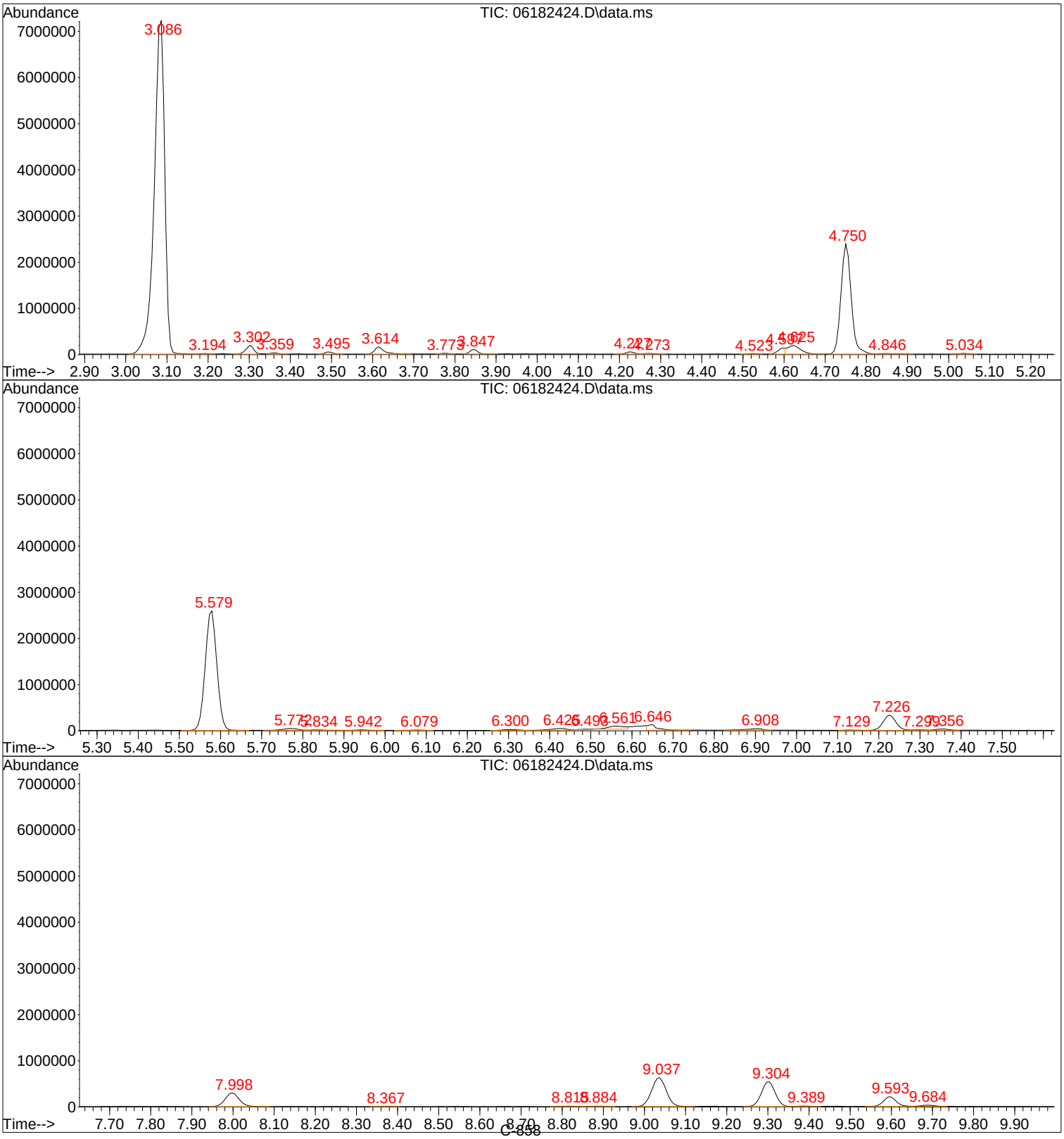
Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Sum of corrected areas: 29180352

Data Path : I:\MS09\DATA\2024 06\18\
Data File : 06182424.D
Acq On : 18 Jun 2024 22:15
Operator : SC
Sample : P2402249-019 (400mL)
Misc : S37-06062402
ALS Vial : 12 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\18\\
Data File : 06182424.D
Acq On : 18 Jun 2024 22:155
Operator : SCC
Sample : P2402249-019 (400mL))
Misc : S37-060624022
ALS Vial : 12 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\18\06182425.D Vial: 13
Acq On : 18 Jun 2024 22:48 Operator: SC
Sample : P2402249-020 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:00:05 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

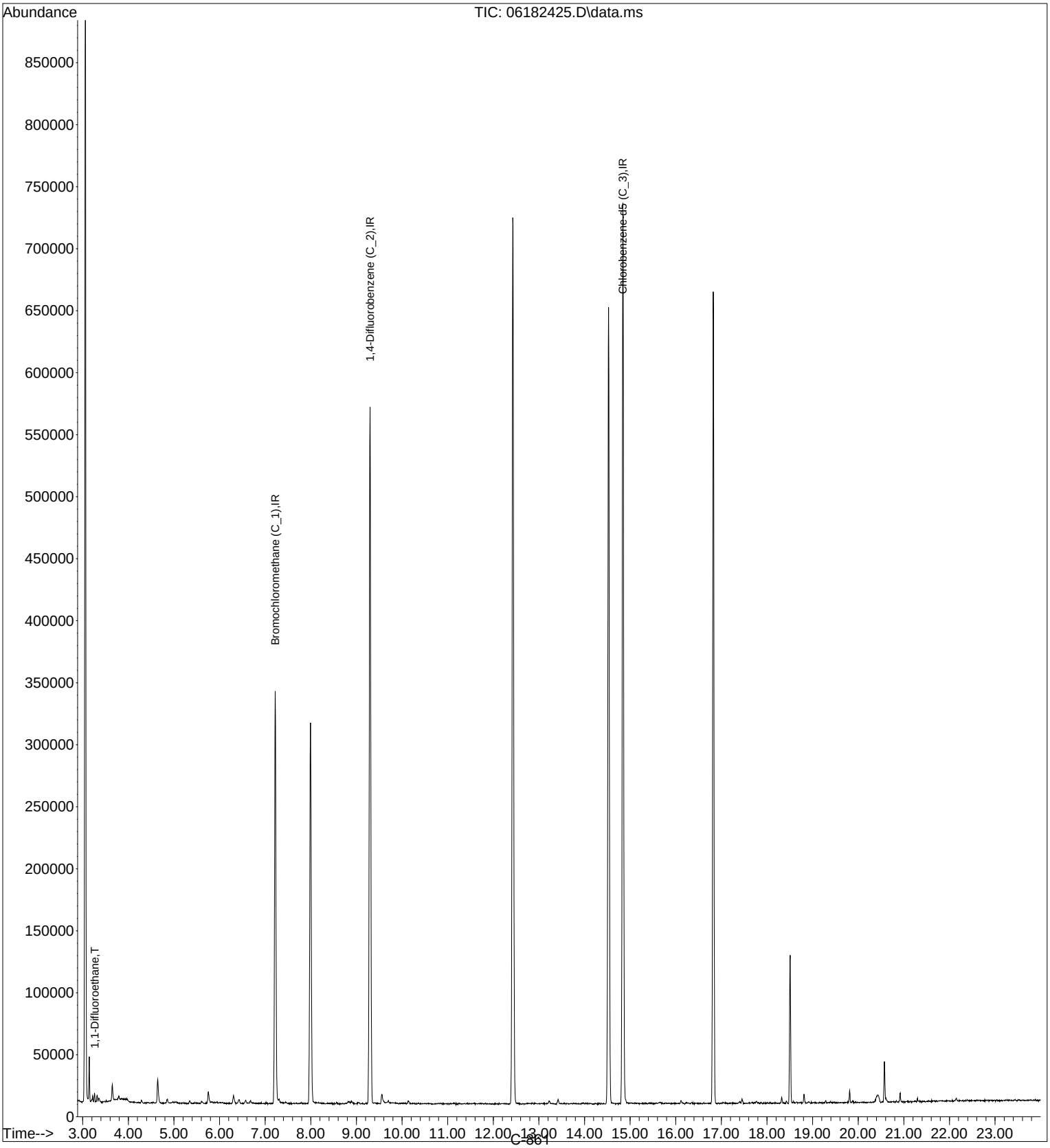
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (C 1)	7.22	130	122152	12.500	ng	-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	520346	12.500	ng	-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	125225	12.500	ng	-0.01
Target Compounds						Qvalue
2) Chloropentafluoroethane	0.00	85	0	N.D.		
3) 1,1,1,2-Tetrafluoroeth...	0.00	83	0	N.D.		
4) 1,1-Difluoroethane	3.26	65	1725	0.162	ng	96
5) Chlorodifluoromethane ...	0.00	67	0	N.D.		
6) 1-Chloro-1,1-Difluoroe...	0.00	65	0	N.D.		
7) Dichlorofluoromethane ...	0.00	67	0	N.D.		
8) Vinylbromide	0.00	108	0	N.D.		
9) 2,2-Dichloro-1,1,1-tri...	0.00	83	0	N.D.		
10) 2-Methylbutane	4.64	57	52	N.D.		
11) Methyl Acetate	5.33	43	419	N.D.		
12) 2-Methylpentane	0.00	71	0	N.D.		
13) 2,2-Dichloropropane	0.00	77	0	N.D.		
14) 1,1-Dichloropropene	0.00	75	0	N.D.		
15) Thiophene	0.00	84	0	N.D.		
17) 2,3-Dimethylpentane	0.00	56	0	N.D.		
18) Dibromomethane	0.00	174	0	N.D.		
20) Methyl Cyclohexane	0.00	55	0	N.D.		
21) 1,3-Dichloropropane	0.00	76	0	N.D.		
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		
23) 1-Chlorohexane	0.00	91	0	N.D.		
24) 1,2,3-Trichloropropane	0.00	75	0	N.D.		
25) Bromobenzene	17.03	77	62	N.D.		
26) 2-Chlorotoluene	17.61	91	679	N.D.		
27) 4-Chlorotoluene	17.67	91	777	N.D.		
28) Indane	0.00	117	0	N.D.		
29) Indene	0.00	115	0	N.D.		
30) 1,2,4,5-Tetramethylben...	0.00	119	0	N.D.		
31) 1,2,3,4-Tetramethylben...	0.00	119	0	N.D.		
32) 1,2,3,5-Tetramethylben...	0.00	119	0	N.D.		
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182425.D Vial: 13
Acq On : 18 Jun 2024 22:48 Operator: SC
Sample : P2402249-020 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:00:05 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182425.D Vial: 13
Acq On : 18 Jun 2024 22:48 Operator: SC
Sample : P2402249-020 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 12:18:53 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/19/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.22	130	120118	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	520258	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	125225	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	273377	12.805	ng		0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.48%				
57) Toluene-d8 (SS2)	12.43	98	579254	12.088	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.72%				
73) Bromofluorobenzene (SS3)	16.83	174	224570	12.978	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.84%				
Target Compounds							Qvalue
2) Propene	0.00	42	0	N.D.	d		
3) Dichlorodifluoromethan...	0.00	85	0	N.D.			
4) Chloromethane	3.52	50	469	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.43	45	127	N.D.			
11) Acetonitrile	4.44	41	209	N.D.			
12) Acrolein	4.55	56	435	0.050	ng	#	76
13) Acetone	4.64	58	6158	0.660	ng	#	86
14) Trichlorofluoromethane	4.77	101	107	N.D.			
15) 2-Propanol (Isopropanol)	4.85	45	3396	0.090	ng		78
16) Acrylonitrile	4.99	53	381	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	0.00	59	0	N.D.			
19) Methylene Chloride	5.34	84	612	N.D.			
20) 3-Chloro-1-propene (Al...	0.00	41	0	N.D.			
21) Trichlorotrifluoroethane	0.00	151	0	N.D.			
22) Carbon Disulfide	0.00	76	0	N.D.	d		
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D.	d		
27) 2-Butanone (MEK)	6.68	72	605	0.082	ng	#	12
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.			
30) Ethyl Acetate	0.00	61	0	N.D.	d		
31) n-Hexane	0.00	57	0	N.D.			
32) Chloroform	0.00	83	0	N.D.			
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	0.00	62	0	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.82	56	1741	No Calib		#	
41) Benzene	8.89	78	1312	N.D.			
42) Carbon Tetrachloride	0.00	117	0	N.D.			
43) Cyclohexane	0.00	84	0	N.D.	d		
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.08	83	181	N.D.			
47) Trichloroethene	10.14	130	1039	0.074	ng		89
48) 1,4-Dioxane	0.00	88	0	N.D.			
49) 2,2,4-Trimethylpentane...	0.00	57	0	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182425.D Vial: 13
Acq On : 18 Jun 2024 22:48 Operator: SC
Sample : P2402249-020 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 12:18:53 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

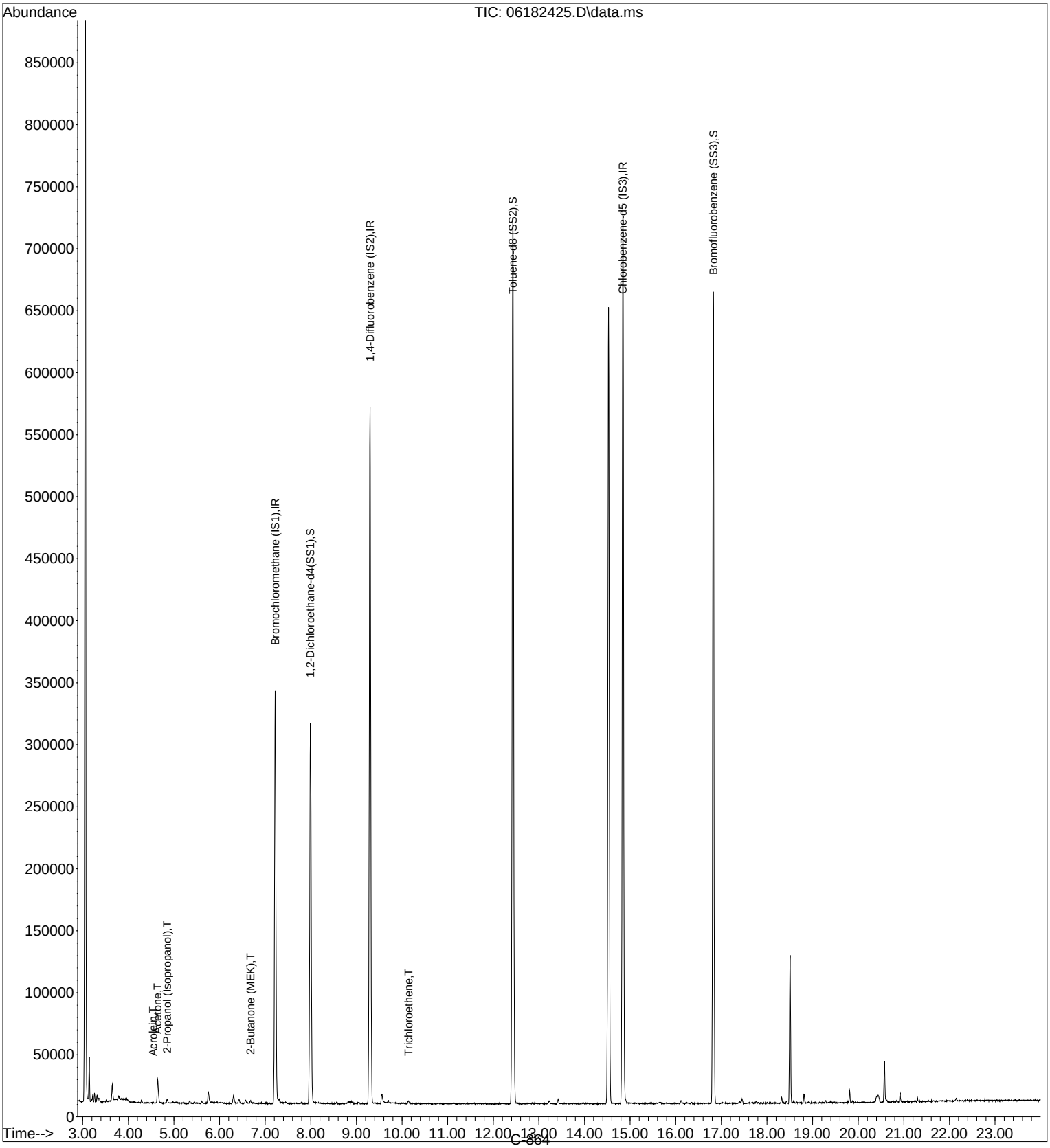
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	0.00	71	0	N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
58) Toluene	12.56	91	936	N.D.	
59) 2-Hexanone	12.93	43	412	N.D.	
60) Dibromochloromethane	13.07	129	457	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	0.00	43	0	N.D.	
63) n-Octane	0.00	57	0	N.D.	
64) Tetrachloroethene	14.03	166	201	N.D.	
65) Chlorobenzene	14.90	112	443	N.D.	
66) Ethylbenzene	15.41	91	659	N.D.	
67) m- & p-Xylenes	15.63	91	736	N.D.	
68) Bromoform	15.67	173	478	N.D.	
69) Styrene	0.00	104	0	N.D.	
70) o-Xylene	16.25	91	555	N.D.	
71) n-Nonane	0.00	43	0	N.D.	
72) 1,1,2,2-Tetrachloroethane	16.21	83	208	N.D.	
74) Cumene	17.03	105	615	N.D.	
75) alpha-Pinene	0.00	93	0	N.D.	
76) n-Propylbenzene	17.67	91	777	N.D.	
77) 3-Ethyltoluene	17.03	105	615	No Calib	#
78) 4-Ethyltoluene	17.86	105	579	N.D.	
79) 1,3,5-Trimethylbenzene	17.96	105	398	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.03	105	615	No Calib	#
82) 1,2,4-Trimethylbenzene	18.43	105	474	N.D.	
83) n-Decane	0.00	58	0	N.D.	
84) Benzyl Chloride	0.00	91	0	N.D.	
85) 1,3-Dichlorobenzene	18.58	146	612	N.D.	
86) 1,4-Dichlorobenzene	18.65	146	534	N.D.	
87) sec-Butylbenzene	18.74	105	712	N.D.	
88) 4-Isopropyltoluene (p-...	18.93	119	575	N.D.	
89) 1,2,3-Trimethylbenzene	17.03	105	615	No Calib	#
90) 1,2-Dichlorobenzene	19.04	146	364	N.D.	
91) d-Limonene	0.00	68	0	N.D.	
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	626	N.D.	
95) Naphthalene	20.94	128	326	N.D.	
96) n-Dodecane	0.00	58	0	N.D.	
97) Hexachlorobutadiene	21.30	225	550	N.D.	
98) Cyclohexanone	0.00	55	0	N.D.	
99) tert-Butylbenzene	18.42	119	642	N.D.	
100) n-Butylbenzene	19.39	91	587	N.D.	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182425.D Vial: 13
Acq On : 18 Jun 2024 22:48 Operator: SC
Sample : P2402249-020 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 12:18:53 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182425.D Vial: 13
Acq On : 18 Jun 2024 22:48 Operator: SC
Sample : P2402249-020 (400mL) Inst : MS09
Misc : S37-06062402

6/19/24

Quant Time: Jun 19 12:18:53 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

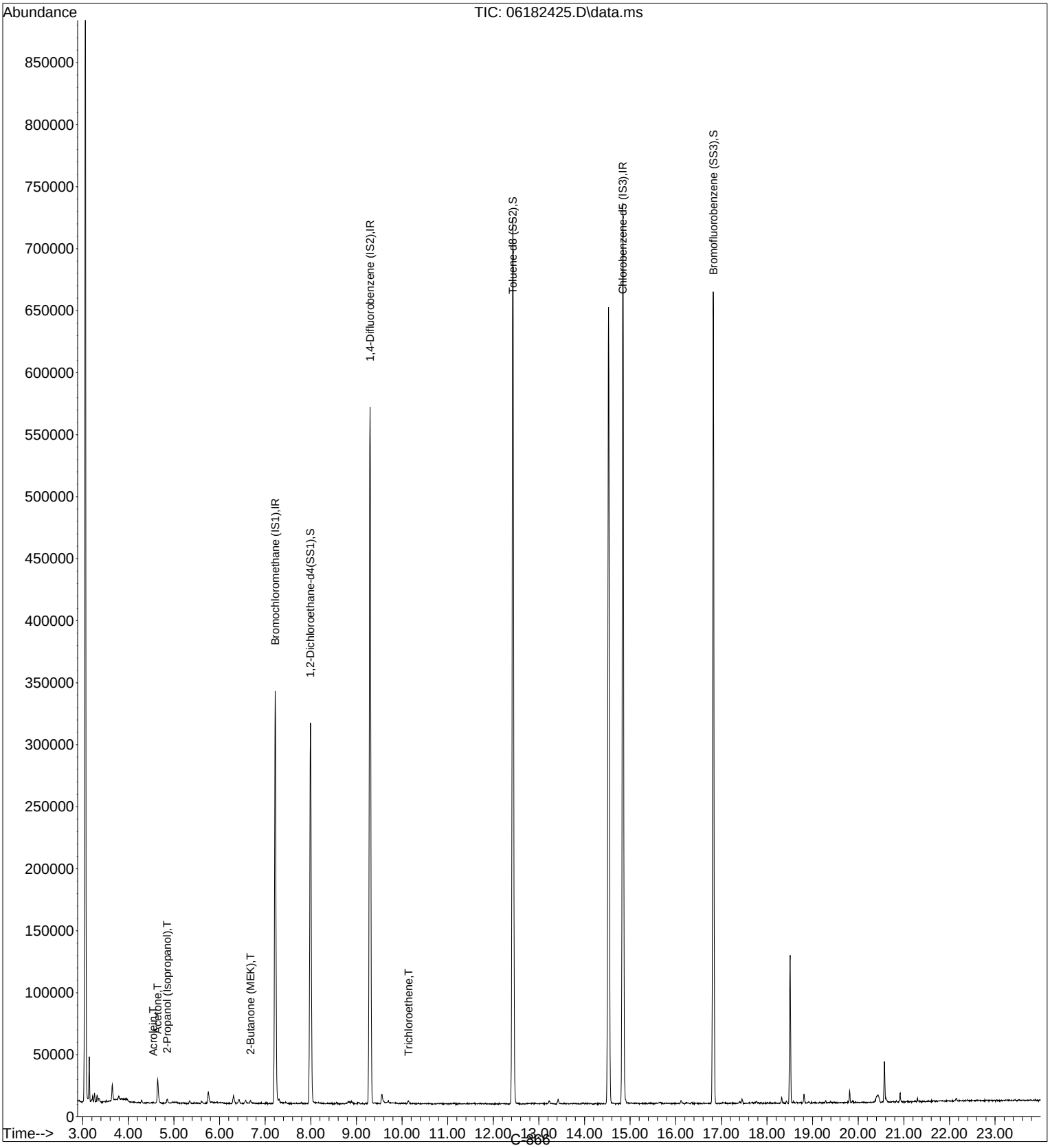
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.22	130	120118	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	520258	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	125225	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	273377	12.805	ng		0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.48%				
57) Toluene-d8 (SS2)	12.43	98	579254	12.088	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.72%				
73) Bromofluorobenzene (SS3)	16.83	174	224570	12.978	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.84%				
Target Compounds							Qvalue
12) Acrolein	4.55	56	435	0.050	ng	#	76
13) Acetone	4.64	58	6158	0.660	ng	#	86
15) 2-Propanol (Isopropanol)	4.85	45	3396	0.090	ng		78
27) 2-Butanone (MEK)	6.68	72	605	0.082	ng	#	12
47) Trichloroethene	10.14	130	1039	0.074	ng		89

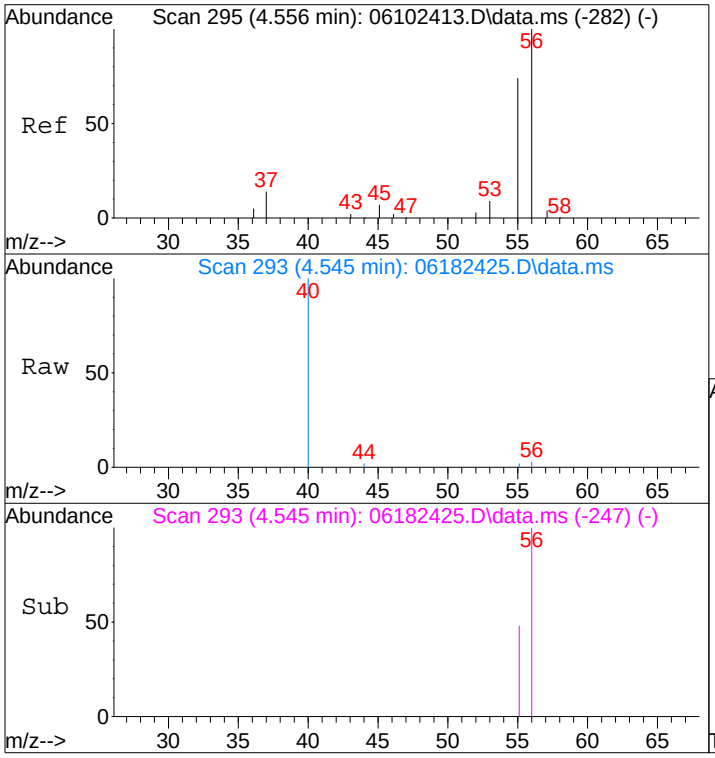
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182425.D Vial: 13
Acq On : 18 Jun 2024 22:48 Operator: SC
Sample : P2402249-020 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 12:18:53 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

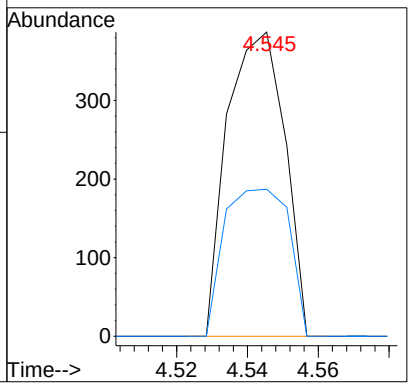


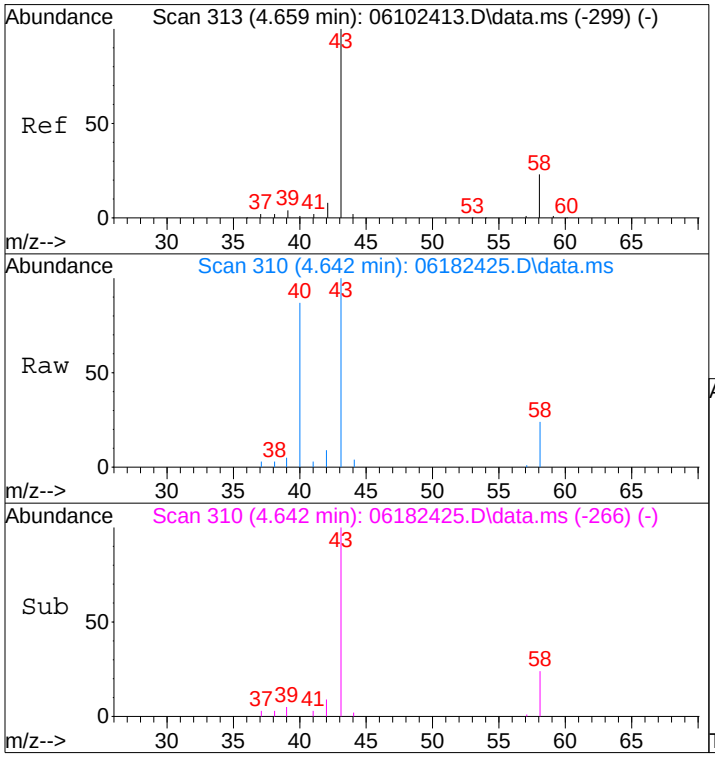


#12
Acrolein
Concen: 0.05 ng
RT: 4.55 min Scan# 293
Delta R.T. 0.010 min
Lab File: 06182425.D
Acq: 18 Jun 2024 22:48

Tgt Ion: 56 Resp: 435

Ion	Ratio	Lower	Upper
56	100		
55	54.7	55.5	95.5#

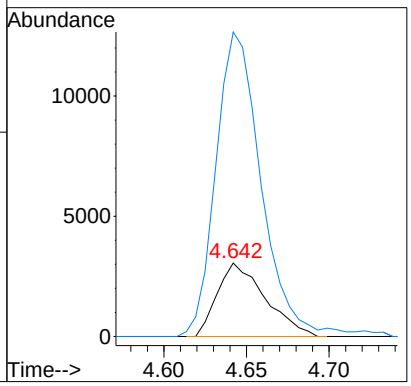


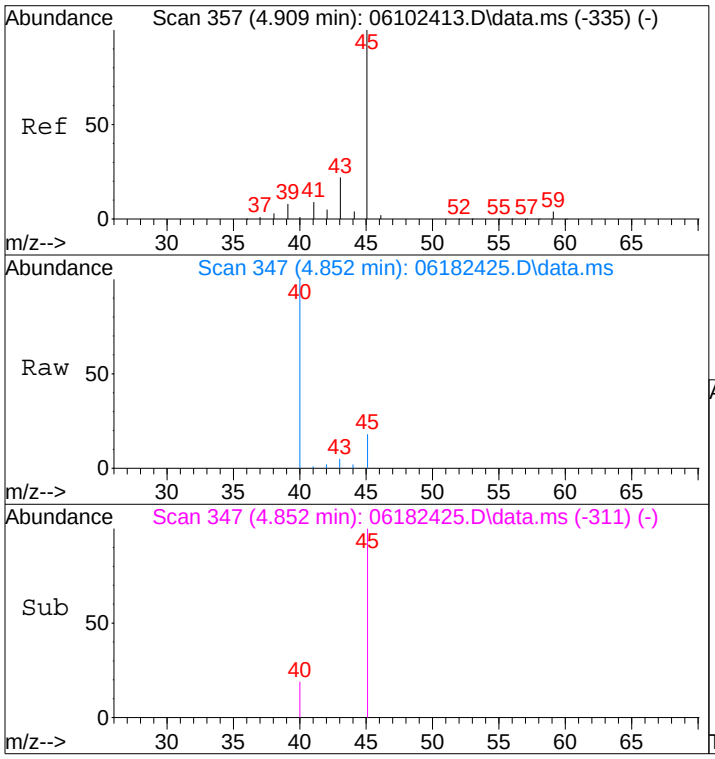


#13
Acetone
Concen: 0.66 ng
RT: 4.64 min Scan# 310
Delta R.T. -0.000 min
Lab File: 06182425.D
Acq: 18 Jun 2024 22:48

Tgt Ion: 58 Resp: 6158

Ion	Ratio	Lower	Upper
58	100		
43	396.0	400.7	460.7#

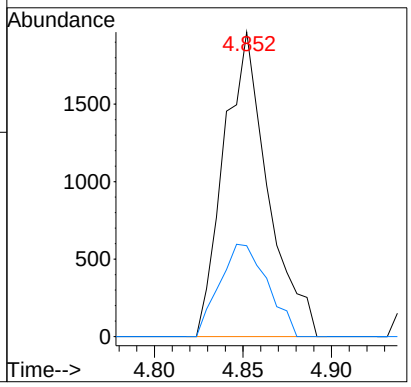


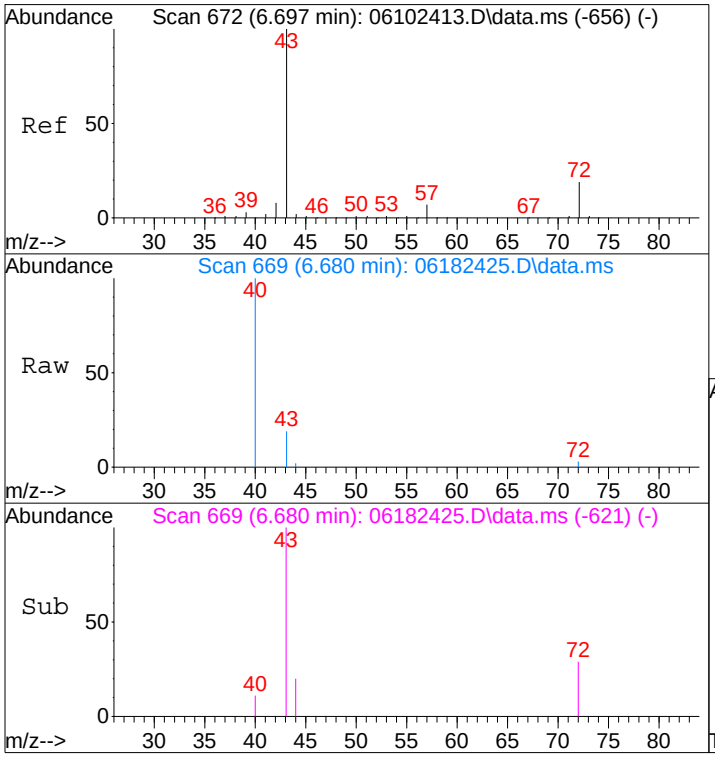


#15
2-Propanol (Isopropanol)
Concen: 0.09 ng
RT: 4.85 min Scan# 347
Delta R.T. -0.048 min
Lab File: 06182425.D
Acq: 18 Jun 2024 22:48

Tgt Ion: 45 Resp: 3396

Ion	Ratio	Lower	Upper
45	100		
43	33.0	2.5	42.5

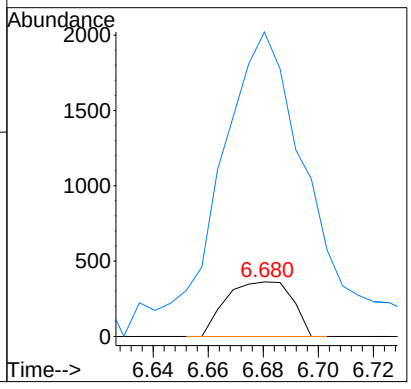


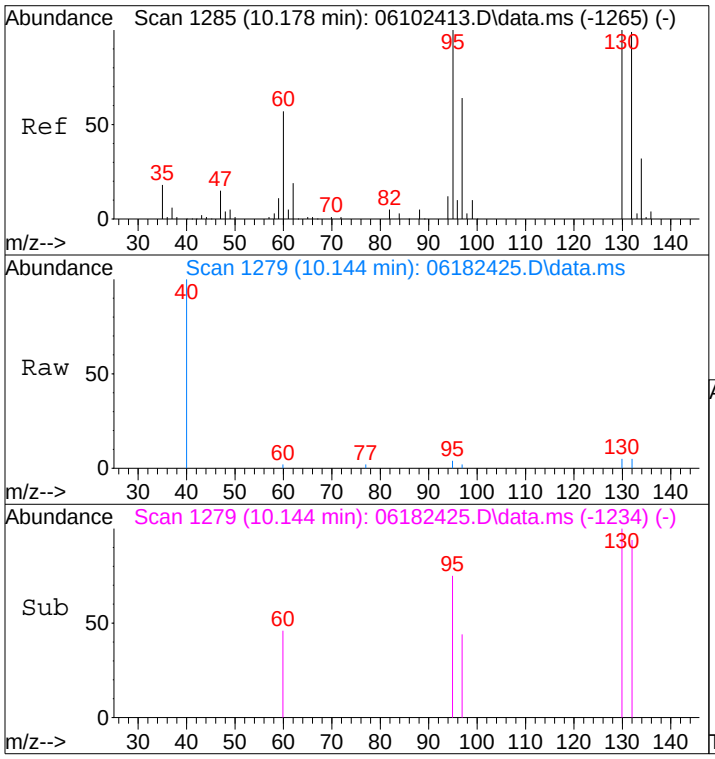


#27
2-Butanone (MEK)
Concen: 0.08 ng
RT: 6.68 min Scan# 669
Delta R.T. 0.022 min
Lab File: 06182425.D
Acq: 18 Jun 2024 22:48

Tgt Ion: 72 Resp: 605

Ion	Ratio	Lower	Upper
72	100		
43	777.5	506.8	546.8#

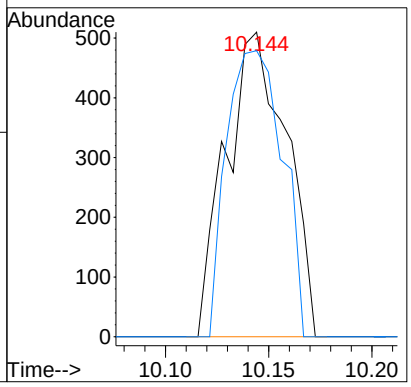




#47
Trichloroethene
Concen: 0.07 ng
RT: 10.14 min Scan# 1279
Delta R.T. 0.005 min
Lab File: 06182425.D
Acq: 18 Jun 2024 22:48

Tgt Ion:130 Resp: 1039

Ion	Ratio	Lower	Upper
130	100		
132	86.8	77.9	117.9



LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\18\
Data File : 06182425.D
Acq On : 18 Jun 2024 22:48
Operator : SC
Sample : P2402249-020 (400mL)
Misc : S37-06062402
ALS Vial : 13 Sample Multiplier: 1

MJ 6/28/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06182425.D\data.ms

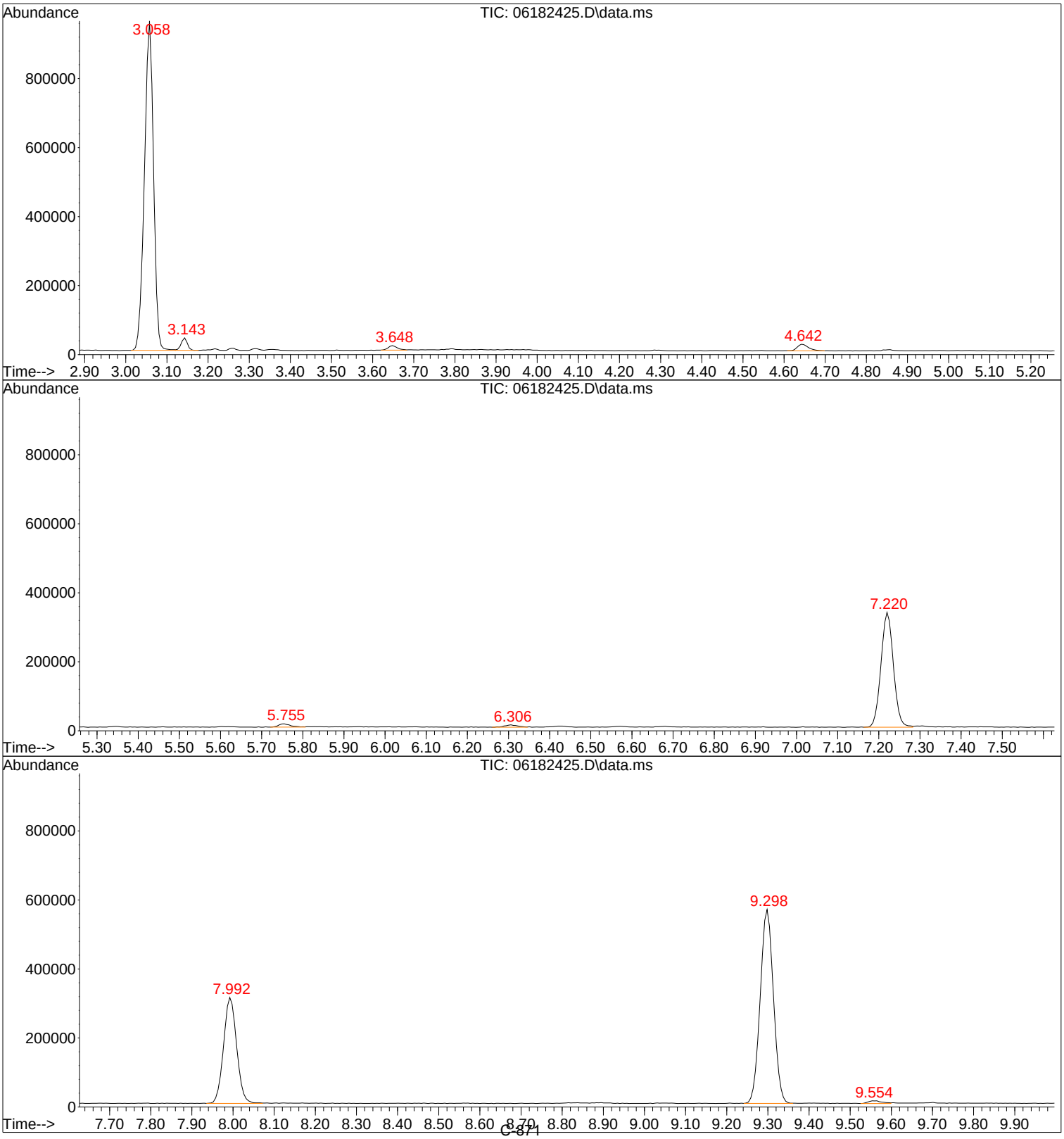
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.058	23	31	42	rBV	954235	1463676	100.00%	34.477%
2	3.143	42	46	52	rVB	36194	37632	2.57%	0.886%
3	3.648	130	135	141	rBV	13108	20716	1.42%	0.488%
4	4.642	304	310	320	rVB	18938	35002	2.39%	0.824%
5	5.755	500	506	515	rBV	9506	20117	1.37%	0.474%
6	6.306	595	603	610	rBV2	6581	14401	0.98%	0.339%
7	7.220	754	764	775	rBV	332769	699045	47.76%	16.466%
8	7.992	890	900	914	rBV	307206	679569	46.43%	16.008%
9	9.298	1120	1130	1141	rBV	561782	1256666	85.86%	29.601%
10	9.554	1170	1175	1183	rBV2	7723	18490	1.26%	0.436%

Sum of corrected areas: 4245314

Data Path : I:\MS09\DATA\2024 06\18\
Data File : 06182425.D
Acq On : 18 Jun 2024 22:48
Operator : SC
Sample : P2402249-020 (400mL)
Misc : S37-06062402
ALS Vial : 13 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\18\\
Data File : 06182425.D
Acq On : 18 Jun 2024 22:488
Operator : SCC
Sample : P2402249-020 (400mL))
Misc : S37-060624022
ALS Vial : 13 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

					|--Internal Standard---|		
TIC Top Hit name	RT	EstConc	Units	Response	# RT Resp Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\18\06182426.D Vial: 14
Acq On : 18 Jun 2024 23:20 Operator: SC
Sample : P2402249-021 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:06:41 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	114425	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	499676	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	123388	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	263290	12.946	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.60%				
57) Toluene-d8 (SS2)	12.43	98	557448	11.806	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 94.48%				
73) Bromofluorobenzene (SS3)	16.83	174	221751	13.006	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 104.08%				
Target Compounds							Qvalue
2) Propene	0.00	42	0	N.D.	d		
3) Dichlorodifluoromethan...	3.36	85	14731m	0.547	ng		
4) Chloromethane	3.49	50	3176m	0.173	ng		
5) 1,2-Dichloro-1,1,2,2-t...	3.61	135	230	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	4.02	94	322	N.D.			
9) Chloroethane	4.15	64	107	N.D.			
10) Ethanol	4.28	45	7519m	0.676	ng		
11) Acetonitrile	0.00	41	0	N.D.	d		
12) Acrolein	4.53	56	1039	0.126	ng		99
13) Acetone	4.63	58	19873	2.236	ng	#	64
14) Trichlorofluoromethane	4.75	101	616210	22.621	ng		99
15) 2-Propanol (Isopropanol)	4.95	45	140	N.D.			
16) Acrylonitrile	4.99	53	478	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.32	59	472	N.D.			
19) Methylene Chloride	5.34	84	928	0.074	ng		100
20) 3-Chloro-1-propene (Al...	5.39	41	113	N.D.			
21) Trichlorotrifluoroethane	5.58	151	236754	20.545	ng		98
22) Carbon Disulfide	5.60	76	51590	1.272	ng		56
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	6.30	73	246	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D.	d		
27) 2-Butanone (MEK)	6.67	72	2522	0.359	ng	#	91
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	7.30	87	246	N.D.			
30) Ethyl Acetate	0.00	61	0	N.D.			
31) n-Hexane	7.30	57	1050	0.056	ng	#	96
32) Chloroform	7.36	83	28794	1.284	ng		99
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	0.00	62	0	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	9.61	61	16753	No Calib		#	
40) 1-Butanol	8.80	56	7846	No Calib			
41) Benzene	8.90	78	6478	0.140	ng		99
42) Carbon Tetrachloride	9.07	117	120	N.D.			
43) Cyclohexane	9.22	84	727	N.D.			
44) tert-Amyl Methyl Ether	9.62	73	366	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.07	83	603	N.D.			
47) Trichloroethene	10.15	130	606	N.D.			
48) 1,4-Dioxane	10.14	88	373	N.D.			
49) 2,2,4-Trimethylpentane...	10.24	57	114	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182426.D Vial: 14
Acq On : 18 Jun 2024 23:20 Operator: SC
Sample : P2402249-021 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:06:41 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

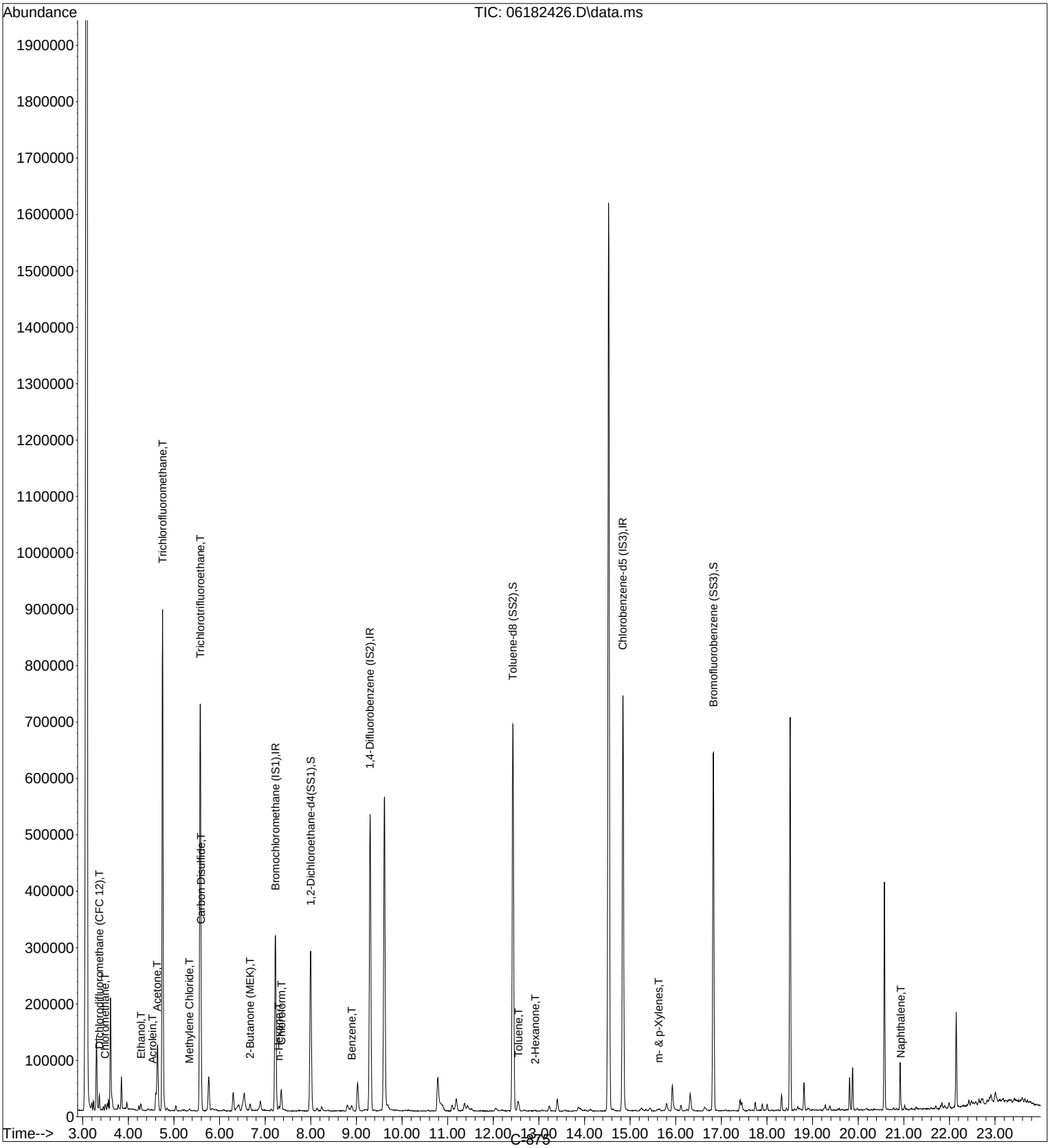
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	10.58	71	306	N.D.		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	11.31	58	166	N.D.		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	12.56	91	7387	0.150 ng		98
59) 2-Hexanone	12.92	43	1877	0.061 ng	#	56
60) Dibromochloromethane	13.07	129	397	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	13.78	43	810	N.D.		
63) n-Octane	13.94	57	311	N.D.		
64) Tetrachloroethene	14.04	166	611	N.D.		
65) Chlorobenzene	14.90	112	447	N.D.		
66) Ethylbenzene	15.41	91	2010	N.D.		
67) m- & p-Xylenes	15.63	91	3307	0.070 ng		81
68) Bromoform	15.67	173	562	N.D.		
69) Styrene	16.10	104	218	N.D.		
70) o-Xylene	16.25	91	1534	N.D.		
71) n-Nonane	0.00	43	0	N.D. d		
72) 1,1,2,2-Tetrachloroethane	16.21	83	223	N.D.		
74) Cumene	17.04	105	907	N.D.		
75) alpha-Pinene	0.00	93	0	N.D.		
76) n-Propylbenzene	17.68	91	1426	N.D.		
77) 3-Ethyltoluene	17.04	105	907	No Calib		
78) 4-Ethyltoluene	17.86	105	1142	N.D.		
79) 1,3,5-Trimethylbenzene	17.96	105	728	N.D.		
80) alpha-Methylstyrene	0.00	118	0	N.D.		
81) 2-Ethyltoluene	17.04	105	907	No Calib		
82) 1,2,4-Trimethylbenzene	18.43	105	1684	N.D.		
83) n-Decane	0.00	58	0	N.D.		
84) Benzyl Chloride	18.56	91	170	N.D.		
85) 1,3-Dichlorobenzene	18.57	146	587	N.D.		
86) 1,4-Dichlorobenzene	18.66	146	534	N.D.		
87) sec-Butylbenzene	18.74	105	985	N.D.		
88) 4-Isopropyltoluene (p-...	18.92	119	1499	N.D.		
89) 1,2,3-Trimethylbenzene	17.04	105	907	No Calib		
90) 1,2-Dichlorobenzene	19.02	146	401	N.D.		
91) d-Limonene	0.00	68	0	N.D.		
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	0.00	58	0	N.D.		
94) 1,2,4-Trichlorobenzene	20.84	180	698	N.D.		
95) Naphthalene	20.94	128	4282	0.065 ng		93
96) n-Dodecane	0.00	58	0	N.D.		
97) Hexachlorobutadiene	21.30	225	638	N.D.		
98) Cyclohexanone	15.39	55	102	No Calib	#	
99) tert-Butylbenzene	18.42	119	878	N.D.		
100) n-Butylbenzene	19.39	91	1337	N.D.		
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182426.D Vial: 14
Acq On : 18 Jun 2024 23:20 Operator: SC
Sample : P2402249-021 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:06:41 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\18\06182426.D Vial: 14
Acq On : 18 Jun 2024 23:20 Operator: SC
Sample : P2402249-021 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:06:41 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

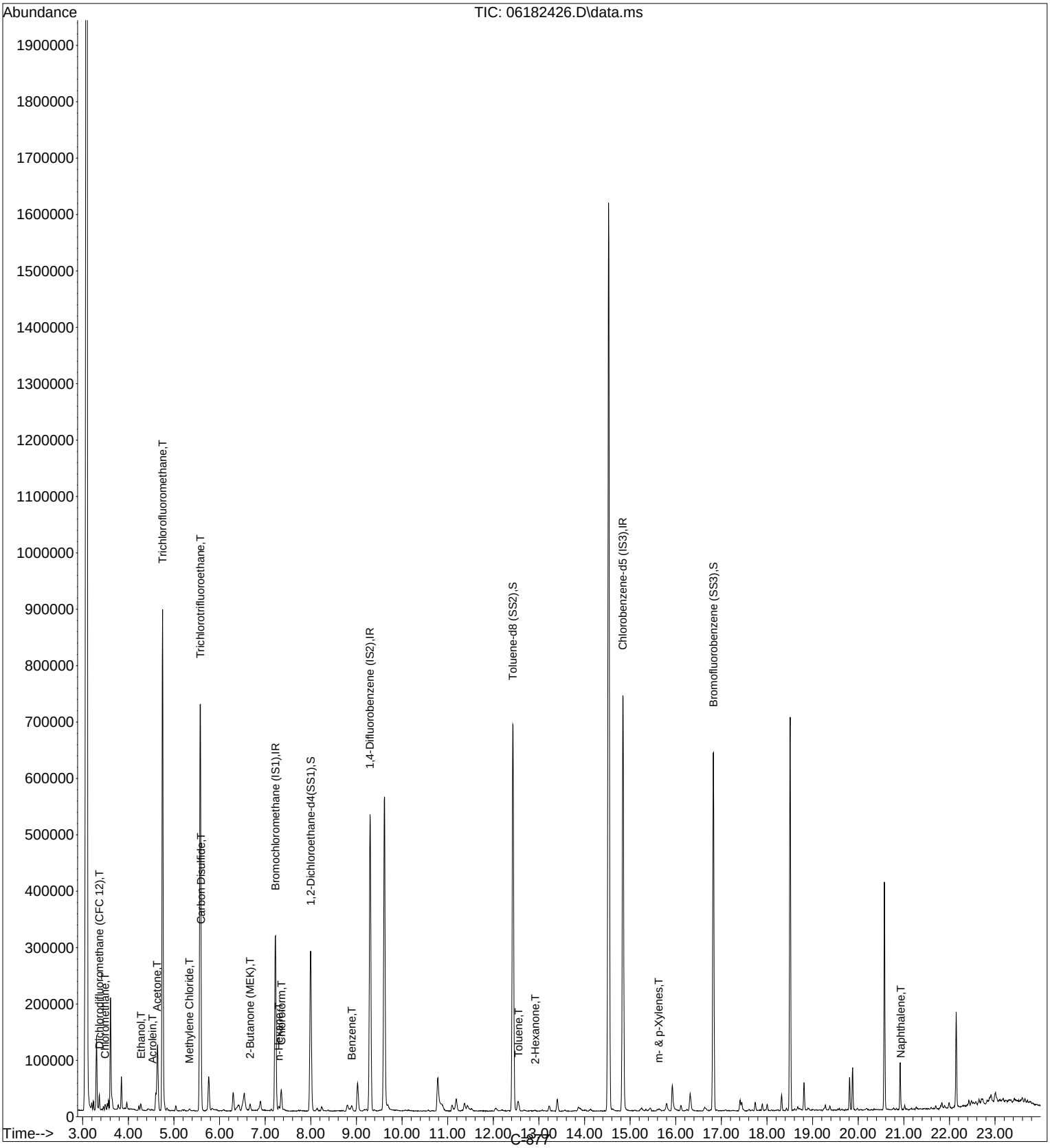
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	114425	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	499676	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	123388	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	263290	12.946	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.60%				
57) Toluene-d8 (SS2)	12.43	98	557448	11.806	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 94.48%				
73) Bromofluorobenzene (SS3)	16.83	174	221751	13.006	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 104.08%				
Target Compounds							Qvalue
3) Dichlorodifluoromethan...	3.36	85	14731m	0.547	ng		
4) Chloromethane	3.49	50	3176m	0.173	ng		
10) Ethanol	4.28	45	7519m	0.676	ng		
12) Acrolein	4.53	56	1039	0.126	ng		99
13) Acetone	4.63	58	19873	2.236	ng	#	64
14) Trichlorofluoromethane	4.75	101	616210	22.621	ng		99
19) Methylene Chloride	5.34	84	928	0.074	ng		100
21) Trichlorotrifluoroethane	5.58	151	236754	20.545	ng		98
22) Carbon Disulfide	5.60	76	51590	1.272	ng		56
27) 2-Butanone (MEK)	6.67	72	2522	0.359	ng	#	91
31) n-Hexane	7.30	57	1050	0.056	ng	#	96
32) Chloroform	7.36	83	28794	1.284	ng		99
41) Benzene	8.90	78	6478	0.140	ng		99
58) Toluene	12.56	91	7387	0.150	ng		98
59) 2-Hexanone	12.92	43	1877	0.061	ng	#	56
67) m- & p-Xylenes	15.63	91	3307	0.070	ng		81
95) Naphthalene	20.94	128	4282	0.065	ng		93

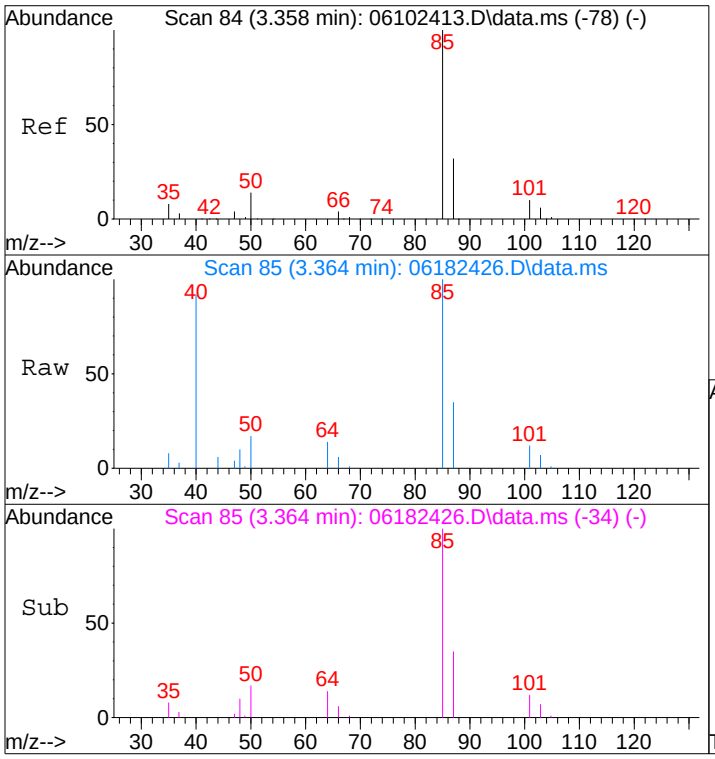
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182426.D Vial: 14
Acq On : 18 Jun 2024 23:20 Operator: SC
Sample : P2402249-021 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:06:41 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

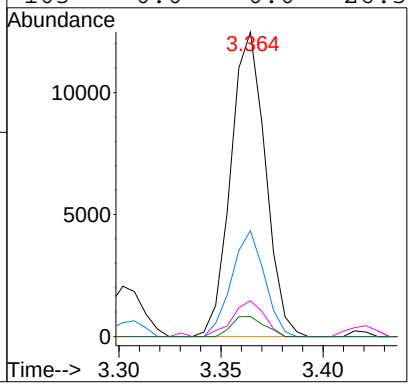


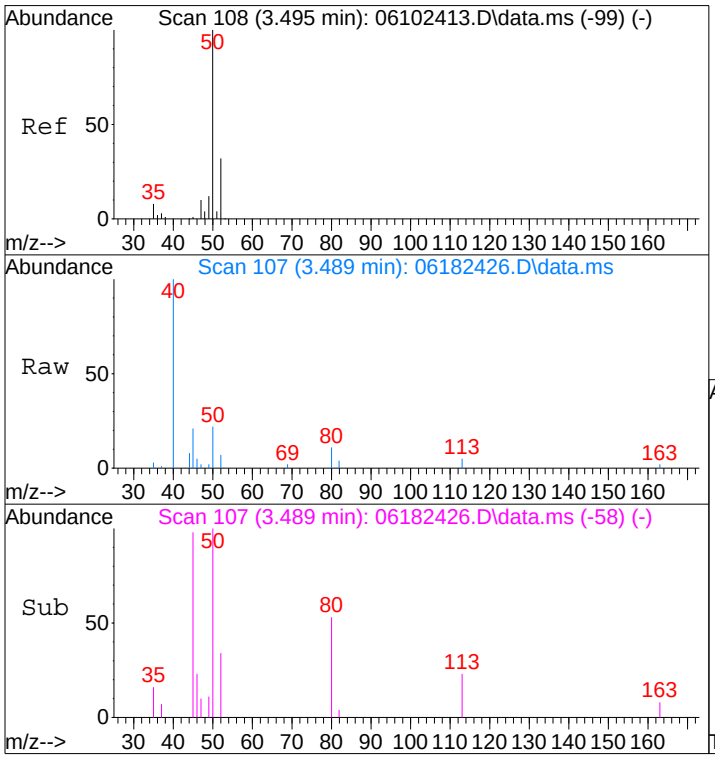


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.55 ng m
RT: 3.36 min Scan# 85
Delta R.T. 0.042 min
Lab File: 06182426.D
Acq: 18 Jun 2024 23:20

Tgt Ion: 85 Resp: 14731

Ion	Ratio	Lower	Upper
85	100		
87	4.4	12.2	52.2#
101	0.0	0.0	29.8
103	0.0	0.0	26.3

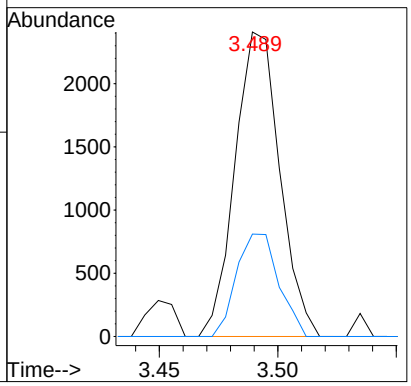


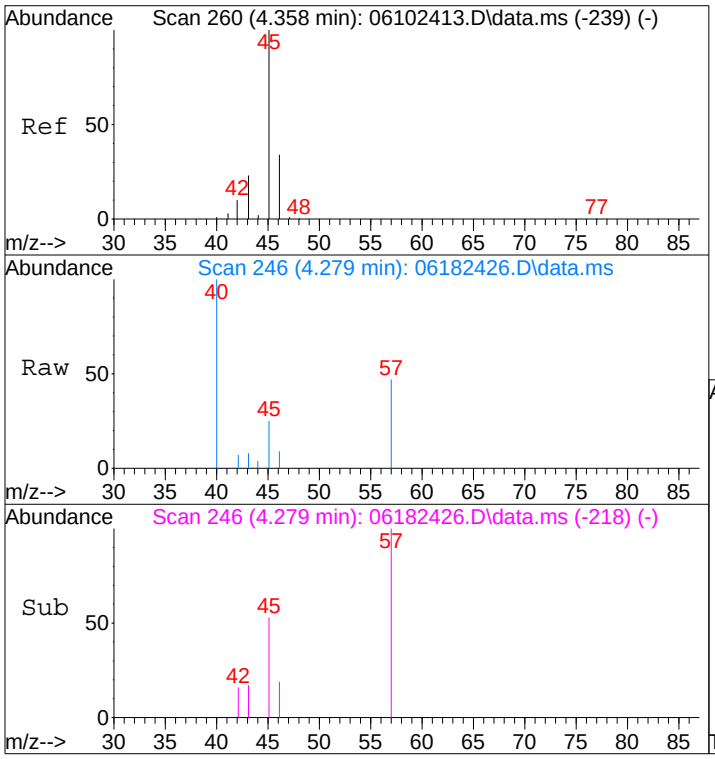


#4
Chloromethane
Concen: 0.17 ng m
RT: 3.49 min Scan# 107
Delta R.T. 0.027 min
Lab File: 06182426.D
Acq: 18 Jun 2024 23:20

Tgt Ion: 50 Resp: 3176

Ion	Ratio	Lower	Upper
50	100		
52	31.7	12.4	52.4

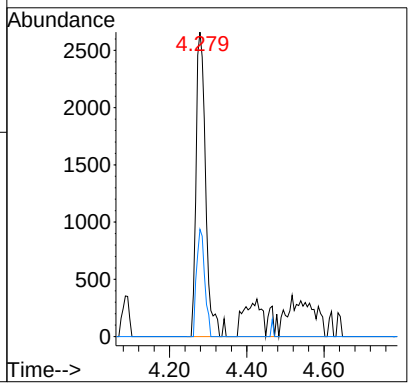


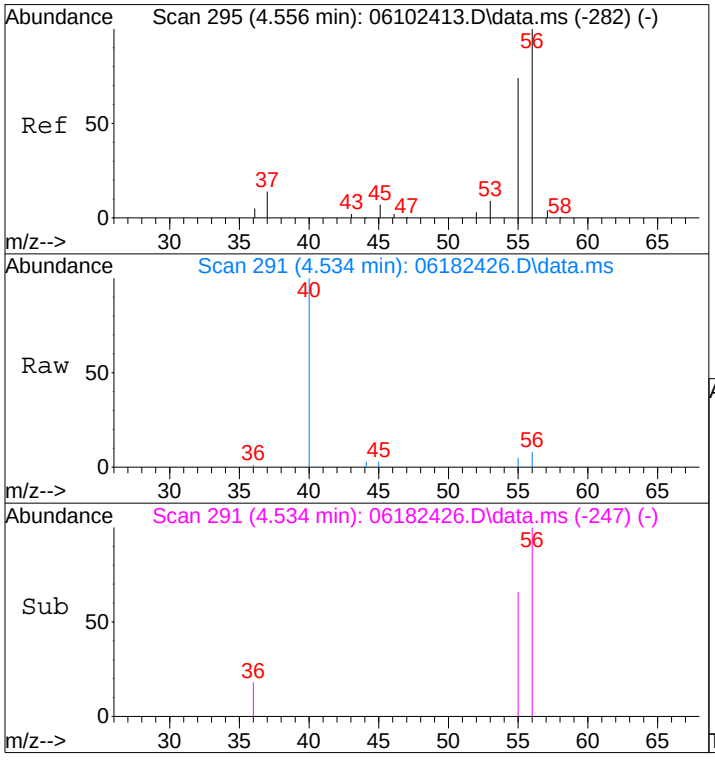


#10
Ethanol
Concen: 0.68 ng m
RT: 4.28 min Scan# 246
Delta R.T. -0.088 min
Lab File: 06182426.D
Acq: 18 Jun 2024 23:20

Tgt Ion: 45 Resp: 7519

Ion	Ratio	Lower	Upper
45	100		
46	0.0	13.5	53.5#

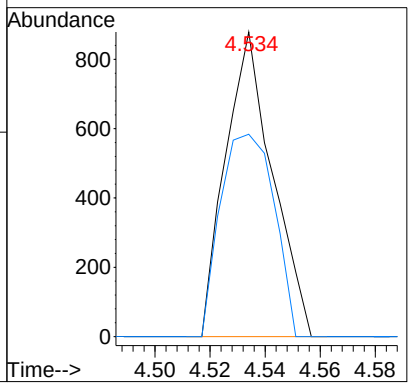


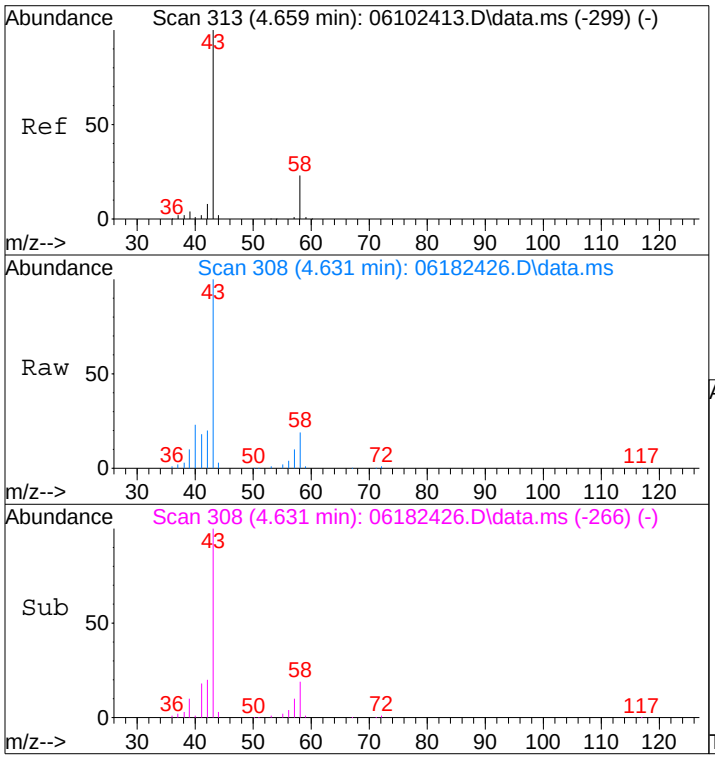


#12
Acrolein
Concen: 0.13 ng
RT: 4.53 min Scan# 291
Delta R.T. -0.001 min
Lab File: 06182426.D
Acq: 18 Jun 2024 23:20

Tgt Ion: 56 Resp: 1039

Ion	Ratio	Lower	Upper
56	100		
55	76.2	55.5	95.5

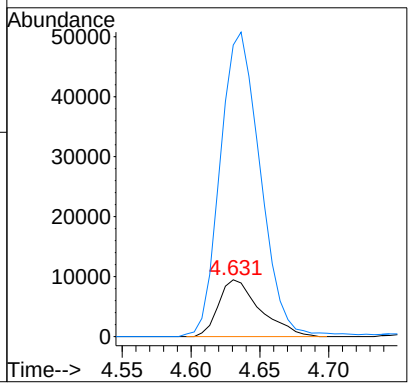


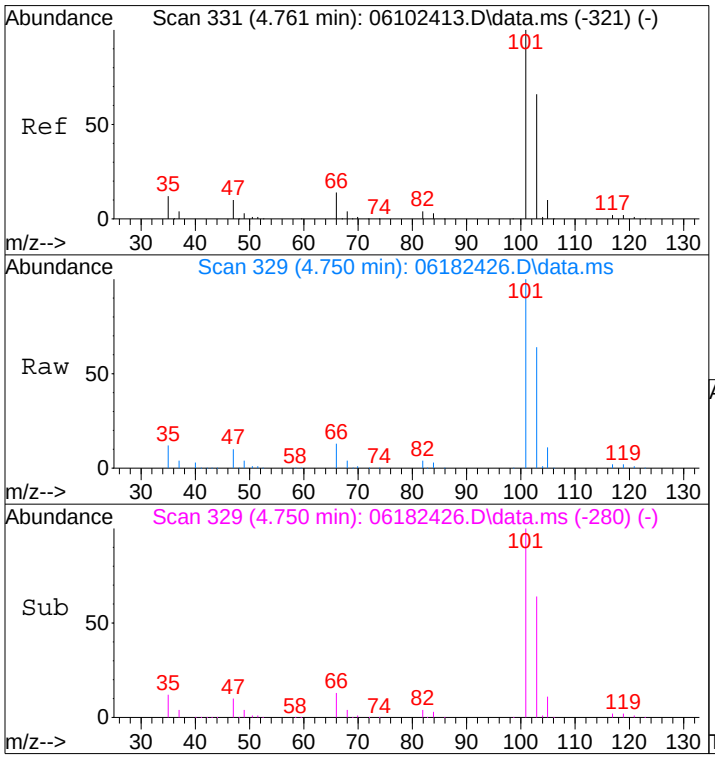


#13
Acetone
Concen: 2.24 ng
RT: 4.63 min Scan# 308
Delta R.T. -0.011 min
Lab File: 06182426.D
Acq: 18 Jun 2024 23:20

Tgt Ion: 58 Resp: 19873

Ion	Ratio	Lower	Upper
58	100		
43	519.5	400.7	460.7#

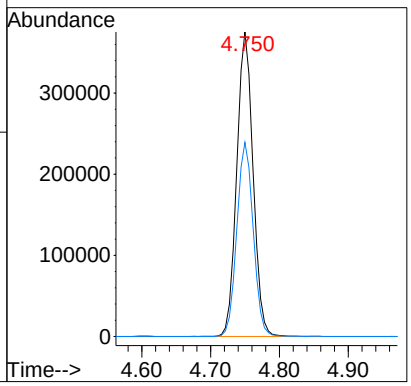


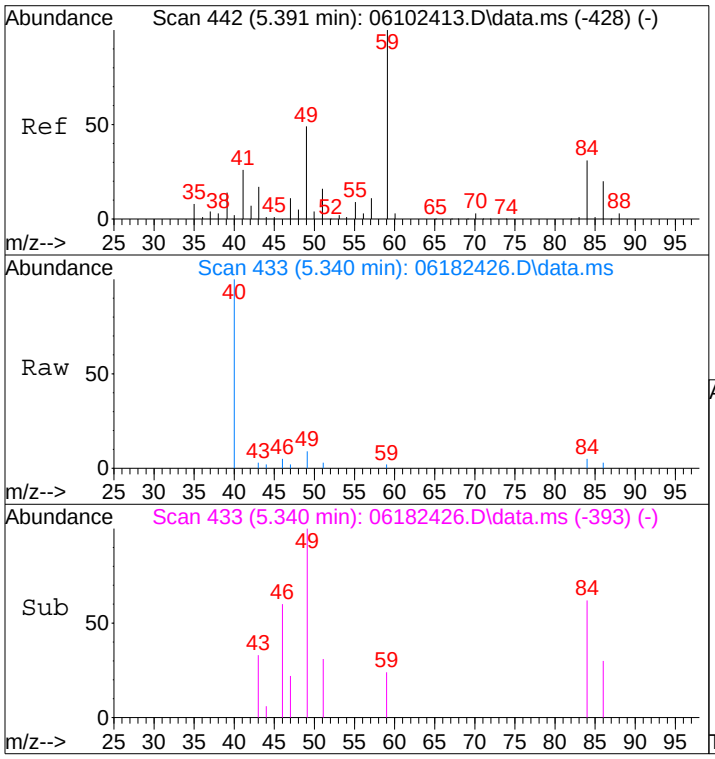


#14
Trichlorofluoromethane
Concen: 22.62 ng
RT: 4.75 min Scan# 329
Delta R.T. 0.029 min
Lab File: 06182426.D
Acq: 18 Jun 2024 23:20

Tgt Ion:101 Resp: 616210

Ion	Ratio	Lower	Upper
101	100		
103	64.0	44.9	84.9

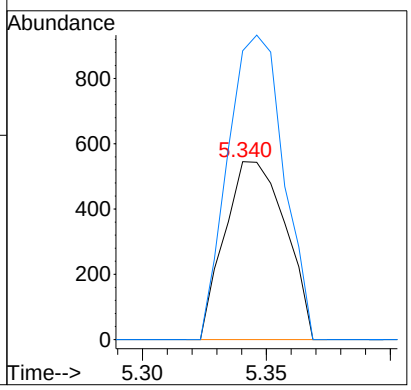


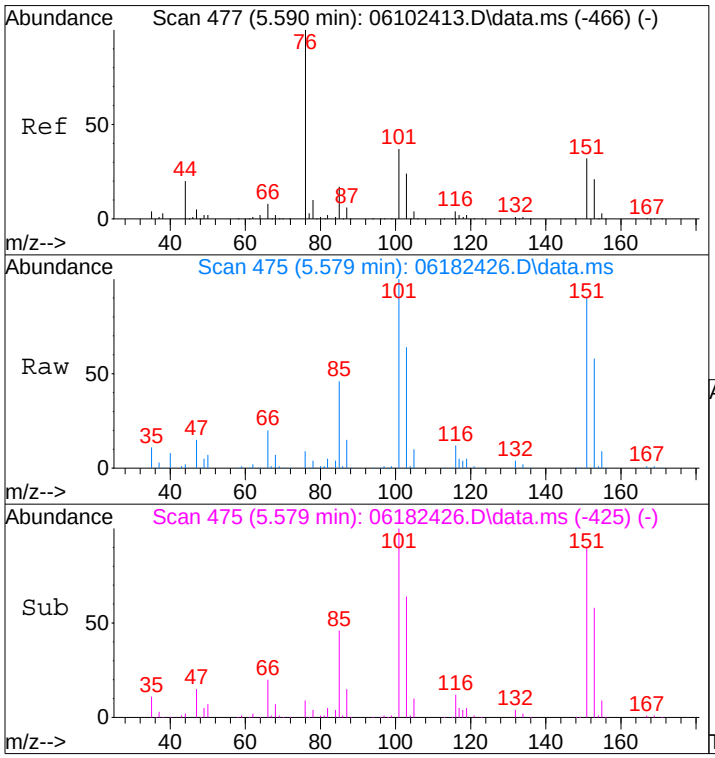


#19
Methylene Chloride
Concen: 0.07 ng
RT: 5.34 min Scan# 433
Delta R.T. -0.021 min
Lab File: 06182426.D
Acq: 18 Jun 2024 23:20

Tgt Ion: 84 Resp: 928

Ion	Ratio	Lower	Upper
84	100		
49	157.3	132.9	182.9

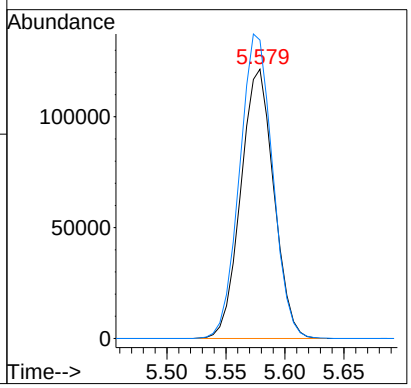


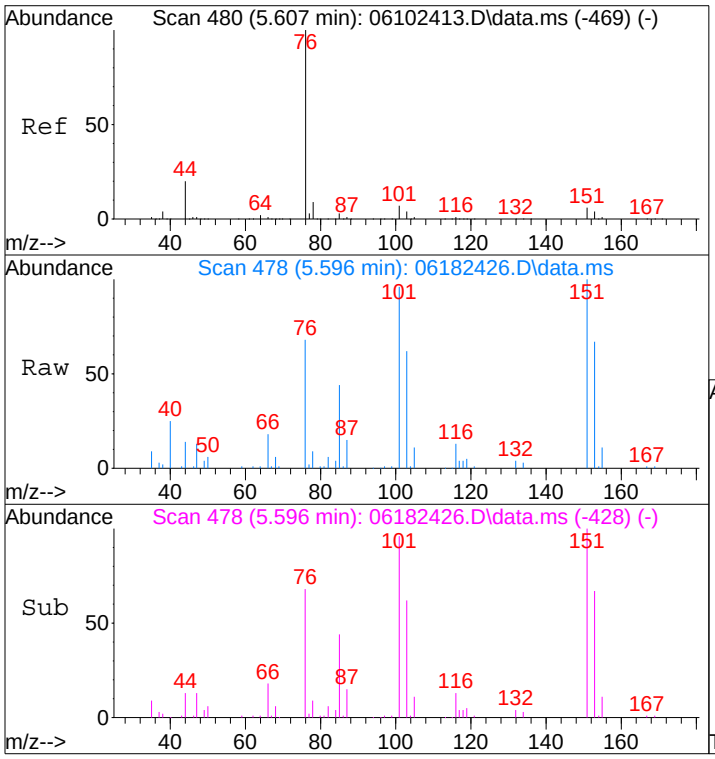


#21
Trichlorotrifluoroethane
Concen: 20.54 ng
RT: 5.58 min Scan# 475
Delta R.T. 0.033 min
Lab File: 06182426.D
Acq: 18 Jun 2024 23:20

Tgt Ion:151 Resp: 236754

Ion	Ratio	Lower	Upper
151	100		
101	113.3	95.0	135.0

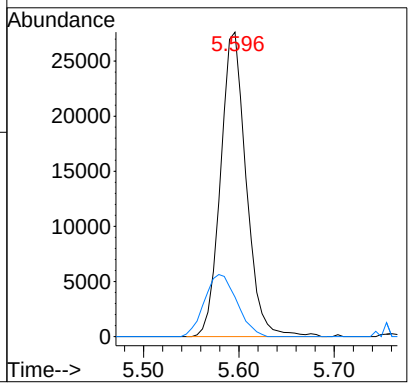


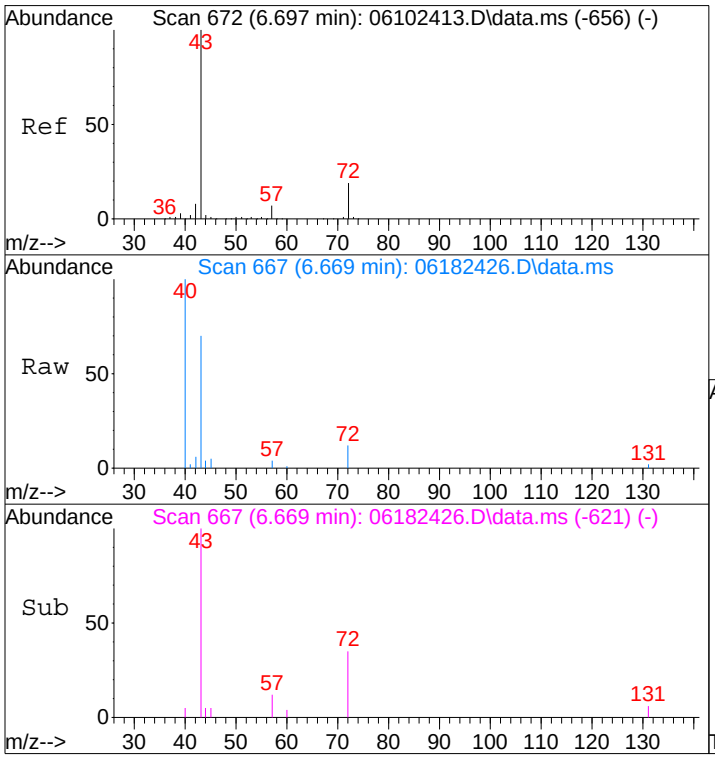


#22
Carbon Disulfide
Concen: 1.27 ng
RT: 5.60 min Scan# 478
Delta R.T. 0.033 min
Lab File: 06182426.D
Acq: 18 Jun 2024 23:20

Tgt Ion: 76 Resp: 51590

Ion	Ratio	Lower	Upper
76	100		
78	25.9	0.0	29.6

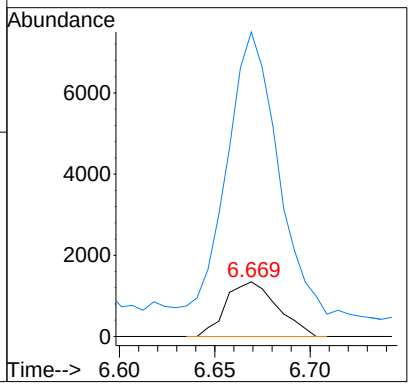


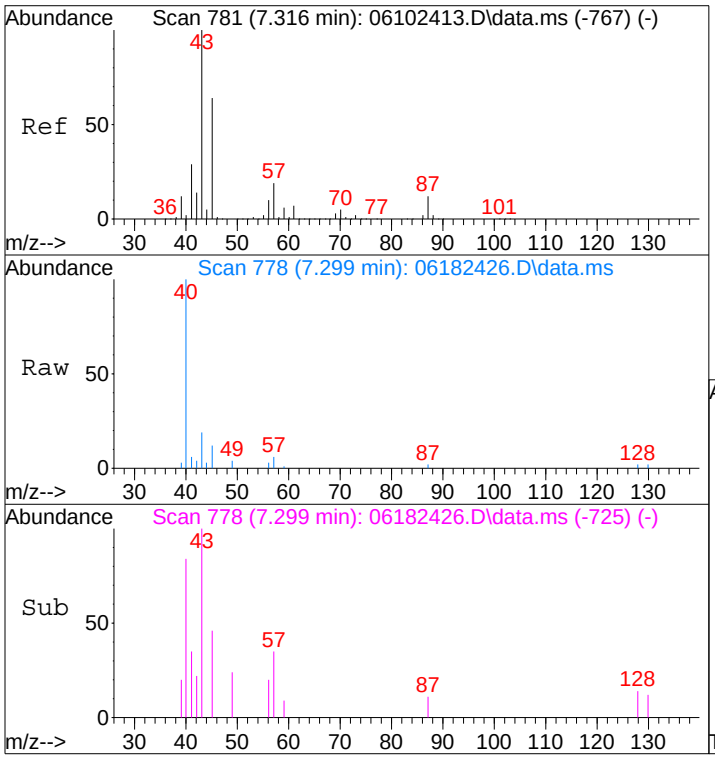


#27
2-Butanone (MEK)
Concen: 0.36 ng
RT: 6.67 min Scan# 667
Delta R.T. 0.011 min
Lab File: 06182426.D
Acq: 18 Jun 2024 23:20

Tgt Ion: 72 Resp: 2522

Ion	Ratio	Lower	Upper
72	100		
43	553.3	506.8	546.8#

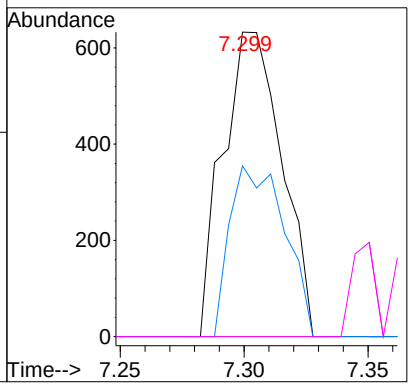


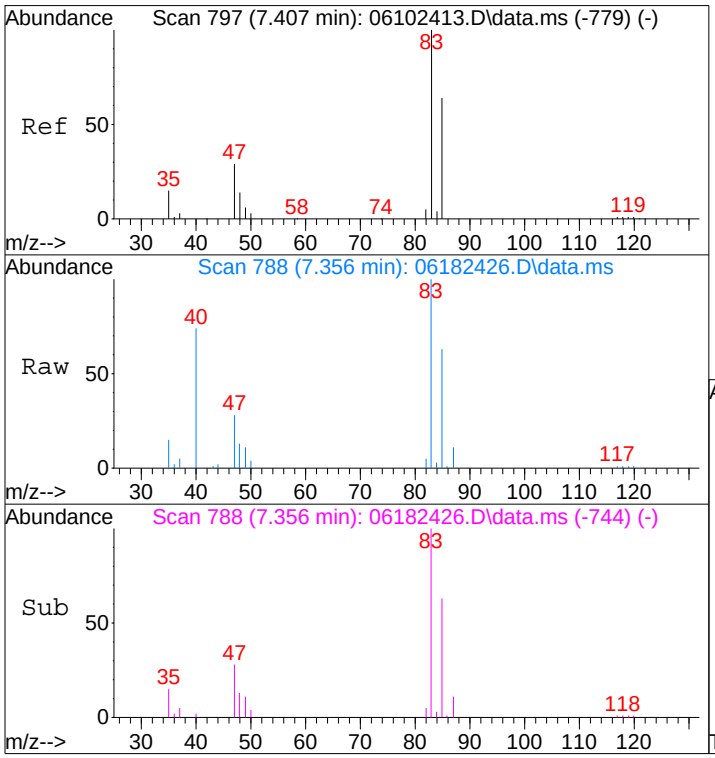


#31
n-Hexane
Concen: 0.06 ng
RT: 7.30 min Scan# 778
Delta R.T. 0.051 min
Lab File: 06182426.D
Acq: 18 Jun 2024 23:20

Tgt Ion: 57 Resp: 1050

Ion	Ratio	Lower	Upper
57	100		
56	52.1	42.5	63.7
86	17.2	9.5	14.3#

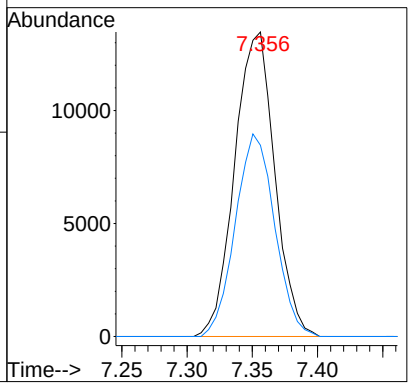


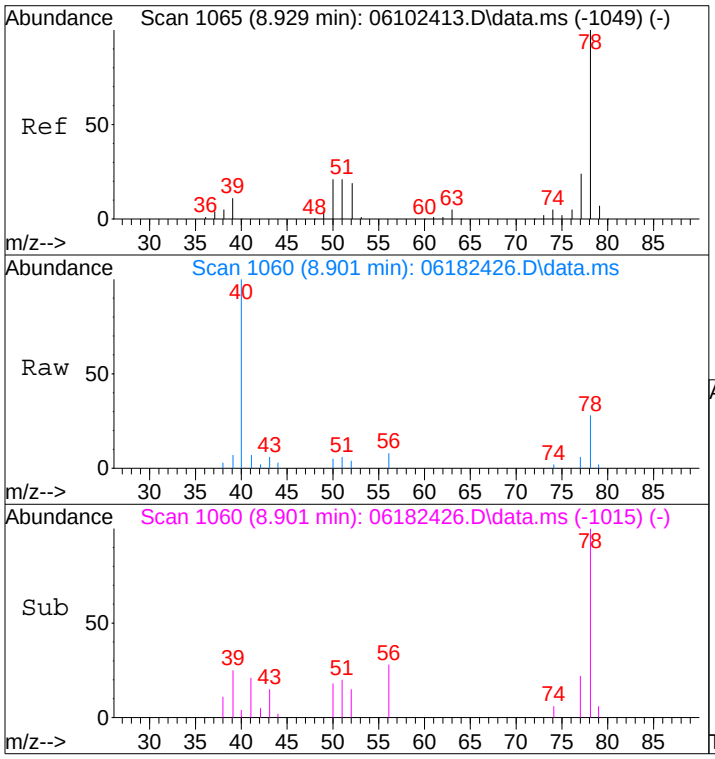


#32
Chloroform
Concen: 1.28 ng
RT: 7.36 min Scan# 788
Delta R.T. 0.001 min
Lab File: 06182426.D
Acq: 18 Jun 2024 23:20

Tgt Ion: 83 Resp: 28794

Ion	Ratio	Lower	Upper
83	100		
85	65.4	44.4	84.4

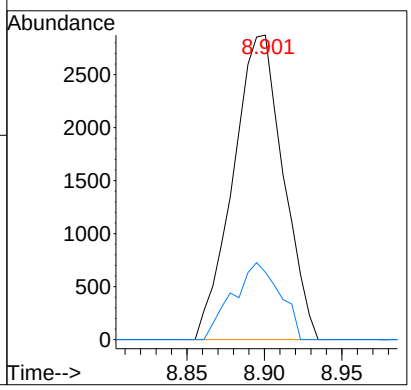


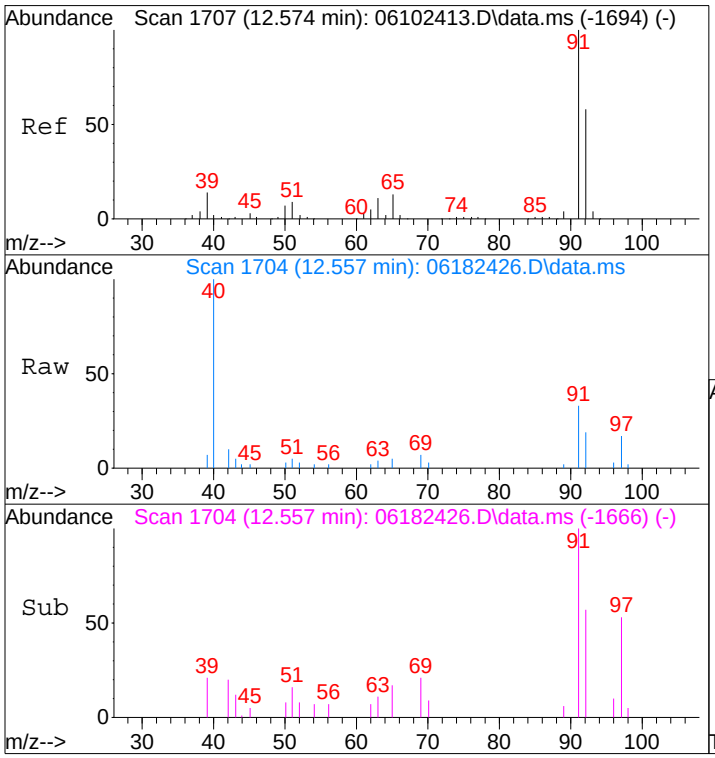


#41
Benzene
Concen: 0.14 ng
RT: 8.90 min Scan# 1060
Delta R.T. 0.003 min
Lab File: 06182426.D
Acq: 18 Jun 2024 23:20

Tgt Ion: 78 Resp: 6478

Ion	Ratio	Lower	Upper
78	100		
77	23.7	4.0	44.0

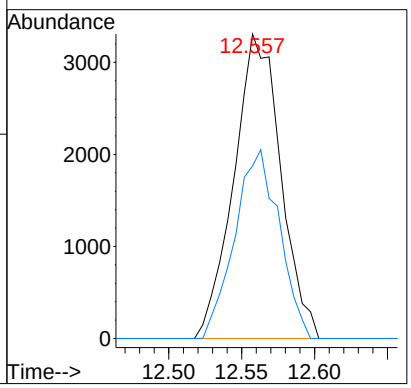


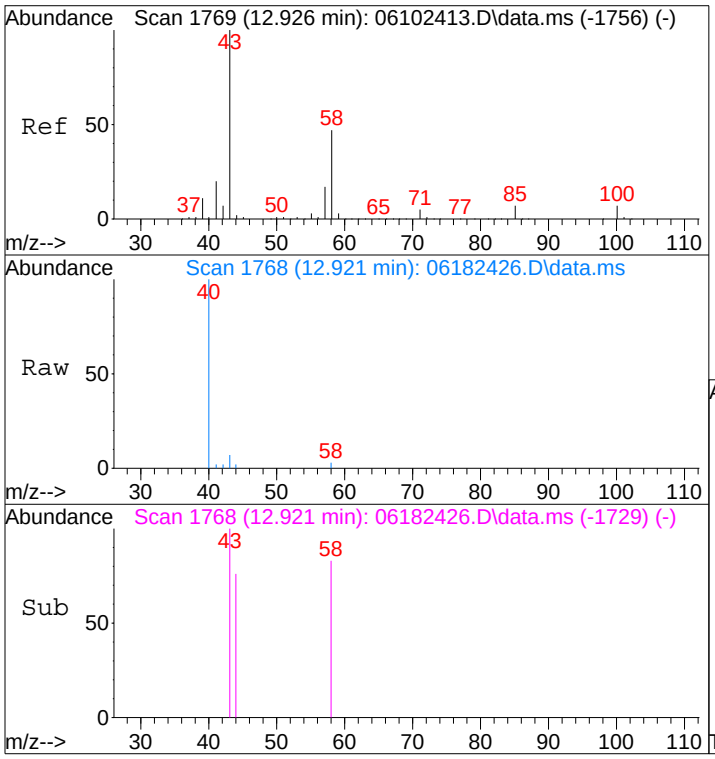


#58
Toluene
Concen: 0.15 ng
RT: 12.56 min Scan# 1704
Delta R.T. -0.034 min
Lab File: 06182426.D
Acq: 18 Jun 2024 23:20

Tgt Ion: 91 Resp: 7387

Ion	Ratio	Lower	Upper
91	100		
92	58.8	37.4	77.4

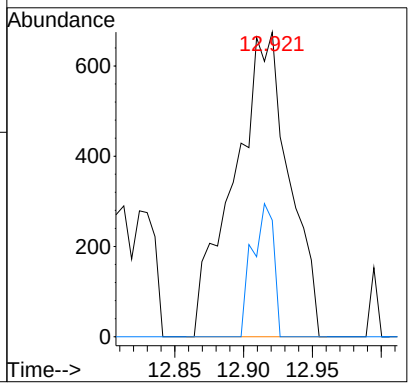


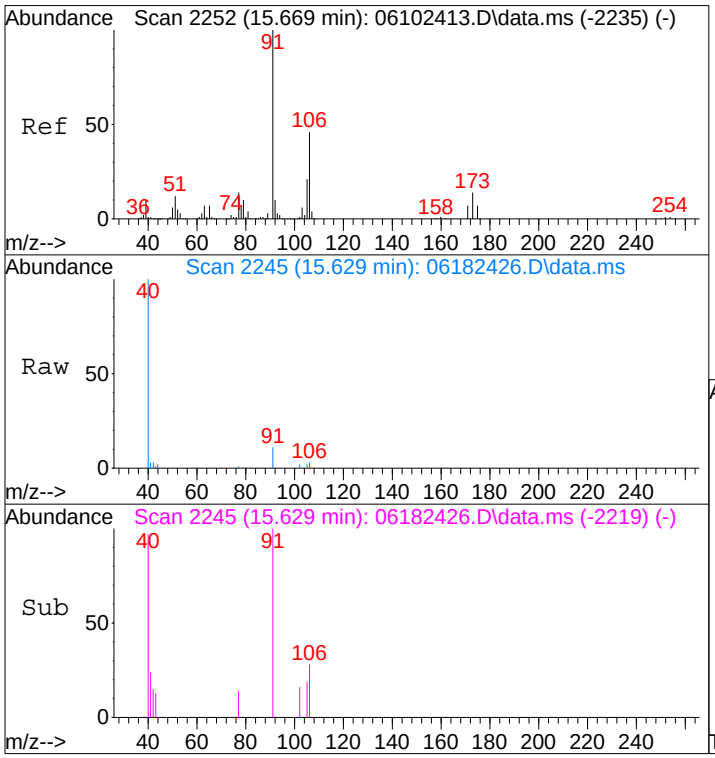


#59
2-Hexanone
Concen: 0.06 ng
RT: 12.92 min Scan# 1768
Delta R.T. -0.028 min
Lab File: 06182426.D
Acq: 18 Jun 2024 23:20

Tgt Ion: 43 Resp: 1877

Ion	Ratio	Lower	Upper
43	100		
58	16.9	25.9	65.9#

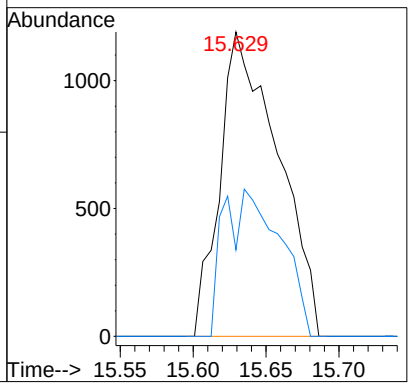


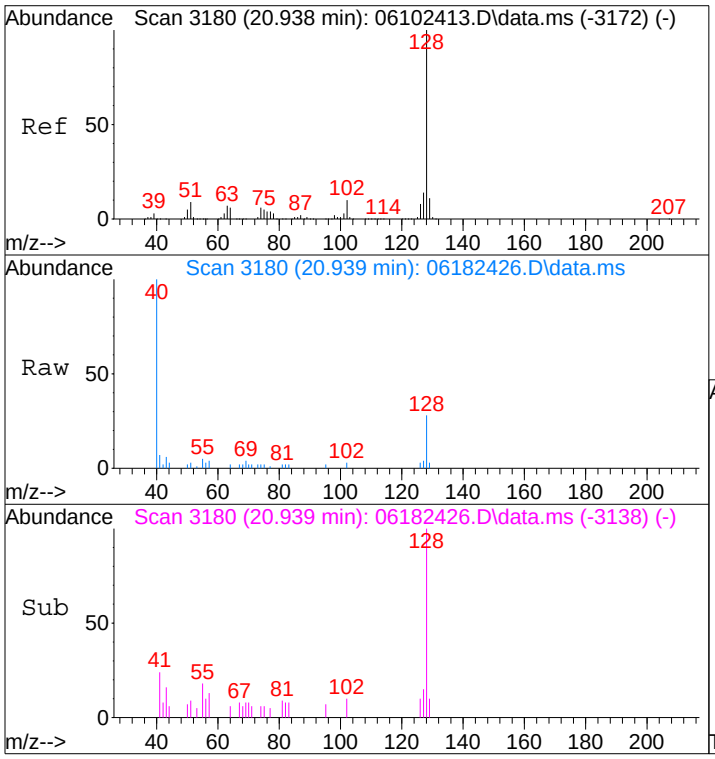


#67
m- & p-Xylenes
Concen: 0.07 ng
RT: 15.63 min Scan# 2245
Delta R.T. -0.051 min
Lab File: 06182426.D
Acq: 18 Jun 2024 23:20

Tgt Ion: 91 Resp: 3307

Ion	Ratio	Lower	Upper
91	100		
106	33.2	25.9	65.9

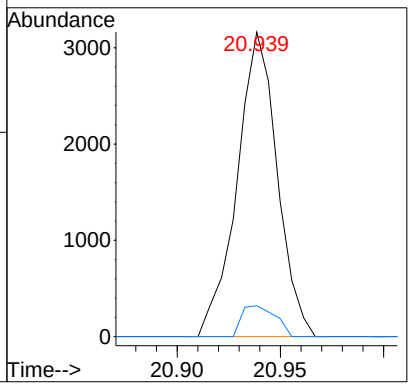




#95
Naphthalene
Concen: 0.07 ng
RT: 20.94 min Scan# 3180
Delta R.T. -0.011 min
Lab File: 06182426.D
Acq: 18 Jun 2024 23:20

Tgt Ion:128 Resp: 4282

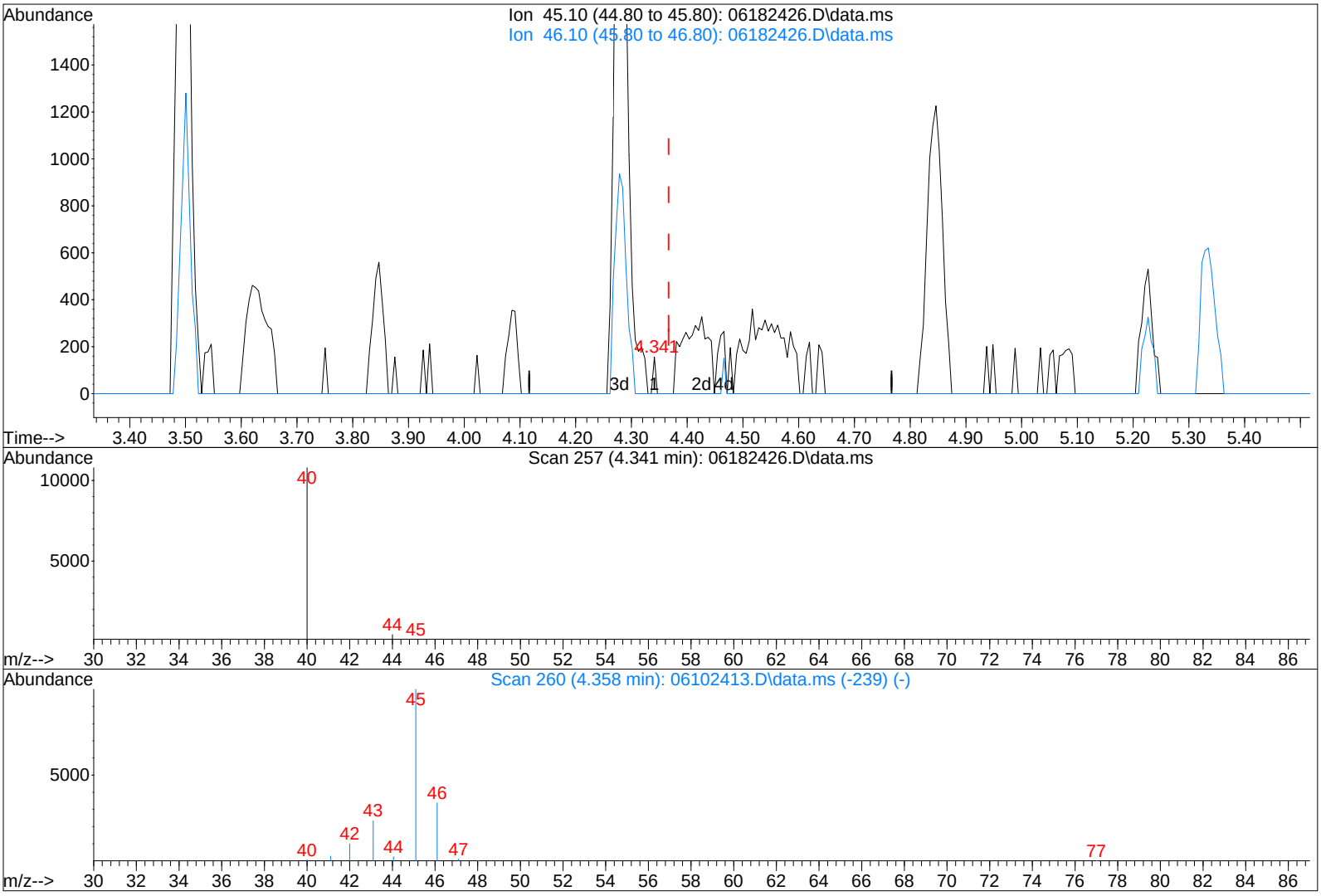
Ion	Ratio	Lower	Upper
128	100		
129	8.5	0.0	31.2



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182426.D Vial: 14
Acq On : 18 Jun 2024 23:20 Operator: SC
Sample : P2402249-021 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 08:27:29 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182426.D\data.ms

(10) Ethanol (T)

4.341min (-0.026) 0.00ng

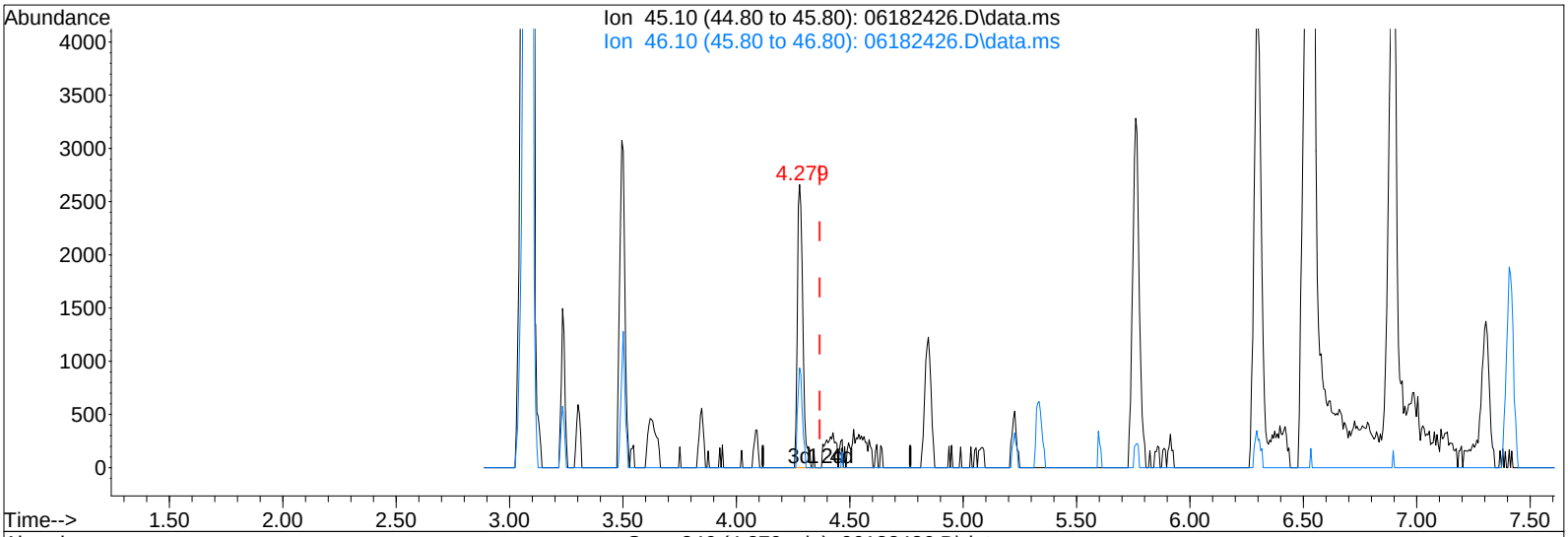
response 53

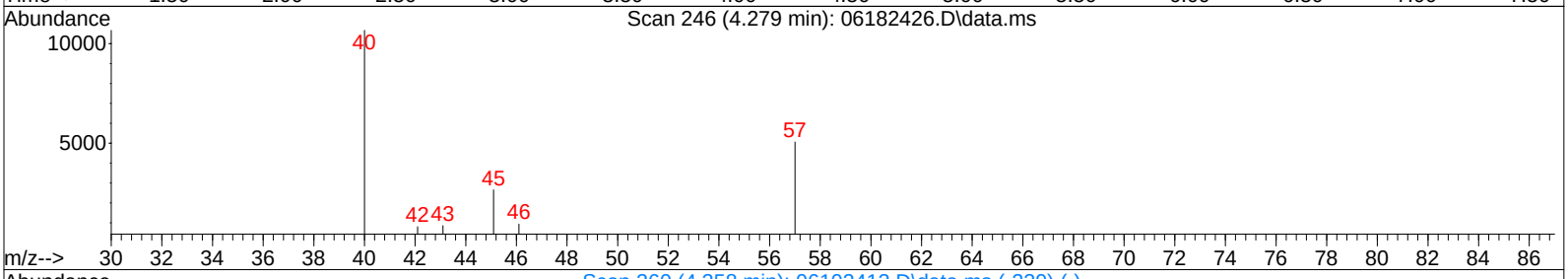
Ion	Exp%	Act%
45.10	100	100
46.10	33.50	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

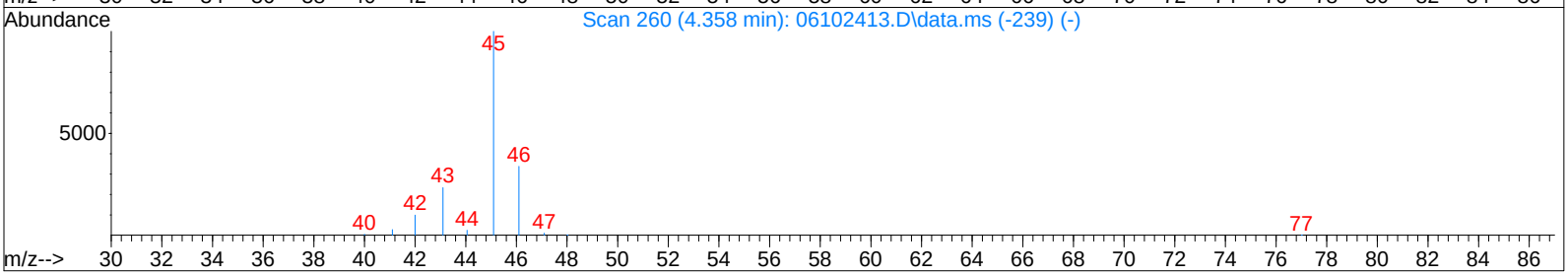
Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182426.D Vial: 14
Acq On : 18 Jun 2024 23:20 Operator: SC
Sample : P2402249-021 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 08:27:29 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M







TIC: 06182426.D\data.ms

(10) Ethanol (T)

4.279min (-0.088) 0.68ng m

response 7519

Ion	Exp%	Act%
45.10	100	100
46.10	33.50	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

MP

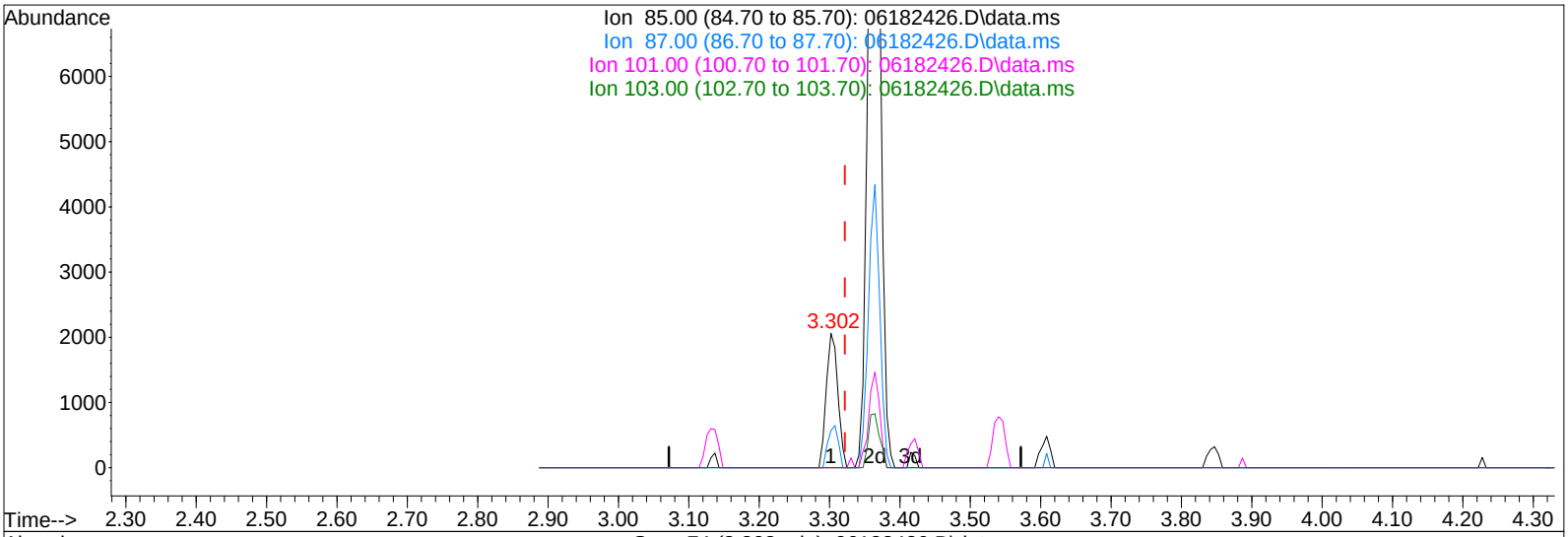
6/19/24

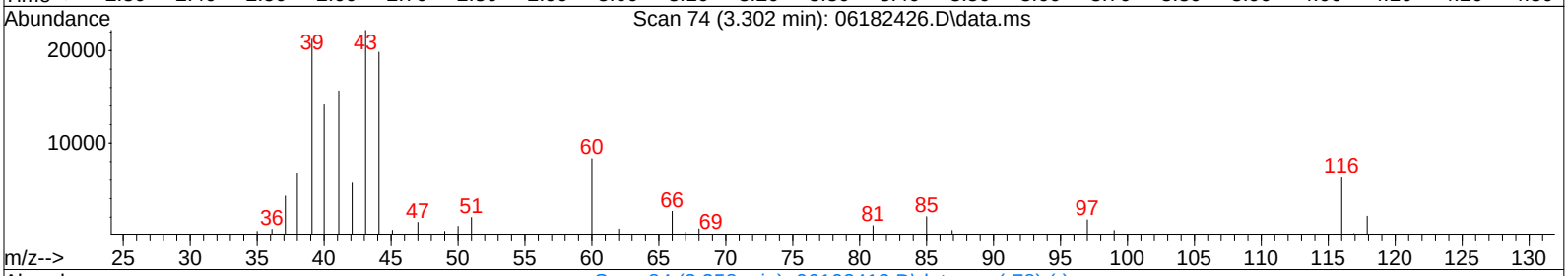
6/29/24

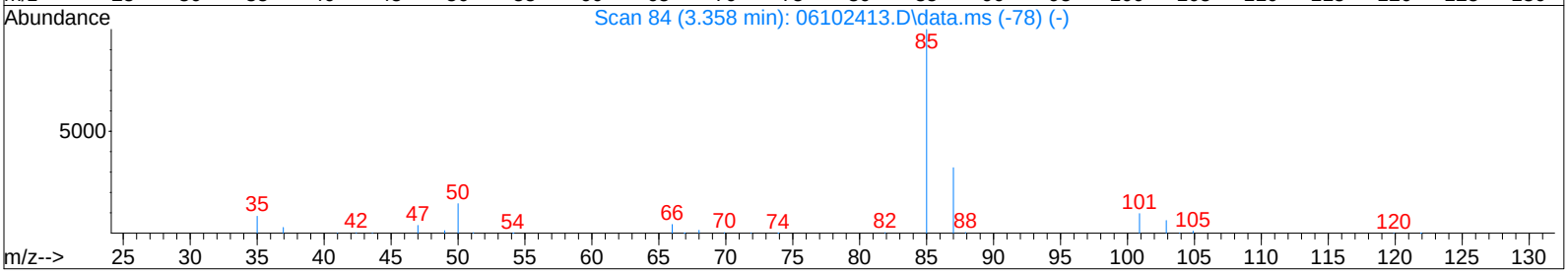
Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182426.D Vial: 14
Acq On : 18 Jun 2024 23:20 Operator: SC
Sample : P2402249-021 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 08:27:29 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M







TIC: 06182426.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.302min (-0.020) 0.09ng

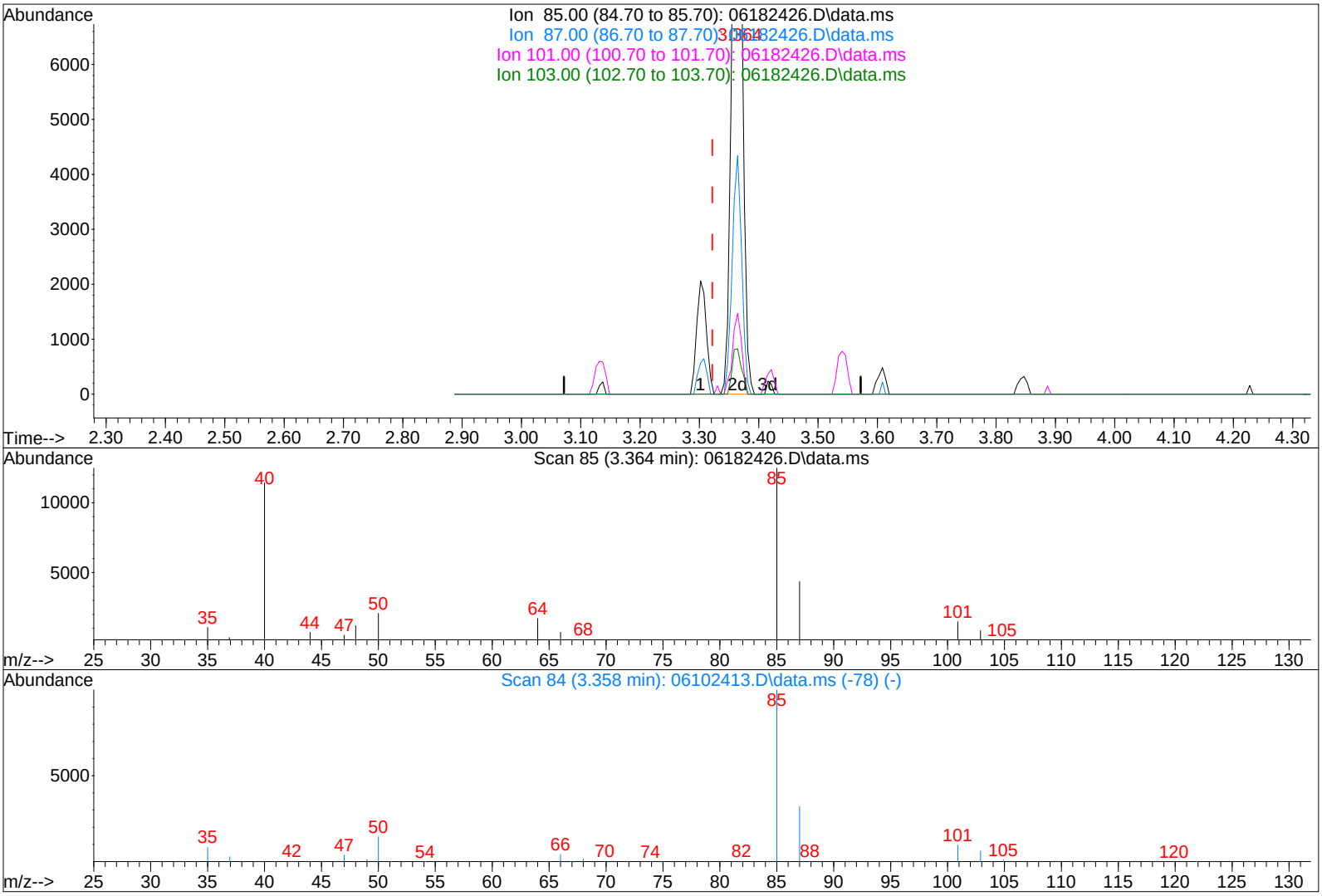
response 2350

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	27.66
101.00	9.80	0.00
103.00	6.30	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182426.D Vial: 14
Acq On : 18 Jun 2024 23:20 Operator: SC
Sample : P2402249-021 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 08:27:29 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182426.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.364min (+0.042) 0.55ng m

response 14731

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	4.41#
101.00	9.80	0.00
103.00	6.30	0.00

WP

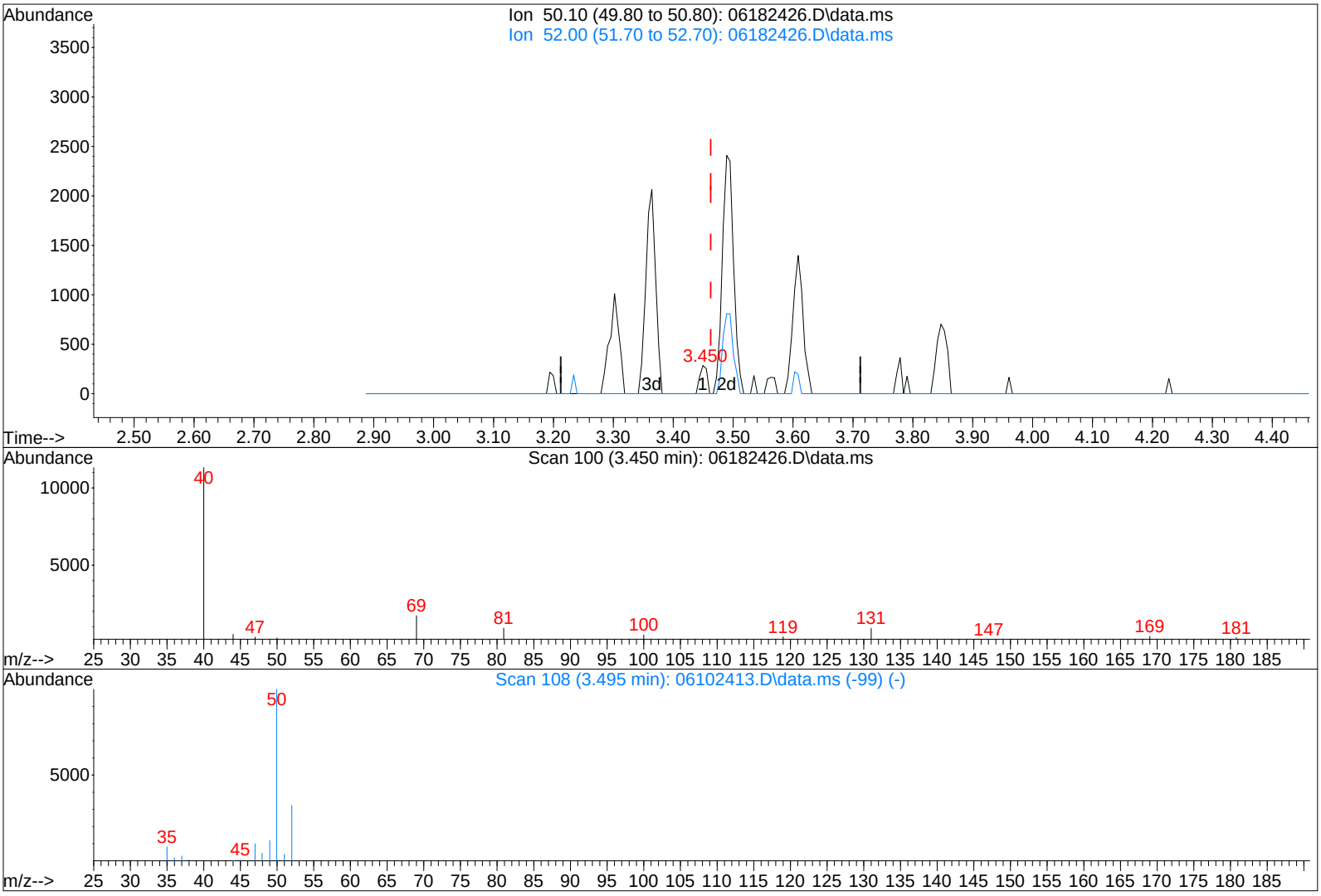
6/19/24

6/29/24

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182426.D Vial: 14
Acq On : 18 Jun 2024 23:20 Operator: SC
Sample : P2402249-021 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 11:22:21 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182426.D\data.ms

(4) Chloromethane (T)

3.450min (-0.013) 0.01ng

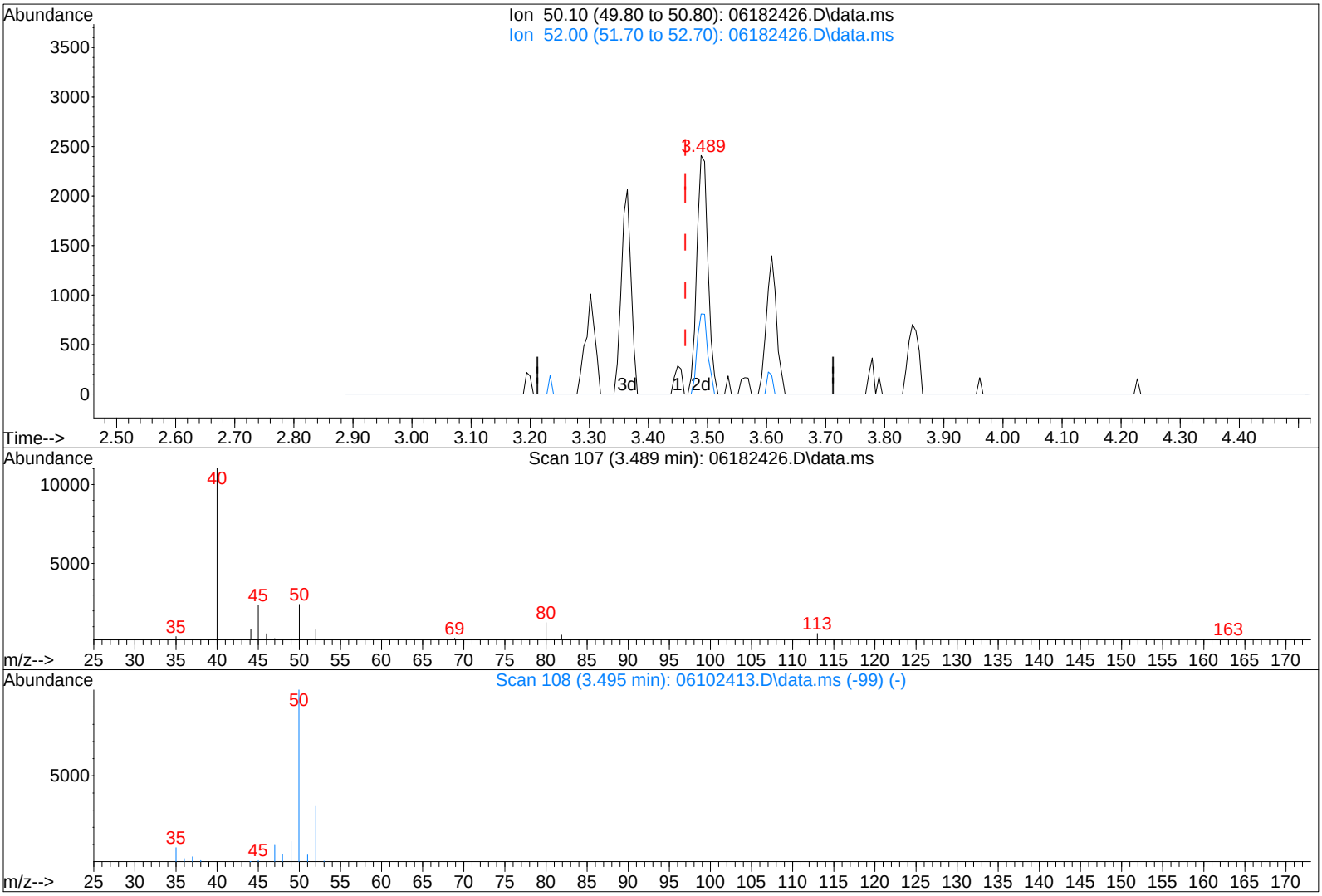
response 241

Ion	Exp%	Act%
50.10	100	100
52.00	32.40	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182426.D Vial: 14
Acq On : 18 Jun 2024 23:20 Operator: SC
Sample : P2402249-021 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 11:22:21 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182426.D\data.ms

(4) Chloromethane (T)

3.489min (+0.027) 0.17ng m

response 3176

Ion	Exp%	Act%
50.10	100	100
52.00	32.40	31.71
0.00	0.00	0.00
0.00	0.00	0.00

MJ 6/28/24

MP

CG 6/29/24

Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\18\06182426.D Vial: 14
Acq On : 18 Jun 2024 23:20 Operator: SC
Sample : P2402249-021 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:00:08 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

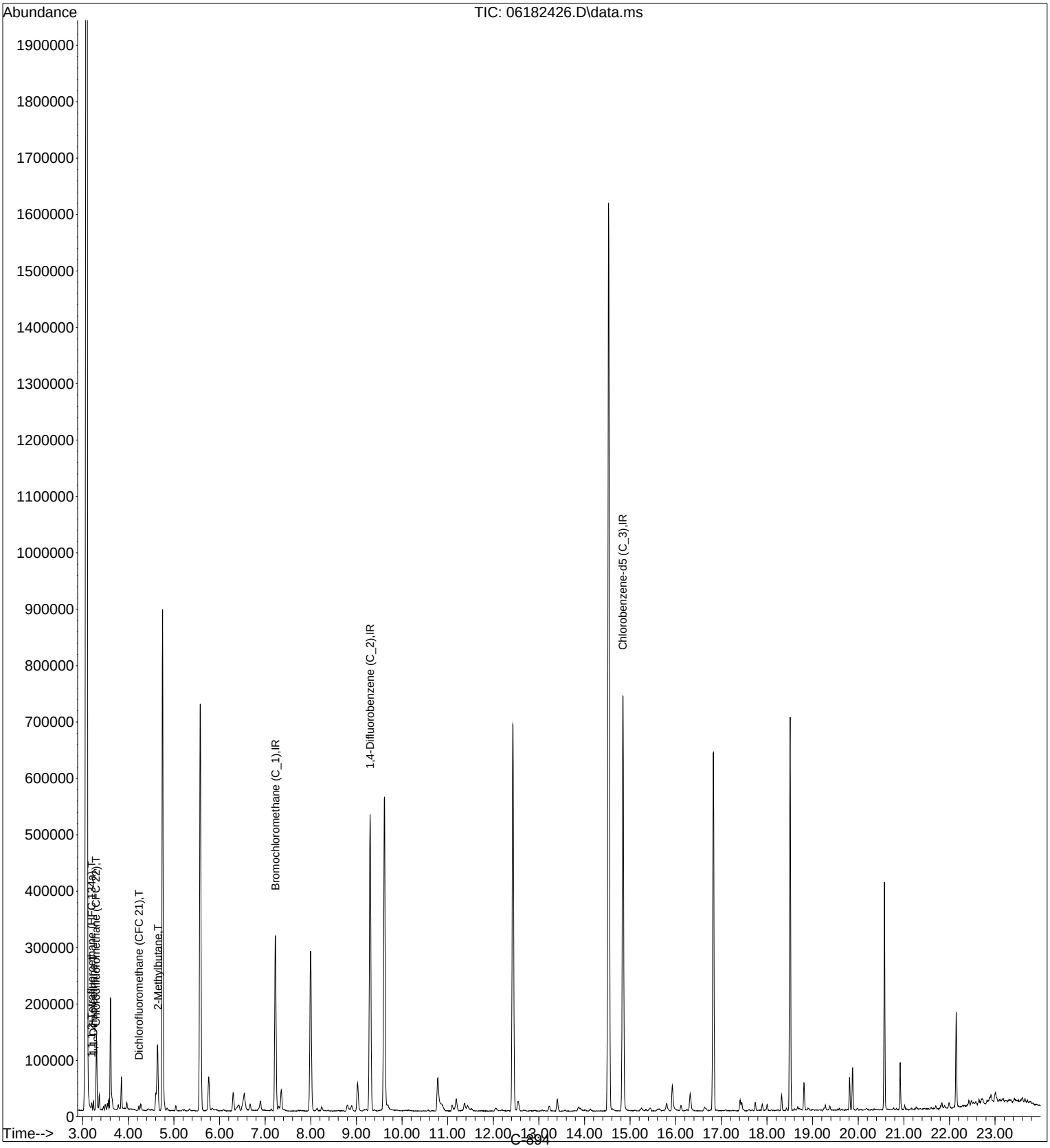
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	114425	12.500	ng		-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	500238	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	123388	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	3.14	85	129	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.19	83	1319	0.112	ng	#	1
4) 1,1-Difluoroethane	3.23	65	3695	0.370	ng		97
5) Chlorodifluoromethane ...	3.29	67	833	0.214	ng		86
6) 1-Chloro-1,1-Difluoroe...	3.51	65	491	N.D.			
7) Dichlorofluoromethane ...	4.23	67	5858	0.223	ng		97
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	4.56	83	229	N.D.			
10) 2-Methylbutane	4.65	57	17069	1.251	ng		94
11) Methyl Acetate	5.33	43	823	N.D.			
12) 2-Methylpentane	6.49	71	722	N.D.			
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	9.03	84	2314	N.D.			
17) 2,3-Dimethylpentane	9.53	56	51	N.D.			
18) Dibromomethane	9.79	174	57	N.D.			
20) Methyl Cyclohexane	11.42	55	812	N.D.			
21) 1,3-Dichloropropane	0.00	76	0	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	16.32	75	1396	N.D.			
25) Bromobenzene	0.00	77	0	N.D.			
26) 2-Chlorotoluene	17.61	91	658	N.D.			
27) 4-Chlorotoluene	17.68	91	1426	N.D.			
28) Indane	19.11	117	173	N.D.			
29) Indene	0.00	115	0	N.D.			
30) 1,2,4,5-Tetramethylben...	20.18	119	65	N.D.			
31) 1,2,3,4-Tetramethylben...	20.22	119	360	N.D.			
32) 1,2,3,5-Tetramethylben...	20.58	119	2360	N.D.			
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182426.D Vial: 14
Acq On : 18 Jun 2024 23:20 Operator: SC
Sample : P2402249-021 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:00:08 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

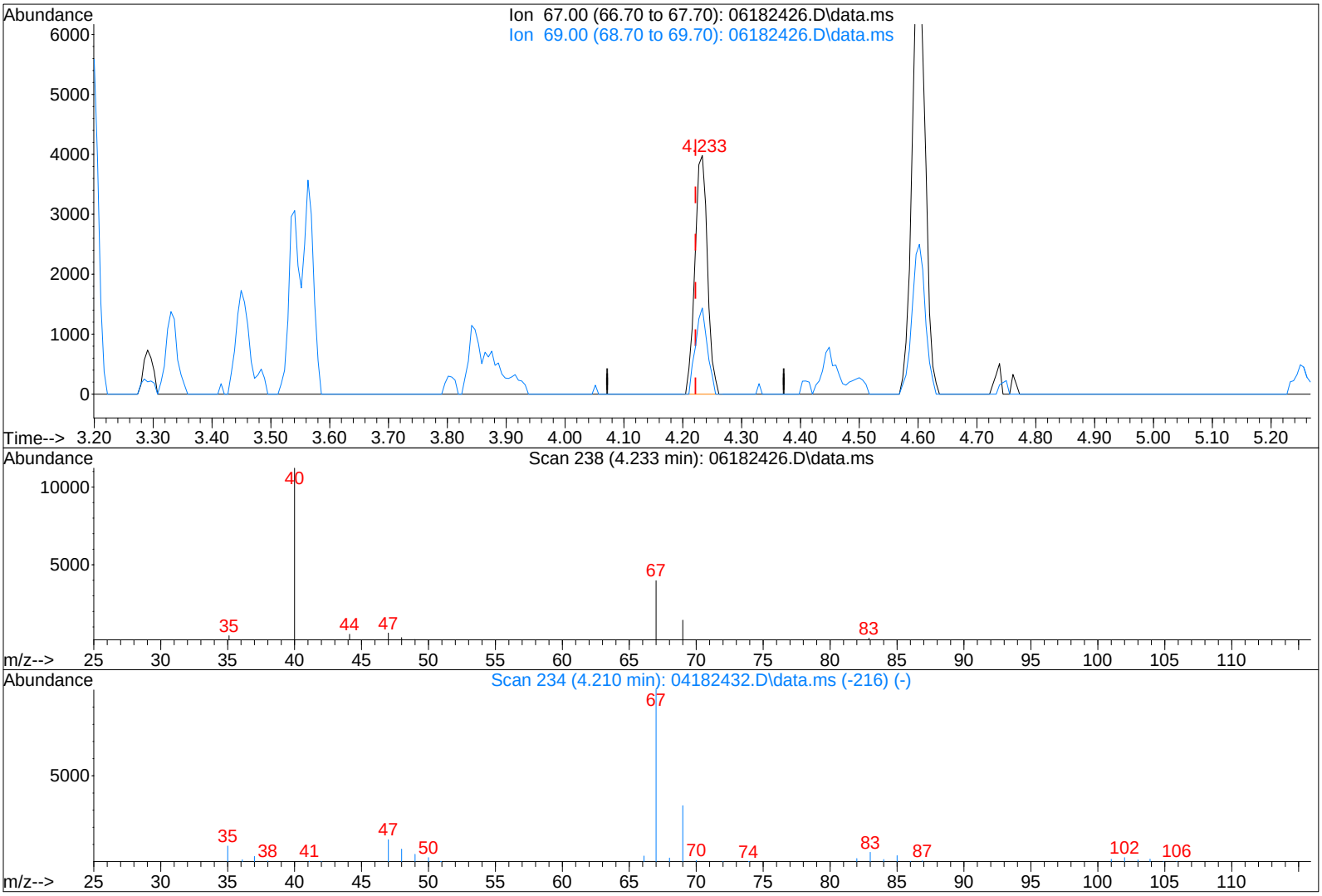


Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182426.D Vial: 14
Acq On : 18 Jun 2024 23:20 Operator: SC
Sample : P2402249-021 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 15:00:08 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182426.D\data.ms

(7) Dichlorofluoromethane (CFC 21) (T)

4.233min (+0.011) 0.22ng

response 5858

Ion	Exp%	Act%
67.00	100	100
69.00	32.40	34.14
0.00	0.00	0.00
0.00	0.00	0.00

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\18\
Data File : 06182426.D
Acq On : 18 Jun 2024 23:20
Operator : SC
Sample : P2402249-021 (400mL)
Misc : S37-06062402
ALS Vial : 14 Sample Multiplier: 1

MJ 6/28/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06182426.D\data.ms

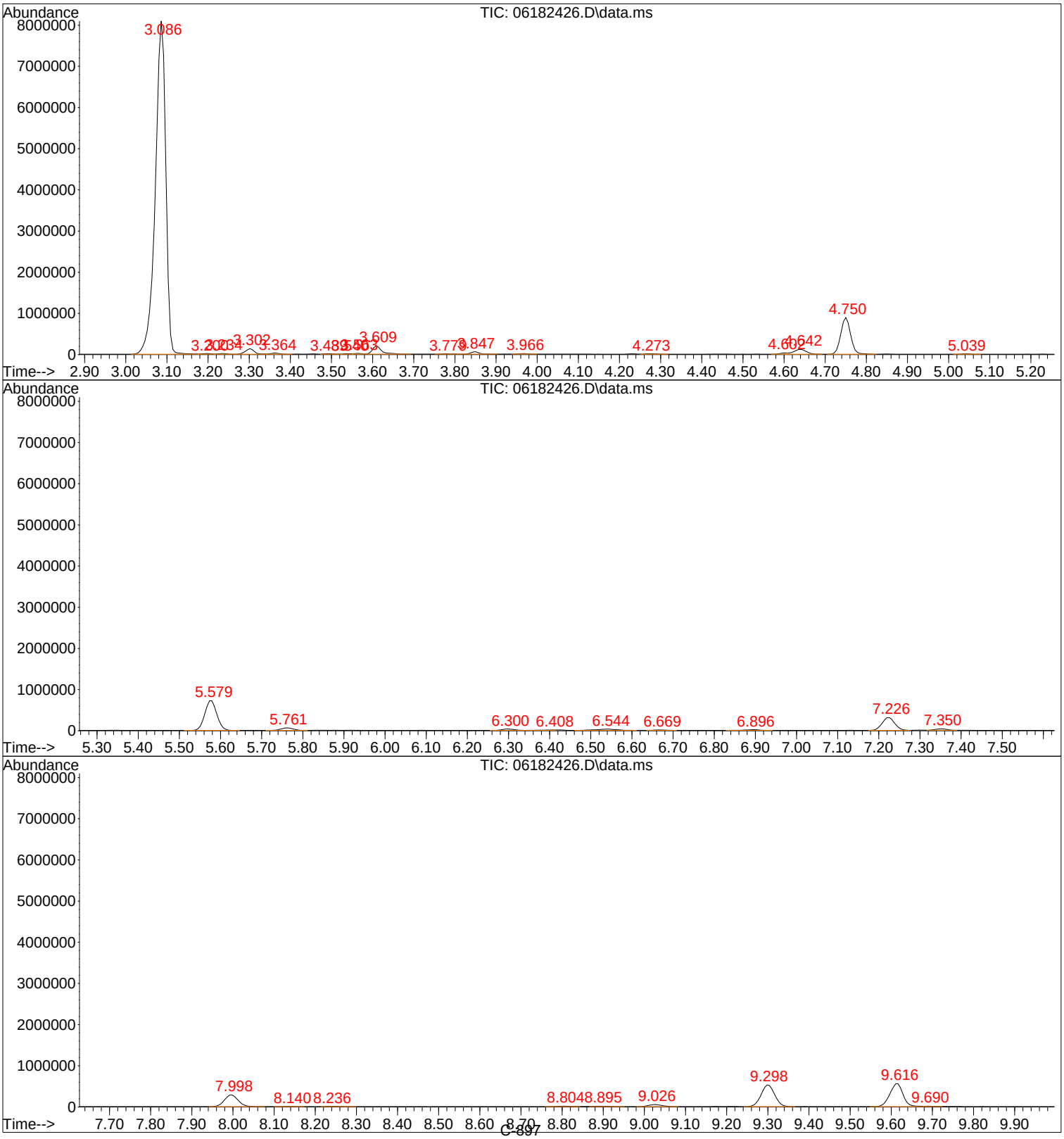
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.086	23	36	52	rBV	8088709	14307733	100.00%	63.004%
2	3.200	52	56	59	rVV2	13116	17975	0.13%	0.079%
3	3.234	59	62	67	rVB	16443	18798	0.13%	0.083%
4	3.302	67	74	81	rBV2	132738	193556	1.35%	0.852%
5	3.364	81	85	92	rVB	27319	34230	0.24%	0.151%
6	3.489	104	107	113	rBV5	9992	17071	0.12%	0.075%
7	3.540	113	116	118	rVV	11183	14091	0.10%	0.062%
8	3.563	118	120	123	rVV	17137	18636	0.13%	0.082%
9	3.609	123	128	143	rVB2	198059	306724	2.14%	1.351%
10	3.779	153	158	165	rBV2	7788	12974	0.09%	0.057%
11	3.847	165	170	180	rVV	57492	75858	0.53%	0.334%
12	3.966	186	191	197	rVB	12105	16140	0.11%	0.071%
13	4.273	241	245	253	rVB2	11391	19188	0.13%	0.084%
14	4.602	297	303	304	rBV	30242	38416	0.27%	0.169%
15	4.642	304	310	319	rVB2	115950	241867	1.69%	1.065%
16	4.750	321	329	342	rBV	888634	1471202	10.28%	6.478%
17	5.039	375	380	387	rBV2	9173	14769	0.10%	0.065%
18	5.579	463	475	487	rBV2	721327	1469103	10.27%	6.469%
19	5.761	498	507	516	rBV	59734	121684	0.85%	0.536%
20	6.300	594	602	609	rBV	32440	69421	0.49%	0.306%
21	6.408	609	621	622	rBV4	8890	21111	0.15%	0.093%
22	6.544	630	645	657	rBV2	30845	104335	0.73%	0.459%
23	6.669	661	667	674	rVB	11038	22068	0.15%	0.097%
24	6.896	695	707	715	rBV3	16067	39809	0.28%	0.175%
25	7.226	756	765	774	rBV	309981	671264	4.69%	2.956%
26	7.350	781	787	794	rVB	34999	70229	0.49%	0.309%
27	7.998	891	901	915	rBV	283576	653792	4.57%	2.879%
28	8.140	919	926	932	rVB3	5232	10731	0.08%	0.047%
29	8.236	939	943	954	rBV3	6977	14277	0.10%	0.063%
30	8.804	1035	1043	1050	rBV3	11010	30574	0.21%	0.135%
31	8.895	1054	1059	1069	rVB4	9640	23835	0.17%	0.105%
32	9.026	1074	1082	1092	rBV	49742	113981	0.80%	0.502%
33	9.298	1120	1130	1142	rVB	525492	1204634	8.42%	5.305%
34	9.616	1174	1186	1197	rBV	555904	1236448	8.64%	5.445%
35	9.690	1197	1199	1205	rVB4	7845	12800	0.09%	0.056%

Sum of corrected areas: 22709324

Data Path : I:\MS09\DATA\2024 06\18\
Data File : 06182426.D
Acq On : 18 Jun 2024 23:20
Operator : SC
Sample : P2402249-021 (400mL)
Misc : S37-06062402
ALS Vial : 14 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\18\\
Data File : 06182426.D
Acq On : 18 Jun 2024 23:200
Operator : SCC
Sample : P2402249-021 (400mL))
Misc : S37-060624022
ALS Vial : 14 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182427.D Vial: 15
Acq On : 18 Jun 2024 23:52 Operator: SC
Sample : P2402249-022 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 10:17:41 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/19/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	115945	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	505560	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	122417	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	265413	12.880	ng		0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.04%				
57) Toluene-d8 (SS2)	12.43	98	567845	12.121	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.96%				
73) Bromofluorobenzene (SS3)	16.83	174	223653	13.221	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 105.76%				
Target Compounds							Qvalue
2) Propene	0.00	42	0	N.D. d			
3) Dichlorodifluoromethan...	3.36	85	14733m	0.540	ng		
4) Chloromethane	3.49	50	1333	0.071	ng		96
5) 1,2-Dichloro-1,1,2,2-t...	3.61	135	283	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	4.01	94	136	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.28	45	10891m	0.966	ng		
11) Acetonitrile	4.47	41	55	N.D.			
12) Acrolein	4.53	56	1407	0.169	ng		99
13) Acetone	4.62	58	28045	3.114	ng		91
14) Trichlorofluoromethane	4.75	101	154477	5.596	ng		99
15) 2-Propanol (Isopropanol)	0.00	45	0	N.D. d			
16) Acrylonitrile	5.03	53	467	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.32	59	605	N.D.			
19) Methylene Chloride	5.34	84	910	0.071	ng		100
20) 3-Chloro-1-propene (Al...	5.45	41	123	N.D.			
21) Trichlorotrifluoroethane	5.58	151	83719	7.170	ng		97
22) Carbon Disulfide	5.59	76	21593	0.526	ng		64
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D. d			
27) 2-Butanone (MEK)	6.67	72	2162	0.303	ng	#	68
28) cis-1,2-Dichloroethene	7.07	61	144	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.			
30) Ethyl Acetate	7.28	61	9627	2.212	ng		99
31) n-Hexane	7.30	57	1207	0.063	ng	#	83
32) Chloroform	7.35	83	10803	0.476	ng		99
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	0.00	62	0	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	9.62	61	22063	No Calib		#	
40) 1-Butanol	8.80	56	3104	No Calib		#	
41) Benzene	8.89	78	5622	0.120	ng		97
42) Carbon Tetrachloride	9.07	117	193	N.D.			
43) Cyclohexane	9.21	84	245	N.D.			
44) tert-Amyl Methyl Ether	9.61	73	242	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.07	83	334	N.D.			
47) Trichloroethene	10.14	130	919	0.067	ng		98
48) 1,4-Dioxane	10.13	88	124	N.D.			
49) 2,2,4-Trimethylpentane...	0.00	57	0	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182427.D Vial: 15
Acq On : 18 Jun 2024 23:52 Operator: SC
Sample : P2402249-022 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 10:17:41 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

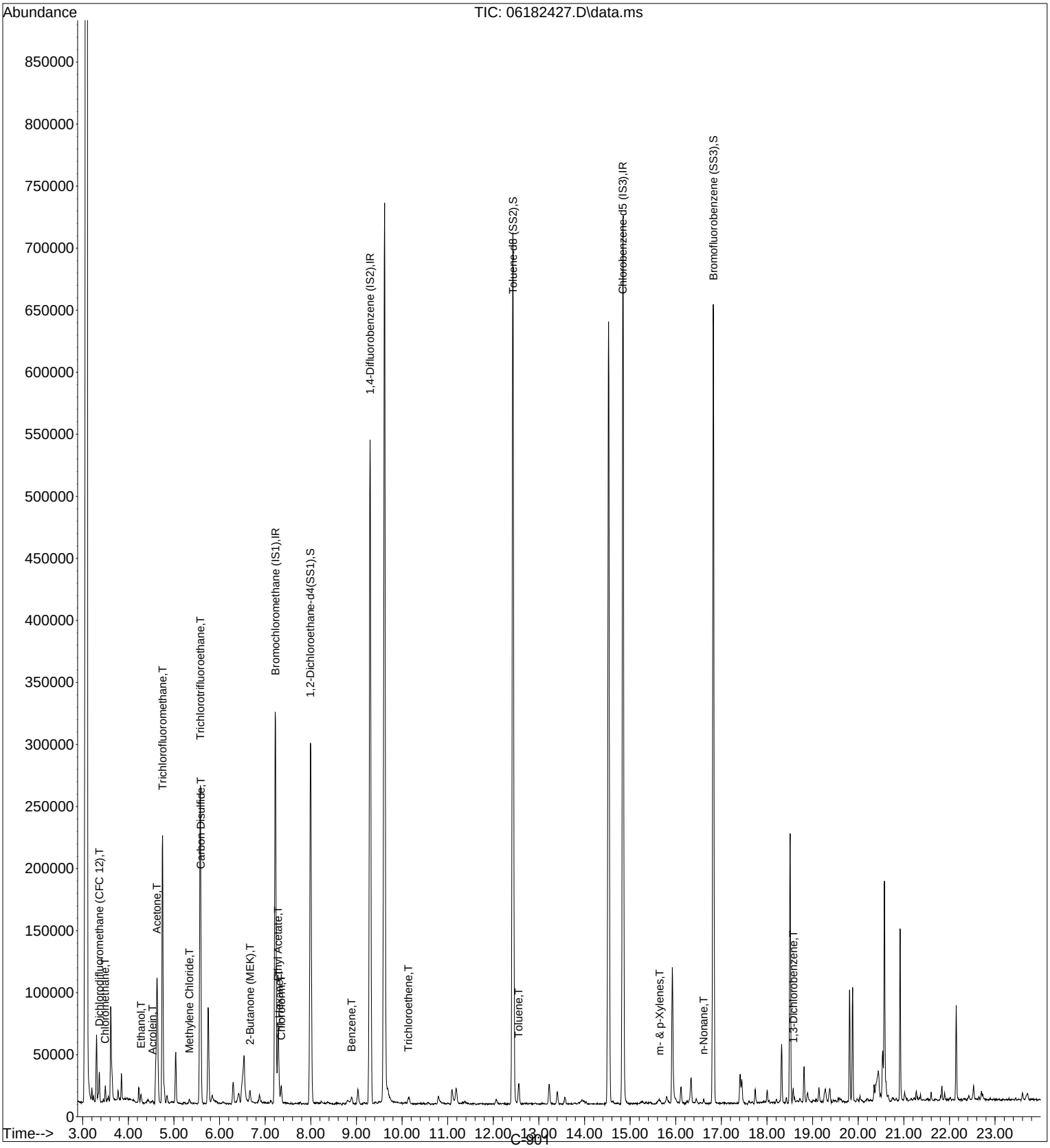
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	10.57	71	222	N.D.		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	11.33	58	129	N.D.		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	12.56	91	13921	0.284 ng		98
59) 2-Hexanone	12.92	43	1314	N.D.		
60) Dibromochloromethane	13.07	129	273	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	13.78	43	858	N.D.		
63) n-Octane	13.92	57	124	N.D.		
64) Tetrachloroethene	14.03	166	690	N.D.		
65) Chlorobenzene	14.90	112	487	N.D.		
66) Ethylbenzene	15.41	91	1504	N.D.		
67) m- & p-Xylenes	15.65	91	3369	0.072 ng		96
68) Bromoform	15.67	173	464	N.D.		
69) Styrene	16.11	104	592	N.D.		
70) o-Xylene	16.24	91	1567	N.D.		
71) n-Nonane	16.61	43	1908	0.071 ng	#	65
72) 1,1,2,2-Tetrachloroethane	16.20	83	316	N.D.		
74) Cumene	17.03	105	775	N.D.		
75) alpha-Pinene	17.53	93	123	N.D.		
76) n-Propylbenzene	17.67	91	1299	N.D.		
77) 3-Ethyltoluene	17.03	105	775	No Calib	#	
78) 4-Ethyltoluene	17.86	105	878	N.D.		
79) 1,3,5-Trimethylbenzene	17.95	105	638	N.D.		
80) alpha-Methylstyrene	0.00	118	0	N.D.		
81) 2-Ethyltoluene	17.03	105	775	No Calib	#	
82) 1,2,4-Trimethylbenzene	18.43	105	1284	N.D.		
83) n-Decane	0.00	58	0	N.D.		
84) Benzyl Chloride	18.57	91	400	N.D.		
85) 1,3-Dichlorobenzene	18.58	146	4440	0.132 ng		99
86) 1,4-Dichlorobenzene	18.65	146	509	N.D.		
87) sec-Butylbenzene	18.74	105	881	N.D.		
88) 4-Isopropyltoluene (p-...	18.93	119	1087	N.D.		
89) 1,2,3-Trimethylbenzene	17.03	105	775	No Calib	#	
90) 1,2-Dichlorobenzene	19.03	146	464	N.D.		
91) d-Limonene	19.08	68	428	N.D.		
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	0.00	58	0	N.D.		
94) 1,2,4-Trichlorobenzene	20.84	180	700	N.D.		
95) Naphthalene	20.94	128	1353	N.D.		
96) n-Dodecane	0.00	58	0	N.D.		
97) Hexachlorobutadiene	21.30	225	697	N.D.		
98) Cyclohexanone	15.44	55	124	No Calib	#	
99) tert-Butylbenzene	18.43	119	983	N.D.		
100) n-Butylbenzene	19.39	91	1093	N.D.		
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182427.D Vial: 15
Acq On : 18 Jun 2024 23:52 Operator: SC
Sample : P2402249-022 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 10:17:41 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182427.D Vial: 15
Acq On : 18 Jun 2024 23:52 Operator: SC
Sample : P2402249-022 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 10:17:41 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/19/24

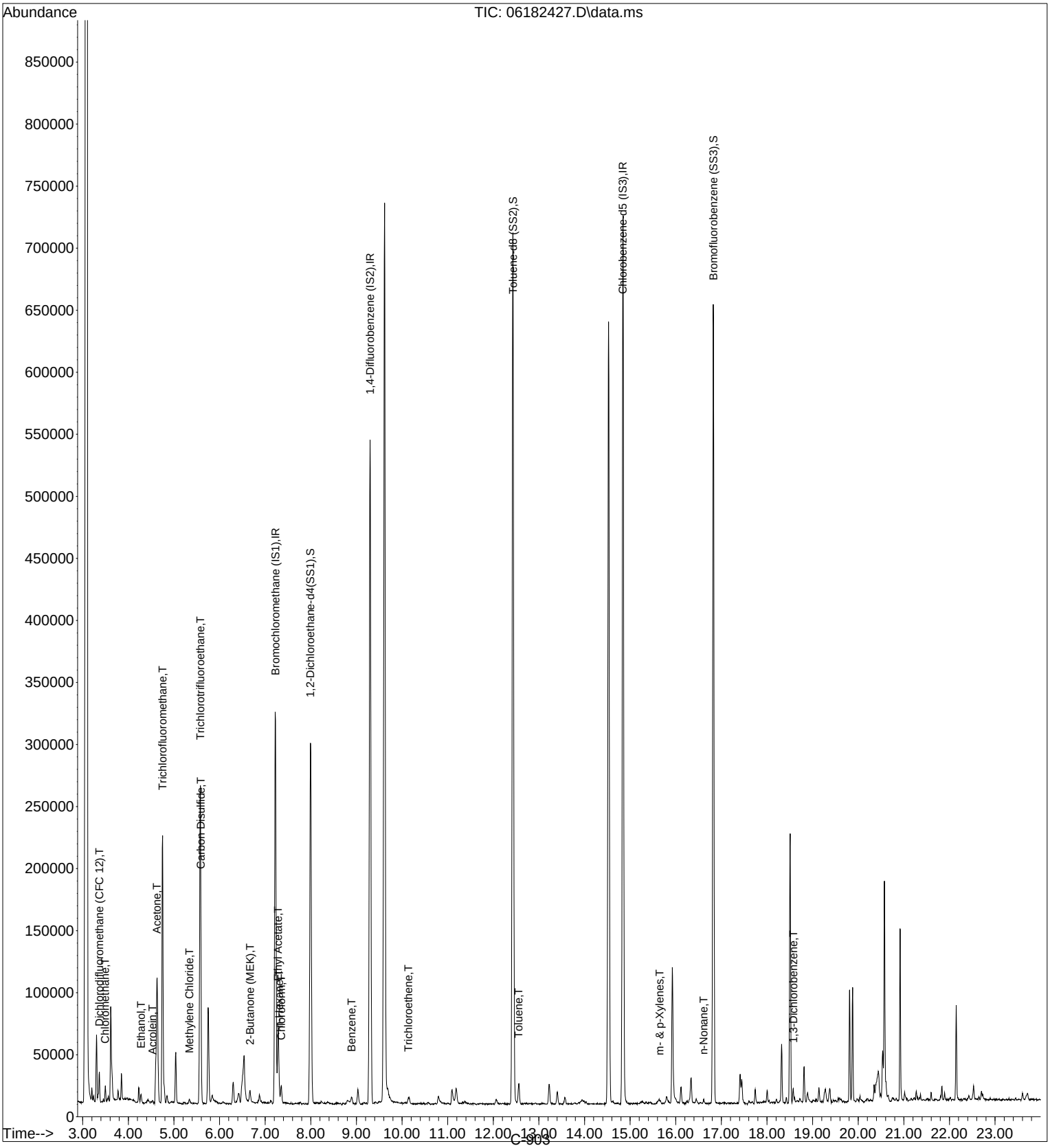
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	115945	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	505560	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	122417	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	265413	12.880	ng		0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.04%				
57) Toluene-d8 (SS2)	12.43	98	567845	12.121	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.96%				
73) Bromofluorobenzene (SS3)	16.83	174	223653	13.221	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 105.76%				
Target Compounds							Qvalue
3) Dichlorodifluoromethan...	3.36	85	14733m	0.540	ng		
4) Chloromethane	3.49	50	1333	0.071	ng		96
10) Ethanol	4.28	45	10891m	0.966	ng		
12) Acrolein	4.53	56	1407	0.169	ng		99
13) Acetone	4.62	58	28045	3.114	ng		91
14) Trichlorofluoromethane	4.75	101	154477	5.596	ng		99
19) Methylene Chloride	5.34	84	910	0.071	ng		100
21) Trichlorotrifluoroethane	5.58	151	83719	7.170	ng		97
22) Carbon Disulfide	5.59	76	21593	0.526	ng		64
27) 2-Butanone (MEK)	6.67	72	2162	0.303	ng	#	68
30) Ethyl Acetate	7.28	61	9627	2.212	ng		99
31) n-Hexane	7.30	57	1207	0.063	ng	#	83
32) Chloroform	7.35	83	10803	0.476	ng		99
41) Benzene	8.89	78	5622	0.120	ng		97
47) Trichloroethene	10.14	130	919	0.067	ng		98
58) Toluene	12.56	91	13921	0.284	ng		98
67) m- & p-Xylenes	15.65	91	3369	0.072	ng		96
71) n-Nonane	16.61	43	1908	0.071	ng	#	65
85) 1,3-Dichlorobenzene	18.58	146	4440	0.132	ng		99

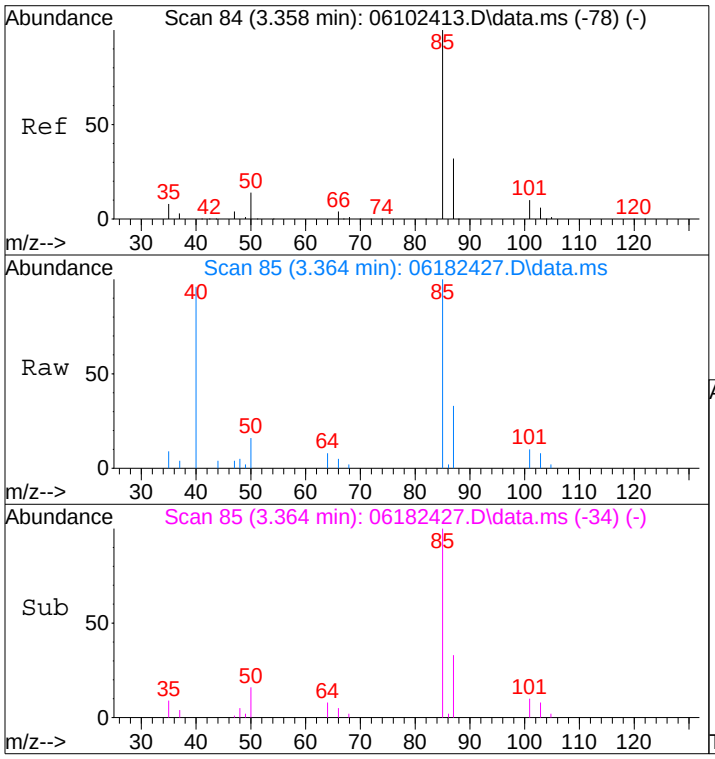
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182427.D Vial: 15
Acq On : 18 Jun 2024 23:52 Operator: SC
Sample : P2402249-022 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 10:17:41 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

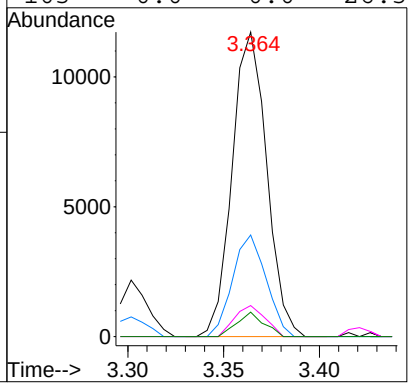


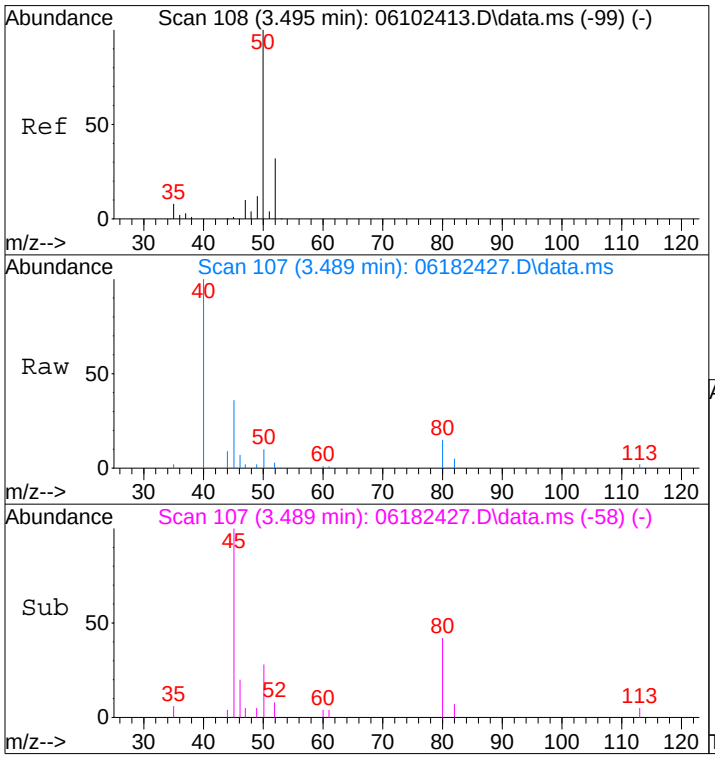


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.54 ng m
RT: 3.36 min Scan# 85
Delta R.T. 0.042 min
Lab File: 06182427.D
Acq: 18 Jun 2024 23:52

Tgt Ion: 85 Resp: 14733

Ion	Ratio	Lower	Upper
85	100		
87	5.1	12.2	52.2#
101	0.0	0.0	29.8
103	0.0	0.0	26.3

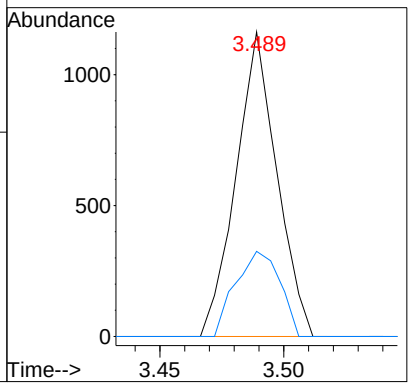


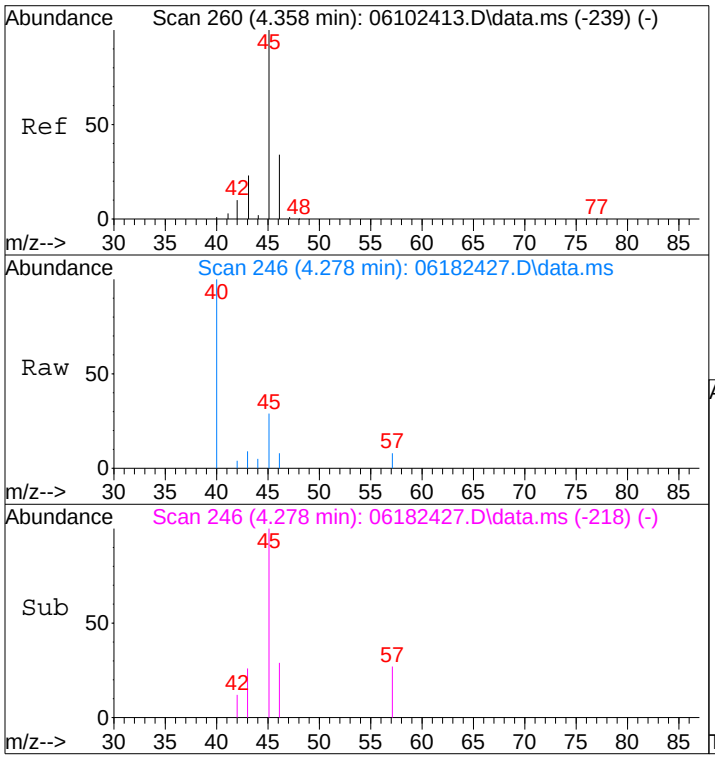


#4
Chloromethane
Concen: 0.07 ng
RT: 3.49 min Scan# 107
Delta R.T. 0.027 min
Lab File: 06182427.D
Acq: 18 Jun 2024 23:52

Tgt Ion: 50 Resp: 1333

Ion	Ratio	Lower	Upper
50	100		
52	30.4	12.4	52.4

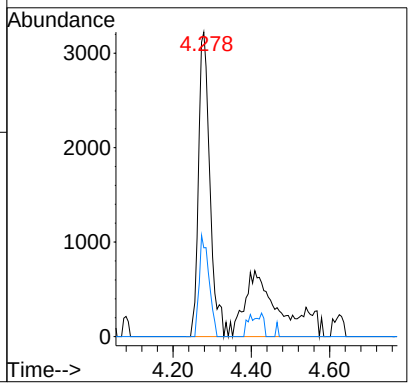


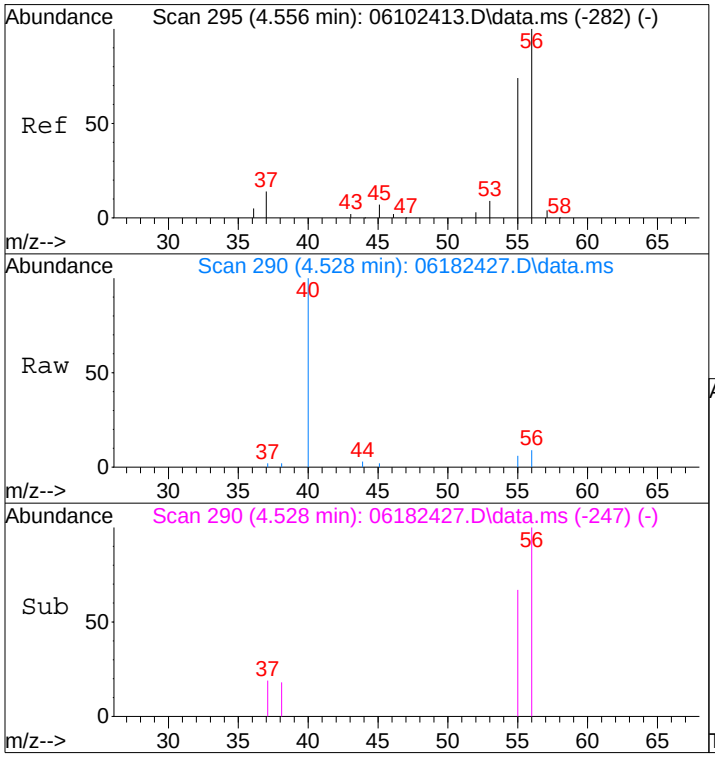


#10
Ethanol
Concen: 0.97 ng m
RT: 4.28 min Scan# 246
Delta R.T. -0.088 min
Lab File: 06182427.D
Acq: 18 Jun 2024 23:52

Tgt Ion: 45 Resp: 10891

Ion	Ratio	Lower	Upper
45	100		
46	5.5	13.5	53.5#

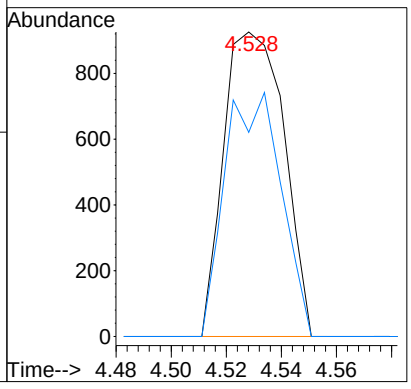


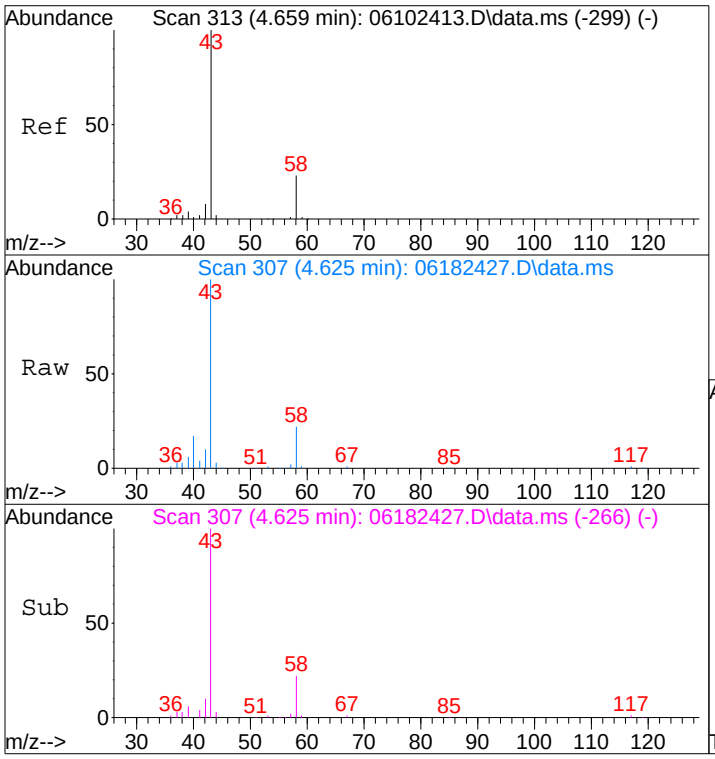


#12
Acrolein
Concen: 0.17 ng
RT: 4.53 min Scan# 290
Delta R.T. -0.007 min
Lab File: 06182427.D
Acq: 18 Jun 2024 23:52

Tgt Ion: 56 Resp: 1407

Ion	Ratio	Lower	Upper
56	100		
55	74.8	55.5	95.5

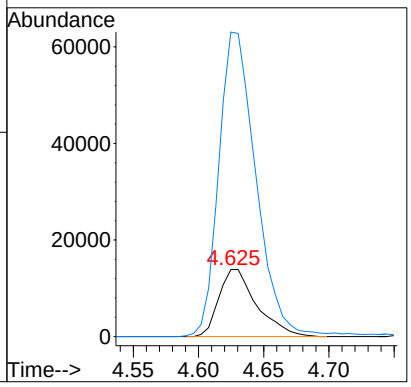


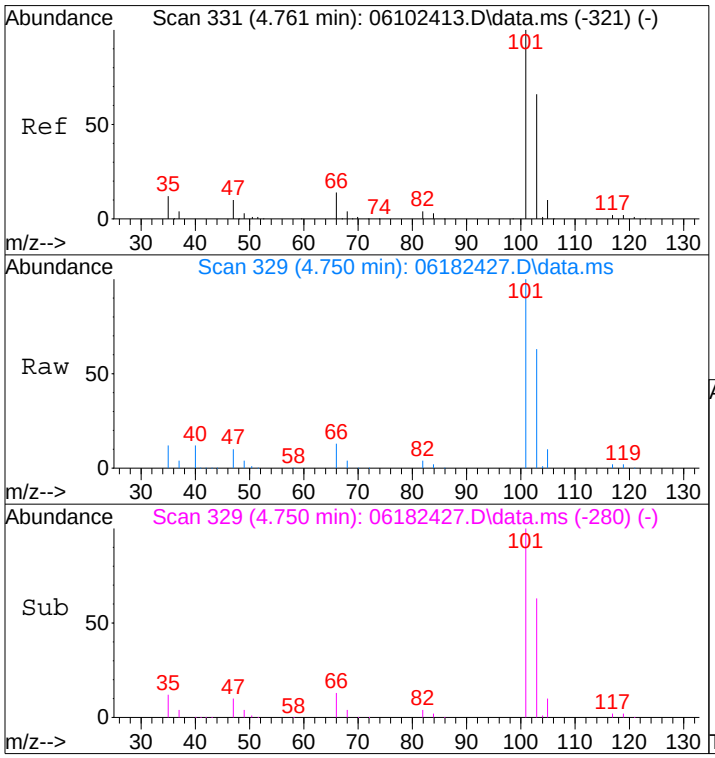


#13
Acetone
Concen: 3.11 ng
RT: 4.62 min Scan# 307
Delta R.T. -0.017 min
Lab File: 06182427.D
Acq: 18 Jun 2024 23:52

Tgt Ion: 58 Resp: 28045

Ion	Ratio	Lower	Upper
58	100		
43	452.8	400.7	460.7

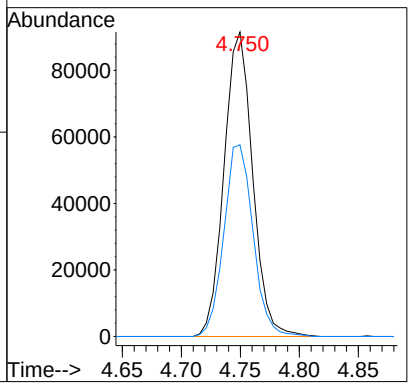


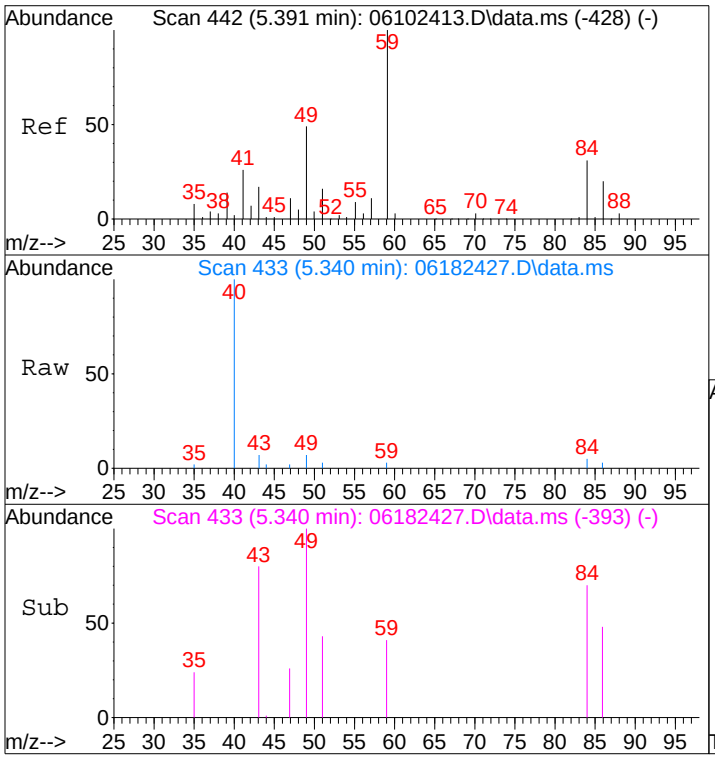


#14
Trichlorofluoromethane
Concen: 5.60 ng
RT: 4.75 min Scan# 329
Delta R.T. 0.029 min
Lab File: 06182427.D
Acq: 18 Jun 2024 23:52

Tgt Ion:101 Resp: 154477

Ion	Ratio	Lower	Upper
101	100		
103	64.2	44.9	84.9

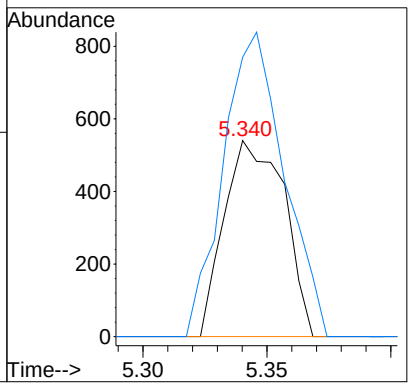


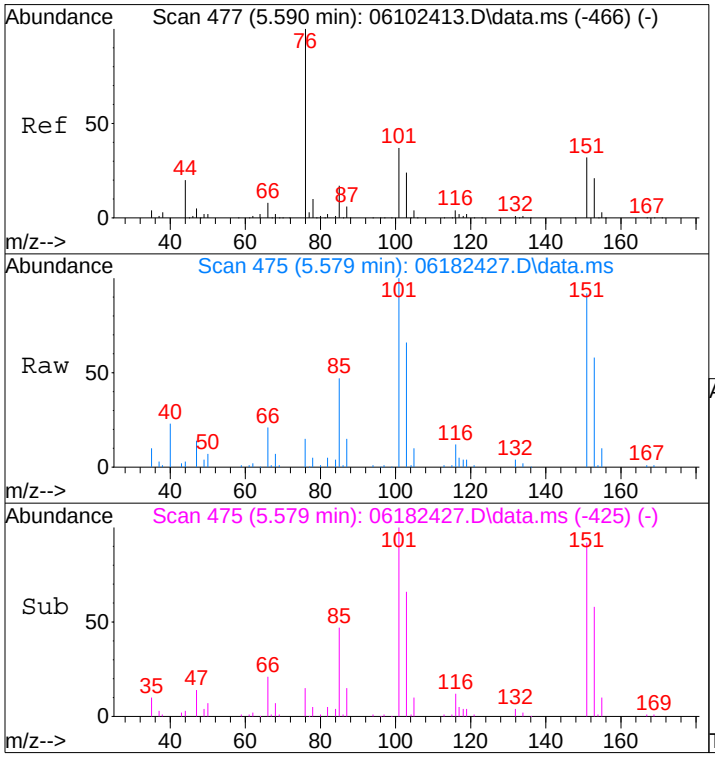


#19
Methylene Chloride
Concen: 0.07 ng
RT: 5.34 min Scan# 433
Delta R.T. -0.021 min
Lab File: 06182427.D
Acq: 18 Jun 2024 23:52

Tgt Ion: 84 Resp: 910

Ion	Ratio	Lower	Upper
84	100		
49	157.3	132.9	182.9

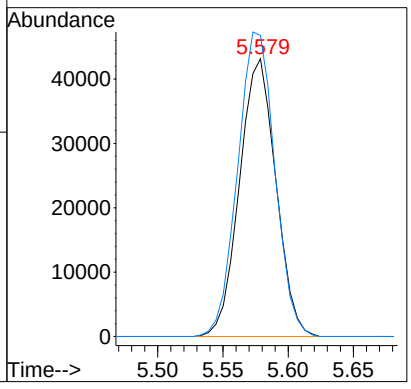


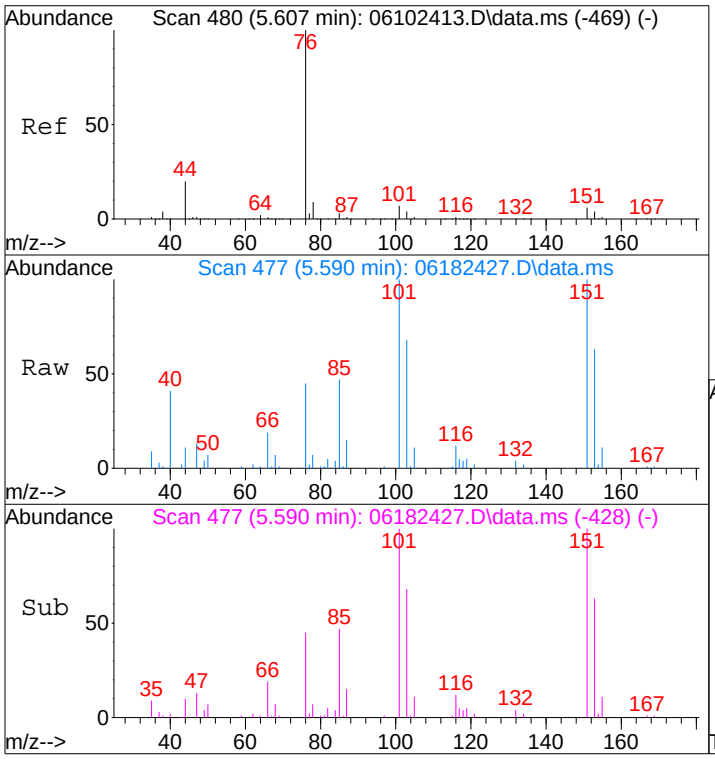


#21
Trichlorotrifluoroethane
Concen: 7.17 ng
RT: 5.58 min Scan# 475
Delta R.T. 0.032 min
Lab File: 06182427.D
Acq: 18 Jun 2024 23:52

Tgt Ion:151 Resp: 83719

Ion	Ratio	Lower	Upper
151	100		
101	112.2	95.0	135.0

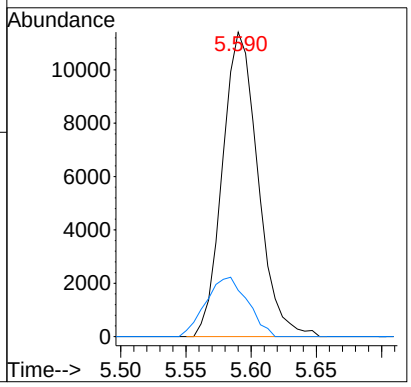


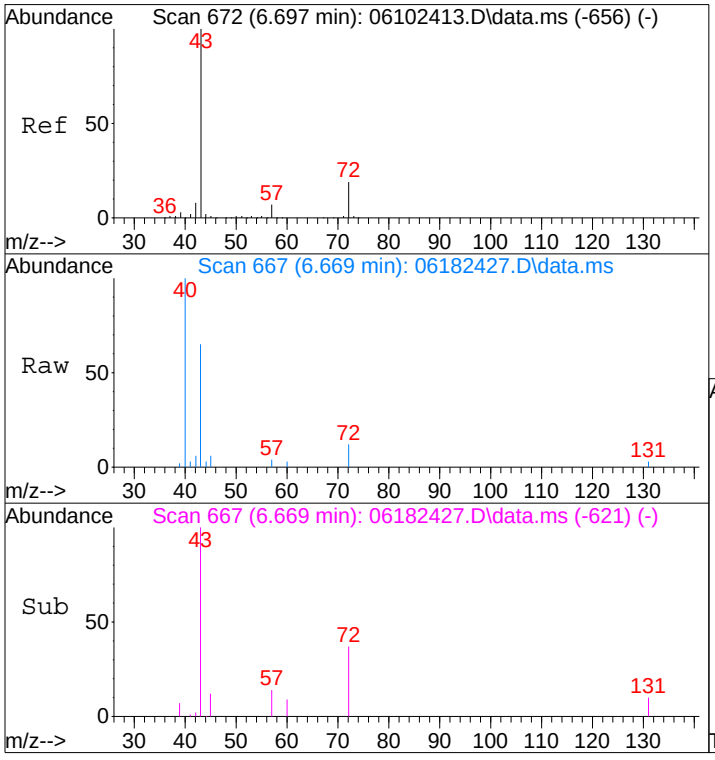


#22
Carbon Disulfide
Concen: 0.53 ng
RT: 5.59 min Scan# 477
Delta R.T. 0.027 min
Lab File: 06182427.D
Acq: 18 Jun 2024 23:52

Tgt Ion: 76 Resp: 21593

Ion	Ratio	Lower	Upper
76	100		
78	22.9	0.0	29.6

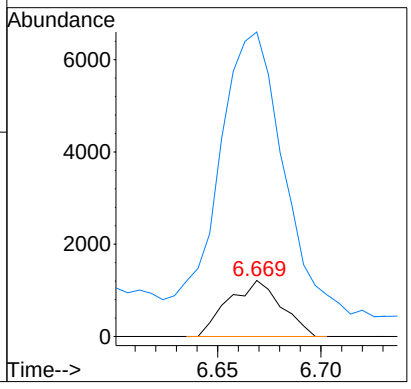


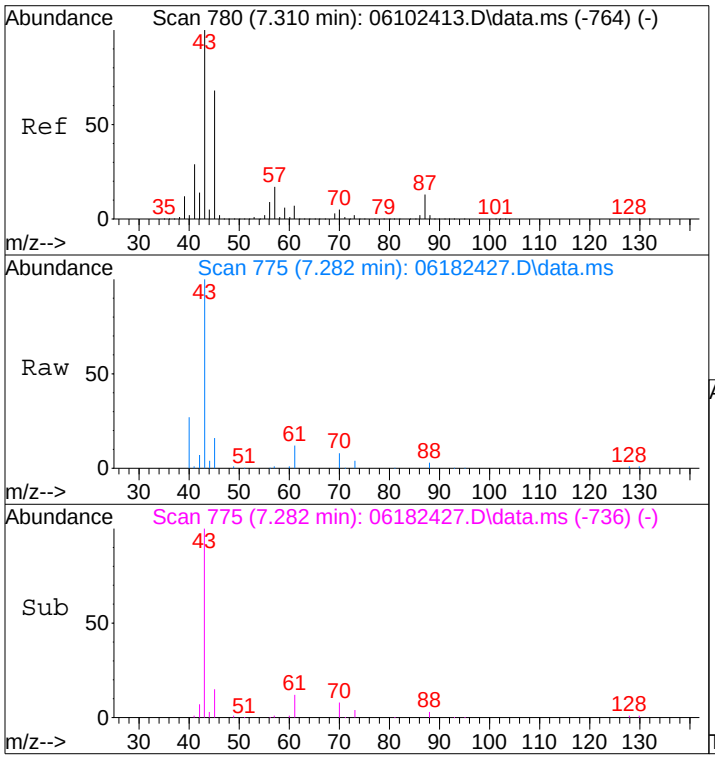


#27
2-Butanone (MEK)
Concen: 0.30 ng
RT: 6.67 min Scan# 667
Delta R.T. 0.011 min
Lab File: 06182427.D
Acq: 18 Jun 2024 23:52

Tgt Ion: 72 Resp: 2162

Ion	Ratio	Lower	Upper
72	100		
43	618.2	506.8	546.8#

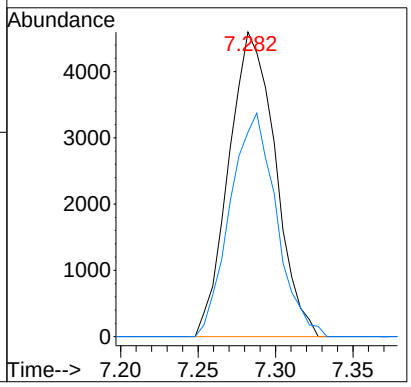


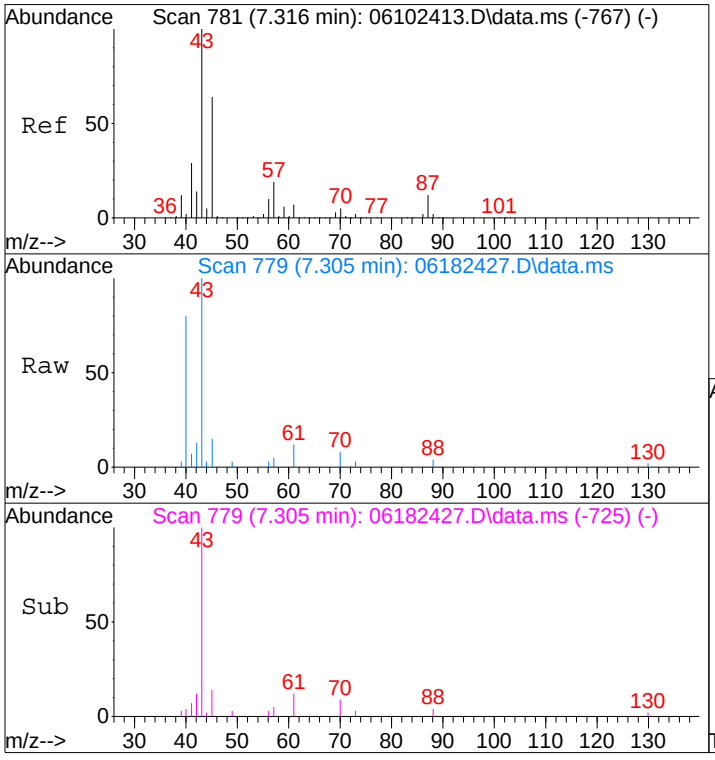


#30
Ethyl Acetate
Concen: 2.21 ng
RT: 7.28 min Scan# 775
Delta R.T. 0.023 min
Lab File: 06182427.D
Acq: 18 Jun 2024 23:52

Tgt Ion: 61 Resp: 9627

Ion	Ratio	Lower	Upper
61	100		
70	73.0	53.5	93.5

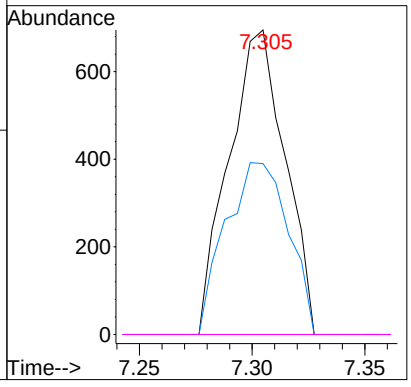


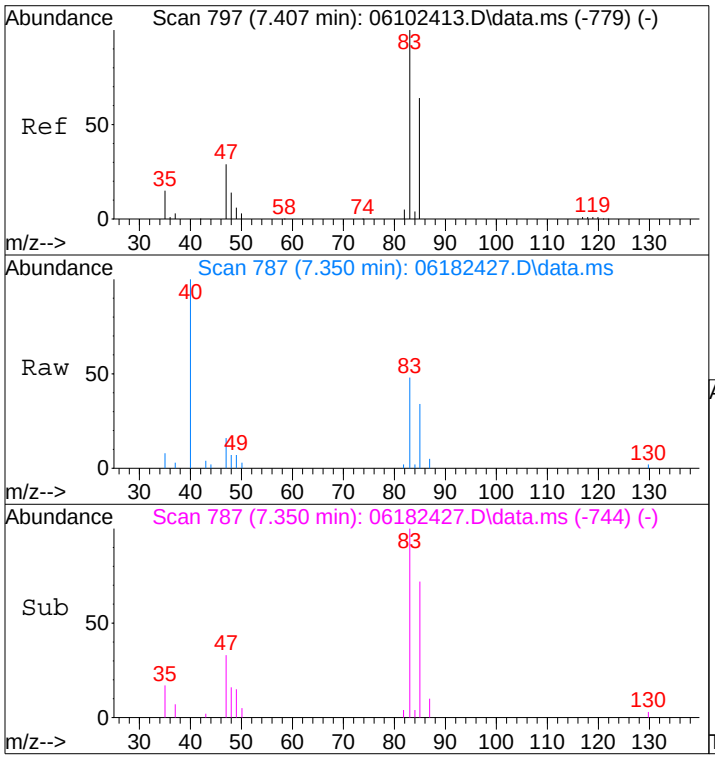


#31
n-Hexane
Concen: 0.06 ng
RT: 7.30 min Scan# 779
Delta R.T. 0.057 min
Lab File: 06182427.D
Acq: 18 Jun 2024 23:52

Tgt Ion: 57 Resp: 1207

Ion	Ratio	Lower	Upper
57	100		
56	62.9	42.5	63.7
86	0.0	9.5	14.3#

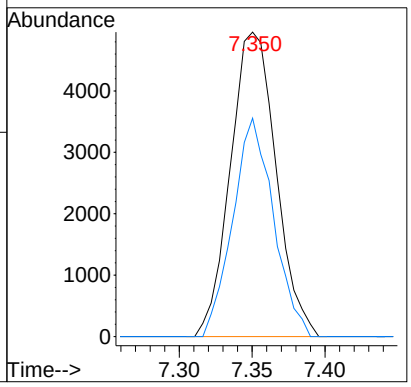


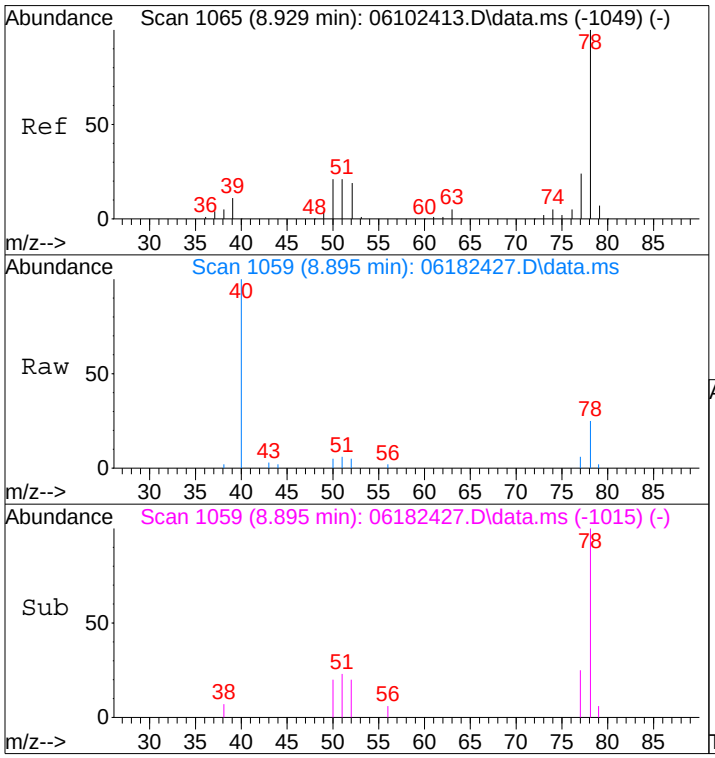


#32
Chloroform
Concen: 0.48 ng
RT: 7.35 min Scan# 787
Delta R.T. -0.005 min
Lab File: 06182427.D
Acq: 18 Jun 2024 23:52

Tgt Ion: 83 Resp: 10803

Ion	Ratio	Lower	Upper
83	100		
85	63.8	44.4	84.4

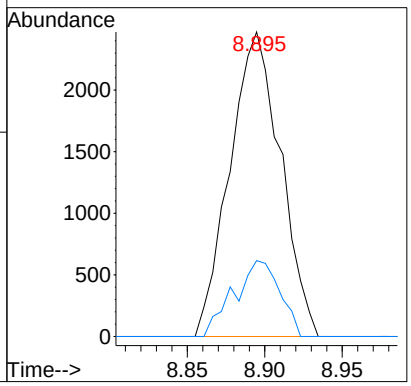


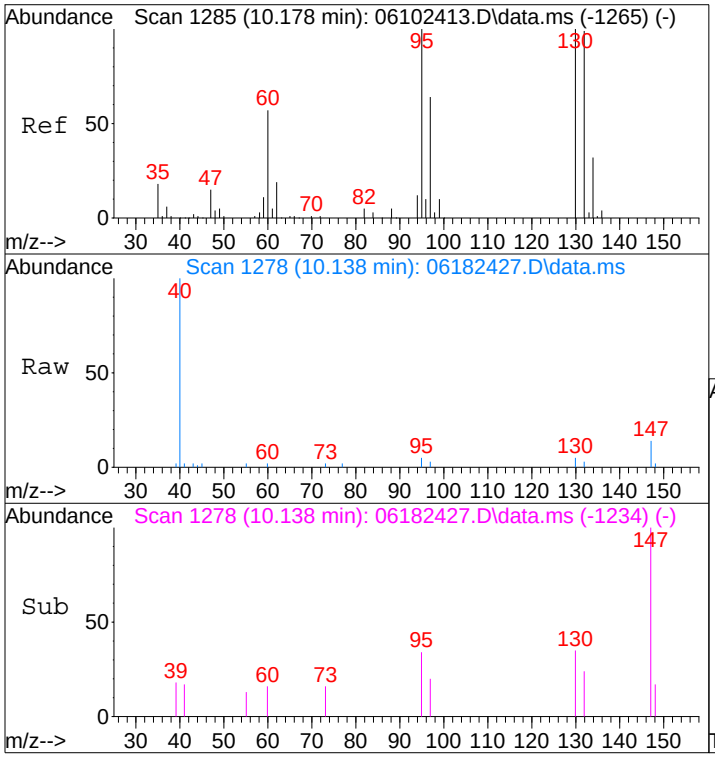


#41
Benzene
Concen: 0.12 ng
RT: 8.89 min Scan# 1059
Delta R.T. -0.002 min
Lab File: 06182427.D
Acq: 18 Jun 2024 23:52

Tgt Ion: 78 Resp: 5622

Ion	Ratio	Lower	Upper
78	100		
77	22.6	4.0	44.0

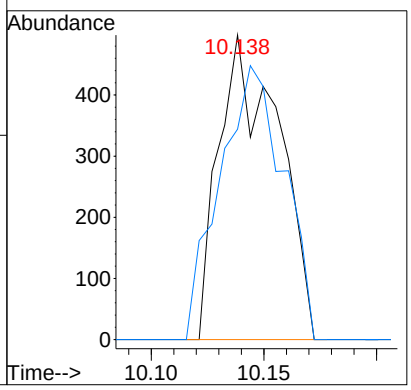


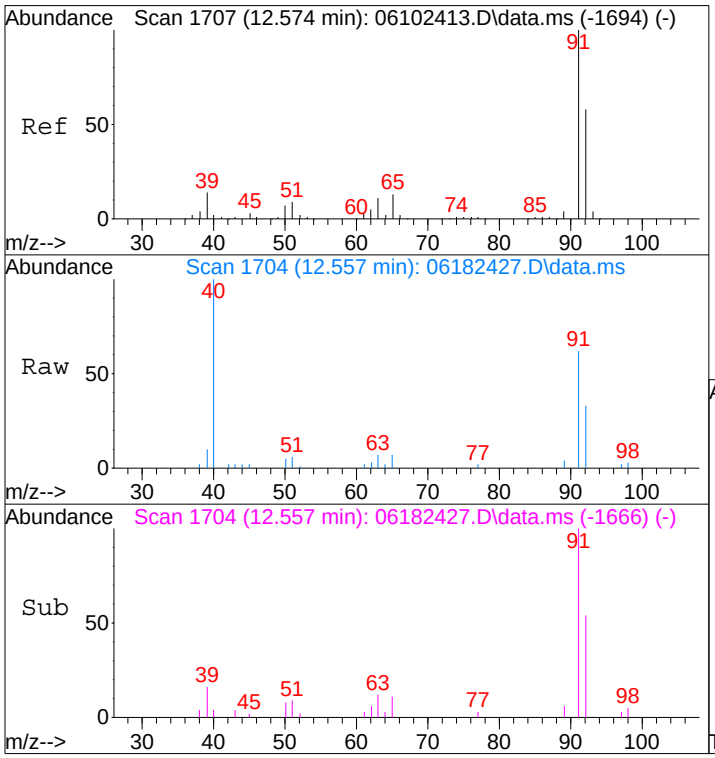


#47
Trichloroethene
Concen: 0.07 ng
RT: 10.14 min Scan# 1278
Delta R.T. -0.001 min
Lab File: 06182427.D
Acq: 18 Jun 2024 23:52

Tgt Ion:130 Resp: 919

Ion	Ratio	Lower	Upper
130	100		
132	96.0	77.9	117.9

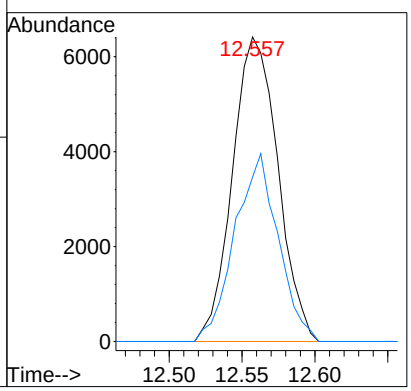


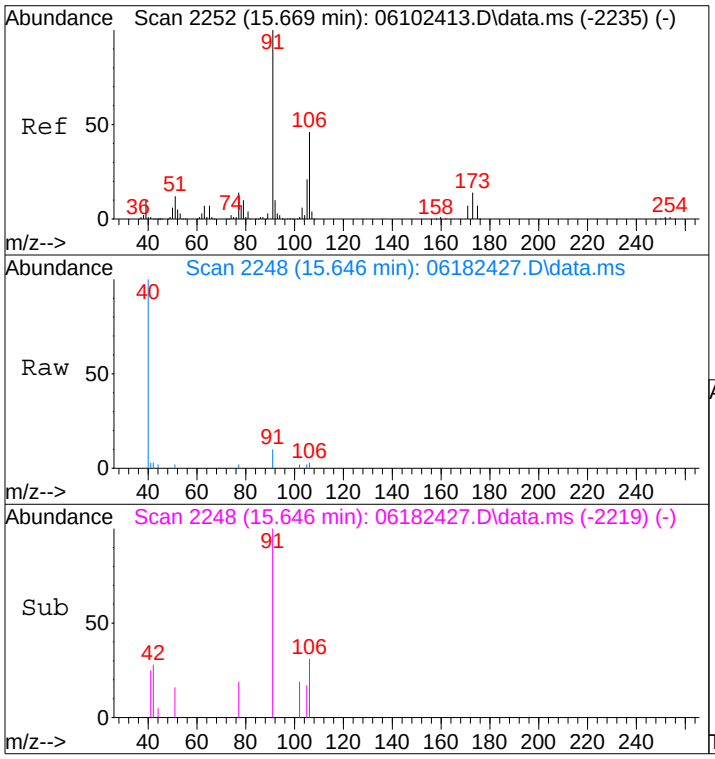


#58
Toluene
Concen: 0.28 ng
RT: 12.56 min Scan# 1704
Delta R.T. -0.034 min
Lab File: 06182427.D
Acq: 18 Jun 2024 23:52

Tgt Ion: 91 Resp: 13921

Ion	Ratio	Lower	Upper
91	100		
92	58.8	37.4	77.4

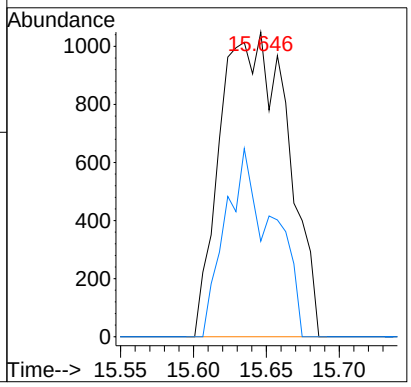


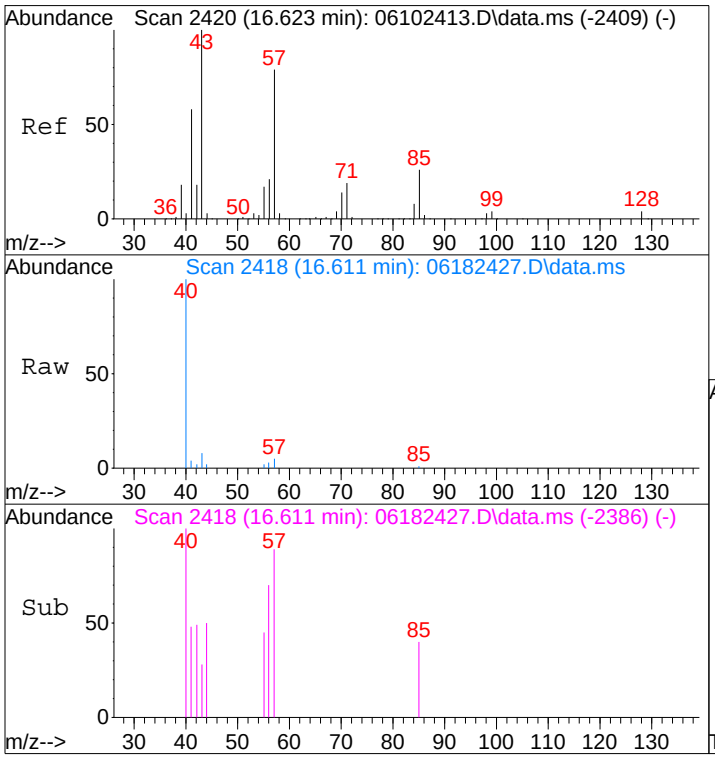


#67
m- & p-Xylenes
Concen: 0.07 ng
RT: 15.65 min Scan# 2248
Delta R.T. -0.034 min
Lab File: 06182427.D
Acq: 18 Jun 2024 23:52

Tgt Ion: 91 Resp: 3369

Ion	Ratio	Lower	Upper
91	100		
106	43.3	25.9	65.9

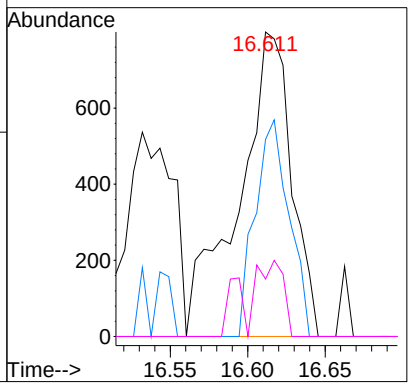


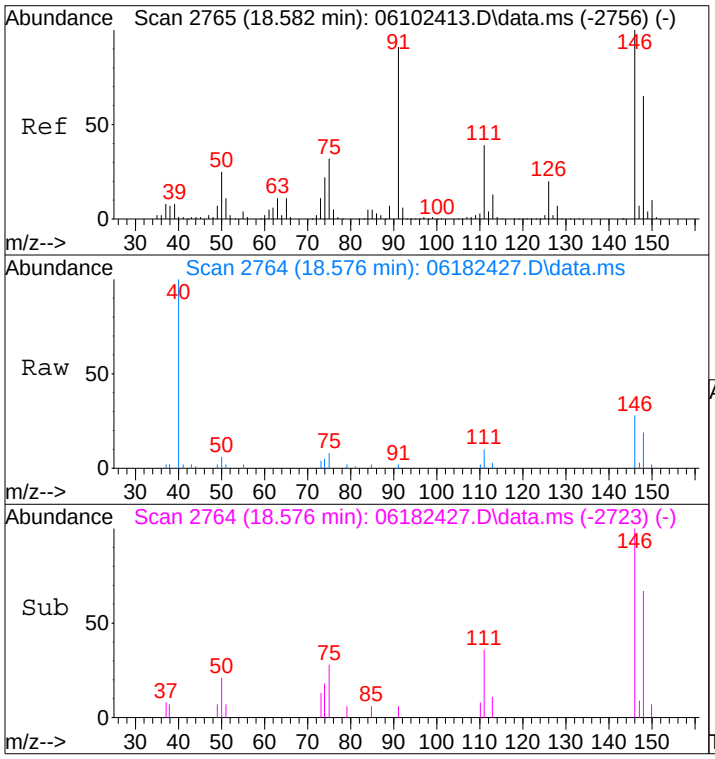


#71
n-Nonane
Concen: 0.07 ng
RT: 16.61 min Scan# 2418
Delta R.T. -0.017 min
Lab File: 06182427.D
Acq: 18 Jun 2024 23:52

Tgt Ion: 43 Resp: 1908

Ion	Ratio	Lower	Upper
43	100		
57	45.6	58.2	98.2#
85	12.5	5.9	45.9

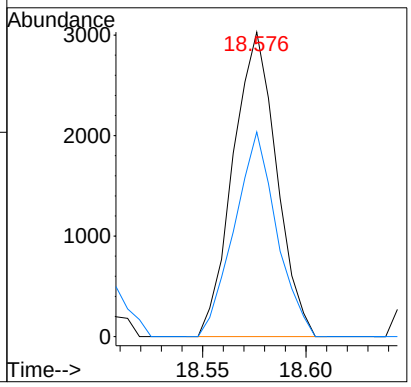




#85
1,3-Dichlorobenzene
Concen: 0.13 ng
RT: 18.58 min Scan# 2764
Delta R.T. -0.017 min
Lab File: 06182427.D
Acq: 18 Jun 2024 23:52

Tgt Ion:146 Resp: 4440

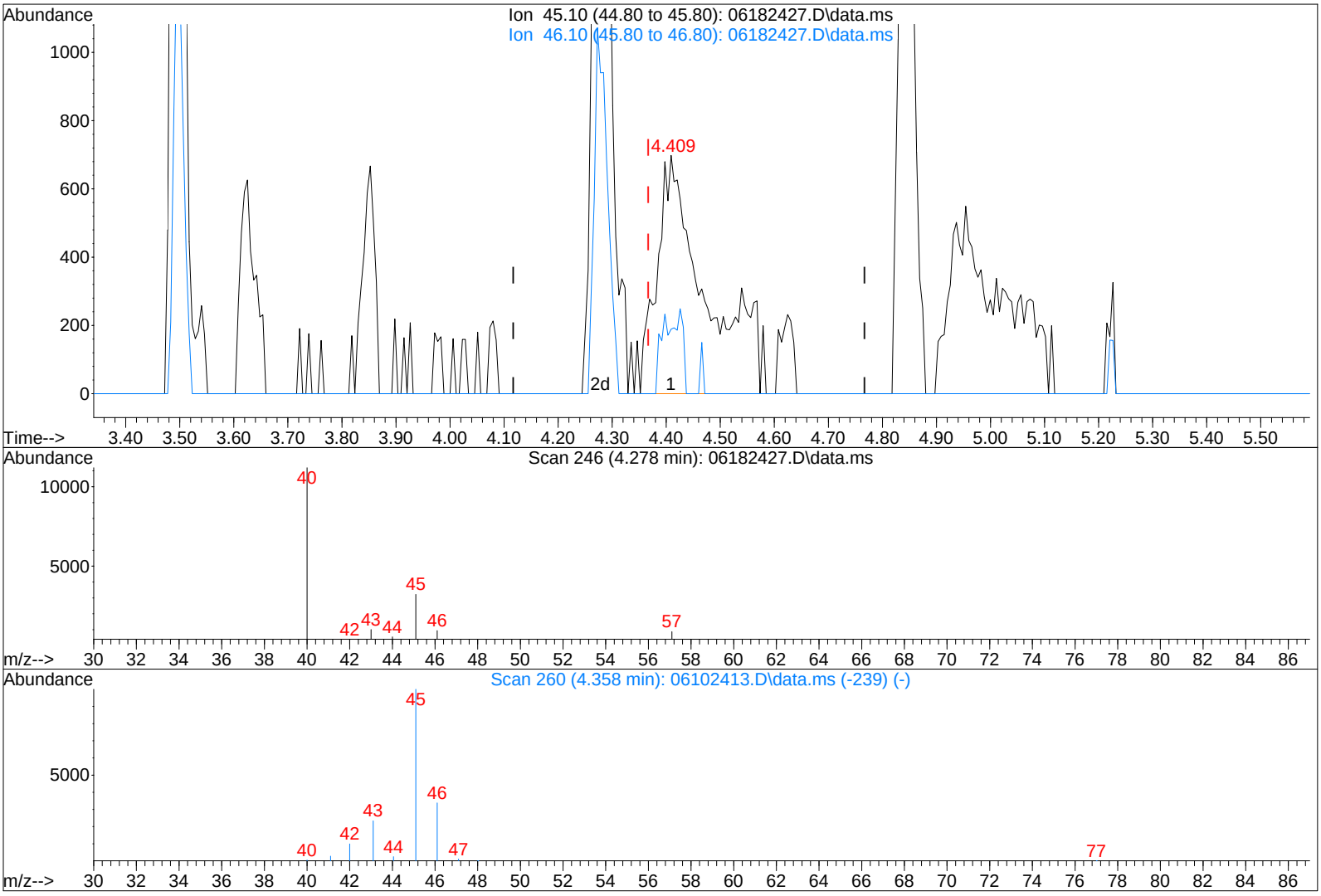
Ion	Ratio	Lower	Upper
146	100		
148	65.1	44.2	84.2



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182427.D Vial: 15
Acq On : 18 Jun 2024 23:52 Operator: SC
Sample : P2402249-022 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 08:27:39 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182427.D\data.ms

(10) Ethanol (T)

4.409min (+0.042) 0.39ng

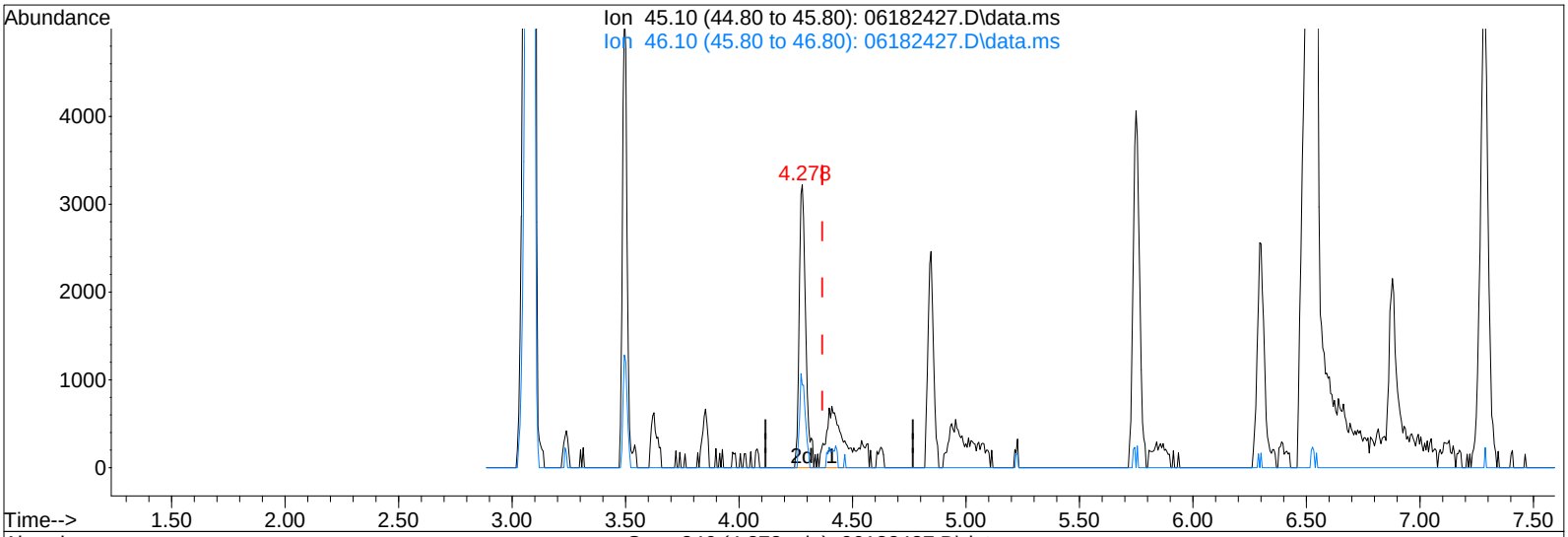
response 4430

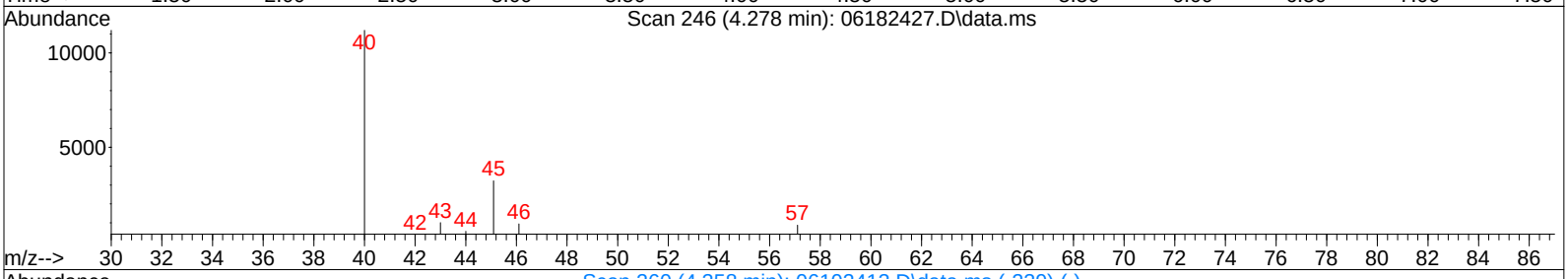
Ion	Exp%	Act%
45.10	100	100
46.10	33.50	13.43#
0.00	0.00	0.00
0.00	0.00	0.00

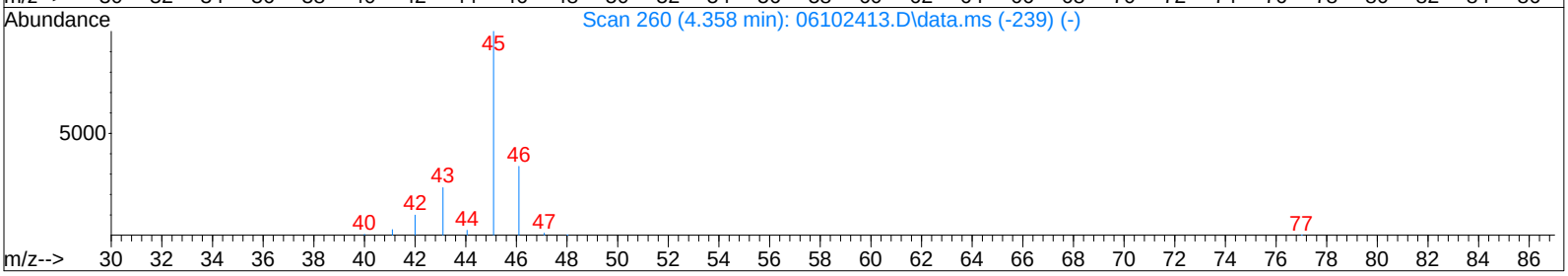
Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182427.D Vial: 15
Acq On : 18 Jun 2024 23:52 Operator: SC
Sample : P2402249-022 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 08:27:39 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M







TIC: 06182427.D\data.ms

(10) Ethanol (T)

4.278min (-0.088) 0.97ng m

response 10891

Ion	Exp%	Act%
45.10	100	100
46.10	33.50	5.46#
0.00	0.00	0.00
0.00	0.00	0.00

WP

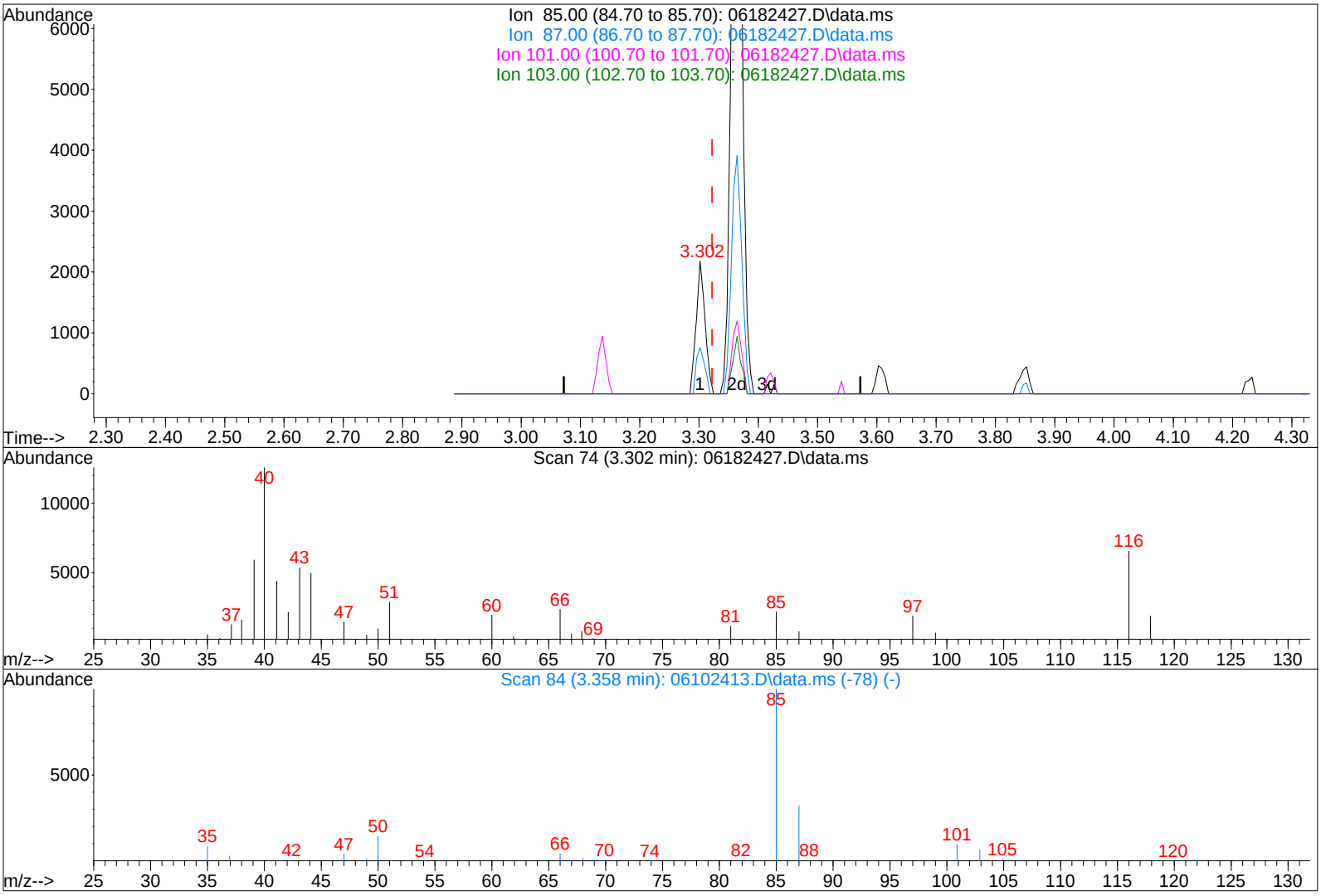
6/19/24

6/29/24

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182427.D Vial: 15
Acq On : 18 Jun 2024 23:52 Operator: SC
Sample : P2402249-022 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 08:27:39 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182427.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.302min (-0.020) 0.08ng

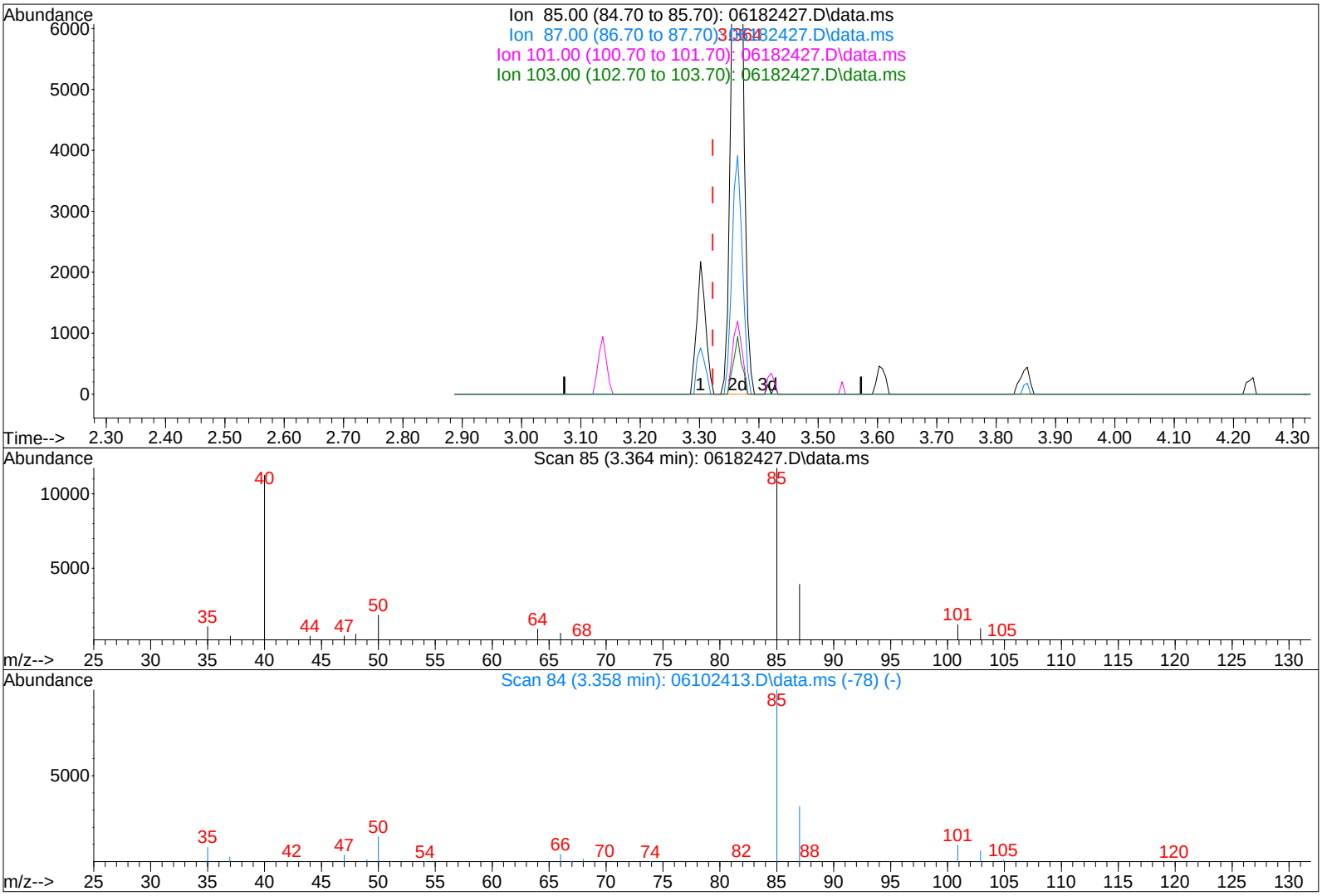
response 2272

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	33.10
101.00	9.80	0.00
103.00	6.30	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182427.D Vial: 15
Acq On : 18 Jun 2024 23:52 Operator: SC
Sample : P2402249-022 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 08:27:39 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182427.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.364min (+0.042) 0.54ng m

response 14733

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	5.10#
101.00	9.80	0.00
103.00	6.30	0.00

WP

6/19/24

6/29/24

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182427.D Vial: 15
Acq On : 18 Jun 2024 23:52 Operator: SC
Sample : P2402249-022 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 15:00:09 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

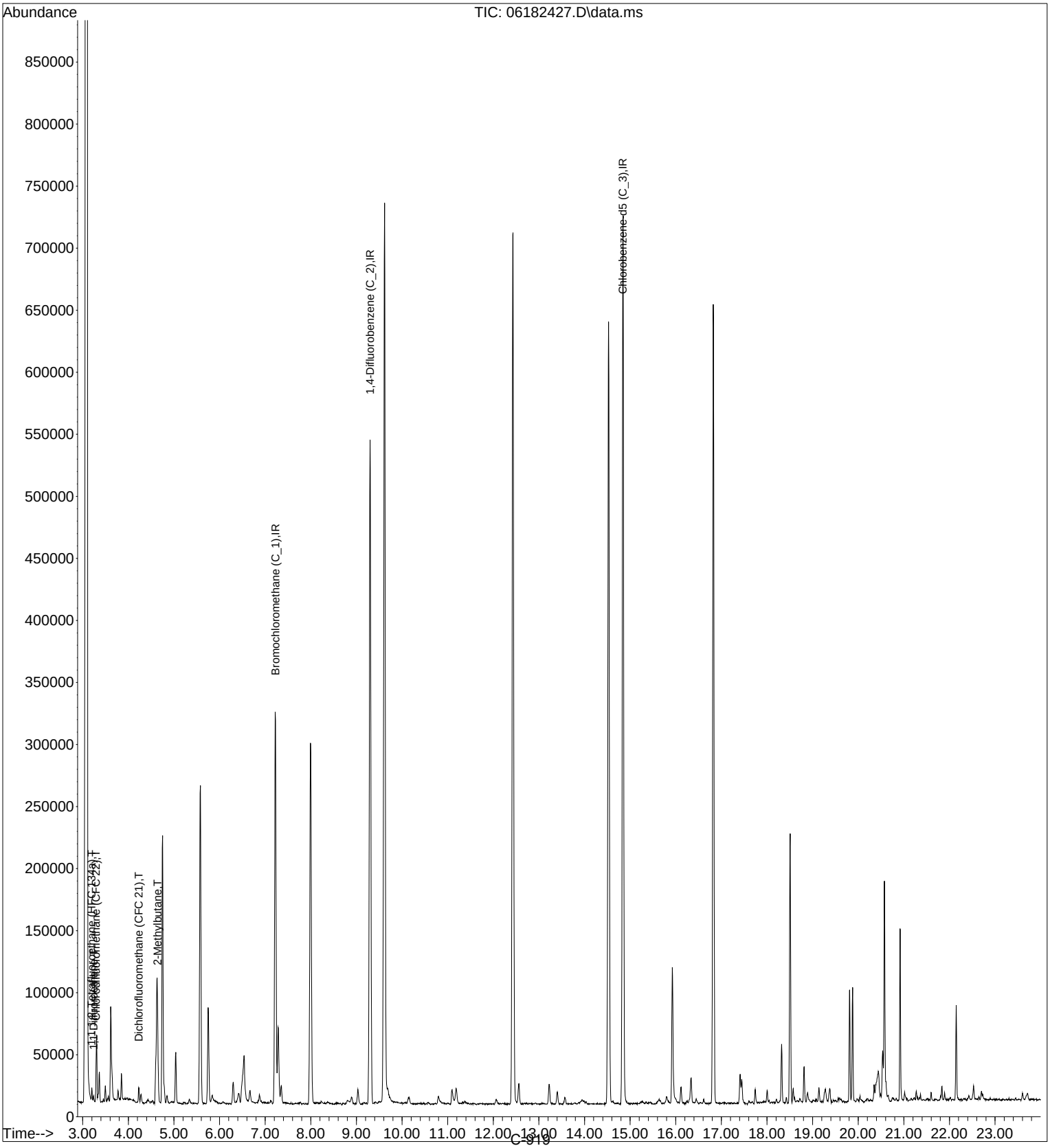
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	115945	12.500	ng		-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	505560	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	122417	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	0.00	85	0	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.19	83	1570	0.132	ng	#	1
4) 1,1-Difluoroethane	3.24	65	1201	0.119	ng		96
5) Chlorodifluoromethane ...	3.29	67	1086	0.275	ng		94
6) 1-Chloro-1,1-Difluoroe...	3.51	65	454	N.D.			
7) Dichlorofluoromethane ...	4.23	67	9355	0.352	ng		98
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	4.56	83	376	N.D.			
10) 2-Methylbutane	4.64	57	6757	0.489	ng	#	65
11) Methyl Acetate	5.33	43	2161	N.D.			
12) 2-Methylpentane	6.49	71	885	N.D.			
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	9.03	84	483	N.D.			
17) 2,3-Dimethylpentane	9.54	56	54	N.D.			
18) Dibromomethane	9.79	174	60	N.D.			
20) Methyl Cyclohexane	11.43	55	52	N.D.			
21) 1,3-Dichloropropane	0.00	76	0	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	16.32	75	64	N.D.			
25) Bromobenzene	0.00	77	0	N.D.			
26) 2-Chlorotoluene	17.61	91	628	N.D.			
27) 4-Chlorotoluene	17.67	91	1299	N.D.			
28) Indane	19.11	117	57	N.D.			
29) Indene	19.09	115	55	N.D.			
30) 1,2,4,5-Tetramethylben...	20.22	119	68	N.D.			
31) 1,2,3,4-Tetramethylben...	20.22	119	68	N.D.			
32) 1,2,3,5-Tetramethylben...	20.60	119	135	N.D.			
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182427.D Vial: 15
Acq On : 18 Jun 2024 23:52 Operator: SC
Sample : P2402249-022 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:00:09 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

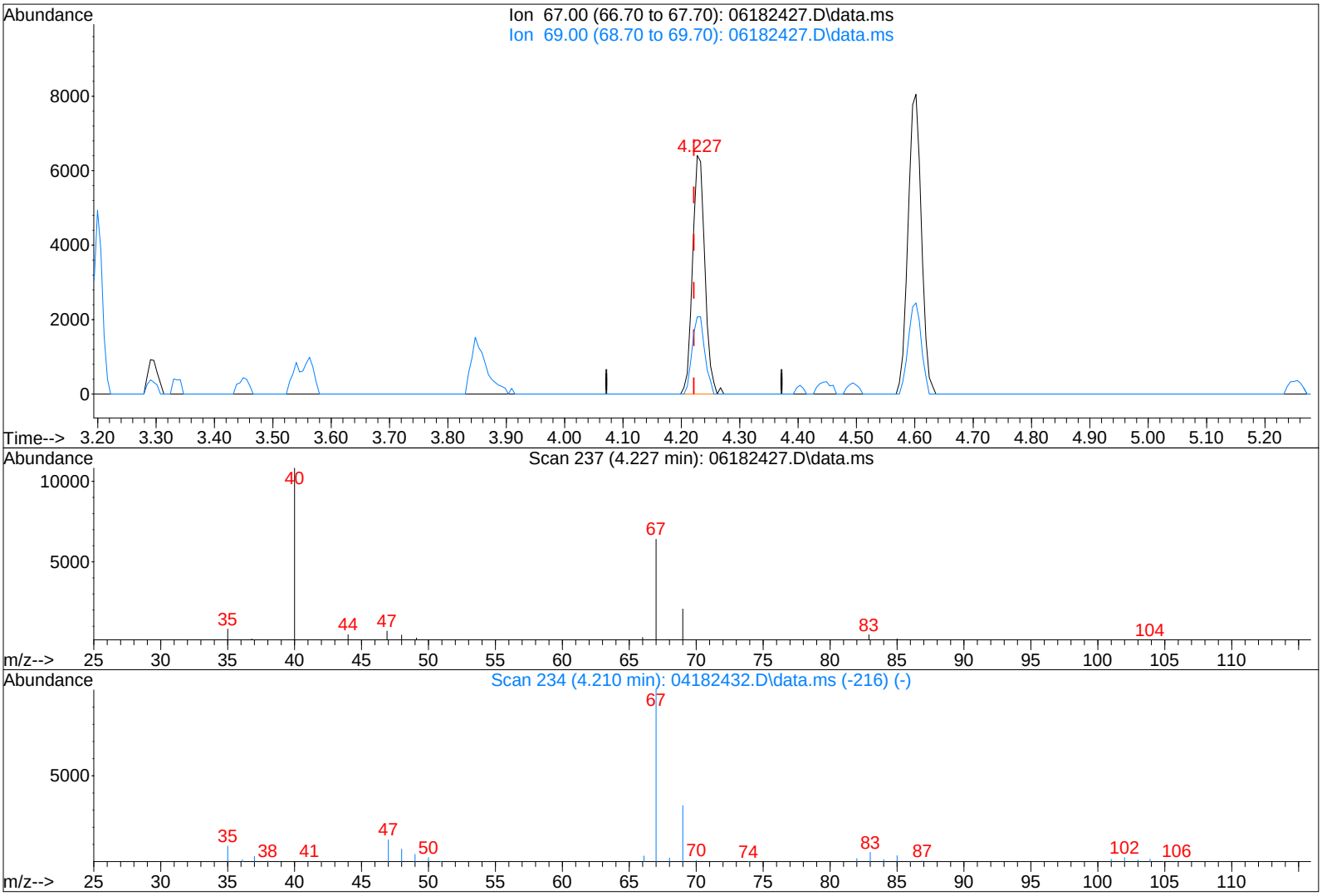


Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182427.D Vial: 15
Acq On : 18 Jun 2024 23:52 Operator: SC
Sample : P2402249-022 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 15:00:09 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182427.D\data.ms

(7) Dichlorofluoromethane (CFC 21) (T)

4.227min (+0.006) 0.35ng

response 9355

Ion	Exp%	Act%
67.00	100	100
69.00	32.40	33.40
0.00	0.00	0.00
0.00	0.00	0.00

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\18\
Data File : 06182427.D
Acq On : 18 Jun 2024 23:52
Operator : SC
Sample : P2402249-022 (400mL)
Misc : S37-06062402
ALS Vial : 15 Sample Multiplier: 1

MJ 6/28/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06182427.D\data.ms

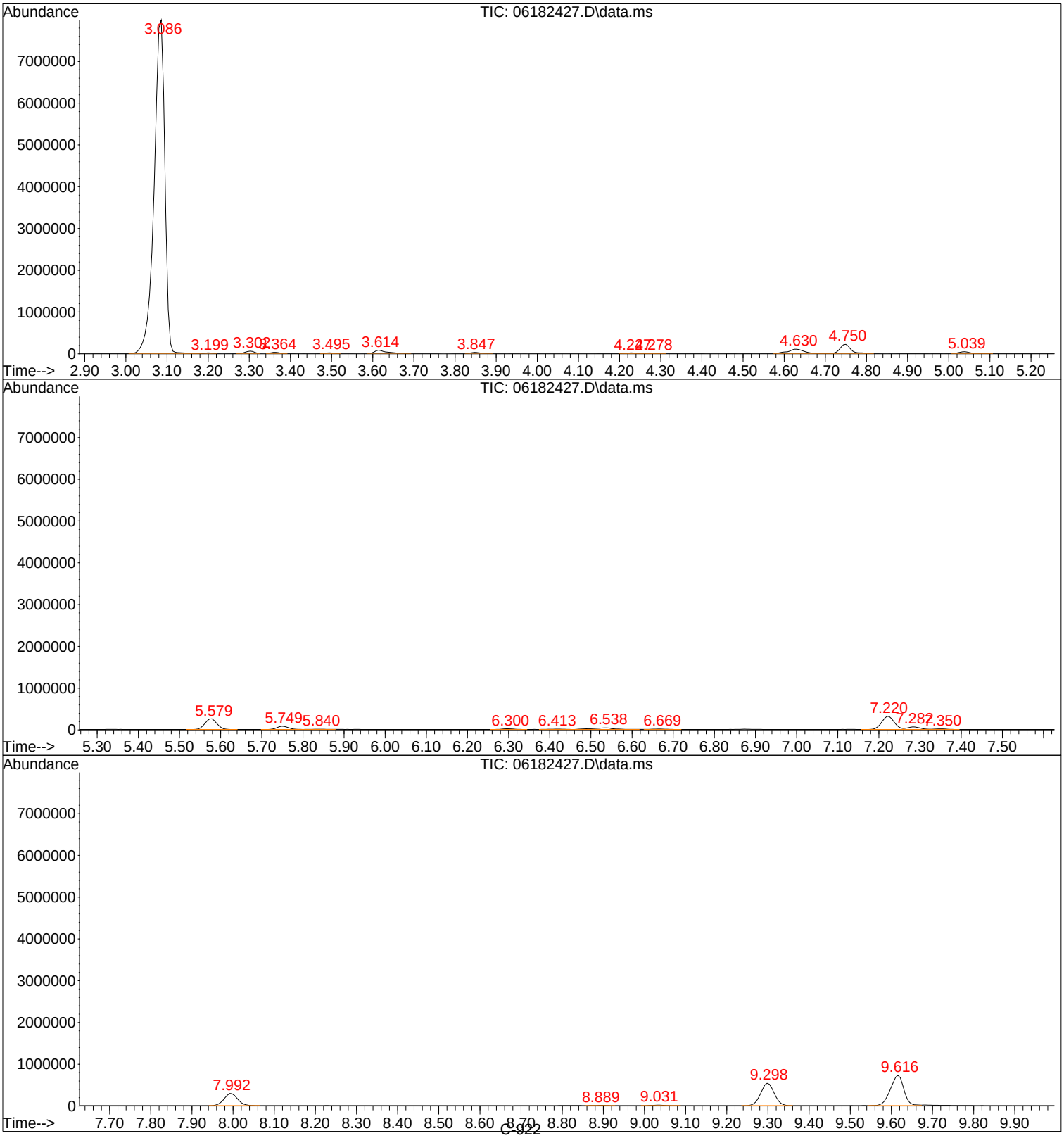
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.086	22	36	53	rBV	7973646	14439403	100.00%	69.382%
2	3.199	53	56	60	rVB2	10098	10090	0.07%	0.048%
3	3.302	68	74	78	rBV3	54207	76708	0.53%	0.369%
4	3.364	81	85	90	rVB	24496	33561	0.23%	0.161%
5	3.495	104	108	113	rBV2	12954	16839	0.12%	0.081%
6	3.614	124	129	143	rBV2	76175	144298	1.00%	0.693%
7	3.847	166	170	178	rBV	21216	28169	0.20%	0.135%
8	4.227	232	237	242	rBV	12050	17161	0.12%	0.082%
9	4.278	242	246	252	rVB3	7007	12154	0.08%	0.058%
10	4.630	298	308	322	rBV2	101301	265806	1.84%	1.277%
11	4.750	322	329	341	rVV	215465	380719	2.64%	1.829%
12	5.039	374	380	392	rVB	41166	66633	0.46%	0.320%
13	5.579	464	475	486	rBV2	256675	522638	3.62%	2.511%
14	5.749	496	505	514	rBV	77788	153821	1.07%	0.739%
15	5.840	514	521	528	rVV5	5473	12855	0.09%	0.062%
16	6.300	594	602	610	rBV	17623	38642	0.27%	0.186%
17	6.413	615	622	629	rVV3	8248	22769	0.16%	0.109%
18	6.538	629	644	658	rVV	38142	142688	0.99%	0.686%
19	6.669	660	667	676	rVB	9374	21134	0.15%	0.102%
20	7.220	753	764	771	rBV	315945	679609	4.71%	3.266%
21	7.282	771	775	783	rVV	61668	134159	0.93%	0.645%
22	7.350	783	787	795	rVB	14266	28447	0.20%	0.137%
23	7.992	891	900	913	rBV	291157	665291	4.61%	3.197%
24	8.889	1052	1058	1065	rVB4	5633	14091	0.10%	0.068%
25	9.031	1076	1083	1093	rVB	12014	25286	0.18%	0.122%
26	9.298	1119	1130	1141	rBV	535357	1221927	8.46%	5.871%
27	9.616	1173	1186	1196	rBV	724493	1636416	11.33%	7.863%

Sum of corrected areas: 20811314

Data Path : I:\MS09\DATA\2024 06\18\
Data File : 06182427.D
Acq On : 18 Jun 2024 23:52
Operator : SC
Sample : P2402249-022 (400mL)
Misc : S37-06062402
ALS Vial : 15 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\18\\
Data File : 06182427.D
Acq On : 18 Jun 2024 23:522
Operator : SCC
Sample : P2402249-022 (400mL))
Misc : S37-060624022
ALS Vial : 15 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

					|--Internal Standard---|		
TIC Top Hit name	RT	EstConc	Units	Response	# RT Resp Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182428.D Vial: 16
Acq On : 19 Jun 2024 00:24 Operator: SC
Sample : P2402249-023 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 09:53:05 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/19/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	116239	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	503345	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	121381	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	266971	12.922	ng		0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.36%				
57) Toluene-d8 (SS2)	12.43	98	562304	12.106	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.88%				
73) Bromofluorobenzene (SS3)	16.83	174	221524	13.207	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 105.68%				
Target Compounds							Qvalue
2) Propene	0.00	42	0	N.D. d			
3) Dichlorodifluoromethan...	3.36	85	14841m	0.543	ng		
4) Chloromethane	3.49	50	1083	0.058	ng		79
5) 1,2-Dichloro-1,1,2,2-t...	3.61	135	311	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	4.02	94	103	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	0.00	45	0	N.D. d			
11) Acetonitrile	0.00	41	0	N.D. d			
12) Acrolein	4.53	56	1049	0.125	ng		95
13) Acetone	4.62	58	35723	3.956	ng	#	81
14) Trichlorofluoromethane	4.76	101	8621539	311.553	ng		99
15) 2-Propanol (Isopropanol)	4.91	45	59	N.D.			
16) Acrylonitrile	5.04	53	280	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.33	59	1117	N.D.			
19) Methylene Chloride	5.34	84	1196	0.094	ng		94
20) 3-Chloro-1-propene (Al...	5.44	41	104	N.D.			
21) Trichlorotrifluoroethane	5.58	151	3469470	296.371	ng		95
22) Carbon Disulfide	5.60	76	58356	1.417	ng	#	1
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	6.29	73	201	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D. d			
27) 2-Butanone (MEK)	6.66	72	4680	0.655	ng	#	91
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D. d			
30) Ethyl Acetate	0.00	61	0	N.D. d			
31) n-Hexane	7.31	57	1762	0.092	ng	#	98
32) Chloroform	7.35	83	42762	1.878	ng		100
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	0.00	62	0	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	9.61	61	14993	No Calib		#	
40) 1-Butanol	8.80	56	4409	No Calib		#	
41) Benzene	8.89	78	6762	0.146	ng		100
42) Carbon Tetrachloride	9.05	117	497	N.D.			
43) Cyclohexane	9.22	84	1418	0.094	ng		91
44) tert-Amyl Methyl Ether	9.61	73	286	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.07	83	1092	0.058	ng		96
47) Trichloroethene	10.14	130	8275	0.610	ng		98
48) 1,4-Dioxane	10.13	88	805	0.094	ng		87
49) 2,2,4-Trimethylpentane...	10.23	57	1063	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182428.D Vial: 16
Acq On : 19 Jun 2024 00:24 Operator: SC
Sample : P2402249-023 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 09:53:05 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

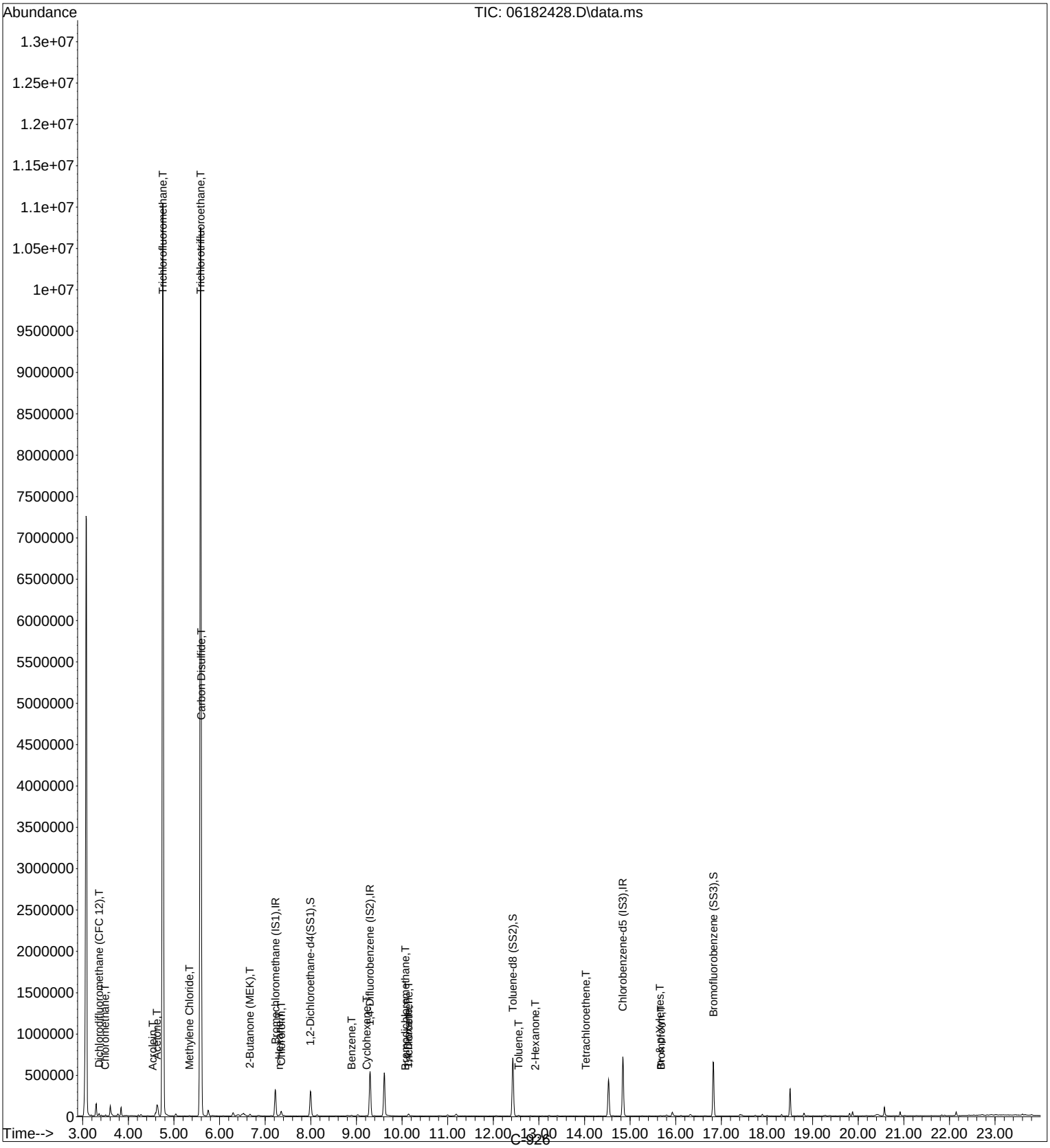
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	0.00	71	0	N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	11.33	58	231	N.D.	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
58) Toluene	12.56	91	5001	0.103 ng	91
59) 2-Hexanone	12.92	43	1641	0.054 ng	77
60) Dibromochloromethane	13.06	129	759	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	0.00	43	0	N.D.	
63) n-Octane	0.00	57	0	N.D.	
64) Tetrachloroethene	14.03	166	1038	0.062 ng	79
65) Chlorobenzene	14.89	112	476	N.D.	
66) Ethylbenzene	15.40	91	1986	N.D.	
67) m- & p-Xylenes	15.65	91	2513	0.054 ng	80
68) Bromoform	15.67	173	2397	0.161 ng	96
69) Styrene	16.10	104	173	N.D.	
70) o-Xylene	16.24	91	1569	N.D.	
71) n-Nonane	16.61	43	640	N.D.	
72) 1,1,2,2-Tetrachloroethane	16.21	83	201	N.D.	
74) Cumene	17.02	105	668	N.D.	
75) alpha-Pinene	0.00	93	0	N.D.	
76) n-Propylbenzene	17.67	91	977	N.D.	
77) 3-Ethyltoluene	17.02	105	668	No Calib	#
78) 4-Ethyltoluene	17.86	105	564	N.D.	
79) 1,3,5-Trimethylbenzene	17.95	105	467	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.02	105	668	No Calib	#
82) 1,2,4-Trimethylbenzene	18.43	105	657	N.D.	
83) n-Decane	0.00	58	0	N.D.	
84) Benzyl Chloride	0.00	91	0	N.D.	
85) 1,3-Dichlorobenzene	18.58	146	412	N.D.	
86) 1,4-Dichlorobenzene	18.66	146	488	N.D.	
87) sec-Butylbenzene	18.74	105	929	N.D.	
88) 4-Isopropyltoluene (p-...	18.93	119	1105	N.D.	
89) 1,2,3-Trimethylbenzene	17.02	105	668	No Calib	#
90) 1,2-Dichlorobenzene	19.04	146	344	N.D.	
91) d-Limonene	0.00	68	0	N.D.	
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	673	N.D.	
95) Naphthalene	20.94	128	716	N.D.	
96) n-Dodecane	0.00	58	0	N.D.	
97) Hexachlorobutadiene	21.30	225	599	N.D.	
98) Cyclohexanone	15.36	55	181	No Calib	#
99) tert-Butylbenzene	18.43	119	645	N.D.	
100) n-Butylbenzene	19.38	91	807	N.D.	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182428.D Vial: 16
Acq On : 19 Jun 2024 00:24 Operator: SC
Sample : P2402249-023 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 09:53:05 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182428.D Vial: 16
Acq On : 19 Jun 2024 00:24 Operator: SC
Sample : P2402249-023 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 09:53:05 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/19/24

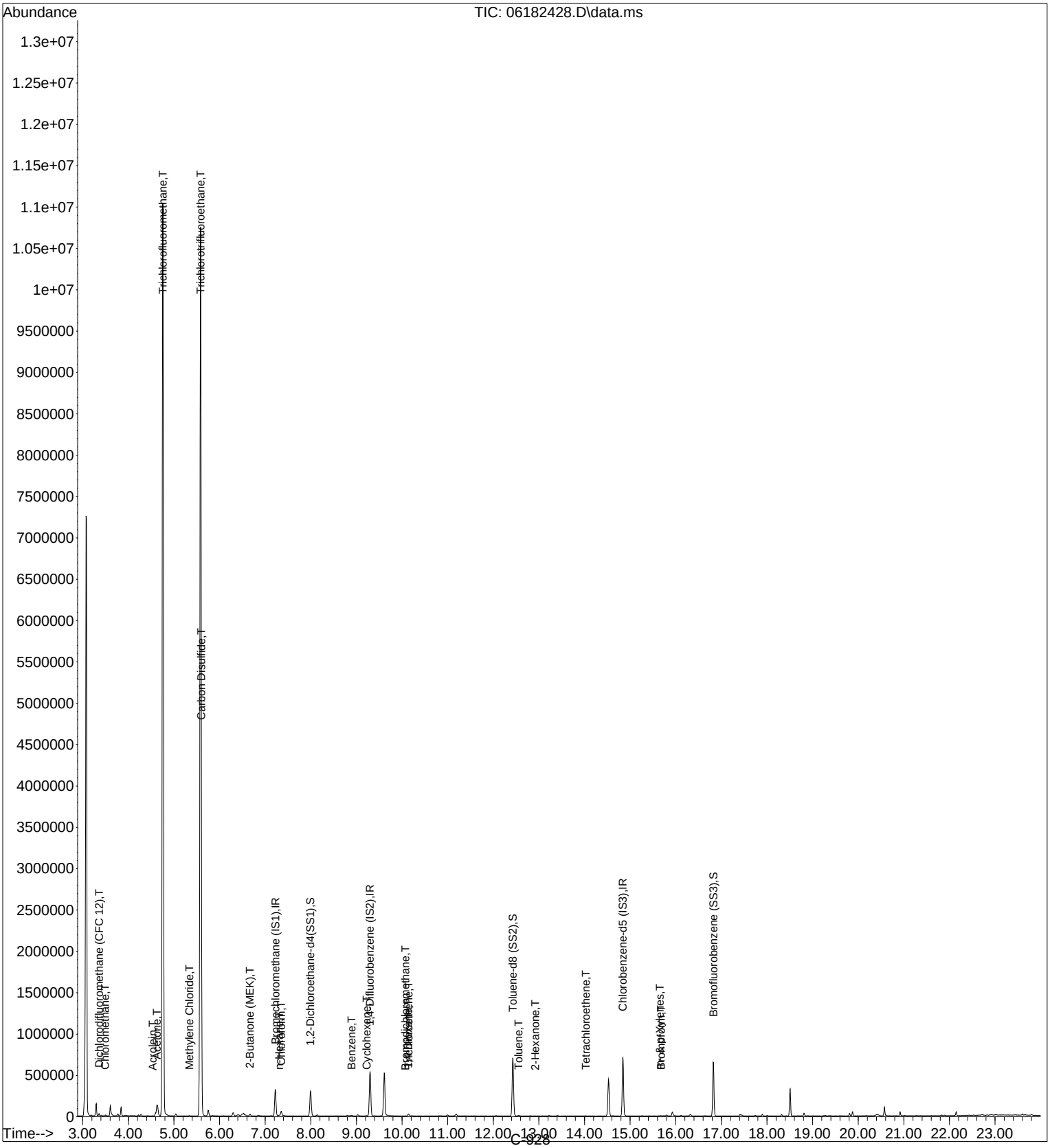
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	116239	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	503345	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	121381	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	266971	12.922	ng		0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.36%				
57) Toluene-d8 (SS2)	12.43	98	562304	12.106	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.88%				
73) Bromofluorobenzene (SS3)	16.83	174	221524	13.207	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 105.68%				
Target Compounds							Qvalue
3) Dichlorodifluoromethan...	3.36	85	14841m	0.543	ng		
4) Chloromethane	3.49	50	1083	0.058	ng		79
12) Acrolein	4.53	56	1049	0.125	ng		95
13) Acetone	4.62	58	35723	3.956	ng	#	81
14) Trichlorofluoromethane	4.76	101	8621539	311.553	ng		99
19) Methylene Chloride	5.34	84	1196	0.094	ng		94
21) Trichlorotrifluoroethane	5.58	151	3469470	296.371	ng		95
22) Carbon Disulfide	5.60	76	58356	1.417	ng	#	1
27) 2-Butanone (MEK)	6.66	72	4680	0.655	ng	#	91
31) n-Hexane	7.31	57	1762	0.092	ng	#	98
32) Chloroform	7.35	83	42762	1.878	ng		100
41) Benzene	8.89	78	6762	0.146	ng		100
43) Cyclohexane	9.22	84	1418	0.094	ng		91
46) Bromodichloromethane	10.07	83	1092	0.058	ng		96
47) Trichloroethene	10.14	130	8275	0.610	ng		98
48) 1,4-Dioxane	10.13	88	805	0.094	ng		87
58) Toluene	12.56	91	5001	0.103	ng		91
59) 2-Hexanone	12.92	43	1641	0.054	ng		77
64) Tetrachloroethene	14.03	166	1038	0.062	ng		79
67) m- & p-Xylenes	15.65	91	2513	0.054	ng		80
68) Bromoform	15.67	173	2397	0.161	ng		96

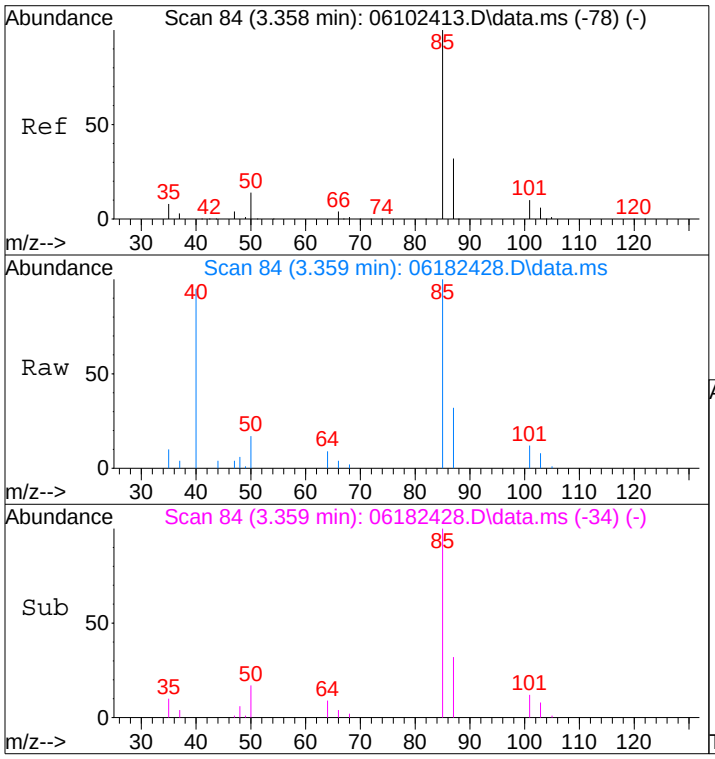
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182428.D Vial: 16
Acq On : 19 Jun 2024 00:24 Operator: SC
Sample : P2402249-023 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 09:53:05 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

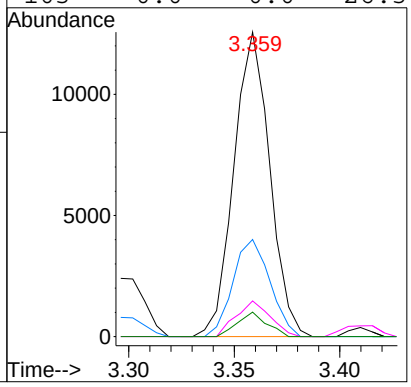


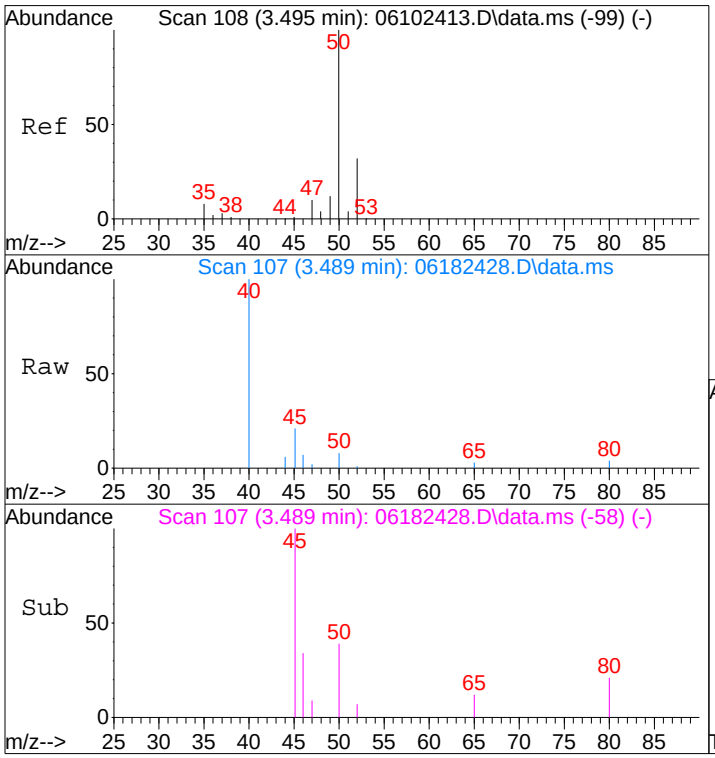


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.54 ng m
RT: 3.36 min Scan# 84
Delta R.T. 0.037 min
Lab File: 06182428.D
Acq: 19 Jun 2024 00:24

Tgt Ion: 85 Resp: 14841

Ion	Ratio	Lower	Upper
85	100		
87	6.7	12.2	52.2#
101	0.0	0.0	29.8
103	0.0	0.0	26.3

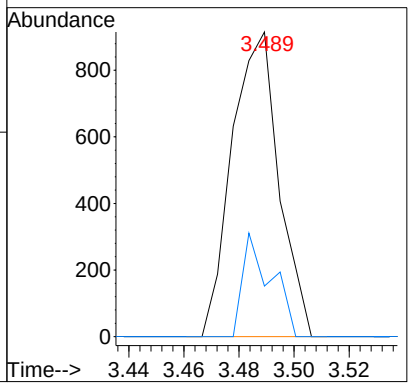


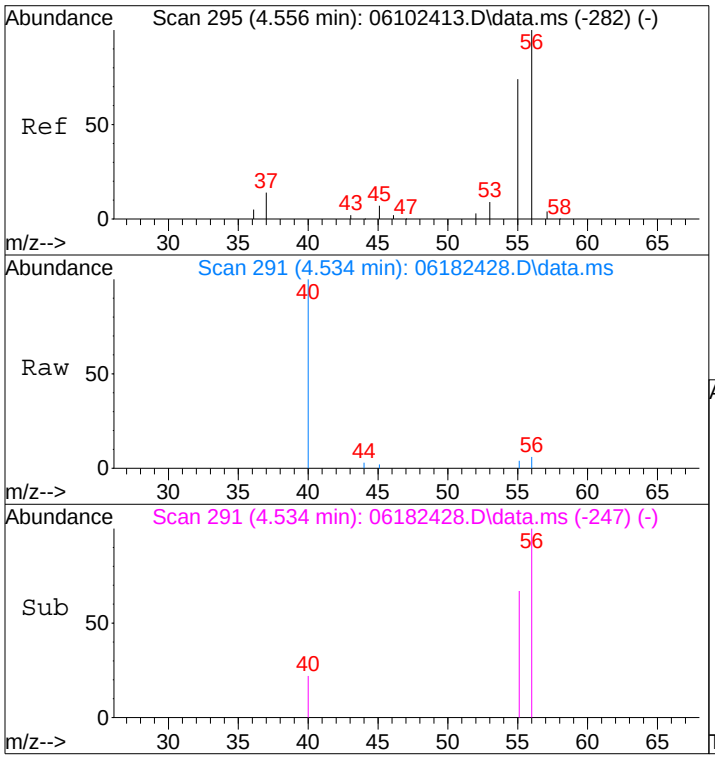


#4
Chloromethane
Concen: 0.06 ng
RT: 3.49 min Scan# 107
Delta R.T. 0.027 min
Lab File: 06182428.D
Acq: 19 Jun 2024 00:24

Tgt Ion: 50 Resp: 1083

Ion	Ratio	Lower	Upper
50	100		
52	20.7	12.4	52.4

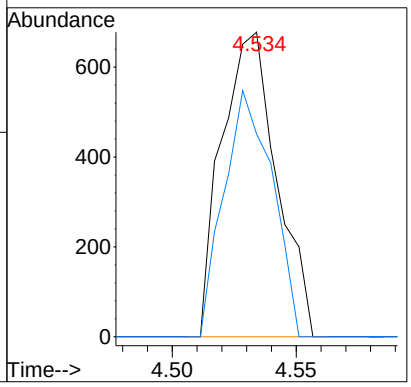


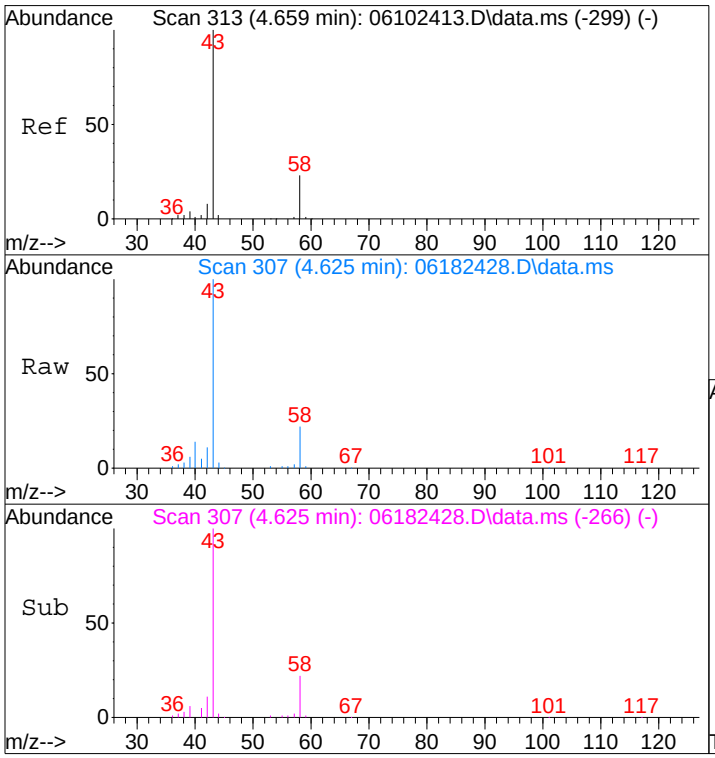


#12
Acrolein
Concen: 0.13 ng
RT: 4.53 min Scan# 291
Delta R.T. -0.001 min
Lab File: 06182428.D
Acq: 19 Jun 2024 00:24

Tgt Ion: 56 Resp: 1049

Ion	Ratio	Lower	Upper
56	100		
55	71.0	55.5	95.5

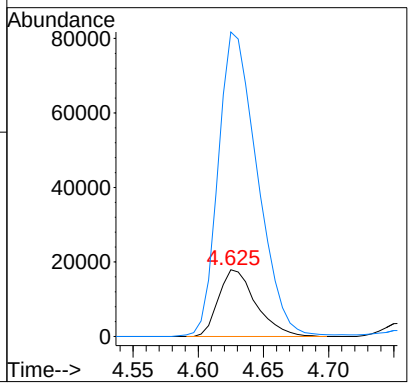


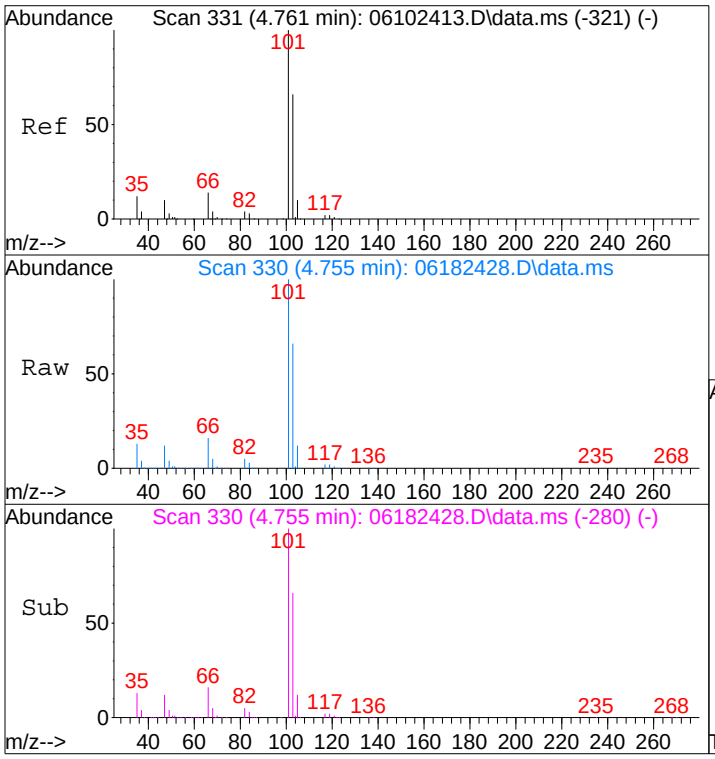


#13
Acetone
Concen: 3.96 ng
RT: 4.62 min Scan# 307
Delta R.T. -0.017 min
Lab File: 06182428.D
Acq: 19 Jun 2024 00:24

Tgt Ion: 58 Resp: 35723

Ion	Ratio	Lower	Upper
58	100		
43	478.9	400.7	460.7#

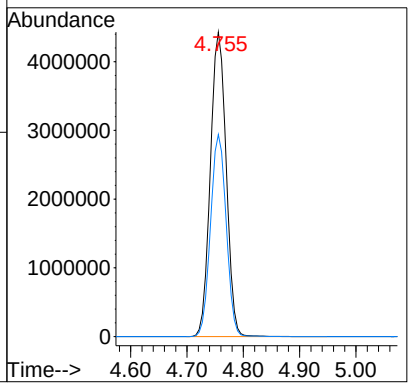


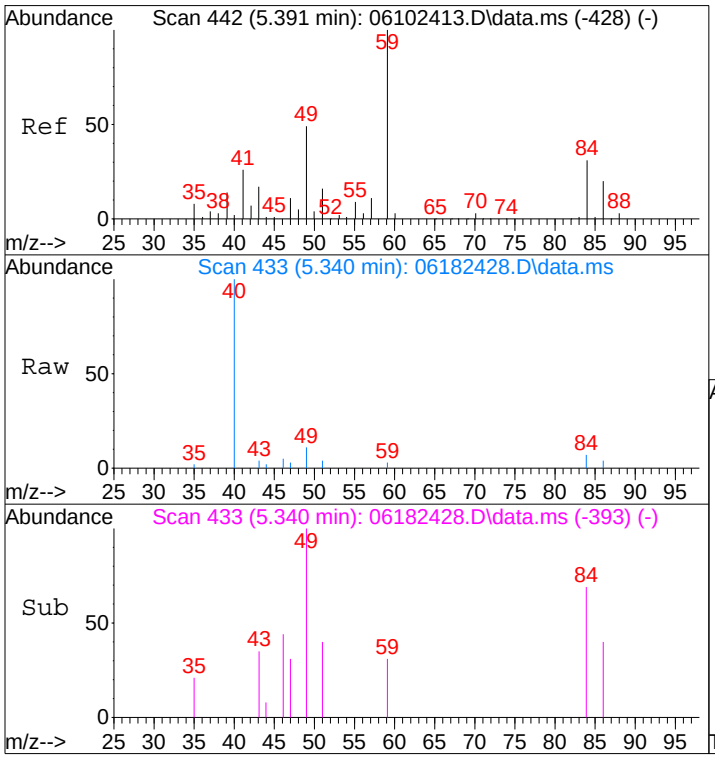


#14
Trichlorofluoromethane
Concen: 311.55 ng
RT: 4.76 min Scan# 330
Delta R.T. 0.035 min
Lab File: 06182428.D
Acq: 19 Jun 2024 00:24

Tgt Ion:101 Resp: 8621539

Ion	Ratio	Lower	Upper
101	100		
103	65.8	44.9	84.9

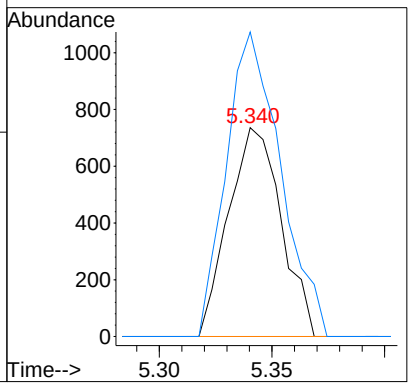


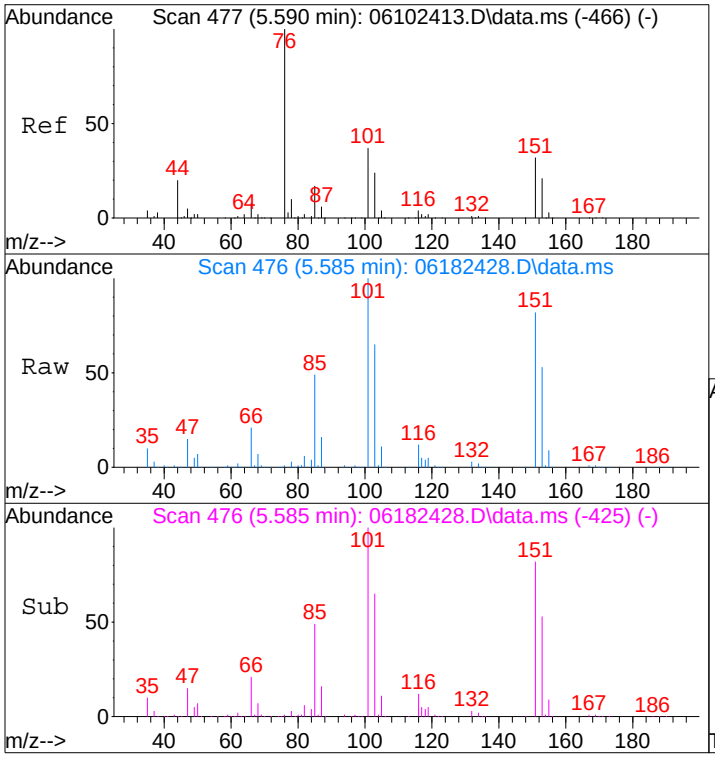


#19
Methylene Chloride
Concen: 0.09 ng
RT: 5.34 min Scan# 433
Delta R.T. -0.021 min
Lab File: 06182428.D
Acq: 19 Jun 2024 00:24

Tgt Ion: 84 Resp: 1196

Ion	Ratio	Lower	Upper
84	100		
49	150.5	132.9	182.9

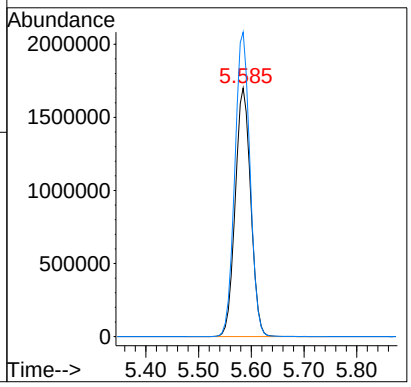


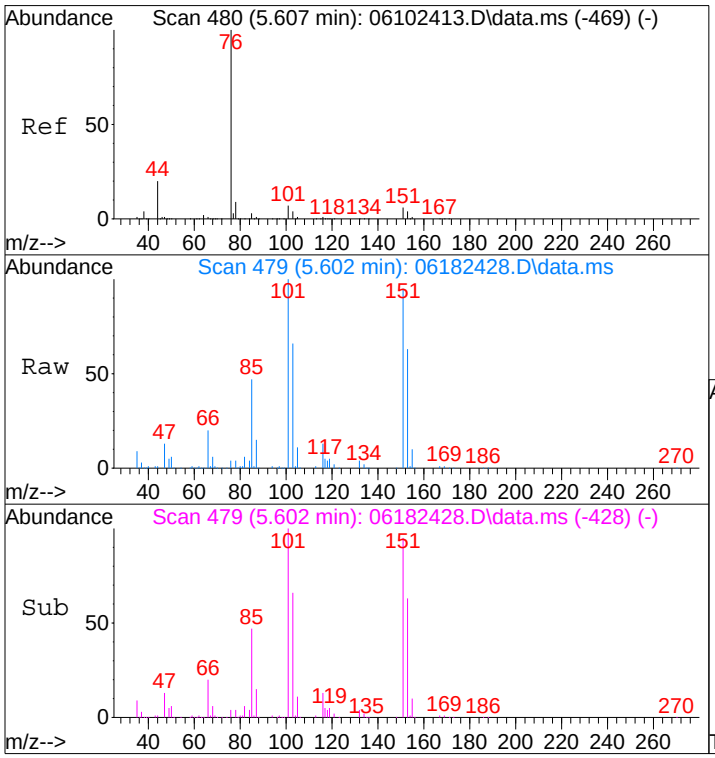


#21
Trichlorotrifluoroethane
Concen: 296.37 ng
RT: 5.58 min Scan# 476
Delta R.T. 0.038 min
Lab File: 06182428.D
Acq: 19 Jun 2024 00:24

Tgt Ion:151 Resp: 3469470

Ion	Ratio	Lower	Upper
151	100		
101	120.1	95.0	135.0

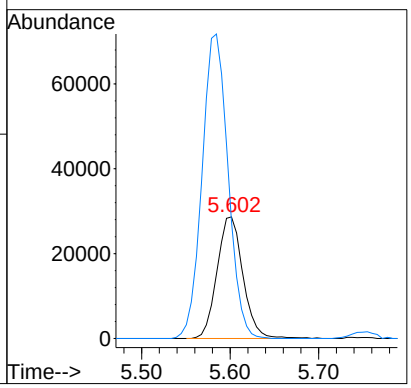


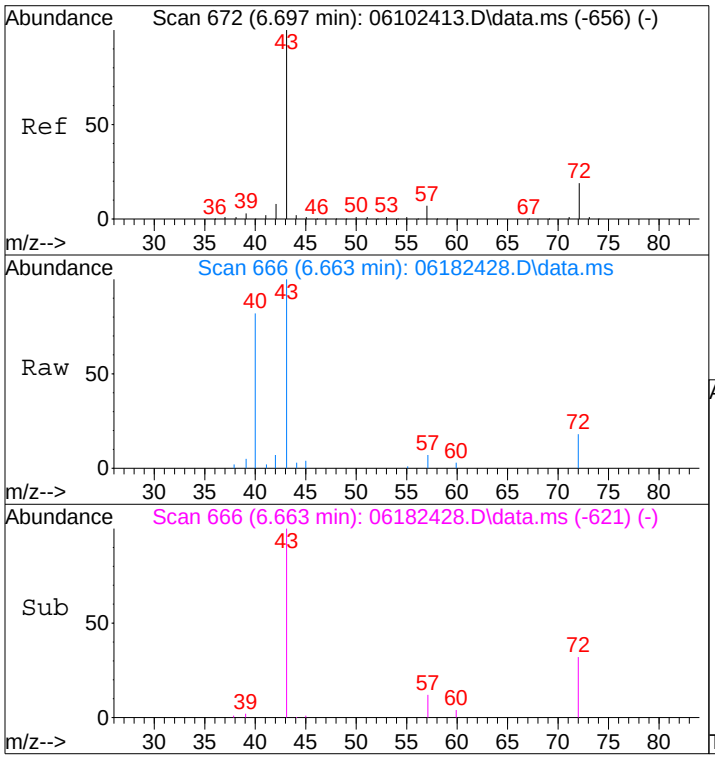


#22
Carbon Disulfide
Concen: 1.42 ng
RT: 5.60 min Scan# 479
Delta R.T. 0.038 min
Lab File: 06182428.D
Acq: 19 Jun 2024 00:24

Tgt Ion: 76 Resp: 58356

Ion	Ratio	Lower	Upper
76	100		
78	251.2	0.0	29.6#

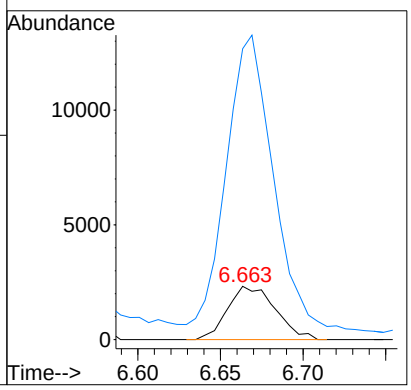


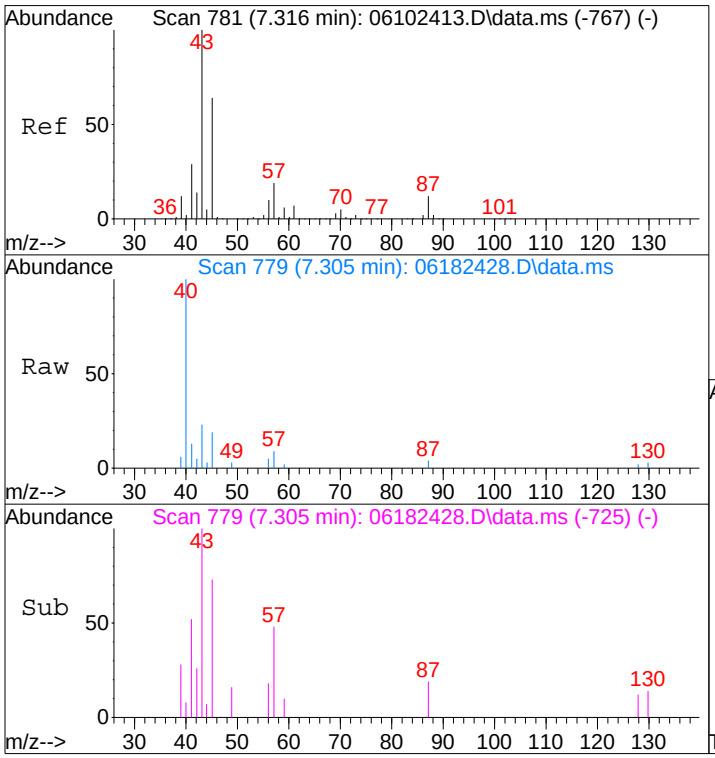


#27
2-Butanone (MEK)
Concen: 0.65 ng
RT: 6.66 min Scan# 666
Delta R.T. 0.005 min
Lab File: 06182428.D
Acq: 19 Jun 2024 00:24

Tgt Ion: 72 Resp: 4680

Ion	Ratio	Lower	Upper
72	100		
43	553.2	506.8	546.8#

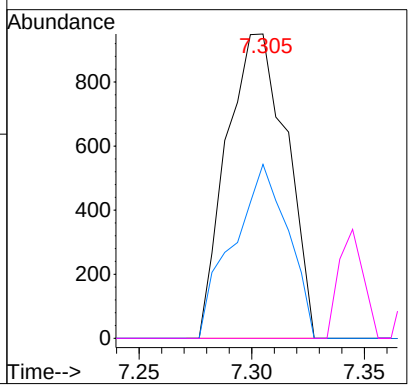


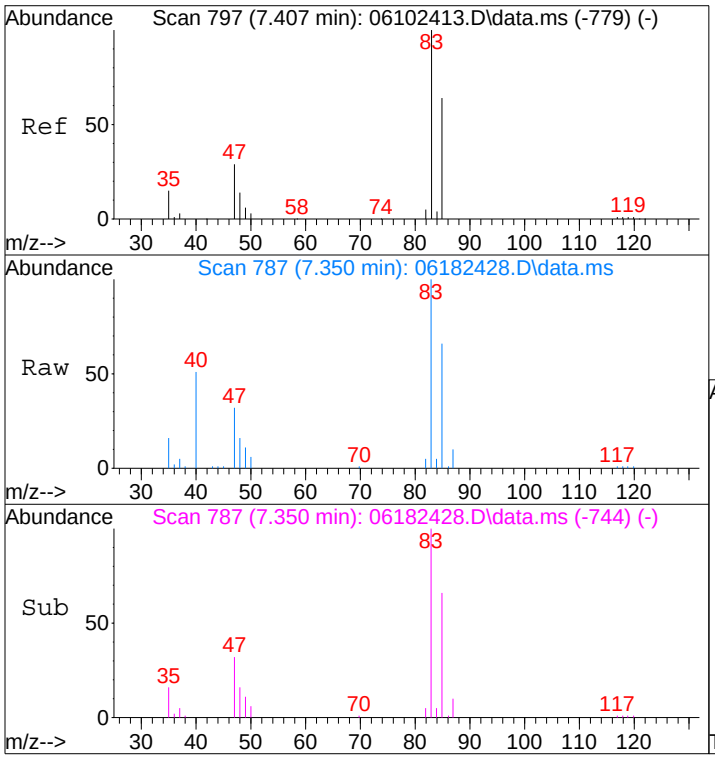


#31
n-Hexane
Concen: 0.09 ng
RT: 7.31 min Scan# 779
Delta R.T. 0.057 min
Lab File: 06182428.D
Acq: 19 Jun 2024 00:24

Tgt Ion: 57 Resp: 1762

Ion	Ratio	Lower	Upper
57	100		
56	52.4	42.5	63.7
86	14.6	9.5	14.3#

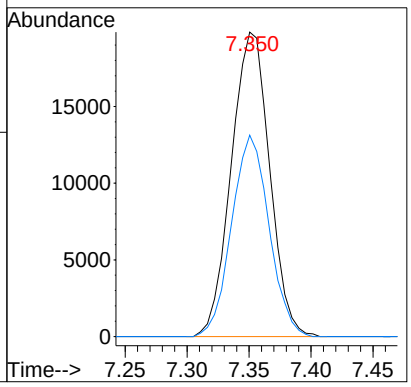


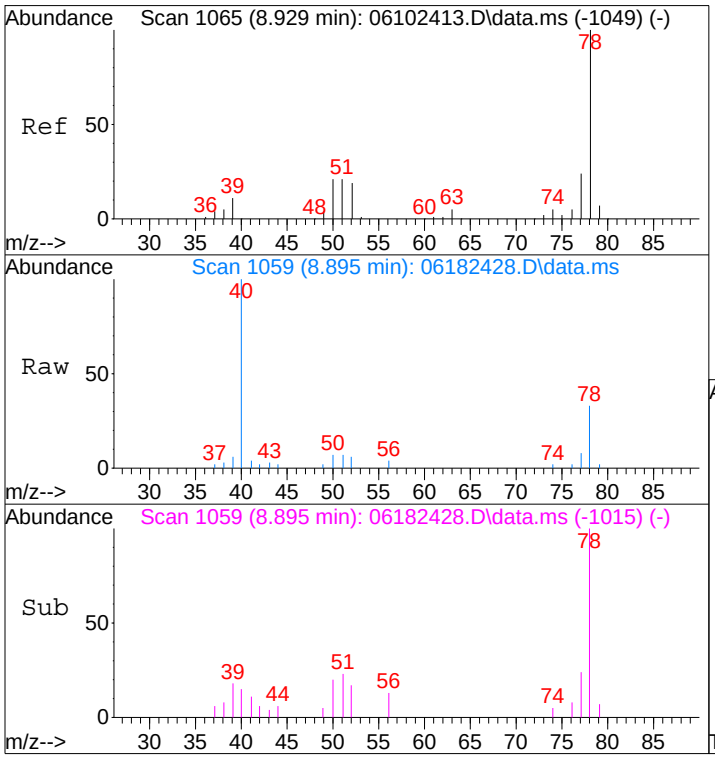


#32
Chloroform
Concen: 1.88 ng
RT: 7.35 min Scan# 787
Delta R.T. -0.004 min
Lab File: 06182428.D
Acq: 19 Jun 2024 00:24

Tgt Ion: 83 Resp: 42762

Ion	Ratio	Lower	Upper
83	100		
85	64.5	44.4	84.4

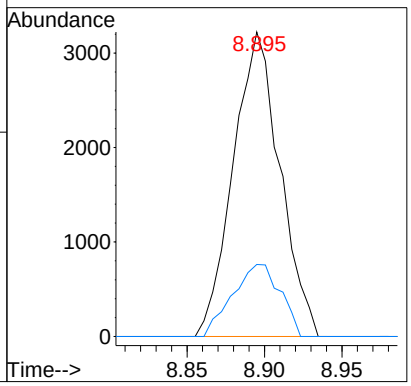


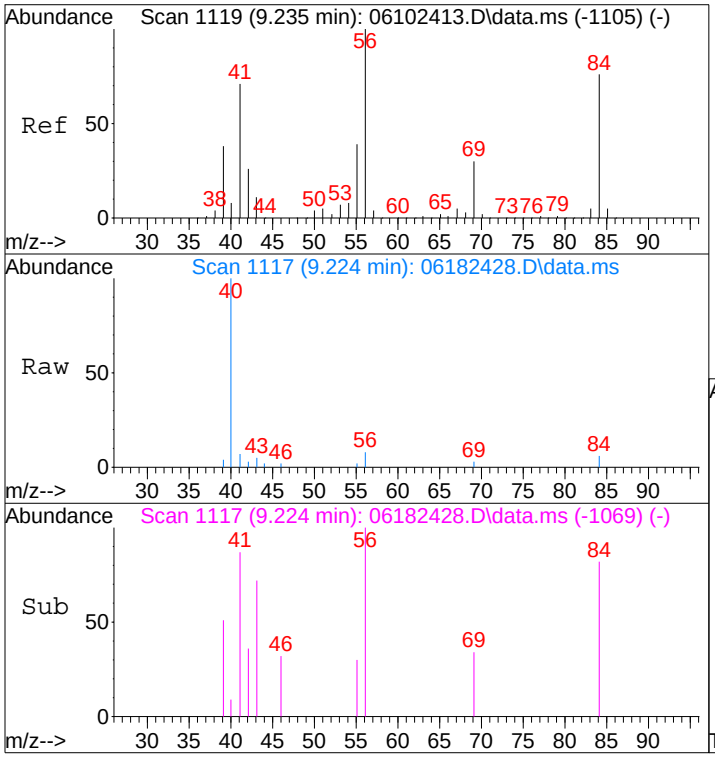


#41
Benzene
Concen: 0.15 ng
RT: 8.89 min Scan# 1059
Delta R.T. -0.002 min
Lab File: 06182428.D
Acq: 19 Jun 2024 00:24

Tgt Ion: 78 Resp: 6762

Ion	Ratio	Lower	Upper
78	100		
77	24.2	4.0	44.0

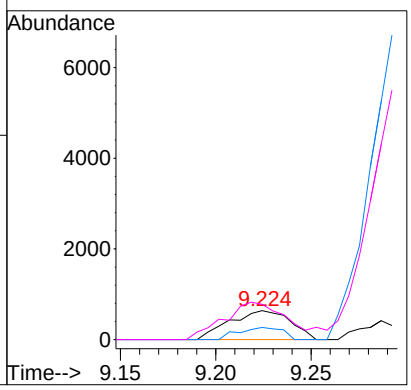


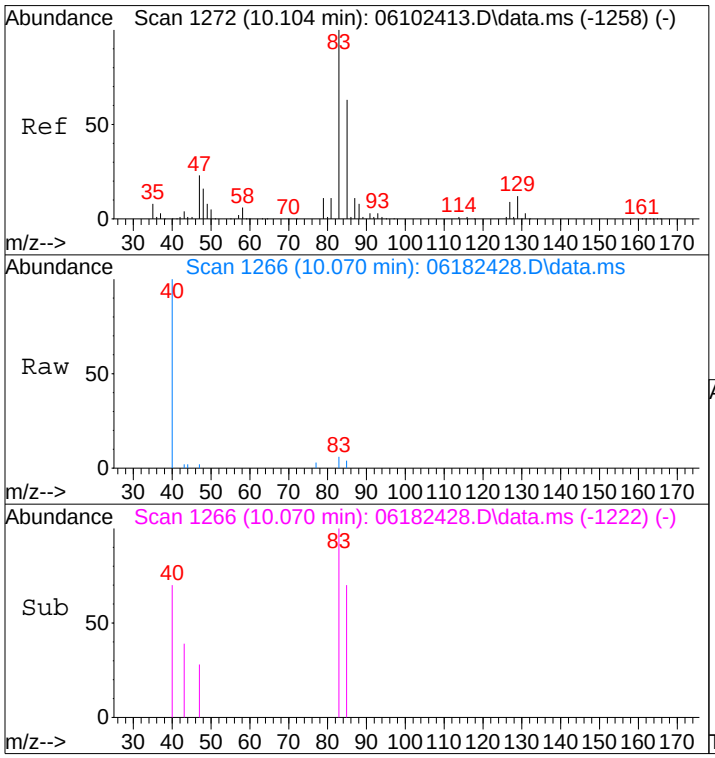


#43
Cyclohexane
Concen: 0.09 ng
RT: 9.22 min Scan# 1117
Delta R.T. 0.022 min
Lab File: 06182428.D
Acq: 19 Jun 2024 00:24

Tgt Ion: 84 Resp: 1418

Ion	Ratio	Lower	Upper
84	100		
69	30.3	18.8	58.8
56	140.8	111.5	151.5

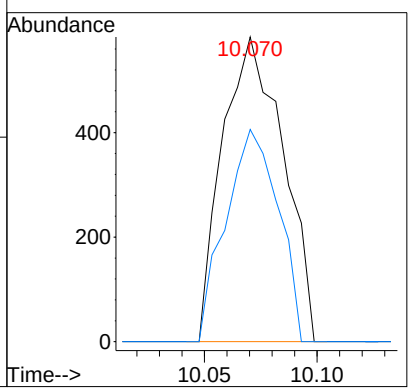


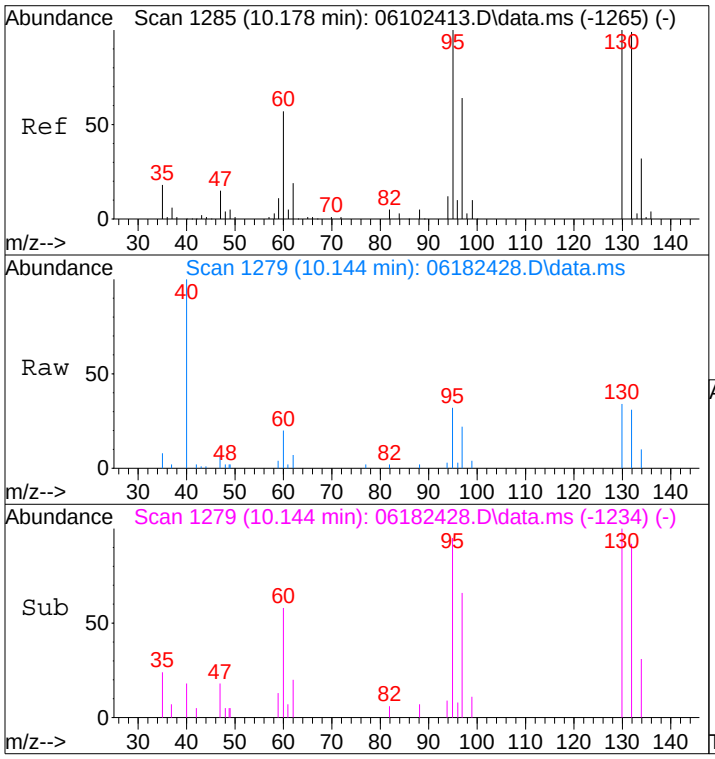


#46
Bromodichloromethane
Concen: 0.06 ng
RT: 10.07 min Scan# 1266
Delta R.T. -0.002 min
Lab File: 06182428.D
Acq: 19 Jun 2024 00:24

Tgt Ion: 83 Resp: 1092

Ion	Ratio	Lower	Upper
83	100		
85	60.4	43.8	83.8

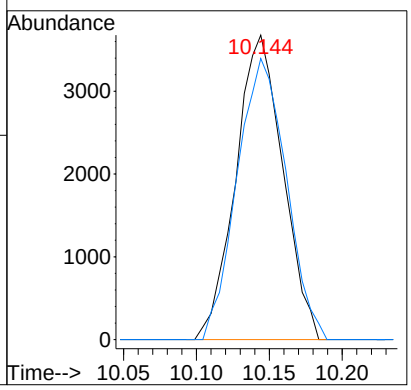


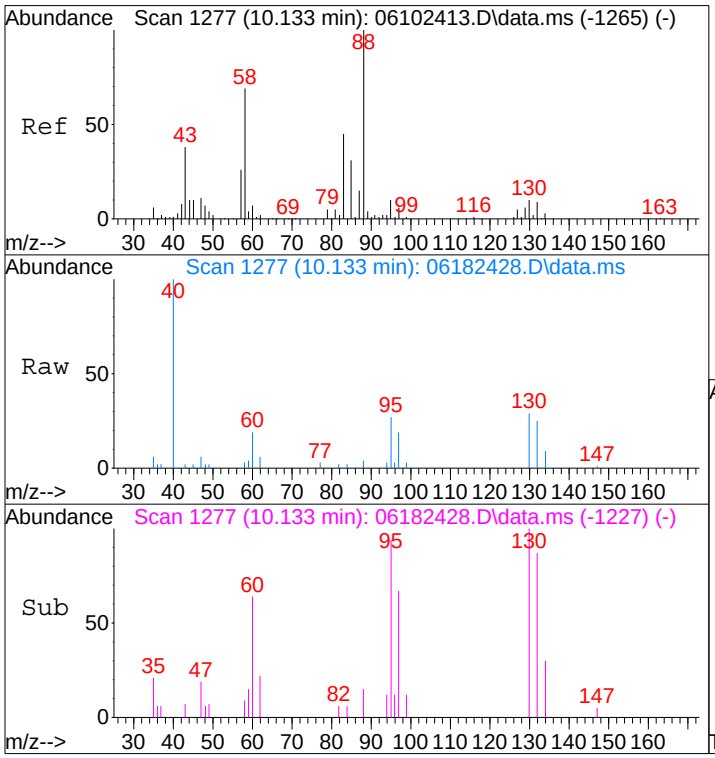


#47
Trichloroethene
Concen: 0.61 ng
RT: 10.14 min Scan# 1279
Delta R.T. 0.005 min
Lab File: 06182428.D
Acq: 19 Jun 2024 00:24

Tgt Ion:130 Resp: 8275

Ion	Ratio	Lower	Upper
130	100		
132	96.3	77.9	117.9

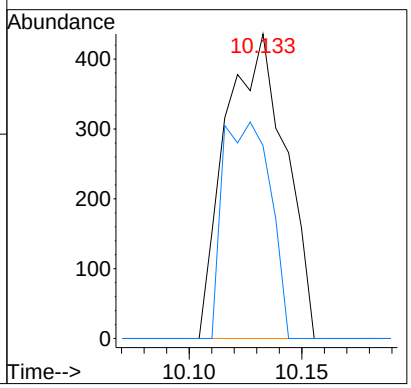


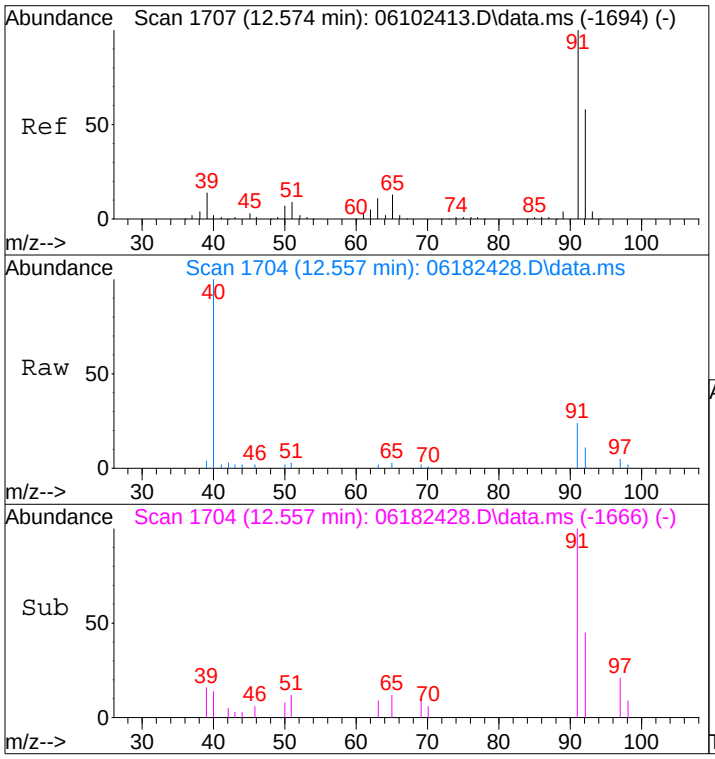


#48
1,4-Dioxane
Concen: 0.09 ng
RT: 10.13 min Scan# 1277
Delta R.T. 0.033 min
Lab File: 06182428.D
Acq: 19 Jun 2024 00:24

Tgt Ion: 88 Resp: 805

Ion	Ratio	Lower	Upper
88	100		
58	56.8	47.6	87.6

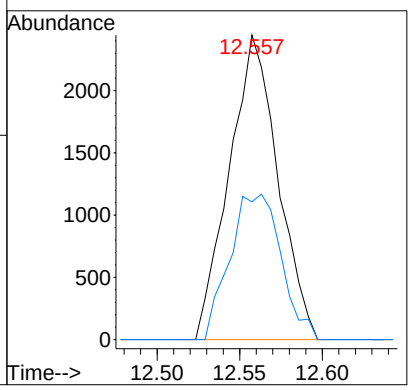


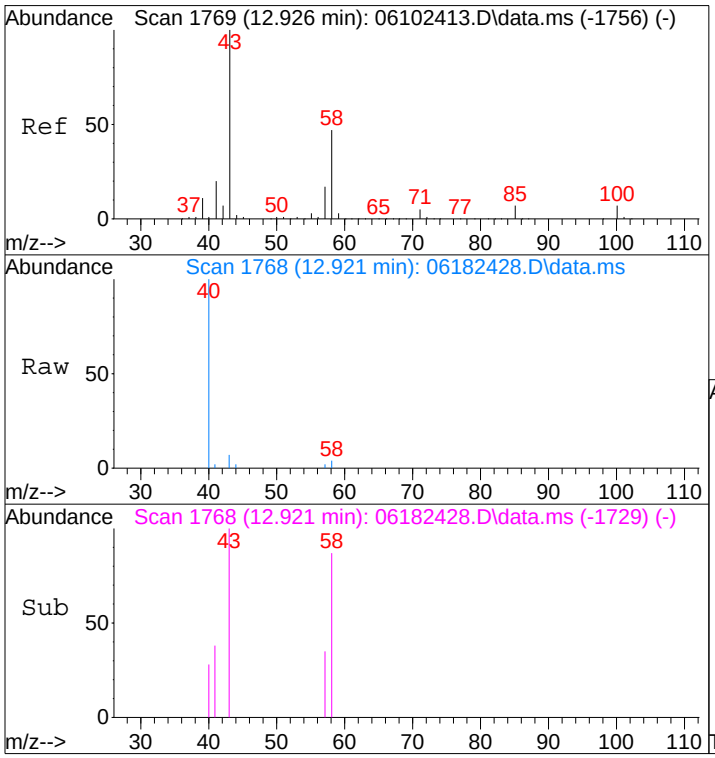


#58
Toluene
Concen: 0.10 ng
RT: 12.56 min Scan# 1704
Delta R.T. -0.034 min
Lab File: 06182428.D
Acq: 19 Jun 2024 00:24

Tgt Ion: 91 Resp: 5001

Ion	Ratio	Lower	Upper
91	100		
92	50.5	37.4	77.4

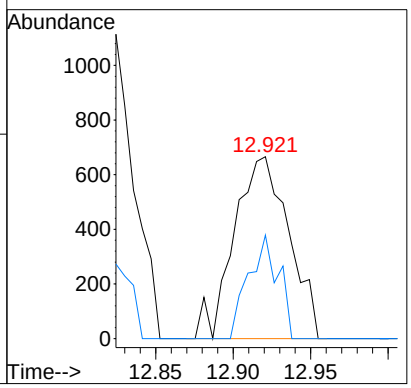


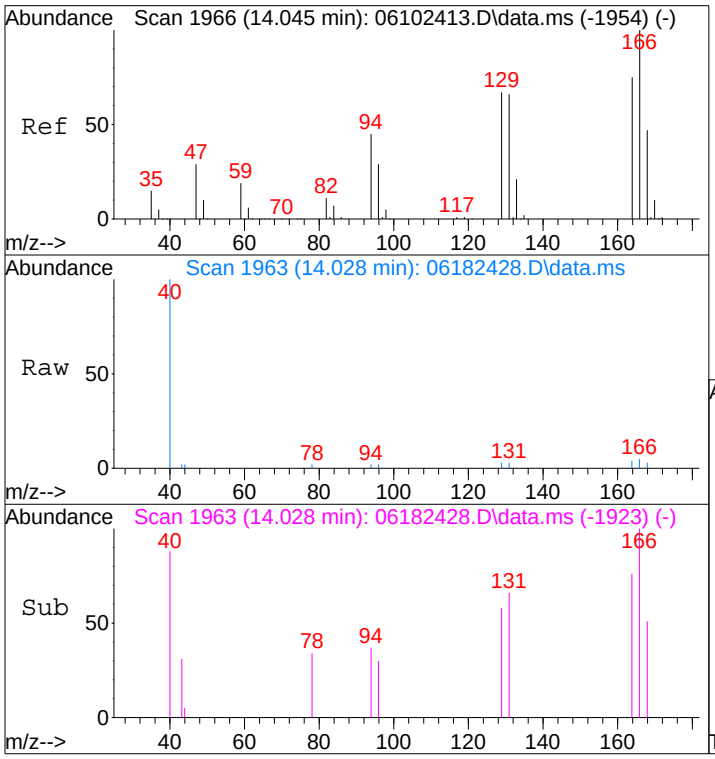


#59
2-Hexanone
Concen: 0.05 ng
RT: 12.92 min Scan# 1768
Delta R.T. -0.028 min
Lab File: 06182428.D
Acq: 19 Jun 2024 00:24

Tgt Ion: 43 Resp: 1641

Ion	Ratio	Lower	Upper
43	100		
58	31.0	25.9	65.9

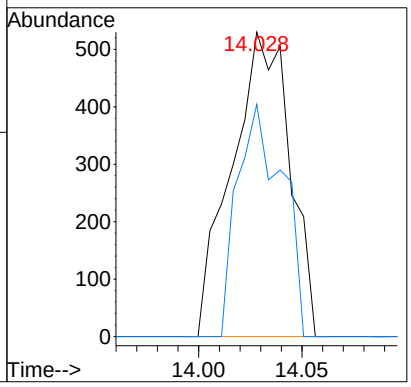


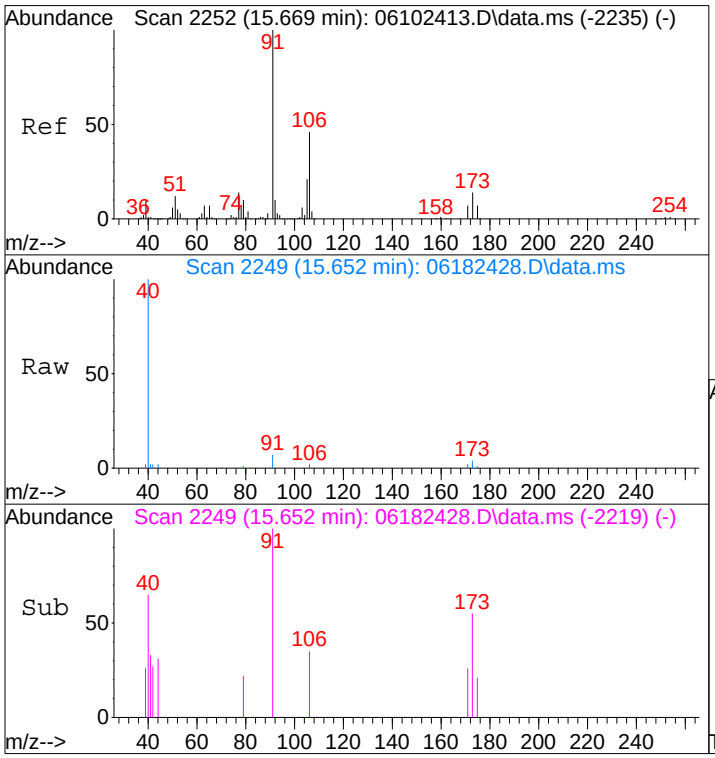


#64
Tetrachloroethene
Concen: 0.06 ng
RT: 14.03 min Scan# 1963
Delta R.T. -0.023 min
Lab File: 06182428.D
Acq: 19 Jun 2024 00:24

Tgt Ion:166 Resp: 1038

Ion	Ratio	Lower	Upper
166	100		
164	59.2	56.9	96.9

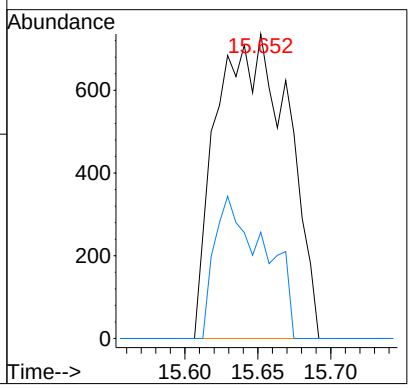


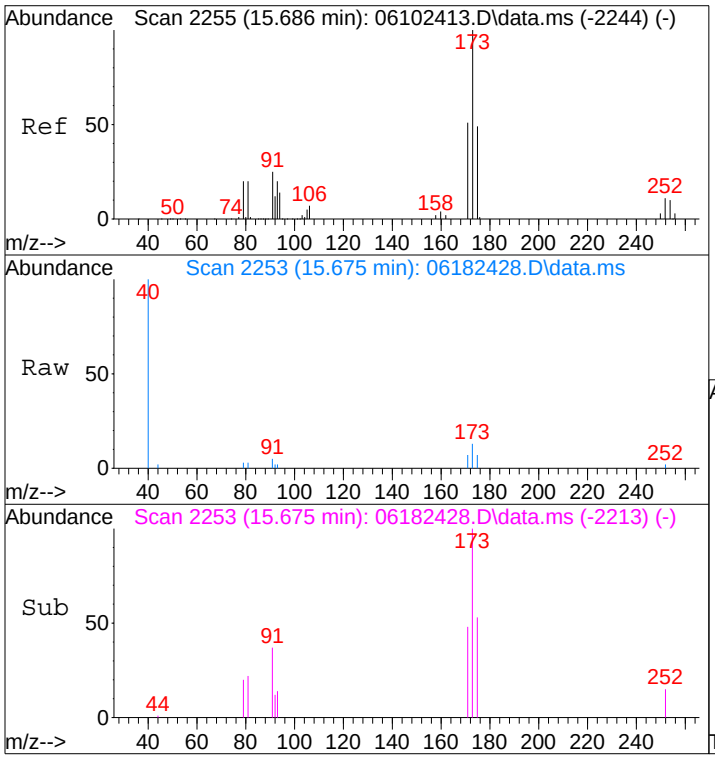


#67
m- & p-Xylenes
Concen: 0.05 ng
RT: 15.65 min Scan# 2249
Delta R.T. -0.028 min
Lab File: 06182428.D
Acq: 19 Jun 2024 00:24

Tgt Ion: 91 Resp: 2513

Ion	Ratio	Lower	Upper
91	100		
106	32.6	25.9	65.9

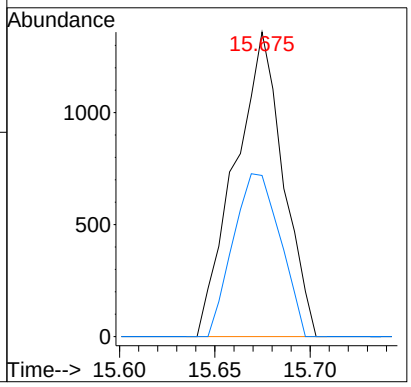




#68
Bromoform
Concen: 0.16 ng
RT: 15.67 min Scan# 2253
Delta R.T. -0.023 min
Lab File: 06182428.D
Acq: 19 Jun 2024 00:24

Tgt Ion:173 Resp: 2397

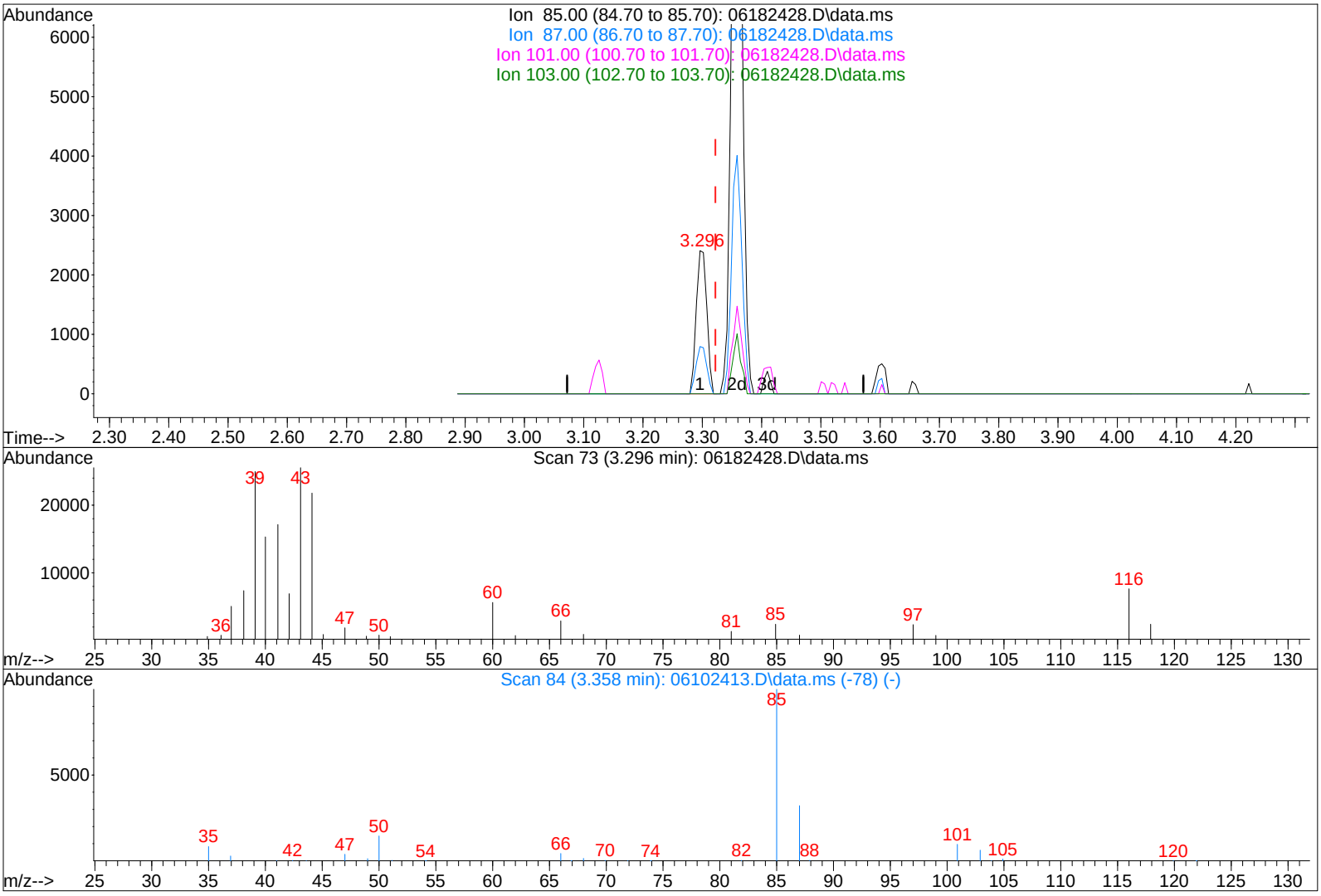
Ion	Ratio	Lower	Upper
173	100		
175	52.2	29.5	69.5



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182428.D Vial: 16
Acq On : 19 Jun 2024 00:24 Operator: SC
Sample : P2402249-023 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 08:27:48 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182428.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.296min (-0.026) 0.11ng

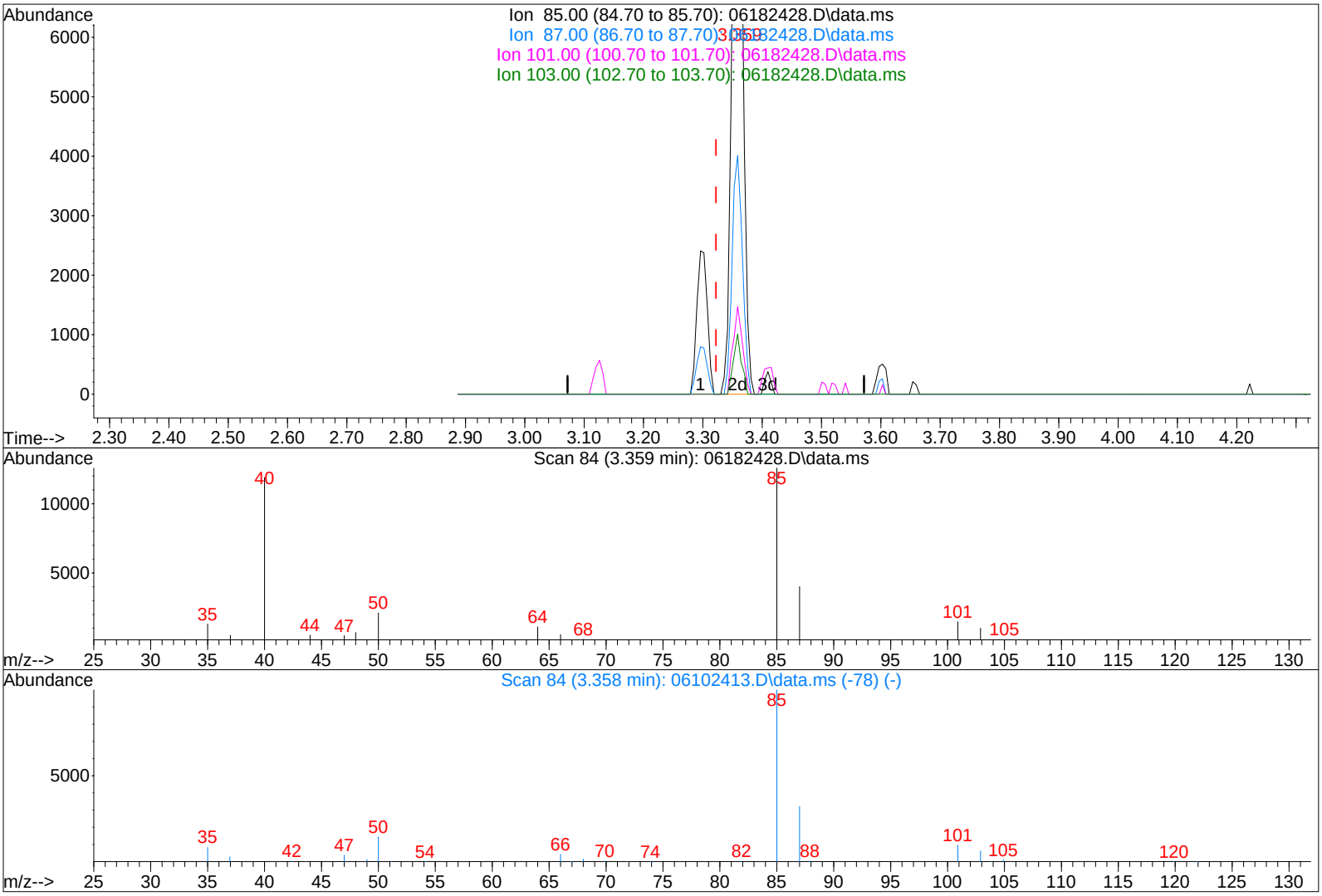
response 2966

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	33.68
101.00	9.80	0.00
103.00	6.30	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182428.D Vial: 16
Acq On : 19 Jun 2024 00:24 Operator: SC
Sample : P2402249-023 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 08:27:48 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182428.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.359min (+0.037) 0.54ng m

response 14841

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	6.73#
101.00	9.80	0.00
103.00	6.30	0.00

WP

6/19/24

6/29/24

Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\18\06182428.D Vial: 16
Acq On : 19 Jun 2024 00:24 Operator: SC
Sample : P2402249-023 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:00:10 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

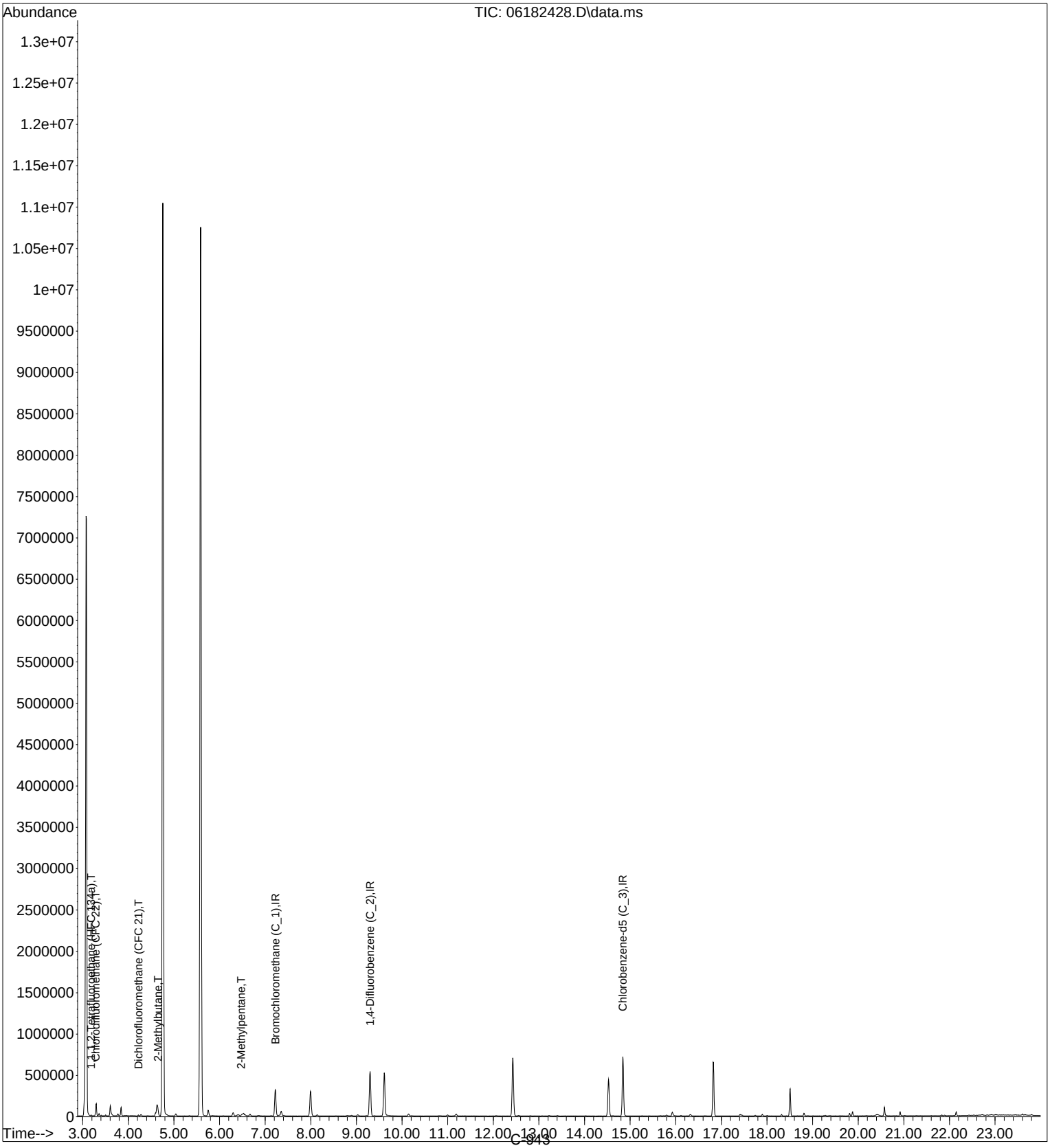
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	116239	12.500	ng		-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	503848	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	121381	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	0.00	85	0	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.18	83	1193	0.100	ng	#	1
4) 1,1-Difluoroethane	3.23	65	276	N.D.			
5) Chlorodifluoromethane ...	3.28	67	786	0.198	ng	#	73
6) 1-Chloro-1,1-Difluoroe...	3.50	65	450	N.D.			
7) Dichlorofluoromethane ...	4.22	67	8423	0.316	ng		99
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	4.56	83	774	N.D.			
10) 2-Methylbutane	4.65	57	16347	1.179	ng	#	84
11) Methyl Acetate	5.33	43	919	N.D.			
12) 2-Methylpentane	6.48	71	1174	0.117	ng	#	1
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	9.03	84	698	N.D.			
17) 2,3-Dimethylpentane	9.61	56	1436	N.D.			
18) Dibromomethane	9.79	174	243	N.D.			
20) Methyl Cyclohexane	11.42	55	672	N.D.			
21) 1,3-Dichloropropane	0.00	76	0	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	16.32	75	754	N.D.			
25) Bromobenzene	0.00	77	0	N.D.			
26) 2-Chlorotoluene	17.61	91	636	N.D.			
27) 4-Chlorotoluene	17.67	91	977	N.D.			
28) Indane	0.00	117	0	N.D.			
29) Indene	0.00	115	0	N.D.			
30) 1,2,4,5-Tetramethylben...	0.00	119	0	N.D.			
31) 1,2,3,4-Tetramethylben...	0.00	119	0	N.D.			
32) 1,2,3,5-Tetramethylben...	20.57	119	364	N.D.			
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182428.D Vial: 16
Acq On : 19 Jun 2024 00:24 Operator: SC
Sample : P2402249-023 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:00:10 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

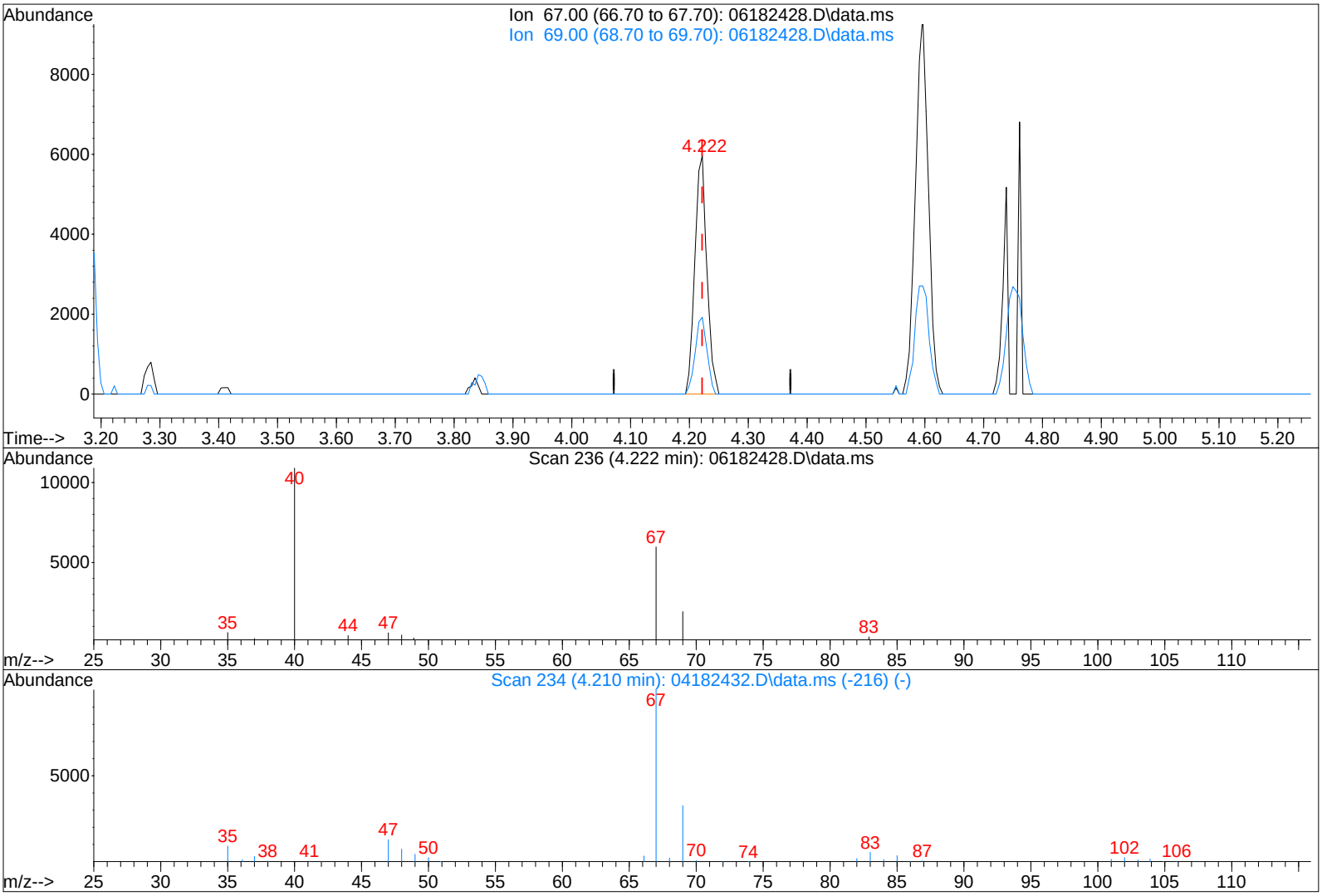


Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182428.D Vial: 16
Acq On : 19 Jun 2024 00:24 Operator: SC
Sample : P2402249-023 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 15:00:10 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182428.D\data.ms

(7) Dichlorofluoromethane (CFC 21) (T)

4.222min (+0.000) 0.32ng

response 8423

Ion	Exp%	Act%
67.00	100	100
69.00	32.40	31.79
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192413.D Vial: 16
Acq On : 19 Jun 2024 15:19 Operator: SC
Sample : P2402249-023Dil (40mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 15:42:42 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/19/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	134427	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	579043	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	133086	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	303913	12.720	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.76%				
57) Toluene-d8 (SS2)	12.43	98	640672	12.580	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.64%				
73) Bromofluorobenzene (SS3)	16.83	174	238158	12.950	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.60%				
Target Compounds							Qvalue
2) Propene	0.00	42	0	N.D.	d		
3) Dichlorodifluoromethan...	3.33	85	365	N.D.			
4) Chloromethane	3.52	50	210	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.30	45	1592	0.122	ng		81
11) Acetonitrile	4.45	41	261	N.D.			
12) Acrolein	4.55	56	54	N.D.			
13) Acetone	4.65	58	4795	0.459	ng		95
14) Trichlorofluoromethane	4.75	101	879570	27.484	ng		100
15) 2-Propanol (Isopropanol)	4.87	45	746	N.D.			
16) Acrylonitrile	5.00	53	358	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	0.00	59	0	N.D.			
19) Methylene Chloride	5.35	84	656	N.D.			
20) 3-Chloro-1-propene (Al...	0.00	41	0	N.D.			
21) Trichlorotrifluoroethane	5.58	151	334236	24.688	ng		98
22) Carbon Disulfide	0.00	76	0	N.D.	d		
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D.			
27) 2-Butanone (MEK)	6.69	72	419	0.051	ng	#	27
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	7.35	87	312	N.D.			
30) Ethyl Acetate	0.00	61	0	N.D.			
31) n-Hexane	0.00	57	0	N.D.			
32) Chloroform	7.35	83	4443	0.169	ng		95
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	0.00	62	0	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.85	56	589	No Calib		#	
41) Benzene	8.89	78	1772	N.D.			
42) Carbon Tetrachloride	0.00	117	0	N.D.			
43) Cyclohexane	0.00	84	0	N.D.	d		
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.08	83	424	N.D.			
47) Trichloroethene	10.14	130	1521	0.097	ng		97
48) 1,4-Dioxane	0.00	88	0	N.D.			
49) 2,2,4-Trimethylpentane...	0.00	57	0	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192413.D Vial: 16
Acq On : 19 Jun 2024 15:19 Operator: SC
Sample : P2402249-023Dil (40mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 15:42:42 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

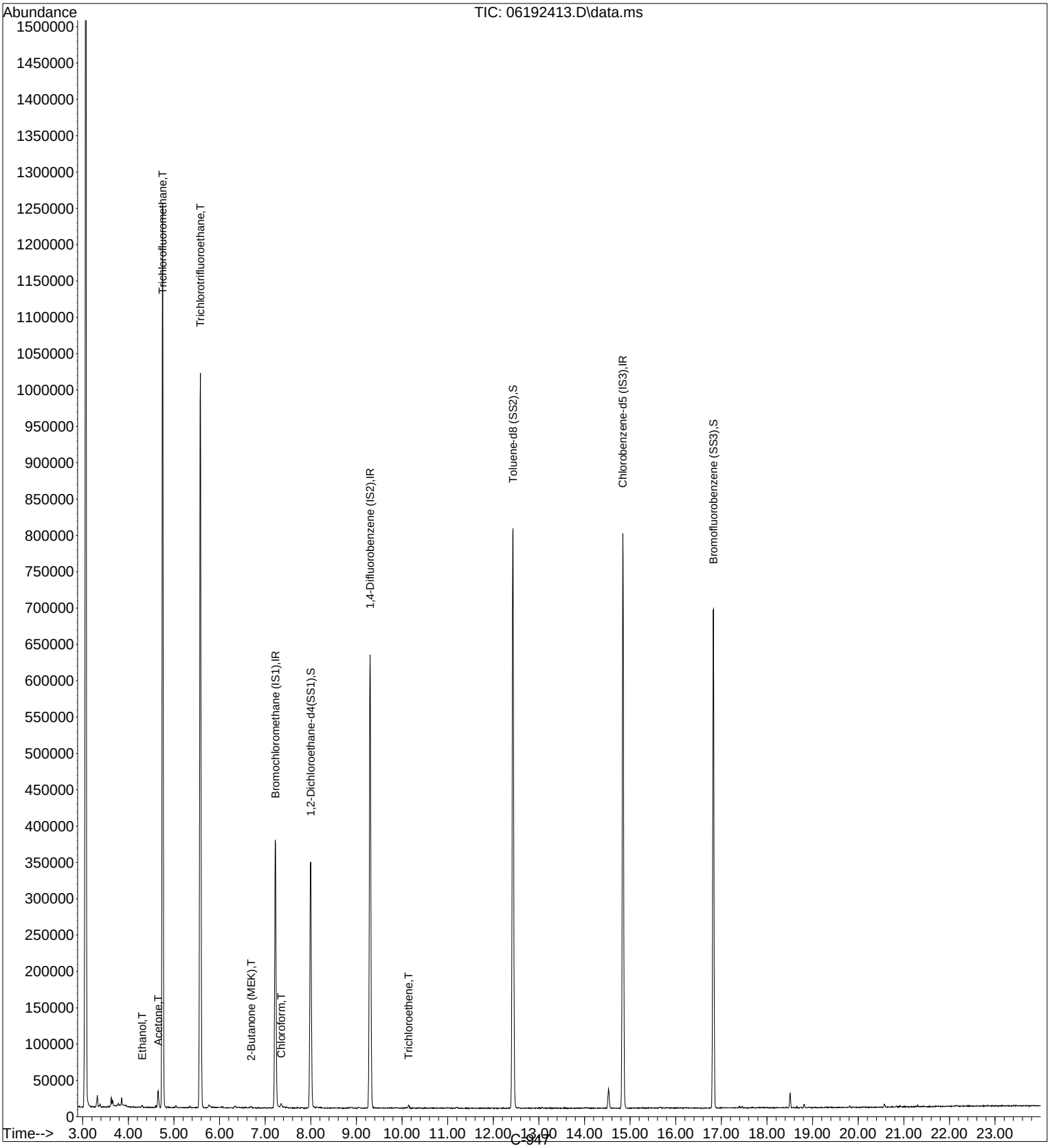
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
51) n-Heptane	0.00	71	0	N.D.		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	12.56	91	988	N.D.		
59) 2-Hexanone	0.00	43	0	N.D.		
60) Dibromochloromethane	13.07	129	459	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	0.00	43	0	N.D.		
63) n-Octane	0.00	57	0	N.D.		
64) Tetrachloroethene	14.02	166	348	N.D.		
65) Chlorobenzene	14.90	112	458	N.D.		
66) Ethylbenzene	15.41	91	774	N.D.		
67) m- & p-Xylenes	15.66	91	835	N.D.		
68) Bromoform	15.67	173	784	N.D.		
69) Styrene	0.00	104	0	N.D.		
70) o-Xylene	16.24	91	620	N.D.		
71) n-Nonane	0.00	43	0	N.D.		
72) 1,1,2,2-Tetrachloroethane	16.21	83	179	N.D.		
74) Cumene	17.04	105	567	N.D.		
75) alpha-Pinene	0.00	93	0	N.D.		
76) n-Propylbenzene	17.68	91	747	N.D.		
77) 3-Ethyltoluene	17.04	105	567	No Calib		#
78) 4-Ethyltoluene	17.86	105	539	N.D.		
79) 1,3,5-Trimethylbenzene	17.96	105	211	N.D.		
80) alpha-Methylstyrene	0.00	118	0	N.D.		
81) 2-Ethyltoluene	17.04	105	567	No Calib		#
82) 1,2,4-Trimethylbenzene	18.43	105	321	N.D.		
83) n-Decane	0.00	58	0	N.D.		
84) Benzyl Chloride	0.00	91	0	N.D.		
85) 1,3-Dichlorobenzene	18.58	146	569	N.D.		
86) 1,4-Dichlorobenzene	18.66	146	407	N.D.		
87) sec-Butylbenzene	18.74	105	665	N.D.		
88) 4-Isopropyltoluene (p-...	18.93	119	538	N.D.		
89) 1,2,3-Trimethylbenzene	17.04	105	567	No Calib		#
90) 1,2-Dichlorobenzene	19.03	146	441	N.D.		
91) d-Limonene	0.00	68	0	N.D.		
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	0.00	58	0	N.D.		
94) 1,2,4-Trichlorobenzene	20.84	180	611	N.D.		
95) Naphthalene	20.94	128	364	N.D.		
96) n-Dodecane	0.00	58	0	N.D.		
97) Hexachlorobutadiene	21.30	225	613	N.D.		
98) Cyclohexanone	0.00	55	0	N.D.		
99) tert-Butylbenzene	18.42	119	685	N.D.		
100) n-Butylbenzene	19.39	91	425	N.D.		
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192413.D Vial: 16
Acq On : 19 Jun 2024 15:19 Operator: SC
Sample : P2402249-023Dil (40mL) Inst : MS09
Misc : S37-06062402

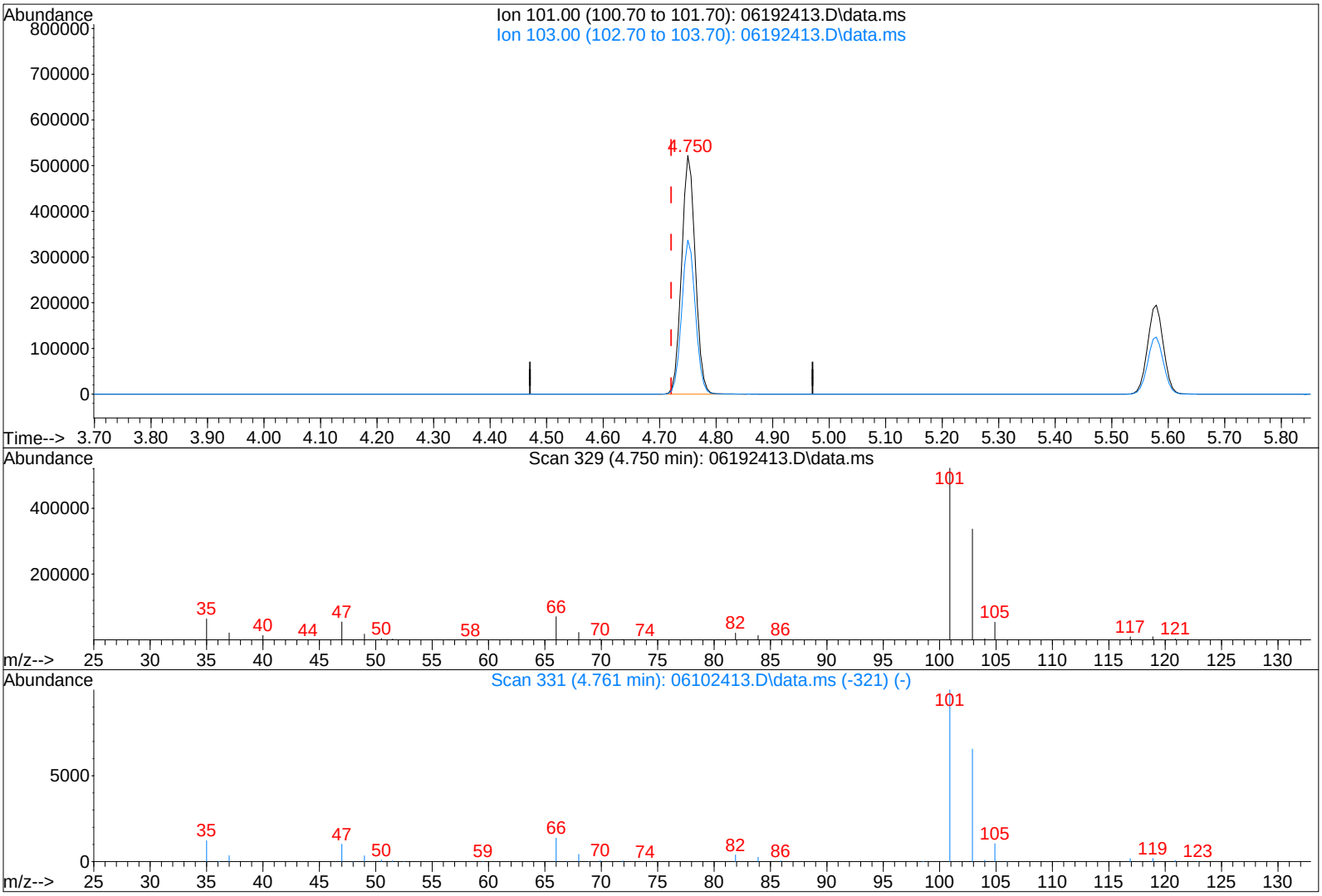
Quant Time: Jun 19 15:42:42 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\19\06192413.D Vial: 16
Acq On : 19 Jun 2024 15:19 Operator: SC
Sample : P2402249-023Dil (40mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 15:41:57 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06192413.D\data.ms

(14) Trichlorofluoromethane (T)

4.750min (+0.029) 27.48ng

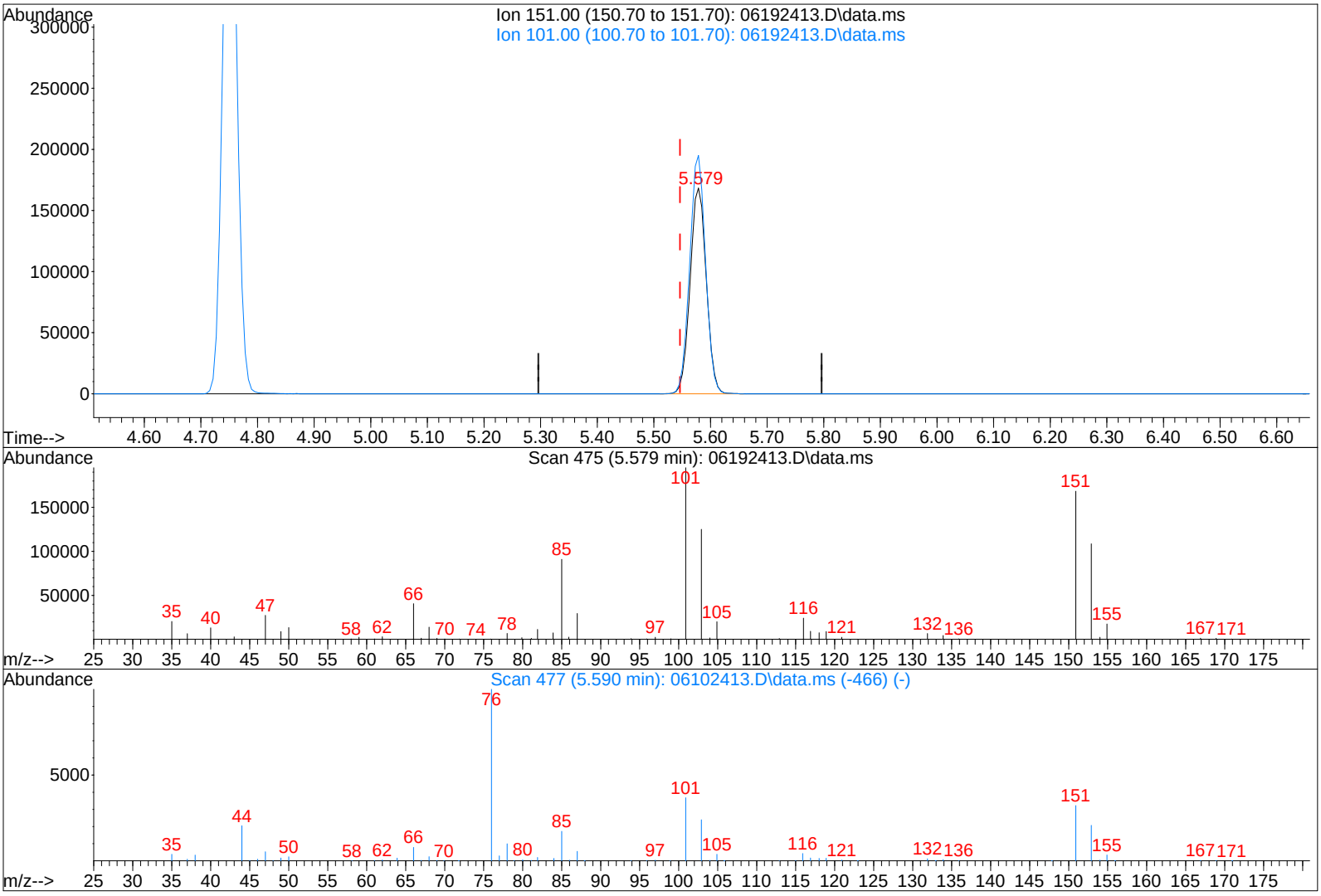
response 879570

Ion	Exp%	Act%
101.00	100	100
103.00	64.90	64.51
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\19\06192413.D Vial: 16
Acq On : 19 Jun 2024 15:19 Operator: SC
Sample : P2402249-023Dil (40mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 15:41:57 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06192413.D\data.ms

(21) Trichlorotrifluoroethane (T)

5.579min (+0.033) 24.69ng

response 334236

Ion	Exp%	Act%
151.00	100	100
101.00	115.00	113.30
0.00	0.00	0.00
0.00	0.00	0.00

LSC Area Percent Report

MJ 6/28/24

Data Path : I:\MS09\DATA\2024 06\18\
Data File : 06182428.D
Acq On : 19 Jun 2024 00:24
Operator : SC
Sample : P2402249-023 (400mL)
Misc : S37-06062402
ALS Vial : 16 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06182428.D\data.ms

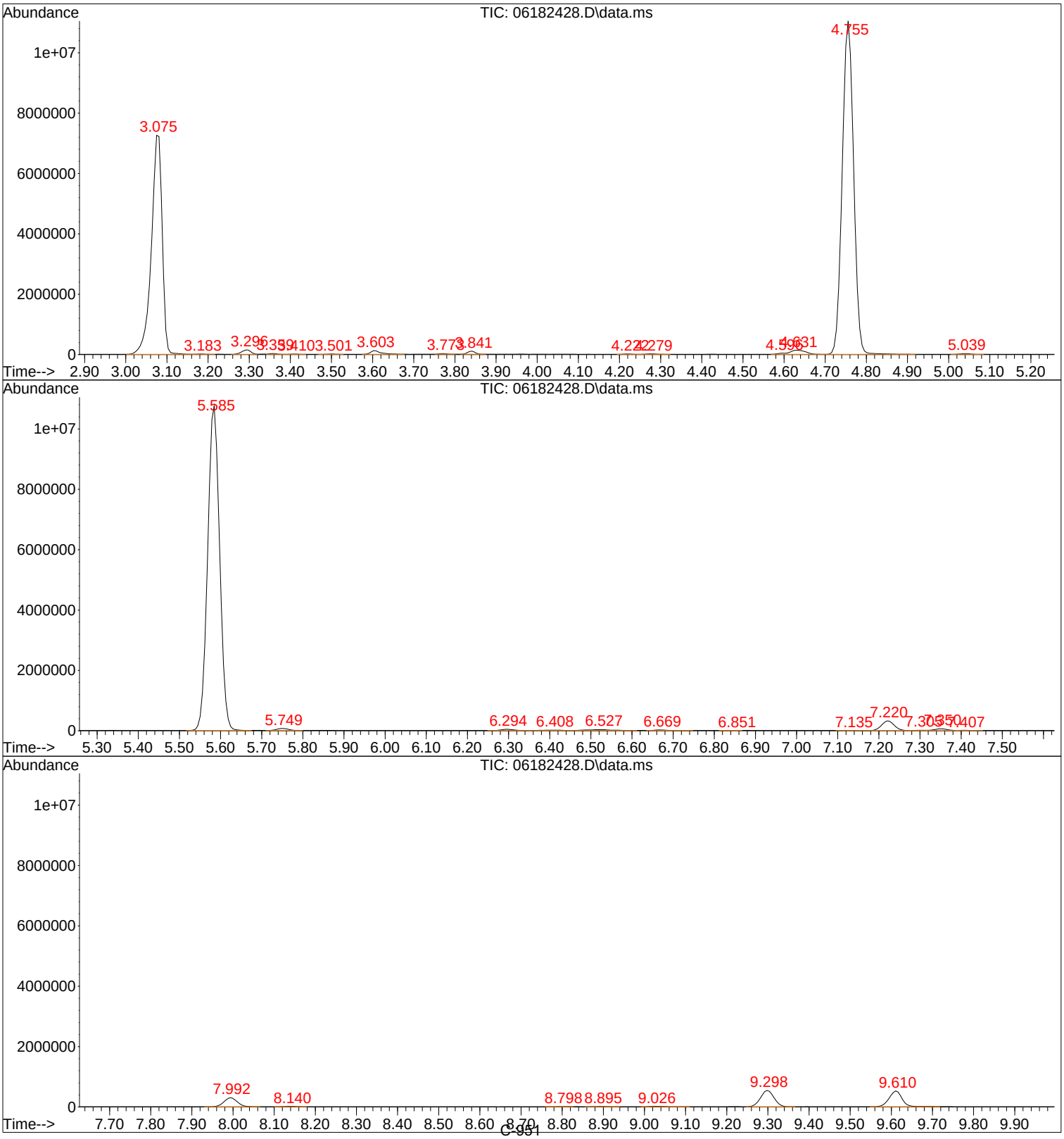
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.075	21	34	50	rBV	7252298	13206347	60.94%	21.418%
2	3.183	50	53	59	rVB	9448	10622	0.05%	0.017%
3	3.296	66	73	77	rBV3	146428	225363	1.04%	0.365%
4	3.359	81	84	89	rVV	27020	31324	0.14%	0.051%
5	3.410	89	93	98	rVB2	8310	10776	0.05%	0.017%
6	3.501	103	109	114	rBV2	10710	15778	0.07%	0.026%
7	3.603	122	127	140	rBV2	122106	213224	0.98%	0.346%
8	3.773	153	157	162	rVB	20815	27485	0.13%	0.045%
9	3.841	164	169	175	rBV	100774	130891	0.60%	0.212%
10	4.222	231	236	240	rBV	10873	15070	0.07%	0.024%
11	4.279	240	246	254	rVB2	15718	28357	0.13%	0.046%
12	4.596	297	302	303	rBV2	37881	47282	0.22%	0.077%
13	4.631	303	308	320	rVV2	134241	339043	1.56%	0.550%
14	4.756	320	330	359	rVB	11038189	21213427	97.88%	34.404%
15	5.039	374	380	388	rBV2	23882	42880	0.20%	0.070%
16	5.585	464	476	492	rBV	10745442	21672728	100.00%	35.149%
17	5.749	498	505	514	rVB	68330	133143	0.61%	0.216%
18	6.294	593	601	609	rBV	40865	86043	0.40%	0.140%
19	6.408	609	621	629	rVV4	13592	54565	0.25%	0.088%
20	6.527	629	642	657	rVV4	31762	130916	0.60%	0.212%
21	6.669	661	667	681	rVB	19459	39873	0.18%	0.065%
22	6.851	692	699	702	rBV4	5939	12580	0.06%	0.020%
23	7.135	742	749	756	rVB3	4946	10220	0.05%	0.017%
24	7.220	756	764	774	rBV	316303	680806	3.14%	1.104%
25	7.305	774	779	781	rVV2	9235	17887	0.08%	0.029%
26	7.350	781	787	794	rVV	56064	121187	0.56%	0.197%
27	7.407	794	797	805	rVB	8137	15250	0.07%	0.025%
28	7.992	889	900	913	rBV	297412	666088	3.07%	1.080%
29	8.140	919	926	933	rVB2	13575	29635	0.14%	0.048%
30	8.798	1035	1042	1047	rBV3	6397	15565	0.07%	0.025%
31	8.895	1052	1059	1067	rVB3	8843	21399	0.10%	0.035%
32	9.026	1076	1082	1097	rVB	14641	34890	0.16%	0.057%
33	9.298	1121	1130	1142	rVB	537424	1216893	5.61%	1.974%
34	9.610	1174	1185	1204	rBV	521328	1142614	5.27%	1.853%

Sum of corrected areas: 61660151

Data Path : I:\MS09\DATA\2024 06\18\
Data File : 06182428.D
Acq On : 19 Jun 2024 00:24
Operator : SC
Sample : P2402249-023 (400mL)
Misc : S37-06062402
ALS Vial : 16 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\18\\
Data File : 06182428.D
Acq On : 19 Jun 2024 00:244
Operator : SCC
Sample : P2402249-023 (400mL))
Misc : S37-060624022
ALS Vial : 16 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

					|--Internal Standard---|		
TIC Top Hit name	RT	EstConc	Units	Response	# RT Resp Conc

No Library Search Compounds Detected
****

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202412.D Vial: 1
Acq On : 20 Jun 2024 15:37 Operator: SC
Sample : P2402249-024 (6.0mL) Inst : MS09
Misc : S37-06062402

MJ 6/29/24

Quant Time: Jun 29 11:18:56 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	177761	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	771767	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	174127	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	383602	12.142	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.12%				
57) Toluene-d8 (SS2)	12.43	98	862132	12.938	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.52%				
73) Bromofluorobenzene (SS3)	16.83	174	299142	12.432	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.44%				
Target Compounds							Qvalue
2) Propene	0.00	42	0	N.D.	d		
3) Dichlorodifluoromethan...	3.33	85	1103	N.D.			
4) Chloromethane	3.52	50	431	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.36	45	51	N.D.			
11) Acetonitrile	4.45	41	136	N.D.			
12) Acrolein	4.55	56	308	N.D.			
13) Acetone	0.00	58	0	N.D.	d		
14) Trichlorofluoromethane	4.76	101	4548445	107.479	ng		100
15) 2-Propanol (Isopropanol)	4.89	45	1378	N.D.			
16) Acrylonitrile	5.04	53	118	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	0.00	59	0	N.D.			
19) Methylene Chloride	5.35	84	1107	0.057	ng		95
20) 3-Chloro-1-propene (Al...	5.46	41	270	N.D.			
21) Trichlorotrifluoroethane	5.59	151	4630235	258.637	ng		92
22) Carbon Disulfide	5.61	76	3143	N.D.			
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D.			
27) 2-Butanone (MEK)	6.69	72	697	0.064	ng	#	66
28) cis-1,2-Dichloroethene	7.08	61	253	N.D.			
29) Diisopropyl Ether	7.35	87	187	N.D.			
30) Ethyl Acetate	7.31	61	166	N.D.			
31) n-Hexane	7.30	57	1297	N.D.			
32) Chloroform	7.35	83	3012	0.086	ng		96
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.10	62	314	N.D.			
38) 1,1,1-Trichloroethane	8.40	97	802	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.84	56	312	No Calib			
41) Benzene	8.91	78	2874	N.D.			
42) Carbon Tetrachloride	0.00	117	0	N.D.			
43) Cyclohexane	9.22	84	889	N.D.			
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.08	83	519	N.D.			
47) Trichloroethene	10.14	130	1906	0.092	ng		99
48) 1,4-Dioxane	10.14	88	115	N.D.			
49) 2,2,4-Trimethylpentane...	10.24	57	3007	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202412.D Vial: 1
Acq On : 20 Jun 2024 15:37 Operator: SC
Sample : P2402249-024 (6.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 11:18:56 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

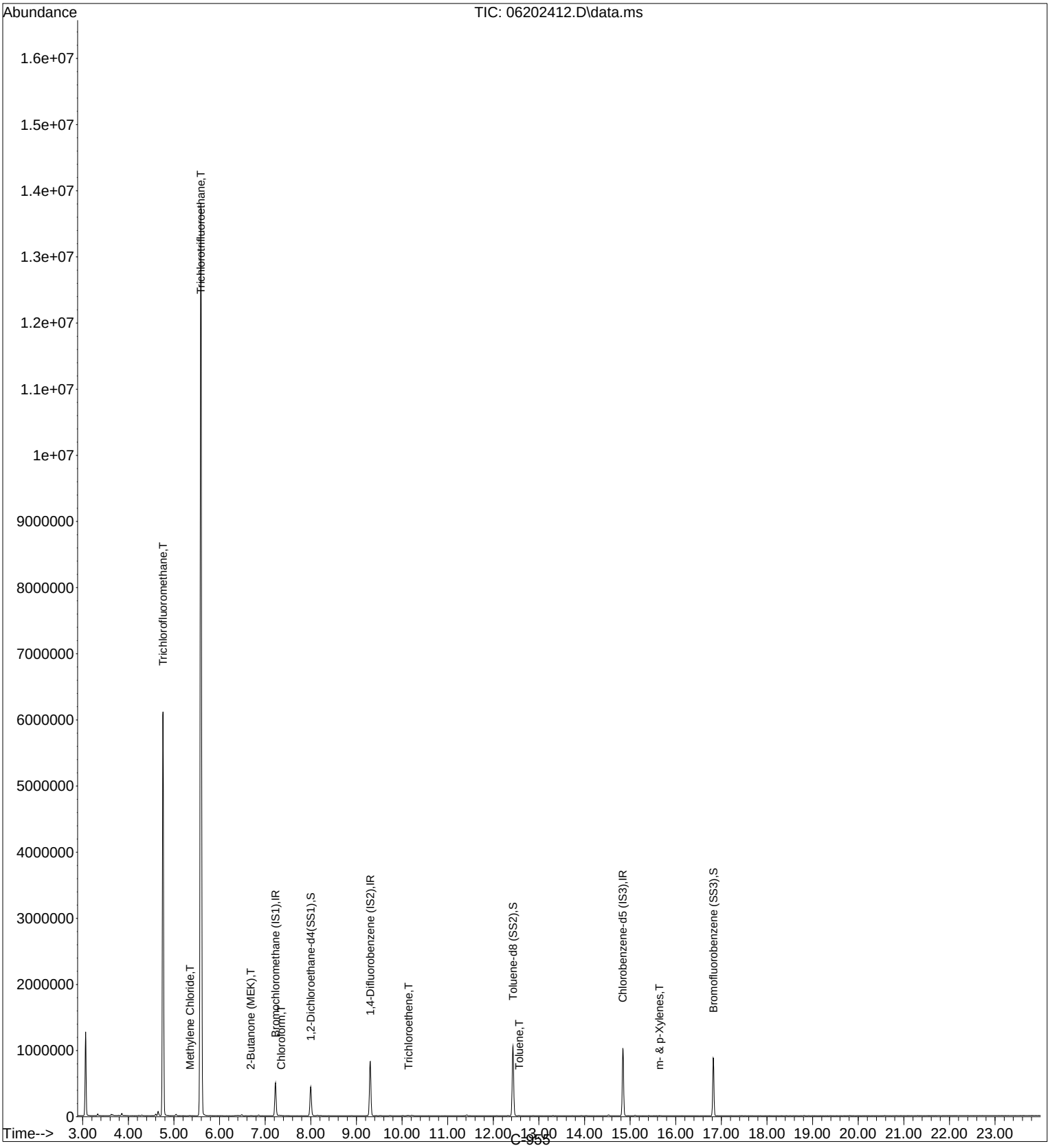
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	0.00	71	0	N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	12.17	97	115	N.D.	
58) Toluene	12.57	91	4305	0.062 ng	98
59) 2-Hexanone	12.94	43	701	N.D.	
60) Dibromochloromethane	13.07	129	581	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	0.00	43	0	N.D.	
63) n-Octane	13.92	57	272	N.D.	
64) Tetrachloroethene	14.03	166	1066	N.D.	
65) Chlorobenzene	14.90	112	753	N.D.	
66) Ethylbenzene	15.41	91	3264	N.D.	
67) m- & p-Xylenes	15.64	91	3533	0.053 ng	91
68) Bromoform	15.68	173	725	N.D.	
69) Styrene	0.00	104	0	N.D.	
70) o-Xylene	16.24	91	1149	N.D.	
71) n-Nonane	0.00	43	0	N.D.	
72) 1,1,2,2-Tetrachloroethane	16.21	83	573	N.D.	
74) Cumene	17.04	105	1081	N.D.	
75) alpha-Pinene	17.52	93	1020	N.D.	
76) n-Propylbenzene	17.67	91	1499	N.D.	
77) 3-Ethyltoluene	17.04	105	1081	No Calib	#
78) 4-Ethyltoluene	17.86	105	979	N.D.	
79) 1,3,5-Trimethylbenzene	17.96	105	545	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.04	105	1081	No Calib	#
82) 1,2,4-Trimethylbenzene	18.43	105	750	N.D.	
83) n-Decane	0.00	58	0	N.D.	
84) Benzyl Chloride	0.00	91	0	N.D.	
85) 1,3-Dichlorobenzene	18.58	146	697	N.D.	
86) 1,4-Dichlorobenzene	18.66	146	659	N.D.	
87) sec-Butylbenzene	18.74	105	1003	N.D.	
88) 4-Isopropyltoluene (p-...	18.93	119	894	N.D.	
89) 1,2,3-Trimethylbenzene	17.04	105	1081	No Calib	#
90) 1,2-Dichlorobenzene	19.04	146	581	N.D.	
91) d-Limonene	0.00	68	0	N.D.	
92) 1,2-Dibromo-3-Chloropr...	19.51	157	127	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	962	N.D.	
95) Naphthalene	20.94	128	1887	N.D.	
96) n-Dodecane	0.00	58	0	N.D.	
97) Hexachlorobutadiene	21.30	225	744	N.D.	
98) Cyclohexanone	15.40	55	695	No Calib	#
99) tert-Butylbenzene	18.42	119	869	N.D.	
100) n-Butylbenzene	19.39	91	639	N.D.	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202412.D Vial: 1
Acq On : 20 Jun 2024 15:37 Operator: SC
Sample : P2402249-024 (6.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 11:18:56 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202412.D Vial: 1
Acq On : 20 Jun 2024 15:37 Operator: SC
Sample : P2402249-024 (6.0mL) Inst : MS09
Misc : S37-06062402

MJ 6/29/24

Quant Time: Jun 29 11:18:56 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

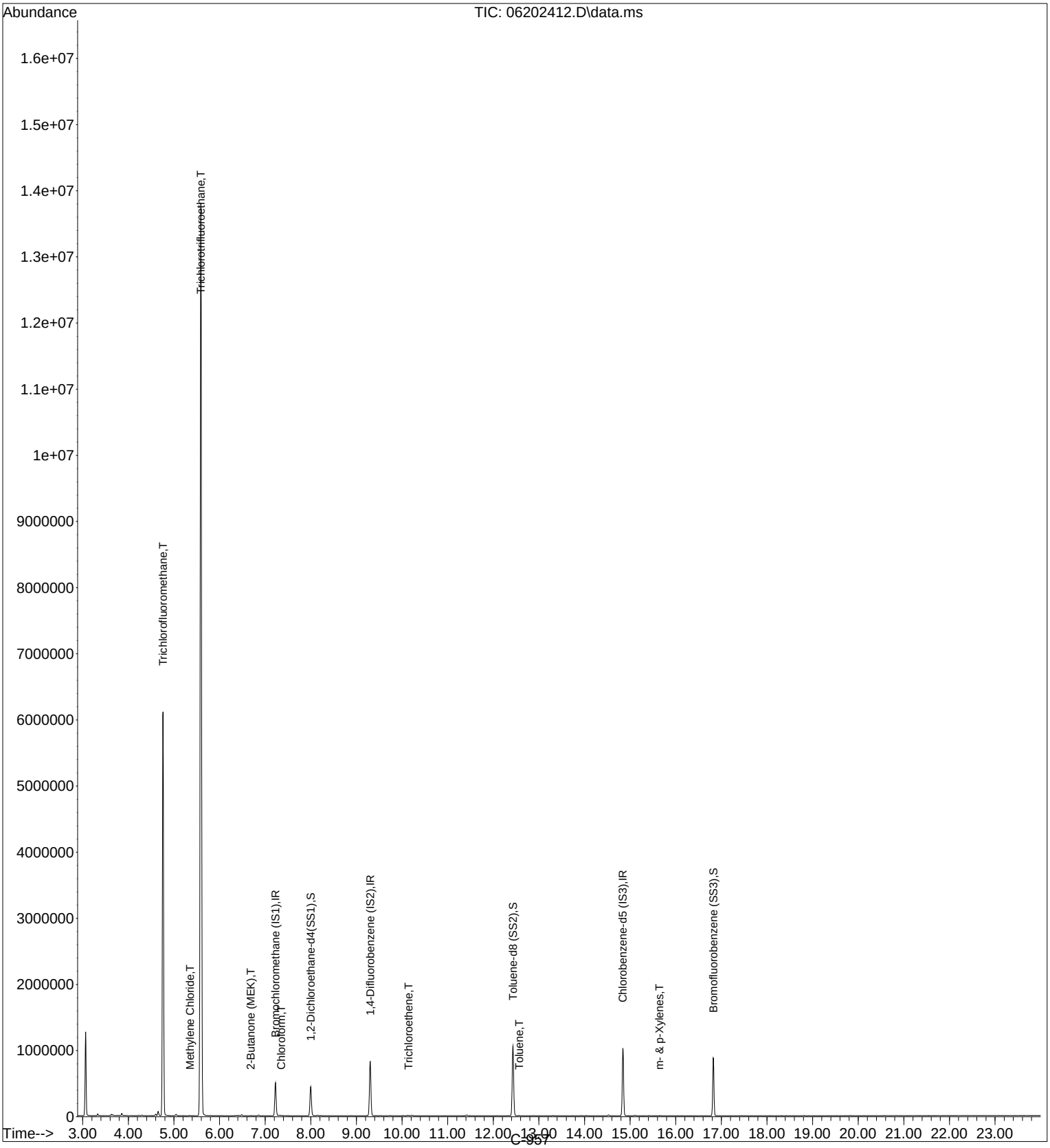
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	177761	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	771767	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	174127	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	383602	12.142	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.12%				
57) Toluene-d8 (SS2)	12.43	98	862132	12.938	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.52%				
73) Bromofluorobenzene (SS3)	16.83	174	299142	12.432	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.44%				
Target Compounds							Qvalue
14) Trichlorofluoromethane	4.76	101	4548445	107.479	ng		100
19) Methylene Chloride	5.35	84	1107	0.057	ng		95
21) Trichlorotrifluoroethane	5.59	151	4630235	258.637	ng		92
27) 2-Butanone (MEK)	6.69	72	697	0.064	ng	#	66
32) Chloroform	7.35	83	3012	0.086	ng		96
47) Trichloroethene	10.14	130	1906	0.092	ng		99
58) Toluene	12.57	91	4305	0.062	ng		98
67) m- & p-Xylenes	15.64	91	3533	0.053	ng		91

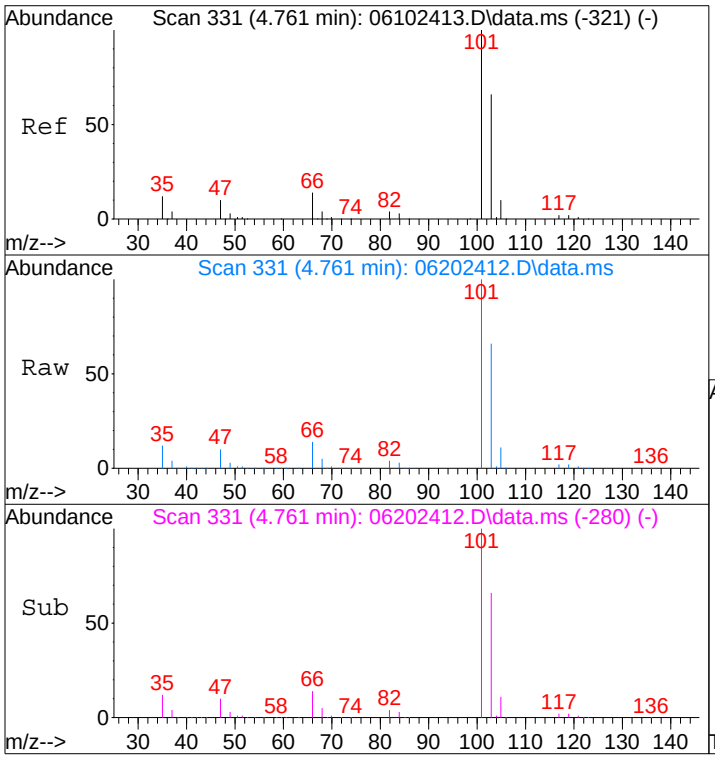
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202412.D Vial: 1
Acq On : 20 Jun 2024 15:37 Operator: SC
Sample : P2402249-024 (6.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 11:18:56 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

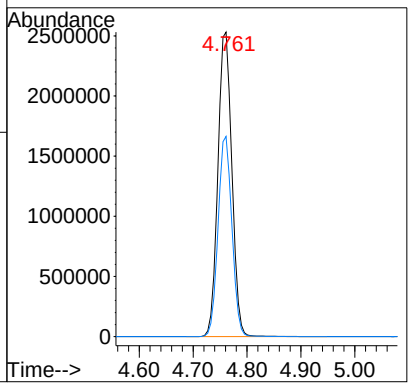


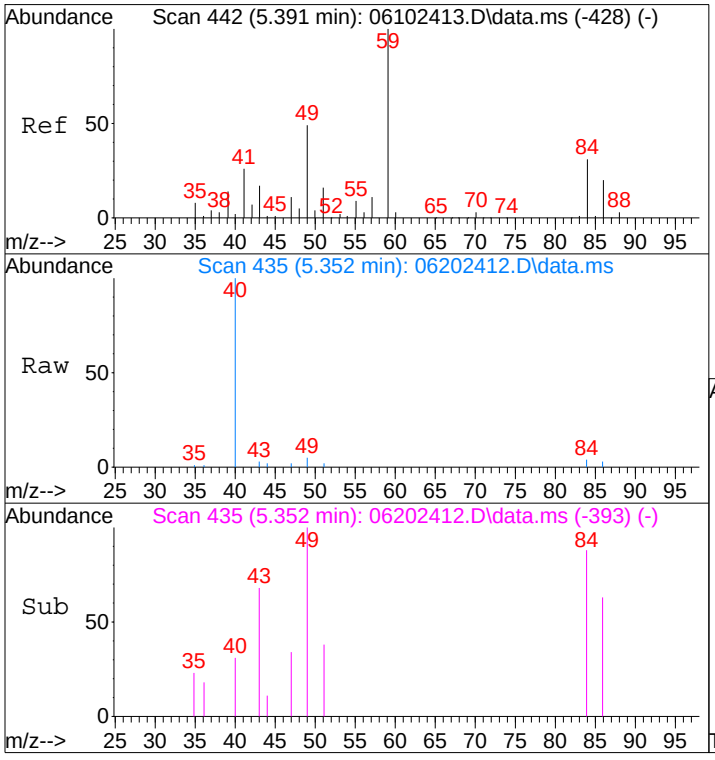


#14
Trichlorofluoromethane
Concen: 107.48 ng
RT: 4.76 min Scan# 331
Delta R.T. 0.040 min
Lab File: 06202412.D
Acq: 20 Jun 2024 15:37

Tgt Ion:101 Resp: 4548445

Ion	Ratio	Lower	Upper
101	100		
103	65.1	44.9	84.9

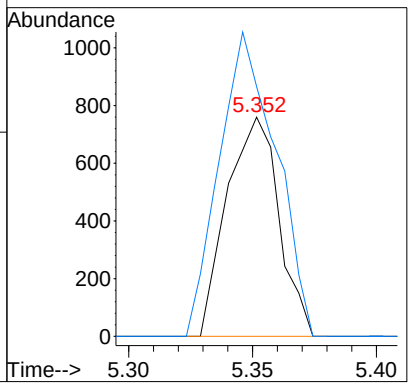


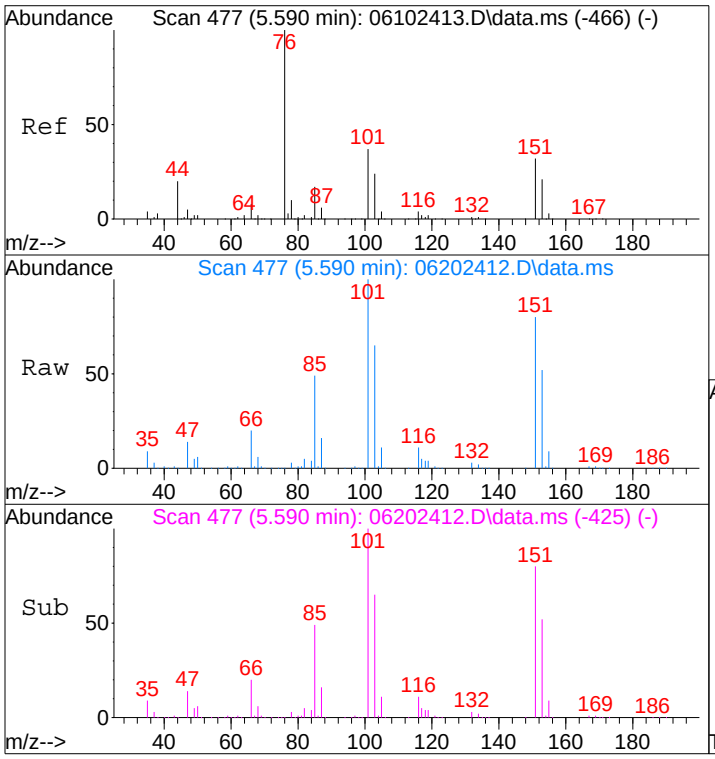


#19
Methylene Chloride
Concen: 0.06 ng
RT: 5.35 min Scan# 435
Delta R.T. -0.009 min
Lab File: 06202412.D
Acq: 20 Jun 2024 15:37

Tgt Ion: 84 Resp: 1107

Ion	Ratio	Lower	Upper
84	100		
49	151.8	132.9	182.9

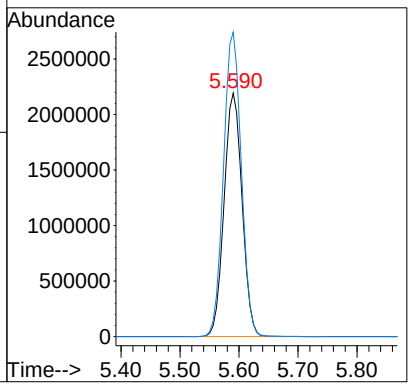


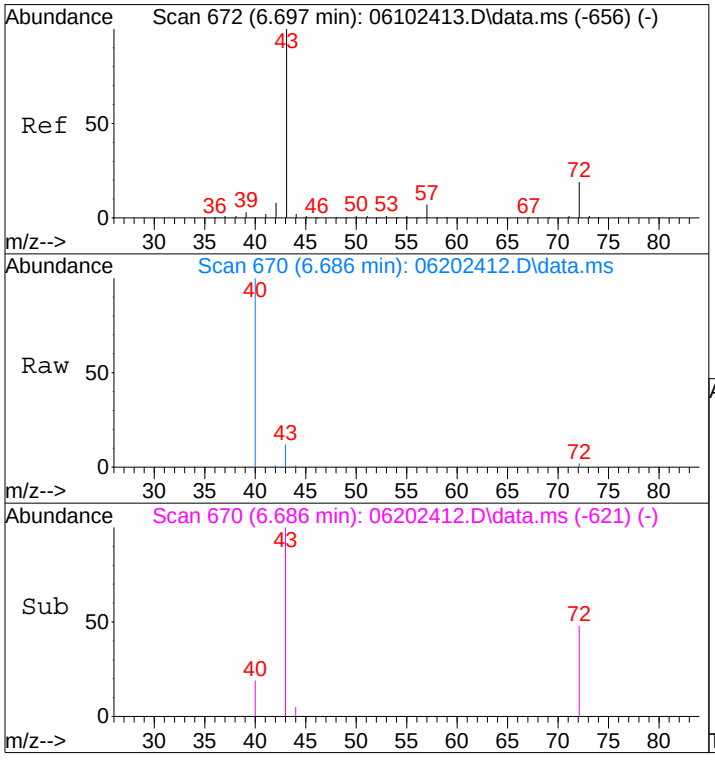


#21
Trichlorotrifluoroethane
Concen: 258.64 ng
RT: 5.59 min Scan# 477
Delta R.T. 0.044 min
Lab File: 06202412.D
Acq: 20 Jun 2024 15:37

Tgt Ion:151 Resp: 4630235

Ion	Ratio	Lower	Upper
151	100		
101	123.8	95.0	135.0

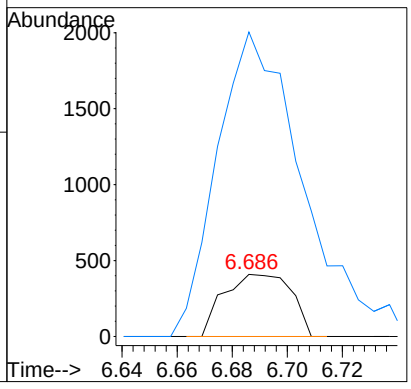


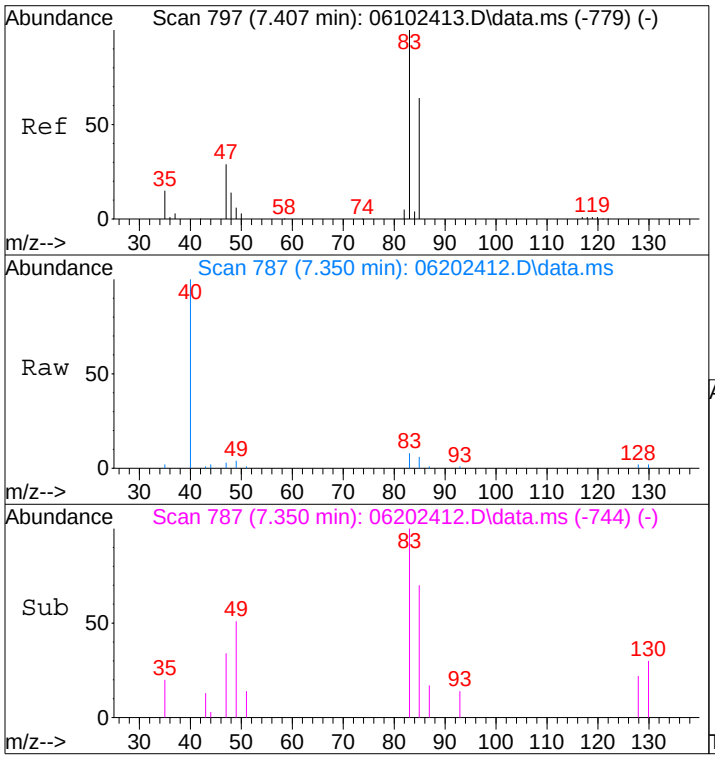


#27
2-Butanone (MEK)
Concen: 0.06 ng
RT: 6.69 min Scan# 670
Delta R.T. 0.028 min
Lab File: 06202412.D
Acq: 20 Jun 2024 15:37

Tgt Ion: 72 Resp: 697

Ion	Ratio	Lower	Upper
72	100		
43	622.8	506.8	546.8#

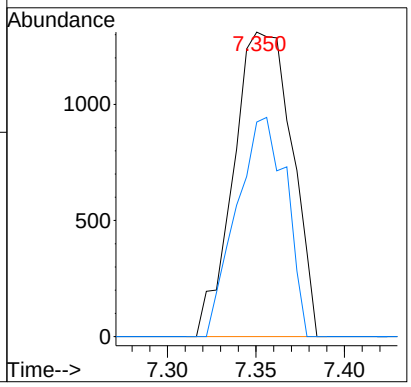


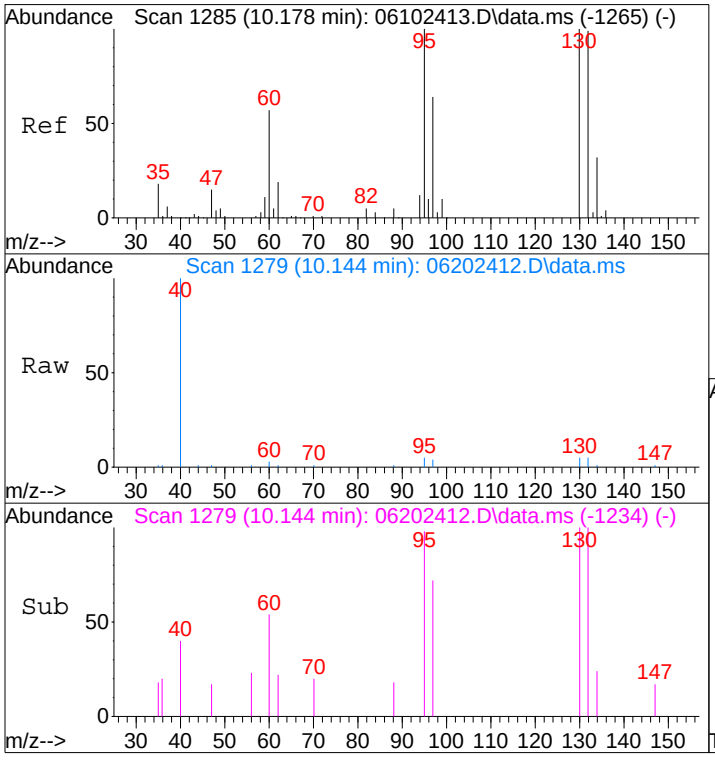


#32
Chloroform
Concen: 0.09 ng
RT: 7.35 min Scan# 787
Delta R.T. -0.004 min
Lab File: 06202412.D
Acq: 20 Jun 2024 15:37

Tgt Ion: 83 Resp: 3012

Ion	Ratio	Lower	Upper
83	100		
85	61.4	44.4	84.4

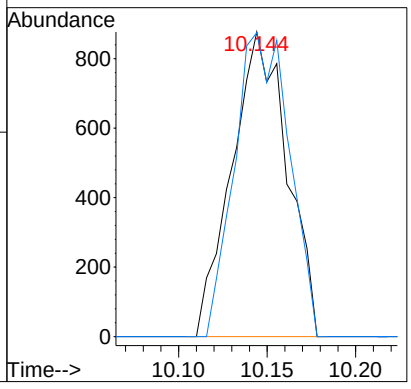


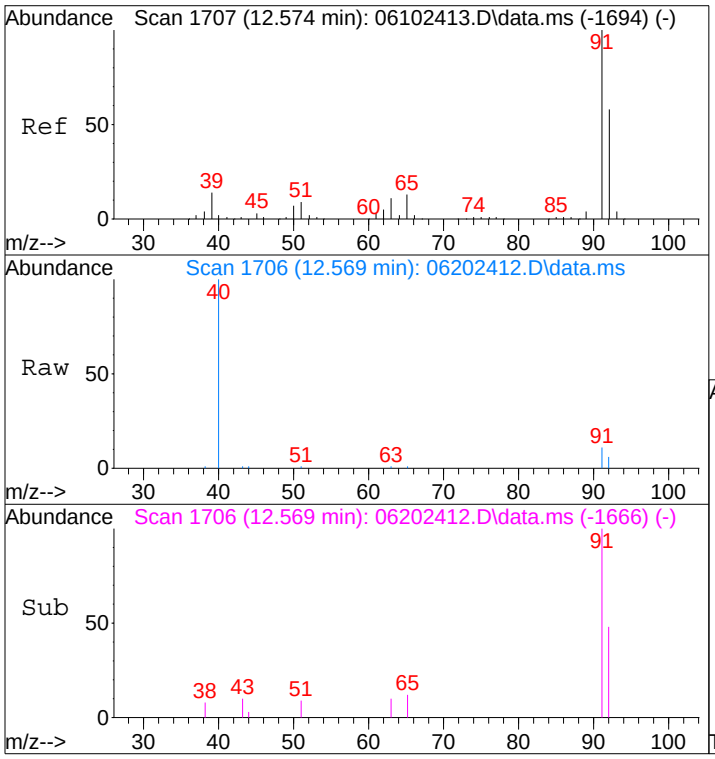


#47
Trichloroethene
Concen: 0.09 ng
RT: 10.14 min Scan# 1279
Delta R.T. 0.004 min
Lab File: 06202412.D
Acq: 20 Jun 2024 15:37

Tgt Ion:130 Resp: 1906

Ion	Ratio	Lower	Upper
130	100		
132	98.8	77.9	117.9

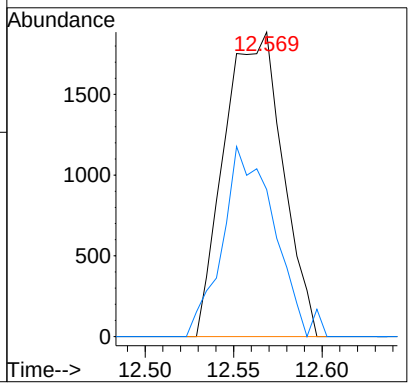


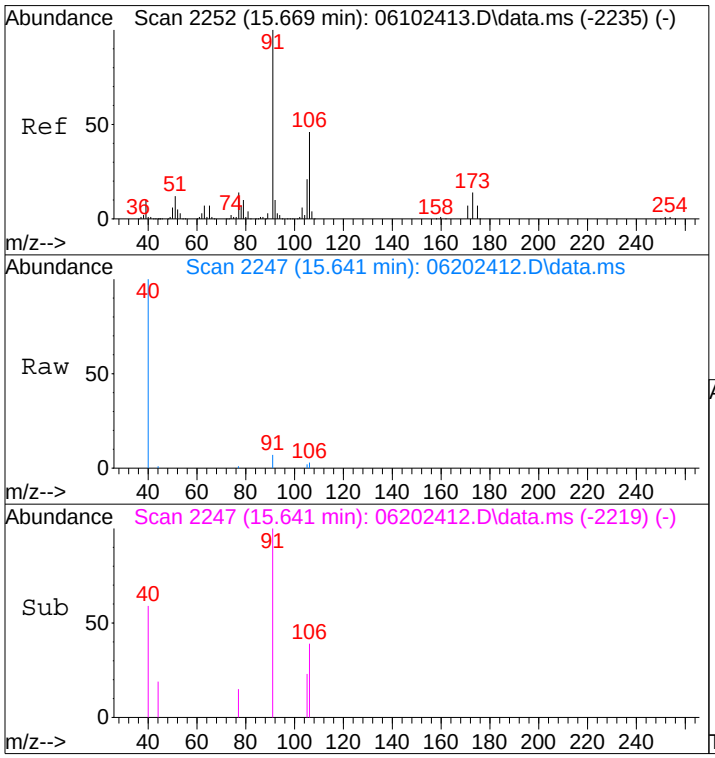


#58
Toluene
Concen: 0.06 ng
RT: 12.57 min Scan# 1706
Delta R.T. -0.023 min
Lab File: 06202412.D
Acq: 20 Jun 2024 15:37

Tgt Ion: 91 Resp: 4305

Ion	Ratio	Lower	Upper
91	100		
92	55.7	37.4	77.4

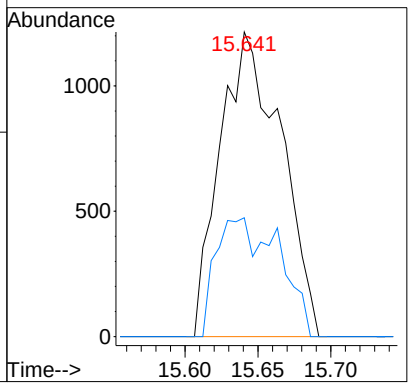




#67
m- & p-Xylenes
Concen: 0.05 ng
RT: 15.64 min Scan# 2247
Delta R.T. -0.040 min
Lab File: 06202412.D
Acq: 20 Jun 2024 15:37

Tgt Ion: 91 Resp: 3533

Ion	Ratio	Lower	Upper
91	100		
106	40.2	25.9	65.9



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202412.D Vial: 1
Acq On : 20 Jun 2024 15:37 Operator: SC
Sample : P2402249-024 (6.0mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 15:27:42 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

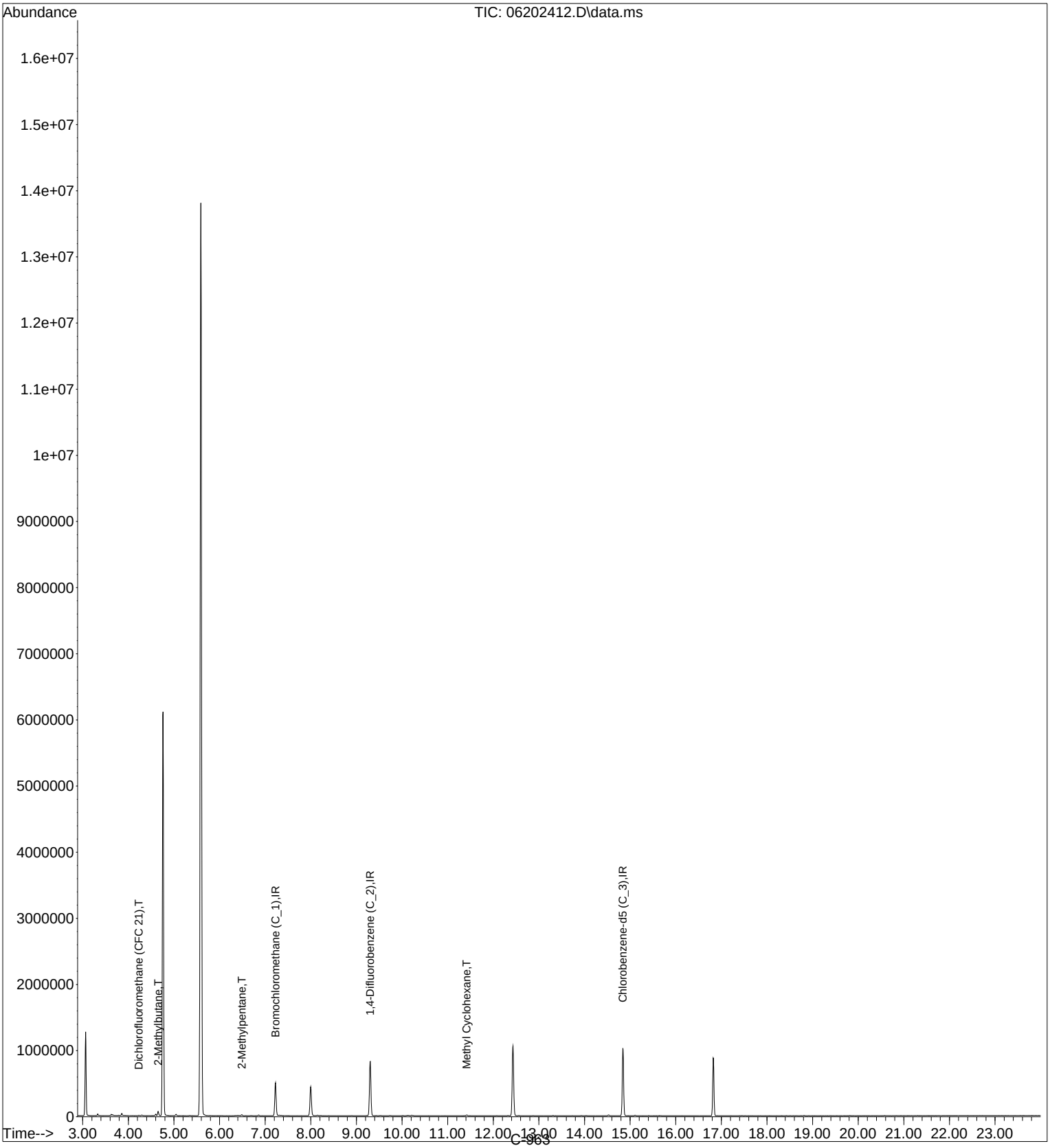
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	180900	12.500	ng		-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	772656	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	174127	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	0.00	85	0	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	0.00	83	0	N.D.			
4) 1,1-Difluoroethane	3.27	65	162	N.D.			
5) Chlorodifluoromethane ...	0.00	67	0	N.D.			
6) 1-Chloro-1,1-Difluoroe...	3.51	65	79	N.D.			
7) Dichlorofluoromethane ...	4.23	67	4177	0.101	ng		98
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	4.56	83	603	N.D.			
10) 2-Methylbutane	4.65	57	9356	0.434	ng		96
11) Methyl Acetate	5.35	43	855	N.D.			
12) 2-Methylpentane	6.49	71	2498	0.159	ng		82
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	0.00	84	0	N.D.			
17) 2,3-Dimethylpentane	9.53	56	2486	N.D.			
18) Dibromomethane	9.80	174	188	N.D.			
20) Methyl Cyclohexane	11.42	55	4420	0.148	ng	#	81
21) 1,3-Dichloropropane	0.00	76	0	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	0.00	75	0	N.D.			
25) Bromobenzene	17.03	77	115	N.D.			
26) 2-Chlorotoluene	17.60	91	1022	N.D.			
27) 4-Chlorotoluene	17.60	91	1022	N.D.			
28) Indane	19.12	117	116	N.D.			
29) Indene	0.00	115	0	N.D.			
30) 1,2,4,5-Tetramethylben...	20.19	119	55	N.D.			
31) 1,2,3,4-Tetramethylben...	20.22	119	185	N.D.			
32) 1,2,3,5-Tetramethylben...	20.60	119	167	N.D.			
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202412.D Vial: 1
Acq On : 20 Jun 2024 15:37 Operator: SC
Sample : P2402249-024 (6.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:27:42 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

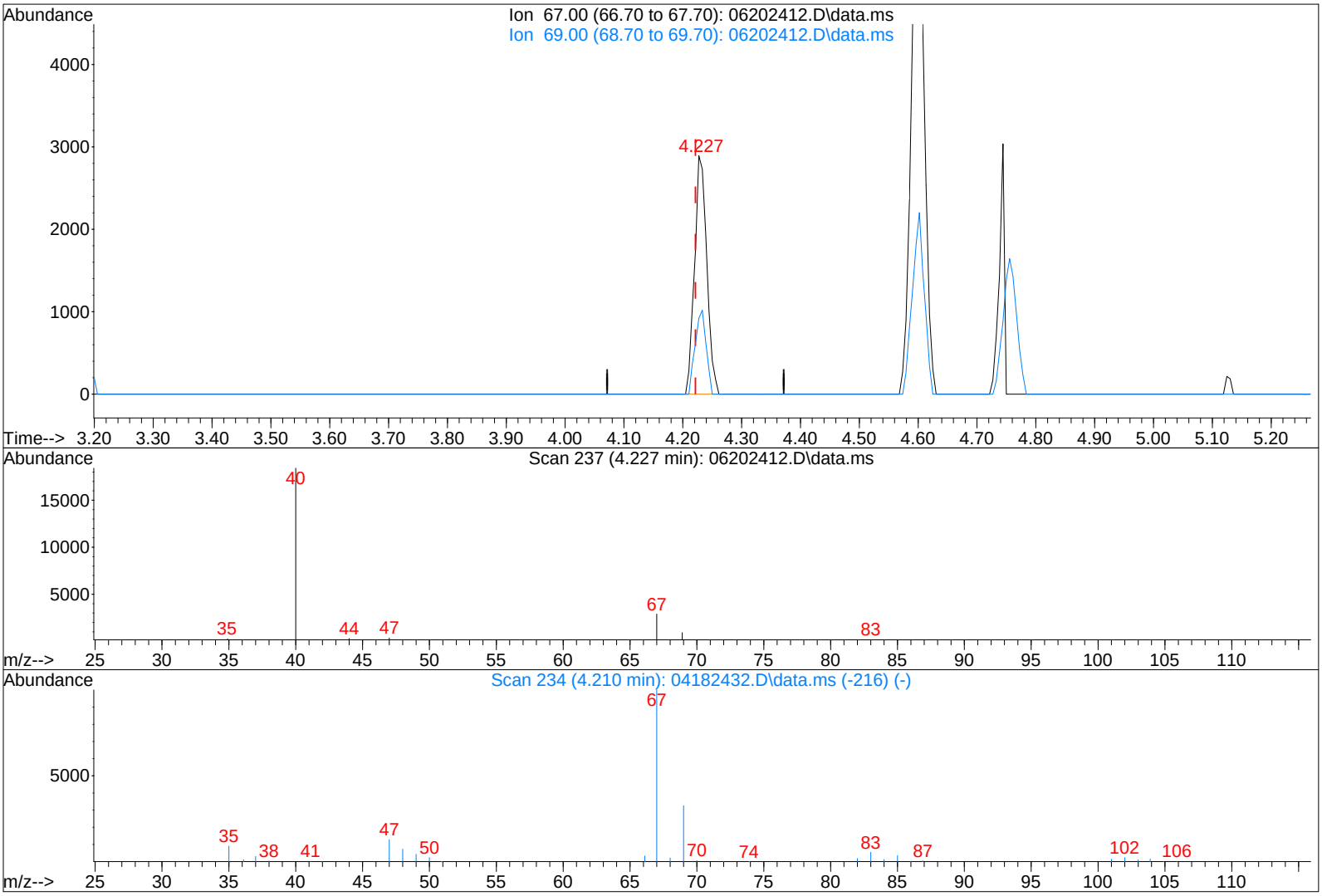


Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\20\06202412.D Vial: 1
Acq On : 20 Jun 2024 15:37 Operator: SC
Sample : P2402249-024 (6.0mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 15:27:42 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06202412.D\data.ms

(7) Dichlorofluoromethane (CFC 21) (T)

4.227min (+0.006) 0.10ng

response 4177

Ion	Exp%	Act%
67.00	100	100
69.00	32.40	31.48
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202407.D Vial: 1
Acq On : 20 Jun 2024 12:56 Operator: SC
Sample : P2402249-024Dil (0.5mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 20 13:25:59 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/20/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.22	130	189343	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	847518	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	194880	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	413603	12.290	ng		0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.32%				
57) Toluene-d8 (SS2)	12.43	98	954012	12.792	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.32%				
73) Bromofluorobenzene (SS3)	16.83	174	329831	12.248	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.00%				
Target Compounds							Qvalue
2) Propene	3.32	42	478	N.D.			
3) Dichlorodifluoromethan...	3.38	85	126	N.D.			
4) Chloromethane	3.53	50	188	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.40	45	52	N.D.			
11) Acetonitrile	4.44	41	1320	N.D.			
12) Acrolein	4.55	56	348	N.D.			
13) Acetone	0.00	58	0	N.D. d			
14) Trichlorofluoromethane	4.75	101	312748	6.938	ng		99
15) 2-Propanol (Isopropanol)	4.88	45	1551	N.D.			
16) Acrylonitrile	5.04	53	109	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	0.00	59	0	N.D.			
19) Methylene Chloride	5.35	84	1090	0.052	ng		99
20) 3-Chloro-1-propene (Al...	5.45	41	312	N.D.			
21) Trichlorotrifluoroethane	5.57	151	329905	17.301	ng		95
22) Carbon Disulfide	5.61	76	966	N.D.			
23) trans-1,2-Dichloroethene	6.13	61	124	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D.			
27) 2-Butanone (MEK)	6.69	72	615	0.053	ng	#	81
28) cis-1,2-Dichloroethene	7.07	61	269	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.			
30) Ethyl Acetate	0.00	61	0	N.D.			
31) n-Hexane	7.30	57	1395	N.D.			
32) Chloroform	7.34	83	773	N.D.			
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	512	N.D.			
38) 1,1,1-Trichloroethane	8.40	97	788	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.84	56	574	No Calib		#	
41) Benzene	8.89	78	2627	N.D.			
42) Carbon Tetrachloride	0.00	117	0	N.D.			
43) Cyclohexane	9.22	84	1038	N.D.			
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.06	83	696	N.D.			
47) Trichloroethene	10.14	130	1446	0.063	ng		98
48) 1,4-Dioxane	10.16	88	276	N.D.			
49) 2,2,4-Trimethylpentane...	10.23	57	2979	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202407.D Vial: 1
Acq On : 20 Jun 2024 12:56 Operator: SC
Sample : P2402249-024Dil (0.5mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 20 13:25:59 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

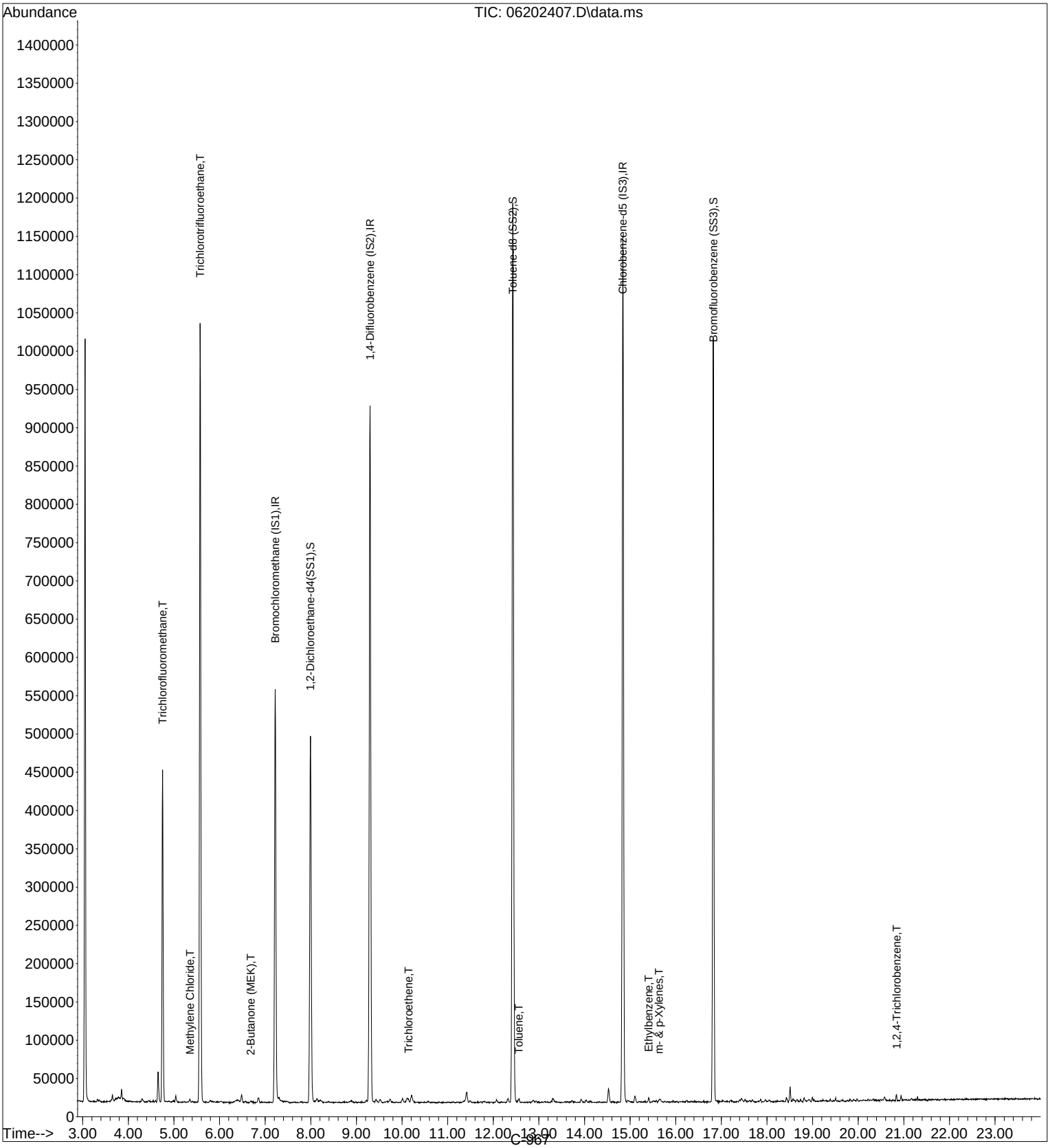
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	10.57	71	325	N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
58) Toluene	12.56	91	4940	0.063 ng	91
59) 2-Hexanone	12.94	43	1629	N.D.	
60) Dibromochloromethane	13.06	129	762	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	13.80	43	615	N.D.	
63) n-Octane	13.91	57	362	N.D.	
64) Tetrachloroethene	14.03	166	954	N.D.	
65) Chlorobenzene	14.89	112	1238	N.D.	
66) Ethylbenzene	15.41	91	4535	0.051 ng	84
67) m- & p-Xylenes	15.63	91	5076	0.068 ng	89
68) Bromoform	15.67	173	695	N.D.	
69) Styrene	16.09	104	530	N.D.	
70) o-Xylene	16.24	91	2072	N.D.	
71) n-Nonane	16.61	43	354	N.D.	
72) 1,1,2,2-Tetrachloroethane	16.20	83	515	N.D.	
74) Cumene	17.03	105	2557	N.D.	
75) alpha-Pinene	17.53	93	1143	N.D.	
76) n-Propylbenzene	17.68	91	2548	N.D.	
77) 3-Ethyltoluene	17.03	105	2557	No Calib	
78) 4-Ethyltoluene	17.86	105	2157	N.D.	
79) 1,3,5-Trimethylbenzene	17.96	105	1354	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.03	105	2557	No Calib	
82) 1,2,4-Trimethylbenzene	18.43	105	1977	N.D.	
83) n-Decane	0.00	58	0	N.D.	
84) Benzyl Chloride	18.56	91	1777	N.D.	
85) 1,3-Dichlorobenzene	18.58	146	1441	N.D.	
86) 1,4-Dichlorobenzene	18.66	146	1512	N.D.	
87) sec-Butylbenzene	18.74	105	1614	N.D.	
88) 4-Isopropyltoluene (p-...	18.93	119	1707	N.D.	
89) 1,2,3-Trimethylbenzene	17.03	105	2557	No Calib	
90) 1,2-Dichlorobenzene	19.03	146	1044	N.D.	
91) d-Limonene	0.00	68	0	N.D.	
92) 1,2-Dibromo-3-Chloropr...	19.51	157	445	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	2905	0.071 ng	99
95) Naphthalene	20.94	128	4759	N.D.	
96) n-Dodecane	0.00	58	0	N.D.	
97) Hexachlorobutadiene	21.30	225	888	N.D.	
98) Cyclohexanone	15.41	55	754	No Calib #	
99) tert-Butylbenzene	18.43	119	1406	N.D.	
100) n-Butylbenzene	19.39	91	1602	N.D.	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202407.D Vial: 1
Acq On : 20 Jun 2024 12:56 Operator: SC
Sample : P2402249-024Dil (0.5mL) Inst : MS09
Misc : S37-06062402

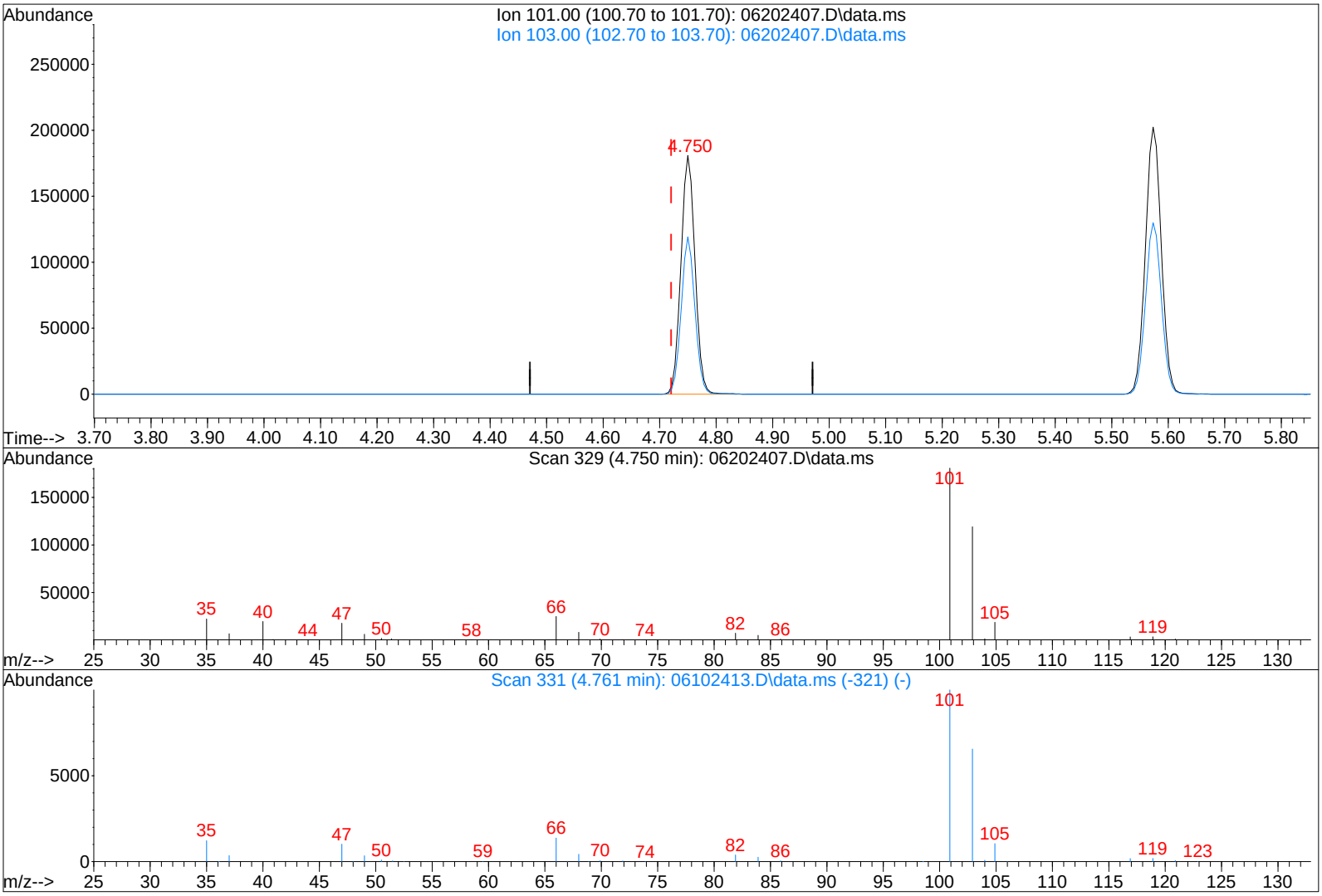
Quant Time: Jun 20 13:25:59 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\20\06202407.D Vial: 1
Acq On : 20 Jun 2024 12:56 Operator: SC
Sample : P2402249-024Dil (0.5mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 20 13:25:59 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06202407.D\data.ms

(14) Trichlorofluoromethane (T)

4.750min (+0.029) 6.94ng

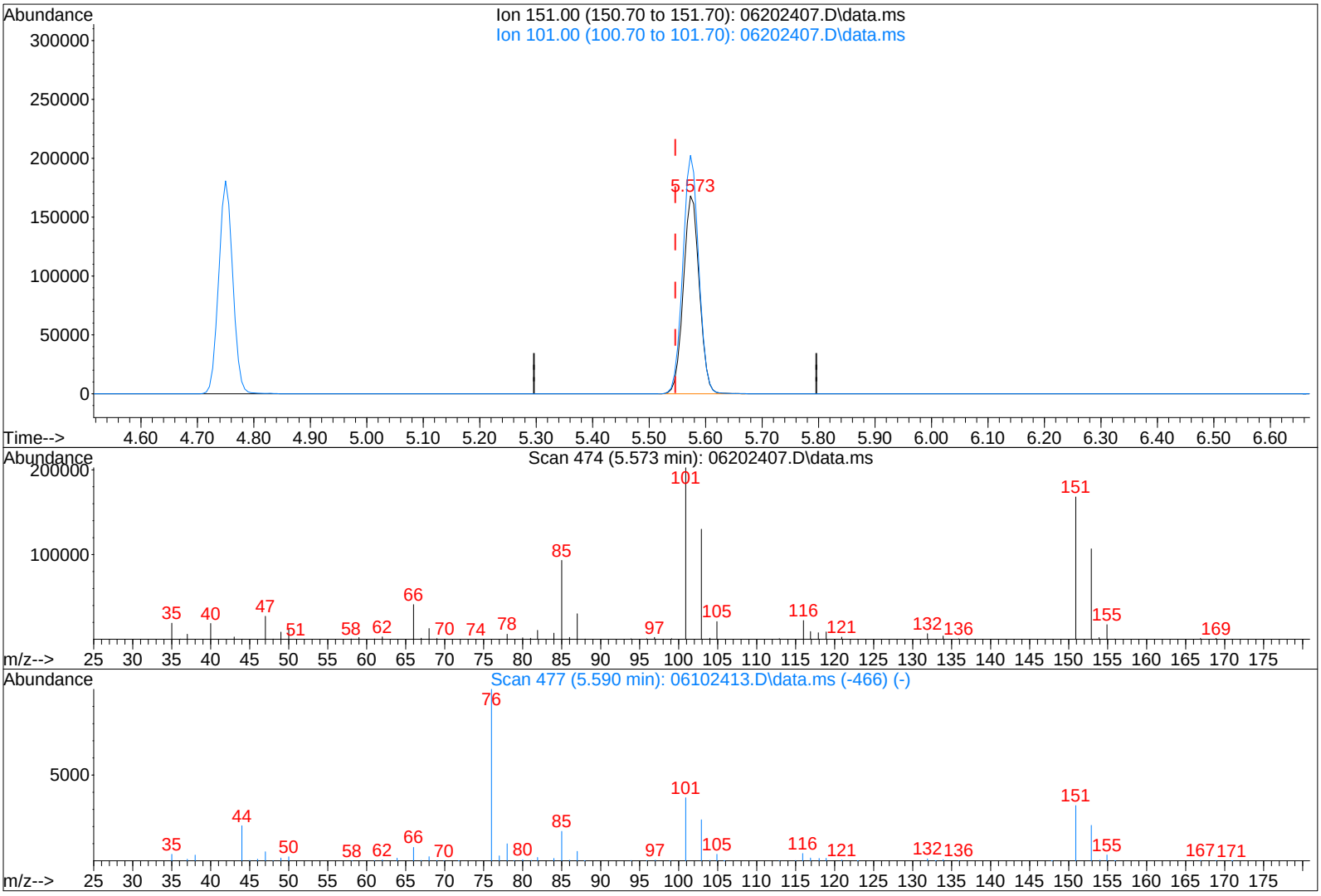
response 312748

Ion	Exp%	Act%
101.00	100	100
103.00	64.90	64.27
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\20\06202407.D Vial: 1
Acq On : 20 Jun 2024 12:56 Operator: SC
Sample : P2402249-024Dil (0.5mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 20 13:25:59 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06202407.D\data.ms

(21) Trichlorotrifluoroethane (T)

5.573min (+0.027) 17.30ng

response 329905

Ion	Exp%	Act%
151.00	100	100
101.00	115.00	120.07
0.00	0.00	0.00
0.00	0.00	0.00

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\20\
Data File : 06202412.D
Acq On : 20 Jun 2024 15:37
Operator : SC
Sample : P2402249-024 (6.0mL)
Misc : S37-06062402
ALS Vial : 1 Sample Multiplier: 1

MJ 6/28/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06202412.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.063	23	32	41	rBV	1266314	1948875	6.75%	4.233%
2	3.330	71	79	86	rBV5	26063	38879	0.13%	0.084%
3	3.625	123	131	134	rBV	17764	24834	0.09%	0.054%
4	3.654	134	136	144	rVB2	11906	17734	0.06%	0.039%
5	3.858	167	172	179	rVB	32093	40317	0.14%	0.088%
6	4.295	245	249	255	rVB3	7798	14195	0.05%	0.031%
7	4.602	298	303	307	rBV2	21178	30804	0.11%	0.067%
8	4.653	307	312	321	rVB2	64003	107176	0.37%	0.233%
9	4.761	321	331	349	rBV	6106390	10943144	37.88%	23.770%
10	5.045	375	381	388	rVB2	19370	34312	0.12%	0.075%
11	5.590	464	477	499	rBV	13797980	28886694	100.00%	62.746%
12	6.487	630	635	641	rVB	13883	24883	0.09%	0.054%
13	6.856	694	700	707	rBV4	9450	18257	0.06%	0.040%
14	7.225	754	765	776	rBV	497131	1056669	3.66%	2.295%
15	7.998	890	901	912	rBV	436815	981129	3.40%	2.131%
16	8.145	920	927	934	rVB3	5434	13389	0.05%	0.029%
17	9.304	1121	1131	1145	rVB	820054	1856363	6.43%	4.032%

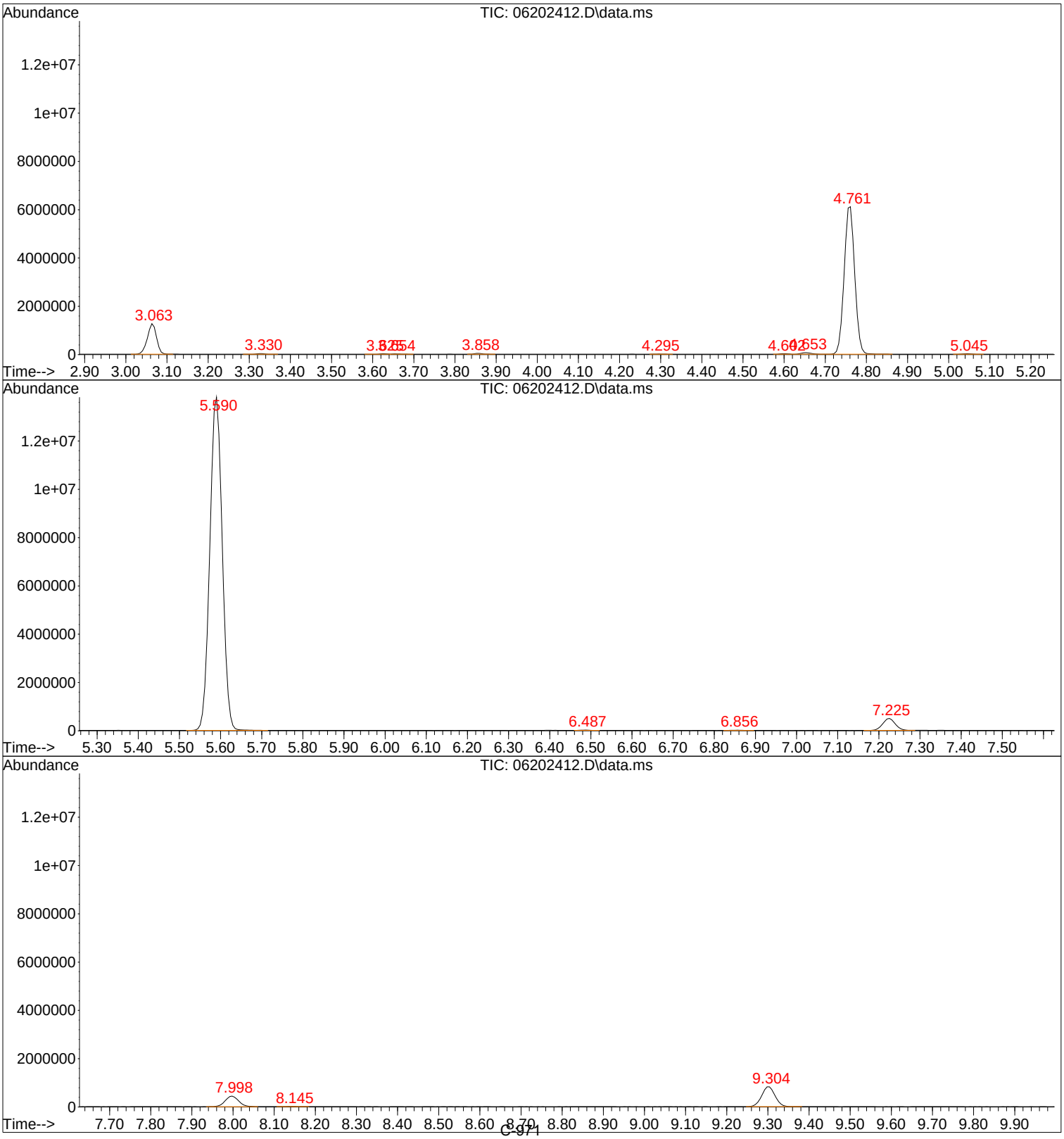
Sum of corrected areas: 46037654

LSC Report - Integrated Chromatogram

Data Path : I:\MS09\DATA\2024 06\20\
Data File : 06202412.D
Acq On : 20 Jun 2024 15:37
Operator : SC
Sample : P2402249-024 (6.0mL)
Misc : S37-06062402
ALS Vial : 1 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



C-971

Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\20\\
Data File : 06202412.D
Acq On : 20 Jun 2024 15:377
Operator : SCC
Sample : P2402249-024 (6.0mL))
Misc : S37-060624022
ALS Vial : 1 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

						Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected

****

Quantitation Report (QT Reviewed)

MJ 6/29/24

Data File : I:\MS09\DATA\2024 06\21\06212413.D Vial: 1
Acq On : 21 Jun 2024 17:01 Operator: SC
Sample : P2402249-025 (2.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 08:12:12 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	179983	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	785308	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	180753	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	392785	12.279	ng		0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.24%				
57) Toluene-d8 (SS2)	12.43	98	885651	12.804	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.40%				
73) Bromofluorobenzene (SS3)	16.82	174	304028	12.172	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.36%				
Target Compounds							Qvalue
2) Propene	0.00	42	0	N.D. d			
3) Dichlorodifluoromethan...	3.32	85	1447	N.D.			
4) Chloromethane	3.51	50	121	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	3.81	54	241	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.28	45	24806	1.418	ng		75
11) Acetonitrile	4.44	41	1233	N.D.			
12) Acrolein	4.54	56	1218	0.094	ng		93
13) Acetone	4.64	58	16707	1.195	ng	#	76
14) Trichlorofluoromethane	4.76	101	1141818	26.648	ng		99
15) 2-Propanol (Isopropanol)	0.00	45	0	N.D. d			
16) Acrylonitrile	5.05	53	860	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.35	59	1329	N.D.			
19) Methylene Chloride	5.35	84	1562	0.079	ng		95
20) 3-Chloro-1-propene (Al...	5.46	41	627	N.D.			
21) Trichlorotrifluoroethane	5.58	151	938856	51.796	ng		94
22) Carbon Disulfide	0.00	76	0	N.D. d			
23) trans-1,2-Dichloroethene	6.14	61	126	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	6.39	73	1045	N.D.			
26) Vinyl Acetate	6.44	86	1209	0.375	ng	#	82
27) 2-Butanone (MEK)	6.67	72	1511	0.137	ng	#	62
28) cis-1,2-Dichloroethene	7.08	61	696	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D. d			
30) Ethyl Acetate	7.28	61	302984	44.850	ng		95
31) n-Hexane	0.00	57	0	N.D. d			
32) Chloroform	7.36	83	1053	N.D.			
34) Tetrahydrofuran (THF)	7.77	72	186	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.12	62	710	N.D.			
38) 1,1,1-Trichloroethane	8.40	97	692	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.84	56	2271	No Calib		#	
41) Benzene	8.90	78	22302	0.308	ng		97
42) Carbon Tetrachloride	0.00	117	0	N.D.			
43) Cyclohexane	9.22	84	901	N.D.			
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.08	83	472	N.D.			
47) Trichloroethene	10.15	130	5651	0.267	ng		96
48) 1,4-Dioxane	10.14	88	162	N.D.			
49) 2,2,4-Trimethylpentane...	10.25	57	4213	0.059	ng		79
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212413.D Vial: 1
Acq On : 21 Jun 2024 17:01 Operator: SC
Sample : P2402249-025 (2.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 08:12:12 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

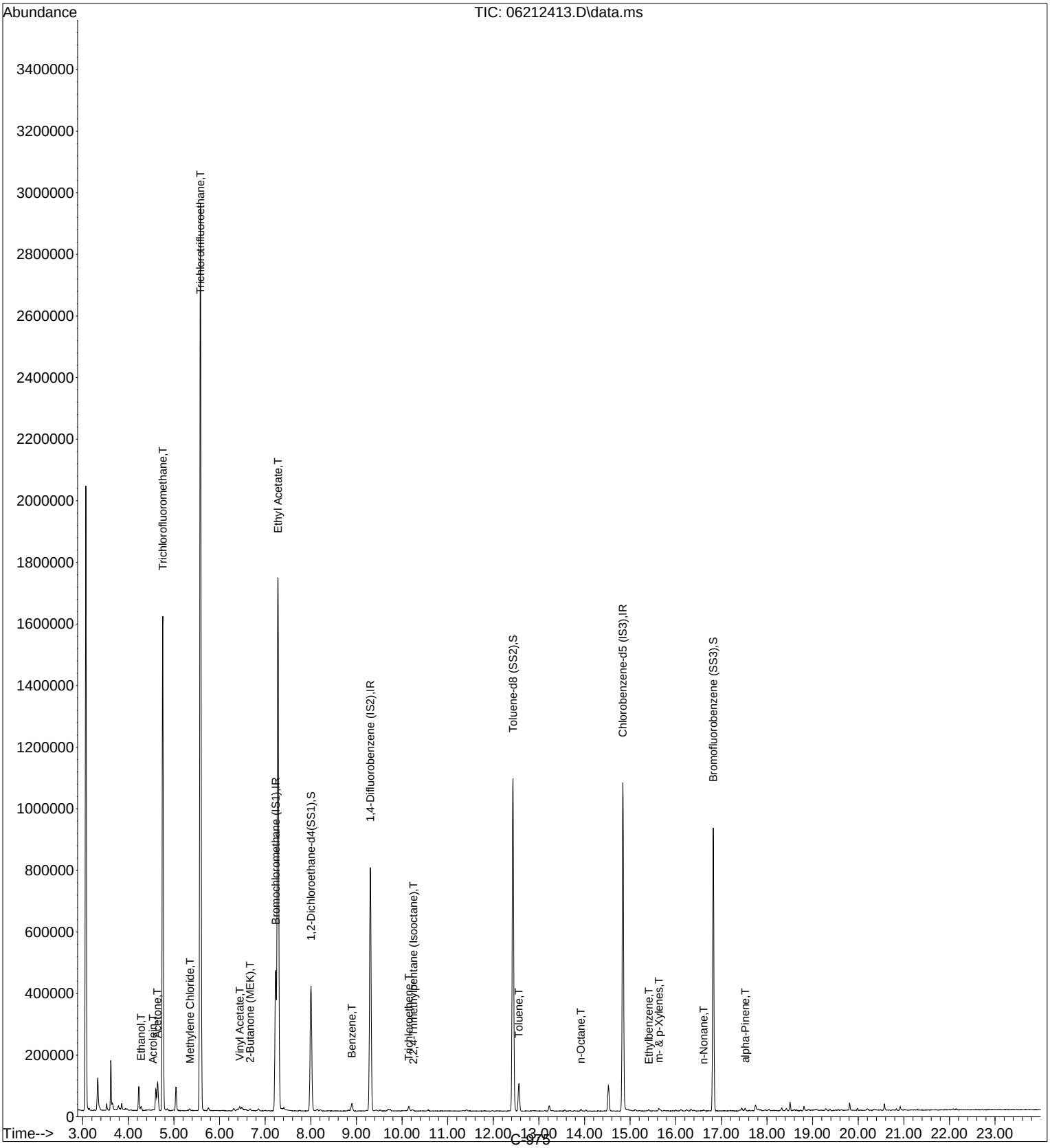
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	10.57	71	672	N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	11.34	58	126	N.D.	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
58) Toluene	12.56	91	79262	1.097 ng	99
59) 2-Hexanone	12.93	43	1365	N.D.	
60) Dibromochloromethane	13.07	129	609	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	13.78	43	1956	N.D.	
63) n-Octane	13.92	57	973	0.065 ng	86
64) Tetrachloroethene	14.03	166	1072	N.D.	
65) Chlorobenzene	14.91	112	908	N.D.	
66) Ethylbenzene	15.41	91	4137	0.050 ng	100
67) m- & p-Xylenes	15.63	91	7019	0.101 ng	98
68) Bromoform	15.67	173	734	N.D.	
69) Styrene	16.10	104	787	N.D.	
70) o-Xylene	16.24	91	3362	N.D.	
71) n-Nonane	16.61	43	1995	0.050 ng	77
72) 1,1,2,2-Tetrachloroethane	16.21	83	481	N.D.	
74) Cumene	17.03	105	1286	N.D.	
75) alpha-Pinene	17.53	93	3172	0.080 ng	85
76) n-Propylbenzene	17.68	91	1859	N.D.	
77) 3-Ethyltoluene	17.03	105	1286	No Calib	
78) 4-Ethyltoluene	17.86	105	1692	N.D.	
79) 1,3,5-Trimethylbenzene	17.96	105	2152	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.03	105	1286	No Calib	
82) 1,2,4-Trimethylbenzene	18.43	105	3168	N.D.	
83) n-Decane	0.00	58	0	N.D.	
84) Benzyl Chloride	18.56	91	448	N.D.	
85) 1,3-Dichlorobenzene	18.58	146	887	N.D.	
86) 1,4-Dichlorobenzene	18.66	146	958	N.D.	
87) sec-Butylbenzene	18.74	105	1589	N.D.	
88) 4-Isopropyltoluene (p-...	18.93	119	1950	N.D.	
89) 1,2,3-Trimethylbenzene	17.03	105	1286	No Calib	
90) 1,2-Dichlorobenzene	19.02	146	773	N.D.	
91) d-Limonene	19.08	68	593	N.D.	
92) 1,2-Dibromo-3-Chloropr...	19.51	157	170	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	1412	N.D.	
95) Naphthalene	20.94	128	2274	N.D.	
96) n-Dodecane	0.00	58	0	N.D.	
97) Hexachlorobutadiene	21.30	225	655	N.D.	
98) Cyclohexanone	15.40	55	353	No Calib #	
99) tert-Butylbenzene	18.50	119	645	N.D.	
100) n-Butylbenzene	19.39	91	1520	N.D.	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212413.D Vial: 1
Acq On : 21 Jun 2024 17:01 Operator: SC
Sample : P2402249-025 (2.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 08:12:12 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

MJ 6/29/24

Data File : I:\MS09\DATA\2024 06\21\06212413.D Vial: 1
Acq On : 21 Jun 2024 17:01 Operator: SC
Sample : P2402249-025 (2.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 08:12:12 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

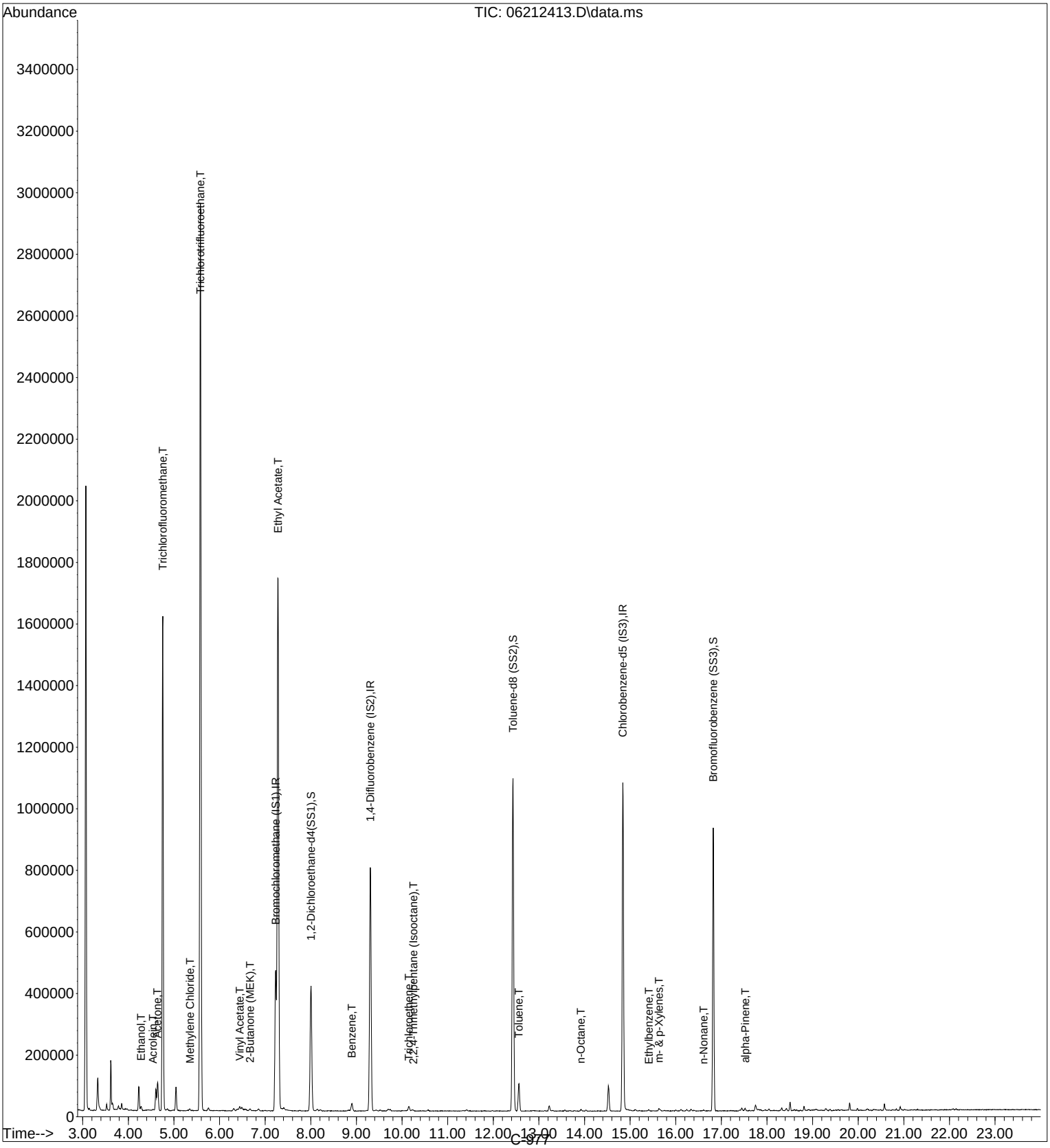
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	179983	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	785308	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	180753	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	392785	12.279	ng		0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.24%				
57) Toluene-d8 (SS2)	12.43	98	885651	12.804	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.40%				
73) Bromofluorobenzene (SS3)	16.82	174	304028	12.172	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.36%				
Target Compounds							Qvalue
10) Ethanol	4.28	45	24806	1.418	ng		75
12) Acrolein	4.54	56	1218	0.094	ng		93
13) Acetone	4.64	58	16707	1.195	ng	#	76
14) Trichlorofluoromethane	4.76	101	1141818	26.648	ng		99
19) Methylene Chloride	5.35	84	1562	0.079	ng		95
21) Trichlorotrifluoroethane	5.58	151	938856	51.796	ng		94
26) Vinyl Acetate	6.44	86	1209	0.375	ng	#	82
27) 2-Butanone (MEK)	6.67	72	1511	0.137	ng	#	62
30) Ethyl Acetate	7.28	61	302984	44.850	ng		95
41) Benzene	8.90	78	22302	0.308	ng		97
47) Trichloroethene	10.15	130	5651	0.267	ng		96
49) 2,2,4-Trimethylpentane...	10.25	57	4213	0.059	ng		79
58) Toluene	12.56	91	79262	1.097	ng		99
63) n-Octane	13.92	57	973	0.065	ng		86
66) Ethylbenzene	15.41	91	4137	0.050	ng		100
67) m- & p-Xylenes	15.63	91	7019	0.101	ng		98
71) n-Nonane	16.61	43	1995	0.050	ng		77
75) alpha-Pinene	17.53	93	3172	0.080	ng		85

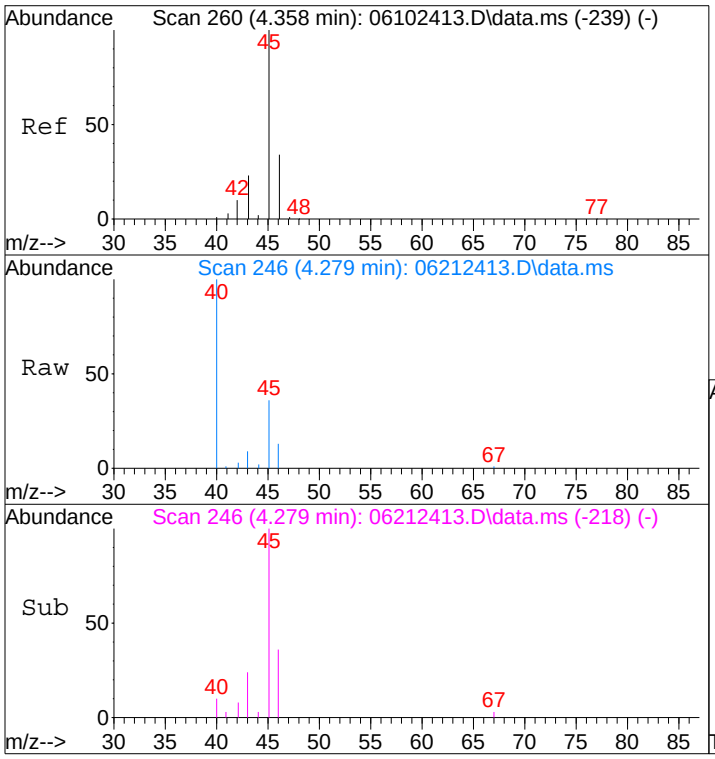
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212413.D Vial: 1
Acq On : 21 Jun 2024 17:01 Operator: SC
Sample : P2402249-025 (2.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 08:12:12 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

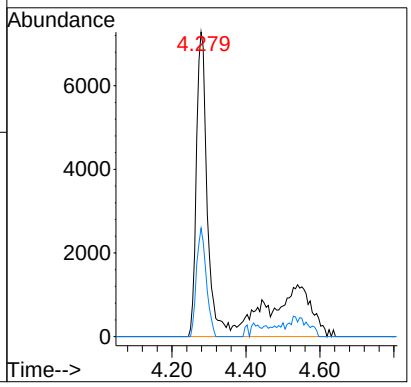


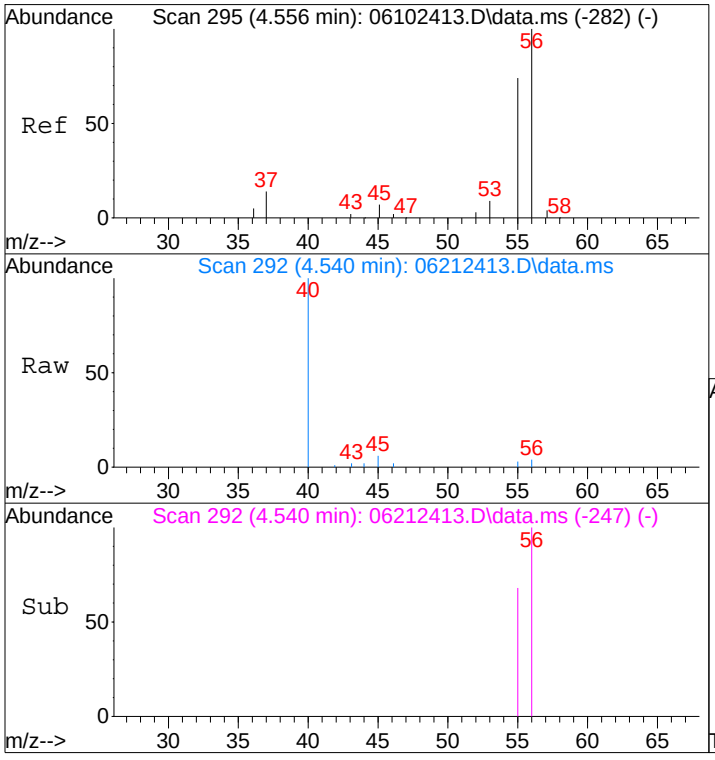


#10
Ethanol
Concen: 1.42 ng
RT: 4.28 min Scan# 246
Delta R.T. -0.088 min
Lab File: 06212413.D
Acq: 21 Jun 2024 17:01

Tgt Ion: 45 Resp: 24806

Ion	Ratio	Lower	Upper
45	100		
46	19.2	13.5	53.5

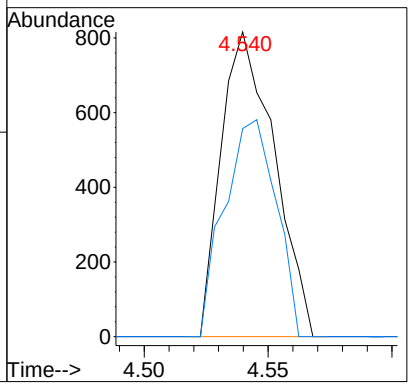


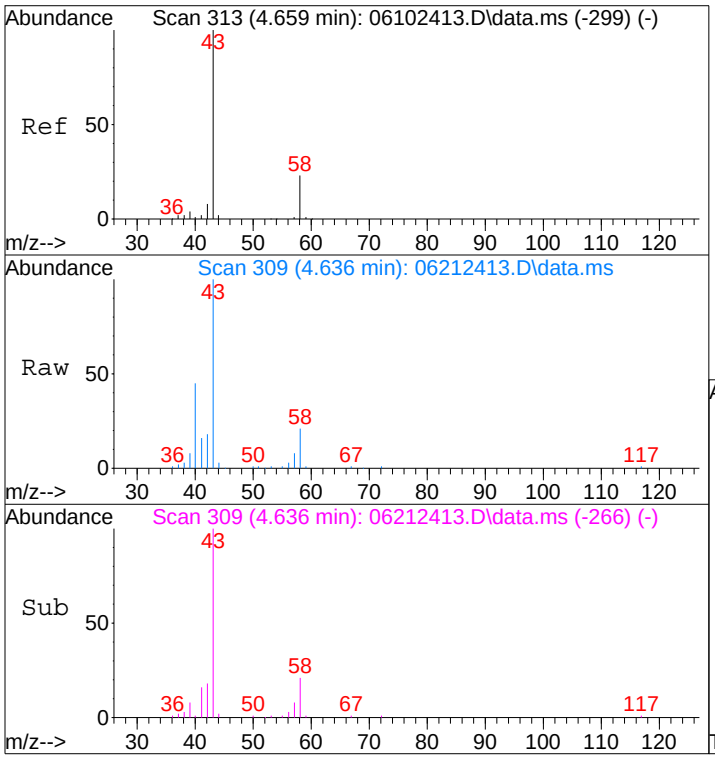


#12
Acrolein
Concen: 0.09 ng
RT: 4.54 min Scan# 292
Delta R.T. 0.004 min
Lab File: 06212413.D
Acq: 21 Jun 2024 17:01

Tgt Ion: 56 Resp: 1218

Ion	Ratio	Lower	Upper
56	100		
55	69.5	55.5	95.5

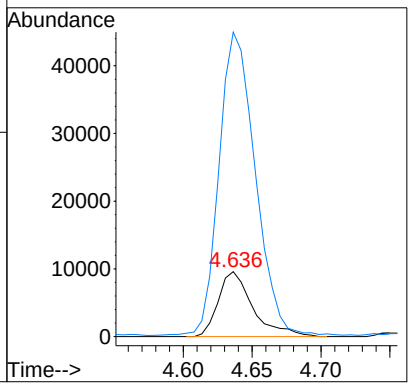


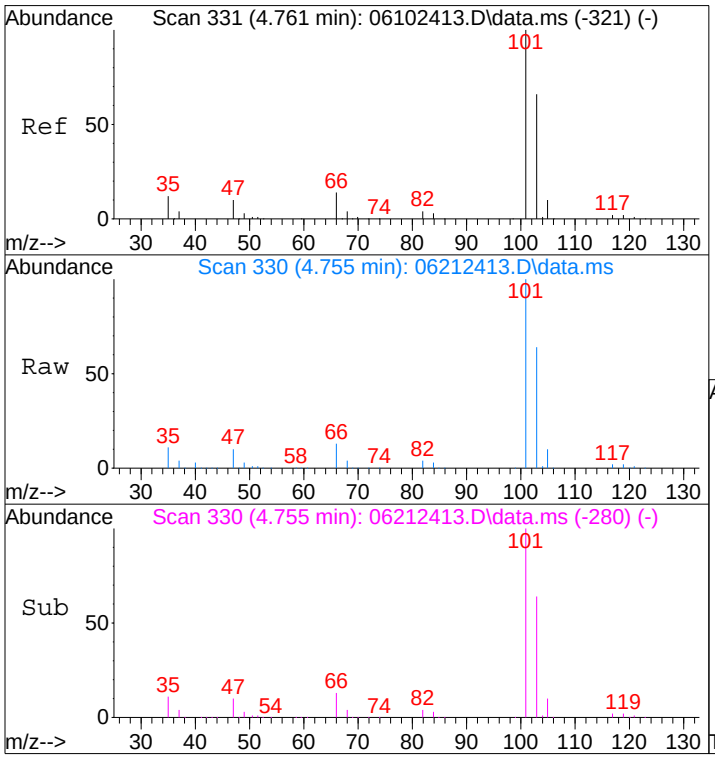


#13
Acetone
Concen: 1.19 ng
RT: 4.64 min Scan# 309
Delta R.T. -0.006 min
Lab File: 06212413.D
Acq: 21 Jun 2024 17:01

Tgt Ion: 58 Resp: 16707

Ion	Ratio	Lower	Upper
58	100		
43	490.2	400.7	460.7#

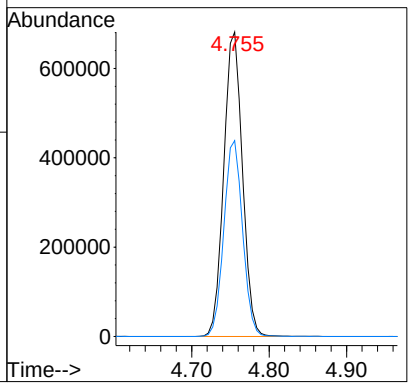


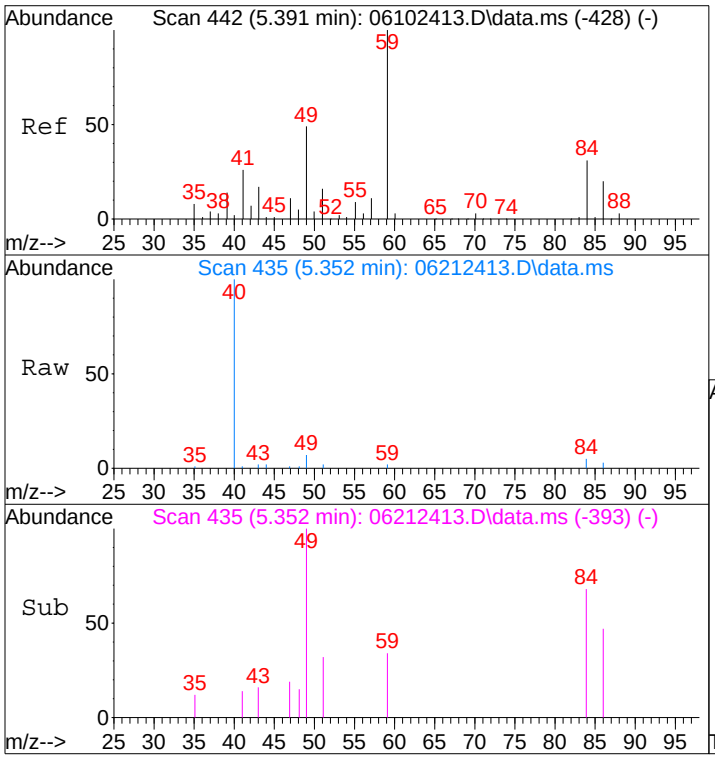


#14
Trichlorofluoromethane
Concen: 26.65 ng
RT: 4.76 min Scan# 330
Delta R.T. 0.035 min
Lab File: 06212413.D
Acq: 21 Jun 2024 17:01

Tgt Ion:101 Resp: 1141818

Ion	Ratio	Lower	Upper
101	100		
103	64.4	44.9	84.9

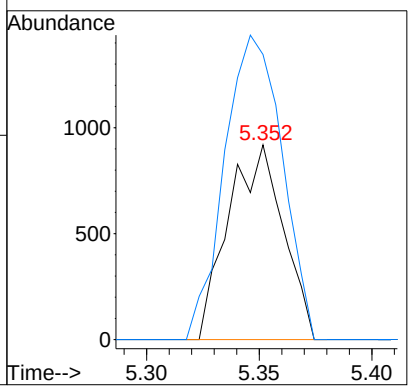


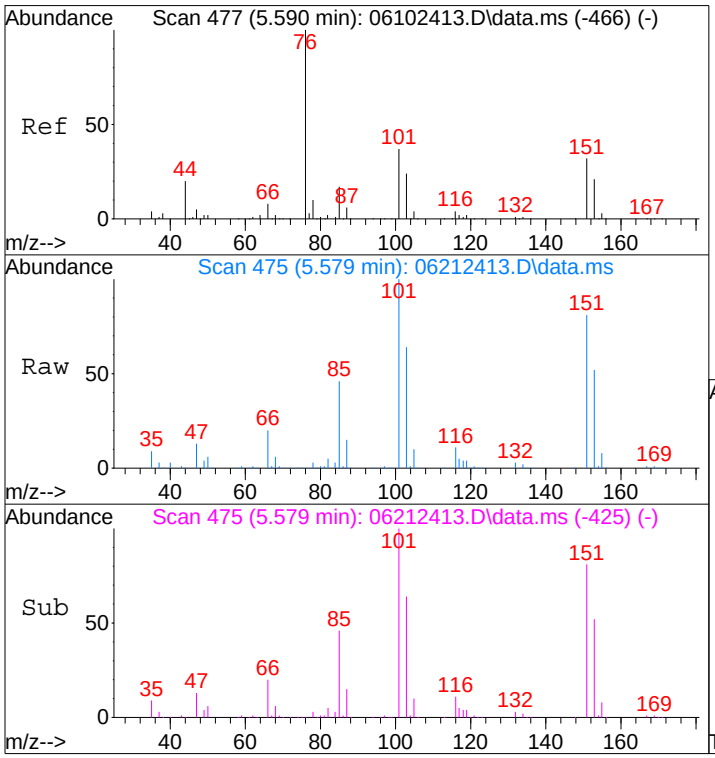


#19
Methylene Chloride
Concen: 0.08 ng
RT: 5.35 min Scan# 435
Delta R.T. -0.009 min
Lab File: 06212413.D
Acq: 21 Jun 2024 17:01

Tgt Ion: 84 Resp: 1562

Ion	Ratio	Lower	Upper
84	100		
49	164.0	132.9	182.9

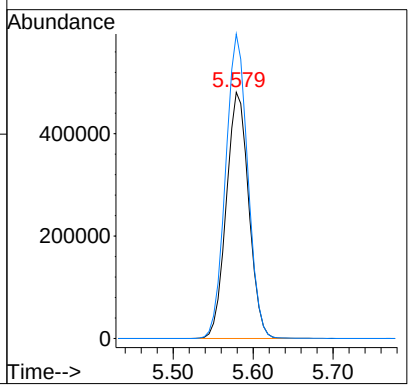


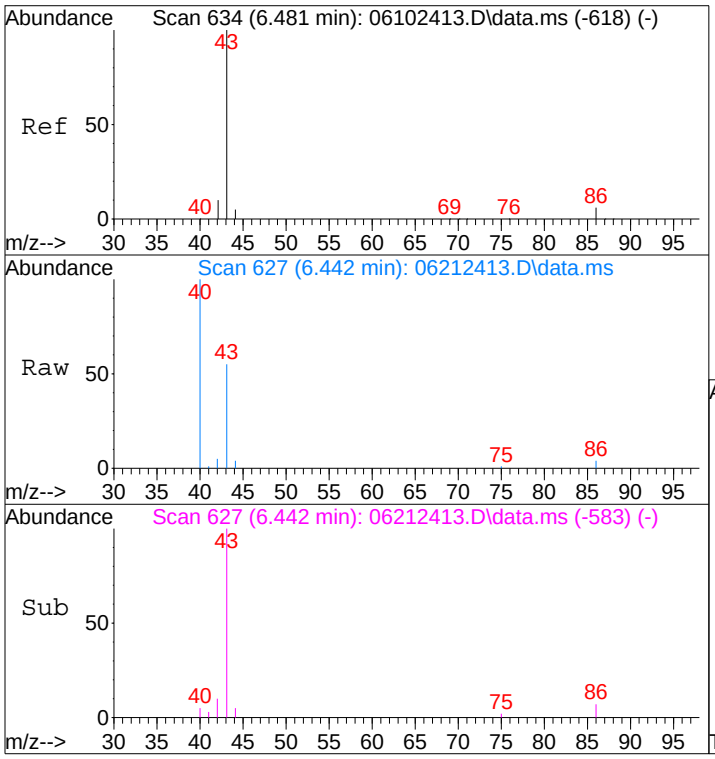


#21
Trichlorotrifluoroethane
Concen: 51.80 ng
RT: 5.58 min Scan# 475
Delta R.T. 0.033 min
Lab File: 06212413.D
Acq: 21 Jun 2024 17:01

Tgt Ion:151 Resp: 938856

Ion	Ratio	Lower	Upper
151	100		
101	121.9	95.0	135.0

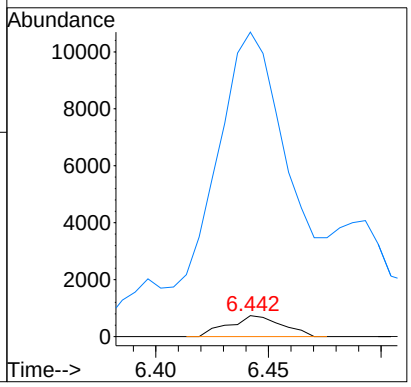


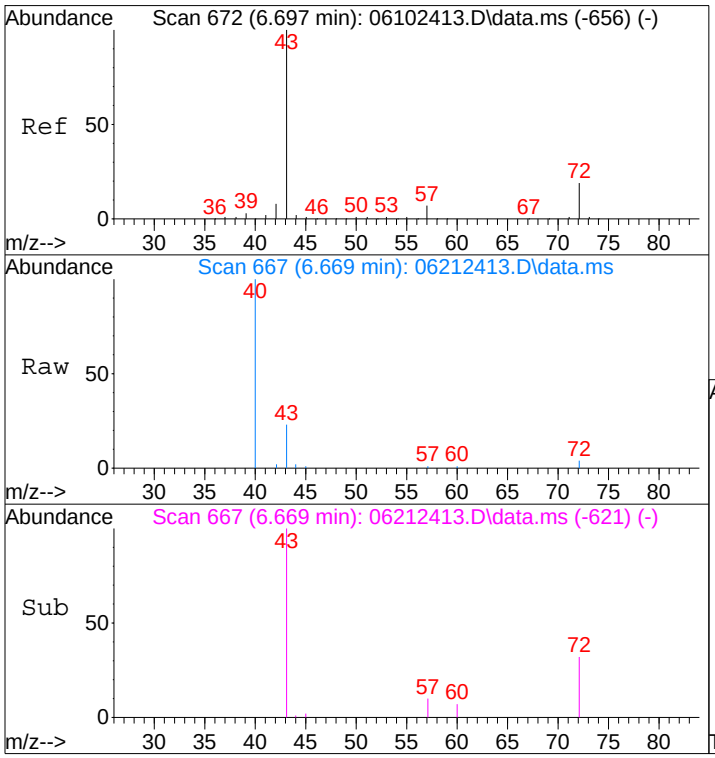


#26
Vinyl Acetate
Concen: 0.37 ng
RT: 6.44 min Scan# 627
Delta R.T. 0.003 min
Lab File: 06212413.D
Acq: 21 Jun 2024 17:01

Tgt Ion: 86 Resp: 1209

Ion	Ratio	Lower	Upper
86	100		
43	1574.6	1668.9	1708.9#

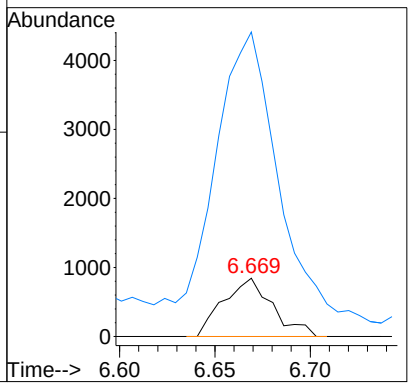


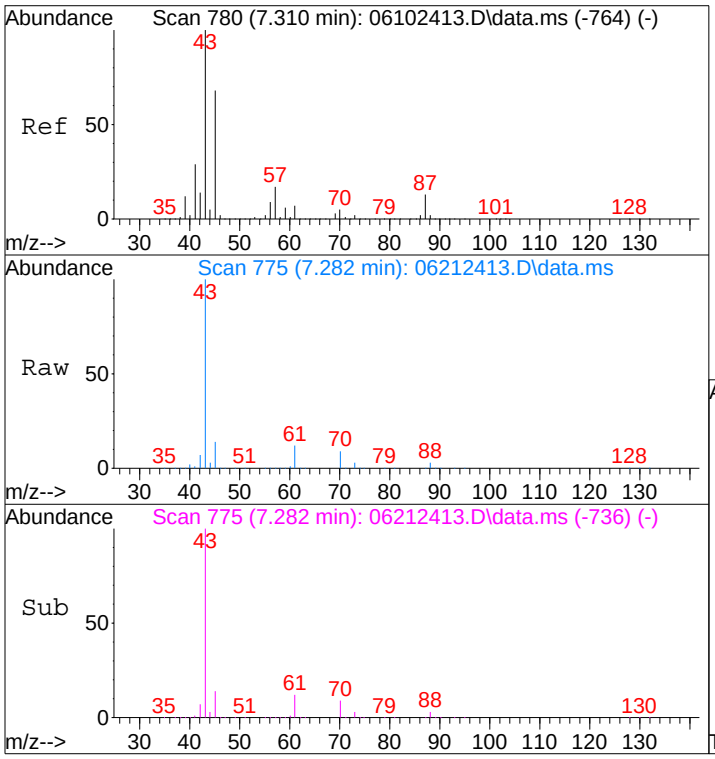


#27
2-Butanone (MEK)
Concen: 0.14 ng
RT: 6.67 min Scan# 667
Delta R.T. 0.011 min
Lab File: 06212413.D
Acq: 21 Jun 2024 17:01

Tgt Ion: 72 Resp: 1511

Ion	Ratio	Lower	Upper
72	100		
43	634.3	506.8	546.8#

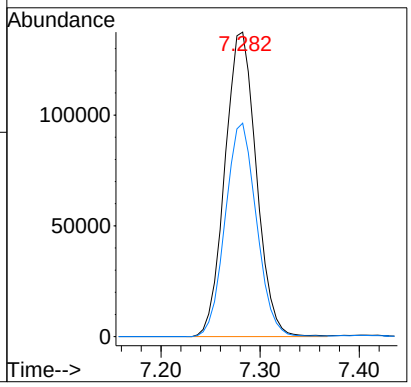


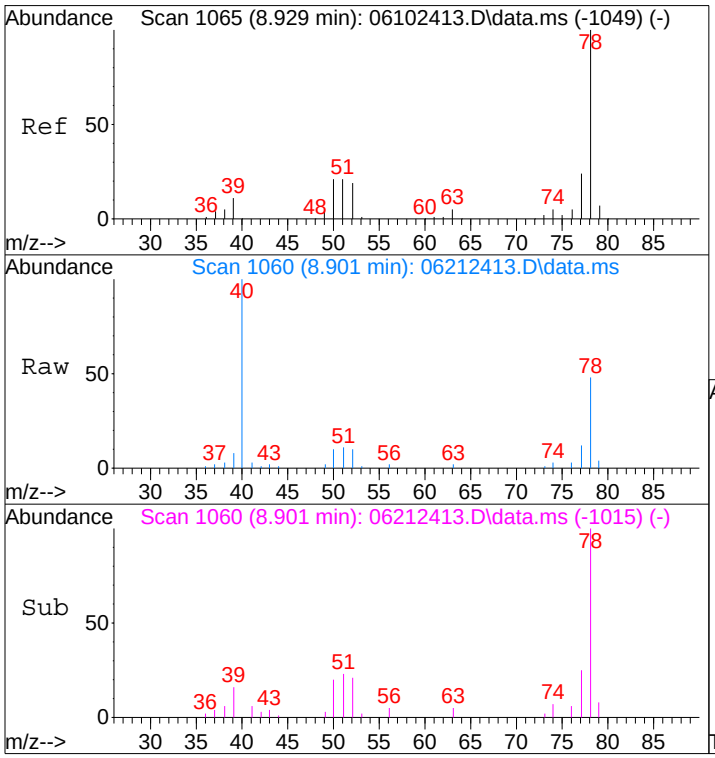


#30
Ethyl Acetate
Concen: 44.85 ng
RT: 7.28 min Scan# 775
Delta R.T. 0.023 min
Lab File: 06212413.D
Acq: 21 Jun 2024 17:01

Tgt Ion: 61 Resp: 302984

Ion	Ratio	Lower	Upper
61	100		
70	69.6	53.5	93.5

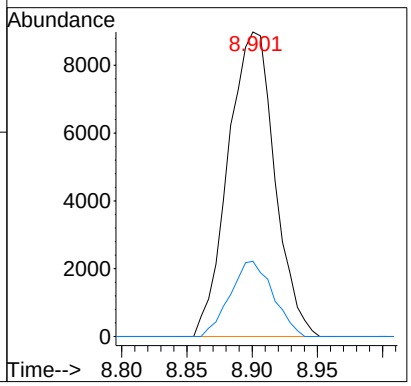


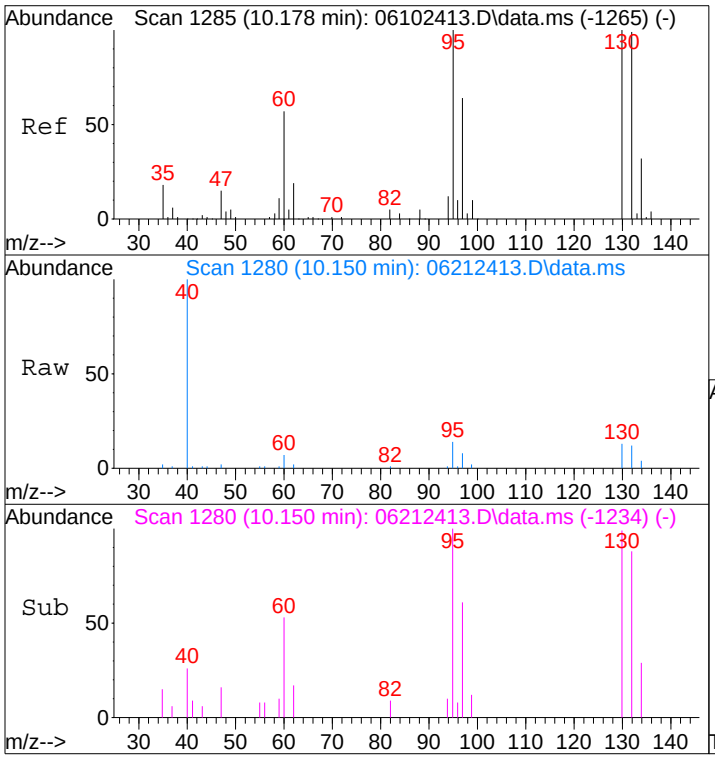


#41
Benzene
Concen: 0.31 ng
RT: 8.90 min Scan# 1060
Delta R.T. 0.003 min
Lab File: 06212413.D
Acq: 21 Jun 2024 17:01

Tgt Ion: 78 Resp: 22302

Ion	Ratio	Lower	Upper
78	100		
77	22.8	4.0	44.0

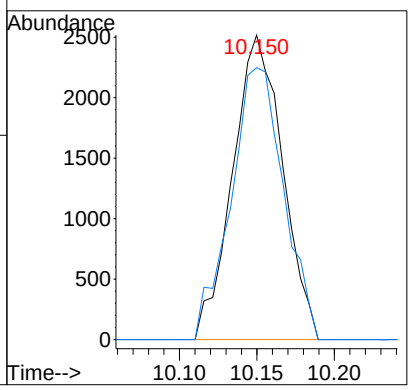


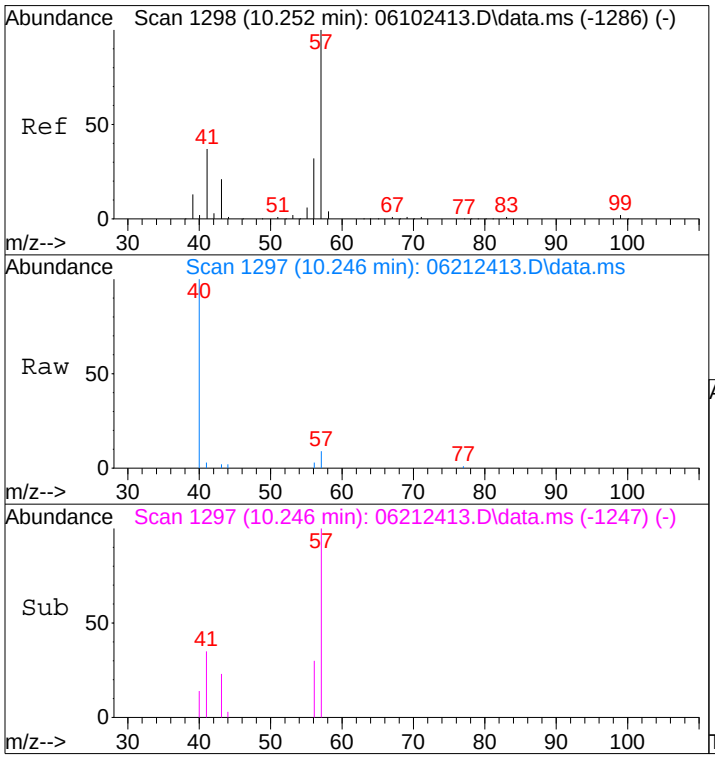


#47
Trichloroethene
Concen: 0.27 ng
RT: 10.15 min Scan# 1280
Delta R.T. 0.010 min
Lab File: 06212413.D
Acq: 21 Jun 2024 17:01

Tgt Ion:130 Resp: 5651

Ion	Ratio	Lower	Upper
130	100		
132	94.3	77.9	117.9

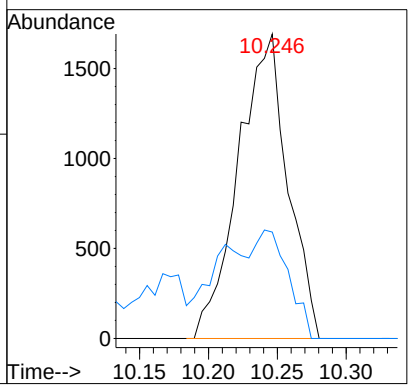


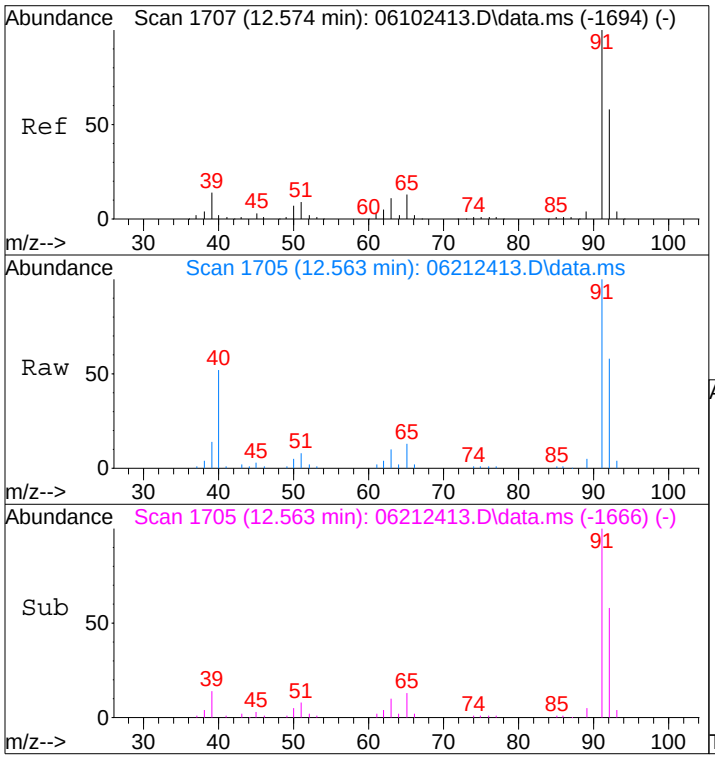


#49
2,2,4-Trimethylpentane (Isooctane)
Concen: 0.06 ng
RT: 10.25 min Scan# 1297
Delta R.T. 0.033 min
Lab File: 06212413.D
Acq: 21 Jun 2024 17:01

Tgt Ion: 57 Resp: 4213

Ion	Ratio	Lower	Upper
57	100		
41	23.9	16.1	56.1

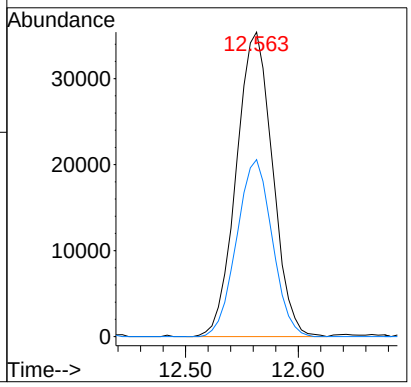


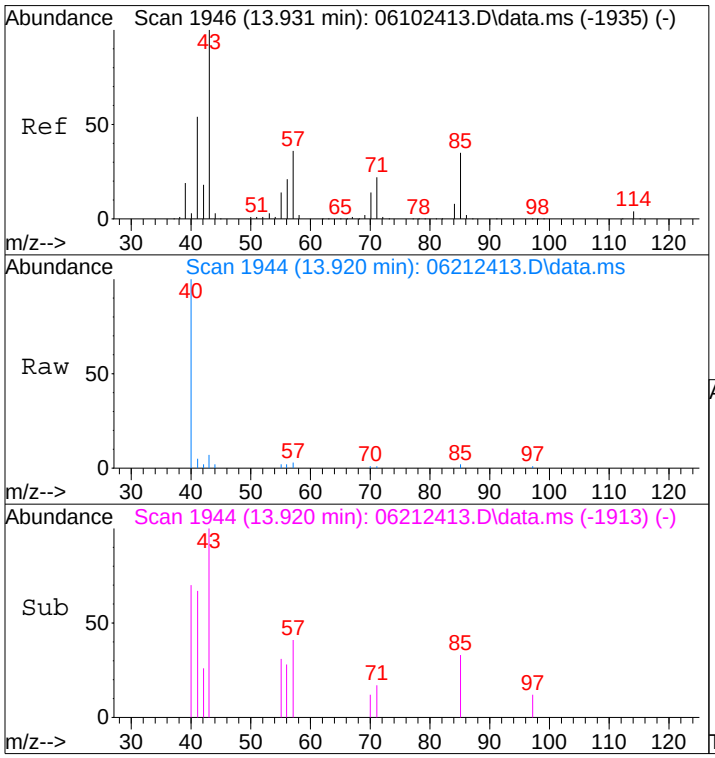


#58
Toluene
Concen: 1.10 ng
RT: 12.56 min Scan# 1705
Delta R.T. -0.028 min
Lab File: 06212413.D
Acq: 21 Jun 2024 17:01

Tgt Ion: 91 Resp: 79262

Ion	Ratio	Lower	Upper
91	100		
92	57.0	37.4	77.4

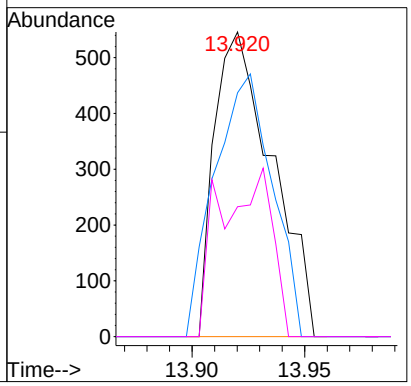


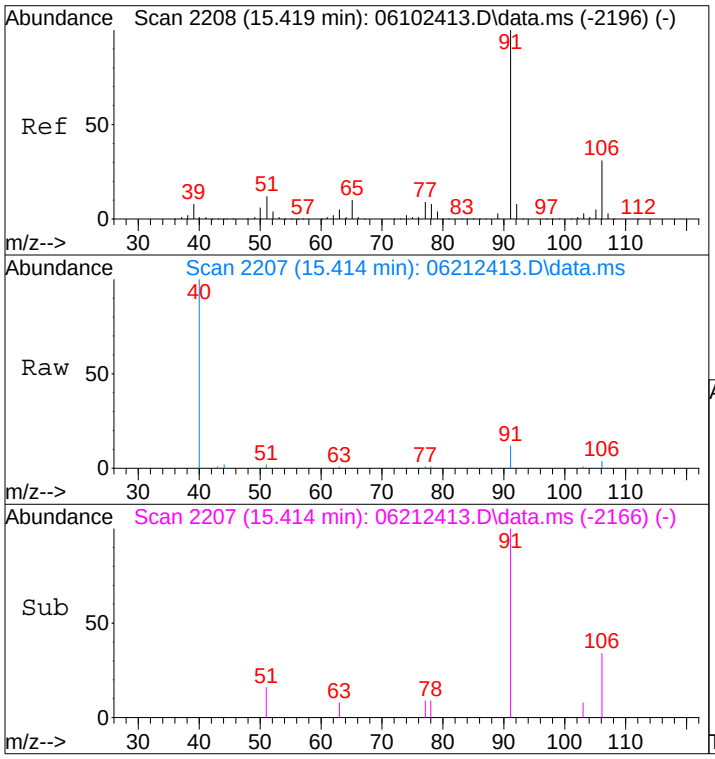


#63
n-Octane
Concen: 0.06 ng
RT: 13.92 min Scan# 1944
Delta R.T. -0.023 min
Lab File: 06212413.D
Acq: 21 Jun 2024 17:01

Tgt Ion: 57 Resp: 973

Ion	Ratio	Lower	Upper
57	100		
85	86.0	79.8	119.6
71	49.4	49.0	73.4

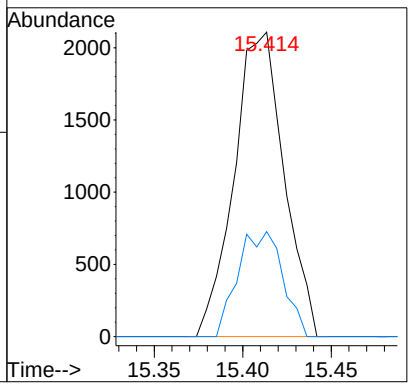


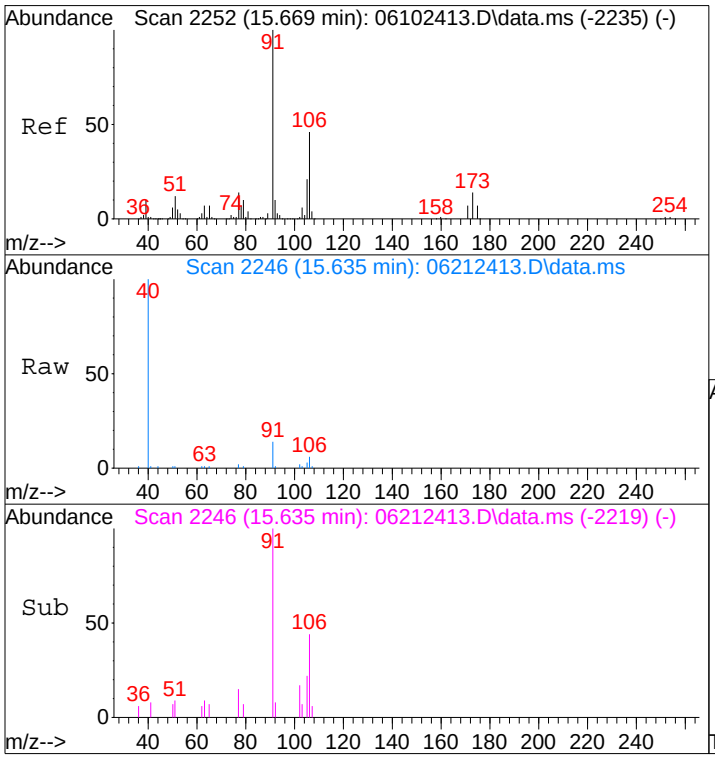


#66
Ethylbenzene
Concen: 0.05 ng
RT: 15.41 min Scan# 2207
Delta R.T. -0.017 min
Lab File: 06212413.D
Acq: 21 Jun 2024 17:01

Tgt Ion: 91 Resp: 4137

Ion	Ratio	Lower	Upper
91	100		
106	31.0	10.7	50.7

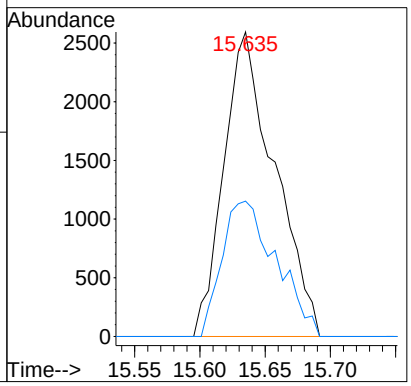


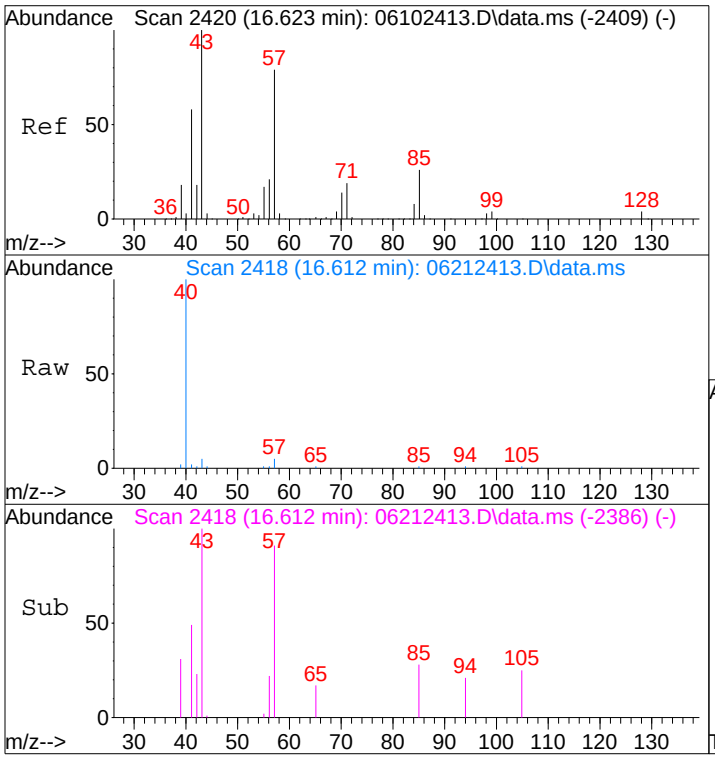


#67
m- & p-Xylenes
Concen: 0.10 ng
RT: 15.63 min Scan# 2246
Delta R.T. -0.045 min
Lab File: 06212413.D
Acq: 21 Jun 2024 17:01

Tgt Ion: 91 Resp: 7019

Ion	Ratio	Lower	Upper
91	100		
106	47.4	25.9	65.9

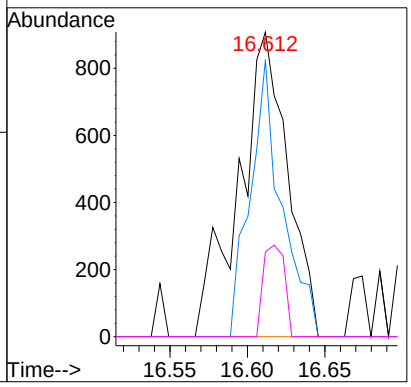


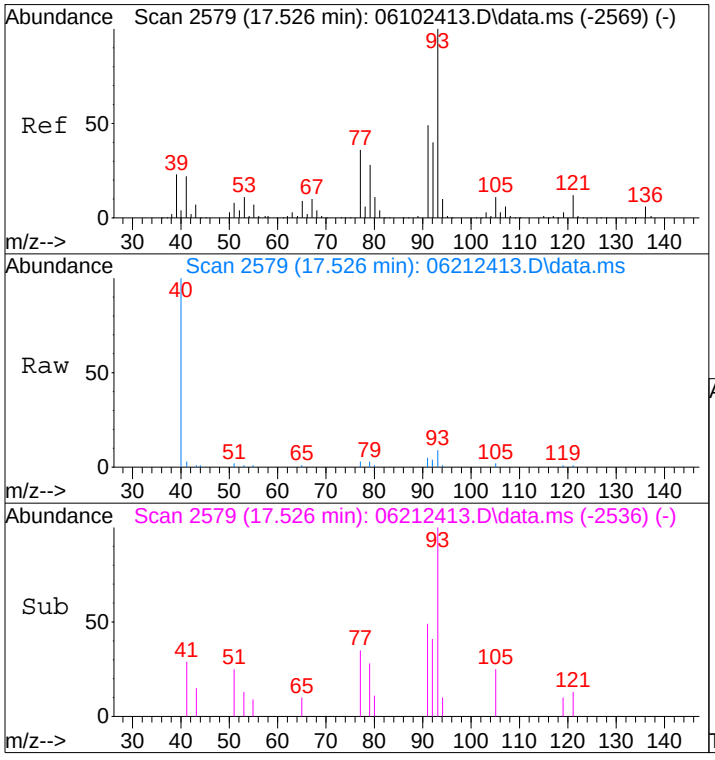


#71
n-Nonane
Concen: 0.05 ng
RT: 16.61 min Scan# 2418
Delta R.T. -0.017 min
Lab File: 06212413.D
Acq: 21 Jun 2024 17:01

Tgt Ion: 43 Resp: 1995

Ion	Ratio	Lower	Upper
43	100		
57	58.7	58.2	98.2
85	13.1	5.9	45.9

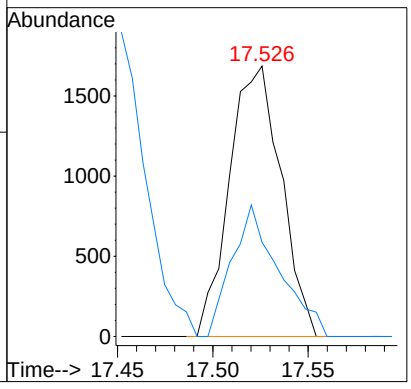




#75
alpha-Pinene
Concen: 0.08 ng
RT: 17.53 min Scan# 2579
Delta R.T. -0.006 min
Lab File: 06212413.D
Acq: 21 Jun 2024 17:01

Tgt Ion: 93 Resp: 3172

Ion	Ratio	Lower	Upper
93	100		
77	44.2	15.3	55.3



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212413.D Vial: 1
Acq On : 21 Jun 2024 17:01 Operator: SC
Sample : P2402249-025 (2.0mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 16:43:39 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

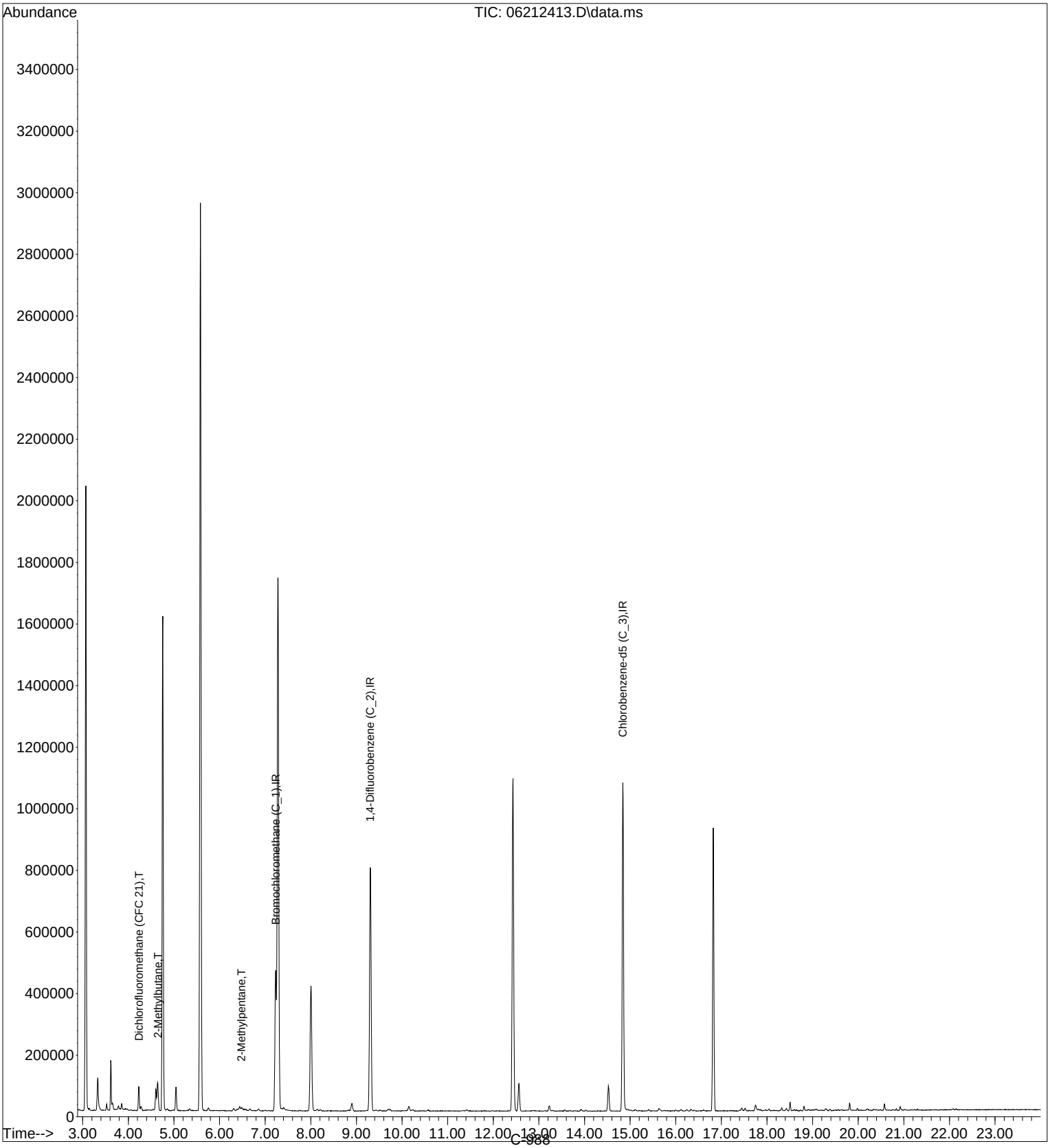
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	180948	12.500	ng		-0.02
16) 1,4-Difluorobenzene (C 2)	9.30	114	786340	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	180753	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	0.00	85	0	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.19	83	220	N.D.			
4) 1,1-Difluoroethane	3.26	65	275	N.D.			
5) Chlorodifluoromethane ...	0.00	67	0	N.D.			
6) 1-Chloro-1,1-Difluoroe...	0.00	65	0	N.D.			
7) Dichlorofluoromethane ...	4.23	67	64932	1.565	ng		99
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	0.00	83	0	N.D.	d		
10) 2-Methylbutane	4.65	57	12954	0.600	ng		90
11) Methyl Acetate	5.33	43	2058	N.D.			
12) 2-Methylpentane	6.48	71	1848	0.118	ng	#	1
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	0.00	84	0	N.D.			
17) 2,3-Dimethylpentane	9.52	56	1654	N.D.			
18) Dibromomethane	9.79	174	109	N.D.			
20) Methyl Cyclohexane	11.41	55	1797	N.D.			
21) 1,3-Dichloropropane	12.56	76	236	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	0.00	75	0	N.D.			
25) Bromobenzene	0.00	77	0	N.D.			
26) 2-Chlorotoluene	17.61	91	1090	N.D.			
27) 4-Chlorotoluene	17.68	91	1859	N.D.			
28) Indane	19.11	117	338	N.D.			
29) Indene	0.00	115	0	N.D.			
30) 1,2,4,5-Tetramethylben...	20.22	119	840	N.D.			
31) 1,2,3,4-Tetramethylben...	20.22	119	840	N.D.			
32) 1,2,3,5-Tetramethylben...	20.60	119	496	N.D.			
33) 1,2,3-Trichlorobenzene	21.19	180	167	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212413.D Vial: 1
Acq On : 21 Jun 2024 17:01 Operator: SC
Sample : P2402249-025 (2.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 16:43:39 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

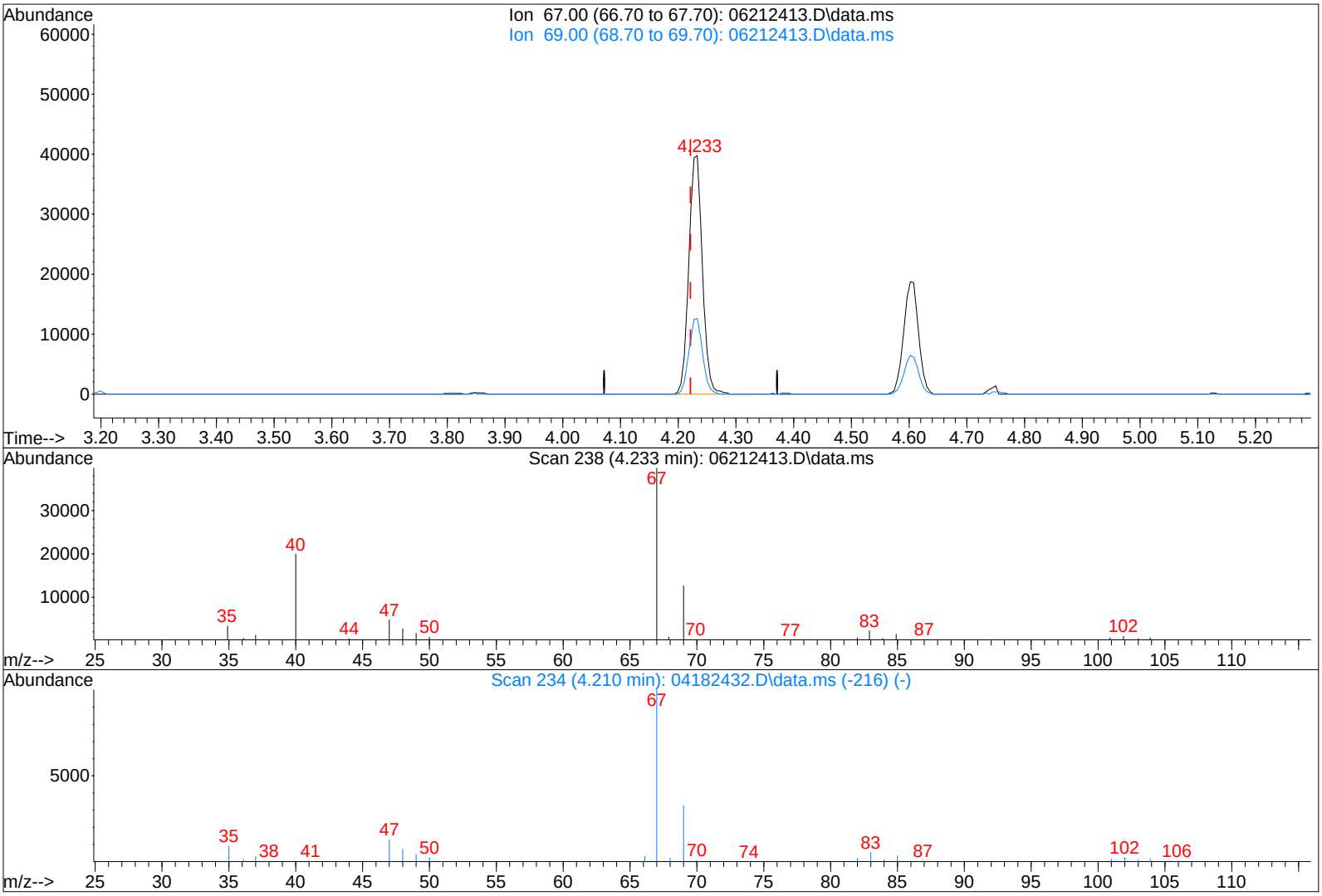


Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\21\06212413.D Vial: 1
Acq On : 21 Jun 2024 17:01 Operator: SC
Sample : P2402249-025 (2.0mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 16:42:40 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06212413.D\data.ms

(7) Dichlorofluoromethane (CFC 21) (T)

4.233min (+0.011) 1.56ng

response 64932

Ion	Exp%	Act%
67.00	100	100
69.00	32.40	31.82
0.00	0.00	0.00
0.00	0.00	0.00

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\21\
Data File : 06212413.D
Acq On : 21 Jun 2024 17:01
Operator : SC
Sample : P2402249-025 (2.0mL)
Misc : S37-06062402
ALS Vial : 1 Sample Multiplier: 1

MJ 6/29/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06212413.D\data.ms

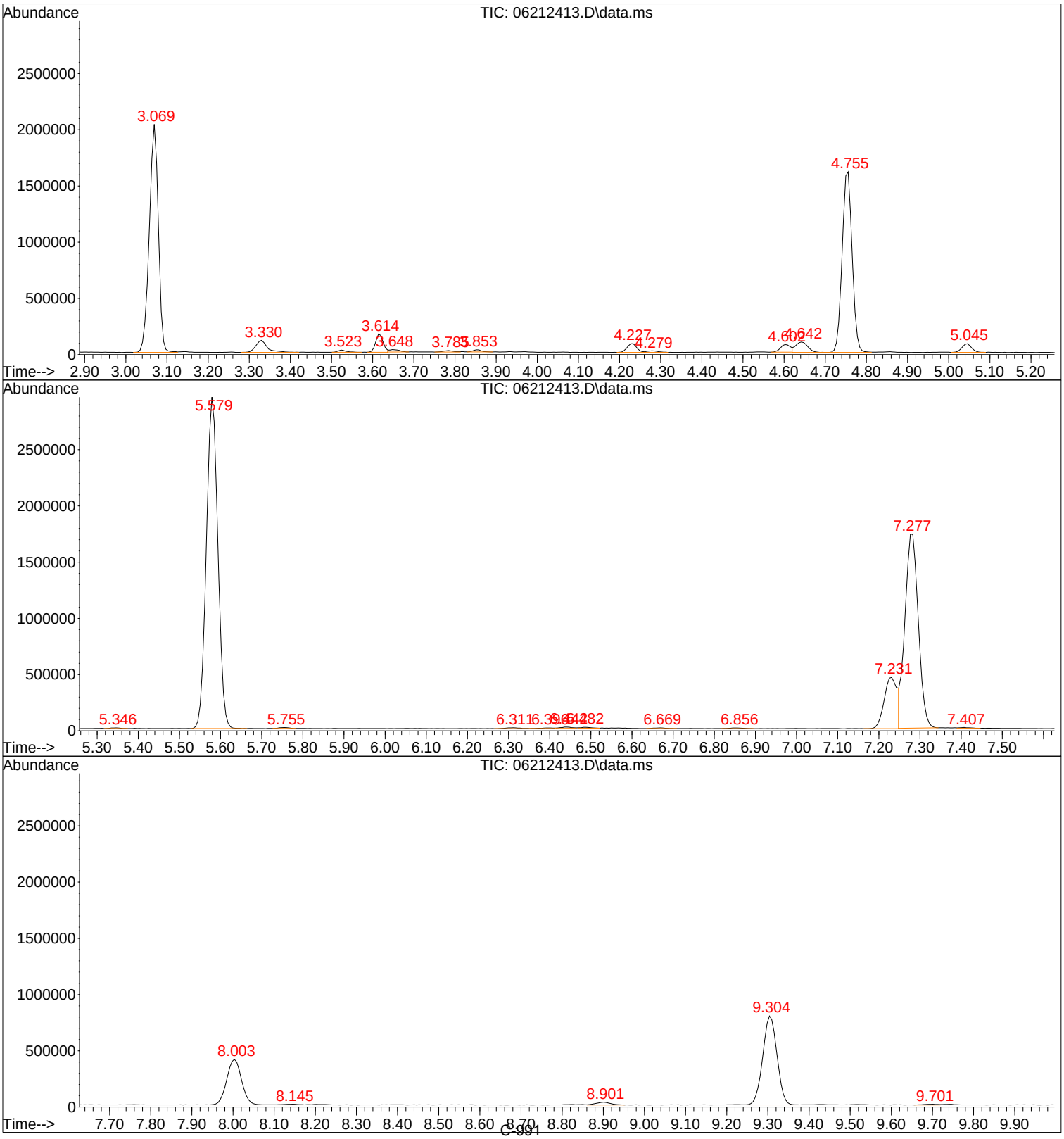
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.069	24	33	43	rBV	2028330	3087492	54.02%	14.949%
2	3.330	70	79	95	rBV2	106420	209109	3.66%	1.012%
3	3.523	109	113	122	rBV	20105	28035	0.49%	0.136%
4	3.614	124	129	133	rBV	161817	208065	3.64%	1.007%
5	3.648	133	135	142	rVB2	21044	33873	0.59%	0.164%
6	3.785	153	159	164	rBV	12345	20566	0.36%	0.100%
7	3.853	167	171	178	rVB2	18704	25505	0.45%	0.123%
8	4.227	231	237	243	rBV	77719	129549	2.27%	0.627%
9	4.279	243	246	253	rVB2	13595	24984	0.44%	0.121%
10	4.602	297	303	306	rBV	66958	115598	2.02%	0.560%
11	4.642	306	310	322	rVB2	91724	184210	3.22%	0.892%
12	4.755	322	330	340	rBV	1605273	2712097	47.45%	13.132%
13	5.045	374	381	389	rVB	76854	124481	2.18%	0.603%
14	5.346	429	434	439	rVB3	5984	11523	0.20%	0.056%
15	5.579	466	475	490	rVB	2946971	5715200	100.00%	27.672%
16	5.755	501	506	511	rVB2	8390	14605	0.26%	0.071%
17	6.311	596	604	611	rBV4	8013	20786	0.36%	0.101%
18	6.396	611	619	622	rBV4	5783	13936	0.24%	0.067%
19	6.442	622	627	631	rVV	11515	22896	0.40%	0.111%
20	6.482	632	634	641	rVB3	7890	13833	0.24%	0.067%
21	6.669	661	667	674	rVB2	6282	13974	0.24%	0.068%
22	6.856	693	700	707	rVB2	6634	15889	0.28%	0.077%
23	7.231	754	766	769	rBV	456388	1037619	18.16%	5.024%
24	7.277	769	774	786	rVB	1723358	3863070	67.59%	18.705%
25	7.407	794	797	804	rVB2	7733	13870	0.24%	0.067%
26	8.003	891	902	915	rBV	405387	1009065	17.66%	4.886%
27	8.145	919	927	932	rVB5	5256	11461	0.20%	0.055%
28	8.901	1053	1060	1069	rVB2	24888	59912	1.05%	0.290%
29	9.304	1121	1131	1144	rVB	789958	1896704	33.19%	9.184%
30	9.701	1193	1201	1204	rBV4	6730	15218	0.27%	0.074%

Sum of corrected areas: 20653125

Data Path : I:\MS09\DATA\2024 06\21\
Data File : 06212413.D
Acq On : 21 Jun 2024 17:01
Operator : SC
Sample : P2402249-025 (2.0mL)
Misc : S37-06062402
ALS Vial : 1 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\21\\
Data File : 06212413.D
Acq On : 21 Jun 2024 17:011
Operator : SCC
Sample : P2402249-025 (2.0mL))
Misc : S37-060624022
ALS Vial : 1 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

						Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182416.D Vial: 5
Acq On : 18 Jun 2024 17:56 Operator: SC
Sample : P2402249-026 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 13:42:30 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/19/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	125566	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	547482	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	129021	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	281304	12.605	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.80%				
57) Toluene-d8 (SS2)	12.43	98	609618	12.347	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.80%				
73) Bromofluorobenzene (SS3)	16.83	174	228139	12.796	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.40%				
Target Compounds							Qvalue
2) Propene	0.00	42	0	N.D. d			
3) Dichlorodifluoromethan...	3.37	85	17318m	0.586	ng		
4) Chloromethane	3.46	50	785	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	3.62	135	451	N.D.			
6) Vinyl Chloride	3.57	62	208	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.29	45	6900m	0.565	ng		
11) Acetonitrile	0.00	41	0	N.D. d			
12) Acrolein	4.55	56	1470	0.163	ng		99
13) Acetone	4.65	58	19345	1.983	ng		100
14) Trichlorofluoromethane	4.76	101	4371494	146.237	ng		100
15) 2-Propanol (Isopropanol)	4.85	45	1967	0.050	ng	#	50
16) Acrylonitrile	5.05	53	256	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.34	59	700	N.D.			
19) Methylene Chloride	5.35	84	805	0.058	ng		95
20) 3-Chloro-1-propene (Al...	5.47	41	111	N.D.			
21) Trichlorotrifluoroethane	5.60	151	5198218	411.062	ng		94
22) Carbon Disulfide	0.00	76	0	N.D. d			
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	6.30	73	118	N.D.			
26) Vinyl Acetate	6.44	86	1022	0.454	ng	#	44
27) 2-Butanone (MEK)	6.67	72	2162	0.280	ng		95
28) cis-1,2-Dichloroethene	7.08	61	337	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.			
30) Ethyl Acetate	7.30	61	2045	0.434	ng		96
31) n-Hexane	7.30	57	566	N.D.			
32) Chloroform	7.36	83	2872	0.117	ng		95
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	117	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	9.60	61	9770	No Calib		#	
40) 1-Butanol	8.81	56	8030	No Calib		#	
41) Benzene	8.90	78	1708	N.D.			
42) Carbon Tetrachloride	9.07	117	1830	0.078	ng		96
43) Cyclohexane	9.17	84	168	N.D.			
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.08	83	375	N.D.			
47) Trichloroethene	10.14	130	2656	0.180	ng		96
48) 1,4-Dioxane	10.13	88	221	N.D.			
49) 2,2,4-Trimethylpentane...	0.00	57	0	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182416.D Vial: 5
Acq On : 18 Jun 2024 17:56 Operator: SC
Sample : P2402249-026 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 13:42:30 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

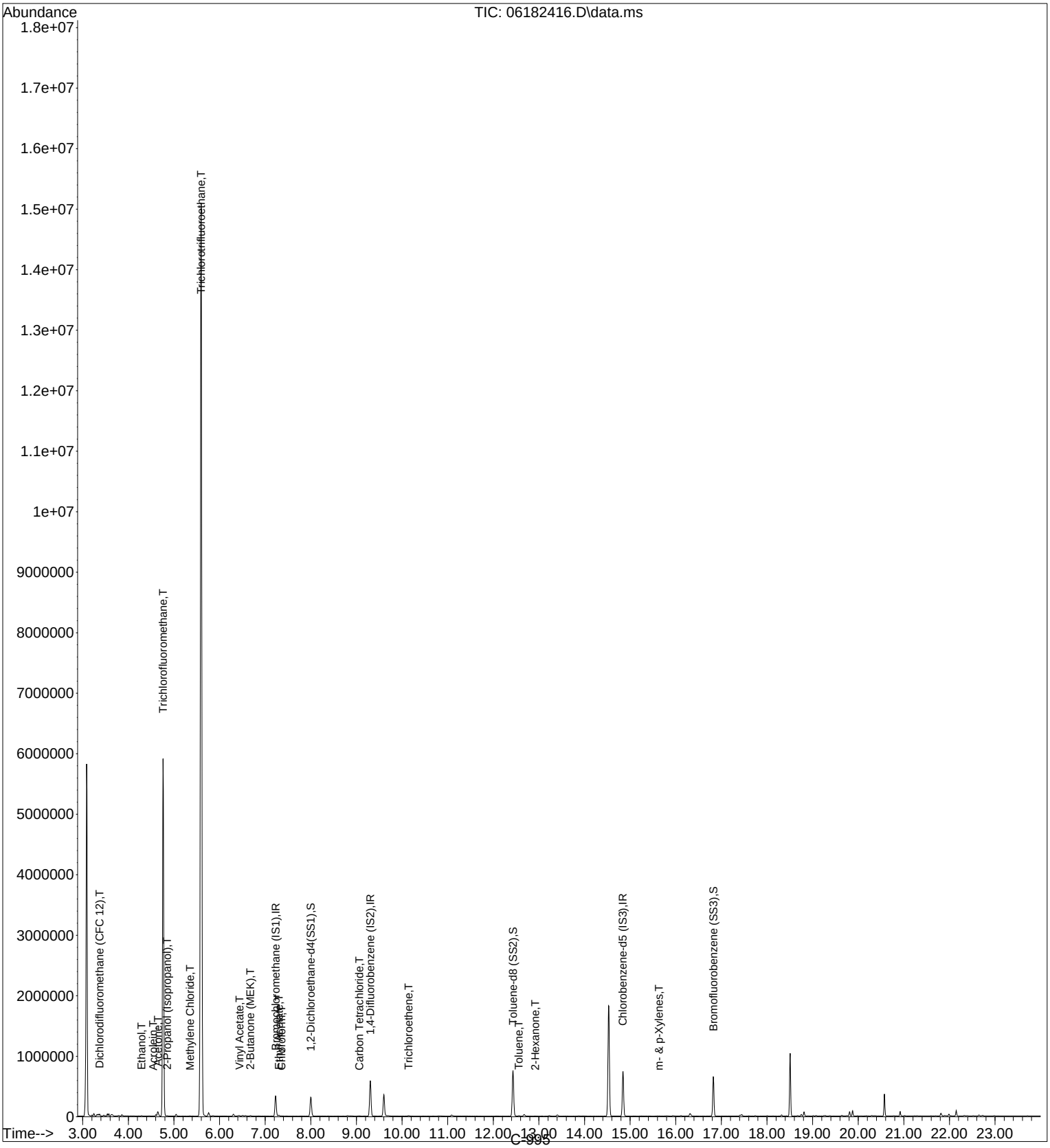
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	0.00	71	0	N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
58) Toluene	12.56	91	6134	0.119 ng	100
59) 2-Hexanone	12.92	43	1722	0.053 ng	76
60) Dibromochloromethane	13.07	129	373	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	13.78	43	628	N.D.	
63) n-Octane	0.00	57	0	N.D.	
64) Tetrachloroethene	14.03	166	612	N.D.	
65) Chlorobenzene	14.90	112	502	N.D.	
66) Ethylbenzene	15.41	91	1688	N.D.	
67) m- & p-Xylenes	15.63	91	2845	0.057 ng	93
68) Bromoform	15.66	173	680	N.D.	
69) Styrene	16.10	104	313	N.D.	
70) o-Xylene	16.25	91	1513	N.D.	
71) n-Nonane	16.62	43	543	N.D.	
72) 1,1,2,2-Tetrachloroethane	16.21	83	342	N.D.	
74) Cumene	17.03	105	726	N.D.	
75) alpha-Pinene	0.00	93	0	N.D.	
76) n-Propylbenzene	17.68	91	1355	N.D.	
77) 3-Ethyltoluene	17.03	105	726	No Calib	#
78) 4-Ethyltoluene	17.86	105	833	N.D.	
79) 1,3,5-Trimethylbenzene	17.96	105	580	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.03	105	726	No Calib	#
82) 1,2,4-Trimethylbenzene	18.43	105	1493	N.D.	
83) n-Decane	0.00	58	0	N.D.	
84) Benzyl Chloride	18.56	91	449	N.D.	
85) 1,3-Dichlorobenzene	18.58	146	551	N.D.	
86) 1,4-Dichlorobenzene	18.65	146	586	N.D.	
87) sec-Butylbenzene	18.75	105	1762	N.D.	
88) 4-Isopropyltoluene (p-...	18.93	119	954	N.D.	
89) 1,2,3-Trimethylbenzene	17.03	105	726	No Calib	#
90) 1,2-Dichlorobenzene	19.03	146	544	N.D.	
91) d-Limonene	19.09	68	119	N.D.	
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	767	N.D.	
95) Naphthalene	20.94	128	2402	N.D.	
96) n-Dodecane	0.00	58	0	N.D.	
97) Hexachlorobutadiene	21.30	225	577	N.D.	
98) Cyclohexanone	15.35	55	359	No Calib	#
99) tert-Butylbenzene	18.43	119	953	N.D.	
100) n-Butylbenzene	19.38	91	1107	N.D.	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182416.D Vial: 5
Acq On : 18 Jun 2024 17:56 Operator: SC
Sample : P2402249-026 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 13:42:30 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



C-995

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182416.D Vial: 5
Acq On : 18 Jun 2024 17:56 Operator: SC
Sample : P2402249-026 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 13:42:30 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/19/24

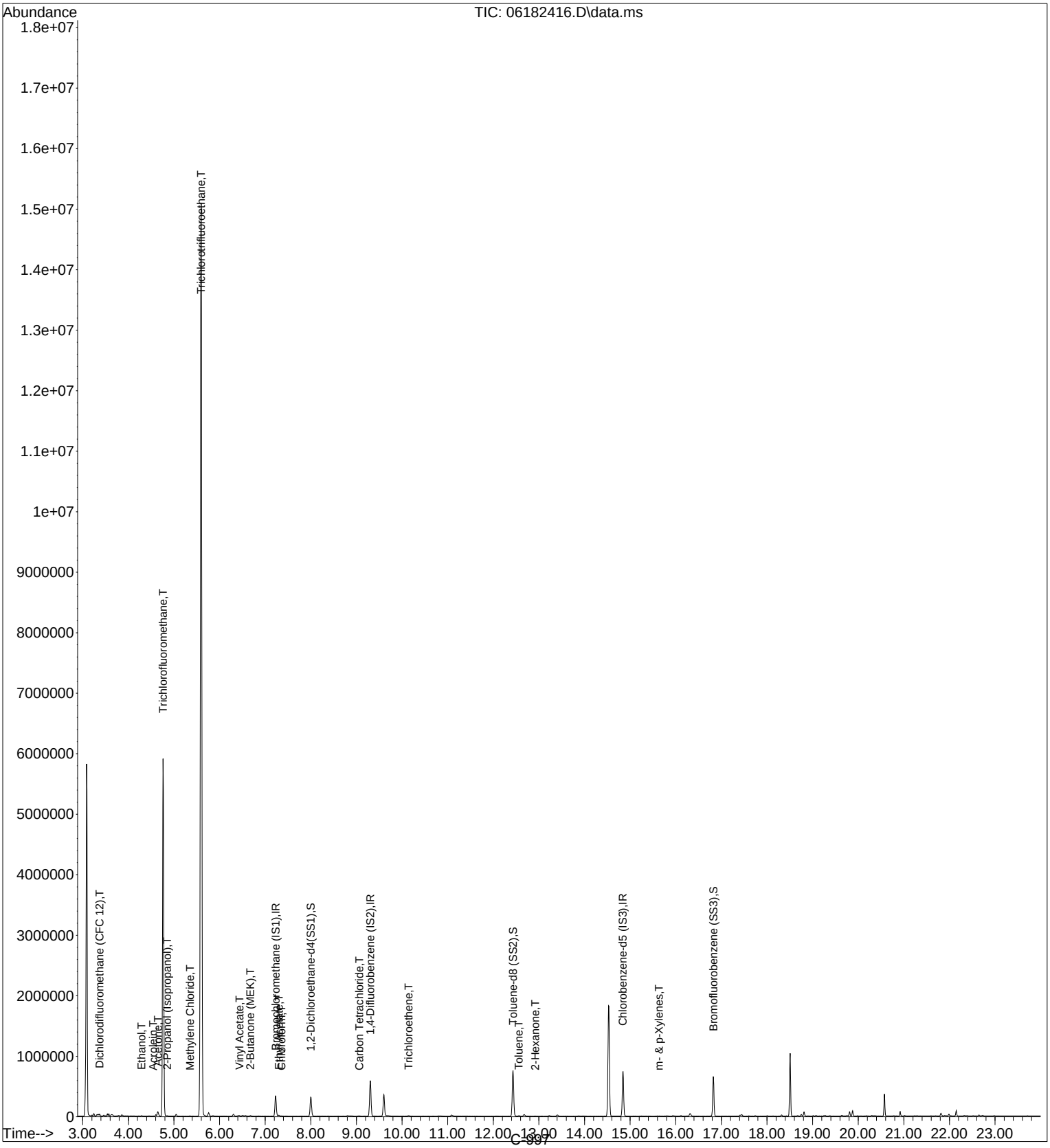
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	125566	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	547482	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	129021	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	281304	12.605	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.80%				
57) Toluene-d8 (SS2)	12.43	98	609618	12.347	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.80%				
73) Bromofluorobenzene (SS3)	16.83	174	228139	12.796	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.40%				
Target Compounds							Qvalue
3) Dichlorodifluoromethan...	3.37	85	17318m	0.586	ng		
10) Ethanol	4.29	45	6900m	0.565	ng		
12) Acrolein	4.55	56	1470	0.163	ng		99
13) Acetone	4.65	58	19345	1.983	ng		100
14) Trichlorofluoromethane	4.76	101	4371494	146.237	ng		100
15) 2-Propanol (Isopropanol)	4.85	45	1967	0.050	ng	#	50
19) Methylene Chloride	5.35	84	805	0.058	ng		95
21) Trichlorotrifluoroethane	5.60	151	5198218	411.062	ng		94
26) Vinyl Acetate	6.44	86	1022	0.454	ng	#	44
27) 2-Butanone (MEK)	6.67	72	2162	0.280	ng		95
30) Ethyl Acetate	7.30	61	2045	0.434	ng		96
32) Chloroform	7.36	83	2872	0.117	ng		95
42) Carbon Tetrachloride	9.07	117	1830	0.078	ng		96
47) Trichloroethene	10.14	130	2656	0.180	ng		96
58) Toluene	12.56	91	6134	0.119	ng		100
59) 2-Hexanone	12.92	43	1722	0.053	ng		76
67) m- & p-Xylenes	15.63	91	2845	0.057	ng		93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

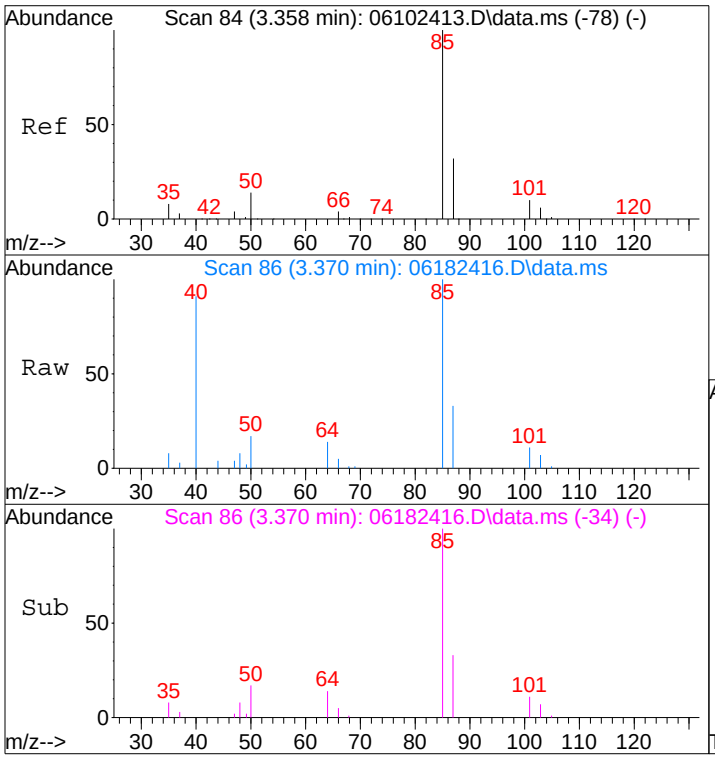
Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182416.D Vial: 5
Acq On : 18 Jun 2024 17:56 Operator: SC
Sample : P2402249-026 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 13:42:30 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



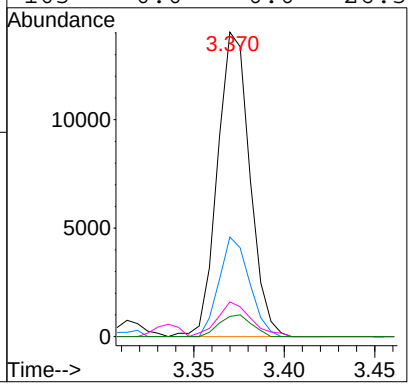
C-997

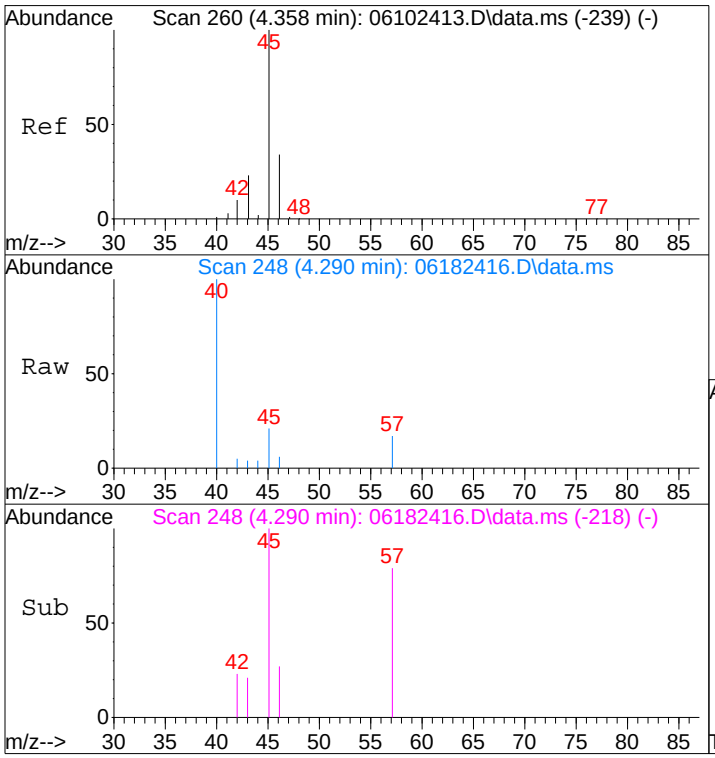


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.59 ng m
RT: 3.37 min Scan# 86
Delta R.T. 0.048 min
Lab File: 06182416.D
Acq: 18 Jun 2024 17:56

Tgt Ion: 85 Resp: 17318

Ion	Ratio	Lower	Upper
85	100		
87	1.3	12.2	52.2#
101	3.1	0.0	29.8
103	0.0	0.0	26.3

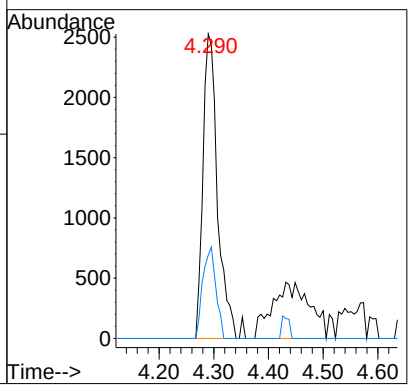


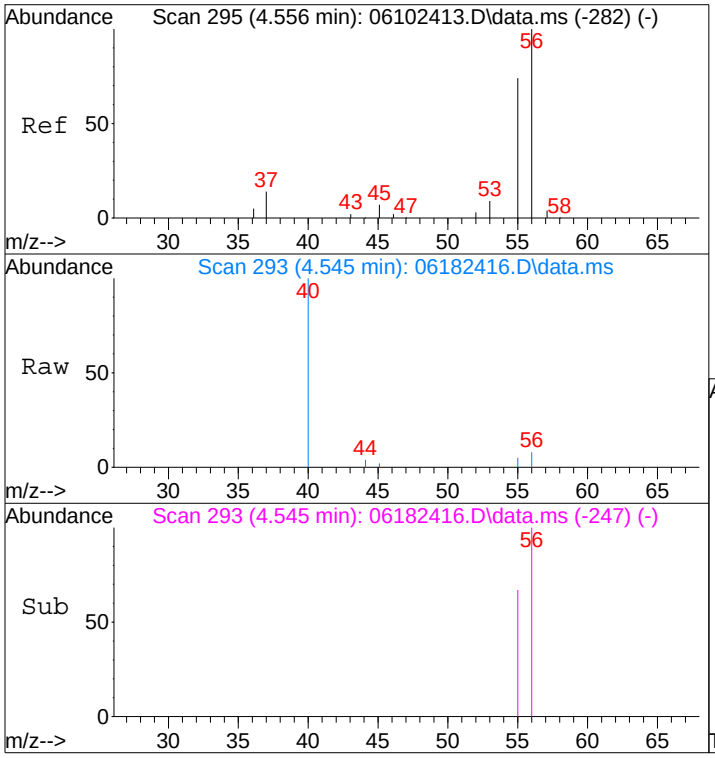


#10
Ethanol
Concen: 0.57 ng m
RT: 4.29 min Scan# 248
Delta R.T. -0.077 min
Lab File: 06182416.D
Acq: 18 Jun 2024 17:56

Tgt Ion: 45 Resp: 6900

Ion	Ratio	Lower	Upper
45	100		
46	0.0	13.5	53.5#

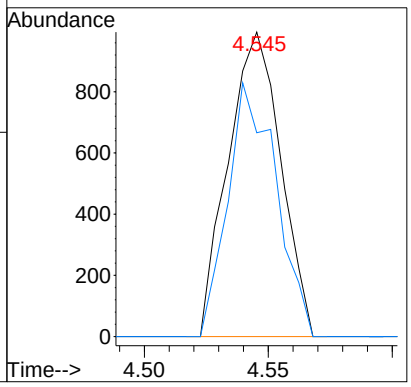


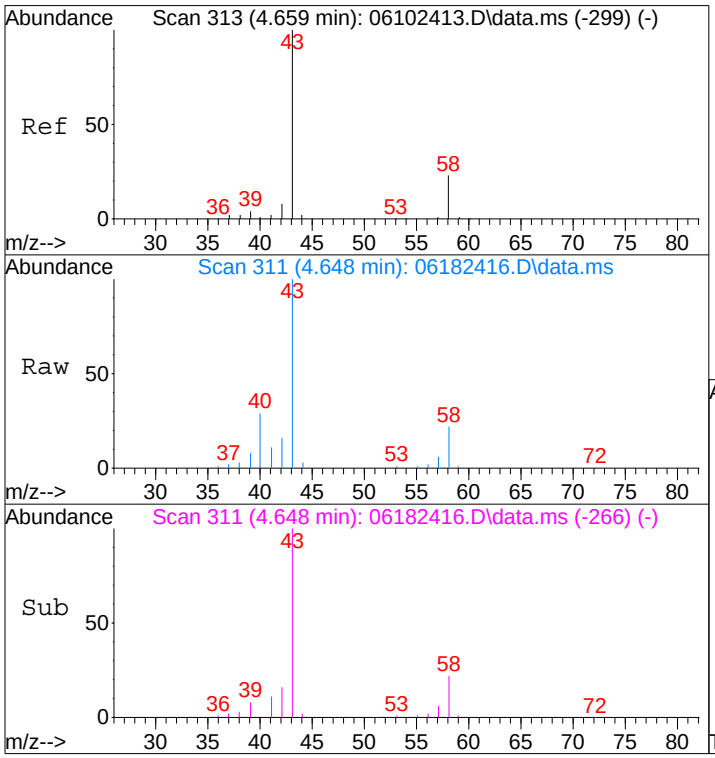


#12
Acrolein
Concen: 0.16 ng
RT: 4.55 min Scan# 293
Delta R.T. 0.010 min
Lab File: 06182416.D
Acq: 18 Jun 2024 17:56

Tgt Ion: 56 Resp: 1470

Ion	Ratio	Lower	Upper
56	100		
55	76.5	55.5	95.5

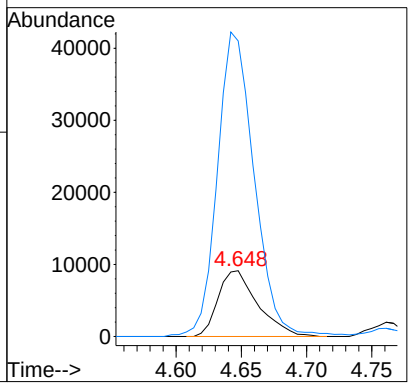


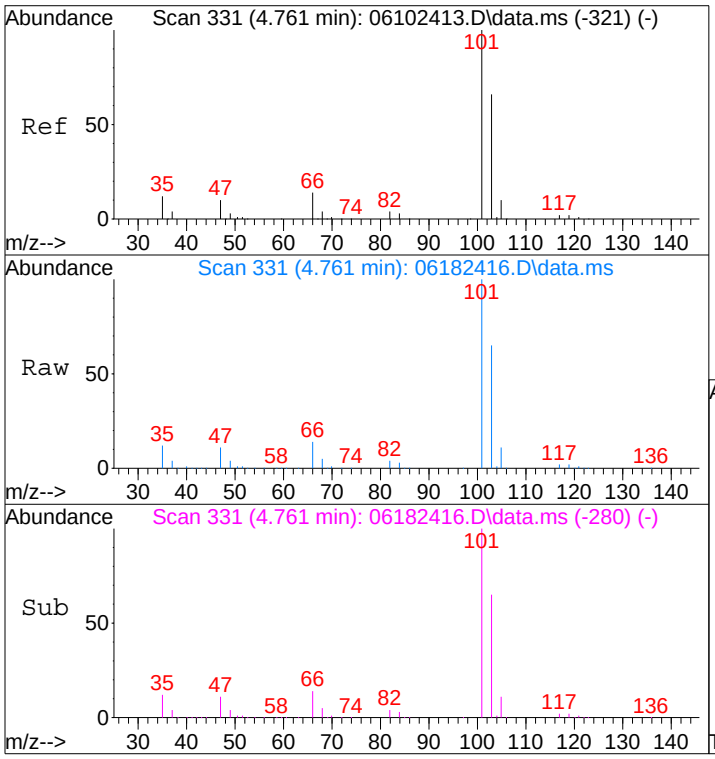


#13
Acetone
Concen: 1.98 ng
RT: 4.65 min Scan# 311
Delta R.T. 0.006 min
Lab File: 06182416.D
Acq: 18 Jun 2024 17:56

Tgt Ion: 58 Resp: 19345

Ion	Ratio	Lower	Upper
58	100		
43	429.6	400.7	460.7

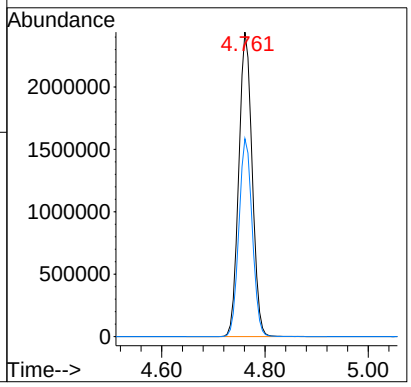


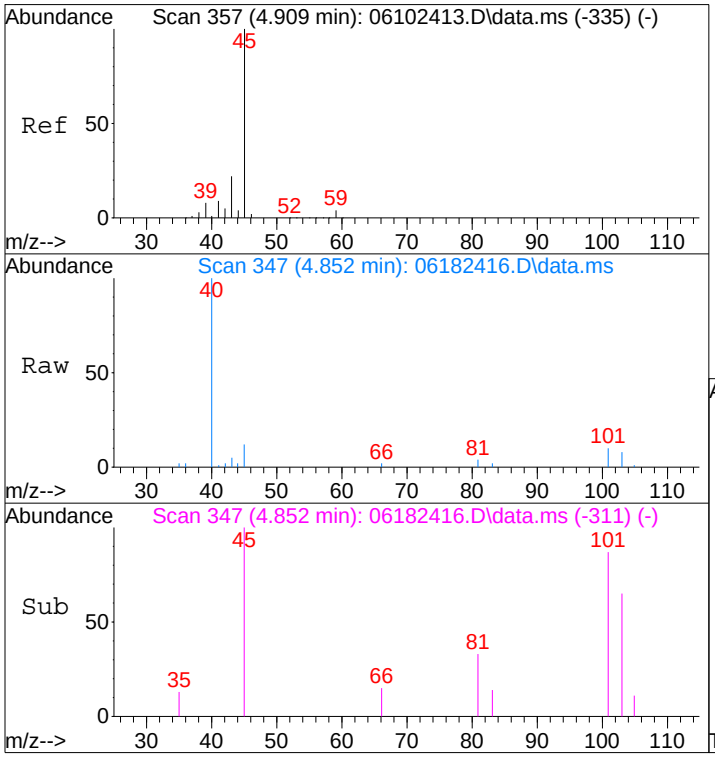


#14
Trichlorofluoromethane
Concen: 146.24 ng
RT: 4.76 min Scan# 331
Delta R.T. 0.040 min
Lab File: 06182416.D
Acq: 18 Jun 2024 17:56

Tgt Ion:101 Resp: 4371494

Ion	Ratio	Lower	Upper
101	100		
103	65.1	44.9	84.9

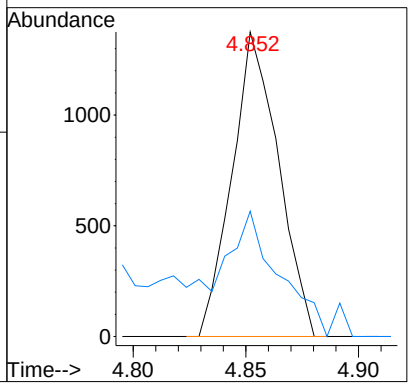


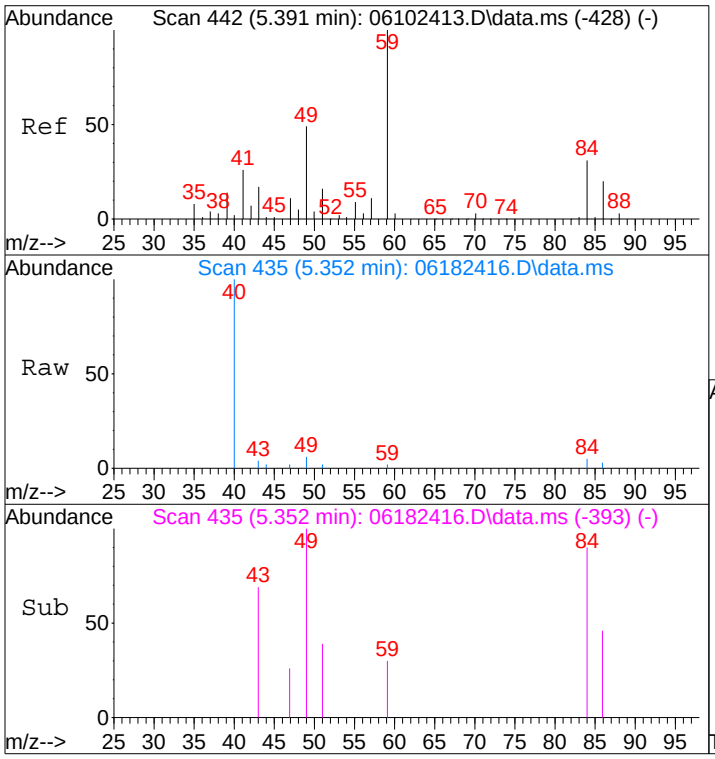


#15
2-Propanol (Isopropanol)
Concen: 0.05 ng
RT: 4.85 min Scan# 347
Delta R.T. -0.048 min
Lab File: 06182416.D
Acq: 18 Jun 2024 17:56

Tgt Ion: 45 Resp: 1967

Ion	Ratio	Lower	Upper
45	100		
43	46.7	2.5	42.5#

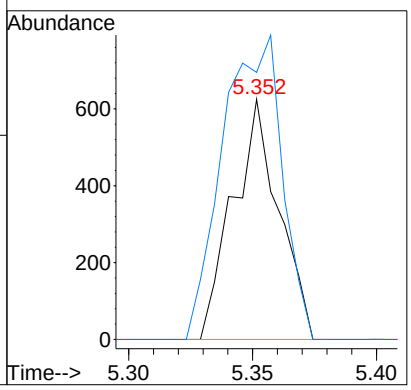


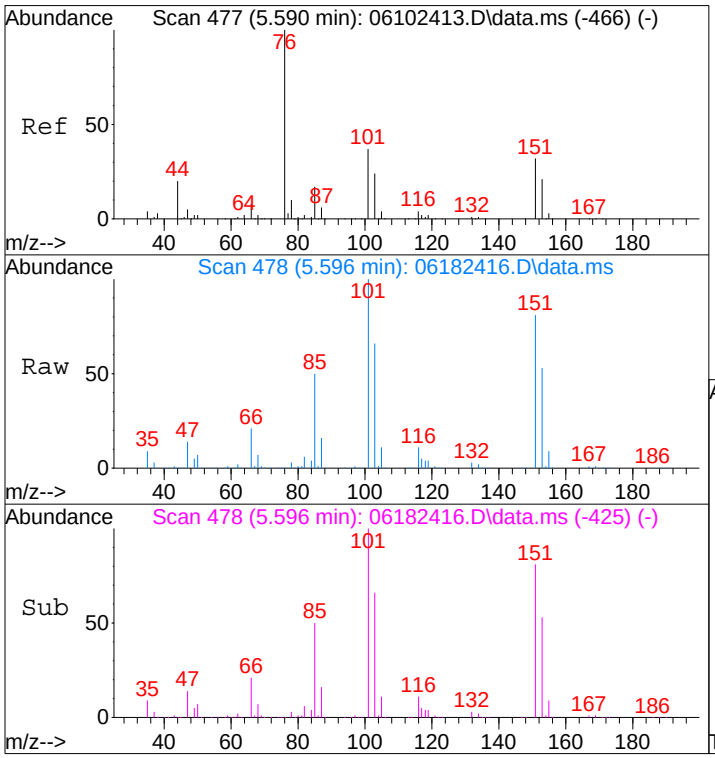


#19
Methylene Chloride
Concen: 0.06 ng
RT: 5.35 min Scan# 435
Delta R.T. -0.009 min
Lab File: 06182416.D
Acq: 18 Jun 2024 17:56

Tgt Ion: 84 Resp: 805

Ion	Ratio	Lower	Upper
84	100		
49	164.0	132.9	182.9

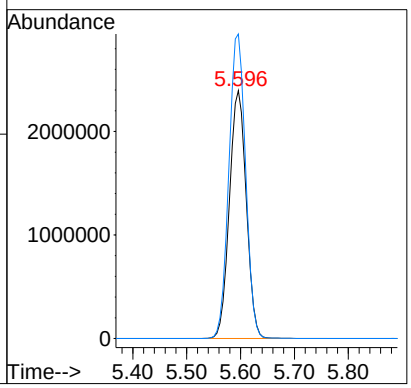


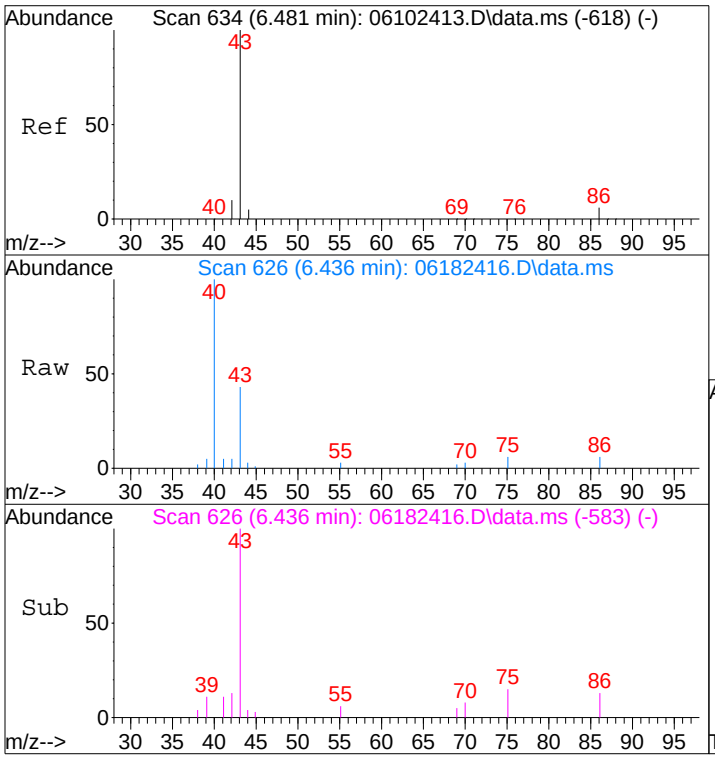


#21
Trichlorotrifluoroethane
Concen: 411.06 ng
RT: 5.60 min Scan# 478
Delta R.T. 0.050 min
Lab File: 06182416.D
Acq: 18 Jun 2024 17:56

Tgt Ion:151 Resp: 5198218

Ion	Ratio	Lower	Upper
151	100		
101	121.9	95.0	135.0

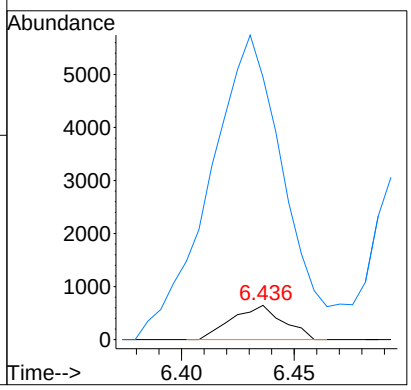


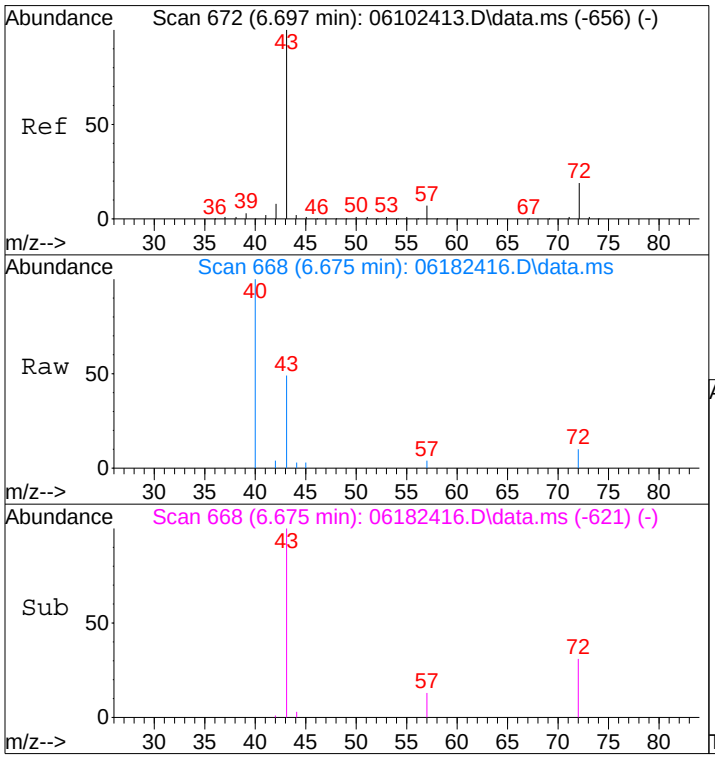


#26
Vinyl Acetate
Concen: 0.45 ng
RT: 6.44 min Scan# 626
Delta R.T. -0.003 min
Lab File: 06182416.D
Acq: 18 Jun 2024 17:56

Tgt Ion: 86 Resp: 1022

Ion	Ratio	Lower	Upper
86	100		
43	1327.0	1668.9	1708.9#

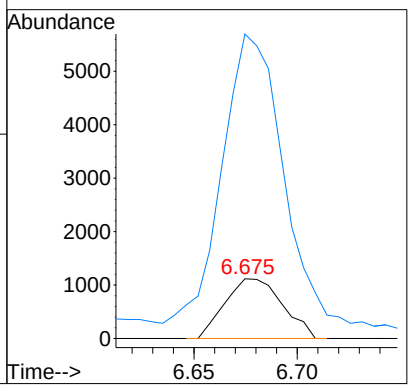


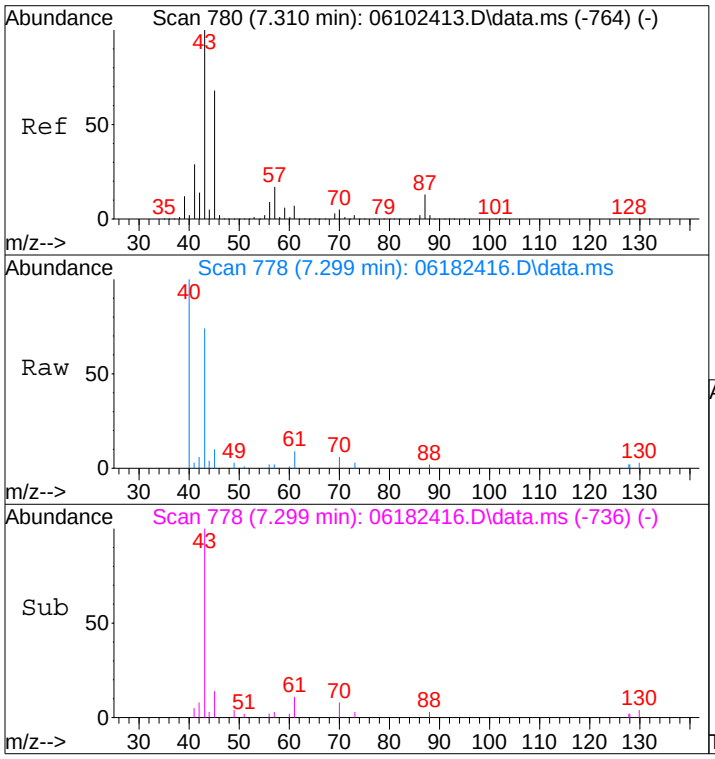


#27
2-Butanone (MEK)
Concen: 0.28 ng
RT: 6.67 min Scan# 668
Delta R.T. 0.016 min
Lab File: 06182416.D
Acq: 18 Jun 2024 17:56

Tgt Ion: 72 Resp: 2162

Ion	Ratio	Lower	Upper
72	100		
43	541.1	506.8	546.8

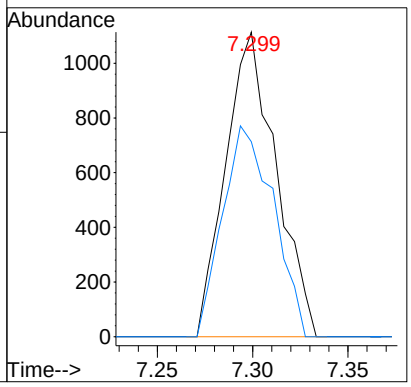


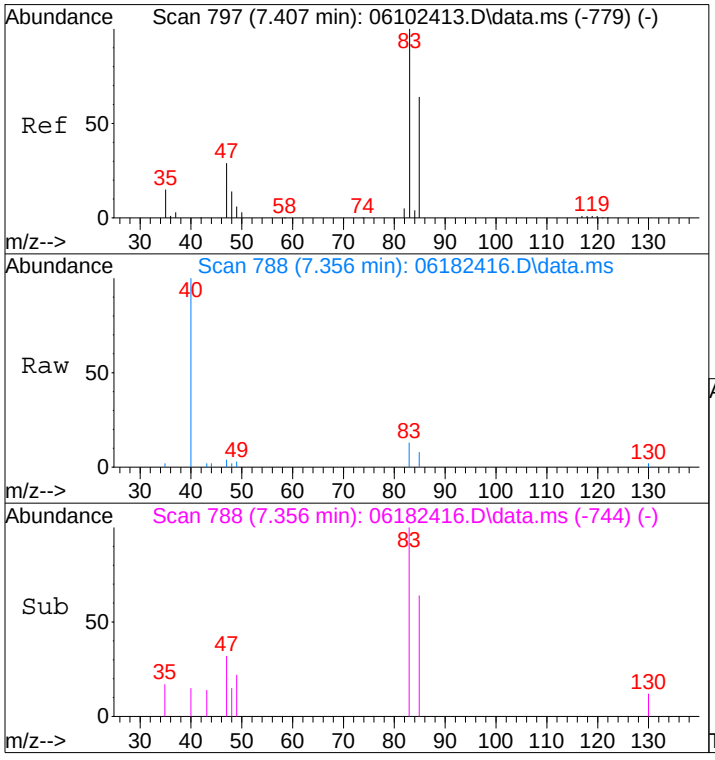


#30
Ethyl Acetate
Concen: 0.43 ng
RT: 7.30 min Scan# 778
Delta R.T. 0.040 min
Lab File: 06182416.D
Acq: 18 Jun 2024 17:56

Tgt Ion: 61 Resp: 2045

Ion	Ratio	Lower	Upper
61	100		
70	69.9	53.5	93.5

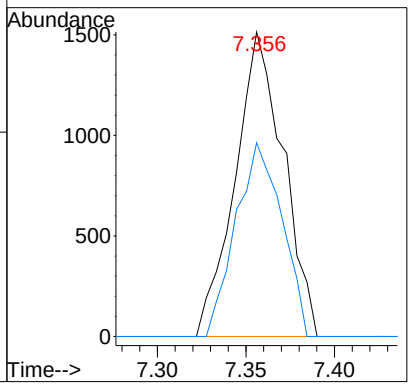


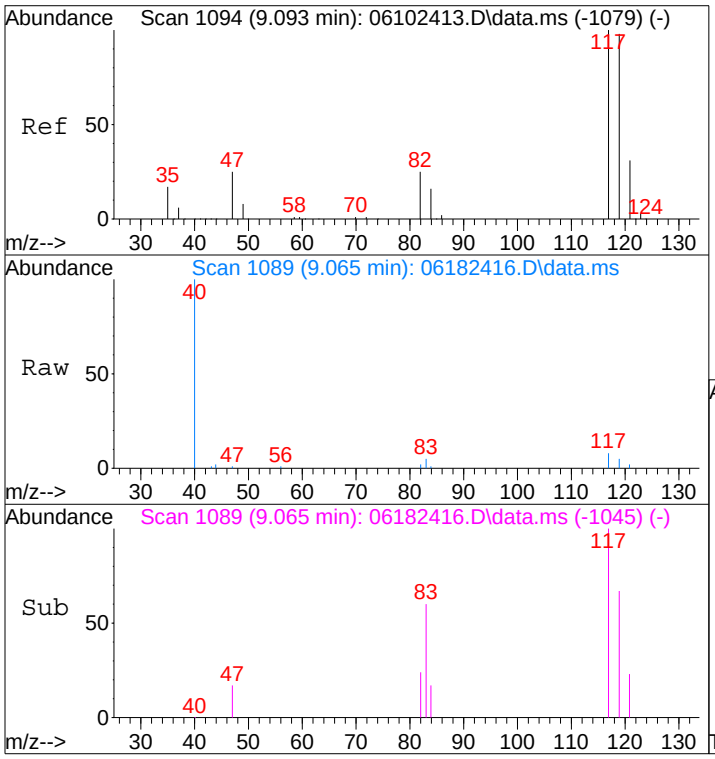


#32
Chloroform
Concen: 0.12 ng
RT: 7.36 min Scan# 788
Delta R.T. 0.001 min
Lab File: 06182416.D
Acq: 18 Jun 2024 17:56

Tgt Ion: 83 Resp: 2872

Ion	Ratio	Lower	Upper
83	100		
85	60.9	44.4	84.4

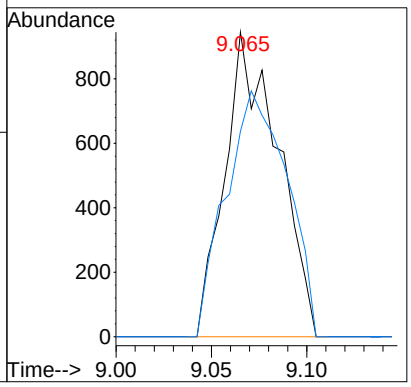


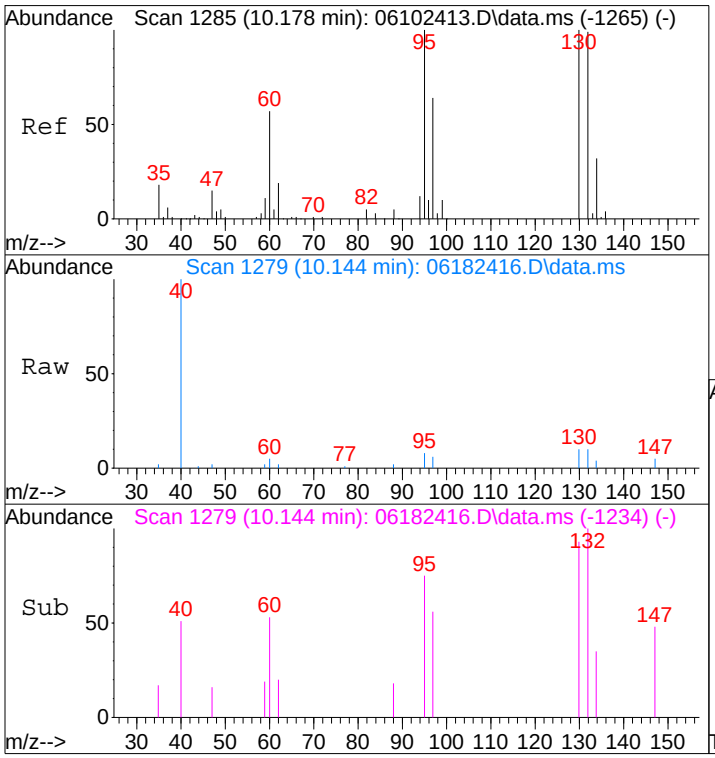


#42
Carbon Tetrachloride
Concen: 0.08 ng
RT: 9.07 min Scan# 1089
Delta R.T. -0.001 min
Lab File: 06182416.D
Acq: 18 Jun 2024 17:56

Tgt Ion:117 Resp: 1830

Ion	Ratio	Lower	Upper
117	100		
119	93.2	77.3	117.3

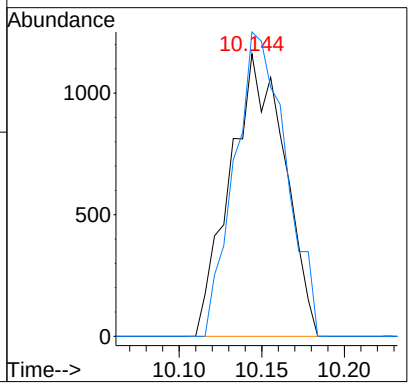


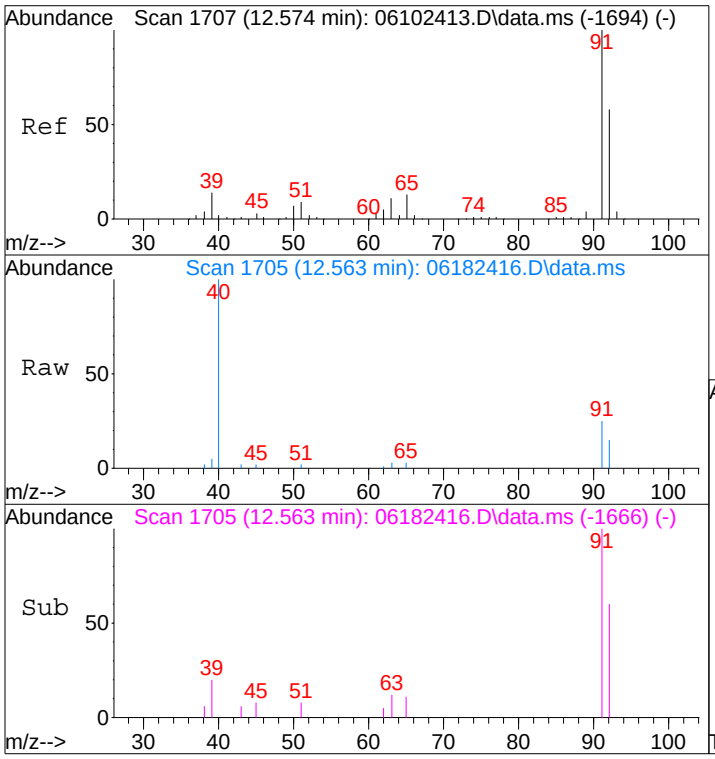


#47
Trichloroethene
Concen: 0.18 ng
RT: 10.14 min Scan# 1279
Delta R.T. 0.004 min
Lab File: 06182416.D
Acq: 18 Jun 2024 17:56

Tgt Ion:130 Resp: 2656

Ion	Ratio	Lower	Upper
130	100		
132	101.7	77.9	117.9

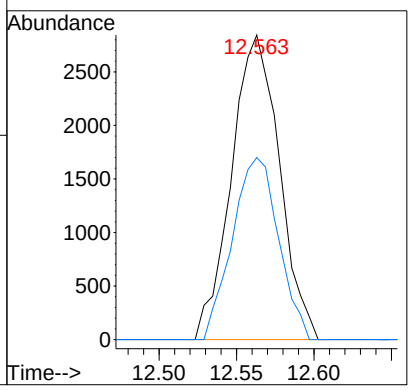


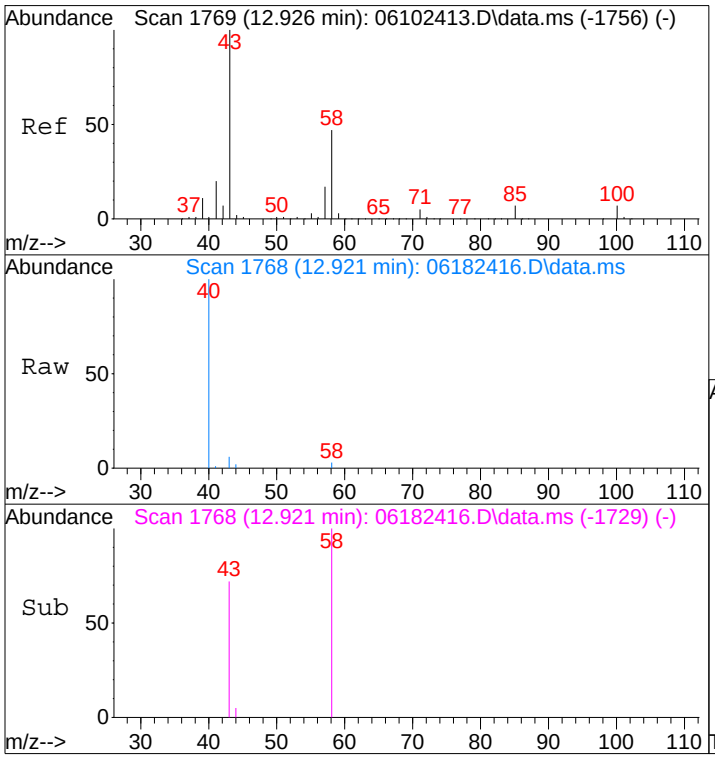


#58
Toluene
Concen: 0.12 ng
RT: 12.56 min Scan# 1705
Delta R.T. -0.028 min
Lab File: 06182416.D
Acq: 18 Jun 2024 17:56

Tgt Ion: 91 Resp: 6134

Ion	Ratio	Lower	Upper
91	100		
92	57.6	37.4	77.4

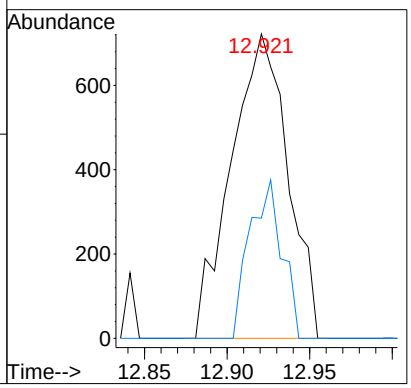


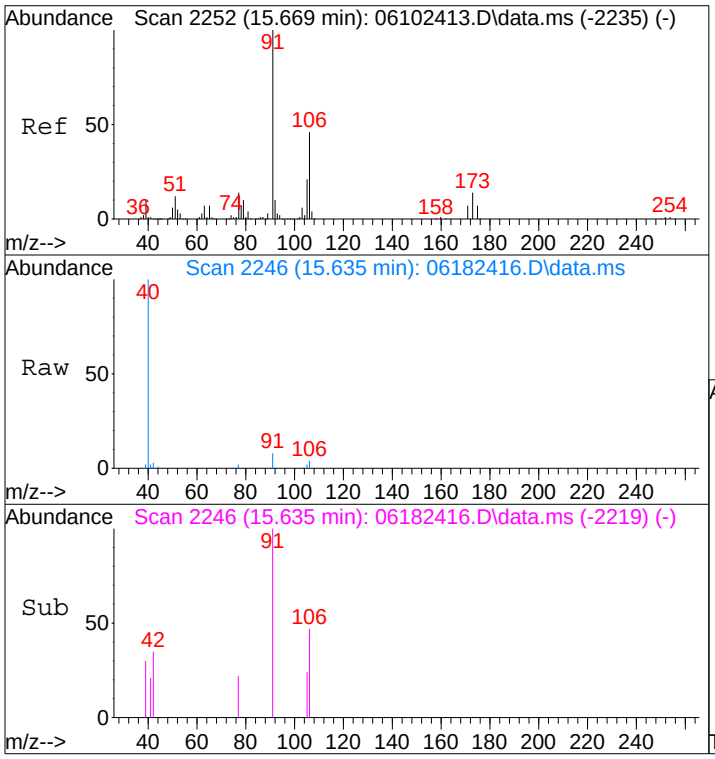


#59
2-Hexanone
Concen: 0.05 ng
RT: 12.92 min Scan# 1768
Delta R.T. -0.028 min
Lab File: 06182416.D
Acq: 18 Jun 2024 17:56

Tgt Ion: 43 Resp: 1722

Ion	Ratio	Lower	Upper
43	100		
58	29.7	25.9	65.9

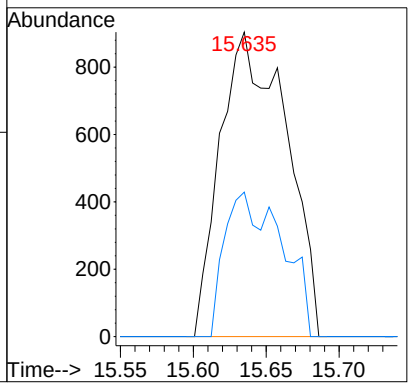




#67
m- & p-Xylenes
Concen: 0.06 ng
RT: 15.63 min Scan# 2246
Delta R.T. -0.045 min
Lab File: 06182416.D
Acq: 18 Jun 2024 17:56

Tgt Ion: 91 Resp: 2845

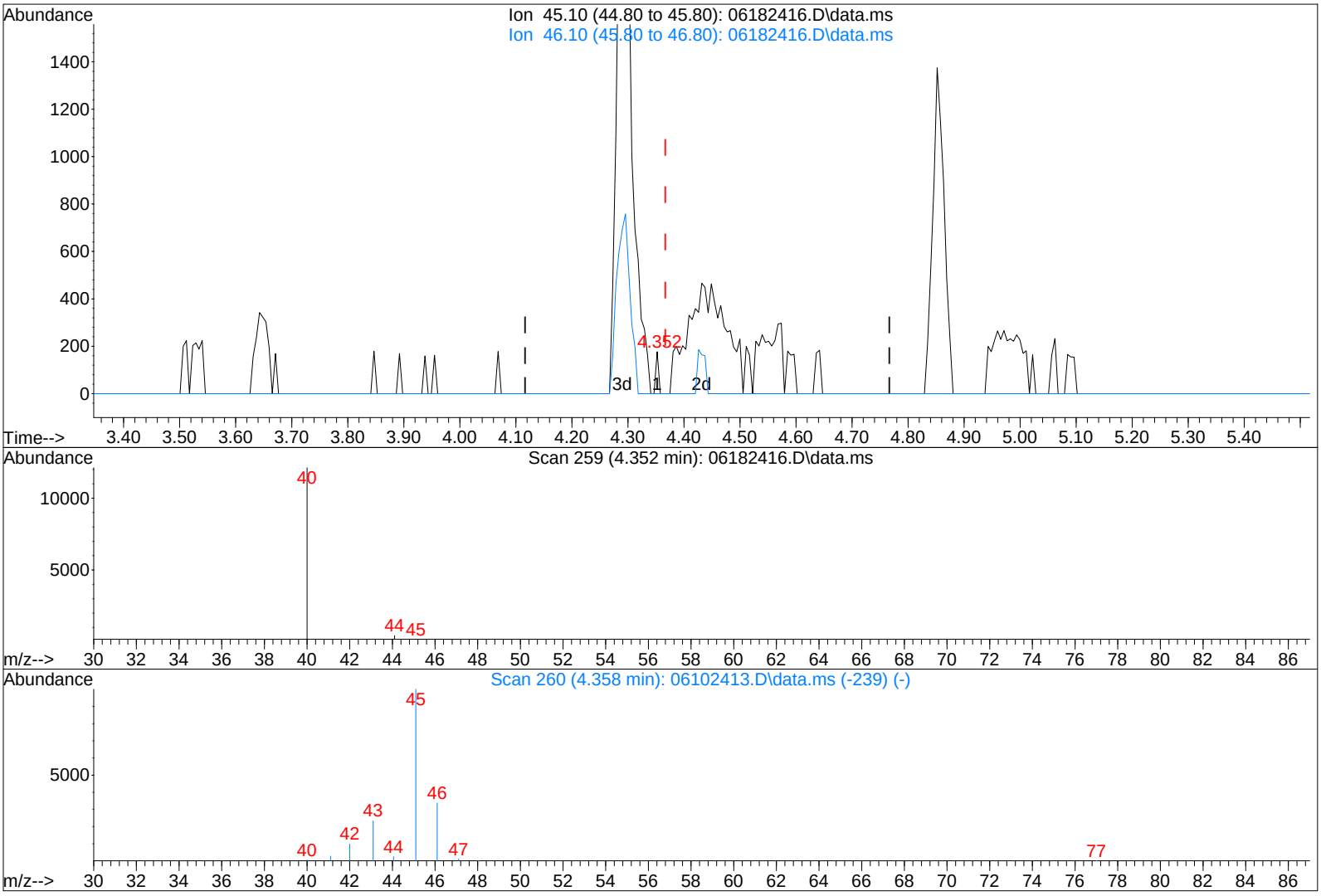
Ion	Ratio	Lower	Upper
91	100		
106	41.2	25.9	65.9



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182416.D Vial: 5
Acq On : 18 Jun 2024 17:56 Operator: SC
Sample : P2402249-026 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 08:25:24 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182416.D\data.ms

(10) Ethanol (T)

4.352min (-0.015) 0.00ng

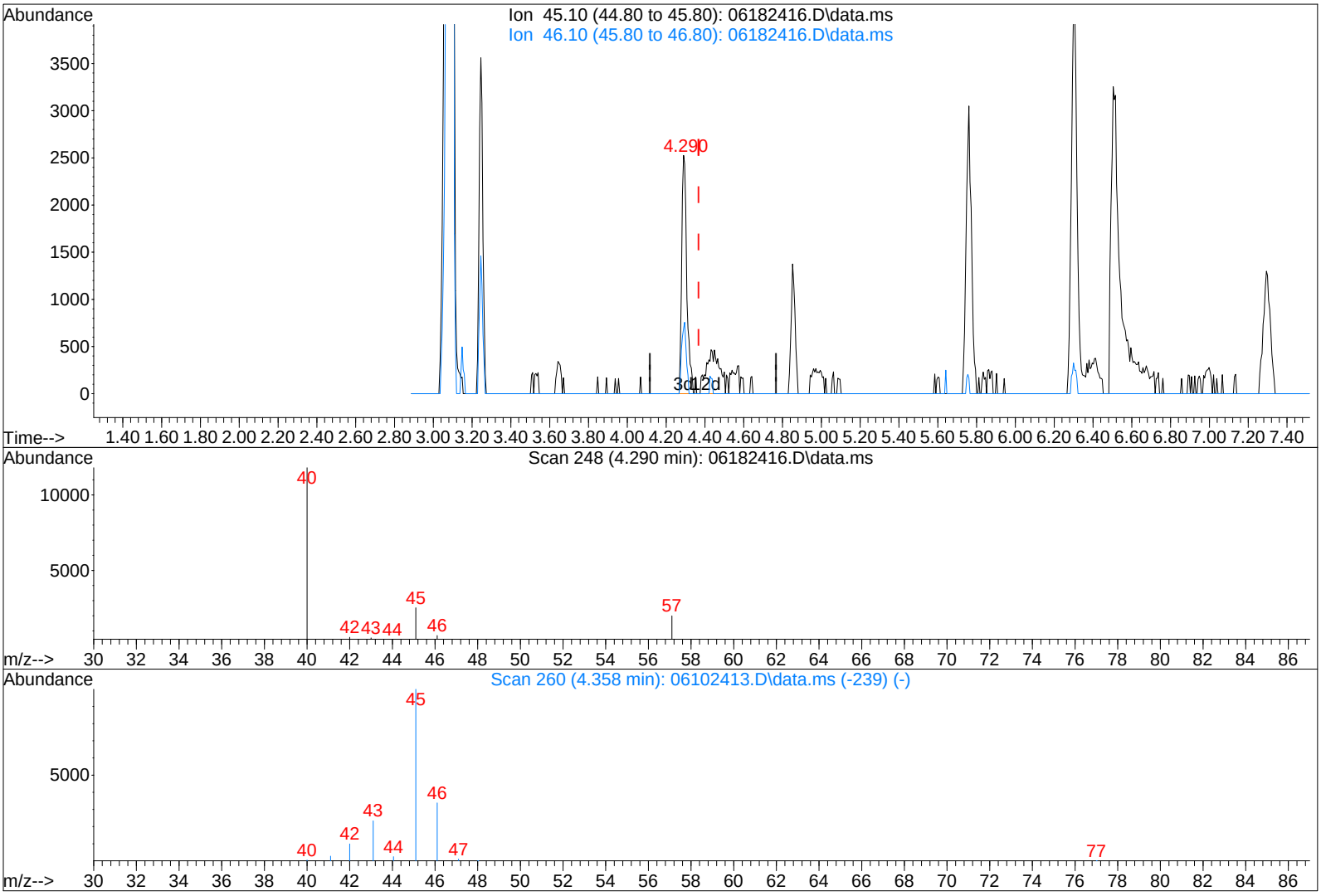
response 60

Ion	Exp%	Act%
45.10	100	100
46.10	33.50	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182416.D Vial: 5
Acq On : 18 Jun 2024 17:56 Operator: SC
Sample : P2402249-026 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 08:25:24 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182416.D\data.ms

(10) Ethanol (T)

4.290min (-0.077) 0.57ng m

response 6900

Ion	Exp%	Act%
45.10	100	100
46.10	33.50	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

MP

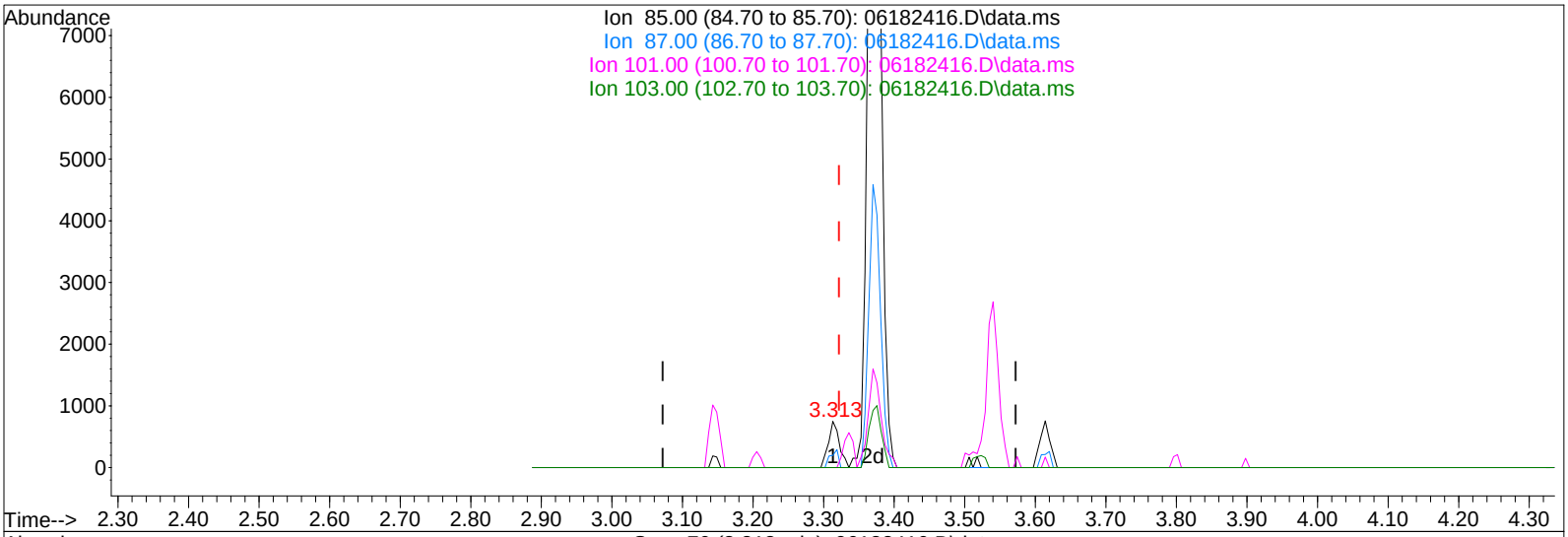
6/19/24

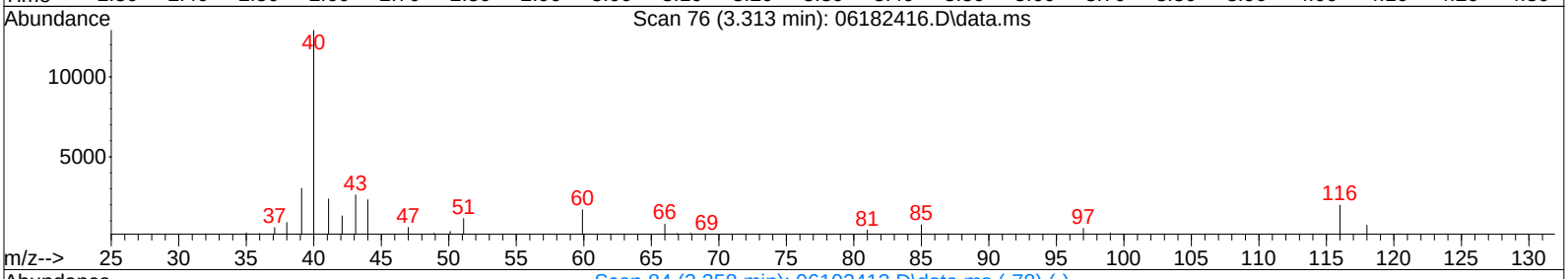
6/29/24

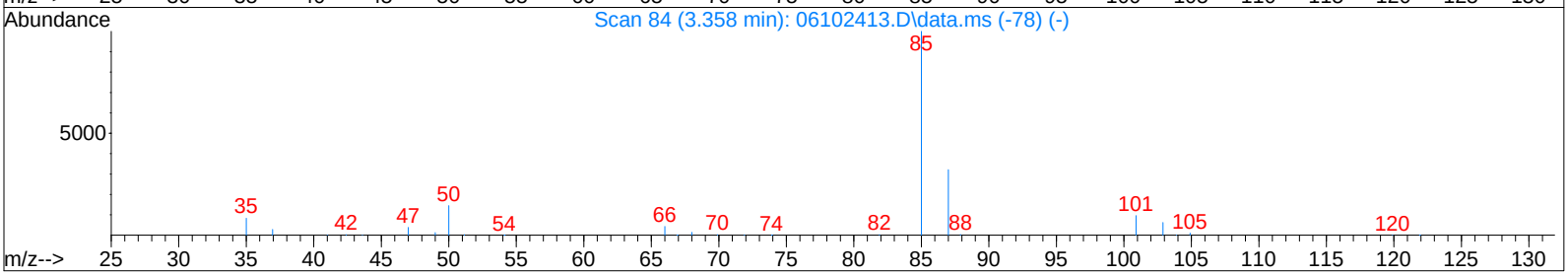
Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182416.D Vial: 5
Acq On : 18 Jun 2024 17:56 Operator: SC
Sample : P2402249-026 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 08:25:24 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M







TIC: 06182416.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.313min (-0.009) 0.03ng

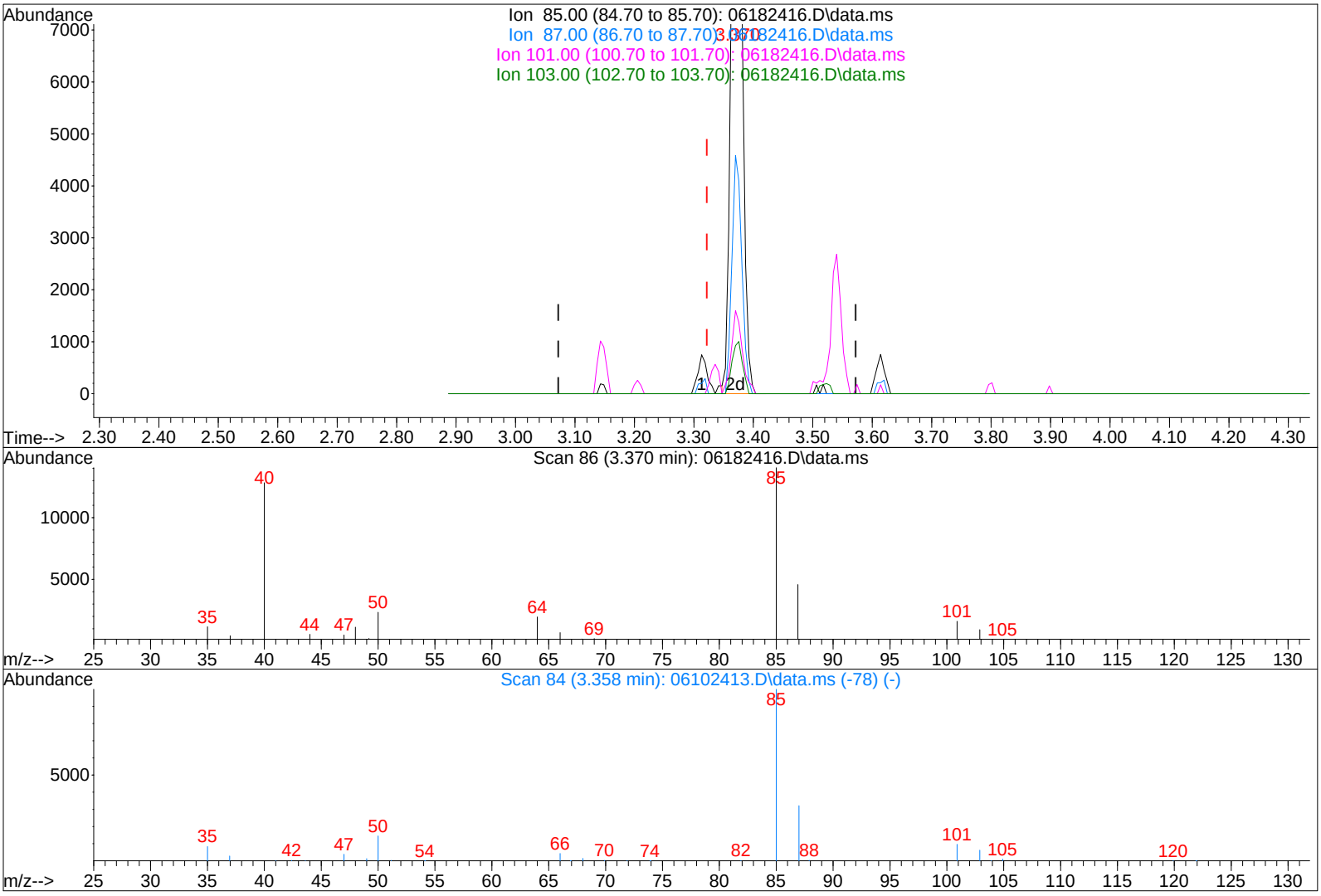
response 810

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	28.52
101.00	9.80	66.91#
103.00	6.30	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182416.D Vial: 5
Acq On : 18 Jun 2024 17:56 Operator: SC
Sample : P2402249-026 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 08:25:24 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182416.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.370min (+0.048) 0.59ng m

response 17318

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	1.33#
101.00	9.80	3.13
103.00	6.30	0.00

MP

6/19/24

6/29/24

Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\18\06182416.D Vial: 5
Acq On : 18 Jun 2024 17:56 Operator: SC
Sample : P2402249-026 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:59:49 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

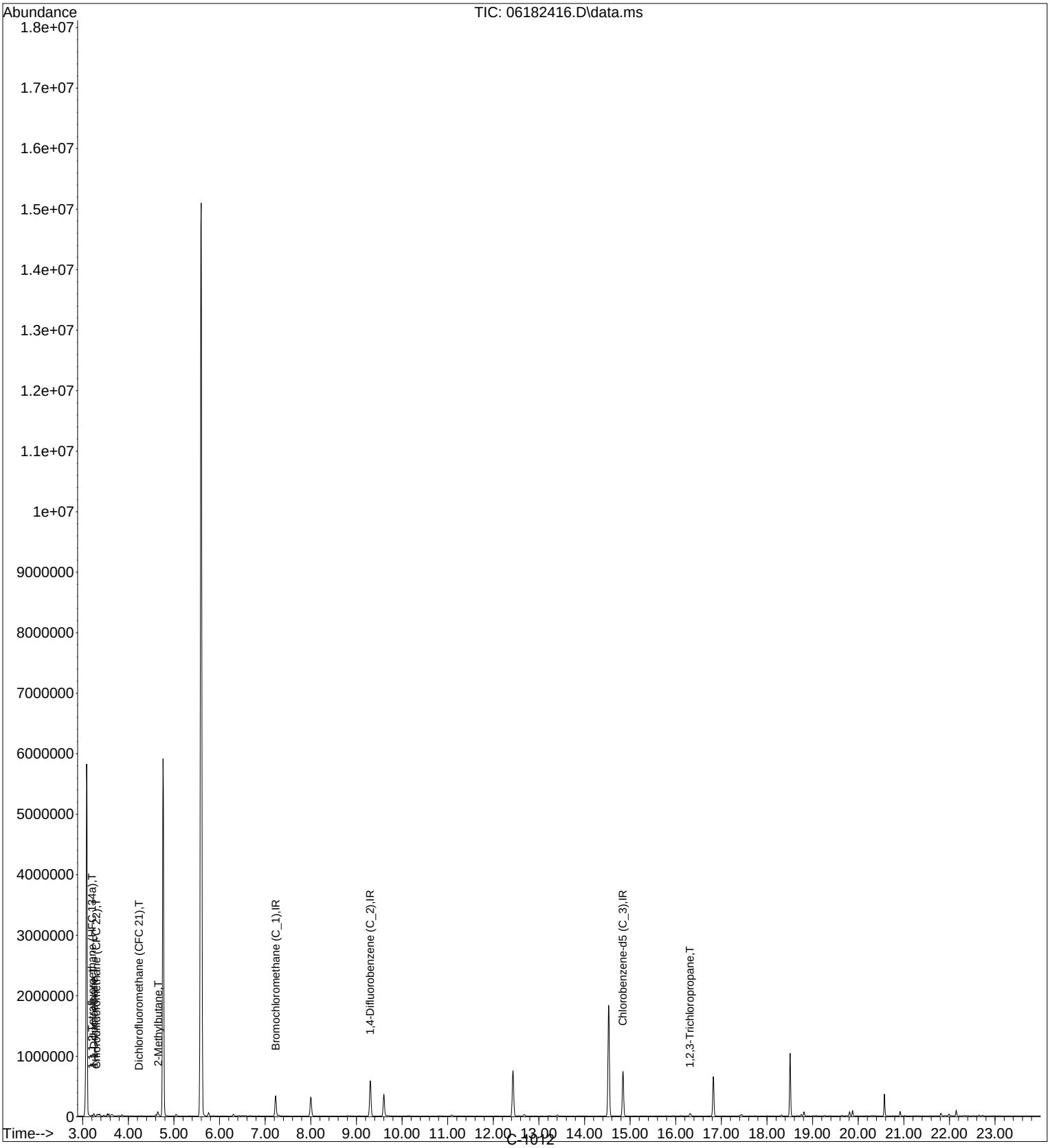
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	125566	12.500	ng		-0.02
16) 1,4-Difluorobenzene (C 2)	9.30	114	547482	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	129021	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	3.14	85	123	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.21	83	1745	0.135	ng	#	1
4) 1,1-Difluoroethane	3.25	65	10805	0.986	ng		97
5) Chlorodifluoromethane ...	3.30	67	622	0.145	ng	#	40
6) 1-Chloro-1,1-Difluoroe...	3.51	65	618	N.D.			
7) Dichlorofluoromethane ...	4.23	67	2964	0.103	ng	#	81
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	4.56	83	446	N.D.			
10) 2-Methylbutane	4.65	57	5468	0.365	ng	#	74
11) Methyl Acetate	5.35	43	1145	N.D.			
12) 2-Methylpentane	6.49	71	427	N.D.			
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	9.06	84	161	N.D.			
17) 2,3-Dimethylpentane	9.53	56	62	N.D.			
18) Dibromomethane	9.80	174	119	N.D.			
20) Methyl Cyclohexane	11.42	55	253	N.D.			
21) 1,3-Dichloropropane	0.00	76	0	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	16.31	75	2323	0.135	ng	#	46
25) Bromobenzene	17.03	77	60	N.D.			
26) 2-Chlorotoluene	17.61	91	556	N.D.			
27) 4-Chlorotoluene	17.68	91	1355	N.D.			
28) Indane	19.10	117	307	N.D.			
29) Indene	0.00	115	0	N.D.			
30) 1,2,4,5-Tetramethylben...	20.17	119	126	N.D.			
31) 1,2,3,4-Tetramethylben...	20.22	119	289	N.D.			
32) 1,2,3,5-Tetramethylben...	20.57	119	2289	N.D.			
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182416.D Vial: 5
Acq On : 18 Jun 2024 17:56 Operator: SC
Sample : P2402249-026 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:59:49 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



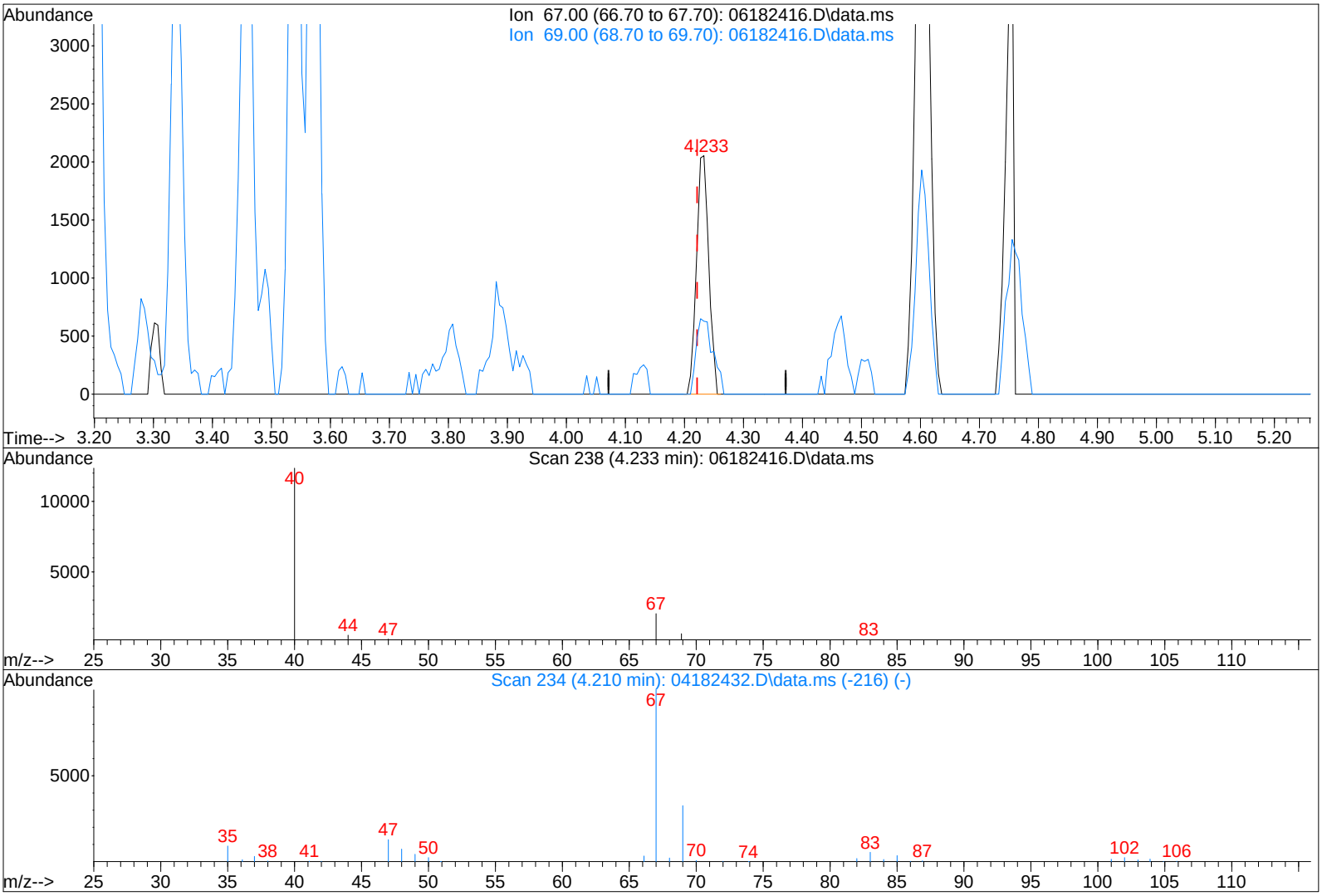
C-1012

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182416.D Vial: 5
Acq On : 18 Jun 2024 17:56 Operator: SC
Sample : P2402249-026 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 14:59:49 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182416.D\data.ms

(7) Dichlorofluoromethane (CFC 21) (T)

4.233min (+0.011) 0.10ng

response 2964

Ion	Exp%	Act%
67.00	100	100
69.00	32.40	42.95#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192408.D Vial: 5
Acq On : 19 Jun 2024 12:37 Operator: SC
Sample : P2402249-026Dil (40mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 13:29:12 2024 6/19/24
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	7.22	130	155617	12.500	ng	0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	675662	12.500	ng	0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	154980	12.500	ng	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4(...	7.99	65	347074	12.549	ng	0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.40%			
57) Toluene-d8 (SS2)	12.43	98	751435	12.670	ng	-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.36%			
73) Bromofluorobenzene (SS3)	16.83	174	268729	12.548	ng	-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.40%			
Target Compounds						Qvalue
2) Propene	3.32	42	308	N.D.		
3) Dichlorodifluoromethan...	3.39	85	1808	N.D.		
4) Chloromethane	3.52	50	201	N.D.		
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.		
6) Vinyl Chloride	0.00	62	0	N.D.		
7) 1,3-Butadiene	0.00	54	0	N.D.		
8) Bromomethane	0.00	94	0	N.D.		
9) Chloroethane	0.00	64	0	N.D.		
10) Ethanol	4.30	45	2704	0.179	ng	94
11) Acetonitrile	4.45	41	801	N.D.		
12) Acrolein	4.55	56	206	N.D.		
13) Acetone	4.65	58	3783	0.313	ng	90
14) Trichlorofluoromethane	4.75	101	465165	12.556	ng	100
15) 2-Propanol (Isopropanol)	4.87	45	794	N.D.		
16) Acrylonitrile	5.00	53	723	N.D.		
17) 1,1-Dichloroethene	0.00	96	0	N.D.		
18) 2-Methyl-2-Propanol (t...	0.00	59	0	N.D.		
19) Methylene Chloride	5.35	84	851	N.D.		
20) 3-Chloro-1-propene (Al...	5.46	41	113	N.D.		
21) Trichlorotrifluoroethane	5.58	151	545374	34.799	ng	98
22) Carbon Disulfide	5.61	76	2317	N.D.		
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.		
24) 1,1-Dichloroethane	0.00	63	0	N.D.		
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.		
26) Vinyl Acetate	0.00	86	0	N.D.		
27) 2-Butanone (MEK)	6.69	72	179	N.D.		
28) cis-1,2-Dichloroethene	7.07	61	190	N.D.		
29) Diisopropyl Ether	0.00	87	0	N.D.		
30) Ethyl Acetate	7.31	61	134	N.D.		
31) n-Hexane	0.00	57	0	N.D.		
32) Chloroform	7.35	83	550	N.D.		
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	8.11	62	182	N.D.		
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	8.85	56	765	No Calib	#	
41) Benzene	8.89	78	1516	N.D.		
42) Carbon Tetrachloride	0.00	117	0	N.D.		
43) Cyclohexane	9.29	84	923	N.D.		
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	0.00	63	0	N.D.		
46) Bromodichloromethane	10.06	83	349	N.D.		
47) Trichloroethene	10.14	130	567	N.D.		
48) 1,4-Dioxane	10.16	88	104	N.D.		
49) 2,2,4-Trimethylpentane...	0.00	57	0	N.D.		
50) Methyl Methacrylate	0.00	100	0	N.D.		

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192408.D Vial: 5
Acq On : 19 Jun 2024 12:37 Operator: SC
Sample : P2402249-026Dil (40mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 13:29:12 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

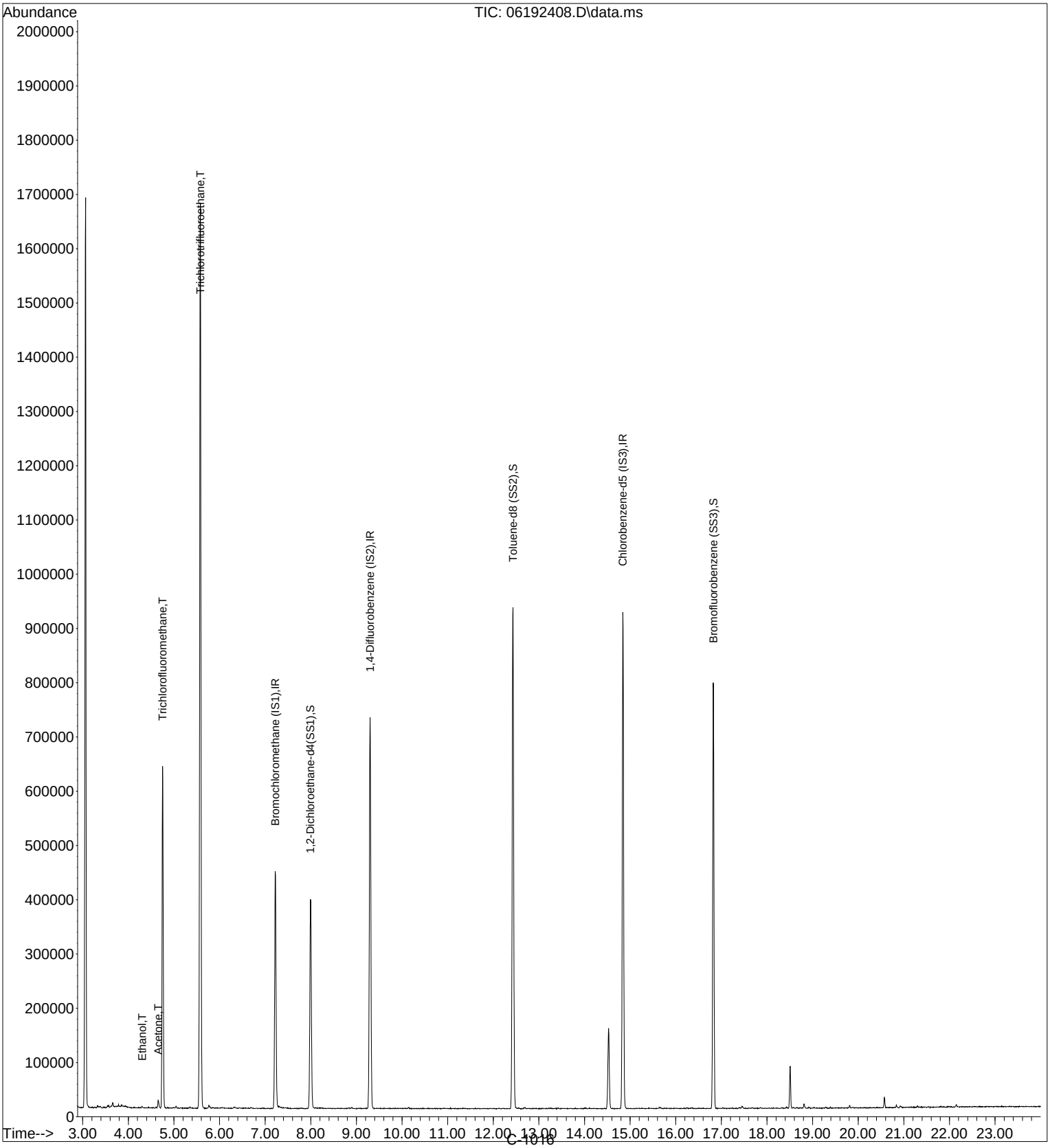
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
51) n-Heptane	0.00	71	0	N.D.		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	12.56	91	1522	N.D.		
59) 2-Hexanone	12.93	43	556	N.D.		
60) Dibromochloromethane	13.08	129	468	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	0.00	43	0	N.D.		
63) n-Octane	0.00	57	0	N.D.		
64) Tetrachloroethene	14.02	166	477	N.D.		
65) Chlorobenzene	14.90	112	683	N.D.		
66) Ethylbenzene	15.41	91	1202	N.D.		
67) m- & p-Xylenes	15.63	91	1198	N.D.		
68) Bromoform	15.67	173	636	N.D.		
69) Styrene	16.11	104	194	N.D.		
70) o-Xylene	16.24	91	811	N.D.		
71) n-Nonane	0.00	43	0	N.D.		
72) 1,1,2,2-Tetrachloroethane	16.21	83	308	N.D.		
74) Cumene	17.03	105	925	N.D.		
75) alpha-Pinene	0.00	93	0	N.D.		
76) n-Propylbenzene	17.67	91	1560	N.D.		
77) 3-Ethyltoluene	17.03	105	925	No Calib		
78) 4-Ethyltoluene	17.86	105	1015	N.D.		
79) 1,3,5-Trimethylbenzene	17.96	105	654	N.D.		
80) alpha-Methylstyrene	0.00	118	0	N.D.		
81) 2-Ethyltoluene	17.03	105	925	No Calib		
82) 1,2,4-Trimethylbenzene	18.43	105	835	N.D.		
83) n-Decane	0.00	58	0	N.D.		
84) Benzyl Chloride	18.56	91	629	N.D.		
85) 1,3-Dichlorobenzene	18.57	146	763	N.D.		
86) 1,4-Dichlorobenzene	18.66	146	800	N.D.		
87) sec-Butylbenzene	18.74	105	1042	N.D.		
88) 4-Isopropyltoluene (p-...	18.93	119	850	N.D.		
89) 1,2,3-Trimethylbenzene	17.03	105	925	No Calib		
90) 1,2-Dichlorobenzene	19.04	146	699	N.D.		
91) d-Limonene	0.00	68	0	N.D.		
92) 1,2-Dibromo-3-Chloropr...	19.51	157	167	N.D.		
93) n-Undecane	0.00	58	0	N.D.		
94) 1,2,4-Trichlorobenzene	20.84	180	1304	N.D.		
95) Naphthalene	20.94	128	2055	N.D.		
96) n-Dodecane	0.00	58	0	N.D.		
97) Hexachlorobutadiene	21.30	225	712	N.D.		
98) Cyclohexanone	0.00	55	0	N.D.		
99) tert-Butylbenzene	18.43	119	911	N.D.		
100) n-Butylbenzene	19.39	91	757	N.D.		
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192408.D Vial: 5
Acq On : 19 Jun 2024 12:37 Operator: SC
Sample : P2402249-026Dil (40mL) Inst : MS09
Misc : S37-06062402

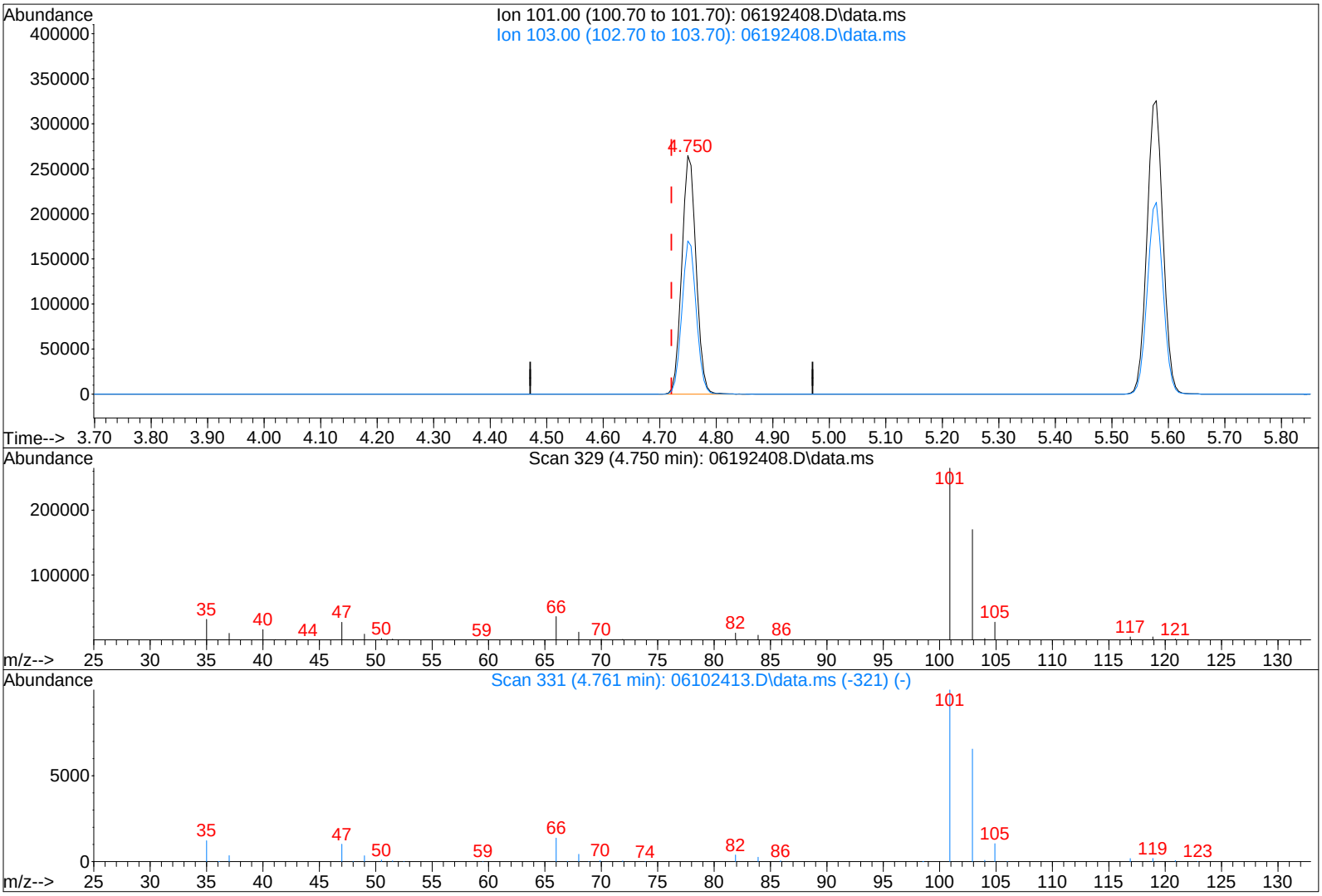
Quant Time: Jun 19 13:29:12 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\19\06192408.D Vial: 5
Acq On : 19 Jun 2024 12:37 Operator: SC
Sample : P2402249-026Dil (40mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 13:29:12 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06192408.D\data.ms

(14) Trichlorofluoromethane (T)

4.750min (+0.029) 12.56ng

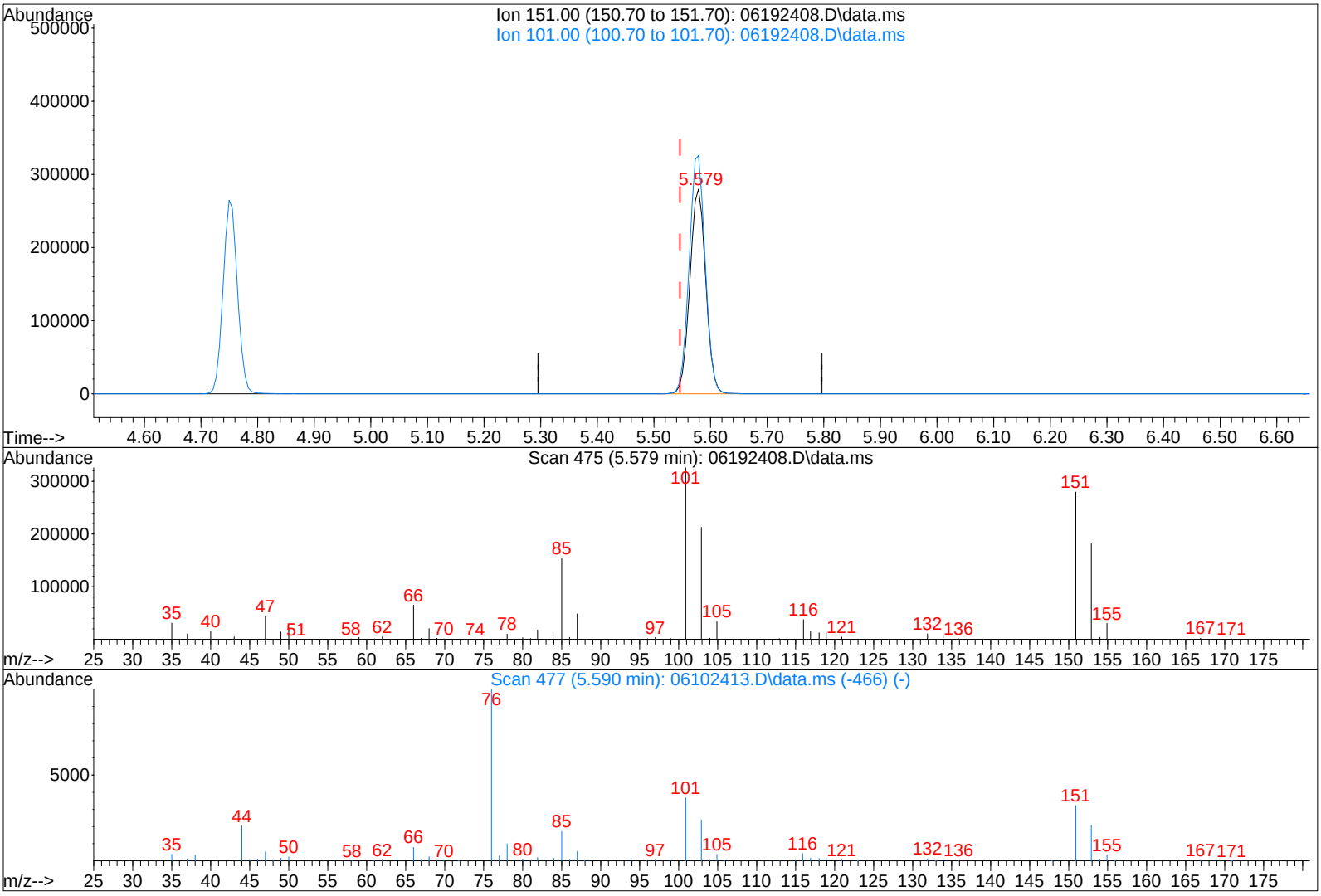
response 465165

Ion	Exp%	Act%
101.00	100	100
103.00	64.90	64.51
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\19\06192408.D Vial: 5
Acq On : 19 Jun 2024 12:37 Operator: SC
Sample : P2402249-026Dil (40mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 13:29:12 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06192408.D\data.ms

(21) Trichlorotrifluoroethane (T)

5.579min (+0.032) 34.80ng

response 545374

Ion	Exp%	Act%
151.00	100	100
101.00	115.00	117.53
0.00	0.00	0.00
0.00	0.00	0.00

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\18\
Data File : 06182416.D
Acq On : 18 Jun 2024 17:56
Operator : SC
Sample : P2402249-026 (400mL)
Misc : S37-06062402
ALS Vial : 5 Sample Multiplier: 1

MJ 6/28/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06182416.D\data.ms

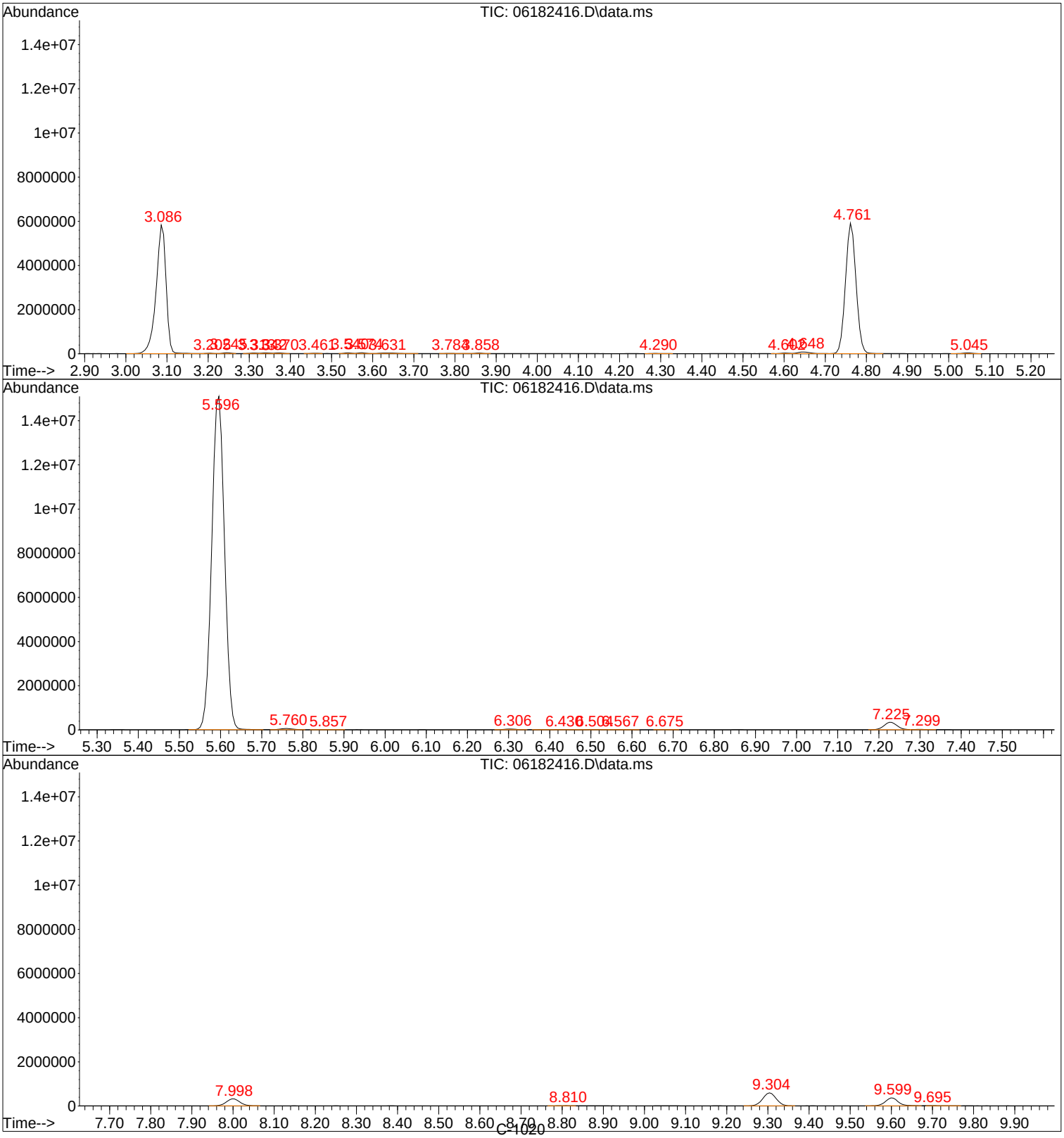
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.086	21	36	54	rBV	5818936	9796255	30.09%	17.086%
2	3.205	54	57	60	rVV	16370	16984	0.05%	0.030%
3	3.245	60	64	68	rVV	38466	49067	0.15%	0.086%
4	3.313	71	76	78	rVV3	22779	33100	0.10%	0.058%
5	3.342	78	81	84	rVV3	27855	41598	0.13%	0.073%
6	3.370	84	86	91	rVB	28740	32031	0.10%	0.056%
7	3.461	97	102	105	rBV2	14194	19316	0.06%	0.034%
8	3.540	112	116	119	rBV	32824	38846	0.12%	0.068%
9	3.574	119	122	127	rVB	36181	42392	0.13%	0.074%
10	3.631	127	132	146	rBV2	22584	65013	0.20%	0.113%
11	3.784	155	159	167	rBV6	7686	13472	0.04%	0.023%
12	3.858	167	172	177	rBV	19592	26304	0.08%	0.046%
13	4.290	243	248	255	rBV3	6057	11560	0.04%	0.020%
14	4.602	297	303	306	rBV2	21277	33694	0.10%	0.059%
15	4.648	306	311	322	rVB3	71742	145152	0.45%	0.253%
16	4.761	322	331	345	rBV	5906398	10526952	32.34%	18.361%
17	5.045	374	381	387	rVB	27921	46645	0.14%	0.081%
18	5.596	465	478	497	rBV	15088870	32553742	100.00%	56.779%
19	5.760	500	507	515	rVB	55180	105258	0.32%	0.184%
20	5.857	517	524	532	rVB5	5034	12771	0.04%	0.022%
21	6.306	596	603	610	rBV	29915	60276	0.19%	0.105%
22	6.430	612	625	631	rVV4	10668	29904	0.09%	0.052%
23	6.504	631	638	645	rVV4	9751	25744	0.08%	0.045%
24	6.567	645	649	658	rVB3	8759	17038	0.05%	0.030%
25	6.675	664	668	675	rVB2	7637	15540	0.05%	0.027%
26	7.225	756	765	774	rBV	334666	731616	2.25%	1.276%
27	7.299	774	778	785	rVB	14189	26073	0.08%	0.045%
28	7.998	891	901	913	rBV	313857	706264	2.17%	1.232%
29	8.810	1036	1044	1048	rBV3	8073	18499	0.06%	0.032%
30	9.304	1120	1131	1142	rBV	585680	1317667	4.05%	2.298%
31	9.599	1172	1183	1196	rBV	355638	759305	2.33%	1.324%
32	9.695	1198	1200	1213	rVB5	6769	16329	0.05%	0.028%

Sum of corrected areas: 57334407

Data Path : I:\MS09\DATA\2024 06\18\
Data File : 06182416.D
Acq On : 18 Jun 2024 17:56
Operator : SC
Sample : P2402249-026 (400mL)
Misc : S37-06062402
ALS Vial : 5 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



C-1020

Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\18\\
Data File : 06182416.D
Acq On : 18 Jun 2024 17:566
Operator : SCC
Sample : P2402249-026 (400mL))
Misc : S37-060624022
ALS Vial : 5 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

						Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected

****

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182417.D Vial: 6
Acq On : 18 Jun 2024 18:29 Operator: SC
Sample : P2402249-027 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 13:39:24 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/19/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	123397	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	539353	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	124502	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	278716	12.708	ng		0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.68%				
57) Toluene-d8 (SS2)	12.43	98	598447	12.561	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.48%				
73) Bromofluorobenzene (SS3)	16.83	174	221463	12.873	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.96%				
Target Compounds							Qvalue
2) Propene	0.00	42	0	N.D. d			
3) Dichlorodifluoromethan...	3.36	85	16399	0.565	ng		99
4) Chloromethane	3.49	50	7063	0.356	ng		96
5) 1,2-Dichloro-1,1,2,2-t...	3.61	135	389	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	4.14	64	189	N.D.			
10) Ethanol	4.27	45	10874m	0.906	ng		
11) Acetonitrile	0.00	41	0	N.D. d			
12) Acrolein	4.52	56	4492	0.506	ng		96
13) Acetone	4.62	58	53269	5.557	ng	#	82
14) Trichlorofluoromethane	4.75	101	7829	0.267	ng		100
15) 2-Propanol (Isopropanol)	4.94	45	128	N.D.			
16) Acrylonitrile	5.04	53	434	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.33	59	894	N.D.			
19) Methylene Chloride	5.34	84	1685	0.124	ng		100
20) 3-Chloro-1-propene (Al...	5.45	41	135	N.D.			
21) Trichlorotrifluoroethane	5.58	151	1963	0.158	ng		91
22) Carbon Disulfide	5.59	76	2474	0.057	ng		88
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D. d			
27) 2-Butanone (MEK)	6.66	72	5595	0.738	ng	#	86
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.			
30) Ethyl Acetate	7.29	61	279	0.060	ng		79
31) n-Hexane	7.30	57	5646	0.278	ng		97
32) Chloroform	7.35	83	464	N.D.			
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	873	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.80	56	2866	No Calib			
41) Benzene	8.89	78	6035	0.121	ng		99
42) Carbon Tetrachloride	9.07	117	2314	0.100	ng		92
43) Cyclohexane	9.21	84	2221	0.138	ng		94
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.07	83	411	N.D.			
47) Trichloroethene	10.13	130	105	N.D.			
48) 1,4-Dioxane	10.13	88	116	N.D.			
49) 2,2,4-Trimethylpentane...	10.23	57	178	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182417.D Vial: 6
Acq On : 18 Jun 2024 18:29 Operator: SC
Sample : P2402249-027 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 13:39:24 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

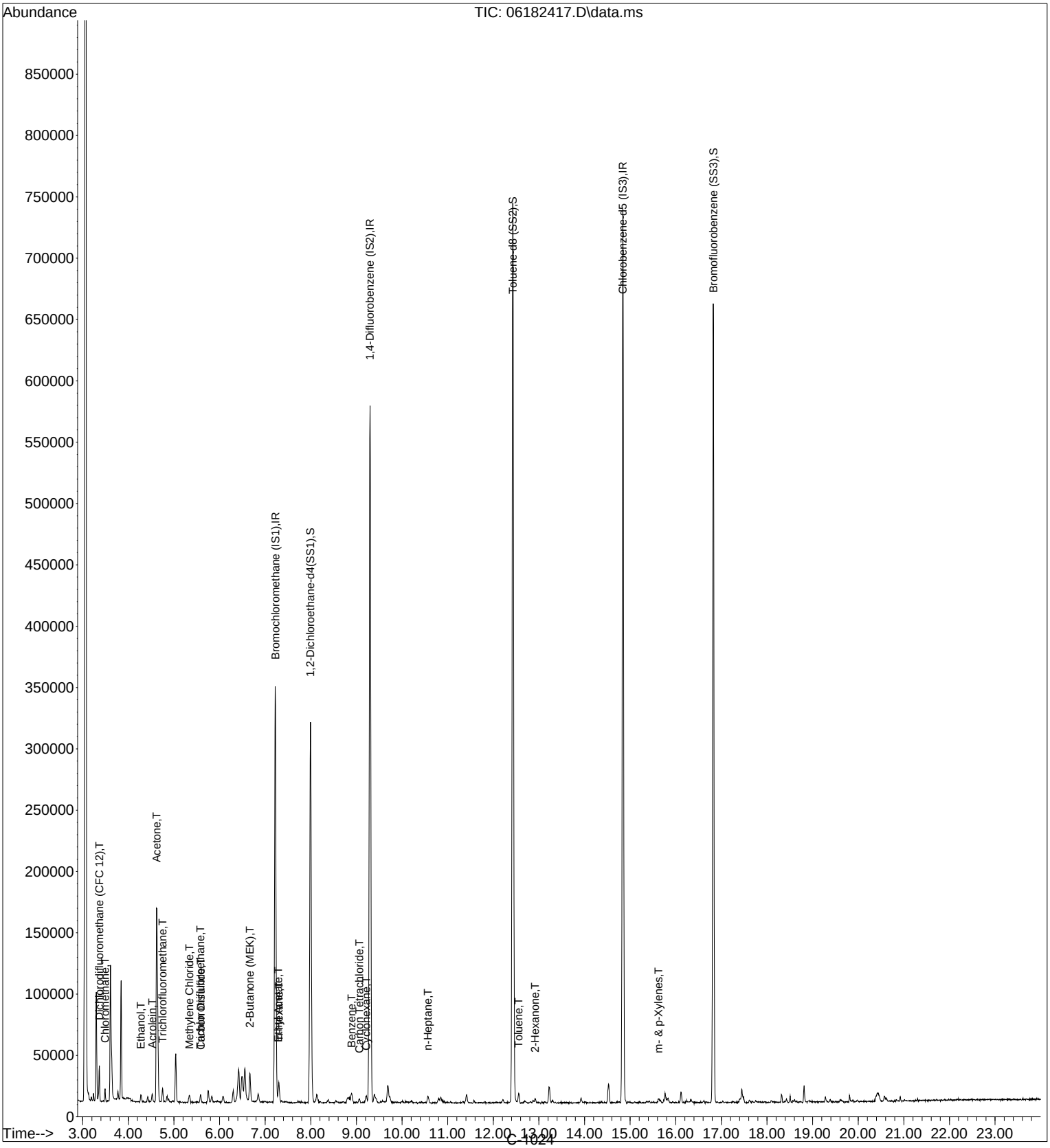
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	10.56	71	1295	0.123 ng	#	88
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	11.33	58	130	N.D.		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	12.56	91	7011	0.141 ng		99
59) 2-Hexanone	12.92	43	3405	0.109 ng		85
60) Dibromochloromethane	13.07	129	198	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	0.00	43	0	N.D.		
63) n-Octane	13.91	57	503	N.D.		
64) Tetrachloroethene	14.03	166	283	N.D.		
65) Chlorobenzene	14.90	112	287	N.D.		
66) Ethylbenzene	15.41	91	1544	N.D.		
67) m- & p-Xylenes	15.62	91	3056	0.064 ng		97
68) Bromoform	15.67	173	459	N.D.		
69) Styrene	0.00	104	0	N.D.		
70) o-Xylene	16.24	91	1181	N.D.		
71) n-Nonane	16.62	43	1126	N.D.		
72) 1,1,2,2-Tetrachloroethane	16.21	83	234	N.D.		
74) Cumene	17.04	105	797	N.D.		
75) alpha-Pinene	0.00	93	0	N.D.		
76) n-Propylbenzene	17.68	91	1324	N.D.		
77) 3-Ethyltoluene	17.04	105	797	No Calib	#	
78) 4-Ethyltoluene	17.86	105	783	N.D.		
79) 1,3,5-Trimethylbenzene	17.95	105	530	N.D.		
80) alpha-Methylstyrene	0.00	118	0	N.D.		
81) 2-Ethyltoluene	17.04	105	797	No Calib	#	
82) 1,2,4-Trimethylbenzene	18.43	105	996	N.D.		
83) n-Decane	0.00	58	0	N.D.		
84) Benzyl Chloride	18.56	91	429	N.D.		
85) 1,3-Dichlorobenzene	18.58	146	489	N.D.		
86) 1,4-Dichlorobenzene	18.66	146	458	N.D.		
87) sec-Butylbenzene	18.74	105	867	N.D.		
88) 4-Isopropyltoluene (p-...	18.93	119	1211	N.D.		
89) 1,2,3-Trimethylbenzene	17.04	105	797	No Calib	#	
90) 1,2-Dichlorobenzene	19.04	146	369	N.D.		
91) d-Limonene	0.00	68	0	N.D.		
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	0.00	58	0	N.D.		
94) 1,2,4-Trichlorobenzene	20.84	180	538	N.D.		
95) Naphthalene	20.94	128	449	N.D.		
96) n-Dodecane	0.00	58	0	N.D.		
97) Hexachlorobutadiene	21.30	225	434	N.D.		
98) Cyclohexanone	15.36	55	385	No Calib	#	
99) tert-Butylbenzene	18.42	119	693	N.D.		
100) n-Butylbenzene	19.38	91	886	N.D.		
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182417.D Vial: 6
Acq On : 18 Jun 2024 18:29 Operator: SC
Sample : P2402249-027 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 13:39:24 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182417.D Vial: 6
Acq On : 18 Jun 2024 18:29 Operator: SC
Sample : P2402249-027 (400mL) Inst : MS09
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Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/19/24

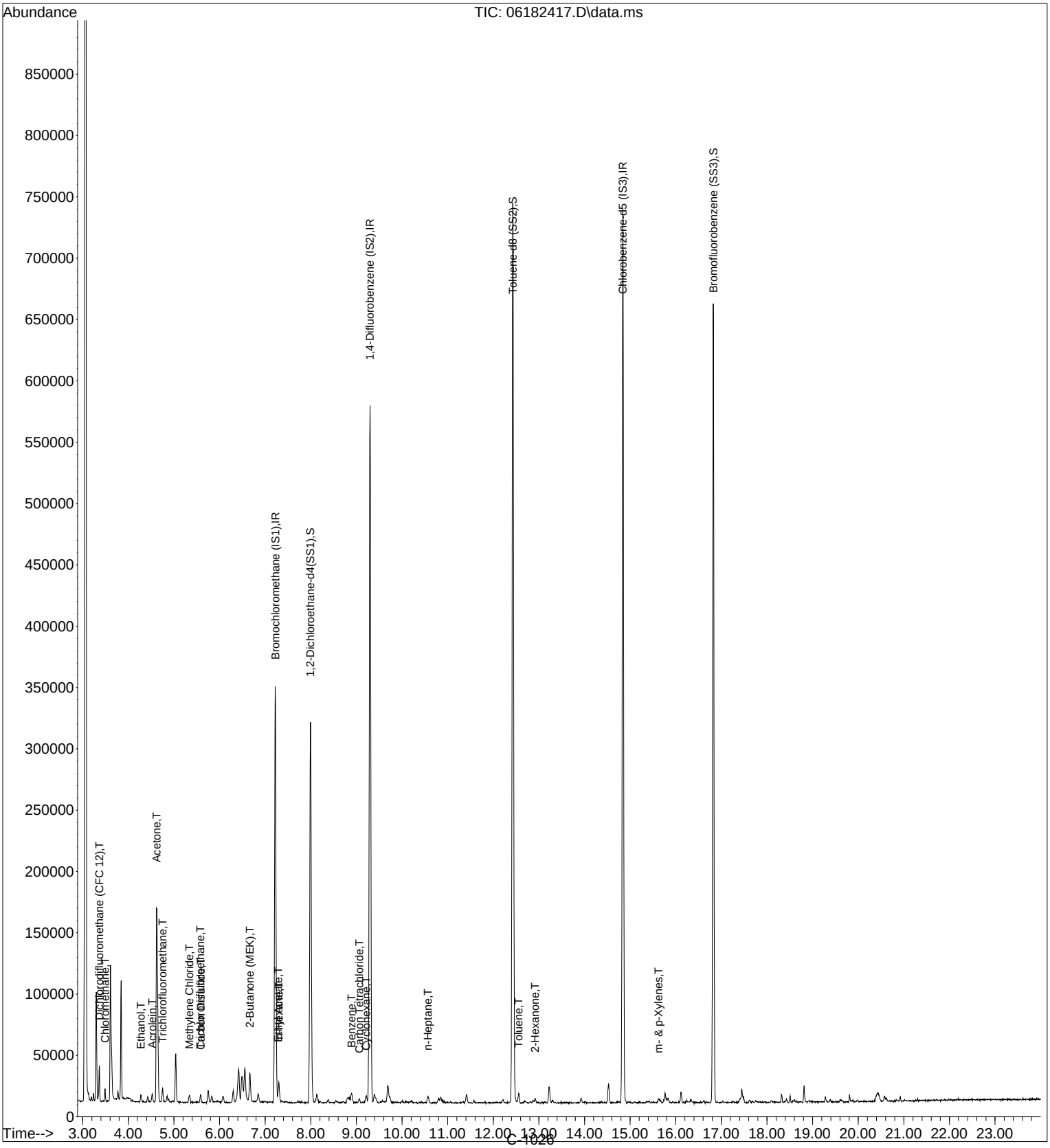
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	123397	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	539353	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	124502	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	278716	12.708	ng		0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.68%				
57) Toluene-d8 (SS2)	12.43	98	598447	12.561	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.48%				
73) Bromofluorobenzene (SS3)	16.83	174	221463	12.873	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.96%				
Target Compounds							Qvalue
3) Dichlorodifluoromethan...	3.36	85	16399	0.565	ng		99
4) Chloromethane	3.49	50	7063	0.356	ng		96
10) Ethanol	4.27	45	10874m	0.906	ng		
12) Acrolein	4.52	56	4492	0.506	ng		96
13) Acetone	4.62	58	53269	5.557	ng	#	82
14) Trichlorofluoromethane	4.75	101	7829	0.267	ng		100
19) Methylene Chloride	5.34	84	1685	0.124	ng		100
21) Trichlorotrifluoroethane	5.58	151	1963	0.158	ng		91
22) Carbon Disulfide	5.59	76	2474	0.057	ng		88
27) 2-Butanone (MEK)	6.66	72	5595	0.738	ng	#	86
30) Ethyl Acetate	7.29	61	279	0.060	ng		79
31) n-Hexane	7.30	57	5646	0.278	ng		97
41) Benzene	8.89	78	6035	0.121	ng		99
42) Carbon Tetrachloride	9.07	117	2314	0.100	ng		92
43) Cyclohexane	9.21	84	2221	0.138	ng		94
51) n-Heptane	10.56	71	1295	0.123	ng	#	88
58) Toluene	12.56	91	7011	0.141	ng		99
59) 2-Hexanone	12.92	43	3405	0.109	ng		85
67) m- & p-Xylenes	15.62	91	3056	0.064	ng		97

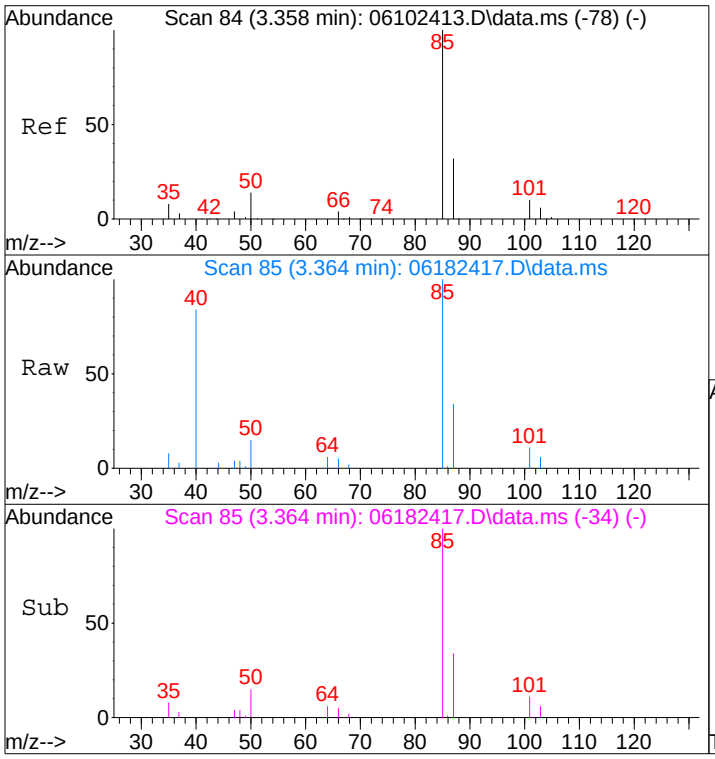
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182417.D Vial: 6
Acq On : 18 Jun 2024 18:29 Operator: SC
Sample : P2402249-027 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 13:39:24 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

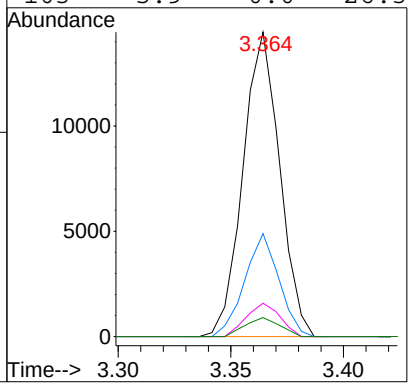


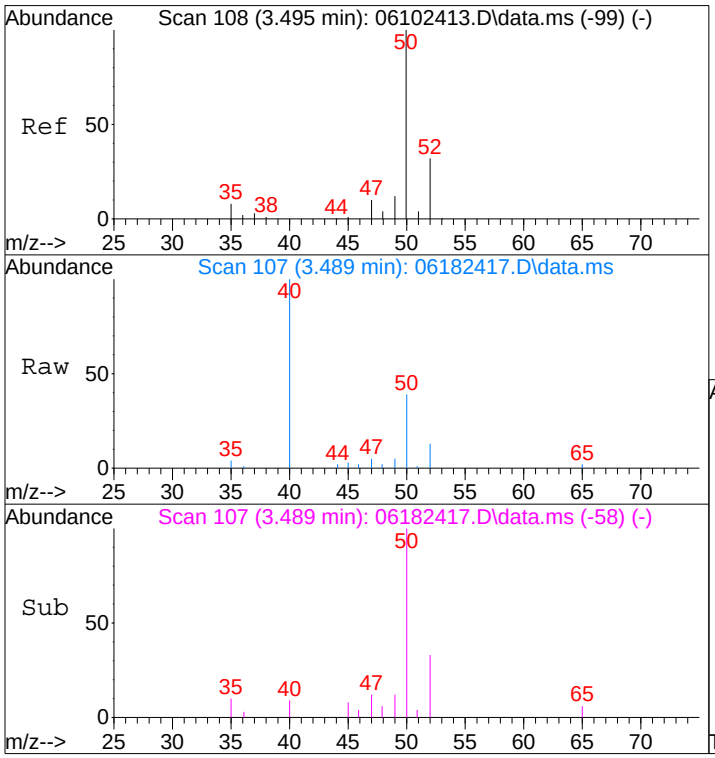


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.56 ng
RT: 3.36 min Scan# 85
Delta R.T. 0.042 min
Lab File: 06182417.D
Acq: 18 Jun 2024 18:29

Tgt Ion: 85 Resp: 16399

Ion	Ratio	Lower	Upper
85	100		
87	31.7	12.2	52.2
101	10.1	0.0	29.8
103	5.9	0.0	26.3

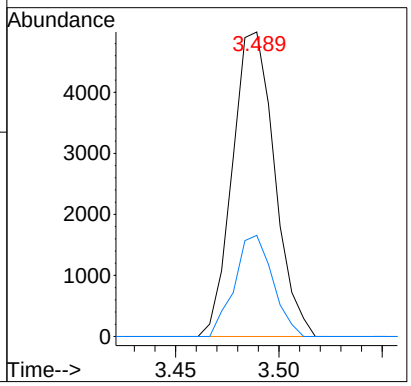


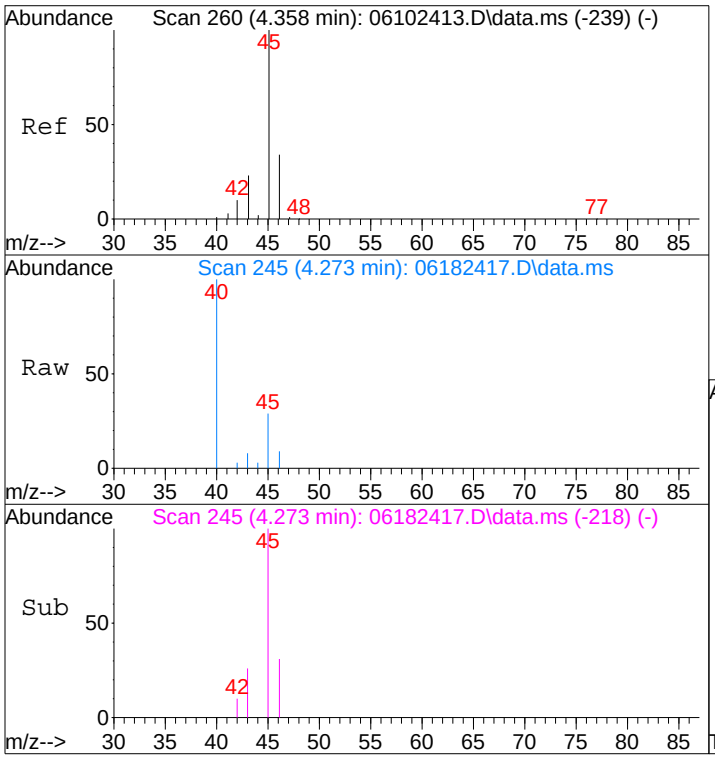


#4
Chloromethane
Concen: 0.36 ng
RT: 3.49 min Scan# 107
Delta R.T. 0.027 min
Lab File: 06182417.D
Acq: 18 Jun 2024 18:29

Tgt Ion: 50 Resp: 7063

Ion	Ratio	Lower	Upper
50	100		
52	30.1	12.4	52.4

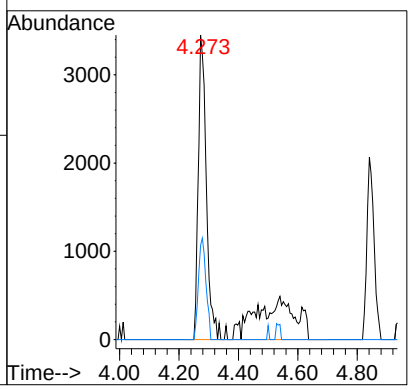


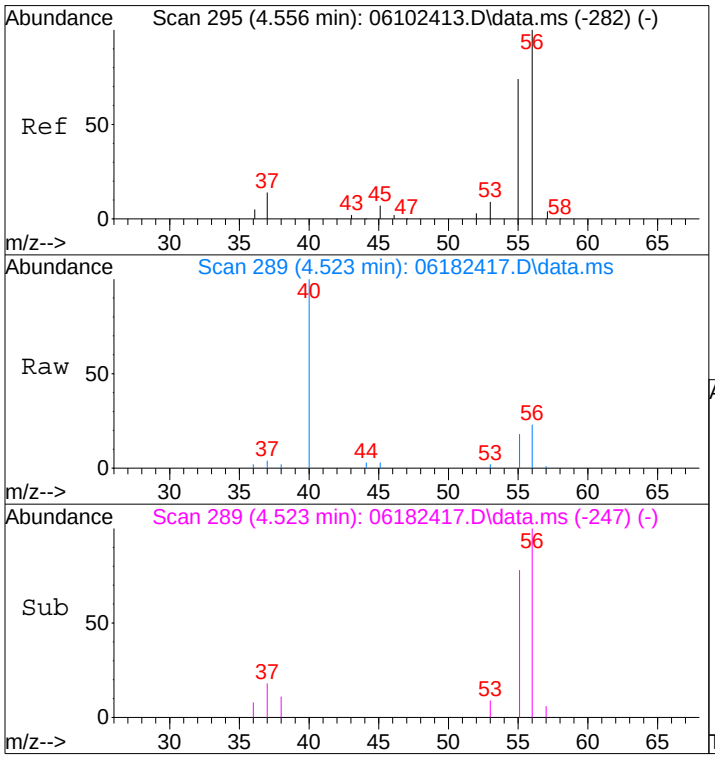


#10
Ethanol
Concen: 0.91 ng m
RT: 4.27 min Scan# 245
Delta R.T. -0.094 min
Lab File: 06182417.D
Acq: 18 Jun 2024 18:29

Tgt Ion: 45 Resp: 10874

Ion	Ratio	Lower	Upper
45	100		
46	0.0	13.5	53.5#

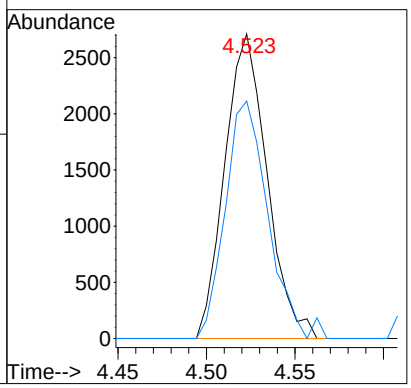


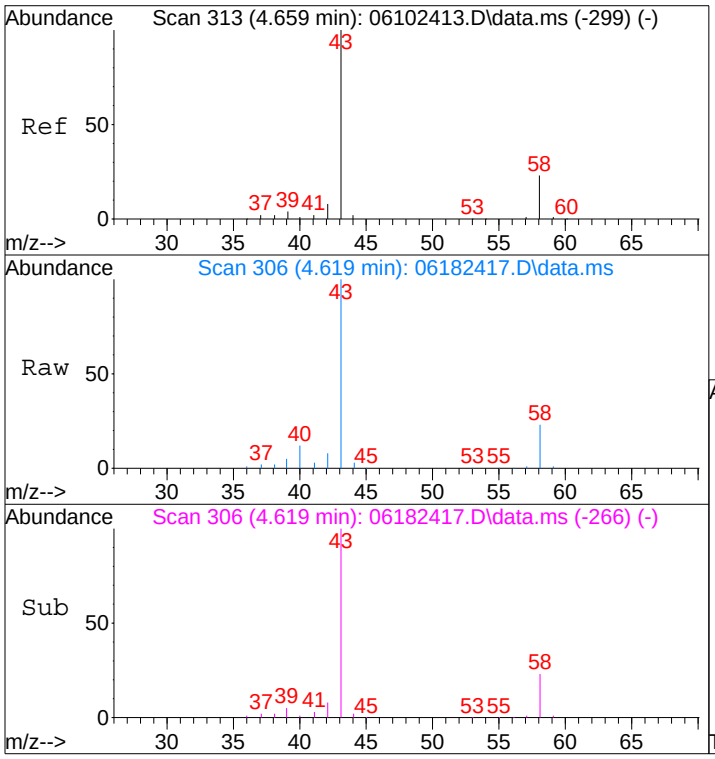


#12
Acrolein
Concen: 0.51 ng
RT: 4.52 min Scan# 289
Delta R.T. -0.013 min
Lab File: 06182417.D
Acq: 18 Jun 2024 18:29

Tgt Ion: 56 Resp: 4492

Ion	Ratio	Lower	Upper
56	100		
55	78.9	55.5	95.5

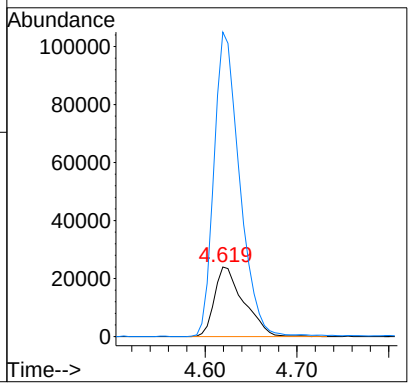


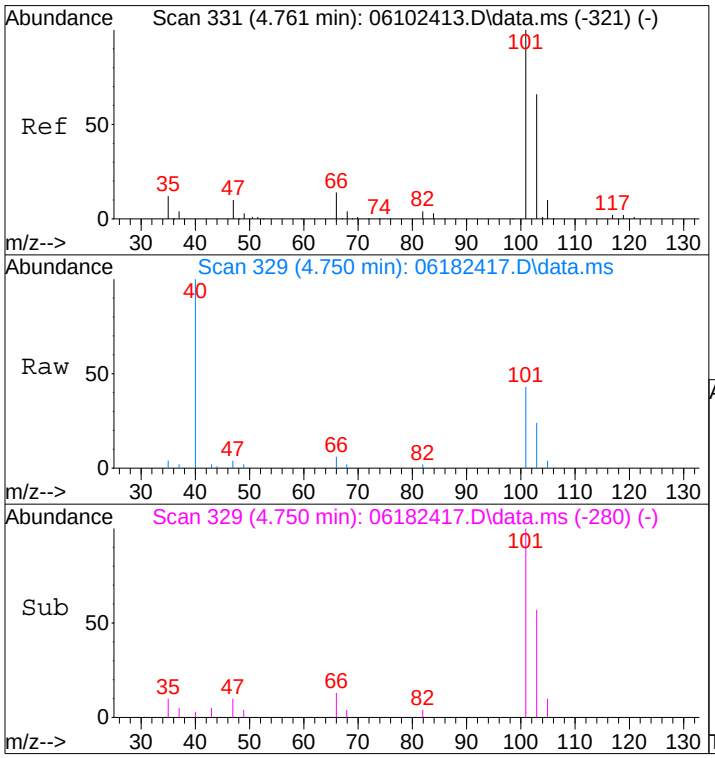


#13
Acetone
Concen: 5.56 ng
RT: 4.62 min Scan# 306
Delta R.T. -0.023 min
Lab File: 06182417.D
Acq: 18 Jun 2024 18:29

Tgt Ion: 58 Resp: 53269

Ion	Ratio	Lower	Upper
58	100		
43	385.1	400.7	460.7#

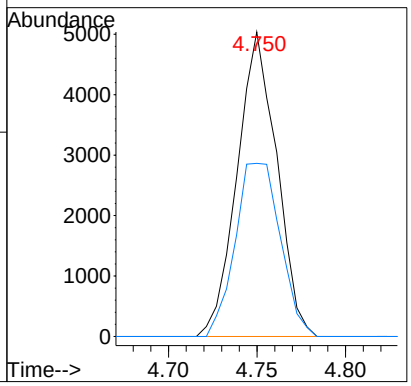


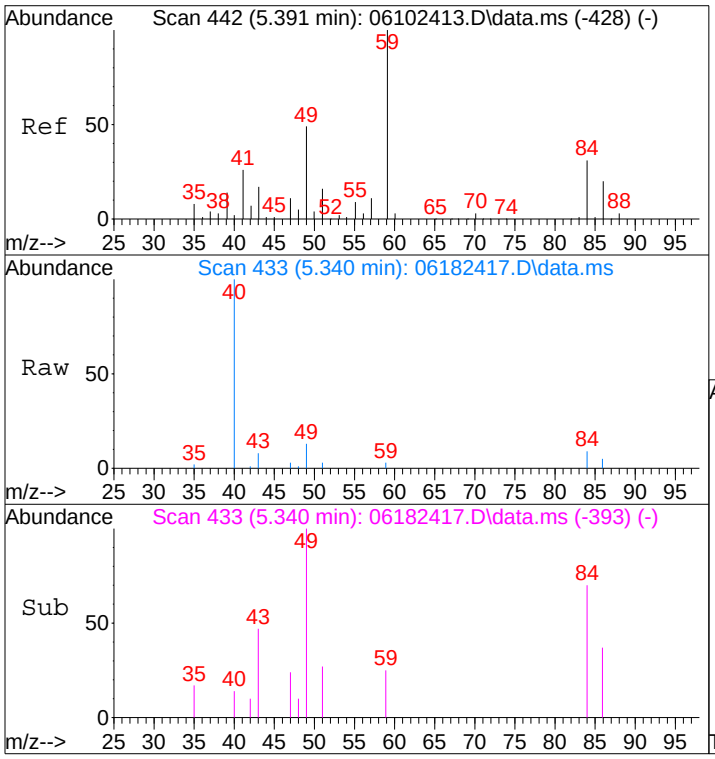


#14
Trichlorofluoromethane
Concen: 0.27 ng
RT: 4.75 min Scan# 329
Delta R.T. 0.029 min
Lab File: 06182417.D
Acq: 18 Jun 2024 18:29

Tgt Ion:101 Resp: 7829

Ion	Ratio	Lower	Upper
101	100		
103	65.1	44.9	84.9

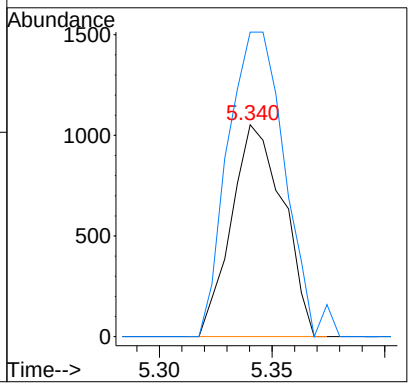


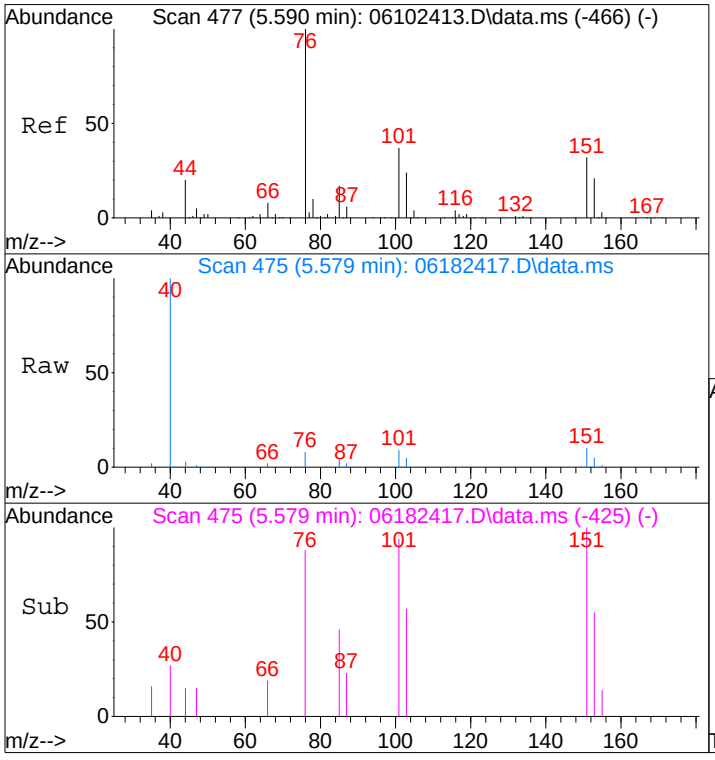


#19
Methylene Chloride
Concen: 0.12 ng
RT: 5.34 min Scan# 433
Delta R.T. -0.021 min
Lab File: 06182417.D
Acq: 18 Jun 2024 18:29

Tgt Ion: 84 Resp: 1685

Ion	Ratio	Lower	Upper
84	100		
49	158.5	132.9	182.9

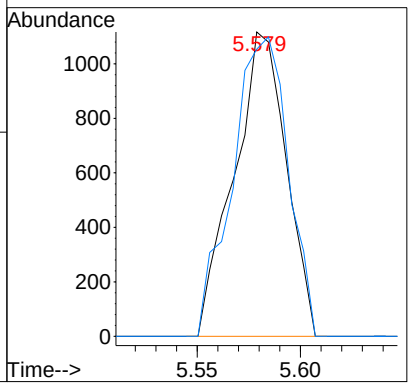


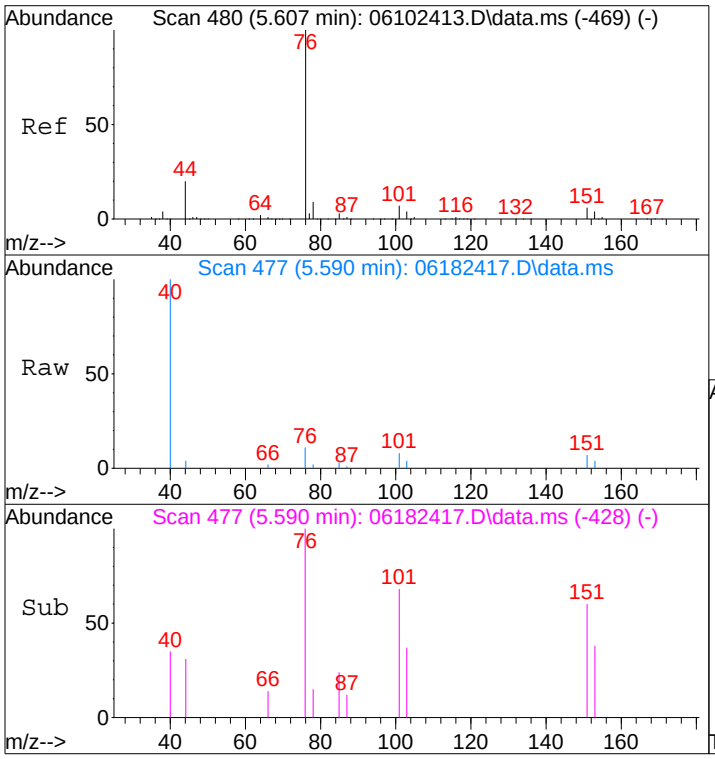


#21
Trichlorotrifluoroethane
Concen: 0.16 ng
RT: 5.58 min Scan# 475
Delta R.T. 0.033 min
Lab File: 06182417.D
Acq: 18 Jun 2024 18:29

Tgt Ion:151 Resp: 1963

Ion	Ratio	Lower	Upper
151	100		
101	105.0	95.0	135.0

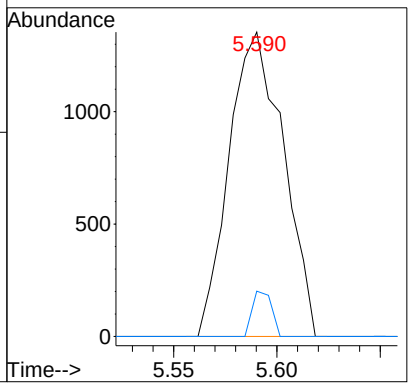


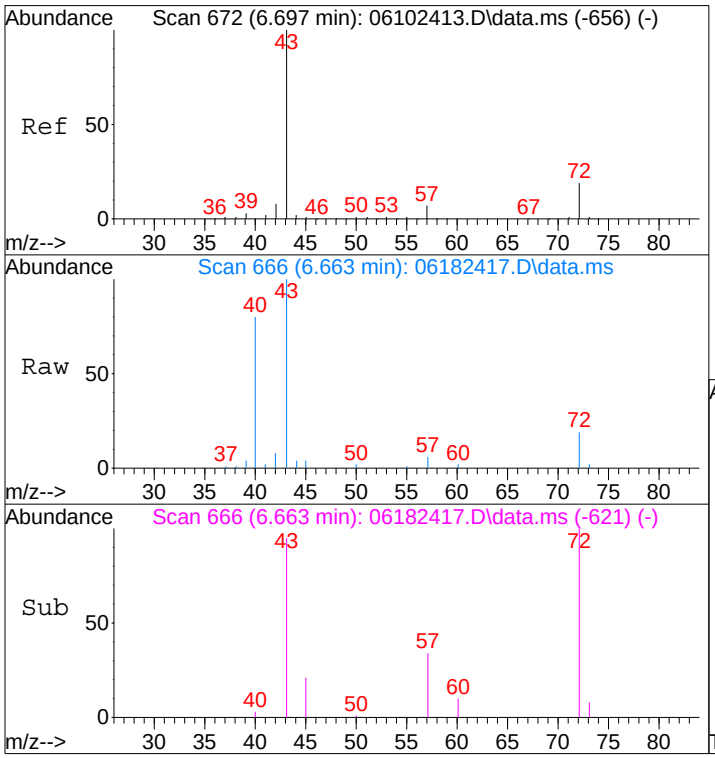


#22
Carbon Disulfide
Concen: 0.06 ng
RT: 5.59 min Scan# 477
Delta R.T. 0.027 min
Lab File: 06182417.D
Acq: 18 Jun 2024 18:29

Tgt Ion: 76 Resp: 2474

Ion	Ratio	Lower	Upper
76	100		
78	5.3	0.0	29.6

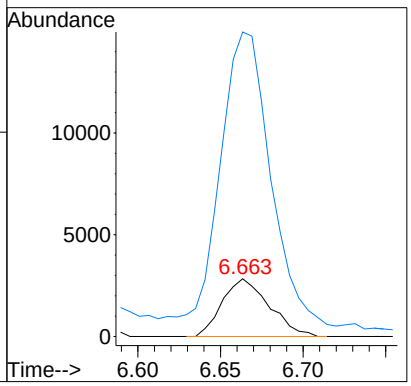


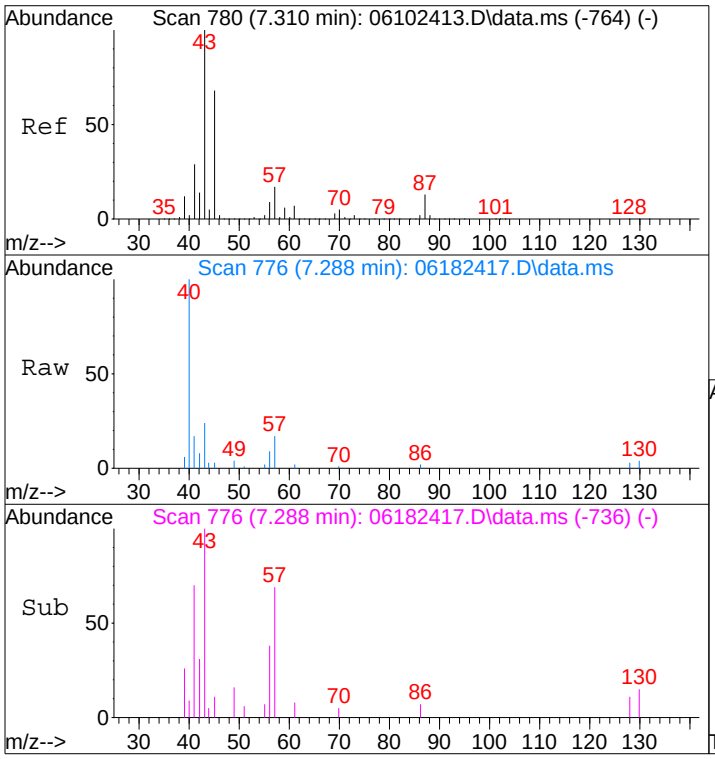


#27
2-Butanone (MEK)
Concen: 0.74 ng
RT: 6.66 min Scan# 666
Delta R.T. 0.005 min
Lab File: 06182417.D
Acq: 18 Jun 2024 18:29

Tgt Ion: 72 Resp: 5595

Ion	Ratio	Lower	Upper
72	100		
43	566.2	506.8	546.8#

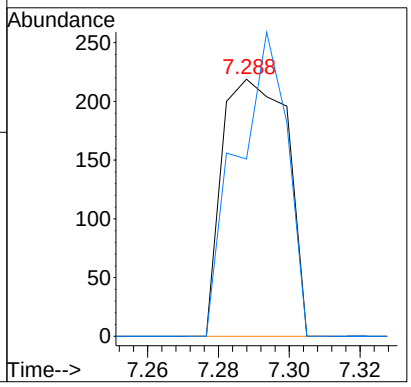


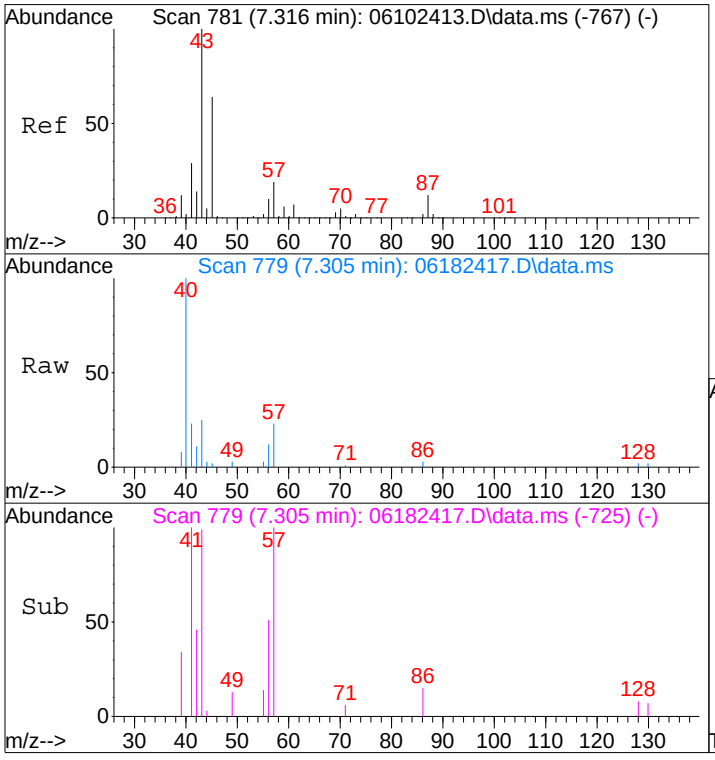


#30
Ethyl Acetate
Concen: 0.06 ng
RT: 7.29 min Scan# 776
Delta R.T. 0.029 min
Lab File: 06182417.D
Acq: 18 Jun 2024 18:29

Tgt Ion: 61 Resp: 279

Ion	Ratio	Lower	Upper
61	100		
70	91.4	53.5	93.5

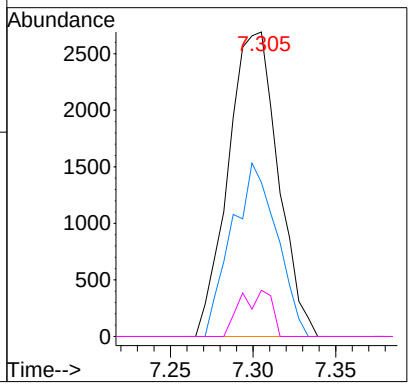


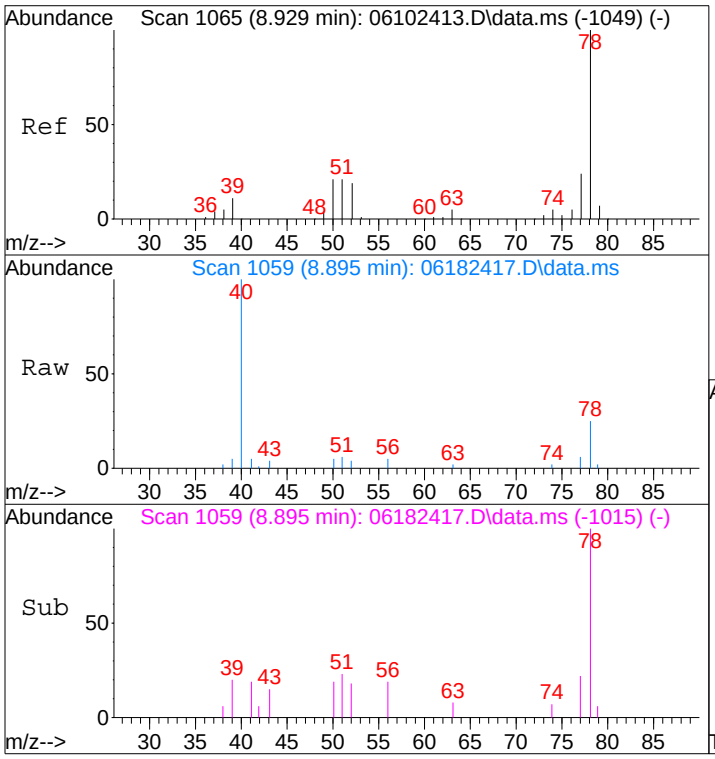


#31
n-Hexane
Concen: 0.28 ng
RT: 7.30 min Scan# 779
Delta R.T. 0.057 min
Lab File: 06182417.D
Acq: 18 Jun 2024 18:29

Tgt Ion: 57 Resp: 5646

Ion	Ratio	Lower	Upper
57	100		
56	51.6	42.5	63.7
86	9.5	9.5	14.3

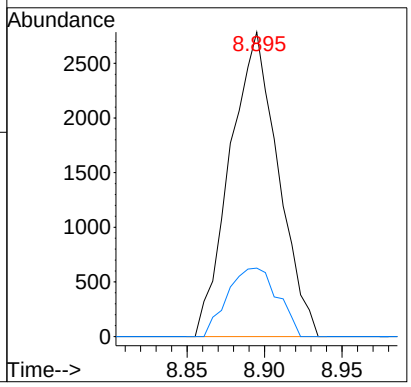


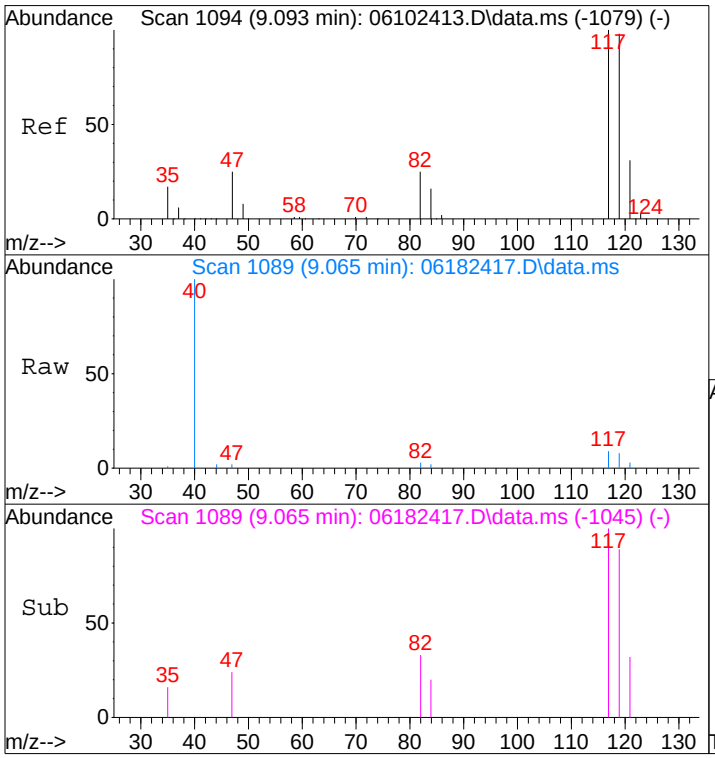


#41
Benzene
Concen: 0.12 ng
RT: 8.89 min Scan# 1059
Delta R.T. -0.002 min
Lab File: 06182417.D
Acq: 18 Jun 2024 18:29

Tgt Ion: 78 Resp: 6035

Ion	Ratio	Lower	Upper
78	100		
77	23.3	4.0	44.0

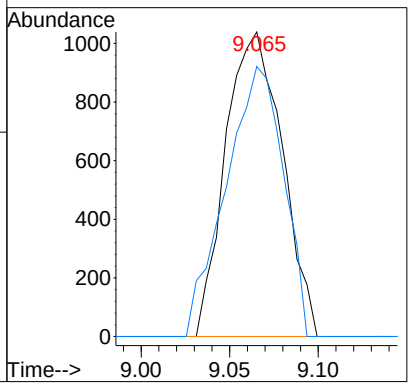


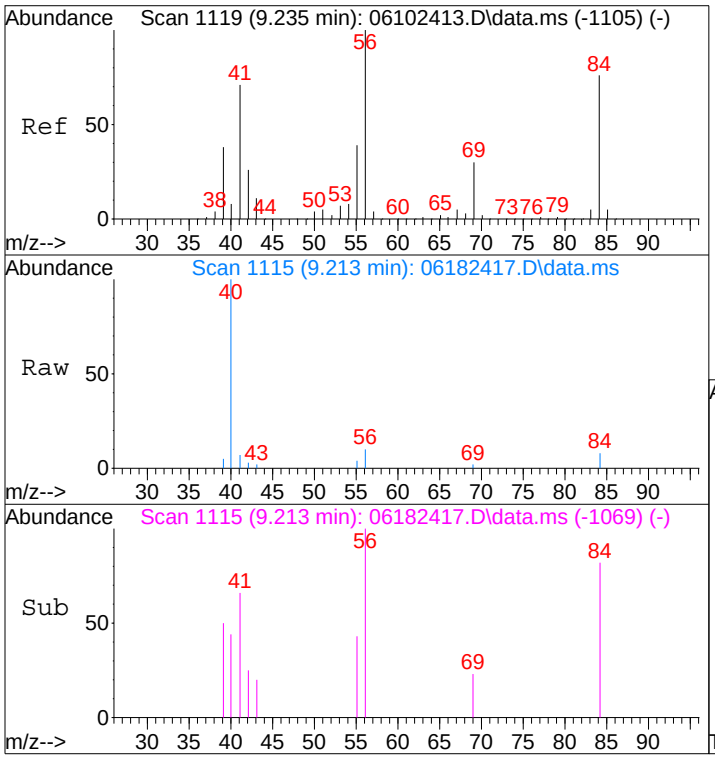


#42
Carbon Tetrachloride
Concen: 0.10 ng
RT: 9.07 min Scan# 1089
Delta R.T. -0.001 min
Lab File: 06182417.D
Acq: 18 Jun 2024 18:29

Tgt Ion:117 Resp: 2314

Ion	Ratio	Lower	Upper
117	100		
119	89.9	77.3	117.3

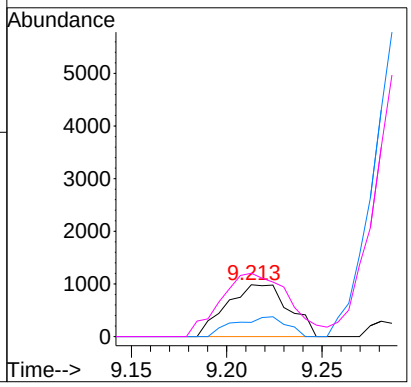


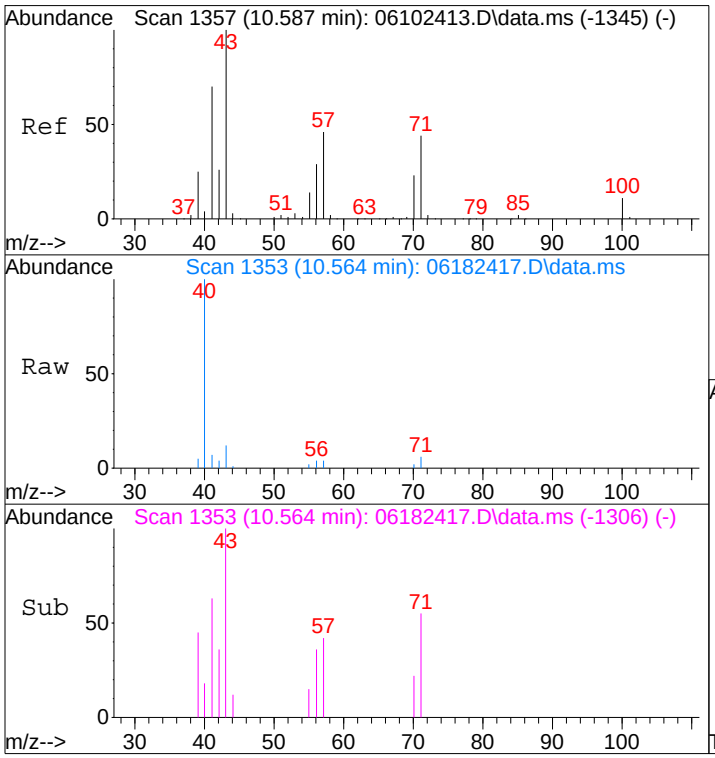


#43
Cyclohexane
Concen: 0.14 ng
RT: 9.21 min Scan# 1115
Delta R.T. 0.011 min
Lab File: 06182417.D
Acq: 18 Jun 2024 18:29

Tgt Ion: 84 Resp: 2221

Ion	Ratio	Lower	Upper
84	100		
69	32.4	18.8	58.8
56	136.9	111.5	151.5

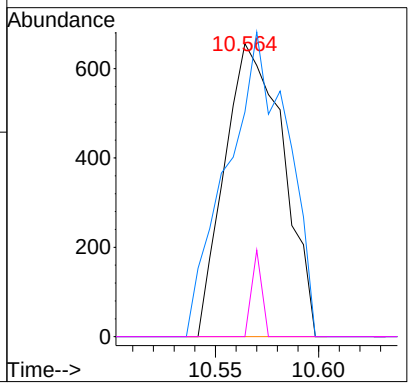


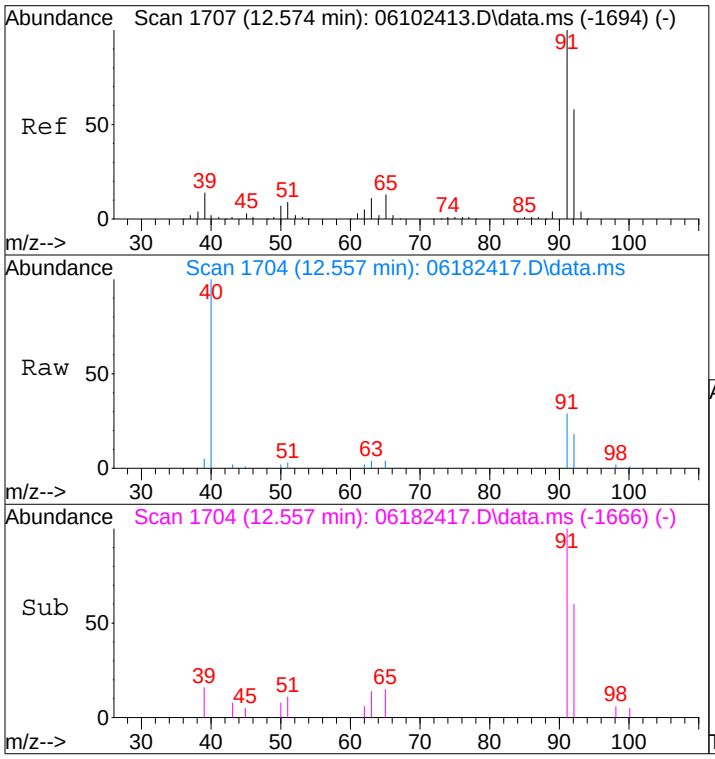


#51
n-Heptane
Concen: 0.12 ng
RT: 10.56 min Scan# 1353
Delta R.T. 0.018 min
Lab File: 06182417.D
Acq: 18 Jun 2024 18:29

Tgt Ion: 71 Resp: 1295

Ion	Ratio	Lower	Upper
71	100		
57	107.5	83.9	123.9
100	0.0	4.8	44.8#

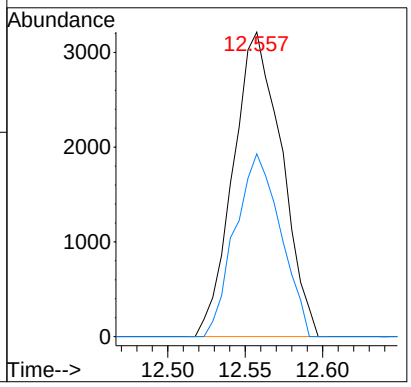


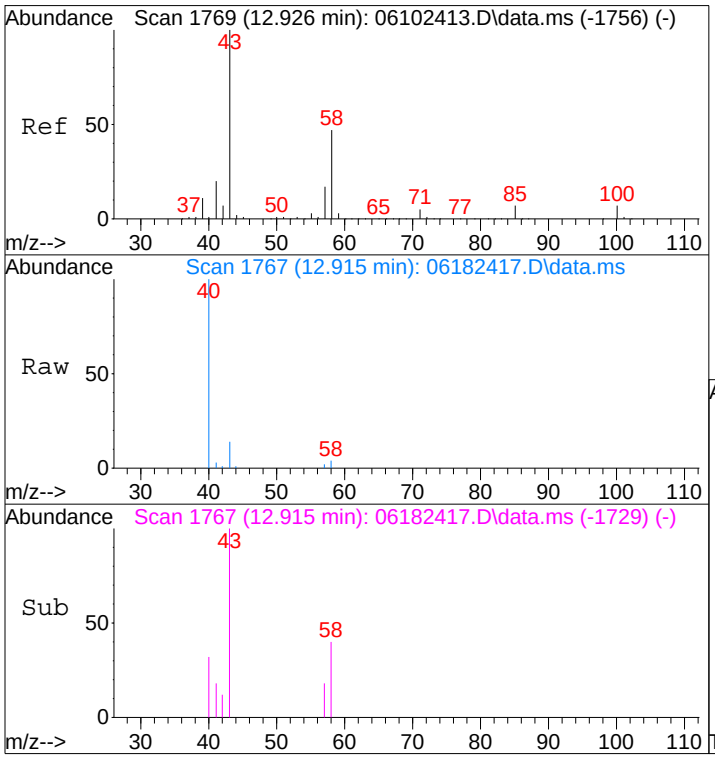


#58
Toluene
Concen: 0.14 ng
RT: 12.56 min Scan# 1704
Delta R.T. -0.034 min
Lab File: 06182417.D
Acq: 18 Jun 2024 18:29

Tgt Ion: 91 Resp: 7011

Ion	Ratio	Lower	Upper
91	100		
92	56.4	37.4	77.4

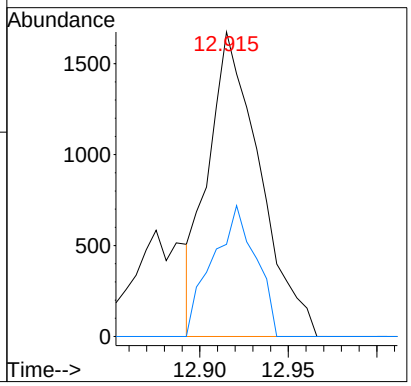


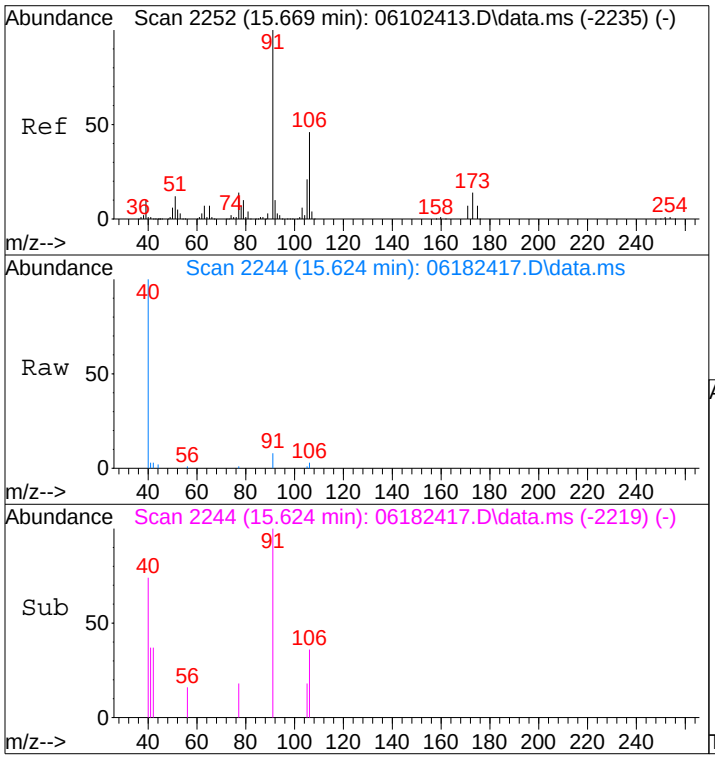


#59
2-Hexanone
Concen: 0.11 ng
RT: 12.92 min Scan# 1767
Delta R.T. -0.034 min
Lab File: 06182417.D
Acq: 18 Jun 2024 18:29

Tgt Ion: 43 Resp: 3405

Ion	Ratio	Lower	Upper
43	100		
58	36.0	25.9	65.9

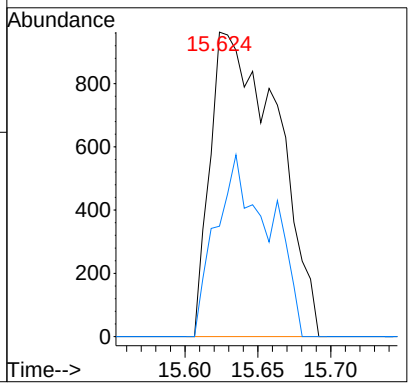




#67
m- & p-Xylenes
Concen: 0.06 ng
RT: 15.62 min Scan# 2244
Delta R.T. -0.057 min
Lab File: 06182417.D
Acq: 18 Jun 2024 18:29

Tgt Ion: 91 Resp: 3056

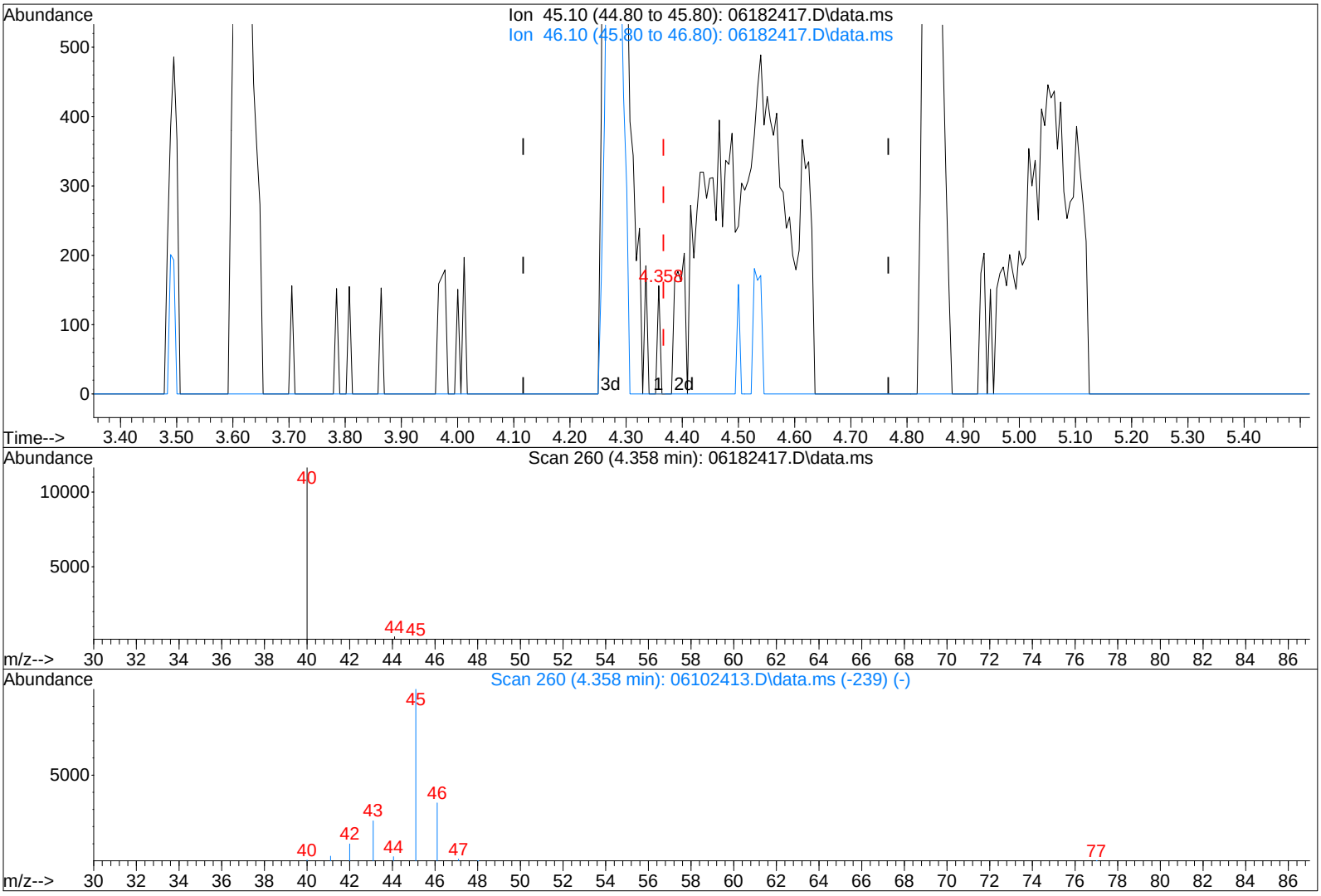
Ion	Ratio	Lower	Upper
91	100		
106	47.9	25.9	65.9



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182417.D Vial: 6
Acq On : 18 Jun 2024 18:29 Operator: SC
Sample : P2402249-027 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 08:25:33 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182417.D\data.ms

(10) Ethanol (T)

4.358min (-0.009) 0.00ng

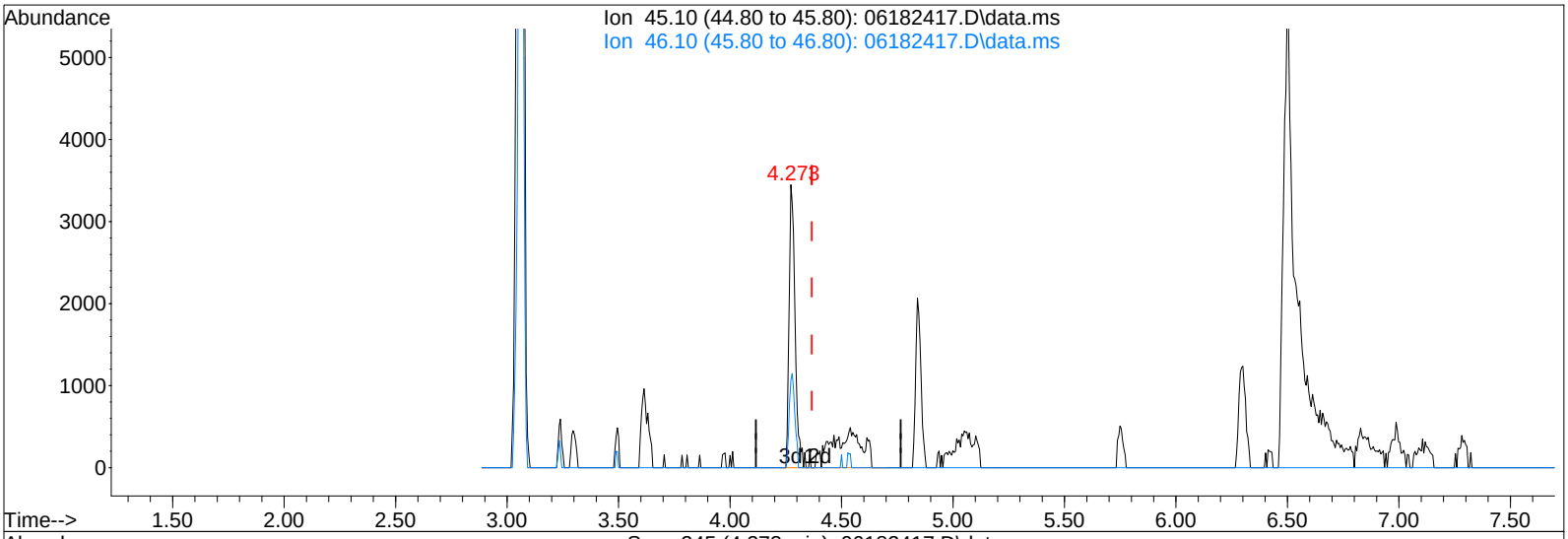
response 53

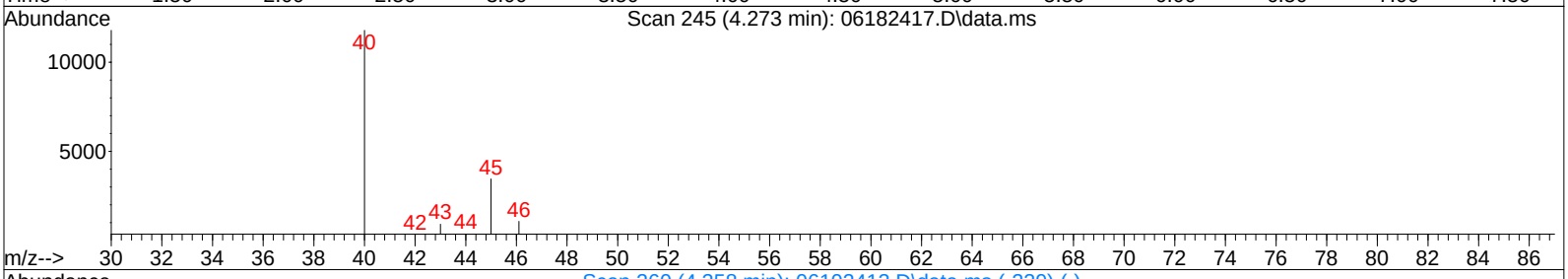
Ion	Exp%	Act%
45.10	100	100
46.10	33.50	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

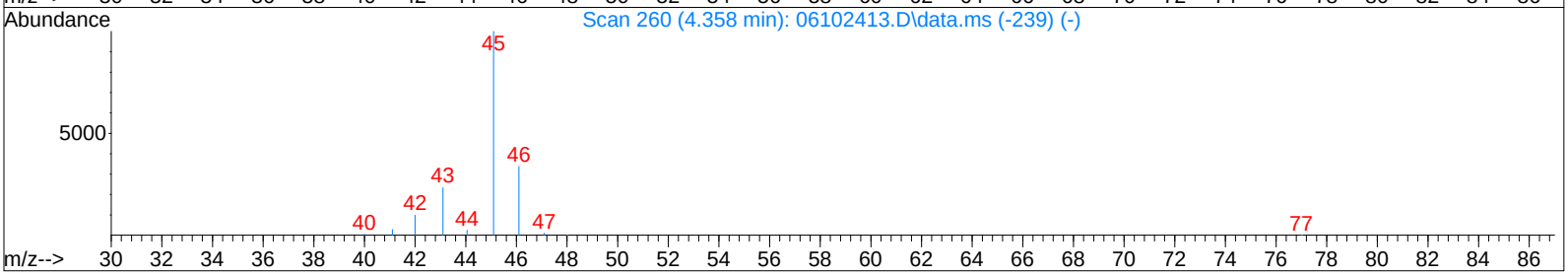
Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182417.D Vial: 6
Acq On : 18 Jun 2024 18:29 Operator: SC
Sample : P2402249-027 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 08:25:33 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M







TIC: 06182417.D\data.ms

(10) Ethanol (T)

4.273min (-0.094) 0.91ng m

response 10874

Ion	Exp%	Act%
45.10	100	100
46.10	33.50	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

MP

6/19/24

6/29/24

Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\18\06182417.D Vial: 6
Acq On : 18 Jun 2024 18:29 Operator: SC
Sample : P2402249-027 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:59:50 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

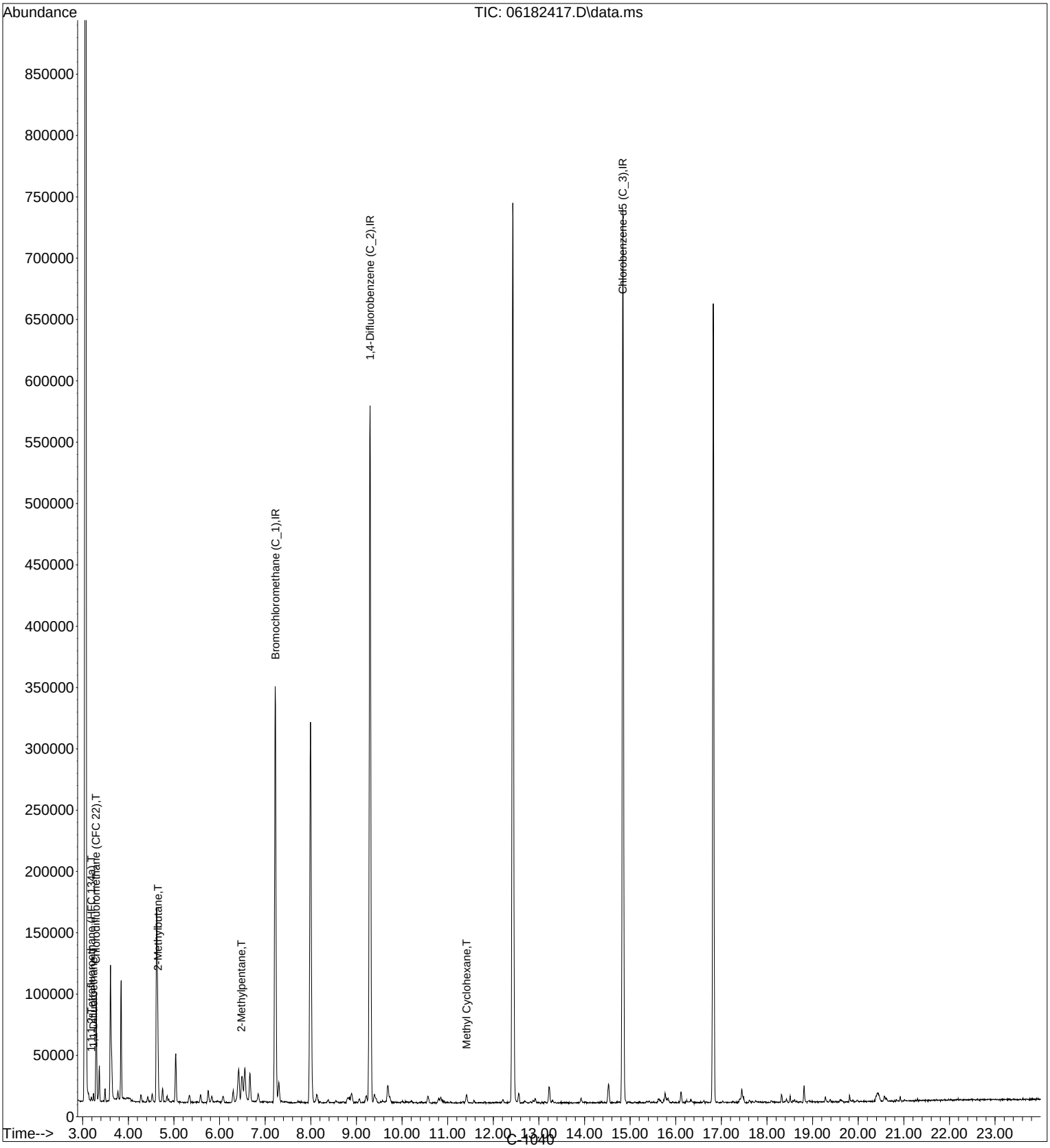
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	123397	12.500 ng		-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	540232	12.500 ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	124502	12.500 ng		-0.01
Target Compounds						Qvalue
2) Chloropentafluoroethane	3.14	85	205	N.D.		
3) 1,1,1,2-Tetrafluoroeth...	3.19	83	1804	0.142 ng		98
4) 1,1-Difluoroethane	3.23	65	1441	0.134 ng		97
5) Chlorodifluoromethane ...	3.29	67	838	0.199 ng		98
6) 1-Chloro-1,1-Difluoroe...	3.50	65	533	N.D.		
7) Dichlorofluoromethane ...	0.00	67	0	N.D.		
8) Vinylbromide	0.00	108	0	N.D.		
9) 2,2-Dichloro-1,1,1-tri...	0.00	83	0	N.D.		
10) 2-Methylbutane	4.65	57	11367	0.772 ng	#	66
11) Methyl Acetate	5.33	43	3572	N.D.		
12) 2-Methylpentane	6.48	71	1939	0.181 ng	#	1
13) 2,2-Dichloropropane	0.00	77	0	N.D.		
14) 1,1-Dichloropropene	0.00	75	0	N.D.		
15) Thiophene	9.07	84	189	N.D.		
17) 2,3-Dimethylpentane	9.51	56	132	N.D.		
18) Dibromomethane	9.79	174	52	N.D.		
20) Methyl Cyclohexane	11.42	55	3055	0.143 ng		95
21) 1,3-Dichloropropane	0.00	76	0	N.D.		
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		
23) 1-Chlorohexane	0.00	91	0	N.D.		
24) 1,2,3-Trichloropropane	0.00	75	0	N.D.		
25) Bromobenzene	0.00	77	0	N.D.		
26) 2-Chlorotoluene	17.60	91	594	N.D.		
27) 4-Chlorotoluene	17.68	91	1324	N.D.		
28) Indane	0.00	117	0	N.D.		
29) Indene	0.00	115	0	N.D.		
30) 1,2,4,5-Tetramethylben...	0.00	119	0	N.D.		
31) 1,2,3,4-Tetramethylben...	0.00	119	0	N.D.		
32) 1,2,3,5-Tetramethylben...	0.00	119	0	N.D.		
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182417.D Vial: 6
Acq On : 18 Jun 2024 18:29 Operator: SC
Sample : P2402249-027 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:59:50 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\18\
Data File : 06182417.D
Acq On : 18 Jun 2024 18:29
Operator : SC
Sample : P2402249-027 (400mL)
Misc : S37-06062402
ALS Vial : 6 Sample Multiplier: 1

MJ 6/28/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06182417.D\data.ms

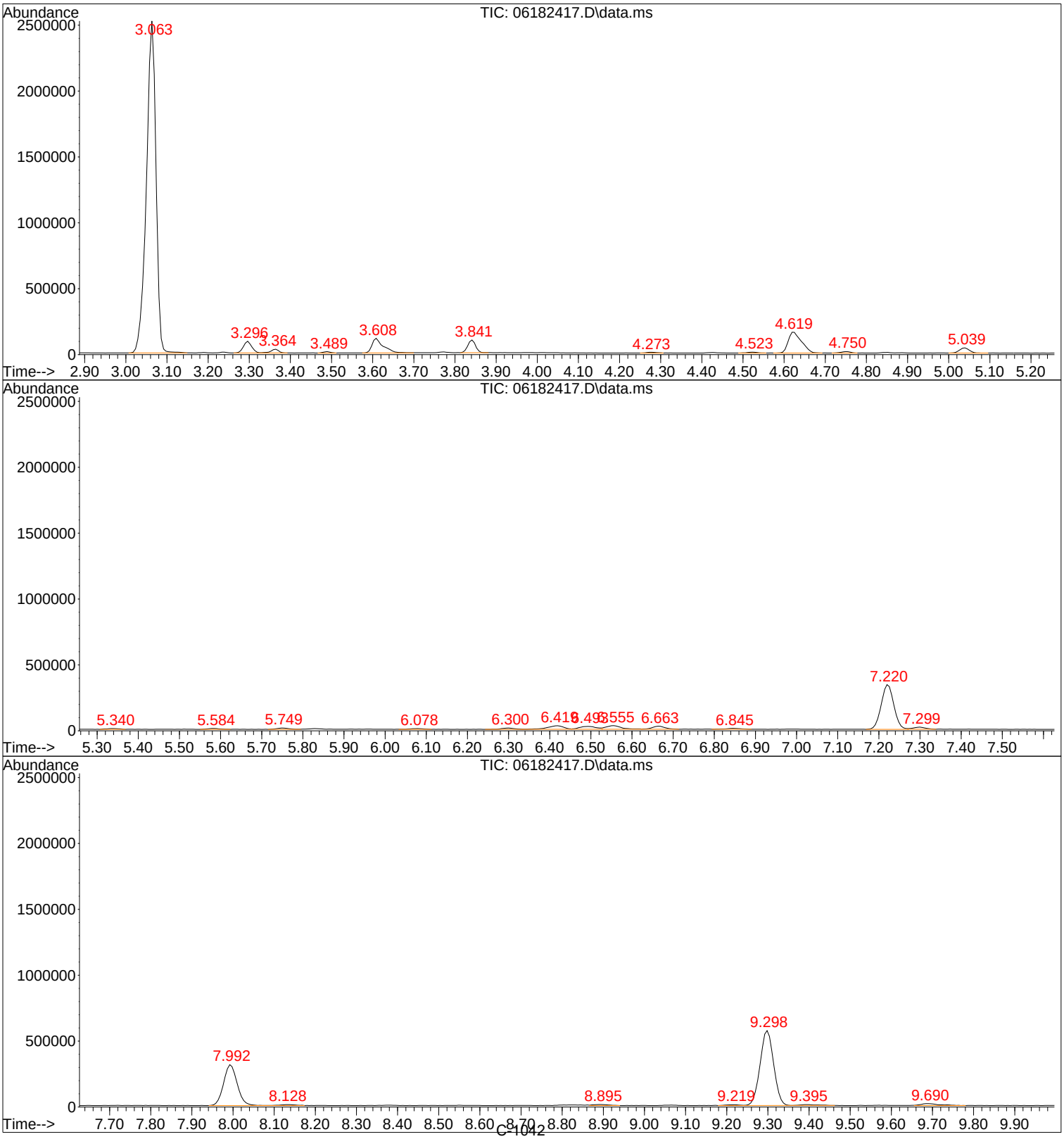
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.063	22	32	47	rBV	2519267	4064613	100.00%	49.048%
2	3.296	67	73	79	rBV2	88937	124877	3.07%	1.507%
3	3.364	79	85	90	rVB2	28921	37695	0.93%	0.455%
4	3.489	103	107	111	rBV	10723	13258	0.33%	0.160%
5	3.608	122	128	144	rBV2	110885	213859	5.26%	2.581%
6	3.841	164	169	176	rBV	96115	126153	3.10%	1.522%
7	4.273	241	245	251	rBV2	6187	11593	0.29%	0.140%
8	4.523	283	289	295	rBV2	6586	11323	0.28%	0.137%
9	4.619	298	306	319	rBV	158227	358682	8.82%	4.328%
10	4.750	323	329	334	rVB2	11101	18031	0.44%	0.218%
11	5.039	373	380	390	rVB	39797	67504	1.66%	0.815%
12	5.340	427	433	438	rVB5	6463	14158	0.35%	0.171%
13	5.584	470	476	483	rBV4	6542	12420	0.31%	0.150%
14	5.749	499	505	513	rBV3	10179	21083	0.52%	0.254%
15	6.078	555	563	569	rVB3	5299	11874	0.29%	0.143%
16	6.300	592	602	608	rBV	10336	20754	0.51%	0.250%
17	6.419	608	623	629	rVV2	27142	73733	1.81%	0.890%
18	6.493	629	636	642	rVV4	21100	61832	1.52%	0.746%
19	6.555	642	647	659	rVV4	27502	68412	1.68%	0.826%
20	6.663	659	666	675	rVB	22928	48039	1.18%	0.580%
21	6.845	689	698	706	rVB5	7103	17318	0.43%	0.209%
22	7.220	755	764	773	rBV	339432	724325	17.82%	8.740%
23	7.299	773	778	785	rVB2	15872	32349	0.80%	0.390%
24	7.992	891	900	914	rBV	310653	712875	17.54%	8.602%
25	8.128	914	924	932	rVB5	6787	18280	0.45%	0.221%
26	8.895	1054	1059	1067	rVB4	8090	20315	0.50%	0.245%
27	9.219	1109	1116	1120	rBV4	5654	12705	0.31%	0.153%
28	9.298	1120	1130	1141	rVV	568085	1303979	32.08%	15.735%
29	9.395	1141	1147	1159	rVB3	6629	19924	0.49%	0.240%
30	9.690	1193	1199	1215	rVB4	14292	45055	1.11%	0.544%

Sum of corrected areas: 8287018

Data Path : I:\MS09\DATA\2024 06\18\
Data File : 06182417.D
Acq On : 18 Jun 2024 18:29
Operator : SC
Sample : P2402249-027 (400mL)
Misc : S37-06062402
ALS Vial : 6 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\18\\
Data File : 06182417.D
Acq On : 18 Jun 2024 18:299
Operator : SCC
Sample : P2402249-027 (400mL))
Misc : S37-060624022
ALS Vial : 6 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182418.D Vial: 7
Acq On : 18 Jun 2024 19:01 Operator: SC
Sample : P2402249-028 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 13:37:08 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/19/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	121703	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	526719	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	123843	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	273361	12.638	ng		0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.12%				
57) Toluene-d8 (SS2)	12.43	98	587273	12.392	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.12%				
73) Bromofluorobenzene (SS3)	16.83	174	221168	12.924	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.36%				
Target Compounds							Qvalue
2) Propene	3.30	42	4730	0.304	ng	#	81
3) Dichlorodifluoromethan...	3.36	85	16948m	0.592	ng		
4) Chloromethane	3.49	50	1723	0.088	ng		93
5) 1,2-Dichloro-1,1,2,2-t...	3.61	135	683	0.055	ng	#	42
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	3.78	54	136	N.D.			
8) Bromomethane	4.02	94	530	0.053	ng		95
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.28	45	25535	2.158	ng		76
11) Acetonitrile	0.00	41	0	N.D.	d		
12) Acrolein	4.53	56	4063	0.464	ng		94
13) Acetone	4.64	58	77865	8.236	ng	#	82
14) Trichlorofluoromethane	4.77	101	20656525m	712.942	ng		
15) 2-Propanol (Isopropanol)	4.85	45	14678	0.385	ng		83
16) Acrylonitrile	4.99	53	544	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.33	59	1424	N.D.			
19) Methylene Chloride	5.35	84	731	0.055	ng		98
20) 3-Chloro-1-propene (Al...	5.47	41	252	N.D.			
21) Trichlorotrifluoroethane	5.60	151	4112221	335.506	ng		94
22) Carbon Disulfide	5.61	76	252464	5.853	ng	#	1
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	6.43	86	6687	3.065	ng	#	4
27) 2-Butanone (MEK)	6.67	72	14522	1.941	ng		95
28) cis-1,2-Dichloroethene	7.07	61	182	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.	d		
30) Ethyl Acetate	7.29	61	124	N.D.			
31) n-Hexane	7.32	57	1688	0.084	ng	#	91
32) Chloroform	7.36	83	24741	1.038	ng		100
34) Tetrahydrofuran (THF)	7.77	72	547	0.080	ng	#	51
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	0.00	62	0	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	9.63	61	24636	No Calib		#	
40) 1-Butanol	8.80	56	10453	No Calib		#	
41) Benzene	8.90	78	9713	0.200	ng		98
42) Carbon Tetrachloride	9.08	117	556	N.D.			
43) Cyclohexane	9.24	84	518	N.D.			
44) tert-Amyl Methyl Ether	9.62	73	135	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.07	83	5780	0.295	ng		100
47) Trichloroethene	10.14	130	3636	0.256	ng		100
48) 1,4-Dioxane	10.12	88	4683	0.522	ng		97
49) 2,2,4-Trimethylpentane...	0.00	57	0	N.D.	d		
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182418.D Vial: 7
Acq On : 18 Jun 2024 19:01 Operator: SC
Sample : P2402249-028 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 13:37:08 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	10.58	71	804	0.078 ng #	86
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	0.00	58	0	N.D. d	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
58) Toluene	12.56	91	7165	0.145 ng	98
59) 2-Hexanone	12.92	43	11724	0.378 ng	88
60) Dibromochloromethane	13.08	129	435	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	13.78	43	923	N.D.	
63) n-Octane	13.92	57	407	N.D.	
64) Tetrachloroethene	14.03	166	1739	0.102 ng	100
65) Chlorobenzene	14.90	112	587	N.D.	
66) Ethylbenzene	15.41	91	1433	N.D.	
67) m- & p-Xylenes	15.63	91	4427	0.093 ng	98
68) Bromoform	15.67	173	426	N.D.	
69) Styrene	16.10	104	337	N.D.	
70) o-Xylene	16.25	91	2044	N.D.	
71) n-Nonane	0.00	43	0	N.D. d	
72) 1,1,2,2-Tetrachloroethane	16.20	83	312	N.D.	
74) Cumene	17.04	105	788	N.D.	
75) alpha-Pinene	0.00	93	0	N.D.	
76) n-Propylbenzene	17.67	91	1248	N.D.	
77) 3-Ethyltoluene	17.04	105	788	No Calib	
78) 4-Ethyltoluene	17.86	105	730	N.D.	
79) 1,3,5-Trimethylbenzene	17.96	105	516	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.04	105	788	No Calib	
82) 1,2,4-Trimethylbenzene	18.43	105	777	N.D.	
83) n-Decane	0.00	58	0	N.D.	
84) Benzyl Chloride	18.56	91	409	N.D.	
85) 1,3-Dichlorobenzene	18.58	146	575	N.D.	
86) 1,4-Dichlorobenzene	18.65	146	505	N.D.	
87) sec-Butylbenzene	18.74	105	959	N.D.	
88) 4-Isopropyltoluene (p-...	18.92	119	1009	N.D.	
89) 1,2,3-Trimethylbenzene	17.04	105	788	No Calib	
90) 1,2-Dichlorobenzene	19.03	146	422	N.D.	
91) d-Limonene	19.02	68	387	N.D.	
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	668	N.D.	
95) Naphthalene	20.94	128	1873	N.D.	
96) n-Dodecane	18.88	58	117	No Calib #	
97) Hexachlorobutadiene	21.30	225	558	N.D.	
98) Cyclohexanone	15.50	55	709	No Calib #	
99) tert-Butylbenzene	18.42	119	767	N.D.	
100) n-Butylbenzene	19.38	91	739	N.D.	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

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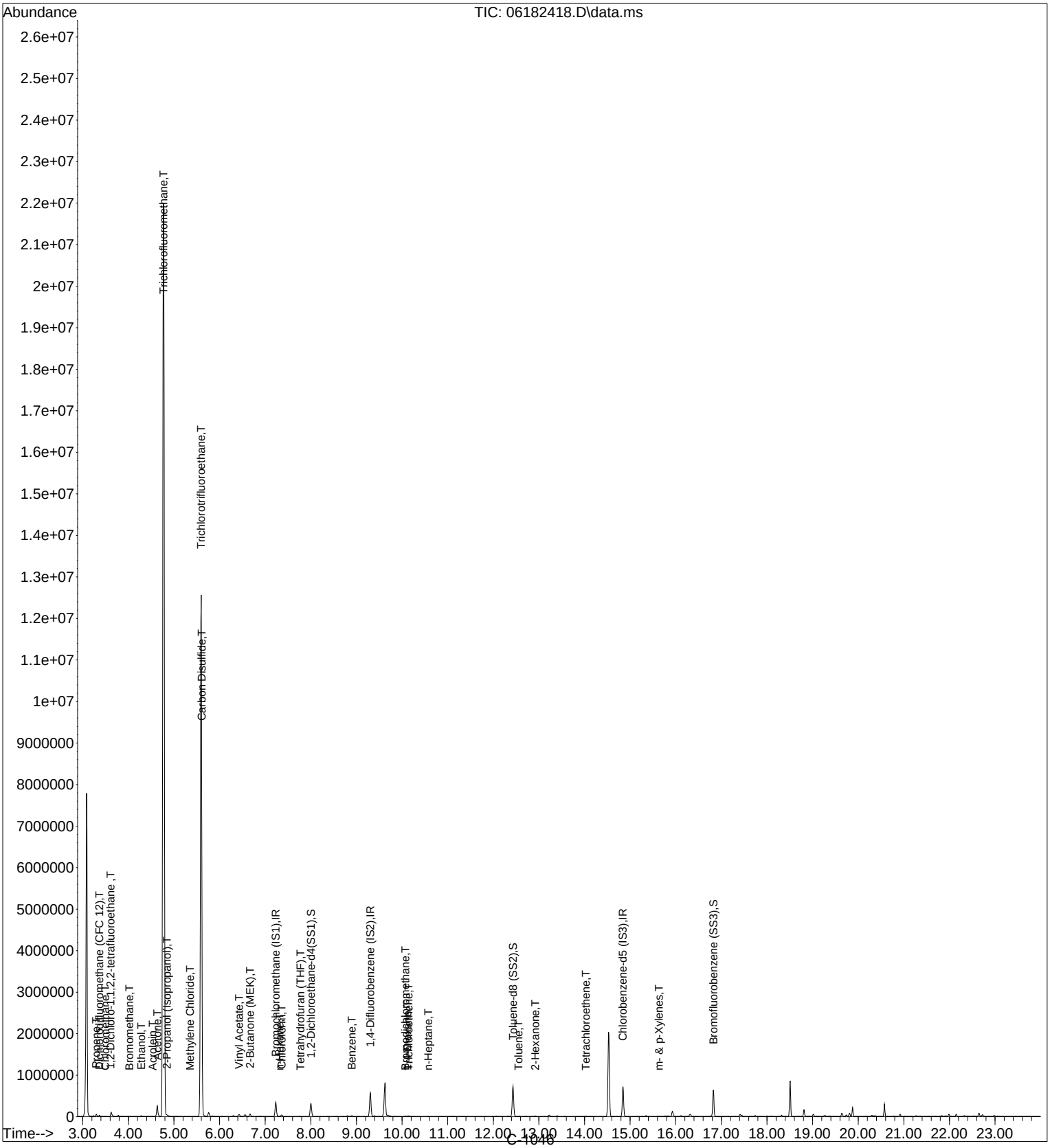
Acq On : 18 Jun 2024 19:01 Operator: SC
Sample : P2402249-028 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 13:37:08 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



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QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/19/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	121703	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	526719	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	123843	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	273361	12.638	ng		0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.12%				
57) Toluene-d8 (SS2)	12.43	98	587273	12.392	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.12%				
73) Bromofluorobenzene (SS3)	16.83	174	221168	12.924	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.36%				
Target Compounds							Qvalue
2) Propene	3.30	42	4730	0.304	ng	#	81
3) Dichlorodifluoromethan...	3.36	85	16948m	0.592	ng		
4) Chloromethane	3.49	50	1723	0.088	ng		93
5) 1,2-Dichloro-1,1,2,2-t...	3.61	135	683	0.055	ng	#	42
8) Bromomethane	4.02	94	530	0.053	ng		95
10) Ethanol	4.28	45	25535	2.158	ng		76
12) Acrolein	4.53	56	4063	0.464	ng		94
13) Acetone	4.64	58	77865	8.236	ng	#	82
14) Trichlorofluoromethane	4.77	101	20656525m	712.942	ng		
15) 2-Propanol (Isopropanol)	4.85	45	14678	0.385	ng		83
19) Methylene Chloride	5.35	84	731	0.055	ng		98
21) Trichlorotrifluoroethane	5.60	151	4112221	335.506	ng		94
22) Carbon Disulfide	5.61	76	252464	5.853	ng	#	1
26) Vinyl Acetate	6.43	86	6687	3.065	ng	#	4
27) 2-Butanone (MEK)	6.67	72	14522	1.941	ng		95
31) n-Hexane	7.32	57	1688	0.084	ng	#	91
32) Chloroform	7.36	83	24741	1.038	ng		100
34) Tetrahydrofuran (THF)	7.77	72	547	0.080	ng	#	51
41) Benzene	8.90	78	9713	0.200	ng		98
46) Bromodichloromethane	10.07	83	5780	0.295	ng		100
47) Trichloroethene	10.14	130	3636	0.256	ng		100
48) 1,4-Dioxane	10.12	88	4683	0.522	ng		97
51) n-Heptane	10.58	71	804	0.078	ng	#	86
58) Toluene	12.56	91	7165	0.145	ng		98
59) 2-Hexanone	12.92	43	11724	0.378	ng		88
64) Tetrachloroethene	14.03	166	1739	0.102	ng		100
67) m- & p-Xylenes	15.63	91	4427	0.093	ng		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

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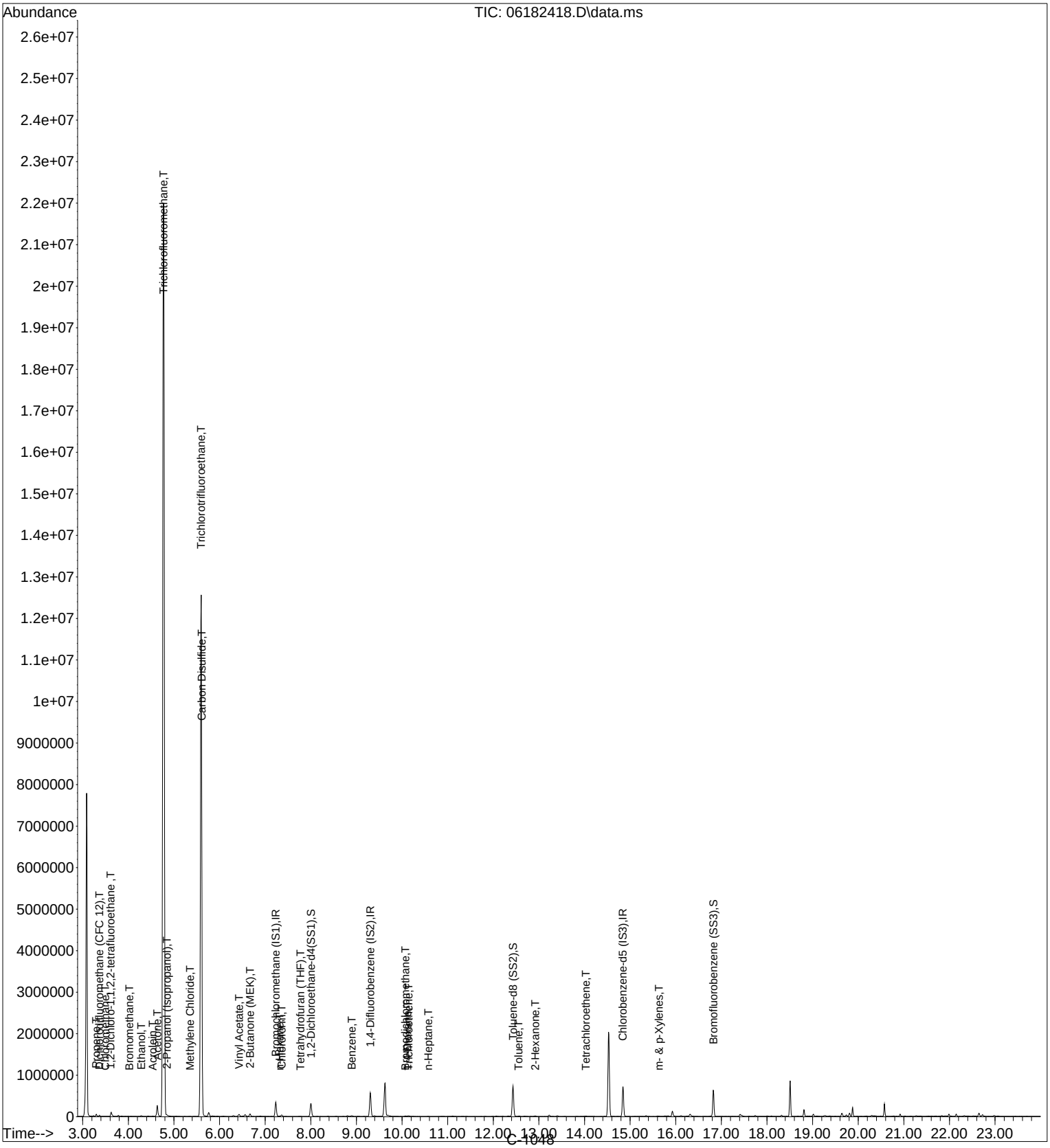
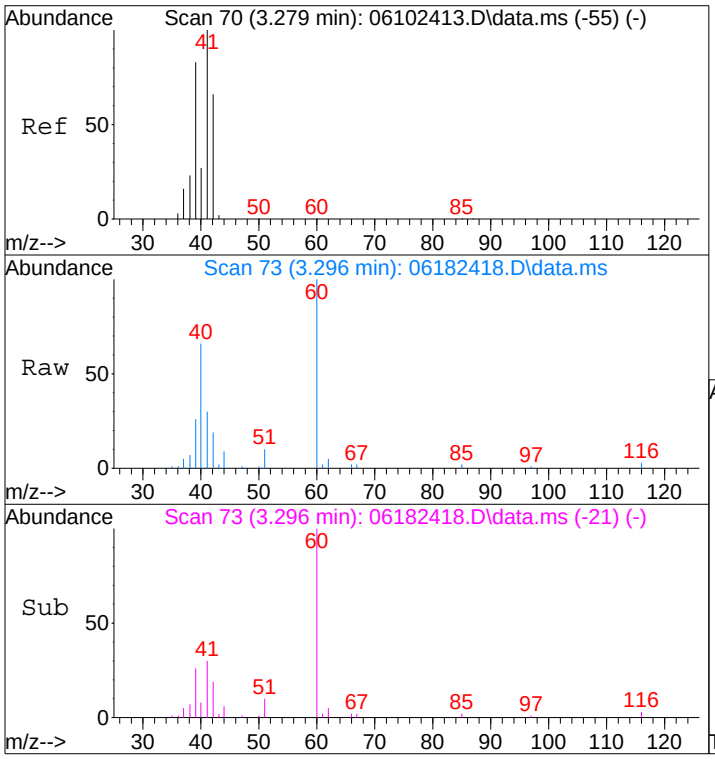
Sample : P2402249-028 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 13:37:08 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

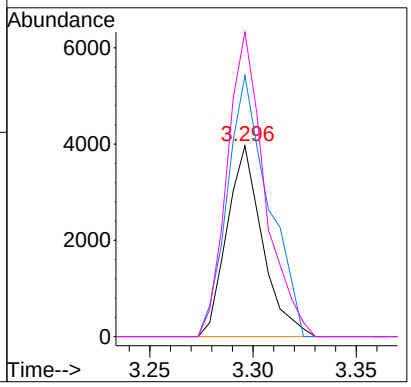


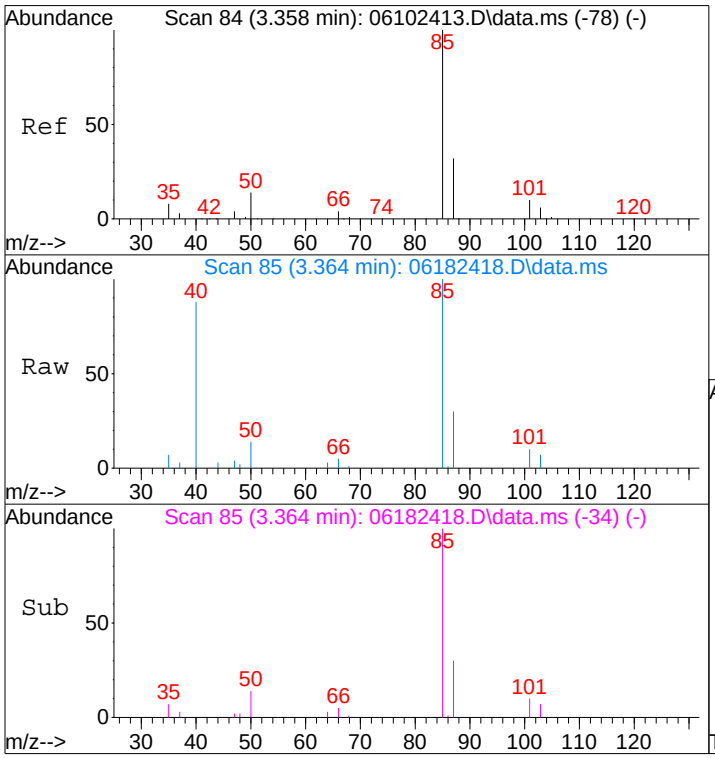


#2
Propene
Concen: 0.30 ng
RT: 3.30 min Scan# 73
Delta R.T. 0.047 min
Lab File: 06182418.D
Acq: 18 Jun 2024 19:01

Tgt Ion: 42 Resp: 4730

Ion	Ratio	Lower	Upper
42	100		
39	159.0	107.3	147.3#
41	169.3	134.3	174.3

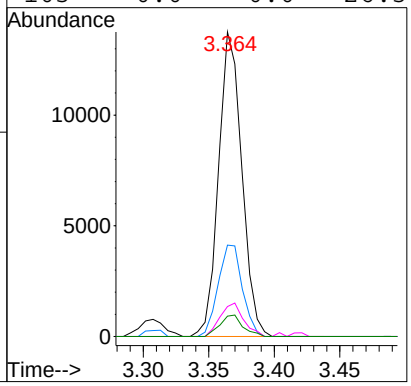


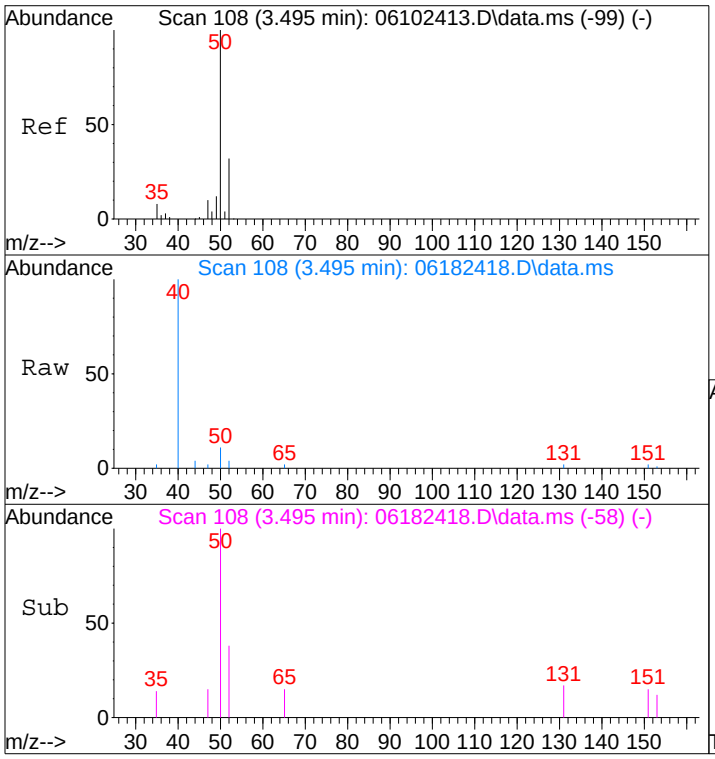


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.59 ng m
RT: 3.36 min Scan# 85
Delta R.T. 0.042 min
Lab File: 06182418.D
Acq: 18 Jun 2024 19:01

Tgt Ion: 85 Resp: 16948

Ion	Ratio	Lower	Upper
85	100		
87	1.6	12.2	52.2#
101	0.0	0.0	29.8
103	0.0	0.0	26.3

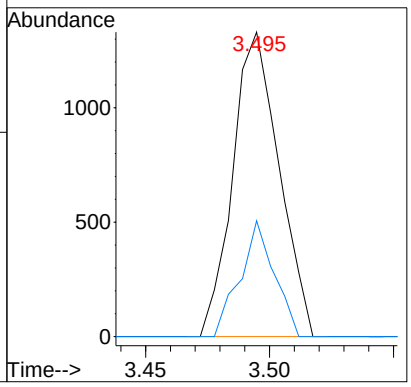


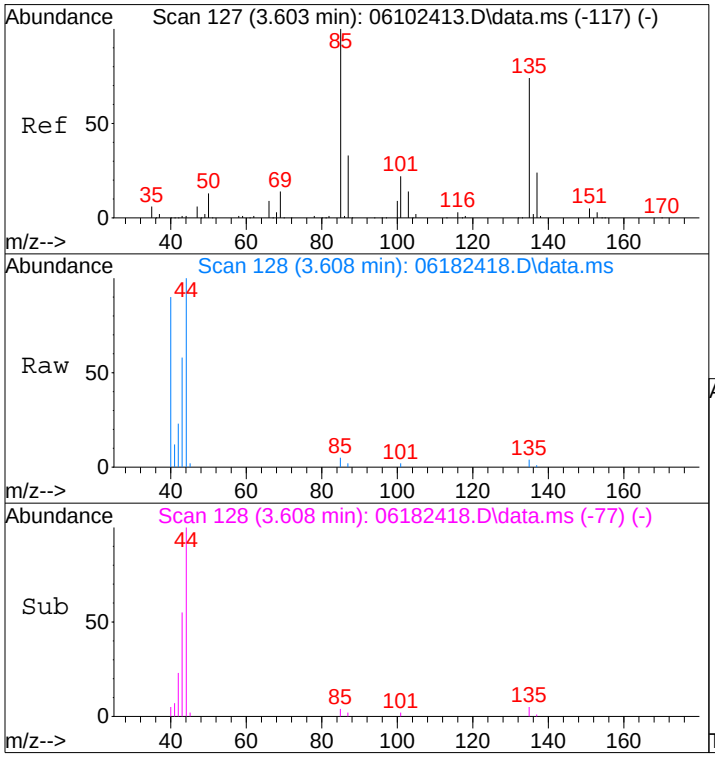


#4
Chloromethane
Concen: 0.09 ng
RT: 3.49 min Scan# 108
Delta R.T. 0.032 min
Lab File: 06182418.D
Acq: 18 Jun 2024 19:01

Tgt Ion: 50 Resp: 1723

Ion	Ratio	Lower	Upper
50	100		
52	28.2	12.4	52.4

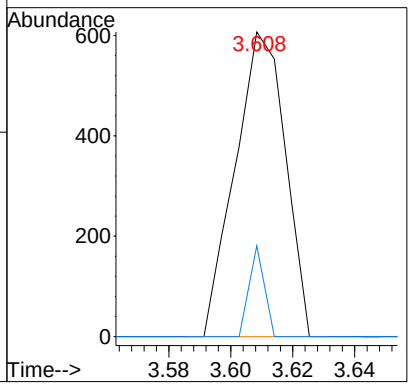


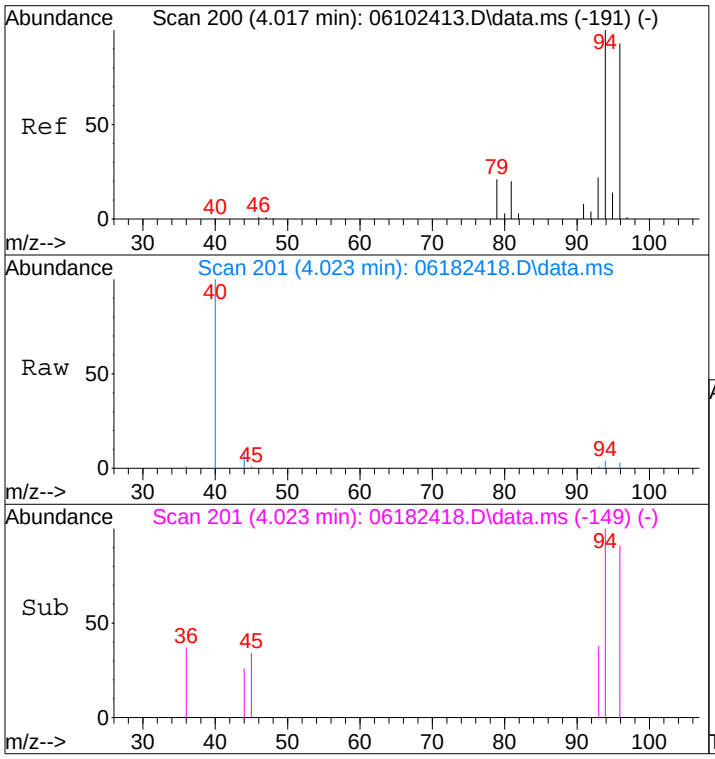


#5
1,2-Dichloro-1,1,2,2-tetrafluoroethane
Concen: 0.05 ng
RT: 3.61 min Scan# 128
Delta R.T. 0.039 min
Lab File: 06182418.D
Acq: 18 Jun 2024 19:01

Tgt Ion:135 Resp: 683

Ion	Ratio	Lower	Upper
135	100		
137	0.0	13.0	53.0#

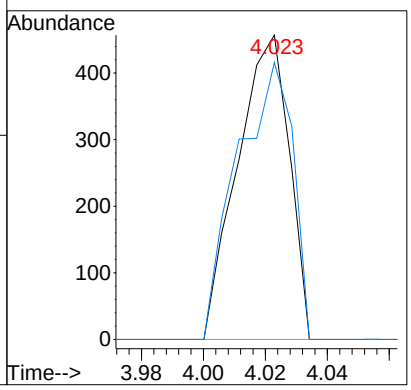


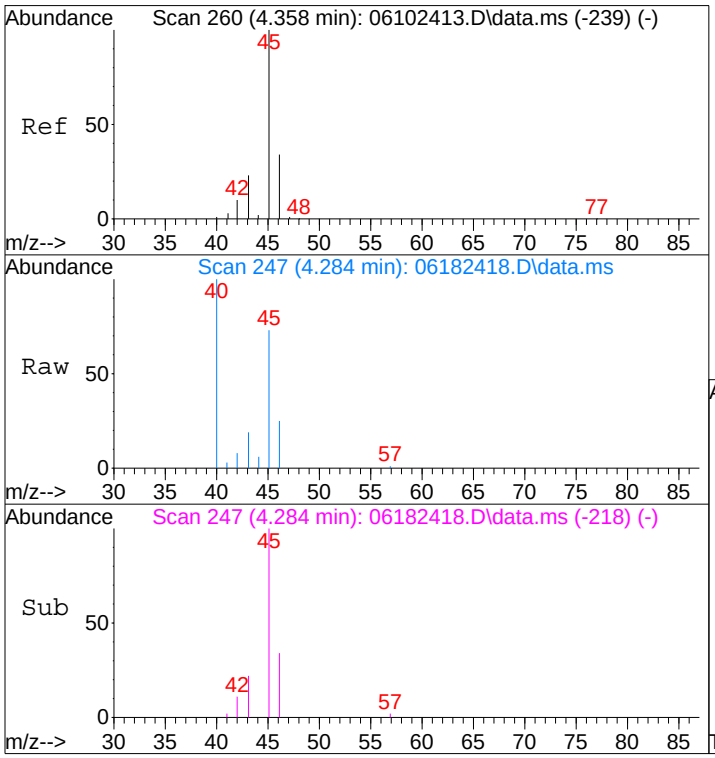


#8
Bromomethane
Concen: 0.05 ng
RT: 4.02 min Scan# 201
Delta R.T. 0.044 min
Lab File: 06182418.D
Acq: 18 Jun 2024 19:01

Tgt Ion: 94 Resp: 530

Ion	Ratio	Lower	Upper
94	100		
96	97.7	73.2	113.2

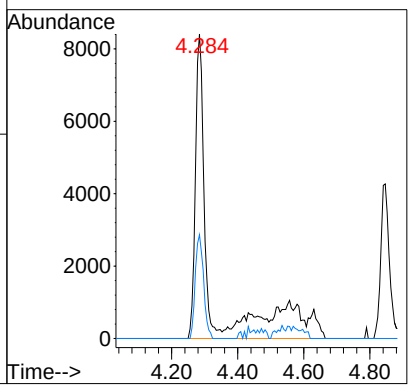


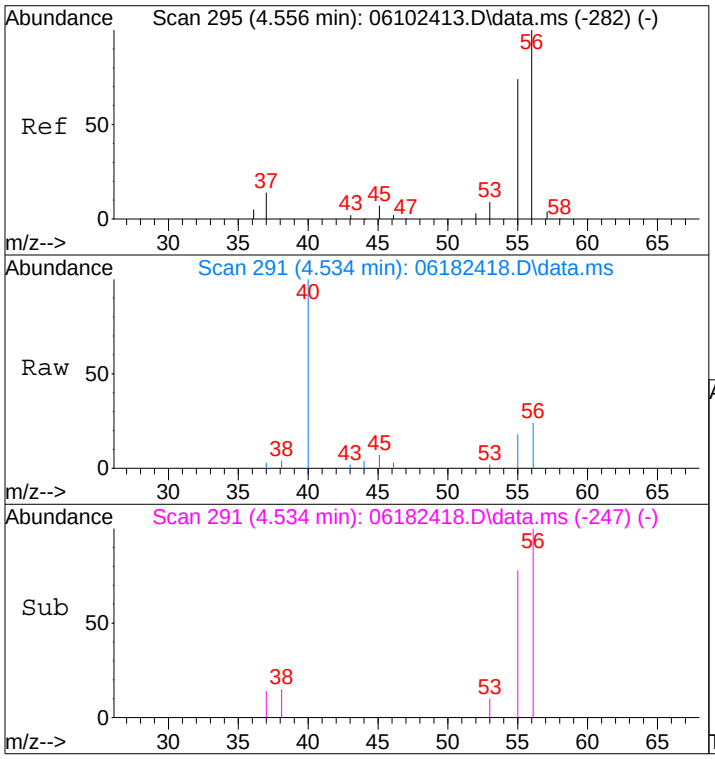


#10
Ethanol
Concen: 2.16 ng
RT: 4.28 min Scan# 247
Delta R.T. -0.083 min
Lab File: 06182418.D
Acq: 18 Jun 2024 19:01

Tgt Ion: 45 Resp: 25535

Ion	Ratio	Lower	Upper
45	100		
46	19.6	13.5	53.5

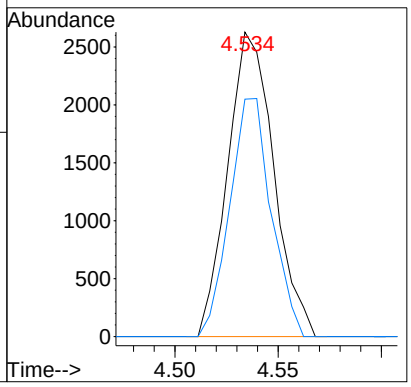


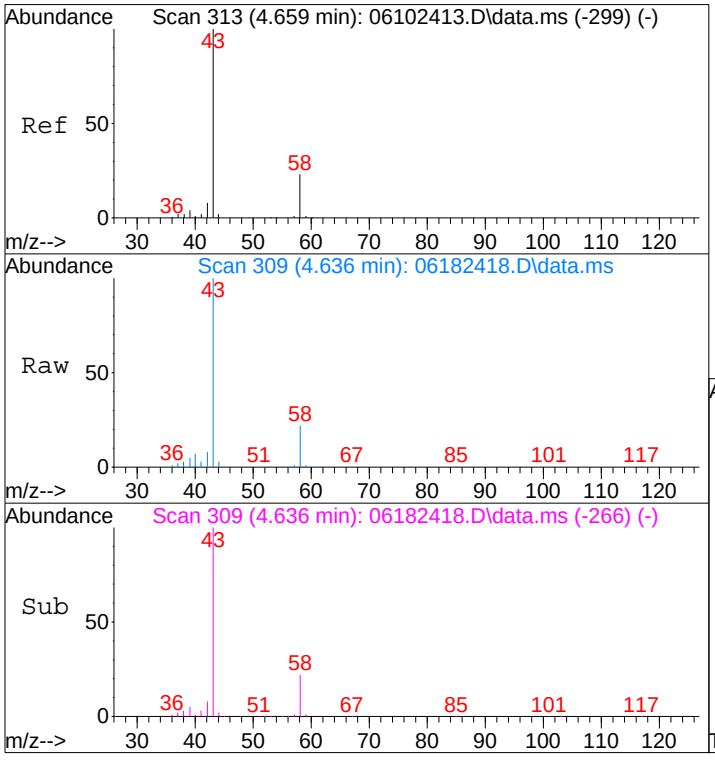


#12
Acrolein
Concen: 0.46 ng
RT: 4.53 min Scan# 291
Delta R.T. -0.001 min
Lab File: 06182418.D
Acq: 18 Jun 2024 19:01

Tgt Ion: 56 Resp: 4063

Ion	Ratio	Lower	Upper
56	100		
55	70.6	55.5	95.5

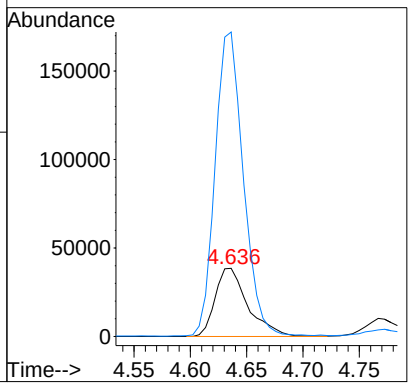


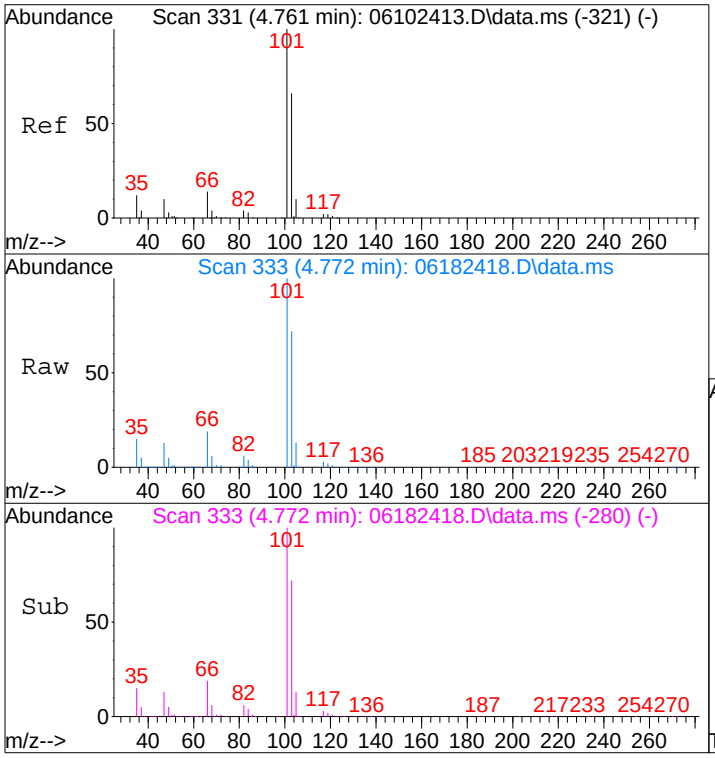


#13
Acetone
Concen: 8.24 ng
RT: 4.64 min Scan# 309
Delta R.T. -0.006 min
Lab File: 06182418.D
Acq: 18 Jun 2024 19:01

Tgt Ion: 58 Resp: 77865

Ion	Ratio	Lower	Upper
58	100		
43	385.7	400.7	460.7#

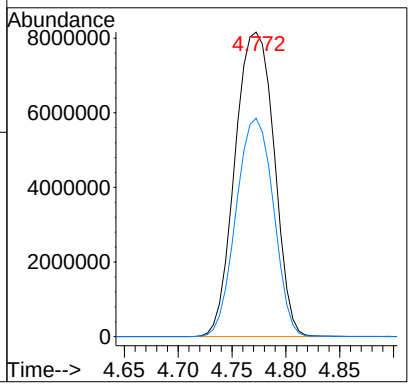


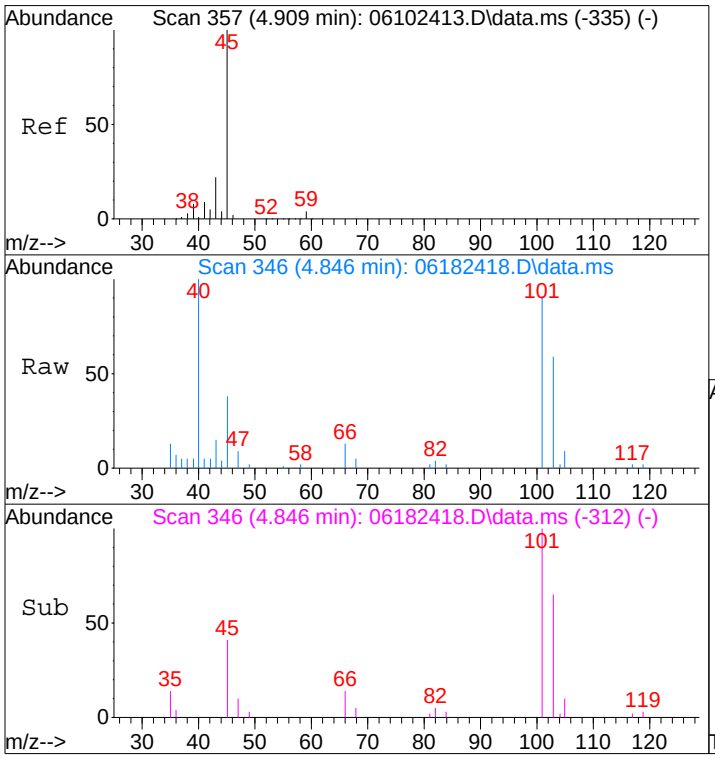


#14
Trichlorofluoromethane
Concen: 712.94 ng m
RT: 4.77 min Scan# 333
Delta R.T. 0.052 min
Lab File: 06182418.D
Acq: 18 Jun 2024 19:01

Tgt Ion:101 Resp:20656525

Ion	Ratio	Lower	Upper
101	100		
103	0.0	44.9	84.9#

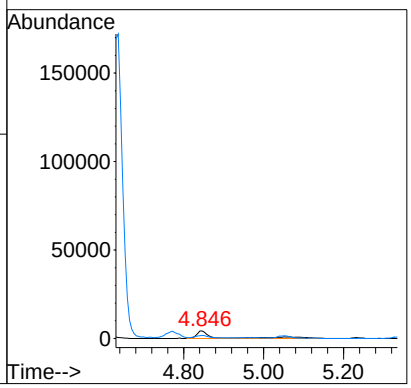


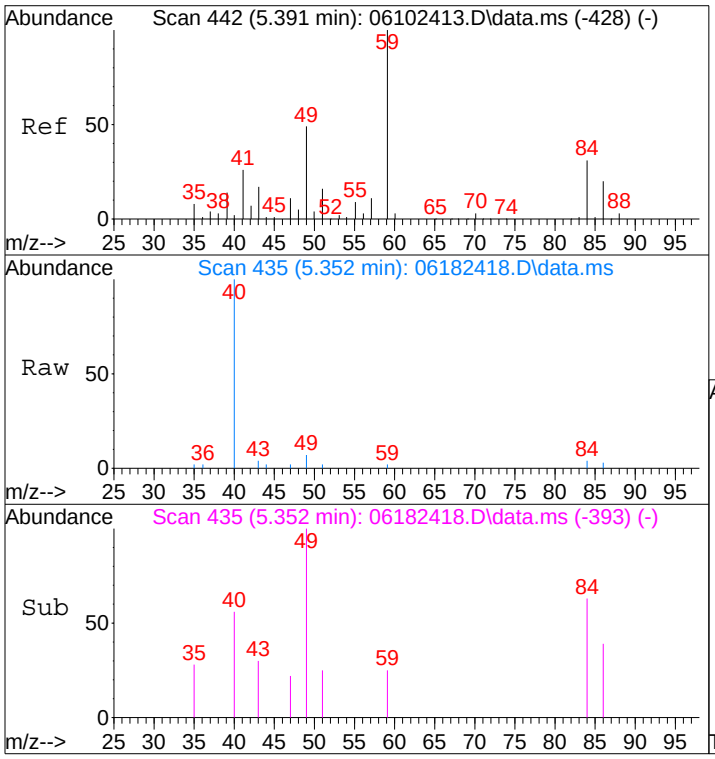


#15
2-Propanol (Isopropanol)
Concen: 0.39 ng
RT: 4.85 min Scan# 346
Delta R.T. -0.054 min
Lab File: 06182418.D
Acq: 18 Jun 2024 19:01

Tgt Ion: 45 Resp: 14678

Ion	Ratio	Lower	Upper
45	100		
43	30.6	2.5	42.5

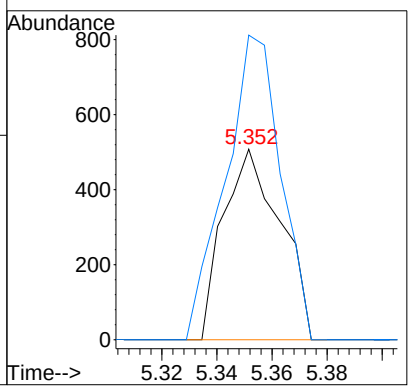


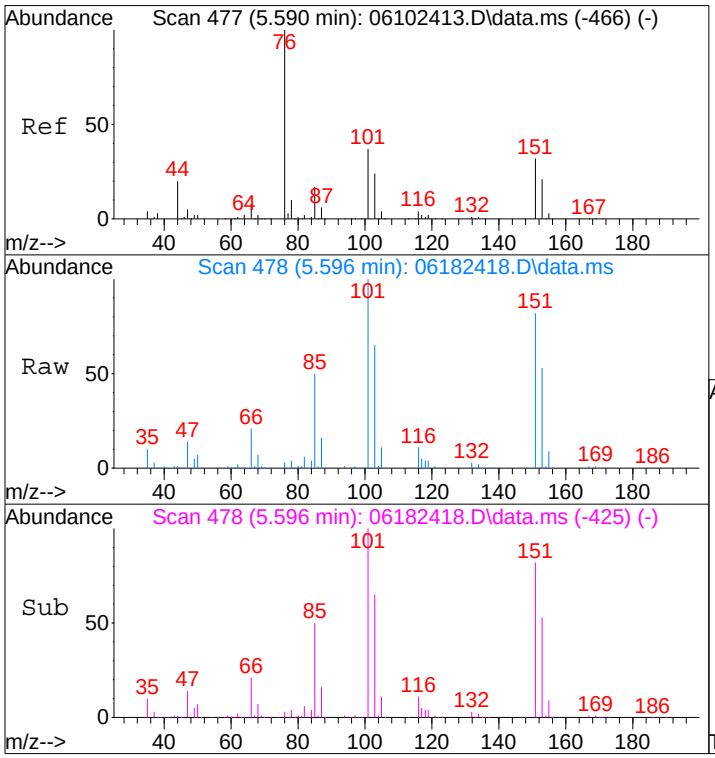


#19
Methylene Chloride
Concen: 0.05 ng
RT: 5.35 min Scan# 435
Delta R.T. -0.009 min
Lab File: 06182418.D
Acq: 18 Jun 2024 19:01

Tgt Ion: 84 Resp: 731

Ion	Ratio	Lower	Upper
84	100		
49	155.5	132.9	182.9

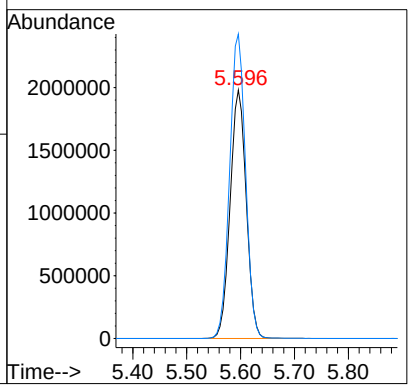


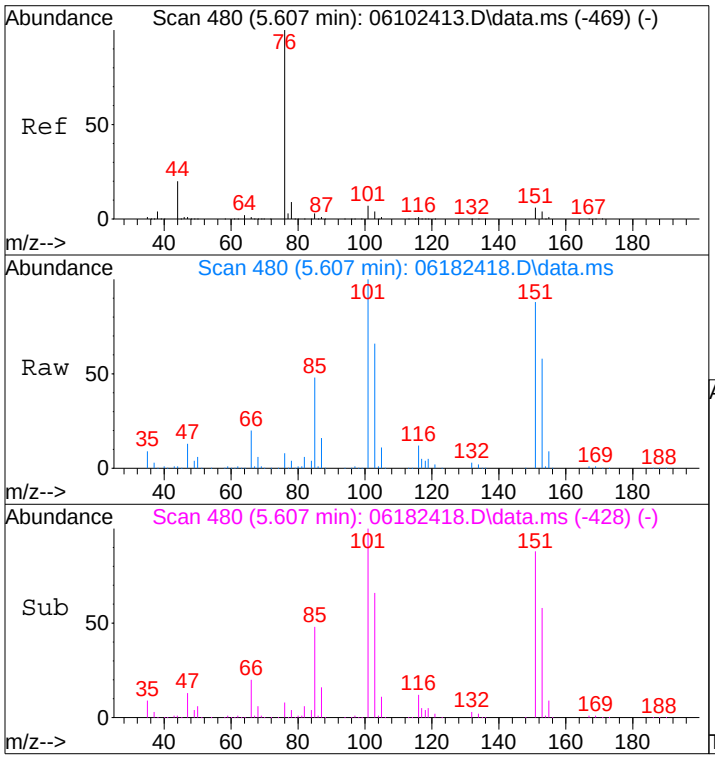


#21
Trichlorotrifluoroethane
Concen: 335.51 ng
RT: 5.60 min Scan# 478
Delta R.T. 0.049 min
Lab File: 06182418.D
Acq: 18 Jun 2024 19:01

Tgt Ion:151 Resp: 4112221

Ion	Ratio	Lower	Upper
151	100		
101	121.1	95.0	135.0

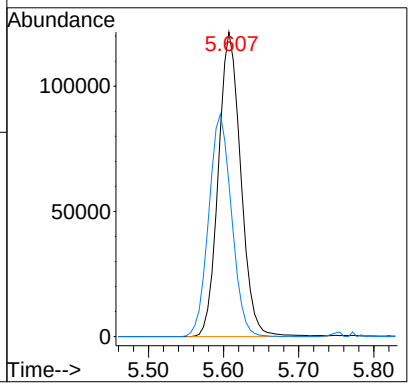


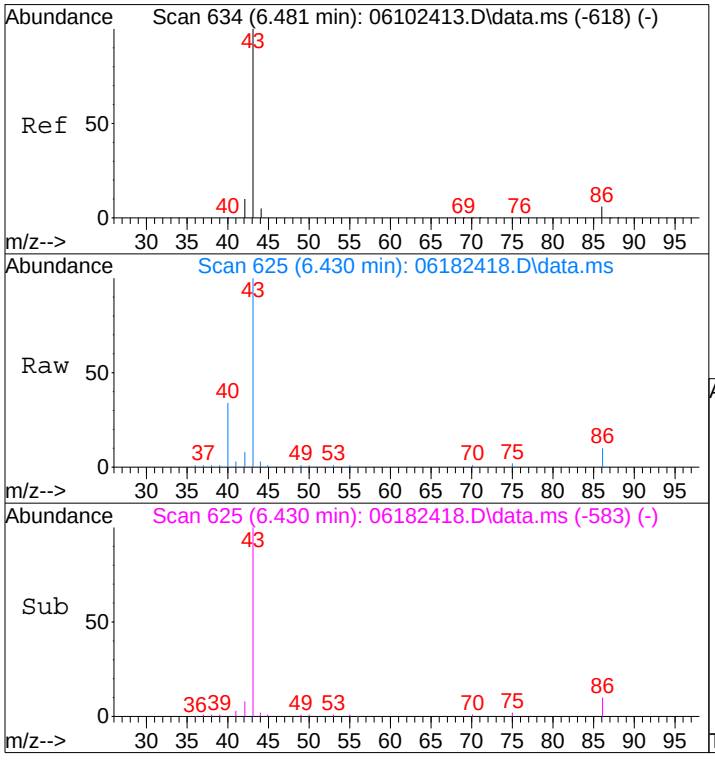


#22
Carbon Disulfide
Concen: 5.85 ng
RT: 5.61 min Scan# 480
Delta R.T. 0.044 min
Lab File: 06182418.D
Acq: 18 Jun 2024 19:01

Tgt Ion: 76 Resp: 252464

Ion	Ratio	Lower	Upper
76	100		
78	74.2	0.0	29.6#

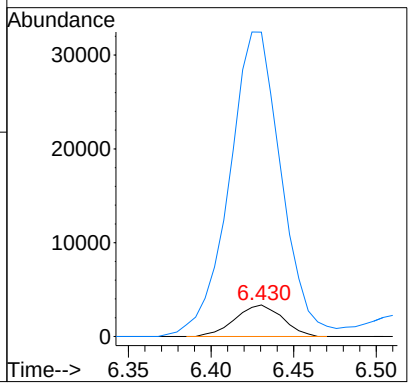


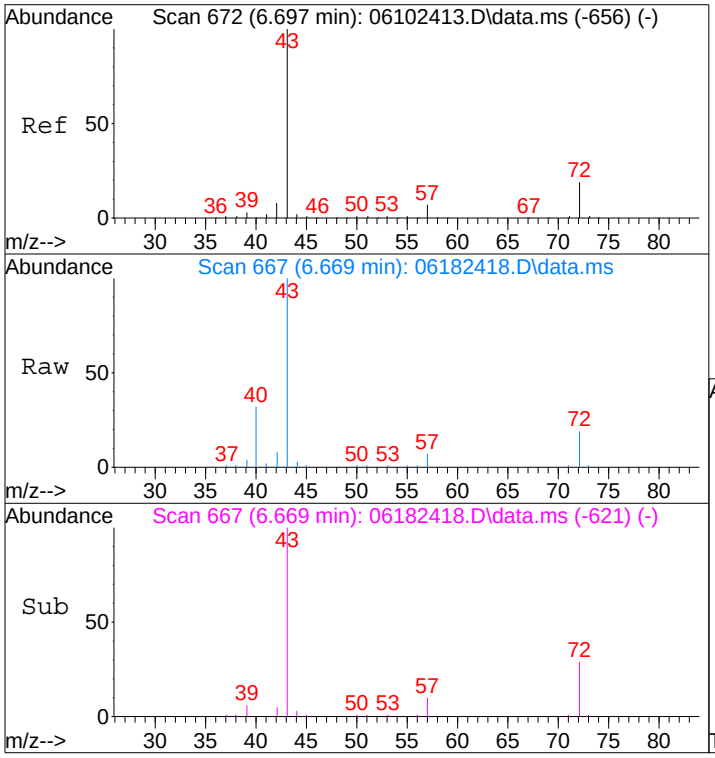


#26
Vinyl Acetate
Concen: 3.07 ng
RT: 6.43 min Scan# 625
Delta R.T. -0.009 min
Lab File: 06182418.D
Acq: 18 Jun 2024 19:01

Tgt Ion: 86 Resp: 6687

Ion	Ratio	Lower	Upper
86	100		
43	1063.4	1668.9	1708.9#

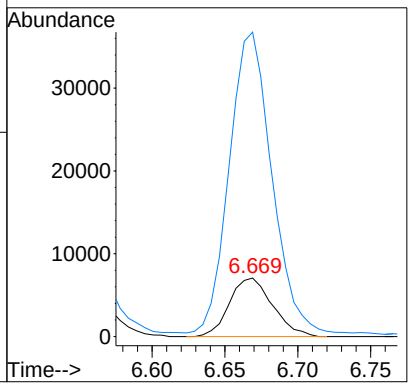


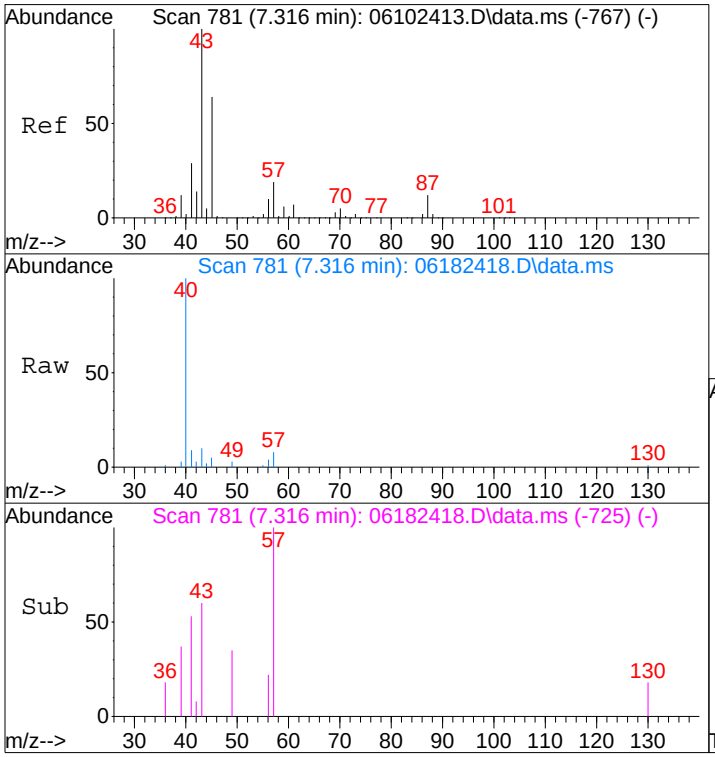


#27
2-Butanone (MEK)
Concen: 1.94 ng
RT: 6.67 min Scan# 667
Delta R.T. 0.011 min
Lab File: 06182418.D
Acq: 18 Jun 2024 19:01

Tgt Ion: 72 Resp: 14522

Ion	Ratio	Lower	Upper
72	100		
43	512.1	506.8	546.8

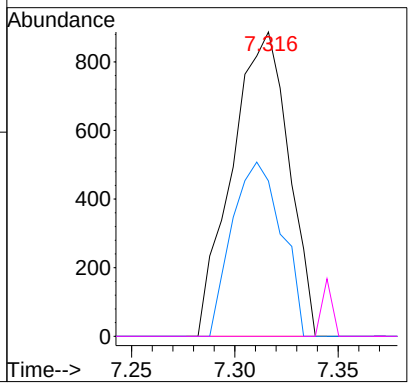


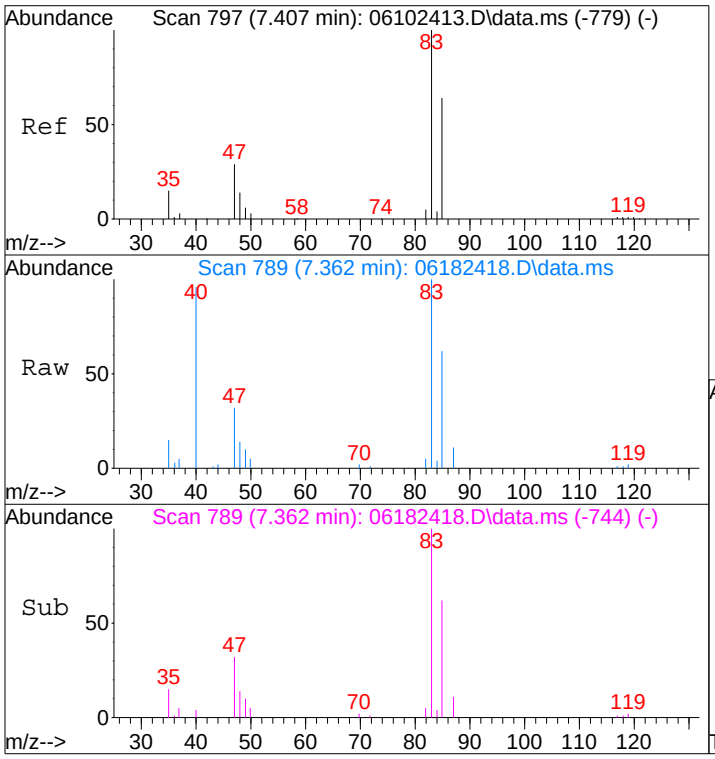


#31
n-Hexane
Concen: 0.08 ng
RT: 7.32 min Scan# 781
Delta R.T. 0.068 min
Lab File: 06182418.D
Acq: 18 Jun 2024 19:01

Tgt Ion: 57 Resp: 1688

Ion	Ratio	Lower	Upper
57	100		
56	50.4	42.5	63.7
86	0.0	9.5	14.3#

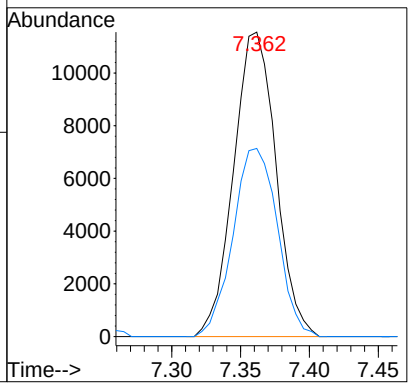


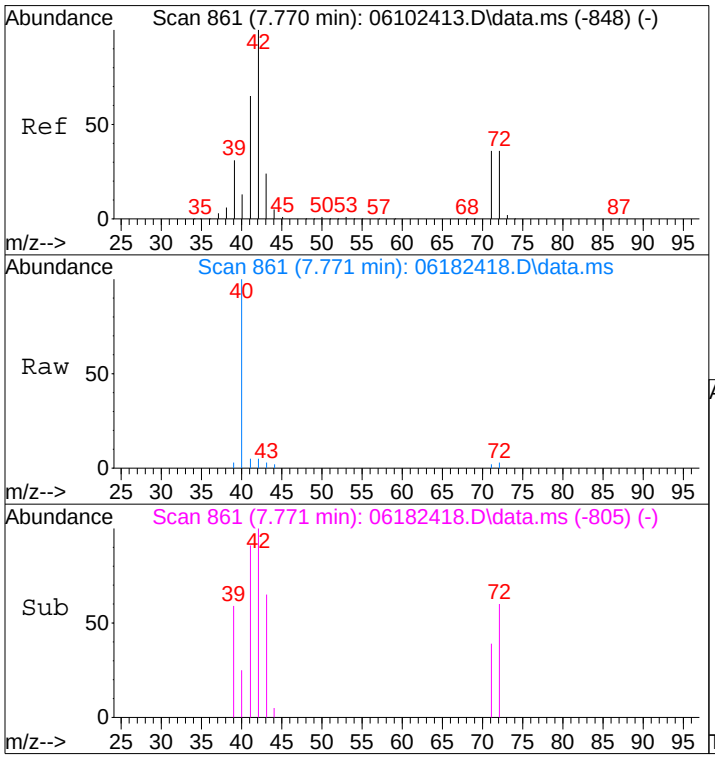


#32
Chloroform
Concen: 1.04 ng
RT: 7.36 min Scan# 789
Delta R.T. 0.007 min
Lab File: 06182418.D
Acq: 18 Jun 2024 19:01

Tgt Ion: 83 Resp: 24741

Ion	Ratio	Lower	Upper
83	100		
85	64.7	44.4	84.4

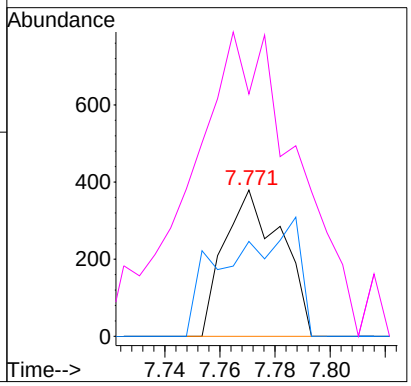


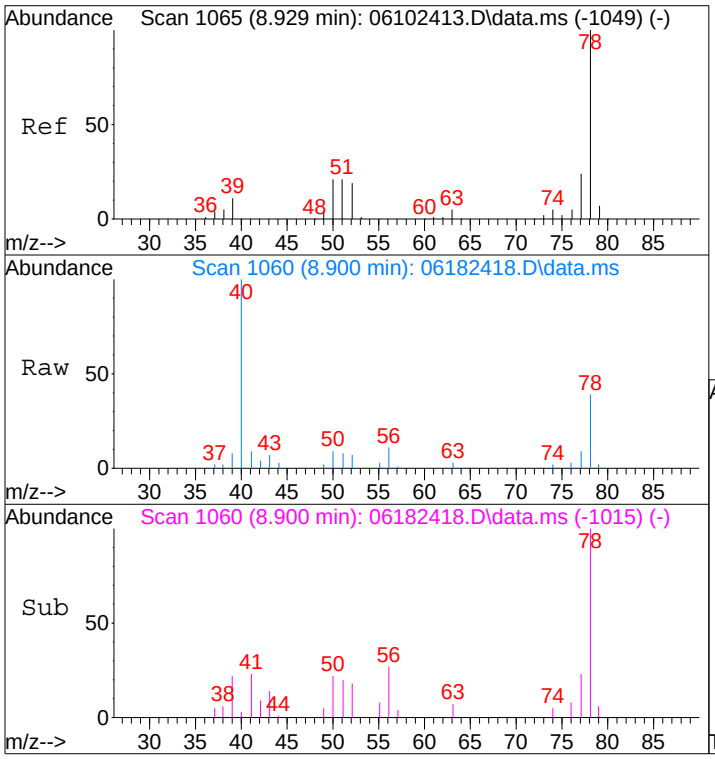


#34
Tetrahydrofuran (THF)
Concen: 0.08 ng
RT: 7.77 min Scan# 861
Delta R.T. 0.067 min
Lab File: 06182418.D
Acq: 18 Jun 2024 19:01

Tgt Ion: 72 Resp: 547

Ion	Ratio	Lower	Upper
72	100		
71	98.5	79.4	119.4
42	403.8	260.8	300.8#

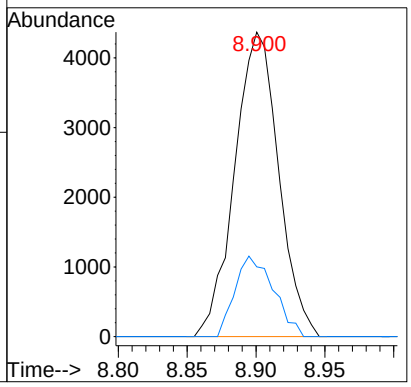


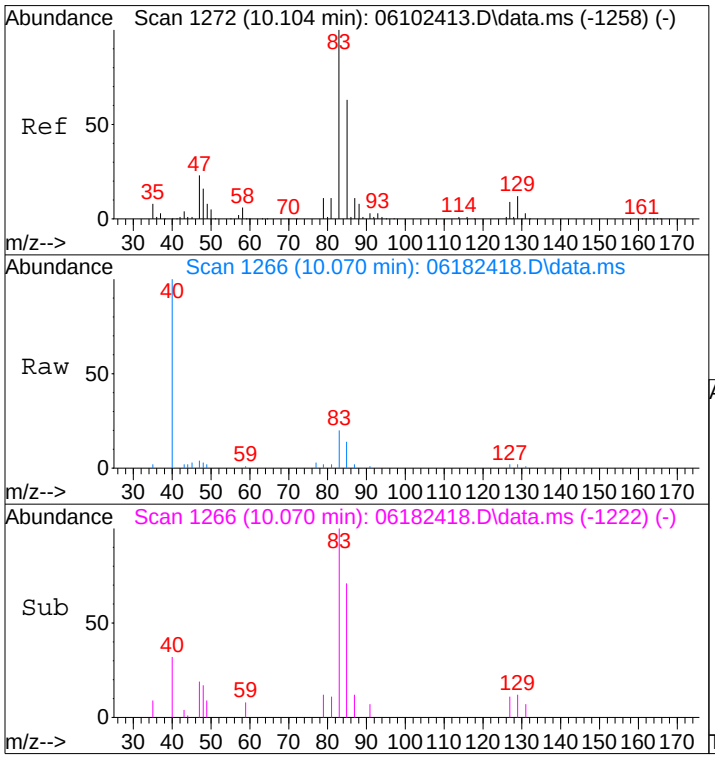


#41
Benzene
Concen: 0.20 ng
RT: 8.90 min Scan# 1060
Delta R.T. 0.003 min
Lab File: 06182418.D
Acq: 18 Jun 2024 19:01

Tgt Ion: 78 Resp: 9713

Ion	Ratio	Lower	Upper
78	100		
77	23.2	4.0	44.0

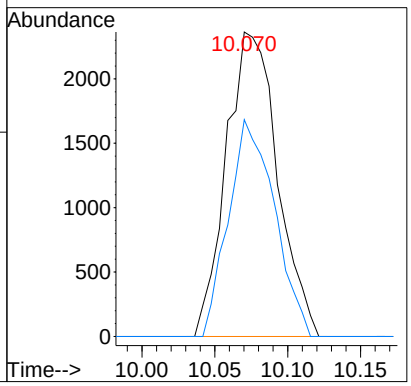


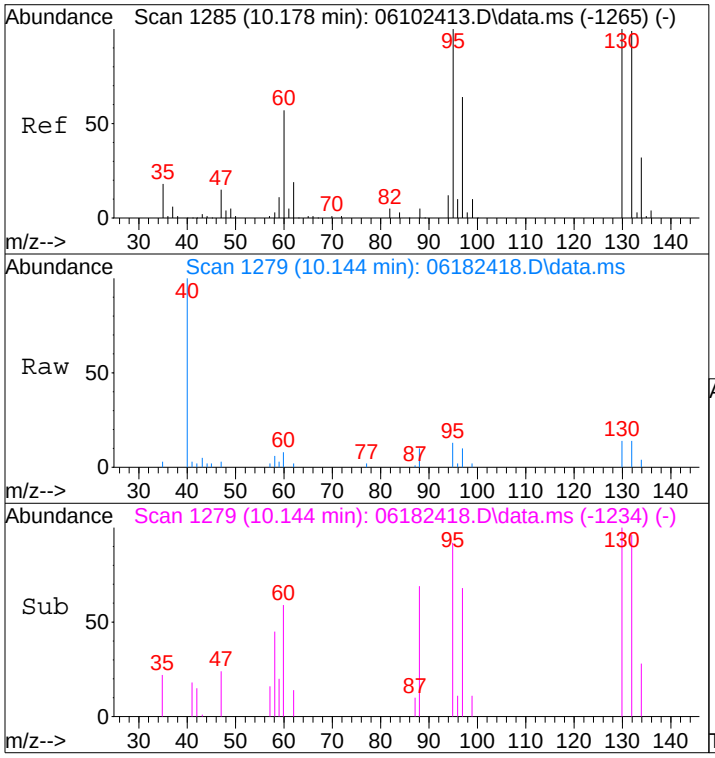


#46
Bromodichloromethane
Concen: 0.30 ng
RT: 10.07 min Scan# 1266
Delta R.T. -0.002 min
Lab File: 06182418.D
Acq: 18 Jun 2024 19:01

Tgt Ion: 83 Resp: 5780

Ion	Ratio	Lower	Upper
83	100		
85	63.8	43.8	83.8

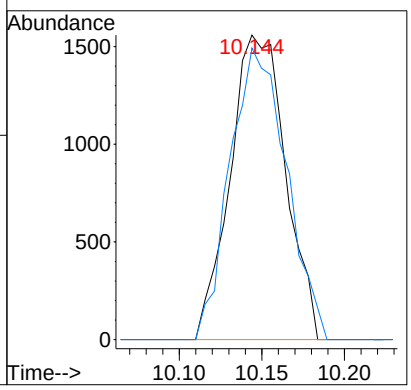


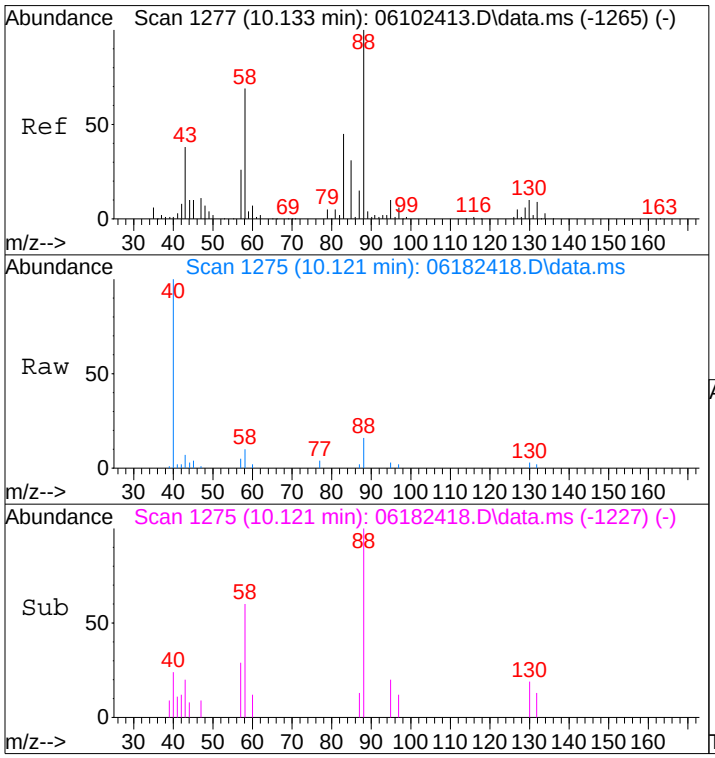


#47
Trichloroethene
Concen: 0.26 ng
RT: 10.14 min Scan# 1279
Delta R.T. 0.004 min
Lab File: 06182418.D
Acq: 18 Jun 2024 19:01

Tgt Ion:130 Resp: 3636

Ion	Ratio	Lower	Upper
130	100		
132	97.6	77.9	117.9

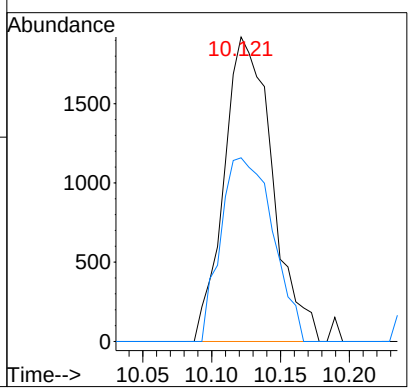


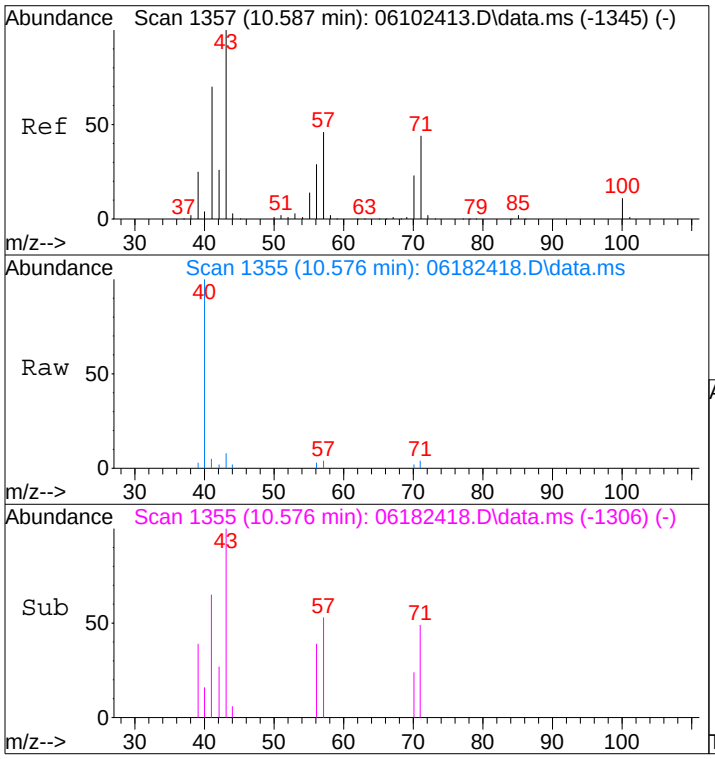


#48
1,4-Dioxane
Concen: 0.52 ng
RT: 10.12 min Scan# 1275
Delta R.T. 0.021 min
Lab File: 06182418.D
Acq: 18 Jun 2024 19:01

Tgt Ion: 88 Resp: 4683

Ion	Ratio	Lower	Upper
88	100		
58	65.1	47.6	87.6

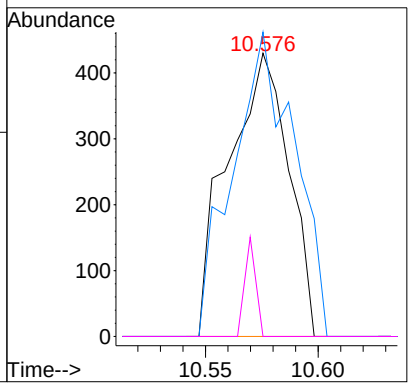


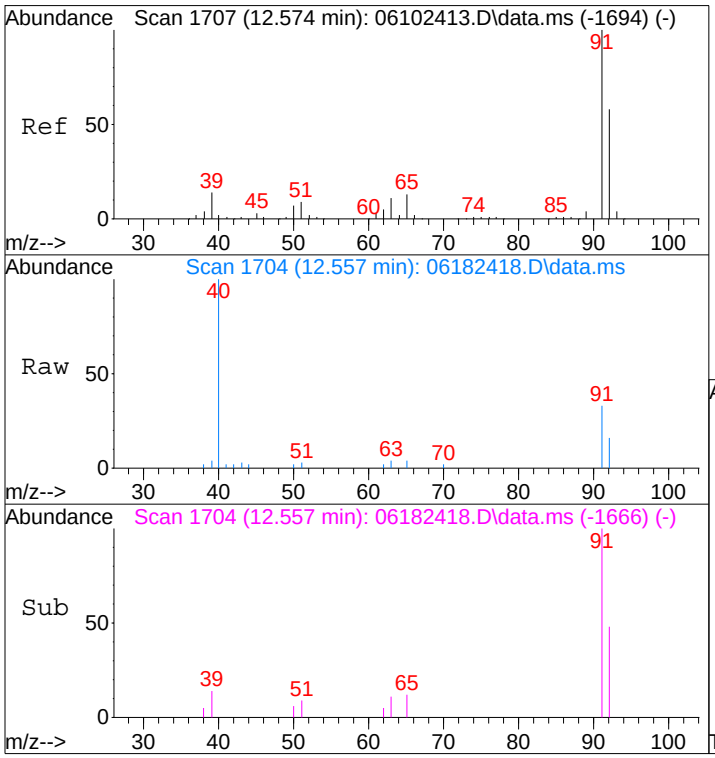


#51
n-Heptane
Concen: 0.08 ng
RT: 10.58 min Scan# 1355
Delta R.T. 0.029 min
Lab File: 06182418.D
Acq: 18 Jun 2024 19:01

Tgt Ion: 71 Resp: 804

Ion	Ratio	Lower	Upper
71	100		
57	109.3	83.9	123.9
100	0.0	4.8	44.8#

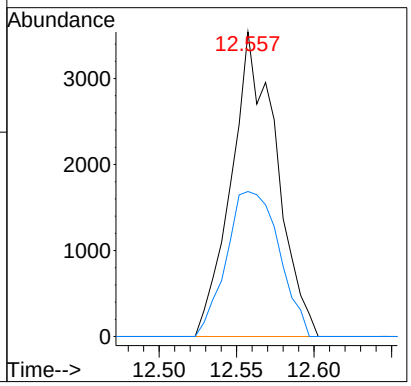


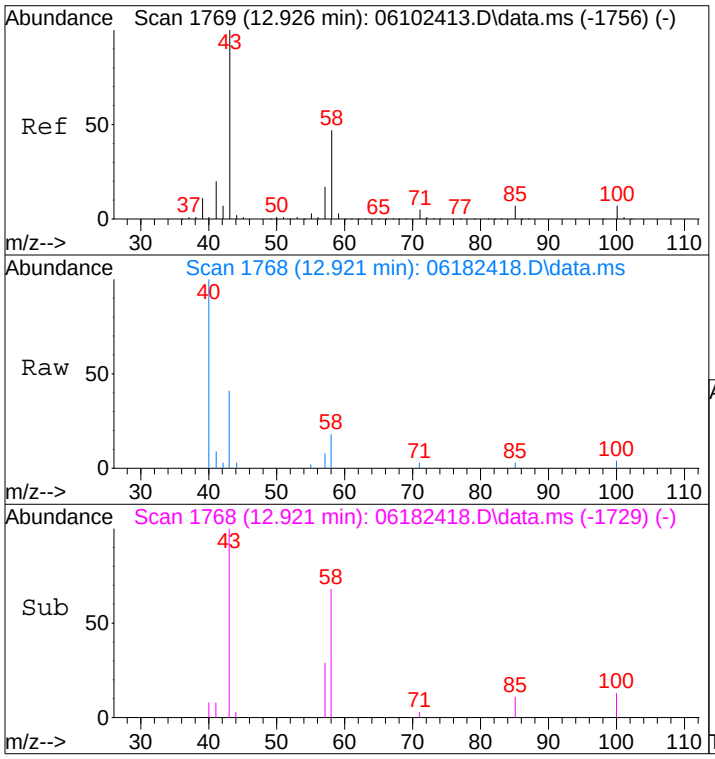


#58
Toluene
Concen: 0.14 ng
RT: 12.56 min Scan# 1704
Delta R.T. -0.034 min
Lab File: 06182418.D
Acq: 18 Jun 2024 19:01

Tgt Ion: 91 Resp: 7165

Ion	Ratio	Lower	Upper
91	100		
92	55.7	37.4	77.4

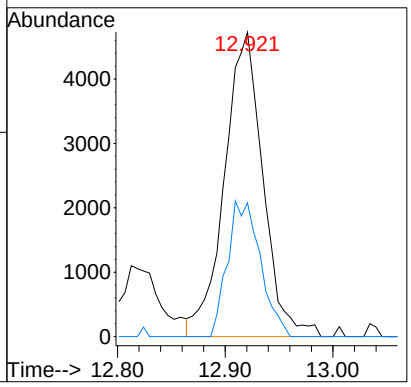


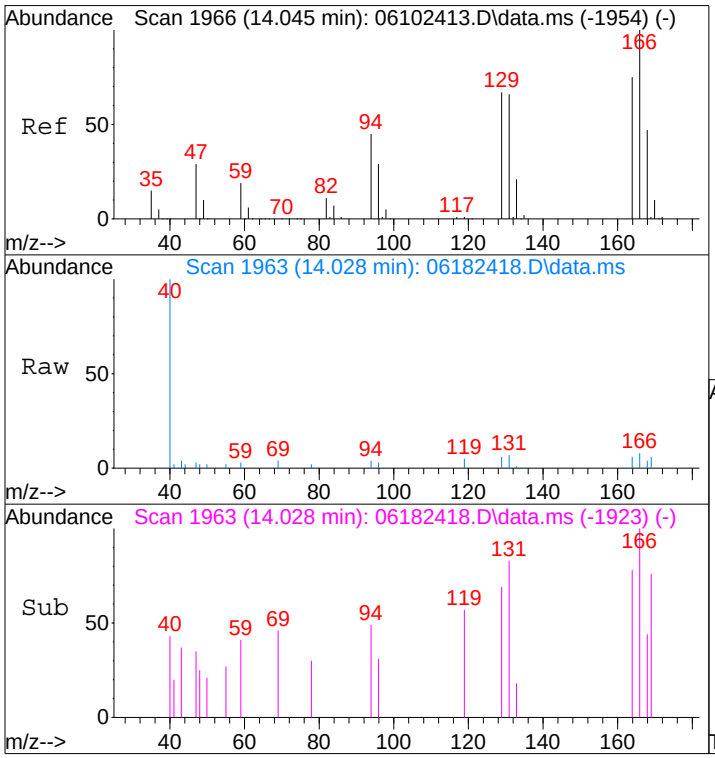


#59
2-Hexanone
Concen: 0.38 ng
RT: 12.92 min Scan# 1768
Delta R.T. -0.028 min
Lab File: 06182418.D
Acq: 18 Jun 2024 19:01

Tgt Ion: 43 Resp: 11724

Ion	Ratio	Lower	Upper
43	100		
58	38.1	25.9	65.9

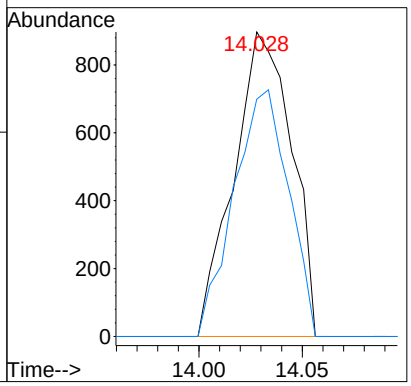


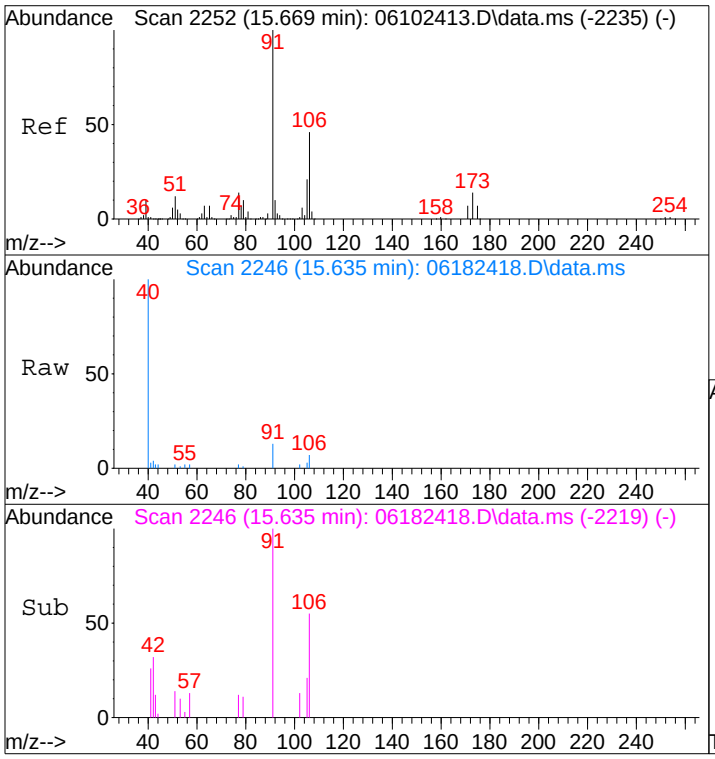


#64
Tetrachloroethene
Concen: 0.10 ng
RT: 14.03 min Scan# 1963
Delta R.T. -0.023 min
Lab File: 06182418.D
Acq: 18 Jun 2024 19:01

Tgt Ion:166 Resp: 1739

Ion	Ratio	Lower	Upper
166	100		
164	77.1	56.9	96.9

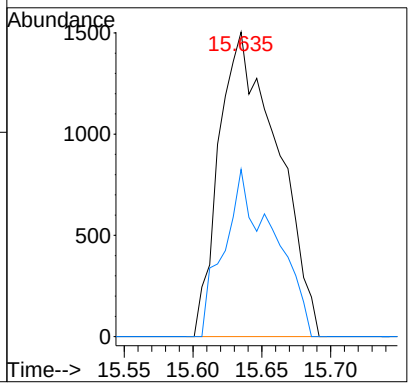




#67
m- & p-Xylenes
Concen: 0.09 ng
RT: 15.63 min Scan# 2246
Delta R.T. -0.046 min
Lab File: 06182418.D
Acq: 18 Jun 2024 19:01

Tgt Ion: 91 Resp: 4427

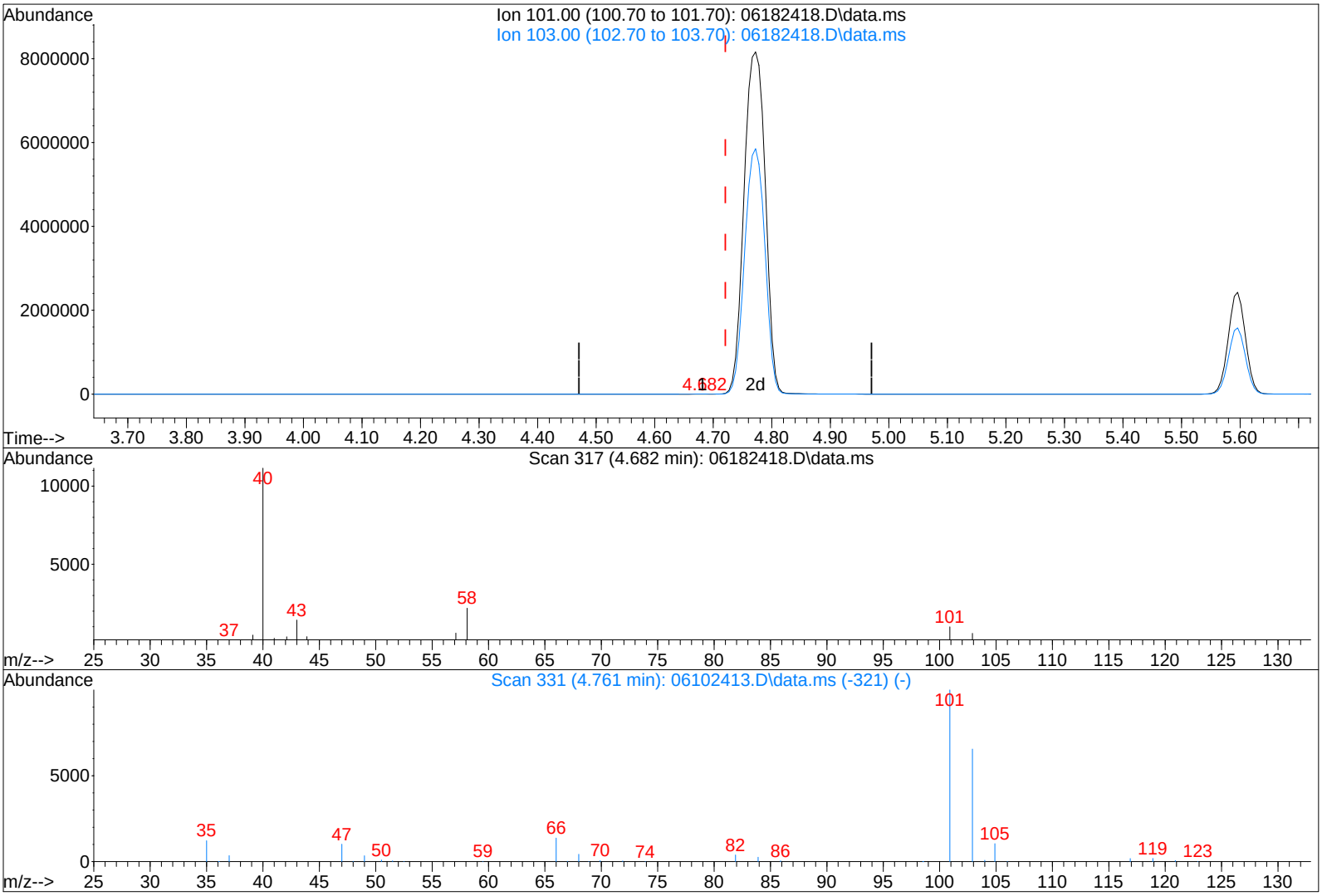
Ion	Ratio	Lower	Upper
91	100		
106	47.0	25.9	65.9



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182418.D Vial: 7
Acq On : 18 Jun 2024 19:01 Operator: SC
Sample : P2402249-028 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 08:25:44 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182418.D\data.ms

(14) Trichlorofluoromethane (T)

4.682min (-0.039) 0.07ng

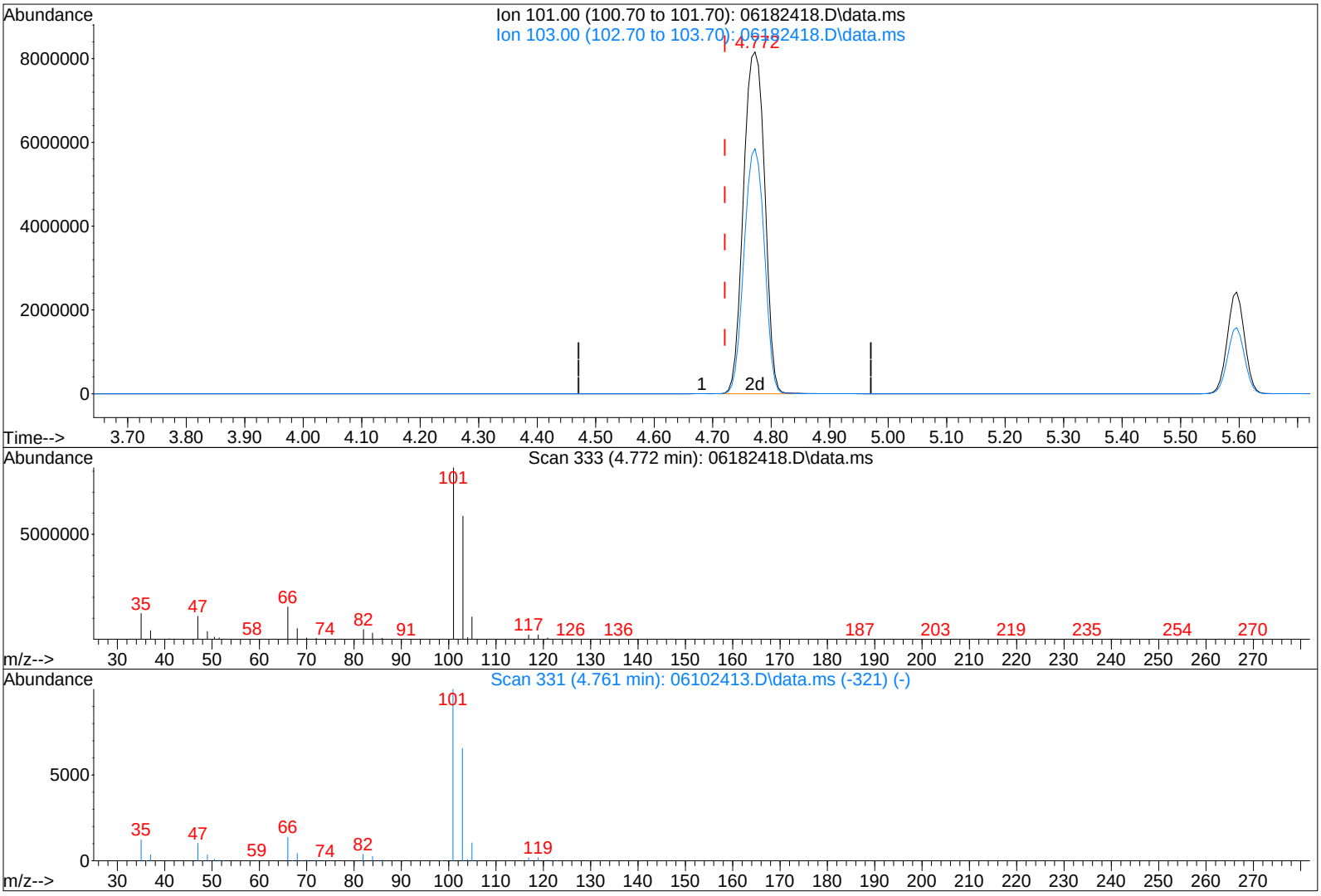
response 2127

Ion	Exp%	Act%
101.00	100	100
103.00	64.90	66.15
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182418.D Vial: 7
Acq On : 18 Jun 2024 19:01 Operator: SC
Sample : P2402249-028 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 08:25:44 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182418.D\data.ms

(14) Trichlorofluoromethane (T)

4.772min (+0.052) 712.94ng m

response 20656525

Ion	Exp%	Act%
101.00	100	100
103.00	64.90	0.01#
0.00	0.00	0.00
0.00	0.00	0.00

MP

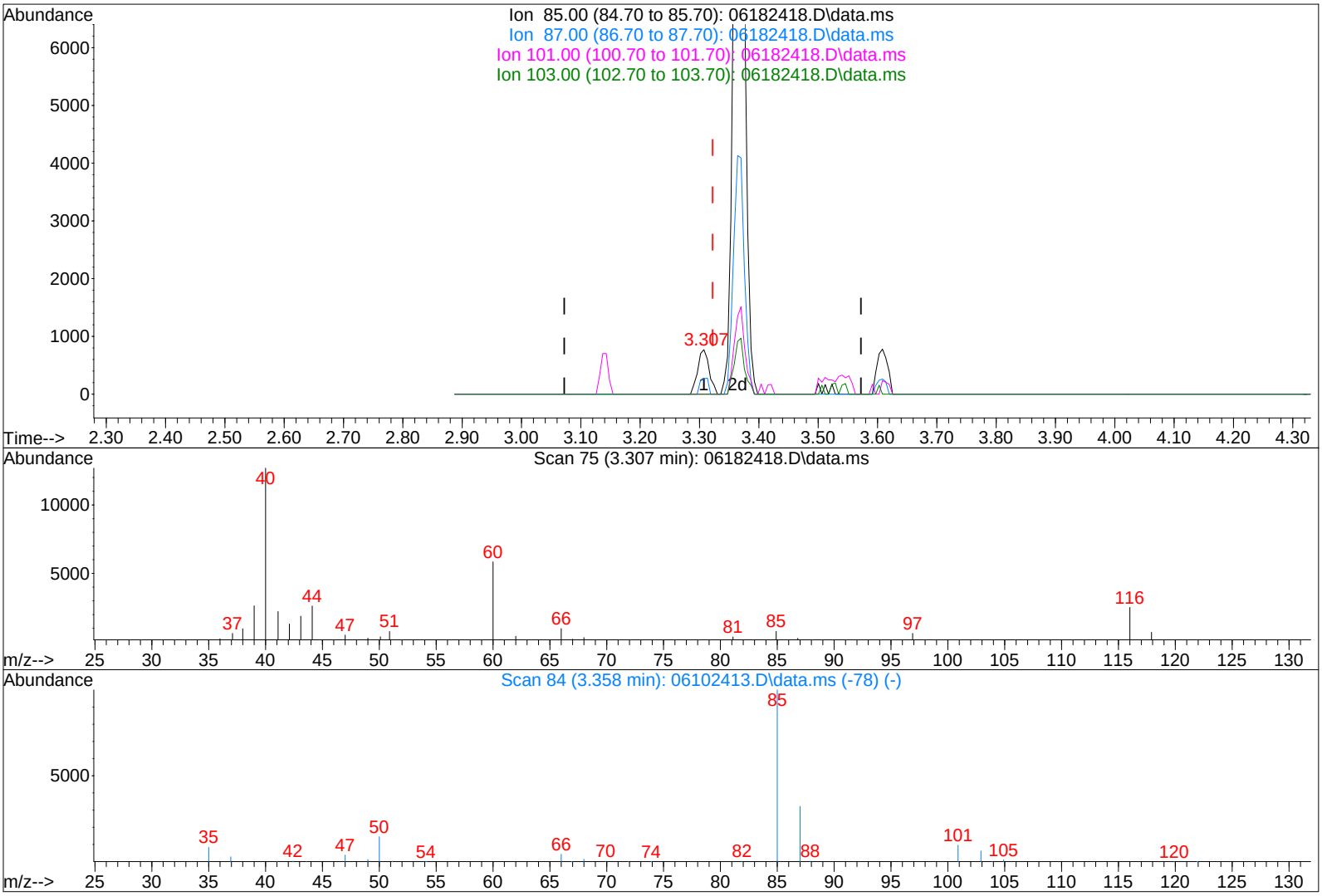
6/19/24

6/29/24

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182418.D Vial: 7
Acq On : 18 Jun 2024 19:01 Operator: SC
Sample : P2402249-028 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 08:25:44 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182418.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.307min (-0.015) 0.04ng

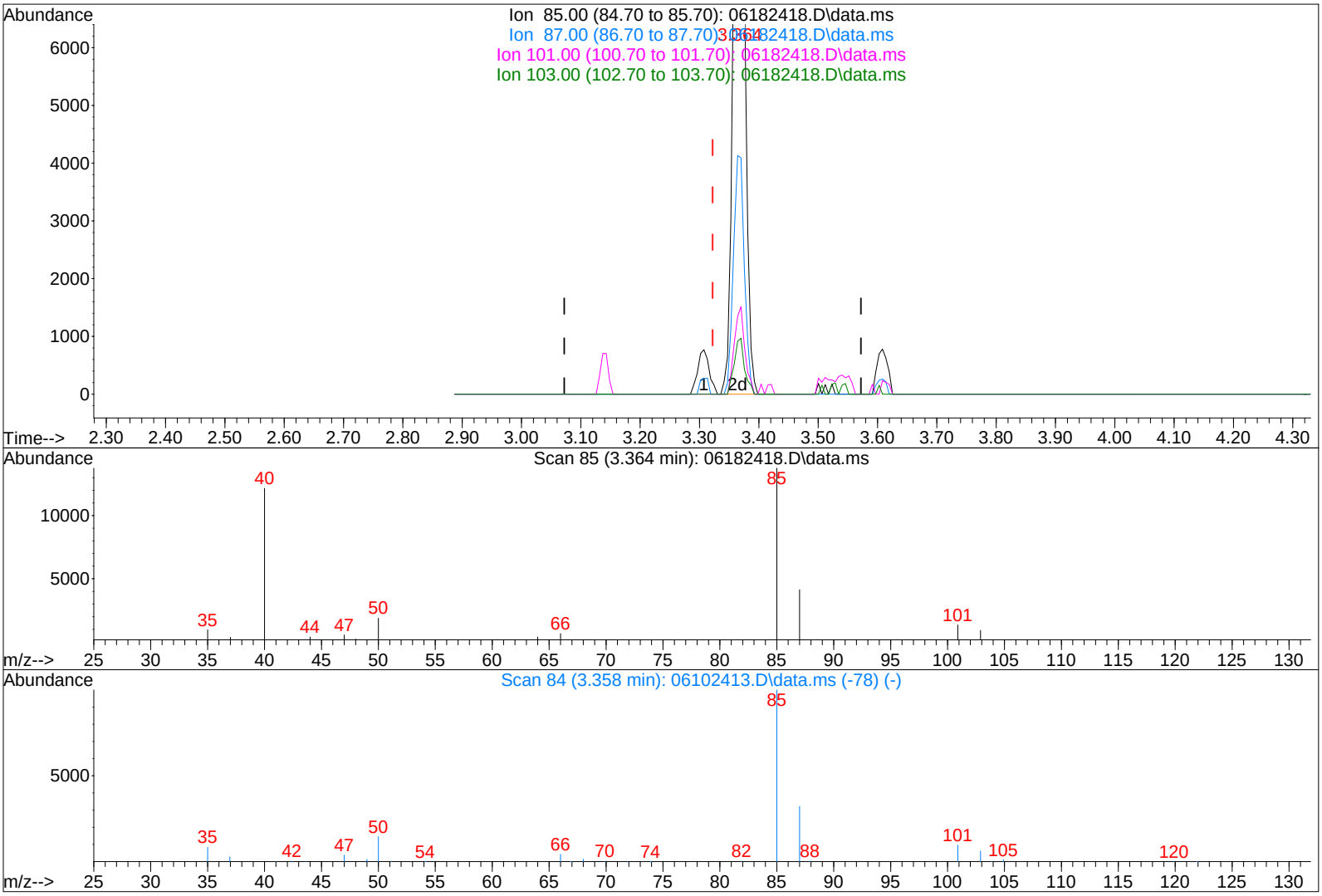
response 1027

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	26.00
101.00	9.80	0.00
103.00	6.30	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\18\06182418.D Vial: 7
Acq On : 18 Jun 2024 19:01 Operator: SC
Sample : P2402249-028 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 08:25:44 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06182418.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.364min (+0.042) 0.59ng m

response 16948

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	1.58#
101.00	9.80	0.00
103.00	6.30	0.00

WP

6/19/24

6/29/24

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182418.D Vial: 7
Acq On : 18 Jun 2024 19:01 Operator: SC
Sample : P2402249-028 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 14:59:53 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

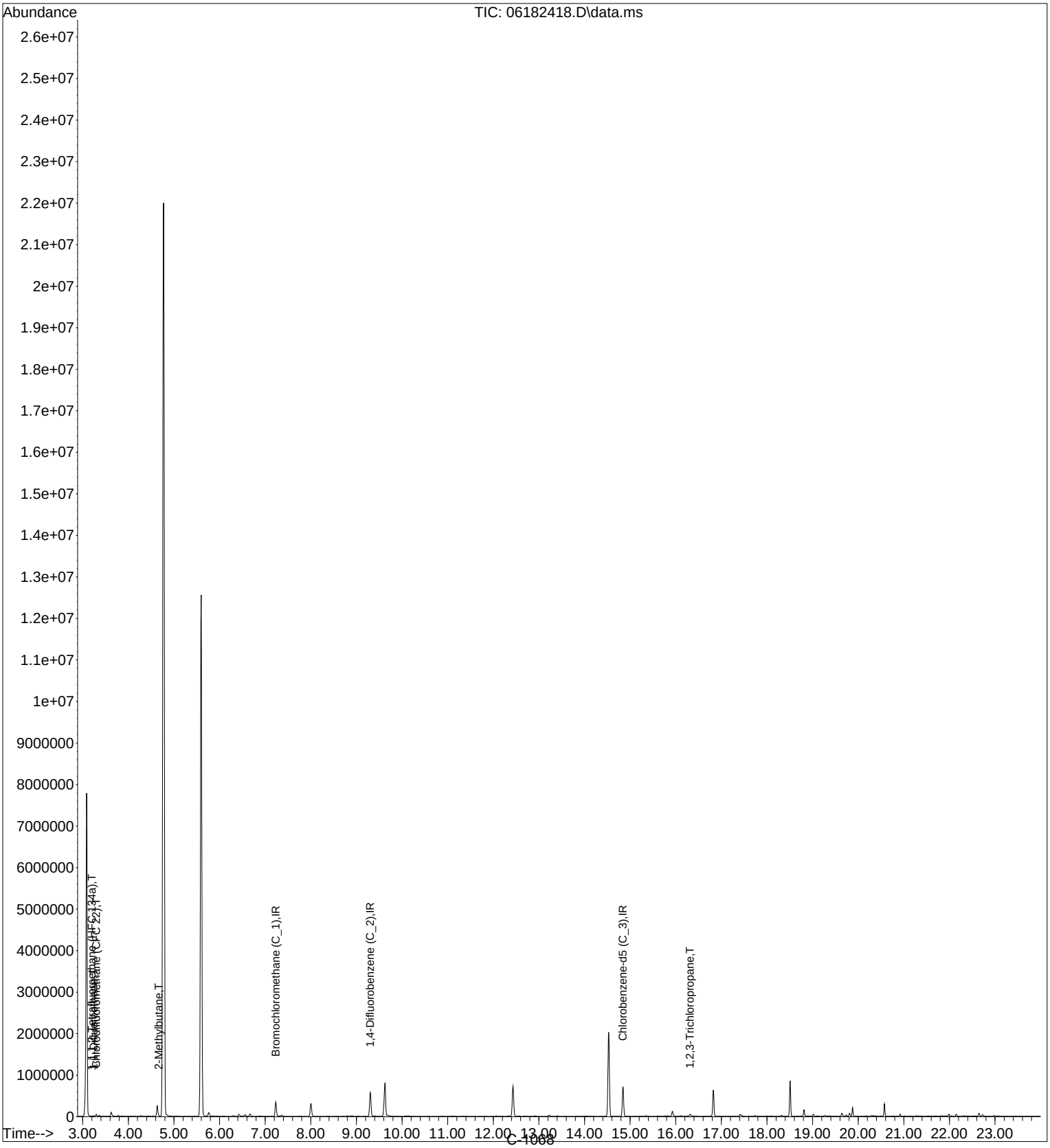
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	121703	12.500	ng		-0.02
16) 1,4-Difluorobenzene (C 2)	9.30	114	526719	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	123843	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	0.00	85	0	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.20	83	1319	0.106	ng	#	4
4) 1,1-Difluoroethane	3.24	65	4438	0.418	ng		94
5) Chlorodifluoromethane ...	3.30	67	421	0.102	ng	#	40
6) 1-Chloro-1,1-Difluoroe...	3.51	65	378	N.D.			
7) Dichlorofluoromethane ...	4.23	67	1257	N.D.			
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	4.57	83	469	N.D.			
10) 2-Methylbutane	4.66	57	5364	0.370	ng	#	1
11) Methyl Acetate	5.34	43	1821	N.D.			
12) 2-Methylpentane	6.50	71	461	N.D.			
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	9.04	84	54	N.D.			
17) 2,3-Dimethylpentane	9.53	56	230	N.D.			
18) Dibromomethane	9.80	174	52	N.D.			
20) Methyl Cyclohexane	11.42	55	1218	N.D.			
21) 1,3-Dichloropropane	0.00	76	0	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	16.31	75	2450	0.148	ng	#	46
25) Bromobenzene	0.00	77	0	N.D.			
26) 2-Chlorotoluene	17.60	91	590	N.D.			
27) 4-Chlorotoluene	17.67	91	1248	N.D.			
28) Indane	19.12	117	187	N.D.			
29) Indene	0.00	115	0	N.D.			
30) 1,2,4,5-Tetramethylben...	20.22	119	62	N.D.			
31) 1,2,3,4-Tetramethylben...	20.22	119	62	N.D.			
32) 1,2,3,5-Tetramethylben...	20.57	119	1429	N.D.			
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182418.D Vial: 7
Acq On : 18 Jun 2024 19:01 Operator: SC
Sample : P2402249-028 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:59:53 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



C-1008

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192409.D Vial: 7
Acq On : 19 Jun 2024 13:10 Operator: SC
Sample : P2402249-028Dil (40mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 13:32:00 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/19/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	148667	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	643708	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	147699	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	329406	12.467	ng		0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.76%				
57) Toluene-d8 (SS2)	12.43	98	717924	12.702	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.60%				
73) Bromofluorobenzene (SS3)	16.83	174	257394	12.611	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.88%				
Target Compounds							Qvalue
2) Propene	3.32	42	812	N.D.			
3) Dichlorodifluoromethan...	3.39	85	1784	0.051	ng	#	92
4) Chloromethane	3.53	50	384	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.35	45	64	N.D.			
11) Acetonitrile	4.44	41	874	N.D.			
12) Acrolein	4.55	56	512	N.D.			
13) Acetone	4.65	58	11212	0.971	ng	#	75
14) Trichlorofluoromethane	4.76	101	2764440	78.107	ng		100
15) 2-Propanol (Isopropanol)	4.98	45	51	N.D.			
16) Acrylonitrile	4.99	53	647	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	0.00	59	0	N.D.			
19) Methylene Chloride	5.35	84	800	N.D.			
20) 3-Chloro-1-propene (Al...	5.45	41	107	N.D.			
21) Trichlorotrifluoroethane	5.58	151	435403	29.080	ng		99
22) Carbon Disulfide	5.60	76	25689	0.488	ng	#	1
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D. d			
27) 2-Butanone (MEK)	6.69	72	1467	0.161	ng	#	36
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.			
30) Ethyl Acetate	0.00	61	0	N.D.			
31) n-Hexane	0.00	57	0	N.D.			
32) Chloroform	7.35	83	2841	0.098	ng		97
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	112	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.81	56	405	No Calib		#	
41) Benzene	8.90	78	2245	N.D.			
42) Carbon Tetrachloride	0.00	117	0	N.D.			
43) Cyclohexane	9.29	84	945	N.D.			
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.07	83	1010	N.D.			
47) Trichloroethene	10.15	130	629	N.D.			
48) 1,4-Dioxane	10.14	88	691	0.063	ng	#	72
49) 2,2,4-Trimethylpentane...	10.24	57	273	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192409.D Vial: 7
Acq On : 19 Jun 2024 13:10 Operator: SC
Sample : P2402249-028Dil (40mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 13:32:00 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

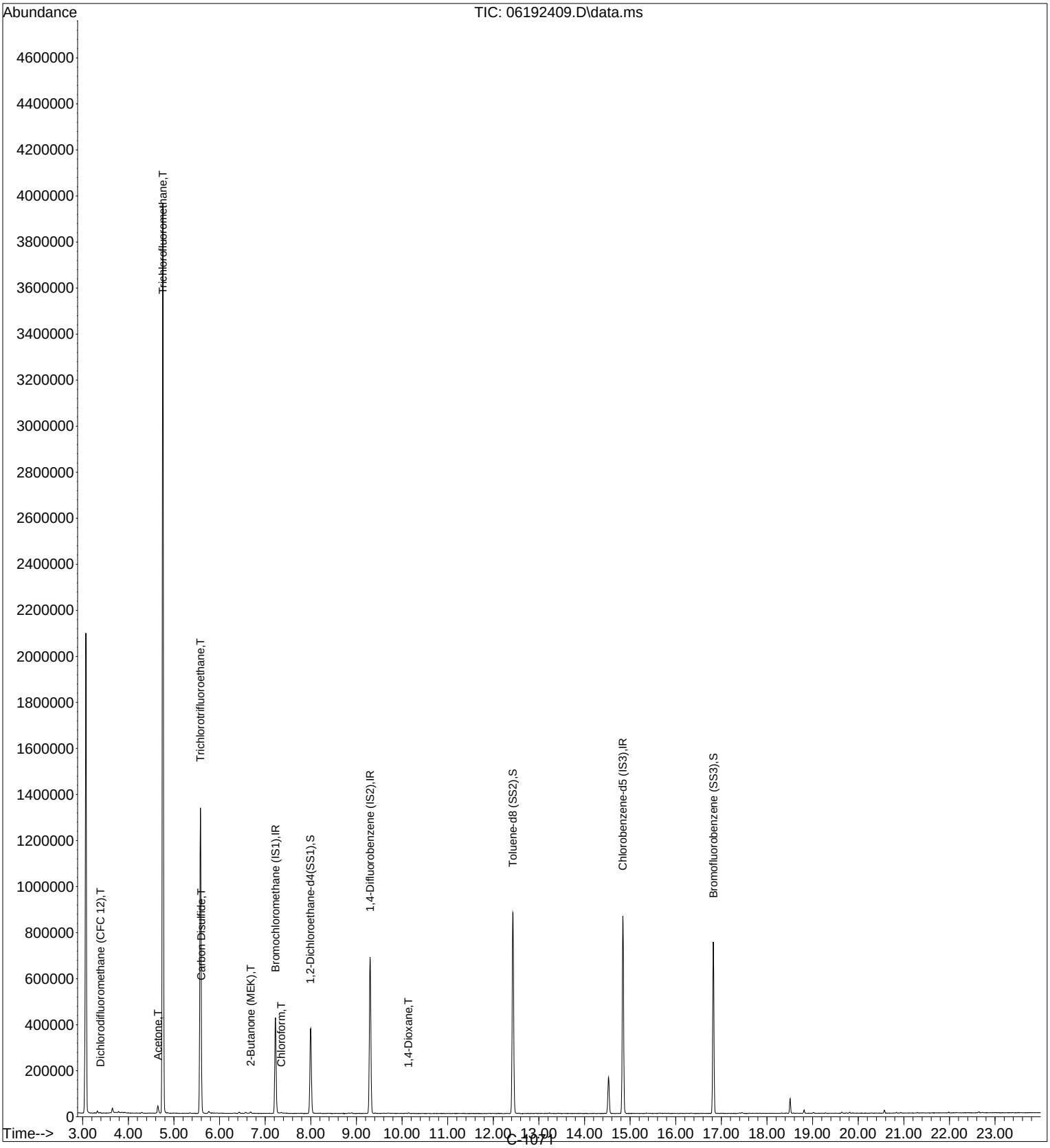
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
51) n-Heptane	0.00	71	0	N.D.		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	12.56	91	1462	N.D.		
59) 2-Hexanone	12.94	43	1254	N.D.		
60) Dibromochloromethane	13.07	129	507	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	0.00	43	0	N.D.		
63) n-Octane	0.00	57	0	N.D.		
64) Tetrachloroethene	14.03	166	441	N.D.		
65) Chlorobenzene	14.90	112	553	N.D.		
66) Ethylbenzene	15.42	91	894	N.D.		
67) m- & p-Xylenes	15.66	91	1968	N.D.		
68) Bromoform	15.67	173	527	N.D.		
69) Styrene	0.00	104	0	N.D.		
70) o-Xylene	16.25	91	827	N.D.		
71) n-Nonane	0.00	43	0	N.D.		
72) 1,1,2,2-Tetrachloroethane	16.22	83	322	N.D.		
74) Cumene	17.03	105	886	N.D.		
75) alpha-Pinene	0.00	93	0	N.D.		
76) n-Propylbenzene	17.68	91	1175	N.D.		
77) 3-Ethyltoluene	17.03	105	886	No Calib		#
78) 4-Ethyltoluene	17.86	105	696	N.D.		
79) 1,3,5-Trimethylbenzene	17.95	105	559	N.D.		
80) alpha-Methylstyrene	0.00	118	0	N.D.		
81) 2-Ethyltoluene	17.03	105	886	No Calib		#
82) 1,2,4-Trimethylbenzene	18.42	105	619	N.D.		
83) n-Decane	0.00	58	0	N.D.		
84) Benzyl Chloride	18.56	91	440	N.D.		
85) 1,3-Dichlorobenzene	18.58	146	796	N.D.		
86) 1,4-Dichlorobenzene	18.65	146	844	N.D.		
87) sec-Butylbenzene	18.74	105	917	N.D.		
88) 4-Isopropyltoluene (p-...	18.93	119	673	N.D.		
89) 1,2,3-Trimethylbenzene	17.03	105	886	No Calib		#
90) 1,2-Dichlorobenzene	19.04	146	557	N.D.		
91) d-Limonene	0.00	68	0	N.D.		
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	0.00	58	0	N.D.		
94) 1,2,4-Trichlorobenzene	20.84	180	1254	N.D.		
95) Naphthalene	20.94	128	1394	N.D.		
96) n-Dodecane	0.00	58	0	N.D.		
97) Hexachlorobutadiene	21.30	225	730	N.D.		
98) Cyclohexanone	15.36	55	282	No Calib		#
99) tert-Butylbenzene	18.43	119	823	N.D.		
100) n-Butylbenzene	19.39	91	768	N.D.		
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192409.D Vial: 7
Acq On : 19 Jun 2024 13:10 Operator: SC
Sample : P2402249-028Dil (40mL) Inst : MS09
Misc : S37-06062402

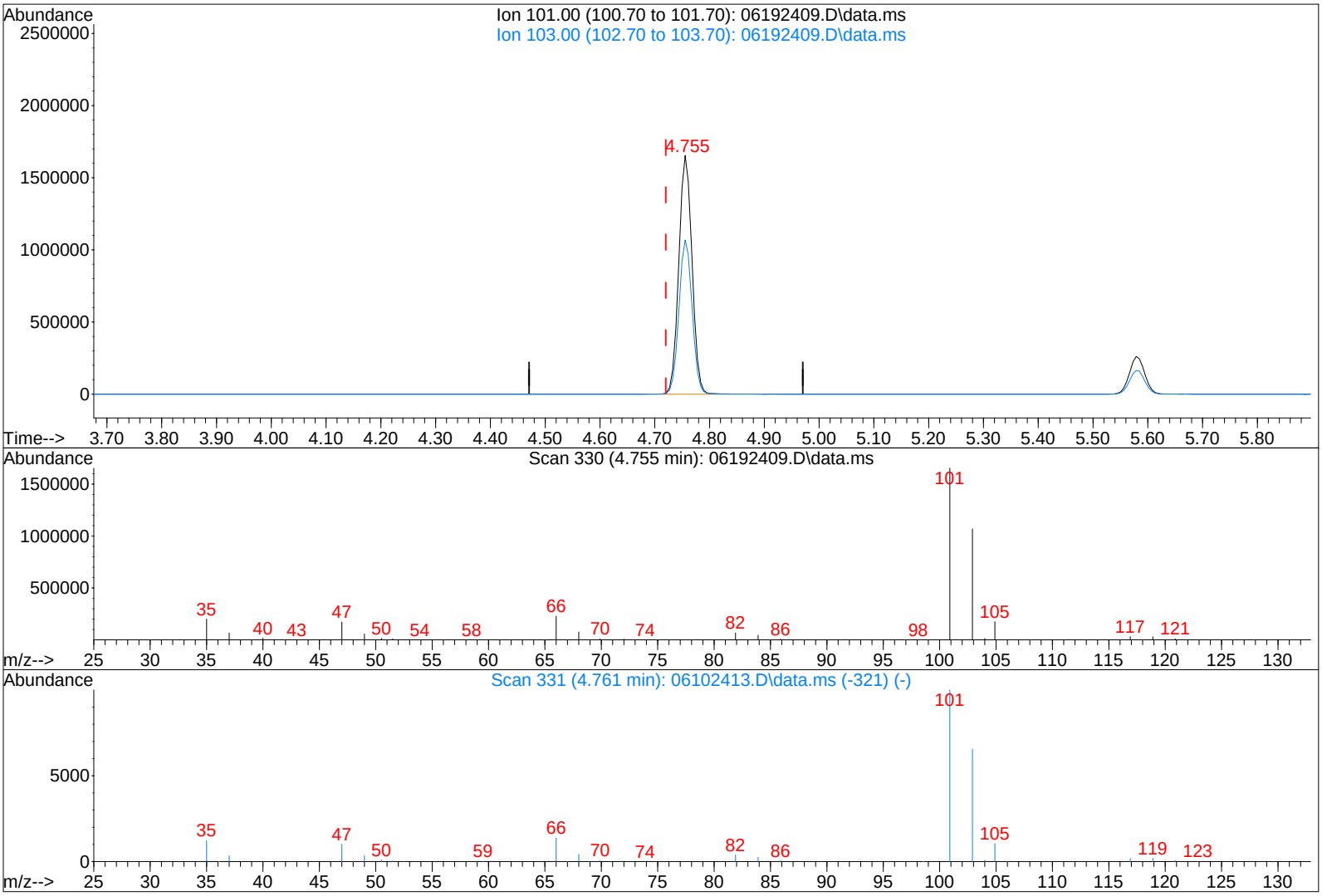
Quant Time: Jun 19 13:32:00 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\19\06192409.D Vial: 7
Acq On : 19 Jun 2024 13:10 Operator: SC
Sample : P2402249-028Dil (40mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 13:31:22 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06192409.D\data.ms

(14) Trichlorofluoromethane (T)

4.755min (+0.035) 78.11ng

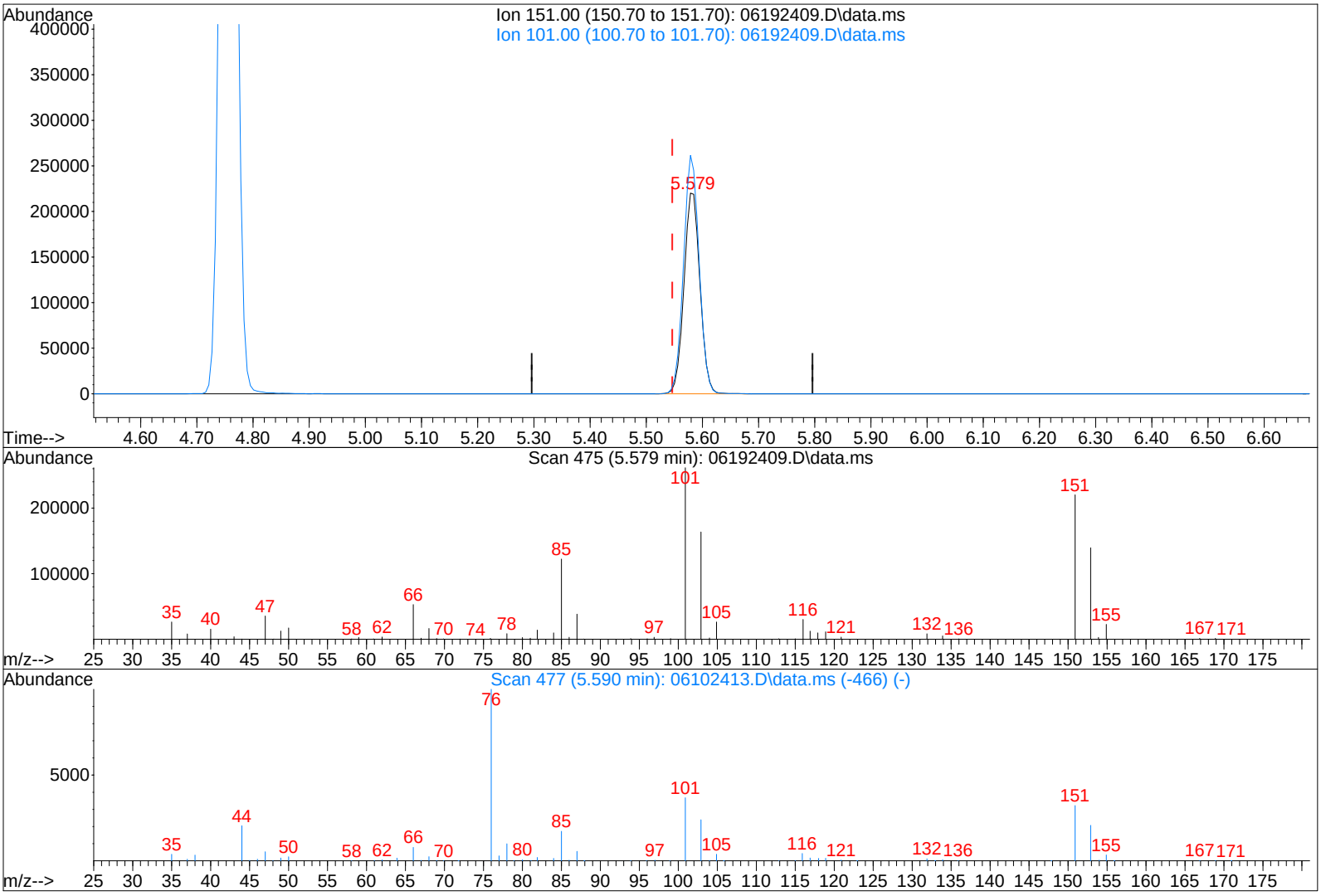
response 2764440

Ion	Exp%	Act%
101.00	100	100
103.00	64.90	64.66
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\19\06192409.D Vial: 7
Acq On : 19 Jun 2024 13:10 Operator: SC
Sample : P2402249-028Dil (40mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 13:31:22 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06192409.D\data.ms

(21) Trichlorotrifluoroethane (T)

5.579min (+0.033) 29.08ng

response 435403

Ion	Exp%	Act%
151.00	100	100
101.00	115.00	116.00
0.00	0.00	0.00
0.00	0.00	0.00

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\18\
Data File : 06182418.D
Acq On : 18 Jun 2024 19:01
Operator : SC
Sample : P2402249-028 (400mL)
Misc : S37-06062402
ALS Vial : 7 Sample Multiplier: 1

MJ 6/28/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06182418.D\data.ms

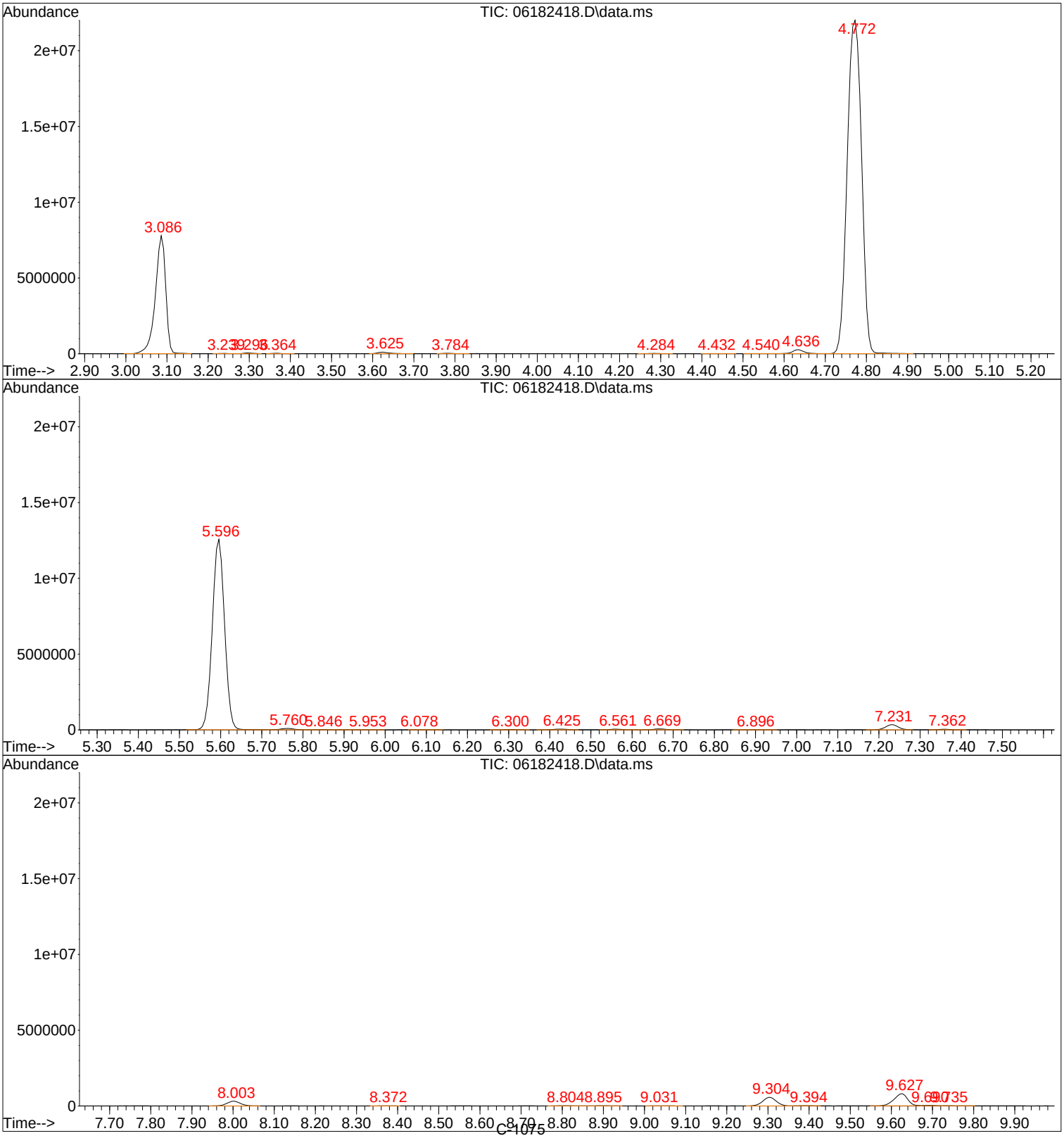
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.086	20	36	49	rBV	7780222	13675568	25.64%	13.772%
2	3.239	58	63	68	rVB	15408	20462	0.04%	0.021%
3	3.296	68	73	79	rVV	48910	71077	0.13%	0.072%
4	3.364	81	85	93	rVB	26017	34519	0.06%	0.035%
5	3.625	125	131	144	rBV	98710	188521	0.35%	0.190%
6	3.784	154	159	168	rBV2	21175	30183	0.06%	0.030%
7	4.284	240	247	255	rVB	14974	26609	0.05%	0.027%
8	4.432	267	273	282	rBV2	6162	13230	0.02%	0.013%
9	4.540	285	292	298	rBV3	6589	12393	0.02%	0.012%
10	4.636	298	309	321	rBV	257577	497214	0.93%	0.501%
11	4.772	321	333	358	rBV	21990750	53330333	100.00%	53.705%
12	5.596	464	478	499	rBV	12556595	25969148	48.69%	26.152%
13	5.760	499	507	515	rVV	89106	190486	0.36%	0.192%
14	5.846	515	522	534	rVV4	10324	32896	0.06%	0.033%
15	5.953	534	541	549	rVB5	5460	16279	0.03%	0.016%
16	6.078	559	563	574	rBV4	5390	13517	0.03%	0.014%
17	6.300	594	602	611	rBV	19234	42507	0.08%	0.043%
18	6.425	614	624	632	rBV	44429	107700	0.20%	0.108%
19	6.561	641	648	658	rVB2	37821	84383	0.16%	0.085%
20	6.669	658	667	677	rVB	55861	112468	0.21%	0.113%
21	6.896	698	707	717	rVB4	7824	18013	0.03%	0.018%
22	7.231	755	766	775	rBV	340798	718956	1.35%	0.724%
23	7.362	782	789	798	rVB2	31342	69178	0.13%	0.070%
24	8.003	891	902	913	rVB	305366	689582	1.29%	0.694%
25	8.372	960	967	973	rBV3	4988	11486	0.02%	0.012%
26	8.804	1036	1043	1050	rBV2	14849	35901	0.07%	0.036%
27	8.895	1050	1059	1068	rVB4	14946	42611	0.08%	0.043%
28	9.031	1078	1083	1094	rVB3	4444	11982	0.02%	0.012%
29	9.304	1121	1131	1141	rBV	565940	1274244	2.39%	1.283%
30	9.394	1141	1147	1153	rBV2	12752	27627	0.05%	0.028%
31	9.627	1174	1188	1196	rBV	796721	1854974	3.48%	1.868%
32	9.690	1196	1199	1205	rVV2	26494	59023	0.11%	0.059%
33	9.735	1205	1207	1219	rVB4	10586	18430	0.03%	0.019%

Sum of corrected areas: 99301500

Data Path : I:\MS09\DATA\2024 06\18\
Data File : 06182418.D
Acq On : 18 Jun 2024 19:01
Operator : SC
Sample : P2402249-028 (400mL)
Misc : S37-06062402
ALS Vial : 7 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\18\\
Data File : 06182418.D
Acq On : 18 Jun 2024 19:011
Operator : SCC
Sample : P2402249-028 (400mL))
Misc : S37-060624022
ALS Vial : 7 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

						Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected

****

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192411.D Vial: 8
Acq On : 19 Jun 2024 14:14 Operator: SC
Sample : P2402249-029 (50mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 14:40:43 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/19/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	145674	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	629829	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	143914	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	325129	12.558	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.48%				
57) Toluene-d8 (SS2)	12.43	98	690723	12.542	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.32%				
73) Bromofluorobenzene (SS3)	16.83	174	255047	12.825	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.64%				
Target Compounds							Qvalue
2) Propene	3.33	42	482	N.D.			
3) Dichlorodifluoromethan...	3.39	85	2554	0.074	ng	#	87
4) Chloromethane	3.52	50	274	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.36	45	52	N.D.			
11) Acetonitrile	4.44	41	203	N.D.			
12) Acrolein	4.54	56	214	N.D.			
13) Acetone	4.63	58	36318	3.209	ng		99
14) Trichlorofluoromethane	4.76	101	3140793	90.564	ng		100
15) 2-Propanol (Isopropanol)	4.86	45	2654	0.058	ng	#	53
16) Acrylonitrile	4.99	53	457	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.37	59	118	N.D.			
19) Methylene Chloride	5.35	84	1013	0.063	ng		100
20) 3-Chloro-1-propene (Al...	0.00	41	0	N.D.			
21) Trichlorotrifluoroethane	5.58	151	491577	33.507	ng		100
22) Carbon Disulfide	5.61	76	1739	N.D.			
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D.			
27) 2-Butanone (MEK)	6.68	72	1053	0.118	ng	#	68
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.			
30) Ethyl Acetate	7.30	61	1185	0.217	ng		92
31) n-Hexane	7.31	57	296	N.D.			
32) Chloroform	7.36	83	3253	0.114	ng		92
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	586	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.83	56	759	No Calib			
41) Benzene	8.89	78	949	N.D.			
42) Carbon Tetrachloride	0.00	117	0	N.D.			
43) Cyclohexane	0.00	84	0	N.D. d			
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	9.86	63	490	N.D.			
46) Bromodichloromethane	10.07	83	1069	N.D.			
47) Trichloroethene	10.14	130	729	N.D.			
48) 1,4-Dioxane	0.00	88	0	N.D.			
49) 2,2,4-Trimethylpentane...	0.00	57	0	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192411.D Vial: 8
Acq On : 19 Jun 2024 14:14 Operator: SC
Sample : P2402249-029 (50mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 14:40:43 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

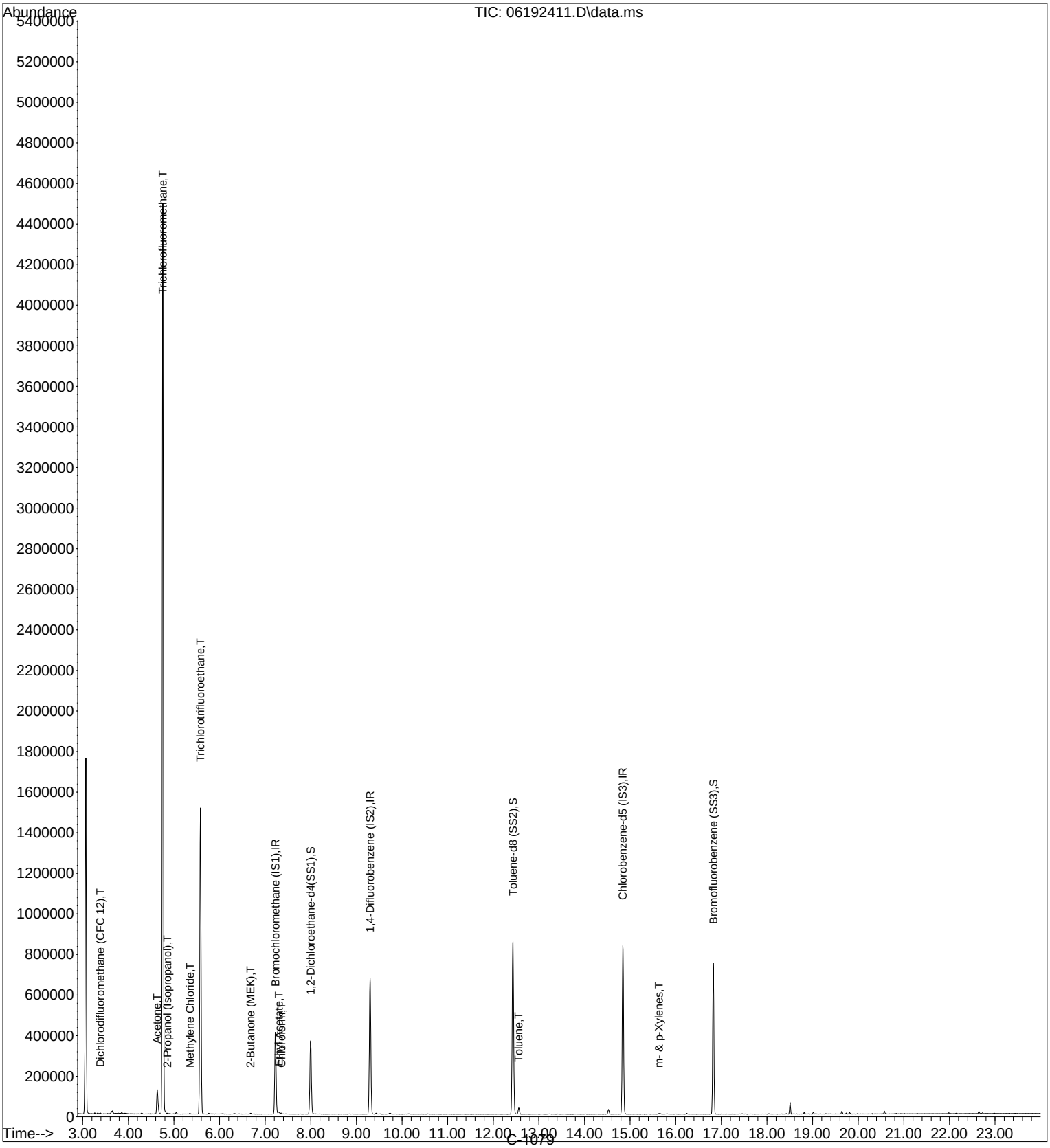
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	10.56	71	108	N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
58) Toluene	12.56	91	27692	0.481 ng	99
59) 2-Hexanone	12.93	43	134	N.D.	
60) Dibromochloromethane	13.07	129	433	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	13.78	43	292	N.D.	
63) n-Octane	0.00	57	0	N.D.	
64) Tetrachloroethene	14.03	166	417	N.D.	
65) Chlorobenzene	14.90	112	716	N.D.	
66) Ethylbenzene	15.40	91	1748	N.D.	
67) m- & p-Xylenes	15.63	91	4707	0.085 ng	100
68) Bromoform	15.67	173	539	N.D.	
69) Styrene	16.09	104	284	N.D.	
70) o-Xylene	16.24	91	2414	N.D.	
71) n-Nonane	0.00	43	0	N.D.	
72) 1,1,2,2-Tetrachloroethane	16.20	83	268	N.D.	
74) Cumene	17.03	105	799	N.D.	
75) alpha-Pinene	17.52	93	466	N.D.	
76) n-Propylbenzene	17.68	91	992	N.D.	
77) 3-Ethyltoluene	17.03	105	799	No Calib	#
78) 4-Ethyltoluene	17.86	105	752	N.D.	
79) 1,3,5-Trimethylbenzene	17.95	105	372	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.03	105	799	No Calib	#
82) 1,2,4-Trimethylbenzene	18.42	105	834	N.D.	
83) n-Decane	0.00	58	0	N.D.	
84) Benzyl Chloride	0.00	91	0	N.D.	
85) 1,3-Dichlorobenzene	18.58	146	549	N.D.	
86) 1,4-Dichlorobenzene	18.66	146	607	N.D.	
87) sec-Butylbenzene	18.74	105	893	N.D.	
88) 4-Isopropyltoluene (p-...	18.93	119	793	N.D.	
89) 1,2,3-Trimethylbenzene	17.03	105	799	No Calib	#
90) 1,2-Dichlorobenzene	19.03	146	573	N.D.	
91) d-Limonene	0.00	68	0	N.D.	
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	859	N.D.	
95) Naphthalene	20.94	128	800	N.D.	
96) n-Dodecane	0.00	58	0	N.D.	
97) Hexachlorobutadiene	21.30	225	543	N.D.	
98) Cyclohexanone	0.00	55	0	N.D.	
99) tert-Butylbenzene	18.43	119	757	N.D.	
100) n-Butylbenzene	19.39	91	648	N.D.	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192411.D Vial: 8
Acq On : 19 Jun 2024 14:14 Operator: SC
Sample : P2402249-029 (50mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 14:40:43 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192411.D Vial: 8
Acq On : 19 Jun 2024 14:14 Operator: SC
Sample : P2402249-029 (50mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 14:40:43 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/19/24

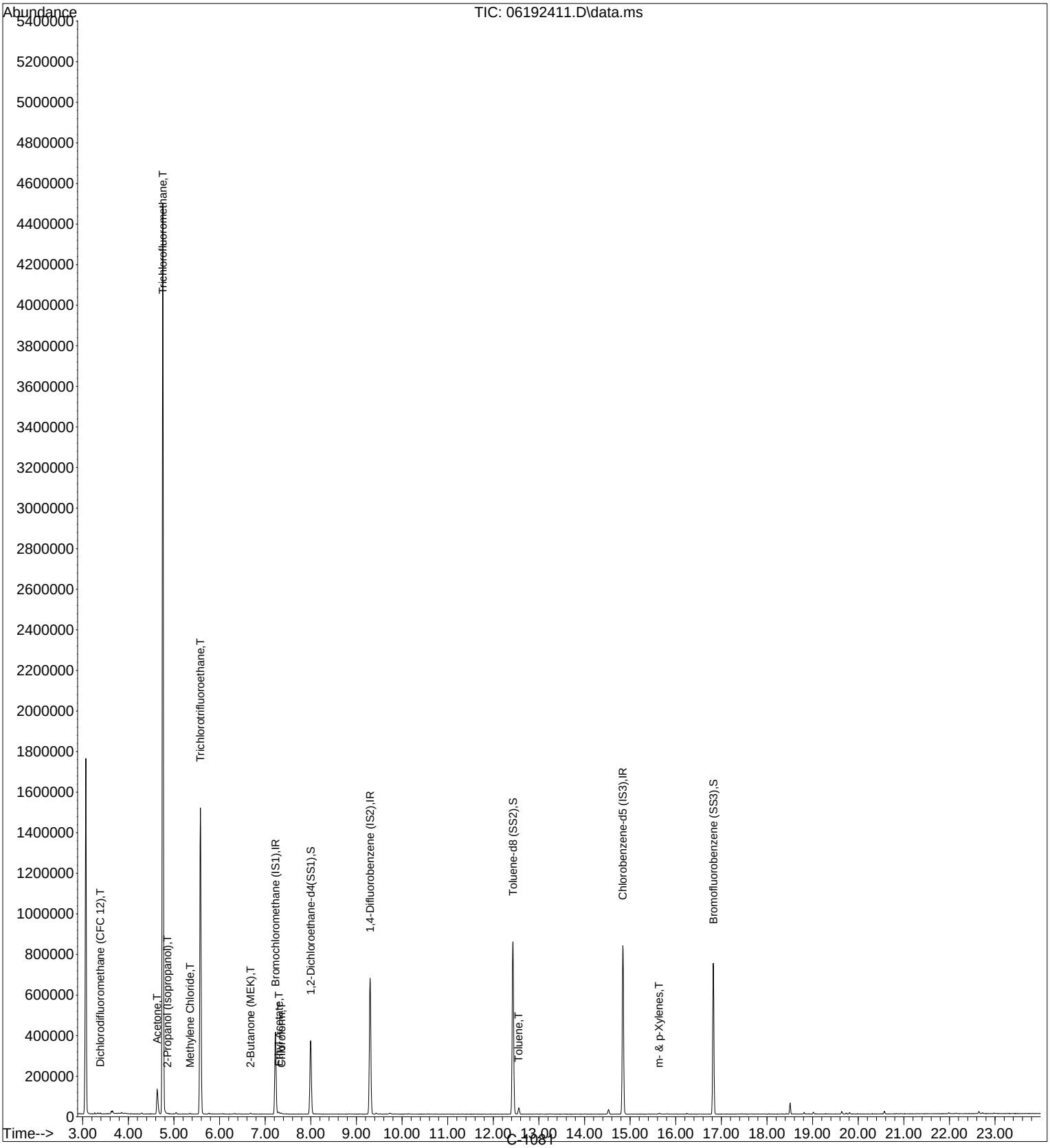
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	145674	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	629829	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	143914	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	325129	12.558	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.48%				
57) Toluene-d8 (SS2)	12.43	98	690723	12.542	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.32%				
73) Bromofluorobenzene (SS3)	16.83	174	255047	12.825	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.64%				
Target Compounds							Qvalue
3) Dichlorodifluoromethan...	3.39	85	2554	0.074	ng	#	87
13) Acetone	4.63	58	36318	3.209	ng		99
14) Trichlorofluoromethane	4.76	101	3140793	90.564	ng		100
15) 2-Propanol (Isopropanol)	4.86	45	2654	0.058	ng	#	53
19) Methylene Chloride	5.35	84	1013	0.063	ng		100
21) Trichlorotrifluoroethane	5.58	151	491577	33.507	ng		100
27) 2-Butanone (MEK)	6.68	72	1053	0.118	ng	#	68
30) Ethyl Acetate	7.30	61	1185	0.217	ng		92
32) Chloroform	7.36	83	3253	0.114	ng		92
58) Toluene	12.56	91	27692	0.481	ng		99
67) m- & p-Xylenes	15.63	91	4707	0.085	ng		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

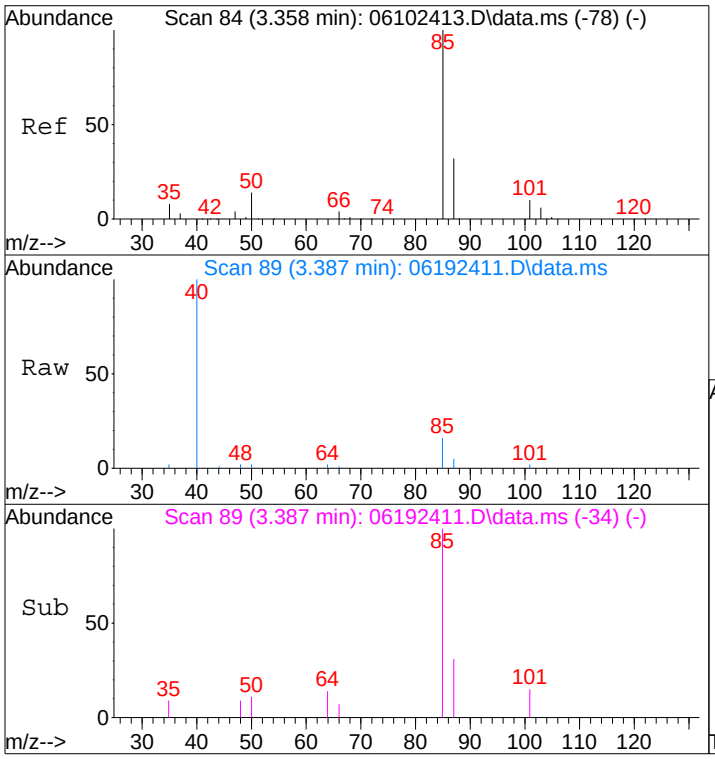
Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192411.D Vial: 8
Acq On : 19 Jun 2024 14:14 Operator: SC
Sample : P2402249-029 (50mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 14:40:43 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



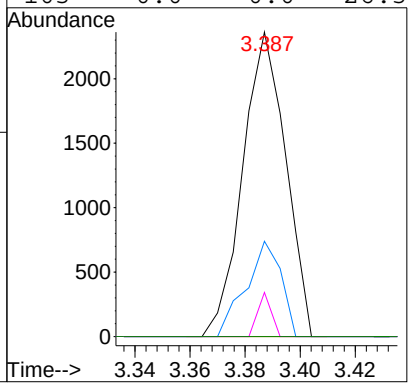
C-10a1

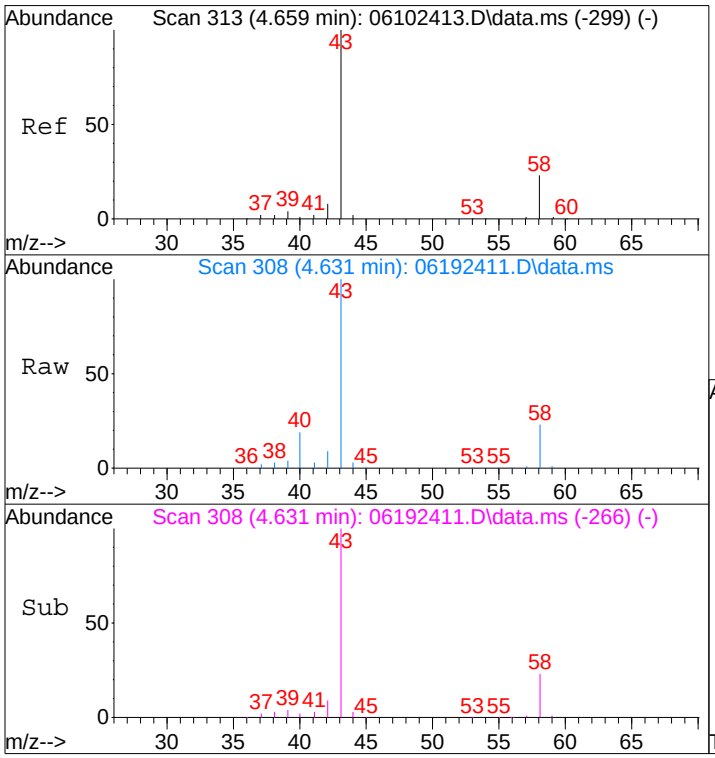


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.07 ng
RT: 3.39 min Scan# 89
Delta R.T. 0.065 min
Lab File: 06192411.D
Acq: 19 Jun 2024 14:14

Tgt Ion: 85 Resp: 2554

Ion	Ratio	Lower	Upper
85	100		
87	25.7	12.2	52.2
101	4.6	0.0	29.8
103	0.0	0.0	26.3

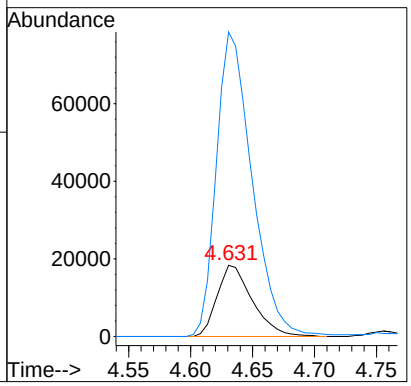


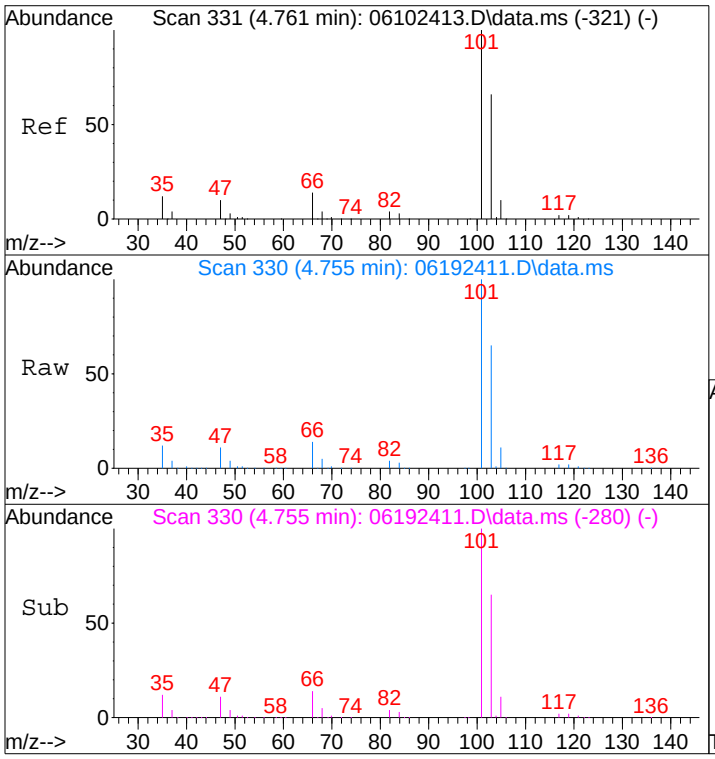


#13
Acetone
Concen: 3.21 ng
RT: 4.63 min Scan# 308
Delta R.T. -0.011 min
Lab File: 06192411.D
Acq: 19 Jun 2024 14:14

Tgt Ion: 58 Resp: 36318

Ion	Ratio	Lower	Upper
58	100		
43	434.3	400.7	460.7

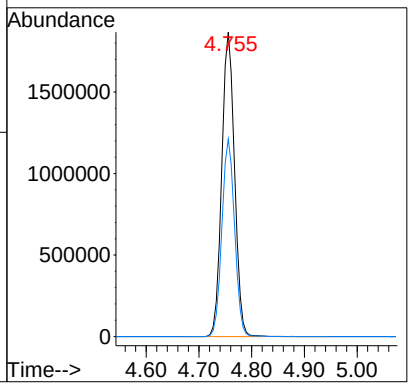


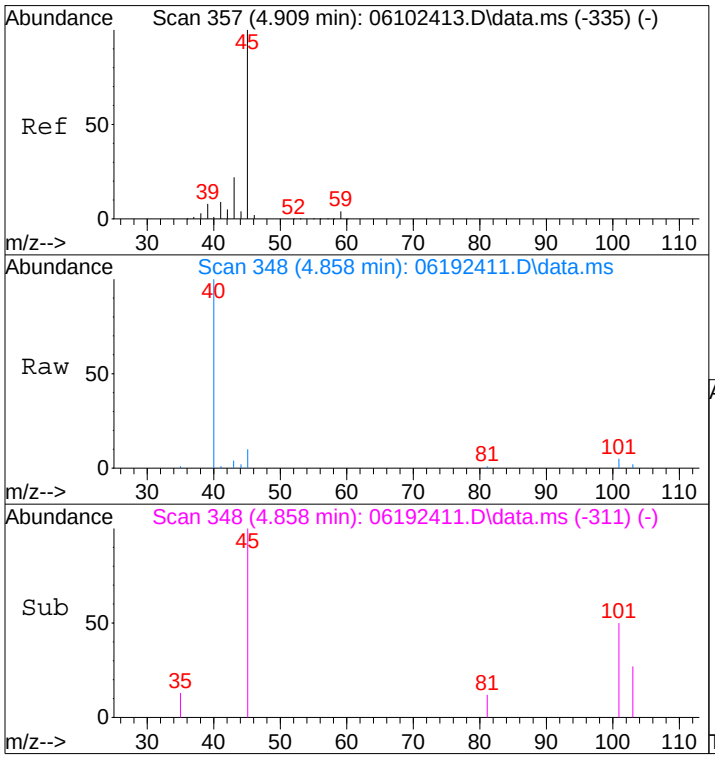


#14
Trichlorofluoromethane
Concen: 90.56 ng
RT: 4.76 min Scan# 330
Delta R.T. 0.035 min
Lab File: 06192411.D
Acq: 19 Jun 2024 14:14

Tgt Ion:101 Resp: 3140793

Ion	Ratio	Lower	Upper
101	100		
103	64.7	44.9	84.9

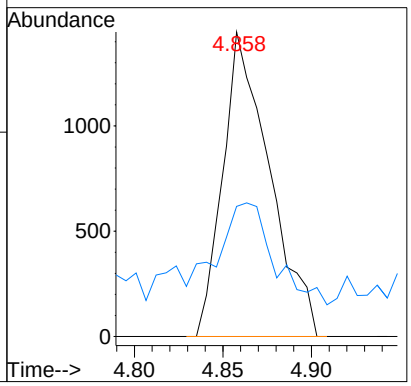


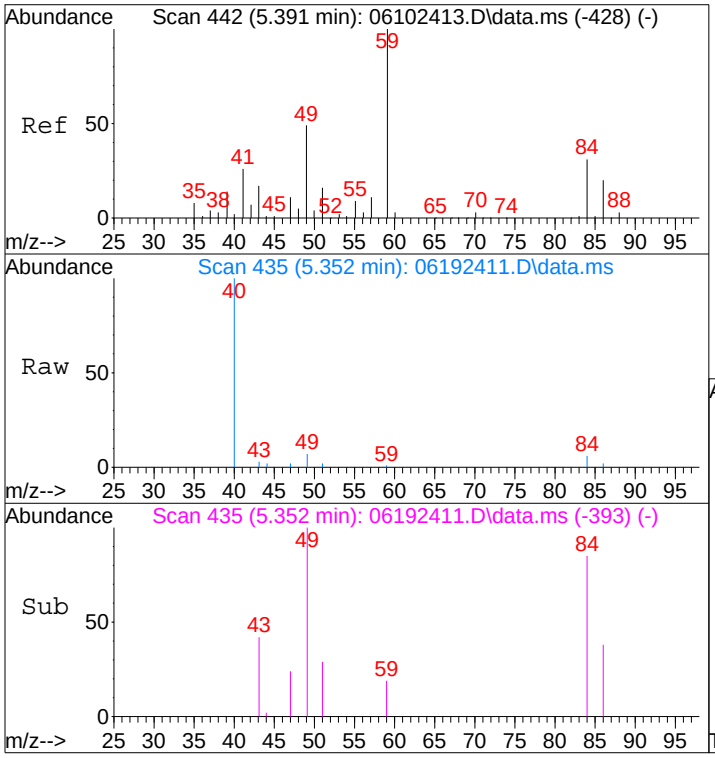


#15
2-Propanol (Isopropanol)
Concen: 0.06 ng
RT: 4.86 min Scan# 348
Delta R.T. -0.043 min
Lab File: 06192411.D
Acq: 19 Jun 2024 14:14

Tgt Ion: 45 Resp: 2654

Ion	Ratio	Lower	Upper
45	100		
43	0.0	2.5	42.5#

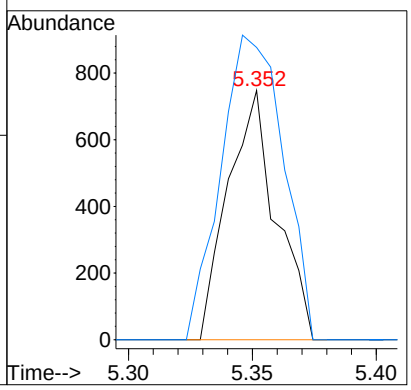


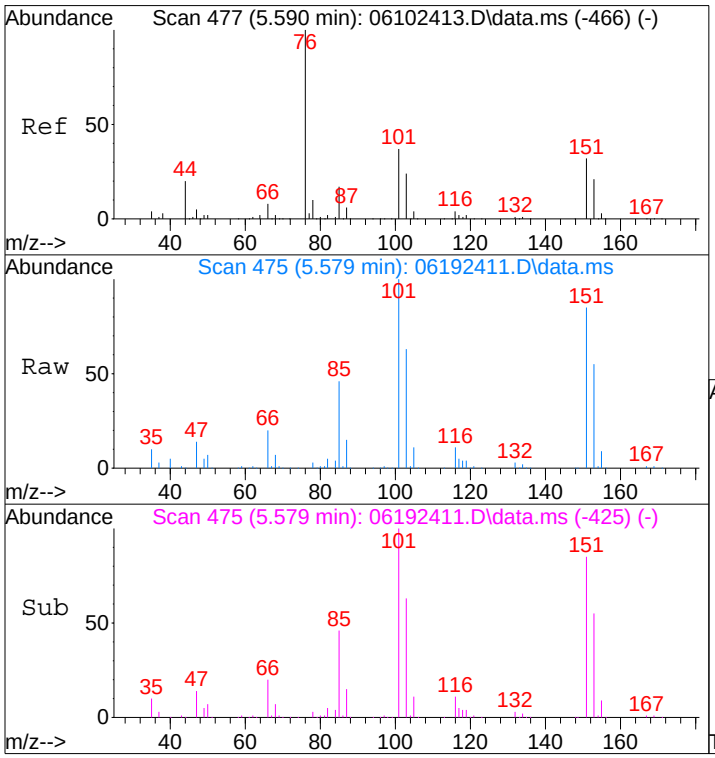


#19
Methylene Chloride
Concen: 0.06 ng
RT: 5.35 min Scan# 435
Delta R.T. -0.009 min
Lab File: 06192411.D
Acq: 19 Jun 2024 14:14

Tgt Ion: 84 Resp: 1013

Ion	Ratio	Lower	Upper
84	100		
49	158.3	132.9	182.9

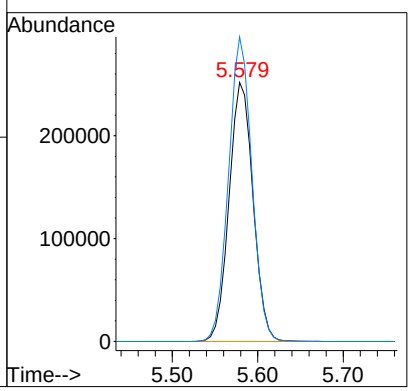


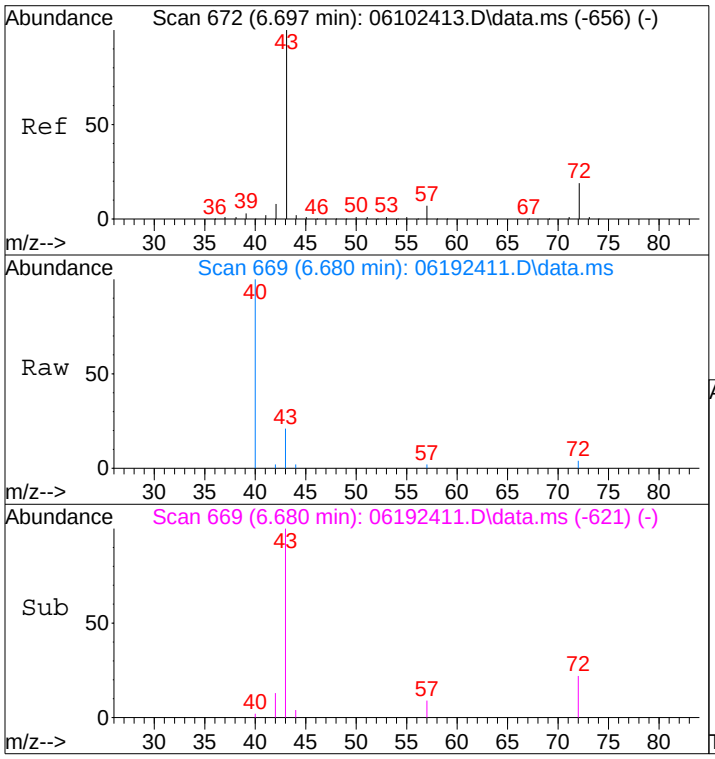


#21
Trichlorotrifluoroethane
Concen: 33.51 ng
RT: 5.58 min Scan# 475
Delta R.T. 0.033 min
Lab File: 06192411.D
Acq: 19 Jun 2024 14:14

Tgt Ion:151 Resp: 491577

Ion	Ratio	Lower	Upper
151	100		
101	114.7	95.0	135.0

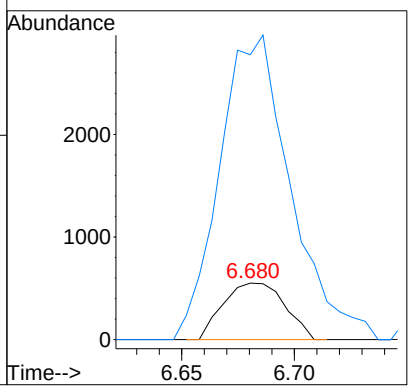


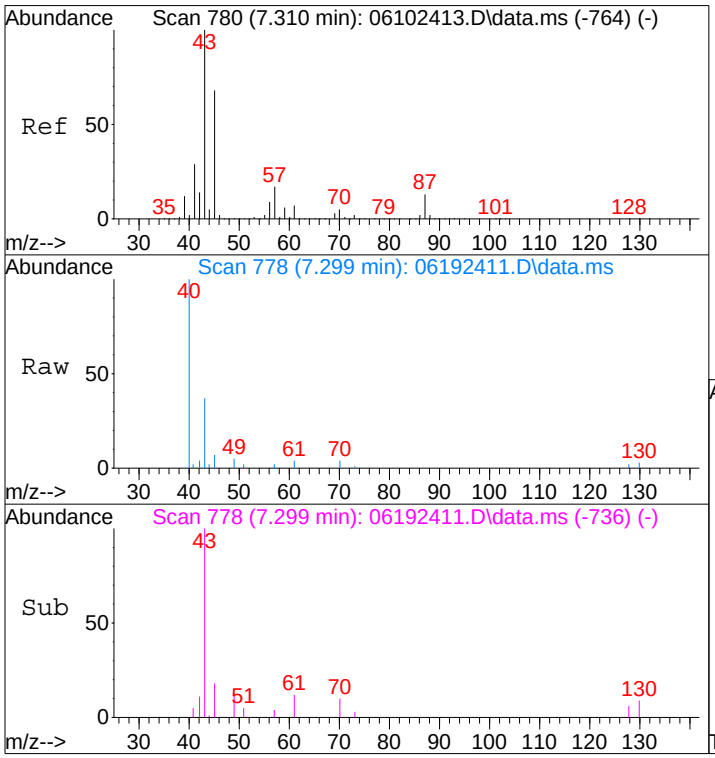


#27
2-Butanone (MEK)
Concen: 0.12 ng
RT: 6.68 min Scan# 669
Delta R.T. 0.022 min
Lab File: 06192411.D
Acq: 19 Jun 2024 14:14

Tgt Ion: 72 Resp: 1053

Ion	Ratio	Lower	Upper
72	100		
43	617.8	506.8	546.8#

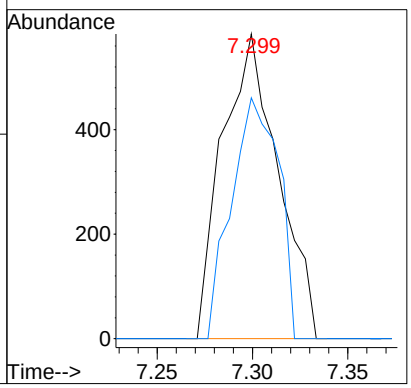


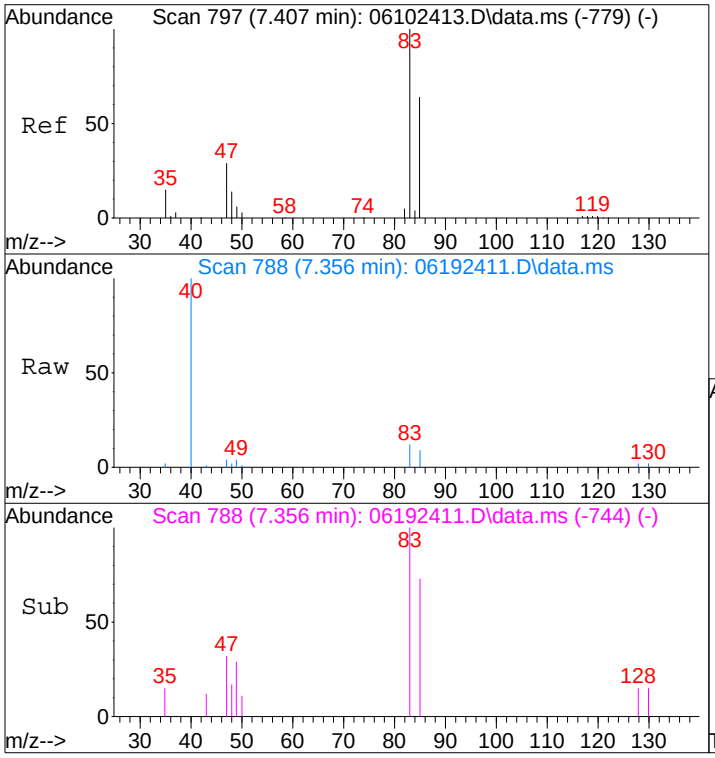


#30
Ethyl Acetate
Concen: 0.22 ng
RT: 7.30 min Scan# 778
Delta R.T. 0.040 min
Lab File: 06192411.D
Acq: 19 Jun 2024 14:14

Tgt Ion: 61 Resp: 1185

Ion	Ratio	Lower	Upper
61	100		
70	67.1	53.5	93.5

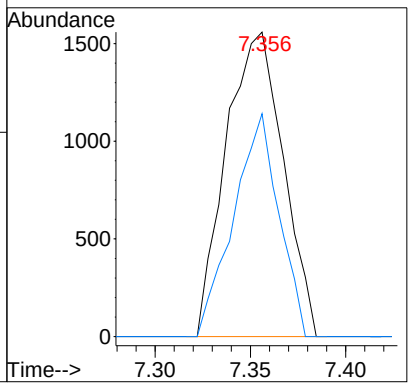


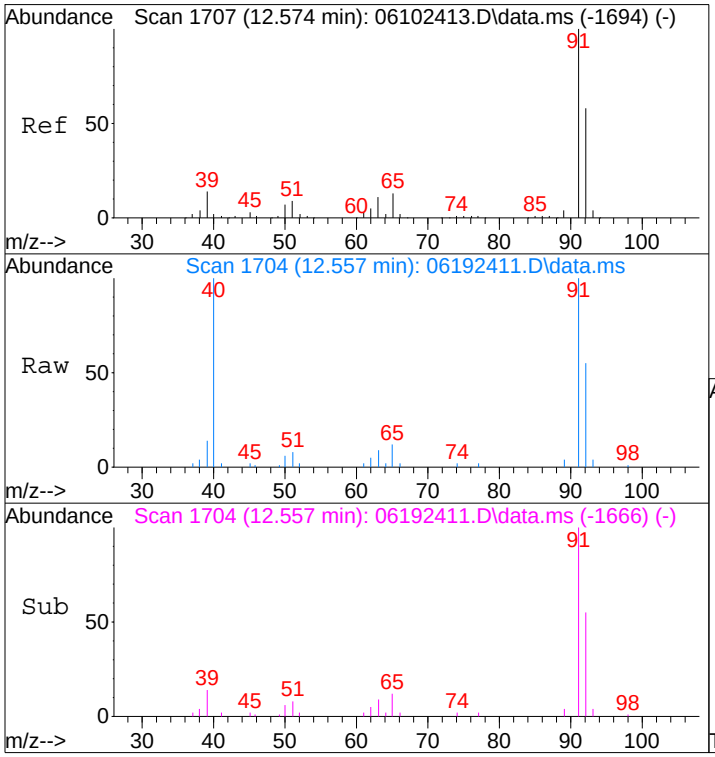


#32
Chloroform
Concen: 0.11 ng
RT: 7.36 min Scan# 788
Delta R.T. 0.001 min
Lab File: 06192411.D
Acq: 19 Jun 2024 14:14

Tgt Ion: 83 Resp: 3253

Ion	Ratio	Lower	Upper
83	100		
85	57.9	44.4	84.4

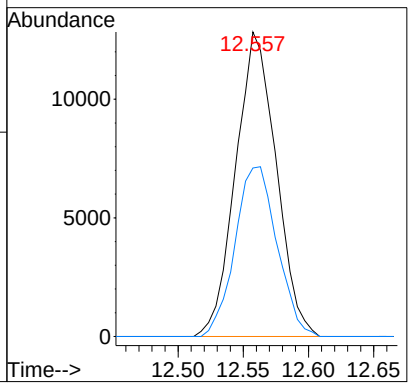


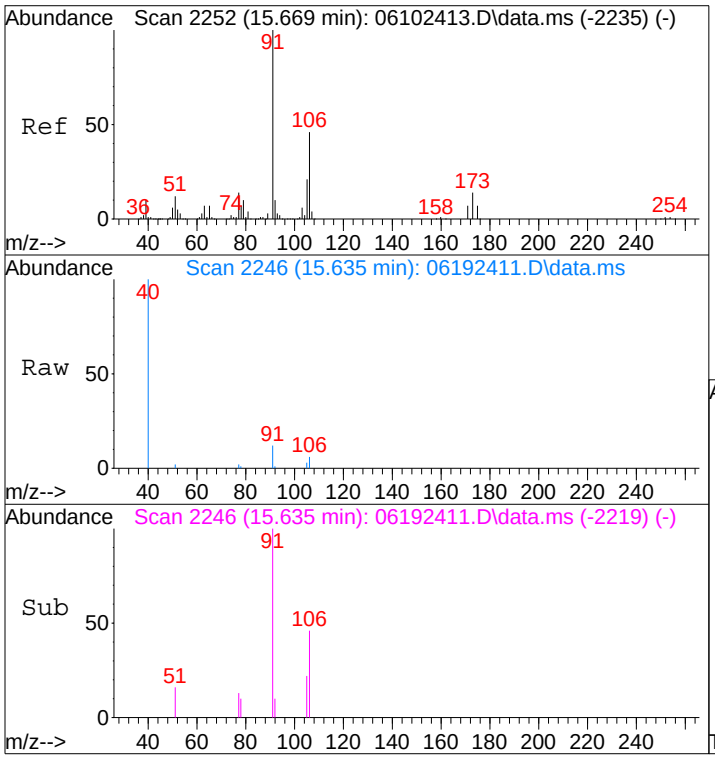


#58
Toluene
Concen: 0.48 ng
RT: 12.56 min Scan# 1704
Delta R.T. -0.034 min
Lab File: 06192411.D
Acq: 19 Jun 2024 14:14

Tgt Ion: 91 Resp: 27692

Ion	Ratio	Lower	Upper
91	100		
92	57.8	37.4	77.4

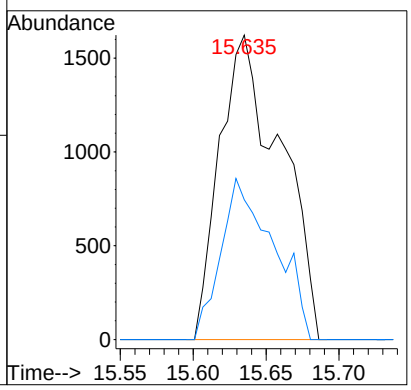




#67
m- & p-Xylenes
Concen: 0.09 ng
RT: 15.63 min Scan# 2246
Delta R.T. -0.045 min
Lab File: 06192411.D
Acq: 19 Jun 2024 14:14

Tgt Ion: 91 Resp: 4707

Ion	Ratio	Lower	Upper
91	100		
106	45.9	25.9	65.9



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192411.D Vial: 8
Acq On : 19 Jun 2024 14:14 Operator: SC
Sample : P2402249-029 (50mL) Inst : MS09
Misc : S37-06062402

MJ 6/29/24

Quant Time: Jun 29 08:57:45 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

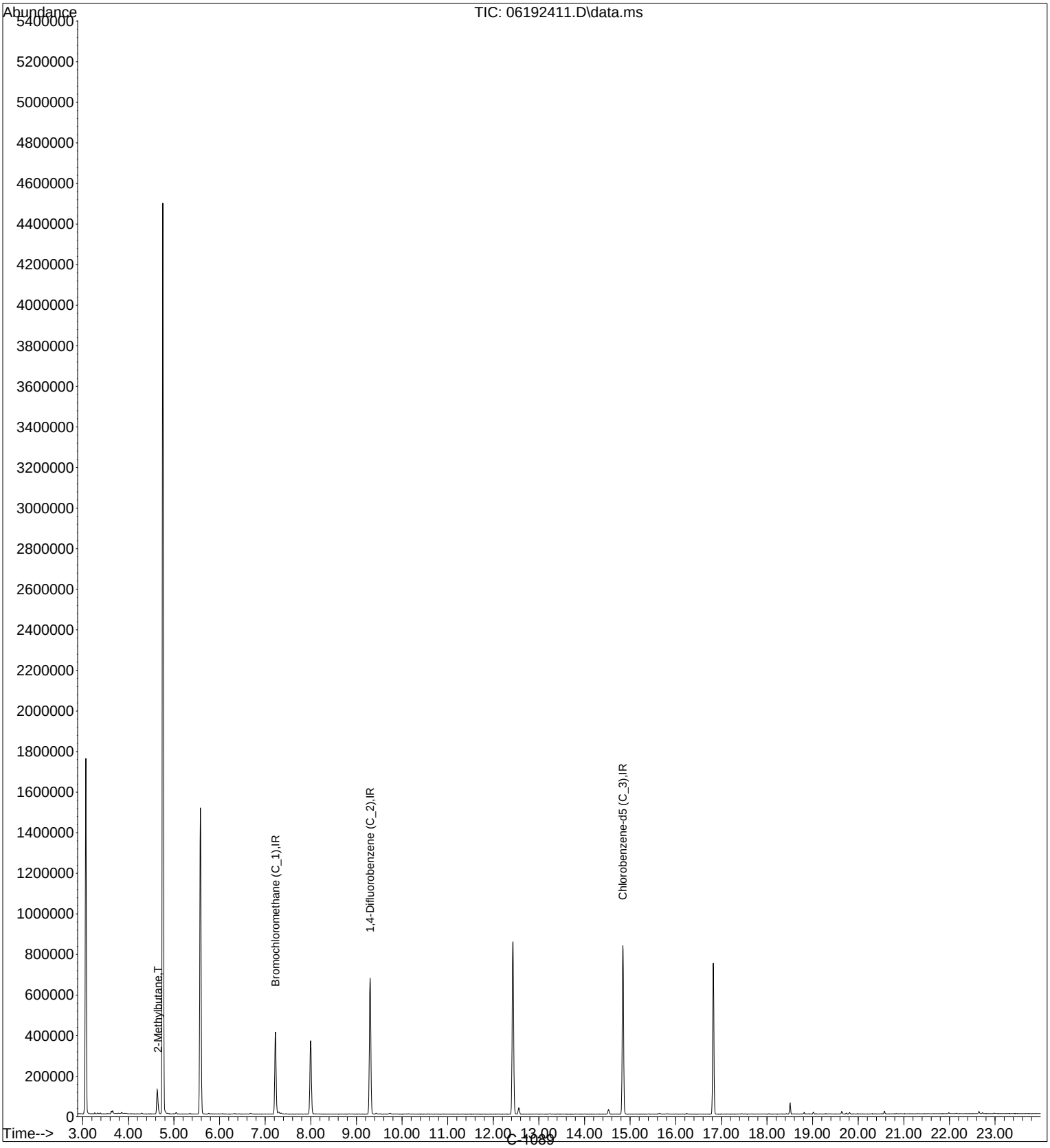
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	146849	12.500	ng		-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	629829	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	143914	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	0.00	85	0	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.20	83	190	N.D.			
4) 1,1-Difluoroethane	3.26	65	1227	N.D.			
5) Chlorodifluoromethane ...	0.00	67	0	N.D.			
6) 1-Chloro-1,1-Difluoroe...	0.00	65	0	N.D.			
7) Dichlorofluoromethane ...	0.00	67	0	N.D.			
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	0.00	83	0	N.D.			
10) 2-Methylbutane	4.65	57	4270	0.244	ng	#	7
11) Methyl Acetate	5.35	43	1092	N.D.			
12) 2-Methylpentane	0.00	71	0	N.D.			
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	0.00	84	0	N.D.			
17) 2,3-Dimethylpentane	9.51	56	650	N.D.			
18) Dibromomethane	9.79	174	117	N.D.			
20) Methyl Cyclohexane	11.42	55	65	N.D.			
21) 1,3-Dichloropropane	0.00	76	0	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	0.00	75	0	N.D.			
25) Bromobenzene	0.00	77	0	N.D.			
26) 2-Chlorotoluene	17.61	91	620	N.D.			
27) 4-Chlorotoluene	17.68	91	992	N.D.			
28) Indane	19.02	117	819	N.D.			
29) Indene	0.00	115	0	N.D.			
30) 1,2,4,5-Tetramethylben...	0.00	119	0	N.D.			
31) 1,2,3,4-Tetramethylben...	0.00	119	0	N.D.			
32) 1,2,3,5-Tetramethylben...	0.00	119	0	N.D.			
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192411.D Vial: 8
Acq On : 19 Jun 2024 14:14 Operator: SC
Sample : P2402249-029 (50mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 08:57:45 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\19\
Data File : 06192411.D
Acq On : 19 Jun 2024 14:14
Operator : SC
Sample : P2402249-029 (50mL)
Misc : S37-06062402
ALS Vial : 8 Sample Multiplier: 1

MJ 6/28/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06192411.D\data.ms

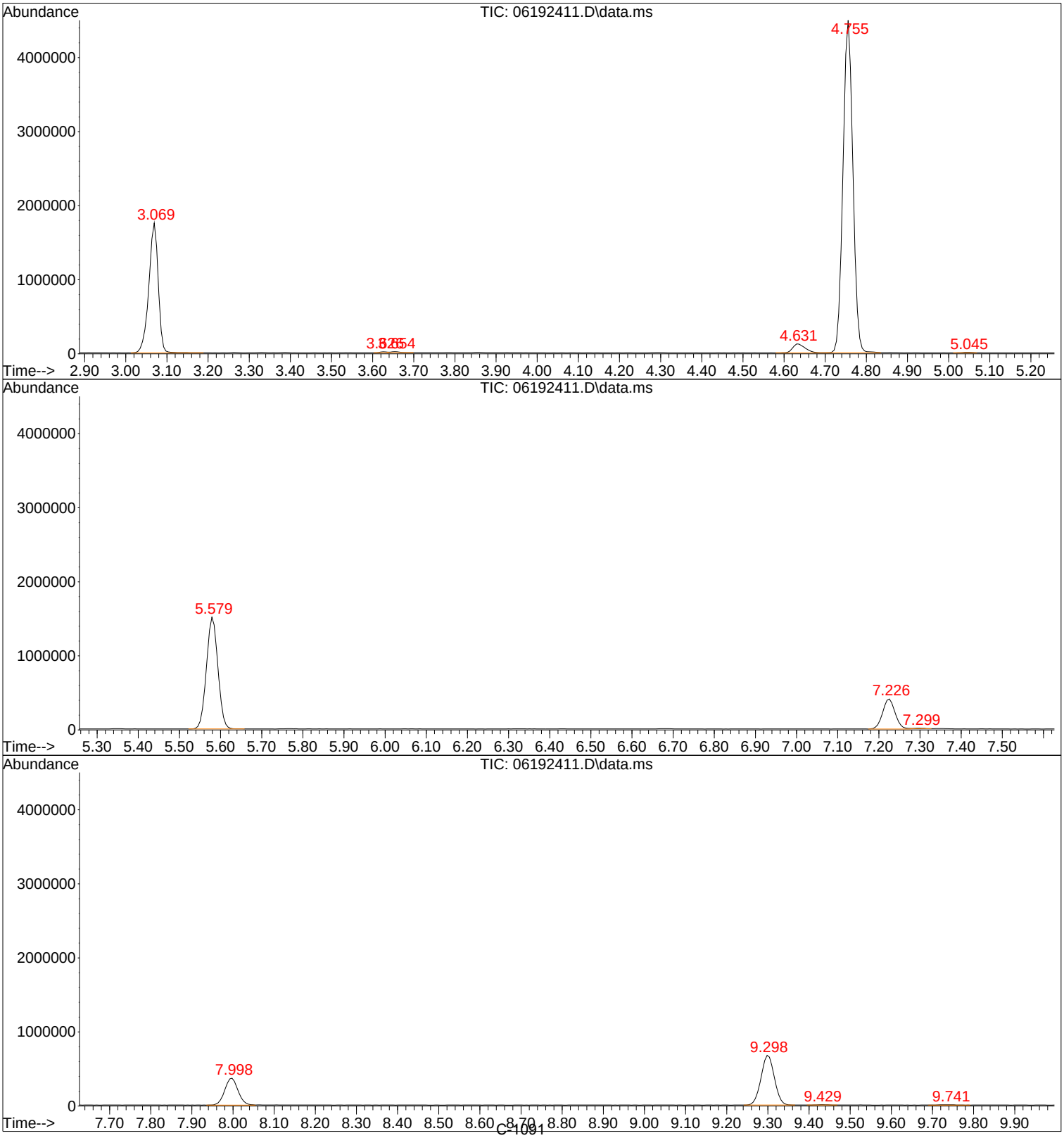
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.069	23	33	54	rBV	1752767	2774020	36.90%	16.589%
2	3.626	127	131	133	rBV2	12762	15238	0.20%	0.091%
3	3.654	133	136	144	rVB2	13723	20270	0.27%	0.121%
4	4.631	299	308	321	rBV	120377	252458	3.36%	1.510%
5	4.755	321	330	344	rBV	4488931	7518183	100.00%	44.959%
6	5.045	375	381	385	rBV2	6436	10661	0.14%	0.064%
7	5.579	465	475	489	rBV	1508925	2913858	38.76%	17.425%
8	7.226	756	765	774	rBV	404954	853332	11.35%	5.103%
9	7.299	774	778	783	rVB2	6561	14256	0.19%	0.085%
10	7.998	890	901	911	rBV	362542	814331	10.83%	4.870%
11	9.298	1120	1130	1142	rVB	670496	1512172	20.11%	9.043%
12	9.429	1147	1153	1160	rBV3	5013	10252	0.14%	0.061%
13	9.741	1199	1208	1217	rVB5	4717	13429	0.18%	0.080%

Sum of corrected areas: 16722460

Data Path : I:\MS09\DATA\2024 06\19\
Data File : 06192411.D
Acq On : 19 Jun 2024 14:14
Operator : SC
Sample : P2402249-029 (50mL)
Misc : S37-06062402
ALS Vial : 8 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\19\\
Data File : 06192411.D
Acq On : 19 Jun 2024 14:144
Operator : SCC
Sample : P2402249-029 (50mL))
Misc : S37-060624022
ALS Vial : 8 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192417.D Vial: 5
Acq On : 19 Jun 2024 17:54 Operator: SC
Sample : P2402249-030 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 15:13:36 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	166175	12.500	ng	0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	743065	12.500	ng	0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	173085	12.500	ng	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4(...	8.00	65	368091	12.463	ng	0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.68%			
57) Toluene-d8 (SS2)	12.43	98	846875	12.786	ng	-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.32%			
73) Bromofluorobenzene (SS3)	16.83	174	287146	12.006	ng	-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.08%			
Target Compounds						Qvalue
2) Propene	0.00	42	0	N.D. d		
3) Dichlorodifluoromethan...	3.38	85	20941m	0.535	ng	
4) Chloromethane	3.51	50	1216	N.D.		
5) 1,2-Dichloro-1,1,2,2-t...	3.61	135	410	N.D.		
6) Vinyl Chloride	0.00	62	0	N.D.		
7) 1,3-Butadiene	0.00	54	0	N.D.		
8) Bromomethane	4.02	94	143	N.D.		
9) Chloroethane	0.00	64	0	N.D.		
10) Ethanol	4.29	45	3150	0.195	ng	92
11) Acetonitrile	4.44	41	1834	N.D.		
12) Acrolein	4.53	56	187	N.D.		
13) Acetone	4.62	58	81403	6.306	ng	99
14) Trichlorofluoromethane	4.75	101	482515	12.197	ng	99
15) 2-Propanol (Isopropanol)	0.00	45	0	N.D. d		
16) Acrylonitrile	5.05	53	53	N.D.		
17) 1,1-Dichloroethene	0.00	96	0	N.D.		
18) 2-Methyl-2-Propanol (t...	5.33	59	610	N.D.		
19) Methylene Chloride	5.35	84	1207	0.066	ng	95
20) 3-Chloro-1-propene (Al...	5.45	41	472	N.D.		
21) Trichlorotrifluoroethane	5.58	151	397036	23.724	ng	96
22) Carbon Disulfide	5.60	76	212541	3.609	ng	84
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.		
24) 1,1-Dichloroethane	6.31	63	121	N.D.		
25) Methyl tert-Butyl Ether	6.31	73	708	N.D.		
26) Vinyl Acetate	0.00	86	0	N.D. d		
27) 2-Butanone (MEK)	6.67	72	9963	0.975	ng	98
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.		
29) Diisopropyl Ether	0.00	87	0	N.D.		
30) Ethyl Acetate	7.29	61	164	N.D.		
31) n-Hexane	0.00	57	0	N.D. d		
32) Chloroform	7.35	83	2095	0.064	ng	92
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	8.11	62	203	N.D.		
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.		
39) Isopropyl Acetate	9.61	61	5887	No Calib	#	
40) 1-Butanol	8.80	56	154	No Calib	#	
41) Benzene	8.89	78	4507	0.066	ng	98
42) Carbon Tetrachloride	9.07	117	1714	0.054	ng	100
43) Cyclohexane	9.22	84	489	N.D.		
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	9.86	63	434	N.D.		
46) Bromodichloromethane	10.08	83	620	N.D.		
47) Trichloroethene	10.14	130	470	N.D.		
48) 1,4-Dioxane	10.13	88	192	N.D.		
49) 2,2,4-Trimethylpentane...	10.23	57	191	N.D.		
50) Methyl Methacrylate	0.00	100	0	N.D.		

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192417.D Vial: 5
Acq On : 19 Jun 2024 17:54 Operator: SC
Sample : P2402249-030 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:13:36 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

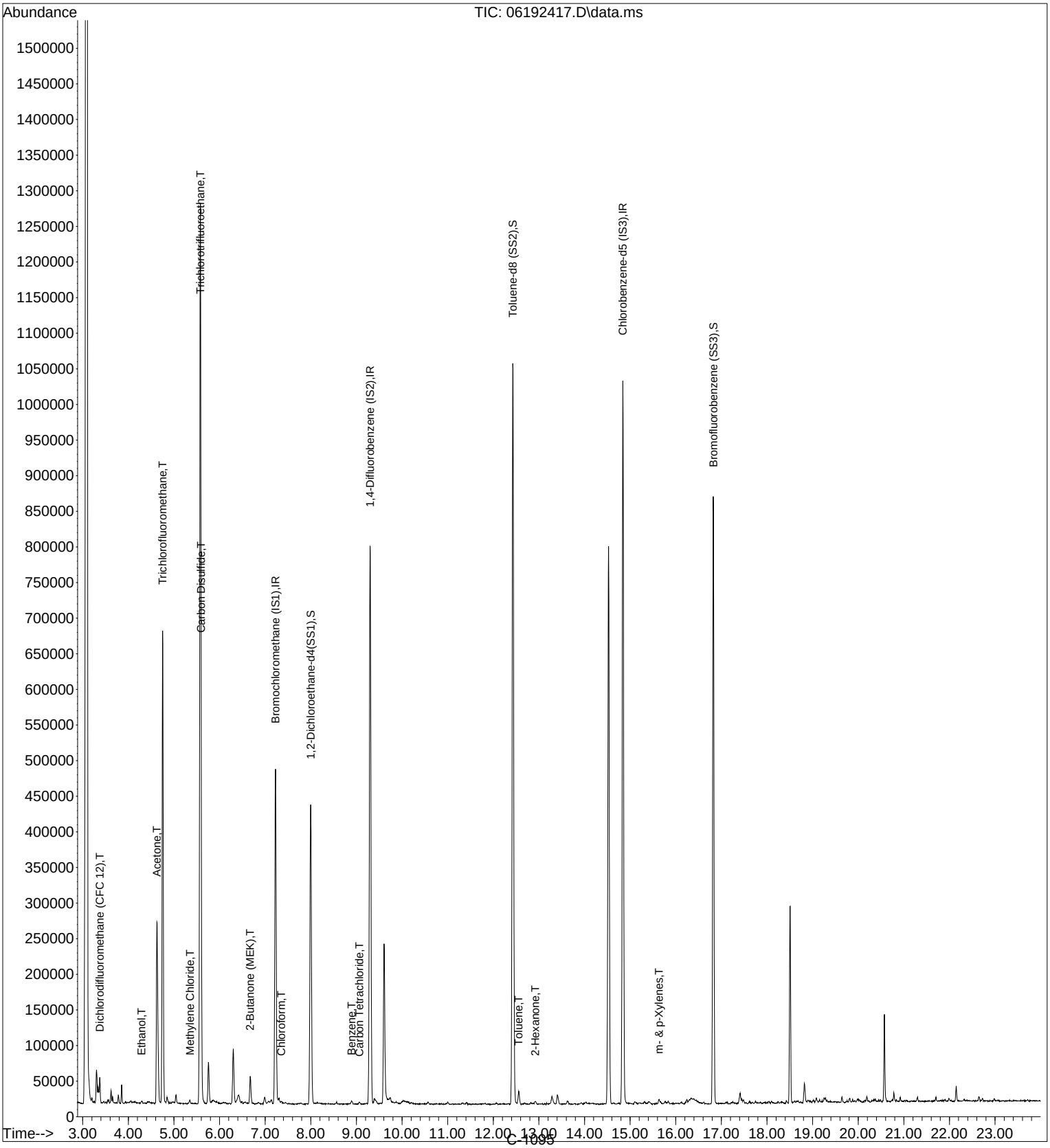
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	10.58	71	474	N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	11.33	58	458	N.D.	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
58) Toluene	12.56	91	15485	0.224 ng	98
59) 2-Hexanone	12.92	43	4824	0.111 ng	91
60) Dibromochloromethane	13.07	129	459	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	13.78	43	519	N.D.	
63) n-Octane	13.93	57	434	N.D.	
64) Tetrachloroethene	14.04	166	548	N.D.	
65) Chlorobenzene	14.90	112	776	N.D.	
66) Ethylbenzene	15.41	91	2219	N.D.	
67) m- & p-Xylenes	15.64	91	5834	0.088 ng	95
68) Bromoform	15.67	173	750	N.D.	
69) Styrene	16.10	104	234	N.D.	
70) o-Xylene	16.24	91	2202	N.D.	
71) n-Nonane	16.61	43	1038	N.D.	
72) 1,1,2,2-Tetrachloroethane	16.21	83	565	N.D.	
74) Cumene	17.03	105	1103	N.D.	
75) alpha-Pinene	0.00	93	0	N.D.	
76) n-Propylbenzene	17.67	91	1745	N.D.	
77) 3-Ethyltoluene	17.03	105	1103	No Calib	#
78) 4-Ethyltoluene	17.86	105	1027	N.D.	
79) 1,3,5-Trimethylbenzene	17.96	105	736	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.03	105	1103	No Calib	#
82) 1,2,4-Trimethylbenzene	18.43	105	1250	N.D.	
83) n-Decane	0.00	58	0	N.D.	
84) Benzyl Chloride	0.00	91	0	N.D.	
85) 1,3-Dichlorobenzene	18.57	146	710	N.D.	
86) 1,4-Dichlorobenzene	18.66	146	619	N.D.	
87) sec-Butylbenzene	18.74	105	1099	N.D.	
88) 4-Isopropyltoluene (p-...	18.93	119	1495	N.D.	
89) 1,2,3-Trimethylbenzene	17.03	105	1103	No Calib	#
90) 1,2-Dichlorobenzene	19.04	146	725	N.D.	
91) d-Limonene	19.09	68	175	N.D.	
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	814	N.D.	
95) Naphthalene	20.94	128	925	N.D.	
96) n-Dodecane	18.89	58	646	No Calib	#
97) Hexachlorobutadiene	21.30	225	787	N.D.	
98) Cyclohexanone	15.52	55	288	No Calib	#
99) tert-Butylbenzene	18.43	119	1005	N.D.	
100) n-Butylbenzene	19.39	91	1040	N.D.	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192417.D Vial: 5
Acq On : 19 Jun 2024 17:54 Operator: SC
Sample : P2402249-030 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:13:36 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192417.D Vial: 5
Acq On : 19 Jun 2024 17:54 Operator: SC
Sample : P2402249-030 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 15:13:36 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

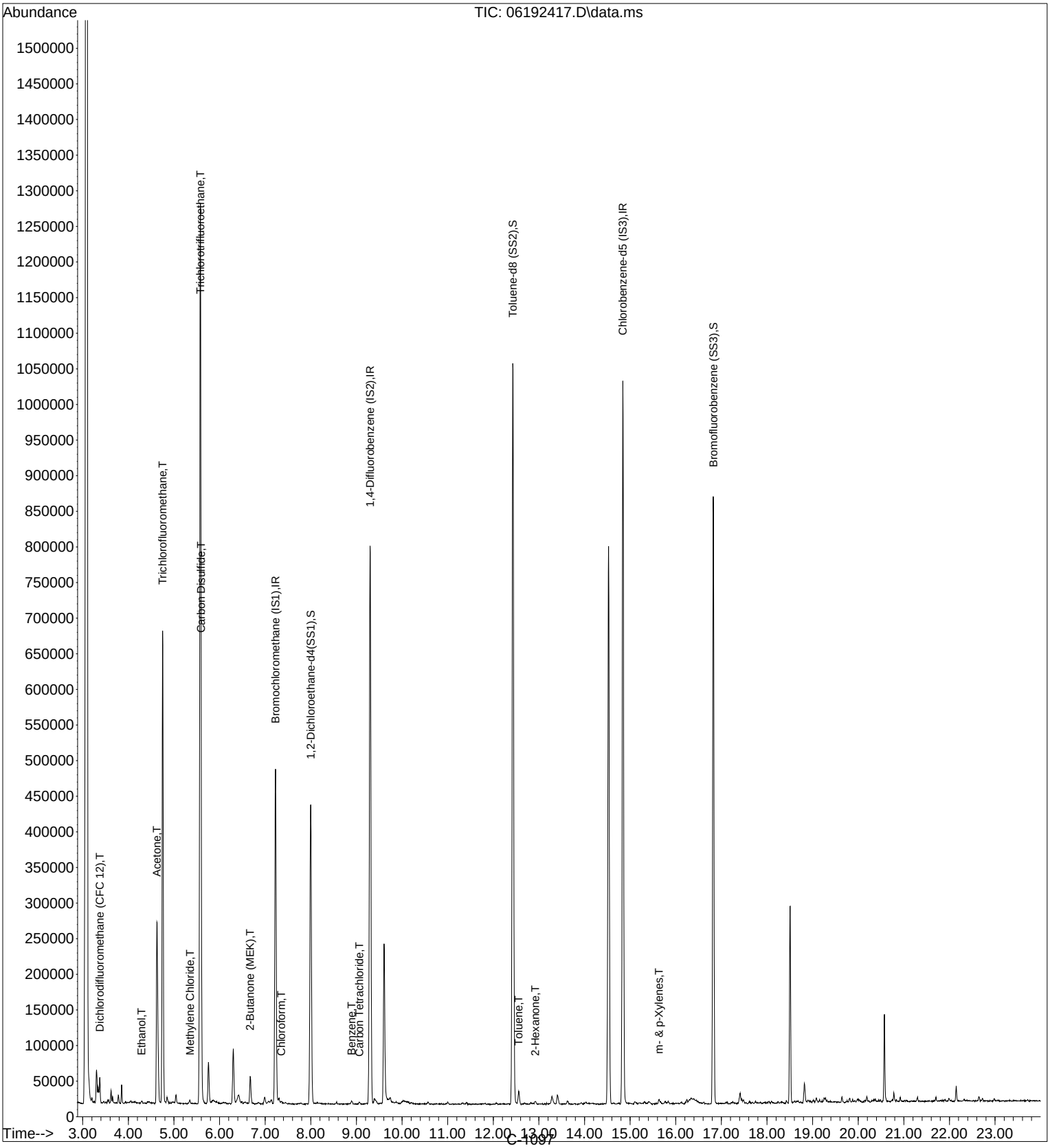
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	166175	12.500	ng	0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	743065	12.500	ng	0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	173085	12.500	ng	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4(...	8.00	65	368091	12.463	ng	0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.68%			
57) Toluene-d8 (SS2)	12.43	98	846875	12.786	ng	-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.32%			
73) Bromofluorobenzene (SS3)	16.83	174	287146	12.006	ng	-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.08%			
Target Compounds						Qvalue
3) Dichlorodifluoromethan...	3.38	85	20941m	0.535	ng	
10) Ethanol	4.29	45	3150	0.195	ng	92
13) Acetone	4.62	58	81403	6.306	ng	99
14) Trichlorofluoromethane	4.75	101	482515	12.197	ng	99
19) Methylene Chloride	5.35	84	1207	0.066	ng	95
21) Trichlorotrifluoroethane	5.58	151	397036	23.724	ng	96
22) Carbon Disulfide	5.60	76	212541	3.609	ng	84
27) 2-Butanone (MEK)	6.67	72	9963	0.975	ng	98
32) Chloroform	7.35	83	2095	0.064	ng	92
41) Benzene	8.89	78	4507	0.066	ng	98
42) Carbon Tetrachloride	9.07	117	1714	0.054	ng	100
58) Toluene	12.56	91	15485	0.224	ng	98
59) 2-Hexanone	12.92	43	4824	0.111	ng	91
67) m- & p-Xylenes	15.64	91	5834	0.088	ng	95

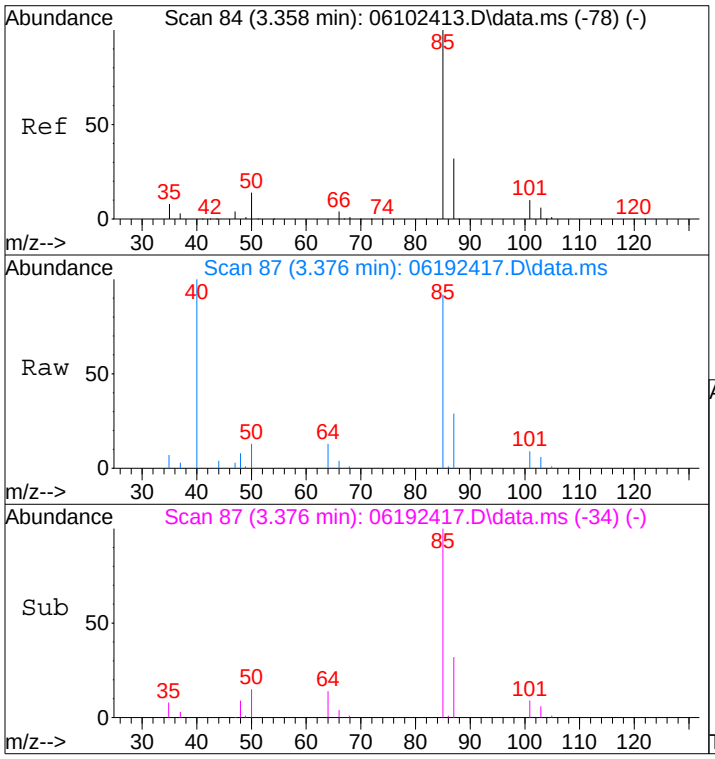
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192417.D Vial: 5
Acq On : 19 Jun 2024 17:54 Operator: SC
Sample : P2402249-030 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:13:36 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

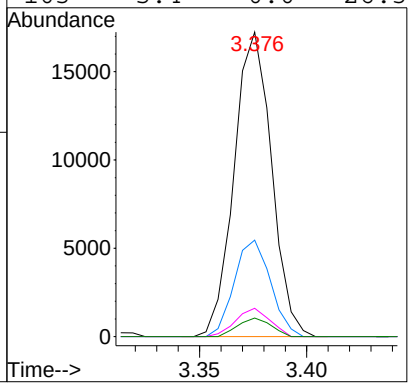


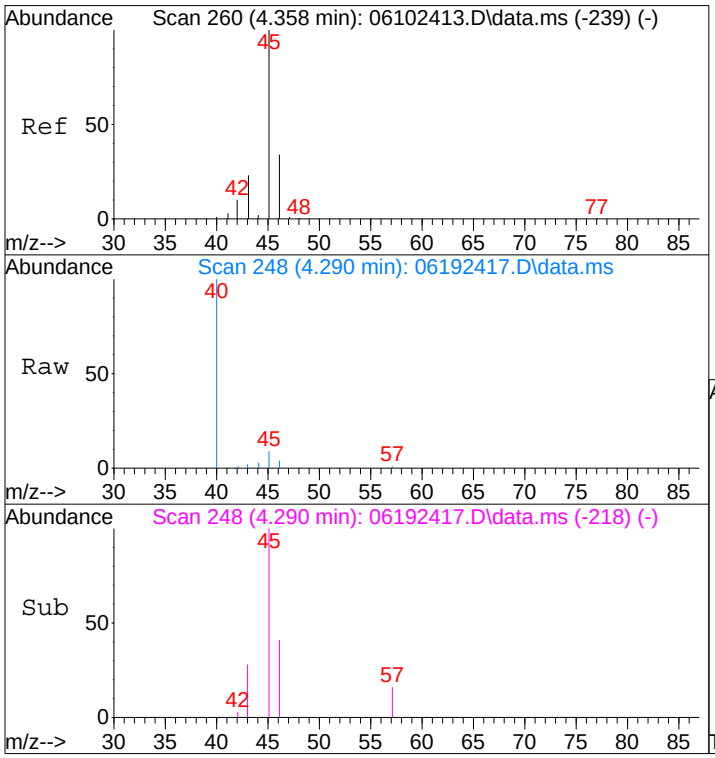


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.54 ng m
RT: 3.38 min Scan# 87
Delta R.T. 0.054 min
Lab File: 06192417.D
Acq: 19 Jun 2024 17:54

Tgt Ion: 85 Resp: 20941

Ion	Ratio	Lower	Upper
85	100		
87	30.7	12.2	52.2
101	8.5	0.0	29.8
103	5.4	0.0	26.3

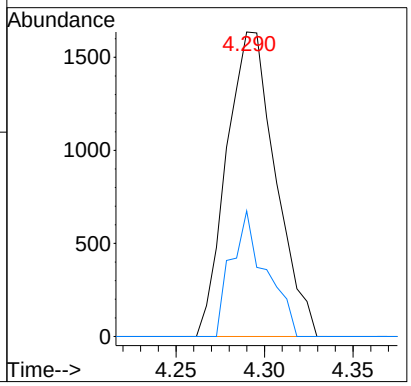


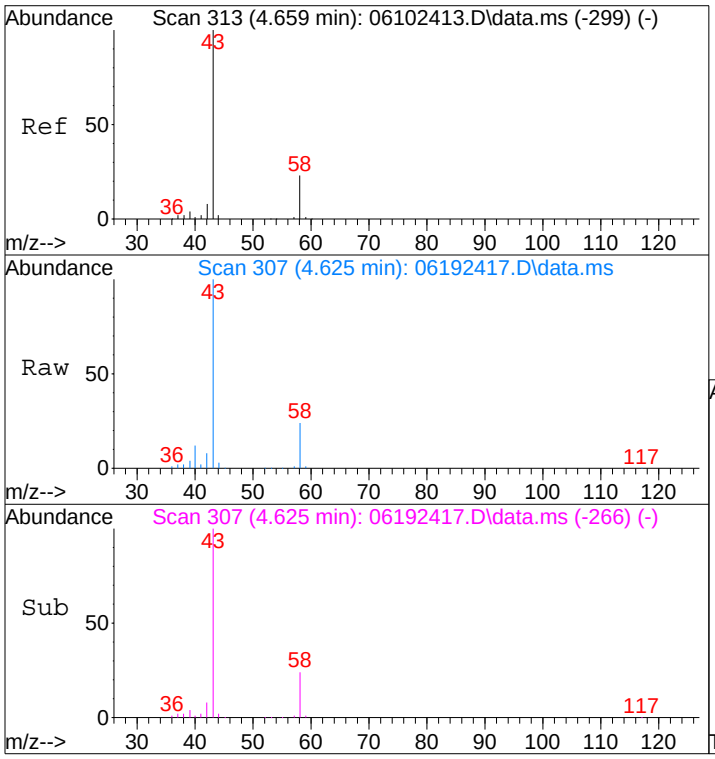


#10
Ethanol
Concen: 0.19 ng
RT: 4.29 min Scan# 248
Delta R.T. -0.077 min
Lab File: 06192417.D
Acq: 19 Jun 2024 17:54

Tgt Ion: 45 Resp: 3150

Ion	Ratio	Lower	Upper
45	100		
46	29.2	13.5	53.5

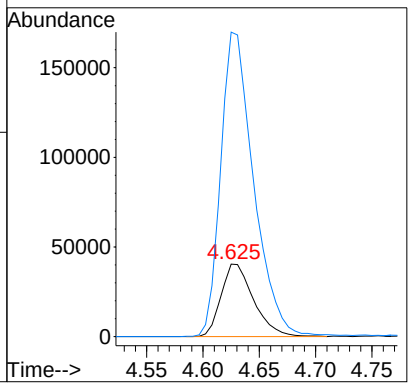


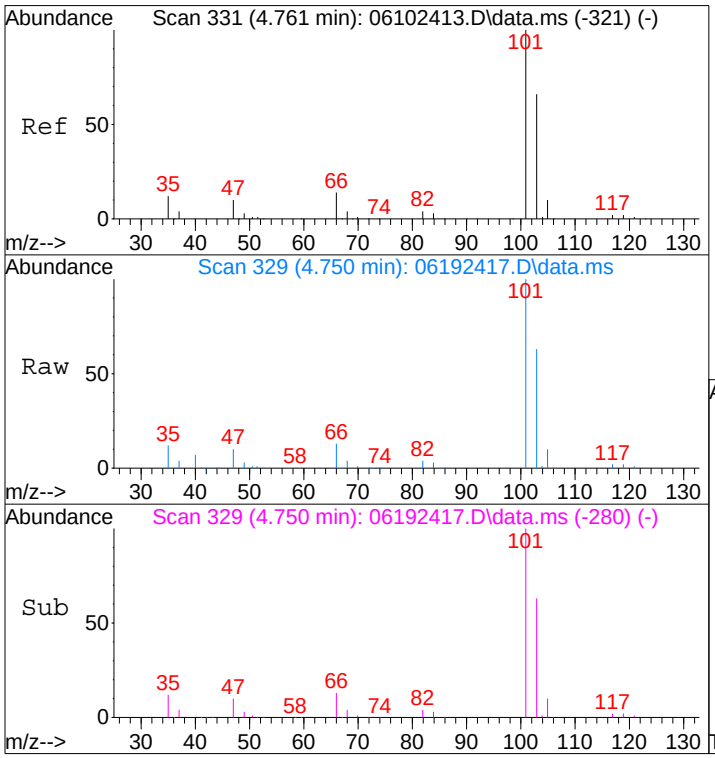


#13
Acetone
Concen: 6.31 ng
RT: 4.62 min Scan# 307
Delta R.T. -0.017 min
Lab File: 06192417.D
Acq: 19 Jun 2024 17:54

Tgt Ion: 58 Resp: 81403

Ion	Ratio	Lower	Upper
58	100		
43	427.7	400.7	460.7

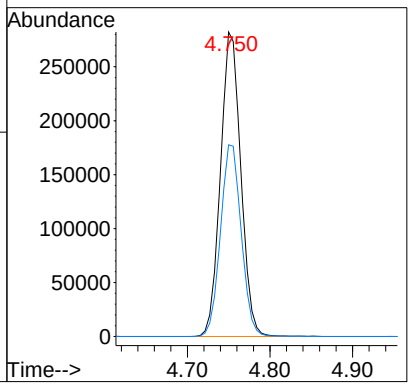


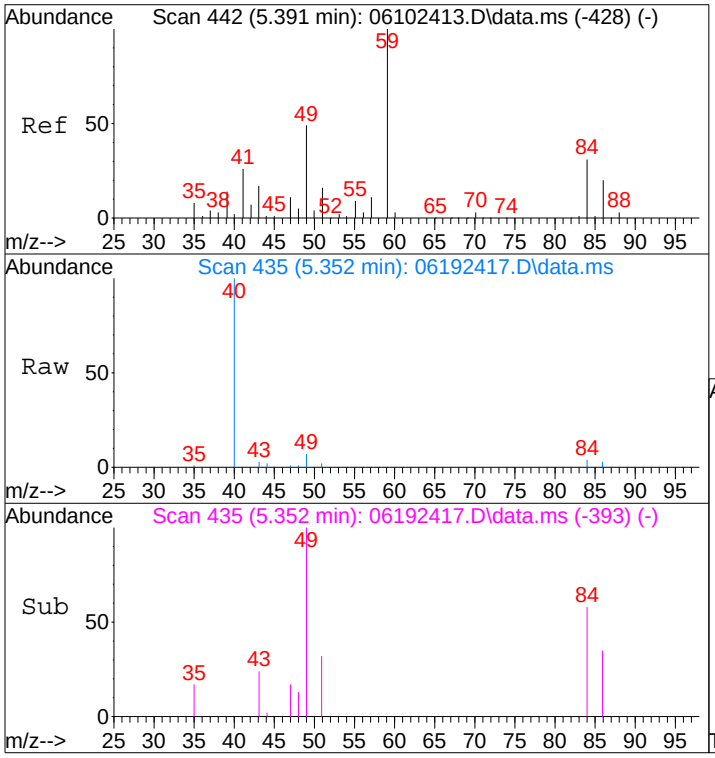


#14
Trichlorofluoromethane
Concen: 12.20 ng
RT: 4.75 min Scan# 329
Delta R.T. 0.029 min
Lab File: 06192417.D
Acq: 19 Jun 2024 17:54

Tgt Ion:101 Resp: 482515

Ion	Ratio	Lower	Upper
101	100		
103	64.1	44.9	84.9

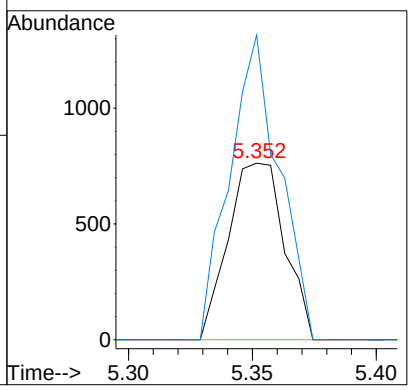


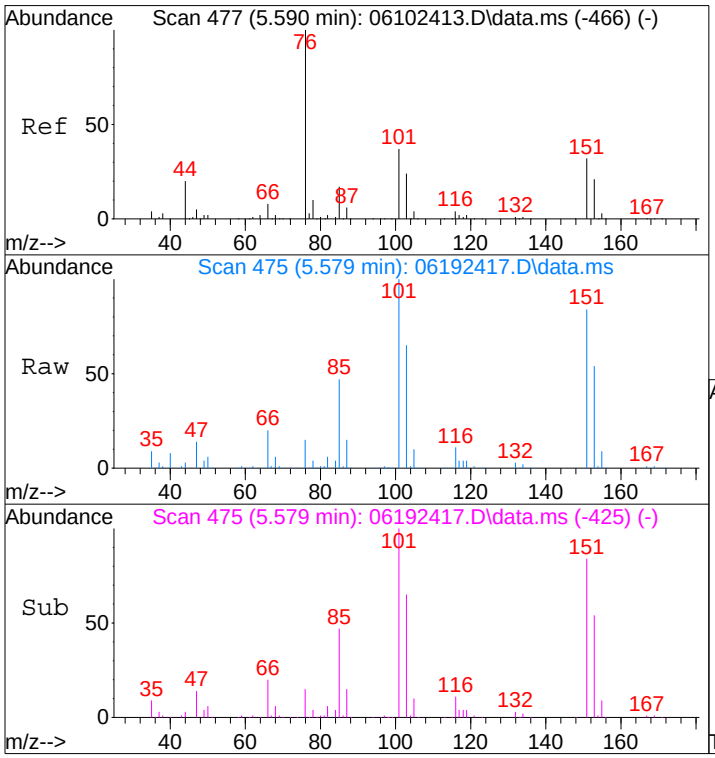


#19
Methylene Chloride
Concen: 0.07 ng
RT: 5.35 min Scan# 435
Delta R.T. -0.009 min
Lab File: 06192417.D
Acq: 19 Jun 2024 17:54

Tgt Ion: 84 Resp: 1207

Ion	Ratio	Lower	Upper
84	100		
49	150.9	132.9	182.9

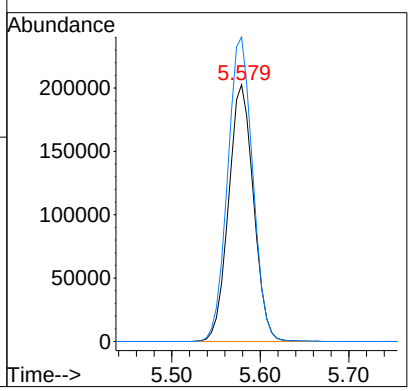


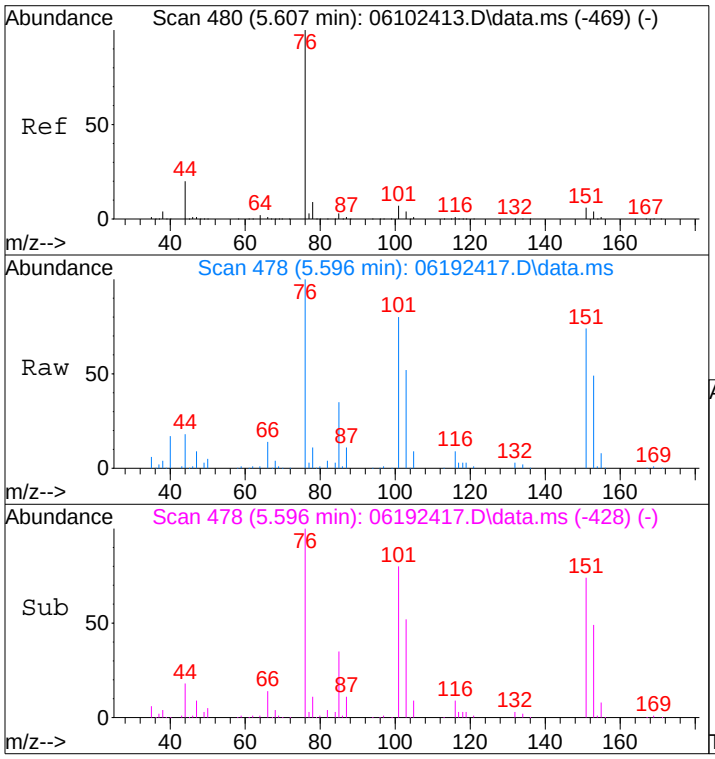


#21
Trichlorotrifluoroethane
Concen: 23.72 ng
RT: 5.58 min Scan# 475
Delta R.T. 0.033 min
Lab File: 06192417.D
Acq: 19 Jun 2024 17:54

Tgt Ion:151 Resp: 397036

Ion	Ratio	Lower	Upper
151	100		
101	119.2	95.0	135.0

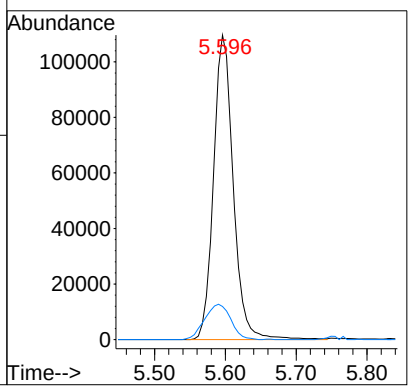


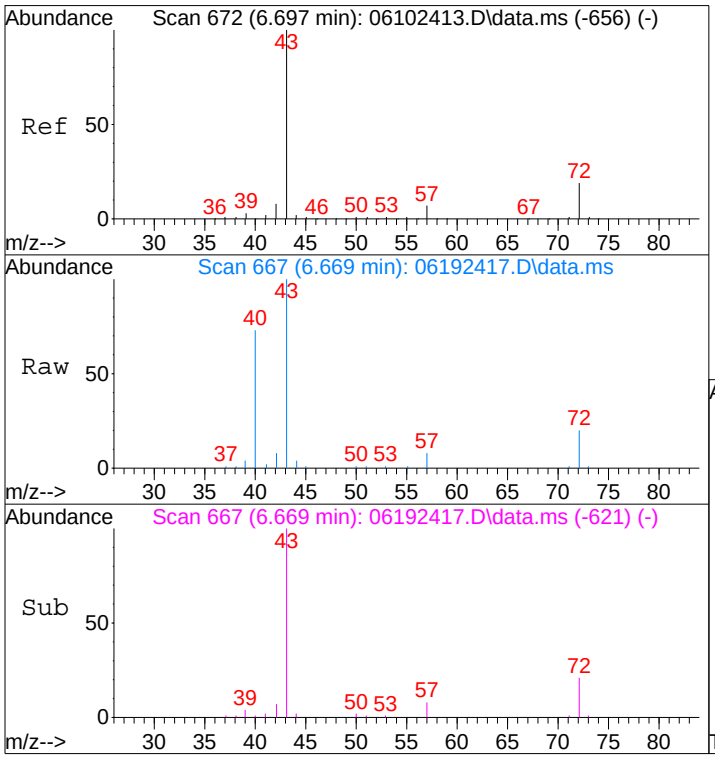


#22
Carbon Disulfide
Concen: 3.61 ng
RT: 5.60 min Scan# 478
Delta R.T. 0.033 min
Lab File: 06192417.D
Acq: 19 Jun 2024 17:54

Tgt Ion: 76 Resp: 212541

Ion	Ratio	Lower	Upper
76	100		
78	15.4	0.0	29.6

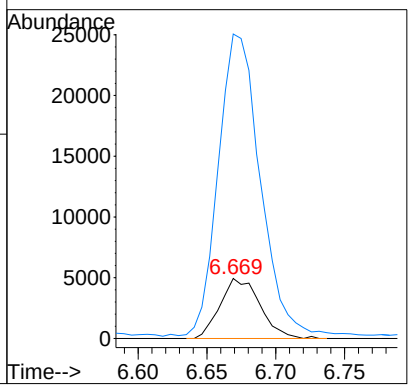


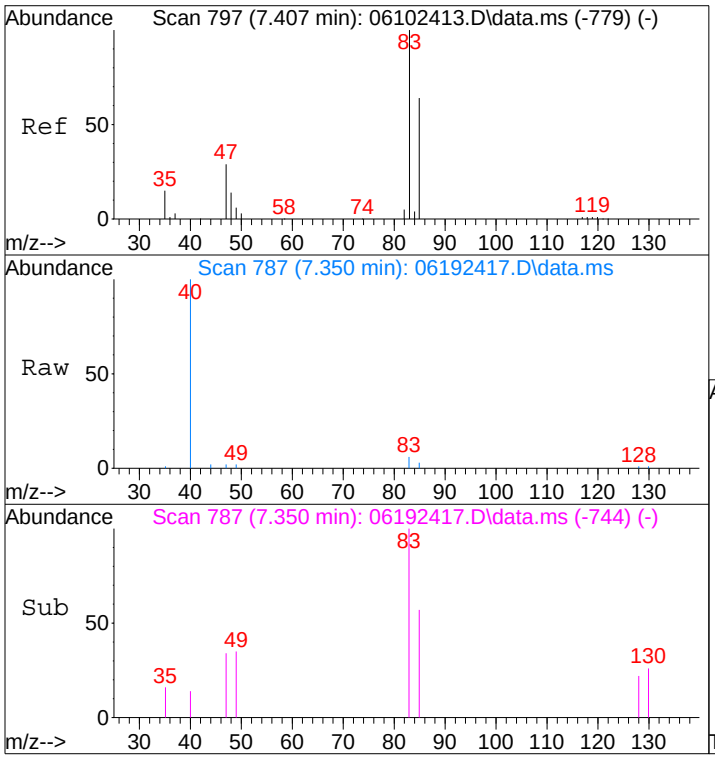


#27
2-Butanone (MEK)
Concen: 0.98 ng
RT: 6.67 min Scan# 667
Delta R.T. 0.011 min
Lab File: 06192417.D
Acq: 19 Jun 2024 17:54

Tgt Ion: 72 Resp: 9963

Ion	Ratio	Lower	Upper
72	100		
43	531.2	506.8	546.8

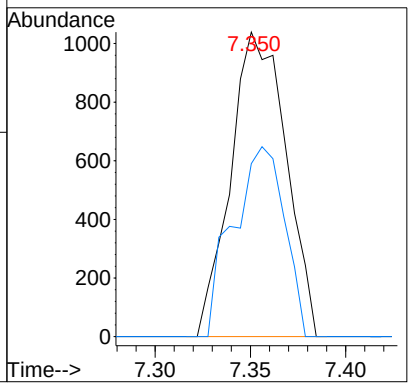


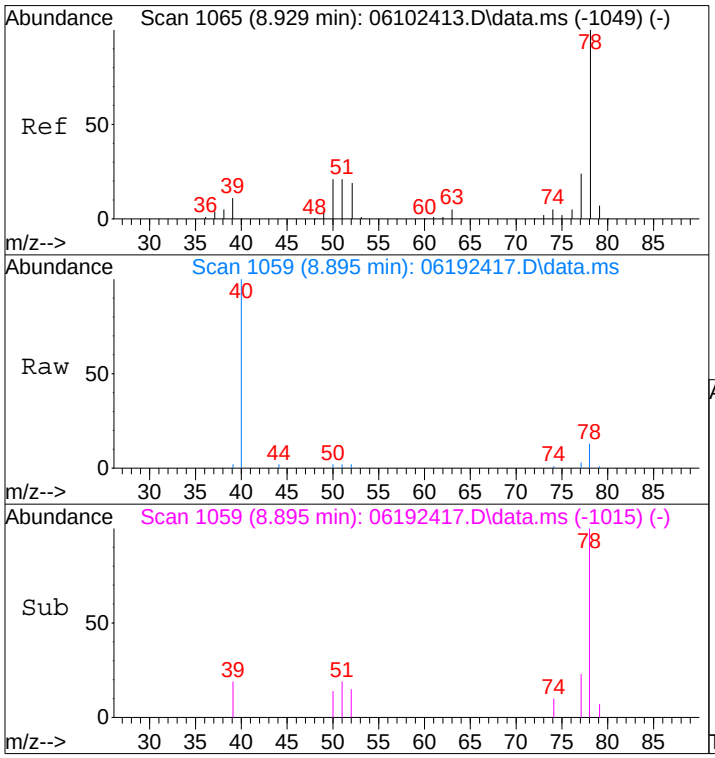


#32
Chloroform
Concen: 0.06 ng
RT: 7.35 min Scan# 787
Delta R.T. -0.004 min
Lab File: 06192417.D
Acq: 19 Jun 2024 17:54

Tgt Ion: 83 Resp: 2095

Ion	Ratio	Lower	Upper
83	100		
85	58.2	44.4	84.4

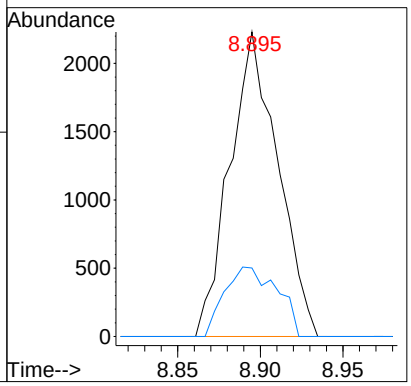


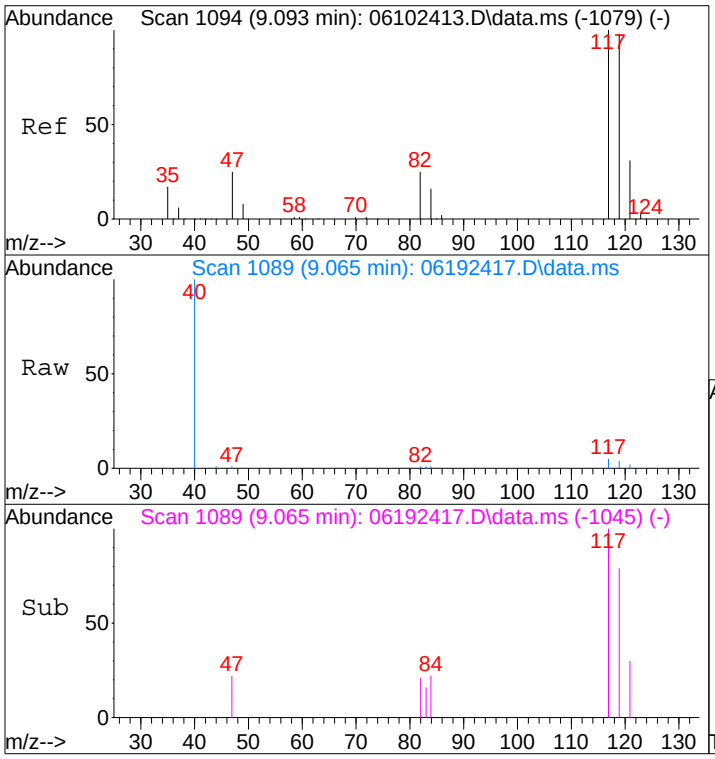


#41
Benzene
Concen: 0.07 ng
RT: 8.89 min Scan# 1059
Delta R.T. -0.002 min
Lab File: 06192417.D
Acq: 19 Jun 2024 17:54

Tgt Ion: 78 Resp: 4507

Ion	Ratio	Lower	Upper
78	100		
77	25.0	4.0	44.0

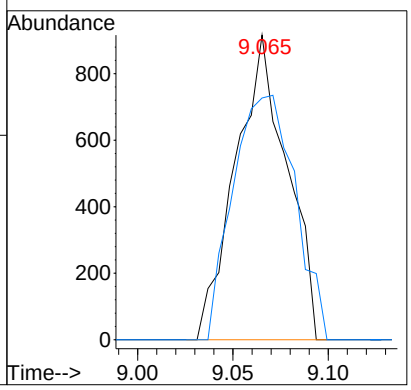


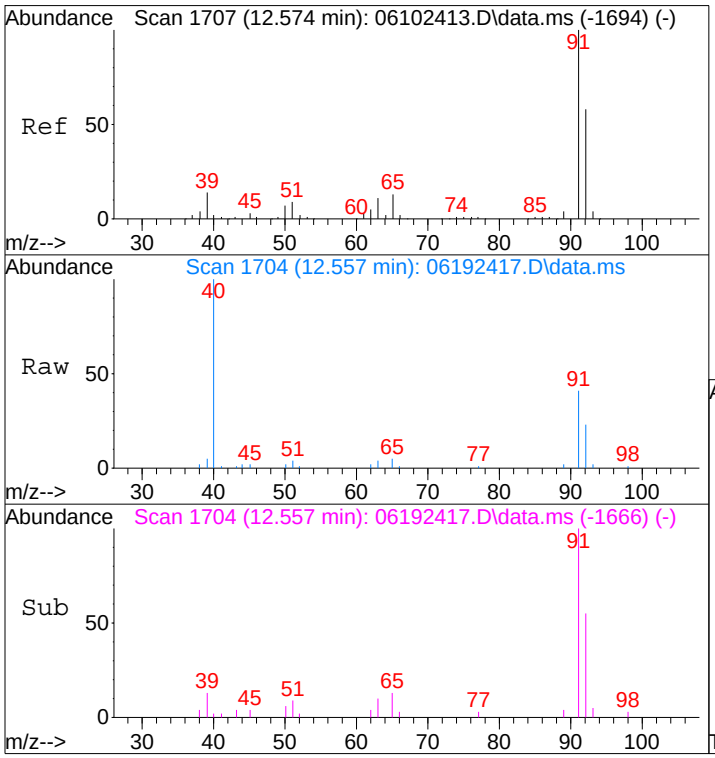


#42
Carbon Tetrachloride
Concen: 0.05 ng
RT: 9.07 min Scan# 1089
Delta R.T. -0.001 min
Lab File: 06192417.D
Acq: 19 Jun 2024 17:54

Tgt Ion:117 Resp: 1714

Ion	Ratio	Lower	Upper
117	100		
119	97.1	77.3	117.3

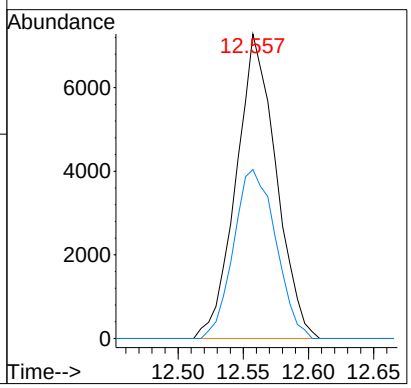


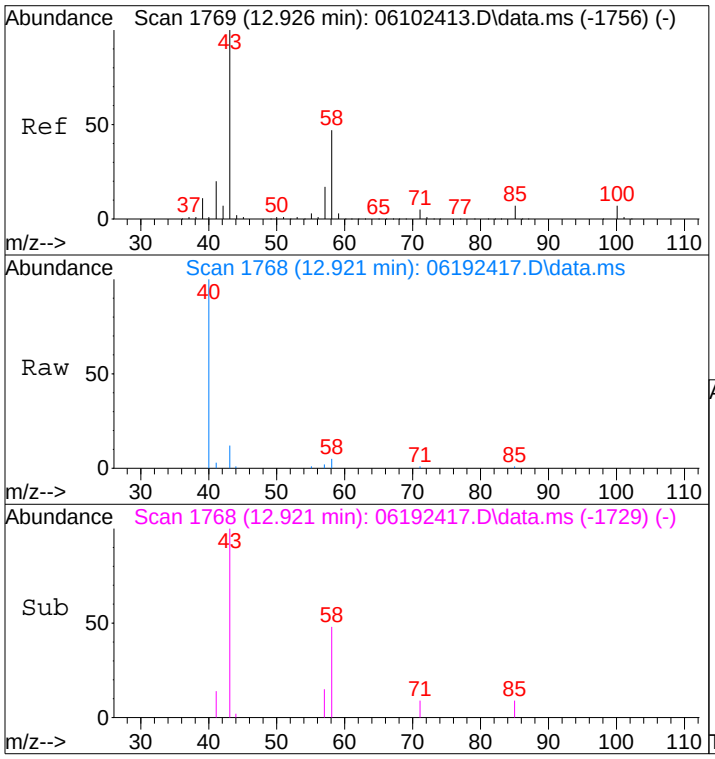


#58
Toluene
Concen: 0.22 ng
RT: 12.56 min Scan# 1704
Delta R.T. -0.034 min
Lab File: 06192417.D
Acq: 19 Jun 2024 17:54

Tgt Ion: 91 Resp: 15485

Ion	Ratio	Lower	Upper
91	100		
92	58.6	37.4	77.4

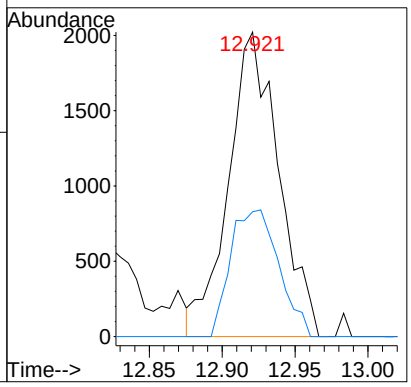


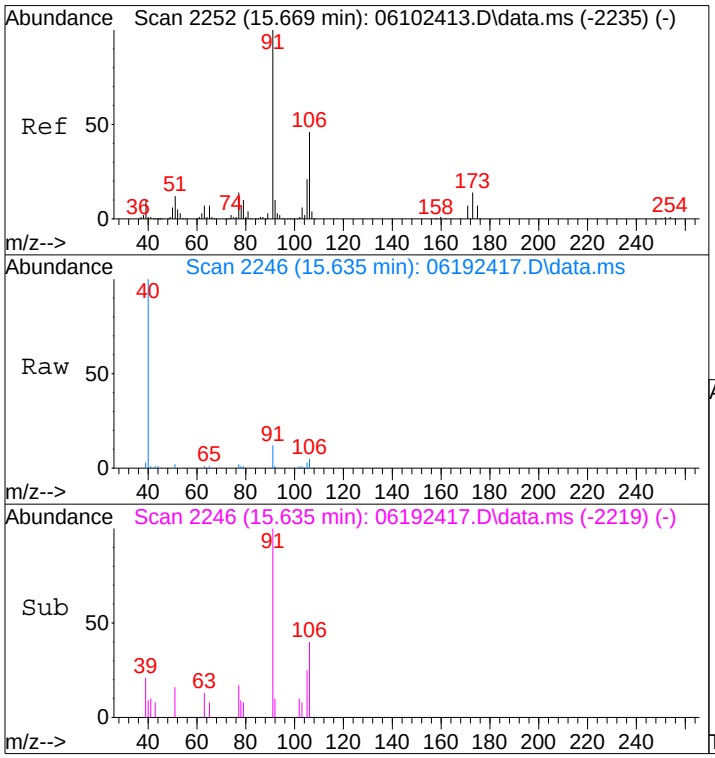


#59
2-Hexanone
Concen: 0.11 ng
RT: 12.92 min Scan# 1768
Delta R.T. -0.028 min
Lab File: 06192417.D
Acq: 19 Jun 2024 17:54

Tgt Ion: 43 Resp: 4824

Ion	Ratio	Lower	Upper
43	100		
58	40.2	25.9	65.9

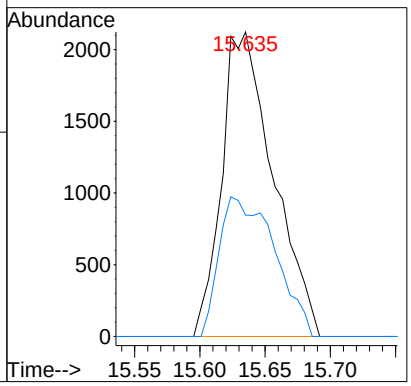




#67
m- & p-Xylenes
Concen: 0.09 ng
RT: 15.64 min Scan# 2246
Delta R.T. -0.045 min
Lab File: 06192417.D
Acq: 19 Jun 2024 17:54

Tgt Ion: 91 Resp: 5834

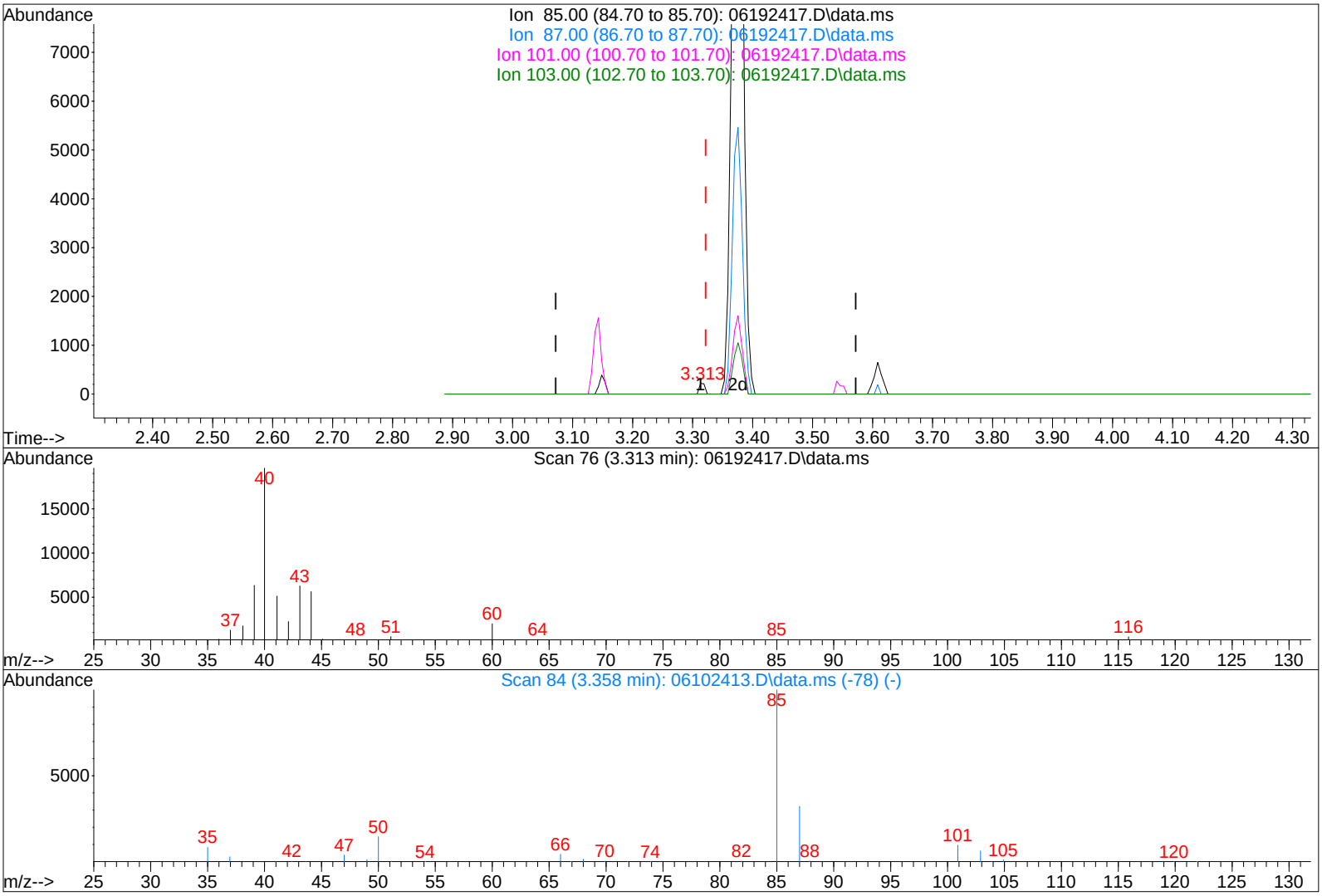
Ion	Ratio	Lower	Upper
91	100		
106	49.2	25.9	65.9



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\19\06192417.D Vial: 5
Acq On : 19 Jun 2024 17:54 Operator: SC
Sample : P2402249-030 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 11:22:01 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06192417.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.313min (-0.009) 0.00ng

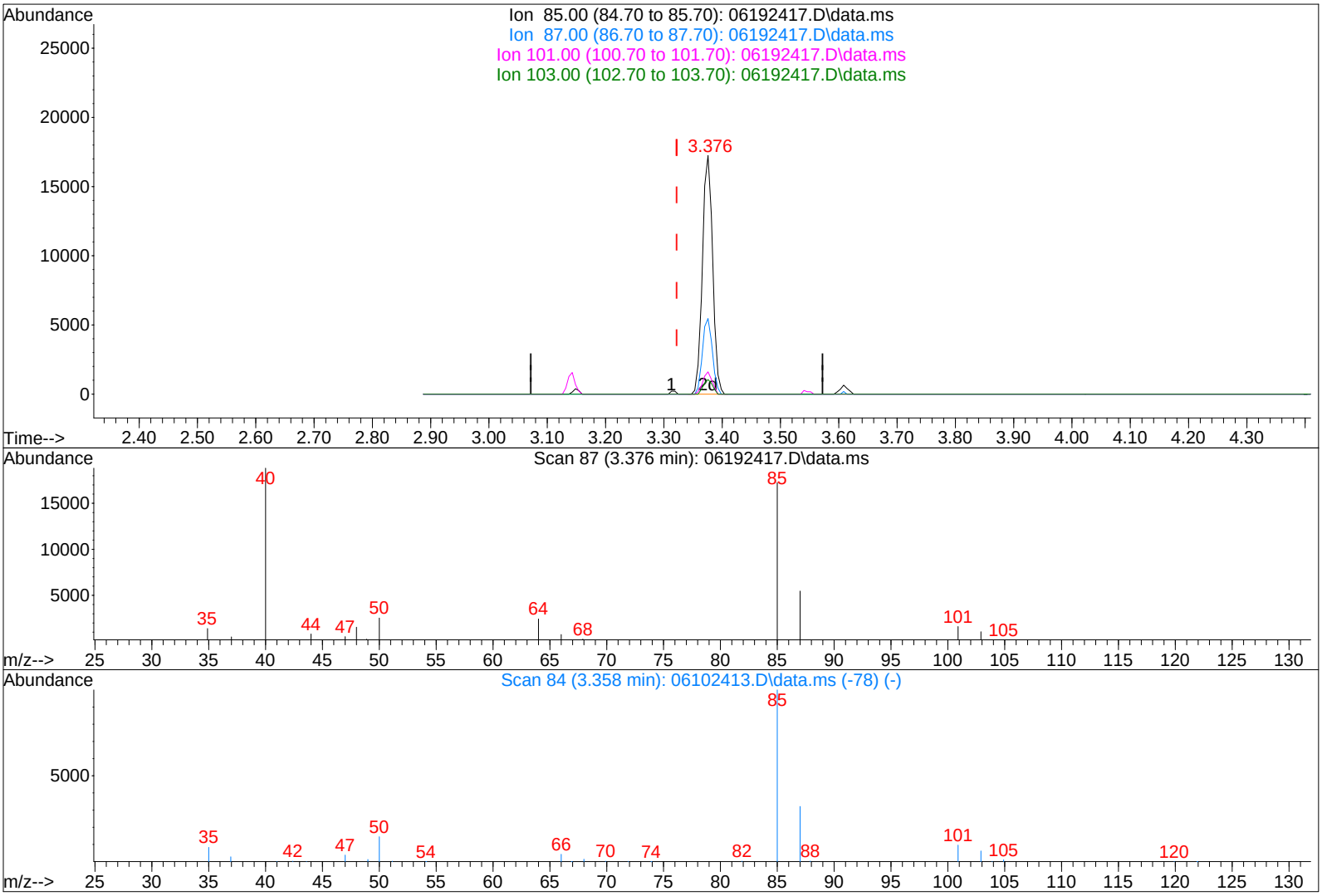
response 146

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	0.00#
101.00	9.80	0.00
103.00	6.30	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\19\06192417.D Vial: 5
Acq On : 19 Jun 2024 17:54 Operator: SC
Sample : P2402249-030 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 11:22:01 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06192417.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.376min (+0.054) 0.54ng m

response 20941

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	30.69
101.00	9.80	8.50
103.00	6.30	5.39

MJ 6/28/24

MP

CG 6/29/24

Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\19\06192417.D Vial: 5
Acq On : 19 Jun 2024 17:54 Operator: SC
Sample : P2402249-030 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:11:48 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

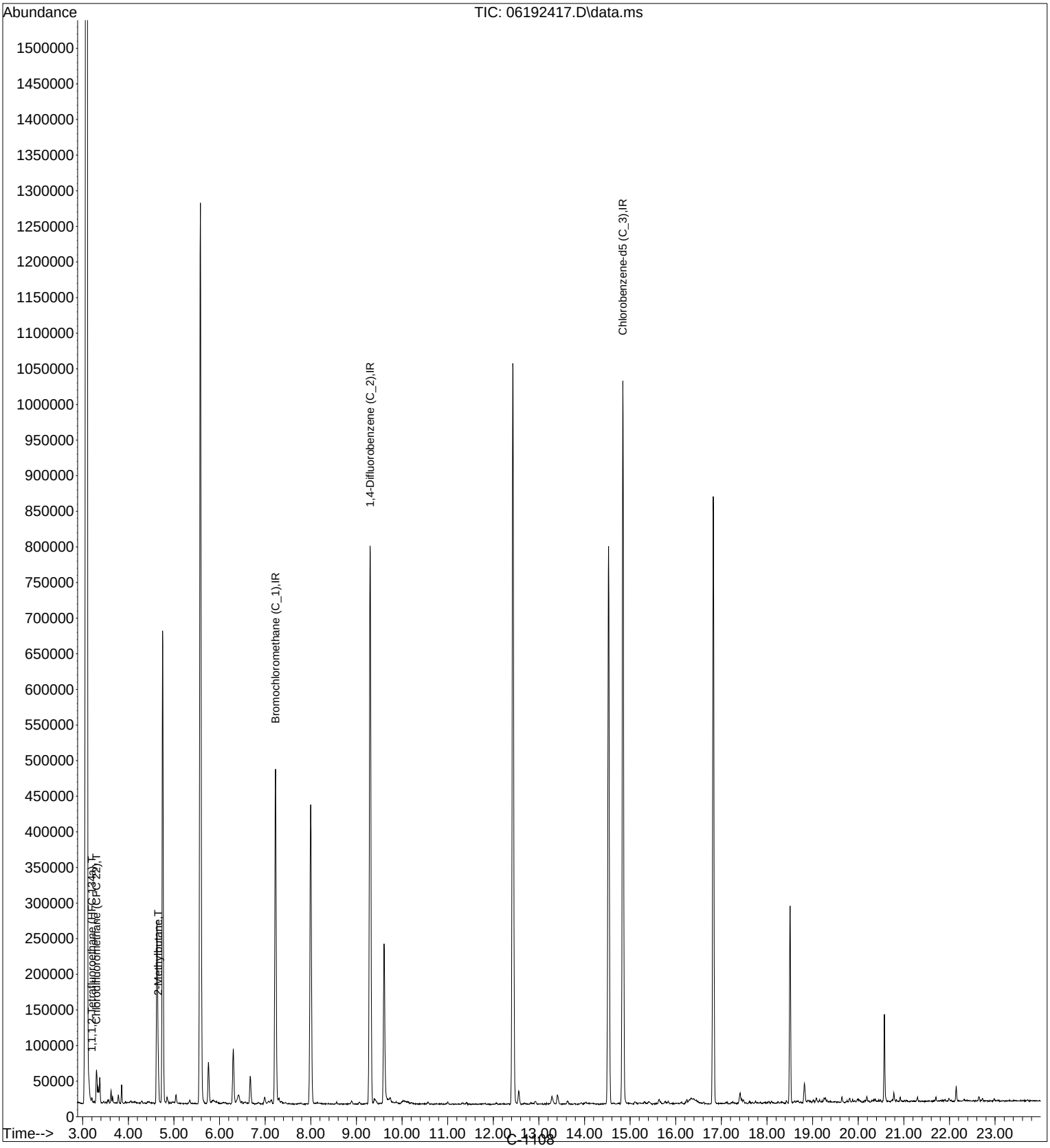
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	166854	12.500	ng		-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	745056	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	173085	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	3.15	85	267	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.20	83	1940	0.113	ng	#	53
4) 1,1-Difluoroethane	3.25	65	508	N.D.			
5) Chlorodifluoromethane ...	3.30	67	595	0.105	ng	#	79
6) 1-Chloro-1,1-Difluoroe...	3.51	65	596	N.D.			
7) Dichlorofluoromethane ...	4.23	67	233	N.D.			
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	0.00	83	0	N.D.			
10) 2-Methylbutane	4.65	57	7380	0.371	ng	#	28
11) Methyl Acetate	5.33	43	1784	N.D.			
12) 2-Methylpentane	6.48	71	463	N.D.			
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	9.05	84	667	N.D.			
17) 2,3-Dimethylpentane	9.53	56	517	N.D.			
18) Dibromomethane	9.81	174	307	N.D.			
20) Methyl Cyclohexane	11.41	55	1223	N.D.			
21) 1,3-Dichloropropane	0.00	76	0	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	0.00	75	0	N.D.			
25) Bromobenzene	0.00	77	0	N.D.			
26) 2-Chlorotoluene	17.61	91	1000	N.D.			
27) 4-Chlorotoluene	17.67	91	1745	N.D.			
28) Indane	19.02	117	60	N.D.			
29) Indene	19.21	115	54	N.D.			
30) 1,2,4,5-Tetramethylben...	20.22	119	119	N.D.			
31) 1,2,3,4-Tetramethylben...	20.22	119	119	N.D.			
32) 1,2,3,5-Tetramethylben...	20.60	119	367	N.D.			
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192417.D Vial: 5
Acq On : 19 Jun 2024 17:54 Operator: SC
Sample : P2402249-030 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:11:48 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



LSC Area Percent Report

MJ 6/28/24

Data Path : I:\MS09\DATA\2024 06\19\
Data File : 06192417.D
Acq On : 19 Jun 2024 17:54
Operator : SC
Sample : P2402249-030 (400mL)
Misc : S37-06062402
ALS Vial : 5 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06192417.D\data.ms

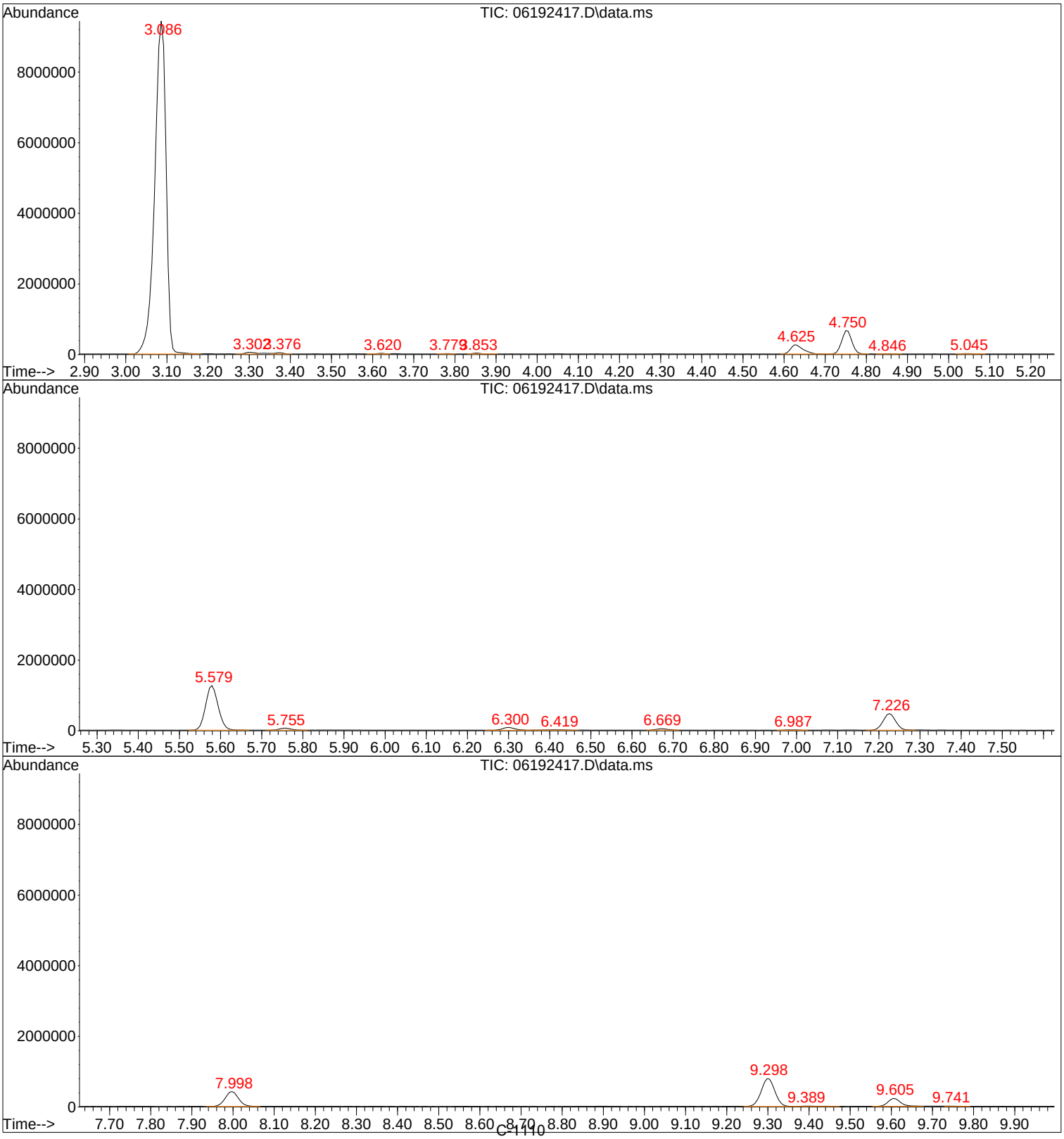
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.086	22	36	53	rBV	9427588	18102027	100.00%	66.060%
2	3.302	68	74	78	rBV3	46378	80917	0.45%	0.295%
3	3.376	83	87	92	rVB	36156	50566	0.28%	0.185%
4	3.620	124	130	134	rBV2	17912	23192	0.13%	0.085%
5	3.779	154	158	162	rBV2	11423	15827	0.09%	0.058%
6	3.853	167	171	180	rVB	26639	32859	0.18%	0.120%
7	4.625	301	307	322	rBV	254052	540765	2.99%	1.973%
8	4.750	322	329	339	rVV	663291	1140057	6.30%	4.160%
9	4.846	342	346	353	rVB4	8638	14943	0.08%	0.055%
10	5.045	376	381	389	rVB2	11795	18986	0.10%	0.069%
11	5.579	465	475	491	rBV2	1264700	2676853	14.79%	9.769%
12	5.755	498	506	516	rBV	58326	116487	0.64%	0.425%
13	6.300	592	602	611	rBV	77582	164967	0.91%	0.602%
14	6.419	611	623	632	rVB4	11126	40418	0.22%	0.147%
15	6.669	661	667	675	rBV	37942	75522	0.42%	0.276%
16	6.987	717	723	730	rBV4	9676	22625	0.12%	0.083%
17	7.226	755	765	776	rBV	469738	1000793	5.53%	3.652%
18	7.998	890	901	913	rBV	420723	949471	5.25%	3.465%
19	9.298	1120	1130	1142	rBV	783597	1812408	10.01%	6.614%
20	9.389	1142	1146	1161	rVB4	7617	25755	0.14%	0.094%
21	9.605	1175	1184	1197	rBV	224558	485632	2.68%	1.772%
22	9.741	1206	1208	1217	rVB4	7212	11368	0.06%	0.041%

Sum of corrected areas: 27402438

Data Path : I:\MS09\DATA\2024 06\19\
Data File : 06192417.D
Acq On : 19 Jun 2024 17:54
Operator : SC
Sample : P2402249-030 (400mL)
Misc : S37-06062402
ALS Vial : 5 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\19\\
Data File : 06192417.D
Acq On : 19 Jun 2024 17:544
Operator : SCC
Sample : P2402249-030 (400mL))
Misc : S37-060624022
ALS Vial : 5 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

						--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192418.D Vial: 6
Acq On : 19 Jun 2024 18:26 Operator: SC
Sample : P2402249-031 (100mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 11:22:52 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.22	130	166915	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	736430	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	169026	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	367083	12.374	ng		0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.96%				
57) Toluene-d8 (SS2)	12.43	98	823730	12.735	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.84%				
73) Bromofluorobenzene (SS3)	16.83	174	282534	12.096	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.80%				
Target Compounds							Qvalue
2) Propene	0.00	42	0	N.D. d			
3) Dichlorodifluoromethan...	3.38	85	5615	0.143	ng		96
4) Chloromethane	3.52	50	711	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.42	45	58	N.D.			
11) Acetonitrile	4.44	41	1728	N.D.			
12) Acrolein	4.53	56	62	N.D.			
13) Acetone	4.64	58	16264	1.254	ng		96
14) Trichlorofluoromethane	4.75	101	5392652	135.708	ng		100
15) 2-Propanol (Isopropanol)	4.89	45	122	N.D.			
16) Acrylonitrile	4.98	53	1152	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.35	59	180	N.D.			
19) Methylene Chloride	5.35	84	938	0.051	ng		81
20) 3-Chloro-1-propene (Al...	5.45	41	140	N.D.			
21) Trichlorotrifluoroethane	5.57	151	410947	24.446	ng		96
22) Carbon Disulfide	0.00	76	0	N.D. d			
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D.			
27) 2-Butanone (MEK)	6.67	72	4219	0.411	ng	#	91
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	7.36	87	193	N.D.			
30) Ethyl Acetate	0.00	61	0	N.D.			
31) n-Hexane	0.00	57	0	N.D.			
32) Chloroform	7.34	83	3316	0.101	ng		93
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.09	62	540	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.83	56	125	No Calib		#	
41) Benzene	8.90	78	3577	0.053	ng		89
42) Carbon Tetrachloride	9.06	117	203	N.D.			
43) Cyclohexane	9.28	84	1010	N.D.			
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.06	83	422	N.D.			
47) Trichloroethene	10.14	130	1208	0.061	ng		95
48) 1,4-Dioxane	10.13	88	378	N.D.			
49) 2,2,4-Trimethylpentane...	10.24	57	366	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192418.D Vial: 6
Acq On : 19 Jun 2024 18:26 Operator: SC
Sample : P2402249-031 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 11:22:52 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

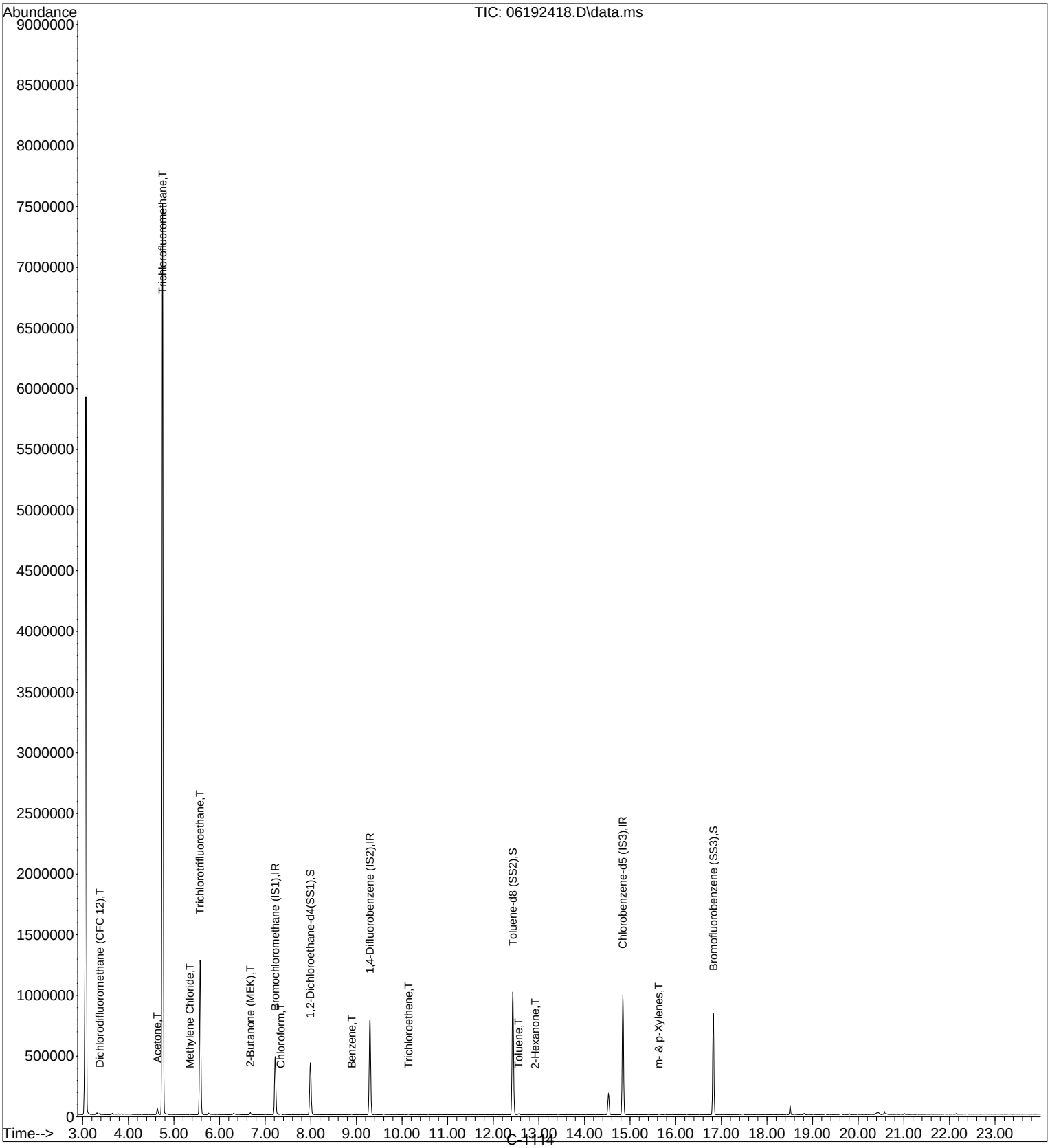
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	10.56	71	450	N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
58) Toluene	12.56	91	8238	0.122 ng	96
59) 2-Hexanone	12.92	43	2318	0.055 ng	80
60) Dibromochloromethane	13.07	129	472	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	0.00	43	0	N.D.	
63) n-Octane	13.93	57	608	N.D.	
64) Tetrachloroethene	14.02	166	440	N.D.	
65) Chlorobenzene	14.90	112	725	N.D.	
66) Ethylbenzene	15.41	91	2555	N.D.	
67) m- & p-Xylenes	15.63	91	4132	0.064 ng	96
68) Bromoform	15.67	173	774	N.D.	
69) Styrene	16.10	104	106	N.D.	
70) o-Xylene	16.24	91	1492	N.D.	
71) n-Nonane	16.61	43	957	N.D.	
72) 1,1,2,2-Tetrachloroethane	16.22	83	377	N.D.	
74) Cumene	17.04	105	1020	N.D.	
75) alpha-Pinene	0.00	93	0	N.D.	
76) n-Propylbenzene	17.67	91	1530	N.D.	
77) 3-Ethyltoluene	17.04	105	1020	No Calib	
78) 4-Ethyltoluene	17.86	105	1034	N.D.	
79) 1,3,5-Trimethylbenzene	17.96	105	571	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.04	105	1020	No Calib	
82) 1,2,4-Trimethylbenzene	18.43	105	1250	N.D.	
83) n-Decane	0.00	58	0	N.D.	
84) Benzyl Chloride	0.00	91	0	N.D.	
85) 1,3-Dichlorobenzene	18.58	146	574	N.D.	
86) 1,4-Dichlorobenzene	18.66	146	582	N.D.	
87) sec-Butylbenzene	18.74	105	1049	N.D.	
88) 4-Isopropyltoluene (p-...	18.93	119	974	N.D.	
89) 1,2,3-Trimethylbenzene	17.04	105	1020	No Calib	
90) 1,2-Dichlorobenzene	19.03	146	553	N.D.	
91) d-Limonene	0.00	68	0	N.D.	
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	631	N.D.	
95) Naphthalene	20.94	128	604	N.D.	
96) n-Dodecane	0.00	58	0	N.D.	
97) Hexachlorobutadiene	21.30	225	677	N.D.	
98) Cyclohexanone	0.00	55	0	N.D.	
99) tert-Butylbenzene	18.51	119	1581	N.D.	
100) n-Butylbenzene	19.39	91	666	N.D.	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192418.D Vial: 6
Acq On : 19 Jun 2024 18:26 Operator: SC
Sample : P2402249-031 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 11:22:52 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192418.D Vial: 6
Acq On : 19 Jun 2024 18:26 Operator: SC
Sample : P2402249-031 (100mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 11:22:52 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

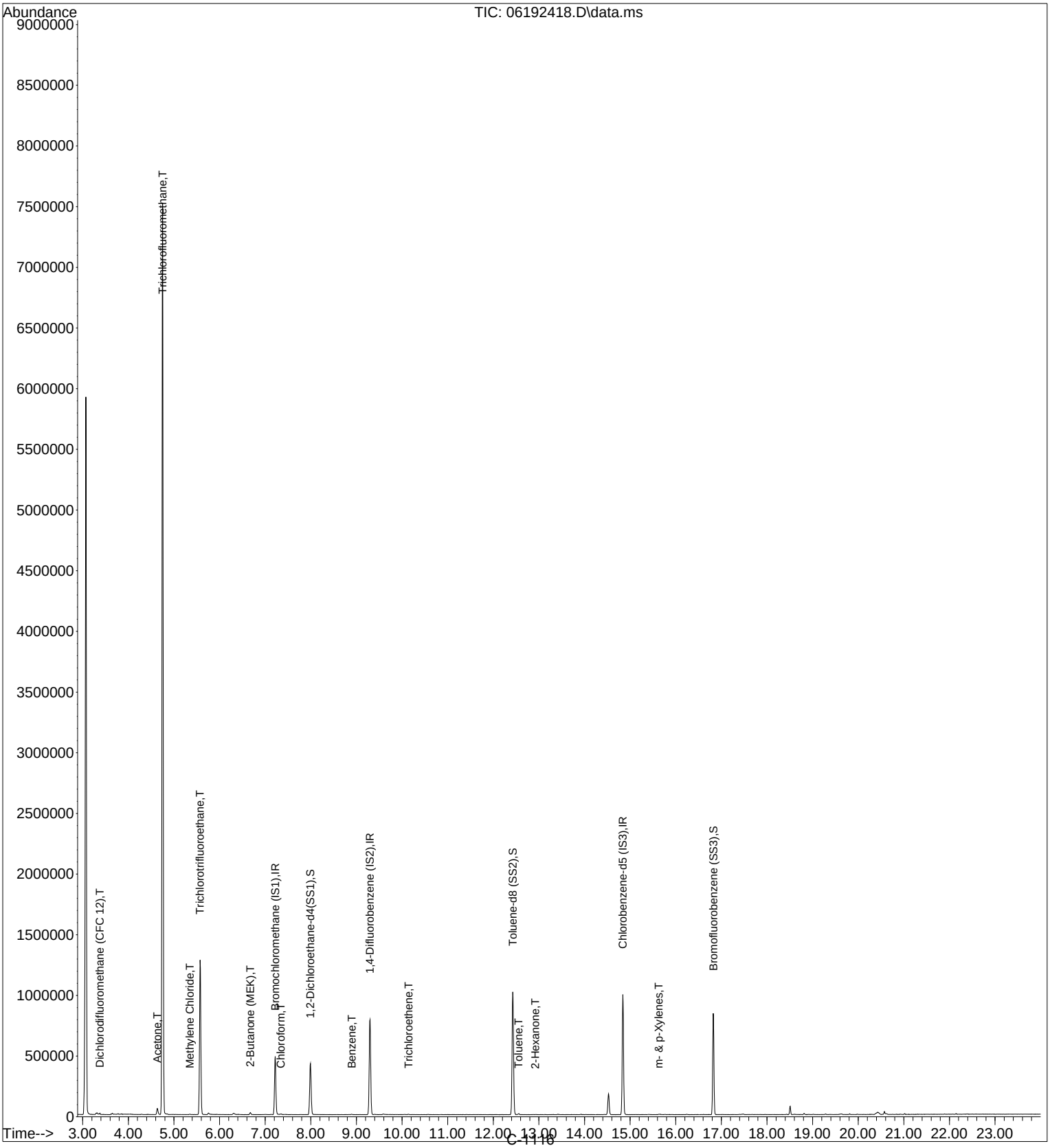
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.22	130	166915	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	736430	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	169026	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	367083	12.374	ng		0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.96%				
57) Toluene-d8 (SS2)	12.43	98	823730	12.735	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.84%				
73) Bromofluorobenzene (SS3)	16.83	174	282534	12.096	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.80%				
Target Compounds							Qvalue
3) Dichlorodifluoromethan...	3.38	85	5615	0.143	ng		96
13) Acetone	4.64	58	16264	1.254	ng		96
14) Trichlorofluoromethane	4.75	101	5392652	135.708	ng		100
19) Methylene Chloride	5.35	84	938	0.051	ng		81
21) Trichlorotrifluoroethane	5.57	151	410947	24.446	ng		96
27) 2-Butanone (MEK)	6.67	72	4219	0.411	ng	#	91
32) Chloroform	7.34	83	3316	0.101	ng		93
41) Benzene	8.90	78	3577	0.053	ng		89
47) Trichloroethene	10.14	130	1208	0.061	ng		95
58) Toluene	12.56	91	8238	0.122	ng		96
59) 2-Hexanone	12.92	43	2318	0.055	ng		80
67) m- & p-Xylenes	15.63	91	4132	0.064	ng		96

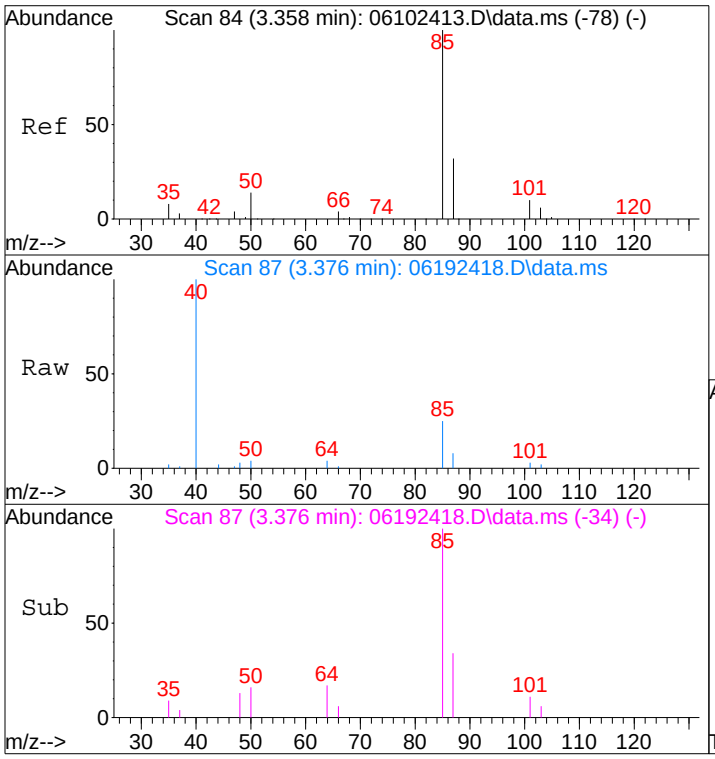
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192418.D Vial: 6
Acq On : 19 Jun 2024 18:26 Operator: SC
Sample : P2402249-031 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 11:22:52 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

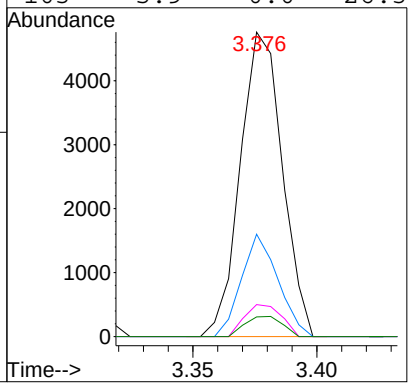


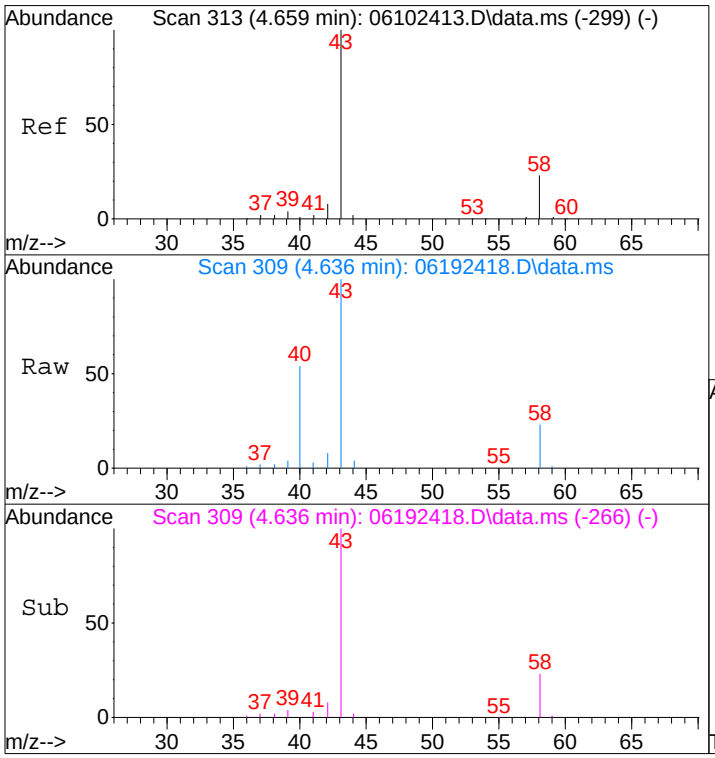


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.14 ng
RT: 3.38 min Scan# 87
Delta R.T. 0.054 min
Lab File: 06192418.D
Acq: 19 Jun 2024 18:26

Tgt Ion: 85 Resp: 5615

Ion	Ratio	Lower	Upper
85	100		
87	29.3	12.2	52.2
101	9.3	0.0	29.8
103	5.9	0.0	26.3

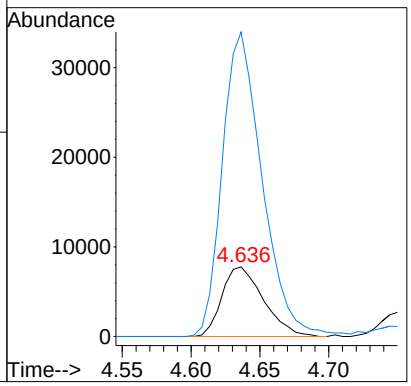


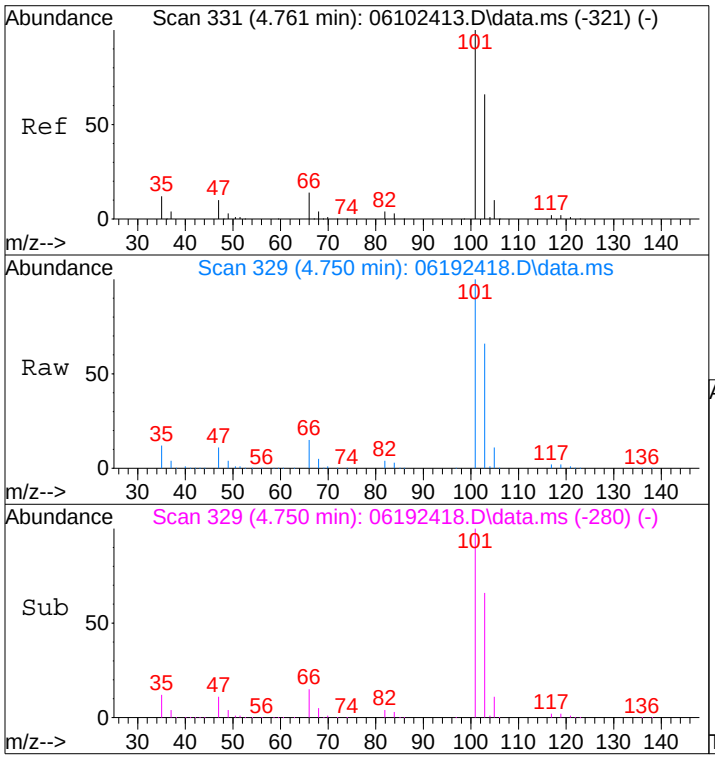


#13
Acetone
Concen: 1.25 ng
RT: 4.64 min Scan# 309
Delta R.T. -0.006 min
Lab File: 06192418.D
Acq: 19 Jun 2024 18:26

Tgt Ion: 58 Resp: 16264

Ion	Ratio	Lower	Upper
58	100		
43	420.2	400.7	460.7

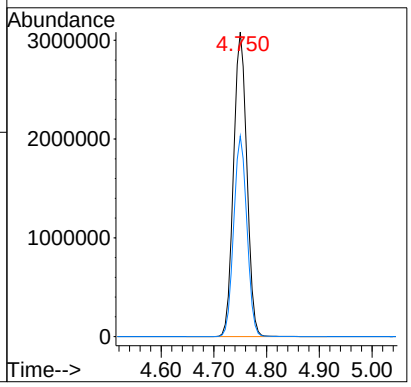


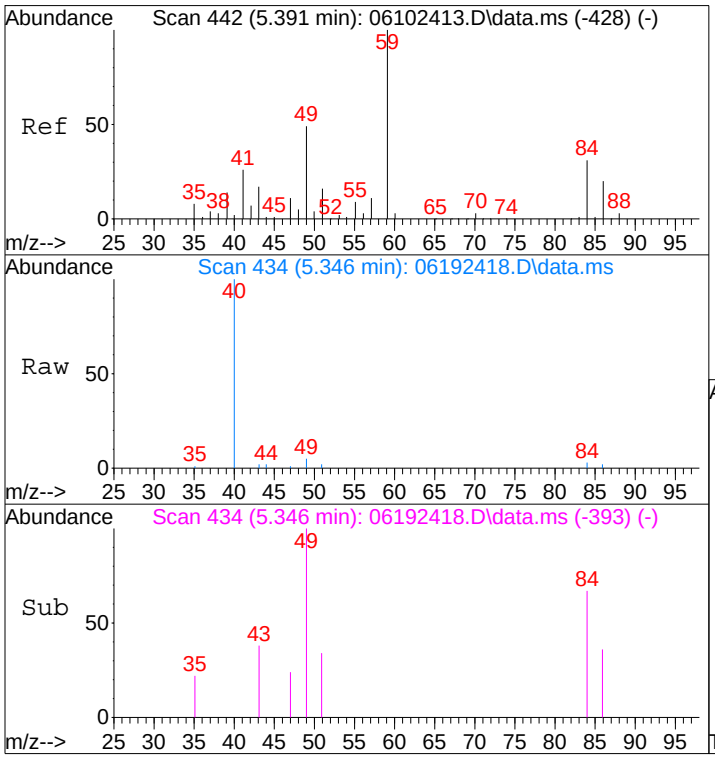


#14
Trichlorofluoromethane
Concen: 135.71 ng
RT: 4.75 min Scan# 329
Delta R.T. 0.029 min
Lab File: 06192418.D
Acq: 19 Jun 2024 18:26

Tgt Ion:101 Resp: 5392652

Ion	Ratio	Lower	Upper
101	100		
103	65.3	44.9	84.9

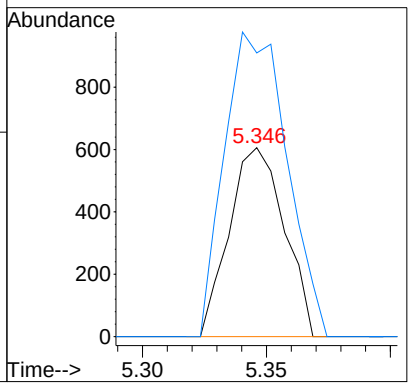


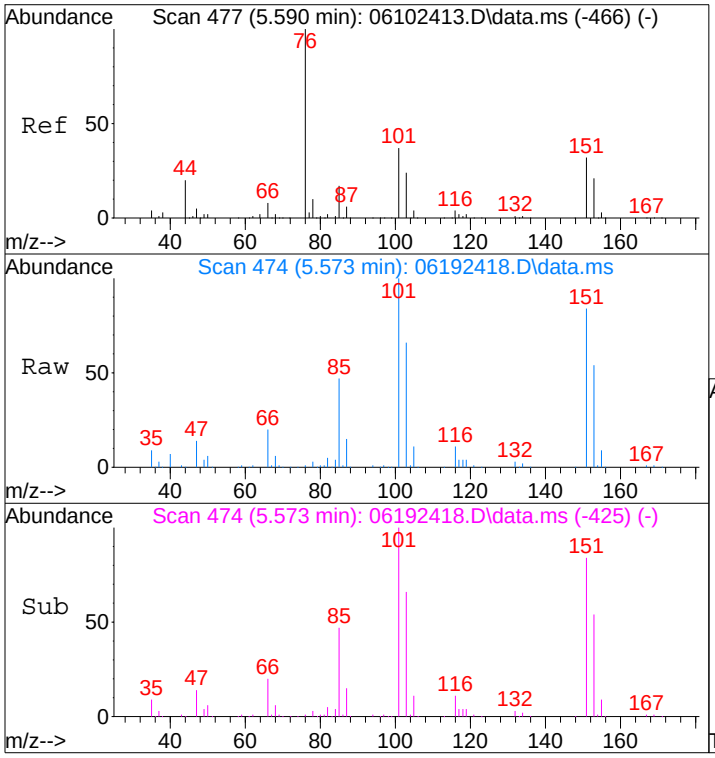


#19
Methylene Chloride
Concen: 0.05 ng
RT: 5.35 min Scan# 434
Delta R.T. -0.015 min
Lab File: 06192418.D
Acq: 19 Jun 2024 18:26

Tgt Ion: 84 Resp: 938

Ion	Ratio	Lower	Upper
84	100		
49	182.5	132.9	182.9

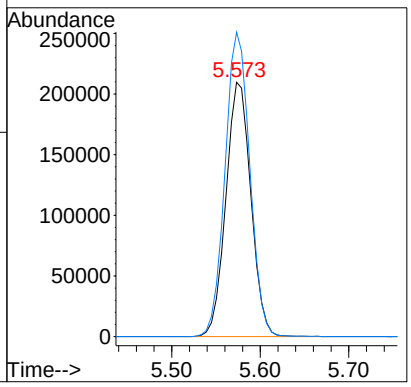


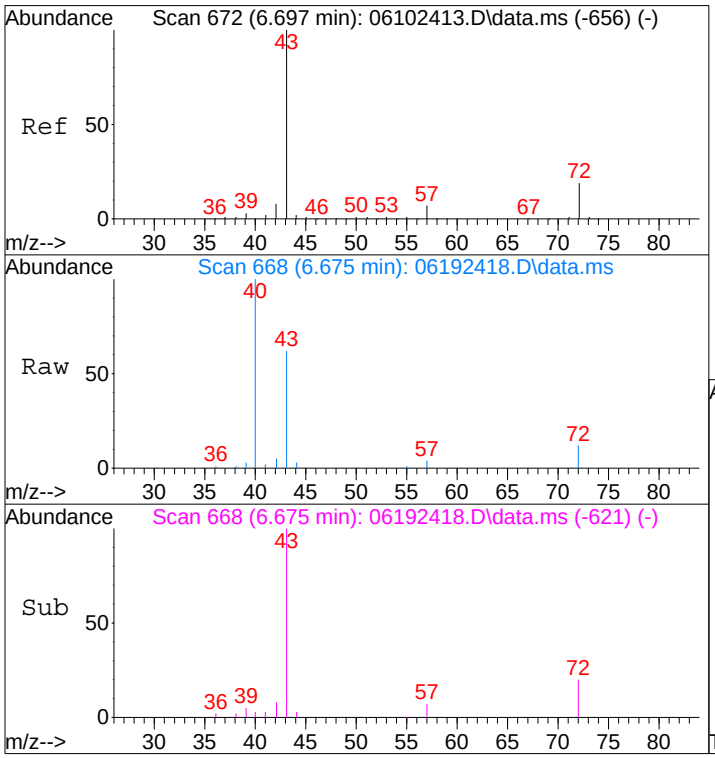


#21
Trichlorotrifluoroethane
Concen: 24.45 ng
RT: 5.57 min Scan# 474
Delta R.T. 0.027 min
Lab File: 06192418.D
Acq: 19 Jun 2024 18:26

Tgt Ion:151 Resp: 410947

Ion	Ratio	Lower	Upper
151	100		
101	118.9	95.0	135.0

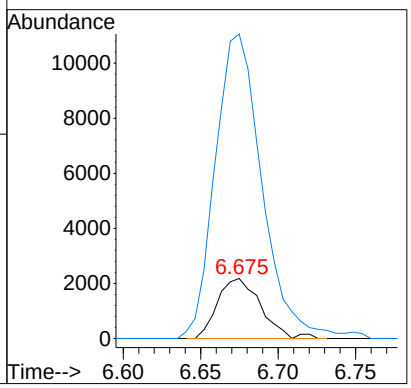


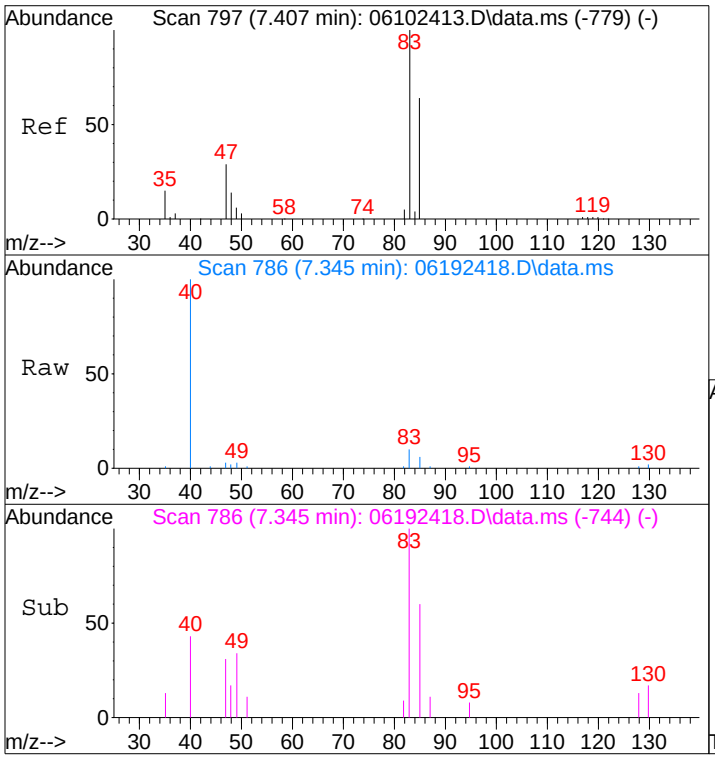


#27
2-Butanone (MEK)
Concen: 0.41 ng
RT: 6.67 min Scan# 668
Delta R.T. 0.016 min
Lab File: 06192418.D
Acq: 19 Jun 2024 18:26

Tgt Ion: 72 Resp: 4219

Ion	Ratio	Lower	Upper
72	100		
43	553.5	506.8	546.8#

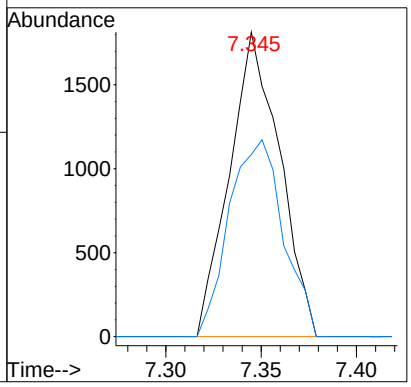


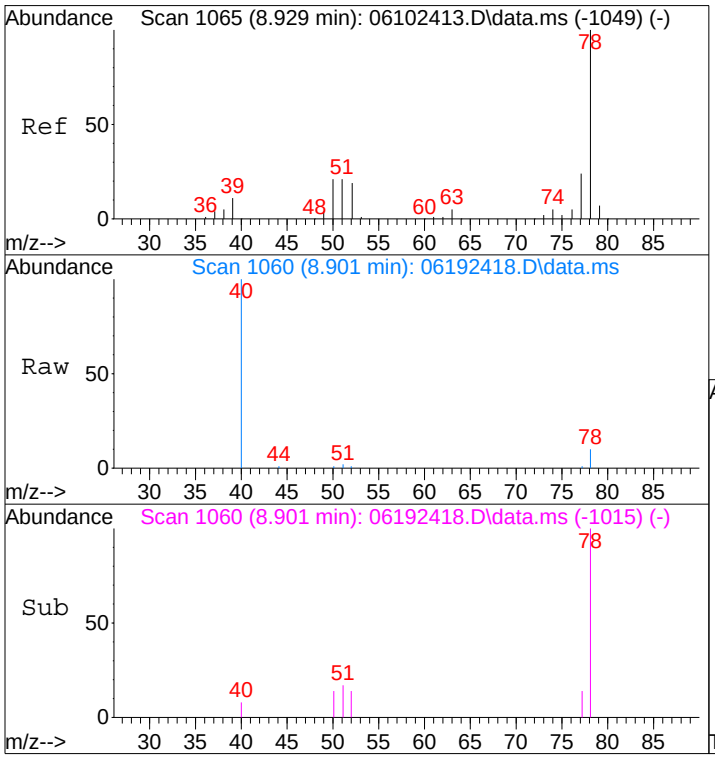


#32
Chloroform
Concen: 0.10 ng
RT: 7.34 min Scan# 786
Delta R.T. -0.010 min
Lab File: 06192418.D
Acq: 19 Jun 2024 18:26

Tgt Ion: 83 Resp: 3316

Ion	Ratio	Lower	Upper
83	100		
85	69.9	44.4	84.4

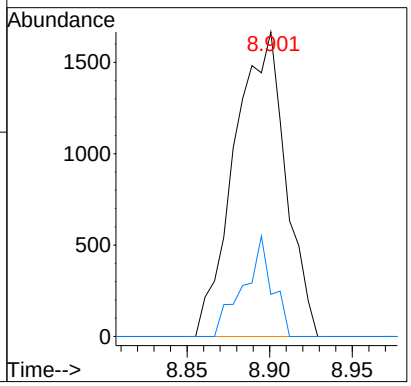


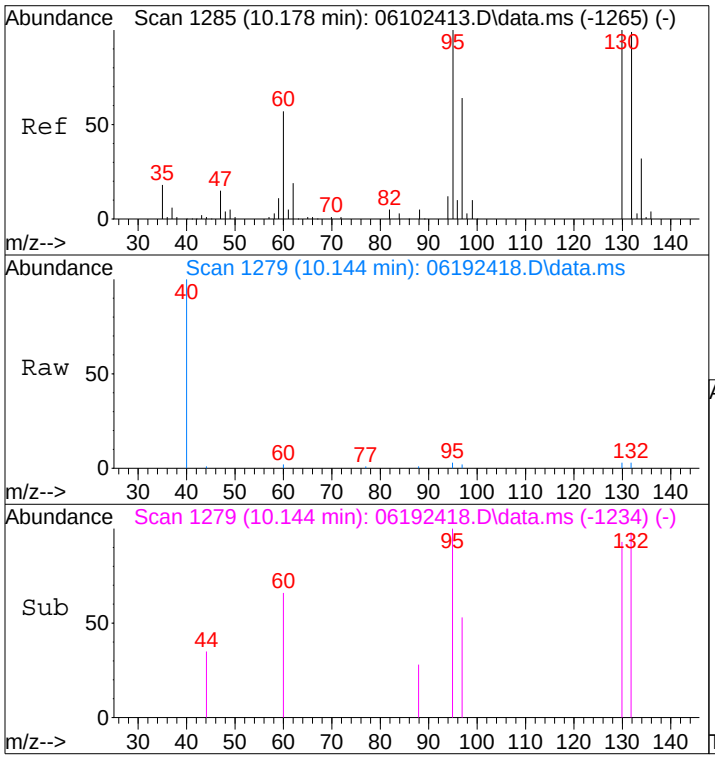


#41
Benzene
Concen: 0.05 ng
RT: 8.90 min Scan# 1060
Delta R.T. 0.003 min
Lab File: 06192418.D
Acq: 19 Jun 2024 18:26

Tgt Ion: 78 Resp: 3577

Ion	Ratio	Lower	Upper
78	100		
77	18.6	4.0	44.0

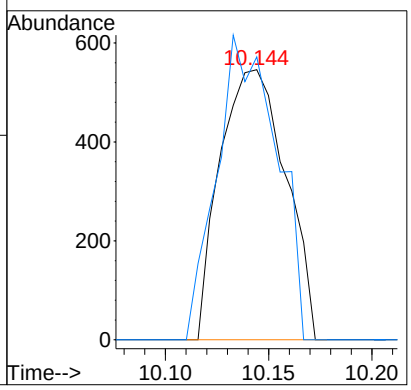


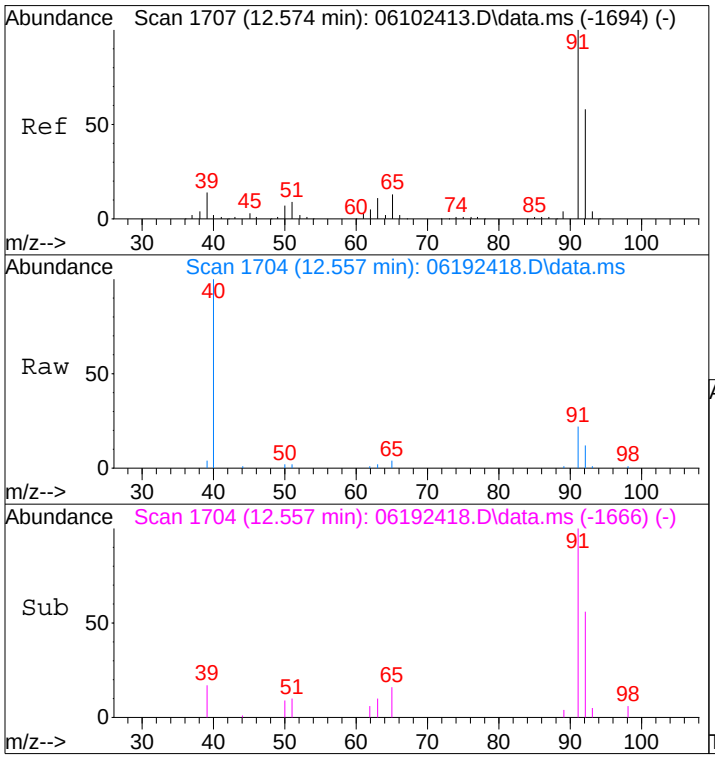


#47
Trichloroethene
Concen: 0.06 ng
RT: 10.14 min Scan# 1279
Delta R.T. 0.005 min
Lab File: 06192418.D
Acq: 19 Jun 2024 18:26

Tgt Ion:130 Resp: 1208

Ion	Ratio	Lower	Upper
130	100		
132	102.5	77.9	117.9

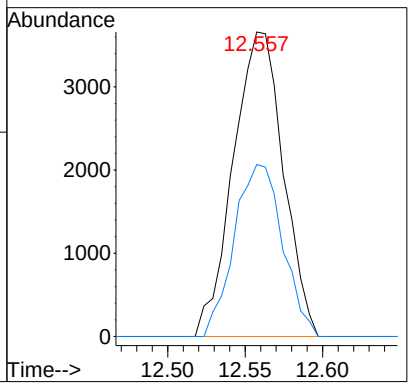


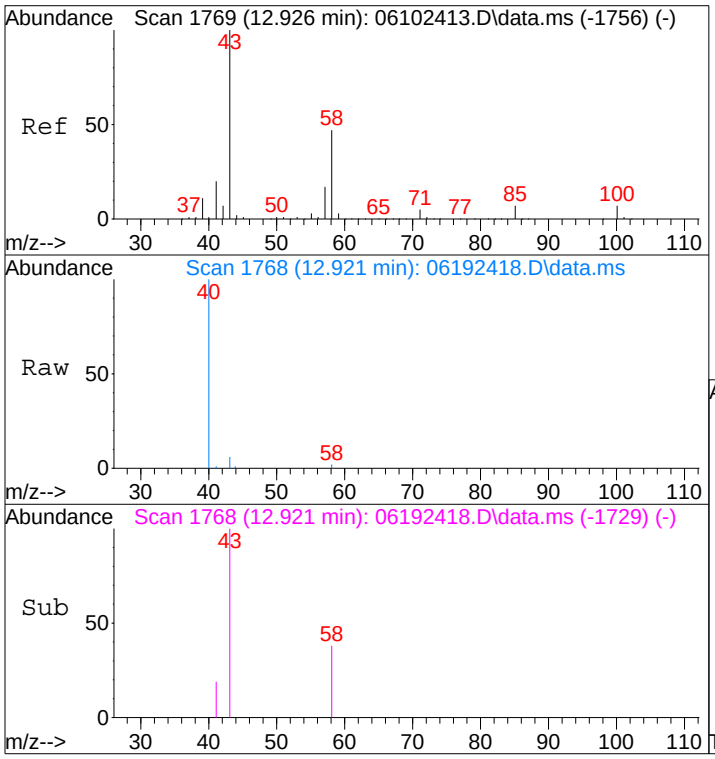


#58
Toluene
Concen: 0.12 ng
RT: 12.56 min Scan# 1704
Delta R.T. -0.034 min
Lab File: 06192418.D
Acq: 19 Jun 2024 18:26

Tgt Ion: 91 Resp: 8238

Ion	Ratio	Lower	Upper
91	100		
92	54.6	37.4	77.4

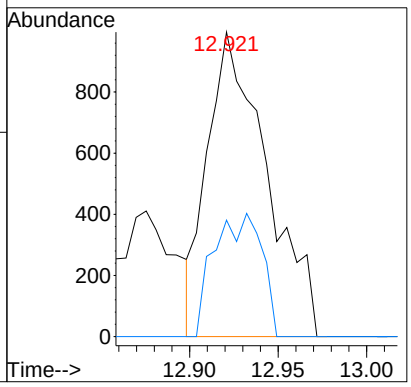


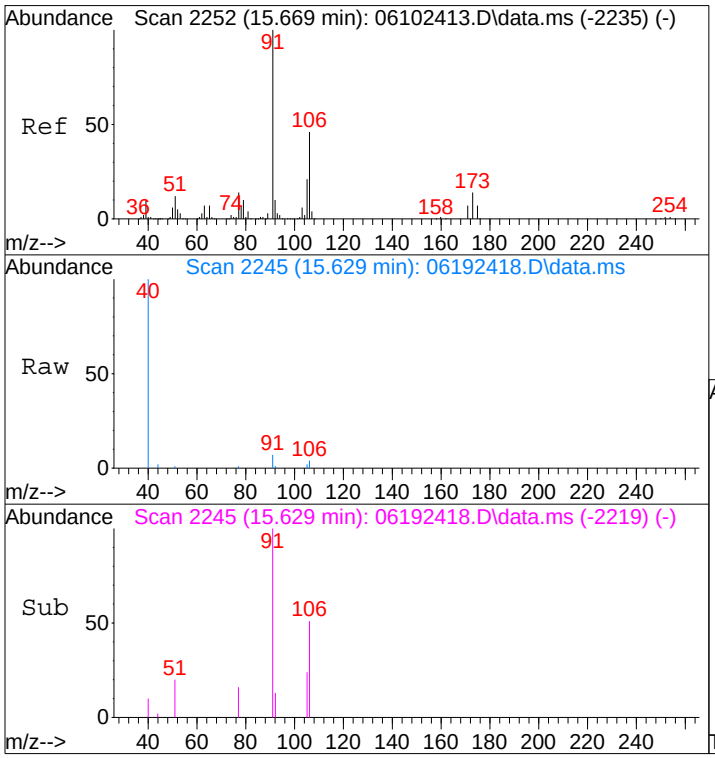


#59
2-Hexanone
Concen: 0.05 ng
RT: 12.92 min Scan# 1768
Delta R.T. -0.028 min
Lab File: 06192418.D
Acq: 19 Jun 2024 18:26

Tgt Ion: 43 Resp: 2318

Ion	Ratio	Lower	Upper
43	100		
58	32.6	25.9	65.9

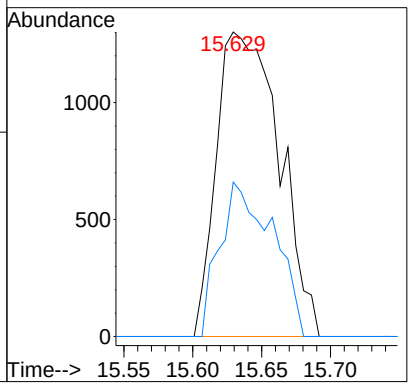




#67
m- & p-Xylenes
Concen: 0.06 ng
RT: 15.63 min Scan# 2245
Delta R.T. -0.051 min
Lab File: 06192418.D
Acq: 19 Jun 2024 18:26

Tgt Ion: 91 Resp: 4132

Ion	Ratio	Lower	Upper
91	100		
106	43.1	25.9	65.9



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192418.D Vial: 6
Acq On : 19 Jun 2024 18:26 Operator: SC
Sample : P2402249-031 (100mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 15:11:49 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

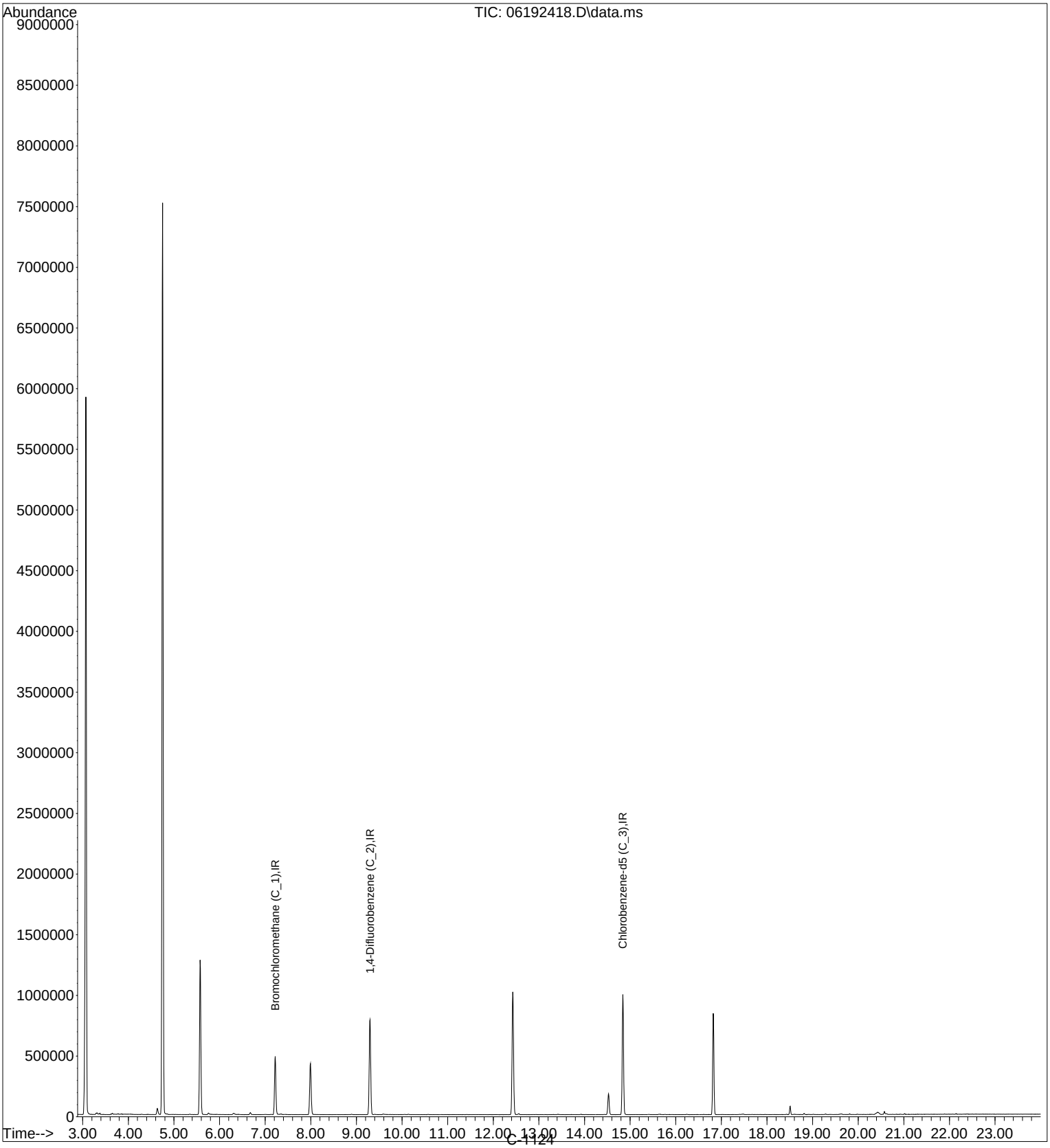
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (C 1)	7.22	130	169810	12.500	ng	-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	737845	12.500	ng	-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	169026	12.500	ng	-0.01
Target Compounds						Qvalue
2) Chloropentafluoroethane	0.00	85	0	N.D.		
3) 1,1,1,2-Tetrafluoroeth...	3.19	83	369	N.D.		
4) 1,1-Difluoroethane	0.00	65	0	N.D.		
5) Chlorodifluoromethane ...	3.30	67	57	N.D.		
6) 1-Chloro-1,1-Difluoroe...	3.50	65	67	N.D.		
7) Dichlorofluoromethane ...	4.22	67	552	N.D.		
8) Vinylbromide	0.00	108	0	N.D.		
9) 2,2-Dichloro-1,1,1-tri...	0.00	83	0	N.D.		
10) 2-Methylbutane	4.64	57	394	N.D.		
11) Methyl Acetate	5.35	43	630	N.D.		
12) 2-Methylpentane	0.00	71	0	N.D.		
13) 2,2-Dichloropropane	0.00	77	0	N.D.		
14) 1,1-Dichloropropene	0.00	75	0	N.D.		
15) Thiophene	0.00	84	0	N.D.		
17) 2,3-Dimethylpentane	0.00	56	0	N.D.		
18) Dibromomethane	9.79	174	121	N.D.		
20) Methyl Cyclohexane	11.42	55	663	N.D.		
21) 1,3-Dichloropropane	0.00	76	0	N.D.		
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		
23) 1-Chlorohexane	0.00	91	0	N.D.		
24) 1,2,3-Trichloropropane	0.00	75	0	N.D.		
25) Bromobenzene	17.02	77	53	N.D.		
26) 2-Chlorotoluene	17.61	91	769	N.D.		
27) 4-Chlorotoluene	17.67	91	1530	N.D.		
28) Indane	19.02	117	124	N.D.		
29) Indene	0.00	115	0	N.D.		
30) 1,2,4,5-Tetramethylben...	0.00	119	0	N.D.		
31) 1,2,3,4-Tetramethylben...	0.00	119	0	N.D.		
32) 1,2,3,5-Tetramethylben...	20.61	119	55	N.D.		
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192418.D Vial: 6
Acq On : 19 Jun 2024 18:26 Operator: SC
Sample : P2402249-031 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:11:49 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



C-1124

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202408.D Vial: 6
Acq On : 20 Jun 2024 13:28 Operator: SC
Sample : P2402249-031Dil (50mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 20 13:51:53 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/20/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.22	130	173760	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	762722	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	175622	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	375810	12.169	ng		0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.36%				
57) Toluene-d8 (SS2)	12.43	98	855077	12.723	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.76%				
73) Bromofluorobenzene (SS3)	16.83	174	295246	12.166	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.36%				
Target Compounds							Qvalue
2) Propene	0.00	42	0	N.D.	d		
3) Dichlorodifluoromethan...	3.39	85	2525	0.062	ng	#	93
4) Chloromethane	3.52	50	425	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.40	45	51	N.D.			
11) Acetonitrile	4.44	41	1952	N.D.			
12) Acrolein	4.55	56	111	N.D.			
13) Acetone	4.65	58	9636	0.714	ng		95
14) Trichlorofluoromethane	4.75	101	2706352	65.423	ng		100
15) 2-Propanol (Isopropanol)	4.86	45	1286	N.D.			
16) Acrylonitrile	4.99	53	1220	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.39	59	111	N.D.			
19) Methylene Chloride	5.35	84	1082	0.057	ng		96
20) 3-Chloro-1-propene (Al...	5.47	41	202	N.D.			
21) Trichlorotrifluoroethane	5.58	151	203231	11.614	ng		96
22) Carbon Disulfide	5.60	76	12304	0.200	ng	#	1
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D.			
27) 2-Butanone (MEK)	6.68	72	2366	0.221	ng		100
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.			
30) Ethyl Acetate	0.00	61	0	N.D.			
31) n-Hexane	0.00	57	0	N.D.			
32) Chloroform	7.35	83	1921	0.056	ng		99
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	844	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.84	56	206	No Calib		#	
41) Benzene	8.89	78	2656	N.D.			
42) Carbon Tetrachloride	0.00	117	0	N.D.			
43) Cyclohexane	9.29	84	1040	N.D.			
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.07	83	564	N.D.			
47) Trichloroethene	10.14	130	805	N.D.			
48) 1,4-Dioxane	10.14	88	156	N.D.			
49) 2,2,4-Trimethylpentane...	0.00	57	0	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202408.D Vial: 6
Acq On : 20 Jun 2024 13:28 Operator: SC
Sample : P2402249-031Dil (50mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 20 13:51:53 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

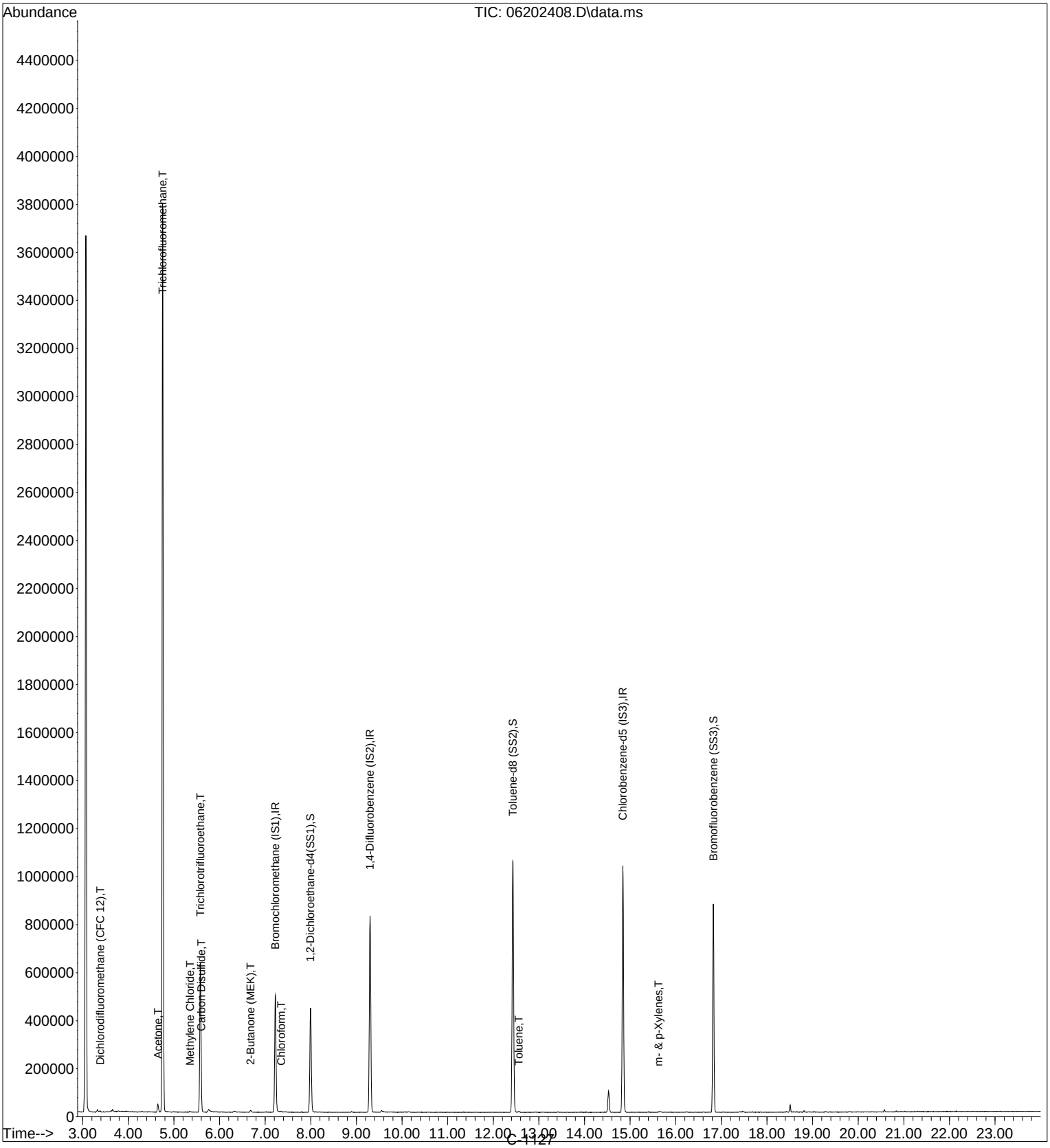
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	10.57	71	111	N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
58) Toluene	12.56	91	4863	0.069 ng	98
59) 2-Hexanone	12.93	43	1726	N.D.	
60) Dibromochloromethane	13.07	129	480	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	13.79	43	127	N.D.	
63) n-Octane	13.93	57	112	N.D.	
64) Tetrachloroethene	14.03	166	422	N.D.	
65) Chlorobenzene	14.90	112	747	N.D.	
66) Ethylbenzene	15.41	91	1920	N.D.	
67) m- & p-Xylenes	15.62	91	3712	0.055 ng	97
68) Bromoform	15.67	173	748	N.D.	
69) Styrene	16.11	104	265	N.D.	
70) o-Xylene	16.24	91	1365	N.D.	
71) n-Nonane	16.61	43	530	N.D.	
72) 1,1,2,2-Tetrachloroethane	16.22	83	432	N.D.	
74) Cumene	17.04	105	1229	N.D.	
75) alpha-Pinene	0.00	93	0	N.D.	
76) n-Propylbenzene	17.68	91	1694	N.D.	
77) 3-Ethyltoluene	17.04	105	1229	No Calib	
78) 4-Ethyltoluene	17.86	105	1184	N.D.	
79) 1,3,5-Trimethylbenzene	17.96	105	845	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.04	105	1229	No Calib	
82) 1,2,4-Trimethylbenzene	18.43	105	1039	N.D.	
83) n-Decane	0.00	58	0	N.D.	
84) Benzyl Chloride	18.56	91	728	N.D.	
85) 1,3-Dichlorobenzene	18.57	146	867	N.D.	
86) 1,4-Dichlorobenzene	18.66	146	1018	N.D.	
87) sec-Butylbenzene	18.74	105	1179	N.D.	
88) 4-Isopropyltoluene (p-...	18.93	119	908	N.D.	
89) 1,2,3-Trimethylbenzene	17.04	105	1229	No Calib	
90) 1,2-Dichlorobenzene	19.04	146	860	N.D.	
91) d-Limonene	0.00	68	0	N.D.	
92) 1,2-Dibromo-3-Chloropr...	19.51	157	172	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	1749	N.D.	
95) Naphthalene	20.94	128	1880	N.D.	
96) n-Dodecane	0.00	58	0	N.D.	
97) Hexachlorobutadiene	21.30	225	710	N.D.	
98) Cyclohexanone	0.00	55	0	N.D.	
99) tert-Butylbenzene	18.42	119	1092	N.D.	
100) n-Butylbenzene	19.39	91	980	N.D.	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202408.D Vial: 6
Acq On : 20 Jun 2024 13:28 Operator: SC
Sample : P2402249-031Dil (50mL) Inst : MS09
Misc : S37-06062402

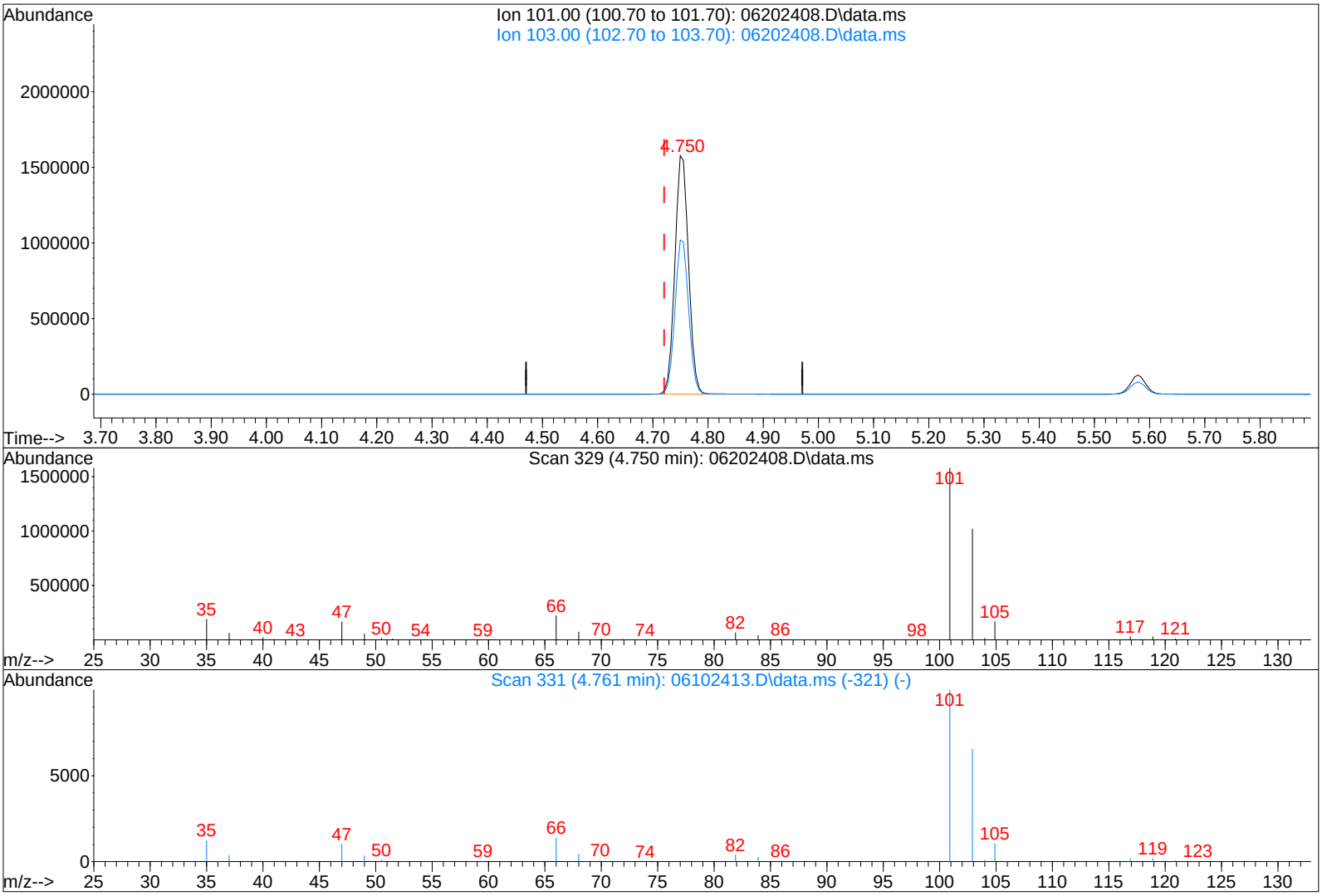
Quant Time: Jun 20 13:51:53 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\20\06202408.D Vial: 6
Acq On : 20 Jun 2024 13:28 Operator: SC
Sample : P2402249-031Dil (50mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 20 13:51:43 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06202408.D\data.ms

(14) Trichlorofluoromethane (T)

4.750min (+0.029) 65.42ng

response 2706352

Ion	Exp%	Act%
101.00	100	100
103.00	64.90	64.74
0.00	0.00	0.00
0.00	0.00	0.00

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\19\
Data File : 06192418.D
Acq On : 19 Jun 2024 18:26
Operator : SC
Sample : P2402249-031 (100mL)
Misc : S37-06062402
ALS Vial : 6 Sample Multiplier: 1

MJ 6/28/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06192418.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.069	20	33	51	rBV	5914105	10280076	79.00%	34.508%
2	3.313	73	76	80	rVV2	13809	20599	0.16%	0.069%
3	3.376	84	87	93	rVB	10651	12521	0.10%	0.042%
4	3.648	132	135	141	rVB2	8609	12155	0.09%	0.041%
5	4.636	301	309	320	rBV	50629	106247	0.82%	0.357%
6	4.750	320	329	344	rBV	7510865	13012853	100.00%	43.682%
7	5.573	465	474	489	rBV	1273782	2495261	19.18%	8.376%
8	5.755	499	506	514	rBV2	13005	31567	0.24%	0.106%
9	6.311	596	604	615	rBV2	10736	31782	0.24%	0.107%
10	6.675	662	668	676	rBV	16973	32588	0.25%	0.109%
11	7.220	755	764	778	rBV	479842	1004117	7.72%	3.371%
12	7.345	781	786	792	rVB4	5655	12414	0.10%	0.042%
13	7.992	890	900	912	rBV	421080	941813	7.24%	3.161%
14	9.298	1118	1130	1142	rBV	784484	1781324	13.69%	5.980%
15	9.582	1175	1180	1187	rBV2	6022	14798	0.11%	0.050%

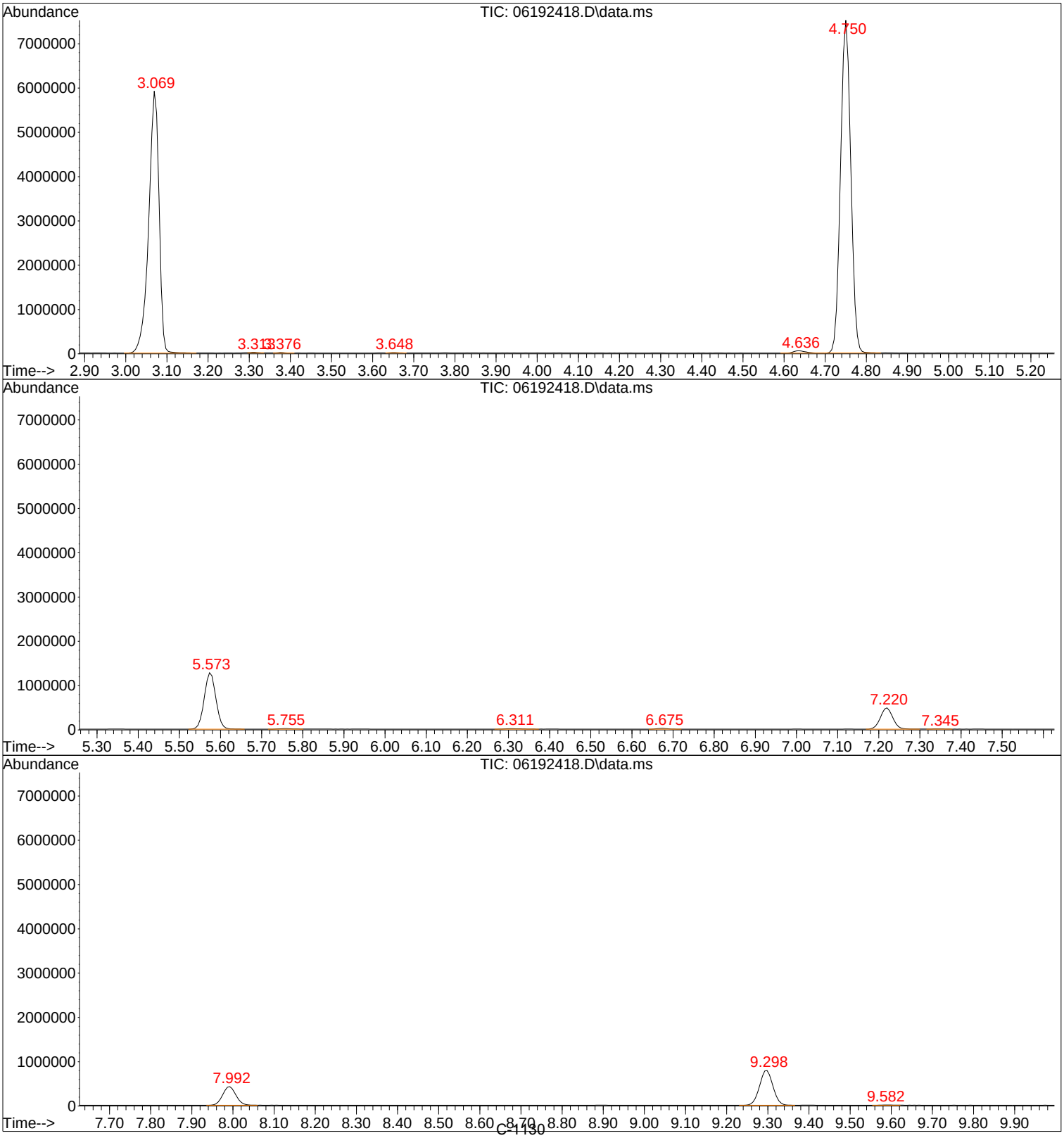
Sum of corrected areas: 29790115

LSC Report - Integrated Chromatogram

Data Path : I:\MS09\DATA\2024 06\19\
Data File : 06192418.D
Acq On : 19 Jun 2024 18:26
Operator : SC
Sample : P2402249-031 (100mL)
Misc : S37-06062402
ALS Vial : 6 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\19\\
Data File : 06192418.D
Acq On : 19 Jun 2024 18:266
Operator : SCC
Sample : P2402249-031 (100mL))
Misc : S37-060624022
ALS Vial : 6 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

						Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected

****

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202409.D Vial: 7
Acq On : 20 Jun 2024 14:01 Operator: SC
Sample : P2402249-032 (400mL) Inst : MS09
Misc : S37-06062402

6/20/24

Quant Time: Jun 20 15:37:37 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	170941	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	757507	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	174094	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	373043	12.279	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.24%				
57) Toluene-d8 (SS2)	12.43	98	855722	12.844	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.72%				
73) Bromofluorobenzene (SS3)	16.83	174	300198	12.479	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.84%				
Target Compounds							Qvalue
2) Propene	0.00	42	0	N.D. d			
3) Dichlorodifluoromethan...	3.38	85	21383	0.532	ng		99
4) Chloromethane	3.51	50	7614	0.277	ng		99
5) 1,2-Dichloro-1,1,2,2-t...	3.61	135	432	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	3.85	54	216	N.D.			
8) Bromomethane	4.02	94	268	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.28	45	22858	1.375	ng		74
11) Acetonitrile	0.00	41	0	N.D. d			
12) Acrolein	4.53	56	2733	0.222	ng		95
13) Acetone	4.63	58	64936	4.890	ng		100
14) Trichlorofluoromethane	4.75	101	356234	8.754	ng		99
15) 2-Propanol (Isopropanol)	4.85	45	4954	0.093	ng	#	1
16) Acrylonitrile	0.00	53	0	N.D. d			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.33	59	1025	N.D.			
19) Methylene Chloride	5.35	84	2548	0.136	ng		96
20) 3-Chloro-1-propene (Al...	5.45	41	288	N.D.			
21) Trichlorotrifluoroethane	5.58	151	12614	0.733	ng		95
22) Carbon Disulfide	5.60	76	82137	1.356	ng		98
23) trans-1,2-Dichloroethene	6.14	61	126	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	6.30	73	121	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D. d			
27) 2-Butanone (MEK)	6.67	72	5371	0.511	ng	#	88
28) cis-1,2-Dichloroethene	7.07	61	138	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.			
30) Ethyl Acetate	7.29	61	821	0.128	ng		91
31) n-Hexane	7.31	57	10028	0.357	ng		98
32) Chloroform	7.35	83	2631	0.079	ng		95
34) Tetrahydrofuran (THF)	7.79	72	703	0.073	ng	#	54
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	920	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	9.57	61	1132	No Calib		#	
40) 1-Butanol	8.81	56	3182	No Calib			
41) Benzene	8.89	78	11178	0.160	ng		96
42) Carbon Tetrachloride	9.06	117	2911	0.090	ng		96
43) Cyclohexane	9.22	84	3832	0.169	ng		97
44) tert-Amyl Methyl Ether	9.63	73	107	N.D.			
45) 1,2-Dichloropropane	9.85	63	158	N.D.			
46) Bromodichloromethane	10.08	83	516	N.D.			
47) Trichloroethene	10.14	130	814	N.D.			
48) 1,4-Dioxane	10.14	88	1420	0.110	ng		90
49) 2,2,4-Trimethylpentane...	10.24	57	979	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202409.D Vial: 7
Acq On : 20 Jun 2024 14:01 Operator: SC
Sample : P2402249-032 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 20 15:37:37 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

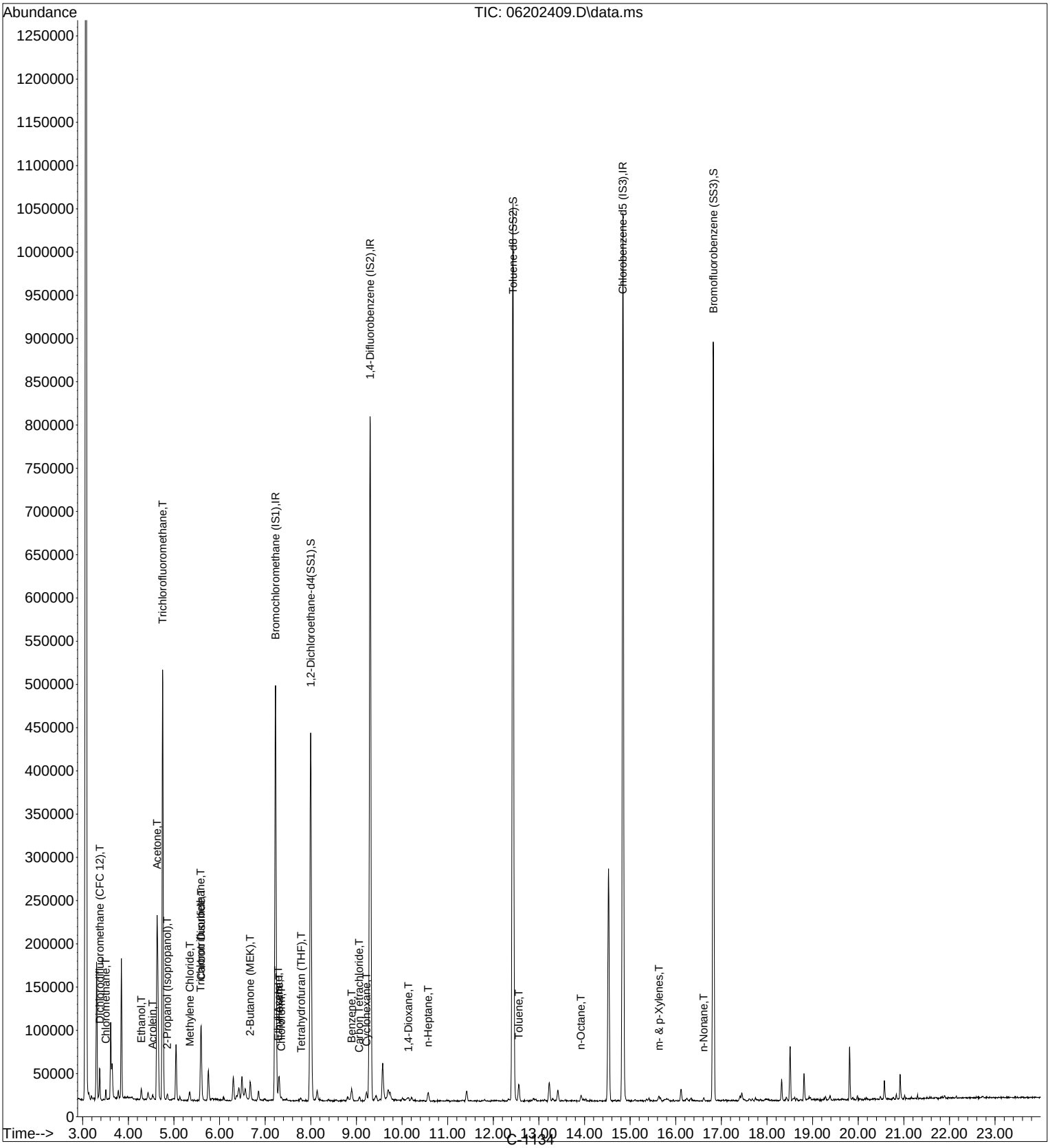
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	10.57	71	2351	0.159 ng	94
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
58) Toluene	12.56	91	17331	0.249 ng	99
59) 2-Hexanone	12.93	43	2080	N.D.	
60) Dibromochloromethane	13.07	129	651	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	13.78	43	564	N.D.	
63) n-Octane	13.92	57	1186	0.082 ng	87
64) Tetrachloroethene	14.03	166	554	N.D.	
65) Chlorobenzene	14.90	112	1045	N.D.	
66) Ethylbenzene	15.41	91	2882	N.D.	
67) m- & p-Xylenes	15.64	91	5661	0.085 ng	98
68) Bromoform	15.67	173	775	N.D.	
69) Styrene	16.11	104	666	N.D.	
70) o-Xylene	16.24	91	2420	N.D.	
71) n-Nonane	16.61	43	2054	0.054 ng	85
72) 1,1,2,2-Tetrachloroethane	16.21	83	578	N.D.	
74) Cumene	17.04	105	1304	N.D.	
75) alpha-Pinene	17.52	93	550	N.D.	
76) n-Propylbenzene	17.67	91	2091	N.D.	
77) 3-Ethyltoluene	17.04	105	1304	No Calib	
78) 4-Ethyltoluene	17.87	105	1249	N.D.	
79) 1,3,5-Trimethylbenzene	17.96	105	874	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.04	105	1304	No Calib	
82) 1,2,4-Trimethylbenzene	18.43	105	1446	N.D.	
83) n-Decane	0.00	58	0	N.D.	
84) Benzyl Chloride	18.56	91	873	N.D.	
85) 1,3-Dichlorobenzene	18.58	146	837	N.D.	
86) 1,4-Dichlorobenzene	18.65	146	1102	N.D.	
87) sec-Butylbenzene	18.74	105	1395	N.D.	
88) 4-Isopropyltoluene (p-...	18.92	119	2720	N.D.	
89) 1,2,3-Trimethylbenzene	17.04	105	1304	No Calib	
90) 1,2-Dichlorobenzene	19.03	146	882	N.D.	
91) d-Limonene	19.08	68	289	N.D.	
92) 1,2-Dibromo-3-Chloropr...	19.51	157	241	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	1712	N.D.	
95) Naphthalene	20.94	128	2538	N.D.	
96) n-Dodecane	0.00	58	0	N.D.	
97) Hexachlorobutadiene	21.30	225	920	N.D.	
98) Cyclohexanone	15.40	55	112	No Calib #	
99) tert-Butylbenzene	18.42	119	1021	N.D.	
100) n-Butylbenzene	19.39	91	1567	N.D.	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202409.D Vial: 7
Acq On : 20 Jun 2024 14:01 Operator: SC
Sample : P2402249-032 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 20 15:37:37 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202409.D Vial: 7
Acq On : 20 Jun 2024 14:01 Operator: SC
Sample : P2402249-032 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 20 15:37:37 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/20/24

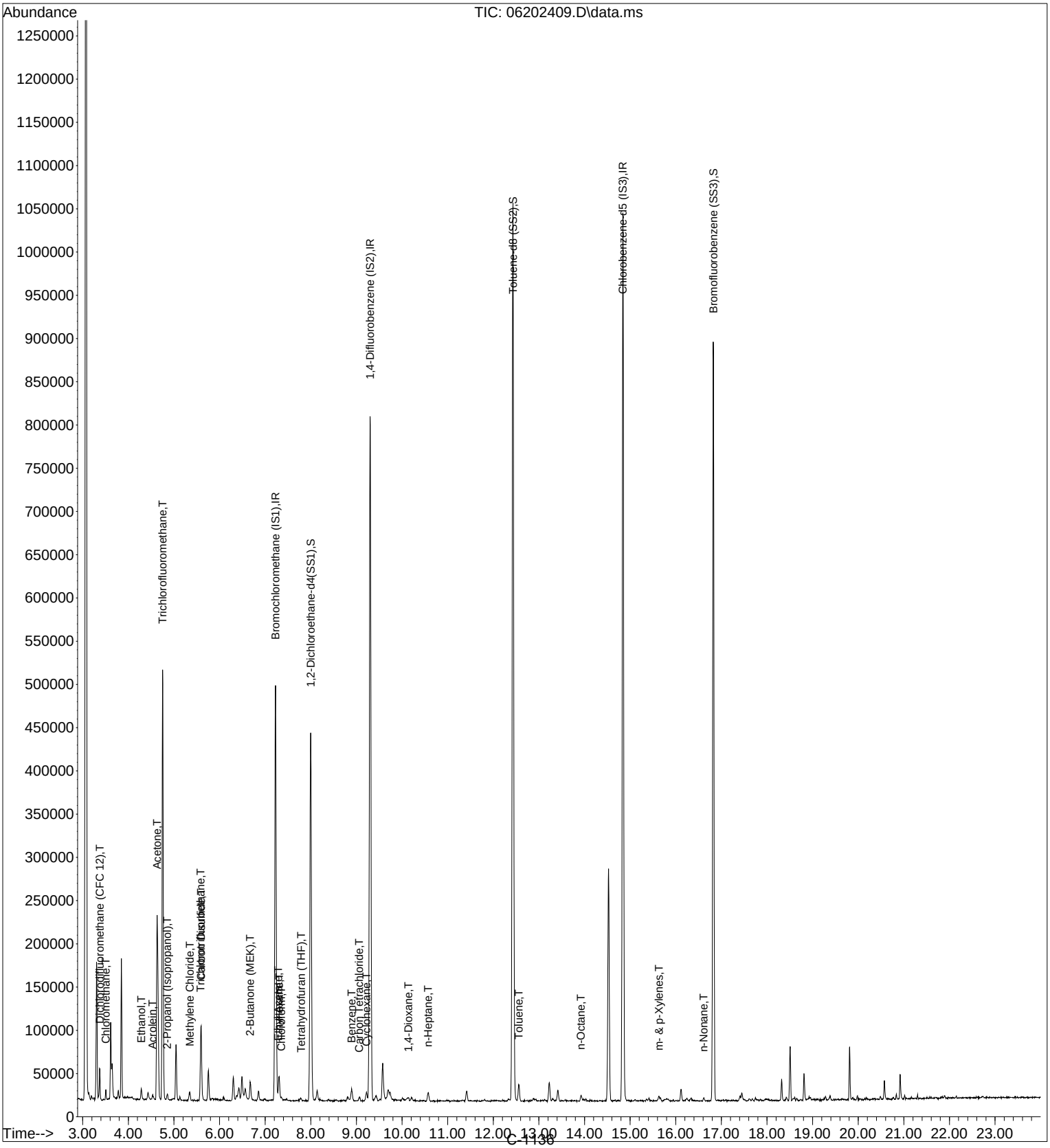
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	170941	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	757507	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	174094	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	373043	12.279	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.24%				
57) Toluene-d8 (SS2)	12.43	98	855722	12.844	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.72%				
73) Bromofluorobenzene (SS3)	16.83	174	300198	12.479	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.84%				
Target Compounds							Qvalue
3) Dichlorodifluoromethan...	3.38	85	21383	0.532	ng		99
4) Chloromethane	3.51	50	7614	0.277	ng		99
10) Ethanol	4.28	45	22858	1.375	ng		74
12) Acrolein	4.53	56	2733	0.222	ng		95
13) Acetone	4.63	58	64936	4.890	ng		100
14) Trichlorofluoromethane	4.75	101	356234	8.754	ng		99
15) 2-Propanol (Isopropanol)	4.85	45	4954	0.093	ng	#	1
19) Methylene Chloride	5.35	84	2548	0.136	ng		96
21) Trichlorotrifluoroethane	5.58	151	12614	0.733	ng		95
22) Carbon Disulfide	5.60	76	82137	1.356	ng		98
27) 2-Butanone (MEK)	6.67	72	5371	0.511	ng	#	88
30) Ethyl Acetate	7.29	61	821	0.128	ng		91
31) n-Hexane	7.31	57	10028	0.357	ng		98
32) Chloroform	7.35	83	2631	0.079	ng		95
34) Tetrahydrofuran (THF)	7.79	72	703	0.073	ng	#	54
41) Benzene	8.89	78	11178	0.160	ng		96
42) Carbon Tetrachloride	9.06	117	2911	0.090	ng		96
43) Cyclohexane	9.22	84	3832	0.169	ng		97
48) 1,4-Dioxane	10.14	88	1420	0.110	ng		90
51) n-Heptane	10.57	71	2351	0.159	ng		94
58) Toluene	12.56	91	17331	0.249	ng		99
63) n-Octane	13.92	57	1186	0.082	ng		87
67) m- & p-Xylenes	15.64	91	5661	0.085	ng		98
71) n-Nonane	16.61	43	2054	0.054	ng		85

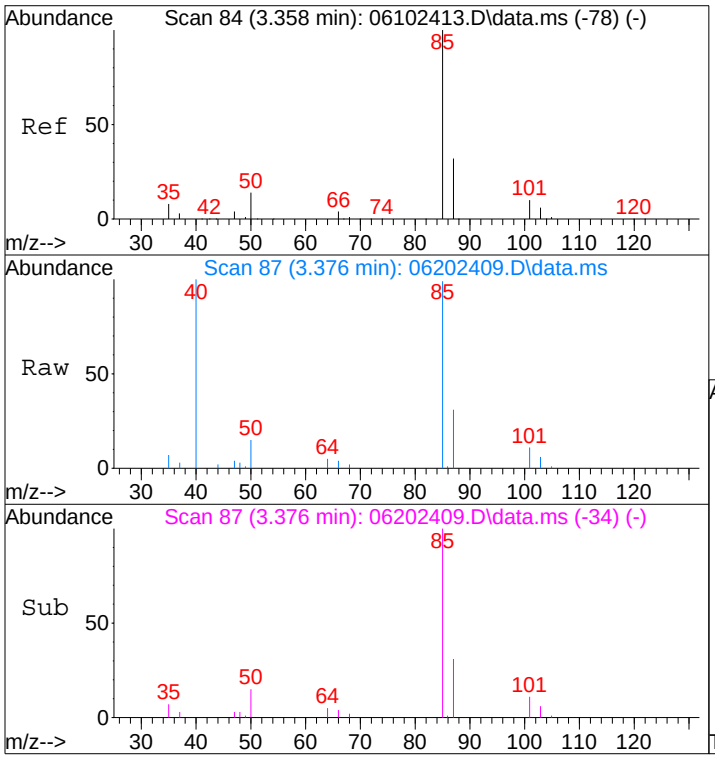
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202409.D Vial: 7
Acq On : 20 Jun 2024 14:01 Operator: SC
Sample : P2402249-032 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 20 15:37:37 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

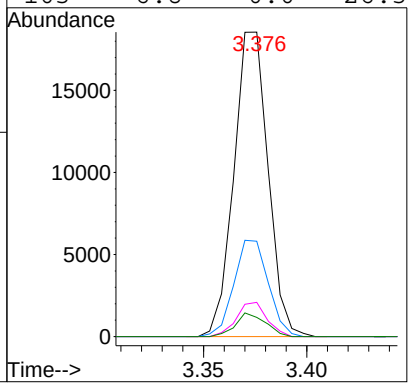


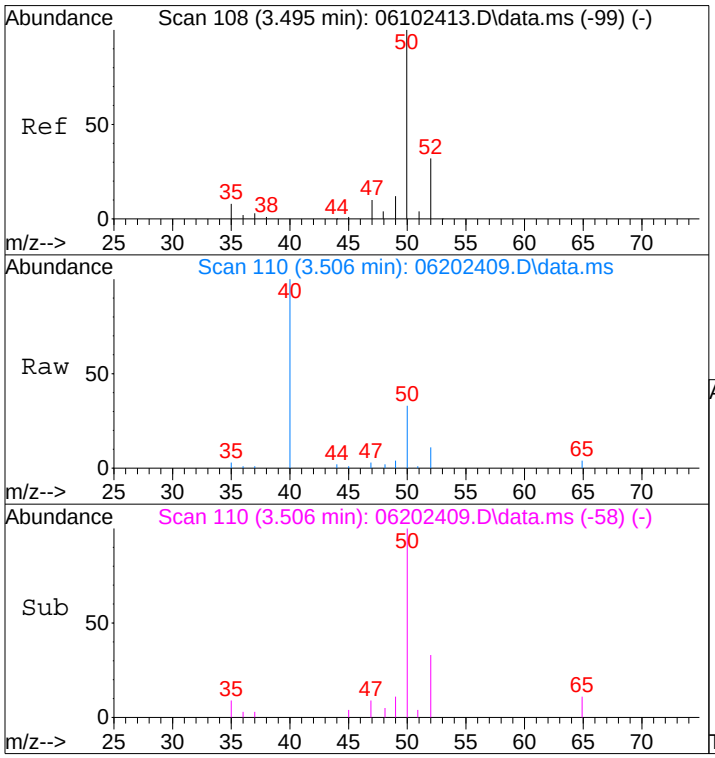


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.53 ng
RT: 3.38 min Scan# 87
Delta R.T. 0.054 min
Lab File: 06202409.D
Acq: 20 Jun 2024 14:01

Tgt Ion: 85 Resp: 21383

Ion	Ratio	Lower	Upper
85	100		
87	31.8	12.2	52.2
101	10.1	0.0	29.8
103	6.8	0.0	26.3

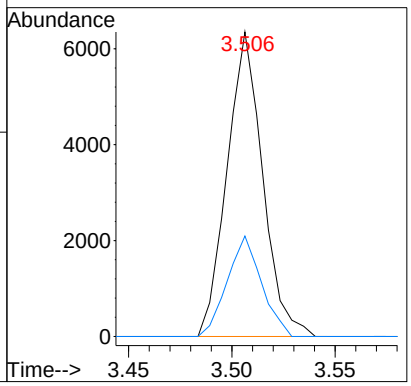


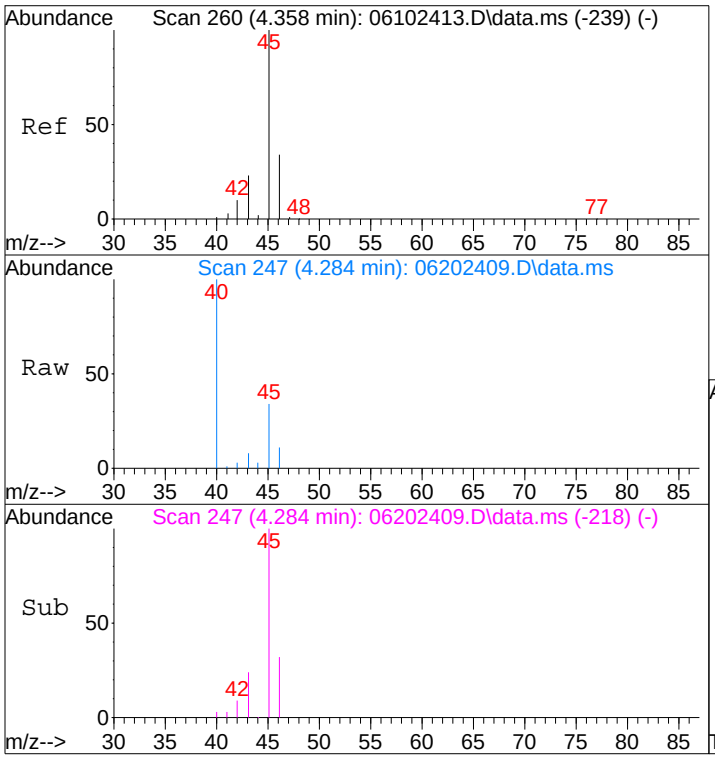


#4
Chloromethane
Concen: 0.28 ng
RT: 3.51 min Scan# 110
Delta R.T. 0.044 min
Lab File: 06202409.D
Acq: 20 Jun 2024 14:01

Tgt Ion: 50 Resp: 7614

Ion	Ratio	Lower	Upper
50	100		
52	31.8	12.4	52.4

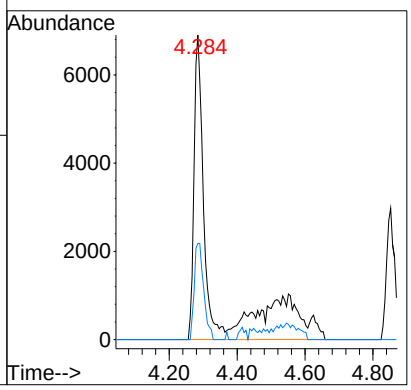


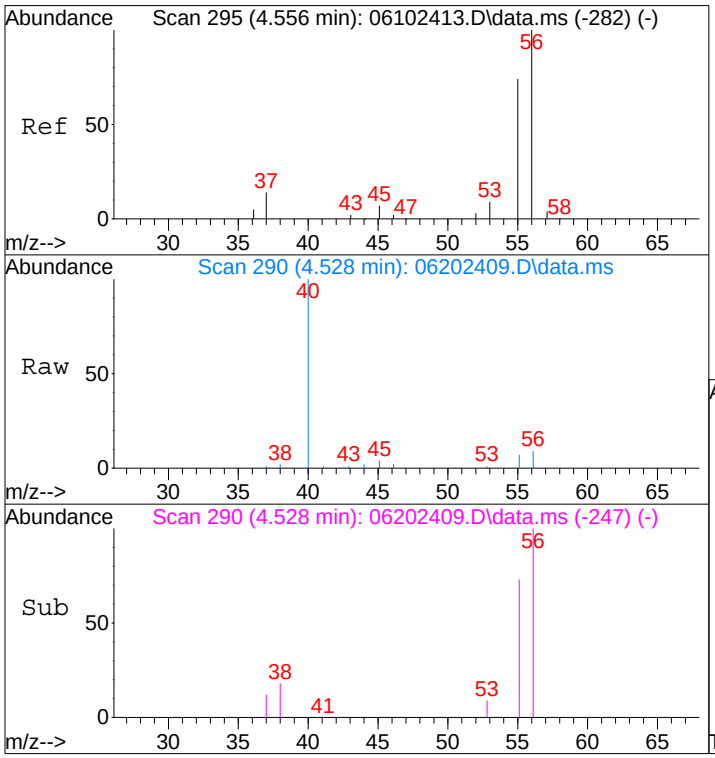


#10
Ethanol
Concen: 1.38 ng
RT: 4.28 min Scan# 247
Delta R.T. -0.083 min
Lab File: 06202409.D
Acq: 20 Jun 2024 14:01

Tgt Ion: 45 Resp: 22858

Ion	Ratio	Lower	Upper
45	100		
46	18.4	13.5	53.5

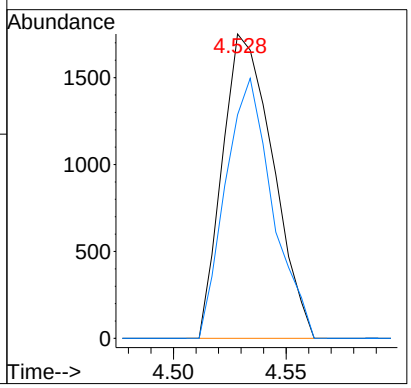


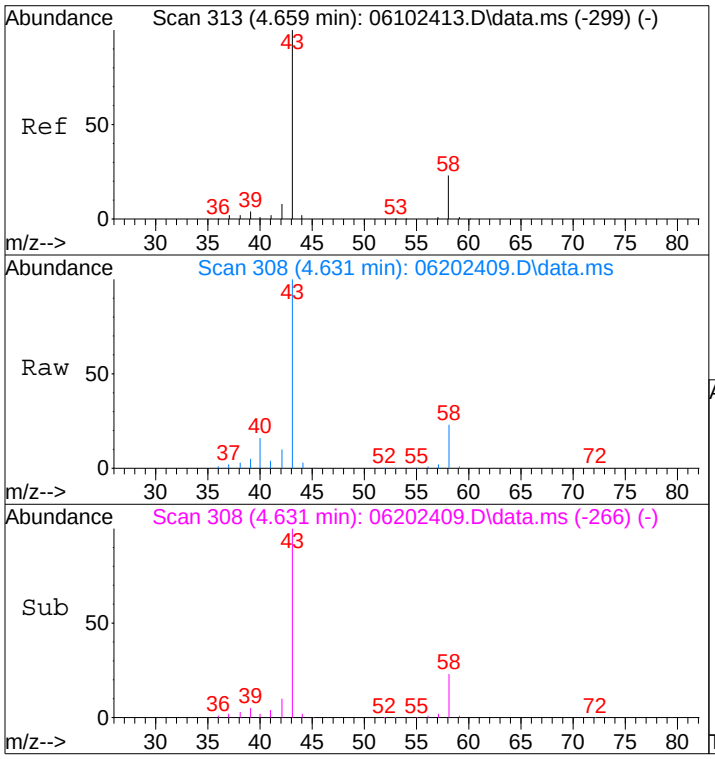


#12
Acrolein
Concen: 0.22 ng
RT: 4.53 min Scan# 290
Delta R.T. -0.007 min
Lab File: 06202409.D
Acq: 20 Jun 2024 14:01

Tgt Ion: 56 Resp: 2733

Ion	Ratio	Lower	Upper
56	100		
55	79.7	55.5	95.5

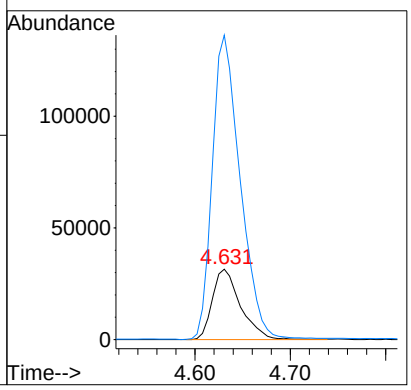


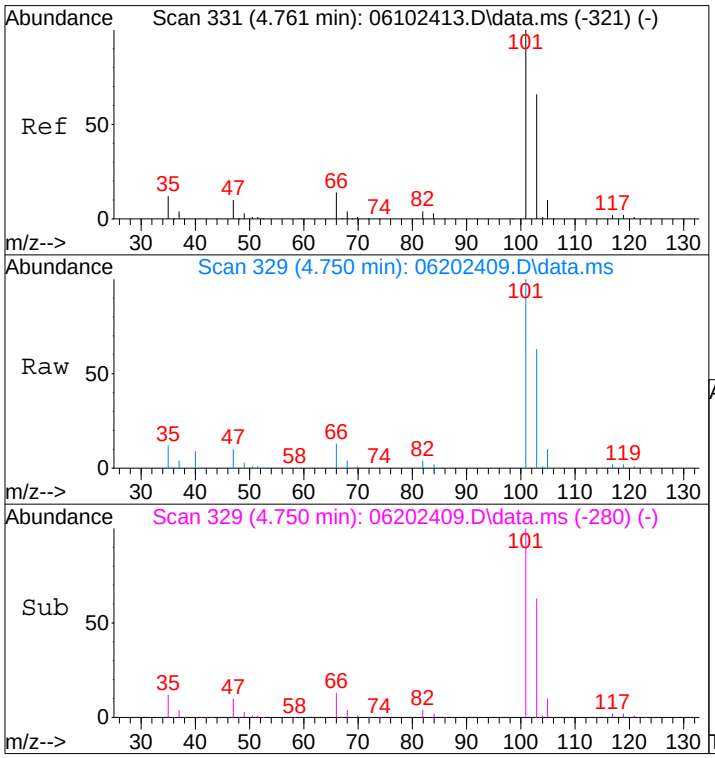


#13
Acetone
Concen: 4.89 ng
RT: 4.63 min Scan# 308
Delta R.T. -0.011 min
Lab File: 06202409.D
Acq: 20 Jun 2024 14:01

Tgt Ion: 58 Resp: 64936

Ion	Ratio	Lower	Upper
58	100		
43	431.4	400.7	460.7

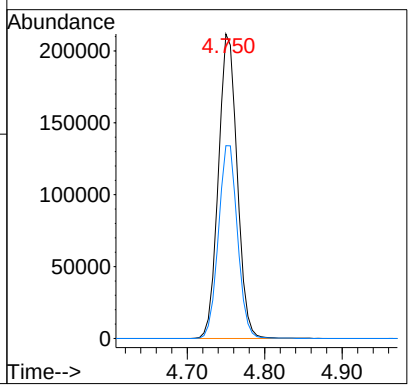


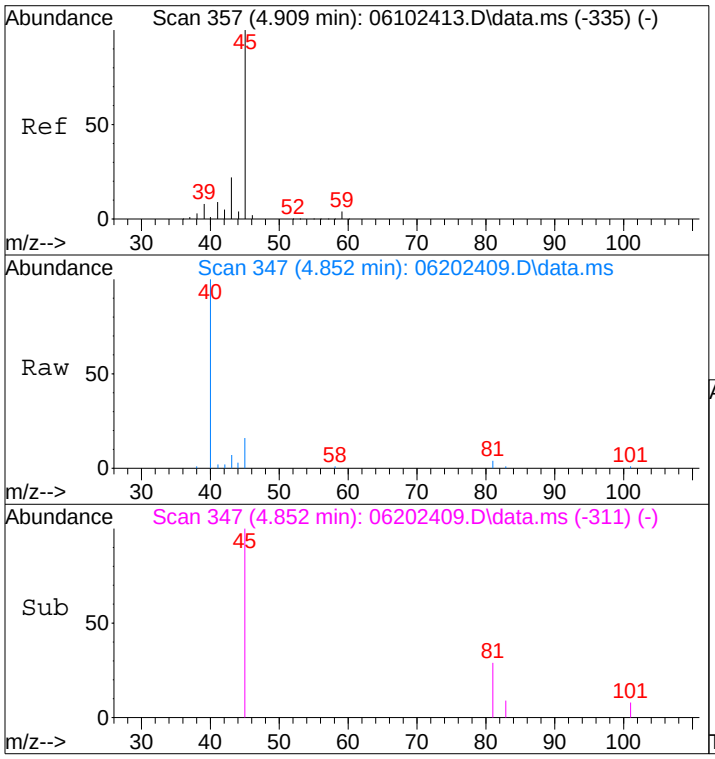


#14
Trichlorofluoromethane
Concen: 8.75 ng
RT: 4.75 min Scan# 329
Delta R.T. 0.029 min
Lab File: 06202409.D
Acq: 20 Jun 2024 14:01

Tgt Ion:101 Resp: 356234

Ion	Ratio	Lower	Upper
101	100		
103	64.3	44.9	84.9

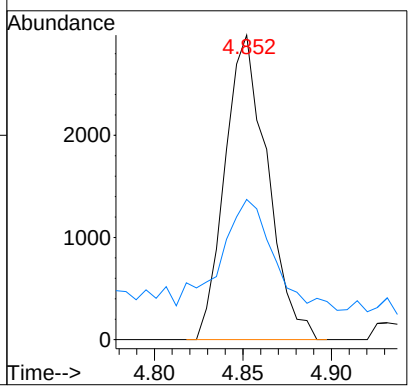


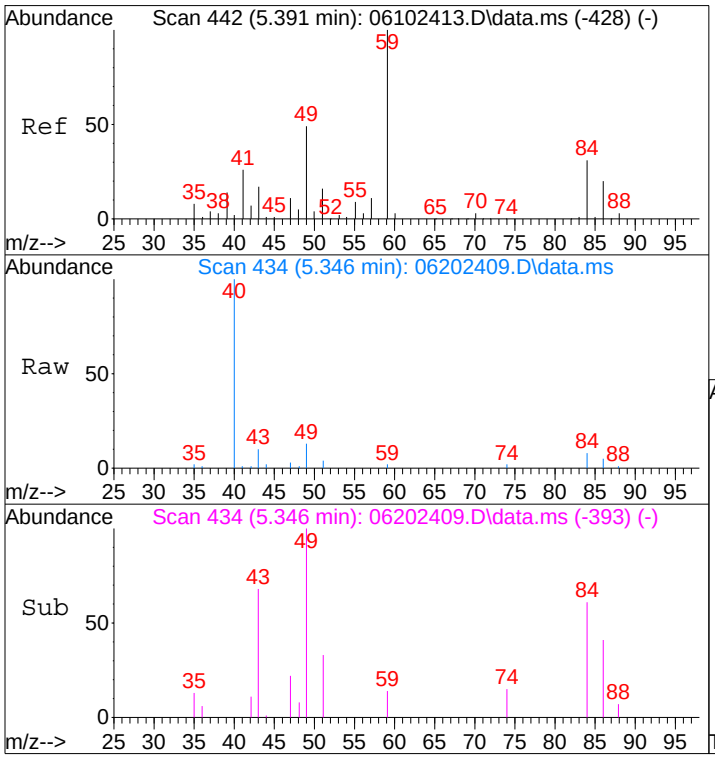


#15
2-Propanol (Isopropanol)
Concen: 0.09 ng
RT: 4.85 min Scan# 347
Delta R.T. -0.048 min
Lab File: 06202409.D
Acq: 20 Jun 2024 14:01

Tgt Ion: 45 Resp: 4954

Ion	Ratio	Lower	Upper
45	100		
43	70.2	2.5	42.5#

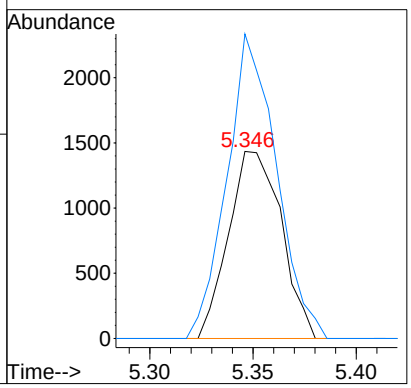


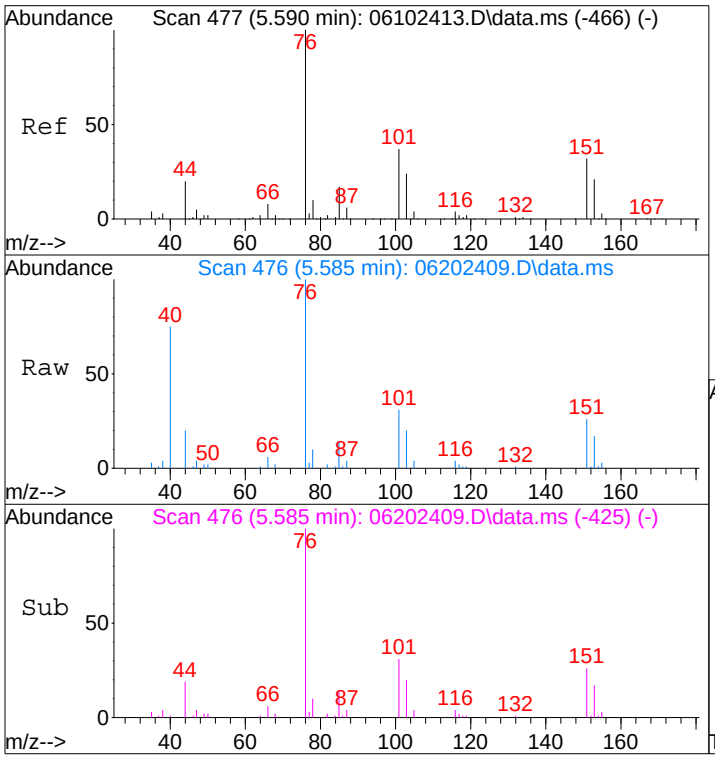


#19
Methylene Chloride
Concen: 0.14 ng
RT: 5.35 min Scan# 434
Delta R.T. -0.015 min
Lab File: 06202409.D
Acq: 20 Jun 2024 14:01

Tgt Ion: 84 Resp: 2548

Ion	Ratio	Lower	Upper
84	100		
49	152.6	132.9	182.9

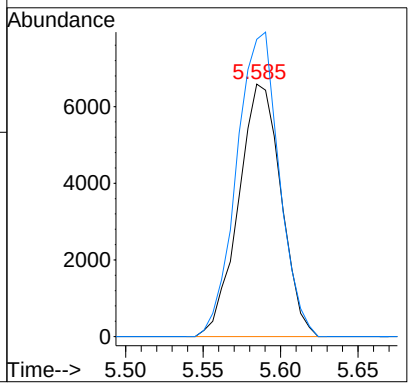


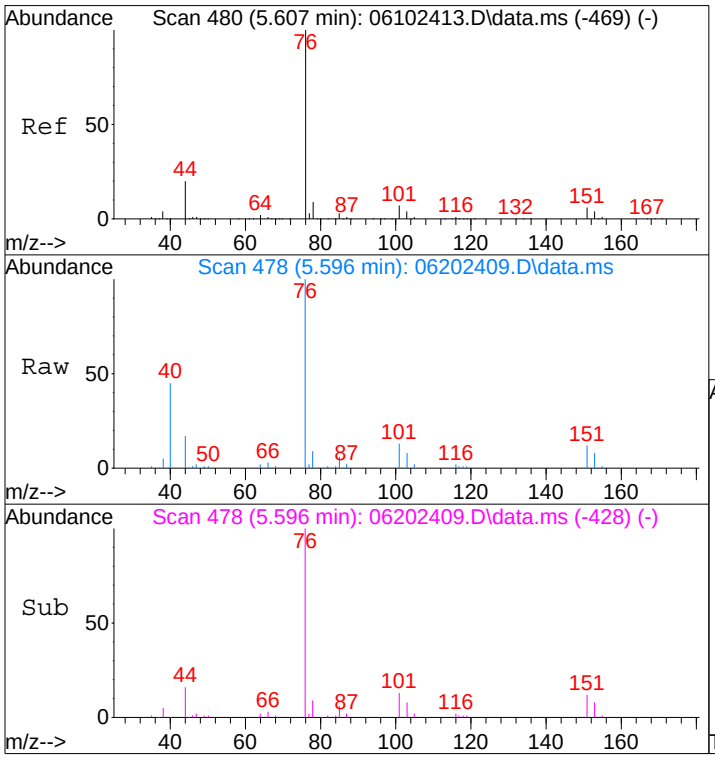


#21
Trichlorotrifluoroethane
Concen: 0.73 ng
RT: 5.58 min Scan# 476
Delta R.T. 0.038 min
Lab File: 06202409.D
Acq: 20 Jun 2024 14:01

Tgt Ion:151 Resp: 12614

Ion	Ratio	Lower	Upper
151	100		
101	120.4	95.0	135.0

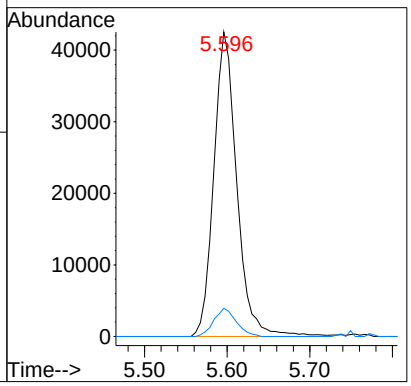


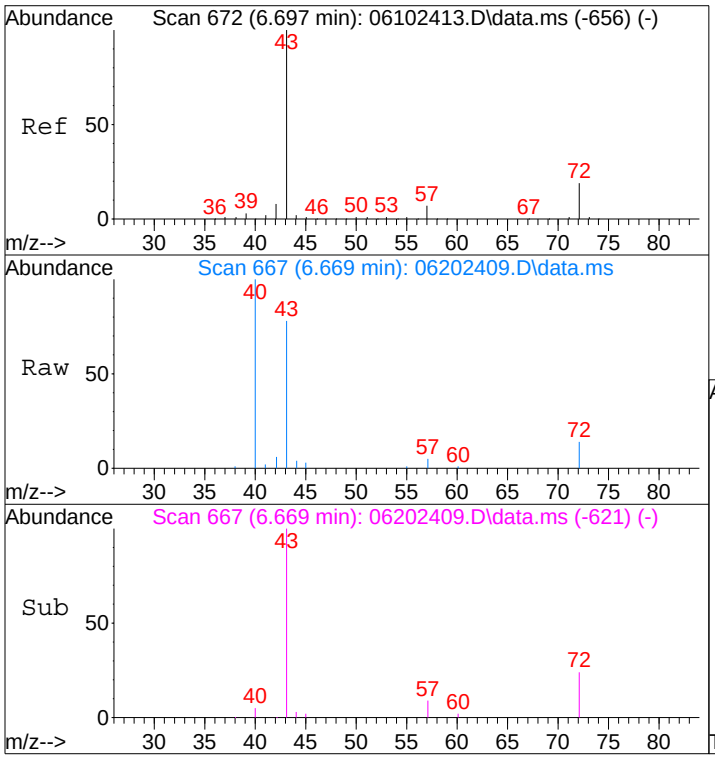


#22
Carbon Disulfide
Concen: 1.36 ng
RT: 5.60 min Scan# 478
Delta R.T. 0.033 min
Lab File: 06202409.D
Acq: 20 Jun 2024 14:01

Tgt Ion: 76 Resp: 82137

Ion	Ratio	Lower	Upper
76	100		
78	9.0	0.0	29.6

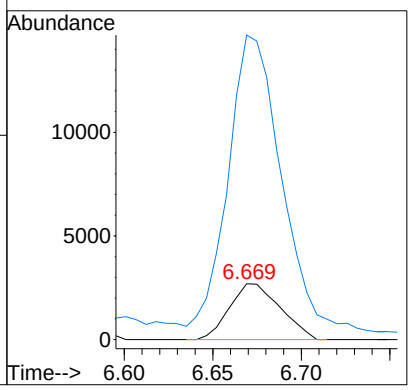


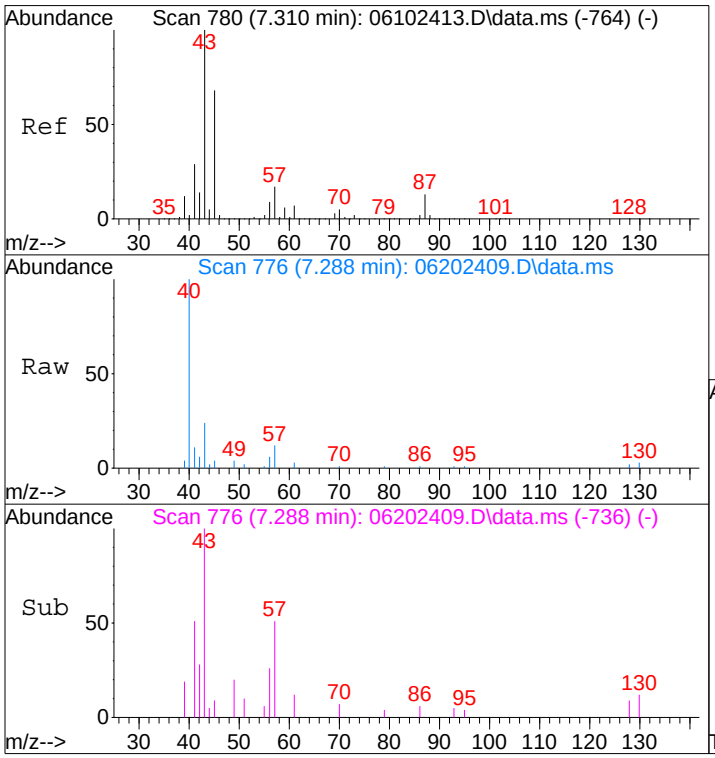


#27
2-Butanone (MEK)
Concen: 0.51 ng
RT: 6.67 min Scan# 667
Delta R.T. 0.011 min
Lab File: 06202409.D
Acq: 20 Jun 2024 14:01

Tgt Ion: 72 Resp: 5371

Ion	Ratio	Lower	Upper
72	100		
43	561.7	506.8	546.8#

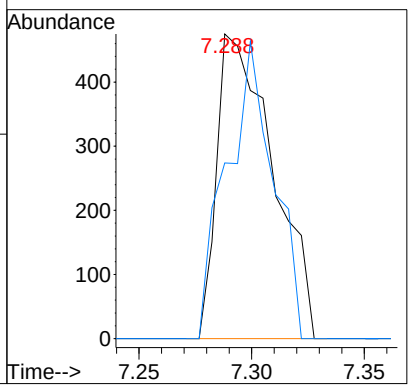


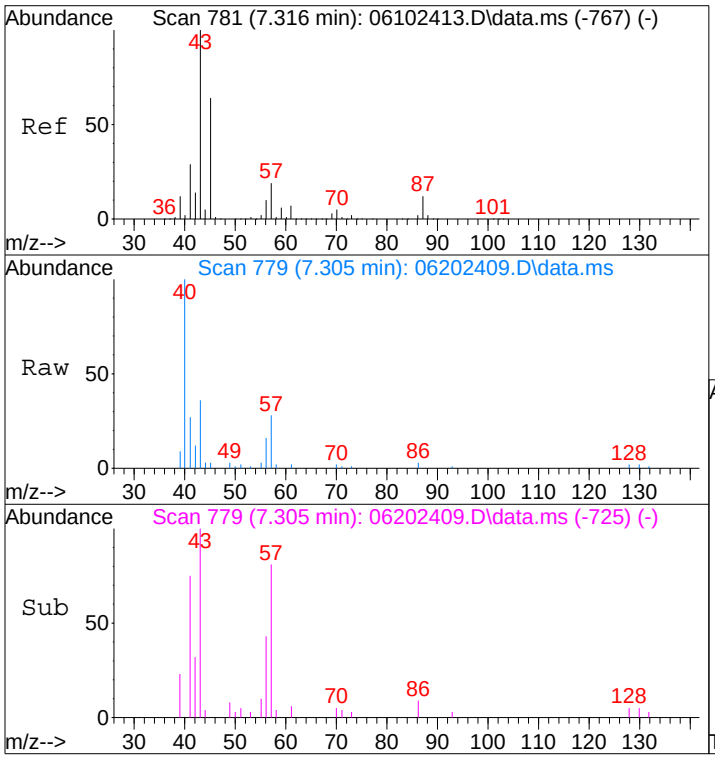


#30
Ethyl Acetate
Concen: 0.13 ng
RT: 7.29 min Scan# 776
Delta R.T. 0.029 min
Lab File: 06202409.D
Acq: 20 Jun 2024 14:01

Tgt Ion: 61 Resp: 821

Ion	Ratio	Lower	Upper
61	100		
70	81.4	53.5	93.5

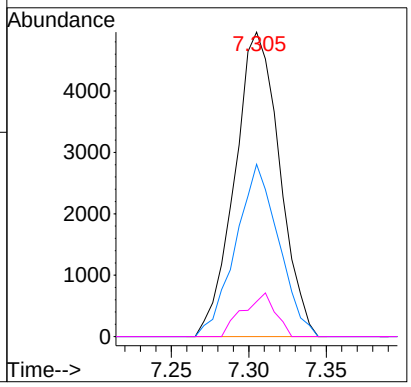


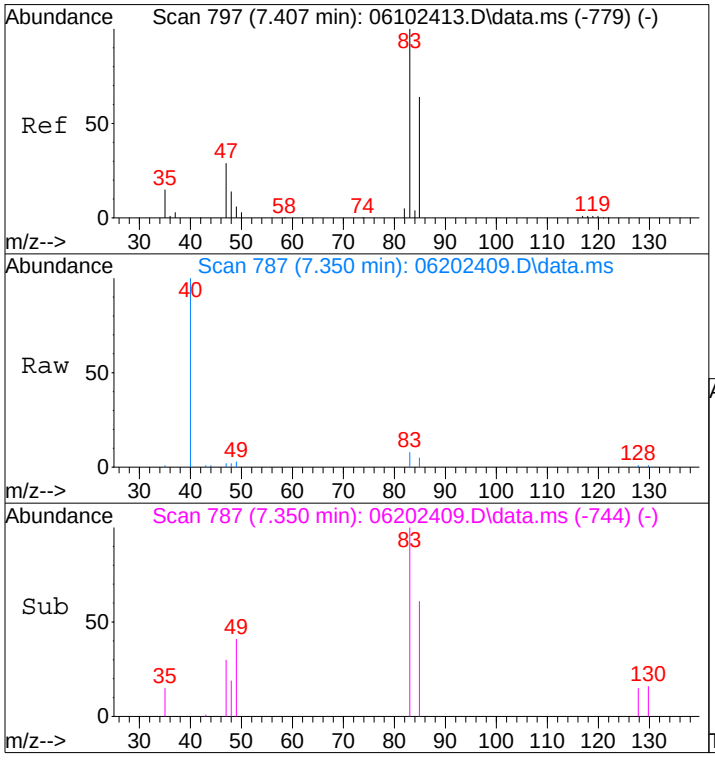


#31
n-Hexane
Concen: 0.36 ng
RT: 7.31 min Scan# 779
Delta R.T. 0.057 min
Lab File: 06202409.D
Acq: 20 Jun 2024 14:01

Tgt Ion: 57 Resp: 10028

Ion	Ratio	Lower	Upper
57	100		
56	54.3	42.5	63.7
86	10.3	9.5	14.3

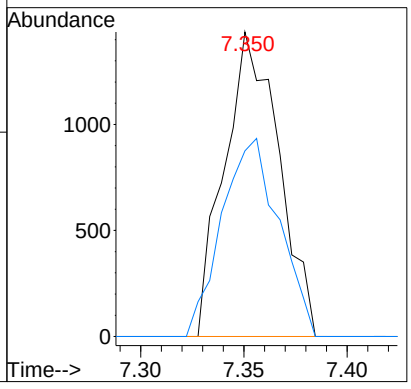


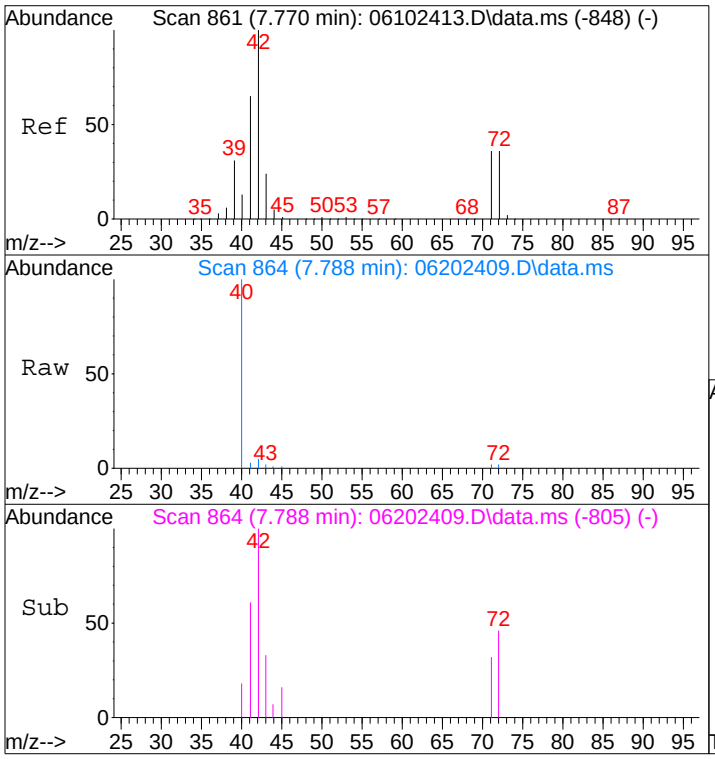


#32
Chloroform
Concen: 0.08 ng
RT: 7.35 min Scan# 787
Delta R.T. -0.004 min
Lab File: 06202409.D
Acq: 20 Jun 2024 14:01

Tgt Ion: 83 Resp: 2631

Ion	Ratio	Lower	Upper
83	100		
85	68.2	44.4	84.4

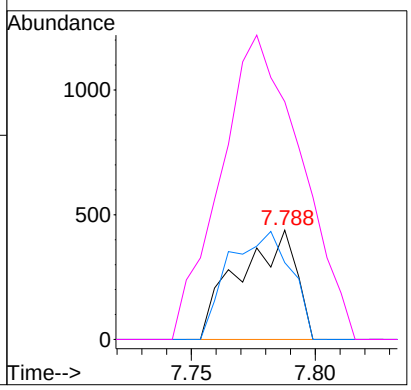


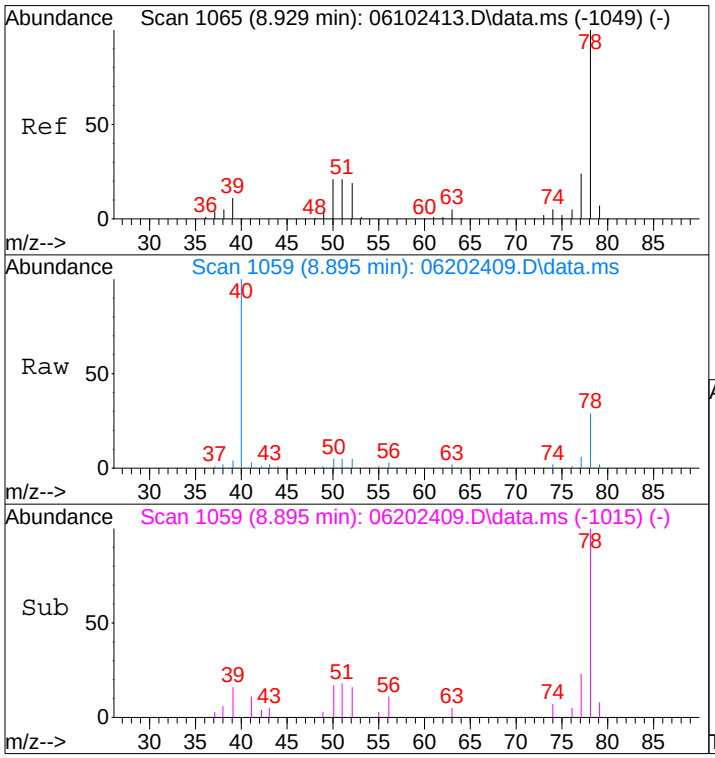


#34
Tetrahydrofuran (THF)
Concen: 0.07 ng
RT: 7.79 min Scan# 864
Delta R.T. 0.085 min
Lab File: 06202409.D
Acq: 20 Jun 2024 14:01

Tgt Ion: 72 Resp: 703

Ion	Ratio	Lower	Upper
72	100		
71	107.0	79.4	119.4
42	392.5	260.8	300.8#

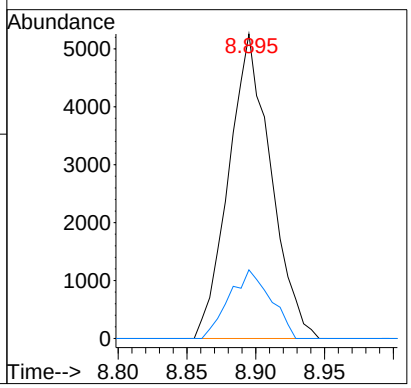


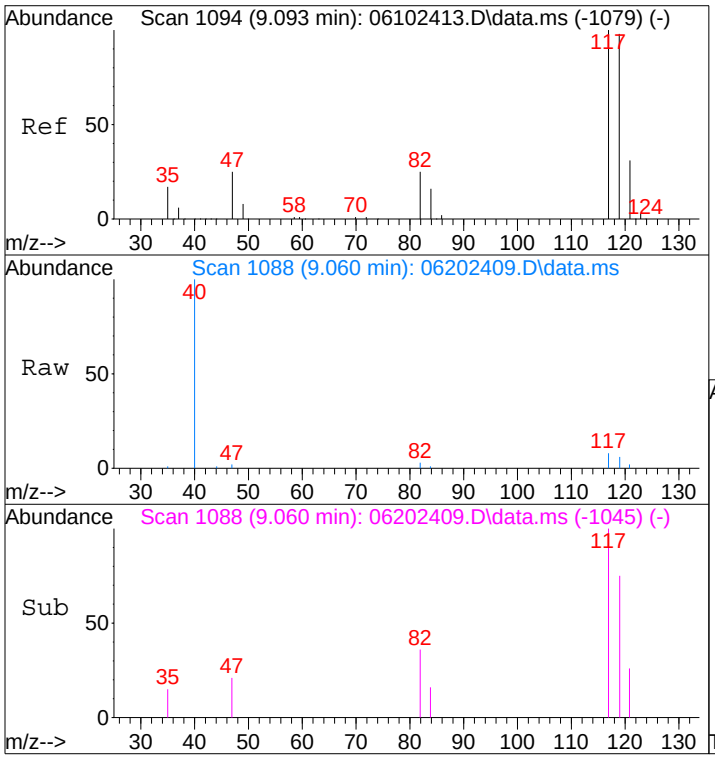


#41
Benzene
Concen: 0.16 ng
RT: 8.89 min Scan# 1059
Delta R.T. -0.002 min
Lab File: 06202409.D
Acq: 20 Jun 2024 14:01

Tgt Ion: 78 Resp: 11178

Ion	Ratio	Lower	Upper
78	100		
77	22.3	4.0	44.0

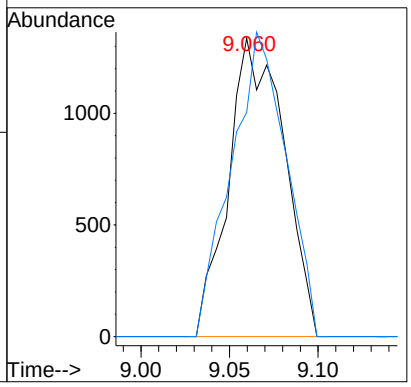


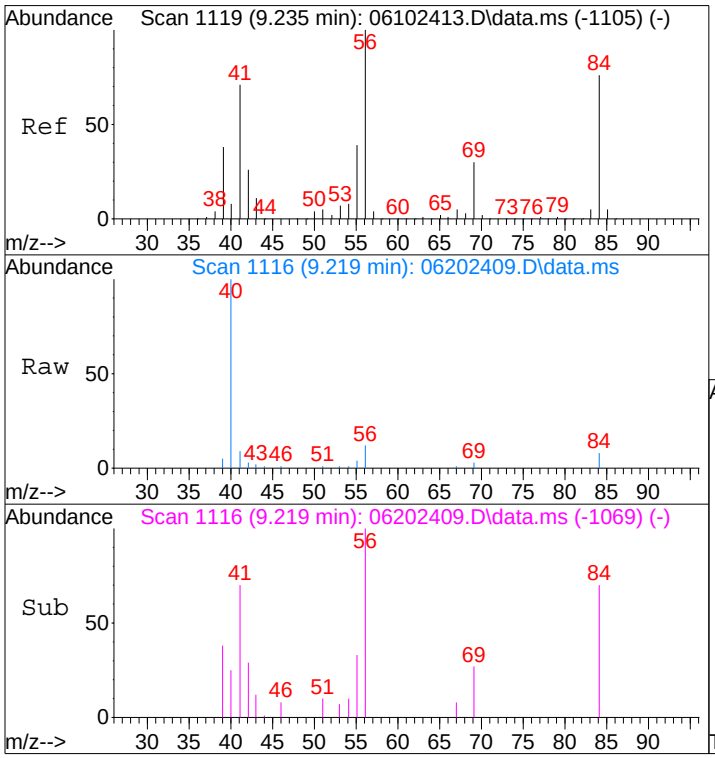


#42
Carbon Tetrachloride
Concen: 0.09 ng
RT: 9.06 min Scan# 1088
Delta R.T. -0.007 min
Lab File: 06202409.D
Acq: 20 Jun 2024 14:01

Tgt Ion:117 Resp: 2911

Ion	Ratio	Lower	Upper
117	100		
119	100.8	77.3	117.3

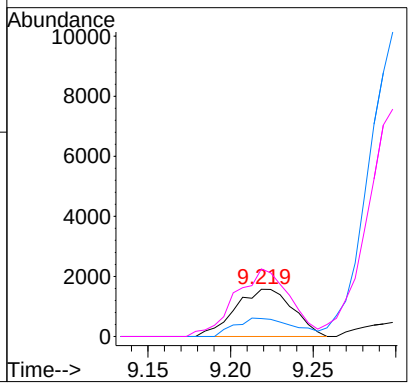


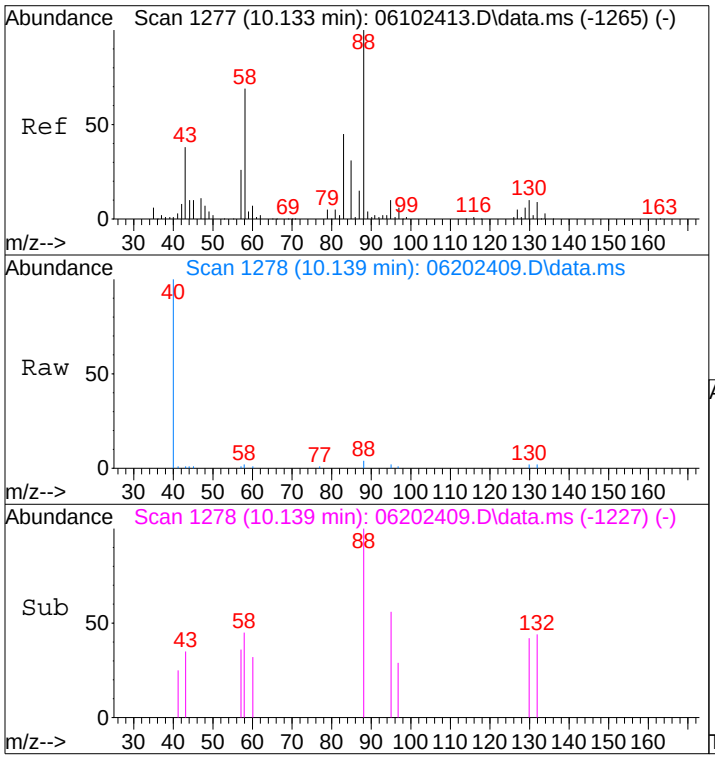


#43
Cyclohexane
Concen: 0.17 ng
RT: 9.22 min Scan# 1116
Delta R.T. 0.016 min
Lab File: 06202409.D
Acq: 20 Jun 2024 14:01

Tgt Ion: 84 Resp: 3832

Ion	Ratio	Lower	Upper
84	100		
69	39.2	18.8	58.8
56	135.6	111.5	151.5

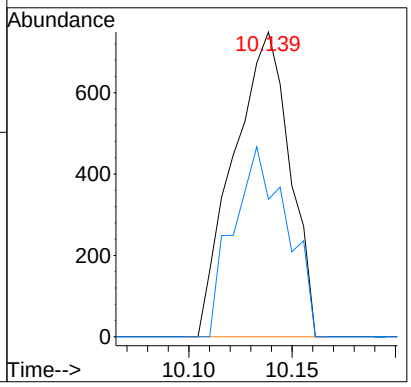


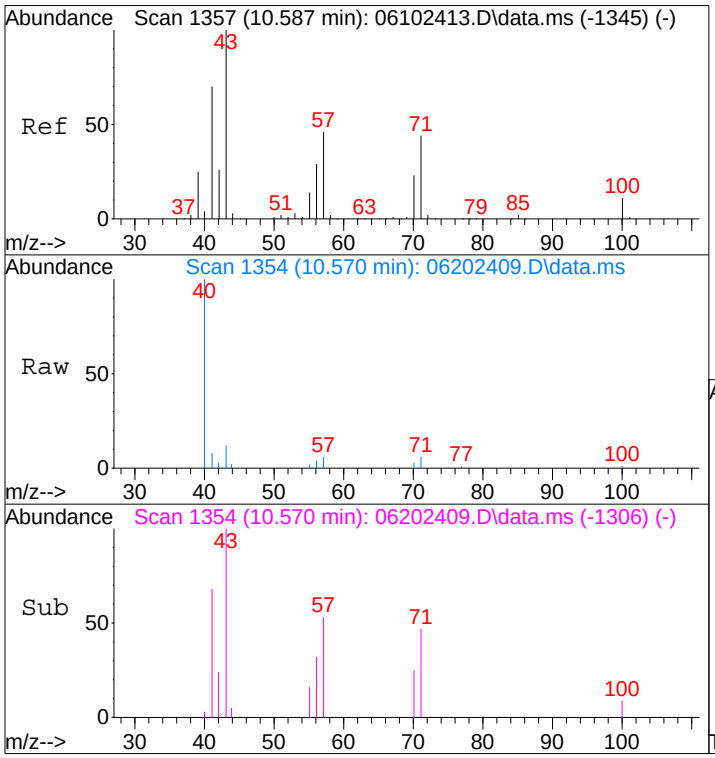


#48
1,4-Dioxane
Concen: 0.11 ng
RT: 10.14 min Scan# 1278
Delta R.T. 0.038 min
Lab File: 06202409.D
Acq: 20 Jun 2024 14:01

Tgt Ion: 88 Resp: 1420

Ion	Ratio	Lower	Upper
88	100		
58	59.4	47.6	87.6

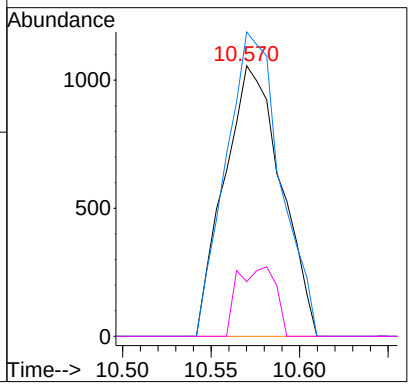


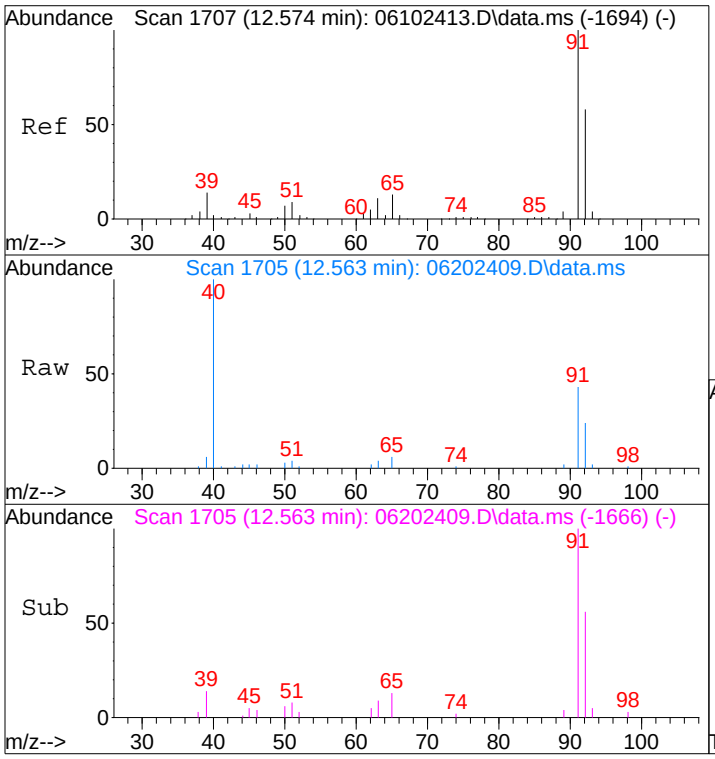


#51
n-Heptane
Concen: 0.16 ng
RT: 10.57 min Scan# 1354
Delta R.T. 0.024 min
Lab File: 06202409.D
Acq: 20 Jun 2024 14:01

Tgt Ion: 71 Resp: 2351

Ion	Ratio	Lower	Upper
71	100		
57	108.3	83.9	123.9
100	17.4	4.8	44.8

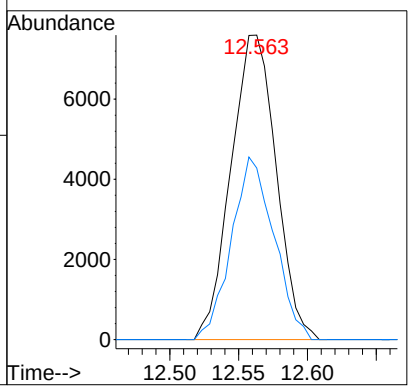


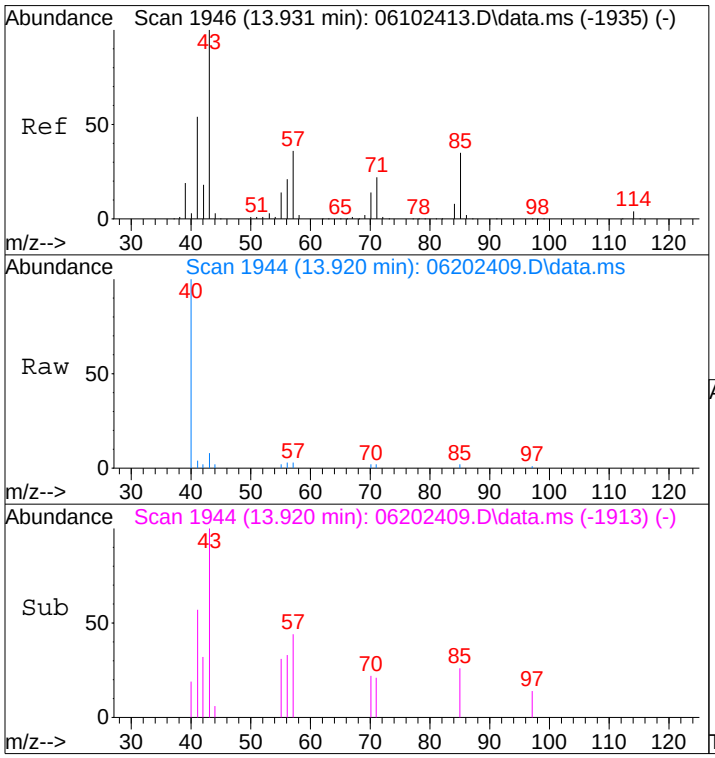


#58
Toluene
Concen: 0.25 ng
RT: 12.56 min Scan# 1705
Delta R.T. -0.028 min
Lab File: 06202409.D
Acq: 20 Jun 2024 14:01

Tgt Ion: 91 Resp: 17331

Ion	Ratio	Lower	Upper
91	100		
92	56.5	37.4	77.4

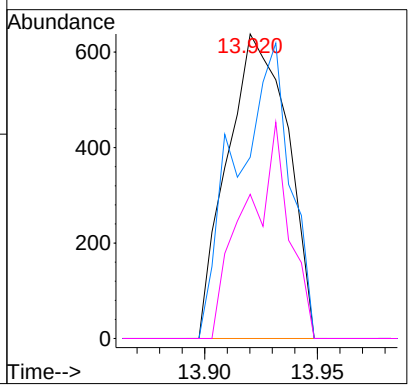


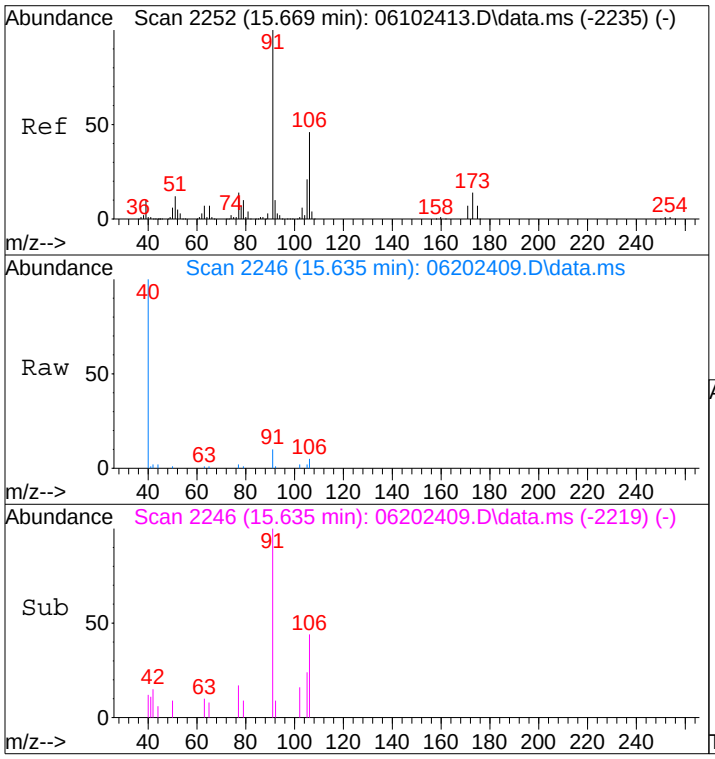


#63
n-Octane
Concen: 0.08 ng
RT: 13.92 min Scan# 1944
Delta R.T. -0.023 min
Lab File: 06202409.D
Acq: 20 Jun 2024 14:01

Tgt Ion: 57 Resp: 1186

Ion	Ratio	Lower	Upper
57	100		
85	87.1	79.8	119.6
71	51.1	49.0	73.4

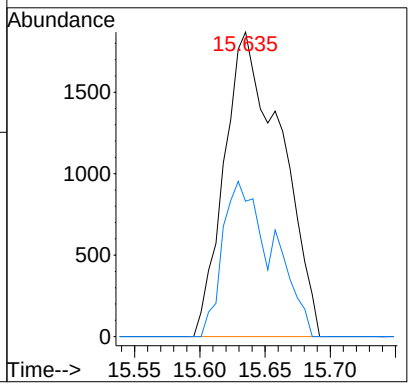


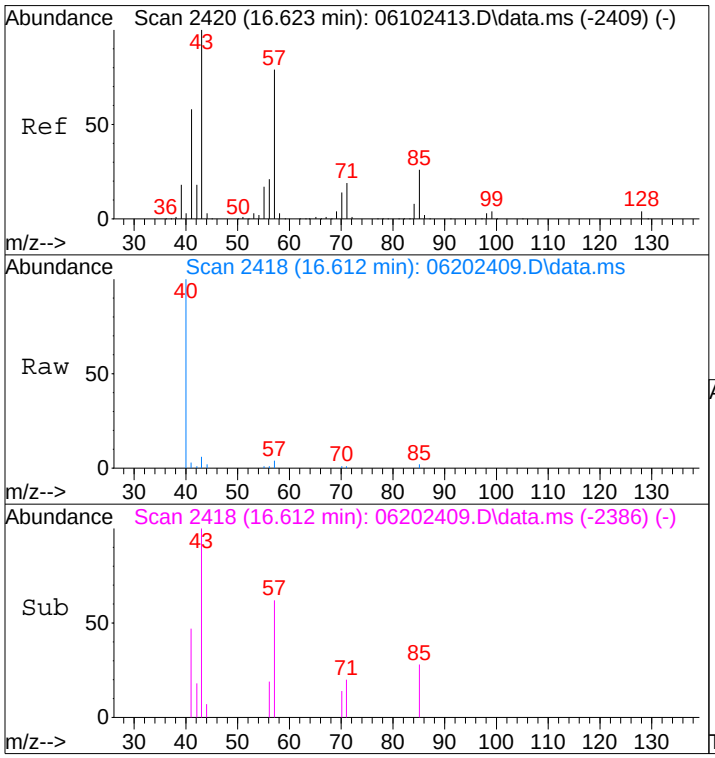


#67
m- & p-Xylenes
Concen: 0.08 ng
RT: 15.64 min Scan# 2246
Delta R.T. -0.045 min
Lab File: 06202409.D
Acq: 20 Jun 2024 14:01

Tgt Ion: 91 Resp: 5661

Ion	Ratio	Lower	Upper
91	100		
106	44.8	25.9	65.9

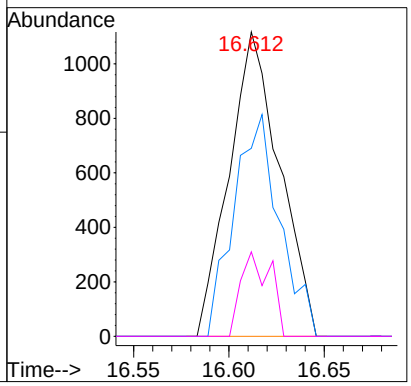




#71
n-Nonane
Concen: 0.05 ng
RT: 16.61 min Scan# 2418
Delta R.T. -0.017 min
Lab File: 06202409.D
Acq: 20 Jun 2024 14:01

Tgt Ion: 43 Resp: 2054

Ion	Ratio	Lower	Upper
43	100		
57	66.0	58.2	98.2
85	16.2	5.9	45.9



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202409.D Vial: 7
Acq On : 20 Jun 2024 14:01 Operator: SC
Sample : P2402249-032 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 15:27:36 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

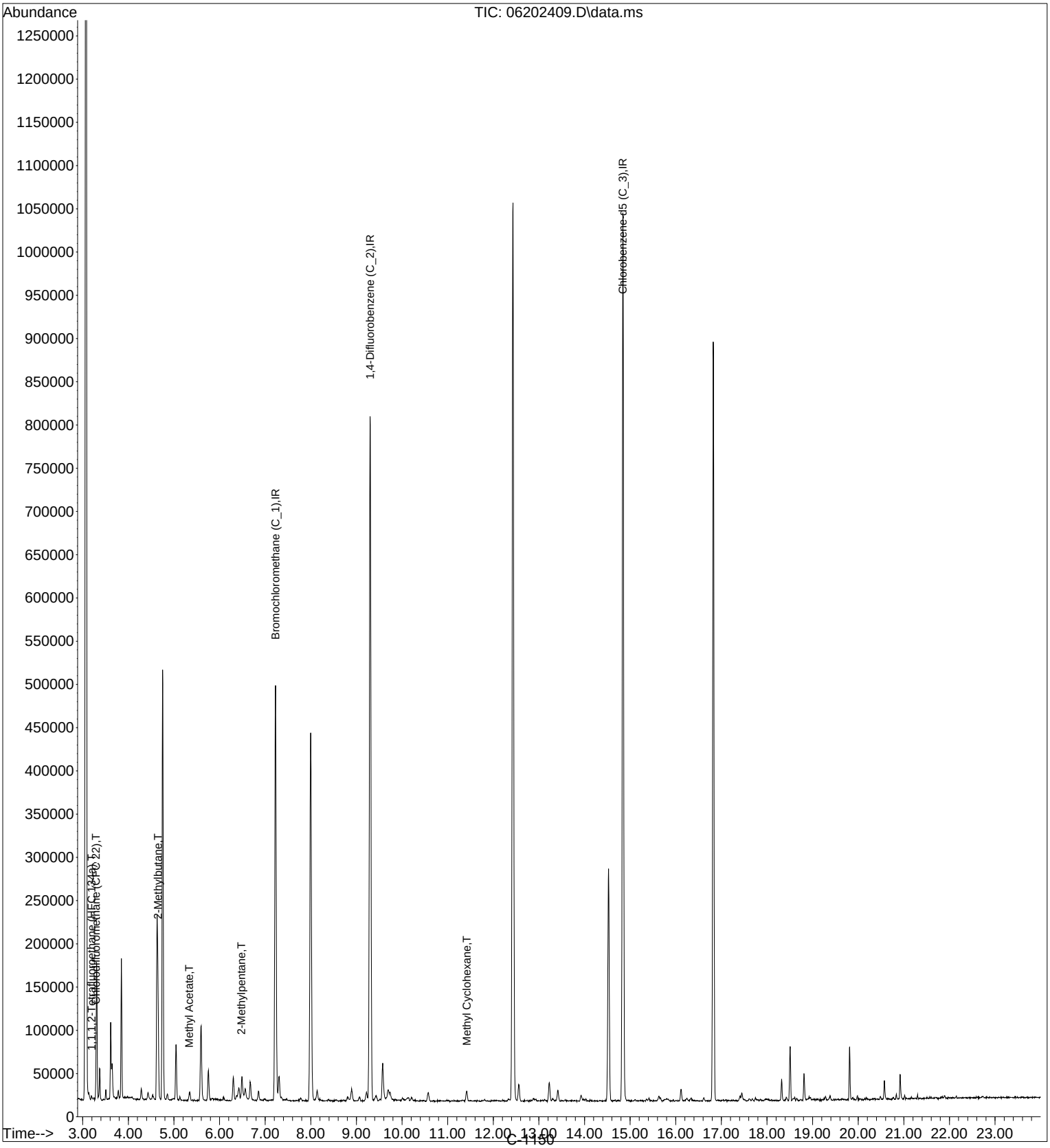
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	173666	12.500	ng		-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	758191	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	174094	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	3.15	85	261	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.19	83	2630	0.148	ng	#	60
4) 1,1-Difluoroethane	3.25	65	655	N.D.			
5) Chlorodifluoromethane ...	3.29	67	1393	0.235	ng	#	80
6) 1-Chloro-1,1-Difluoroe...	3.51	65	784	N.D.			
7) Dichlorofluoromethane ...	4.24	67	54	N.D.			
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	0.00	83	0	N.D.			
10) 2-Methylbutane	4.65	57	18970	0.916	ng	#	71
11) Methyl Acetate	5.33	43	6004	0.103	ng	#	90
12) 2-Methylpentane	6.48	71	3435	0.228	ng	#	7
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	9.07	84	464	N.D.			
17) 2,3-Dimethylpentane	9.53	56	924	N.D.			
18) Dibromomethane	9.80	174	197	N.D.			
20) Methyl Cyclohexane	11.42	55	5096	0.171	ng		96
21) 1,3-Dichloropropane	0.00	76	0	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	0.00	75	0	N.D.			
25) Bromobenzene	17.03	77	114	N.D.			
26) 2-Chlorotoluene	17.61	91	1098	N.D.			
27) 4-Chlorotoluene	17.67	91	2091	N.D.			
28) Indane	19.12	117	52	N.D.			
29) Indene	0.00	115	0	N.D.			
30) 1,2,4,5-Tetramethylben...	20.23	119	217	N.D.			
31) 1,2,3,4-Tetramethylben...	20.23	119	217	N.D.			
32) 1,2,3,5-Tetramethylben...	20.59	119	259	N.D.			
33) 1,2,3-Trichlorobenzene	21.19	180	112	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202409.D Vial: 7
Acq On : 20 Jun 2024 14:01 Operator: SC
Sample : P2402249-032 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:27:36 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



C-1150

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\20\
Data File : 06202409.D
Acq On : 20 Jun 2024 14:01
Operator : SC
Sample : P2402249-032 (400mL)
Misc : S37-06062402
ALS Vial : 7 Sample Multiplier: 1

MJ 6/28/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06202409.D\data.ms

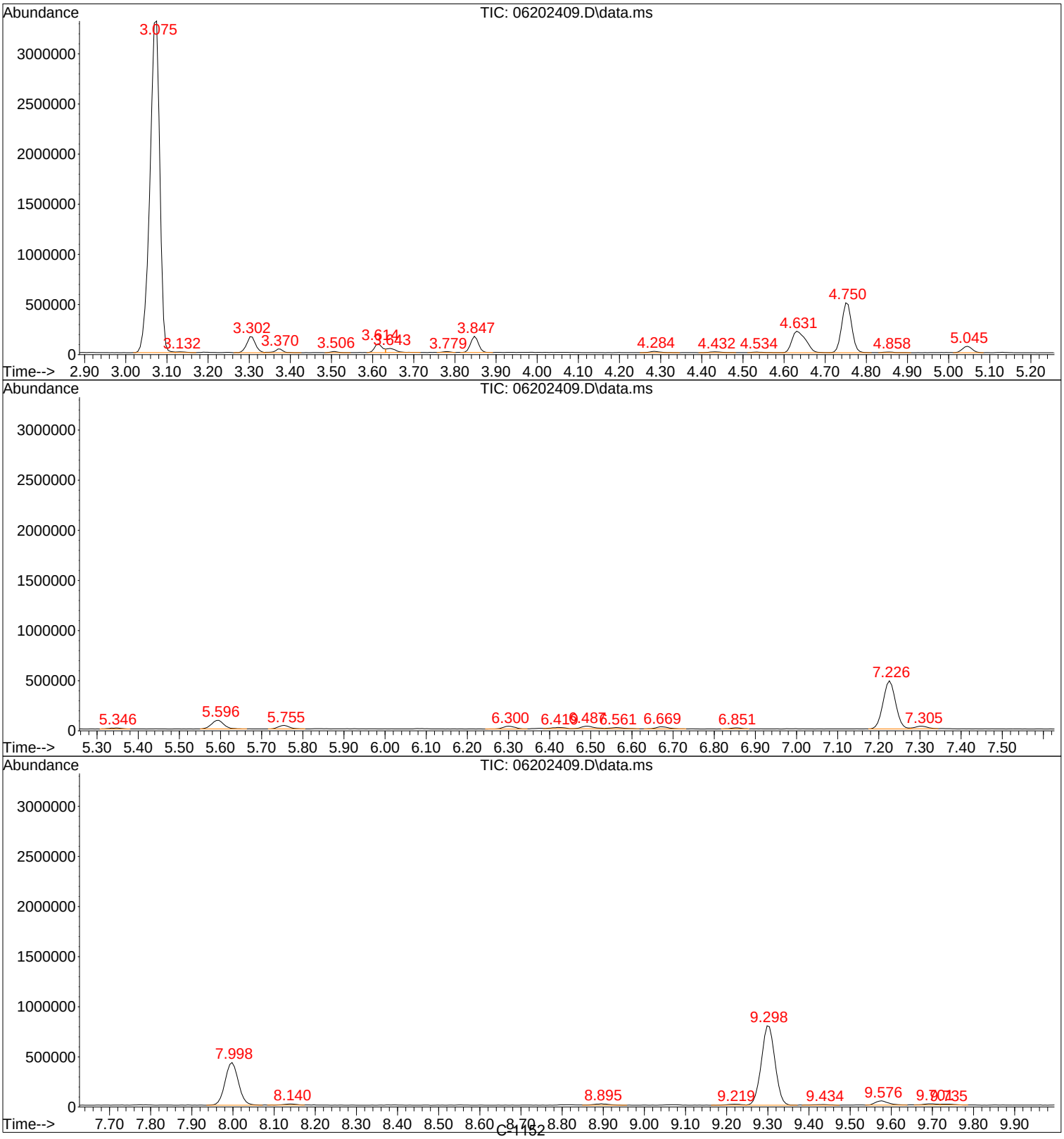
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.075	24	34	42	rBV	3308532	5495935	100.00%	44.424%
2	3.132	42	44	51	rVB3	8176	12134	0.22%	0.098%
3	3.302	67	74	80	rBV2	159864	244297	4.45%	1.975%
4	3.370	80	86	96	rVB2	36809	51741	0.94%	0.418%
5	3.506	106	110	117	rBV	12170	14870	0.27%	0.120%
6	3.614	124	129	132	rBV	88510	120815	2.20%	0.977%
7	3.643	132	134	147	rVB	40724	61865	1.13%	0.500%
8	3.779	154	158	162	rVB3	8814	11513	0.21%	0.093%
9	3.847	164	170	178	rVB	161506	215416	3.92%	1.741%
10	4.284	241	247	258	rVB	13238	25004	0.45%	0.202%
11	4.432	266	273	282	rBV2	8607	19419	0.35%	0.157%
12	4.534	287	291	302	rVV2	6375	13409	0.24%	0.108%
13	4.631	302	308	322	rVV2	214017	501116	9.12%	4.051%
14	4.750	322	329	340	rVV	497844	843525	15.35%	6.818%
15	4.858	343	348	357	rVB3	7238	13938	0.25%	0.113%
16	5.045	375	381	388	rVB	63815	105253	1.92%	0.851%
17	5.346	427	434	440	rBV3	9920	21092	0.38%	0.170%
18	5.596	470	478	490	rBV3	86448	183498	3.34%	1.483%
19	5.755	499	506	515	rBV	34972	67358	1.23%	0.544%
20	6.300	592	602	610	rBV	27582	57474	1.05%	0.465%
21	6.419	617	623	629	rVB3	12007	25930	0.47%	0.210%
22	6.487	629	635	643	rVV3	25602	57816	1.05%	0.467%
23	6.561	643	648	658	rVV4	12426	29529	0.54%	0.239%
24	6.669	660	667	678	rVB	21356	46057	0.84%	0.372%
25	6.851	693	699	705	rVB2	10138	18320	0.33%	0.148%
26	7.226	756	765	774	rBV	479814	1020974	18.58%	8.253%
27	7.305	774	779	786	rVB3	25109	51140	0.93%	0.413%
28	7.998	890	901	914	rBV	426061	966280	17.58%	7.811%
29	8.140	916	926	932	rVV5	11350	24218	0.44%	0.196%
30	8.895	1051	1059	1070	rVB4	14422	34668	0.63%	0.280%
31	9.219	1106	1116	1121	rBV3	10493	25237	0.46%	0.204%
32	9.298	1121	1130	1143	rVV	791899	1829604	33.29%	14.789%
33	9.434	1145	1154	1161	rVB3	6121	17561	0.32%	0.142%
34	9.576	1172	1179	1190	rBV	42790	95708	1.74%	0.774%
35	9.701	1193	1201	1204	rVV3	11470	30145	0.55%	0.244%
36	9.735	1204	1207	1216	rVB5	8745	18645	0.34%	0.151%

Sum of corrected areas: 12371504

Data Path : I:\MS09\DATA\2024 06\20\
Data File : 06202409.D
Acq On : 20 Jun 2024 14:01
Operator : SC
Sample : P2402249-032 (400mL)
Misc : S37-06062402
ALS Vial : 7 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\20\\
Data File : 06202409.D
Acq On : 20 Jun 2024 14:011
Operator : SCC
Sample : P2402249-032 (400mL))
Misc : S37-060624022
ALS Vial : 7 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

						--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202411.D Vial: 1
Acq On : 20 Jun 2024 15:05 Operator: SC
Sample : P2402249-033 (1.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 20 15:32:47 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/20/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	173480	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	757702	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	174153	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	382550	12.407	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.28%				
57) Toluene-d8 (SS2)	12.43	98	853480	12.806	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.48%				
73) Bromofluorobenzene (SS3)	16.83	174	297806	12.375	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.96%				
Target Compounds							Qvalue
2) Propene	3.34	42	245	N.D.			
3) Dichlorodifluoromethan...	3.34	85	188	N.D.			
4) Chloromethane	3.53	50	240	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.31	45	2636	0.156	ng		98
11) Acetonitrile	0.00	41	0	N.D.			
12) Acrolein	4.55	56	177	N.D.			
13) Acetone	4.66	58	4881	0.362	ng	#	68
14) Trichlorofluoromethane	4.76	101	9937792m	240.624	ng		
15) 2-Propanol (Isopropanol)	4.89	45	1200	N.D.			
16) Acrylonitrile	5.00	53	698	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	0.00	59	0	N.D.			
19) Methylene Chloride	5.35	84	962	0.050	ng		94
20) 3-Chloro-1-propene (Al...	5.46	41	116	N.D.			
21) Trichlorotrifluoroethane	5.58	151	363360	20.798	ng		96
22) Carbon Disulfide	5.61	76	1026	N.D.			
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D.			
27) 2-Butanone (MEK)	6.69	72	491	N.D.			
28) cis-1,2-Dichloroethene	7.08	61	124	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.			
30) Ethyl Acetate	0.00	61	0	N.D.			
31) n-Hexane	7.31	57	1021	N.D.			
32) Chloroform	7.35	83	519	N.D.			
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	129	N.D.			
38) 1,1,1-Trichloroethane	8.40	97	833	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.84	56	319	No Calib			
41) Benzene	8.90	78	2280	N.D.			
42) Carbon Tetrachloride	0.00	117	0	N.D.			
43) Cyclohexane	9.22	84	866	N.D.			
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.08	83	334	N.D.			
47) Trichloroethene	10.14	130	1786	0.087	ng		88
48) 1,4-Dioxane	10.14	88	135	N.D.			
49) 2,2,4-Trimethylpentane...	10.23	57	2424	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202411.D Vial: 1
Acq On : 20 Jun 2024 15:05 Operator: SC
Sample : P2402249-033 (1.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 20 15:32:47 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

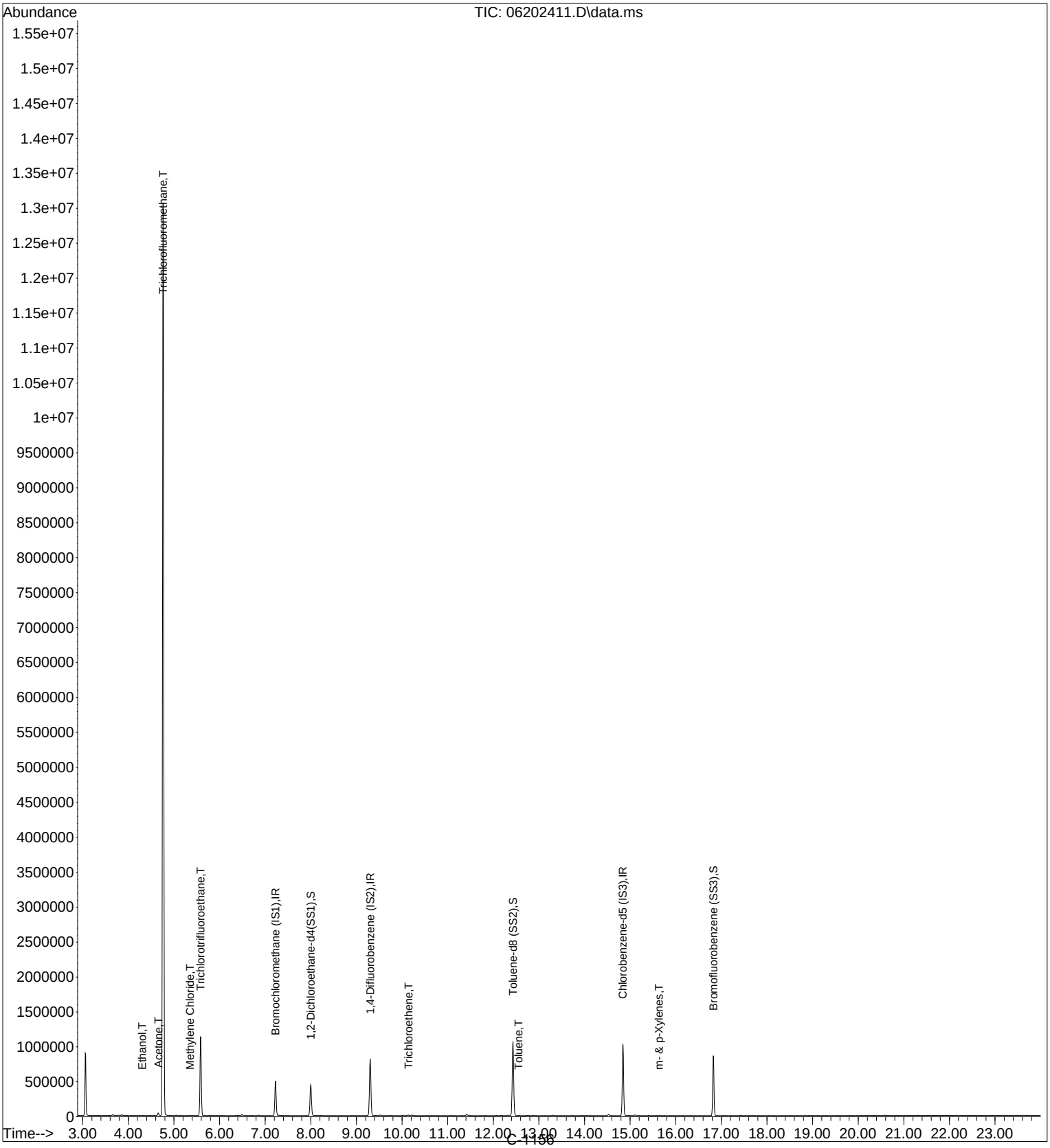
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	0.00	71	0	N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	12.17	97	329	N.D.	
58) Toluene	12.56	91	3603	0.052 ng	99
59) 2-Hexanone	12.93	43	808	N.D.	
60) Dibromochloromethane	13.07	129	461	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	0.00	43	0	N.D.	
63) n-Octane	13.93	57	138	N.D.	
64) Tetrachloroethene	14.03	166	842	N.D.	
65) Chlorobenzene	14.90	112	751	N.D.	
66) Ethylbenzene	15.41	91	3214	N.D.	
67) m- & p-Xylenes	15.63	91	3777	0.056 ng #	65
68) Bromoform	15.67	173	683	N.D.	
69) Styrene	0.00	104	0	N.D.	
70) o-Xylene	16.24	91	1310	N.D.	
71) n-Nonane	16.62	43	303	N.D.	
72) 1,1,2,2-Tetrachloroethane	16.21	83	447	N.D.	
74) Cumene	17.03	105	2826	N.D.	
75) alpha-Pinene	17.53	93	993	N.D.	
76) n-Propylbenzene	17.68	91	2643	N.D.	
77) 3-Ethyltoluene	17.03	105	2826	No Calib	
78) 4-Ethyltoluene	17.86	105	1017	N.D.	
79) 1,3,5-Trimethylbenzene	17.96	105	708	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.03	105	2826	No Calib	
82) 1,2,4-Trimethylbenzene	18.43	105	978	N.D.	
83) n-Decane	0.00	58	0	N.D.	
84) Benzyl Chloride	18.56	91	125	N.D.	
85) 1,3-Dichlorobenzene	18.58	146	781	N.D.	
86) 1,4-Dichlorobenzene	18.66	146	682	N.D.	
87) sec-Butylbenzene	18.74	105	1081	N.D.	
88) 4-Isopropyltoluene (p-...	18.93	119	885	N.D.	
89) 1,2,3-Trimethylbenzene	17.03	105	2826	No Calib	
90) 1,2-Dichlorobenzene	19.04	146	683	N.D.	
91) d-Limonene	0.00	68	0	N.D.	
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	958	N.D.	
95) Naphthalene	20.94	128	1216	N.D.	
96) n-Dodecane	0.00	58	0	N.D.	
97) Hexachlorobutadiene	21.30	225	743	N.D.	
98) Cyclohexanone	15.40	55	1461	No Calib #	
99) tert-Butylbenzene	18.42	119	1026	N.D.	
100) n-Butylbenzene	19.39	91	795	N.D.	
101) 1,1,1,2-Tetrachloroethane	14.87	131	373	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202411.D Vial: 1
Acq On : 20 Jun 2024 15:05 Operator: SC
Sample : P2402249-033 (1.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 20 15:32:47 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202411.D Vial: 1
Acq On : 20 Jun 2024 15:05 Operator: SC
Sample : P2402249-033 (1.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 20 15:32:47 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/20/24

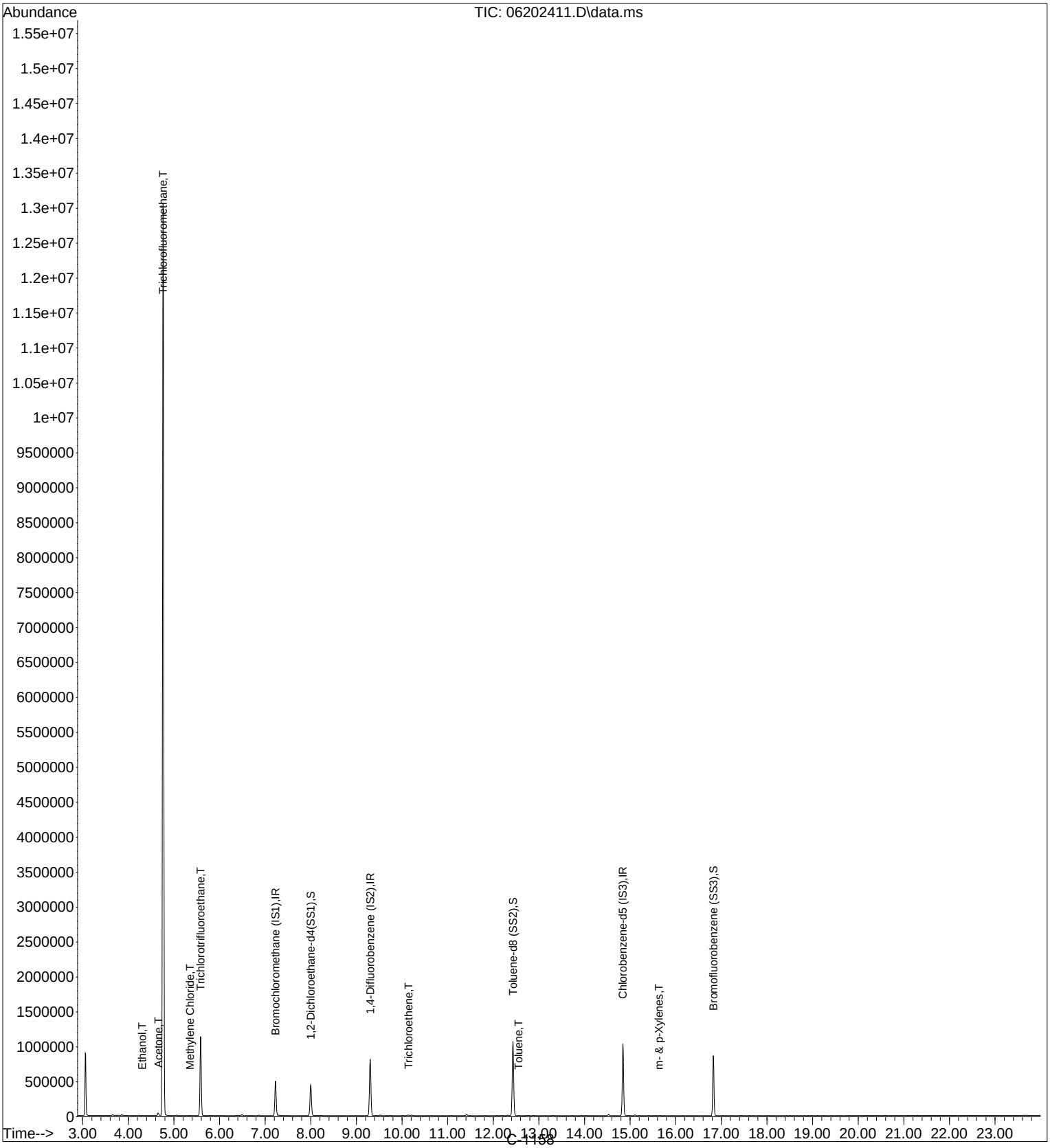
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	173480	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	757702	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	174153	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	382550	12.407	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.28%				
57) Toluene-d8 (SS2)	12.43	98	853480	12.806	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.48%				
73) Bromofluorobenzene (SS3)	16.83	174	297806	12.375	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.96%				
Target Compounds							Qvalue
10) Ethanol	4.31	45	2636	0.156	ng		98
13) Acetone	4.66	58	4881	0.362	ng	#	68
14) Trichlorofluoromethane	4.76	101	9937792m	240.624	ng		
19) Methylene Chloride	5.35	84	962	0.050	ng		94
21) Trichlorotrifluoroethane	5.58	151	363360	20.798	ng		96
47) Trichloroethene	10.14	130	1786	0.087	ng		88
58) Toluene	12.56	91	3603	0.052	ng		99
67) m- & p-Xylenes	15.63	91	3777	0.056	ng	#	65

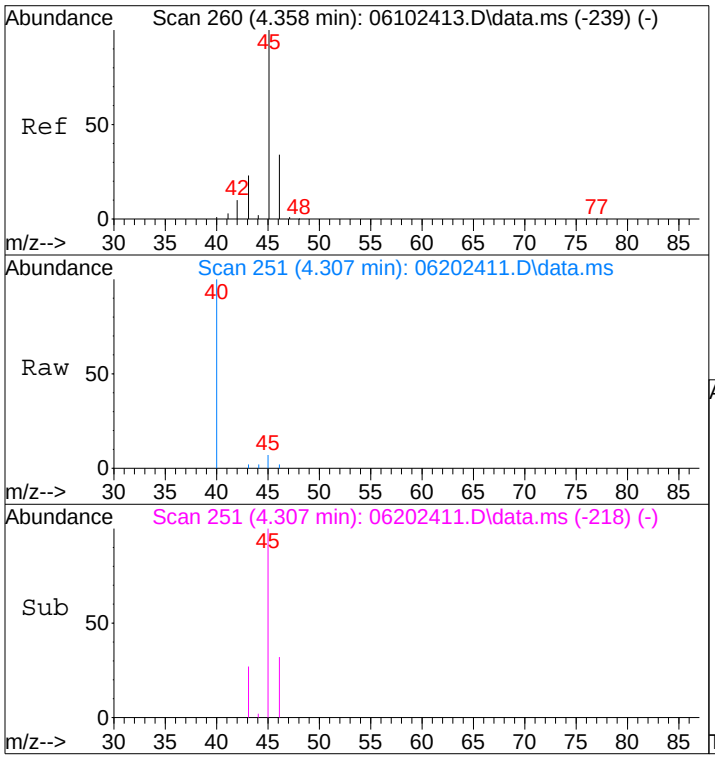
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202411.D Vial: 1
Acq On : 20 Jun 2024 15:05 Operator: SC
Sample : P2402249-033 (1.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 20 15:32:47 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

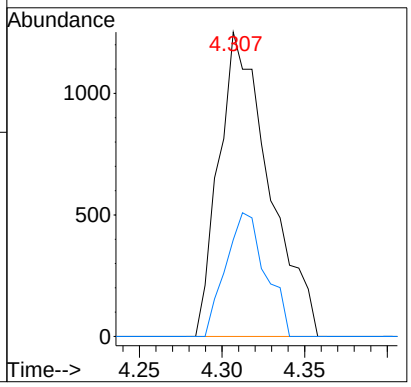


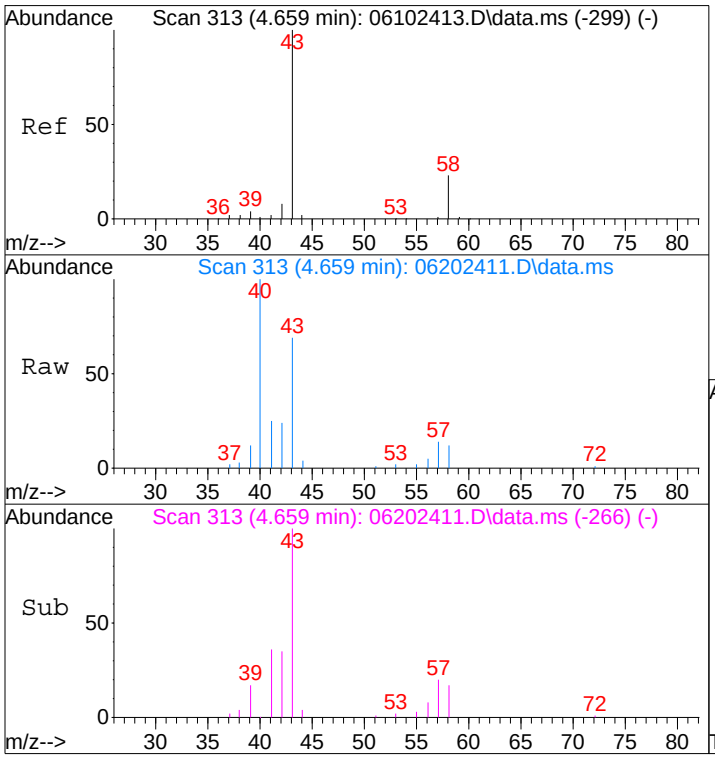


#10
Ethanol
Concen: 0.16 ng
RT: 4.31 min Scan# 251
Delta R.T. -0.060 min
Lab File: 06202411.D
Acq: 20 Jun 2024 15:05

Tgt Ion: 45 Resp: 2636

Ion	Ratio	Lower	Upper
45	100		
46	32.4	13.5	53.5

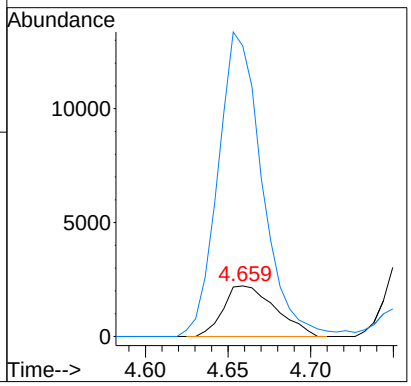


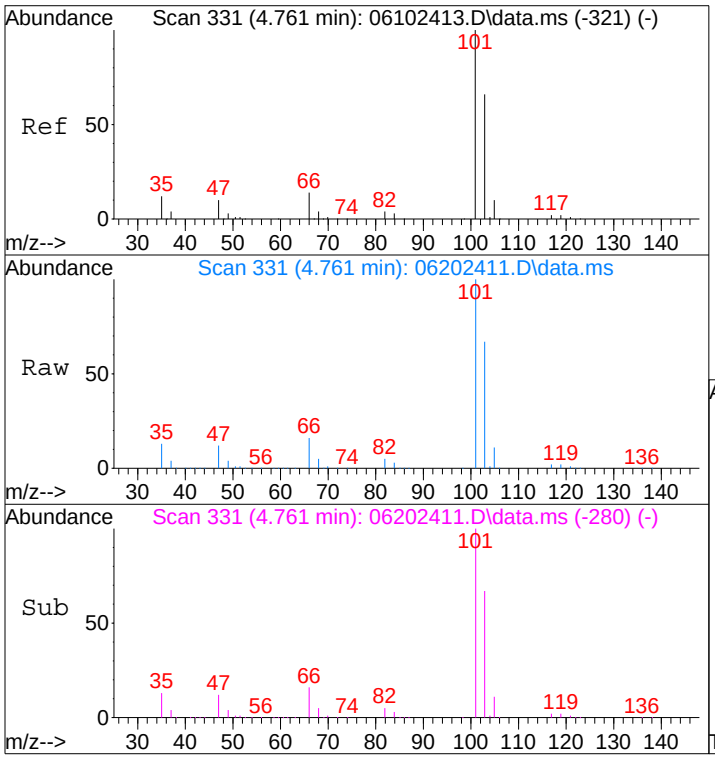


#13
Acetone
Concen: 0.36 ng
RT: 4.66 min Scan# 313
Delta R.T. 0.017 min
Lab File: 06202411.D
Acq: 20 Jun 2024 15:05

Tgt Ion: 58 Resp: 4881

Ion	Ratio	Lower	Upper
58	100		
43	511.6	400.7	460.7#

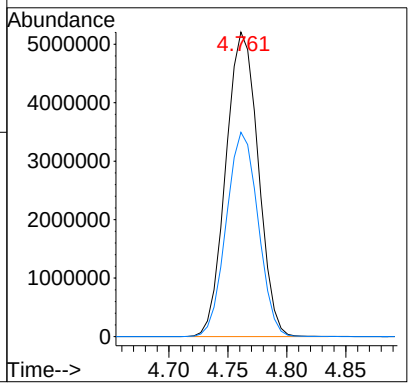


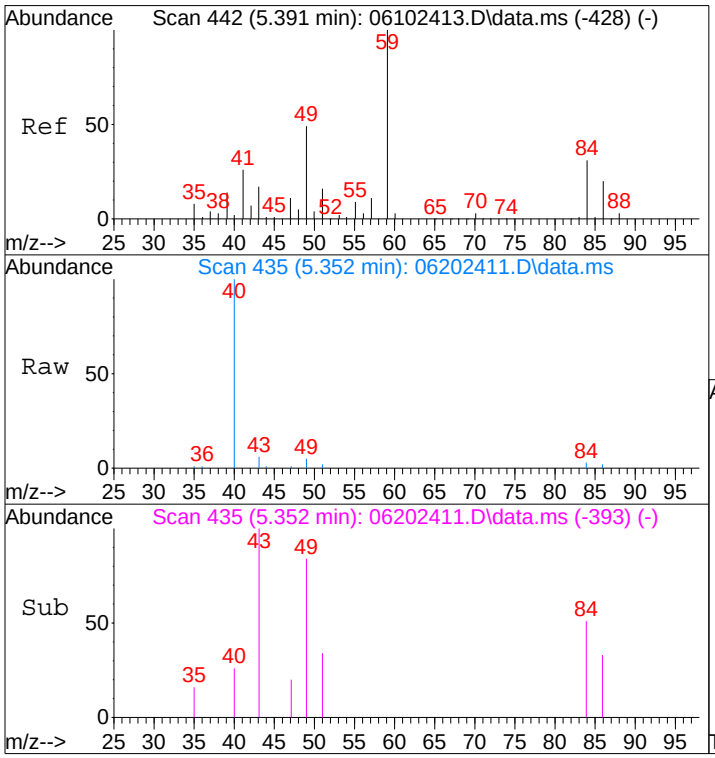


#14
Trichlorofluoromethane
Concen: 240.62 ng m
RT: 4.76 min Scan# 331
Delta R.T. 0.040 min
Lab File: 06202411.D
Acq: 20 Jun 2024 15:05

Tgt Ion:101 Resp: 9937792

Ion	Ratio	Lower	Upper
101	100		
103	0.0	44.9	84.9#

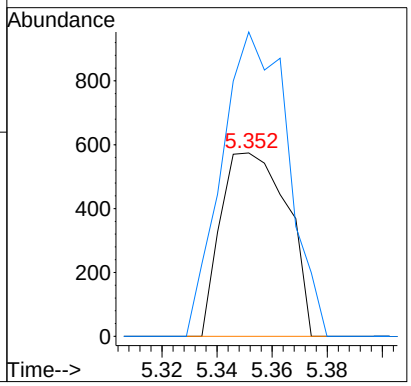


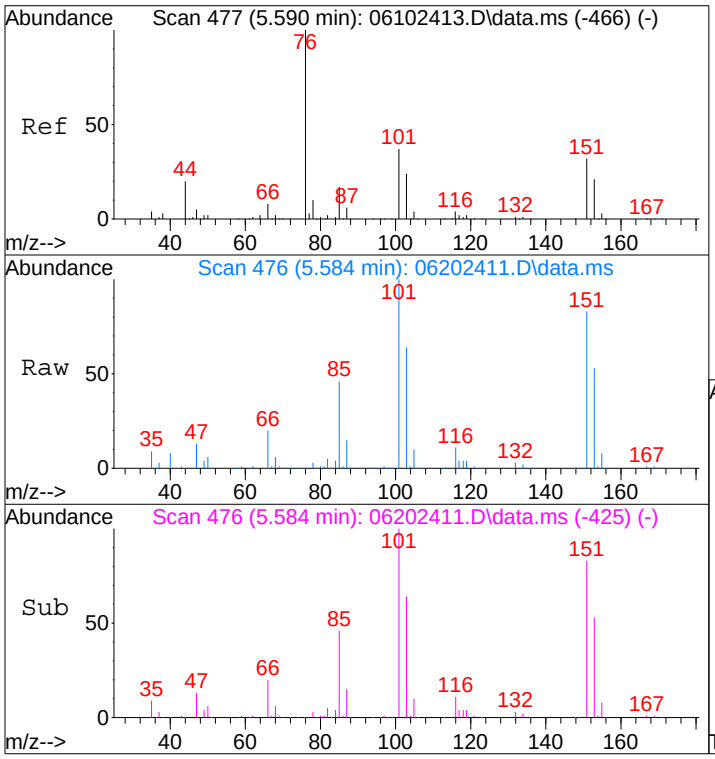


#19
Methylene Chloride
Concen: 0.05 ng
RT: 5.35 min Scan# 435
Delta R.T. -0.009 min
Lab File: 06202411.D
Acq: 20 Jun 2024 15:05

Tgt Ion: 84 Resp: 962

Ion	Ratio	Lower	Upper
84	100		
49	165.5	132.9	182.9

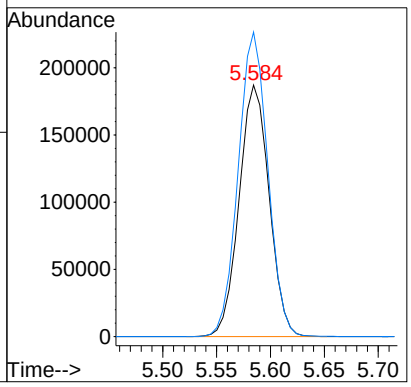


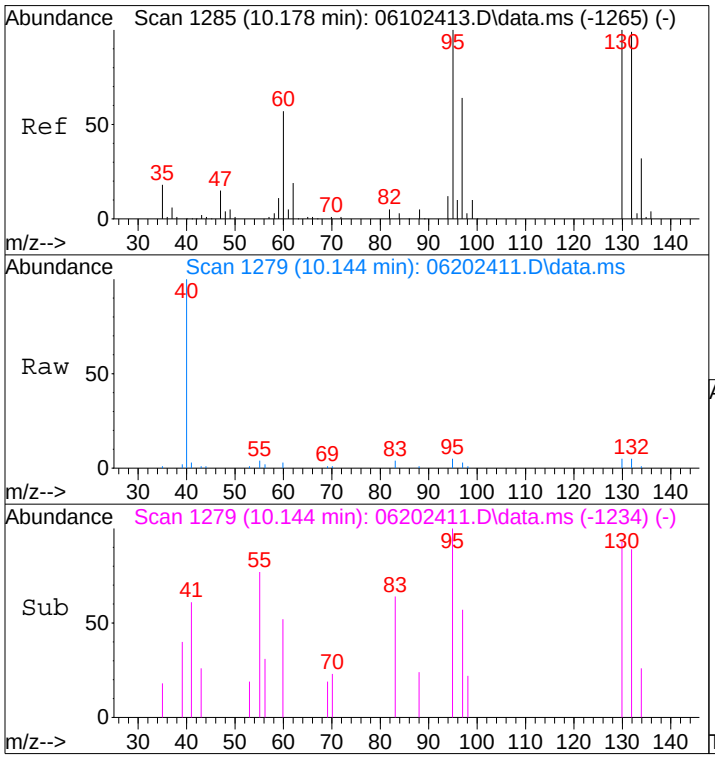


#21
Trichlorotrifluoroethane
Concen: 20.80 ng
RT: 5.58 min Scan# 476
Delta R.T. 0.038 min
Lab File: 06202411.D
Acq: 20 Jun 2024 15:05

Tgt Ion:151 Resp: 363360

Ion	Ratio	Lower	Upper
151	100		
101	119.1	95.0	135.0

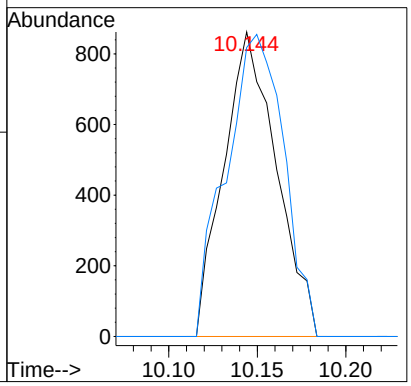


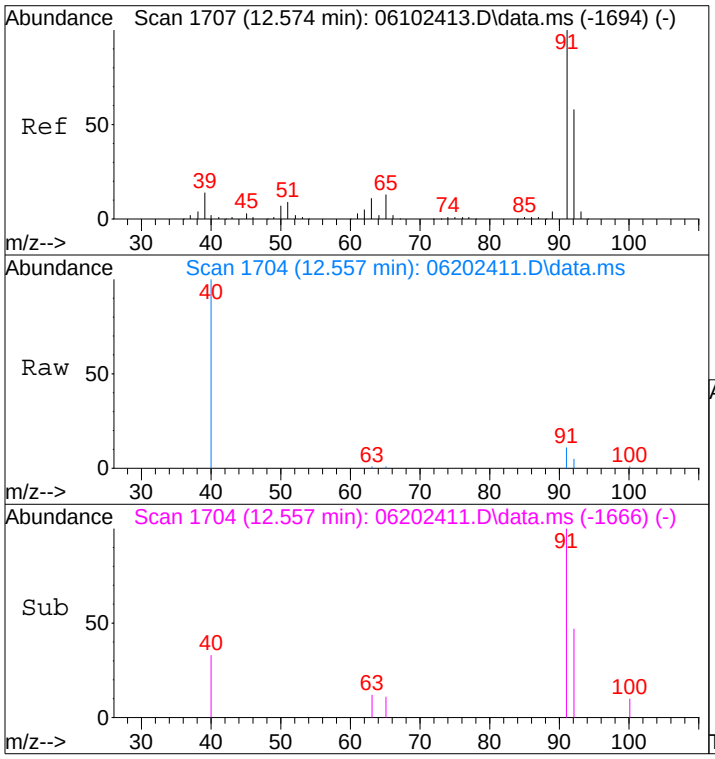


#47
Trichloroethene
Concen: 0.09 ng
RT: 10.14 min Scan# 1279
Delta R.T. 0.004 min
Lab File: 06202411.D
Acq: 20 Jun 2024 15:05

Tgt Ion:130 Resp: 1786

Ion	Ratio	Lower	Upper
130	100		
132	109.5	77.9	117.9

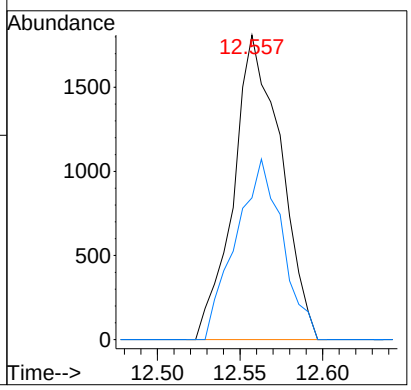


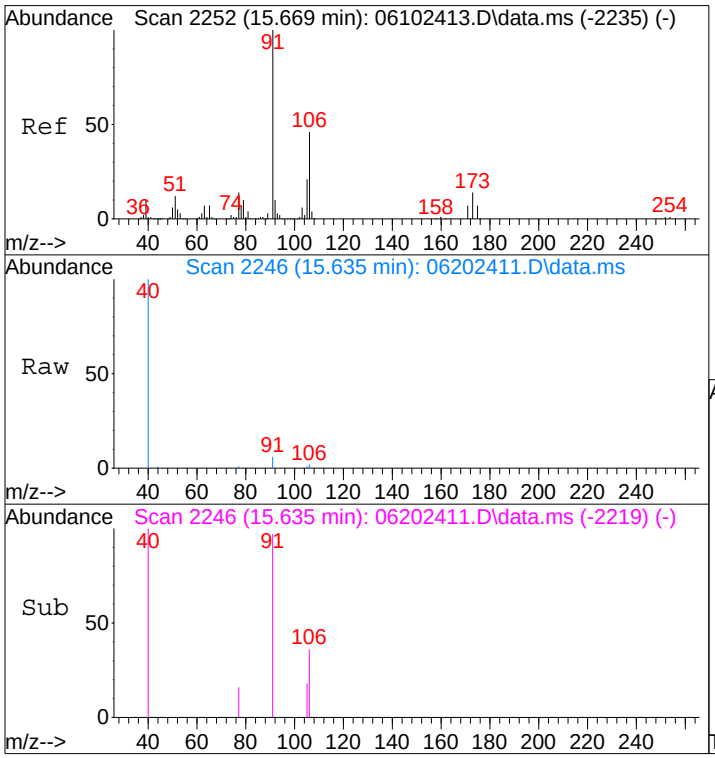


#58
Toluene
Concen: 0.05 ng
RT: 12.56 min Scan# 1704
Delta R.T. -0.034 min
Lab File: 06202411.D
Acq: 20 Jun 2024 15:05

Tgt Ion: 91 Resp: 3603

Ion	Ratio	Lower	Upper
91	100		
92	58.4	37.4	77.4

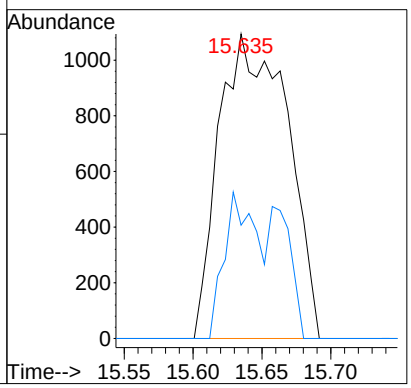




#67
m- & p-Xylenes
Concen: 0.06 ng
RT: 15.63 min Scan# 2246
Delta R.T. -0.046 min
Lab File: 06202411.D
Acq: 20 Jun 2024 15:05

Tgt Ion: 91 Resp: 3777

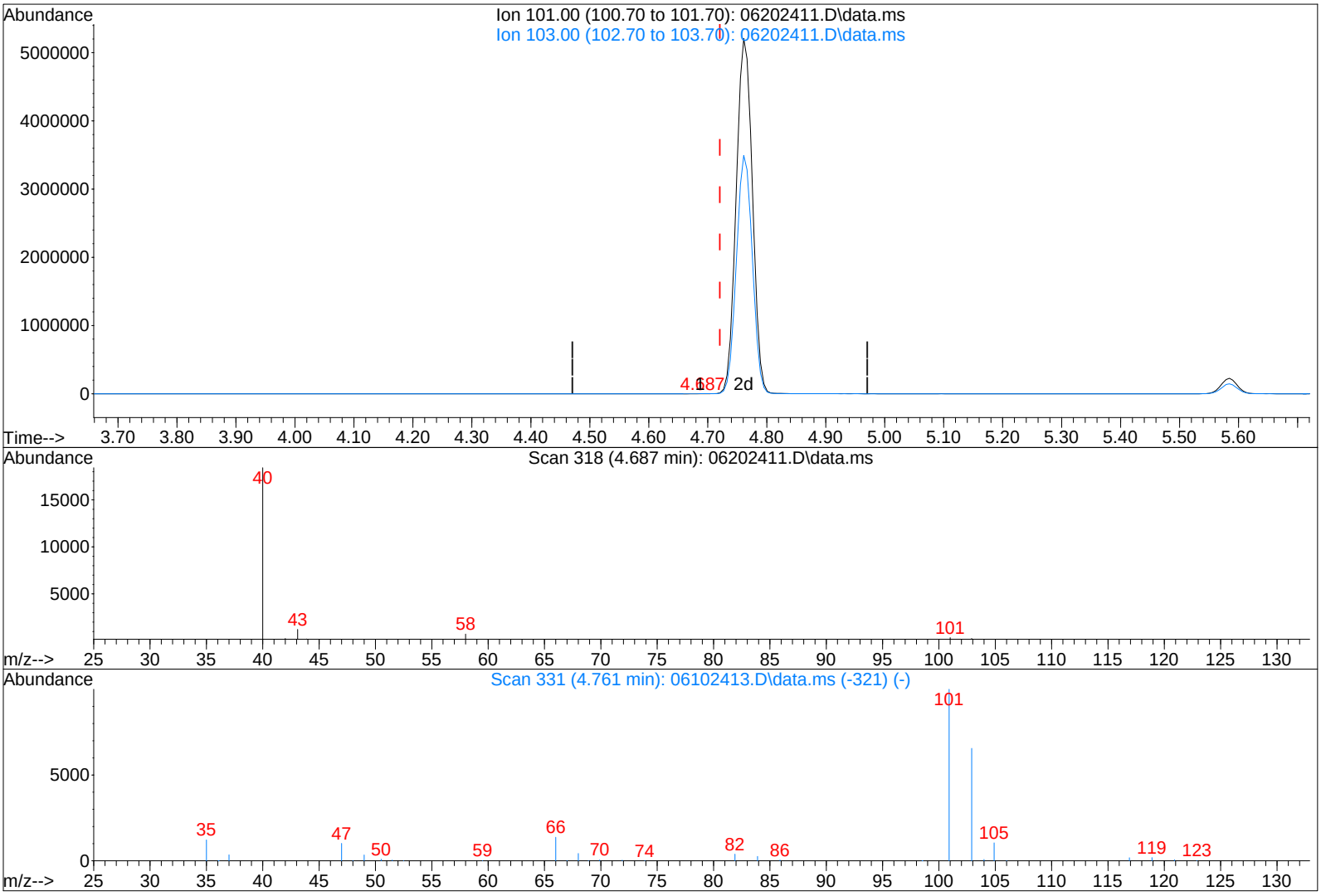
Ion	Ratio	Lower	Upper
91	100		
106	22.9	25.9	65.9#



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\20\06202411.D Vial: 1
Acq On : 20 Jun 2024 15:05 Operator: SC
Sample : P2402249-033 (1.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 20 15:32:28 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06202411.D\data.ms

(14) Trichlorofluoromethane (T)

4.687min (-0.033) 0.02ng

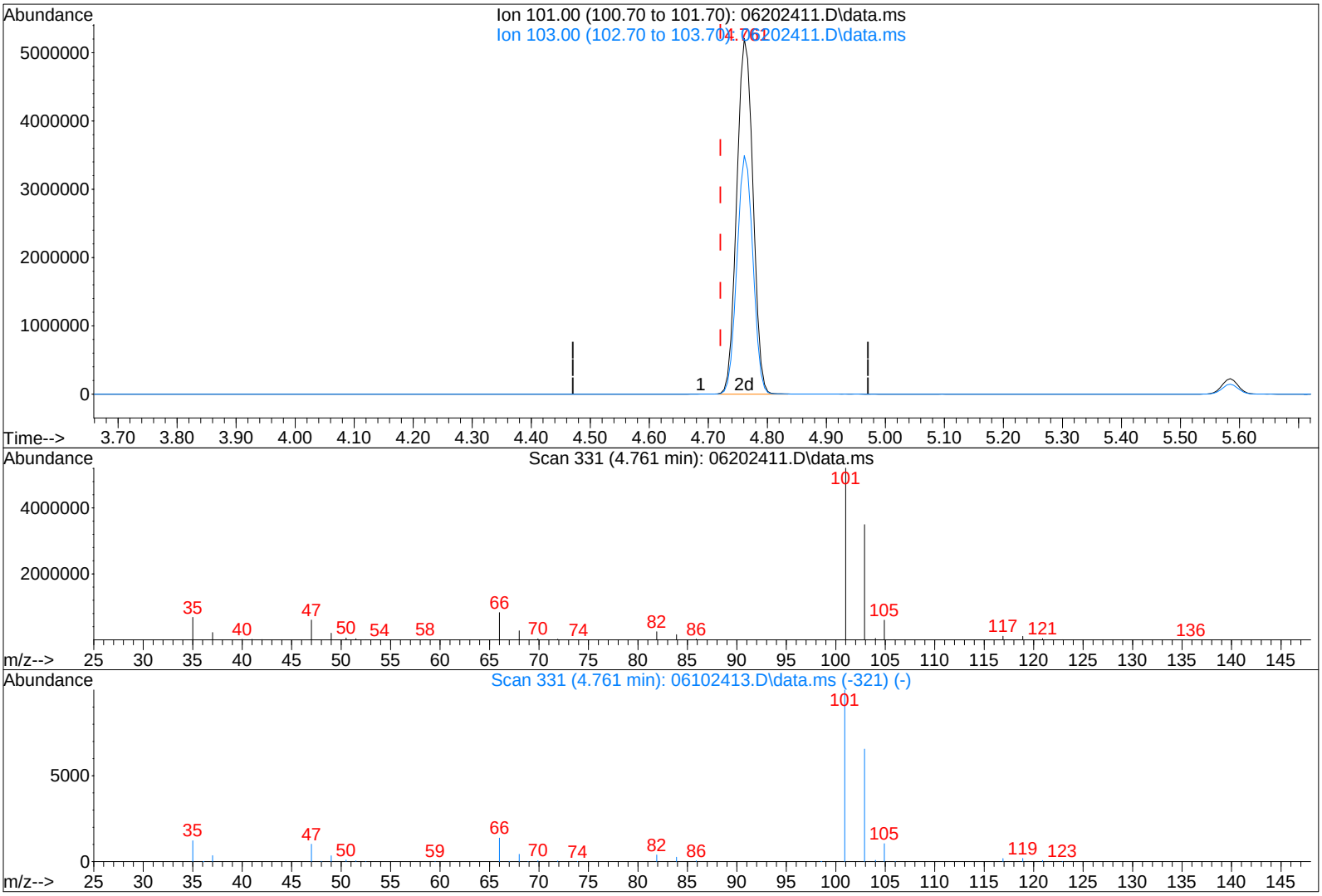
response 691

Ion	Exp%	Act%
101.00	100	100
103.00	64.90	38.49#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\20\06202411.D Vial: 1
Acq On : 20 Jun 2024 15:05 Operator: SC
Sample : P2402249-033 (1.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 20 15:32:28 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06202411.D\data.ms

(14) Trichlorofluoromethane (T)

4.761min (+0.040) 240.62ng m

response 9937792

Ion	Exp%	Act%
101.00	100	100
103.00	64.90	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

MP

6/20/24

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202411.D Vial: 1
Acq On : 20 Jun 2024 15:05 Operator: SC
Sample : P2402249-033 (1.0mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 15:27:40 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

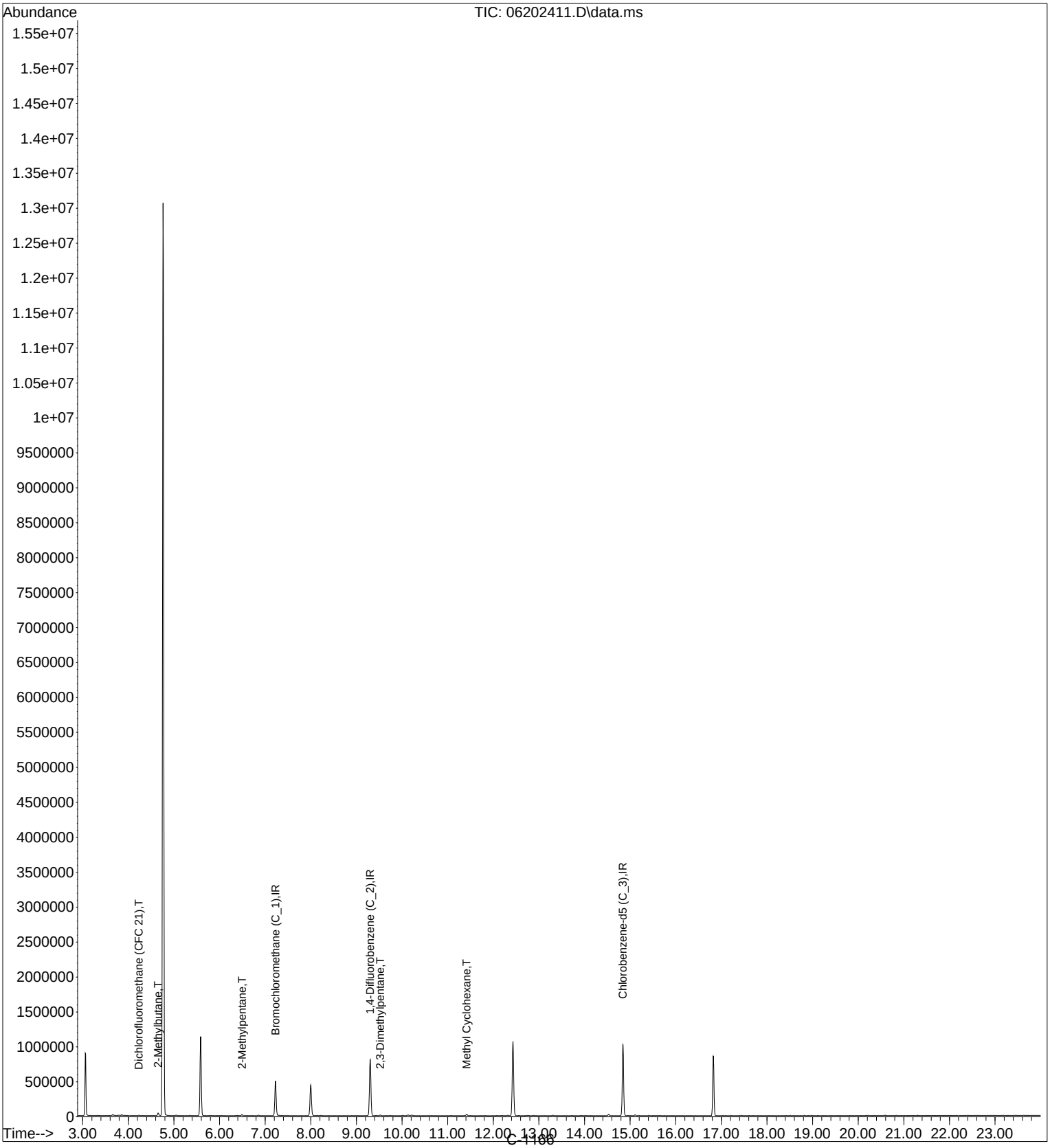
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	176220	12.500 ng	-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	759100	12.500 ng	-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	174153	12.500 ng	-0.01
Target Compounds					Qvalue
2) Chloropentafluoroethane	3.17	85	750	N.D.	
3) 1,1,1,2-Tetrafluoroeth...	3.21	83	735	N.D.	
4) 1,1-Difluoroethane	3.26	65	627	N.D.	
5) Chlorodifluoromethane ...	3.30	67	351	N.D.	
6) 1-Chloro-1,1-Difluoroe...	3.51	65	1746	N.D.	
7) Dichlorofluoromethane ...	4.23	67	4497	0.111 ng	91
8) Vinylbromide	4.43	108	436	N.D.	
9) 2,2-Dichloro-1,1,1-tri...	4.56	83	973	N.D.	
10) 2-Methylbutane	4.65	57	5710	0.272 ng	99
11) Methyl Acetate	5.35	43	2062	N.D.	
12) 2-Methylpentane	6.49	71	2252	0.148 ng	81
13) 2,2-Dichloropropane	0.00	77	0	N.D.	
14) 1,1-Dichloropropene	8.74	75	664	N.D.	
15) Thiophene	9.04	84	1103	N.D.	
17) 2,3-Dimethylpentane	9.52	56	4397	0.120 ng	96
18) Dibromomethane	9.80	174	656	N.D.	
20) Methyl Cyclohexane	11.42	55	7417	0.248 ng	97
21) 1,3-Dichloropropane	12.59	76	585	N.D.	
22) 1,1,1,2-Tetrachloroethane	14.87	131	373	N.D.	
23) 1-Chlorohexane	15.20	91	597	N.D.	
24) 1,2,3-Trichloropropane	16.40	75	854	N.D.	
25) Bromobenzene	17.09	77	759	N.D.	
26) 2-Chlorotoluene	17.61	91	2556	N.D.	
27) 4-Chlorotoluene	17.61	91	2557	N.D.	
28) Indane	19.11	117	1868	N.D.	
29) Indene	19.21	115	732	N.D.	
30) 1,2,4,5-Tetramethylben...	20.18	119	1725	N.D.	
31) 1,2,3,4-Tetramethylben...	20.22	119	2000	N.D.	
32) 1,2,3,5-Tetramethylben...	20.60	119	1907	N.D.	
33) 1,2,3-Trichlorobenzene	21.19	180	741	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202411.D Vial: 1
Acq On : 20 Jun 2024 15:05 Operator: SC
Sample : P2402249-033 (1.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:27:40 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



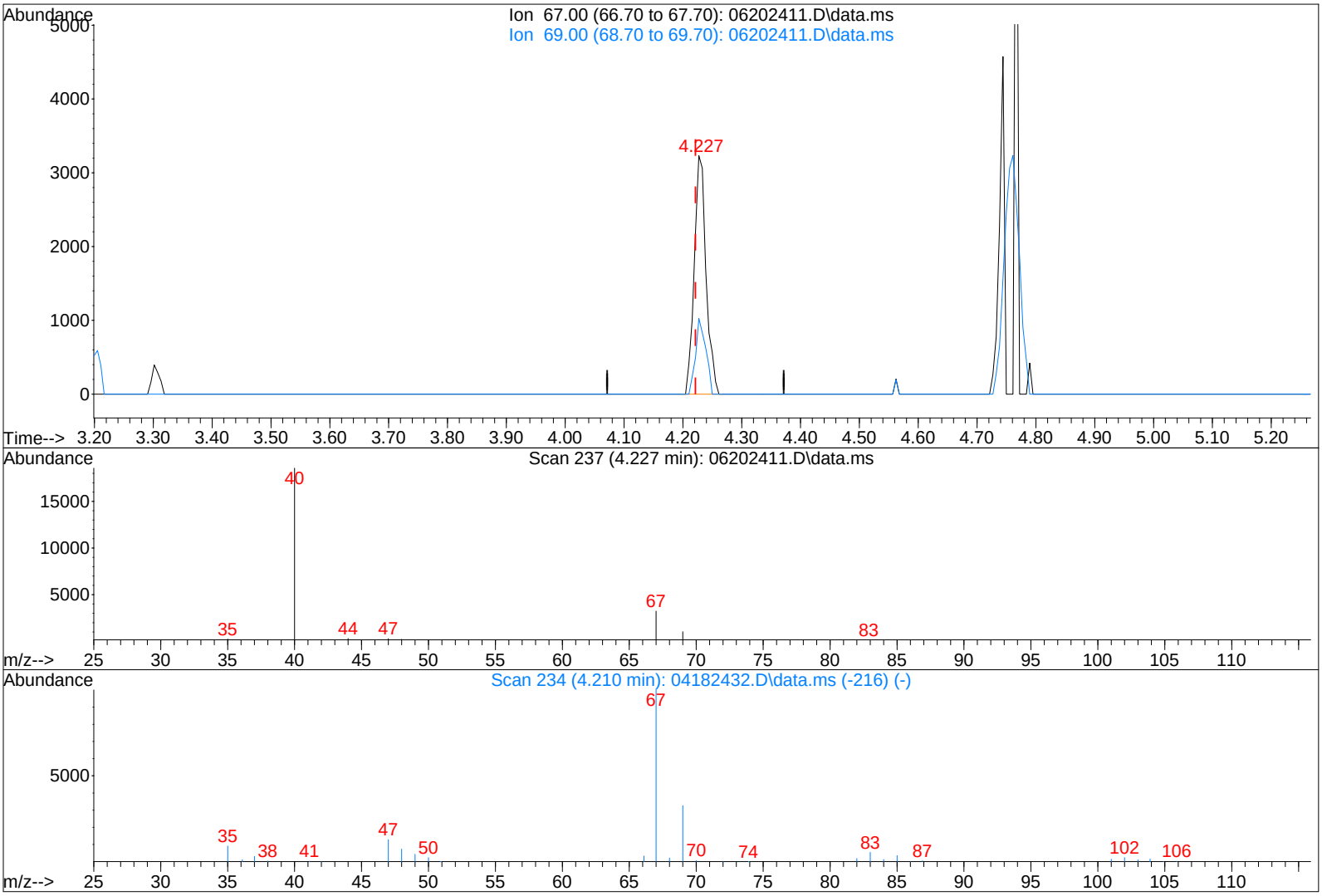
C-1108

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\20\06202411.D Vial: 1
Acq On : 20 Jun 2024 15:05 Operator: SC
Sample : P2402249-033 (1.0mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 15:27:40 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06202411.D\data.ms

(7) Dichlorofluoromethane (CFC 21) (T)

4.227min (+0.006) 0.11ng

response 4497

Ion	Exp%	Act%
67.00	100	100
69.00	32.40	27.33
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

MJ 6/29/24

Data File : I:\MS09\DATA\2024 06\20\06202413.D Vial: 1
Acq On : 20 Jun 2024 16:27 Operator: SC
Sample : P2402249-033Dil (0.2mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 09:57:56 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	168228	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	731521	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	166196	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	368841	12.336	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.72%				
57) Toluene-d8 (SS2)	12.43	98	814848	12.812	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.48%				
73) Bromofluorobenzene (SS3)	16.83	174	285802	12.445	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.52%				
Target Compounds							Qvalue
2) Propene	3.32	42	1061	N.D.			
3) Dichlorodifluoromethan...	3.34	85	196	N.D.			
4) Chloromethane	0.00	50	0	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	3.70	62	371	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.37	45	55	N.D.			
11) Acetonitrile	4.45	41	332	N.D.			
12) Acrolein	4.55	56	338	N.D.			
13) Acetone	4.65	58	7801	0.597	ng	#	85
14) Trichlorofluoromethane	4.76	101	2262748	56.498	ng		100
15) 2-Propanol (Isopropanol)	4.91	45	51	N.D.			
16) Acrylonitrile	5.00	53	758	N.D.			
17) 1,1-Dichloroethene	5.26	96	144	N.D.			
18) 2-Methyl-2-Propanol (t...	5.35	59	52	N.D.			
19) Methylene Chloride	5.35	84	1619	0.088	ng		99
20) 3-Chloro-1-propene (Al...	5.47	41	266	N.D.			
21) Trichlorotrifluoroethane	5.58	151	108485	6.403	ng		96
22) Carbon Disulfide	0.00	76	0	N.D.	d		
23) trans-1,2-Dichloroethene	6.14	61	309	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D.			
27) 2-Butanone (MEK)	6.69	72	711	0.069	ng	#	68
28) cis-1,2-Dichloroethene	7.08	61	591	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.			
30) Ethyl Acetate	7.30	61	398	0.063	ng		100
31) n-Hexane	7.31	57	1217	N.D.			
32) Chloroform	7.35	83	952	N.D.			
34) Tetrahydrofuran (THF)	7.79	72	113	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	525	N.D.			
38) 1,1,1-Trichloroethane	8.40	97	733	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.84	56	352	No Calib		#	
41) Benzene	8.89	78	3193	N.D.			
42) Carbon Tetrachloride	9.07	117	372	N.D.			
43) Cyclohexane	9.22	84	901	N.D.			
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.08	83	641	N.D.			
47) Trichloroethene	10.15	130	2885	0.146	ng		88
48) 1,4-Dioxane	10.14	88	268	N.D.			
49) 2,2,4-Trimethylpentane...	10.23	57	2387	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202413.D Vial: 1
Acq On : 20 Jun 2024 16:27 Operator: SC
Sample : P2402249-033Dil (0.2mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 09:57:56 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

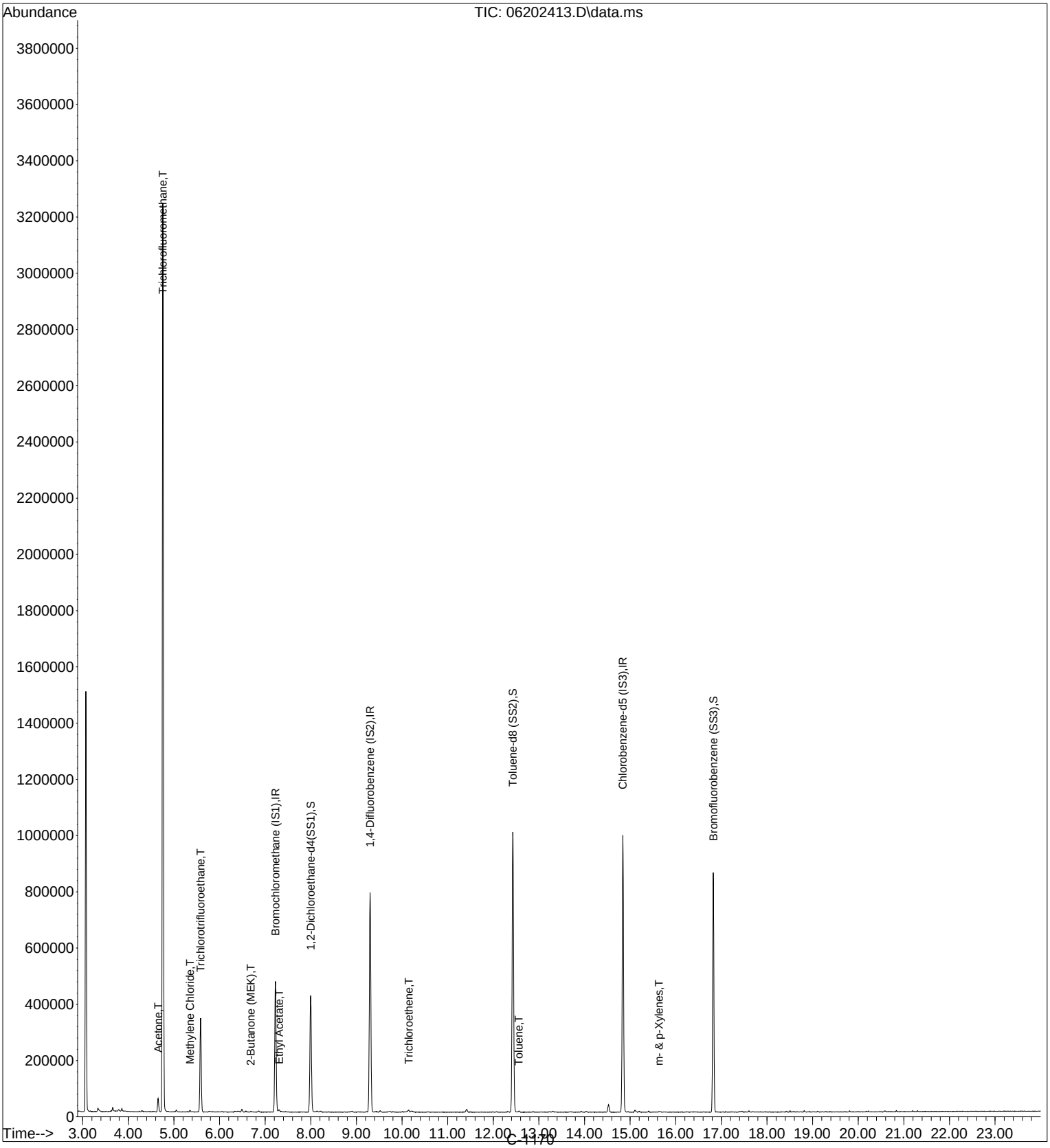
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	10.58	71	178	N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	12.17	97	112	N.D.	
58) Toluene	12.56	91	4442	0.067 ng	100
59) 2-Hexanone	12.93	43	720	N.D.	
60) Dibromochloromethane	13.06	129	532	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	0.00	43	0	N.D.	
63) n-Octane	13.92	57	220	N.D.	
64) Tetrachloroethene	14.03	166	985	N.D.	
65) Chlorobenzene	14.90	112	1061	N.D.	
66) Ethylbenzene	15.41	91	3079	N.D.	
67) m- & p-Xylenes	15.63	91	3367	0.053 ng	93
68) Bromoform	15.67	173	614	N.D.	
69) Styrene	16.10	104	172	N.D.	
70) o-Xylene	16.24	91	1154	N.D.	
71) n-Nonane	16.61	43	526	N.D.	
72) 1,1,2,2-Tetrachloroethane	16.20	83	356	N.D.	
74) Cumene	17.04	105	997	N.D.	
75) alpha-Pinene	17.53	93	772	N.D.	
76) n-Propylbenzene	17.69	91	2784	N.D.	
77) 3-Ethyltoluene	17.04	105	997	No Calib	
78) 4-Ethyltoluene	17.86	105	934	N.D.	
79) 1,3,5-Trimethylbenzene	17.96	105	764	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.04	105	997	No Calib	
82) 1,2,4-Trimethylbenzene	18.43	105	1214	N.D.	
83) n-Decane	0.00	58	0	N.D.	
84) Benzyl Chloride	18.57	91	126	N.D.	
85) 1,3-Dichlorobenzene	18.58	146	733	N.D.	
86) 1,4-Dichlorobenzene	18.66	146	819	N.D.	
87) sec-Butylbenzene	18.74	105	956	N.D.	
88) 4-Isopropyltoluene (p-...	18.93	119	975	N.D.	
89) 1,2,3-Trimethylbenzene	17.04	105	997	No Calib	
90) 1,2-Dichlorobenzene	19.03	146	588	N.D.	
91) d-Limonene	0.00	68	0	N.D.	
92) 1,2-Dibromo-3-Chloropr...	19.51	157	120	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	1399	N.D.	
95) Naphthalene	20.94	128	1713	N.D.	
96) n-Dodecane	0.00	58	0	N.D.	
97) Hexachlorobutadiene	21.30	225	790	N.D.	
98) Cyclohexanone	15.39	55	273	No Calib	#
99) tert-Butylbenzene	18.42	119	902	N.D.	
100) n-Butylbenzene	19.39	91	817	N.D.	
101) 1,1,1,2-Tetrachloroethane	14.87	131	415	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202413.D Vial: 1
Acq On : 20 Jun 2024 16:27 Operator: SC
Sample : P2402249-033Dil (0.2mL) Inst : MS09
Misc : S37-06062402

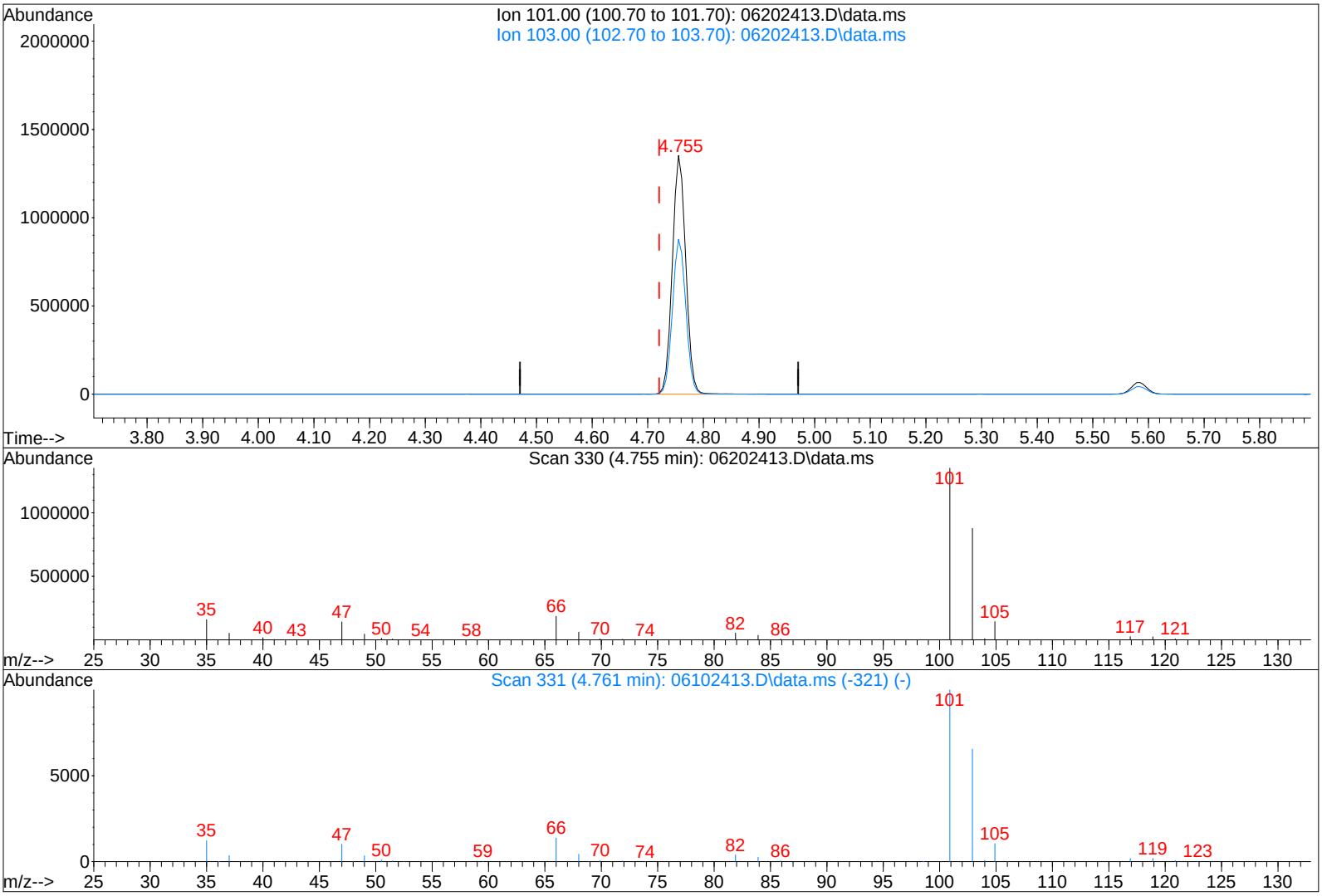
Quant Time: Jun 29 09:57:56 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\20\06202413.D Vial: 1
Acq On : 20 Jun 2024 16:27 Operator: SC
Sample : P2402249-033Dil (0.2mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 20 16:48:57 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06202413.D\data.ms

(14) Trichlorofluoromethane (T)

4.755min (+0.035) 56.50ng

response 2262748

Ion	Exp%	Act%
101.00	100	100
103.00	64.90	64.84
0.00	0.00	0.00
0.00	0.00	0.00

LSC Area Percent Report

MJ 6/28/24

Data Path : I:\MS09\DATA\2024 06\20\
Data File : 06202411.D
Acq On : 20 Jun 2024 15:05
Operator : SC
Sample : P2402249-033 (1.0mL)
Misc : S37-06062402
ALS Vial : 1 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06202411.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.058	24	31	44	rBV	891348	1391314	5.69%	4.343%
2	3.659	132	137	148	rVB2	9162	16228	0.07%	0.051%
3	3.852	168	171	177	rVB	8896	10448	0.04%	0.033%
4	4.653	306	312	321	rBV2	37565	68414	0.28%	0.214%
5	4.761	322	331	348	rVV	13056498	24449977	100.00%	76.315%
6	5.045	376	381	388	rVB2	6928	11190	0.05%	0.035%
7	5.584	467	476	488	rVB	1129747	2180589	8.92%	6.806%
8	6.487	629	635	642	rVB3	12136	24757	0.10%	0.077%
9	6.856	695	700	708	rVB2	7826	15256	0.06%	0.048%
10	7.225	754	765	777	rBV	494265	1038393	4.25%	3.241%
11	7.998	888	901	913	rBV	434345	975533	3.99%	3.045%
12	9.304	1121	1131	1143	rVB	799412	1826593	7.47%	5.701%
13	9.519	1164	1169	1176	rVB4	8561	18579	0.08%	0.058%
14	9.741	1201	1208	1214	rVB4	4799	11171	0.05%	0.035%

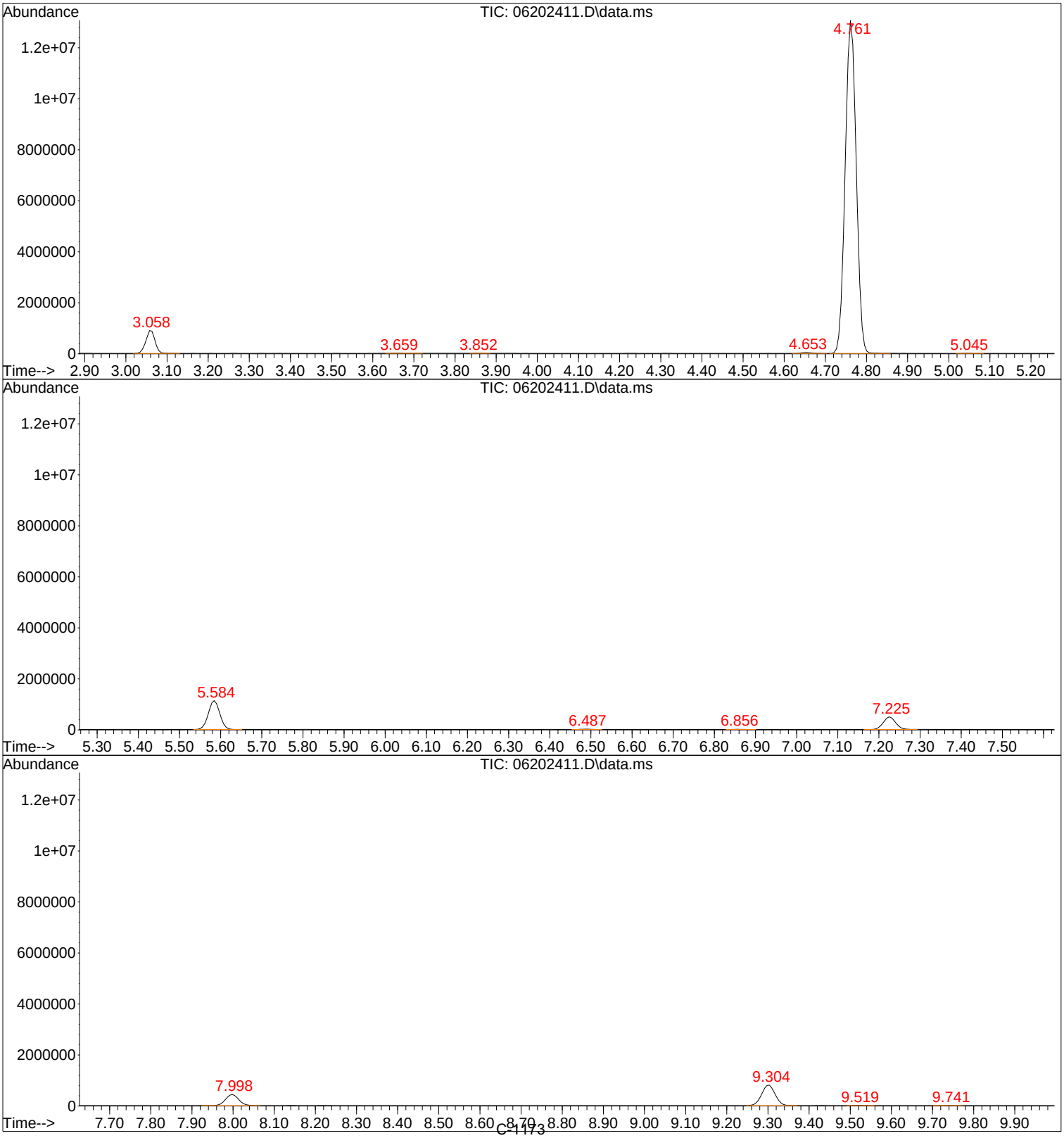
Sum of corrected areas: 32038442

LSC Report - Integrated Chromatogram

Data Path : I:\MS09\DATA\2024 06\20\
Data File : 06202411.D
Acq On : 20 Jun 2024 15:05
Operator : SC
Sample : P2402249-033 (1.0mL)
Misc : S37-06062402
ALS Vial : 1 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\20\\
Data File : 06202411.D
Acq On : 20 Jun 2024 15:055
Operator : SCC
Sample : P2402249-033 (1.0mL))
Misc : S37-060624022
ALS Vial : 1 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

						Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected

****

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192421.D Vial: 9
Acq On : 19 Jun 2024 20:03 Operator: SC
Sample : P2402249-034 (40mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 11:24:08 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	163202	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	704282	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	162065	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	354179	12.210	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.68%				
57) Toluene-d8 (SS2)	12.43	98	788030	12.706	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.68%				
73) Bromofluorobenzene (SS3)	16.83	174	278025	12.415	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.28%				
Target Compounds							Qvalue
2) Propene	0.00	42	0	N.D. d			
3) Dichlorodifluoromethan...	3.37	85	2859	0.074	ng		96
4) Chloromethane	3.52	50	509	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.28	45	22193	1.399	ng		81
11) Acetonitrile	4.45	41	247	N.D.			
12) Acrolein	4.52	56	330	N.D.			
13) Acetone	4.62	58	521931	41.167	ng		98
14) Trichlorofluoromethane	4.76	101	7980388	205.398	ng		99
15) 2-Propanol (Isopropanol)	4.85	45	24684	0.483	ng	#	19
16) Acrylonitrile	4.99	53	580	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	0.00	59	0	N.D. d			
19) Methylene Chloride	5.35	84	1507	0.084	ng		90
20) 3-Chloro-1-propene (Al...	5.44	41	330	N.D.			
21) Trichlorotrifluoroethane	5.58	151	670090	40.769	ng		96
22) Carbon Disulfide	0.00	76	0	N.D. d			
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D.			
27) 2-Butanone (MEK)	6.67	72	2707	0.270	ng	#	69
28) cis-1,2-Dichloroethene	7.08	61	179	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.			
30) Ethyl Acetate	7.29	61	2750	0.449	ng		99
31) n-Hexane	7.30	57	701	N.D.			
32) Chloroform	7.36	83	1594	N.D.			
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	362	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.83	56	2016	No Calib		#	
41) Benzene	8.89	78	2514	N.D.			
42) Carbon Tetrachloride	0.00	117	0	N.D.			
43) Cyclohexane	9.22	84	1748	0.083	ng		93
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	9.87	63	1277	0.081	ng		96
46) Bromodichloromethane	10.08	83	1044	N.D.			
47) Trichloroethene	10.14	130	1434	0.076	ng		95
48) 1,4-Dioxane	10.14	88	200	N.D.			
49) 2,2,4-Trimethylpentane...	10.23	57	810	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192421.D Vial: 9
Acq On : 19 Jun 2024 20:03 Operator: SC
Sample : P2402249-034 (40mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 11:24:08 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

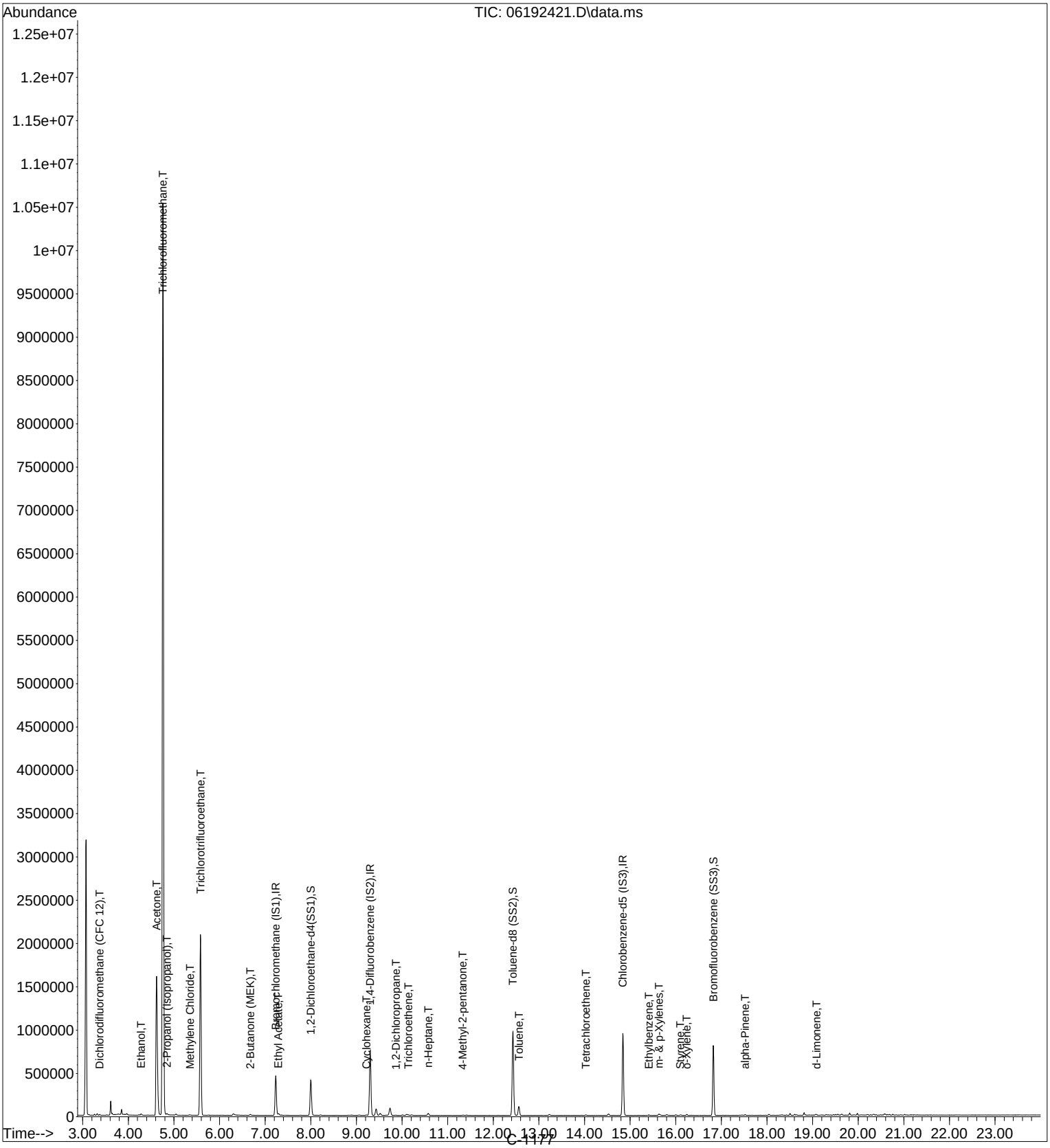
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	10.58	71	5258	0.383 ng		94
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	11.33	58	1117	0.078 ng	#	72
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	12.56	91	89836	1.386 ng		100
59) 2-Hexanone	12.93	43	555	N.D.		
60) Dibromochloromethane	13.07	129	540	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	13.78	43	1546	N.D.		
63) n-Octane	13.93	57	253	N.D.		
64) Tetrachloroethene	14.03	166	2025	0.091 ng		92
65) Chlorobenzene	14.90	112	950	N.D.		
66) Ethylbenzene	15.41	91	4946	0.067 ng		96
67) m- & p-Xylenes	15.63	91	13866	0.222 ng		98
68) Bromoform	15.67	173	594	N.D.		
69) Styrene	16.10	104	2581	0.061 ng		98
70) o-Xylene	16.24	91	7571	0.123 ng		97
71) n-Nonane	16.62	43	554	N.D.		
72) 1,1,2,2-Tetrachloroethane	16.21	83	229	N.D.		
74) Cumene	17.03	105	1062	N.D.		
75) alpha-Pinene	17.52	93	3517	0.098 ng		94
76) n-Propylbenzene	17.68	91	1345	N.D.		
77) 3-Ethyltoluene	17.03	105	1062	No Calib		
78) 4-Ethyltoluene	17.87	105	840	N.D.		
79) 1,3,5-Trimethylbenzene	17.96	105	610	N.D.		
80) alpha-Methylstyrene	0.00	118	0	N.D.		
81) 2-Ethyltoluene	17.03	105	1062	No Calib		
82) 1,2,4-Trimethylbenzene	18.43	105	1388	N.D.		
83) n-Decane	0.00	58	0	N.D.		
84) Benzyl Chloride	0.00	91	0	N.D.		
85) 1,3-Dichlorobenzene	18.58	146	589	N.D.		
86) 1,4-Dichlorobenzene	18.65	146	672	N.D.		
87) sec-Butylbenzene	18.74	105	1032	N.D.		
88) 4-Isopropyltoluene (p-...	18.93	119	1604	N.D.		
89) 1,2,3-Trimethylbenzene	17.03	105	1062	No Calib		
90) 1,2-Dichlorobenzene	19.04	146	533	N.D.		
91) d-Limonene	19.09	68	1489	0.065 ng		81
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	0.00	58	0	N.D.		
94) 1,2,4-Trichlorobenzene	20.84	180	837	N.D.		
95) Naphthalene	20.94	128	424	N.D.		
96) n-Dodecane	0.00	58	0	N.D.		
97) Hexachlorobutadiene	21.30	225	738	N.D.		
98) Cyclohexanone	15.37	55	178	No Calib	#	
99) tert-Butylbenzene	18.43	119	954	N.D.		
100) n-Butylbenzene	19.39	91	931	N.D.		
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192421.D Vial: 9
Acq On : 19 Jun 2024 20:03 Operator: SC
Sample : P2402249-034 (40mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 11:24:08 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\19\06192421.D Vial: 9
Acq On : 19 Jun 2024 20:03 Operator: SC
Sample : P2402249-034 (40mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 11:24:08 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

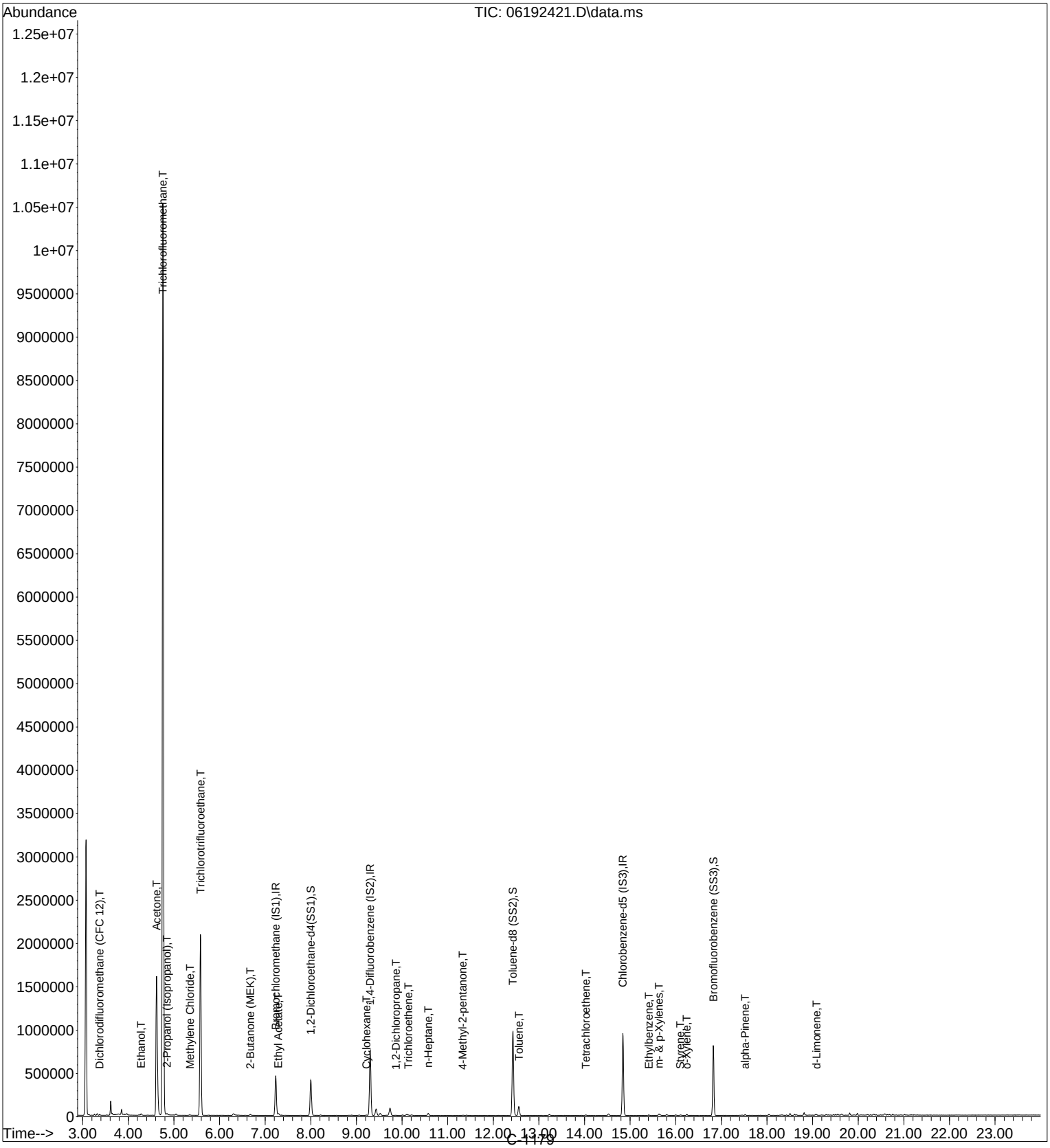
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	163202	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	704282	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	162065	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	354179	12.210	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.68%				
57) Toluene-d8 (SS2)	12.43	98	788030	12.706	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.68%				
73) Bromofluorobenzene (SS3)	16.83	174	278025	12.415	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.28%				
Target Compounds							Qvalue
3) Dichlorodifluoromethan...	3.37	85	2859	0.074	ng		96
10) Ethanol	4.28	45	22193	1.399	ng		81
13) Acetone	4.62	58	521931	41.167	ng		98
14) Trichlorofluoromethane	4.76	101	7980388	205.398	ng		99
15) 2-Propanol (Isopropanol)	4.85	45	24684	0.483	ng	#	19
19) Methylene Chloride	5.35	84	1507	0.084	ng		90
21) Trichlorotrifluoroethane	5.58	151	670090	40.769	ng		96
27) 2-Butanone (MEK)	6.67	72	2707	0.270	ng	#	69
30) Ethyl Acetate	7.29	61	2750	0.449	ng		99
43) Cyclohexane	9.22	84	1748	0.083	ng		93
45) 1,2-Dichloropropane	9.87	63	1277	0.081	ng		96
47) Trichloroethene	10.14	130	1434	0.076	ng		95
51) n-Heptane	10.58	71	5258	0.383	ng		94
53) 4-Methyl-2-pentanone	11.33	58	1117	0.078	ng	#	72
58) Toluene	12.56	91	89836	1.386	ng		100
64) Tetrachloroethene	14.03	166	2025	0.091	ng		92
66) Ethylbenzene	15.41	91	4946	0.067	ng		96
67) m- & p-Xylenes	15.63	91	13866	0.222	ng		98
69) Styrene	16.10	104	2581	0.061	ng		98
70) o-Xylene	16.24	91	7571	0.123	ng		97
75) alpha-Pinene	17.52	93	3517	0.098	ng		94
91) d-Limonene	19.09	68	1489	0.065	ng		81

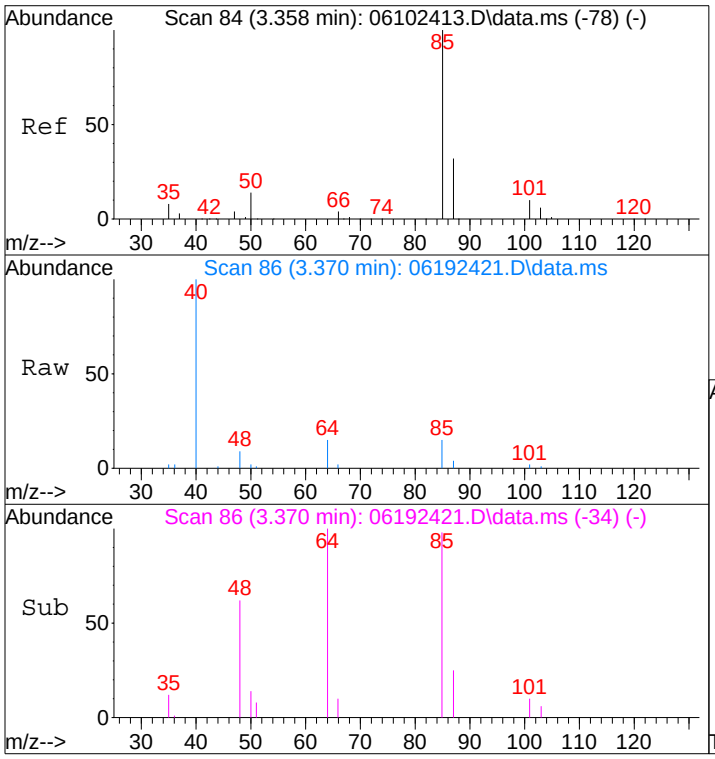
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192421.D Vial: 9
Acq On : 19 Jun 2024 20:03 Operator: SC
Sample : P2402249-034 (40mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 11:24:08 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

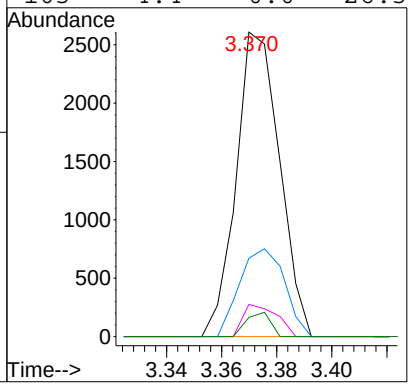


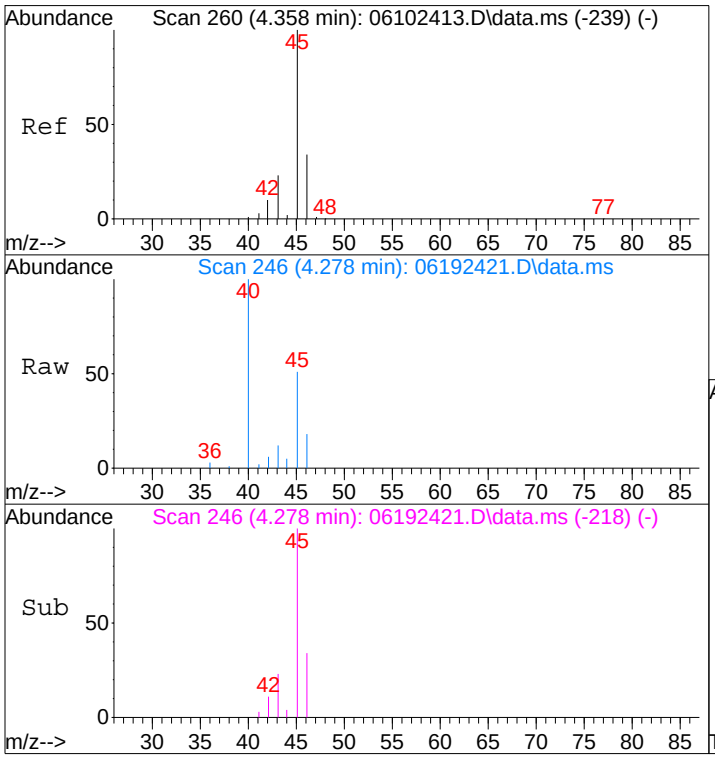


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.07 ng
RT: 3.37 min Scan# 86
Delta R.T. 0.048 min
Lab File: 06192421.D
Acq: 19 Jun 2024 20:03

Tgt Ion: 85 Resp: 2859

Ion	Ratio	Lower	Upper
85	100		
87	29.9	12.2	52.2
101	8.2	0.0	29.8
103	4.4	0.0	26.3

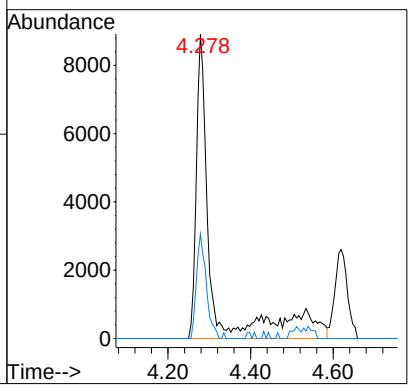


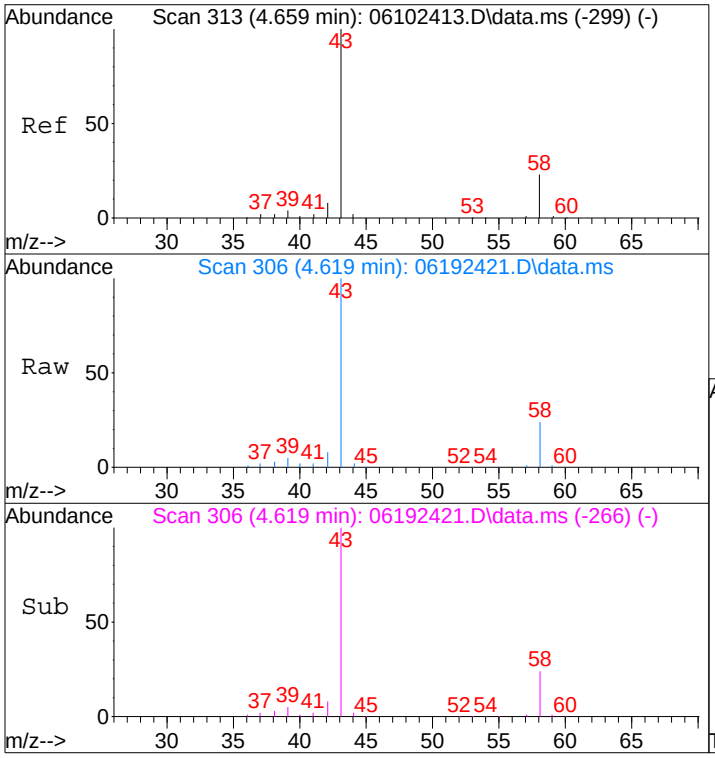


#10
Ethanol
Concen: 1.40 ng
RT: 4.28 min Scan# 246
Delta R.T. -0.088 min
Lab File: 06192421.D
Acq: 19 Jun 2024 20:03

Tgt Ion: 45 Resp: 22193

Ion	Ratio	Lower	Upper
45	100		
46	22.7	13.5	53.5

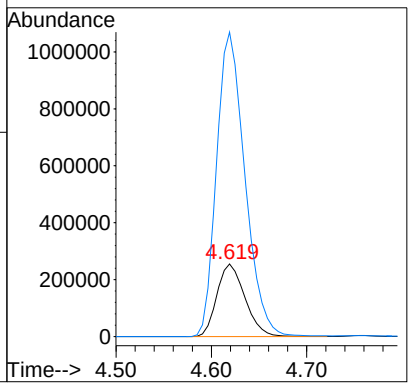


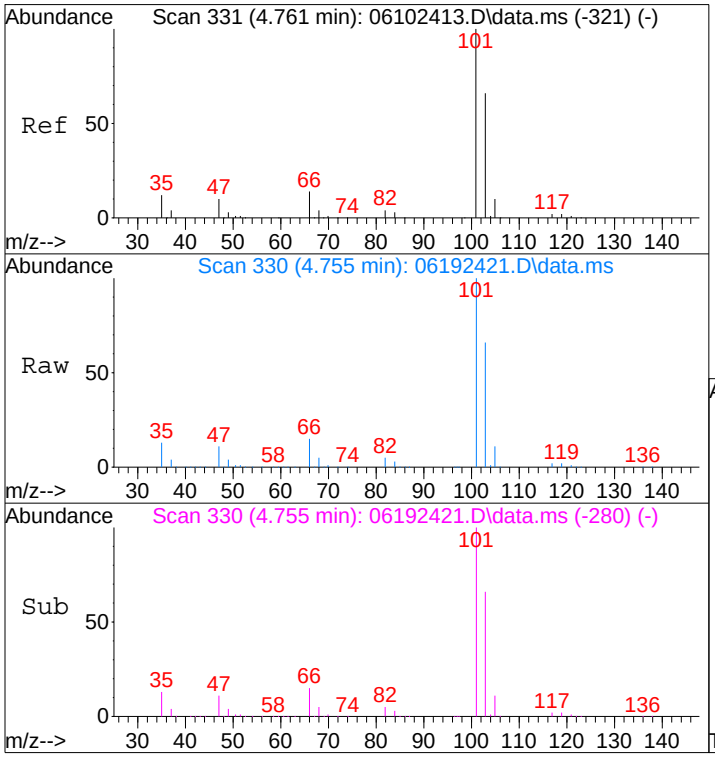


#13
Acetone
Concen: 41.17 ng
RT: 4.62 min Scan# 306
Delta R.T. -0.023 min
Lab File: 06192421.D
Acq: 19 Jun 2024 20:03

Tgt Ion: 58 Resp: 521931

Ion	Ratio	Lower	Upper
58	100		
43	424.8	400.7	460.7

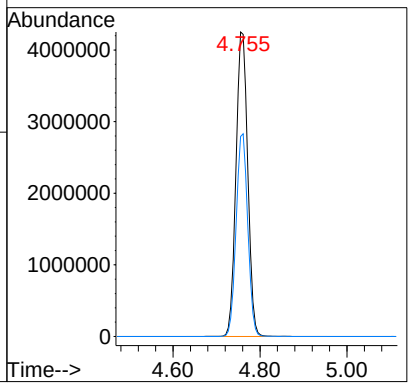


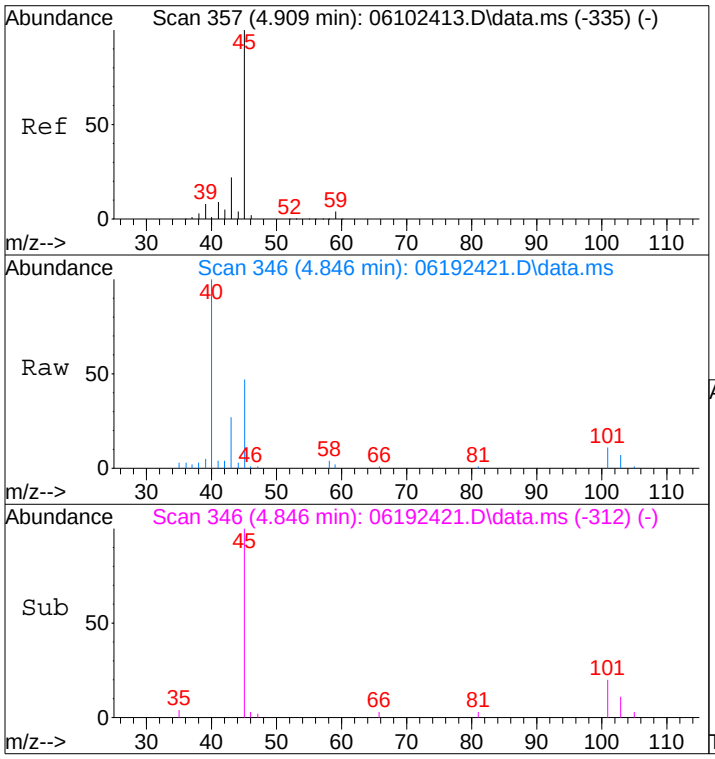


#14
Trichlorofluoromethane
Concen: 205.40 ng
RT: 4.76 min Scan# 330
Delta R.T. 0.035 min
Lab File: 06192421.D
Acq: 19 Jun 2024 20:03

Tgt Ion:101 Resp: 7980388

Ion	Ratio	Lower	Upper
101	100		
103	65.7	44.9	84.9

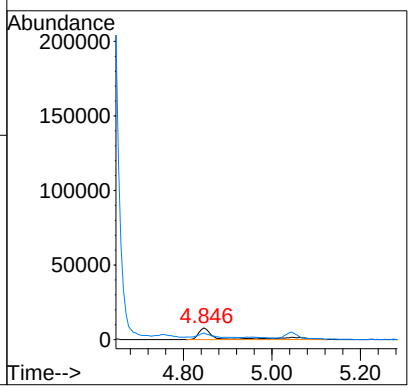


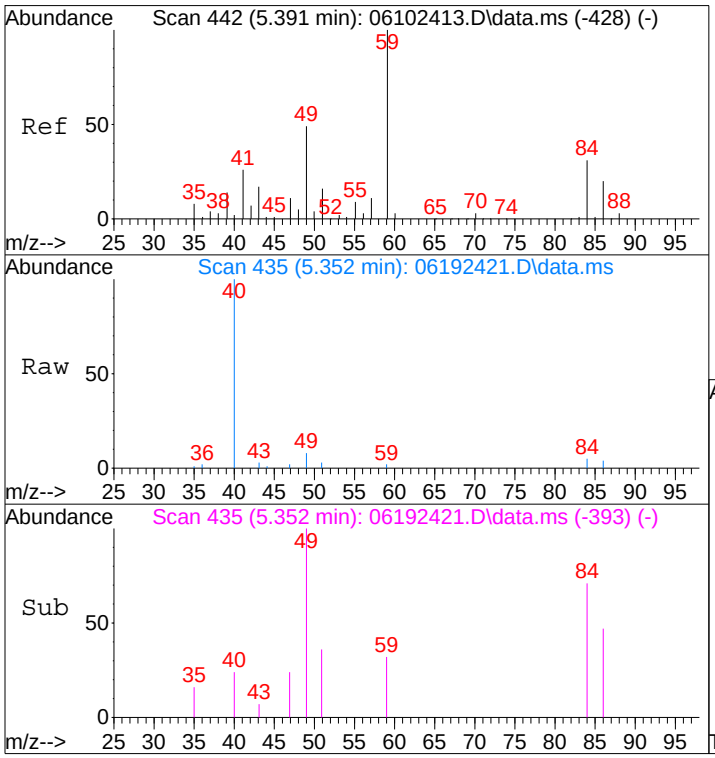


#15
2-Propanol (Isopropanol)
Concen: 0.48 ng
RT: 4.85 min Scan# 346
Delta R.T. -0.054 min
Lab File: 06192421.D
Acq: 19 Jun 2024 20:03

Tgt Ion: 45 Resp: 24684

Ion	Ratio	Lower	Upper
45	100		
43	61.2	2.5	42.5#

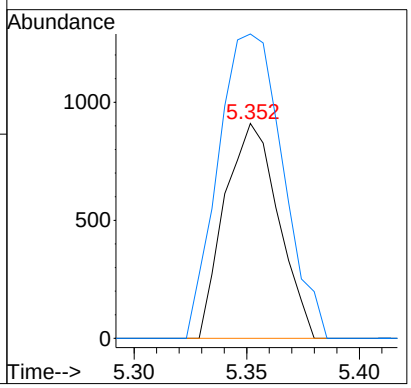


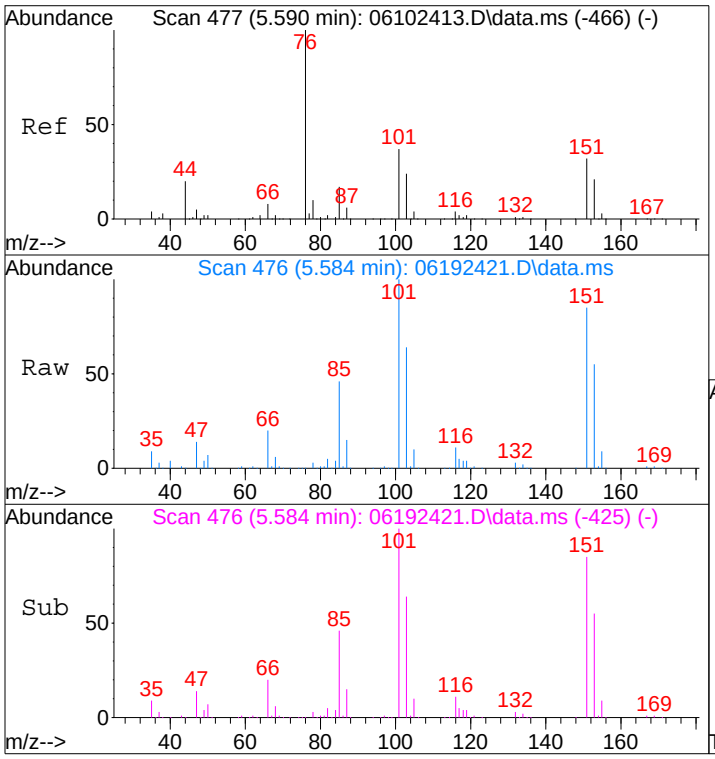


#19
Methylene Chloride
Concen: 0.08 ng
RT: 5.35 min Scan# 435
Delta R.T. -0.009 min
Lab File: 06192421.D
Acq: 19 Jun 2024 20:03

Tgt Ion: 84 Resp: 1507

Ion	Ratio	Lower	Upper
84	100		
49	171.0	132.9	182.9

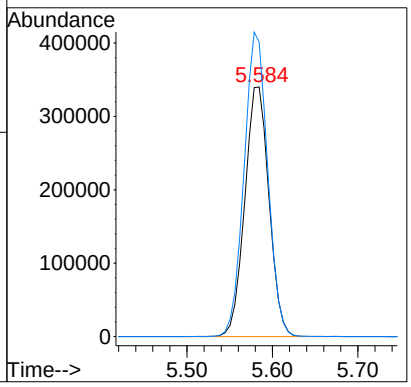


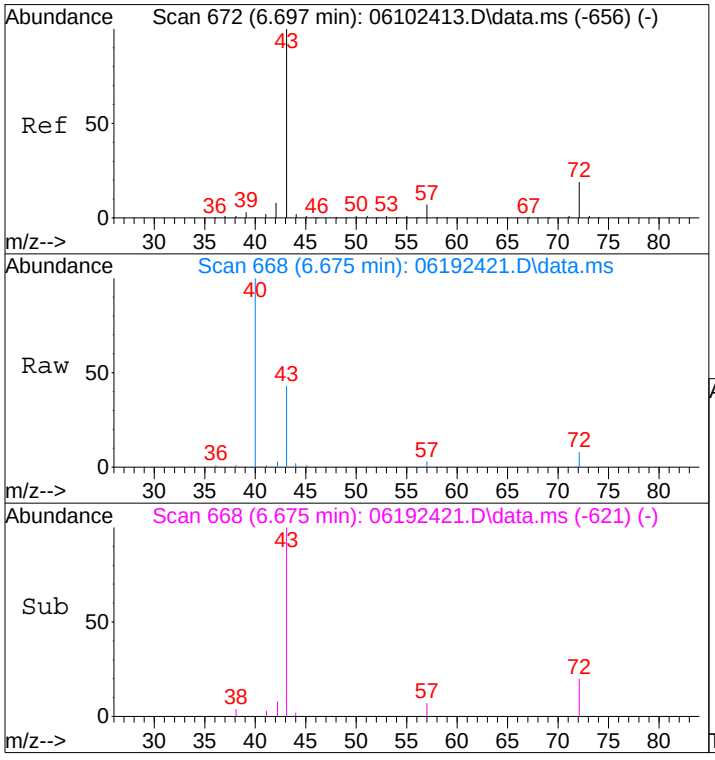


#21
Trichlorotrifluoroethane
Concen: 40.77 ng
RT: 5.58 min Scan# 476
Delta R.T. 0.038 min
Lab File: 06192421.D
Acq: 19 Jun 2024 20:03

Tgt Ion:151 Resp: 670090

Ion	Ratio	Lower	Upper
151	100		
101	119.1	95.0	135.0

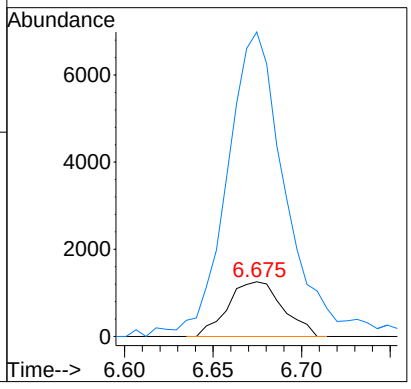


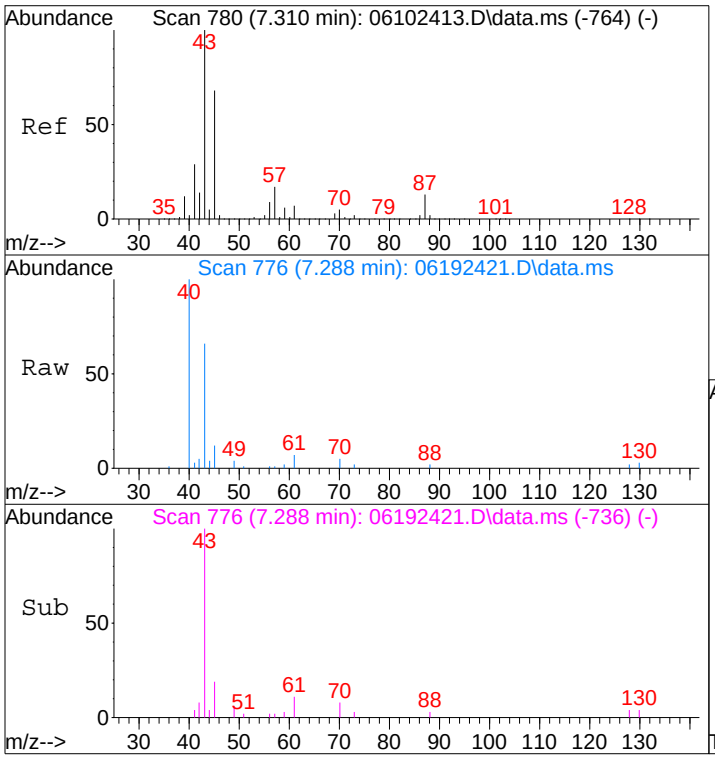


#27
2-Butanone (MEK)
Concen: 0.27 ng
RT: 6.67 min Scan# 668
Delta R.T. 0.016 min
Lab File: 06192421.D
Acq: 19 Jun 2024 20:03

Tgt Ion: 72 Resp: 2707

Ion	Ratio	Lower	Upper
72	100		
43	616.3	506.8	546.8#

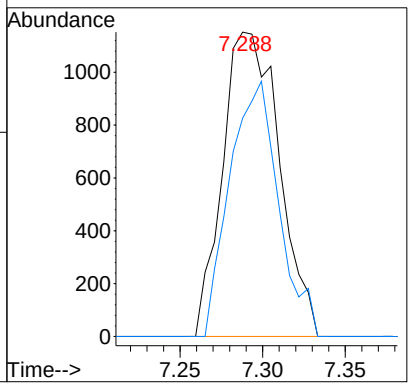


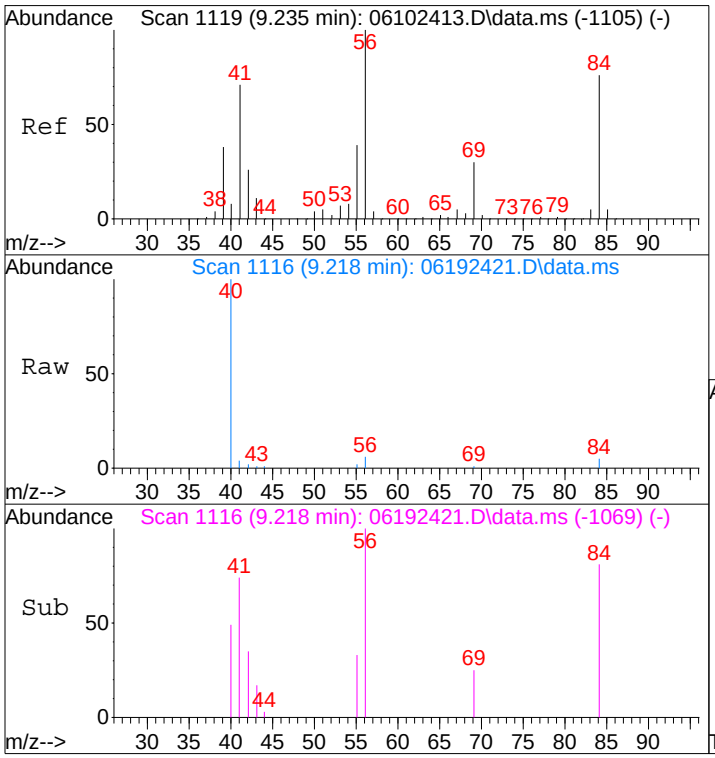


#30
Ethyl Acetate
Concen: 0.45 ng
RT: 7.29 min Scan# 776
Delta R.T. 0.029 min
Lab File: 06192421.D
Acq: 19 Jun 2024 20:03

Tgt Ion: 61 Resp: 2750

Ion	Ratio	Lower	Upper
61	100		
70	72.3	53.5	93.5

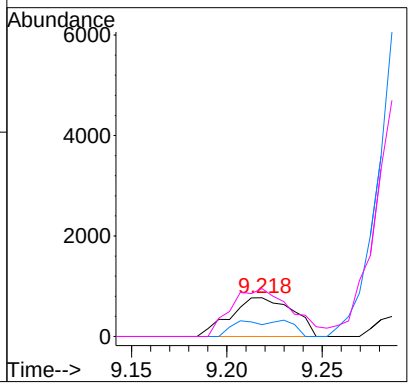


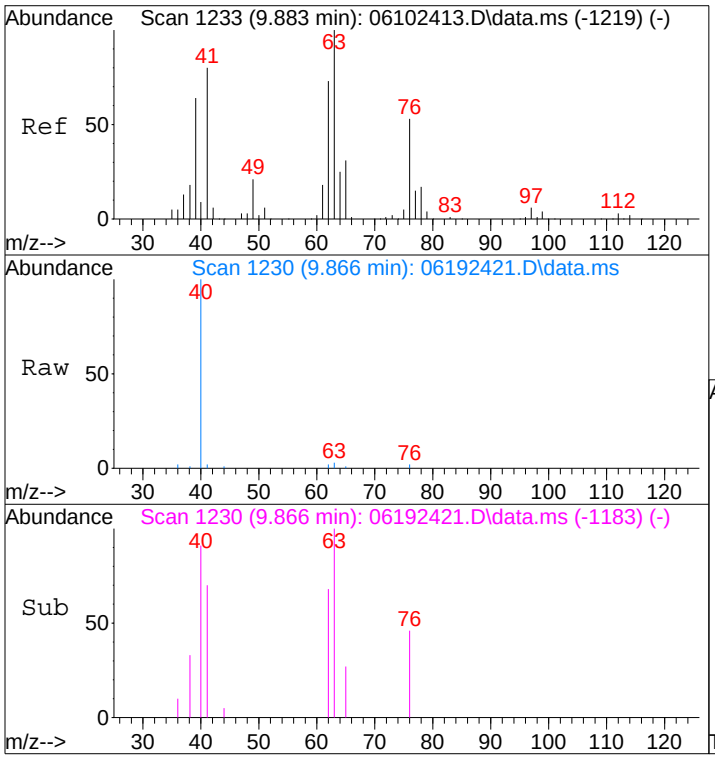


#43
Cyclohexane
Concen: 0.08 ng
RT: 9.22 min Scan# 1116
Delta R.T. 0.016 min
Lab File: 06192421.D
Acq: 19 Jun 2024 20:03

Tgt Ion: 84 Resp: 1748

Ion	Ratio	Lower	Upper
84	100		
69	36.4	18.8	58.8
56	122.3	111.5	151.5

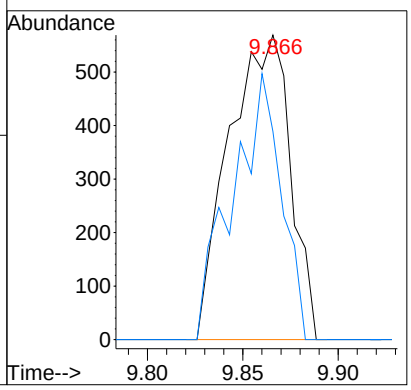


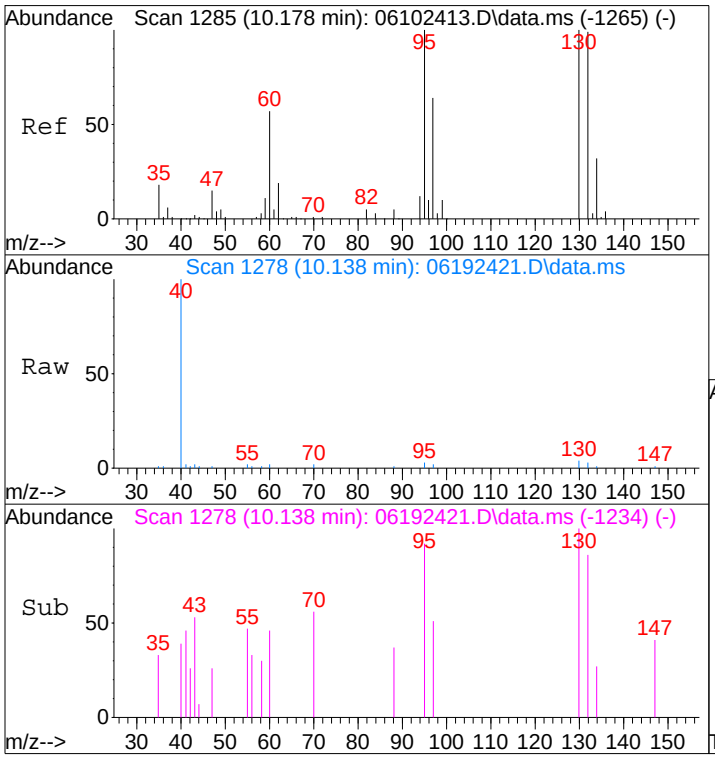


#45
1,2-Dichloropropane
Concen: 0.08 ng
RT: 9.87 min Scan# 1230
Delta R.T. 0.014 min
Lab File: 06192421.D
Acq: 19 Jun 2024 20:03

Tgt Ion: 63 Resp: 1277

Ion	Ratio	Lower	Upper
63	100		
62	69.1	52.4	92.4

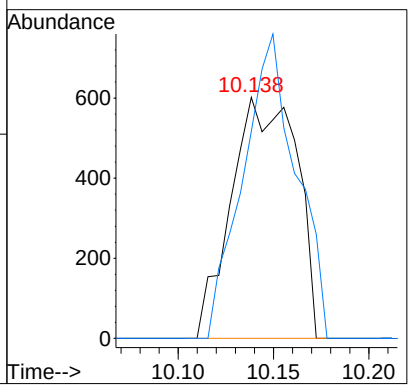


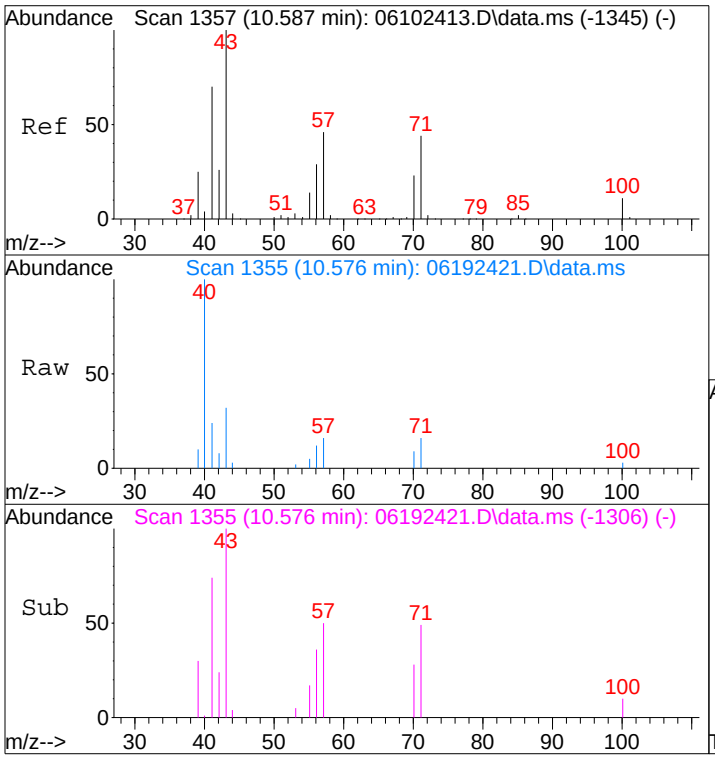


#47
Trichloroethene
Concen: 0.08 ng
RT: 10.14 min Scan# 1278
Delta R.T. -0.001 min
Lab File: 06192421.D
Acq: 19 Jun 2024 20:03

Tgt Ion:130 Resp: 1434

Ion	Ratio	Lower	Upper
130	100		
132	102.6	77.9	117.9

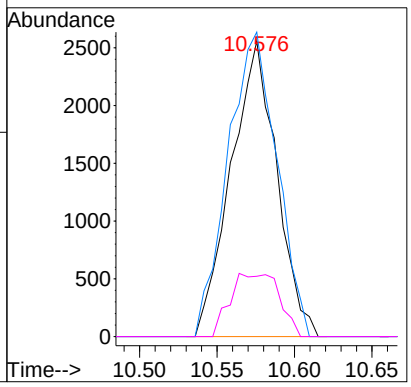


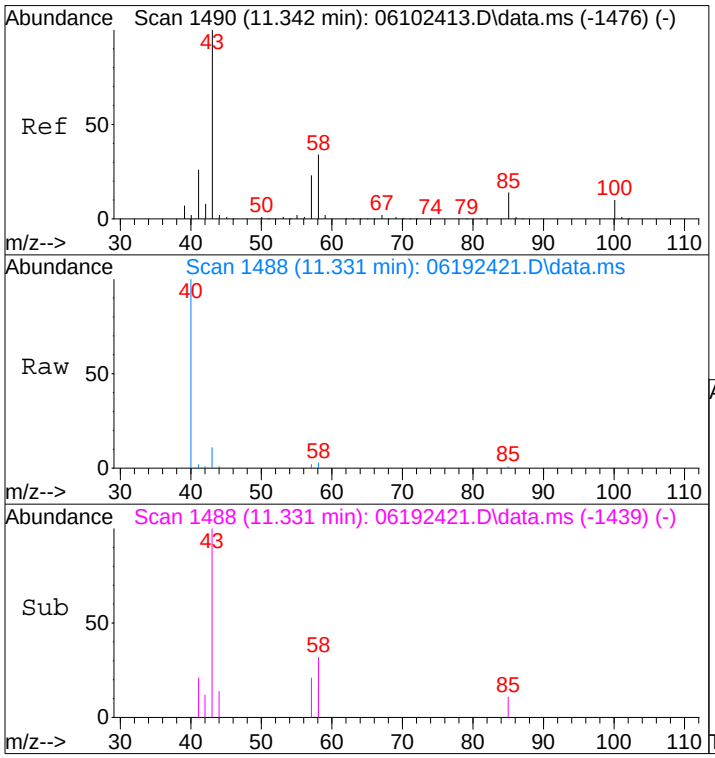


#51
n-Heptane
Concen: 0.38 ng
RT: 10.58 min Scan# 1355
Delta R.T. 0.029 min
Lab File: 06192421.D
Acq: 19 Jun 2024 20:03

Tgt Ion: 71 Resp: 5258

Ion	Ratio	Lower	Upper
71	100		
57	110.2	83.9	123.9
100	22.9	4.8	44.8

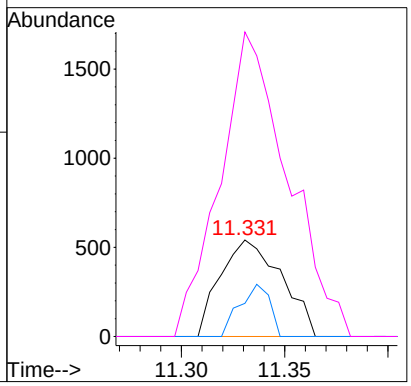


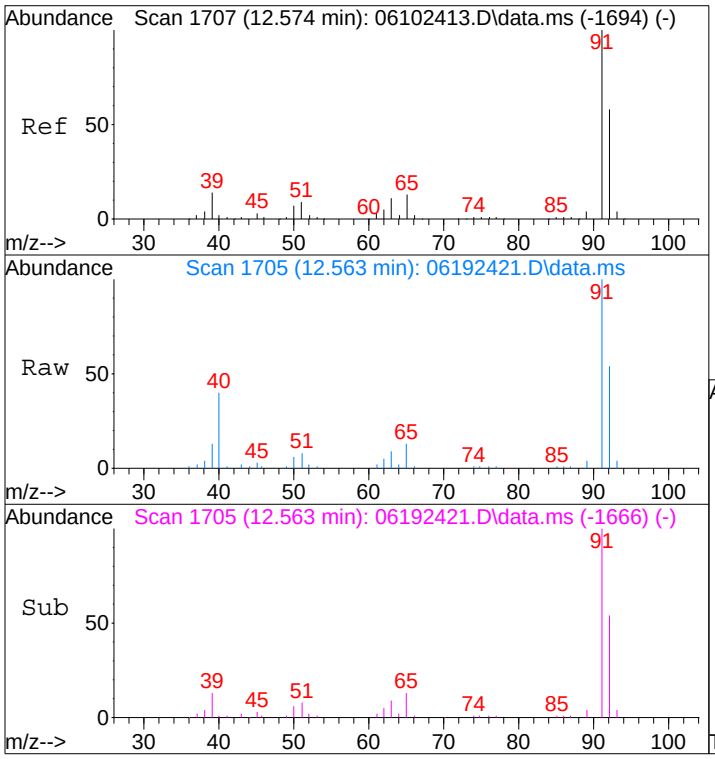


#53
4-Methyl-2-pentanone
Concen: 0.08 ng
RT: 11.33 min Scan# 1488
Delta R.T. 0.028 min
Lab File: 06192421.D
Acq: 19 Jun 2024 20:03

Tgt Ion: 58 Resp: 1117

Ion	Ratio	Lower	Upper
58	100		
85	26.6	34.5	51.7#
43	349.7	236.1	354.1

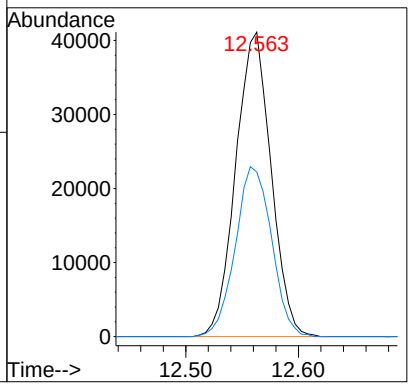


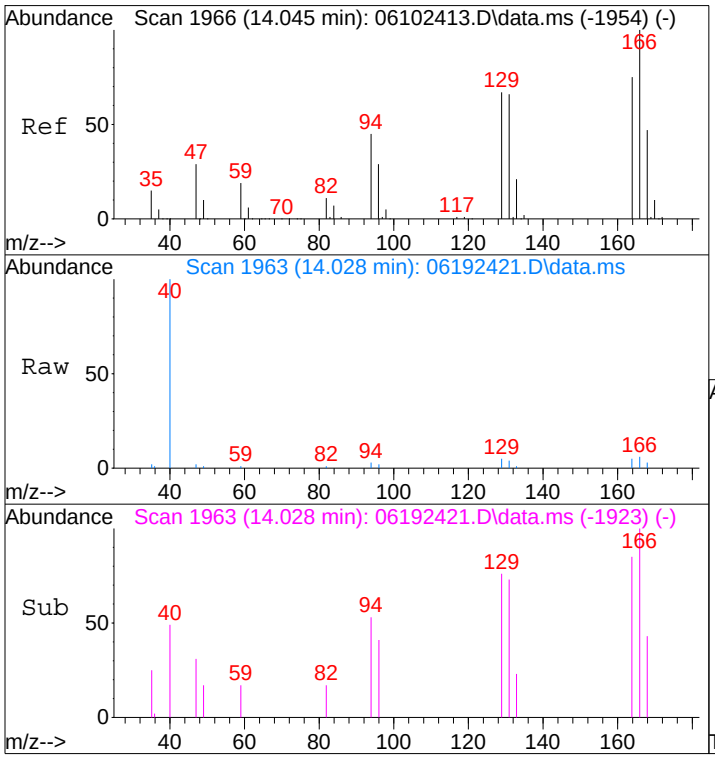


#58
Toluene
Concen: 1.39 ng
RT: 12.56 min Scan# 1705
Delta R.T. -0.028 min
Lab File: 06192421.D
Acq: 19 Jun 2024 20:03

Tgt Ion: 91 Resp: 89836

Ion	Ratio	Lower	Upper
91	100		
92	57.2	37.4	77.4

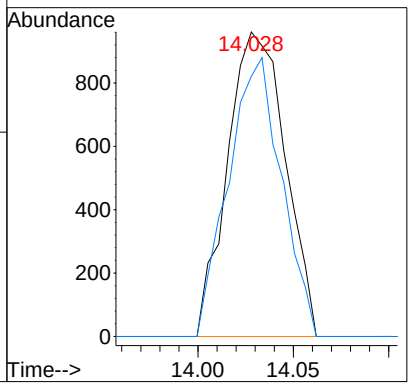


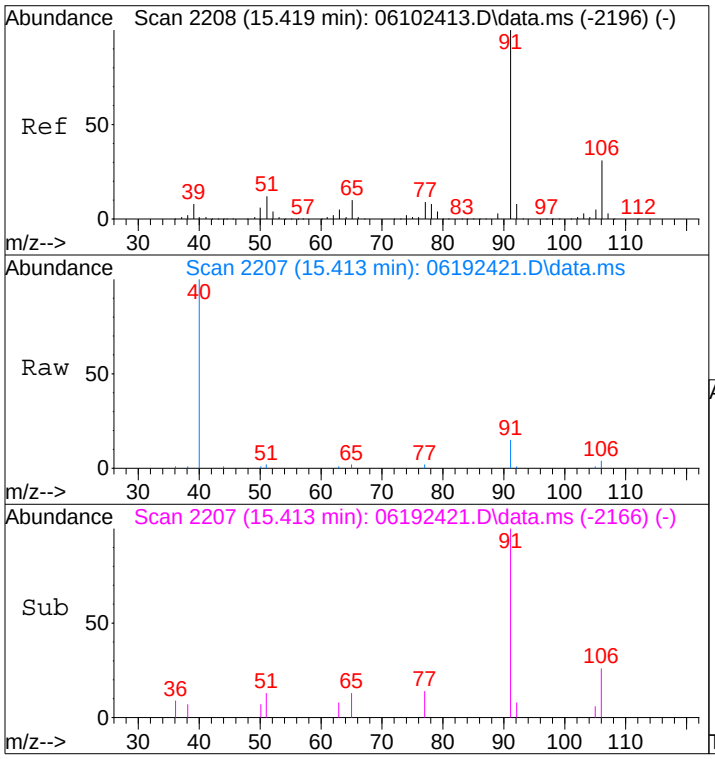


#64
Tetrachloroethene
Concen: 0.09 ng
RT: 14.03 min Scan# 1963
Delta R.T. -0.023 min
Lab File: 06192421.D
Acq: 19 Jun 2024 20:03

Tgt Ion:166 Resp: 2025

Ion	Ratio	Lower	Upper
166	100		
164	84.2	56.9	96.9

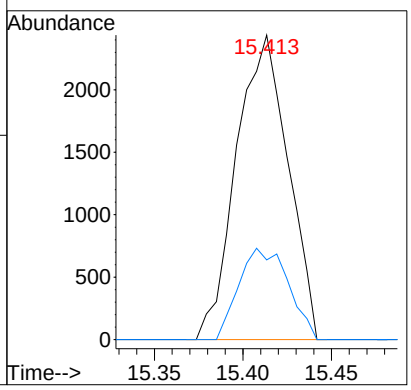


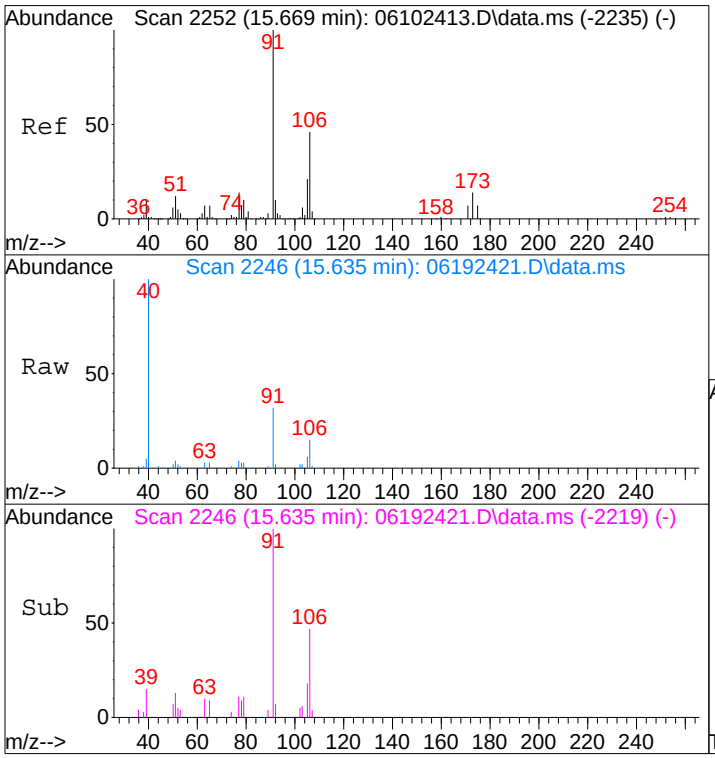


#66
Ethylbenzene
Concen: 0.07 ng
RT: 15.41 min Scan# 2207
Delta R.T. -0.017 min
Lab File: 06192421.D
Acq: 19 Jun 2024 20:03

Tgt Ion: 91 Resp: 4946

Ion	Ratio	Lower	Upper
91	100		
106	28.7	10.7	50.7

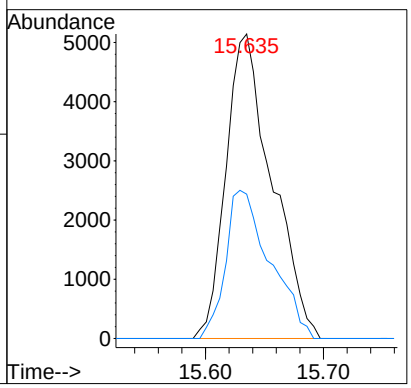


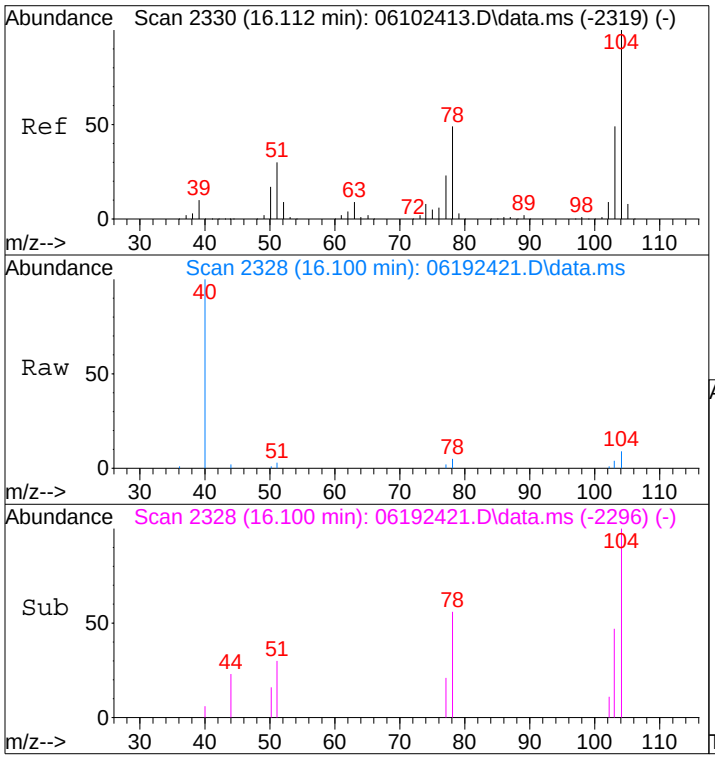


#67
m- & p-Xylenes
Concen: 0.22 ng
RT: 15.63 min Scan# 2246
Delta R.T. -0.046 min
Lab File: 06192421.D
Acq: 19 Jun 2024 20:03

Tgt Ion: 91 Resp: 13866

Ion	Ratio	Lower	Upper
91	100		
106	47.3	25.9	65.9

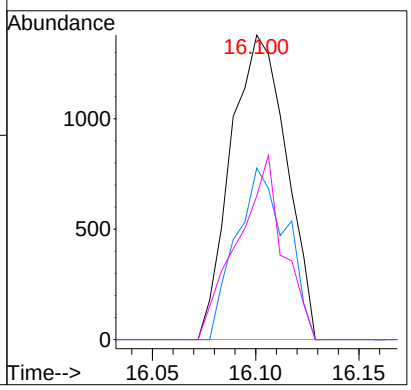


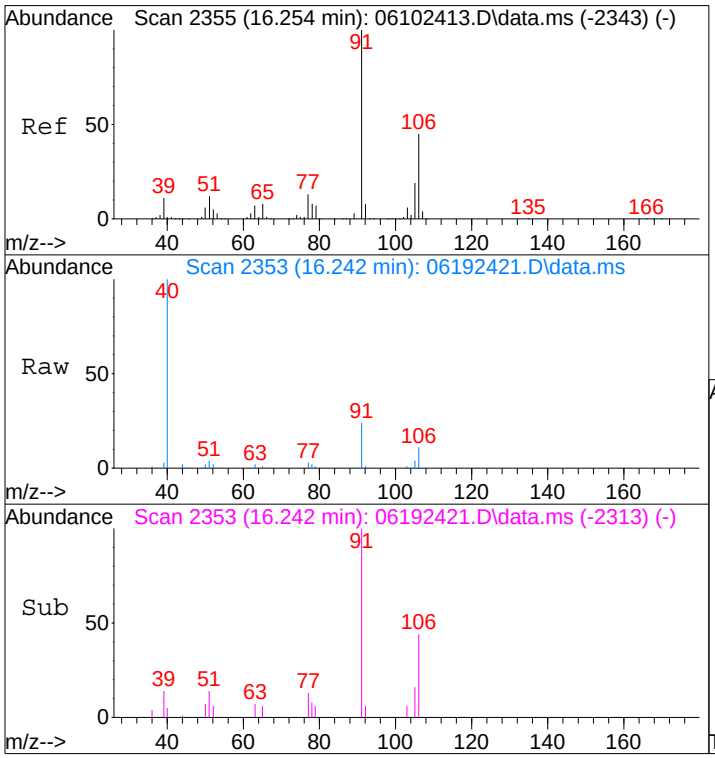


#69
Styrene
Concen: 0.06 ng
RT: 16.10 min Scan# 2328
Delta R.T. -0.017 min
Lab File: 06192421.D
Acq: 19 Jun 2024 20:03

Tgt Ion:104 Resp: 2581

Ion	Ratio	Lower	Upper
104	100		
78	51.1	29.2	69.2
103	49.7	29.4	69.4

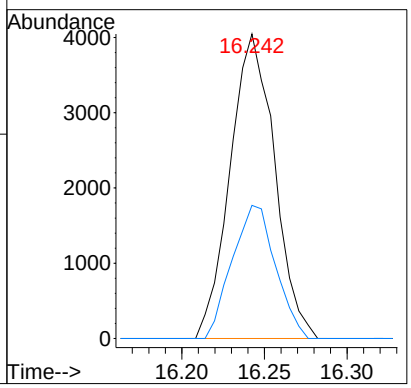


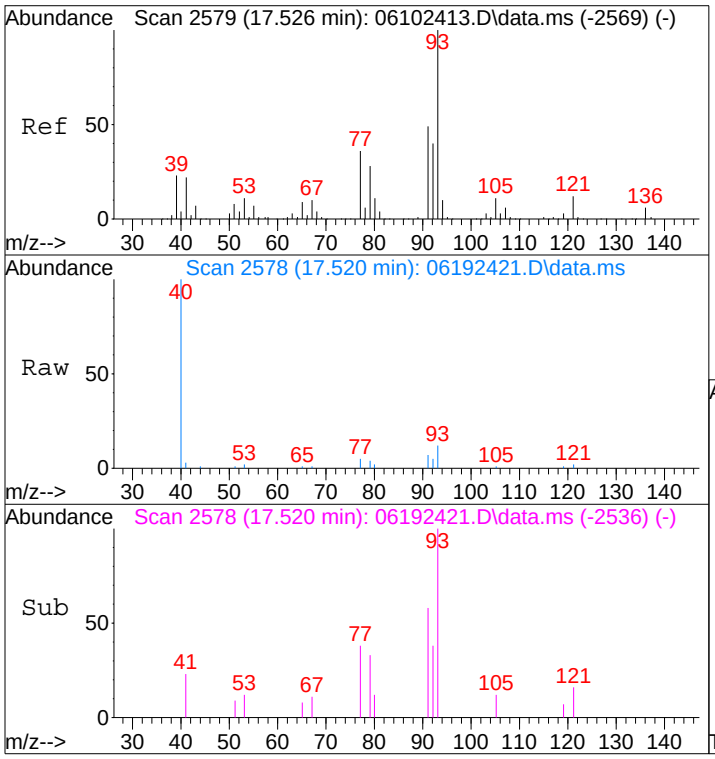


#70
o-Xylene
Concen: 0.12 ng
RT: 16.24 min Scan# 2353
Delta R.T. -0.023 min
Lab File: 06192421.D
Acq: 19 Jun 2024 20:03

Tgt Ion: 91 Resp: 7571

Ion	Ratio	Lower	Upper
91	100		
106	42.6	24.5	64.5

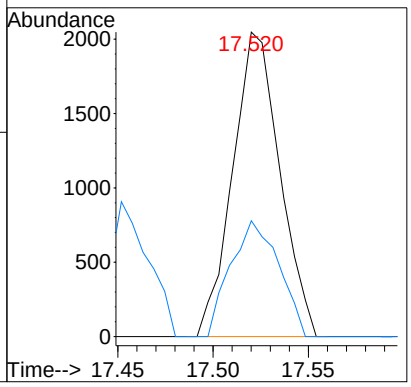


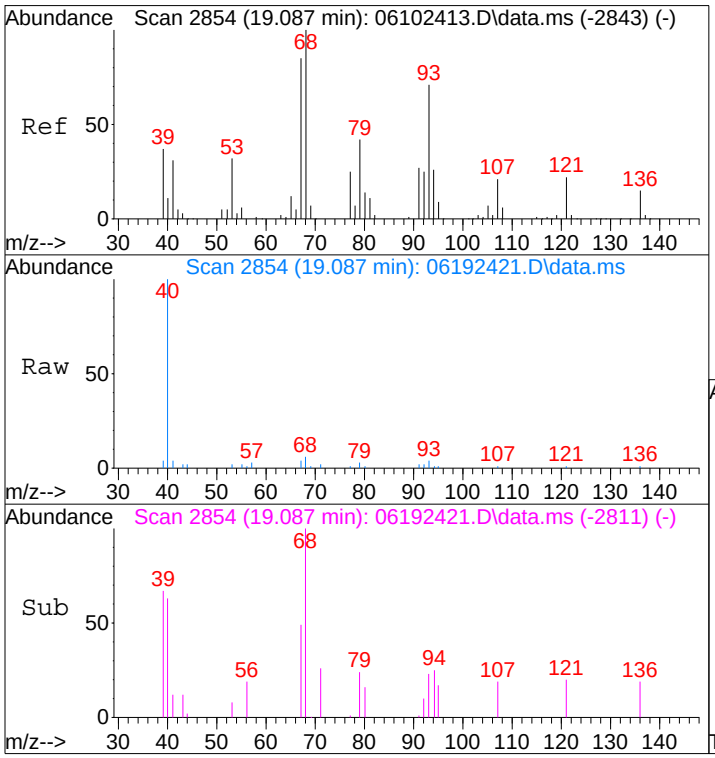


#75
alpha-Pinene
Concen: 0.10 ng
RT: 17.52 min Scan# 2578
Delta R.T. -0.011 min
Lab File: 06192421.D
Acq: 19 Jun 2024 20:03

Tgt Ion: 93 Resp: 3517

Ion	Ratio	Lower	Upper
93	100		
77	39.1	15.3	55.3

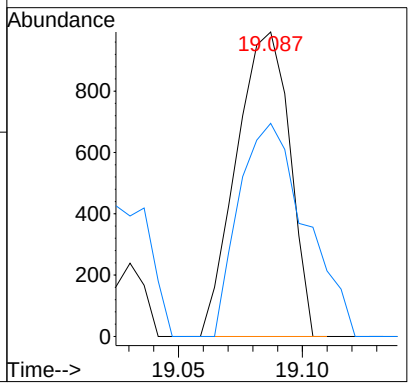




#91
d-Limonene
Concen: 0.06 ng
RT: 19.09 min Scan# 2854
Delta R.T. -0.006 min
Lab File: 06192421.D
Acq: 19 Jun 2024 20:03

Tgt Ion: 68 Resp: 1489

Ion	Ratio	Lower	Upper
68	100		
93	87.6	52.2	92.2



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192421.D Vial: 9
Acq On : 19 Jun 2024 20:03 Operator: SC
Sample : P2402249-034 (40mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 15:11:50 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

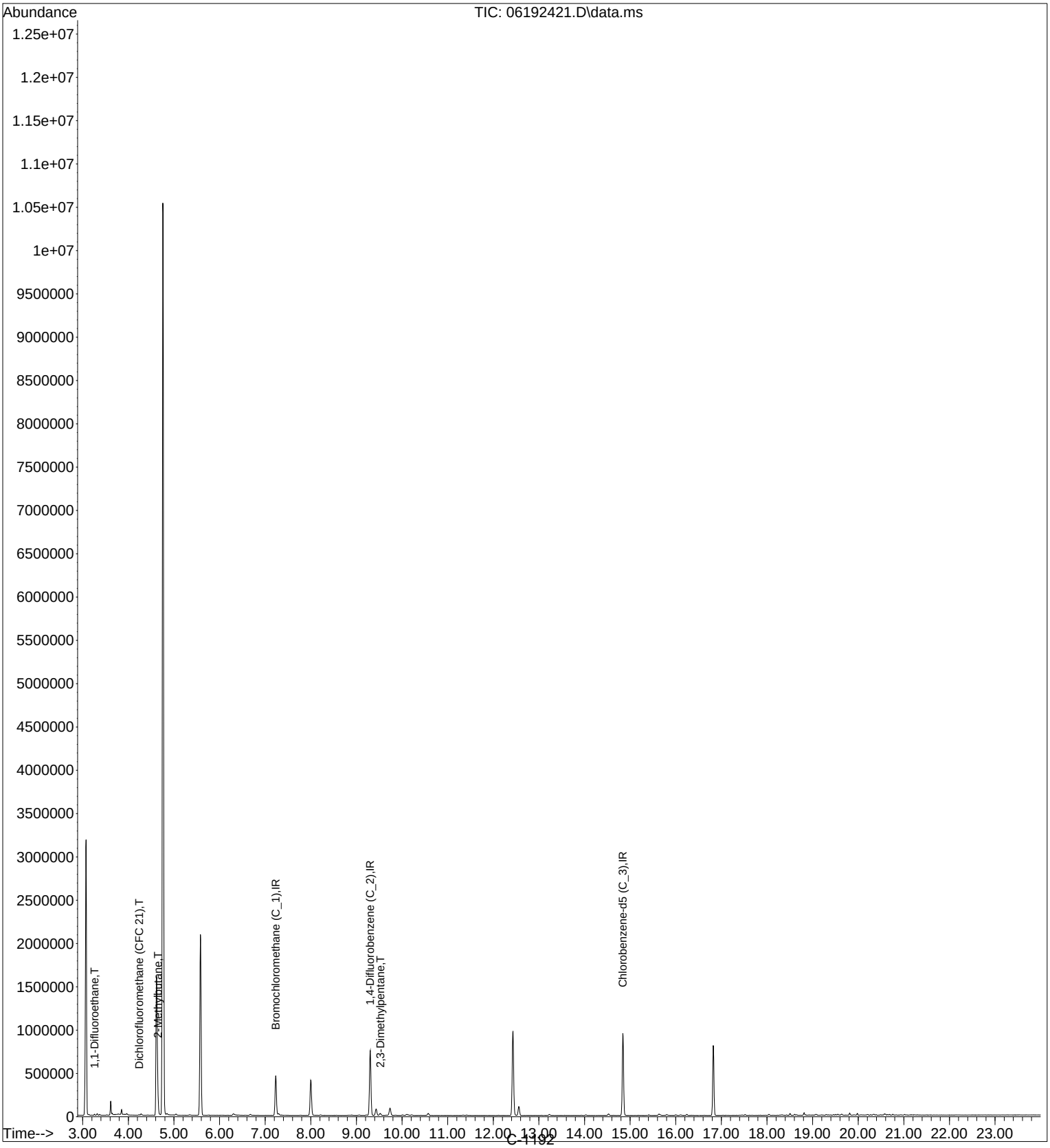
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	164035	12.500	ng		-0.02
16) 1,4-Difluorobenzene (C 2)	9.30	114	704282	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	162065	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	0.00	85	0	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.20	83	631	N.D.			
4) 1,1-Difluoroethane	3.26	65	2708	0.189	ng		94
5) Chlorodifluoromethane ...	0.00	67	0	N.D.			
6) 1-Chloro-1,1-Difluoroe...	0.00	65	0	N.D.			
7) Dichlorofluoromethane ...	4.24	67	4232	0.113	ng		97
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	0.00	83	0	N.D.			
10) 2-Methylbutane	4.65	57	35317	1.805	ng	#	1
11) Methyl Acetate	5.33	43	3779	N.D.			
12) 2-Methylpentane	6.49	71	52	N.D.			
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	0.00	84	0	N.D.			
17) 2,3-Dimethylpentane	9.53	56	11686	0.343	ng		97
18) Dibromomethane	9.80	174	181	N.D.			
20) Methyl Cyclohexane	11.42	55	1561	N.D.			
21) 1,3-Dichloropropane	12.56	76	338	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	0.00	75	0	N.D.			
25) Bromobenzene	0.00	77	0	N.D.			
26) 2-Chlorotoluene	17.60	91	736	N.D.			
27) 4-Chlorotoluene	17.68	91	1345	N.D.			
28) Indane	19.12	117	206	N.D.			
29) Indene	0.00	115	0	N.D.			
30) 1,2,4,5-Tetramethylben...	20.18	119	117	N.D.			
31) 1,2,3,4-Tetramethylben...	20.22	119	273	N.D.			
32) 1,2,3,5-Tetramethylben...	20.59	119	131	N.D.			
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192421.D Vial: 9
Acq On : 19 Jun 2024 20:03 Operator: SC
Sample : P2402249-034 (40mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:11:50 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



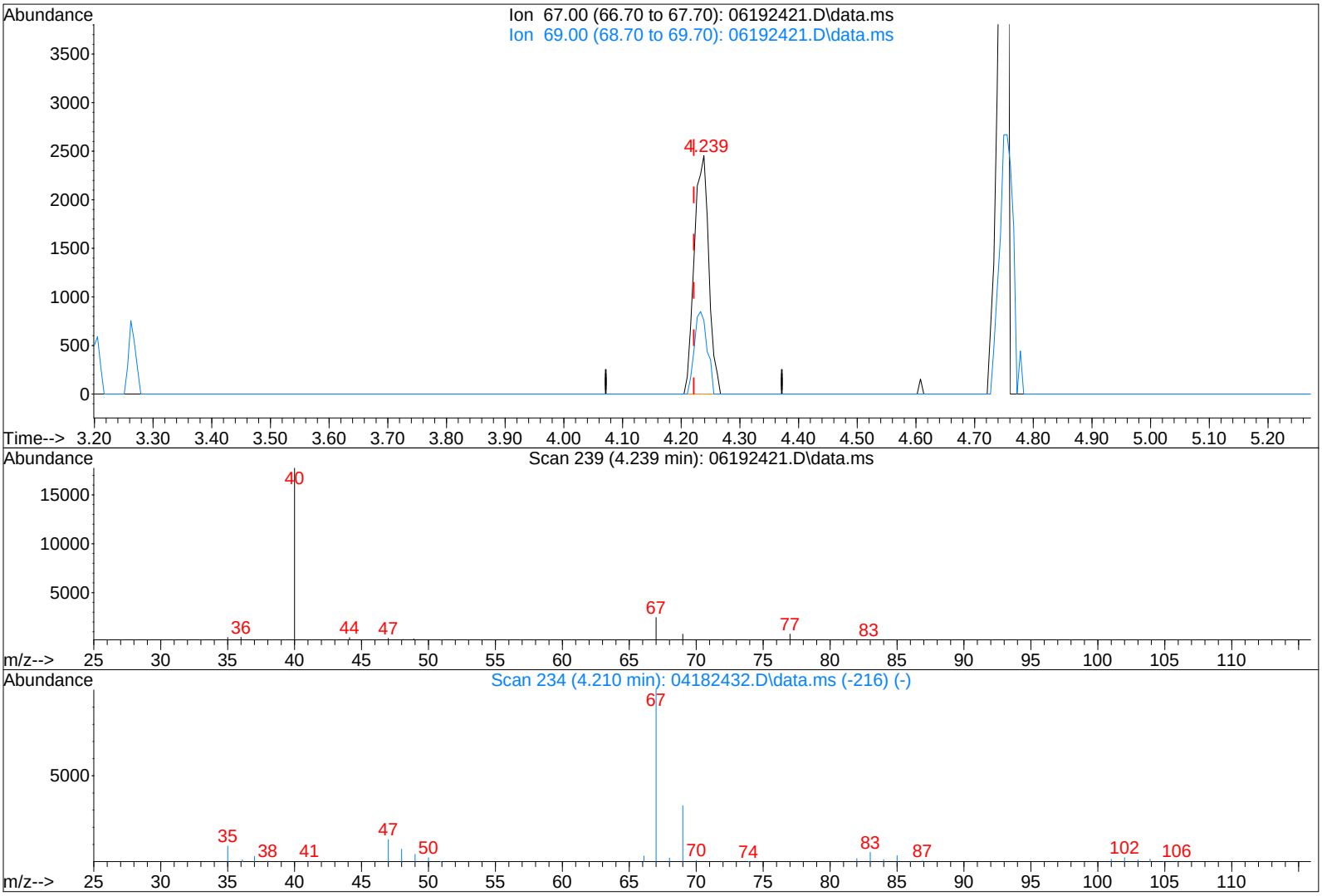
C-1192

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\19\06192421.D Vial: 9
Acq On : 19 Jun 2024 20:03 Operator: SC
Sample : P2402249-034 (40mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 15:11:50 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06192421.D\data.ms

(7) Dichlorofluoromethane (CFC 21) (T)

4.239min (+0.017) 0.11ng

response 4232

Ion	Exp%	Act%
67.00	100	100
69.00	32.40	30.65
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242409.D Vial: 1
Acq On : 24 Jun 2024 11:55 Operator: SC
Sample : P2402249-034Dil (4.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 24 12:17:02 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/24/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	192602	12.500	ng		-0.05
37) 1,4-Difluorobenzene (IS2)	9.30	114	853577	12.500	ng		-0.03
56) Chlorobenzene-d5 (IS3)	14.84	54	190487	12.500	ng		-0.01
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	412537	12.051	ng		-0.04
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.40%				
57) Toluene-d8 (SS2)	12.43	98	952516	13.067	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 104.56%				
73) Bromofluorobenzene (SS3)	16.82	174	321505	12.214	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.68%				
Target Compounds							Qvalue
2) Propene	0.00	42	0	N.D.	d		
3) Dichlorodifluoromethan...	3.34	85	326	N.D.			
4) Chloromethane	3.53	50	342	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.39	45	71	N.D.			
11) Acetonitrile	4.44	41	724	N.D.			
12) Acrolein	4.54	56	472	N.D.			
13) Acetone	4.63	58	63568	4.249	ng		99
14) Trichlorofluoromethane	4.76	101	865405	18.874	ng		99
15) 2-Propanol (Isopropanol)	4.87	45	4068	0.067	ng	#	1
16) Acrylonitrile	5.04	53	125	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.38	59	112	N.D.			
19) Methylene Chloride	5.35	84	1314	0.062	ng		98
20) 3-Chloro-1-propene (Al...	5.45	41	292	N.D.			
21) Trichlorotrifluoroethane	5.58	151	79231	4.085	ng		94
22) Carbon Disulfide	5.61	76	1476	N.D.			
23) trans-1,2-Dichloroethene	6.14	61	111	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D.			
27) 2-Butanone (MEK)	6.69	72	968	0.082	ng	#	76
28) cis-1,2-Dichloroethene	7.08	61	247	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.			
30) Ethyl Acetate	7.29	61	1730	0.239	ng		96
31) n-Hexane	7.31	57	1303	N.D.			
32) Chloroform	7.35	83	869	N.D.			
34) Tetrahydrofuran (THF)	7.78	72	129	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	403	N.D.			
38) 1,1,1-Trichloroethane	8.40	97	622	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.84	56	956	No Calib		#	
41) Benzene	8.90	78	3157	N.D.			
42) Carbon Tetrachloride	0.00	117	0	N.D.			
43) Cyclohexane	9.21	84	262	N.D.			
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	9.87	63	104	N.D.			
46) Bromodichloromethane	10.07	83	509	N.D.			
47) Trichloroethene	10.14	130	1421	0.062	ng		94
48) 1,4-Dioxane	10.14	88	293	N.D.			
49) 2,2,4-Trimethylpentane...	10.24	57	2318	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242409.D Vial: 1
Acq On : 24 Jun 2024 11:55 Operator: SC
Sample : P2402249-034Dil (4.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 24 12:17:02 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

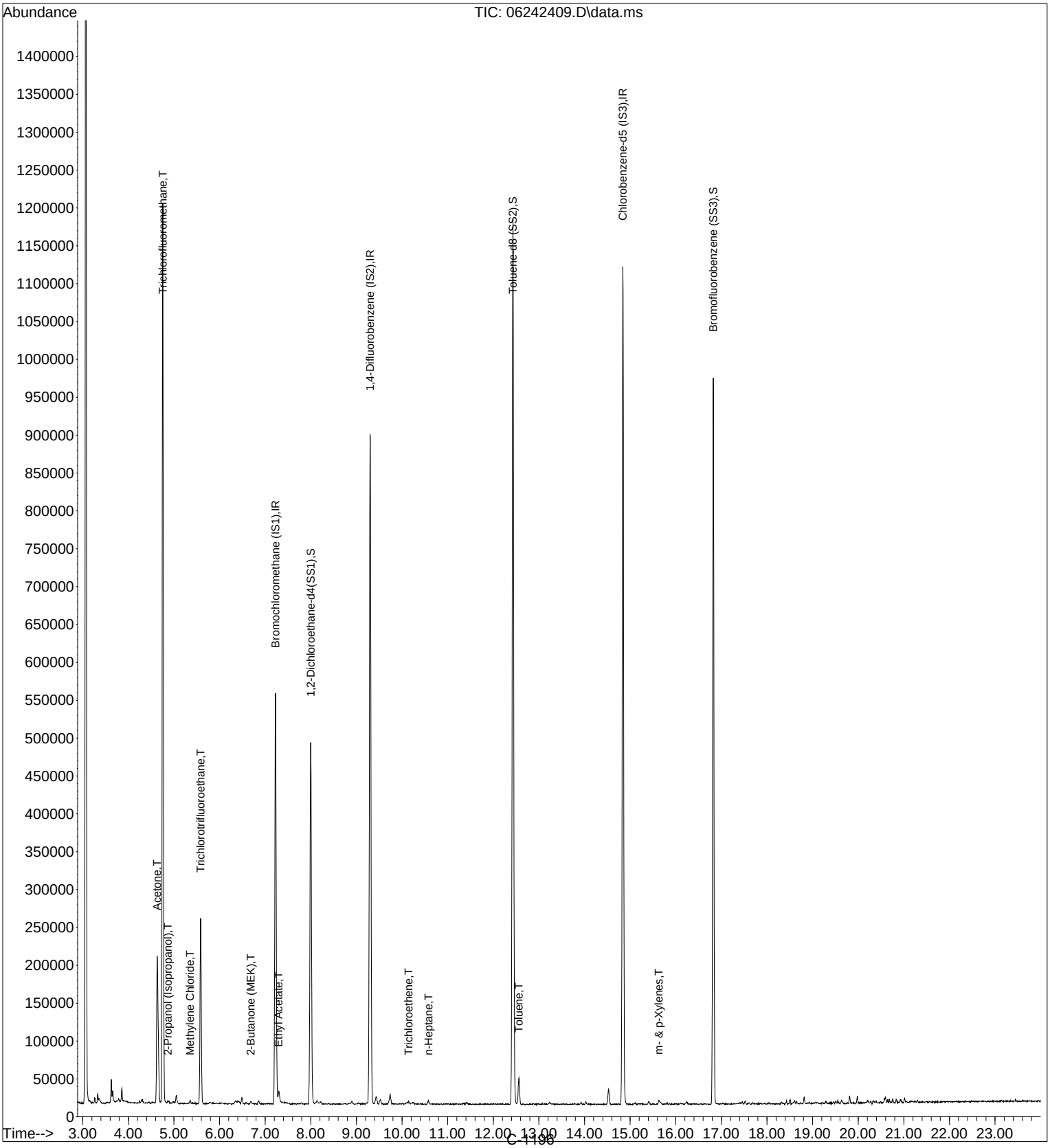
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	10.58	71	979	0.059 ng	#	82
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	11.34	58	440	N.D.		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	12.17	97	113	N.D.		
58) Toluene	12.56	91	29487	0.387 ng		100
59) 2-Hexanone	12.94	43	651	N.D.		
60) Dibromochloromethane	13.07	129	689	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	13.78	43	666	N.D.		
63) n-Octane	13.92	57	304	N.D.		
64) Tetrachloroethene	14.03	166	1064	N.D.		
65) Chlorobenzene	14.90	112	922	N.D.		
66) Ethylbenzene	15.41	91	4018	N.D.		
67) m- & p-Xylenes	15.63	91	5721	0.078 ng		98
68) Bromoform	15.67	173	833	N.D.		
69) Styrene	16.10	104	694	N.D.		
70) o-Xylene	16.24	91	2509	N.D.		
71) n-Nonane	16.62	43	532	N.D.		
72) 1,1,2,2-Tetrachloroethane	16.21	83	470	N.D.		
74) Cumene	17.03	105	1392	N.D.		
75) alpha-Pinene	17.52	93	1983	N.D.		
76) n-Propylbenzene	17.68	91	2289	N.D.		
77) 3-Ethyltoluene	17.03	105	1392	No Calib	#	
78) 4-Ethyltoluene	17.86	105	1089	N.D.		
79) 1,3,5-Trimethylbenzene	17.96	105	844	N.D.		
80) alpha-Methylstyrene	0.00	118	0	N.D.		
81) 2-Ethyltoluene	17.03	105	1392	No Calib	#	
82) 1,2,4-Trimethylbenzene	18.43	105	999	N.D.		
83) n-Decane	0.00	58	0	N.D.		
84) Benzyl Chloride	18.57	91	293	N.D.		
85) 1,3-Dichlorobenzene	18.58	146	855	N.D.		
86) 1,4-Dichlorobenzene	18.66	146	973	N.D.		
87) sec-Butylbenzene	18.74	105	1223	N.D.		
88) 4-Isopropyltoluene (p-...	18.92	119	1137	N.D.		
89) 1,2,3-Trimethylbenzene	17.03	105	1392	No Calib	#	
90) 1,2-Dichlorobenzene	19.03	146	781	N.D.		
91) d-Limonene	19.08	68	161	N.D.		
92) 1,2-Dibromo-3-Chloropr...	19.51	157	219	N.D.		
93) n-Undecane	0.00	58	0	N.D.		
94) 1,2,4-Trichlorobenzene	20.84	180	1353	N.D.		
95) Naphthalene	20.94	128	1901	N.D.		
96) n-Dodecane	0.00	58	0	N.D.		
97) Hexachlorobutadiene	21.30	225	667	N.D.		
98) Cyclohexanone	0.00	55	0	N.D.		
99) tert-Butylbenzene	18.43	119	1200	N.D.		
100) n-Butylbenzene	19.39	91	1080	N.D.		
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242409.D Vial: 1
Acq On : 24 Jun 2024 11:55 Operator: SC
Sample : P2402249-034Dil (4.0mL) Inst : MS09
Misc : S37-06062402

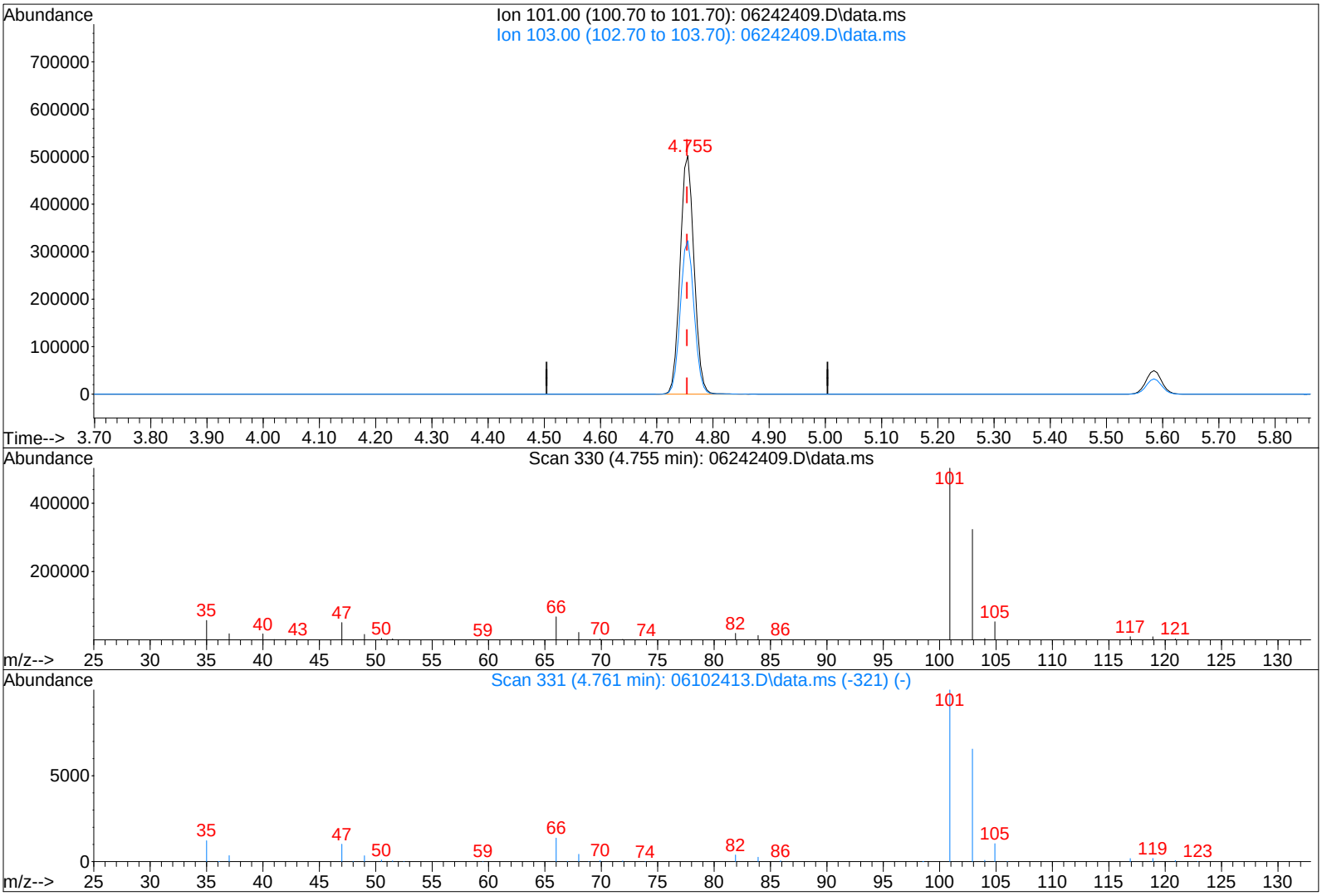
Quant Time: Jun 24 12:17:02 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\24\06242409.D Vial: 1
Acq On : 24 Jun 2024 11:55 Operator: SC
Sample : P2402249-034Dil (4.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 24 12:16:52 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06242409.D\data.ms

(14) Trichlorofluoromethane (T)

4.755min (+0.001) 18.87ng

response 865405

Ion	Exp%	Act%
101.00	100	100
103.00	64.90	64.25
0.00	0.00	0.00
0.00	0.00	0.00

LSC Area Percent Report

MJ 6/28/24

Data Path : I:\MS09\DATA\2024 06\19\
Data File : 06192421.D
Acq On : 19 Jun 2024 20:03
Operator : SC
Sample : P2402249-034 (40mL)
Misc : S37-06062402
ALS Vial : 9 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06192421.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.075	22	34	45	rBV	3182295	5219246	26.79%	14.192%
2	3.256	62	66	70	rVB2	11949	14063	0.07%	0.038%
3	3.319	70	77	81	rBV3	18217	27661	0.14%	0.075%
4	3.370	81	86	90	rBV2	8954	11198	0.06%	0.030%
5	3.614	123	129	133	rBV	162196	208987	1.07%	0.568%
6	3.642	133	134	142	rVB2	18925	19297	0.10%	0.052%
7	3.853	166	171	176	rVB	55187	69122	0.35%	0.188%
8	3.966	188	191	198	rVB4	17486	27715	0.14%	0.075%
9	4.239	232	239	242	rBV3	6776	11601	0.06%	0.032%
10	4.278	242	246	257	rVB2	16441	29080	0.15%	0.079%
11	4.619	298	306	321	rBV	1605244	3415947	17.53%	9.288%
12	4.755	321	330	342	rVV	10529164	19482243	100.00%	52.974%
13	4.846	342	346	354	rVB	15723	30991	0.16%	0.084%
14	5.045	375	381	391	rVB2	13955	27415	0.14%	0.075%
15	5.579	465	475	491	rVB	2086473	4043475	20.75%	10.995%
16	6.306	594	603	614	rBV	19322	57414	0.29%	0.156%
17	6.675	661	668	677	rVB2	9878	23953	0.12%	0.065%
18	7.231	757	766	774	rBV	457499	975720	5.01%	2.653%
19	7.294	774	777	785	rVB	19466	35151	0.18%	0.096%
20	7.998	890	901	911	rBV	405771	902676	4.63%	2.454%
21	9.065	1081	1089	1094	rBV4	4984	12945	0.07%	0.035%
22	9.304	1120	1131	1144	rVB	747482	1697125	8.71%	4.615%
23	9.429	1144	1153	1162	rBV	74236	174525	0.90%	0.475%
24	9.519	1162	1169	1180	rVB2	23265	54418	0.28%	0.148%
25	9.735	1198	1207	1217	rVB2	84699	205167	1.05%	0.558%

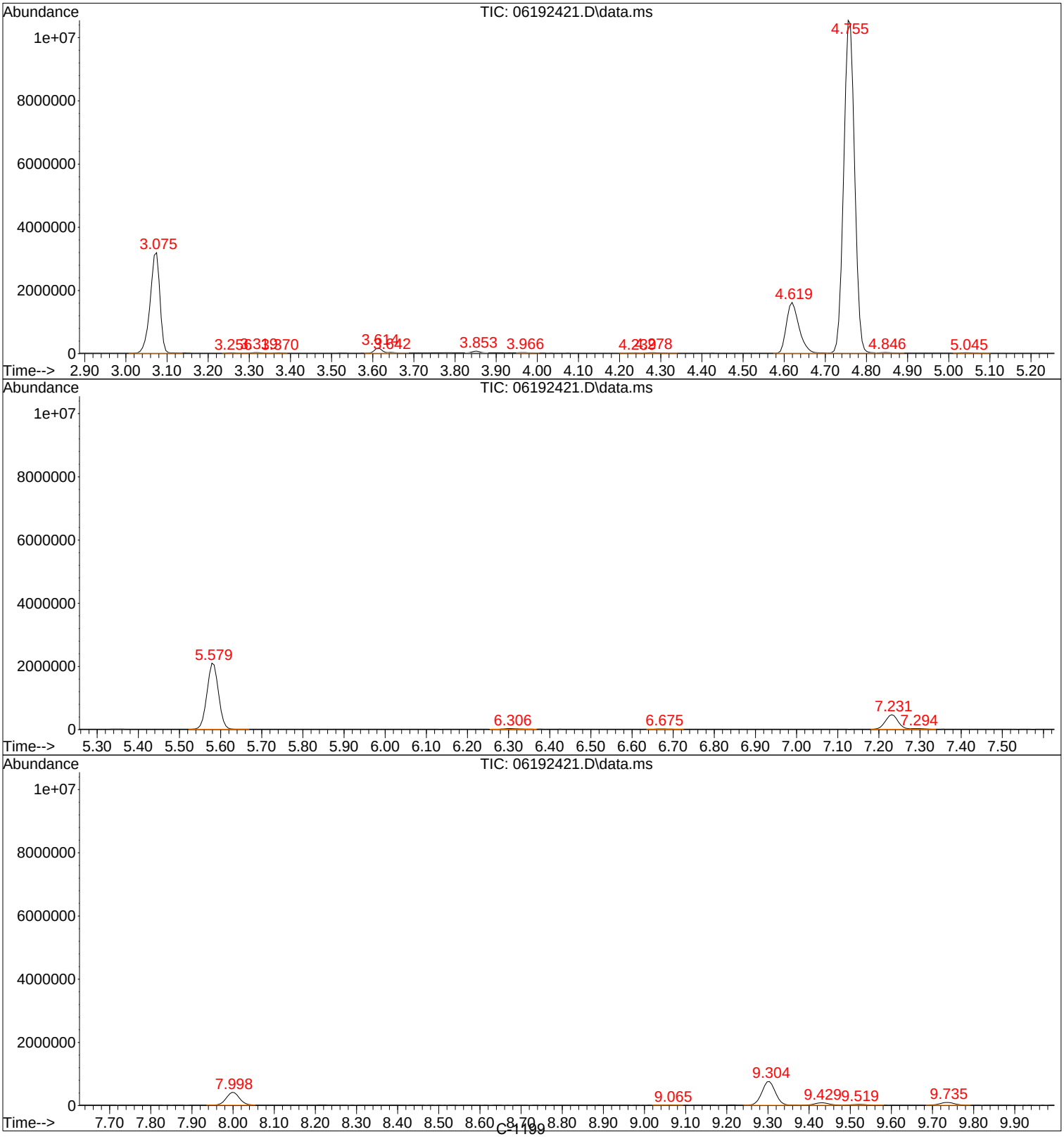
Sum of corrected areas: 36777135

LSC Report - Integrated Chromatogram

Data Path : I:\MS09\DATA\2024 06\19\
Data File : 06192421.D
Acq On : 19 Jun 2024 20:03
Operator : SC
Sample : P2402249-034 (40mL)
Misc : S37-06062402
ALS Vial : 9 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\19\\
Data File : 06192421.D
Acq On : 19 Jun 2024 20:033
Operator : SCC
Sample : P2402249-034 (40mL))
Misc : S37-060624022
ALS Vial : 9 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\19\06192422.D Vial: 10
Acq On : 19 Jun 2024 20:36 Operator: SC
Sample : P2402249-035 (40mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 11:25:39 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	160838	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	688284	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	158470	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	351287	12.289	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.32%				
57) Toluene-d8 (SS2)	12.43	98	774345	12.769	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.16%				
73) Bromofluorobenzene (SS3)	16.83	174	275988	12.603	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.80%				
Target Compounds							Qvalue
2) Propene	0.00	42	0	N.D. d			
3) Dichlorodifluoromethan...	3.38	85	2328	0.062	ng	#	92
4) Chloromethane	3.52	50	637	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	4.02	94	112	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.28	45	17540	1.122	ng		83
11) Acetonitrile	4.44	41	61	N.D.			
12) Acrolein	4.55	56	390	N.D.			
13) Acetone	4.64	58	19919	1.594	ng	#	69
14) Trichlorofluoromethane	4.76	101	2450063	63.986	ng		100
15) 2-Propanol (Isopropanol)	4.85	45	17666	0.351	ng		91
16) Acrylonitrile	5.00	53	589	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.36	59	214	N.D.			
19) Methylene Chloride	5.35	84	1576	0.089	ng		96
20) 3-Chloro-1-propene (Al...	5.45	41	134	N.D.			
21) Trichlorotrifluoroethane	5.58	151	292291	18.045	ng		98
22) Carbon Disulfide	5.61	76	1329	N.D.			
23) trans-1,2-Dichloroethene	6.15	61	114	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D.			
27) 2-Butanone (MEK)	0.00	72	0	N.D. d			
28) cis-1,2-Dichloroethene	7.08	61	181	N.D.			
29) Diisopropyl Ether	7.29	87	116	N.D.			
30) Ethyl Acetate	7.28	61	22577	3.740	ng		95
31) n-Hexane	7.31	57	592	N.D.			
32) Chloroform	7.36	83	831	N.D.			
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	212	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.83	56	489	No Calib		#	
41) Benzene	8.91	78	3568	0.056	ng		90
42) Carbon Tetrachloride	0.00	117	0	N.D.			
43) Cyclohexane	9.22	84	137	N.D.			
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	9.85	63	128	N.D.			
46) Bromodichloromethane	10.08	83	501	N.D.			
47) Trichloroethene	10.14	130	884	N.D.			
48) 1,4-Dioxane	0.00	88	0	N.D.			
49) 2,2,4-Trimethylpentane...	10.25	57	211	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192422.D Vial: 10
Acq On : 19 Jun 2024 20:36 Operator: SC
Sample : P2402249-035 (40mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 11:25:39 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

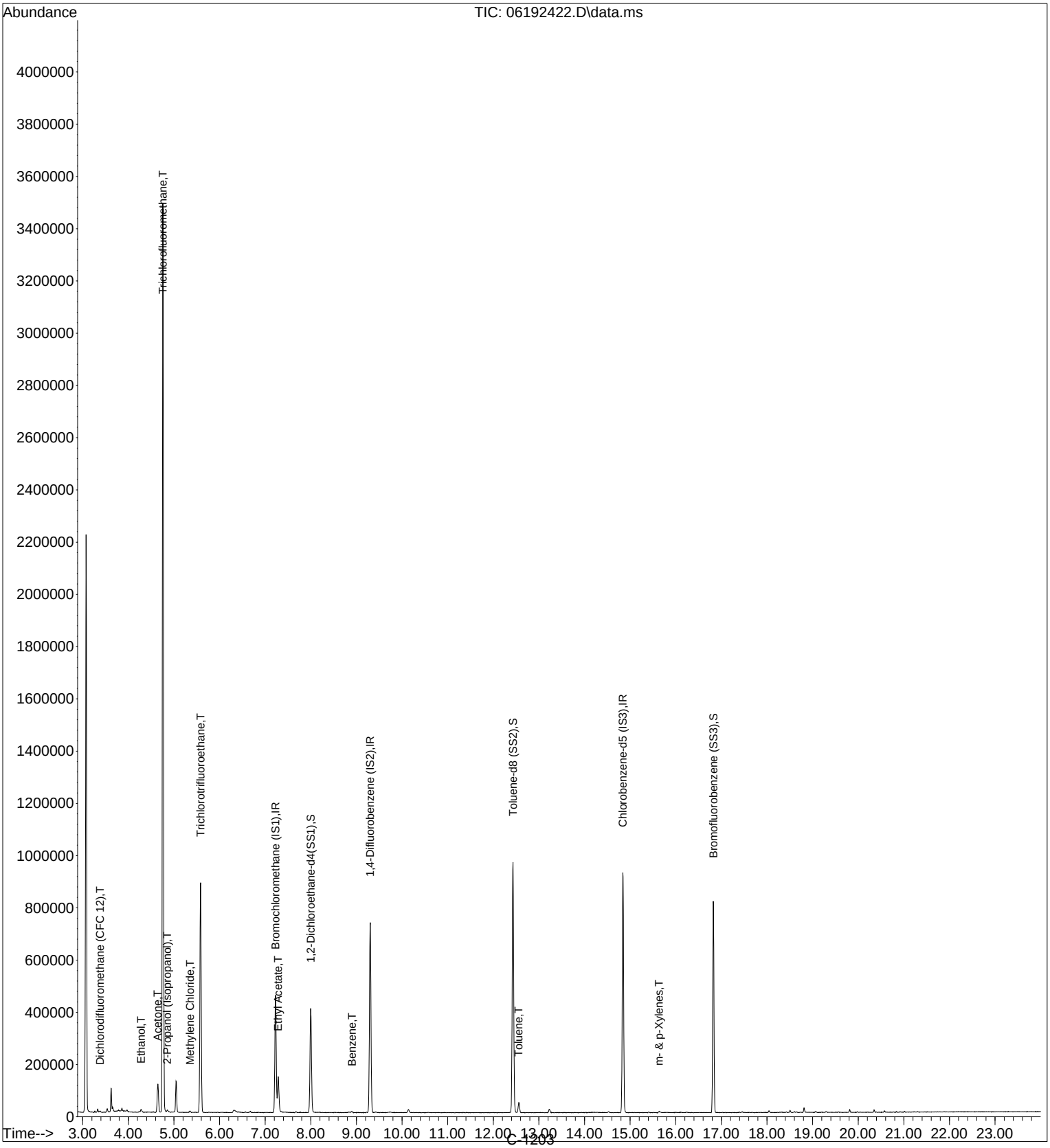
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	0.00	71	0	N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
58) Toluene	12.56	91	33951	0.536 ng	100
59) 2-Hexanone	12.93	43	395	N.D.	
60) Dibromochloromethane	13.07	129	427	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	13.79	43	537	N.D.	
63) n-Octane	0.00	57	0	N.D.	
64) Tetrachloroethene	14.03	166	320	N.D.	
65) Chlorobenzene	14.90	112	651	N.D.	
66) Ethylbenzene	15.41	91	2454	N.D.	
67) m- & p-Xylenes	15.63	91	5056	0.083 ng	90
68) Bromoform	15.67	173	590	N.D.	
69) Styrene	16.10	104	955	N.D.	
70) o-Xylene	16.24	91	1889	N.D.	
71) n-Nonane	16.61	43	370	N.D.	
72) 1,1,2,2-Tetrachloroethane	16.21	83	335	N.D.	
74) Cumene	17.03	105	937	N.D.	
75) alpha-Pinene	17.53	93	479	N.D.	
76) n-Propylbenzene	17.68	91	1165	N.D.	
77) 3-Ethyltoluene	17.03	105	937	No Calib	#
78) 4-Ethyltoluene	17.86	105	855	N.D.	
79) 1,3,5-Trimethylbenzene	17.96	105	613	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.03	105	937	No Calib	#
82) 1,2,4-Trimethylbenzene	18.43	105	923	N.D.	
83) n-Decane	0.00	58	0	N.D.	
84) Benzyl Chloride	0.00	91	0	N.D.	
85) 1,3-Dichlorobenzene	18.58	146	517	N.D.	
86) 1,4-Dichlorobenzene	18.65	146	631	N.D.	
87) sec-Butylbenzene	18.74	105	889	N.D.	
88) 4-Isopropyltoluene (p-...	18.93	119	829	N.D.	
89) 1,2,3-Trimethylbenzene	17.03	105	937	No Calib	#
90) 1,2-Dichlorobenzene	19.04	146	473	N.D.	
91) d-Limonene	19.08	68	222	N.D.	
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	715	N.D.	
95) Naphthalene	20.94	128	702	N.D.	
96) n-Dodecane	0.00	58	0	N.D.	
97) Hexachlorobutadiene	21.30	225	637	N.D.	
98) Cyclohexanone	0.00	55	0	N.D.	
99) tert-Butylbenzene	18.42	119	840	N.D.	
100) n-Butylbenzene	19.39	91	722	N.D.	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192422.D Vial: 10
Acq On : 19 Jun 2024 20:36 Operator: SC
Sample : P2402249-035 (40mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 11:25:39 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\19\06192422.D Vial: 10
Acq On : 19 Jun 2024 20:36 Operator: SC
Sample : P2402249-035 (40mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 11:25:39 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

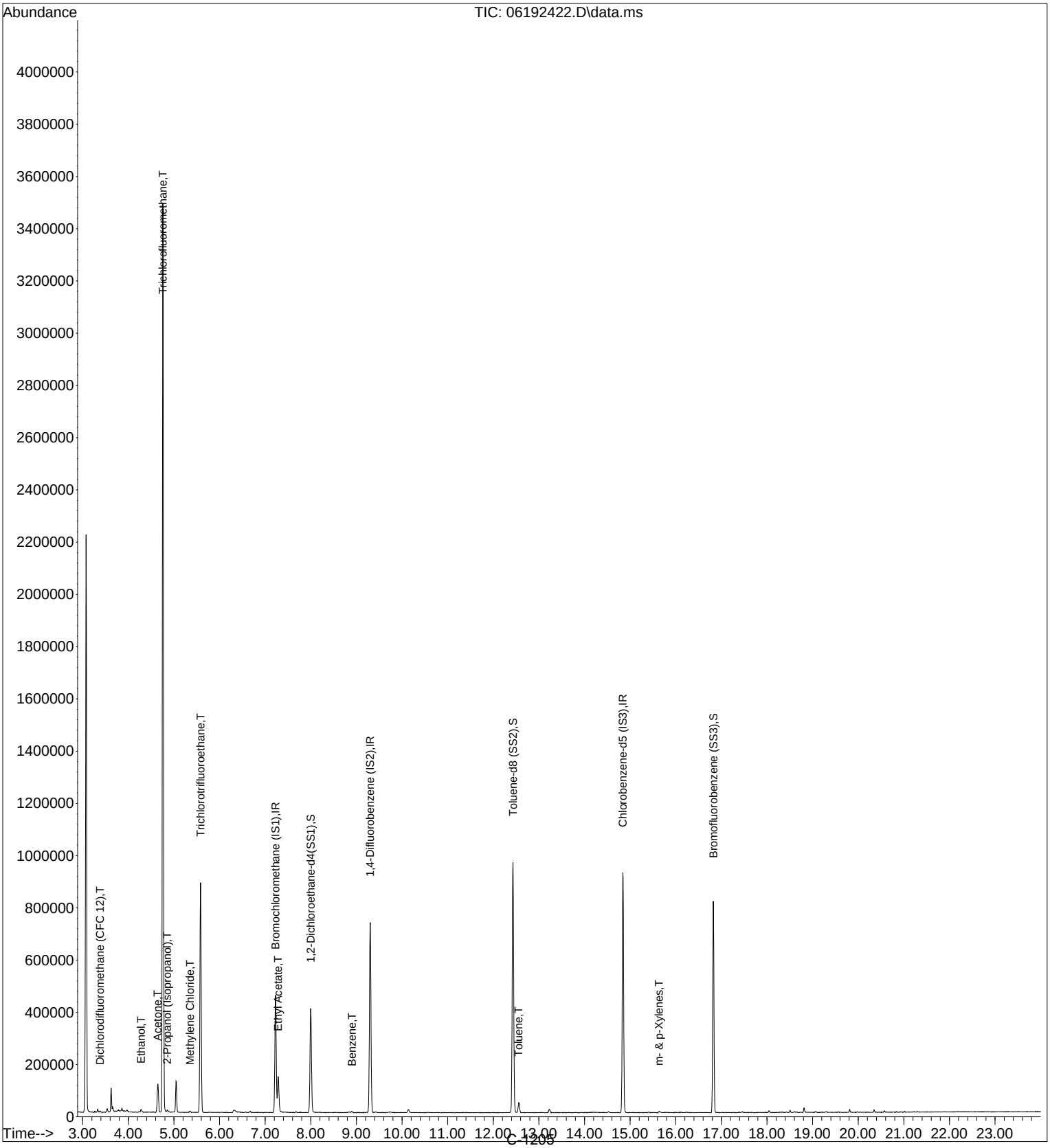
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	160838	12.500	ng	0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	688284	12.500	ng	0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	158470	12.500	ng	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4(...	8.00	65	351287	12.289	ng	0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.32%			
57) Toluene-d8 (SS2)	12.43	98	774345	12.769	ng	-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.16%			
73) Bromofluorobenzene (SS3)	16.83	174	275988	12.603	ng	-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.80%			
Target Compounds						Qvalue
3) Dichlorodifluoromethan...	3.38	85	2328	0.062	ng #	92
10) Ethanol	4.28	45	17540	1.122	ng	83
13) Acetone	4.64	58	19919	1.594	ng #	69
14) Trichlorofluoromethane	4.76	101	2450063	63.986	ng	100
15) 2-Propanol (Isopropanol)	4.85	45	17666	0.351	ng	91
19) Methylene Chloride	5.35	84	1576	0.089	ng	96
21) Trichlorotrifluoroethane	5.58	151	292291	18.045	ng	98
30) Ethyl Acetate	7.28	61	22577	3.740	ng	95
41) Benzene	8.91	78	3568	0.056	ng	90
58) Toluene	12.56	91	33951	0.536	ng	100
67) m- & p-Xylenes	15.63	91	5056	0.083	ng	90

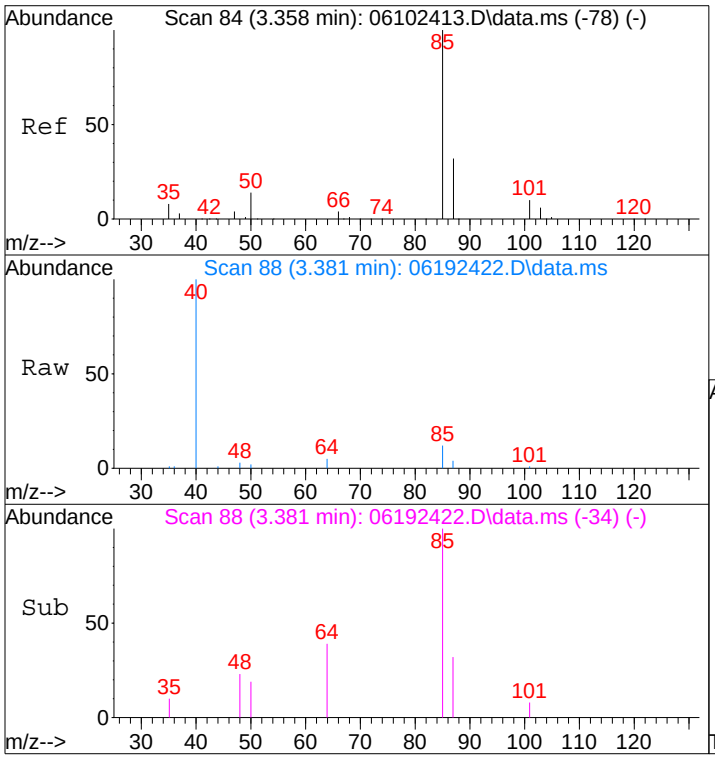
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192422.D Vial: 10
Acq On : 19 Jun 2024 20:36 Operator: SC
Sample : P2402249-035 (40mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 11:25:39 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

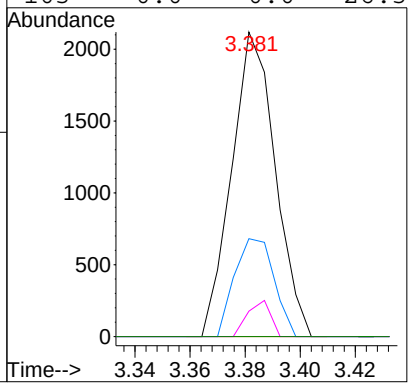


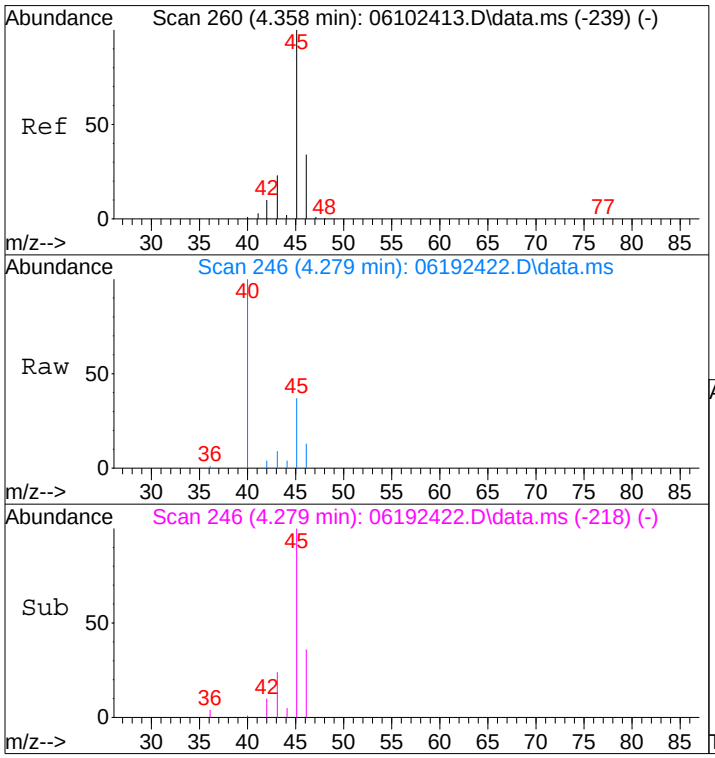


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.06 ng
RT: 3.38 min Scan# 88
Delta R.T. 0.059 min
Lab File: 06192422.D
Acq: 19 Jun 2024 20:36

Tgt Ion: 85 Resp: 2328

Ion	Ratio	Lower	Upper
85	100		
87	29.2	12.2	52.2
101	6.3	0.0	29.8
103	0.0	0.0	26.3

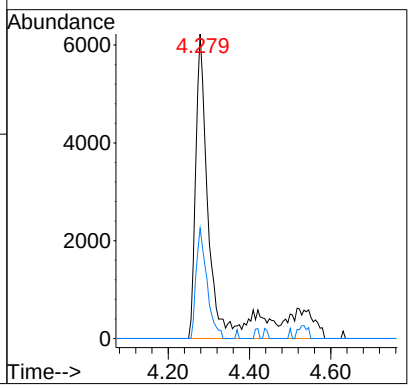


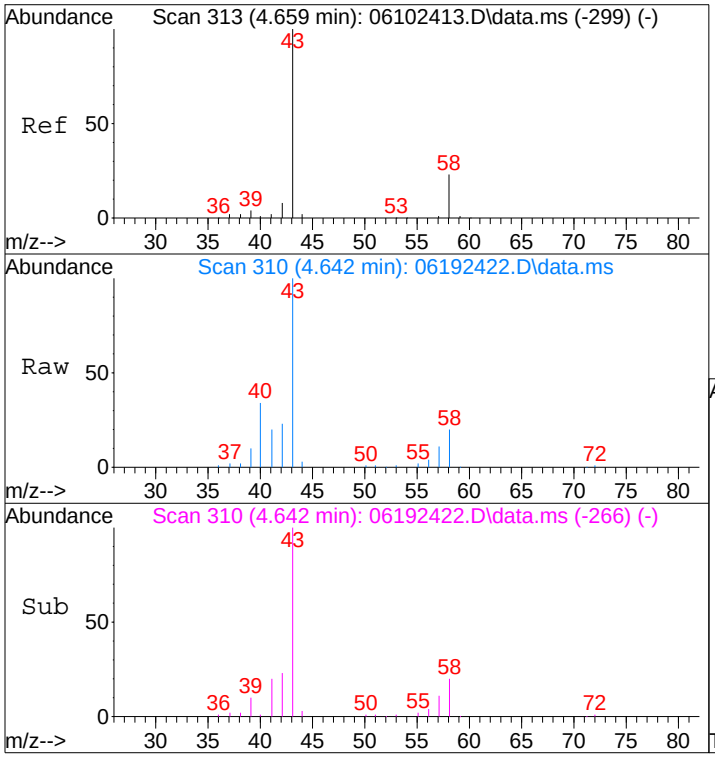


#10
Ethanol
Concen: 1.12 ng
RT: 4.28 min Scan# 246
Delta R.T. -0.088 min
Lab File: 06192422.D
Acq: 19 Jun 2024 20:36

Tgt Ion: 45 Resp: 17540

Ion	Ratio	Lower	Upper
45	100		
46	23.9	13.5	53.5

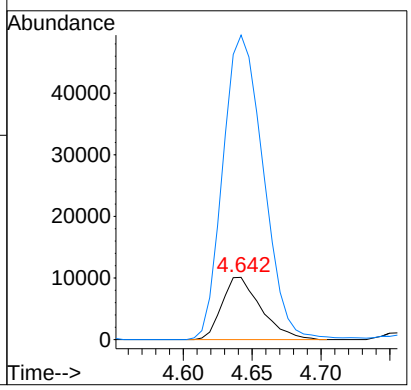


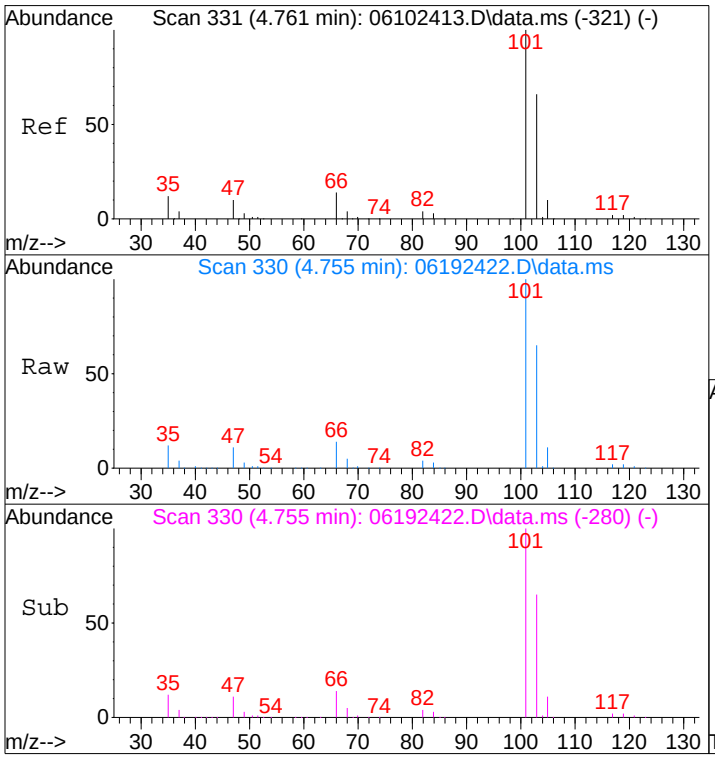


#13
Acetone
Concen: 1.59 ng
RT: 4.64 min Scan# 310
Delta R.T. -0.000 min
Lab File: 06192422.D
Acq: 19 Jun 2024 20:36

Tgt Ion: 58 Resp: 19919

Ion	Ratio	Lower	Upper
58	100		
43	508.7	400.7	460.7#

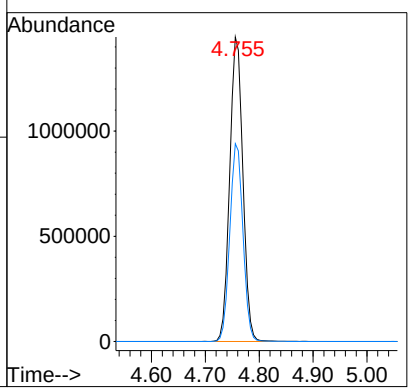


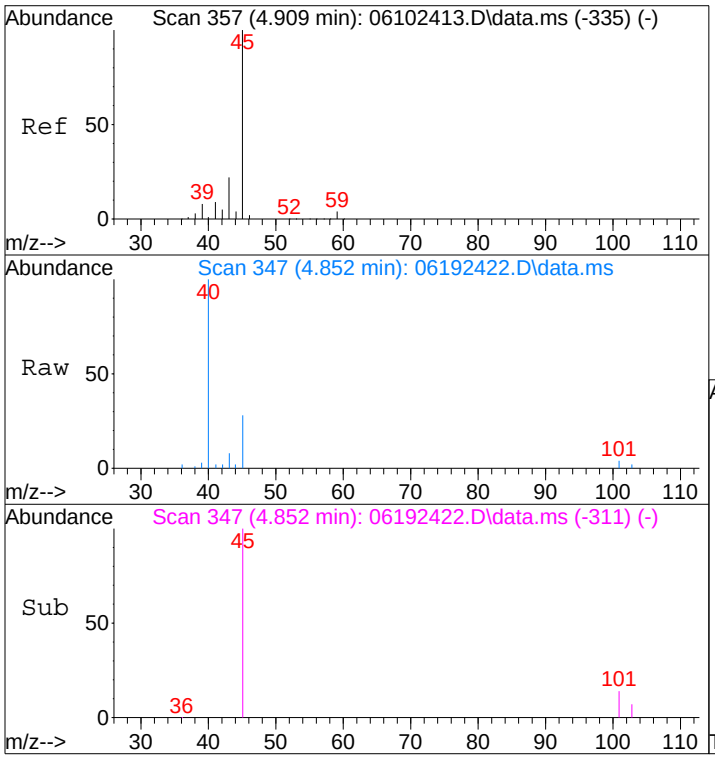


#14
Trichlorofluoromethane
Concen: 63.99 ng
RT: 4.76 min Scan# 330
Delta R.T. 0.035 min
Lab File: 06192422.D
Acq: 19 Jun 2024 20:36

Tgt Ion:101 Resp: 2450063

Ion	Ratio	Lower	Upper
101	100		
103	64.9	44.9	84.9

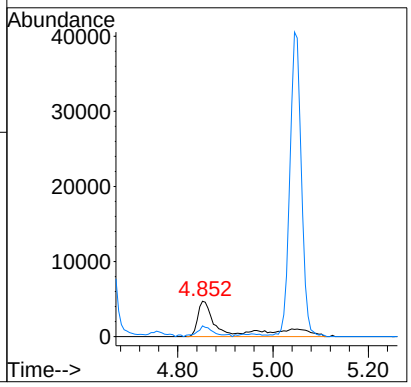


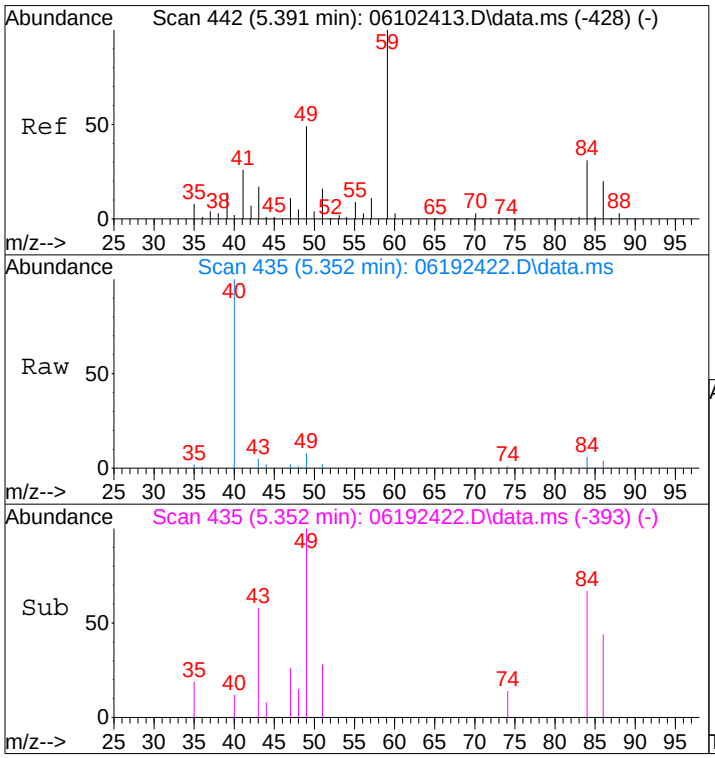


#15
2-Propanol (Isopropanol)
Concen: 0.35 ng
RT: 4.85 min Scan# 347
Delta R.T. -0.048 min
Lab File: 06192422.D
Acq: 19 Jun 2024 20:36

Tgt Ion: 45 Resp: 17666

Ion	Ratio	Lower	Upper
45	100		
43	18.3	2.5	42.5

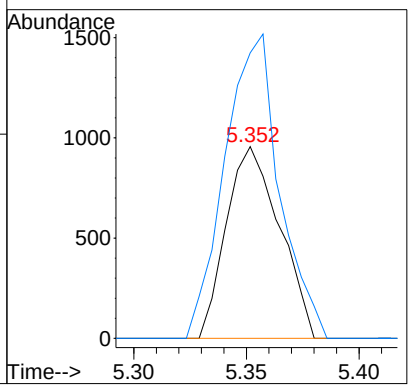


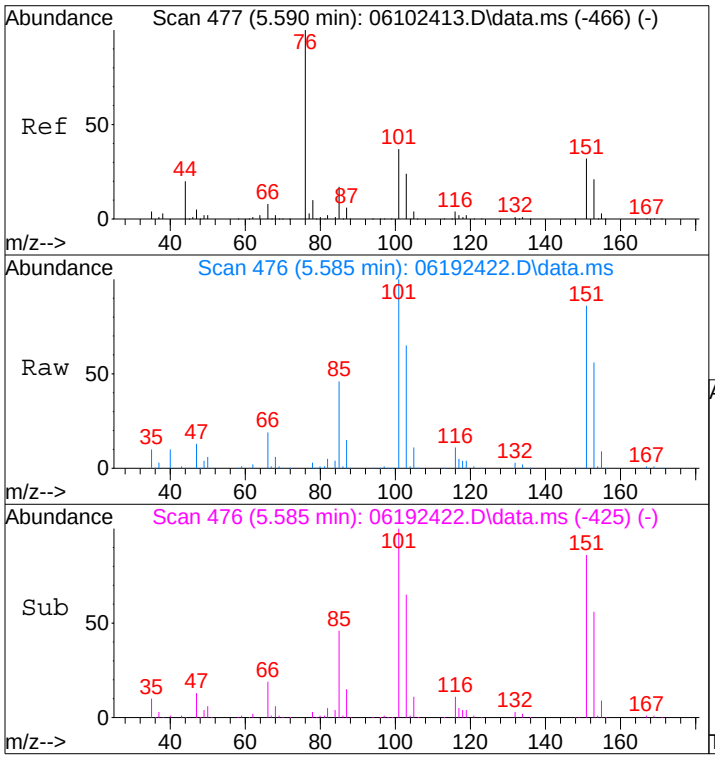


#19
Methylene Chloride
Concen: 0.09 ng
RT: 5.35 min Scan# 435
Delta R.T. -0.009 min
Lab File: 06192422.D
Acq: 19 Jun 2024 20:36

Tgt Ion: 84 Resp: 1576

Ion	Ratio	Lower	Upper
84	100		
49	162.9	132.9	182.9

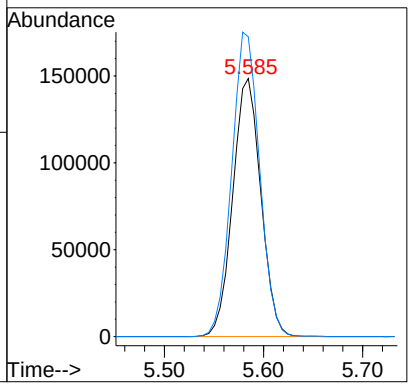


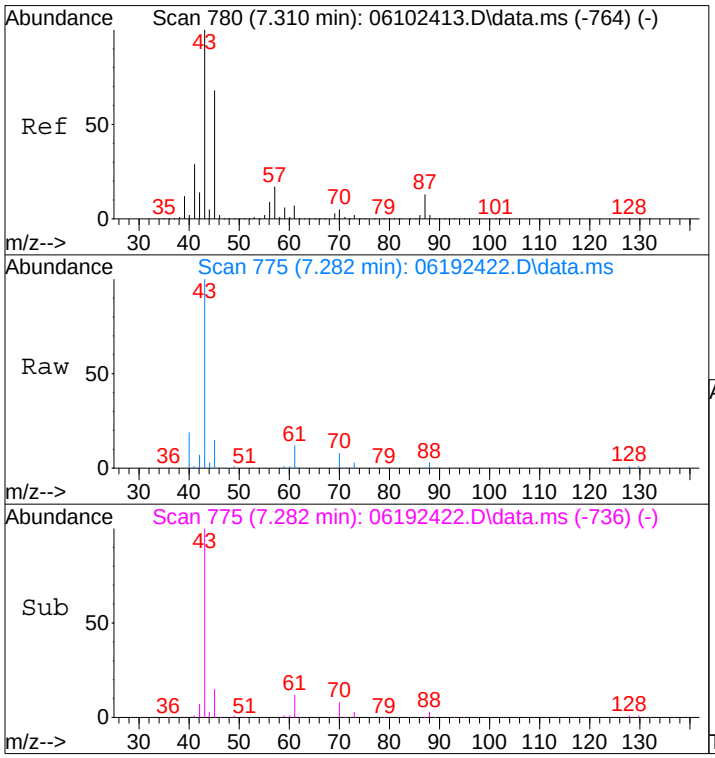


#21
Trichlorotrifluoroethane
Concen: 18.04 ng
RT: 5.58 min Scan# 476
Delta R.T. 0.038 min
Lab File: 06192422.D
Acq: 19 Jun 2024 20:36

Tgt Ion:151 Resp: 292291

Ion	Ratio	Lower	Upper
151	100		
101	117.6	95.0	135.0

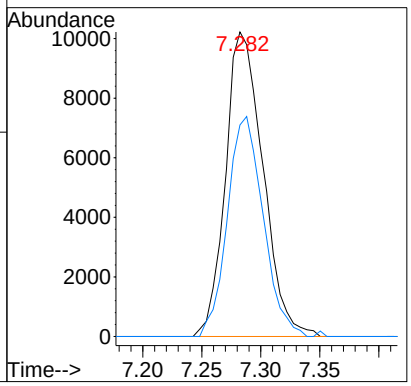


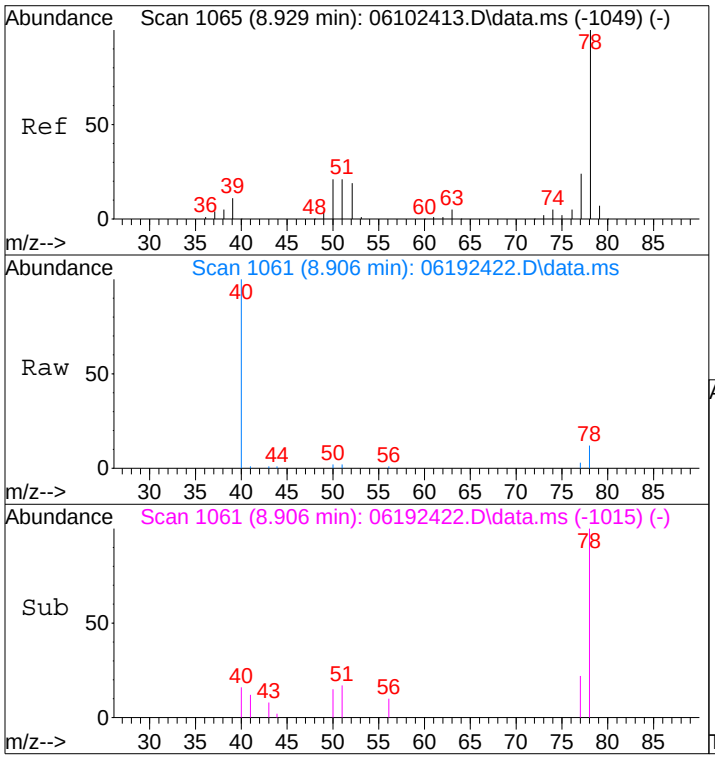


#30
Ethyl Acetate
Concen: 3.74 ng
RT: 7.28 min Scan# 775
Delta R.T. 0.023 min
Lab File: 06192422.D
Acq: 19 Jun 2024 20:36

Tgt Ion: 61 Resp: 22577

Ion	Ratio	Lower	Upper
61	100		
70	69.0	53.5	93.5

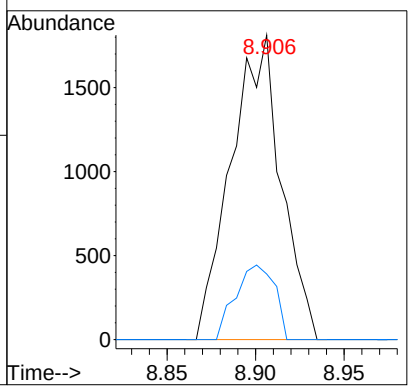


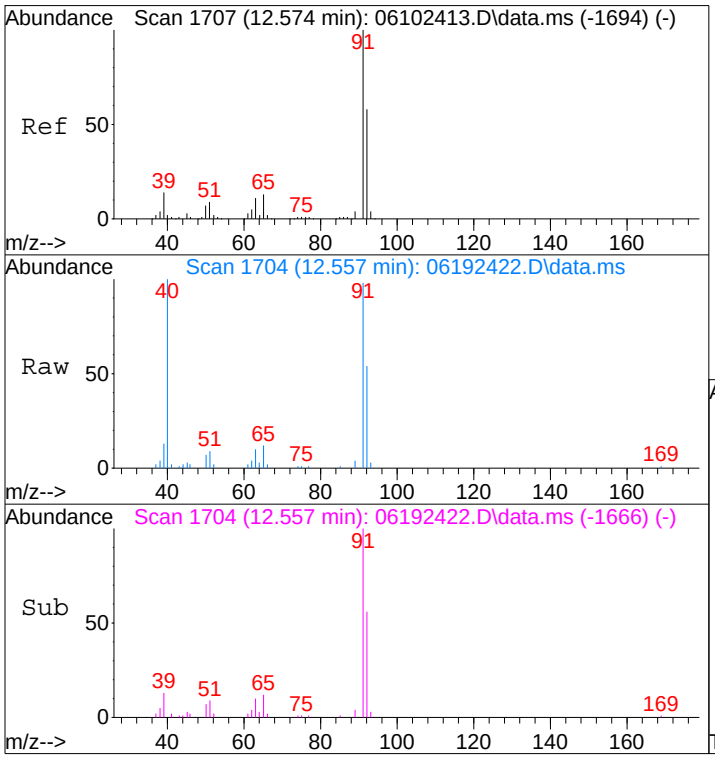


#41
Benzene
Concen: 0.06 ng
RT: 8.91 min Scan# 1061
Delta R.T. 0.009 min
Lab File: 06192422.D
Acq: 19 Jun 2024 20:36

Tgt Ion: 78 Resp: 3568

Ion	Ratio	Lower	Upper
78	100		
77	19.2	4.0	44.0

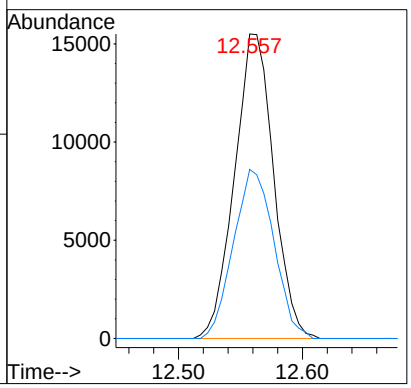


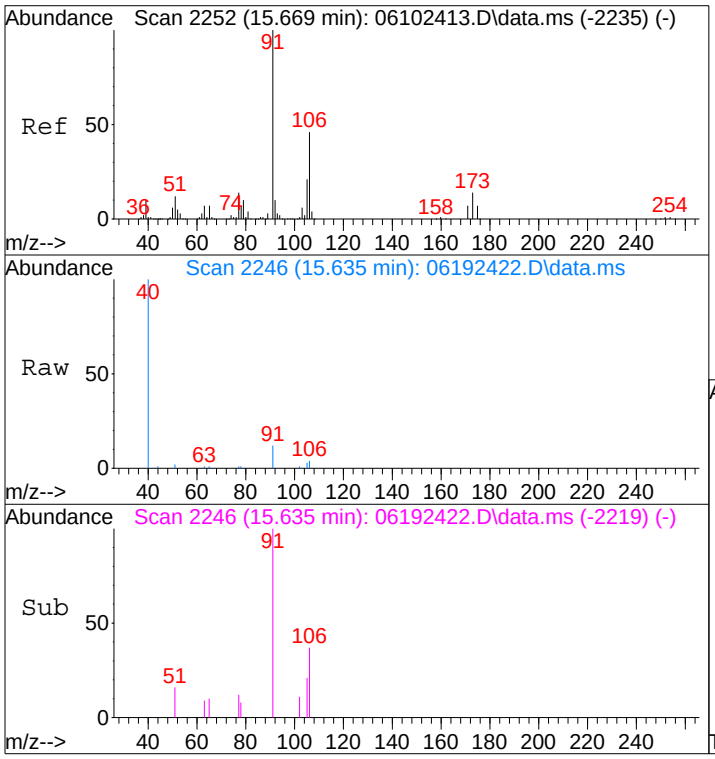


#58
Toluene
Concen: 0.54 ng
RT: 12.56 min Scan# 1704
Delta R.T. -0.034 min
Lab File: 06192422.D
Acq: 19 Jun 2024 20:36

Tgt Ion: 91 Resp: 33951

Ion	Ratio	Lower	Upper
91	100		
92	57.6	37.4	77.4

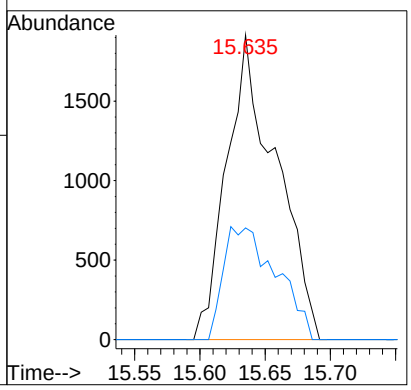




#67
m- & p-Xylenes
Concen: 0.08 ng
RT: 15.63 min Scan# 2246
Delta R.T. -0.045 min
Lab File: 06192422.D
Acq: 19 Jun 2024 20:36

Tgt Ion: 91 Resp: 5056

Ion	Ratio	Lower	Upper
91	100		
106	39.5	25.9	65.9



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192422.D Vial: 10
Acq On : 19 Jun 2024 20:36 Operator: SC
Sample : P2402249-035 (40mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 15:11:51 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

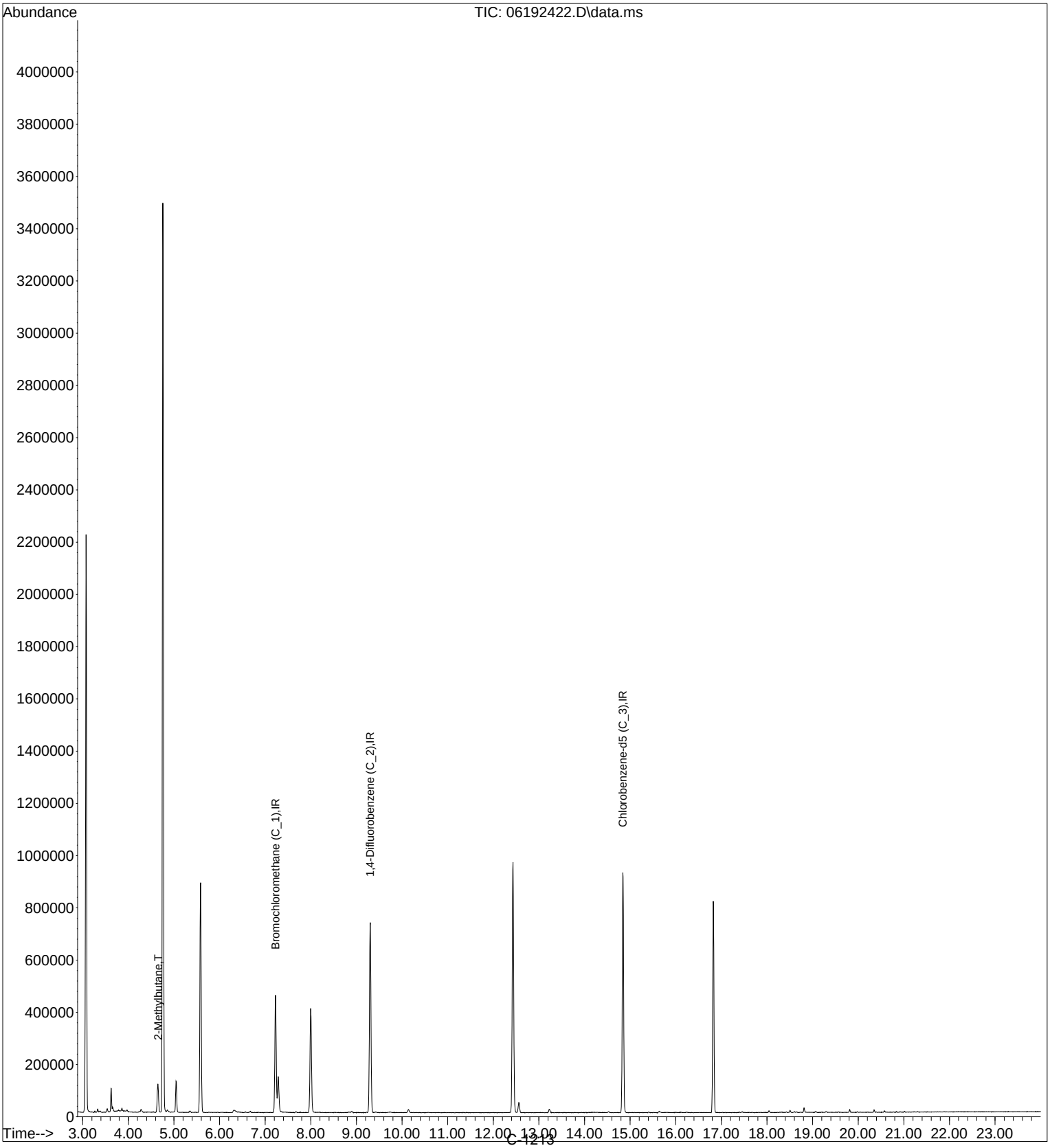
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	160838	12.500	ng	-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	689239	12.500	ng	-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	158470	12.500	ng	-0.01
Target Compounds						Qvalue
2) Chloropentafluoroethane	0.00	85	0	N.D.		
3) 1,1,1,2-Tetrafluoroeth...	3.21	83	358	N.D.		
4) 1,1-Difluoroethane	3.27	65	1120	N.D.		
5) Chlorodifluoromethane ...	0.00	67	0	N.D.		
6) 1-Chloro-1,1-Difluoroe...	0.00	65	0	N.D.		
7) Dichlorofluoromethane ...	4.24	67	1740	N.D.		
8) Vinylbromide	0.00	108	0	N.D.		
9) 2,2-Dichloro-1,1,1-tri...	0.00	83	0	N.D.		
10) 2-Methylbutane	4.65	57	15105	0.787	ng	90
11) Methyl Acetate	5.34	43	2687	N.D.		
12) 2-Methylpentane	0.00	71	0	N.D.		
13) 2,2-Dichloropropane	0.00	77	0	N.D.		
14) 1,1-Dichloropropene	0.00	75	0	N.D.		
15) Thiophene	0.00	84	0	N.D.		
17) 2,3-Dimethylpentane	9.53	56	226	N.D.		
18) Dibromomethane	9.80	174	106	N.D.		
20) Methyl Cyclohexane	11.42	55	190	N.D.		
21) 1,3-Dichloropropane	0.00	76	0	N.D.		
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		
23) 1-Chlorohexane	0.00	91	0	N.D.		
24) 1,2,3-Trichloropropane	0.00	75	0	N.D.		
25) Bromobenzene	0.00	77	0	N.D.		
26) 2-Chlorotoluene	17.61	91	729	N.D.		
27) 4-Chlorotoluene	17.68	91	1165	N.D.		
28) Indane	0.00	117	0	N.D.		
29) Indene	0.00	115	0	N.D.		
30) 1,2,4,5-Tetramethylben...	0.00	119	0	N.D.		
31) 1,2,3,4-Tetramethylben...	0.00	119	0	N.D.		
32) 1,2,3,5-Tetramethylben...	0.00	119	0	N.D.		
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192422.D Vial: 10
Acq On : 19 Jun 2024 20:36 Operator: SC
Sample : P2402249-035 (40mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:11:51 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\19\
Data File : 06192422.D
Acq On : 19 Jun 2024 20:36
Operator : SC
Sample : P2402249-035 (40mL)
Misc : S37-06062402
ALS Vial : 10 Sample Multiplier: 1

MJ 6/28/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06192422.D\data.ms

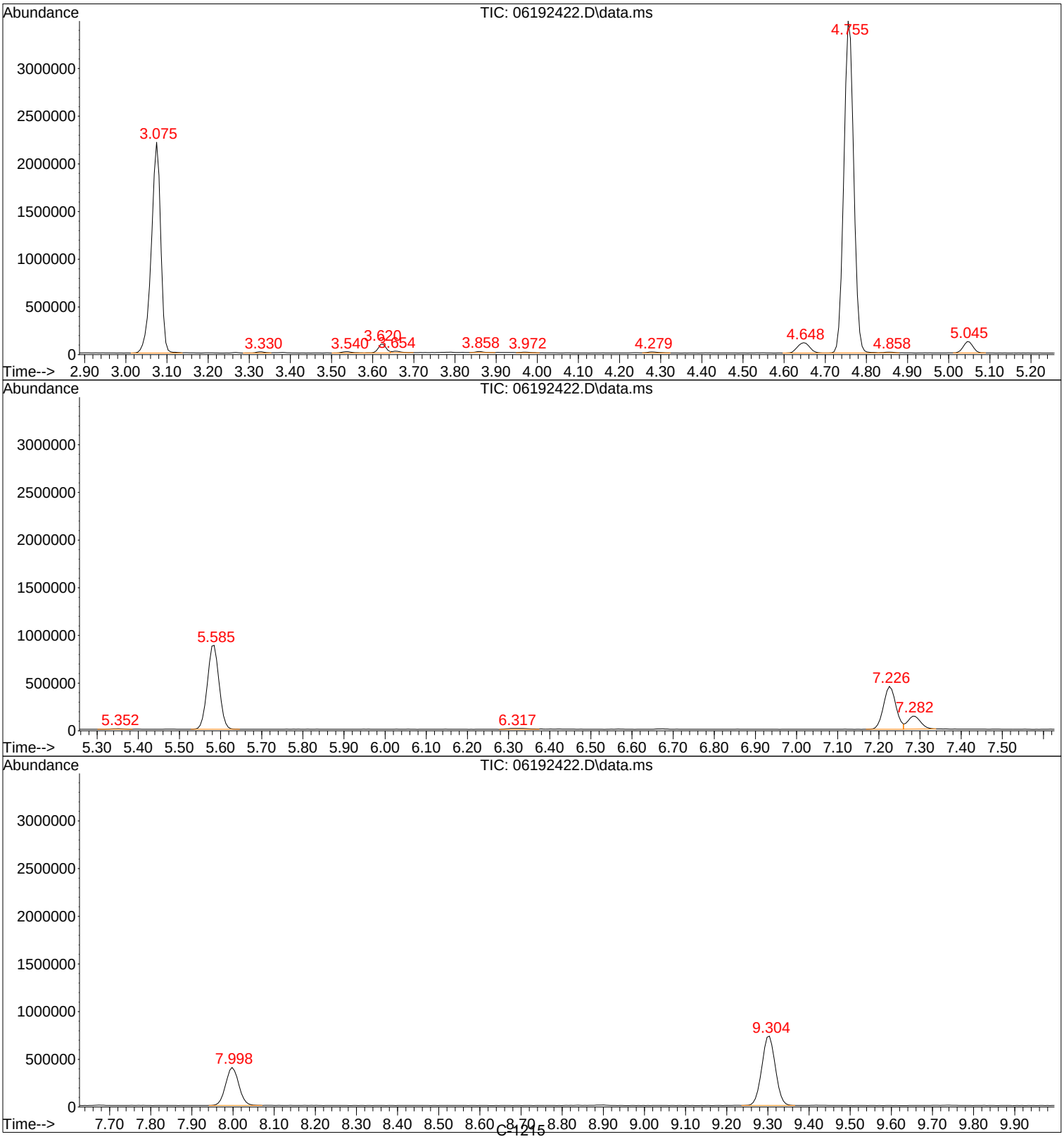
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.075	23	34	45	rBV	2212040	3479809	59.50%	22.307%
2	3.330	71	79	83	rBV4	13152	20243	0.35%	0.130%
3	3.540	109	116	123	rBV2	13881	26172	0.45%	0.168%
4	3.620	123	130	134	rBV	90949	124971	2.14%	0.801%
5	3.654	134	136	144	rVB	16313	23604	0.40%	0.151%
6	3.858	168	172	179	rVB2	11698	16362	0.28%	0.105%
7	3.972	188	192	198	rVB4	7208	12416	0.21%	0.080%
8	4.279	242	246	254	rVB2	11126	21334	0.36%	0.137%
9	4.648	302	311	322	rBV2	109275	229758	3.93%	1.473%
10	4.755	322	330	343	rVV	3480621	5848409	100.00%	37.490%
11	4.858	343	348	352	rVV2	6805	11436	0.20%	0.073%
12	5.045	375	381	389	rVB	118908	196940	3.37%	1.262%
13	5.352	426	435	441	rVB4	6176	12917	0.22%	0.083%
14	5.585	466	476	487	rVB	879649	1740746	29.76%	11.159%
15	6.317	598	605	615	rBV3	9420	36237	0.62%	0.232%
16	7.226	755	765	771	rBV	449119	949829	16.24%	6.089%
17	7.282	771	775	785	rVB	134426	291575	4.99%	1.869%
18	7.998	891	901	914	rBV	399126	891813	15.25%	5.717%
19	9.304	1119	1131	1142	rBV	727405	1665196	28.47%	10.674%

Sum of corrected areas: 15599767

Data Path : I:\MS09\DATA\2024 06\19\
Data File : 06192422.D
Acq On : 19 Jun 2024 20:36
Operator : SC
Sample : P2402249-035 (40mL)
Misc : S37-06062402
ALS Vial : 10 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\19\\
Data File : 06192422.D
Acq On : 19 Jun 2024 20:366
Operator : SCC
Sample : P2402249-035 (40mL))
Misc : S37-060624022
ALS Vial : 10 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

					|--Internal Standard---|		
TIC Top Hit name	RT	EstConc	Units	Response	# RT Resp Conc

No Library Search Compounds Detected
****

Quantitation Report (QT/LSC Reviewed)

MJ 6/29/24

Data File : I:\MS09\DATA\2024 06\19\06192423.D Vial: 11
Acq On : 19 Jun 2024 21:08 Operator: SC
Sample : P2402249-036 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 09:44:53 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	157304	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	679884	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	163718	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	345206	12.347	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.80%				
57) Toluene-d8 (SS2)	12.43	98	767151	12.245	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.92%				
73) Bromofluorobenzene (SS3)	16.83	174	284145	12.560	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.48%				
Target Compounds							Qvalue
2) Propene	0.00	42	0	N.D. d			
3) Dichlorodifluoromethan...	3.36	85	20438m	0.552	ng		
4) Chloromethane	3.49	50	2683	0.106	ng		91
5) 1,2-Dichloro-1,1,2,2-t...	3.61	135	432	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	3.81	54	378	N.D.			
8) Bromomethane	4.01	94	186	N.D.			
9) Chloroethane	4.15	64	239	N.D.			
10) Ethanol	4.28	45	24062	1.573	ng		75
11) Acetonitrile	0.00	41	0	N.D. d			
12) Acrolein	4.52	56	10880	0.961	ng		98
13) Acetone	4.62	58	90685	7.421	ng	#	61
14) Trichlorofluoromethane	4.75	101	1552605	41.459	ng		100
15) 2-Propanol (Isopropanol)	4.90	45	153	N.D.			
16) Acrylonitrile	5.04	53	178	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.33	59	2475	0.063	ng	#	24
19) Methylene Chloride	5.35	84	1202	0.069	ng		97
20) 3-Chloro-1-propene (Al...	5.45	41	567	N.D.			
21) Trichlorotrifluoroethane	5.58	151	559559	35.321	ng		97
22) Carbon Disulfide	0.00	76	0	N.D. d			
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	6.43	86	8447	2.996	ng	#	18
27) 2-Butanone (MEK)	6.66	72	10619	1.098	ng	#	85
28) cis-1,2-Dichloroethene	7.07	61	196	N.D.			
29) Diisopropyl Ether	7.35	87	181	N.D.			
30) Ethyl Acetate	7.29	61	7687	1.302	ng		92
31) n-Hexane	7.30	57	1017	N.D.			
32) Chloroform	7.36	83	3499	0.114	ng		92
34) Tetrahydrofuran (THF)	7.78	72	286	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	194	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	9.59	61	2007	No Calib		#	
40) 1-Butanol	8.80	56	8489	No Calib		#	
41) Benzene	8.90	78	5543	0.088	ng		99
42) Carbon Tetrachloride	9.07	117	971	N.D.			
43) Cyclohexane	9.22	84	326	N.D.			
44) tert-Amyl Methyl Ether	9.60	73	522	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.08	83	461	N.D.			
47) Trichloroethene	10.14	130	1206	0.066	ng		90
48) 1,4-Dioxane	10.12	88	520	N.D.			
49) 2,2,4-Trimethylpentane...	10.22	57	1022	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192423.D Vial: 11
Acq On : 19 Jun 2024 21:08 Operator: SC
Sample : P2402249-036 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 09:44:53 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

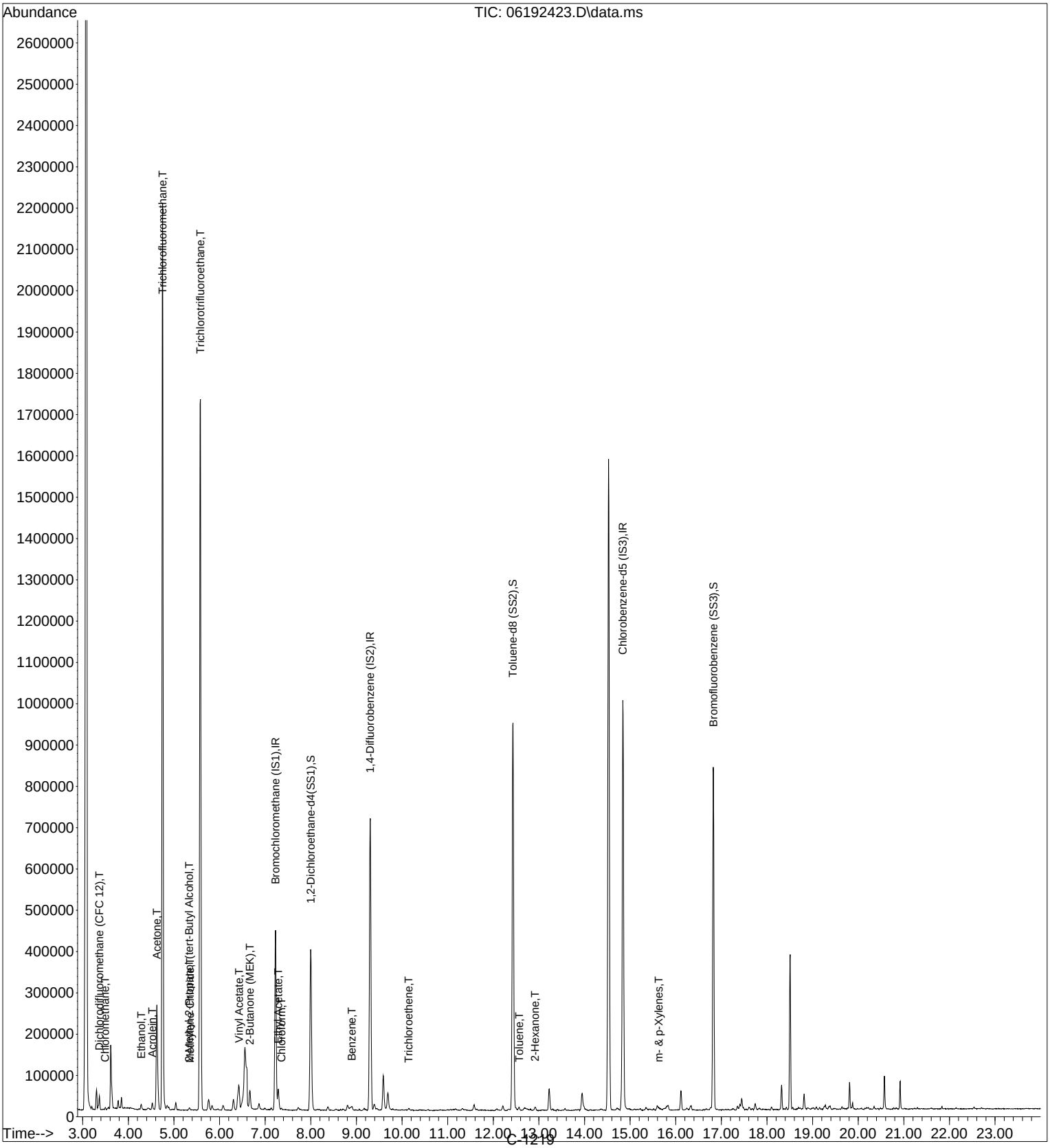
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	10.58	71	109	N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	0.00	58	0	N.D. d	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
58) Toluene	12.57	91	6404	0.098 ng	100
59) 2-Hexanone	12.92	43	9076	0.221 ng	88
60) Dibromochloromethane	13.07	129	518	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	13.77	43	1750	N.D.	
63) n-Octane	13.93	57	273	N.D.	
64) Tetrachloroethene	14.03	166	690	N.D.	
65) Chlorobenzene	14.90	112	837	N.D.	
66) Ethylbenzene	15.41	91	1681	N.D.	
67) m- & p-Xylenes	15.63	91	3263	0.052 ng	93
68) Bromoform	15.67	173	988	N.D.	
69) Styrene	16.11	104	962	N.D.	
70) o-Xylene	16.24	91	1322	N.D.	
71) n-Nonane	16.61	43	1080	N.D.	
72) 1,1,2,2-Tetrachloroethane	16.21	83	497	N.D.	
74) Cumene	17.03	105	969	N.D.	
75) alpha-Pinene	17.53	93	183	N.D.	
76) n-Propylbenzene	17.68	91	1700	N.D.	
77) 3-Ethyltoluene	17.03	105	969	No Calib	#
78) 4-Ethyltoluene	17.86	105	954	N.D.	
79) 1,3,5-Trimethylbenzene	17.96	105	582	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.03	105	969	No Calib	#
82) 1,2,4-Trimethylbenzene	18.43	105	1038	N.D.	
83) n-Decane	17.10	58	324	No Calib	#
84) Benzyl Chloride	18.55	91	517	N.D.	
85) 1,3-Dichlorobenzene	18.58	146	652	N.D.	
86) 1,4-Dichlorobenzene	18.65	146	661	N.D.	
87) sec-Butylbenzene	18.74	105	1158	N.D.	
88) 4-Isopropyltoluene (p-...	18.92	119	1075	N.D.	
89) 1,2,3-Trimethylbenzene	17.03	105	969	No Calib	#
90) 1,2-Dichlorobenzene	19.04	146	522	N.D.	
91) d-Limonene	19.08	68	612	N.D.	
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	840	N.D.	
95) Naphthalene	20.94	128	1234	N.D.	
96) n-Dodecane	18.89	58	200	No Calib	#
97) Hexachlorobutadiene	21.30	225	697	N.D.	
98) Cyclohexanone	15.49	55	773	No Calib	#
99) tert-Butylbenzene	18.43	119	1110	N.D.	
100) n-Butylbenzene	19.39	91	1407	N.D.	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192423.D Vial: 11
Acq On : 19 Jun 2024 21:08 Operator: SC
Sample : P2402249-036 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 09:44:53 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192423.D Vial: 11
Acq On : 19 Jun 2024 21:08 Operator: SC
Sample : P2402249-036 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/29/24

Quant Time: Jun 29 09:44:53 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

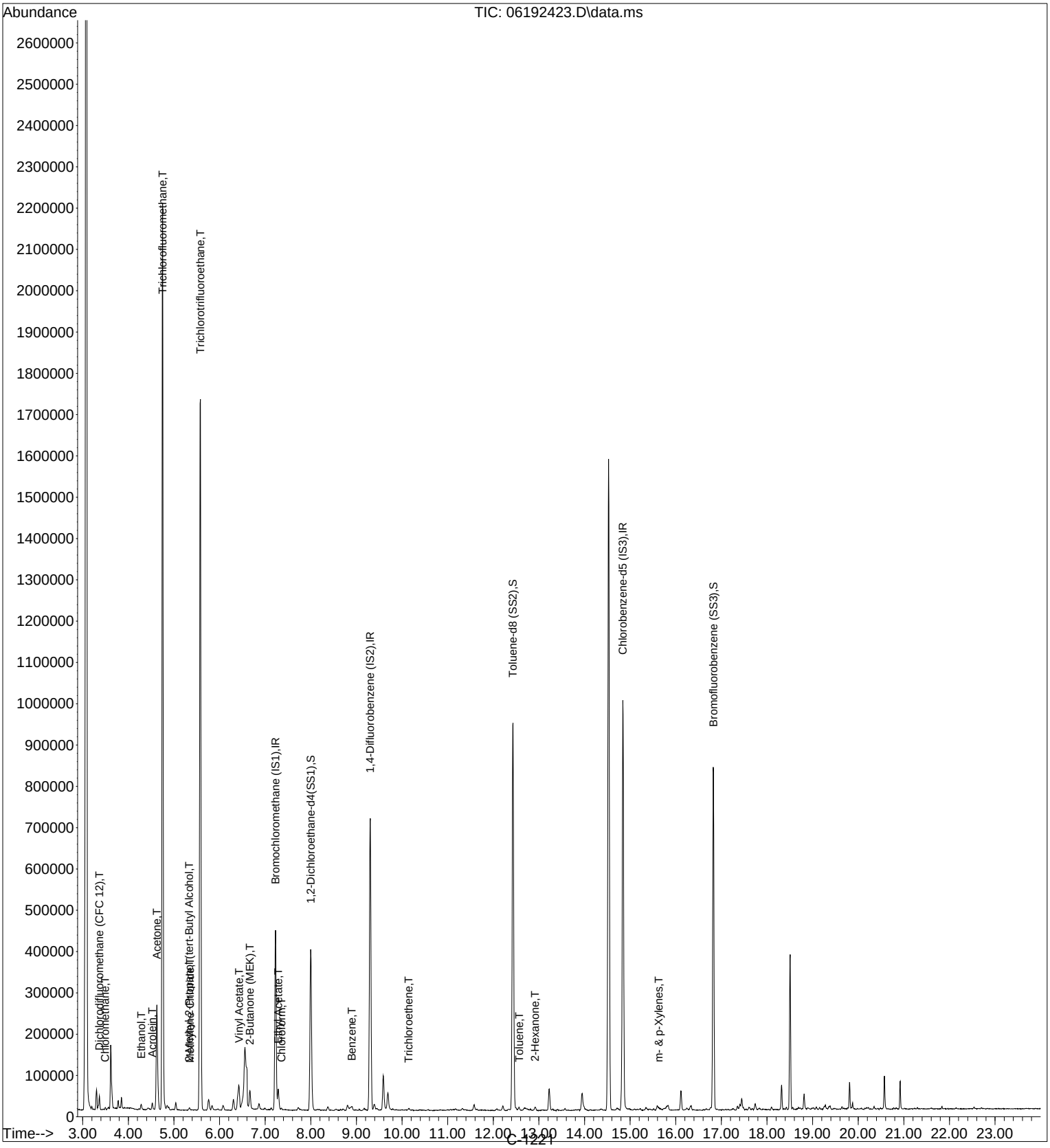
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	157304	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	679884	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	163718	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	345206	12.347	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.80%				
57) Toluene-d8 (SS2)	12.43	98	767151	12.245	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.92%				
73) Bromofluorobenzene (SS3)	16.83	174	284145	12.560	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.48%				
Target Compounds							Qvalue
3) Dichlorodifluoromethan...	3.36	85	20438m	0.552	ng		
4) Chloromethane	3.49	50	2683	0.106	ng		91
10) Ethanol	4.28	45	24062	1.573	ng		75
12) Acrolein	4.52	56	10880	0.961	ng		98
13) Acetone	4.62	58	90685	7.421	ng	#	61
14) Trichlorofluoromethane	4.75	101	1552605	41.459	ng		100
18) 2-Methyl-2-Propanol (t...	5.33	59	2475	0.063	ng	#	24
19) Methylene Chloride	5.35	84	1202	0.069	ng		97
21) Trichlorotrifluoroethane	5.58	151	559559	35.321	ng		97
26) Vinyl Acetate	6.43	86	8447	2.996	ng	#	18
27) 2-Butanone (MEK)	6.66	72	10619	1.098	ng	#	85
30) Ethyl Acetate	7.29	61	7687	1.302	ng		92
32) Chloroform	7.36	83	3499	0.114	ng		92
41) Benzene	8.90	78	5543	0.088	ng		99
47) Trichloroethene	10.14	130	1206	0.066	ng		90
58) Toluene	12.57	91	6404	0.098	ng		100
59) 2-Hexanone	12.92	43	9076	0.221	ng		88
67) m- & p-Xylenes	15.63	91	3263	0.052	ng		93

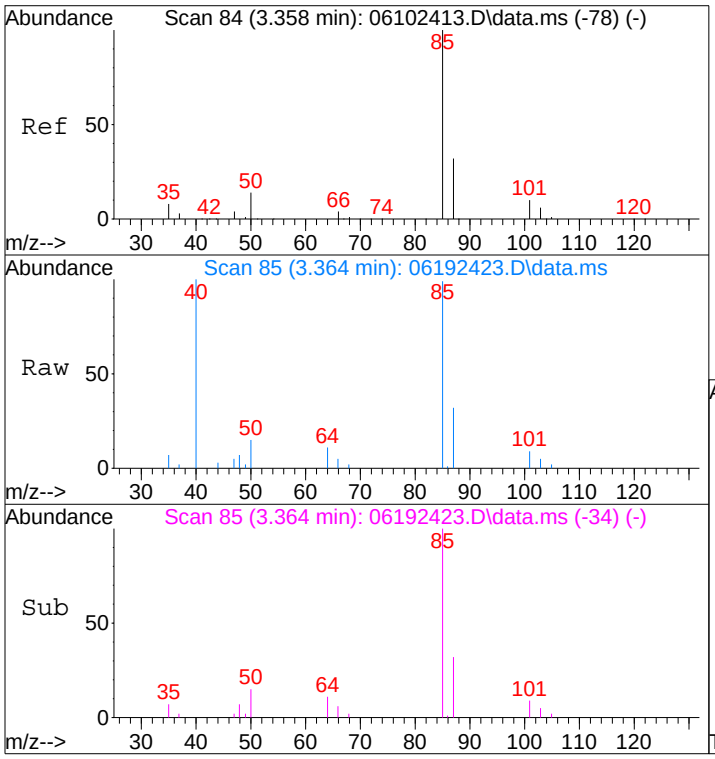
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192423.D Vial: 11
Acq On : 19 Jun 2024 21:08 Operator: SC
Sample : P2402249-036 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 09:44:53 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

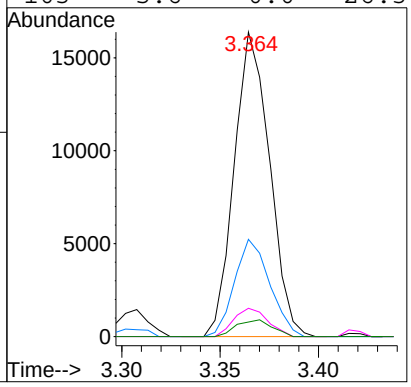


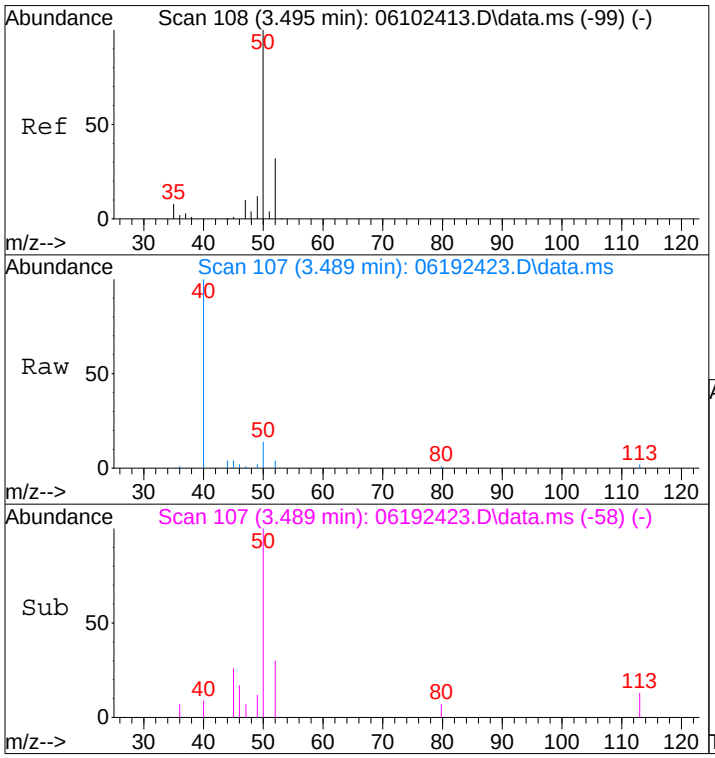


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.55 ng m
RT: 3.36 min Scan# 85
Delta R.T. 0.042 min
Lab File: 06192423.D
Acq: 19 Jun 2024 21:08

Tgt Ion: 85 Resp: 20438

Ion	Ratio	Lower	Upper
85	100		
87	31.8	12.2	52.2
101	9.0	0.0	29.8
103	5.6	0.0	26.3

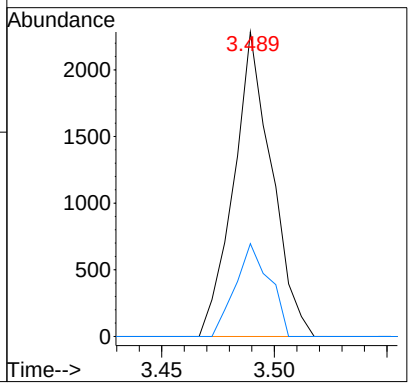


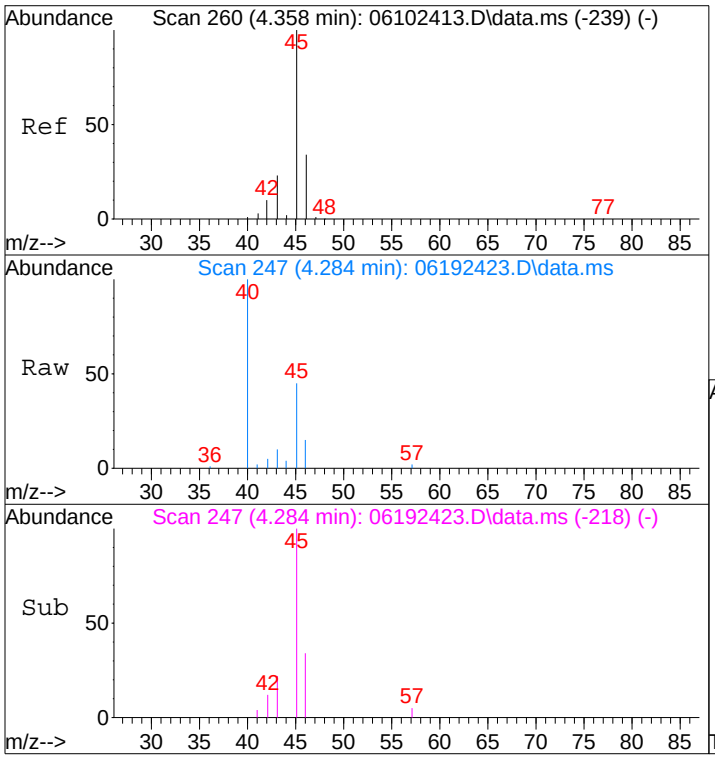


#4
Chloromethane
Concen: 0.11 ng
RT: 3.49 min Scan# 107
Delta R.T. 0.027 min
Lab File: 06192423.D
Acq: 19 Jun 2024 21:08

Tgt Ion: 50 Resp: 2683

Ion	Ratio	Lower	Upper
50	100		
52	27.5	12.4	52.4

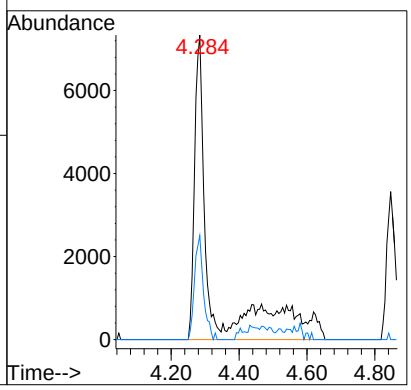


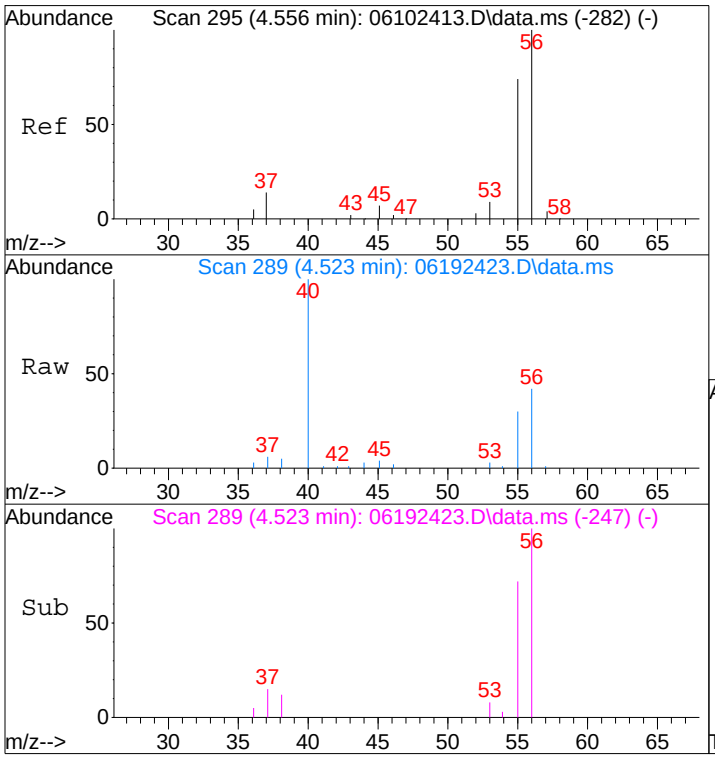


#10
Ethanol
Concen: 1.57 ng
RT: 4.28 min Scan# 247
Delta R.T. -0.083 min
Lab File: 06192423.D
Acq: 19 Jun 2024 21:08

Tgt Ion: 45 Resp: 24062

Ion	Ratio	Lower	Upper
45	100		
46	19.3	13.5	53.5

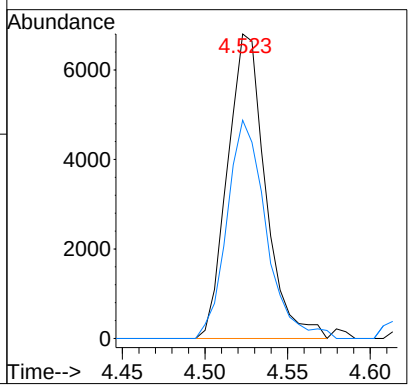


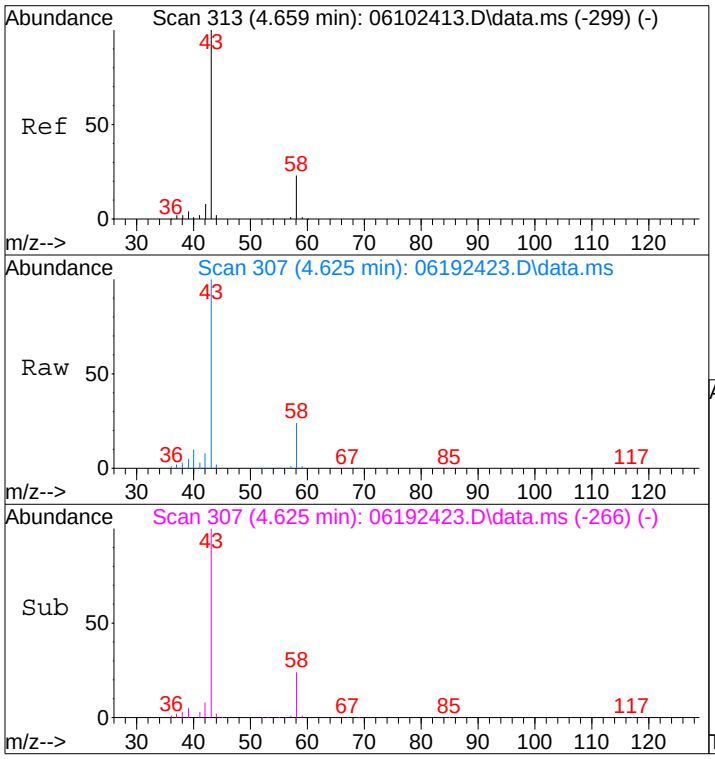


#12
Acrolein
Concen: 0.96 ng
RT: 4.52 min Scan# 289
Delta R.T. -0.013 min
Lab File: 06192423.D
Acq: 19 Jun 2024 21:08

Tgt Ion: 56 Resp: 10880

Ion	Ratio	Lower	Upper
56	100		
55	73.9	55.5	95.5

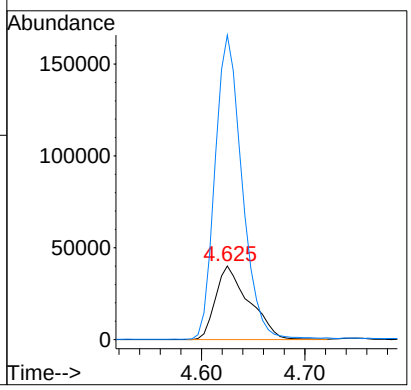


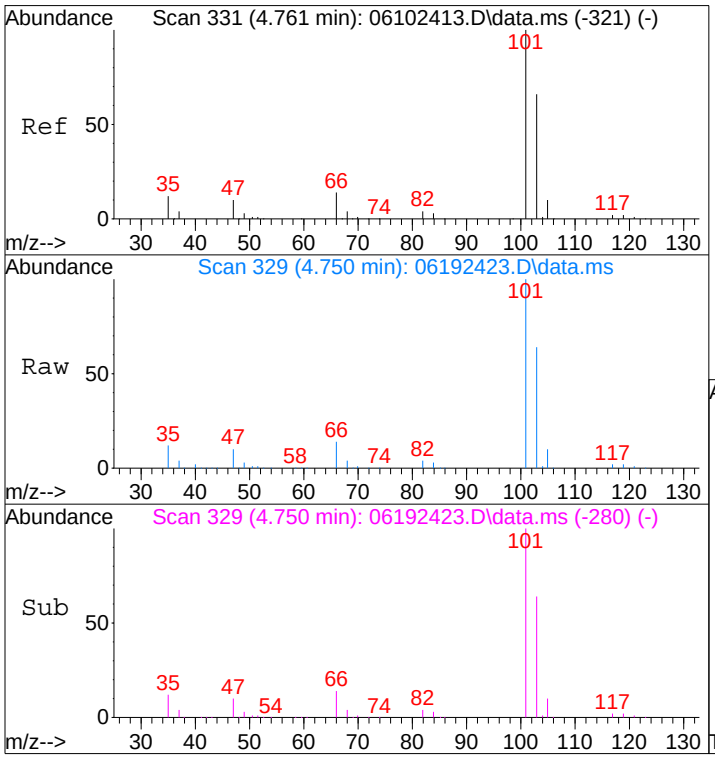


#13
Acetone
Concen: 7.42 ng
RT: 4.62 min Scan# 307
Delta R.T. -0.017 min
Lab File: 06192423.D
Acq: 19 Jun 2024 21:08

Tgt Ion: 58 Resp: 90685

Ion	Ratio	Lower	Upper
58	100		
43	333.2	400.7	460.7#

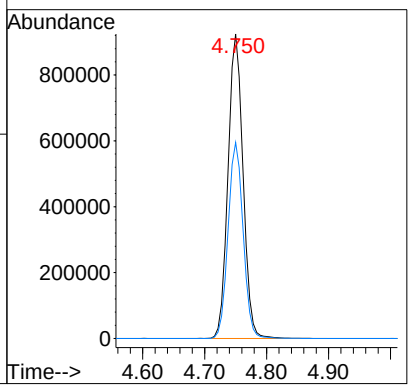


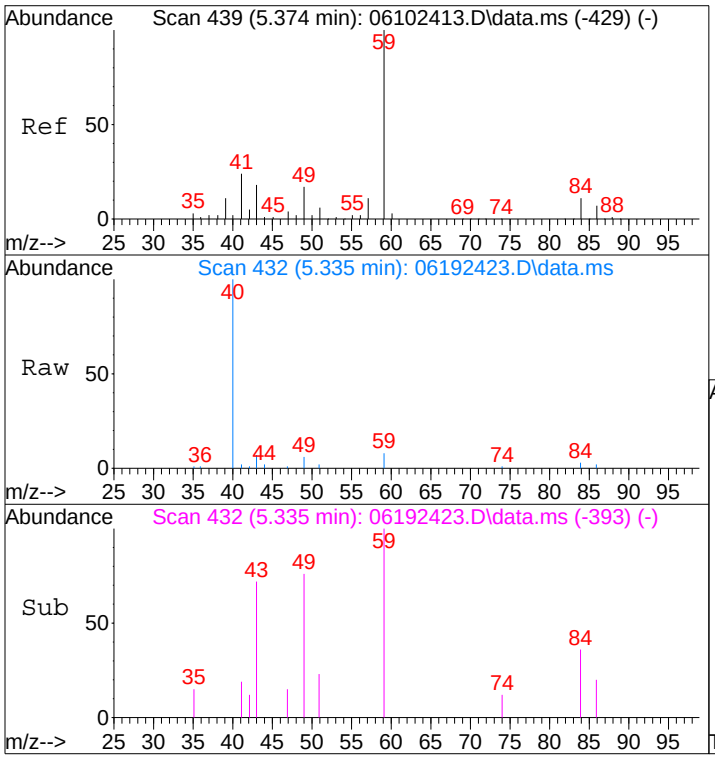


#14
Trichlorofluoromethane
Concen: 41.46 ng
RT: 4.75 min Scan# 329
Delta R.T. 0.029 min
Lab File: 06192423.D
Acq: 19 Jun 2024 21:08

Tgt Ion:101 Resp: 1552605

Ion	Ratio	Lower	Upper
101	100		
103	64.6	44.9	84.9

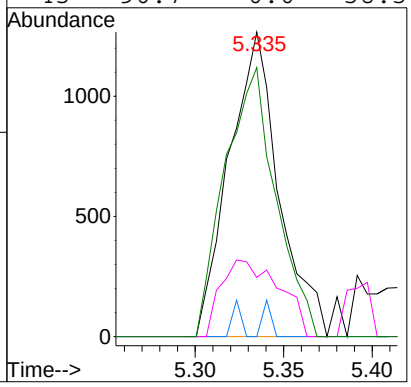


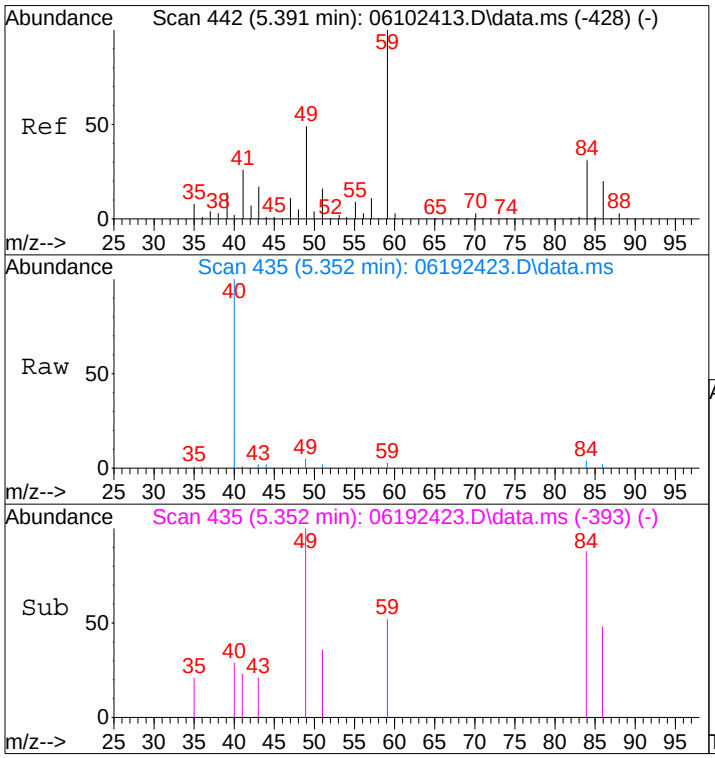


#18
2-Methyl-2-Propanol (tert-Butyl Alcohol
Concen: 0.06 ng
RT: 5.33 min Scan# 432
Delta R.T. -0.026 min
Lab File: 06192423.D
Acq: 19 Jun 2024 21:08

Tgt Ion: 59 Resp: 2475

Ion	Ratio	Lower	Upper
59	100		
57	2.1	0.0	30.9
41	8.5	0.9	40.9
43	90.7	0.0	38.3#

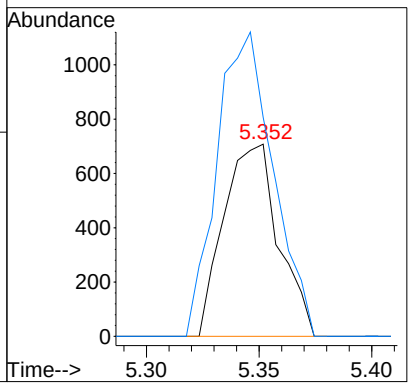


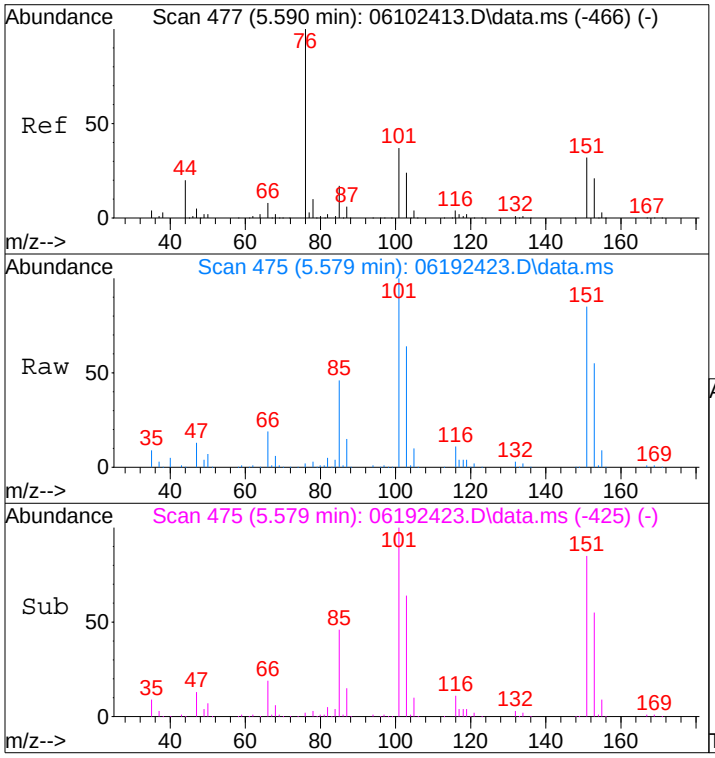


#19
Methylene Chloride
Concen: 0.07 ng
RT: 5.35 min Scan# 435
Delta R.T. -0.009 min
Lab File: 06192423.D
Acq: 19 Jun 2024 21:08

Tgt Ion: 84 Resp: 1202

Ion	Ratio	Lower	Upper
84	100		
49	161.8	132.9	182.9

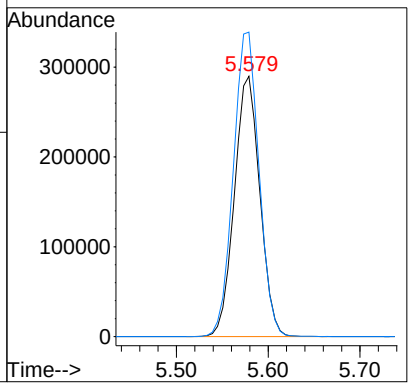


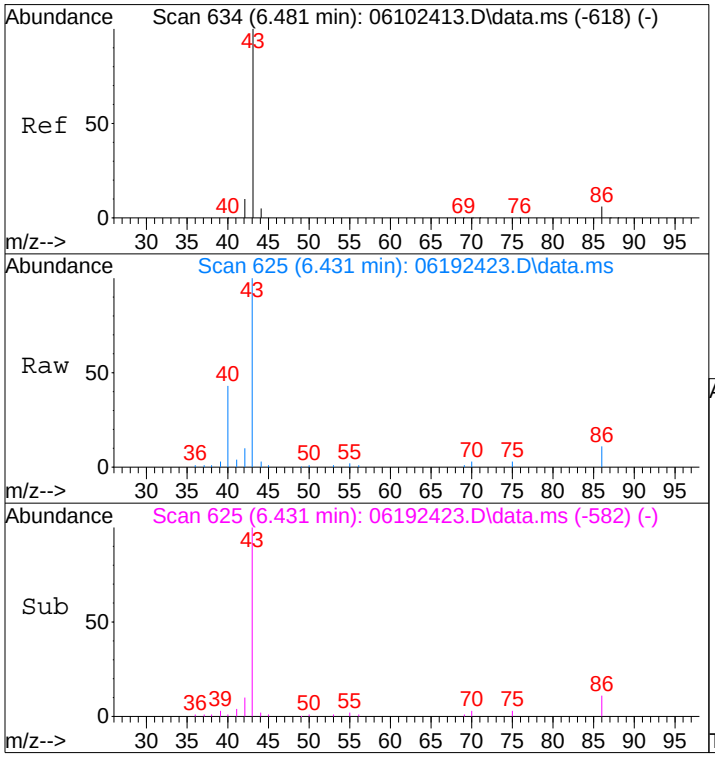


#21
Trichlorotrifluoroethane
Concen: 35.32 ng
RT: 5.58 min Scan# 475
Delta R.T. 0.033 min
Lab File: 06192423.D
Acq: 19 Jun 2024 21:08

Tgt Ion:151 Resp: 559559

Ion	Ratio	Lower	Upper
151	100		
101	117.7	95.0	135.0

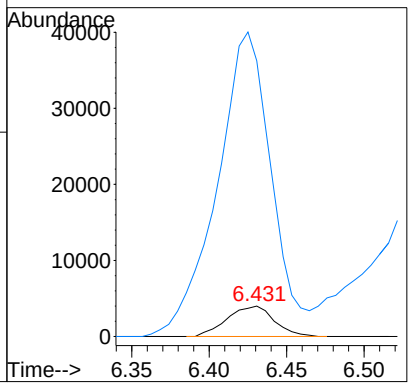


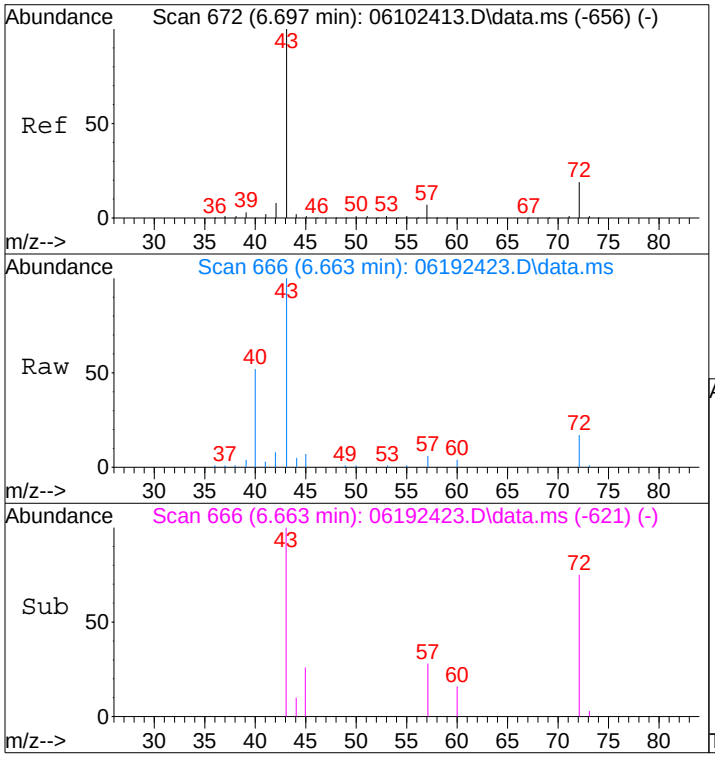


#26
Vinyl Acetate
Concen: 3.00 ng
RT: 6.43 min Scan# 625
Delta R.T. -0.009 min
Lab File: 06192423.D
Acq: 19 Jun 2024 21:08

Tgt Ion: 86 Resp: 8447

Ion	Ratio	Lower	Upper
86	100		
43	1154.8	1668.9	1708.9#

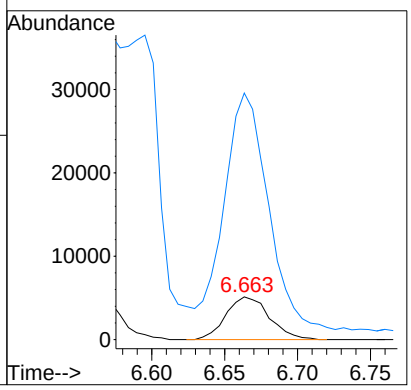


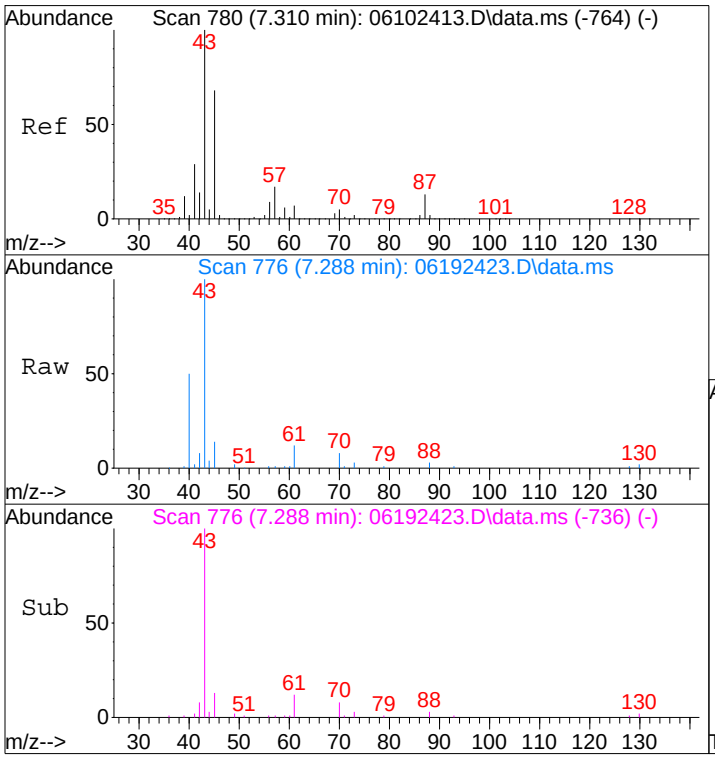


#27
2-Butanone (MEK)
Concen: 1.10 ng
RT: 6.66 min Scan# 666
Delta R.T. 0.005 min
Lab File: 06192423.D
Acq: 19 Jun 2024 21:08

Tgt Ion: 72 Resp: 10619

Ion	Ratio	Lower	Upper
72	100		
43	568.8	506.8	546.8#

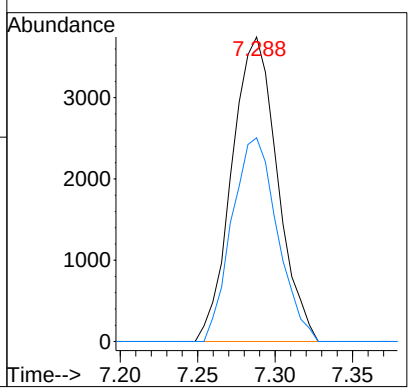


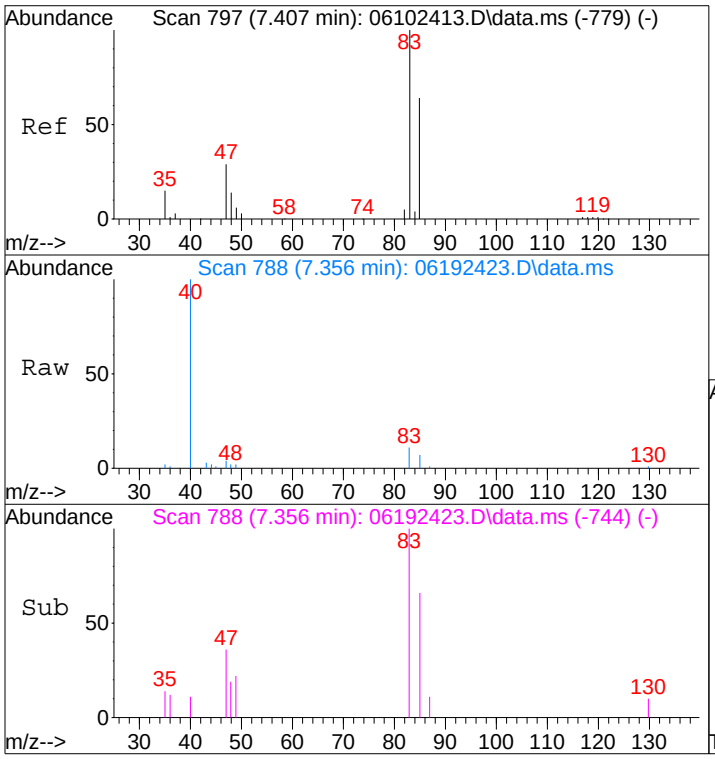


#30
Ethyl Acetate
Concen: 1.30 ng
RT: 7.29 min Scan# 776
Delta R.T. 0.029 min
Lab File: 06192423.D
Acq: 19 Jun 2024 21:08

Tgt Ion: 61 Resp: 7687

Ion	Ratio	Lower	Upper
61	100		
70	66.8	53.5	93.5

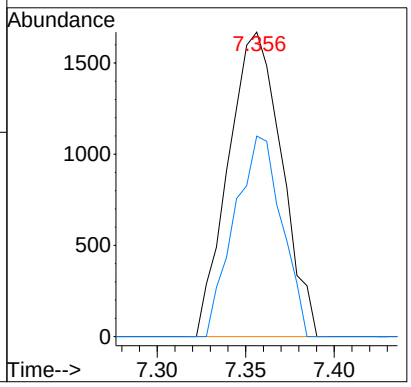


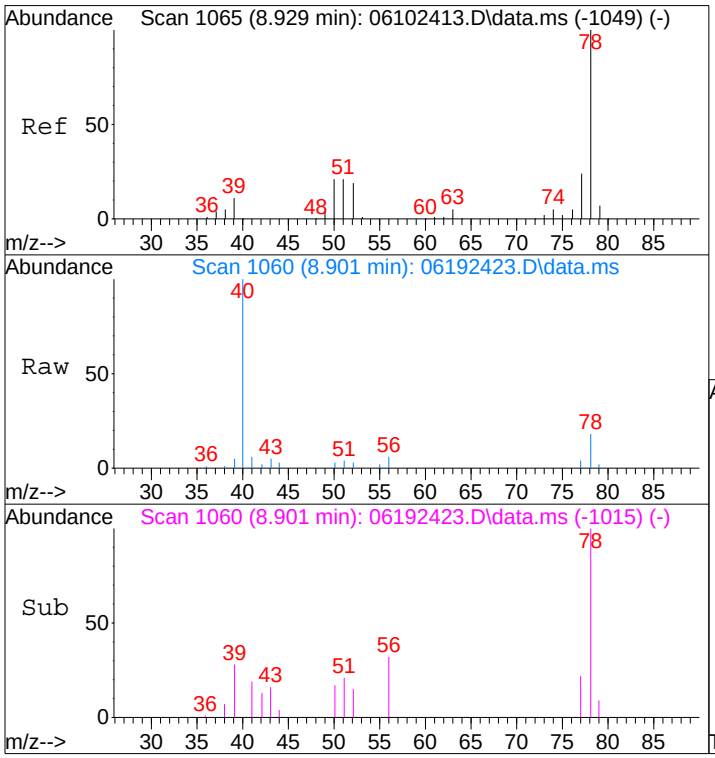


#32
Chloroform
Concen: 0.11 ng
RT: 7.36 min Scan# 788
Delta R.T. 0.001 min
Lab File: 06192423.D
Acq: 19 Jun 2024 21:08

Tgt Ion: 83 Resp: 3499

Ion	Ratio	Lower	Upper
83	100		
85	58.4	44.4	84.4

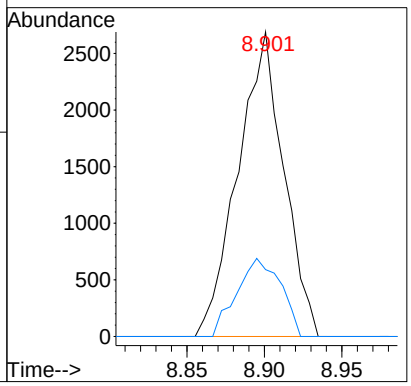


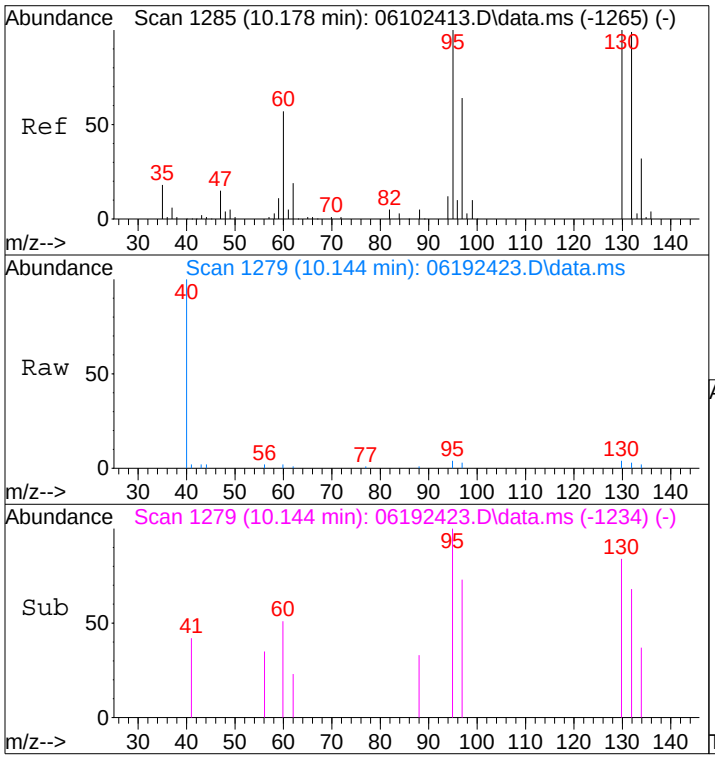


#41
Benzene
Concen: 0.09 ng
RT: 8.90 min Scan# 1060
Delta R.T. 0.003 min
Lab File: 06192423.D
Acq: 19 Jun 2024 21:08

Tgt Ion: 78 Resp: 5543

Ion	Ratio	Lower	Upper
78	100		
77	24.6	4.0	44.0

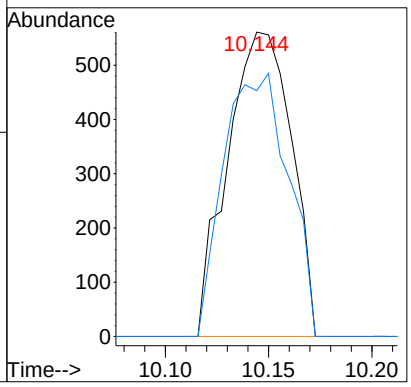


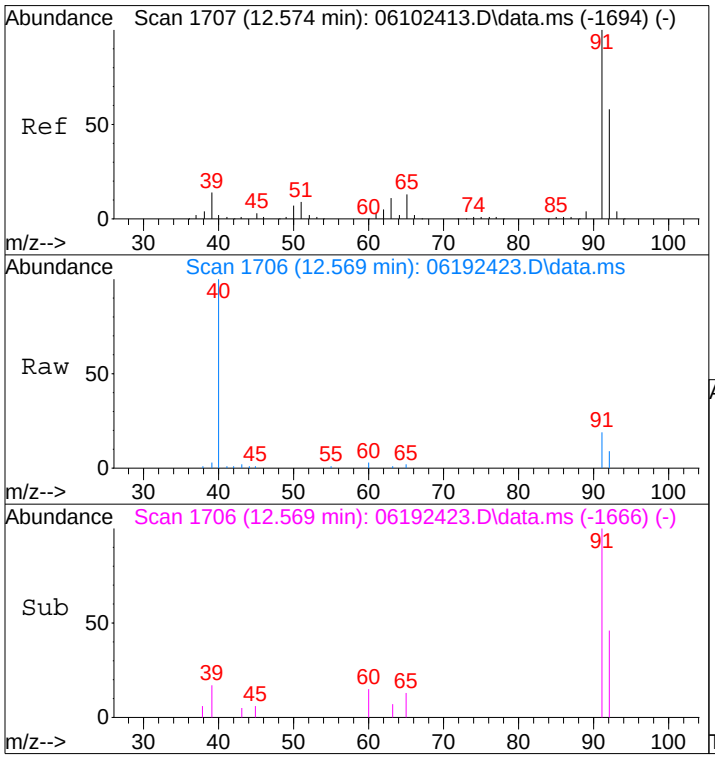


#47
Trichloroethene
Concen: 0.07 ng
RT: 10.14 min Scan# 1279
Delta R.T. 0.005 min
Lab File: 06192423.D
Acq: 19 Jun 2024 21:08

Tgt Ion:130 Resp: 1206

Ion	Ratio	Lower	Upper
130	100		
132	87.8	77.9	117.9

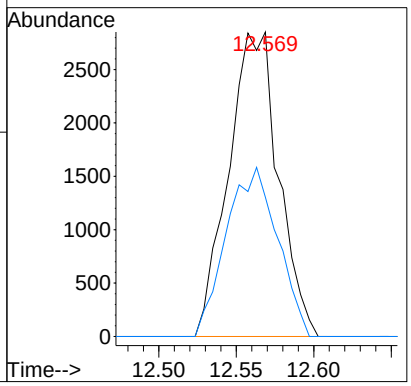


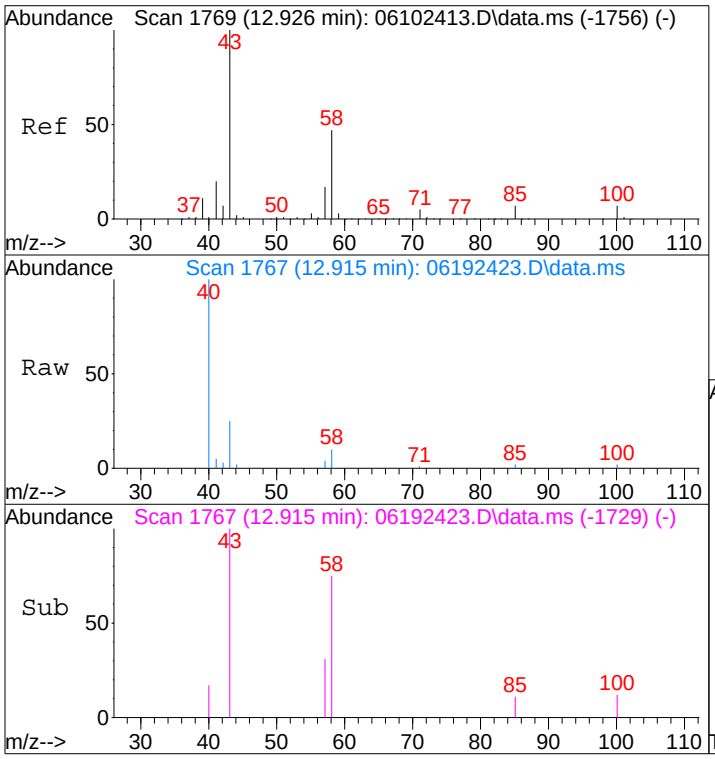


#58
Toluene
Concen: 0.10 ng
RT: 12.57 min Scan# 1706
Delta R.T. -0.023 min
Lab File: 06192423.D
Acq: 19 Jun 2024 21:08

Tgt Ion: 91 Resp: 6404

Ion	Ratio	Lower	Upper
91	100		
92	57.1	37.4	77.4

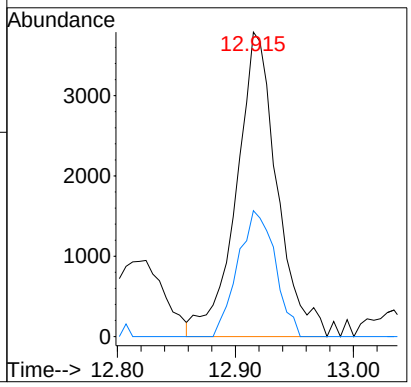


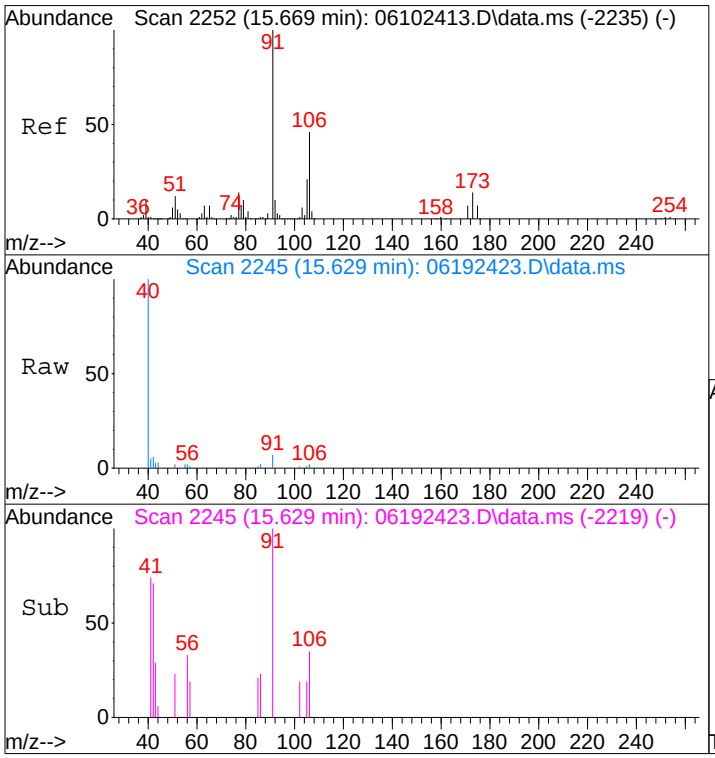


#59
2-Hexanone
Concen: 0.22 ng
RT: 12.92 min Scan# 1767
Delta R.T. -0.034 min
Lab File: 06192423.D
Acq: 19 Jun 2024 21:08

Tgt Ion: 43 Resp: 9076

Ion	Ratio	Lower	Upper
43	100		
58	38.0	25.9	65.9

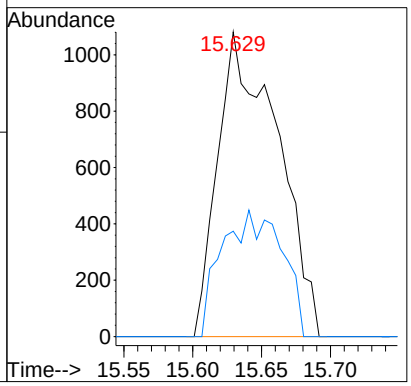




#67
m- & p-Xylenes
Concen: 0.05 ng
RT: 15.63 min Scan# 2245
Delta R.T. -0.051 min
Lab File: 06192423.D
Acq: 19 Jun 2024 21:08

Tgt Ion: 91 Resp: 3263

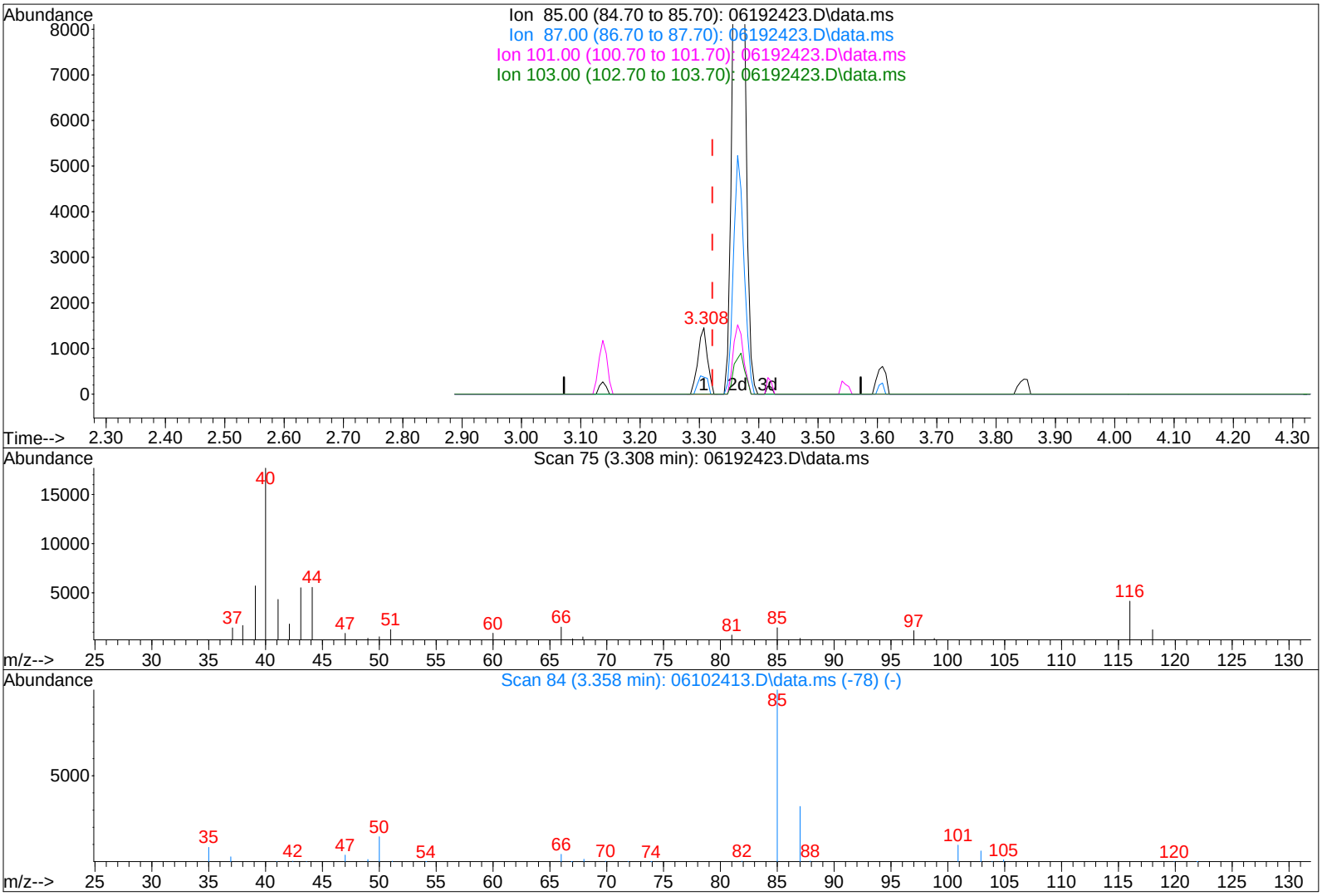
Ion	Ratio	Lower	Upper
91	100		
106	41.6	25.9	65.9



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\19\06192423.D Vial: 11
Acq On : 19 Jun 2024 21:08 Operator: SC
Sample : P2402249-036 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 11:26:53 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06192423.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.308min (-0.014) 0.04ng

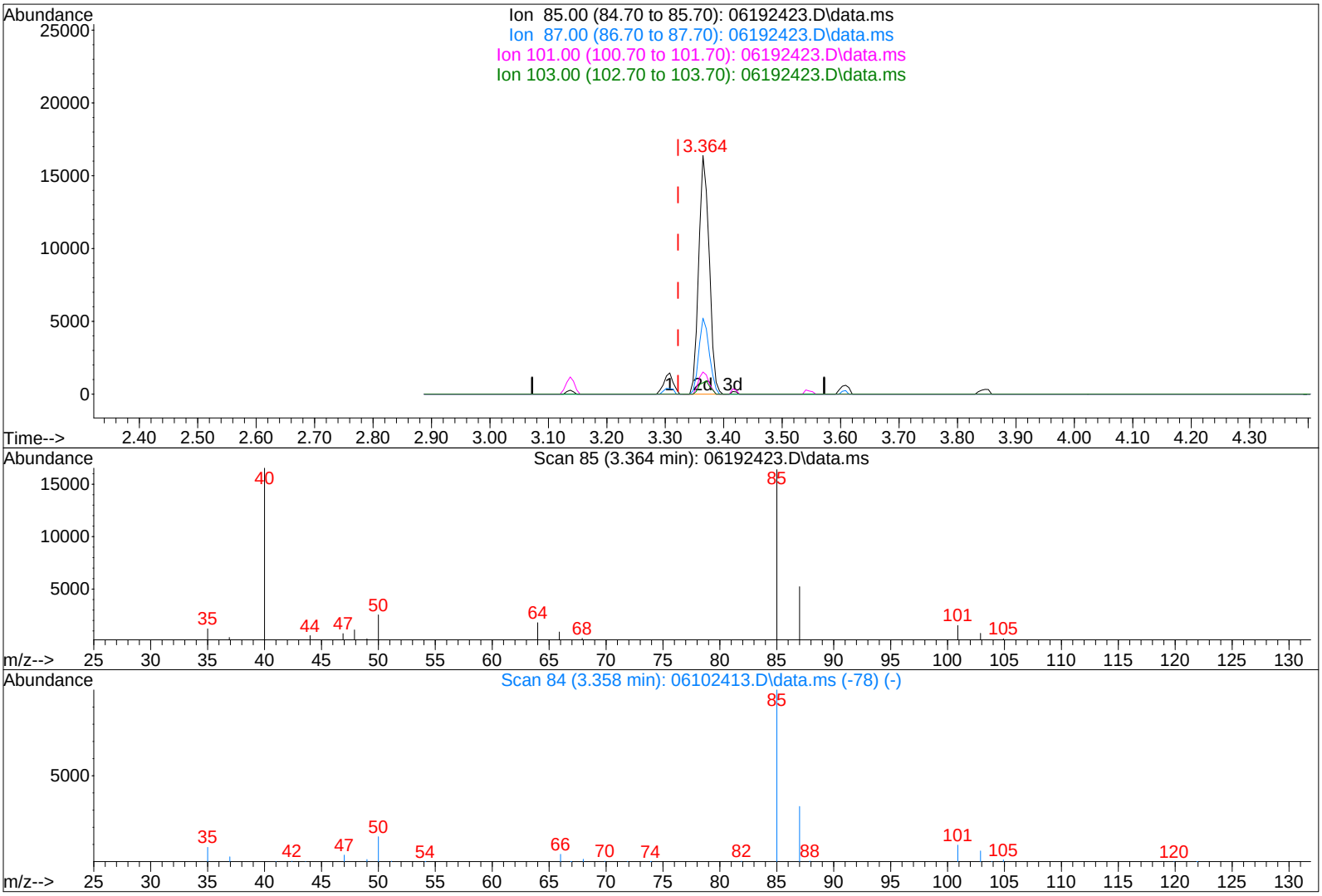
response 1610

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	28.01
101.00	9.80	0.00
103.00	6.30	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\19\06192423.D Vial: 11
Acq On : 19 Jun 2024 21:08 Operator: SC
Sample : P2402249-036 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 11:26:53 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06192423.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.364min (+0.042) 0.55ng m

response 20438

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	31.77
101.00	9.80	8.98
103.00	6.30	5.57

MJ 6/29/24

WP

CG 6/29/24

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192423.D Vial: 11
Acq On : 19 Jun 2024 21:08 Operator: SC
Sample : P2402249-036 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 15:11:54 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

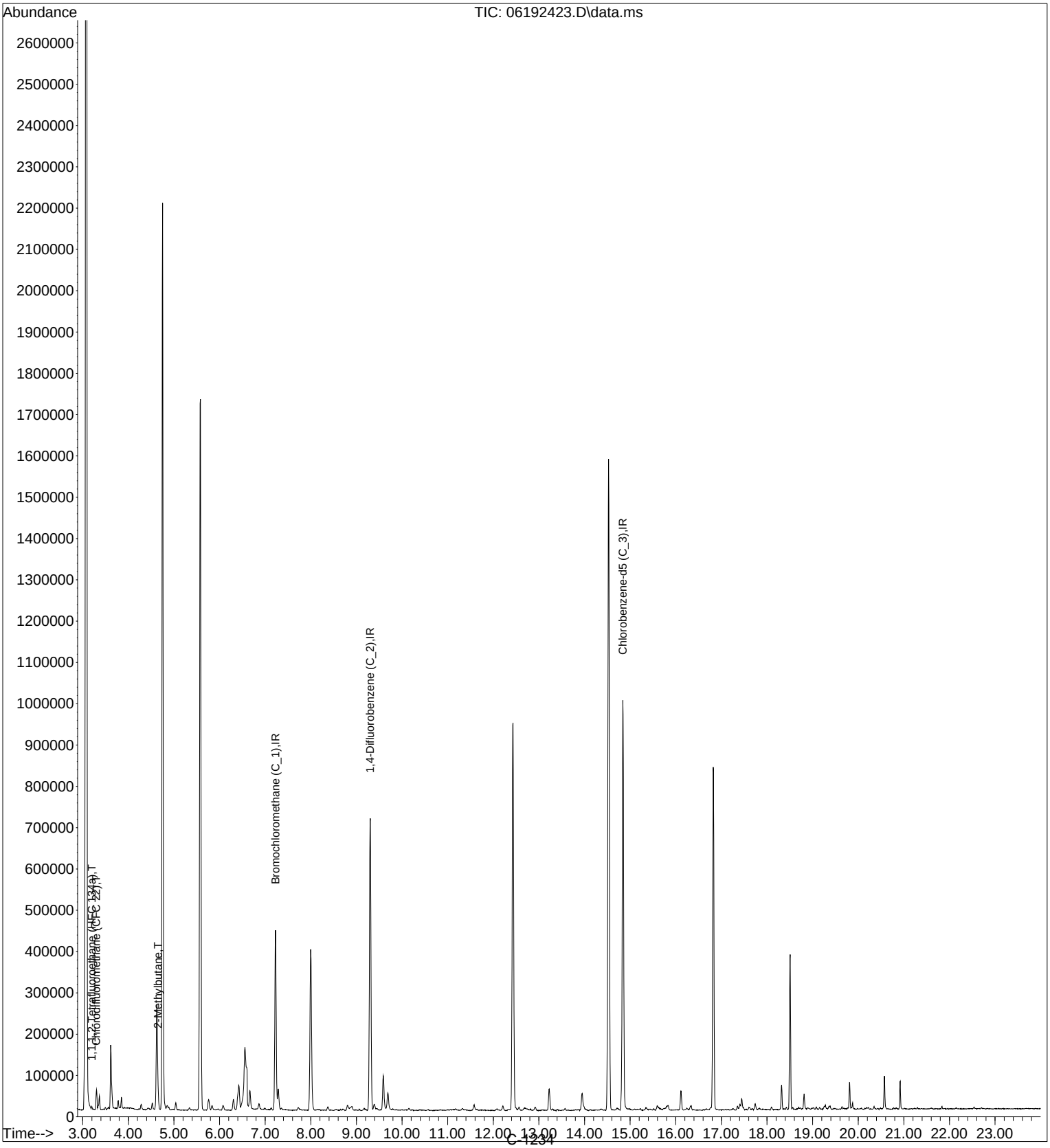
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	157580	12.500	ng		-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	681490	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	163718	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	3.14	85	210	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.20	83	2009	0.124	ng	#	1
4) 1,1-Difluoroethane	3.24	65	284	N.D.			
5) Chlorodifluoromethane ...	3.30	67	1158	0.216	ng		97
6) 1-Chloro-1,1-Difluoroe...	3.50	65	536	N.D.			
7) Dichlorofluoromethane ...	4.23	67	2057	N.D.			
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	4.56	83	320	N.D.			
10) 2-Methylbutane	4.65	57	10694	0.569	ng	#	1
11) Methyl Acetate	5.33	43	2244	N.D.			
12) 2-Methylpentane	6.48	71	248	N.D.			
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	8.99	84	73	N.D.			
17) 2,3-Dimethylpentane	9.58	56	294	N.D.			
18) Dibromomethane	9.80	174	276	N.D.			
20) Methyl Cyclohexane	11.40	55	348	N.D.			
21) 1,3-Dichloropropane	0.00	76	0	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	0.00	75	0	N.D.			
25) Bromobenzene	0.00	77	0	N.D.			
26) 2-Chlorotoluene	17.61	91	803	N.D.			
27) 4-Chlorotoluene	17.68	91	1700	N.D.			
28) Indane	19.10	117	135	N.D.			
29) Indene	19.21	115	52	N.D.			
30) 1,2,4,5-Tetramethylben...	20.23	119	62	N.D.			
31) 1,2,3,4-Tetramethylben...	20.23	119	62	N.D.			
32) 1,2,3,5-Tetramethylben...	20.60	119	160	N.D.			
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192423.D Vial: 11
Acq On : 19 Jun 2024 21:08 Operator: SC
Sample : P2402249-036 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:11:54 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



C-1234

LSC Area Percent Report

MJ 6/28/24

Data Path : I:\MS09\DATA\2024 06\19\
Data File : 06192423.D
Acq On : 19 Jun 2024 21:08
Operator : SC
Sample : P2402249-036 (400mL)
Misc : S37-06062402
ALS Vial : 11 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06192423.D\data.ms

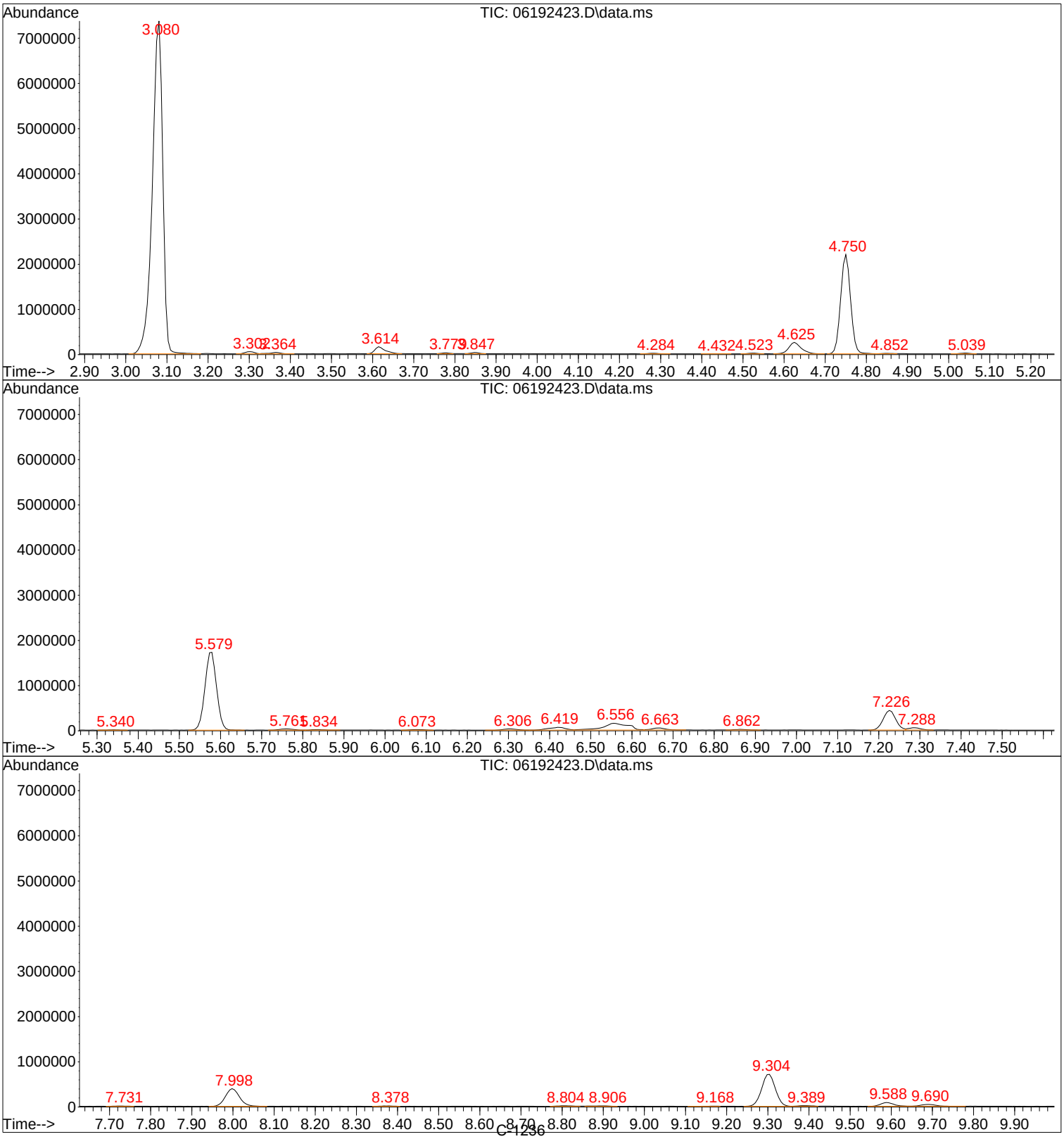
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.080	22	35	53	rBV	7364998	12971061	100.00%	49.381%
2	3.302	68	74	78	rBV3	48543	76936	0.59%	0.293%
3	3.364	78	85	93	rVB2	33561	57052	0.44%	0.217%
4	3.614	124	129	139	rBV	154185	271515	2.09%	1.034%
5	3.779	154	158	161	rBV	18829	25397	0.20%	0.097%
6	3.847	166	170	175	rVB2	25616	33683	0.26%	0.128%
7	4.284	241	247	254	rVB	12383	21808	0.17%	0.083%
8	4.432	267	273	280	rBV6	3943	10583	0.08%	0.040%
9	4.523	284	289	294	rBV2	15580	25044	0.19%	0.095%
10	4.625	298	307	320	rVB	253168	532106	4.10%	2.026%
11	4.750	321	329	342	rBV	2193653	3677380	28.35%	14.000%
12	4.852	342	347	351	rBV5	7319	12852	0.10%	0.049%
13	5.039	374	380	385	rBV3	17151	27987	0.22%	0.107%
14	5.340	426	433	439	rBV5	6293	14062	0.11%	0.054%
15	5.579	465	475	489	rVB	1721322	3382210	26.08%	12.876%
16	5.761	499	507	515	rBV	25757	61538	0.47%	0.234%
17	5.834	515	520	530	rVB4	10643	22519	0.17%	0.086%
18	6.073	556	562	570	rBV4	11766	26859	0.21%	0.102%
19	6.306	592	603	611	rBV	26469	59811	0.46%	0.228%
20	6.419	611	623	630	rVV2	59703	172334	1.33%	0.656%
21	6.556	630	647	660	rVV3	150216	631088	4.87%	2.403%
22	6.663	660	666	678	rVB	44016	98142	0.76%	0.374%
23	6.862	695	701	710	rVB2	13642	29328	0.23%	0.112%
24	7.226	756	765	772	rBV	435067	928741	7.16%	3.536%
25	7.288	772	776	784	rVB	48817	97929	0.75%	0.373%
26	7.731	847	854	859	rBV3	6440	15946	0.12%	0.061%
27	7.998	891	901	916	rBV	389825	930933	7.18%	3.544%
28	8.378	961	968	973	rBV4	8601	20088	0.15%	0.076%
29	8.804	1037	1043	1050	rBV3	12401	32040	0.25%	0.122%
30	8.906	1052	1061	1066	rVB7	8746	27860	0.21%	0.106%
31	9.168	1096	1107	1110	rBV4	5949	11776	0.09%	0.045%
32	9.304	1120	1131	1140	rBV	707118	1644030	12.67%	6.259%
33	9.389	1140	1146	1152	rVV2	12541	27153	0.21%	0.103%
34	9.588	1173	1181	1191	rBV	83051	184726	1.42%	0.703%
35	9.690	1191	1199	1215	rVB	41199	105014	0.81%	0.400%

Sum of corrected areas: 26267531

Data Path : I:\MS09\DATA\2024 06\19\
Data File : 06192423.D
Acq On : 19 Jun 2024 21:08
Operator : SC
Sample : P2402249-036 (400mL)
Misc : S37-06062402
ALS Vial : 11 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\19\\
Data File : 06192423.D
Acq On : 19 Jun 2024 21:088
Operator : SCC
Sample : P2402249-036 (400mL))
Misc : S37-060624022
ALS Vial : 11 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

						Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192424.D Vial: 12
Acq On : 19 Jun 2024 21:41 Operator: SC
Sample : P2402249-037 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/29/24

Quant Time: Jun 29 09:48:05 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.24	130	157841	12.500	ng		0.02
37) 1,4-Difluorobenzene (IS2)	9.31	114	685259	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.85	54	162539	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.01	65	351001	12.512	ng		0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.08%				
57) Toluene-d8 (SS2)	12.43	98	767869	12.345	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.80%				
73) Bromofluorobenzene (SS3)	16.83	174	288634	12.851	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.80%				
Target Compounds							Qvalue
2) Propene	3.28	42	32296	1.598	ng	#	64
3) Dichlorodifluoromethan...	3.36	85	26742m	0.720	ng		
4) Chloromethane	3.49	50	4537	0.179	ng		95
5) 1,2-Dichloro-1,1,2,2-t...	3.61	135	389	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	3.77	54	568	N.D.			
8) Bromomethane	4.02	94	1514	0.117	ng		83
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.30	45	252252	16.439	ng		97
11) Acetonitrile	0.00	41	0	N.D.	d		
12) Acrolein	4.54	56	4408	0.388	ng		91
13) Acetone	4.63	58	1264512	103.126	ng		96
14) Trichlorofluoromethane	4.75	101	502922	13.384	ng		99
15) 2-Propanol (Isopropanol)	4.85	45	155655	3.150	ng		92
16) Acrylonitrile	0.00	53	0	N.D.	d		
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.33	59	30786	0.781	ng	#	6
19) Methylene Chloride	5.37	84	9293	0.535	ng		95
20) 3-Chloro-1-propene (Al...	5.45	41	490	N.D.			
21) Trichlorotrifluoroethane	5.58	151	180962	11.384	ng		98
22) Carbon Disulfide	0.00	76	0	N.D.	d		
23) trans-1,2-Dichloroethene	6.15	61	792	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	6.37	73	1039	N.D.			
26) Vinyl Acetate	6.44	86	2397	0.847	ng	#	79
27) 2-Butanone (MEK)	6.67	72	38647	3.983	ng		99
28) cis-1,2-Dichloroethene	7.09	61	824	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.	d		
30) Ethyl Acetate	7.28	61	154342	26.052	ng		93
31) n-Hexane	7.30	57	10324	0.398	ng		90
32) Chloroform	7.37	83	8530	0.276	ng		99
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.	d		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.12	62	2002	0.065	ng		86
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.80	56	21080	No Calib		#	
41) Benzene	8.91	78	20124	0.318	ng		100
42) Carbon Tetrachloride	9.07	117	3472	0.118	ng		95
43) Cyclohexane	9.22	84	15155	0.740	ng		98
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	9.86	63	22259	1.458	ng		99
46) Bromodichloromethane	0.00	83	0	N.D.	d		
47) Trichloroethene	10.15	130	2080	0.113	ng		94
48) 1,4-Dioxane	10.13	88	453	N.D.			
49) 2,2,4-Trimethylpentane...	0.00	57	0	N.D.	d		
50) Methyl Methacrylate	10.41	100	2226	0.415	ng		96

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192424.D Vial: 12
Acq On : 19 Jun 2024 21:41 Operator: SC
Sample : P2402249-037 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 09:48:05 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

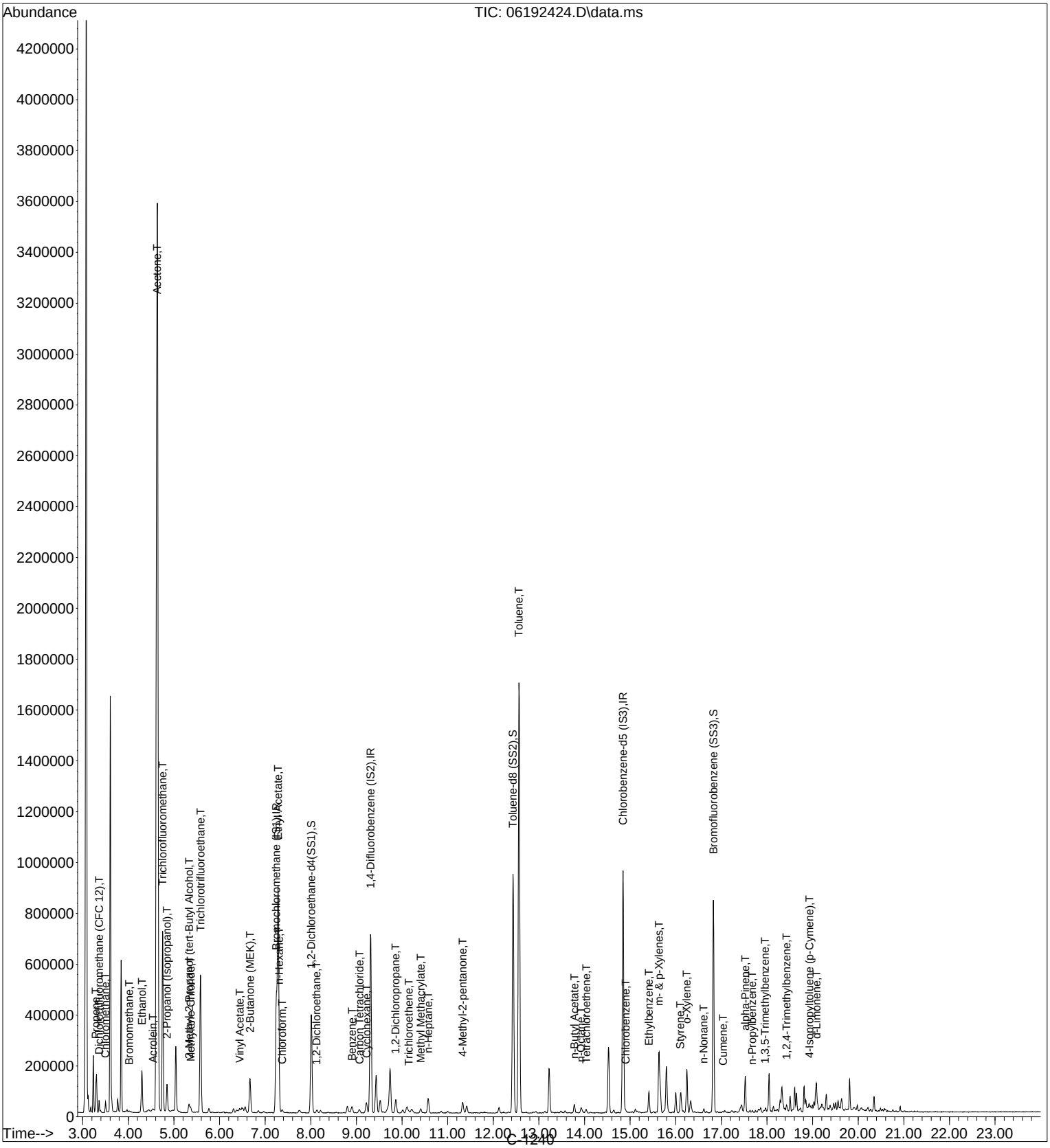
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	10.58	71	13668	1.024 ng		96
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	11.33	58	13838	0.995 ng		94
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	12.56	91	1479027	22.756 ng		100
59) 2-Hexanone	0.00	43	0	N.D. d		
60) Dibromochloromethane	13.07	129	543	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	13.78	43	33072	0.772 ng		98
63) n-Octane	13.92	57	3864	0.287 ng		95
64) Tetrachloroethene	14.04	166	4081	0.183 ng		97
65) Chlorobenzene	14.90	112	5856	0.129 ng		94
66) Ethylbenzene	15.41	91	66021	0.888 ng		100
67) m- & p-Xylenes	15.63	91	212226	3.394 ng		97
68) Bromoform	15.69	173	980	N.D.		
69) Styrene	16.10	104	25950	0.615 ng		97
70) o-Xylene	16.24	91	112295	1.821 ng		100
71) n-Nonane	16.61	43	7496	0.209 ng		94
72) 1,1,2,2-Tetrachloroethane	16.21	83	633	N.D.		
74) Cumene	17.04	105	4966	0.065 ng		92
75) alpha-Pinene	17.53	93	54794	1.528 ng		99
76) n-Propylbenzene	17.68	91	5550	0.060 ng		98
77) 3-Ethyltoluene	17.04	105	4966	No Calib		
78) 4-Ethyltoluene	17.86	105	3615	N.D.		
79) 1,3,5-Trimethylbenzene	17.96	105	3507	0.055 ng		100
80) alpha-Methylstyrene	0.00	118	0	N.D.		
81) 2-Ethyltoluene	17.04	105	4966	No Calib		
82) 1,2,4-Trimethylbenzene	18.43	105	8820	0.130 ng		93
83) n-Decane	0.00	58	0	N.D.		
84) Benzyl Chloride	18.56	91	318	N.D.		
85) 1,3-Dichlorobenzene	18.57	146	801	N.D.		
86) 1,4-Dichlorobenzene	18.65	146	1246	N.D.		
87) sec-Butylbenzene	18.74	105	2598	N.D.		
88) 4-Isopropyltoluene (p-...	18.93	119	10205	0.133 ng		99
89) 1,2,3-Trimethylbenzene	17.04	105	4966	No Calib		
90) 1,2-Dichlorobenzene	19.03	146	614	N.D.		
91) d-Limonene	19.09	68	17789	0.774 ng	#	69
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	17.87	58	287	No Calib	#	
94) 1,2,4-Trichlorobenzene	20.84	180	881	N.D.		
95) Naphthalene	20.94	128	829	N.D.		
96) n-Dodecane	18.95	58	300	No Calib	#	
97) Hexachlorobutadiene	21.30	225	711	N.D.		
98) Cyclohexanone	15.52	55	2368	No Calib	#	
99) tert-Butylbenzene	18.43	119	2319	N.D.		
100) n-Butylbenzene	19.39	91	3080	N.D.		
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192424.D Vial: 12
Acq On : 19 Jun 2024 21:41 Operator: SC
Sample : P2402249-037 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 09:48:05 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



C-1240

Quantitation Report (QT/LSC Reviewed)

MJ 6/29/24

Data File : I:\MS09\DATA\2024 06\19\06192424.D Vial: 12
Acq On : 19 Jun 2024 21:41 Operator: SC
Sample : P2402249-037 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 09:48:05 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

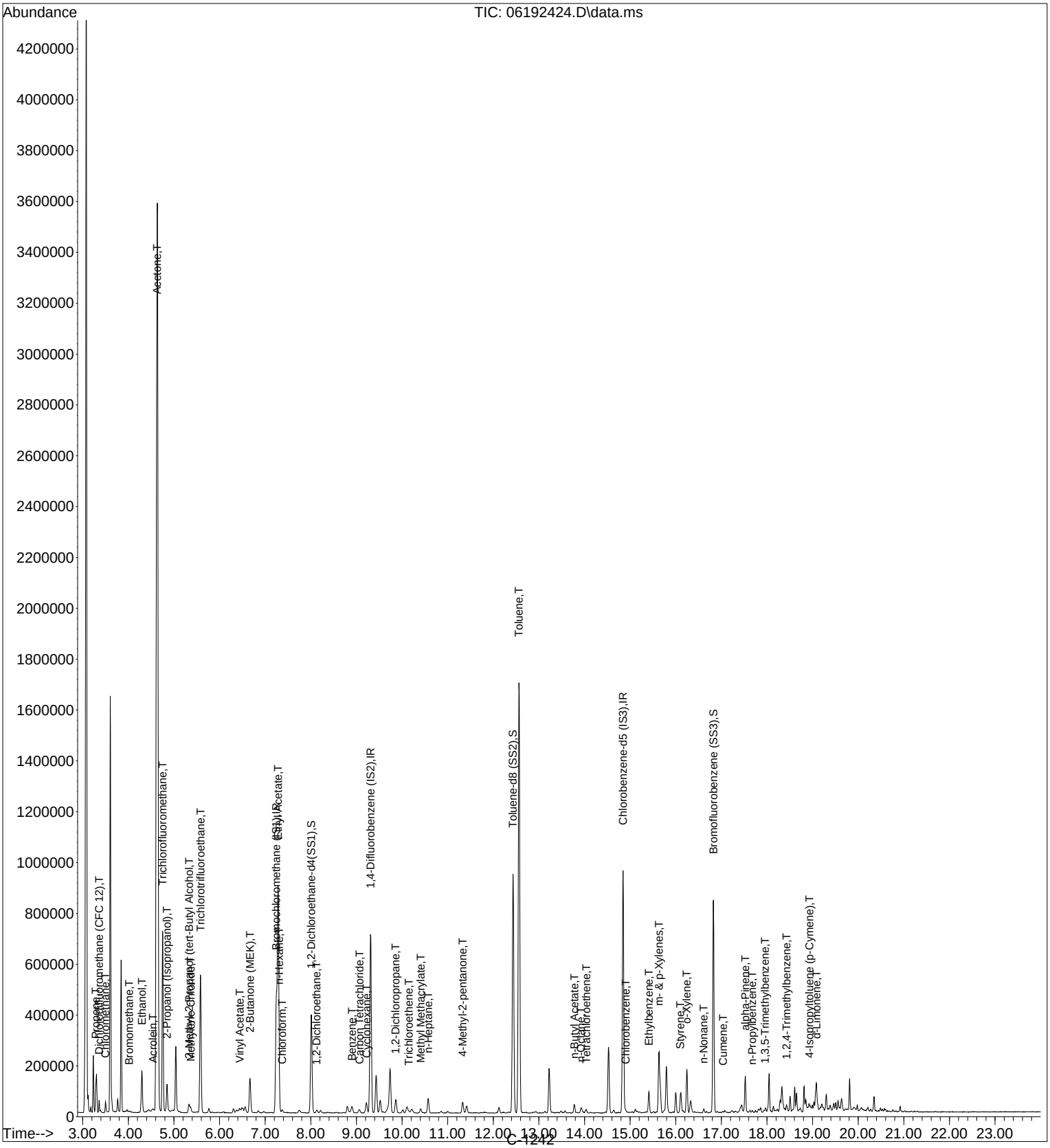
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.24	130	157841	12.500	ng		0.02
37) 1,4-Difluorobenzene (IS2)	9.31	114	685259	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.85	54	162539	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.01	65	351001	12.512	ng		0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.08%				
57) Toluene-d8 (SS2)	12.43	98	767869	12.345	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.80%				
73) Bromofluorobenzene (SS3)	16.83	174	288634	12.851	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.80%				
Target Compounds							Qvalue
2) Propene	3.28	42	32296	1.598	ng	#	64
3) Dichlorodifluoromethan...	3.36	85	26742m	0.720	ng		
4) Chloromethane	3.49	50	4537	0.179	ng		95
8) Bromomethane	4.02	94	1514	0.117	ng		83
10) Ethanol	4.30	45	252252	16.439	ng		97
12) Acrolein	4.54	56	4408	0.388	ng		91
13) Acetone	4.63	58	1264512	103.126	ng		96
14) Trichlorofluoromethane	4.75	101	502922	13.384	ng		99
15) 2-Propanol (Isopropanol)	4.85	45	155655	3.150	ng		92
18) 2-Methyl-2-Propanol (t...	5.33	59	30786	0.781	ng	#	6
19) Methylene Chloride	5.37	84	9293	0.535	ng		95
21) Trichlorotrifluoroethane	5.58	151	180962	11.384	ng		98
26) Vinyl Acetate	6.44	86	2397	0.847	ng	#	79
27) 2-Butanone (MEK)	6.67	72	38647	3.983	ng		99
30) Ethyl Acetate	7.28	61	154342	26.052	ng		93
31) n-Hexane	7.30	57	10324	0.398	ng		90
32) Chloroform	7.37	83	8530	0.276	ng		99
36) 1,2-Dichloroethane	8.12	62	2002	0.065	ng		86
41) Benzene	8.91	78	20124	0.318	ng		100
42) Carbon Tetrachloride	9.07	117	3472	0.118	ng		95
43) Cyclohexane	9.22	84	15155	0.740	ng		98
45) 1,2-Dichloropropane	9.86	63	22259	1.458	ng		99
47) Trichloroethene	10.15	130	2080	0.113	ng		94
50) Methyl Methacrylate	10.41	100	2226	0.415	ng		96
51) n-Heptane	10.58	71	13668	1.024	ng		96
53) 4-Methyl-2-pentanone	11.33	58	13838	0.995	ng		94
58) Toluene	12.56	91	1479027	22.756	ng		100
62) n-Butyl Acetate	13.78	43	33072	0.772	ng		98
63) n-Octane	13.92	57	3864	0.287	ng		95
64) Tetrachloroethene	14.04	166	4081	0.183	ng		97
65) Chlorobenzene	14.90	112	5856	0.129	ng		94
66) Ethylbenzene	15.41	91	66021	0.888	ng		100
67) m- & p-Xylenes	15.63	91	212226	3.394	ng		97
69) Styrene	16.10	104	25950	0.615	ng		97
70) o-Xylene	16.24	91	112295	1.821	ng		100
71) n-Nonane	16.61	43	7496	0.209	ng		94
74) Cumene	17.04	105	4966	0.065	ng		92
75) alpha-Pinene	17.53	93	54794	1.528	ng		99
76) n-Propylbenzene	17.68	91	5550	0.060	ng		98
79) 1,3,5-Trimethylbenzene	17.96	105	3507	0.055	ng		100
82) 1,2,4-Trimethylbenzene	18.43	105	8820	0.130	ng		93
88) 4-Isopropyltoluene (p-...	18.93	119	10205	0.133	ng		99
91) d-Limonene	19.09	68	17789	0.774	ng	#	69

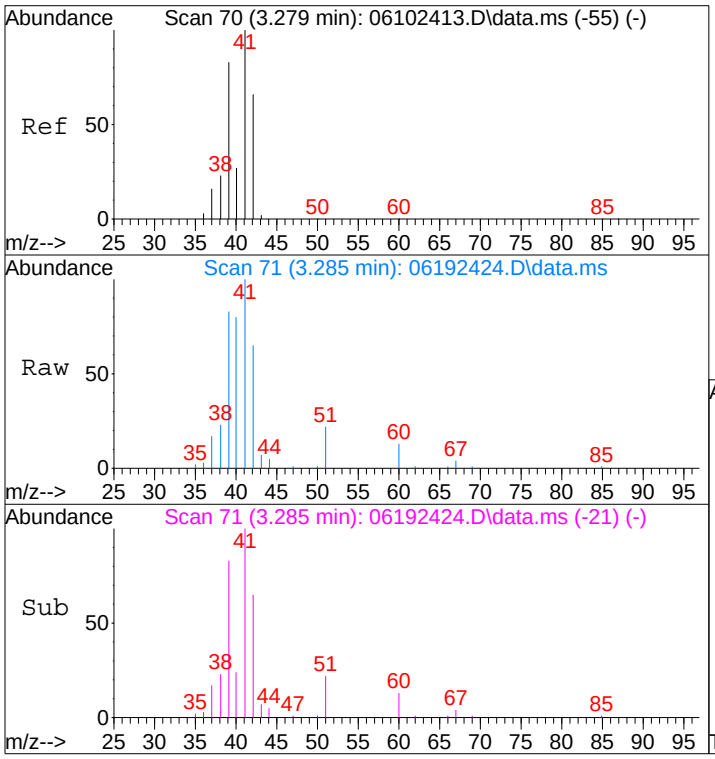
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192424.D Vial: 12
Acq On : 19 Jun 2024 21:41 Operator: SC
Sample : P2402249-037 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 09:48:05 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

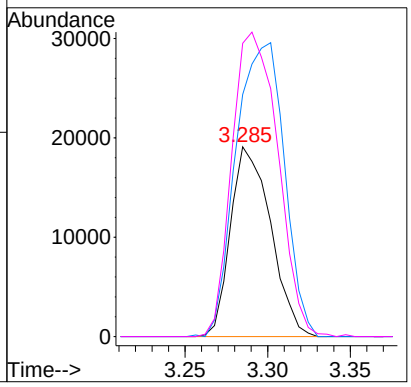


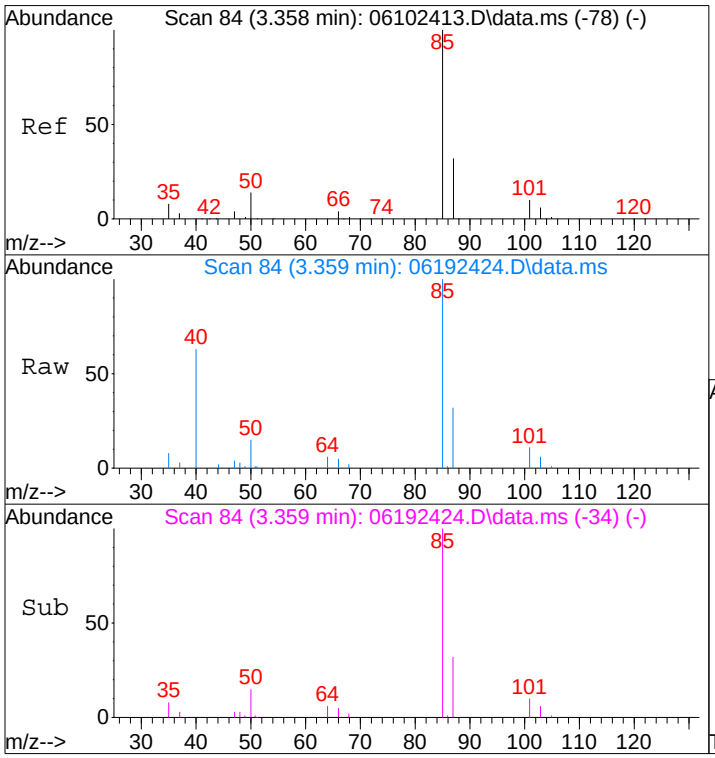


#2
Propene
Concen: 1.60 ng
RT: 3.28 min Scan# 71
Delta R.T. 0.036 min
Lab File: 06192424.D
Acq: 19 Jun 2024 21:41

Tgt Ion: 42 Resp: 32296

Ion	Ratio	Lower	Upper
42	100		
39	186.0	107.3	147.3#
41	184.0	134.3	174.3#

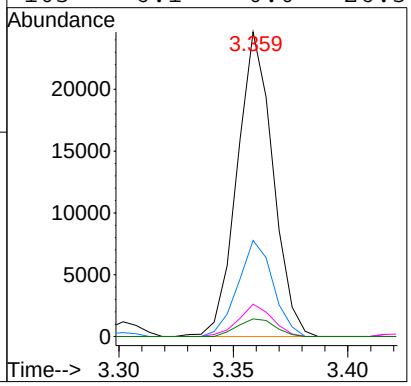


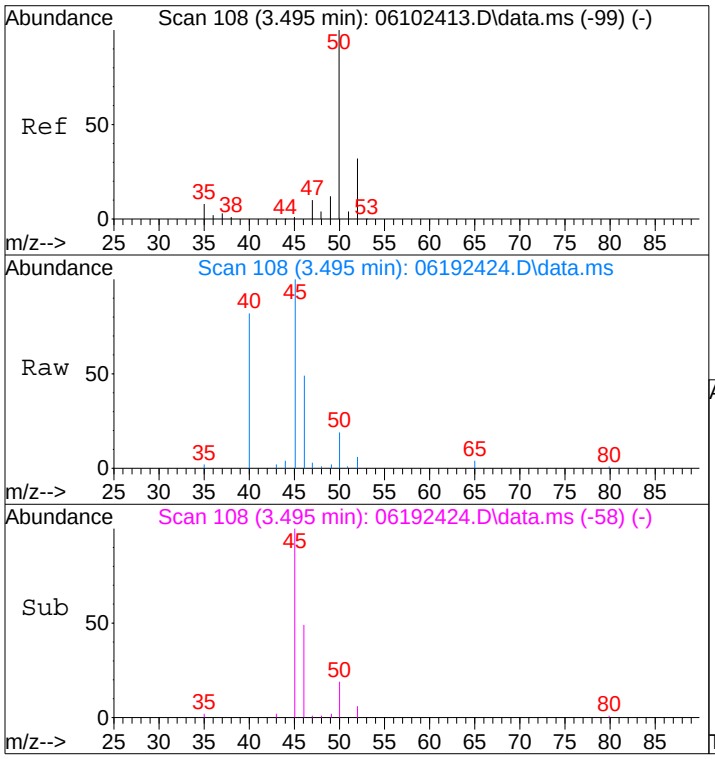


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.72 ng m
RT: 3.36 min Scan# 84
Delta R.T. 0.037 min
Lab File: 06192424.D
Acq: 19 Jun 2024 21:41

Tgt Ion: 85 Resp: 26742

Ion	Ratio	Lower	Upper
85	100		
87	31.0	12.2	52.2
101	10.0	0.0	29.8
103	6.1	0.0	26.3

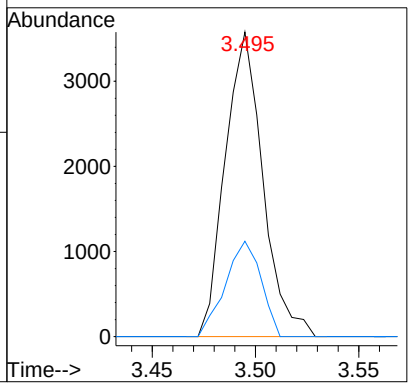


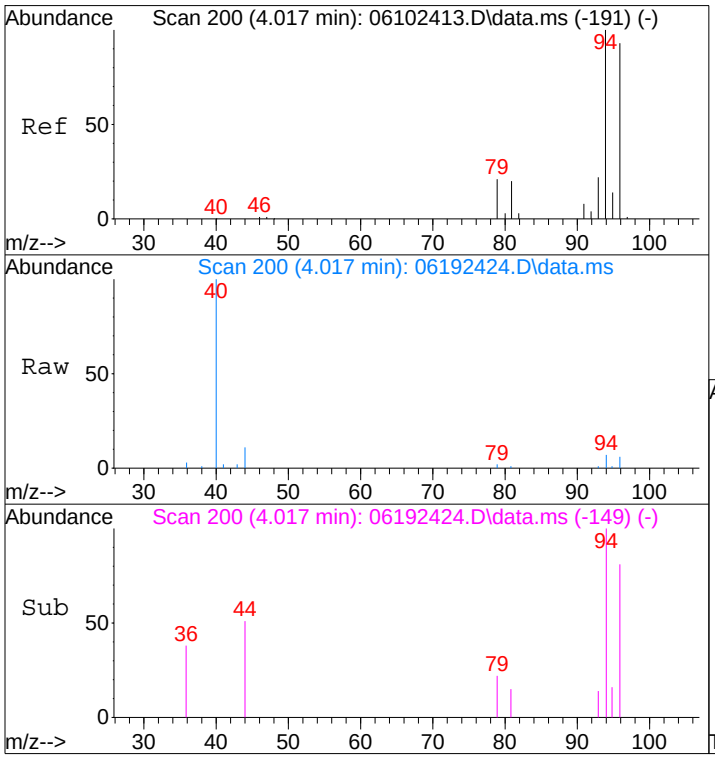


#4
Chloromethane
Concen: 0.18 ng
RT: 3.49 min Scan# 108
Delta R.T. 0.032 min
Lab File: 06192424.D
Acq: 19 Jun 2024 21:41

Tgt Ion: 50 Resp: 4537

Ion	Ratio	Lower	Upper
50	100		
52	29.7	12.4	52.4

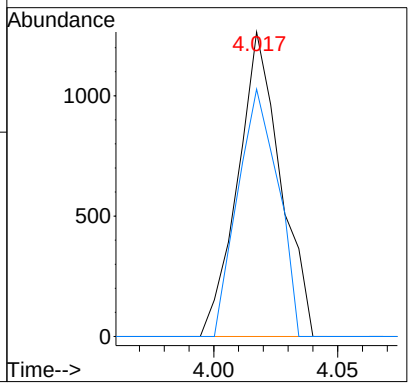


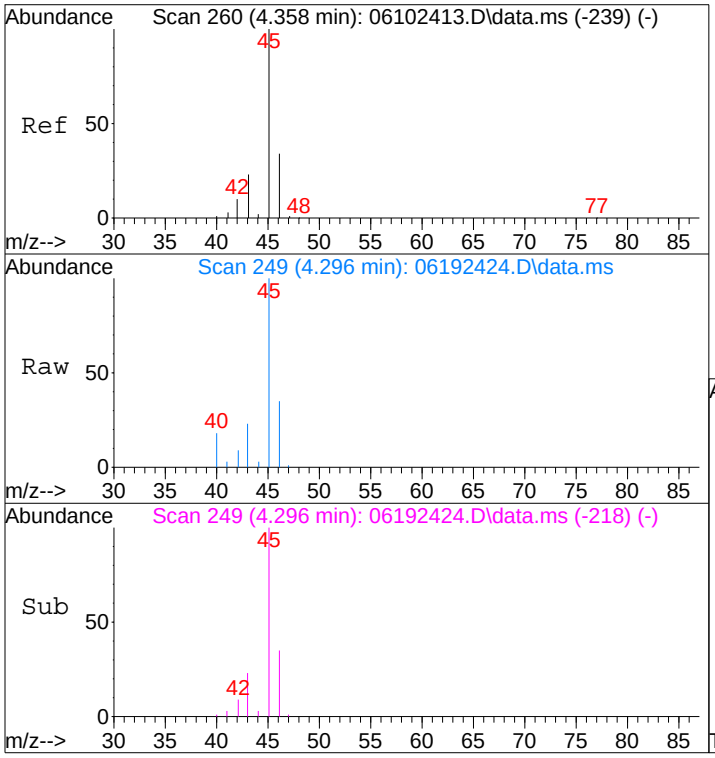


#8
Bromomethane
Concen: 0.12 ng
RT: 4.02 min Scan# 200
Delta R.T. 0.038 min
Lab File: 06192424.D
Acq: 19 Jun 2024 21:41

Tgt Ion: 94 Resp: 1514

Ion	Ratio	Lower	Upper
94	100		
96	76.6	73.2	113.2

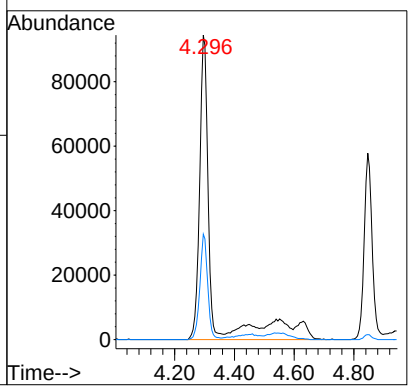


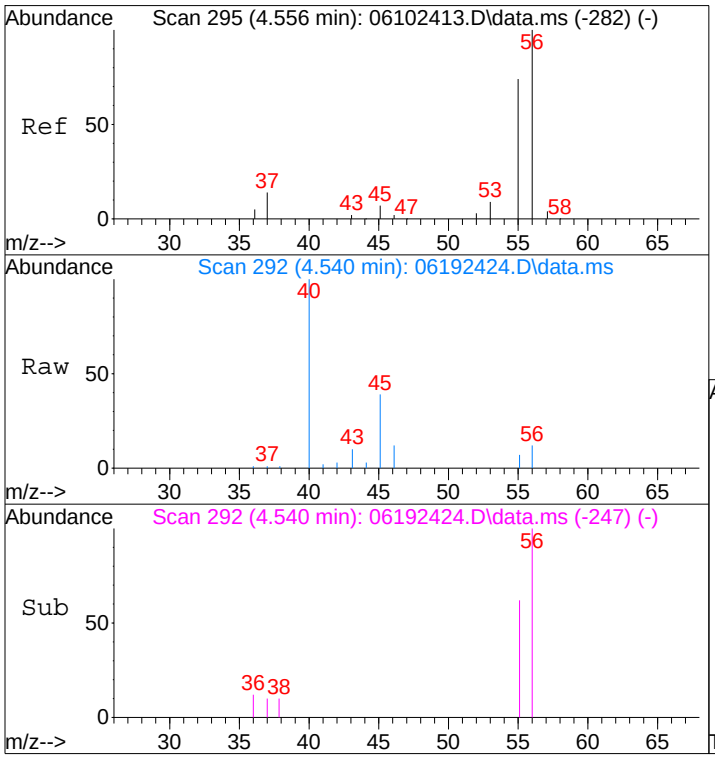


#10
Ethanol
Concen: 16.44 ng
RT: 4.30 min Scan# 249
Delta R.T. -0.071 min
Lab File: 06192424.D
Acq: 19 Jun 2024 21:41

Tgt Ion: 45 Resp: 252252

Ion	Ratio	Lower	Upper
45	100		
46	31.8	13.5	53.5

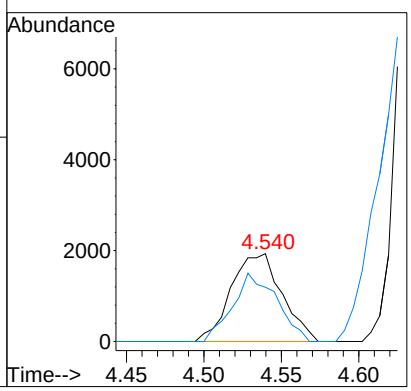


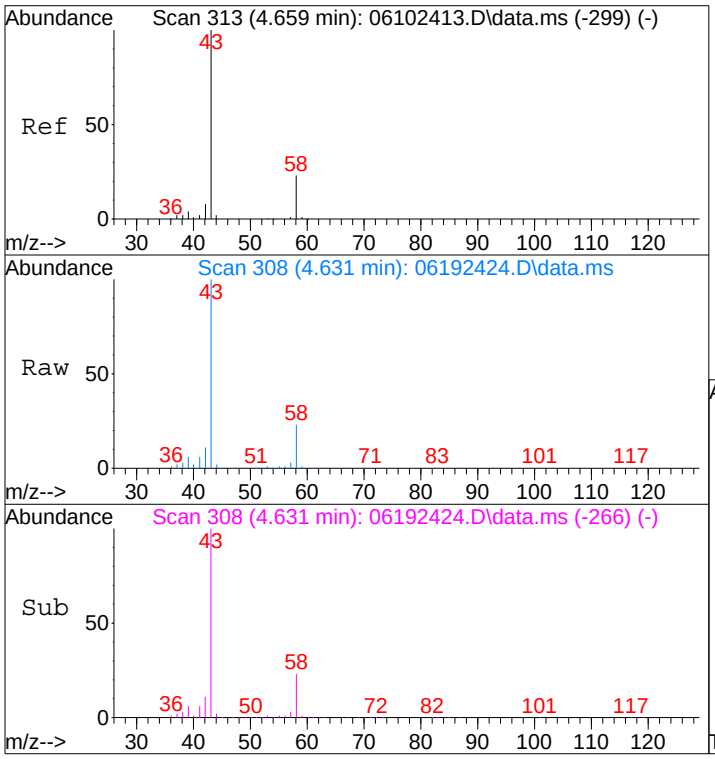


#12
Acrolein
Concen: 0.39 ng
RT: 4.54 min Scan# 292
Delta R.T. 0.004 min
Lab File: 06192424.D
Acq: 19 Jun 2024 21:41

Tgt Ion: 56 Resp: 4408

Ion	Ratio	Lower	Upper
56	100		
55	67.4	55.5	95.5

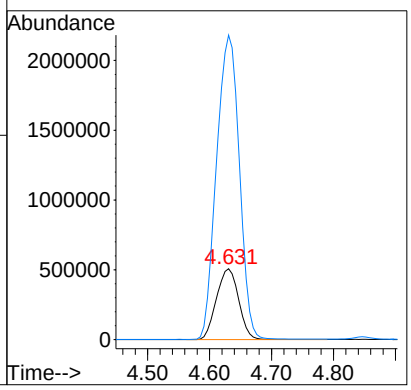


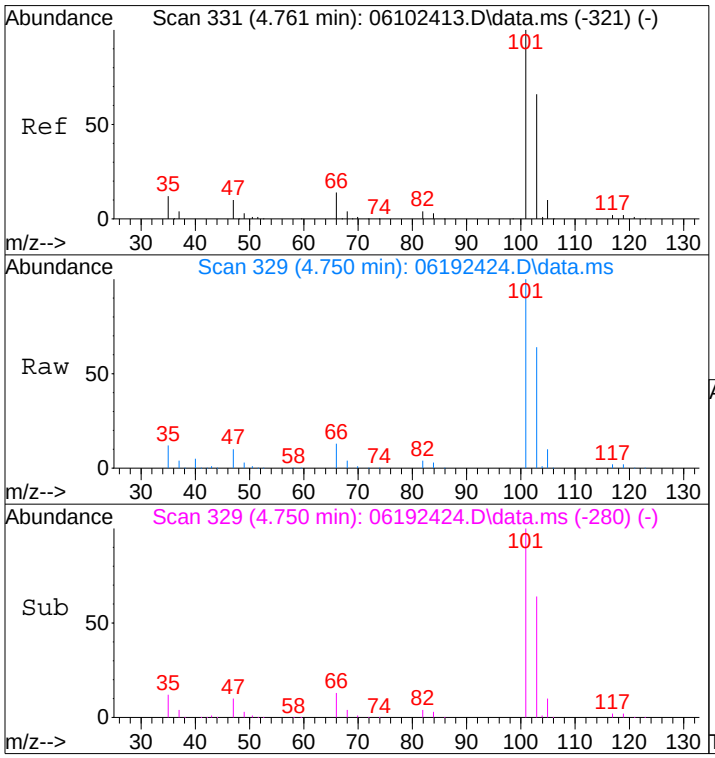


#13
Acetone
Concen: 103.13 ng
RT: 4.63 min Scan# 308
Delta R.T. -0.011 min
Lab File: 06192424.D
Acq: 19 Jun 2024 21:41

Tgt Ion: 58 Resp: 1264512

Ion	Ratio	Lower	Upper
58	100		
43	441.3	400.7	460.7

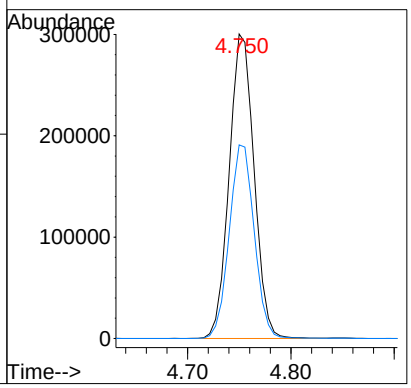


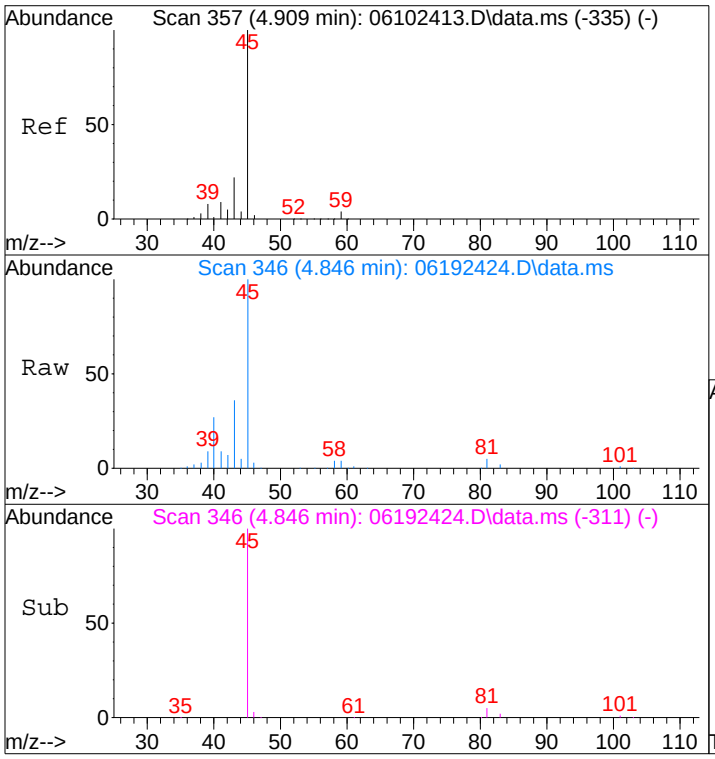


#14
Trichlorofluoromethane
Concen: 13.38 ng
RT: 4.75 min Scan# 329
Delta R.T. 0.029 min
Lab File: 06192424.D
Acq: 19 Jun 2024 21:41

Tgt Ion:101 Resp: 502922

Ion	Ratio	Lower	Upper
101	100		
103	63.9	44.9	84.9

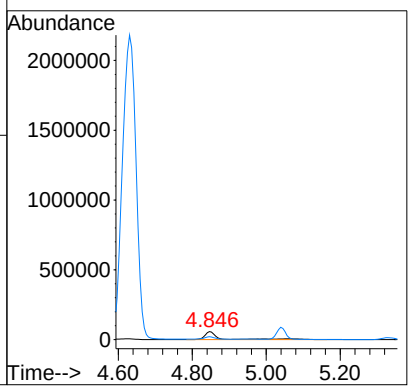


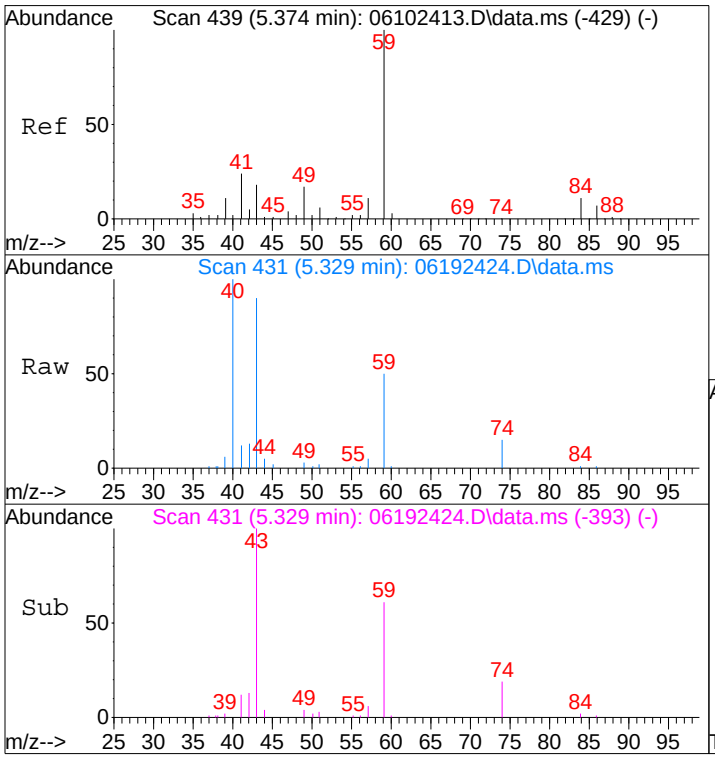


#15
2-Propanol (Isopropanol)
Concen: 3.15 ng
RT: 4.85 min Scan# 346
Delta R.T. -0.054 min
Lab File: 06192424.D
Acq: 19 Jun 2024 21:41

Tgt Ion: 45 Resp: 155655

Ion	Ratio	Lower	Upper
45	100		
43	26.3	2.5	42.5

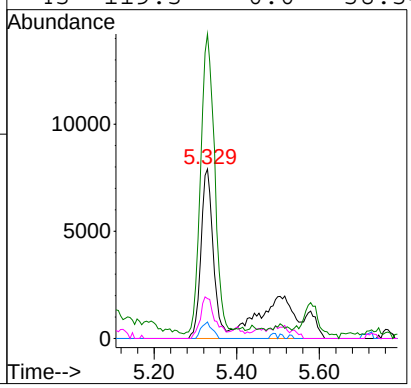


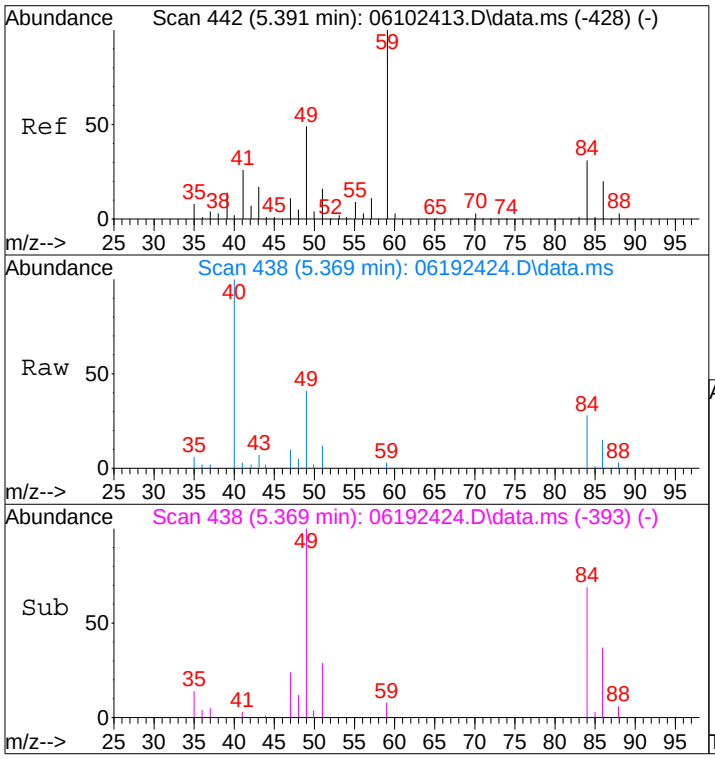


#18
2-Methyl-2-Propanol (tert-Butyl Alcohol
Concen: 0.78 ng
RT: 5.33 min Scan# 431
Delta R.T. -0.032 min
Lab File: 06192424.D
Acq: 19 Jun 2024 21:41

Tgt Ion: 59 Resp: 30786

Ion	Ratio	Lower	Upper
59	100		
57	4.6	0.0	30.9
41	29.2	0.9	40.9
43	119.3	0.0	38.3#

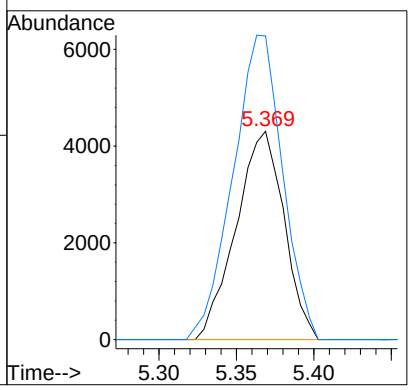


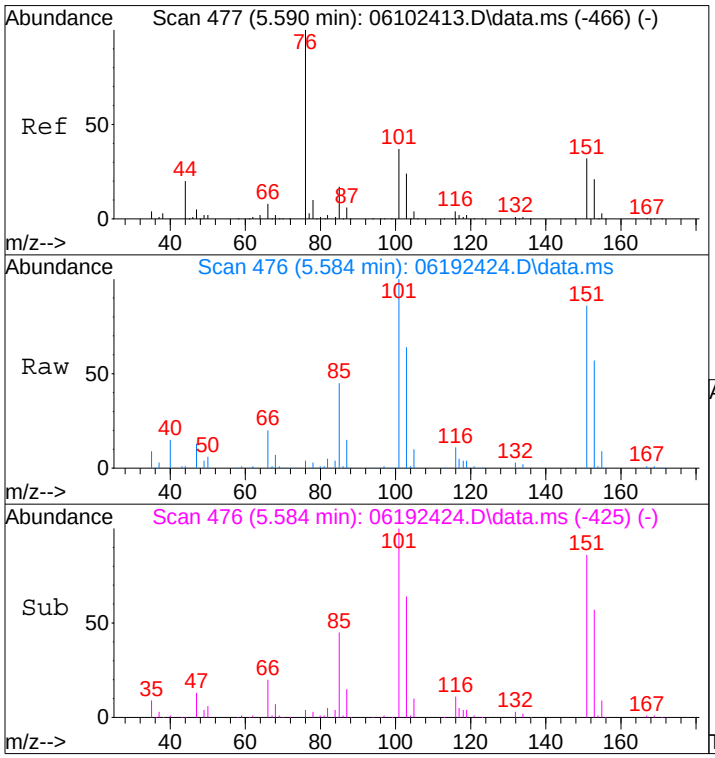


#19
Methylene Chloride
Concen: 0.54 ng
RT: 5.37 min Scan# 438
Delta R.T. 0.008 min
Lab File: 06192424.D
Acq: 19 Jun 2024 21:41

Tgt Ion: 84 Resp: 9293

Ion	Ratio	Lower	Upper
84	100		
49	151.4	132.9	182.9

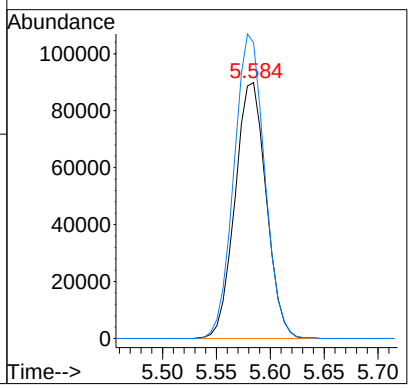


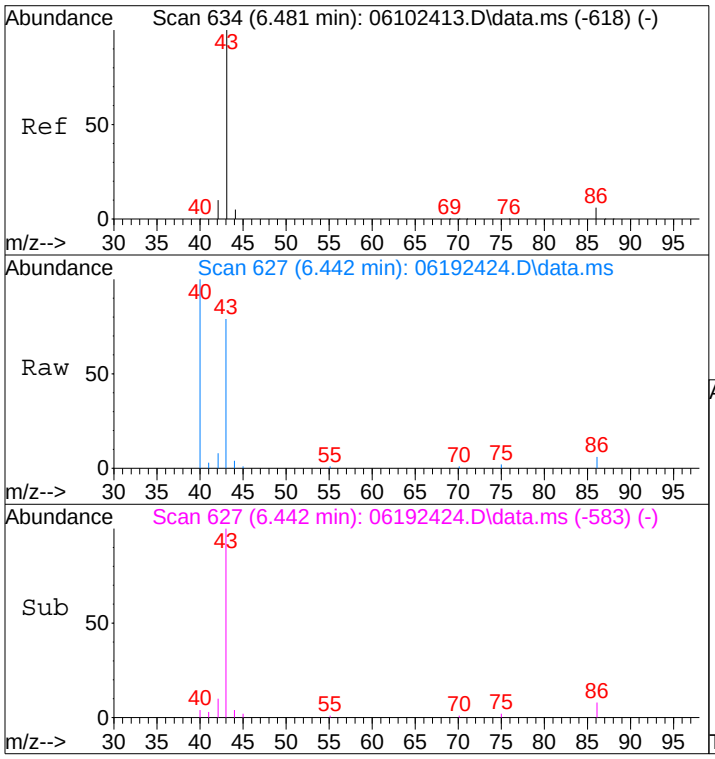


#21
Trichlorotrifluoroethane
Concen: 11.38 ng
RT: 5.58 min Scan# 476
Delta R.T. 0.038 min
Lab File: 06192424.D
Acq: 19 Jun 2024 21:41

Tgt Ion:151 Resp: 180962

Ion	Ratio	Lower	Upper
151	100		
101	117.1	95.0	135.0

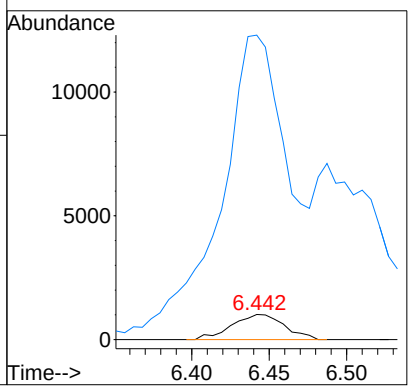


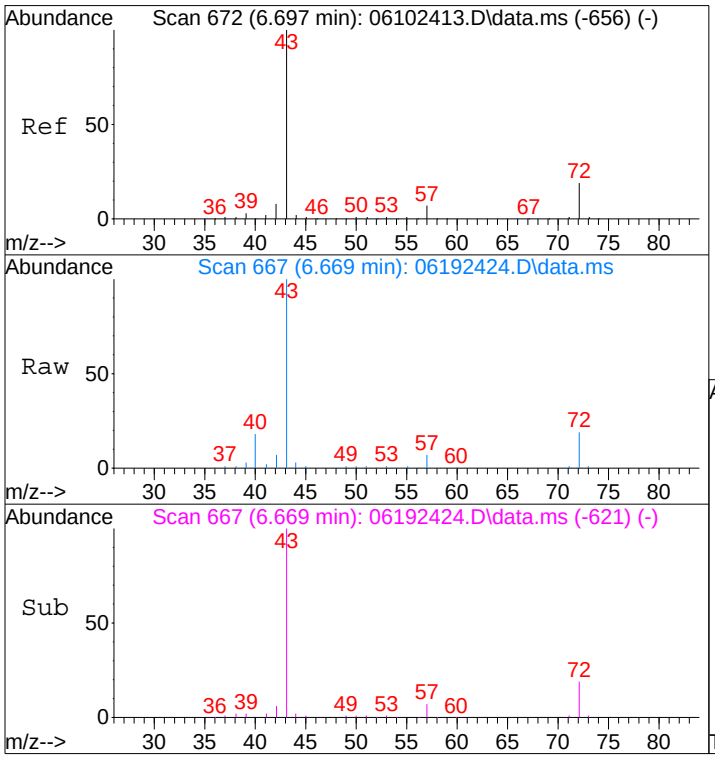


#26
Vinyl Acetate
Concen: 0.85 ng
RT: 6.44 min Scan# 627
Delta R.T. 0.003 min
Lab File: 06192424.D
Acq: 19 Jun 2024 21:41

Tgt Ion: 86 Resp: 2397

Ion	Ratio	Lower	Upper
86	100		
43	1554.6	1668.9	1708.9#

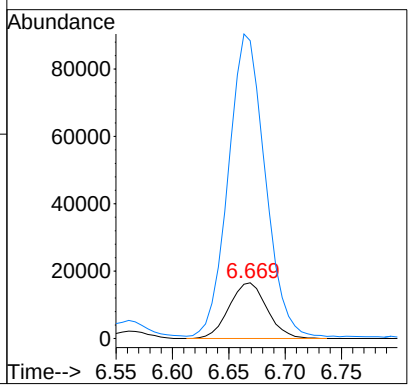


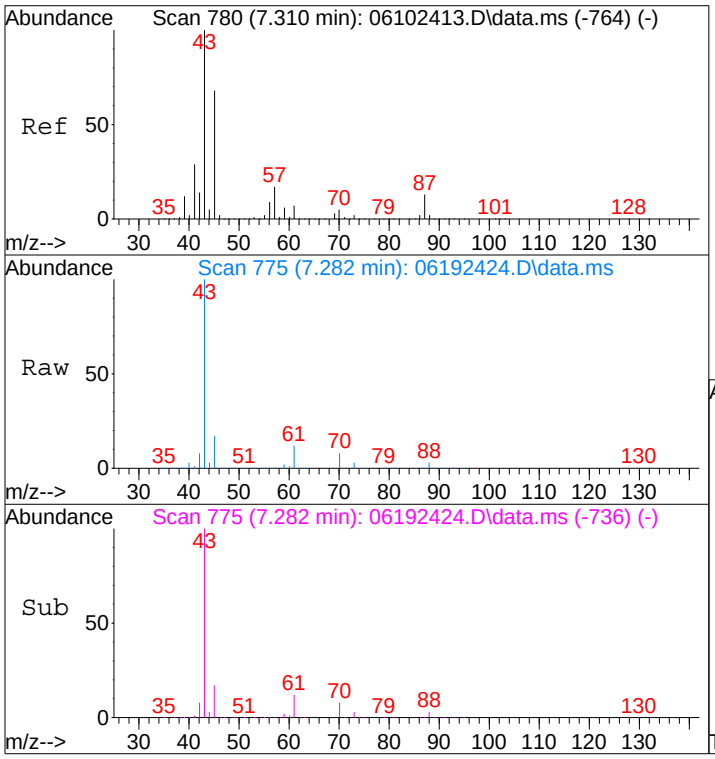


#27
2-Butanone (MEK)
Concen: 3.98 ng
RT: 6.67 min Scan# 667
Delta R.T. 0.011 min
Lab File: 06192424.D
Acq: 19 Jun 2024 21:41

Tgt Ion: 72 Resp: 38647

Ion	Ratio	Lower	Upper
72	100		
43	530.8	506.8	546.8

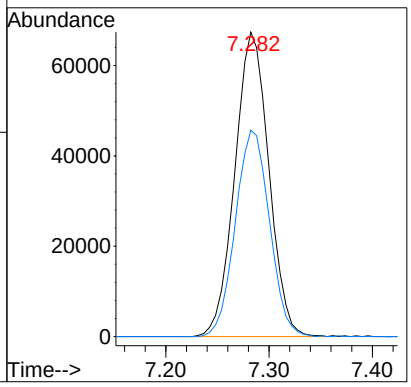


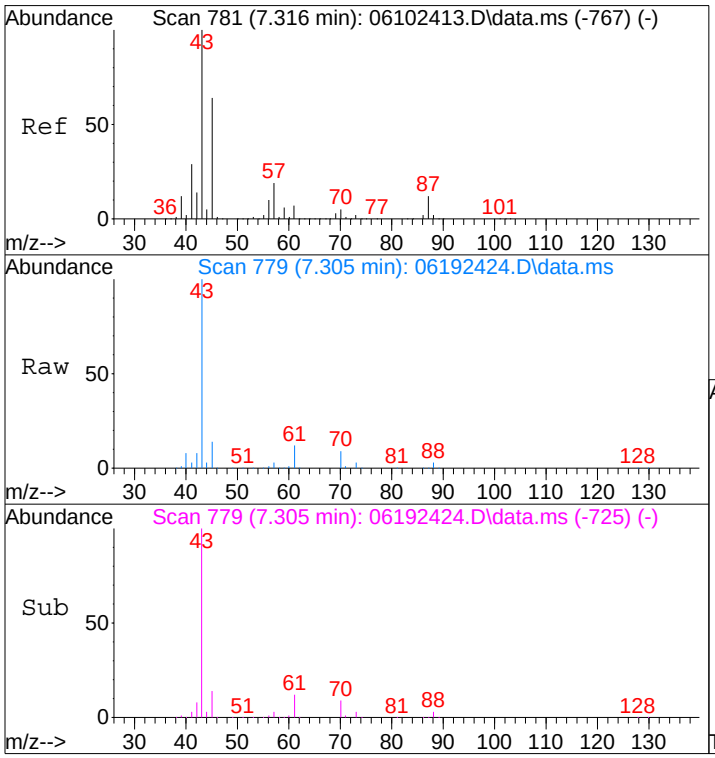


#30
Ethyl Acetate
Concen: 26.05 ng
RT: 7.28 min Scan# 775
Delta R.T. 0.023 min
Lab File: 06192424.D
Acq: 19 Jun 2024 21:41

Tgt Ion: 61 Resp: 154342

Ion	Ratio	Lower	Upper
61	100		
70	68.0	53.5	93.5

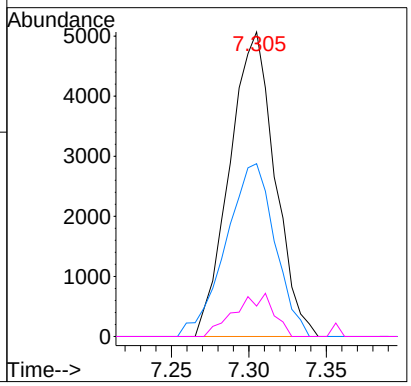


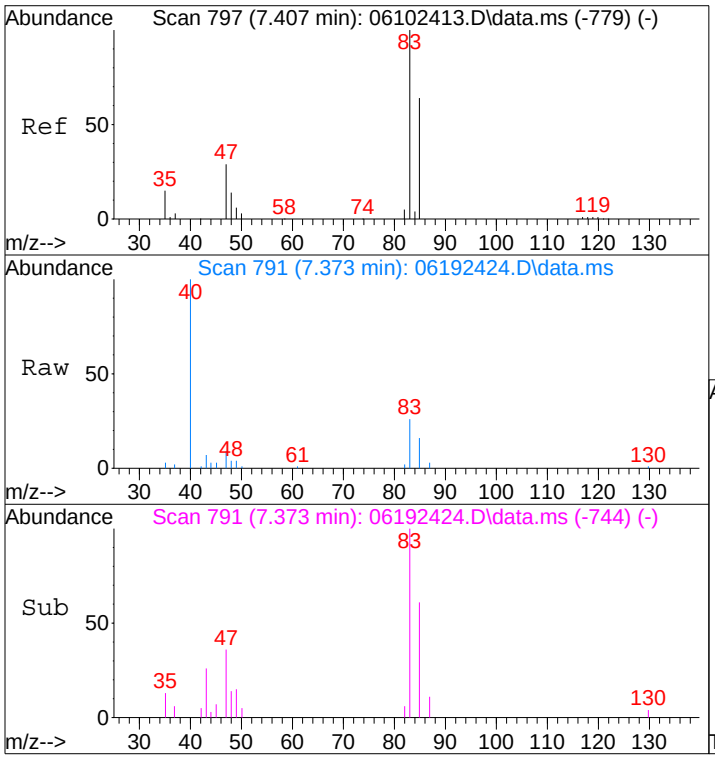


#31
n-Hexane
Concen: 0.40 ng
RT: 7.30 min Scan# 779
Delta R.T. 0.057 min
Lab File: 06192424.D
Acq: 19 Jun 2024 21:41

Tgt Ion: 57 Resp: 10324

Ion	Ratio	Lower	Upper
57	100		
56	61.7	42.5	63.7
86	12.1	9.5	14.3

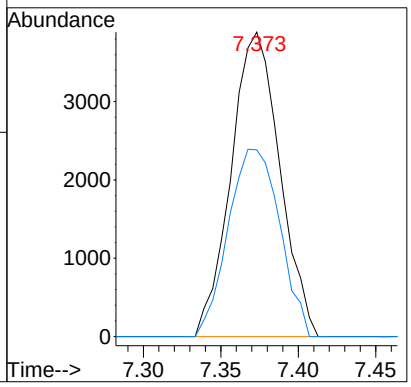


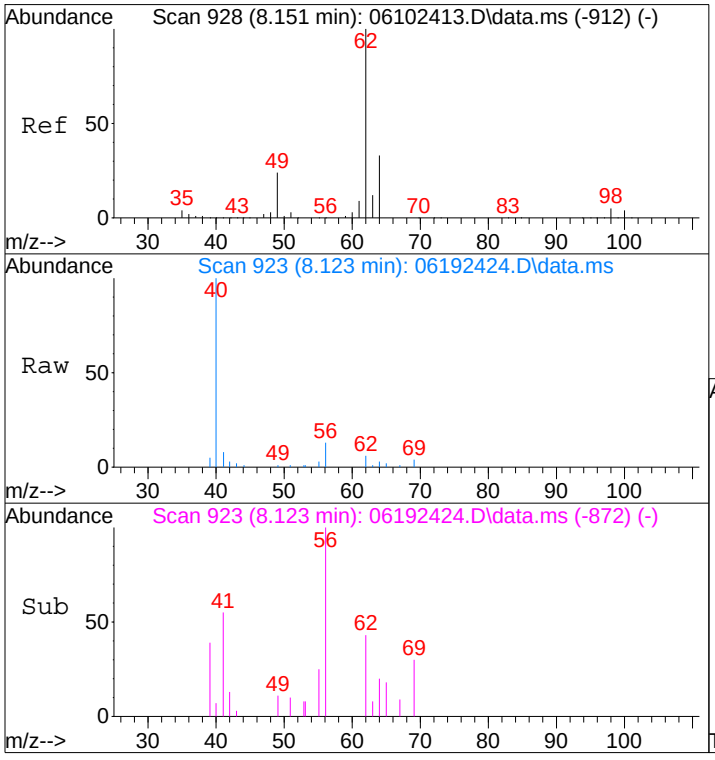


#32
Chloroform
Concen: 0.28 ng
RT: 7.37 min Scan# 791
Delta R.T. 0.018 min
Lab File: 06192424.D
Acq: 19 Jun 2024 21:41

Tgt Ion: 83 Resp: 8530

Ion	Ratio	Lower	Upper
83	100		
85	65.0	44.4	84.4

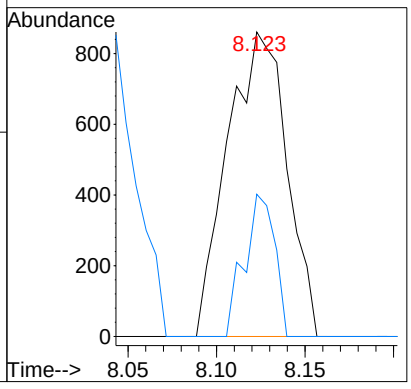


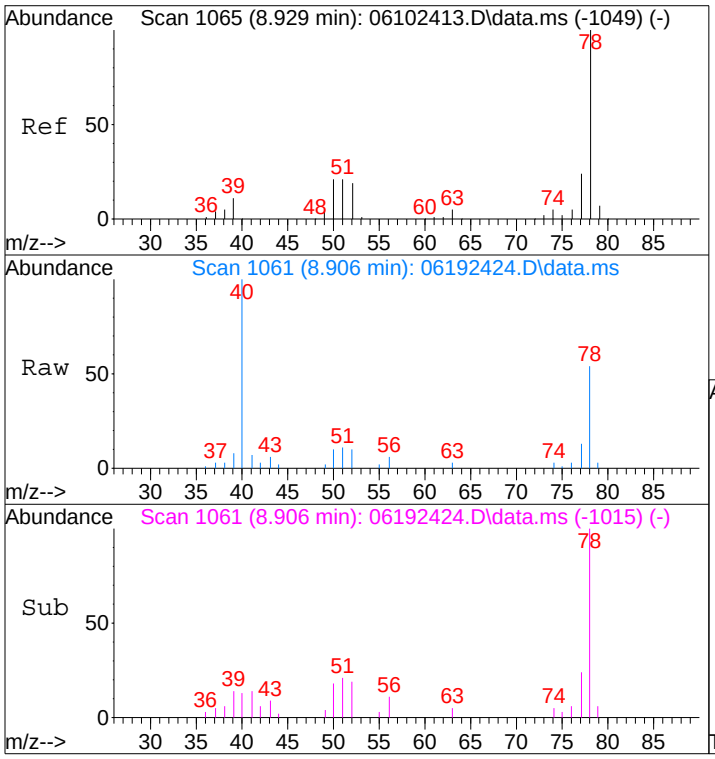


#36
1,2-Dichloroethane
Concen: 0.06 ng
RT: 8.12 min Scan# 923
Delta R.T. 0.038 min
Lab File: 06192424.D
Acq: 19 Jun 2024 21:41

Tgt Ion: 62 Resp: 2002

Ion	Ratio	Lower	Upper
62	100		
64	23.9	12.0	52.0

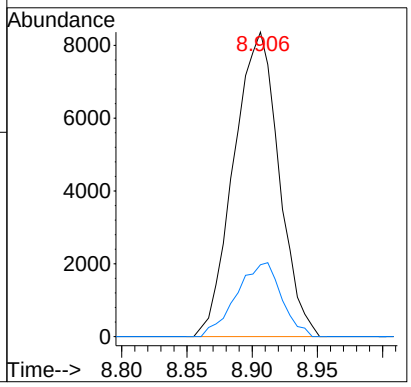


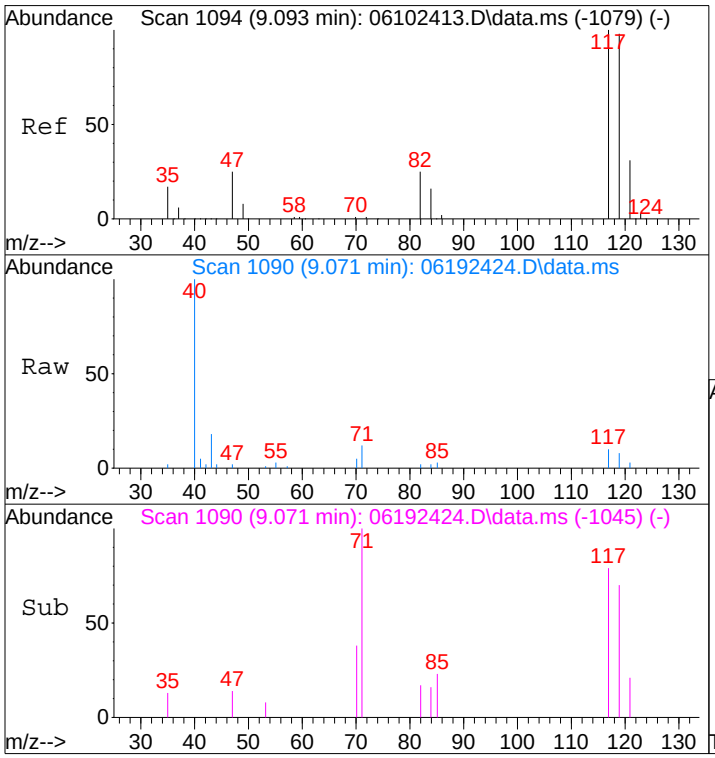


#41
Benzene
Concen: 0.32 ng
RT: 8.91 min Scan# 1061
Delta R.T. 0.009 min
Lab File: 06192424.D
Acq: 19 Jun 2024 21:41

Tgt Ion: 78 Resp: 20124

Ion	Ratio	Lower	Upper
78	100		
77	24.2	4.0	44.0

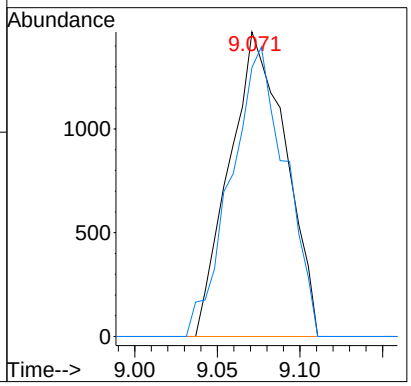


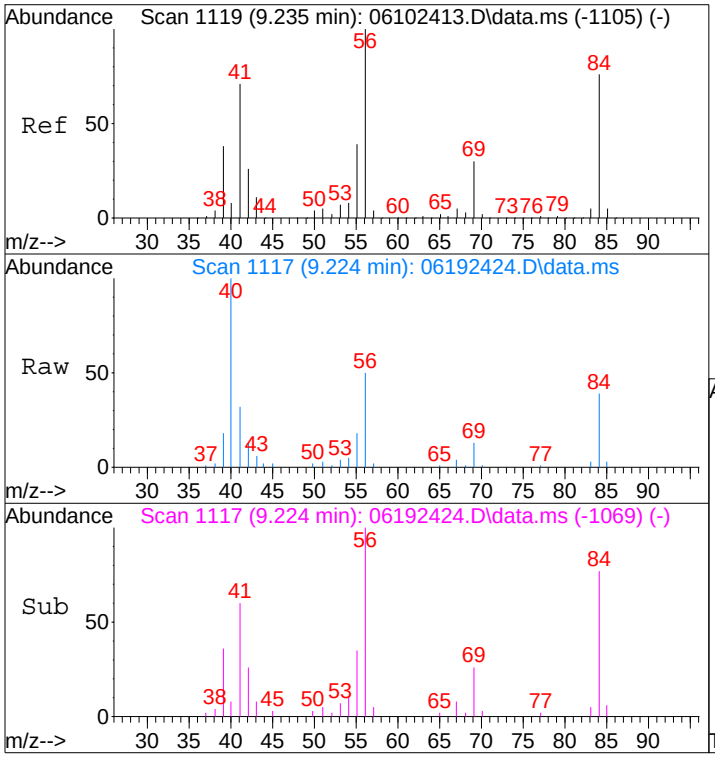


#42
Carbon Tetrachloride
Concen: 0.12 ng
RT: 9.07 min Scan# 1090
Delta R.T. 0.004 min
Lab File: 06192424.D
Acq: 19 Jun 2024 21:41

Tgt Ion:117 Resp: 3472

Ion	Ratio	Lower	Upper
117	100		
119	92.4	77.3	117.3

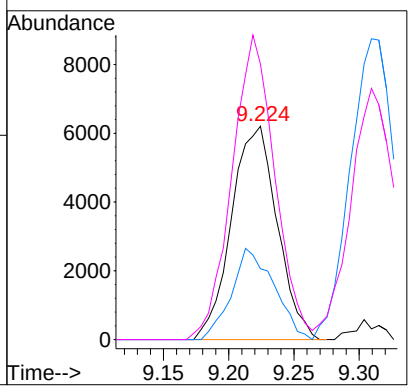


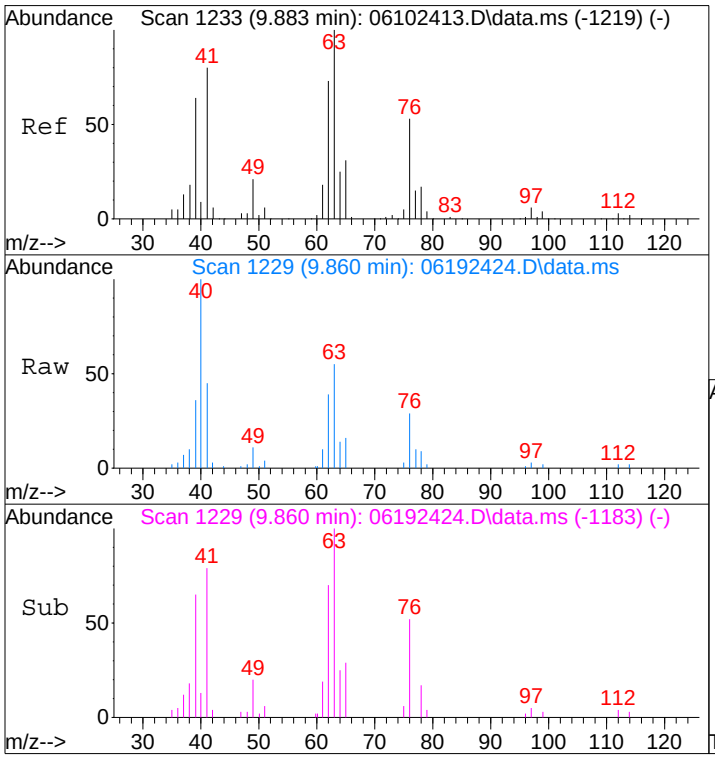


#43
Cyclohexane
Concen: 0.74 ng
RT: 9.22 min Scan# 1117
Delta R.T. 0.022 min
Lab File: 06192424.D
Acq: 19 Jun 2024 21:41

Tgt Ion: 84 Resp: 15155

Ion	Ratio	Lower	Upper
84	100		
69	39.7	18.8	58.8
56	133.6	111.5	151.5

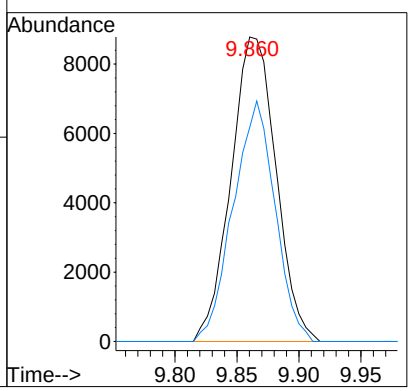


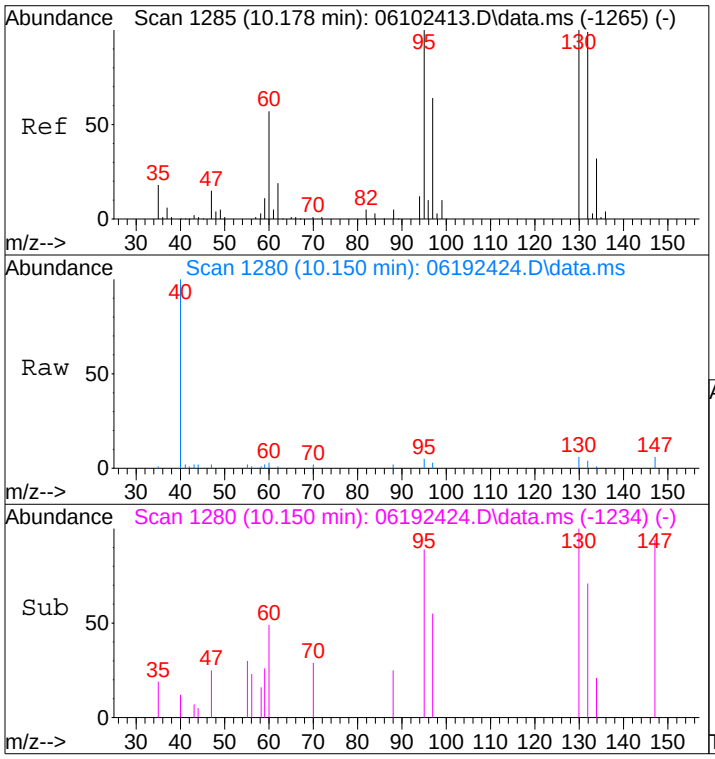


#45
1,2-Dichloropropane
Concen: 1.46 ng
RT: 9.86 min Scan# 1229
Delta R.T. 0.009 min
Lab File: 06192424.D
Acq: 19 Jun 2024 21:41

Tgt Ion: 63 Resp: 22259

Ion	Ratio	Lower	Upper
63	100		
62	73.4	52.4	92.4

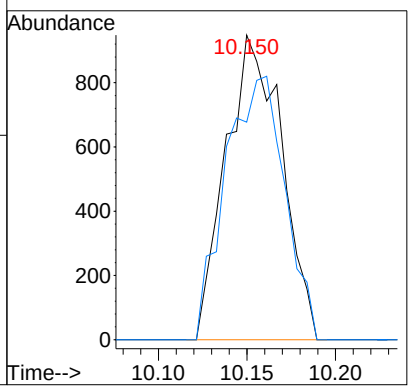


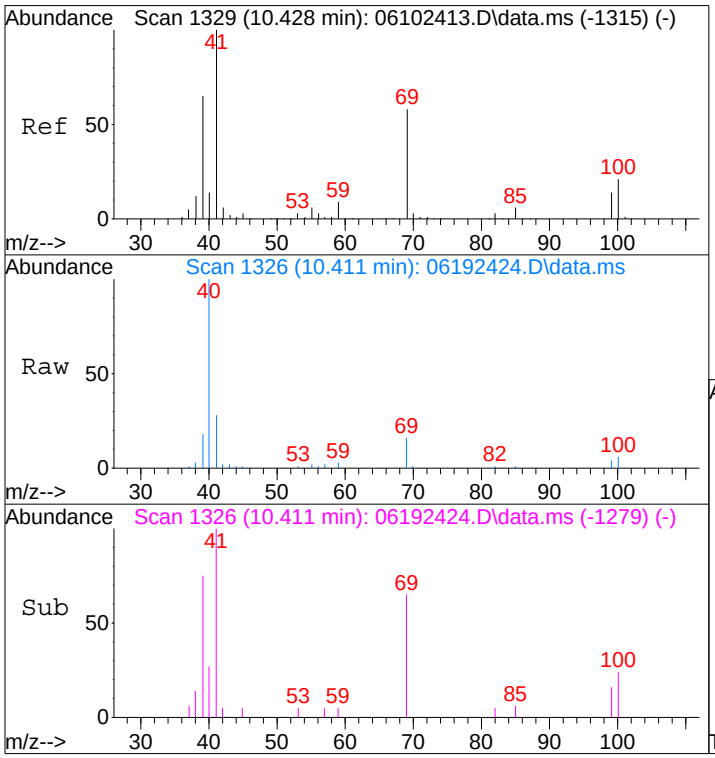


#47
Trichloroethene
Concen: 0.11 ng
RT: 10.15 min Scan# 1280
Delta R.T. 0.010 min
Lab File: 06192424.D
Acq: 19 Jun 2024 21:41

Tgt Ion:130 Resp: 2080

Ion	Ratio	Lower	Upper
130	100		
132	91.7	77.9	117.9

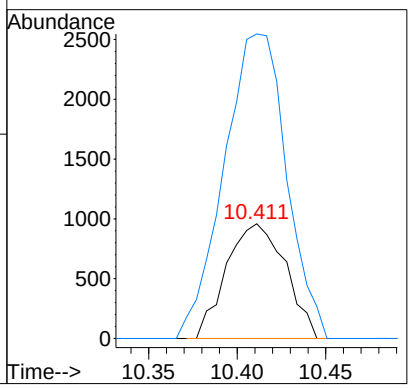


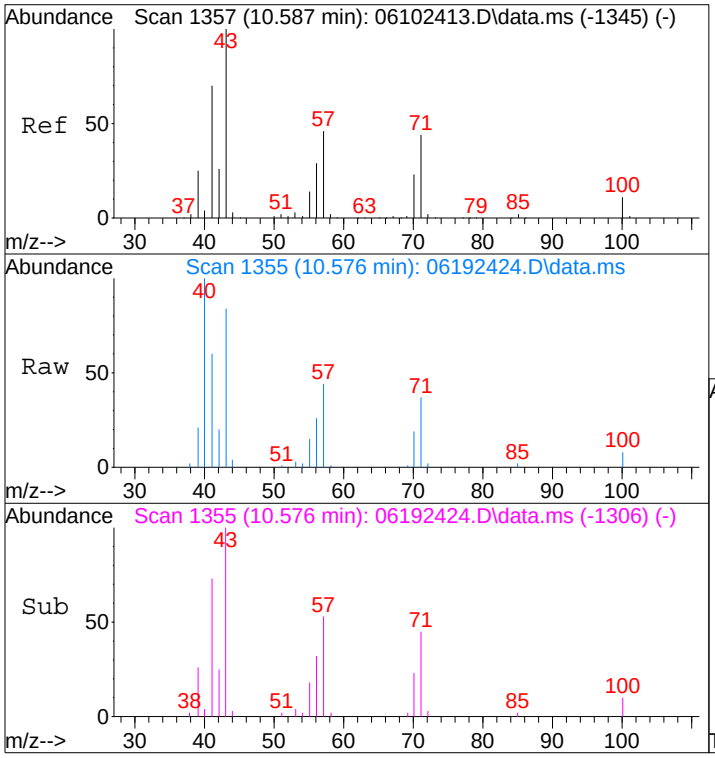


#50
Methyl Methacrylate
Concen: 0.42 ng
RT: 10.41 min Scan# 1326
Delta R.T. 0.017 min
Lab File: 06192424.D
Acq: 19 Jun 2024 21:41

Tgt Ion:100 Resp: 2226

Ion	Ratio	Lower	Upper
100	100		
69	281.3	254.2	294.2

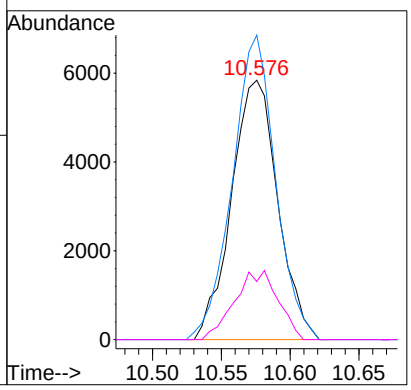


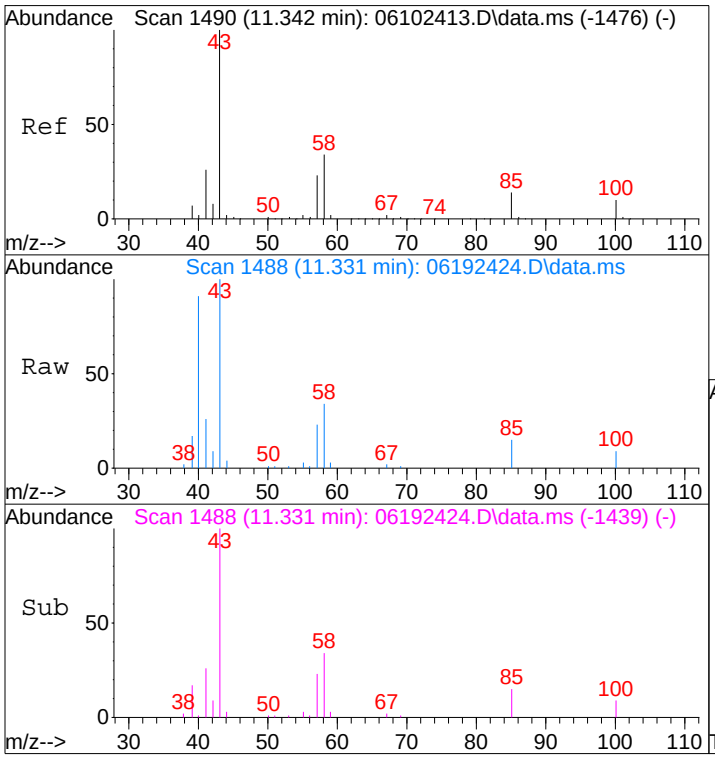


#51
n-Heptane
Concen: 1.02 ng
RT: 10.58 min Scan# 1355
Delta R.T. 0.029 min
Lab File: 06192424.D
Acq: 19 Jun 2024 21:41

Tgt Ion: 71 Resp: 13668

Ion	Ratio	Lower	Upper
71	100		
57	109.2	83.9	123.9
100	24.9	4.8	44.8

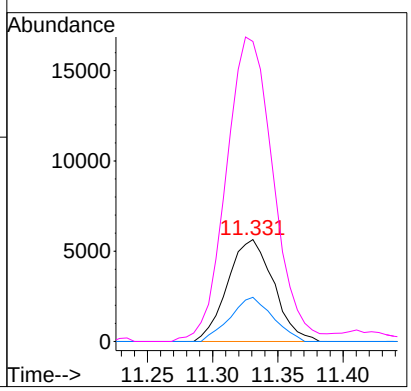


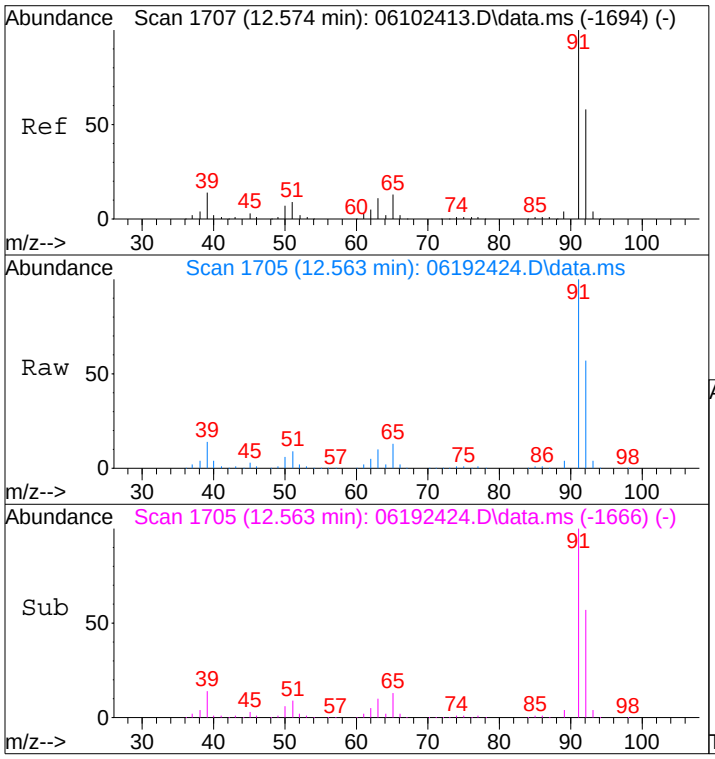


#53
4-Methyl-2-pentanone
Concen: 1.00 ng
RT: 11.33 min Scan# 1488
Delta R.T. 0.028 min
Lab File: 06192424.D
Acq: 19 Jun 2024 21:41

Tgt Ion: 58 Resp: 13838

Ion	Ratio	Lower	Upper
58	100		
85	40.4	34.5	51.7
43	307.0	236.1	354.1

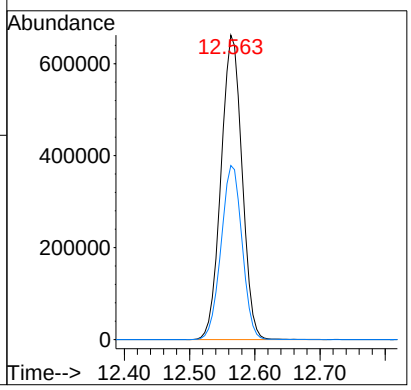


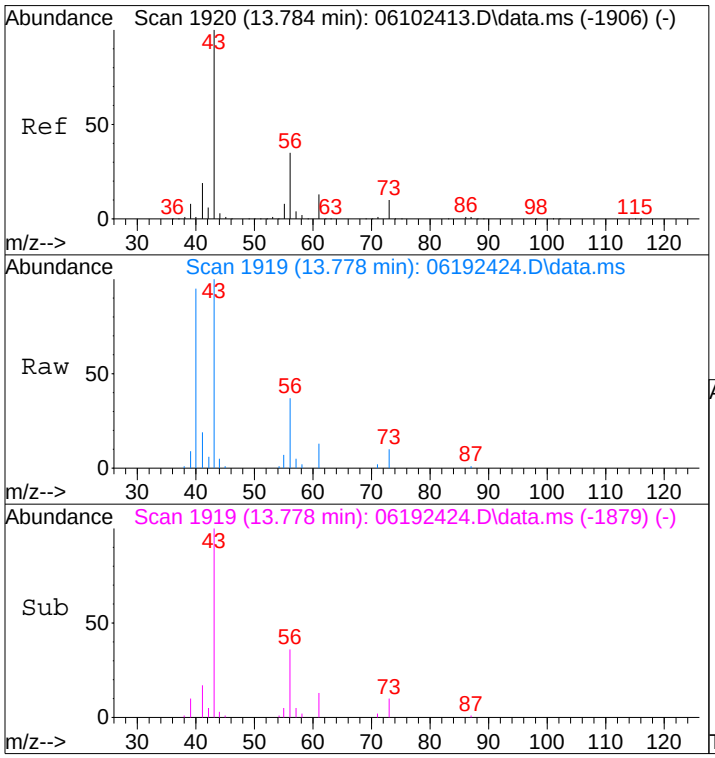


#58
Toluene
Concen: 22.76 ng
RT: 12.56 min Scan# 1705
Delta R.T. -0.028 min
Lab File: 06192424.D
Acq: 19 Jun 2024 21:41

Tgt Ion: 91 Resp: 1479027

Ion	Ratio	Lower	Upper
91	100		
92	57.3	37.4	77.4

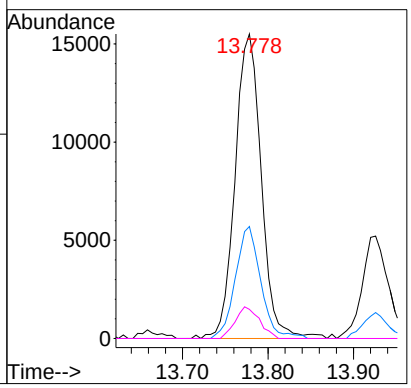


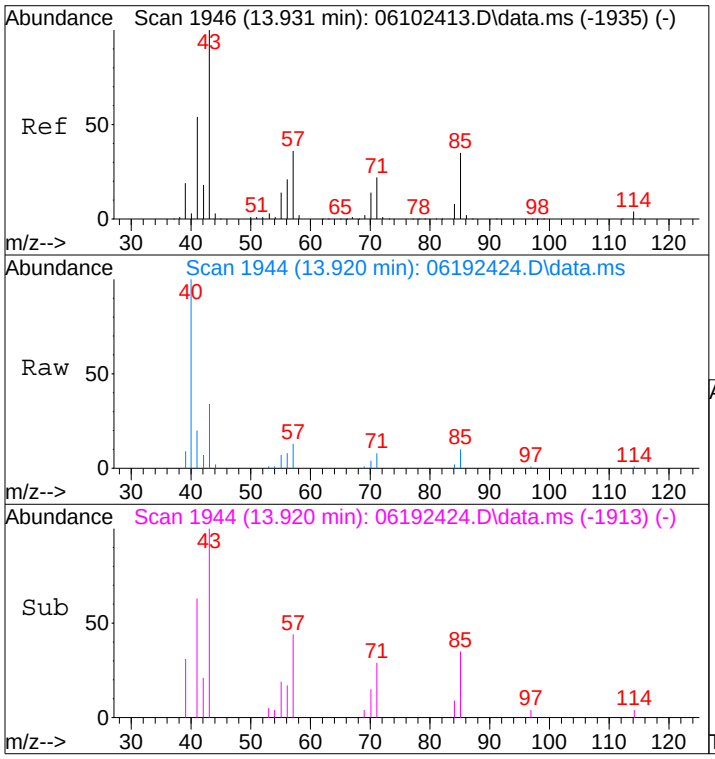


#62
n-Butyl Acetate
Concen: 0.77 ng
RT: 13.78 min Scan# 1919
Delta R.T. -0.023 min
Lab File: 06192424.D
Acq: 19 Jun 2024 21:41

Tgt Ion: 43 Resp: 33072

Ion	Ratio	Lower	Upper
43	100		
56	35.6	14.3	54.3
73	9.6	0.0	30.4

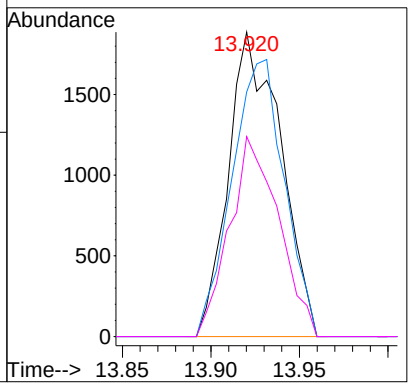


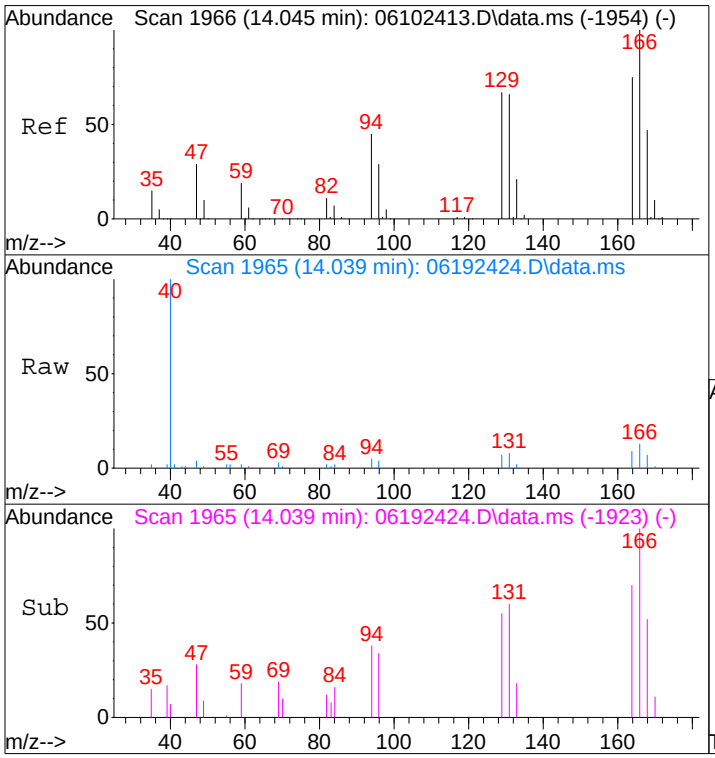


#63
n-Octane
Concen: 0.29 ng
RT: 13.92 min Scan# 1944
Delta R.T. -0.023 min
Lab File: 06192424.D
Acq: 19 Jun 2024 21:41

Tgt Ion: 57 Resp: 3864

Ion	Ratio	Lower	Upper
57	100		
85	91.6	79.8	119.6
71	61.6	49.0	73.4

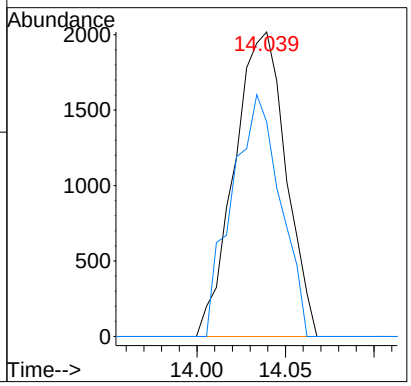


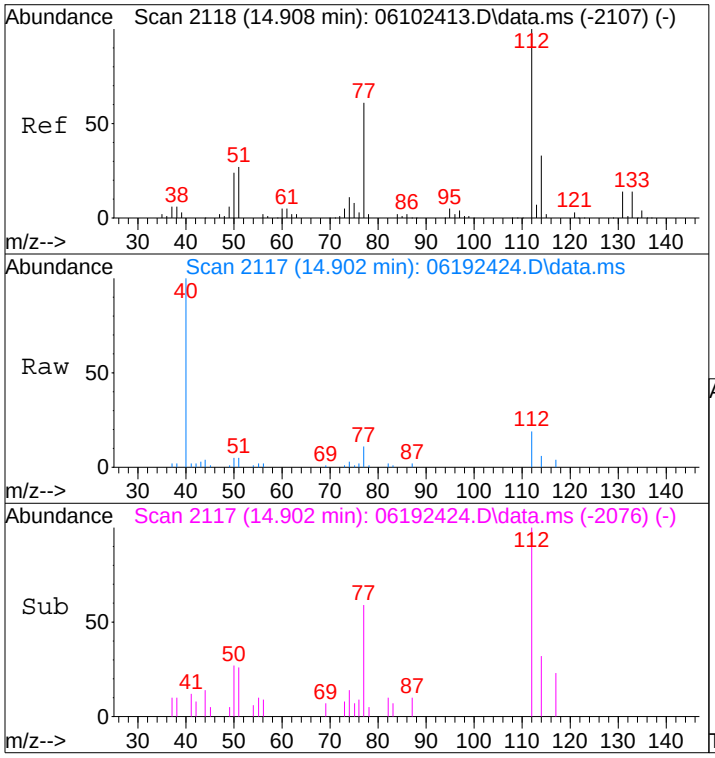


#64
Tetrachloroethene
Concen: 0.18 ng
RT: 14.04 min Scan# 1965
Delta R.T. -0.011 min
Lab File: 06192424.D
Acq: 19 Jun 2024 21:41

Tgt Ion:166 Resp: 4081

Ion	Ratio	Lower	Upper
166	100		
164	74.6	56.9	96.9

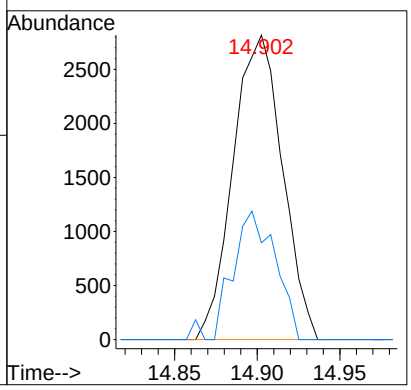


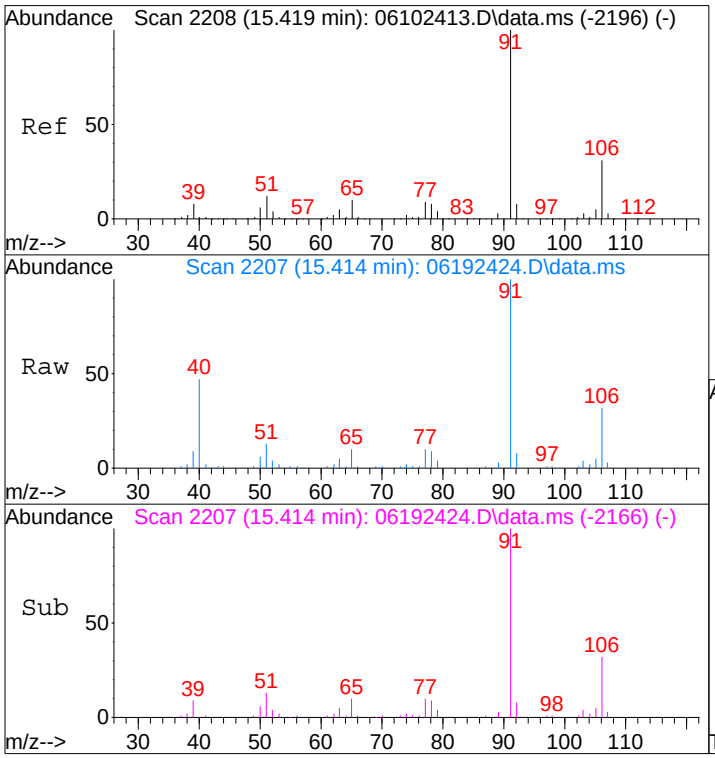


#65
Chlorobenzene
Concen: 0.13 ng
RT: 14.90 min Scan# 2117
Delta R.T. -0.017 min
Lab File: 06192424.D
Acq: 19 Jun 2024 21:41

Tgt Ion:112 Resp: 5856

Ion	Ratio	Lower	Upper
112	100		
114	37.1	13.5	53.5

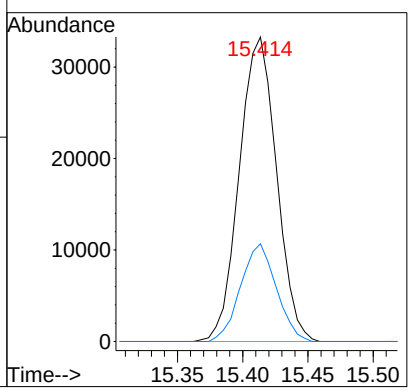


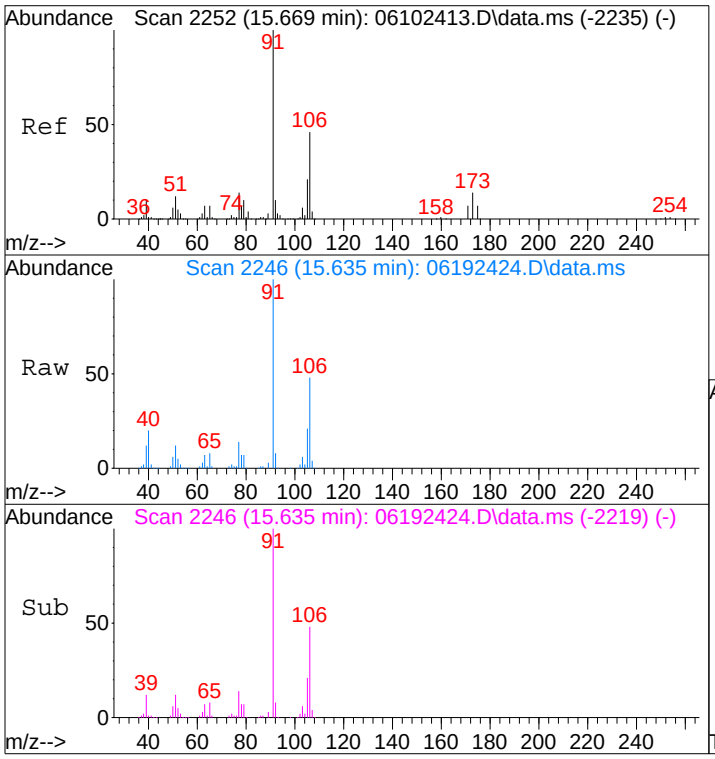


#66
Ethylbenzene
Concen: 0.89 ng
RT: 15.41 min Scan# 2207
Delta R.T. -0.017 min
Lab File: 06192424.D
Acq: 19 Jun 2024 21:41

Tgt Ion: 91 Resp: 66021

Ion	Ratio	Lower	Upper
91	100		
106	30.8	10.7	50.7

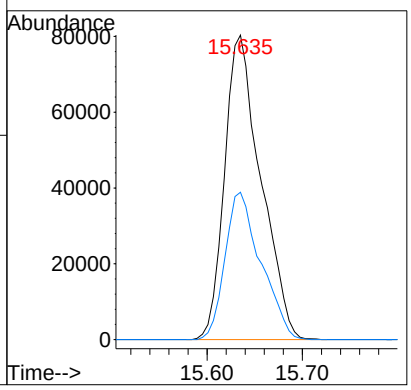


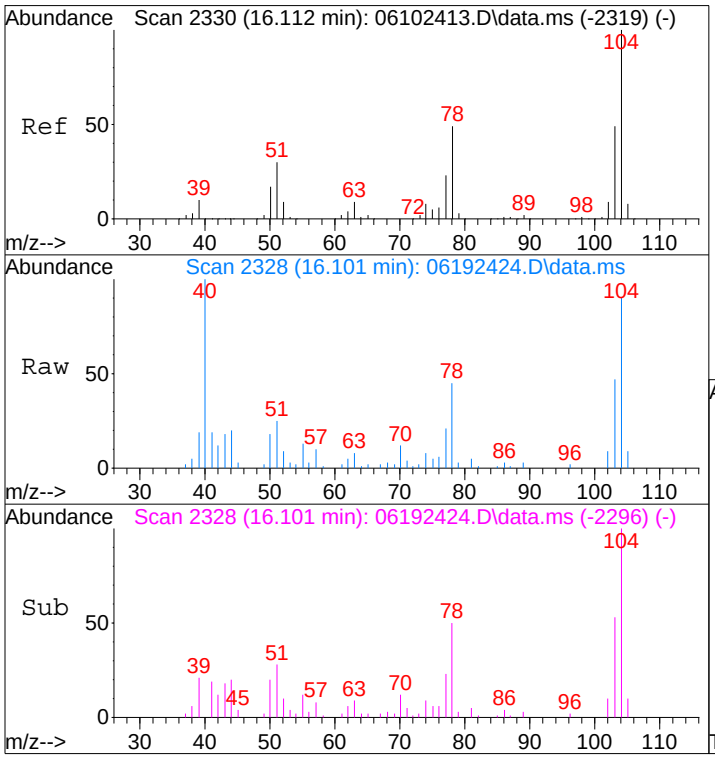


#67
m- & p-Xylenes
Concen: 3.39 ng
RT: 15.63 min Scan# 2246
Delta R.T. -0.045 min
Lab File: 06192424.D
Acq: 19 Jun 2024 21:41

Tgt Ion: 91 Resp: 212226

Ion	Ratio	Lower	Upper
91	100		
106	47.8	25.9	65.9

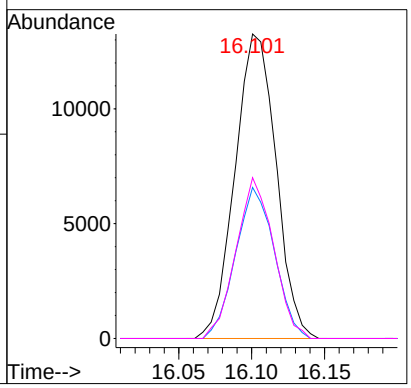


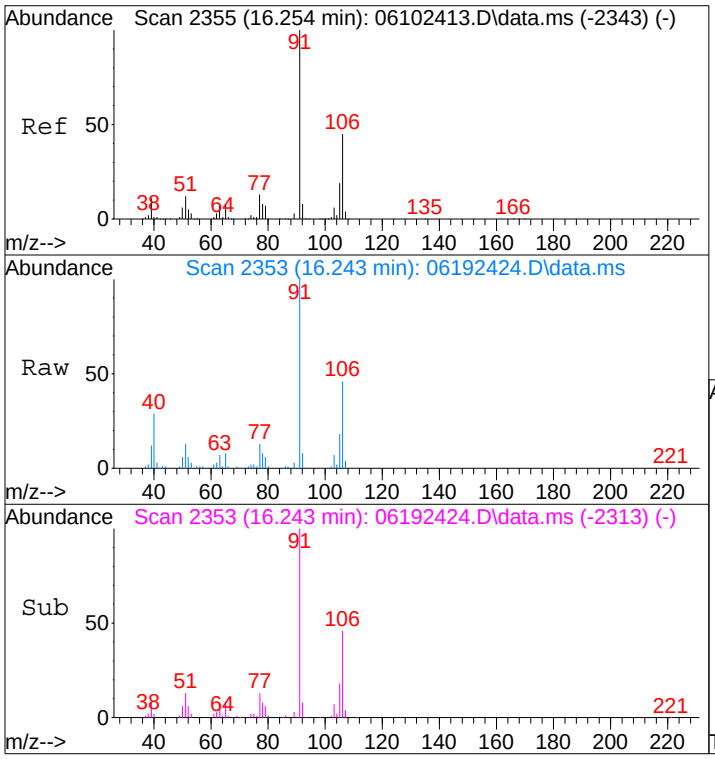


#69
Styrene
Concen: 0.62 ng
RT: 16.10 min Scan# 2328
Delta R.T. -0.017 min
Lab File: 06192424.D
Acq: 19 Jun 2024 21:41

Tgt Ion:104 Resp: 25950

Ion	Ratio	Lower	Upper
104	100		
78	46.9	29.2	69.2
103	48.3	29.4	69.4

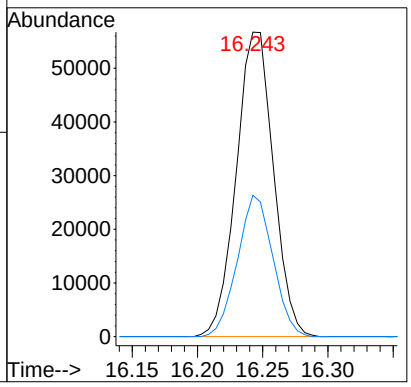


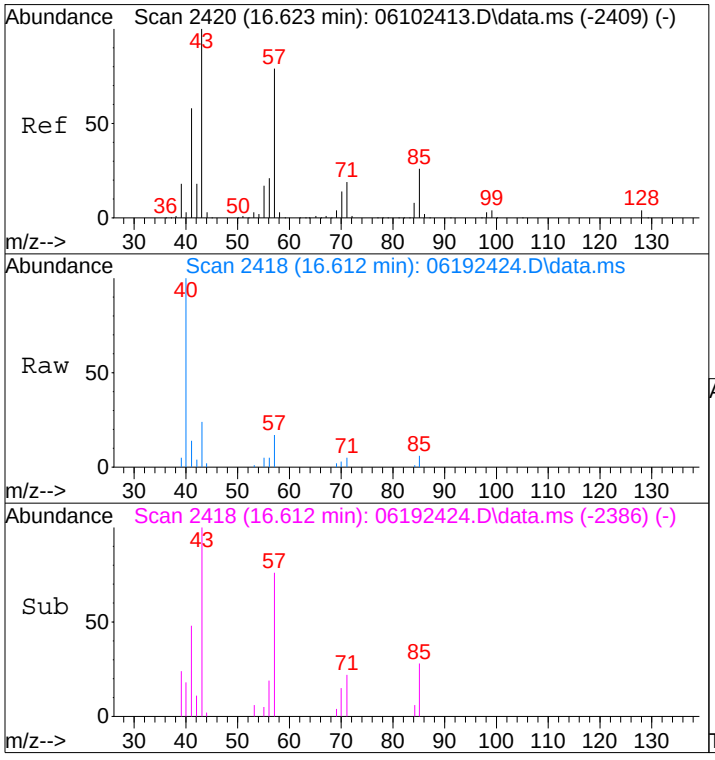


#70
o-Xylene
Concen: 1.82 ng
RT: 16.24 min Scan# 2353
Delta R.T. -0.023 min
Lab File: 06192424.D
Acq: 19 Jun 2024 21:41

Tgt Ion: 91 Resp: 112295

Ion	Ratio	Lower	Upper
91	100		
106	44.4	24.5	64.5

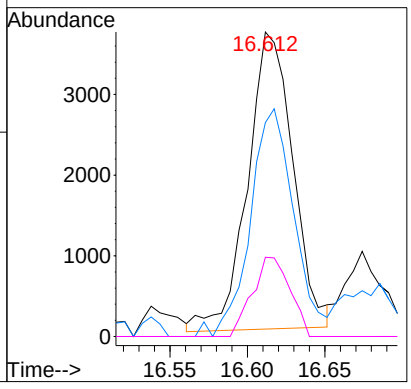


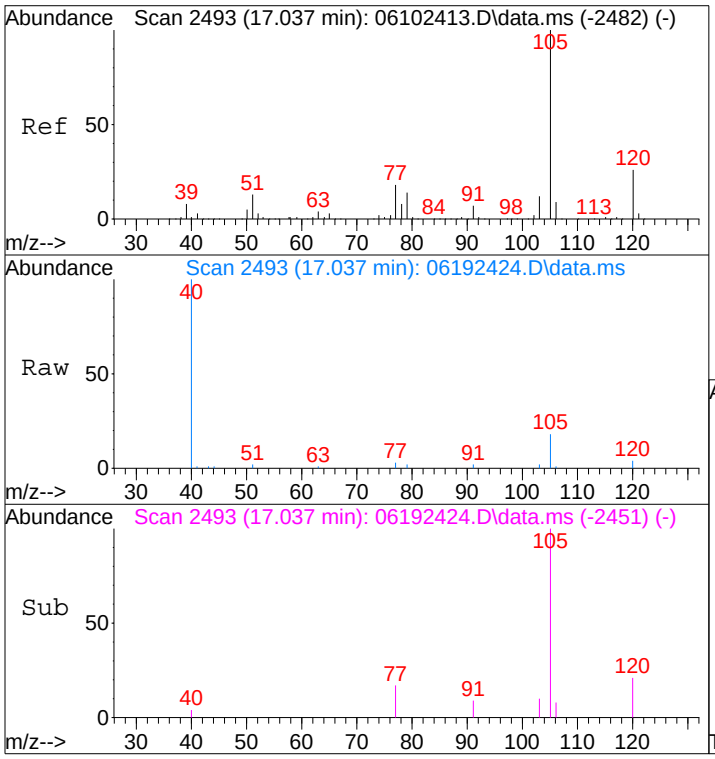


#71
n-Nonane
Concen: 0.21 ng
RT: 16.61 min Scan# 2418
Delta R.T. -0.017 min
Lab File: 06192424.D
Acq: 19 Jun 2024 21:41

Tgt Ion: 43 Resp: 7496

Ion	Ratio	Lower	Upper
43	100		
57	73.9	58.2	98.2
85	22.1	5.9	45.9

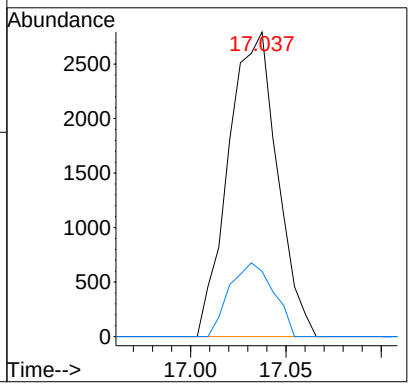


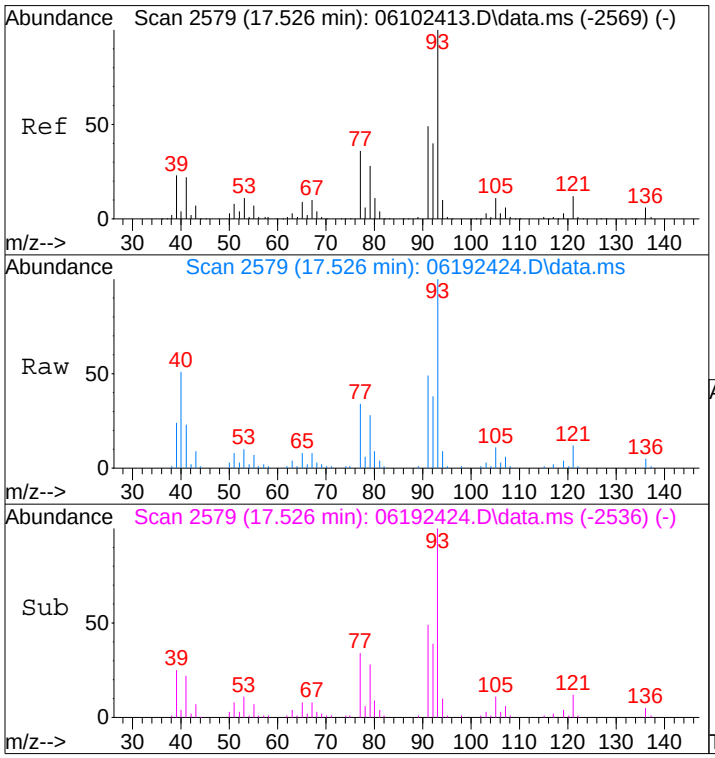


#74
Cumene
Concen: 0.06 ng
RT: 17.04 min Scan# 2493
Delta R.T. -0.011 min
Lab File: 06192424.D
Acq: 19 Jun 2024 21:41

Tgt Ion:105 Resp: 4966

Ion	Ratio	Lower	Upper
105	100		
120	21.9	6.0	46.0

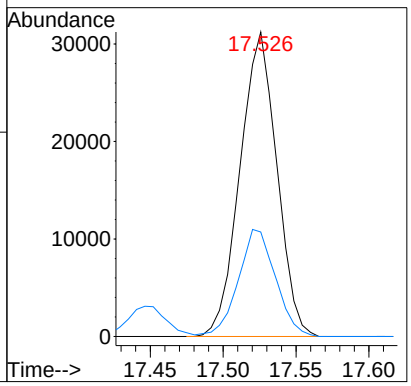


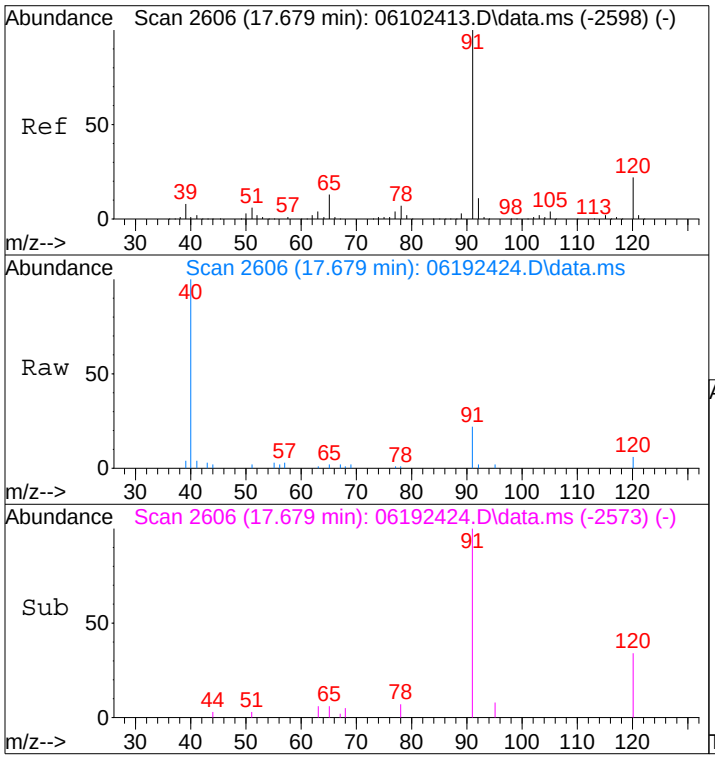


#75
alpha-Pinene
Concen: 1.53 ng
RT: 17.53 min Scan# 2579
Delta R.T. -0.006 min
Lab File: 06192424.D
Acq: 19 Jun 2024 21:41

Tgt Ion: 93 Resp: 54794

Ion	Ratio	Lower	Upper
93	100		
77	35.7	15.3	55.3

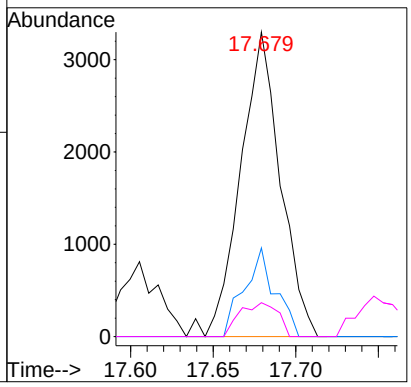


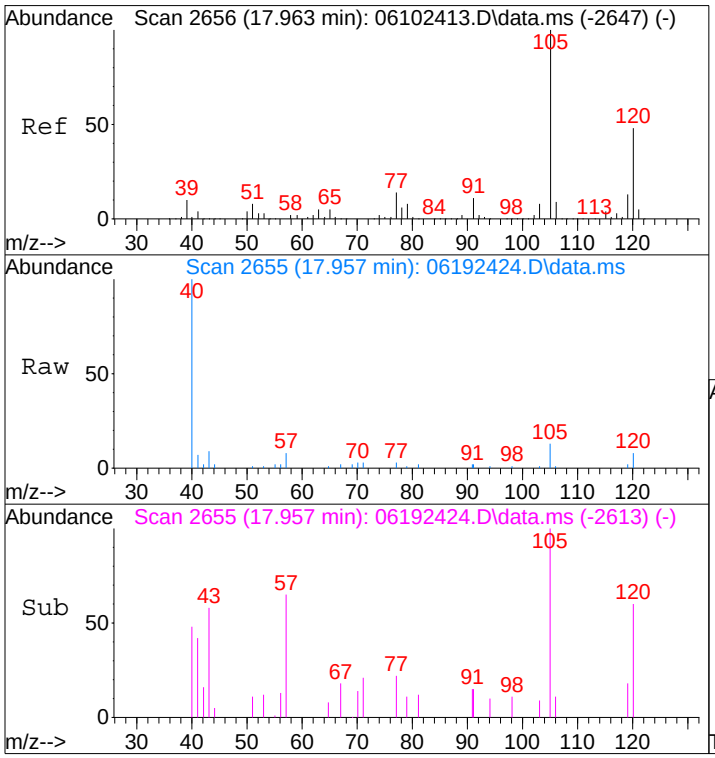


#76
n-Propylbenzene
Concen: 0.06 ng
RT: 17.68 min Scan# 2606
Delta R.T. -0.011 min
Lab File: 06192424.D
Acq: 19 Jun 2024 21:41

Tgt Ion: 91 Resp: 5550

Ion	Ratio	Lower	Upper
91	100		
120	22.6	2.7	42.7
65	10.6	0.0	32.7

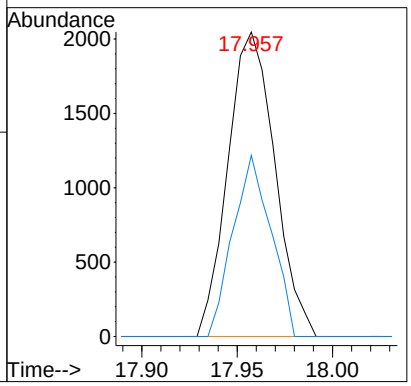


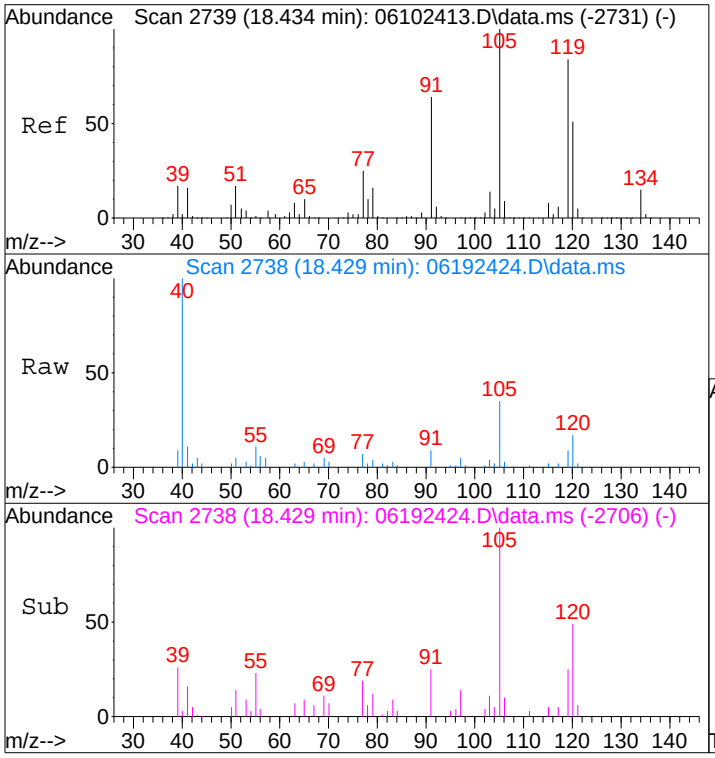


#79
1,3,5-Trimethylbenzene
Concen: 0.05 ng
RT: 17.96 min Scan# 2655
Delta R.T. -0.011 min
Lab File: 06192424.D
Acq: 19 Jun 2024 21:41

Tgt Ion:105 Resp: 3507

Ion	Ratio	Lower	Upper
105	100		
120	48.3	28.0	68.0

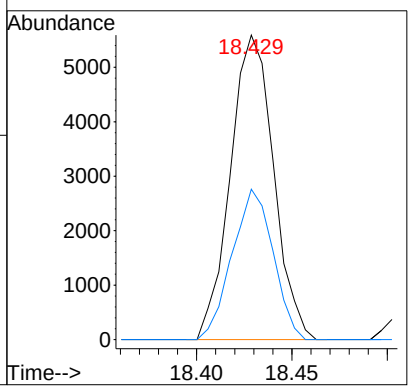


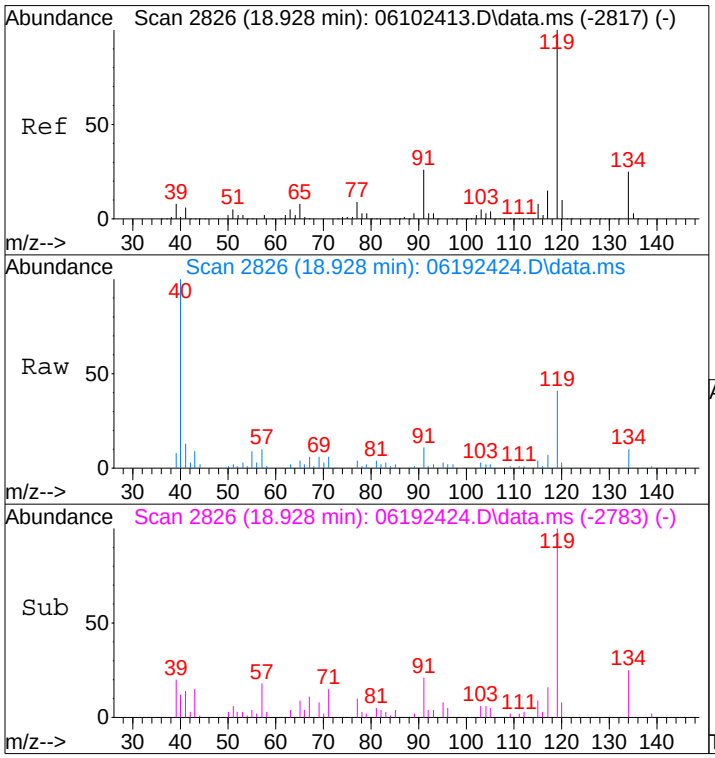


#82
1,2,4-Trimethylbenzene
Concen: 0.13 ng
RT: 18.43 min Scan# 2738
Delta R.T. -0.017 min
Lab File: 06192424.D
Acq: 19 Jun 2024 21:41

Tgt Ion:105 Resp: 8820

Ion	Ratio	Lower	Upper
105	100		
120	46.7	31.9	71.9

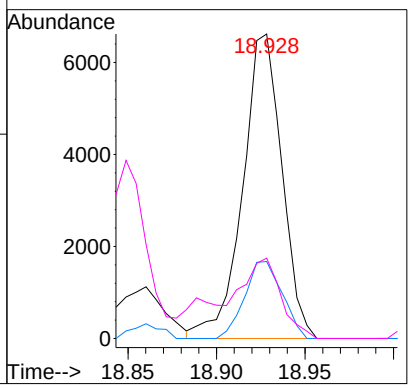


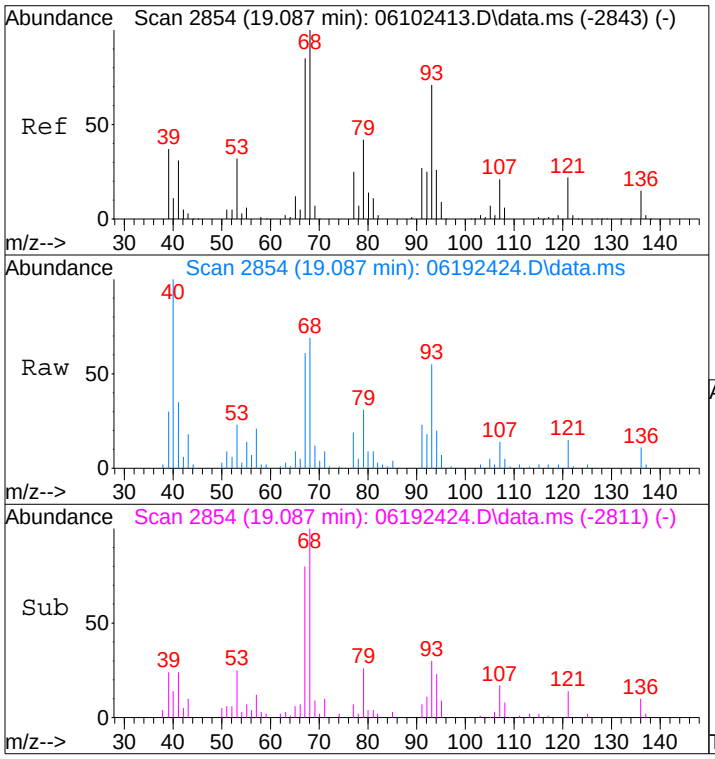


#88
4-Isopropyltoluene (p-Cymene)
Concen: 0.13 ng
RT: 18.93 min Scan# 2826
Delta R.T. -0.006 min
Lab File: 06192424.D
Acq: 19 Jun 2024 21:41

Tgt Ion:119 Resp: 10205

Ion	Ratio	Lower	Upper
119	100		
134	24.2	4.9	44.9
91	26.1	5.8	45.8

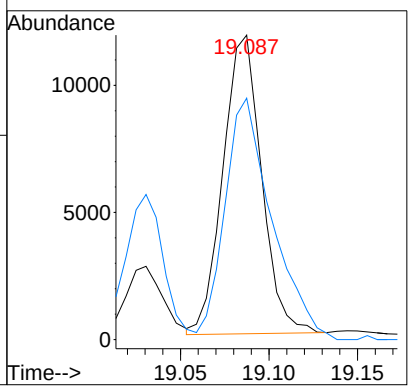




#91
d-Limonene
Concen: 0.77 ng
RT: 19.09 min Scan# 2854
Delta R.T. -0.006 min
Lab File: 06192424.D
Acq: 19 Jun 2024 21:41

Tgt Ion: 68 Resp: 17789

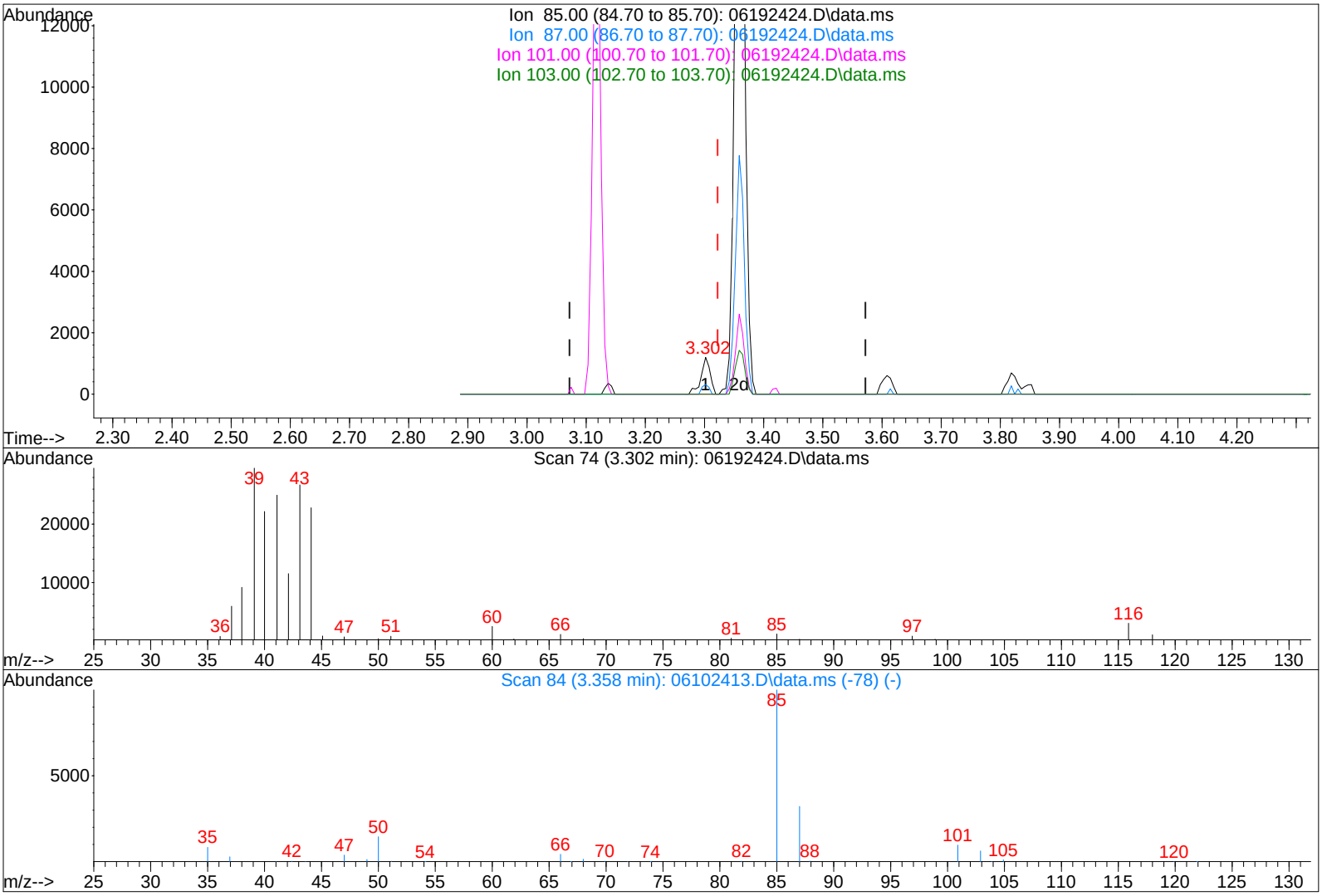
Ion	Ratio	Lower	Upper
68	100		
93	98.3	52.2	92.2#



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\19\06192424.D Vial: 12
Acq On : 19 Jun 2024 21:41 Operator: SC
Sample : P2402249-037 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 11:29:28 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06192424.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.302min (-0.020) 0.03ng

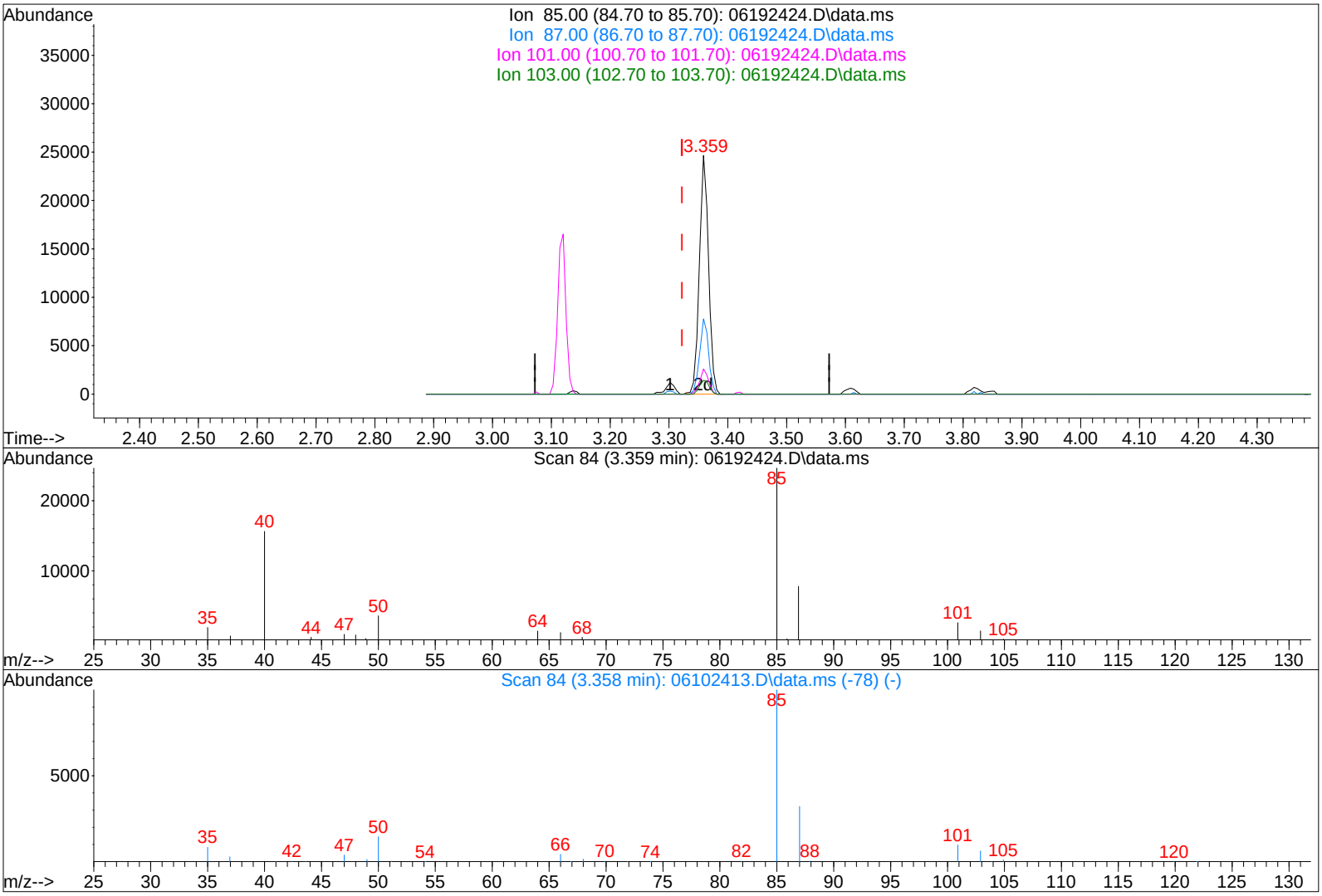
response 1276

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	20.45
101.00	9.80	0.00
103.00	6.30	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\19\06192424.D Vial: 12
Acq On : 19 Jun 2024 21:41 Operator: SC
Sample : P2402249-037 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 11:29:28 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06192424.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.359min (+0.037) 0.72ng m

response 26742

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	31.04
101.00	9.80	10.00
103.00	6.30	6.08

MJ 6/29/24

WP

CG 6/29/24

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192424.D Vial: 12
Acq On : 19 Jun 2024 21:41 Operator: SC
Sample : P2402249-037 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 15:11:56 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

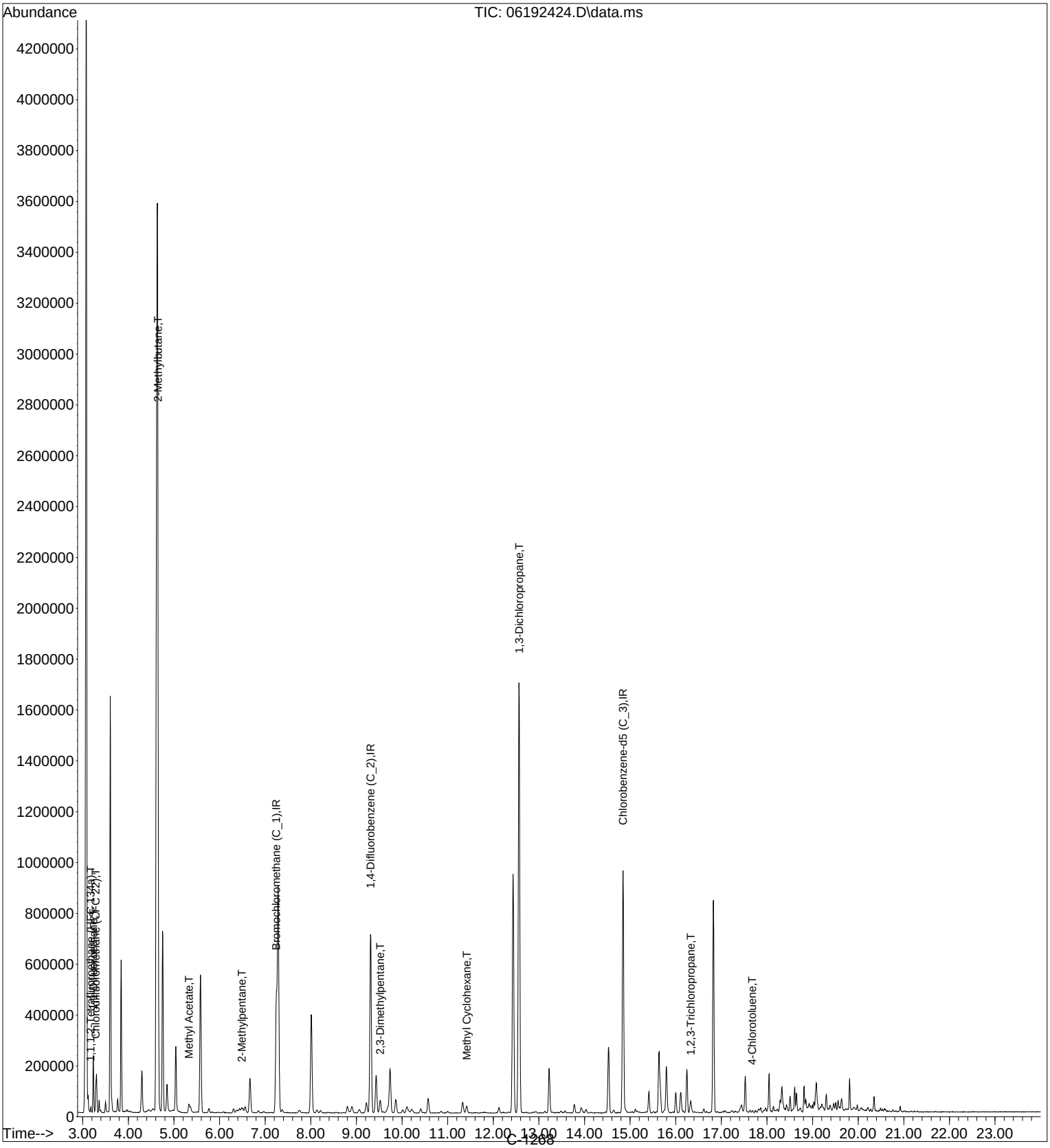
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.24	130	157841	12.500	ng		-0.01
16) 1,4-Difluorobenzene (C 2)	9.31	114	685259	12.500	ng		-0.01
19) Chlorobenzene-d5 (C_3)	14.85	54	162539	12.500	ng		0.00
Target Compounds							Qvalue
2) Chloropentafluoroethane	3.14	85	275	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.18	83	9050	0.559	ng		93
4) 1,1-Difluoroethane	3.23	65	55109	3.999	ng		98
5) Chlorodifluoromethane ...	3.28	67	1476	0.274	ng		88
6) 1-Chloro-1,1-Difluoroe...	3.49	65	929	N.D.			
7) Dichlorofluoromethane ...	4.24	67	1203	N.D.			
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	4.58	83	57	N.D.			
10) 2-Methylbutane	4.65	57	249268	13.241	ng	#	48
11) Methyl Acetate	5.33	43	35483	0.667	ng	#	62
12) 2-Methylpentane	6.49	71	2488	0.182	ng	#	1
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	9.08	84	489	N.D.			
17) 2,3-Dimethylpentane	9.52	56	25544	0.770	ng		96
18) Dibromomethane	9.81	174	303	N.D.			
20) Methyl Cyclohexane	11.42	55	11547	0.414	ng		89
21) 1,3-Dichloropropane	12.57	76	7576	0.350	ng	#	1
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	16.33	75	3384	0.156	ng	#	46
25) Bromobenzene	17.03	77	816	N.D.			
26) 2-Chlorotoluene	17.61	91	1256	N.D.			
27) 4-Chlorotoluene	17.68	91	5550	0.117	ng	#	41
28) Indane	19.11	117	1950	N.D.			
29) Indene	19.21	115	215	N.D.			
30) 1,2,4,5-Tetramethylben...	20.18	119	220	N.D.			
31) 1,2,3,4-Tetramethylben...	20.22	119	611	N.D.			
32) 1,2,3,5-Tetramethylben...	20.60	119	62	N.D.			
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192424.D Vial: 12
Acq On : 19 Jun 2024 21:41 Operator: SC
Sample : P2402249-037 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:11:56 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



C-1208

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\19\
Data File : 06192424.D
Acq On : 19 Jun 2024 21:41
Operator : SC
Sample : P2402249-037 (400mL)
Misc : S37-06062402
ALS Vial : 12 Sample Multiplier: 1

MJ 6/28/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06192424.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.075	23	34	40	rBV	4583257	7703955	81.74%	24.199%
2	3.114	40	41	49	rVV	65788	63761	0.68%	0.200%
3	3.177	49	52	57	rVB	19733	21610	0.23%	0.068%
4	3.234	57	62	67	rBV	223253	272888	2.90%	0.857%
5	3.302	67	74	80	rVB4	151367	287434	3.05%	0.903%
6	3.359	80	84	88	rBV	47809	55831	0.59%	0.175%
7	3.501	104	109	116	rBV2	42385	61369	0.65%	0.193%
8	3.603	121	127	142	rVV	1635961	2142595	22.73%	6.730%
9	3.767	151	156	163	rBV	48599	68695	0.73%	0.216%
10	3.841	163	169	175	rVB	595866	774669	8.22%	2.433%
11	3.972	187	192	196	rVB4	7617	10683	0.11%	0.034%
12	4.296	238	249	259	rBV	164148	309072	3.28%	0.971%
13	4.449	267	276	283	rBV4	7377	21602	0.23%	0.068%
14	4.540	285	292	298	rVV4	10385	29883	0.32%	0.094%
15	4.636	298	309	322	rVV2	3572578	9425070	100.00%	29.605%
16	4.750	322	329	339	rVV	708060	1180547	12.53%	3.708%
17	4.846	339	346	355	rVB	105098	189978	2.02%	0.597%
18	4.977	360	369	370	rVV6	5549	14704	0.16%	0.046%
19	5.039	374	380	391	rVB	256924	432094	4.58%	1.357%
20	5.329	423	431	449	rBV2	33259	118860	1.26%	0.373%
21	5.579	467	475	487	rVB	542698	1101937	11.69%	3.461%
22	5.766	498	508	516	rBV	16723	35135	0.37%	0.110%
23	6.306	594	603	609	rBV2	17049	38075	0.40%	0.120%
24	6.374	609	615	617	rBV3	8654	15474	0.16%	0.049%
25	6.436	623	626	631	rBV	6614	11856	0.13%	0.037%
26	6.487	631	635	643	rVV2	12086	30728	0.33%	0.097%
27	6.561	643	648	657	rVB2	23129	53892	0.57%	0.169%
28	6.663	657	666	681	rVB	134359	309196	3.28%	0.971%
29	6.851	695	699	706	rVB3	8211	15920	0.17%	0.050%
30	7.282	758	775	786	rBV3	895208	3044968	32.31%	9.565%
31	7.367	786	790	800	rVB2	11126	25852	0.27%	0.081%
32	7.754	848	858	868	rBV6	9876	30127	0.32%	0.095%
33	8.009	892	903	917	rBV	387020	906099	9.61%	2.846%
34	8.140	917	926	933	rVV5	11333	29052	0.31%	0.091%
35	8.213	933	939	949	rVB3	9899	23075	0.24%	0.072%
36	8.804	1035	1043	1049	rBV2	26254	62035	0.66%	0.195%
37	8.906	1053	1061	1071	rVB4	24086	67272	0.71%	0.211%
38	9.065	1080	1089	1098	rVB6	13142	36240	0.38%	0.114%
39	9.219	1105	1116	1123	rBV2	40174	100978	1.07%	0.317%
40	9.309	1123	1132	1143	rVB	701695	1654783	17.56%	5.198%

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\19\
Data File : 06192424.D
Acq On : 19 Jun 2024 21:41
Operator : SC
Sample : P2402249-037 (400mL)
Misc : S37-06062402
ALS Vial : 12 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

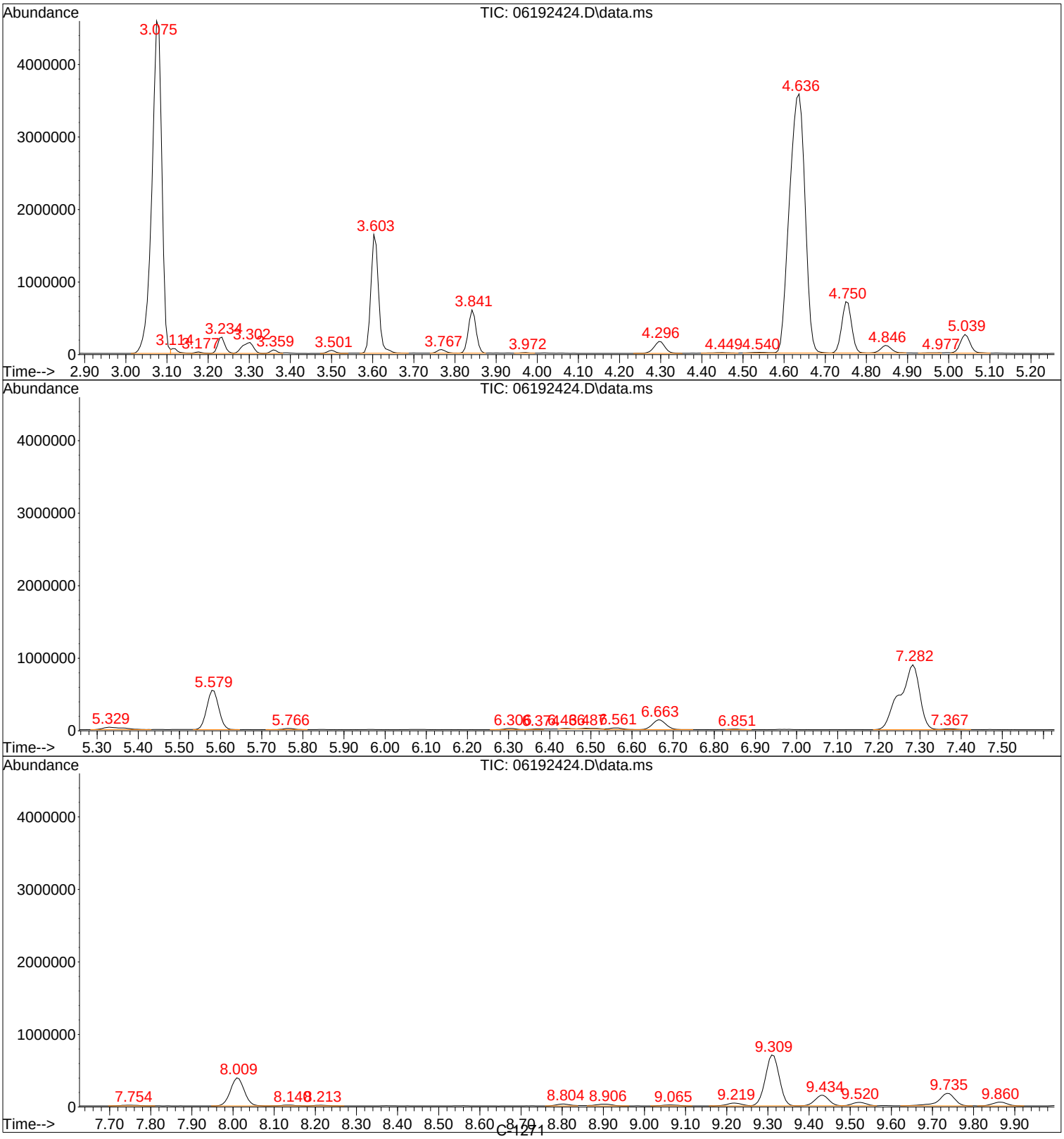
41	9.434	1143	1154	1162	rBV	145759	344227	3.65%	1.081%
42	9.520	1162	1169	1177	rVB	46609	110317	1.17%	0.347%
43	9.735	1187	1207	1218	rVV2	171842	474954	5.04%	1.492%
44	9.860	1220	1229	1240	rVB5	51834	128152	1.36%	0.403%

Sum of corrected areas: 31835644

Data Path : I:\MS09\DATA\2024 06\19\
Data File : 06192424.D
Acq On : 19 Jun 2024 21:41
Operator : SC
Sample : P2402249-037 (400mL)
Misc : S37-06062402
ALS Vial : 12 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\19\\
Data File : 06192424.D
Acq On : 19 Jun 2024 21:411
Operator : SCC
Sample : P2402249-037 (400mL))
Misc : S37-060624022
ALS Vial : 12 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\19\06192425.D Vial: 13
Acq On : 19 Jun 2024 22:13 Operator: SC
Sample : P2402249-038 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 11:34:22 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.25	130	159064	12.500	ng		0.03
37) 1,4-Difluorobenzene (IS2)	9.31	114	686337	12.500	ng		0.01
56) Chlorobenzene-d5 (IS3)	14.85	54	164580	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.01	65	350575	12.401	ng		0.04
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.20%				
57) Toluene-d8 (SS2)	12.44	98	770582	12.235	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.92%				
73) Bromofluorobenzene (SS3)	16.83	174	290265	12.763	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.08%				
Target Compounds							Qvalue
2) Propene	3.29	42	35229	1.730	ng	#	53
3) Dichlorodifluoromethan...	3.36	85	22903	0.612	ng		99
4) Chloromethane	3.49	50	6278	0.245	ng		99
5) 1,2-Dichloro-1,1,2,2-t...	3.61	135	497	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	3.77	54	816	N.D.			
8) Bromomethane	4.02	94	1243	0.096	ng		92
9) Chloroethane	4.15	64	828	0.081	ng		78
10) Ethanol	4.30	45	189827	12.276	ng		92
11) Acetonitrile	4.46	41	11314	0.291	ng		91
12) Acrolein	4.55	56	9165	0.801	ng		90
13) Acetone	4.65	58	2536269	205.253	ng		95
14) Trichlorofluoromethane	4.76	101	2910398	76.856	ng		100
15) 2-Propanol (Isopropanol)	4.85	45	139277	2.797	ng		93
16) Acrylonitrile	0.00	53	0	N.D. d			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.33	59	39313	0.989	ng	#	26
19) Methylene Chloride	5.38	84	10619	0.607	ng		97
20) 3-Chloro-1-propene (Al...	5.43	41	131	N.D.			
21) Trichlorotrifluoroethane	5.59	151	1386672	86.562	ng		96
22) Carbon Disulfide	5.61	76	1625866	28.842	ng		93
23) trans-1,2-Dichloroethene	6.16	61	740	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	6.38	73	1173	N.D.			
26) Vinyl Acetate	6.45	86	6158	2.160	ng	#	44
27) 2-Butanone (MEK)	6.67	72	60603	6.198	ng		100
28) cis-1,2-Dichloroethene	7.11	61	110	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D. d			
30) Ethyl Acetate	7.29	61	36452	6.105	ng		84
31) n-Hexane	7.30	57	16723	0.639	ng		95
32) Chloroform	7.38	83	29724	0.954	ng		98
34) Tetrahydrofuran (THF)	0.00	72	0	N.D. d			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.13	62	1940	0.062	ng		95
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	9.61	61	19082	No Calib		#	
40) 1-Butanol	8.81	56	31812	No Calib		#	
41) Benzene	8.91	78	14976	0.236	ng		97
42) Carbon Tetrachloride	9.08	117	1206	N.D.			
43) Cyclohexane	9.22	84	12390	0.604	ng		97
44) tert-Amyl Methyl Ether	9.62	73	749	N.D.			
45) 1,2-Dichloropropane	9.87	63	29988	1.961	ng		99
46) Bromodichloromethane	0.00	83	0	N.D. d			
47) Trichloroethene	10.16	130	4758	0.257	ng		95
48) 1,4-Dioxane	10.13	88	2380	0.204	ng		97
49) 2,2,4-Trimethylpentane...	0.00	57	0	N.D. d			
50) Methyl Methacrylate	10.42	100	1726	0.321	ng	#	84

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192425.D Vial: 13
Acq On : 19 Jun 2024 22:13 Operator: SC
Sample : P2402249-038 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 11:34:22 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

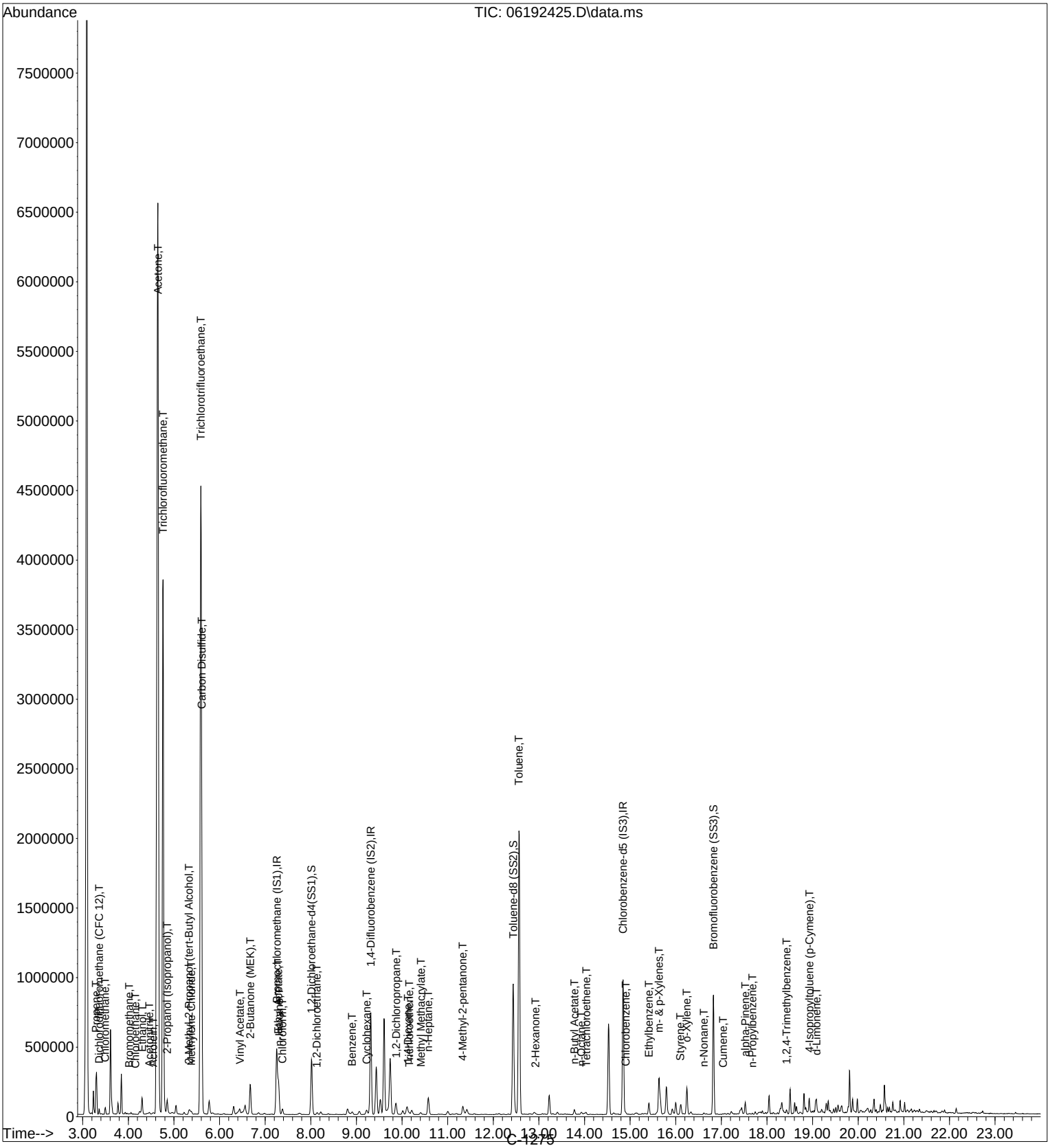
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	10.58	71	28063	2.100 ng		94
52) cis-1,3-Dichloropropene	11.33	75	662	N.D.		
53) 4-Methyl-2-pentanone	11.33	58	7595	0.545 ng		93
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	12.56	91	1767957	26.864 ng		100
59) 2-Hexanone	12.93	43	7049	0.171 ng		73
60) Dibromochloromethane	13.07	129	559	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	13.78	43	29834	0.688 ng		99
63) n-Octane	13.93	57	2692	0.197 ng		89
64) Tetrachloroethene	14.04	166	4824	0.213 ng		93
65) Chlorobenzene	14.90	112	7518	0.163 ng		99
66) Ethylbenzene	15.41	91	68590	0.911 ng		99
67) m- & p-Xylenes	15.63	91	230885	3.647 ng		98
68) Bromoform	15.68	173	814	N.D.		
69) Styrene	16.10	104	20153	0.472 ng		98
70) o-Xylene	16.24	91	125978	2.018 ng		98
71) n-Nonane	16.62	43	4666	0.129 ng		95
72) 1,1,2,2-Tetrachloroethane	16.21	83	426	N.D.		
74) Cumene	17.04	105	3924	0.050 ng		93
75) alpha-Pinene	17.53	93	31366	0.864 ng		97
76) n-Propylbenzene	17.68	91	4986	0.053 ng		95
77) 3-Ethyltoluene	17.04	105	3924	No Calib		
78) 4-Ethyltoluene	17.86	105	3394	N.D.		
79) 1,3,5-Trimethylbenzene	17.96	105	2859	N.D.		
80) alpha-Methylstyrene	0.00	118	0	N.D.		
81) 2-Ethyltoluene	17.04	105	3924	No Calib		
82) 1,2,4-Trimethylbenzene	18.43	105	9365	0.137 ng		91
83) n-Decane	17.10	58	148	No Calib	#	
84) Benzyl Chloride	18.56	91	845	N.D.		
85) 1,3-Dichlorobenzene	18.58	146	799	N.D.		
86) 1,4-Dichlorobenzene	18.65	146	1444	N.D.		
87) sec-Butylbenzene	18.74	105	1925	N.D.		
88) 4-Isopropyltoluene (p-...	18.93	119	55491	0.713 ng		97
89) 1,2,3-Trimethylbenzene	17.04	105	3924	No Calib		
90) 1,2-Dichlorobenzene	19.04	146	693	N.D.		
91) d-Limonene	19.09	68	15784	0.678 ng		83
92) 1,2-Dibromo-3-Chloropr...	19.51	157	107	N.D.		
93) n-Undecane	17.85	58	326	No Calib	#	
94) 1,2,4-Trichlorobenzene	20.84	180	895	N.D.		
95) Naphthalene	20.94	128	3378	N.D.		
96) n-Dodecane	18.92	58	2096	No Calib	#	
97) Hexachlorobutadiene	21.30	225	745	N.D.		
98) Cyclohexanone	15.52	55	1194	No Calib	#	
99) tert-Butylbenzene	0.00	119	0	N.D.	d	
100) n-Butylbenzene	0.00	91	0	N.D.	d	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192425.D Vial: 13
Acq On : 19 Jun 2024 22:13 Operator: SC
Sample : P2402249-038 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 11:34:22 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192425.D Vial: 13
Acq On : 19 Jun 2024 22:13 Operator: SC
Sample : P2402249-038 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 11:34:22 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.25	130	159064	12.500	ng		0.03
37) 1,4-Difluorobenzene (IS2)	9.31	114	686337	12.500	ng		0.01
56) Chlorobenzene-d5 (IS3)	14.85	54	164580	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.01	65	350575	12.401	ng		0.04
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.20%				
57) Toluene-d8 (SS2)	12.44	98	770582	12.235	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.92%				
73) Bromofluorobenzene (SS3)	16.83	174	290265	12.763	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.08%				
Target Compounds							Qvalue
2) Propene	3.29	42	35229	1.730	ng	#	53
3) Dichlorodifluoromethan...	3.36	85	22903	0.612	ng		99
4) Chloromethane	3.49	50	6278	0.245	ng		99
8) Bromomethane	4.02	94	1243	0.096	ng		92
9) Chloroethane	4.15	64	828	0.081	ng		78
10) Ethanol	4.30	45	189827	12.276	ng		92
11) Acetonitrile	4.46	41	11314	0.291	ng		91
12) Acrolein	4.55	56	9165	0.801	ng		90
13) Acetone	4.65	58	2536269	205.253	ng		95
14) Trichlorofluoromethane	4.76	101	2910398	76.856	ng		100
15) 2-Propanol (Isopropanol)	4.85	45	139277	2.797	ng		93
18) 2-Methyl-2-Propanol (t...	5.33	59	39313	0.989	ng	#	26
19) Methylene Chloride	5.38	84	10619	0.607	ng		97
21) Trichlorotrifluoroethane	5.59	151	1386672	86.562	ng		96
22) Carbon Disulfide	5.61	76	1625866	28.842	ng		93
26) Vinyl Acetate	6.45	86	6158	2.160	ng	#	44
27) 2-Butanone (MEK)	6.67	72	60603	6.198	ng		100
30) Ethyl Acetate	7.29	61	36452	6.105	ng		84
31) n-Hexane	7.30	57	16723	0.639	ng		95
32) Chloroform	7.38	83	29724	0.954	ng		98
36) 1,2-Dichloroethane	8.13	62	1940	0.062	ng		95
41) Benzene	8.91	78	14976	0.236	ng		97
43) Cyclohexane	9.22	84	12390	0.604	ng		97
45) 1,2-Dichloropropane	9.87	63	29988	1.961	ng		99
47) Trichloroethene	10.16	130	4758	0.257	ng		95
48) 1,4-Dioxane	10.13	88	2380	0.204	ng		97
50) Methyl Methacrylate	10.42	100	1726	0.321	ng	#	84
51) n-Heptane	10.58	71	28063	2.100	ng		94
53) 4-Methyl-2-pentanone	11.33	58	7595	0.545	ng		93
58) Toluene	12.56	91	1767957	26.864	ng		100
59) 2-Hexanone	12.93	43	7049	0.171	ng		73
62) n-Butyl Acetate	13.78	43	29834	0.688	ng		99
63) n-Octane	13.93	57	2692	0.197	ng		89
64) Tetrachloroethene	14.04	166	4824	0.213	ng		93
65) Chlorobenzene	14.90	112	7518	0.163	ng		99
66) Ethylbenzene	15.41	91	68590	0.911	ng		99
67) m- & p-Xylenes	15.63	91	230885	3.647	ng		98
69) Styrene	16.10	104	20153	0.472	ng		98
70) o-Xylene	16.24	91	125978	2.018	ng		98
71) n-Nonane	16.62	43	4666	0.129	ng		95
74) Cumene	17.04	105	3924	0.050	ng		93
75) alpha-Pinene	17.53	93	31366	0.864	ng		97
76) n-Propylbenzene	17.68	91	4986	0.053	ng		95
82) 1,2,4-Trimethylbenzene	18.43	105	9365	0.137	ng		91
88) 4-Isopropyltoluene (p-...	18.93	119	55491	0.713	ng		97
91) d-Limonene	19.09	68	15784	0.678	ng		83

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192425.D Vial: 13
Acq On : 19 Jun 2024 22:13 Operator: SC
Sample : P2402249-038 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 11:34:22 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

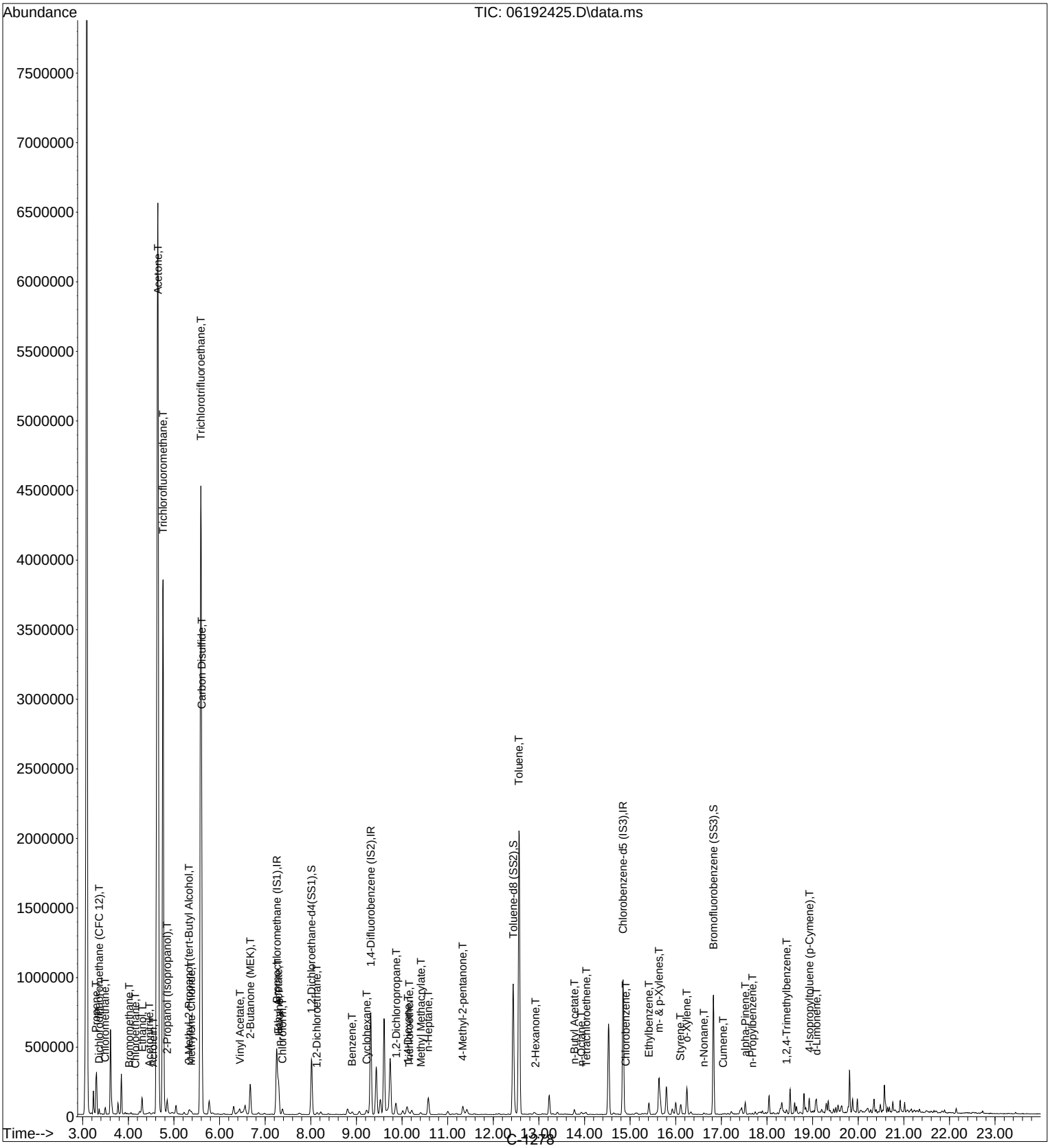
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

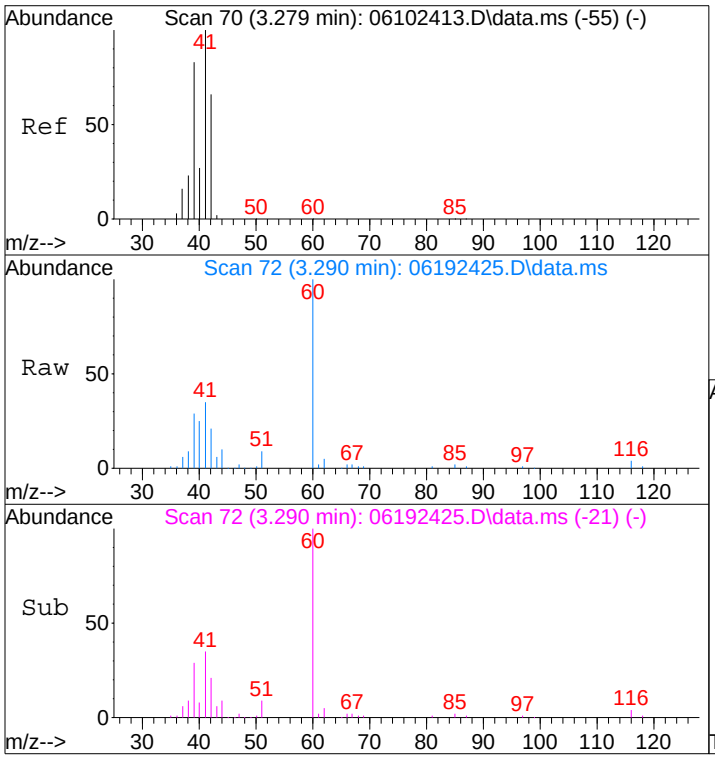
Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192425.D Vial: 13
Acq On : 19 Jun 2024 22:13 Operator: SC
Sample : P2402249-038 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 11:34:22 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



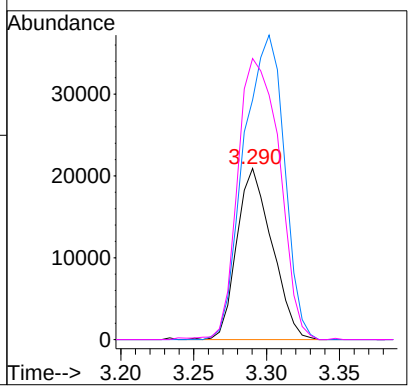
C-1278

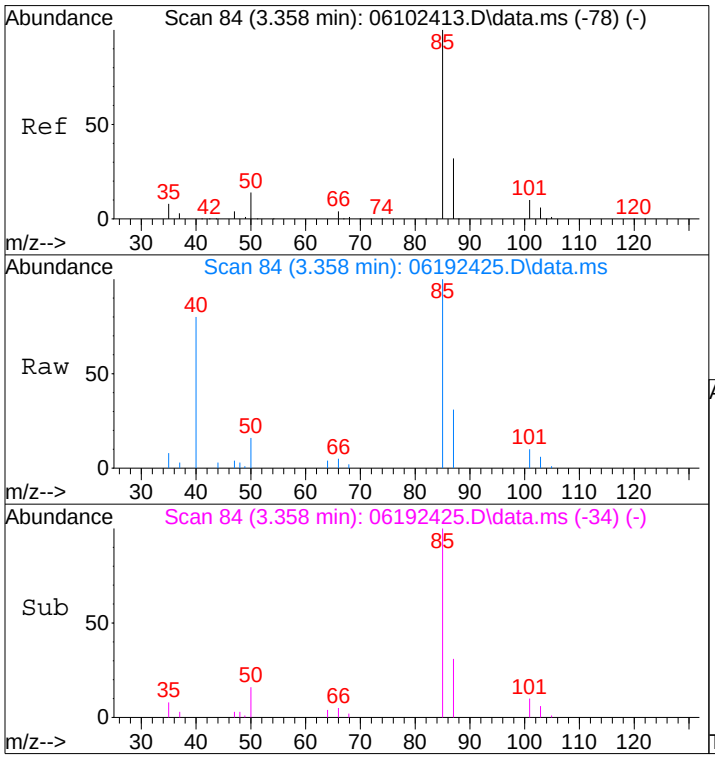


#2
Propene
Concen: 1.73 ng
RT: 3.29 min Scan# 72
Delta R.T. 0.041 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion: 42 Resp: 35229

Ion	Ratio	Lower	Upper
42	100		
39	204.7	107.3	147.3#
41	194.1	134.3	174.3#

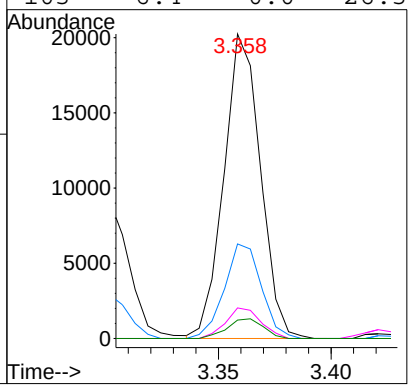


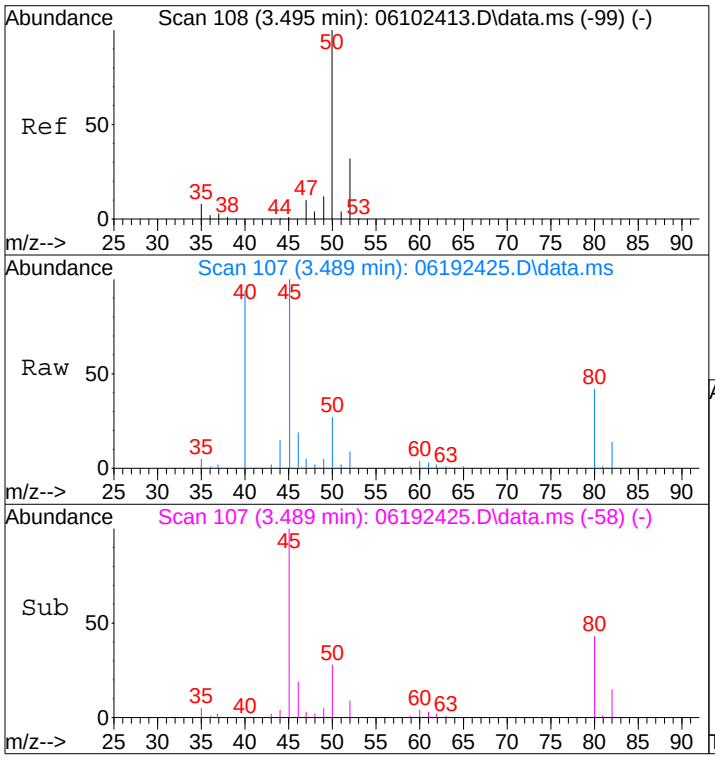


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.61 ng
RT: 3.36 min Scan# 84
Delta R.T. 0.036 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion: 85 Resp: 22903

Ion	Ratio	Lower	Upper
85	100		
87	31.4	12.2	52.2
101	9.7	0.0	29.8
103	6.4	0.0	26.3

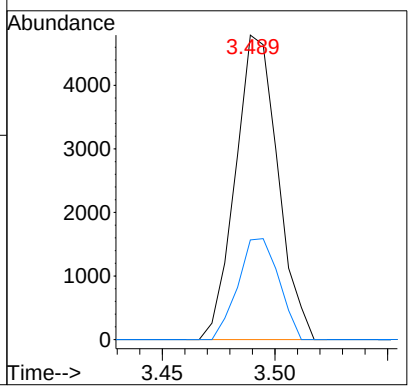


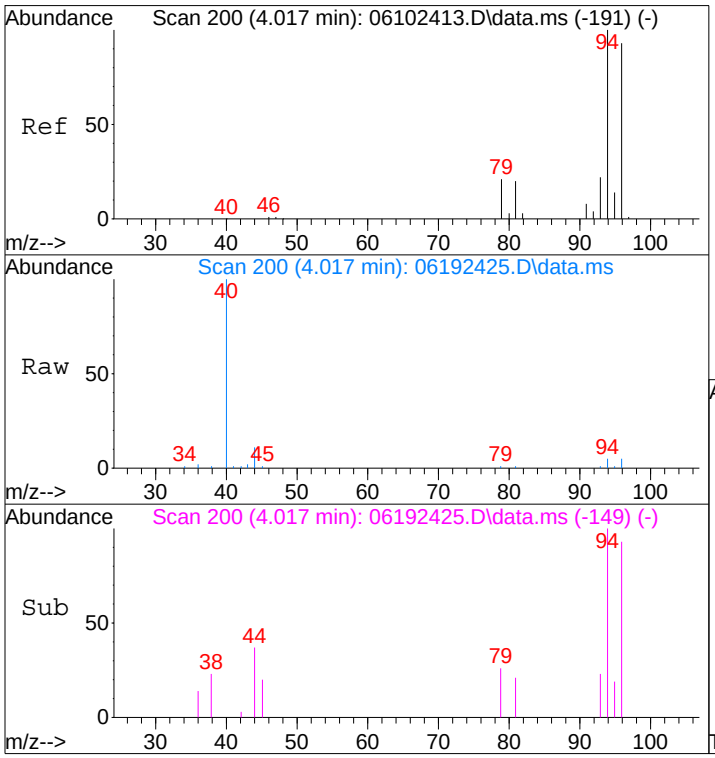


#4
Chloromethane
Concen: 0.25 ng
RT: 3.49 min Scan# 107
Delta R.T. 0.027 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion: 50 Resp: 6278

Ion	Ratio	Lower	Upper
50	100		
52	32.0	12.4	52.4

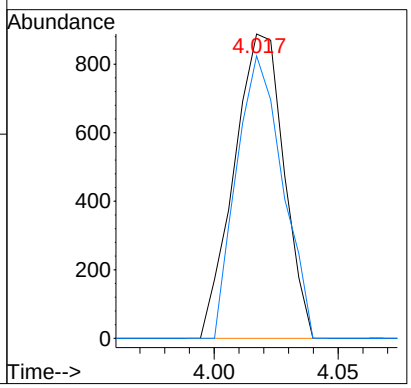


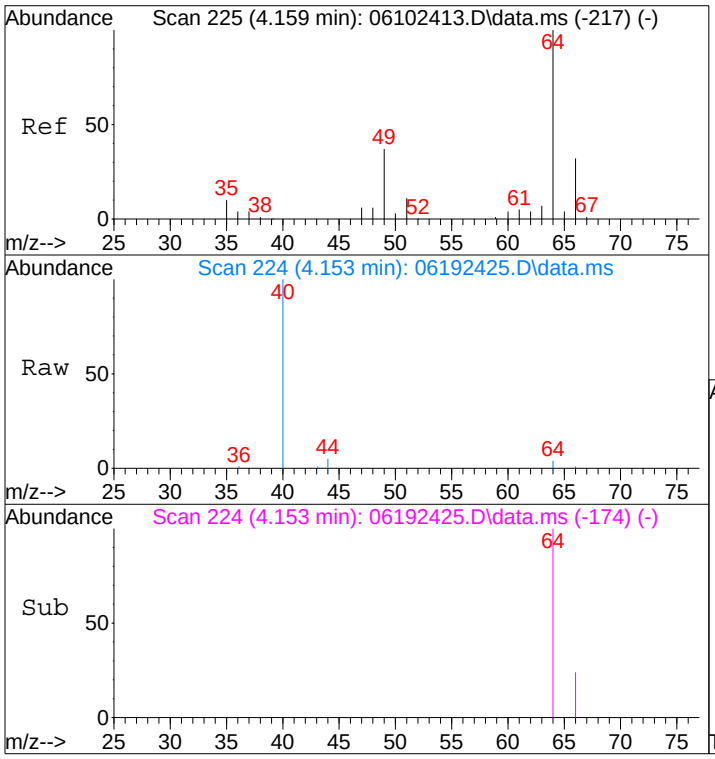


#8
Bromomethane
Concen: 0.10 ng
RT: 4.02 min Scan# 200
Delta R.T. 0.038 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion: 94 Resp: 1243

Ion	Ratio	Lower	Upper
94	100		
96	85.8	73.2	113.2

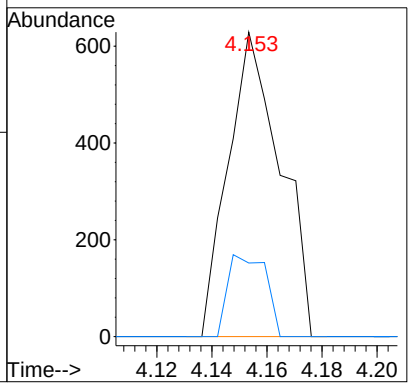


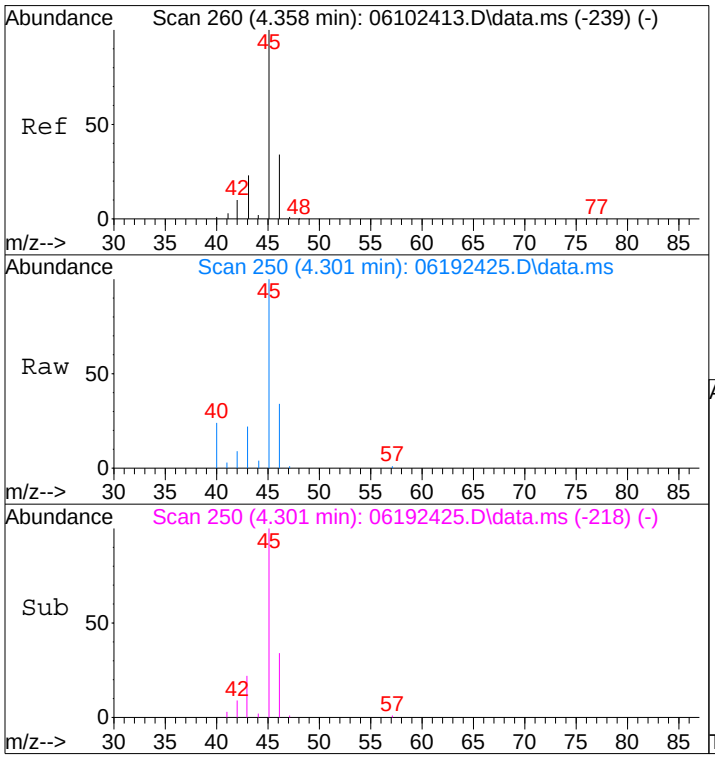


#9
Chloroethane
Concen: 0.08 ng
RT: 4.15 min Scan# 224
Delta R.T. 0.034 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion: 64 Resp: 828

Ion	Ratio	Lower	Upper
64	100		
66	19.4	11.4	51.4

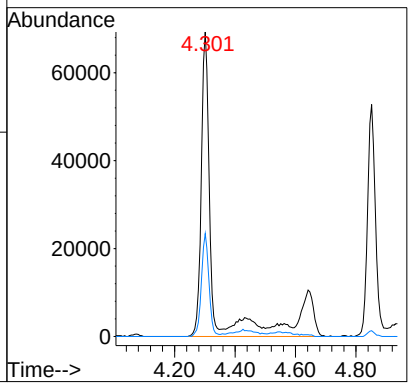


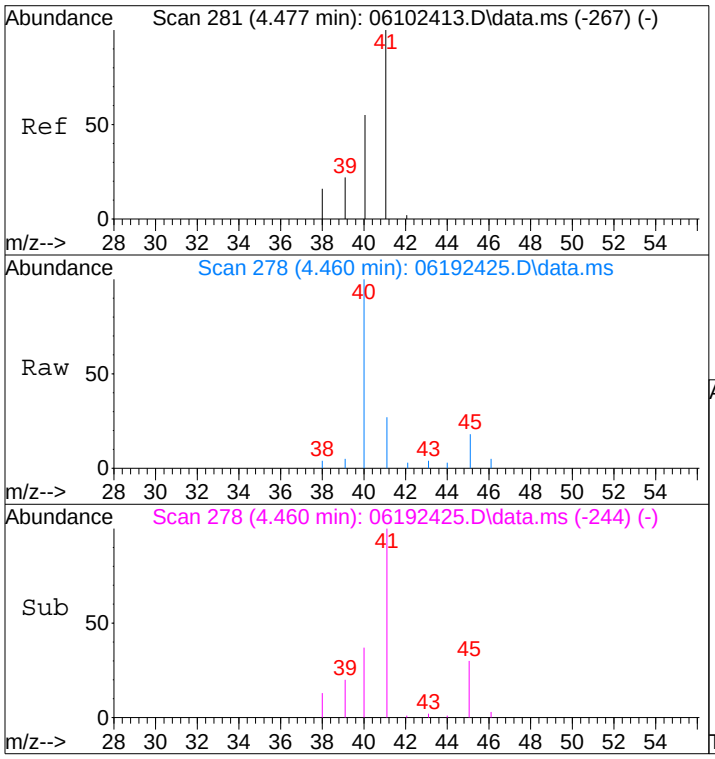


#10
Ethanol
Concen: 12.28 ng
RT: 4.30 min Scan# 250
Delta R.T. -0.066 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion: 45 Resp: 189827

Ion	Ratio	Lower	Upper
45	100		
46	29.2	13.5	53.5

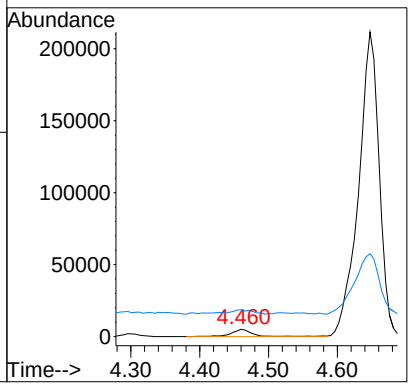


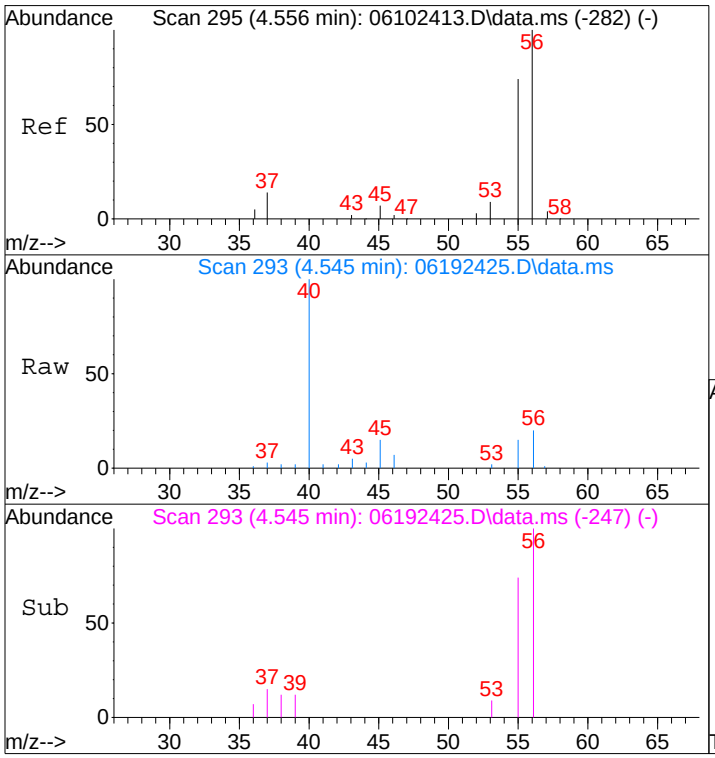


#11
Acetonitrile
Concen: 0.29 ng
RT: 4.46 min Scan# 278
Delta R.T. -0.008 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion: 41 Resp: 11314

Ion	Ratio	Lower	Upper
41	100		
40	60.8	34.7	74.7

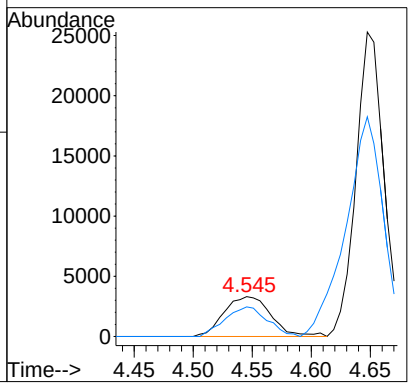


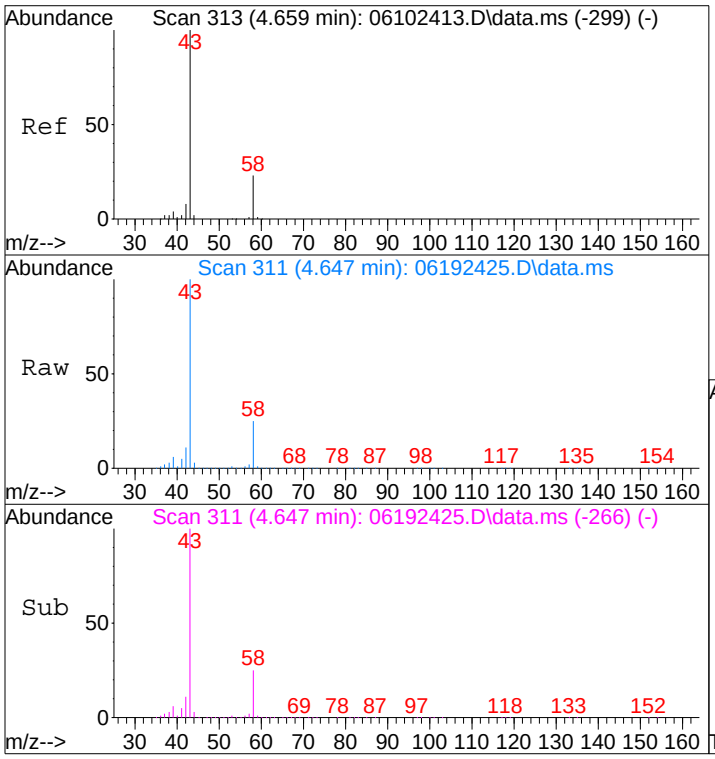


#12
Acrolein
Concen: 0.80 ng
RT: 4.55 min Scan# 293
Delta R.T. 0.010 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion: 56 Resp: 9165

Ion	Ratio	Lower	Upper
56	100		
55	66.7	55.5	95.5

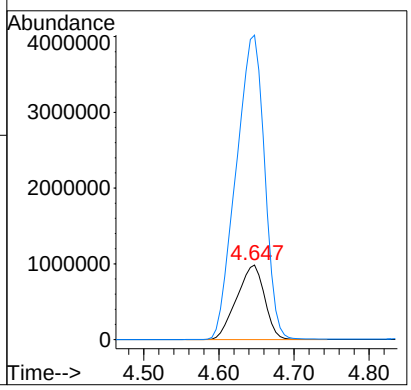


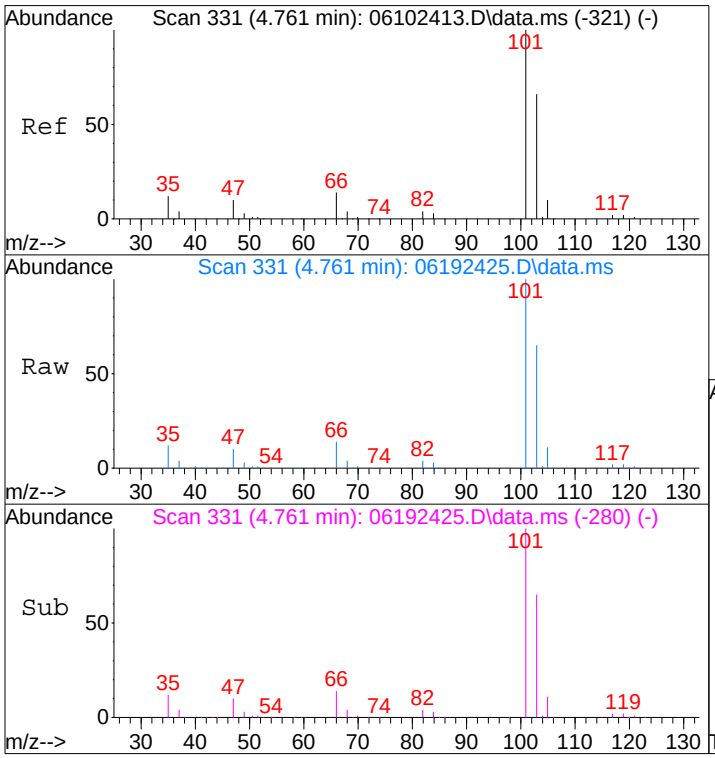


#13
Acetone
Concen: 205.25 ng
RT: 4.65 min Scan# 311
Delta R.T. 0.005 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion: 58 Resp: 2536269

Ion	Ratio	Lower	Upper
58	100		
43	419.2	400.7	460.7

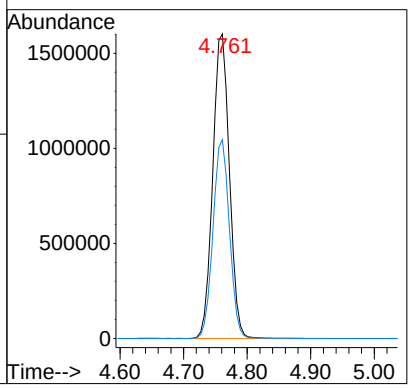


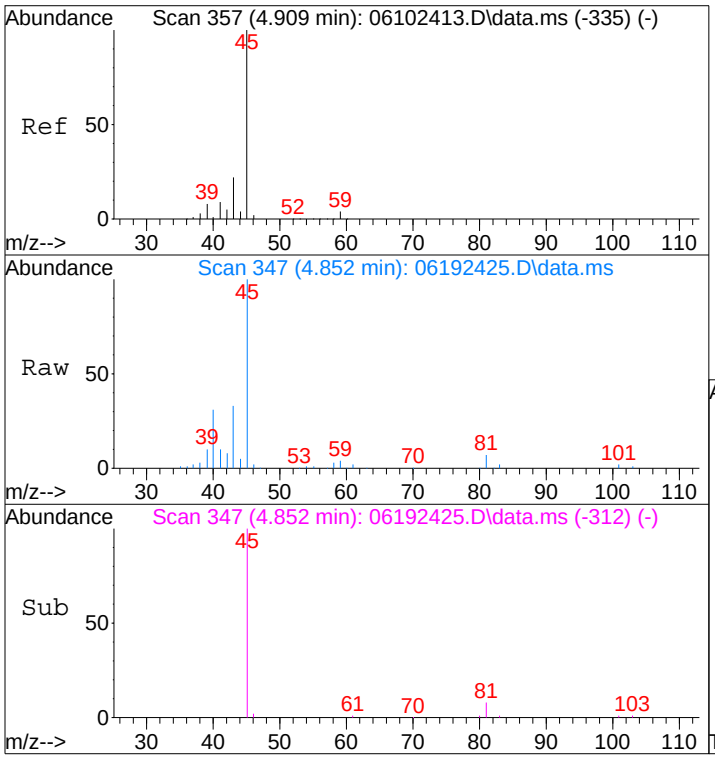


#14
Trichlorofluoromethane
Concen: 76.86 ng
RT: 4.76 min Scan# 331
Delta R.T. 0.040 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion:101 Resp: 2910398

Ion	Ratio	Lower	Upper
101	100		
103	64.7	44.9	84.9

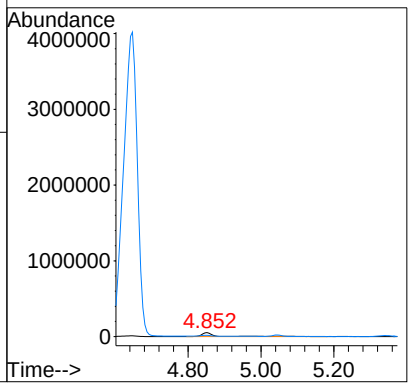


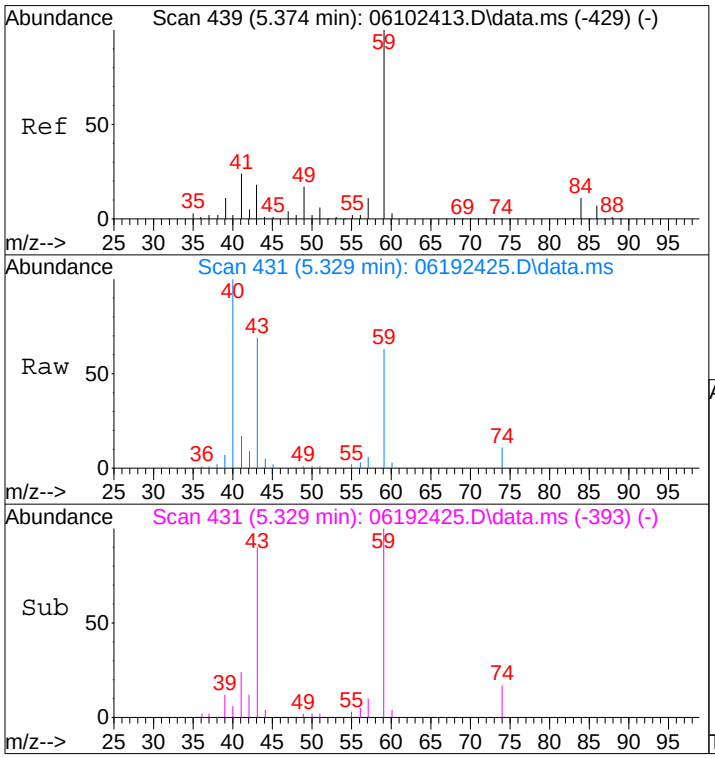


#15
2-Propanol (Isopropanol)
Concen: 2.80 ng
RT: 4.85 min Scan# 347
Delta R.T. -0.049 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion: 45 Resp: 139277

Ion	Ratio	Lower	Upper
45	100		
43	26.1	2.5	42.5

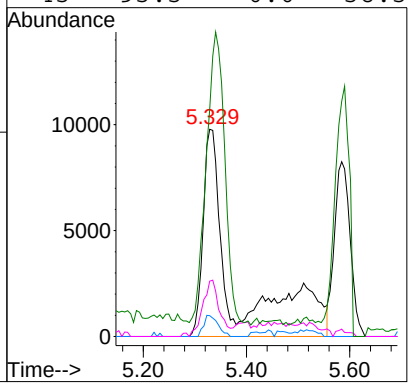


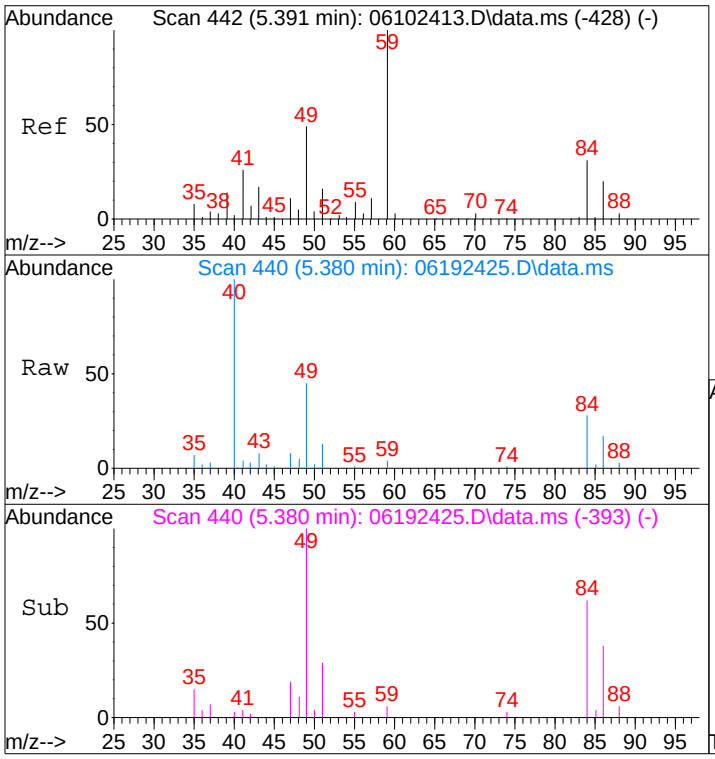


#18
2-Methyl-2-Propanol (tert-Butyl Alcohol
Concen: 0.99 ng
RT: 5.33 min Scan# 431
Delta R.T. -0.032 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion: 59 Resp: 39313

Ion	Ratio	Lower	Upper
59	100		
57	4.9	0.0	30.9
41	30.9	0.9	40.9
43	93.3	0.0	38.3#

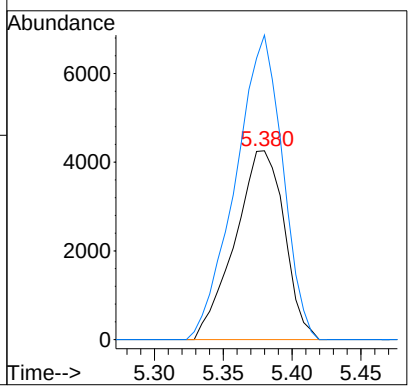


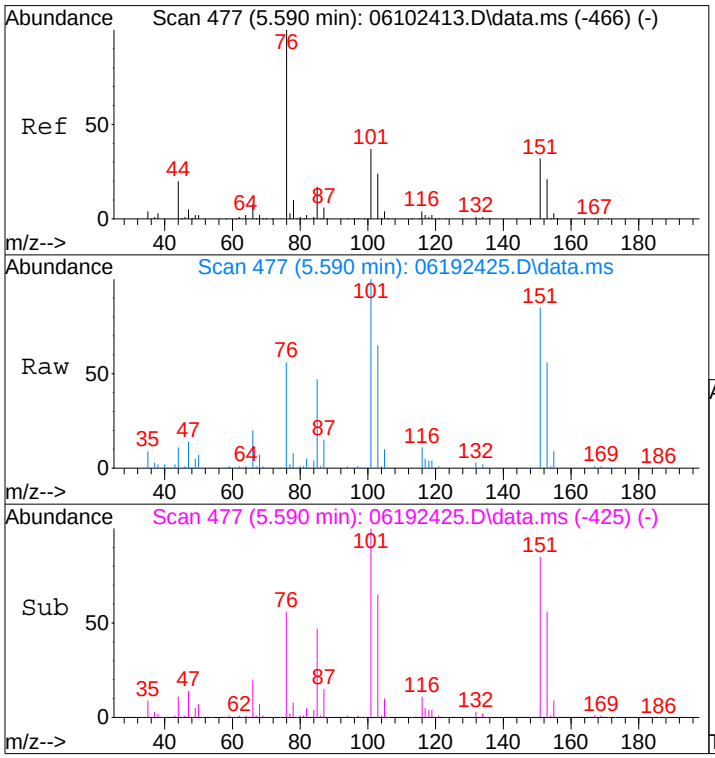


#19
Methylene Chloride
Concen: 0.61 ng
RT: 5.38 min Scan# 440
Delta R.T. 0.019 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion: 84 Resp: 10619

Ion	Ratio	Lower	Upper
84	100		
49	154.3	132.9	182.9

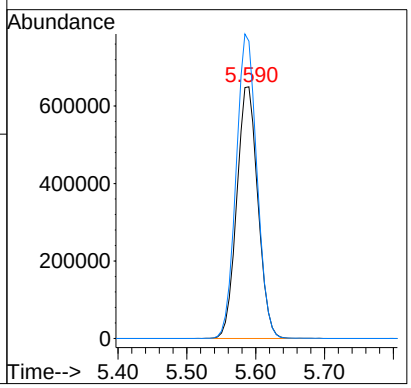


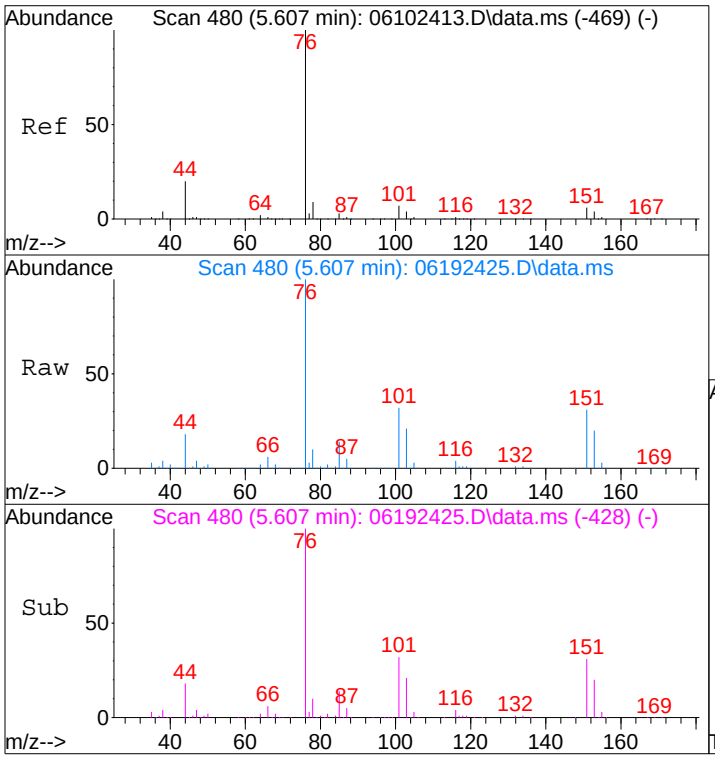


#21
Trichlorotrifluoroethane
Concen: 86.56 ng
RT: 5.59 min Scan# 477
Delta R.T. 0.044 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion:151 Resp: 1386672

Ion	Ratio	Lower	Upper
151	100		
101	119.1	95.0	135.0

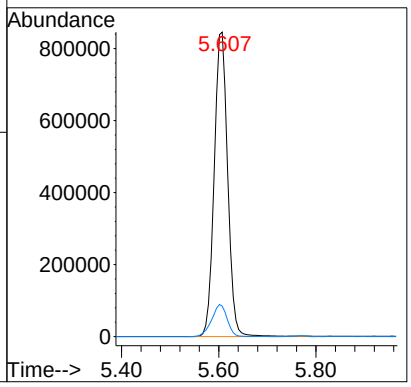


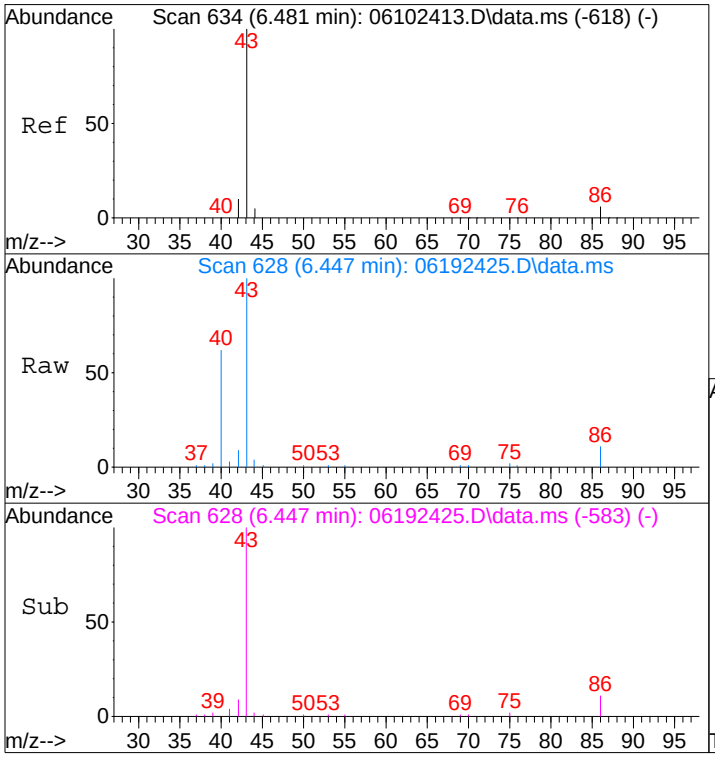


#22
Carbon Disulfide
Concen: 28.84 ng
RT: 5.61 min Scan# 480
Delta R.T. 0.044 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion: 76 Resp: 1625866

Ion	Ratio	Lower	Upper
76	100		
78	12.2	0.0	29.6

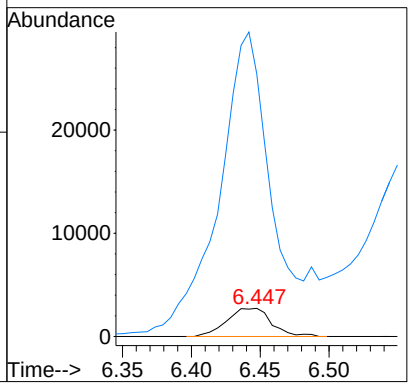


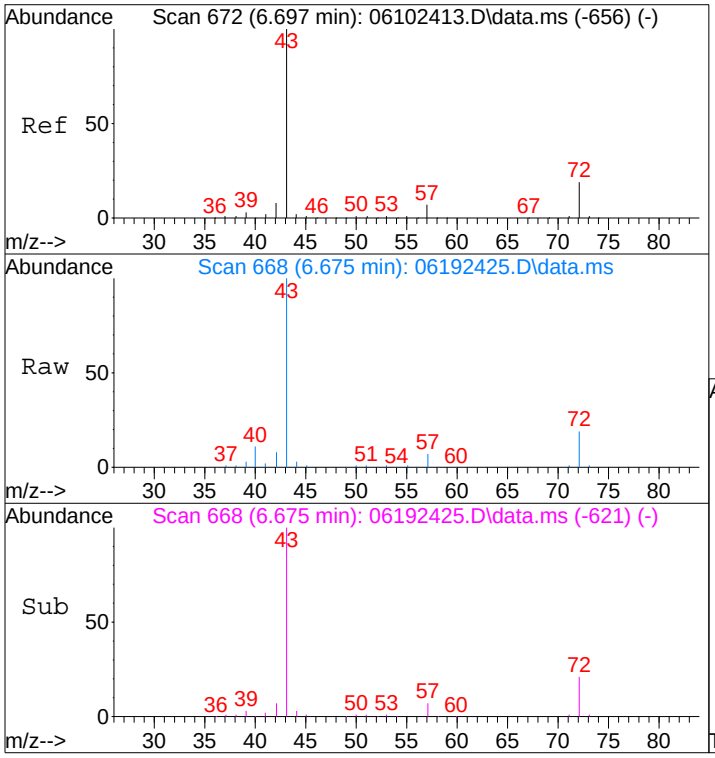


#26
Vinyl Acetate
Concen: 2.16 ng
RT: 6.45 min Scan# 628
Delta R.T. 0.008 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion: 86 Resp: 6158

Ion	Ratio	Lower	Upper
86	100		
43	1325.9	1668.9	1708.9#

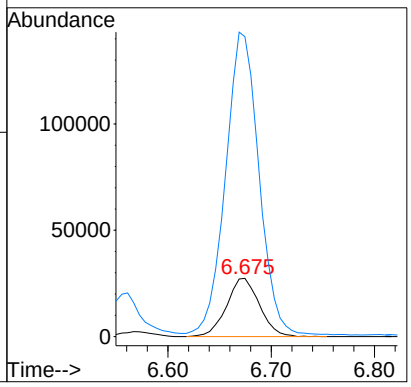


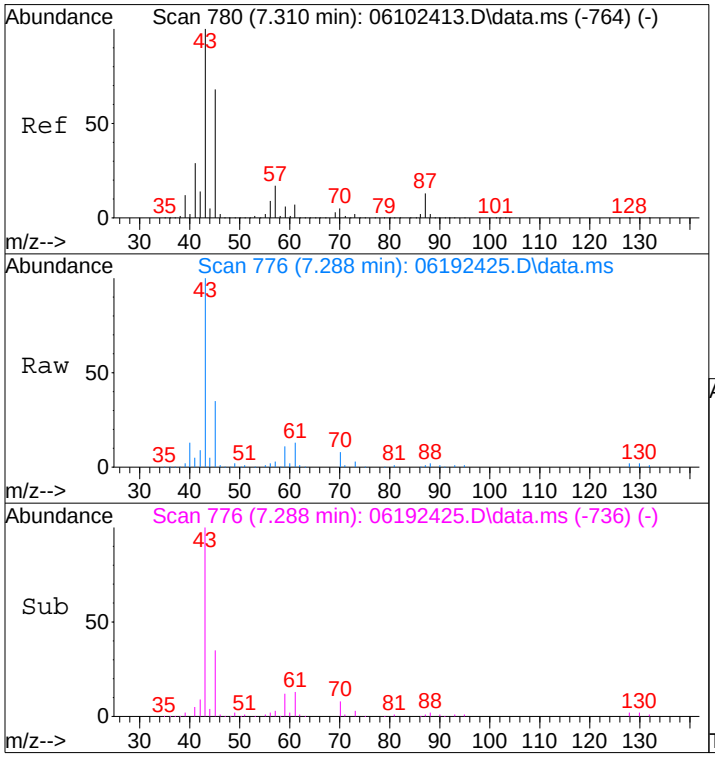


#27
2-Butanone (MEK)
Concen: 6.20 ng
RT: 6.67 min Scan# 668
Delta R.T. 0.016 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion: 72 Resp: 60603

Ion	Ratio	Lower	Upper
72	100		
43	527.3	506.8	546.8

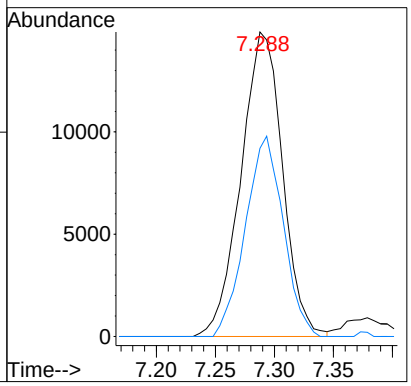


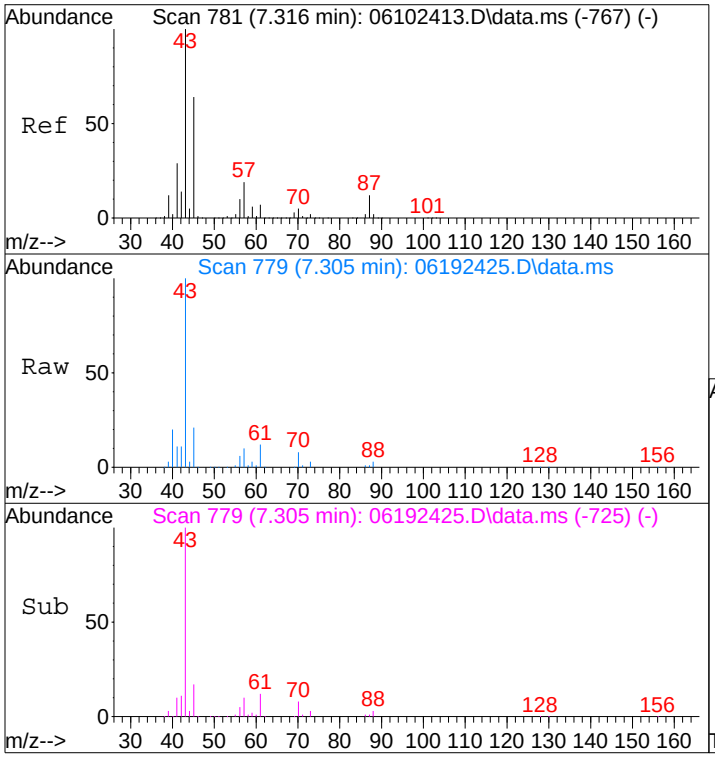


#30
Ethyl Acetate
Concen: 6.11 ng
RT: 7.29 min Scan# 776
Delta R.T. 0.029 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion: 61 Resp: 36452

Ion	Ratio	Lower	Upper
61	100		
70	59.9	53.5	93.5

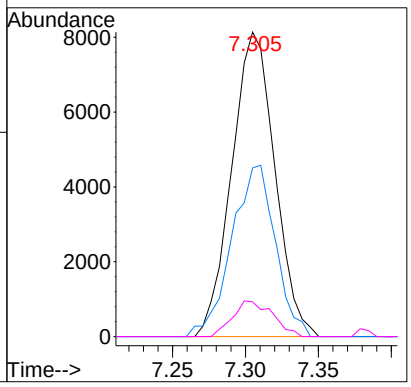


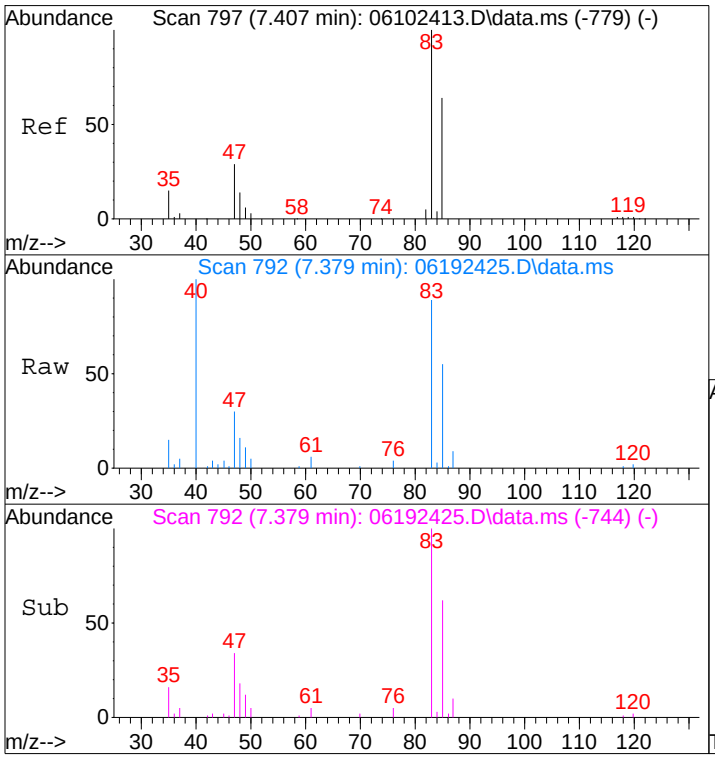


#31
n-Hexane
Concen: 0.64 ng
RT: 7.30 min Scan# 779
Delta R.T. 0.057 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion: 57 Resp: 16723

Ion	Ratio	Lower	Upper
57	100		
56	57.0	42.5	63.7
86	10.9	9.5	14.3

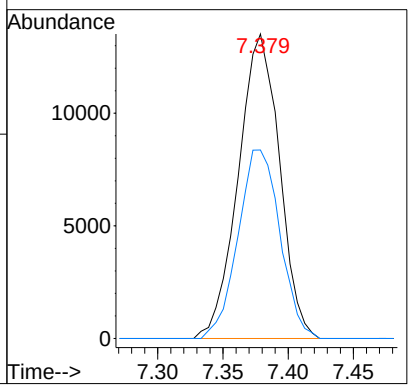


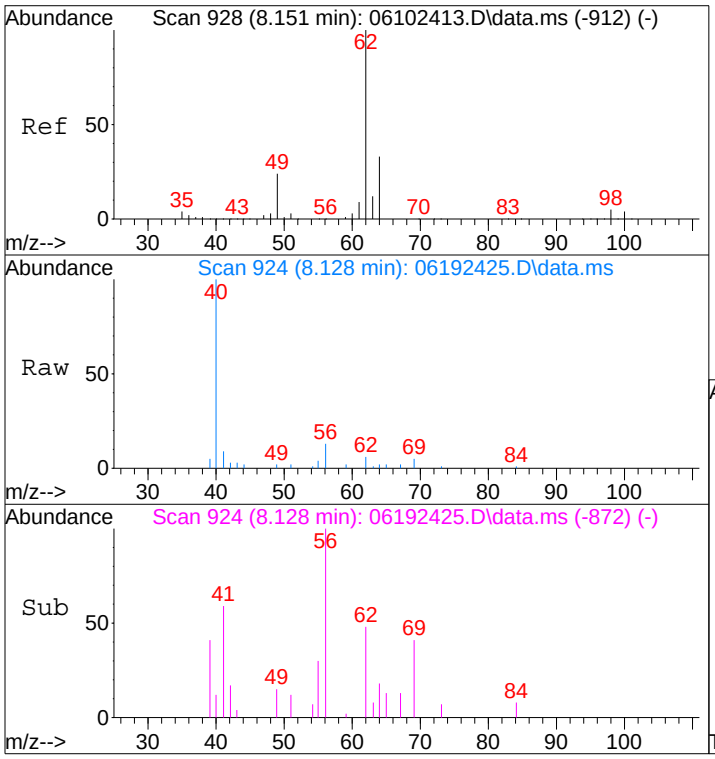


#32
Chloroform
Concen: 0.95 ng
RT: 7.38 min Scan# 792
Delta R.T. 0.024 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion: 83 Resp: 29724

Ion	Ratio	Lower	Upper
83	100		
85	63.1	44.4	84.4

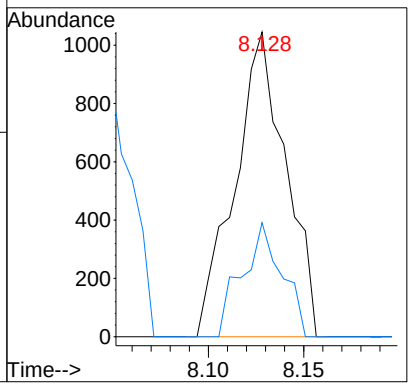


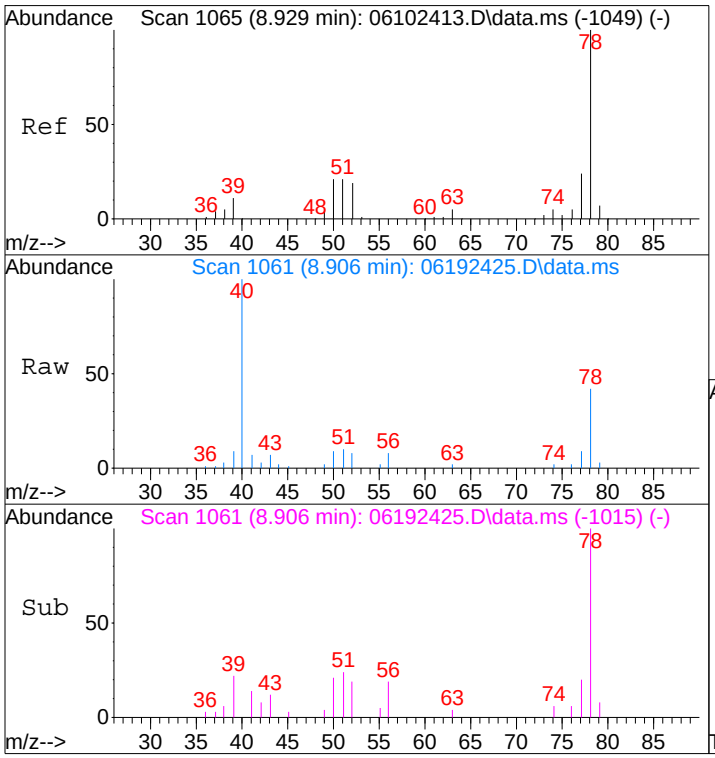


#36
1,2-Dichloroethane
Concen: 0.06 ng
RT: 8.13 min Scan# 924
Delta R.T. 0.043 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion: 62 Resp: 1940

Ion	Ratio	Lower	Upper
62	100		
64	29.3	12.0	52.0

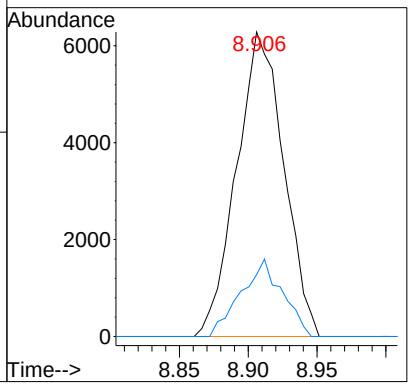


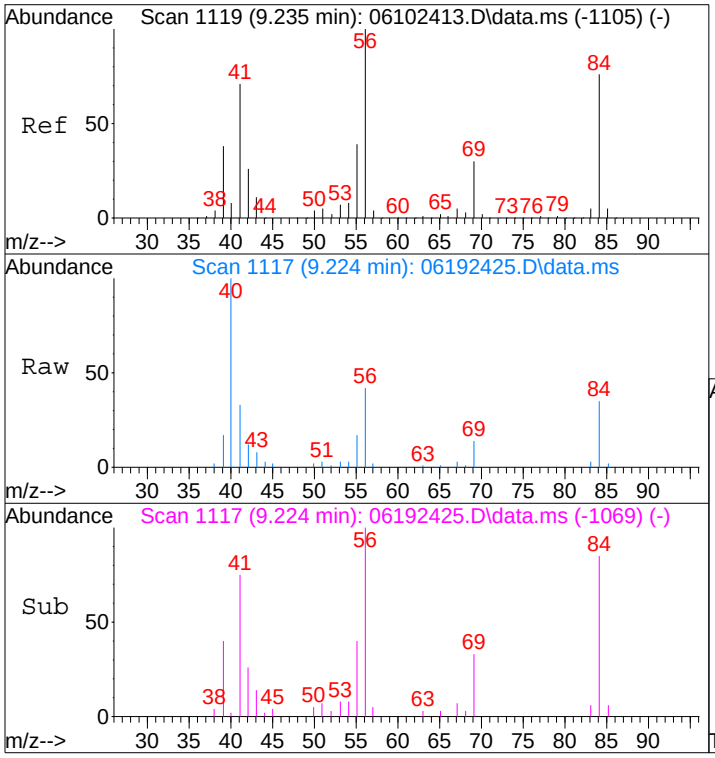


#41
Benzene
Concen: 0.24 ng
RT: 8.91 min Scan# 1061
Delta R.T. 0.009 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion: 78 Resp: 14976

Ion	Ratio	Lower	Upper
78	100		
77	22.3	4.0	44.0

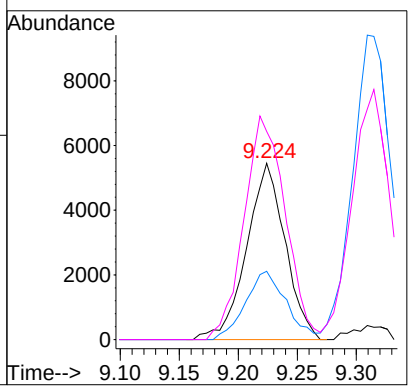


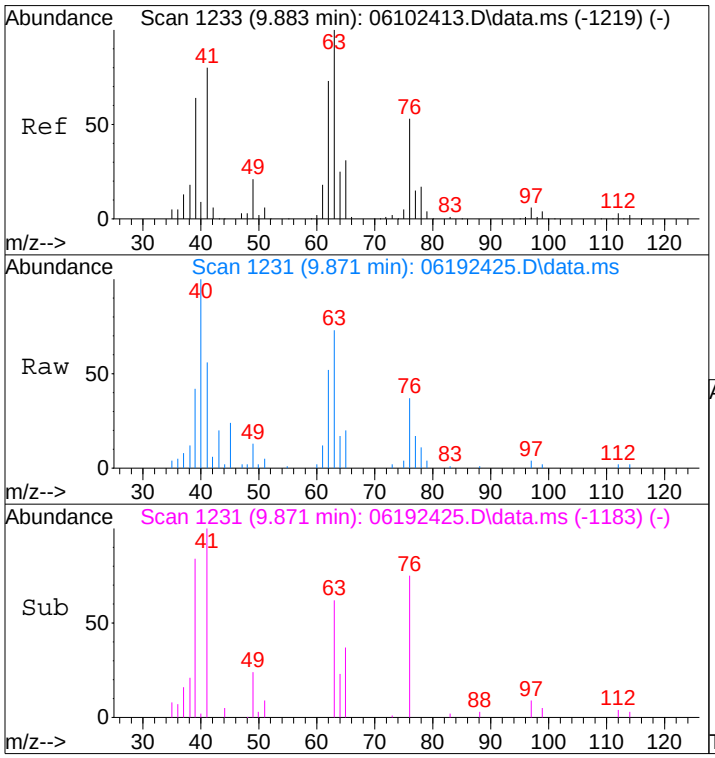


#43
Cyclohexane
Concen: 0.60 ng
RT: 9.22 min Scan# 1117
Delta R.T. 0.022 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion: 84 Resp: 12390

Ion	Ratio	Lower	Upper
84	100		
69	40.6	18.8	58.8
56	135.7	111.5	151.5

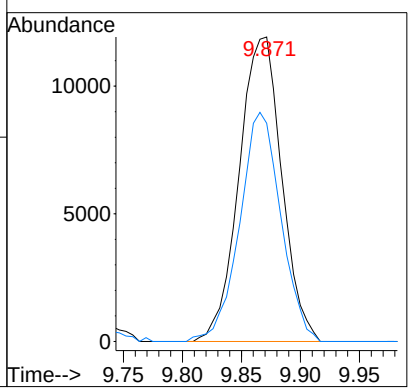


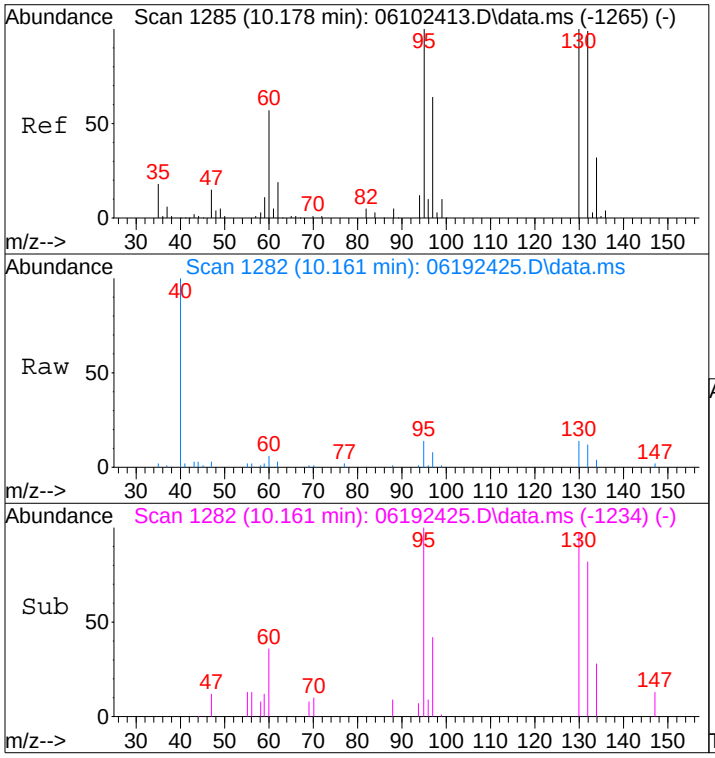


#45
1,2-Dichloropropane
Concen: 1.96 ng
RT: 9.87 min Scan# 1231
Delta R.T. 0.020 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion: 63 Resp: 29988

Ion	Ratio	Lower	Upper
63	100		
62	72.8	52.4	92.4

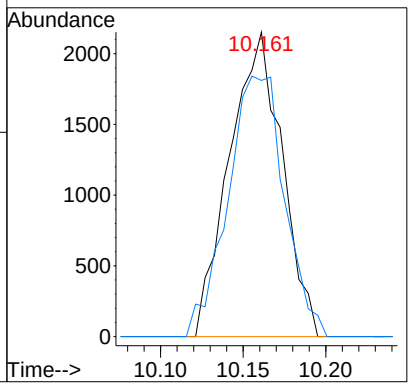


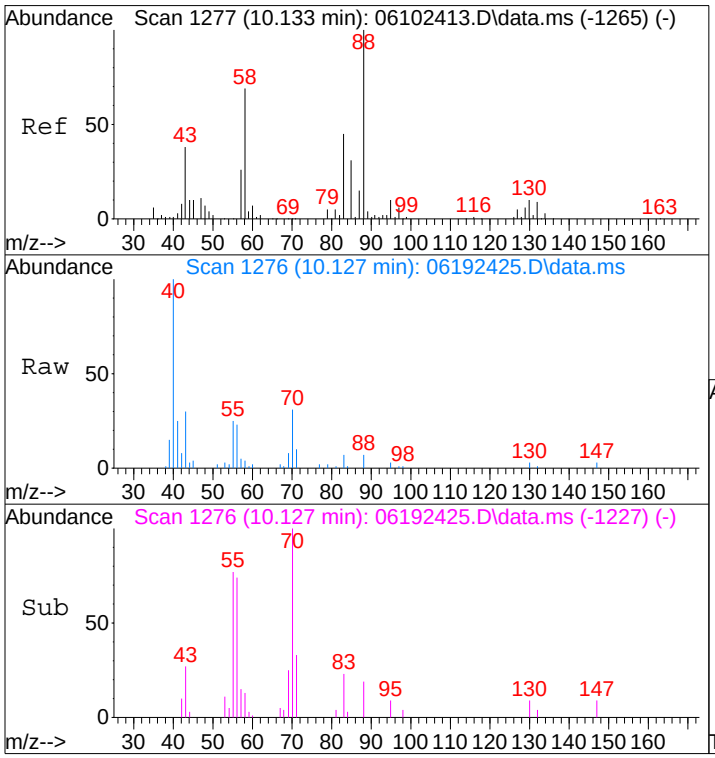


#47
Trichloroethene
Concen: 0.26 ng
RT: 10.16 min Scan# 1282
Delta R.T. 0.021 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion:130 Resp: 4758

Ion	Ratio	Lower	Upper
130	100		
132	92.5	77.9	117.9

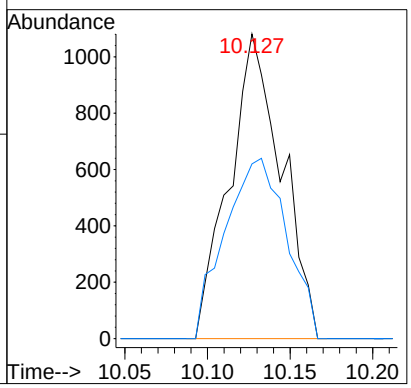


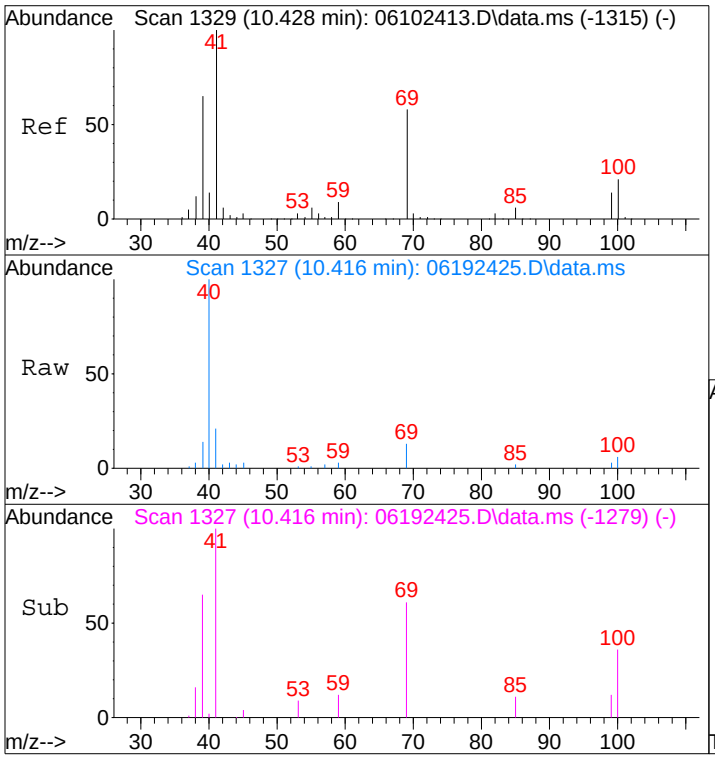


#48
1,4-Dioxane
Concen: 0.20 ng
RT: 10.13 min Scan# 1276
Delta R.T. 0.027 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion: 88 Resp: 2380

Ion	Ratio	Lower	Upper
88	100		
58	69.7	47.6	87.6

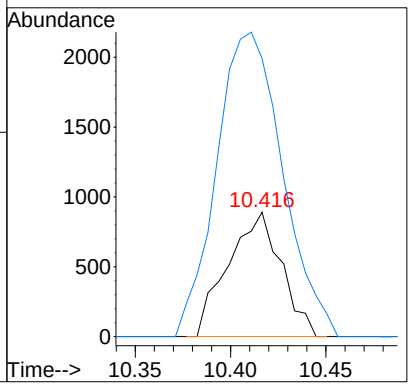


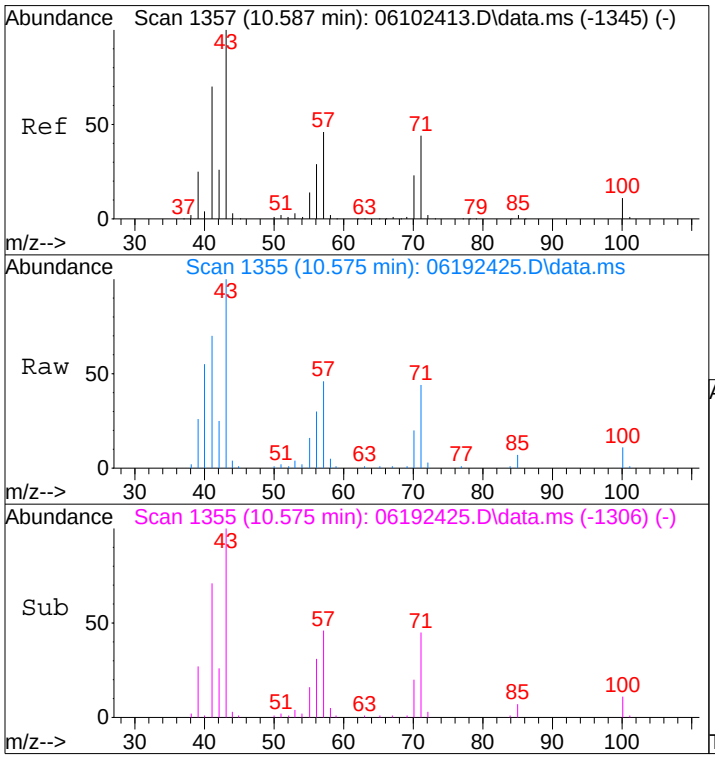


#50
Methyl Methacrylate
Concen: 0.32 ng
RT: 10.42 min Scan# 1327
Delta R.T. 0.023 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion:100 Resp: 1726

Ion	Ratio	Lower	Upper
100	100		
69	304.5	254.2	294.2#

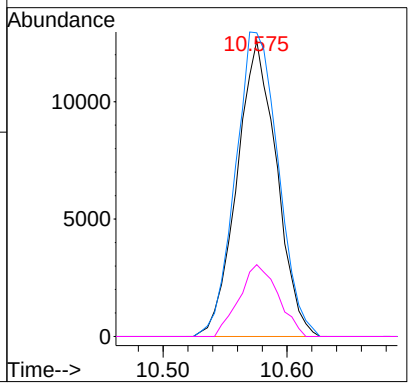


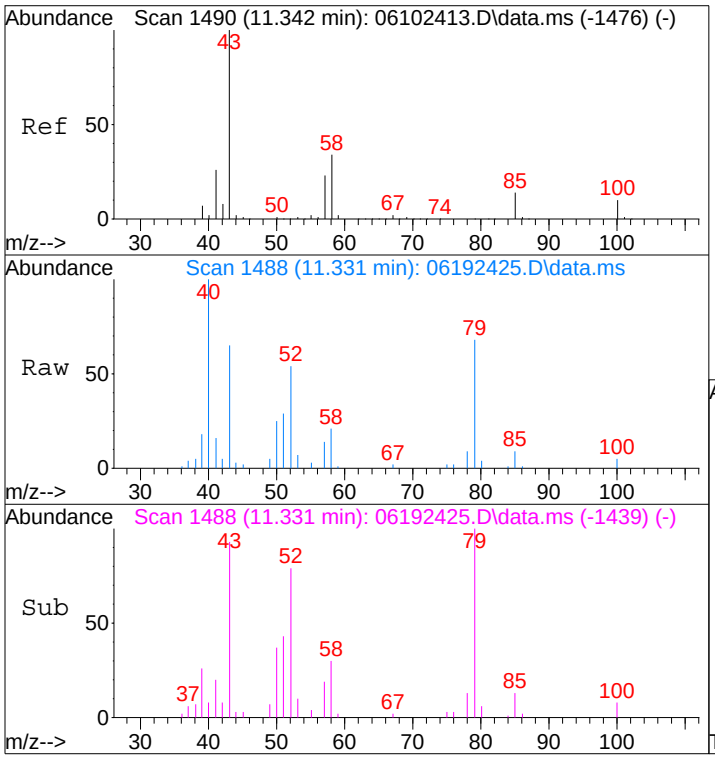


#51
n-Heptane
Concen: 2.10 ng
RT: 10.58 min Scan# 1355
Delta R.T. 0.029 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion: 71 Resp: 28063

Ion	Ratio	Lower	Upper
71	100		
57	110.7	83.9	123.9
100	23.8	4.8	44.8

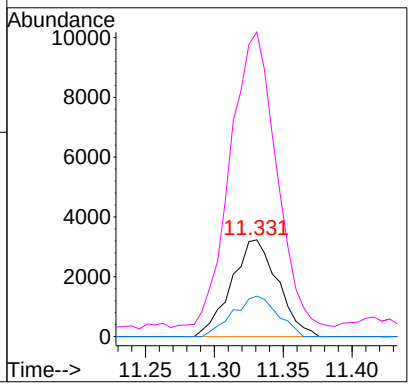


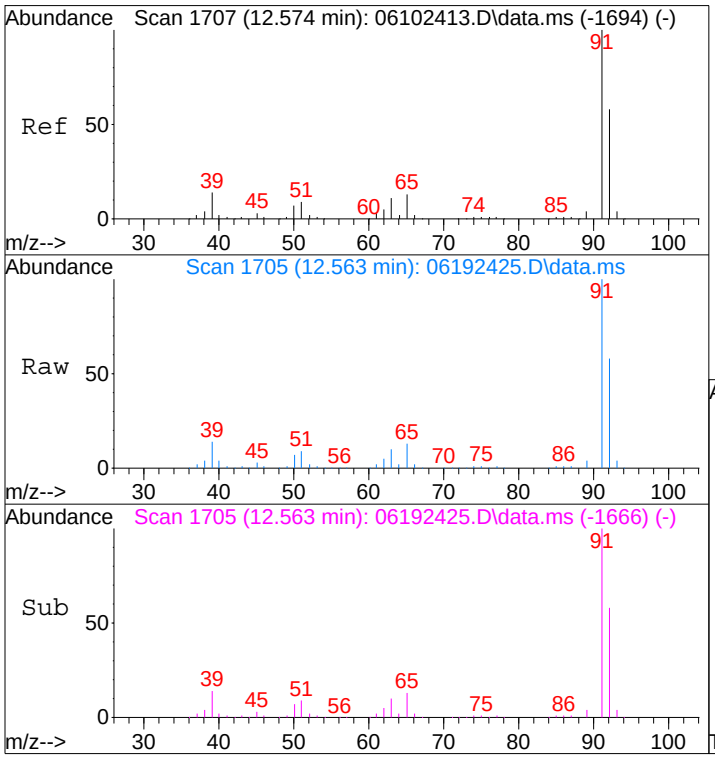


#53
4-Methyl-2-pentanone
Concen: 0.55 ng
RT: 11.33 min Scan# 1488
Delta R.T. 0.028 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion: 58 Resp: 7595

Ion	Ratio	Lower	Upper
58	100		
85	40.3	34.5	51.7
43	310.5	236.1	354.1

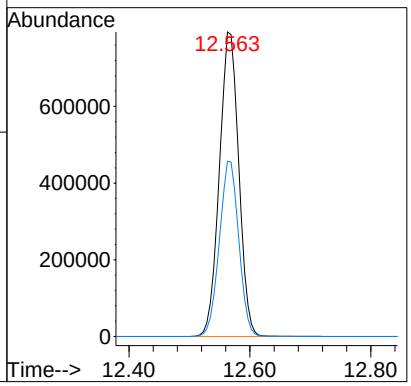


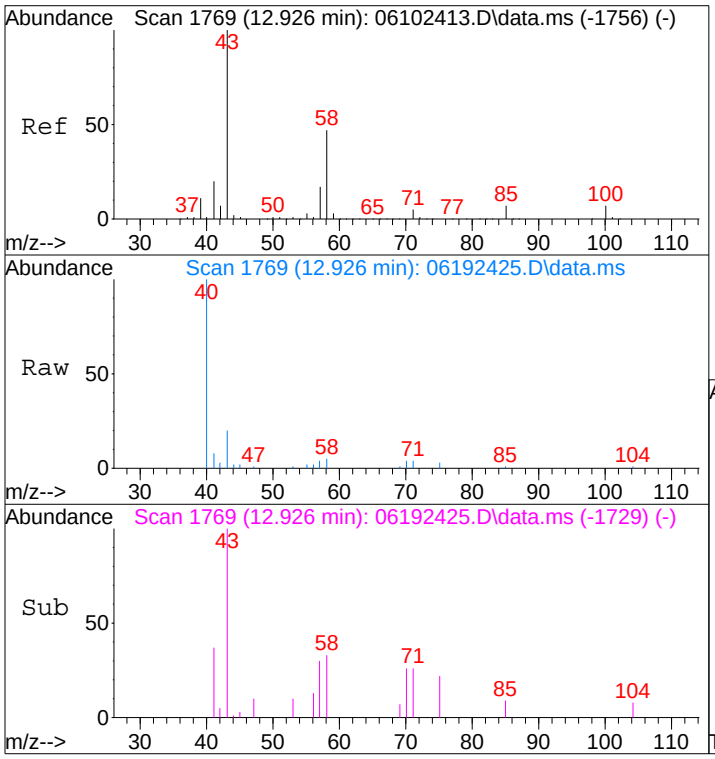


#58
Toluene
Concen: 26.86 ng
RT: 12.56 min Scan# 1705
Delta R.T. -0.029 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion: 91 Resp: 1767957

Ion	Ratio	Lower	Upper
91	100		
92	57.5	37.4	77.4

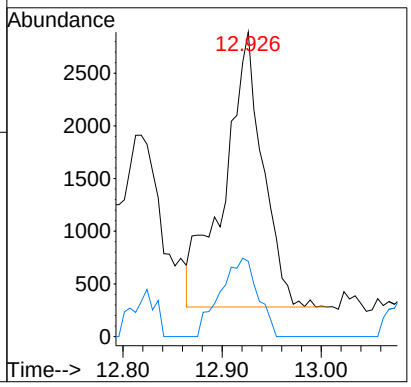


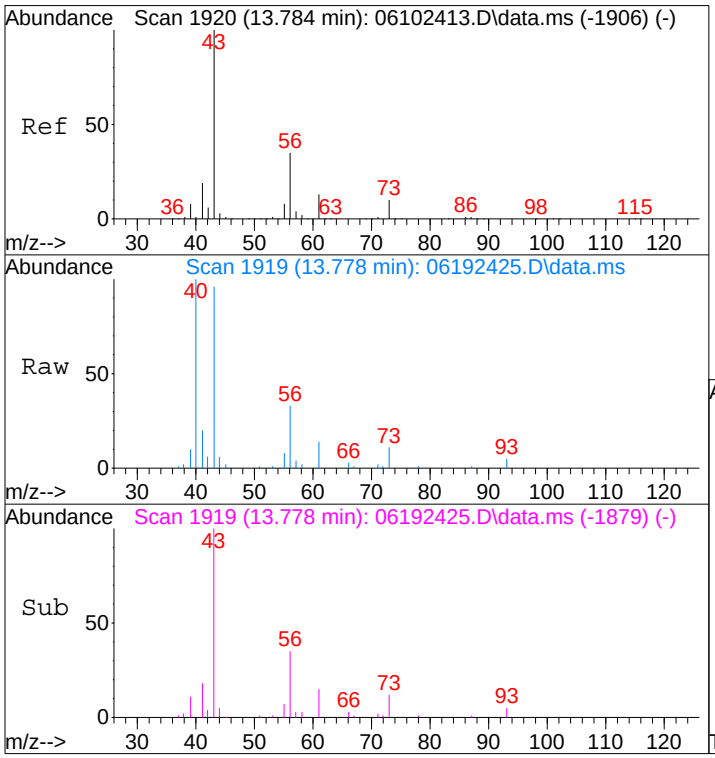


#59
2-Hexanone
Concen: 0.17 ng
RT: 12.93 min Scan# 1769
Delta R.T. -0.023 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion: 43 Resp: 7049

Ion	Ratio	Lower	Upper
43	100		
58	27.8	25.9	65.9

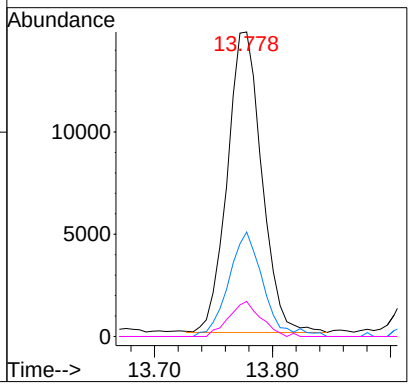


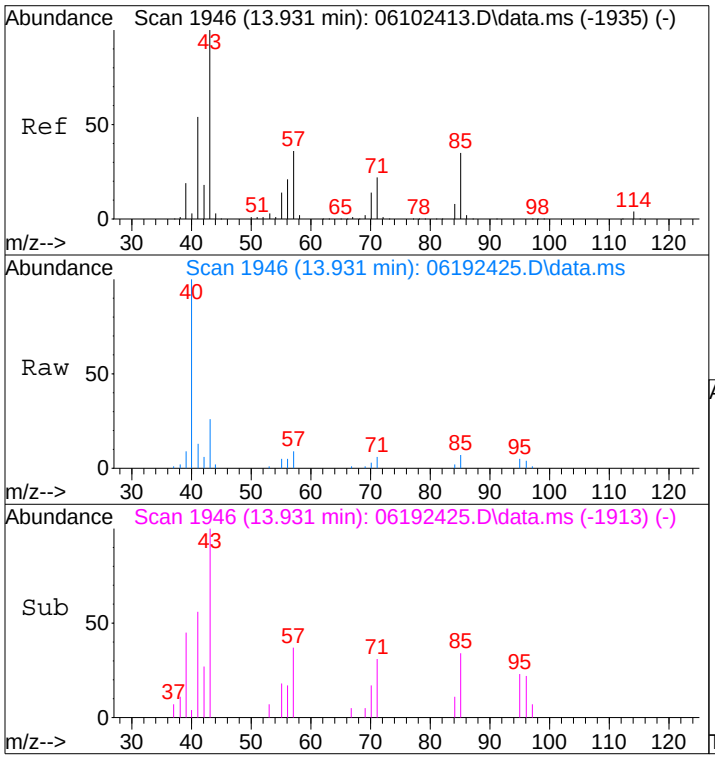


#62
n-Butyl Acetate
Concen: 0.69 ng
RT: 13.78 min Scan# 1919
Delta R.T. -0.023 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion: 43 Resp: 29834

Ion	Ratio	Lower	Upper
43	100		
56	34.7	14.3	54.3
73	10.9	0.0	30.4

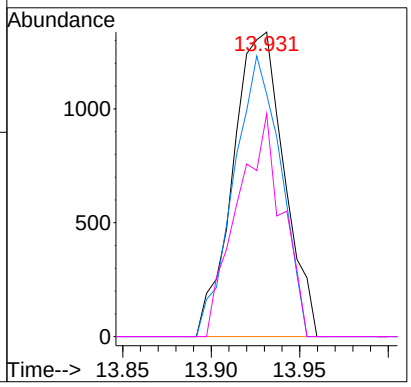


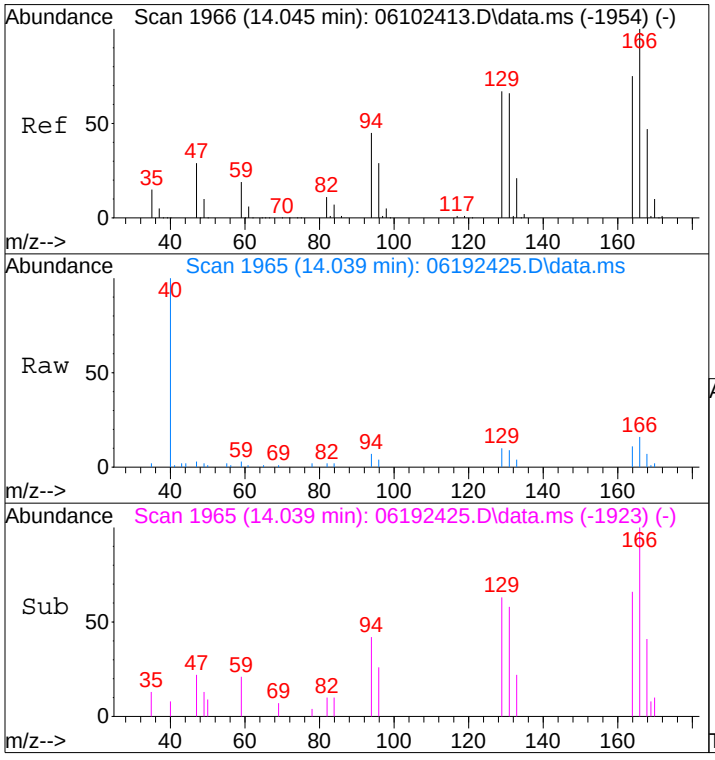


#63
n-Octane
Concen: 0.20 ng
RT: 13.93 min Scan# 1946
Delta R.T. -0.012 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion: 57 Resp: 2692

Ion	Ratio	Lower	Upper
57	100		
85	84.6	79.8	119.6
71	64.0	49.0	73.4

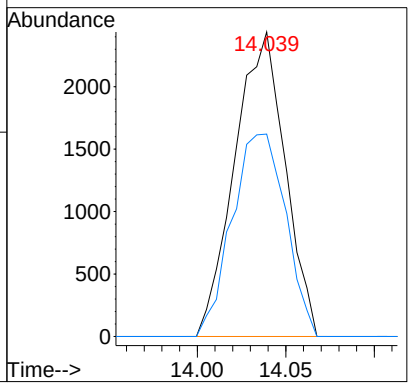


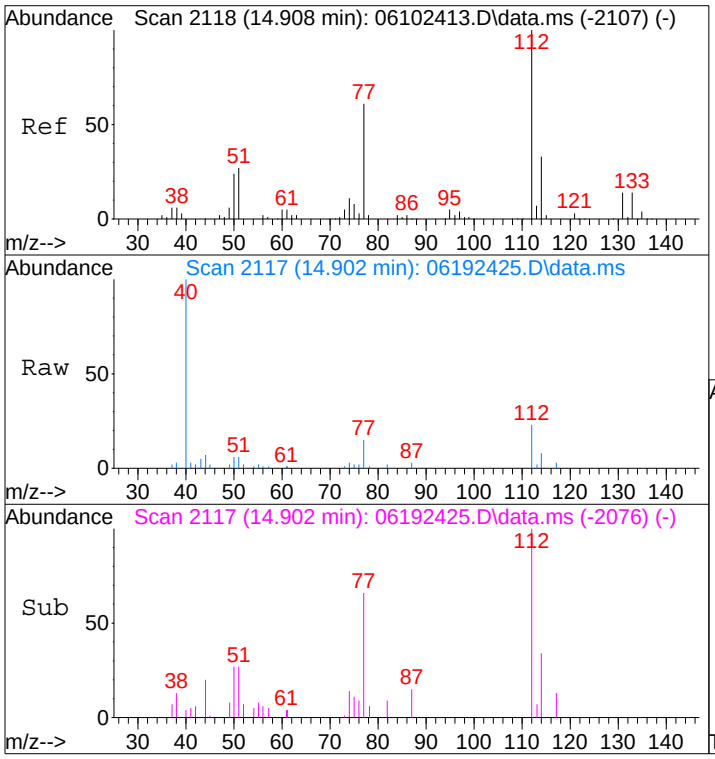


#64
Tetrachloroethene
Concen: 0.21 ng
RT: 14.04 min Scan# 1965
Delta R.T. -0.012 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion:166 Resp: 4824

Ion	Ratio	Lower	Upper
166	100		
164	70.9	56.9	96.9

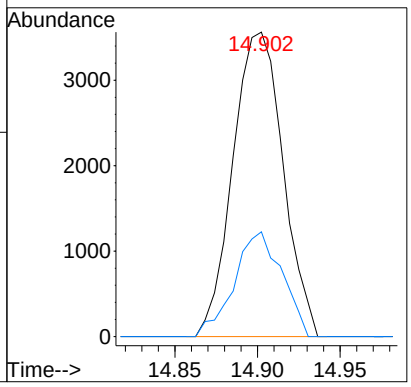


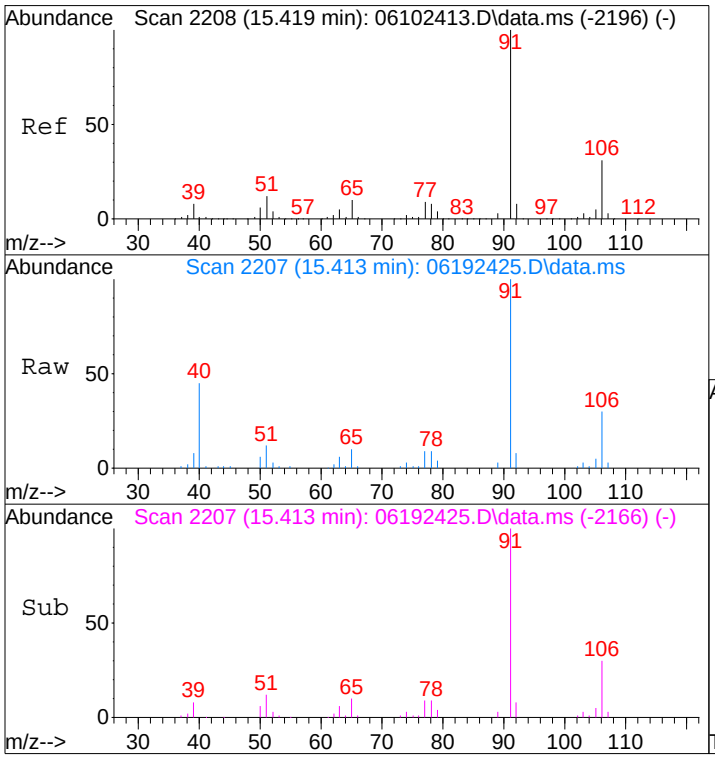


#65
Chlorobenzene
Concen: 0.16 ng
RT: 14.90 min Scan# 2117
Delta R.T. -0.017 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion:112 Resp: 7518

Ion	Ratio	Lower	Upper
112	100		
114	32.7	13.5	53.5

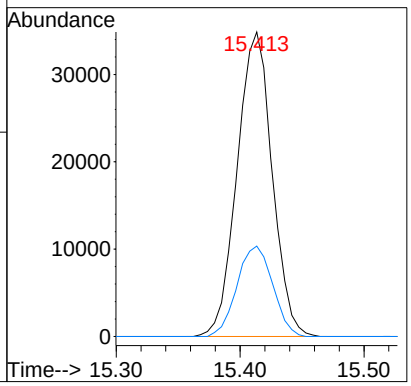


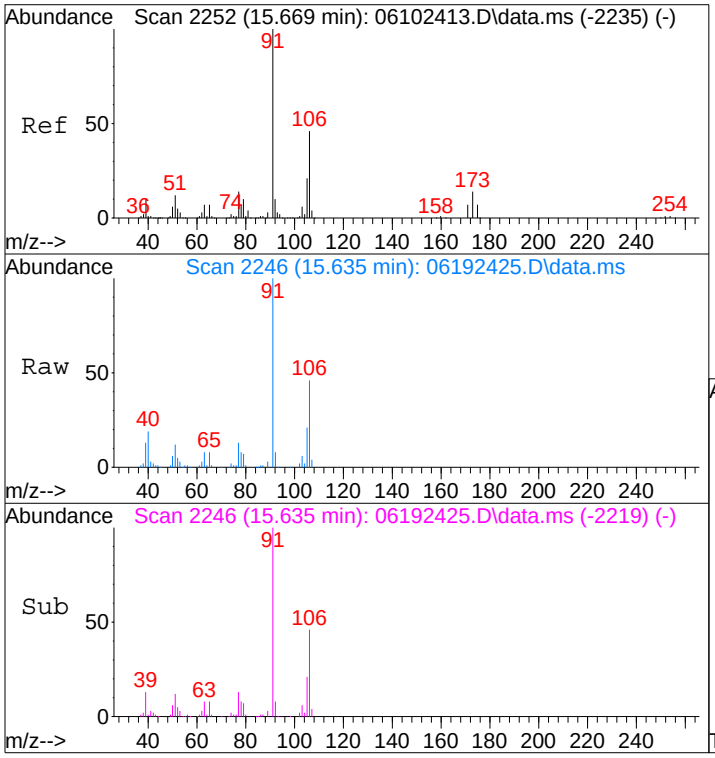


#66
Ethylbenzene
Concen: 0.91 ng
RT: 15.41 min Scan# 2207
Delta R.T. -0.017 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion: 91 Resp: 68590

Ion	Ratio	Lower	Upper
91	100		
106	30.2	10.7	50.7

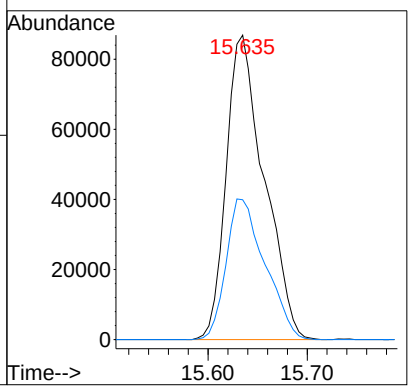


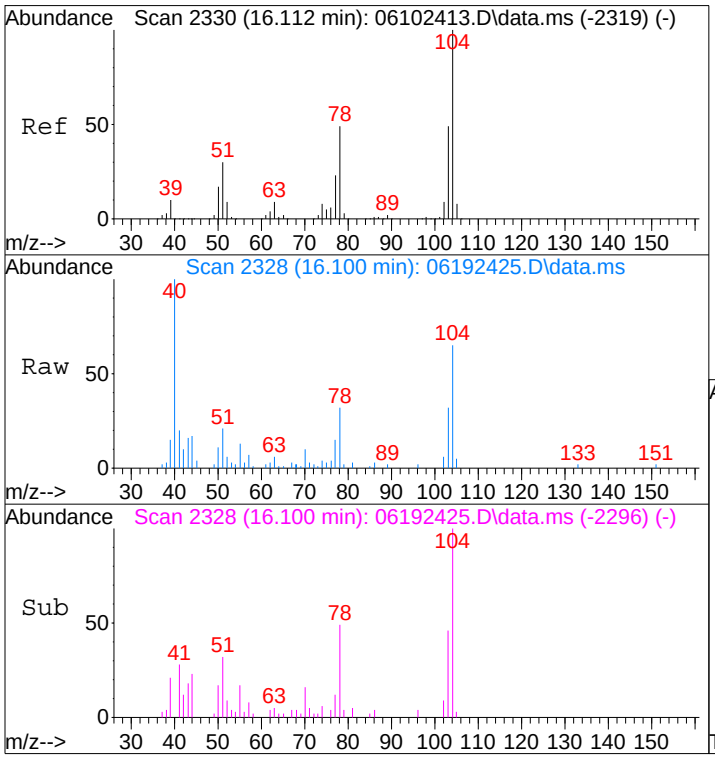


#67
m- & p-Xylenes
Concen: 3.65 ng
RT: 15.63 min Scan# 2246
Delta R.T. -0.046 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion: 91 Resp: 230885

Ion	Ratio	Lower	Upper
91	100		
106	47.3	25.9	65.9

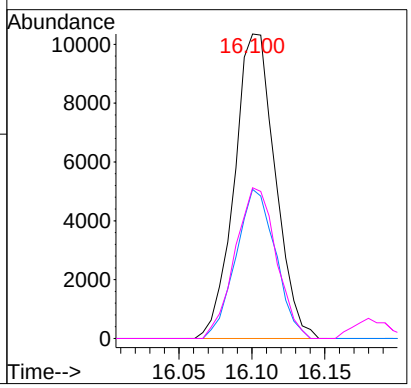


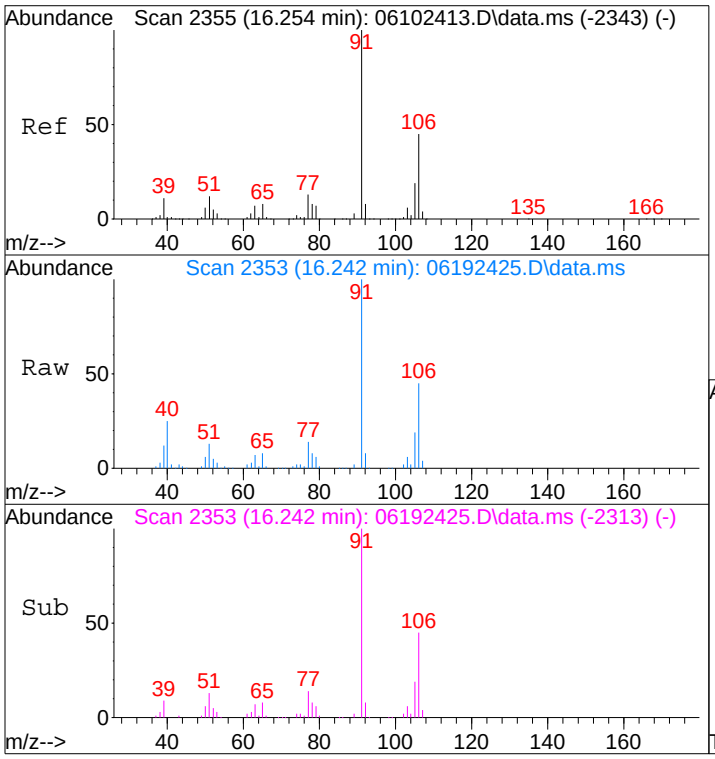


#69
Styrene
Concen: 0.47 ng
RT: 16.10 min Scan# 2328
Delta R.T. -0.017 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion:104 Resp: 20153

Ion	Ratio	Lower	Upper
104	100		
78	47.5	29.2	69.2
103	50.0	29.4	69.4

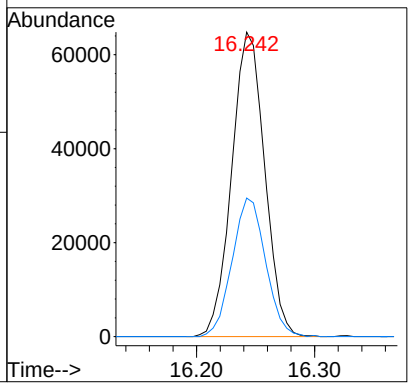


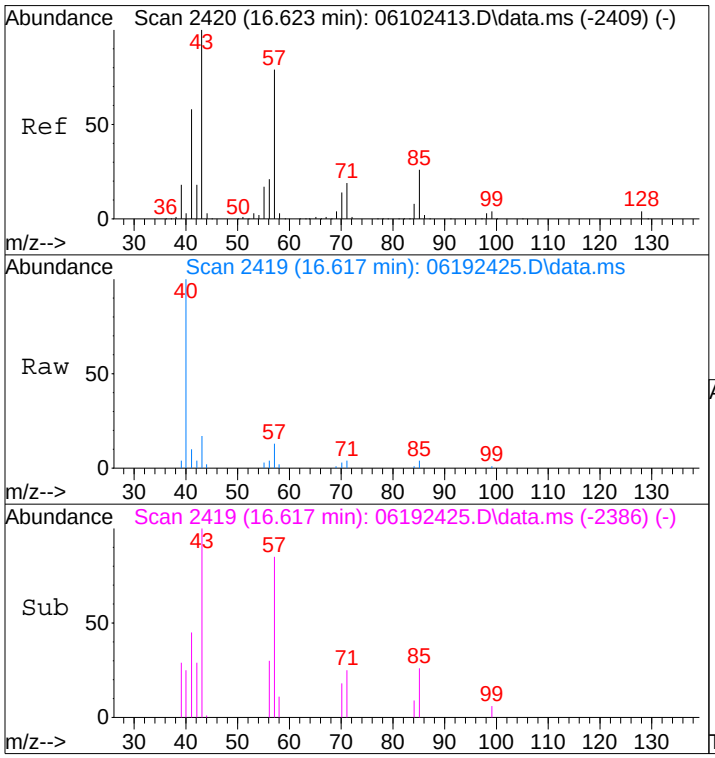


#70
o-Xylene
Concen: 2.02 ng
RT: 16.24 min Scan# 2353
Delta R.T. -0.023 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion: 91 Resp: 125978

Ion	Ratio	Lower	Upper
91	100		
106	46.1	24.5	64.5

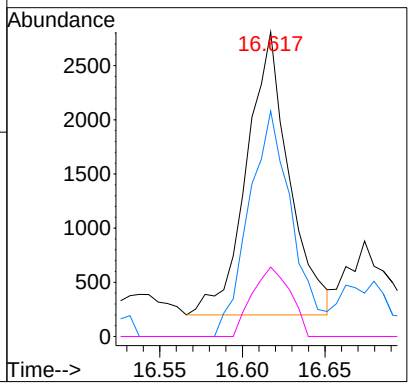


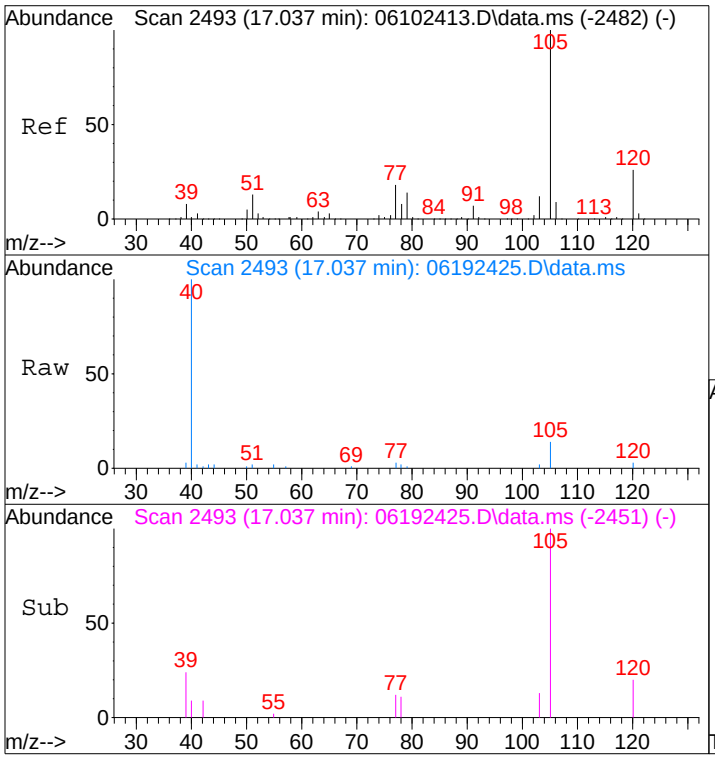


#71
n-Nonane
Concen: 0.13 ng
RT: 16.62 min Scan# 2419
Delta R.T. -0.012 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion: 43 Resp: 4666

Ion	Ratio	Lower	Upper
43	100		
57	81.7	58.2	98.2
85	22.1	5.9	45.9

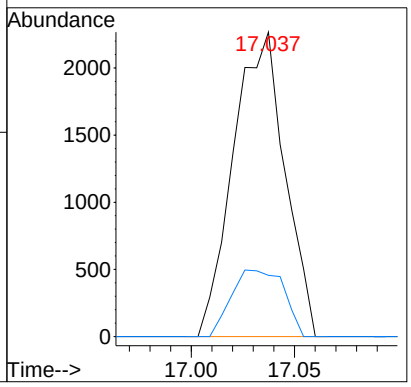


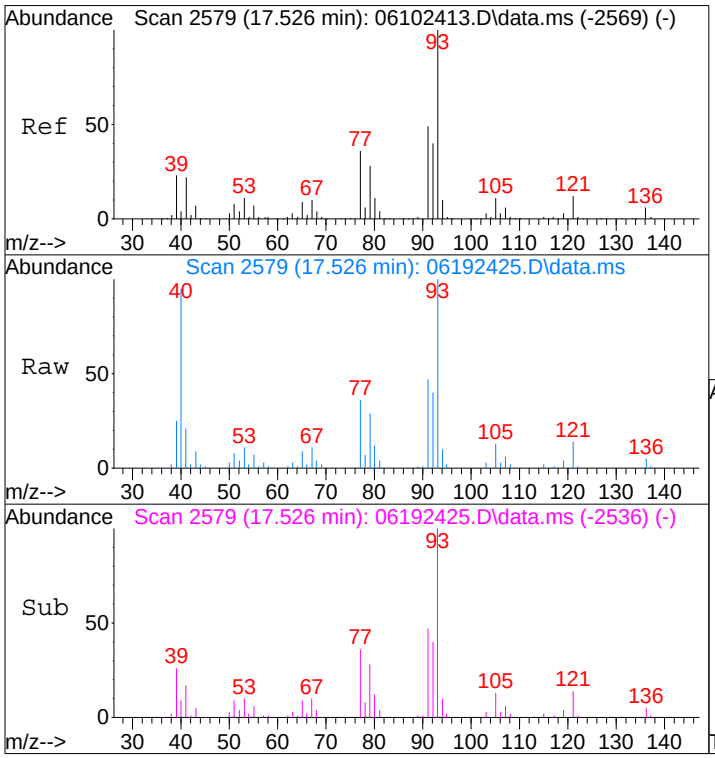


#74
Cumene
Concen: 0.05 ng
RT: 17.04 min Scan# 2493
Delta R.T. -0.012 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion:105 Resp: 3924

Ion	Ratio	Lower	Upper
105	100		
120	22.3	6.0	46.0

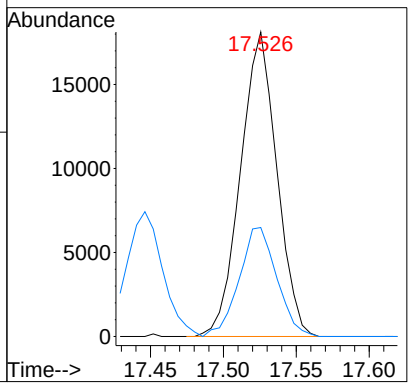


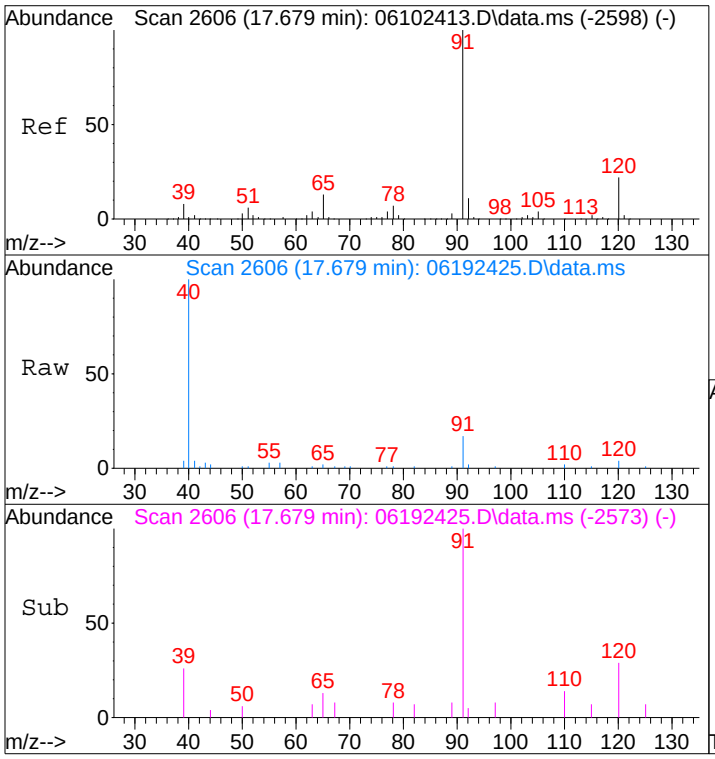


#75
alpha-Pinene
Concen: 0.86 ng
RT: 17.53 min Scan# 2579
Delta R.T. -0.006 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion: 93 Resp: 31366

Ion	Ratio	Lower	Upper
93	100		
77	37.1	15.3	55.3

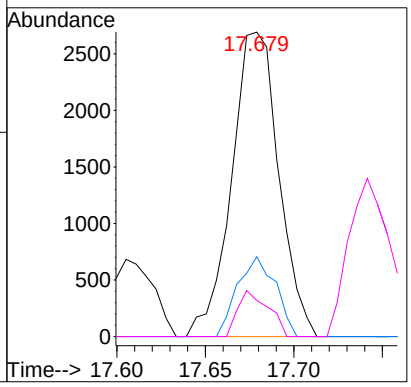


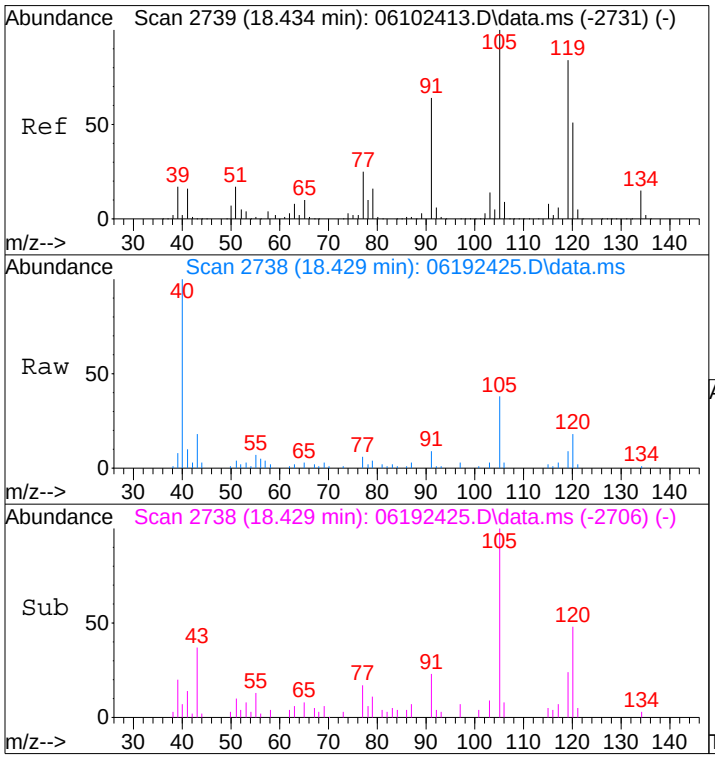


#76
n-Propylbenzene
Concen: 0.05 ng
RT: 17.68 min Scan# 2606
Delta R.T. -0.012 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion: 91 Resp: 4986

Ion	Ratio	Lower	Upper
91	100		
120	21.2	2.7	42.7
65	9.8	0.0	32.7

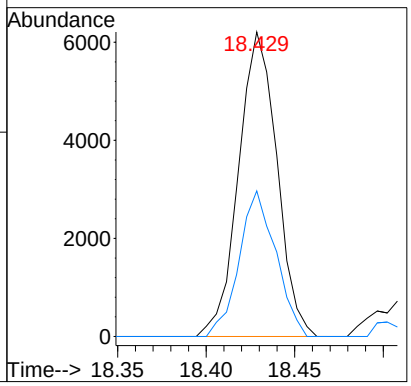


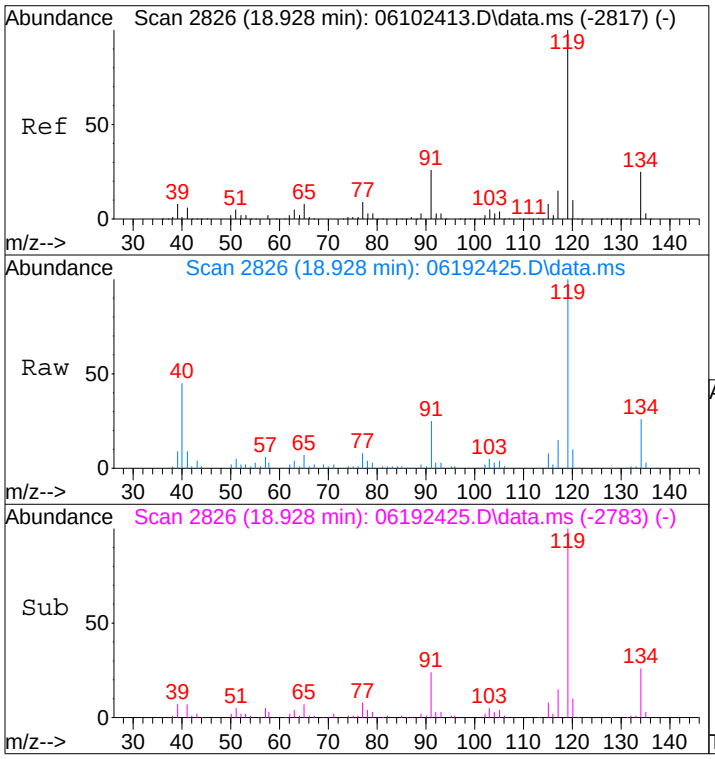


#82
1,2,4-Trimethylbenzene
Concen: 0.14 ng
RT: 18.43 min Scan# 2738
Delta R.T. -0.017 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion:105 Resp: 9365

Ion	Ratio	Lower	Upper
105	100		
120	45.7	31.9	71.9

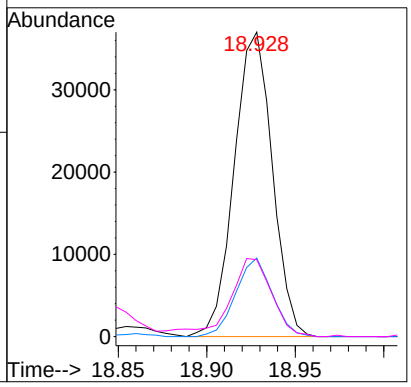


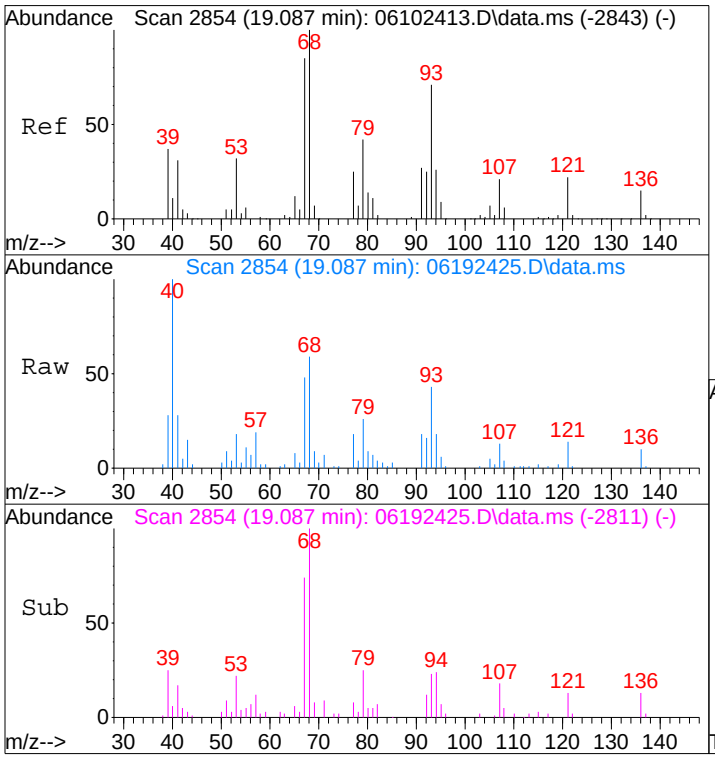


#88
4-Isopropyltoluene (p-Cymene)
Concen: 0.71 ng
RT: 18.93 min Scan# 2826
Delta R.T. -0.006 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion:119 Resp: 55491

Ion	Ratio	Lower	Upper
119	100		
134	24.7	4.9	44.9
91	28.5	5.8	45.8

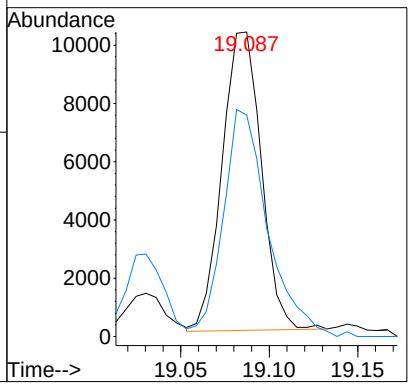




#91
d-Limonene
Concen: 0.68 ng
RT: 19.09 min Scan# 2854
Delta R.T. -0.006 min
Lab File: 06192425.D
Acq: 19 Jun 2024 22:13

Tgt Ion: 68 Resp: 15784

Ion	Ratio	Lower	Upper
68	100		
93	86.8	52.2	92.2



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192425.D Vial: 13
Acq On : 19 Jun 2024 22:13 Operator: SC
Sample : P2402249-038 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 15:18:19 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

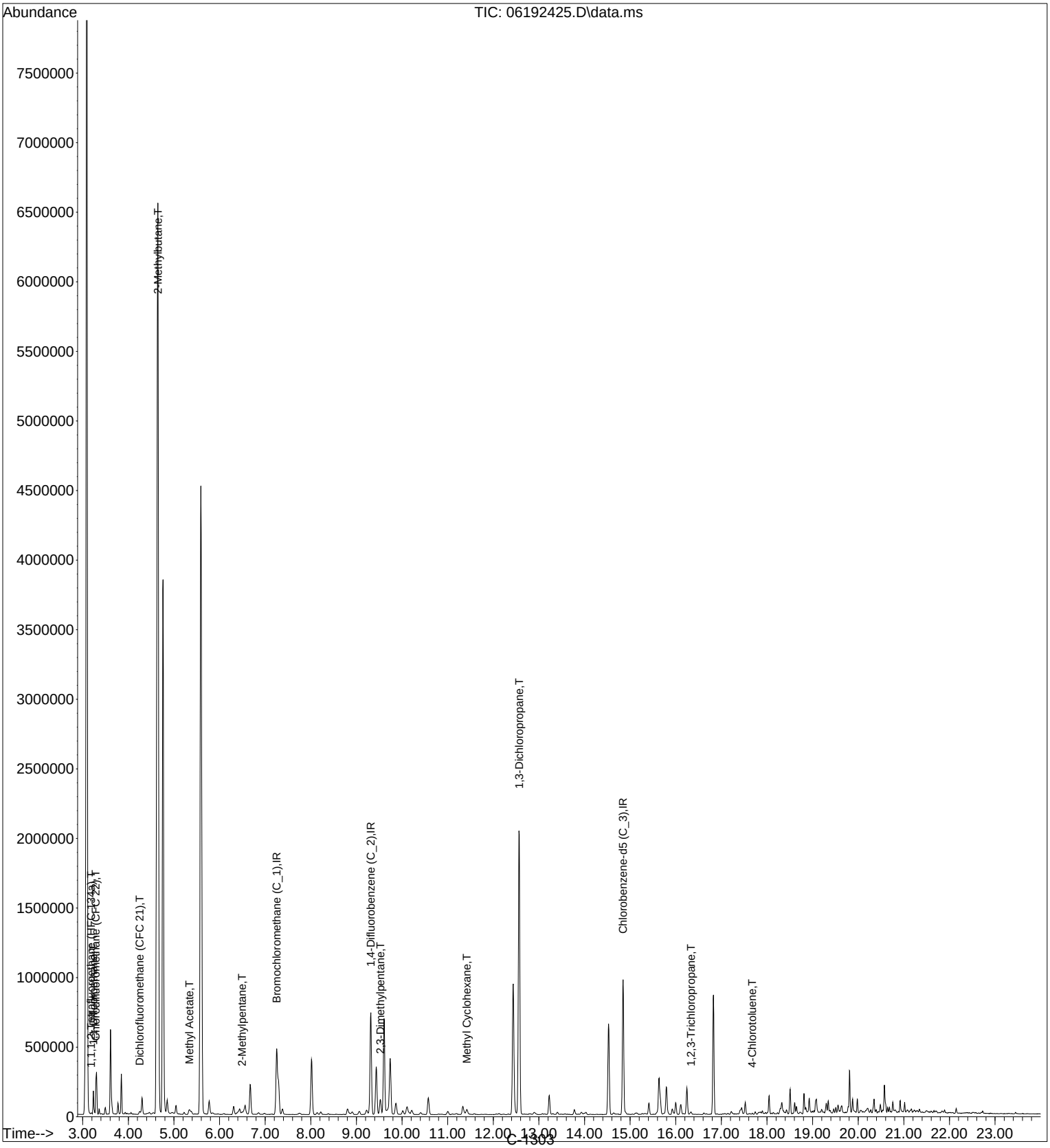
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.25	130	159064	12.500	ng		0.00
16) 1,4-Difluorobenzene (C 2)	9.31	114	686337	12.500	ng		0.00
19) Chlorobenzene-d5 (C_3)	14.85	54	164580	12.500	ng		0.00
Target Compounds							Qvalue
2) Chloropentafluoroethane	3.14	85	237	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.18	83	3225	0.198	ng	#	1
4) 1,1-Difluoroethane	3.23	65	41107	2.960	ng		95
5) Chlorodifluoromethane ...	3.28	67	2555	0.471	ng	#	40
6) 1-Chloro-1,1-Difluoroe...	3.51	65	687	N.D.			
7) Dichlorofluoromethane ...	4.25	67	24580	0.674	ng		98
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	0.00	83	0	N.D.	d		
10) 2-Methylbutane	4.65	57	189512	9.989	ng	#	1
11) Methyl Acetate	5.34	43	35849	0.669	ng	#	46
12) 2-Methylpentane	6.49	71	2540	0.184	ng	#	1
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	9.05	84	1066	N.D.			
17) 2,3-Dimethylpentane	9.53	56	52253	1.573	ng		92
18) Dibromomethane	9.80	174	199	N.D.			
20) Methyl Cyclohexane	11.42	55	13327	0.472	ng		89
21) 1,3-Dichloropropane	12.57	76	9357	0.426	ng	#	1
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	15.12	91	62	N.D.			
24) 1,2,3-Trichloropropane	16.33	75	2309	0.105	ng	#	46
25) Bromobenzene	17.04	77	743	N.D.			
26) 2-Chlorotoluene	17.61	91	1153	N.D.			
27) 4-Chlorotoluene	17.68	91	4986	0.104	ng	#	41
28) Indane	19.12	117	1830	N.D.			
29) Indene	19.21	115	394	N.D.			
30) 1,2,4,5-Tetramethylben...	20.22	119	2054	N.D.			
31) 1,2,3,4-Tetramethylben...	20.22	119	2054	N.D.			
32) 1,2,3,5-Tetramethylben...	20.60	119	3164	N.D.			
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192425.D Vial: 13
Acq On : 19 Jun 2024 22:13 Operator: SC
Sample : P2402249-038 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:18:19 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



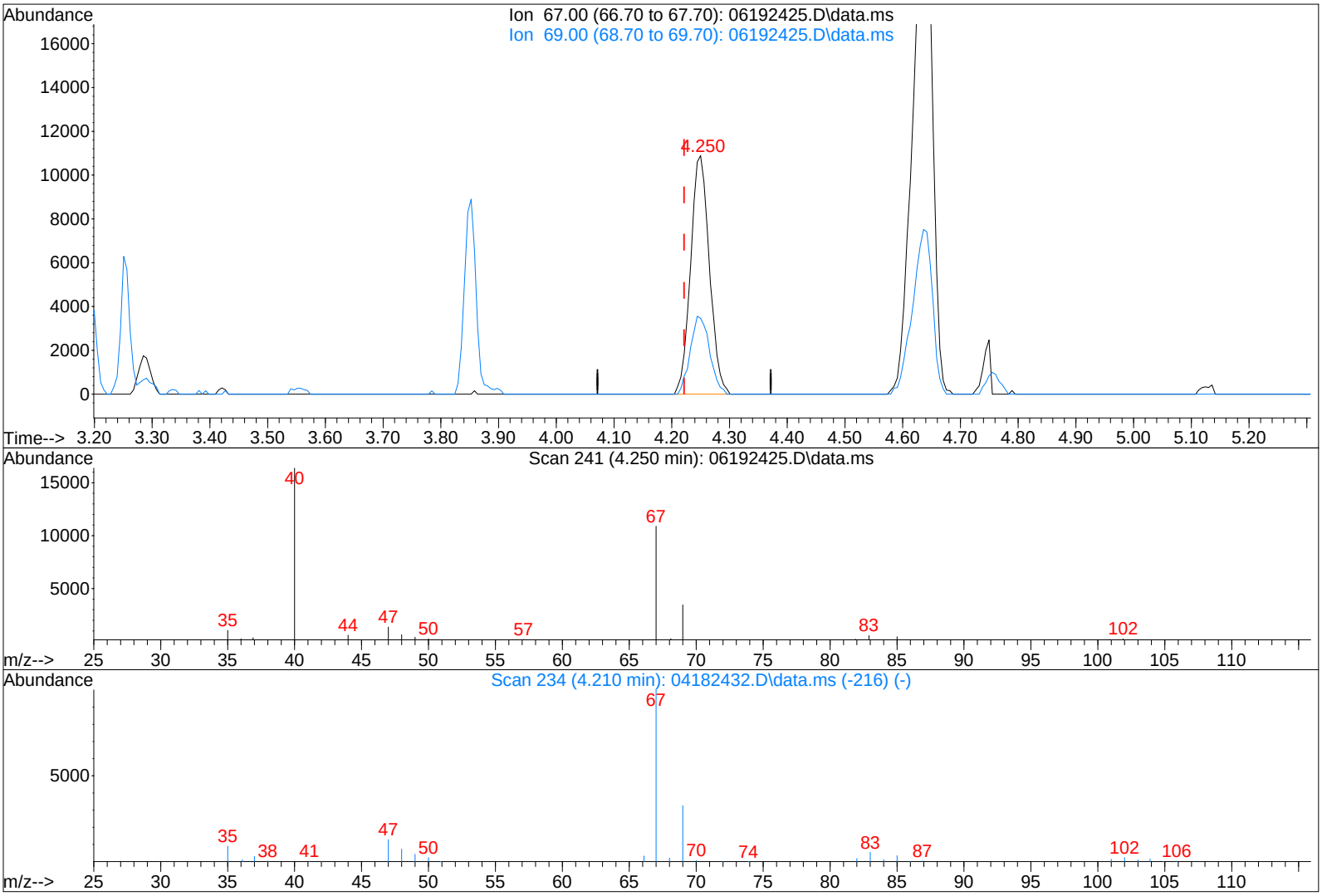
C-1303

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\19\06192425.D Vial: 13
Acq On : 19 Jun 2024 22:13 Operator: SC
Sample : P2402249-038 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 15:11:57 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06192425.D\data.ms

(7) Dichlorofluoromethane (CFC 21) (T)

4.250min (+0.028) 0.67ng

response 24580

Ion	Exp%	Act%
67.00	100	100
69.00	32.40	33.54
0.00	0.00	0.00
0.00	0.00	0.00

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\19\
Data File : 06192425.D
Acq On : 19 Jun 2024 22:13
Operator : SC
Sample : P2402249-038 (400mL)
Misc : S37-06062402
ALS Vial : 13 Sample Multiplier: 1

MJ 6/28/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06192425.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.092	19	37	50	rBV	9343823	18205350	100.00%	27.755%
2	3.194	50	55	58	rVV4	10990	22905	0.13%	0.035%
3	3.234	58	62	68	rVV	169393	221113	1.21%	0.337%
4	3.302	68	74	80	rVV2	304237	556841	3.06%	0.849%
5	3.358	80	84	89	rVV	39387	48726	0.27%	0.074%
6	3.415	89	94	98	rVB2	6407	12457	0.07%	0.019%
7	3.495	103	108	115	rBV4	47689	74617	0.41%	0.114%
8	3.608	122	128	146	rVB2	607311	953050	5.23%	1.453%
9	3.773	151	157	163	rVV	77357	104397	0.57%	0.159%
10	3.847	163	170	181	rVV2	287568	388370	2.13%	0.592%
11	3.932	181	185	188	rVB2	10978	14015	0.08%	0.021%
12	4.057	203	207	212	rVB2	10879	13104	0.07%	0.020%
13	4.250	234	241	244	rBV	19924	41628	0.23%	0.063%
14	4.301	244	250	263	rVV	118452	212640	1.17%	0.324%
15	4.460	263	278	284	rVV6	12445	38369	0.21%	0.058%
16	4.551	286	294	299	rVV4	9987	28721	0.16%	0.044%
17	4.647	299	311	323	rVV	6546616	16801231	92.29%	25.615%
18	4.761	323	331	342	rVV	3839736	7058523	38.77%	10.761%
19	4.852	342	347	359	rVV	100720	202467	1.11%	0.309%
20	4.954	359	365	372	rVV4	9696	31694	0.17%	0.048%
21	5.045	375	381	389	rVB	59310	105611	0.58%	0.161%
22	5.221	405	412	421	rVB4	15321	29421	0.16%	0.045%
23	5.340	424	433	438	rBV2	35455	103656	0.57%	0.158%
24	5.590	465	477	500	rVV2	4514006	10608841	58.27%	16.174%
25	5.772	500	509	518	rVV	96160	211564	1.16%	0.323%
26	5.851	518	523	533	rVB6	9357	23619	0.13%	0.036%
27	6.090	559	565	573	rBV4	5967	15063	0.08%	0.023%
28	6.311	595	604	611	rBV	58218	128797	0.71%	0.196%
29	6.436	611	626	632	rBV2	36701	114849	0.63%	0.175%
30	6.561	639	648	658	rVB3	63324	167453	0.92%	0.255%
31	6.669	658	667	681	rVB	215204	482182	2.65%	0.735%
32	6.851	690	699	707	rBV3	11596	29492	0.16%	0.045%
33	6.975	714	721	722	rBV4	7759	11228	0.06%	0.017%
34	7.254	758	770	785	rBV3	472816	1623073	8.92%	2.474%
35	7.379	785	792	805	rVB	39634	92766	0.51%	0.141%
36	7.748	851	857	867	rVB7	9850	29856	0.16%	0.046%
37	8.015	893	904	918	rVB	397128	917216	5.04%	1.398%
38	8.140	918	926	933	rBV3	14244	36654	0.20%	0.056%
39	8.219	933	940	950	rVB3	18333	42861	0.24%	0.065%
40	8.384	963	969	975	rVB4	5539	11996	0.07%	0.018%

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\19\
Data File : 06192425.D
Acq On : 19 Jun 2024 22:13
Operator : SC
Sample : P2402249-038 (400mL)
Misc : S37-06062402
ALS Vial : 13 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

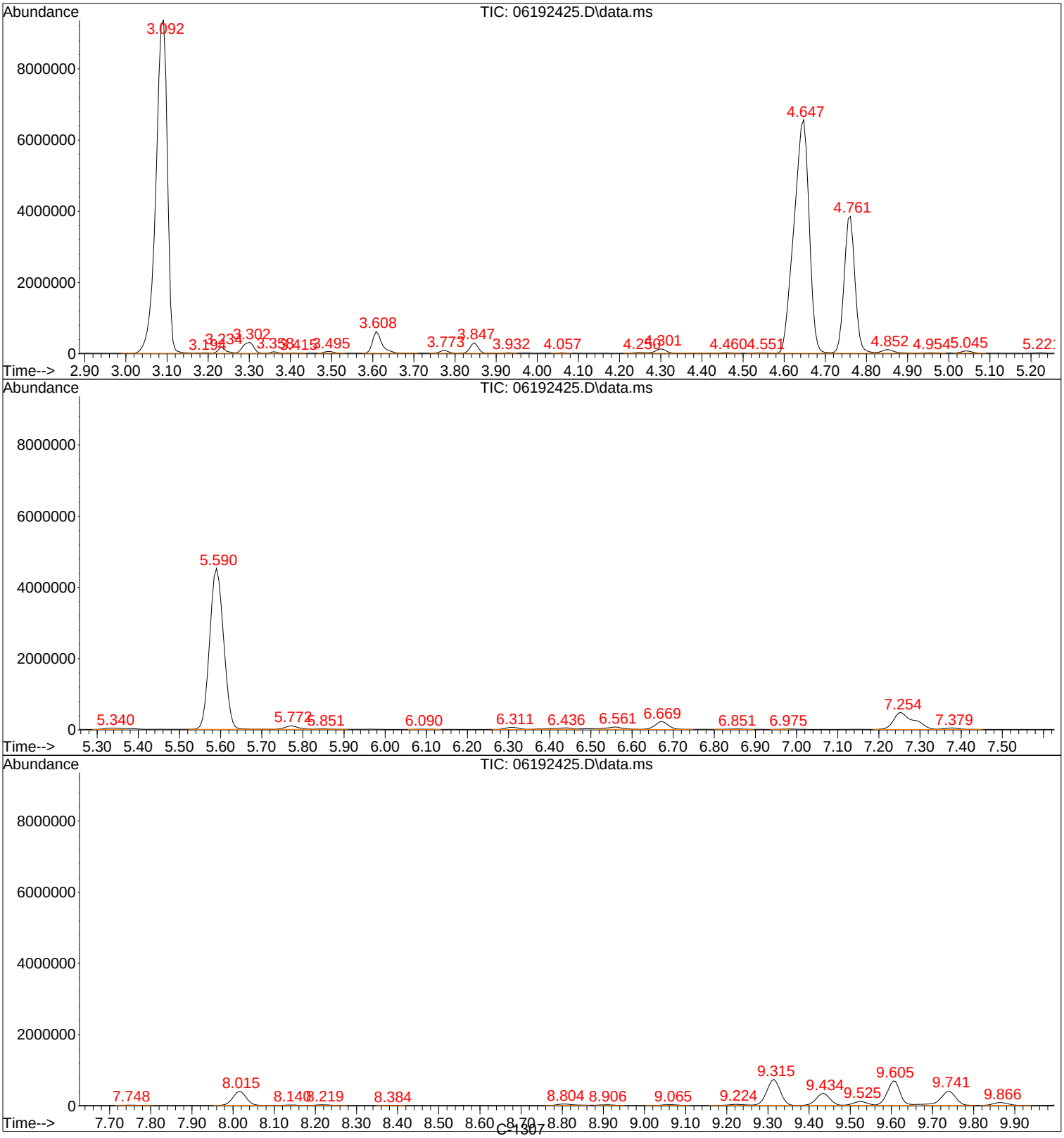
41	8.804	1035	1043	1054	rBV	41125	120238	0.66%	0.183%
42	8.906	1056	1061	1069	rVB3	18689	46306	0.25%	0.071%
43	9.065	1078	1089	1097	rVB4	22792	62494	0.34%	0.095%
44	9.224	1105	1117	1123	rBV3	30645	81228	0.45%	0.124%
45	9.315	1123	1133	1143	rVV	731692	1667672	9.16%	2.542%
46	9.434	1143	1154	1163	rVV	342455	800204	4.40%	1.220%
47	9.525	1163	1170	1176	rVV	106082	257894	1.42%	0.393%
48	9.605	1176	1184	1193	rVV	688961	1494634	8.21%	2.279%
49	9.741	1196	1208	1219	rVV	402100	1044104	5.74%	1.592%
50	9.866	1221	1230	1243	rVB3	79655	201403	1.11%	0.307%

Sum of corrected areas: 65592593

Data Path : I:\MS09\DATA\2024 06\19\
Data File : 06192425.D
Acq On : 19 Jun 2024 22:13
Operator : SC
Sample : P2402249-038 (400mL)
Misc : S37-06062402
ALS Vial : 13 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\19\\
Data File : 06192425.D
Acq On : 19 Jun 2024 22:133
Operator : SCC
Sample : P2402249-038 (400mL))
Misc : S37-060624022
ALS Vial : 13 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT/LSC Reviewed)

MJ 6/29/24

Data File : I:\MS09\DATA\2024 06\19\06192426.D Vial: 14
Acq On : 19 Jun 2024 22:46 Operator: SC
Sample : P2402249-039 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 09:50:55 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	7.22	130	159652	12.500	ng	0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	688589	12.500	ng	0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	161191	12.500	ng	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4(...	7.99	65	350363	12.347	ng	0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.80%			
57) Toluene-d8 (SS2)	12.43	98	774701	12.559	ng	-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.48%			
73) Bromofluorobenzene (SS3)	16.83	174	279949	12.568	ng	-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.56%			
Target Compounds						Qvalue
2) Propene	0.00	42	0	N.D. d		
3) Dichlorodifluoromethan...	3.38	85	4607m	0.123	ng	
4) Chloromethane	3.51	50	2529	0.098	ng	96
5) 1,2-Dichloro-1,1,2,2-t...	3.61	135	112	N.D.		
6) Vinyl Chloride	0.00	62	0	N.D.		
7) 1,3-Butadiene	3.77	54	516	N.D.		
8) Bromomethane	0.00	94	0	N.D.		
9) Chloroethane	0.00	64	0	N.D.		
10) Ethanol	4.39	45	51	N.D.		
11) Acetonitrile	4.44	41	1223	N.D.		
12) Acrolein	4.55	56	212	N.D.		
13) Acetone	0.00	58	0	N.D. d		
14) Trichlorofluoromethane	4.75	101	2501524	65.816	ng	100
15) 2-Propanol (Isopropanol)	4.88	45	1505	N.D.		
16) Acrylonitrile	5.04	53	569	N.D.		
17) 1,1-Dichloroethene	0.00	96	0	N.D.		
18) 2-Methyl-2-Propanol (t...	5.39	59	425	N.D.		
19) Methylene Chloride	5.35	84	1119	0.064	ng	97
20) 3-Chloro-1-propene (Al...	5.43	41	118	N.D.		
21) Trichlorotrifluoroethane	5.58	151	1436365	89.334	ng	95
22) Carbon Disulfide	0.00	76	0	N.D. d		
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.		
24) 1,1-Dichloroethane	0.00	63	0	N.D.		
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.		
26) Vinyl Acetate	0.00	86	0	N.D.		
27) 2-Butanone (MEK)	0.00	72	0	N.D. d		
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.		
29) Diisopropyl Ether	0.00	87	0	N.D. d		
30) Ethyl Acetate	0.00	61	0	N.D.		
31) n-Hexane	7.30	57	853	N.D.		
32) Chloroform	7.35	83	17284	0.553	ng	98
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	8.11	62	184	N.D.		
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	8.83	56	2120	No Calib	#	
41) Benzene	8.90	78	2557	N.D.		
42) Carbon Tetrachloride	0.00	117	0	N.D.		
43) Cyclohexane	9.29	84	975	N.D.		
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	0.00	63	0	N.D.		
46) Bromodichloromethane	10.08	83	766	N.D.		
47) Trichloroethene	10.15	130	859	N.D.		
48) 1,4-Dioxane	0.00	88	0	N.D.		
49) 2,2,4-Trimethylpentane...	0.00	57	0	N.D.		
50) Methyl Methacrylate	0.00	100	0	N.D.		

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192426.D Vial: 14
Acq On : 19 Jun 2024 22:46 Operator: SC
Sample : P2402249-039 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 09:50:55 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

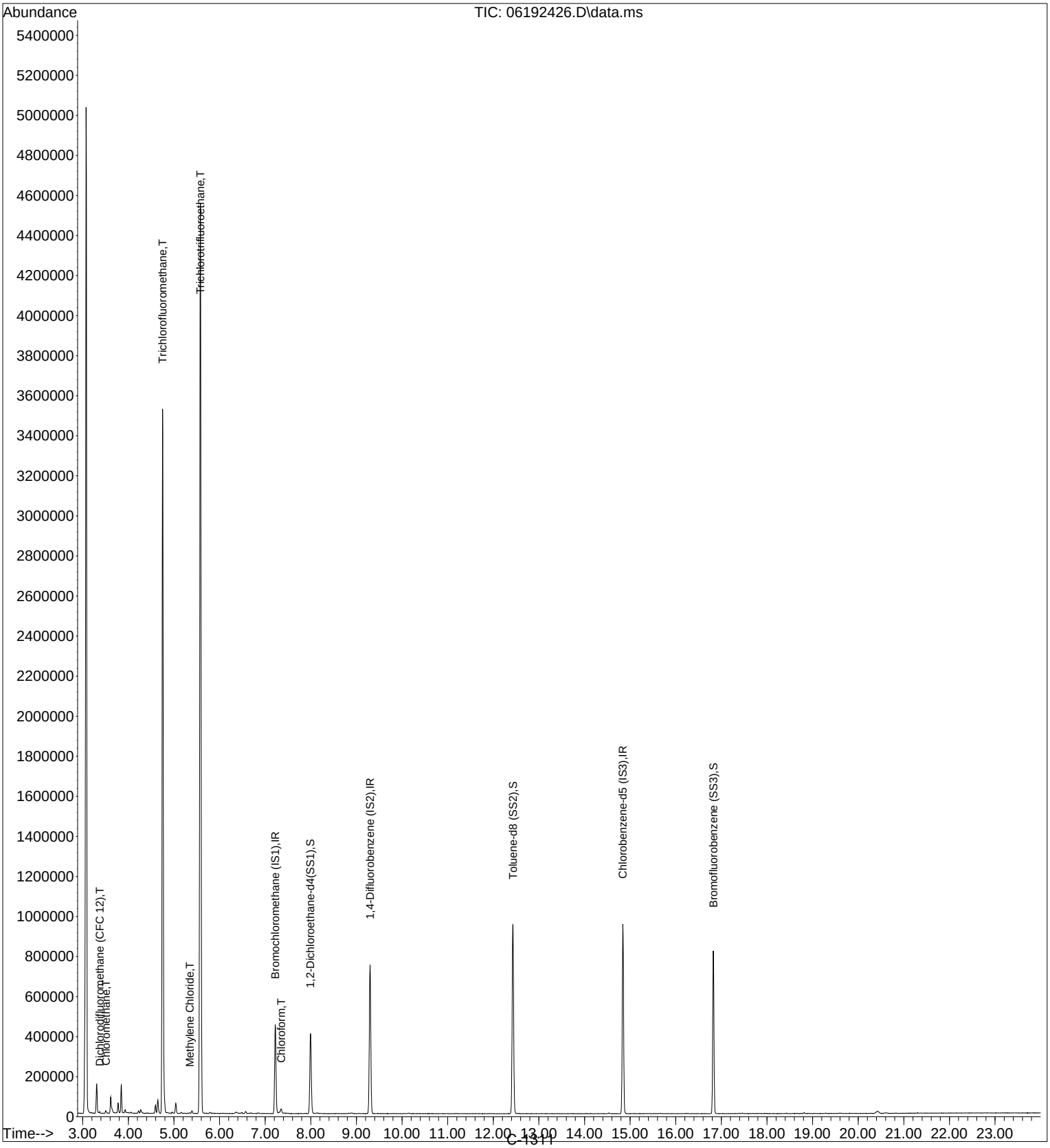
Internal Standards	R.T.	QIon	Response	Conc Units Dev(Min)
51) n-Heptane	0.00	71	0	N.D.
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.
58) Toluene	12.56	91	1346	N.D.
59) 2-Hexanone	0.00	43	0	N.D.
60) Dibromochloromethane	13.07	129	475	N.D.
61) 1,2-Dibromoethane	0.00	107	0	N.D.
62) n-Butyl Acetate	0.00	43	0	N.D.
63) n-Octane	0.00	57	0	N.D.
64) Tetrachloroethene	14.03	166	303	N.D.
65) Chlorobenzene	14.90	112	637	N.D.
66) Ethylbenzene	15.41	91	919	N.D.
67) m- & p-Xylenes	15.64	91	1477	N.D.
68) Bromoform	15.67	173	707	N.D.
69) Styrene	0.00	104	0	N.D.
70) o-Xylene	16.24	91	694	N.D.
71) n-Nonane	0.00	43	0	N.D.
72) 1,1,2,2-Tetrachloroethane	16.21	83	301	N.D.
74) Cumene	17.03	105	841	N.D.
75) alpha-Pinene	0.00	93	0	N.D.
76) n-Propylbenzene	17.68	91	1053	N.D.
77) 3-Ethyltoluene	17.03	105	841	No Calib
78) 4-Ethyltoluene	17.86	105	695	N.D.
79) 1,3,5-Trimethylbenzene	17.95	105	323	N.D.
80) alpha-Methylstyrene	0.00	118	0	N.D.
81) 2-Ethyltoluene	17.03	105	841	No Calib
82) 1,2,4-Trimethylbenzene	18.43	105	458	N.D.
83) n-Decane	0.00	58	0	N.D.
84) Benzyl Chloride	0.00	91	0	N.D.
85) 1,3-Dichlorobenzene	18.58	146	648	N.D.
86) 1,4-Dichlorobenzene	18.66	146	619	N.D.
87) sec-Butylbenzene	18.74	105	832	N.D.
88) 4-Isopropyltoluene (p-...	18.93	119	665	N.D.
89) 1,2,3-Trimethylbenzene	17.03	105	841	No Calib
90) 1,2-Dichlorobenzene	19.04	146	460	N.D.
91) d-Limonene	0.00	68	0	N.D.
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.
93) n-Undecane	0.00	58	0	N.D.
94) 1,2,4-Trichlorobenzene	20.84	180	713	N.D.
95) Naphthalene	20.94	128	290	N.D.
96) n-Dodecane	0.00	58	0	N.D.
97) Hexachlorobutadiene	21.30	225	648	N.D.
98) Cyclohexanone	0.00	55	0	N.D.
99) tert-Butylbenzene	18.42	119	703	N.D.
100) n-Butylbenzene	19.39	91	504	N.D.
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192426.D Vial: 14
Acq On : 19 Jun 2024 22:46 Operator: SC
Sample : P2402249-039 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 09:50:55 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192426.D Vial: 14
Acq On : 19 Jun 2024 22:46 Operator: SC
Sample : P2402249-039 (100mL) Inst : MS09
Misc : S37-06062402

MJ 6/29/24

Quant Time: Jun 29 09:50:55 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

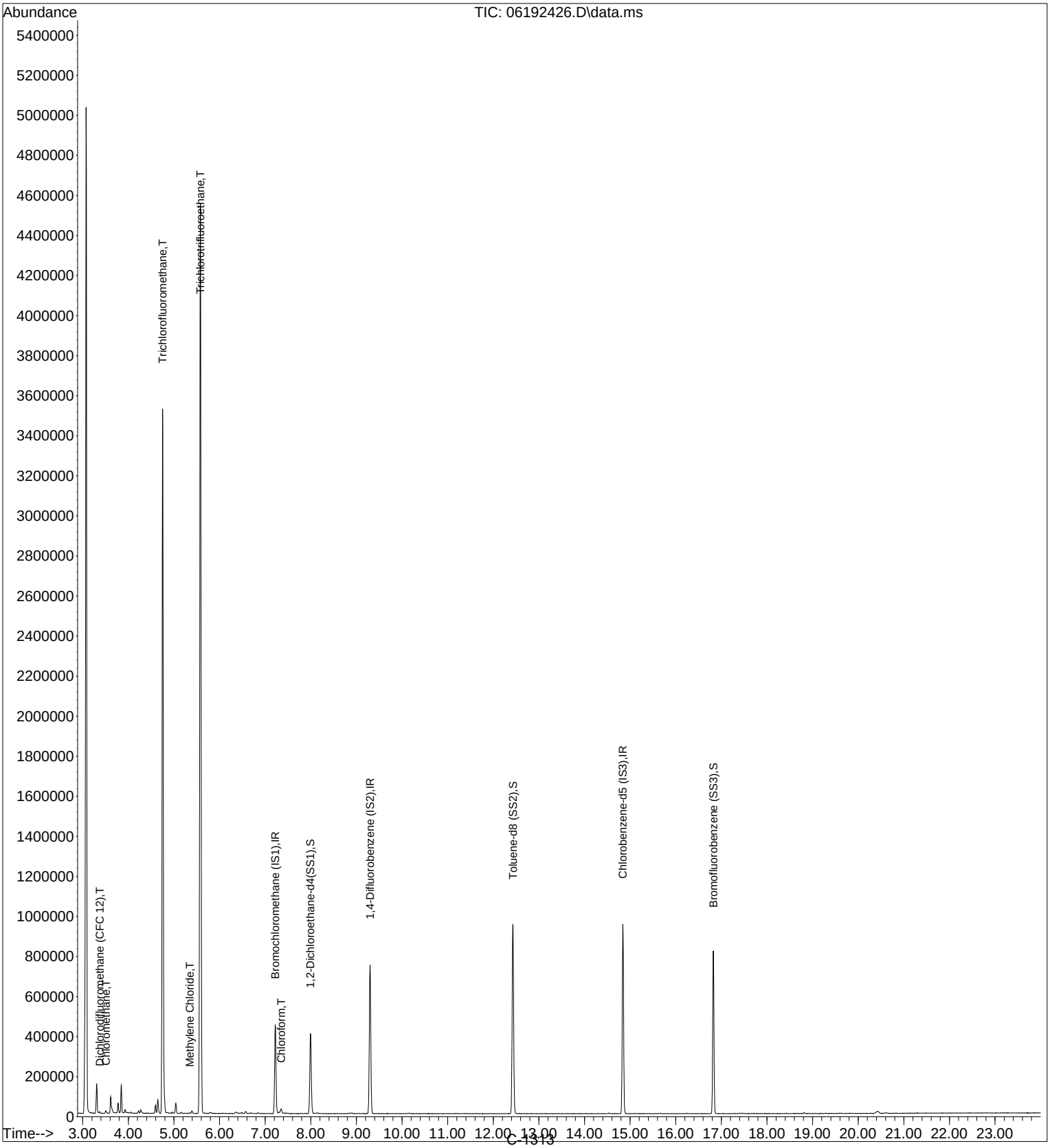
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	7.22	130	159652	12.500	ng	0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	688589	12.500	ng	0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	161191	12.500	ng	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4(...	7.99	65	350363	12.347	ng	0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.80%			
57) Toluene-d8 (SS2)	12.43	98	774701	12.559	ng	-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.48%			
73) Bromofluorobenzene (SS3)	16.83	174	279949	12.568	ng	-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.56%			
Target Compounds						Qvalue
3) Dichlorodifluoromethan...	3.38	85	4607m	0.123	ng	
4) Chloromethane	3.51	50	2529	0.098	ng	96
14) Trichlorofluoromethane	4.75	101	2501524	65.816	ng	100
19) Methylene Chloride	5.35	84	1119	0.064	ng	97
21) Trichlorotrifluoroethane	5.58	151	1436365	89.334	ng	95
32) Chloroform	7.35	83	17284	0.553	ng	98

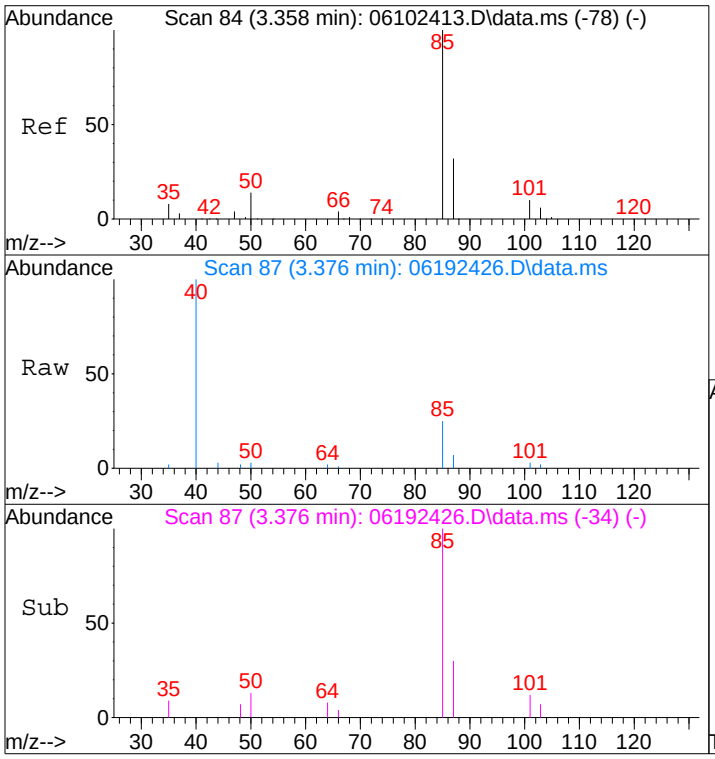
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192426.D Vial: 14
Acq On : 19 Jun 2024 22:46 Operator: SC
Sample : P2402249-039 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 09:50:55 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

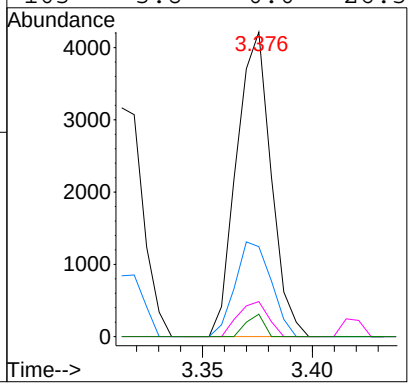


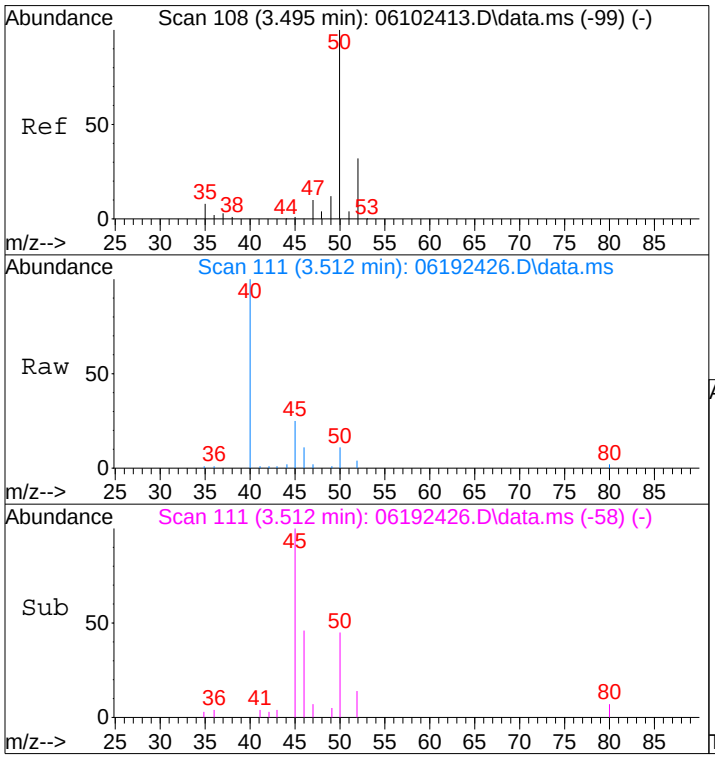


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.12 ng m
RT: 3.38 min Scan# 87
Delta R.T. 0.054 min
Lab File: 06192426.D
Acq: 19 Jun 2024 22:46

Tgt Ion: 85 Resp: 4607

Ion	Ratio	Lower	Upper
85	100		
87	32.5	12.2	52.2
101	11.8	0.0	29.8
103	3.8	0.0	26.3

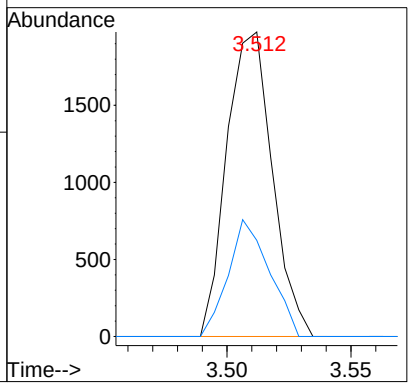


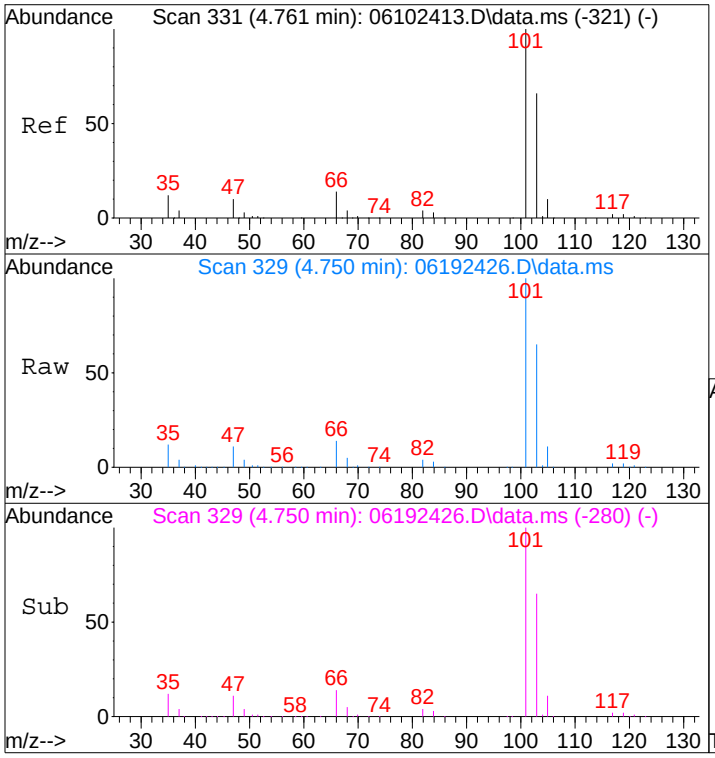


#4
Chloromethane
Concen: 0.10 ng
RT: 3.51 min Scan# 111
Delta R.T. 0.049 min
Lab File: 06192426.D
Acq: 19 Jun 2024 22:46

Tgt Ion: 50 Resp: 2529

Ion	Ratio	Lower	Upper
50	100		
52	34.6	12.4	52.4

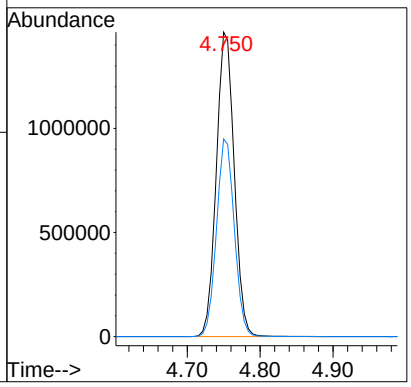


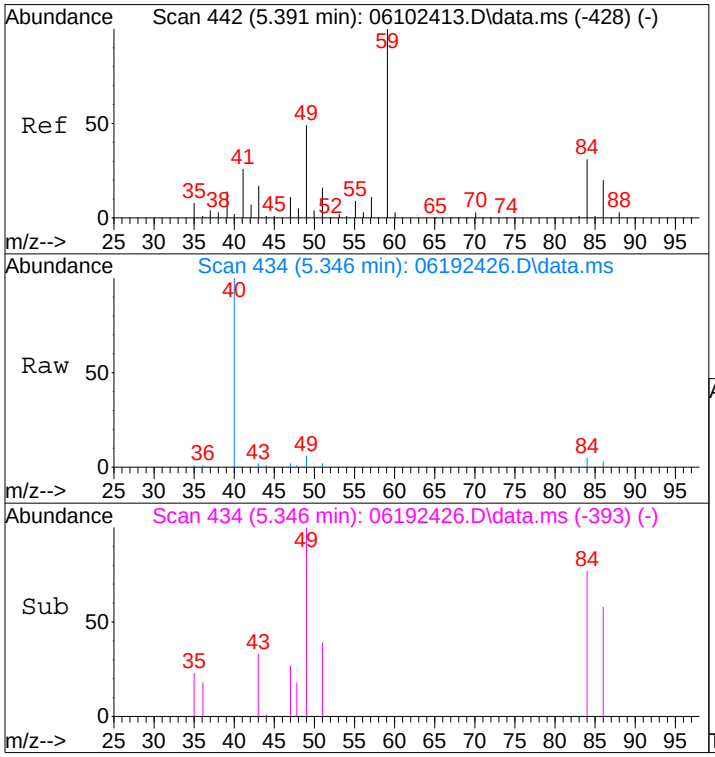


#14
Trichlorofluoromethane
Concen: 65.82 ng
RT: 4.75 min Scan# 329
Delta R.T. 0.029 min
Lab File: 06192426.D
Acq: 19 Jun 2024 22:46

Tgt Ion:101 Resp: 2501524

Ion	Ratio	Lower	Upper
101	100		
103	64.6	44.9	84.9

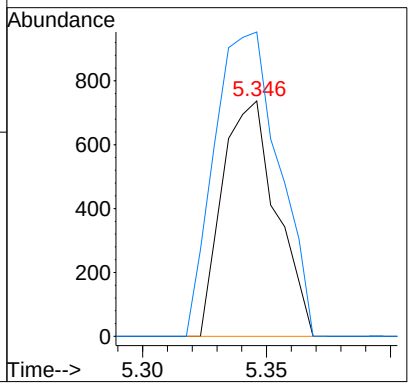


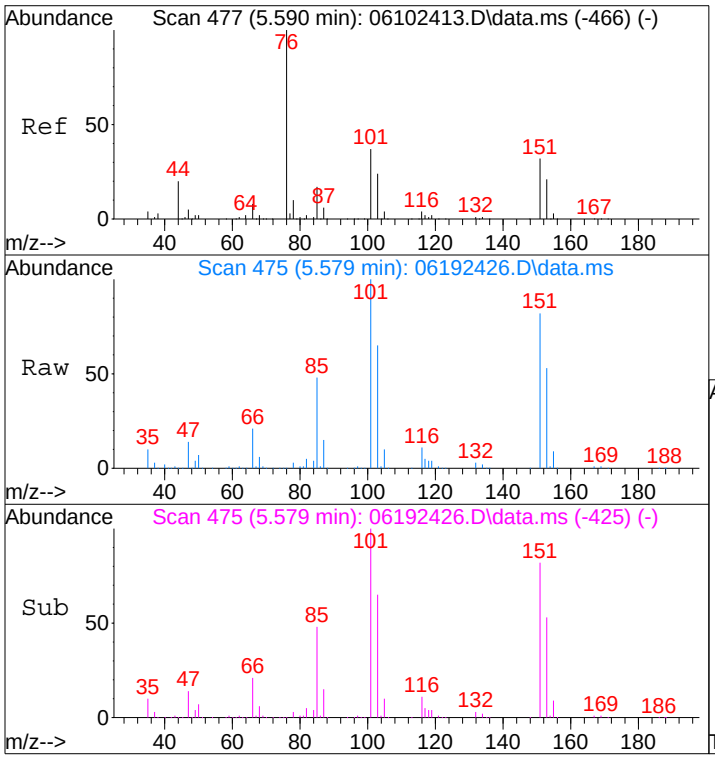


#19
Methylene Chloride
Concen: 0.06 ng
RT: 5.35 min Scan# 434
Delta R.T. -0.015 min
Lab File: 06192426.D
Acq: 19 Jun 2024 22:46

Tgt Ion: 84 Resp: 1119

Ion	Ratio	Lower	Upper
84	100		
49	154.3	132.9	182.9

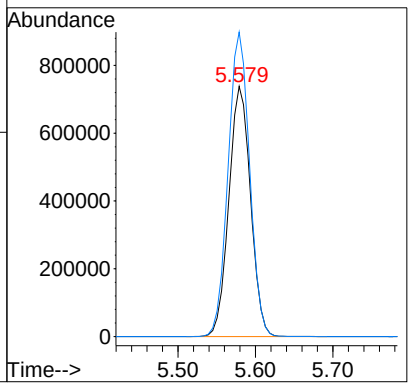


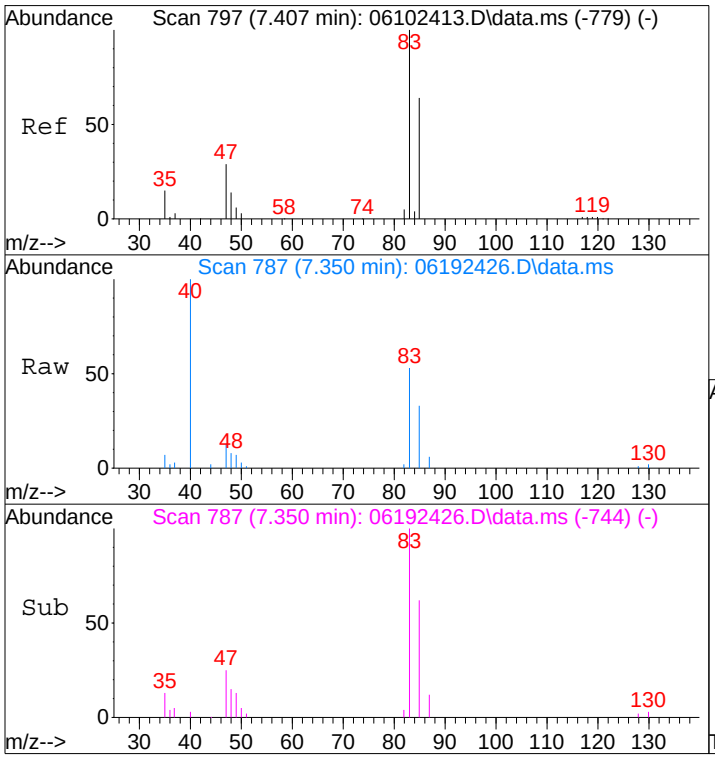


#21
Trichlorotrifluoroethane
Concen: 89.33 ng
RT: 5.58 min Scan# 475
Delta R.T. 0.033 min
Lab File: 06192426.D
Acq: 19 Jun 2024 22:46

Tgt Ion:151 Resp: 1436365

Ion	Ratio	Lower	Upper
151	100		
101	120.6	95.0	135.0

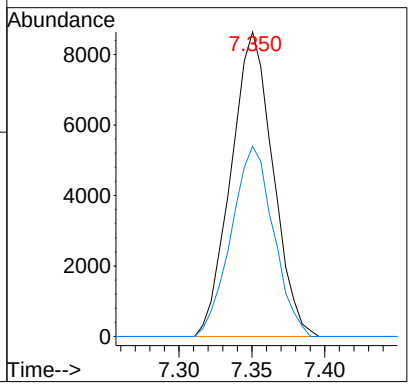




#32
Chloroform
Concen: 0.55 ng
RT: 7.35 min Scan# 787
Delta R.T. -0.004 min
Lab File: 06192426.D
Acq: 19 Jun 2024 22:46

Tgt Ion: 83 Resp: 17284

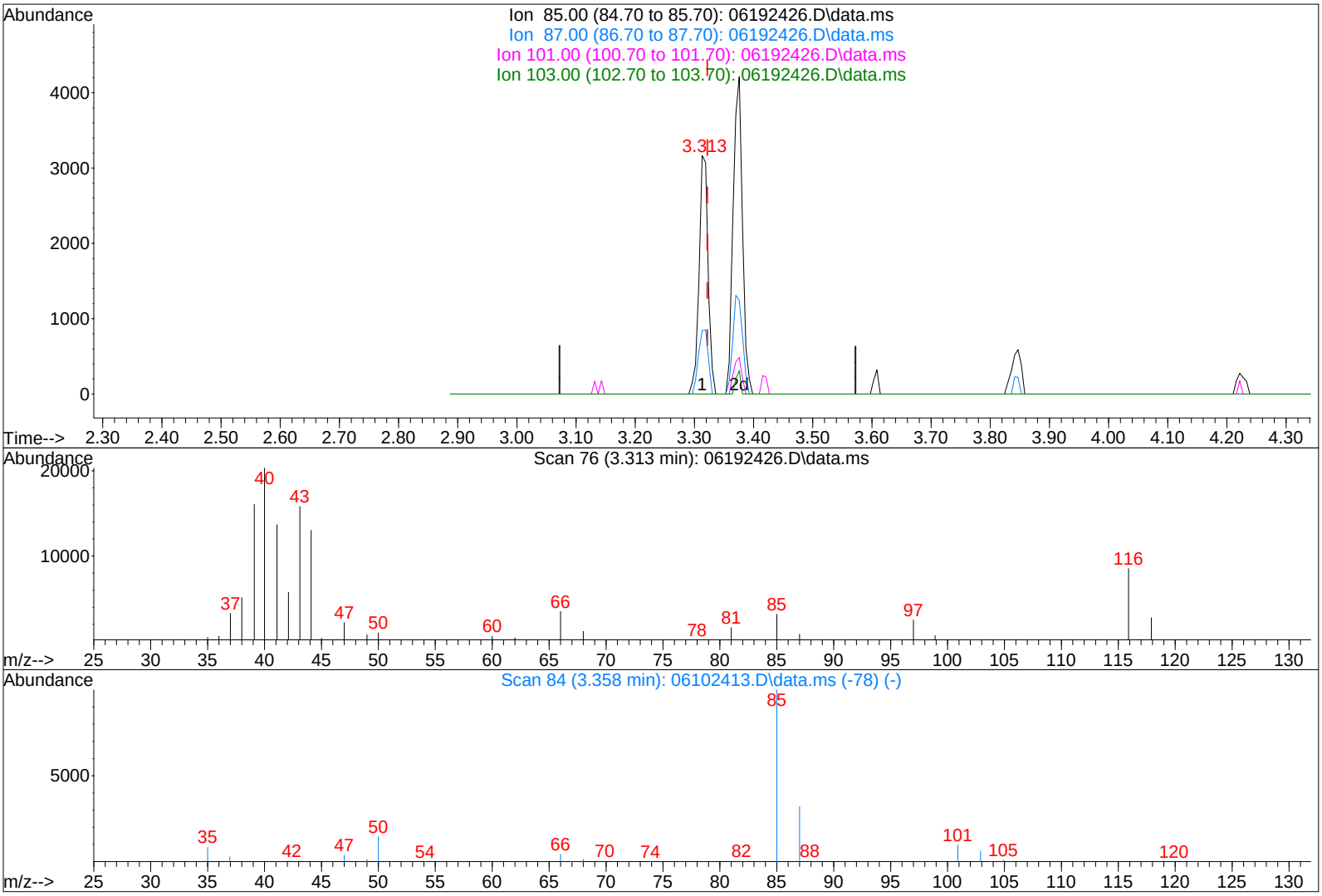
Ion	Ratio	Lower	Upper
83	100		
85	63.0	44.4	84.4



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\19\06192426.D Vial: 14
Acq On : 19 Jun 2024 22:46 Operator: SC
Sample : P2402249-039 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 11:35:32 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06192426.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.313min (-0.009) 0.09ng

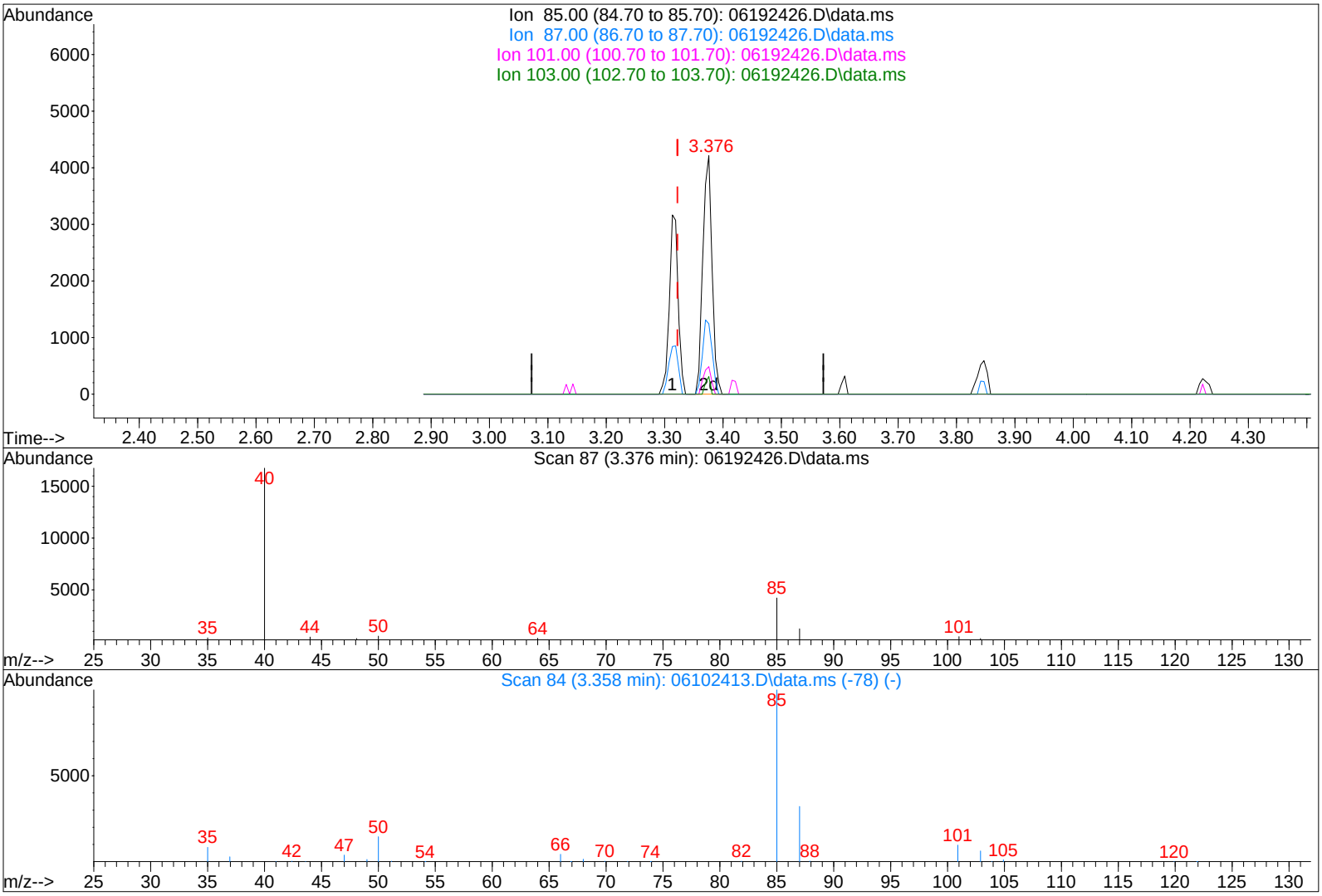
response 3353

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	29.05
101.00	9.80	0.00
103.00	6.30	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\19\06192426.D Vial: 14
Acq On : 19 Jun 2024 22:46 Operator: SC
Sample : P2402249-039 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 11:35:32 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06192426.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.376min (+0.054) 0.12ng m

response 4607

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	32.45
101.00	9.80	11.81
103.00	6.30	3.76

MJ 6/29/24

WP

Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\19\06192426.D Vial: 14
Acq On : 19 Jun 2024 22:46 Operator: SC
Sample : P2402249-039 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:11:59 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

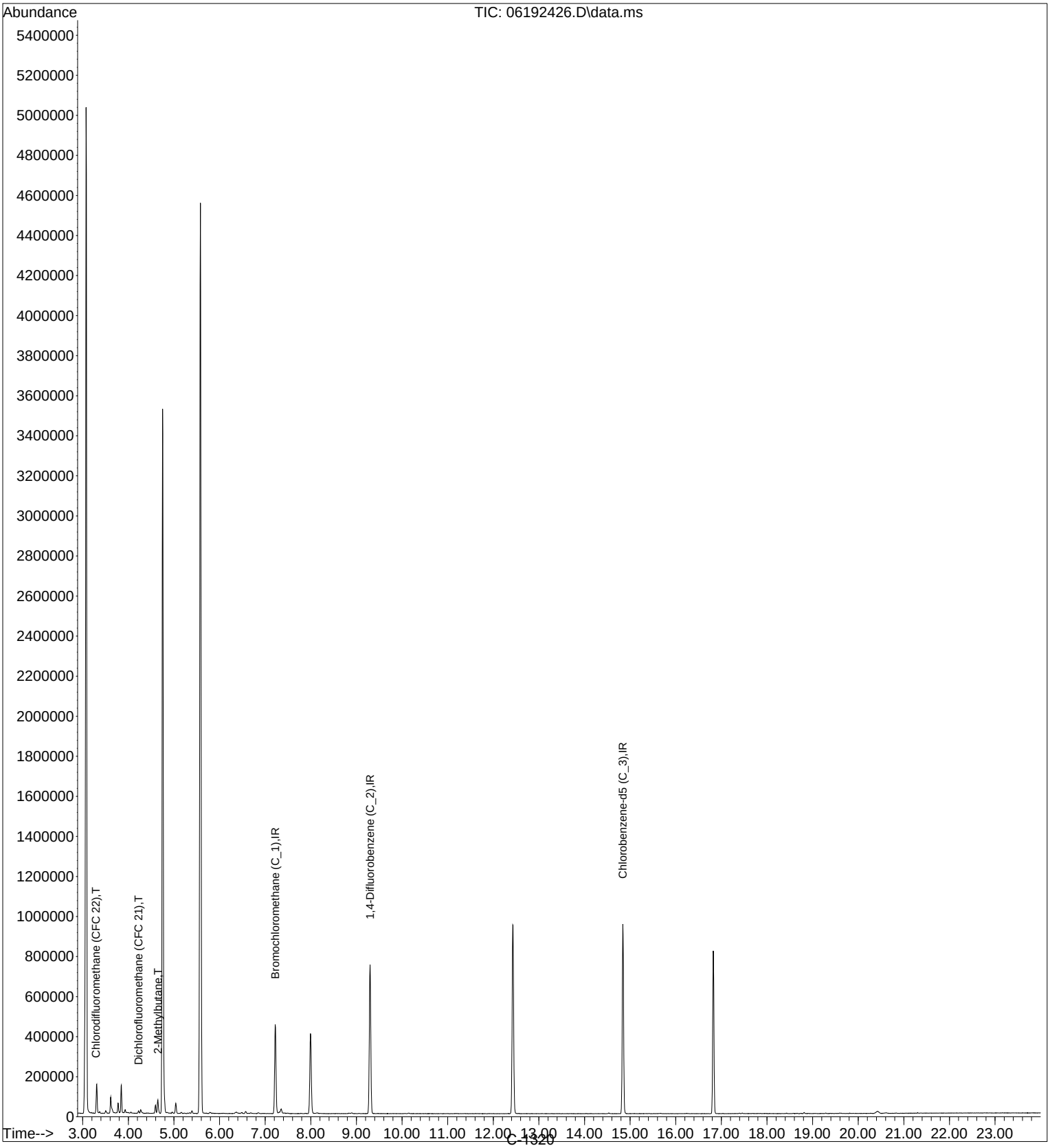
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.22	130	160776	12.500	ng		-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	690058	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	161191	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	0.00	85	0	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.19	83	261	N.D.			
4) 1,1-Difluoroethane	0.00	65	0	N.D.			
5) Chlorodifluoromethane ...	3.29	67	592	0.108	ng	#	57
6) 1-Chloro-1,1-Difluoroe...	3.50	65	53	N.D.			
7) Dichlorofluoromethane ...	4.22	67	10077	0.273	ng		98
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	4.56	83	561	N.D.			
10) 2-Methylbutane	4.65	57	9486	0.495	ng		92
11) Methyl Acetate	5.33	43	763	N.D.			
12) 2-Methylpentane	6.48	71	864	N.D.			
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	0.00	84	0	N.D.			
17) 2,3-Dimethylpentane	0.00	56	0	N.D.			
18) Dibromomethane	9.79	174	180	N.D.			
20) Methyl Cyclohexane	0.00	55	0	N.D.			
21) 1,3-Dichloropropane	0.00	76	0	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	0.00	75	0	N.D.			
25) Bromobenzene	0.00	77	0	N.D.			
26) 2-Chlorotoluene	17.61	91	722	N.D.			
27) 4-Chlorotoluene	17.61	91	722	N.D.			
28) Indane	0.00	117	0	N.D.			
29) Indene	0.00	115	0	N.D.			
30) 1,2,4,5-Tetramethylben...	0.00	119	0	N.D.			
31) 1,2,3,4-Tetramethylben...	0.00	119	0	N.D.			
32) 1,2,3,5-Tetramethylben...	0.00	119	0	N.D.			
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192426.D Vial: 14
Acq On : 19 Jun 2024 22:46 Operator: SC
Sample : P2402249-039 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:11:59 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

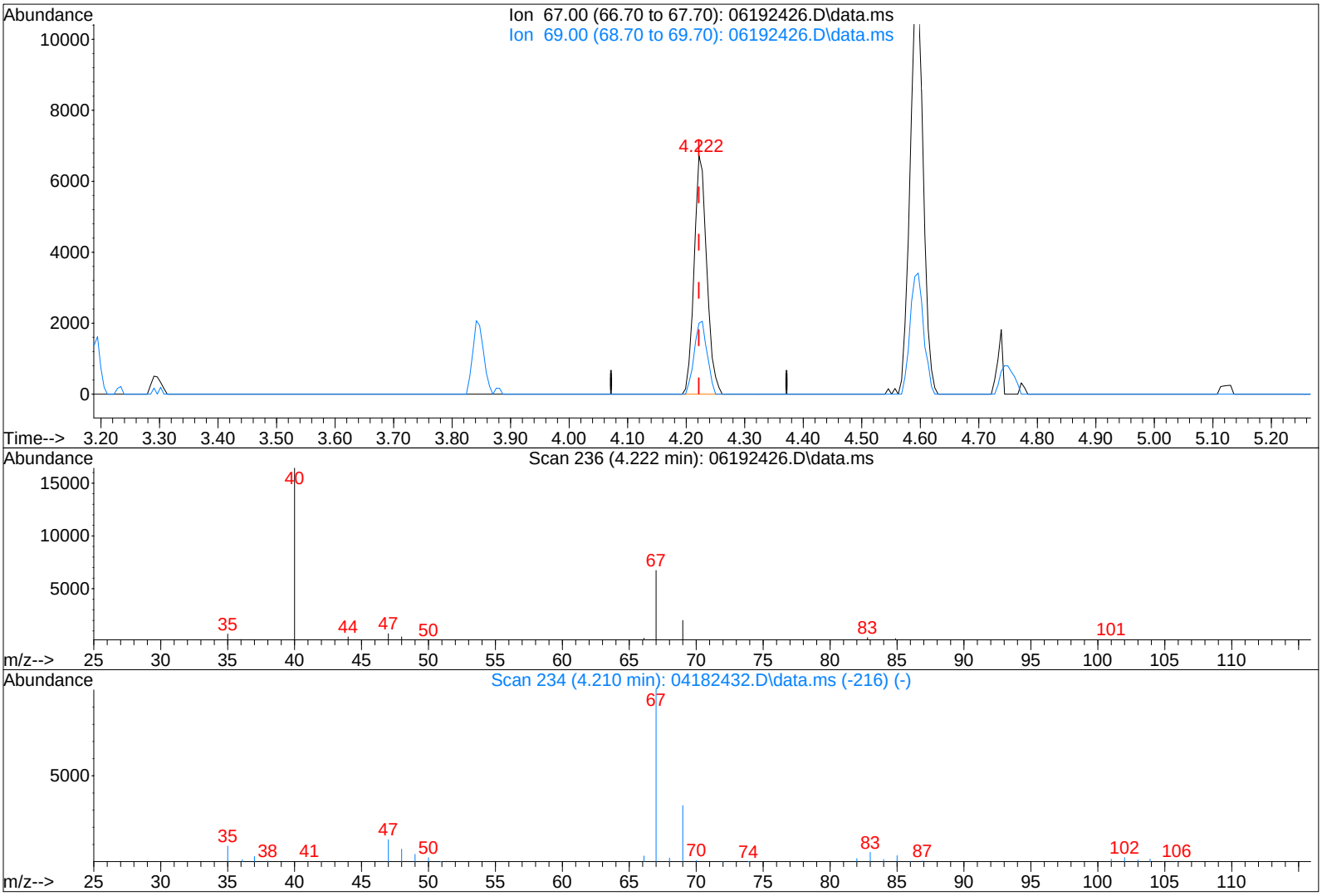


Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\19\06192426.D Vial: 14
Acq On : 19 Jun 2024 22:46 Operator: SC
Sample : P2402249-039 (100mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 15:11:59 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06192426.D\data.ms

(7) Dichlorofluoromethane (CFC 21) (T)

4.222min (+0.000) 0.27ng

response 10077

Ion	Exp%	Act%
67.00	100	100
69.00	32.40	31.16
0.00	0.00	0.00
0.00	0.00	0.00

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\19\
Data File : 06192426.D
Acq On : 19 Jun 2024 22:46
Operator : SC
Sample : P2402249-039 (100mL)
Misc : S37-06062402
ALS Vial : 14 Sample Multiplier: 1

MJ 6/28/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06192426.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.075	22	34	53	rBV	5023156	8520731	96.93%	30.413%
2	3.308	68	75	84	rBV3	145346	232377	2.64%	0.829%
3	3.370	84	86	92	rVB2	8658	10113	0.12%	0.036%
4	3.501	104	109	117	rBV3	13219	23709	0.27%	0.085%
5	3.614	124	129	142	rBV2	79607	150188	1.71%	0.536%
6	3.773	153	157	162	rBV	48607	65125	0.74%	0.232%
7	3.847	164	170	177	rVB	137342	184104	2.09%	0.657%
8	3.932	181	185	189	rBV2	14526	18325	0.21%	0.065%
9	4.227	231	237	241	rBV2	12021	18815	0.21%	0.067%
10	4.273	241	245	253	rVV	16391	26564	0.30%	0.095%
11	4.596	297	302	306	rBV	40666	60860	0.69%	0.217%
12	4.648	306	311	321	rVB	67225	116650	1.33%	0.416%
13	4.750	321	329	344	rBV	3516840	6075744	69.12%	21.686%
14	4.960	363	366	374	rBV3	6736	10665	0.12%	0.038%
15	5.039	374	380	389	rVB	50397	85102	0.97%	0.304%
16	5.391	438	442	448	rVB2	12700	19718	0.22%	0.070%
17	5.579	463	475	490	rBV	4546379	8790524	100.00%	31.376%
18	5.789	507	512	519	rBV3	5161	10998	0.13%	0.039%
19	6.368	603	614	624	rBV6	7247	23027	0.26%	0.082%
20	6.573	643	650	655	rBV4	10498	19416	0.22%	0.069%
21	6.845	693	698	707	rBV3	4325	11680	0.13%	0.042%
22	7.220	753	764	775	rBV	445054	943830	10.74%	3.369%
23	7.350	781	787	795	rVB2	21576	45528	0.52%	0.163%
24	7.992	890	900	914	rBV	399911	889275	10.12%	3.174%
25	9.298	1120	1130	1140	rBV	742907	1663906	18.93%	5.939%

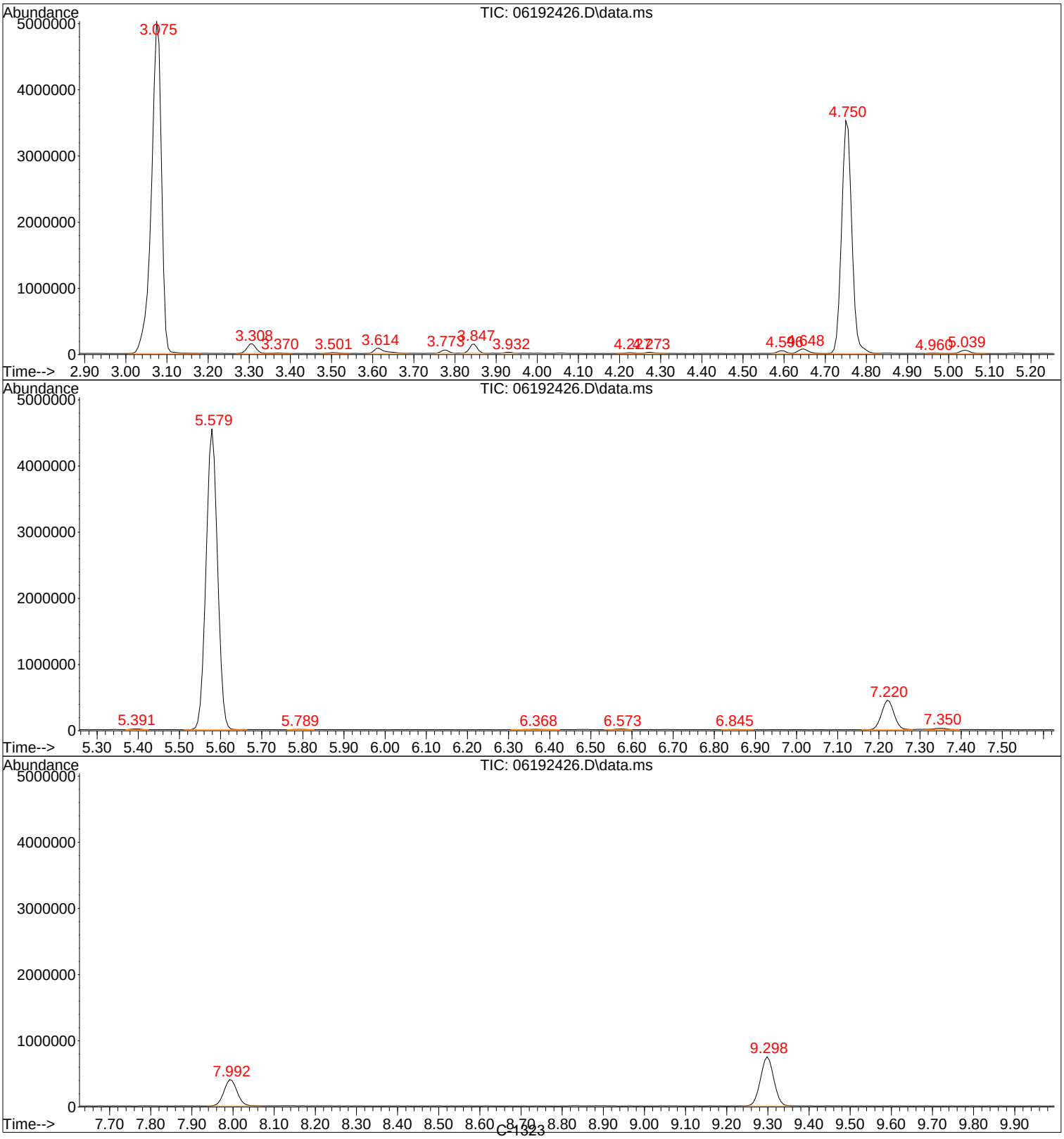
Sum of corrected areas: 28016974

LSC Report - Integrated Chromatogram

Data Path : I:\MS09\DATA\2024 06\19\
Data File : 06192426.D
Acq On : 19 Jun 2024 22:46
Operator : SC
Sample : P2402249-039 (100mL)
Misc : S37-06062402
ALS Vial : 14 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\19\\
Data File : 06192426.D
Acq On : 19 Jun 2024 22:466
Operator : SCC
Sample : P2402249-039 (100mL))
Misc : S37-060624022
ALS Vial : 14 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

					|--Internal Standard---|		
TIC Top Hit name	RT	EstConc	Units	Response	# RT Resp Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202410.D Vial: 15
Acq On : 20 Jun 2024 14:33 Operator: SC
Sample : P2402249-040 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 20 15:35:11 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/20/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	168160	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	742689	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	170794	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	368827	12.341	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.72%				
57) Toluene-d8 (SS2)	12.43	98	831668	12.725	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.76%				
73) Bromofluorobenzene (SS3)	16.83	174	288507	12.224	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.76%				
Target Compounds							Qvalue
2) Propene	0.00	42	0	N.D. d			
3) Dichlorodifluoromethan...	3.36	85	21234	0.537	ng		99
4) Chloromethane	3.50	50	8690	0.321	ng		99
5) 1,2-Dichloro-1,1,2,2-t...	3.61	135	428	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	3.85	54	298	N.D.			
8) Bromomethane	4.03	94	303	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.28	45	51824	3.170	ng		80
11) Acetonitrile	4.50	41	139	N.D.			
12) Acrolein	4.53	56	1274	0.105	ng		90
13) Acetone	4.62	58	76113	5.826	ng		88
14) Trichlorofluoromethane	4.76	101	22836	0.570	ng		100
15) 2-Propanol (Isopropanol)	4.84	45	94998	1.805	ng		88
16) Acrylonitrile	0.00	53	0	N.D. d			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.33	59	1461	N.D.			
19) Methylene Chloride	5.35	84	2592	0.140	ng		95
20) 3-Chloro-1-propene (Al...	5.45	41	368	N.D.			
21) Trichlorotrifluoroethane	5.59	151	3725	0.220	ng		95
22) Carbon Disulfide	5.60	76	7361	0.124	ng		99
23) trans-1,2-Dichloroethene	6.14	61	320	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	6.37	73	219	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D. d			
27) 2-Butanone (MEK)	6.66	72	5861	0.567	ng	#	89
28) cis-1,2-Dichloroethene	7.07	61	475	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D. d			
30) Ethyl Acetate	7.28	61	126288	20.008	ng		95
31) n-Hexane	7.31	57	9924	0.359	ng		95
32) Chloroform	7.36	83	856	N.D.			
34) Tetrahydrofuran (THF)	7.75	72	11714	1.242	ng	#	87
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	679	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	9.56	61	2921	No Calib		#	
40) 1-Butanol	8.81	56	3796	No Calib		#	
41) Benzene	8.89	78	32615	0.476	ng		99
42) Carbon Tetrachloride	9.07	117	2755	0.087	ng		93
43) Cyclohexane	9.22	84	3836	0.173	ng		96
44) tert-Amyl Methyl Ether	9.58	73	688	N.D.			
45) 1,2-Dichloropropane	9.85	63	180	N.D.			
46) Bromodichloromethane	10.06	83	571	N.D.			
47) Trichloroethene	10.15	130	2076	0.104	ng		91
48) 1,4-Dioxane	10.13	88	1212	0.096	ng		98
49) 2,2,4-Trimethylpentane...	10.25	57	1152	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202410.D Vial: 15
Acq On : 20 Jun 2024 14:33 Operator: SC
Sample : P2402249-040 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 20 15:35:11 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

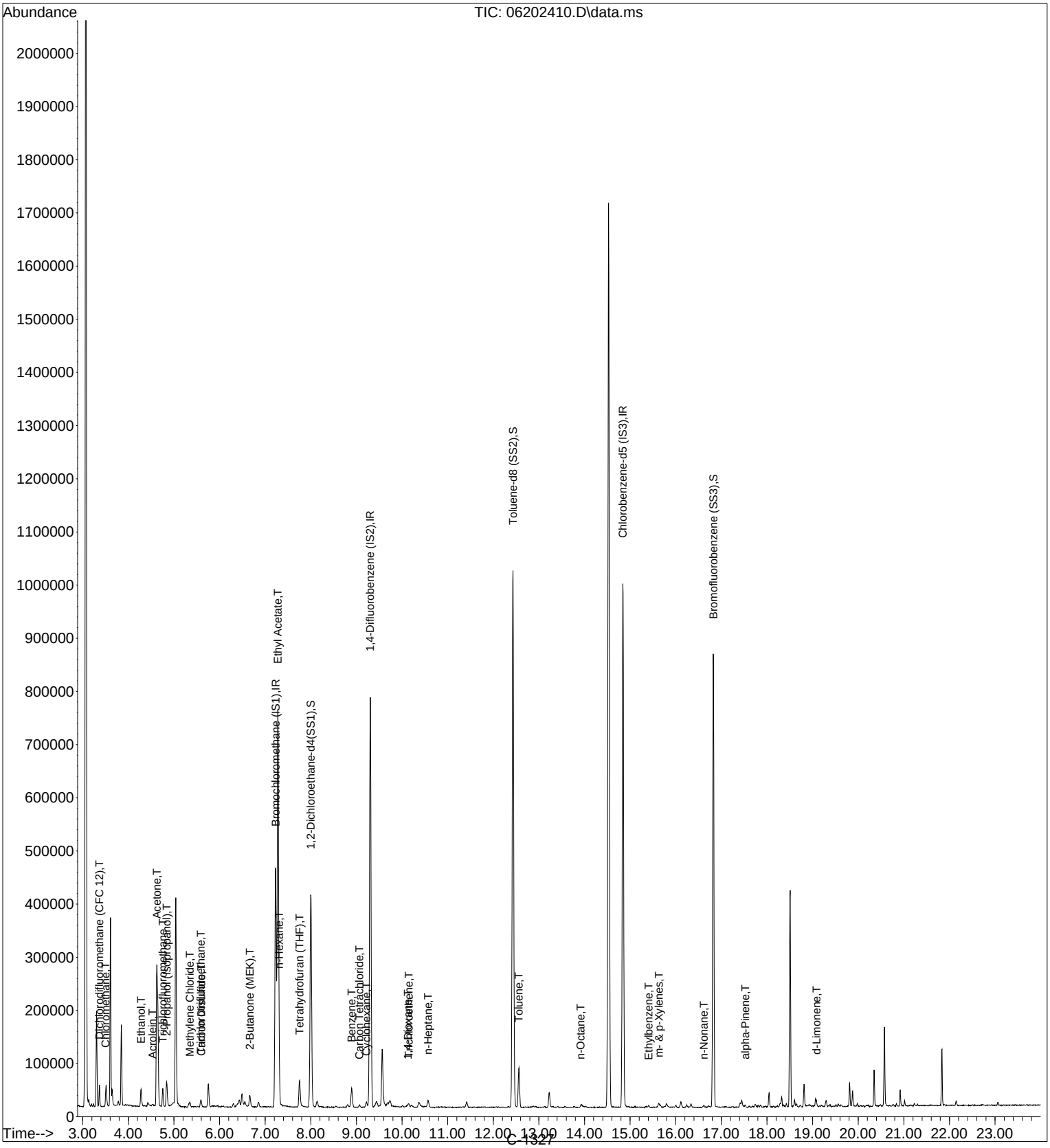
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	10.57	71	2641	0.183 ng	89
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	11.34	58	274	N.D.	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	12.18	97	120	N.D.	
58) Toluene	12.56	91	64229	0.940 ng	99
59) 2-Hexanone	12.93	43	2038	N.D.	
60) Dibromochloromethane	13.07	129	518	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	13.78	43	1958	N.D.	
63) n-Octane	13.91	57	891	0.063 ng	95
64) Tetrachloroethene	14.03	166	803	N.D.	
65) Chlorobenzene	14.90	112	1514	N.D.	
66) Ethylbenzene	15.41	91	3969	0.051 ng	93
67) m- & p-Xylenes	15.63	91	6921	0.105 ng	98
68) Bromoform	15.68	173	706	N.D.	
69) Styrene	16.10	104	1933	N.D.	
70) o-Xylene	16.24	91	3012	N.D.	
71) n-Nonane	16.62	43	2303	0.061 ng	84
72) 1,1,2,2-Tetrachloroethane	16.21	83	513	N.D.	
74) Cumene	17.03	105	1448	N.D.	
75) alpha-Pinene	17.53	93	2073	0.055 ng	96
76) n-Propylbenzene	17.68	91	2719	N.D.	
77) 3-Ethyltoluene	17.03	105	1448	No Calib	
78) 4-Ethyltoluene	17.86	105	1936	N.D.	
79) 1,3,5-Trimethylbenzene	17.96	105	1143	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.03	105	1448	No Calib	
82) 1,2,4-Trimethylbenzene	18.43	105	2955	N.D.	
83) n-Decane	0.00	58	0	N.D.	
84) Benzyl Chloride	18.56	91	573	N.D.	
85) 1,3-Dichlorobenzene	18.58	146	942	N.D.	
86) 1,4-Dichlorobenzene	18.66	146	923	N.D.	
87) sec-Butylbenzene	18.74	105	1305	N.D.	
88) 4-Isopropyltoluene (p-...	18.93	119	2016	N.D.	
89) 1,2,3-Trimethylbenzene	17.03	105	1448	No Calib	
90) 1,2-Dichlorobenzene	19.03	146	693	N.D.	
91) d-Limonene	19.09	68	2149	0.089 ng	95
92) 1,2-Dibromo-3-Chloropr...	19.51	157	169	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	1282	N.D.	
95) Naphthalene	20.94	128	2040	N.D.	
96) n-Dodecane	0.00	58	0	N.D.	
97) Hexachlorobutadiene	21.30	225	772	N.D.	
98) Cyclohexanone	15.39	55	222	No Calib #	
99) tert-Butylbenzene	18.42	119	1452	N.D.	
100) n-Butylbenzene	19.38	91	1360	N.D.	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202410.D Vial: 15
Acq On : 20 Jun 2024 14:33 Operator: SC
Sample : P2402249-040 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 20 15:35:11 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202410.D Vial: 15
Acq On : 20 Jun 2024 14:33 Operator: SC
Sample : P2402249-040 (400mL) Inst : MS09
Misc : S37-06062402

6/20/24

Quant Time: Jun 20 15:35:11 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

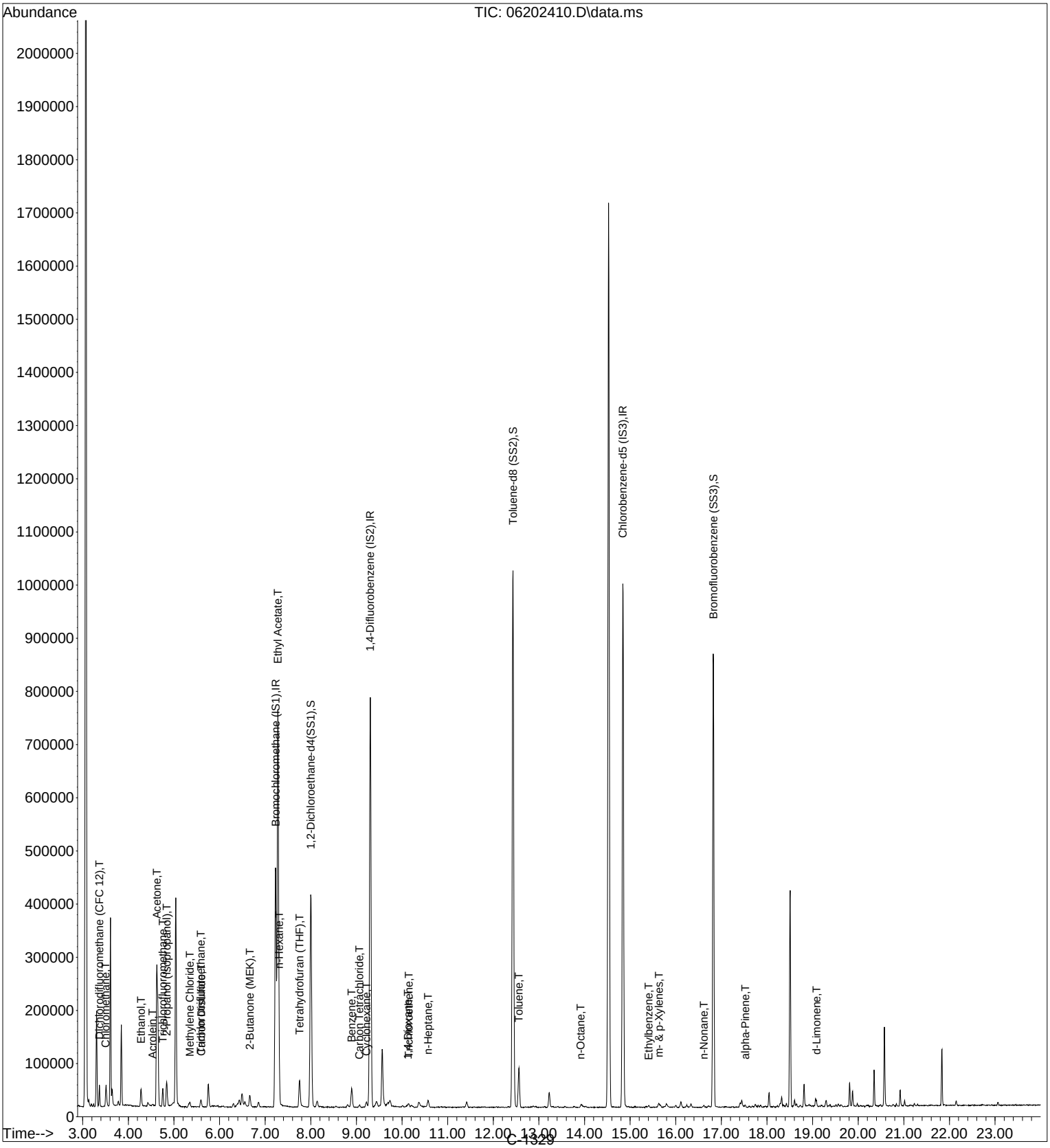
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	168160	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	742689	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	170794	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	368827	12.341	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.72%				
57) Toluene-d8 (SS2)	12.43	98	831668	12.725	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.76%				
73) Bromofluorobenzene (SS3)	16.83	174	288507	12.224	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.76%				
Target Compounds							Qvalue
3) Dichlorodifluoromethan...	3.36	85	21234	0.537	ng		99
4) Chloromethane	3.50	50	8690	0.321	ng		99
10) Ethanol	4.28	45	51824	3.170	ng		80
12) Acrolein	4.53	56	1274	0.105	ng		90
13) Acetone	4.62	58	76113	5.826	ng		88
14) Trichlorofluoromethane	4.76	101	22836	0.570	ng		100
15) 2-Propanol (Isopropanol)	4.84	45	94998	1.805	ng		88
19) Methylene Chloride	5.35	84	2592	0.140	ng		95
21) Trichlorotrifluoroethane	5.59	151	3725	0.220	ng		95
22) Carbon Disulfide	5.60	76	7361	0.124	ng		99
27) 2-Butanone (MEK)	6.66	72	5861	0.567	ng	#	89
30) Ethyl Acetate	7.28	61	126288	20.008	ng		95
31) n-Hexane	7.31	57	9924	0.359	ng		95
34) Tetrahydrofuran (THF)	7.75	72	11714	1.242	ng	#	87
41) Benzene	8.89	78	32615	0.476	ng		99
42) Carbon Tetrachloride	9.07	117	2755	0.087	ng		93
43) Cyclohexane	9.22	84	3836	0.173	ng		96
47) Trichloroethene	10.15	130	2076	0.104	ng		91
48) 1,4-Dioxane	10.13	88	1212	0.096	ng		98
51) n-Heptane	10.57	71	2641	0.183	ng		89
58) Toluene	12.56	91	64229	0.940	ng		99
63) n-Octane	13.91	57	891	0.063	ng		95
66) Ethylbenzene	15.41	91	3969	0.051	ng		93
67) m- & p-Xylenes	15.63	91	6921	0.105	ng		98
71) n-Nonane	16.62	43	2303	0.061	ng		84
75) alpha-Pinene	17.53	93	2073	0.055	ng		96
91) d-Limonene	19.09	68	2149	0.089	ng		95

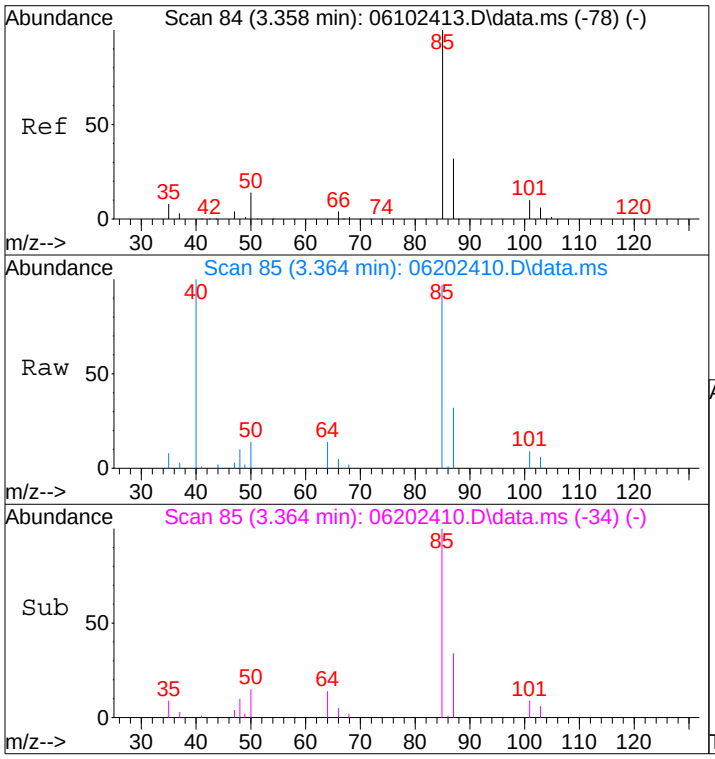
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202410.D Vial: 15
Acq On : 20 Jun 2024 14:33 Operator: SC
Sample : P2402249-040 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 20 15:35:11 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

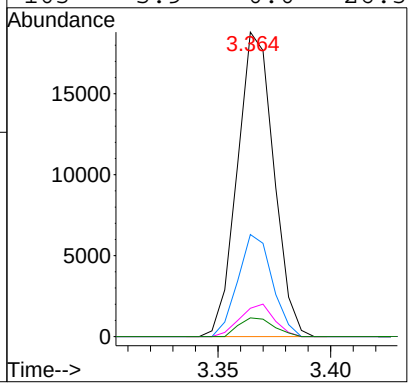


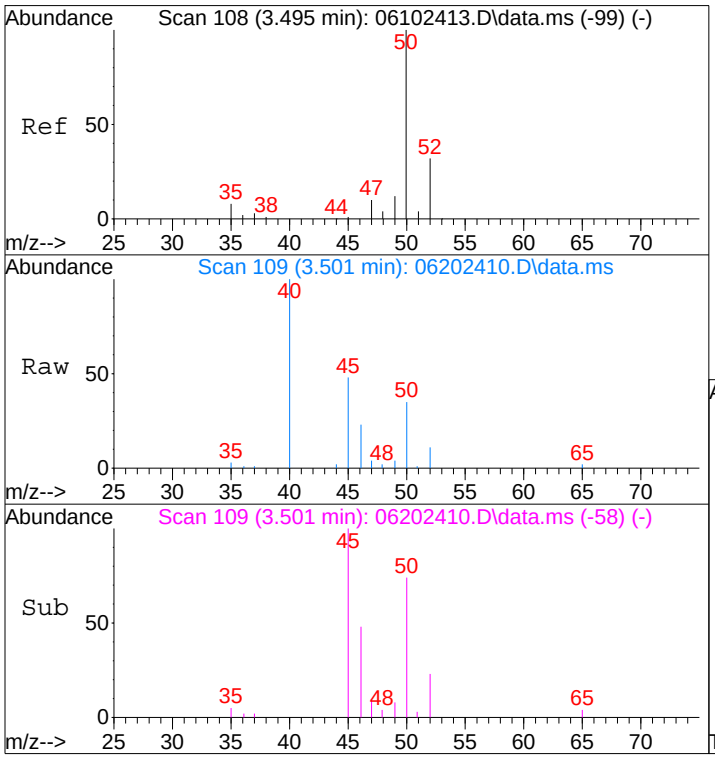


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.54 ng
RT: 3.36 min Scan# 85
Delta R.T. 0.042 min
Lab File: 06202410.D
Acq: 20 Jun 2024 14:33

Tgt Ion: 85 Resp: 21234

Ion	Ratio	Lower	Upper
85	100		
87	31.6	12.2	52.2
101	9.9	0.0	29.8
103	5.9	0.0	26.3

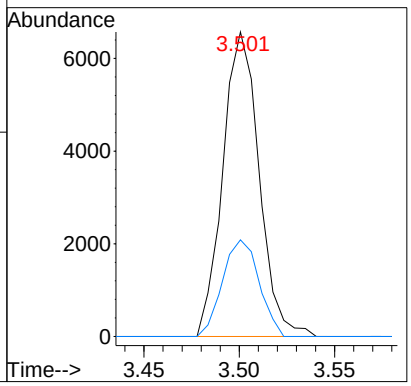


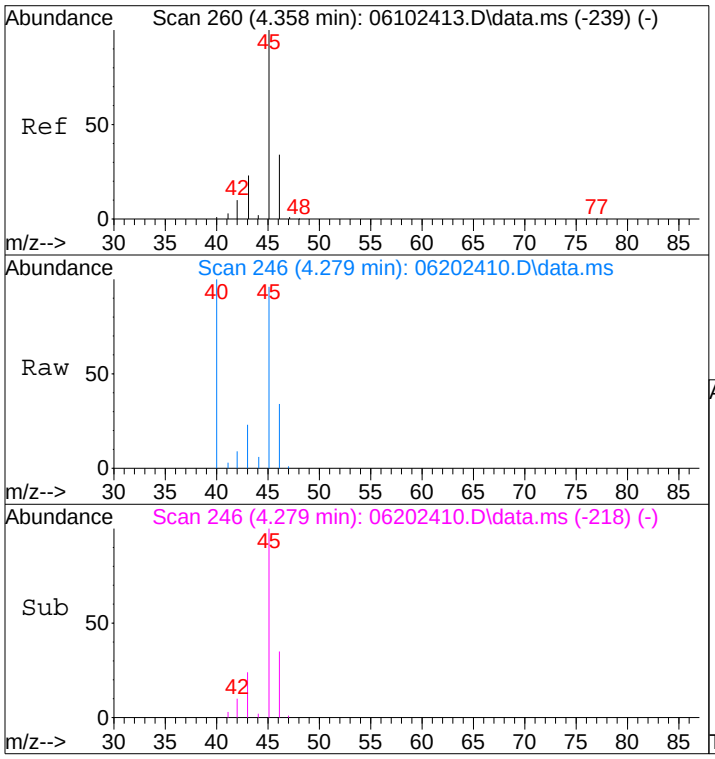


#4
Chloromethane
Concen: 0.32 ng
RT: 3.50 min Scan# 109
Delta R.T. 0.038 min
Lab File: 06202410.D
Acq: 20 Jun 2024 14:33

Tgt Ion: 50 Resp: 8690

Ion	Ratio	Lower	Upper
50	100		
52	31.9	12.4	52.4

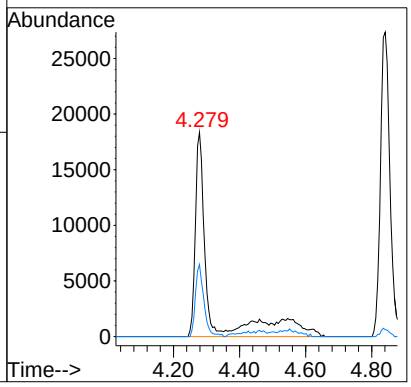


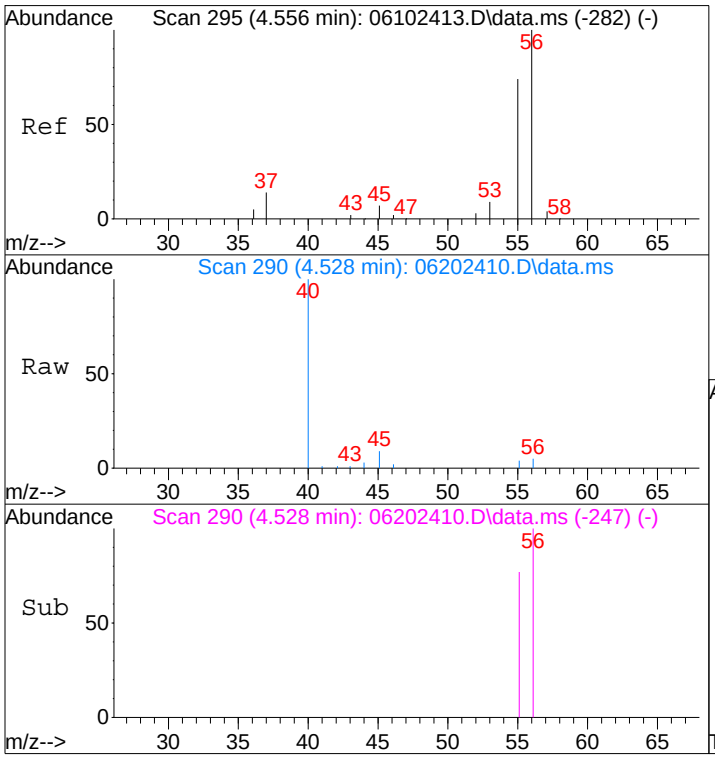


#10
Ethanol
Concen: 3.17 ng
RT: 4.28 min Scan# 246
Delta R.T. -0.088 min
Lab File: 06202410.D
Acq: 20 Jun 2024 14:33

Tgt Ion: 45 Resp: 51824

Ion	Ratio	Lower	Upper
45	100		
46	22.3	13.5	53.5

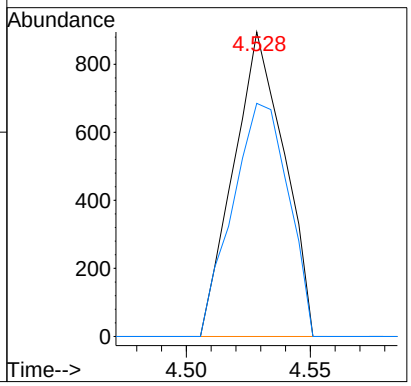


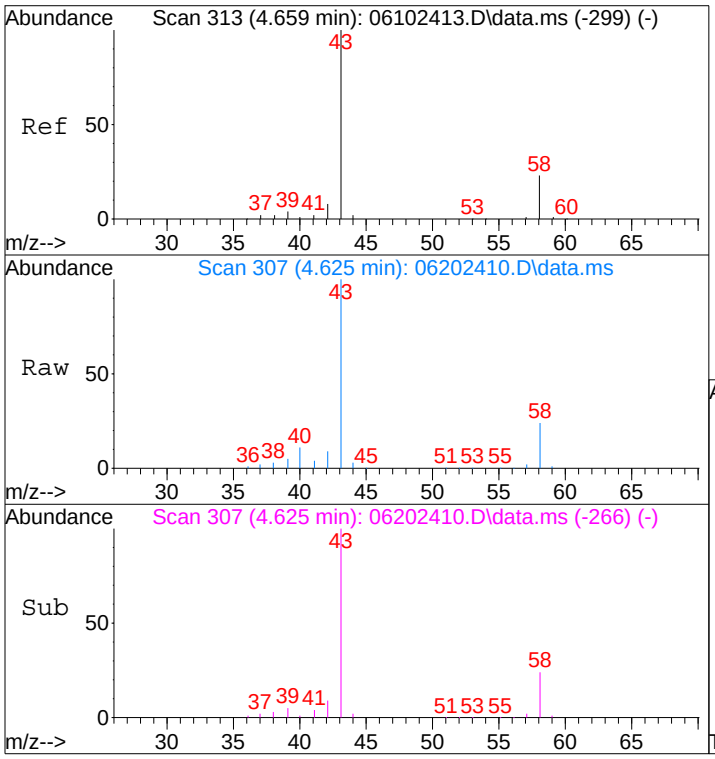


#12
Acrolein
Concen: 0.11 ng
RT: 4.53 min Scan# 290
Delta R.T. -0.007 min
Lab File: 06202410.D
Acq: 20 Jun 2024 14:33

Tgt Ion: 56 Resp: 1274

Ion	Ratio	Lower	Upper
56	100		
55	84.2	55.5	95.5

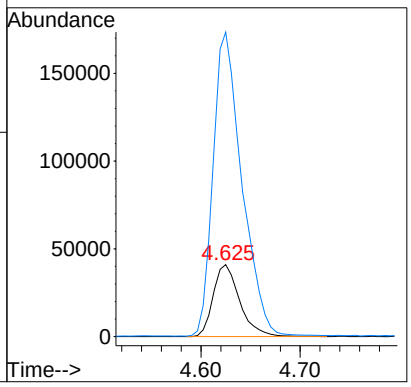


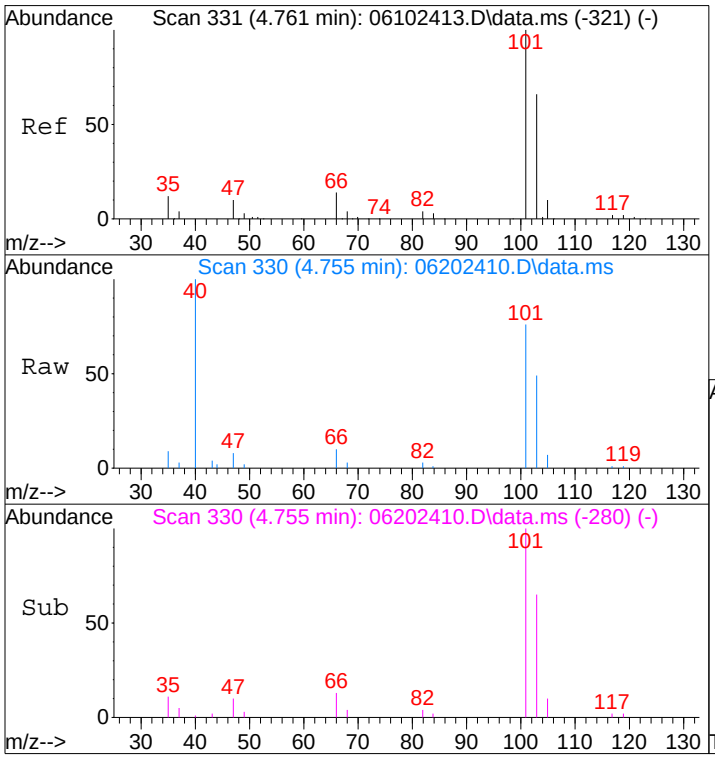


#13
Acetone
Concen: 5.83 ng
RT: 4.62 min Scan# 307
Delta R.T. -0.017 min
Lab File: 06202410.D
Acq: 20 Jun 2024 14:33

Tgt Ion: 58 Resp: 76113

Ion	Ratio	Lower	Upper
58	100		
43	459.9	400.7	460.7

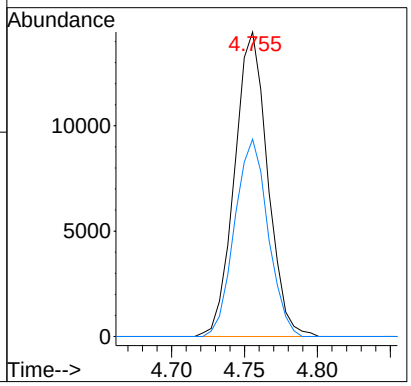


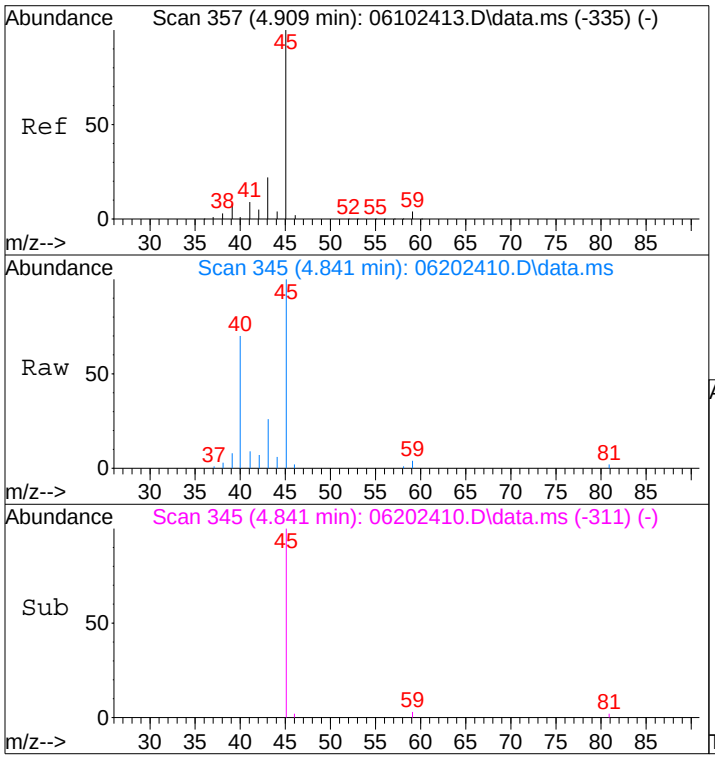


#14
Trichlorofluoromethane
Concen: 0.57 ng
RT: 4.76 min Scan# 330
Delta R.T. 0.035 min
Lab File: 06202410.D
Acq: 20 Jun 2024 14:33

Tgt Ion:101 Resp: 22836

Ion	Ratio	Lower	Upper
101	100		
103	65.3	44.9	84.9

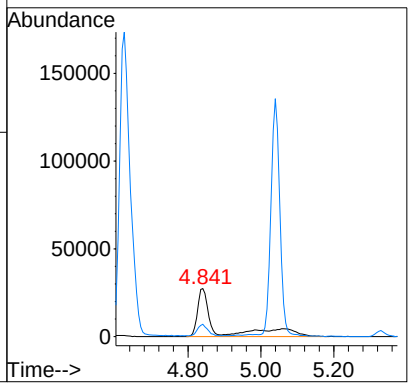


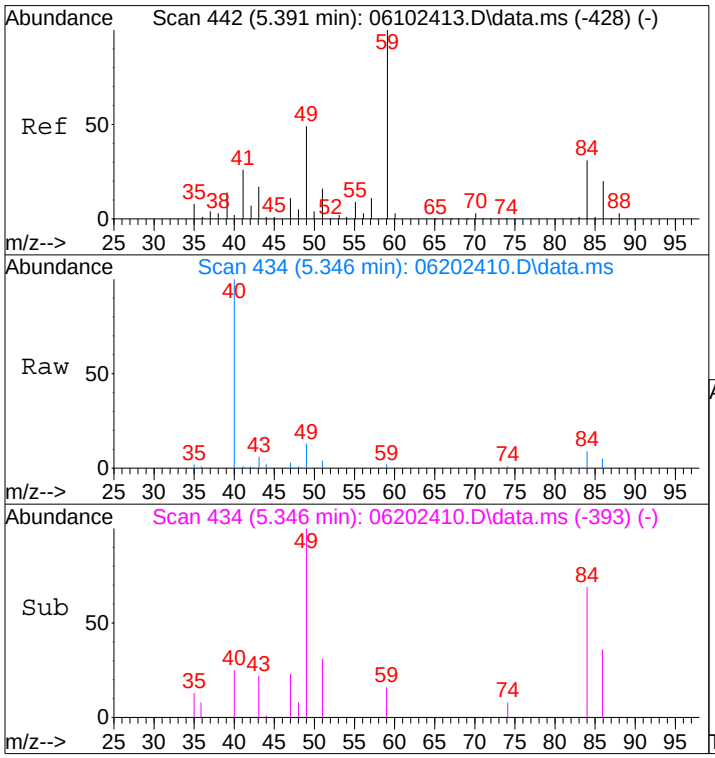


#15
2-Propanol (Isopropanol)
Concen: 1.80 ng
RT: 4.84 min Scan# 345
Delta R.T. -0.060 min
Lab File: 06202410.D
Acq: 20 Jun 2024 14:33

Tgt Ion: 45 Resp: 94998

Ion	Ratio	Lower	Upper
45	100		
43	16.9	2.5	42.5

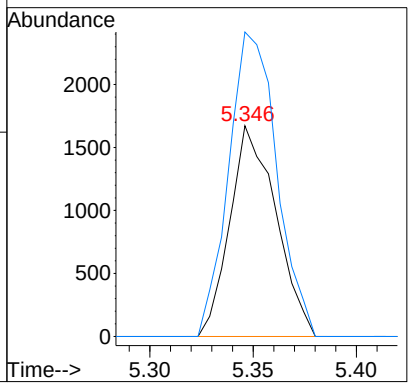


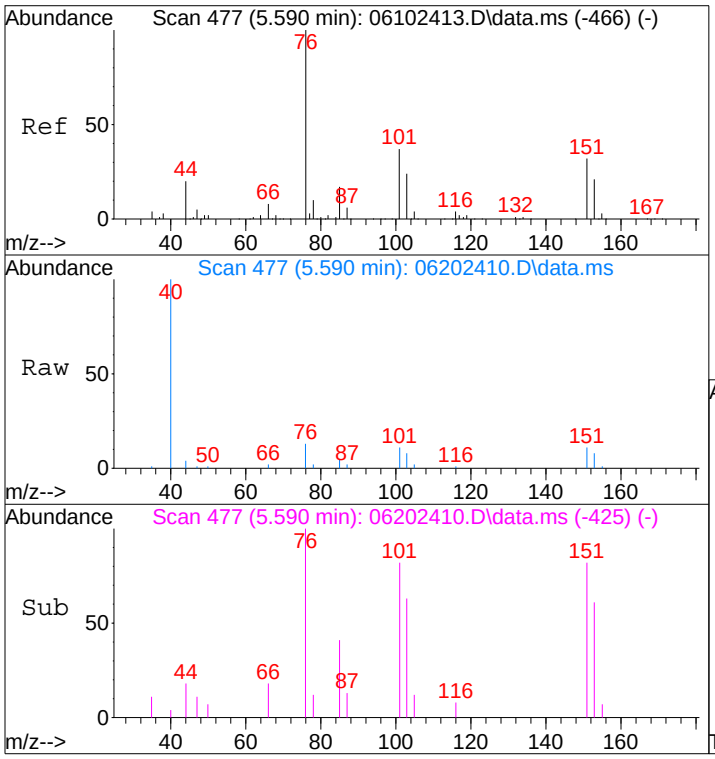


#19
Methylene Chloride
Concen: 0.14 ng
RT: 5.35 min Scan# 434
Delta R.T. -0.015 min
Lab File: 06202410.D
Acq: 20 Jun 2024 14:33

Tgt Ion: 84 Resp: 2592

Ion	Ratio	Lower	Upper
84	100		
49	151.0	132.9	182.9

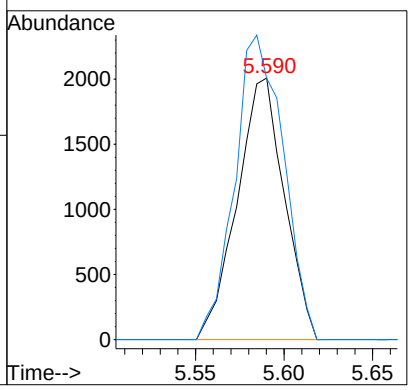


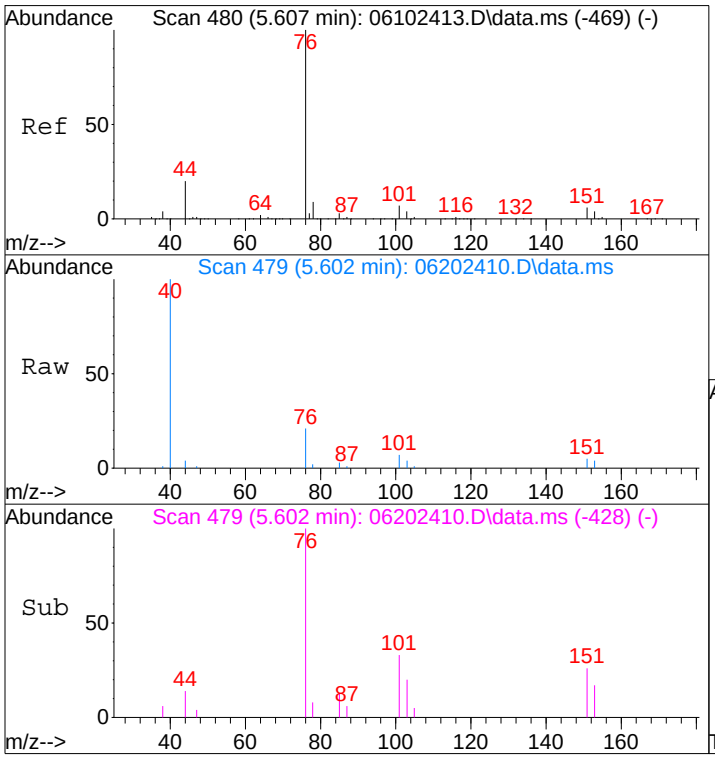


#21
Trichlorotrifluoroethane
Concen: 0.22 ng
RT: 5.59 min Scan# 477
Delta R.T. 0.044 min
Lab File: 06202410.D
Acq: 20 Jun 2024 14:33

Tgt Ion:151 Resp: 3725

Ion	Ratio	Lower	Upper
151	100		
101	120.1	95.0	135.0

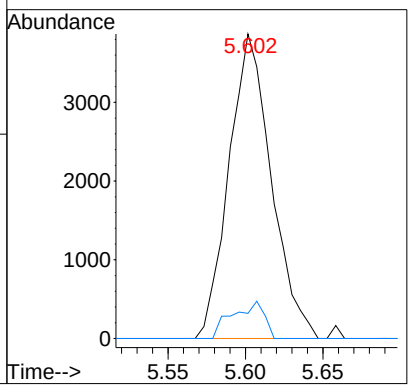


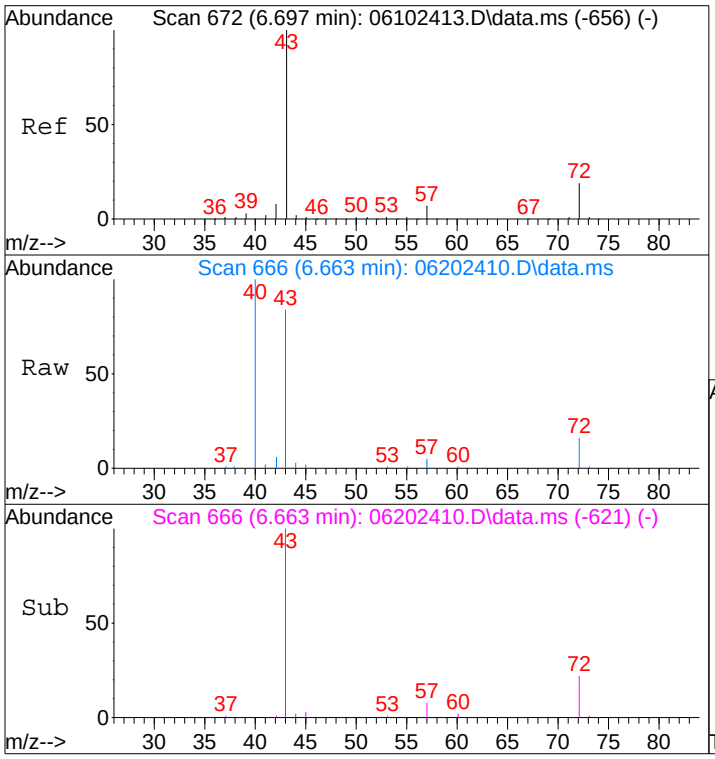


#22
Carbon Disulfide
Concen: 0.12 ng
RT: 5.60 min Scan# 479
Delta R.T. 0.038 min
Lab File: 06202410.D
Acq: 20 Jun 2024 14:33

Tgt Ion: 76 Resp: 7361

Ion	Ratio	Lower	Upper
76	100		
78	9.1	0.0	29.6

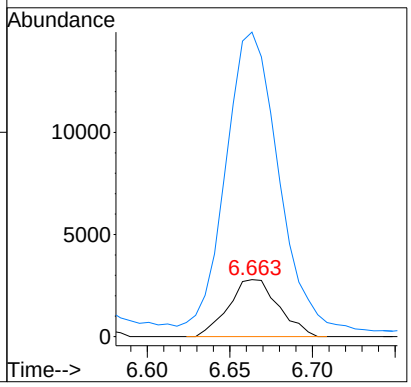


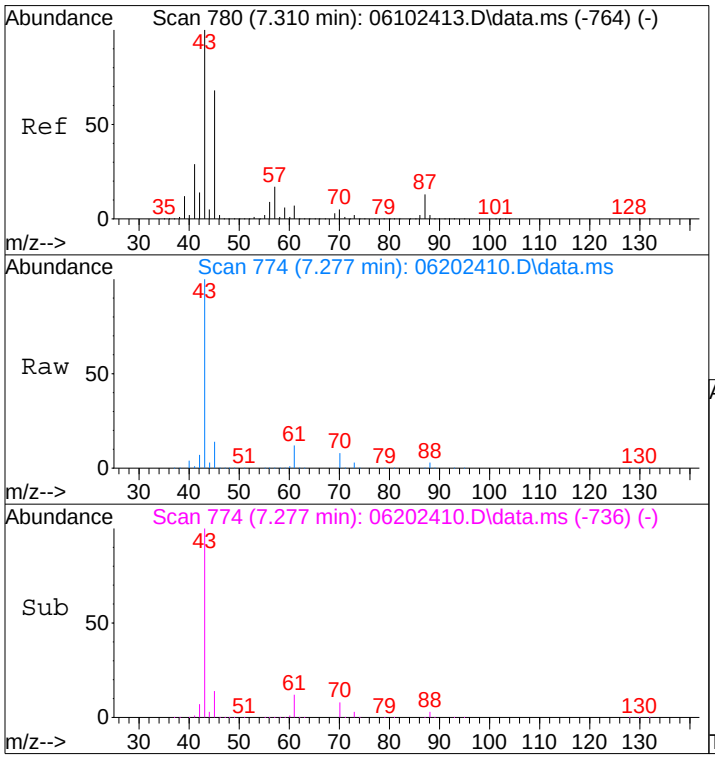


#27
2-Butanone (MEK)
Concen: 0.57 ng
RT: 6.66 min Scan# 666
Delta R.T. 0.005 min
Lab File: 06202410.D
Acq: 20 Jun 2024 14:33

Tgt Ion: 72 Resp: 5861

Ion	Ratio	Lower	Upper
72	100		
43	556.9	506.8	546.8#

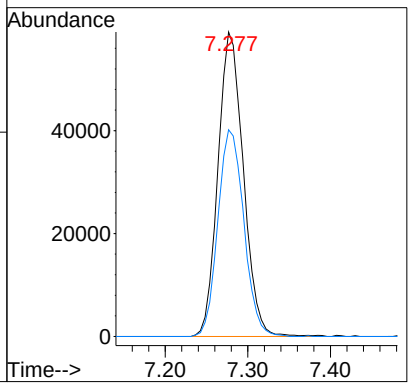


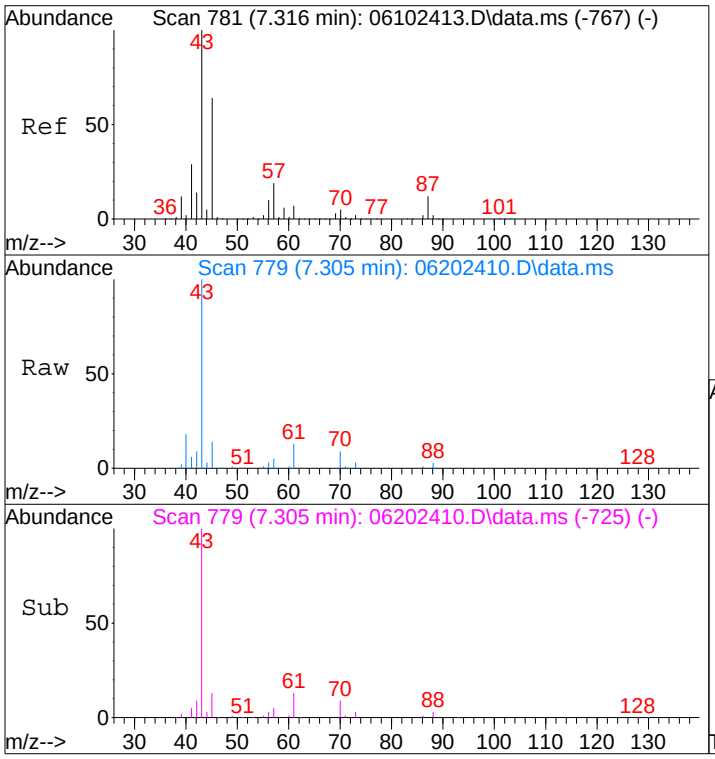


#30
Ethyl Acetate
Concen: 20.01 ng
RT: 7.28 min Scan# 774
Delta R.T. 0.017 min
Lab File: 06202410.D
Acq: 20 Jun 2024 14:33

Tgt Ion: 61 Resp: 126288

Ion	Ratio	Lower	Upper
61	100		
70	69.4	53.5	93.5

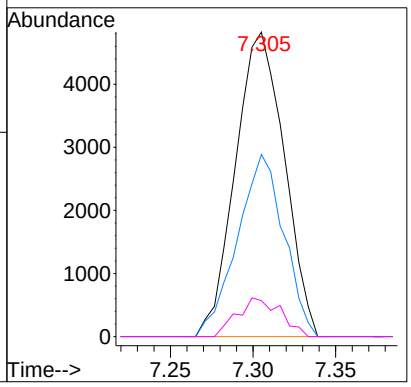


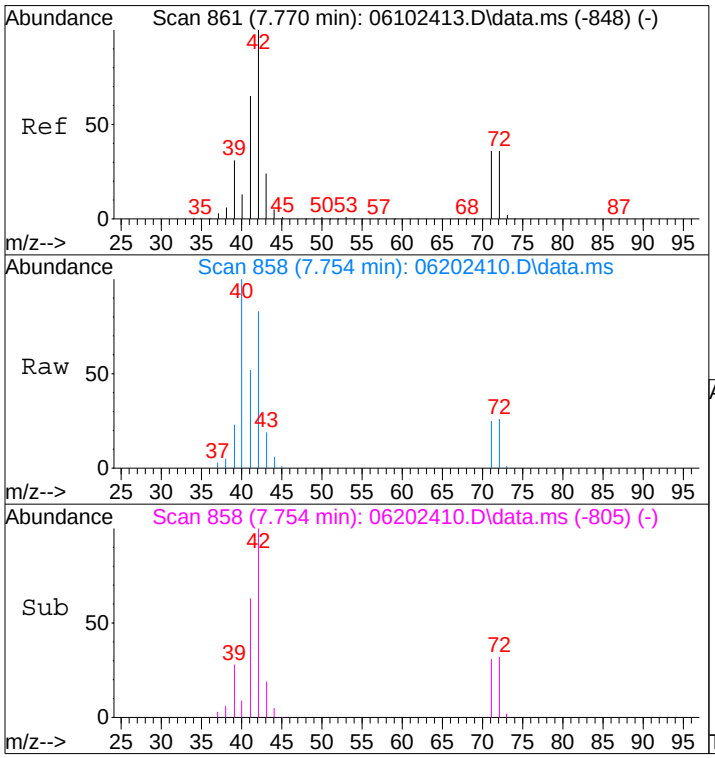


#31
n-Hexane
Concen: 0.36 ng
RT: 7.31 min Scan# 779
Delta R.T. 0.057 min
Lab File: 06202410.D
Acq: 20 Jun 2024 14:33

Tgt Ion: 57 Resp: 9924

Ion	Ratio	Lower	Upper
57	100		
56	56.9	42.5	63.7
86	11.3	9.5	14.3

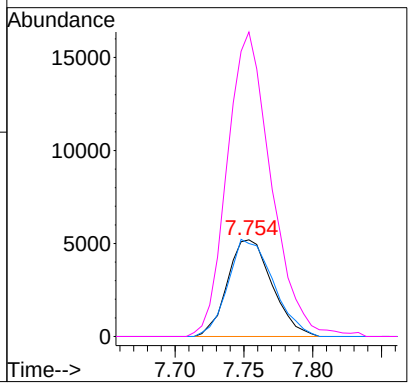


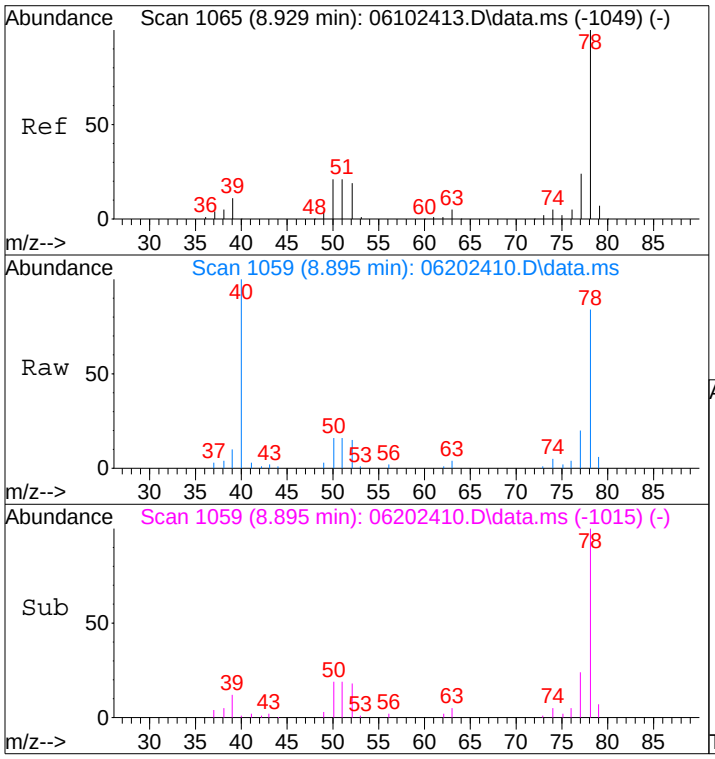


#34
Tetrahydrofuran (THF)
Concen: 1.24 ng
RT: 7.75 min Scan# 858
Delta R.T. 0.051 min
Lab File: 06202410.D
Acq: 20 Jun 2024 14:33

Tgt Ion: 72 Resp: 11714

Ion	Ratio	Lower	Upper
72	100		
71	101.6	79.4	119.4
42	311.5	260.8	300.8#

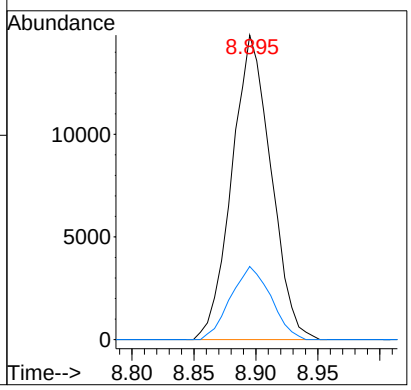


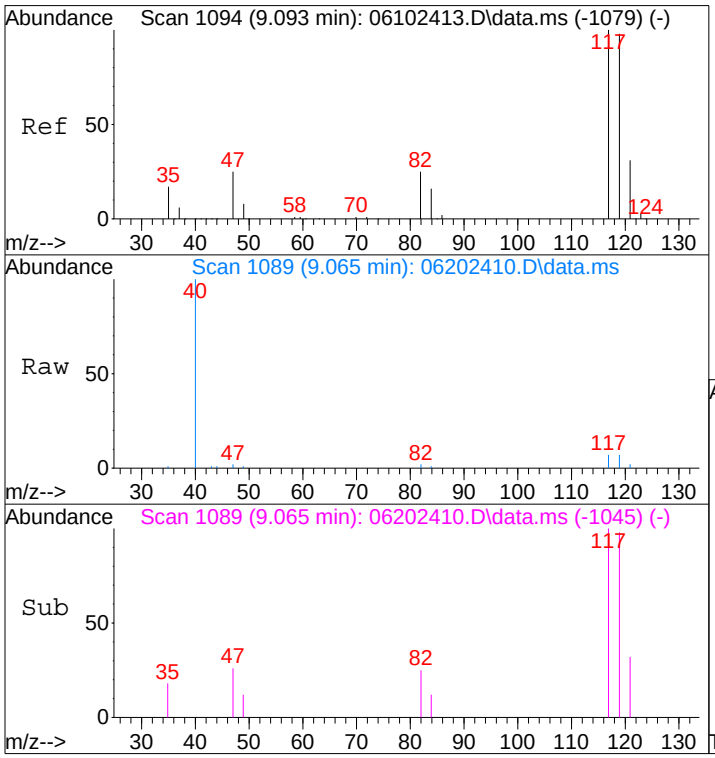


#41
Benzene
Concen: 0.48 ng
RT: 8.89 min Scan# 1059
Delta R.T. -0.002 min
Lab File: 06202410.D
Acq: 20 Jun 2024 14:33

Tgt Ion: 78 Resp: 32615

Ion	Ratio	Lower	Upper
78	100		
77	24.7	4.0	44.0

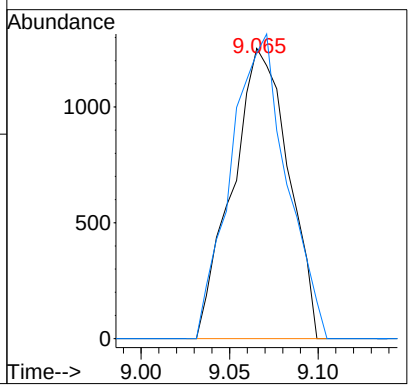


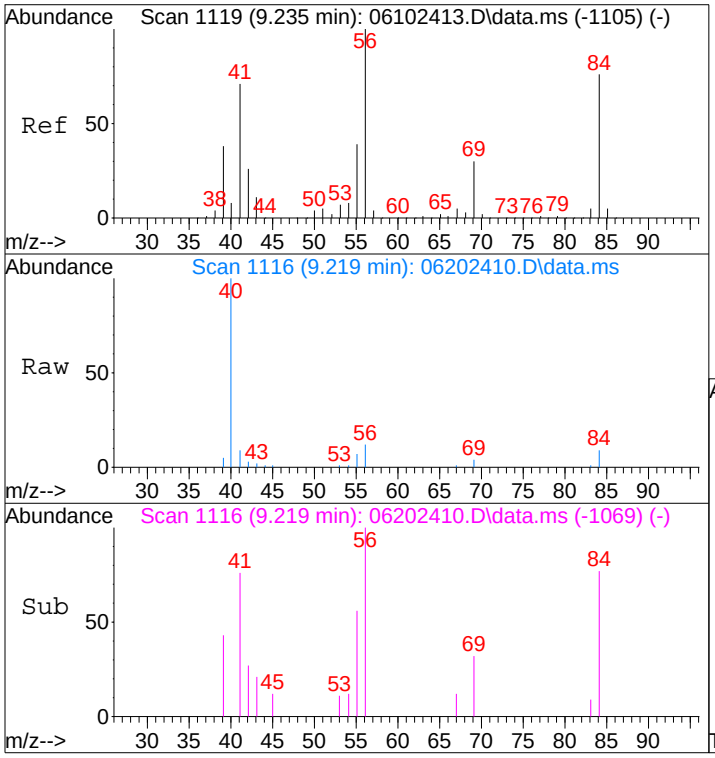


#42
Carbon Tetrachloride
Concen: 0.09 ng
RT: 9.07 min Scan# 1089
Delta R.T. -0.001 min
Lab File: 06202410.D
Acq: 20 Jun 2024 14:33

Tgt Ion:117 Resp: 2755

Ion	Ratio	Lower	Upper
117	100		
119	104.6	77.3	117.3

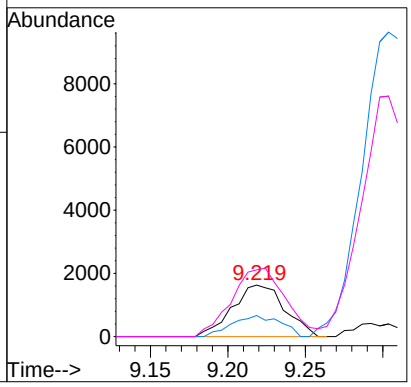


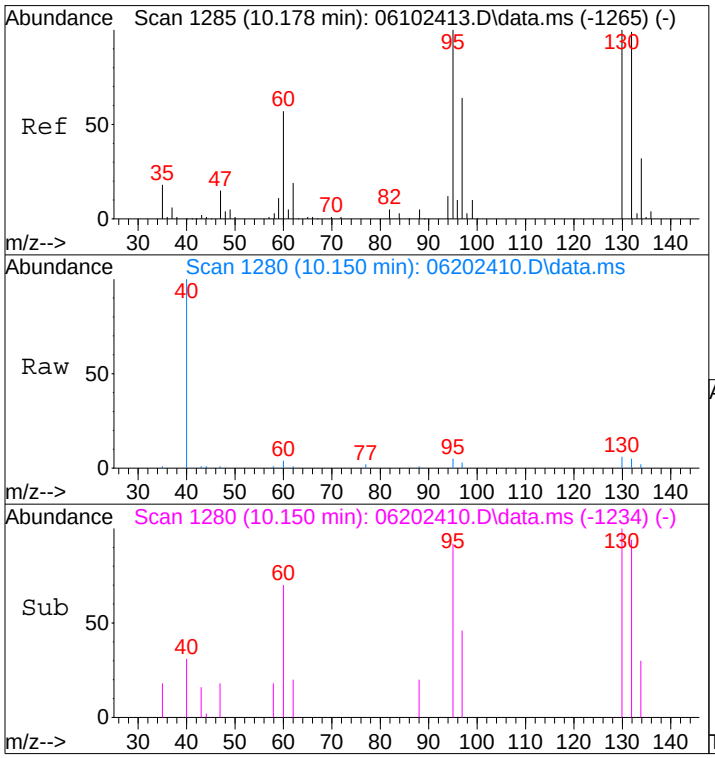


#43
Cyclohexane
Concen: 0.17 ng
RT: 9.22 min Scan# 1116
Delta R.T. 0.016 min
Lab File: 06202410.D
Acq: 20 Jun 2024 14:33

Tgt Ion: 84 Resp: 3836

Ion	Ratio	Lower	Upper
84	100		
69	38.2	18.8	58.8
56	136.8	111.5	151.5

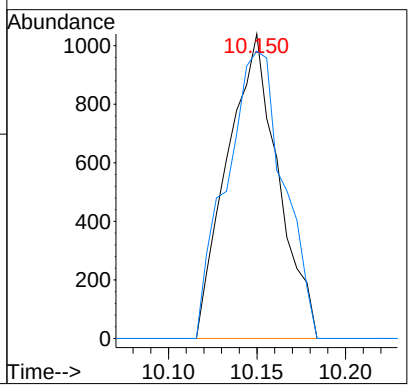


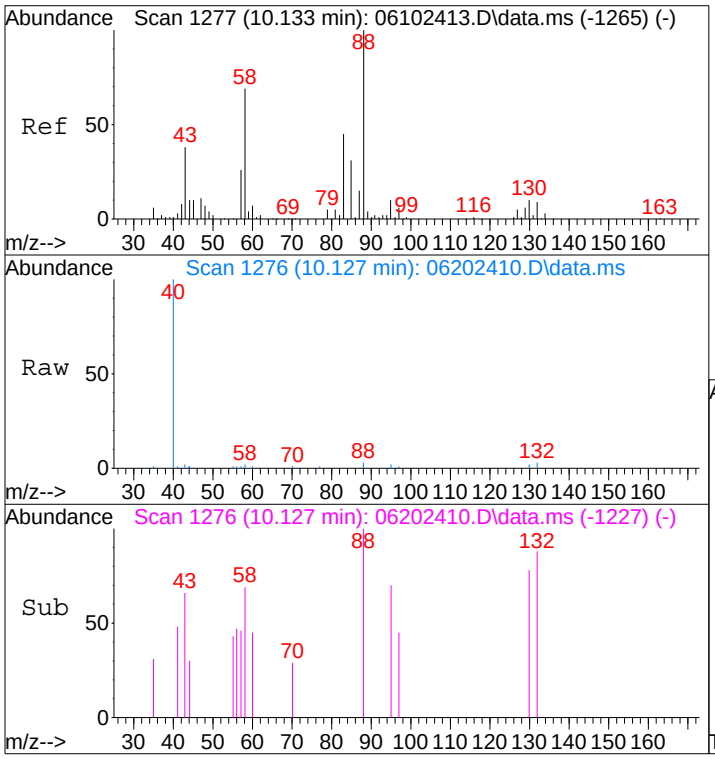


#47
Trichloroethene
Concen: 0.10 ng
RT: 10.15 min Scan# 1280
Delta R.T. 0.010 min
Lab File: 06202410.D
Acq: 20 Jun 2024 14:33

Tgt Ion:130 Resp: 2076

Ion	Ratio	Lower	Upper
130	100		
132	106.6	77.9	117.9

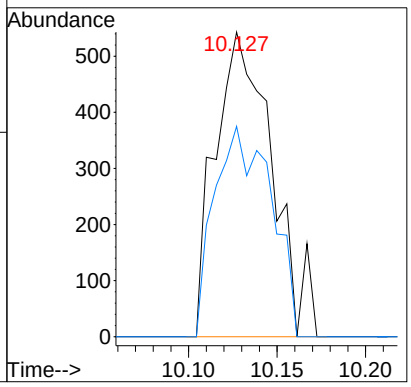


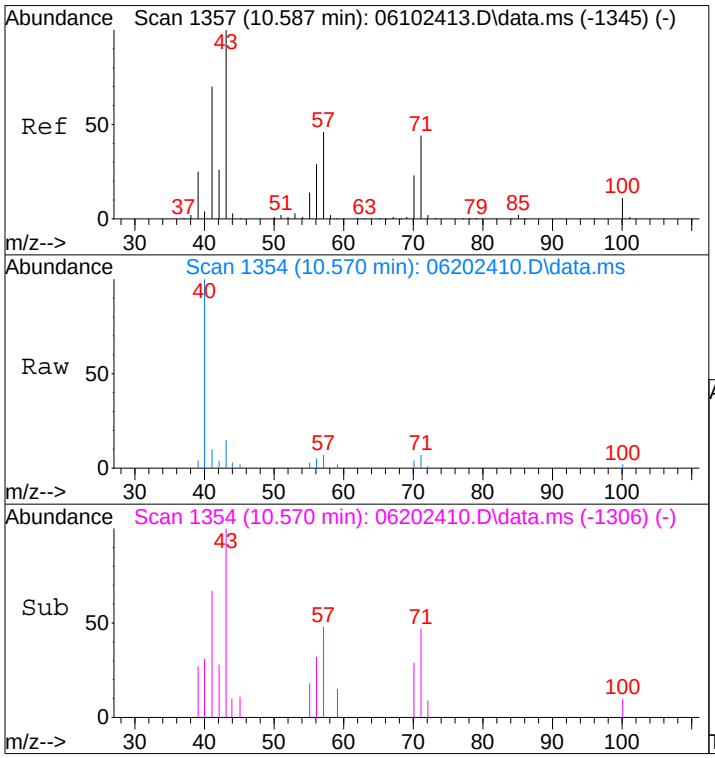


#48
1,4-Dioxane
Concen: 0.10 ng
RT: 10.13 min Scan# 1276
Delta R.T. 0.027 min
Lab File: 06202410.D
Acq: 20 Jun 2024 14:33

Tgt Ion: 88 Resp: 1212

Ion	Ratio	Lower	Upper
88	100		
58	68.9	47.6	87.6

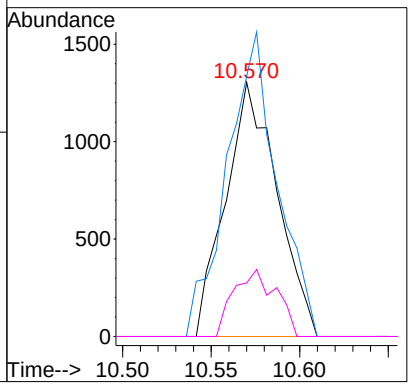


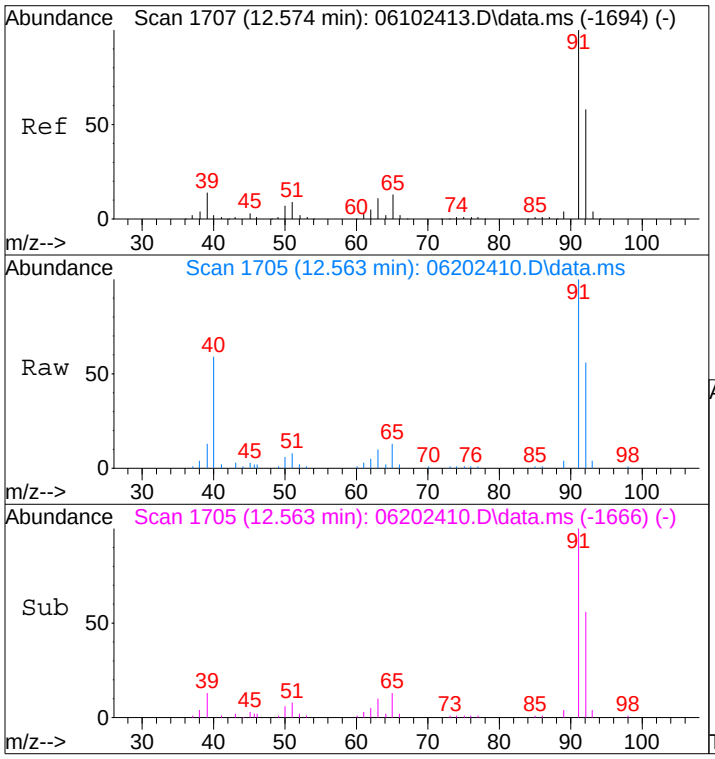


#51
n-Heptane
Concen: 0.18 ng
RT: 10.57 min Scan# 1354
Delta R.T. 0.024 min
Lab File: 06202410.D
Acq: 20 Jun 2024 14:33

Tgt Ion: 71 Resp: 2641

Ion	Ratio	Lower	Upper
71	100		
57	116.2	83.9	123.9
100	21.7	4.8	44.8

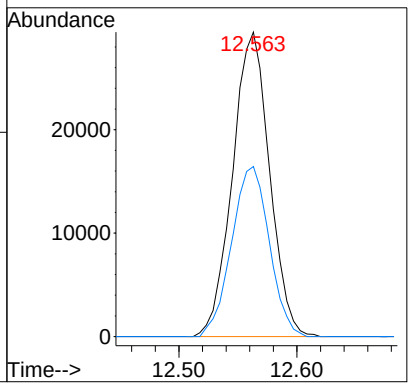


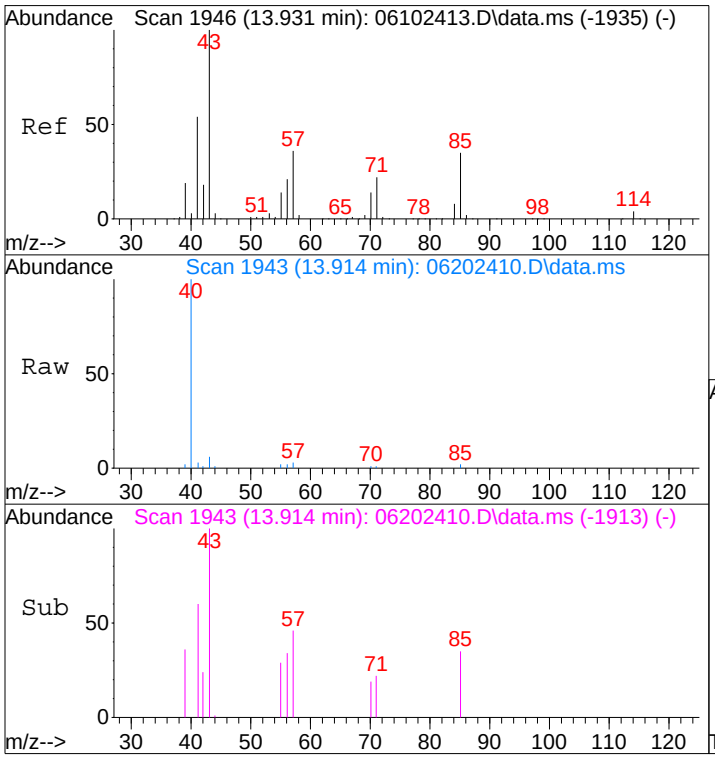


#58
Toluene
Concen: 0.94 ng
RT: 12.56 min Scan# 1705
Delta R.T. -0.028 min
Lab File: 06202410.D
Acq: 20 Jun 2024 14:33

Tgt Ion: 91 Resp: 64229

Ion	Ratio	Lower	Upper
91	100		
92	56.8	37.4	77.4

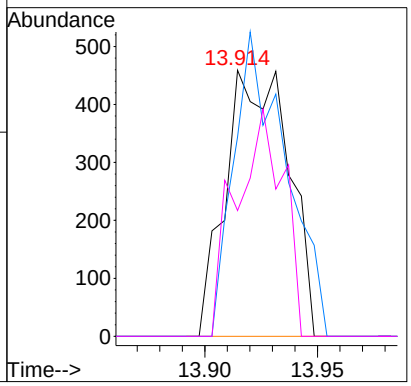


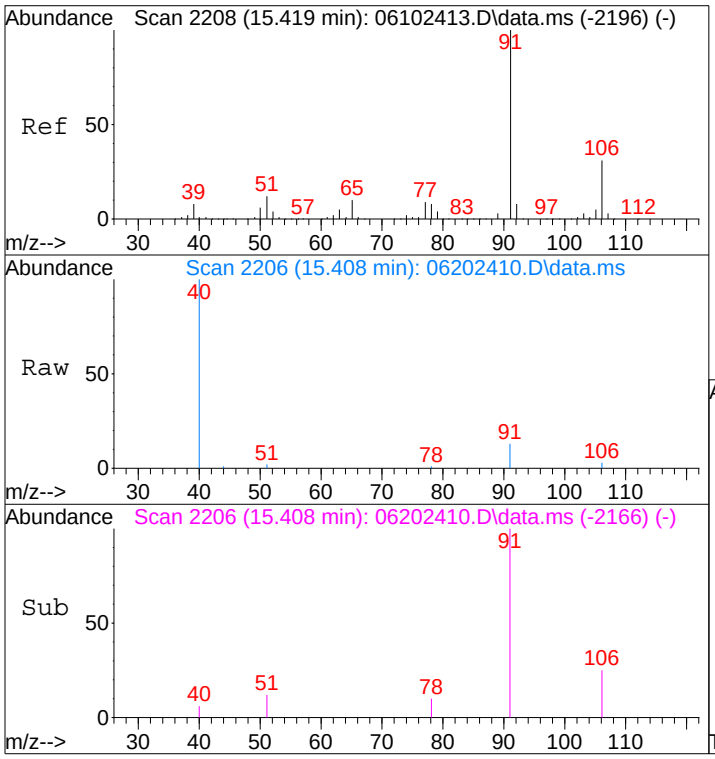


#63
n-Octane
Concen: 0.06 ng
RT: 13.91 min Scan# 1943
Delta R.T. -0.028 min
Lab File: 06202410.D
Acq: 20 Jun 2024 14:33

Tgt Ion: 57 Resp: 891

Ion	Ratio	Lower	Upper
57	100		
85	94.7	79.8	119.6
71	65.0	49.0	73.4

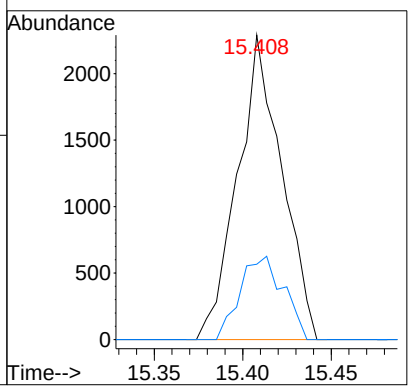


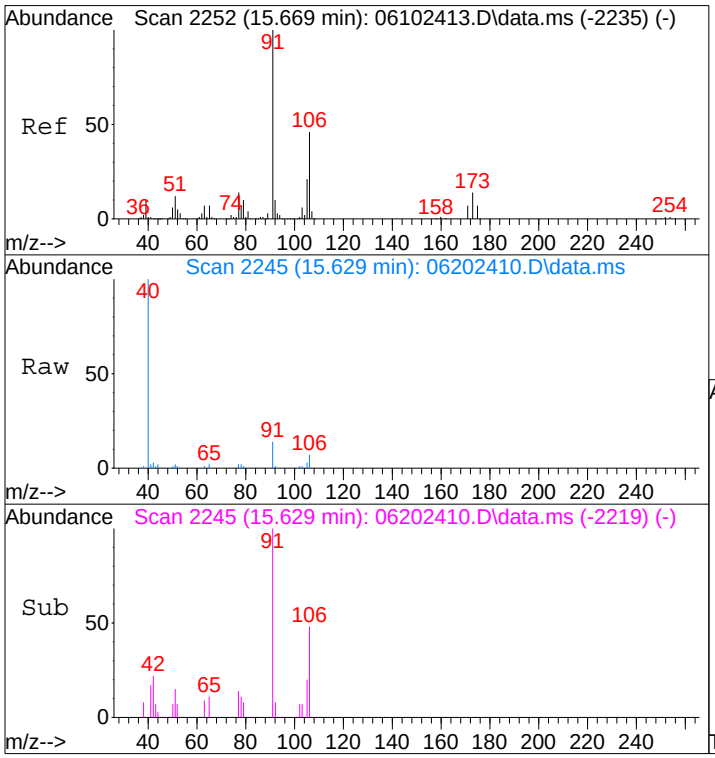


#66
Ethylbenzene
Concen: 0.05 ng
RT: 15.41 min Scan# 2206
Delta R.T. -0.023 min
Lab File: 06202410.D
Acq: 20 Jun 2024 14:33

Tgt Ion: 91 Resp: 3969

Ion	Ratio	Lower	Upper
91	100		
106	26.8	10.7	50.7

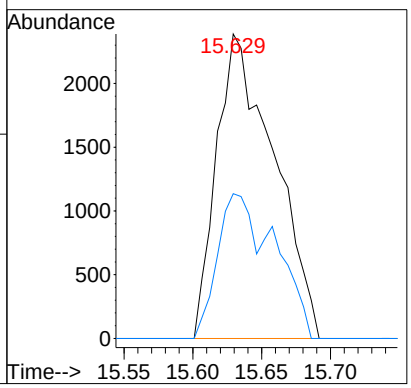


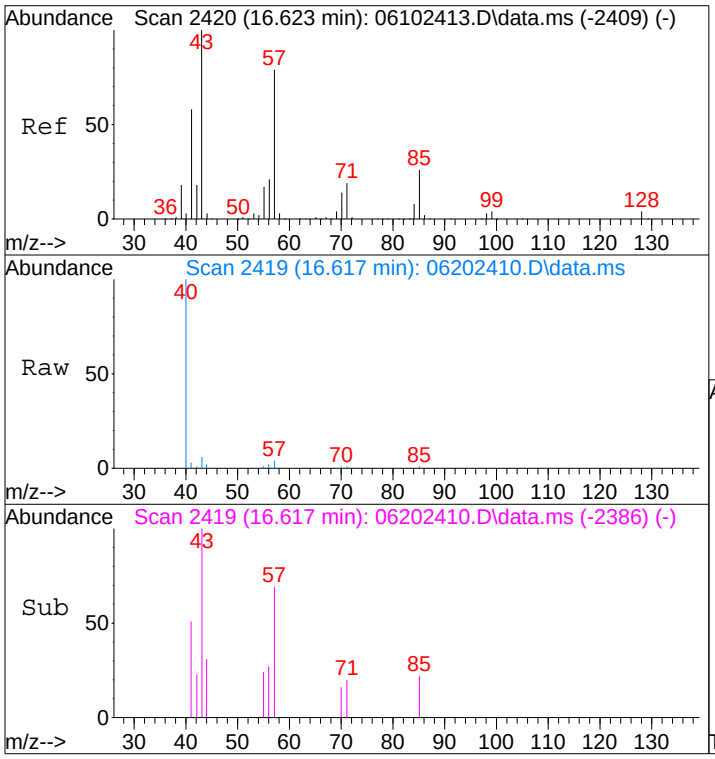


#67
m- & p-Xylenes
Concen: 0.11 ng
RT: 15.63 min Scan# 2245
Delta R.T. -0.051 min
Lab File: 06202410.D
Acq: 20 Jun 2024 14:33

Tgt Ion: 91 Resp: 6921

Ion	Ratio	Lower	Upper
91	100		
106	47.2	25.9	65.9

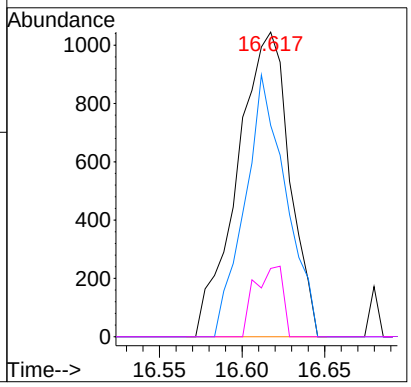


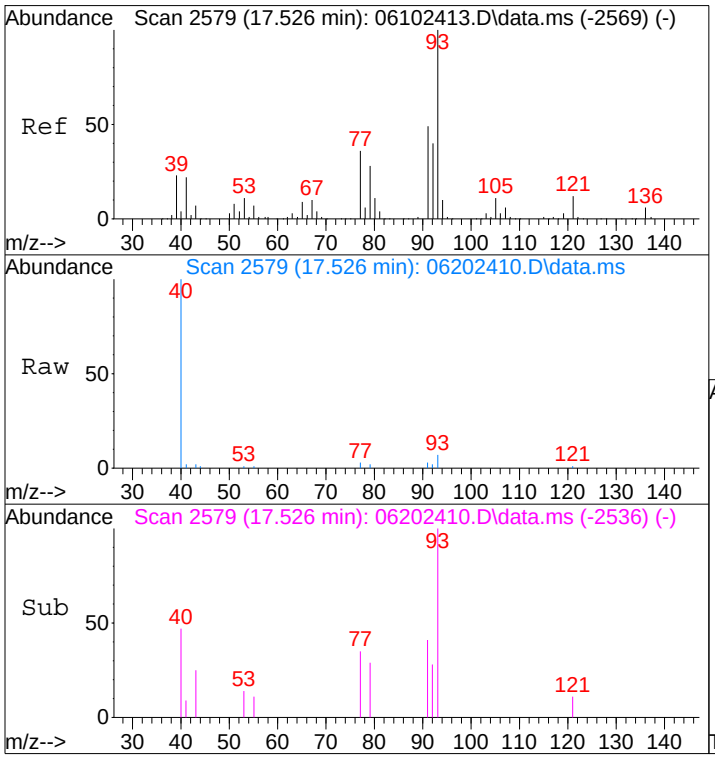


#71
n-Nonane
Concen: 0.06 ng
RT: 16.62 min Scan# 2419
Delta R.T. -0.011 min
Lab File: 06202410.D
Acq: 20 Jun 2024 14:33

Tgt Ion: 43 Resp: 2303

Ion	Ratio	Lower	Upper
43	100		
57	67.5	58.2	98.2
85	12.4	5.9	45.9

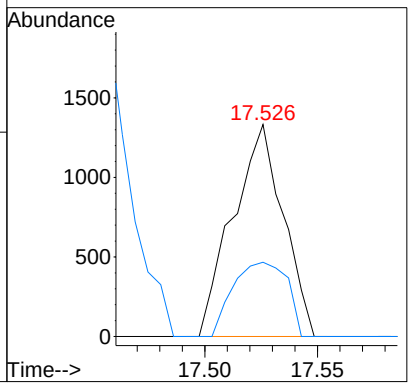


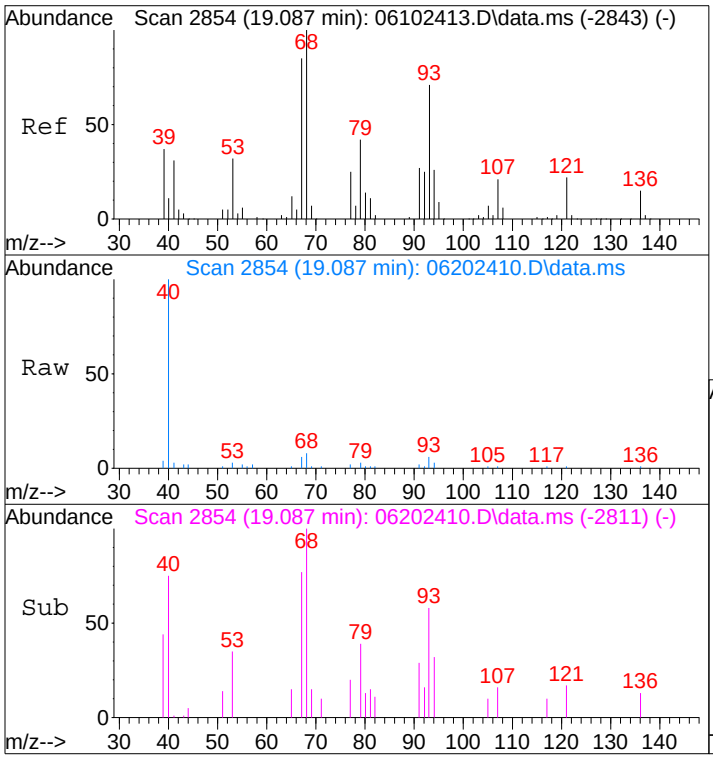


#75
alpha-Pinene
Concen: 0.06 ng
RT: 17.53 min Scan# 2579
Delta R.T. -0.006 min
Lab File: 06202410.D
Acq: 20 Jun 2024 14:33

Tgt Ion: 93 Resp: 2073

Ion	Ratio	Lower	Upper
93	100		
77	37.6	15.3	55.3

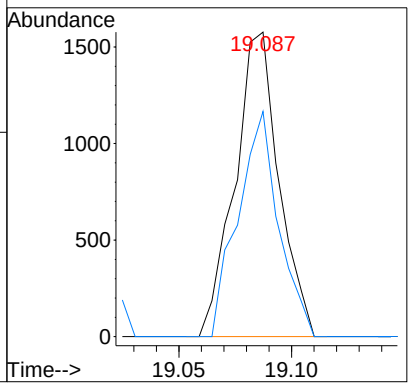




#91
d-Limonene
Concen: 0.09 ng
RT: 19.09 min Scan# 2854
Delta R.T. -0.006 min
Lab File: 06202410.D
Acq: 20 Jun 2024 14:33

Tgt Ion: 68 Resp: 2149

Ion	Ratio	Lower	Upper
68	100		
93	68.1	52.2	92.2



Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\20\06202410.D Vial: 15
Acq On : 20 Jun 2024 14:33 Operator: SC
Sample : P2402249-040 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:27:38 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

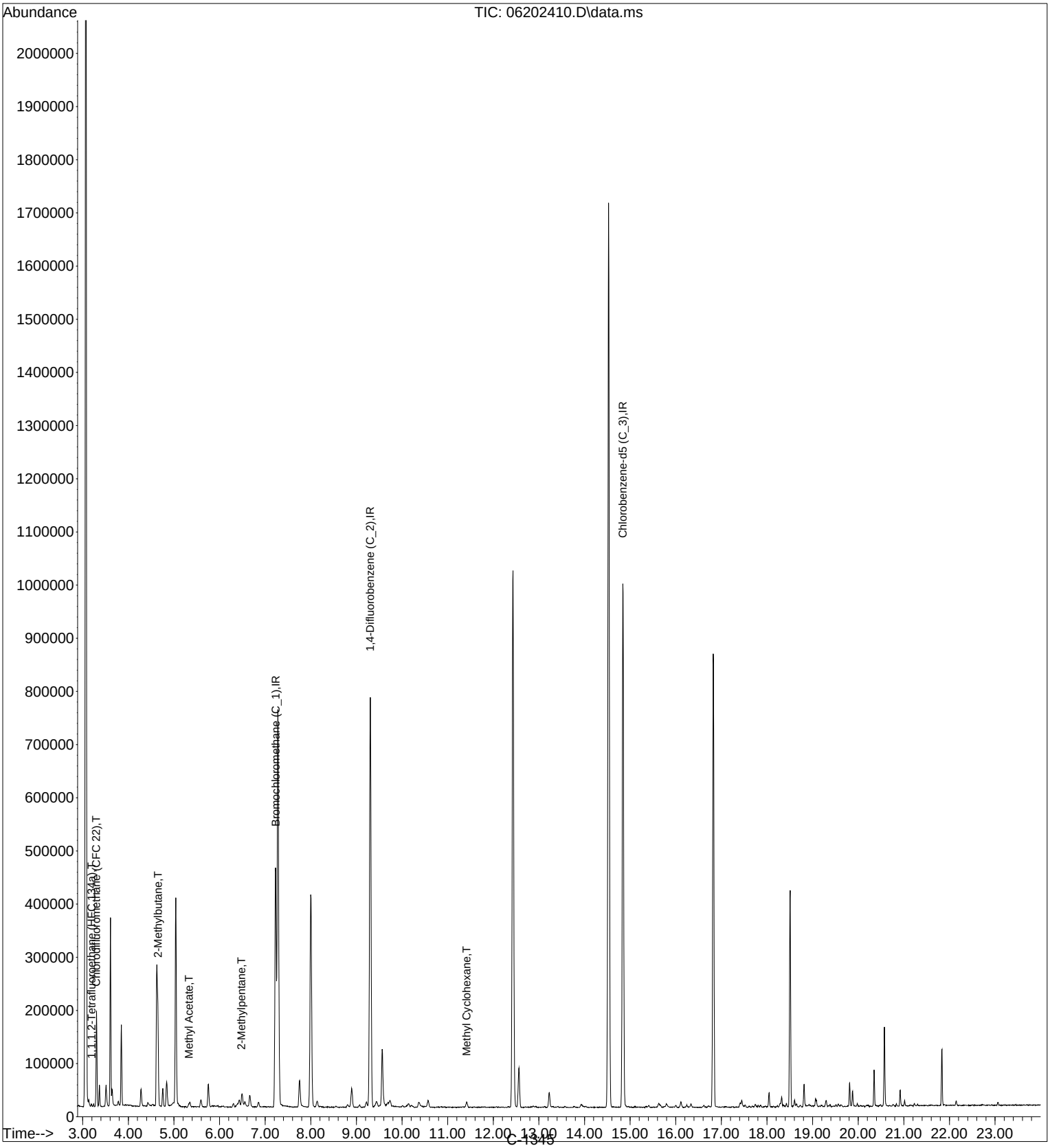
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	168726	12.500	ng		-0.02
16) 1,4-Difluorobenzene (C 2)	9.30	114	742689	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	170794	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	3.14	85	269	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.19	83	2480	0.143	ng	#	77
4) 1,1-Difluoroethane	3.24	65	1015	N.D.			
5) Chlorodifluoromethane ...	3.30	67	1279	0.222	ng		90
6) 1-Chloro-1,1-Difluoroe...	3.51	65	894	N.D.			
7) Dichlorofluoromethane ...	0.00	67	0	N.D.			
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	0.00	83	0	N.D.			
10) 2-Methylbutane	4.65	57	34094	1.694	ng	#	83
11) Methyl Acetate	5.33	43	6279	0.110	ng	#	83
12) 2-Methylpentane	6.48	71	2906	0.199	ng	#	1
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	9.06	84	328	N.D.			
17) 2,3-Dimethylpentane	9.52	56	2170	N.D.			
18) Dibromomethane	9.79	174	306	N.D.			
20) Methyl Cyclohexane	11.42	55	4214	0.144	ng		86
21) 1,3-Dichloropropane	12.56	76	220	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	16.32	75	309	N.D.			
25) Bromobenzene	17.03	77	57	N.D.			
26) 2-Chlorotoluene	17.61	91	1058	N.D.			
27) 4-Chlorotoluene	17.68	91	2719	N.D.			
28) Indane	19.11	117	492	N.D.			
29) Indene	19.21	115	186	N.D.			
30) 1,2,4,5-Tetramethylben...	20.18	119	411	N.D.			
31) 1,2,3,4-Tetramethylben...	20.22	119	494	N.D.			
32) 1,2,3,5-Tetramethylben...	20.59	119	1012	N.D.			
33) 1,2,3-Trichlorobenzene	21.19	180	190	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202410.D Vial: 15
Acq On : 20 Jun 2024 14:33 Operator: SC
Sample : P2402249-040 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:27:38 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\20\
Data File : 06202410.D
Acq On : 20 Jun 2024 14:33
Operator : SC
Sample : P2402249-040 (400mL)
Misc : S37-06062402
ALS Vial : 15 Sample Multiplier: 1

MJ 6/28/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06202410.D\data.ms

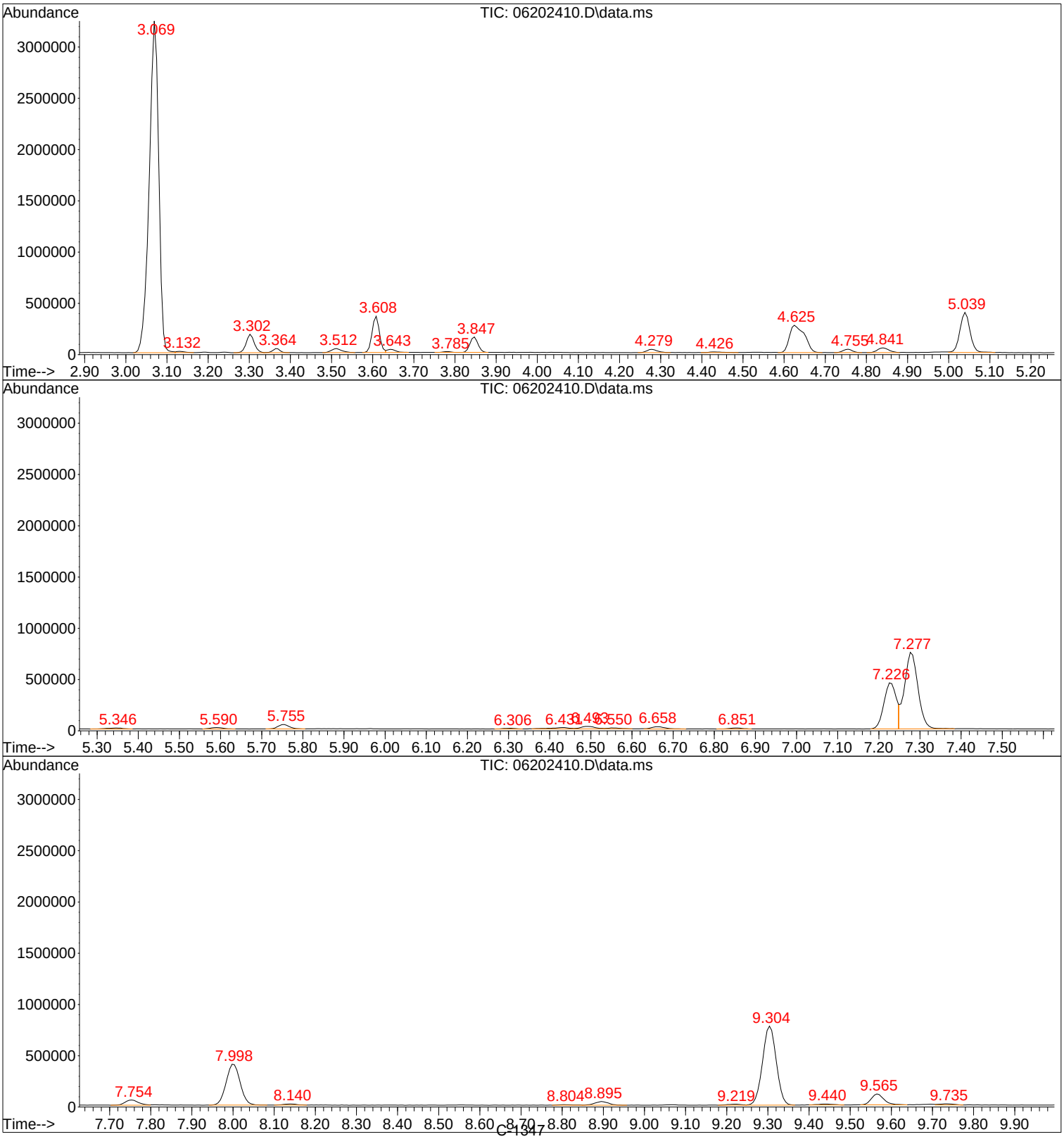
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.069	24	33	42	rBV	3235232	5195404	100.00%	36.827%
2	3.132	42	44	50	rVB2	12660	16775	0.32%	0.119%
3	3.302	67	74	80	rBV3	180262	245026	4.72%	1.737%
4	3.364	80	85	91	rVB2	40420	48810	0.94%	0.346%
5	3.512	105	111	119	rBV2	40303	71705	1.38%	0.508%
6	3.608	122	128	132	rVV	354008	445024	8.57%	3.155%
7	3.643	132	134	142	rVB	30013	42023	0.81%	0.298%
8	3.785	153	159	164	rBV	7673	10767	0.21%	0.076%
9	3.847	164	170	176	rVB	151362	205860	3.96%	1.459%
10	4.279	240	246	254	rBV	32088	56341	1.08%	0.399%
11	4.426	267	272	283	rBV3	6890	17232	0.33%	0.122%
12	4.625	300	307	319	rVB2	265958	676177	13.01%	4.793%
13	4.755	324	330	336	rBV	33787	52825	1.02%	0.374%
14	4.841	338	345	352	rBV	46164	90850	1.75%	0.644%
15	5.039	373	380	393	rVB	391594	671628	12.93%	4.761%
16	5.346	423	434	441	rBV5	10098	28538	0.55%	0.202%
17	5.590	471	477	485	rBV5	13694	30285	0.58%	0.215%
18	5.755	498	506	515	rBV	43272	84290	1.62%	0.597%
19	6.306	596	603	608	rBV2	7278	13656	0.26%	0.097%
20	6.431	612	625	630	rVV3	12676	40240	0.77%	0.285%
21	6.493	630	636	643	rVV4	23685	57798	1.11%	0.410%
22	6.550	643	646	655	rVB4	8360	16989	0.33%	0.120%
23	6.658	660	665	678	rVB	22261	52348	1.01%	0.371%
24	6.851	691	699	706	rBV3	9283	21204	0.41%	0.150%
25	7.226	757	765	769	rBV	449875	958086	18.44%	6.791%
26	7.277	769	774	793	rVB	746281	1673359	32.21%	11.861%
27	7.754	849	858	866	rBV3	50080	114655	2.21%	0.813%
28	7.998	891	901	916	rBV	399438	950606	18.30%	6.738%
29	8.140	919	926	933	rVB4	10918	25971	0.50%	0.184%
30	8.804	1038	1043	1051	rBV3	5209	13535	0.26%	0.096%
31	8.895	1051	1059	1070	rVB	35792	81678	1.57%	0.579%
32	9.219	1109	1116	1121	rBV5	10240	22415	0.43%	0.159%
33	9.304	1121	1131	1142	rVB	770848	1795425	34.56%	12.727%
34	9.440	1148	1155	1163	rVB7	8959	24295	0.47%	0.172%
35	9.565	1170	1177	1190	rVB	106403	228518	4.40%	1.620%
36	9.735	1202	1207	1214	rVB3	11209	27236	0.52%	0.193%

Sum of corrected areas: 14107574

Data Path : I:\MS09\DATA\2024 06\20\
Data File : 06202410.D
Acq On : 20 Jun 2024 14:33
Operator : SC
Sample : P2402249-040 (400mL)
Misc : S37-06062402
ALS Vial : 15 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\20\\
Data File : 06202410.D
Acq On : 20 Jun 2024 14:333
Operator : SCC
Sample : P2402249-040 (400mL))
Misc : S37-060624022
ALS Vial : 15 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192428.D Vial: 16
Acq On : 19 Jun 2024 23:50 Operator: SC
Sample : P2402249-041 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/29/24

Quant Time: Jun 29 09:53:12 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	147608	12.500 ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	649931	12.500 ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	153139	12.500 ng		0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4(...	8.00	65	333144	12.699 ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.60%			
57) Toluene-d8 (SS2)	12.43	98	726035	12.389 ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.12%			
73) Bromofluorobenzene (SS3)	16.82	174	274786	12.985 ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.92%			
Target Compounds						Qvalue
2) Propene	0.00	42	0	N.D. d		
3) Dichlorodifluoromethan...	3.38	85	18796m	0.541 ng		
4) Chloromethane	3.49	50	872	N.D.		
5) 1,2-Dichloro-1,1,2,2-t...	3.61	135	433	N.D.		
6) Vinyl Chloride	0.00	62	0	N.D.		
7) 1,3-Butadiene	0.00	54	0	N.D.		
8) Bromomethane	4.02	94	289	N.D.		
9) Chloroethane	4.16	64	114	N.D.		
10) Ethanol	4.39	45	117	N.D.		
11) Acetonitrile	0.00	41	0	N.D. d		
12) Acrolein	4.53	56	2030	0.191 ng		95
13) Acetone	4.64	58	26859	2.342 ng	#	74
14) Trichlorofluoromethane	4.75	101	544154	15.485 ng		100
15) 2-Propanol (Isopropanol)	0.00	45	0	N.D. d		
16) Acrylonitrile	4.99	53	633	N.D.		
17) 1,1-Dichloroethene	0.00	96	0	N.D.		
18) 2-Methyl-2-Propanol (t...	5.34	59	641	N.D.		
19) Methylene Chloride	5.35	84	1078	0.066 ng		93
20) 3-Chloro-1-propene (Al...	5.45	41	117	N.D.		
21) Trichlorotrifluoroethane	5.58	151	280062	18.839 ng		99
22) Carbon Disulfide	0.00	76	0	N.D. d		
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.		
24) 1,1-Dichloroethane	0.00	63	0	N.D.		
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.		
26) Vinyl Acetate	6.43	86	1419	0.536 ng	#	45
27) 2-Butanone (MEK)	6.67	72	3560	0.392 ng		93
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.		
29) Diisopropyl Ether	0.00	87	0	N.D.		
30) Ethyl Acetate	0.00	61	0	N.D.		
31) n-Hexane	7.31	57	367	N.D.		
32) Chloroform	7.36	83	2362	0.082 ng		98
34) Tetrahydrofuran (THF)	7.79	72	190	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	8.11	62	191	N.D.		
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.		
39) Isopropyl Acetate	9.63	61	11475	No Calib	#	
40) 1-Butanol	8.80	56	18357	No Calib	#	
41) Benzene	8.90	78	4153	0.069 ng		99
42) Carbon Tetrachloride	9.06	117	2329	0.084 ng		98
43) Cyclohexane	9.29	84	832	N.D.		
44) tert-Amyl Methyl Ether	9.61	73	149	N.D.		
45) 1,2-Dichloropropane	9.84	63	109	N.D.		
46) Bromodichloromethane	10.08	83	571	N.D.		
47) Trichloroethene	10.14	130	2074	0.118 ng		97
48) 1,4-Dioxane	10.13	88	1139	0.103 ng		90
49) 2,2,4-Trimethylpentane...	10.25	57	470	N.D.		
50) Methyl Methacrylate	0.00	100	0	N.D.		

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192428.D Vial: 16
Acq On : 19 Jun 2024 23:50 Operator: SC
Sample : P2402249-041 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 09:53:12 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

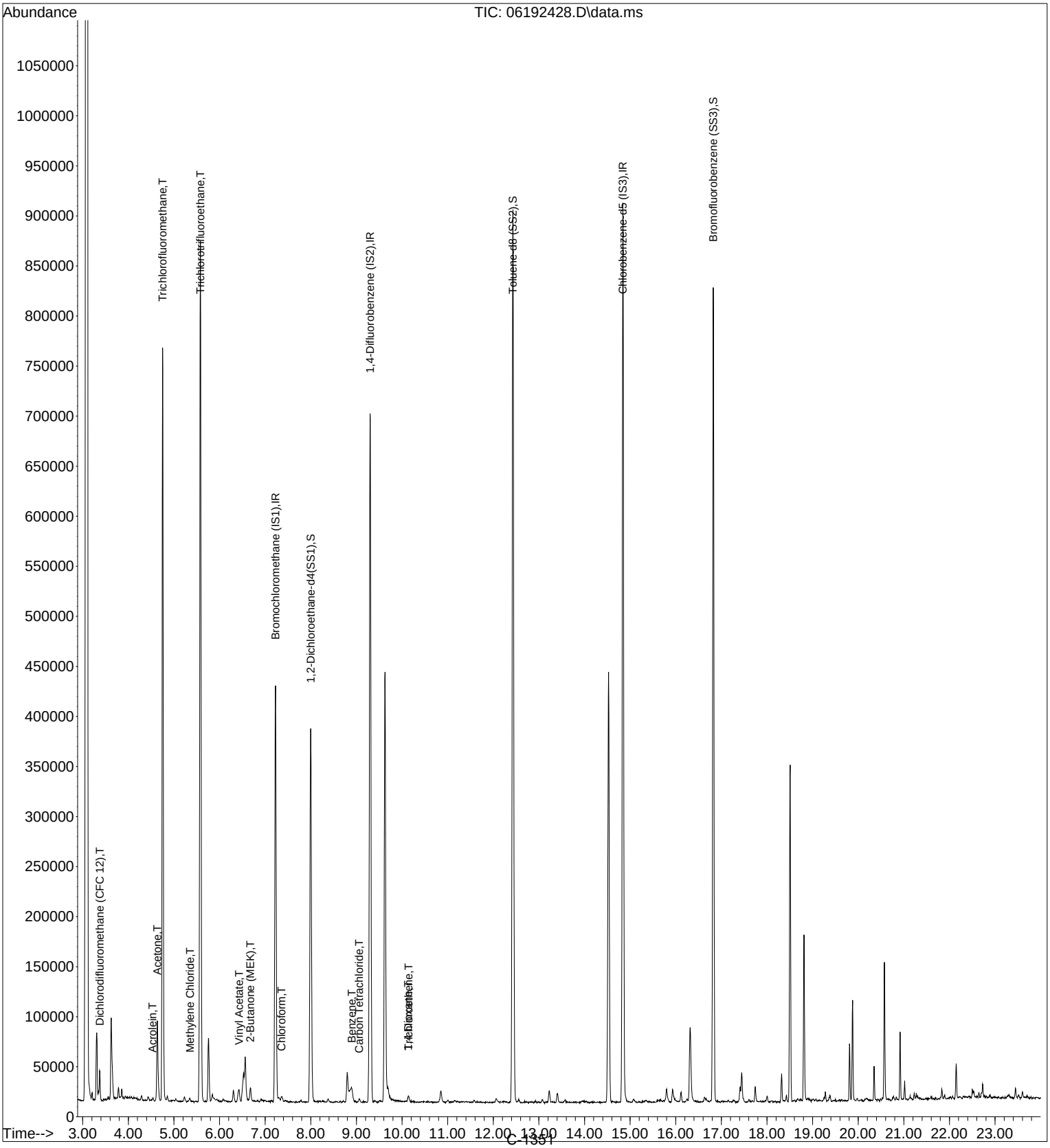
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	0.00	71	0	N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
58) Toluene	12.55	91	2967	N.D.	
59) 2-Hexanone	12.92	43	1413	N.D.	
60) Dibromochloromethane	13.07	129	495	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	13.78	43	340	N.D.	
63) n-Octane	0.00	57	0	N.D.	
64) Tetrachloroethene	14.03	166	506	N.D.	
65) Chlorobenzene	14.90	112	847	N.D.	
66) Ethylbenzene	15.41	91	1187	N.D.	
67) m- & p-Xylenes	15.65	91	2200	N.D.	
68) Bromoform	15.68	173	669	N.D.	
69) Styrene	0.00	104	0	N.D.	
70) o-Xylene	16.25	91	1089	N.D.	
71) n-Nonane	16.62	43	1000	N.D.	
72) 1,1,2,2-Tetrachloroethane	16.20	83	368	N.D.	
74) Cumene	17.04	105	978	N.D.	
75) alpha-Pinene	0.00	93	0	N.D.	
76) n-Propylbenzene	17.67	91	1245	N.D.	
77) 3-Ethyltoluene	17.04	105	978	No Calib	#
78) 4-Ethyltoluene	17.86	105	867	N.D.	
79) 1,3,5-Trimethylbenzene	17.96	105	607	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.04	105	978	No Calib	#
82) 1,2,4-Trimethylbenzene	18.43	105	1194	N.D.	
83) n-Decane	0.00	58	0	N.D.	
84) Benzyl Chloride	0.00	91	0	N.D.	
85) 1,3-Dichlorobenzene	18.58	146	628	N.D.	
86) 1,4-Dichlorobenzene	18.66	146	622	N.D.	
87) sec-Butylbenzene	18.74	105	880	N.D.	
88) 4-Isopropyltoluene (p-...	18.93	119	1049	N.D.	
89) 1,2,3-Trimethylbenzene	17.04	105	978	No Calib	#
90) 1,2-Dichlorobenzene	19.04	146	519	N.D.	
91) d-Limonene	19.09	68	161	N.D.	
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	739	N.D.	
95) Naphthalene	20.94	128	934	N.D.	
96) n-Dodecane	0.00	58	0	N.D.	
97) Hexachlorobutadiene	21.30	225	762	N.D.	
98) Cyclohexanone	15.37	55	115	No Calib	#
99) tert-Butylbenzene	0.00	119	0	N.D.	d
100) n-Butylbenzene	19.39	91	860	N.D.	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192428.D Vial: 16
Acq On : 19 Jun 2024 23:50 Operator: SC
Sample : P2402249-041 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 09:53:12 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT/LSC Reviewed)

MJ 6/29/24

Data File : I:\MS09\DATA\2024 06\19\06192428.D Vial: 16
Acq On : 19 Jun 2024 23:50 Operator: SC
Sample : P2402249-041 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 09:53:12 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

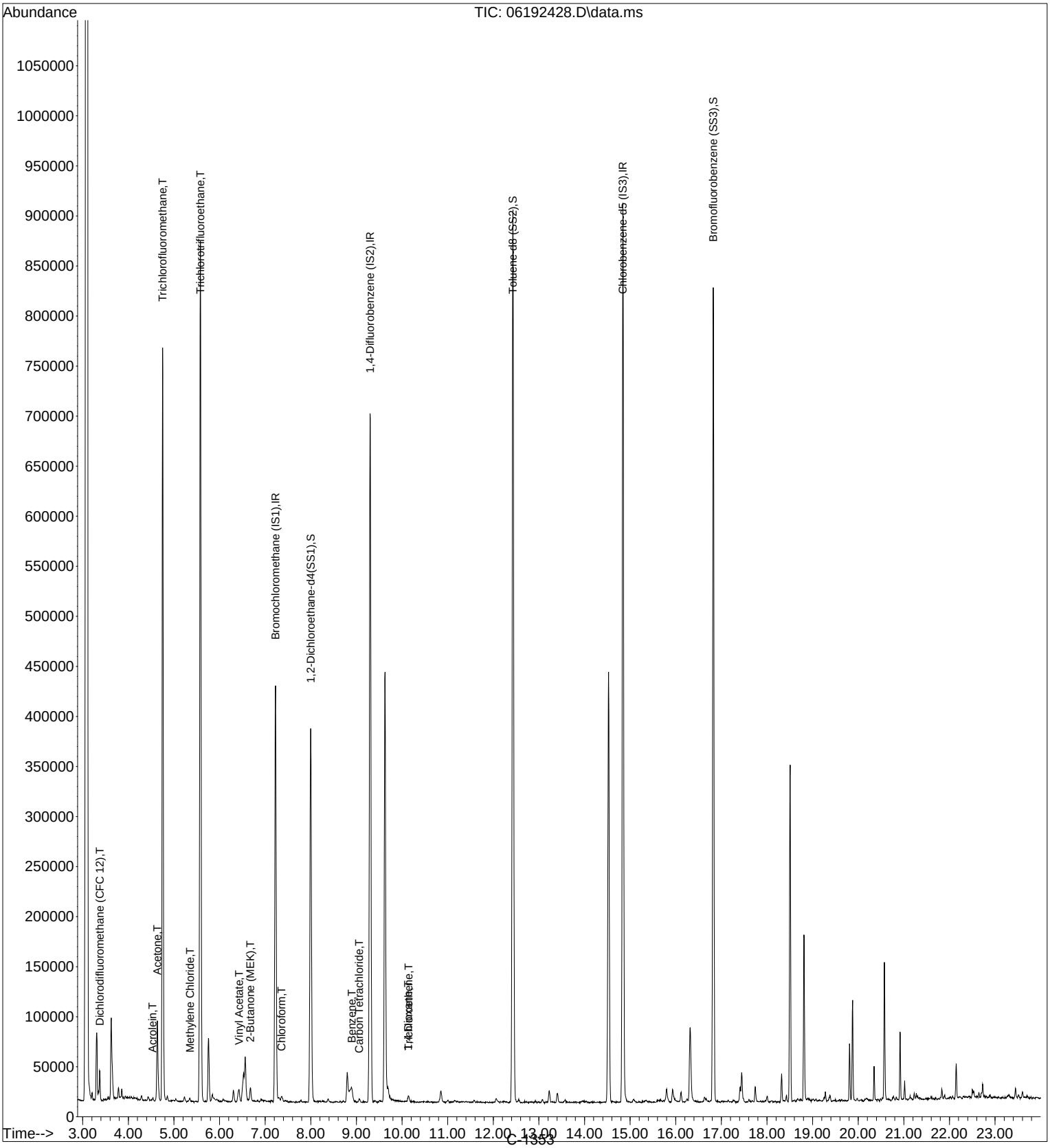
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	147608	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	649931	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	153139	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	333144	12.699	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.60%				
57) Toluene-d8 (SS2)	12.43	98	726035	12.389	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.12%				
73) Bromofluorobenzene (SS3)	16.82	174	274786	12.985	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.92%				
Target Compounds							Qvalue
3) Dichlorodifluoromethan...	3.38	85	18796m	0.541	ng		
12) Acrolein	4.53	56	2030	0.191	ng		95
13) Acetone	4.64	58	26859	2.342	ng	#	74
14) Trichlorofluoromethane	4.75	101	544154	15.485	ng		100
19) Methylene Chloride	5.35	84	1078	0.066	ng		93
21) Trichlorotrifluoroethane	5.58	151	280062	18.839	ng		99
26) Vinyl Acetate	6.43	86	1419	0.536	ng	#	45
27) 2-Butanone (MEK)	6.67	72	3560	0.392	ng		93
32) Chloroform	7.36	83	2362	0.082	ng		98
41) Benzene	8.90	78	4153	0.069	ng		99
42) Carbon Tetrachloride	9.06	117	2329	0.084	ng		98
47) Trichloroethene	10.14	130	2074	0.118	ng		97
48) 1,4-Dioxane	10.13	88	1139	0.103	ng		90

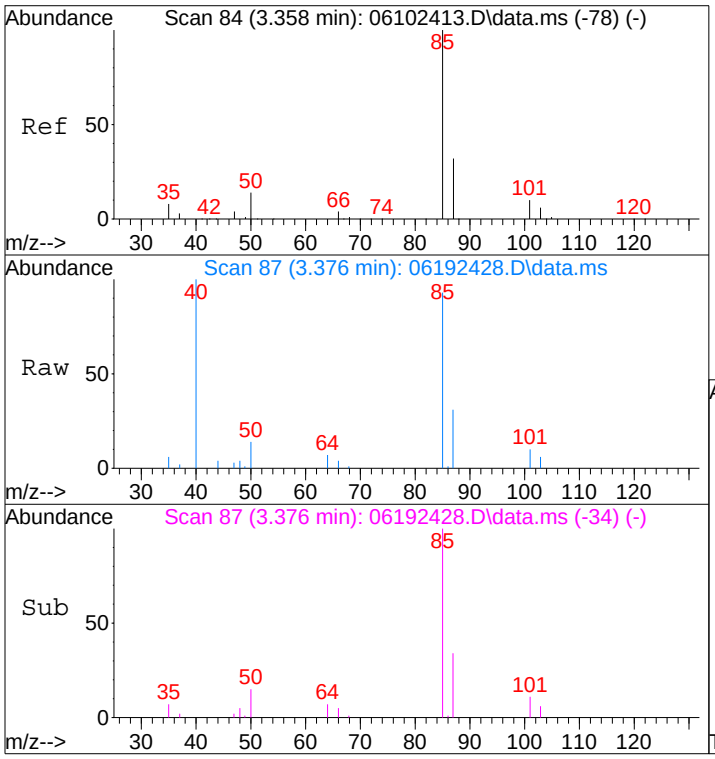
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192428.D Vial: 16
Acq On : 19 Jun 2024 23:50 Operator: SC
Sample : P2402249-041 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 09:53:12 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

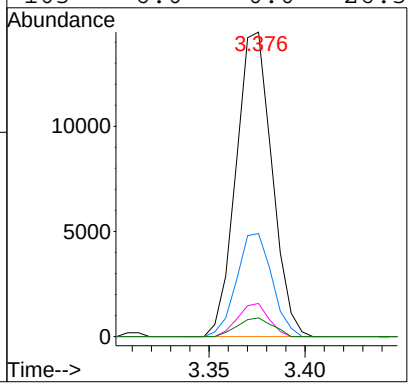


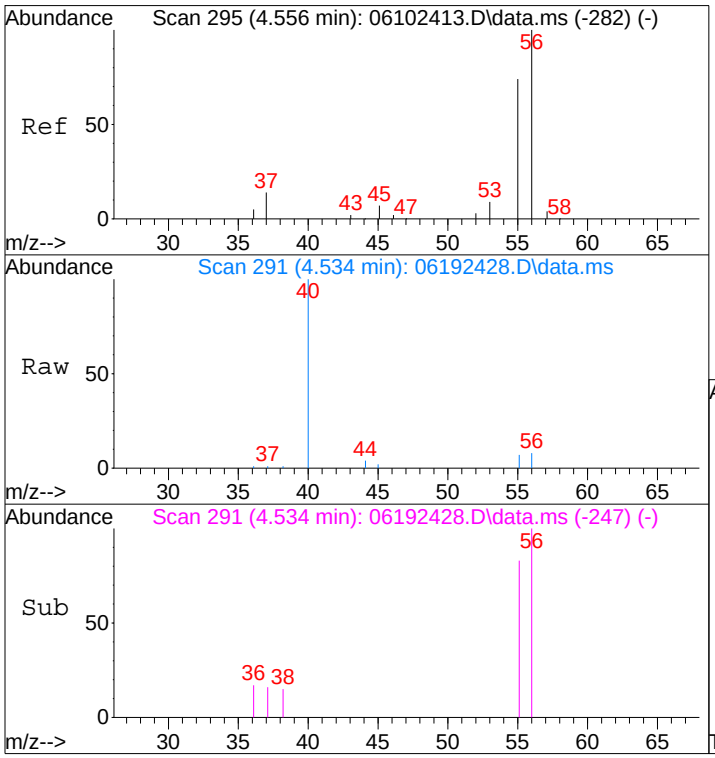


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.54 ng m
RT: 3.38 min Scan# 87
Delta R.T. 0.054 min
Lab File: 06192428.D
Acq: 19 Jun 2024 23:50

Tgt Ion: 85 Resp: 18796

Ion	Ratio	Lower	Upper
85	100		
87	33.4	12.2	52.2
101	9.4	0.0	29.8
103	6.0	0.0	26.3

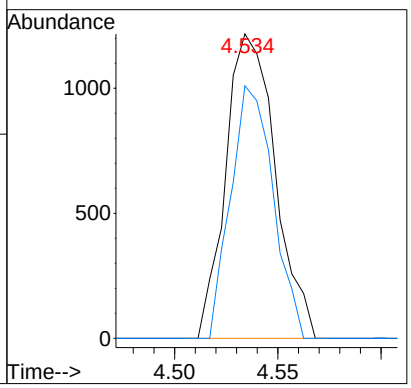


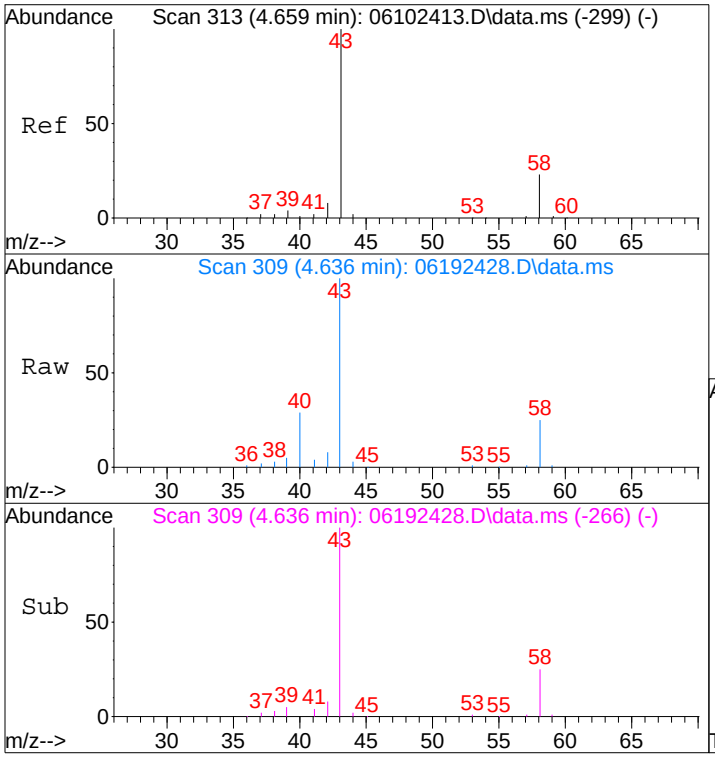


#12
Acrolein
Concen: 0.19 ng
RT: 4.53 min Scan# 291
Delta R.T. -0.001 min
Lab File: 06192428.D
Acq: 19 Jun 2024 23:50

Tgt Ion: 56 Resp: 2030

Ion	Ratio	Lower	Upper
56	100		
55	71.1	55.5	95.5

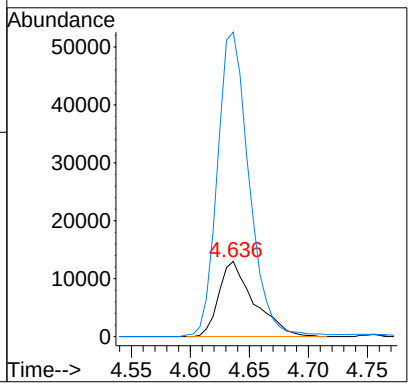


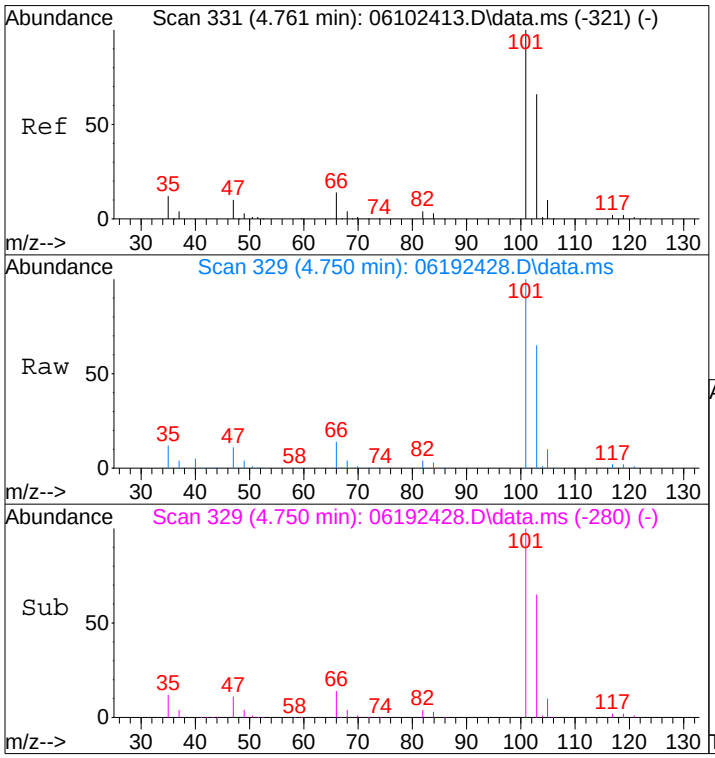


#13
Acetone
Concen: 2.34 ng
RT: 4.64 min Scan# 309
Delta R.T. -0.006 min
Lab File: 06192428.D
Acq: 19 Jun 2024 23:50

Tgt Ion: 58 Resp: 26859

Ion	Ratio	Lower	Upper
58	100		
43	366.9	400.7	460.7#

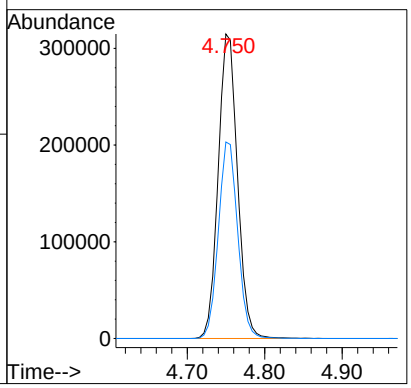


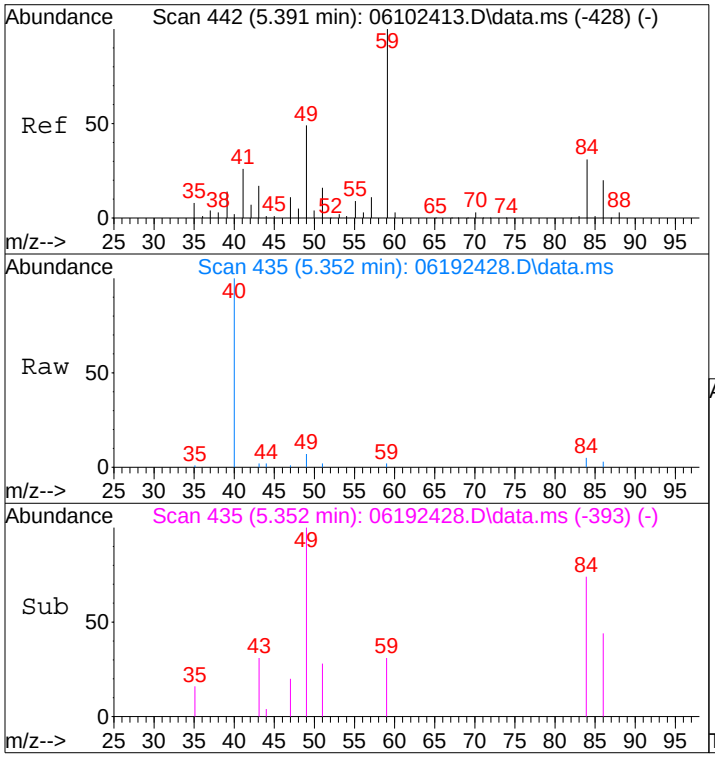


#14
Trichlorofluoromethane
Concen: 15.48 ng
RT: 4.75 min Scan# 329
Delta R.T. 0.029 min
Lab File: 06192428.D
Acq: 19 Jun 2024 23:50

Tgt Ion:101 Resp: 544154

Ion	Ratio	Lower	Upper
101	100		
103	64.7	44.9	84.9

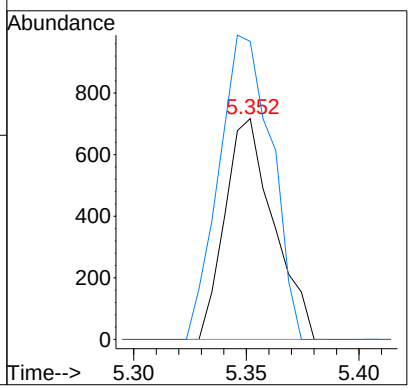


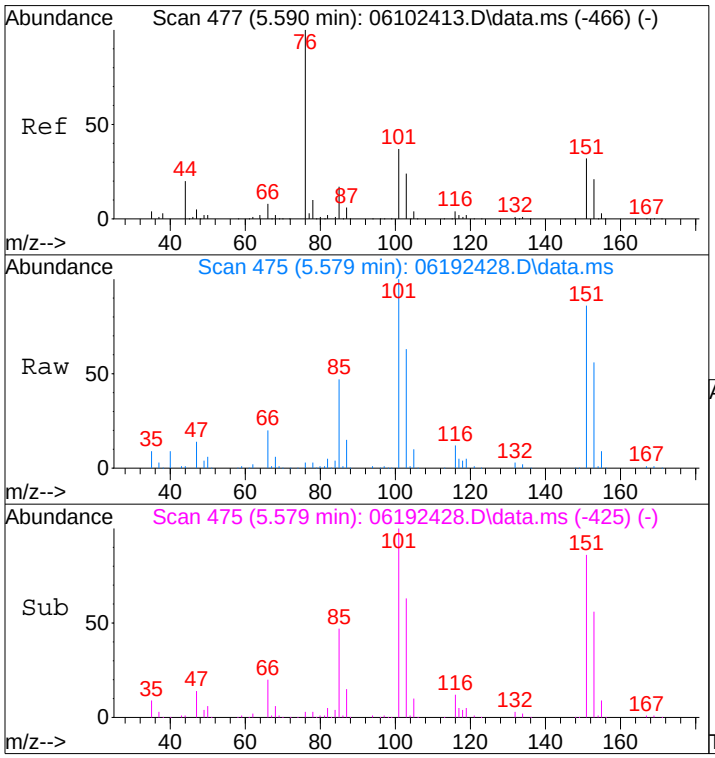


#19
Methylene Chloride
Concen: 0.07 ng
RT: 5.35 min Scan# 435
Delta R.T. -0.009 min
Lab File: 06192428.D
Acq: 19 Jun 2024 23:50

Tgt Ion: 84 Resp: 1078

Ion	Ratio	Lower	Upper
84	100		
49	149.2	132.9	182.9

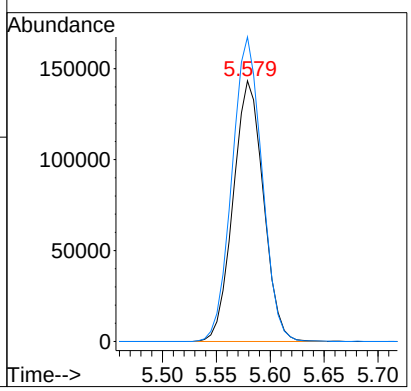


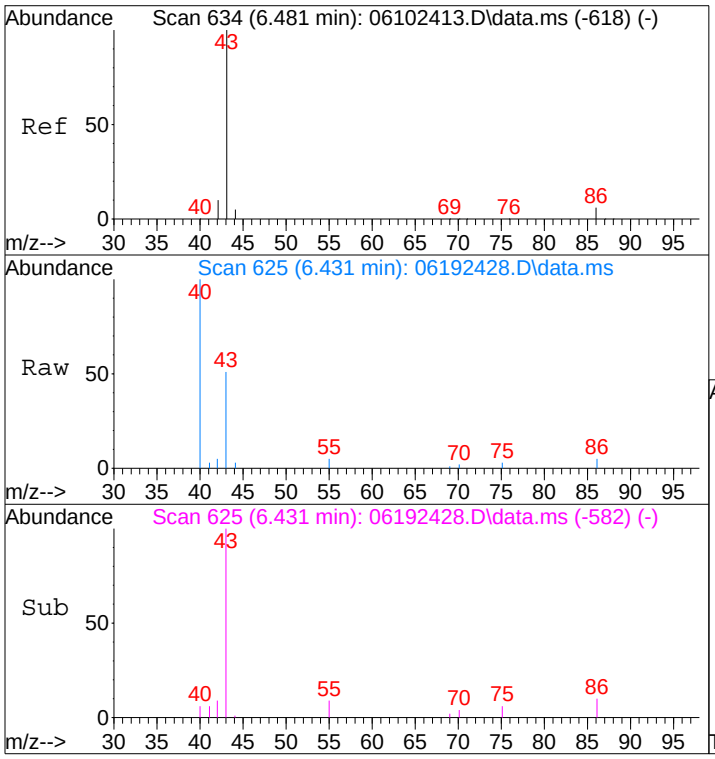


#21
Trichlorotrifluoroethane
Concen: 18.84 ng
RT: 5.58 min Scan# 475
Delta R.T. 0.033 min
Lab File: 06192428.D
Acq: 19 Jun 2024 23:50

Tgt Ion:151 Resp: 280062

Ion	Ratio	Lower	Upper
151	100		
101	116.0	95.0	135.0

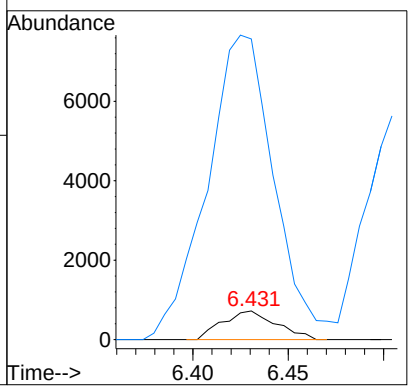


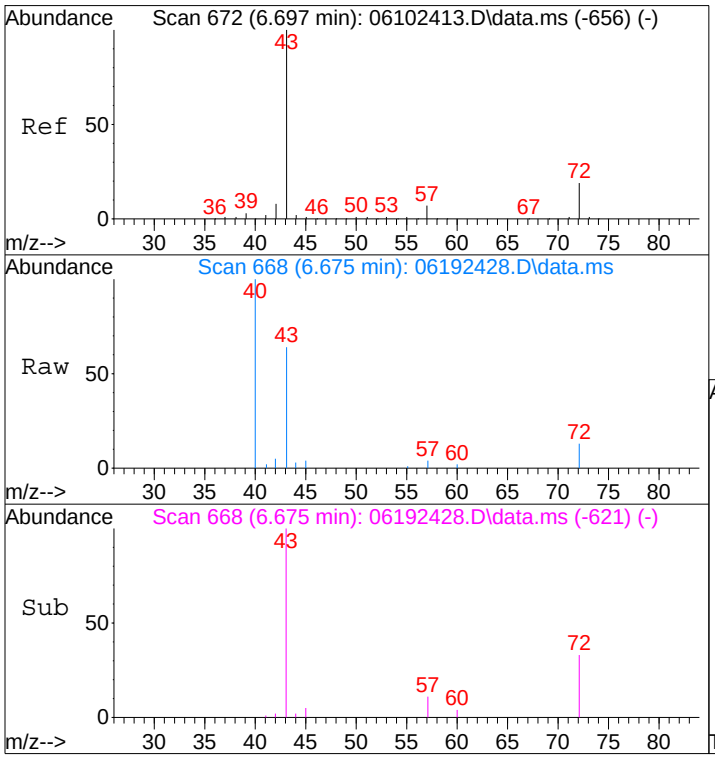


#26
Vinyl Acetate
Concen: 0.54 ng
RT: 6.43 min Scan# 625
Delta R.T. -0.009 min
Lab File: 06192428.D
Acq: 19 Jun 2024 23:50

Tgt Ion: 86 Resp: 1419

Ion	Ratio	Lower	Upper
86	100		
43	1328.0	1668.9	1708.9#

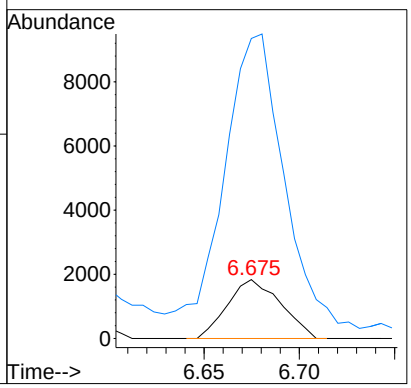


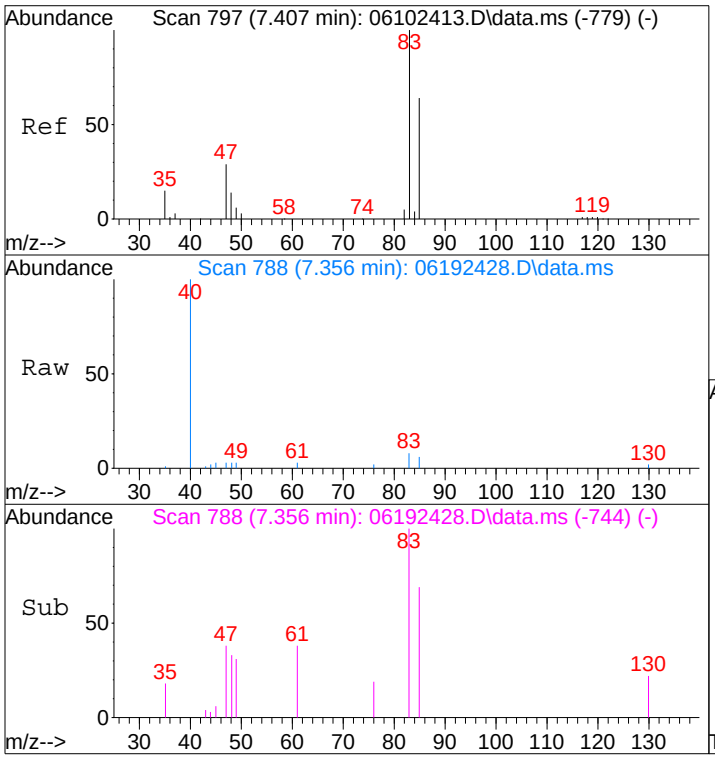


#27
2-Butanone (MEK)
Concen: 0.39 ng
RT: 6.67 min Scan# 668
Delta R.T. 0.016 min
Lab File: 06192428.D
Acq: 19 Jun 2024 23:50

Tgt Ion: 72 Resp: 3560

Ion	Ratio	Lower	Upper
72	100		
43	545.9	506.8	546.8

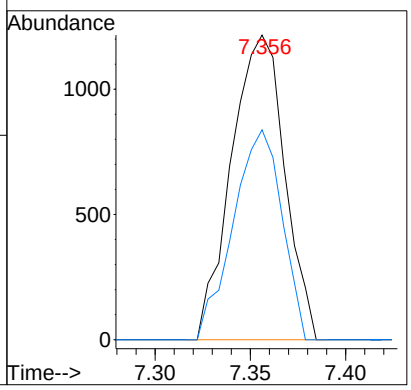


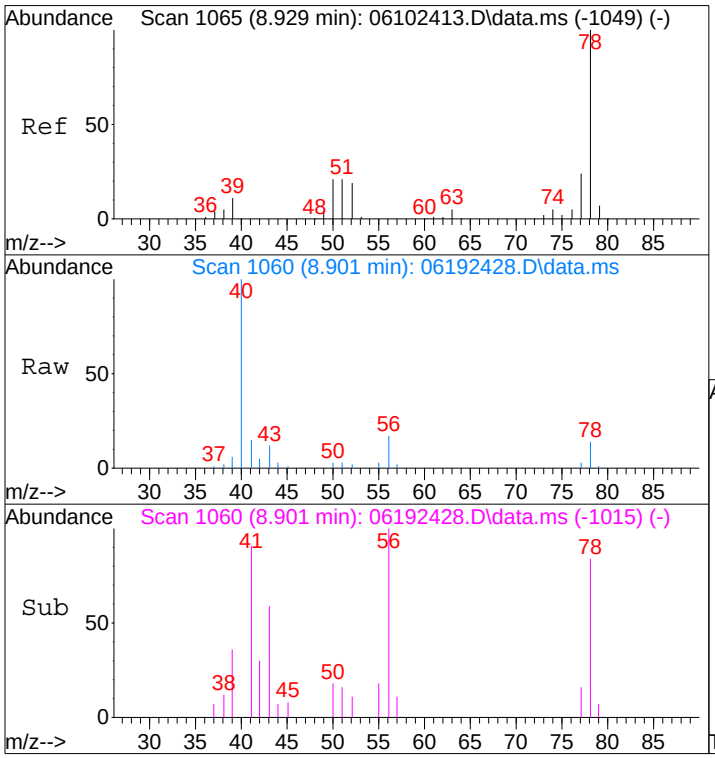


#32
Chloroform
Concen: 0.08 ng
RT: 7.36 min Scan# 788
Delta R.T. 0.001 min
Lab File: 06192428.D
Acq: 19 Jun 2024 23:50

Tgt Ion: 83 Resp: 2362

Ion	Ratio	Lower	Upper
83	100		
85	63.0	44.4	84.4

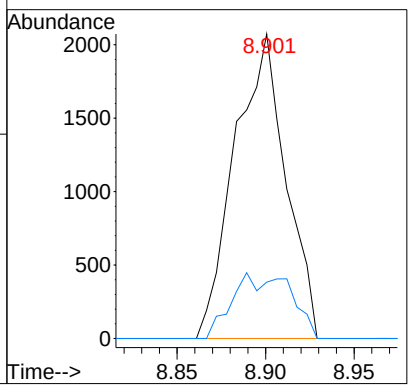


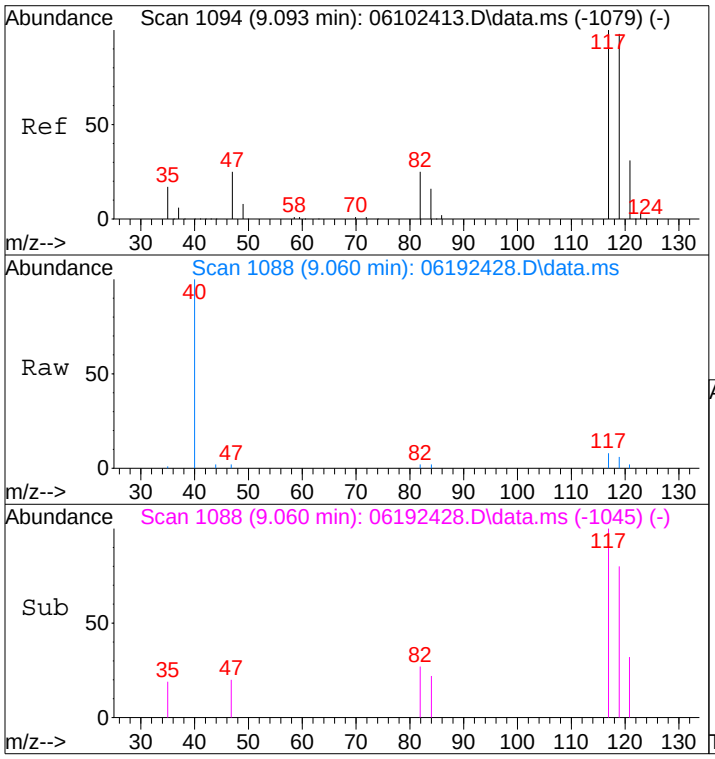


#41
Benzene
Concen: 0.07 ng
RT: 8.90 min Scan# 1060
Delta R.T. 0.003 min
Lab File: 06192428.D
Acq: 19 Jun 2024 23:50

Tgt Ion: 78 Resp: 4153

Ion	Ratio	Lower	Upper
78	100		
77	24.5	4.0	44.0

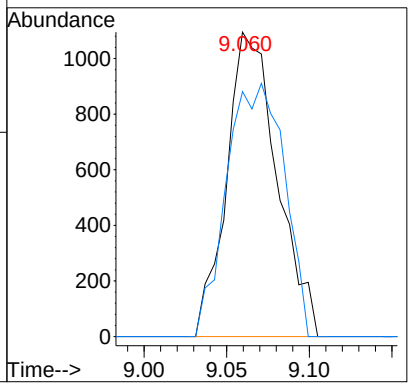


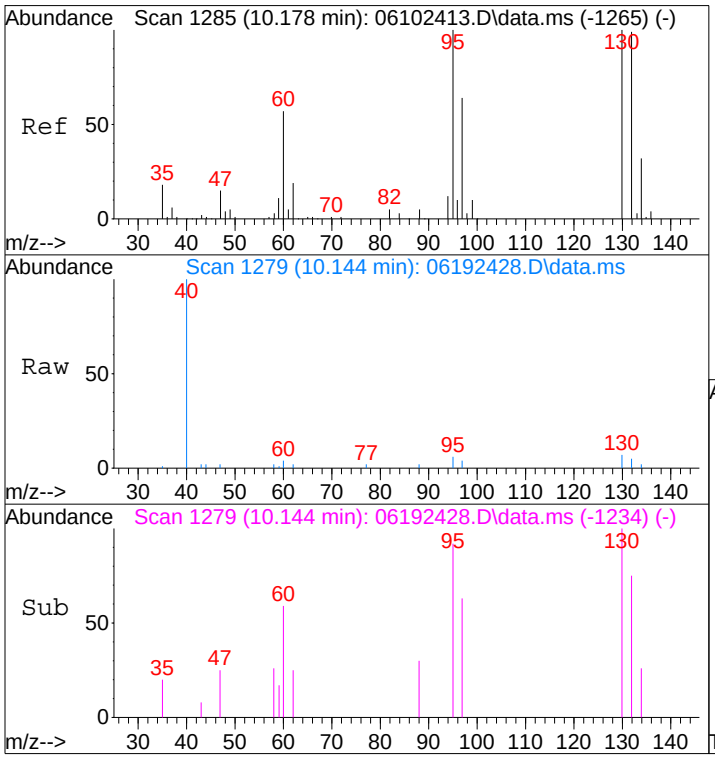


#42
Carbon Tetrachloride
Concen: 0.08 ng
RT: 9.06 min Scan# 1088
Delta R.T. -0.007 min
Lab File: 06192428.D
Acq: 19 Jun 2024 23:50

Tgt Ion:117 Resp: 2329

Ion	Ratio	Lower	Upper
117	100		
119	95.0	77.3	117.3

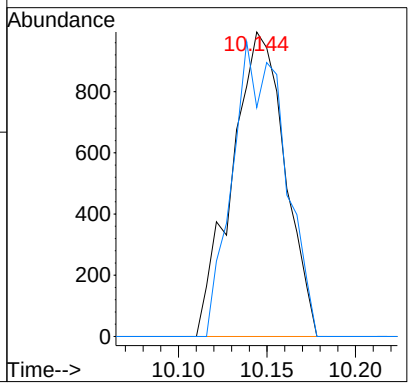


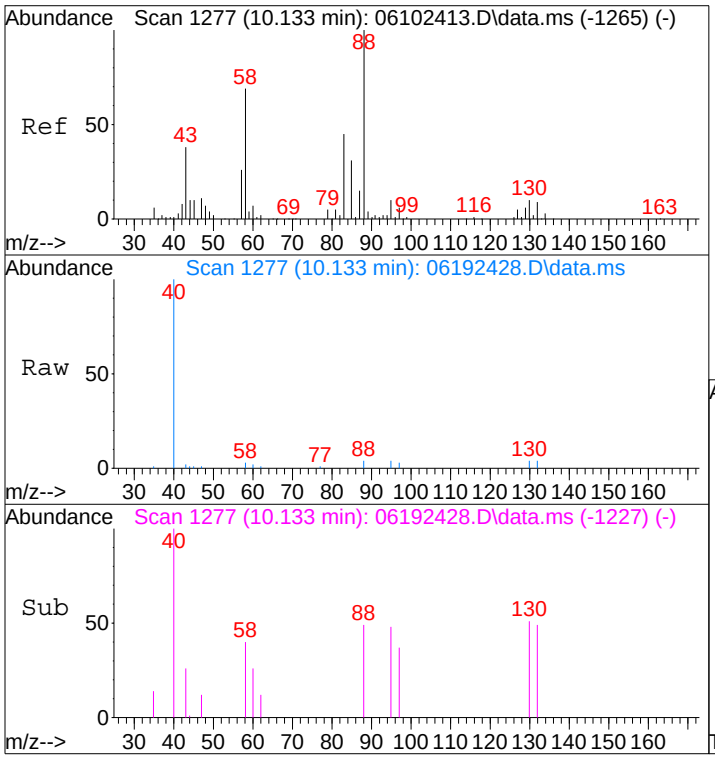


#47
Trichloroethene
Concen: 0.12 ng
RT: 10.14 min Scan# 1279
Delta R.T. 0.005 min
Lab File: 06192428.D
Acq: 19 Jun 2024 23:50

Tgt Ion:130 Resp: 2074

Ion	Ratio	Lower	Upper
130	100		
132	94.6	77.9	117.9

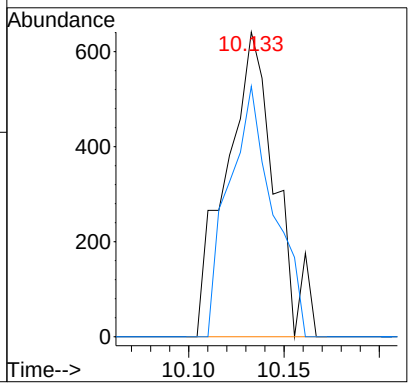




#48
1,4-Dioxane
Concen: 0.10 ng
RT: 10.13 min Scan# 1277
Delta R.T. 0.033 min
Lab File: 06192428.D
Acq: 19 Jun 2024 23:50

Tgt Ion: 88 Resp: 1139

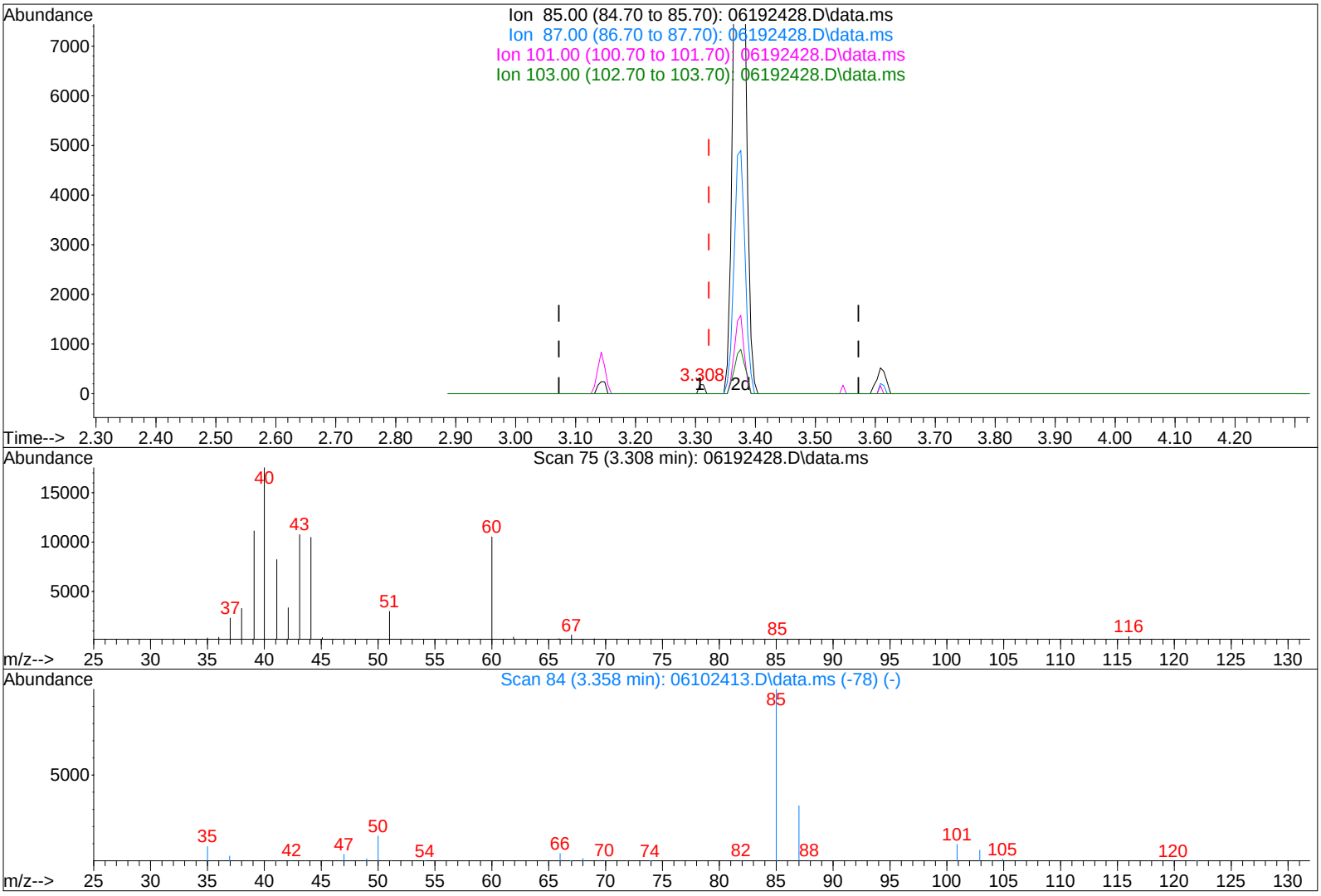
Ion	Ratio	Lower	Upper
88	100		
58	75.3	47.6	87.6



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\19\06192428.D Vial: 16
Acq On : 19 Jun 2024 23:50 Operator: SC
Sample : P2402249-041 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 11:36:46 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06192428.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.308min (-0.015) 0.00ng

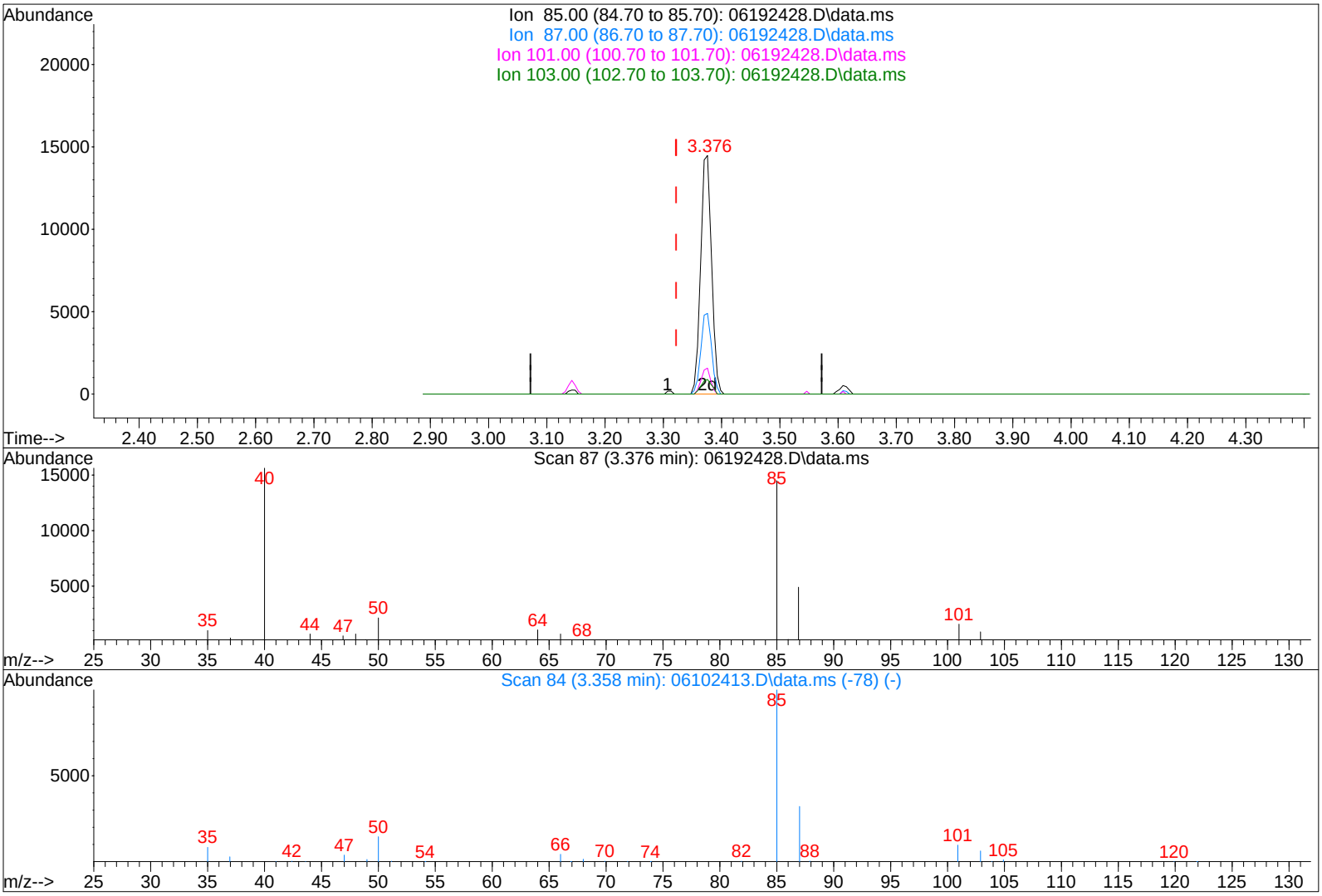
response 123

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	0.00#
101.00	9.80	0.00
103.00	6.30	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\19\06192428.D Vial: 16
Acq On : 19 Jun 2024 23:50 Operator: SC
Sample : P2402249-041 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 11:36:46 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06192428.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.376min (+0.054) 0.54ng m

response 18796

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	33.36
101.00	9.80	9.41
103.00	6.30	6.03

MJ 6/29/24

WP

CG 6/29/24

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192428.D Vial: 16
Acq On : 19 Jun 2024 23:50 Operator: SC
Sample : P2402249-041 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 15:12:00 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

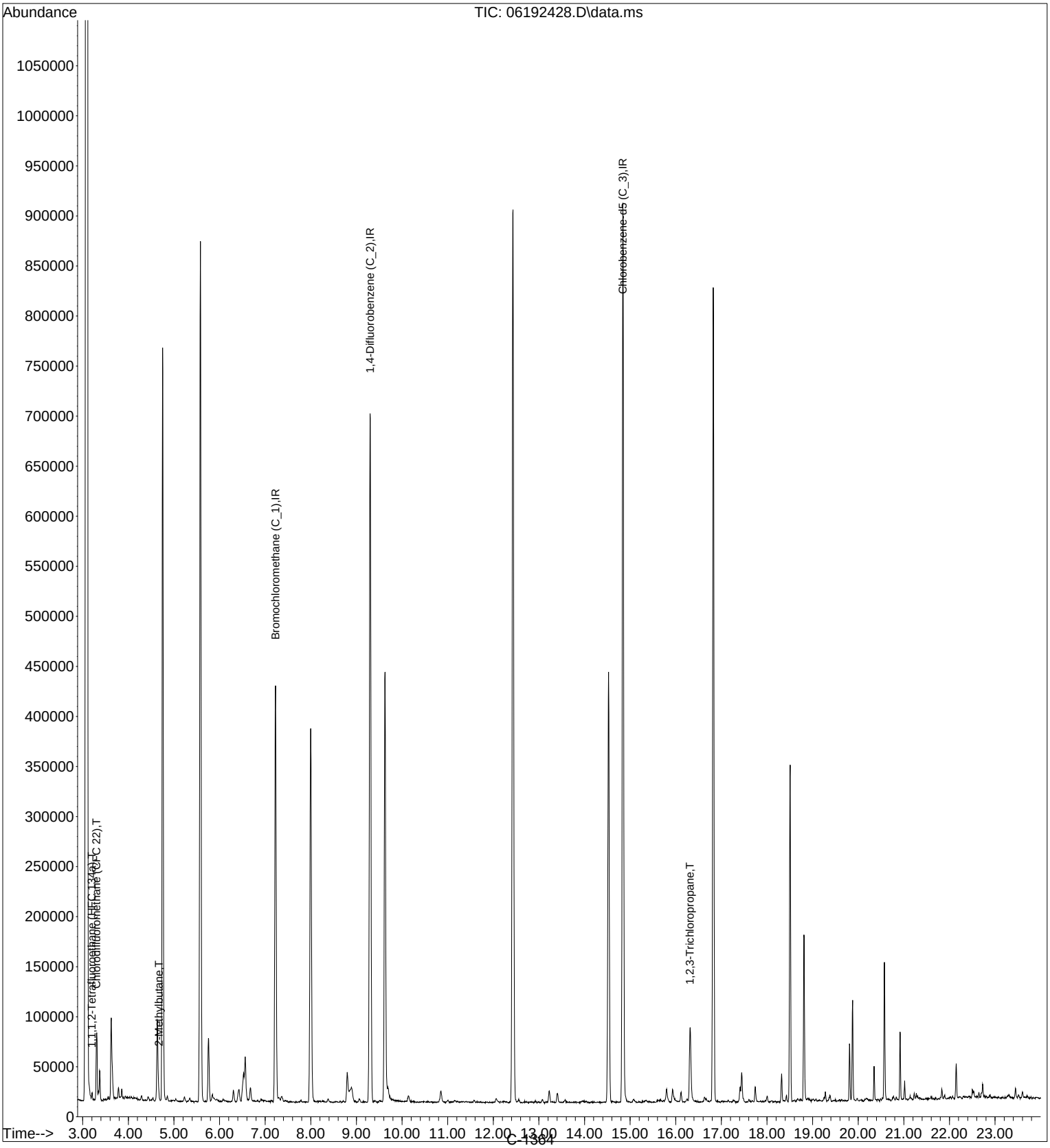
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	149676	12.500	ng		-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	649931	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	153139	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	3.14	85	223	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.20	83	1723	0.112	ng	#	1
4) 1,1-Difluoroethane	0.00	65	0	N.D.			
5) Chlorodifluoromethane ...	3.30	67	933	0.183	ng		96
6) 1-Chloro-1,1-Difluoroe...	3.51	65	591	N.D.			
7) Dichlorofluoromethane ...	4.23	67	292	N.D.			
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	0.00	83	0	N.D.			
10) 2-Methylbutane	4.67	57	2148	0.120	ng	#	1
11) Methyl Acetate	5.33	43	1292	N.D.			
12) 2-Methylpentane	6.56	71	862	N.D.			
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	9.06	84	217	N.D.			
17) 2,3-Dimethylpentane	9.63	56	1036	N.D.			
18) Dibromomethane	9.79	174	121	N.D.			
20) Methyl Cyclohexane	11.58	55	52	N.D.			
21) 1,3-Dichloropropane	0.00	76	0	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	16.31	75	4586	0.224	ng	#	46
25) Bromobenzene	17.04	77	56	N.D.			
26) 2-Chlorotoluene	17.61	91	742	N.D.			
27) 4-Chlorotoluene	17.67	91	1245	N.D.			
28) Indane	0.00	117	0	N.D.			
29) Indene	0.00	115	0	N.D.			
30) 1,2,4,5-Tetramethylben...	0.00	119	0	N.D.			
31) 1,2,3,4-Tetramethylben...	0.00	119	0	N.D.			
32) 1,2,3,5-Tetramethylben...	20.61	119	55	N.D.			
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192428.D Vial: 16
Acq On : 19 Jun 2024 23:50 Operator: SC
Sample : P2402249-041 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:12:00 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\19\
Data File : 06192428.D
Acq On : 19 Jun 2024 23:50
Operator : SC
Sample : P2402249-041 (400mL)
Misc : S37-06062402
ALS Vial : 16 Sample Multiplier: 1

MJ 6/28/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06192428.D\data.ms

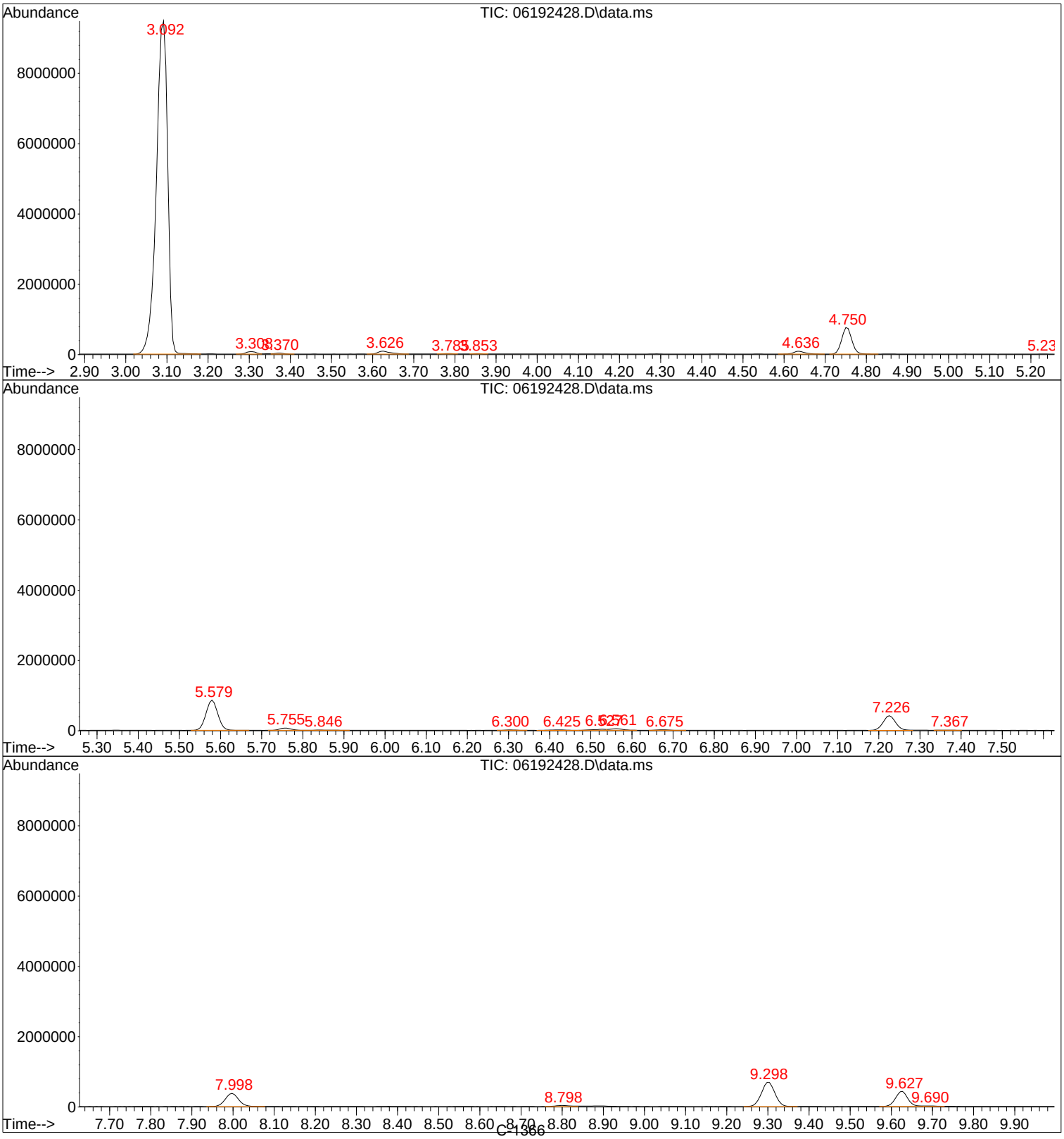
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.092	24	37	53	rBV	9474663	18139272	100.00%	68.826%
2	3.308	68	75	79	rBV2	67264	116656	0.64%	0.443%
3	3.370	83	86	93	rVB	30152	41550	0.23%	0.158%
4	3.626	124	131	142	rBV2	81749	170929	0.94%	0.649%
5	3.785	154	159	163	rBV2	10558	15402	0.08%	0.058%
6	3.853	168	171	176	rVB2	9116	11884	0.07%	0.045%
7	4.636	300	309	320	rBV	80161	157935	0.87%	0.599%
8	4.750	322	329	343	rVV	751893	1286833	7.09%	4.883%
9	5.232	409	414	422	rVB3	5437	11819	0.07%	0.045%
10	5.579	466	475	491	rVB	859612	1704928	9.40%	6.469%
11	5.755	499	506	514	rBV	63396	124803	0.69%	0.474%
12	5.846	514	522	534	rBV5	6961	19880	0.11%	0.075%
13	6.300	597	602	610	rVB2	11501	22197	0.12%	0.084%
14	6.425	614	624	632	rBV2	12434	34548	0.19%	0.131%
15	6.527	632	642	644	rBV	28280	66952	0.37%	0.254%
16	6.561	644	648	657	rVB2	43279	88360	0.49%	0.335%
17	6.675	662	668	678	rVB2	13185	29107	0.16%	0.110%
18	7.226	756	765	775	rBV	416145	876928	4.83%	3.327%
19	7.368	784	790	796	rVB4	4905	12101	0.07%	0.046%
20	7.998	890	901	915	rBV	373495	848168	4.68%	3.218%
21	8.798	1035	1042	1049	rBV	29815	72122	0.40%	0.274%
22	9.298	1120	1130	1143	rBV	688083	1575210	8.68%	5.977%
23	9.627	1178	1188	1197	rBV	429346	907392	5.00%	3.443%
24	9.690	1197	1199	1206	rVB2	11121	20138	0.11%	0.076%

Sum of corrected areas: 26355114

Data Path : I:\MS09\DATA\2024 06\19\
Data File : 06192428.D
Acq On : 19 Jun 2024 23:50
Operator : SC
Sample : P2402249-041 (400mL)
Misc : S37-06062402
ALS Vial : 16 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\19\\
Data File : 06192428.D
Acq On : 19 Jun 2024 23:500
Operator : SCC
Sample : P2402249-041 (400mL))
Misc : S37-060624022
ALS Vial : 16 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

						Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202414.D Vial: 4
Acq On : 20 Jun 2024 16:59 Operator: SC
Sample : P2402249-042 (100mL) Inst : MS09
Misc : S37-06062402

MJ 6/29/24

Quant Time: Jun 29 09:59:09 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.24	130	161570	12.500	ng		0.01
37) 1,4-Difluorobenzene (IS2)	9.30	114	700296	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	161982	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	356429	12.412	ng		0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.28%				
57) Toluene-d8 (SS2)	12.43	98	783123	12.634	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.04%				
73) Bromofluorobenzene (SS3)	16.82	174	282127	12.604	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.80%				
Target Compounds							Qvalue
2) Propene	0.00	42	0	N.D. d			
3) Dichlorodifluoromethan...	3.37	85	6658m	0.175	ng		
4) Chloromethane	3.50	50	1729	0.067	ng		96
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	3.85	54	242	N.D.			
8) Bromomethane	4.02	94	349	N.D.			
9) Chloroethane	4.16	64	140	N.D.			
10) Ethanol	4.29	45	131986	8.403	ng		99
11) Acetonitrile	4.44	41	1884	N.D.			
12) Acrolein	4.53	56	1515	0.130	ng		95
13) Acetone	4.62	58	433164	34.511	ng		99
14) Trichlorofluoromethane	4.76	101	3632135	94.428	ng		100
15) 2-Propanol (Isopropanol)	4.85	45	96412	1.906	ng		99
16) Acrylonitrile	5.05	53	595	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.33	59	6202	0.154	ng	#	1
19) Methylene Chloride	5.35	84	2582	0.145	ng		91
20) 3-Chloro-1-propene (Al...	5.45	41	1021	N.D.			
21) Trichlorotrifluoroethane	5.58	151	1818257	111.743	ng		95
22) Carbon Disulfide	0.00	76	0	N.D. d			
23) trans-1,2-Dichloroethene	6.14	61	174	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	6.39	73	124	N.D.			
26) Vinyl Acetate	6.44	86	1011	0.349	ng	#	68
27) 2-Butanone (MEK)	6.67	72	9768	0.983	ng		95
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D. d			
30) Ethyl Acetate	7.28	61	23933	3.946	ng		95
31) n-Hexane	7.30	57	4133	0.156	ng	#	95
32) Chloroform	7.36	83	10434	0.330	ng		96
34) Tetrahydrofuran (THF)	0.00	72	0	N.D. d			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	660	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	9.57	61	1800	No Calib		#	
40) 1-Butanol	8.80	56	5585	No Calib		#	
41) Benzene	8.91	78	4748	0.073	ng		94
42) Carbon Tetrachloride	9.07	117	903	N.D.			
43) Cyclohexane	9.22	84	4846	0.232	ng		97
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	9.85	63	4424	0.283	ng		99
46) Bromodichloromethane	0.00	83	0	N.D. d			
47) Trichloroethene	10.15	130	2342	0.124	ng		94
48) 1,4-Dioxane	0.00	88	0	N.D. d			
49) 2,2,4-Trimethylpentane...	10.24	57	1942	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D. d			

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202414.D Vial: 4
Acq On : 20 Jun 2024 16:59 Operator: SC
Sample : P2402249-042 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 09:59:09 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

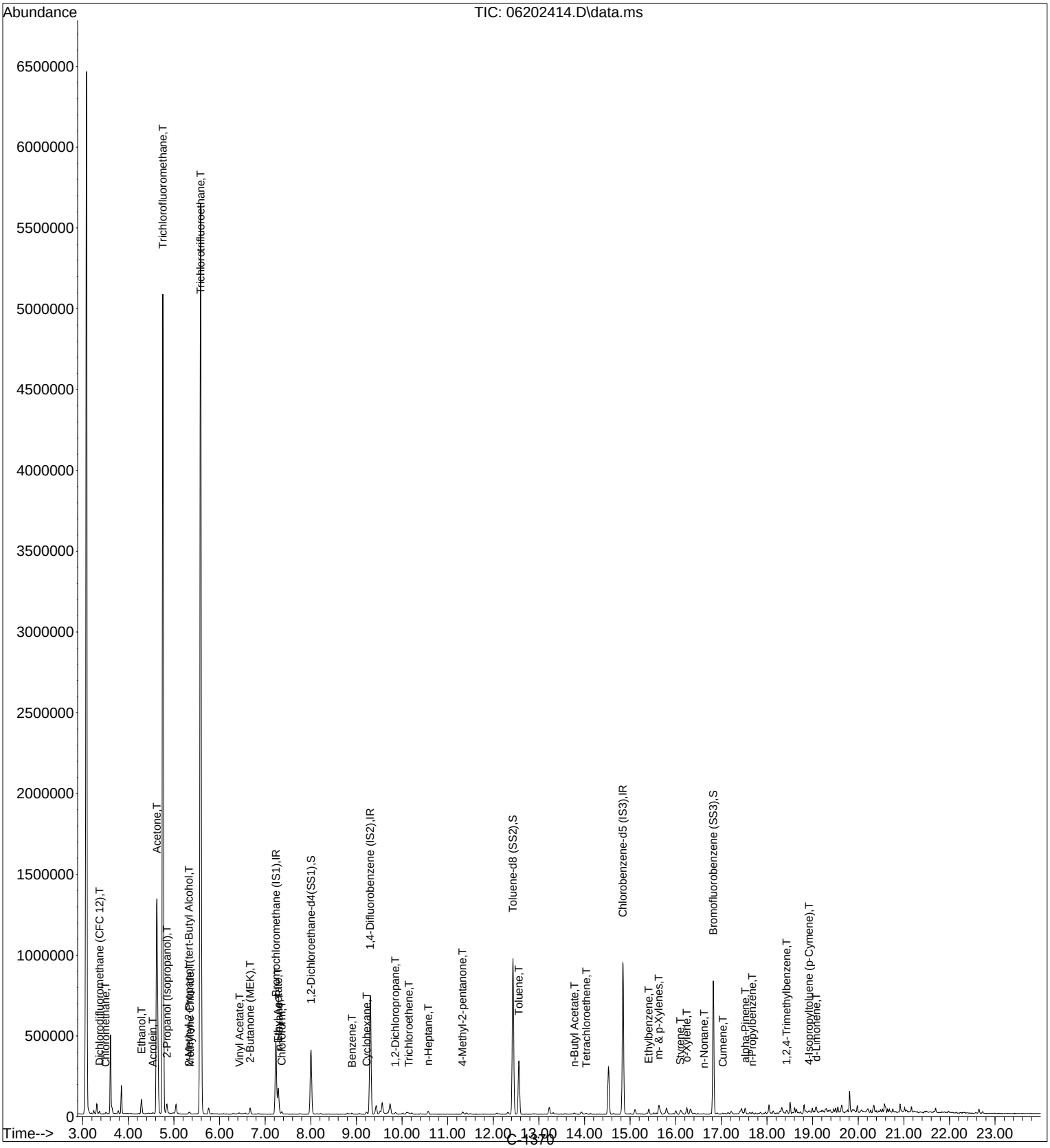
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	10.58	71	4222	0.310 ng	98
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	11.33	58	4224	0.297 ng	88
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
58) Toluene	12.56	91	292395	4.514 ng	99
59) 2-Hexanone	0.00	43	0	N.D. d	
60) Dibromochloromethane	13.08	129	581	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	13.78	43	7704	0.180 ng	99
63) n-Octane	0.00	57	0	N.D. d	
64) Tetrachloroethene	14.04	166	1319	0.059 ng	100
65) Chlorobenzene	14.90	112	1818	N.D.	
66) Ethylbenzene	15.41	91	20458	0.276 ng	99
67) m- & p-Xylenes	15.63	91	48532	0.779 ng	99
68) Bromoform	15.67	173	671	N.D.	
69) Styrene	16.10	104	8366	0.199 ng	98
70) o-Xylene	16.24	91	25032	0.407 ng	98
71) n-Nonane	16.62	43	2298	0.064 ng	85
72) 1,1,2,2-Tetrachloroethane	16.22	83	430	N.D.	
74) Cumene	17.03	105	5580	0.073 ng	99
75) alpha-Pinene	17.53	93	13322	0.373 ng	96
76) n-Propylbenzene	17.68	91	7759	0.084 ng	95
77) 3-Ethyltoluene	17.03	105	5580	No Calib	
78) 4-Ethyltoluene	17.86	105	2786	N.D.	
79) 1,3,5-Trimethylbenzene	17.96	105	1635	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.03	105	5580	No Calib	
82) 1,2,4-Trimethylbenzene	18.43	105	6658	0.099 ng	92
83) n-Decane	17.15	58	1103	No Calib	
84) Benzyl Chloride	18.55	91	313	N.D.	
85) 1,3-Dichlorobenzene	18.58	146	636	N.D.	
86) 1,4-Dichlorobenzene	18.65	146	907	N.D.	
87) sec-Butylbenzene	18.74	105	4059	N.D.	
88) 4-Isopropyltoluene (p-...	18.92	119	4346	0.057 ng	93
89) 1,2,3-Trimethylbenzene	17.03	105	5580	No Calib	
90) 1,2-Dichlorobenzene	19.04	146	554	N.D.	
91) d-Limonene	19.08	68	5608	0.245 ng	92
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	1005	N.D.	
95) Naphthalene	20.94	128	2111	N.D.	
96) n-Dodecane	19.00	58	316	No Calib #	
97) Hexachlorobutadiene	21.30	225	649	N.D.	
98) Cyclohexanone	15.41	55	3167	No Calib #	
99) tert-Butylbenzene	18.43	119	1891	N.D.	
100) n-Butylbenzene	0.00	91	0	N.D. d	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202414.D Vial: 4
Acq On : 20 Jun 2024 16:59 Operator: SC
Sample : P2402249-042 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 09:59:09 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202414.D Vial: 4
Acq On : 20 Jun 2024 16:59 Operator: SC
Sample : P2402249-042 (100mL) Inst : MS09
Misc : S37-06062402

MJ 6/29/24

Quant Time: Jun 29 09:59:09 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

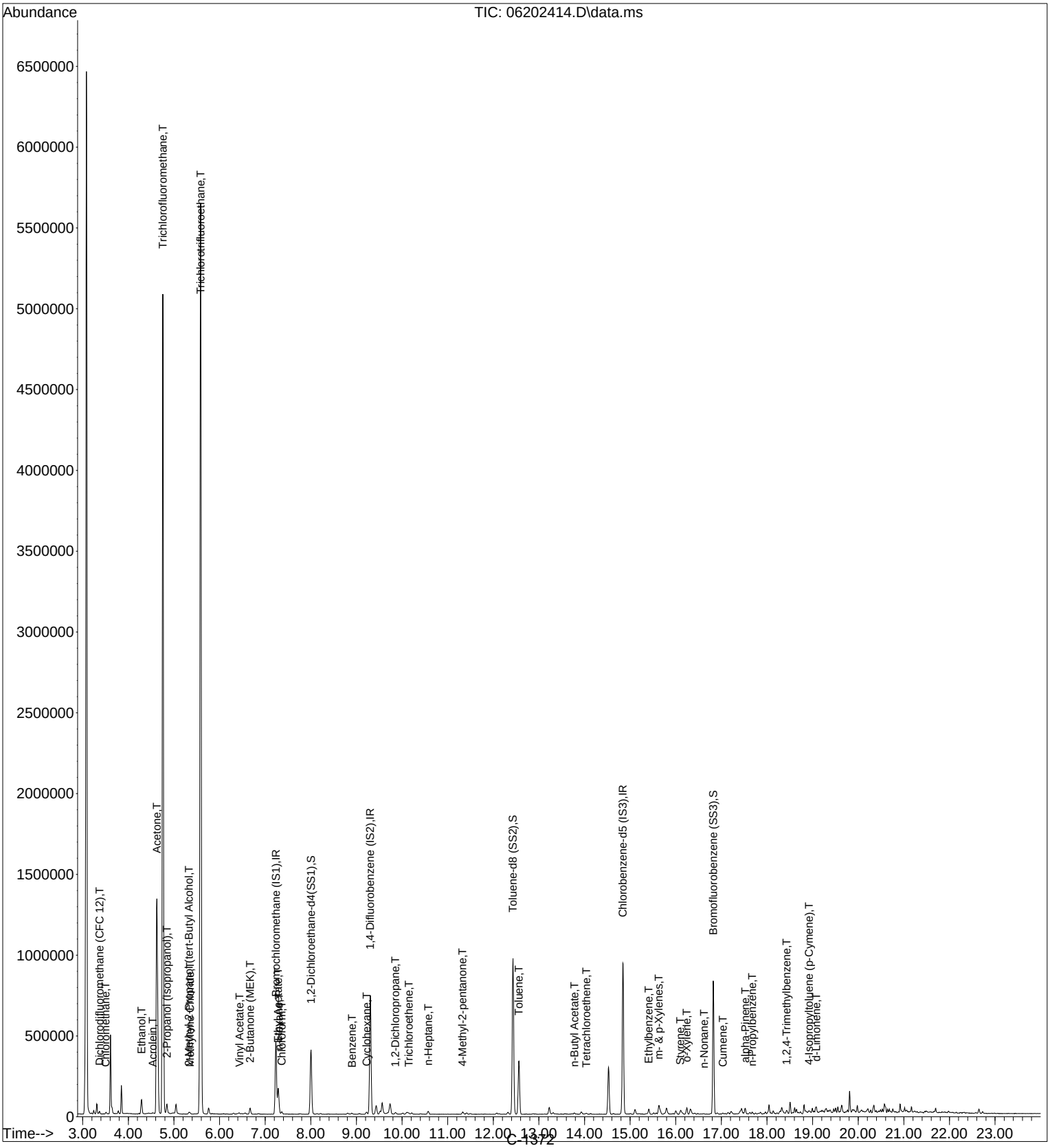
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.24	130	161570	12.500	ng		0.01
37) 1,4-Difluorobenzene (IS2)	9.30	114	700296	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	161982	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	356429	12.412	ng		0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.28%				
57) Toluene-d8 (SS2)	12.43	98	783123	12.634	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.04%				
73) Bromofluorobenzene (SS3)	16.82	174	282127	12.604	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.80%				
Target Compounds							Qvalue
3) Dichlorodifluoromethan...	3.37	85	6658m	0.175	ng		
4) Chloromethane	3.50	50	1729	0.067	ng		96
10) Ethanol	4.29	45	131986	8.403	ng		99
12) Acrolein	4.53	56	1515	0.130	ng		95
13) Acetone	4.62	58	433164	34.511	ng		99
14) Trichlorofluoromethane	4.76	101	3632135	94.428	ng		100
15) 2-Propanol (Isopropanol)	4.85	45	96412	1.906	ng		99
18) 2-Methyl-2-Propanol (t...	5.33	59	6202	0.154	ng	#	1
19) Methylene Chloride	5.35	84	2582	0.145	ng		91
21) Trichlorotrifluoroethane	5.58	151	1818257	111.743	ng		95
26) Vinyl Acetate	6.44	86	1011	0.349	ng	#	68
27) 2-Butanone (MEK)	6.67	72	9768	0.983	ng		95
30) Ethyl Acetate	7.28	61	23933	3.946	ng		95
31) n-Hexane	7.30	57	4133	0.156	ng	#	95
32) Chloroform	7.36	83	10434	0.330	ng		96
41) Benzene	8.91	78	4748	0.073	ng		94
43) Cyclohexane	9.22	84	4846	0.232	ng		97
45) 1,2-Dichloropropane	9.85	63	4424	0.283	ng		99
47) Trichloroethene	10.15	130	2342	0.124	ng		94
51) n-Heptane	10.58	71	4222	0.310	ng		98
53) 4-Methyl-2-pentanone	11.33	58	4224	0.297	ng		88
58) Toluene	12.56	91	292395	4.514	ng		99
62) n-Butyl Acetate	13.78	43	7704	0.180	ng		99
64) Tetrachloroethene	14.04	166	1319	0.059	ng		100
66) Ethylbenzene	15.41	91	20458	0.276	ng		99
67) m- & p-Xylenes	15.63	91	48532	0.779	ng		99
69) Styrene	16.10	104	8366	0.199	ng		98
70) o-Xylene	16.24	91	25032	0.407	ng		98
71) n-Nonane	16.62	43	2298	0.064	ng		85
74) Cumene	17.03	105	5580	0.073	ng		99
75) alpha-Pinene	17.53	93	13322	0.373	ng		96
76) n-Propylbenzene	17.68	91	7759	0.084	ng		95
82) 1,2,4-Trimethylbenzene	18.43	105	6658	0.099	ng		92
88) 4-Isopropyltoluene (p-...	18.92	119	4346	0.057	ng		93
91) d-Limonene	19.08	68	5608	0.245	ng		92

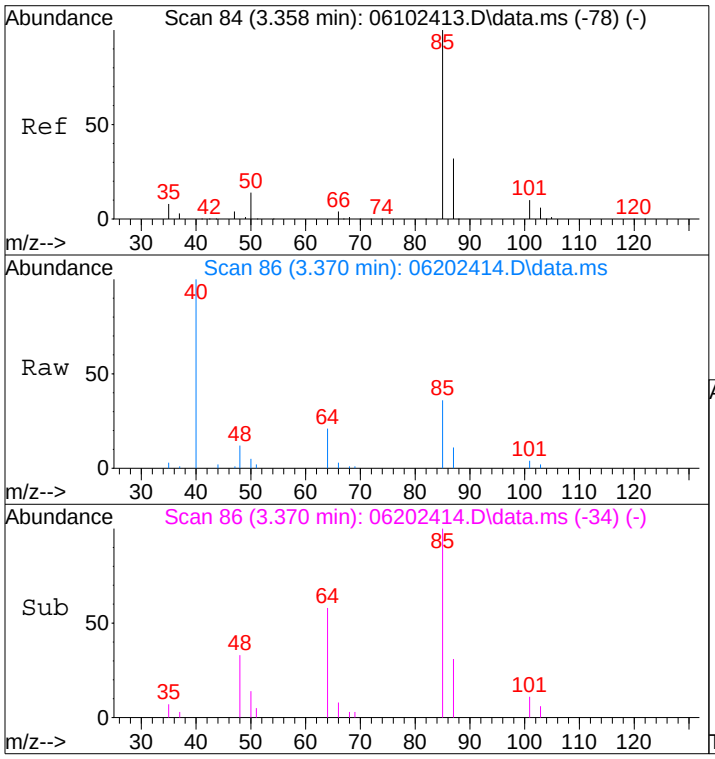
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202414.D Vial: 4
Acq On : 20 Jun 2024 16:59 Operator: SC
Sample : P2402249-042 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 09:59:09 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

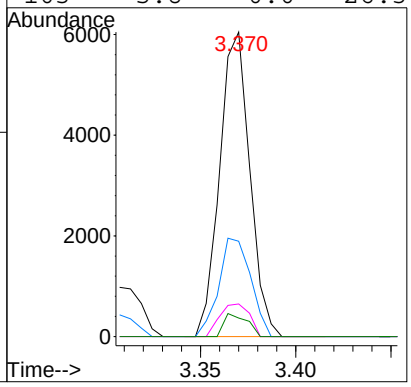


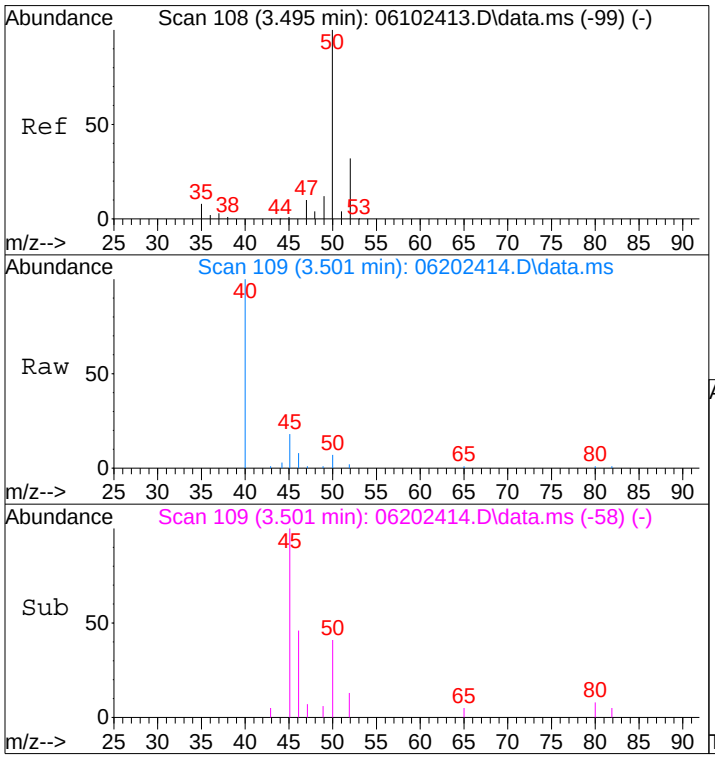


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.18 ng m
RT: 3.37 min Scan# 86
Delta R.T. 0.048 min
Lab File: 06202414.D
Acq: 20 Jun 2024 16:59

Tgt Ion: 85 Resp: 6658

Ion	Ratio	Lower	Upper
85	100		
87	34.3	12.2	52.2
101	10.6	0.0	29.8
103	5.8	0.0	26.3

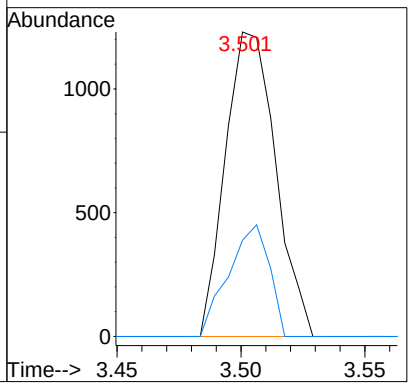


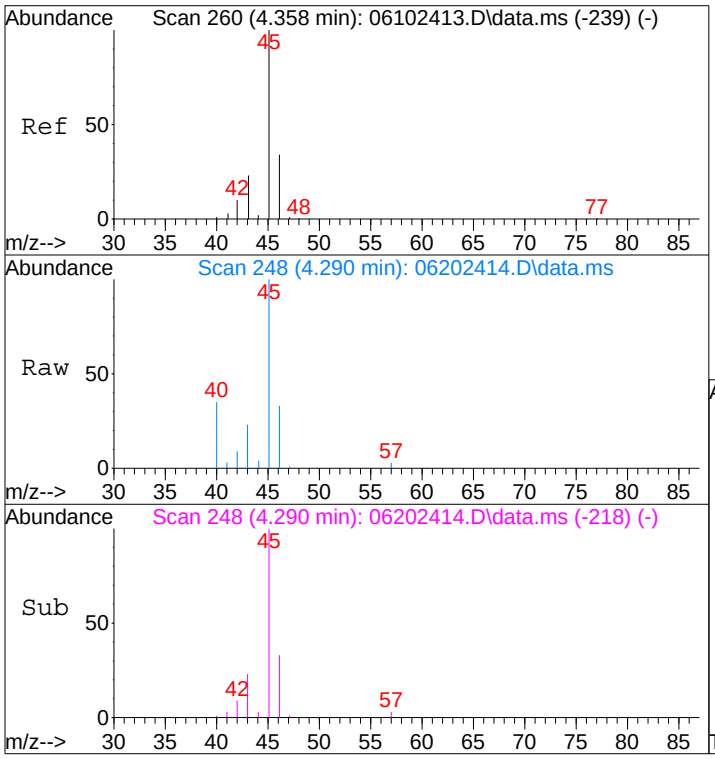


#4
Chloromethane
Concen: 0.07 ng
RT: 3.50 min Scan# 109
Delta R.T. 0.038 min
Lab File: 06202414.D
Acq: 20 Jun 2024 16:59

Tgt Ion: 50 Resp: 1729

Ion	Ratio	Lower	Upper
50	100		
52	29.9	12.4	52.4

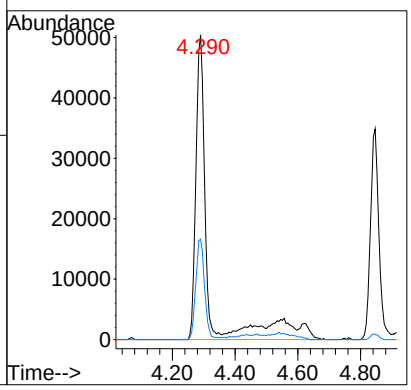


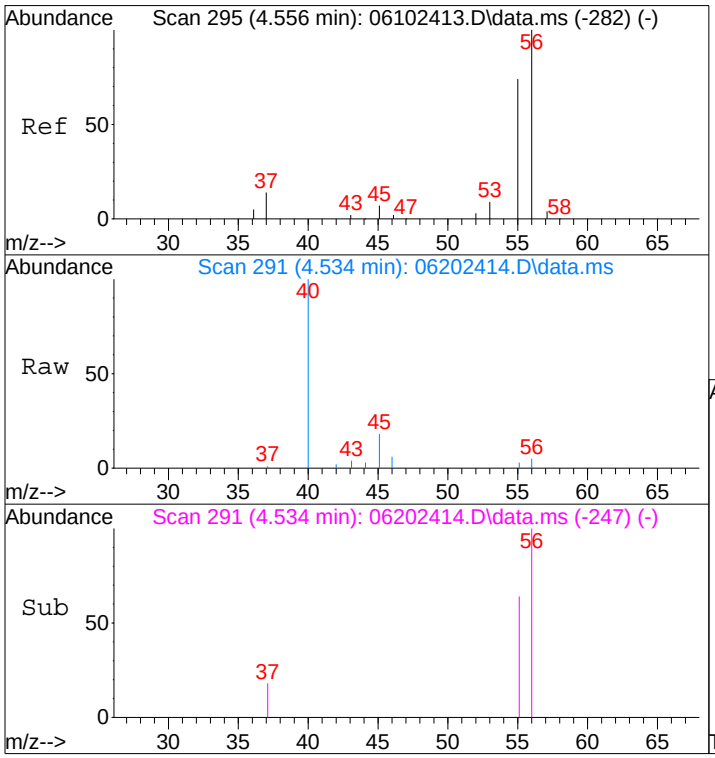


#10
Ethanol
Concen: 8.40 ng
RT: 4.29 min Scan# 248
Delta R.T. -0.077 min
Lab File: 06202414.D
Acq: 20 Jun 2024 16:59

Tgt Ion: 45 Resp: 131986

Ion	Ratio	Lower	Upper
45	100		
46	32.9	13.5	53.5

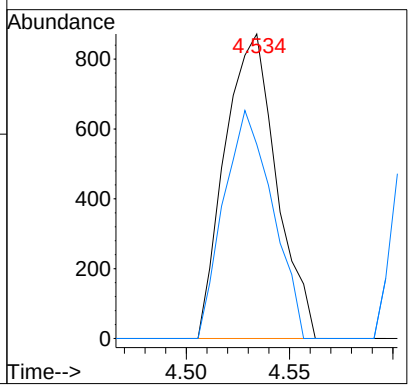


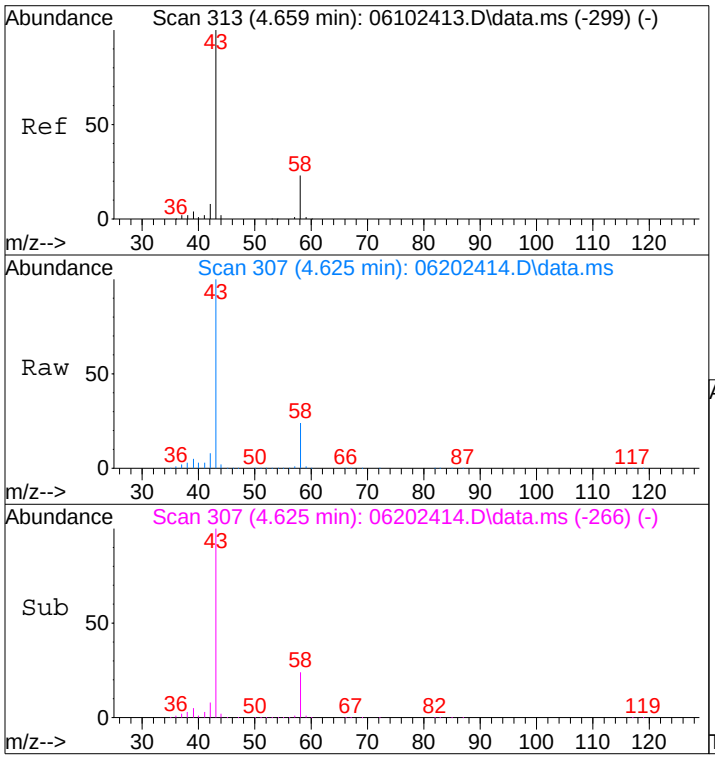


#12
Acrolein
Concen: 0.13 ng
RT: 4.53 min Scan# 291
Delta R.T. -0.001 min
Lab File: 06202414.D
Acq: 20 Jun 2024 16:59

Tgt Ion: 56 Resp: 1515

Ion	Ratio	Lower	Upper
56	100		
55	70.9	55.5	95.5

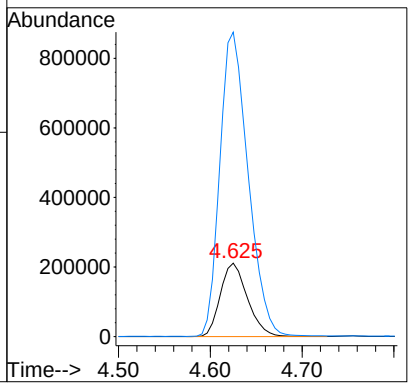


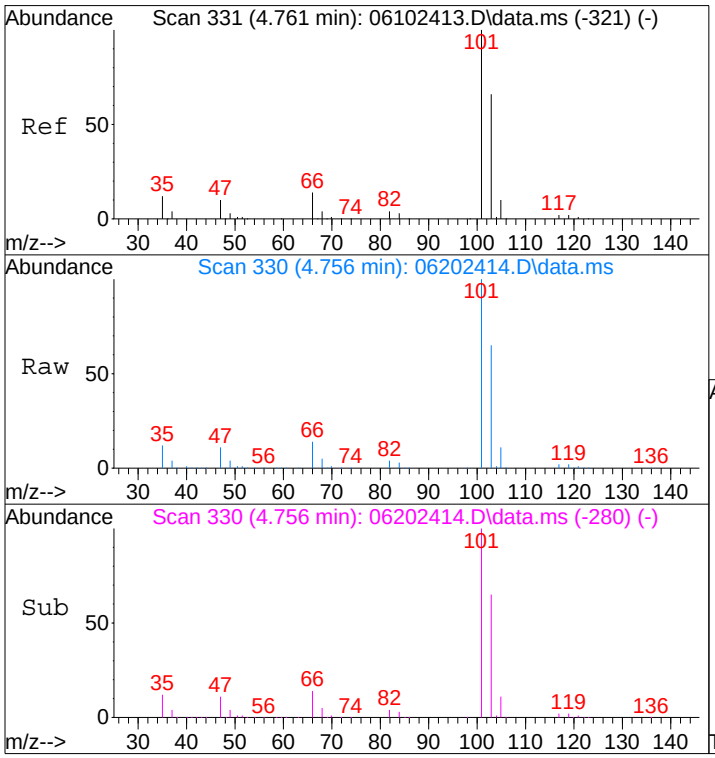


#13
Acetone
Concen: 34.51 ng
RT: 4.62 min Scan# 307
Delta R.T. -0.017 min
Lab File: 06202414.D
Acq: 20 Jun 2024 16:59

Tgt Ion: 58 Resp: 433164

Ion	Ratio	Lower	Upper
58	100		
43	433.3	400.7	460.7

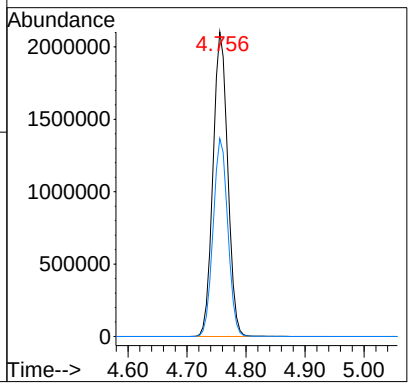


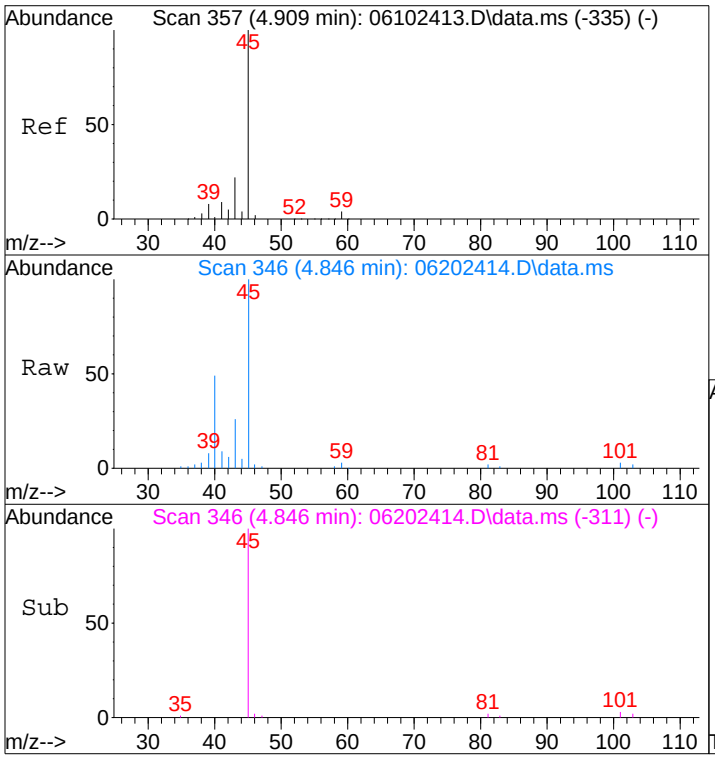


#14
Trichlorofluoromethane
Concen: 94.43 ng
RT: 4.76 min Scan# 330
Delta R.T. 0.035 min
Lab File: 06202414.D
Acq: 20 Jun 2024 16:59

Tgt Ion:101 Resp: 3632135

Ion	Ratio	Lower	Upper
101	100		
103	64.9	44.9	84.9

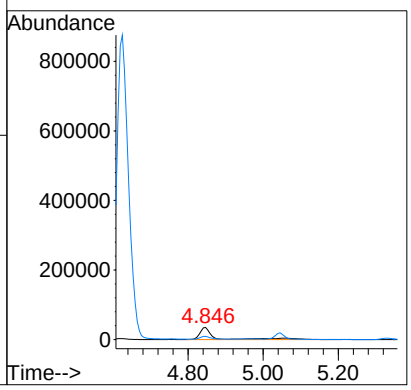


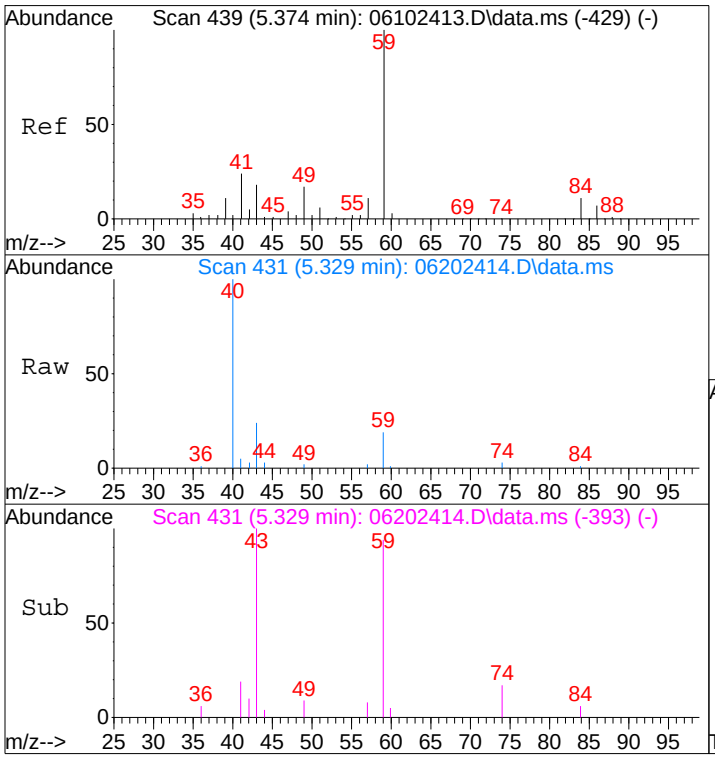


#15
2-Propanol (Isopropanol)
Concen: 1.91 ng
RT: 4.85 min Scan# 346
Delta R.T. -0.054 min
Lab File: 06202414.D
Acq: 20 Jun 2024 16:59

Tgt Ion: 45 Resp: 96412

Ion	Ratio	Lower	Upper
45	100		
43	22.2	2.5	42.5

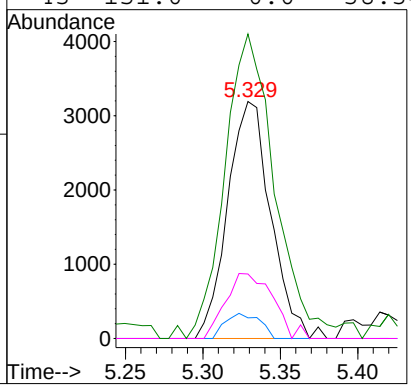


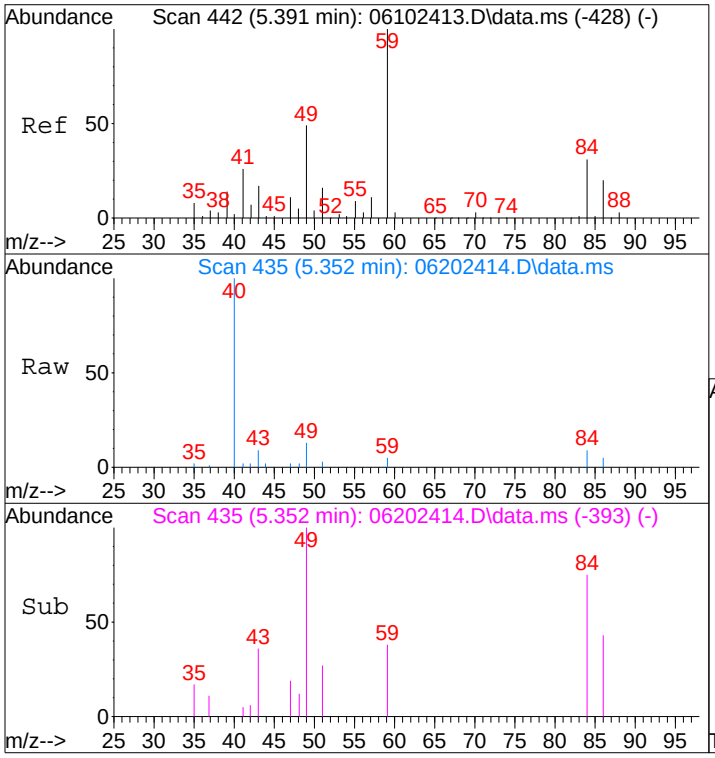


#18
2-Methyl-2-Propanol (tert-Butyl Alcohol
Concen: 0.15 ng
RT: 5.33 min Scan# 431
Delta R.T. -0.032 min
Lab File: 06202414.D
Acq: 20 Jun 2024 16:59

Tgt Ion: 59 Resp: 6202

Ion	Ratio	Lower	Upper
59	100		
57	8.5	0.0	30.9
41	30.0	0.9	40.9
43	151.0	0.0	38.3#

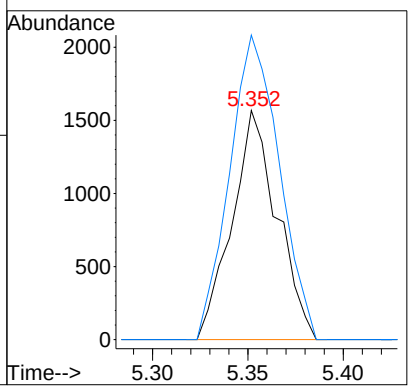


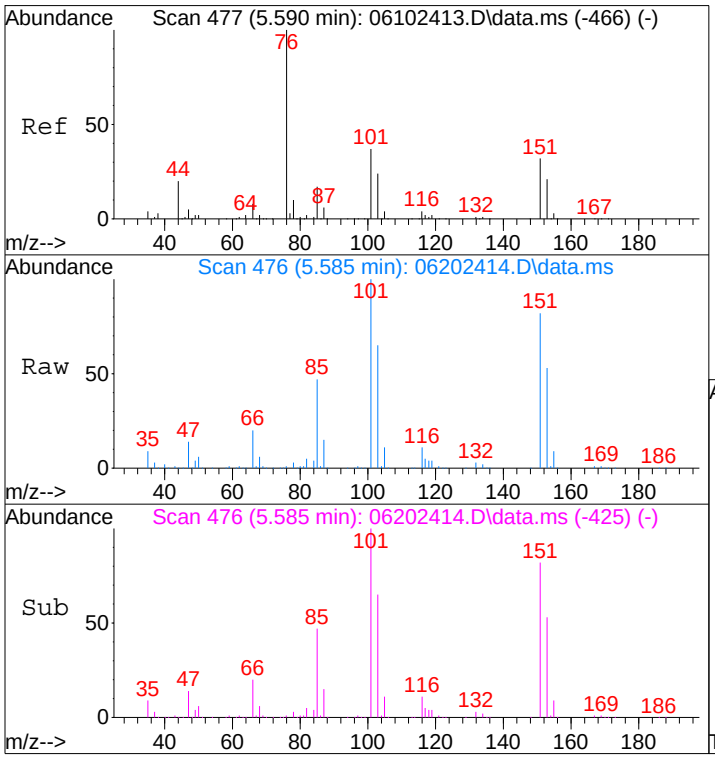


#19
Methylene Chloride
Concen: 0.15 ng
RT: 5.35 min Scan# 435
Delta R.T. -0.009 min
Lab File: 06202414.D
Acq: 20 Jun 2024 16:59

Tgt Ion: 84 Resp: 2582

Ion	Ratio	Lower	Upper
84	100		
49	146.2	132.9	182.9

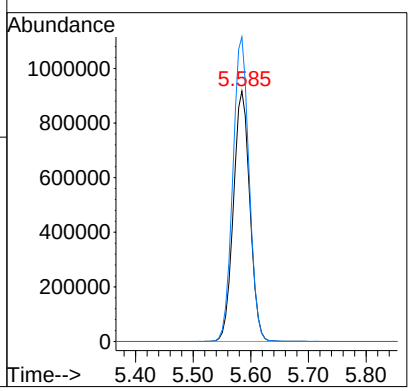


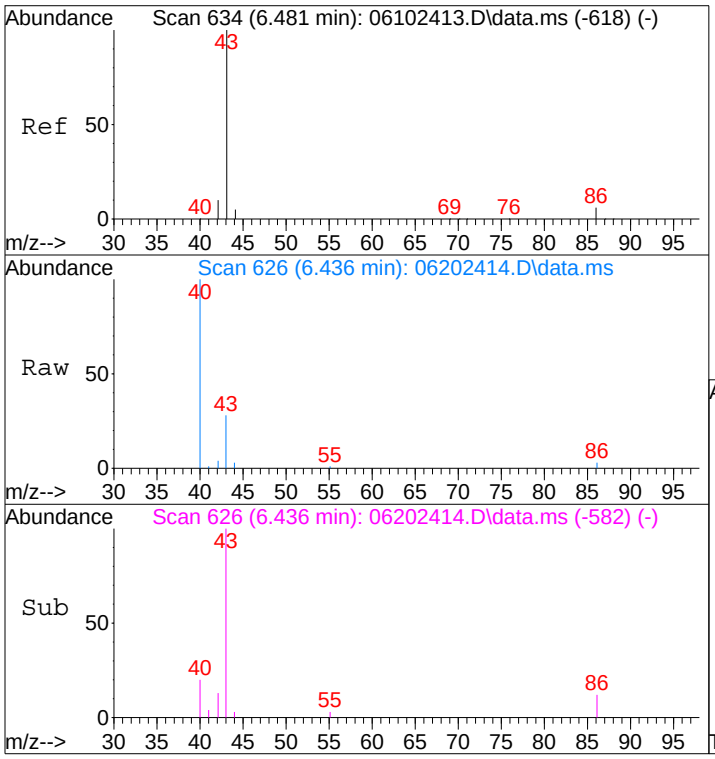


#21
Trichlorotrifluoroethane
Concen: 111.74 ng
RT: 5.58 min Scan# 476
Delta R.T. 0.038 min
Lab File: 06202414.D
Acq: 20 Jun 2024 16:59

Tgt Ion:151 Resp: 1818257

Ion	Ratio	Lower	Upper
151	100		
101	120.4	95.0	135.0

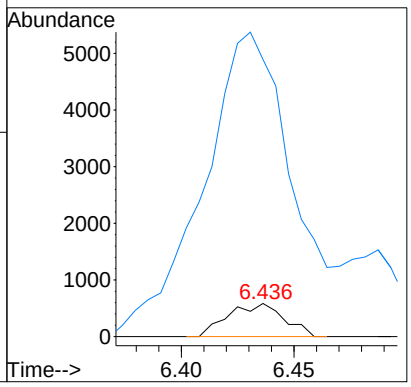


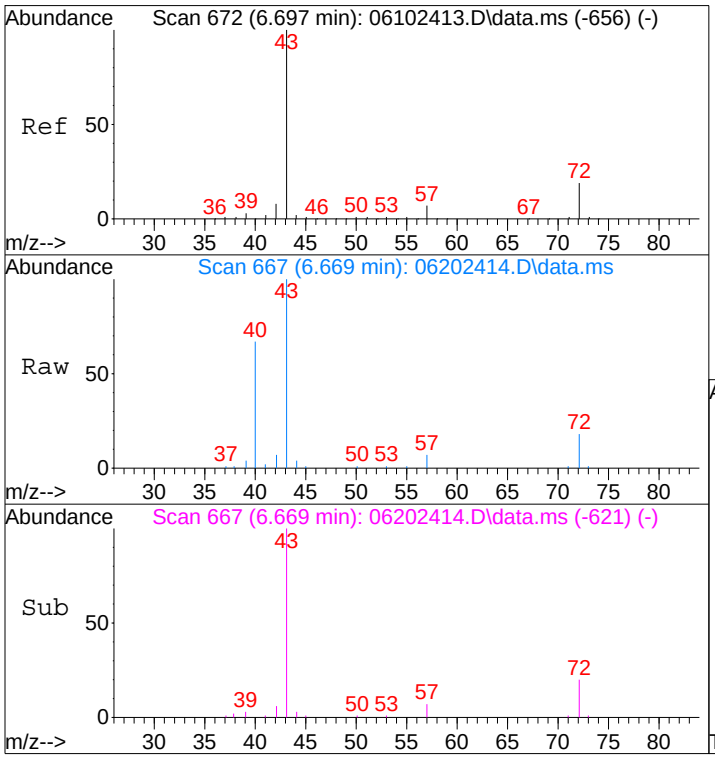


#26
Vinyl Acetate
Concen: 0.35 ng
RT: 6.44 min Scan# 626
Delta R.T. -0.003 min
Lab File: 06202414.D
Acq: 20 Jun 2024 16:59

Tgt Ion: 86 Resp: 1011

Ion	Ratio	Lower	Upper
86	100		
43	1482.5	1668.9	1708.9#

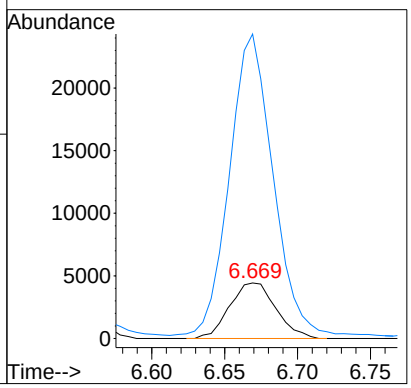


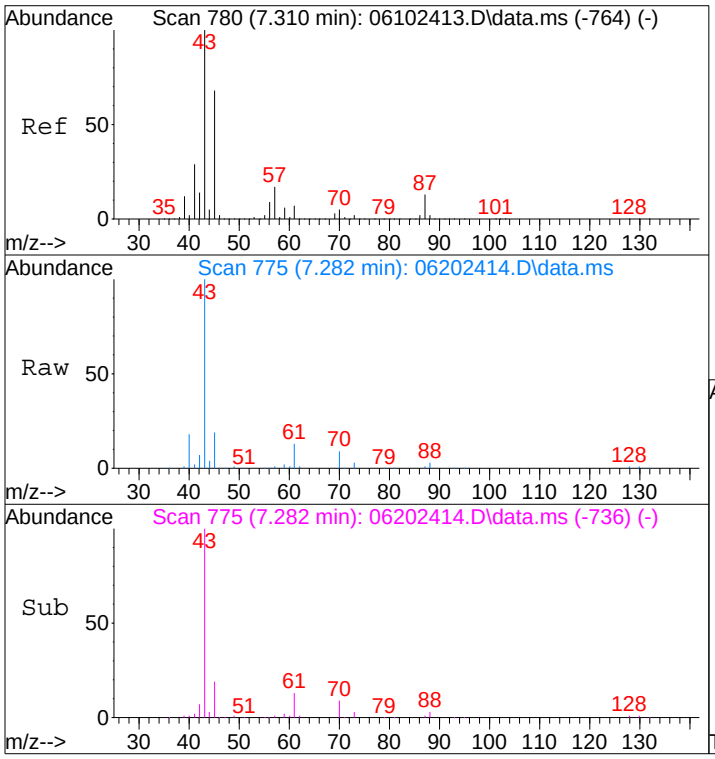


#27
2-Butanone (MEK)
Concen: 0.98 ng
RT: 6.67 min Scan# 667
Delta R.T. 0.011 min
Lab File: 06202414.D
Acq: 20 Jun 2024 16:59

Tgt Ion: 72 Resp: 9768

Ion	Ratio	Lower	Upper
72	100		
43	513.3	506.8	546.8

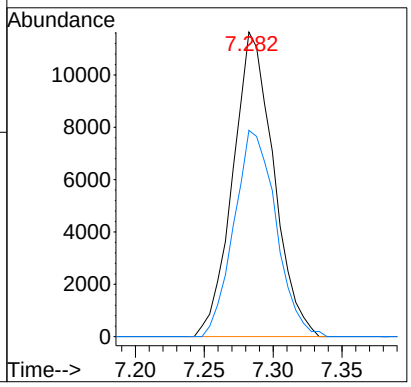


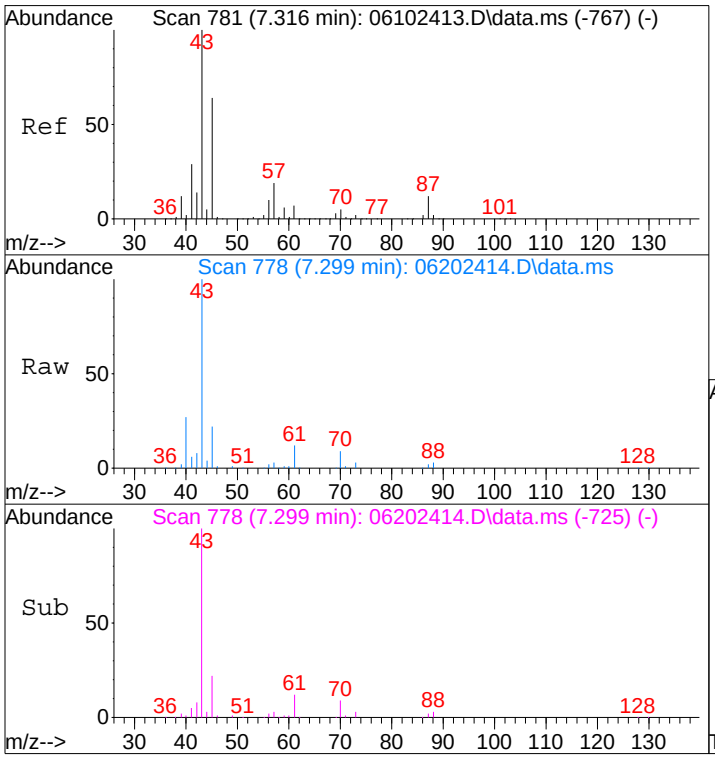


#30
Ethyl Acetate
Concen: 3.95 ng
RT: 7.28 min Scan# 775
Delta R.T. 0.023 min
Lab File: 06202414.D
Acq: 20 Jun 2024 16:59

Tgt Ion: 61 Resp: 23933

Ion	Ratio	Lower	Upper
61	100		
70	69.6	53.5	93.5

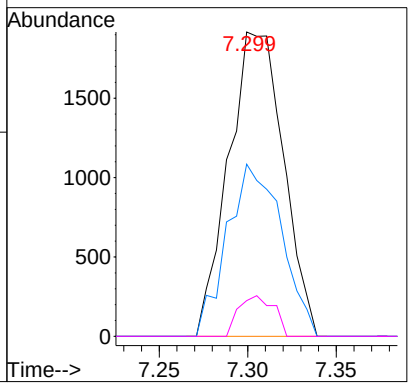


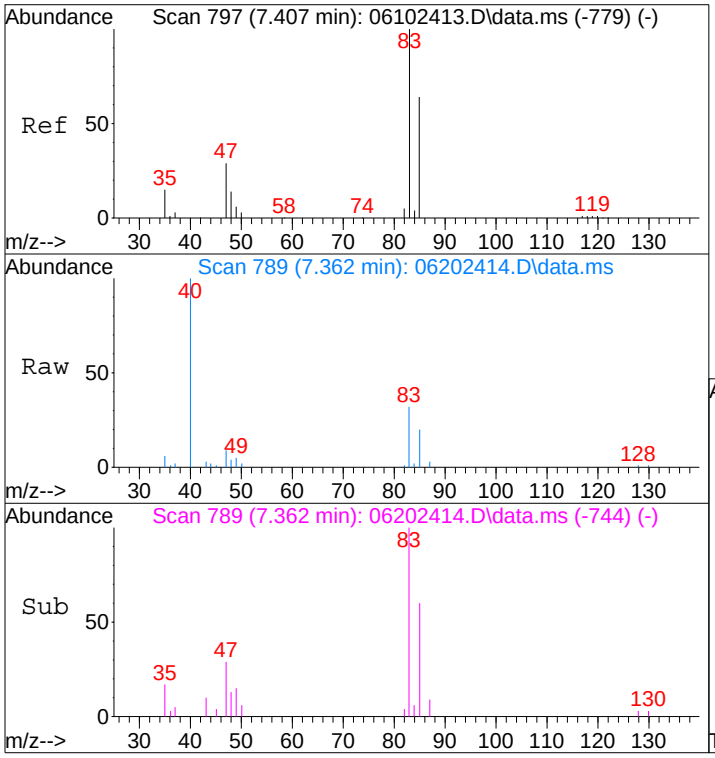


#31
n-Hexane
Concen: 0.16 ng
RT: 7.30 min Scan# 778
Delta R.T. 0.051 min
Lab File: 06202414.D
Acq: 20 Jun 2024 16:59

Tgt Ion: 57 Resp: 4133

Ion	Ratio	Lower	Upper
57	100		
56	55.9	42.5	63.7
86	8.6	9.5	14.3#

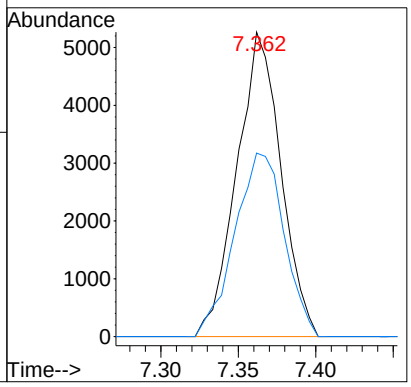


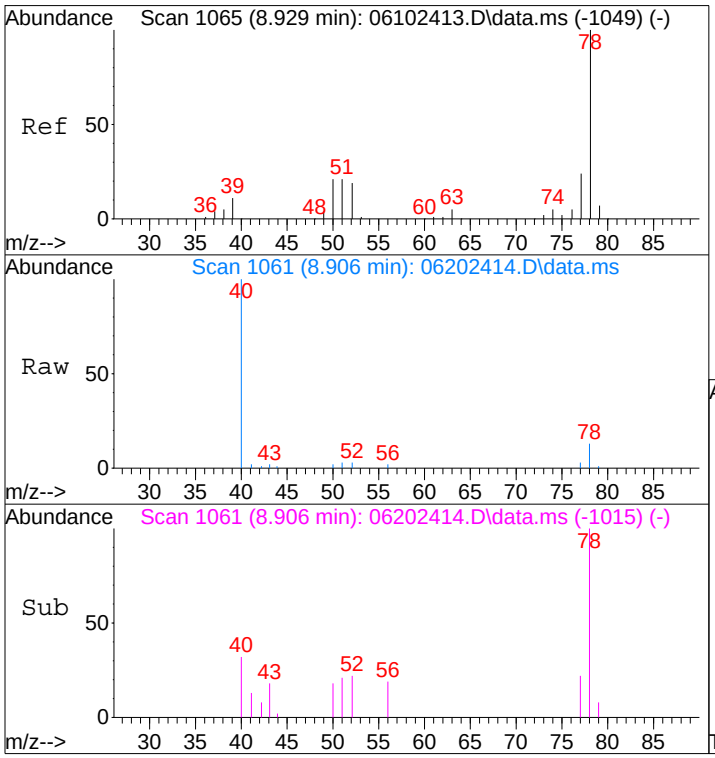


#32
Chloroform
Concen: 0.33 ng
RT: 7.36 min Scan# 789
Delta R.T. 0.007 min
Lab File: 06202414.D
Acq: 20 Jun 2024 16:59

Tgt Ion: 83 Resp: 10434

Ion	Ratio	Lower	Upper
83	100		
85	67.6	44.4	84.4

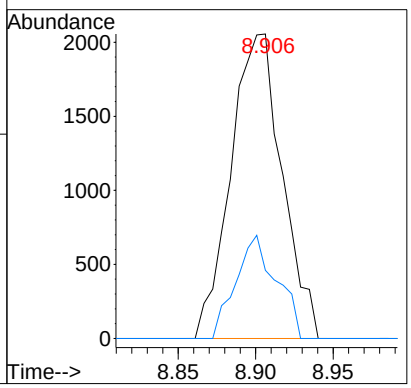


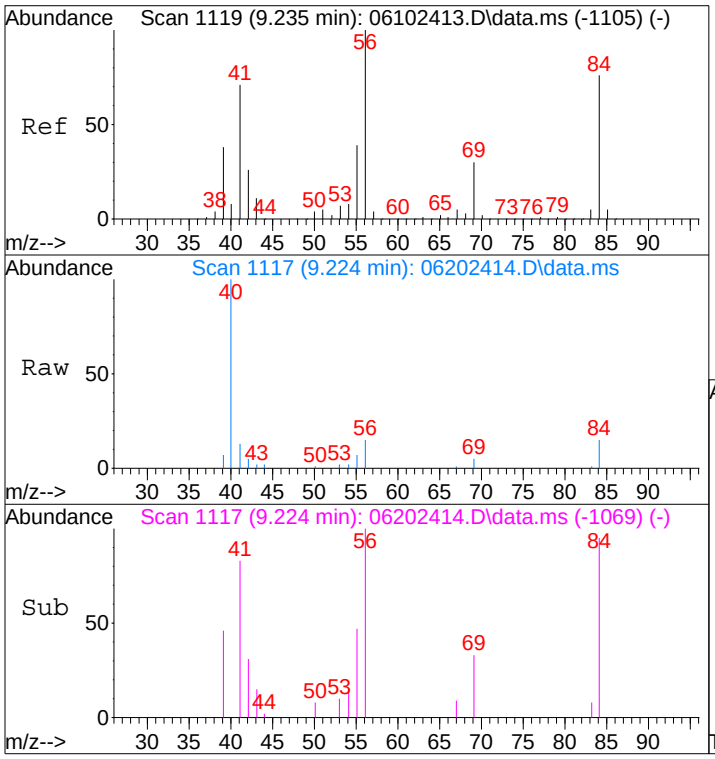


#41
Benzene
Concen: 0.07 ng
RT: 8.91 min Scan# 1061
Delta R.T. 0.009 min
Lab File: 06202414.D
Acq: 20 Jun 2024 16:59

Tgt Ion: 78 Resp: 4748

Ion	Ratio	Lower	Upper
78	100		
77	26.9	4.0	44.0

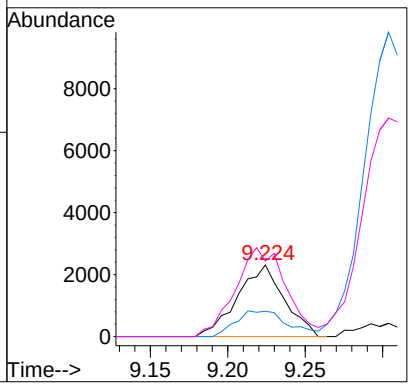


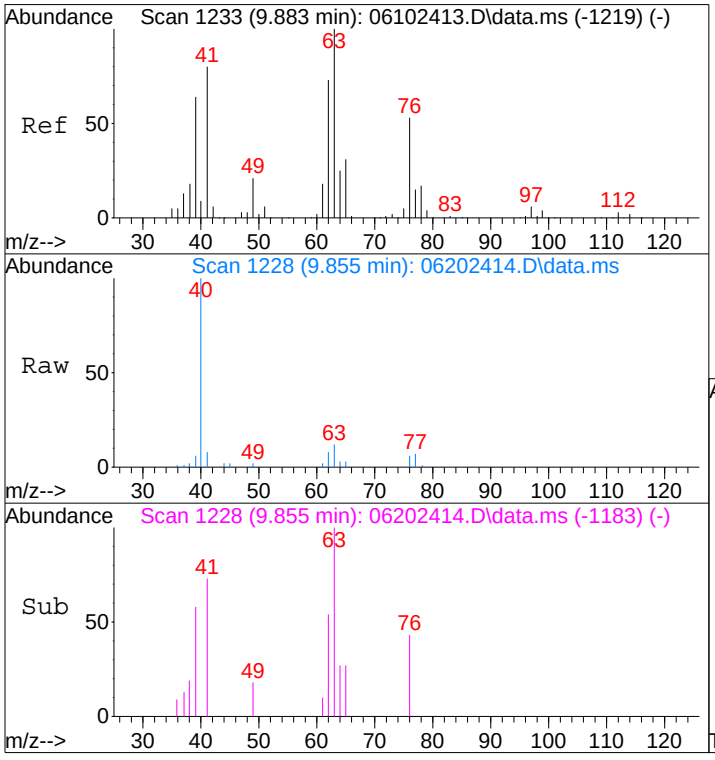


#43
Cyclohexane
Concen: 0.23 ng
RT: 9.22 min Scan# 1117
Delta R.T. 0.022 min
Lab File: 06202414.D
Acq: 20 Jun 2024 16:59

Tgt Ion: 84 Resp: 4846

Ion	Ratio	Lower	Upper
84	100		
69	40.2	18.8	58.8
56	135.1	111.5	151.5

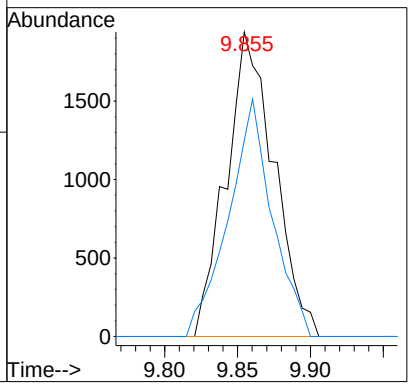


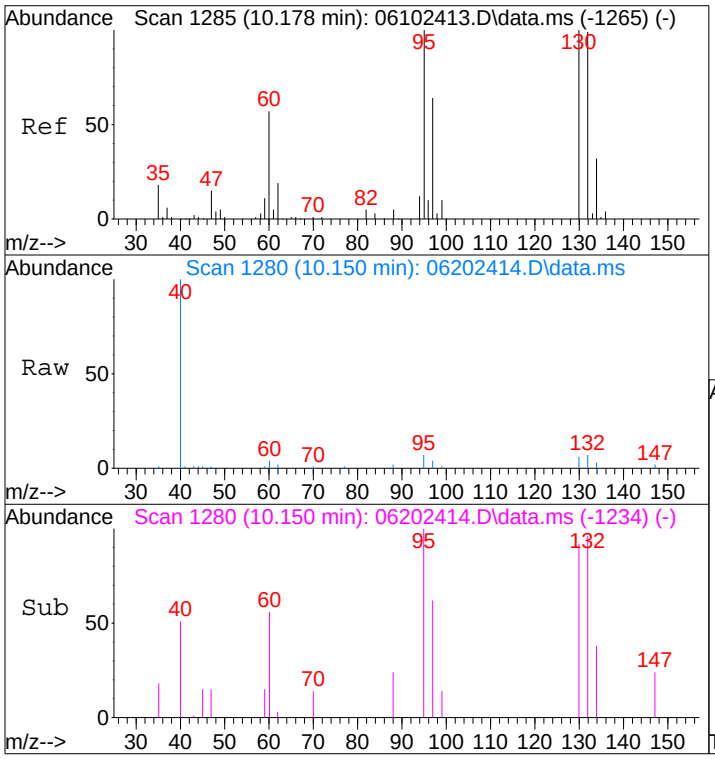


#45
1,2-Dichloropropane
Concen: 0.28 ng
RT: 9.85 min Scan# 1228
Delta R.T. 0.003 min
Lab File: 06202414.D
Acq: 20 Jun 2024 16:59

Tgt Ion: 63 Resp: 4424

Ion	Ratio	Lower	Upper
63	100		
62	71.4	52.4	92.4

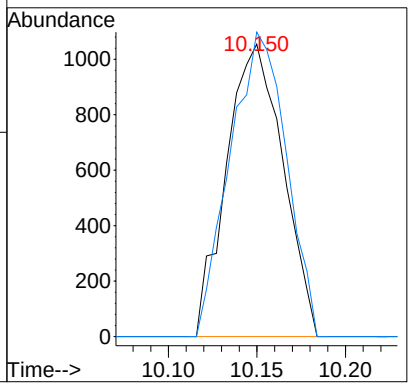


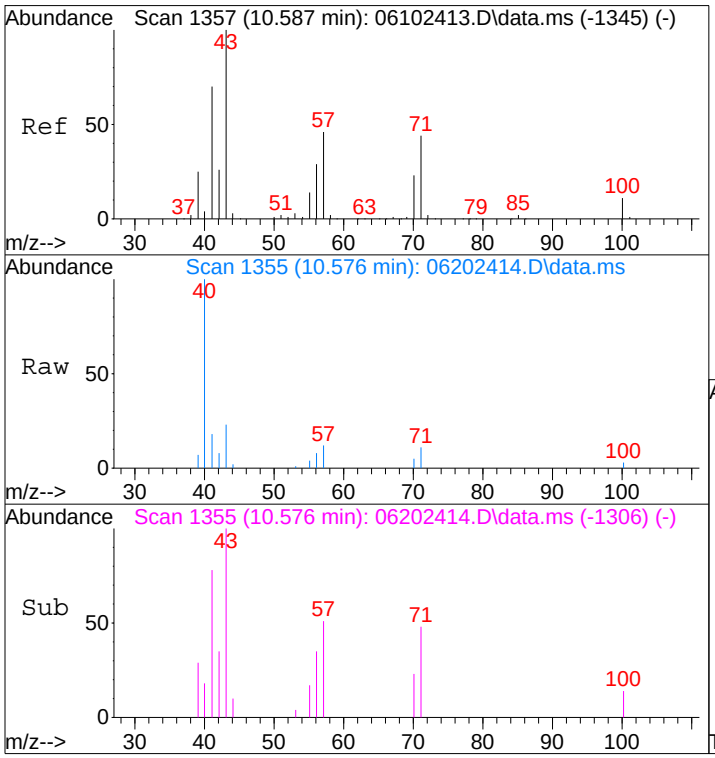


#47
Trichloroethene
Concen: 0.12 ng
RT: 10.15 min Scan# 1280
Delta R.T. 0.010 min
Lab File: 06202414.D
Acq: 20 Jun 2024 16:59

Tgt Ion:130 Resp: 2342

Ion	Ratio	Lower	Upper
130	100		
132	103.6	77.9	117.9

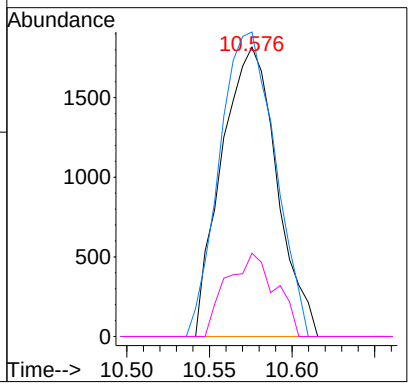


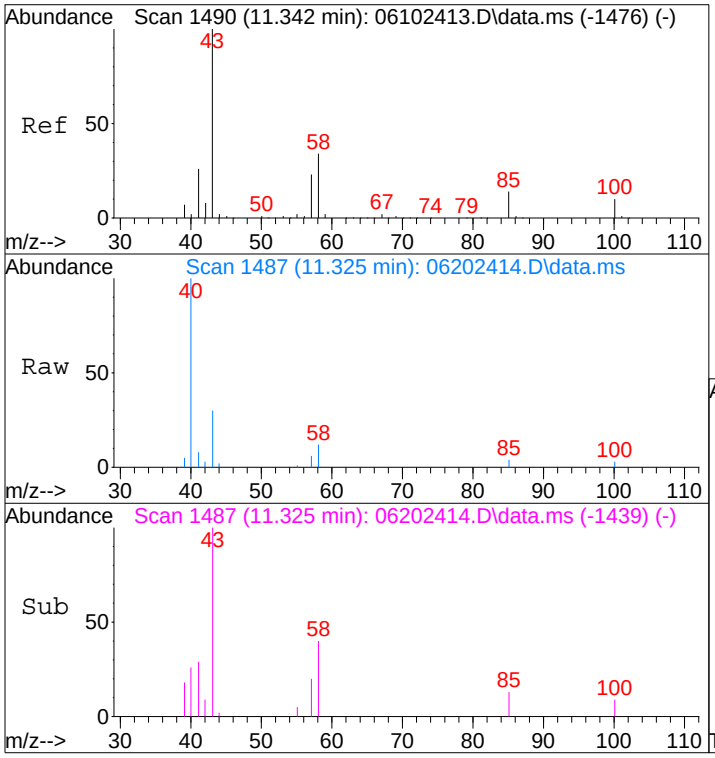


#51
n-Heptane
Concen: 0.31 ng
RT: 10.58 min Scan# 1355
Delta R.T. 0.029 min
Lab File: 06202414.D
Acq: 20 Jun 2024 16:59

Tgt Ion: 71 Resp: 4222

Ion	Ratio	Lower	Upper
71	100		
57	105.6	83.9	123.9
100	25.4	4.8	44.8

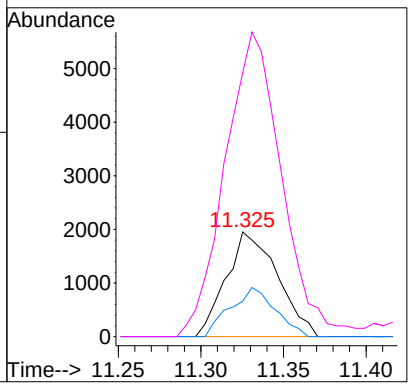


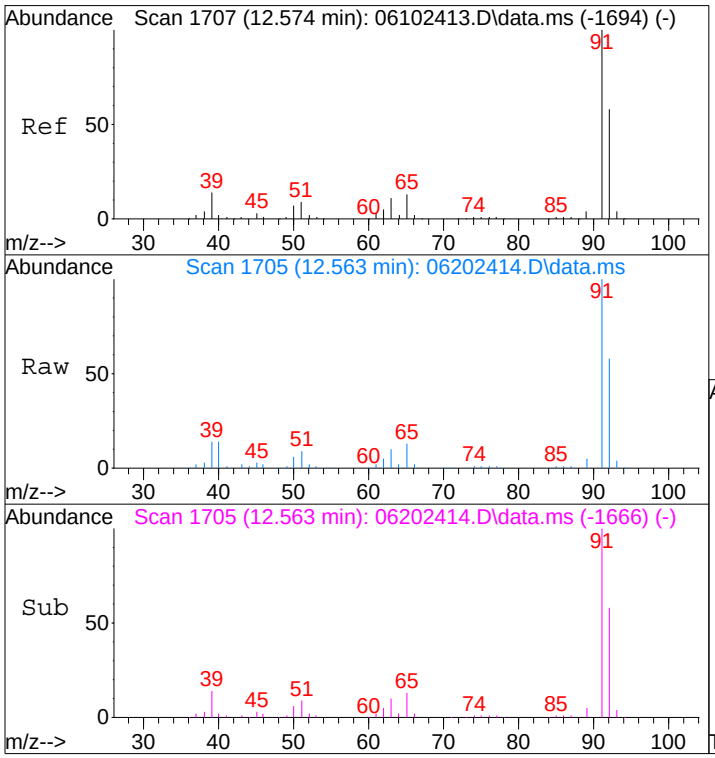


#53
4-Methyl-2-pentanone
Concen: 0.30 ng
RT: 11.33 min Scan# 1487
Delta R.T. 0.022 min
Lab File: 06202414.D
Acq: 20 Jun 2024 16:59

Tgt Ion: 58 Resp: 4224

Ion	Ratio	Lower	Upper
58	100		
85	41.0	34.5	51.7
43	320.3	236.1	354.1

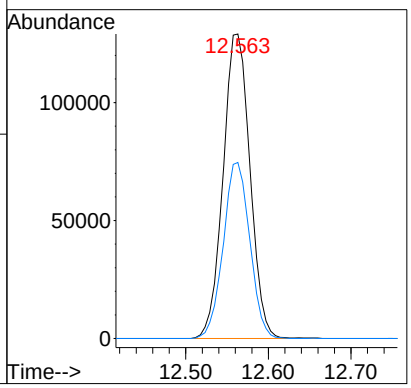


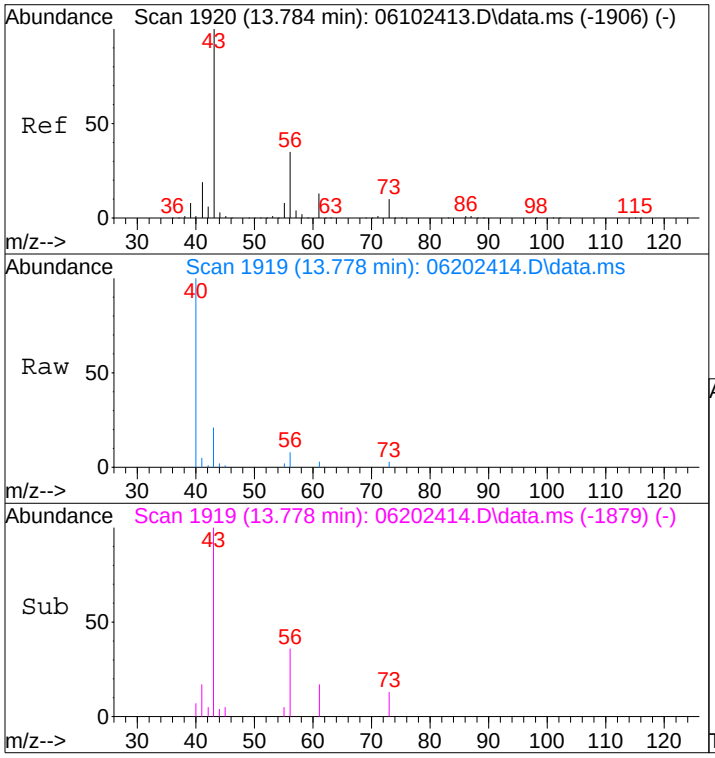


#58
Toluene
Concen: 4.51 ng
RT: 12.56 min Scan# 1705
Delta R.T. -0.028 min
Lab File: 06202414.D
Acq: 20 Jun 2024 16:59

Tgt Ion: 91 Resp: 292395

Ion	Ratio	Lower	Upper
91	100		
92	56.9	37.4	77.4

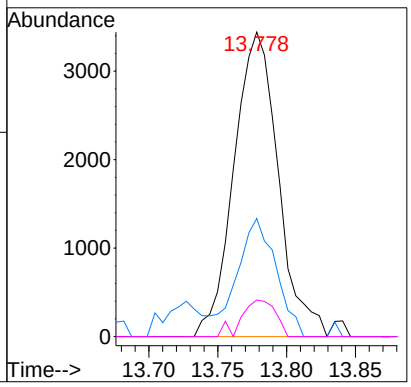


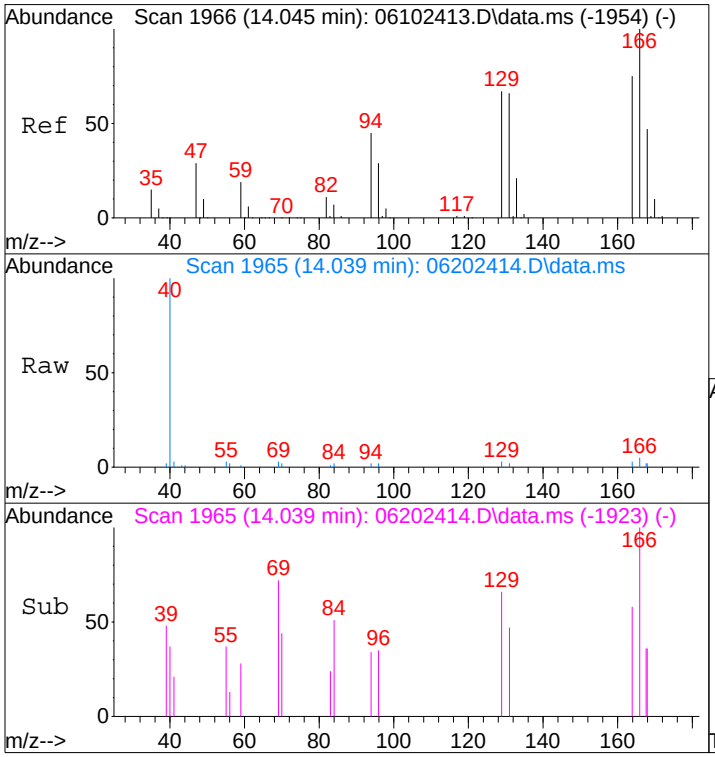


#62
n-Butyl Acetate
Concen: 0.18 ng
RT: 13.78 min Scan# 1919
Delta R.T. -0.023 min
Lab File: 06202414.D
Acq: 20 Jun 2024 16:59

Tgt Ion: 43 Resp: 7704

Ion	Ratio	Lower	Upper
43	100		
56	34.0	14.3	54.3
73	9.2	0.0	30.4

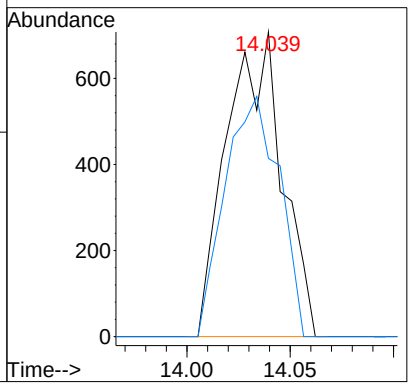


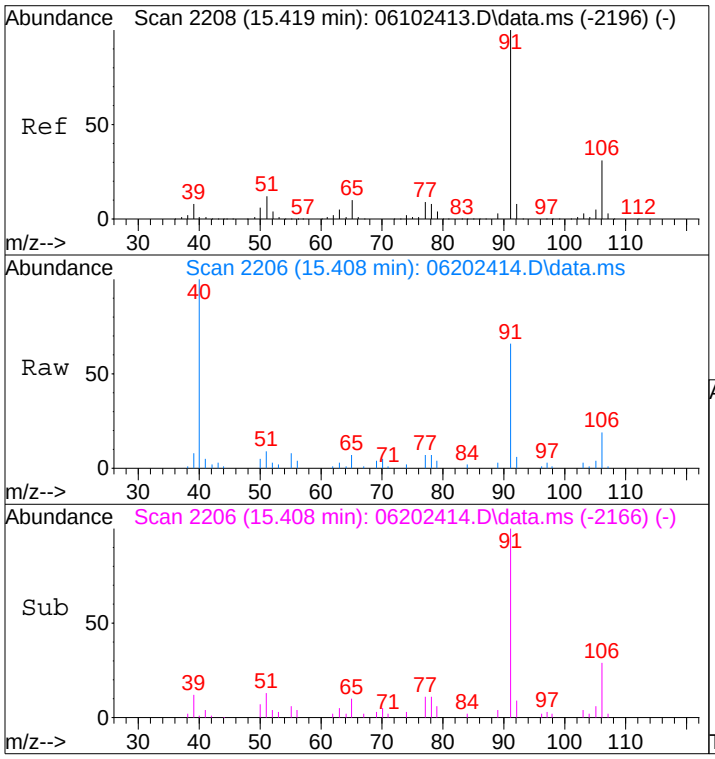


#64
Tetrachloroethene
Concen: 0.06 ng
RT: 14.04 min Scan# 1965
Delta R.T. -0.011 min
Lab File: 06202414.D
Acq: 20 Jun 2024 16:59

Tgt Ion:166 Resp: 1319

Ion	Ratio	Lower	Upper
166	100		
164	77.3	56.9	96.9

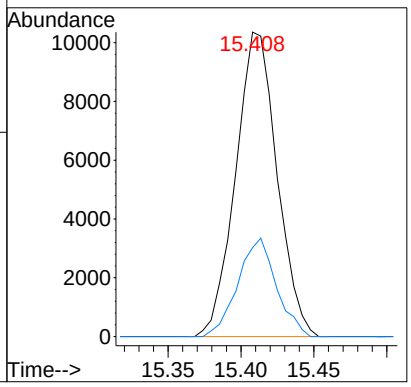


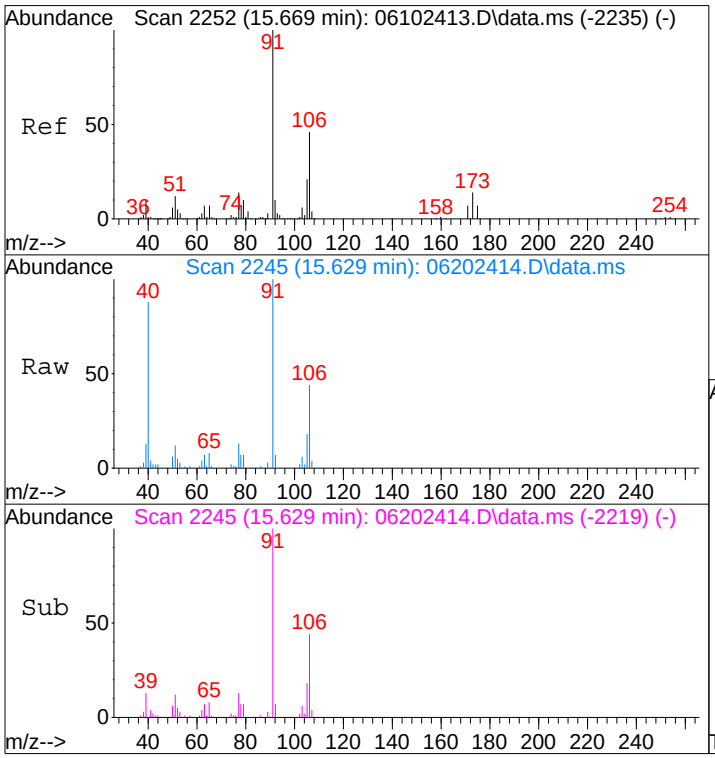


#66
Ethylbenzene
Concen: 0.28 ng
RT: 15.41 min Scan# 2206
Delta R.T. -0.023 min
Lab File: 06202414.D
Acq: 20 Jun 2024 16:59

Tgt Ion: 91 Resp: 20458

Ion	Ratio	Lower	Upper
91	100		
106	30.0	10.7	50.7

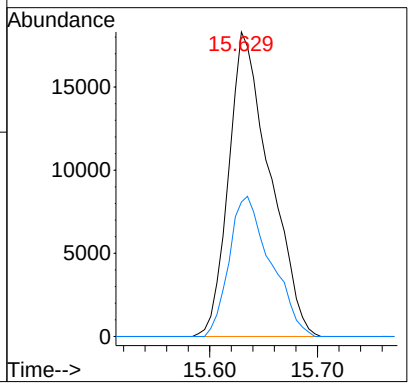


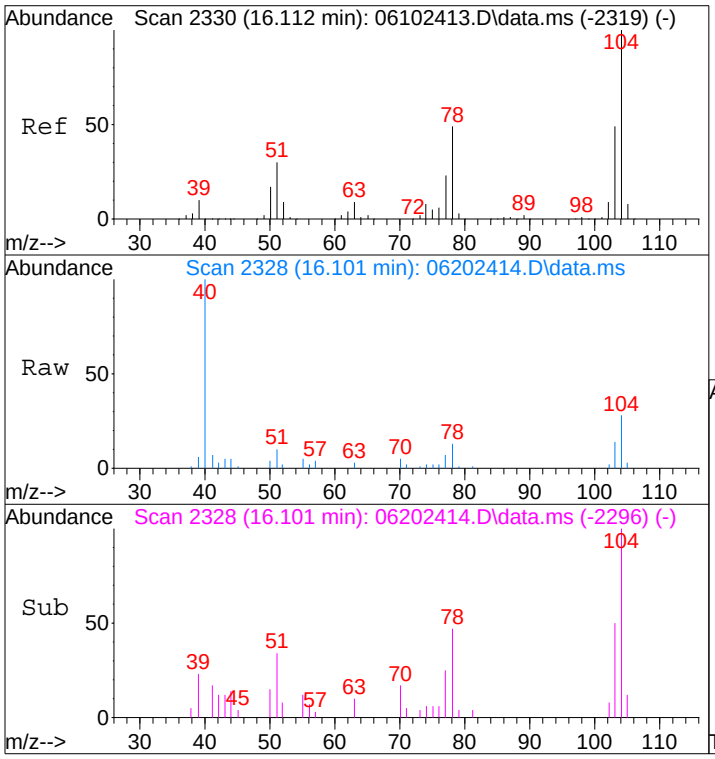


#67
m- & p-Xylenes
Concen: 0.78 ng
RT: 15.63 min Scan# 2245
Delta R.T. -0.051 min
Lab File: 06202414.D
Acq: 20 Jun 2024 16:59

Tgt Ion: 91 Resp: 48532

Ion	Ratio	Lower	Upper
91	100		
106	46.6	25.9	65.9

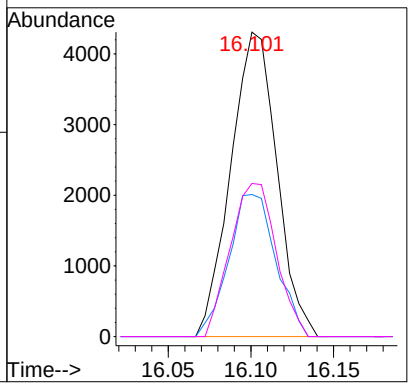


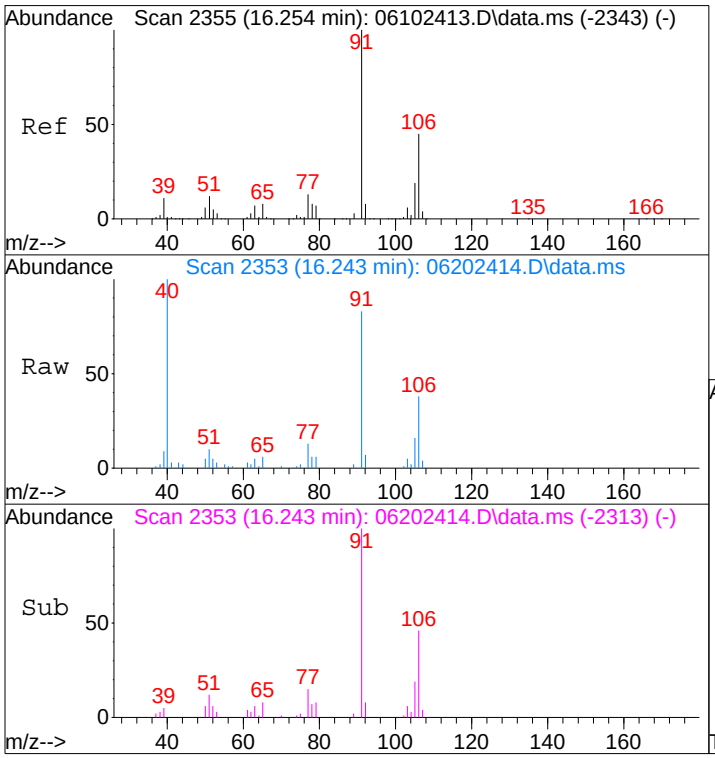


#69
Styrene
Concen: 0.20 ng
RT: 16.10 min Scan# 2328
Delta R.T. -0.017 min
Lab File: 06202414.D
Acq: 20 Jun 2024 16:59

Tgt Ion:104 Resp: 8366

Ion	Ratio	Lower	Upper
104	100		
78	47.8	29.2	69.2
103	50.1	29.4	69.4

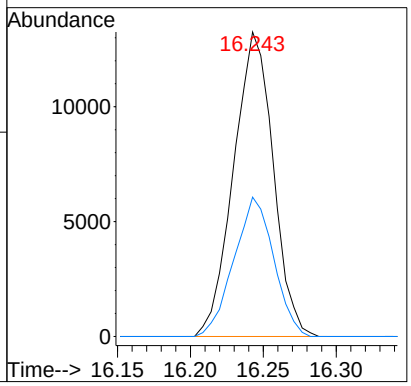


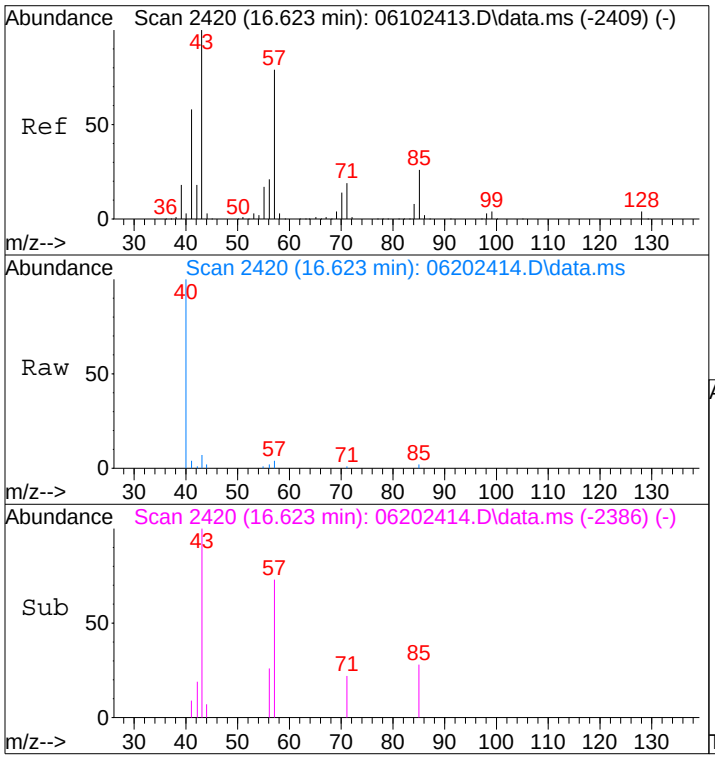


#70
o-Xylene
Concen: 0.41 ng
RT: 16.24 min Scan# 2353
Delta R.T. -0.023 min
Lab File: 06202414.D
Acq: 20 Jun 2024 16:59

Tgt Ion: 91 Resp: 25032

Ion	Ratio	Lower	Upper
91	100		
106	46.0	24.5	64.5

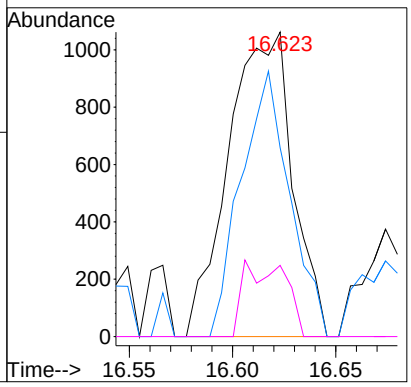


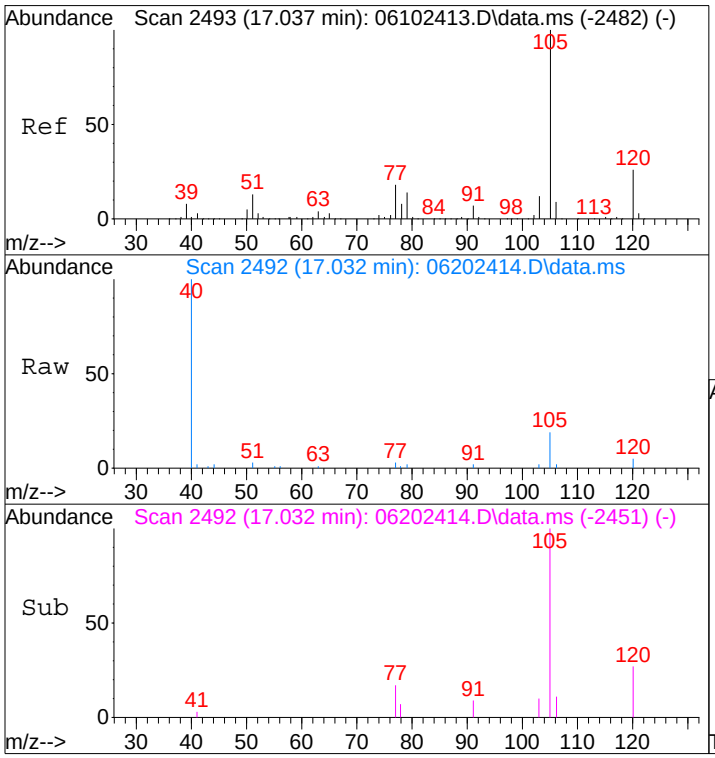


#71
n-Nonane
Concen: 0.06 ng
RT: 16.62 min Scan# 2420
Delta R.T. -0.006 min
Lab File: 06202414.D
Acq: 20 Jun 2024 16:59

Tgt Ion: 43 Resp: 2298

Ion	Ratio	Lower	Upper
43	100		
57	66.1	58.2	98.2
85	16.1	5.9	45.9

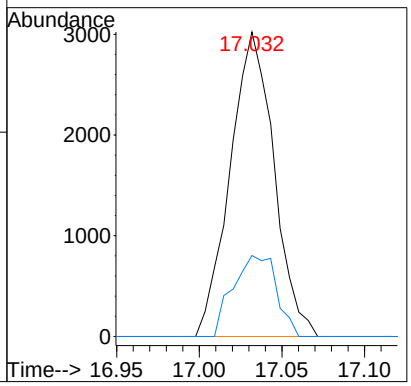


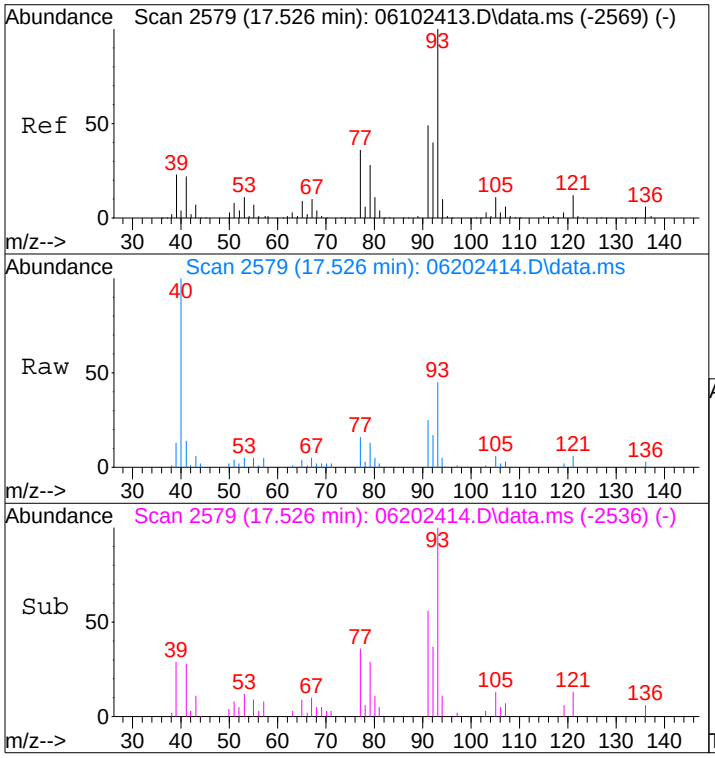


#74
Cumene
Concen: 0.07 ng
RT: 17.03 min Scan# 2492
Delta R.T. -0.017 min
Lab File: 06202414.D
Acq: 20 Jun 2024 16:59

Tgt Ion:105 Resp: 5580

Ion	Ratio	Lower	Upper
105	100		
120	26.4	6.0	46.0

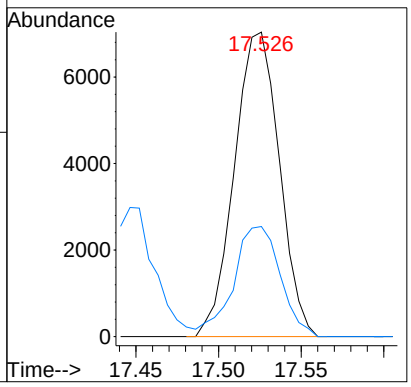


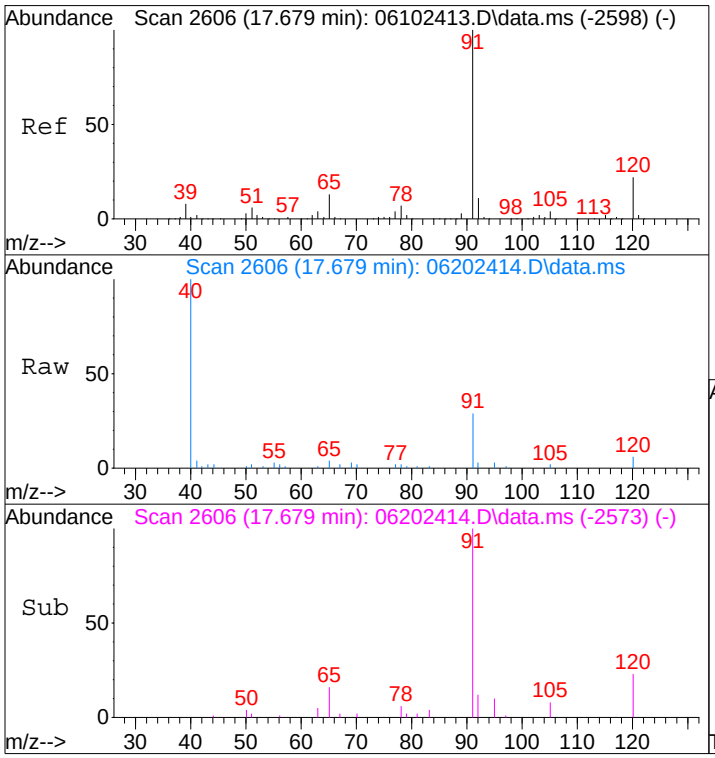


#75
alpha-Pinene
Concen: 0.37 ng
RT: 17.53 min Scan# 2579
Delta R.T. -0.006 min
Lab File: 06202414.D
Acq: 20 Jun 2024 16:59

Tgt Ion: 93 Resp: 13322

Ion	Ratio	Lower	Upper
93	100		
77	37.6	15.3	55.3

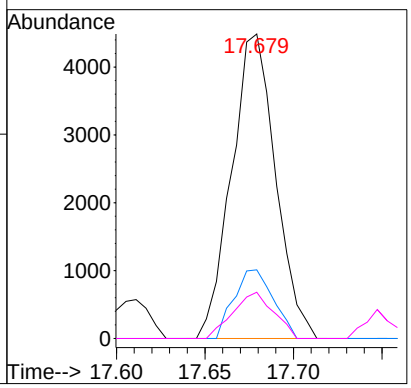


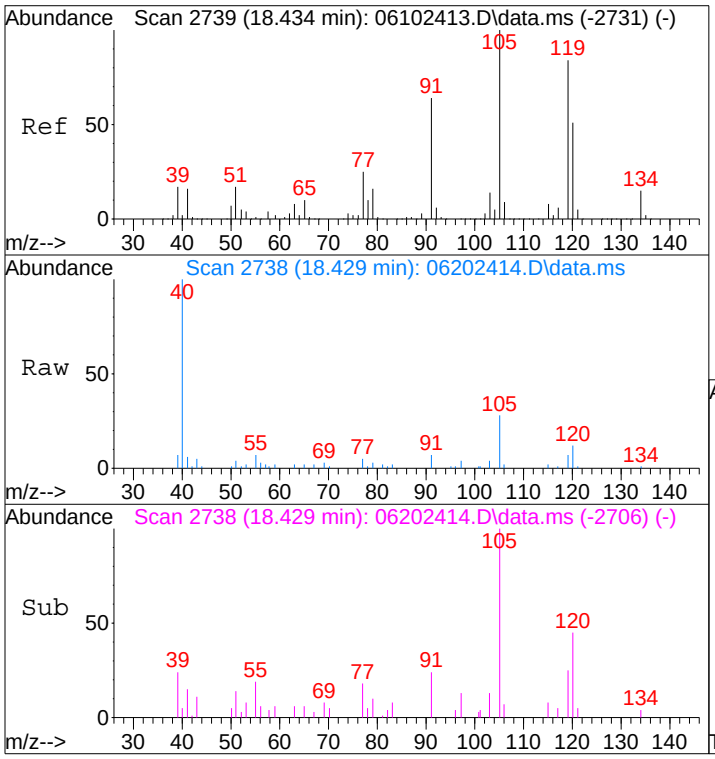


#76
n-Propylbenzene
Concen: 0.08 ng
RT: 17.68 min Scan# 2606
Delta R.T. -0.011 min
Lab File: 06202414.D
Acq: 20 Jun 2024 16:59

Tgt Ion: 91 Resp: 7759

Ion	Ratio	Lower	Upper
91	100		
120	20.2	2.7	42.7
65	14.1	0.0	32.7

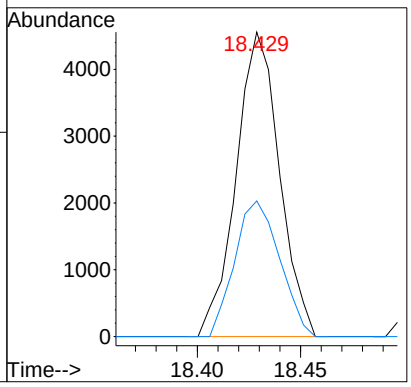


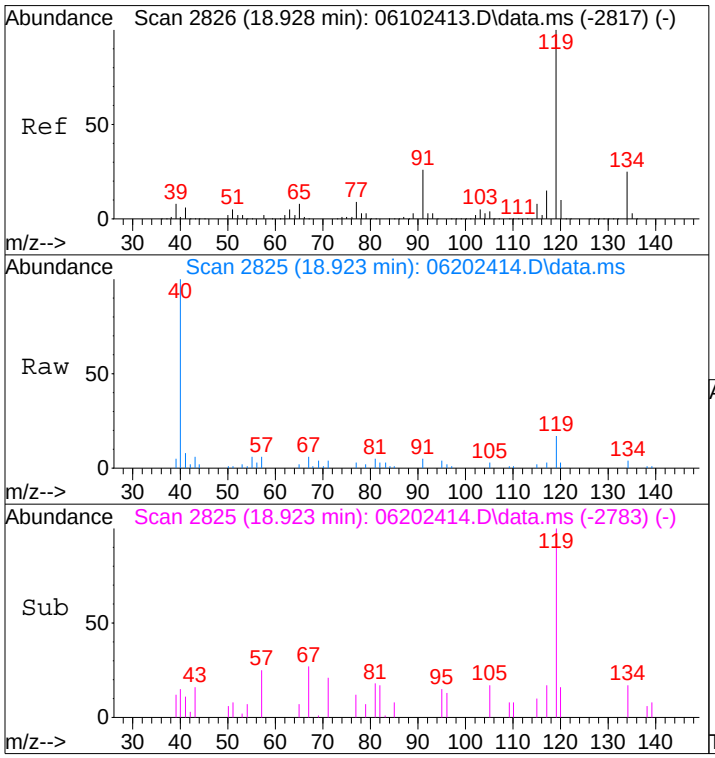


#82
1,2,4-Trimethylbenzene
Concen: 0.10 ng
RT: 18.43 min Scan# 2738
Delta R.T. -0.017 min
Lab File: 06202414.D
Acq: 20 Jun 2024 16:59

Tgt Ion:105 Resp: 6658

Ion	Ratio	Lower	Upper
105	100		
120	46.2	31.9	71.9

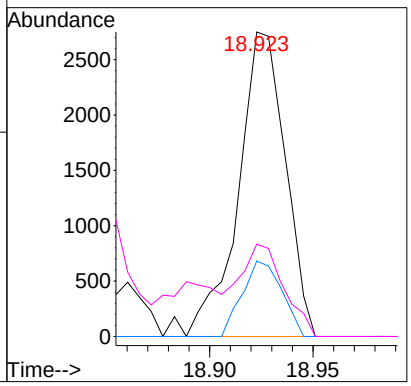


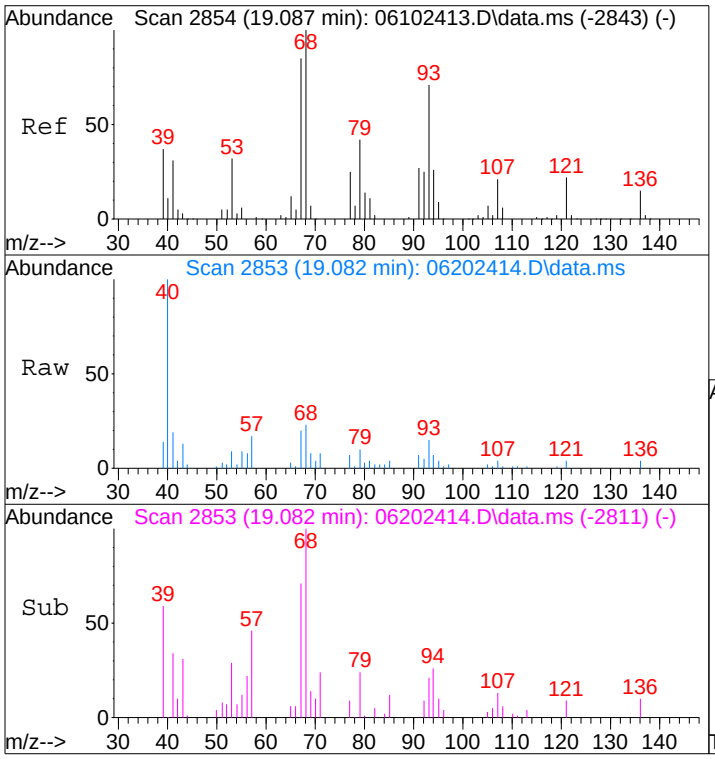


#88
4-Isopropyltoluene (p-Cymene)
Concen: 0.06 ng
RT: 18.92 min Scan# 2825
Delta R.T. -0.011 min
Lab File: 06202414.D
Acq: 20 Jun 2024 16:59

Tgt Ion:119 Resp: 4346

Ion	Ratio	Lower	Upper
119	100		
134	20.9	4.9	44.9
91	28.9	5.8	45.8

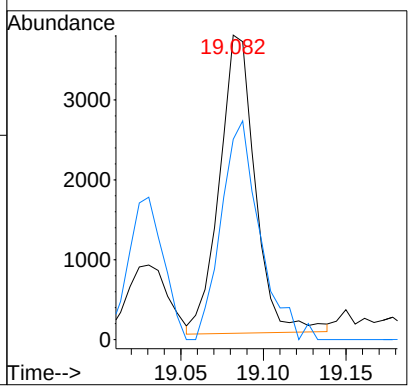




#91
d-Limonene
Concen: 0.24 ng
RT: 19.08 min Scan# 2853
Delta R.T. -0.011 min
Lab File: 06202414.D
Acq: 20 Jun 2024 16:59

Tgt Ion: 68 Resp: 5608

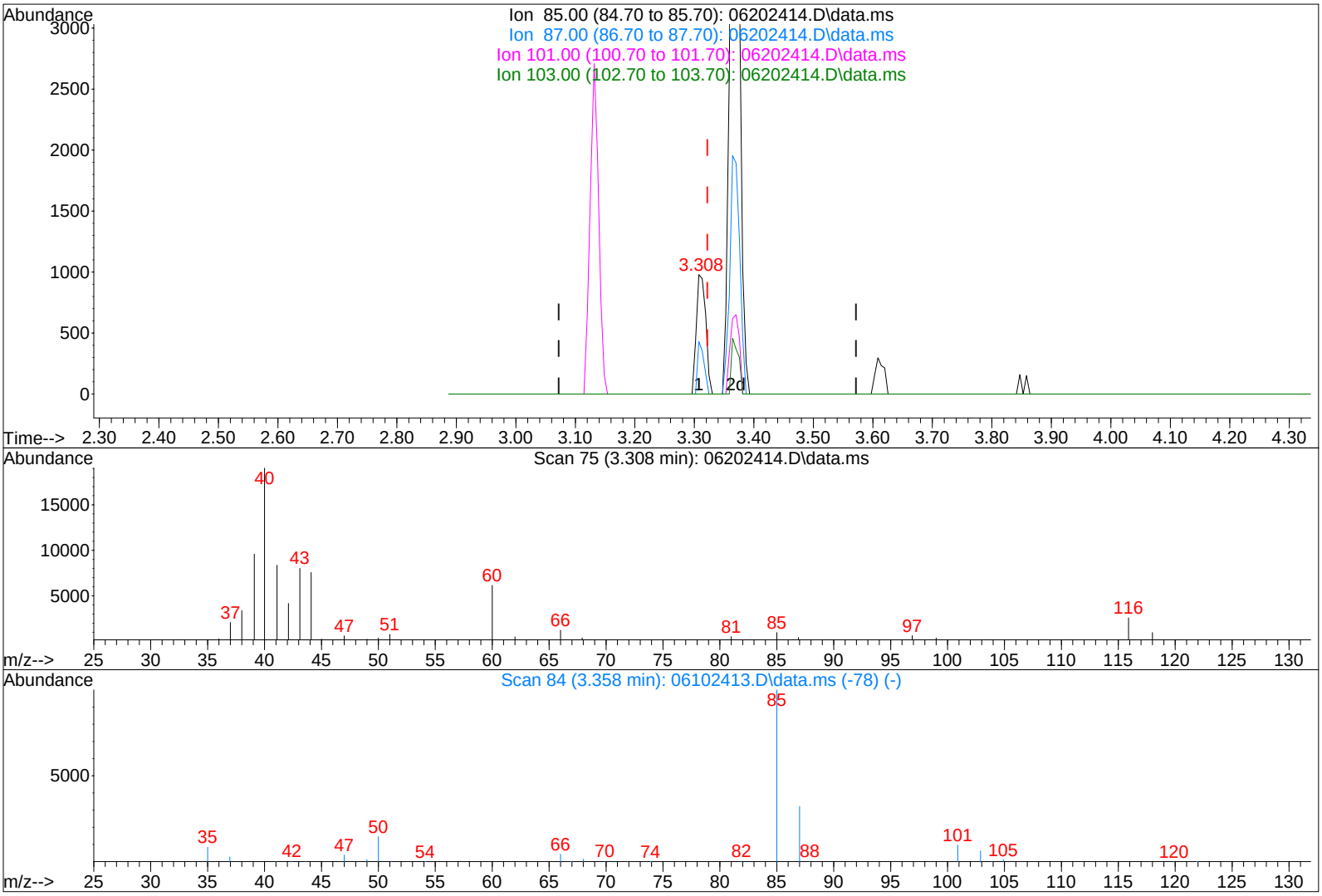
Ion	Ratio	Lower	Upper
68	100		
93	79.1	52.2	92.2



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\20\06202414.D Vial: 4
Acq On : 20 Jun 2024 16:59 Operator: SC
Sample : P2402249-042 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 11:48:41 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06202414.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.308min (-0.015) 0.03ng

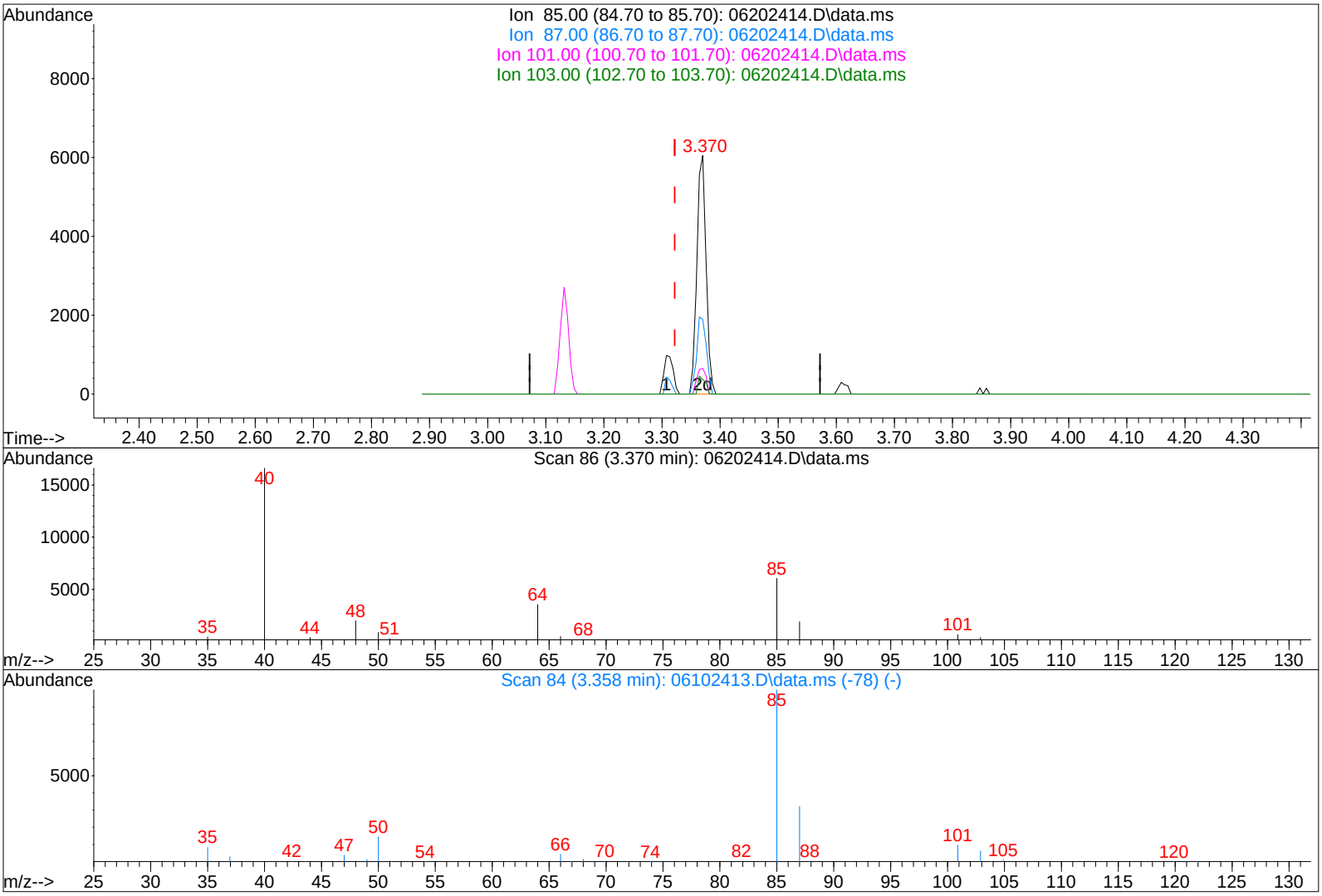
response 1079

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	30.12
101.00	9.80	0.00
103.00	6.30	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\20\06202414.D Vial: 4
Acq On : 20 Jun 2024 16:59 Operator: SC
Sample : P2402249-042 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 11:48:41 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06202414.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.370min (+0.048) 0.18ng m

response 6658

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	34.26
101.00	9.80	10.60
103.00	6.30	5.77

MJ 6/29/24

WP

CG 6/29/24

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202414.D Vial: 4
Acq On : 20 Jun 2024 16:59 Operator: SC
Sample : P2402249-042 (100mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 15:27:46 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

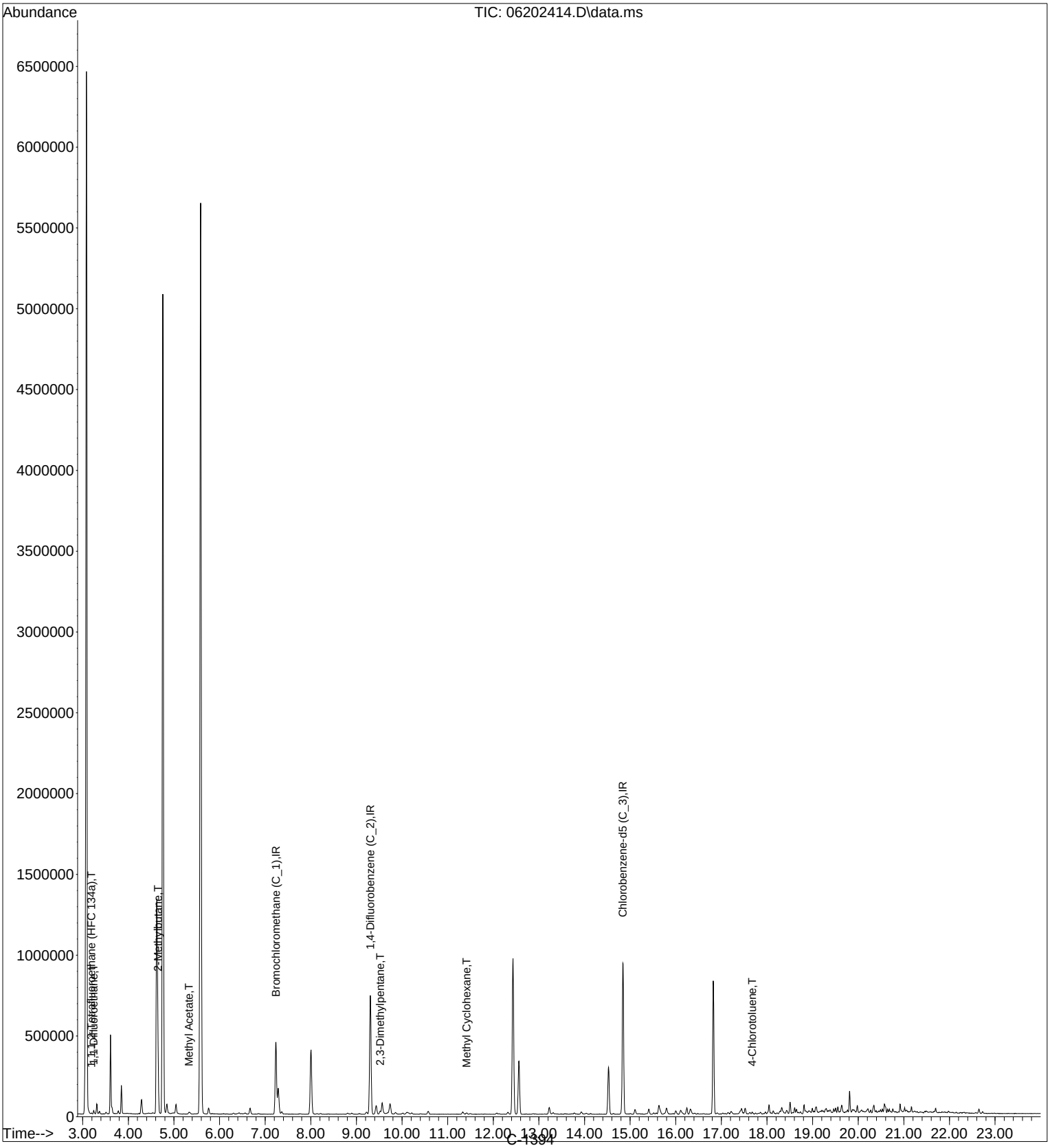
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.24	130	161806	12.500	ng		-0.02
16) 1,4-Difluorobenzene (C 2)	9.30	114	701208	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	161982	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	0.00	85	0	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.19	83	2354	0.142	ng	#	78
4) 1,1-Difluoroethane	3.24	65	5256	0.372	ng		94
5) Chlorodifluoromethane ...	3.30	67	377	N.D.			
6) 1-Chloro-1,1-Difluoroe...	3.51	65	193	N.D.			
7) Dichlorofluoromethane ...	4.23	67	3411	N.D.			
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	4.58	83	180	N.D.			
10) 2-Methylbutane	4.65	57	63821	3.307	ng	#	35
11) Methyl Acetate	5.33	43	9368	0.172	ng	#	40
12) 2-Methylpentane	6.48	71	650	N.D.			
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	0.00	84	0	N.D.			
17) 2,3-Dimethylpentane	9.52	56	9779	0.288	ng		96
18) Dibromomethane	9.81	174	271	N.D.			
20) Methyl Cyclohexane	11.42	55	3919	0.141	ng		95
21) 1,3-Dichloropropane	12.55	76	1509	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	15.10	91	51	N.D.			
24) 1,2,3-Trichloropropane	16.32	75	1874	N.D.			
25) Bromobenzene	17.03	77	1073	N.D.			
26) 2-Chlorotoluene	17.61	91	905	N.D.			
27) 4-Chlorotoluene	17.68	91	7759	0.164	ng	#	41
28) Indane	19.12	117	2594	N.D.			
29) Indene	19.21	115	750	N.D.			
30) 1,2,4,5-Tetramethylben...	20.18	119	3107	N.D.			
31) 1,2,3,4-Tetramethylben...	20.22	119	2559	N.D.			
32) 1,2,3,5-Tetramethylben...	20.60	119	2615	N.D.			
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202414.D Vial: 4
Acq On : 20 Jun 2024 16:59 Operator: SC
Sample : P2402249-042 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:27:46 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212407.D Vial: 4
Acq On : 21 Jun 2024 13:38 Operator: SC
Sample : P2402249-042Dil (50mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 17:05:37 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	175956	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	772154	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	177377	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	380061	12.153	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.20%				
57) Toluene-d8 (SS2)	12.43	98	869059	12.803	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.40%				
73) Bromofluorobenzene (SS3)	16.83	174	301343	12.294	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.32%				
Target Compounds							Qvalue
2) Propene	0.00	42	0	N.D. d			
3) Dichlorodifluoromethan...	3.37	85	3547m	0.086	ng		
4) Chloromethane	3.51	50	1151	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	4.02	94	290	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.28	45	76879	4.494	ng		98
11) Acetonitrile	0.00	41	0	N.D. d			
12) Acrolein	4.53	56	1015	0.080	ng		88
13) Acetone	4.62	58	237637	17.385	ng		99
14) Trichlorofluoromethane	4.76	101	1841285	43.956	ng		100
15) 2-Propanol (Isopropanol)	4.85	45	57544	1.045	ng		99
16) Acrylonitrile	5.04	53	416	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	0.00	59	0	N.D. d			
19) Methylene Chloride	5.35	84	1892	0.098	ng		99
20) 3-Chloro-1-propene (Al...	5.46	41	565	N.D.			
21) Trichlorotrifluoroethane	5.58	151	923310	52.104	ng		94
22) Carbon Disulfide	0.00	76	0	N.D. d			
23) trans-1,2-Dichloroethene	6.14	61	298	N.D.			
24) 1,1-Dichloroethane	6.32	63	119	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D. d			
27) 2-Butanone (MEK)	6.67	72	5162	0.477	ng	#	81
28) cis-1,2-Dichloroethene	7.08	61	215	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D. d			
30) Ethyl Acetate	7.29	61	13156	1.992	ng		94
31) n-Hexane	7.30	57	2402	0.083	ng	#	97
32) Chloroform	7.36	83	6099	0.177	ng		95
34) Tetrahydrofuran (THF)	7.77	72	338	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	683	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.82	56	2397	No Calib			
41) Benzene	8.89	78	3376	N.D.			
42) Carbon Tetrachloride	9.07	117	304	N.D.			
43) Cyclohexane	9.22	84	2715	0.118	ng		91
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	9.86	63	2306	0.134	ng		97
46) Bromodichloromethane	10.09	83	1174	N.D.			
47) Trichloroethene	10.14	130	1759	0.085	ng		98
48) 1,4-Dioxane	10.13	88	479	N.D.			
49) 2,2,4-Trimethylpentane...	10.23	57	1025	N.D.			
50) Methyl Methacrylate	10.42	100	237	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212407.D Vial: 4
Acq On : 21 Jun 2024 13:38 Operator: SC
Sample : P2402249-042Dil (50mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 17:05:37 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

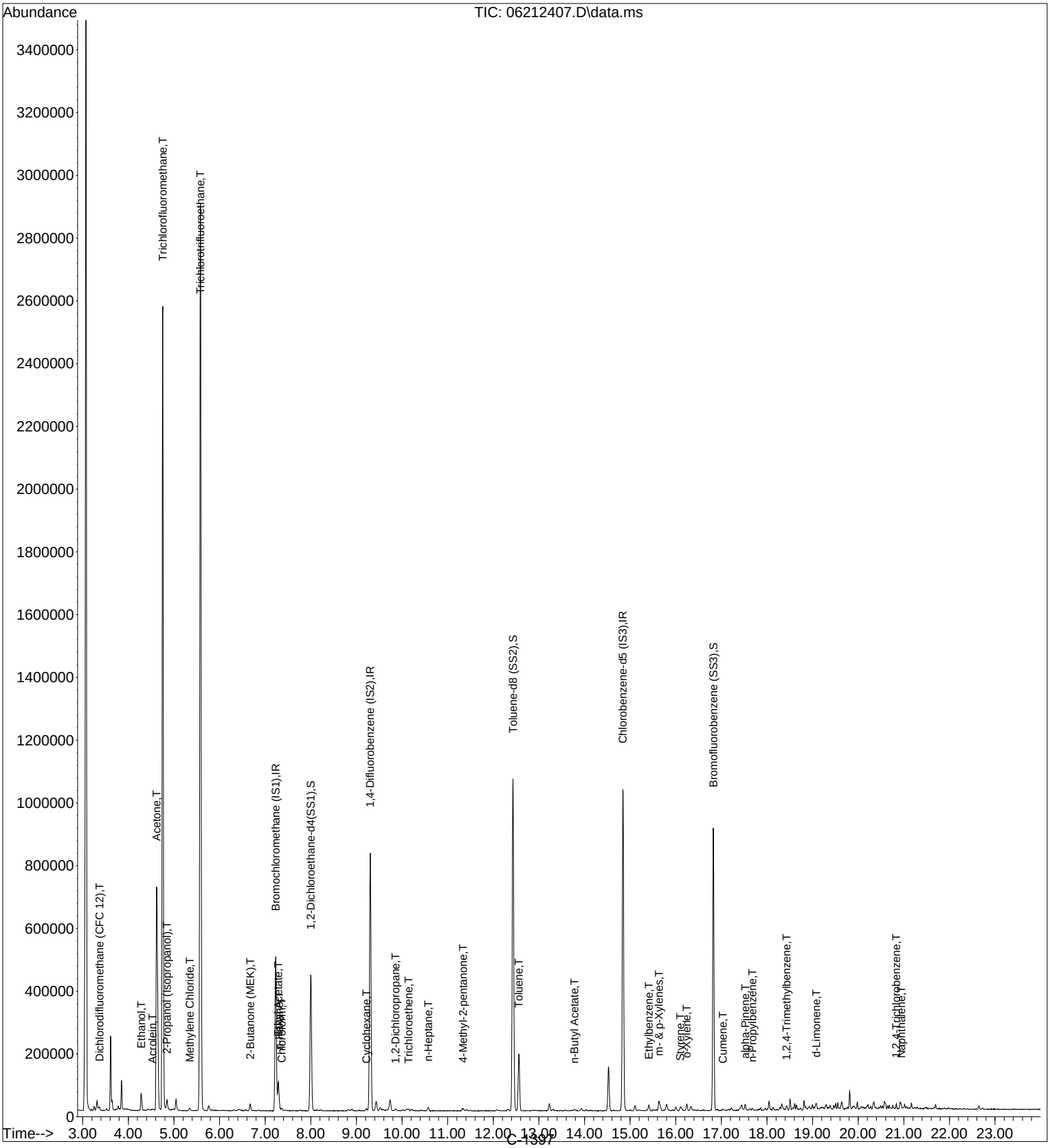
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	10.58	71	2262	0.150 ng	89
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	11.34	58	2670	0.170 ng	94
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
58) Toluene	12.56	91	158635	2.237 ng	100
59) 2-Hexanone	0.00	43	0	N.D. d	
60) Dibromochloromethane	13.07	129	617	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	13.78	43	5537	0.118 ng	92
63) n-Octane	13.92	57	693	N.D.	
64) Tetrachloroethene	14.04	166	749	N.D.	
65) Chlorobenzene	14.90	112	1738	N.D.	
66) Ethylbenzene	15.41	91	13317	0.164 ng	92
67) m- & p-Xylenes	15.63	91	28226	0.414 ng	99
68) Bromoform	15.67	173	777	N.D.	
69) Styrene	16.10	104	5380	0.117 ng	98
70) o-Xylene	16.24	91	15133	0.225 ng	98
71) n-Nonane	16.61	43	1245	N.D.	
72) 1,1,2,2-Tetrachloroethane	16.22	83	731	N.D.	
74) Cumene	17.03	105	4830	0.057 ng	95
75) alpha-Pinene	17.53	93	7104	0.182 ng	90
76) n-Propylbenzene	17.68	91	6171	0.061 ng	96
77) 3-Ethyltoluene	17.03	105	4830	No Calib	
78) 4-Ethyltoluene	17.86	105	3254	N.D.	
79) 1,3,5-Trimethylbenzene	17.96	105	1970	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.03	105	4830	No Calib	
82) 1,2,4-Trimethylbenzene	18.43	105	5034	0.068 ng	90
83) n-Decane	0.00	58	0	N.D.	
84) Benzyl Chloride	18.56	91	2777	N.D.	
85) 1,3-Dichlorobenzene	18.58	146	1969	N.D.	
86) 1,4-Dichlorobenzene	18.65	146	2060	N.D.	
87) sec-Butylbenzene	18.74	105	3029	N.D.	
88) 4-Isopropyltoluene (p-...	18.93	119	3210	N.D.	
89) 1,2,3-Trimethylbenzene	17.03	105	4830	No Calib	
90) 1,2-Dichlorobenzene	19.03	146	1494	N.D.	
91) d-Limonene	19.08	68	3162	0.126 ng	96
92) 1,2-Dibromo-3-Chloropr...	19.51	157	662	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	4077	0.109 ng	97
95) Naphthalene	20.94	128	7986	0.084 ng	97
96) n-Dodecane	0.00	58	0	N.D.	
97) Hexachlorobutadiene	21.30	225	1007	N.D.	
98) Cyclohexanone	15.41	55	2770	No Calib #	
99) tert-Butylbenzene	18.43	119	1965	N.D.	
100) n-Butylbenzene	0.00	91	0	N.D. d	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212407.D Vial: 4
Acq On : 21 Jun 2024 13:38 Operator: SC
Sample : P2402249-042Dil (50mL) Inst : MS09
Misc : S37-06062402

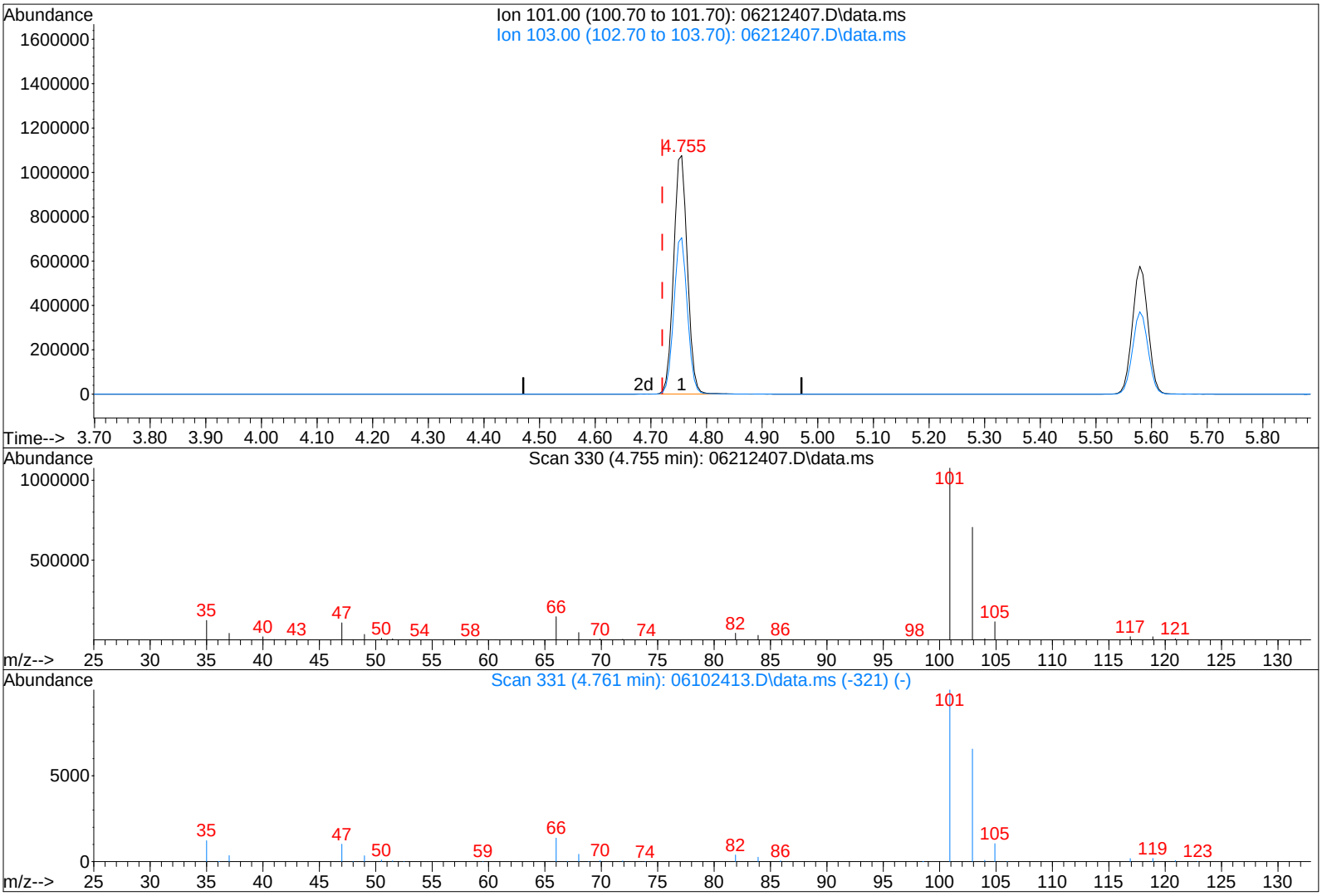
Quant Time: Jun 28 17:05:37 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\21\06212407.D Vial: 4
Acq On : 21 Jun 2024 13:38 Operator: SC
Sample : P2402249-042Dil (50mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 21 13:59:42 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06212407.D\data.ms

(14) Trichlorofluoromethane (T)

4.755min (+0.035) 43.96ng

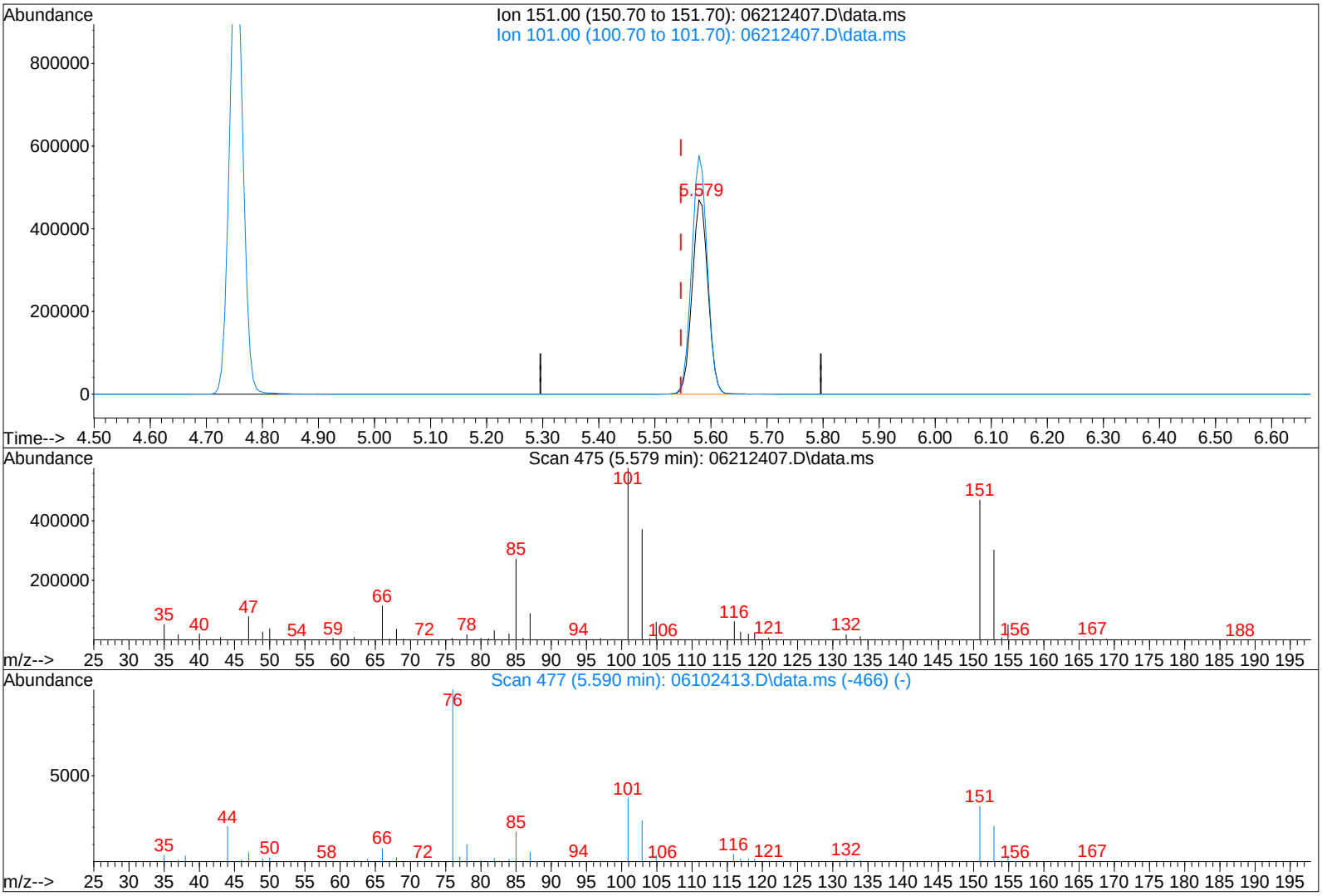
response 1841285

Ion	Exp%	Act%
101.00	100	100
103.00	64.90	64.85
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\21\06212407.D Vial: 4
Acq On : 21 Jun 2024 13:38 Operator: SC
Sample : P2402249-042Dil (50mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 21 13:59:42 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06212407.D\data.ms

(21) Trichlorotrifluoroethane (T)

5.579min (+0.033) 52.10ng

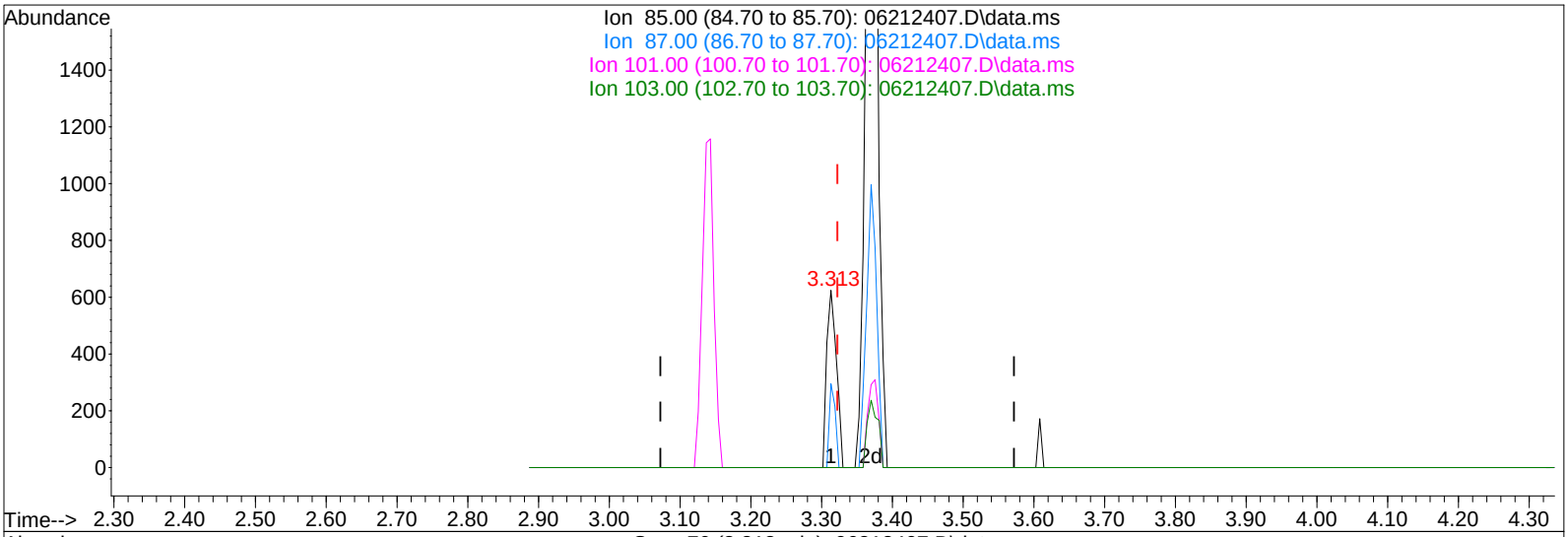
response 923310

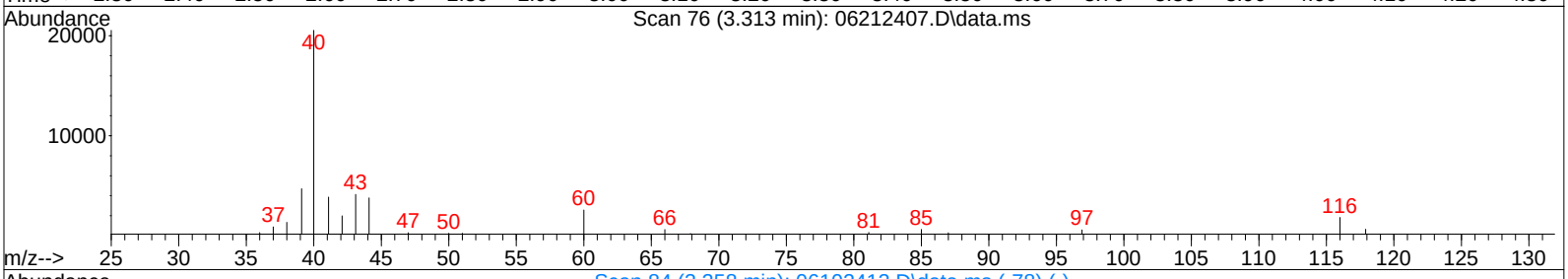
Ion	Exp%	Act%
151.00	100	100
101.00	115.00	121.44
0.00	0.00	0.00
0.00	0.00	0.00

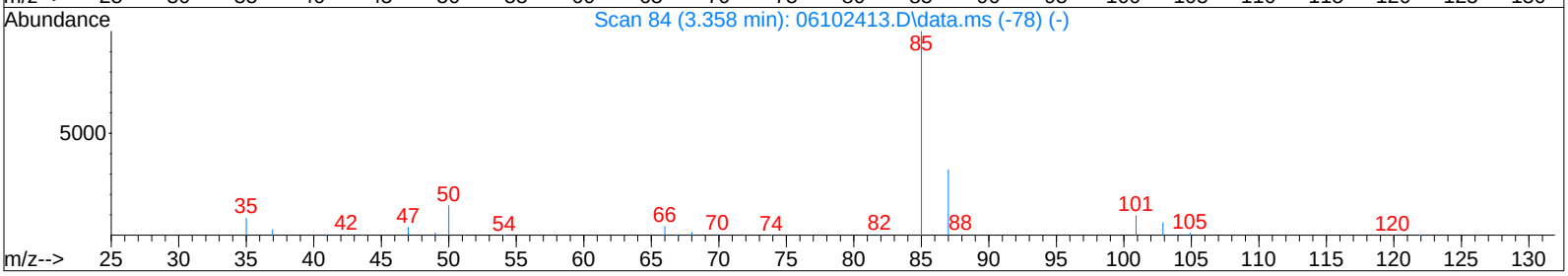
Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\21\06212407.D Vial: 4
Acq On : 21 Jun 2024 13:38 Operator: SC
Sample : P2402249-042Dil (50mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 17:04:12 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M







TIC: 06212407.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.313min (-0.009) 0.01ng

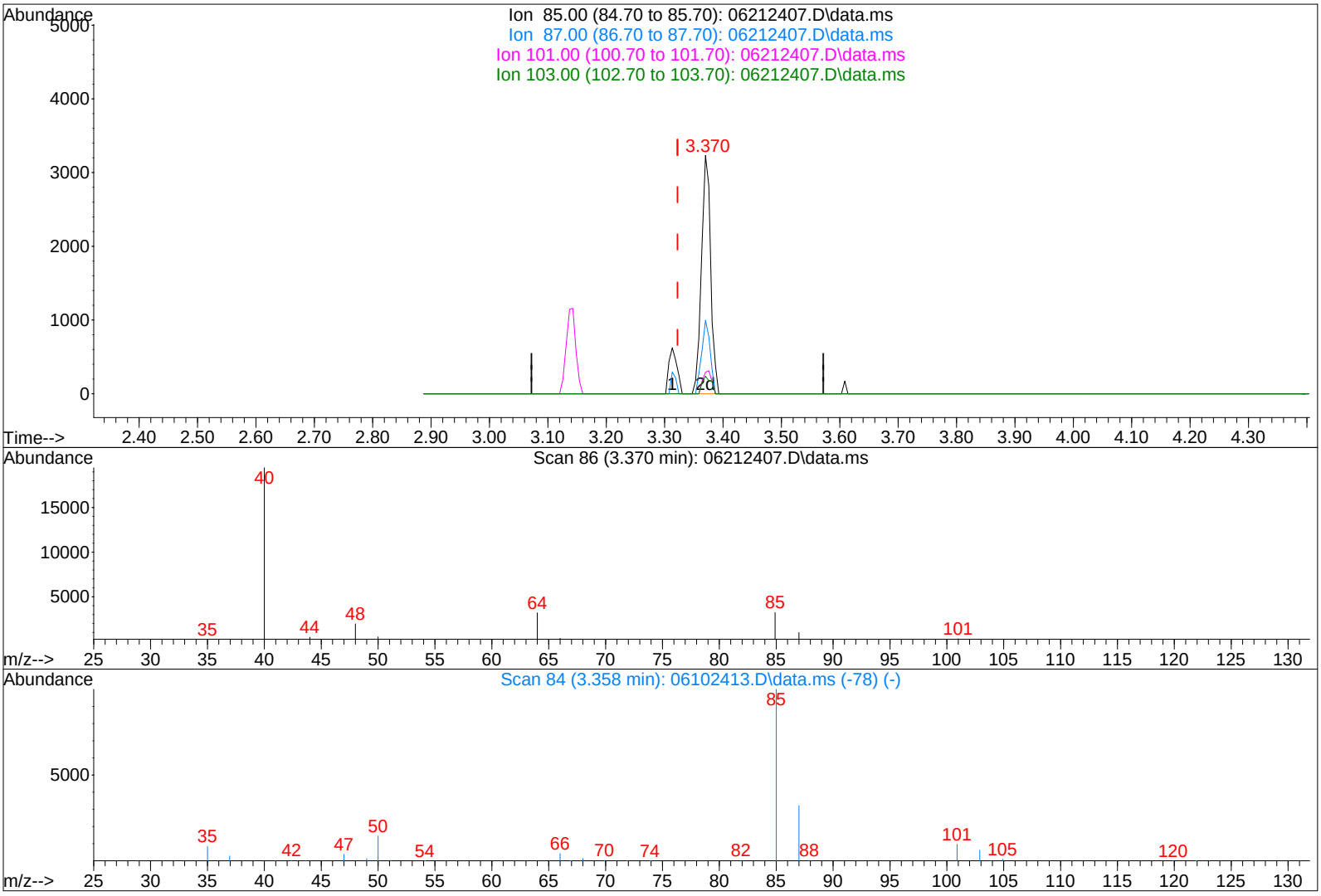
response 602

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	28.90
101.00	9.80	0.00
103.00	6.30	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\21\06212407.D Vial: 4
Acq On : 21 Jun 2024 13:38 Operator: SC
Sample : P2402249-042Dil (50mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 17:04:12 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06212407.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.370min (+0.048) 0.09ng m

response 3547

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	28.50
101.00	9.80	9.11
103.00	6.30	7.08

MJ 6/28/24

WP

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\20\
Data File : 06202414.D
Acq On : 20 Jun 2024 16:59
Operator : SC
Sample : P2402249-042 (100mL)
Misc : S37-06062402
ALS Vial : 4 Sample Multiplier: 1

MJ 6/28/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06202414.D\data.ms

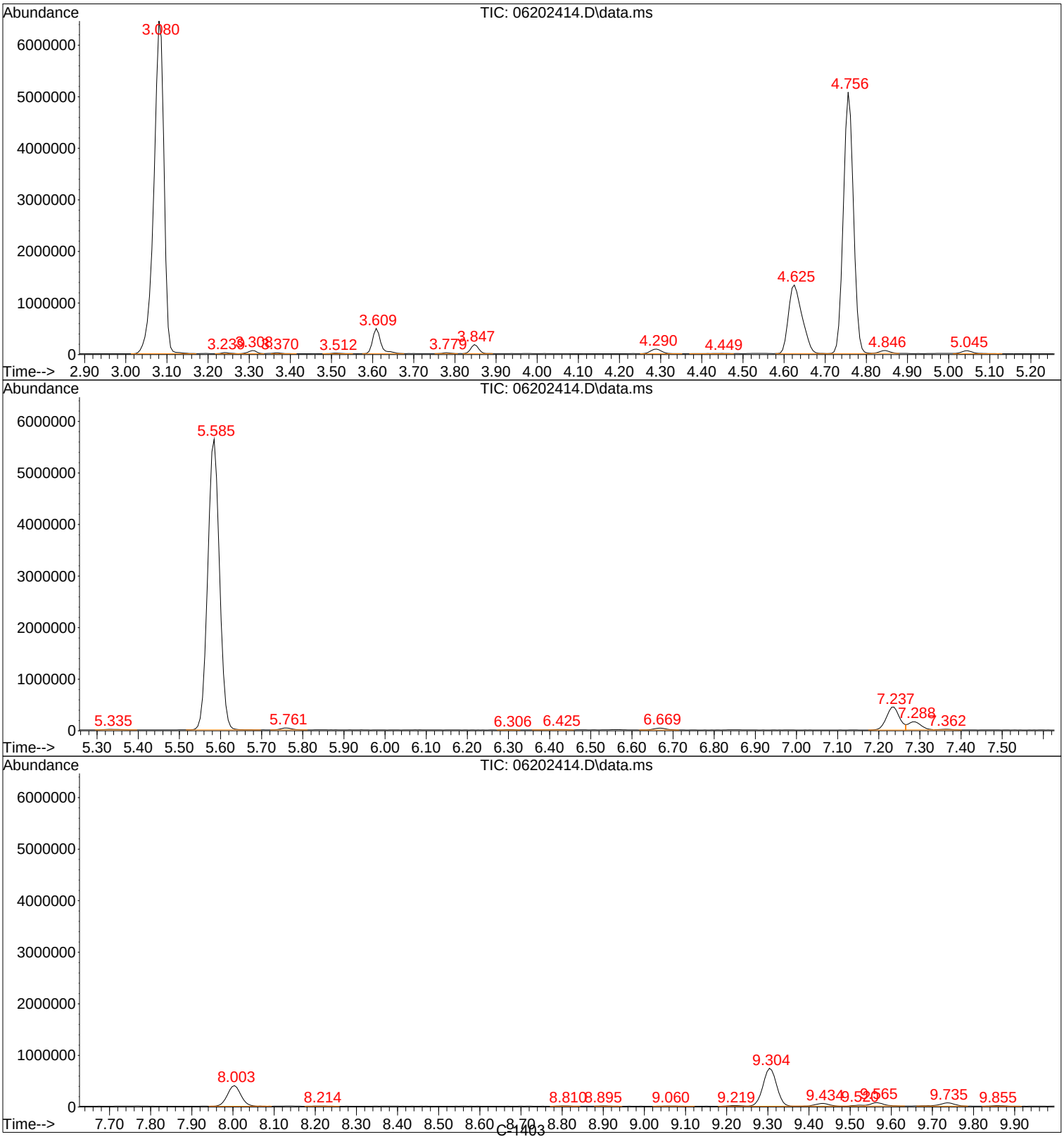
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.080	23	35	51	rBV	6451913	11049428	98.75%	27.471%
2	3.239	59	63	69	rBV2	21316	28693	0.26%	0.071%
3	3.308	69	75	80	rVV2	61907	88777	0.79%	0.221%
4	3.370	83	86	94	rVB3	16876	23322	0.21%	0.058%
5	3.512	105	111	118	rBV3	10938	20855	0.19%	0.052%
6	3.609	122	128	140	rVV	487915	680543	6.08%	1.692%
7	3.779	153	158	163	rBV2	16637	20865	0.19%	0.052%
8	3.847	165	170	178	rBV	174180	232674	2.08%	0.578%
9	4.290	241	248	259	rBV	88125	166118	1.48%	0.413%
10	4.449	262	276	281	rBV4	4624	16270	0.15%	0.040%
11	4.625	299	307	321	rVB	1328706	3060386	27.35%	7.609%
12	4.756	321	330	340	rBV	5069954	8683014	77.60%	21.587%
13	4.846	340	346	352	rVB	55128	98407	0.88%	0.245%
14	5.045	375	381	396	rVB2	57924	112727	1.01%	0.280%
15	5.335	425	432	443	rVB5	11513	31614	0.28%	0.079%
16	5.585	464	476	496	rVB	5637341	11189809	100.00%	27.820%
17	5.761	500	507	516	rBV	36754	71216	0.64%	0.177%
18	6.306	597	603	607	rBV2	6875	14889	0.13%	0.037%
19	6.425	612	624	630	rBV3	7868	23225	0.21%	0.058%
20	6.669	658	667	675	rBV	36708	75241	0.67%	0.187%
21	7.237	756	767	772	rBV	444280	997577	8.92%	2.480%
22	7.288	772	776	784	rVV	159032	339378	3.03%	0.844%
23	7.362	784	789	796	rVB2	14541	29002	0.26%	0.072%
24	8.003	891	902	918	rVB	398928	911360	8.14%	2.266%
25	8.214	932	939	947	rVB5	4292	10402	0.09%	0.026%
26	8.810	1037	1044	1050	rBV4	7448	17827	0.16%	0.044%
27	8.895	1056	1059	1068	rVB3	6224	11598	0.10%	0.029%
28	9.060	1081	1088	1099	rVB5	4261	11231	0.10%	0.028%
29	9.219	1109	1116	1122	rBV3	12898	31878	0.28%	0.079%
30	9.304	1122	1131	1144	rVB	734965	1685513	15.06%	4.190%
31	9.434	1144	1154	1163	rBV	52312	121607	1.09%	0.302%
32	9.520	1163	1169	1172	rBV3	17739	35254	0.32%	0.088%
33	9.565	1172	1177	1189	rVB	65893	142183	1.27%	0.353%
34	9.735	1194	1207	1216	rVB2	62772	165959	1.48%	0.413%
35	9.855	1222	1228	1239	rVB5	10192	23597	0.21%	0.059%

Sum of corrected areas: 40222439

Data Path : I:\MS09\DATA\2024 06\20\
Data File : 06202414.D
Acq On : 20 Jun 2024 16:59
Operator : SC
Sample : P2402249-042 (100mL)
Misc : S37-06062402
ALS Vial : 4 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\20\\
Data File : 06202414.D
Acq On : 20 Jun 2024 16:599
Operator : SCC
Sample : P2402249-042 (100mL))
Misc : S37-060624022
ALS Vial : 4 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT/LSC Reviewed)

MJ 6/29/24

Data File : I:\MS09\DATA\2024 06\20\06202415.D Vial: 5
Acq On : 20 Jun 2024 17:31 Operator: SC
Sample : P2402249-043 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:01:35 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	156799	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	685496	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	157885	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	346302	12.426	ng		0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.44%				
57) Toluene-d8 (SS2)	12.43	98	767236	12.699	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.60%				
73) Bromofluorobenzene (SS3)	16.82	174	270991	12.421	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.36%				
Target Compounds							Qvalue
2) Propene	0.00	42	0	N.D. d			
3) Dichlorodifluoromethan...	3.38	85	5360m	0.145	ng		
4) Chloromethane	3.51	50	5783	0.229	ng		98
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	4.02	94	583	N.D.			
9) Chloroethane	4.15	64	254	N.D.			
10) Ethanol	4.39	45	108	N.D.			
11) Acetonitrile	0.00	41	0	N.D. d			
12) Acrolein	4.53	56	2158	0.191	ng		96
13) Acetone	4.63	58	44439	3.648	ng	#	71
14) Trichlorofluoromethane	4.75	101	3992669	106.959	ng		100
15) 2-Propanol (Isopropanol)	0.00	45	0	N.D. d			
16) Acrylonitrile	4.99	53	929	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.33	59	1067	N.D.			
19) Methylene Chloride	5.34	84	1154	0.067	ng		99
20) 3-Chloro-1-propene (Al...	5.45	41	199	N.D.			
21) Trichlorotrifluoroethane	5.58	151	1991730	126.128	ng		94
22) Carbon Disulfide	0.00	76	0	N.D. d			
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	6.42	86	2794	0.994	ng	#	22
27) 2-Butanone (MEK)	6.67	72	4231	0.439	ng	#	79
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D. d			
30) Ethyl Acetate	7.29	61	2929	0.498	ng		95
31) n-Hexane	7.31	57	439	N.D.			
32) Chloroform	7.35	83	9947	0.324	ng		97
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	0.00	62	0	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	9.55	61	776	No Calib		#	
40) 1-Butanol	8.80	56	4450	No Calib			
41) Benzene	8.90	78	3887	0.061	ng		97
42) Carbon Tetrachloride	0.00	117	0	N.D.			
43) Cyclohexane	0.00	84	0	N.D.			
44) tert-Amyl Methyl Ether	9.54	73	449	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.07	83	1149	N.D.			
47) Trichloroethene	10.15	130	2488	0.135	ng		100
48) 1,4-Dioxane	10.13	88	1110	0.095	ng		97
49) 2,2,4-Trimethylpentane...	10.24	57	2431	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

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QLast Update : Mon Jun 17 15:00:37 2024
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DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	0.00	71	0	N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
58) Toluene	12.56	91	5291	0.084 ng	94
59) 2-Hexanone	0.00	43	0	N.D. d	
60) Dibromochloromethane	13.07	129	437	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	0.00	43	0	N.D.	
63) n-Octane	13.91	57	308	N.D.	
64) Tetrachloroethene	14.03	166	901	N.D.	
65) Chlorobenzene	14.89	112	617	N.D.	
66) Ethylbenzene	15.41	91	1362	N.D.	
67) m- & p-Xylenes	15.63	91	6995	0.115 ng	97
68) Bromoform	15.67	173	678	N.D.	
69) Styrene	16.11	104	213	N.D.	
70) o-Xylene	16.24	91	2892	N.D.	
71) n-Nonane	16.61	43	3190	0.092 ng	92
72) 1,1,2,2-Tetrachloroethane	16.21	83	474	N.D.	
74) Cumene	17.03	105	849	N.D.	
75) alpha-Pinene	0.00	93	0	N.D.	
76) n-Propylbenzene	17.68	91	1624	N.D.	
77) 3-Ethyltoluene	17.03	105	849	No Calib #	
78) 4-Ethyltoluene	17.86	105	888	N.D.	
79) 1,3,5-Trimethylbenzene	17.95	105	961	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.03	105	849	No Calib #	
82) 1,2,4-Trimethylbenzene	18.43	105	1363	N.D.	
83) n-Decane	17.09	58	123	No Calib #	
84) Benzyl Chloride	18.57	91	692	N.D.	
85) 1,3-Dichlorobenzene	18.58	146	607	N.D.	
86) 1,4-Dichlorobenzene	18.66	146	562	N.D.	
87) sec-Butylbenzene	18.74	105	1159	N.D.	
88) 4-Isopropyltoluene (p-...	18.92	119	1234	N.D.	
89) 1,2,3-Trimethylbenzene	17.03	105	849	No Calib #	
90) 1,2-Dichlorobenzene	19.03	146	536	N.D.	
91) d-Limonene	0.00	68	0	N.D.	
92) 1,2-Dibromo-3-Chloropr...	19.51	157	126	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	932	N.D.	
95) Naphthalene	20.94	128	2019	N.D.	
96) n-Dodecane	0.00	58	0	N.D.	
97) Hexachlorobutadiene	21.30	225	783	N.D.	
98) Cyclohexanone	15.50	55	123	No Calib #	
99) tert-Butylbenzene	18.43	119	1064	N.D.	
100) n-Butylbenzene	19.38	91	1079	N.D.	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

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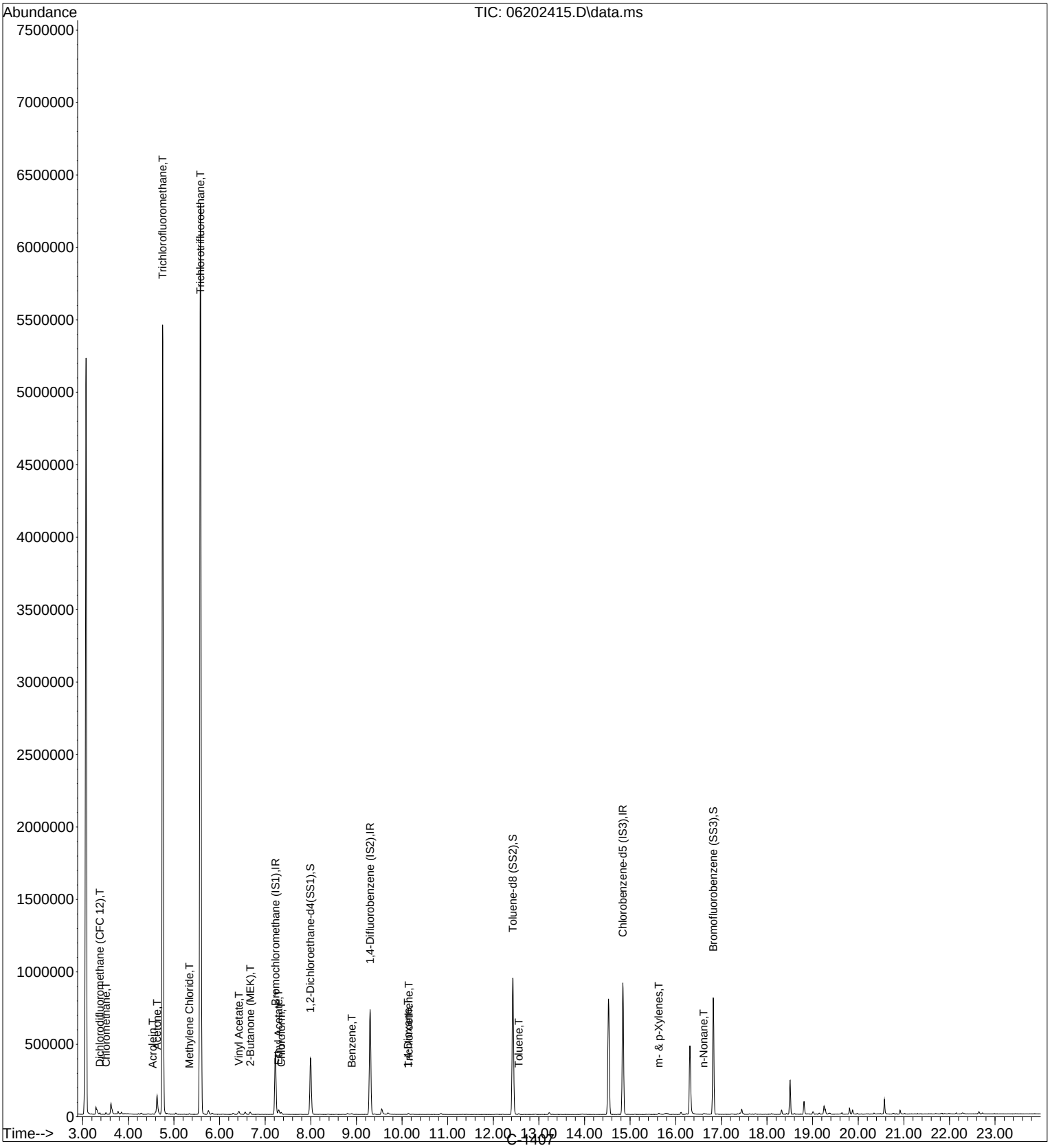
DataAcq Meth:TO15.M



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33) 1,2-Dichloroethane-d4(...	7.99	65	346302	12.426	ng		0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.44%				
57) Toluene-d8 (SS2)	12.43	98	767236	12.699	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.60%				
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Target Compounds							Qvalue
3) Dichlorodifluoromethan...	3.38	85	5360m	0.145	ng		
4) Chloromethane	3.51	50	5783	0.229	ng		98
12) Acrolein	4.53	56	2158	0.191	ng		96
13) Acetone	4.63	58	44439	3.648	ng	#	71
14) Trichlorofluoromethane	4.75	101	3992669	106.959	ng		100
19) Methylene Chloride	5.34	84	1154	0.067	ng		99
21) Trichlorotrifluoroethane	5.58	151	1991730	126.128	ng		94
26) Vinyl Acetate	6.42	86	2794	0.994	ng	#	22
27) 2-Butanone (MEK)	6.67	72	4231	0.439	ng	#	79
30) Ethyl Acetate	7.29	61	2929	0.498	ng		95
32) Chloroform	7.35	83	9947	0.324	ng		97
41) Benzene	8.90	78	3887	0.061	ng		97
47) Trichloroethene	10.15	130	2488	0.135	ng		100
48) 1,4-Dioxane	10.13	88	1110	0.095	ng		97
58) Toluene	12.56	91	5291	0.084	ng		94
67) m- & p-Xylenes	15.63	91	6995	0.115	ng		97
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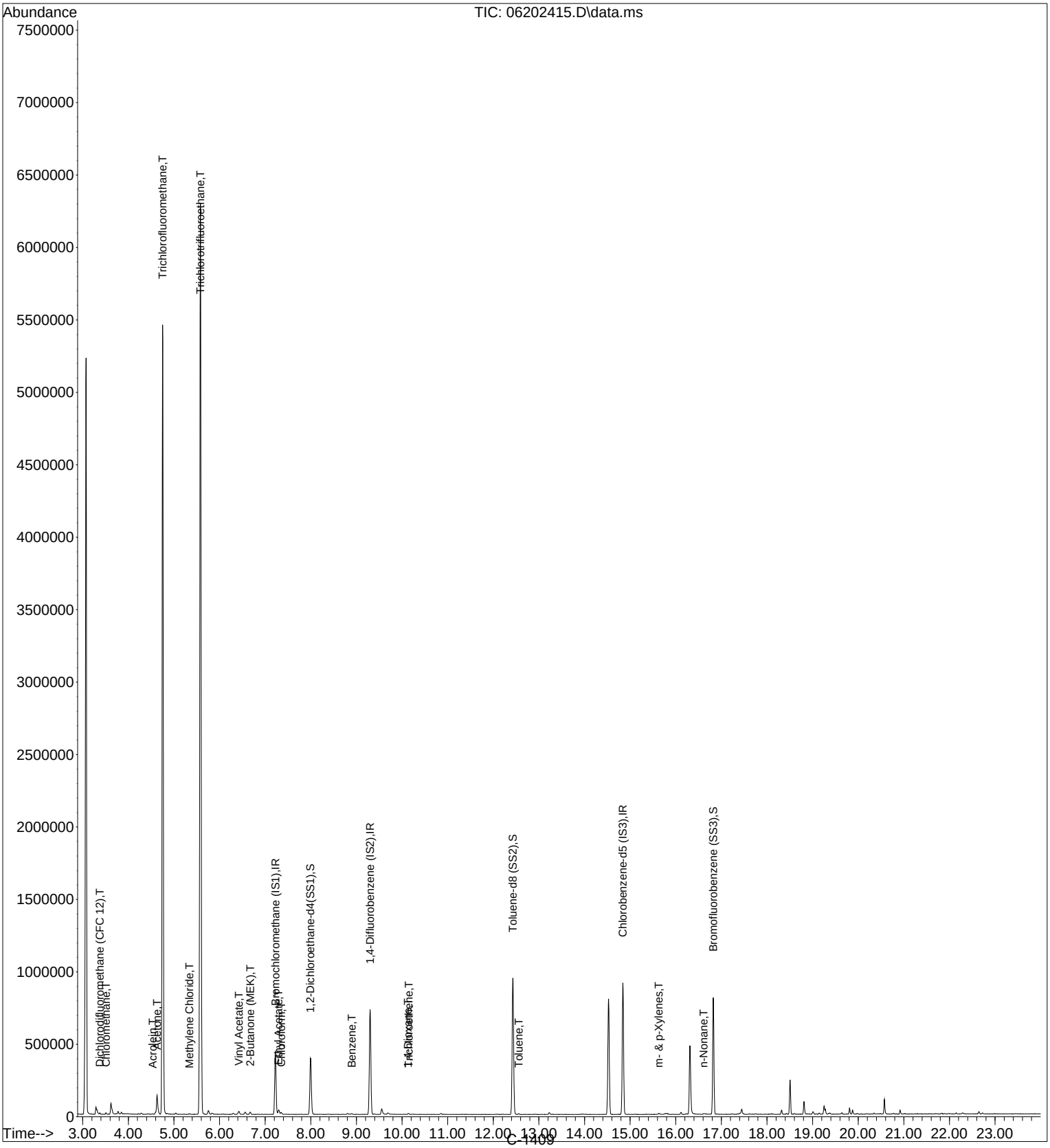
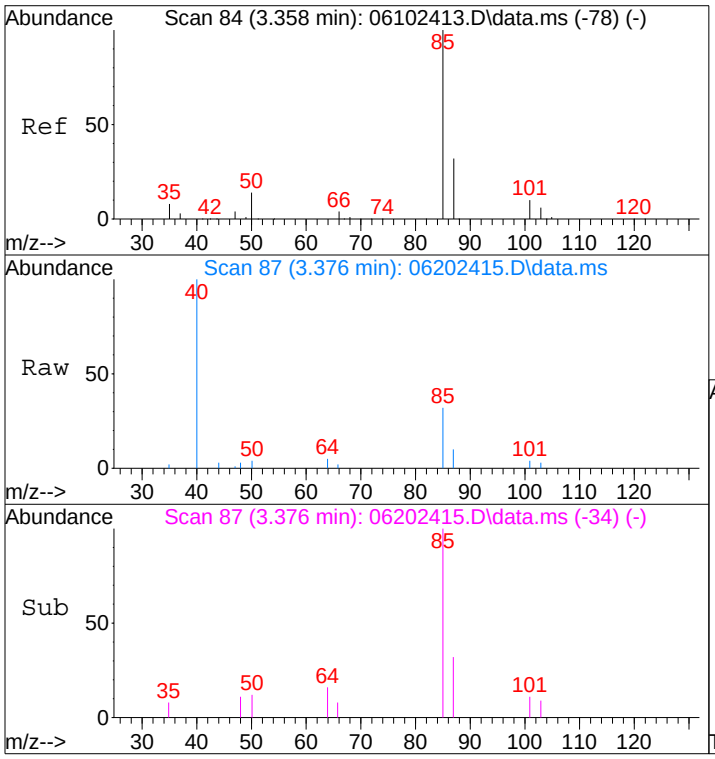
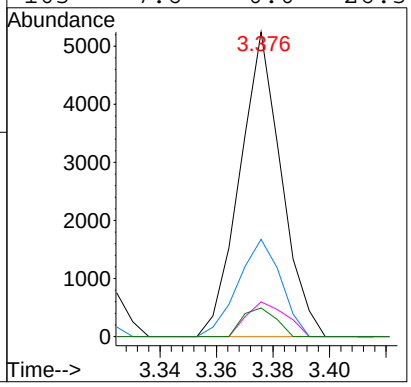


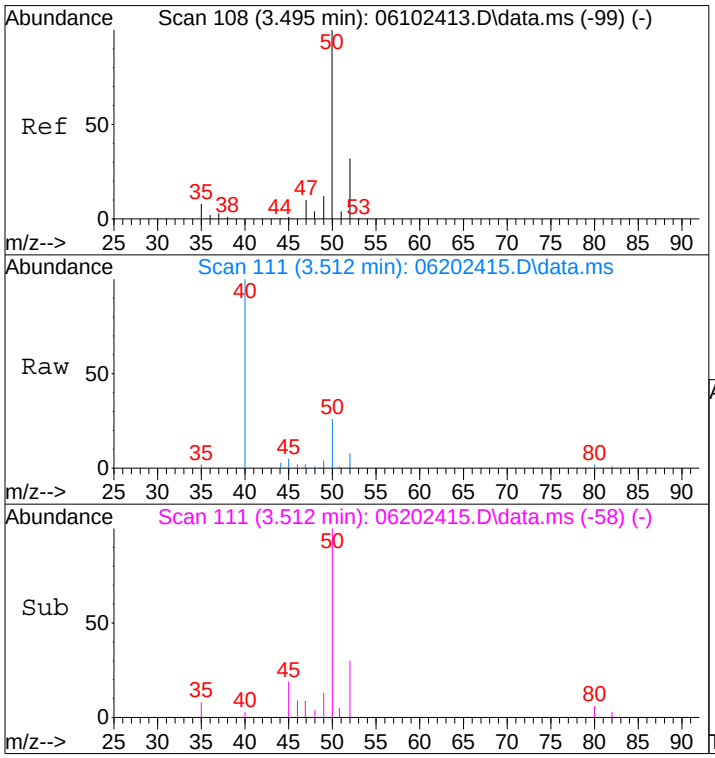


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.15 ng m
RT: 3.38 min Scan# 87
Delta R.T. 0.054 min
Lab File: 06202415.D
Acq: 20 Jun 2024 17:31

Tgt Ion: 85 Resp: 5360

Ion	Ratio	Lower	Upper
85	100		
87	32.9	12.2	52.2
101	10.8	0.0	29.8
103	7.6	0.0	26.3

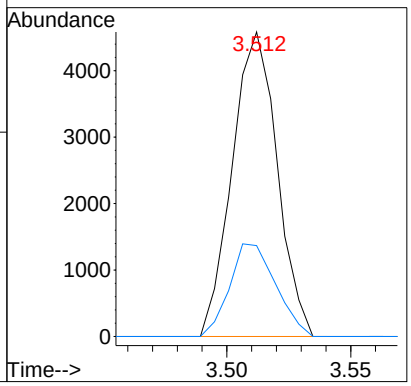


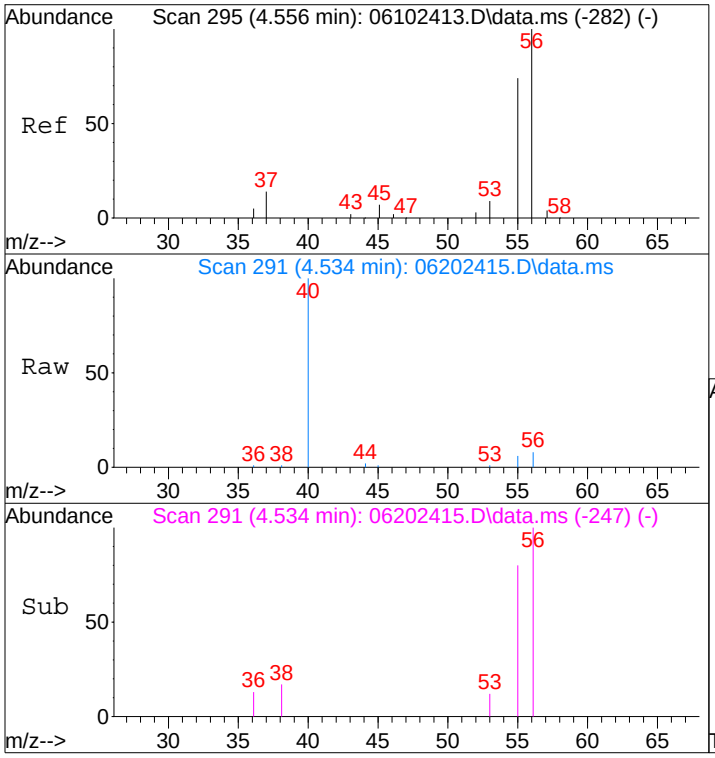


#4
Chloromethane
Concen: 0.23 ng
RT: 3.51 min Scan# 111
Delta R.T. 0.050 min
Lab File: 06202415.D
Acq: 20 Jun 2024 17:31

Tgt Ion: 50 Resp: 5783

Ion	Ratio	Lower	Upper
50	100		
52	31.3	12.4	52.4

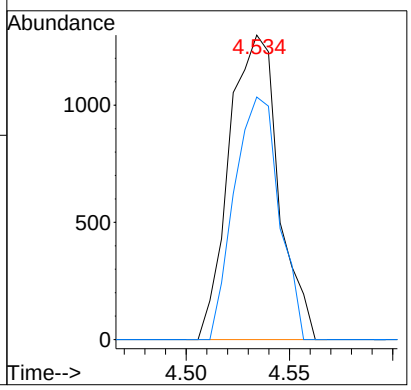


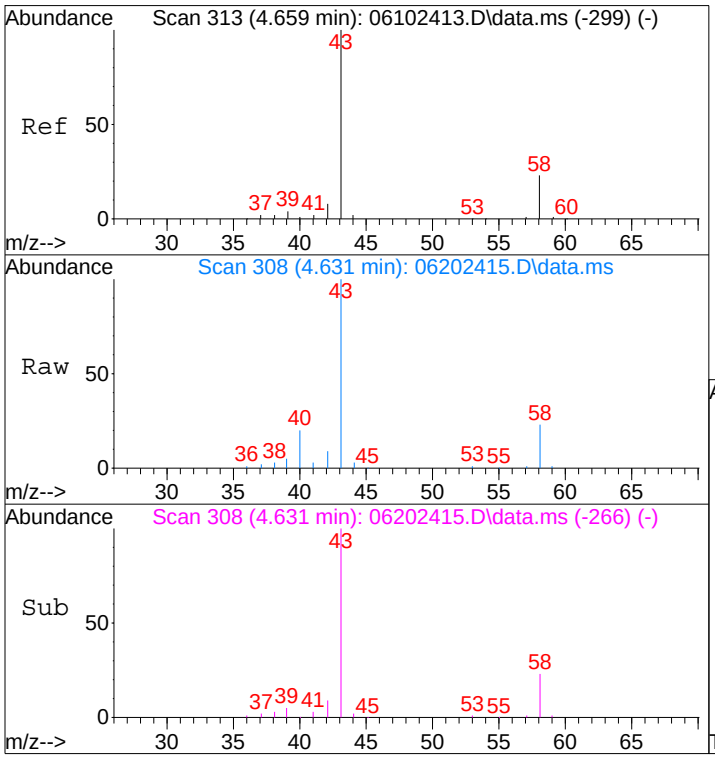


#12
Acrolein
Concen: 0.19 ng
RT: 4.53 min Scan# 291
Delta R.T. -0.001 min
Lab File: 06202415.D
Acq: 20 Jun 2024 17:31

Tgt Ion: 56 Resp: 2158

Ion	Ratio	Lower	Upper
56	100		
55	72.4	55.5	95.5

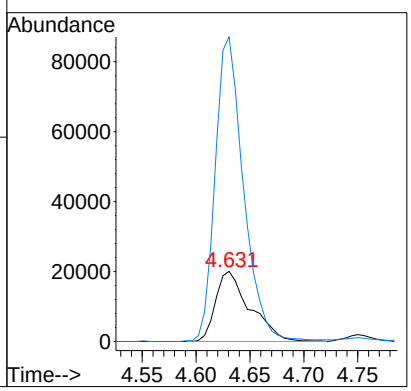


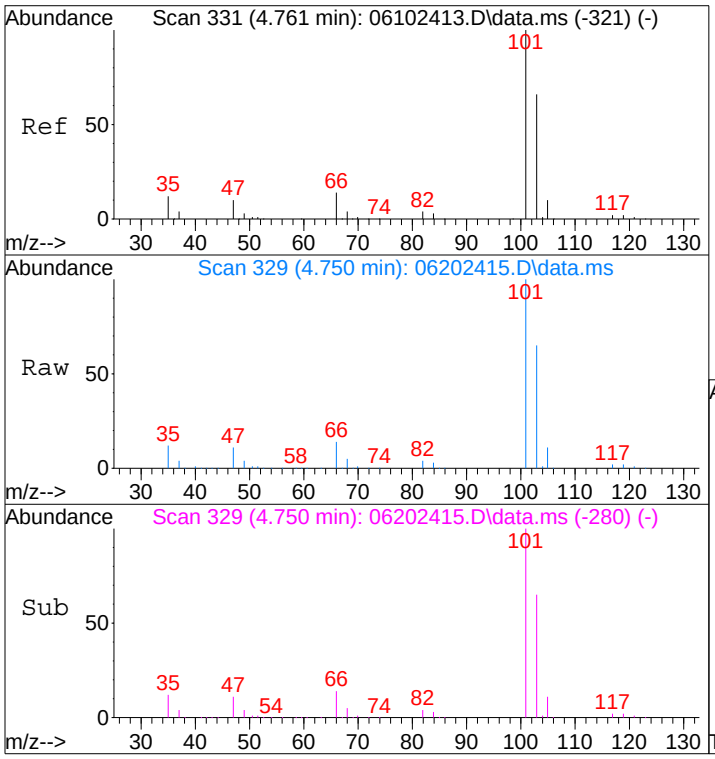


#13
Acetone
Concen: 3.65 ng
RT: 4.63 min Scan# 308
Delta R.T. -0.011 min
Lab File: 06202415.D
Acq: 20 Jun 2024 17:31

Tgt Ion: 58 Resp: 44439

Ion	Ratio	Lower	Upper
58	100		
43	359.3	400.7	460.7#

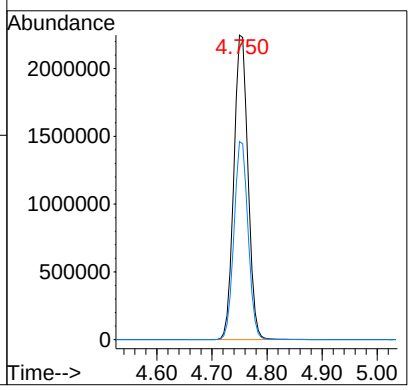


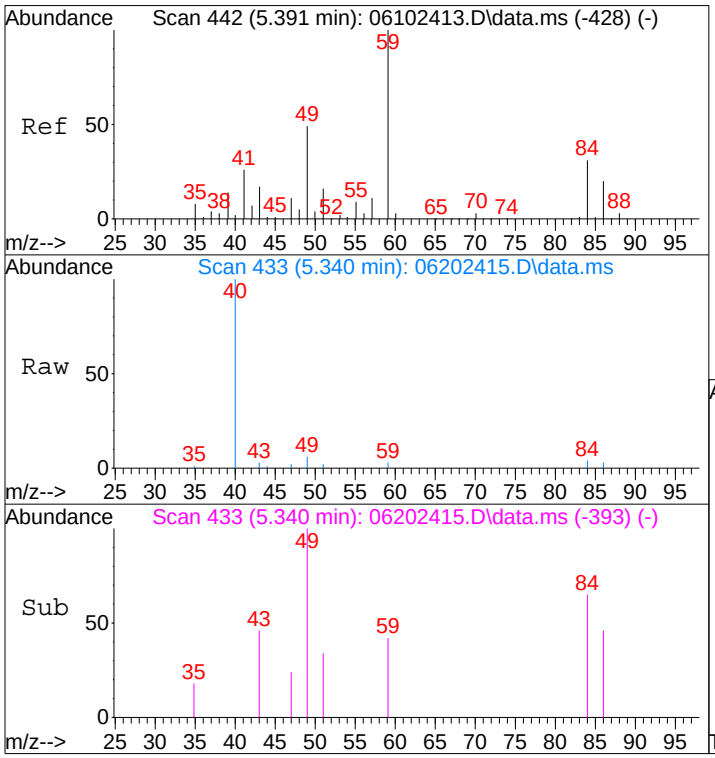


#14
Trichlorofluoromethane
Concen: 106.96 ng
RT: 4.75 min Scan# 329
Delta R.T. 0.029 min
Lab File: 06202415.D
Acq: 20 Jun 2024 17:31

Tgt Ion:101 Resp: 3992669

Ion	Ratio	Lower	Upper
101	100		
103	64.7	44.9	84.9

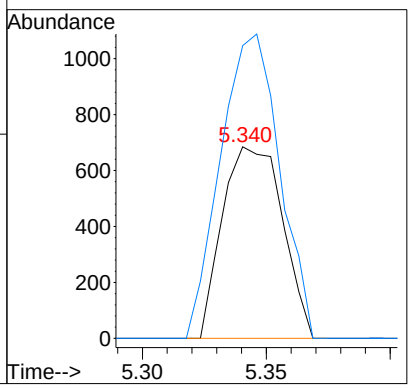


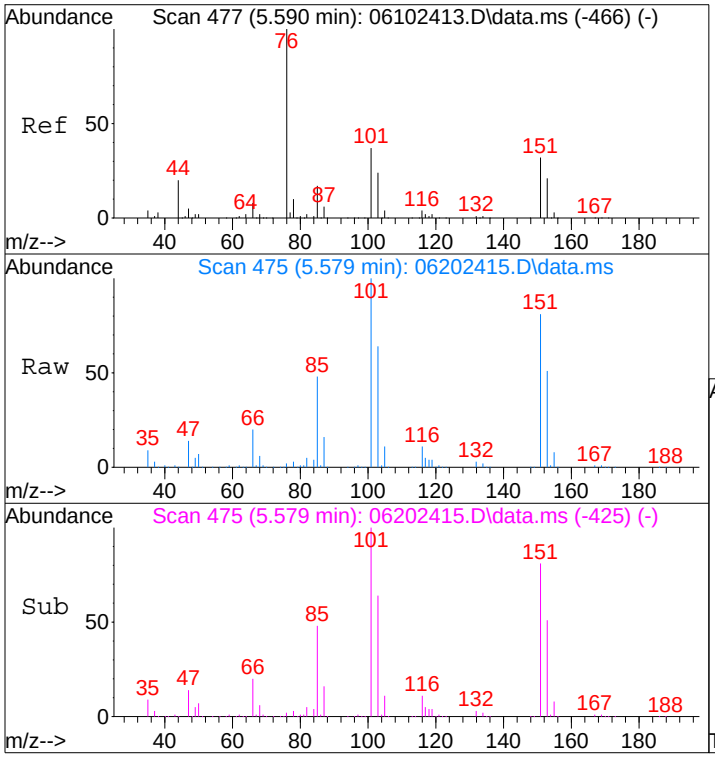


#19
Methylene Chloride
Concen: 0.07 ng
RT: 5.34 min Scan# 433
Delta R.T. -0.020 min
Lab File: 06202415.D
Acq: 20 Jun 2024 17:31

Tgt Ion: 84 Resp: 1154

Ion	Ratio	Lower	Upper
84	100		
49	156.5	132.9	182.9

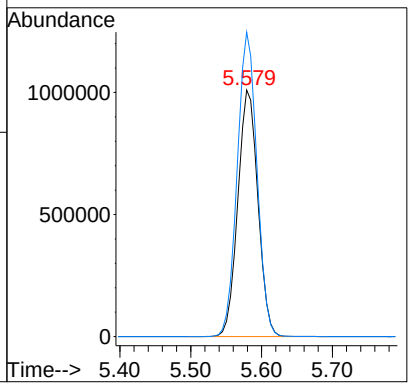


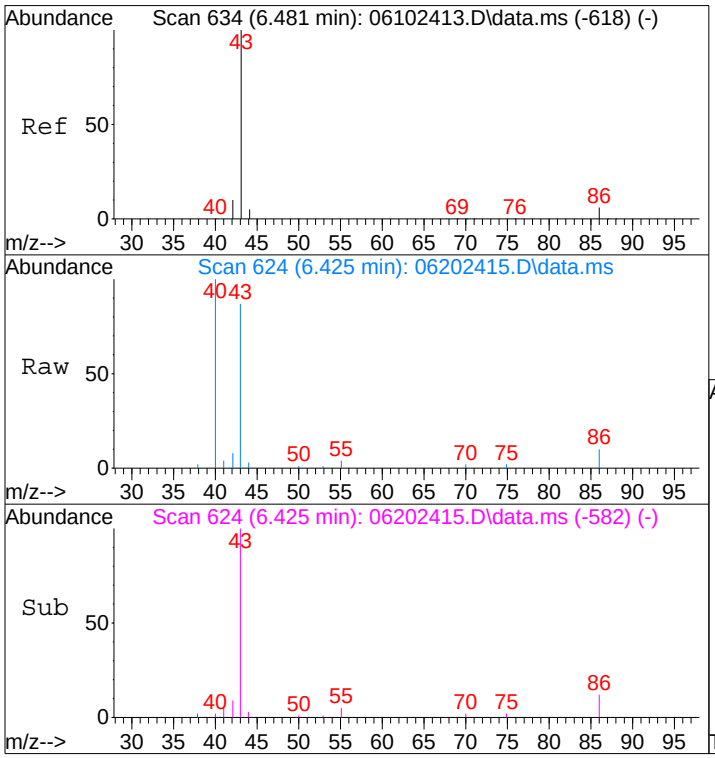


#21
Trichlorotrifluoroethane
Concen: 126.13 ng
RT: 5.58 min Scan# 475
Delta R.T. 0.033 min
Lab File: 06202415.D
Acq: 20 Jun 2024 17:31

Tgt Ion:151 Resp: 1991730

Ion	Ratio	Lower	Upper
151	100		
101	121.2	95.0	135.0

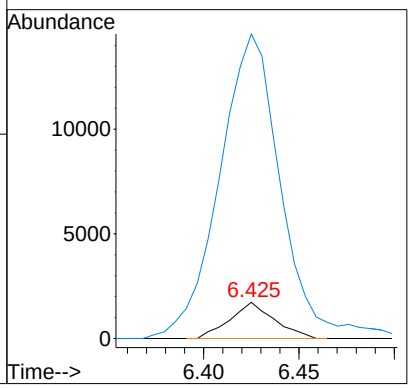


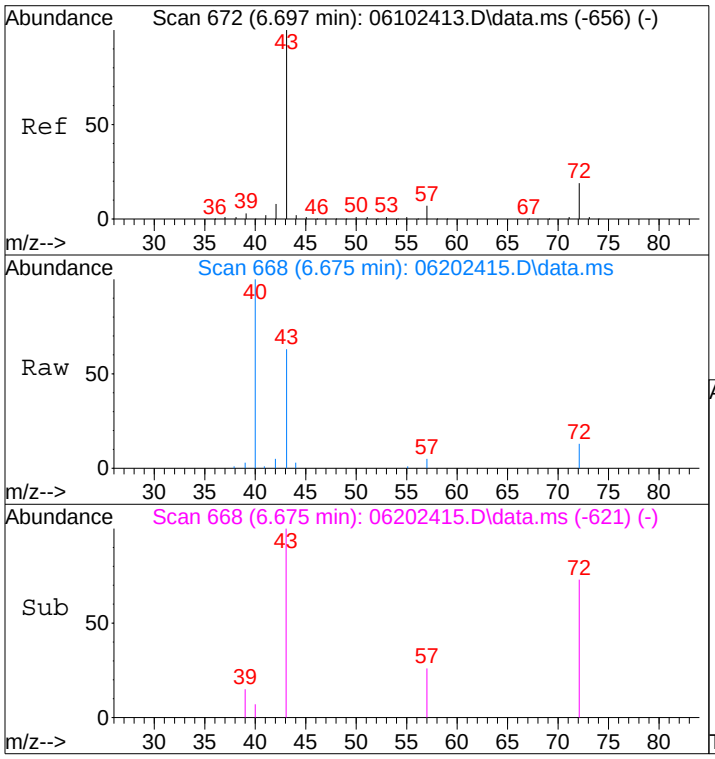


#26
Vinyl Acetate
Concen: 0.99 ng
RT: 6.42 min Scan# 624
Delta R.T. -0.014 min
Lab File: 06202415.D
Acq: 20 Jun 2024 17:31

Tgt Ion: 86 Resp: 2794

Ion	Ratio	Lower	Upper
86	100		
43	1182.6	1668.9	1708.9#

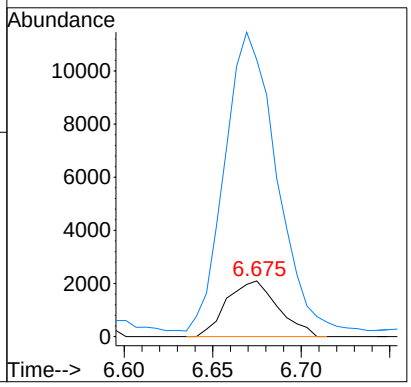


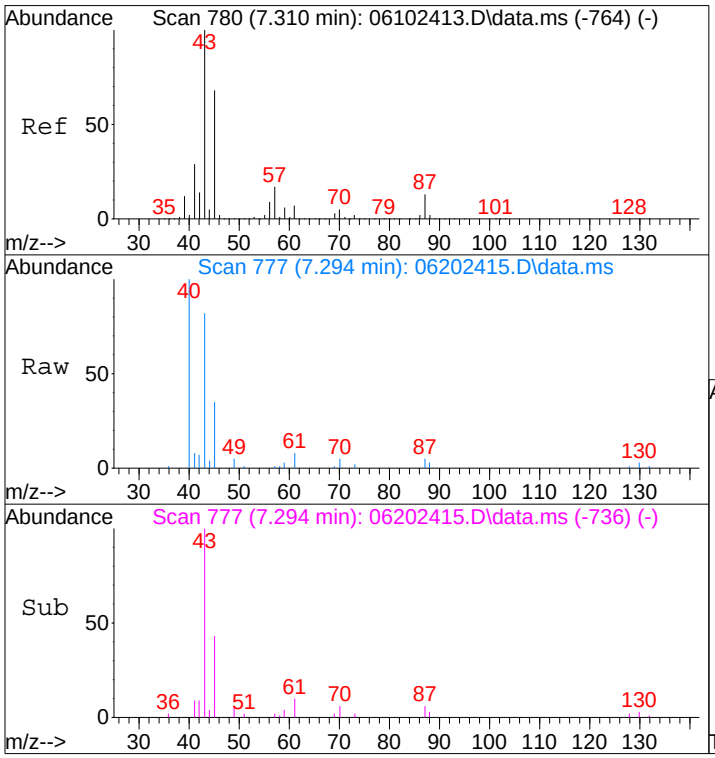


#27
2-Butanone (MEK)
Concen: 0.44 ng
RT: 6.67 min Scan# 668
Delta R.T. 0.016 min
Lab File: 06202415.D
Acq: 20 Jun 2024 17:31

Tgt Ion: 72 Resp: 4231

Ion	Ratio	Lower	Upper
72	100		
43	586.6	506.8	546.8#

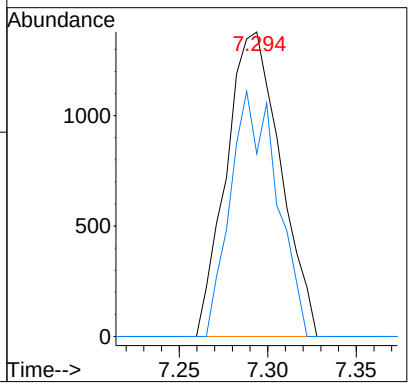


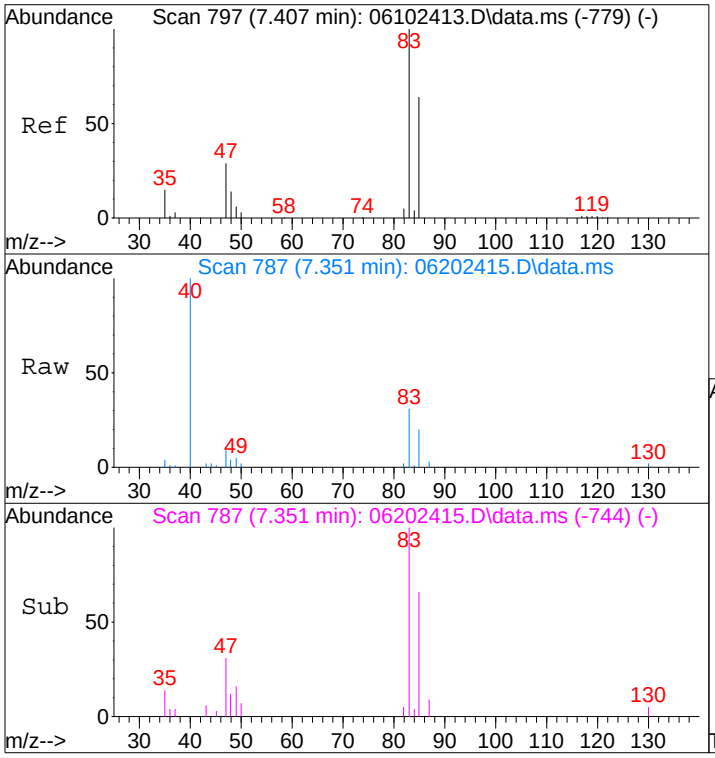


#30
Ethyl Acetate
Concen: 0.50 ng
RT: 7.29 min Scan# 777
Delta R.T. 0.034 min
Lab File: 06202415.D
Acq: 20 Jun 2024 17:31

Tgt Ion: 61 Resp: 2929

Ion	Ratio	Lower	Upper
61	100		
70	69.1	53.5	93.5

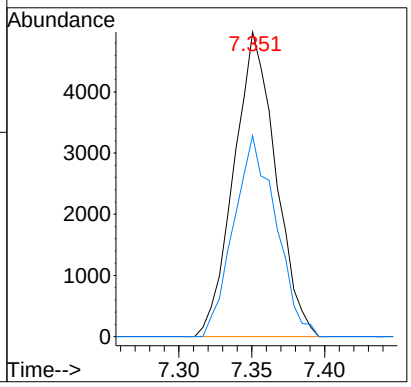


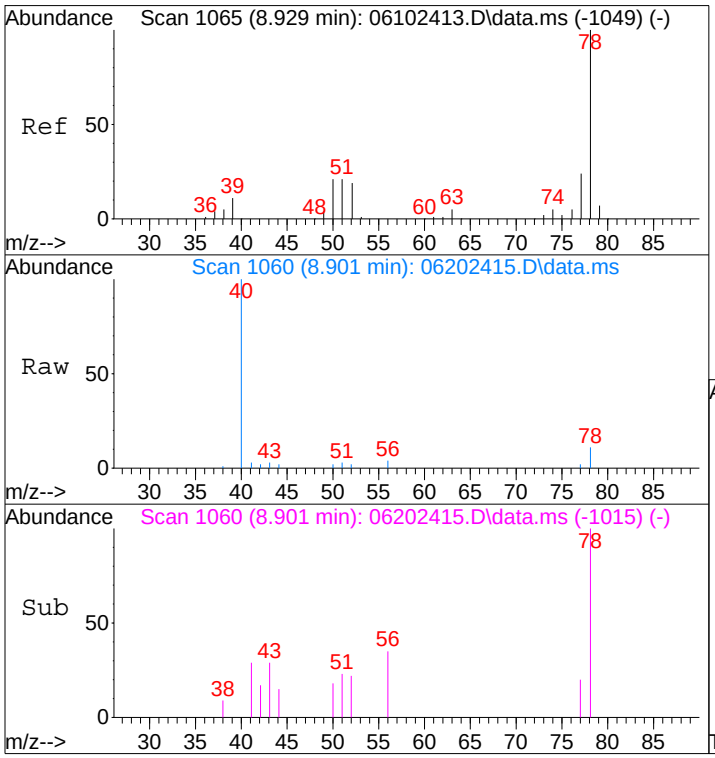


#32
Chloroform
Concen: 0.32 ng
RT: 7.35 min Scan# 787
Delta R.T. -0.004 min
Lab File: 06202415.D
Acq: 20 Jun 2024 17:31

Tgt Ion: 83 Resp: 9947

Ion	Ratio	Lower	Upper
83	100		
85	66.6	44.4	84.4

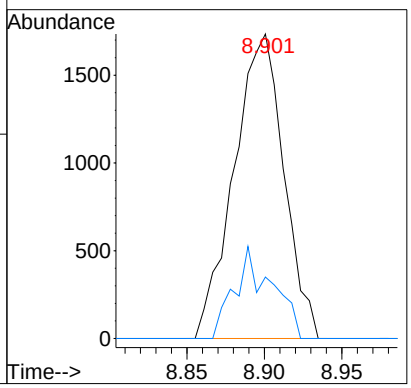


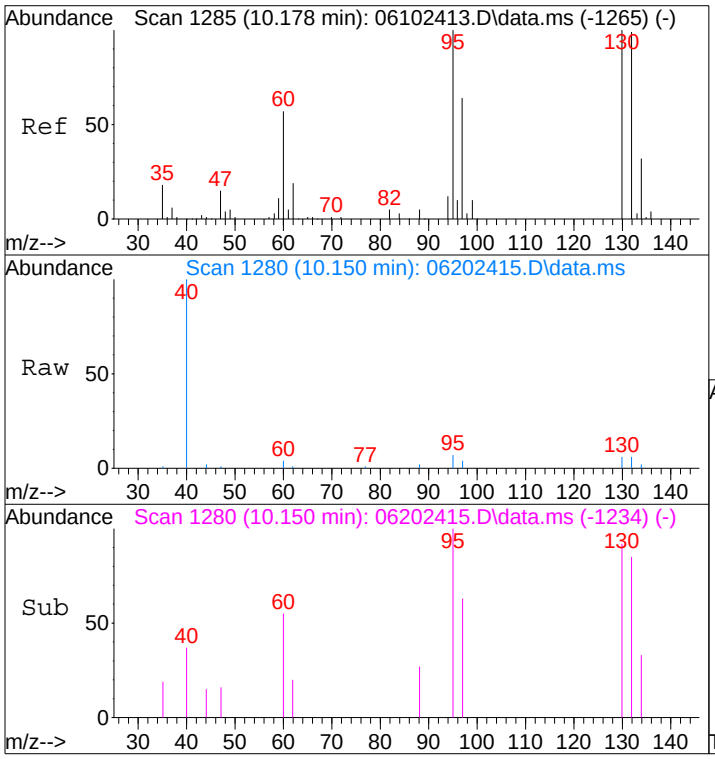


#41
Benzene
Concen: 0.06 ng
RT: 8.90 min Scan# 1060
Delta R.T. 0.003 min
Lab File: 06202415.D
Acq: 20 Jun 2024 17:31

Tgt Ion: 78 Resp: 3887

Ion	Ratio	Lower	Upper
78	100		
77	22.7	4.0	44.0

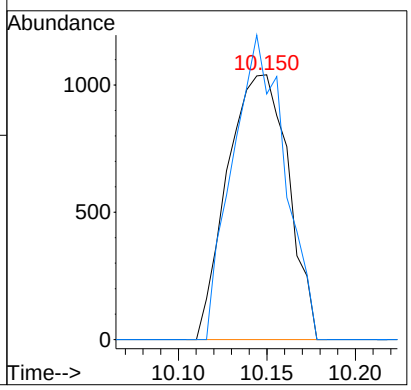


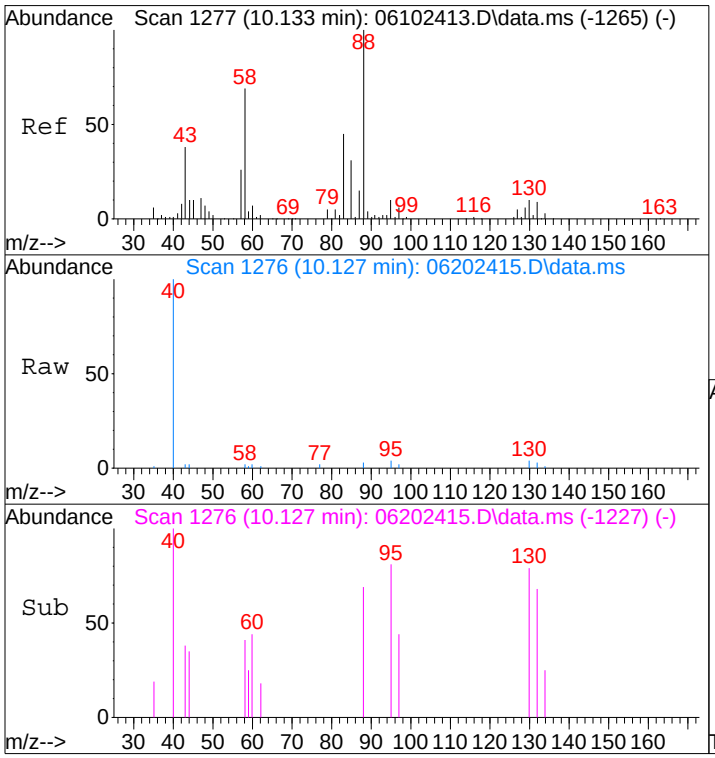


#47
Trichloroethene
Concen: 0.13 ng
RT: 10.15 min Scan# 1280
Delta R.T. 0.010 min
Lab File: 06202415.D
Acq: 20 Jun 2024 17:31

Tgt Ion:130 Resp: 2488

Ion	Ratio	Lower	Upper
130	100		
132	98.2	77.9	117.9

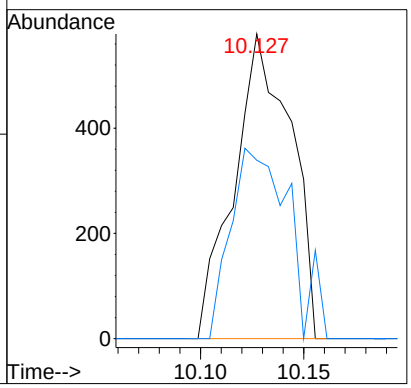


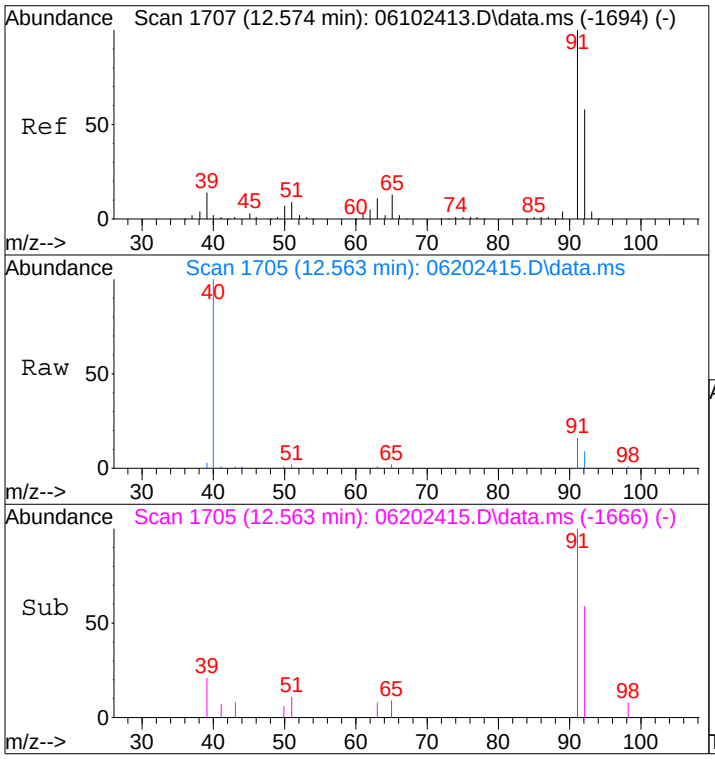


#48
1,4-Dioxane
Concen: 0.10 ng
RT: 10.13 min Scan# 1276
Delta R.T. 0.027 min
Lab File: 06202415.D
Acq: 20 Jun 2024 17:31

Tgt Ion: 88 Resp: 1110

Ion	Ratio	Lower	Upper
88	100		
58	65.0	47.6	87.6

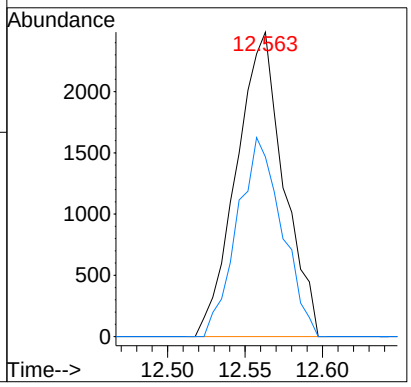


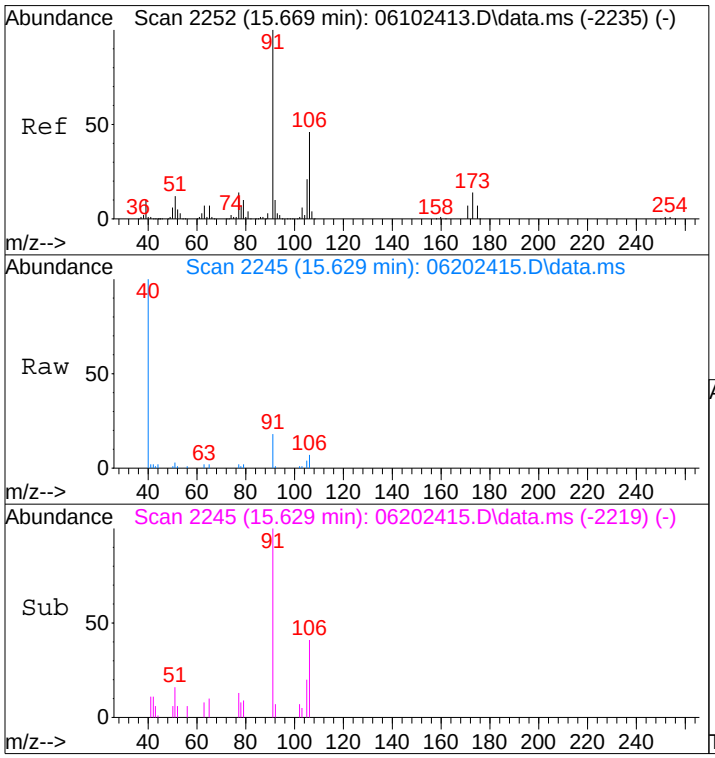


#58
Toluene
Concen: 0.08 ng
RT: 12.56 min Scan# 1705
Delta R.T. -0.028 min
Lab File: 06202415.D
Acq: 20 Jun 2024 17:31

Tgt Ion: 91 Resp: 5291

Ion	Ratio	Lower	Upper
91	100		
92	62.0	37.4	77.4

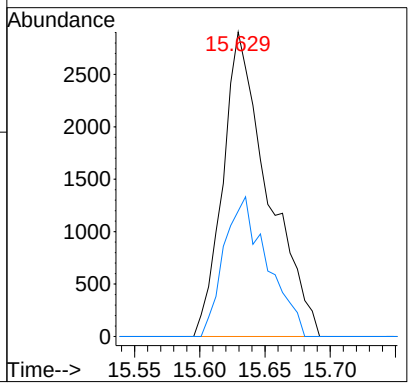


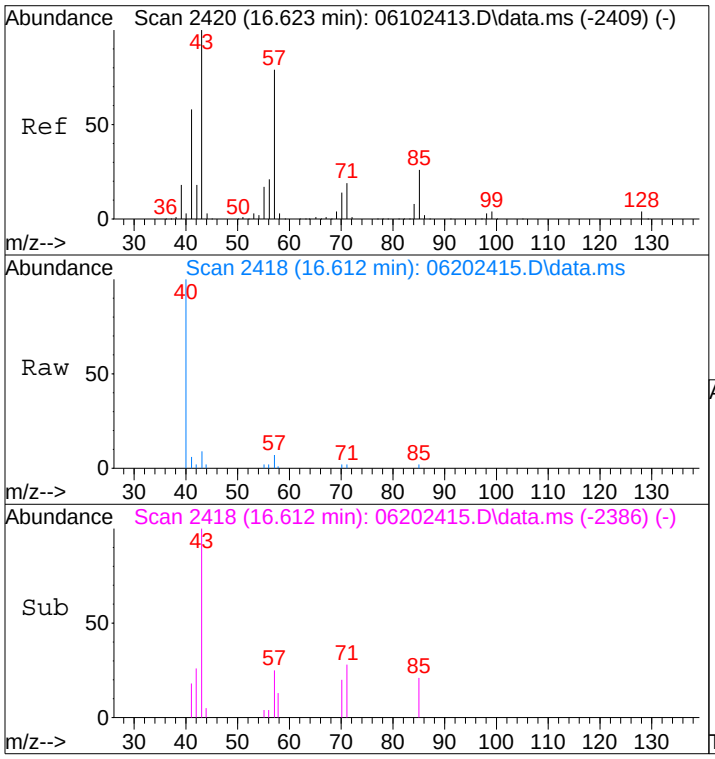


#67
m- & p-Xylenes
Concen: 0.12 ng
RT: 15.63 min Scan# 2245
Delta R.T. -0.051 min
Lab File: 06202415.D
Acq: 20 Jun 2024 17:31

Tgt Ion: 91 Resp: 6995

Ion	Ratio	Lower	Upper
91	100		
106	44.1	25.9	65.9

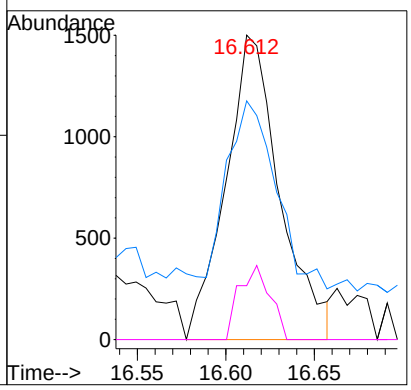




#71
n-Nonane
Concen: 0.09 ng
RT: 16.61 min Scan# 2418
Delta R.T. -0.017 min
Lab File: 06202415.D
Acq: 20 Jun 2024 17:31

Tgt Ion: 43 Resp: 3190

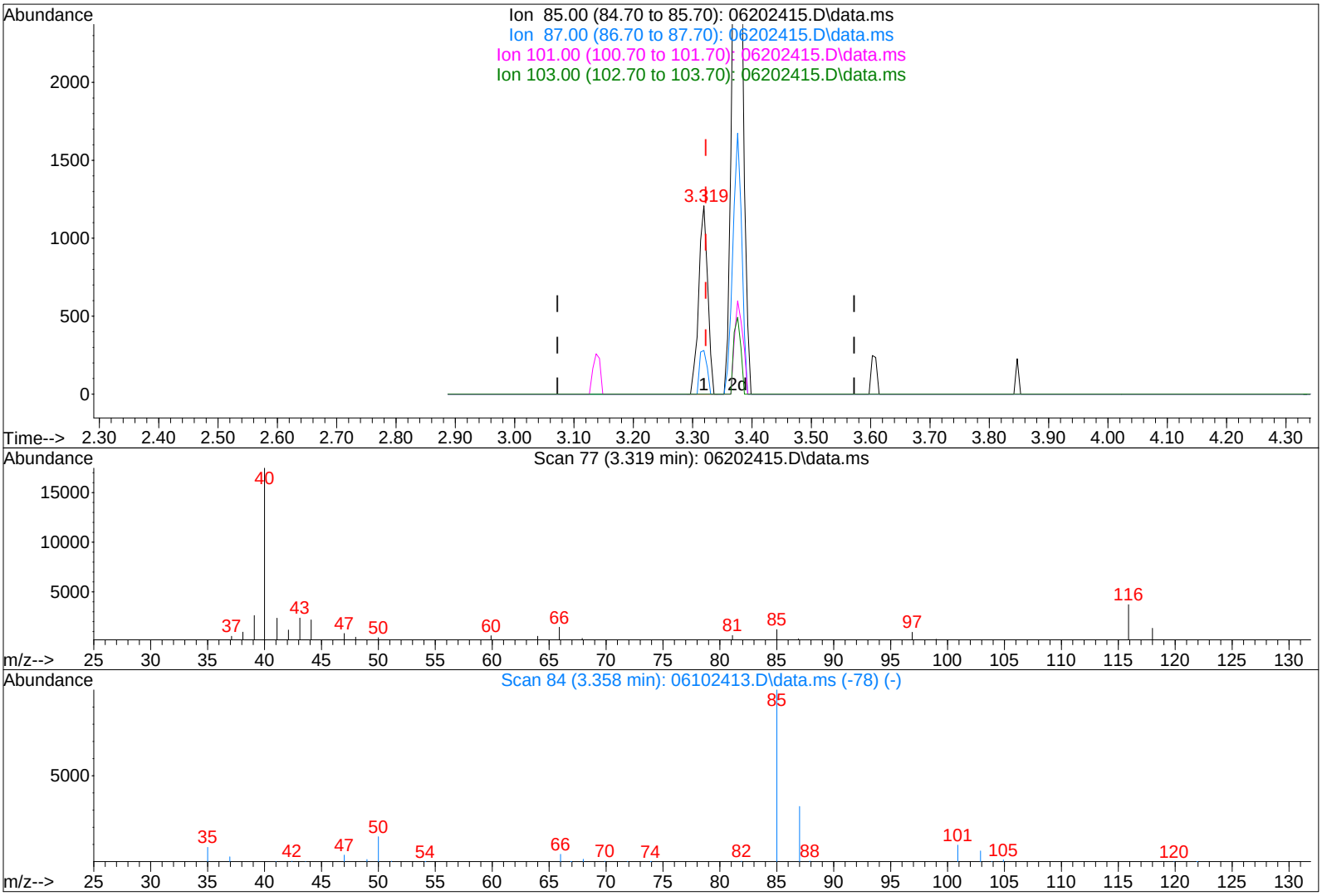
Ion	Ratio	Lower	Upper
43	100		
57	75.8	58.2	98.2
85	13.9	5.9	45.9



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\20\06202415.D Vial: 5
Acq On : 20 Jun 2024 17:31 Operator: SC
Sample : P2402249-043 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 11:49:49 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06202415.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.319min (-0.003) 0.03ng

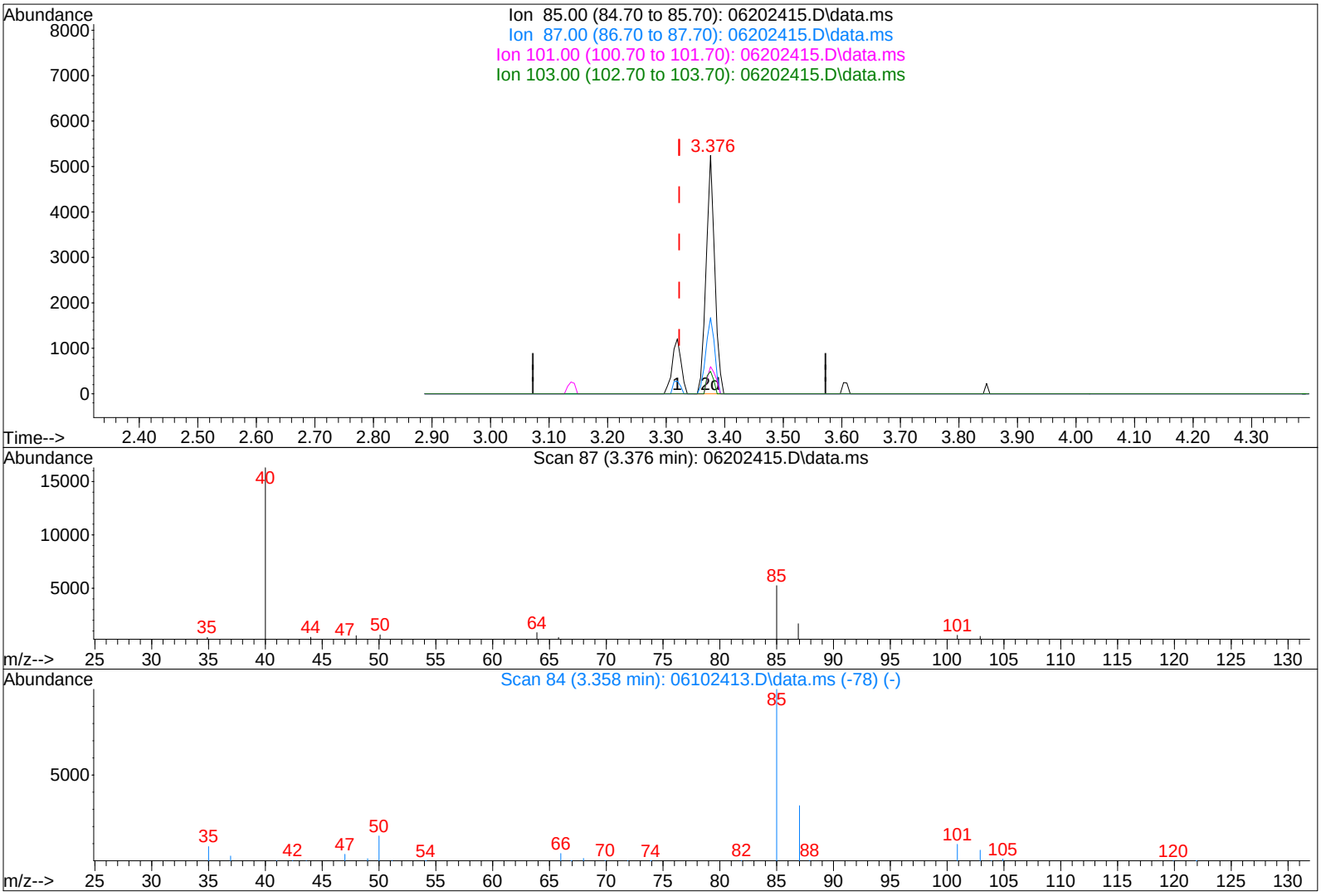
response 1275

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	19.22
101.00	9.80	0.00
103.00	6.30	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\20\06202415.D Vial: 5
Acq On : 20 Jun 2024 17:31 Operator: SC
Sample : P2402249-043 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 11:49:49 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06202415.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.376min (+0.054) 0.15ng m

response 5360

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	32.89
101.00	9.80	10.80
103.00	6.30	7.56

MJ 6/29/24

WP

CG 6/29/24

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202415.D Vial: 5
Acq On : 20 Jun 2024 17:31 Operator: SC
Sample : P2402249-043 (100mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 15:27:51 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

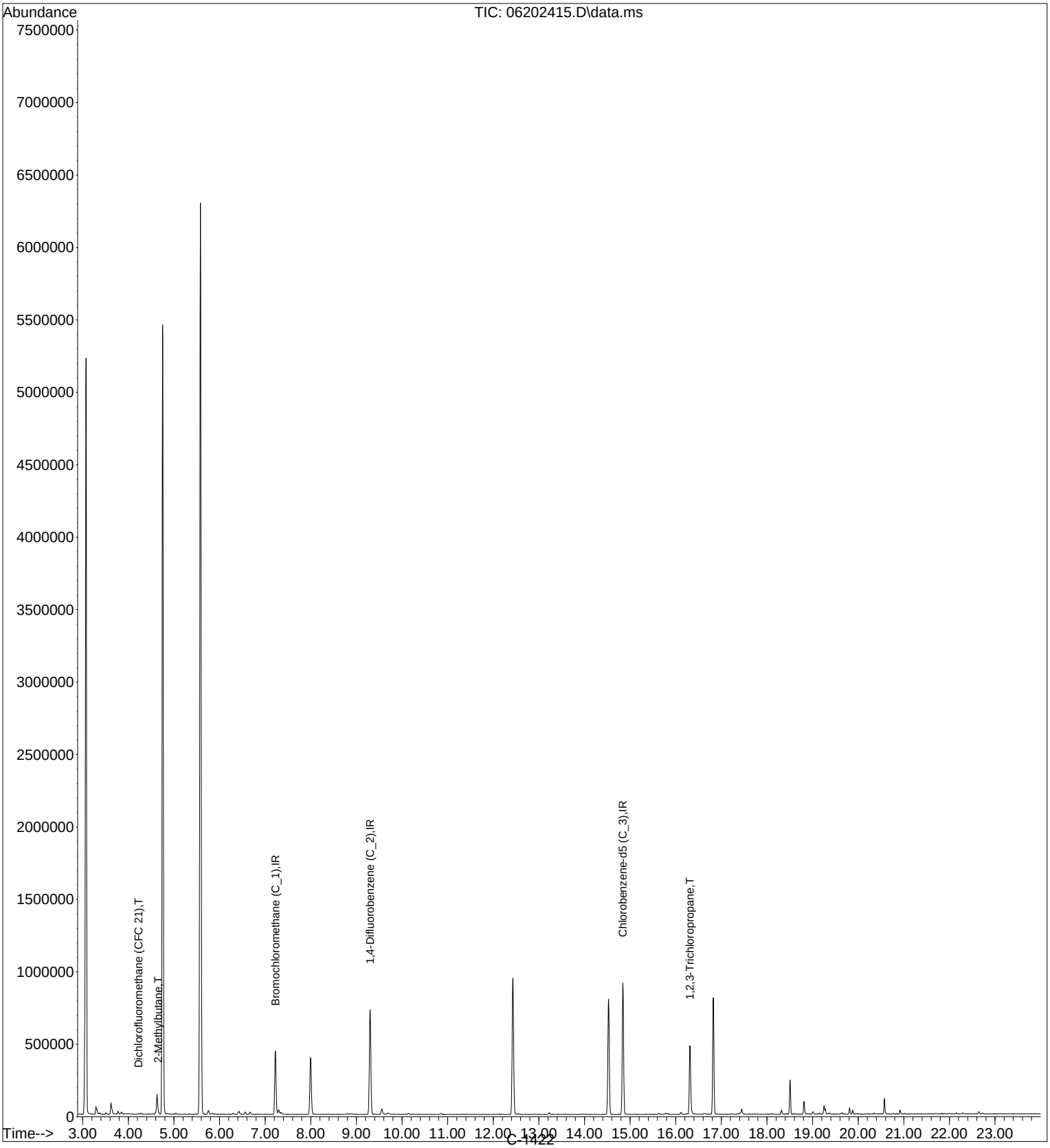
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	157768	12.500	ng		-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	686930	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	157885	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	0.00	85	0	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.20	83	447	N.D.			
4) 1,1-Difluoroethane	0.00	65	0	N.D.			
5) Chlorodifluoromethane ...	3.30	67	271	N.D.			
6) 1-Chloro-1,1-Difluoroe...	3.51	65	55	N.D.			
7) Dichlorofluoromethane ...	4.22	67	3743	0.103	ng		95
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	4.56	83	255	N.D.			
10) 2-Methylbutane	4.65	57	4309	0.229	ng	#	1
11) Methyl Acetate	5.33	43	1284	N.D.			
12) 2-Methylpentane	6.56	71	238	N.D.			
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	0.00	84	0	N.D.			
17) 2,3-Dimethylpentane	9.52	56	52	N.D.			
18) Dibromomethane	9.79	174	178	N.D.			
20) Methyl Cyclohexane	11.42	55	532	N.D.			
21) 1,3-Dichloropropane	0.00	76	0	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	16.31	75	24126	1.145	ng	#	46
25) Bromobenzene	0.00	77	0	N.D.			
26) 2-Chlorotoluene	17.61	91	902	N.D.			
27) 4-Chlorotoluene	17.68	91	1624	N.D.			
28) Indane	19.01	117	85	N.D.			
29) Indene	0.00	115	0	N.D.			
30) 1,2,4,5-Tetramethylben...	20.22	119	832	N.D.			
31) 1,2,3,4-Tetramethylben...	20.22	119	832	N.D.			
32) 1,2,3,5-Tetramethylben...	20.61	119	1012	N.D.			
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202415.D Vial: 5
Acq On : 20 Jun 2024 17:31 Operator: SC
Sample : P2402249-043 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:27:51 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



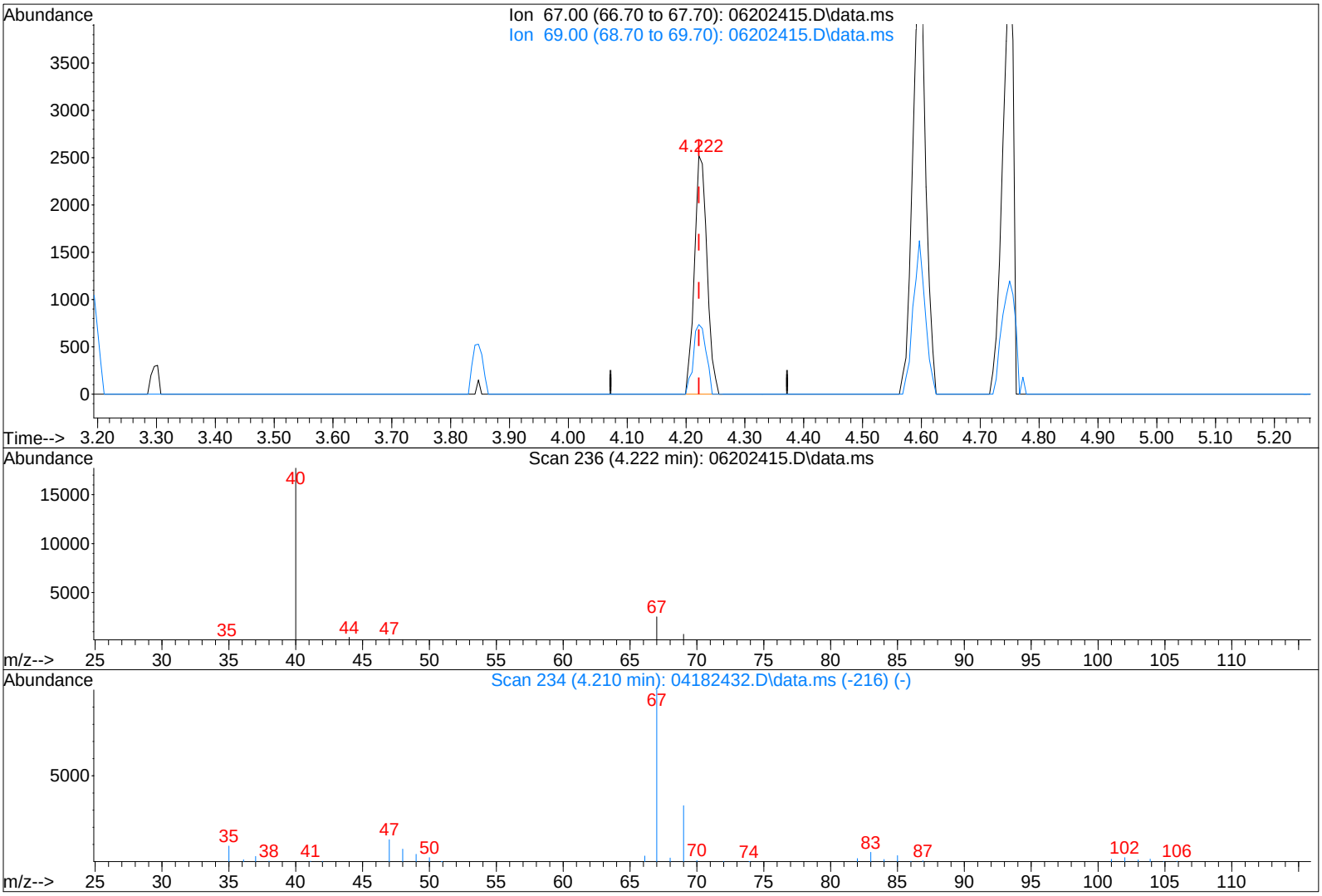
C-1422

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\20\06202415.D Vial: 5
Acq On : 20 Jun 2024 17:31 Operator: SC
Sample : P2402249-043 (100mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 15:27:51 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06202415.D\data.ms

(7) Dichlorofluoromethane (CFC 21) (T)

4.222min (+0.000) 0.10ng

response 3743

Ion	Exp%	Act%
67.00	100	100
69.00	32.40	29.58
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\21\06212408.D Vial: 5
Acq On : 21 Jun 2024 14:10 Operator: SC
Sample : P2402249-043Dil (50mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 17:07:16 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	176548	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	770809	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	177546	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	380094	12.113	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.88%				
57) Toluene-d8 (SS2)	12.43	98	871673	12.829	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.64%				
73) Bromofluorobenzene (SS3)	16.83	174	301438	12.287	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.32%				
Target Compounds							Qvalue
2) Propene	0.00	42	0	N.D.	d		
3) Dichlorodifluoromethan...	3.33	85	583	N.D.			
4) Chloromethane	3.52	50	3192	0.112	ng		97
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	4.02	94	235	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.43	45	418	N.D.			
11) Acetonitrile	0.00	41	0	N.D.	d		
12) Acrolein	4.54	56	1205	0.095	ng		99
13) Acetone	4.64	58	25109	1.831	ng	#	66
14) Trichlorofluoromethane	4.76	101	1910922	45.465	ng		100
15) 2-Propanol (Isopropanol)	4.91	45	51	N.D.			
16) Acrylonitrile	5.03	53	65	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.34	59	537	N.D.			
19) Methylene Chloride	5.35	84	1212	0.062	ng		91
20) 3-Chloro-1-propene (Al...	5.45	41	301	N.D.			
21) Trichlorotrifluoroethane	5.58	151	961012	54.049	ng		94
22) Carbon Disulfide	0.00	76	0	N.D.	d		
23) trans-1,2-Dichloroethene	6.14	61	166	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D.	d		
27) 2-Butanone (MEK)	6.67	72	2223	0.205	ng	#	68
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.	d		
30) Ethyl Acetate	7.30	61	1450	0.219	ng		94
31) n-Hexane	7.30	57	112	N.D.			
32) Chloroform	7.36	83	5127	0.148	ng		97
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	345	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.82	56	2614	No Calib		#	
41) Benzene	8.90	78	2524	N.D.			
42) Carbon Tetrachloride	0.00	117	0	N.D.			
43) Cyclohexane	9.30	84	925	N.D.			
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.07	83	799	N.D.			
47) Trichloroethene	10.15	130	1466	0.071	ng		96
48) 1,4-Dioxane	10.14	88	644	N.D.			
49) 2,2,4-Trimethylpentane...	10.24	57	1112	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212408.D Vial: 5
Acq On : 21 Jun 2024 14:10 Operator: SC
Sample : P2402249-043Dil (50mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 17:07:16 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

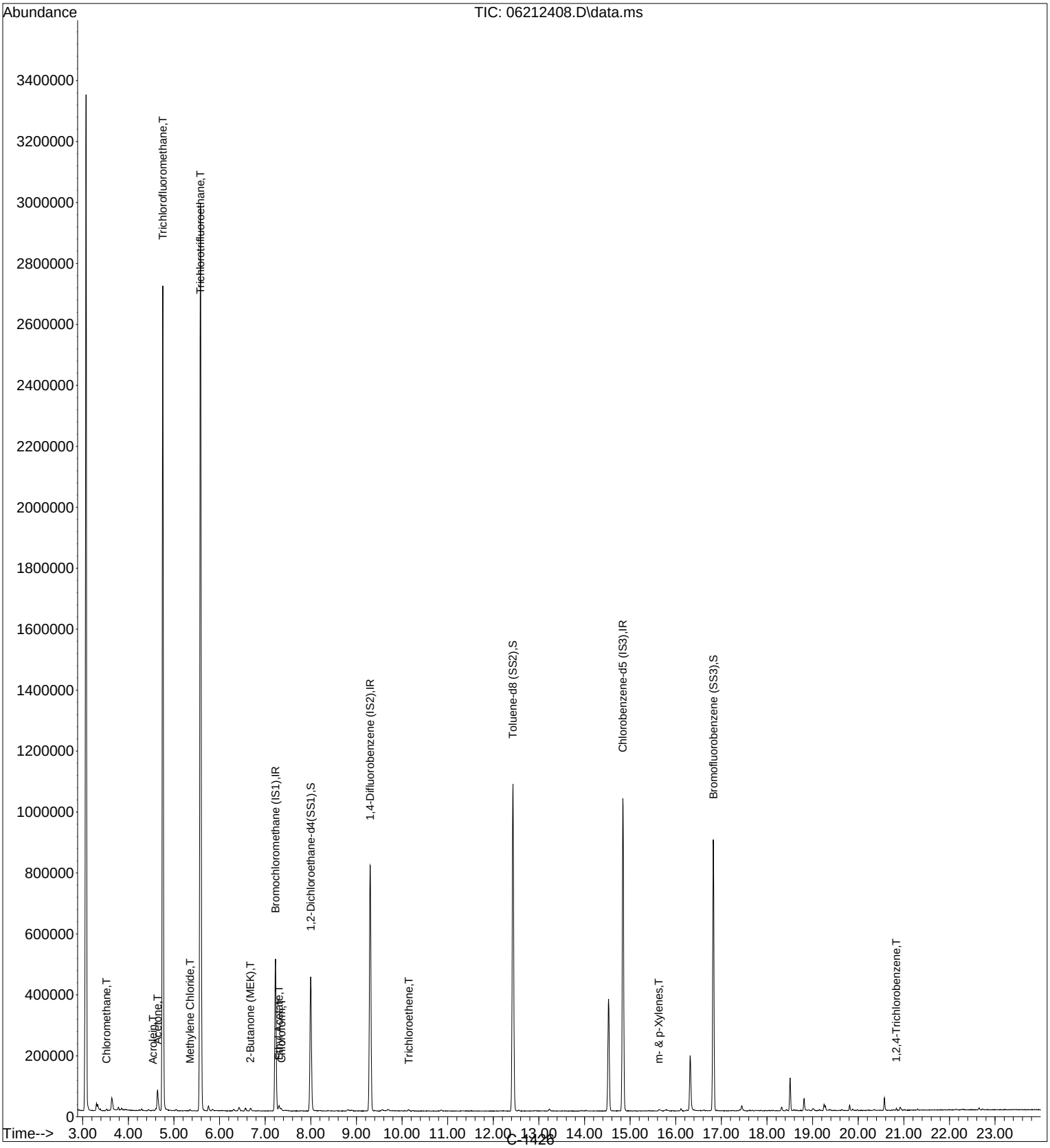
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	0.00	71	0	N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
58) Toluene	12.56	91	3543	N.D.	
59) 2-Hexanone	12.92	43	1970	N.D.	
60) Dibromochloromethane	13.08	129	567	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	13.79	43	172	N.D.	
63) n-Octane	0.00	57	0	N.D.	
64) Tetrachloroethene	14.03	166	692	N.D.	
65) Chlorobenzene	14.89	112	744	N.D.	
66) Ethylbenzene	15.41	91	1474	N.D.	
67) m- & p-Xylenes	15.63	91	5031	0.074 ng	95
68) Bromoform	15.67	173	701	N.D.	
69) Styrene	16.11	104	152	N.D.	
70) o-Xylene	16.24	91	2126	N.D.	
71) n-Nonane	16.62	43	1729	N.D.	
72) 1,1,2,2-Tetrachloroethane	16.21	83	526	N.D.	
74) Cumene	17.04	105	1390	N.D.	
75) alpha-Pinene	0.00	93	0	N.D.	
76) n-Propylbenzene	17.68	91	1859	N.D.	
77) 3-Ethyltoluene	17.04	105	1390	No Calib	
78) 4-Ethyltoluene	17.86	105	1246	N.D.	
79) 1,3,5-Trimethylbenzene	17.96	105	950	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.04	105	1390	No Calib	
82) 1,2,4-Trimethylbenzene	18.43	105	1278	N.D.	
83) n-Decane	0.00	58	0	N.D.	
84) Benzyl Chloride	18.56	91	1183	N.D.	
85) 1,3-Dichlorobenzene	18.58	146	1031	N.D.	
86) 1,4-Dichlorobenzene	18.66	146	1113	N.D.	
87) sec-Butylbenzene	18.74	105	1224	N.D.	
88) 4-Isopropyltoluene (p-...	18.93	119	1328	N.D.	
89) 1,2,3-Trimethylbenzene	17.04	105	1390	No Calib	
90) 1,2-Dichlorobenzene	19.03	146	993	N.D.	
91) d-Limonene	0.00	68	0	N.D.	
92) 1,2-Dibromo-3-Chloropr...	19.51	157	203	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	2018	0.054 ng	95
95) Naphthalene	20.94	128	3336	N.D.	
96) n-Dodecane	0.00	58	0	N.D.	
97) Hexachlorobutadiene	21.30	225	761	N.D.	
98) Cyclohexanone	0.00	55	0	N.D.	
99) tert-Butylbenzene	18.42	119	1095	N.D.	
100) n-Butylbenzene	19.39	91	1827	N.D.	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212408.D Vial: 5
Acq On : 21 Jun 2024 14:10 Operator: SC
Sample : P2402249-043Dil (50mL) Inst : MS09
Misc : S37-06062402

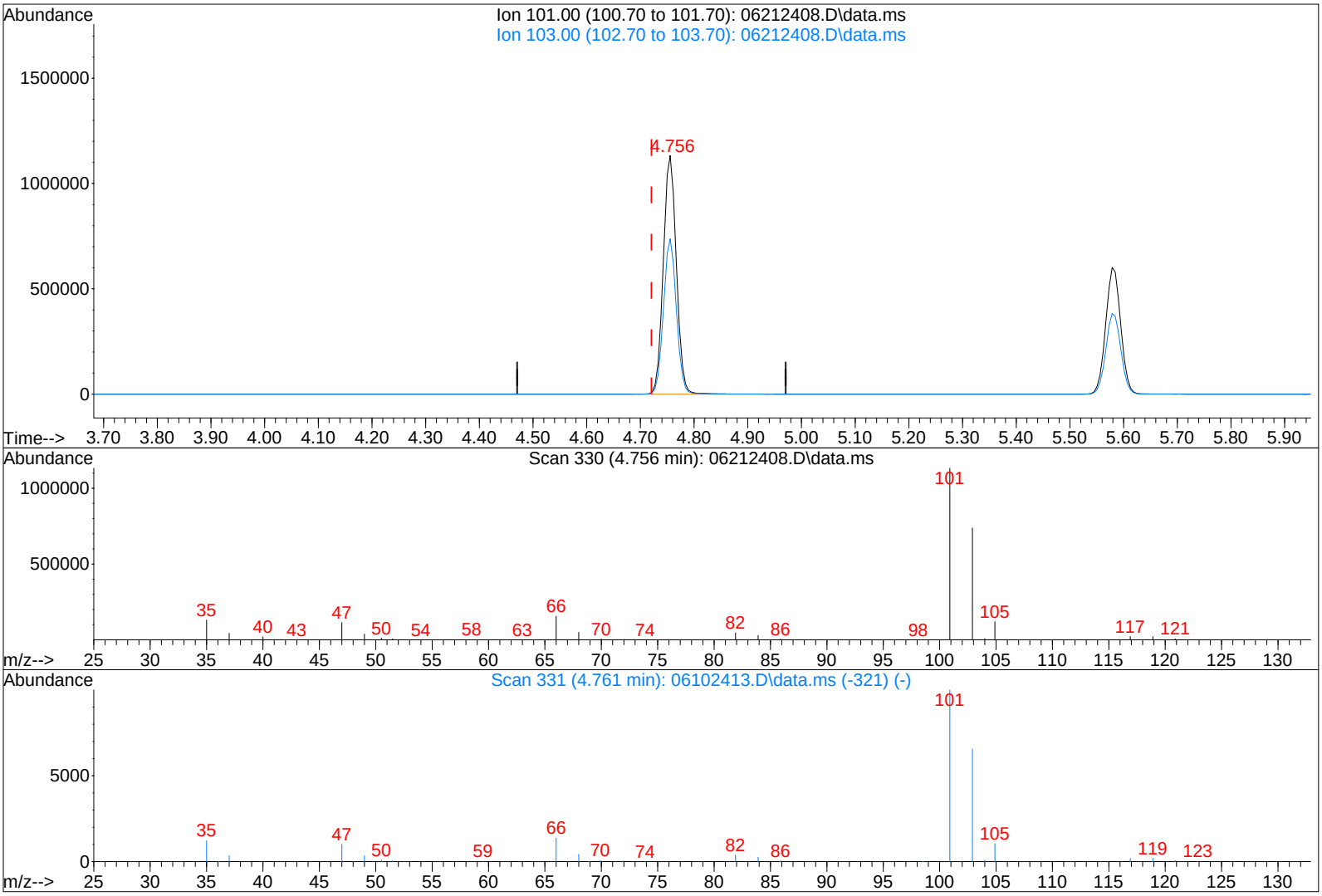
Quant Time: Jun 28 17:07:16 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\21\06212408.D Vial: 5
Acq On : 21 Jun 2024 14:10 Operator: SC
Sample : P2402249-043Dil (50mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 21 14:32:15 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06212408.D\data.ms

(14) Trichlorofluoromethane (T)

4.756min (+0.035) 45.47ng

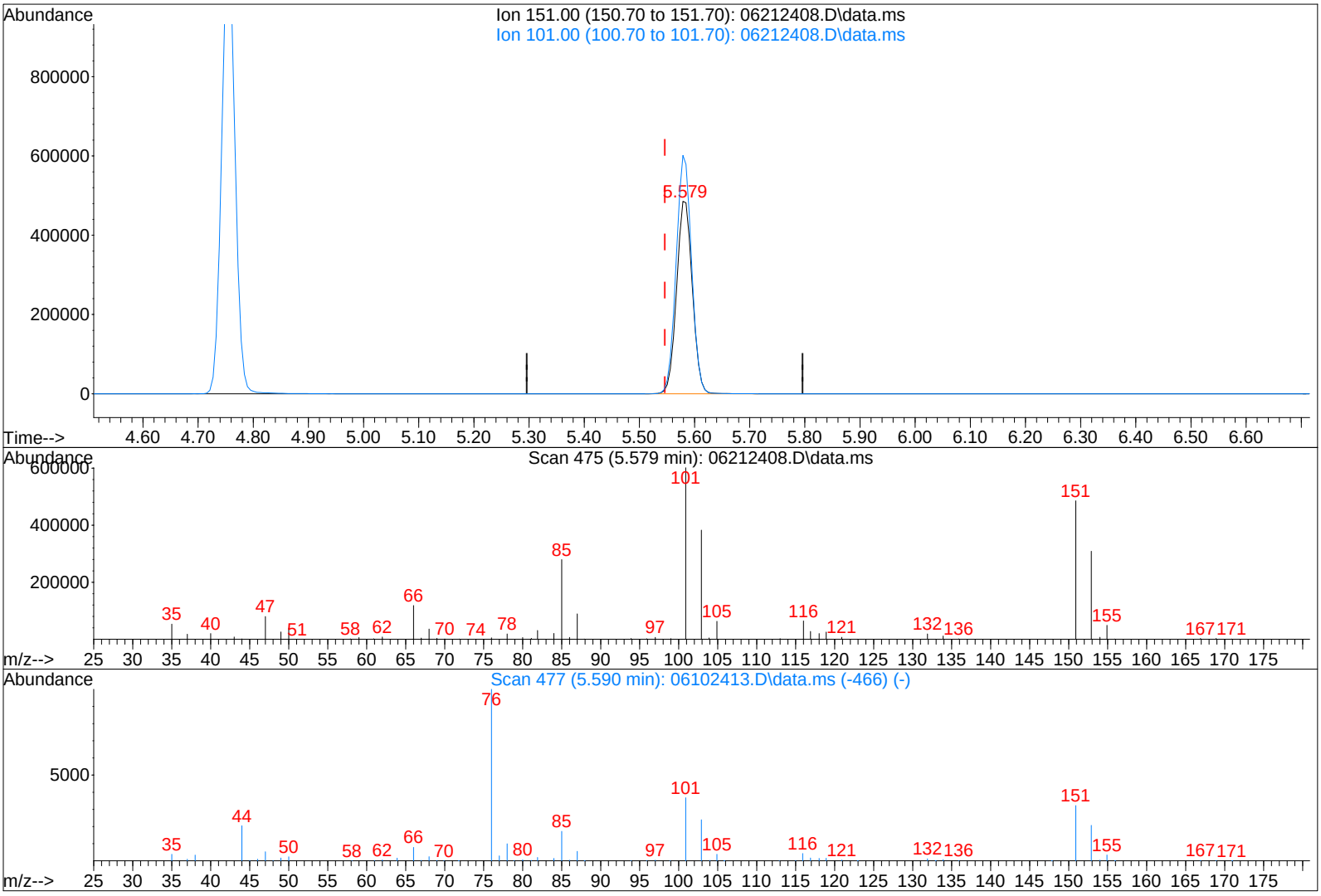
response 1910922

Ion	Exp%	Act%
101.00	100	100
103.00	64.90	64.57
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\21\06212408.D Vial: 5
Acq On : 21 Jun 2024 14:10 Operator: SC
Sample : P2402249-043Dil (50mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 21 14:32:15 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06212408.D\data.ms

(21) Trichlorotrifluoroethane (T)

5.579min (+0.033) 54.05ng

response 961012

Ion	Exp%	Act%
151.00	100	100
101.00	115.00	121.52
0.00	0.00	0.00
0.00	0.00	0.00

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\20\
Data File : 06202415.D
Acq On : 20 Jun 2024 17:31
Operator : SC
Sample : P2402249-043 (100mL)
Misc : S37-06062402
ALS Vial : 5 Sample Multiplier: 1

MJ 6/28/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06202415.D\data.ms

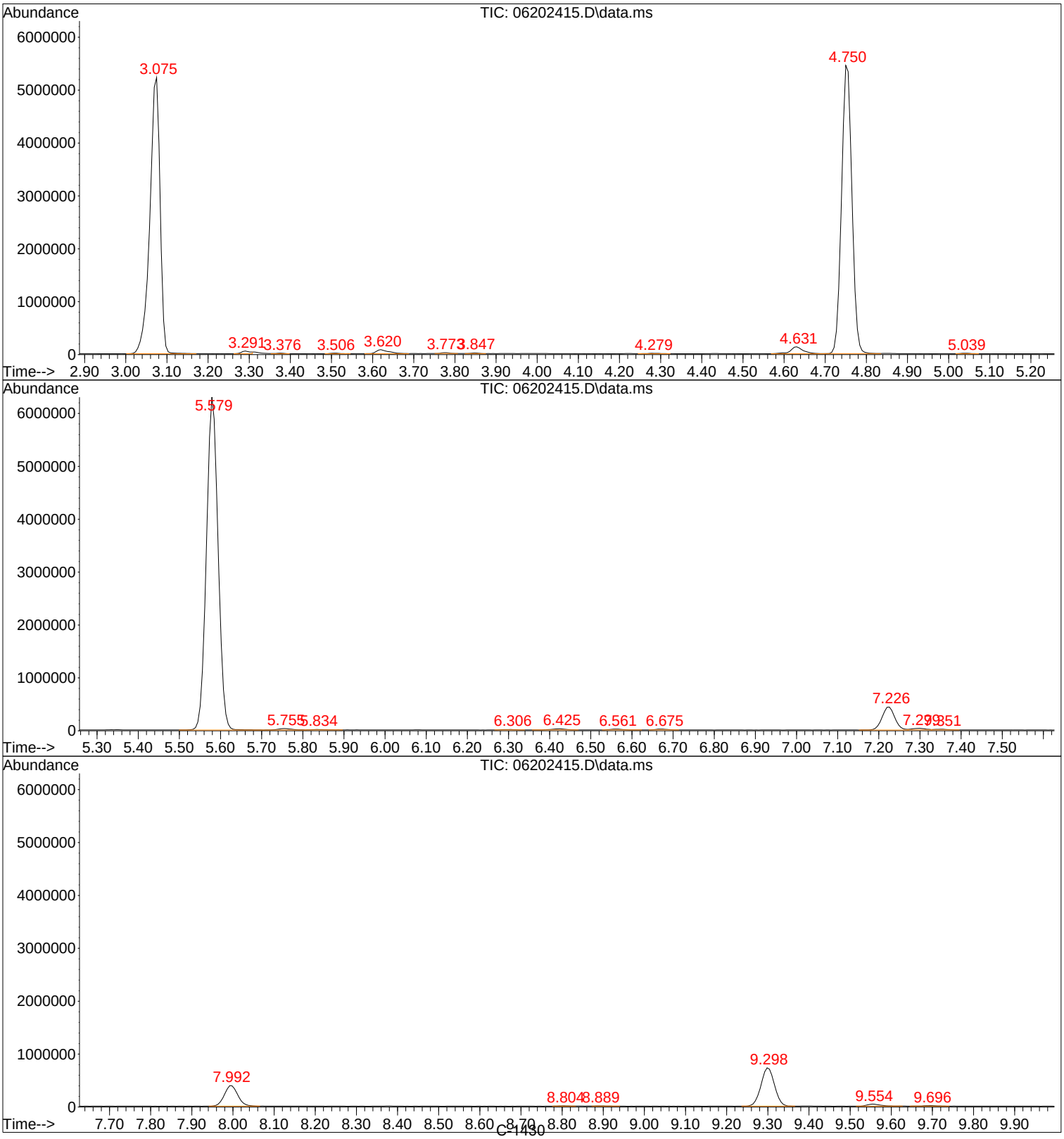
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.075	21	34	51	rBV	5220545	8945701	72.39%	25.261%
2	3.291	67	72	75	rBV	49960	75486	0.61%	0.213%
3	3.376	83	87	91	rVB2	10143	12810	0.10%	0.036%
4	3.506	106	110	117	rBV3	10654	15142	0.12%	0.043%
5	3.620	123	130	142	rBV	75939	163414	1.32%	0.461%
6	3.773	153	157	163	rVV2	16358	22345	0.18%	0.063%
7	3.847	166	170	175	rVB3	11856	14355	0.12%	0.041%
8	4.279	240	246	254	rVB3	7789	16510	0.13%	0.047%
9	4.631	297	308	320	rBV	130541	280005	2.27%	0.791%
10	4.750	320	329	344	rBV	5448206	9569767	77.44%	27.023%
11	5.039	376	380	386	rVB2	8645	13557	0.11%	0.038%
12	5.579	461	475	497	rVB	6291238	12357637	100.00%	34.896%
13	5.755	497	506	515	rBV	26426	61151	0.49%	0.173%
14	5.834	515	520	531	rVB3	8309	18628	0.15%	0.053%
15	6.306	596	603	609	rVB	8325	17120	0.14%	0.048%
16	6.425	612	624	632	rBV2	21284	52647	0.43%	0.149%
17	6.561	642	648	659	rVB3	15737	34068	0.28%	0.096%
18	6.675	662	668	675	rVB2	15496	31878	0.26%	0.090%
19	7.226	752	765	773	rBV	434456	937360	7.59%	2.647%
20	7.299	773	778	783	rVV2	30291	67431	0.55%	0.190%
21	7.351	783	787	795	rVB3	13712	27543	0.22%	0.078%
22	7.992	891	900	913	rBV	388656	882883	7.14%	2.493%
23	8.804	1038	1043	1048	rBV2	6310	13539	0.11%	0.038%
24	8.889	1055	1058	1067	rVB5	5217	11279	0.09%	0.032%
25	9.298	1119	1130	1142	rBV	723830	1655175	13.39%	4.674%
26	9.554	1168	1175	1188	rBV	38554	91706	0.74%	0.259%
27	9.696	1191	1200	1208	rVV6	9480	23957	0.19%	0.068%

Sum of corrected areas: 35413094

Data Path : I:\MS09\DATA\2024 06\20\
Data File : 06202415.D
Acq On : 20 Jun 2024 17:31
Operator : SC
Sample : P2402249-043 (100mL)
Misc : S37-06062402
ALS Vial : 5 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\20\\
Data File : 06202415.D
Acq On : 20 Jun 2024 17:311
Operator : SCC
Sample : P2402249-043 (100mL))
Misc : S37-060624022
ALS Vial : 5 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT/LSC Reviewed)

MJ 6/29/24

Data File : I:\MS09\DATA\2024 06\20\06202416.D Vial: 6
Acq On : 20 Jun 2024 18:04 Operator: SC
Sample : P2402249-044 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:03:09 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.24	130	159314	12.500	ng		0.01
37) 1,4-Difluorobenzene (IS2)	9.31	114	695380	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	160983	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	350198	12.368	ng		0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.96%				
57) Toluene-d8 (SS2)	12.43	98	776630	12.607	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.88%				
73) Bromofluorobenzene (SS3)	16.83	174	280175	12.595	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.72%				
Target Compounds							Qvalue
2) Propene	0.00	42	0	N.D. d			
3) Dichlorodifluoromethan...	3.37	85	25134m	0.670	ng		
4) Chloromethane	3.49	50	2659	0.104	ng		86
5) 1,2-Dichloro-1,1,2,2-t...	3.61	135	1142	0.070	ng		86
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	4.02	94	138	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.28	45	8739	0.564	ng		97
11) Acetonitrile	0.00	41	0	N.D. d			
12) Acrolein	4.55	56	1408	0.123	ng		94
13) Acetone	4.65	58	35145	2.840	ng	#	86
14) Trichlorofluoromethane	4.77	101	30209034m	796.492	ng		
15) 2-Propanol (Isopropanol)	4.95	45	123	N.D.			
16) Acrylonitrile	5.06	53	182	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.34	59	861	N.D.			
19) Methylene Chloride	5.36	84	2910	0.166	ng		95
20) 3-Chloro-1-propene (Al...	5.47	41	328	N.D.			
21) Trichlorotrifluoroethane	5.62	151	19832693	1236.097	ng		90
22) Carbon Disulfide	0.00	76	0	N.D. d			
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	6.29	73	742	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D.			
27) 2-Butanone (MEK)	6.68	72	3626	0.370	ng	#	75
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D. d			
30) Ethyl Acetate	7.30	61	1119	0.187	ng		97
31) n-Hexane	7.32	57	2836	0.108	ng	#	96
32) Chloroform	7.36	83	56425	1.808	ng		100
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.12	62	841	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	9.60	61	755	No Calib	#		
40) 1-Butanol	8.83	56	2676	No Calib			
41) Benzene	8.92	78	3371	0.053	ng		99
42) Carbon Tetrachloride	9.08	117	1465	N.D.			
43) Cyclohexane	0.00	84	0	N.D. d			
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	0.00	83	0	N.D. d			
47) Trichloroethene	10.15	130	7792	0.416	ng		96
48) 1,4-Dioxane	10.14	88	365	N.D.			
49) 2,2,4-Trimethylpentane...	10.23	57	1222	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202416.D Vial: 6
Acq On : 20 Jun 2024 18:04 Operator: SC
Sample : P2402249-044 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:03:09 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

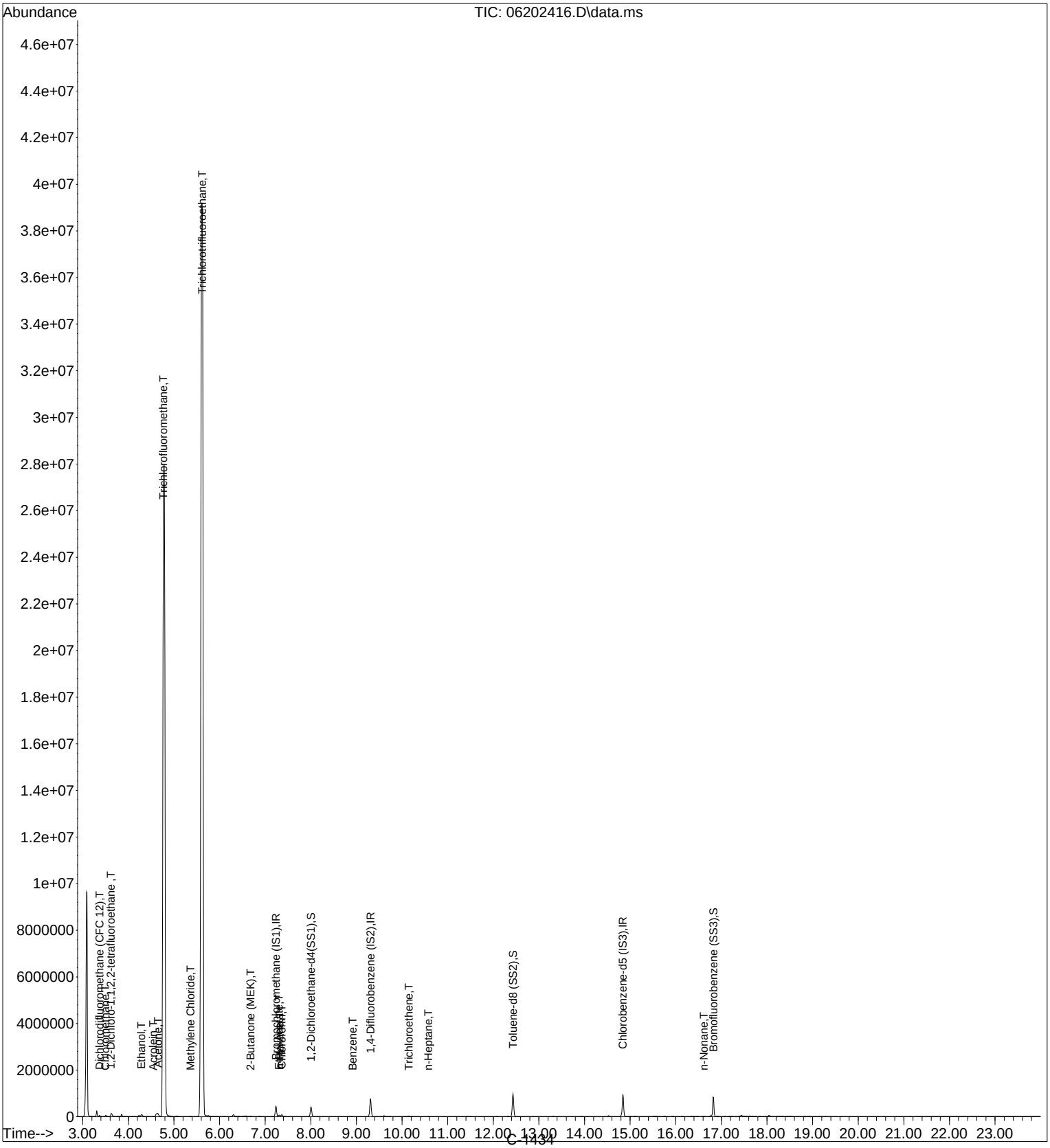
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	10.58	71	1169	0.086 ng	#	90
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	12.08	97	146	N.D.		
58) Toluene	12.56	91	913	N.D.		
59) 2-Hexanone	12.93	43	827	N.D.		
60) Dibromochloromethane	13.07	129	578	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	13.73	43	109	N.D.		
63) n-Octane	13.93	57	567	N.D.		
64) Tetrachloroethene	14.03	166	414	N.D.		
65) Chlorobenzene	14.89	112	609	N.D.		
66) Ethylbenzene	15.41	91	1144	N.D.		
67) m- & p-Xylenes	15.63	91	902	N.D.		
68) Bromoform	15.67	173	579	N.D.		
69) Styrene	0.00	104	0	N.D.		
70) o-Xylene	16.24	91	831	N.D.		
71) n-Nonane	16.62	43	6935	0.195 ng		97
72) 1,1,2,2-Tetrachloroethane	16.22	83	334	N.D.		
74) Cumene	17.03	105	946	N.D.		
75) alpha-Pinene	0.00	93	0	N.D.		
76) n-Propylbenzene	17.68	91	1614	N.D.		
77) 3-Ethyltoluene	17.03	105	946	No Calib		
78) 4-Ethyltoluene	17.86	105	1033	N.D.		
79) 1,3,5-Trimethylbenzene	17.96	105	960	N.D.		
80) alpha-Methylstyrene	0.00	118	0	N.D.		
81) 2-Ethyltoluene	17.03	105	946	No Calib		
82) 1,2,4-Trimethylbenzene	18.43	105	889	N.D.		
83) n-Decane	0.00	58	0	N.D.		
84) Benzyl Chloride	0.00	91	0	N.D.		
85) 1,3-Dichlorobenzene	18.58	146	666	N.D.		
86) 1,4-Dichlorobenzene	18.65	146	593	N.D.		
87) sec-Butylbenzene	18.74	105	1283	N.D.		
88) 4-Isopropyltoluene (p-...	18.93	119	882	N.D.		
89) 1,2,3-Trimethylbenzene	17.03	105	946	No Calib		
90) 1,2-Dichlorobenzene	19.03	146	641	N.D.		
91) d-Limonene	0.00	68	0	N.D.		
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	0.00	58	0	N.D.		
94) 1,2,4-Trichlorobenzene	20.84	180	796	N.D.		
95) Naphthalene	20.94	128	500	N.D.		
96) n-Dodecane	0.00	58	0	N.D.		
97) Hexachlorobutadiene	21.30	225	752	N.D.		
98) Cyclohexanone	15.41	55	2719	No Calib	#	
99) tert-Butylbenzene	18.42	119	994	N.D.		
100) n-Butylbenzene	19.38	91	706	N.D.		
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202416.D Vial: 6
Acq On : 20 Jun 2024 18:04 Operator: SC
Sample : P2402249-044 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:03:09 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202416.D Vial: 6
Acq On : 20 Jun 2024 18:04 Operator: SC
Sample : P2402249-044 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:03:09 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

MJ 6/29/24

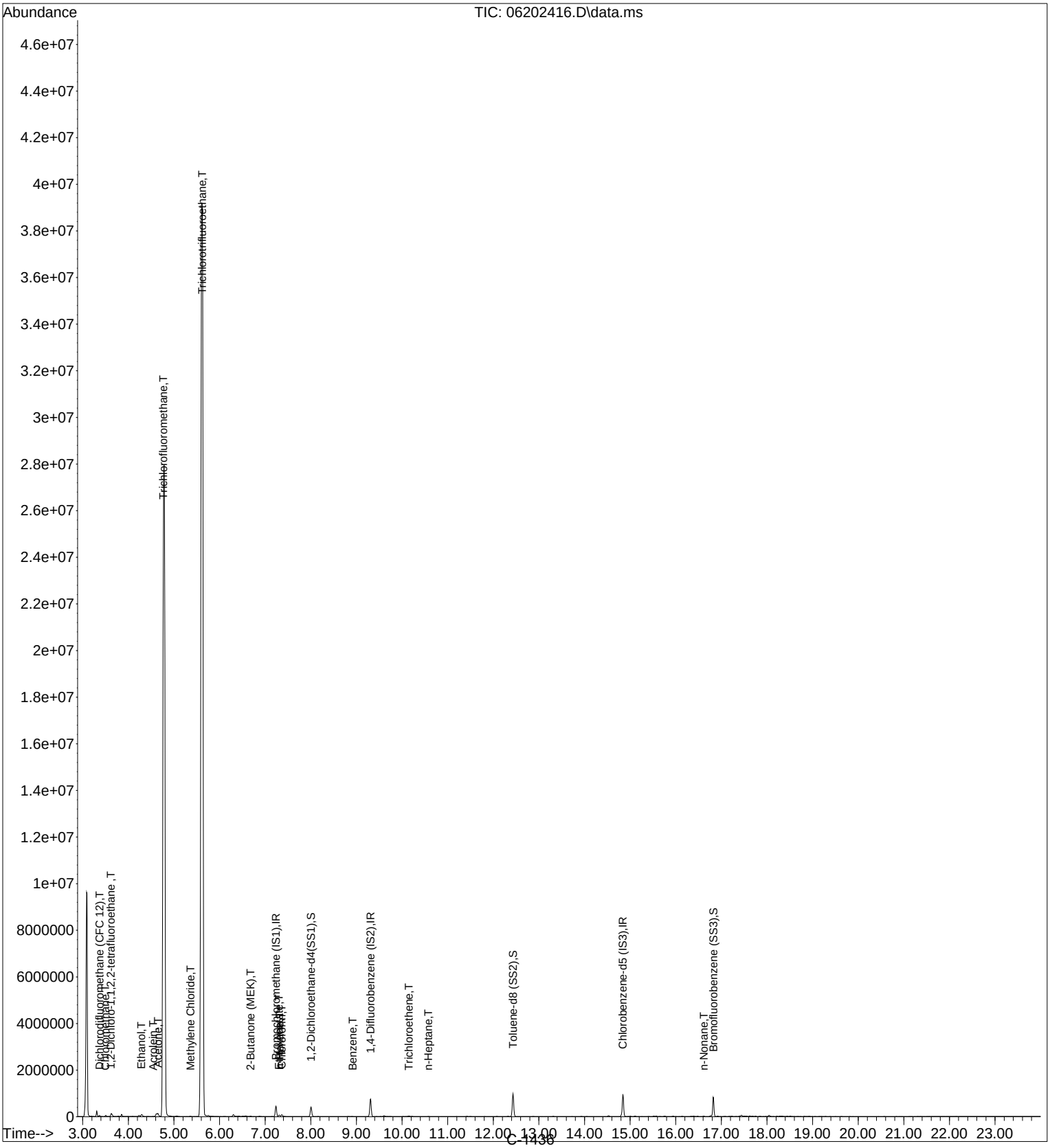
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.24	130	159314	12.500	ng		0.01
37) 1,4-Difluorobenzene (IS2)	9.31	114	695380	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	160983	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	350198	12.368	ng		0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.96%				
57) Toluene-d8 (SS2)	12.43	98	776630	12.607	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.88%				
73) Bromofluorobenzene (SS3)	16.83	174	280175	12.595	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.72%				
Target Compounds							Qvalue
3) Dichlorodifluoromethan...	3.37	85	25134m	0.670	ng		
4) Chloromethane	3.49	50	2659	0.104	ng		86
5) 1,2-Dichloro-1,1,2,2-t...	3.61	135	1142	0.070	ng		86
10) Ethanol	4.28	45	8739	0.564	ng		97
12) Acrolein	4.55	56	1408	0.123	ng		94
13) Acetone	4.65	58	35145	2.840	ng	#	86
14) Trichlorofluoromethane	4.77	101	30209034m	796.492	ng		
19) Methylene Chloride	5.36	84	2910	0.166	ng		95
21) Trichlorotrifluoroethane	5.62	151	19832693	1236.097	ng		90
27) 2-Butanone (MEK)	6.68	72	3626	0.370	ng	#	75
30) Ethyl Acetate	7.30	61	1119	0.187	ng		97
31) n-Hexane	7.32	57	2836	0.108	ng	#	96
32) Chloroform	7.36	83	56425	1.808	ng		100
41) Benzene	8.92	78	3371	0.053	ng		99
47) Trichloroethene	10.15	130	7792	0.416	ng		96
51) n-Heptane	10.58	71	1169	0.086	ng	#	90
71) n-Nonane	16.62	43	6935	0.195	ng		97

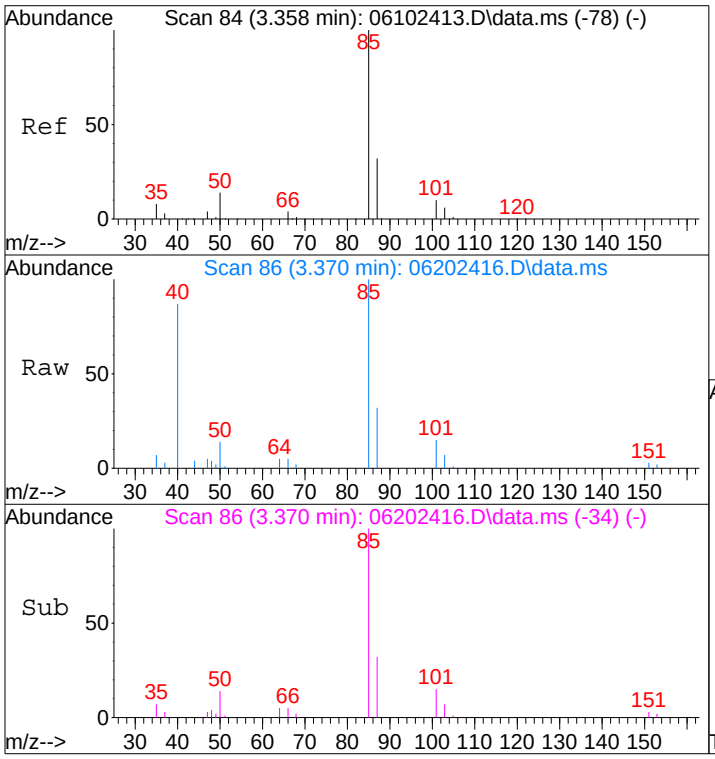
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202416.D Vial: 6
Acq On : 20 Jun 2024 18:04 Operator: SC
Sample : P2402249-044 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:03:09 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

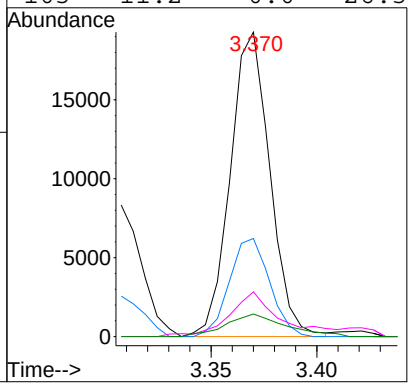


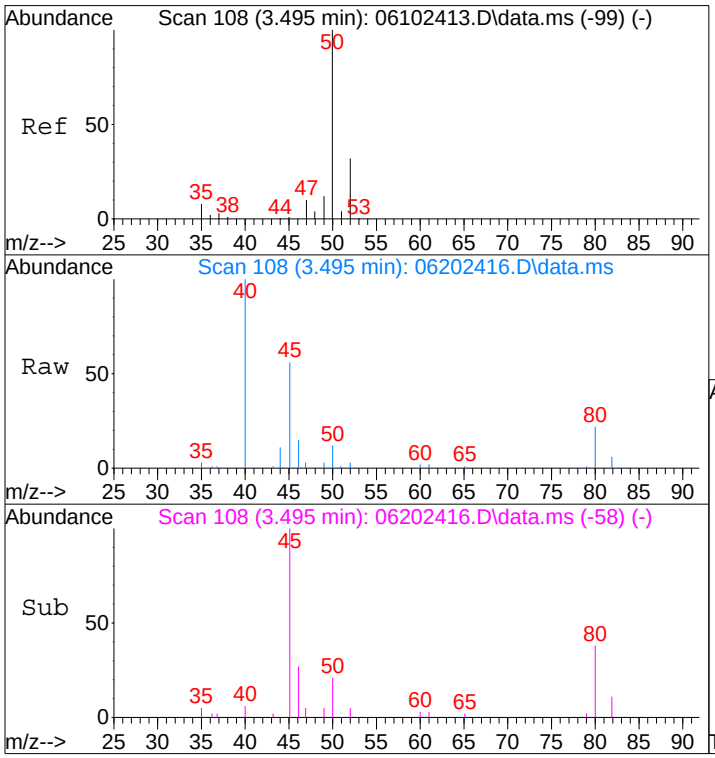


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.67 ng m
RT: 3.37 min Scan# 86
Delta R.T. 0.048 min
Lab File: 06202416.D
Acq: 20 Jun 2024 18:04

Tgt Ion: 85 Resp: 25134

Ion	Ratio	Lower	Upper
85	100		
87	32.8	12.2	52.2
101	17.2	0.0	29.8
103	11.2	0.0	26.3

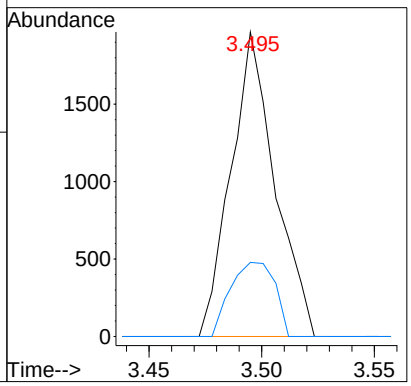


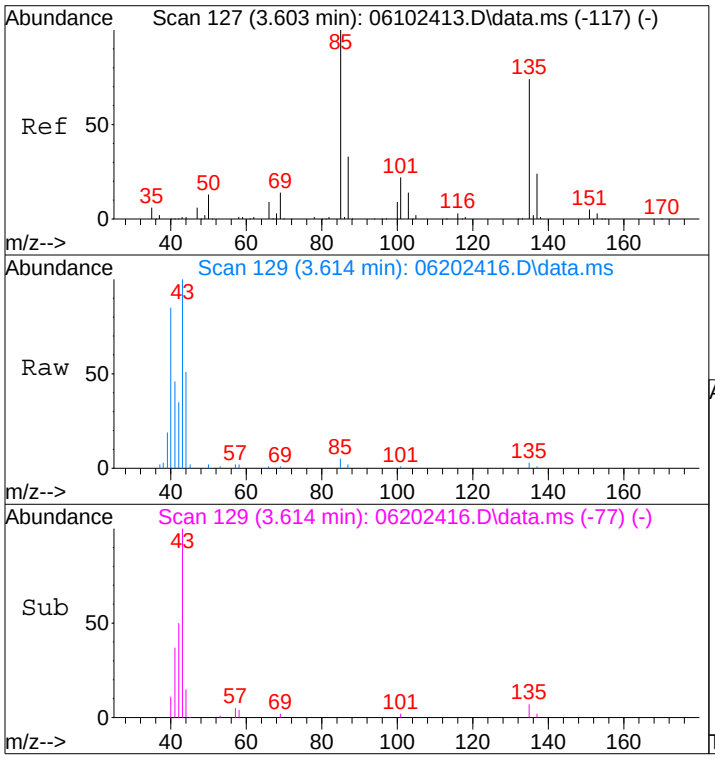


#4
Chloromethane
Concen: 0.10 ng
RT: 3.49 min Scan# 108
Delta R.T. 0.032 min
Lab File: 06202416.D
Acq: 20 Jun 2024 18:04

Tgt Ion: 50 Resp: 2659

Ion	Ratio	Lower	Upper
50	100		
52	24.7	12.4	52.4

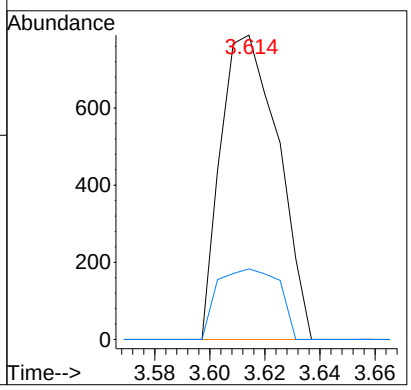


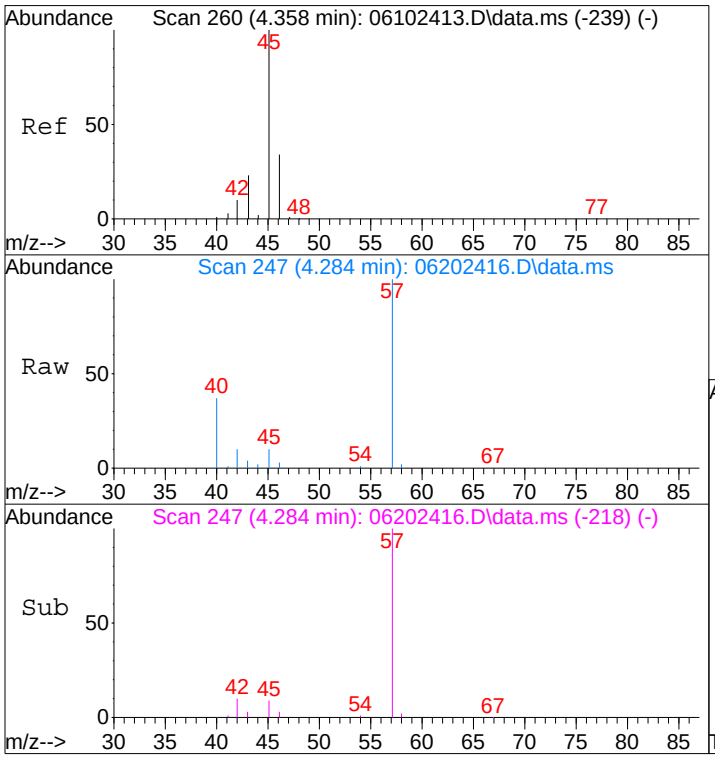


#5
1,2-Dichloro-1,1,2,2-tetrafluoroethane
Concen: 0.07 ng
RT: 3.61 min Scan# 129
Delta R.T. 0.045 min
Lab File: 06202416.D
Acq: 20 Jun 2024 18:04

Tgt Ion:135 Resp: 1142

Ion	Ratio	Lower	Upper
135	100		
137	24.9	13.0	53.0

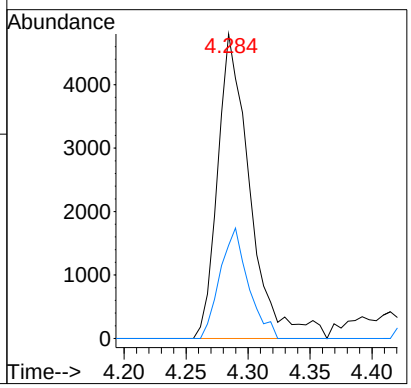


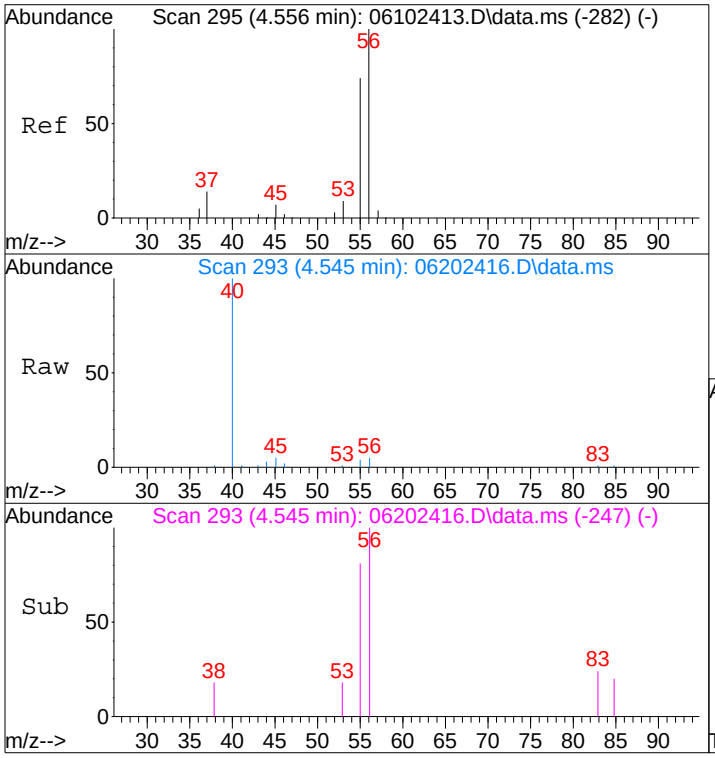


#10
Ethanol
Concen: 0.56 ng
RT: 4.28 min Scan# 247
Delta R.T. -0.083 min
Lab File: 06202416.D
Acq: 20 Jun 2024 18:04

Tgt Ion: 45 Resp: 8739

Ion	Ratio	Lower	Upper
45	100		
46	31.8	13.5	53.5

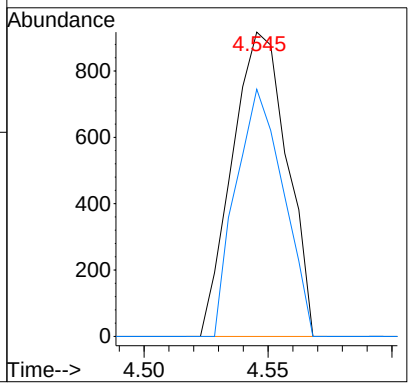


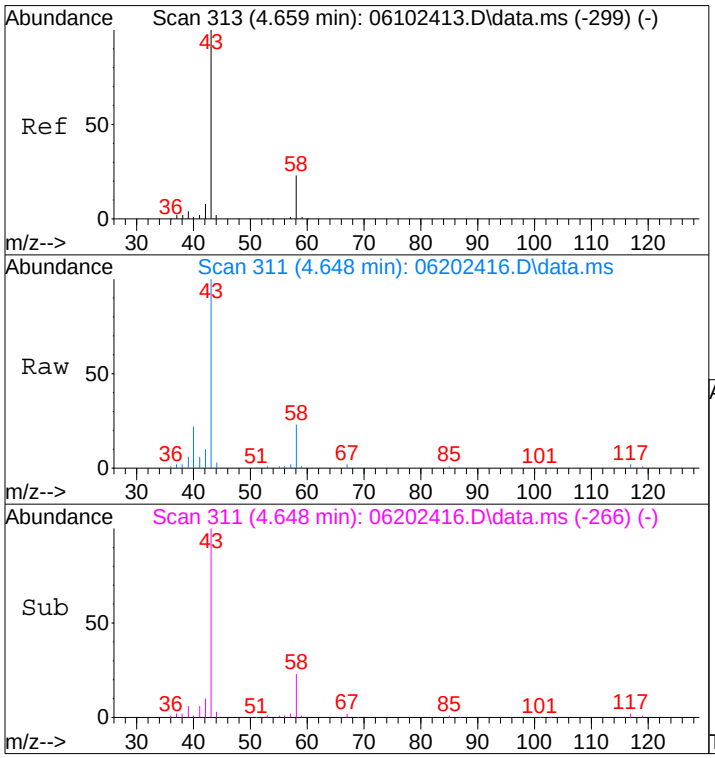


#12
Acrolein
Concen: 0.12 ng
RT: 4.55 min Scan# 293
Delta R.T. 0.010 min
Lab File: 06202416.D
Acq: 20 Jun 2024 18:04

Tgt Ion: 56 Resp: 1408

Ion	Ratio	Lower	Upper
56	100		
55	70.7	55.5	95.5

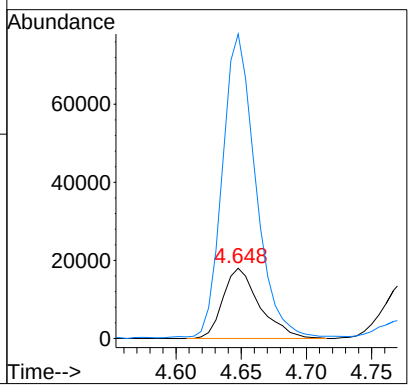


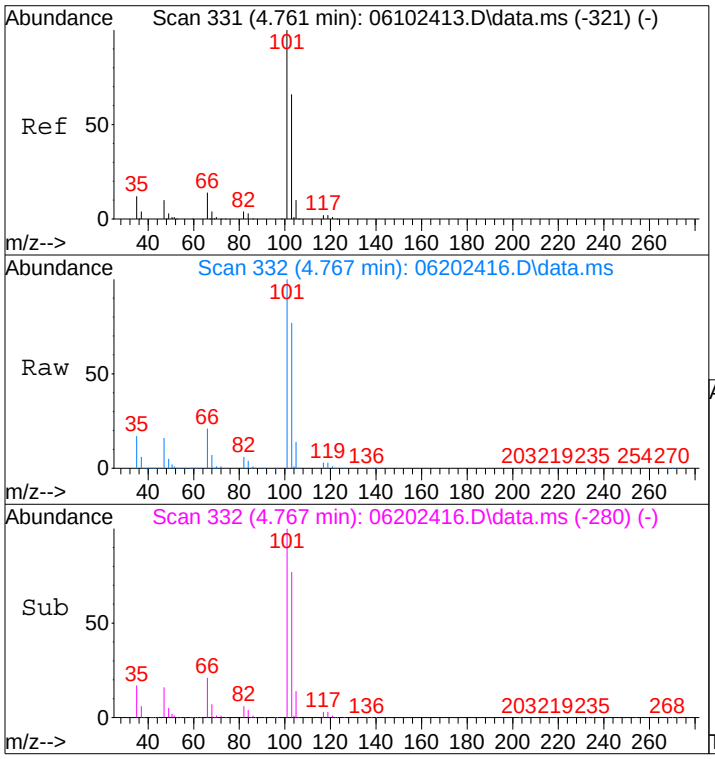


#13
Acetone
Concen: 2.84 ng
RT: 4.65 min Scan# 311
Delta R.T. 0.006 min
Lab File: 06202416.D
Acq: 20 Jun 2024 18:04

Tgt Ion: 58 Resp: 35145

Ion	Ratio	Lower	Upper
58	100		
43	394.7	400.7	460.7#

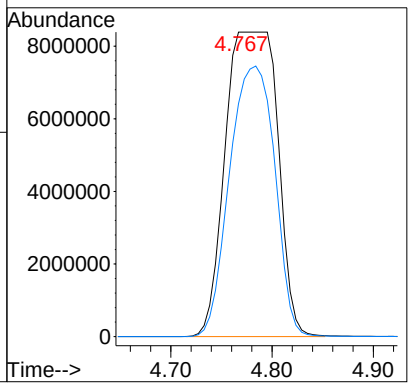


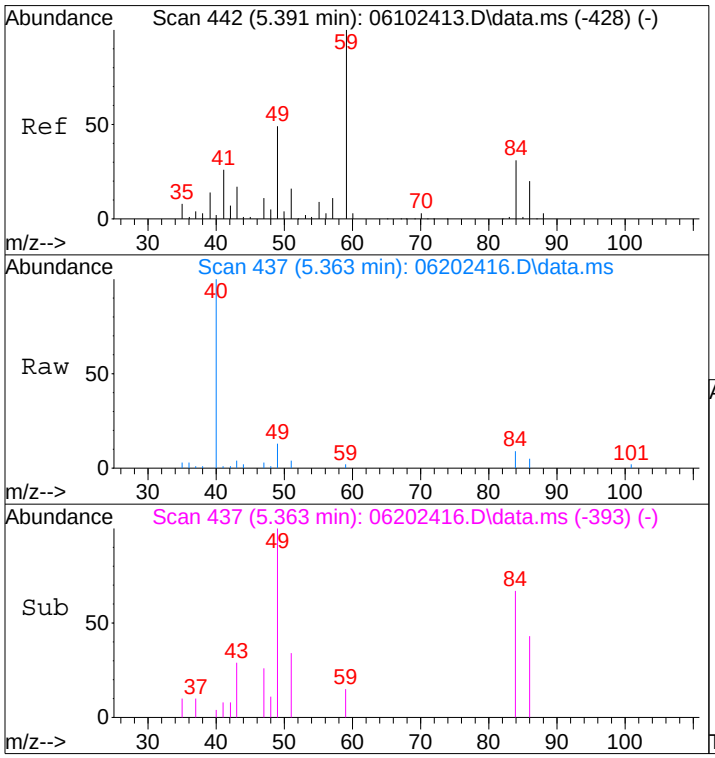


#14
Trichlorofluoromethane
Concen: 796.49 ng m
RT: 4.77 min Scan# 332
Delta R.T. 0.046 min
Lab File: 06202416.D
Acq: 20 Jun 2024 18:04

Tgt Ion:101 Resp:30209034

Ion	Ratio	Lower	Upper
101	100		
103	76.6	44.9	84.9

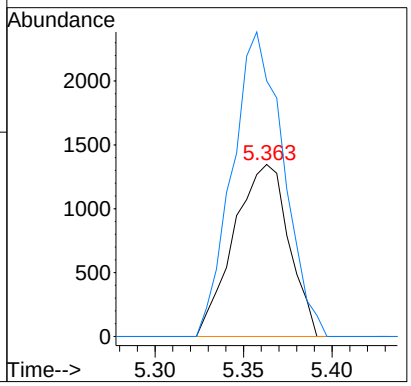


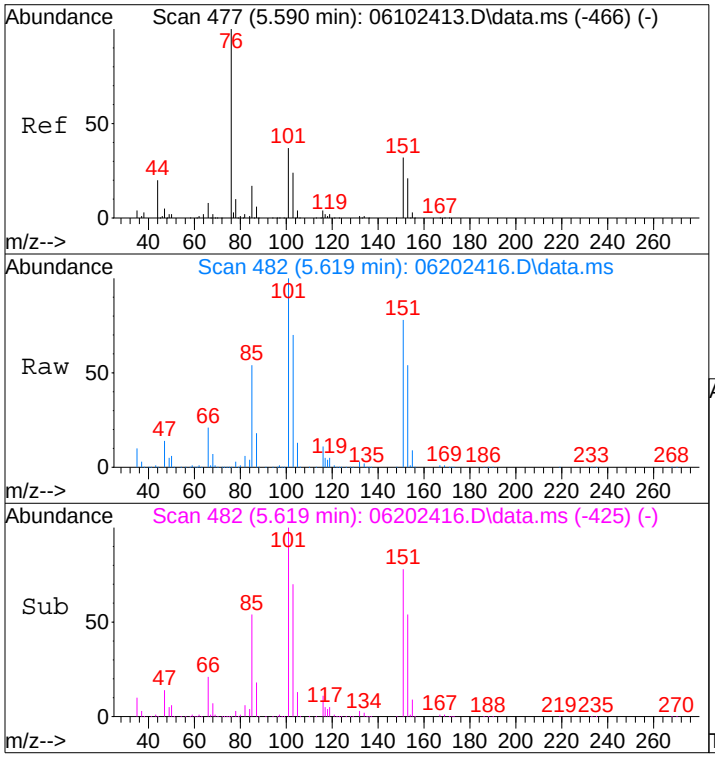


#19
Methylene Chloride
Concen: 0.17 ng
RT: 5.36 min Scan# 437
Delta R.T. 0.002 min
Lab File: 06202416.D
Acq: 20 Jun 2024 18:04

Tgt Ion: 84 Resp: 2910

Ion	Ratio	Lower	Upper
84	100		
49	164.6	132.9	182.9

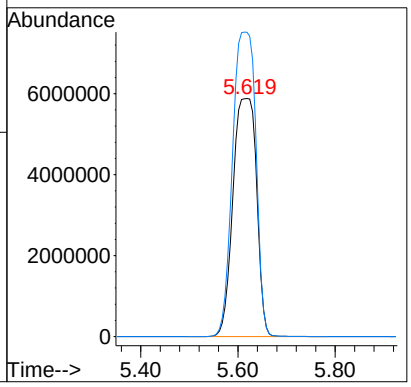


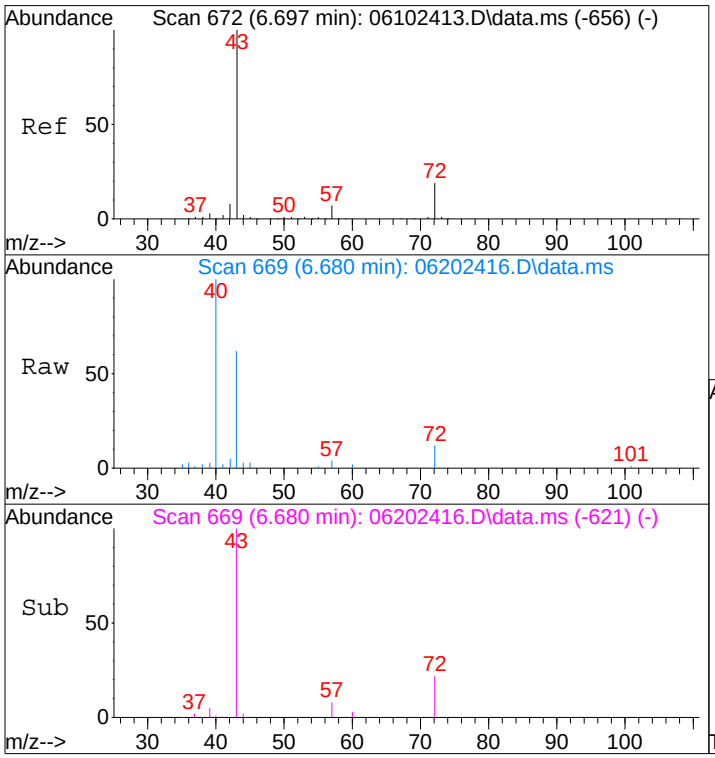


#21
Trichlorotrifluoroethane
Concen: 1236.10 ng
RT: 5.62 min Scan# 482
Delta R.T. 0.072 min
Lab File: 06202416.D
Acq: 20 Jun 2024 18:04

Tgt Ion:151 Resp:19832693

Ion	Ratio	Lower	Upper
151	100		
101	126.2	95.0	135.0

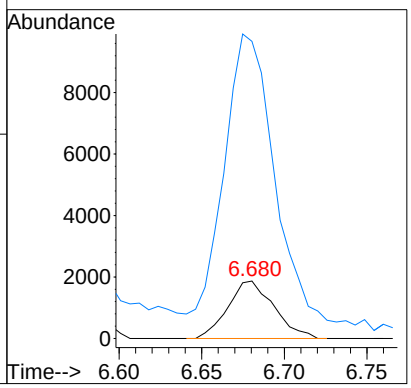


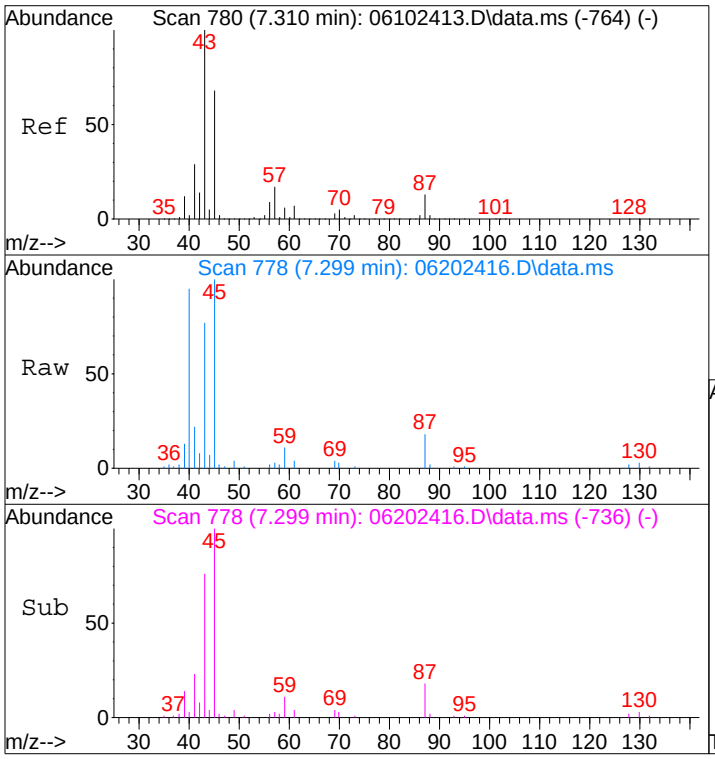


#27
2-Butanone (MEK)
Concen: 0.37 ng
RT: 6.68 min Scan# 669
Delta R.T. 0.022 min
Lab File: 06202416.D
Acq: 20 Jun 2024 18:04

Tgt Ion: 72 Resp: 3626

Ion	Ratio	Lower	Upper
72	100		
43	598.4	506.8	546.8#

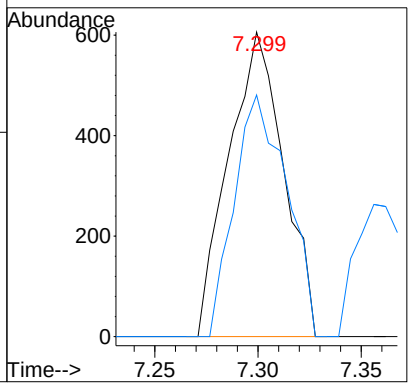


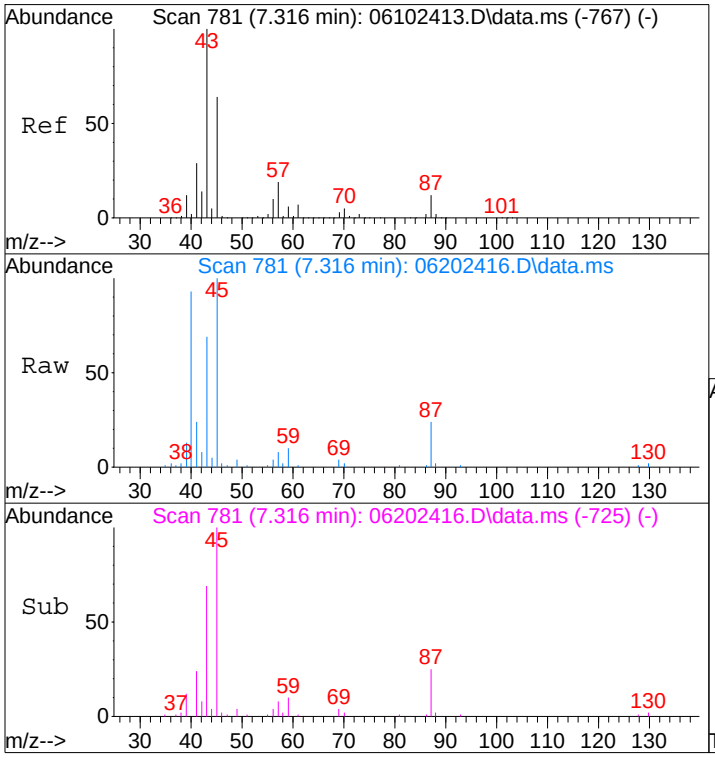


#30
Ethyl Acetate
Concen: 0.19 ng
RT: 7.30 min Scan# 778
Delta R.T. 0.040 min
Lab File: 06202416.D
Acq: 20 Jun 2024 18:04

Tgt Ion: 61 Resp: 1119

Ion	Ratio	Lower	Upper
61	100		
70	76.1	53.5	93.5

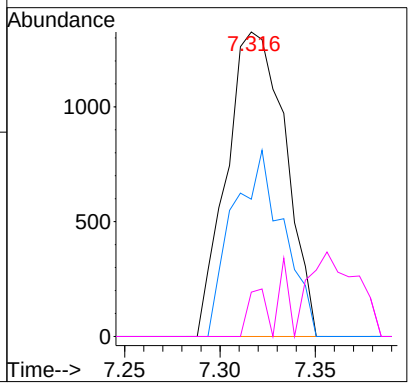


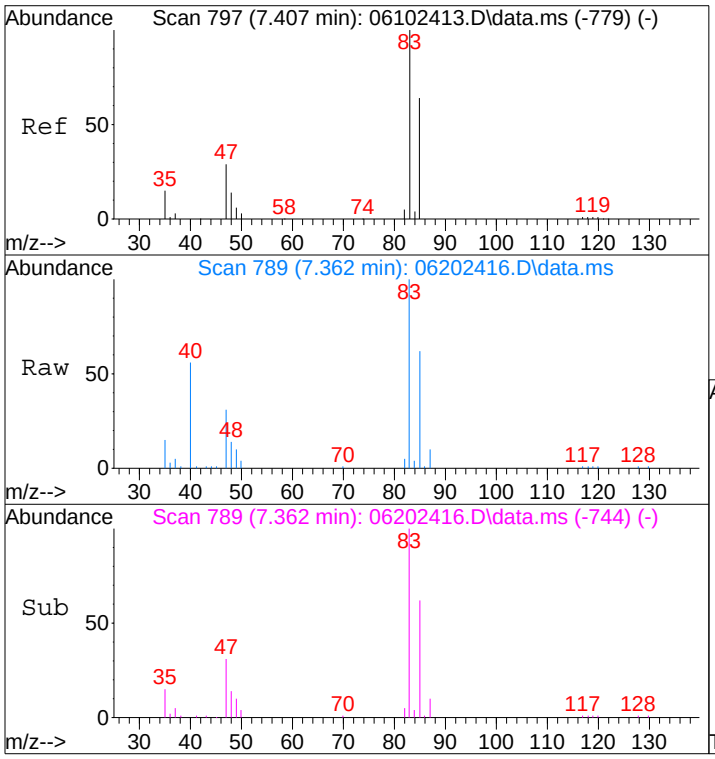


#31
n-Hexane
Concen: 0.11 ng
RT: 7.32 min Scan# 781
Delta R.T. 0.068 min
Lab File: 06202416.D
Acq: 20 Jun 2024 18:04

Tgt Ion: 57 Resp: 2836

Ion	Ratio	Lower	Upper
57	100		
56	52.8	42.5	63.7
86	4.8	9.5	14.3#

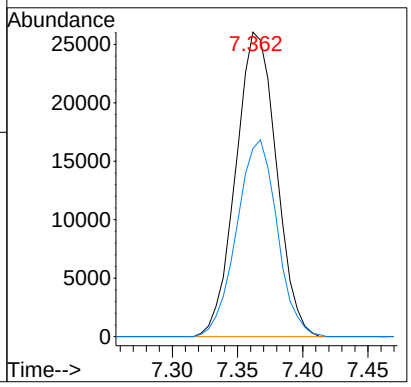


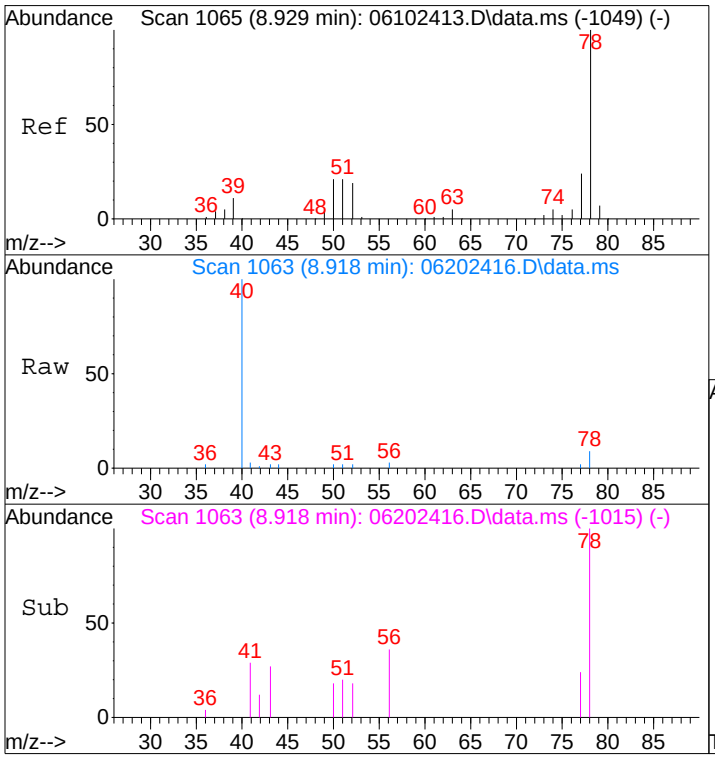


#32
Chloroform
Concen: 1.81 ng
RT: 7.36 min Scan# 789
Delta R.T. 0.007 min
Lab File: 06202416.D
Acq: 20 Jun 2024 18:04

Tgt Ion: 83 Resp: 56425

Ion	Ratio	Lower	Upper
83	100		
85	64.3	44.4	84.4

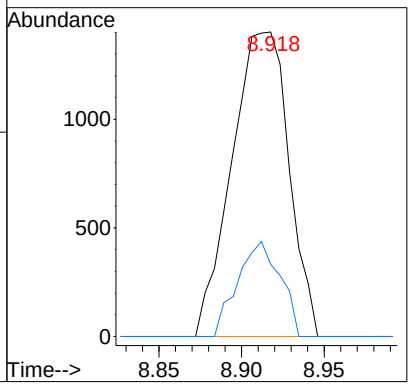


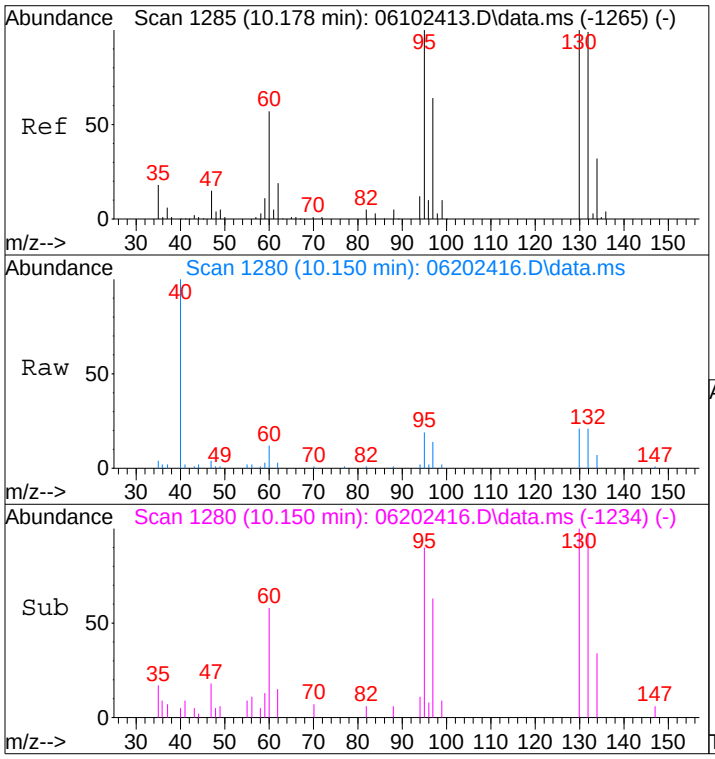


#41
Benzene
Concen: 0.05 ng
RT: 8.92 min Scan# 1063
Delta R.T. 0.020 min
Lab File: 06202416.D
Acq: 20 Jun 2024 18:04

Tgt Ion: 78 Resp: 3371

Ion	Ratio	Lower	Upper
78	100		
77	23.3	4.0	44.0

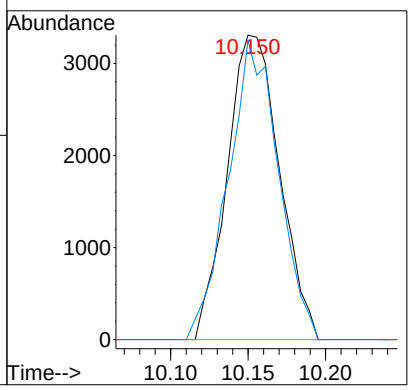


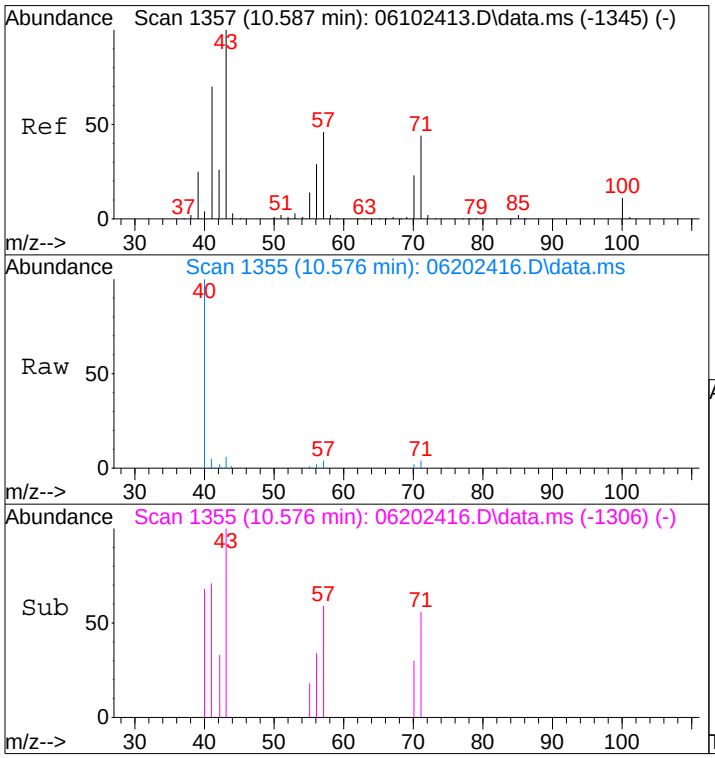


#47
Trichloroethene
Concen: 0.42 ng
RT: 10.15 min Scan# 1280
Delta R.T. 0.010 min
Lab File: 06202416.D
Acq: 20 Jun 2024 18:04

Tgt Ion:130 Resp: 7792

Ion	Ratio	Lower	Upper
130	100		
132	94.2	77.9	117.9

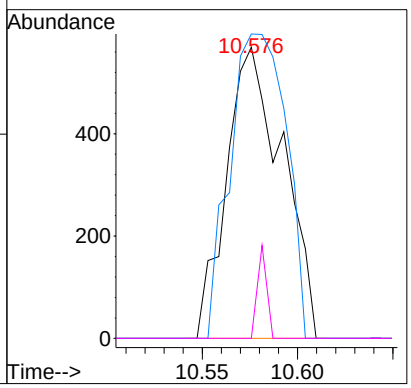


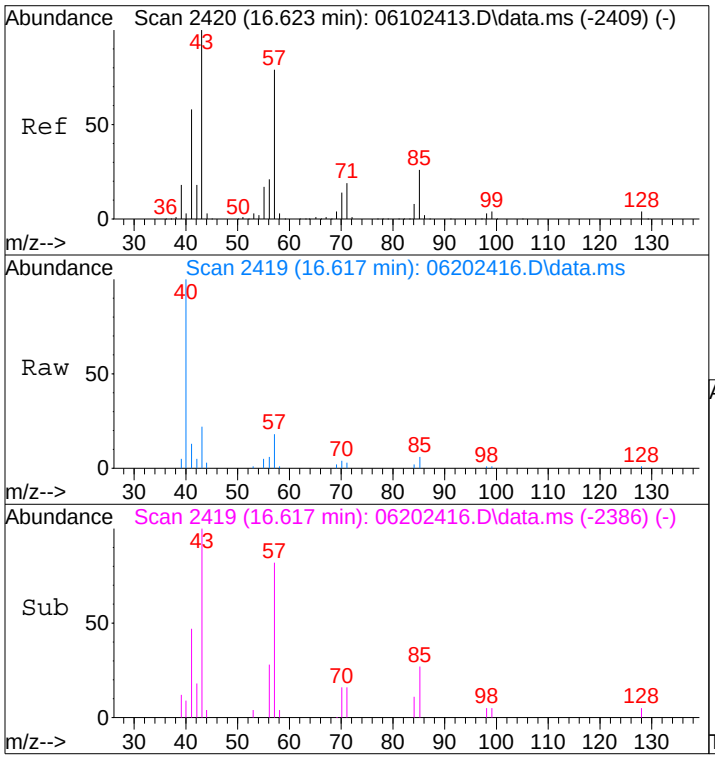


#51
n-Heptane
Concen: 0.09 ng
RT: 10.58 min Scan# 1355
Delta R.T. 0.029 min
Lab File: 06202416.D
Acq: 20 Jun 2024 18:04

Tgt Ion: 71 Resp: 1169

Ion	Ratio	Lower	Upper
71	100		
57	104.6	83.9	123.9
100	0.0	4.8	44.8#

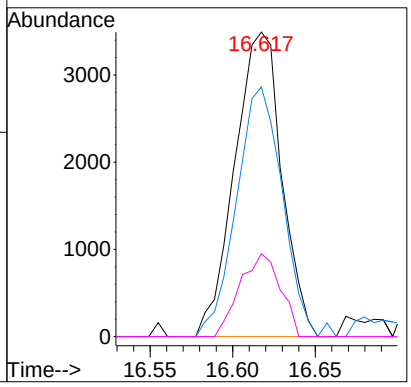




#71
n-Nonane
Concen: 0.20 ng
RT: 16.62 min Scan# 2419
Delta R.T. -0.011 min
Lab File: 06202416.D
Acq: 20 Jun 2024 18:04

Tgt Ion: 43 Resp: 6935

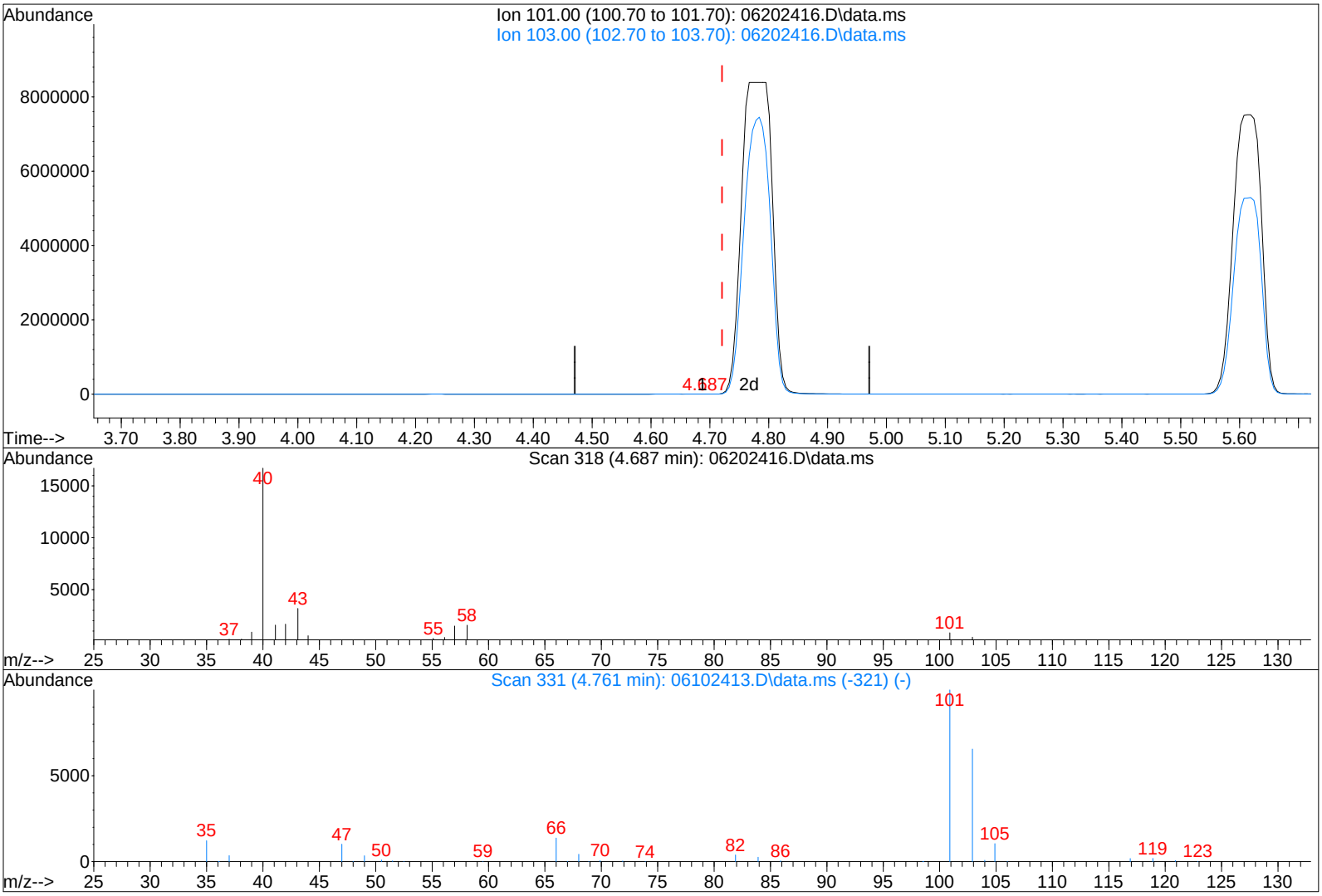
Ion	Ratio	Lower	Upper
43	100		
57	80.1	58.2	98.2
85	23.4	5.9	45.9



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\20\06202416.D Vial: 6
Acq On : 20 Jun 2024 18:04 Operator: SC
Sample : P2402249-044 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 11:55:32 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06202416.D\data.ms

(14) Trichlorofluoromethane (T)

4.687min (-0.033) 0.03ng

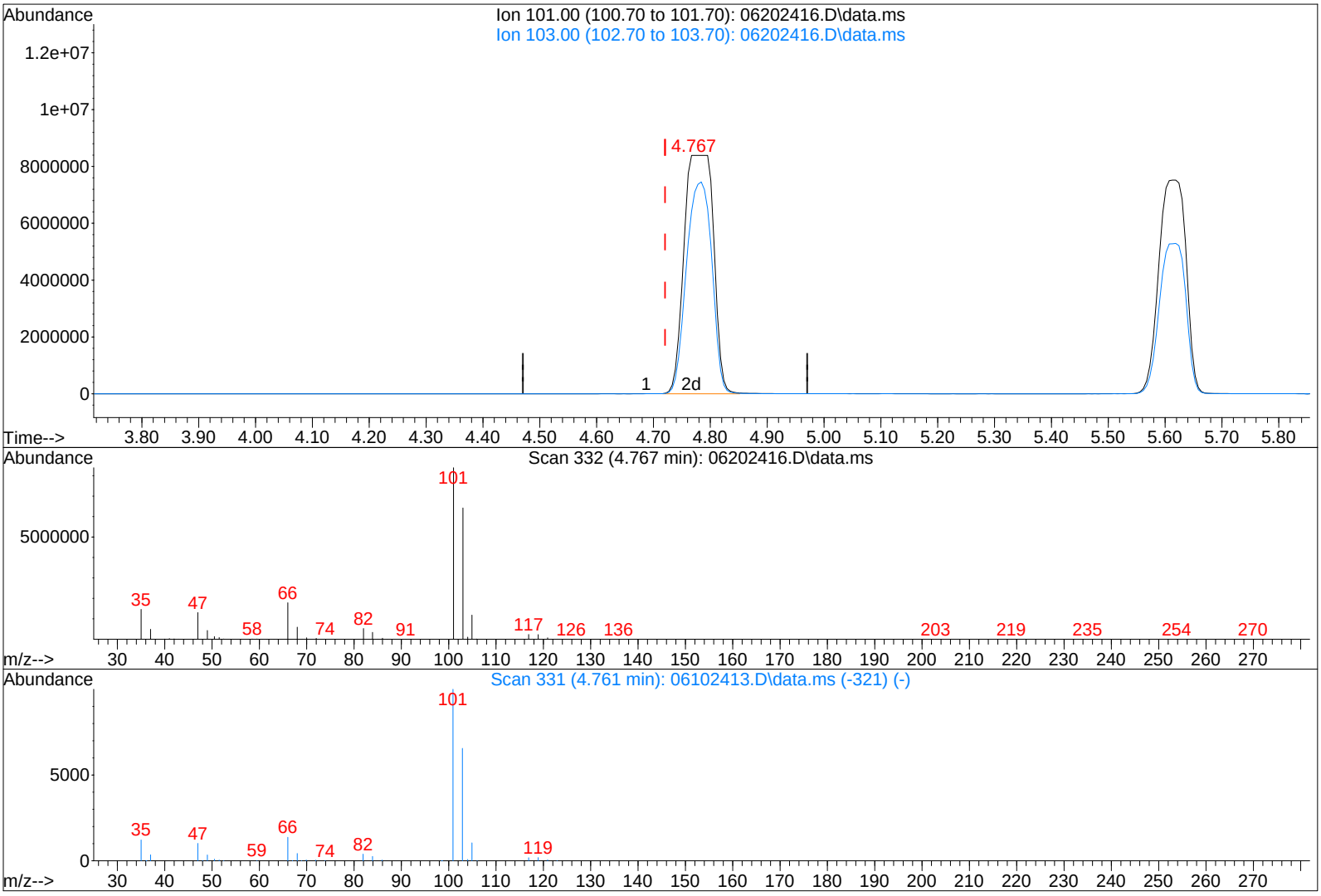
response 1105

Ion	Exp%	Act%
101.00	100	100
103.00	64.90	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\20\06202416.D Vial: 6
Acq On : 20 Jun 2024 18:04 Operator: SC
Sample : P2402249-044 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 11:55:32 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06202416.D\data.ms

(14) Trichlorofluoromethane (T)

4.767min (+0.046) 796.49ng m

response 30209034

Ion	Exp%	Act%
101.00	100	100
103.00	64.90	76.60
0.00	0.00	0.00
0.00	0.00	0.00

MP

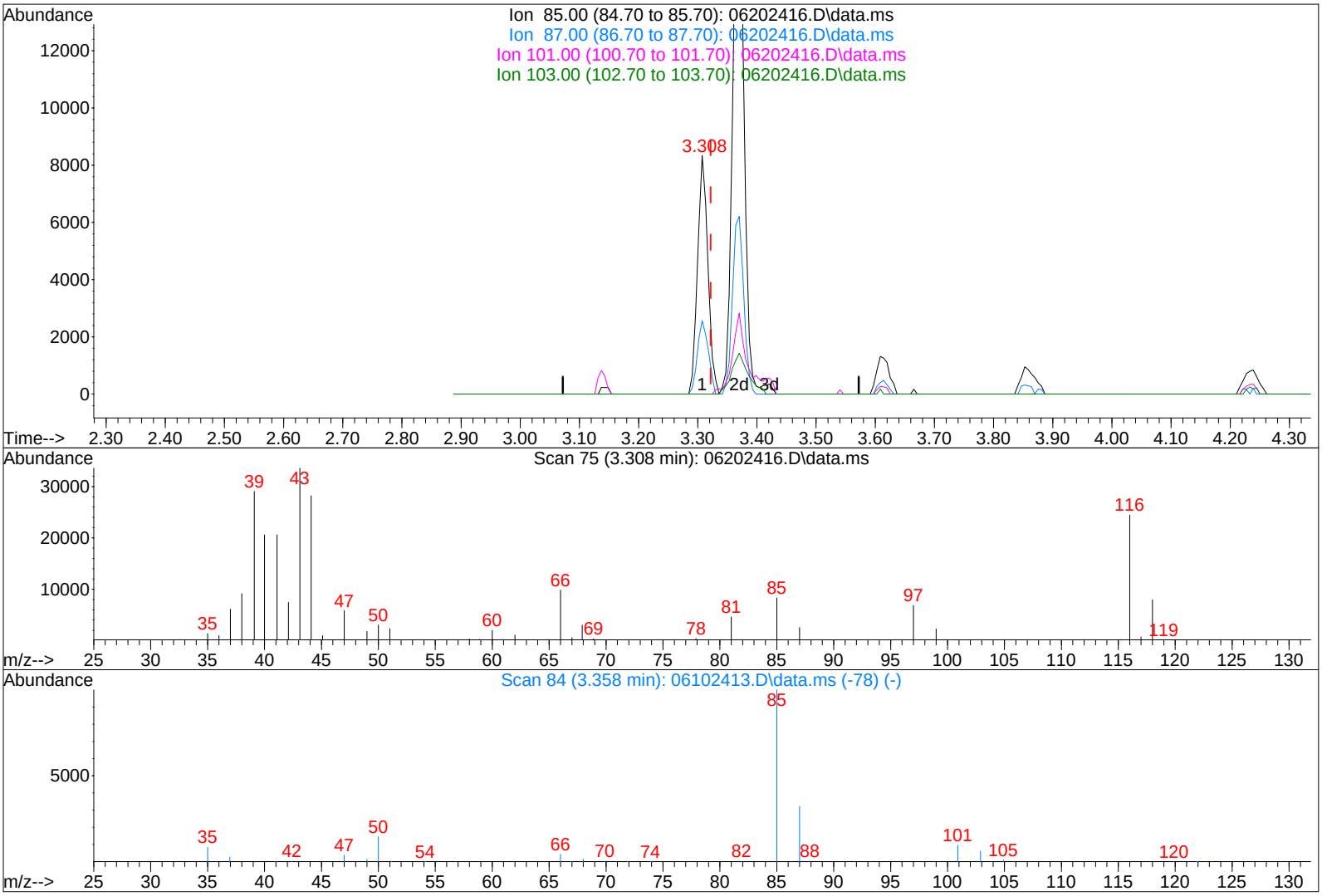
MJ 6/29/24

CG 6/29/24

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\20\06202416.D Vial: 6
Acq On : 20 Jun 2024 18:04 Operator: SC
Sample : P2402249-044 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 11:55:32 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06202416.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.308min (-0.015) 0.27ng

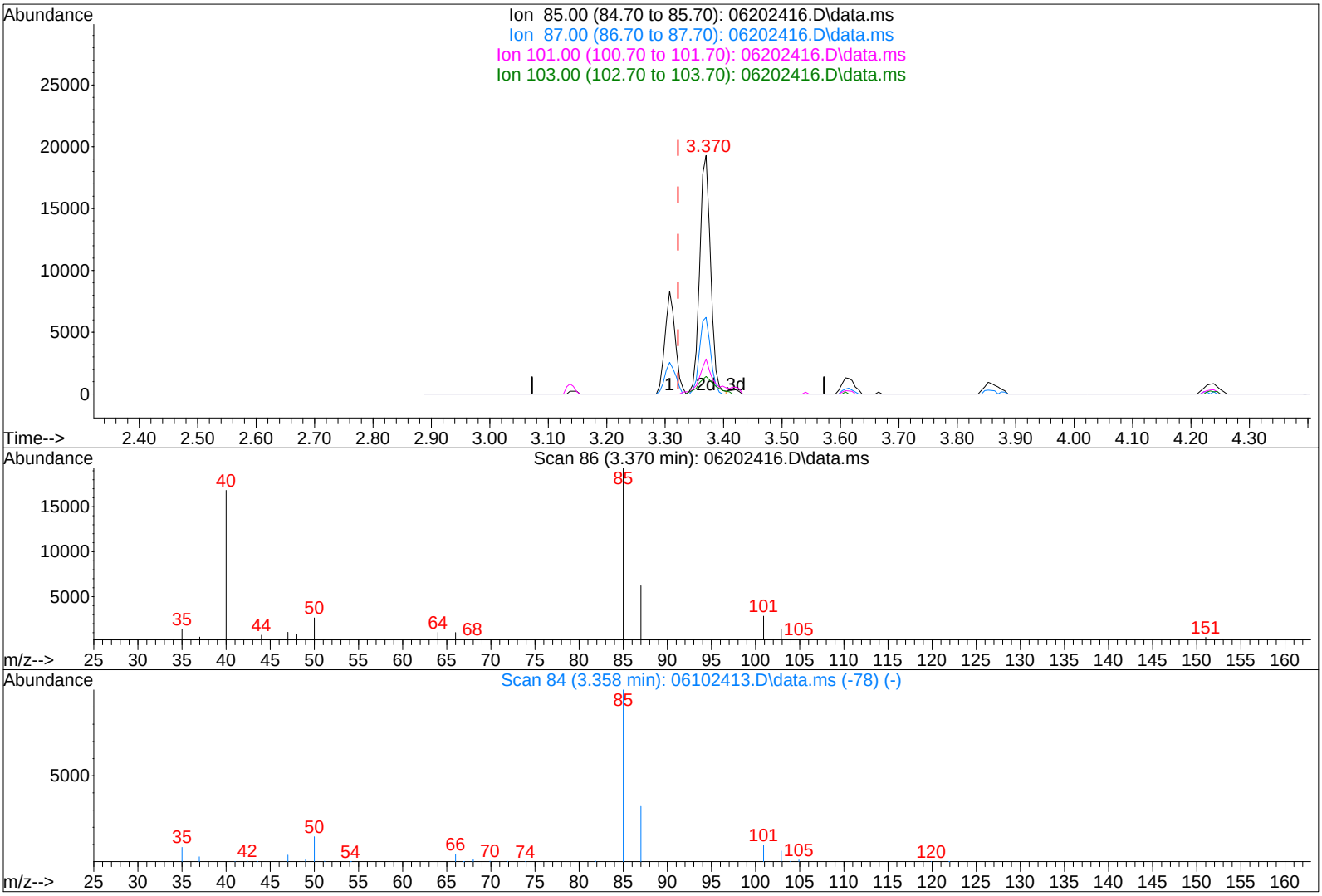
response 10124

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	32.39
101.00	9.80	0.00
103.00	6.30	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\20\06202416.D Vial: 6
Acq On : 20 Jun 2024 18:04 Operator: SC
Sample : P2402249-044 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 11:55:32 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06202416.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.370min (+0.048) 0.67ng m

response 25134

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	32.82
101.00	9.80	17.24
103.00	6.30	11.17

MJ 6/29/24

WP

CG 6/29/24

Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\20\06202416.D Vial: 6
Acq On : 20 Jun 2024 18:04 Operator: SC
Sample : P2402249-044 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:32:48 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

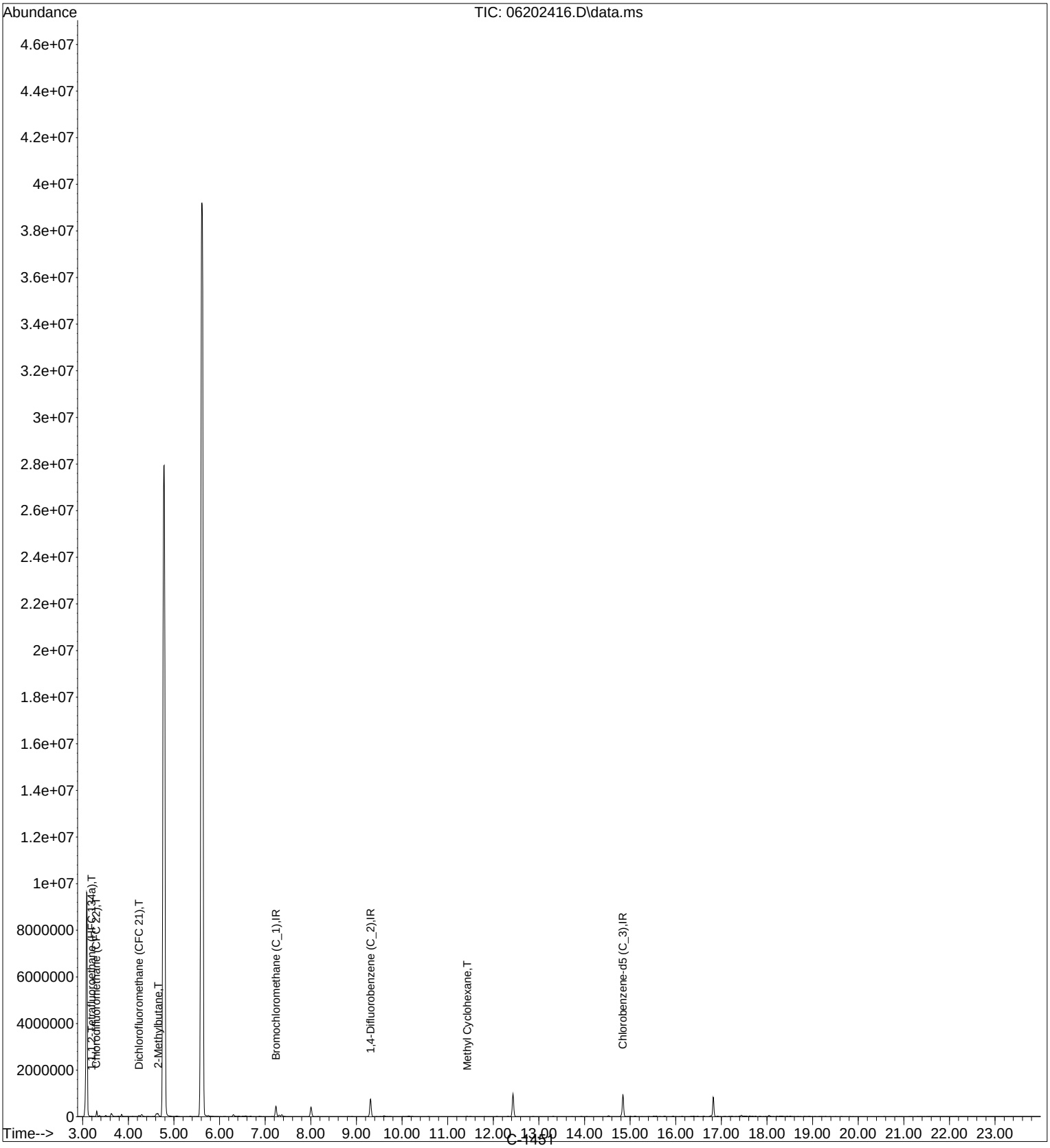
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.24	130	160322	12.500	ng		-0.02
16) 1,4-Difluorobenzene (C 2)	9.31	114	696678	12.500	ng		-0.01
19) Chlorobenzene-d5 (C_3)	14.84	54	160983	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	3.14	85	235	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.19	83	1703	0.104	ng	#	1
4) 1,1-Difluoroethane	0.00	65	0	N.D.			
5) Chlorodifluoromethane ...	3.30	67	1893	0.346	ng	#	82
6) 1-Chloro-1,1-Difluoroe...	3.51	65	717	N.D.			
7) Dichlorofluoromethane ...	4.23	67	38984	1.060	ng		100
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	0.00	83	0	N.D.	d		
10) 2-Methylbutane	4.65	57	8331	0.436	ng	#	67
11) Methyl Acetate	5.35	43	1757	N.D.			
12) 2-Methylpentane	6.50	71	1263	N.D.			
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	9.08	84	57	N.D.			
17) 2,3-Dimethylpentane	9.53	56	2095	N.D.			
18) Dibromomethane	9.81	174	224	N.D.			
20) Methyl Cyclohexane	11.43	55	4329	0.157	ng		98
21) 1,3-Dichloropropane	0.00	76	0	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	0.00	75	0	N.D.			
25) Bromobenzene	17.04	77	61	N.D.			
26) 2-Chlorotoluene	17.61	91	1019	N.D.			
27) 4-Chlorotoluene	17.68	91	1614	N.D.			
28) Indane	0.00	117	0	N.D.			
29) Indene	0.00	115	0	N.D.			
30) 1,2,4,5-Tetramethylben...	0.00	119	0	N.D.			
31) 1,2,3,4-Tetramethylben...	0.00	119	0	N.D.			
32) 1,2,3,5-Tetramethylben...	0.00	119	0	N.D.			
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202416.D Vial: 6
Acq On : 20 Jun 2024 18:04 Operator: SC
Sample : P2402249-044 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:32:48 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



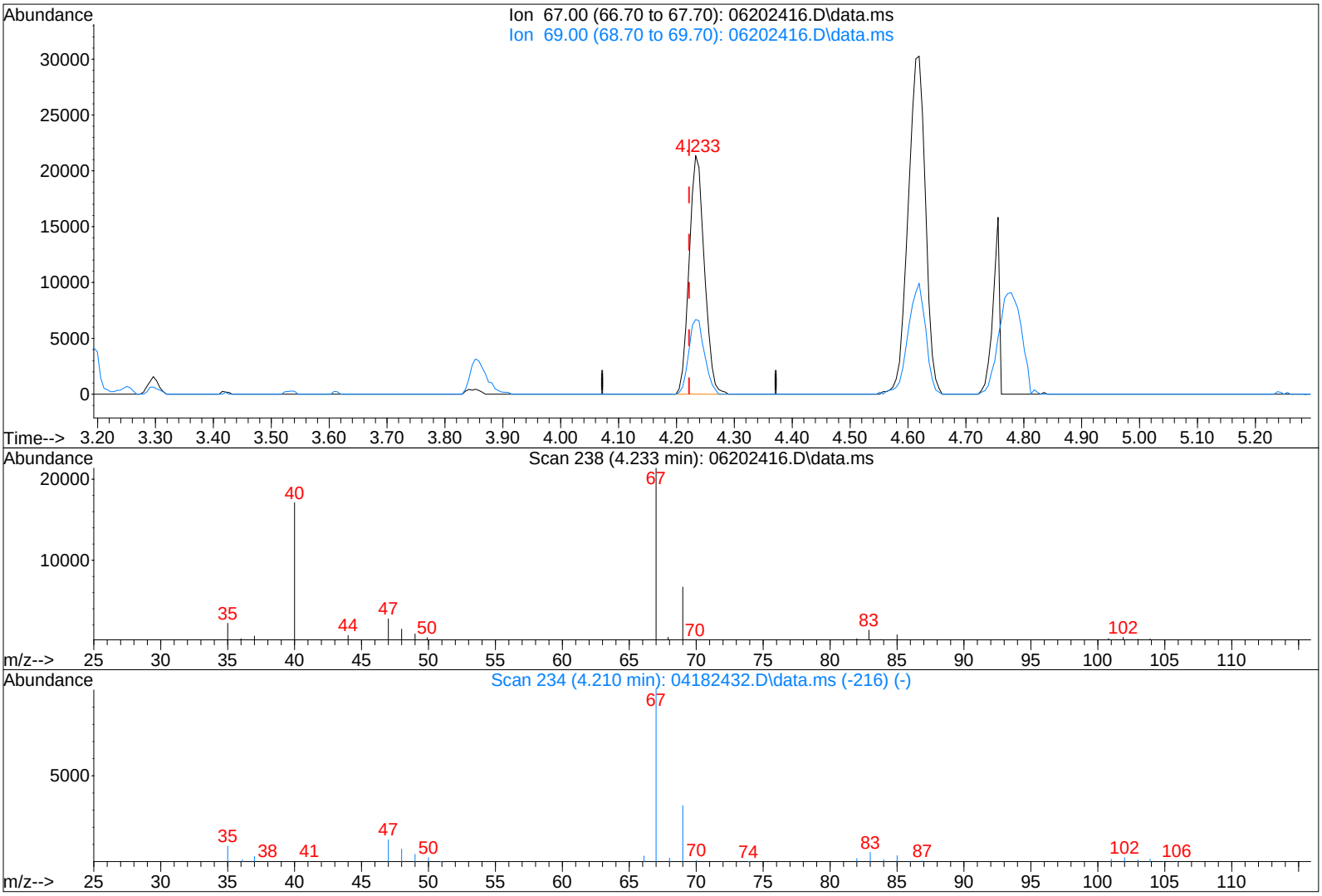
C-1451

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\20\06202416.D Vial: 6
Acq On : 20 Jun 2024 18:04 Operator: SC
Sample : P2402249-044 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 15:27:54 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06202416.D\data.ms

(7) Dichlorofluoromethane (CFC 21) (T)

4.233min (+0.011) 1.06ng

response 38984

Ion	Exp%	Act%
67.00	100	100
69.00	32.40	32.36
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212409.D Vial: 6
Acq On : 21 Jun 2024 14:42 Operator: SC
Sample : P2402249-044Dil (20mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 21 15:04:42 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	174645	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	767799	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	175582	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	379367	12.222	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.76%				
57) Toluene-d8 (SS2)	12.43	98	869784	12.945	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.52%				
73) Bromofluorobenzene (SS3)	16.83	174	296110	12.204	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.60%				
Target Compounds							Qvalue
2) Propene	3.34	42	602	N.D.			
3) Dichlorodifluoromethan...	3.34	85	306	N.D.			
4) Chloromethane	3.53	50	101	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.41	45	62	N.D.			
11) Acetonitrile	4.46	41	247	N.D.			
12) Acrolein	0.00	56	0	N.D.			
13) Acetone	4.66	58	2966	0.219	ng	#	85
14) Trichlorofluoromethane	4.76	101	1948004	46.852	ng		100
15) 2-Propanol (Isopropanol)	4.92	45	1118	N.D.			
16) Acrylonitrile	5.01	53	645	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	0.00	59	0	N.D.			
19) Methylene Chloride	5.35	84	987	0.051	ng		86
20) 3-Chloro-1-propene (Al...	5.45	41	240	N.D.			
21) Trichlorotrifluoroethane	5.58	151	1104598	62.802	ng		94
22) Carbon Disulfide	5.61	76	1616	N.D.			
23) trans-1,2-Dichloroethene	6.13	61	104	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D.			
27) 2-Butanone (MEK)	0.00	72	0	N.D.			
28) cis-1,2-Dichloroethene	7.07	61	266	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.			
30) Ethyl Acetate	0.00	61	0	N.D.			
31) n-Hexane	0.00	57	0	N.D.			
32) Chloroform	7.36	83	2406	0.070	ng		98
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	315	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	0.00	56	0	N.D.			
41) Benzene	8.90	78	1107	N.D.			
42) Carbon Tetrachloride	0.00	117	0	N.D.			
43) Cyclohexane	9.29	84	1031	N.D.			
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.08	83	601	N.D.			
47) Trichloroethene	10.16	130	490	N.D.			
48) 1,4-Dioxane	10.16	88	133	N.D.			
49) 2,2,4-Trimethylpentane...	0.00	57	0	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212409.D Vial: 6
Acq On : 21 Jun 2024 14:42 Operator: SC
Sample : P2402249-044Dil (20mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 21 15:04:42 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

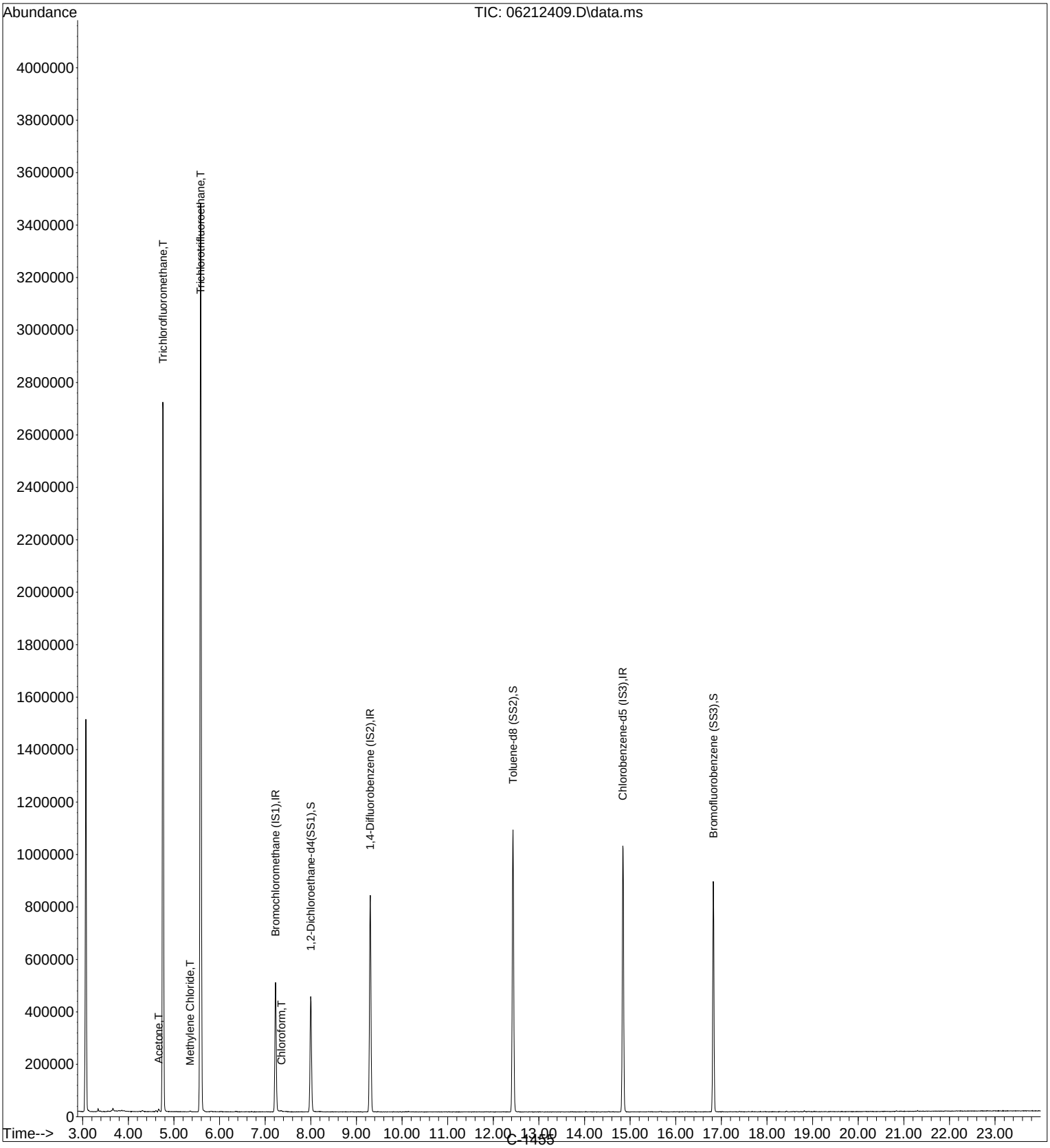
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
51) n-Heptane	0.00	71	0	N.D.		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	12.56	91	934	N.D.		
59) 2-Hexanone	0.00	43	0	N.D.		
60) Dibromochloromethane	13.07	129	526	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	0.00	43	0	N.D.		
63) n-Octane	0.00	57	0	N.D.		
64) Tetrachloroethene	14.04	166	385	N.D.		
65) Chlorobenzene	14.90	112	875	N.D.		
66) Ethylbenzene	15.41	91	1022	N.D.		
67) m- & p-Xylenes	15.65	91	1110	N.D.		
68) Bromoform	15.67	173	595	N.D.		
69) Styrene	0.00	104	0	N.D.		
70) o-Xylene	16.24	91	773	N.D.		
71) n-Nonane	0.00	43	0	N.D.		
72) 1,1,2,2-Tetrachloroethane	16.21	83	448	N.D.		
74) Cumene	17.03	105	940	N.D.		
75) alpha-Pinene	0.00	93	0	N.D.		
76) n-Propylbenzene	17.67	91	1382	N.D.		
77) 3-Ethyltoluene	17.03	105	940	No Calib		#
78) 4-Ethyltoluene	17.86	105	760	N.D.		
79) 1,3,5-Trimethylbenzene	17.95	105	667	N.D.		
80) alpha-Methylstyrene	0.00	118	0	N.D.		
81) 2-Ethyltoluene	17.03	105	940	No Calib		#
82) 1,2,4-Trimethylbenzene	18.43	105	589	N.D.		
83) n-Decane	0.00	58	0	N.D.		
84) Benzyl Chloride	18.57	91	204	N.D.		
85) 1,3-Dichlorobenzene	18.58	146	639	N.D.		
86) 1,4-Dichlorobenzene	18.66	146	760	N.D.		
87) sec-Butylbenzene	18.74	105	922	N.D.		
88) 4-Isopropyltoluene (p-...	18.93	119	615	N.D.		
89) 1,2,3-Trimethylbenzene	17.03	105	940	No Calib		#
90) 1,2-Dichlorobenzene	19.04	146	691	N.D.		
91) d-Limonene	0.00	68	0	N.D.		
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	0.00	58	0	N.D.		
94) 1,2,4-Trichlorobenzene	20.84	180	1141	N.D.		
95) Naphthalene	20.94	128	1012	N.D.		
96) n-Dodecane	0.00	58	0	N.D.		
97) Hexachlorobutadiene	21.30	225	727	N.D.		
98) Cyclohexanone	0.00	55	0	N.D.		
99) tert-Butylbenzene	18.43	119	994	N.D.		
100) n-Butylbenzene	19.39	91	597	N.D.		
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212409.D Vial: 6
Acq On : 21 Jun 2024 14:42 Operator: SC
Sample : P2402249-044Dil (20mL) Inst : MS09
Misc : S37-06062402

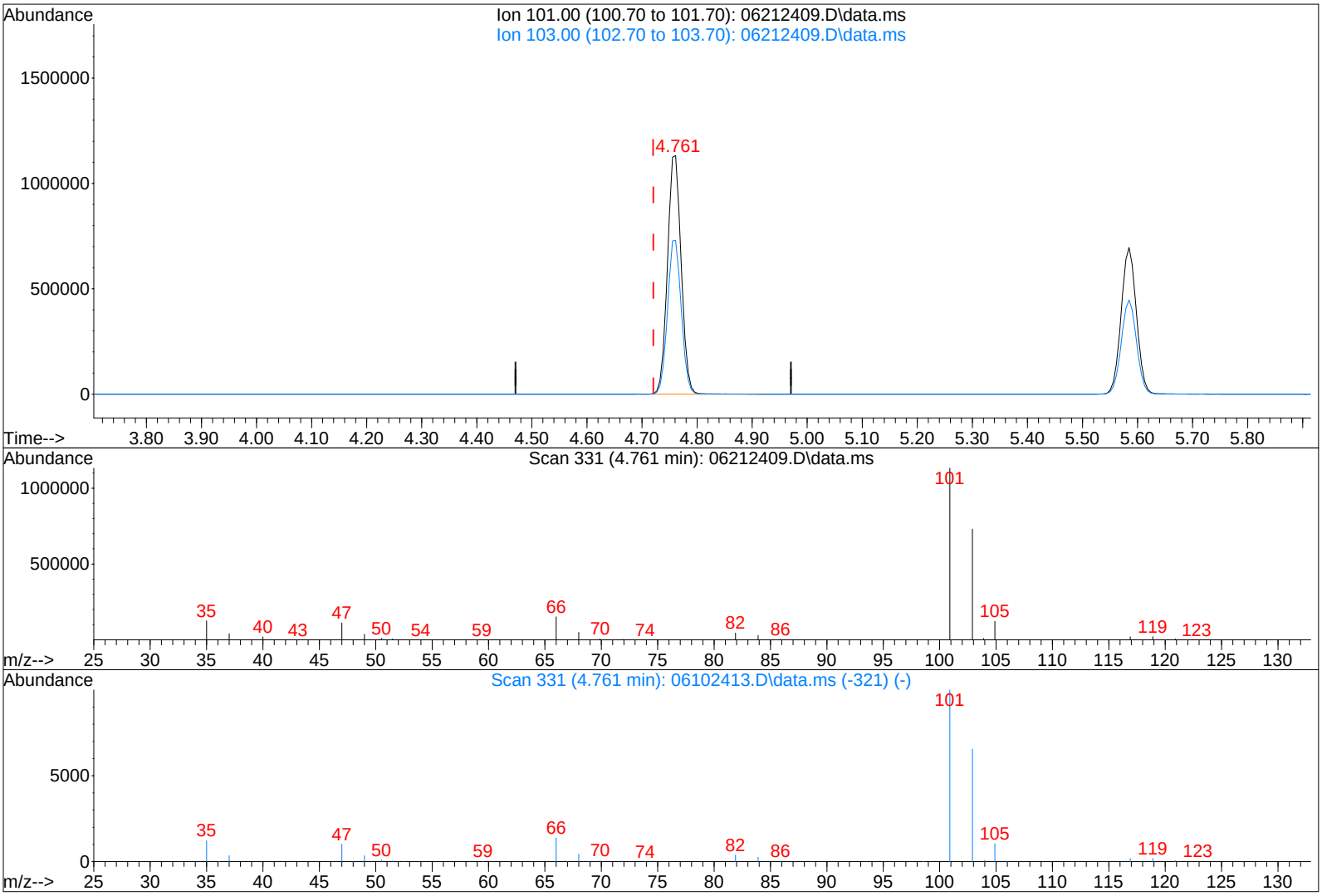
Quant Time: Jun 21 15:04:42 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\21\06212409.D Vial: 6
Acq On : 21 Jun 2024 14:42 Operator: SC
Sample : P2402249-044Dil (20mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 21 15:04:42 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06212409.D\data.ms

(14) Trichlorofluoromethane (T)

4.761min (+0.040) 46.85ng

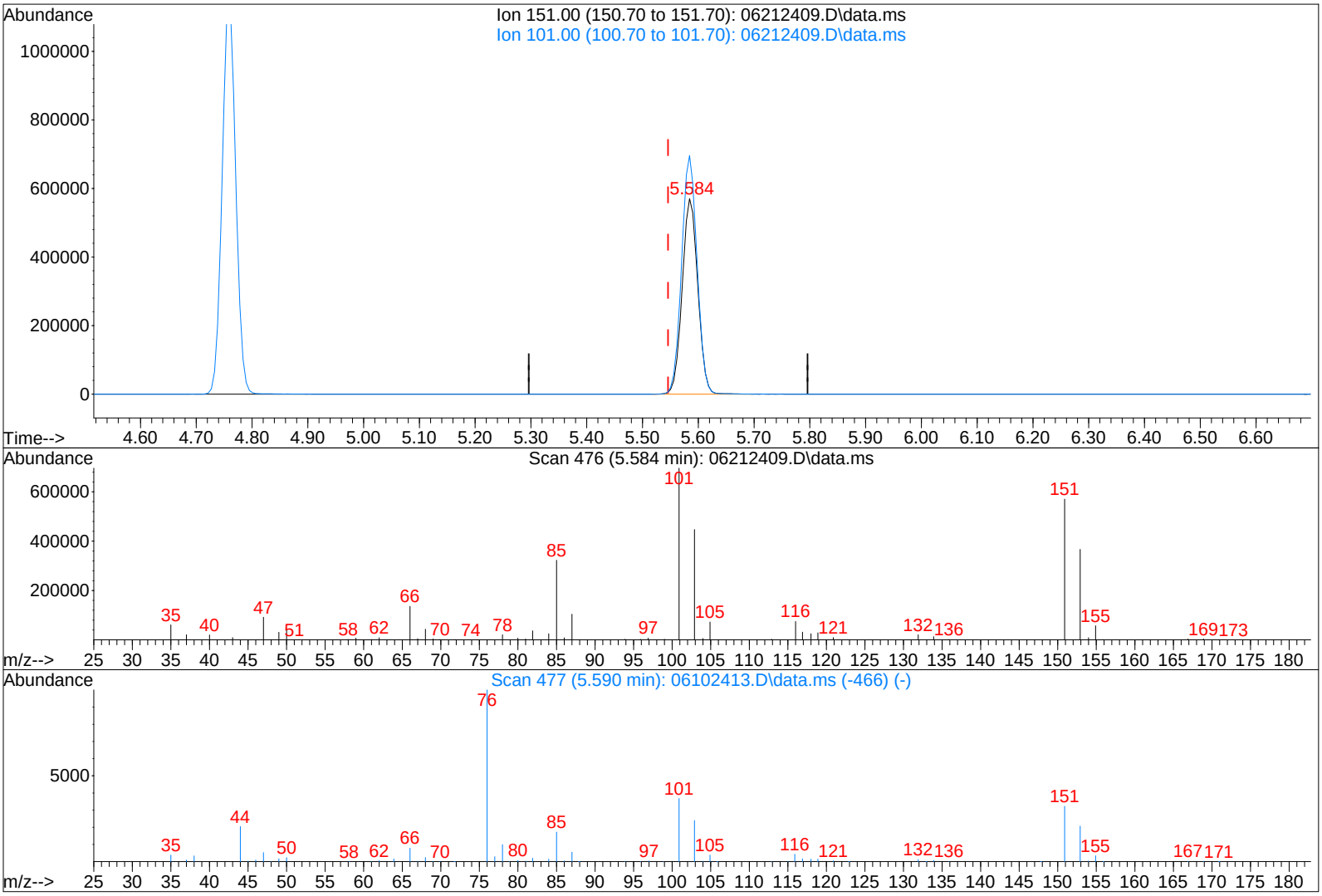
response 1948004

Ion	Exp%	Act%
101.00	100	100
103.00	64.90	64.77
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\21\06212409.D Vial: 6
Acq On : 21 Jun 2024 14:42 Operator: SC
Sample : P2402249-044Dil (20mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 21 15:04:42 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06212409.D\data.ms

(21) Trichlorotrifluoroethane (T)

5.584min (+0.038) 62.80ng

response 1104598

Ion	Exp%	Act%
151.00	100	100
101.00	115.00	121.06
0.00	0.00	0.00
0.00	0.00	0.00

LSC Area Percent Report

MJ 6/28/24

Data Path : I:\MS09\DATA\2024 06\20\
Data File : 06202416.D
Acq On : 20 Jun 2024 18:04
Operator : SC
Sample : P2402249-044 (400mL)
Misc : S37-06062402
ALS Vial : 6 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06202416.D\data.ms

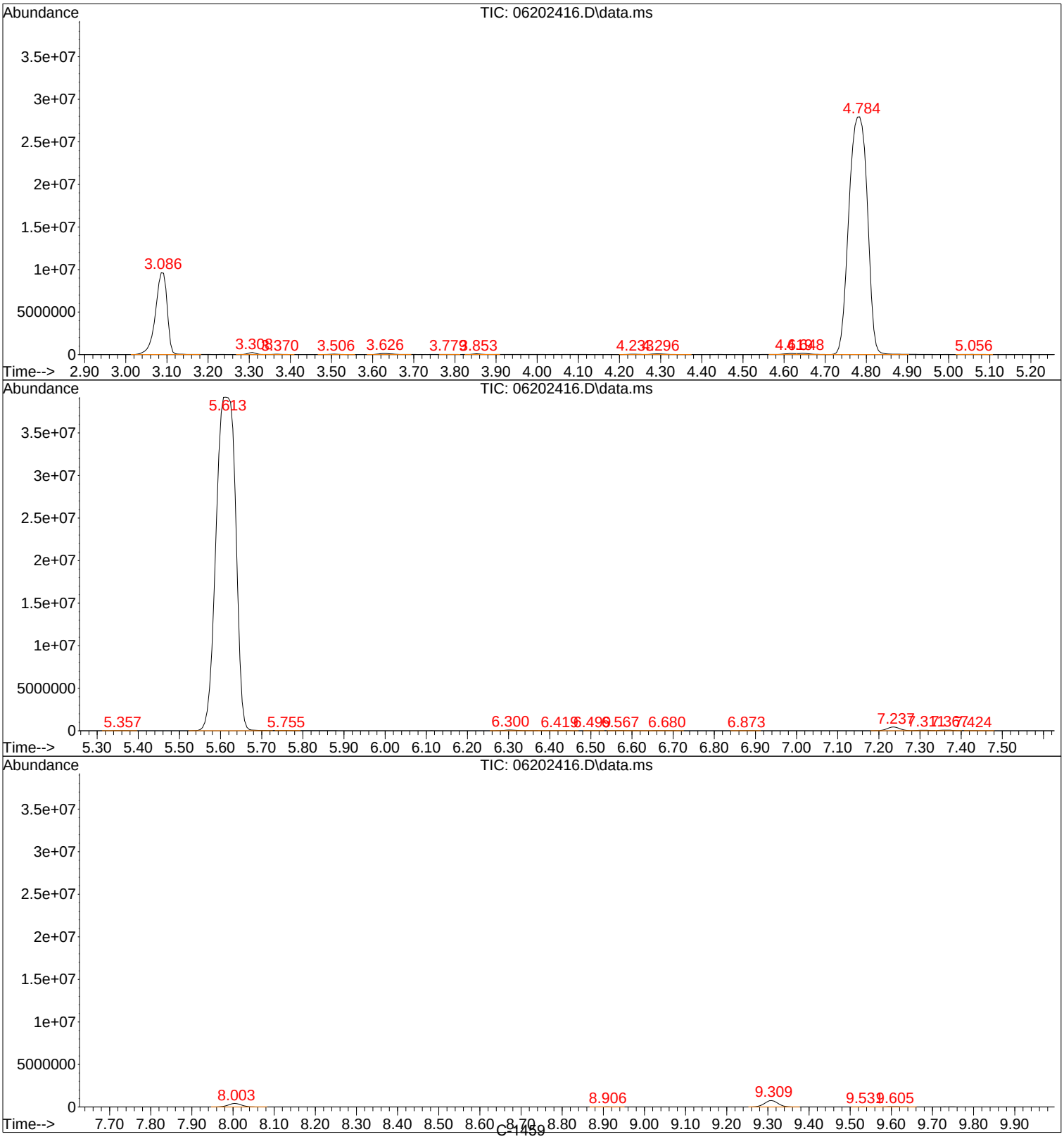
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.086	23	36	53	rBV	9611443	19069889	14.75%	7.897%
2	3.308	68	75	80	rBV2	229185	305699	0.24%	0.127%
3	3.370	80	86	93	rVB2	38539	60280	0.05%	0.025%
4	3.506	103	110	119	rBV2	44314	66456	0.05%	0.028%
5	3.626	124	131	143	rBV3	121266	274071	0.21%	0.114%
6	3.779	155	158	164	rVB	11233	16149	0.01%	0.007%
7	3.853	166	171	181	rVB2	81955	112119	0.09%	0.046%
8	4.233	232	238	243	rBV	41249	75741	0.06%	0.031%
9	4.296	243	249	263	rVB	76164	173257	0.13%	0.072%
10	4.619	296	306	308	rBV	113490	226161	0.17%	0.094%
11	4.648	308	311	322	rVB	126784	239633	0.19%	0.099%
12	4.784	322	335	356	rBV2	27920354	87180172	67.43%	36.104%
13	5.056	376	383	392	rVB3	16561	43238	0.03%	0.018%
14	5.357	428	436	443	rBV4	9184	19018	0.01%	0.008%
15	5.613	465	481	501	rBV2	39181335	129287901	100.00%	53.542%
16	5.755	502	506	513	rVB	31925	58543	0.05%	0.024%
17	6.300	594	602	615	rBV	73831	179704	0.14%	0.074%
18	6.419	615	623	632	rVV4	13916	47862	0.04%	0.020%
19	6.499	634	637	643	rVV4	12857	29302	0.02%	0.012%
20	6.567	644	649	662	rVV6	21975	62037	0.05%	0.026%
21	6.680	662	669	677	rVB	15060	32014	0.02%	0.013%
22	6.873	697	703	710	rBV2	9710	19683	0.02%	0.008%
23	7.237	757	767	774	rBV	439584	927606	0.72%	0.384%
24	7.311	774	780	785	rVV	55669	133915	0.10%	0.055%
25	7.367	785	790	796	rVV	71262	150140	0.12%	0.062%
26	7.424	797	800	810	rVB2	8667	16758	0.01%	0.007%
27	8.003	892	902	916	rBV	404608	891590	0.69%	0.369%
28	8.906	1054	1061	1069	rVB5	5619	15196	0.01%	0.006%
29	9.309	1122	1132	1144	rVB	744978	1676542	1.30%	0.694%
30	9.531	1166	1171	1178	rBV2	5300	11617	0.01%	0.005%
31	9.605	1178	1184	1194	rBV2	30535	69115	0.05%	0.029%

Sum of corrected areas: 241471408

Data Path : I:\MS09\DATA\2024 06\20\
Data File : 06202416.D
Acq On : 20 Jun 2024 18:04
Operator : SC
Sample : P2402249-044 (400mL)
Misc : S37-06062402
ALS Vial : 6 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\20\\
Data File : 06202416.D
Acq On : 20 Jun 2024 18:044
Operator : SCC
Sample : P2402249-044 (400mL))
Misc : S37-060624022
ALS Vial : 6 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

						--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202417.D Vial: 7
Acq On : 20 Jun 2024 18:36 Operator: SC
Sample : P2402249-045 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/29/24

Quant Time: Jun 29 10:04:05 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.22	130	155217	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	685101	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	155601	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	345836	12.536	ng		0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.32%				
57) Toluene-d8 (SS2)	12.43	98	760240	12.767	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.16%				
73) Bromofluorobenzene (SS3)	16.83	174	271969	12.649	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.20%				
Target Compounds							Qvalue
2) Propene	3.31	42	748	N.D.			
3) Dichlorodifluoromethan...	0.00	85	0	N.D.			
4) Chloromethane	3.52	50	223	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.30	45	2317	0.154	ng		94
11) Acetonitrile	4.45	41	400	N.D.			
12) Acrolein	4.55	56	333	N.D.			
13) Acetone	4.65	58	5782	0.480	ng	#	65
14) Trichlorofluoromethane	4.76	101	4495m	0.122	ng		
15) 2-Propanol (Isopropanol)	4.86	45	1081	N.D.			
16) Acrylonitrile	4.99	53	545	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	0.00	59	0	N.D.			
19) Methylene Chloride	5.34	84	1045	0.061	ng		82
20) 3-Chloro-1-propene (Al...	5.45	41	172	N.D.			
21) Trichlorotrifluoroethane	5.59	151	3609	0.231	ng		100
22) Carbon Disulfide	5.61	76	2181	N.D.			
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D.			
27) 2-Butanone (MEK)	0.00	72	0	N.D.	d		
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.			
30) Ethyl Acetate	0.00	61	0	N.D.			
31) n-Hexane	0.00	57	0	N.D.			
32) Chloroform	0.00	83	0	N.D.			
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.12	62	171	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.83	56	3213	No Calib		#	
41) Benzene	8.89	78	2312	N.D.			
42) Carbon Tetrachloride	0.00	117	0	N.D.			
43) Cyclohexane	0.00	84	0	N.D.	d		
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.06	83	282	N.D.			
47) Trichloroethene	10.13	130	285	N.D.			
48) 1,4-Dioxane	10.14	88	223	N.D.			
49) 2,2,4-Trimethylpentane...	0.00	57	0	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202417.D Vial: 7
Acq On : 20 Jun 2024 18:36 Operator: SC
Sample : P2402249-045 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:04:05 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

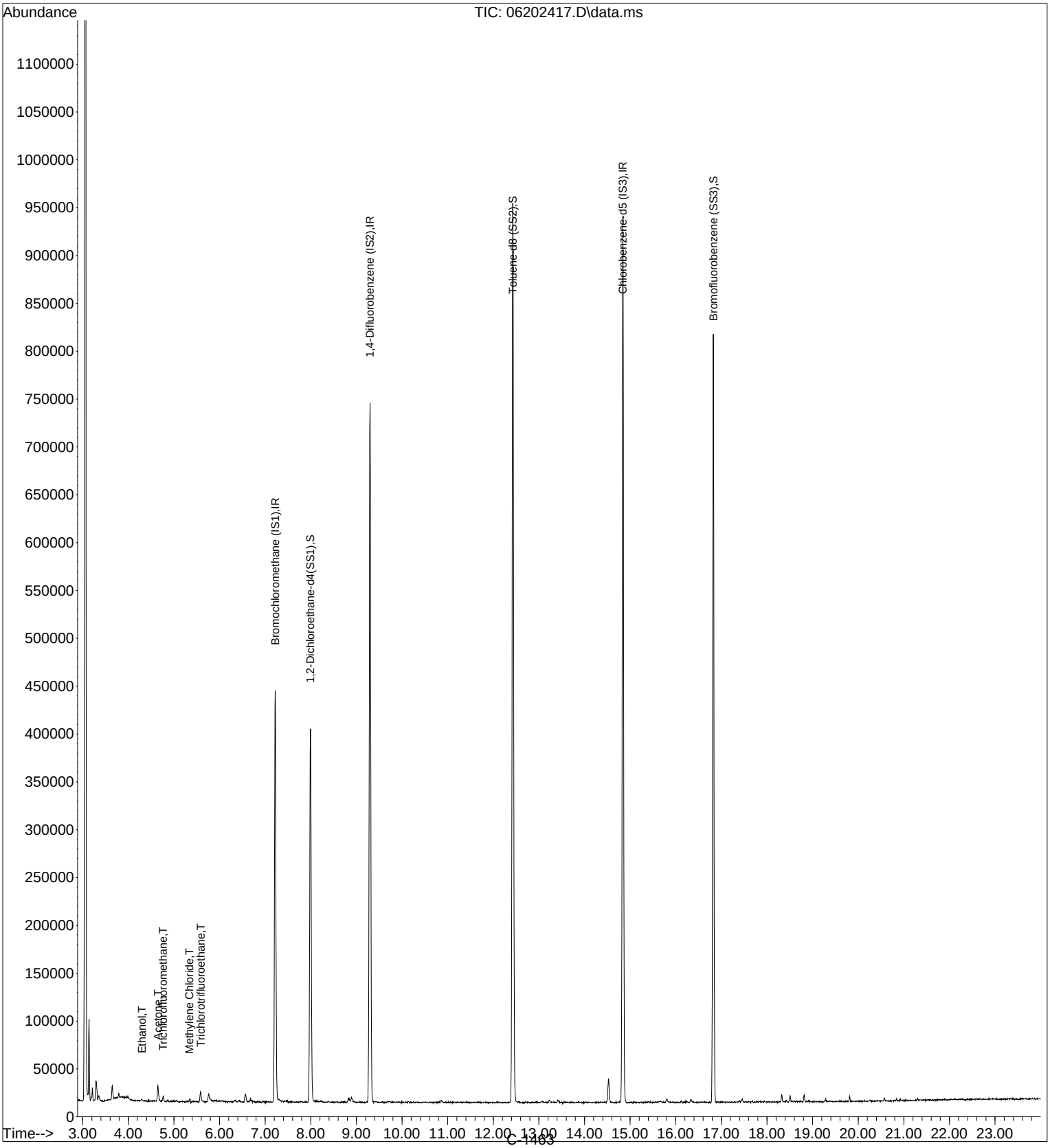
Internal Standards	R.T.	QIon	Response	Conc Units Dev(Min)
51) n-Heptane	0.00	71	0	N.D.
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.
58) Toluene	12.56	91	1005	N.D.
59) 2-Hexanone	12.94	43	154	N.D.
60) Dibromochloromethane	13.06	129	438	N.D.
61) 1,2-Dibromoethane	0.00	107	0	N.D.
62) n-Butyl Acetate	0.00	43	0	N.D.
63) n-Octane	0.00	57	0	N.D.
64) Tetrachloroethene	14.03	166	411	N.D.
65) Chlorobenzene	14.91	112	565	N.D.
66) Ethylbenzene	15.41	91	926	N.D.
67) m- & p-Xylenes	15.66	91	864	N.D.
68) Bromoform	15.67	173	567	N.D.
69) Styrene	0.00	104	0	N.D.
70) o-Xylene	16.23	91	712	N.D.
71) n-Nonane	0.00	43	0	N.D.
72) 1,1,2,2-Tetrachloroethane	16.21	83	375	N.D.
74) Cumene	17.03	105	759	N.D.
75) alpha-Pinene	0.00	93	0	N.D.
76) n-Propylbenzene	17.67	91	1062	N.D.
77) 3-Ethyltoluene	17.03	105	759	No Calib #
78) 4-Ethyltoluene	17.87	105	581	N.D.
79) 1,3,5-Trimethylbenzene	17.96	105	471	N.D.
80) alpha-Methylstyrene	0.00	118	0	N.D.
81) 2-Ethyltoluene	17.03	105	759	No Calib #
82) 1,2,4-Trimethylbenzene	18.43	105	627	N.D.
83) n-Decane	0.00	58	0	N.D.
84) Benzyl Chloride	0.00	91	0	N.D.
85) 1,3-Dichlorobenzene	18.58	146	529	N.D.
86) 1,4-Dichlorobenzene	18.66	146	581	N.D.
87) sec-Butylbenzene	18.74	105	896	N.D.
88) 4-Isopropyltoluene (p-...	18.93	119	652	N.D.
89) 1,2,3-Trimethylbenzene	17.03	105	759	No Calib #
90) 1,2-Dichlorobenzene	19.04	146	445	N.D.
91) d-Limonene	0.00	68	0	N.D.
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.
93) n-Undecane	0.00	58	0	N.D.
94) 1,2,4-Trichlorobenzene	20.84	180	747	N.D.
95) Naphthalene	20.94	128	371	N.D.
96) n-Dodecane	0.00	58	0	N.D.
97) Hexachlorobutadiene	21.30	225	702	N.D.
98) Cyclohexanone	0.00	55	0	N.D.
99) tert-Butylbenzene	18.42	119	775	N.D.
100) n-Butylbenzene	19.39	91	558	N.D.
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202417.D Vial: 7
Acq On : 20 Jun 2024 18:36 Operator: SC
Sample : P2402249-045 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:04:05 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202417.D Vial: 7
Acq On : 20 Jun 2024 18:36 Operator: SC
Sample : P2402249-045 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/29/24

Quant Time: Jun 29 10:04:05 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

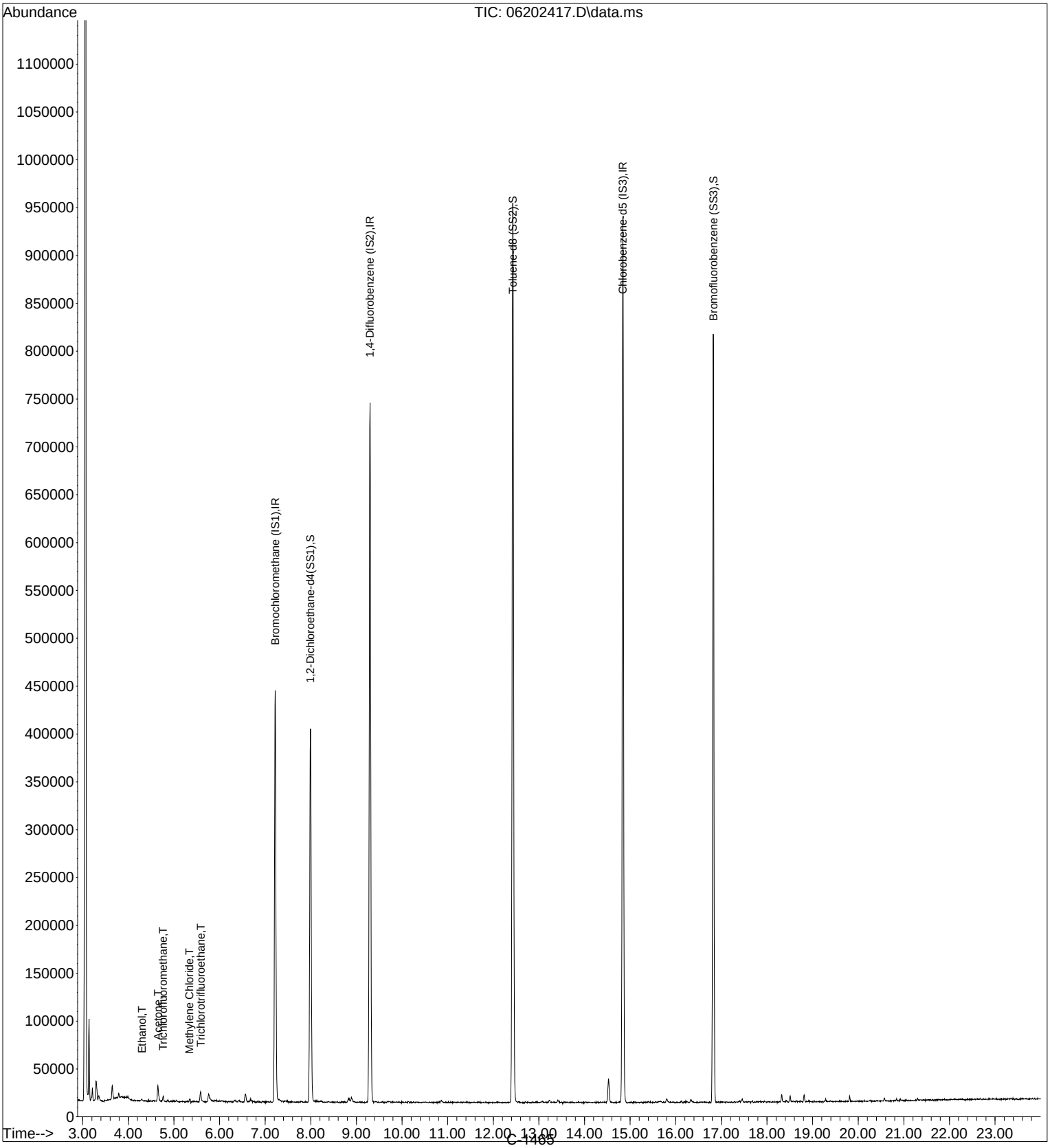
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.22	130	155217	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	685101	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	155601	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	345836	12.536	ng		0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.32%				
57) Toluene-d8 (SS2)	12.43	98	760240	12.767	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.16%				
73) Bromofluorobenzene (SS3)	16.83	174	271969	12.649	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.20%				
Target Compounds							Qvalue
10) Ethanol	4.30	45	2317	0.154	ng		94
13) Acetone	4.65	58	5782	0.480	ng	#	65
14) Trichlorofluoromethane	4.76	101	4495m	0.122	ng		
19) Methylene Chloride	5.34	84	1045	0.061	ng		82
21) Trichlorotrifluoroethane	5.59	151	3609	0.231	ng		100

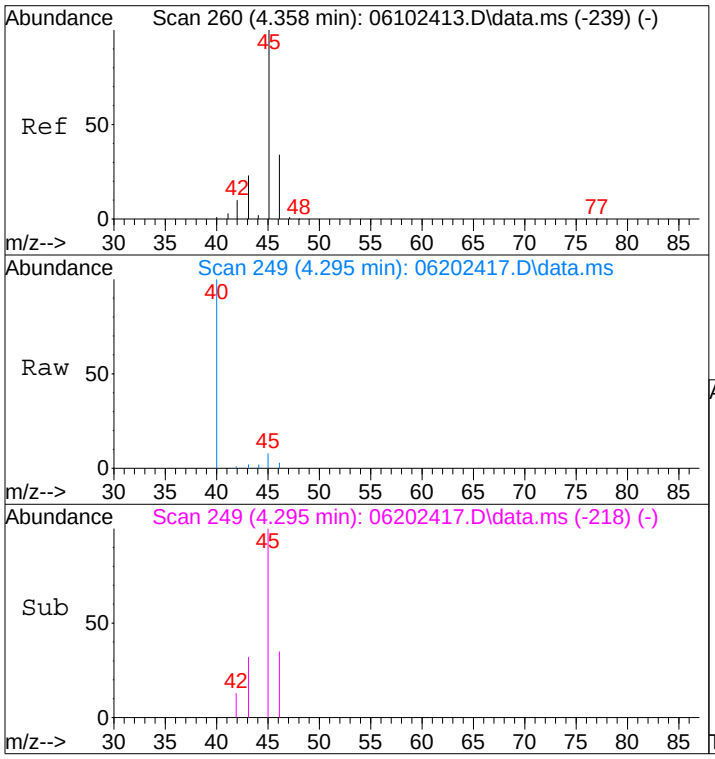
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202417.D Vial: 7
Acq On : 20 Jun 2024 18:36 Operator: SC
Sample : P2402249-045 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:04:05 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

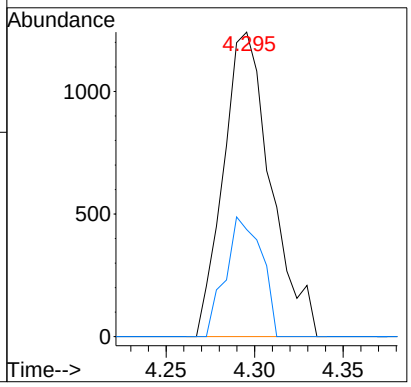


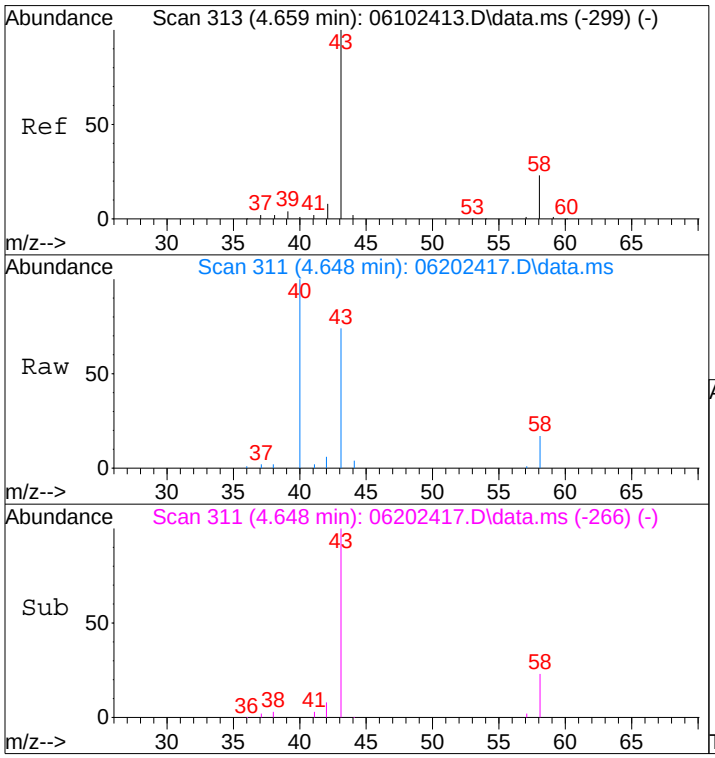


#10
Ethanol
Concen: 0.15 ng
RT: 4.30 min Scan# 249
Delta R.T. -0.071 min
Lab File: 06202417.D
Acq: 20 Jun 2024 18:36

Tgt Ion: 45 Resp: 2317

Ion	Ratio	Lower	Upper
45	100		
46	29.9	13.5	53.5

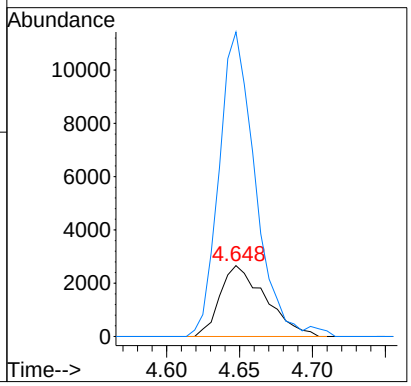


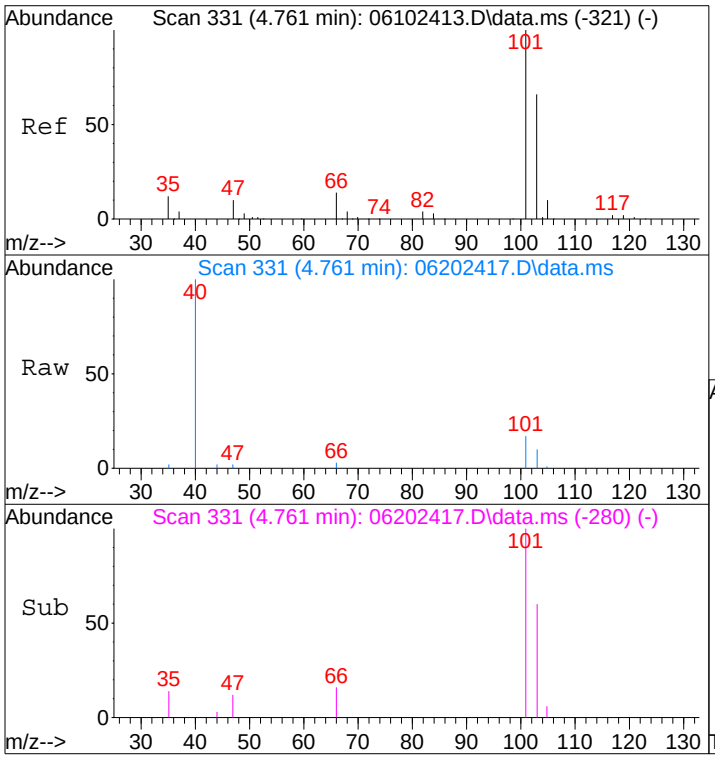


#13
Acetone
Concen: 0.48 ng
RT: 4.65 min Scan# 311
Delta R.T. 0.006 min
Lab File: 06202417.D
Acq: 20 Jun 2024 18:36

Tgt Ion: 58 Resp: 5782

Ion	Ratio	Lower	Upper
58	100		
43	343.7	400.7	460.7#

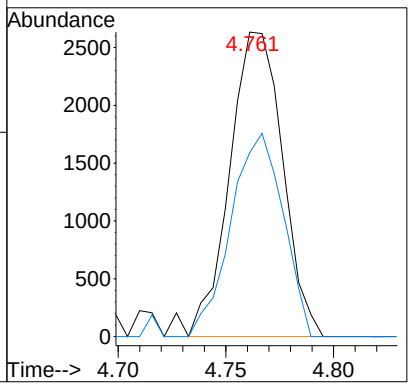


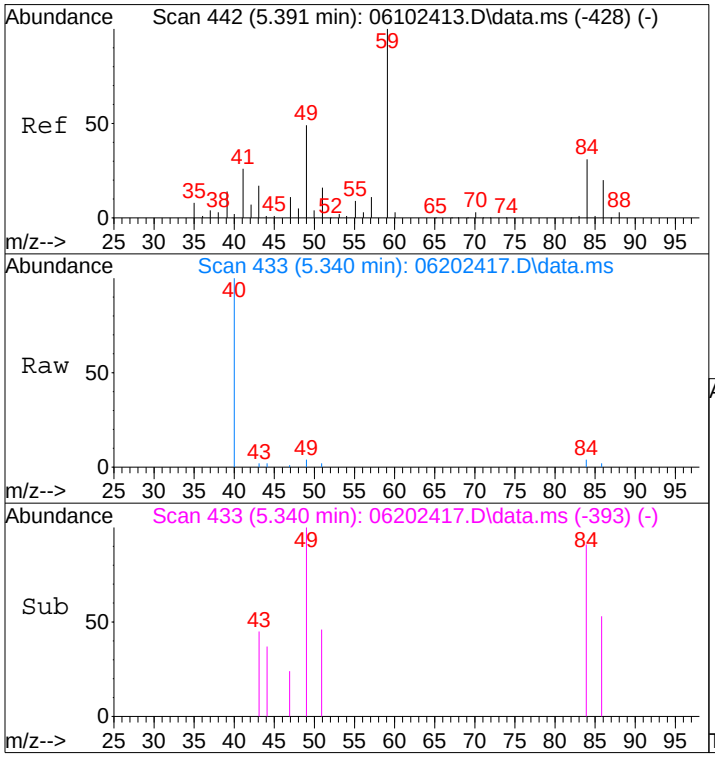


#14
Trichlorofluoromethane
Concen: 0.12 ng m
RT: 4.76 min Scan# 331
Delta R.T. 0.040 min
Lab File: 06202417.D
Acq: 20 Jun 2024 18:36

Tgt Ion:101 Resp: 4495

Ion	Ratio	Lower	Upper
101	100		
103	66.0	44.9	84.9

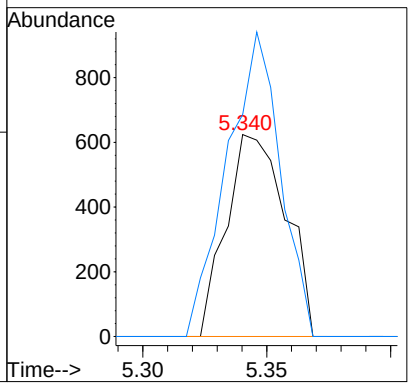


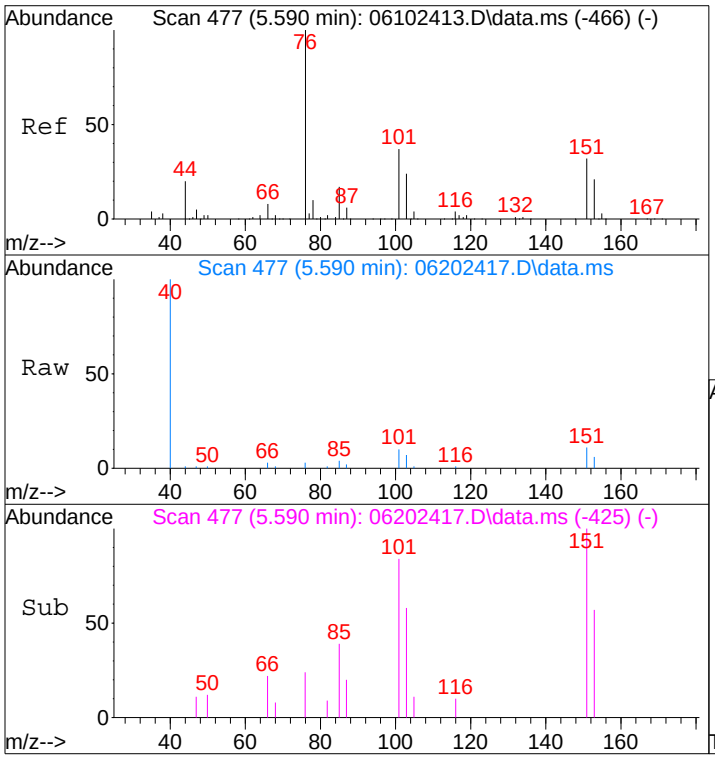


#19
Methylene Chloride
Concen: 0.06 ng
RT: 5.34 min Scan# 433
Delta R.T. -0.021 min
Lab File: 06202417.D
Acq: 20 Jun 2024 18:36

Tgt Ion: 84 Resp: 1045

Ion	Ratio	Lower	Upper
84	100		
49	134.5	132.9	182.9

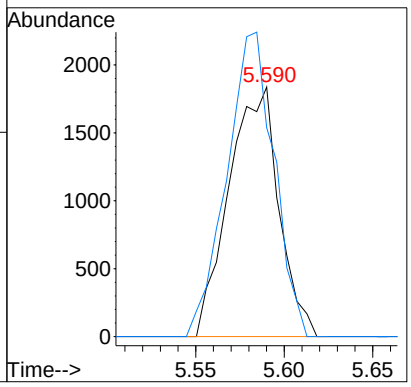




#21
Trichlorotrifluoroethane
Concen: 0.23 ng
RT: 5.59 min Scan# 477
Delta R.T. 0.044 min
Lab File: 06202417.D
Acq: 20 Jun 2024 18:36

Tgt Ion:151 Resp: 3609

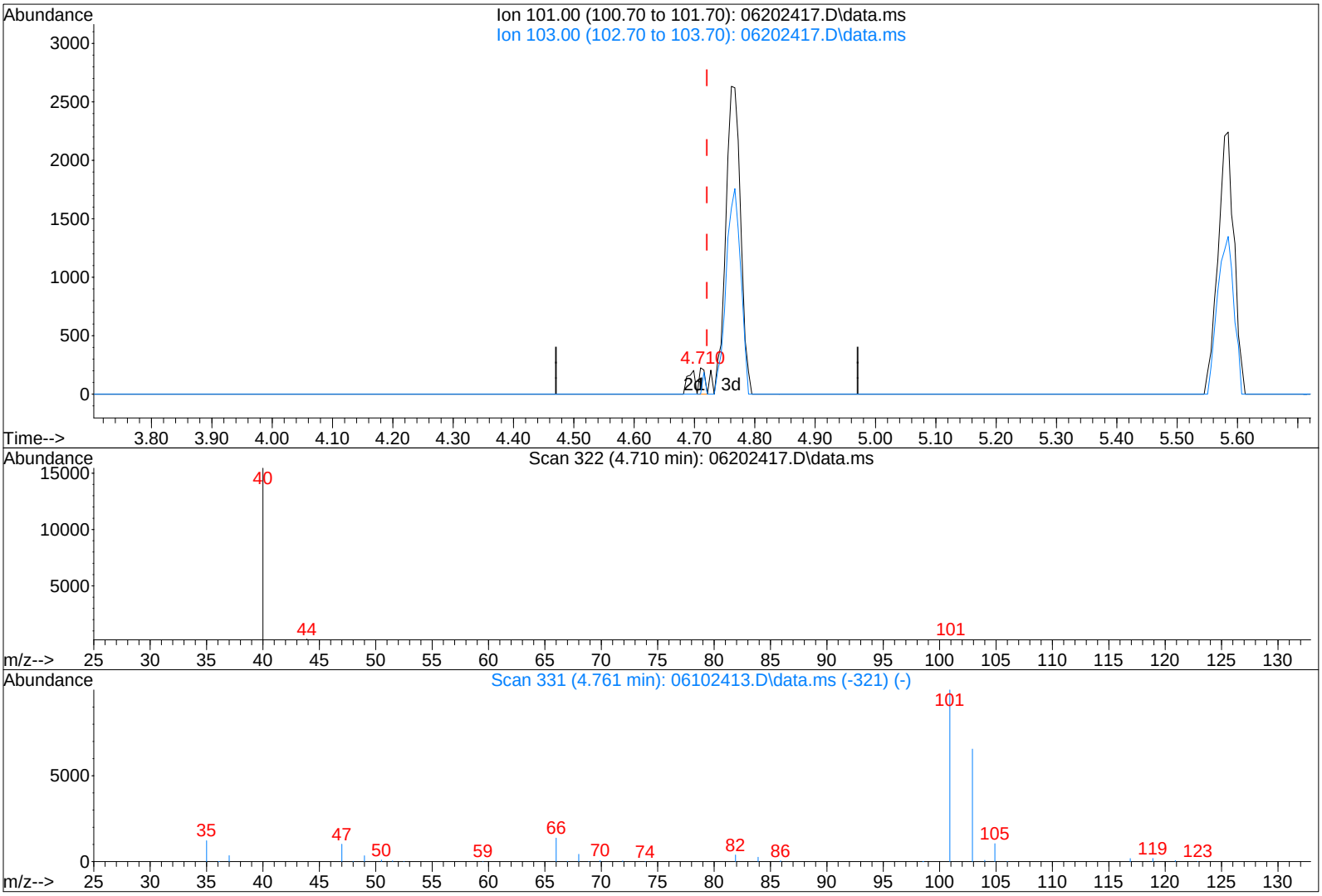
Ion	Ratio	Lower	Upper
151	100		
101	115.5	95.0	135.0



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\20\06202417.D Vial: 7
Acq On : 20 Jun 2024 18:36 Operator: SC
Sample : P2402249-045 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 12:02:31 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06202417.D\data.ms

(14) Trichlorofluoromethane (T)

4.710min (-0.011) 0.00ng

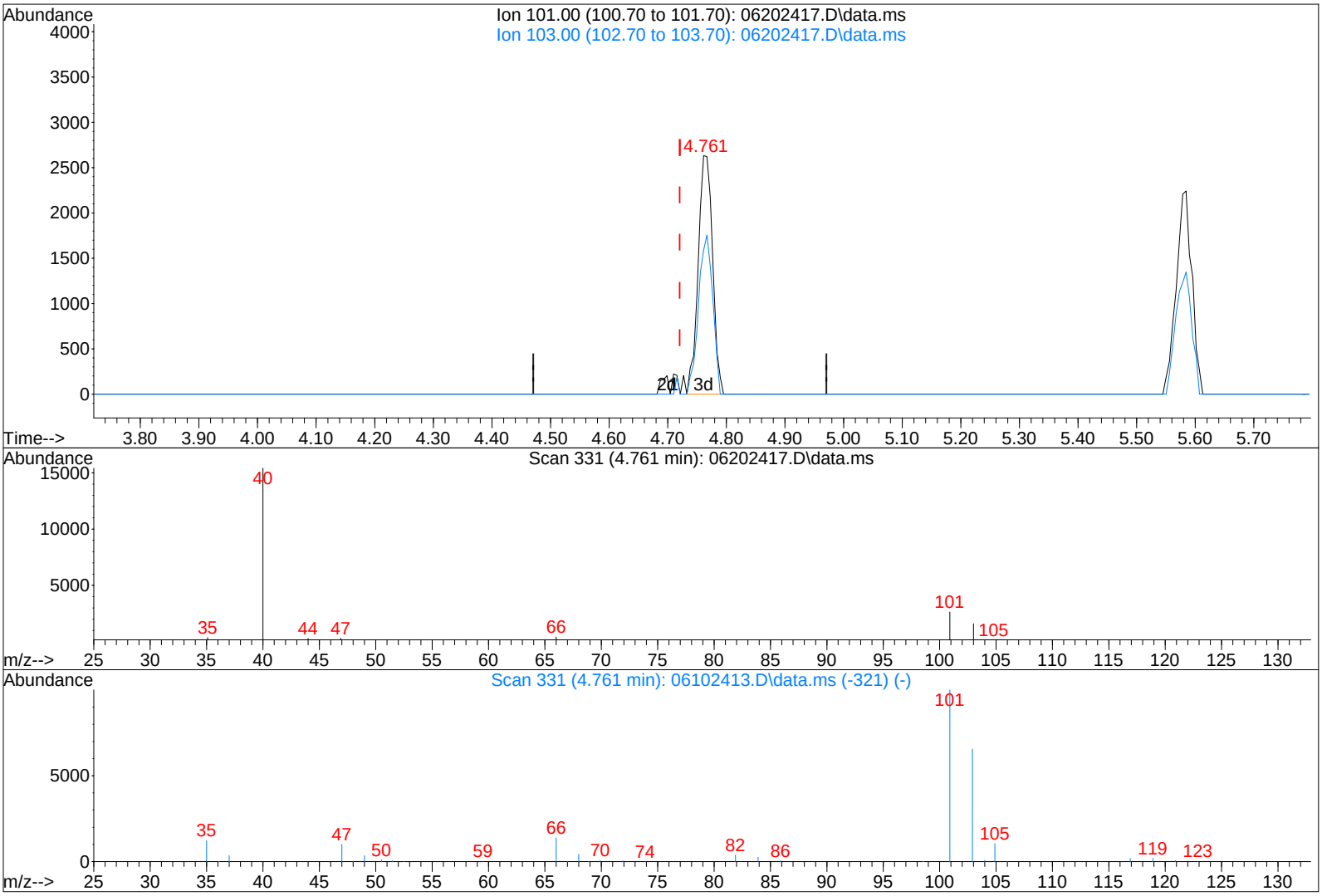
response 146

Ion	Exp%	Act%
101.00	100	100
103.00	64.90	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\20\06202417.D Vial: 7
Acq On : 20 Jun 2024 18:36 Operator: SC
Sample : P2402249-045 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 12:02:31 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06202417.D\data.ms

(14) Trichlorofluoromethane (T)

4.761min (+0.040) 0.12ng m

response 4495

Ion	Exp%	Act%
101.00	100	100
103.00	64.90	65.96
0.00	0.00	0.00
0.00	0.00	0.00

MJ 6/29/24

WP

CG 6/29/24

Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\20\06202417.D Vial: 7
Acq On : 20 Jun 2024 18:36 Operator: SC
Sample : P2402249-045 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:27:57 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

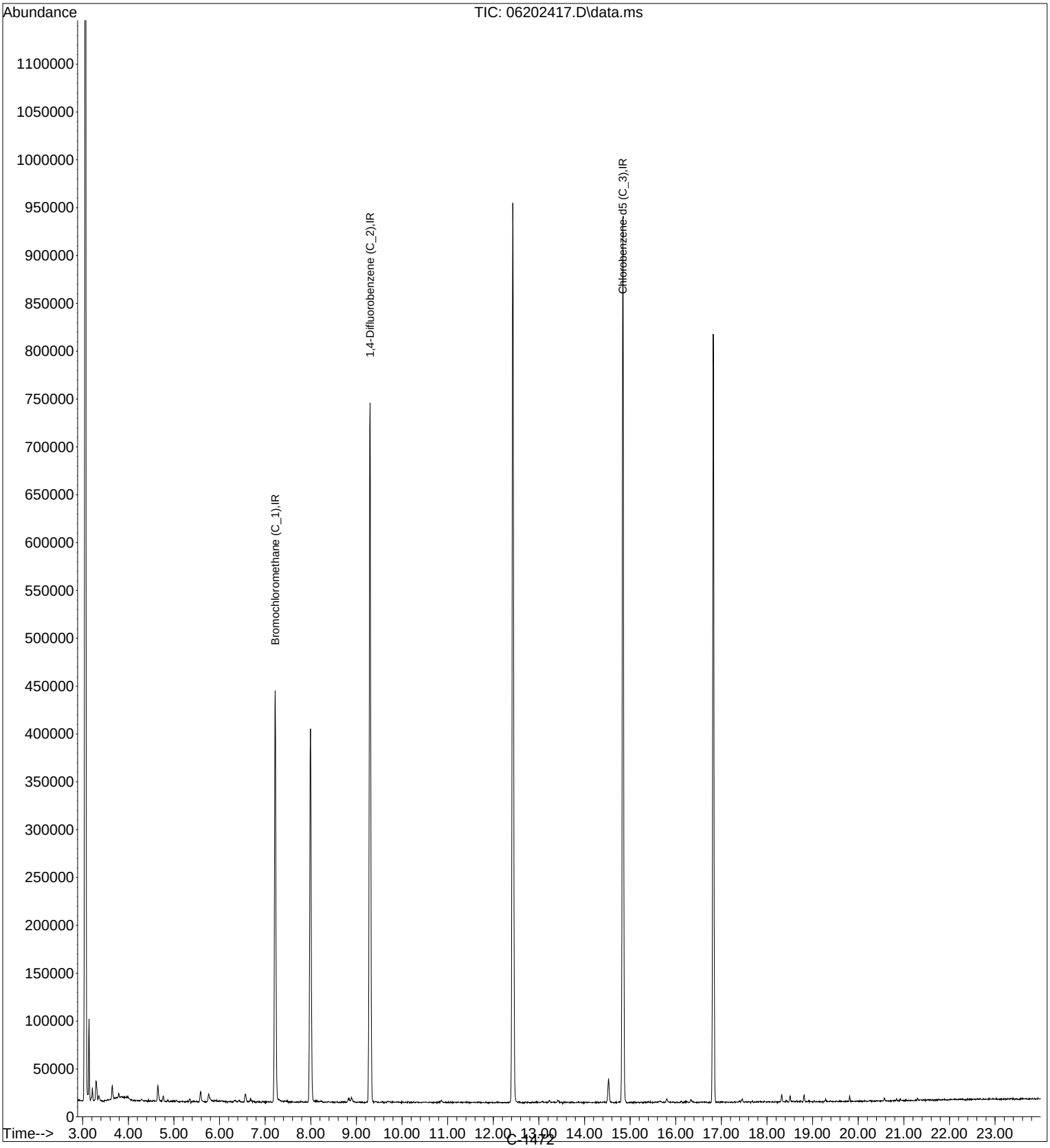
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (C 1)	7.22	130	157327	12.500	ng	-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	684922	12.500	ng	-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	155601	12.500	ng	-0.01
Target Compounds						Qvalue
2) Chloropentafluoroethane	0.00	85	0	N.D.		
3) 1,1,1,2-Tetrafluoroeth...	0.00	83	0	N.D.		
4) 1,1-Difluoroethane	0.00	65	0	N.D.		
5) Chlorodifluoromethane ...	0.00	67	0	N.D.		
6) 1-Chloro-1,1-Difluoroe...	0.00	65	0	N.D.		
7) Dichlorofluoromethane ...	0.00	67	0	N.D.		
8) Vinylbromide	0.00	108	0	N.D.		
9) 2,2-Dichloro-1,1,1-tri...	0.00	83	0	N.D.		
10) 2-Methylbutane	4.66	57	539	N.D.		
11) Methyl Acetate	5.35	43	549	N.D.		
12) 2-Methylpentane	0.00	71	0	N.D.		
13) 2,2-Dichloropropane	0.00	77	0	N.D.		
14) 1,1-Dichloropropene	0.00	75	0	N.D.		
15) Thiophene	0.00	84	0	N.D.		
17) 2,3-Dimethylpentane	0.00	56	0	N.D.		
18) Dibromomethane	9.79	174	197	N.D.		
20) Methyl Cyclohexane	0.00	55	0	N.D.		
21) 1,3-Dichloropropane	0.00	76	0	N.D.		
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		
23) 1-Chlorohexane	0.00	91	0	N.D.		
24) 1,2,3-Trichloropropane	16.33	75	108	N.D.		
25) Bromobenzene	0.00	77	0	N.D.		
26) 2-Chlorotoluene	17.60	91	671	N.D.		
27) 4-Chlorotoluene	17.67	91	1062	N.D.		
28) Indane	0.00	117	0	N.D.		
29) Indene	0.00	115	0	N.D.		
30) 1,2,4,5-Tetramethylben...	0.00	119	0	N.D.		
31) 1,2,3,4-Tetramethylben...	0.00	119	0	N.D.		
32) 1,2,3,5-Tetramethylben...	0.00	119	0	N.D.		
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202417.D Vial: 7
Acq On : 20 Jun 2024 18:36 Operator: SC
Sample : P2402249-045 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:27:57 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



LSC Area Percent Report

MJ 6/28/24

Data Path : I:\MS09\DATA\2024 06\20\
Data File : 06202417.D
Acq On : 20 Jun 2024 18:36
Operator : SC
Sample : P2402249-045 (400mL)
Misc : S37-06062402
ALS Vial : 7 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06202417.D\data.ms

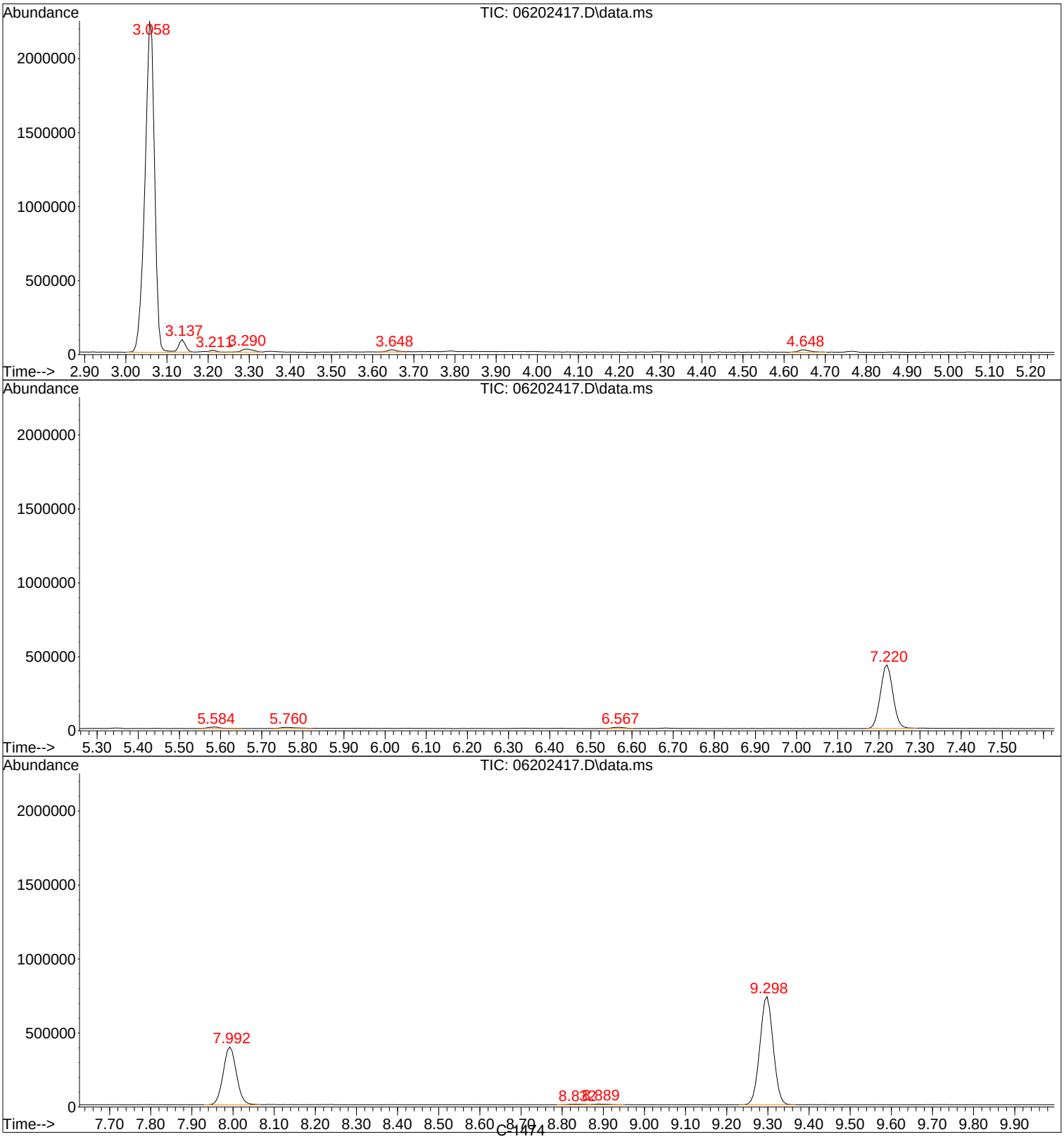
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.058	21	31	41	rBV	2238355	3620607	100.00%	49.262%
2	3.137	41	45	50	rVB	85099	96510	2.67%	1.313%
3	3.211	56	58	63	rVB	13630	13517	0.37%	0.184%
4	3.290	63	72	79	rBV	20691	41936	1.16%	0.571%
5	3.648	128	135	141	rBV2	14864	25964	0.72%	0.353%
6	4.648	305	311	321	rVB	16265	31136	0.86%	0.424%
7	5.584	470	476	488	rBV3	10640	22467	0.62%	0.306%
8	5.760	501	507	518	rBV2	8199	22457	0.62%	0.306%
9	6.567	643	649	656	rBV4	8658	19042	0.53%	0.259%
10	7.220	755	764	777	rBV	429354	913074	25.22%	12.423%
11	7.992	889	900	913	rBV	390573	876673	24.21%	11.928%
12	8.832	1040	1048	1054	rBV2	4401	11268	0.31%	0.153%
13	8.889	1054	1058	1069	rVB5	4912	10975	0.30%	0.149%
14	9.298	1118	1130	1142	rBV	730857	1644031	45.41%	22.369%

Sum of corrected areas: 7349657

Data Path : I:\MS09\DATA\2024 06\20\
Data File : 06202417.D
Acq On : 20 Jun 2024 18:36
Operator : SC
Sample : P2402249-045 (400mL)
Misc : S37-06062402
ALS Vial : 7 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\20\\
Data File : 06202417.D
Acq On : 20 Jun 2024 18:366
Operator : SCC
Sample : P2402249-045 (400mL))
Misc : S37-060624022
ALS Vial : 7 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT/LSC Reviewed)

MJ 6/29/24

Data File : I:\MS09\DATA\2024 06\20\06202418.D Vial: 8
Acq On : 20 Jun 2024 19:08 Operator: SC
Sample : P2402249-046 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:04:50 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	151930	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	661901	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	153965	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	335091	12.409	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.28%				
57) Toluene-d8 (SS2)	12.43	98	740766	12.573	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.56%				
73) Bromofluorobenzene (SS3)	16.83	174	269634	12.673	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.36%				
Target Compounds							Qvalue
2) Propene	0.00	42	0	N.D. d			
3) Dichlorodifluoromethan...	3.37	85	19055m	0.533	ng		
4) Chloromethane	3.49	50	837	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	3.61	135	440	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.28	45	27208	1.842	ng		75
11) Acetonitrile	4.43	41	1259	N.D.			
12) Acrolein	4.54	56	1994	0.182	ng		96
13) Acetone	4.64	58	26464	2.242	ng	#	71
14) Trichlorofluoromethane	4.76	101	2569058	71.028	ng		100
15) 2-Propanol (Isopropanol)	4.85	45	4378	0.092	ng		65
16) Acrylonitrile	4.99	53	762	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.32	59	563	N.D.			
19) Methylene Chloride	5.35	84	1091	0.065	ng		99
20) 3-Chloro-1-propene (Al...	5.45	41	240	N.D.			
21) Trichlorotrifluoroethane	5.58	151	1202954	78.620	ng		97
22) Carbon Disulfide	0.00	76	0	N.D. d			
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	6.31	73	252	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D. d			
27) 2-Butanone (MEK)	6.67	72	6009	0.643	ng	#	91
28) cis-1,2-Dichloroethene	7.07	61	108	N.D.			
29) Diisopropyl Ether	7.36	87	526	N.D.			
30) Ethyl Acetate	0.00	61	0	N.D.			
31) n-Hexane	7.31	57	187	N.D.			
32) Chloroform	7.36	83	6016	0.202	ng		98
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.12	62	326	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	9.60	61	2274	No Calib		#	
40) 1-Butanol	8.80	56	10043	No Calib		#	
41) Benzene	8.89	78	3978	0.065	ng		98
42) Carbon Tetrachloride	9.07	117	968	N.D.			
43) Cyclohexane	9.16	84	959	N.D.			
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.06	83	361	N.D.			
47) Trichloroethene	10.14	130	1227	0.069	ng		89
48) 1,4-Dioxane	0.00	88	0	N.D.			
49) 2,2,4-Trimethylpentane...	0.00	57	0	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202418.D Vial: 8
Acq On : 20 Jun 2024 19:08 Operator: SC
Sample : P2402249-046 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:04:50 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

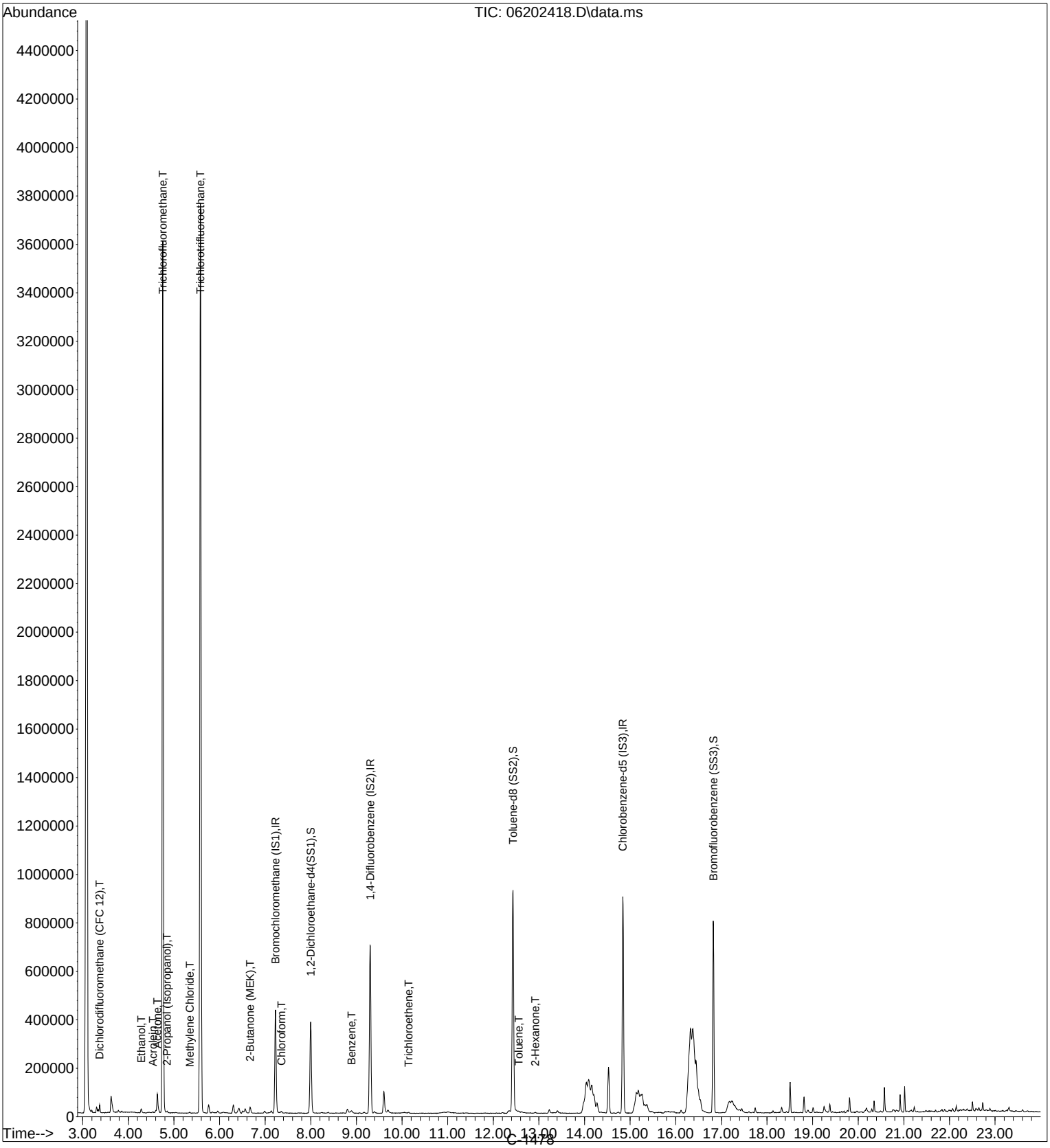
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	0.00	71	0	N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	11.33	58	187	N.D.	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
58) Toluene	12.56	91	3335	0.054 ng	98
59) 2-Hexanone	12.92	43	3852	0.100 ng	88
60) Dibromochloromethane	13.07	129	527	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	13.77	43	497	N.D.	
63) n-Octane	13.93	57	133	N.D.	
64) Tetrachloroethene	14.03	166	535	N.D.	
65) Chlorobenzene	14.90	112	521	N.D.	
66) Ethylbenzene	15.41	91	1588	N.D.	
67) m- & p-Xylenes	15.63	91	1511	N.D.	
68) Bromoform	15.67	173	707	N.D.	
69) Styrene	16.10	104	308	N.D.	
70) o-Xylene	16.25	91	1190	N.D.	
71) n-Nonane	16.62	43	848	N.D.	
72) 1,1,2,2-Tetrachloroethane	16.21	83	539	N.D.	
74) Cumene	17.03	105	1054	N.D.	
75) alpha-Pinene	0.00	93	0	N.D.	
76) n-Propylbenzene	17.67	91	1547	N.D.	
77) 3-Ethyltoluene	17.03	105	1054	No Calib	#
78) 4-Ethyltoluene	17.86	105	987	N.D.	
79) 1,3,5-Trimethylbenzene	17.96	105	730	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.03	105	1054	No Calib	#
82) 1,2,4-Trimethylbenzene	18.43	105	1197	N.D.	
83) n-Decane	0.00	58	0	N.D.	
84) Benzyl Chloride	0.00	91	0	N.D.	
85) 1,3-Dichlorobenzene	18.58	146	664	N.D.	
86) 1,4-Dichlorobenzene	18.66	146	694	N.D.	
87) sec-Butylbenzene	18.74	105	1147	N.D.	
88) 4-Isopropyltoluene (p-...	18.92	119	1718	N.D.	
89) 1,2,3-Trimethylbenzene	17.03	105	1054	No Calib	#
90) 1,2-Dichlorobenzene	19.03	146	397	N.D.	
91) d-Limonene	19.08	68	527	N.D.	
92) 1,2-Dibromo-3-Chloropr...	19.51	157	104	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	901	N.D.	
95) Naphthalene	20.94	128	2257	N.D.	
96) n-Dodecane	0.00	58	0	N.D.	
97) Hexachlorobutadiene	21.30	225	655	N.D.	
98) Cyclohexanone	15.50	55	538	No Calib	#
99) tert-Butylbenzene	18.42	119	1515	N.D.	
100) n-Butylbenzene	19.39	91	1133	N.D.	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202418.D Vial: 8
Acq On : 20 Jun 2024 19:08 Operator: SC
Sample : P2402249-046 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:04:50 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202418.D Vial: 8
Acq On : 20 Jun 2024 19:08 Operator: SC
Sample : P2402249-046 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/29/24

Quant Time: Jun 29 10:04:50 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

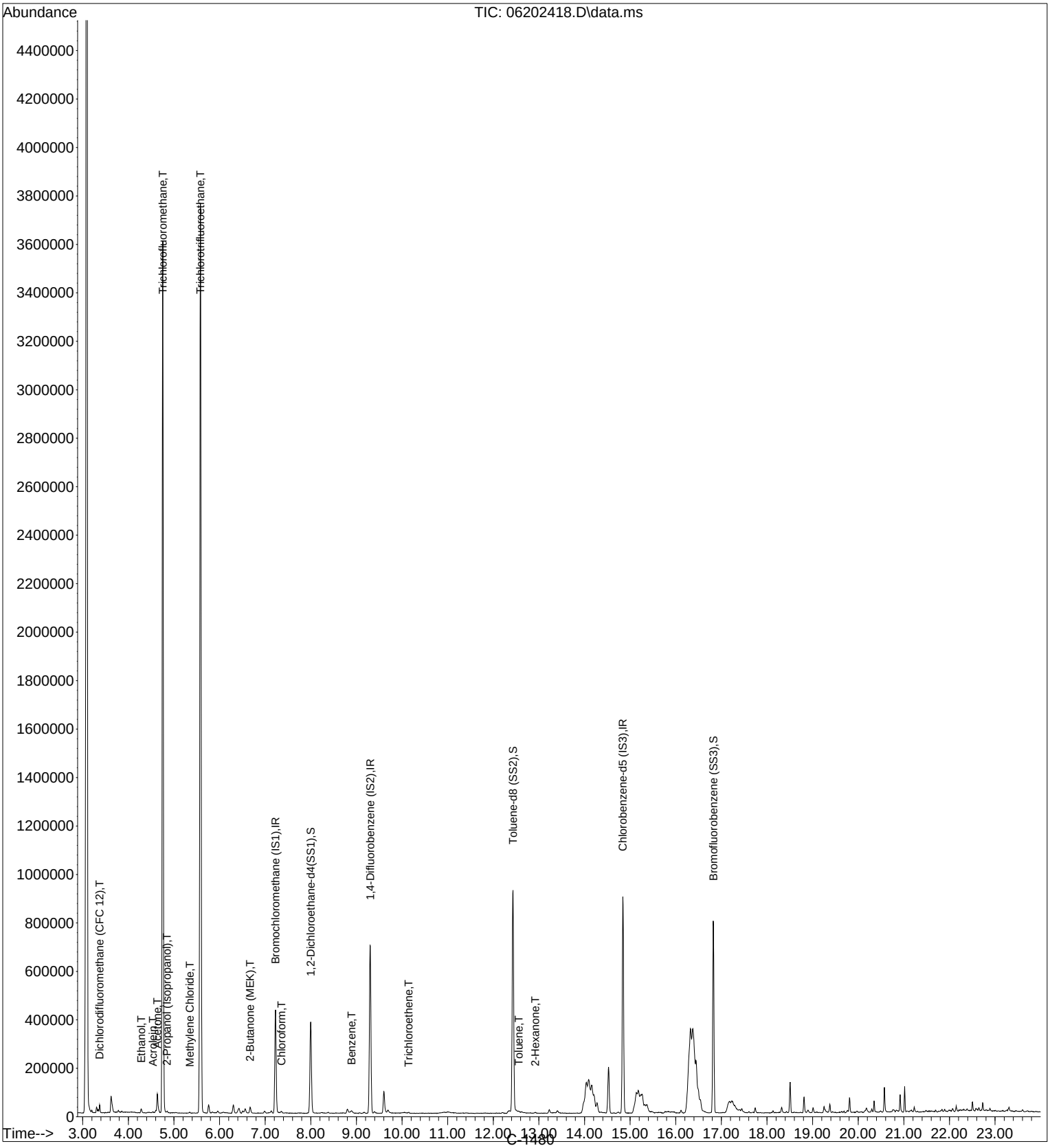
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	151930	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	661901	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	153965	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	335091	12.409	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.28%				
57) Toluene-d8 (SS2)	12.43	98	740766	12.573	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.56%				
73) Bromofluorobenzene (SS3)	16.83	174	269634	12.673	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.36%				
Target Compounds							Qvalue
3) Dichlorodifluoromethan...	3.37	85	19055m	0.533	ng		
10) Ethanol	4.28	45	27208	1.842	ng		75
12) Acrolein	4.54	56	1994	0.182	ng		96
13) Acetone	4.64	58	26464	2.242	ng	#	71
14) Trichlorofluoromethane	4.76	101	2569058	71.028	ng		100
15) 2-Propanol (Isopropanol)	4.85	45	4378	0.092	ng		65
19) Methylene Chloride	5.35	84	1091	0.065	ng		99
21) Trichlorotrifluoroethane	5.58	151	1202954	78.620	ng		97
27) 2-Butanone (MEK)	6.67	72	6009	0.643	ng	#	91
32) Chloroform	7.36	83	6016	0.202	ng		98
41) Benzene	8.89	78	3978	0.065	ng		98
47) Trichloroethene	10.14	130	1227	0.069	ng		89
58) Toluene	12.56	91	3335	0.054	ng		98
59) 2-Hexanone	12.92	43	3852	0.100	ng		88

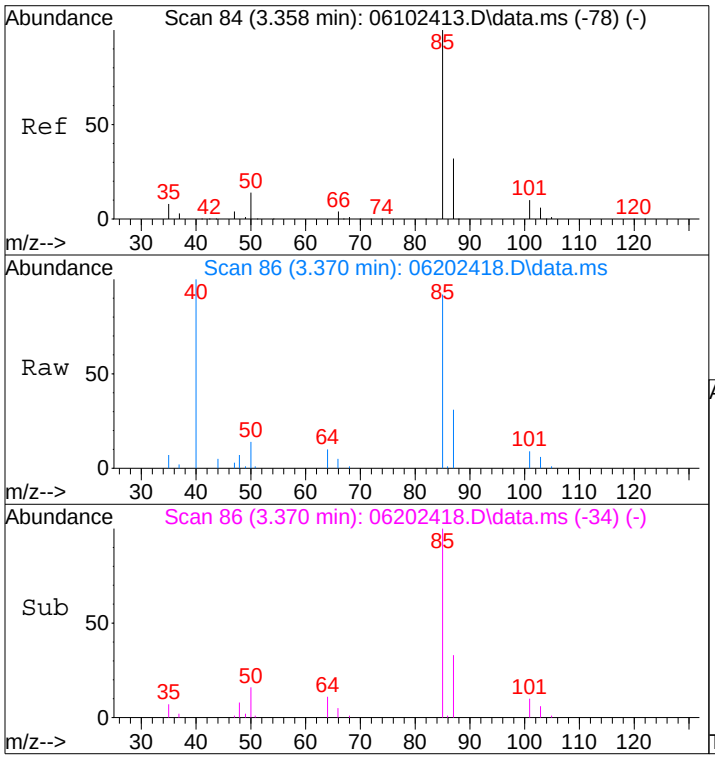
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202418.D Vial: 8
Acq On : 20 Jun 2024 19:08 Operator: SC
Sample : P2402249-046 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:04:50 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

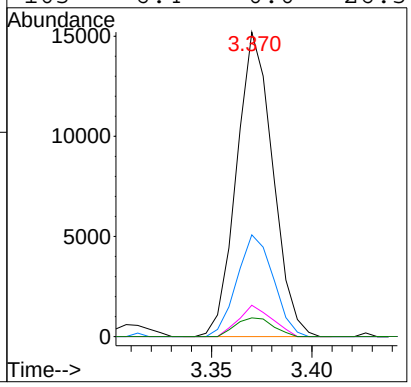


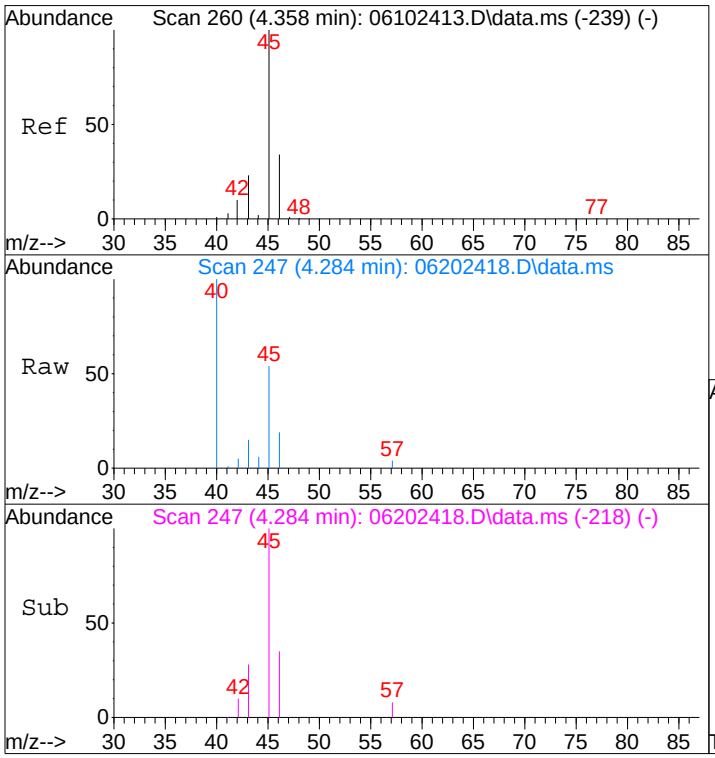


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.53 ng m
RT: 3.37 min Scan# 86
Delta R.T. 0.048 min
Lab File: 06202418.D
Acq: 20 Jun 2024 19:08

Tgt Ion: 85 Resp: 19055

Ion	Ratio	Lower	Upper
85	100		
87	33.6	12.2	52.2
101	9.4	0.0	29.8
103	6.4	0.0	26.3

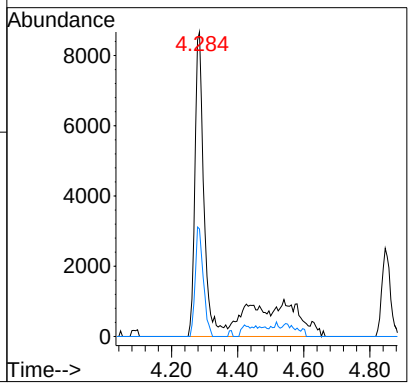


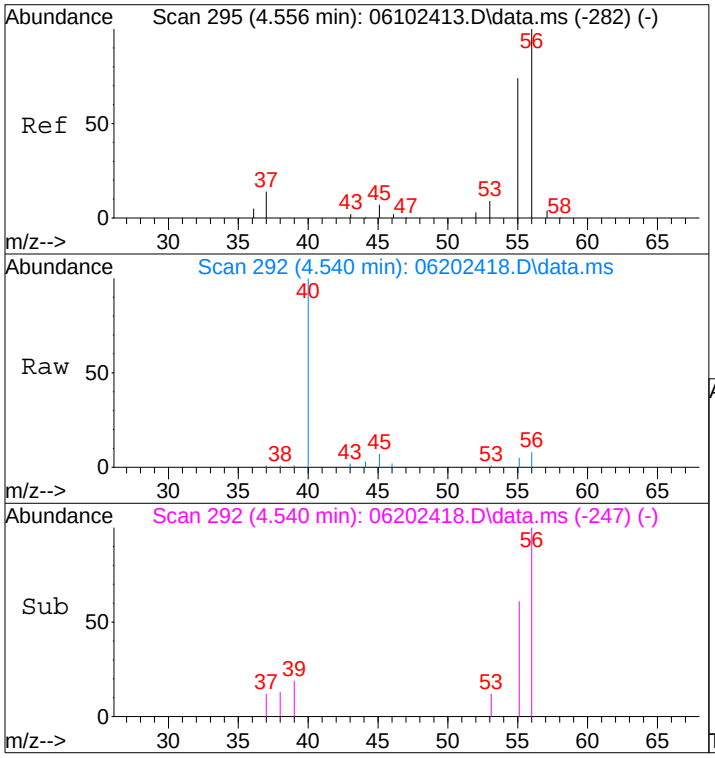


#10
Ethanol
Concen: 1.84 ng
RT: 4.28 min Scan# 247
Delta R.T. -0.083 min
Lab File: 06202418.D
Acq: 20 Jun 2024 19:08

Tgt Ion: 45 Resp: 27208

Ion	Ratio	Lower	Upper
45	100		
46	19.4	13.5	53.5

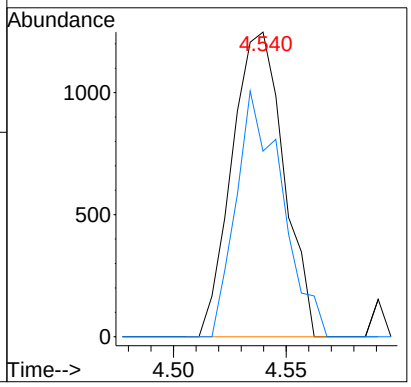


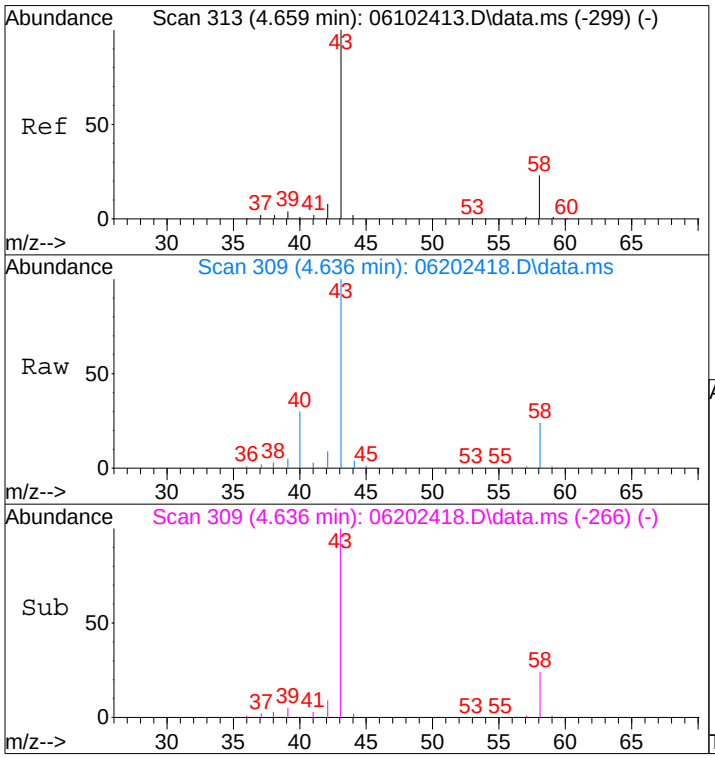


#12
Acrolein
Concen: 0.18 ng
RT: 4.54 min Scan# 292
Delta R.T. 0.004 min
Lab File: 06202418.D
Acq: 20 Jun 2024 19:08

Tgt Ion: 56 Resp: 1994

Ion	Ratio	Lower	Upper
56	100		
55	71.7	55.5	95.5

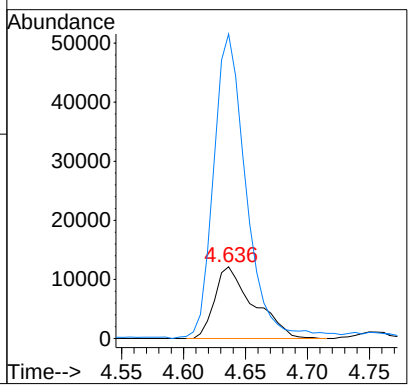


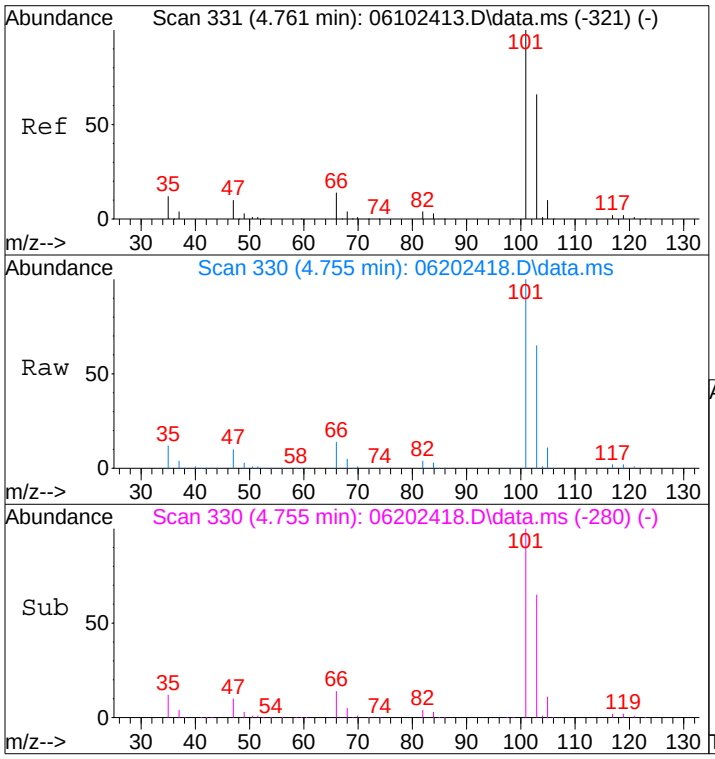


#13
Acetone
Concen: 2.24 ng
RT: 4.64 min Scan# 309
Delta R.T. -0.006 min
Lab File: 06202418.D
Acq: 20 Jun 2024 19:08

Tgt Ion: 58 Resp: 26464

Ion	Ratio	Lower	Upper
58	100		
43	357.7	400.7	460.7#

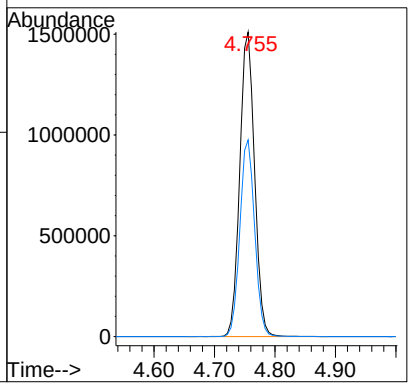


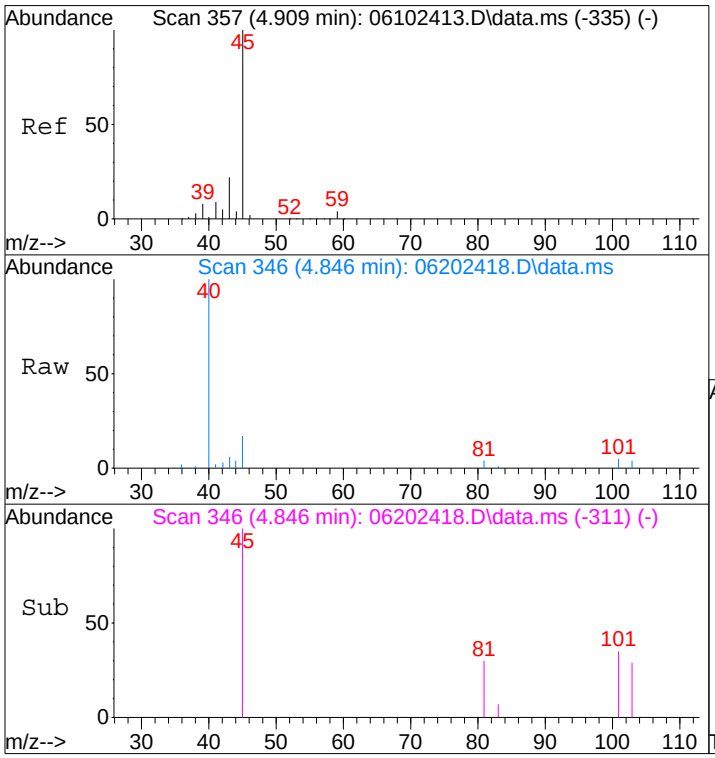


#14
Trichlorofluoromethane
Concen: 71.03 ng
RT: 4.76 min Scan# 330
Delta R.T. 0.035 min
Lab File: 06202418.D
Acq: 20 Jun 2024 19:08

Tgt Ion:101 Resp: 2569058

Ion	Ratio	Lower	Upper
101	100		
103	64.6	44.9	84.9

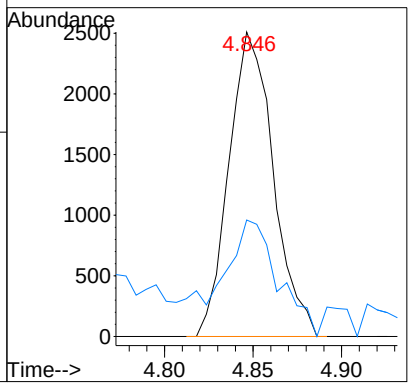


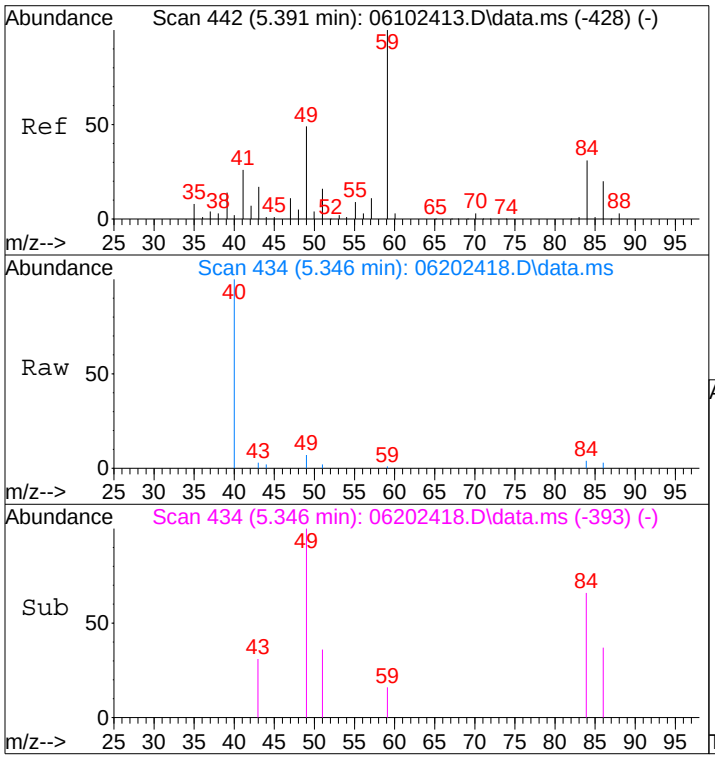


#15
2-Propanol (Isopropanol)
Concen: 0.09 ng
RT: 4.85 min Scan# 346
Delta R.T. -0.054 min
Lab File: 06202418.D
Acq: 20 Jun 2024 19:08

Tgt Ion: 45 Resp: 4378

Ion	Ratio	Lower	Upper
45	100		
43	5.4	2.5	42.5

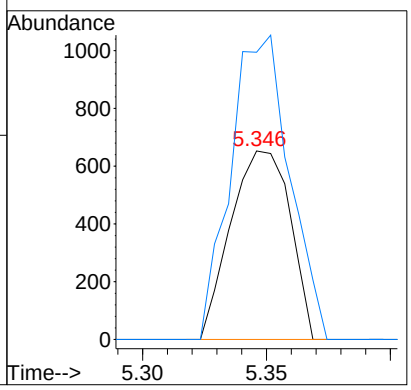


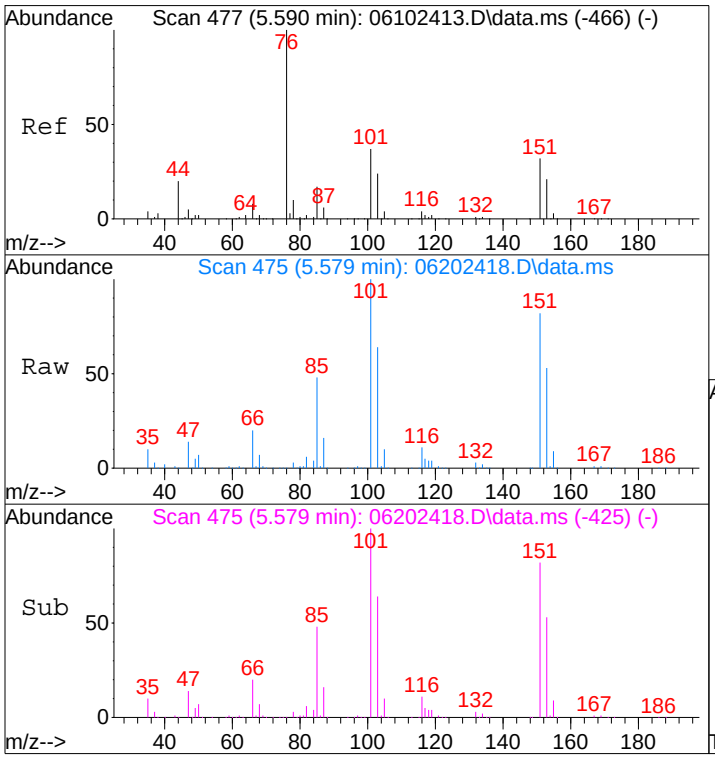


#19
Methylene Chloride
Concen: 0.07 ng
RT: 5.35 min Scan# 434
Delta R.T. -0.015 min
Lab File: 06202418.D
Acq: 20 Jun 2024 19:08

Tgt Ion: 84 Resp: 1091

Ion	Ratio	Lower	Upper
84	100		
49	159.9	132.9	182.9

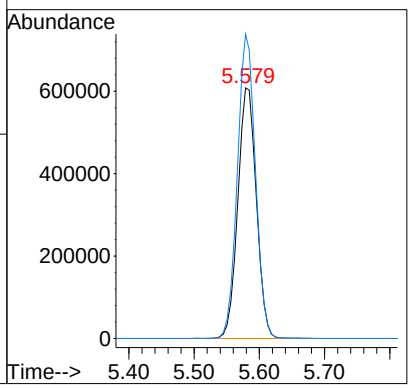


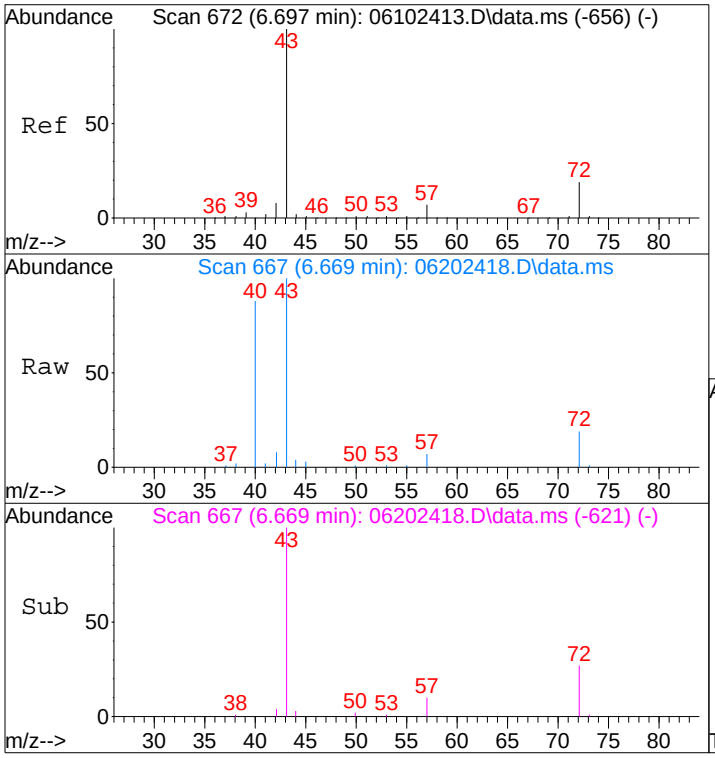


#21
Trichlorotrifluoroethane
Concen: 78.62 ng
RT: 5.58 min Scan# 475
Delta R.T. 0.033 min
Lab File: 06202418.D
Acq: 20 Jun 2024 19:08

Tgt Ion:151 Resp: 1202954

Ion	Ratio	Lower	Upper
151	100		
101	118.3	95.0	135.0

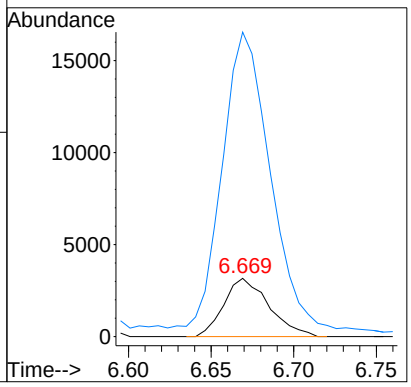


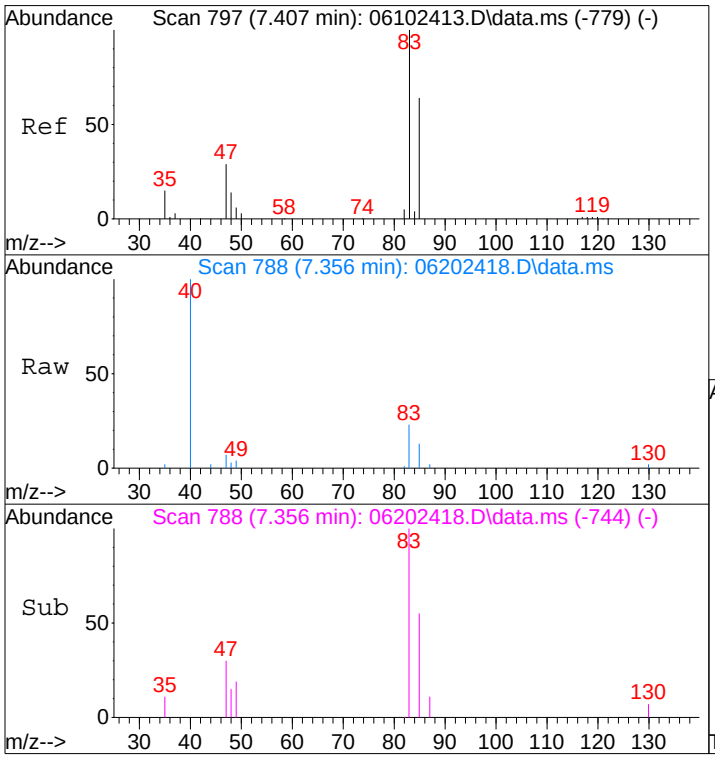


#27
2-Butanone (MEK)
Concen: 0.64 ng
RT: 6.67 min Scan# 667
Delta R.T. 0.011 min
Lab File: 06202418.D
Acq: 20 Jun 2024 19:08

Tgt Ion: 72 Resp: 6009

Ion	Ratio	Lower	Upper
72	100		
43	552.8	506.8	546.8#

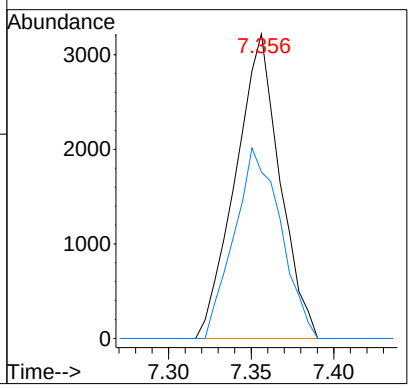


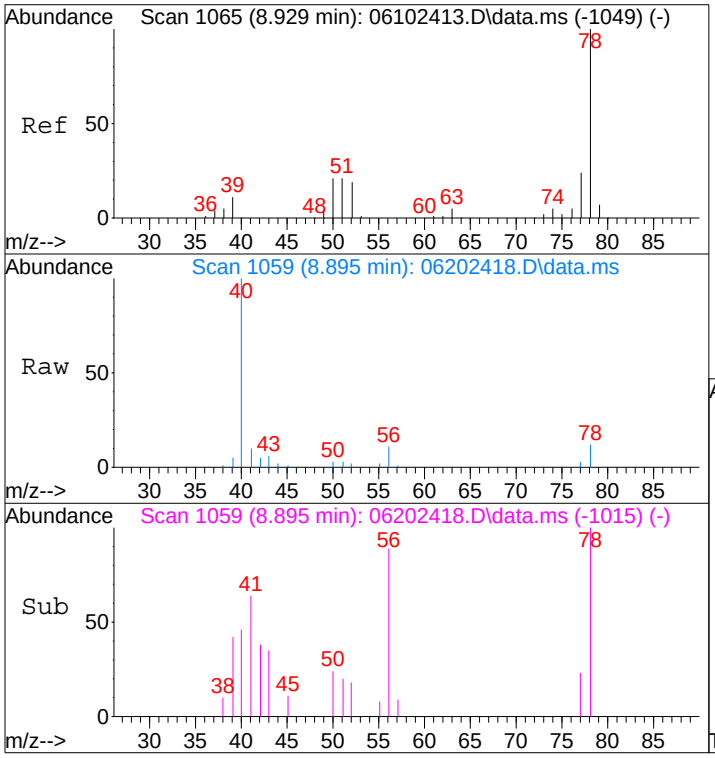


#32
Chloroform
Concen: 0.20 ng
RT: 7.36 min Scan# 788
Delta R.T. 0.001 min
Lab File: 06202418.D
Acq: 20 Jun 2024 19:08

Tgt Ion: 83 Resp: 6016

Ion	Ratio	Lower	Upper
83	100		
85	65.6	44.4	84.4

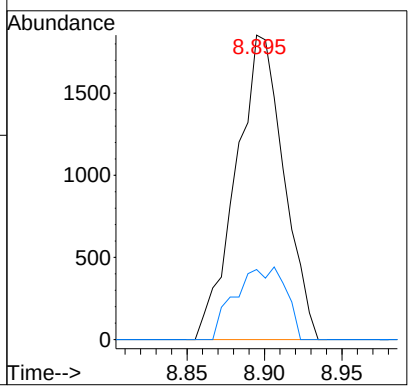


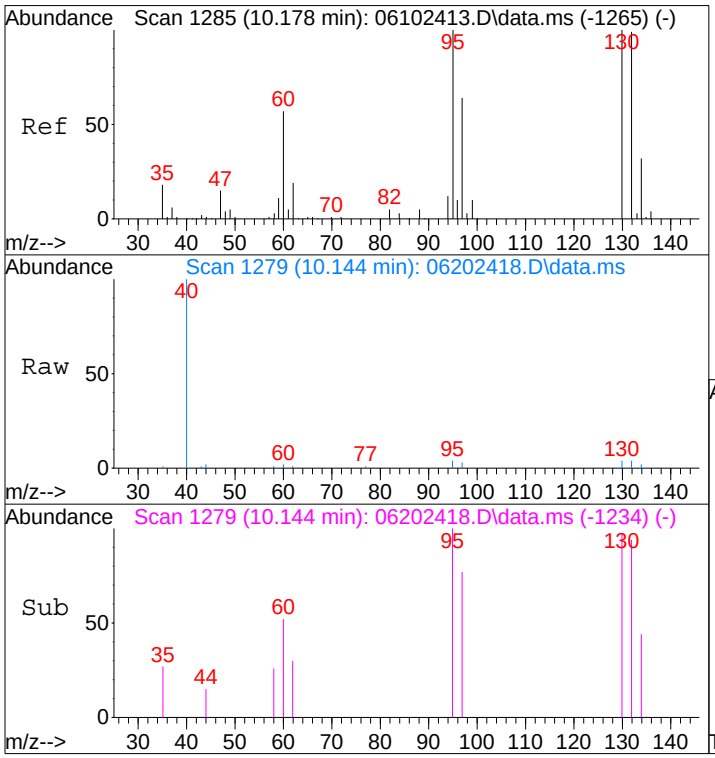


#41
Benzene
Concen: 0.07 ng
RT: 8.89 min Scan# 1059
Delta R.T. -0.002 min
Lab File: 06202418.D
Acq: 20 Jun 2024 19:08

Tgt Ion: 78 Resp: 3978

Ion	Ratio	Lower	Upper
78	100		
77	25.1	4.0	44.0

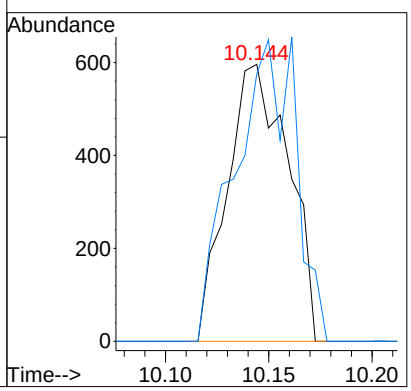


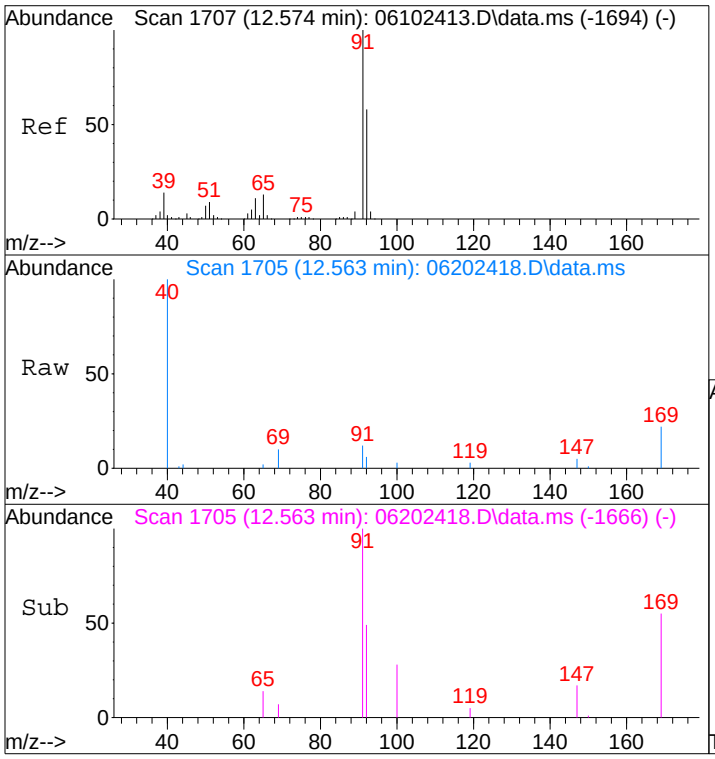


#47
Trichloroethene
Concen: 0.07 ng
RT: 10.14 min Scan# 1279
Delta R.T. 0.005 min
Lab File: 06202418.D
Acq: 20 Jun 2024 19:08

Tgt Ion:130 Resp: 1227

Ion	Ratio	Lower	Upper
130	100		
132	109.1	77.9	117.9

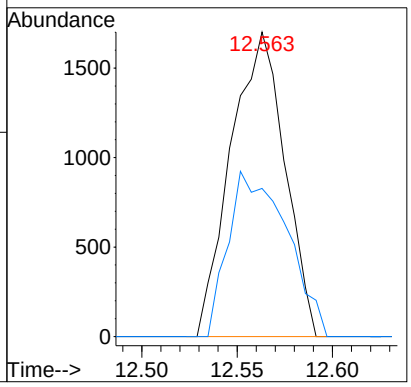


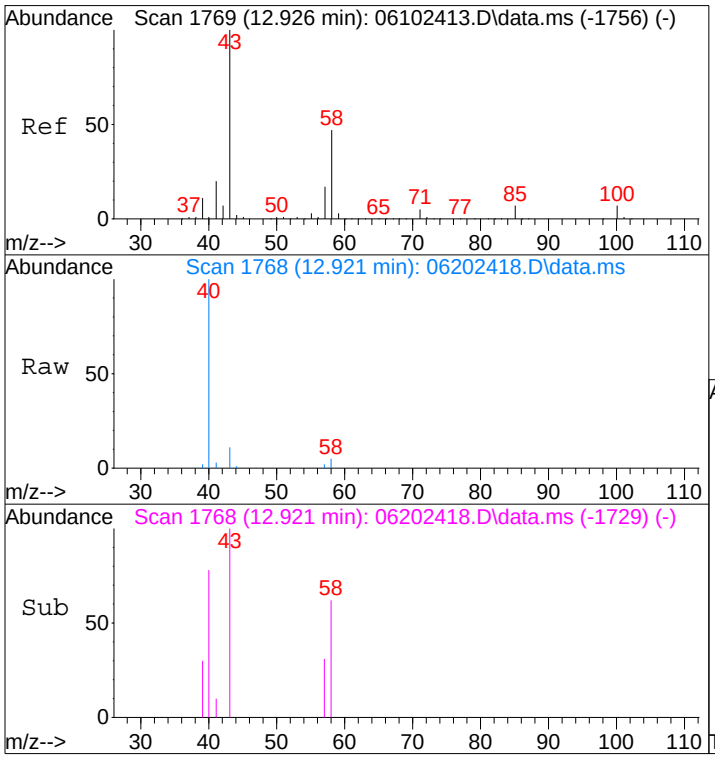


#58
Toluene
Concen: 0.05 ng
RT: 12.56 min Scan# 1705
Delta R.T. -0.028 min
Lab File: 06202418.D
Acq: 20 Jun 2024 19:08

Tgt Ion: 91 Resp: 3335

Ion	Ratio	Lower	Upper
91	100		
92	59.2	37.4	77.4

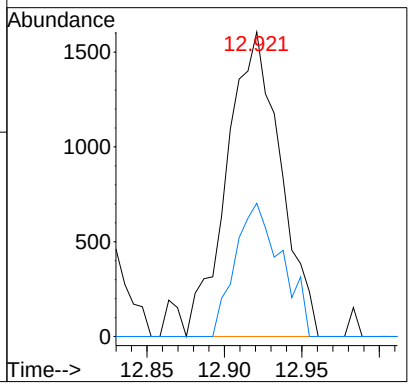




#59
2-Hexanone
Concen: 0.10 ng
RT: 12.92 min Scan# 1768
Delta R.T. -0.028 min
Lab File: 06202418.D
Acq: 20 Jun 2024 19:08

Tgt Ion: 43 Resp: 3852

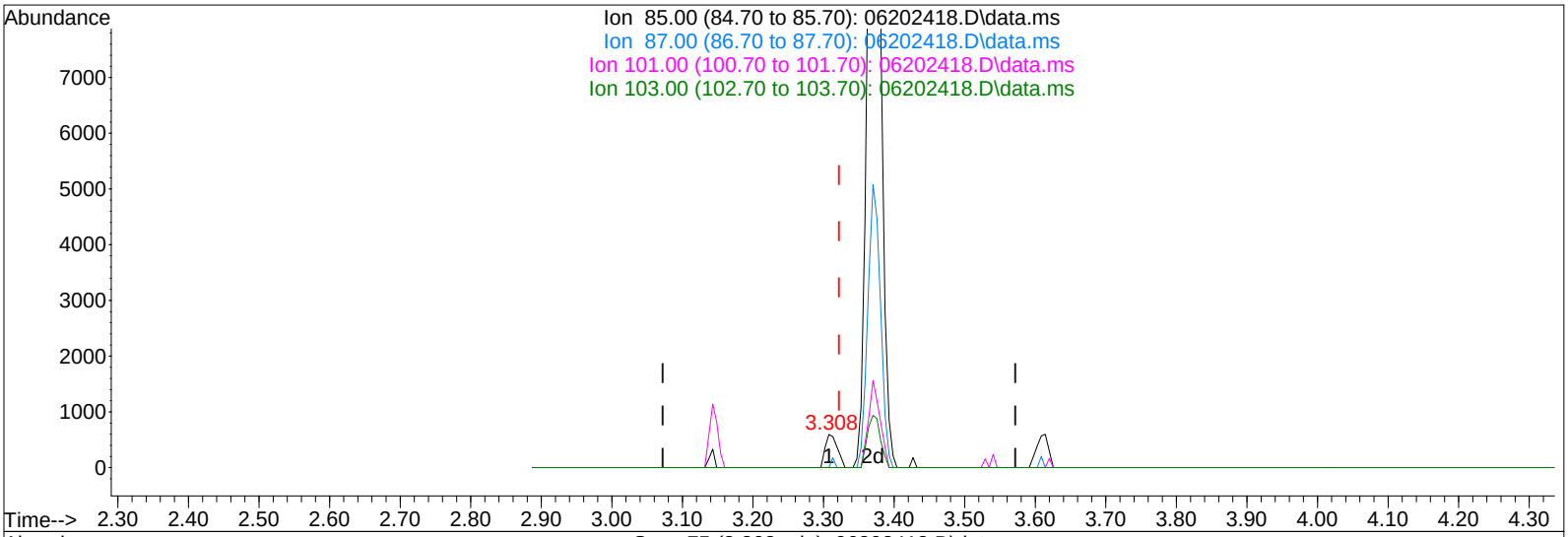
Ion	Ratio	Lower	Upper
43	100		
58	38.0	25.9	65.9

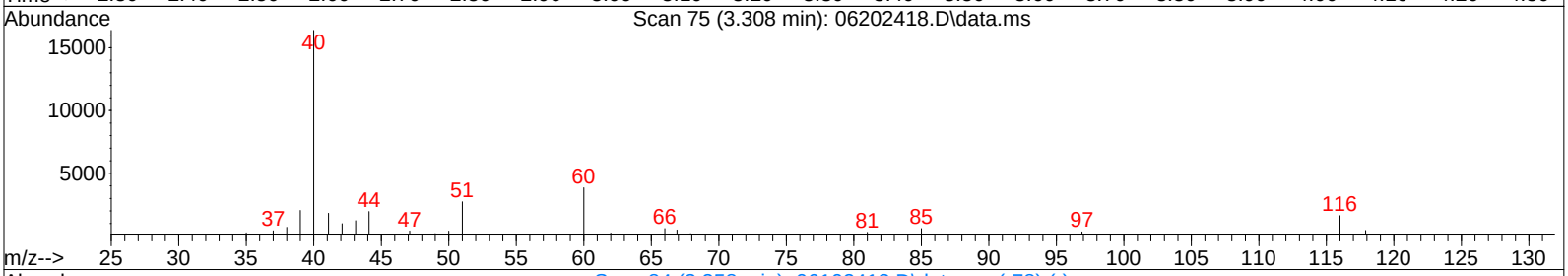


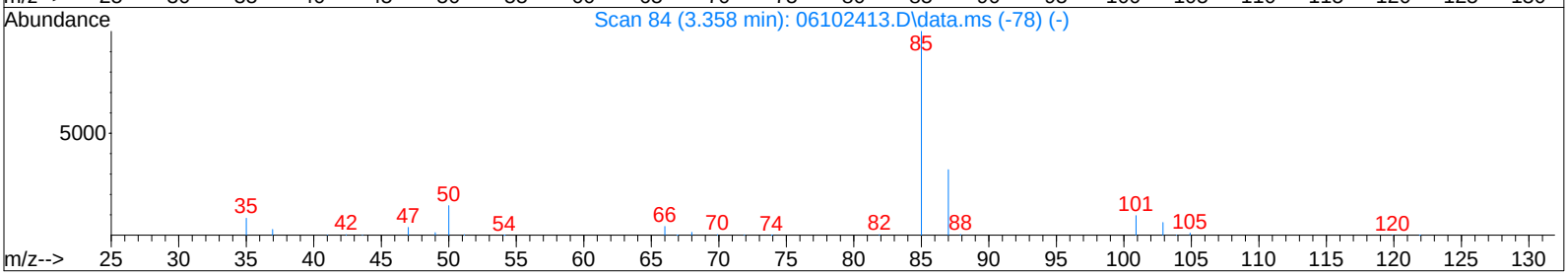
Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\20\06202418.D Vial: 8
Acq On : 20 Jun 2024 19:08 Operator: SC
Sample : P2402249-046 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 12:04:46 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M







TIC: 06202418.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.308min (-0.015) 0.02ng

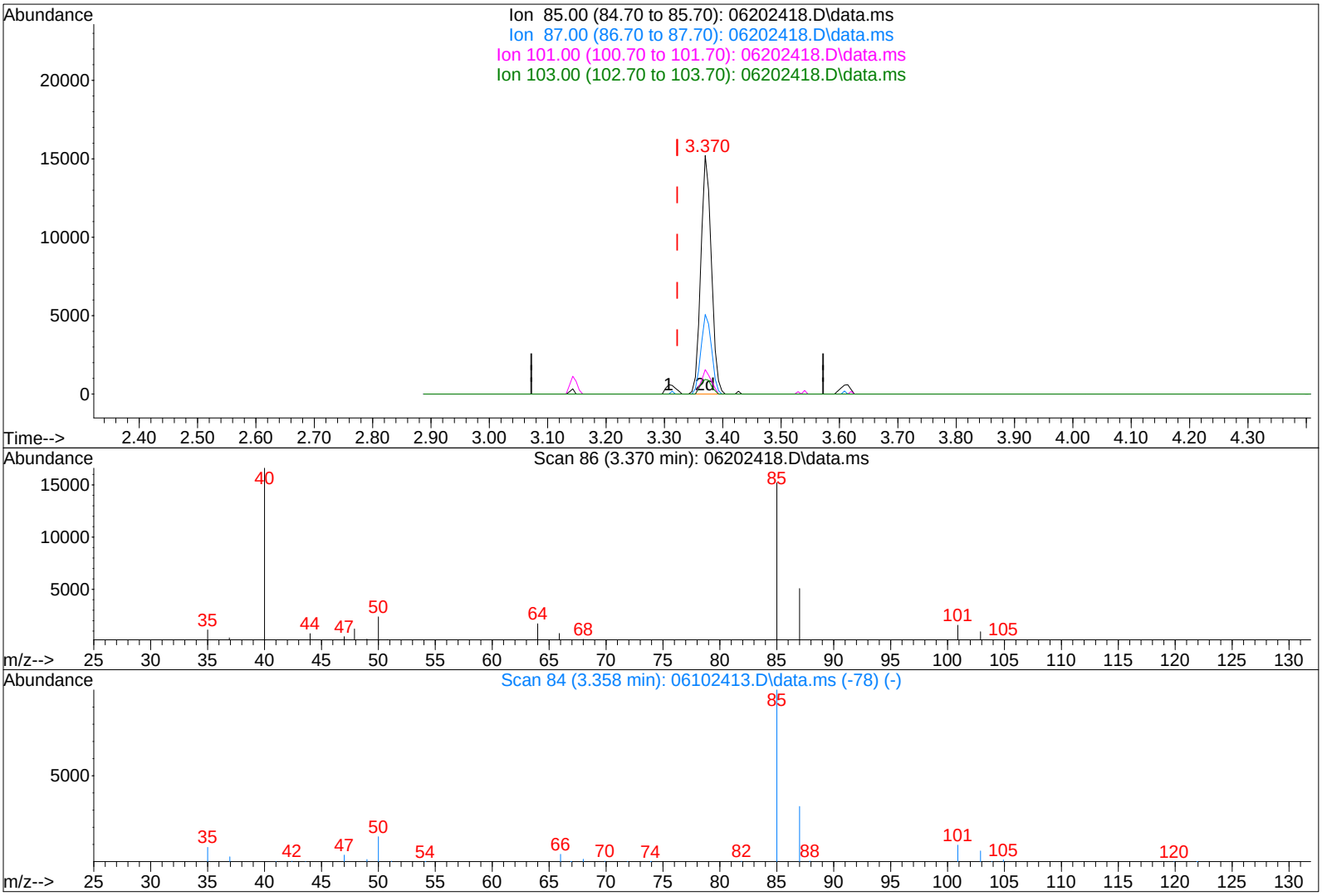
response 709

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	0.00#
101.00	9.80	0.00
103.00	6.30	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\20\06202418.D Vial: 8
Acq On : 20 Jun 2024 19:08 Operator: SC
Sample : P2402249-046 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 12:04:46 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06202418.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.370min (+0.048) 0.53ng m

response 19055

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	33.56
101.00	9.80	9.42
103.00	6.30	6.39

WP

MJ 6/29/24

CG 6/29/24

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202418.D Vial: 8
Acq On : 20 Jun 2024 19:08 Operator: SC
Sample : P2402249-046 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 15:27:58 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

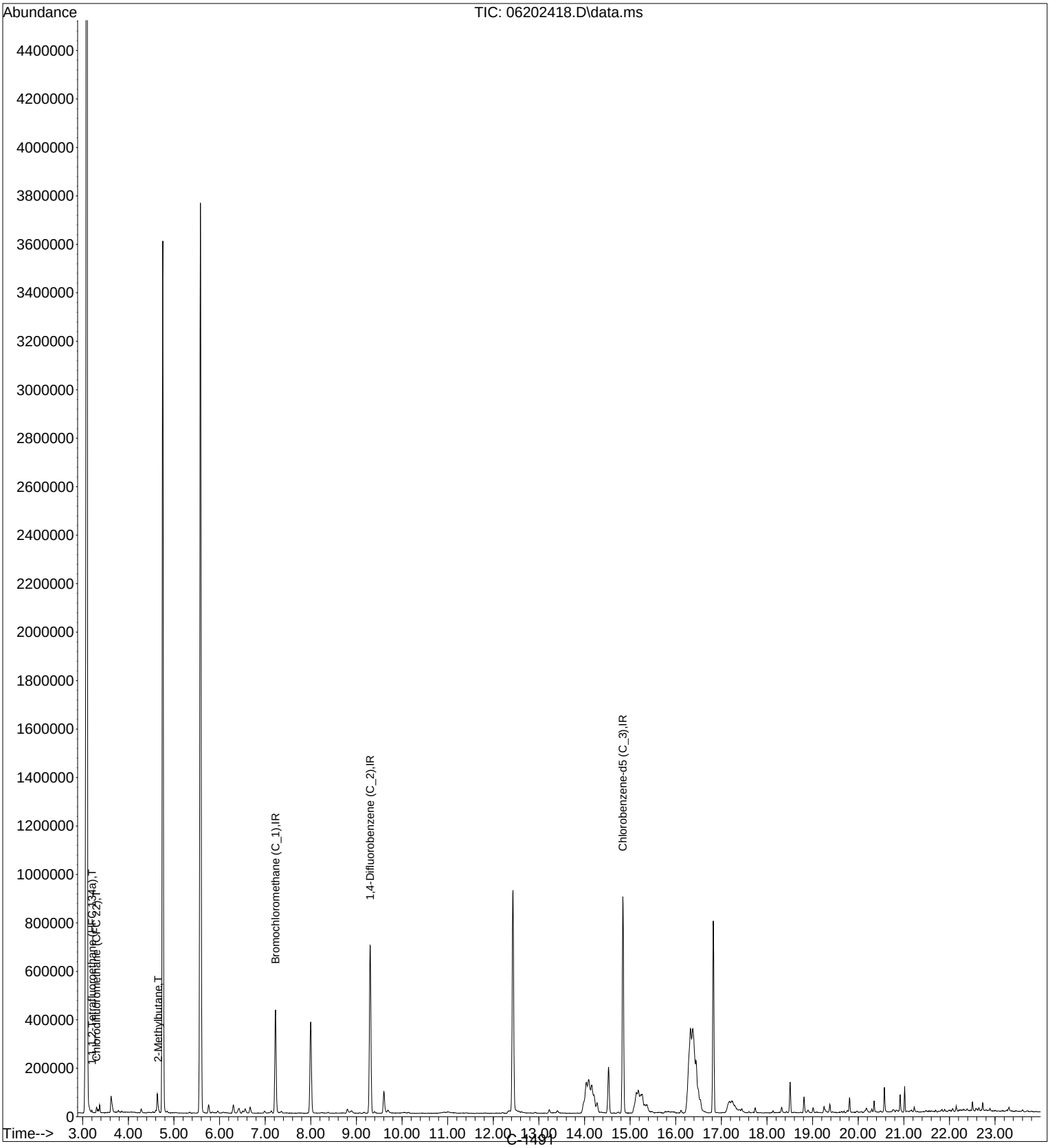
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	152194	12.500	ng		-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	663540	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	153965	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	3.14	85	164	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.21	83	1899	0.122	ng	#	1
4) 1,1-Difluoroethane	0.00	65	0	N.D.			
5) Chlorodifluoromethane ...	3.30	67	799	0.154	ng		89
6) 1-Chloro-1,1-Difluoroe...	3.51	65	616	N.D.			
7) Dichlorofluoromethane ...	4.24	67	545	N.D.			
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	4.56	83	240	N.D.			
10) 2-Methylbutane	4.66	57	2453	0.135	ng	#	1
11) Methyl Acetate	5.34	43	1512	N.D.			
12) 2-Methylpentane	6.57	71	180	N.D.			
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	0.00	84	0	N.D.			
17) 2,3-Dimethylpentane	9.60	56	52	N.D.			
18) Dibromomethane	9.80	174	108	N.D.			
20) Methyl Cyclohexane	11.42	55	120	N.D.			
21) 1,3-Dichloropropane	0.00	76	0	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	16.36	75	51	N.D.			
25) Bromobenzene	17.04	77	61	N.D.			
26) 2-Chlorotoluene	17.61	91	878	N.D.			
27) 4-Chlorotoluene	17.67	91	1547	N.D.			
28) Indane	19.01	117	252	N.D.			
29) Indene	0.00	115	0	N.D.			
30) 1,2,4,5-Tetramethylben...	20.18	119	82	N.D.			
31) 1,2,3,4-Tetramethylben...	20.22	119	136	N.D.			
32) 1,2,3,5-Tetramethylben...	20.59	119	295	N.D.			
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202418.D Vial: 8
Acq On : 20 Jun 2024 19:08 Operator: SC
Sample : P2402249-046 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:27:58 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\20\
Data File : 06202418.D
Acq On : 20 Jun 2024 19:08
Operator : SC
Sample : P2402249-046 (400mL)
Misc : S37-06062402
ALS Vial : 8 Sample Multiplier: 1

MJ 6/28/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06202418.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.086	23	36	53	rBV	9138680	17221966	100.00%	49.044%
2	3.200	53	56	64	rVB3	10748	14691	0.09%	0.042%
3	3.302	70	74	78	rBV2	23384	37408	0.22%	0.107%
4	3.370	83	86	94	rVB	32900	42422	0.25%	0.121%
5	3.620	124	130	145	rBV	67496	157183	0.91%	0.448%
6	3.779	154	158	163	rBV3	8643	12374	0.07%	0.035%
7	4.284	242	247	256	rBV2	16937	30650	0.18%	0.087%
8	4.602	298	303	304	rBV2	8942	11371	0.07%	0.032%
9	4.636	304	309	318	rVV	77199	144901	0.84%	0.413%
10	4.755	322	330	343	rVV	3597969	6124199	35.56%	17.440%
11	4.852	343	347	358	rVB3	7750	14909	0.09%	0.042%
12	5.579	463	475	493	rBV	3755600	7276556	42.25%	20.722%
13	5.761	500	507	514	rBV	34167	66511	0.39%	0.189%
14	5.959	537	542	550	rVB4	8443	17008	0.10%	0.048%
15	6.300	594	602	611	rBV	34601	73741	0.43%	0.210%
16	6.425	614	624	630	rVV5	19880	52773	0.31%	0.150%
17	6.504	634	638	643	rBV	9495	20055	0.12%	0.057%
18	6.561	643	648	656	rVB3	17029	36179	0.21%	0.103%
19	6.669	661	667	677	rVB	24236	48909	0.28%	0.139%
20	6.981	717	722	730	rBV3	8684	17808	0.10%	0.051%
21	7.135	741	749	756	rVB6	9087	19143	0.11%	0.055%
22	7.226	756	765	778	rBV	426252	892609	5.18%	2.542%
23	7.350	782	787	795	rVB3	7379	15991	0.09%	0.046%
24	7.998	891	901	921	rVB	376415	855776	4.97%	2.437%
25	8.804	1035	1043	1051	rBV2	17040	42976	0.25%	0.122%
26	8.895	1054	1059	1071	rVB4	10667	30549	0.18%	0.087%
27	9.298	1119	1130	1142	rBV	692486	1598068	9.28%	4.551%
28	9.400	1142	1148	1154	rVB3	5882	11900	0.07%	0.034%
29	9.599	1175	1183	1194	rBV	89770	201037	1.17%	0.573%
30	9.690	1194	1199	1207	rVB2	11081	25572	0.15%	0.073%

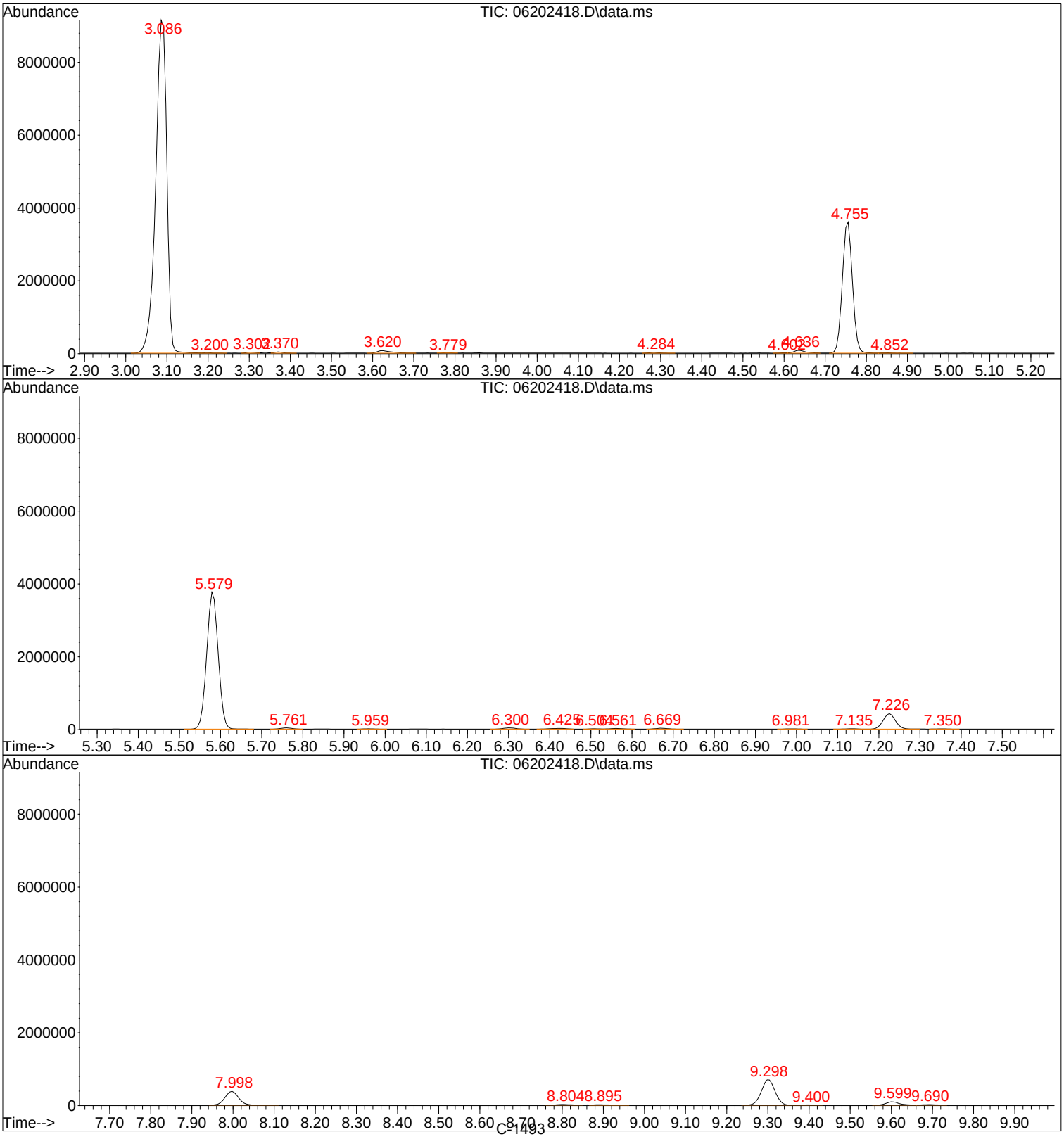
Sum of corrected areas: 35115235

LSC Report - Integrated Chromatogram

Data Path : I:\MS09\DATA\2024 06\20\
Data File : 06202418.D
Acq On : 20 Jun 2024 19:08
Operator : SC
Sample : P2402249-046 (400mL)
Misc : S37-06062402
ALS Vial : 8 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\20\\
Data File : 06202418.D
Acq On : 20 Jun 2024 19:088
Operator : SCC
Sample : P2402249-046 (400mL))
Misc : S37-060624022
ALS Vial : 8 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

						Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT/LSC Reviewed)

MJ 6/29/24

Data File : I:\MS09\DATA\2024 06\20\06202419.D Vial: 9
Acq On : 20 Jun 2024 19:40 Operator: SC
Sample : P2402249-047 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:05:34 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane (IS1)	7.22	130	153585	12.500 ng	0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	656628	12.500 ng	0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	153770	12.500 ng	0.00
System Monitoring Compounds					
33) 1,2-Dichloroethane-d4(...	7.99	65	336198	12.316 ng	0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.56%		
57) Toluene-d8 (SS2)	12.43	98	730614	12.416 ng	-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.36%		
73) Bromofluorobenzene (SS3)	16.82	174	265314	12.486 ng	-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.92%		
Target Compounds					Qvalue
2) Propene	0.00	42	0	N.D. d	
3) Dichlorodifluoromethan...	3.38	85	5462m	0.151 ng	
4) Chloromethane	3.52	50	385	N.D.	
5) 1,2-Dichloro-1,1,2,2-t...	3.61	135	146	N.D.	
6) Vinyl Chloride	0.00	62	0	N.D.	
7) 1,3-Butadiene	0.00	54	0	N.D.	
8) Bromomethane	0.00	94	0	N.D.	
9) Chloroethane	0.00	64	0	N.D.	
10) Ethanol	4.41	45	53	N.D.	
11) Acetonitrile	4.45	41	292	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) Acetone	4.64	58	14954	1.253 ng	96
14) Trichlorofluoromethane	4.76	101	4227552	115.622 ng	100
15) 2-Propanol (Isopropanol)	4.88	45	51	N.D.	
16) Acrylonitrile	4.99	53	433	N.D.	
17) 1,1-Dichloroethene	0.00	96	0	N.D.	
18) 2-Methyl-2-Propanol (t...	5.33	59	62	N.D.	
19) Methylene Chloride	5.35	84	1016	0.060 ng	98
20) 3-Chloro-1-propene (Al...	5.45	41	142	N.D.	
21) Trichlorotrifluoroethane	5.58	151	2059063	133.121 ng	95
22) Carbon Disulfide	0.00	76	0	N.D. d	
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.	
24) 1,1-Dichloroethane	0.00	63	0	N.D.	
25) Methyl tert-Butyl Ether	6.29	73	1292	N.D.	
26) Vinyl Acetate	0.00	86	0	N.D.	
27) 2-Butanone (MEK)	6.68	72	1901	0.201 ng #	62
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.	
29) Diisopropyl Ether	0.00	87	0	N.D. d	
30) Ethyl Acetate	0.00	61	0	N.D.	
31) n-Hexane	0.00	57	0	N.D.	
32) Chloroform	7.34	83	8545	0.284 ng	99
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.	
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.	
36) 1,2-Dichloroethane	8.11	62	268	N.D.	
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.	
39) Isopropyl Acetate	9.56	61	755	No Calib #	
40) 1-Butanol	0.00	56	0	N.D.	
41) Benzene	8.89	78	2879	N.D.	
42) Carbon Tetrachloride	0.00	117	0	N.D.	
43) Cyclohexane	0.00	84	0	N.D. d	
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.	
45) 1,2-Dichloropropane	0.00	63	0	N.D.	
46) Bromodichloromethane	10.07	83	1173	N.D.	
47) Trichloroethene	10.14	130	39111	2.210 ng	100
48) 1,4-Dioxane	0.00	88	0	N.D.	
49) 2,2,4-Trimethylpentane...	10.29	57	177	N.D.	
50) Methyl Methacrylate	0.00	100	0	N.D.	

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202419.D Vial: 9
Acq On : 20 Jun 2024 19:40 Operator: SC
Sample : P2402249-047 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:05:34 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

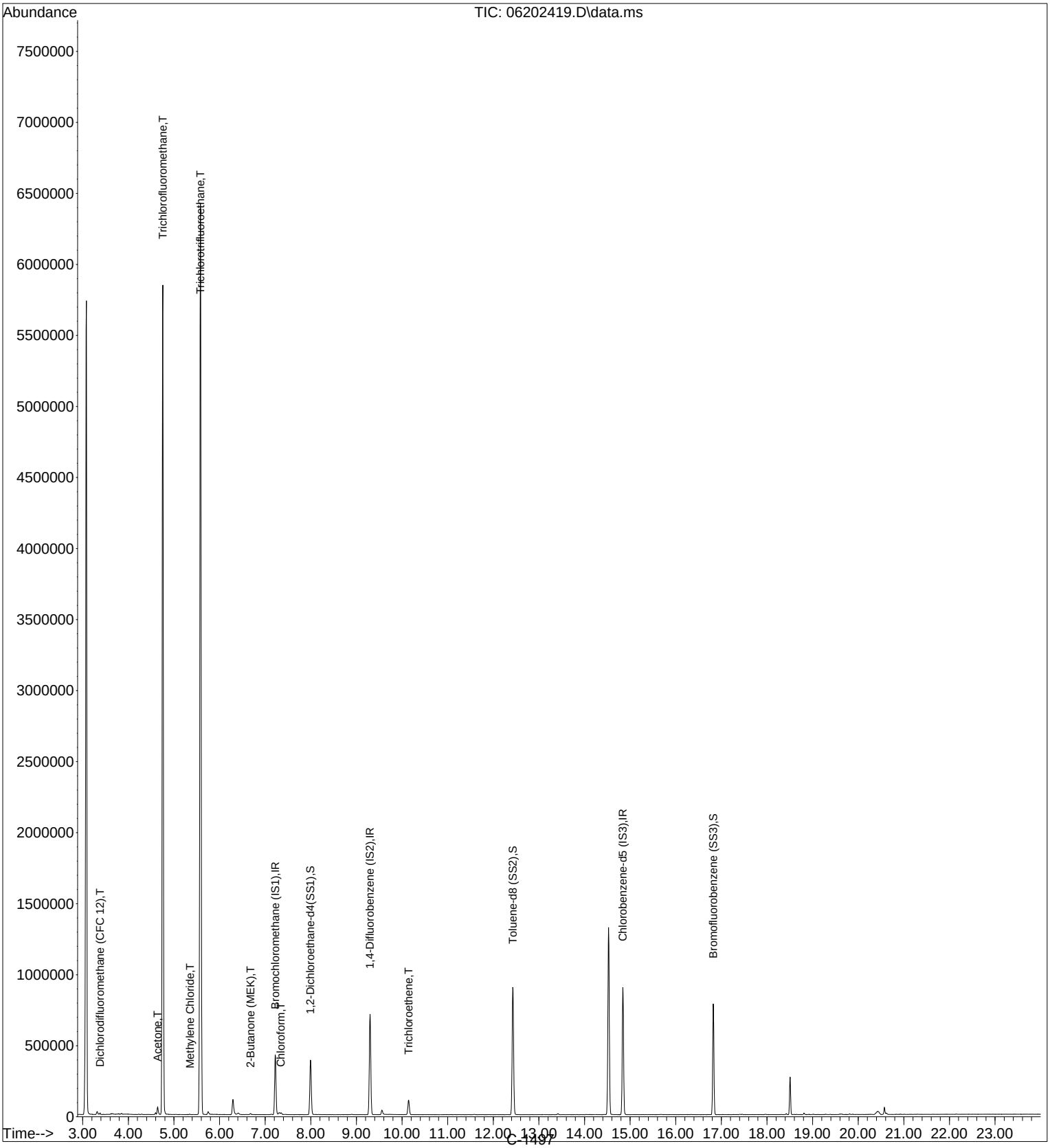
Internal Standards	R.T.	QIon	Response	Conc Units Dev(Min)
51) n-Heptane	0.00	71	0	N.D.
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.
58) Toluene	12.56	91	995	N.D.
59) 2-Hexanone	12.94	43	150	N.D.
60) Dibromochloromethane	13.07	129	392	N.D.
61) 1,2-Dibromoethane	0.00	107	0	N.D.
62) n-Butyl Acetate	0.00	43	0	N.D.
63) n-Octane	0.00	57	0	N.D.
64) Tetrachloroethene	14.03	166	544	N.D.
65) Chlorobenzene	14.90	112	611	N.D.
66) Ethylbenzene	15.41	91	831	N.D.
67) m- & p-Xylenes	15.63	91	752	N.D.
68) Bromoform	15.68	173	683	N.D.
69) Styrene	0.00	104	0	N.D.
70) o-Xylene	16.24	91	616	N.D.
71) n-Nonane	0.00	43	0	N.D.
72) 1,1,2,2-Tetrachloroethane	16.22	83	473	N.D.
74) Cumene	17.04	105	906	N.D.
75) alpha-Pinene	0.00	93	0	N.D.
76) n-Propylbenzene	17.68	91	848	N.D.
77) 3-Ethyltoluene	17.04	105	906	No Calib #
78) 4-Ethyltoluene	17.86	105	622	N.D.
79) 1,3,5-Trimethylbenzene	17.96	105	428	N.D.
80) alpha-Methylstyrene	0.00	118	0	N.D.
81) 2-Ethyltoluene	17.04	105	906	No Calib #
82) 1,2,4-Trimethylbenzene	18.43	105	639	N.D.
83) n-Decane	0.00	58	0	N.D.
84) Benzyl Chloride	0.00	91	0	N.D.
85) 1,3-Dichlorobenzene	18.58	146	537	N.D.
86) 1,4-Dichlorobenzene	18.66	146	586	N.D.
87) sec-Butylbenzene	18.74	105	774	N.D.
88) 4-Isopropyltoluene (p-...	18.92	119	786	N.D.
89) 1,2,3-Trimethylbenzene	17.04	105	906	No Calib #
90) 1,2-Dichlorobenzene	19.03	146	482	N.D.
91) d-Limonene	0.00	68	0	N.D.
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.
93) n-Undecane	0.00	58	0	N.D.
94) 1,2,4-Trichlorobenzene	20.84	180	564	N.D.
95) Naphthalene	20.94	128	348	N.D.
96) n-Dodecane	0.00	58	0	N.D.
97) Hexachlorobutadiene	21.30	225	610	N.D.
98) Cyclohexanone	0.00	55	0	N.D.
99) tert-Butylbenzene	0.00	119	0	N.D. d
100) n-Butylbenzene	19.39	91	605	N.D.
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202419.D Vial: 9
Acq On : 20 Jun 2024 19:40 Operator: SC
Sample : P2402249-047 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:05:34 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202419.D Vial: 9
Acq On : 20 Jun 2024 19:40 Operator: SC
Sample : P2402249-047 (100mL) Inst : MS09
Misc : S37-06062402

MJ 6/29/24

Quant Time: Jun 29 10:05:34 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

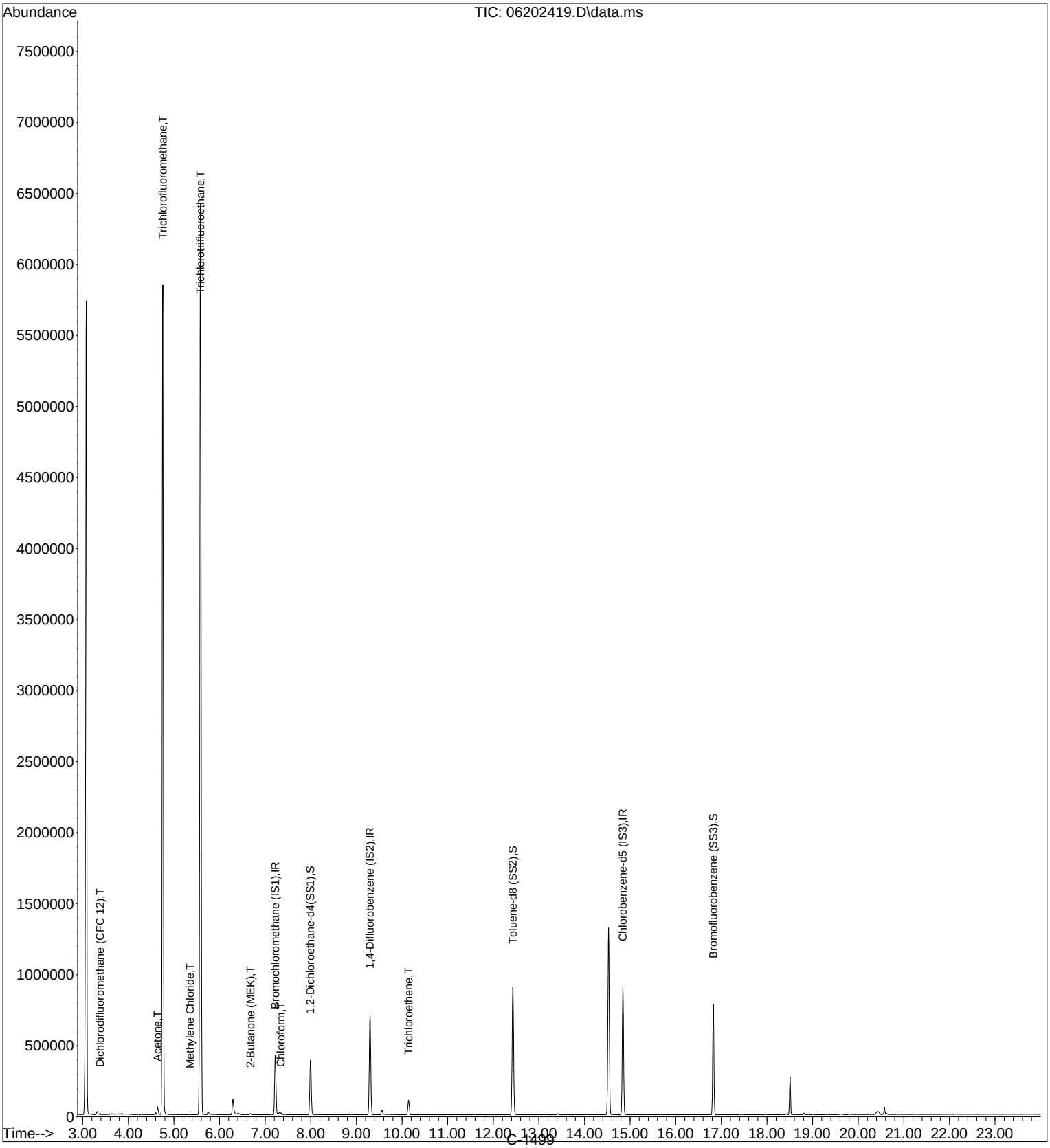
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.22	130	153585	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	656628	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	153770	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	336198	12.316	ng		0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.56%				
57) Toluene-d8 (SS2)	12.43	98	730614	12.416	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.36%				
73) Bromofluorobenzene (SS3)	16.82	174	265314	12.486	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.92%				
Target Compounds							Qvalue
3) Dichlorodifluoromethan...	3.38	85	5462m	0.151	ng		
13) Acetone	4.64	58	14954	1.253	ng		96
14) Trichlorofluoromethane	4.76	101	4227552	115.622	ng		100
19) Methylene Chloride	5.35	84	1016	0.060	ng		98
21) Trichlorotrifluoroethane	5.58	151	2059063	133.121	ng		95
27) 2-Butanone (MEK)	6.68	72	1901	0.201	ng	#	62
32) Chloroform	7.34	83	8545	0.284	ng		99
47) Trichloroethene	10.14	130	39111	2.210	ng		100

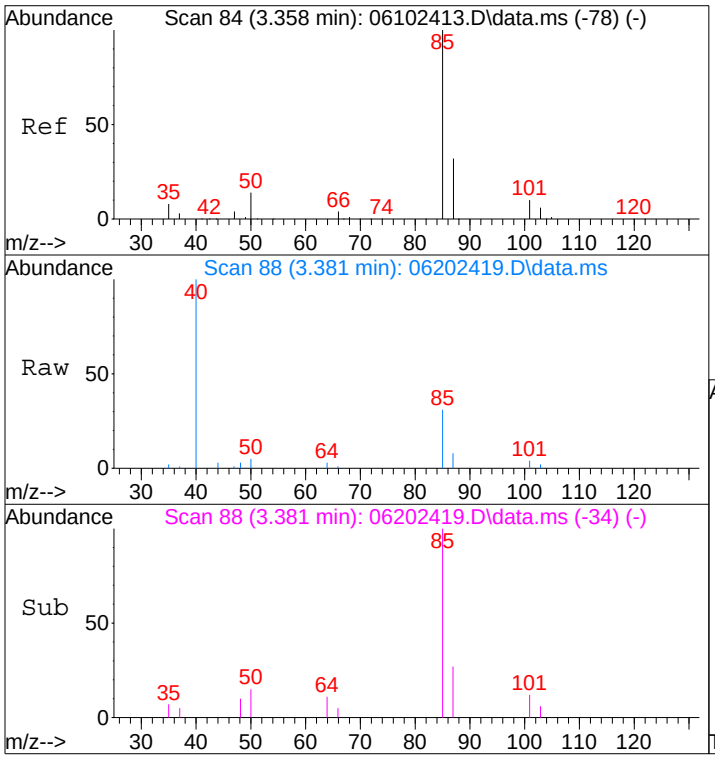
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202419.D Vial: 9
Acq On : 20 Jun 2024 19:40 Operator: SC
Sample : P2402249-047 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:05:34 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

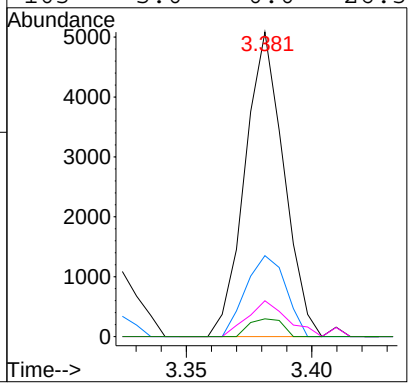


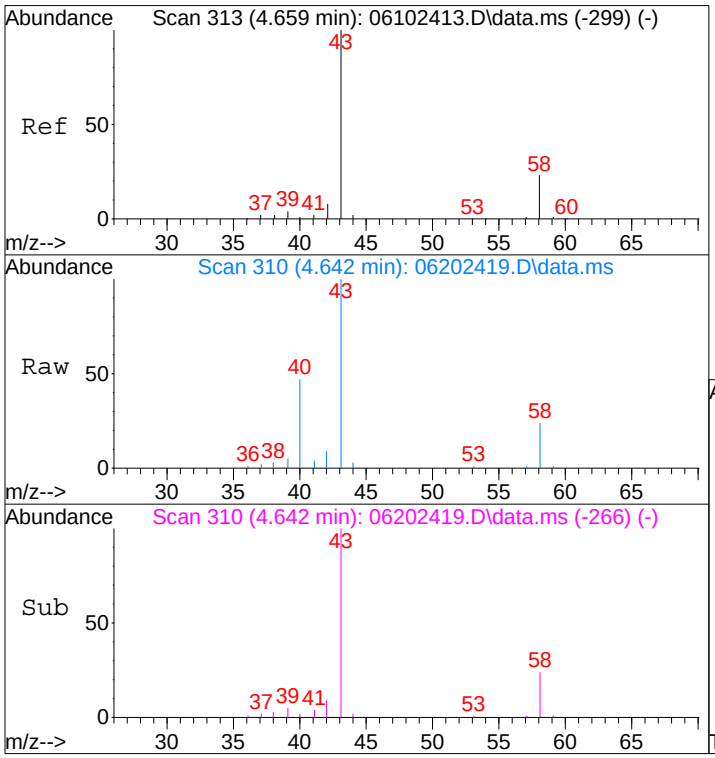


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.15 ng m
RT: 3.38 min Scan# 88
Delta R.T. 0.059 min
Lab File: 06202419.D
Acq: 20 Jun 2024 19:40

Tgt Ion: 85 Resp: 5462

Ion	Ratio	Lower	Upper
85	100		
87	27.5	12.2	52.2
101	12.0	0.0	29.8
103	5.0	0.0	26.3

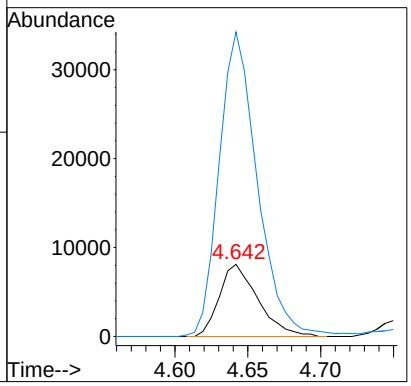


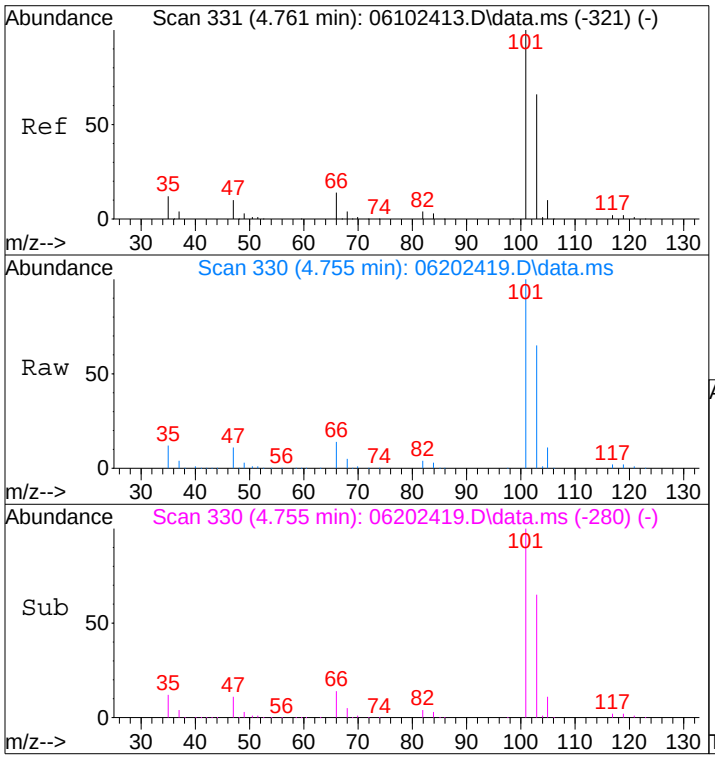


#13
Acetone
Concen: 1.25 ng
RT: 4.64 min Scan# 310
Delta R.T. -0.000 min
Lab File: 06202419.D
Acq: 20 Jun 2024 19:40

Tgt Ion: 58 Resp: 14954

Ion	Ratio	Lower	Upper
58	100		
43	419.9	400.7	460.7

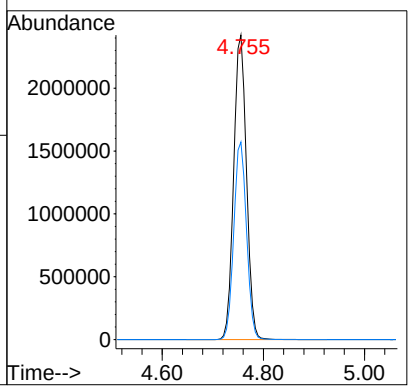


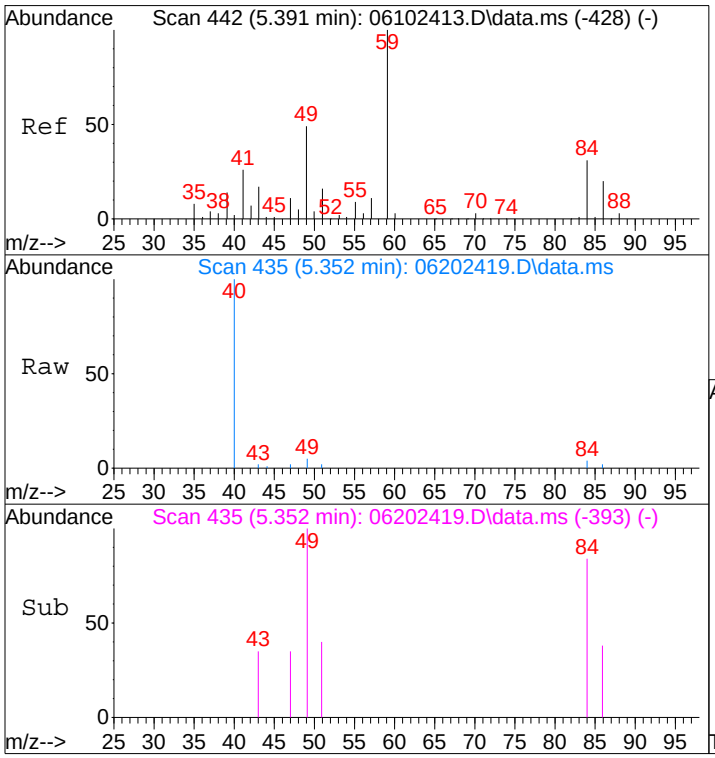


#14
Trichlorofluoromethane
Concen: 115.62 ng
RT: 4.76 min Scan# 330
Delta R.T. 0.035 min
Lab File: 06202419.D
Acq: 20 Jun 2024 19:40

Tgt Ion:101 Resp: 4227552

Ion	Ratio	Lower	Upper
101	100		
103	64.8	44.9	84.9

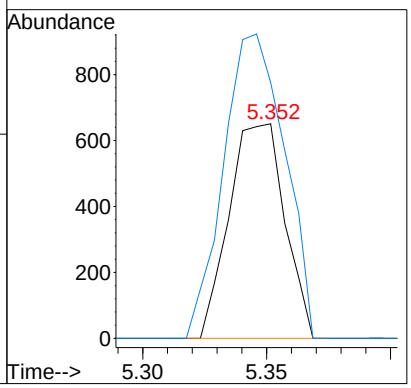


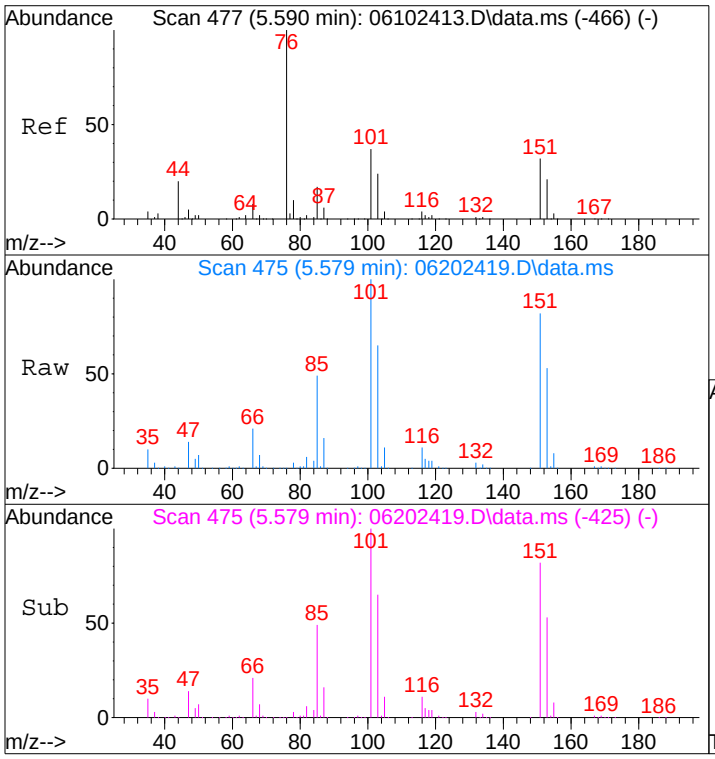


#19
Methylene Chloride
Concen: 0.06 ng
RT: 5.35 min Scan# 435
Delta R.T. -0.009 min
Lab File: 06202419.D
Acq: 20 Jun 2024 19:40

Tgt Ion: 84 Resp: 1016

Ion	Ratio	Lower	Upper
84	100		
49	155.9	132.9	182.9

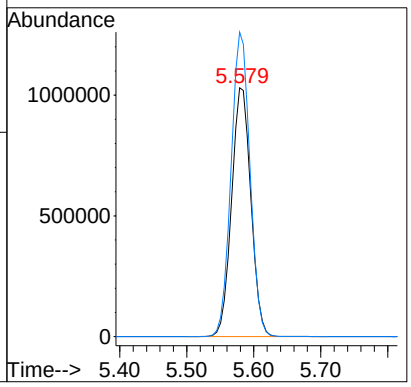


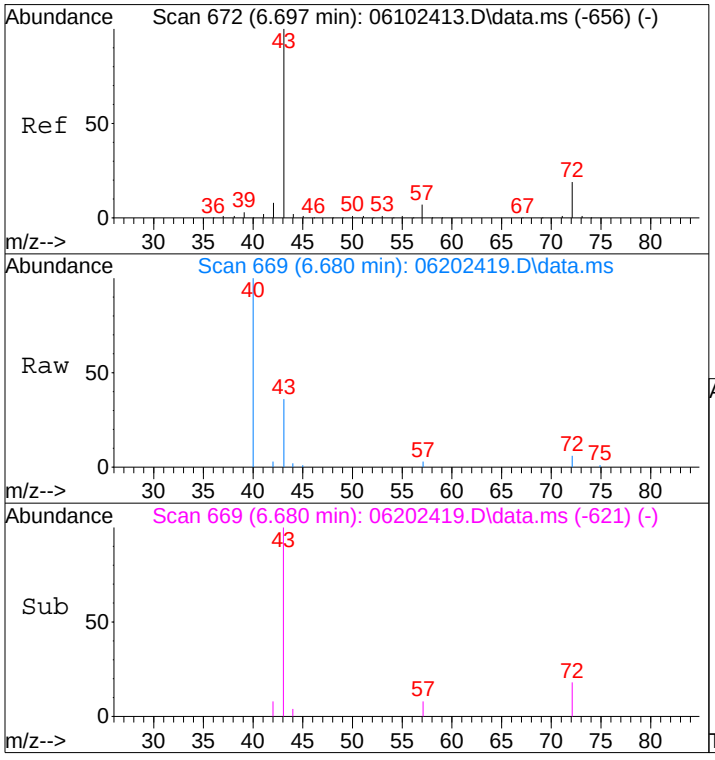


#21
Trichlorotrifluoroethane
Concen: 133.12 ng
RT: 5.58 min Scan# 475
Delta R.T. 0.033 min
Lab File: 06202419.D
Acq: 20 Jun 2024 19:40

Tgt Ion:151 Resp: 2059063

Ion	Ratio	Lower	Upper
151	100		
101	120.1	95.0	135.0

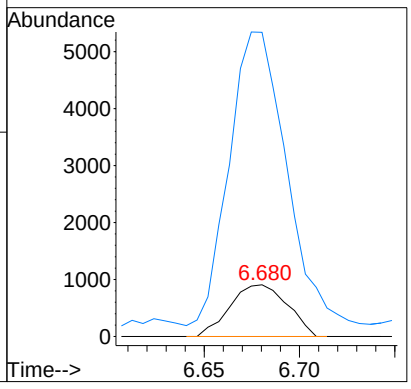


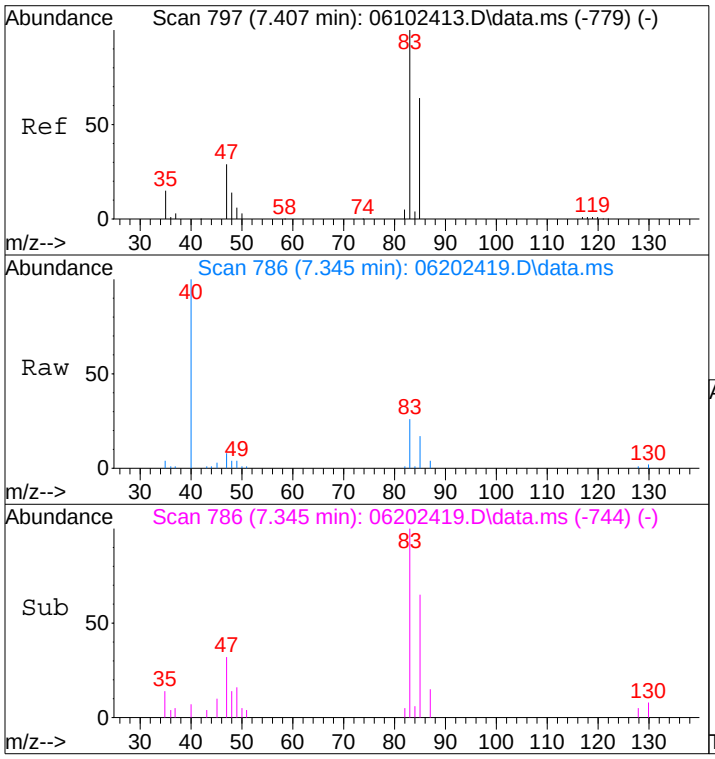


#27
2-Butanone (MEK)
Concen: 0.20 ng
RT: 6.68 min Scan# 669
Delta R.T. 0.022 min
Lab File: 06202419.D
Acq: 20 Jun 2024 19:40

Tgt Ion: 72 Resp: 1901

Ion	Ratio	Lower	Upper
72	100		
43	635.6	506.8	546.8#

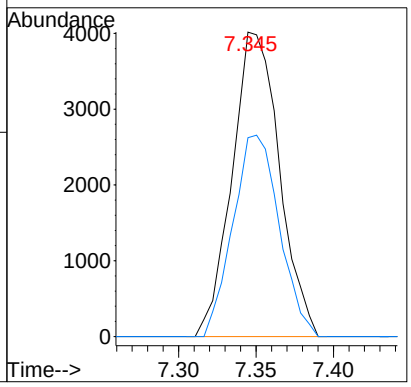


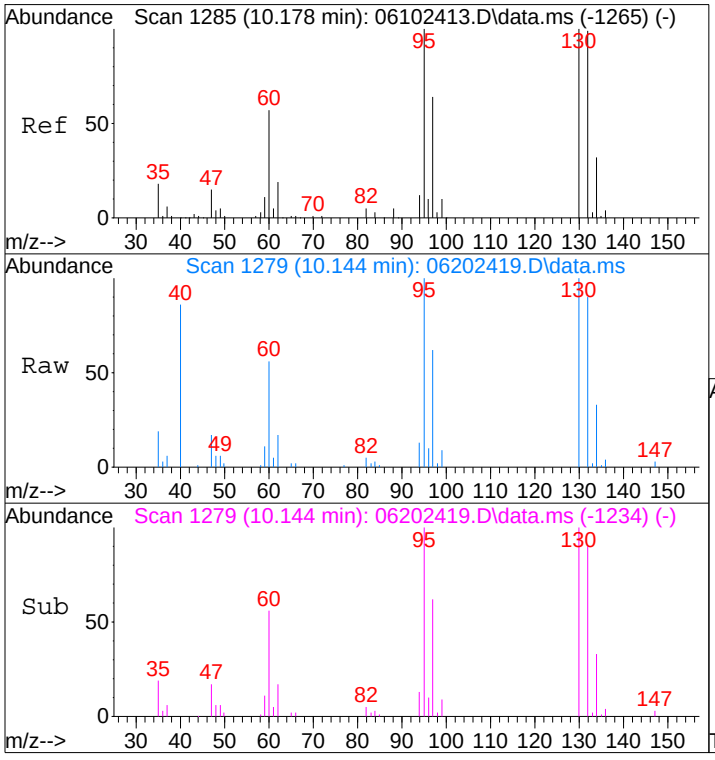


#32
Chloroform
Concen: 0.28 ng
RT: 7.34 min Scan# 786
Delta R.T. -0.010 min
Lab File: 06202419.D
Acq: 20 Jun 2024 19:40

Tgt Ion: 83 Resp: 8545

Ion	Ratio	Lower	Upper
83	100		
85	64.9	44.4	84.4

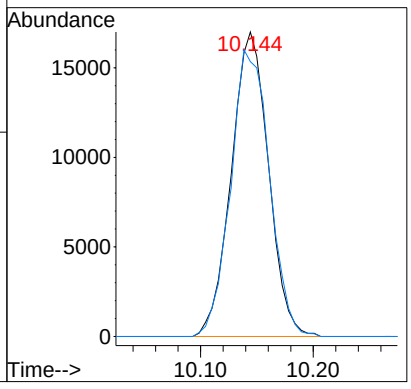




#47
Trichloroethene
Concen: 2.21 ng
RT: 10.14 min Scan# 1279
Delta R.T. 0.004 min
Lab File: 06202419.D
Acq: 20 Jun 2024 19:40

Tgt Ion:130 Resp: 39111

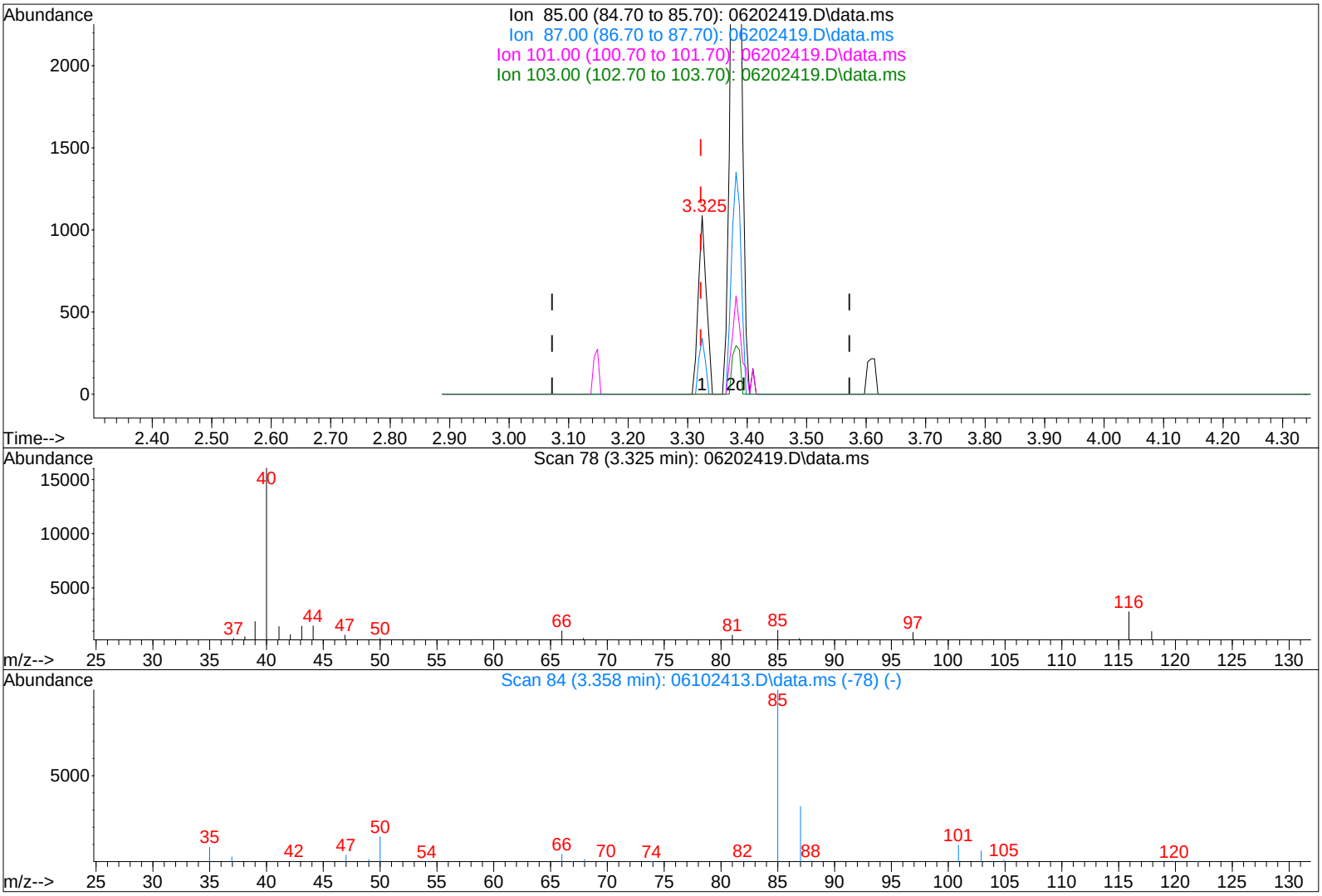
Ion	Ratio	Lower	Upper
130	100		
132	98.2	77.9	117.9



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\20\06202419.D Vial: 9
Acq On : 20 Jun 2024 19:40 Operator: SC
Sample : P2402249-047 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 12:06:03 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06202419.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.325min (+0.002) 0.03ng

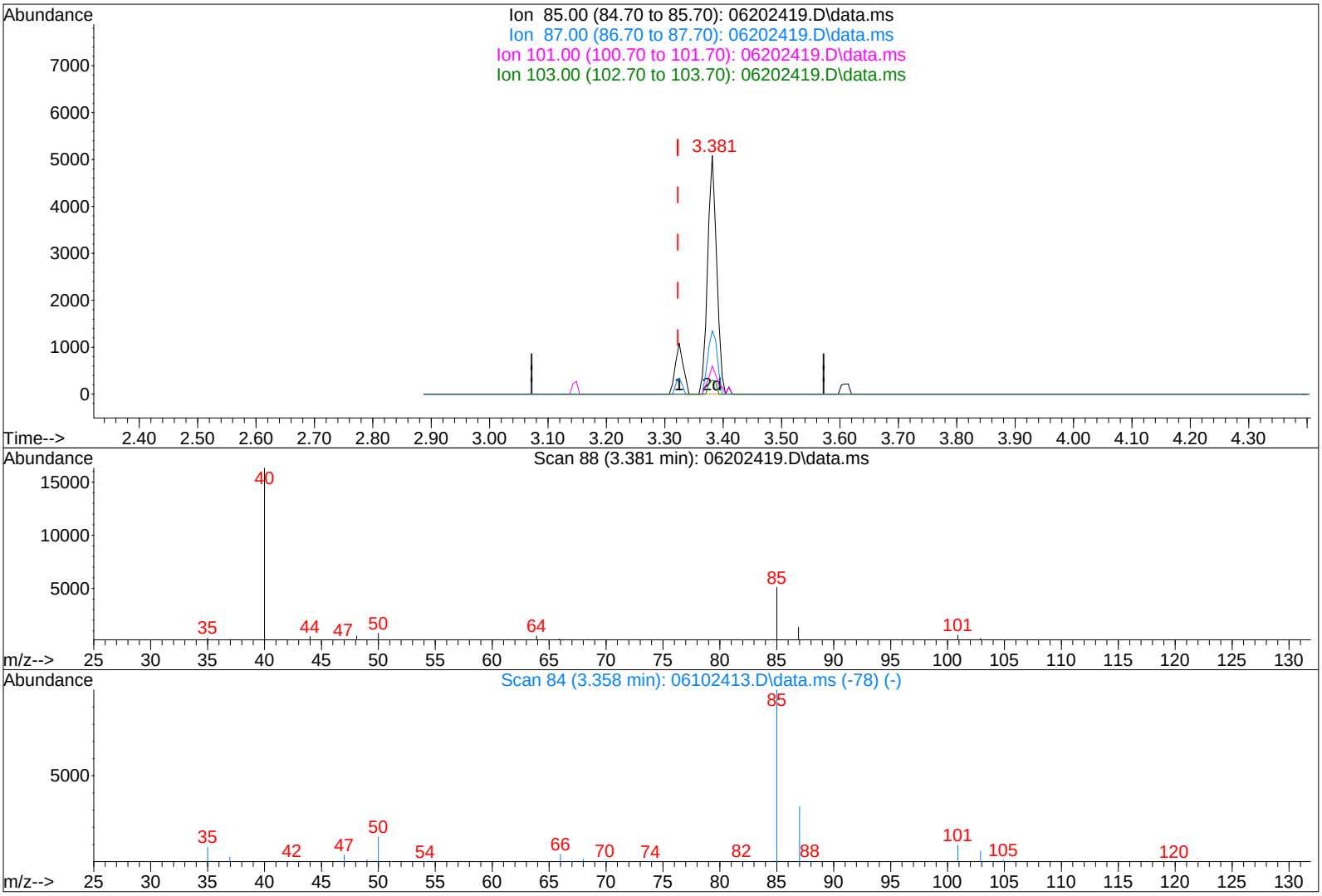
response 1031

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	24.73
101.00	9.80	0.00
103.00	6.30	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\20\06202419.D Vial: 9
Acq On : 20 Jun 2024 19:40 Operator: SC
Sample : P2402249-047 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 12:06:03 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06202419.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.381min (+0.059) 0.15ng m

response 5462

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	27.50
101.00	9.80	11.96
103.00	6.30	5.00

MJ 6/29/24

WP

CG 6/29/24

Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\20\06202419.D Vial: 9
Acq On : 20 Jun 2024 19:40 Operator: SC
Sample : P2402249-047 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:27:59 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

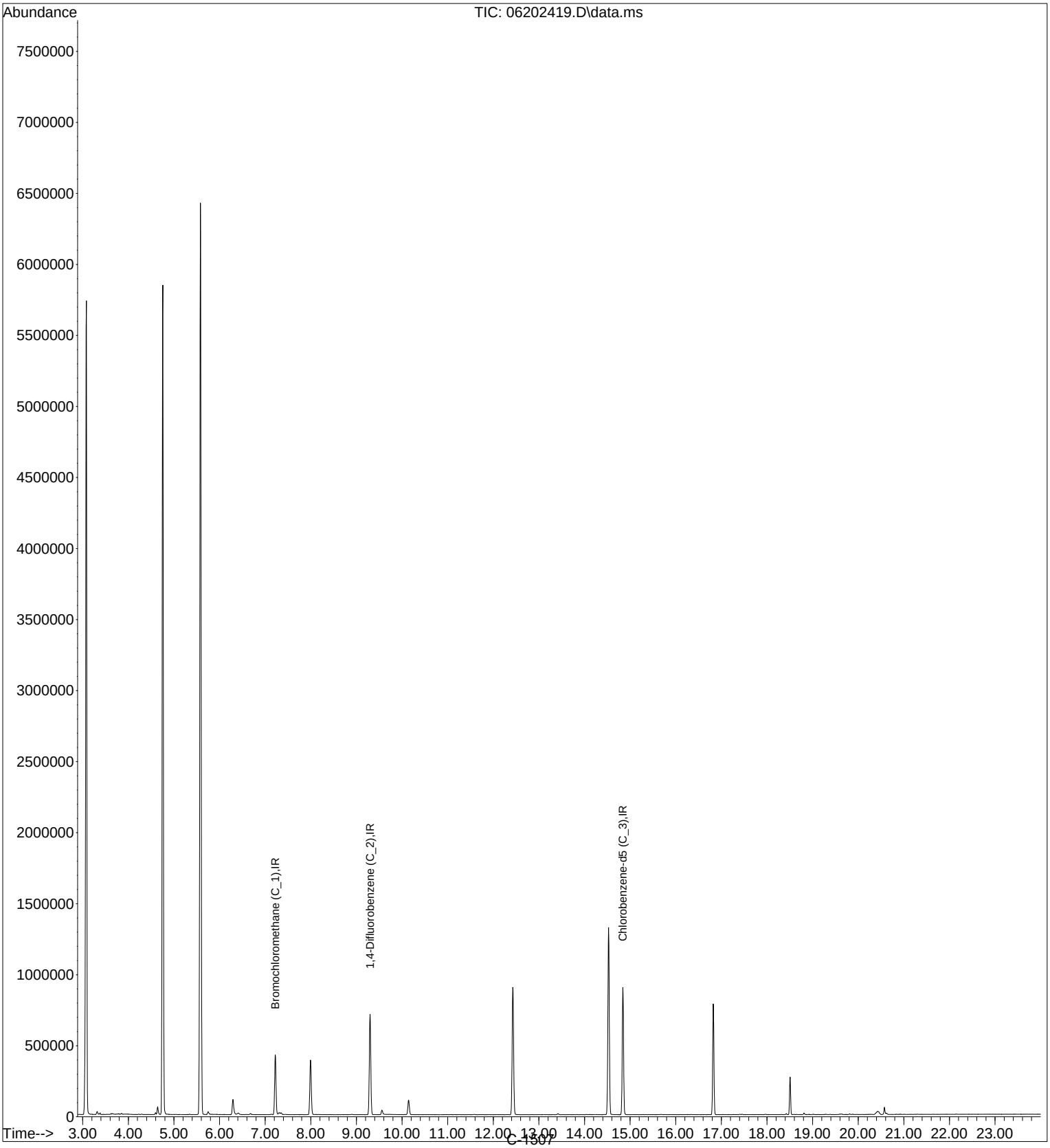
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (C 1)	7.22	130	154484	12.500	ng	-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	658352	12.500	ng	-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	153770	12.500	ng	-0.01
Target Compounds						Qvalue
2) Chloropentafluoroethane	0.00	85	0	N.D.		
3) 1,1,1,2-Tetrafluoroeth...	3.20	83	336	N.D.		
4) 1,1-Difluoroethane	0.00	65	0	N.D.		
5) Chlorodifluoromethane ...	3.31	67	186	N.D.		
6) 1-Chloro-1,1-Difluoroe...	3.51	65	65	N.D.		
7) Dichlorofluoromethane ...	4.23	67	2670	N.D.		
8) Vinylbromide	0.00	108	0	N.D.		
9) 2,2-Dichloro-1,1,1-tri...	4.55	83	212	N.D.		
10) 2-Methylbutane	4.65	57	879	N.D.		
11) Methyl Acetate	5.35	43	574	N.D.		
12) 2-Methylpentane	0.00	71	0	N.D.		
13) 2,2-Dichloropropane	0.00	77	0	N.D.		
14) 1,1-Dichloropropene	0.00	75	0	N.D.		
15) Thiophene	0.00	84	0	N.D.		
17) 2,3-Dimethylpentane	0.00	56	0	N.D.		
18) Dibromomethane	9.79	174	71	N.D.		
20) Methyl Cyclohexane	0.00	55	0	N.D.		
21) 1,3-Dichloropropane	0.00	76	0	N.D.		
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		
23) 1-Chlorohexane	0.00	91	0	N.D.		
24) 1,2,3-Trichloropropane	0.00	75	0	N.D.		
25) Bromobenzene	17.03	77	53	N.D.		
26) 2-Chlorotoluene	17.61	91	739	N.D.		
27) 4-Chlorotoluene	17.68	91	848	N.D.		
28) Indane	19.01	117	118	N.D.		
29) Indene	0.00	115	0	N.D.		
30) 1,2,4,5-Tetramethylben...	0.00	119	0	N.D.		
31) 1,2,3,4-Tetramethylben...	0.00	119	0	N.D.		
32) 1,2,3,5-Tetramethylben...	20.59	119	154	N.D.		
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202419.D Vial: 9
Acq On : 20 Jun 2024 19:40 Operator: SC
Sample : P2402249-047 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:27:59 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



C-1507

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212419.D Vial: 9
Acq On : 22 Jun 2024 9:15 Operator: SC
Sample : P2402249-047Dil (50mL) Inst : MS09
Misc : S37-06062402

MJ 6/29/24

Quant Time: Jun 29 10:26:27 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	171860	12.500 ng	0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	754868	12.500 ng	0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	172613	12.500 ng	0.00
System Monitoring Compounds					
33) 1,2-Dichloroethane-d4(...	8.00	65	377626	12.363 ng	0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.88%		
57) Toluene-d8 (SS2)	12.43	98	835671	12.651 ng	-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.20%		
73) Bromofluorobenzene (SS3)	16.83	174	290974	12.199 ng	-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.60%		
Target Compounds					Qvalue
2) Propene	0.00	42	0	N.D. d	
3) Dichlorodifluoromethan...	3.34	85	557	N.D.	
4) Chloromethane	3.53	50	251	N.D.	
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.	
6) Vinyl Chloride	0.00	62	0	N.D.	
7) 1,3-Butadiene	0.00	54	0	N.D.	
8) Bromomethane	0.00	94	0	N.D.	
9) Chloroethane	0.00	64	0	N.D.	
10) Ethanol	4.30	45	2882	0.172 ng	95
11) Acetonitrile	4.45	41	552	N.D.	
12) Acrolein	4.56	56	175	N.D.	
13) Acetone	4.65	58	10489	0.786 ng	93
14) Trichlorofluoromethane	4.76	101	2350001m	57.437 ng	
15) 2-Propanol (Isopropanol)	4.86	45	1377	N.D.	
16) Acrylonitrile	5.00	53	731	N.D.	
17) 1,1-Dichloroethene	0.00	96	0	N.D.	
18) 2-Methyl-2-Propanol (t...	5.37	59	70	N.D.	
19) Methylene Chloride	5.35	84	1080	0.057 ng	92
20) 3-Chloro-1-propene (Al...	5.45	41	279	N.D.	
21) Trichlorotrifluoroethane	5.58	151	1141551	65.955 ng	97
22) Carbon Disulfide	5.60	76	3023	N.D.	
23) trans-1,2-Dichloroethene	6.14	61	152	N.D.	
24) 1,1-Dichloroethane	0.00	63	0	N.D.	
25) Methyl tert-Butyl Ether	6.29	73	361	N.D.	
26) Vinyl Acetate	0.00	86	0	N.D.	
27) 2-Butanone (MEK)	0.00	72	0	N.D. d	
28) cis-1,2-Dichloroethene	7.07	61	339	N.D.	
29) Diisopropyl Ether	0.00	87	0	N.D. d	
30) Ethyl Acetate	0.00	61	0	N.D.	
31) n-Hexane	7.30	57	126	N.D.	
32) Chloroform	7.36	83	4807	0.143 ng	96
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.	
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.	
36) 1,2-Dichloroethane	8.11	62	235	N.D.	
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.	
39) Isopropyl Acetate	0.00	61	0	N.D.	
40) 1-Butanol	8.84	56	574	No Calib #	
41) Benzene	8.89	78	3028	N.D.	
42) Carbon Tetrachloride	0.00	117	0	N.D.	
43) Cyclohexane	9.29	84	988	N.D.	
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.	
45) 1,2-Dichloropropane	0.00	63	0	N.D.	
46) Bromodichloromethane	10.07	83	882	N.D.	
47) Trichloroethene	10.14	130	22713	1.117 ng	98
48) 1,4-Dioxane	10.14	88	170	N.D.	
49) 2,2,4-Trimethylpentane...	10.23	57	185	N.D.	
50) Methyl Methacrylate	0.00	100	0	N.D.	

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212419.D Vial: 9
Acq On : 22 Jun 2024 9:15 Operator: SC
Sample : P2402249-047Dil (50mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:26:27 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

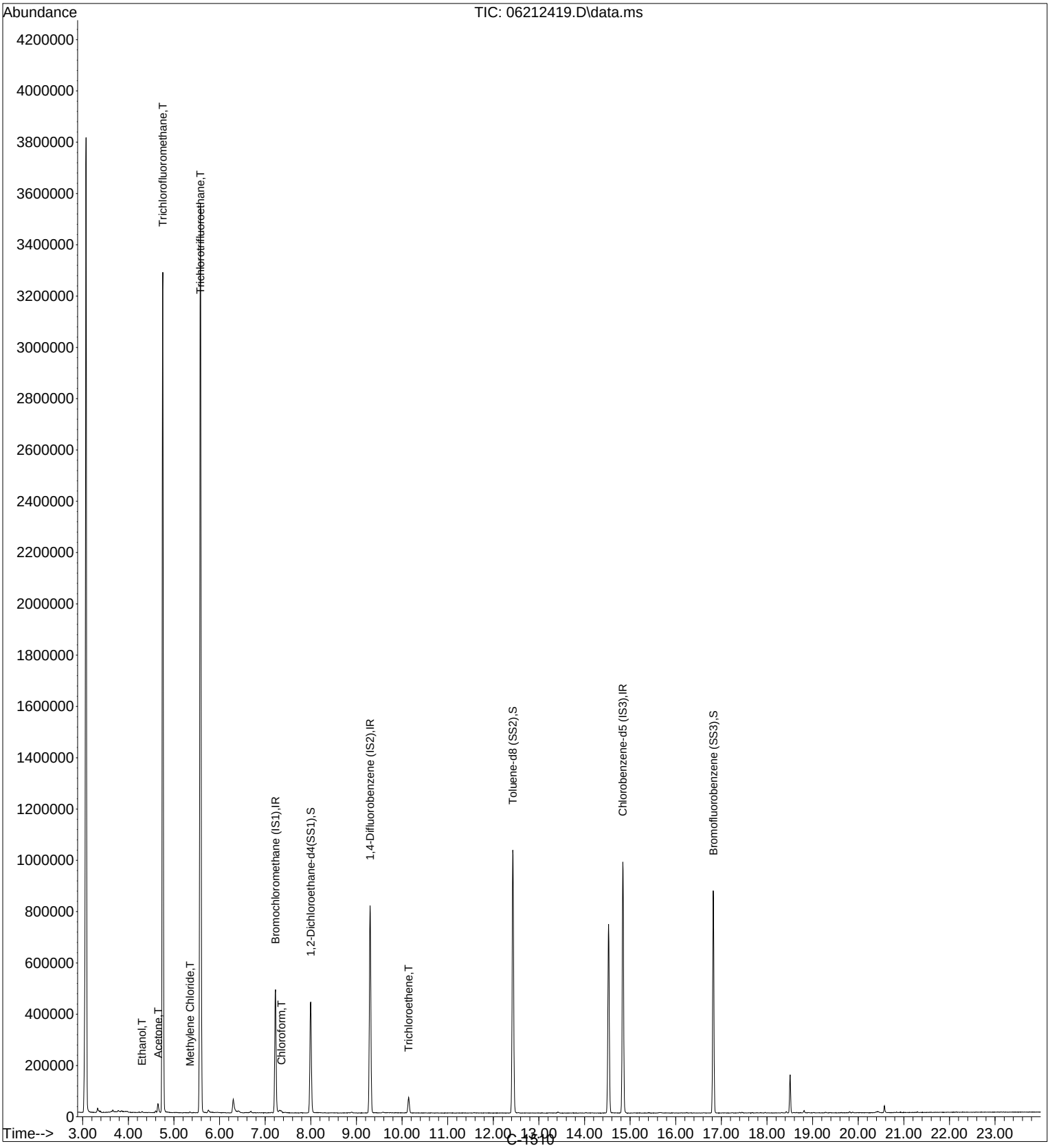
Internal Standards	R.T.	QIon	Response	Conc Units Dev(Min)
51) n-Heptane	0.00	71	0	N.D.
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.
58) Toluene	12.56	91	1459	N.D.
59) 2-Hexanone	12.93	43	193	N.D.
60) Dibromochloromethane	13.07	129	485	N.D.
61) 1,2-Dibromoethane	0.00	107	0	N.D.
62) n-Butyl Acetate	0.00	43	0	N.D.
63) n-Octane	0.00	57	0	N.D.
64) Tetrachloroethene	14.02	166	657	N.D.
65) Chlorobenzene	14.90	112	861	N.D.
66) Ethylbenzene	15.42	91	1228	N.D.
67) m- & p-Xylenes	15.63	91	2021	N.D.
68) Bromoform	15.67	173	692	N.D.
69) Styrene	0.00	104	0	N.D.
70) o-Xylene	16.24	91	967	N.D.
71) n-Nonane	16.62	43	410	N.D.
72) 1,1,2,2-Tetrachloroethane	16.21	83	378	N.D.
74) Cumene	17.02	105	1071	N.D.
75) alpha-Pinene	0.00	93	0	N.D.
76) n-Propylbenzene	17.68	91	1259	N.D.
77) 3-Ethyltoluene	17.02	105	1071	No Calib
78) 4-Ethyltoluene	17.86	105	908	N.D.
79) 1,3,5-Trimethylbenzene	17.96	105	513	N.D.
80) alpha-Methylstyrene	0.00	118	0	N.D.
81) 2-Ethyltoluene	17.02	105	1071	No Calib
82) 1,2,4-Trimethylbenzene	18.43	105	644	N.D.
83) n-Decane	0.00	58	0	N.D.
84) Benzyl Chloride	0.00	91	0	N.D.
85) 1,3-Dichlorobenzene	18.57	146	871	N.D.
86) 1,4-Dichlorobenzene	18.65	146	764	N.D.
87) sec-Butylbenzene	18.74	105	1104	N.D.
88) 4-Isopropyltoluene (p-...	18.93	119	728	N.D.
89) 1,2,3-Trimethylbenzene	17.02	105	1071	No Calib
90) 1,2-Dichlorobenzene	19.04	146	667	N.D.
91) d-Limonene	0.00	68	0	N.D.
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.
93) n-Undecane	0.00	58	0	N.D.
94) 1,2,4-Trichlorobenzene	20.84	180	962	N.D.
95) Naphthalene	20.94	128	509	N.D.
96) n-Dodecane	0.00	58	0	N.D.
97) Hexachlorobutadiene	21.30	225	721	N.D.
98) Cyclohexanone	0.00	55	0	N.D.
99) tert-Butylbenzene	18.51	119	3034	N.D.
100) n-Butylbenzene	19.39	91	666	N.D.
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212419.D Vial: 9
Acq On : 22 Jun 2024 9:15 Operator: SC
Sample : P2402249-047Dil (50mL) Inst : MS09
Misc : S37-06062402

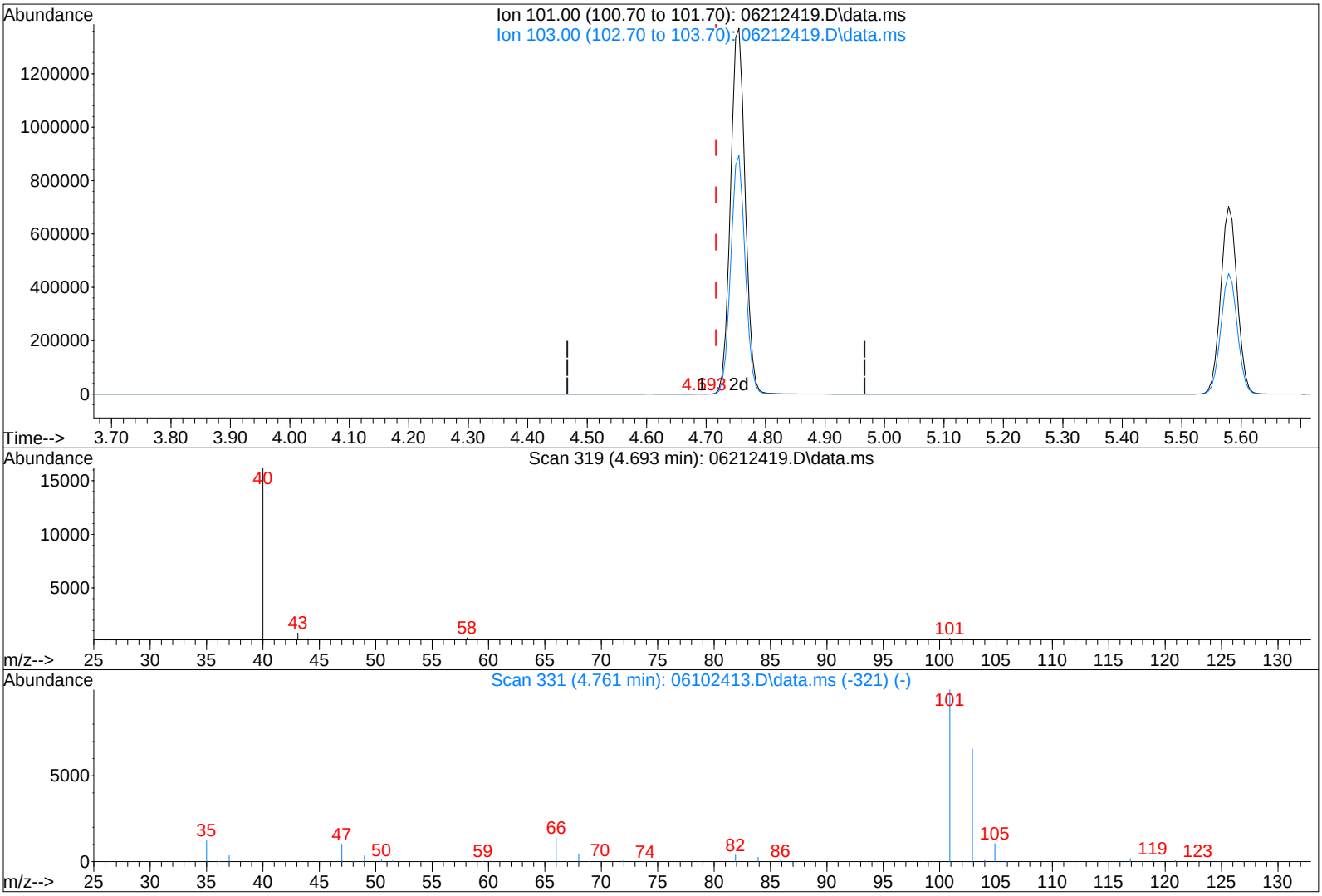
Quant Time: Jun 29 10:26:27 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\21\06212419.D Vial: 9
Acq On : 22 Jun 2024 9:15 Operator: SC
Sample : P2402249-047Dil (50mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 17:44:57 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06212419.D\data.ms

(14) Trichlorofluoromethane (T)

4.693min (-0.024) 0.01ng

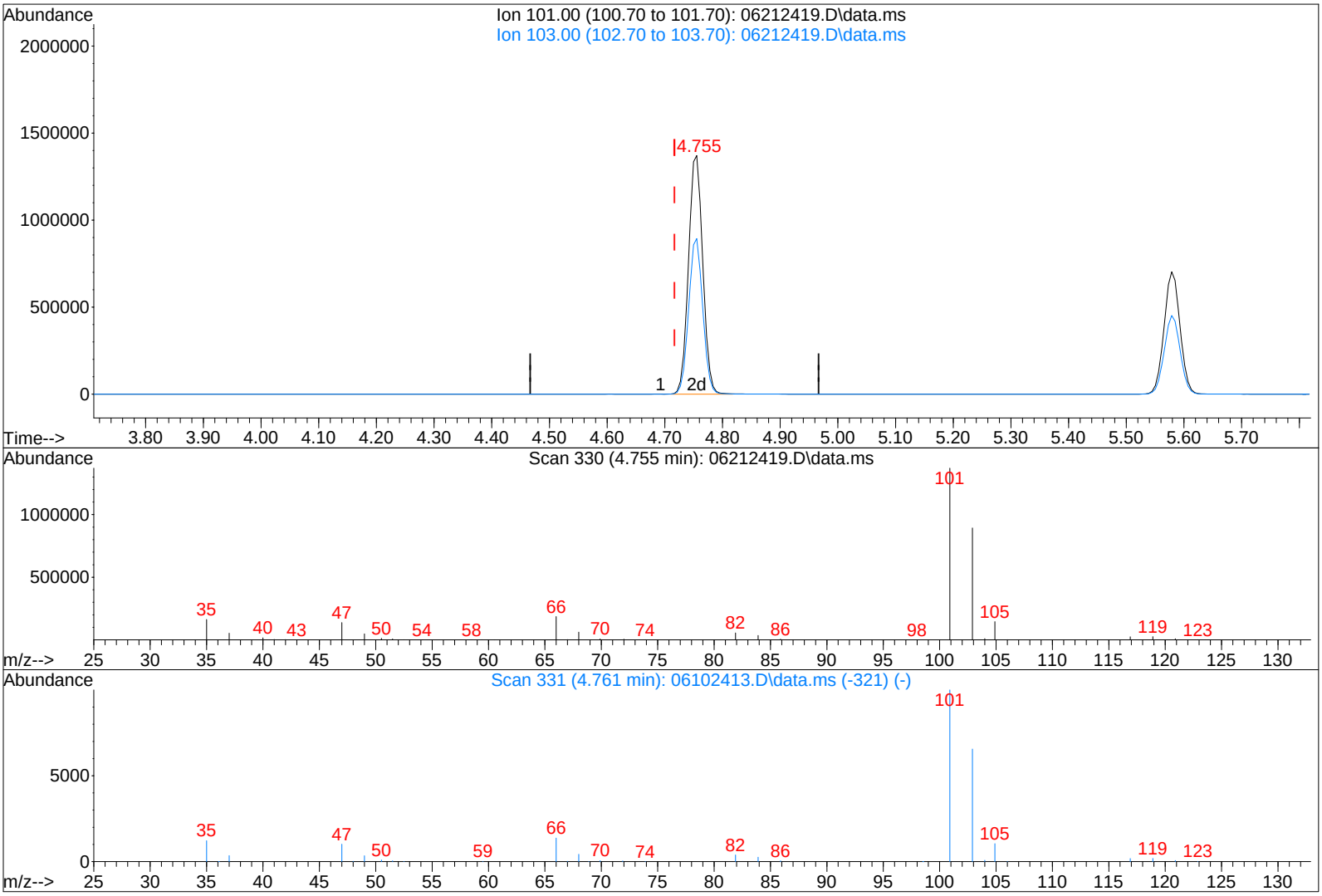
response 226

Ion	Exp%	Act%
101.00	100	100
103.00	64.90	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\21\06212419.D Vial: 9
Acq On : 22 Jun 2024 9:15 Operator: SC
Sample : P2402249-047Dil (50mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 17:44:57 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06212419.D\data.ms

(14) Trichlorofluoromethane (T)

4.755min (+0.039) 57.44ng m

response 2350001

MJ 6/29/24

MP

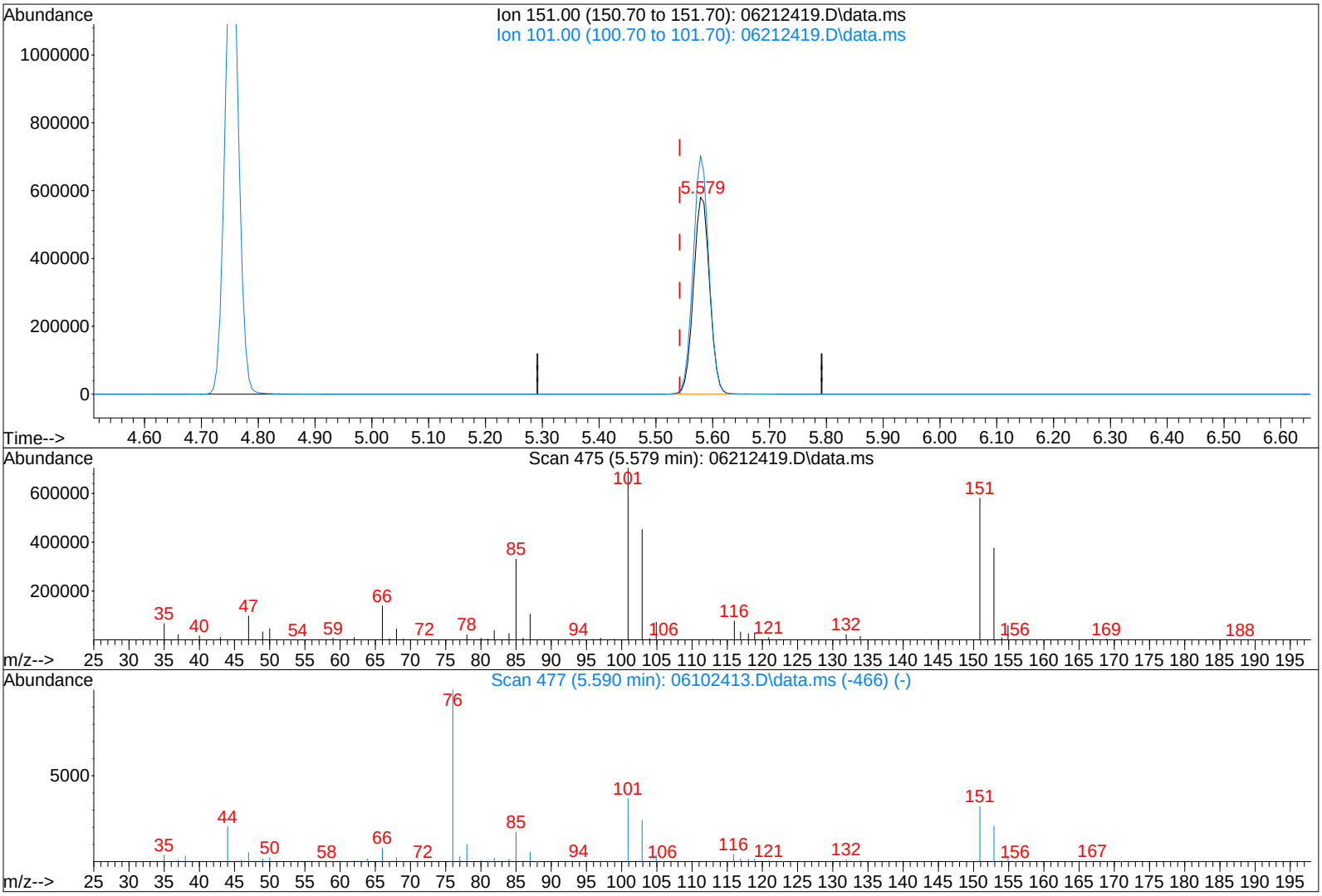
Ion	Exp%	Act%
101.00	100	100
103.00	64.90	64.44
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\21\06212419.D Vial: 9
Acq On : 22 Jun 2024 9:15 Operator: SC
Sample : P2402249-047Dil (50mL) Inst : MS09
Misc : S37-06062402

MJ 6/29/24

Quant Time: Jun 29 10:26:27 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06212419.D\data.ms

(21) Trichlorotrifluoroethane (T)

5.579min (+0.037) 65.95ng

response 1141551

Ion	Exp%	Act%
151.00	100	100
101.00	115.00	118.40
0.00	0.00	0.00
0.00	0.00	0.00

LSC Area Percent Report

MJ 6/28/24

Data Path : I:\MS09\DATA\2024 06\20\
Data File : 06202419.D
Acq On : 20 Jun 2024 19:40
Operator : SC
Sample : P2402249-047 (100mL)
Misc : S37-06062402
ALS Vial : 9 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06202419.D\data.ms

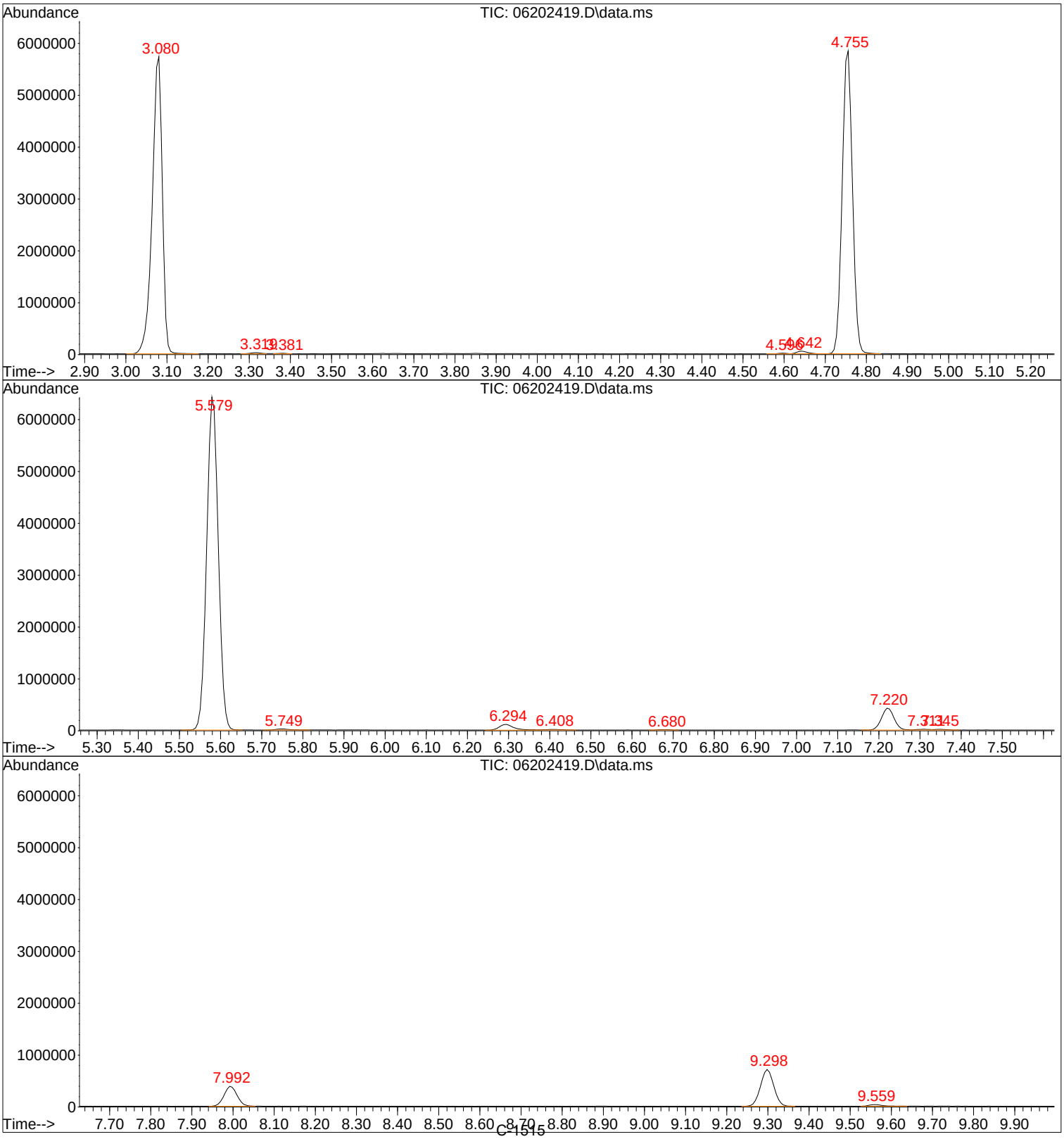
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.080	21	35	52	rBV	5729109	9746630	77.38%	26.719%
2	3.319	70	77	81	rBV4	20291	38387	0.30%	0.105%
3	3.381	84	88	92	rVB	10785	13031	0.10%	0.036%
4	4.596	295	302	305	rBV4	12723	18002	0.14%	0.049%
5	4.642	305	310	320	rVB	52047	92675	0.74%	0.254%
6	4.755	320	330	344	rBV	5838832	10154521	80.62%	27.837%
7	5.579	462	475	488	rBV	6417713	12595195	100.00%	34.528%
8	5.749	497	505	517	rBV	20617	49686	0.39%	0.136%
9	6.294	592	601	614	rBV	108869	263534	2.09%	0.722%
10	6.408	614	621	631	rVB3	11248	33973	0.27%	0.093%
11	6.680	662	669	675	rVB	6993	13383	0.11%	0.037%
12	7.220	753	764	774	rBV	421911	897812	7.13%	2.461%
13	7.311	774	780	783	rVV3	13784	30321	0.24%	0.083%
14	7.345	783	786	795	rVB3	12032	24274	0.19%	0.067%
15	7.992	891	900	911	rBV	385000	846715	6.72%	2.321%
16	9.298	1119	1130	1142	rBV	708233	1586988	12.60%	4.350%
17	9.559	1170	1176	1190	rBV	31443	73402	0.58%	0.201%

Sum of corrected areas: 36478529

Data Path : I:\MS09\DATA\2024 06\20\
Data File : 06202419.D
Acq On : 20 Jun 2024 19:40
Operator : SC
Sample : P2402249-047 (100mL)
Misc : S37-06062402
ALS Vial : 9 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\20\\
Data File : 06202419.D
Acq On : 20 Jun 2024 19:400
Operator : SCC
Sample : P2402249-047 (100mL))
Misc : S37-060624022
ALS Vial : 9 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202420.D Vial: 10
Acq On : 20 Jun 2024 20:12 Operator: SC
Sample : P2402249-048 (20mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 12:06:46 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.22	130	149858	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	644242	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	148611	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	332371	12.479	ng		0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.84%				
57) Toluene-d8 (SS2)	12.43	98	715968	12.590	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.72%				
73) Bromofluorobenzene (SS3)	16.82	174	259926	12.657	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.28%				
Target Compounds							Qvalue
2) Propene	3.32	42	730	N.D.			
3) Dichlorodifluoromethan...	3.32	85	537	N.D.			
4) Chloromethane	3.39	50	132	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.31	45	2928	0.201	ng		89
11) Acetonitrile	0.00	41	0	N.D.			
12) Acrolein	0.00	56	0	N.D.			
13) Acetone	4.66	58	2826	0.243	ng	#	85
14) Trichlorofluoromethane	4.75	101	2608669	73.120	ng		99
15) 2-Propanol (Isopropanol)	4.89	45	887	N.D.			
16) Acrylonitrile	5.00	53	302	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	0.00	59	0	N.D.			
19) Methylene Chloride	5.34	84	886	0.054	ng		99
20) 3-Chloro-1-propene (Al...	0.00	41	0	N.D.			
21) Trichlorotrifluoroethane	5.58	151	1423050	94.290	ng		98
22) Carbon Disulfide	0.00	76	0	N.D.	d		
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D.			
27) 2-Butanone (MEK)	6.69	72	304	N.D.			
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.	d		
30) Ethyl Acetate	0.00	61	0	N.D.			
31) n-Hexane	0.00	57	0	N.D.			
32) Chloroform	7.35	83	3347	0.114	ng		97
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.12	62	164	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.85	56	219	No Calib			
41) Benzene	8.89	78	1475	N.D.			
42) Carbon Tetrachloride	0.00	117	0	N.D.			
43) Cyclohexane	0.00	84	0	N.D.	d		
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.07	83	581	N.D.			
47) Trichloroethene	10.13	130	1316	0.076	ng		88
48) 1,4-Dioxane	0.00	88	0	N.D.			
49) 2,2,4-Trimethylpentane...	0.00	57	0	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202420.D Vial: 10
Acq On : 20 Jun 2024 20:12 Operator: SC
Sample : P2402249-048 (20mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 12:06:46 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

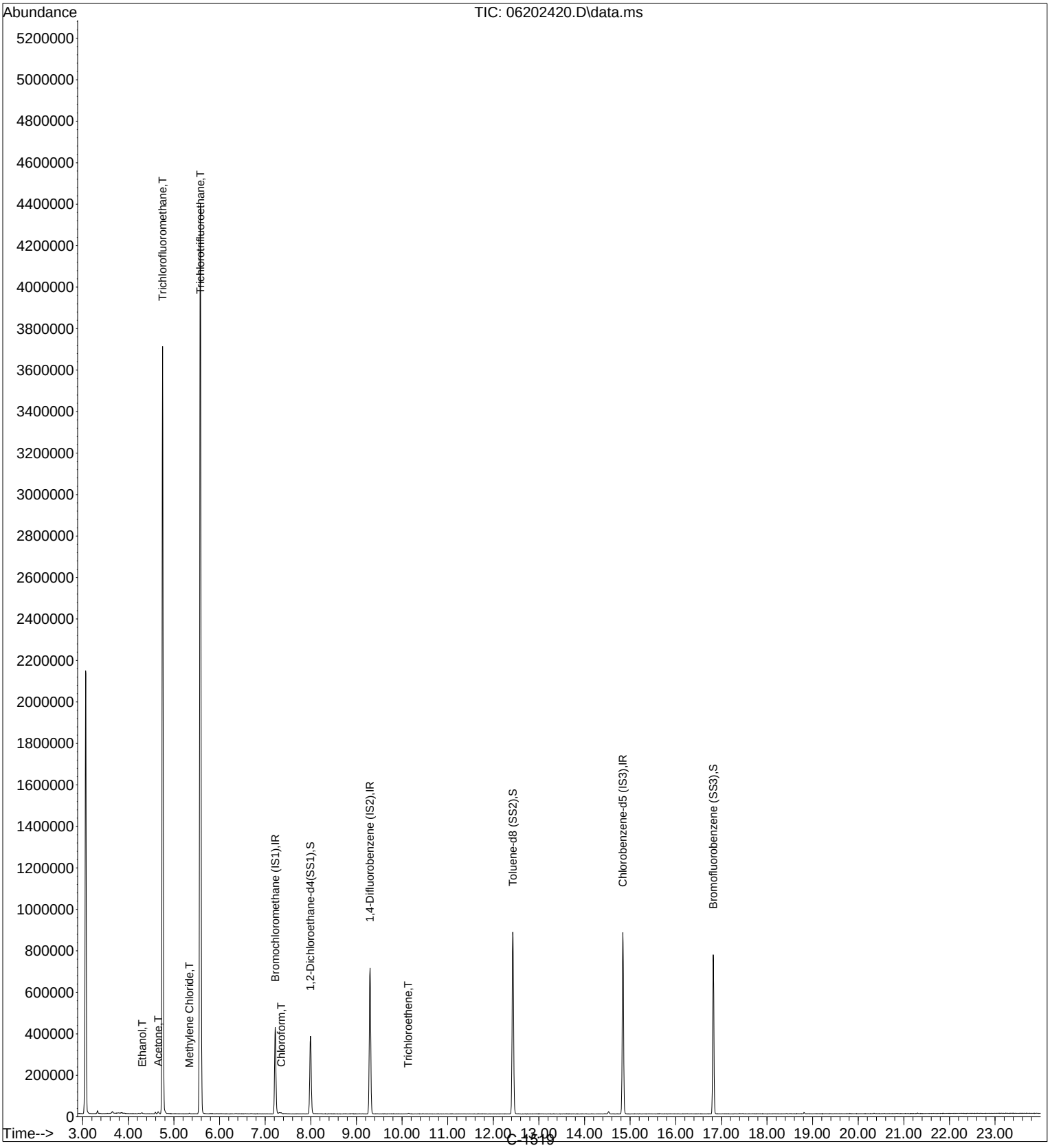
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
51) n-Heptane	0.00	71	0	N.D.		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	12.57	91	778	N.D.		
59) 2-Hexanone	0.00	43	0	N.D.		
60) Dibromochloromethane	13.07	129	392	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	0.00	43	0	N.D.		
63) n-Octane	0.00	57	0	N.D.		
64) Tetrachloroethene	14.03	166	405	N.D.		
65) Chlorobenzene	14.90	112	547	N.D.		
66) Ethylbenzene	15.41	91	806	N.D.		
67) m- & p-Xylenes	15.64	91	832	N.D.		
68) Bromoform	15.67	173	603	N.D.		
69) Styrene	0.00	104	0	N.D.		
70) o-Xylene	16.24	91	603	N.D.		
71) n-Nonane	0.00	43	0	N.D.		
72) 1,1,2,2-Tetrachloroethane	16.20	83	373	N.D.		
74) Cumene	17.03	105	699	N.D.		
75) alpha-Pinene	0.00	93	0	N.D.		
76) n-Propylbenzene	17.68	91	877	N.D.		
77) 3-Ethyltoluene	17.03	105	699	No Calib		#
78) 4-Ethyltoluene	17.87	105	519	N.D.		
79) 1,3,5-Trimethylbenzene	17.96	105	340	N.D.		
80) alpha-Methylstyrene	0.00	118	0	N.D.		
81) 2-Ethyltoluene	17.03	105	699	No Calib		#
82) 1,2,4-Trimethylbenzene	18.42	105	436	N.D.		
83) n-Decane	0.00	58	0	N.D.		
84) Benzyl Chloride	0.00	91	0	N.D.		
85) 1,3-Dichlorobenzene	18.58	146	431	N.D.		
86) 1,4-Dichlorobenzene	18.66	146	462	N.D.		
87) sec-Butylbenzene	18.74	105	772	N.D.		
88) 4-Isopropyltoluene (p-...	18.93	119	448	N.D.		
89) 1,2,3-Trimethylbenzene	17.03	105	699	No Calib		#
90) 1,2-Dichlorobenzene	19.03	146	434	N.D.		
91) d-Limonene	0.00	68	0	N.D.		
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	0.00	58	0	N.D.		
94) 1,2,4-Trichlorobenzene	20.84	180	489	N.D.		
95) Naphthalene	20.94	128	197	N.D.		
96) n-Dodecane	0.00	58	0	N.D.		
97) Hexachlorobutadiene	21.30	225	520	N.D.		
98) Cyclohexanone	0.00	55	0	N.D.		
99) tert-Butylbenzene	18.43	119	681	N.D.		
100) n-Butylbenzene	19.39	91	384	N.D.		
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202420.D Vial: 10
Acq On : 20 Jun 2024 20:12 Operator: SC
Sample : P2402249-048 (20mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 12:06:46 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202420.D Vial: 10
Acq On : 20 Jun 2024 20:12 Operator: SC
Sample : P2402249-048 (20mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 12:06:46 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

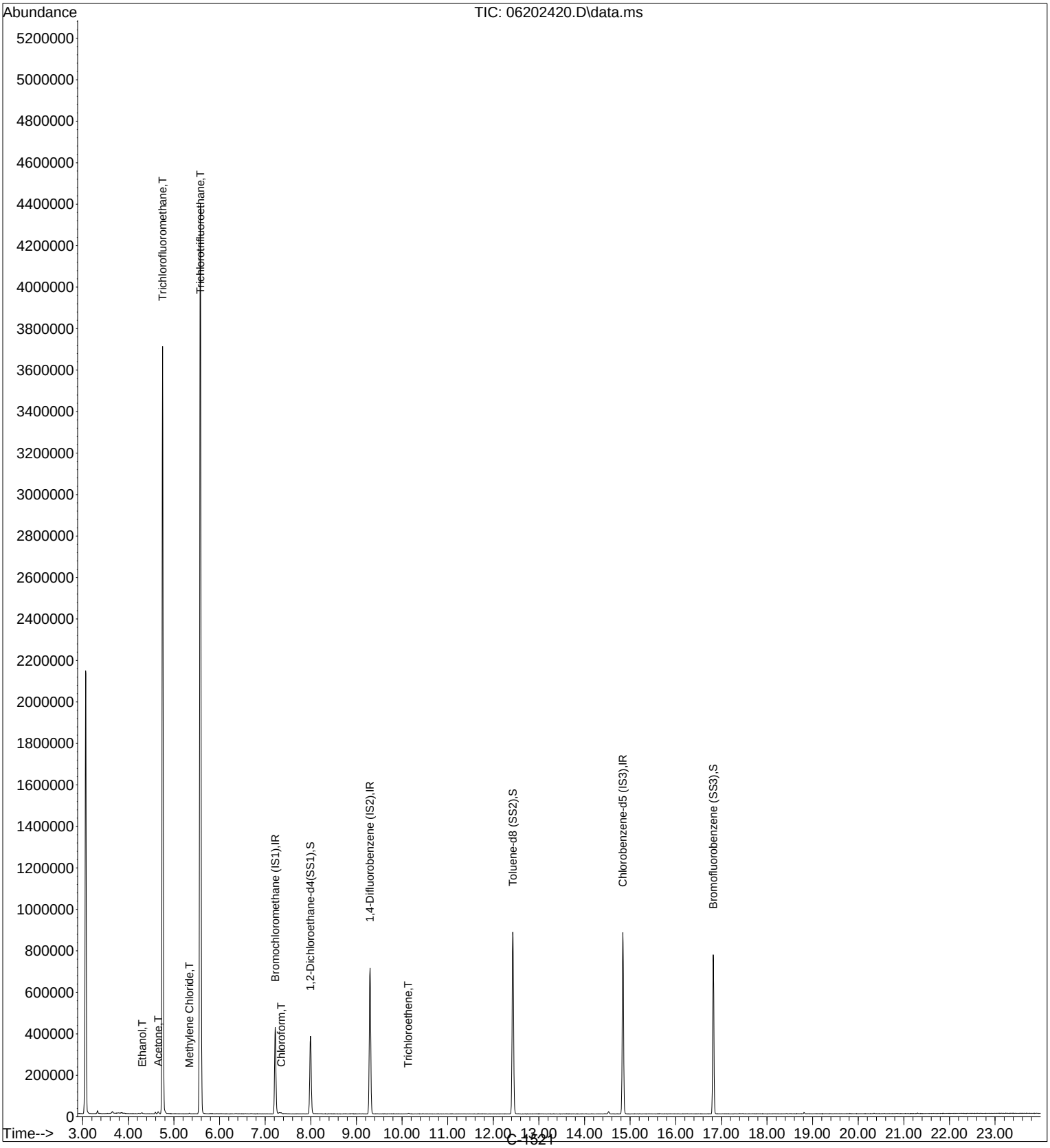
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.22	130	149858	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	644242	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	148611	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	332371	12.479	ng		0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.84%				
57) Toluene-d8 (SS2)	12.43	98	715968	12.590	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.72%				
73) Bromofluorobenzene (SS3)	16.82	174	259926	12.657	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.28%				
Target Compounds							Qvalue
10) Ethanol	4.31	45	2928	0.201	ng		89
13) Acetone	4.66	58	2826	0.243	ng	#	85
14) Trichlorofluoromethane	4.75	101	2608669	73.120	ng		99
19) Methylene Chloride	5.34	84	886	0.054	ng		99
21) Trichlorotrifluoroethane	5.58	151	1423050	94.290	ng		98
32) Chloroform	7.35	83	3347	0.114	ng		97
47) Trichloroethene	10.13	130	1316	0.076	ng		88

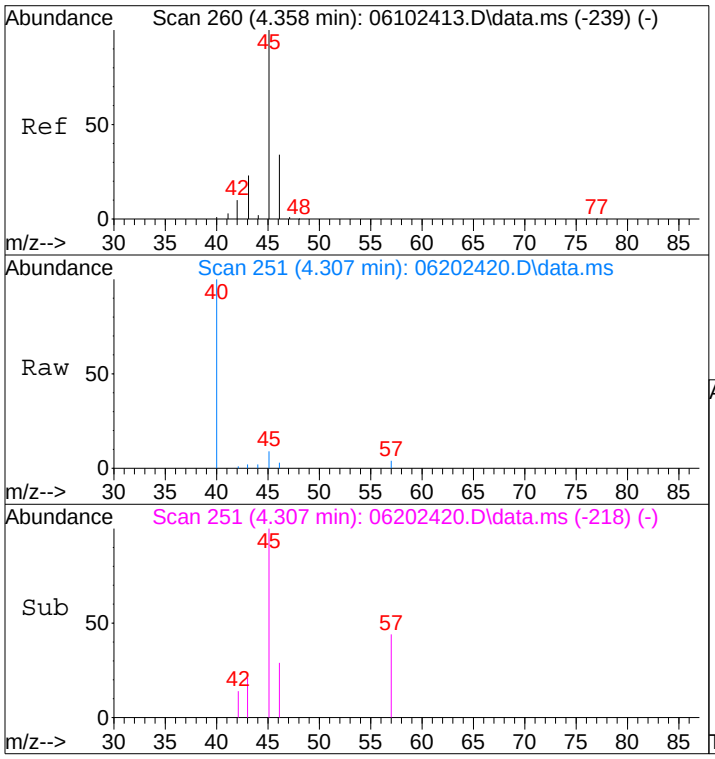
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202420.D Vial: 10
Acq On : 20 Jun 2024 20:12 Operator: SC
Sample : P2402249-048 (20mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 12:06:46 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

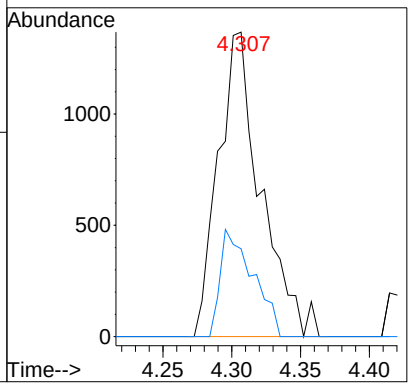


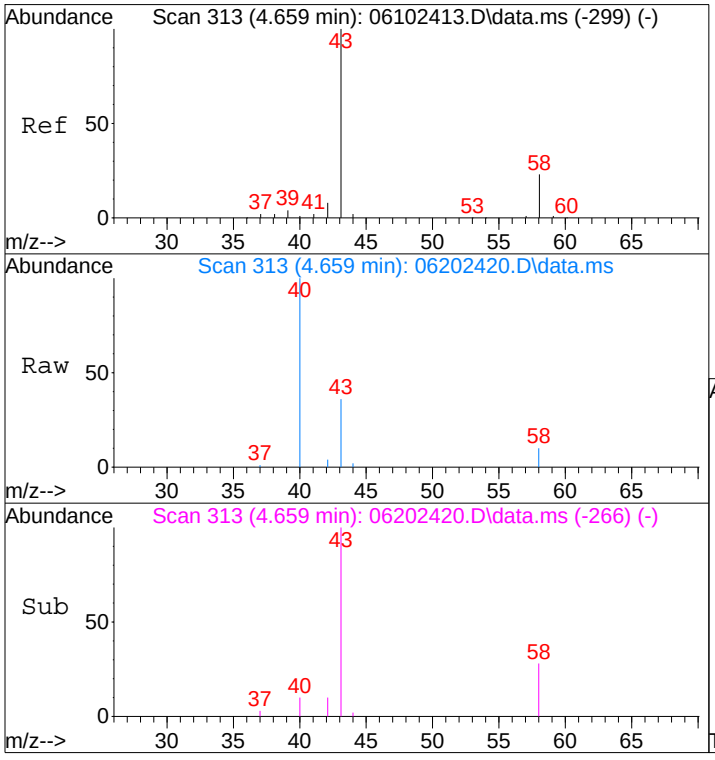


#10
Ethanol
Concen: 0.20 ng
RT: 4.31 min Scan# 251
Delta R.T. -0.060 min
Lab File: 06202420.D
Acq: 20 Jun 2024 20:12

Tgt Ion: 45 Resp: 2928

Ion	Ratio	Lower	Upper
45	100		
46	27.2	13.5	53.5

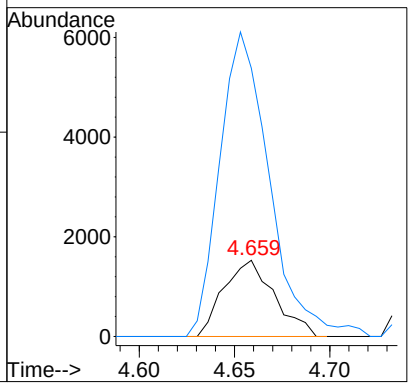


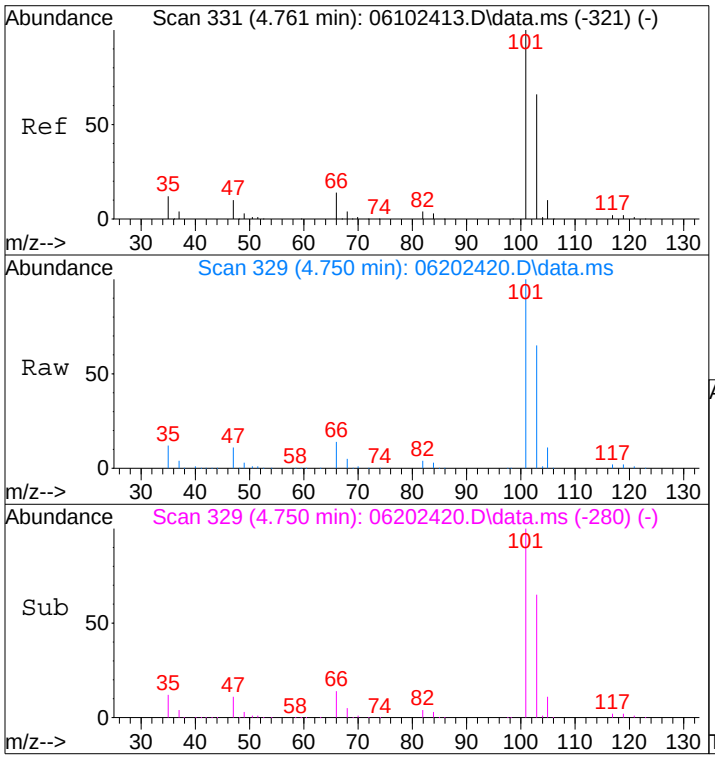


#13
Acetone
Concen: 0.24 ng
RT: 4.66 min Scan# 313
Delta R.T. 0.017 min
Lab File: 06202420.D
Acq: 20 Jun 2024 20:12

Tgt Ion: 58 Resp: 2826

Ion	Ratio	Lower	Upper
58	100		
43	393.1	400.7	460.7#

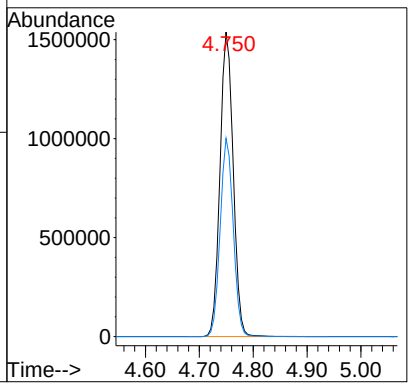


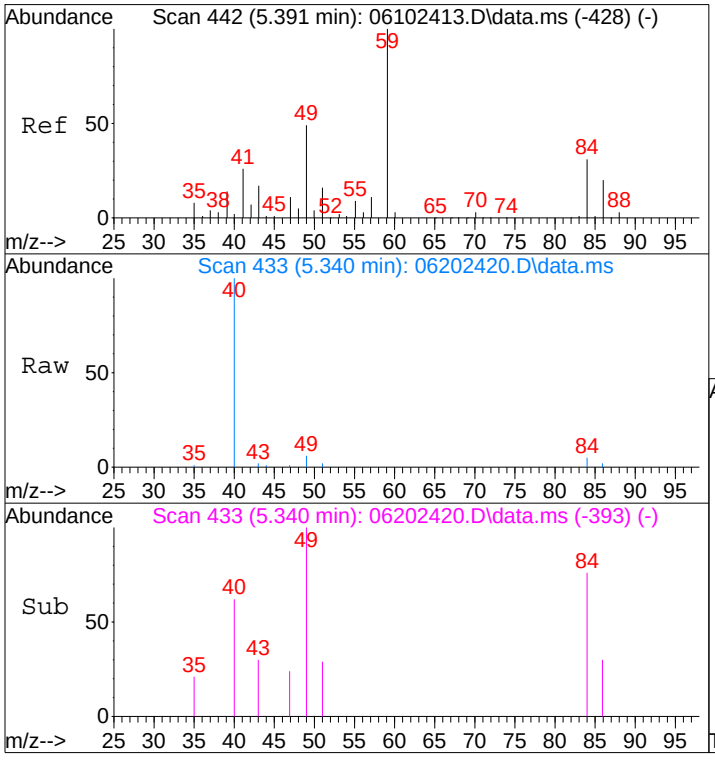


#14
Trichlorofluoromethane
Concen: 73.12 ng
RT: 4.75 min Scan# 329
Delta R.T. 0.029 min
Lab File: 06202420.D
Acq: 20 Jun 2024 20:12

Tgt Ion:101 Resp: 2608669

Ion	Ratio	Lower	Upper
101	100		
103	64.5	44.9	84.9

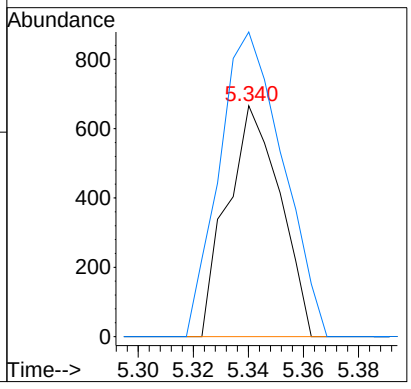


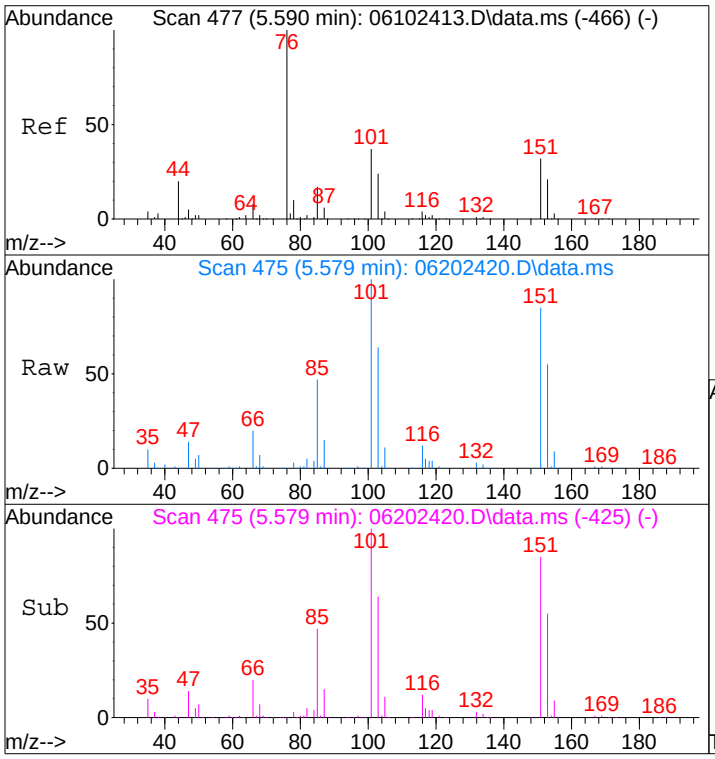


#19
Methylene Chloride
Concen: 0.05 ng
RT: 5.34 min Scan# 433
Delta R.T. -0.021 min
Lab File: 06202420.D
Acq: 20 Jun 2024 20:12

Tgt Ion: 84 Resp: 886

Ion	Ratio	Lower	Upper
84	100		
49	159.4	132.9	182.9

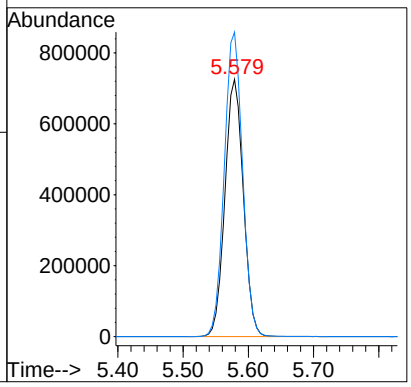


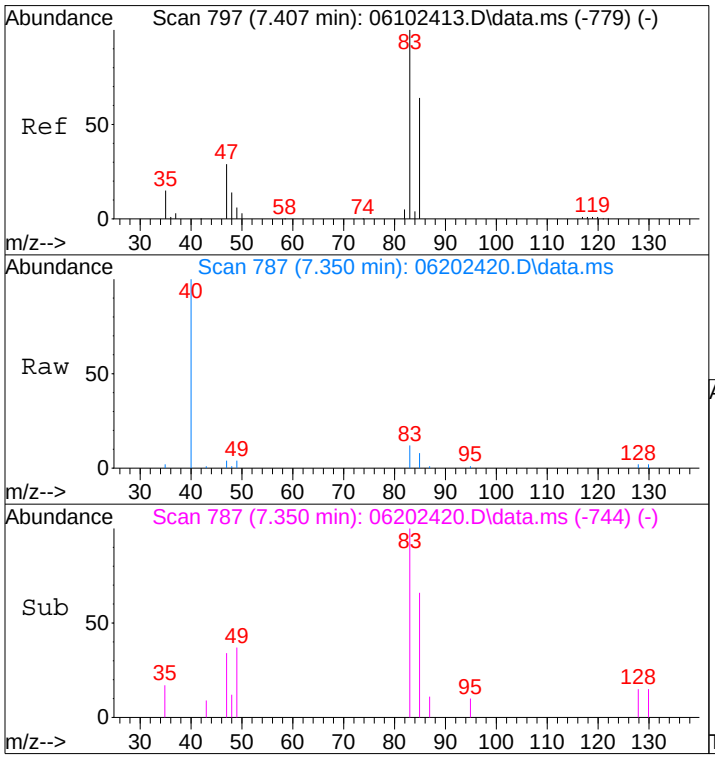


#21
Trichlorotrifluoroethane
Concen: 94.29 ng
RT: 5.58 min Scan# 475
Delta R.T. 0.032 min
Lab File: 06202420.D
Acq: 20 Jun 2024 20:12

Tgt Ion:151 Resp: 1423050

Ion	Ratio	Lower	Upper
151	100		
101	117.6	95.0	135.0

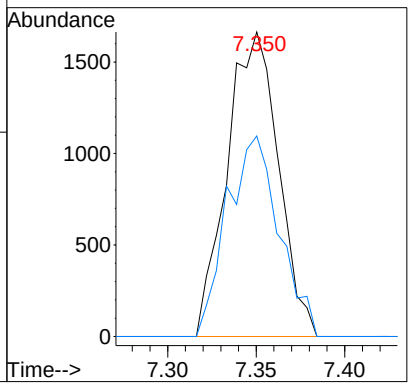


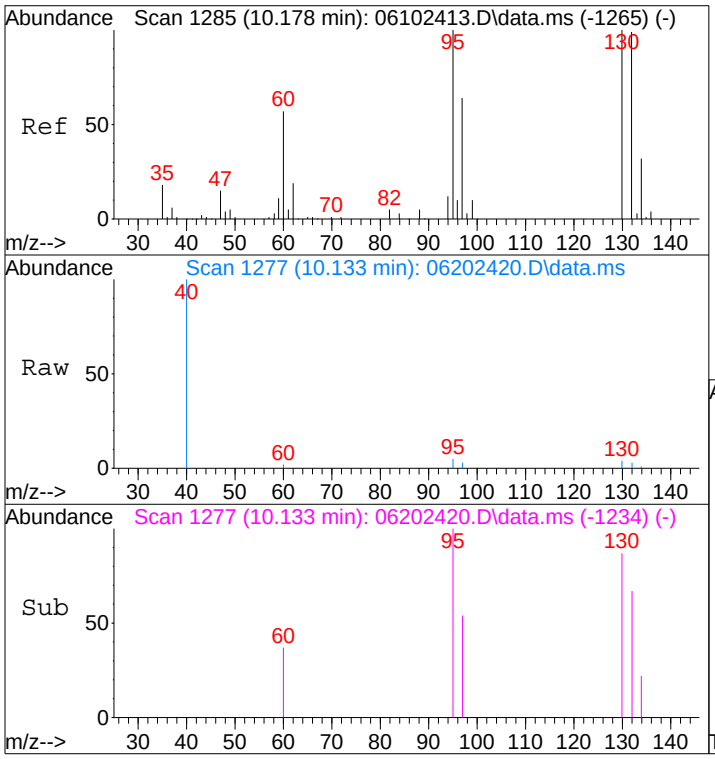


#32
Chloroform
Concen: 0.11 ng
RT: 7.35 min Scan# 787
Delta R.T. -0.005 min
Lab File: 06202420.D
Acq: 20 Jun 2024 20:12

Tgt Ion: 83 Resp: 3347

Ion	Ratio	Lower	Upper
83	100		
85	67.1	44.4	84.4

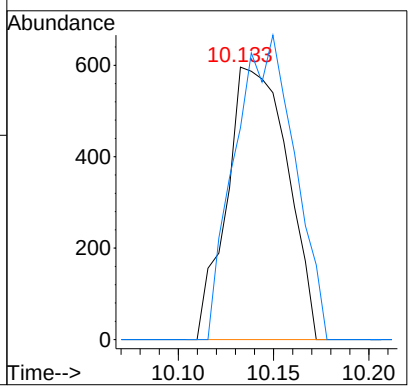




#47
Trichloroethene
Concen: 0.08 ng
RT: 10.13 min Scan# 1277
Delta R.T. -0.007 min
Lab File: 06202420.D
Acq: 20 Jun 2024 20:12

Tgt Ion:130 Resp: 1316

Ion	Ratio	Lower	Upper
130	100		
132	110.0	77.9	117.9



Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\20\06202420.D Vial: 10
Acq On : 20 Jun 2024 20:12 Operator: SC
Sample : P2402249-048 (20mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:28:02 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

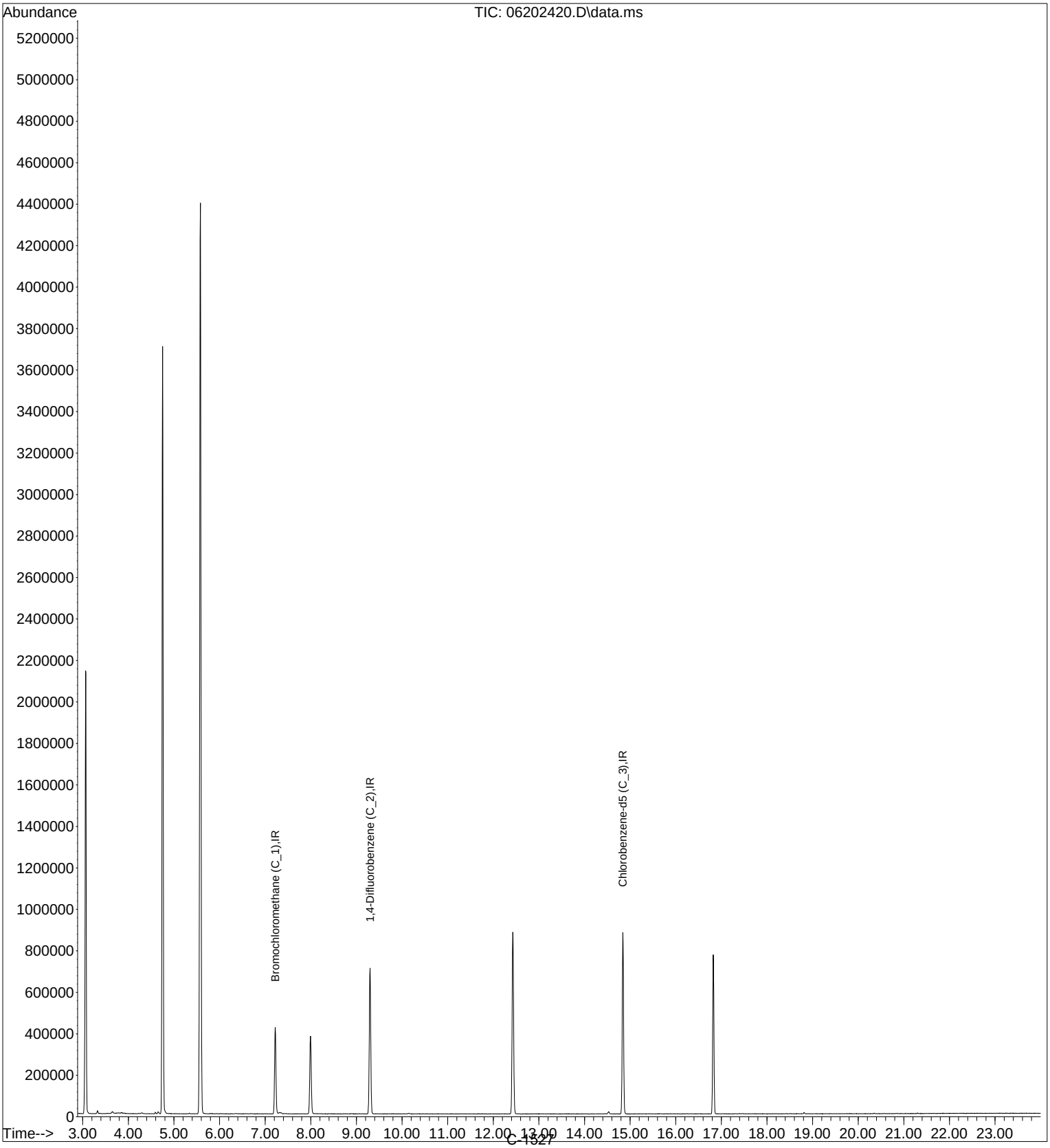
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (C 1)	7.22	130	149929	12.500	ng	-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	645543	12.500	ng	-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	148611	12.500	ng	-0.01
Target Compounds						Qvalue
2) Chloropentafluoroethane	0.00	85	0	N.D.		
3) 1,1,1,2-Tetrafluoroeth...	0.00	83	0	N.D.		
4) 1,1-Difluoroethane	0.00	65	0	N.D.		
5) Chlorodifluoromethane ...	0.00	67	0	N.D.		
6) 1-Chloro-1,1-Difluoroe...	0.00	65	0	N.D.		
7) Dichlorofluoromethane ...	4.23	67	1738	N.D.		
8) Vinylbromide	0.00	108	0	N.D.		
9) 2,2-Dichloro-1,1,1-tri...	4.59	83	146	N.D.		
10) 2-Methylbutane	4.65	57	61	N.D.		
11) Methyl Acetate	5.36	43	462	N.D.		
12) 2-Methylpentane	0.00	71	0	N.D.		
13) 2,2-Dichloropropane	0.00	77	0	N.D.		
14) 1,1-Dichloropropene	0.00	75	0	N.D.		
15) Thiophene	0.00	84	0	N.D.		
17) 2,3-Dimethylpentane	0.00	56	0	N.D.		
18) Dibromomethane	9.79	174	240	N.D.		
20) Methyl Cyclohexane	0.00	55	0	N.D.		
21) 1,3-Dichloropropane	0.00	76	0	N.D.		
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		
23) 1-Chlorohexane	0.00	91	0	N.D.		
24) 1,2,3-Trichloropropane	0.00	75	0	N.D.		
25) Bromobenzene	0.00	77	0	N.D.		
26) 2-Chlorotoluene	17.61	91	625	N.D.		
27) 4-Chlorotoluene	17.68	91	877	N.D.		
28) Indane	0.00	117	0	N.D.		
29) Indene	0.00	115	0	N.D.		
30) 1,2,4,5-Tetramethylben...	0.00	119	0	N.D.		
31) 1,2,3,4-Tetramethylben...	0.00	119	0	N.D.		
32) 1,2,3,5-Tetramethylben...	0.00	119	0	N.D.		
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202420.D Vial: 10
Acq On : 20 Jun 2024 20:12 Operator: SC
Sample : P2402249-048 (20mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:28:02 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\22\06222406.D Vial: 10
Acq On : 22 Jun 2024 15:55 Operator: MC/MJ
Sample : P2402249-048Dil (15mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 13:46:37 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.22	130	204189	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	892956	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	210722	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	447986	12.344	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.72%				
57) Toluene-d8 (SS2)	12.43	98	1008673	12.509	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.08%				
73) Bromofluorobenzene (SS3)	16.82	174	367024	12.605	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.80%				
Target Compounds							Qvalue
2) Propene	3.32	42	1082	N.D.			
3) Dichlorodifluoromethan...	3.34	85	390	N.D.			
4) Chloromethane	3.52	50	216	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	3.81	54	108	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.40	45	175	N.D.			
11) Acetonitrile	4.44	41	802	N.D.			
12) Acrolein	4.55	56	62	N.D.			
13) Acetone	4.66	58	3883	0.245	ng	#	76
14) Trichlorofluoromethane	4.75	101	2169185	44.623	ng		100
15) 2-Propanol (Isopropanol)	4.90	45	1557	N.D.			
16) Acrylonitrile	5.00	53	1106	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	0.00	59	0	N.D.			
19) Methylene Chloride	5.34	84	1245	0.055	ng		93
20) 3-Chloro-1-propene (Al...	5.43	41	125	N.D.			
21) Trichlorotrifluoroethane	5.58	151	1191333	57.933	ng		96
22) Carbon Disulfide	0.00	76	0	N.D.	d		
23) trans-1,2-Dichloroethene	6.12	61	218	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D.			
27) 2-Butanone (MEK)	6.69	72	449	N.D.			
28) cis-1,2-Dichloroethene	7.07	61	337	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.	d		
30) Ethyl Acetate	0.00	61	0	N.D.			
31) n-Hexane	0.00	57	0	N.D.			
32) Chloroform	7.34	83	2929	0.073	ng		100
34) Tetrahydrofuran (THF)	7.78	72	121	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	419	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.83	56	1082	No Calib			
41) Benzene	8.89	78	2641	N.D.			
42) Carbon Tetrachloride	0.00	117	0	N.D.			
43) Cyclohexane	9.29	84	1012	N.D.			
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.06	83	634	N.D.			
47) Trichloroethene	10.14	130	1521	0.063	ng		93
48) 1,4-Dioxane	10.14	88	259	N.D.			
49) 2,2,4-Trimethylpentane...	0.00	57	0	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222406.D Vial: 10
Acq On : 22 Jun 2024 15:55 Operator: MC/MJ
Sample : P2402249-048Dil (15mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 13:46:37 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

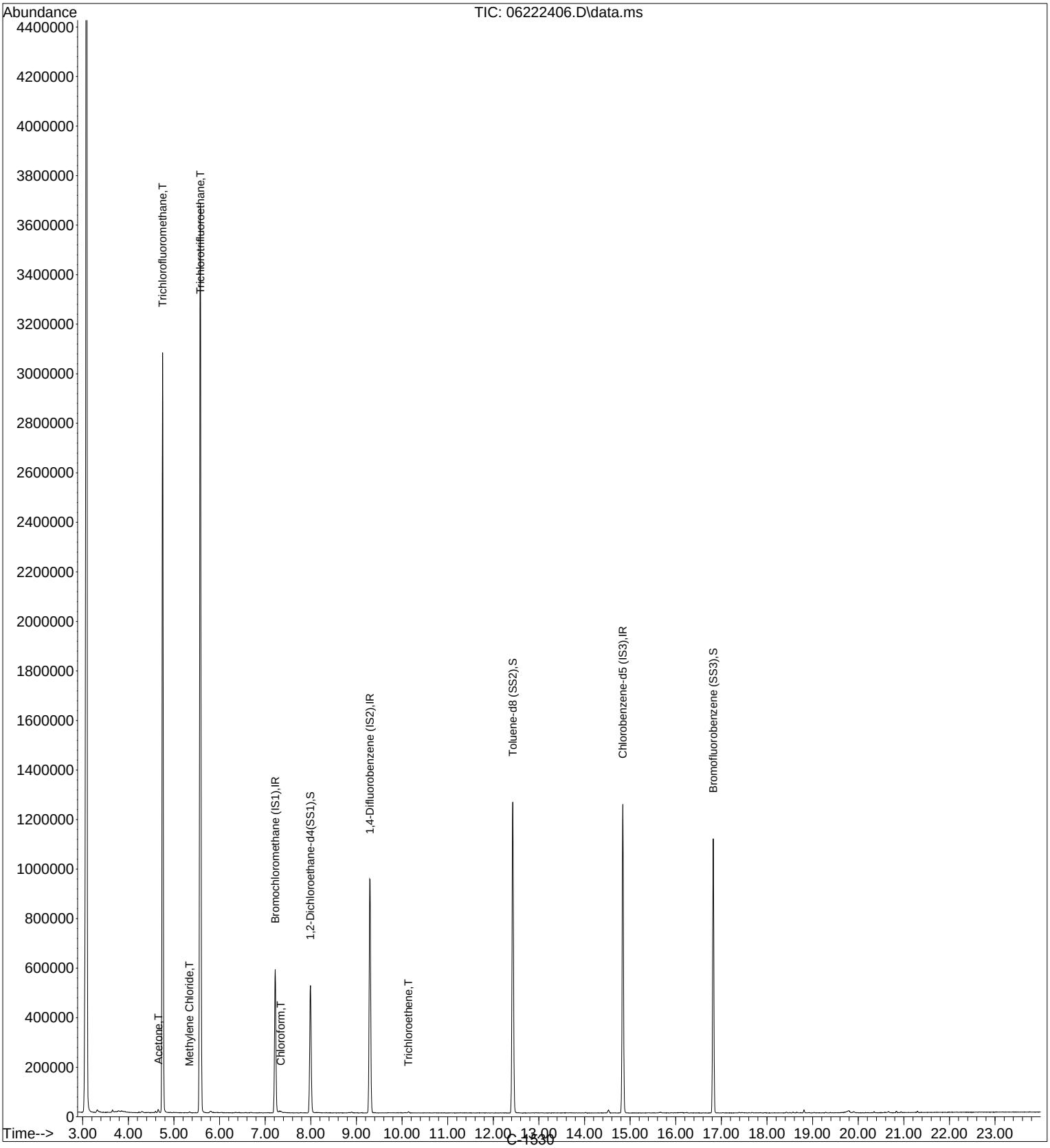
Internal Standards	R.T.	QIon	Response	Conc Units Dev(Min)
51) n-Heptane	0.00	71	0	N.D.
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.
58) Toluene	12.56	91	1286	N.D.
59) 2-Hexanone	12.93	43	562	N.D.
60) Dibromochloromethane	13.07	129	697	N.D.
61) 1,2-Dibromoethane	0.00	107	0	N.D.
62) n-Butyl Acetate	0.00	43	0	N.D.
63) n-Octane	0.00	57	0	N.D.
64) Tetrachloroethene	14.03	166	556	N.D.
65) Chlorobenzene	14.90	112	1116	N.D.
66) Ethylbenzene	15.41	91	1382	N.D.
67) m- & p-Xylenes	15.63	91	2961	N.D.
68) Bromoform	15.67	173	846	N.D.
69) Styrene	16.11	104	159	N.D.
70) o-Xylene	16.24	91	1198	N.D.
71) n-Nonane	16.62	43	239	N.D.
72) 1,1,2,2-Tetrachloroethane	16.21	83	665	N.D.
74) Cumene	17.03	105	1340	N.D.
75) alpha-Pinene	0.00	93	0	N.D.
76) n-Propylbenzene	17.68	91	2091	N.D.
77) 3-Ethyltoluene	17.03	105	1340	No Calib
78) 4-Ethyltoluene	17.86	105	1280	N.D.
79) 1,3,5-Trimethylbenzene	17.96	105	788	N.D.
80) alpha-Methylstyrene	0.00	118	0	N.D.
81) 2-Ethyltoluene	17.03	105	1340	No Calib
82) 1,2,4-Trimethylbenzene	18.43	105	935	N.D.
83) n-Decane	0.00	58	0	N.D.
84) Benzyl Chloride	18.56	91	533	N.D.
85) 1,3-Dichlorobenzene	18.57	146	1299	N.D.
86) 1,4-Dichlorobenzene	18.66	146	1278	N.D.
87) sec-Butylbenzene	18.74	105	1172	N.D.
88) 4-Isopropyltoluene (p-...	18.92	119	996	N.D.
89) 1,2,3-Trimethylbenzene	17.03	105	1340	No Calib
90) 1,2-Dichlorobenzene	19.03	146	1042	N.D.
91) d-Limonene	0.00	68	0	N.D.
92) 1,2-Dibromo-3-Chloropr...	19.51	157	248	N.D.
93) n-Undecane	0.00	58	0	N.D.
94) 1,2,4-Trichlorobenzene	20.84	180	1931	N.D.
95) Naphthalene	20.94	128	2415	N.D.
96) n-Dodecane	0.00	58	0	N.D.
97) Hexachlorobutadiene	21.30	225	1144	N.D.
98) Cyclohexanone	0.00	55	0	N.D.
99) tert-Butylbenzene	18.42	119	1203	N.D.
100) n-Butylbenzene	19.39	91	1223	N.D.
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222406.D Vial: 10
Acq On : 22 Jun 2024 15:55 Operator: MC/MJ
Sample : P2402249-048Dil (15mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 13:46:37 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

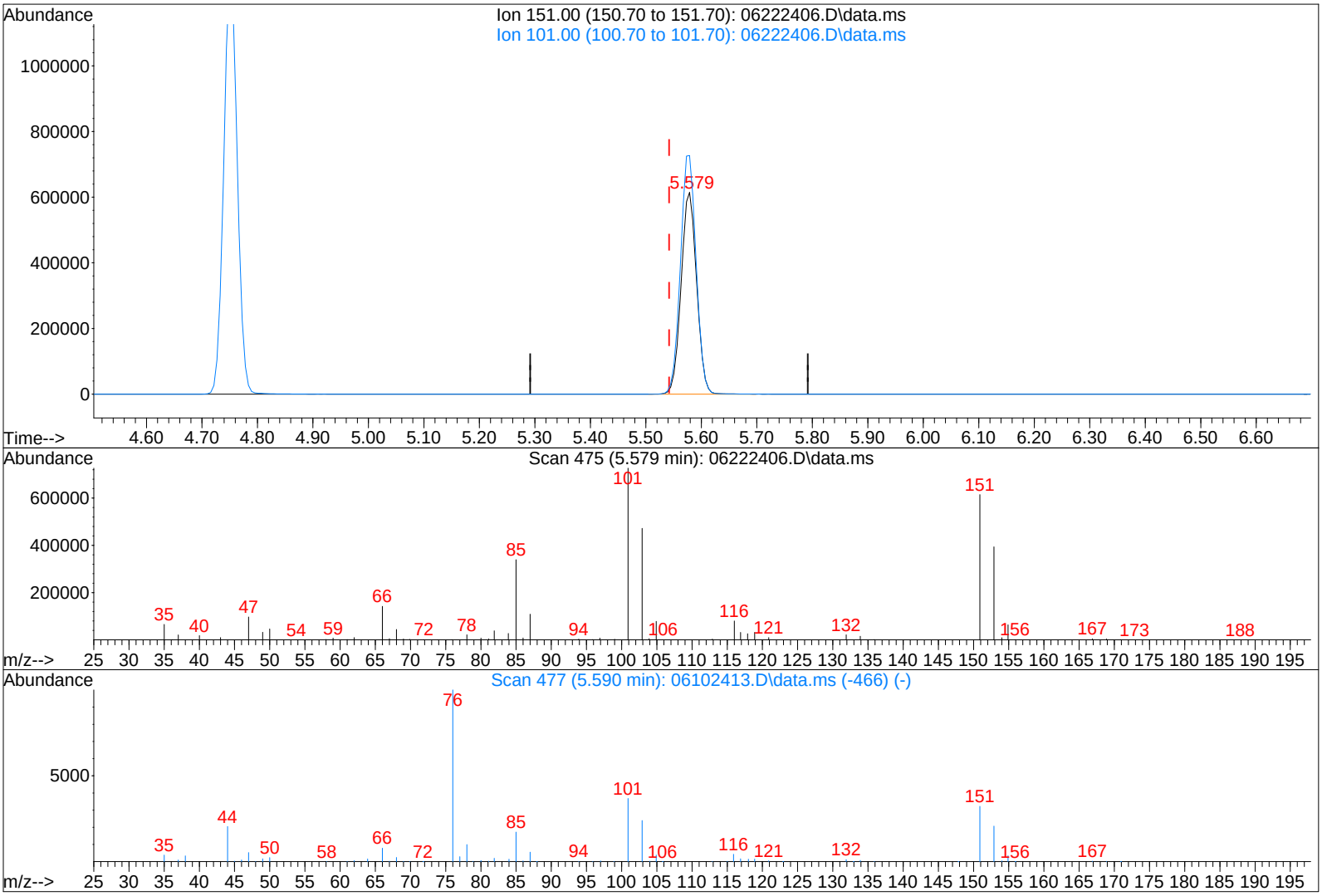


Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\22\06222406.D Vial: 10
Acq On : 22 Jun 2024 15:55 Operator: MC/MJ
Sample : P2402249-048Dil (15mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 13:46:37 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06222406.D\data.ms

(21) Trichlorotrifluoroethane (T)

5.579min (+0.037) 57.93ng

response 1191333

Ion	Exp%	Act%
151.00	100	100
101.00	115.00	119.75
0.00	0.00	0.00
0.00	0.00	0.00

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\20\
Data File : 06202420.D
Acq On : 20 Jun 2024 20:12
Operator : SC
Sample : P2402249-048 (20mL)
Misc : S37-06062402
ALS Vial : 10 Sample Multiplier: 1

MJ 6/28/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06202420.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.063	21	32	49	rBV	2135538	3503888	40.80%	16.181%
2	3.324	72	78	82	rBV4	13556	20006	0.23%	0.092%
3	3.654	129	136	145	rBV2	8442	19371	0.23%	0.089%
4	4.591	296	301	306	rBV2	7437	10898	0.13%	0.050%
5	4.653	306	312	320	rVB	9660	17920	0.21%	0.083%
6	4.750	320	329	345	rBV	3700205	6227807	72.51%	28.759%
7	5.579	464	475	489	rBV	4391267	8588619	100.00%	39.661%
8	7.220	755	764	776	rBV	417235	877134	10.21%	4.051%
9	7.992	890	900	913	rBV	374994	835687	9.73%	3.859%
10	9.298	1120	1130	1142	rBV	703608	1553590	18.09%	7.174%

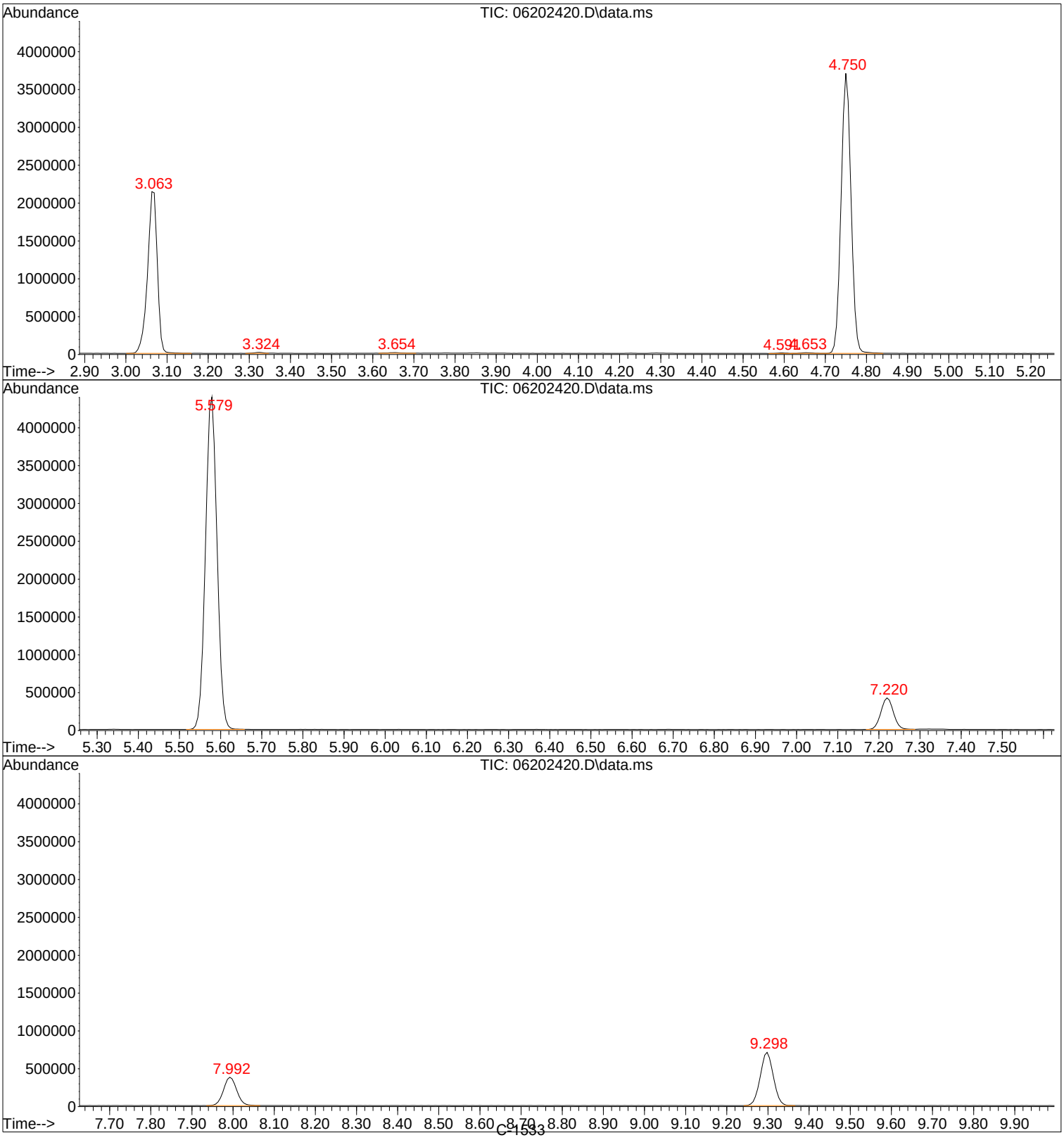
Sum of corrected areas: 21654920

LSC Report - Integrated Chromatogram

Data Path : I:\MS09\DATA\2024 06\20\
Data File : 06202420.D
Acq On : 20 Jun 2024 20:12
Operator : SC
Sample : P2402249-048 (20mL)
Misc : S37-06062402
ALS Vial : 10 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\20\\
Data File : 06202420.D
Acq On : 20 Jun 2024 20:122
Operator : SCC
Sample : P2402249-048 (20mL))
Misc : S37-060624022
ALS Vial : 10 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT/LSC Reviewed)

MJ 6/29/24

Data File : I:\MS09\DATA\2024 06\20\06202422.D Vial: 11
Acq On : 20 Jun 2024 21:17 Operator: SC
Sample : P2402249-049 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:07:23 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.22	130	144502	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	615538	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	148409	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	323305	12.588	ng		0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.72%				
57) Toluene-d8 (SS2)	12.43	98	692414	12.192	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.52%				
73) Bromofluorobenzene (SS3)	16.83	174	262684	12.809	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.48%				
Target Compounds							Qvalue
2) Propene	0.00	42	0	N.D. d			
3) Dichlorodifluoromethan...	3.37	85	4759m	0.140	ng		
4) Chloromethane	3.51	50	669	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	3.77	54	345	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.29	45	1886	0.134	ng		93
11) Acetonitrile	4.41	41	1060	N.D.			
12) Acrolein	0.00	56	0	N.D.			
13) Acetone	4.64	58	15179	1.352	ng	#	80
14) Trichlorofluoromethane	4.75	101	2659596m	77.311	ng		
15) 2-Propanol (Isopropanol)	4.90	45	59	N.D.			
16) Acrylonitrile	5.04	53	547	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.36	59	56	N.D.			
19) Methylene Chloride	5.35	84	890	0.056	ng		87
20) 3-Chloro-1-propene (Al...	5.45	41	123	N.D.			
21) Trichlorotrifluoroethane	5.58	151	1102166	75.735	ng		98
22) Carbon Disulfide	0.00	76	0	N.D. d			
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	6.31	63	504	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D. d			
26) Vinyl Acetate	0.00	86	0	N.D.			
27) 2-Butanone (MEK)	6.67	72	3434	0.387	ng	#	87
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D. d			
30) Ethyl Acetate	7.29	61	2068	0.381	ng		96
31) n-Hexane	7.30	57	3280	0.138	ng	#	91
32) Chloroform	7.34	83	2480	0.088	ng		100
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.12	62	204	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	9.59	61	427	No Calib		#	
40) 1-Butanol	8.82	56	175	No Calib		#	
41) Benzene	8.89	78	4423	0.078	ng		94
42) Carbon Tetrachloride	9.05	117	223	N.D.			
43) Cyclohexane	0.00	84	0	N.D. d			
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.06	83	575	N.D.			
47) Trichloroethene	0.00	130	0	N.D. d			
48) 1,4-Dioxane	10.13	88	290	N.D.			
49) 2,2,4-Trimethylpentane...	10.24	57	1535	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202422.D Vial: 11
Acq On : 20 Jun 2024 21:17 Operator: SC
Sample : P2402249-049 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:07:23 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

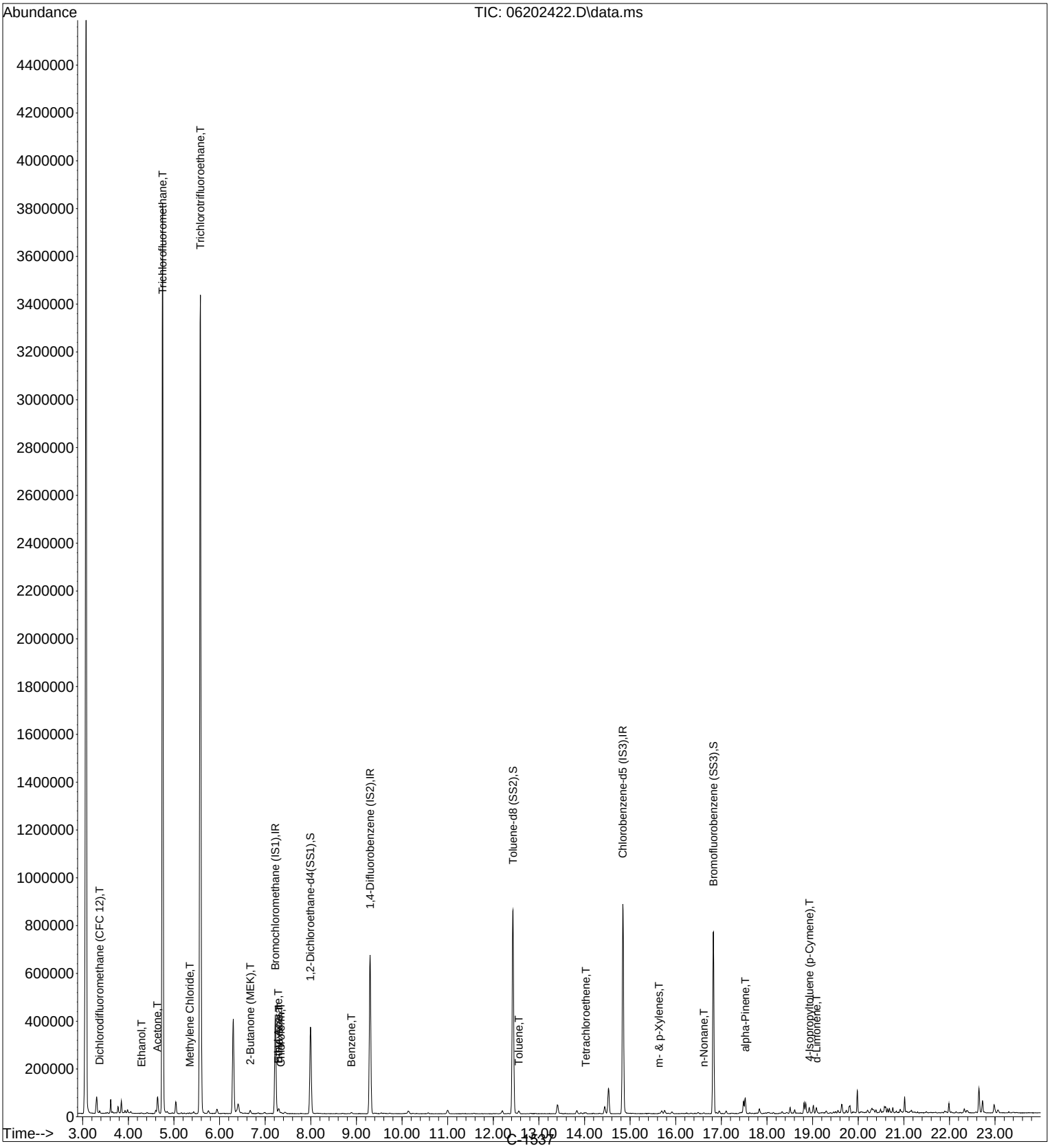
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	0.00	71	0	N.D. d	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	11.34	58	179	N.D.	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
58) Toluene	12.56	91	9947	0.168 ng	95
59) 2-Hexanone	12.93	43	1635	N.D.	
60) Dibromochloromethane	13.06	129	497	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	0.00	43	0	N.D.	
63) n-Octane	13.93	57	593	N.D.	
64) Tetrachloroethene	14.03	166	1489	0.073 ng	97
65) Chlorobenzene	14.89	112	749	N.D.	
66) Ethylbenzene	15.41	91	2001	N.D.	
67) m- & p-Xylenes	15.63	91	2953	0.052 ng	98
68) Bromoform	15.68	173	834	N.D.	
69) Styrene	16.11	104	265	N.D.	
70) o-Xylene	16.24	91	1392	N.D.	
71) n-Nonane	16.62	43	1881	0.057 ng	97
72) 1,1,2,2-Tetrachloroethane	16.22	83	334	N.D.	
74) Cumene	17.03	105	927	N.D.	
75) alpha-Pinene	17.53	93	25353	0.774 ng	99
76) n-Propylbenzene	17.68	91	1408	N.D.	
77) 3-Ethyltoluene	17.03	105	927	No Calib #	
78) 4-Ethyltoluene	17.86	105	1256	N.D.	
79) 1,3,5-Trimethylbenzene	17.96	105	642	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.03	105	927	No Calib #	
82) 1,2,4-Trimethylbenzene	18.43	105	1404	N.D.	
83) n-Decane	0.00	58	0	N.D.	
84) Benzyl Chloride	0.00	91	0	N.D.	
85) 1,3-Dichlorobenzene	18.58	146	554	N.D.	
86) 1,4-Dichlorobenzene	18.66	146	633	N.D.	
87) sec-Butylbenzene	18.74	105	1054	N.D.	
88) 4-Isopropyltoluene (p-...	18.93	119	12150	0.173 ng	99
89) 1,2,3-Trimethylbenzene	17.03	105	927	No Calib #	
90) 1,2-Dichlorobenzene	19.04	146	629	N.D.	
91) d-Limonene	19.09	68	3471	0.165 ng	88
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	800	N.D.	
95) Naphthalene	20.94	128	880	N.D.	
96) n-Dodecane	18.92	58	319	No Calib #	
97) Hexachlorobutadiene	21.30	225	731	N.D.	
98) Cyclohexanone	0.00	55	0	N.D.	
99) tert-Butylbenzene	18.43	119	856	N.D.	
100) n-Butylbenzene	19.38	91	1029	N.D.	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202422.D Vial: 11
Acq On : 20 Jun 2024 21:17 Operator: SC
Sample : P2402249-049 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:07:23 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202422.D Vial: 11
Acq On : 20 Jun 2024 21:17 Operator: SC
Sample : P2402249-049 (100mL) Inst : MS09
Misc : S37-06062402

MJ 6/29/24

Quant Time: Jun 29 10:07:23 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.22	130	144502	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	615538	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	148409	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	323305	12.588	ng		0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.72%				
57) Toluene-d8 (SS2)	12.43	98	692414	12.192	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.52%				
73) Bromofluorobenzene (SS3)	16.83	174	262684	12.809	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.48%				
Target Compounds							Qvalue
3) Dichlorodifluoromethan...	3.37	85	4759m	0.140	ng		
10) Ethanol	4.29	45	1886	0.134	ng		93
13) Acetone	4.64	58	15179	1.352	ng	#	80
14) Trichlorofluoromethane	4.75	101	2659596m	77.311	ng		
19) Methylene Chloride	5.35	84	890	0.056	ng		87
21) Trichlorotrifluoroethane	5.58	151	1102166	75.735	ng		98
27) 2-Butanone (MEK)	6.67	72	3434	0.387	ng	#	87
30) Ethyl Acetate	7.29	61	2068	0.381	ng		96
31) n-Hexane	7.30	57	3280	0.138	ng	#	91
32) Chloroform	7.34	83	2480	0.088	ng		100
41) Benzene	8.89	78	4423	0.078	ng		94
58) Toluene	12.56	91	9947	0.168	ng		95
64) Tetrachloroethene	14.03	166	1489	0.073	ng		97
67) m- & p-Xylenes	15.63	91	2953	0.052	ng		98
71) n-Nonane	16.62	43	1881	0.057	ng		97
75) alpha-Pinene	17.53	93	25353	0.774	ng		99
88) 4-Isopropyltoluene (p-...	18.93	119	12150	0.173	ng		99
91) d-Limonene	19.09	68	3471	0.165	ng		88

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202422.D Vial: 11
Acq On : 20 Jun 2024 21:17 Operator: SC
Sample : P2402249-049 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:07:23 2024
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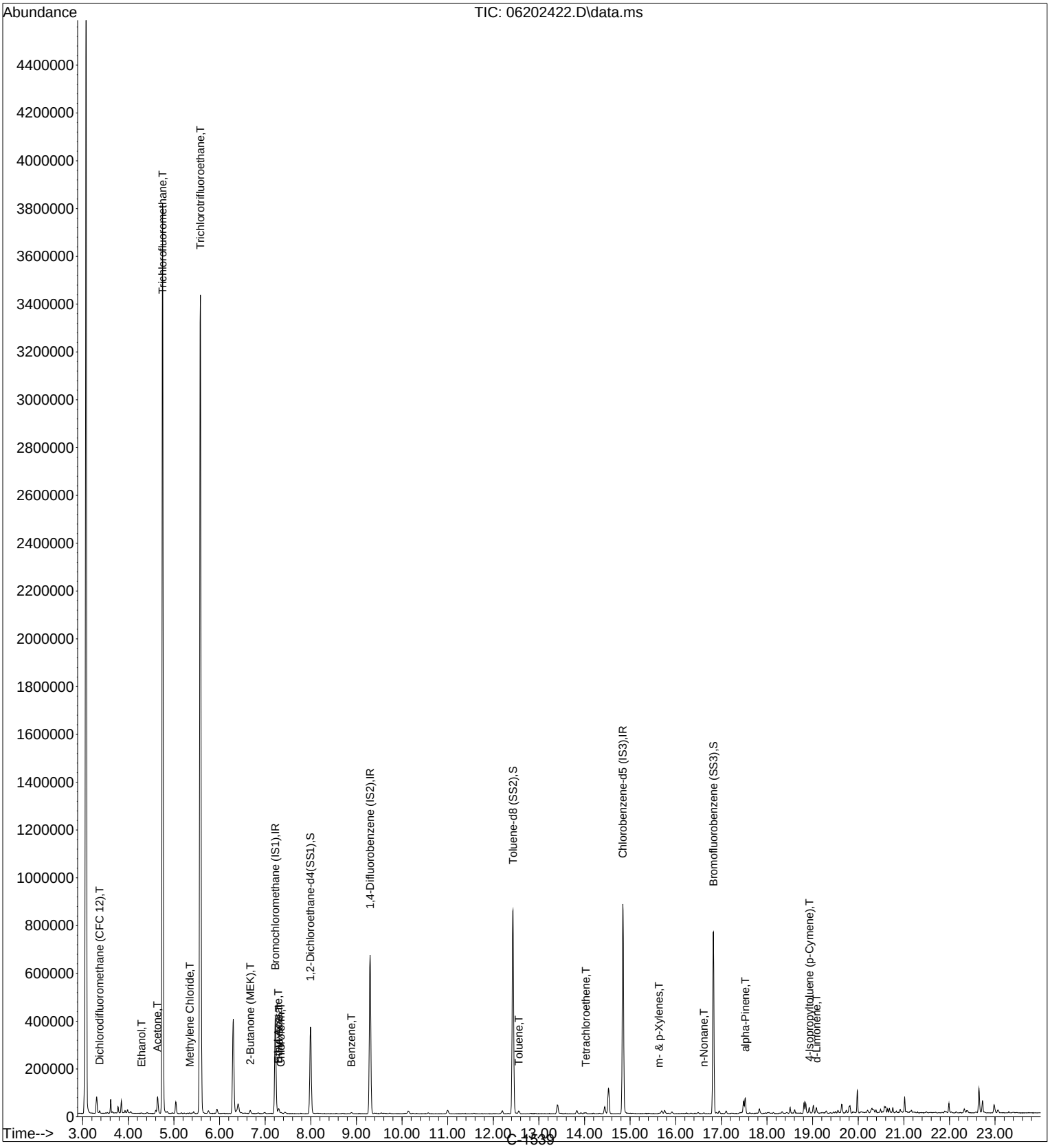
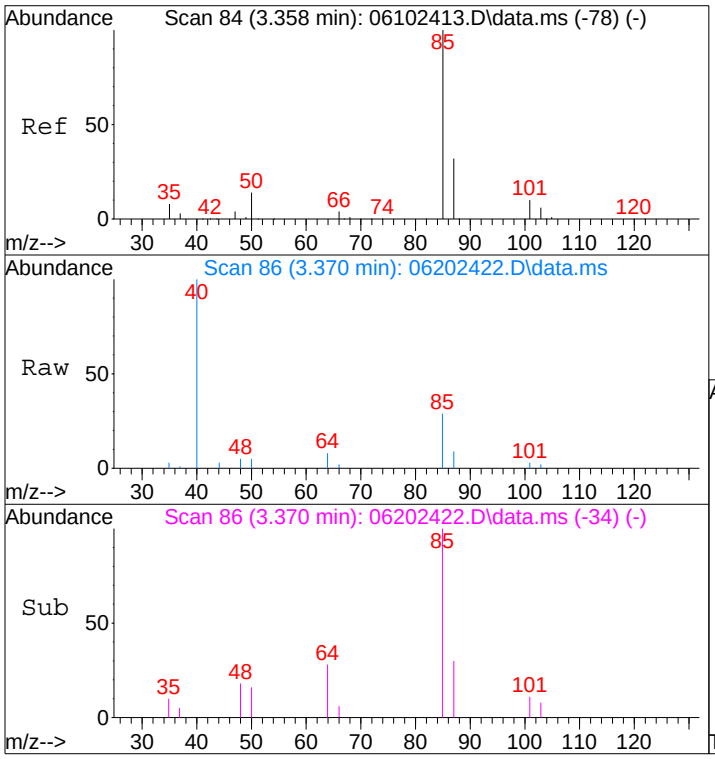
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

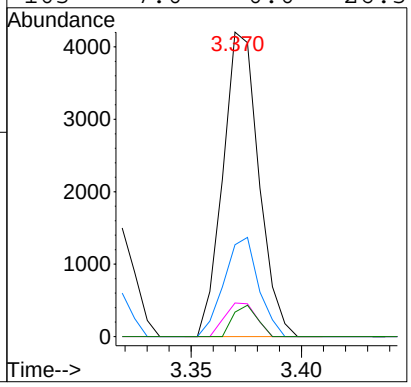


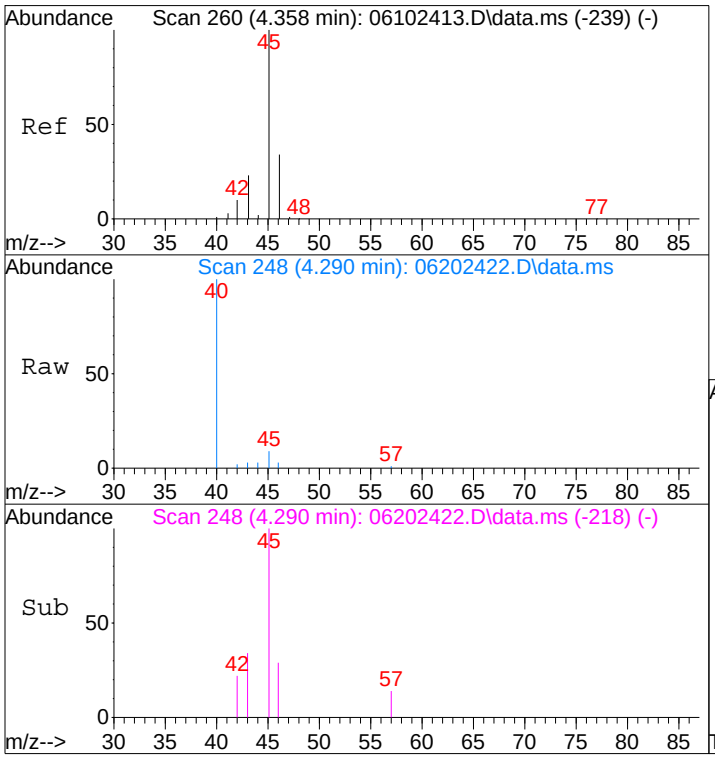


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.14 ng m
RT: 3.37 min Scan# 86
Delta R.T. 0.048 min
Lab File: 06202422.D
Acq: 20 Jun 2024 21:17

Tgt Ion: 85 Resp: 4759

Ion	Ratio	Lower	Upper
85	100		
87	31.4	12.2	52.2
101	9.7	0.0	29.8
103	7.0	0.0	26.3

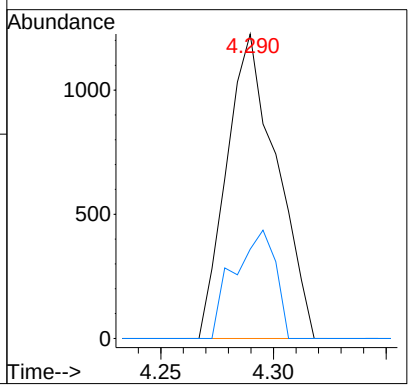


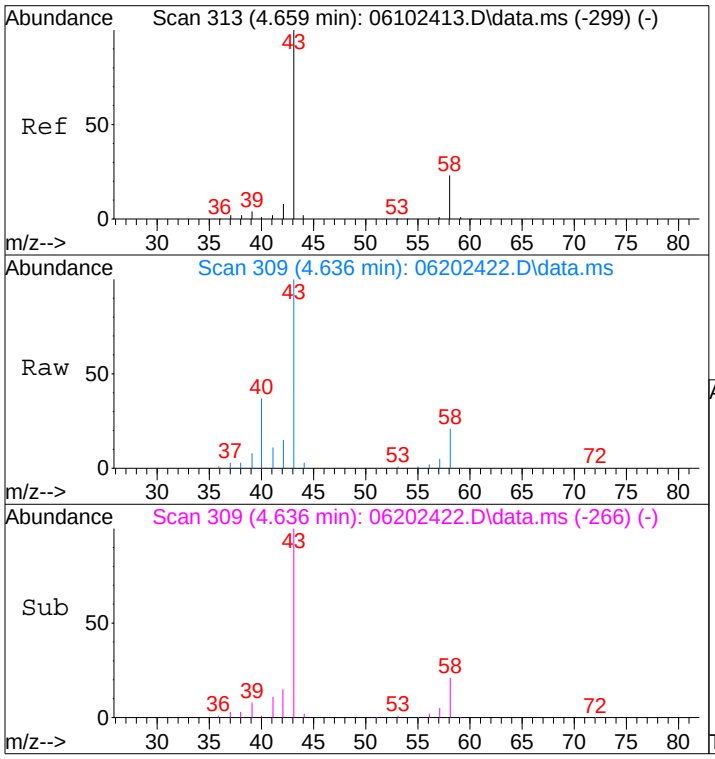


#10
Ethanol
Concen: 0.13 ng
RT: 4.29 min Scan# 248
Delta R.T. -0.077 min
Lab File: 06202422.D
Acq: 20 Jun 2024 21:17

Tgt Ion: 45 Resp: 1886

Ion	Ratio	Lower	Upper
45	100		
46	29.7	13.5	53.5

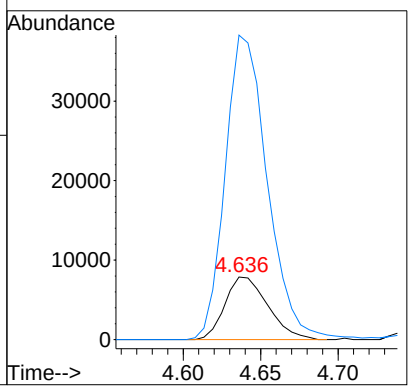


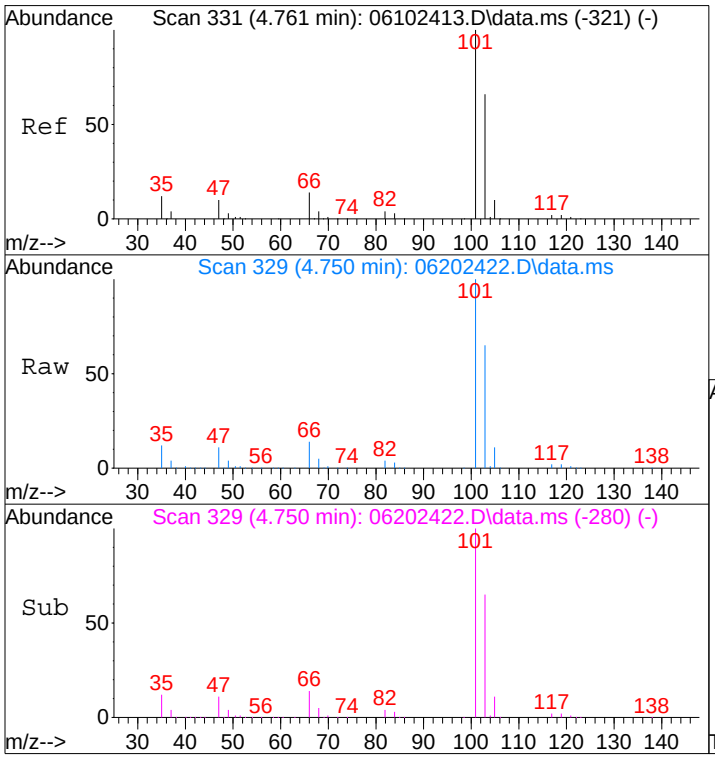


#13
Acetone
Concen: 1.35 ng
RT: 4.64 min Scan# 309
Delta R.T. -0.006 min
Lab File: 06202422.D
Acq: 20 Jun 2024 21:17

Tgt Ion: 58 Resp: 15179

Ion	Ratio	Lower	Upper
58	100		
43	479.9	400.7	460.7#

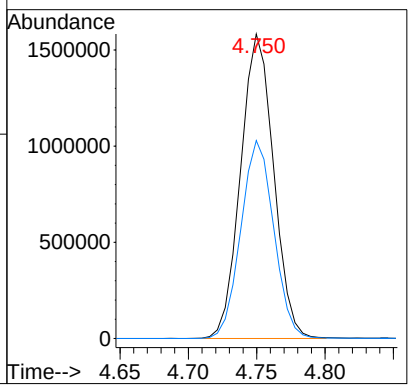


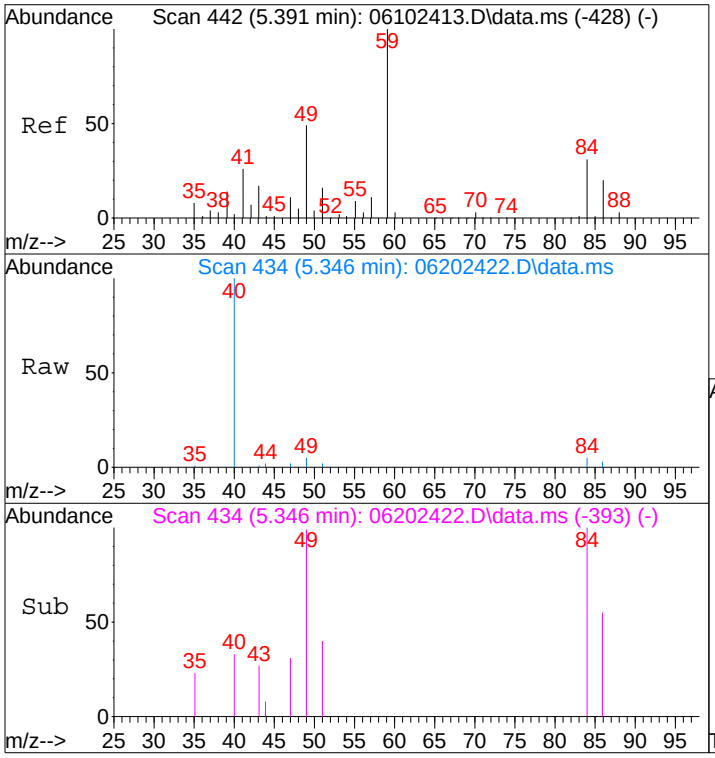


#14
Trichlorofluoromethane
Concen: 77.31 ng m
RT: 4.75 min Scan# 329
Delta R.T. 0.029 min
Lab File: 06202422.D
Acq: 20 Jun 2024 21:17

Tgt Ion:101 Resp: 2659596

Ion	Ratio	Lower	Upper
101	100		
103	64.9	44.9	84.9

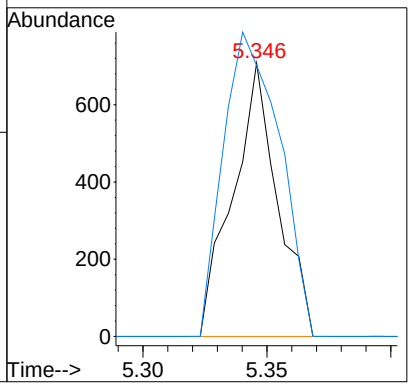


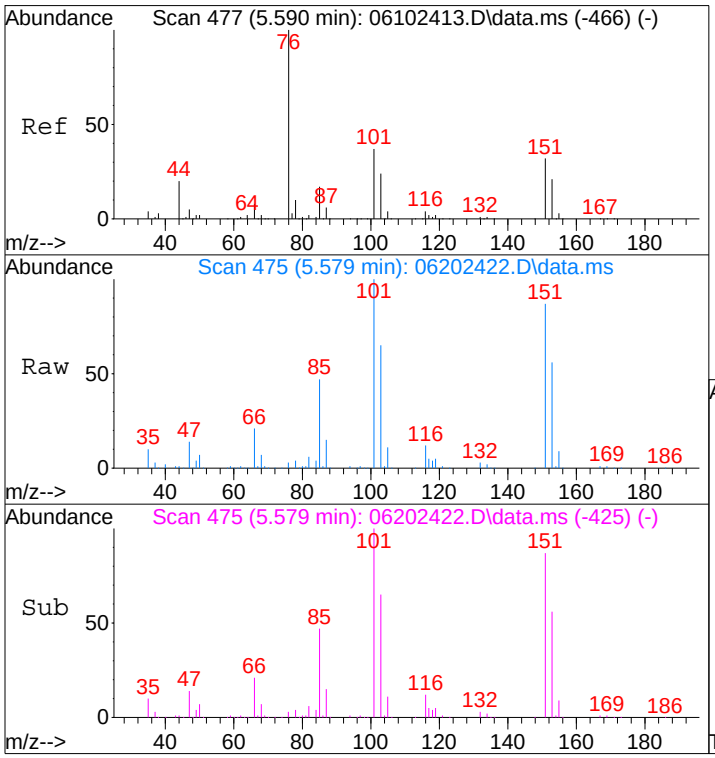


#19
Methylene Chloride
Concen: 0.06 ng
RT: 5.35 min Scan# 434
Delta R.T. -0.015 min
Lab File: 06202422.D
Acq: 20 Jun 2024 21:17

Tgt Ion: 84 Resp: 890

Ion	Ratio	Lower	Upper
84	100		
49	140.4	132.9	182.9

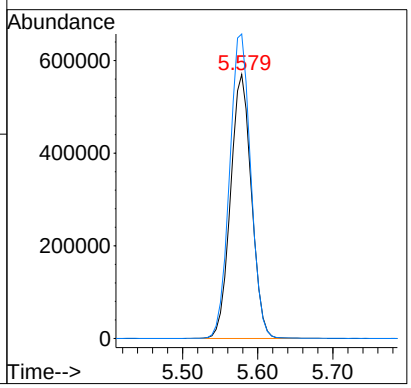


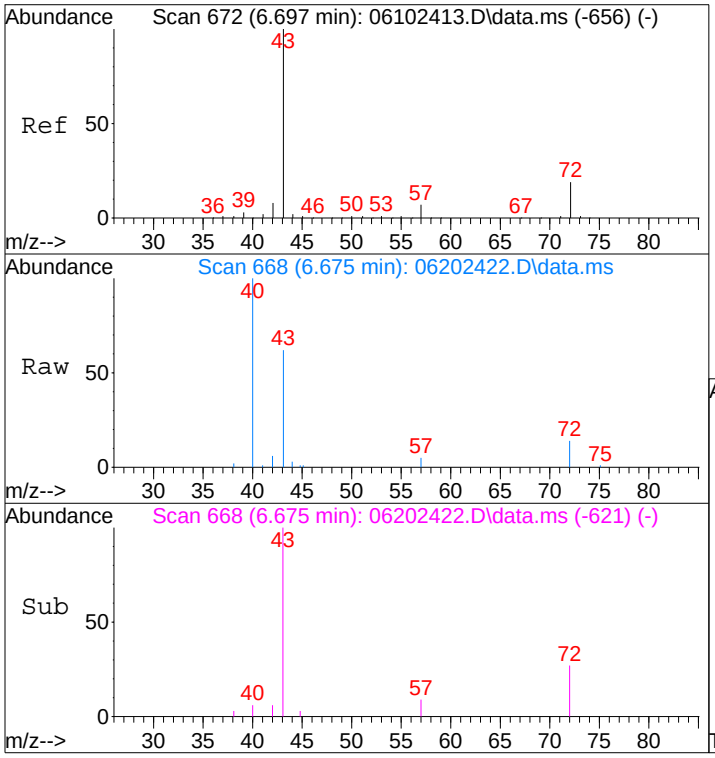


#21
Trichlorotrifluoroethane
Concen: 75.74 ng
RT: 5.58 min Scan# 475
Delta R.T. 0.032 min
Lab File: 06202422.D
Acq: 20 Jun 2024 21:17

Tgt Ion:151 Resp: 1102166

Ion	Ratio	Lower	Upper
151	100		
101	116.7	95.0	135.0

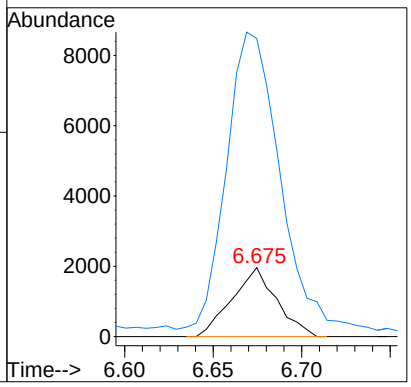


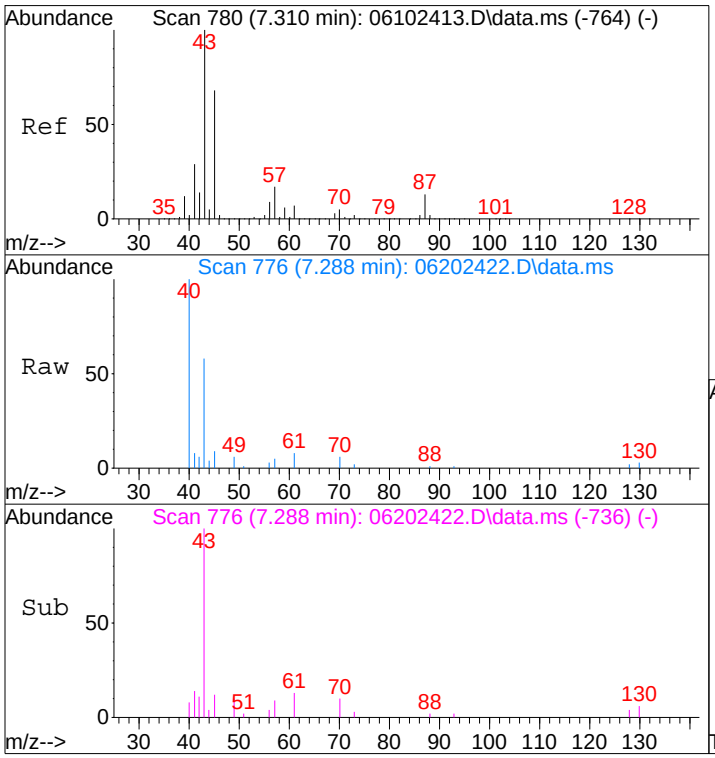


#27
2-Butanone (MEK)
Concen: 0.39 ng
RT: 6.67 min Scan# 668
Delta R.T. 0.016 min
Lab File: 06202422.D
Acq: 20 Jun 2024 21:17

Tgt Ion: 72 Resp: 3434

Ion	Ratio	Lower	Upper
72	100		
43	562.6	506.8	546.8#

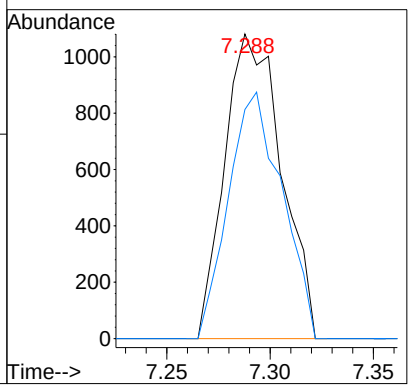


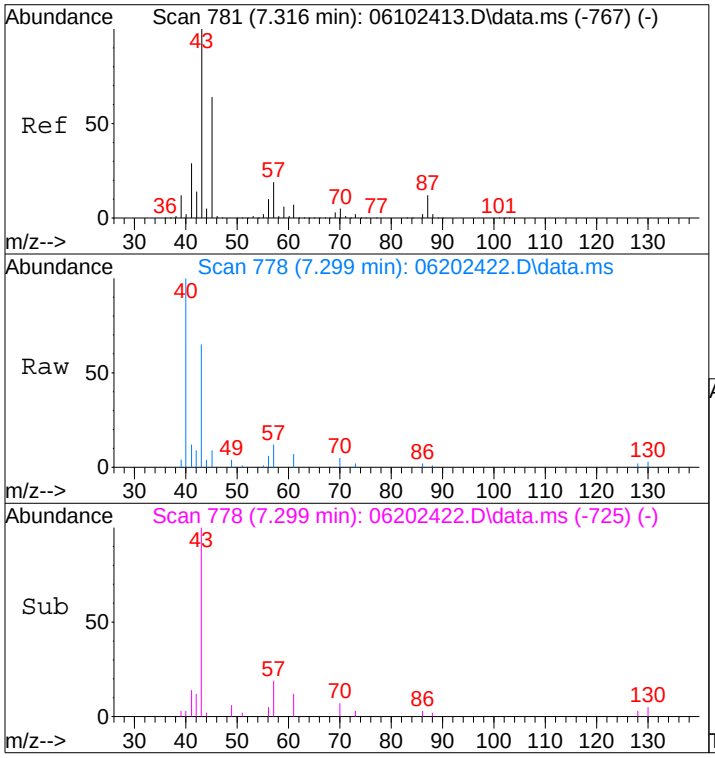


#30
Ethyl Acetate
Concen: 0.38 ng
RT: 7.29 min Scan# 776
Delta R.T. 0.029 min
Lab File: 06202422.D
Acq: 20 Jun 2024 21:17

Tgt Ion: 61 Resp: 2068

Ion	Ratio	Lower	Upper
61	100		
70	76.5	53.5	93.5

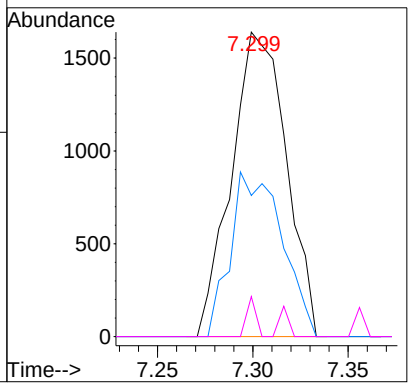


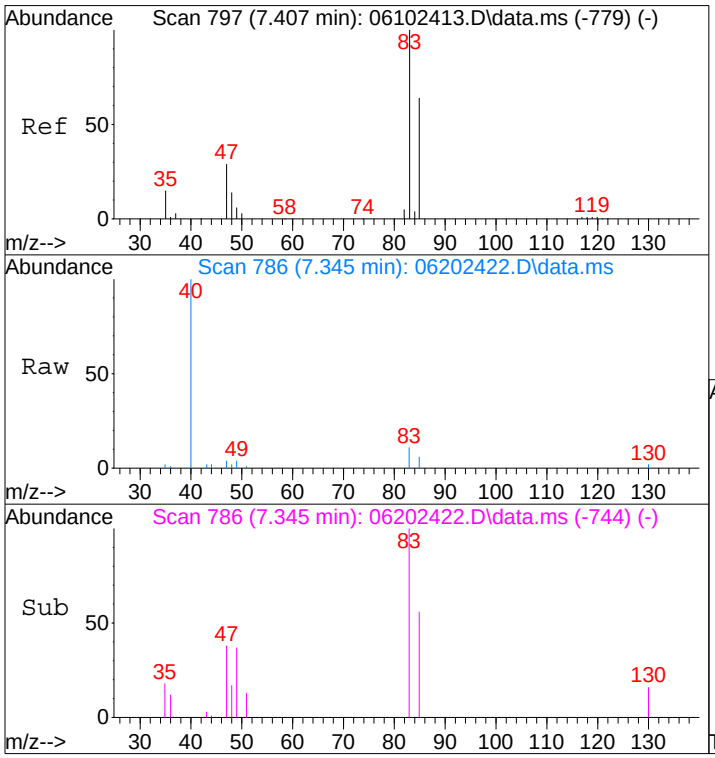


#31
n-Hexane
Concen: 0.14 ng
RT: 7.30 min Scan# 778
Delta R.T. 0.051 min
Lab File: 06202422.D
Acq: 20 Jun 2024 21:17

Tgt Ion: 57 Resp: 3280

Ion	Ratio	Lower	Upper
57	100		
56	50.5	42.5	63.7
86	0.0	9.5	14.3#

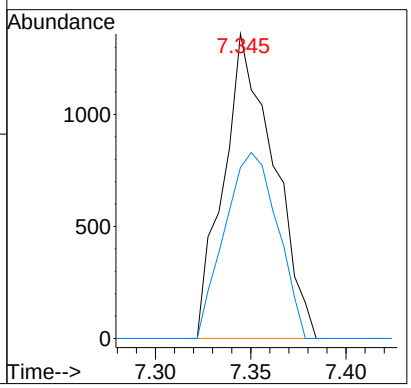


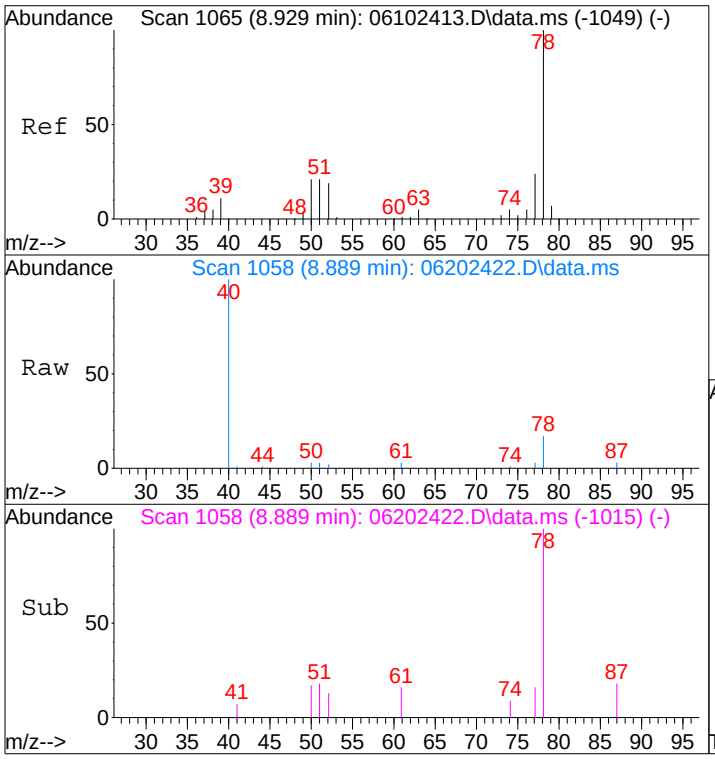


#32
Chloroform
Concen: 0.09 ng
RT: 7.34 min Scan# 786
Delta R.T. -0.010 min
Lab File: 06202422.D
Acq: 20 Jun 2024 21:17

Tgt Ion: 83 Resp: 2480

Ion	Ratio	Lower	Upper
83	100		
85	64.5	44.4	84.4

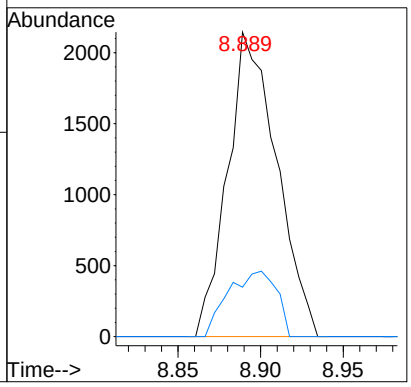


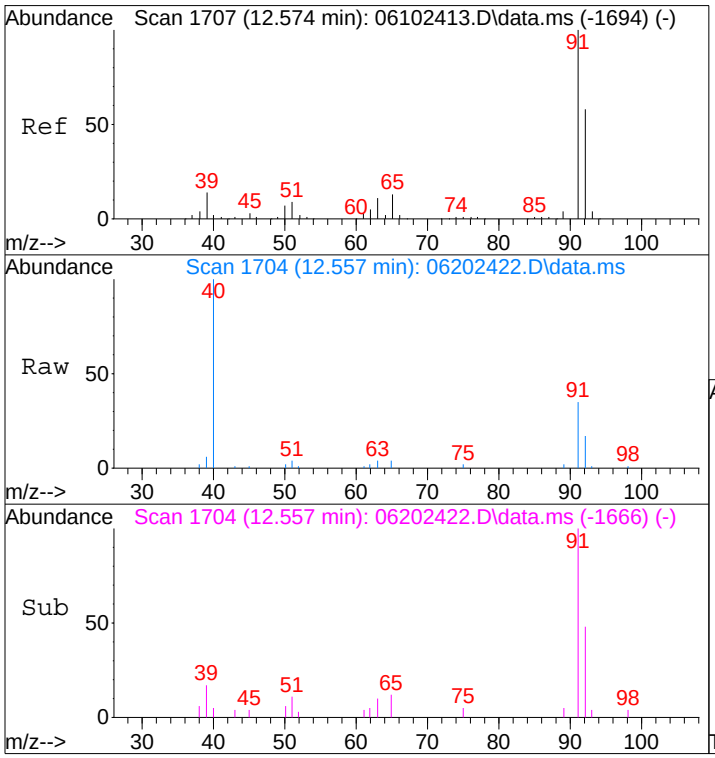


#41
Benzene
Concen: 0.08 ng
RT: 8.89 min Scan# 1058
Delta R.T. -0.008 min
Lab File: 06202422.D
Acq: 20 Jun 2024 21:17

Tgt Ion: 78 Resp: 4423

Ion	Ratio	Lower	Upper
78	100		
77	21.2	4.0	44.0

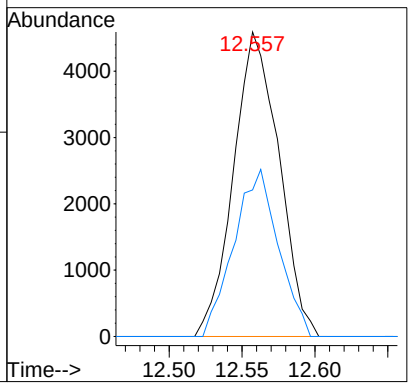


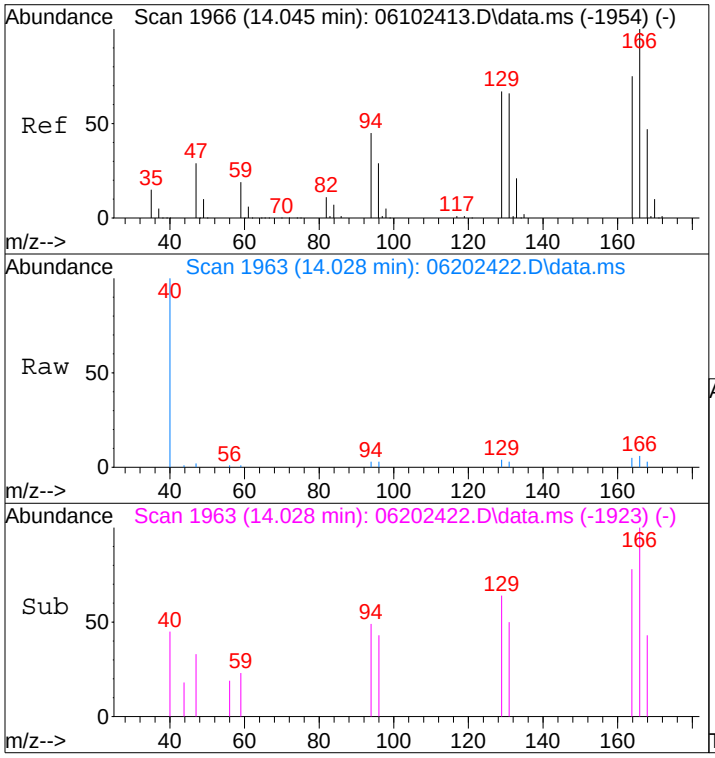


#58
Toluene
Concen: 0.17 ng
RT: 12.56 min Scan# 1704
Delta R.T. -0.034 min
Lab File: 06202422.D
Acq: 20 Jun 2024 21:17

Tgt Ion: 91 Resp: 9947

Ion	Ratio	Lower	Upper
91	100		
92	53.8	37.4	77.4

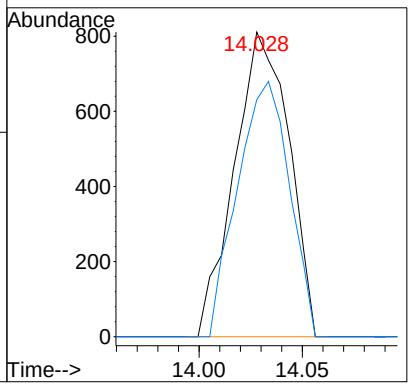


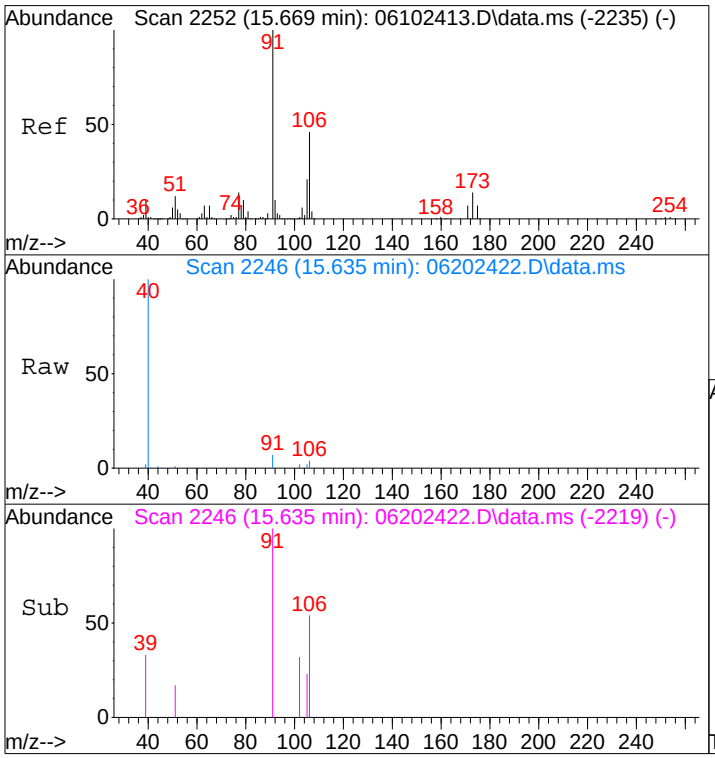


#64
Tetrachloroethene
Concen: 0.07 ng
RT: 14.03 min Scan# 1963
Delta R.T. -0.023 min
Lab File: 06202422.D
Acq: 20 Jun 2024 21:17

Tgt Ion:166 Resp: 1489

Ion	Ratio	Lower	Upper
166	100		
164	79.9	56.9	96.9

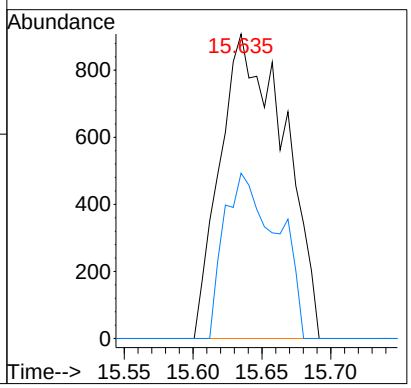


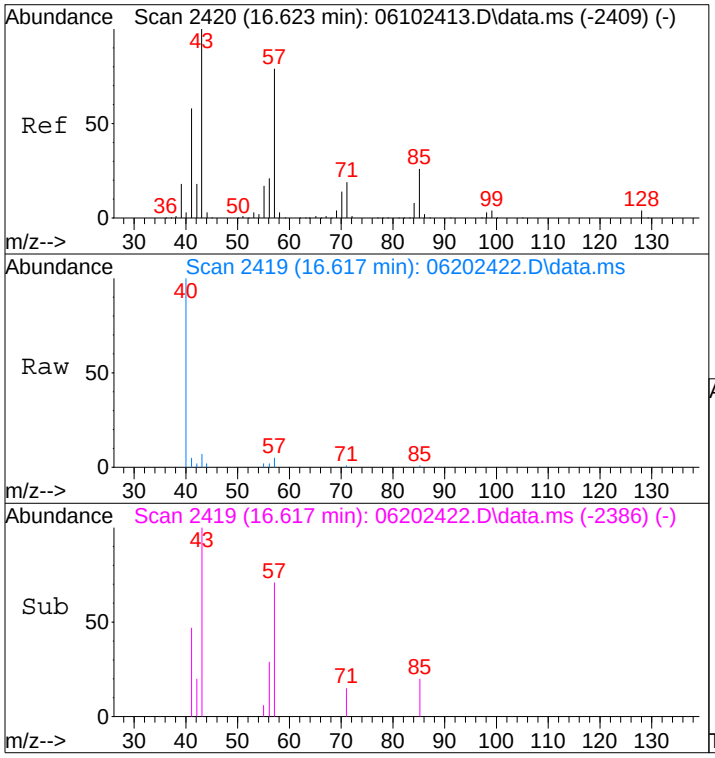


#67
m- & p-Xylenes
Concen: 0.05 ng
RT: 15.63 min Scan# 2246
Delta R.T. -0.046 min
Lab File: 06202422.D
Acq: 20 Jun 2024 21:17

Tgt Ion: 91 Resp: 2953

Ion	Ratio	Lower	Upper
91	100		
106	44.6	25.9	65.9

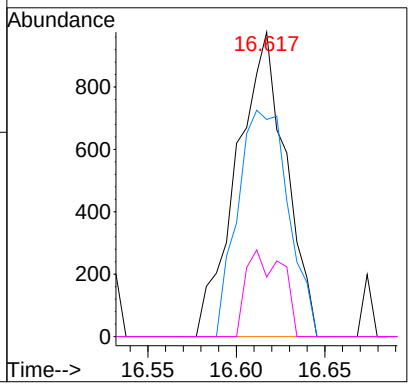


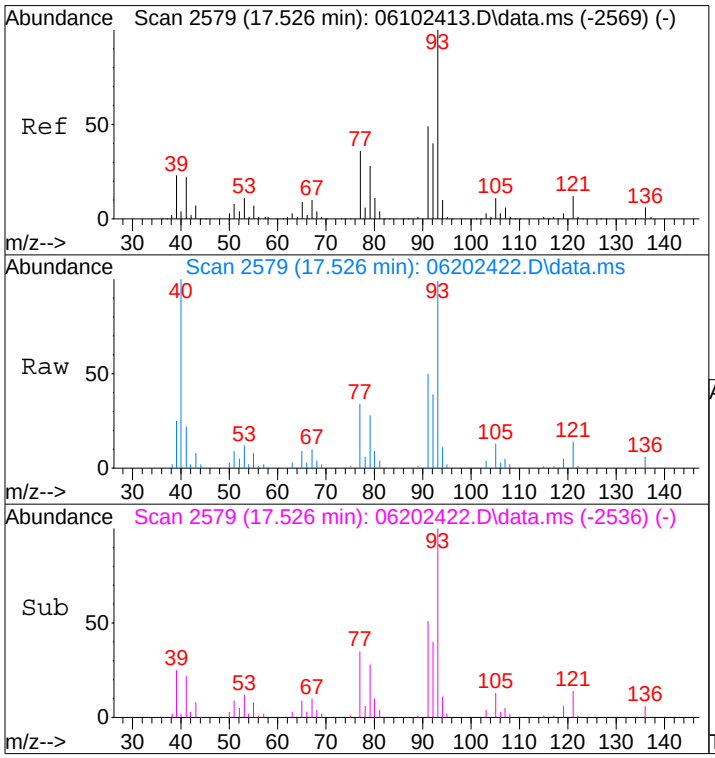


#71
n-Nonane
Concen: 0.06 ng
RT: 16.62 min Scan# 2419
Delta R.T. -0.012 min
Lab File: 06202422.D
Acq: 20 Jun 2024 21:17

Tgt Ion: 43 Resp: 1881

Ion	Ratio	Lower	Upper
43	100		
57	77.0	58.2	98.2
85	20.9	5.9	45.9

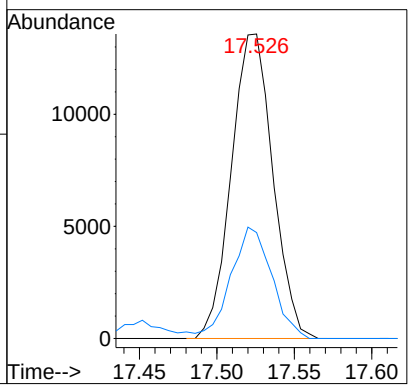


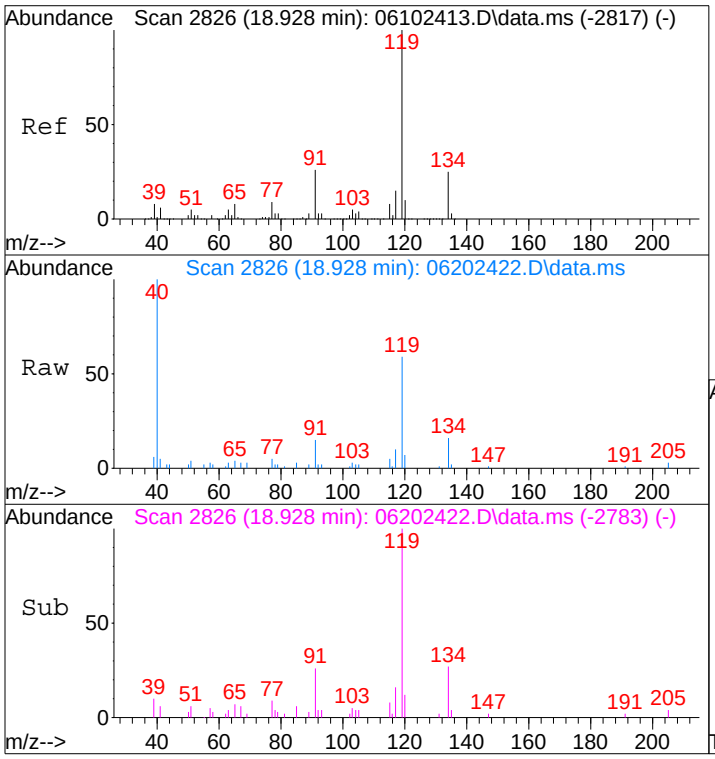


#75
alpha-Pinene
Concen: 0.77 ng
RT: 17.53 min Scan# 2579
Delta R.T. -0.006 min
Lab File: 06202422.D
Acq: 20 Jun 2024 21:17

Tgt Ion: 93 Resp: 25353

Ion	Ratio	Lower	Upper
93	100		
77	35.9	15.3	55.3

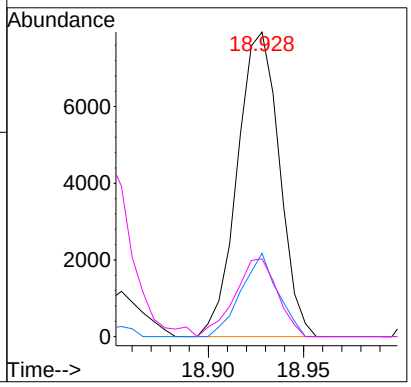


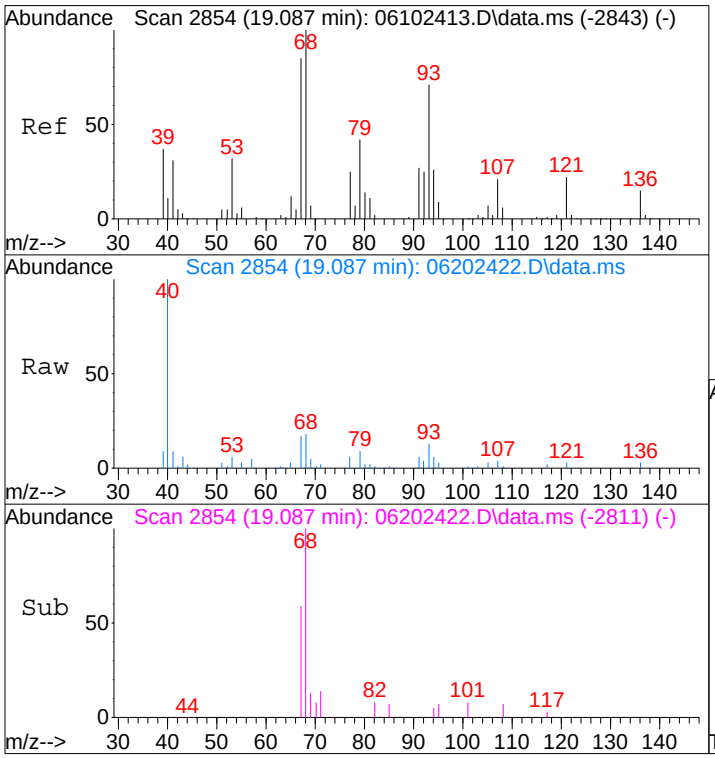


#88
4-Isopropyltoluene (p-Cymene)
Concen: 0.17 ng
RT: 18.93 min Scan# 2826
Delta R.T. -0.006 min
Lab File: 06202422.D
Acq: 20 Jun 2024 21:17

Tgt Ion:119 Resp: 12150

Ion	Ratio	Lower	Upper
119	100		
134	23.9	4.9	44.9
91	26.2	5.8	45.8

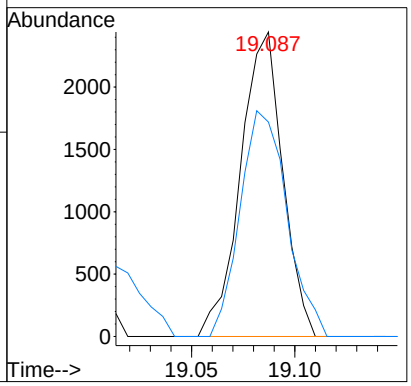




#91
d-Limonene
Concen: 0.17 ng
RT: 19.09 min Scan# 2854
Delta R.T. -0.006 min
Lab File: 06202422.D
Acq: 20 Jun 2024 21:17

Tgt Ion: 68 Resp: 3471

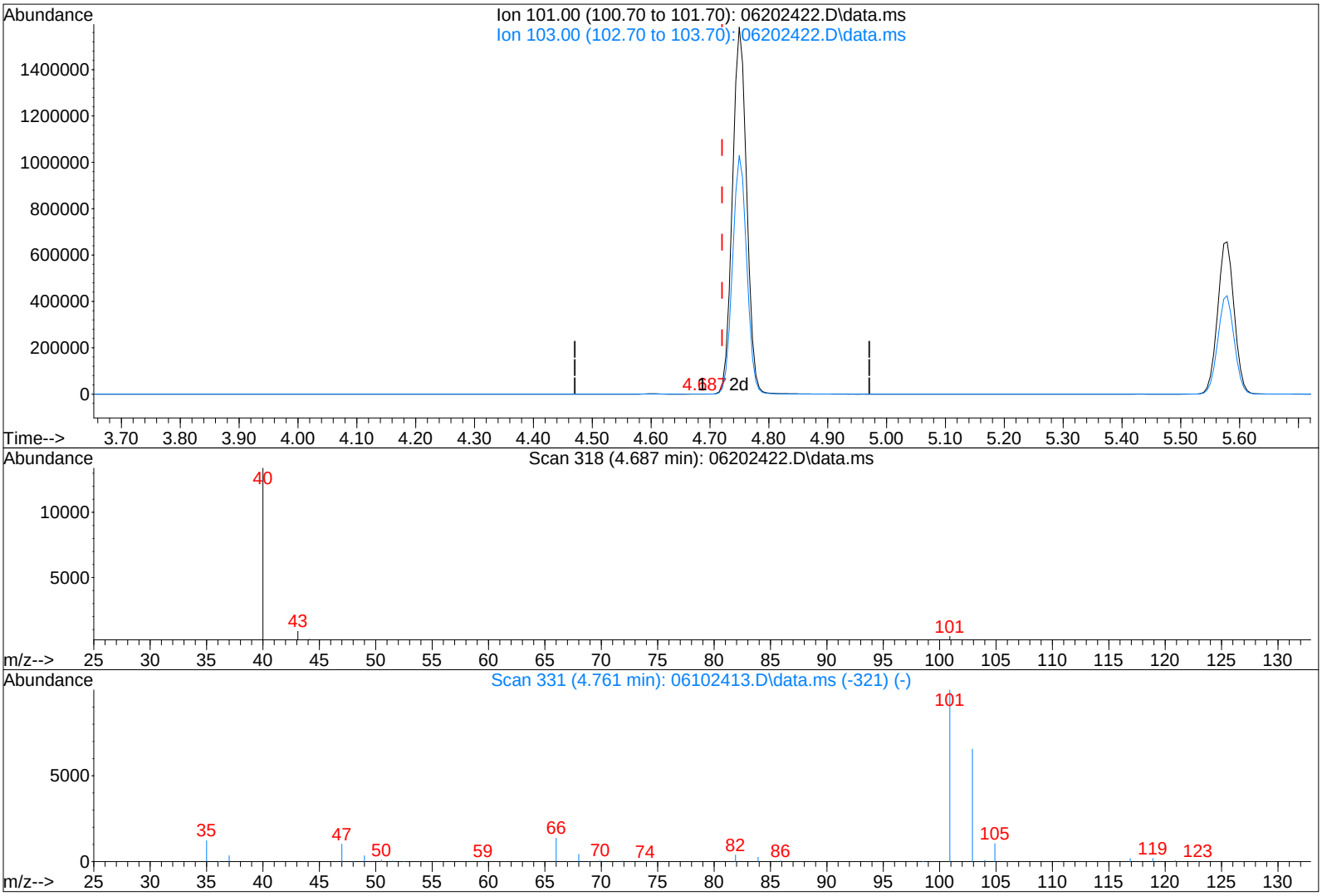
Ion	Ratio	Lower	Upper
68	100		
93	82.5	52.2	92.2



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\20\06202422.D Vial: 11
Acq On : 20 Jun 2024 21:17 Operator: SC
Sample : P2402249-049 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 12:09:48 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06202422.D\data.ms

(14) Trichlorofluoromethane (T)

4.687min (-0.033) 0.02ng

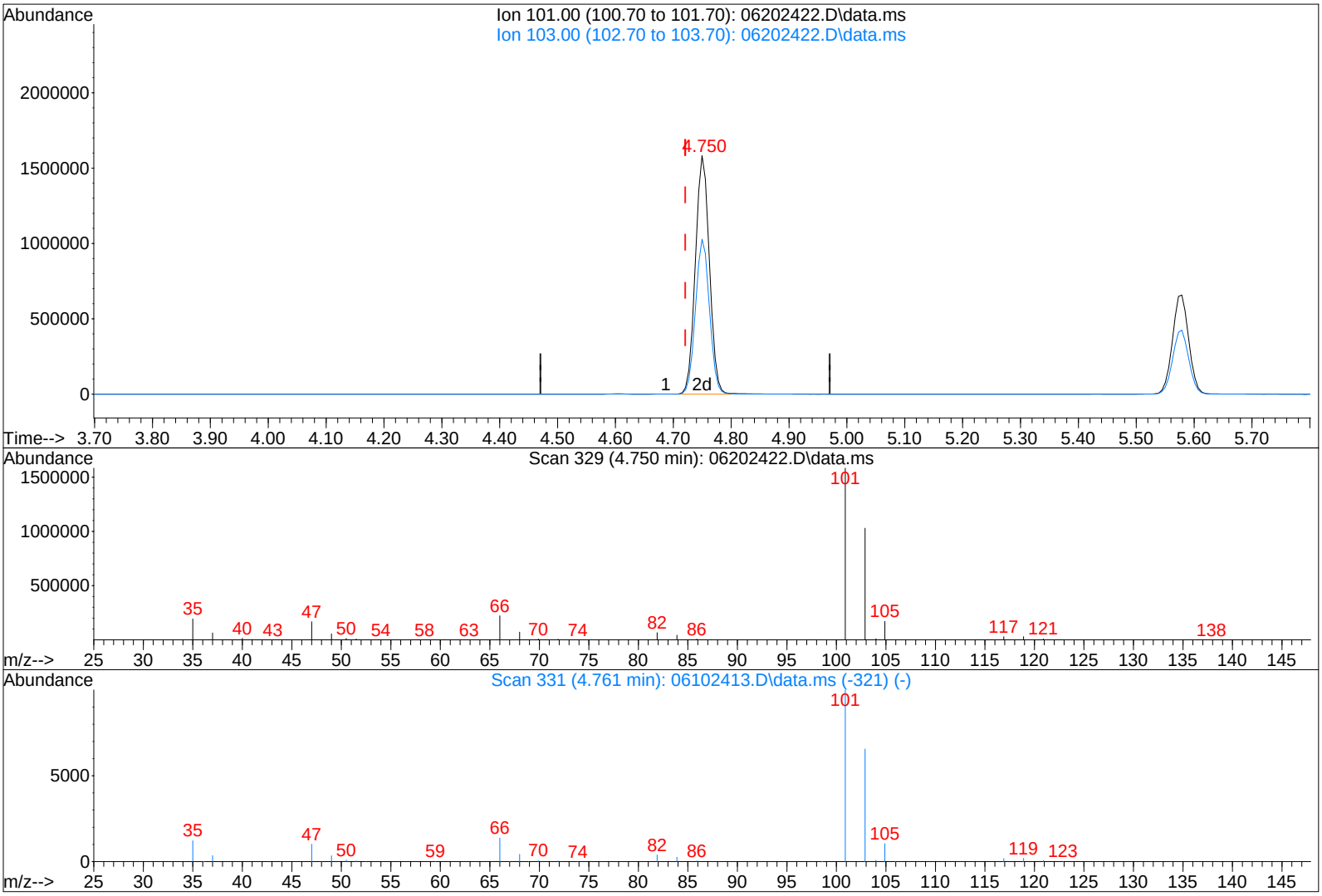
response 617

Ion	Exp%	Act%
101.00	100	100
103.00	64.90	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\20\06202422.D Vial: 11
Acq On : 20 Jun 2024 21:17 Operator: SC
Sample : P2402249-049 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 12:09:48 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06202422.D\data.ms

(14) Trichlorofluoromethane (T)

4.750min (+0.029) 77.31ng m

response 2659596

Ion	Exp%	Act%
101.00	100	100
103.00	64.90	64.87
0.00	0.00	0.00
0.00	0.00	0.00

MP

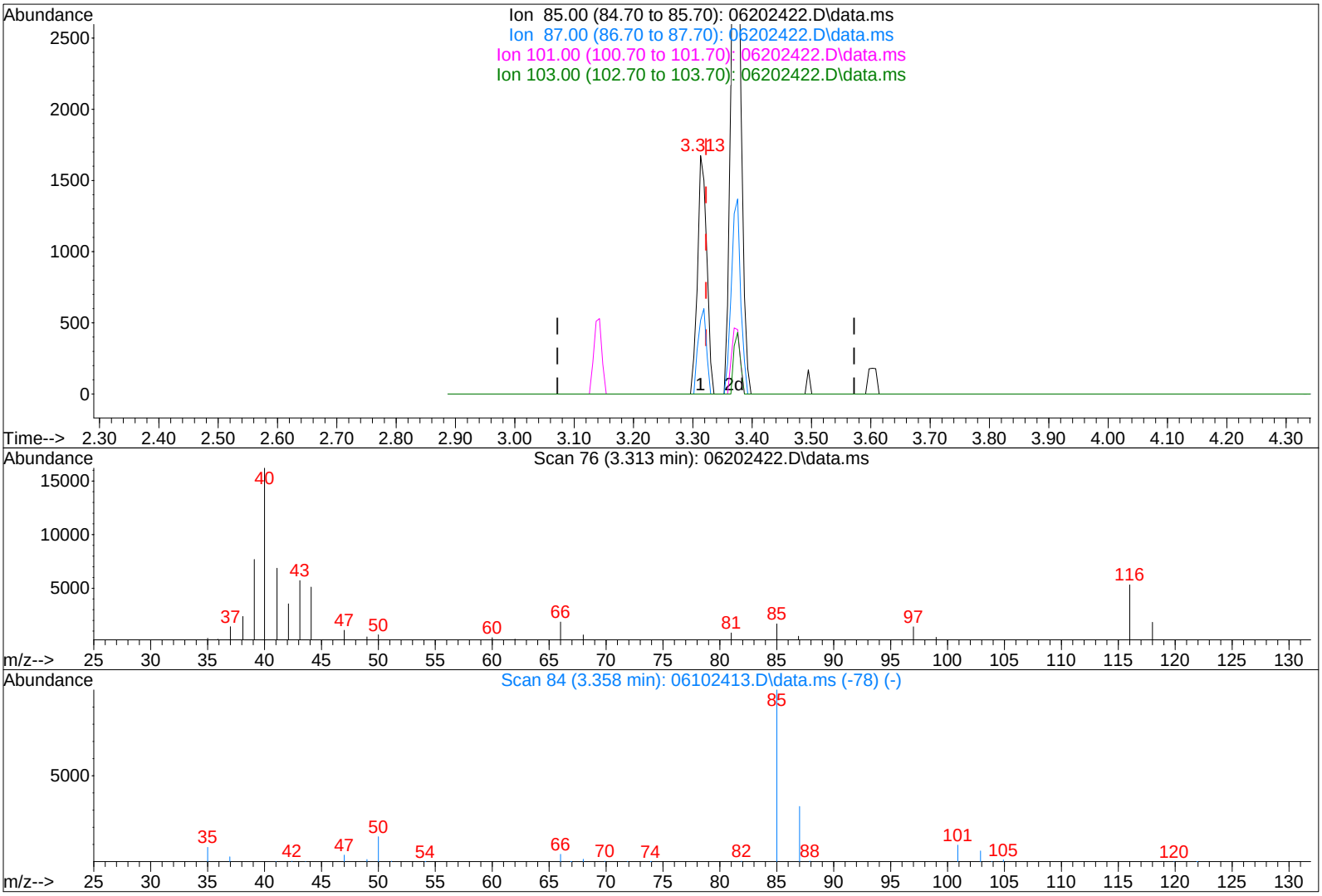
MJ 6/29/24

CG 6/29/24

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\20\06202422.D Vial: 11
Acq On : 20 Jun 2024 21:17 Operator: SC
Sample : P2402249-049 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 12:09:48 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06202422.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.313min (-0.009) 0.05ng

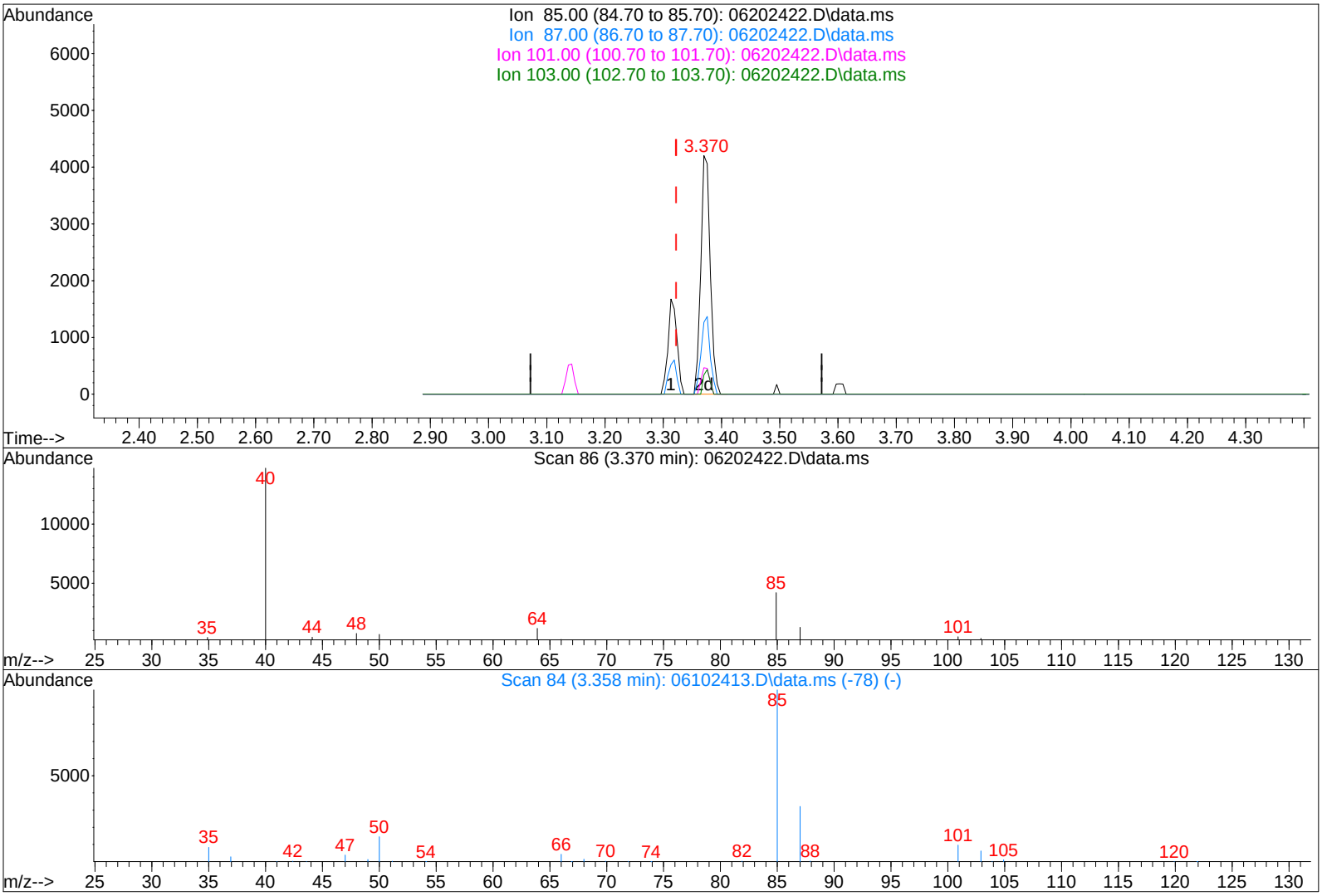
response 1800

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	31.83
101.00	9.80	0.00
103.00	6.30	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\20\06202422.D Vial: 11
Acq On : 20 Jun 2024 21:17 Operator: SC
Sample : P2402249-049 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 12:09:48 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06202422.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.370min (+0.048) 0.14ng m

response 4759

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	31.37
101.00	9.80	9.69
103.00	6.30	6.98

WP

MJ 6/29/24

CG 6/29/24

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202422.D Vial: 11
Acq On : 20 Jun 2024 21:17 Operator: SC
Sample : P2402249-049 (100mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 15:28:06 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

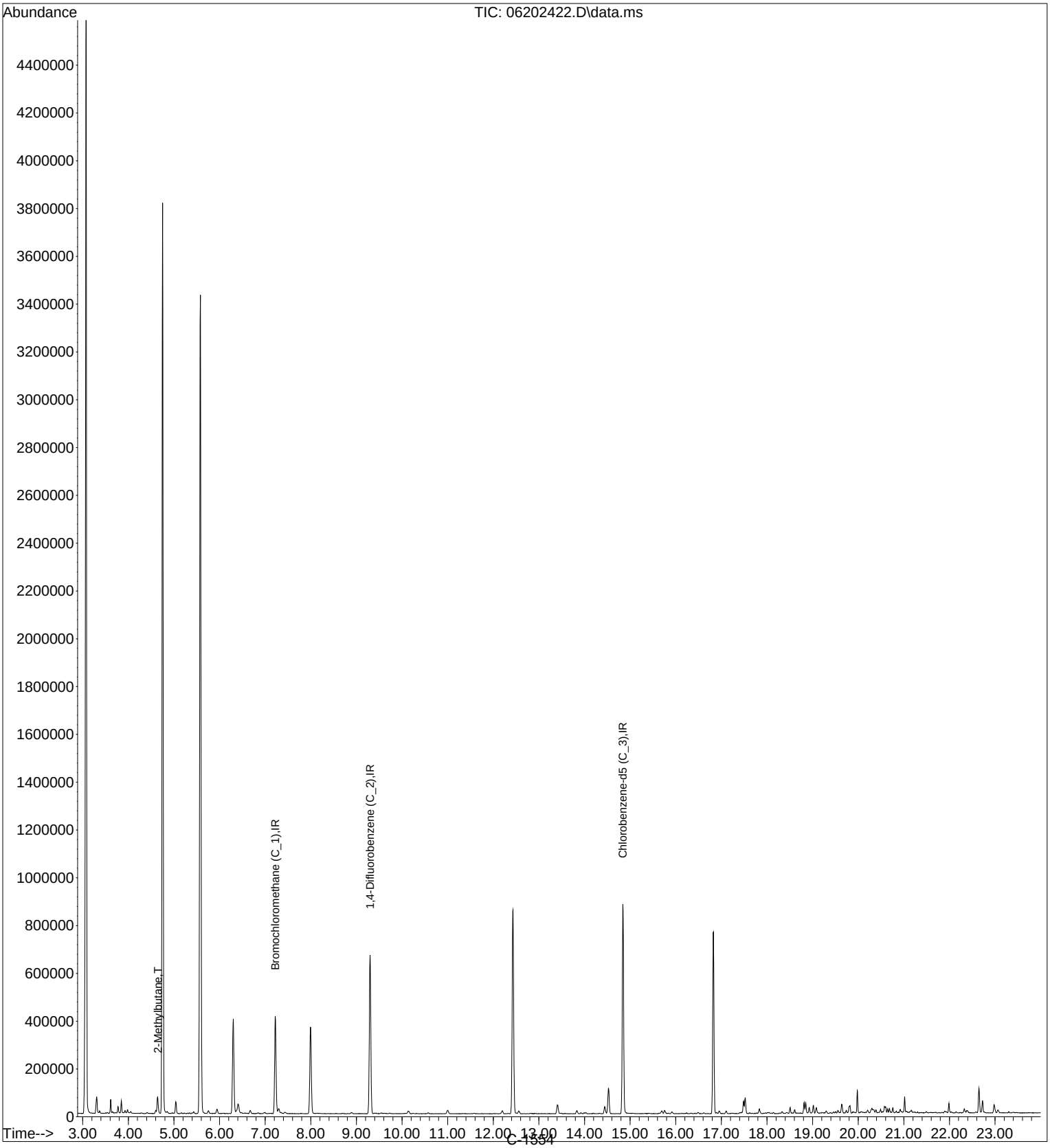
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.22	130	146209	12.500	ng		-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	617079	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	148409	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	0.00	85	0	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.20	83	452	N.D.			
4) 1,1-Difluoroethane	3.26	65	66	N.D.			
5) Chlorodifluoromethane ...	3.30	67	161	N.D.			
6) 1-Chloro-1,1-Difluoroe...	3.50	65	55	N.D.			
7) Dichlorofluoromethane ...	4.23	67	281	N.D.			
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	4.59	83	348	N.D.			
10) 2-Methylbutane	4.65	57	5054	0.290	ng	#	70
11) Methyl Acetate	5.34	43	585	N.D.			
12) 2-Methylpentane	6.49	71	501	N.D.			
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	0.00	84	0	N.D.			
17) 2,3-Dimethylpentane	9.54	56	62	N.D.			
18) Dibromomethane	9.79	174	59	N.D.			
20) Methyl Cyclohexane	11.57	55	1137	N.D.			
21) 1,3-Dichloropropane	0.00	76	0	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	16.49	75	267	N.D.			
25) Bromobenzene	17.11	77	52	N.D.			
26) 2-Chlorotoluene	17.60	91	832	N.D.			
27) 4-Chlorotoluene	17.68	91	1408	N.D.			
28) Indane	19.10	117	646	N.D.			
29) Indene	0.00	115	0	N.D.			
30) 1,2,4,5-Tetramethylben...	20.18	119	167	N.D.			
31) 1,2,3,4-Tetramethylben...	20.22	119	358	N.D.			
32) 1,2,3,5-Tetramethylben...	20.59	119	222	N.D.			
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202422.D Vial: 11
Acq On : 20 Jun 2024 21:17 Operator: SC
Sample : P2402249-049 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:28:06 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\20\
Data File : 06202422.D
Acq On : 20 Jun 2024 21:17
Operator : SC
Sample : P2402249-049 (100mL)
Misc : S37-06062402
ALS Vial : 11 Sample Multiplier: 1

MJ 6/28/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06202422.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.075	19	34	53	rBV	4716138	7922715	100.00%	30.401%
2	3.307	68	75	83	rBV4	68518	130255	1.64%	0.500%
3	3.370	83	86	92	rVB	10216	12195	0.15%	0.047%
4	3.614	124	129	133	rBV	57022	67218	0.85%	0.258%
5	3.773	152	157	164	rBV2	26675	36796	0.46%	0.141%
6	3.847	164	170	178	rVV	50748	68484	0.86%	0.263%
7	3.926	178	184	188	rVV	11002	16175	0.20%	0.062%
8	3.983	189	194	199	rVV	14072	21368	0.27%	0.082%
9	4.051	202	206	212	rVB2	7087	10603	0.13%	0.041%
10	4.602	296	303	305	rBV3	13531	21728	0.27%	0.083%
11	4.642	305	310	321	rVV2	69282	132183	1.67%	0.507%
12	4.750	321	329	342	rVV	3809166	6378897	80.51%	24.477%
13	4.852	344	347	353	rVB3	7632	12468	0.16%	0.048%
14	5.039	373	380	387	rVB	48431	81458	1.03%	0.313%
15	5.431	446	449	455	rVB2	7743	12011	0.15%	0.046%
16	5.579	464	475	495	rBV	3424161	6791418	85.72%	26.060%
17	5.755	499	506	513	rBV2	11184	21932	0.28%	0.084%
18	5.942	532	539	548	rVB2	18316	37912	0.48%	0.145%
19	6.300	592	602	611	rBV	396224	882303	11.14%	3.386%
20	6.408	611	621	631	rVB	37845	110346	1.39%	0.423%
21	6.675	660	668	675	rVB	13345	26772	0.34%	0.103%
22	6.987	716	723	731	rVB7	5046	11943	0.15%	0.046%
23	7.220	755	764	773	rBV	408162	880107	11.11%	3.377%
24	7.299	773	778	785	rVB3	17512	37325	0.47%	0.143%
25	7.430	796	801	810	rVB5	5565	13281	0.17%	0.051%
26	7.992	890	900	912	rBV	362689	812389	10.25%	3.117%
27	8.889	1051	1058	1064	rBV4	4884	11358	0.14%	0.044%
28	9.298	1120	1130	1143	rBV	664372	1498724	18.92%	5.751%

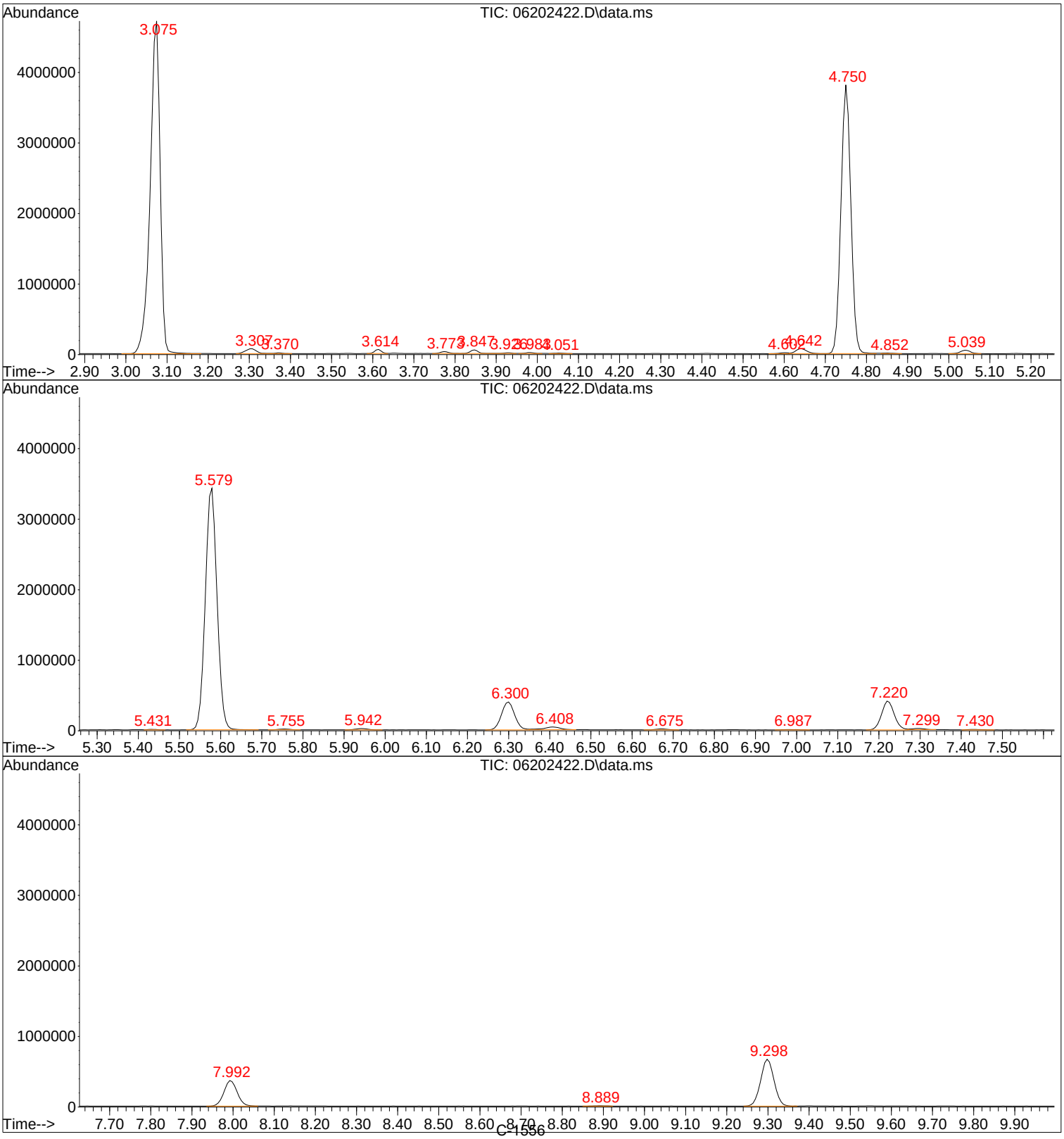
Sum of corrected areas: 26060364

LSC Report - Integrated Chromatogram

Data Path : I:\MS09\DATA\2024 06\20\
Data File : 06202422.D
Acq On : 20 Jun 2024 21:17
Operator : SC
Sample : P2402249-049 (100mL)
Misc : S37-06062402
ALS Vial : 11 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\20\\
Data File : 06202422.D
Acq On : 20 Jun 2024 21:177
Operator : SCC
Sample : P2402249-049 (100mL))
Misc : S37-060624022
ALS Vial : 11 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT/LSC Reviewed)

MJ 6/29/24

Data File : I:\MS09\DATA\2024 06\20\06202423.D Vial: 12
Acq On : 20 Jun 2024 21:50 Operator: SC
Sample : P2402249-050 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:08:07 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	142446	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	615267	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	147399	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	321011	12.680	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.44%				
57) Toluene-d8 (SS2)	12.43	98	689941	12.232	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.84%				
73) Bromofluorobenzene (SS3)	16.83	174	266878	13.103	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 104.80%				
Target Compounds							Qvalue
2) Propene	0.00	42	0	N.D. d			
3) Dichlorodifluoromethan...	3.36	85	17325m	0.517	ng		
4) Chloromethane	3.49	50	453	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	3.61	135	366	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	3.81	54	110	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.28	45	34498	2.491	ng		75
11) Acetonitrile	4.48	41	127	N.D.			
12) Acrolein	4.53	56	3141	0.306	ng		95
13) Acetone	4.64	58	30784	2.782	ng	#	73
14) Trichlorofluoromethane	4.75	101	2051028	60.481	ng		100
15) 2-Propanol (Isopropanol)	0.00	45	0	N.D. d			
16) Acrylonitrile	4.99	53	680	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.33	59	469	N.D.			
19) Methylene Chloride	5.35	84	919	0.059	ng		87
20) 3-Chloro-1-propene (Al...	5.46	41	124	N.D.			
21) Trichlorotrifluoroethane	5.58	151	875756	61.046	ng		99
22) Carbon Disulfide	0.00	76	0	N.D. d			
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	6.42	86	1577	0.618	ng	#	32
27) 2-Butanone (MEK)	6.67	72	8655	0.988	ng		97
28) cis-1,2-Dichloroethene	7.07	61	236	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.			
30) Ethyl Acetate	7.29	61	2834	0.530	ng		98
31) n-Hexane	7.31	57	135	N.D.			
32) Chloroform	7.36	83	8097	0.290	ng		95
34) Tetrahydrofuran (THF)	7.78	72	319	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	109	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.80	56	18814	No Calib		#	
41) Benzene	8.90	78	3134	0.055	ng		94
42) Carbon Tetrachloride	9.07	117	640	N.D.			
43) Cyclohexane	9.16	84	177	N.D.			
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.08	83	768	N.D.			
47) Trichloroethene	10.15	130	1459	0.088	ng		81
48) 1,4-Dioxane	0.00	88	0	N.D.			
49) 2,2,4-Trimethylpentane...	0.00	57	0	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202423.D Vial: 12
Acq On : 20 Jun 2024 21:50 Operator: SC
Sample : P2402249-050 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:08:07 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

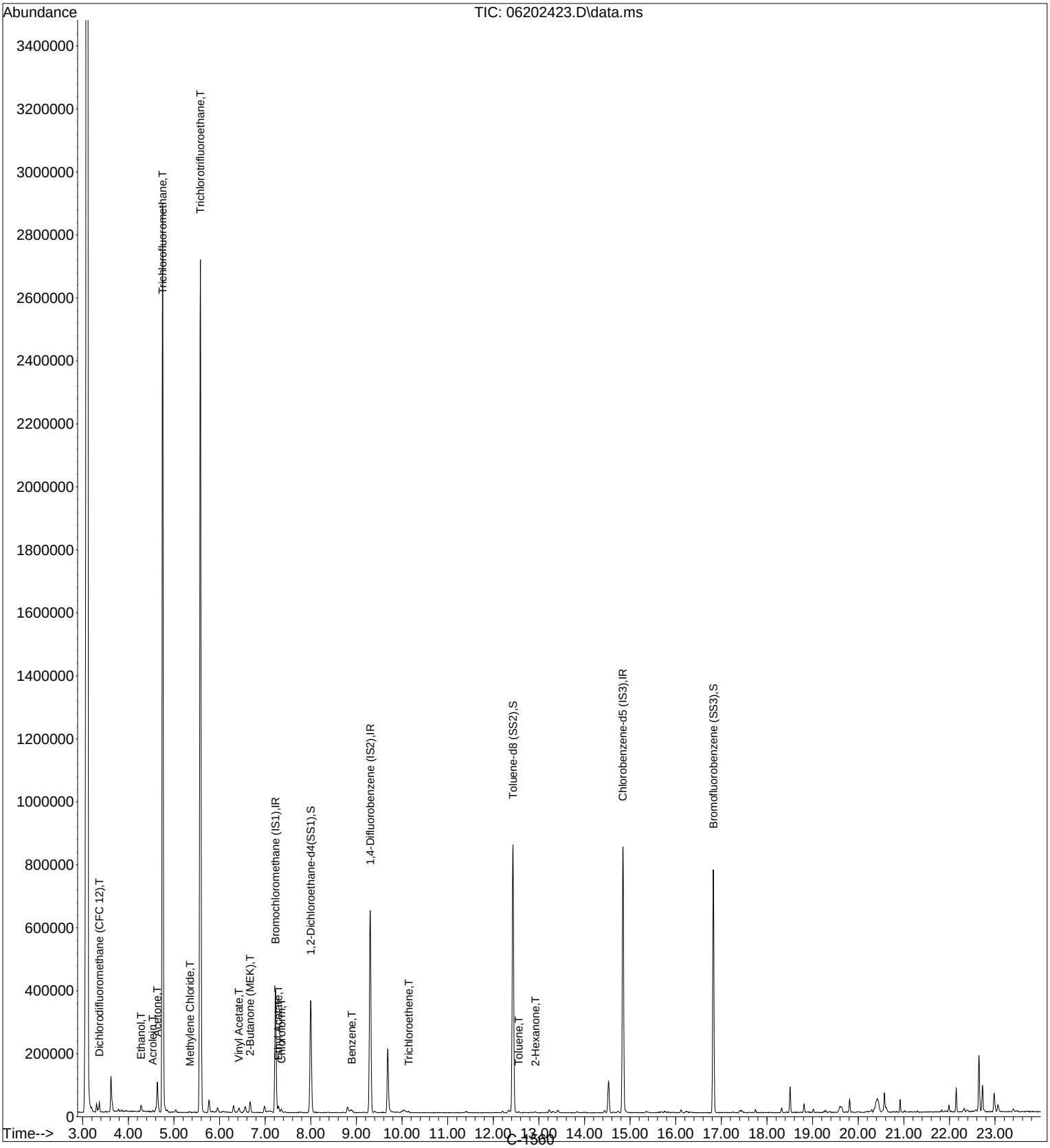
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	0.00	71	0	N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
58) Toluene	12.56	91	3428	0.058 ng	100
59) 2-Hexanone	12.93	43	3403	0.092 ng	82
60) Dibromochloromethane	13.07	129	482	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	0.00	43	0	N.D.	
63) n-Octane	0.00	57	0	N.D.	
64) Tetrachloroethene	14.03	166	436	N.D.	
65) Chlorobenzene	14.89	112	566	N.D.	
66) Ethylbenzene	15.41	91	1189	N.D.	
67) m- & p-Xylenes	15.63	91	723	N.D.	
68) Bromoform	15.66	173	722	N.D.	
69) Styrene	16.11	104	286	N.D.	
70) o-Xylene	16.24	91	935	N.D.	
71) n-Nonane	16.61	43	502	N.D.	
72) 1,1,2,2-Tetrachloroethane	16.22	83	457	N.D.	
74) Cumene	17.03	105	690	N.D.	
75) alpha-Pinene	17.52	93	188	N.D.	
76) n-Propylbenzene	17.68	91	1045	N.D.	
77) 3-Ethyltoluene	17.03	105	690	No Calib	#
78) 4-Ethyltoluene	17.86	105	834	N.D.	
79) 1,3,5-Trimethylbenzene	17.96	105	490	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.03	105	690	No Calib	#
82) 1,2,4-Trimethylbenzene	18.43	105	653	N.D.	
83) n-Decane	0.00	58	0	N.D.	
84) Benzyl Chloride	0.00	91	0	N.D.	
85) 1,3-Dichlorobenzene	18.58	146	567	N.D.	
86) 1,4-Dichlorobenzene	18.66	146	663	N.D.	
87) sec-Butylbenzene	18.74	105	927	N.D.	
88) 4-Isopropyltoluene (p-...	18.92	119	818	N.D.	
89) 1,2,3-Trimethylbenzene	17.03	105	690	No Calib	#
90) 1,2-Dichlorobenzene	19.03	146	457	N.D.	
91) d-Limonene	0.00	68	0	N.D.	
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	747	N.D.	
95) Naphthalene	20.94	128	661	N.D.	
96) n-Dodecane	0.00	58	0	N.D.	
97) Hexachlorobutadiene	21.30	225	542	N.D.	
98) Cyclohexanone	15.50	55	136	No Calib	#
99) tert-Butylbenzene	18.42	119	919	N.D.	
100) n-Butylbenzene	19.38	91	767	N.D.	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202423.D Vial: 12
Acq On : 20 Jun 2024 21:50 Operator: SC
Sample : P2402249-050 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:08:07 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT/LSC Reviewed)

MJ 6/29/24

Data File : I:\MS09\DATA\2024 06\20\06202423.D Vial: 12
Acq On : 20 Jun 2024 21:50 Operator: SC
Sample : P2402249-050 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:08:07 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

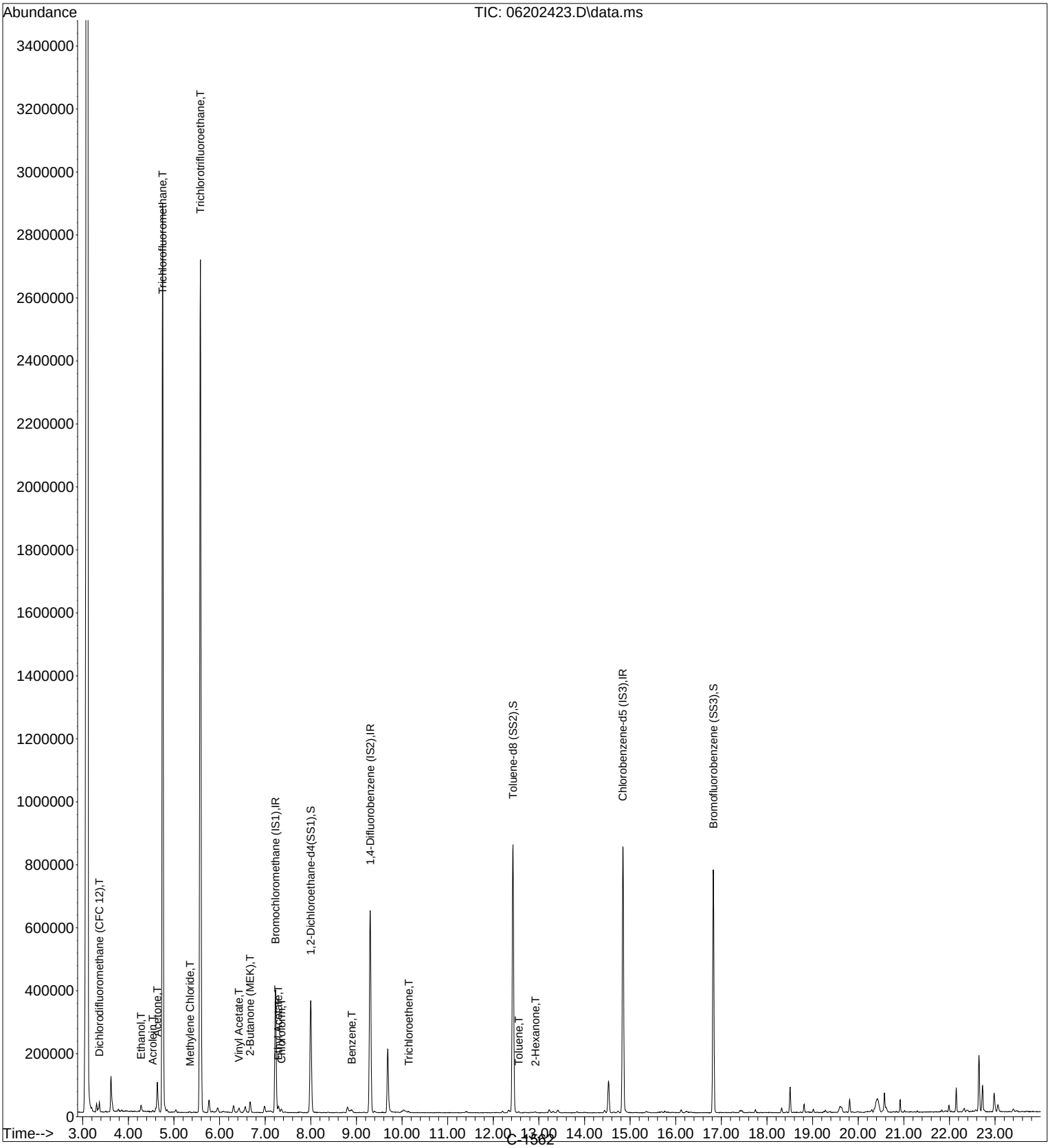
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	142446	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	615267	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	147399	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	321011	12.680	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.44%				
57) Toluene-d8 (SS2)	12.43	98	689941	12.232	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.84%				
73) Bromofluorobenzene (SS3)	16.83	174	266878	13.103	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 104.80%				
Target Compounds							Qvalue
3) Dichlorodifluoromethan...	3.36	85	17325m	0.517	ng		
10) Ethanol	4.28	45	34498	2.491	ng		75
12) Acrolein	4.53	56	3141	0.306	ng		95
13) Acetone	4.64	58	30784	2.782	ng	#	73
14) Trichlorofluoromethane	4.75	101	2051028	60.481	ng		100
19) Methylene Chloride	5.35	84	919	0.059	ng		87
21) Trichlorotrifluoroethane	5.58	151	875756	61.046	ng		99
26) Vinyl Acetate	6.42	86	1577	0.618	ng	#	32
27) 2-Butanone (MEK)	6.67	72	8655	0.988	ng		97
30) Ethyl Acetate	7.29	61	2834	0.530	ng		98
32) Chloroform	7.36	83	8097	0.290	ng		95
41) Benzene	8.90	78	3134	0.055	ng		94
47) Trichloroethene	10.15	130	1459	0.088	ng		81
58) Toluene	12.56	91	3428	0.058	ng		100
59) 2-Hexanone	12.93	43	3403	0.092	ng		82

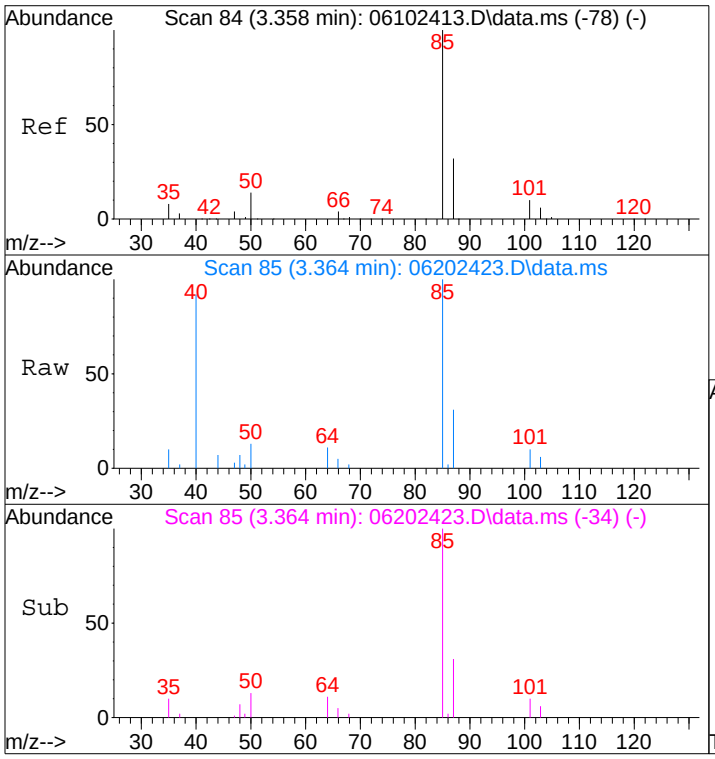
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202423.D Vial: 12
Acq On : 20 Jun 2024 21:50 Operator: SC
Sample : P2402249-050 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:08:07 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

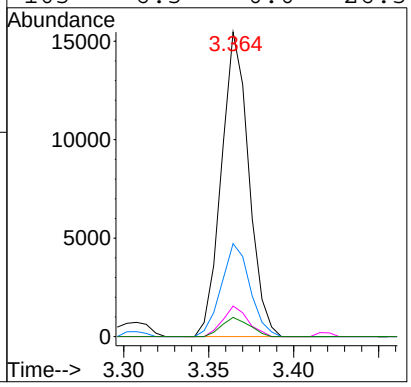


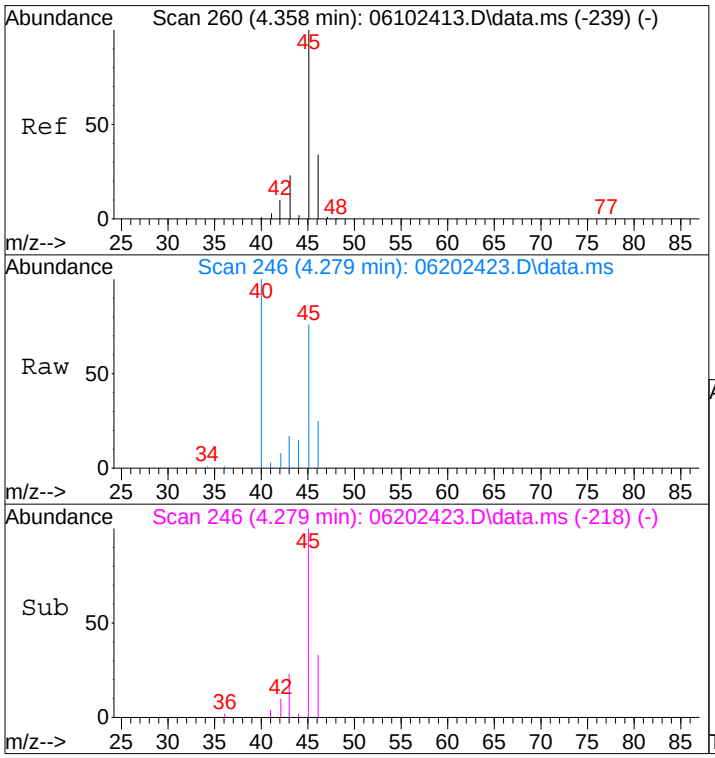


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.52 ng m
RT: 3.36 min Scan# 85
Delta R.T. 0.042 min
Lab File: 06202423.D
Acq: 20 Jun 2024 21:50

Tgt Ion: 85 Resp: 17325

Ion	Ratio	Lower	Upper
85	100		
87	32.1	12.2	52.2
101	9.3	0.0	29.8
103	6.3	0.0	26.3

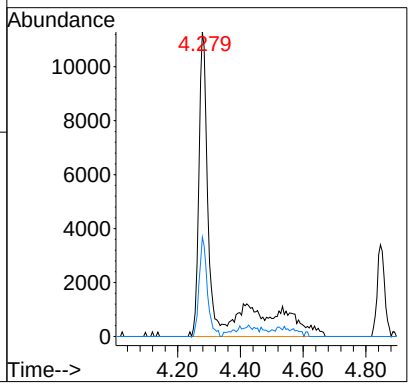


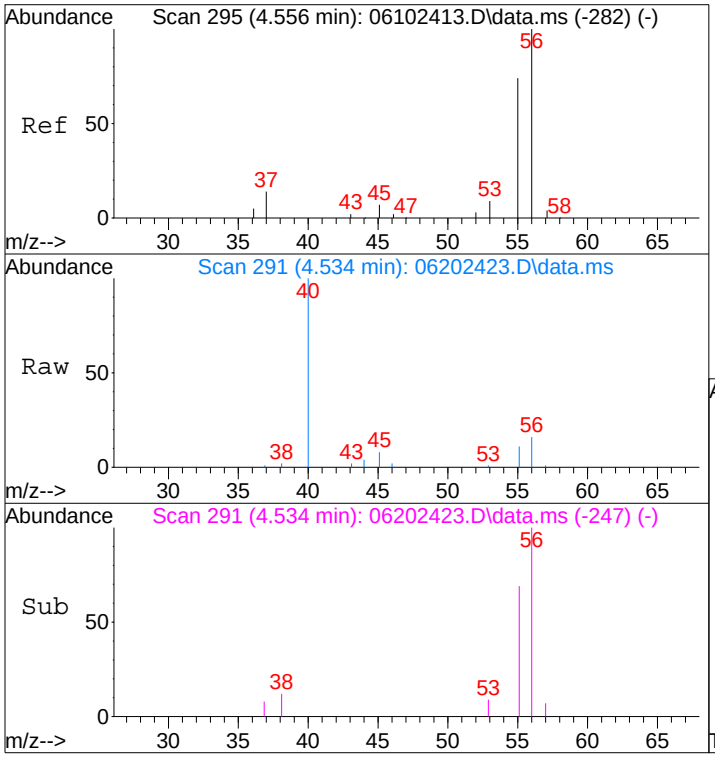


#10
Ethanol
Concen: 2.49 ng
RT: 4.28 min Scan# 246
Delta R.T. -0.088 min
Lab File: 06202423.D
Acq: 20 Jun 2024 21:50

Tgt Ion: 45 Resp: 34498

Ion	Ratio	Lower	Upper
45	100		
46	19.2	13.5	53.5

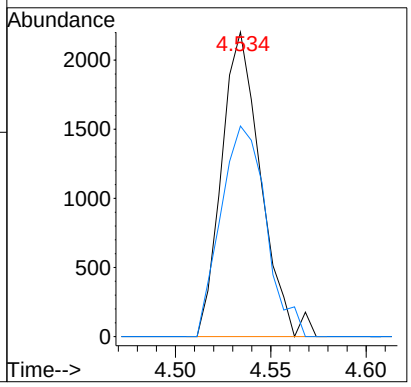


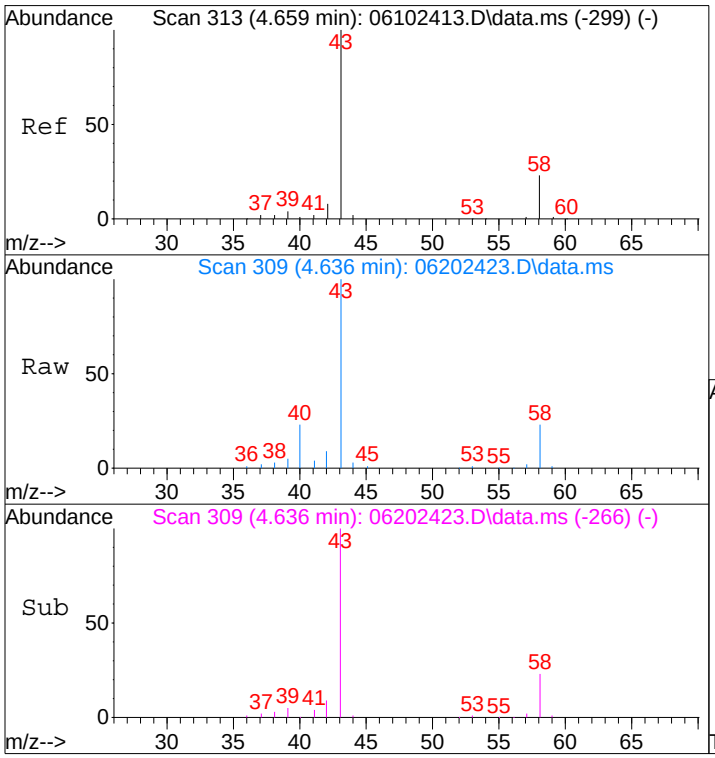


#12
Acrolein
Concen: 0.31 ng
RT: 4.53 min Scan# 291
Delta R.T. -0.001 min
Lab File: 06202423.D
Acq: 20 Jun 2024 21:50

Tgt Ion: 56 Resp: 3141

Ion	Ratio	Lower	Upper
56	100		
55	80.1	55.5	95.5

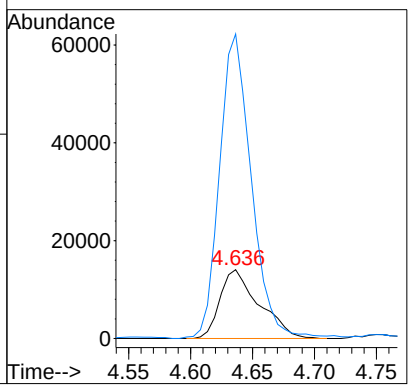


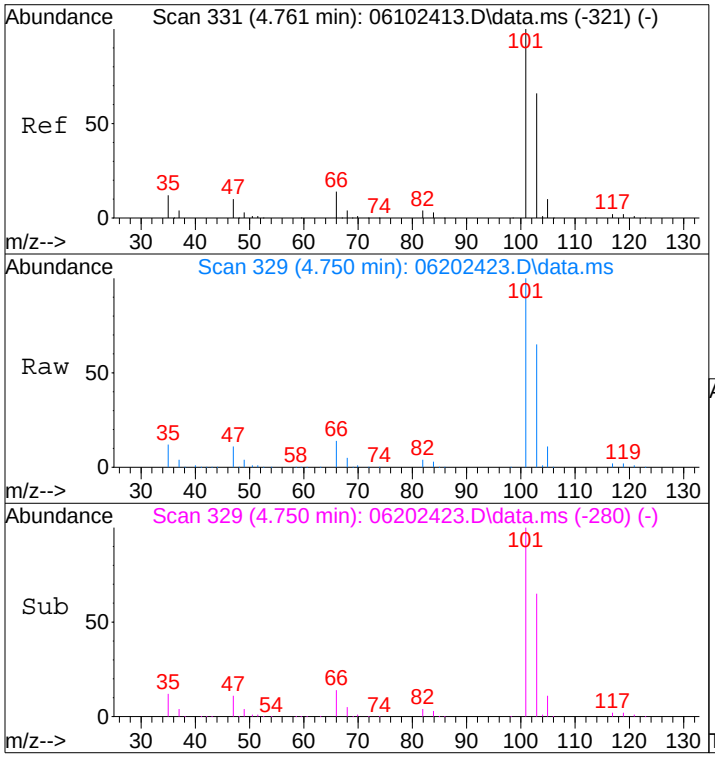


#13
Acetone
Concen: 2.78 ng
RT: 4.64 min Scan# 309
Delta R.T. -0.006 min
Lab File: 06202423.D
Acq: 20 Jun 2024 21:50

Tgt Ion: 58 Resp: 30784

Ion	Ratio	Lower	Upper
58	100		
43	362.8	400.7	460.7#

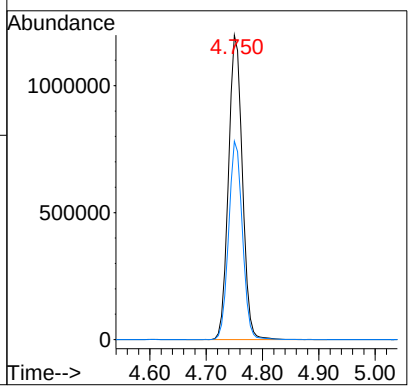


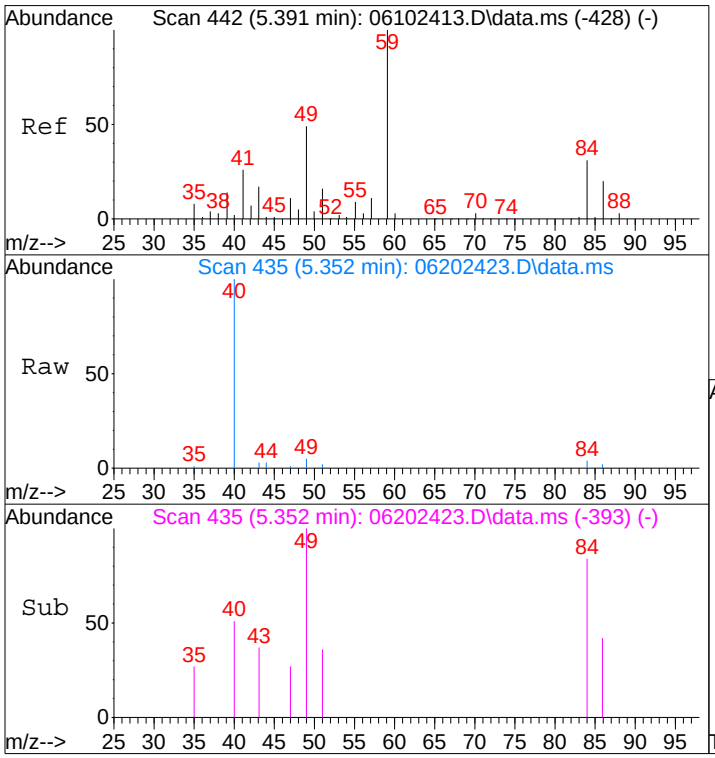


#14
Trichlorofluoromethane
Concen: 60.48 ng
RT: 4.75 min Scan# 329
Delta R.T. 0.029 min
Lab File: 06202423.D
Acq: 20 Jun 2024 21:50

Tgt Ion:101 Resp: 2051028

Ion	Ratio	Lower	Upper
101	100		
103	64.6	44.9	84.9

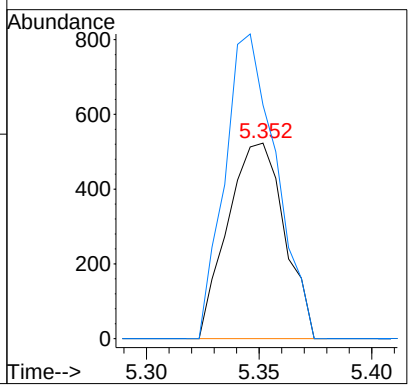


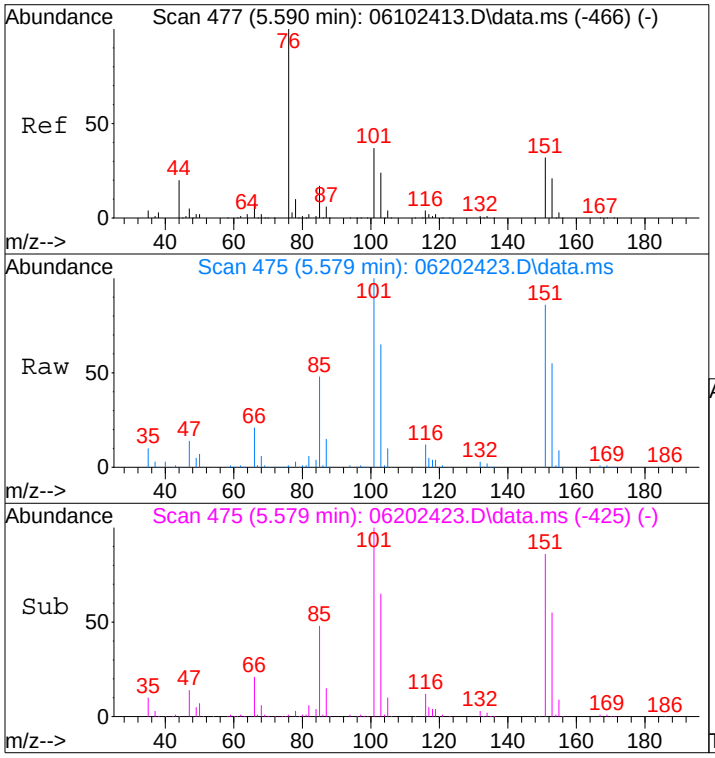


#19
Methylene Chloride
Concen: 0.06 ng
RT: 5.35 min Scan# 435
Delta R.T. -0.009 min
Lab File: 06202423.D
Acq: 20 Jun 2024 21:50

Tgt Ion: 84 Resp: 919

Ion	Ratio	Lower	Upper
84	100		
49	140.4	132.9	182.9

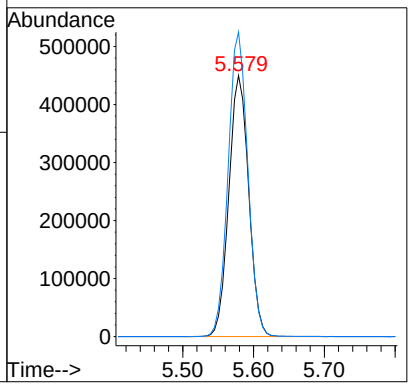


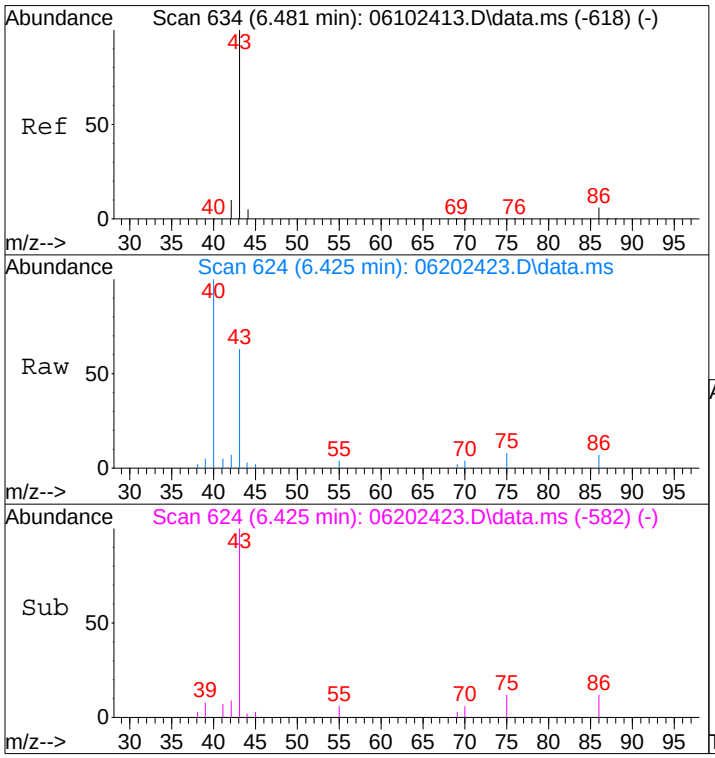


#21
Trichlorotrifluoroethane
Concen: 61.05 ng
RT: 5.58 min Scan# 475
Delta R.T. 0.033 min
Lab File: 06202423.D
Acq: 20 Jun 2024 21:50

Tgt Ion:151 Resp: 875756

Ion	Ratio	Lower	Upper
151	100		
101	115.6	95.0	135.0

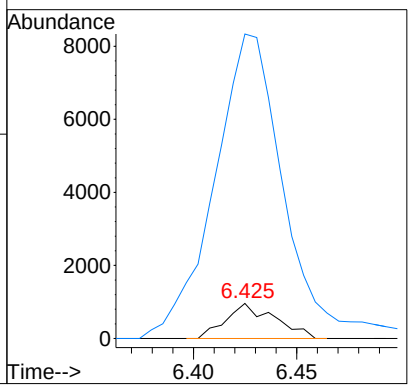


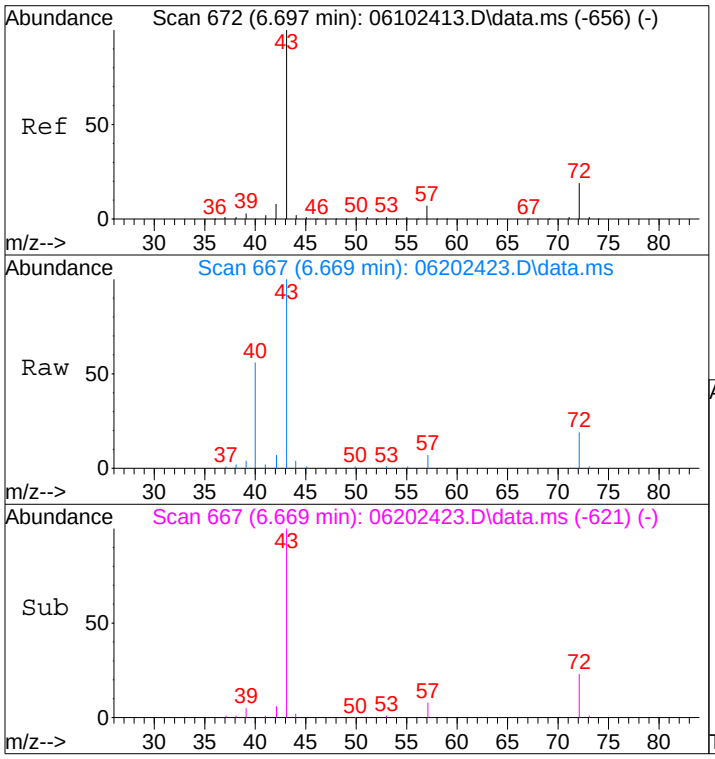


#26
Vinyl Acetate
Concen: 0.62 ng
RT: 6.42 min Scan# 624
Delta R.T. -0.014 min
Lab File: 06202423.D
Acq: 20 Jun 2024 21:50

Tgt Ion: 86 Resp: 1577

Ion	Ratio	Lower	Upper
86	100		
43	1245.3	1668.9	1708.9#

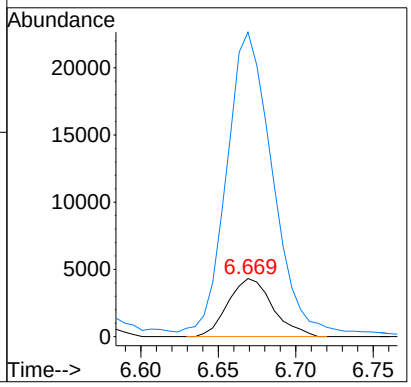


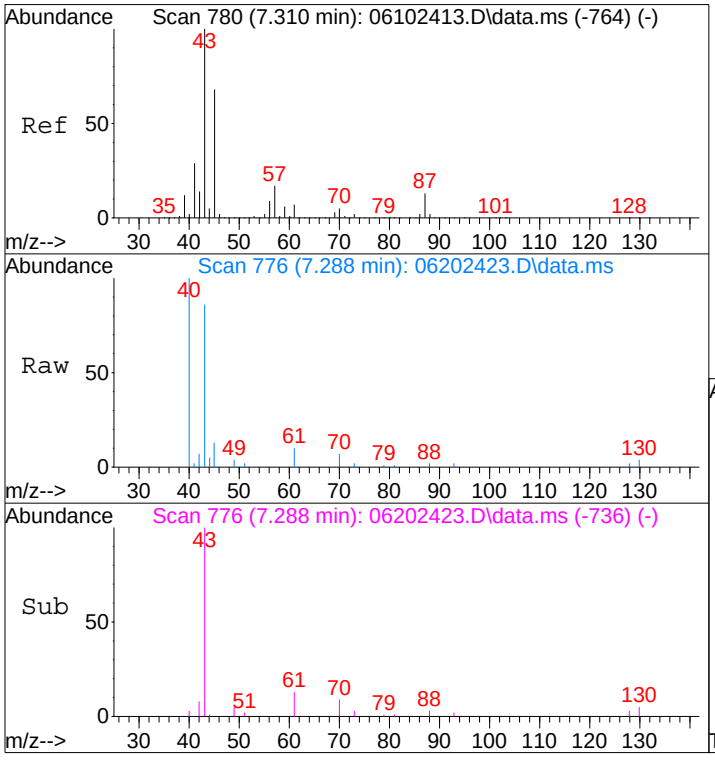


#27
2-Butanone (MEK)
Concen: 0.99 ng
RT: 6.67 min Scan# 667
Delta R.T. 0.011 min
Lab File: 06202423.D
Acq: 20 Jun 2024 21:50

Tgt Ion: 72 Resp: 8655

Ion	Ratio	Lower	Upper
72	100		
43	534.5	506.8	546.8

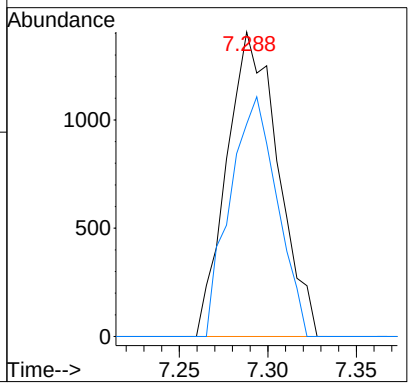


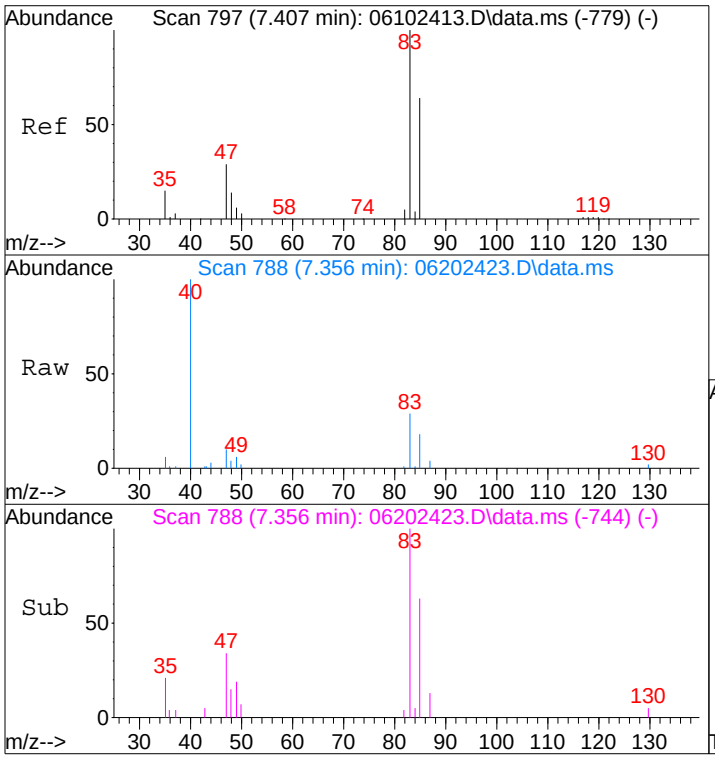


#30
Ethyl Acetate
Concen: 0.53 ng
RT: 7.29 min Scan# 776
Delta R.T. 0.029 min
Lab File: 06202423.D
Acq: 20 Jun 2024 21:50

Tgt Ion: 61 Resp: 2834

Ion	Ratio	Lower	Upper
61	100		
70	72.2	53.5	93.5

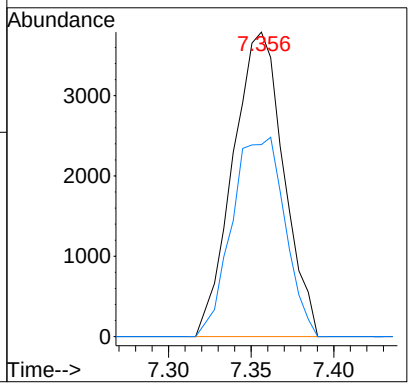


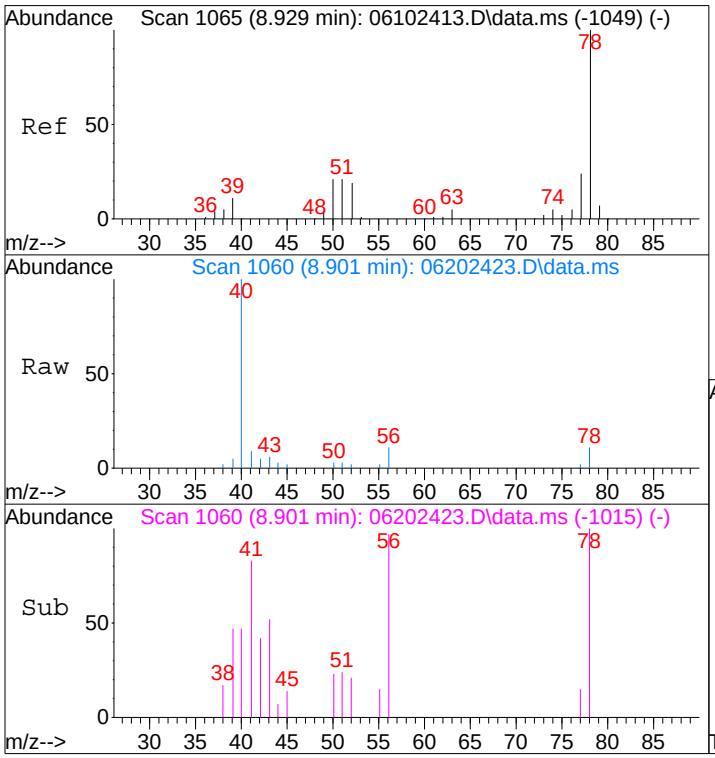


#32
Chloroform
Concen: 0.29 ng
RT: 7.36 min Scan# 788
Delta R.T. 0.001 min
Lab File: 06202423.D
Acq: 20 Jun 2024 21:50

Tgt Ion: 83 Resp: 8097

Ion	Ratio	Lower	Upper
83	100		
85	68.0	44.4	84.4

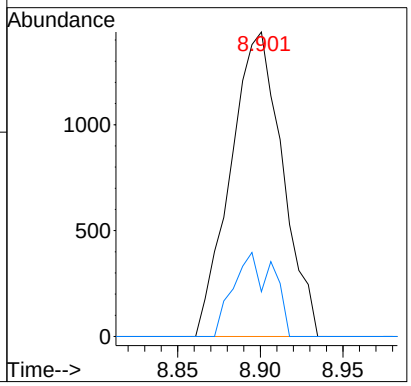


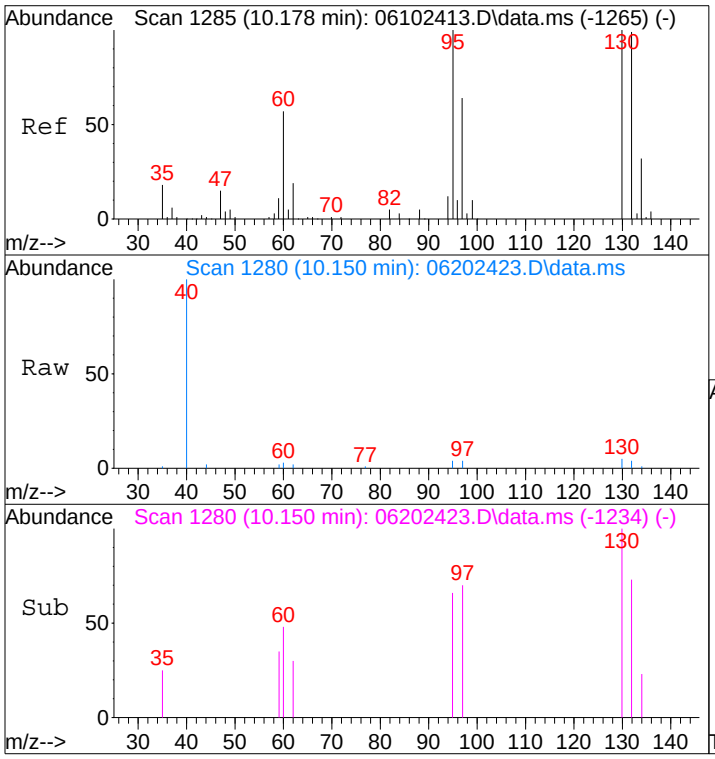


#41
Benzene
Concen: 0.06 ng
RT: 8.90 min Scan# 1060
Delta R.T. 0.003 min
Lab File: 06202423.D
Acq: 20 Jun 2024 21:50

Tgt Ion: 78 Resp: 3134

Ion	Ratio	Lower	Upper
78	100		
77	21.1	4.0	44.0

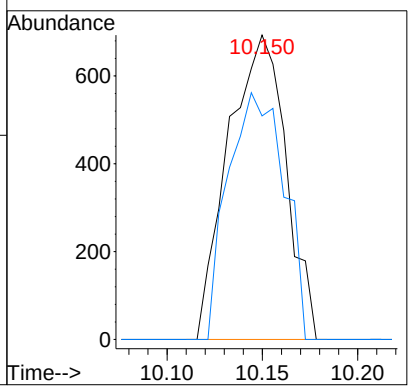


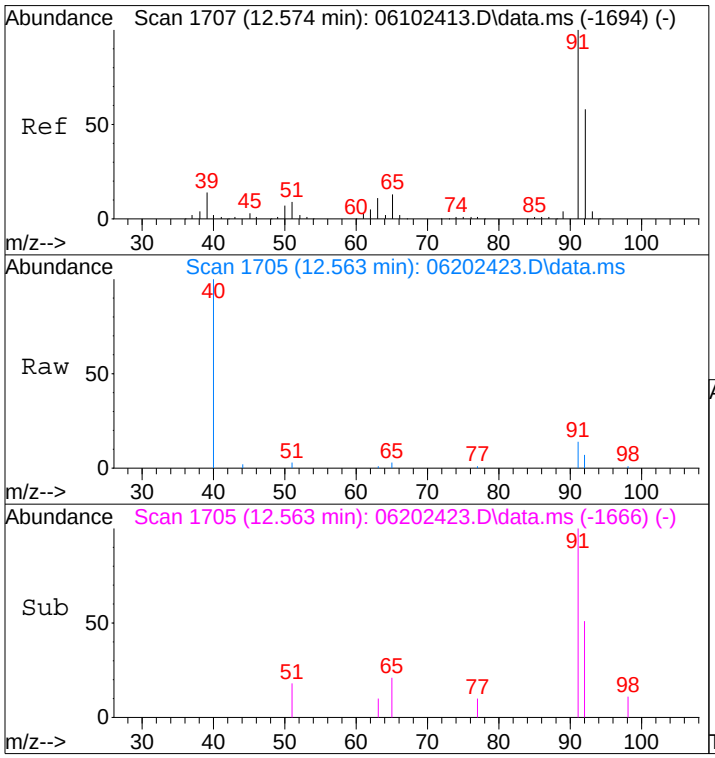


#47
Trichloroethene
Concen: 0.09 ng
RT: 10.15 min Scan# 1280
Delta R.T. 0.010 min
Lab File: 06202423.D
Acq: 20 Jun 2024 21:50

Tgt Ion:130 Resp: 1459

Ion	Ratio	Lower	Upper
130	100		
132	78.9	77.9	117.9

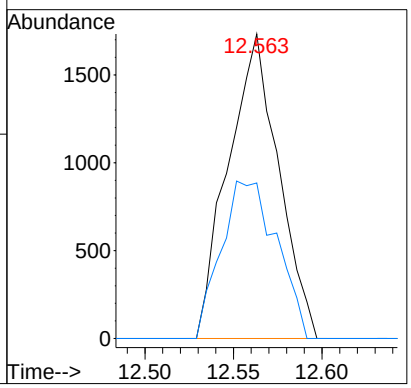


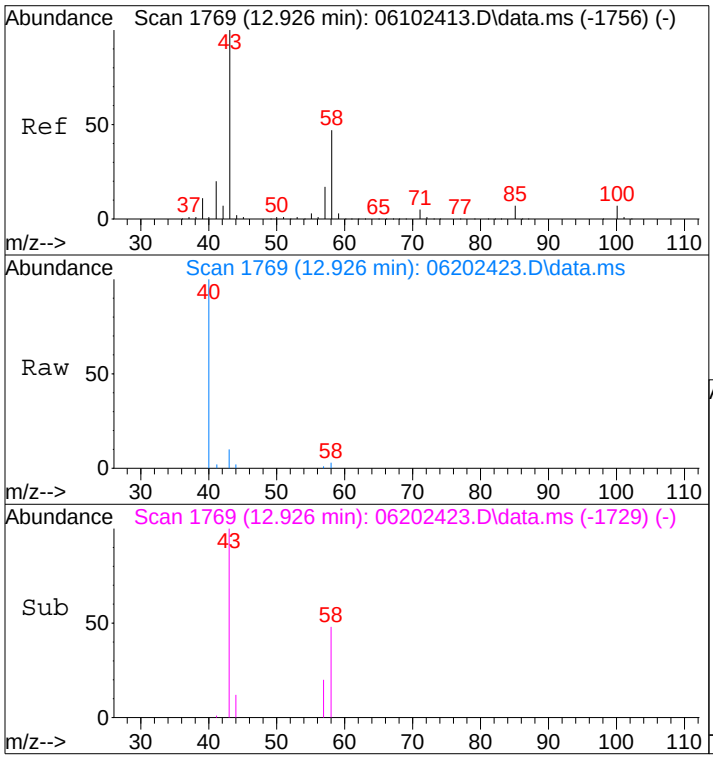


#58
Toluene
Concen: 0.06 ng
RT: 12.56 min Scan# 1705
Delta R.T. -0.028 min
Lab File: 06202423.D
Acq: 20 Jun 2024 21:50

Tgt Ion: 91 Resp: 3428

Ion	Ratio	Lower	Upper
91	100		
92	57.1	37.4	77.4

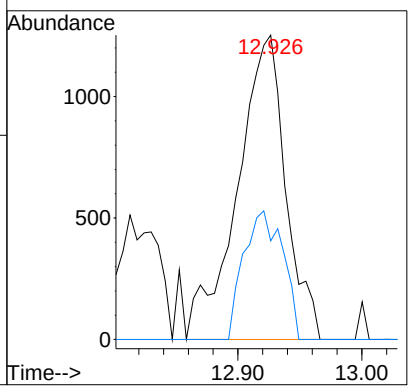




#59
2-Hexanone
Concen: 0.09 ng
RT: 12.93 min Scan# 1769
Delta R.T. -0.023 min
Lab File: 06202423.D
Acq: 20 Jun 2024 21:50

Tgt Ion: 43 Resp: 3403

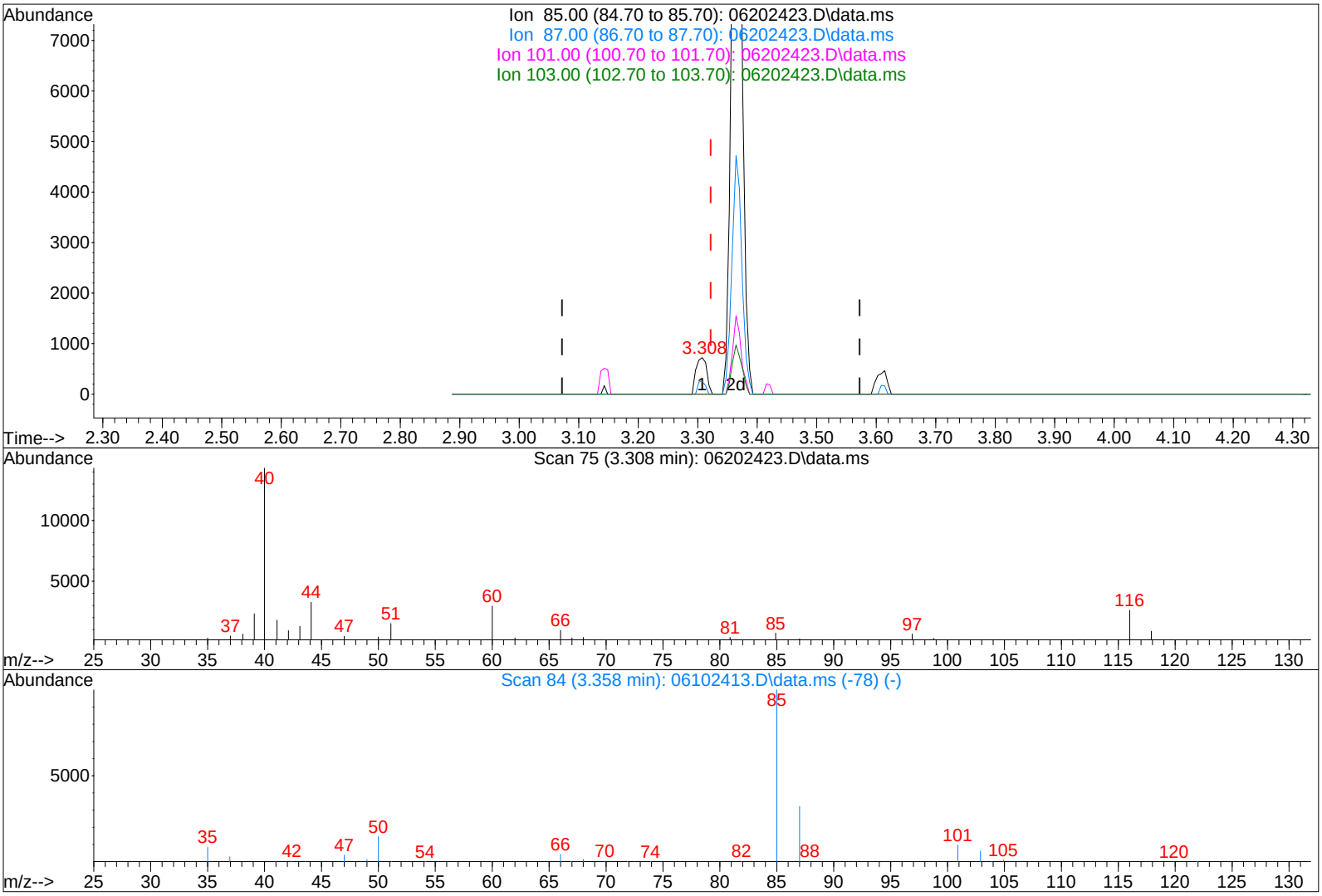
Ion	Ratio	Lower	Upper
43	100		
58	34.2	25.9	65.9



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\20\06202423.D Vial: 12
Acq On : 20 Jun 2024 21:50 Operator: SC
Sample : P2402249-050 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 12:10:46 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06202423.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.308min (-0.015) 0.03ng

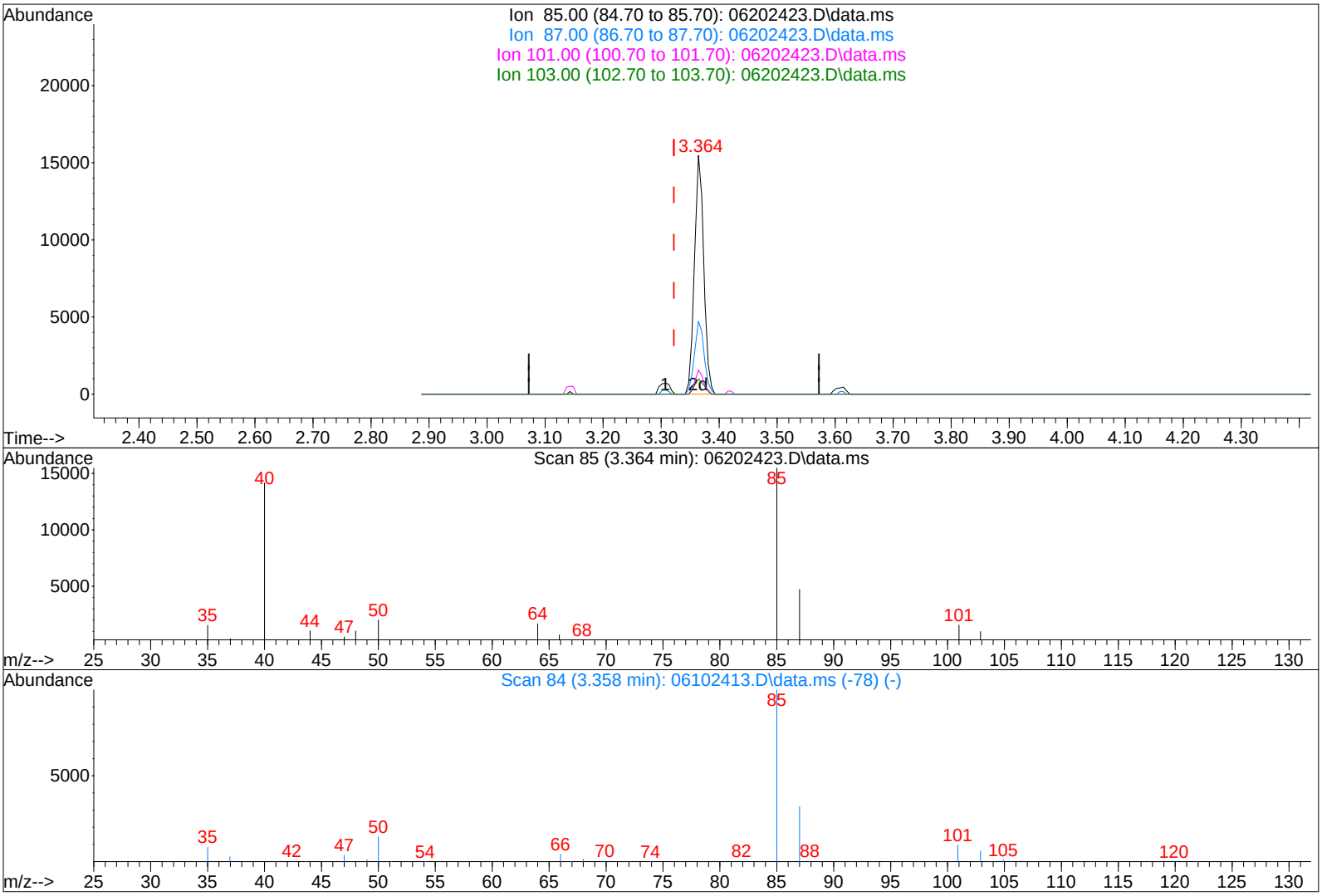
response 910

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	24.62
101.00	9.80	0.00
103.00	6.30	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\20\06202423.D Vial: 12
Acq On : 20 Jun 2024 21:50 Operator: SC
Sample : P2402249-050 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 12:10:46 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06202423.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.364min (+0.042) 0.52ng m

response 17325

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	32.06
101.00	9.80	9.31
103.00	6.30	6.34

MJ 6/29/24

WP

CG 6/29/24

Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\20\06202423.D Vial: 12
Acq On : 20 Jun 2024 21:50 Operator: SC
Sample : P2402249-050 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:28:08 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

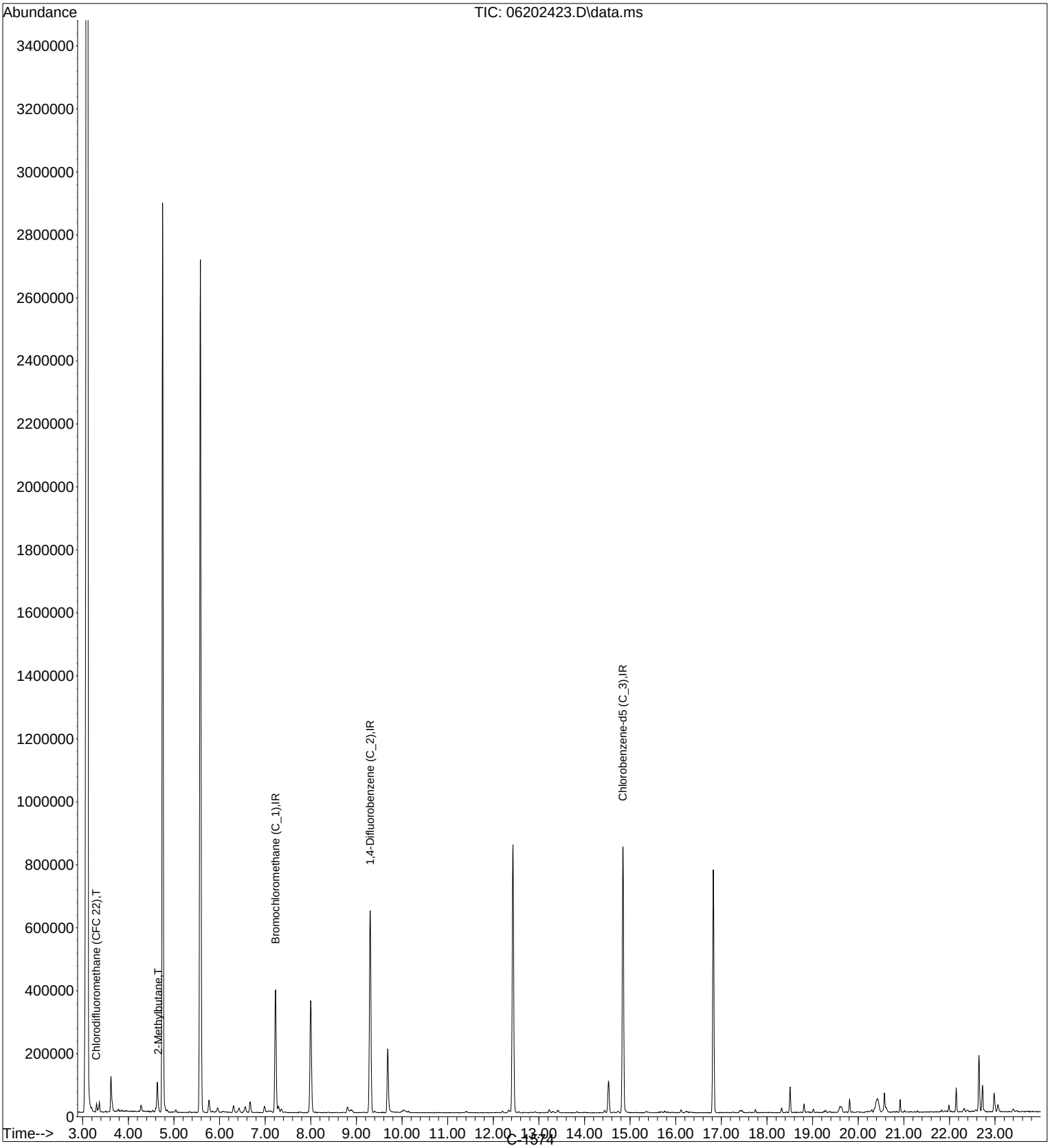
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	142928	12.500	ng		-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	616208	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	147399	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	3.14	85	57	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.21	83	1241	N.D.			
4) 1,1-Difluoroethane	3.24	65	51	N.D.			
5) Chlorodifluoromethane ...	3.30	67	543	0.111	ng	#	68
6) 1-Chloro-1,1-Difluoroe...	3.51	65	588	N.D.			
7) Dichlorofluoromethane ...	4.23	67	1219	N.D.			
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	4.56	83	83	N.D.			
10) 2-Methylbutane	4.65	57	3447	0.202	ng	#	31
11) Methyl Acetate	5.33	43	1423	N.D.			
12) 2-Methylpentane	6.57	71	115	N.D.			
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	0.00	84	0	N.D.			
17) 2,3-Dimethylpentane	0.00	56	0	N.D.			
18) Dibromomethane	9.80	174	52	N.D.			
20) Methyl Cyclohexane	11.39	55	825	N.D.			
21) 1,3-Dichloropropane	0.00	76	0	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	0.00	75	0	N.D.			
25) Bromobenzene	0.00	77	0	N.D.			
26) 2-Chlorotoluene	17.61	91	738	N.D.			
27) 4-Chlorotoluene	17.68	91	1045	N.D.			
28) Indane	19.02	117	720	N.D.			
29) Indene	0.00	115	0	N.D.			
30) 1,2,4,5-Tetramethylben...	0.00	119	0	N.D.			
31) 1,2,3,4-Tetramethylben...	0.00	119	0	N.D.			
32) 1,2,3,5-Tetramethylben...	20.61	119	75	N.D.			
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202423.D Vial: 12
Acq On : 20 Jun 2024 21:50 Operator: SC
Sample : P2402249-050 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:28:08 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\20\
Data File : 06202423.D
Acq On : 20 Jun 2024 21:50
Operator : SC
Sample : P2402249-050 (400mL)
Misc : S37-06062402
ALS Vial : 12 Sample Multiplier: 1

MJ 6/28/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06202423.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.097	23	38	53	rBV	10670741	27380263	100.00%	64.943%
2	3.194	53	55	61	rVB3	13080	19267	0.07%	0.046%
3	3.302	70	74	78	rBV5	26443	38896	0.14%	0.092%
4	3.364	82	85	93	rVB	31154	38704	0.14%	0.092%
5	3.620	124	130	144	rBV	112367	211156	0.77%	0.501%
6	4.279	240	246	254	rBV	19884	37162	0.14%	0.088%
7	4.597	298	302	303	rBV2	11360	11330	0.04%	0.027%
8	4.636	303	309	321	rVB	94860	184289	0.67%	0.437%
9	4.750	321	329	343	rBV	2886617	4885629	17.84%	11.588%
10	4.846	343	346	352	rVB3	7328	11193	0.04%	0.027%
11	5.039	375	380	386	rVB2	8579	16013	0.06%	0.038%
12	5.579	462	475	492	rBV	2708719	5257350	19.20%	12.470%
13	5.766	501	508	516	rBV	39322	79325	0.29%	0.188%
14	5.959	533	542	549	rVB5	14025	34018	0.12%	0.081%
15	6.306	596	603	612	rBV2	21822	47058	0.17%	0.112%
16	6.425	617	624	633	rVB2	14251	34511	0.13%	0.082%
17	6.567	643	649	658	rVB3	18124	38422	0.14%	0.091%
18	6.669	661	667	674	rVB	32594	64198	0.23%	0.152%
19	6.981	716	722	729	rBV2	20588	45966	0.17%	0.109%
20	7.101	741	743	756	rVB5	4786	15137	0.06%	0.036%
21	7.226	756	765	773	rVV	389569	838046	3.06%	1.988%
22	7.288	773	776	783	rVV2	20432	41039	0.15%	0.097%
23	7.356	783	788	796	rVB3	11323	24414	0.09%	0.058%
24	7.998	892	901	915	rVB	355058	806220	2.94%	1.912%
25	8.804	1037	1043	1053	rBV3	17786	51323	0.19%	0.122%
26	8.895	1055	1059	1070	rVB4	9186	23354	0.09%	0.055%
27	9.304	1117	1131	1143	rBV	641261	1493384	5.45%	3.542%
28	9.684	1191	1198	1215	rBV	201426	432558	1.58%	1.026%

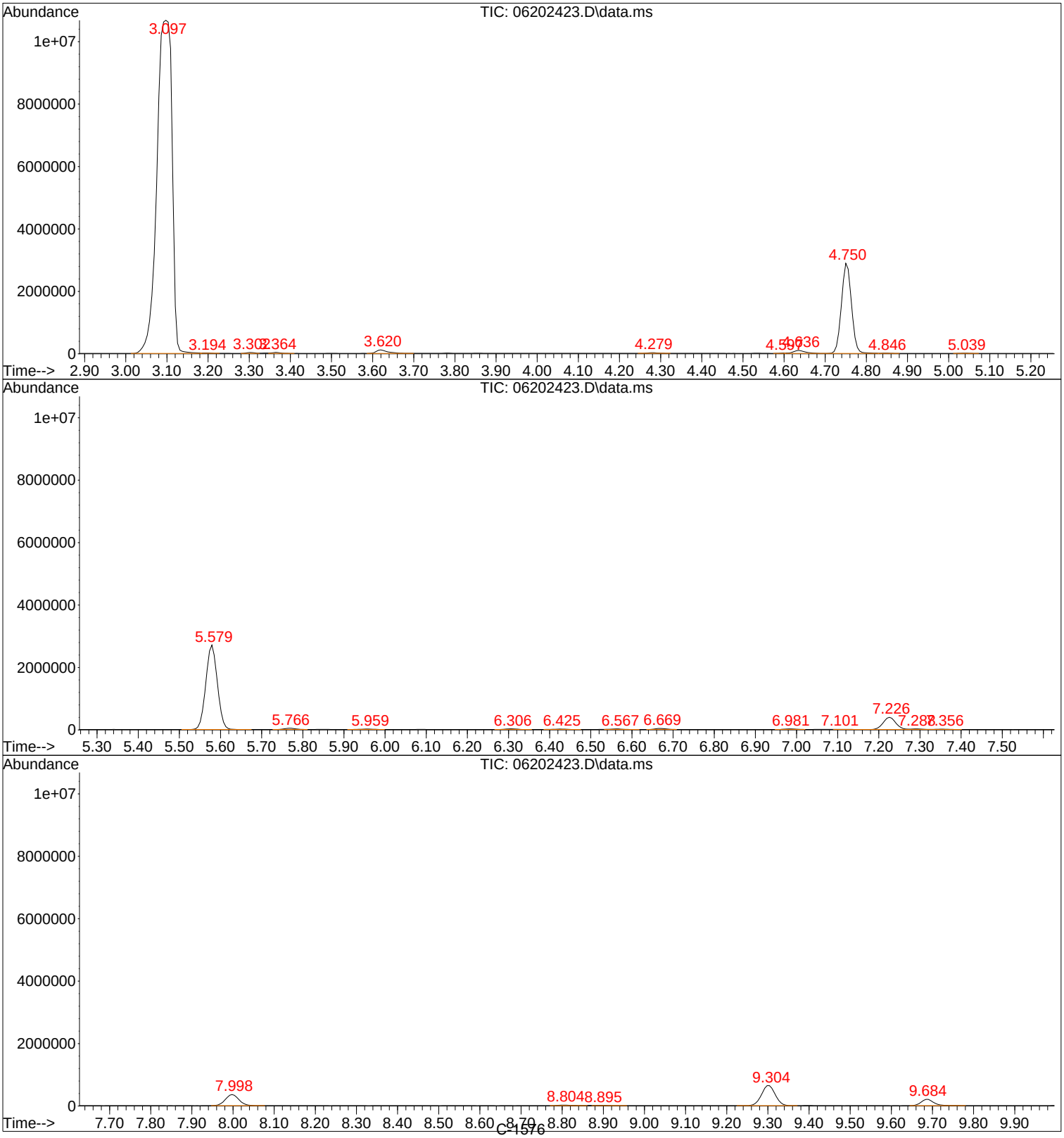
Sum of corrected areas: 42160225

LSC Report - Integrated Chromatogram

Data Path : I:\MS09\DATA\2024 06\20\
Data File : 06202423.D
Acq On : 20 Jun 2024 21:50
Operator : SC
Sample : P2402249-050 (400mL)
Misc : S37-06062402
ALS Vial : 12 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\20\\
Data File : 06202423.D
Acq On : 20 Jun 2024 21:500
Operator : SCC
Sample : P2402249-050 (400mL))
Misc : S37-060624022
ALS Vial : 12 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT/LSC Reviewed)

MJ 6/29/24

Data File : I:\MS09\DATA\2024 06\20\06202424.D Vial: 13
Acq On : 20 Jun 2024 22:22 Operator: SC
Sample : P2402249-051 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:09:26 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	139281	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	594427	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	140876	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	313848	12.678	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.44%				
57) Toluene-d8 (SS2)	12.43	98	664775	12.331	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.64%				
73) Bromofluorobenzene (SS3)	16.83	174	256200	13.161	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 105.28%				
Target Compounds							Qvalue
2) Propene	0.00	42	0	N.D. d			
3) Dichlorodifluoromethan...	3.38	85	4298m	0.131	ng		
4) Chloromethane	3.52	50	555	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.36	45	146	N.D.			
11) Acetonitrile	4.44	41	663	N.D.			
12) Acrolein	4.54	56	1094	0.109	ng		93
13) Acetone	4.64	58	14590	1.348	ng	#	55
14) Trichlorofluoromethane	4.76	101	2739121	82.607	ng		100
15) 2-Propanol (Isopropanol)	4.85	45	3278	0.075	ng		67
16) Acrylonitrile	4.99	53	422	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.33	59	244	N.D.			
19) Methylene Chloride	5.35	84	862	0.056	ng		90
20) 3-Chloro-1-propene (Al...	0.00	41	0	N.D.			
21) Trichlorotrifluoroethane	5.58	151	1296942	92.460	ng		98
22) Carbon Disulfide	0.00	76	0	N.D. d			
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	6.43	86	452	0.181	ng		98
27) 2-Butanone (MEK)	6.67	72	2627	0.307	ng		100
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D. d			
30) Ethyl Acetate	7.29	61	3258	0.623	ng		93
31) n-Hexane	0.00	57	0	N.D.			
32) Chloroform	7.35	83	7019	0.257	ng		98
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	170	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.82	56	7008	No Calib		#	
41) Benzene	8.90	78	2653	N.D.			
42) Carbon Tetrachloride	0.00	117	0	N.D.			
43) Cyclohexane	0.00	84	0	N.D.			
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.07	83	699	N.D.			
47) Trichloroethene	10.14	130	1537	0.096	ng		95
48) 1,4-Dioxane	0.00	88	0	N.D.			
49) 2,2,4-Trimethylpentane...	0.00	57	0	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202424.D Vial: 13
Acq On : 20 Jun 2024 22:22 Operator: SC
Sample : P2402249-051 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:09:26 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	0.00	71	0	N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
58) Toluene	12.56	91	3052	0.054 ng	97
59) 2-Hexanone	12.93	43	936	N.D.	
60) Dibromochloromethane	13.07	129	446	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	0.00	43	0	N.D.	
63) n-Octane	0.00	57	0	N.D.	
64) Tetrachloroethene	14.03	166	457	N.D.	
65) Chlorobenzene	14.90	112	515	N.D.	
66) Ethylbenzene	15.41	91	853	N.D.	
67) m- & p-Xylenes	15.63	91	1116	N.D.	
68) Bromoform	15.67	173	567	N.D.	
69) Styrene	0.00	104	0	N.D.	
70) o-Xylene	16.25	91	684	N.D.	
71) n-Nonane	16.62	43	109	N.D.	
72) 1,1,2,2-Tetrachloroethane	16.21	83	272	N.D.	
74) Cumene	17.03	105	840	N.D.	
75) alpha-Pinene	0.00	93	0	N.D.	
76) n-Propylbenzene	17.68	91	977	N.D.	
77) 3-Ethyltoluene	17.03	105	840	No Calib	#
78) 4-Ethyltoluene	17.86	105	572	N.D.	
79) 1,3,5-Trimethylbenzene	17.95	105	363	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.03	105	840	No Calib	#
82) 1,2,4-Trimethylbenzene	18.43	105	559	N.D.	
83) n-Decane	0.00	58	0	N.D.	
84) Benzyl Chloride	0.00	91	0	N.D.	
85) 1,3-Dichlorobenzene	18.58	146	451	N.D.	
86) 1,4-Dichlorobenzene	18.66	146	525	N.D.	
87) sec-Butylbenzene	18.74	105	816	N.D.	
88) 4-Isopropyltoluene (p-...	18.93	119	1095	N.D.	
89) 1,2,3-Trimethylbenzene	17.03	105	840	No Calib	#
90) 1,2-Dichlorobenzene	19.03	146	423	N.D.	
91) d-Limonene	0.00	68	0	N.D.	
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	655	N.D.	
95) Naphthalene	20.94	128	357	N.D.	
96) n-Dodecane	0.00	58	0	N.D.	
97) Hexachlorobutadiene	21.30	225	751	N.D.	
98) Cyclohexanone	15.36	55	485	No Calib	#
99) tert-Butylbenzene	18.43	119	695	N.D.	
100) n-Butylbenzene	19.39	91	619	N.D.	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

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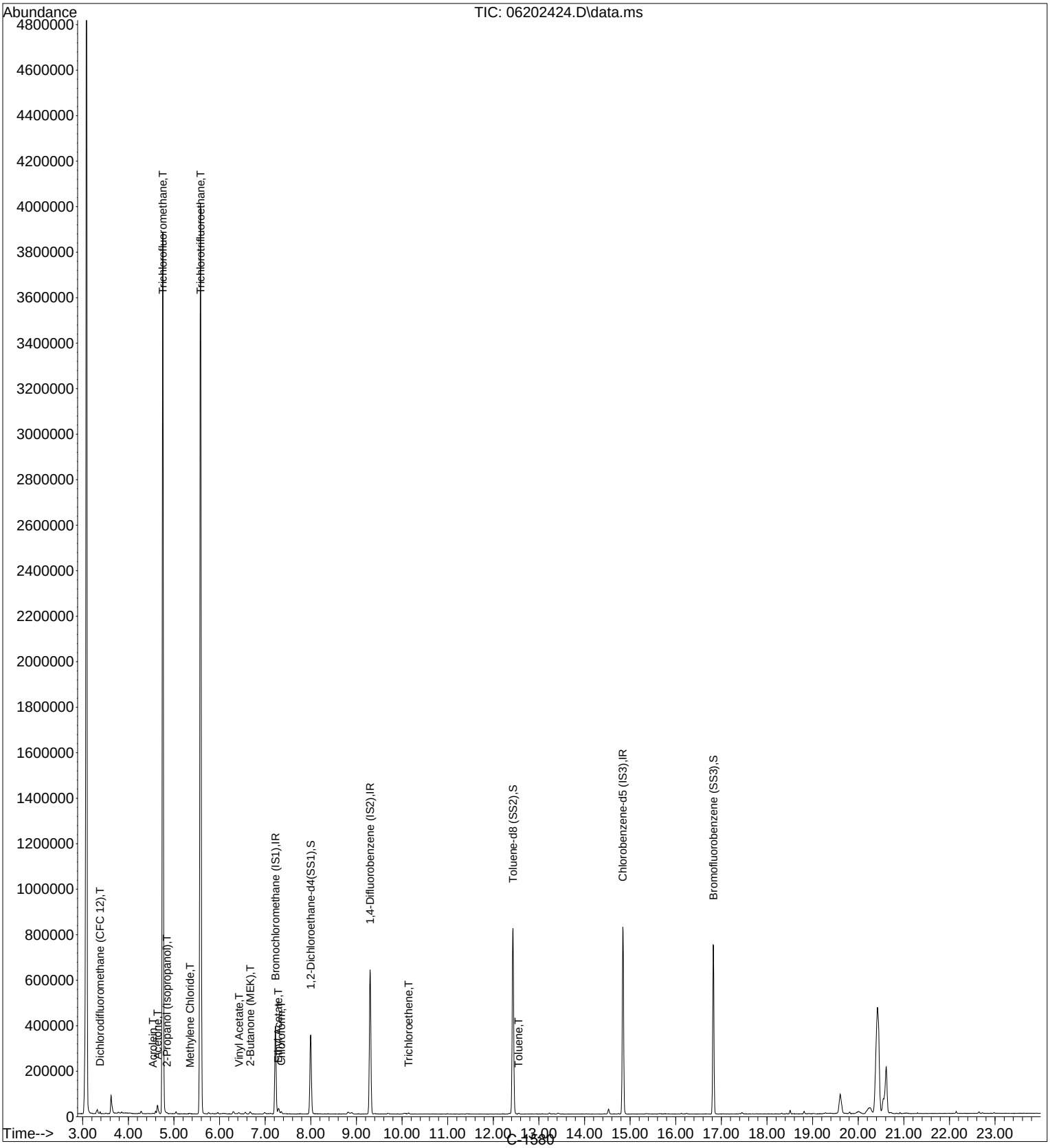
Acq On : 20 Jun 2024 22:22 Operator: SC
Sample : P2402249-051 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:09:26 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT/LSC Reviewed)

MJ 6/29/24

Data File : I:\MS09\DATA\2024 06\20\06202424.D Vial: 13
Acq On : 20 Jun 2024 22:22 Operator: SC
Sample : P2402249-051 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:09:26 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

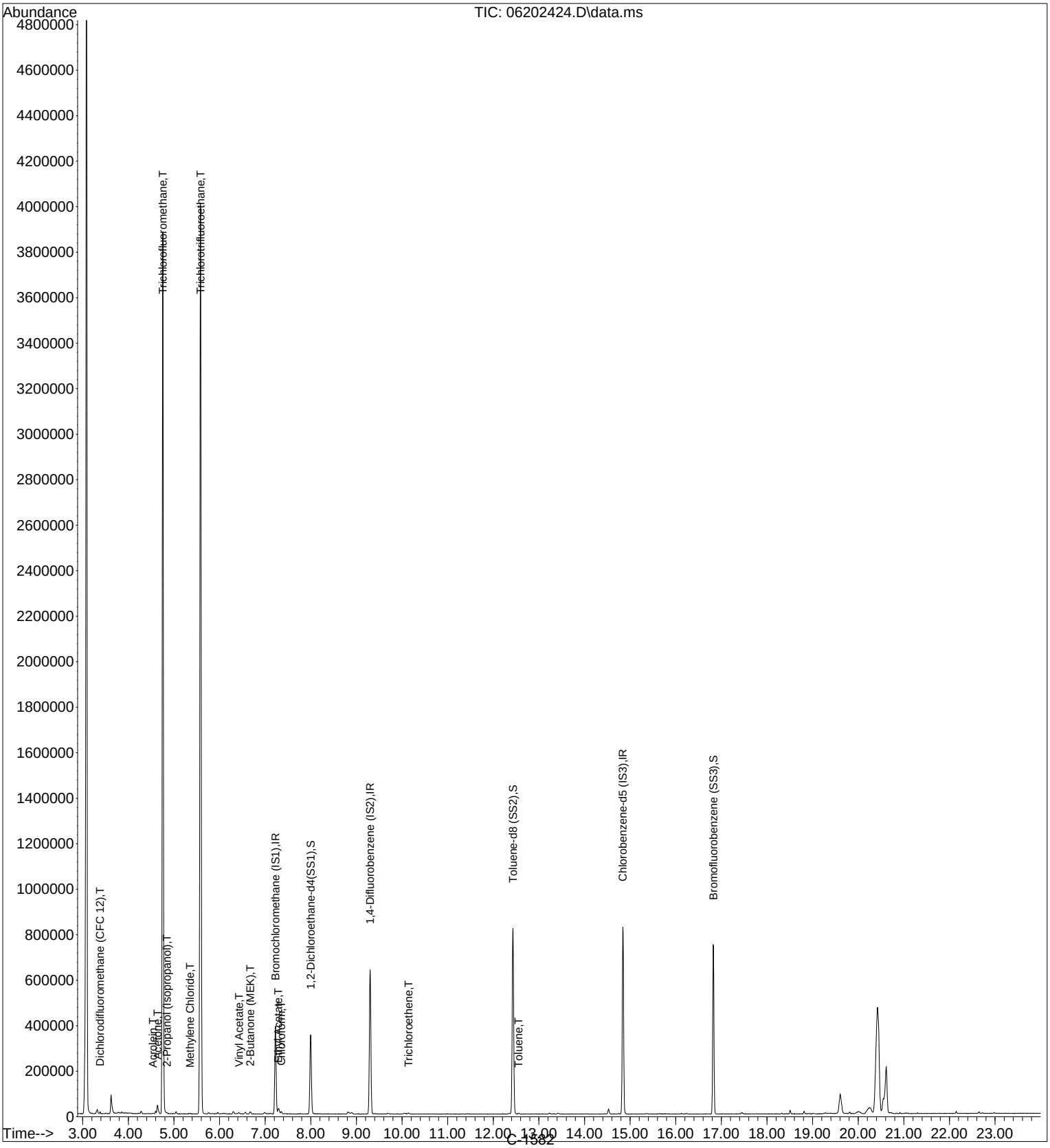
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	139281	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	594427	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	140876	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	313848	12.678	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.44%				
57) Toluene-d8 (SS2)	12.43	98	664775	12.331	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.64%				
73) Bromofluorobenzene (SS3)	16.83	174	256200	13.161	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 105.28%				
Target Compounds							Qvalue
3) Dichlorodifluoromethan...	3.38	85	4298m	0.131	ng		
12) Acrolein	4.54	56	1094	0.109	ng		93
13) Acetone	4.64	58	14590	1.348	ng	#	55
14) Trichlorofluoromethane	4.76	101	2739121	82.607	ng		100
15) 2-Propanol (Isopropanol)	4.85	45	3278	0.075	ng		67
19) Methylene Chloride	5.35	84	862	0.056	ng		90
21) Trichlorotrifluoroethane	5.58	151	1296942	92.460	ng		98
26) Vinyl Acetate	6.43	86	452	0.181	ng		98
27) 2-Butanone (MEK)	6.67	72	2627	0.307	ng		100
30) Ethyl Acetate	7.29	61	3258	0.623	ng		93
32) Chloroform	7.35	83	7019	0.257	ng		98
47) Trichloroethene	10.14	130	1537	0.096	ng		95
58) Toluene	12.56	91	3052	0.054	ng		97

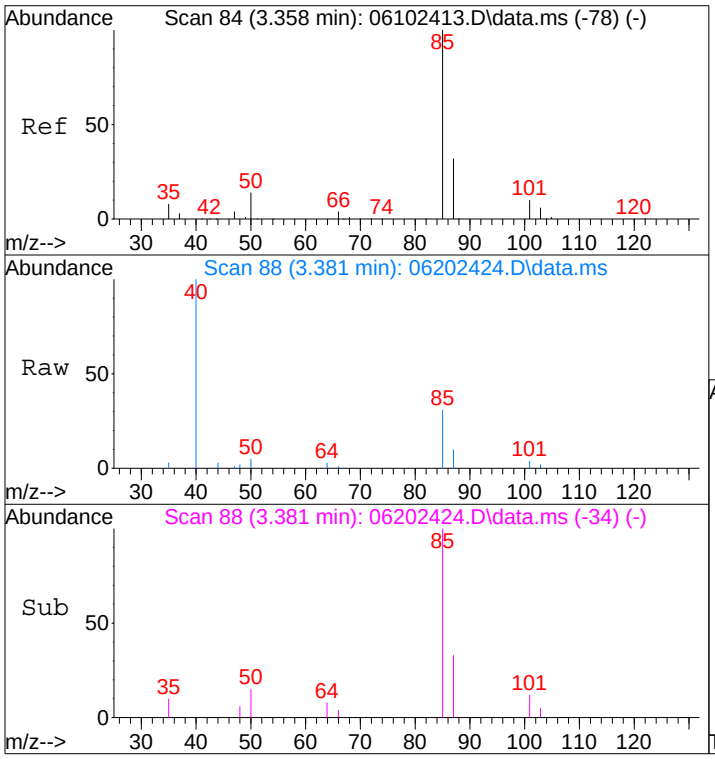
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202424.D Vial: 13
Acq On : 20 Jun 2024 22:22 Operator: SC
Sample : P2402249-051 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:09:26 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

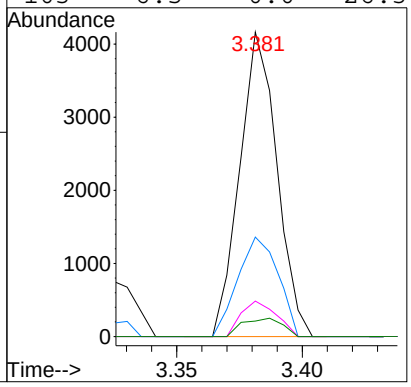


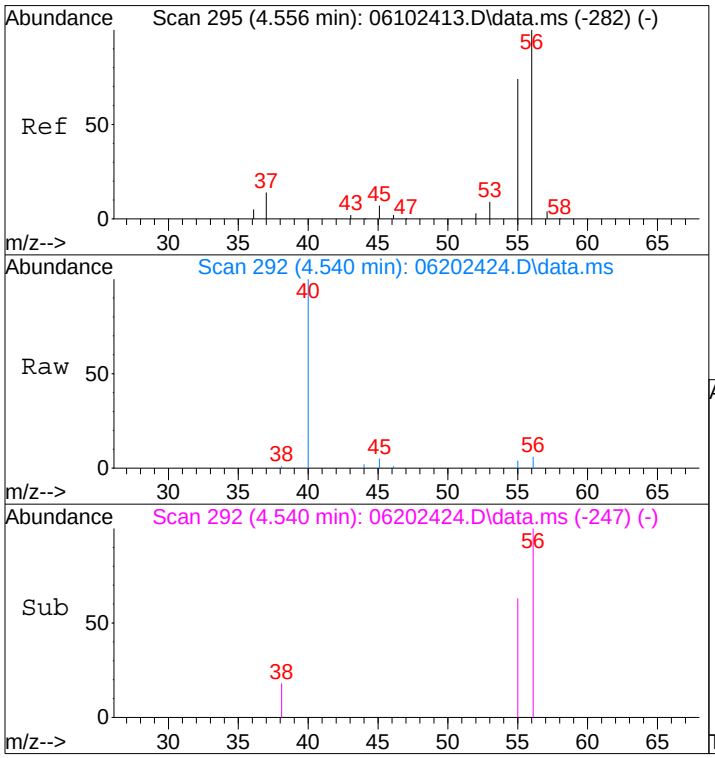


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.13 ng m
RT: 3.38 min Scan# 88
Delta R.T. 0.059 min
Lab File: 06202424.D
Acq: 20 Jun 2024 22:22

Tgt Ion: 85 Resp: 4298

Ion	Ratio	Lower	Upper
85	100		
87	35.4	12.2	52.2
101	11.1	0.0	29.8
103	6.5	0.0	26.3

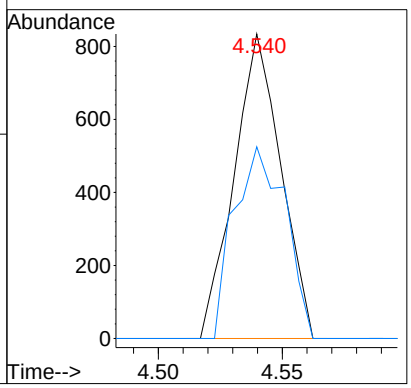


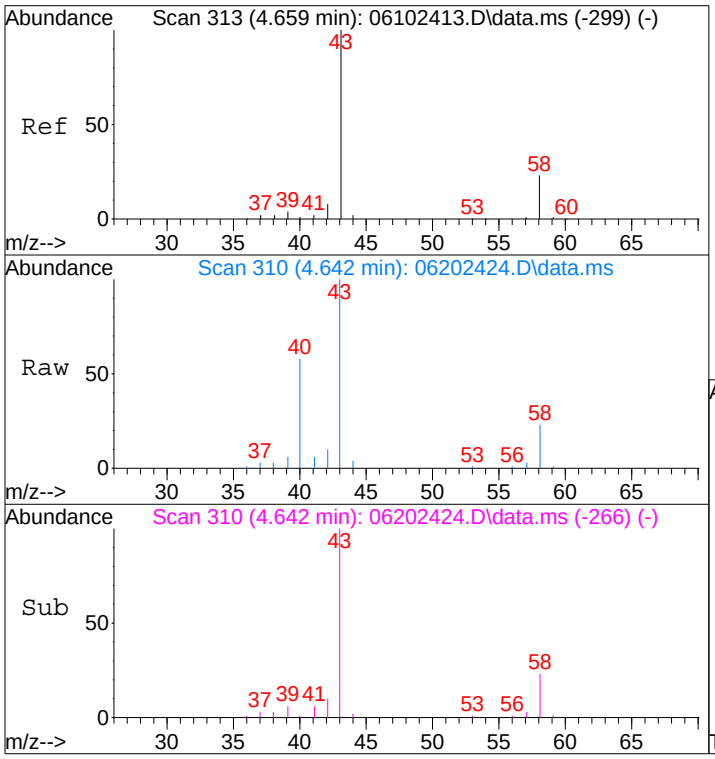


#12
Acrolein
Concen: 0.11 ng
RT: 4.54 min Scan# 292
Delta R.T. 0.004 min
Lab File: 06202424.D
Acq: 20 Jun 2024 22:22

Tgt Ion: 56 Resp: 1094

Ion	Ratio	Lower	Upper
56	100		
55	69.3	55.5	95.5

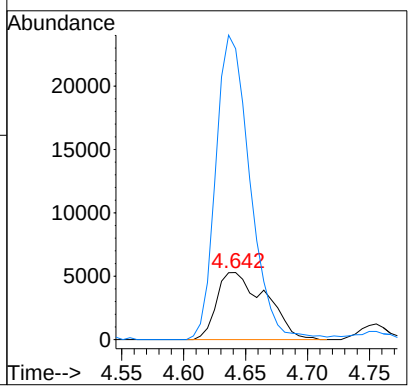


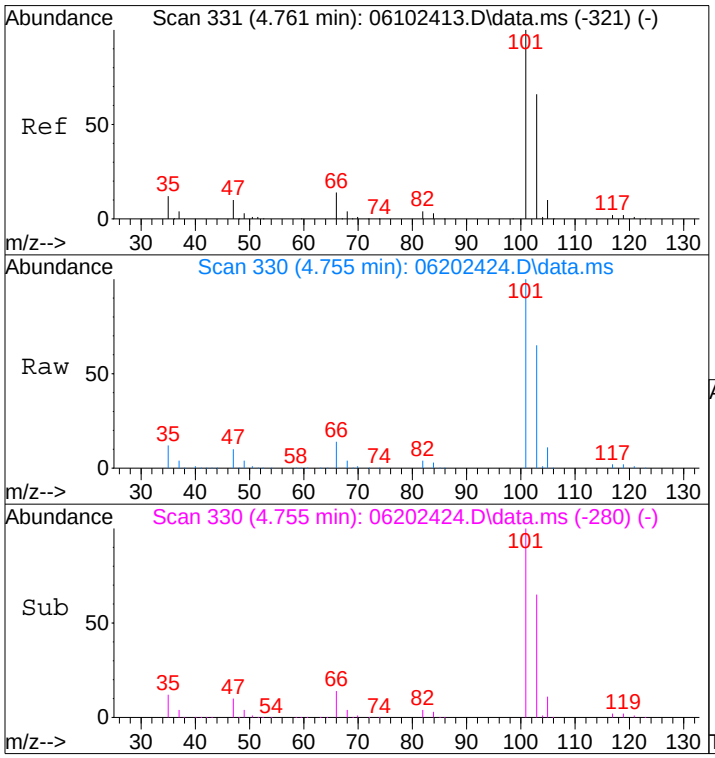


#13
Acetone
Concen: 1.35 ng
RT: 4.64 min Scan# 310
Delta R.T. -0.000 min
Lab File: 06202424.D
Acq: 20 Jun 2024 22:22

Tgt Ion: 58 Resp: 14590

Ion	Ratio	Lower	Upper
58	100		
43	318.7	400.7	460.7#

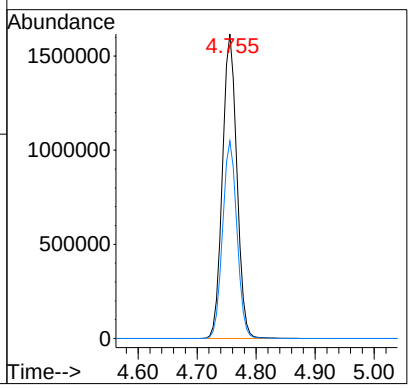


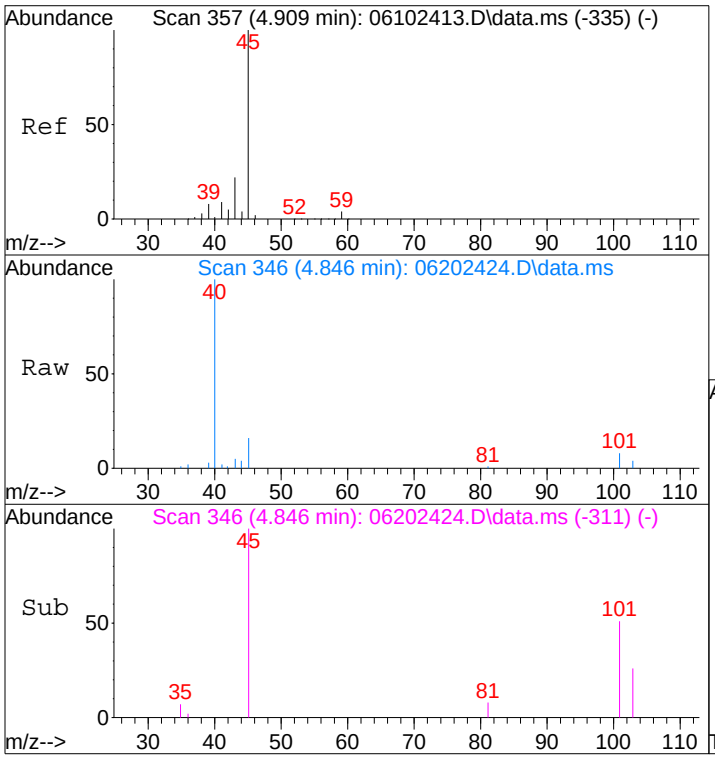


#14
Trichlorofluoromethane
Concen: 82.61 ng
RT: 4.76 min Scan# 330
Delta R.T. 0.035 min
Lab File: 06202424.D
Acq: 20 Jun 2024 22:22

Tgt Ion:101 Resp: 2739121

Ion	Ratio	Lower	Upper
101	100		
103	64.7	44.9	84.9

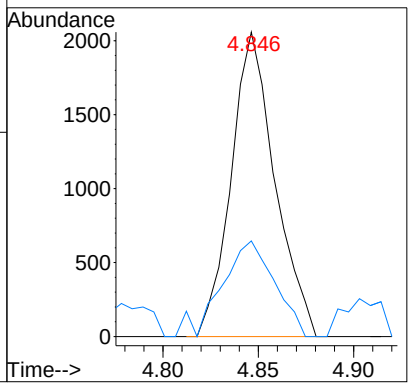


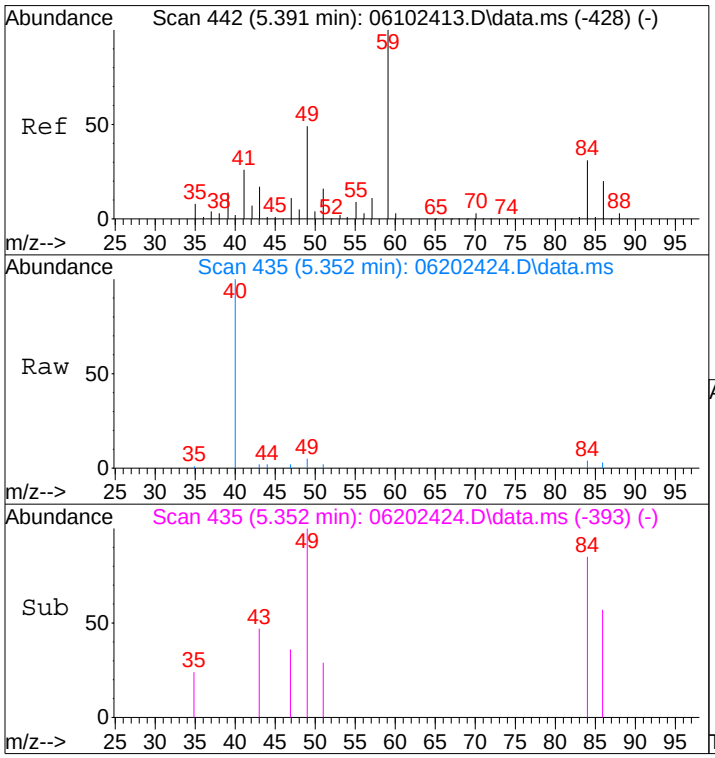


#15
2-Propanol (Isopropanol)
Concen: 0.08 ng
RT: 4.85 min Scan# 346
Delta R.T. -0.054 min
Lab File: 06202424.D
Acq: 20 Jun 2024 22:22

Tgt Ion: 45 Resp: 3278

Ion	Ratio	Lower	Upper
45	100		
43	38.2	2.5	42.5

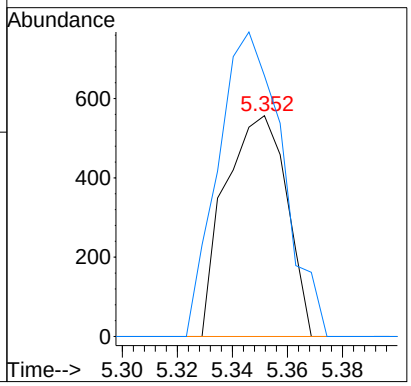


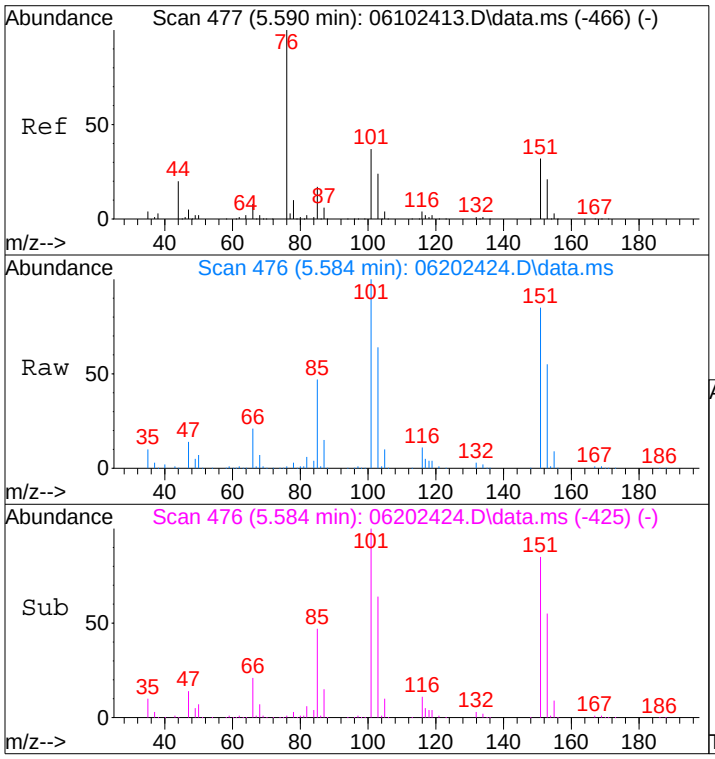


#19
Methylene Chloride
Concen: 0.06 ng
RT: 5.35 min Scan# 435
Delta R.T. -0.009 min
Lab File: 06202424.D
Acq: 20 Jun 2024 22:22

Tgt Ion: 84 Resp: 862

Ion	Ratio	Lower	Upper
84	100		
49	144.5	132.9	182.9

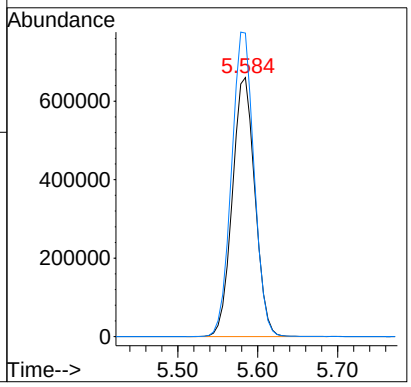


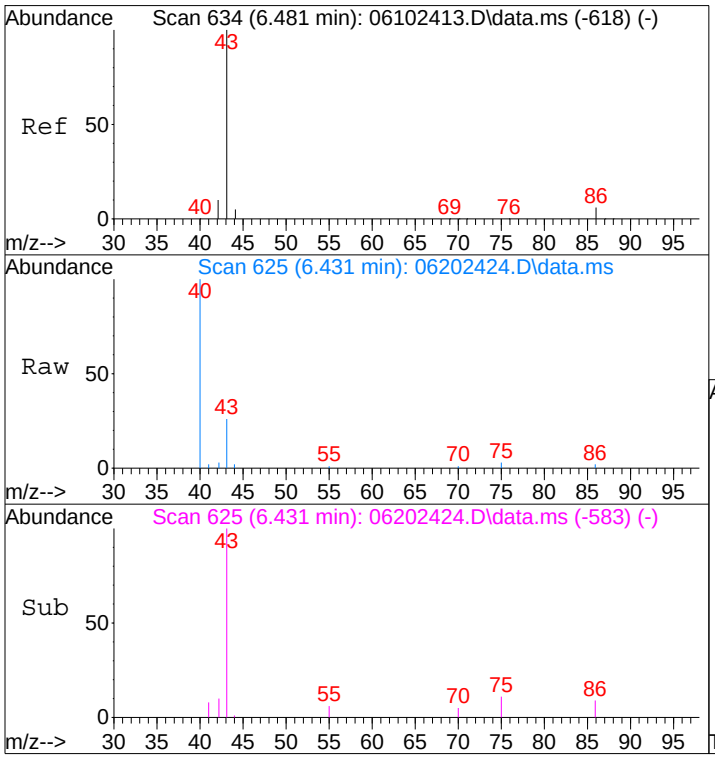


#21
Trichlorotrifluoroethane
Concen: 92.46 ng
RT: 5.58 min Scan# 476
Delta R.T. 0.038 min
Lab File: 06202424.D
Acq: 20 Jun 2024 22:22

Tgt Ion:151 Resp: 1296942

Ion	Ratio	Lower	Upper
151	100		
101	117.2	95.0	135.0

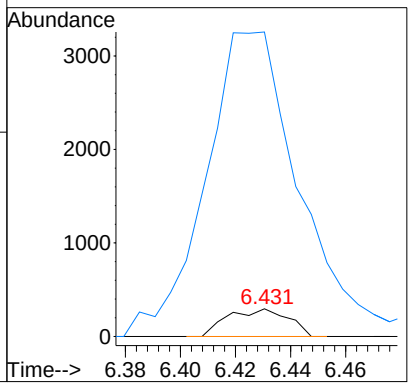


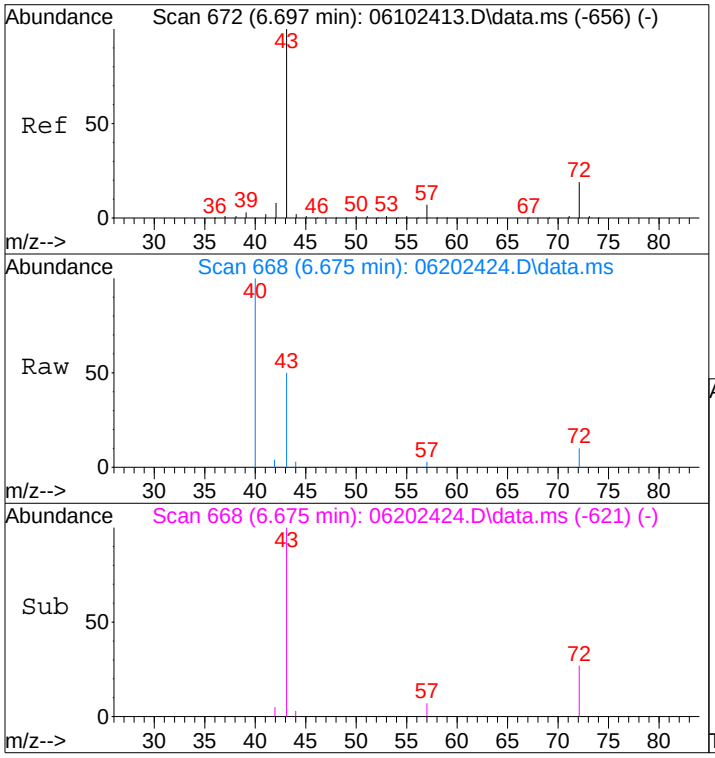


#26
Vinyl Acetate
Concen: 0.18 ng
RT: 6.43 min Scan# 625
Delta R.T. -0.009 min
Lab File: 06202424.D
Acq: 20 Jun 2024 22:22

Tgt Ion: 86 Resp: 452

Ion	Ratio	Lower	Upper
86	100		
43	1701.5	1668.9	1708.9

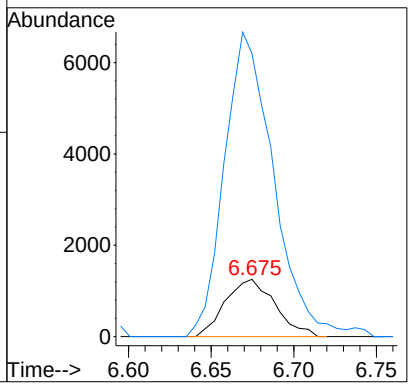


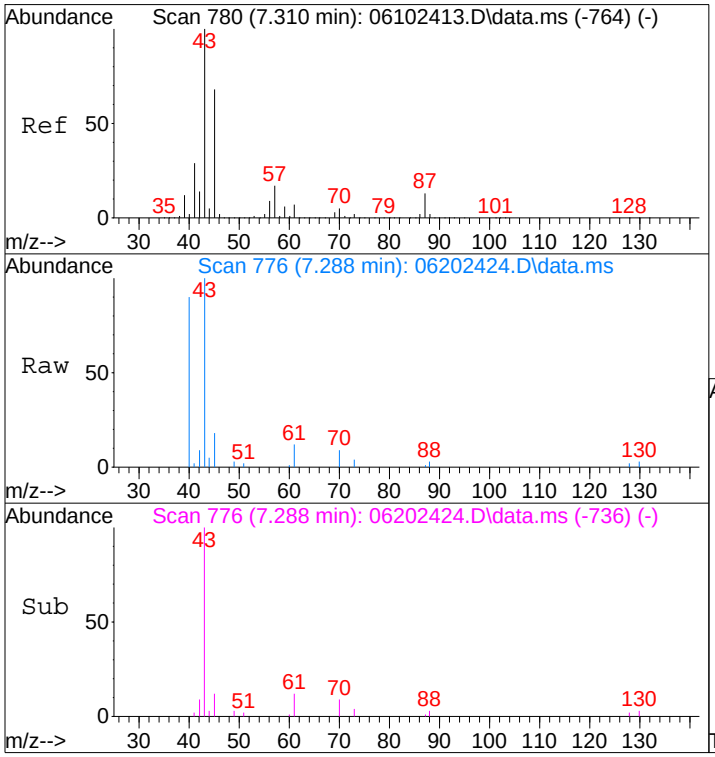


#27
2-Butanone (MEK)
Concen: 0.31 ng
RT: 6.67 min Scan# 668
Delta R.T. 0.016 min
Lab File: 06202424.D
Acq: 20 Jun 2024 22:22

Tgt Ion: 72 Resp: 2627

Ion	Ratio	Lower	Upper
72	100		
43	527.8	506.8	546.8

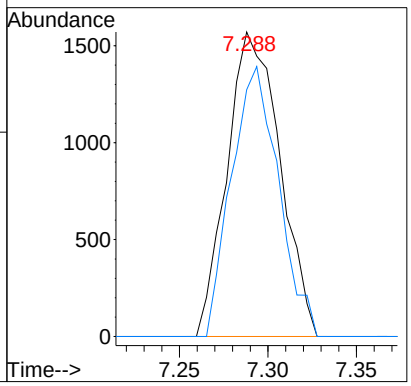


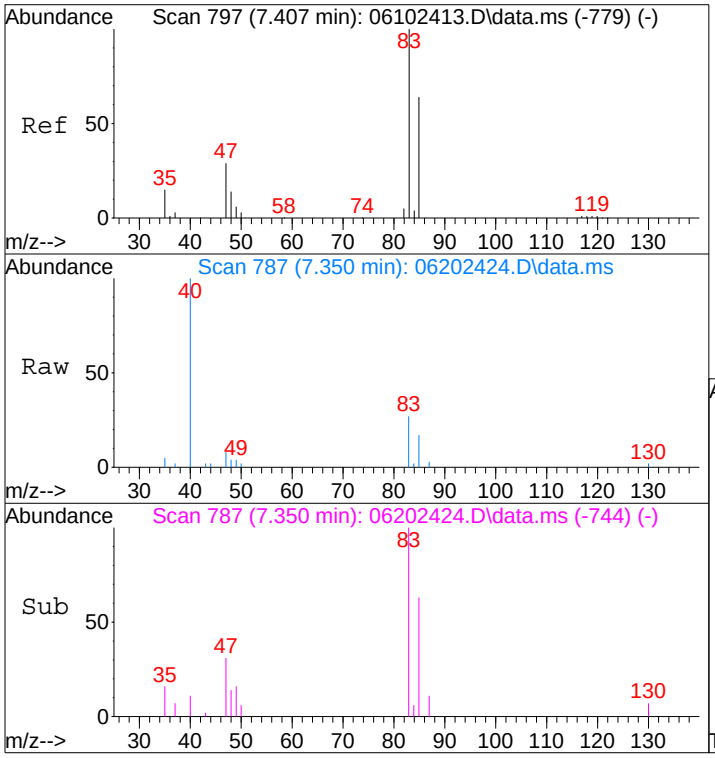


#30
Ethyl Acetate
Concen: 0.62 ng
RT: 7.29 min Scan# 776
Delta R.T. 0.029 min
Lab File: 06202424.D
Acq: 20 Jun 2024 22:22

Tgt Ion: 61 Resp: 3258

Ion	Ratio	Lower	Upper
61	100		
70	79.2	53.5	93.5

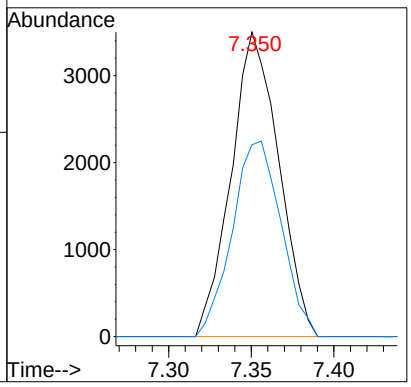


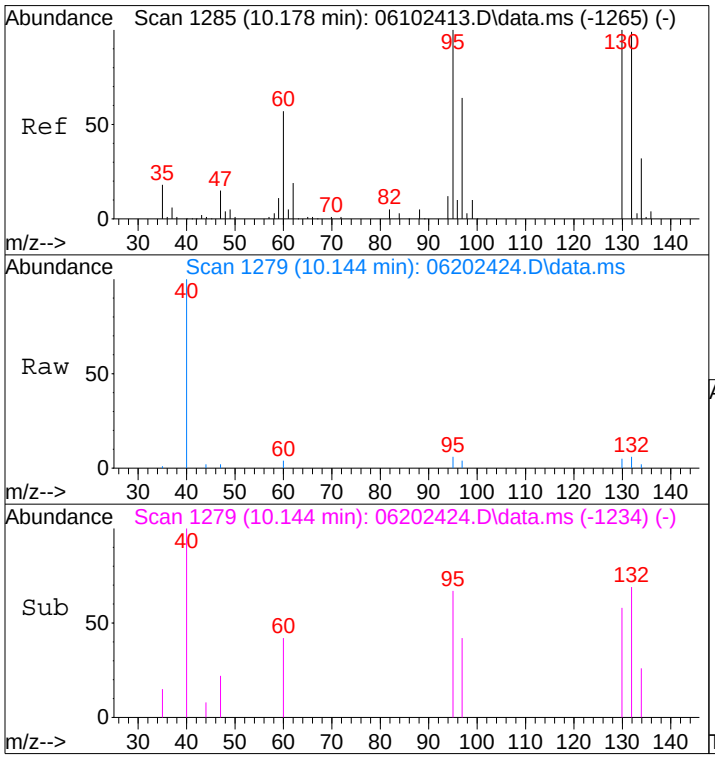


#32
Chloroform
Concen: 0.26 ng
RT: 7.35 min Scan# 787
Delta R.T. -0.004 min
Lab File: 06202424.D
Acq: 20 Jun 2024 22:22

Tgt Ion: 83 Resp: 7019

Ion	Ratio	Lower	Upper
83	100		
85	66.0	44.4	84.4

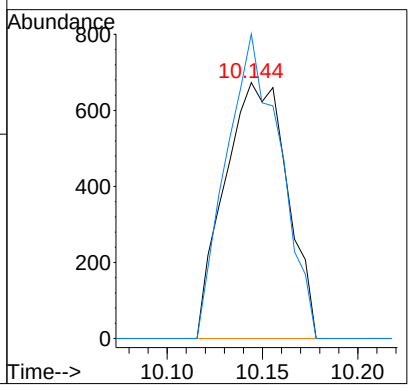


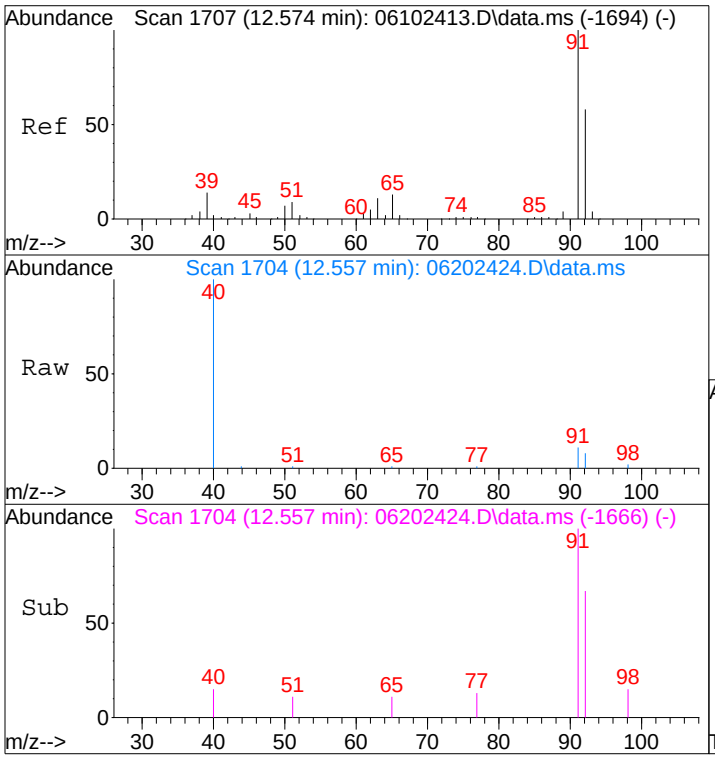


#47
Trichloroethene
Concen: 0.10 ng
RT: 10.14 min Scan# 1279
Delta R.T. 0.004 min
Lab File: 06202424.D
Acq: 20 Jun 2024 22:22

Tgt Ion:130 Resp: 1537

Ion	Ratio	Lower	Upper
130	100		
132	103.0	77.9	117.9

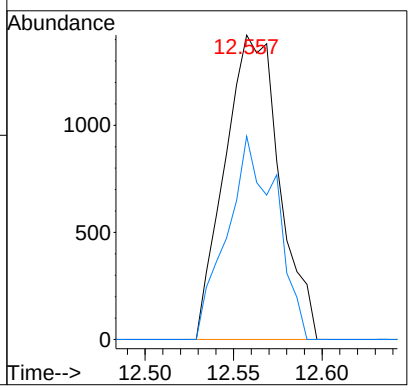




#58
Toluene
Concen: 0.05 ng
RT: 12.56 min Scan# 1704
Delta R.T. -0.034 min
Lab File: 06202424.D
Acq: 20 Jun 2024 22:22

Tgt Ion: 91 Resp: 3052

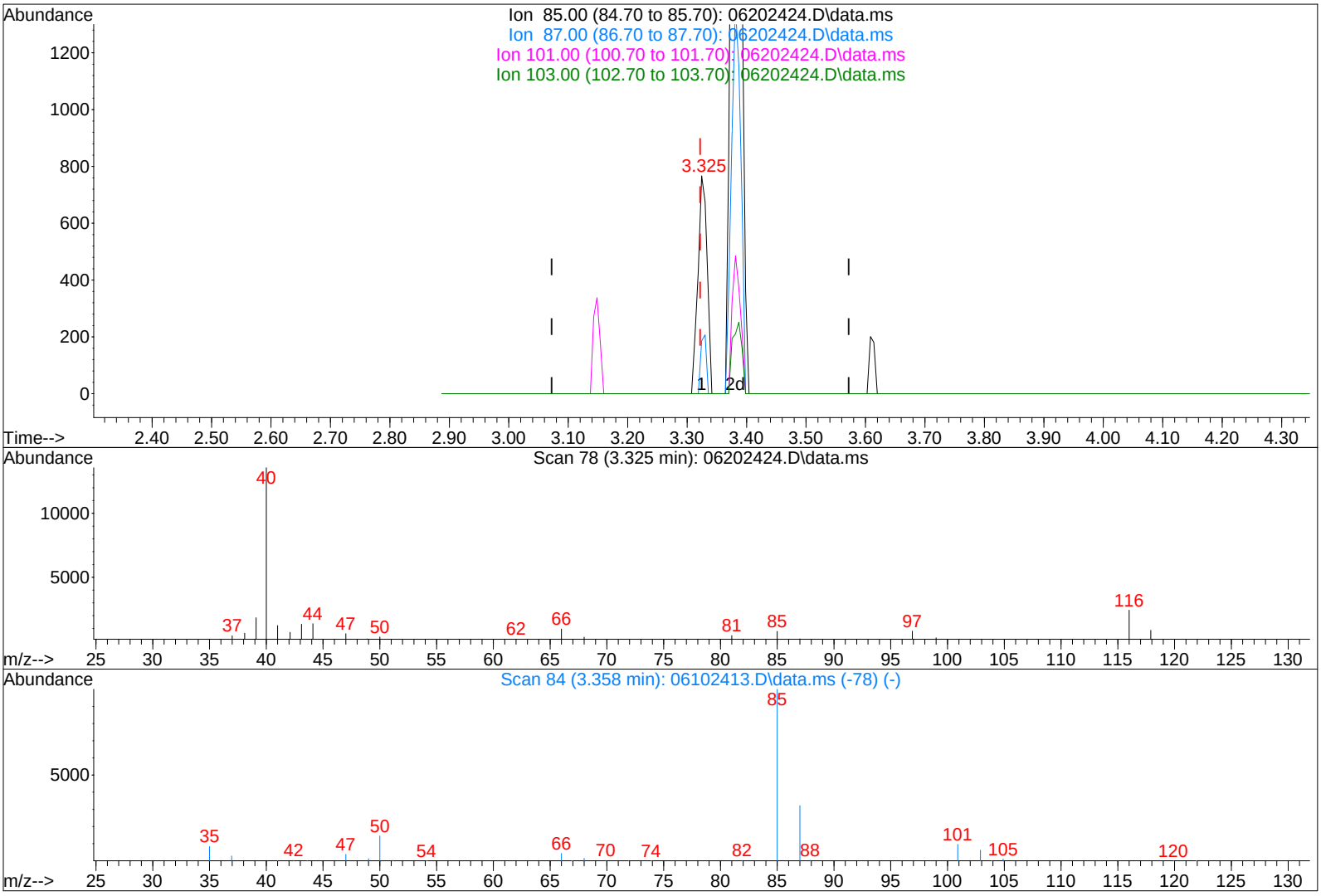
Ion	Ratio	Lower	Upper
91	100		
92	59.8	37.4	77.4



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\20\06202424.D Vial: 13
Acq On : 20 Jun 2024 22:22 Operator: SC
Sample : P2402249-051 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 12:11:58 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06202424.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.325min (+0.002) 0.03ng

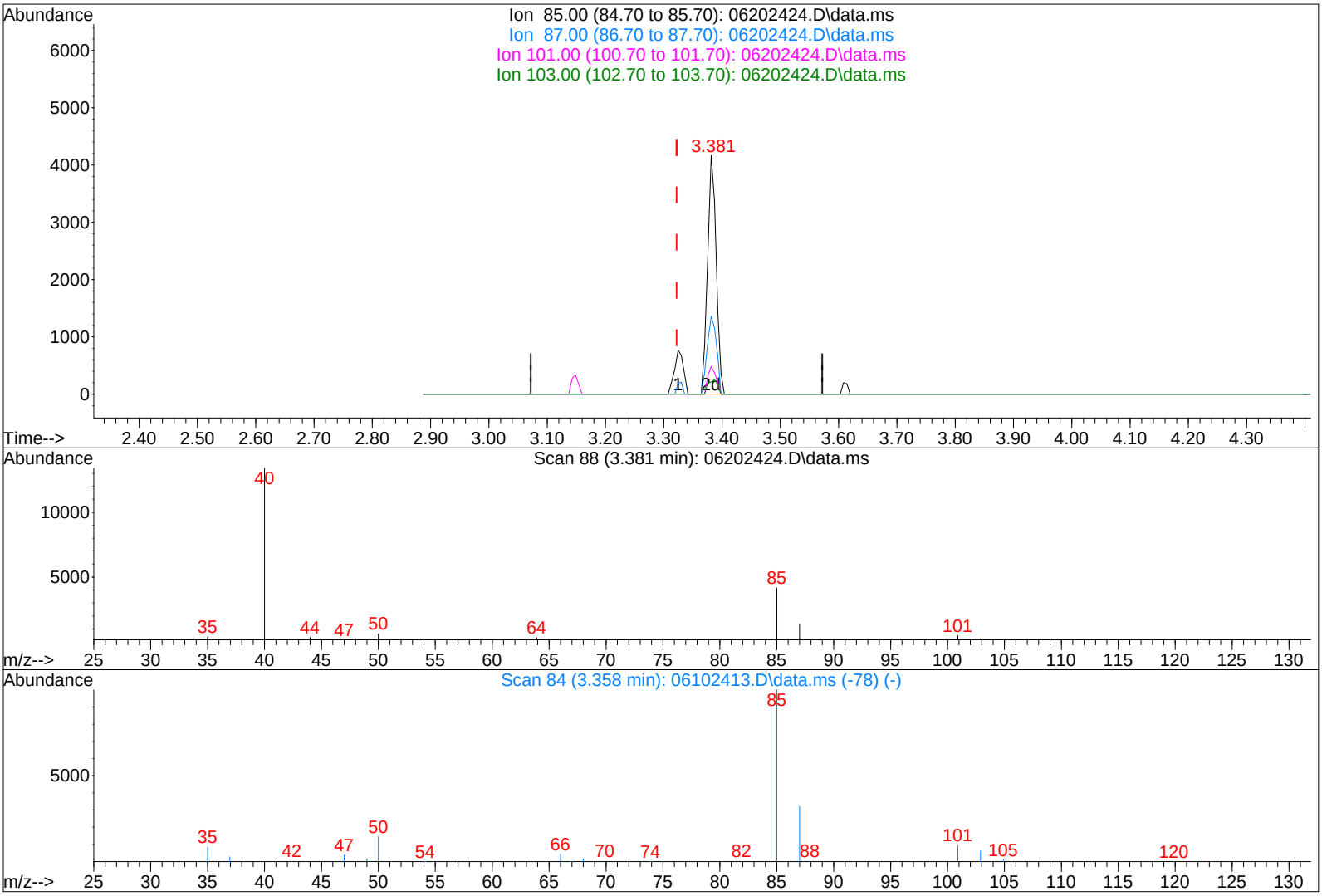
response 826

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	16.22
101.00	9.80	0.00
103.00	6.30	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\20\06202424.D Vial: 13
Acq On : 20 Jun 2024 22:22 Operator: SC
Sample : P2402249-051 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 12:11:58 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06202424.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.381min (+0.059) 0.13ng m

response 4298

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	35.44
101.00	9.80	11.05
103.00	6.30	6.47

MJ 6/29/24

WP

CG 6/29/24

Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\20\06202424.D Vial: 13
Acq On : 20 Jun 2024 22:22 Operator: SC
Sample : P2402249-051 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:28:11 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

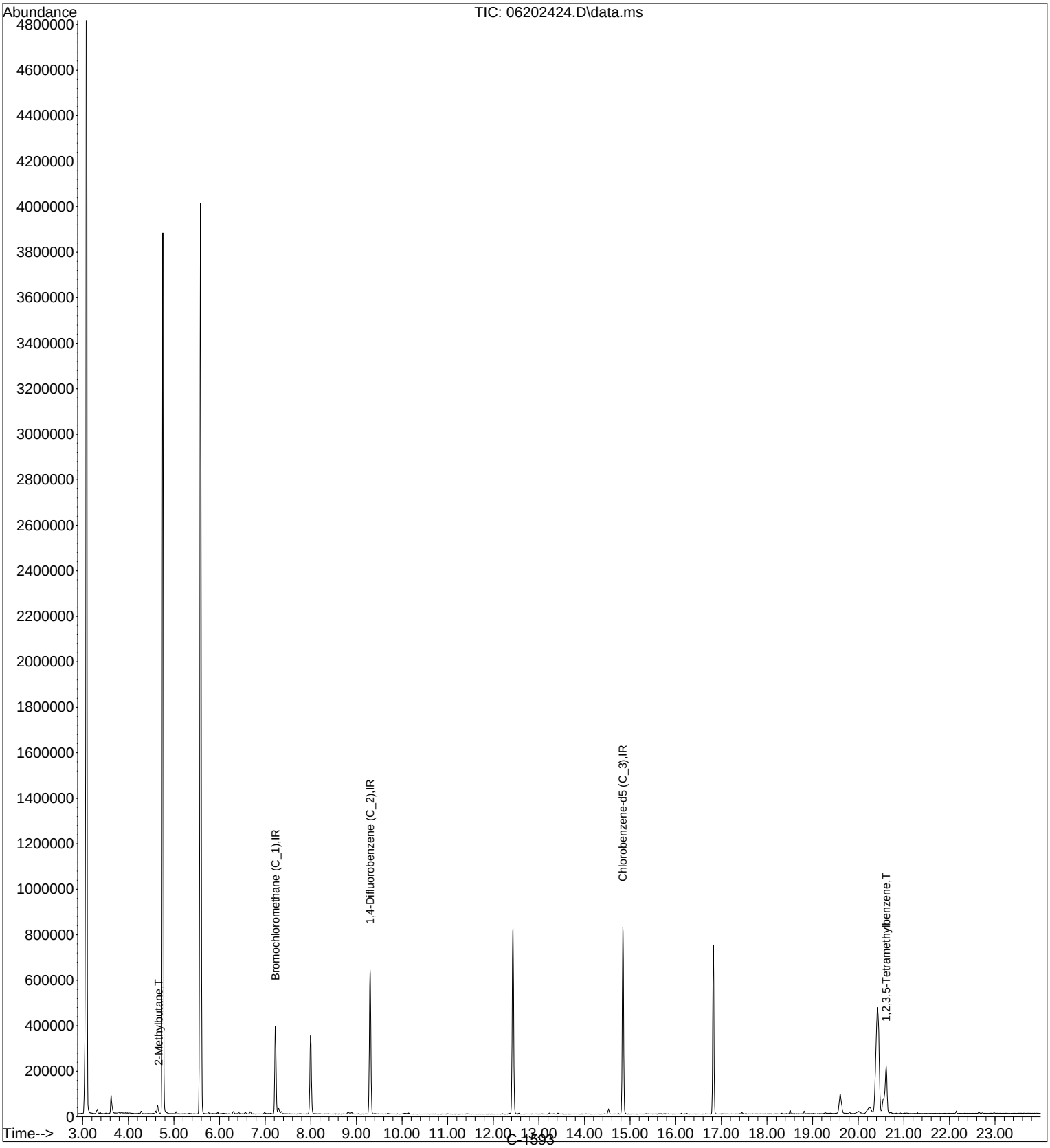
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	140248	12.500	ng		-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	595214	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	140876	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	0.00	85	0	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.21	83	394	N.D.			
4) 1,1-Difluoroethane	0.00	65	0	N.D.			
5) Chlorodifluoromethane ...	3.31	67	135	N.D.			
6) 1-Chloro-1,1-Difluoroe...	0.00	65	0	N.D.			
7) Dichlorofluoromethane ...	4.23	67	2476	N.D.			
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	4.56	83	56	N.D.			
10) 2-Methylbutane	4.66	57	2462	0.147	ng	#	1
11) Methyl Acetate	5.35	43	656	N.D.			
12) 2-Methylpentane	0.00	71	0	N.D.			
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	0.00	84	0	N.D.			
17) 2,3-Dimethylpentane	0.00	56	0	N.D.			
18) Dibromomethane	9.79	174	62	N.D.			
20) Methyl Cyclohexane	11.44	55	66	N.D.			
21) 1,3-Dichloropropane	0.00	76	0	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	0.00	75	0	N.D.			
25) Bromobenzene	0.00	77	0	N.D.			
26) 2-Chlorotoluene	17.61	91	581	N.D.			
27) 4-Chlorotoluene	17.68	91	977	N.D.			
28) Indane	0.00	117	0	N.D.			
29) Indene	0.00	115	0	N.D.			
30) 1,2,4,5-Tetramethylben...	20.21	119	114	N.D.			
31) 1,2,3,4-Tetramethylben...	20.23	119	182	N.D.			
32) 1,2,3,5-Tetramethylben...	20.61	119	4892	0.106	ng	#	82
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202424.D Vial: 13
Acq On : 20 Jun 2024 22:22 Operator: SC
Sample : P2402249-051 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:28:11 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\22\06222410.D Vial: 13
Acq On : 22 Jun 2024 18:05 Operator: MC/MJ
Sample : P2402249-051Dil (50mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 13:54:58 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.22	130	169390	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	733255	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	175364	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	374151	12.428	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.44%				
57) Toluene-d8 (SS2)	12.43	98	827545	12.332	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.64%				
73) Bromofluorobenzene (SS3)	16.83	174	316248	13.051	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 104.40%				
Target Compounds							Qvalue
2) Propene	0.00	42	0	N.D.	d		
3) Dichlorodifluoromethan...	3.32	85	437	N.D.			
4) Chloromethane	3.51	50	395	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.28	45	7093	0.431	ng		99
11) Acetonitrile	4.43	41	835	N.D.			
12) Acrolein	0.00	56	0	N.D.	d		
13) Acetone	4.64	58	10571	0.803	ng	#	50
14) Trichlorofluoromethane	4.75	101	1454097	36.058	ng		100
15) 2-Propanol (Isopropanol)	4.93	45	132	N.D.			
16) Acrylonitrile	4.99	53	553	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	0.00	59	0	N.D.			
19) Methylene Chloride	5.35	84	830	N.D.			
20) 3-Chloro-1-propene (Al...	5.44	41	241	N.D.			
21) Trichlorotrifluoroethane	5.57	151	691300	40.523	ng		97
22) Carbon Disulfide	0.00	76	0	N.D.	d		
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D.	d		
27) 2-Butanone (MEK)	6.67	72	1564	0.150	ng	#	80
28) cis-1,2-Dichloroethene	7.07	61	140	N.D.			
29) Diisopropyl Ether	7.30	87	257	N.D.			
30) Ethyl Acetate	7.30	61	1908	0.300	ng		93
31) n-Hexane	0.00	57	0	N.D.			
32) Chloroform	7.35	83	4255	0.128	ng		99
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.12	62	253	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.83	56	6627	No Calib		#	
41) Benzene	8.89	78	2554	N.D.			
42) Carbon Tetrachloride	0.00	117	0	N.D.			
43) Cyclohexane	9.29	84	887	N.D.			
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.07	83	433	N.D.			
47) Trichloroethene	10.15	130	1366	0.069	ng		96
48) 1,4-Dioxane	10.14	88	215	N.D.			
49) 2,2,4-Trimethylpentane...	0.00	57	0	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222410.D Vial: 13
Acq On : 22 Jun 2024 18:05 Operator: MC/MJ
Sample : P2402249-051Dil (50mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 13:54:58 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

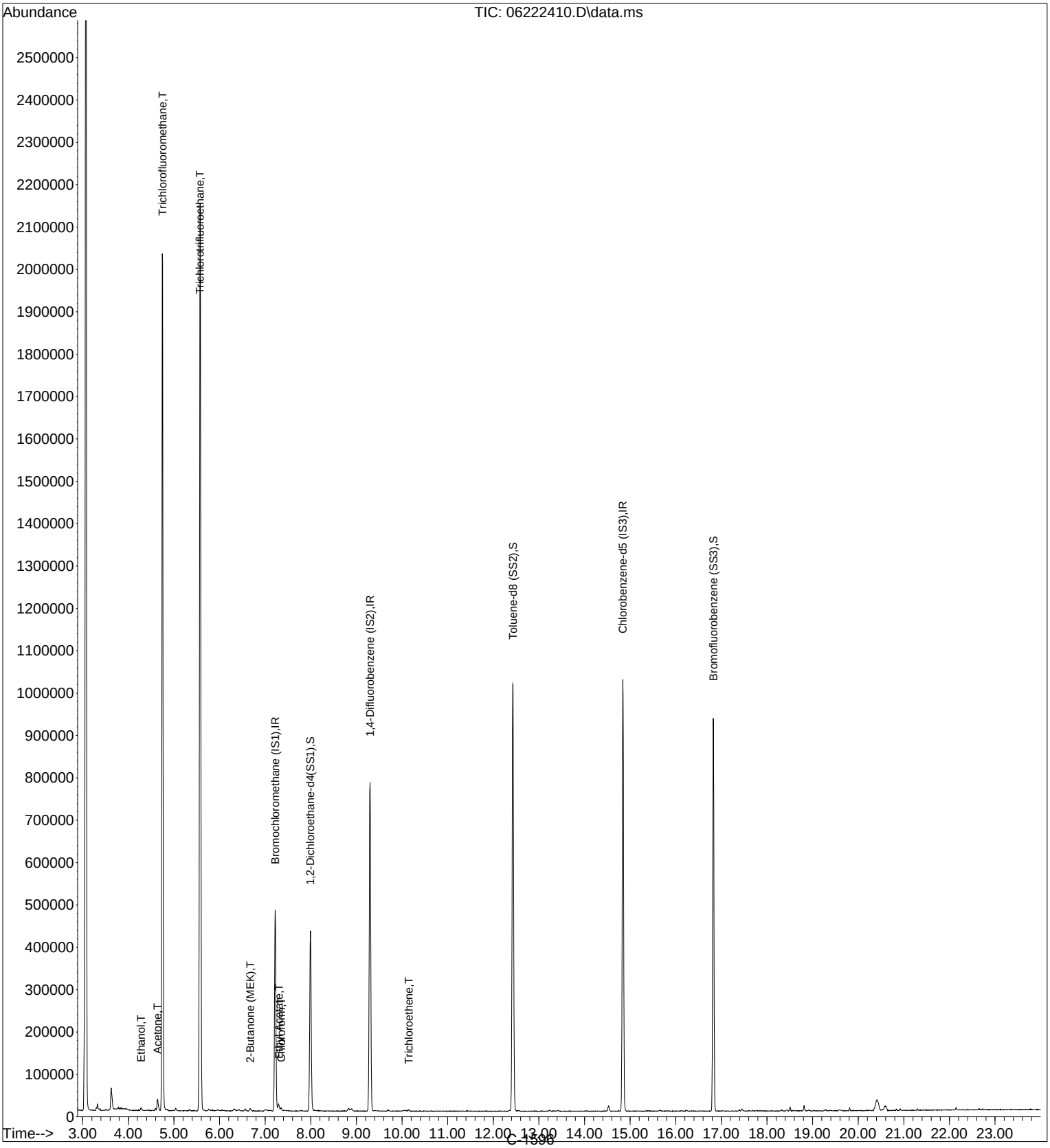
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
51) n-Heptane	0.00	71	0	N.D.		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	12.56	91	2313	N.D.		
59) 2-Hexanone	12.93	43	663	N.D.		
60) Dibromochloromethane	13.07	129	507	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	0.00	43	0	N.D.		
63) n-Octane	0.00	57	0	N.D.		
64) Tetrachloroethene	14.03	166	392	N.D.		
65) Chlorobenzene	14.90	112	751	N.D.		
66) Ethylbenzene	15.41	91	1109	N.D.		
67) m- & p-Xylenes	15.65	91	2038	N.D.		
68) Bromoform	15.67	173	826	N.D.		
69) Styrene	0.00	104	0	N.D.		
70) o-Xylene	16.24	91	1023	N.D.		
71) n-Nonane	16.61	43	237	N.D.		
72) 1,1,2,2-Tetrachloroethane	16.22	83	421	N.D.		
74) Cumene	17.03	105	973	N.D.		
75) alpha-Pinene	0.00	93	0	N.D.		
76) n-Propylbenzene	17.68	91	1257	N.D.		
77) 3-Ethyltoluene	17.03	105	973	No Calib		#
78) 4-Ethyltoluene	17.86	105	867	N.D.		
79) 1,3,5-Trimethylbenzene	17.95	105	685	N.D.		
80) alpha-Methylstyrene	0.00	118	0	N.D.		
81) 2-Ethyltoluene	17.03	105	973	No Calib		#
82) 1,2,4-Trimethylbenzene	18.43	105	737	N.D.		
83) n-Decane	0.00	58	0	N.D.		
84) Benzyl Chloride	0.00	91	0	N.D.		
85) 1,3-Dichlorobenzene	18.57	146	766	N.D.		
86) 1,4-Dichlorobenzene	18.66	146	746	N.D.		
87) sec-Butylbenzene	18.74	105	1235	N.D.		
88) 4-Isopropyltoluene (p-...	18.92	119	1082	N.D.		
89) 1,2,3-Trimethylbenzene	17.03	105	973	No Calib		#
90) 1,2-Dichlorobenzene	19.03	146	648	N.D.		
91) d-Limonene	0.00	68	0	N.D.		
92) 1,2-Dibromo-3-Chloropr...	19.51	157	180	N.D.		
93) n-Undecane	0.00	58	0	N.D.		
94) 1,2,4-Trichlorobenzene	20.84	180	1030	N.D.		
95) Naphthalene	20.94	128	592	N.D.		
96) n-Dodecane	0.00	58	0	N.D.		
97) Hexachlorobutadiene	21.30	225	952	N.D.		
98) Cyclohexanone	15.36	55	262	No Calib		#
99) tert-Butylbenzene	18.42	119	994	N.D.		
100) n-Butylbenzene	19.39	91	834	N.D.		
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222410.D Vial: 13
Acq On : 22 Jun 2024 18:05 Operator: MC/MJ
Sample : P2402249-051Dil (50mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 13:54:58 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

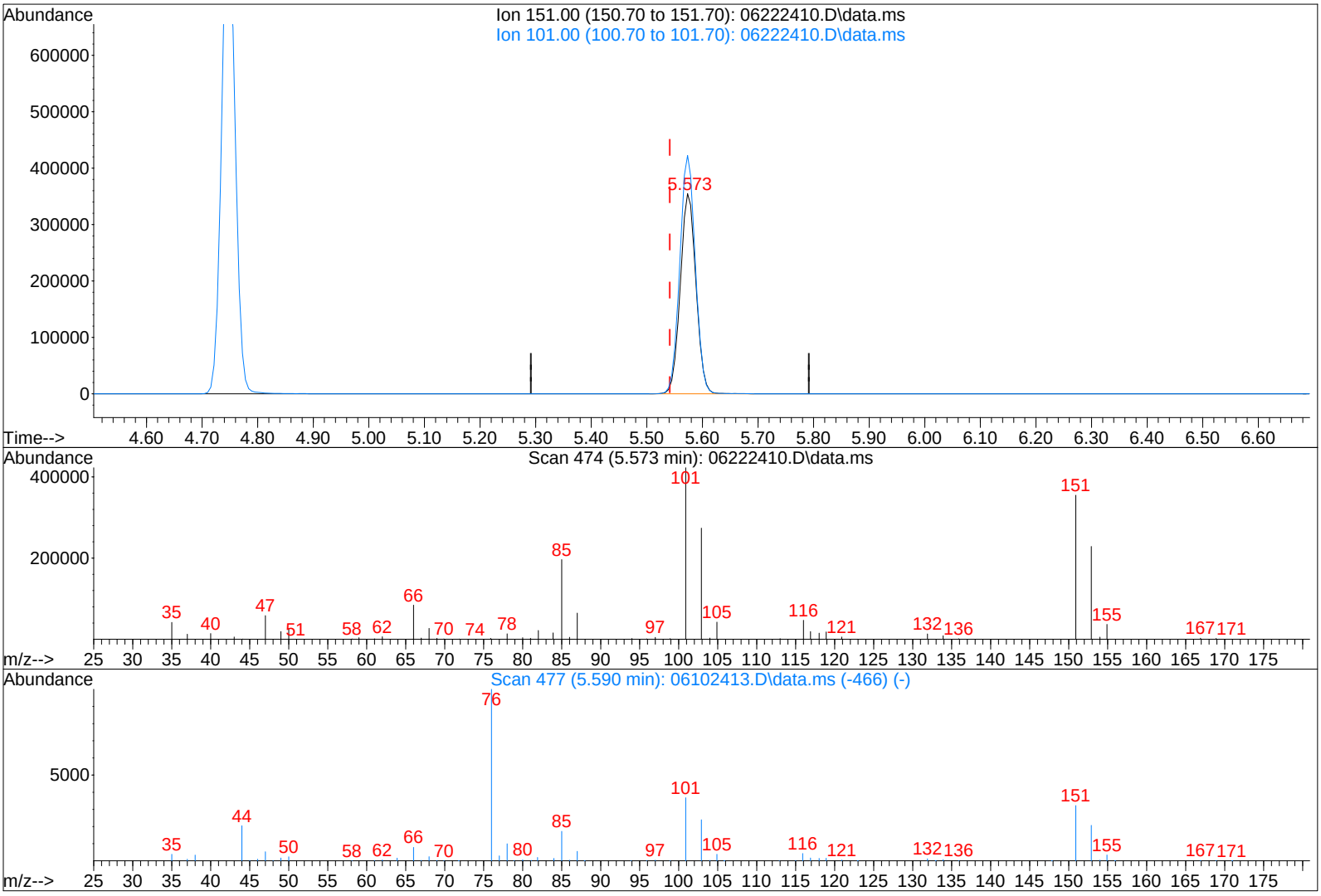


Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\22\06222410.D Vial: 13
Acq On : 22 Jun 2024 18:05 Operator: MC/MJ
Sample : P2402249-051Dil (50mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 13:54:58 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06222410.D\data.ms

(21) Trichlorotrifluoroethane (T)

5.573min (+0.031) 40.52ng

response 691300

Ion	Exp%	Act%
151.00	100	100
101.00	115.00	118.36
0.00	0.00	0.00
0.00	0.00	0.00

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\20\
Data File : 06202424.D
Acq On : 20 Jun 2024 22:22
Operator : SC
Sample : P2402249-051 (100mL)
Misc : S37-06062402
ALS Vial : 13 Sample Multiplier: 1

MJ 6/28/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06202424.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.080	22	35	53	rBV	5648672	9826946	100.00%	35.269%
2	3.319	70	77	85	rBV4	17754	38126	0.39%	0.137%
3	3.381	85	88	92	rVB	8733	10205	0.10%	0.037%
4	3.620	124	130	143	rBV	79036	162434	1.65%	0.583%
5	4.284	241	247	253	rVB2	10988	19133	0.19%	0.069%
6	4.596	297	302	305	rBV3	11263	16769	0.17%	0.060%
7	4.642	305	310	320	rVB	36873	77367	0.79%	0.278%
8	4.755	320	330	344	rBV	3871703	6553630	66.69%	23.521%
9	5.045	377	381	388	rVB3	9191	14331	0.15%	0.051%
10	5.579	465	475	496	rVB	4003098	7887716	80.27%	28.309%
11	5.760	501	507	511	rBV2	5523	10916	0.11%	0.039%
12	5.965	534	543	549	rVB3	5786	12457	0.13%	0.045%
13	6.300	595	602	611	rBV3	11230	26565	0.27%	0.095%
14	6.567	639	649	657	rBV3	8096	19242	0.20%	0.069%
15	6.669	661	667	678	rVB2	9509	21364	0.22%	0.077%
16	6.981	716	722	731	rBV2	5990	15510	0.16%	0.056%
17	7.225	756	765	773	rBV	385719	813197	8.28%	2.919%
18	7.294	773	777	783	rVV2	23717	53218	0.54%	0.191%
19	7.350	783	787	793	rVB2	9411	18649	0.19%	0.067%
20	7.998	890	901	911	rBV	347710	782576	7.96%	2.809%
21	8.810	1038	1044	1053	rBV4	8221	24080	0.25%	0.086%
22	8.901	1053	1060	1069	rVB5	5983	16960	0.17%	0.061%
23	9.298	1118	1130	1142	rBV	633910	1441588	14.67%	5.174%

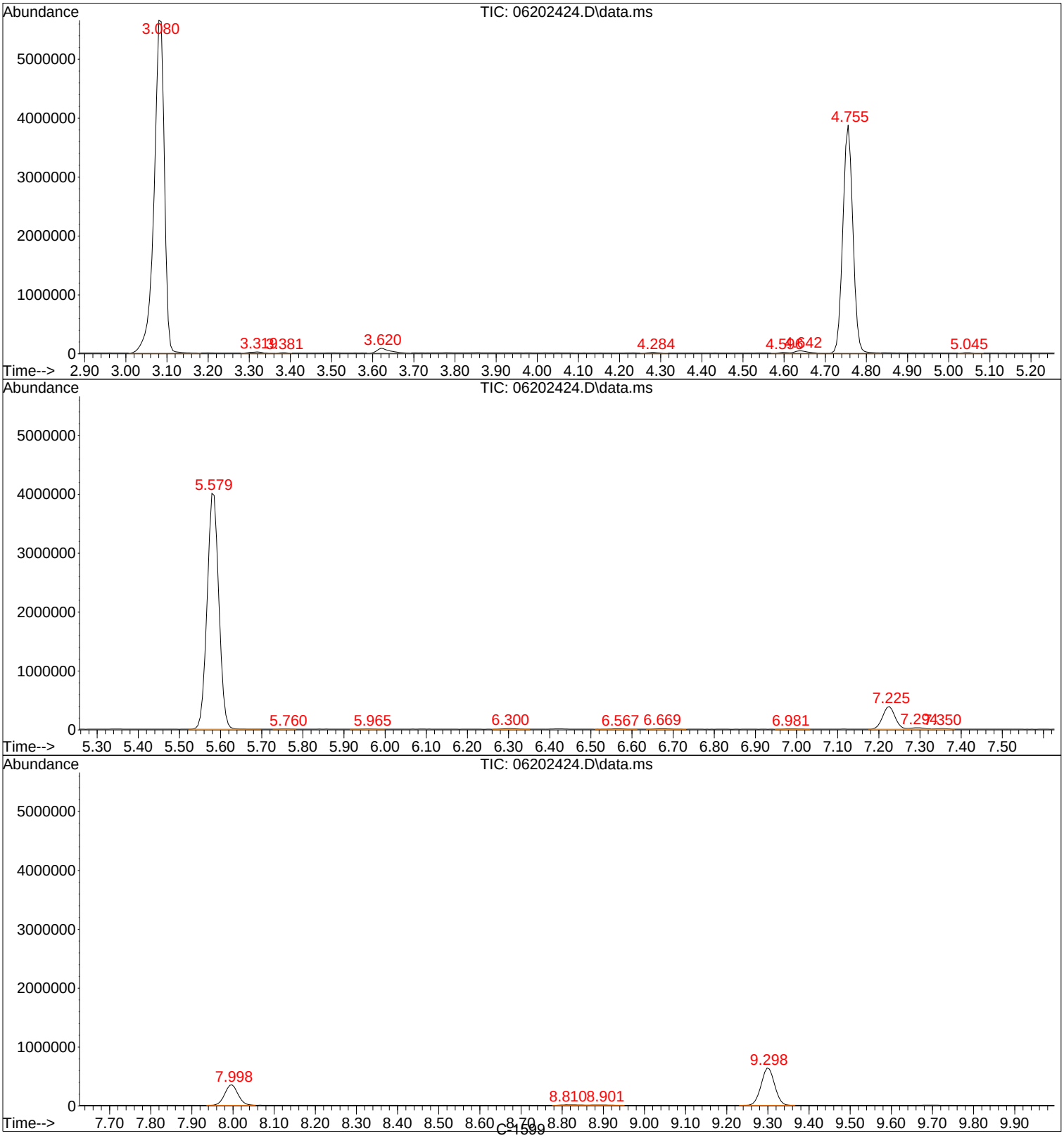
Sum of corrected areas: 27862979

LSC Report - Integrated Chromatogram

Data Path : I:\MS09\DATA\2024 06\20\
Data File : 06202424.D
Acq On : 20 Jun 2024 22:22
Operator : SC
Sample : P2402249-051 (100mL)
Misc : S37-06062402
ALS Vial : 13 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\20\\
Data File : 06202424.D
Acq On : 20 Jun 2024 22:222
Operator : SCC
Sample : P2402249-051 (100mL))
Misc : S37-060624022
ALS Vial : 13 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242412.D Vial: 1
Acq On : 24 Jun 2024 13:41 Operator: SC
Sample : P2402249-052 (5.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 24 14:22:16 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/24/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	188144	12.500	ng		-0.05
37) 1,4-Difluorobenzene (IS2)	9.30	114	819448	12.500	ng		-0.03
56) Chlorobenzene-d5 (IS3)	14.84	54	184989	12.500	ng		-0.01
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	405308	12.121	ng		-0.04
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.96%				
57) Toluene-d8 (SS2)	12.43	98	913594	12.905	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.28%				
73) Bromofluorobenzene (SS3)	16.82	174	312831	12.238	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.92%				
Target Compounds							Qvalue
2) Propene	3.33	42	483	N.D.			
3) Dichlorodifluoromethan...	3.34	85	336	N.D.			
4) Chloromethane	3.52	50	141	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.40	45	67	N.D.			
11) Acetonitrile	4.45	41	125	N.D.			
12) Acrolein	4.55	56	345	N.D.			
13) Acetone	0.00	58	0	N.D.	d		
14) Trichlorofluoromethane	4.76	101	1726999	38.557	ng		100
15) 2-Propanol (Isopropanol)	4.87	45	1335	N.D.			
16) Acrylonitrile	5.00	53	908	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	0.00	59	0	N.D.			
19) Methylene Chloride	5.36	84	1019	N.D.			
20) 3-Chloro-1-propene (Al...	5.45	41	248	N.D.			
21) Trichlorotrifluoroethane	5.58	151	972461	51.322	ng		95
22) Carbon Disulfide	5.61	76	1751	N.D.			
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D.			
27) 2-Butanone (MEK)	6.69	72	715	0.062	ng	#	56
28) cis-1,2-Dichloroethene	7.07	61	199	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.			
30) Ethyl Acetate	7.31	61	184	N.D.			
31) n-Hexane	7.30	57	750	N.D.			
32) Chloroform	7.34	83	1470	N.D.			
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	284	N.D.			
38) 1,1,1-Trichloroethane	8.40	97	554	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.87	56	2125	No Calib		#	
41) Benzene	8.89	78	2349	N.D.			
42) Carbon Tetrachloride	0.00	117	0	N.D.			
43) Cyclohexane	9.21	84	184	N.D.			
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.06	83	540	N.D.			
47) Trichloroethene	10.14	130	1356	0.061	ng		97
48) 1,4-Dioxane	10.14	88	390	N.D.			
49) 2,2,4-Trimethylpentane...	10.24	57	2040	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242412.D Vial: 1
Acq On : 24 Jun 2024 13:41 Operator: SC
Sample : P2402249-052 (5.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 24 14:22:16 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

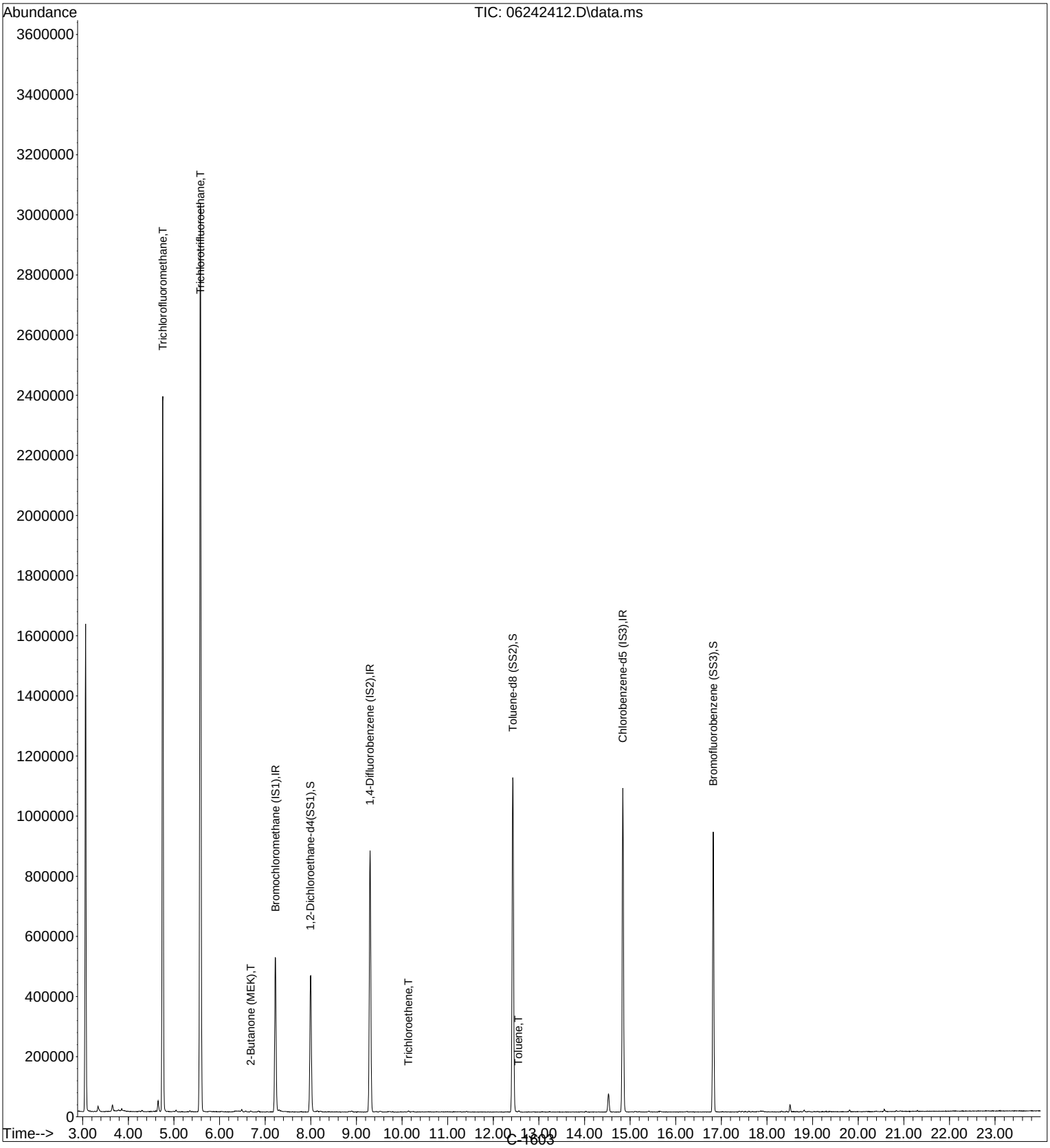
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	0.00	71	0	N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
58) Toluene	12.55	91	3764	0.051 ng	95
59) 2-Hexanone	12.93	43	313	N.D.	
60) Dibromochloromethane	13.07	129	667	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	0.00	43	0	N.D.	
63) n-Octane	13.91	57	116	N.D.	
64) Tetrachloroethene	14.03	166	864	N.D.	
65) Chlorobenzene	14.90	112	862	N.D.	
66) Ethylbenzene	15.41	91	3008	N.D.	
67) m- & p-Xylenes	15.63	91	3380	N.D.	
68) Bromoform	15.67	173	811	N.D.	
69) Styrene	16.10	104	120	N.D.	
70) o-Xylene	16.24	91	1347	N.D.	
71) n-Nonane	16.61	43	371	N.D.	
72) 1,1,2,2-Tetrachloroethane	16.21	83	488	N.D.	
74) Cumene	17.04	105	1136	N.D.	
75) alpha-Pinene	17.52	93	1224	N.D.	
76) n-Propylbenzene	17.68	91	2346	N.D.	
77) 3-Ethyltoluene	17.04	105	1136	No Calib	#
78) 4-Ethyltoluene	17.87	105	955	N.D.	
79) 1,3,5-Trimethylbenzene	17.96	105	741	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.04	105	1136	No Calib	#
82) 1,2,4-Trimethylbenzene	18.42	105	824	N.D.	
83) n-Decane	0.00	58	0	N.D.	
84) Benzyl Chloride	0.00	91	0	N.D.	
85) 1,3-Dichlorobenzene	18.58	146	717	N.D.	
86) 1,4-Dichlorobenzene	18.66	146	680	N.D.	
87) sec-Butylbenzene	18.74	105	1302	N.D.	
88) 4-Isopropyltoluene (p-...	18.93	119	874	N.D.	
89) 1,2,3-Trimethylbenzene	17.04	105	1136	No Calib	#
90) 1,2-Dichlorobenzene	19.02	146	679	N.D.	
91) d-Limonene	0.00	68	0	N.D.	
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	1231	N.D.	
95) Naphthalene	20.94	128	1447	N.D.	
96) n-Dodecane	0.00	58	0	N.D.	
97) Hexachlorobutadiene	21.30	225	699	N.D.	
98) Cyclohexanone	15.51	55	108	No Calib	#
99) tert-Butylbenzene	18.42	119	934	N.D.	
100) n-Butylbenzene	19.38	91	677	N.D.	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242412.D Vial: 1
Acq On : 24 Jun 2024 13:41 Operator: SC
Sample : P2402249-052 (5.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 24 14:22:16 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242412.D Vial: 1
Acq On : 24 Jun 2024 13:41 Operator: SC
Sample : P2402249-052 (5.0mL) Inst : MS09
Misc : S37-06062402

6/24/24

Quant Time: Jun 24 14:22:16 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

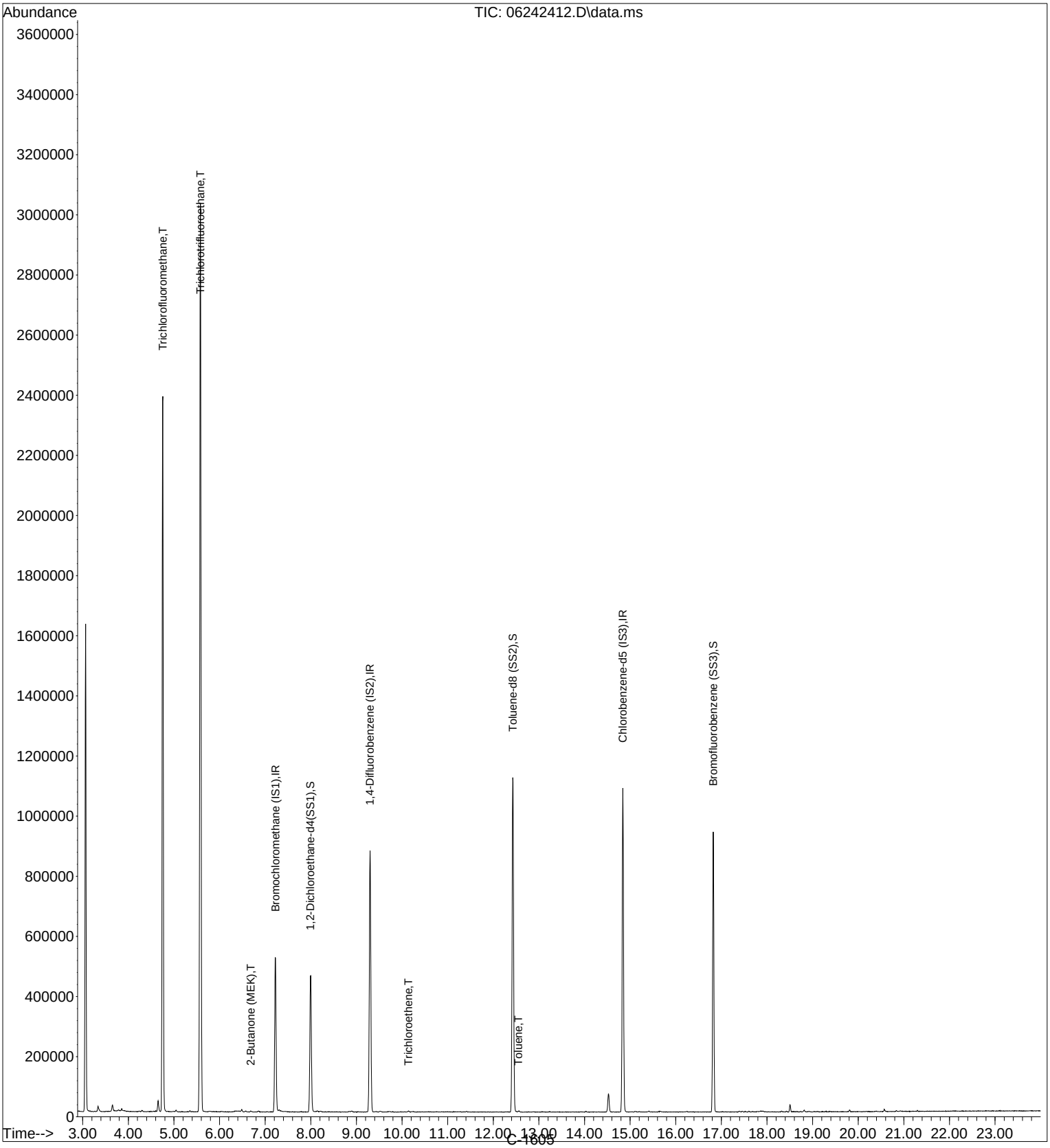
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	188144	12.500	ng		-0.05
37) 1,4-Difluorobenzene (IS2)	9.30	114	819448	12.500	ng		-0.03
56) Chlorobenzene-d5 (IS3)	14.84	54	184989	12.500	ng		-0.01
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	405308	12.121	ng		-0.04
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.96%				
57) Toluene-d8 (SS2)	12.43	98	913594	12.905	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.28%				
73) Bromofluorobenzene (SS3)	16.82	174	312831	12.238	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.92%				
Target Compounds							Qvalue
14) Trichlorofluoromethane	4.76	101	1726999	38.557	ng		100
21) Trichlorotrifluoroethane	5.58	151	972461	51.322	ng		95
27) 2-Butanone (MEK)	6.69	72	715	0.062	ng	#	56
47) Trichloroethene	10.14	130	1356	0.061	ng		97
58) Toluene	12.55	91	3764	0.051	ng		95

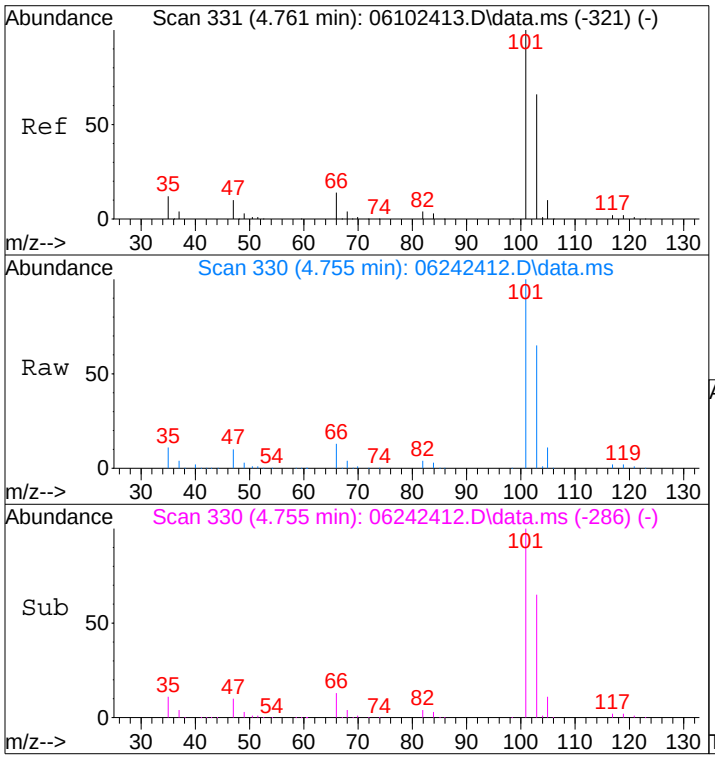
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242412.D Vial: 1
Acq On : 24 Jun 2024 13:41 Operator: SC
Sample : P2402249-052 (5.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 24 14:22:16 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

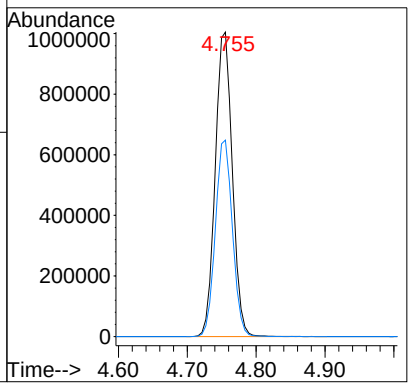


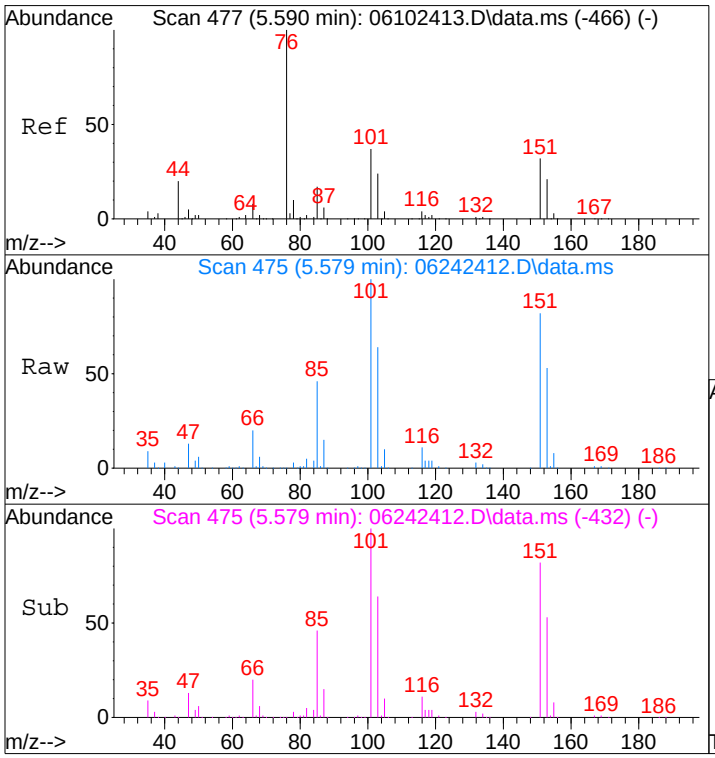


#14
Trichlorofluoromethane
Concen: 38.56 ng
RT: 4.76 min Scan# 330
Delta R.T. 0.001 min
Lab File: 06242412.D
Acq: 24 Jun 2024 13:41

Tgt Ion:101 Resp: 1726999

Ion	Ratio	Lower	Upper
101	100		
103	64.6	44.9	84.9

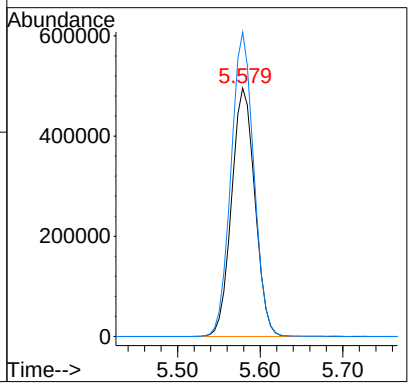


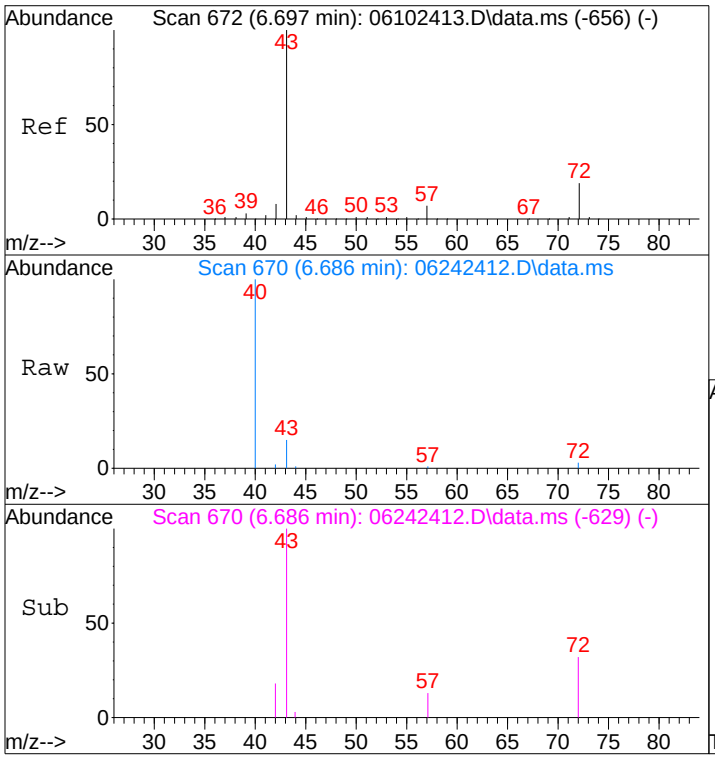


#21
Trichlorotrifluoroethane
Concen: 51.32 ng
RT: 5.58 min Scan# 475
Delta R.T. -0.007 min
Lab File: 06242412.D
Acq: 24 Jun 2024 13:41

Tgt Ion:151 Resp: 972461

Ion	Ratio	Lower	Upper
151	100		
101	119.9	95.0	135.0

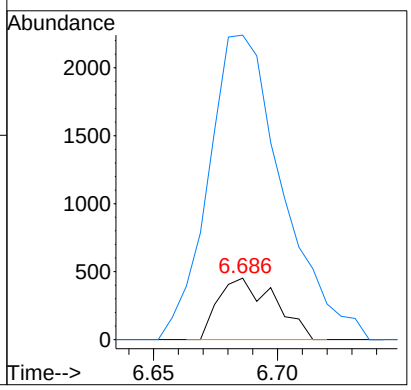


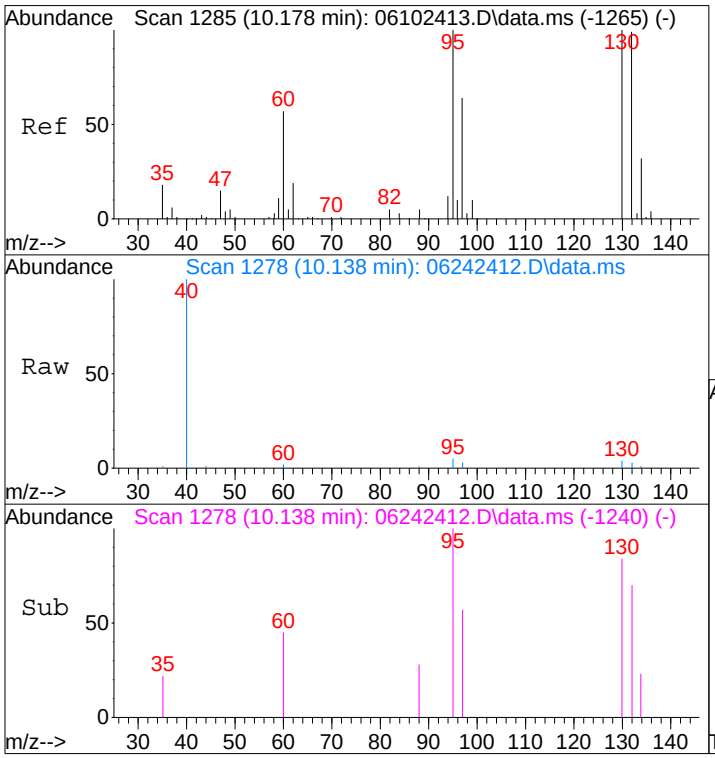


#27
2-Butanone (MEK)
Concen: 0.06 ng
RT: 6.69 min Scan# 670
Delta R.T. -0.019 min
Lab File: 06242412.D
Acq: 24 Jun 2024 13:41

Tgt Ion: 72 Resp: 715

Ion	Ratio	Lower	Upper
72	100		
43	653.3	506.8	546.8#

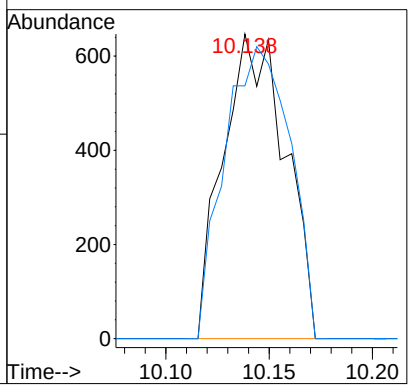


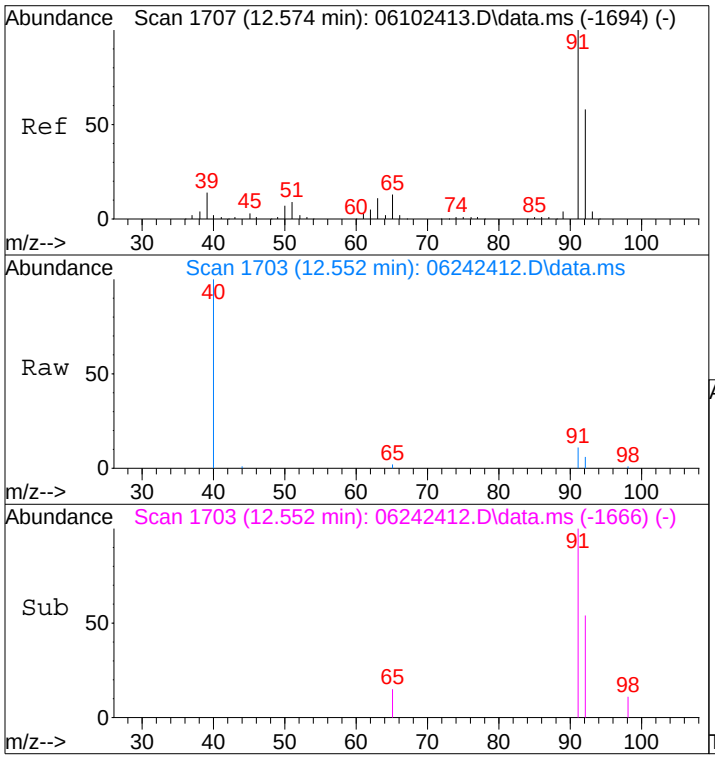


#47
Trichloroethene
Concen: 0.06 ng
RT: 10.14 min Scan# 1278
Delta R.T. -0.032 min
Lab File: 06242412.D
Acq: 24 Jun 2024 13:41

Tgt Ion:130 Resp: 1356

Ion	Ratio	Lower	Upper
130	100		
132	101.1	77.9	117.9

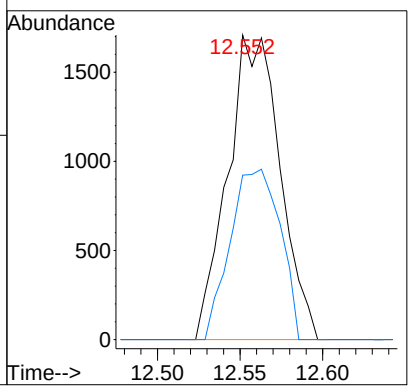




#58
Toluene
Concen: 0.05 ng
RT: 12.55 min Scan# 1703
Delta R.T. -0.040 min
Lab File: 06242412.D
Acq: 24 Jun 2024 13:41

Tgt Ion: 91 Resp: 3764

Ion	Ratio	Lower	Upper
91	100		
92	53.4	37.4	77.4



Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\24\06242412.D Vial: 1
Acq On : 24 Jun 2024 13:41 Operator: SC
Sample : P2402249-052 (5.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 16:49:06 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

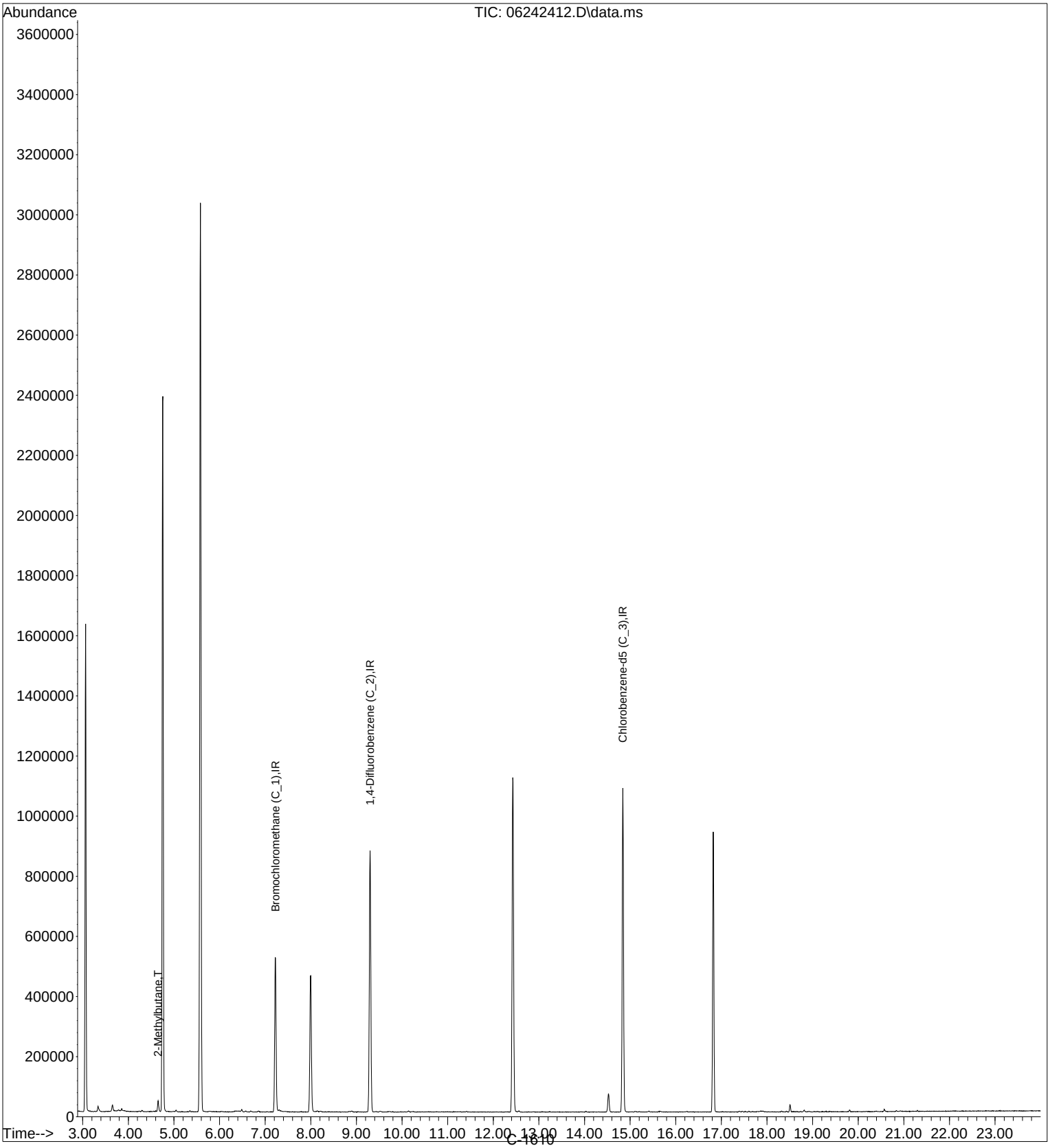
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	189018	12.500	ng	-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	821052	12.500	ng	-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	184989	12.500	ng	-0.01
Target Compounds						Qvalue
2) Chloropentafluoroethane	3.17	85	452	N.D.		
3) 1,1,1,2-Tetrafluoroeth...	3.21	83	390	N.D.		
4) 1,1-Difluoroethane	3.26	65	427	N.D.		
5) Chlorodifluoromethane ...	3.31	67	161	N.D.		
6) 1-Chloro-1,1-Difluoroe...	3.51	65	934	N.D.		
7) Dichlorofluoromethane ...	4.24	67	1789	N.D.		
8) Vinylbromide	4.42	108	136	N.D.		
9) 2,2-Dichloro-1,1,1-tri...	4.56	83	701	N.D.		
10) 2-Methylbutane	4.65	57	4951	0.220	ng	93
11) Methyl Acetate	5.35	43	1520	N.D.		
12) 2-Methylpentane	6.48	71	1513	N.D.		
13) 2,2-Dichloropropane	0.00	77	0	N.D.		
14) 1,1-Dichloropropene	8.72	75	578	N.D.		
15) Thiophene	9.04	84	563	N.D.		
17) 2,3-Dimethylpentane	9.51	56	1401	N.D.		
18) Dibromomethane	9.79	174	580	N.D.		
20) Methyl Cyclohexane	11.41	55	1025	N.D.		
21) 1,3-Dichloropropane	12.57	76	342	N.D.		
22) 1,1,1,2-Tetrachloroethane	14.87	131	57	N.D.		
23) 1-Chlorohexane	15.19	91	304	N.D.		
24) 1,2,3-Trichloropropane	16.39	75	436	N.D.		
25) Bromobenzene	17.09	77	387	N.D.		
26) 2-Chlorotoluene	17.61	91	1899	N.D.		
27) 4-Chlorotoluene	17.61	91	1899	N.D.		
28) Indane	19.12	117	1040	N.D.		
29) Indene	19.21	115	331	N.D.		
30) 1,2,4,5-Tetramethylben...	20.18	119	891	N.D.		
31) 1,2,3,4-Tetramethylben...	20.22	119	1017	N.D.		
32) 1,2,3,5-Tetramethylben...	20.60	119	1031	N.D.		
33) 1,2,3-Trichlorobenzene	21.19	180	396	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242412.D Vial: 1
Acq On : 24 Jun 2024 13:41 Operator: SC
Sample : P2402249-052 (5.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 16:49:06 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\24\
Data File : 06242412.D
Acq On : 24 Jun 2024 13:41
Operator : SC
Sample : P2402249-052 (5.0mL)
Misc : S37-06062402
ALS Vial : 1 Sample Multiplier: 1

MJ 6/28/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06242412.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.063	24	32	42	rBV	1622021	2435988	41.65%	14.593%
2	3.336	75	80	93	rVB4	18050	37717	0.64%	0.226%
3	3.648	128	135	144	rBV2	21487	42625	0.73%	0.255%
4	3.852	167	171	182	rVB2	7828	13772	0.24%	0.083%
5	4.653	306	312	321	rBV2	35540	62020	1.06%	0.372%
6	4.755	321	330	344	rVB	2379173	4103285	70.15%	24.581%
7	5.045	376	381	390	rVB	6292	11630	0.20%	0.070%
8	5.579	465	475	487	rBV	3023141	5848984	100.00%	35.039%
9	6.487	629	635	641	rVB	8162	15119	0.26%	0.091%
10	7.220	755	764	775	rBV	513319	1111487	19.00%	6.658%
11	7.998	891	901	913	rBV	453955	1037470	17.74%	6.215%
12	9.298	1120	1130	1144	rVB	868936	1972825	33.73%	11.818%

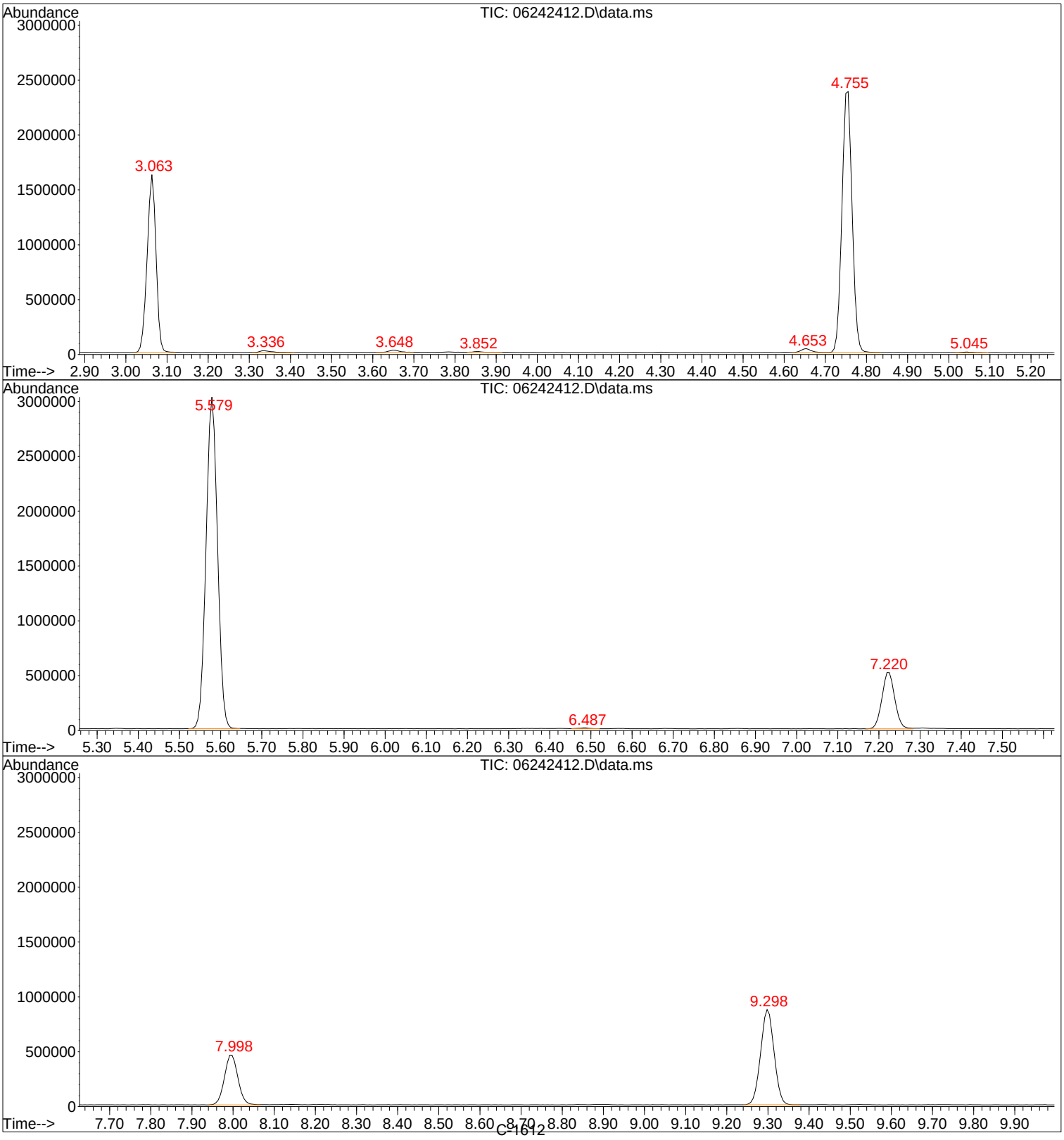
Sum of corrected areas: 16692922

LSC Report - Integrated Chromatogram

Data Path : I:\MS09\DATA\2024 06\24\
Data File : 06242412.D
Acq On : 24 Jun 2024 13:41
Operator : SC
Sample : P2402249-052 (5.0mL)
Misc : S37-06062402
ALS Vial : 1 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\24\\
Data File : 06242412.D
Acq On : 24 Jun 2024 13:411
Operator : SCC
Sample : P2402249-052 (5.0mL))
Misc : S37-060624022
ALS Vial : 1 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

						Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT/LSC Reviewed)

MJ 6/29/24

Data File : I:\MS09\DATA\2024 06\20\06202425.D Vial: 14
Acq On : 20 Jun 2024 22:54 Operator: SC
Sample : P2402249-053 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:10:07 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.24	130	138785	12.500	ng		0.01
37) 1,4-Difluorobenzene (IS2)	9.31	114	595220	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.85	54	152376	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	311247	12.618	ng		0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.96%				
57) Toluene-d8 (SS2)	12.44	98	671818	11.521	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 92.16%				
73) Bromofluorobenzene (SS3)	16.83	174	272018	12.919	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.36%				
Target Compounds							Qvalue
2) Propene	3.28	42	27591	1.553	ng	#	77
3) Dichlorodifluoromethan...	3.36	85	16445m	0.503	ng		
4) Chloromethane	3.49	50	7735	0.346	ng		97
5) 1,2-Dichloro-1,1,2,2-t...	3.61	135	268	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	3.78	54	377	N.D.			
8) Bromomethane	4.01	94	1482	0.131	ng		93
9) Chloroethane	4.15	64	836	0.094	ng		70
10) Ethanol	4.40	45	56	N.D.			
11) Acetonitrile	0.00	41	0	N.D.	d		
12) Acrolein	4.52	56	439	N.D.			
13) Acetone	4.62	58	434649	40.315	ng		94
14) Trichlorofluoromethane	4.75	101	2333189	70.616	ng		100
15) 2-Propanol (Isopropanol)	4.84	45	258800	5.957	ng		92
16) Acrylonitrile	0.00	53	0	N.D.	d		
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	0.00	59	0	N.D.	d		
19) Methylene Chloride	5.36	84	1485	0.097	ng		93
20) 3-Chloro-1-propene (Al...	5.45	41	652	N.D.			
21) Trichlorotrifluoroethane	5.58	151	1157333	82.802	ng		99
22) Carbon Disulfide	0.00	76	0	N.D.	d		
23) trans-1,2-Dichloroethene	6.14	61	624	N.D.			
24) 1,1-Dichloroethane	6.32	63	788	N.D.			
25) Methyl tert-Butyl Ether	6.32	73	7218	0.200	ng		64
26) Vinyl Acetate	0.00	86	0	N.D.	d		
27) 2-Butanone (MEK)	6.66	72	123378	14.461	ng		96
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	7.30	87	252	N.D.			
30) Ethyl Acetate	7.28	61	675	0.130	ng		87
31) n-Hexane	7.30	57	5864	0.257	ng		99
32) Chloroform	7.36	83	9883	0.363	ng		97
34) Tetrahydrofuran (THF)	7.75	72	5655	0.727	ng	#	81
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.12	62	137	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	9.63	61	10420	No Calib		#	
40) 1-Butanol	8.81	56	2015	No Calib		#	
41) Benzene	8.91	78	10401	0.189	ng		100
42) Carbon Tetrachloride	9.08	117	889	N.D.			
43) Cyclohexane	9.22	84	2218	0.125	ng		90
44) tert-Amyl Methyl Ether	9.53	73	281	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	0.00	83	0	N.D.	d		
47) Trichloroethene	10.14	130	1388	0.087	ng		93
48) 1,4-Dioxane	10.12	88	8982	0.886	ng		83
49) 2,2,4-Trimethylpentane...	0.00	57	0	N.D.	d		
50) Methyl Methacrylate	0.00	100	0	N.D.	d		

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202425.D Vial: 14
Acq On : 20 Jun 2024 22:54 Operator: SC
Sample : P2402249-053 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:10:07 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

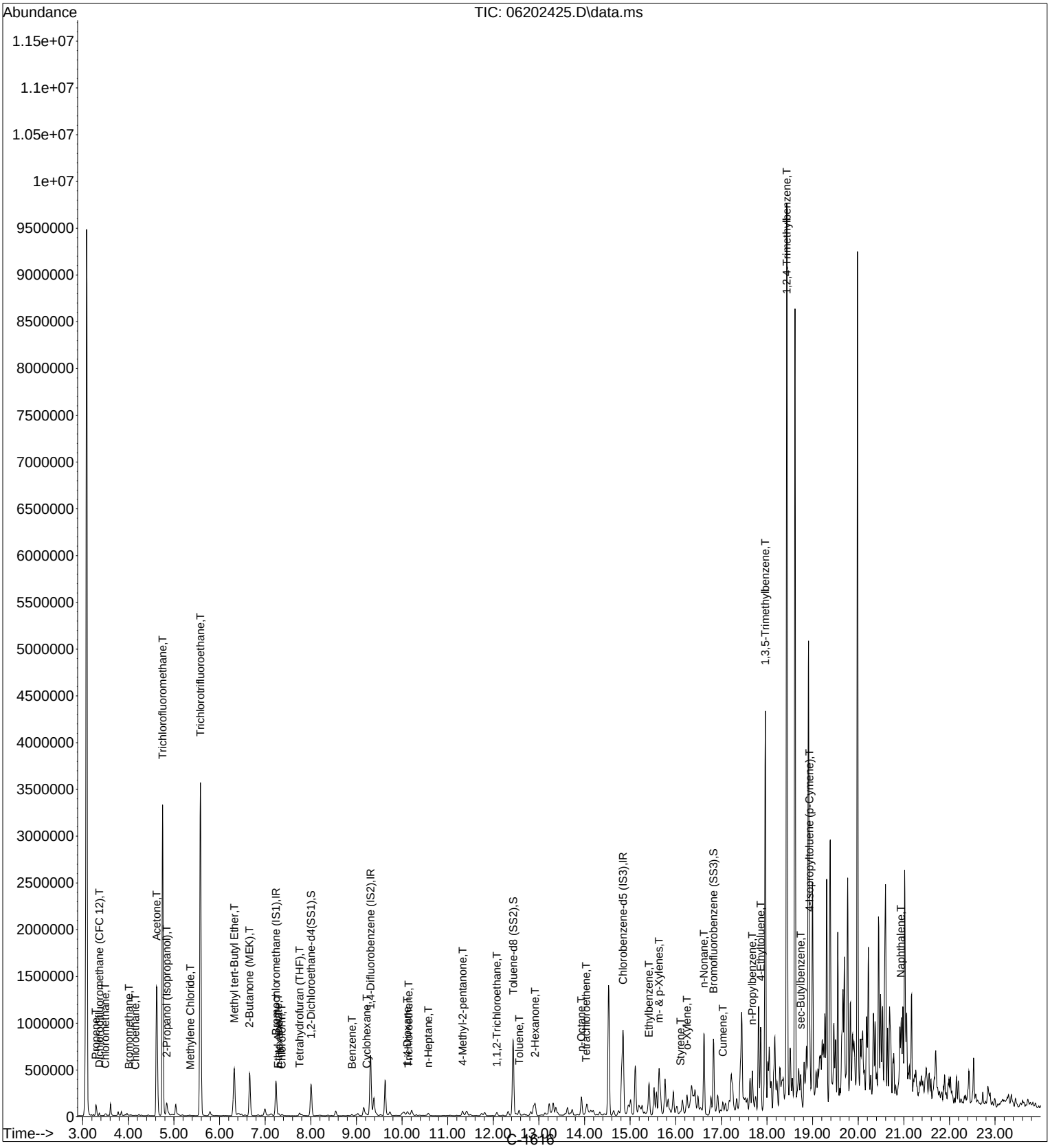
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	10.58	71	5985	0.516 ng		95
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	11.33	58	15420	1.277 ng		99
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	12.08	97	1270	0.098 ng		80
58) Toluene	12.57	91	45051	0.739 ng		97
59) 2-Hexanone	12.91	43	160242	4.195 ng		79
60) Dibromochloromethane	13.07	129	549	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	13.83	43	570	N.D.		
63) n-Octane	13.93	57	22346	1.768 ng		90
64) Tetrachloroethene	14.03	166	7919	0.378 ng		97
65) Chlorobenzene	14.89	112	1134	N.D.		
66) Ethylbenzene	15.41	91	105860	1.519 ng		99
67) m- & p-Xylenes	15.63	91	441036	7.524 ng		98
68) Bromoform	15.68	173	815	N.D.		
69) Styrene	16.11	104	10400	0.263 ng		96
70) o-Xylene	16.25	91	92805	1.605 ng		98
71) n-Nonane	16.62	43	385194	11.464 ng		99
72) 1,1,2,2-Tetrachloroethane	0.00	83	0	N.D. d		
74) Cumene	17.03	105	79700	1.104 ng		99
75) alpha-Pinene	0.00	93	0	N.D. d		
76) n-Propylbenzene	17.68	91	192525	2.210 ng		99
77) 3-Ethyltoluene	17.03	105	79700	No Calib		
78) 4-Ethyltoluene	17.86	105	400393	5.819 ng		99
79) 1,3,5-Trimethylbenzene	17.96	105	2026413	33.713 ng		100
80) alpha-Methylstyrene	17.04	118	124	No Calib	#	
81) 2-Ethyltoluene	17.03	105	79700	No Calib		
82) 1,2,4-Trimethylbenzene	18.43	105	4717989	74.456 ng		90
83) n-Decane	17.09	58	8575	No Calib	#	
84) Benzyl Chloride	0.00	91	0	N.D. d		
85) 1,3-Dichlorobenzene	18.57	146	713	N.D.		
86) 1,4-Dichlorobenzene	18.66	146	1202	N.D.		
87) sec-Butylbenzene	18.74	105	110552	1.379 ng		99
88) 4-Isopropyltoluene (p-...	18.93	119	486035	6.743 ng	#	46
89) 1,2,3-Trimethylbenzene	17.03	105	79700	No Calib		
90) 1,2-Dichlorobenzene	19.04	146	658	N.D.		
91) d-Limonene	0.00	68	0	N.D. d		
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	17.86	58	9836	No Calib	#	
94) 1,2,4-Trichlorobenzene	20.84	180	1308	N.D.		
95) Naphthalene	20.94	128	279129	3.437 ng		82
96) n-Dodecane	18.91	58	50845	No Calib	#	
97) Hexachlorobutadiene	21.30	225	700	N.D.		
98) Cyclohexanone	15.41	55	87491	No Calib	#	
99) tert-Butylbenzene	0.00	119	0	N.D. d		
100) n-Butylbenzene	0.00	91	0	N.D. d		
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202425.D Vial: 14
Acq On : 20 Jun 2024 22:54 Operator: SC
Sample : P2402249-053 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:10:07 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



C-1618

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202425.D Vial: 14
Acq On : 20 Jun 2024 22:54 Operator: SC
Sample : P2402249-053 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/29/24

Quant Time: Jun 29 10:10:07 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

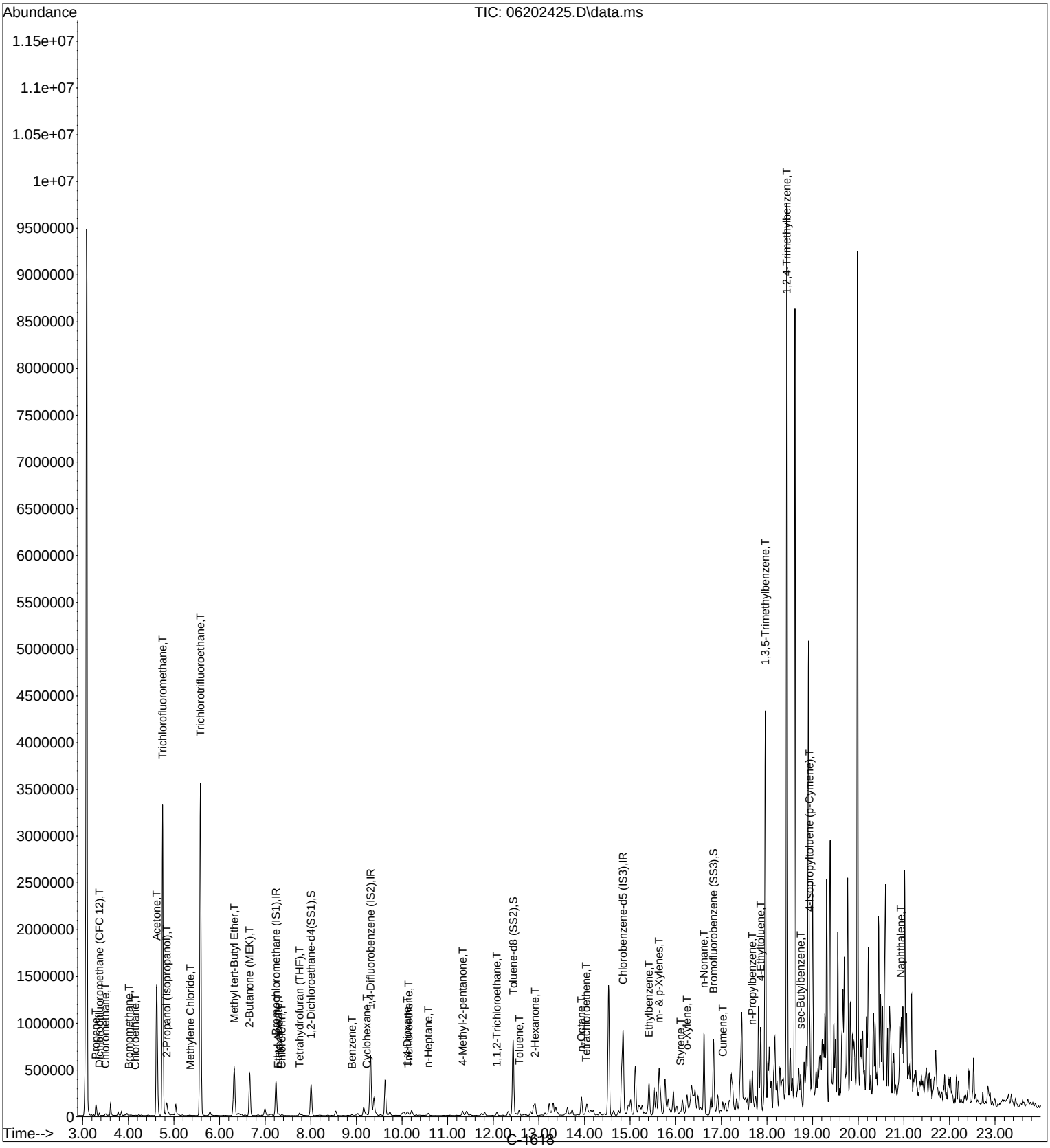
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.24	130	138785	12.500	ng		0.01
37) 1,4-Difluorobenzene (IS2)	9.31	114	595220	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.85	54	152376	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	311247	12.618	ng		0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.96%				
57) Toluene-d8 (SS2)	12.44	98	671818	11.521	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 92.16%				
73) Bromofluorobenzene (SS3)	16.83	174	272018	12.919	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.36%				
Target Compounds							Qvalue
2) Propene	3.28	42	27591	1.553	ng	#	77
3) Dichlorodifluoromethan...	3.36	85	16445m	0.503	ng		
4) Chloromethane	3.49	50	7735	0.346	ng		97
8) Bromomethane	4.01	94	1482	0.131	ng		93
9) Chloroethane	4.15	64	836	0.094	ng		70
13) Acetone	4.62	58	434649	40.315	ng		94
14) Trichlorofluoromethane	4.75	101	2333189	70.616	ng		100
15) 2-Propanol (Isopropanol)	4.84	45	258800	5.957	ng		92
19) Methylene Chloride	5.36	84	1485	0.097	ng		93
21) Trichlorotrifluoroethane	5.58	151	1157333	82.802	ng		99
25) Methyl tert-Butyl Ether	6.32	73	7218	0.200	ng		64
27) 2-Butanone (MEK)	6.66	72	123378	14.461	ng		96
30) Ethyl Acetate	7.28	61	675	0.130	ng		87
31) n-Hexane	7.30	57	5864	0.257	ng		99
32) Chloroform	7.36	83	9883	0.363	ng		97
34) Tetrahydrofuran (THF)	7.75	72	5655	0.727	ng	#	81
41) Benzene	8.91	78	10401	0.189	ng		100
43) Cyclohexane	9.22	84	2218	0.125	ng		90
47) Trichloroethene	10.14	130	1388	0.087	ng		93
48) 1,4-Dioxane	10.12	88	8982	0.886	ng		83
51) n-Heptane	10.58	71	5985	0.516	ng		95
53) 4-Methyl-2-pentanone	11.33	58	15420	1.277	ng		99
55) 1,1,2-Trichloroethane	12.08	97	1270	0.098	ng		80
58) Toluene	12.57	91	45051	0.739	ng		97
59) 2-Hexanone	12.91	43	160242	4.195	ng		79
63) n-Octane	13.93	57	22346	1.768	ng		90
64) Tetrachloroethene	14.03	166	7919	0.378	ng		97
66) Ethylbenzene	15.41	91	105860	1.519	ng		99
67) m- & p-Xylenes	15.63	91	441036	7.524	ng		98
69) Styrene	16.11	104	10400	0.263	ng		96
70) o-Xylene	16.25	91	92805	1.605	ng		98
71) n-Nonane	16.62	43	385194	11.464	ng		99
74) Cumene	17.03	105	79700	1.104	ng		99
76) n-Propylbenzene	17.68	91	192525	2.210	ng		99
78) 4-Ethyltoluene	17.86	105	400393	5.819	ng		99
79) 1,3,5-Trimethylbenzene	17.96	105	2026413	33.713	ng		100
82) 1,2,4-Trimethylbenzene	18.43	105	4717989	74.456	ng		90
87) sec-Butylbenzene	18.74	105	110552	1.379	ng		99
88) 4-Isopropyltoluene (p-...	18.93	119	486035	6.743	ng	#	46
95) Naphthalene	20.94	128	279129	3.437	ng		82

(#) = qualifier out of range (m) = manual integration (+) = signals summed

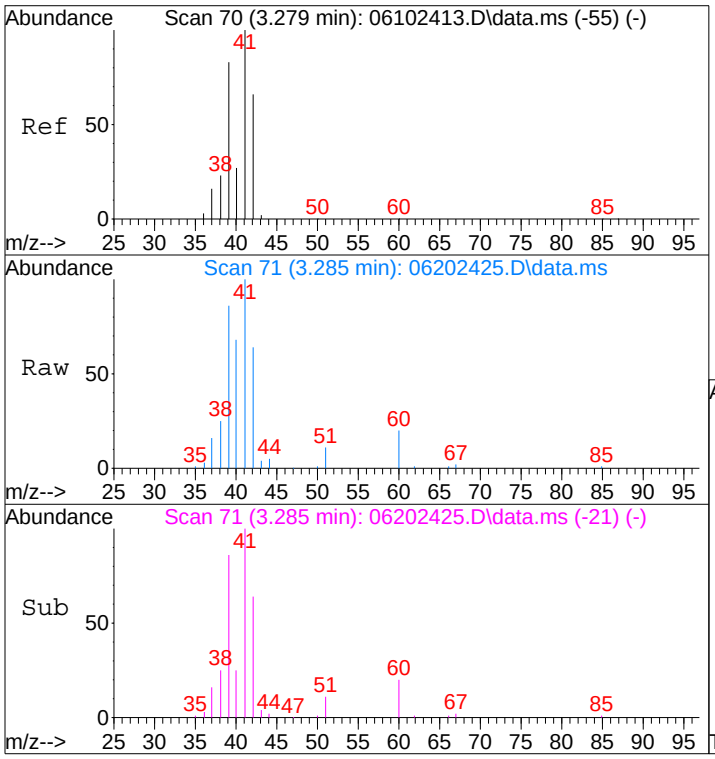
Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202425.D Vial: 14
Acq On : 20 Jun 2024 22:54 Operator: SC
Sample : P2402249-053 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:10:07 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



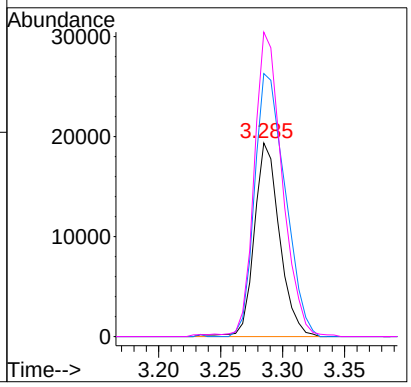
C-1618

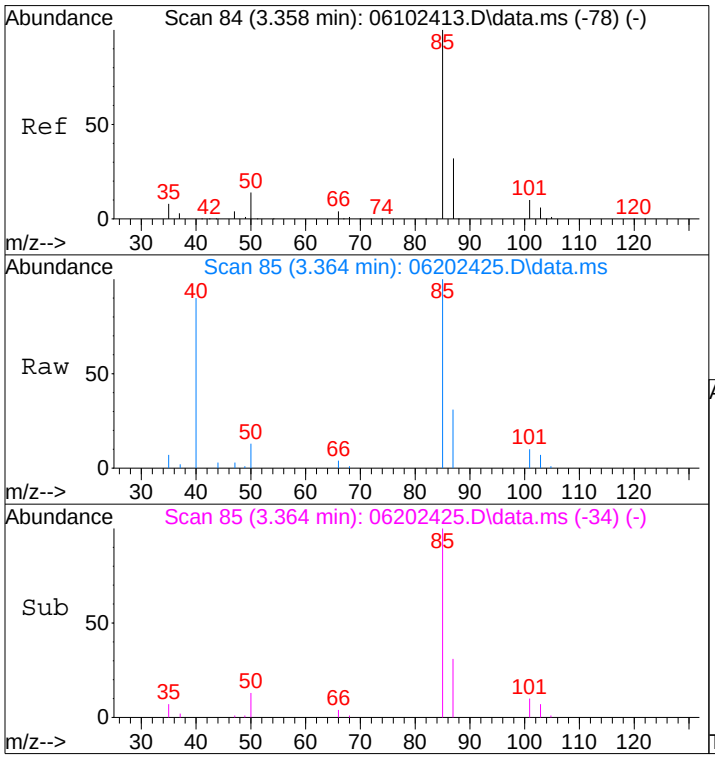


#2
Propene
Concen: 1.55 ng
RT: 3.28 min Scan# 71
Delta R.T. 0.036 min
Lab File: 06202425.D
Acq: 20 Jun 2024 22:54

Tgt Ion: 42 Resp: 27591

Ion	Ratio	Lower	Upper
42	100		
39	163.7	107.3	147.3#
41	173.9	134.3	174.3

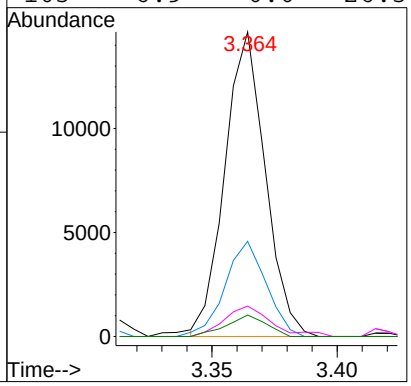


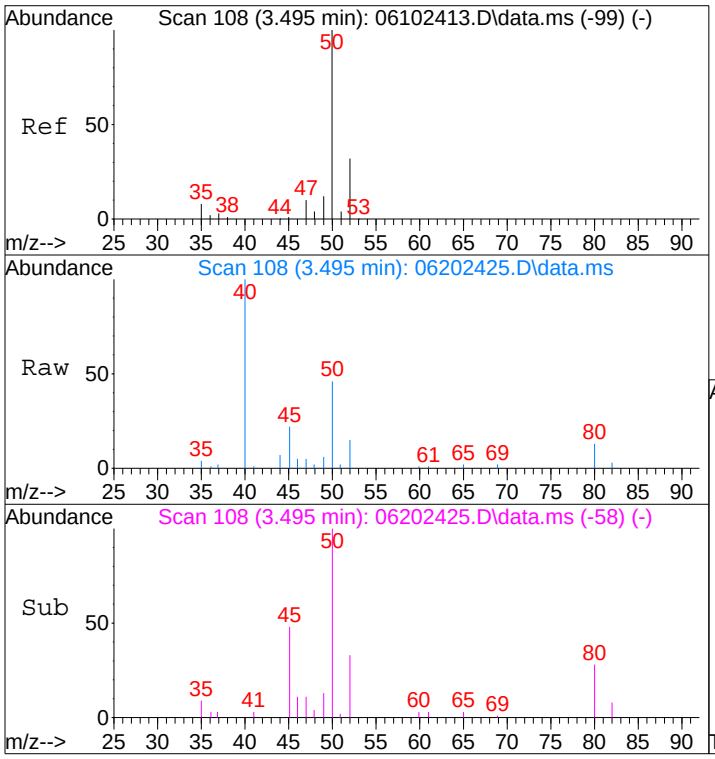


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.50 ng m
RT: 3.36 min Scan# 85
Delta R.T. 0.042 min
Lab File: 06202425.D
Acq: 20 Jun 2024 22:54

Tgt Ion: 85 Resp: 16445

Ion	Ratio	Lower	Upper
85	100		
87	31.8	12.2	52.2
101	10.8	0.0	29.8
103	6.9	0.0	26.3

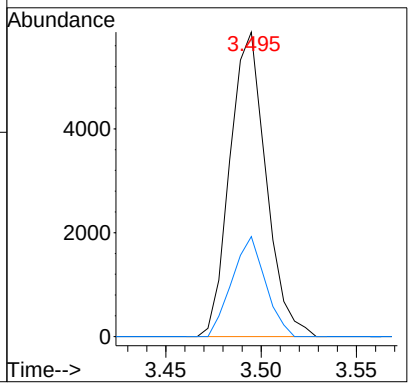


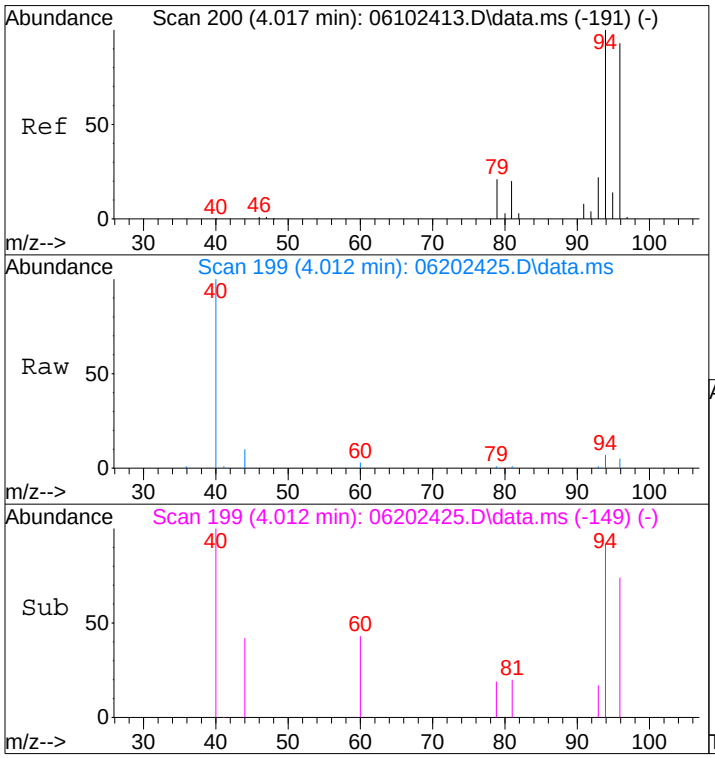


#4
Chloromethane
Concen: 0.35 ng
RT: 3.49 min Scan# 108
Delta R.T. 0.032 min
Lab File: 06202425.D
Acq: 20 Jun 2024 22:54

Tgt Ion: 50 Resp: 7735

Ion	Ratio	Lower	Upper
50	100		
52	30.4	12.4	52.4

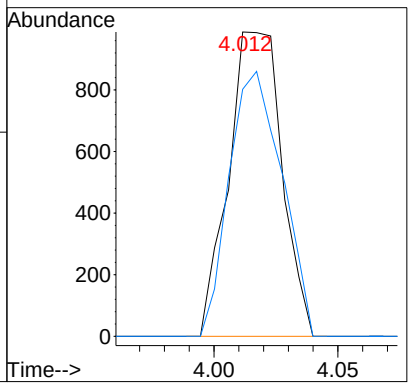


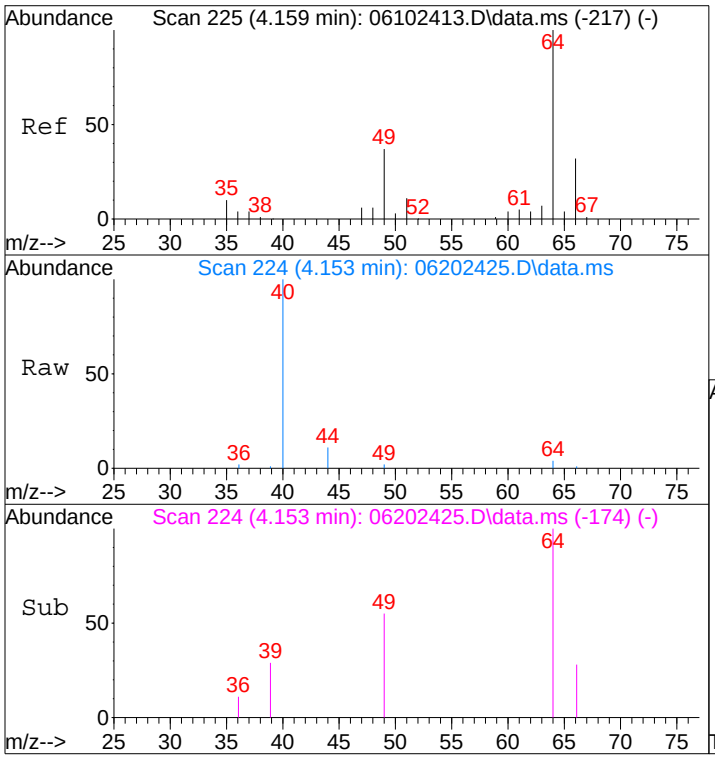


#8
Bromomethane
Concen: 0.13 ng
RT: 4.01 min Scan# 199
Delta R.T. 0.032 min
Lab File: 06202425.D
Acq: 20 Jun 2024 22:54

Tgt Ion: 94 Resp: 1482

Ion	Ratio	Lower	Upper
94	100		
96	86.4	73.2	113.2

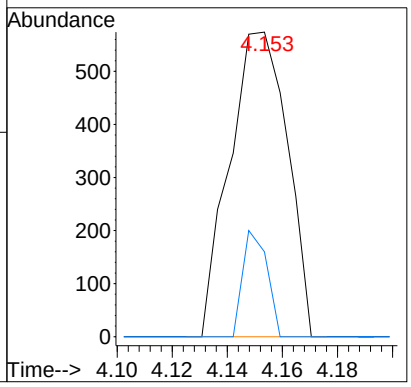


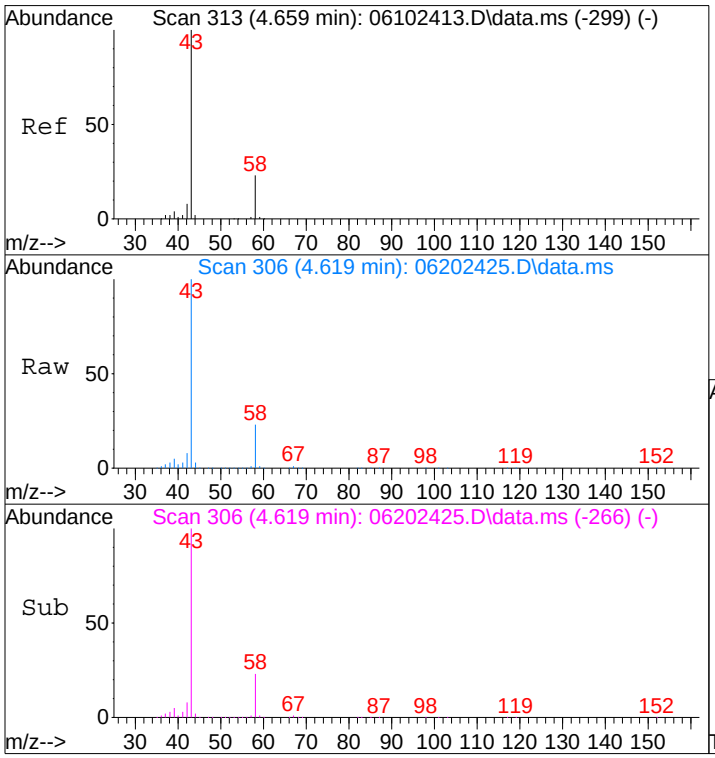


#9
Chloroethane
Concen: 0.09 ng
RT: 4.15 min Scan# 224
Delta R.T. 0.034 min
Lab File: 06202425.D
Acq: 20 Jun 2024 22:54

Tgt Ion: 64 Resp: 836

Ion	Ratio	Lower	Upper
64	100		
66	14.7	11.4	51.4

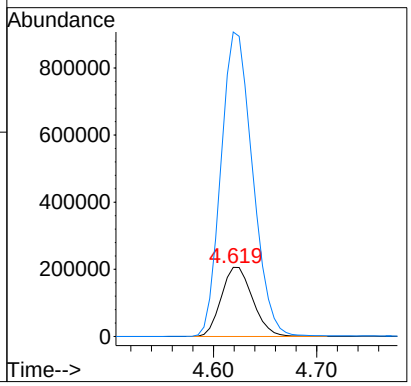


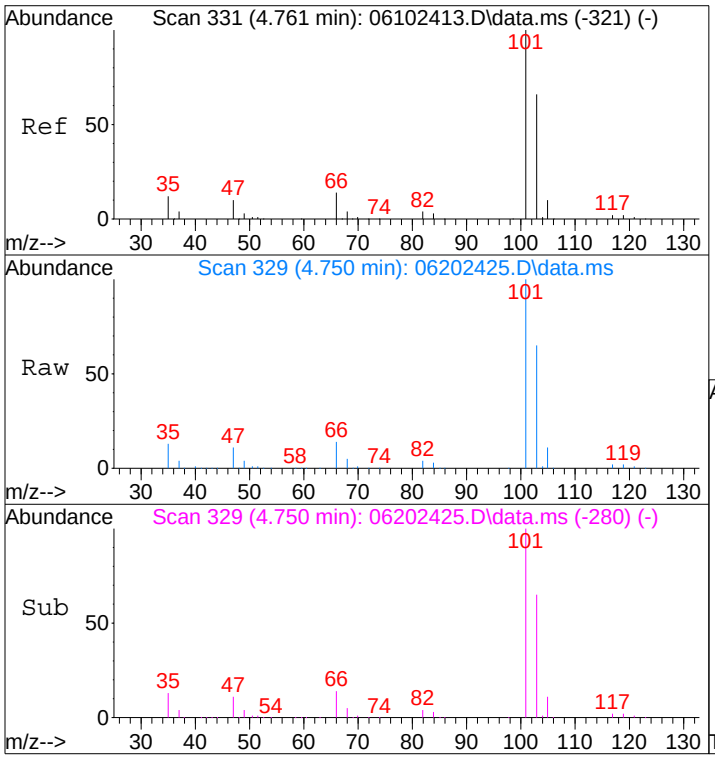


#13
Acetone
Concen: 40.31 ng
RT: 4.62 min Scan# 306
Delta R.T. -0.023 min
Lab File: 06202425.D
Acq: 20 Jun 2024 22:54

Tgt Ion: 58 Resp: 434649

Ion	Ratio	Lower	Upper
58	100		
43	446.0	400.7	460.7

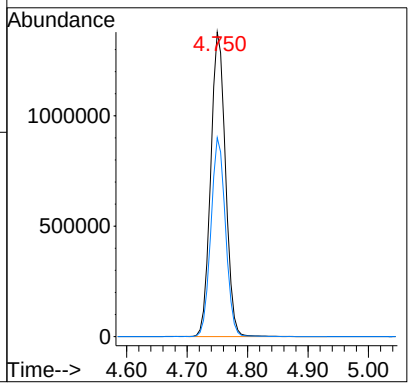


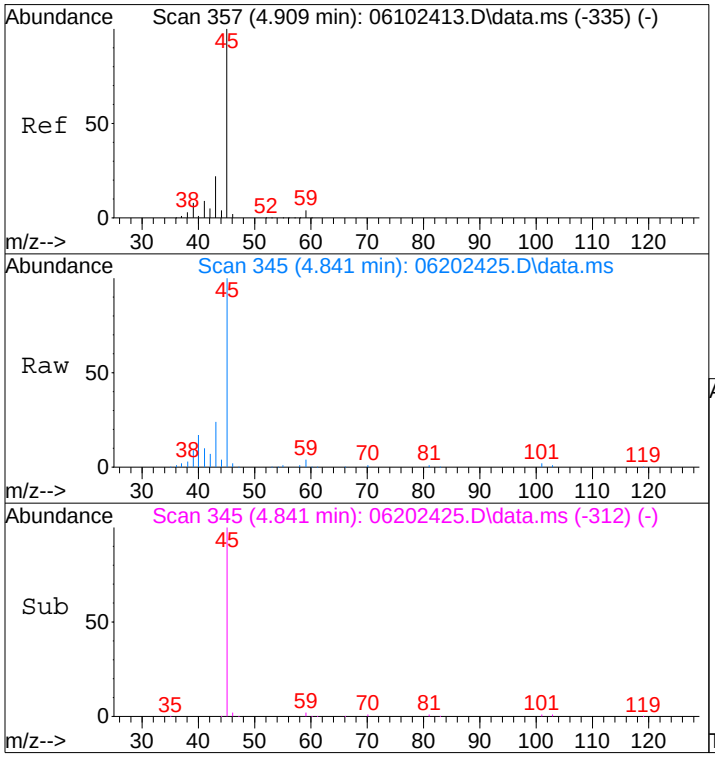


#14
Trichlorofluoromethane
Concen: 70.62 ng
RT: 4.75 min Scan# 329
Delta R.T. 0.029 min
Lab File: 06202425.D
Acq: 20 Jun 2024 22:54

Tgt Ion:101 Resp: 2333189

Ion	Ratio	Lower	Upper
101	100		
103	64.7	44.9	84.9

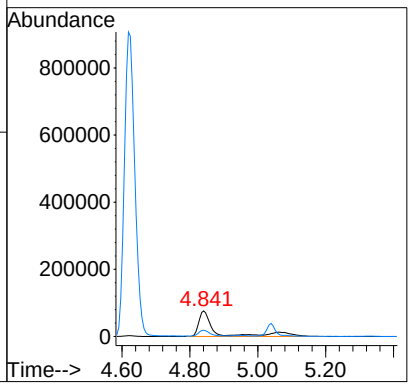


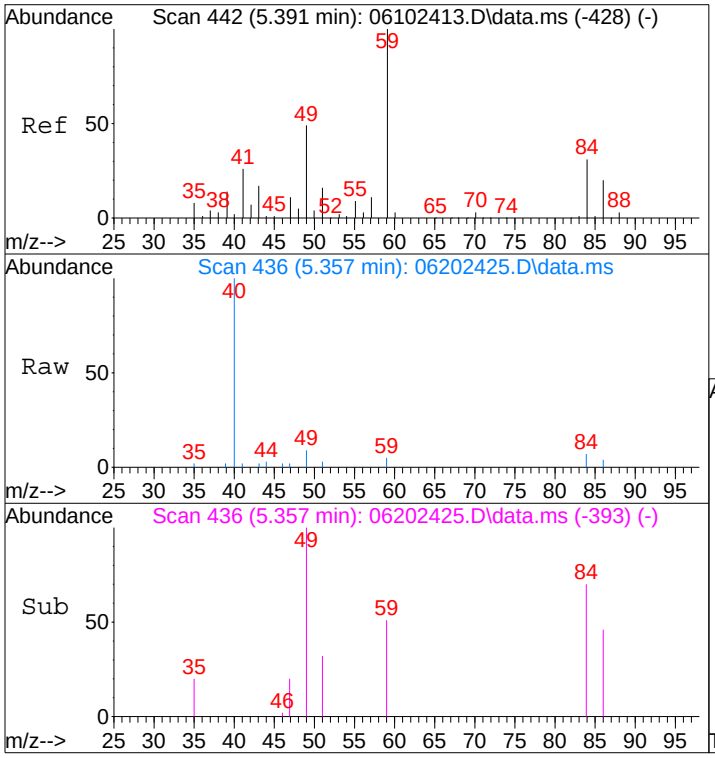


#15
2-Propanol (Isopropanol)
Concen: 5.96 ng
RT: 4.84 min Scan# 345
Delta R.T. -0.060 min
Lab File: 06202425.D
Acq: 20 Jun 2024 22:54

Tgt Ion: 45 Resp: 258800

Ion	Ratio	Lower	Upper
45	100		
43	18.5	2.5	42.5

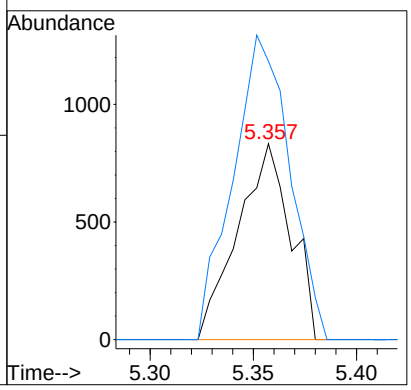


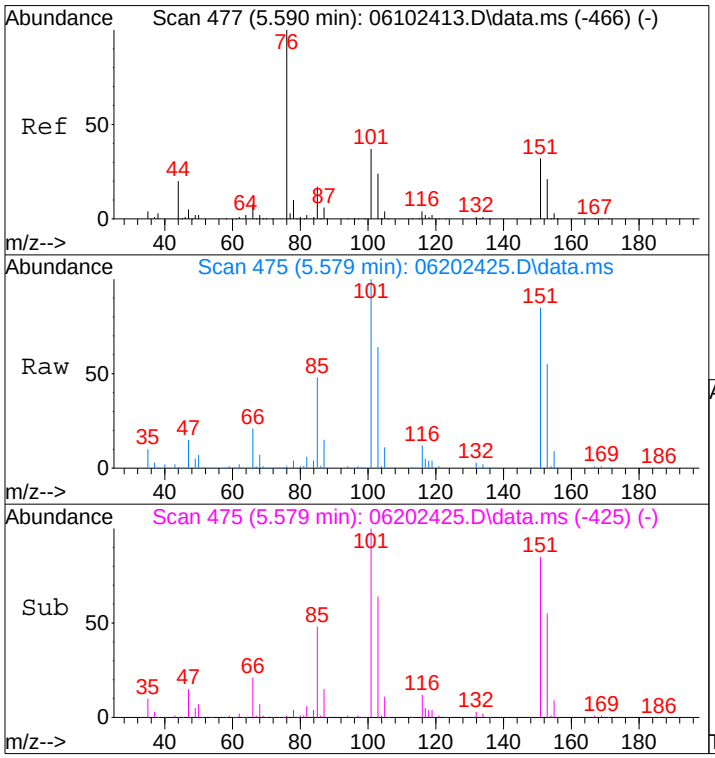


#19
Methylene Chloride
Concen: 0.10 ng
RT: 5.36 min Scan# 436
Delta R.T. -0.004 min
Lab File: 06202425.D
Acq: 20 Jun 2024 22:54

Tgt Ion: 84 Resp: 1485

Ion	Ratio	Lower	Upper
84	100		
49	166.6	132.9	182.9

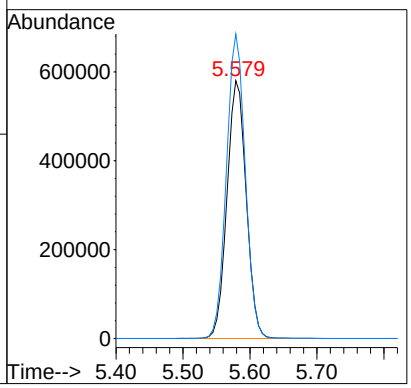


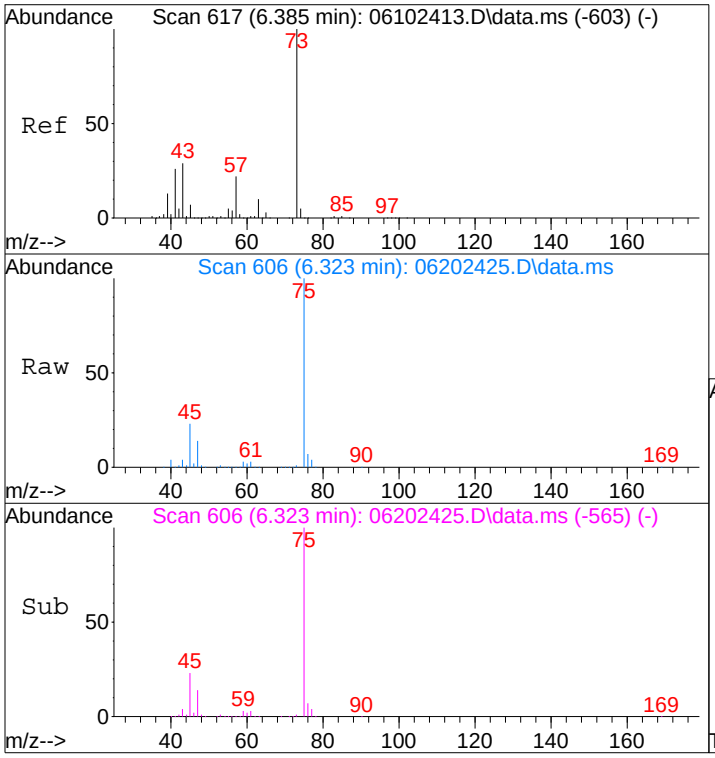


#21
Trichlorotrifluoroethane
Concen: 82.80 ng
RT: 5.58 min Scan# 475
Delta R.T. 0.032 min
Lab File: 06202425.D
Acq: 20 Jun 2024 22:54

Tgt Ion:151 Resp: 1157333

Ion	Ratio	Lower	Upper
151	100		
101	116.0	95.0	135.0

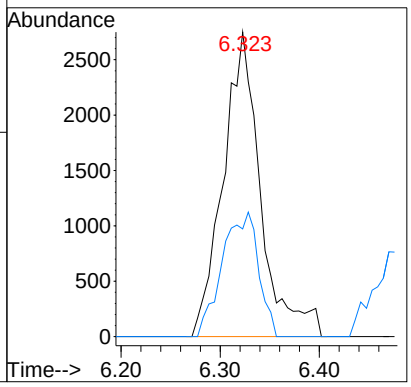


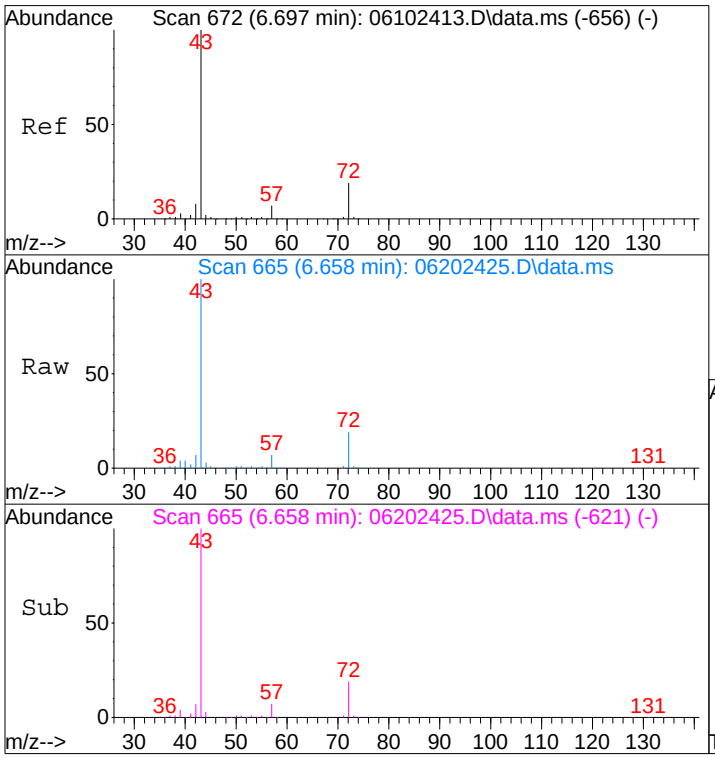


#25
Methyl tert-Butyl Ether
Concen: 0.20 ng
RT: 6.32 min Scan# 606
Delta R.T. -0.016 min
Lab File: 06202425.D
Acq: 20 Jun 2024 22:54

Tgt Ion: 73 Resp: 7218

Ion	Ratio	Lower	Upper
73	100		
57	39.4	2.3	42.3

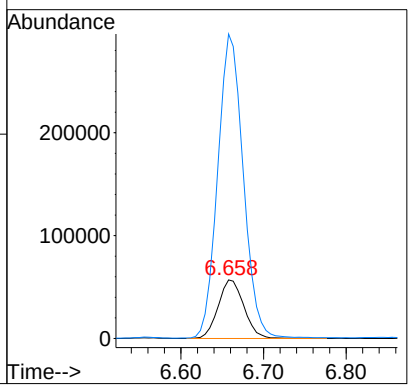


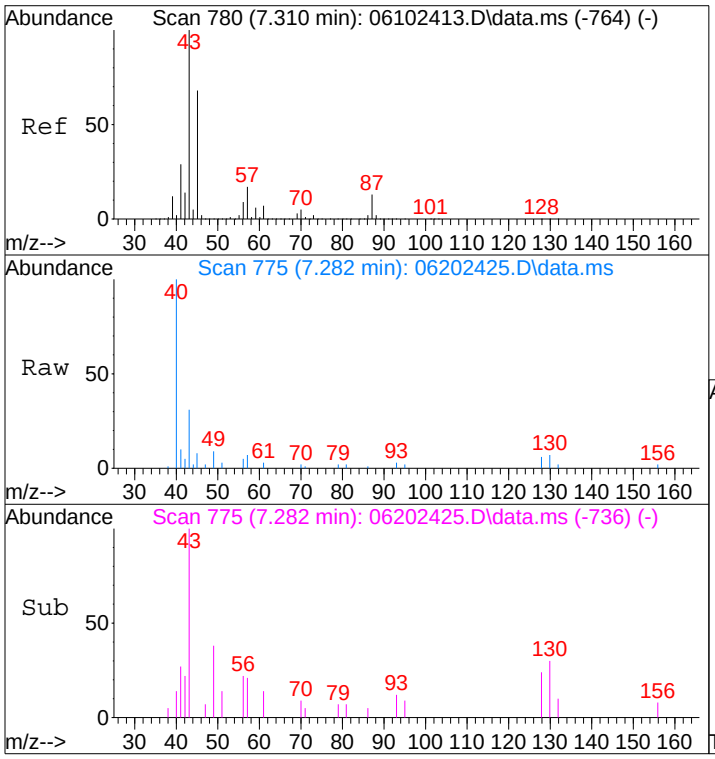


#27
2-Butanone (MEK)
Concen: 14.46 ng
RT: 6.66 min Scan# 665
Delta R.T. -0.001 min
Lab File: 06202425.D
Acq: 20 Jun 2024 22:54

Tgt Ion: 72 Resp: 123378

Ion	Ratio	Lower	Upper
72	100		
43	516.4	506.8	546.8

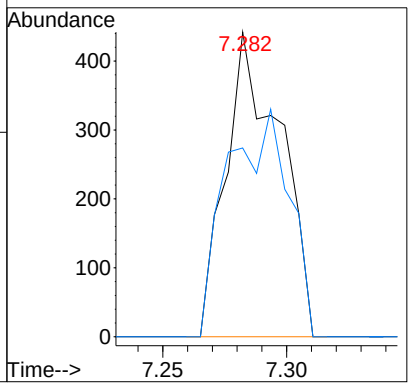


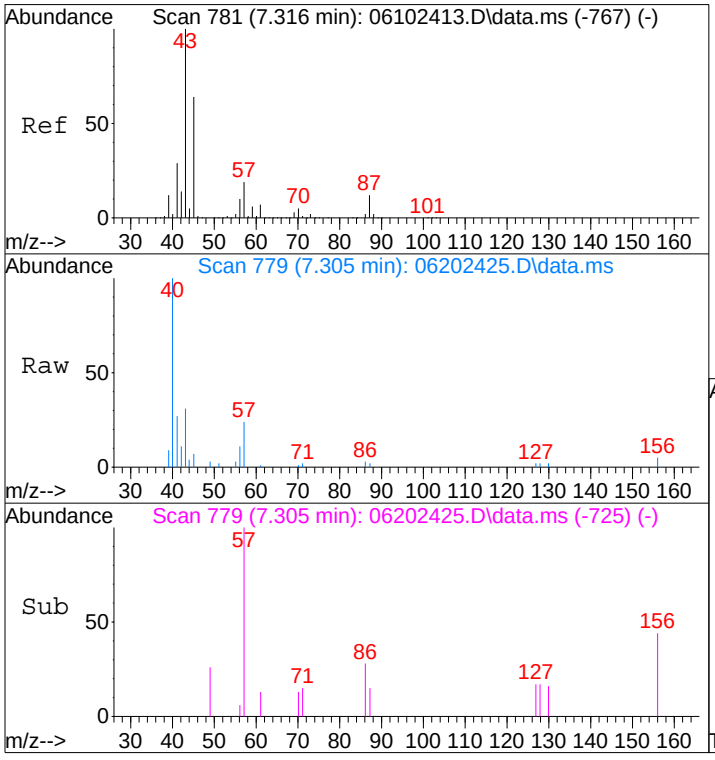


#30
Ethyl Acetate
Concen: 0.13 ng
RT: 7.28 min Scan# 775
Delta R.T. 0.023 min
Lab File: 06202425.D
Acq: 20 Jun 2024 22:54

Tgt Ion: 61 Resp: 675

Ion	Ratio	Lower	Upper
61	100		
70	84.7	53.5	93.5

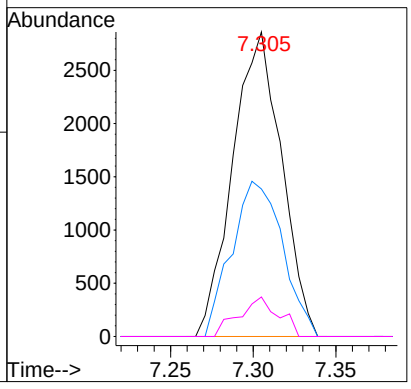


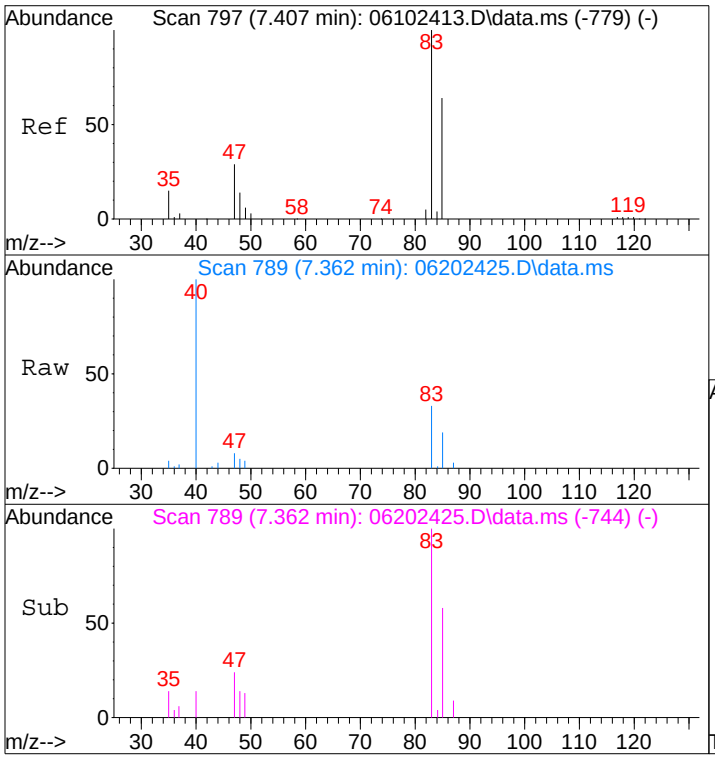


#31
n-Hexane
Concen: 0.26 ng
RT: 7.30 min Scan# 779
Delta R.T. 0.057 min
Lab File: 06202425.D
Acq: 20 Jun 2024 22:54

Tgt Ion: 57 Resp: 5864

Ion	Ratio	Lower	Upper
57	100		
56	53.3	42.5	63.7
86	10.5	9.5	14.3

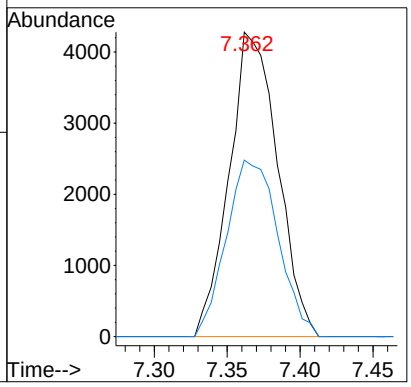


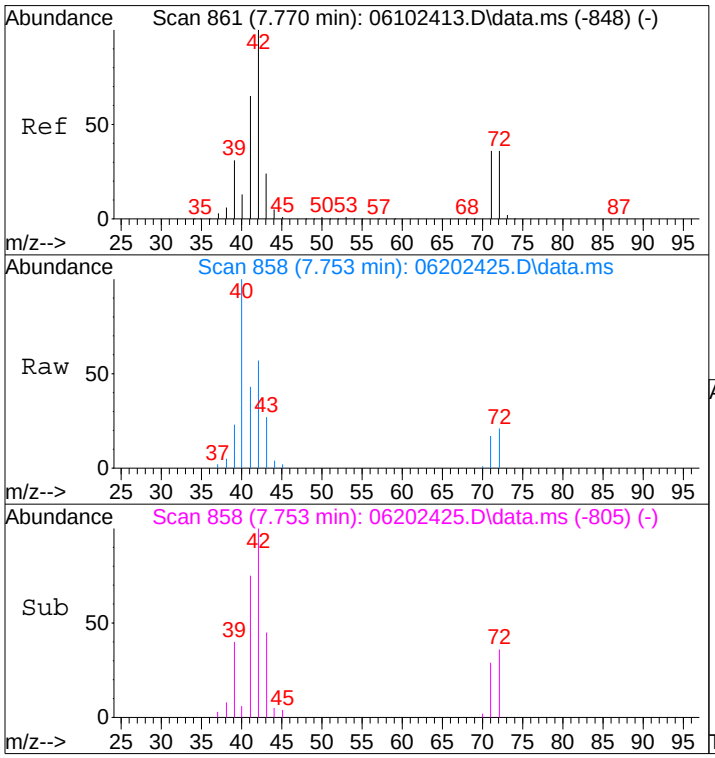


#32
Chloroform
Concen: 0.36 ng
RT: 7.36 min Scan# 789
Delta R.T. 0.007 min
Lab File: 06202425.D
Acq: 20 Jun 2024 22:54

Tgt Ion: 83 Resp: 9883

Ion	Ratio	Lower	Upper
83	100		
85	62.0	44.4	84.4

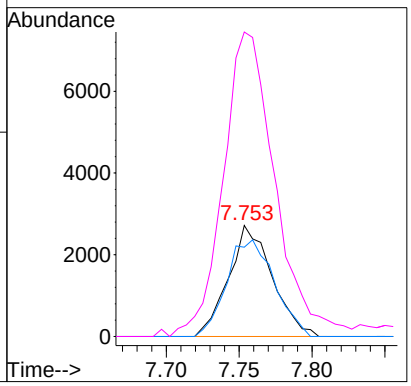


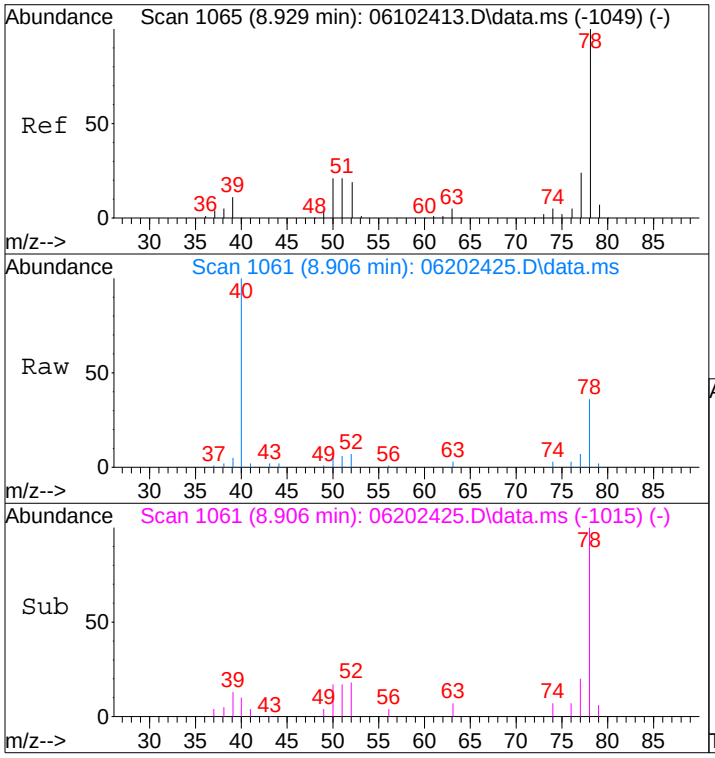


#34
Tetrahydrofuran (THF)
Concen: 0.73 ng
RT: 7.75 min Scan# 858
Delta R.T. 0.050 min
Lab File: 06202425.D
Acq: 20 Jun 2024 22:54

Tgt Ion: 72 Resp: 5655

Ion	Ratio	Lower	Upper
72	100		
71	95.3	79.4	119.4
42	326.5	260.8	300.8#

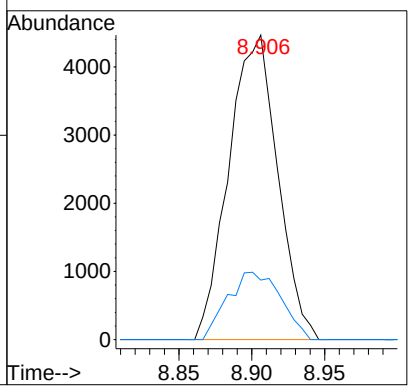


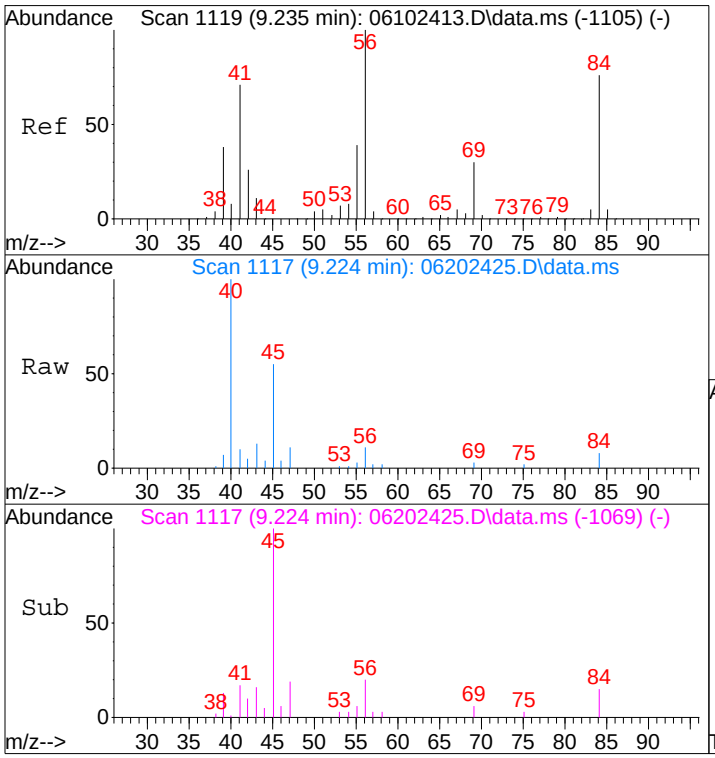


#41
Benzene
Concen: 0.19 ng
RT: 8.91 min Scan# 1061
Delta R.T. 0.009 min
Lab File: 06202425.D
Acq: 20 Jun 2024 22:54

Tgt Ion: 78 Resp: 10401

Ion	Ratio	Lower	Upper
78	100		
77	24.1	4.0	44.0

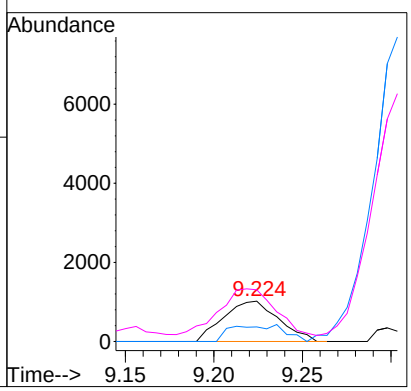


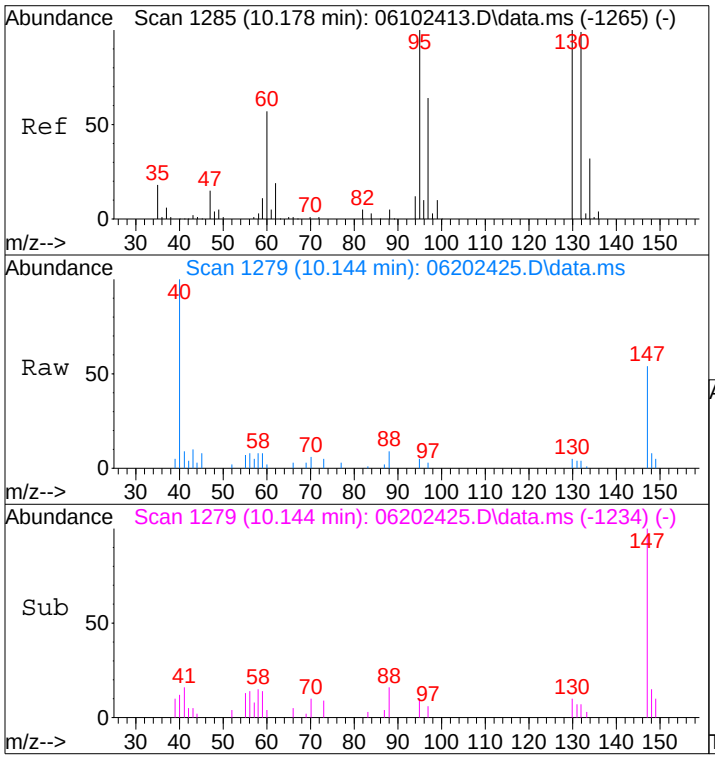


#43
Cyclohexane
Concen: 0.12 ng
RT: 9.22 min Scan# 1117
Delta R.T. 0.022 min
Lab File: 06202425.D
Acq: 20 Jun 2024 22:54

Tgt Ion: 84 Resp: 2218

Ion	Ratio	Lower	Upper
84	100		
69	39.0	18.8	58.8
56	116.5	111.5	151.5

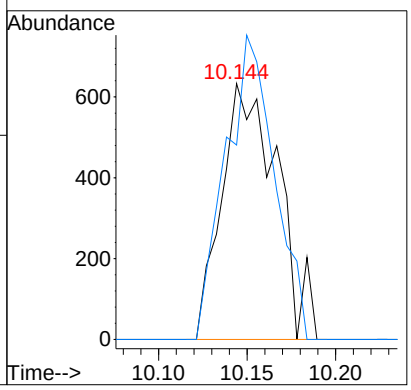


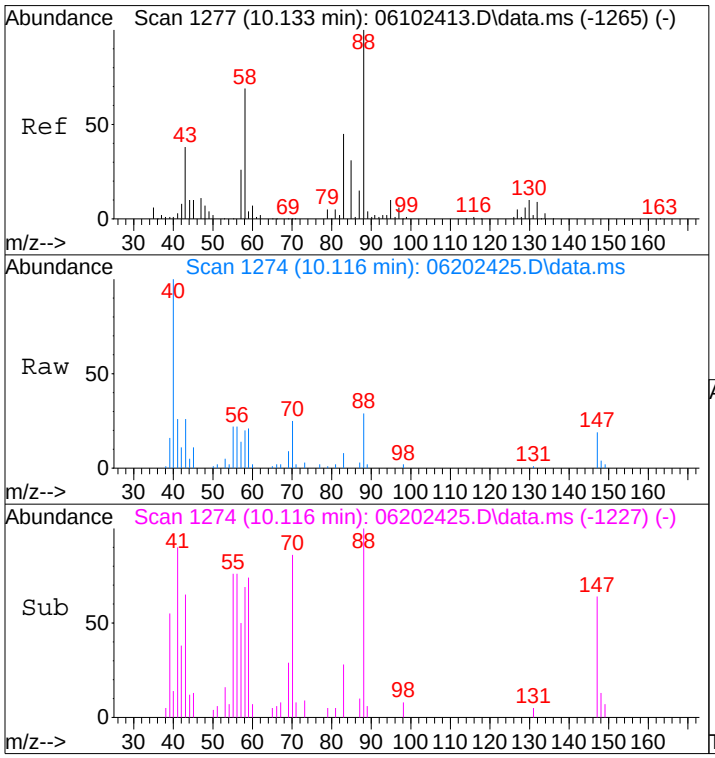


#47
Trichloroethene
Concen: 0.09 ng
RT: 10.14 min Scan# 1279
Delta R.T. 0.004 min
Lab File: 06202425.D
Acq: 20 Jun 2024 22:54

Tgt Ion:130 Resp: 1388

Ion	Ratio	Lower	Upper
130	100		
132	104.3	77.9	117.9

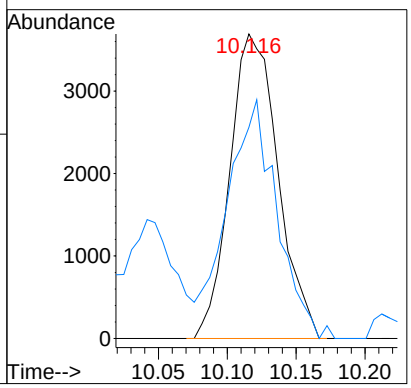


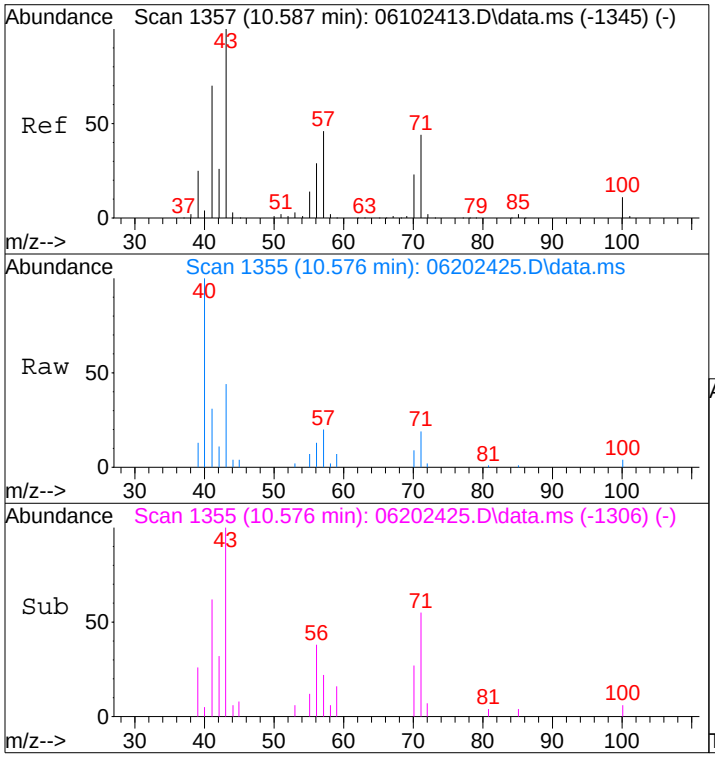


#48
1,4-Dioxane
Concen: 0.89 ng
RT: 10.12 min Scan# 1274
Delta R.T. 0.016 min
Lab File: 06202425.D
Acq: 20 Jun 2024 22:54

Tgt Ion: 88 Resp: 8982

Ion	Ratio	Lower	Upper
88	100		
58	81.4	47.6	87.6

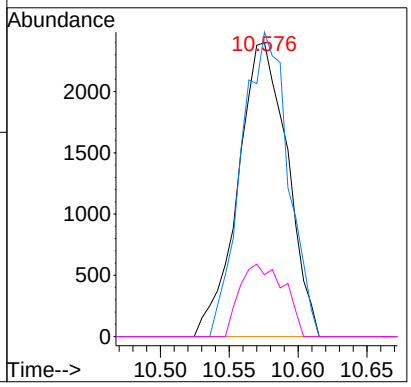


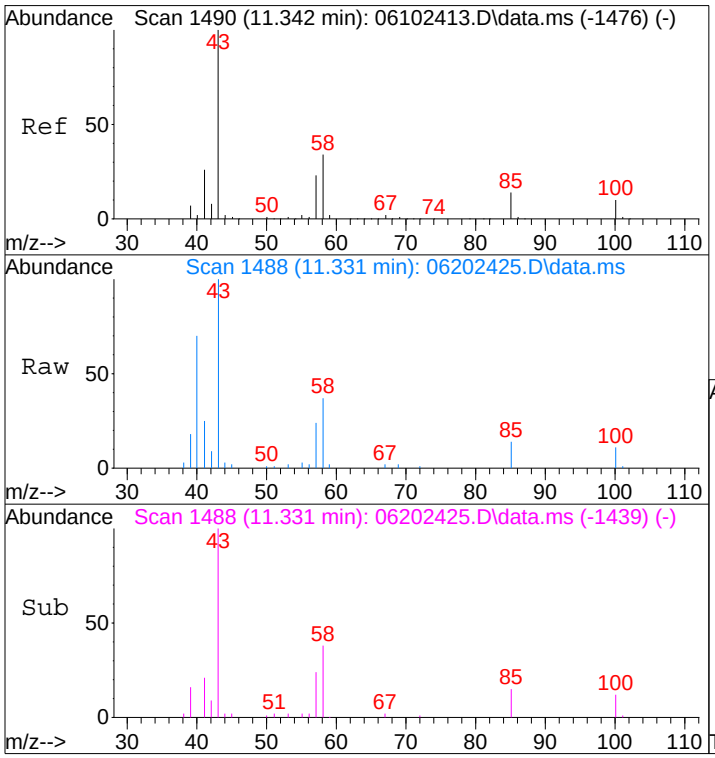


#51
n-Heptane
Concen: 0.52 ng
RT: 10.58 min Scan# 1355
Delta R.T. 0.029 min
Lab File: 06202425.D
Acq: 20 Jun 2024 22:54

Tgt Ion: 71 Resp: 5985

Ion	Ratio	Lower	Upper
71	100		
57	98.4	83.9	123.9
100	22.2	4.8	44.8

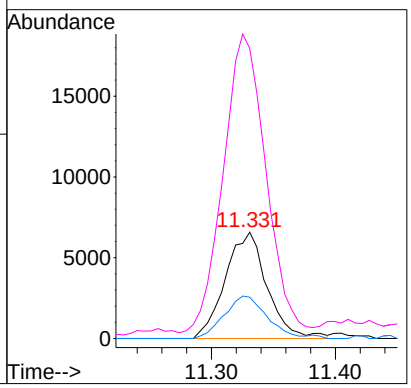


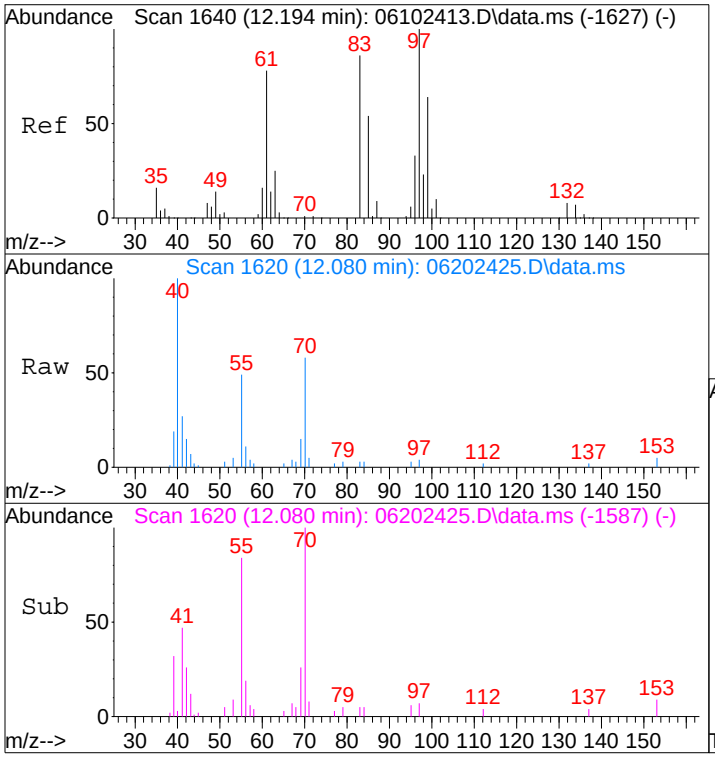


#53
4-Methyl-2-pentanone
Concen: 1.28 ng
RT: 11.33 min Scan# 1488
Delta R.T. 0.028 min
Lab File: 06202425.D
Acq: 20 Jun 2024 22:54

Tgt Ion: 58 Resp: 15420

Ion	Ratio	Lower	Upper
58	100		
85	41.4	34.5	51.7
43	297.3	236.1	354.1

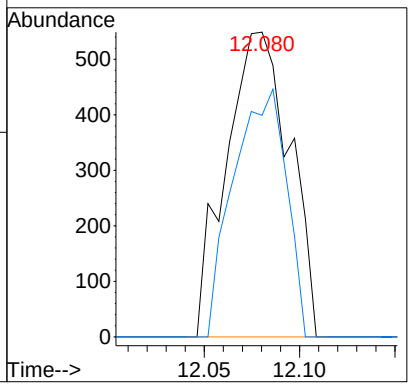


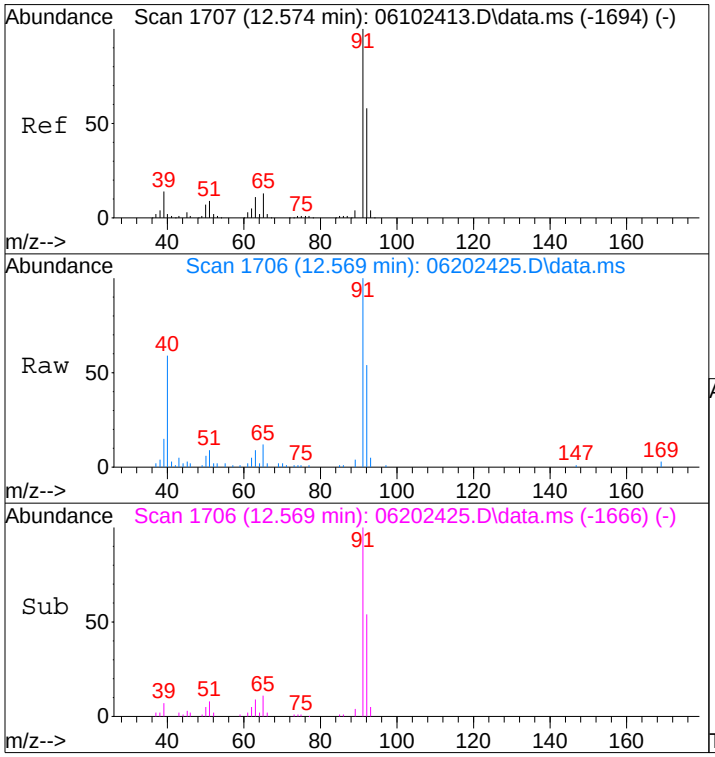


#55
1,1,2-Trichloroethane
Concen: 0.10 ng
RT: 12.08 min Scan# 1620
Delta R.T. -0.064 min
Lab File: 06202425.D
Acq: 20 Jun 2024 22:54

Tgt Ion: 97 Resp: 1270

Ion	Ratio	Lower	Upper
97	100		
83	67.6	66.3	106.3

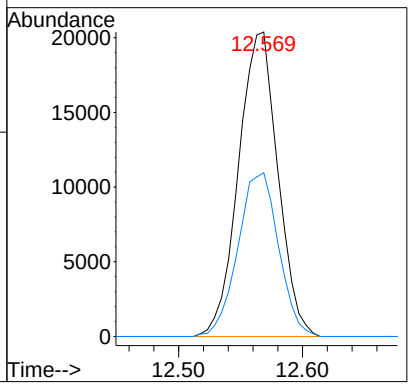


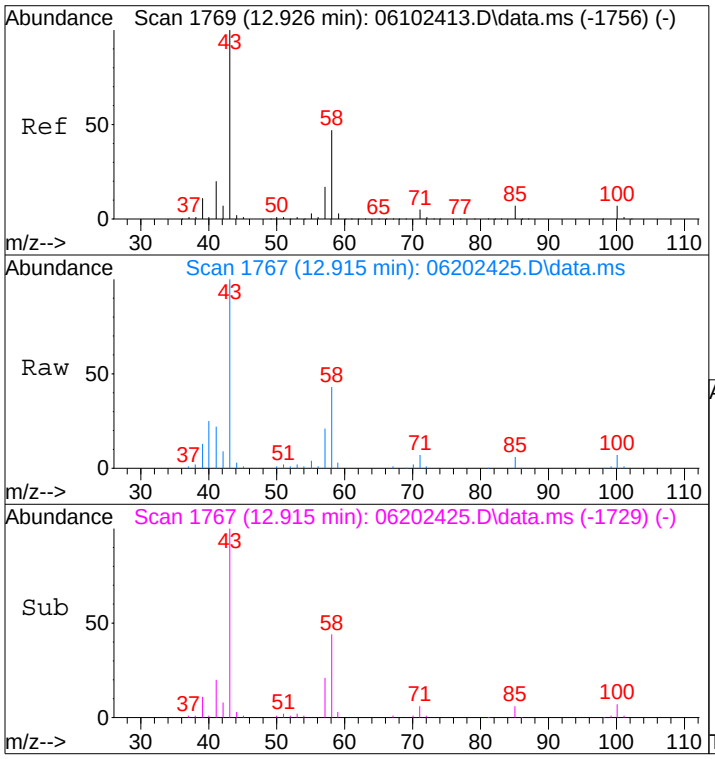


#58
Toluene
Concen: 0.74 ng
RT: 12.57 min Scan# 1706
Delta R.T. -0.023 min
Lab File: 06202425.D
Acq: 20 Jun 2024 22:54

Tgt Ion: 91 Resp: 45051

Ion	Ratio	Lower	Upper
91	100		
92	55.5	37.4	77.4

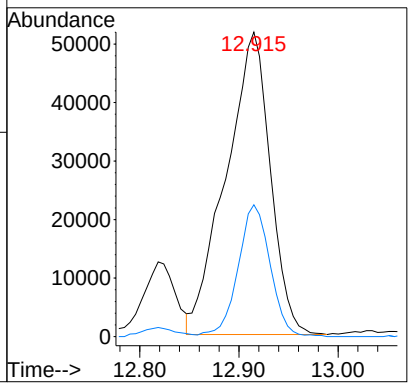


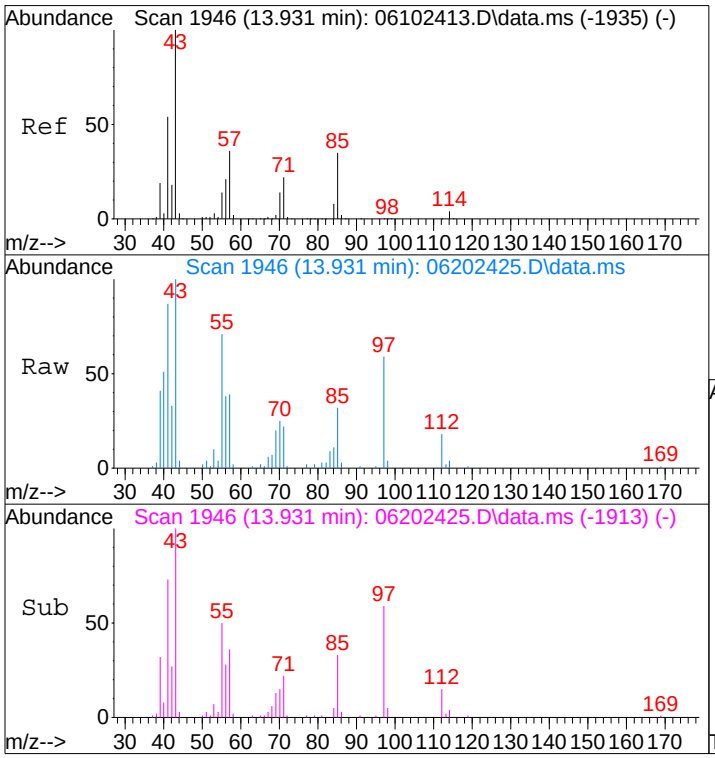


#59
2-Hexanone
Concen: 4.19 ng
RT: 12.91 min Scan# 1767
Delta R.T. -0.034 min
Lab File: 06202425.D
Acq: 20 Jun 2024 22:54

Tgt Ion: 43 Resp: 160242

Ion	Ratio	Lower	Upper
43	100		
58	31.7	25.9	65.9

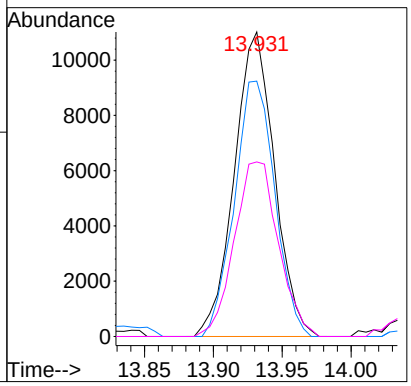


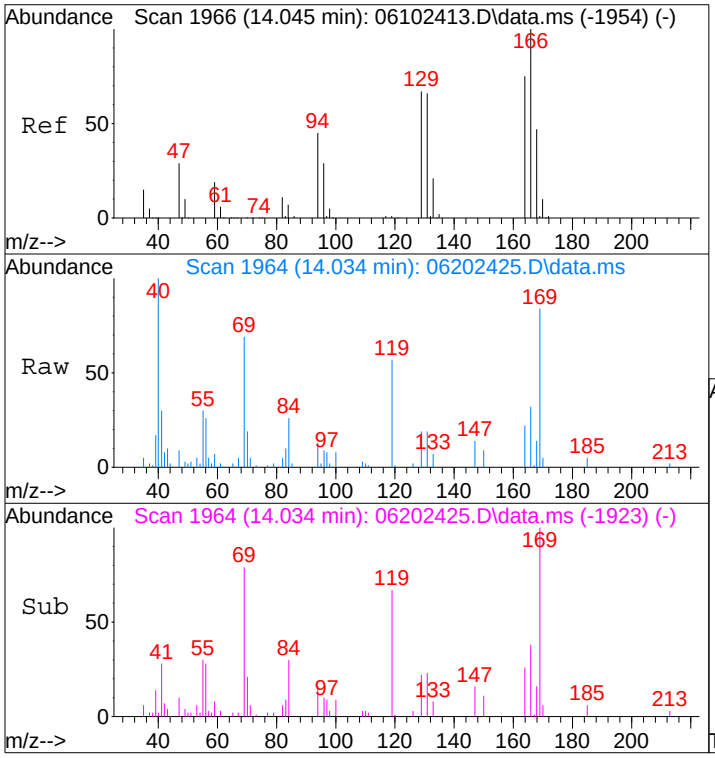


#63
n-Octane
Concen: 1.77 ng
RT: 13.93 min Scan# 1946
Delta R.T. -0.011 min
Lab File: 06202425.D
Acq: 20 Jun 2024 22:54

Tgt Ion: 57 Resp: 22346

Ion	Ratio	Lower	Upper
57	100		
85	84.6	79.8	119.6
71	62.8	49.0	73.4

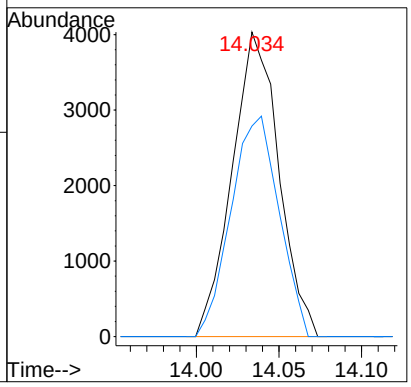


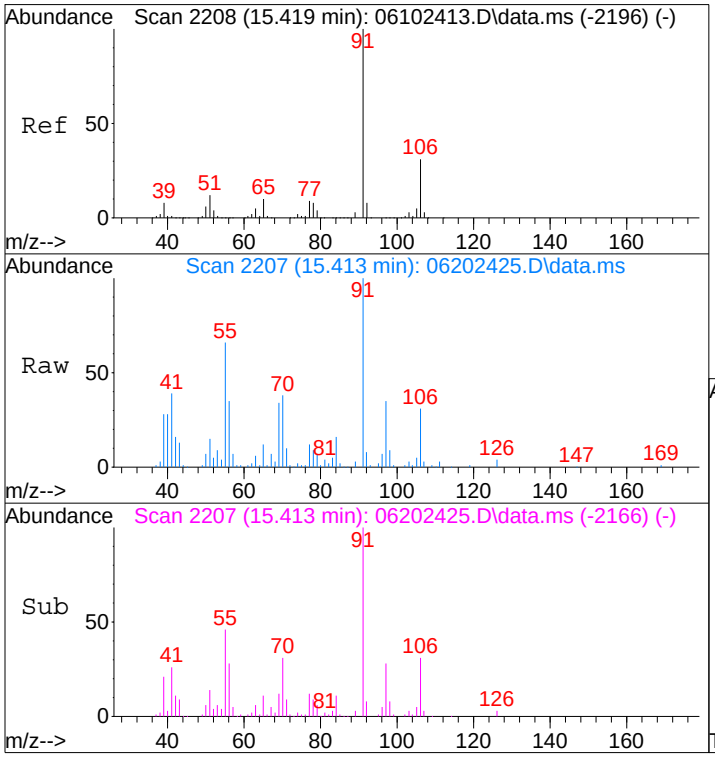


#64
Tetrachloroethene
Concen: 0.38 ng
RT: 14.03 min Scan# 1964
Delta R.T. -0.017 min
Lab File: 06202425.D
Acq: 20 Jun 2024 22:54

Tgt Ion:166 Resp: 7919

Ion	Ratio	Lower	Upper
166	100		
164	74.5	56.9	96.9

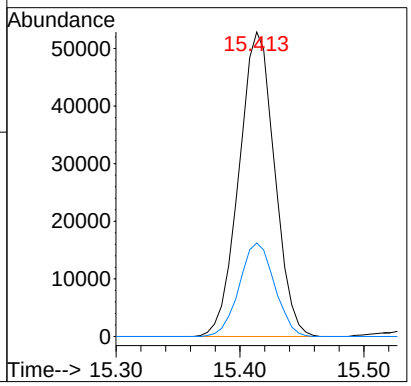


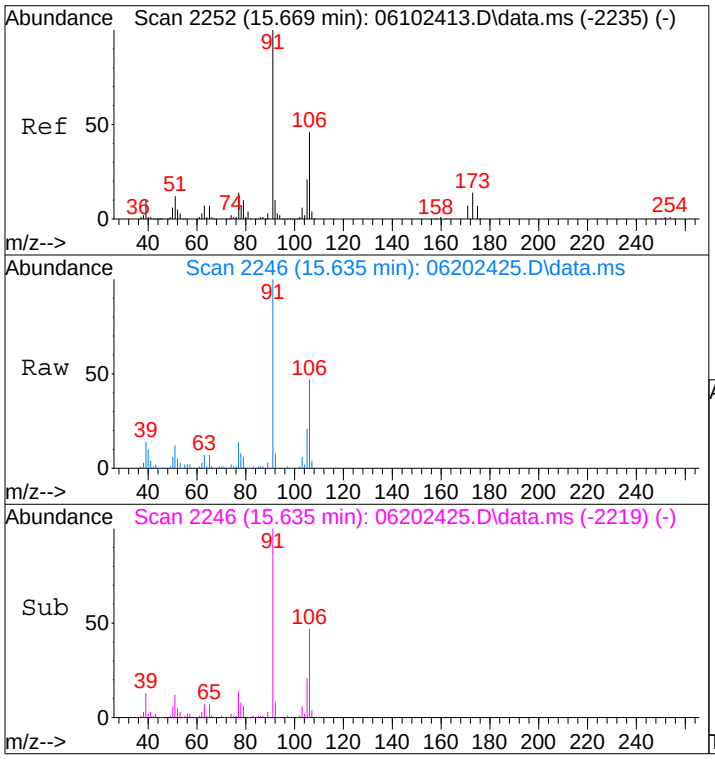


#66
Ethylbenzene
Concen: 1.52 ng
RT: 15.41 min Scan# 2207
Delta R.T. -0.017 min
Lab File: 06202425.D
Acq: 20 Jun 2024 22:54

Tgt Ion: 91 Resp: 105860

Ion	Ratio	Lower	Upper
91	100		
106	30.3	10.7	50.7

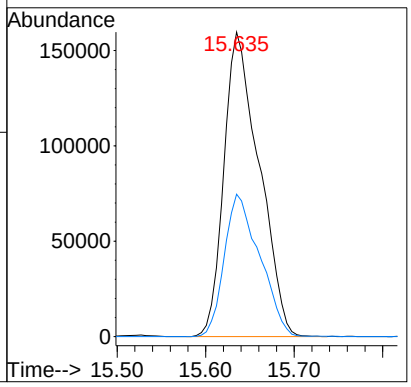


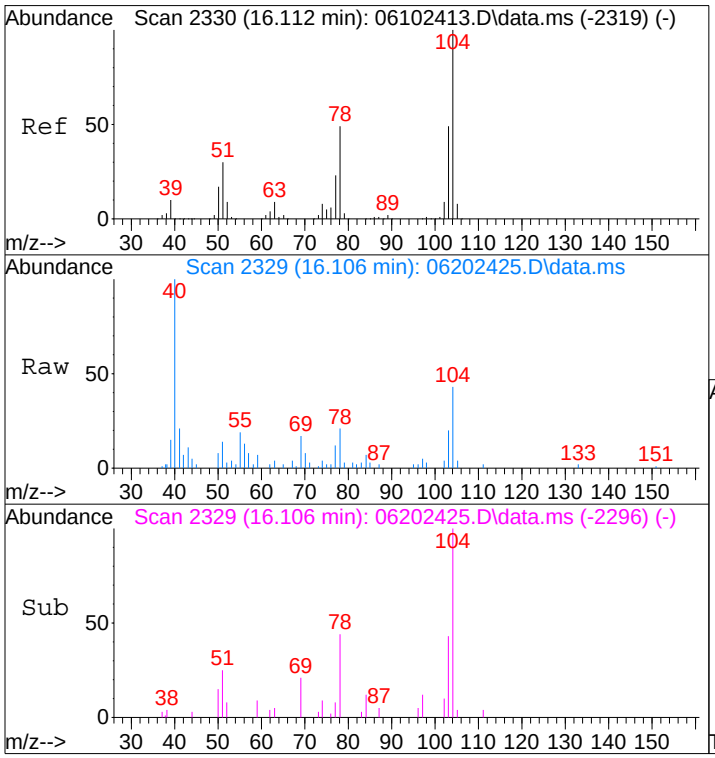


#67
m- & p-Xylenes
Concen: 7.52 ng
RT: 15.63 min Scan# 2246
Delta R.T. -0.046 min
Lab File: 06202425.D
Acq: 20 Jun 2024 22:54

Tgt Ion: 91 Resp: 441036

Ion	Ratio	Lower	Upper
91	100		
106	47.0	25.9	65.9

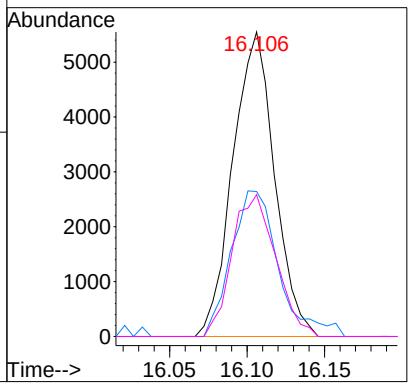


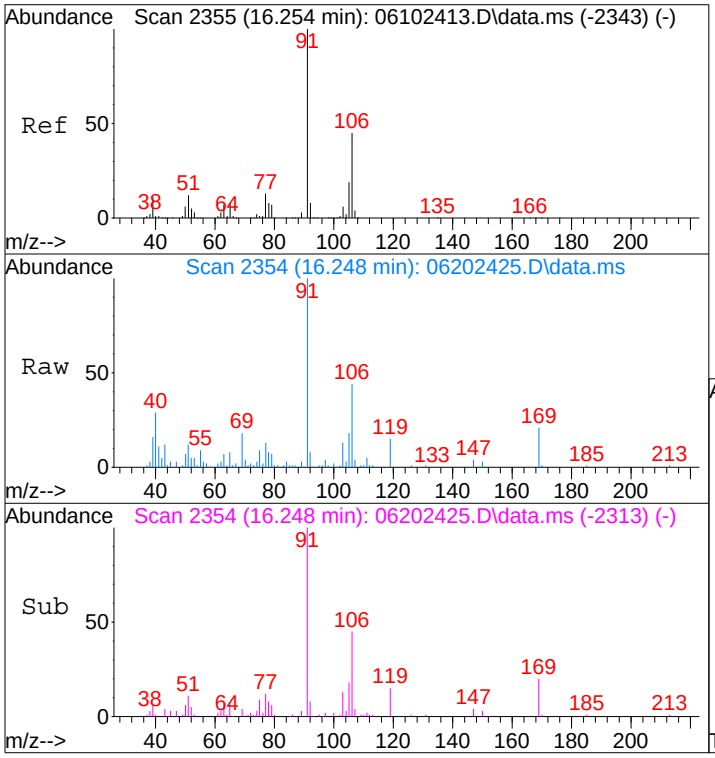


#69
Styrene
Concen: 0.26 ng
RT: 16.11 min Scan# 2329
Delta R.T. -0.011 min
Lab File: 06202425.D
Acq: 20 Jun 2024 22:54

Tgt Ion:104 Resp: 10400

Ion	Ratio	Lower	Upper
104	100		
78	54.3	29.2	69.2
103	48.8	29.4	69.4

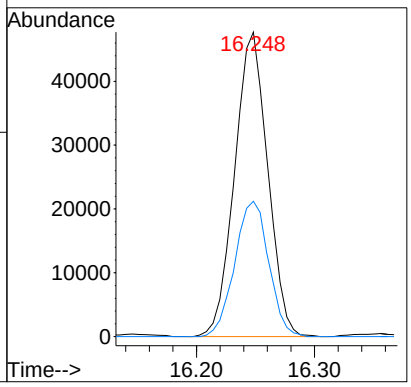


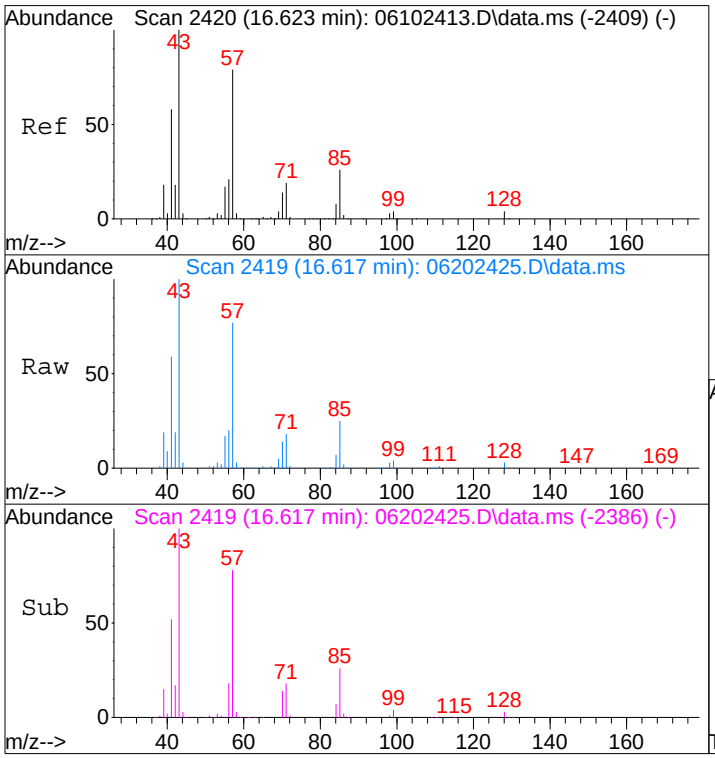


#70
o-Xylene
Concen: 1.61 ng
RT: 16.25 min Scan# 2354
Delta R.T. -0.017 min
Lab File: 06202425.D
Acq: 20 Jun 2024 22:54

Tgt Ion: 91 Resp: 92805

Ion	Ratio	Lower	Upper
91	100		
106	45.7	24.5	64.5

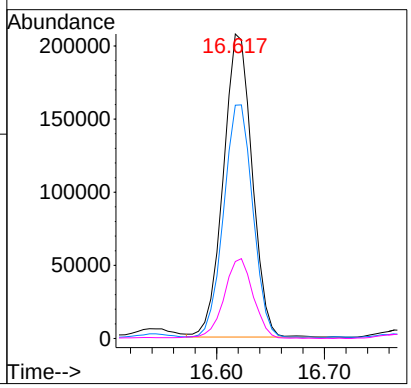


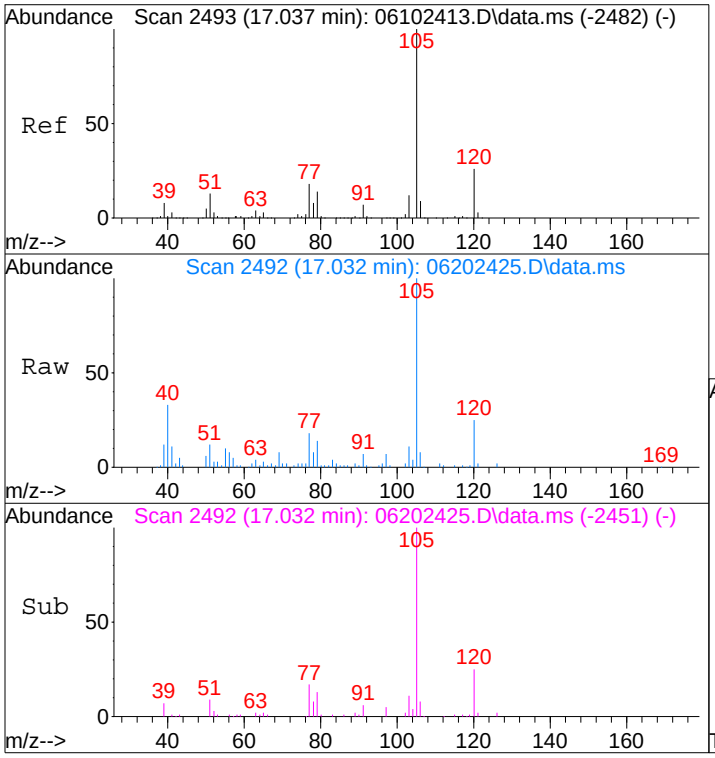


#71
n-Nonane
Concen: 11.46 ng
RT: 16.62 min Scan# 2419
Delta R.T. -0.011 min
Lab File: 06202425.D
Acq: 20 Jun 2024 22:54

Tgt Ion: 43 Resp: 385194

Ion	Ratio	Lower	Upper
43	100		
57	77.4	58.2	98.2
85	26.8	5.9	45.9

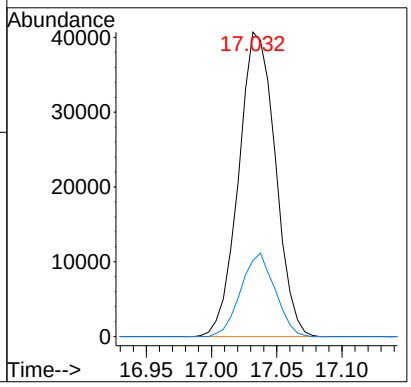


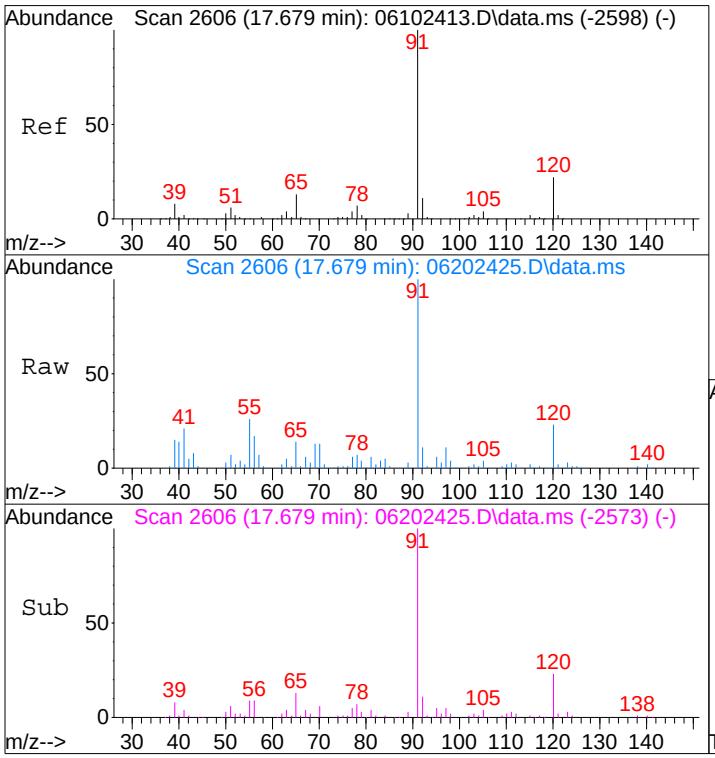


#74
Cumene
Concen: 1.10 ng
RT: 17.03 min Scan# 2492
Delta R.T. -0.017 min
Lab File: 06202425.D
Acq: 20 Jun 2024 22:54

Tgt Ion:105 Resp: 79700

Ion	Ratio	Lower	Upper
105	100		
120	25.5	6.0	46.0

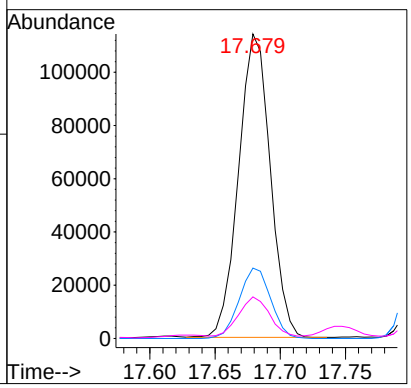


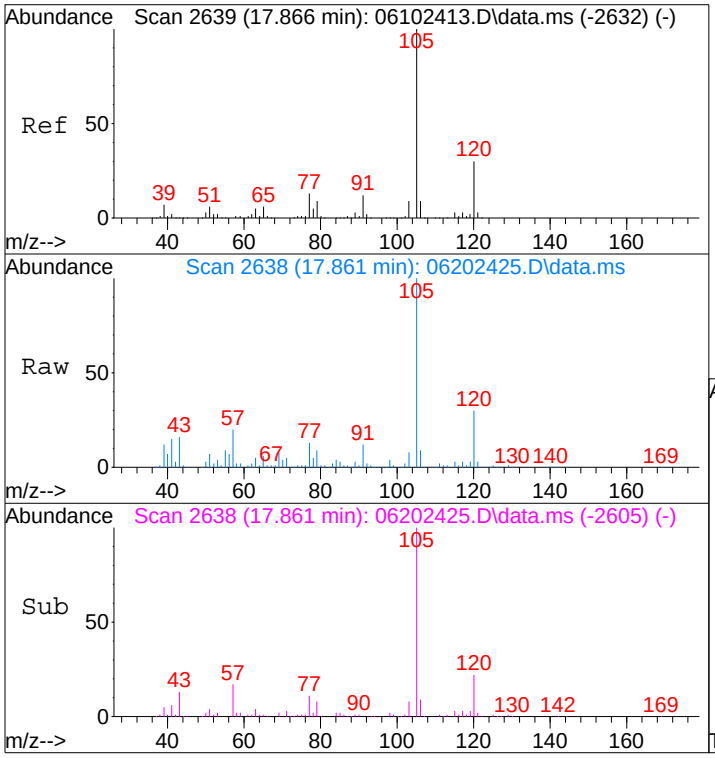


#76
n-Propylbenzene
Concen: 2.21 ng
RT: 17.68 min Scan# 2606
Delta R.T. -0.011 min
Lab File: 06202425.D
Acq: 20 Jun 2024 22:54

Tgt Ion: 91 Resp: 192525

Ion	Ratio	Lower	Upper
91	100		
120	23.0	2.7	42.7
65	12.3	0.0	32.7

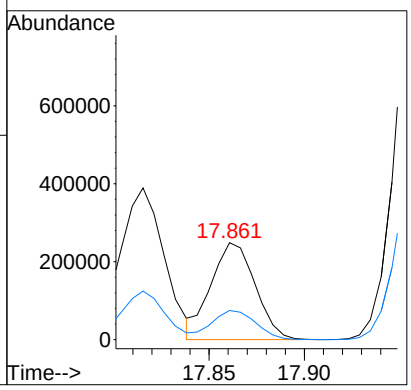


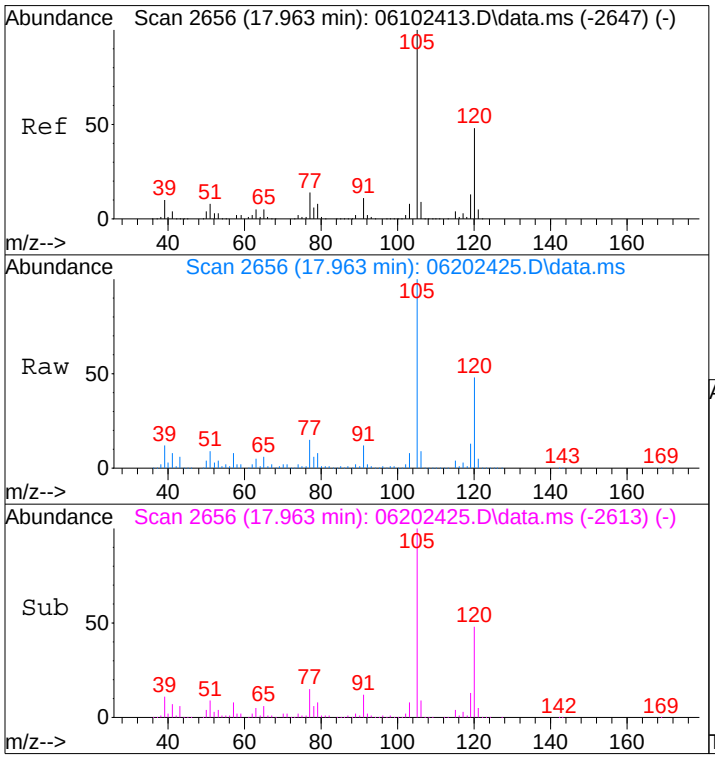


#78
4-Ethyltoluene
Concen: 5.82 ng
RT: 17.86 min Scan# 2638
Delta R.T. -0.011 min
Lab File: 06202425.D
Acq: 20 Jun 2024 22:54

Tgt Ion:105 Resp: 400393

Ion	Ratio	Lower	Upper
105	100		
120	30.4	9.9	49.9

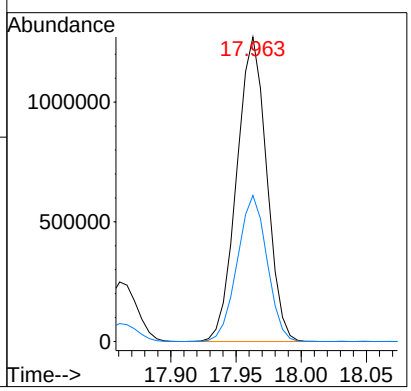


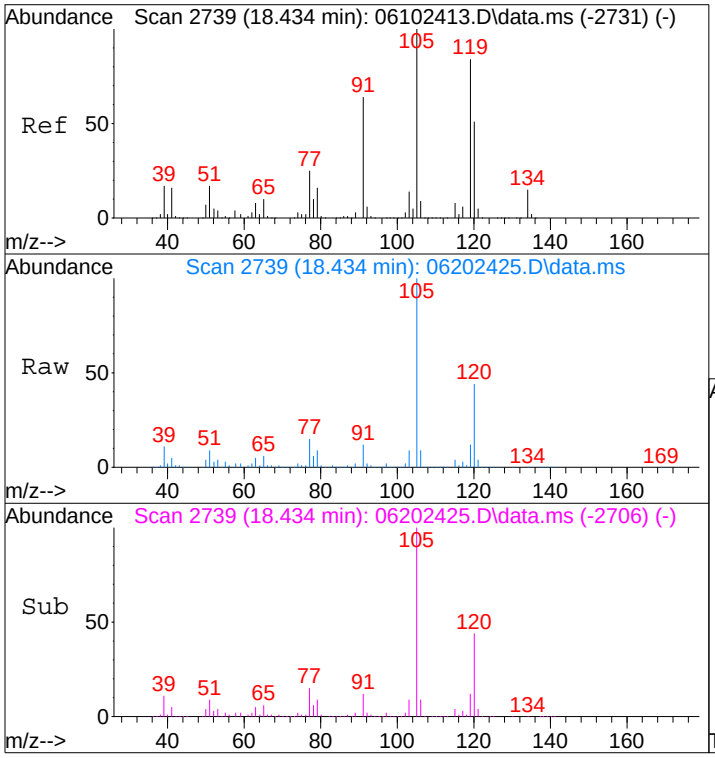


#79
1,3,5-Trimethylbenzene
Concen: 33.71 ng
RT: 17.96 min Scan# 2656
Delta R.T. -0.006 min
Lab File: 06202425.D
Acq: 20 Jun 2024 22:54

Tgt Ion:105 Resp: 2026413

Ion	Ratio	Lower	Upper
105	100		
120	47.7	28.0	68.0

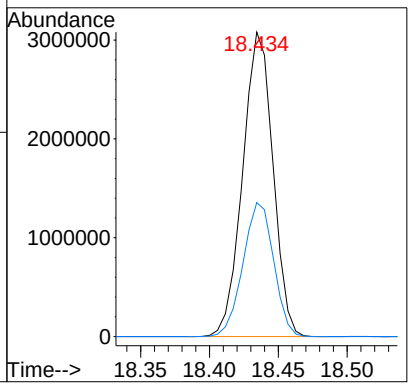


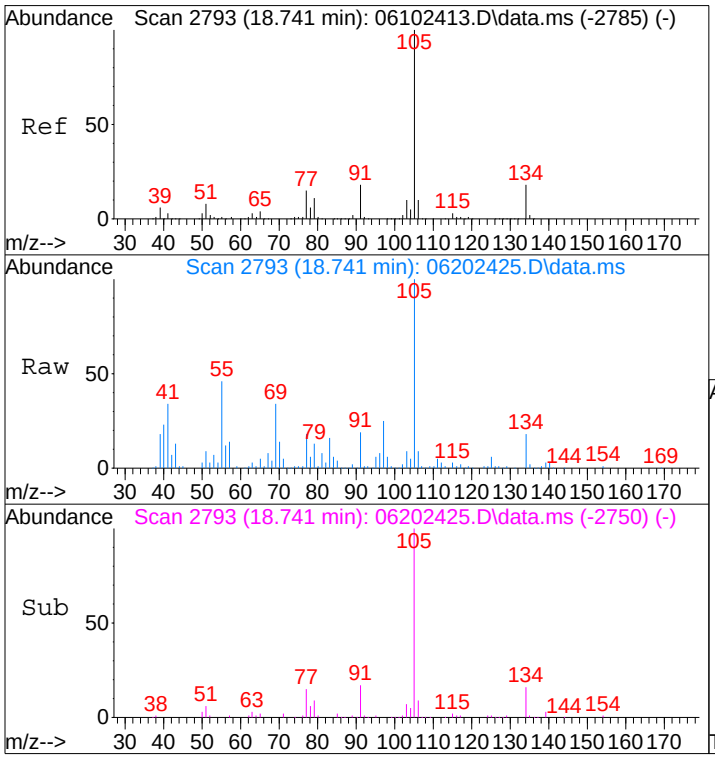


#82
1,2,4-Trimethylbenzene
Concen: 74.46 ng
RT: 18.43 min Scan# 2739
Delta R.T. -0.011 min
Lab File: 06202425.D
Acq: 20 Jun 2024 22:54

Tgt Ion:105 Resp: 4717989

Ion	Ratio	Lower	Upper
105	100		
120	44.6	31.9	71.9

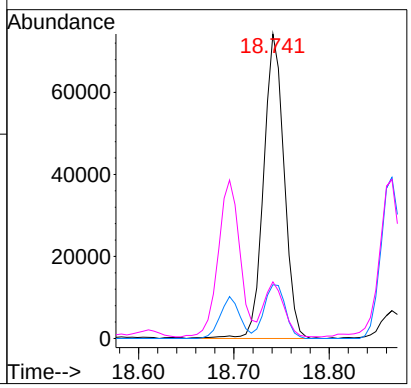


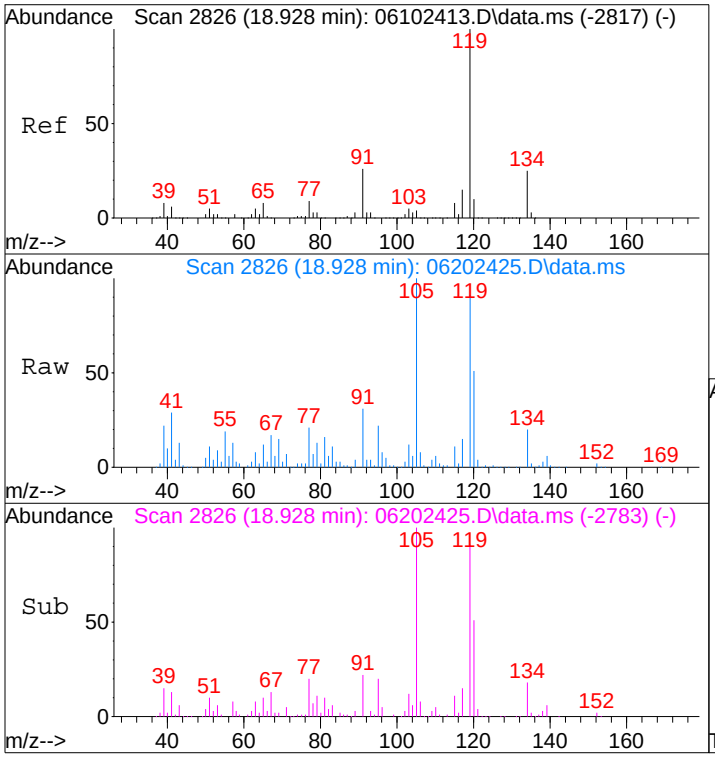


#87
sec-Butylbenzene
Concen: 1.38 ng
RT: 18.74 min Scan# 2793
Delta R.T. -0.006 min
Lab File: 06202425.D
Acq: 20 Jun 2024 22:54

Tgt Ion:105 Resp: 110552

Ion	Ratio	Lower	Upper
105	100		
134	18.2	0.0	38.8
91	17.2	0.0	37.6

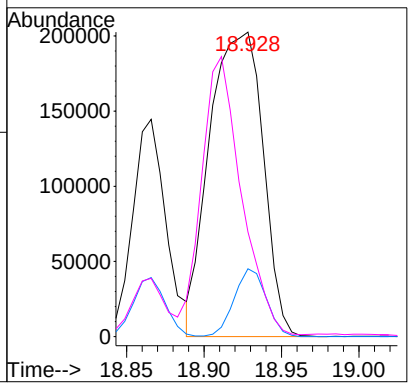


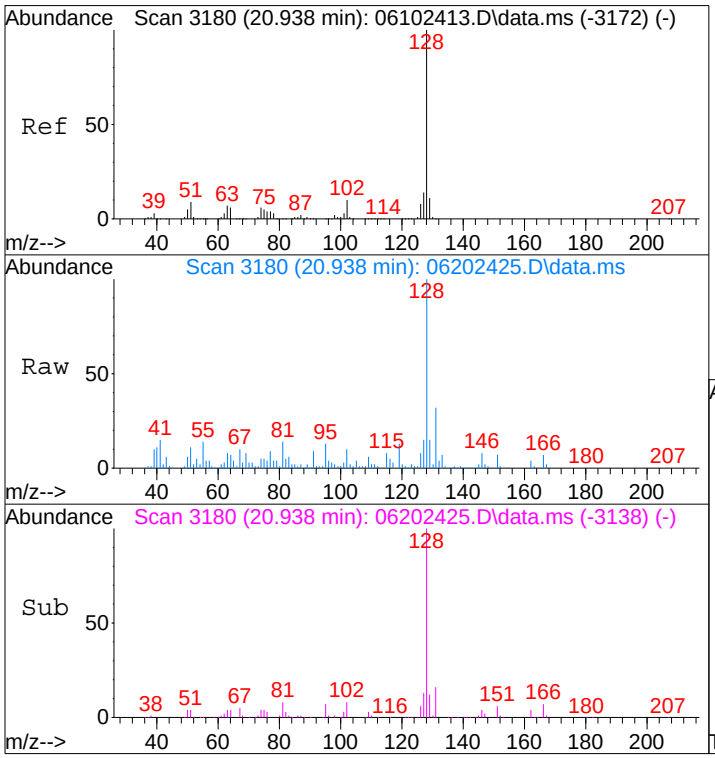


#88
4-Isopropyltoluene (p-Cymene)
Concen: 6.74 ng
RT: 18.93 min Scan# 2826
Delta R.T. -0.006 min
Lab File: 06202425.D
Acq: 20 Jun 2024 22:54

Tgt Ion:119 Resp: 486035

Ion	Ratio	Lower	Upper
119	100		
134	13.4	4.9	44.9
91	68.1	5.8	45.8#

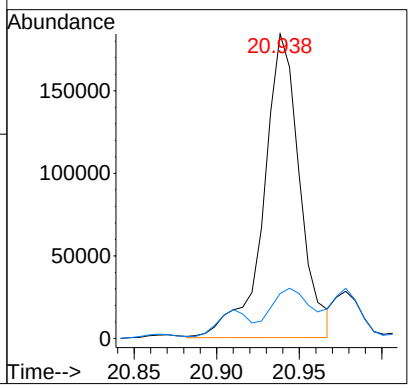




#95
Naphthalene
Concen: 3.44 ng
RT: 20.94 min Scan# 3180
Delta R.T. -0.011 min
Lab File: 06202425.D
Acq: 20 Jun 2024 22:54

Tgt Ion:128 Resp: 279129

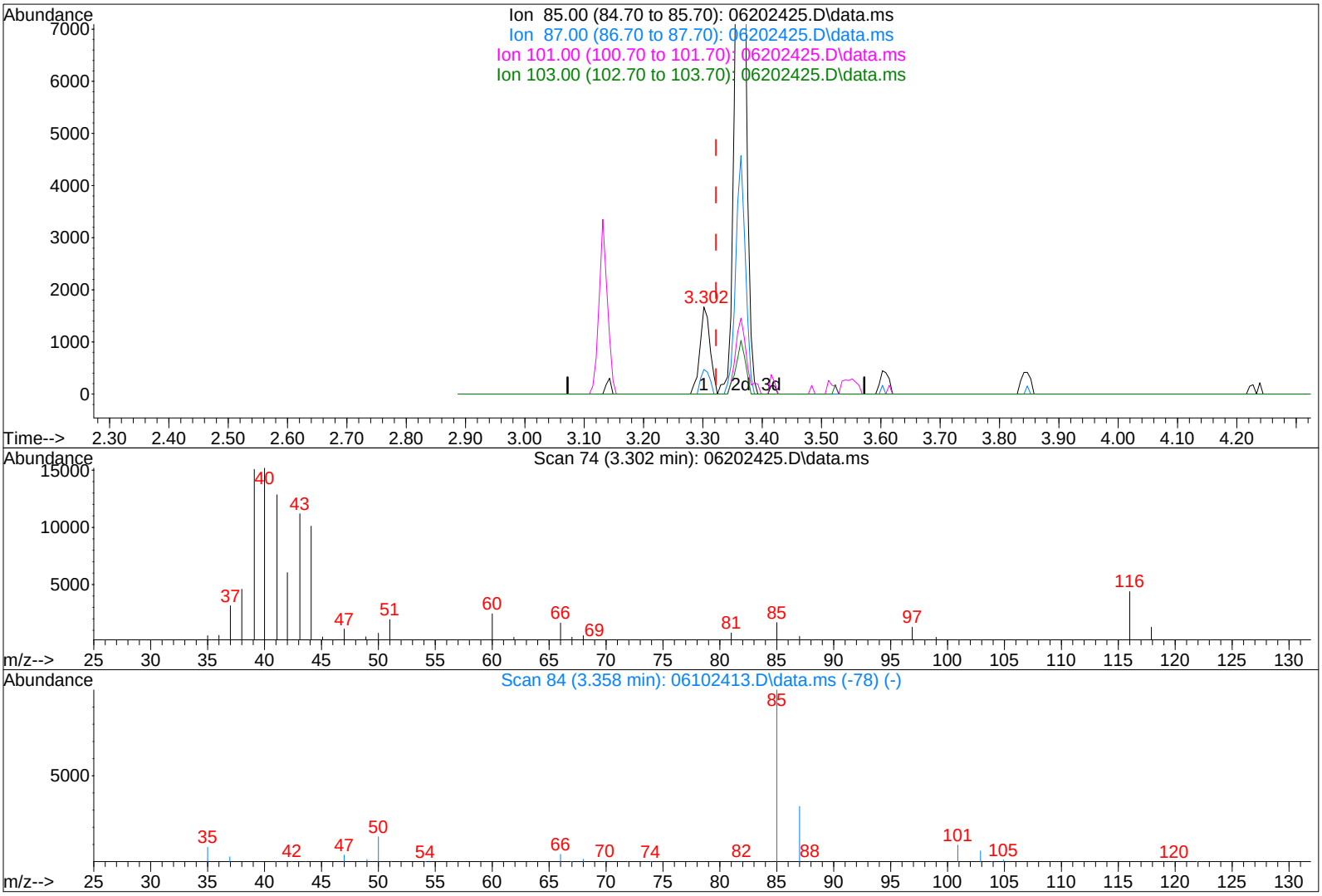
Ion	Ratio	Lower	Upper
128	100		
129	18.0	0.0	31.2



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\20\06202425.D Vial: 14
Acq On : 20 Jun 2024 22:54 Operator: SC
Sample : P2402249-053 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 12:15:54 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06202425.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.302min (-0.020) 0.06ng

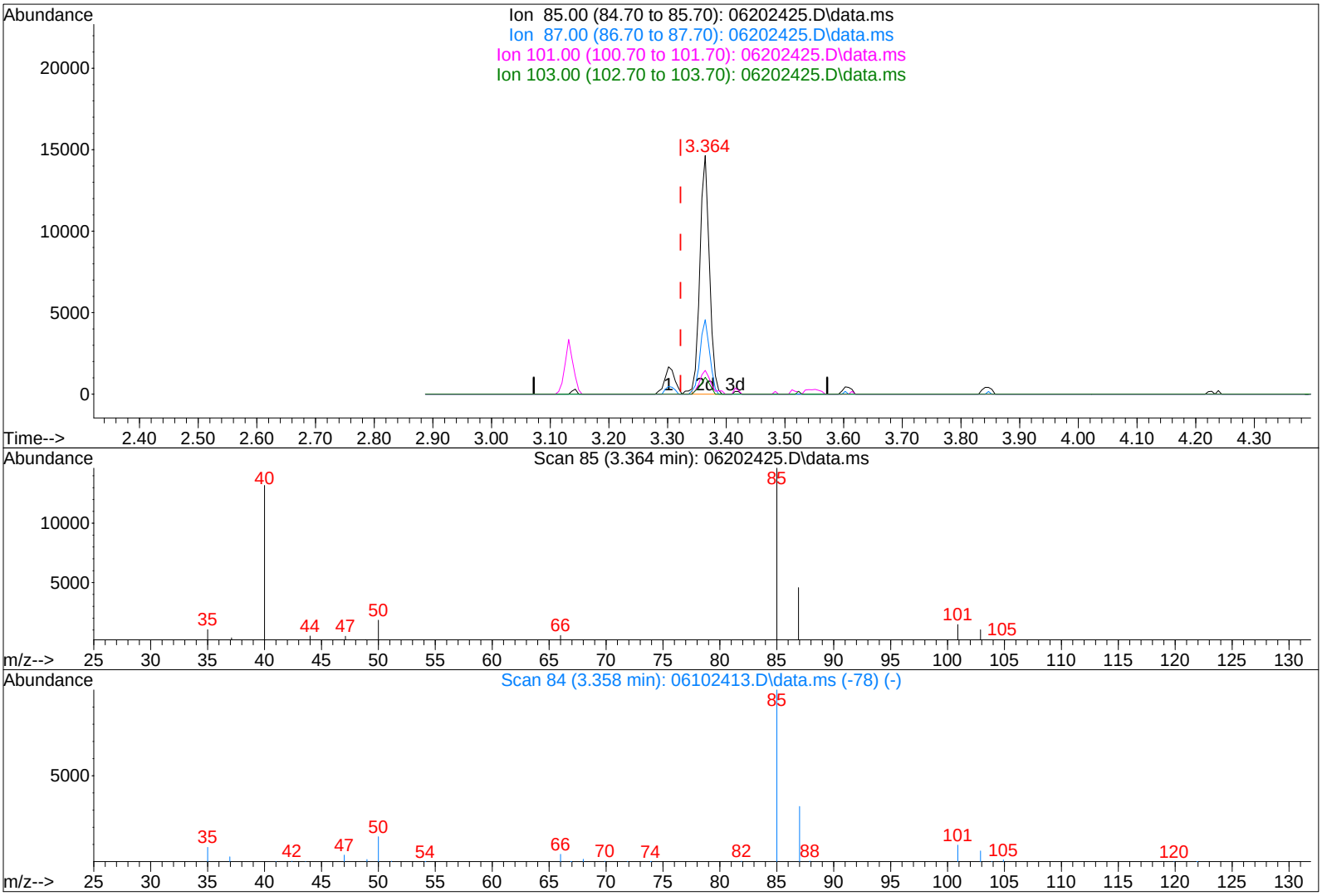
response 1979

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	24.91
101.00	9.80	0.00
103.00	6.30	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\20\06202425.D Vial: 14
Acq On : 20 Jun 2024 22:54 Operator: SC
Sample : P2402249-053 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 12:15:54 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06202425.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.364min (+0.042) 0.50ng m

response 16445

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	31.83
101.00	9.80	10.78
103.00	6.30	6.93

WP

MJ 6/29/24

CG 6/29/24

Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\20\06202425.D Vial: 14
Acq On : 20 Jun 2024 22:54 Operator: SC
Sample : P2402249-053 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:28:12 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

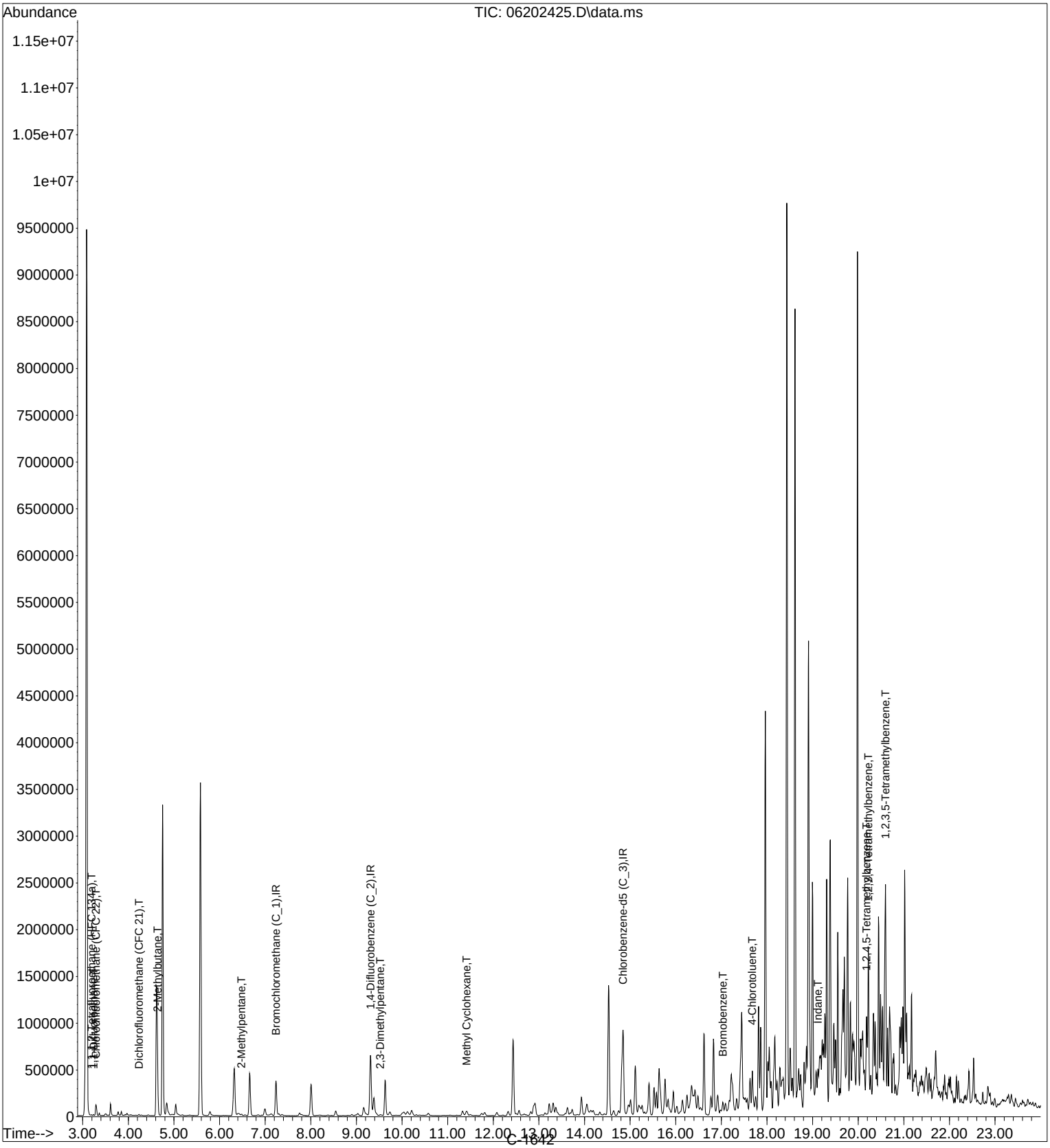
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.24	130	138785	12.500	ng		-0.02
16) 1,4-Difluorobenzene (C 2)	9.31	114	595484	12.500	ng		-0.01
19) Chlorobenzene-d5 (C_3)	14.85	54	152376	12.500	ng		0.00
Target Compounds							Qvalue
2) Chloropentafluoroethane	3.14	85	167	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.19	83	1479	0.104	ng	#	1
4) 1,1-Difluoroethane	3.24	65	2278	0.188	ng		92
5) Chlorodifluoromethane ...	3.29	67	915	0.193	ng		85
6) 1-Chloro-1,1-Difluoroe...	3.51	65	552	N.D.			
7) Dichlorofluoromethane ...	4.23	67	8752	0.275	ng		99
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	4.58	83	420	N.D.			
10) 2-Methylbutane	4.64	57	37542	2.268	ng	#	1
11) Methyl Acetate	5.33	43	2879	N.D.			
12) 2-Methylpentane	6.48	71	2678	0.223	ng	#	61
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	9.03	84	1440	N.D.			
17) 2,3-Dimethylpentane	9.52	56	3313	0.115	ng	#	60
18) Dibromomethane	9.80	174	73	N.D.			
20) Methyl Cyclohexane	11.42	55	20049	0.767	ng		92
21) 1,3-Dichloropropane	0.00	76	0	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	15.20	91	975	N.D.			
24) 1,2,3-Trichloropropane	16.34	75	480	N.D.			
25) Bromobenzene	17.03	77	16367	0.686	ng	#	15
26) 2-Chlorotoluene	17.62	91	1185	N.D.			
27) 4-Chlorotoluene	17.68	91	192838	4.328	ng	#	41
28) Indane	19.12	117	152978	3.035	ng		98
29) Indene	19.21	115	3361	N.D.			
30) 1,2,4,5-Tetramethylben...	20.18	119	335830	6.445	ng		96
31) 1,2,3,4-Tetramethylben...	20.22	119	604206	11.498	ng		98
32) 1,2,3,5-Tetramethylben...	20.60	119	635096	12.736	ng		97
33) 1,2,3-Trichlorobenzene	21.19	180	569	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202425.D Vial: 14
Acq On : 20 Jun 2024 22:54 Operator: SC
Sample : P2402249-053 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:28:12 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

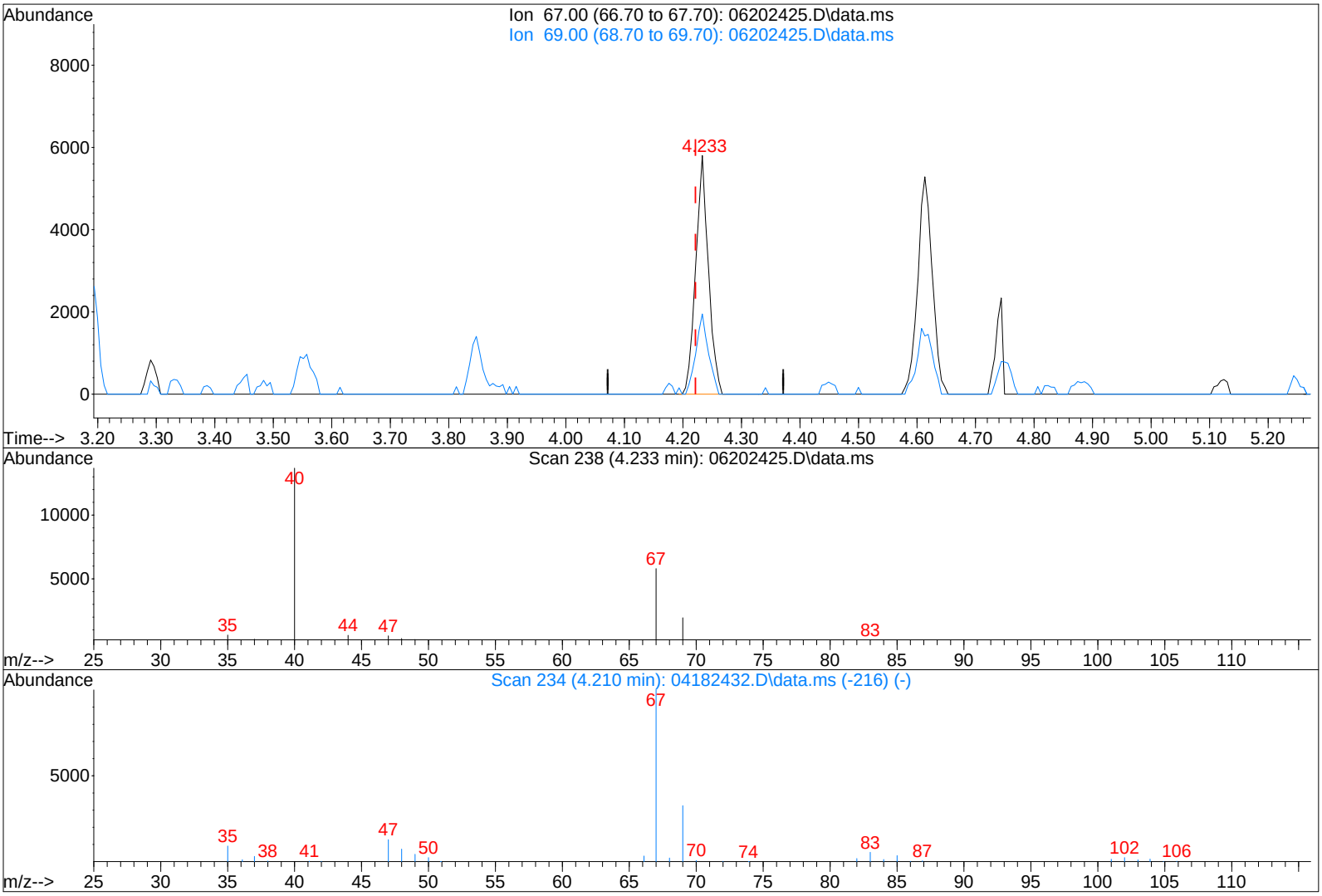


Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\20\06202425.D Vial: 14
Acq On : 20 Jun 2024 22:54 Operator: SC
Sample : P2402249-053 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 15:28:12 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06202425.D\data.ms

(7) Dichlorofluoromethane (CFC 21) (T)

4.233min (+0.011) 0.28ng

response 8752

Ion	Exp%	Act%
67.00	100	100
69.00	32.40	33.19
0.00	0.00	0.00
0.00	0.00	0.00

LSC Area Percent Report

MJ 6/28/24

Data Path : I:\MS09\DATA\2024 06\20\
Data File : 06202425.D
Acq On : 20 Jun 2024 22:54
Operator : SC
Sample : P2402249-053 (400mL)
Misc : S37-06062402
ALS Vial : 14 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06202425.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.086	17	36	52	rBV	9475439	18092922	100.00%	41.914%
2	3.239	59	63	66	rVV2	8659	10727	0.06%	0.025%
3	3.290	66	72	80	rVV3	115380	214141	1.18%	0.496%
4	3.364	80	85	91	rVB	26703	31245	0.17%	0.072%
5	3.500	103	109	115	rBV2	18092	41074	0.23%	0.095%
6	3.608	123	128	140	rVB2	122490	177385	0.98%	0.411%
7	3.779	151	158	165	rBV	38005	59508	0.33%	0.138%
8	3.847	165	170	178	rVB	40263	53449	0.30%	0.124%
9	3.972	188	192	197	rVB	19693	26409	0.15%	0.061%
10	4.057	203	207	212	rVB3	7148	10166	0.06%	0.024%
11	4.233	233	238	243	rVV	10045	14967	0.08%	0.035%
12	4.284	243	247	257	rVB4	6075	12947	0.07%	0.030%
13	4.432	268	273	282	rVB2	6286	12834	0.07%	0.030%
14	4.619	298	306	320	rBV	1378255	3033927	16.77%	7.028%
15	4.750	321	329	339	rVV	3321559	5599547	30.95%	12.972%
16	4.841	339	345	359	rVV2	133054	361425	2.00%	0.837%
17	4.954	359	365	369	rVV3	12924	35421	0.20%	0.082%
18	5.039	373	380	397	rVV2	119406	273027	1.51%	0.633%
19	5.187	401	406	413	rVB2	8956	17767	0.10%	0.041%
20	5.579	462	475	497	rVB	3561688	7060264	39.02%	16.356%
21	5.789	501	512	519	rBV	42239	98042	0.54%	0.227%
22	6.323	593	606	616	rBV	502311	1324224	7.32%	3.068%
23	6.413	616	622	630	rVV2	23417	85952	0.48%	0.199%
24	6.482	630	634	640	rVV3	15143	30294	0.17%	0.070%
25	6.561	641	648	654	rVV5	7325	15860	0.09%	0.037%
26	6.658	654	665	678	rVV	450028	966443	5.34%	2.239%
27	6.845	687	698	706	rVB3	8038	23481	0.13%	0.054%
28	6.993	715	724	737	rBV2	69483	178476	0.99%	0.413%
29	7.129	741	748	757	rVB4	17843	53789	0.30%	0.125%
30	7.237	757	767	775	rBV	370945	821381	4.54%	1.903%
31	7.299	775	778	784	rVB4	17421	30417	0.17%	0.070%
32	7.367	784	790	798	rBV3	9751	20936	0.12%	0.049%
33	7.753	847	858	864	rBV2	26830	66784	0.37%	0.155%
34	8.003	889	902	915	rBV	333614	786575	4.35%	1.822%
35	8.378	958	968	975	rBV6	6181	16221	0.09%	0.038%
36	8.543	989	997	1006	rBV	48311	111806	0.62%	0.259%
37	8.906	1053	1061	1067	rVB3	10845	25886	0.14%	0.060%
38	9.031	1077	1083	1095	rVB	23296	58010	0.32%	0.134%
39	9.162	1095	1106	1122	rBV	86349	278623	1.54%	0.645%
40	9.309	1122	1132	1140	rVV	645244	1608512	8.89%	3.726%

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\20\
Data File : 06202425.D
Acq On : 20 Jun 2024 22:54
Operator : SC
Sample : P2402249-053 (400mL)
Misc : S37-06062402
ALS Vial : 14 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

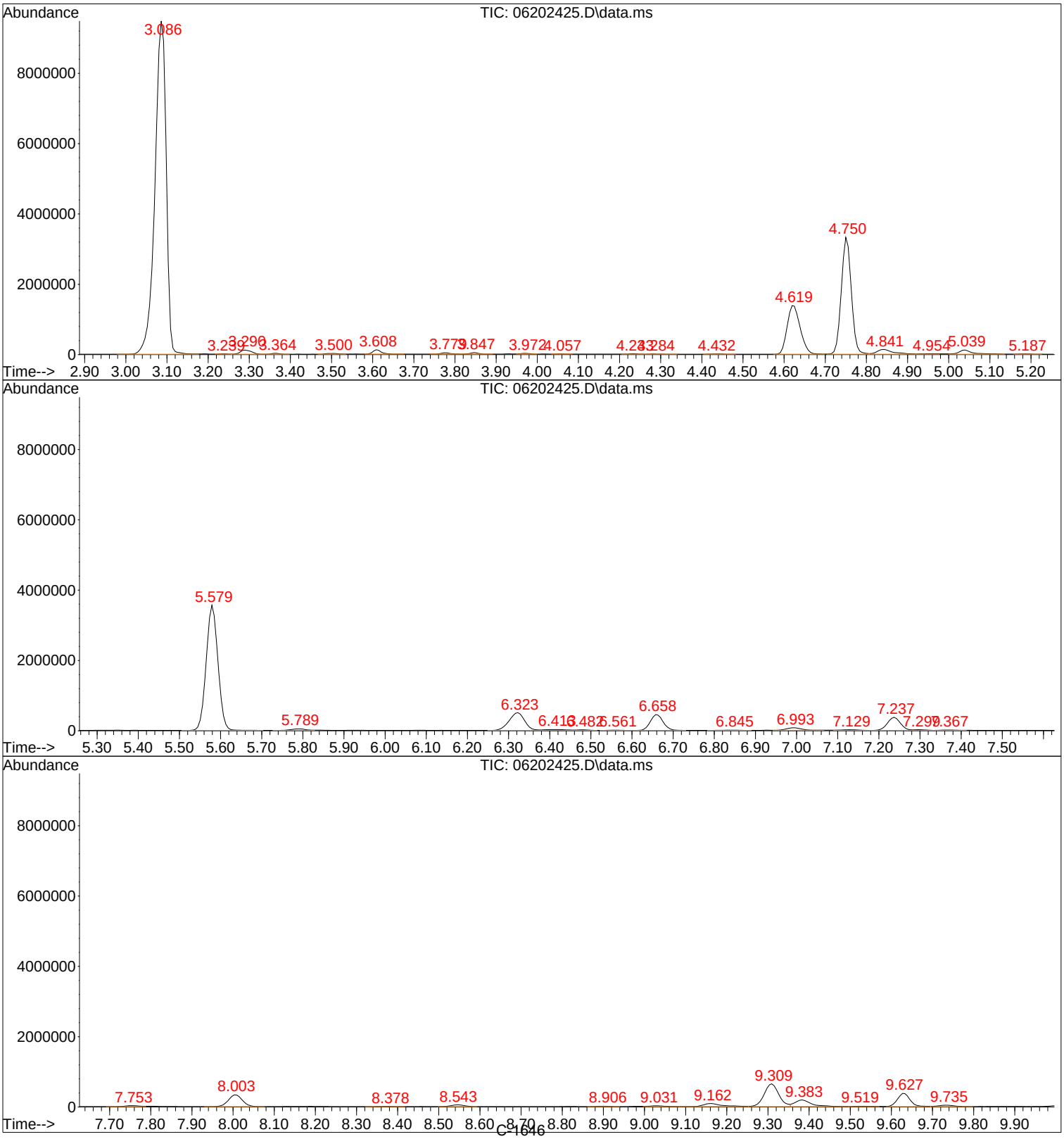
41	9.383	1140	1145	1165	rVV	189350	506409	2.80%	1.173%
42	9.519	1165	1169	1178	rVV6	8794	24422	0.13%	0.057%
43	9.627	1181	1188	1200	rVV	375418	798388	4.41%	1.850%
44	9.735	1200	1207	1218	rVB2	37136	96201	0.53%	0.223%

Sum of corrected areas: 43166284

Data Path : I:\MS09\DATA\2024 06\20\
Data File : 06202425.D
Acq On : 20 Jun 2024 22:54
Operator : SC
Sample : P2402249-053 (400mL)
Misc : S37-06062402
ALS Vial : 14 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\20\\
Data File : 06202425.D
Acq On : 20 Jun 2024 22:544
Operator : SCC
Sample : P2402249-053 (400mL))
Misc : S37-060624022
ALS Vial : 14 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT/LSC Reviewed)

MJ 6/29/24

Data File : I:\MS09\DATA\2024 06\20\06202426.D Vial: 15
Acq On : 20 Jun 2024 23:27 Operator: SC
Sample : P2402249-054 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:10:46 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.24	130	161516	12.500	ng		0.01
37) 1,4-Difluorobenzene (IS2)	9.31	114	717137	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	170647	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	358177	12.477	ng		0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.84%				
57) Toluene-d8 (SS2)	12.43	98	813065	12.451	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.60%				
73) Bromofluorobenzene (SS3)	16.83	174	298829	12.673	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.36%				
Target Compounds							Qvalue
2) Propene	0.00	42	0	N.D. d			
3) Dichlorodifluoromethan...	3.36	85	20310m	0.534	ng		
4) Chloromethane	3.49	50	1719	0.066	ng		89
5) 1,2-Dichloro-1,1,2,2-t...	3.61	135	564	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	3.77	54	363	N.D.			
8) Bromomethane	4.01	94	140	N.D.			
9) Chloroethane	4.15	64	283	N.D.			
10) Ethanol	4.28	45	92412	5.885	ng		80
11) Acetonitrile	0.00	41	0	N.D. d			
12) Acrolein	4.53	56	4925	0.424	ng		97
13) Acetone	4.62	58	111487	8.885	ng		99
14) Trichlorofluoromethane	4.76	101	5431683	141.259	ng		100
15) 2-Propanol (Isopropanol)	4.84	45	78789	1.558	ng		88
16) Acrylonitrile	0.00	53	0	N.D. d			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.33	59	16768	0.416	ng	#	73
19) Methylene Chloride	5.35	84	5486	0.309	ng		99
20) 3-Chloro-1-propene (Al...	5.46	41	613	N.D.			
21) Trichlorotrifluoroethane	5.58	151	2563921	157.621	ng		93
22) Carbon Disulfide	5.61	76	3685552	64.388	ng		94
23) trans-1,2-Dichloroethene	6.14	61	395	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	6.38	73	1629	N.D.			
26) Vinyl Acetate	6.44	86	5601	1.935	ng	#	41
27) 2-Butanone (MEK)	6.66	72	13483	1.358	ng		97
28) cis-1,2-Dichloroethene	7.08	61	259	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D. d			
30) Ethyl Acetate	7.28	61	237844	39.233	ng		96
31) n-Hexane	0.00	57	0	N.D. d			
32) Chloroform	7.37	83	28357	0.896	ng		100
34) Tetrahydrofuran (THF)	7.76	72	991	0.109	ng	#	37
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	574	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	9.64	61	6459	No Calib		#	
40) 1-Butanol	8.80	56	12496	No Calib			
41) Benzene	8.89	78	25117	0.379	ng		100
42) Carbon Tetrachloride	9.07	117	1004	N.D.			
43) Cyclohexane	9.22	84	3743	0.175	ng		95
44) tert-Amyl Methyl Ether	9.62	73	586	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.07	83	1422	0.053	ng		97
47) Trichloroethene	10.15	130	2983	0.154	ng		94
48) 1,4-Dioxane	10.12	88	16364	1.340	ng		95
49) 2,2,4-Trimethylpentane...	0.00	57	0	N.D. d			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202426.D Vial: 15
Acq On : 20 Jun 2024 23:27 Operator: SC
Sample : P2402249-054 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:10:46 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

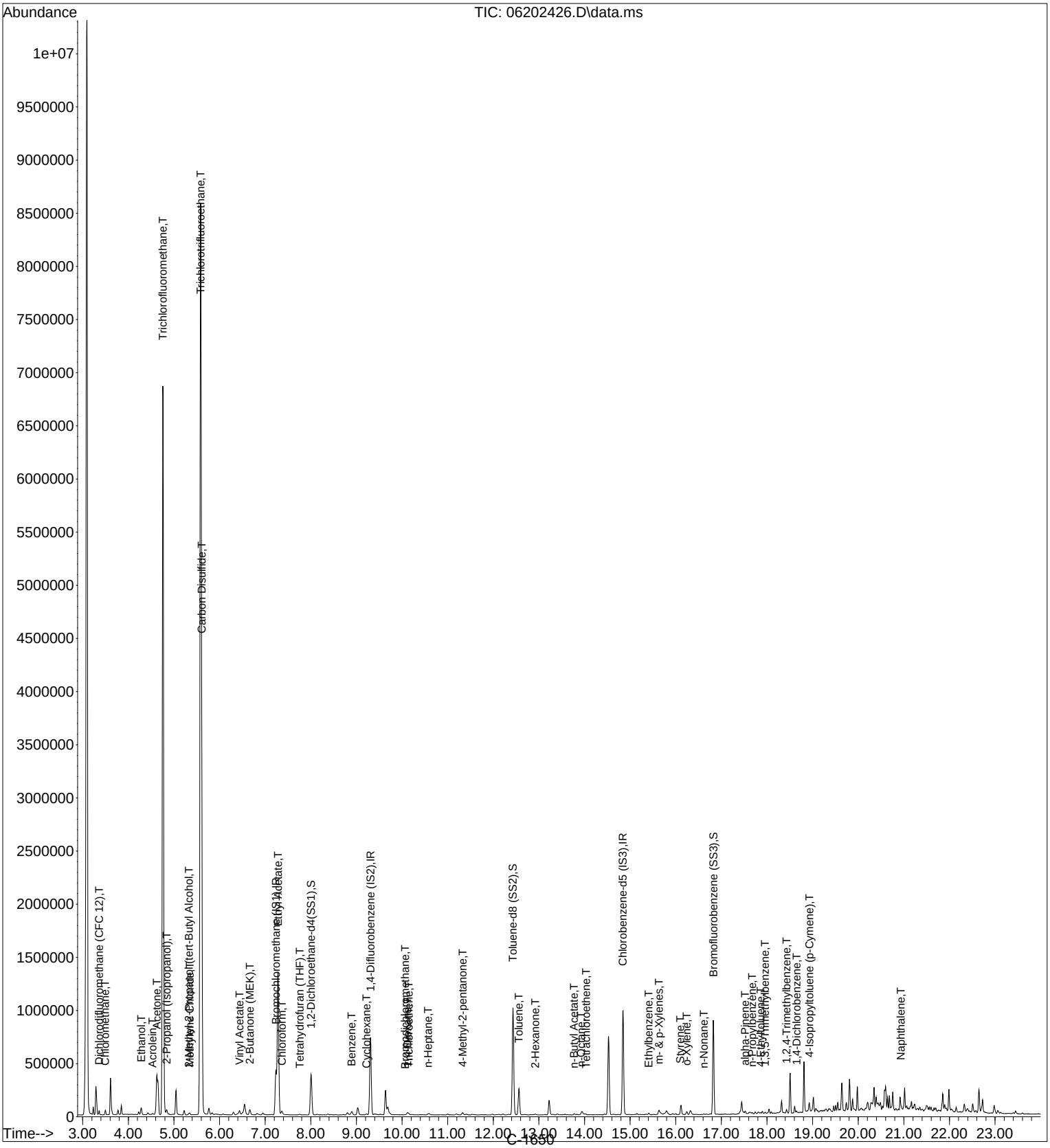
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
51) n-Heptane	10.57	71	2506	0.179	ng		89
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.			
53) 4-Methyl-2-pentanone	11.33	58	6045	0.415	ng	#	63
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.			
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.			
58) Toluene	12.56	91	216069	3.166	ng		100
59) 2-Hexanone	12.92	43	9886	0.231	ng		77
60) Dibromochloromethane	13.07	129	636	N.D.			
61) 1,2-Dibromoethane	0.00	107	0	N.D.			
62) n-Butyl Acetate	13.77	43	11217	0.249	ng		96
63) n-Octane	13.93	57	2584	0.183	ng	#	74
64) Tetrachloroethene	14.03	166	2243	0.096	ng		98
65) Chlorobenzene	14.90	112	1153	N.D.			
66) Ethylbenzene	15.41	91	13259	0.170	ng		96
67) m- & p-Xylenes	15.63	91	36659	0.558	ng		99
68) Bromoform	15.67	173	803	N.D.			
69) Styrene	16.10	104	3175	0.072	ng		95
70) o-Xylene	16.24	91	17906	0.277	ng		98
71) n-Nonane	16.62	43	3216	0.085	ng		96
72) 1,1,2,2-Tetrachloroethane	16.21	83	915	N.D.			
74) Cumene	17.03	105	2357	N.D.			
75) alpha-Pinene	17.52	93	9812	0.261	ng		81
76) n-Propylbenzene	17.68	91	5702	0.058	ng		87
77) 3-Ethyltoluene	17.03	105	2357	No Calib			
78) 4-Ethyltoluene	17.86	105	4518	0.059	ng		83
79) 1,3,5-Trimethylbenzene	17.96	105	4947	0.073	ng		92
80) alpha-Methylstyrene	0.00	118	0	N.D.			
81) 2-Ethyltoluene	17.03	105	2357	No Calib			
82) 1,2,4-Trimethylbenzene	18.43	105	13367	0.188	ng		100
83) n-Decane	17.11	58	334	No Calib		#	
84) Benzyl Chloride	18.64	91	324	N.D.			
85) 1,3-Dichlorobenzene	18.58	146	1181	N.D.			
86) 1,4-Dichlorobenzene	18.65	146	2408	0.053	ng		97
87) sec-Butylbenzene	18.74	105	1832	N.D.			
88) 4-Isopropyltoluene (p-...	18.93	119	39859	0.494	ng		97
89) 1,2,3-Trimethylbenzene	17.03	105	2357	No Calib			
90) 1,2-Dichlorobenzene	19.03	146	885	N.D.			
91) d-Limonene	0.00	68	0	N.D.	d		
92) 1,2-Dibromo-3-Chloropr...	19.50	157	343	N.D.			
93) n-Undecane	17.87	58	128	No Calib		#	
94) 1,2,4-Trichlorobenzene	20.84	180	1096	N.D.			
95) Naphthalene	20.94	128	12394	0.136	ng		86
96) n-Dodecane	18.92	58	1372	No Calib		#	
97) Hexachlorobutadiene	21.30	225	774	N.D.			
98) Cyclohexanone	15.40	55	187	No Calib		#	
99) tert-Butylbenzene	0.00	119	0	N.D.	d		
100) n-Butylbenzene	19.39	91	3275	N.D.			
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202426.D Vial: 15
Acq On : 20 Jun 2024 23:27 Operator: SC
Sample : P2402249-054 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:10:46 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202426.D Vial: 15
Acq On : 20 Jun 2024 23:27 Operator: SC
Sample : P2402249-054 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/29/24

Quant Time: Jun 29 10:10:46 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.24	130	161516	12.500	ng		0.01
37) 1,4-Difluorobenzene (IS2)	9.31	114	717137	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	170647	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	358177	12.477	ng		0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.84%				
57) Toluene-d8 (SS2)	12.43	98	813065	12.451	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.60%				
73) Bromofluorobenzene (SS3)	16.83	174	298829	12.673	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.36%				
Target Compounds							Qvalue
3) Dichlorodifluoromethan...	3.36	85	20310m	0.534	ng		
4) Chloromethane	3.49	50	1719	0.066	ng		89
10) Ethanol	4.28	45	92412	5.885	ng		80
12) Acrolein	4.53	56	4925	0.424	ng		97
13) Acetone	4.62	58	111487	8.885	ng		99
14) Trichlorofluoromethane	4.76	101	5431683	141.259	ng		100
15) 2-Propanol (Isopropanol)	4.84	45	78789	1.558	ng		88
18) 2-Methyl-2-Propanol (t...	5.33	59	16768	0.416	ng	#	73
19) Methylene Chloride	5.35	84	5486	0.309	ng		99
21) Trichlorotrifluoroethane	5.58	151	2563921	157.621	ng		93
22) Carbon Disulfide	5.61	76	3685552	64.388	ng		94
26) Vinyl Acetate	6.44	86	5601	1.935	ng	#	41
27) 2-Butanone (MEK)	6.66	72	13483	1.358	ng		97
30) Ethyl Acetate	7.28	61	237844	39.233	ng		96
32) Chloroform	7.37	83	28357	0.896	ng		100
34) Tetrahydrofuran (THF)	7.76	72	991	0.109	ng	#	37
41) Benzene	8.89	78	25117	0.379	ng		100
43) Cyclohexane	9.22	84	3743	0.175	ng		95
46) Bromodichloromethane	10.07	83	1422	0.053	ng		97
47) Trichloroethene	10.15	130	2983	0.154	ng		94
48) 1,4-Dioxane	10.12	88	16364	1.340	ng		95
51) n-Heptane	10.57	71	2506	0.179	ng		89
53) 4-Methyl-2-pentanone	11.33	58	6045	0.415	ng	#	63
58) Toluene	12.56	91	216069	3.166	ng		100
59) 2-Hexanone	12.92	43	9886	0.231	ng		77
62) n-Butyl Acetate	13.77	43	11217	0.249	ng		96
63) n-Octane	13.93	57	2584	0.183	ng	#	74
64) Tetrachloroethene	14.03	166	2243	0.096	ng		98
66) Ethylbenzene	15.41	91	13259	0.170	ng		96
67) m- & p-Xylenes	15.63	91	36659	0.558	ng		99
69) Styrene	16.10	104	3175	0.072	ng		95
70) o-Xylene	16.24	91	17906	0.277	ng		98
71) n-Nonane	16.62	43	3216	0.085	ng		96
75) alpha-Pinene	17.52	93	9812	0.261	ng		81
76) n-Propylbenzene	17.68	91	5702	0.058	ng		87
78) 4-Ethyltoluene	17.86	105	4518	0.059	ng		83
79) 1,3,5-Trimethylbenzene	17.96	105	4947	0.073	ng		92
82) 1,2,4-Trimethylbenzene	18.43	105	13367	0.188	ng		100
86) 1,4-Dichlorobenzene	18.65	146	2408	0.053	ng		97
88) 4-Isopropyltoluene (p-...	18.93	119	39859	0.494	ng		97
95) Naphthalene	20.94	128	12394	0.136	ng		86

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202426.D Vial: 15
Acq On : 20 Jun 2024 23:27 Operator: SC
Sample : P2402249-054 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:10:46 2024
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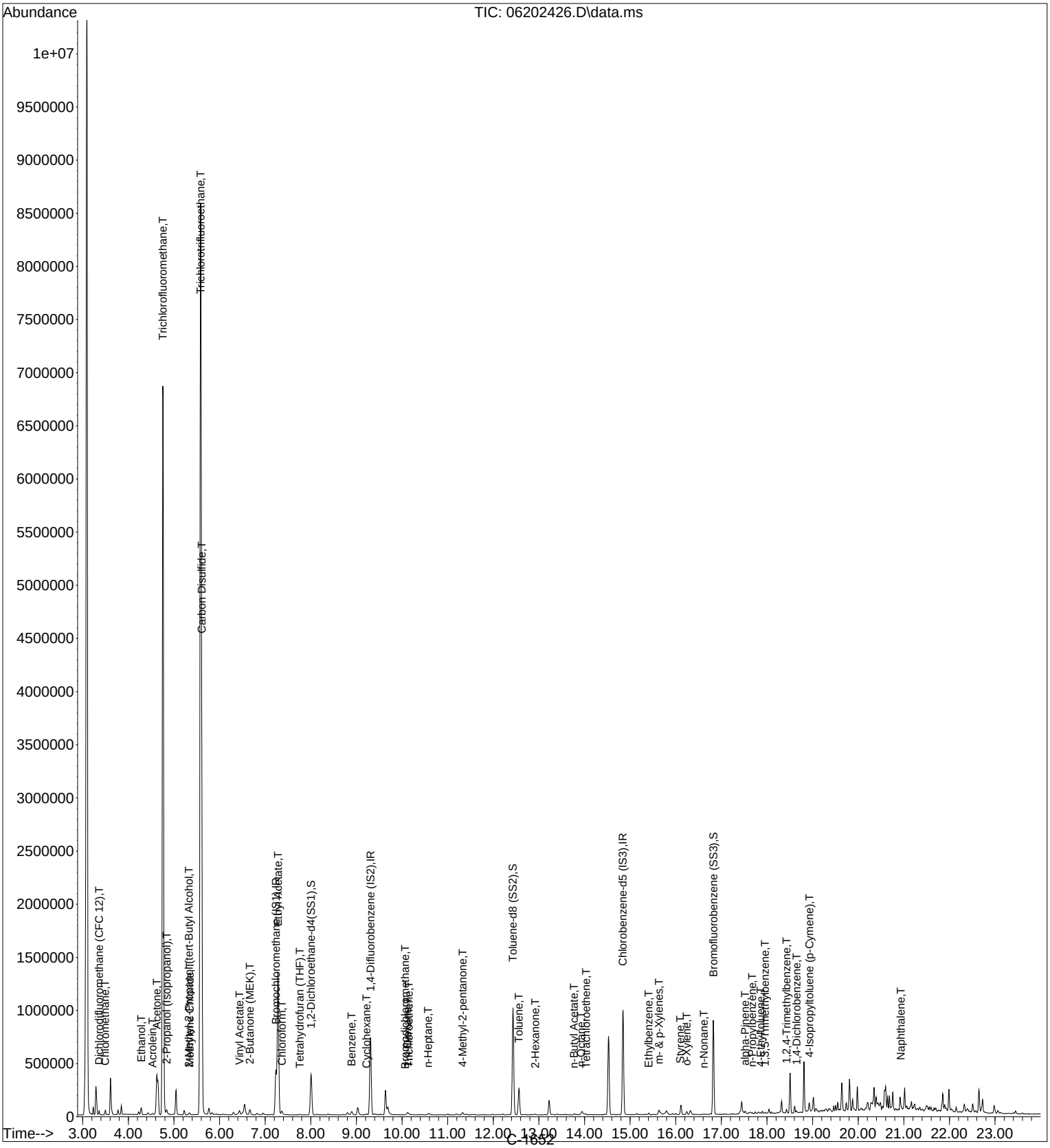
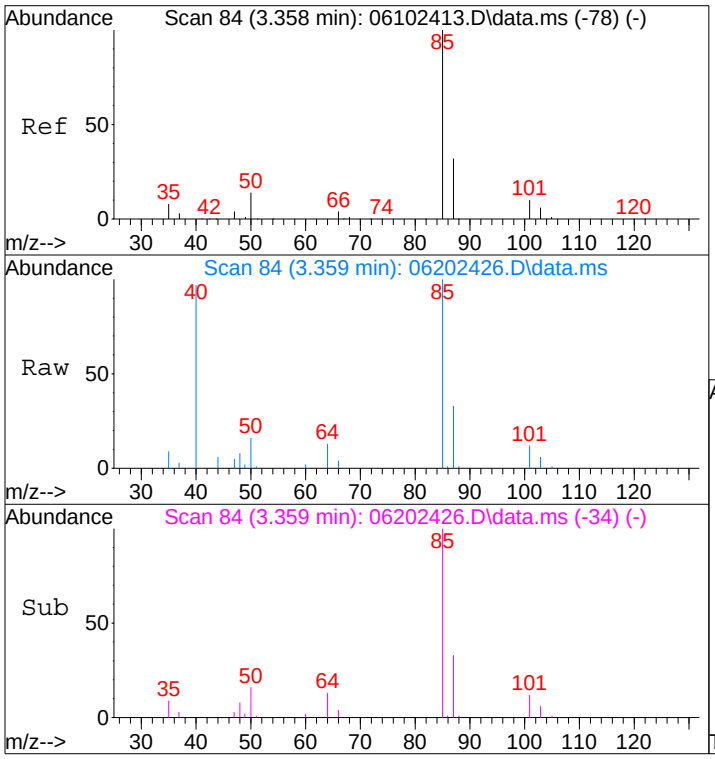
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

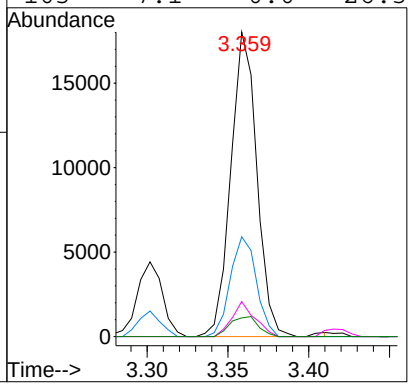


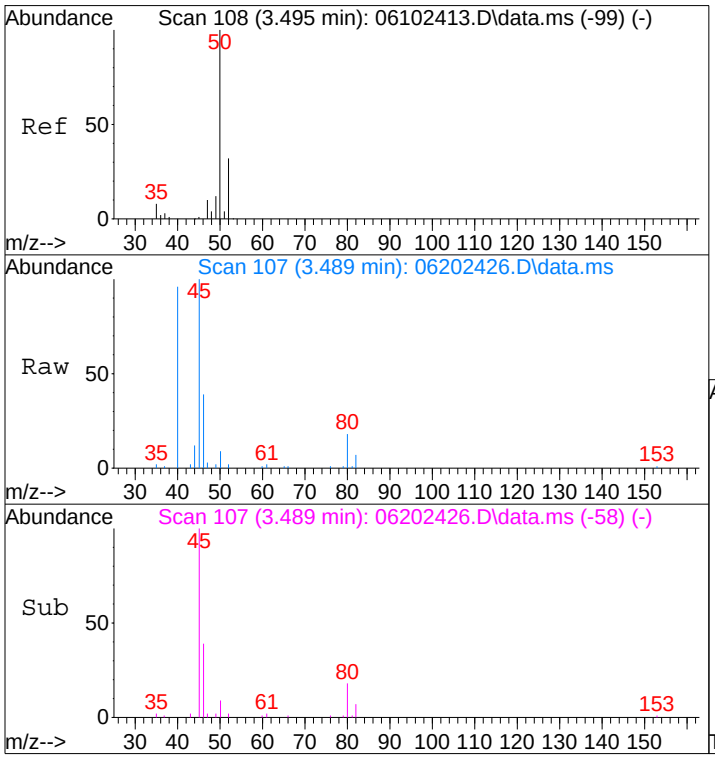


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.53 ng m
RT: 3.36 min Scan# 84
Delta R.T. 0.036 min
Lab File: 06202426.D
Acq: 20 Jun 2024 23:27

Tgt Ion: 85 Resp: 20310

Ion	Ratio	Lower	Upper
85	100		
87	32.3	12.2	52.2
101	10.1	0.0	29.8
103	7.1	0.0	26.3

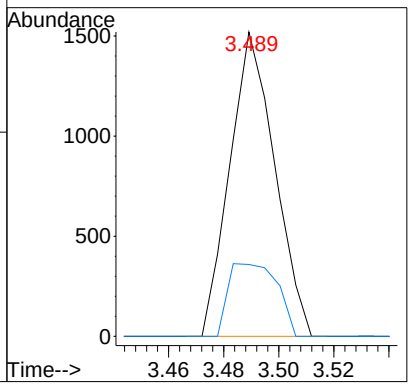


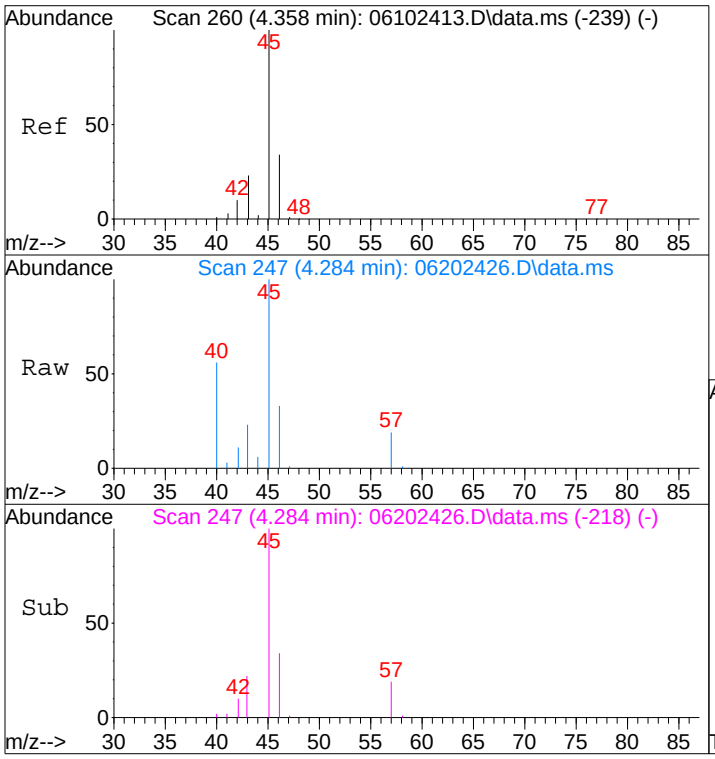


#4
Chloromethane
Concen: 0.07 ng
RT: 3.49 min Scan# 107
Delta R.T. 0.027 min
Lab File: 06202426.D
Acq: 20 Jun 2024 23:27

Tgt Ion: 50 Resp: 1719

Ion	Ratio	Lower	Upper
50	100		
52	26.1	12.4	52.4

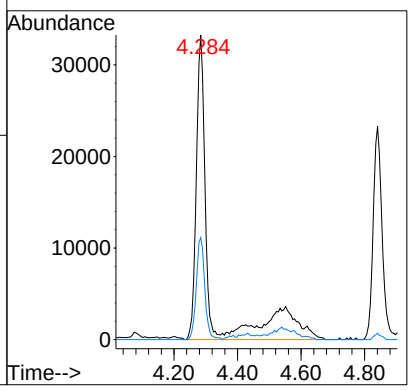


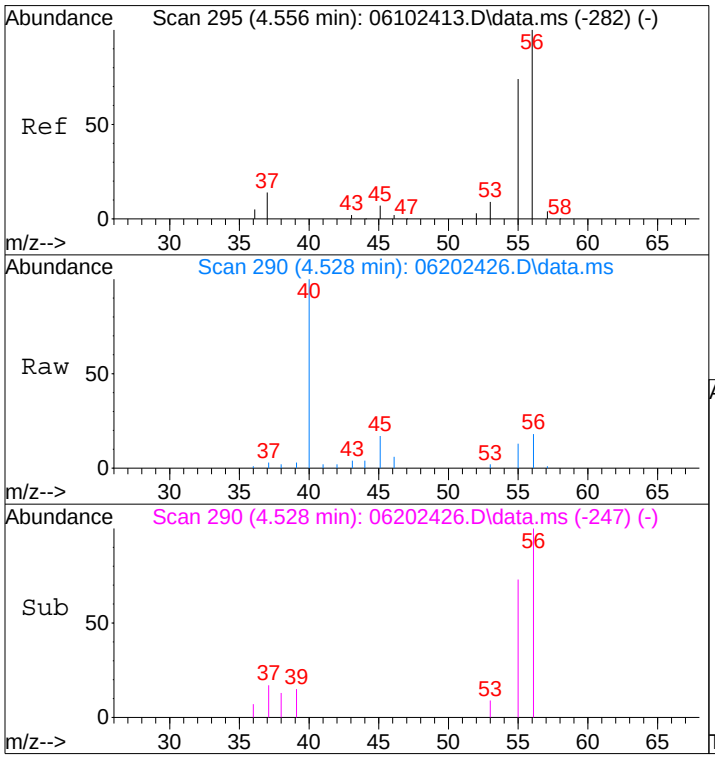


#10
Ethanol
Concen: 5.89 ng
RT: 4.28 min Scan# 247
Delta R.T. -0.083 min
Lab File: 06202426.D
Acq: 20 Jun 2024 23:27

Tgt Ion: 45 Resp: 92412

Ion	Ratio	Lower	Upper
45	100		
46	22.3	13.5	53.5

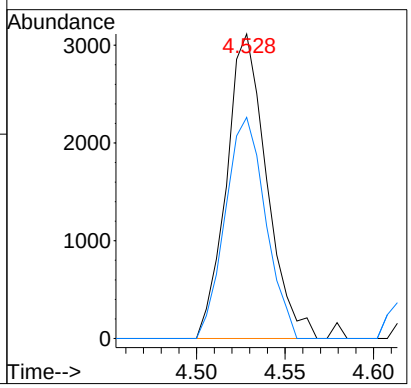


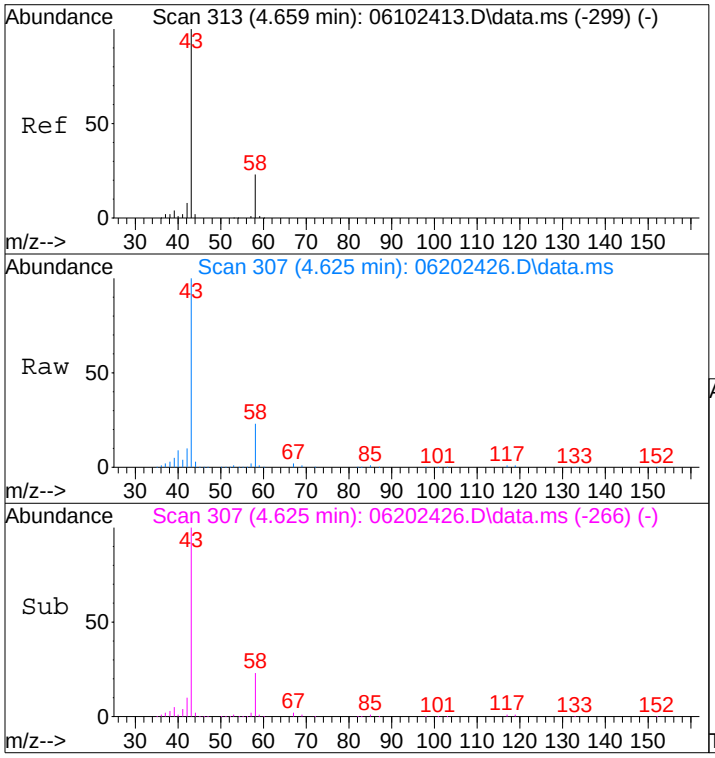


#12
Acrolein
Concen: 0.42 ng
RT: 4.53 min Scan# 290
Delta R.T. -0.007 min
Lab File: 06202426.D
Acq: 20 Jun 2024 23:27

Tgt Ion: 56 Resp: 4925

Ion	Ratio	Lower	Upper
56	100		
55	72.8	55.5	95.5

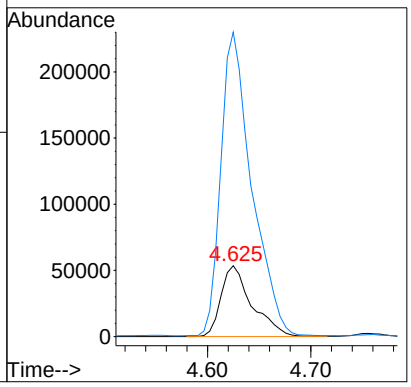


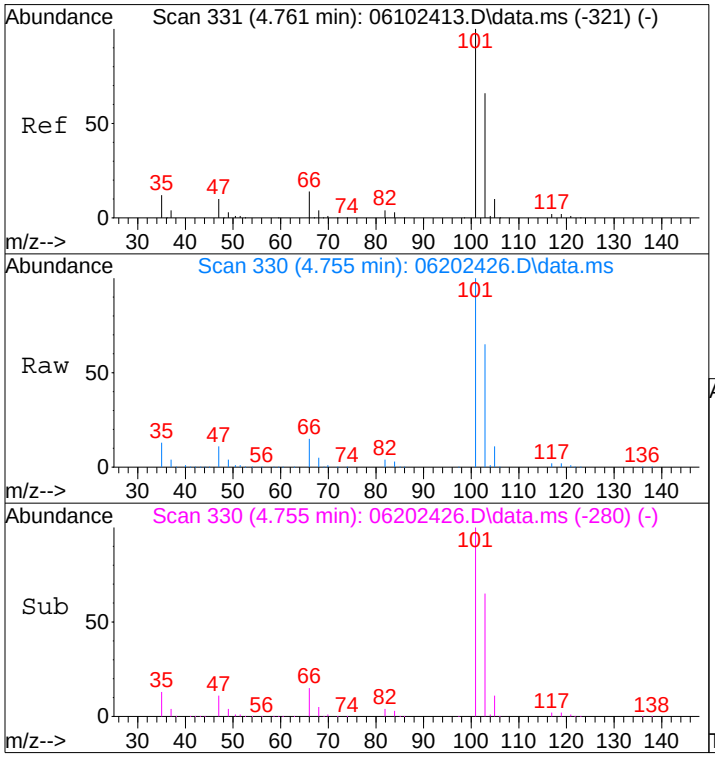


#13
Acetone
Concen: 8.89 ng
RT: 4.62 min Scan# 307
Delta R.T. -0.017 min
Lab File: 06202426.D
Acq: 20 Jun 2024 23:27

Tgt Ion: 58 Resp: 111487

Ion	Ratio	Lower	Upper
58	100		
43	428.7	400.7	460.7

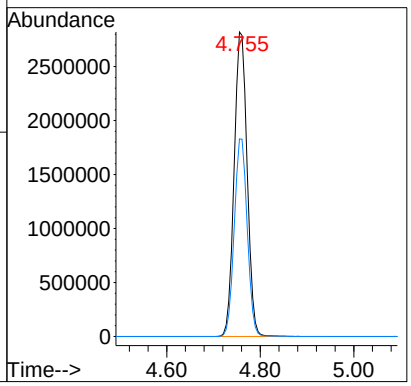


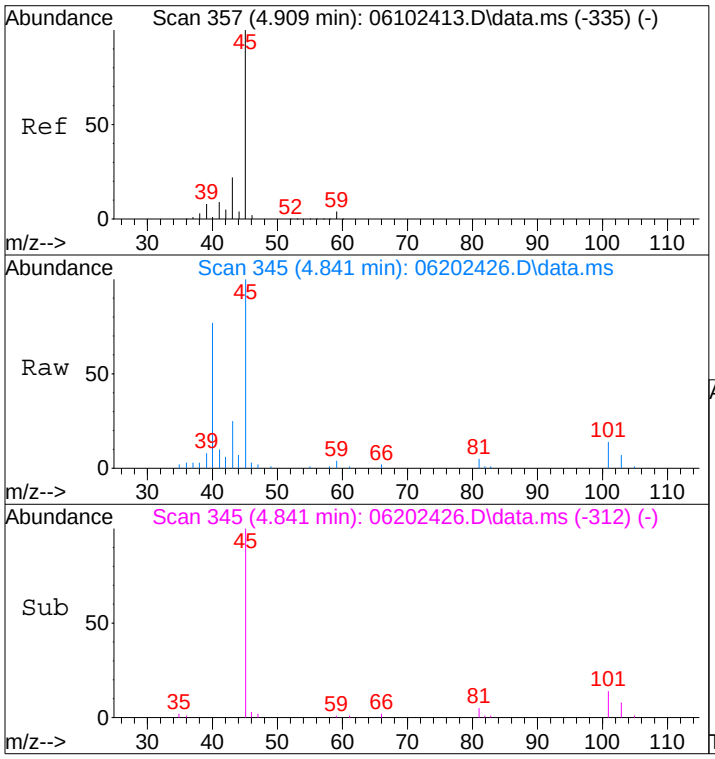


#14
Trichlorofluoromethane
Concen: 141.26 ng
RT: 4.76 min Scan# 330
Delta R.T. 0.035 min
Lab File: 06202426.D
Acq: 20 Jun 2024 23:27

Tgt Ion:101 Resp: 5431683

Ion	Ratio	Lower	Upper
101	100		
103	64.9	44.9	84.9

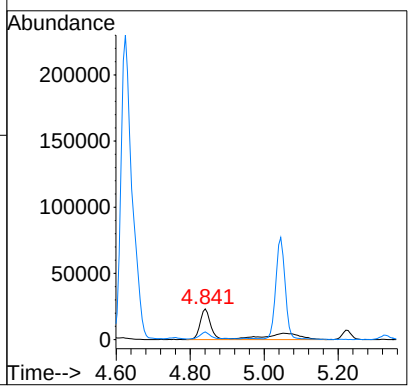


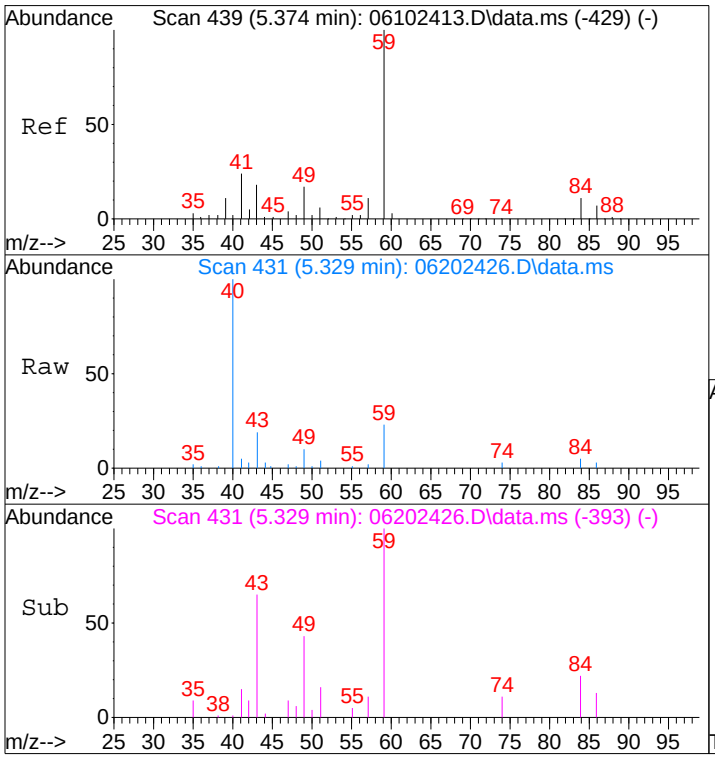


#15
2-Propanol (Isopropanol)
Concen: 1.56 ng
RT: 4.84 min Scan# 345
Delta R.T. -0.060 min
Lab File: 06202426.D
Acq: 20 Jun 2024 23:27

Tgt Ion: 45 Resp: 78789

Ion	Ratio	Lower	Upper
45	100		
43	16.8	2.5	42.5

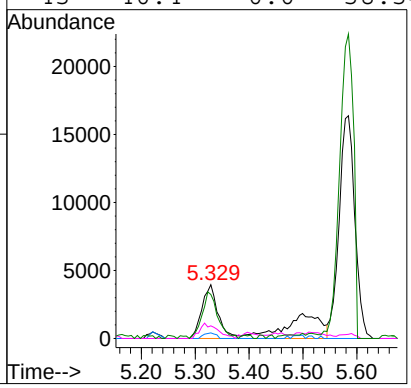


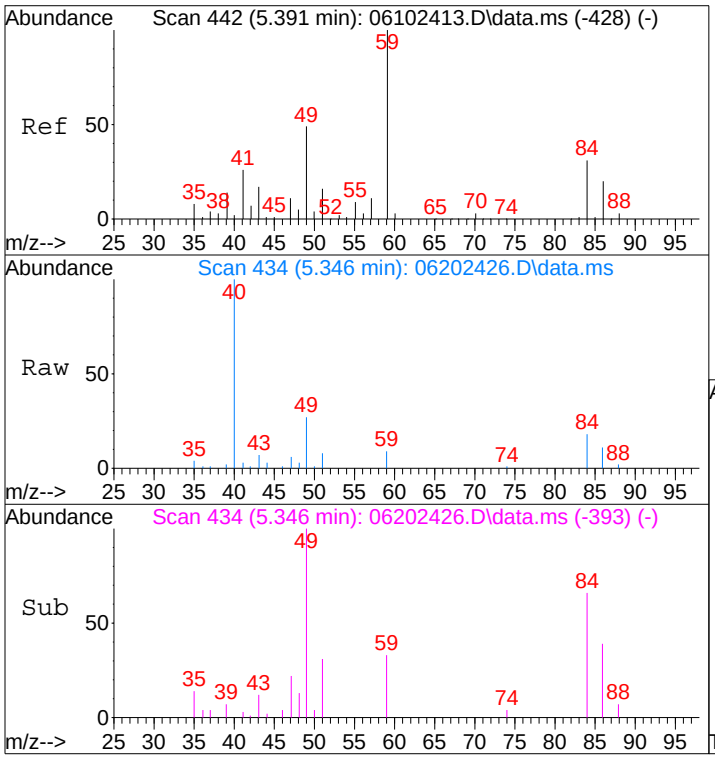


#18
2-Methyl-2-Propanol (tert-Butyl Alcohol
Concen: 0.42 ng
RT: 5.33 min Scan# 431
Delta R.T. -0.032 min
Lab File: 06202426.D
Acq: 20 Jun 2024 23:27

Tgt Ion: 59 Resp: 16768

Ion	Ratio	Lower	Upper
59	100		
57	3.8	0.0	30.9
41	15.0	0.9	40.9
43	40.4	0.0	38.3#

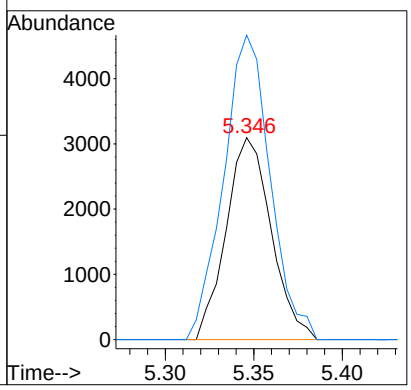


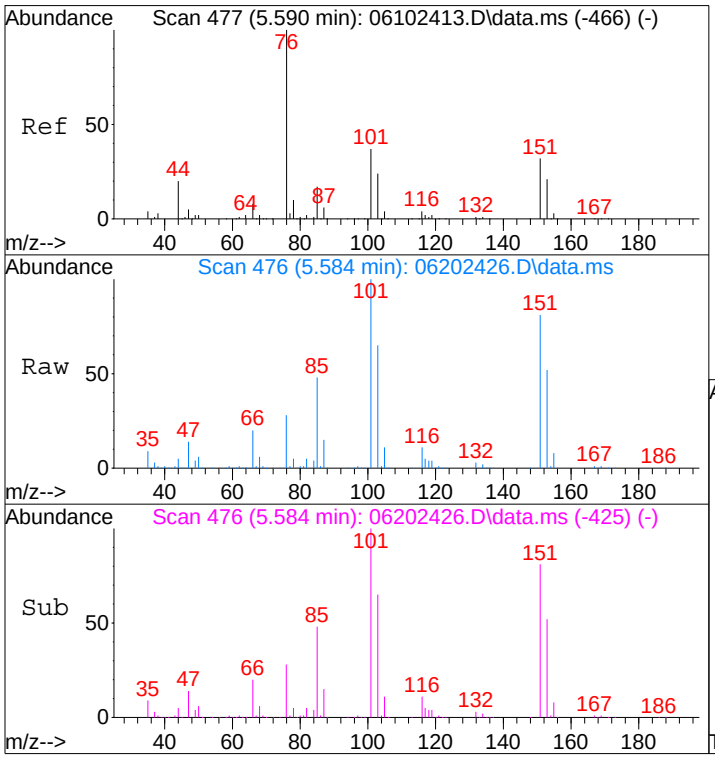


#19
Methylene Chloride
Concen: 0.31 ng
RT: 5.35 min Scan# 434
Delta R.T. -0.015 min
Lab File: 06202426.D
Acq: 20 Jun 2024 23:27

Tgt Ion: 84 Resp: 5486

Ion	Ratio	Lower	Upper
84	100		
49	156.0	132.9	182.9

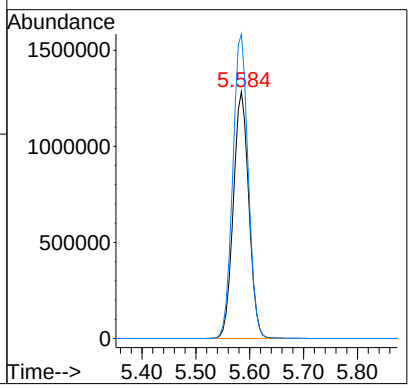


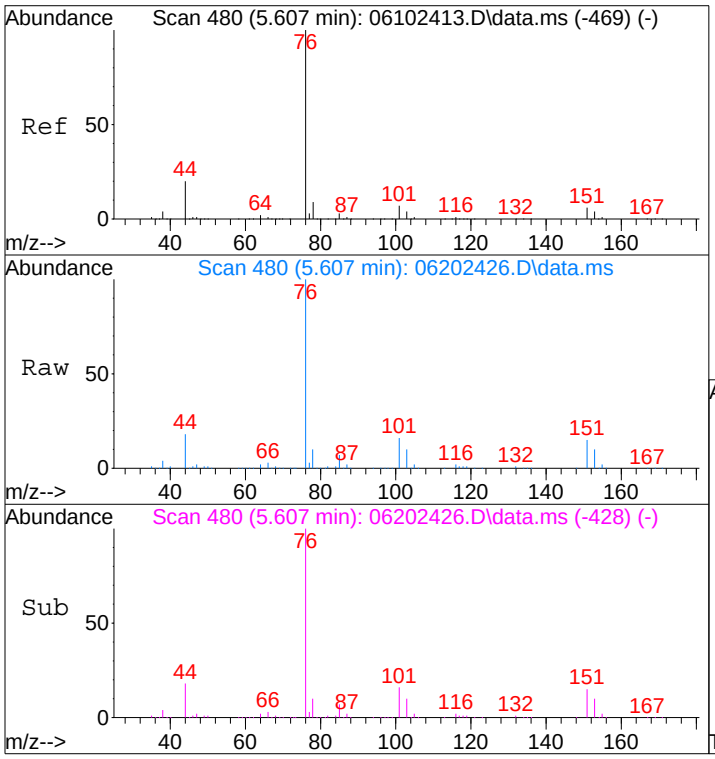


#21
Trichlorotrifluoroethane
Concen: 157.62 ng
RT: 5.58 min Scan# 476
Delta R.T. 0.038 min
Lab File: 06202426.D
Acq: 20 Jun 2024 23:27

Tgt Ion:151 Resp: 2563921

Ion	Ratio	Lower	Upper
151	100		
101	123.1	95.0	135.0

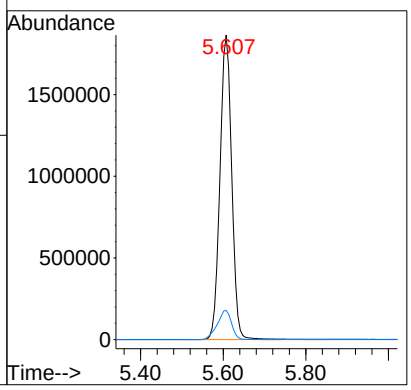


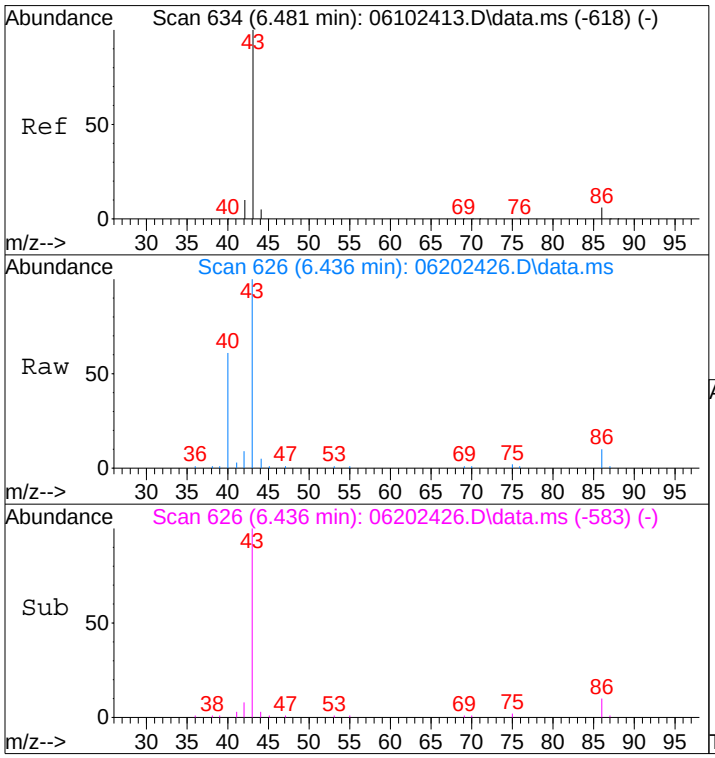


#22
Carbon Disulfide
Concen: 64.39 ng
RT: 5.61 min Scan# 480
Delta R.T. 0.044 min
Lab File: 06202426.D
Acq: 20 Jun 2024 23:27

Tgt Ion: 76 Resp: 3685552

Ion	Ratio	Lower	Upper
76	100		
78	11.7	0.0	29.6

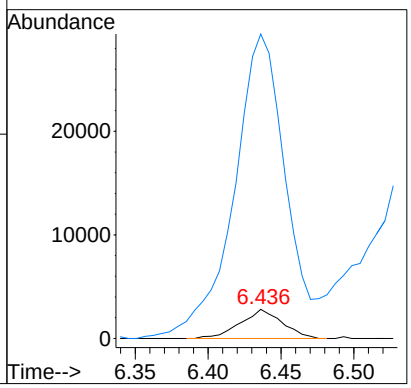


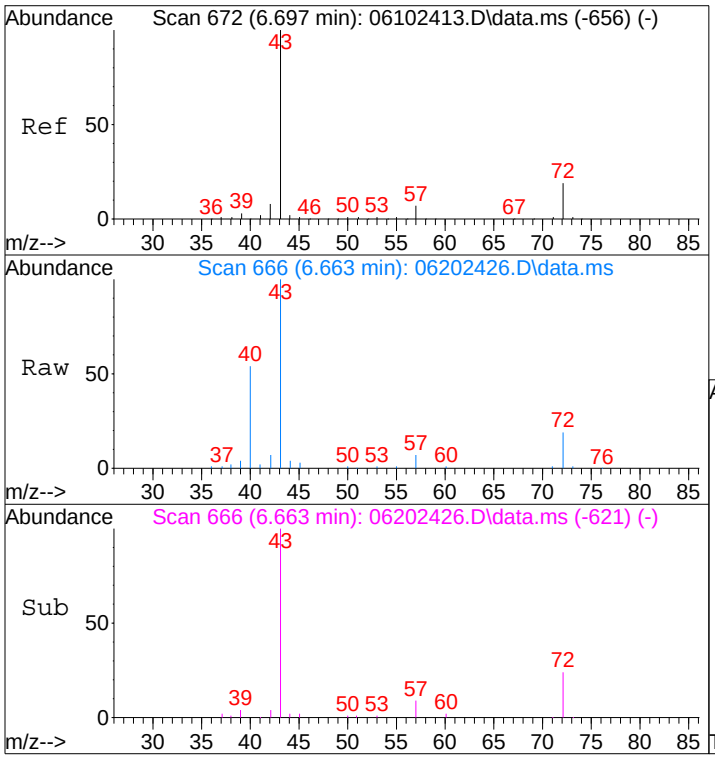


#26
Vinyl Acetate
Concen: 1.93 ng
RT: 6.44 min Scan# 626
Delta R.T. -0.003 min
Lab File: 06202426.D
Acq: 20 Jun 2024 23:27

Tgt Ion: 86 Resp: 5601

Ion	Ratio	Lower	Upper
86	100		
43	1301.5	1668.9	1708.9#

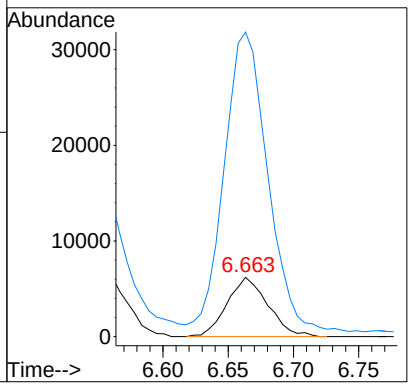


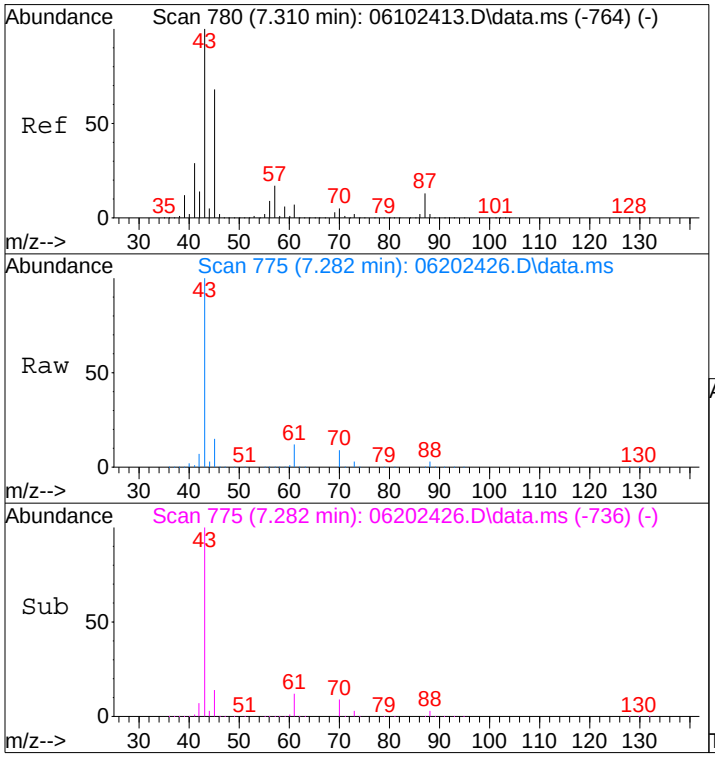


#27
2-Butanone (MEK)
Concen: 1.36 ng
RT: 6.66 min Scan# 666
Delta R.T. 0.005 min
Lab File: 06202426.D
Acq: 20 Jun 2024 23:27

Tgt Ion: 72 Resp: 13483

Ion	Ratio	Lower	Upper
72	100		
43	536.7	506.8	546.8

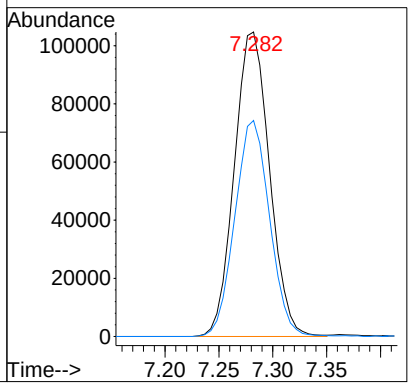


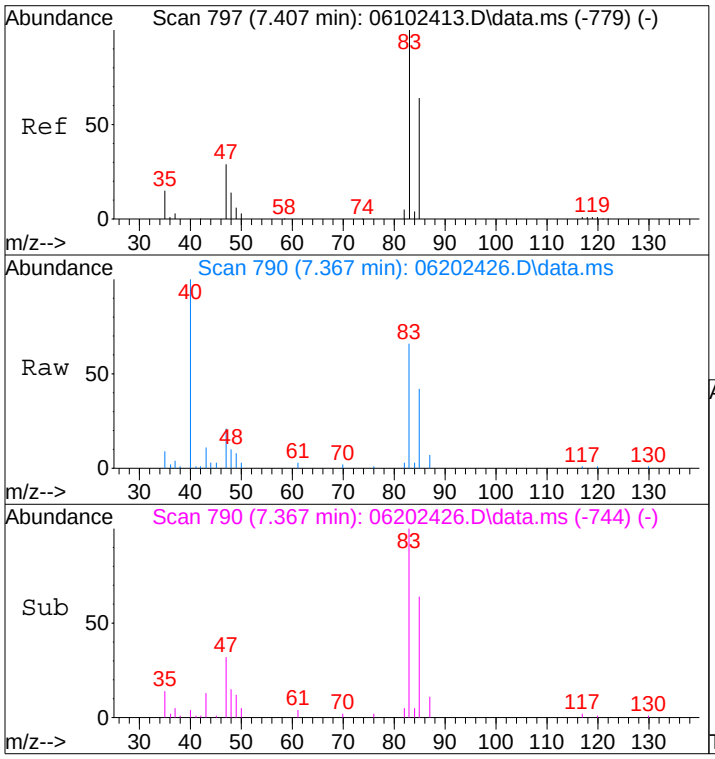


#30
Ethyl Acetate
Concen: 39.23 ng
RT: 7.28 min Scan# 775
Delta R.T. 0.023 min
Lab File: 06202426.D
Acq: 20 Jun 2024 23:27

Tgt Ion: 61 Resp: 237844

Ion	Ratio	Lower	Upper
61	100		
70	70.2	53.5	93.5

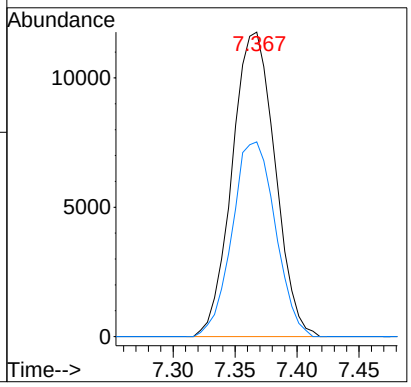


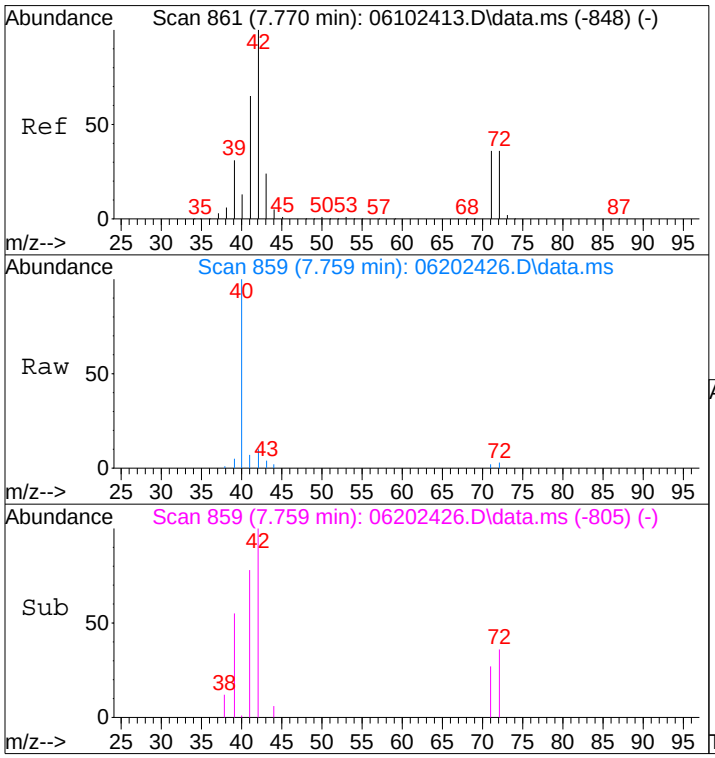


#32
Chloroform
Concen: 0.90 ng
RT: 7.37 min Scan# 790
Delta R.T. 0.013 min
Lab File: 06202426.D
Acq: 20 Jun 2024 23:27

Tgt Ion: 83 Resp: 28357

Ion	Ratio	Lower	Upper
83	100		
85	64.4	44.4	84.4

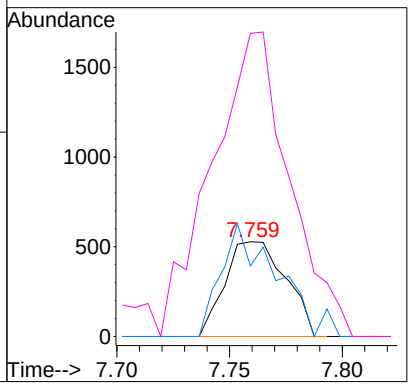


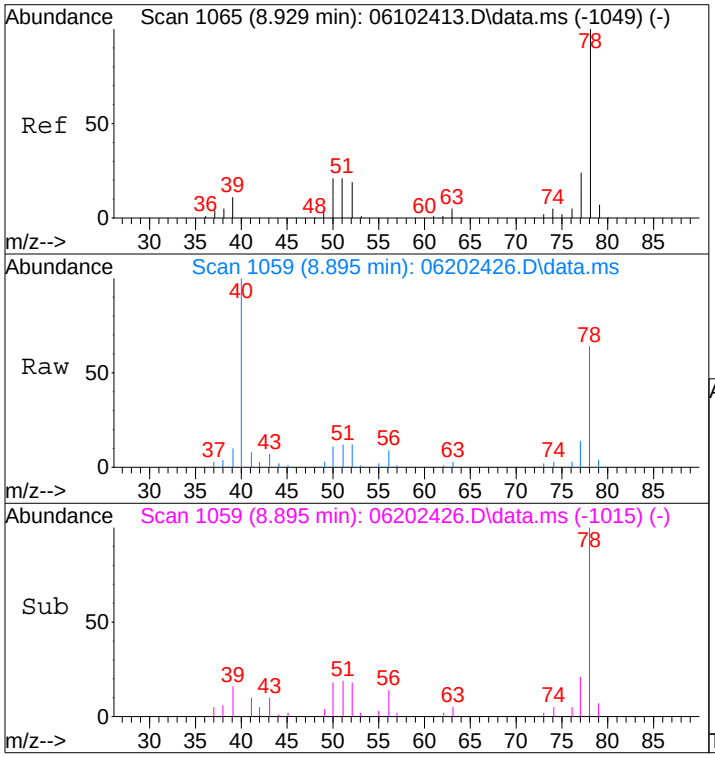


#34
Tetrahydrofuran (THF)
Concen: 0.11 ng
RT: 7.76 min Scan# 859
Delta R.T. 0.056 min
Lab File: 06202426.D
Acq: 20 Jun 2024 23:27

Tgt Ion: 72 Resp: 991

Ion	Ratio	Lower	Upper
72	100		
71	110.0	79.4	119.4
42	434.7	260.8	300.8#

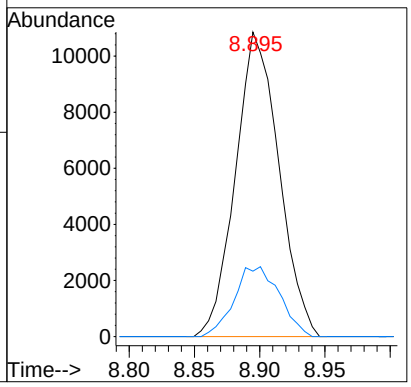


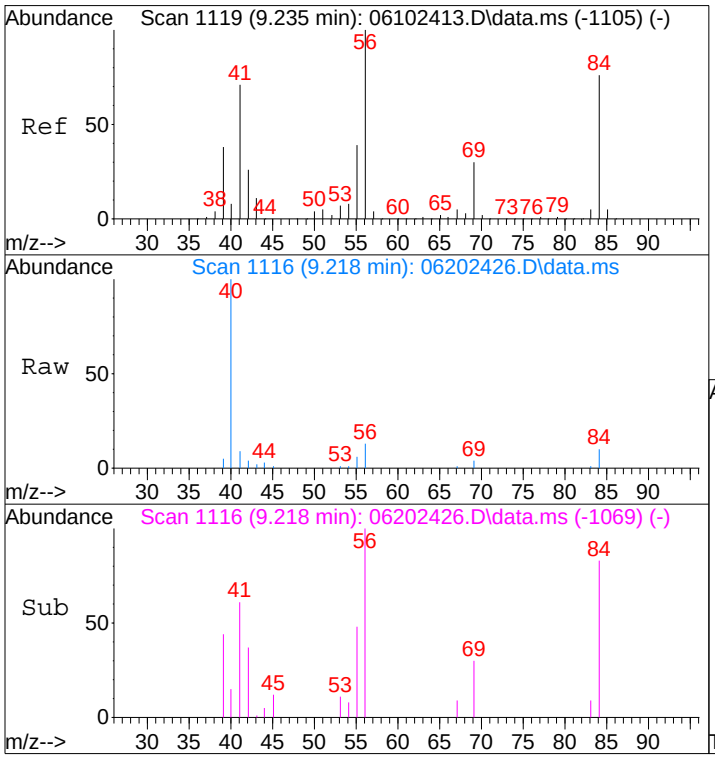


#41
Benzene
Concen: 0.38 ng
RT: 8.89 min Scan# 1059
Delta R.T. -0.002 min
Lab File: 06202426.D
Acq: 20 Jun 2024 23:27

Tgt Ion: 78 Resp: 25117

Ion	Ratio	Lower	Upper
78	100		
77	23.9	4.0	44.0

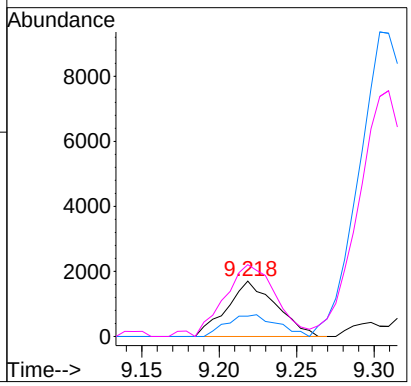


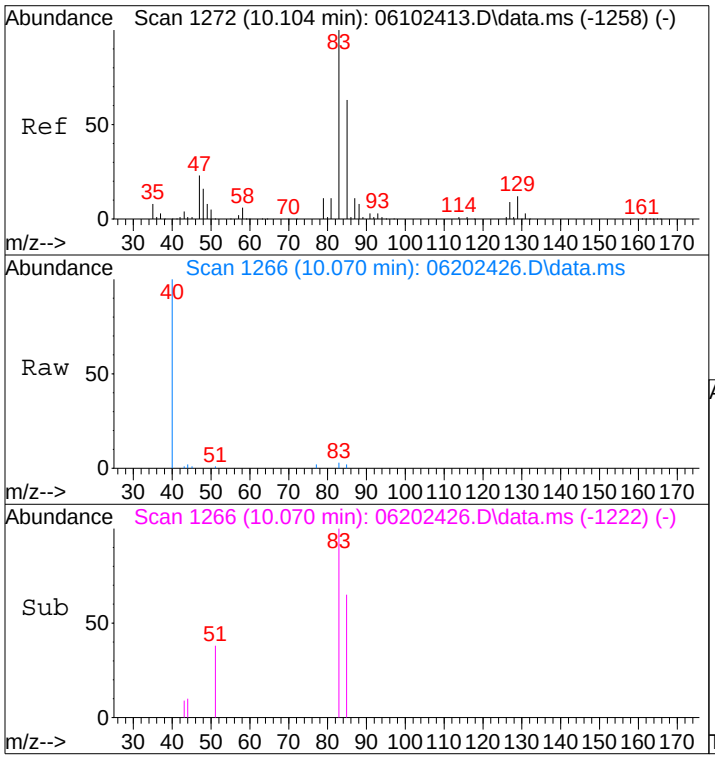


#43
Cyclohexane
Concen: 0.17 ng
RT: 9.22 min Scan# 1116
Delta R.T. 0.016 min
Lab File: 06202426.D
Acq: 20 Jun 2024 23:27

Tgt Ion: 84 Resp: 3743

Ion	Ratio	Lower	Upper
84	100		
69	40.4	18.8	58.8
56	138.6	111.5	151.5

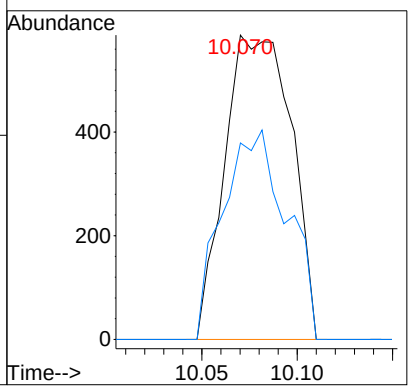


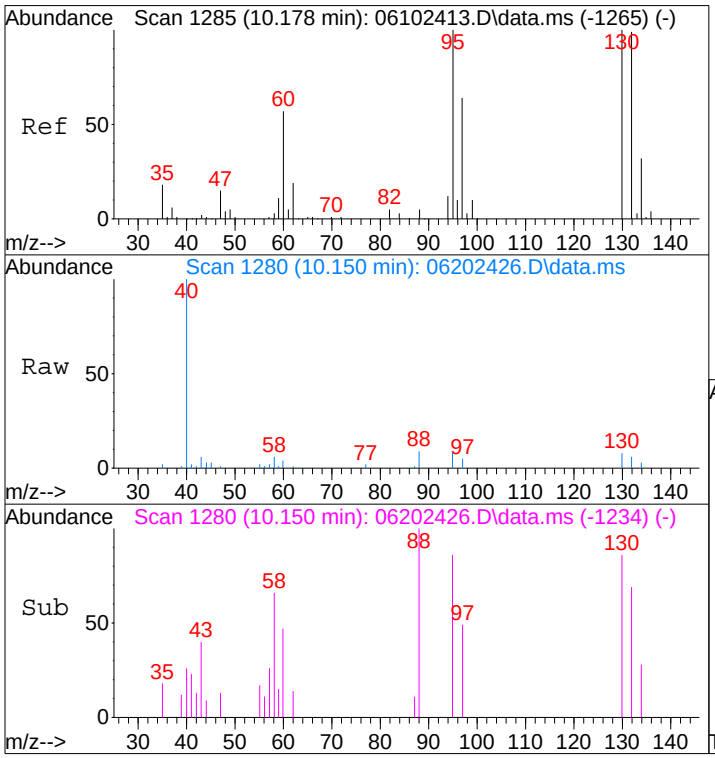


#46
Bromodichloromethane
Concen: 0.05 ng
RT: 10.07 min Scan# 1266
Delta R.T. -0.002 min
Lab File: 06202426.D
Acq: 20 Jun 2024 23:27

Tgt Ion: 83 Resp: 1422

Ion	Ratio	Lower	Upper
83	100		
85	66.4	43.8	83.8

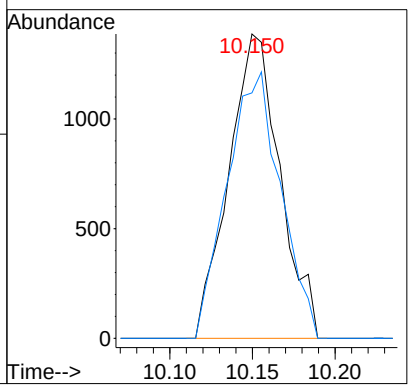


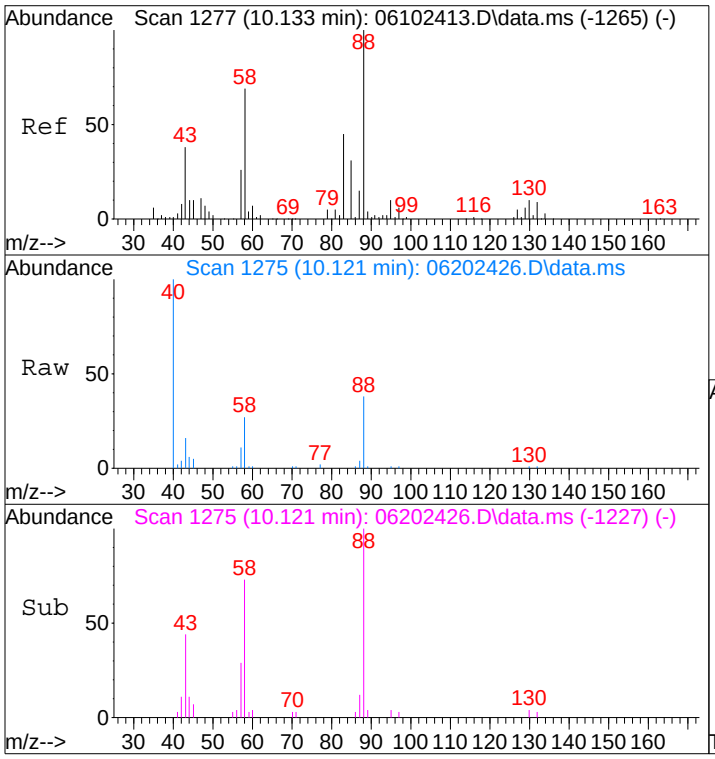


#47
Trichloroethene
Concen: 0.15 ng
RT: 10.15 min Scan# 1280
Delta R.T. 0.010 min
Lab File: 06202426.D
Acq: 20 Jun 2024 23:27

Tgt Ion:130 Resp: 2983

Ion	Ratio	Lower	Upper
130	100		
132	91.9	77.9	117.9

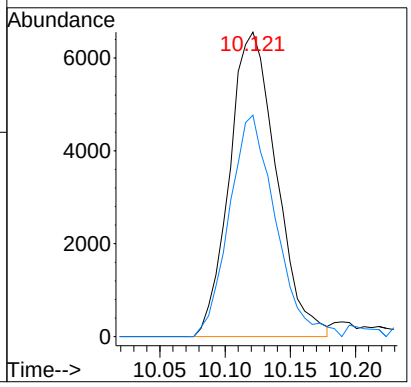


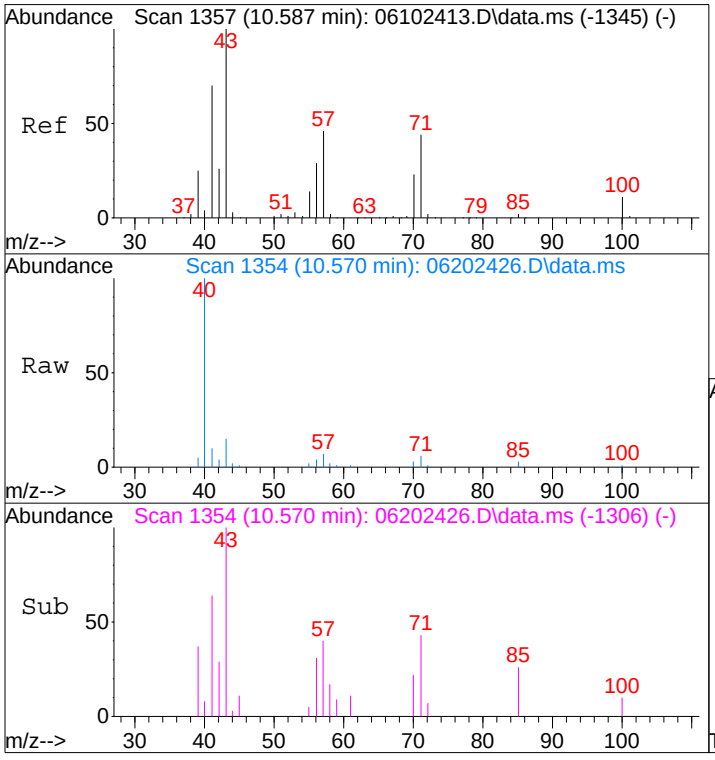


#48
1,4-Dioxane
Concen: 1.34 ng
RT: 10.12 min Scan# 1275
Delta R.T. 0.021 min
Lab File: 06202426.D
Acq: 20 Jun 2024 23:27

Tgt Ion: 88 Resp: 16364

Ion	Ratio	Lower	Upper
88	100		
58	71.7	47.6	87.6

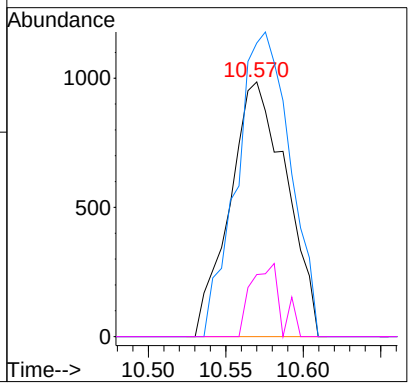


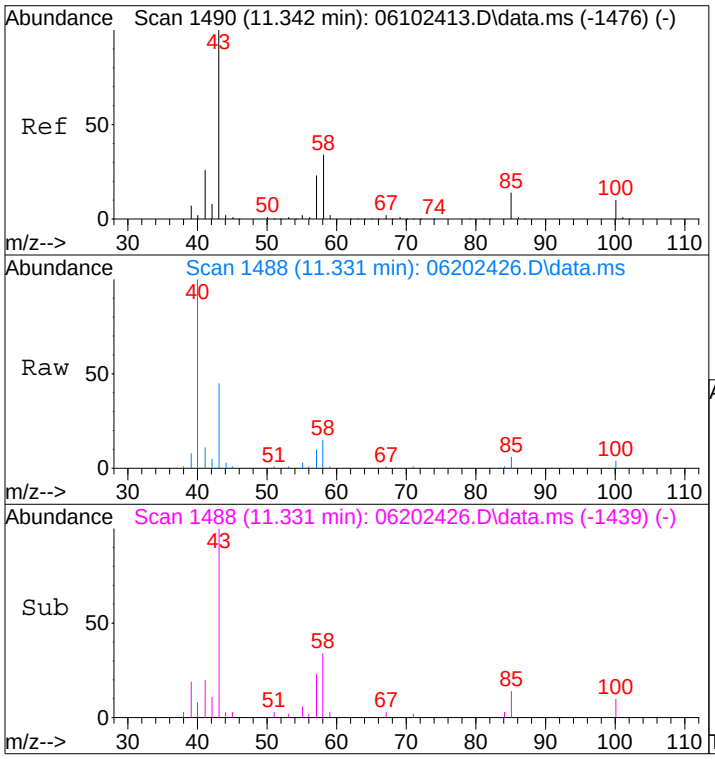


#51
n-Heptane
Concen: 0.18 ng
RT: 10.57 min Scan# 1354
Delta R.T. 0.024 min
Lab File: 06202426.D
Acq: 20 Jun 2024 23:27

Tgt Ion: 71 Resp: 2506

Ion	Ratio	Lower	Upper
71	100		
57	113.0	83.9	123.9
100	15.1	4.8	44.8

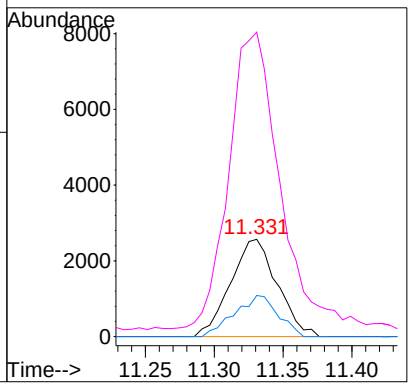


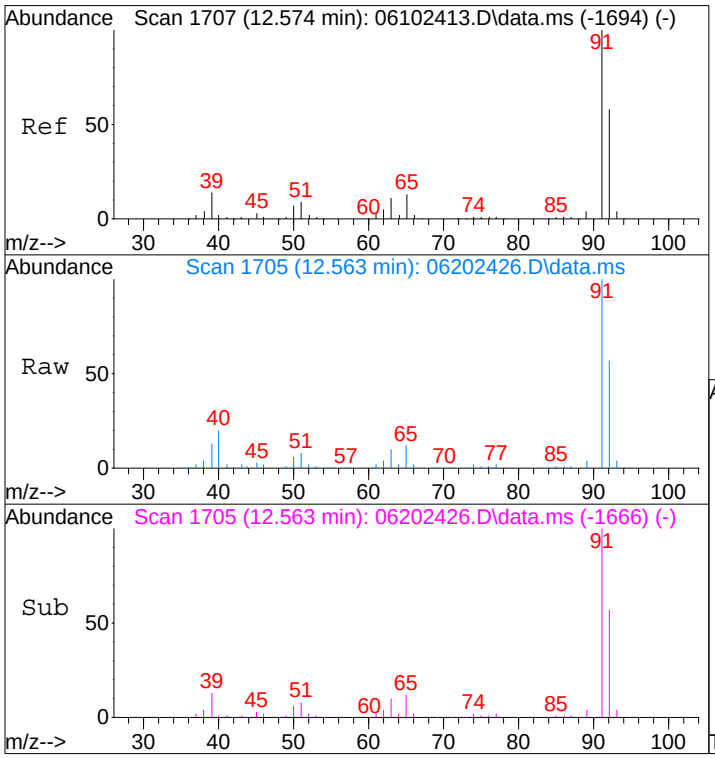


#53
4-Methyl-2-pentanone
Concen: 0.42 ng
RT: 11.33 min Scan# 1488
Delta R.T. 0.028 min
Lab File: 06202426.D
Acq: 20 Jun 2024 23:27

Tgt Ion: 58 Resp: 6045

Ion	Ratio	Lower	Upper
58	100		
85	39.4	34.5	51.7
43	376.0	236.1	354.1#

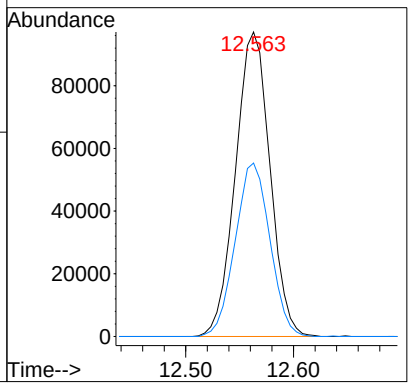


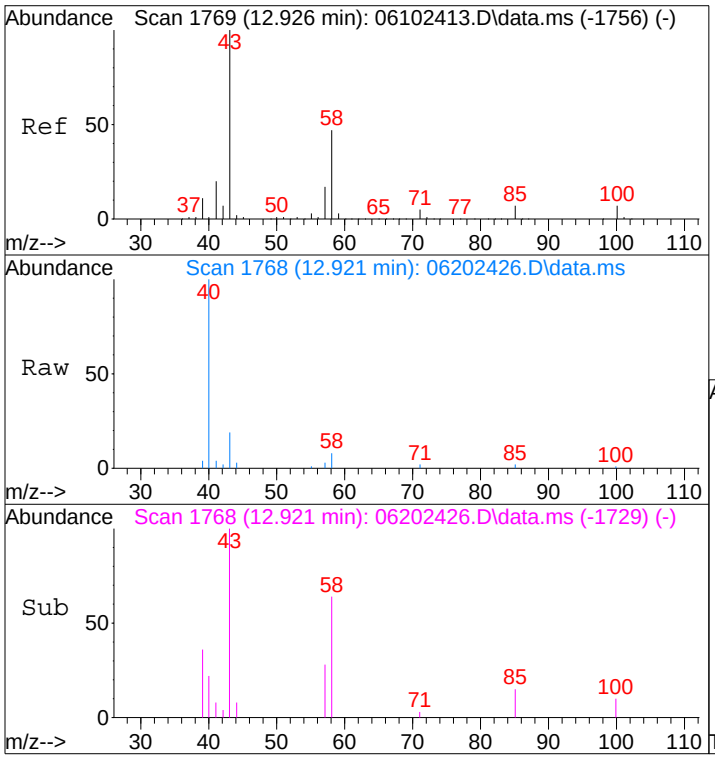


#58
Toluene
Concen: 3.17 ng
RT: 12.56 min Scan# 1705
Delta R.T. -0.028 min
Lab File: 06202426.D
Acq: 20 Jun 2024 23:27

Tgt Ion: 91 Resp: 216069

Ion	Ratio	Lower	Upper
91	100		
92	57.3	37.4	77.4

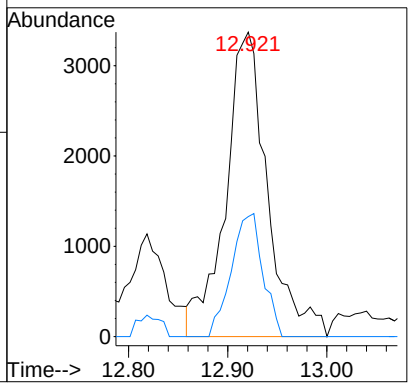


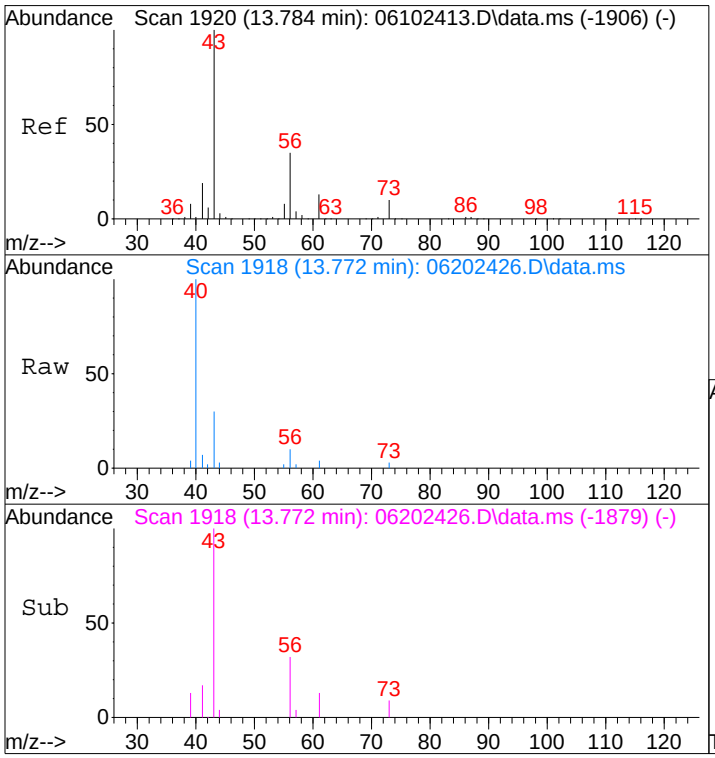


#59
2-Hexanone
Concen: 0.23 ng
RT: 12.92 min Scan# 1768
Delta R.T. -0.028 min
Lab File: 06202426.D
Acq: 20 Jun 2024 23:27

Tgt Ion: 43 Resp: 9886

Ion	Ratio	Lower	Upper
43	100		
58	30.4	25.9	65.9

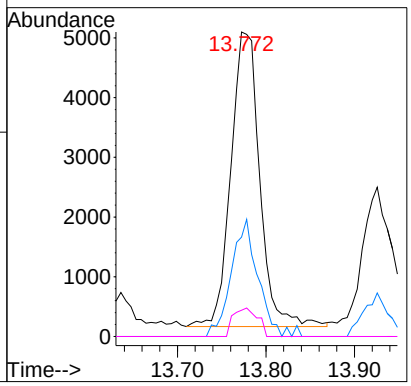


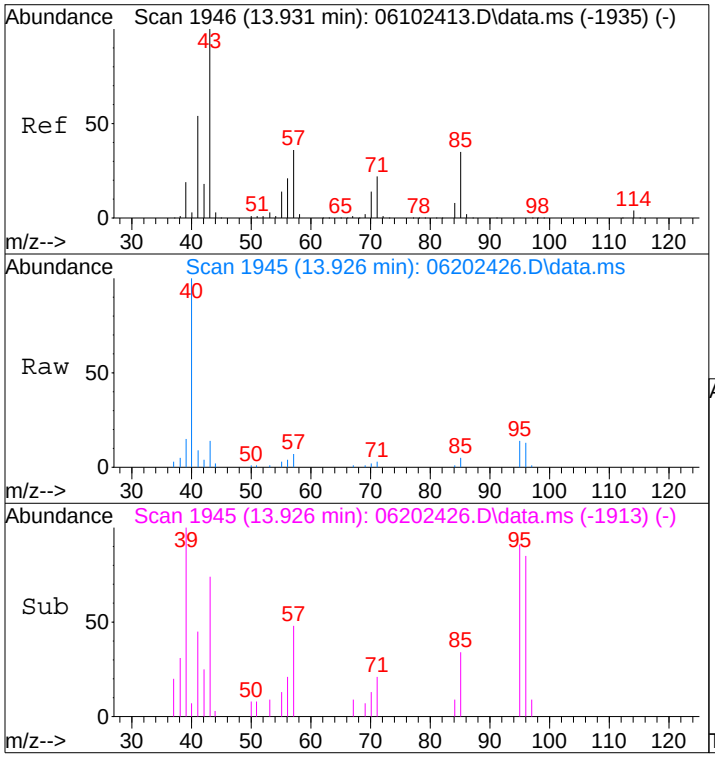


#62
n-Butyl Acetate
Concen: 0.25 ng
RT: 13.77 min Scan# 1918
Delta R.T. -0.028 min
Lab File: 06202426.D
Acq: 20 Jun 2024 23:27

Tgt Ion: 43 Resp: 11217

Ion	Ratio	Lower	Upper
43	100		
56	35.9	14.3	54.3
73	8.1	0.0	30.4

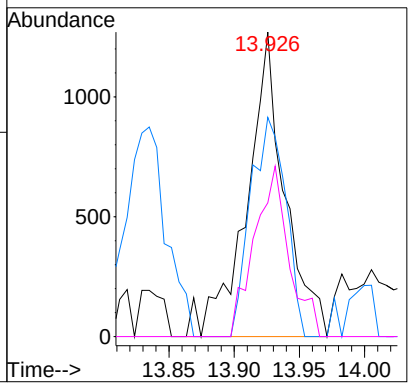


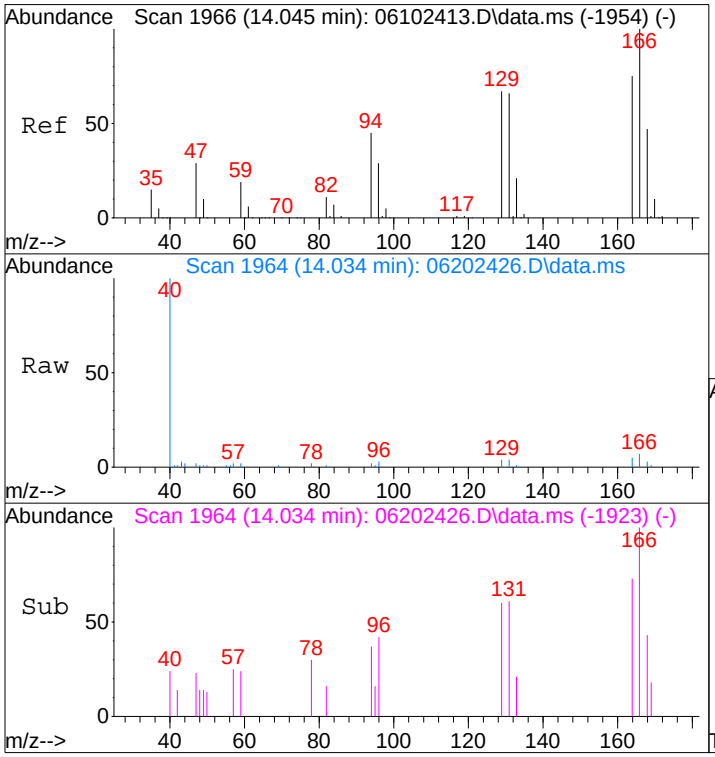


#63
n-Octane
Concen: 0.18 ng
RT: 13.93 min Scan# 1945
Delta R.T. -0.017 min
Lab File: 06202426.D
Acq: 20 Jun 2024 23:27

Tgt Ion: 57 Resp: 2584

Ion	Ratio	Lower	Upper
57	100		
85	66.4	79.8	119.6#
71	50.6	49.0	73.4

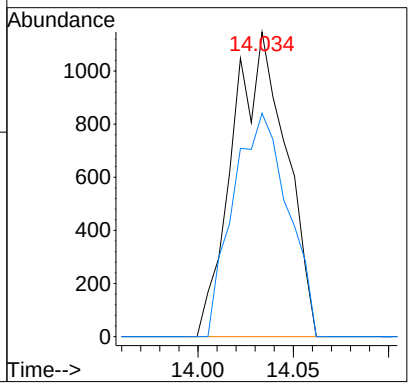


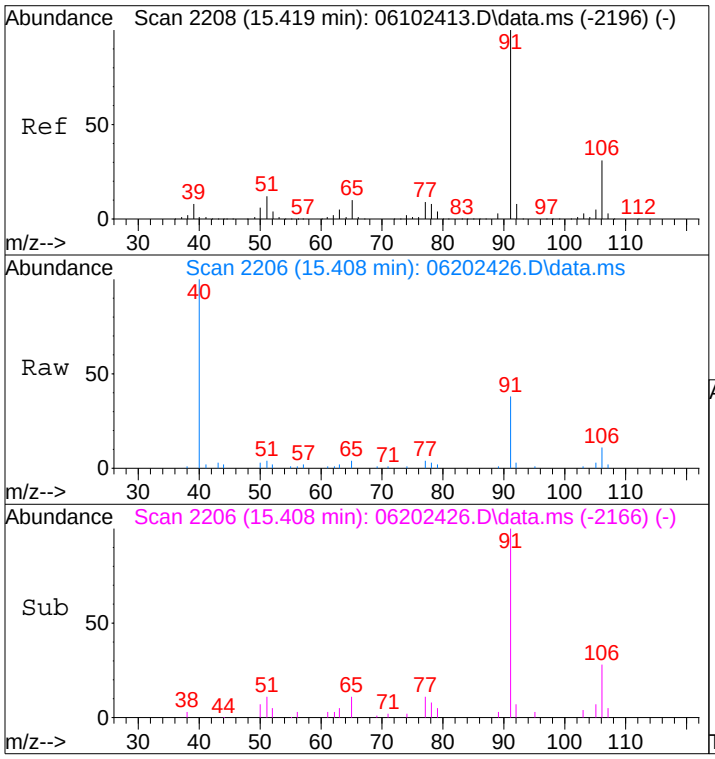


#64
Tetrachloroethene
Concen: 0.10 ng
RT: 14.03 min Scan# 1964
Delta R.T. -0.017 min
Lab File: 06202426.D
Acq: 20 Jun 2024 23:27

Tgt Ion:166 Resp: 2243

Ion	Ratio	Lower	Upper
166	100		
164	74.9	56.9	96.9

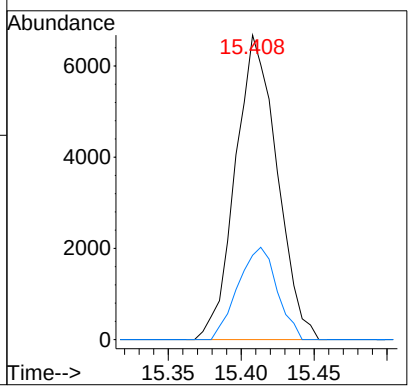


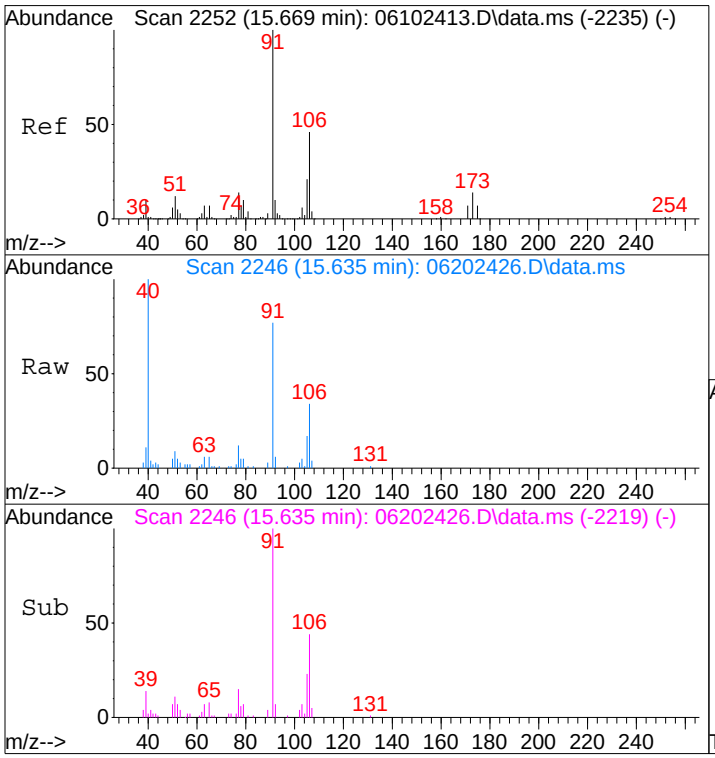


#66
Ethylbenzene
Concen: 0.17 ng
RT: 15.41 min Scan# 2206
Delta R.T. -0.023 min
Lab File: 06202426.D
Acq: 20 Jun 2024 23:27

Tgt Ion: 91 Resp: 13259

Ion	Ratio	Lower	Upper
91	100		
106	28.4	10.7	50.7

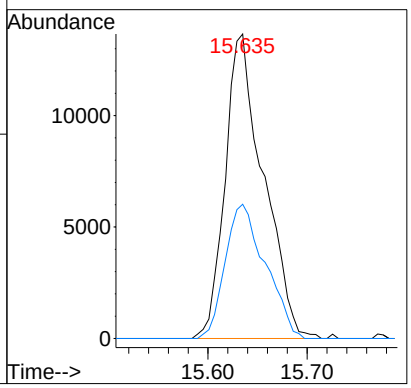


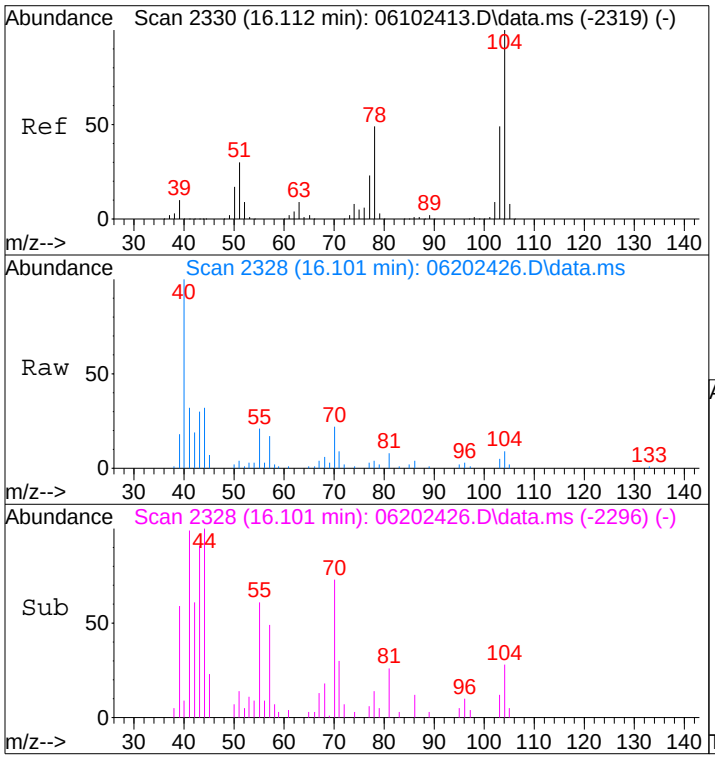


#67
m- & p-Xylenes
Concen: 0.56 ng
RT: 15.63 min Scan# 2246
Delta R.T. -0.046 min
Lab File: 06202426.D
Acq: 20 Jun 2024 23:27

Tgt Ion: 91 Resp: 36659

Ion	Ratio	Lower	Upper
91	100		
106	46.3	25.9	65.9

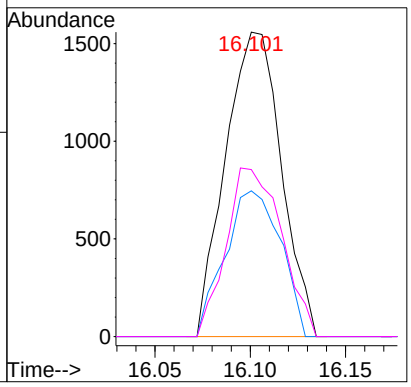


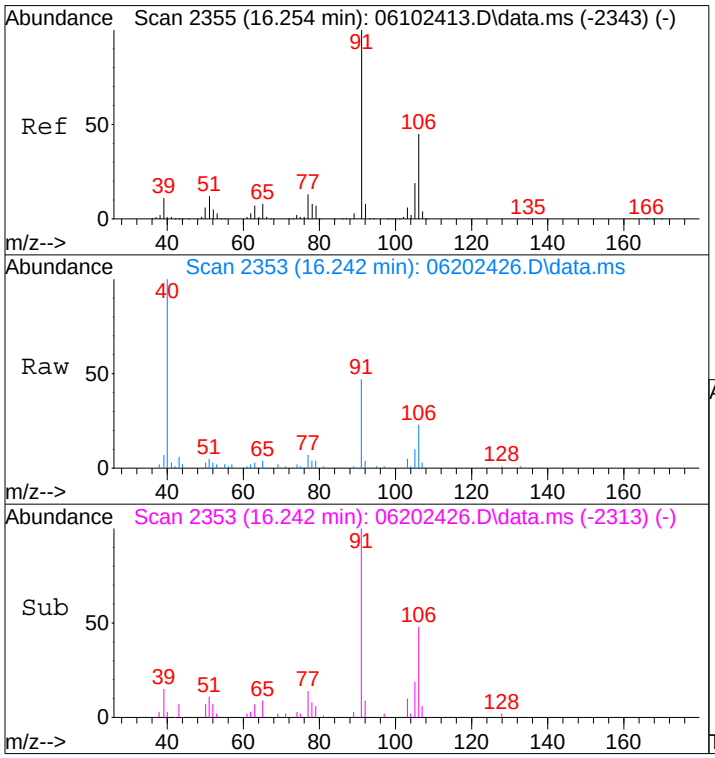


#69
Styrene
Concen: 0.07 ng
RT: 16.10 min Scan# 2328
Delta R.T. -0.017 min
Lab File: 06202426.D
Acq: 20 Jun 2024 23:27

Tgt Ion:104 Resp: 3175

Ion	Ratio	Lower	Upper
104	100		
78	47.7	29.2	69.2
103	54.8	29.4	69.4

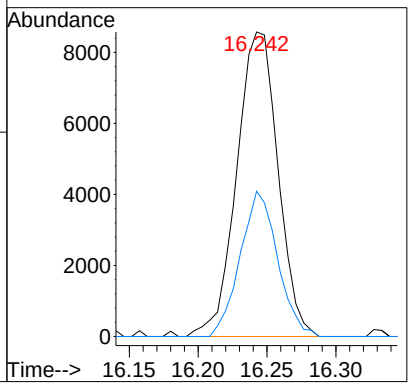


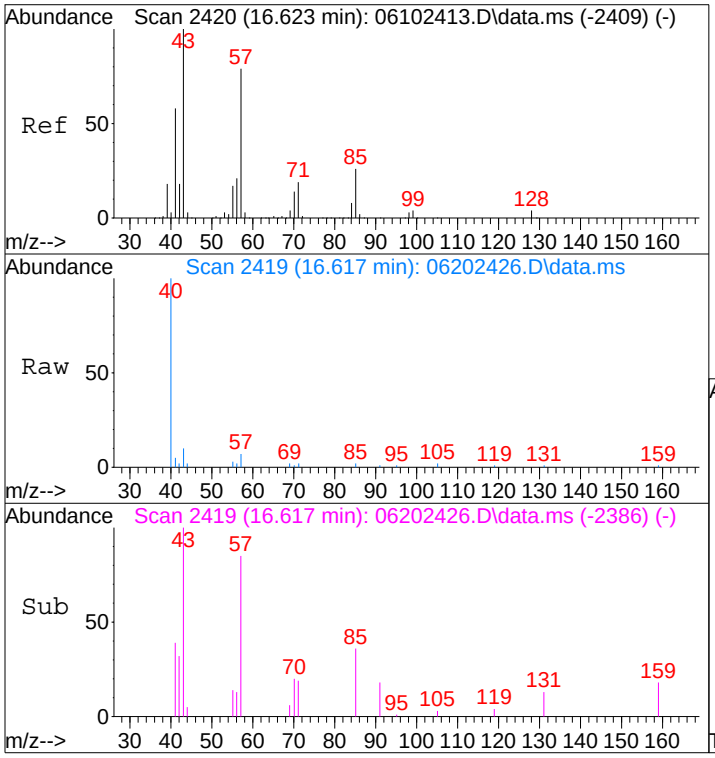


#70
o-Xylene
Concen: 0.28 ng
RT: 16.24 min Scan# 2353
Delta R.T. -0.023 min
Lab File: 06202426.D
Acq: 20 Jun 2024 23:27

Tgt Ion: 91 Resp: 17906

Ion	Ratio	Lower	Upper
91	100		
106	43.2	24.5	64.5

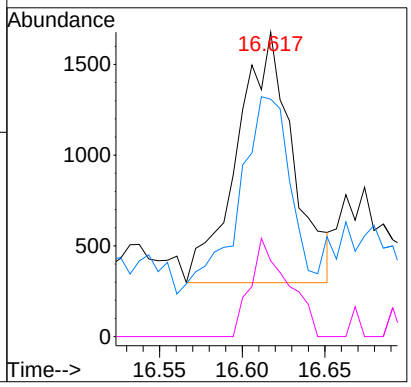


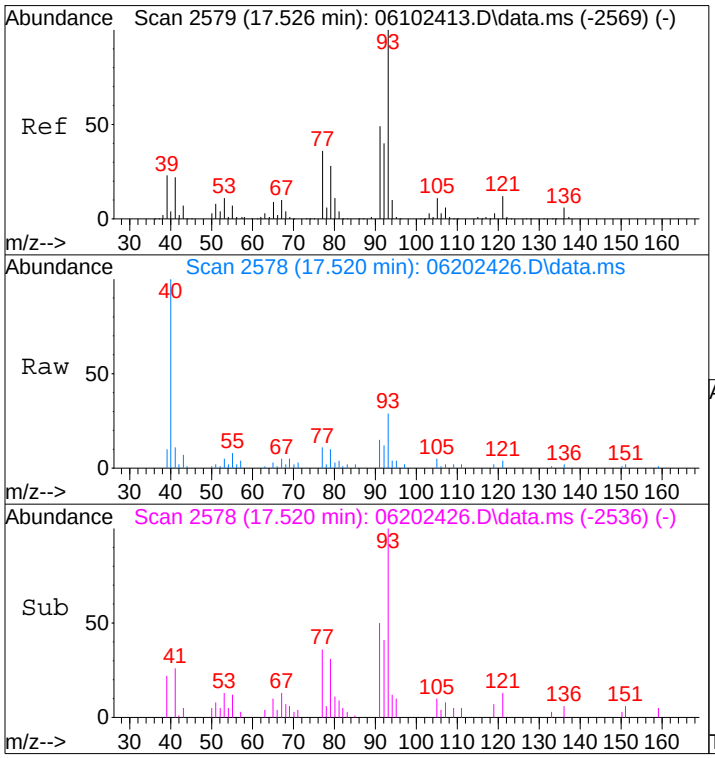


#71
n-Nonane
Concen: 0.09 ng
RT: 16.62 min Scan# 2419
Delta R.T. -0.011 min
Lab File: 06202426.D
Acq: 20 Jun 2024 23:27

Tgt Ion: 43 Resp: 3216

Ion	Ratio	Lower	Upper
43	100		
57	74.0	58.2	98.2
85	26.6	5.9	45.9

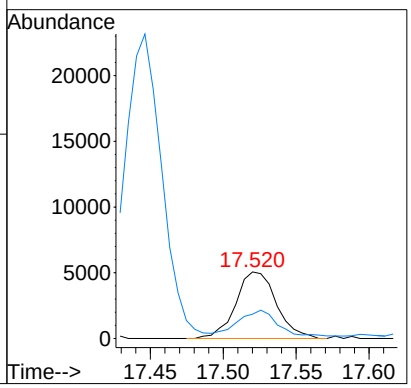


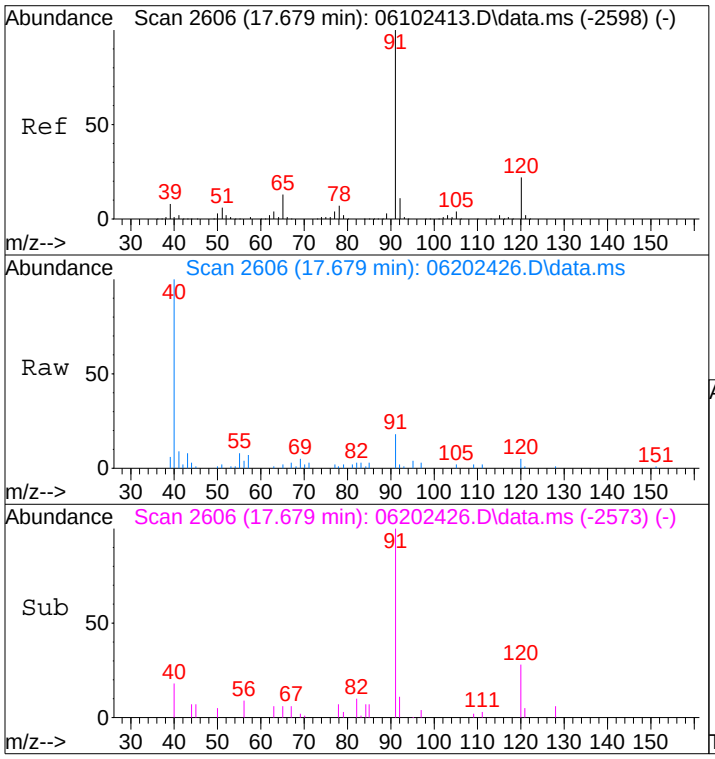


#75
alpha-Pinene
Concen: 0.26 ng
RT: 17.52 min Scan# 2578
Delta R.T. -0.011 min
Lab File: 06202426.D
Acq: 20 Jun 2024 23:27

Tgt Ion: 93 Resp: 9812

Ion	Ratio	Lower	Upper
93	100		
77	46.6	15.3	55.3

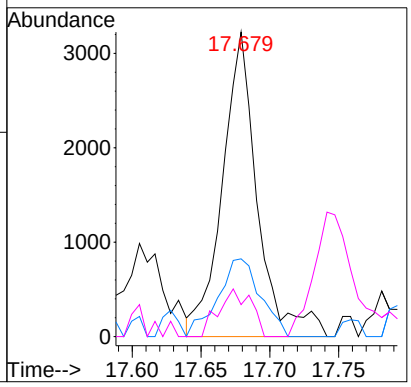


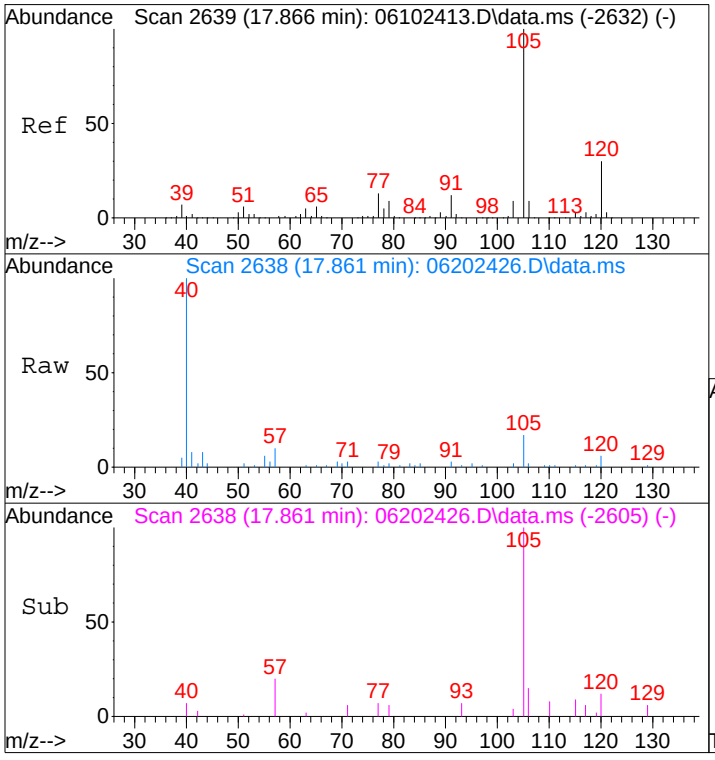


#76
n-Propylbenzene
Concen: 0.06 ng
RT: 17.68 min Scan# 2606
Delta R.T. -0.011 min
Lab File: 06202426.D
Acq: 20 Jun 2024 23:27

Tgt Ion: 91 Resp: 5702

Ion	Ratio	Lower	Upper
91	100		
120	31.0	2.7	42.7
65	14.4	0.0	32.7

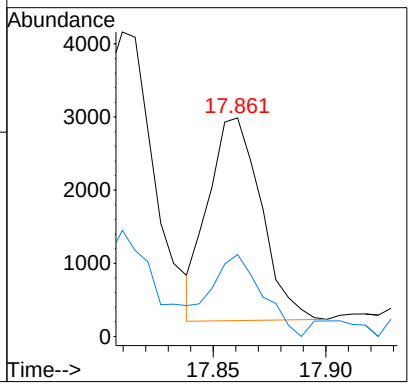


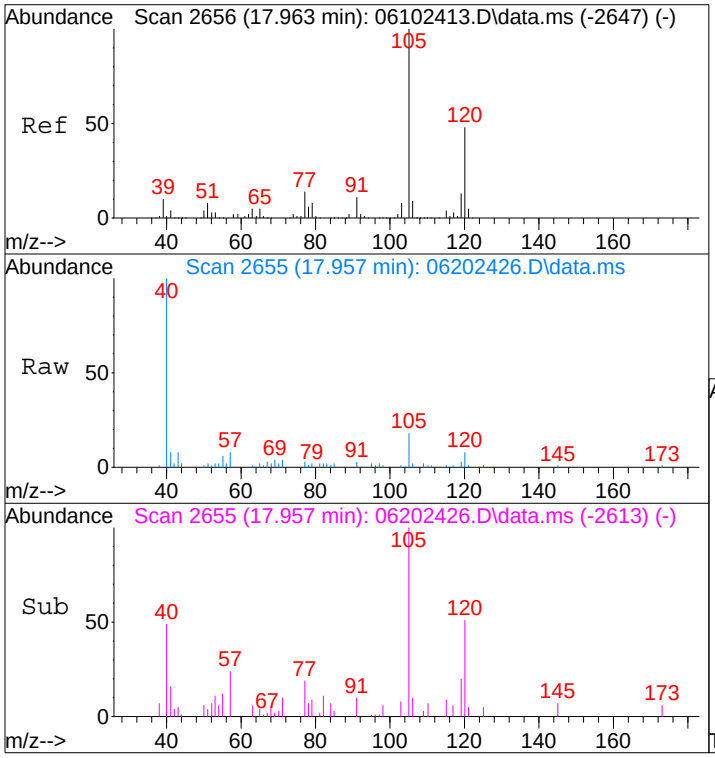


#78
4-Ethyltoluene
Concen: 0.06 ng
RT: 17.86 min Scan# 2638
Delta R.T. -0.011 min
Lab File: 06202426.D
Acq: 20 Jun 2024 23:27

Tgt Ion:105 Resp: 4518

Ion	Ratio	Lower	Upper
105	100		
120	39.2	9.9	49.9

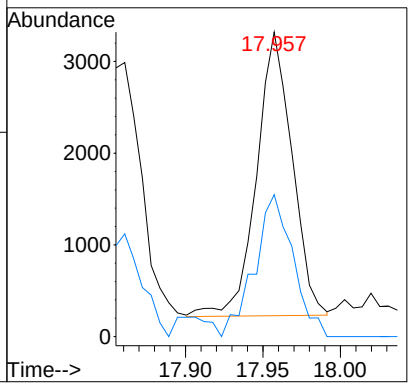


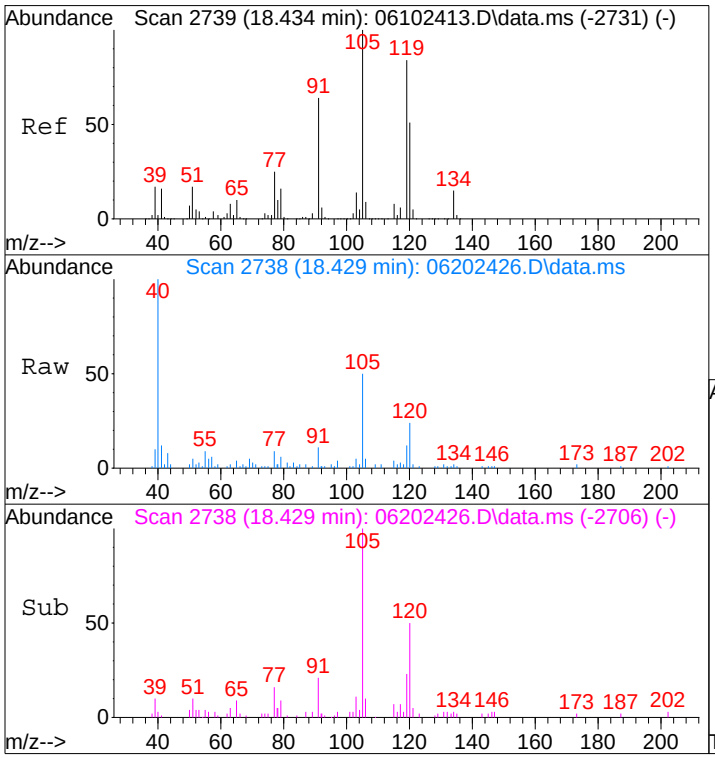


#79
1,3,5-Trimethylbenzene
Concen: 0.07 ng
RT: 17.96 min Scan# 2655
Delta R.T. -0.011 min
Lab File: 06202426.D
Acq: 20 Jun 2024 23:27

Tgt Ion:105 Resp: 4947

Ion	Ratio	Lower	Upper
105	100		
120	53.7	28.0	68.0

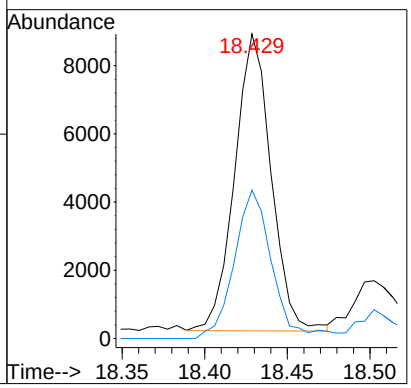


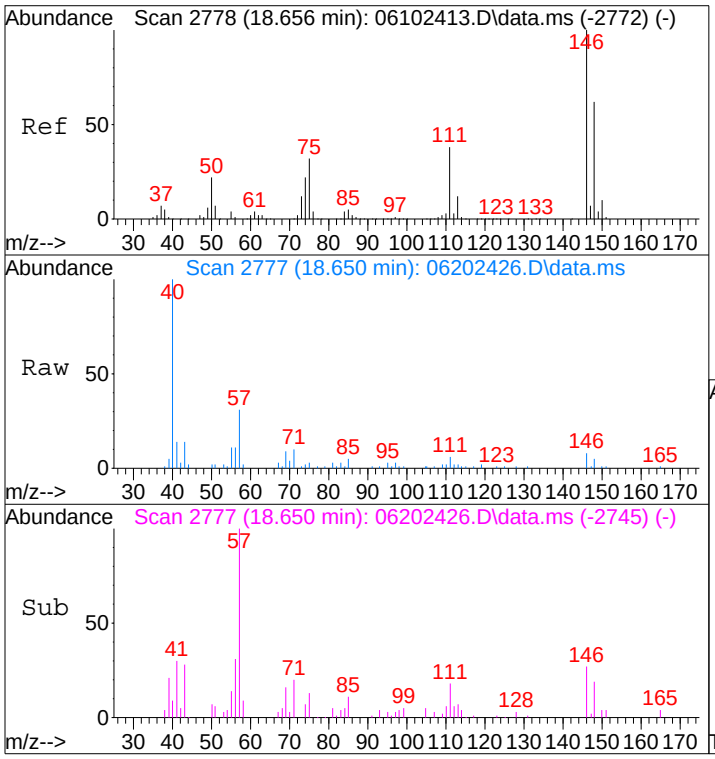


#82
1,2,4-Trimethylbenzene
Concen: 0.19 ng
RT: 18.43 min Scan# 2738
Delta R.T. -0.017 min
Lab File: 06202426.D
Acq: 20 Jun 2024 23:27

Tgt Ion:105 Resp: 13367

Ion	Ratio	Lower	Upper
105	100		
120	51.7	31.9	71.9

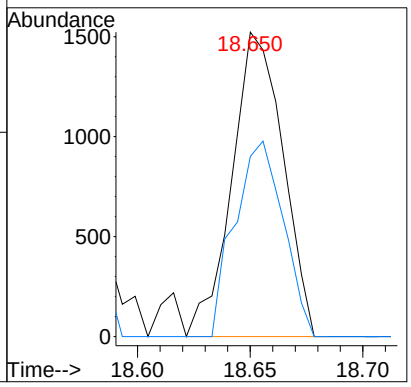


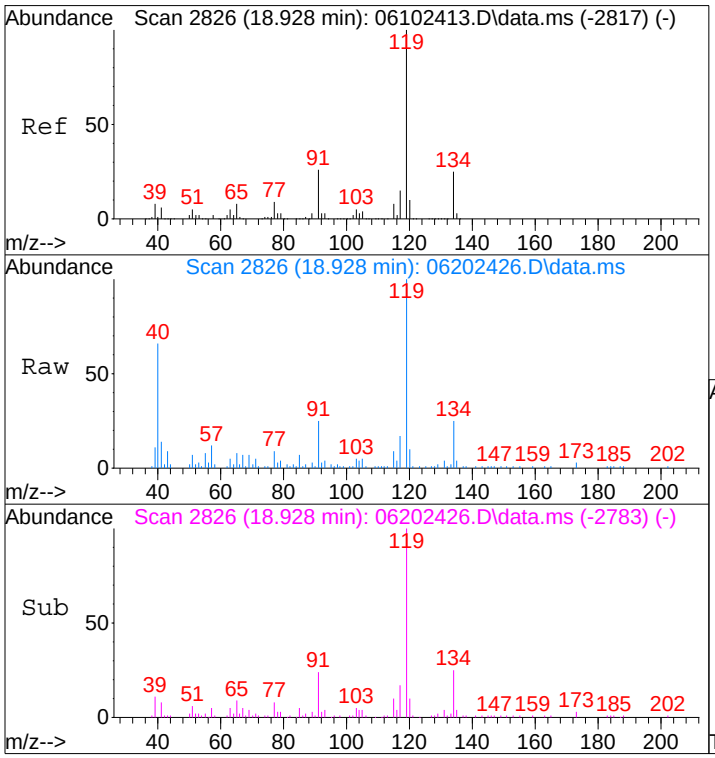


#86
1,4-Dichlorobenzene
Concen: 0.05 ng
RT: 18.65 min Scan# 2777
Delta R.T. -0.017 min
Lab File: 06202426.D
Acq: 20 Jun 2024 23:27

Tgt Ion:146 Resp: 2408

Ion	Ratio	Lower	Upper
146	100		
148	61.2	43.3	83.3

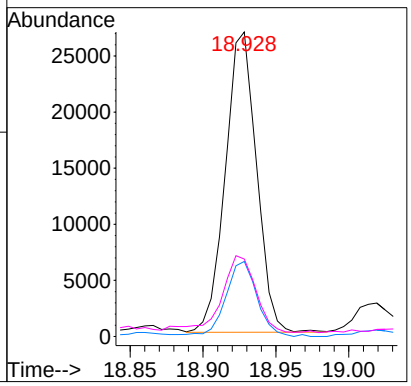


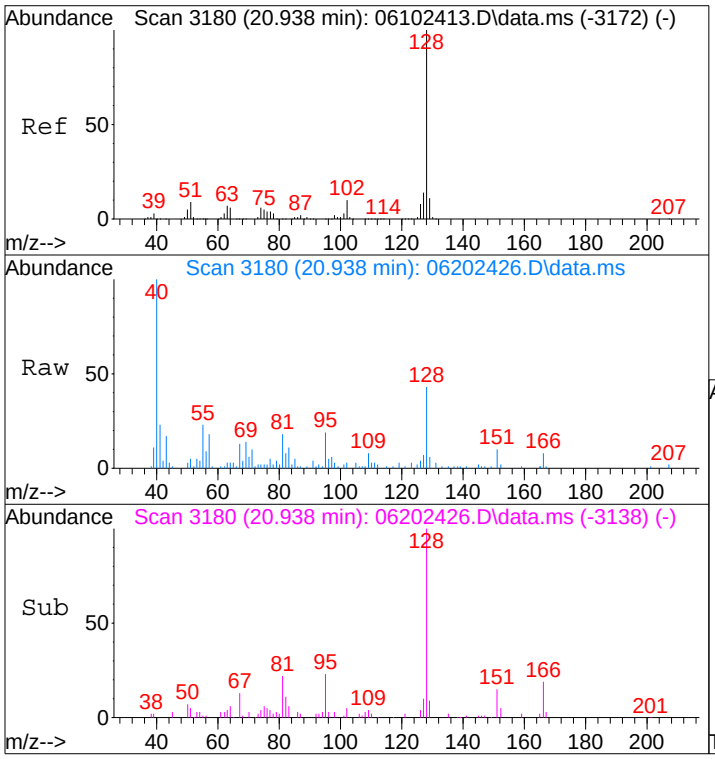


#88
4-Isopropyltoluene (p-Cymene)
Concen: 0.49 ng
RT: 18.93 min Scan# 2826
Delta R.T. -0.006 min
Lab File: 06202426.D
Acq: 20 Jun 2024 23:27

Tgt Ion:119 Resp: 39859

Ion	Ratio	Lower	Upper
119	100		
134	25.2	4.9	44.9
91	28.8	5.8	45.8

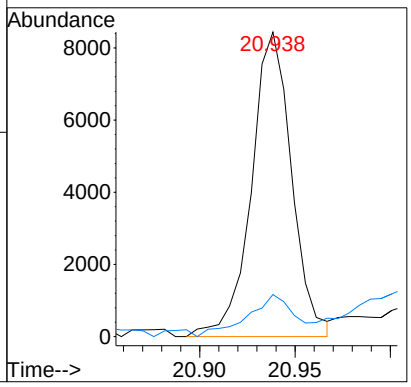




#95
Naphthalene
Concen: 0.14 ng
RT: 20.94 min Scan# 3180
Delta R.T. -0.011 min
Lab File: 06202426.D
Acq: 20 Jun 2024 23:27

Tgt Ion:128 Resp: 12394

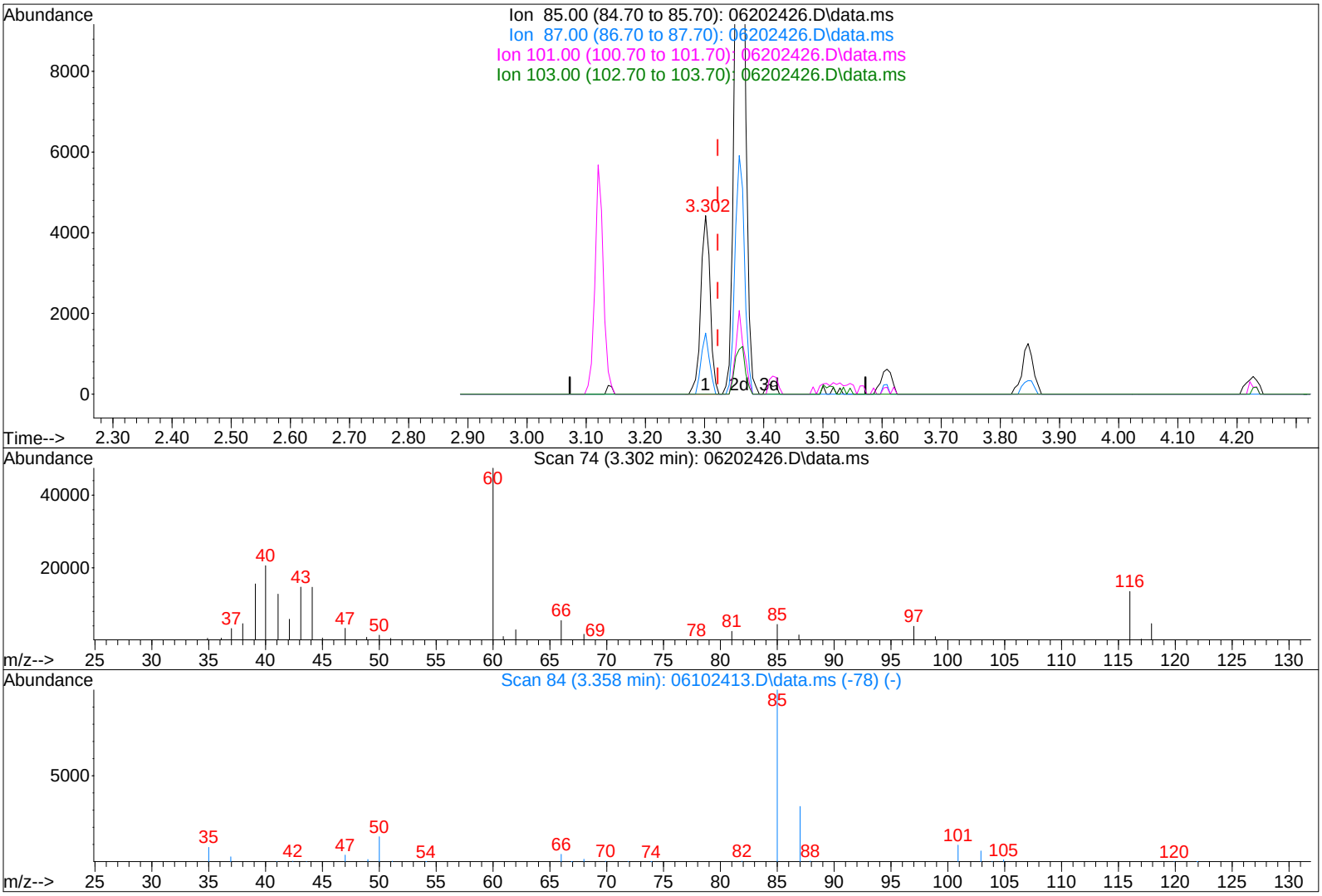
Ion	Ratio	Lower	Upper
128	100		
129	16.6	0.0	31.2



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\20\06202426.D Vial: 15
Acq On : 20 Jun 2024 23:27 Operator: SC
Sample : P2402249-054 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 12:19:43 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06202426.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.302min (-0.020) 0.13ng

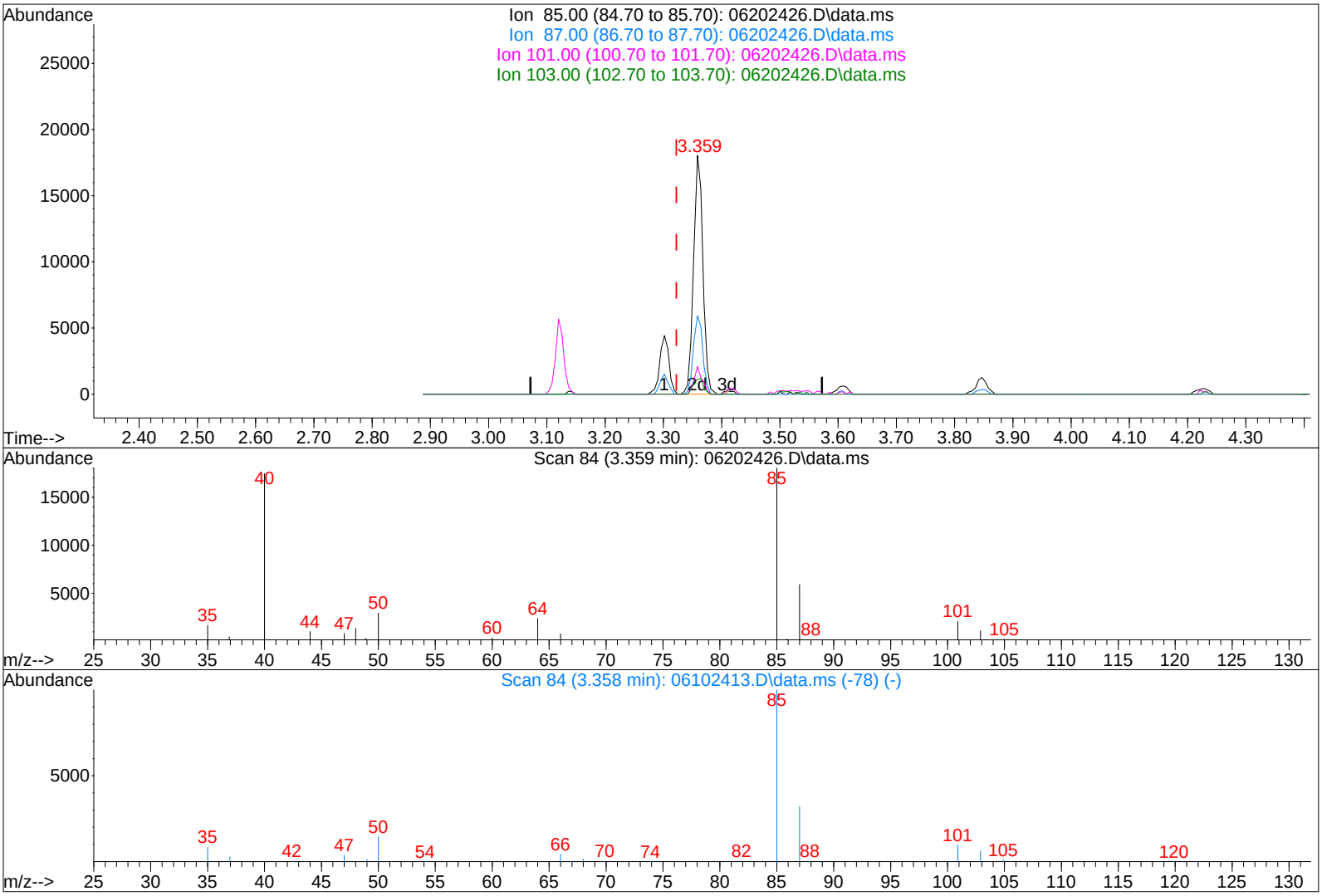
response 4843

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	30.27
101.00	9.80	0.00
103.00	6.30	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\20\06202426.D Vial: 15
Acq On : 20 Jun 2024 23:27 Operator: SC
Sample : P2402249-054 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 12:19:43 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06202426.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.359min (+0.036) 0.53ng m

response 20310

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	32.25
101.00	9.80	10.12
103.00	6.30	7.06

MJ 6/29/24

WP

CG 6/29/24

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202426.D Vial: 15
Acq On : 20 Jun 2024 23:27 Operator: SC
Sample : P2402249-054 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 15:28:15 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

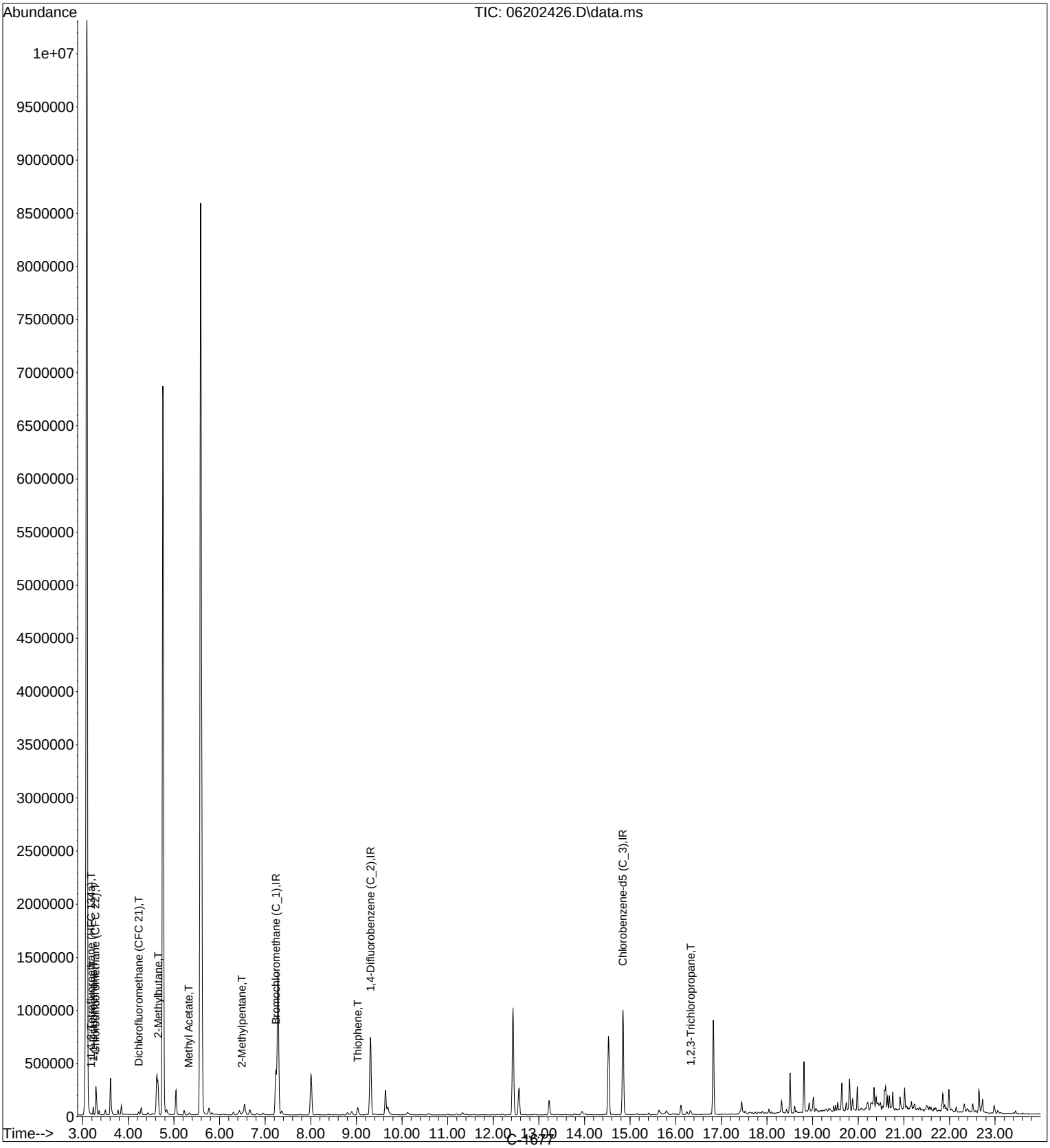
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.24	130	161516	12.500	ng		-0.02
16) 1,4-Difluorobenzene (C 2)	9.31	114	717598	12.500	ng		-0.01
19) Chlorobenzene-d5 (C_3)	14.84	54	170647	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	3.14	85	137	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.18	83	2393	0.144	ng	#	1
4) 1,1-Difluoroethane	3.23	65	18248	1.294	ng		94
5) Chlorodifluoromethane ...	3.28	67	1537	0.279	ng		94
6) 1-Chloro-1,1-Difluoroe...	3.50	65	669	N.D.			
7) Dichlorofluoromethane ...	4.23	67	19125	0.516	ng		99
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	4.57	83	930	N.D.			
10) 2-Methylbutane	4.65	57	68203	3.540	ng		89
11) Methyl Acetate	5.32	43	6779	0.125	ng	#	1
12) 2-Methylpentane	6.49	71	1700	0.122	ng	#	1
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	9.03	84	4360	0.133	ng	#	21
17) 2,3-Dimethylpentane	9.52	56	2064	N.D.			
18) Dibromomethane	9.81	174	68	N.D.			
20) Methyl Cyclohexane	11.41	55	2780	N.D.			
21) 1,3-Dichloropropane	12.56	76	1180	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	16.33	75	2414	0.106	ng	#	46
25) Bromobenzene	17.11	77	242	N.D.			
26) 2-Chlorotoluene	17.61	91	1688	N.D.			
27) 4-Chlorotoluene	17.61	91	1261	N.D.			
28) Indane	19.11	117	2636	N.D.			
29) Indene	19.11	115	2028	N.D.			
30) 1,2,4,5-Tetramethylben...	20.18	119	1654	N.D.			
31) 1,2,3,4-Tetramethylben...	20.22	119	2954	N.D.			
32) 1,2,3,5-Tetramethylben...	20.60	119	4807	N.D.			
33) 1,2,3-Trichlorobenzene	21.17	180	56	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202426.D Vial: 15
Acq On : 20 Jun 2024 23:27 Operator: SC
Sample : P2402249-054 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:28:15 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

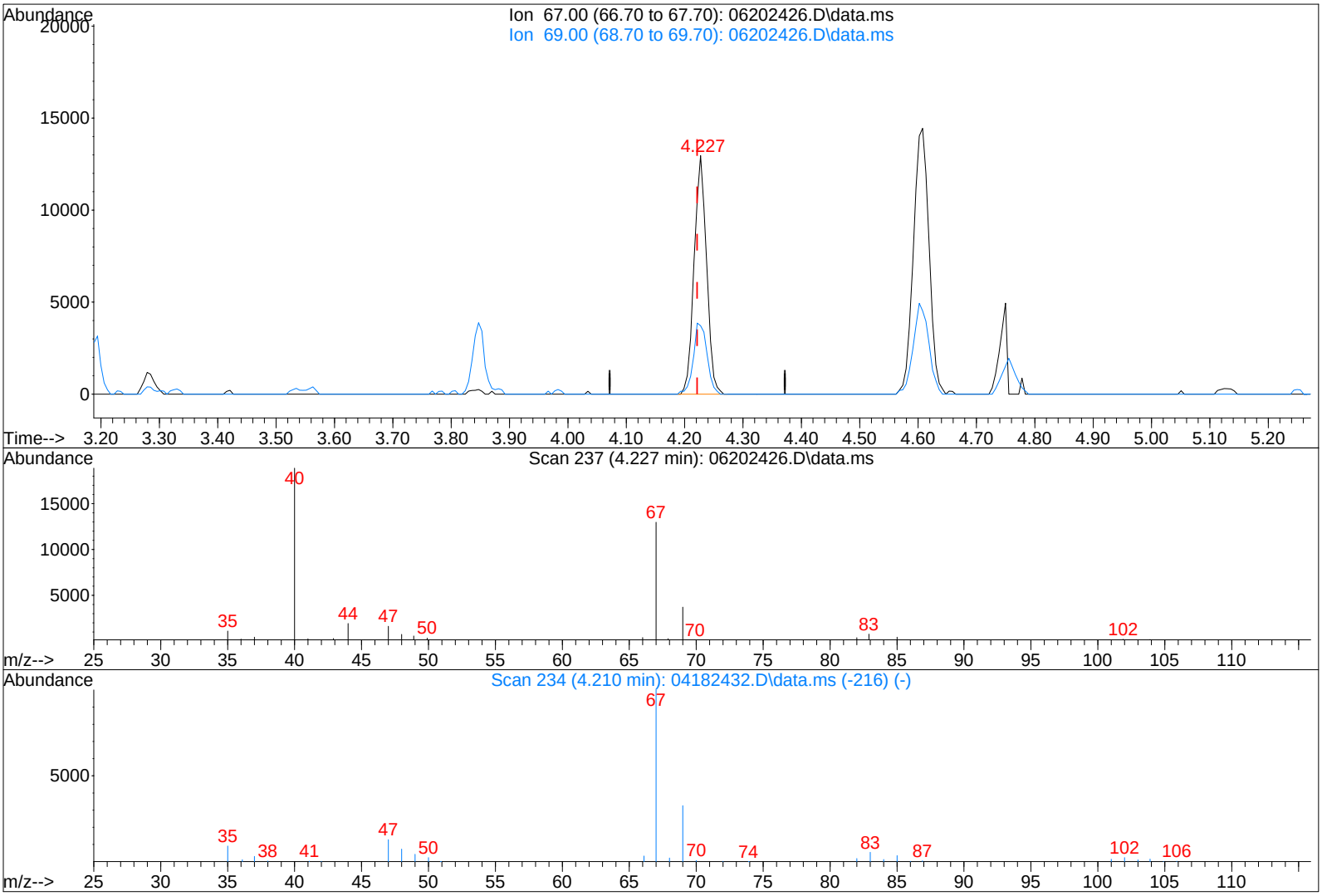


Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\20\06202426.D Vial: 15
Acq On : 20 Jun 2024 23:27 Operator: SC
Sample : P2402249-054 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 15:28:15 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06202426.D\data.ms

(7) Dichlorofluoromethane (CFC 21) (T)

4.227min (+0.006) 0.52ng

response 19125

Ion	Exp%	Act%
67.00	100	100
69.00	32.40	32.73
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222412.D Vial: 15
Acq On : 22 Jun 2024 19:10 Operator: MC/MJ
Sample : P2402249-054Dil (40mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 14:38:12 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	185018	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	803736	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	189642	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	386834	11.764	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 94.08%				
57) Toluene-d8 (SS2)	12.43	98	913726	12.591	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.72%				
73) Bromofluorobenzene (SS3)	16.83	174	333852	12.740	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.92%				
Target Compounds							Qvalue
2) Propene	3.31	42	1128	N.D.			
3) Dichlorodifluoromethan...	3.32	85	606	N.D.			
4) Chloromethane	3.52	50	420	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.37	45	257	N.D.			
11) Acetonitrile	4.44	41	1886	N.D.			
12) Acrolein	4.55	56	538	N.D.			
13) Acetone	4.64	58	14639	1.019	ng	#	84
14) Trichlorofluoromethane	4.75	101	530326m	12.040	ng		
15) 2-Propanol (Isopropanol)	4.85	45	5928	0.102	ng		87
16) Acrylonitrile	5.05	53	108	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.37	59	1342	N.D.			
19) Methylene Chloride	5.35	84	1374	0.068	ng		92
20) 3-Chloro-1-propene (Al...	5.45	41	383	N.D.			
21) Trichlorotrifluoroethane	5.58	151	376360	20.198	ng		96
22) Carbon Disulfide	5.60	76	340271	5.190	ng		92
23) trans-1,2-Dichloroethene	6.14	61	111	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	6.40	73	167	N.D.			
26) Vinyl Acetate	6.41	86	388	0.117	ng	#	75
27) 2-Butanone (MEK)	6.67	72	1342	0.118	ng	#	56
28) cis-1,2-Dichloroethene	7.06	61	128	N.D.			
29) Diisopropyl Ether	7.29	87	182	N.D.			
30) Ethyl Acetate	7.28	61	20723	2.984	ng		94
31) n-Hexane	7.30	57	341	N.D.			
32) Chloroform	7.35	83	2683	0.074	ng		98
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	197	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.82	56	3080	No Calib		#	
41) Benzene	8.89	78	3427	N.D.			
42) Carbon Tetrachloride	0.00	117	0	N.D.			
43) Cyclohexane	9.23	84	257	N.D.			
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.07	83	282	N.D.			
47) Trichloroethene	10.14	130	1533	0.071	ng		87
48) 1,4-Dioxane	10.13	88	1820	0.133	ng		96
49) 2,2,4-Trimethylpentane...	10.25	57	289	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222412.D Vial: 15
Acq On : 22 Jun 2024 19:10 Operator: MC/MJ
Sample : P2402249-054Dil (40mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:38:12 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

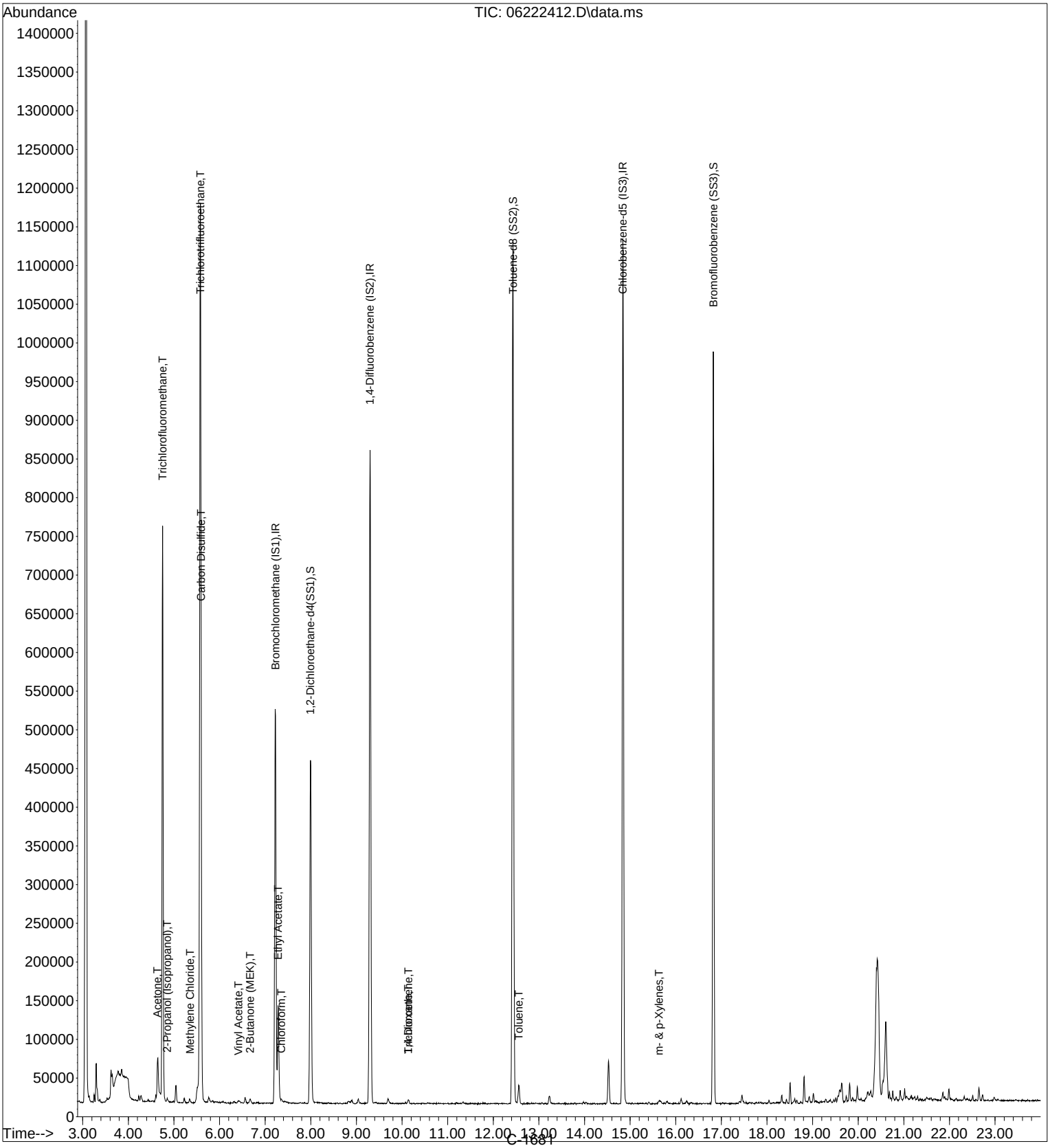
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	0.00	71	0	N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	11.34	58	543	N.D.	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	12.18	97	105	N.D.	
58) Toluene	12.56	91	21101	0.278 ng	100
59) 2-Hexanone	12.93	43	959	N.D.	
60) Dibromochloromethane	13.07	129	572	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	13.78	43	894	N.D.	
63) n-Octane	0.00	57	0	N.D.	
64) Tetrachloroethene	14.03	166	685	N.D.	
65) Chlorobenzene	14.90	112	899	N.D.	
66) Ethylbenzene	15.42	91	2236	N.D.	
67) m- & p-Xylenes	15.63	91	4944	0.068 ng	96
68) Bromoform	15.67	173	810	N.D.	
69) Styrene	16.09	104	238	N.D.	
70) o-Xylene	16.24	91	2321	N.D.	
71) n-Nonane	16.61	43	562	N.D.	
72) 1,1,2,2-Tetrachloroethane	16.20	83	610	N.D.	
74) Cumene	17.03	105	1367	N.D.	
75) alpha-Pinene	17.53	93	764	N.D.	
76) n-Propylbenzene	17.67	91	1668	N.D.	
77) 3-Ethyltoluene	17.03	105	1367	No Calib	
78) 4-Ethyltoluene	17.86	105	1398	N.D.	
79) 1,3,5-Trimethylbenzene	17.96	105	884	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.03	105	1367	No Calib	
82) 1,2,4-Trimethylbenzene	18.42	105	1753	N.D.	
83) n-Decane	0.00	58	0	N.D.	
84) Benzyl Chloride	0.00	91	0	N.D.	
85) 1,3-Dichlorobenzene	18.58	146	842	N.D.	
86) 1,4-Dichlorobenzene	18.66	146	980	N.D.	
87) sec-Butylbenzene	18.74	105	1223	N.D.	
88) 4-Isopropyltoluene (p-...	18.93	119	4308	N.D.	
89) 1,2,3-Trimethylbenzene	17.03	105	1367	No Calib	
90) 1,2-Dichlorobenzene	19.04	146	802	N.D.	
91) d-Limonene	19.09	68	136	N.D.	
92) 1,2-Dibromo-3-Chloropr...	19.52	157	185	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	1317	N.D.	
95) Naphthalene	20.94	128	1533	N.D.	
96) n-Dodecane	0.00	58	0	N.D.	
97) Hexachlorobutadiene	21.30	225	819	N.D.	
98) Cyclohexanone	0.00	55	0	N.D.	
99) tert-Butylbenzene	18.43	119	1329	N.D.	
100) n-Butylbenzene	19.38	91	1320	N.D.	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222412.D Vial: 15
Acq On : 22 Jun 2024 19:10 Operator: MC/MJ
Sample : P2402249-054Dil (40mL) Inst : MS09
Misc : S37-06062402

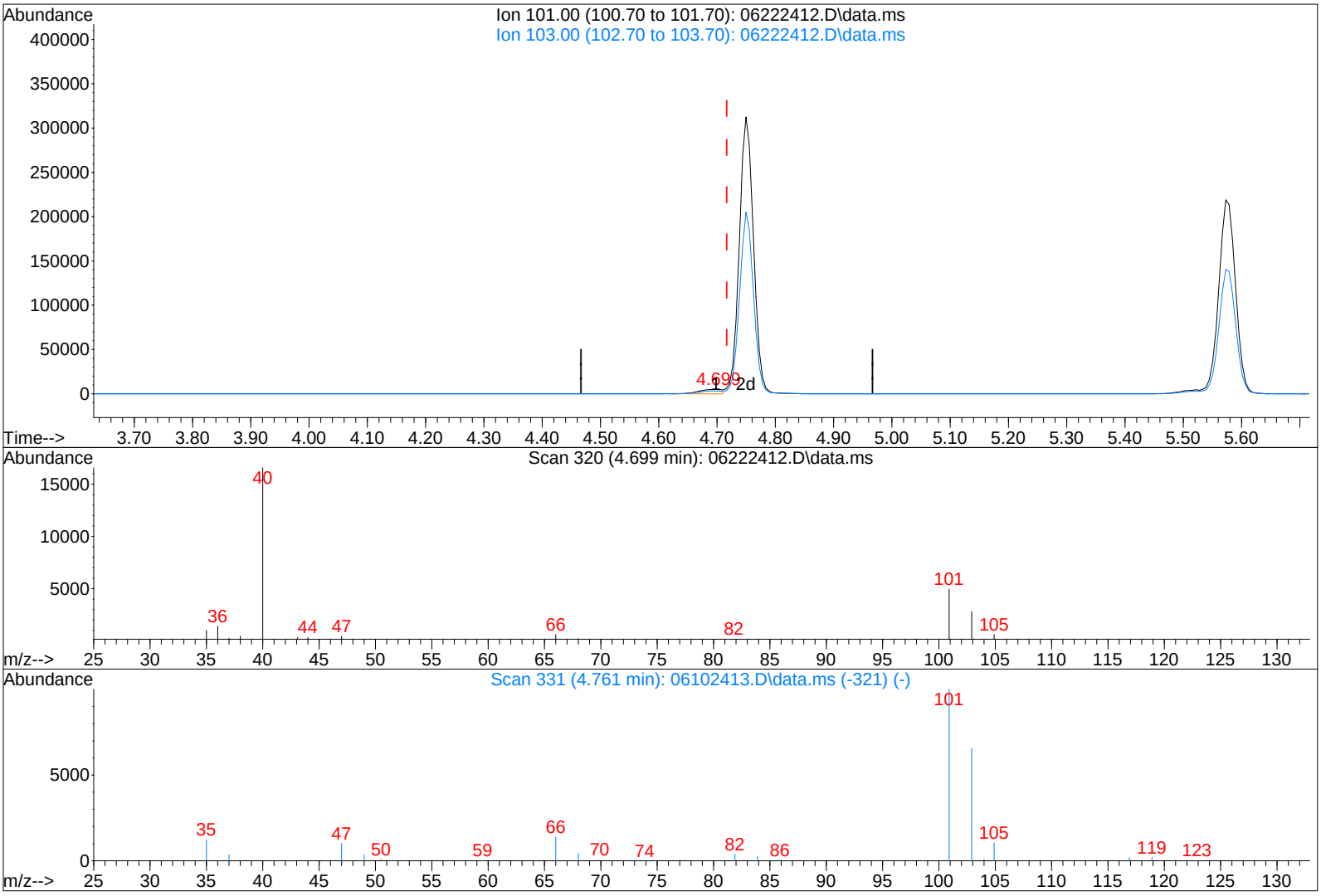
Quant Time: Jun 28 14:38:12 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\22\06222412.D Vial: 15
Acq On : 22 Jun 2024 19:10 Operator: MC/MJ
Sample : P2402249-054Dil (40mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 24 09:21:19 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06222412.D\data.ms

(14) Trichlorofluoromethane (T)

4.699min (-0.018) 0.31ng

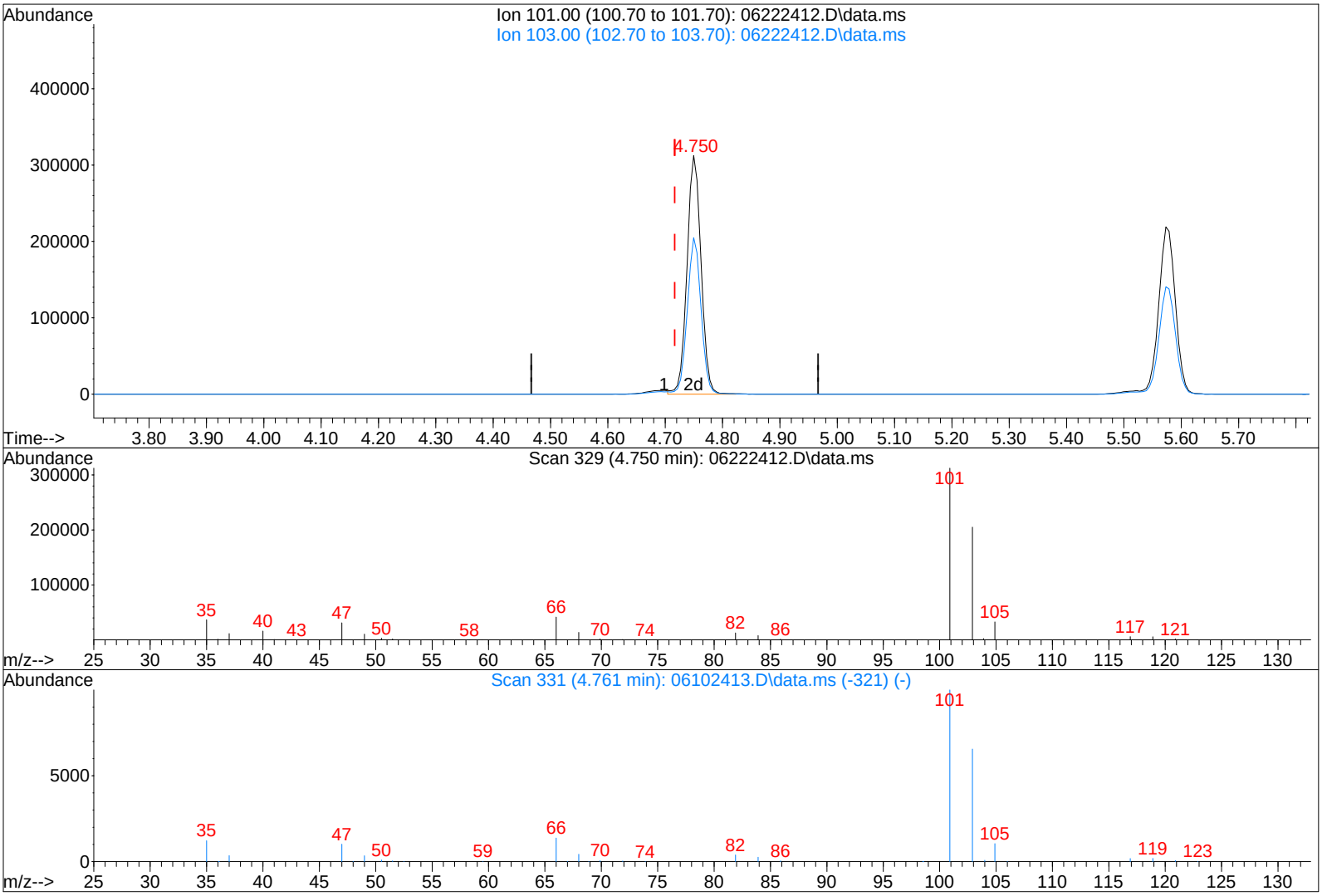
response 13696

Ion	Exp%	Act%
101.00	100	100
103.00	64.90	62.97
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\22\06222412.D Vial: 15
Acq On : 22 Jun 2024 19:10 Operator: MC/MJ
Sample : P2402249-054Dil (40mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 24 09:21:19 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06222412.D\data.ms

(14) Trichlorofluoromethane (T)

4.750min (+0.033) 12.04ng m

response 530326

Ion	Exp%	Act%
101.00	100	100
103.00	64.90	64.64
0.00	0.00	0.00
0.00	0.00	0.00

MJ 6/28/24

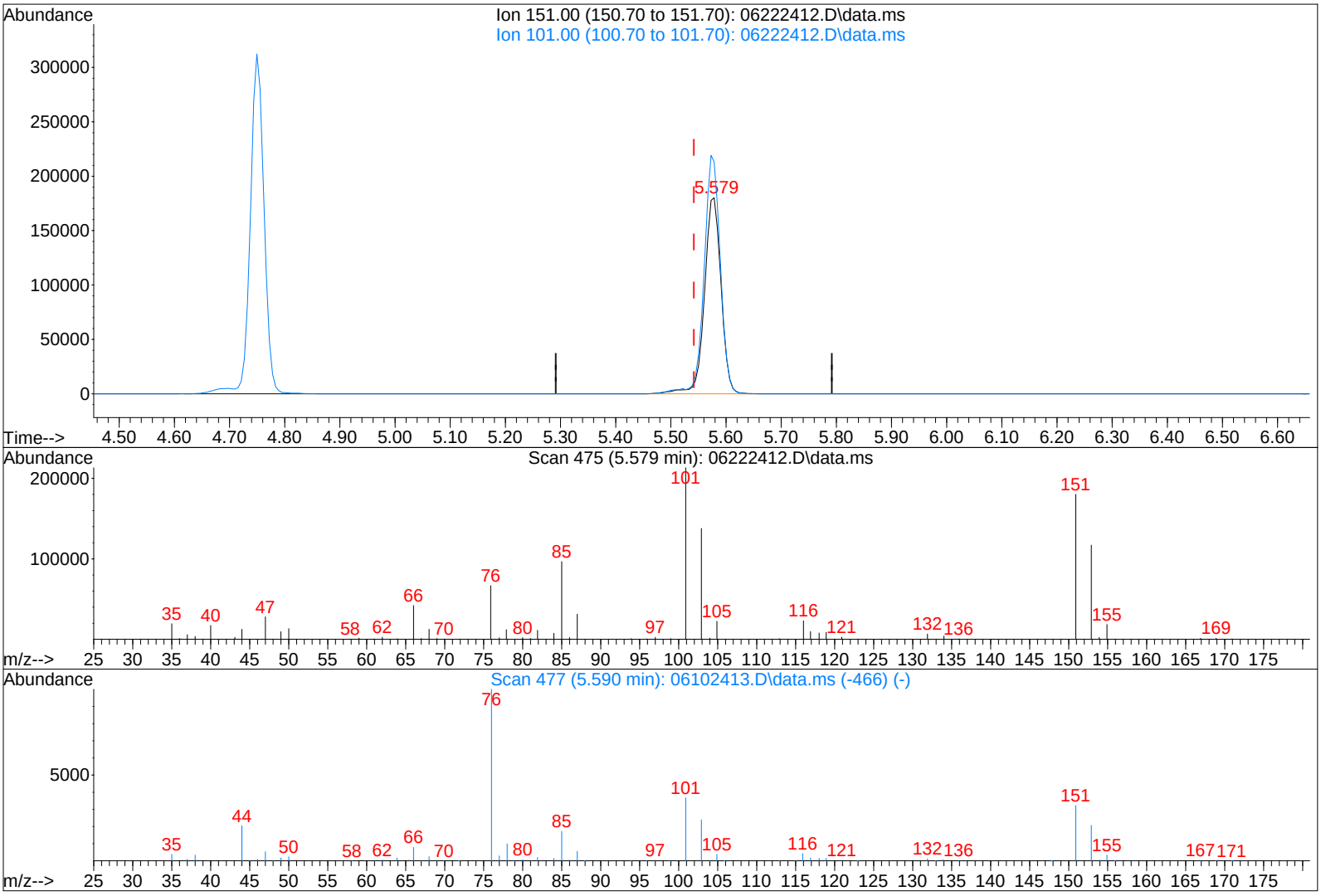
WP

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\22\06222412.D Vial: 15
Acq On : 22 Jun 2024 19:10 Operator: MC/MJ
Sample : P2402249-054Dil (40mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 14:38:12 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06222412.D\data.ms

(21) Trichlorotrifluoroethane (T)

5.579min (+0.037) 20.20ng

response 376360

Ion	Exp%	Act%
151.00	100	100
101.00	115.00	119.27
0.00	0.00	0.00
0.00	0.00	0.00

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\20\
Data File : 06202426.D
Acq On : 20 Jun 2024 23:27
Operator : SC
Sample : P2402249-054 (400mL)
Misc : S37-06062402
ALS Vial : 15 Sample Multiplier: 1

MJ 6/28/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06202426.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.092	21	37	51	rBV	10320422	22184859	100.00%	32.533%
2	3.234	57	62	66	rVB	72007	82581	0.37%	0.121%
3	3.290	66	72	79	rVV	265895	454977	2.05%	0.667%
4	3.359	79	84	90	rVB2	38108	48853	0.22%	0.072%
5	3.495	103	108	113	rBV2	43341	63558	0.29%	0.093%
6	3.608	122	128	143	rBV2	344063	565325	2.55%	0.829%
7	3.773	152	157	165	rBV2	42295	59002	0.27%	0.087%
8	3.847	165	170	179	rVB	85491	113249	0.51%	0.166%
9	4.227	231	237	241	rBV	25631	40171	0.18%	0.059%
10	4.284	241	247	256	rVB2	64452	121360	0.55%	0.178%
11	4.426	264	272	281	rBV2	17878	39891	0.18%	0.058%
12	4.528	285	290	297	rVV5	10123	20825	0.09%	0.031%
13	4.625	297	307	321	rVB2	373413	1148058	5.17%	1.684%
14	4.755	321	330	341	rBV	6854746	13102731	59.06%	19.215%
15	4.841	341	345	351	rVB	40424	73188	0.33%	0.107%
16	5.045	373	381	390	rVB	226288	395315	1.78%	0.580%
17	5.221	406	412	420	rVB2	41060	72479	0.33%	0.106%
18	5.340	422	433	441	rBV5	19215	50734	0.23%	0.074%
19	5.584	464	476	498	rBV2	8575365	20886832	94.15%	30.630%
20	5.766	501	508	515	rVV	57893	116767	0.53%	0.171%
21	5.840	515	521	528	rVB3	14681	29143	0.13%	0.043%
22	6.078	556	563	568	rBV3	7518	15286	0.07%	0.022%
23	6.306	595	603	610	rBV	25797	55991	0.25%	0.082%
24	6.436	610	626	632	rVV	40079	116750	0.53%	0.171%
25	6.544	632	645	659	rVV2	98839	297609	1.34%	0.436%
26	6.663	659	666	680	rVB	48645	113881	0.51%	0.167%
27	6.822	687	694	708	rVB4	13038	39790	0.18%	0.058%
28	6.947	708	716	721	rBV2	17054	35982	0.16%	0.053%
29	7.237	756	767	769	rBV	419078	885563	3.99%	1.299%
30	7.282	769	775	784	rVV	1344056	3129231	14.11%	4.589%
31	7.367	784	790	807	rVB2	36017	98003	0.44%	0.144%
32	7.759	850	859	865	rVB3	5769	14464	0.07%	0.021%
33	8.003	891	902	914	rBV	381089	930776	4.20%	1.365%
34	8.134	918	925	929	rBV5	5875	12078	0.05%	0.018%
35	8.378	959	968	974	rBV3	8258	19402	0.09%	0.028%
36	8.707	1020	1026	1034	rVB	4724	10406	0.05%	0.015%
37	8.798	1034	1042	1050	rBV2	21659	55218	0.25%	0.081%
38	8.901	1051	1060	1069	rVB2	30816	84173	0.38%	0.123%
39	9.025	1074	1082	1096	rVB	67796	166258	0.75%	0.244%
40	9.218	1109	1116	1122	rBV5	9609	24336	0.11%	0.036%

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\20\
Data File : 06202426.D
Acq On : 20 Jun 2024 23:27
Operator : SC
Sample : P2402249-054 (400mL)
Misc : S37-06062402
ALS Vial : 15 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

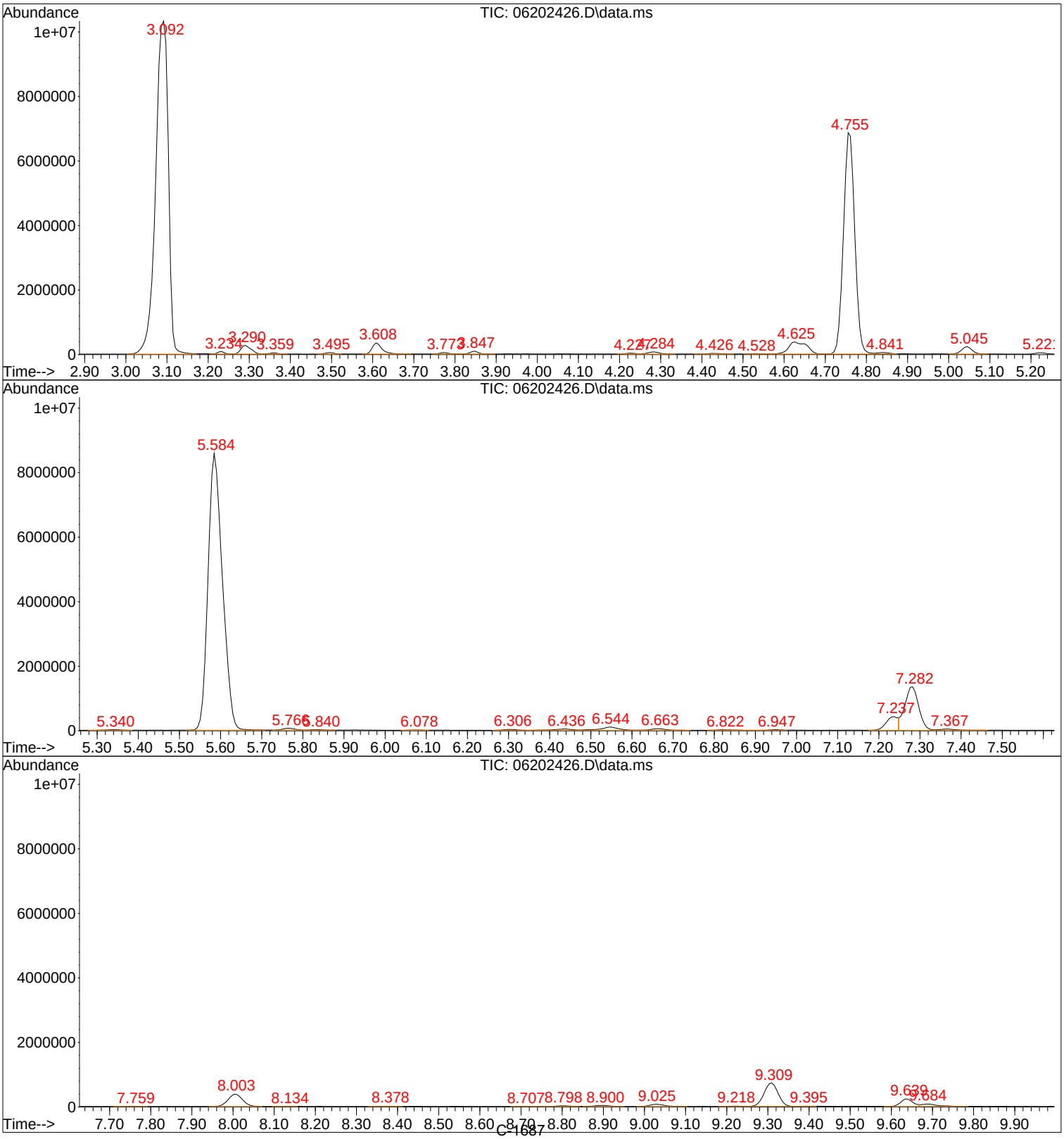
41	9.309	1122	1132	1142	rVB	727112	1725041	7.78%	2.530%
42	9.395	1142	1147	1151	rBV2	7817	16325	0.07%	0.024%
43	9.639	1180	1190	1195	rBV	228853	481096	2.17%	0.706%
44	9.684	1195	1198	1216	rVB	72829	193644	0.87%	0.284%

Sum of corrected areas: 68191201

Data Path : I:\MS09\DATA\2024 06\20\
Data File : 06202426.D
Acq On : 20 Jun 2024 23:27
Operator : SC
Sample : P2402249-054 (400mL)
Misc : S37-06062402
ALS Vial : 15 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\20\\
Data File : 06202426.D
Acq On : 20 Jun 2024 23:277
Operator : SCC
Sample : P2402249-054 (400mL))
Misc : S37-060624022
ALS Vial : 15 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

						Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\20\06202427.D Vial: 16
Acq On : 20 Jun 2024 23:59 Operator: SC
Sample : P2402249-055 (50mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 12:20:37 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.22	130	171760	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	755911	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	175655	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	373401	12.232	ng		0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.84%				
57) Toluene-d8 (SS2)	12.43	98	849237	12.634	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.04%				
73) Bromofluorobenzene (SS3)	16.83	174	305067	12.568	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.56%				
Target Compounds							Qvalue
2) Propene	0.00	42	0	N.D.	d		
3) Dichlorodifluoromethan...	3.31	85	1895	N.D.			
4) Chloromethane	3.51	50	1936	0.070	ng		96
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	3.77	54	260	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.37	45	53	N.D.			
11) Acetonitrile	0.00	41	0	N.D.	d		
12) Acrolein	4.52	56	3132	0.253	ng		99
13) Acetone	4.62	58	62706	4.700	ng	#	66
14) Trichlorofluoromethane	4.74	101	3447994	84.322	ng		100
15) 2-Propanol (Isopropanol)	0.00	45	0	N.D.	d		
16) Acrylonitrile	4.98	53	859	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	0.00	59	0	N.D.	d		
19) Methylene Chloride	5.34	84	1203	0.064	ng		89
20) 3-Chloro-1-propene (Al...	5.45	41	721	N.D.			
21) Trichlorotrifluoroethane	5.57	151	2115778	122.313	ng		93
22) Carbon Disulfide	0.00	76	0	N.D.	d		
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	6.29	73	153	N.D.			
26) Vinyl Acetate	6.42	86	2247	0.730	ng	#	48
27) 2-Butanone (MEK)	6.66	72	9778	0.926	ng		100
28) cis-1,2-Dichloroethene	7.06	61	119	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.	d		
30) Ethyl Acetate	0.00	61	0	N.D.			
31) n-Hexane	7.29	57	725	N.D.			
32) Chloroform	7.34	83	9145	0.272	ng		98
34) Tetrahydrofuran (THF)	7.77	72	137	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	349	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.82	56	8276	No Calib		#	
41) Benzene	8.89	78	3944	0.057	ng		94
42) Carbon Tetrachloride	0.00	117	0	N.D.			
43) Cyclohexane	9.28	84	1003	N.D.			
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	9.84	63	133	N.D.			
46) Bromodichloromethane	10.08	83	787	N.D.			
47) Trichloroethene	10.14	130	6075	0.298	ng		100
48) 1,4-Dioxane	10.13	88	661	0.051	ng		78
49) 2,2,4-Trimethylpentane...	10.22	57	165	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202427.D Vial: 16
Acq On : 20 Jun 2024 23:59 Operator: SC
Sample : P2402249-055 (50mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 12:20:37 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

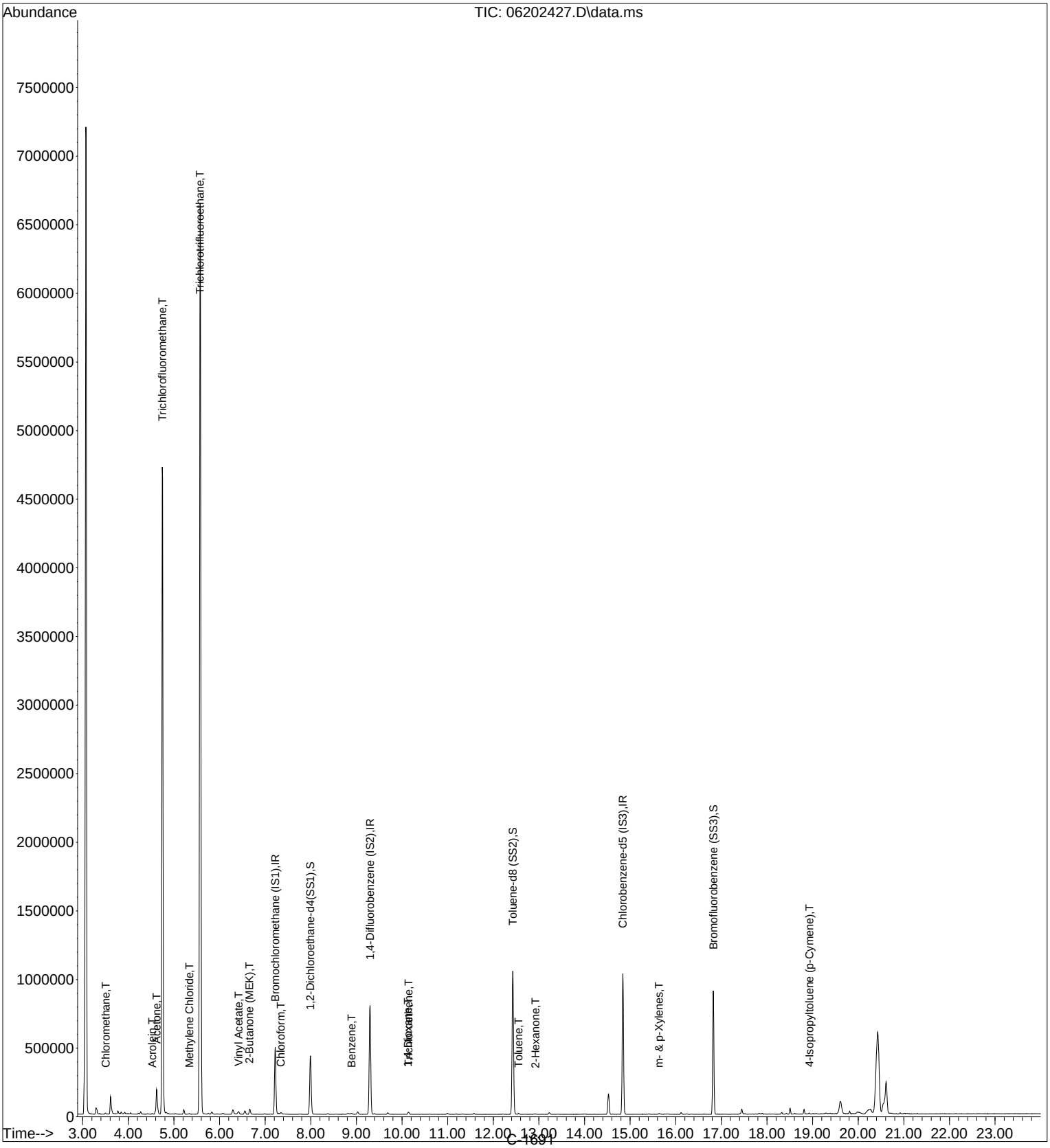
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	0.00	71	0	N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	11.33	58	710	N.D.	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	12.17	97	120	N.D.	
58) Toluene	12.56	91	7595	0.108 ng	98
59) 2-Hexanone	12.93	43	2422	0.055 ng	91
60) Dibromochloromethane	13.07	129	570	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	0.00	43	0	N.D.	
63) n-Octane	13.91	57	110	N.D.	
64) Tetrachloroethene	14.03	166	504	N.D.	
65) Chlorobenzene	14.90	112	954	N.D.	
66) Ethylbenzene	15.41	91	3075	N.D.	
67) m- & p-Xylenes	15.64	91	5954	0.088 ng	98
68) Bromoform	15.67	173	852	N.D.	
69) Styrene	16.09	104	325	N.D.	
70) o-Xylene	16.24	91	2874	N.D.	
71) n-Nonane	16.61	43	1272	N.D.	
72) 1,1,2,2-Tetrachloroethane	16.21	83	424	N.D.	
74) Cumene	17.03	105	1531	N.D.	
75) alpha-Pinene	17.52	93	1709	N.D.	
76) n-Propylbenzene	17.68	91	1984	N.D.	
77) 3-Ethyltoluene	17.03	105	1531	No Calib	
78) 4-Ethyltoluene	17.86	105	1577	N.D.	
79) 1,3,5-Trimethylbenzene	17.95	105	1584	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.03	105	1531	No Calib	
82) 1,2,4-Trimethylbenzene	18.43	105	2451	N.D.	
83) n-Decane	0.00	58	0	N.D.	
84) Benzyl Chloride	18.55	91	117	N.D.	
85) 1,3-Dichlorobenzene	18.57	146	735	N.D.	
86) 1,4-Dichlorobenzene	18.66	146	745	N.D.	
87) sec-Butylbenzene	18.74	105	1375	N.D.	
88) 4-Isopropyltoluene (p-...	18.93	119	4233	0.051 ng	86
89) 1,2,3-Trimethylbenzene	17.03	105	1531	No Calib	
90) 1,2-Dichlorobenzene	19.03	146	570	N.D.	
91) d-Limonene	19.08	68	567	N.D.	
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	748	N.D.	
95) Naphthalene	20.94	128	1171	N.D.	
96) n-Dodecane	0.00	58	0	N.D.	
97) Hexachlorobutadiene	21.30	225	858	N.D.	
98) Cyclohexanone	15.49	55	116	No Calib #	
99) tert-Butylbenzene	18.43	119	1386	N.D.	
100) n-Butylbenzene	19.39	91	1267	N.D.	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202427.D Vial: 16
Acq On : 20 Jun 2024 23:59 Operator: SC
Sample : P2402249-055 (50mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 12:20:37 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202427.D Vial: 16
Acq On : 20 Jun 2024 23:59 Operator: SC
Sample : P2402249-055 (50mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 12:20:37 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

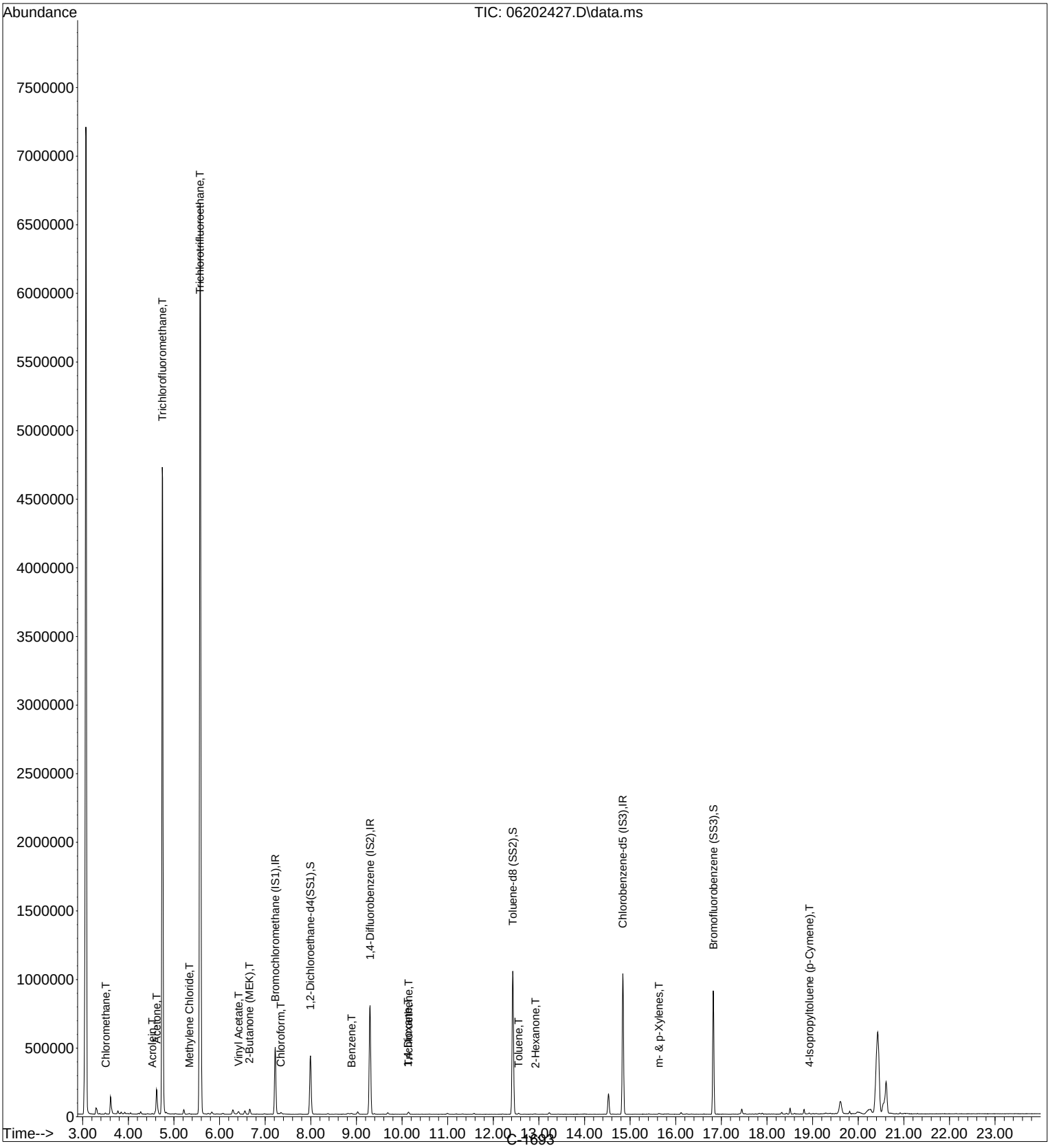
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.22	130	171760	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	755911	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	175655	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	373401	12.232	ng		0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.84%				
57) Toluene-d8 (SS2)	12.43	98	849237	12.634	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.04%				
73) Bromofluorobenzene (SS3)	16.83	174	305067	12.568	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.56%				
Target Compounds							Qvalue
4) Chloromethane	3.51	50	1936	0.070	ng		96
12) Acrolein	4.52	56	3132	0.253	ng		99
13) Acetone	4.62	58	62706	4.700	ng	#	66
14) Trichlorofluoromethane	4.74	101	3447994	84.322	ng		100
19) Methylene Chloride	5.34	84	1203	0.064	ng		89
21) Trichlorotrifluoroethane	5.57	151	2115778	122.313	ng		93
26) Vinyl Acetate	6.42	86	2247	0.730	ng	#	48
27) 2-Butanone (MEK)	6.66	72	9778	0.926	ng		100
32) Chloroform	7.34	83	9145	0.272	ng		98
41) Benzene	8.89	78	3944	0.057	ng		94
47) Trichloroethene	10.14	130	6075	0.298	ng		100
48) 1,4-Dioxane	10.13	88	661	0.051	ng		78
58) Toluene	12.56	91	7595	0.108	ng		98
59) 2-Hexanone	12.93	43	2422	0.055	ng		91
67) m- & p-Xylenes	15.64	91	5954	0.088	ng		98
88) 4-Isopropyltoluene (p-...	18.93	119	4233	0.051	ng		86

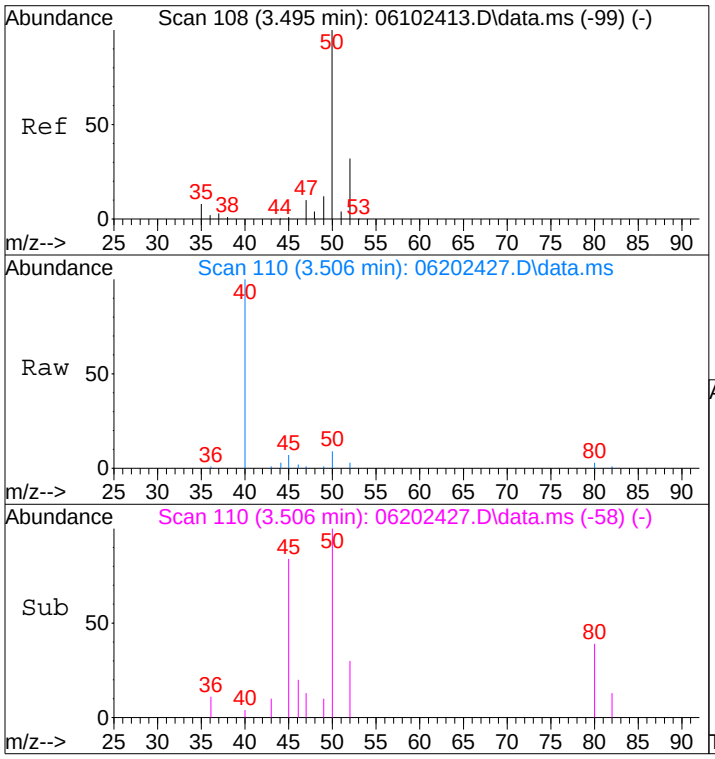
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202427.D Vial: 16
Acq On : 20 Jun 2024 23:59 Operator: SC
Sample : P2402249-055 (50mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 12:20:37 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

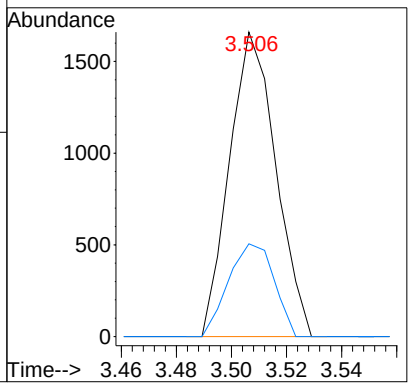


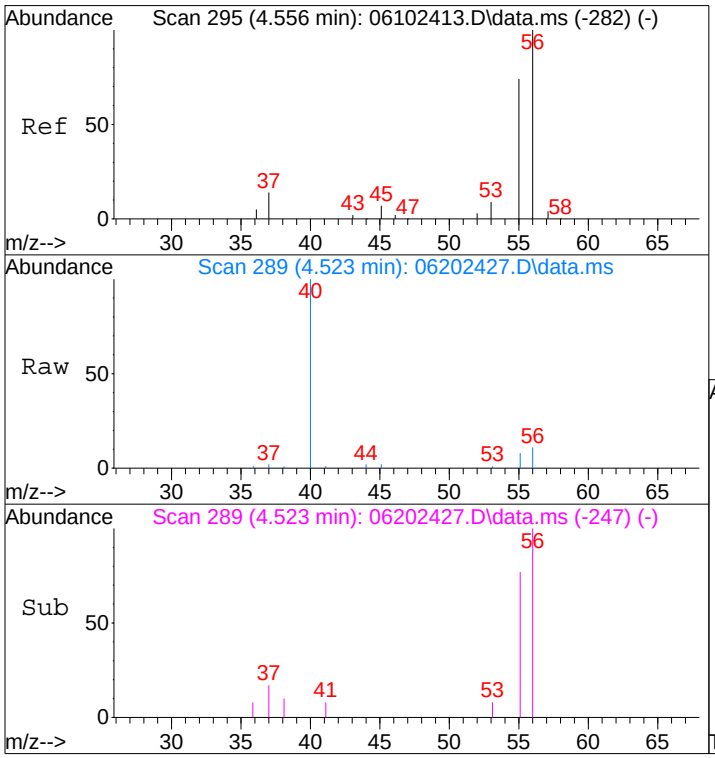


#4
Chloromethane
Concen: 0.07 ng
RT: 3.51 min Scan# 110
Delta R.T. 0.044 min
Lab File: 06202427.D
Acq: 20 Jun 2024 23:59

Tgt Ion: 50 Resp: 1936

Ion	Ratio	Lower	Upper
50	100		
52	30.1	12.4	52.4

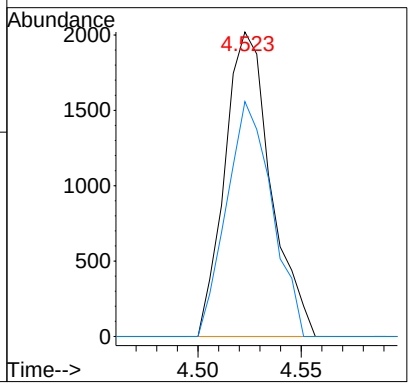


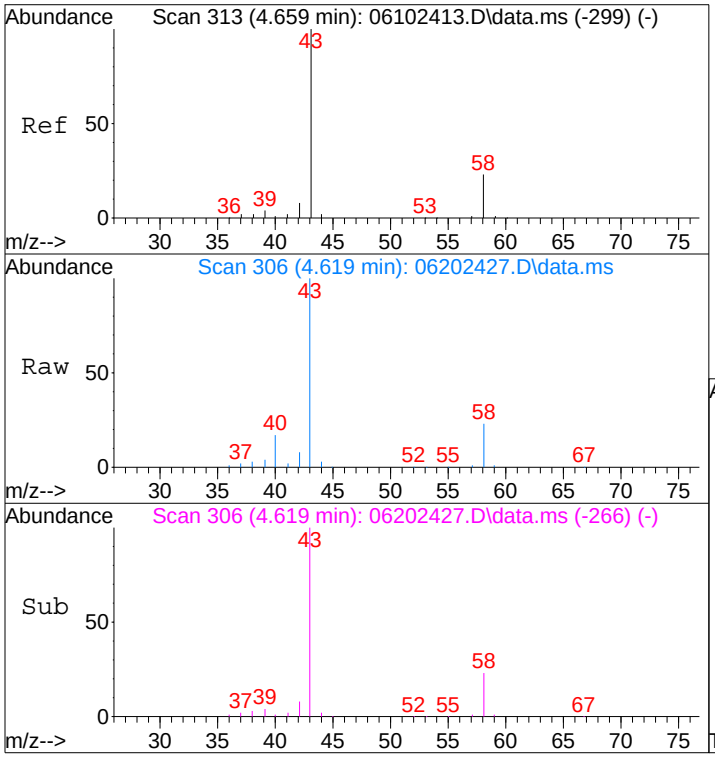


#12
Acrolein
Concen: 0.25 ng
RT: 4.52 min Scan# 289
Delta R.T. -0.013 min
Lab File: 06202427.D
Acq: 20 Jun 2024 23:59

Tgt Ion: 56 Resp: 3132

Ion	Ratio	Lower	Upper
56	100		
55	76.1	55.5	95.5

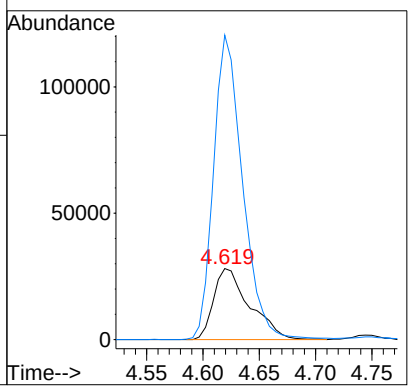


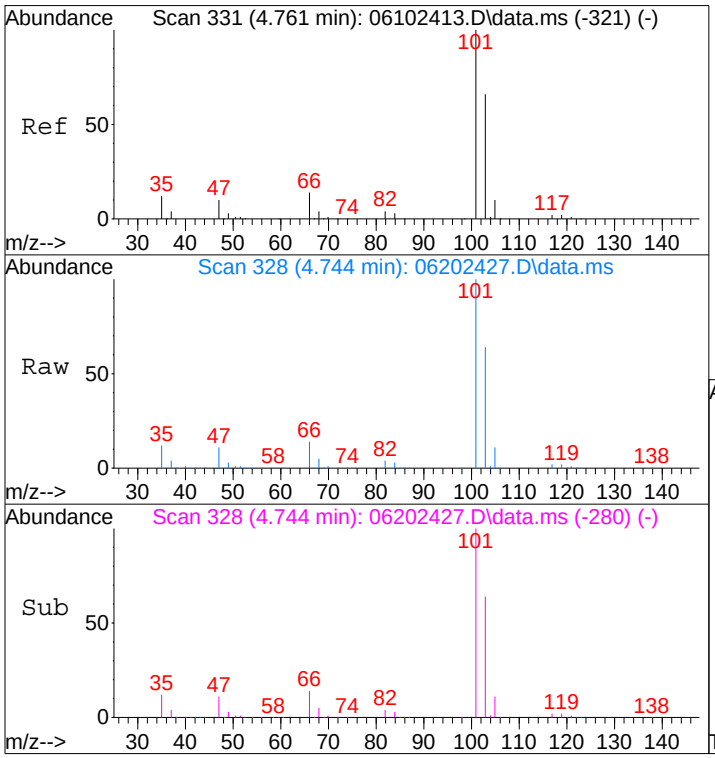


#13
Acetone
Concen: 4.70 ng
RT: 4.62 min Scan# 306
Delta R.T. -0.023 min
Lab File: 06202427.D
Acq: 20 Jun 2024 23:59

Tgt Ion: 58 Resp: 62706

Ion	Ratio	Lower	Upper
58	100		
43	345.9	400.7	460.7#

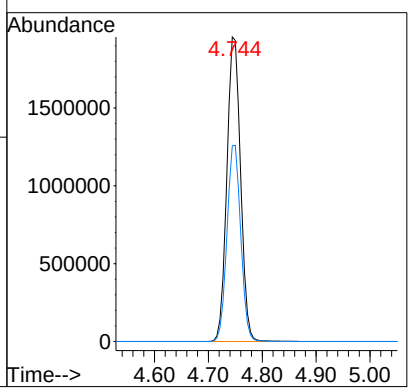


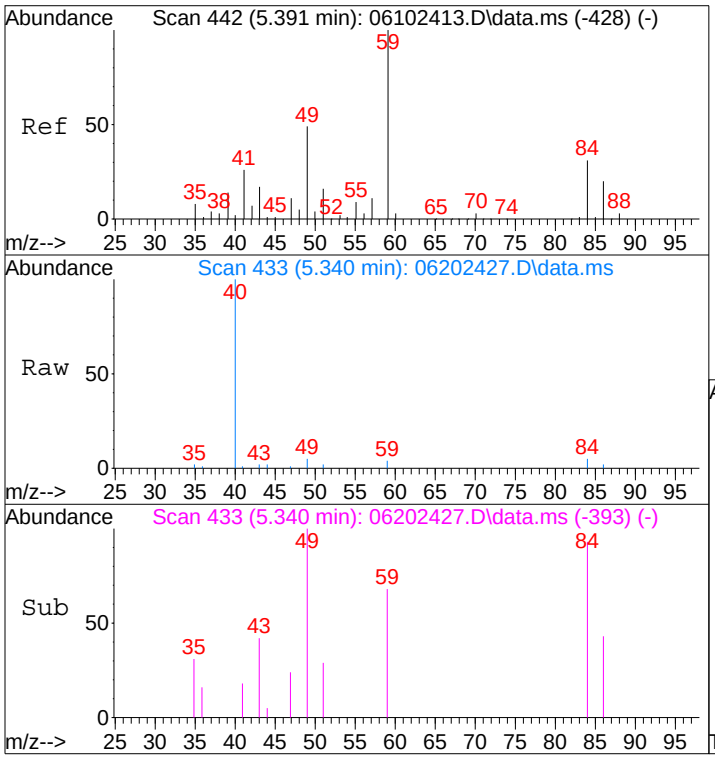


#14
Trichlorofluoromethane
Concen: 84.32 ng
RT: 4.74 min Scan# 328
Delta R.T. 0.024 min
Lab File: 06202427.D
Acq: 20 Jun 2024 23:59

Tgt Ion:101 Resp: 3447994

Ion	Ratio	Lower	Upper
101	100		
103	64.6	44.9	84.9

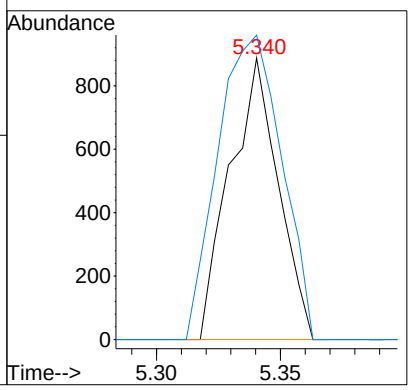


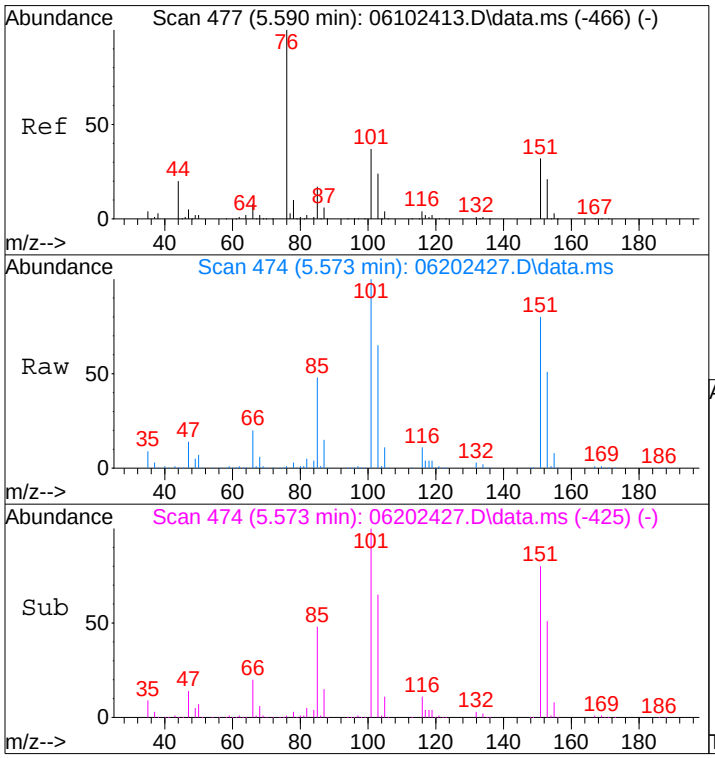


#19
Methylene Chloride
Concen: 0.06 ng
RT: 5.34 min Scan# 433
Delta R.T. -0.021 min
Lab File: 06202427.D
Acq: 20 Jun 2024 23:59

Tgt Ion: 84 Resp: 1203

Ion	Ratio	Lower	Upper
84	100		
49	143.1	132.9	182.9

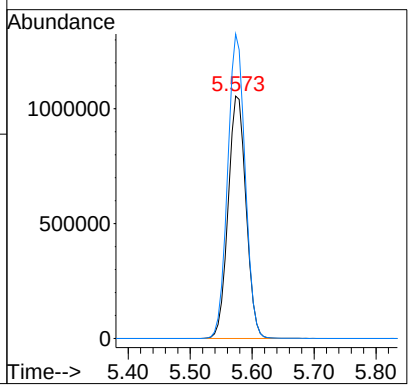


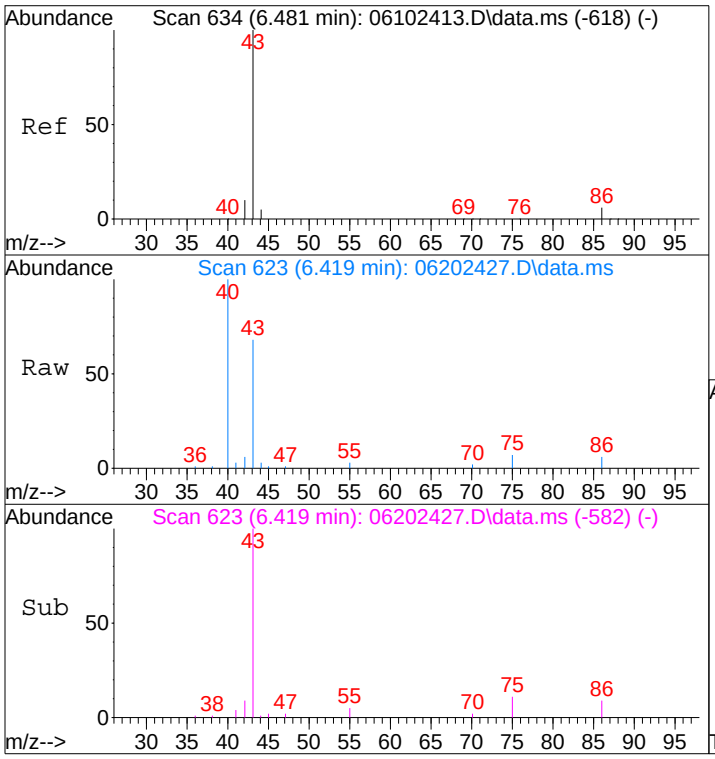


#21
Trichlorotrifluoroethane
Concen: 122.31 ng
RT: 5.57 min Scan# 474
Delta R.T. 0.027 min
Lab File: 06202427.D
Acq: 20 Jun 2024 23:59

Tgt Ion:151 Resp: 2115778

Ion	Ratio	Lower	Upper
151	100		
101	122.7	95.0	135.0

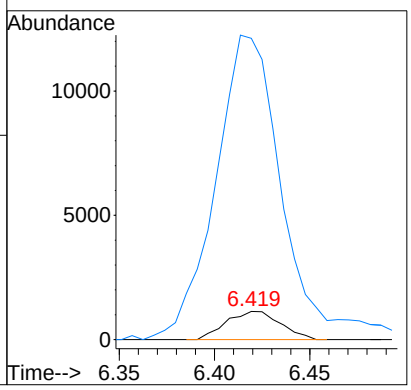


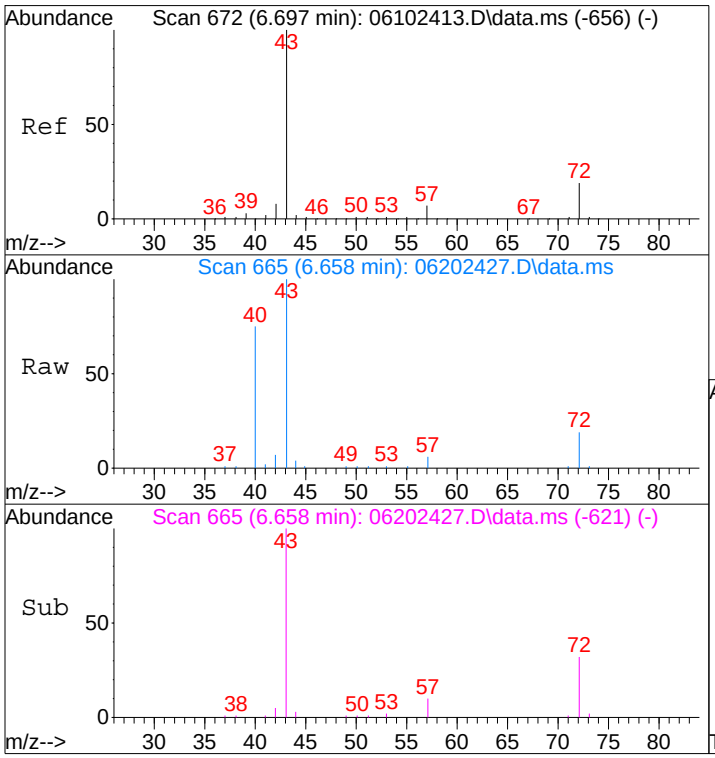


#26
Vinyl Acetate
Concen: 0.73 ng
RT: 6.42 min Scan# 623
Delta R.T. -0.020 min
Lab File: 06202427.D
Acq: 20 Jun 2024 23:59

Tgt Ion: 86 Resp: 2247

Ion	Ratio	Lower	Upper
86	100		
43	1347.1	1668.9	1708.9#

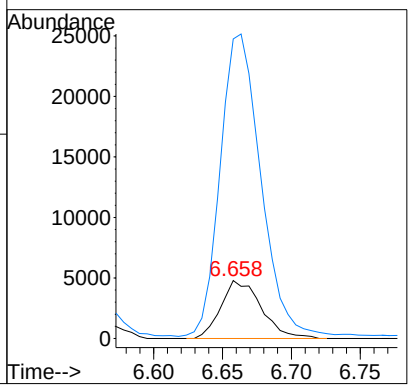


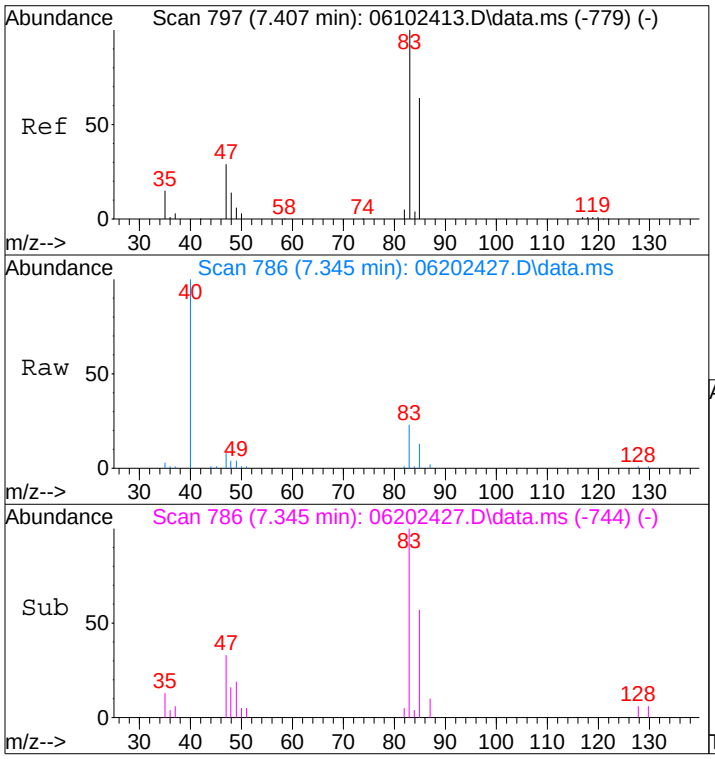


#27
2-Butanone (MEK)
Concen: 0.93 ng
RT: 6.66 min Scan# 665
Delta R.T. -0.001 min
Lab File: 06202427.D
Acq: 20 Jun 2024 23:59

Tgt Ion: 72 Resp: 9778

Ion	Ratio	Lower	Upper
72	100		
43	525.8	506.8	546.8

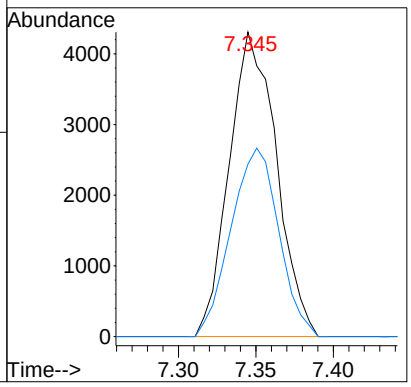


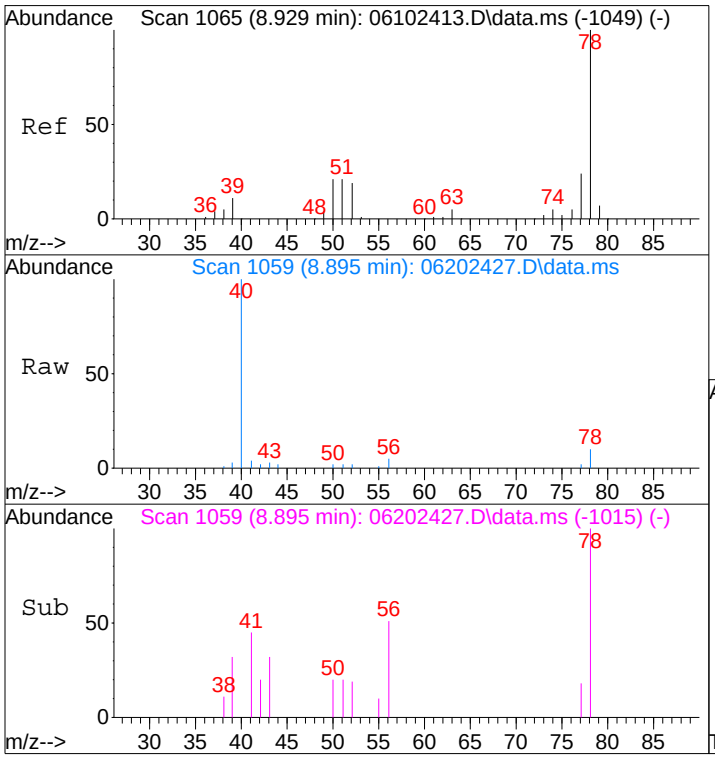


#32
Chloroform
Concen: 0.27 ng
RT: 7.34 min Scan# 786
Delta R.T. -0.010 min
Lab File: 06202427.D
Acq: 20 Jun 2024 23:59

Tgt Ion: 83 Resp: 9145

Ion	Ratio	Lower	Upper
83	100		
85	62.7	44.4	84.4

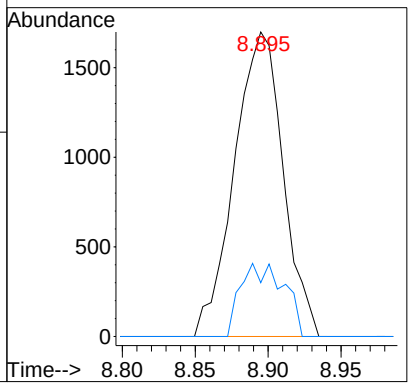


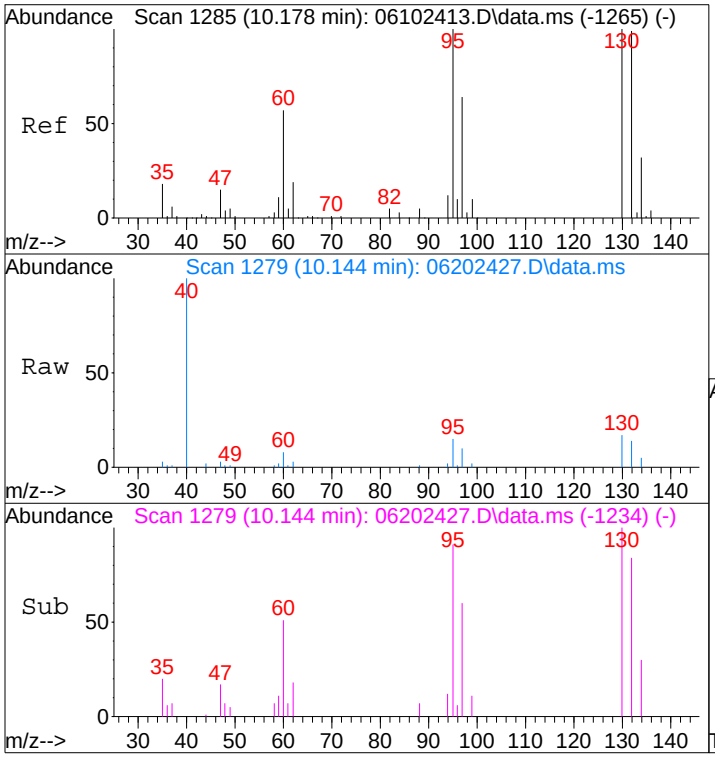


#41
Benzene
Concen: 0.06 ng
RT: 8.89 min Scan# 1059
Delta R.T. -0.002 min
Lab File: 06202427.D
Acq: 20 Jun 2024 23:59

Tgt Ion: 78 Resp: 3944

Ion	Ratio	Lower	Upper
78	100		
77	21.3	4.0	44.0

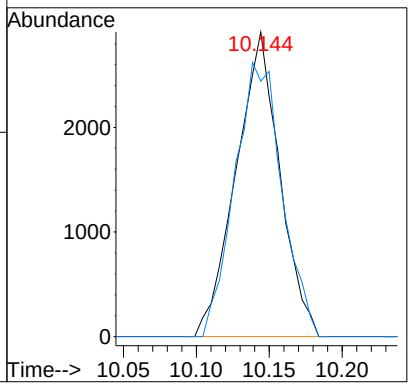


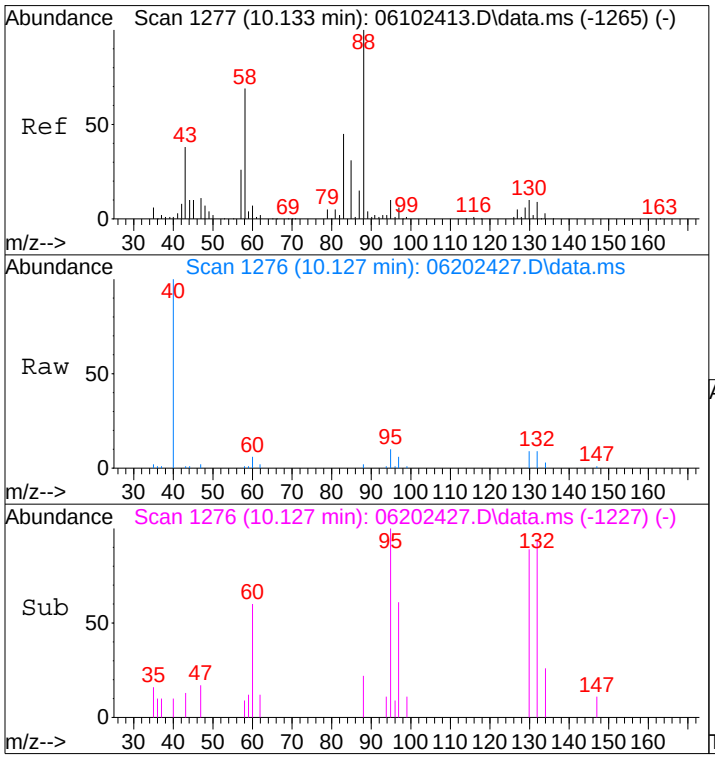


#47
Trichloroethene
Concen: 0.30 ng
RT: 10.14 min Scan# 1279
Delta R.T. 0.005 min
Lab File: 06202427.D
Acq: 20 Jun 2024 23:59

Tgt Ion:130 Resp: 6075

Ion	Ratio	Lower	Upper
130	100		
132	97.6	77.9	117.9

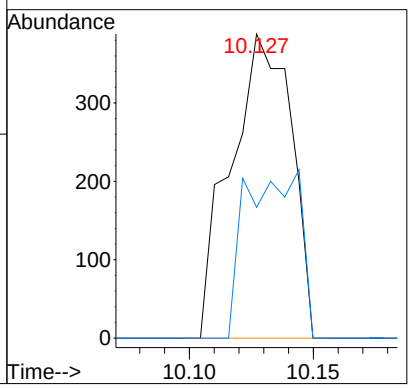


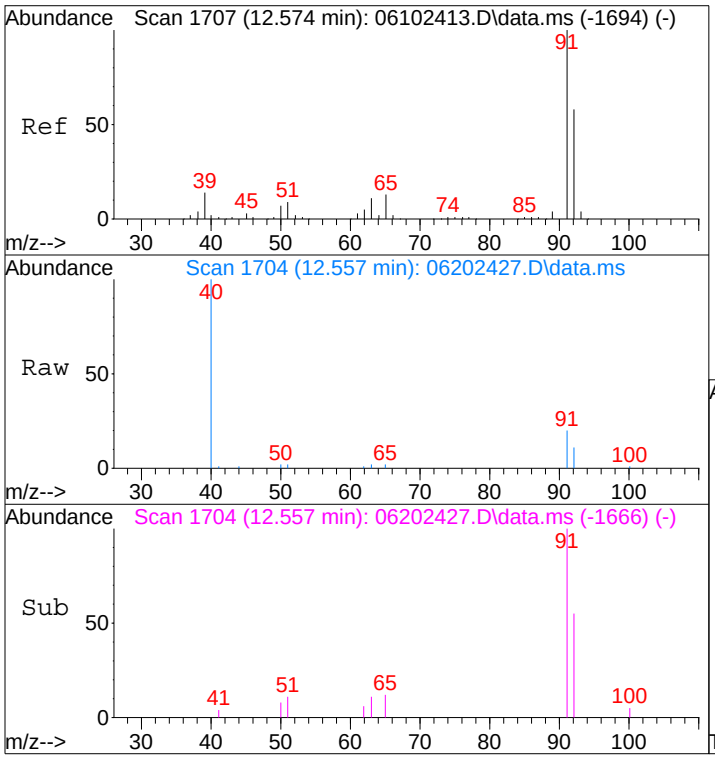


#48
1,4-Dioxane
Concen: 0.05 ng
RT: 10.13 min Scan# 1276
Delta R.T. 0.027 min
Lab File: 06202427.D
Acq: 20 Jun 2024 23:59

Tgt Ion: 88 Resp: 661

Ion	Ratio	Lower	Upper
88	100		
58	49.8	47.6	87.6

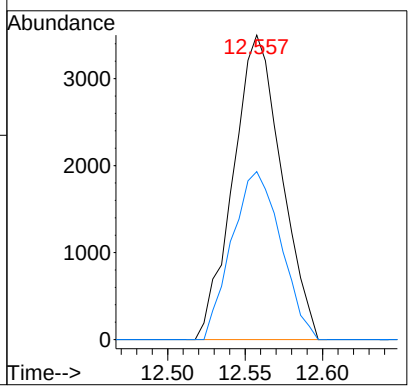


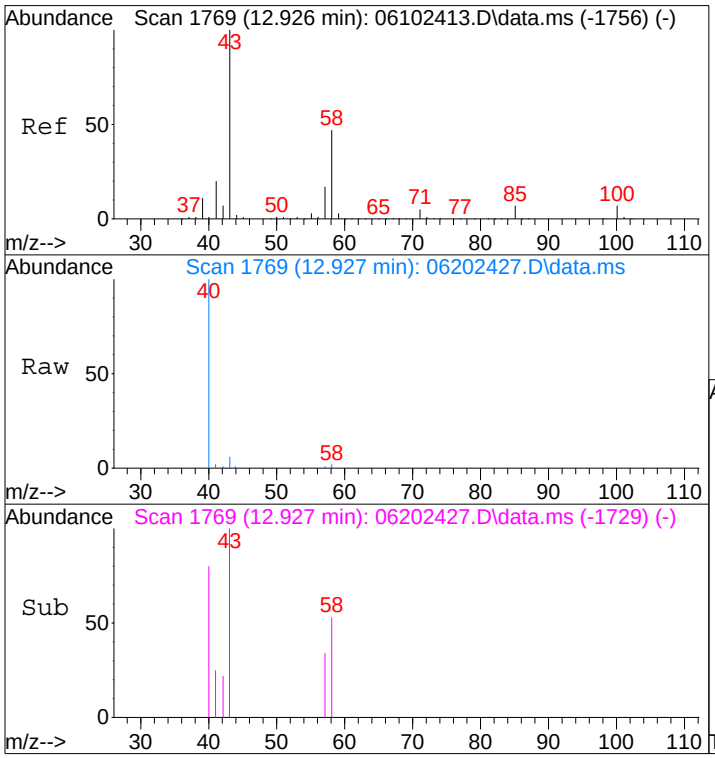


#58
Toluene
Concen: 0.11 ng
RT: 12.56 min Scan# 1704
Delta R.T. -0.034 min
Lab File: 06202427.D
Acq: 20 Jun 2024 23:59

Tgt Ion: 91 Resp: 7595

Ion	Ratio	Lower	Upper
91	100		
92	56.1	37.4	77.4

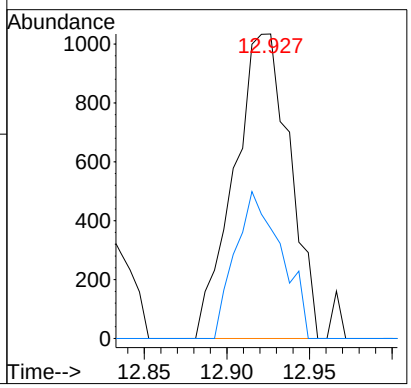


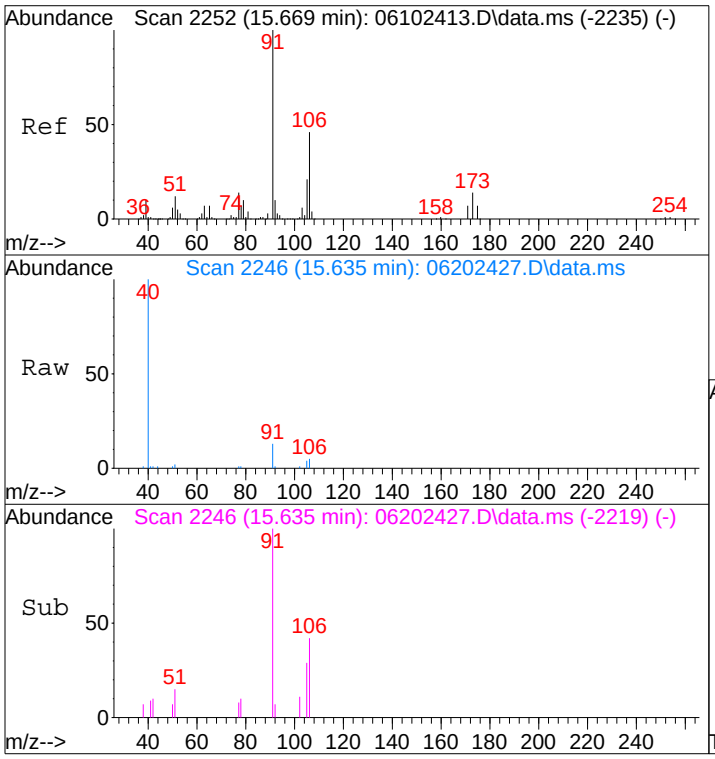


#59
2-Hexanone
Concen: 0.06 ng
RT: 12.93 min Scan# 1769
Delta R.T. -0.023 min
Lab File: 06202427.D
Acq: 20 Jun 2024 23:59

Tgt Ion: 43 Resp: 2422

Ion	Ratio	Lower	Upper
43	100		
58	40.0	25.9	65.9

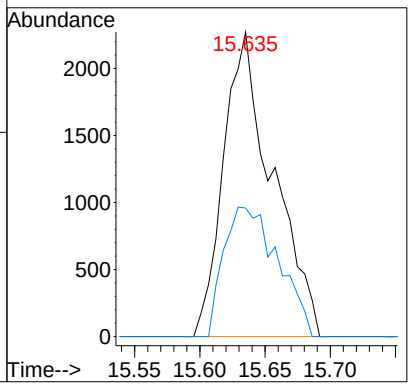


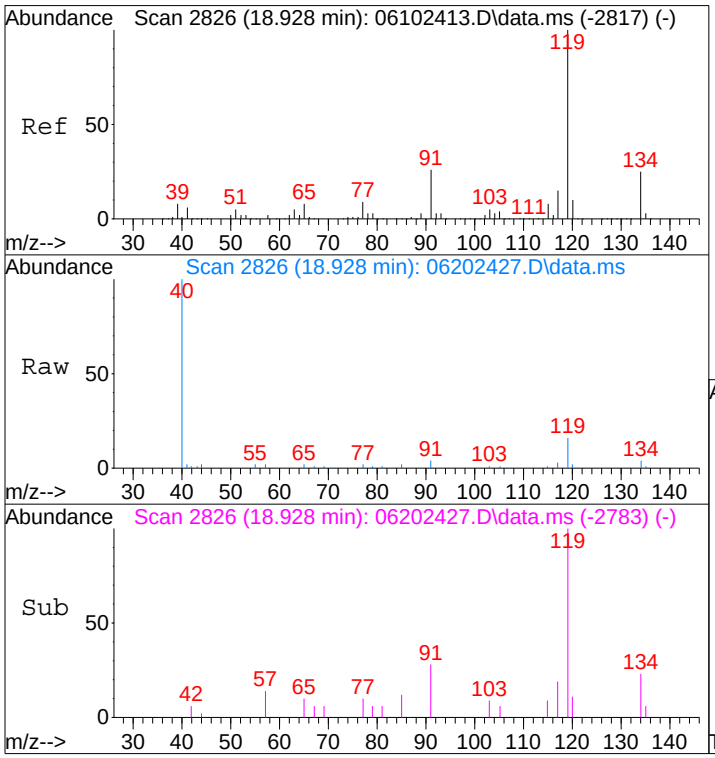


#67
m- & p-Xylenes
Concen: 0.09 ng
RT: 15.64 min Scan# 2246
Delta R.T. -0.045 min
Lab File: 06202427.D
Acq: 20 Jun 2024 23:59

Tgt Ion: 91 Resp: 5954

Ion	Ratio	Lower	Upper
91	100		
106	47.0	25.9	65.9

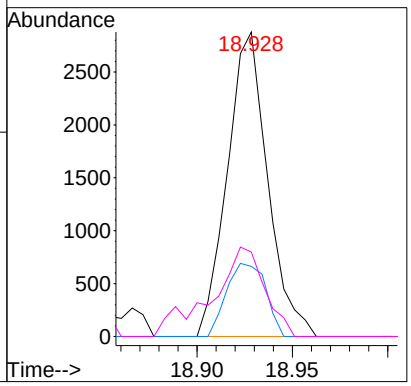




#88
4-Isopropyltoluene (p-Cymene)
Concen: 0.05 ng
RT: 18.93 min Scan# 2826
Delta R.T. -0.006 min
Lab File: 06202427.D
Acq: 20 Jun 2024 23:59

Tgt Ion:119 Resp: 4233

Ion	Ratio	Lower	Upper
119	100		
134	23.3	4.9	44.9
91	38.6	5.8	45.8



Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\20\06202427.D Vial: 16
Acq On : 20 Jun 2024 23:59 Operator: SC
Sample : P2402249-055 (50mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:28:16 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

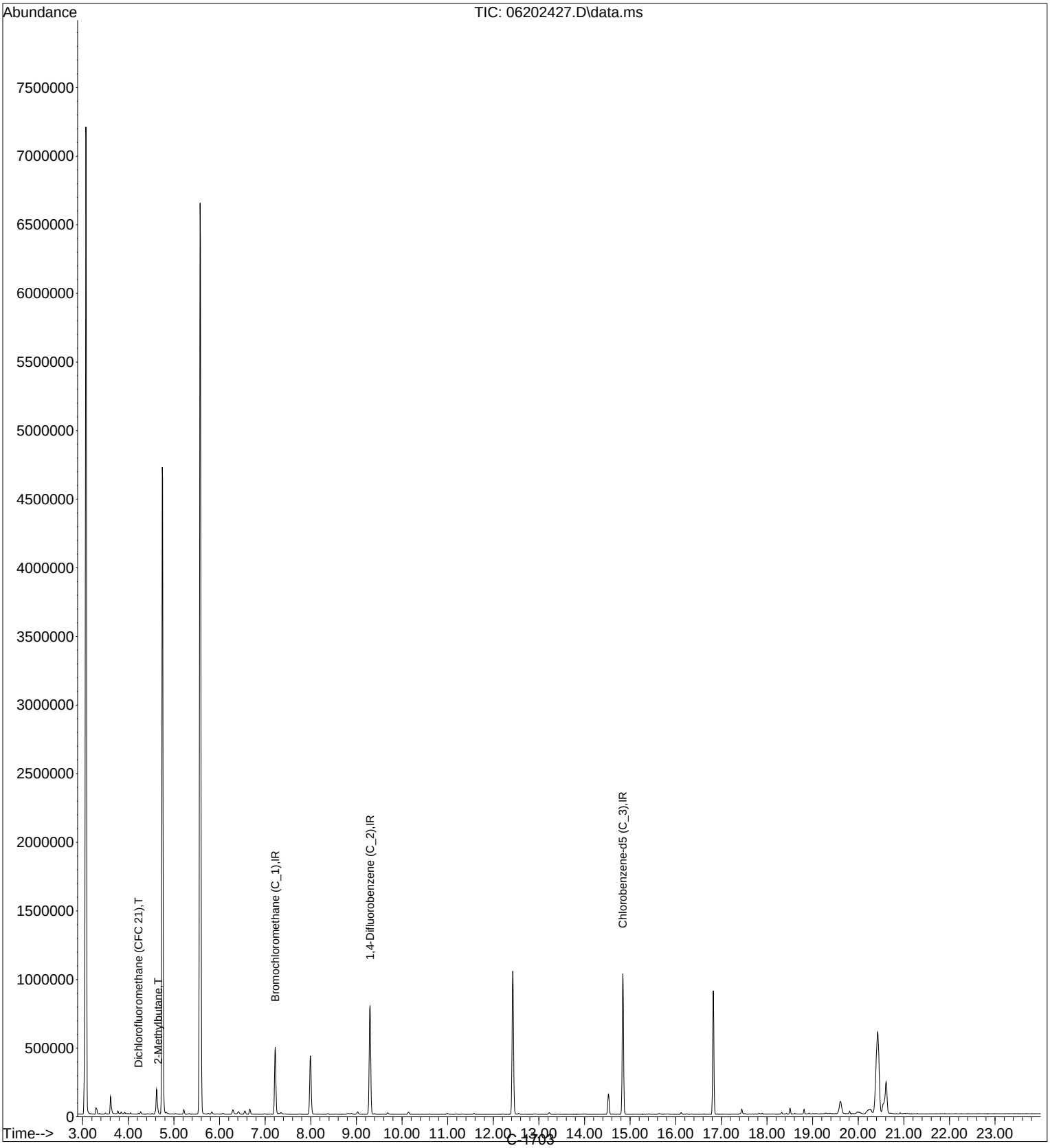
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.22	130	174660	12.500	ng		-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	756918	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	175655	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	0.00	85	0	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.19	83	148	N.D.			
4) 1,1-Difluoroethane	0.00	65	0	N.D.			
5) Chlorodifluoromethane ...	3.29	67	190	N.D.			
6) 1-Chloro-1,1-Difluoroe...	0.00	65	0	N.D.			
7) Dichlorofluoromethane ...	4.22	67	5382	0.134	ng		99
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	4.55	83	237	N.D.			
10) 2-Methylbutane	4.65	57	5730	0.275	ng	#	1
11) Methyl Acetate	5.32	43	1667	N.D.			
12) 2-Methylpentane	6.56	71	379	N.D.			
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	9.03	84	913	N.D.			
17) 2,3-Dimethylpentane	0.00	56	0	N.D.			
18) Dibromomethane	9.79	174	63	N.D.			
20) Methyl Cyclohexane	11.31	55	374	N.D.			
21) 1,3-Dichloropropane	0.00	76	0	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	16.38	75	520	N.D.			
25) Bromobenzene	17.03	77	190	N.D.			
26) 2-Chlorotoluene	17.61	91	1051	N.D.			
27) 4-Chlorotoluene	17.68	91	1984	N.D.			
28) Indane	19.02	117	53	N.D.			
29) Indene	0.00	115	0	N.D.			
30) 1,2,4,5-Tetramethylben...	20.18	119	84	N.D.			
31) 1,2,3,4-Tetramethylben...	20.26	119	1294	N.D.			
32) 1,2,3,5-Tetramethylben...	20.61	119	4514	N.D.			
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202427.D Vial: 16
Acq On : 20 Jun 2024 23:59 Operator: SC
Sample : P2402249-055 (50mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:28:16 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



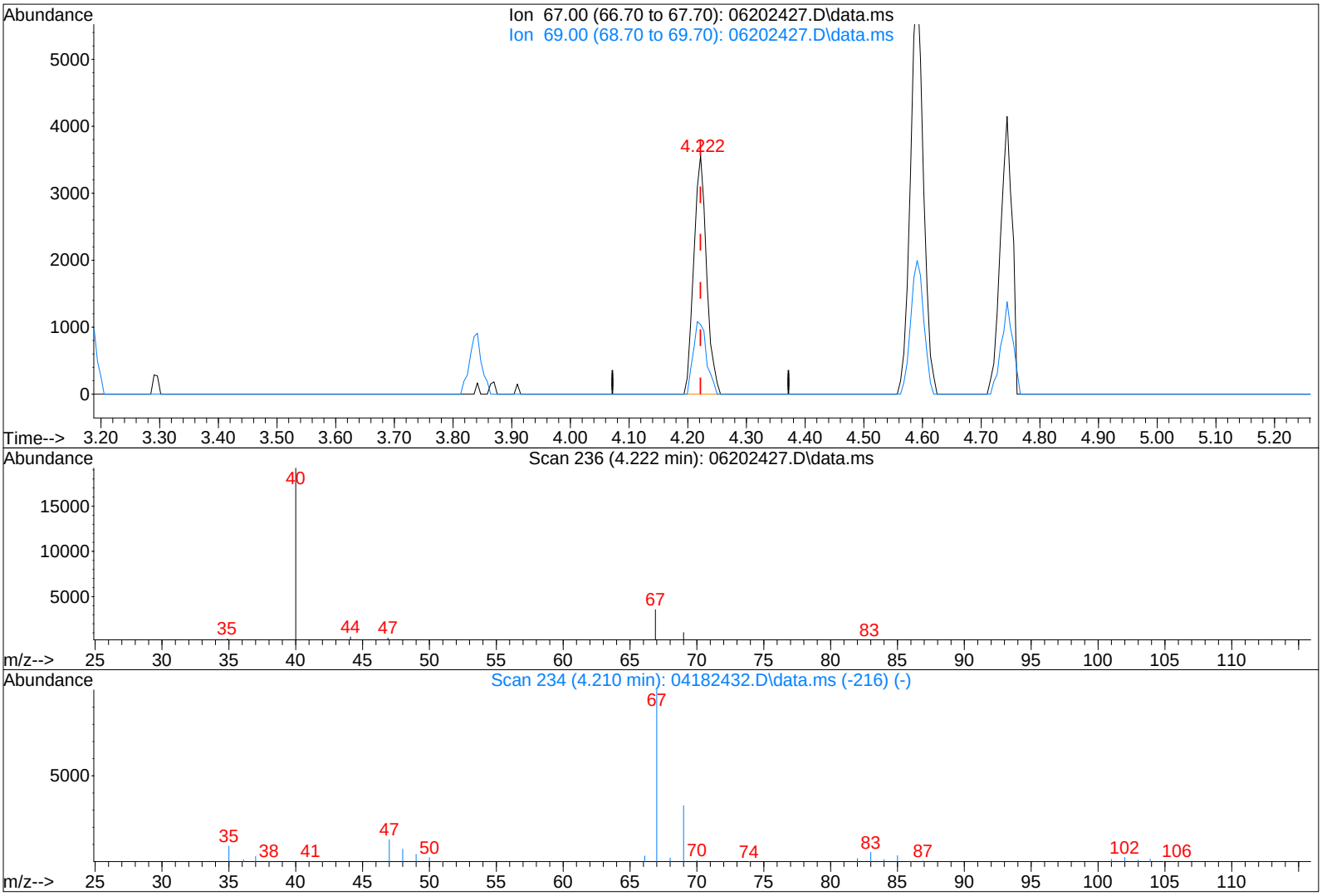
C-1703

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\20\06202427.D Vial: 16
Acq On : 20 Jun 2024 23:59 Operator: SC
Sample : P2402249-055 (50mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 15:28:16 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06202427.D\data.ms

(7) Dichlorofluoromethane (CFC 21) (T)

4.222min (+0.000) 0.13ng

response 5382

Ion	Exp%	Act%
67.00	100	100
69.00	32.40	31.68
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222413.D Vial: 16
Acq On : 22 Jun 2024 19:42 Operator: MC/MJ
Sample : P2402249-055Dil (25mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 14:40:03 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	179300	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	791586	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	186030	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	379792	11.918	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 95.36%				
57) Toluene-d8 (SS2)	12.43	98	896285	12.590	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.72%				
73) Bromofluorobenzene (SS3)	16.83	174	329086	12.802	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.40%				
Target Compounds							Qvalue
2) Propene	3.32	42	3645	0.159	ng	#	82
3) Dichlorodifluoromethan...	3.33	85	785	N.D.			
4) Chloromethane	3.52	50	1005	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.38	45	52	N.D.			
11) Acetonitrile	4.44	41	1854	N.D.			
12) Acrolein	4.54	56	1446	0.112	ng		89
13) Acetone	4.64	58	30693	2.204	ng	#	66
14) Trichlorofluoromethane	4.76	101	1513680m	35.461	ng		
15) 2-Propanol (Isopropanol)	4.85	45	8571	0.153	ng	#	55
16) Acrylonitrile	4.99	53	631	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.40	59	1757	N.D.			
19) Methylene Chloride	5.35	84	997	0.051	ng		94
20) 3-Chloro-1-propene (Al...	5.45	41	366	N.D.			
21) Trichlorotrifluoroethane	5.58	151	959119	53.115	ng		94
22) Carbon Disulfide	0.00	76	0	N.D.	d		
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	6.44	86	1050	0.327	ng	#	25
27) 2-Butanone (MEK)	6.67	72	4171	0.378	ng	#	72
28) cis-1,2-Dichloroethene	7.07	61	276	N.D.			
29) Diisopropyl Ether	7.34	87	434	N.D.			
30) Ethyl Acetate	0.00	61	0	N.D.			
31) n-Hexane	7.31	57	128	N.D.			
32) Chloroform	7.35	83	4213	0.120	ng		99
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	264	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.83	56	4502	No Calib		#	
41) Benzene	8.89	78	2655	N.D.			
42) Carbon Tetrachloride	0.00	117	0	N.D.			
43) Cyclohexane	0.00	84	0	N.D.			
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	9.86	63	257	N.D.			
46) Bromodichloromethane	10.08	83	612	N.D.			
47) Trichloroethene	10.14	130	3719	0.174	ng		98
48) 1,4-Dioxane	10.13	88	495	N.D.			
49) 2,2,4-Trimethylpentane...	0.00	57	0	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222413.D Vial: 16
Acq On : 22 Jun 2024 19:42 Operator: MC/MJ
Sample : P2402249-055Dil (25mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:40:03 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

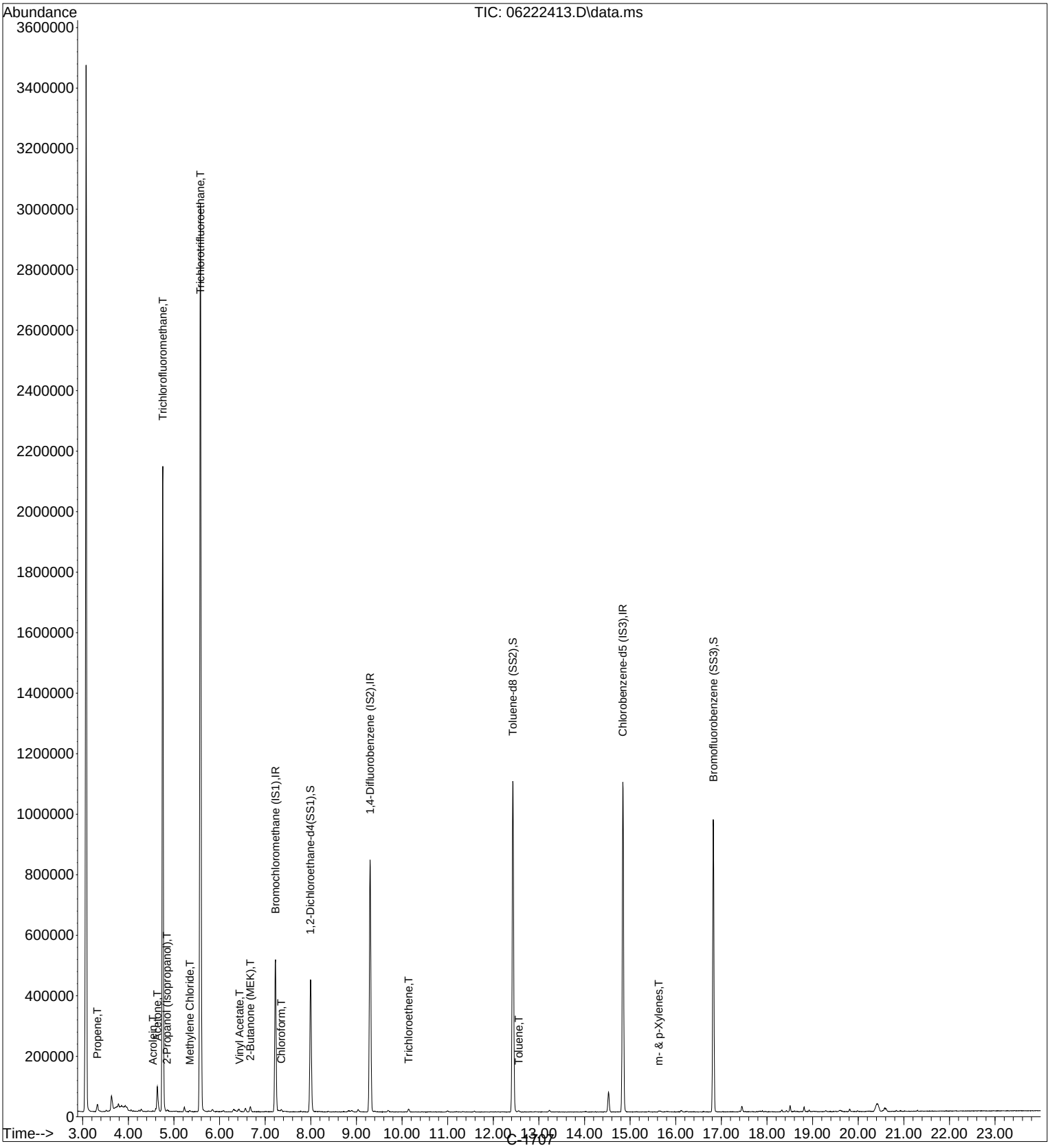
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	0.00	71	0	N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	11.34	58	279	N.D.	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
58) Toluene	12.56	91	3849	0.052 ng	99
59) 2-Hexanone	12.93	43	1129	N.D.	
60) Dibromochloromethane	13.08	129	584	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	0.00	43	0	N.D.	
63) n-Octane	0.00	57	0	N.D.	
64) Tetrachloroethene	14.03	166	462	N.D.	
65) Chlorobenzene	14.90	112	907	N.D.	
66) Ethylbenzene	15.41	91	2086	N.D.	
67) m- & p-Xylenes	15.63	91	4133	0.058 ng	96
68) Bromoform	15.67	173	909	N.D.	
69) Styrene	16.09	104	202	N.D.	
70) o-Xylene	16.25	91	1934	N.D.	
71) n-Nonane	16.62	43	672	N.D.	
72) 1,1,2,2-Tetrachloroethane	16.21	83	476	N.D.	
74) Cumene	17.03	105	1385	N.D.	
75) alpha-Pinene	17.53	93	653	N.D.	
76) n-Propylbenzene	17.68	91	1579	N.D.	
77) 3-Ethyltoluene	17.03	105	1385	No Calib	#
78) 4-Ethyltoluene	17.86	105	1148	N.D.	
79) 1,3,5-Trimethylbenzene	17.96	105	921	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.03	105	1385	No Calib	#
82) 1,2,4-Trimethylbenzene	18.43	105	1301	N.D.	
83) n-Decane	0.00	58	0	N.D.	
84) Benzyl Chloride	0.00	91	0	N.D.	
85) 1,3-Dichlorobenzene	18.58	146	782	N.D.	
86) 1,4-Dichlorobenzene	18.66	146	953	N.D.	
87) sec-Butylbenzene	18.74	105	1424	N.D.	
88) 4-Isopropyltoluene (p-...	18.93	119	2443	N.D.	
89) 1,2,3-Trimethylbenzene	17.03	105	1385	No Calib	#
90) 1,2-Dichlorobenzene	19.04	146	754	N.D.	
91) d-Limonene	19.08	68	190	N.D.	
92) 1,2-Dibromo-3-Chloropr...	19.51	157	114	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	1084	N.D.	
95) Naphthalene	20.94	128	869	N.D.	
96) n-Dodecane	0.00	58	0	N.D.	
97) Hexachlorobutadiene	21.30	225	856	N.D.	
98) Cyclohexanone	0.00	55	0	N.D.	
99) tert-Butylbenzene	18.43	119	1168	N.D.	
100) n-Butylbenzene	19.39	91	822	N.D.	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222413.D Vial: 16
Acq On : 22 Jun 2024 19:42 Operator: MC/MJ
Sample : P2402249-055Dil (25mL) Inst : MS09
Misc : S37-06062402

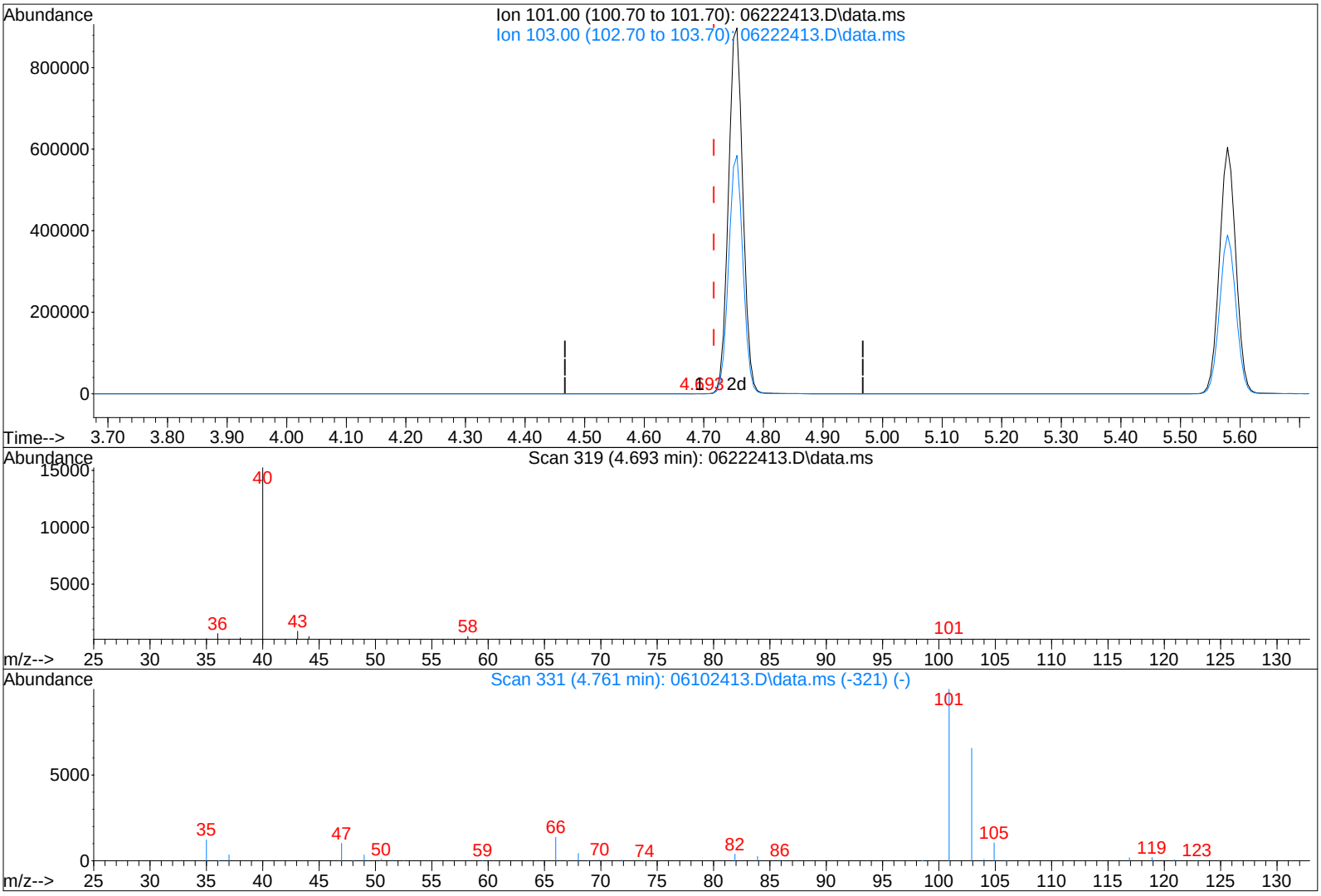
Quant Time: Jun 28 14:40:03 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\22\06222413.D Vial: 16
Acq On : 22 Jun 2024 19:42 Operator: MC/MJ
Sample : P2402249-055Dil (25mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 13:58:12 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06222413.D\data.ms

(14) Trichlorofluoromethane (T)

4.693min (-0.024) 0.00ng

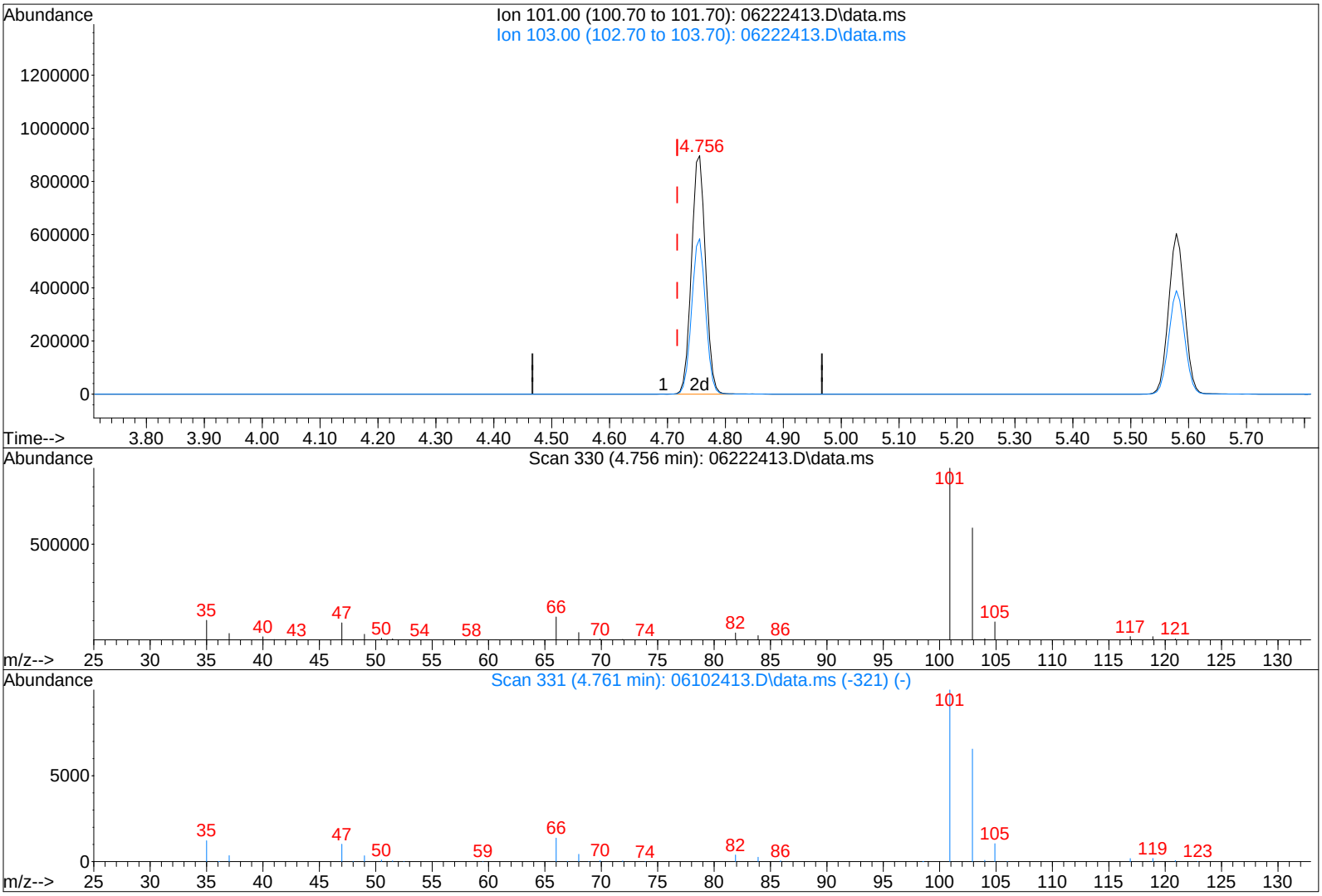
response 153

Ion	Exp%	Act%
101.00	100	100
103.00	64.90	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\22\06222413.D Vial: 16
Acq On : 22 Jun 2024 19:42 Operator: MC/MJ
Sample : P2402249-055Dil (25mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 13:58:12 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06222413.D\data.ms

(14) Trichlorofluoromethane (T)

4.756min (+0.039) 35.46ng m

response 1513680

Ion	Exp%	Act%
101.00	100	100
103.00	64.90	64.56
0.00	0.00	0.00
0.00	0.00	0.00

MJ 6/28/24

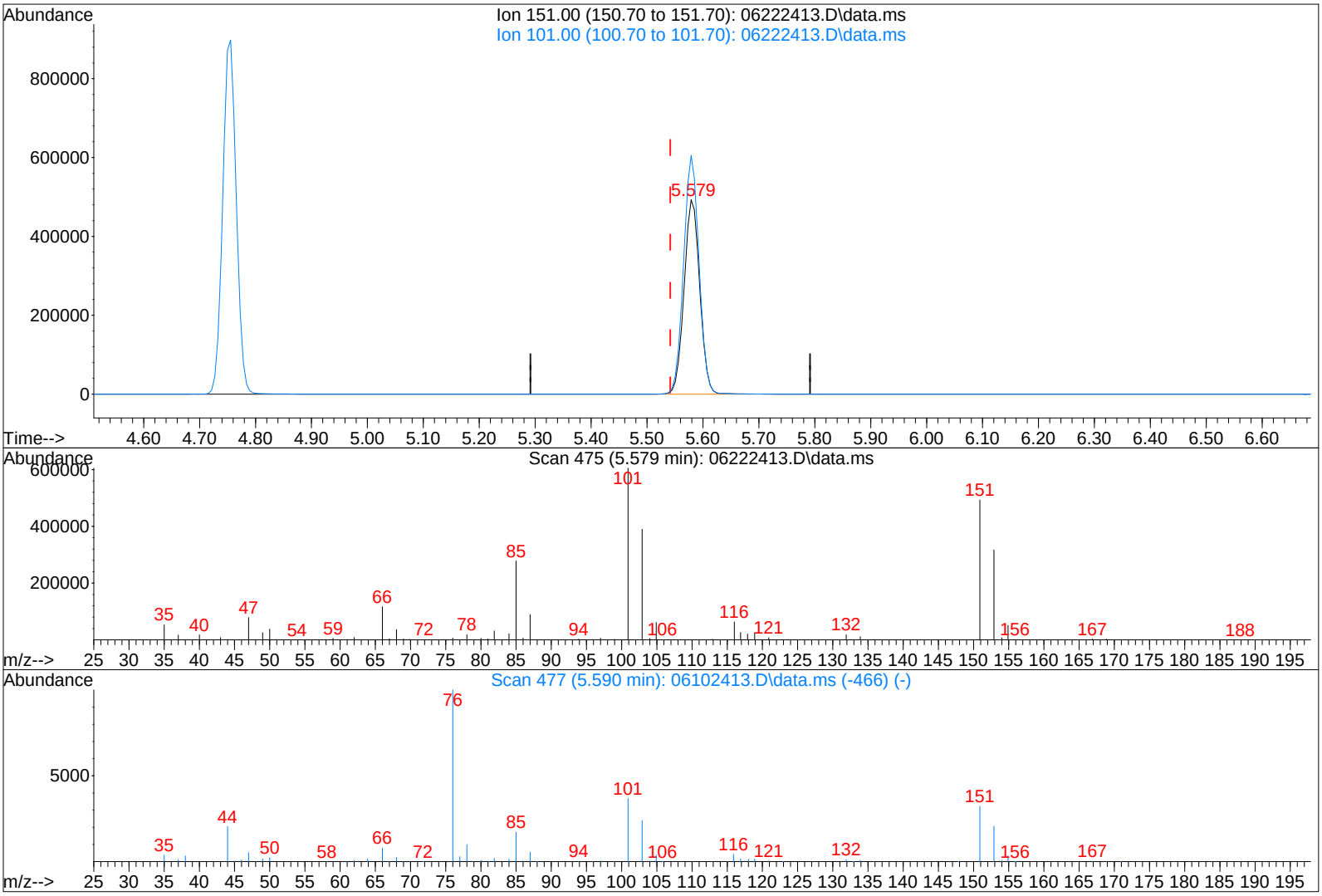
WP

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\22\06222413.D Vial: 16
Acq On : 22 Jun 2024 19:42 Operator: MC/MJ
Sample : P2402249-055Dil (25mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 13:58:12 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06222413.D\data.ms

(21) Trichlorotrifluoroethane (T)

5.579min (+0.037) 53.11ng

response 959119

Ion	Exp%	Act%
151.00	100	100
101.00	115.00	120.98
0.00	0.00	0.00
0.00	0.00	0.00

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\20\
Data File : 06202427.D
Acq On : 20 Jun 2024 23:59
Operator : SC
Sample : P2402249-055 (50mL)
Misc : S37-06062402
ALS Vial : 16 Sample Multiplier: 1

MJ 6/28/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06202427.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.069	21	33	51	rBV	7193431	13005579	98.97%	32.813%
2	3.291	67	72	83	rBV3	46694	104345	0.79%	0.263%
3	3.501	102	109	114	rBV3	8202	14963	0.11%	0.038%
4	3.609	121	128	144	rBV	127312	248574	1.89%	0.627%
5	3.773	152	157	162	rBV2	20756	30723	0.23%	0.078%
6	3.841	165	169	176	rVB3	11922	16115	0.12%	0.041%
7	3.921	178	183	187	rBV2	10767	14856	0.11%	0.037%
8	4.051	201	206	210	rVB2	8363	10085	0.08%	0.025%
9	4.222	230	236	240	rBV2	6373	11581	0.09%	0.029%
10	4.273	240	245	250	rVV	16179	24320	0.19%	0.061%
11	4.619	295	306	319	rBV	180320	376086	2.86%	0.949%
12	4.744	319	328	341	rBV	4714040	8277489	62.99%	20.884%
13	4.829	341	343	351	rVB2	10555	17679	0.13%	0.045%
14	5.215	405	411	419	rVB2	34403	59501	0.45%	0.150%
15	5.573	463	474	487	rBV	6638425	13140274	100.00%	33.153%
16	5.749	500	505	512	rVB2	5741	12616	0.10%	0.032%
17	5.829	512	519	529	rVB3	15942	35602	0.27%	0.090%
18	6.067	555	561	569	rVB4	5894	14612	0.11%	0.037%
19	6.289	593	600	613	rBV	32011	77273	0.59%	0.195%
20	6.414	613	622	630	rVB2	18920	47394	0.36%	0.120%
21	6.556	640	647	653	rBV3	25186	52240	0.40%	0.132%
22	6.658	658	665	676	rBV	36707	75816	0.58%	0.191%
23	7.220	753	764	775	rBV	488700	1034928	7.88%	2.611%
24	7.345	782	786	795	rVB3	11412	24650	0.19%	0.062%
25	7.992	889	900	912	rBV	427279	971161	7.39%	2.450%
26	8.373	960	967	973	rVB5	5171	10794	0.08%	0.027%
27	8.815	1038	1045	1051	rBV4	5628	16991	0.13%	0.043%
28	8.889	1052	1058	1065	rVB5	6437	17143	0.13%	0.043%
29	9.026	1076	1082	1094	rVB2	18281	40316	0.31%	0.102%
30	9.298	1119	1130	1141	rVB	792489	1824273	13.88%	4.603%
31	9.690	1192	1199	1207	rBV5	11704	27170	0.21%	0.069%

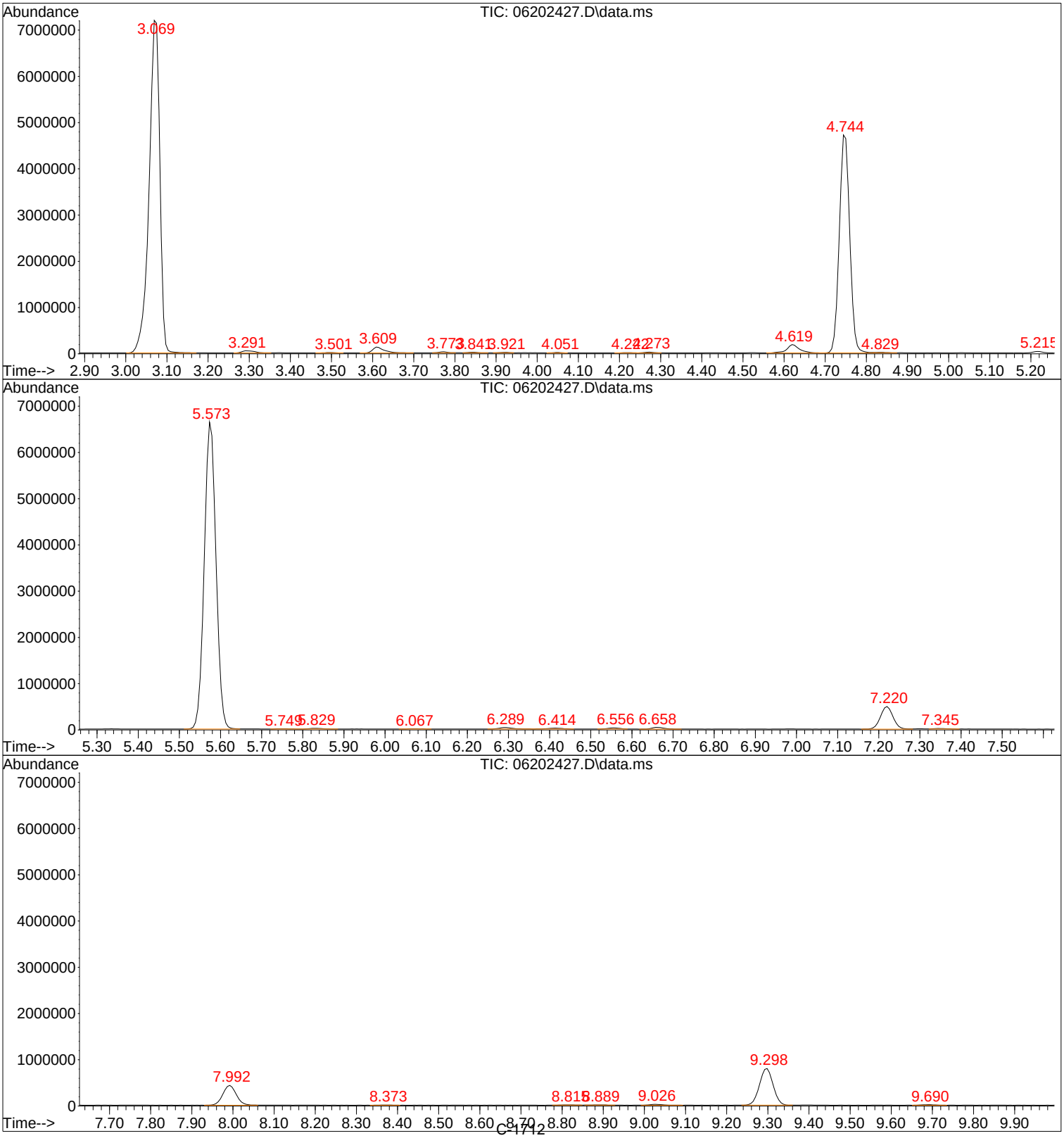
Sum of corrected areas: 39635149

LSC Report - Integrated Chromatogram

Data Path : I:\MS09\DATA\2024 06\20\
Data File : 06202427.D
Acq On : 20 Jun 2024 23:59
Operator : SC
Sample : P2402249-055 (50mL)
Misc : S37-06062402
ALS Vial : 16 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\20\\
Data File : 06202427.D
Acq On : 20 Jun 2024 23:599
Operator : SCC
Sample : P2402249-055 (50mL))
Misc : S37-060624022
ALS Vial : 16 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212414.D Vial: 4
Acq On : 21 Jun 2024 17:34 Operator: SC
Sample : P2402249-056 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/29/24

Quant Time: Jun 29 10:24:41 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	173165	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	760804	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	177408	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	378811	12.308	ng		0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.48%				
57) Toluene-d8 (SS2)	12.43	98	862696	12.707	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.68%				
73) Bromofluorobenzene (SS3)	16.83	174	301021	12.279	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.24%				
Target Compounds							Qvalue
2) Propene	3.29	42	10694	0.482	ng		89
3) Dichlorodifluoromethan...	3.36	85	22483m	0.552	ng		
4) Chloromethane	3.49	50	7205	0.259	ng		97
5) 1,2-Dichloro-1,1,2,2-t...	3.60	135	386	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	3.77	54	564	N.D.			
8) Bromomethane	4.01	94	557	N.D.			
9) Chloroethane	4.14	64	533	N.D.			
10) Ethanol	4.28	45	57469	3.414	ng		83
11) Acetonitrile	0.00	41	0	N.D.	d		
12) Acrolein	4.52	56	12444	0.999	ng		95
13) Acetone	4.61	58	188764	14.032	ng	#	80
14) Trichlorofluoromethane	4.74	101	159834	3.877	ng		99
15) 2-Propanol (Isopropanol)	4.84	45	49554	0.914	ng		97
16) Acrylonitrile	0.00	53	0	N.D.	d		
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.32	59	7395	0.171	ng	#	32
19) Methylene Chloride	5.34	84	1895	0.100	ng		96
20) 3-Chloro-1-propene (Al...	5.44	41	1132	N.D.			
21) Trichlorotrifluoroethane	5.57	151	139580	8.004	ng		95
22) Carbon Disulfide	5.59	76	74146	1.208	ng		83
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	6.36	73	111	N.D.			
26) Vinyl Acetate	6.43	86	13785	4.441	ng	#	7
27) 2-Butanone (MEK)	6.66	72	29218	2.745	ng	#	93
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.	d		
30) Ethyl Acetate	7.28	61	258507	39.773	ng		96
31) n-Hexane	0.00	57	0	N.D.	d		
32) Chloroform	7.36	83	8069	0.238	ng		99
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.	d		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.12	62	487	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	9.58	61	5432	No Calib		#	
40) 1-Butanol	8.80	56	26177	No Calib		#	
41) Benzene	8.90	78	18880	0.269	ng		99
42) Carbon Tetrachloride	9.07	117	1637	0.050	ng		99
43) Cyclohexane	9.22	84	855	N.D.			
44) tert-Amyl Methyl Ether	9.60	73	354	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.08	83	915	N.D.			
47) Trichloroethene	10.15	130	643	N.D.			
48) 1,4-Dioxane	10.13	88	1298	0.100	ng		94
49) 2,2,4-Trimethylpentane...	10.22	57	1599	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212414.D Vial: 4
Acq On : 21 Jun 2024 17:34 Operator: SC
Sample : P2402249-056 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:24:41 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

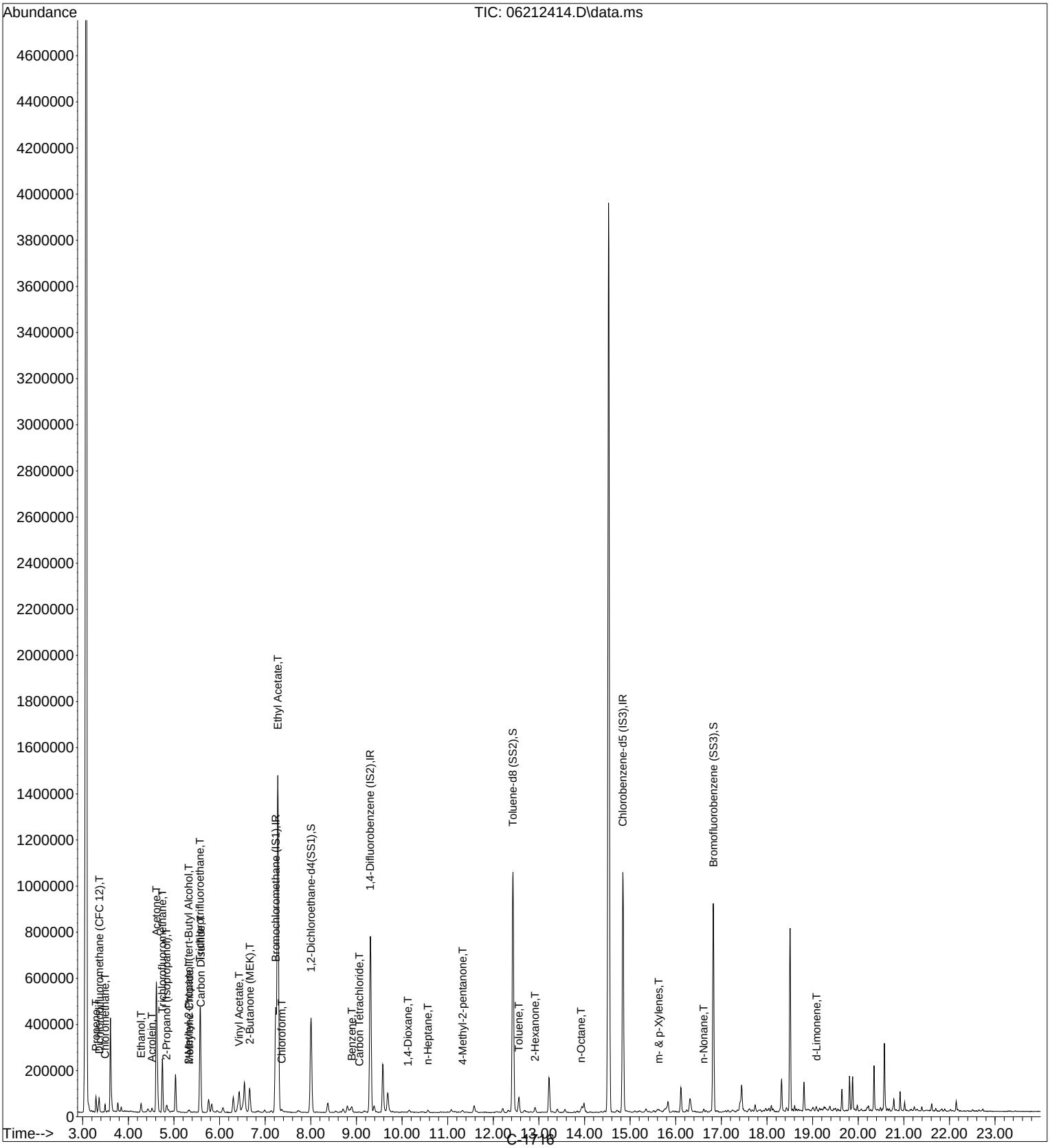
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
51) n-Heptane	10.56	71	2111	0.143	ng		92
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.			
53) 4-Methyl-2-pentanone	11.33	58	2149	0.139	ng	#	61
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.			
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.			
58) Toluene	12.56	91	56504	0.796	ng		98
59) 2-Hexanone	12.92	43	21015	0.473	ng		95
60) Dibromochloromethane	13.07	129	488	N.D.			
61) 1,2-Dibromoethane	0.00	107	0	N.D.			
62) n-Butyl Acetate	0.00	43	0	N.D.	d		
63) n-Octane	13.93	57	2228	0.151	ng		93
64) Tetrachloroethene	14.03	166	1047	N.D.			
65) Chlorobenzene	14.90	112	1057	N.D.			
66) Ethylbenzene	15.41	91	2932	N.D.			
67) m- & p-Xylenes	15.63	91	6657	0.098	ng		97
68) Bromoform	15.68	173	769	N.D.			
69) Styrene	16.10	104	2072	N.D.			
70) o-Xylene	16.24	91	2889	N.D.			
71) n-Nonane	16.61	43	6372	0.163	ng		93
72) 1,1,2,2-Tetrachloroethane	16.21	83	710	N.D.			
74) Cumene	17.03	105	1278	N.D.			
75) alpha-Pinene	17.52	93	1821	N.D.			
76) n-Propylbenzene	17.67	91	2541	N.D.			
77) 3-Ethyltoluene	17.03	105	1278	No Calib			
78) 4-Ethyltoluene	17.86	105	1704	N.D.			
79) 1,3,5-Trimethylbenzene	17.96	105	1394	N.D.			
80) alpha-Methylstyrene	0.00	118	0	N.D.			
81) 2-Ethyltoluene	17.03	105	1278	No Calib			
82) 1,2,4-Trimethylbenzene	18.43	105	2561	N.D.			
83) n-Decane	17.09	58	920	No Calib		#	
84) Benzyl Chloride	18.56	91	1440	N.D.			
85) 1,3-Dichlorobenzene	18.58	146	832	N.D.			
86) 1,4-Dichlorobenzene	18.66	146	931	N.D.			
87) sec-Butylbenzene	18.74	105	1465	N.D.			
88) 4-Isopropyltoluene (p-...	18.92	119	1934	N.D.			
89) 1,2,3-Trimethylbenzene	17.03	105	1278	No Calib			
90) 1,2-Dichlorobenzene	19.04	146	736	N.D.			
91) d-Limonene	19.09	68	3091	0.123	ng		99
92) 1,2-Dibromo-3-Chloropr...	19.51	157	149	N.D.			
93) n-Undecane	17.80	58	283	No Calib		#	
94) 1,2,4-Trichlorobenzene	20.84	180	1247	N.D.			
95) Naphthalene	20.94	128	1328	N.D.			
96) n-Dodecane	18.90	58	745	No Calib		#	
97) Hexachlorobutadiene	21.30	225	718	N.D.			
98) Cyclohexanone	15.35	55	5582	No Calib		#	
99) tert-Butylbenzene	18.42	119	1406	N.D.			
100) n-Butylbenzene	19.38	91	2807	N.D.			
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212414.D Vial: 4
Acq On : 21 Jun 2024 17:34 Operator: SC
Sample : P2402249-056 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:24:41 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



C-1710

Quantitation Report (QT/LSC Reviewed)

MJ 6/29/24

Data File : I:\MS09\DATA\2024 06\21\06212414.D Vial: 4
Acq On : 21 Jun 2024 17:34 Operator: SC
Sample : P2402249-056 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:24:41 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

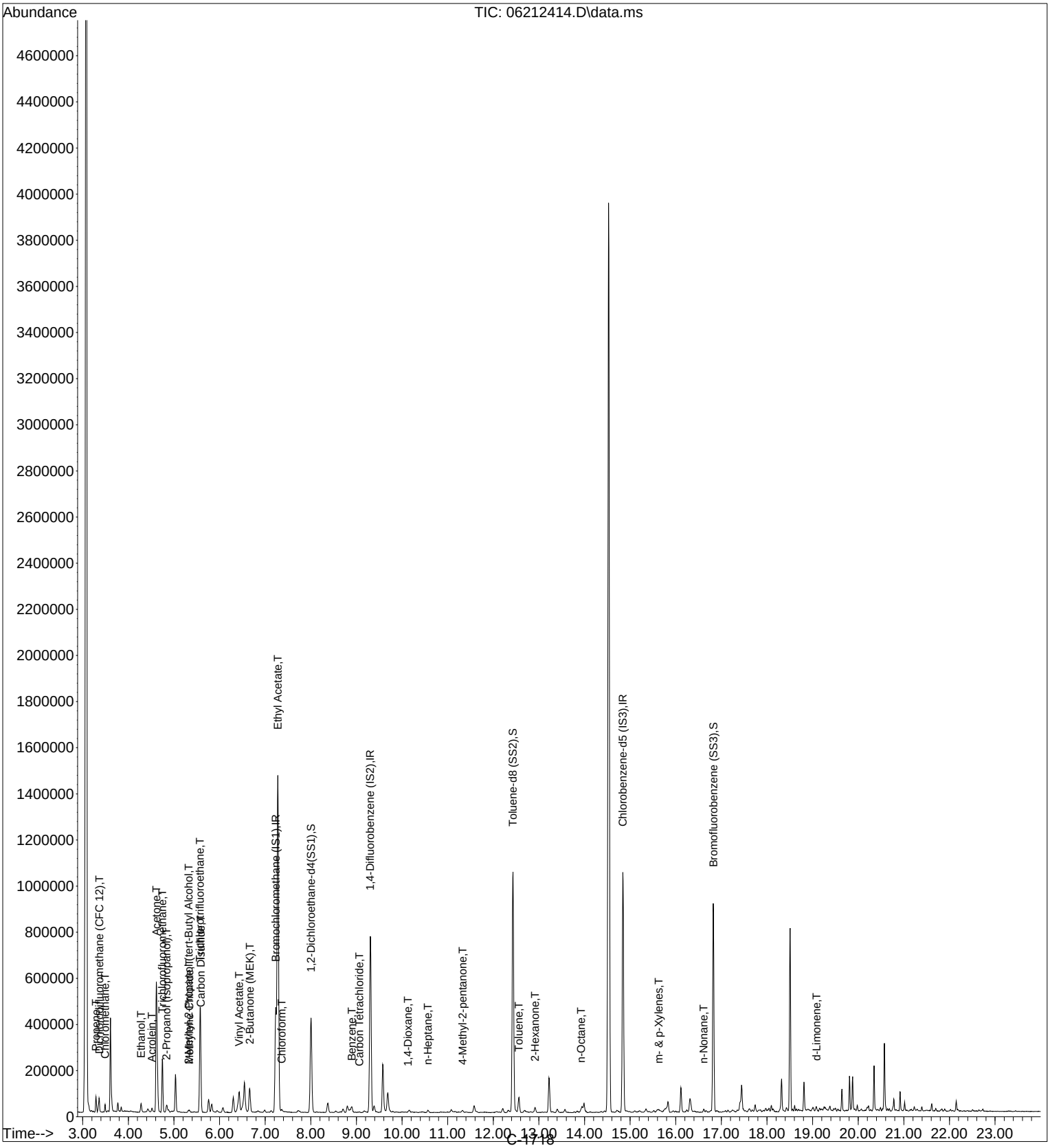
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	173165	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	760804	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	177408	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	378811	12.308	ng		0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.48%				
57) Toluene-d8 (SS2)	12.43	98	862696	12.707	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.68%				
73) Bromofluorobenzene (SS3)	16.83	174	301021	12.279	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.24%				
Target Compounds							Qvalue
2) Propene	3.29	42	10694	0.482	ng		89
3) Dichlorodifluoromethan...	3.36	85	22483m	0.552	ng		
4) Chloromethane	3.49	50	7205	0.259	ng		97
10) Ethanol	4.28	45	57469	3.414	ng		83
12) Acrolein	4.52	56	12444	0.999	ng		95
13) Acetone	4.61	58	188764	14.032	ng	#	80
14) Trichlorofluoromethane	4.74	101	159834	3.877	ng		99
15) 2-Propanol (Isopropanol)	4.84	45	49554	0.914	ng		97
18) 2-Methyl-2-Propanol (t...	5.32	59	7395	0.171	ng	#	32
19) Methylene Chloride	5.34	84	1895	0.100	ng		96
21) Trichlorotrifluoroethane	5.57	151	139580	8.004	ng		95
22) Carbon Disulfide	5.59	76	74146	1.208	ng		83
26) Vinyl Acetate	6.43	86	13785	4.441	ng	#	7
27) 2-Butanone (MEK)	6.66	72	29218	2.745	ng	#	93
30) Ethyl Acetate	7.28	61	258507	39.773	ng		96
32) Chloroform	7.36	83	8069	0.238	ng		99
41) Benzene	8.90	78	18880	0.269	ng		99
42) Carbon Tetrachloride	9.07	117	1637	0.050	ng		99
48) 1,4-Dioxane	10.13	88	1298	0.100	ng		94
51) n-Heptane	10.56	71	2111	0.143	ng		92
53) 4-Methyl-2-pentanone	11.33	58	2149	0.139	ng	#	61
58) Toluene	12.56	91	56504	0.796	ng		98
59) 2-Hexanone	12.92	43	21015	0.473	ng		95
63) n-Octane	13.93	57	2228	0.151	ng		93
67) m- & p-Xylenes	15.63	91	6657	0.098	ng		97
71) n-Nonane	16.61	43	6372	0.163	ng		93
91) d-Limonene	19.09	68	3091	0.123	ng		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

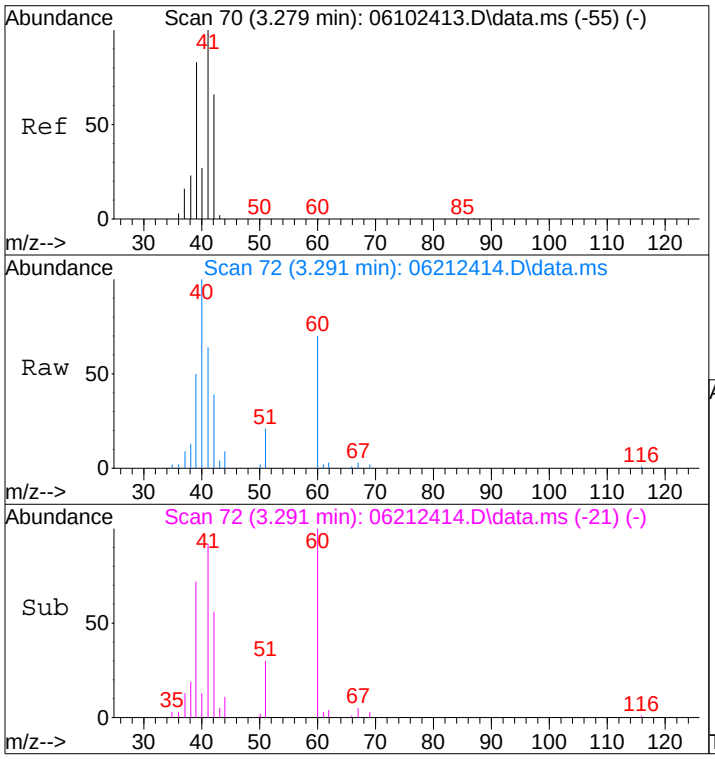
Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212414.D Vial: 4
Acq On : 21 Jun 2024 17:34 Operator: SC
Sample : P2402249-056 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:24:41 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



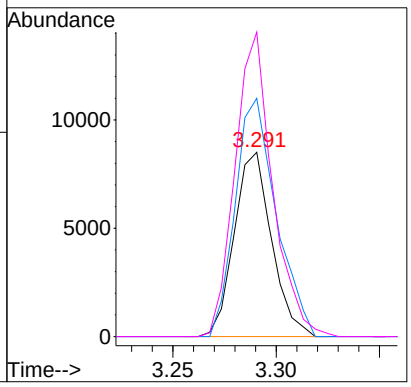
C-1718

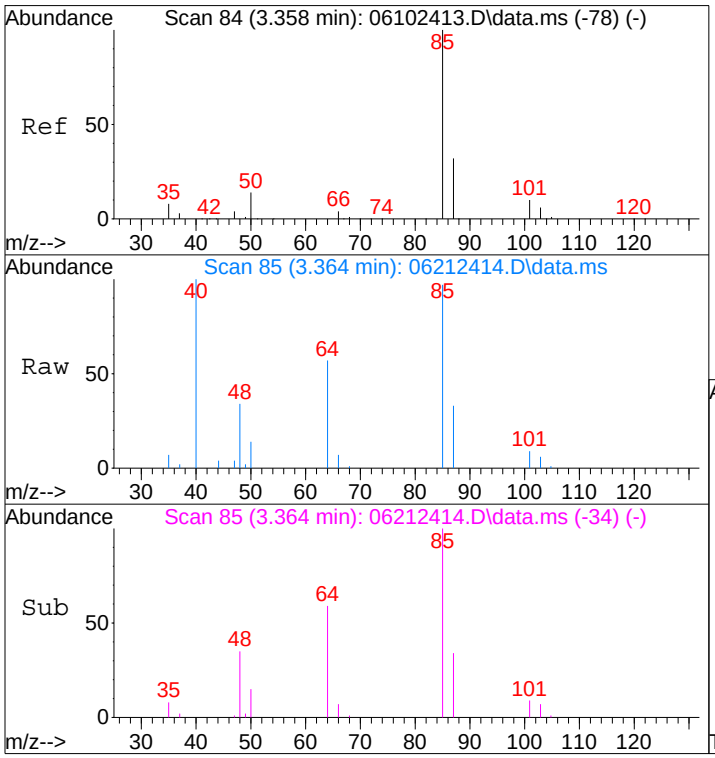


#2
Propene
Concen: 0.48 ng
RT: 3.29 min Scan# 72
Delta R.T. 0.041 min
Lab File: 06212414.D
Acq: 21 Jun 2024 17:34

Tgt Ion: 42 Resp: 10694

Ion	Ratio	Lower	Upper
42	100		
39	141.6	107.3	147.3
41	166.0	134.3	174.3

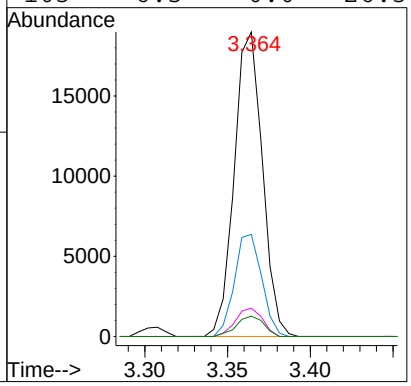


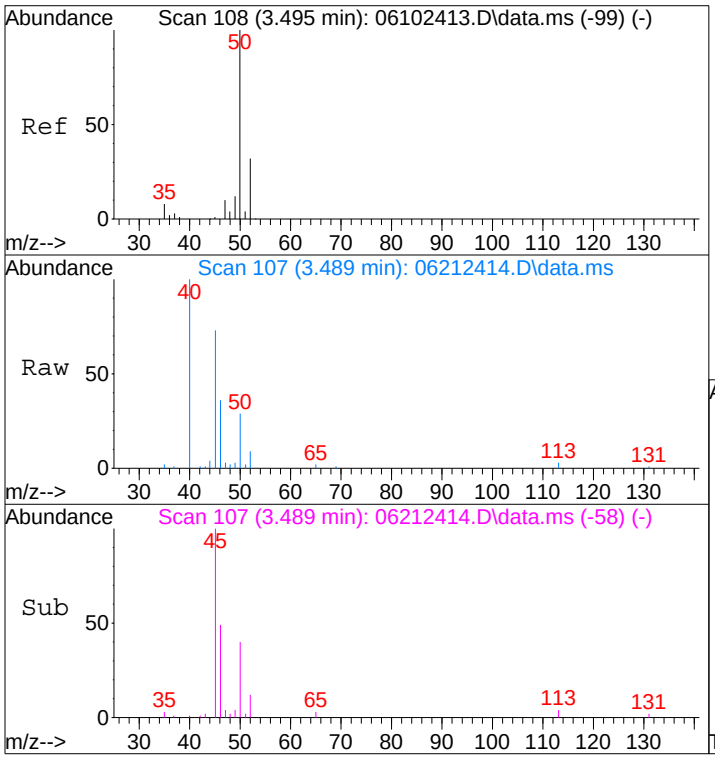


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.55 ng m
RT: 3.36 min Scan# 85
Delta R.T. 0.042 min
Lab File: 06212414.D
Acq: 21 Jun 2024 17:34

Tgt Ion: 85 Resp: 22483

Ion	Ratio	Lower	Upper
85	100		
87	32.5	12.2	52.2
101	9.0	0.0	29.8
103	6.5	0.0	26.3

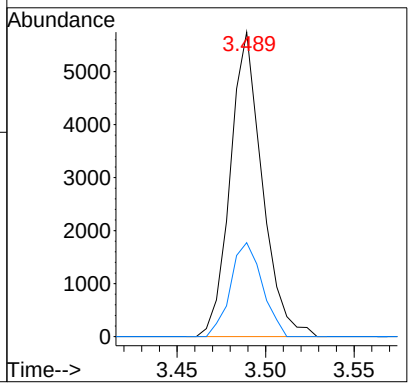


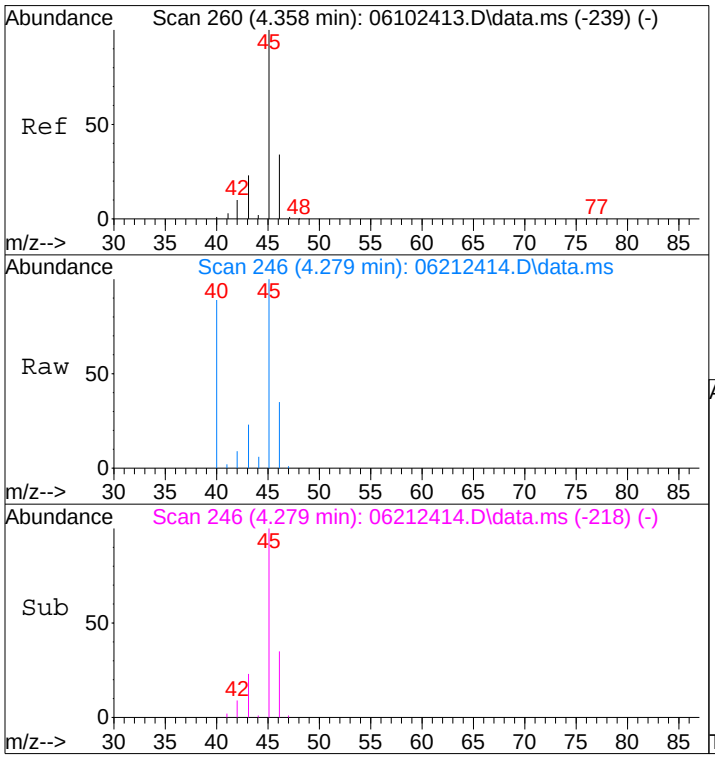


#4
Chloromethane
Concen: 0.26 ng
RT: 3.49 min Scan# 107
Delta R.T. 0.027 min
Lab File: 06212414.D
Acq: 21 Jun 2024 17:34

Tgt Ion: 50 Resp: 7205

Ion	Ratio	Lower	Upper
50	100		
52	30.7	12.4	52.4

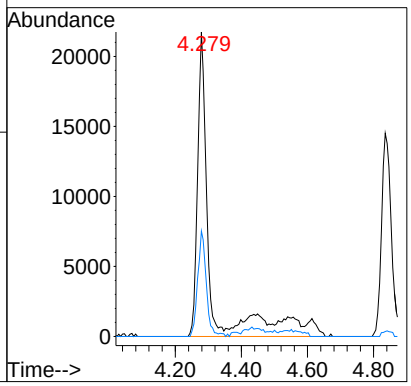


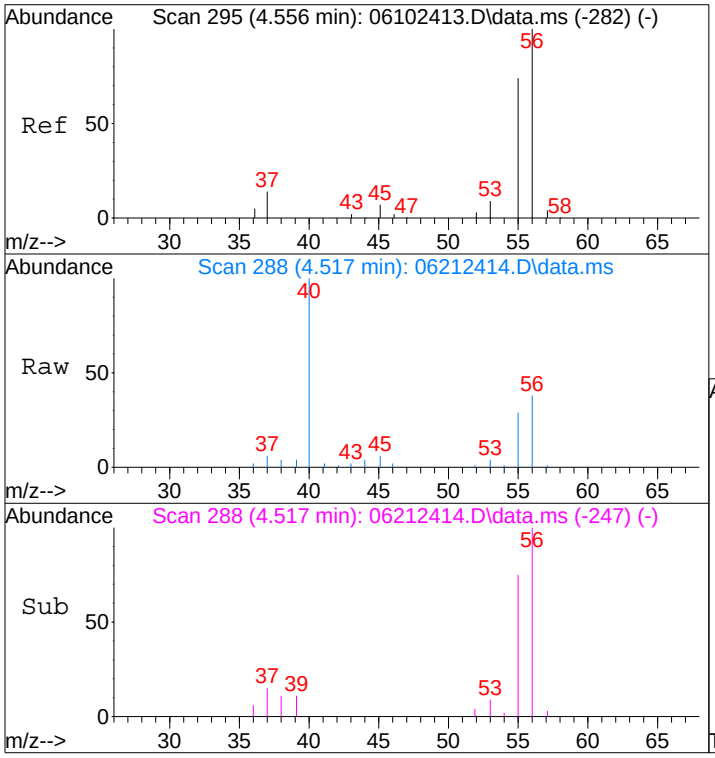


#10
Ethanol
Concen: 3.41 ng
RT: 4.28 min Scan# 246
Delta R.T. -0.088 min
Lab File: 06212414.D
Acq: 21 Jun 2024 17:34

Tgt Ion: 45 Resp: 57469

Ion	Ratio	Lower	Upper
45	100		
46	23.7	13.5	53.5

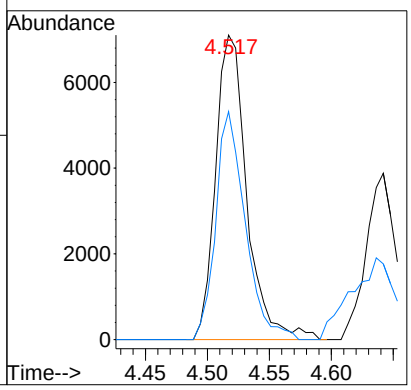


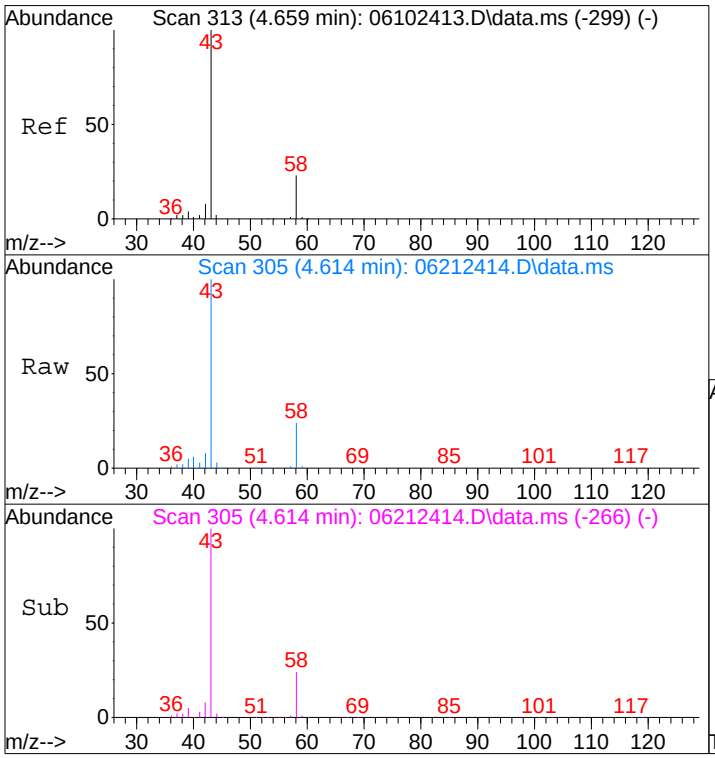


#12
Acrolein
Concen: 1.00 ng
RT: 4.52 min Scan# 288
Delta R.T. -0.018 min
Lab File: 06212414.D
Acq: 21 Jun 2024 17:34

Tgt Ion: 56 Resp: 12444

Ion	Ratio	Lower	Upper
56	100		
55	70.9	55.5	95.5

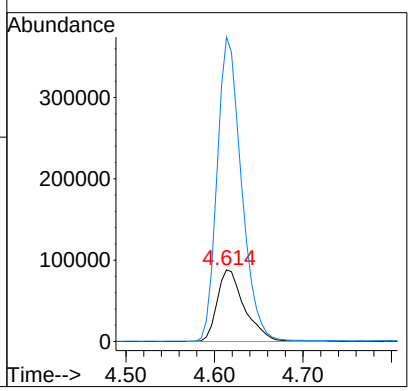


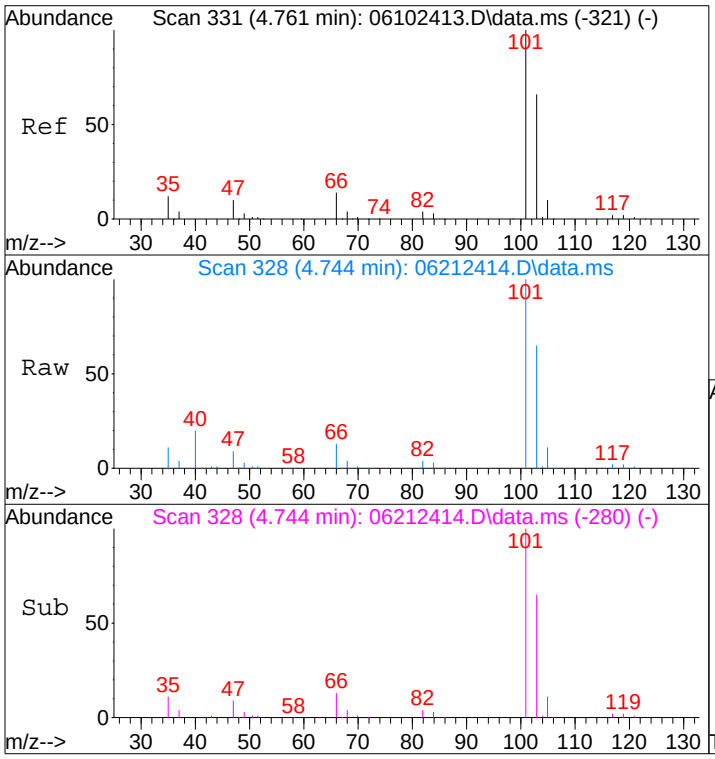


#13
Acetone
Concen: 14.03 ng
RT: 4.61 min Scan# 305
Delta R.T. -0.028 min
Lab File: 06212414.D
Acq: 21 Jun 2024 17:34

Tgt Ion: 58 Resp: 188764

Ion	Ratio	Lower	Upper
58	100		
43	380.6	400.7	460.7#

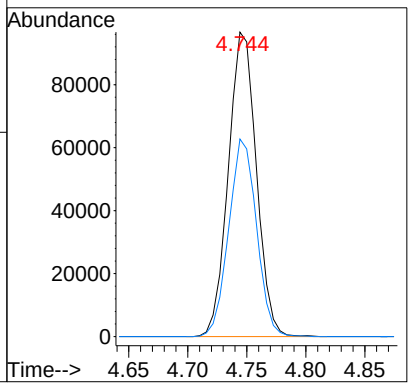


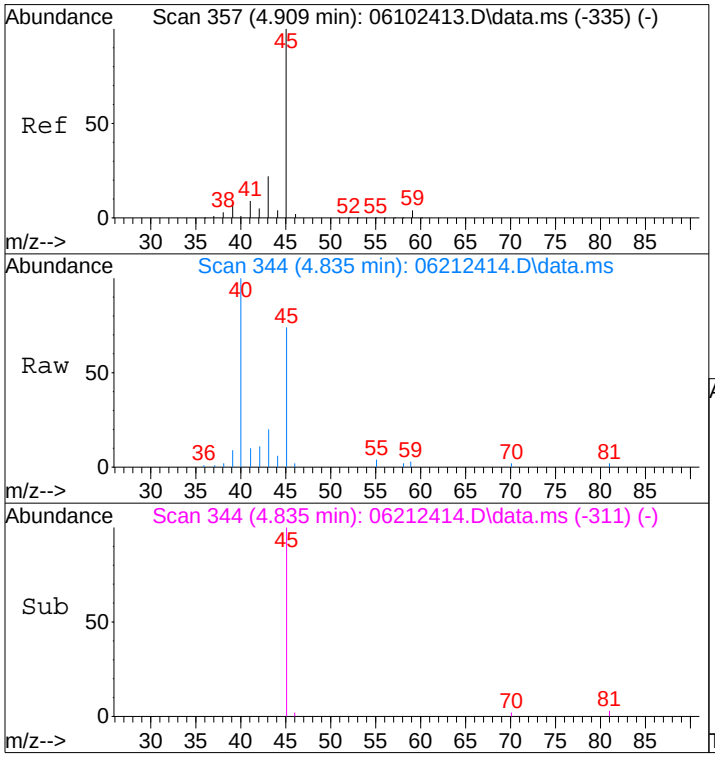


#14
Trichlorofluoromethane
Concen: 3.88 ng
RT: 4.74 min Scan# 328
Delta R.T. 0.024 min
Lab File: 06212414.D
Acq: 21 Jun 2024 17:34

Tgt Ion:101 Resp: 159834

Ion	Ratio	Lower	Upper
101	100		
103	64.4	44.9	84.9

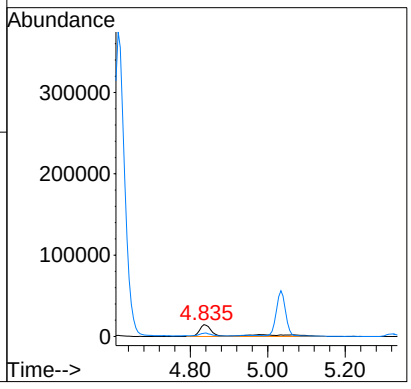


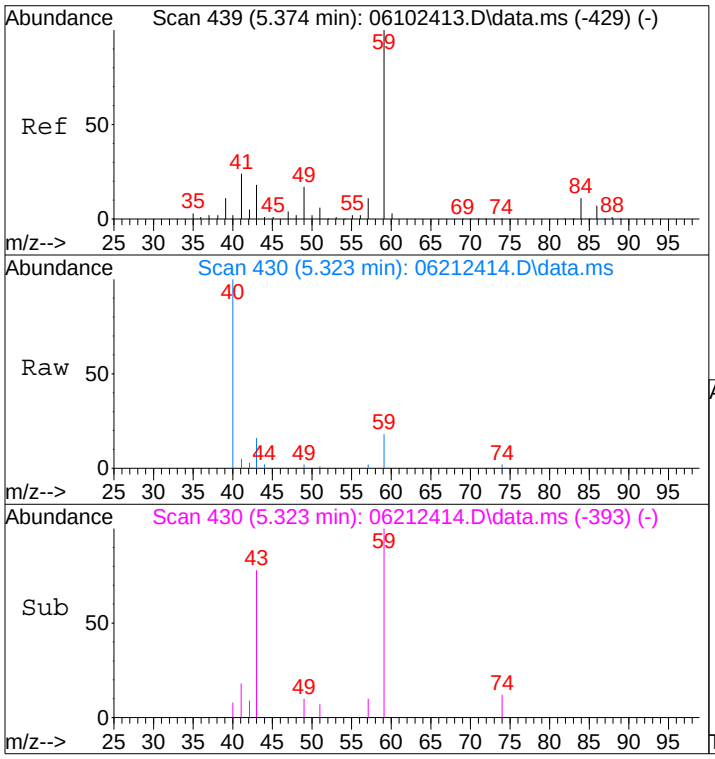


#15
2-Propanol (Isopropanol)
Concen: 0.91 ng
RT: 4.84 min Scan# 344
Delta R.T. -0.065 min
Lab File: 06212414.D
Acq: 21 Jun 2024 17:34

Tgt Ion: 45 Resp: 49554

Ion	Ratio	Lower	Upper
45	100		
43	20.9	2.5	42.5

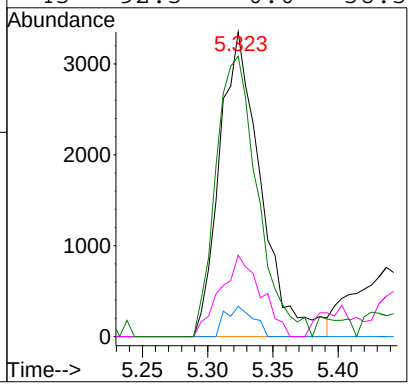


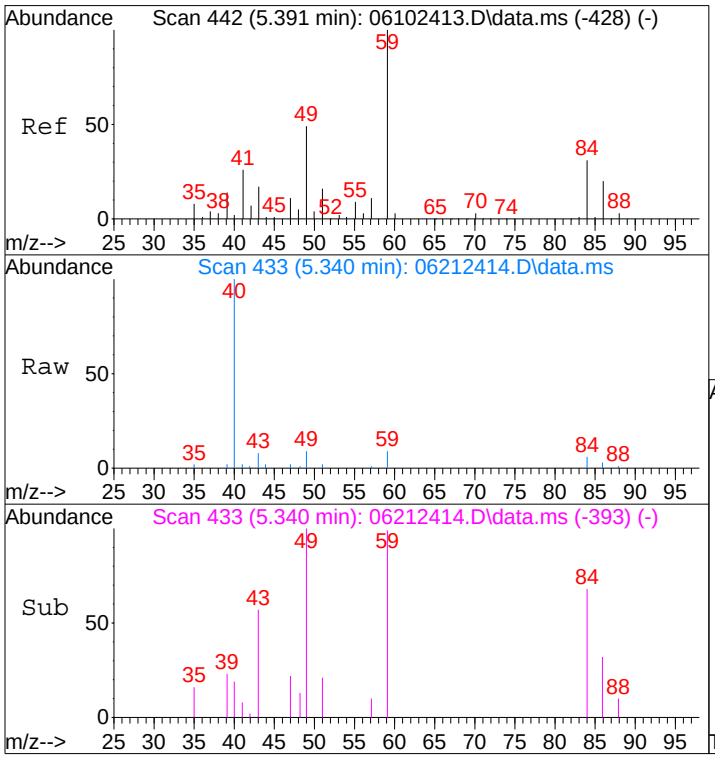


#18
2-Methyl-2-Propanol (tert-Butyl Alcohol
Concen: 0.17 ng
RT: 5.32 min Scan# 430
Delta R.T. -0.038 min
Lab File: 06212414.D
Acq: 21 Jun 2024 17:34

Tgt Ion: 59 Resp: 7395

Ion	Ratio	Lower	Upper
59	100		
57	6.8	0.0	30.9
41	26.0	0.9	40.9
43	92.3	0.0	38.3#

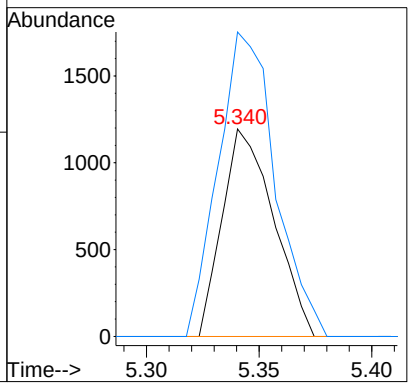


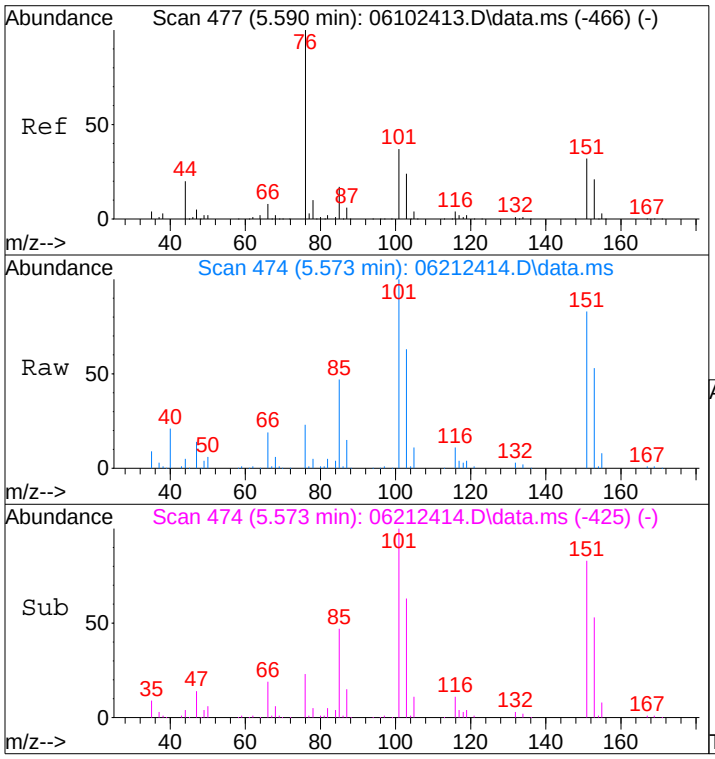


#19
Methylene Chloride
Concen: 0.10 ng
RT: 5.34 min Scan# 433
Delta R.T. -0.021 min
Lab File: 06212414.D
Acq: 21 Jun 2024 17:34

Tgt Ion: 84 Resp: 1895

Ion	Ratio	Lower	Upper
84	100		
49	163.1	132.9	182.9

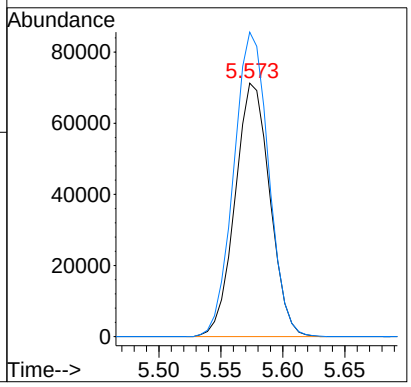


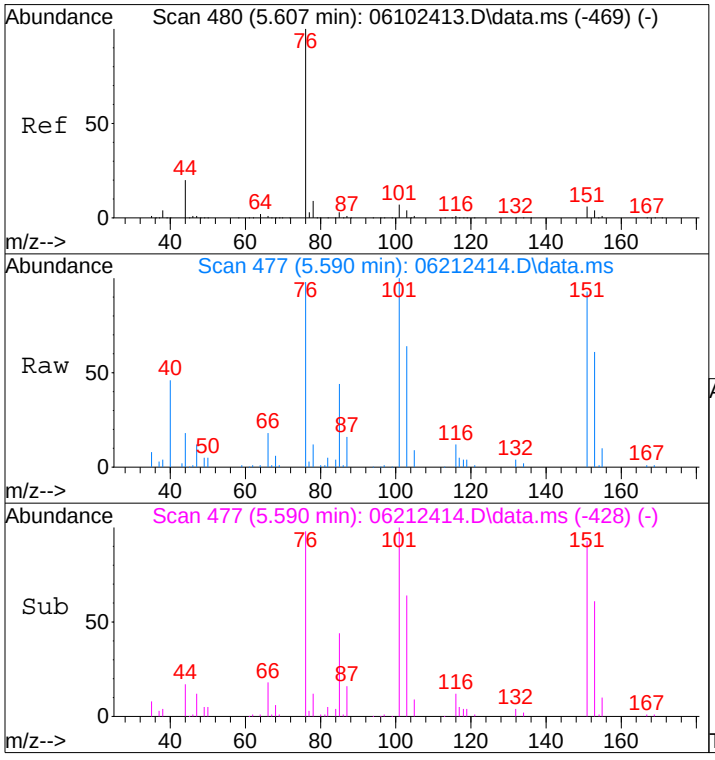


#21
Trichlorotrifluoroethane
Concen: 8.00 ng
RT: 5.57 min Scan# 474
Delta R.T. 0.027 min
Lab File: 06212414.D
Acq: 21 Jun 2024 17:34

Tgt Ion:151 Resp: 139580

Ion	Ratio	Lower	Upper
151	100		
101	120.3	95.0	135.0

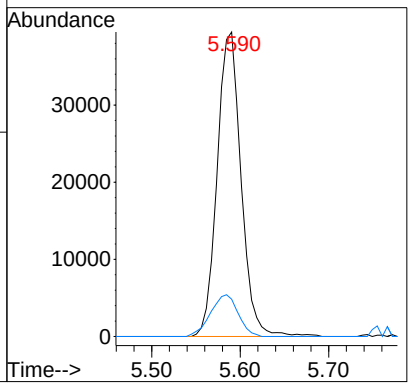


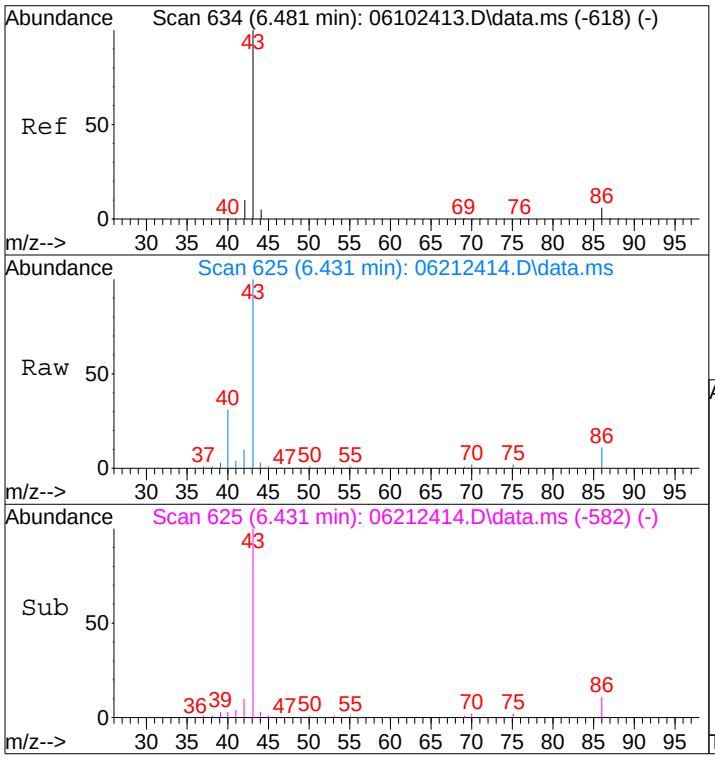


#22
Carbon Disulfide
Concen: 1.21 ng
RT: 5.59 min Scan# 477
Delta R.T. 0.027 min
Lab File: 06212414.D
Acq: 21 Jun 2024 17:34

Tgt Ion: 76 Resp: 74146

Ion	Ratio	Lower	Upper
76	100		
78	15.8	0.0	29.6

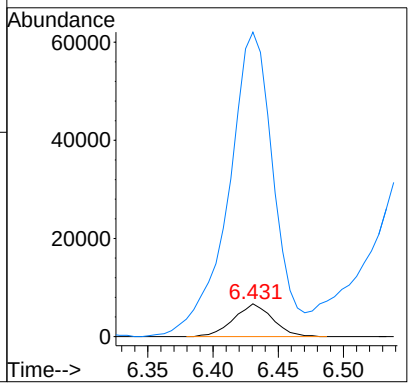


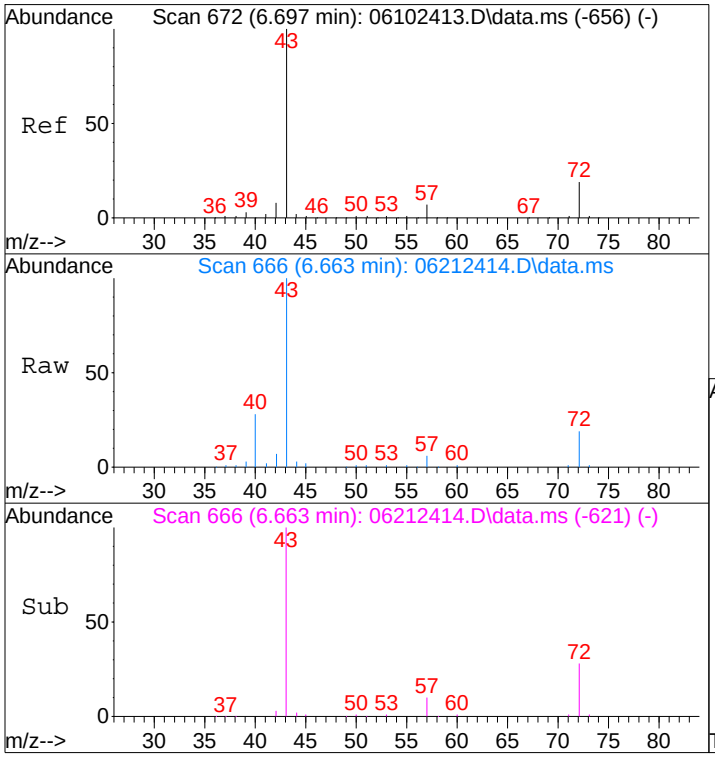


#26
Vinyl Acetate
Concen: 4.44 ng
RT: 6.43 min Scan# 625
Delta R.T. -0.009 min
Lab File: 06212414.D
Acq: 21 Jun 2024 17:34

Tgt Ion: 86 Resp: 13785

Ion	Ratio	Lower	Upper
86	100		
43	1084.7	1668.9	1708.9#

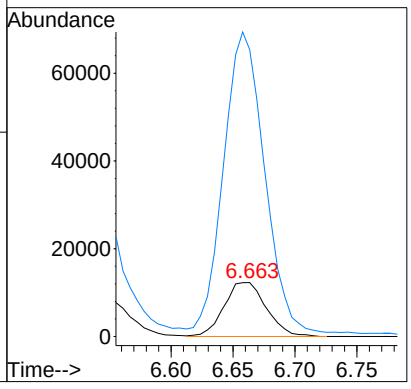


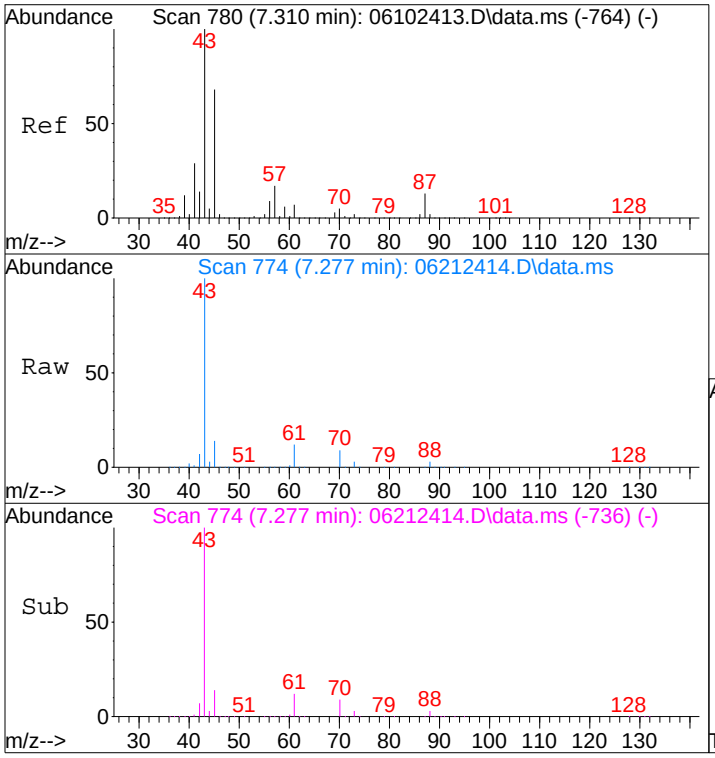


#27
2-Butanone (MEK)
Concen: 2.74 ng
RT: 6.66 min Scan# 666
Delta R.T. 0.005 min
Lab File: 06212414.D
Acq: 21 Jun 2024 17:34

Tgt Ion: 72 Resp: 29218

Ion	Ratio	Lower	Upper
72	100		
43	548.1	506.8	546.8#

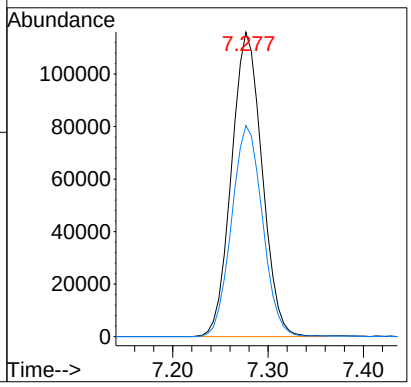


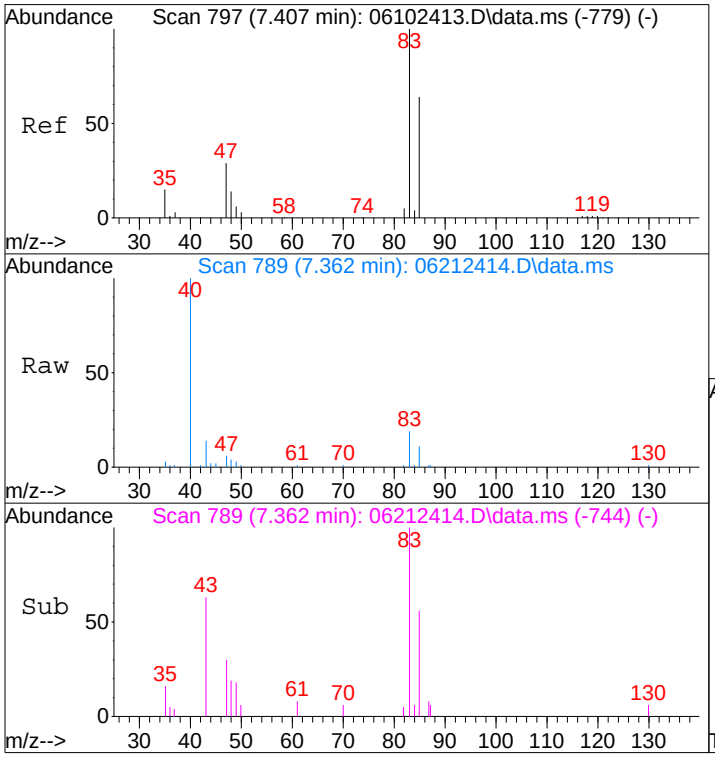


#30
Ethyl Acetate
Concen: 39.77 ng
RT: 7.28 min Scan# 774
Delta R.T. 0.017 min
Lab File: 06212414.D
Acq: 21 Jun 2024 17:34

Tgt Ion: 61 Resp: 258507

Ion	Ratio	Lower	Upper
61	100		
70	70.2	53.5	93.5

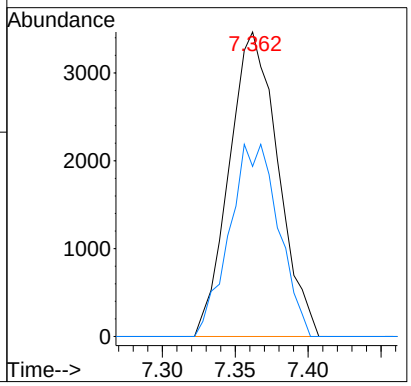


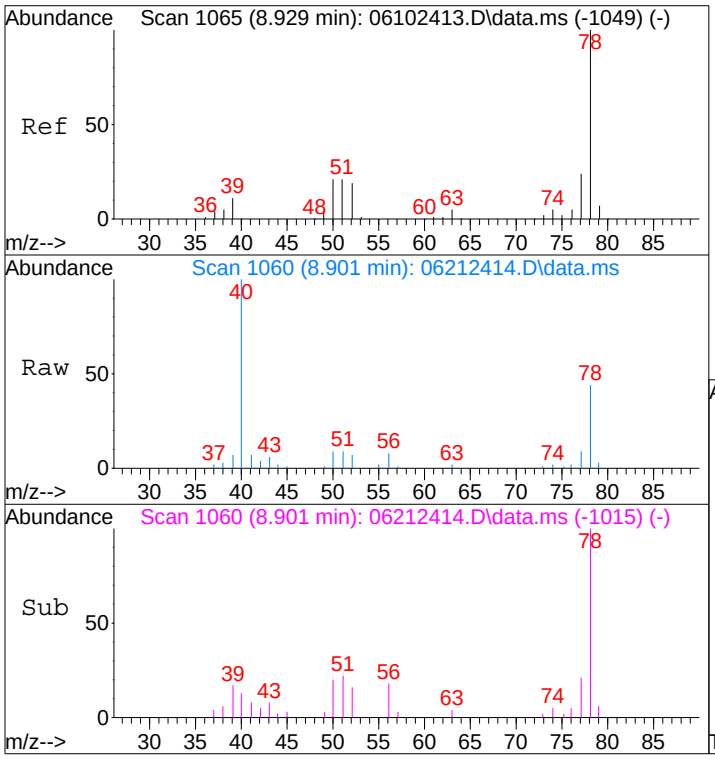


#32
Chloroform
Concen: 0.24 ng
RT: 7.36 min Scan# 789
Delta R.T. 0.007 min
Lab File: 06212414.D
Acq: 21 Jun 2024 17:34

Tgt Ion: 83 Resp: 8069

Ion	Ratio	Lower	Upper
83	100		
85	63.6	44.4	84.4

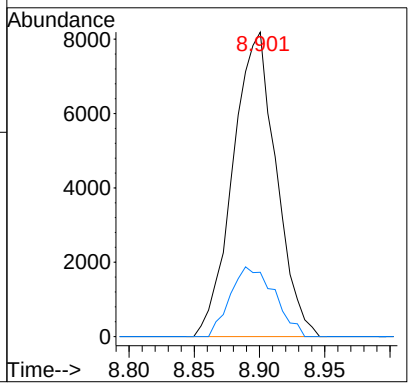


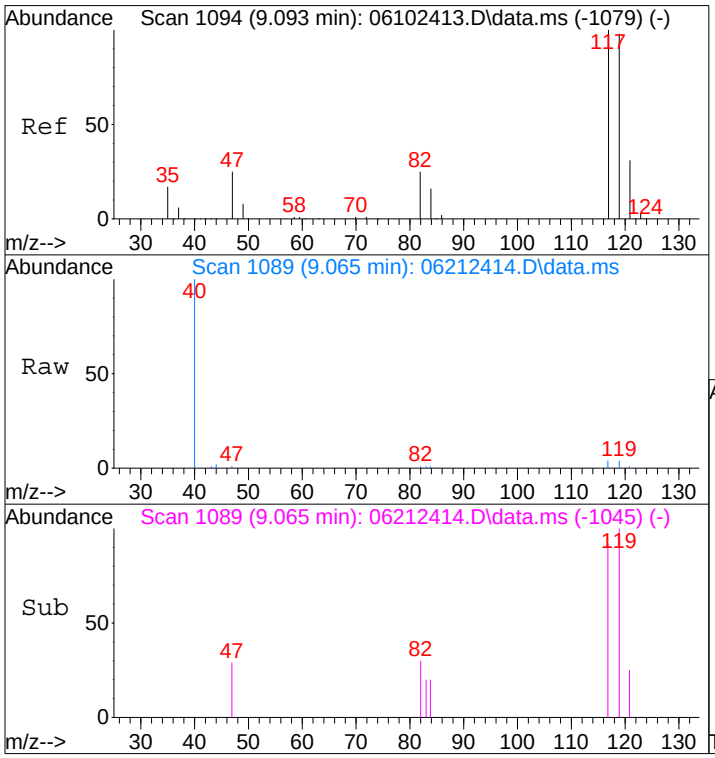


#41
Benzene
Concen: 0.27 ng
RT: 8.90 min Scan# 1060
Delta R.T. 0.003 min
Lab File: 06212414.D
Acq: 21 Jun 2024 17:34

Tgt Ion: 78 Resp: 18880

Ion	Ratio	Lower	Upper
78	100		
77	23.4	4.0	44.0

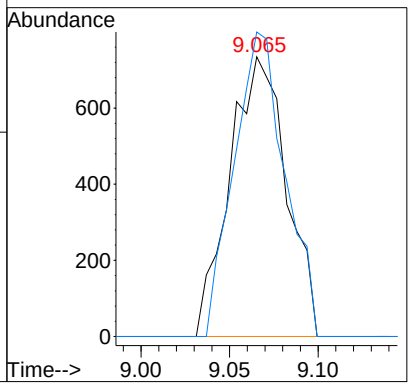


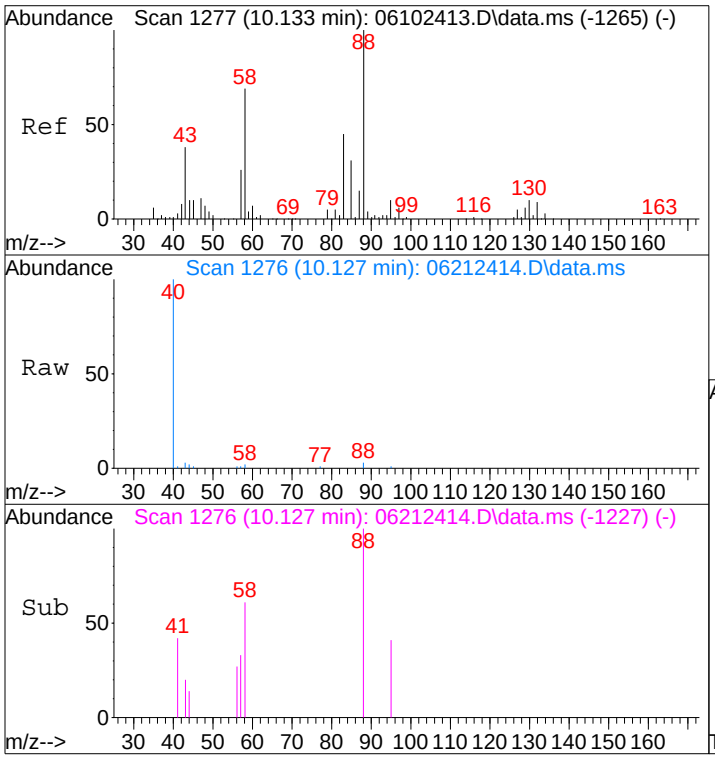


#42
Carbon Tetrachloride
Concen: 0.05 ng
RT: 9.07 min Scan# 1089
Delta R.T. -0.001 min
Lab File: 06212414.D
Acq: 21 Jun 2024 17:34

Tgt Ion:117 Resp: 1637

Ion	Ratio	Lower	Upper
117	100		
119	97.9	77.3	117.3

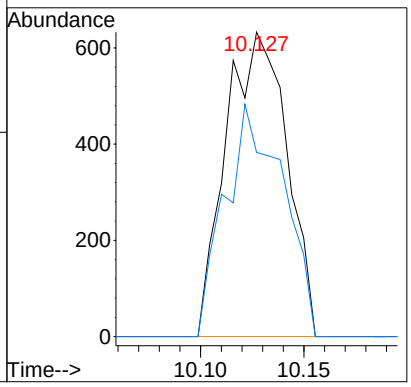


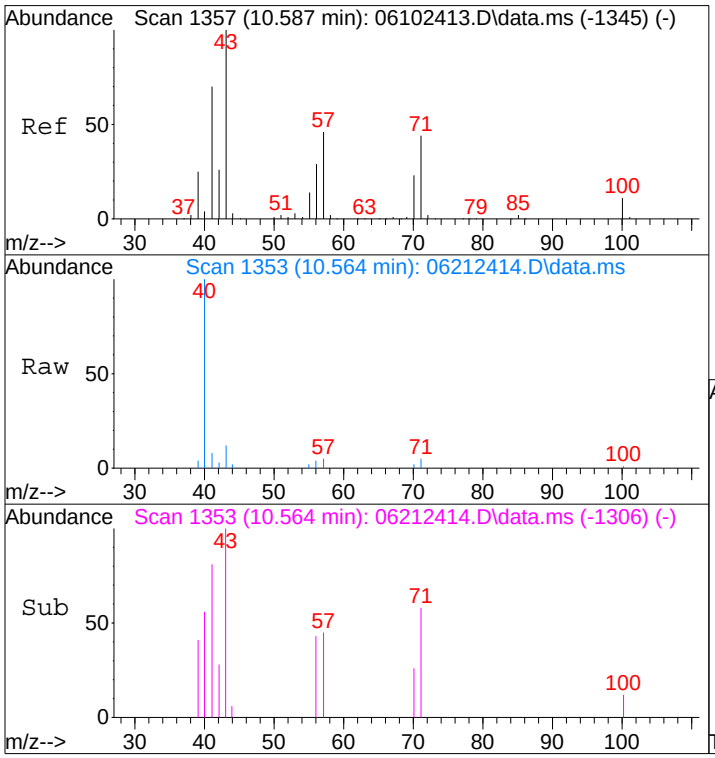


#48
1,4-Dioxane
Concen: 0.10 ng
RT: 10.13 min Scan# 1276
Delta R.T. 0.027 min
Lab File: 06212414.D
Acq: 21 Jun 2024 17:34

Tgt Ion: 88 Resp: 1298

Ion	Ratio	Lower	Upper
88	100		
58	72.8	47.6	87.6

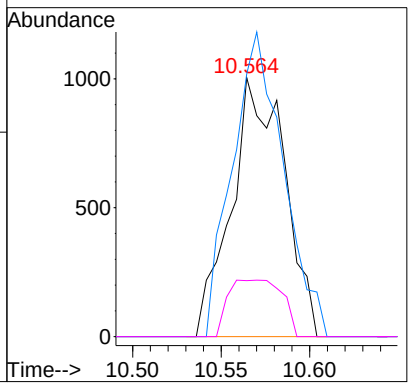


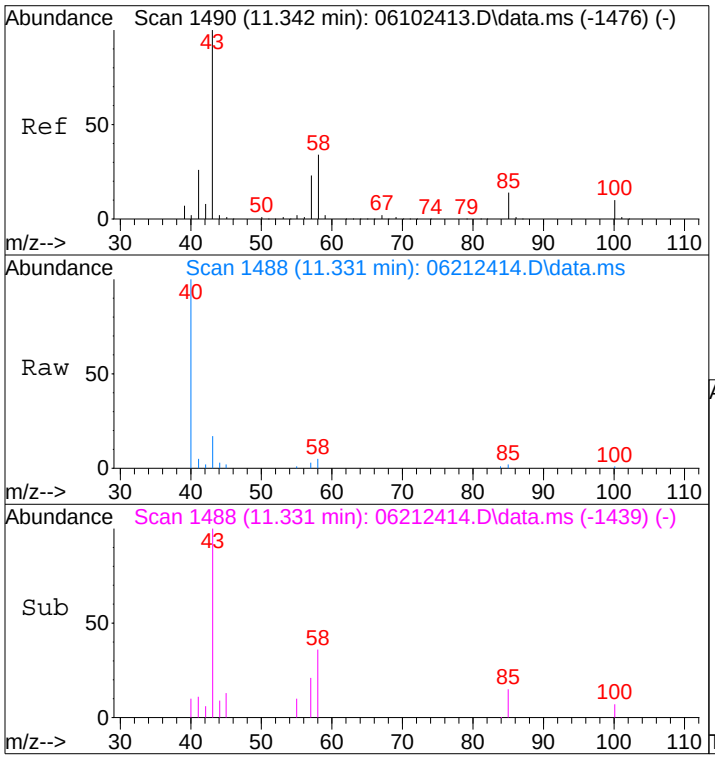


#51
n-Heptane
Concen: 0.14 ng
RT: 10.56 min Scan# 1353
Delta R.T. 0.018 min
Lab File: 06212414.D
Acq: 21 Jun 2024 17:34

Tgt Ion: 71 Resp: 2111

Ion	Ratio	Lower	Upper
71	100		
57	112.3	83.9	123.9
100	22.1	4.8	44.8

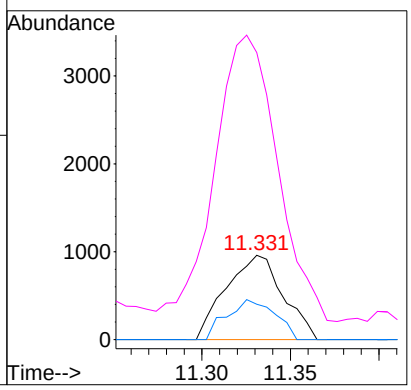


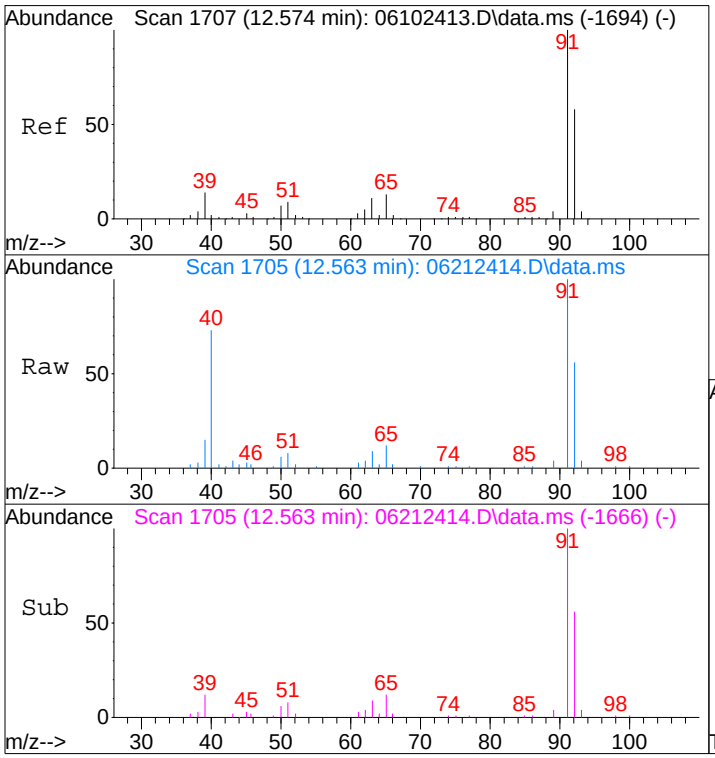


#53
4-Methyl-2-pentanone
Concen: 0.14 ng
RT: 11.33 min Scan# 1488
Delta R.T. 0.028 min
Lab File: 06212414.D
Acq: 21 Jun 2024 17:34

Tgt Ion: 58 Resp: 2149

Ion	Ratio	Lower	Upper
58	100		
85	40.0	34.5	51.7
43	380.0	236.1	354.1#

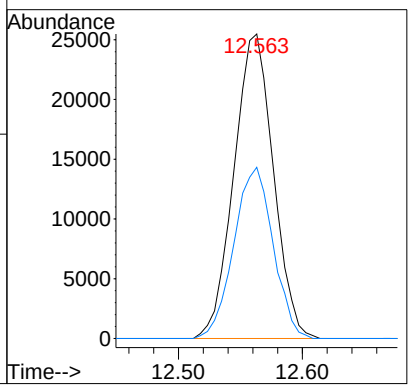


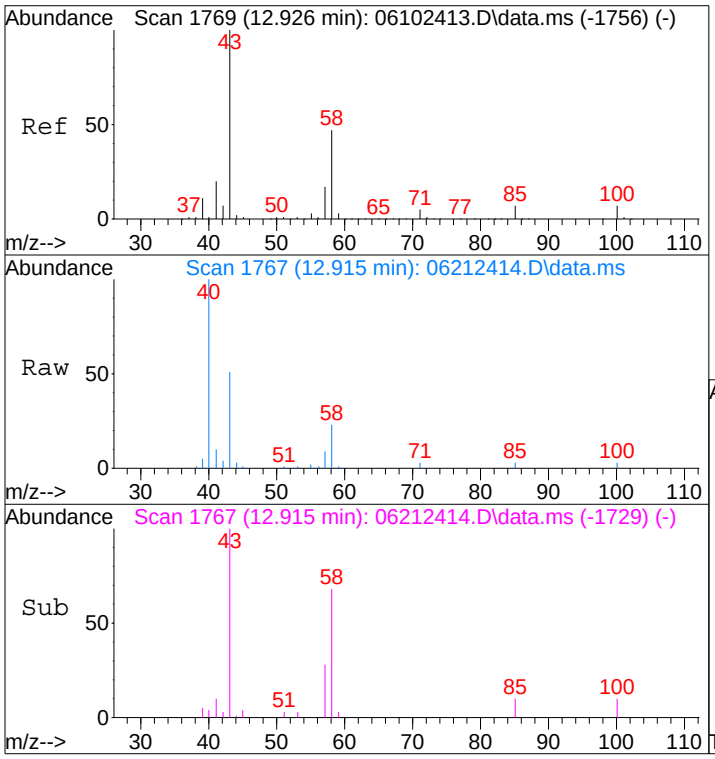


#58
Toluene
Concen: 0.80 ng
RT: 12.56 min Scan# 1705
Delta R.T. -0.028 min
Lab File: 06212414.D
Acq: 21 Jun 2024 17:34

Tgt Ion: 91 Resp: 56504

Ion	Ratio	Lower	Upper
91	100		
92	55.9	37.4	77.4

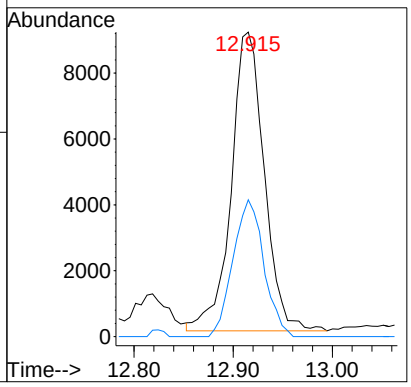


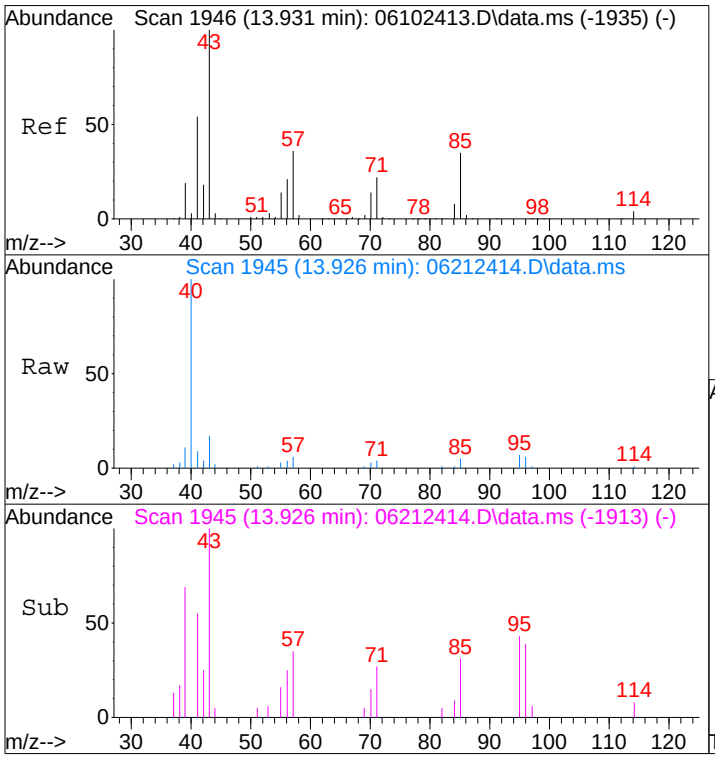


#59
2-Hexanone
Concen: 0.47 ng
RT: 12.92 min Scan# 1767
Delta R.T. -0.034 min
Lab File: 06212414.D
Acq: 21 Jun 2024 17:34

Tgt Ion: 43 Resp: 21015

Ion	Ratio	Lower	Upper
43	100		
58	42.7	25.9	65.9

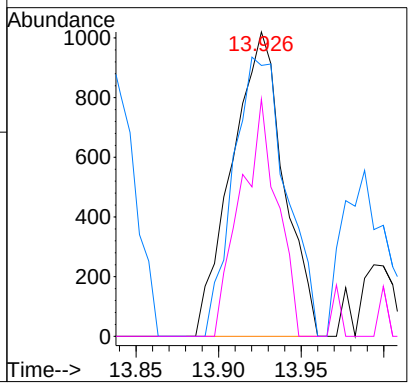


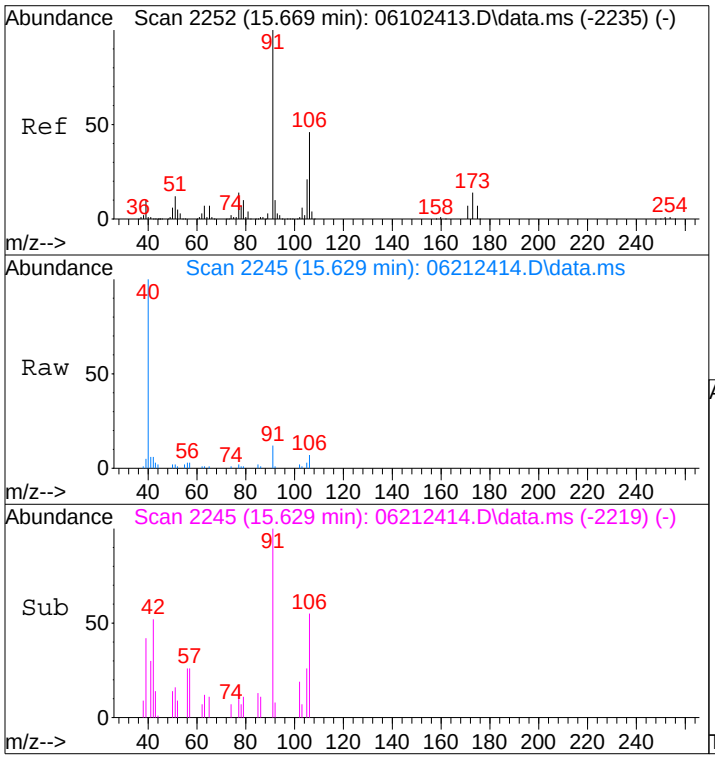


#63
n-Octane
Concen: 0.15 ng
RT: 13.93 min Scan# 1945
Delta R.T. -0.017 min
Lab File: 06212414.D
Acq: 21 Jun 2024 17:34

Tgt Ion: 57 Resp: 2228

Ion	Ratio	Lower	Upper
57	100		
85	93.6	79.8	119.6
71	55.3	49.0	73.4

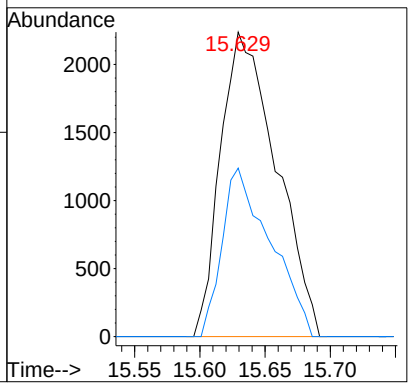


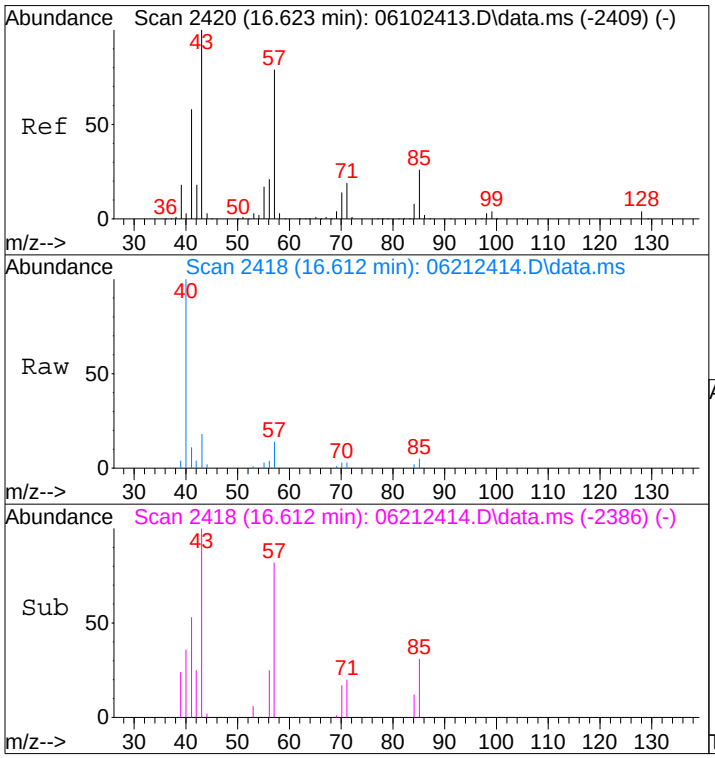


#67
m- & p-Xylenes
Concen: 0.10 ng
RT: 15.63 min Scan# 2245
Delta R.T. -0.051 min
Lab File: 06212414.D
Acq: 21 Jun 2024 17:34

Tgt Ion: 91 Resp: 6657

Ion	Ratio	Lower	Upper
91	100		
106	47.9	25.9	65.9

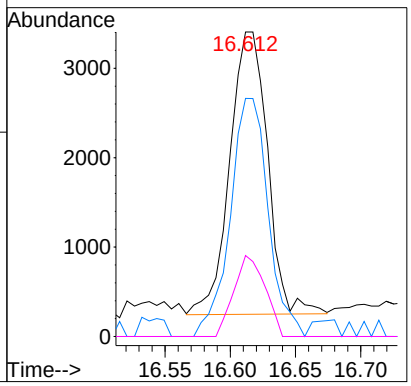


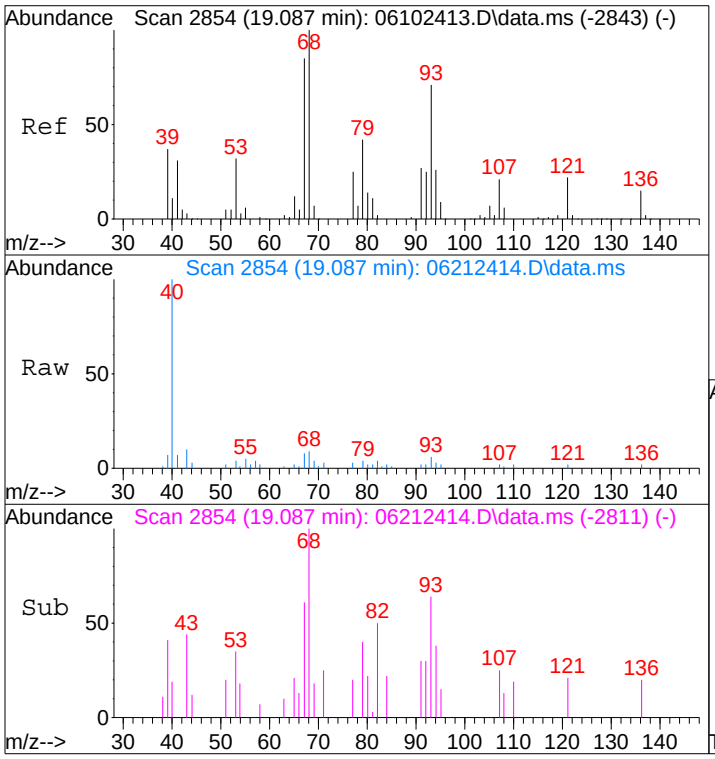


#71
n-Nonane
Concen: 0.16 ng
RT: 16.61 min Scan# 2418
Delta R.T. -0.017 min
Lab File: 06212414.D
Acq: 21 Jun 2024 17:34

Tgt Ion: 43 Resp: 6372

Ion	Ratio	Lower	Upper
43	100		
57	84.5	58.2	98.2
85	23.6	5.9	45.9

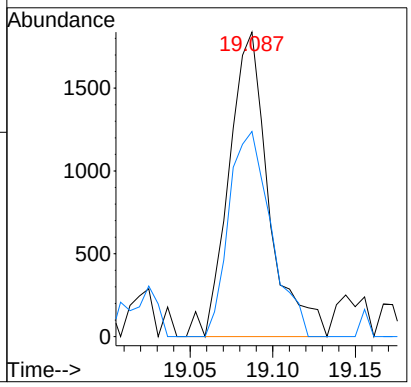




#91
d-Limonene
Concen: 0.12 ng
RT: 19.09 min Scan# 2854
Delta R.T. -0.006 min
Lab File: 06212414.D
Acq: 21 Jun 2024 17:34

Tgt Ion: 68 Resp: 3091

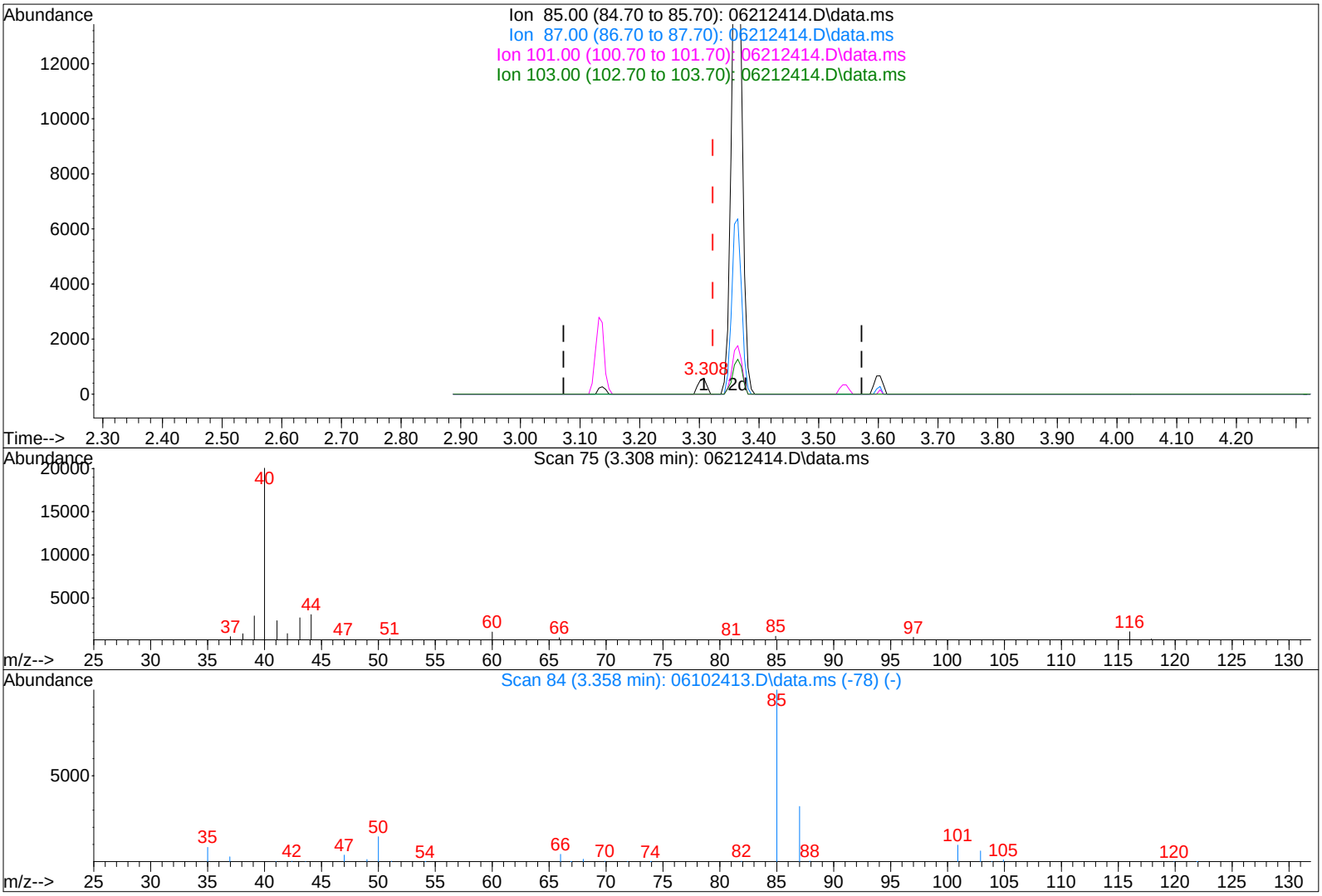
Ion	Ratio	Lower	Upper
68	100		
93	71.2	52.2	92.2



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\21\06212414.D Vial: 4
Acq On : 21 Jun 2024 17:34 Operator: SC
Sample : P2402249-056 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 17:12:41 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06212414.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.308min (-0.015) 0.01ng

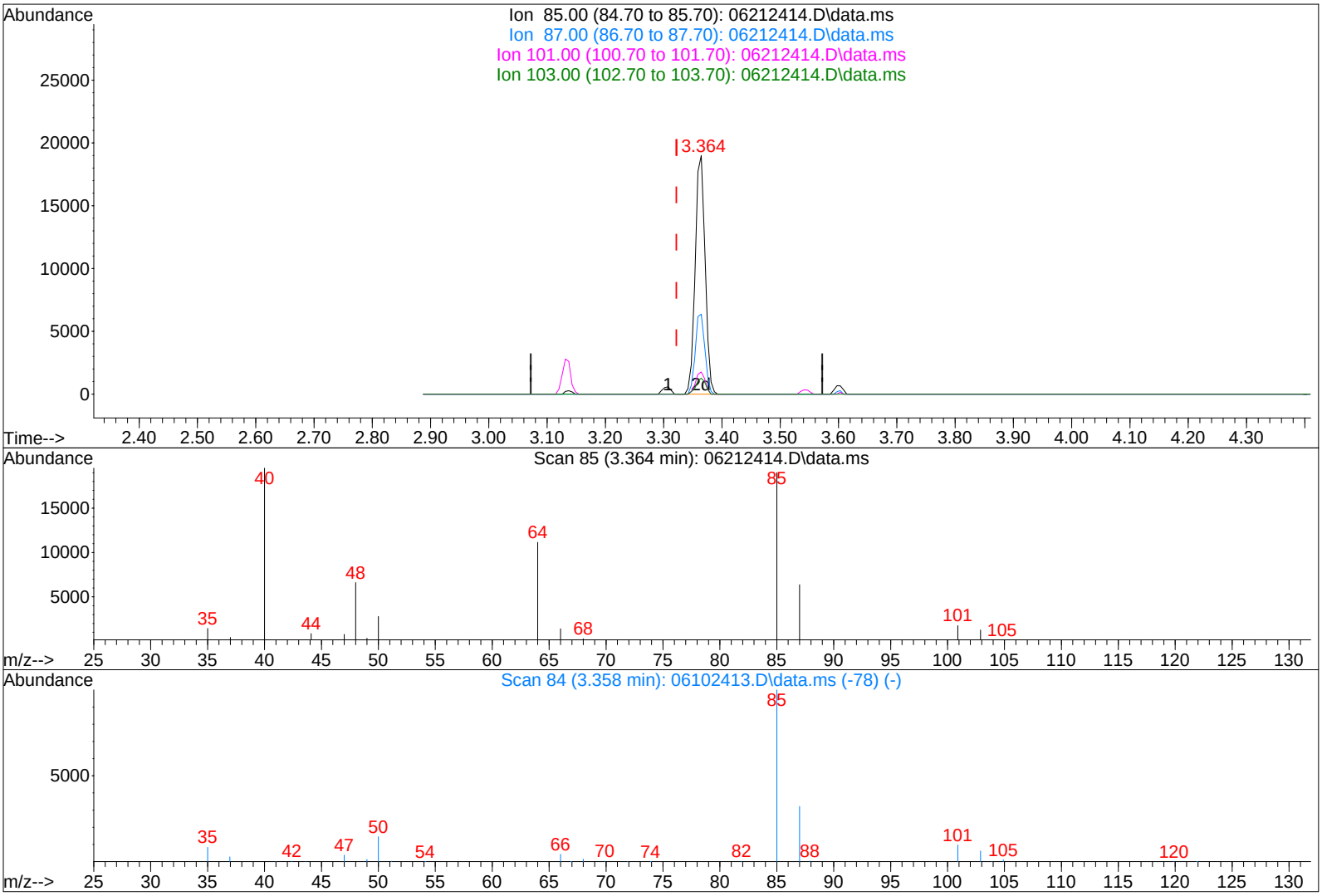
response 566

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	0.00#
101.00	9.80	0.00
103.00	6.30	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\21\06212414.D Vial: 4
Acq On : 21 Jun 2024 17:34 Operator: SC
Sample : P2402249-056 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 17:12:41 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06212414.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.364min (+0.042) 0.55ng m

response 22483

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	32.52
101.00	9.80	8.97
103.00	6.30	6.50

MJ 6/29/24

WP

CG 6/29/24

Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\21\06212414.D Vial: 4
Acq On : 21 Jun 2024 17:34 Operator: SC
Sample : P2402249-056 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 16:42:41 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

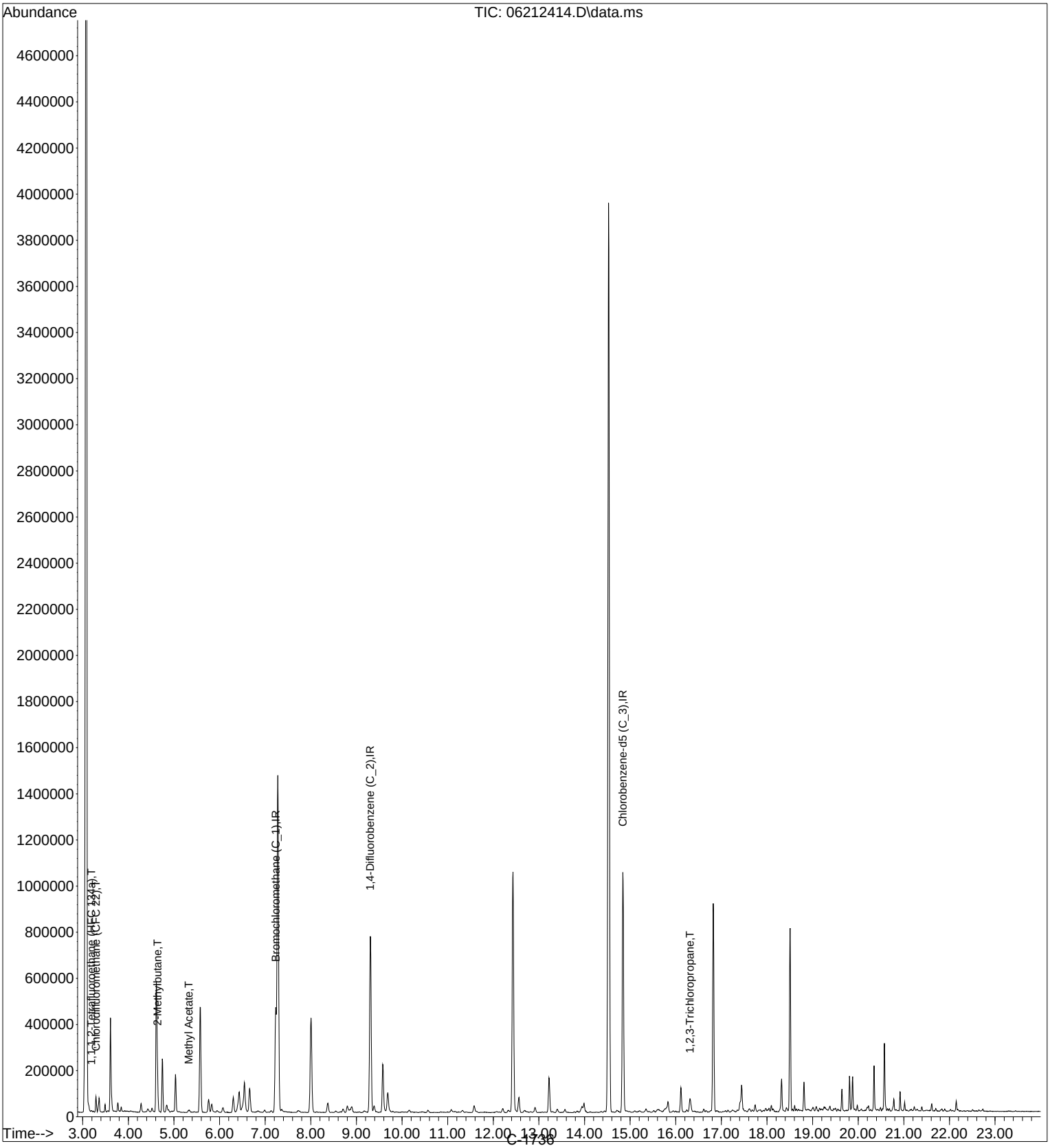
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	173165	12.500	ng		-0.02
16) 1,4-Difluorobenzene (C 2)	9.30	114	761726	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	177408	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	3.14	85	227	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.19	83	2355	0.133	ng	#	32
4) 1,1-Difluoroethane	3.23	65	897	N.D.			
5) Chlorodifluoromethane ...	3.29	67	825	0.140	ng	#	69
6) 1-Chloro-1,1-Difluoroe...	3.49	65	777	N.D.			
7) Dichlorofluoromethane ...	0.00	67	0	N.D.			
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	0.00	83	0	N.D.			
10) 2-Methylbutane	4.64	57	27172	1.316	ng	#	37
11) Methyl Acetate	5.32	43	6829	0.117	ng	#	1
12) 2-Methylpentane	6.48	71	240	N.D.			
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	9.04	84	442	N.D.			
17) 2,3-Dimethylpentane	9.53	56	327	N.D.			
18) Dibromomethane	9.80	174	189	N.D.			
20) Methyl Cyclohexane	11.42	55	937	N.D.			
21) 1,3-Dichloropropane	12.56	76	58	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	15.20	91	119	N.D.			
24) 1,2,3-Trichloropropane	16.31	75	3168	0.134	ng	#	46
25) Bromobenzene	17.09	77	70	N.D.			
26) 2-Chlorotoluene	17.61	91	1013	N.D.			
27) 4-Chlorotoluene	17.61	91	1013	N.D.			
28) Indane	19.11	117	264	N.D.			
29) Indene	19.21	115	178	N.D.			
30) 1,2,4,5-Tetramethylben...	20.18	119	155	N.D.			
31) 1,2,3,4-Tetramethylben...	20.18	119	155	N.D.			
32) 1,2,3,5-Tetramethylben...	20.58	119	1431	N.D.			
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212414.D Vial: 4
Acq On : 21 Jun 2024 17:34 Operator: SC
Sample : P2402249-056 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 16:42:41 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\21\
Data File : 06212414.D
Acq On : 21 Jun 2024 17:34
Operator : SC
Sample : P2402249-056 (400mL)
Misc : S37-06062402
ALS Vial : 4 Sample Multiplier: 1

MJ 6/28/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06212414.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.075	22	34	51	rBV	9228776	18095275	100.00%	57.209%
2	3.291	67	72	77	rBV2	66777	93116	0.51%	0.294%
3	3.359	77	84	90	rVV2	59953	105115	0.58%	0.332%
4	3.489	102	107	113	rBV	33041	39495	0.22%	0.125%
5	3.552	113	118	122	rBV4	5518	10605	0.06%	0.034%
6	3.609	122	128	142	rVV	406591	637877	3.53%	2.017%
7	3.768	150	156	165	rBV	38163	56717	0.31%	0.179%
8	3.841	165	169	175	rVV	19070	23357	0.13%	0.074%
9	4.279	239	246	258	rBV	37508	70604	0.39%	0.223%
10	4.426	264	272	279	rBV2	12980	28708	0.16%	0.091%
11	4.517	282	288	297	rVV2	16898	31829	0.18%	0.101%
12	4.614	299	305	322	rVB	565864	1194852	6.60%	3.778%
13	4.744	322	328	337	rBV	231213	381159	2.11%	1.205%
14	4.841	338	345	350	rVV3	30082	64114	0.35%	0.203%
15	4.880	350	352	357	rVB2	10333	13830	0.08%	0.044%
16	5.034	373	379	390	rVB	162711	267327	1.48%	0.845%
17	5.329	422	431	432	rBV2	10025	19617	0.11%	0.062%
18	5.573	466	474	484	rVB2	455383	936150	5.17%	2.960%
19	5.761	497	507	513	rBV	55528	117725	0.65%	0.372%
20	5.829	513	519	530	rVV2	35367	78916	0.44%	0.249%
21	5.942	534	539	549	rVB5	7568	18759	0.10%	0.059%
22	6.073	554	562	571	rBV3	20551	47209	0.26%	0.149%
23	6.300	592	602	610	rBV	66816	144776	0.80%	0.458%
24	6.431	612	625	632	rVV	88765	256311	1.42%	0.810%
25	6.544	632	645	656	rVV3	129370	371395	2.05%	1.174%
26	6.658	656	665	677	rVB	102238	241433	1.33%	0.763%
27	6.845	693	698	705	rVB6	5685	11909	0.07%	0.038%
28	6.993	714	724	730	rBV2	9644	20519	0.11%	0.065%
29	7.135	743	749	754	rVB5	7313	16395	0.09%	0.052%
30	7.231	757	766	768	rBV	454731	889807	4.92%	2.813%
31	7.277	768	774	785	rVV	1458557	3422045	18.91%	10.819%
32	7.362	787	789	796	rVB3	9268	15794	0.09%	0.050%
33	7.725	846	853	857	rBV5	8010	18571	0.10%	0.059%
34	8.003	891	902	915	rBV	409843	1014805	5.61%	3.208%
35	8.373	956	967	977	rBV2	40381	95702	0.53%	0.303%
36	8.543	989	997	1005	rBV3	6401	15548	0.09%	0.049%
37	8.702	1019	1025	1035	rVB3	14844	35384	0.20%	0.112%
38	8.798	1035	1042	1050	rBV2	28184	74843	0.41%	0.237%
39	8.901	1050	1060	1066	rVB4	23722	72348	0.40%	0.229%
40	9.173	1103	1108	1118	rBV7	5899	14796	0.08%	0.047%

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\21\
Data File : 06212414.D
Acq On : 21 Jun 2024 17:34
Operator : SC
Sample : P2402249-056 (400mL)
Misc : S37-06062402
ALS Vial : 4 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

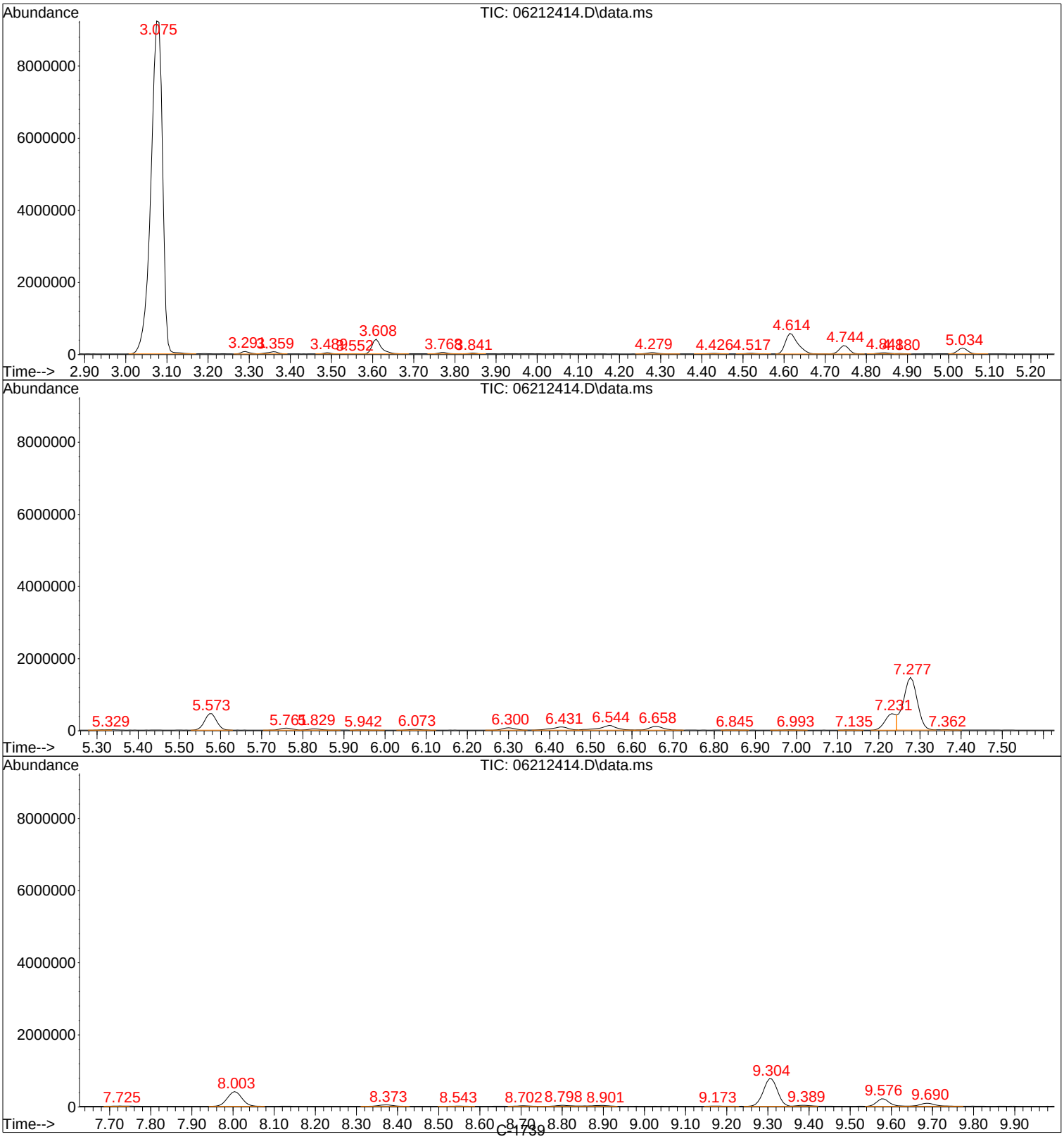
41	9.304	1120	1131	1141	rBV	763291	1846364	10.20%	5.837%
42	9.389	1141	1146	1152	rVB	25058	52857	0.29%	0.167%
43	9.576	1172	1179	1191	rBV	207105	450222	2.49%	1.423%
44	9.690	1191	1199	1214	rVB	83035	215939	1.19%	0.683%

Sum of corrected areas: 31630119

Data Path : I:\MS09\DATA\2024 06\21\
Data File : 06212414.D
Acq On : 21 Jun 2024 17:34
Operator : SC
Sample : P2402249-056 (400mL)
Misc : S37-06062402
ALS Vial : 4 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\21\\
Data File : 06212414.D
Acq On : 21 Jun 2024 17:344
Operator : SCC
Sample : P2402249-056 (400mL))
Misc : S37-060624022
ALS Vial : 4 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\21\06212415.D Vial: 5
Acq On : 21 Jun 2024 18:06 Operator: SC
Sample : P2402249-057 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 17:20:36 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:53:58 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.29	130	173577	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.34	114	771563	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.85	54	178684	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.05	65	383225	12.422	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.36%				
57) Toluene-d8 (SS2)	12.44	98	867399	12.685	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.52%				
73) Bromofluorobenzene (SS3)	16.83	174	303261	12.282	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.24%				
Target Compounds							Qvalue
2) Propene	3.28	42	118683m	5.341	ng		
3) Dichlorodifluoromethan...	3.36	85	24569	0.601	ng		97
4) Chloromethane	3.50	50	12445	0.446	ng		100
5) 1,2-Dichloro-1,1,2,2-t...	3.61	135	1158	0.065	ng		98
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.	d		
8) Bromomethane	4.02	94	334	N.D.			
9) Chloroethane	4.15	64	476	N.D.			
10) Ethanol	4.35	45	1281380	75.934	ng		100
11) Acetonitrile	0.00	41	0	N.D.	d		
12) Acrolein	4.53	56	12331	0.987	ng		95
13) Acetone	4.64	58	559411	41.486	ng	#	20
14) Trichlorofluoromethane	4.76	101	14767	0.357	ng		97
15) 2-Propanol (Isopropanol)	4.89	45	1496686	27.546	ng		90
16) Acrylonitrile	0.00	53	0	N.D.	d		
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.36	59	299354	6.903	ng		78
19) Methylene Chloride	5.39	84	26455	1.386	ng		99
20) 3-Chloro-1-propene (Al...	0.00	41	0	N.D.	d		
21) Trichlorotrifluoroethane	5.59	151	6497	0.372	ng		99
22) Carbon Disulfide	5.61	76	18861	0.307	ng		100
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.	d		
24) 1,1-Dichloroethane	6.37	63	104	N.D.			
25) Methyl tert-Butyl Ether	6.37	73	8110	0.180	ng		94
26) Vinyl Acetate	6.49	86	57381	18.442	ng	#	77
27) 2-Butanone (MEK)	6.70	72	47184	4.422	ng		97
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.	d		
30) Ethyl Acetate	7.33	61	7040667	1080.671	ng		99
31) n-Hexane	0.00	57	0	N.D.	d		
32) Chloroform	7.42	83	3095	0.091	ng		91
34) Tetrahydrofuran (THF)	7.76	72	3513	0.361	ng	#	1
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.16	62	2453	0.072	ng		82
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	9.55	61	362	No Calib		#	
40) 1-Butanol	8.82	56	34616	No Calib		#	
41) Benzene	8.93	78	327306	4.595	ng		100
42) Carbon Tetrachloride	9.11	117	3163	0.096	ng		93
43) Cyclohexane	9.22	84	41824	1.814	ng		97
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	9.88	63	1130	0.066	ng		89
46) Bromodichloromethane	10.12	83	1402	N.D.			
47) Trichloroethene	10.18	130	622	N.D.			
48) 1,4-Dioxane	10.15	88	503	N.D.			
49) 2,2,4-Trimethylpentane...	10.24	57	29864	0.424	ng		74
50) Methyl Methacrylate	10.43	100	704	0.117	ng	#	64

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212415.D Vial: 5
Acq On : 21 Jun 2024 18:06 Operator: SC
Sample : P2402249-057 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 17:20:36 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:53:58 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

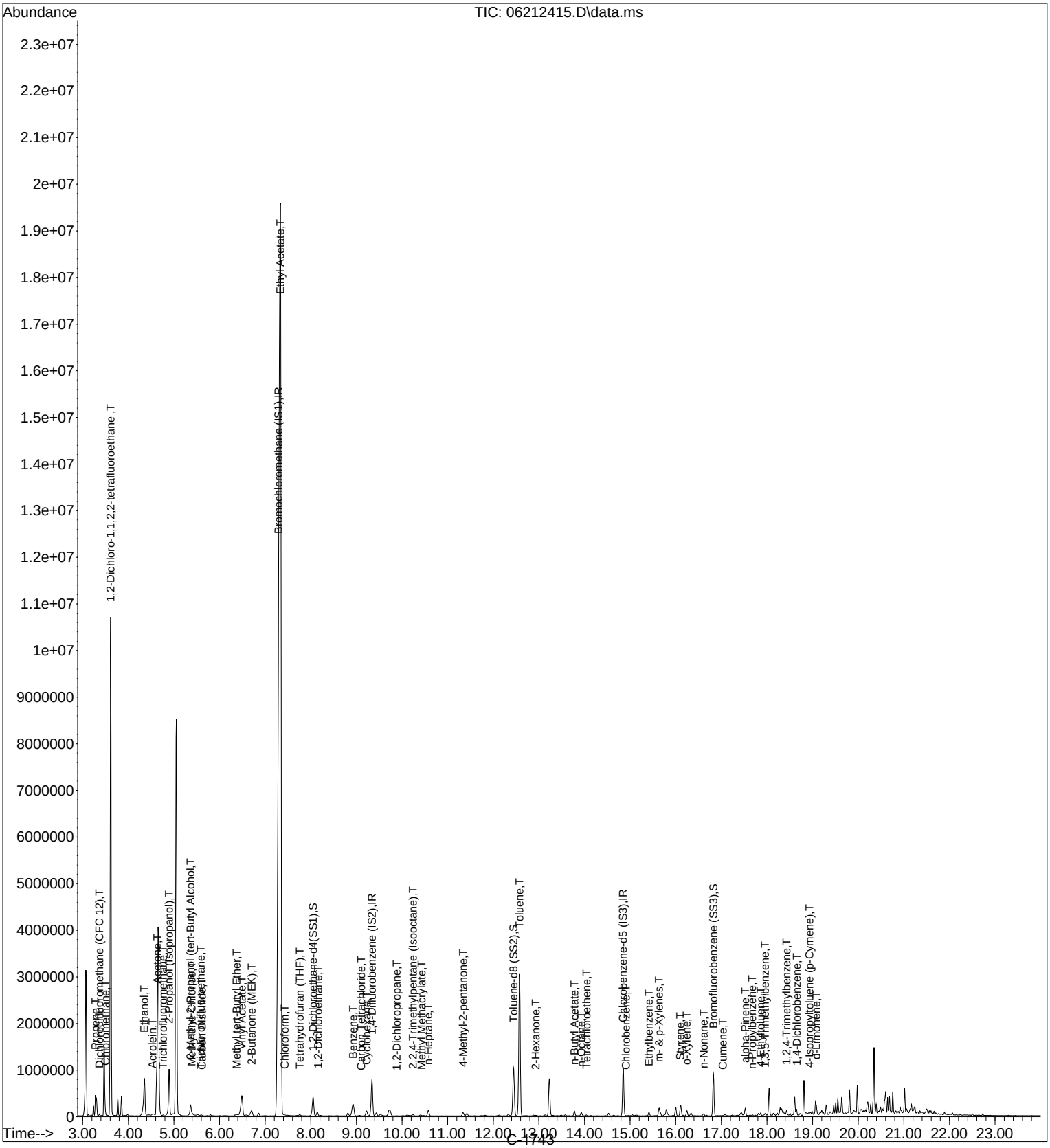
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	10.58	71	30680	2.042 ng		99
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	11.34	58	24379	1.557 ng		99
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	12.57	91	2721063	38.083 ng		100
59) 2-Hexanone	12.93	43	8843	0.197 ng		76
60) Dibromochloromethane	13.09	129	660	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	13.78	43	98397	2.090 ng		97
63) n-Octane	13.93	57	14715	0.993 ng		94
64) Tetrachloroethene	14.05	166	6898	0.281 ng		98
65) Chlorobenzene	14.91	112	2965	0.059 ng		96
66) Ethylbenzene	15.41	91	66417	0.812 ng		100
67) m- & p-Xylenes	15.63	91	146521	2.132 ng		98
68) Bromoform	15.67	173	787	N.D.		
69) Styrene	16.10	104	92388	1.993 ng		99
70) o-Xylene	16.24	91	69737	1.029 ng		100
71) n-Nonane	16.62	43	26383	0.670 ng		86
72) 1,1,2,2-Tetrachloroethane	16.21	83	667	N.D.		
74) Cumene	17.03	105	6798	0.080 ng		99
75) alpha-Pinene	17.53	93	62967	1.597 ng		99
76) n-Propylbenzene	17.68	91	14623	0.143 ng		97
77) 3-Ethyltoluene	17.03	105	6798	No Calib		
78) 4-Ethyltoluene	17.86	105	13814	0.171 ng		98
79) 1,3,5-Trimethylbenzene	17.96	105	15497	0.220 ng		96
80) alpha-Methylstyrene	0.00	118	0	N.D.		
81) 2-Ethyltoluene	17.03	105	6798	No Calib		
82) 1,2,4-Trimethylbenzene	18.43	105	42470	0.572 ng		88
83) n-Decane	17.08	58	1002	No Calib	#	
84) Benzyl Chloride	18.63	91	356	N.D.		
85) 1,3-Dichlorobenzene	18.58	146	723	N.D.		
86) 1,4-Dichlorobenzene	18.66	146	4336	0.091 ng		99
87) sec-Butylbenzene	18.74	105	3045	N.D.		
88) 4-Isopropyltoluene (p-...	18.93	119	9556	0.113 ng	#	76
89) 1,2,3-Trimethylbenzene	17.03	105	6798	No Calib		
90) 1,2-Dichlorobenzene	19.03	146	914	N.D.		
91) d-Limonene	19.08	68	26718	1.058 ng		89
92) 1,2-Dibromo-3-Chloropr...	19.51	157	178	N.D.		
93) n-Undecane	17.86	58	981	No Calib	#	
94) 1,2,4-Trichlorobenzene	20.84	180	1145	N.D.		
95) Naphthalene	20.94	128	4219	N.D.		
96) n-Dodecane	18.96	58	1123	No Calib	#	
97) Hexachlorobutadiene	21.30	225	800	N.D.		
98) Cyclohexanone	15.45	55	112	No Calib	#	
99) tert-Butylbenzene	0.00	119	0	N.D.	d	
100) n-Butylbenzene	0.00	91	0	N.D.	d	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212415.D Vial: 5
Acq On : 21 Jun 2024 18:06 Operator: SC
Sample : P2402249-057 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 17:20:36 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:53:58 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212415.D Vial: 5
Acq On : 21 Jun 2024 18:06 Operator: SC
Sample : P2402249-057 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 17:20:36 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:53:58 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.29	130	173577	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.34	114	771563	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.85	54	178684	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.05	65	383225	12.422	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.36%				
57) Toluene-d8 (SS2)	12.44	98	867399	12.685	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.52%				
73) Bromofluorobenzene (SS3)	16.83	174	303261	12.282	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.24%				
Target Compounds							Qvalue
2) Propene	3.28	42	118683m	5.341	ng		
3) Dichlorodifluoromethan...	3.36	85	24569	0.601	ng		97
4) Chloromethane	3.50	50	12445	0.446	ng		100
5) 1,2-Dichloro-1,1,2,2-t...	3.61	135	1158	0.065	ng		98
10) Ethanol	4.35	45	1281380	75.934	ng		100
12) Acrolein	4.53	56	12331	0.987	ng		95
13) Acetone	4.64	58	559411	41.486	ng	#	20
14) Trichlorofluoromethane	4.76	101	14767	0.357	ng		97
15) 2-Propanol (Isopropanol)	4.89	45	1496686	27.546	ng		90
18) 2-Methyl-2-Propanol (t...	5.36	59	299354	6.903	ng		78
19) Methylene Chloride	5.39	84	26455	1.386	ng		99
21) Trichlorotrifluoroethane	5.59	151	6497	0.372	ng		99
22) Carbon Disulfide	5.61	76	18861	0.307	ng		100
25) Methyl tert-Butyl Ether	6.37	73	8110	0.180	ng		94
26) Vinyl Acetate	6.49	86	57381	18.442	ng	#	77
27) 2-Butanone (MEK)	6.70	72	47184	4.422	ng		97
30) Ethyl Acetate	7.33	61	7040667	1080.671	ng		99
32) Chloroform	7.42	83	3095	0.091	ng		91
34) Tetrahydrofuran (THF)	7.76	72	3513	0.361	ng	#	1
36) 1,2-Dichloroethane	8.16	62	2453	0.072	ng		82
41) Benzene	8.93	78	327306	4.595	ng		100
42) Carbon Tetrachloride	9.11	117	3163	0.096	ng		93
43) Cyclohexane	9.22	84	41824	1.814	ng		97
45) 1,2-Dichloropropane	9.88	63	1130	0.066	ng		89
49) 2,2,4-Trimethylpentane...	10.24	57	29864	0.424	ng		74
50) Methyl Methacrylate	10.43	100	704	0.117	ng	#	64
51) n-Heptane	10.58	71	30680	2.042	ng		99
53) 4-Methyl-2-pentanone	11.34	58	24379	1.557	ng		99
58) Toluene	12.57	91	2721063	38.083	ng		100
59) 2-Hexanone	12.93	43	8843	0.197	ng		76
62) n-Butyl Acetate	13.78	43	98397	2.090	ng		97
63) n-Octane	13.93	57	14715	0.993	ng		94
64) Tetrachloroethene	14.05	166	6898	0.281	ng		98
65) Chlorobenzene	14.91	112	2965	0.059	ng		96
66) Ethylbenzene	15.41	91	66417	0.812	ng		100
67) m- & p-Xylenes	15.63	91	146521	2.132	ng		98
69) Styrene	16.10	104	92388	1.993	ng		99
70) o-Xylene	16.24	91	69737	1.029	ng		100
71) n-Nonane	16.62	43	26383	0.670	ng		86
74) Cumene	17.03	105	6798	0.080	ng		99
75) alpha-Pinene	17.53	93	62967	1.597	ng		99
76) n-Propylbenzene	17.68	91	14623	0.143	ng		97
78) 4-Ethyltoluene	17.86	105	13814	0.171	ng		98
79) 1,3,5-Trimethylbenzene	17.96	105	15497	0.220	ng		96
82) 1,2,4-Trimethylbenzene	18.43	105	42470	0.572	ng		88
86) 1,4-Dichlorobenzene	18.66	146	4336	0.091	ng		99
88) 4-Isopropyltoluene (p-...	18.93	119	9556	0.113	ng	#	76

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212415.D Vial: 5
Acq On : 21 Jun 2024 18:06 Operator: SC
Sample : P2402249-057 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 17:20:36 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:53:58 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

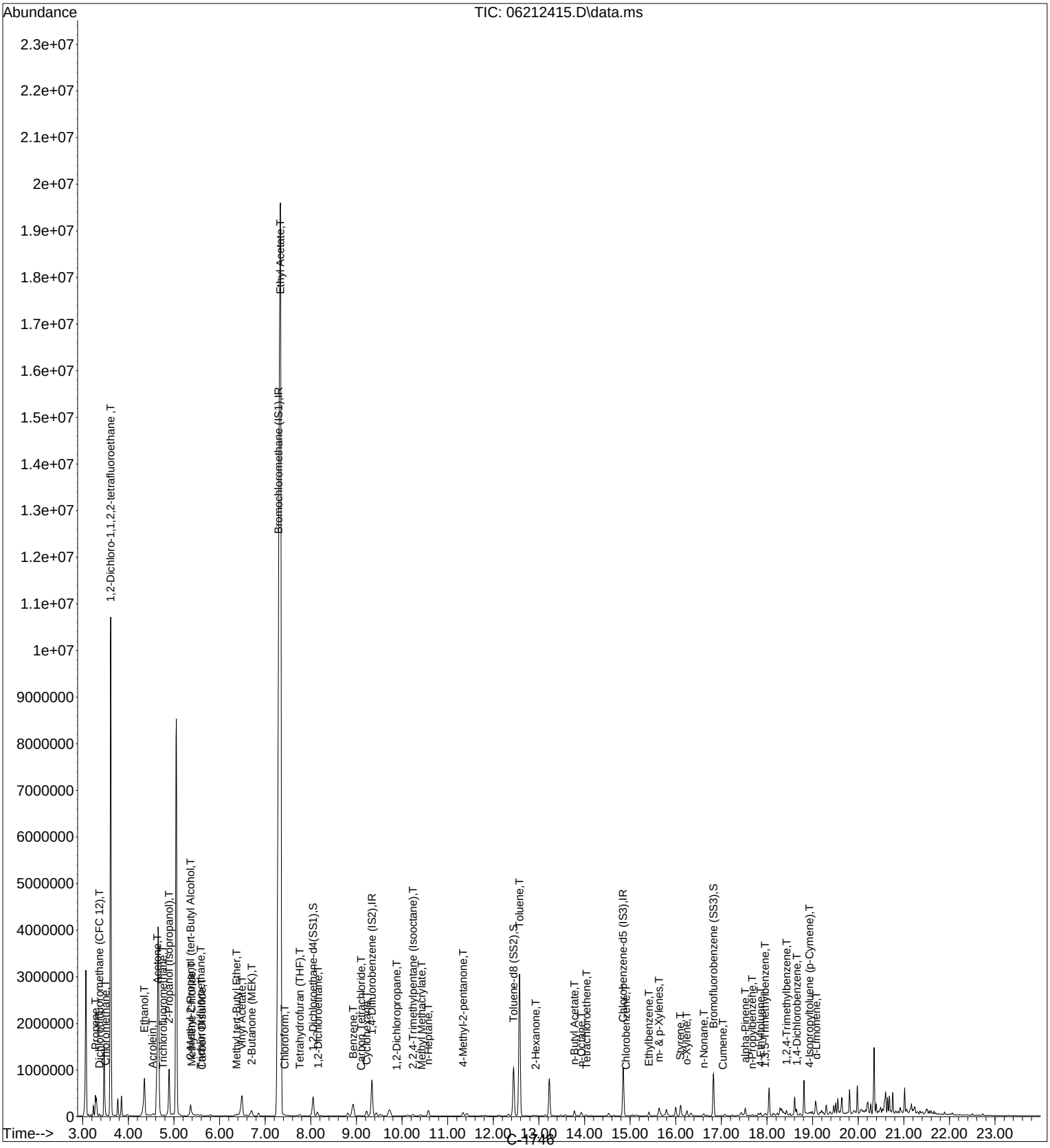
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
91) d-Limonene	19.08	68	26718	1.058	ng	89

(#) = qualifier out of range (m) = manual integration (+) = signals summed

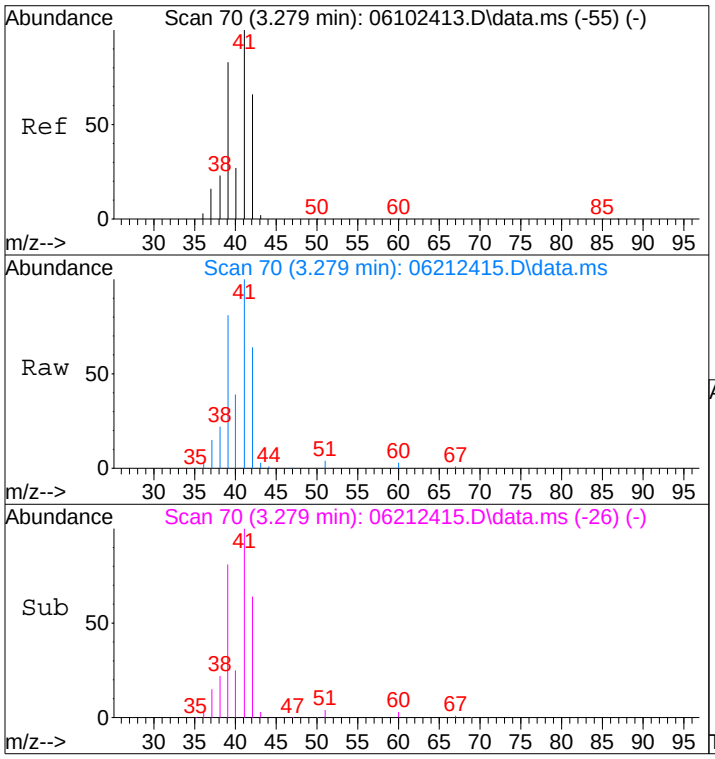
Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212415.D Vial: 5
Acq On : 21 Jun 2024 18:06 Operator: SC
Sample : P2402249-057 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 17:20:36 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:53:58 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



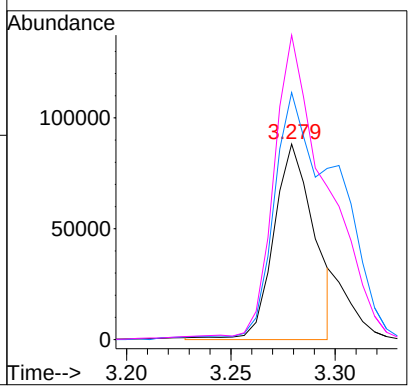
C-1748

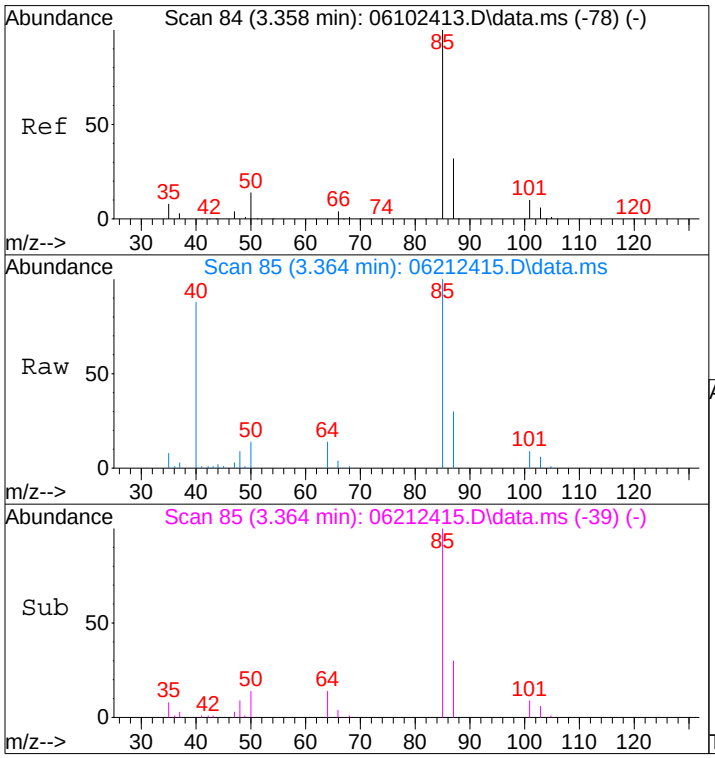


#2
Propene
Concen: 5.34 ng m
RT: 3.28 min Scan# 70
Delta R.T. -0.001 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion: 42 Resp: 118683

Ion	Ratio	Lower	Upper
42	100		
39	117.6	107.3	147.3
41	141.5	134.3	174.3

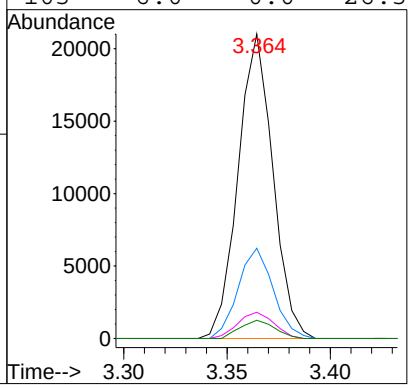


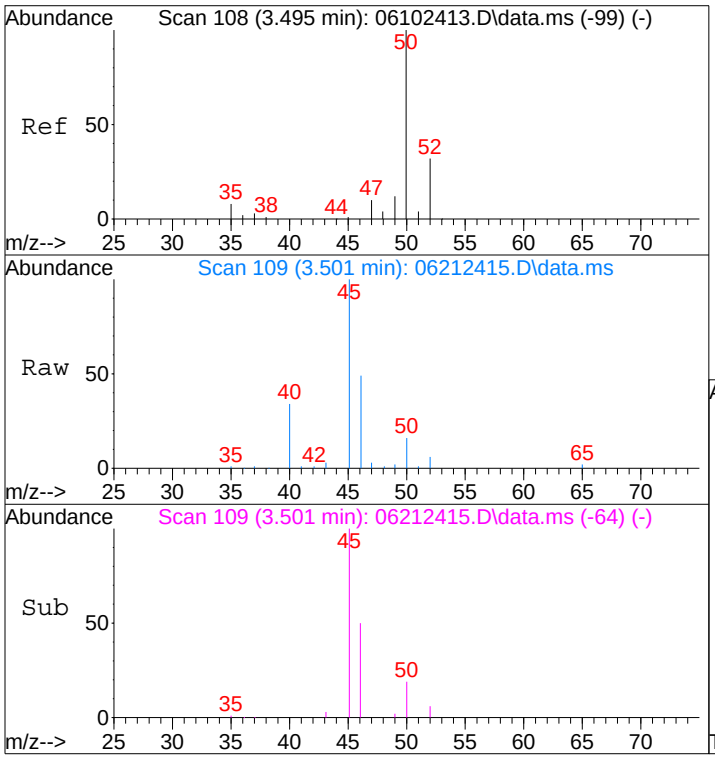


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.60 ng
RT: 3.36 min Scan# 85
Delta R.T. 0.011 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion: 85 Resp: 24569

Ion	Ratio	Lower	Upper
85	100		
87	29.9	12.2	52.2
101	9.0	0.0	29.8
103	6.0	0.0	26.3

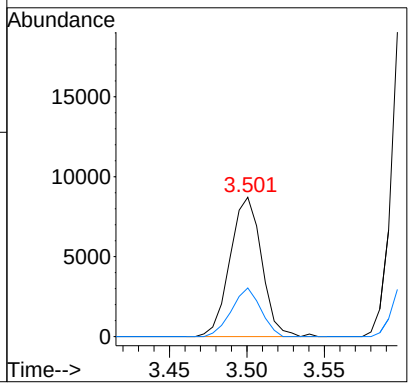


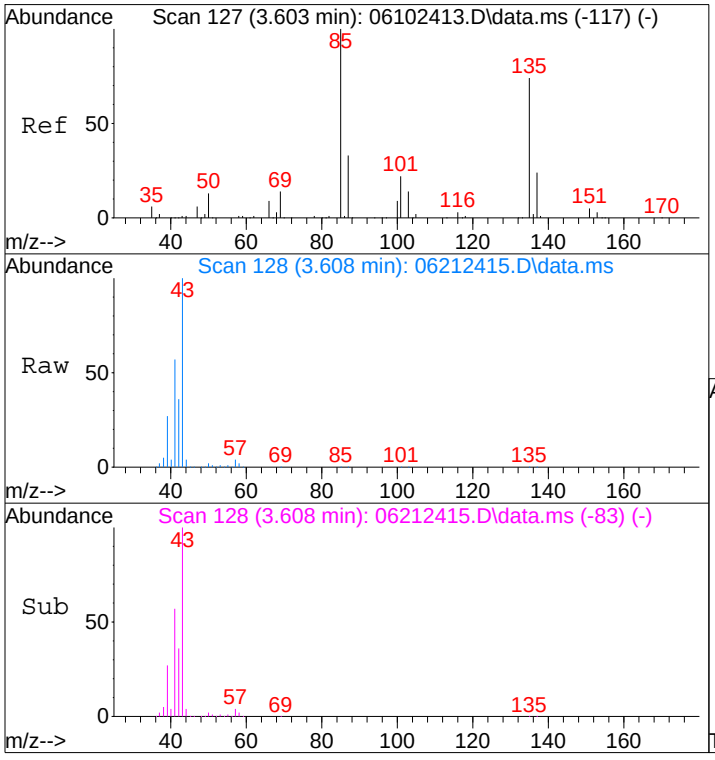


#4
Chloromethane
Concen: 0.45 ng
RT: 3.50 min Scan# 109
Delta R.T. 0.005 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion: 50 Resp: 12445

Ion	Ratio	Lower	Upper
50	100		
52	32.2	12.4	52.4

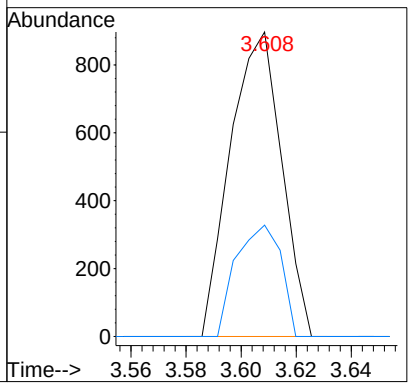


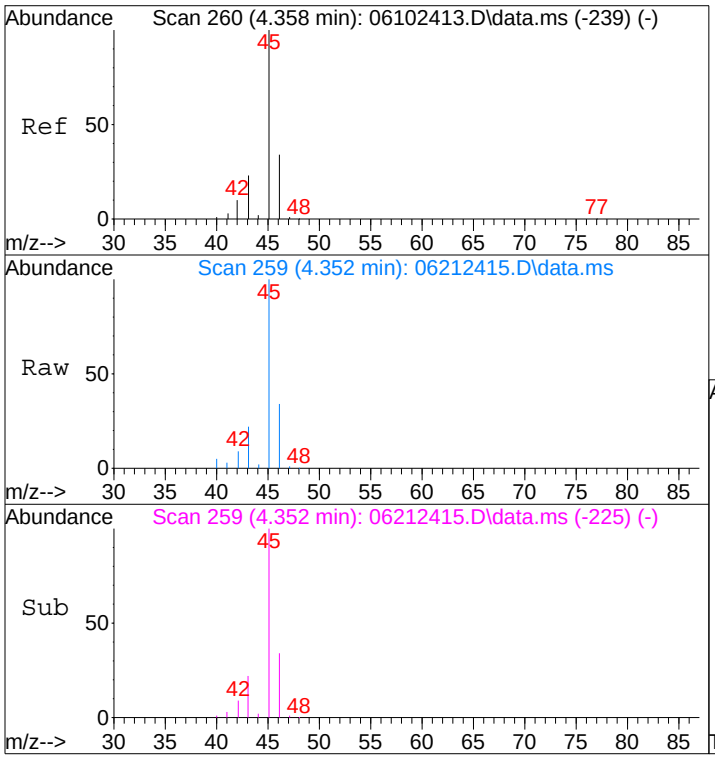


#5
1,2-Dichloro-1,1,2,2-tetrafluoroethane
Concen: 0.07 ng
RT: 3.61 min Scan# 128
Delta R.T. 0.006 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion:135 Resp: 1158

Ion	Ratio	Lower	Upper
135	100		
137	32.0	13.0	53.0

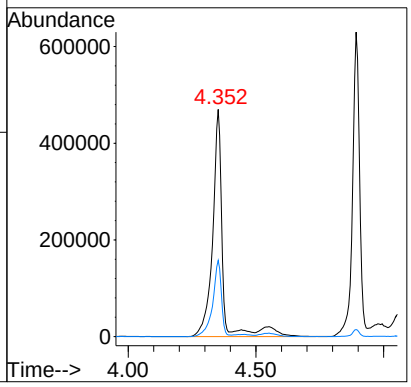


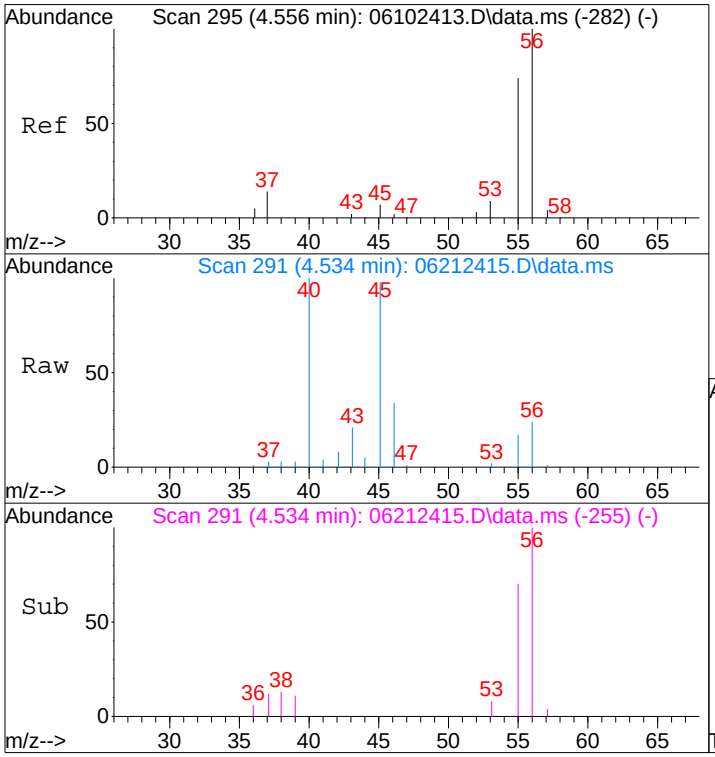


#10
Ethanol
Concen: 75.93 ng
RT: 4.35 min Scan# 259
Delta R.T. -0.056 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion: 45 Resp: 1281380

Ion	Ratio	Lower	Upper
45	100		
46	33.4	13.5	53.5

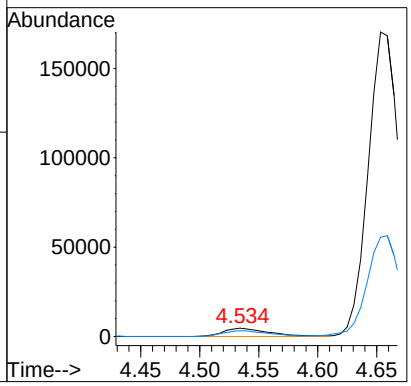


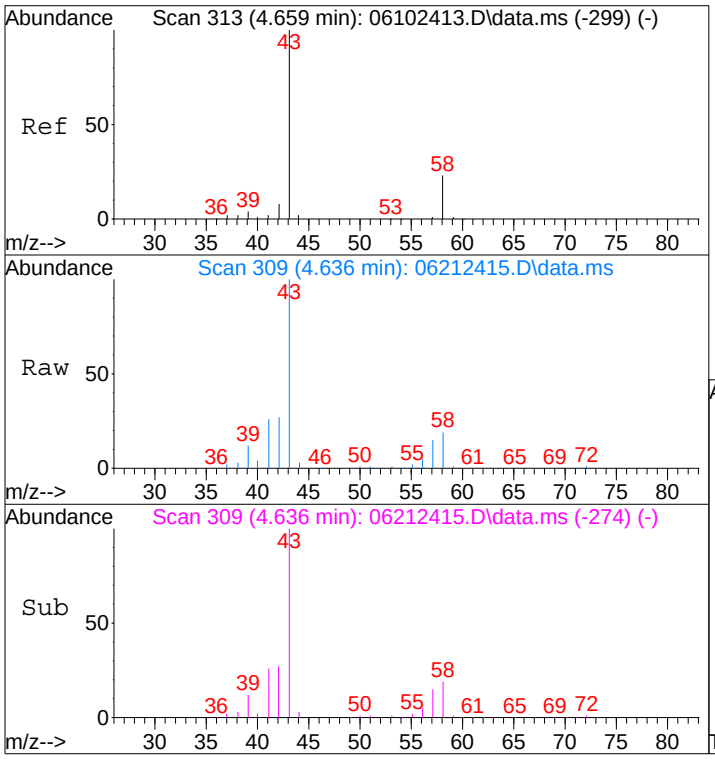


#12
Acrolein
Concen: 0.99 ng
RT: 4.53 min Scan# 291
Delta R.T. -0.044 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion: 56 Resp: 12331

Ion	Ratio	Lower	Upper
56	100		
55	71.1	55.5	95.5

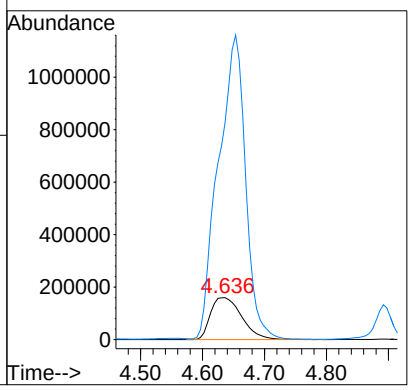


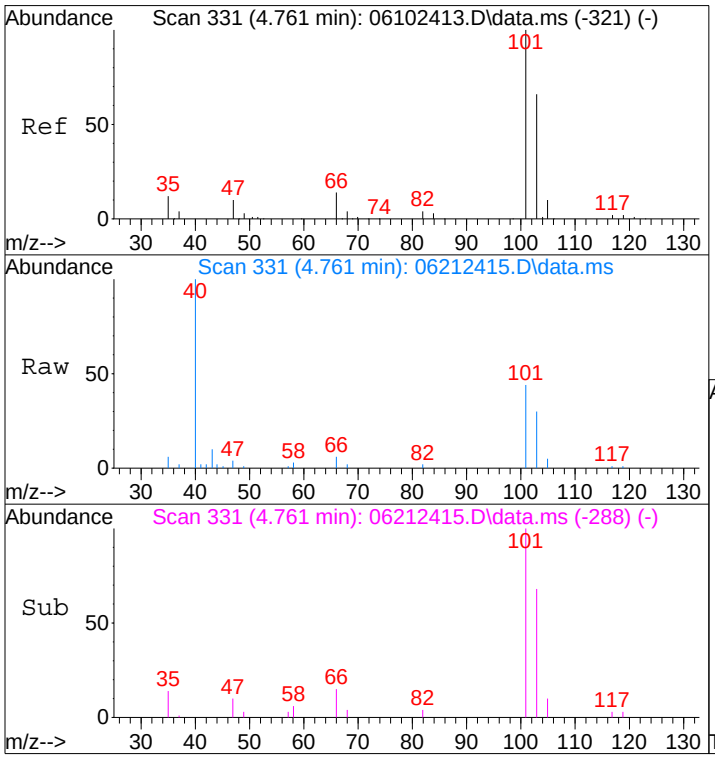


#13
Acetone
Concen: 41.49 ng
RT: 4.64 min Scan# 309
Delta R.T. -0.049 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion: 58 Resp: 559411

Ion	Ratio	Lower	Upper
58	100		
43	629.1	400.7	460.7#

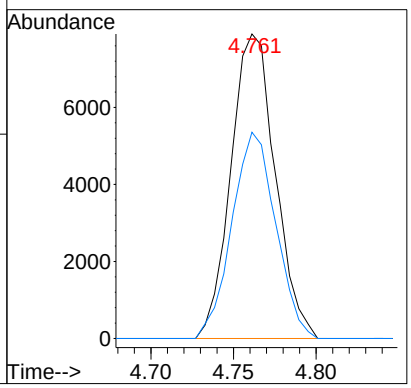


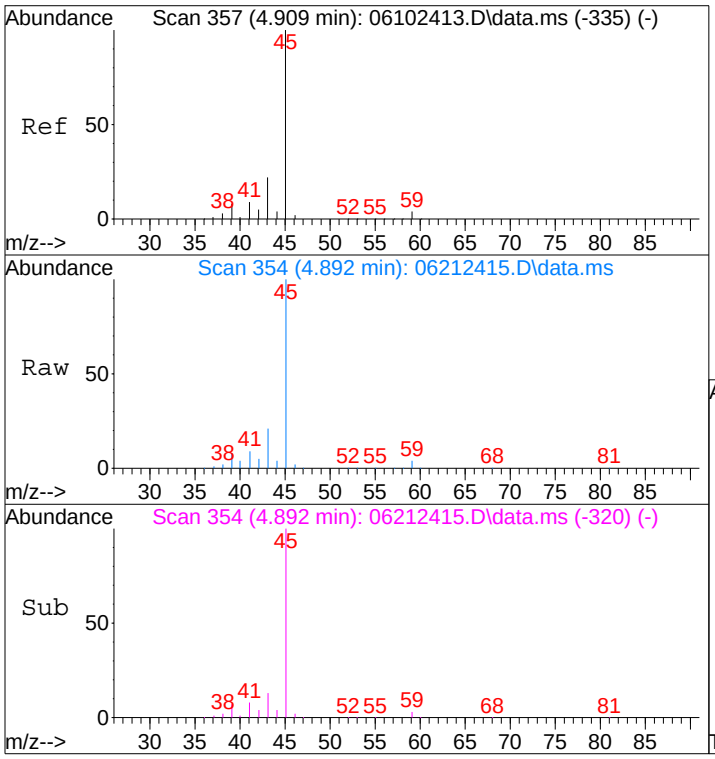


#14
Trichlorofluoromethane
Concen: 0.36 ng
RT: 4.76 min Scan# 331
Delta R.T. -0.004 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion:101 Resp: 14767

Ion	Ratio	Lower	Upper
101	100		
103	67.0	44.9	84.9

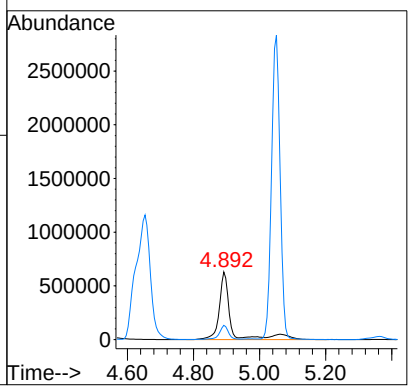


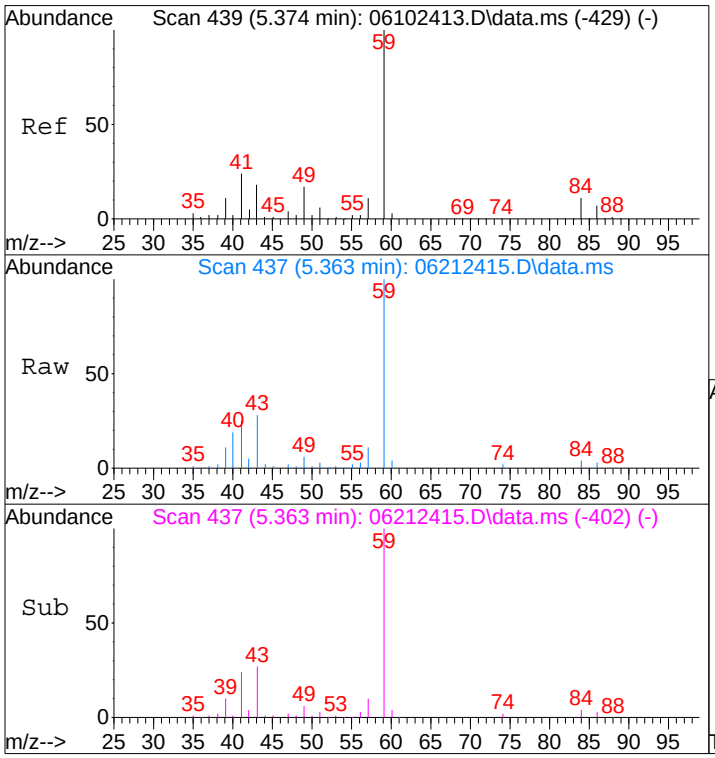


#15
2-Propanol (Isopropanol)
Concen: 27.55 ng
RT: 4.89 min Scan# 354
Delta R.T. -0.055 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion: 45 Resp: 1496686

Ion	Ratio	Lower	Upper
45	100		
43	17.9	2.5	42.5

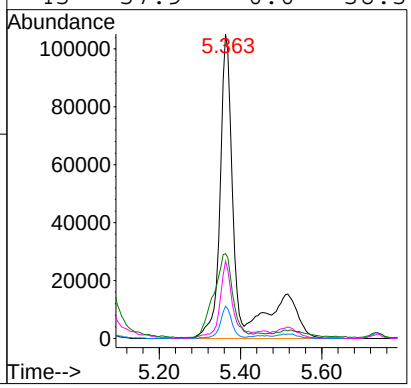


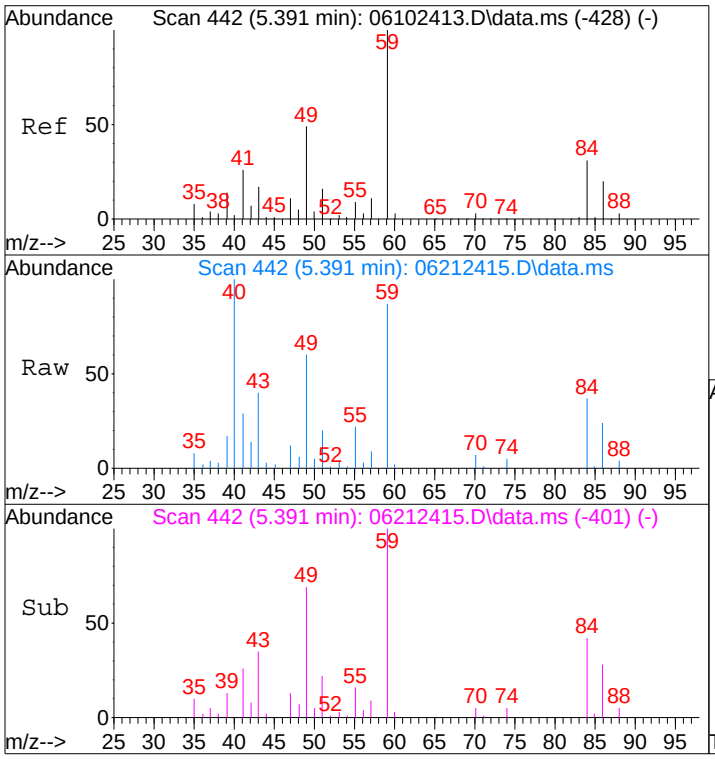


#18
2-Methyl-2-Propanol (tert-Butyl Alcohol
Concen: 6.90 ng
RT: 5.36 min Scan# 437
Delta R.T. -0.049 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion: 59 Resp: 299354

Ion	Ratio	Lower	Upper
59	100		
57	10.3	0.0	30.9
41	27.2	0.9	40.9
43	37.9	0.0	38.3

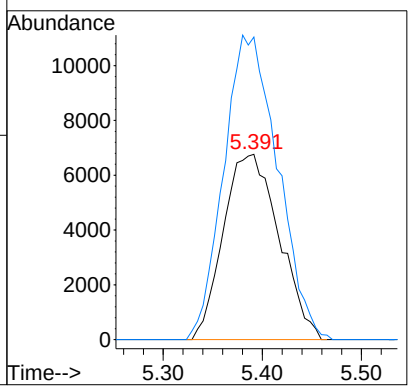


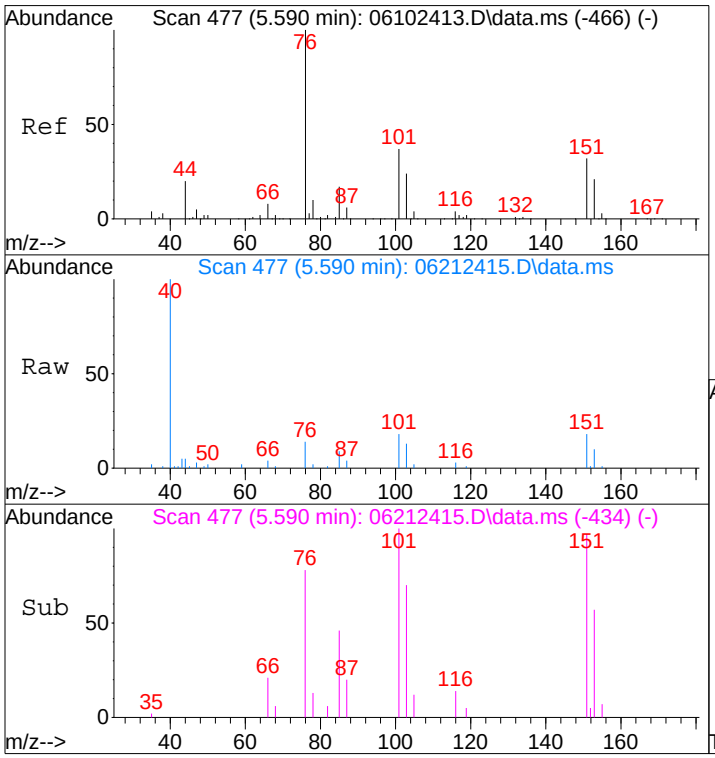


#19
Methylene Chloride
Concen: 1.39 ng
RT: 5.39 min Scan# 442
Delta R.T. -0.020 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion: 84 Resp: 26455

Ion	Ratio	Lower	Upper
84	100		
49	159.2	132.9	182.9

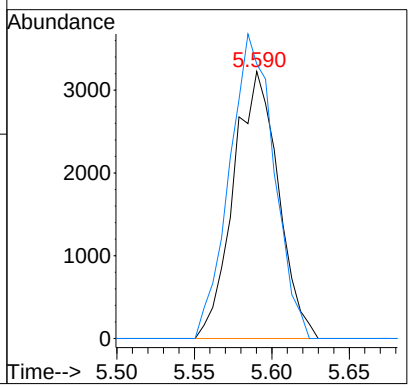


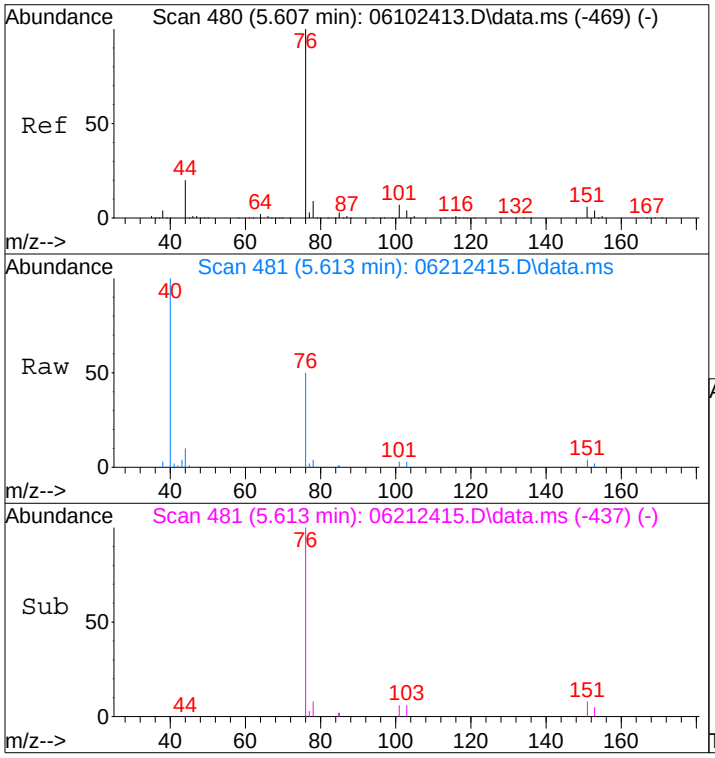


#21
Trichlorotrifluoroethane
Concen: 0.37 ng
RT: 5.59 min Scan# 477
Delta R.T. -0.008 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion:151 Resp: 6497

Ion	Ratio	Lower	Upper
151	100		
101	113.4	95.0	135.0

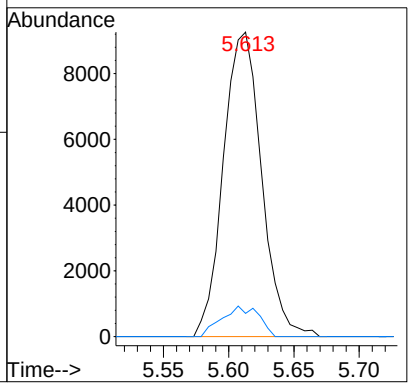


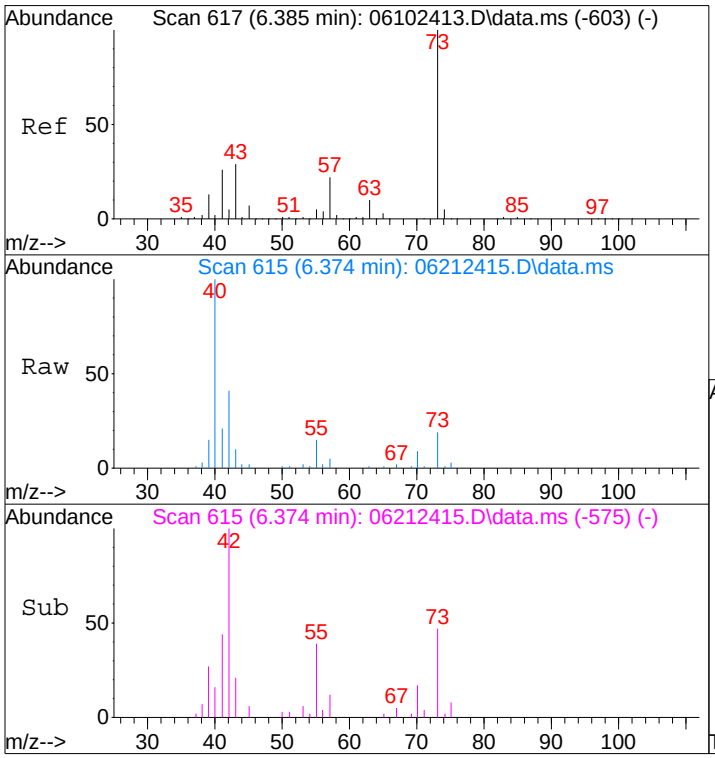


#22
Carbon Disulfide
Concen: 0.31 ng
RT: 5.61 min Scan# 481
Delta R.T. -0.003 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion: 76 Resp: 18861

Ion	Ratio	Lower	Upper
76	100		
78	9.7	0.0	29.6

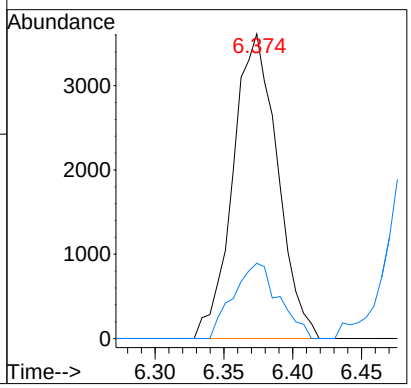


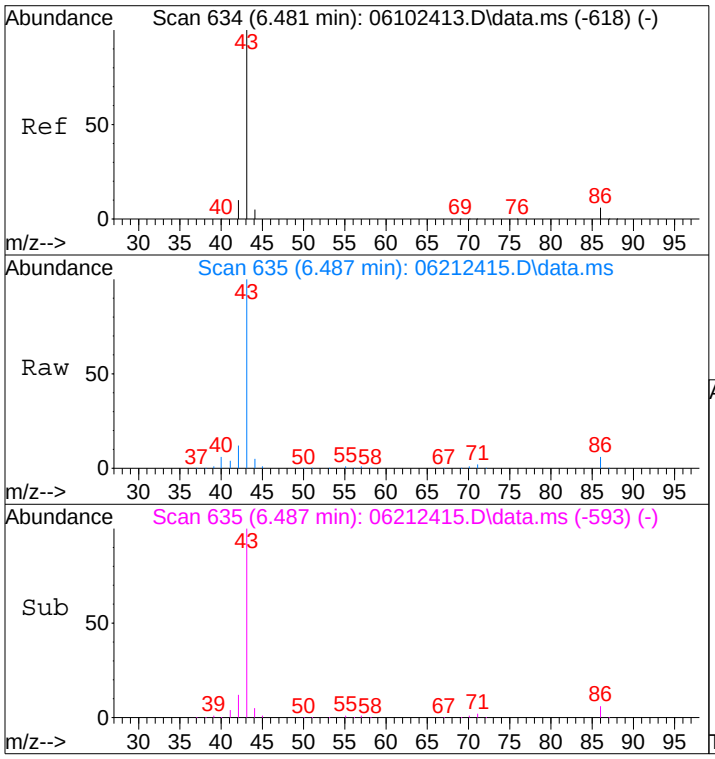


#25
Methyl tert-Butyl Ether
Concen: 0.18 ng
RT: 6.37 min Scan# 615
Delta R.T. -0.024 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion: 73 Resp: 8110

Ion	Ratio	Lower	Upper
73	100		
57	25.3	2.3	42.3

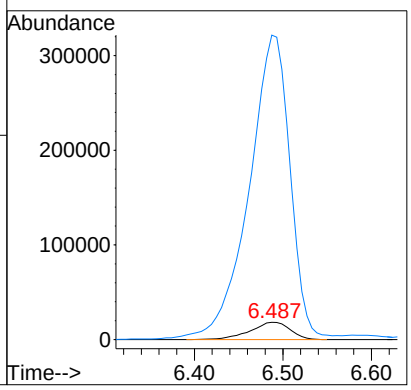


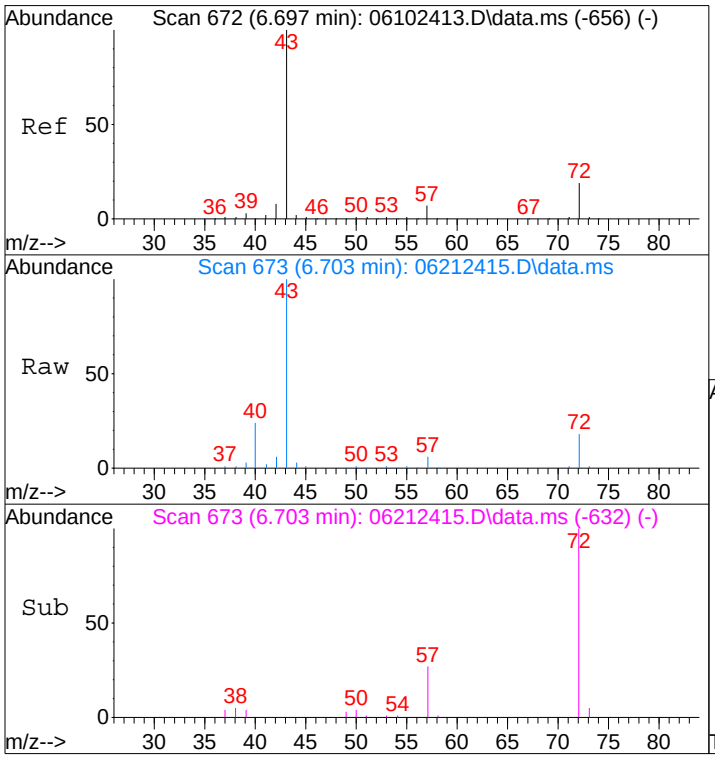


#26
Vinyl Acetate
Concen: 18.44 ng
RT: 6.49 min Scan# 635
Delta R.T. -0.013 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion: 86 Resp: 57381

Ion	Ratio	Lower	Upper
86	100		
43	1841.9	1668.9	1708.9#

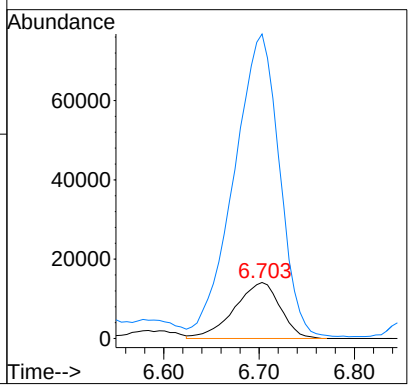


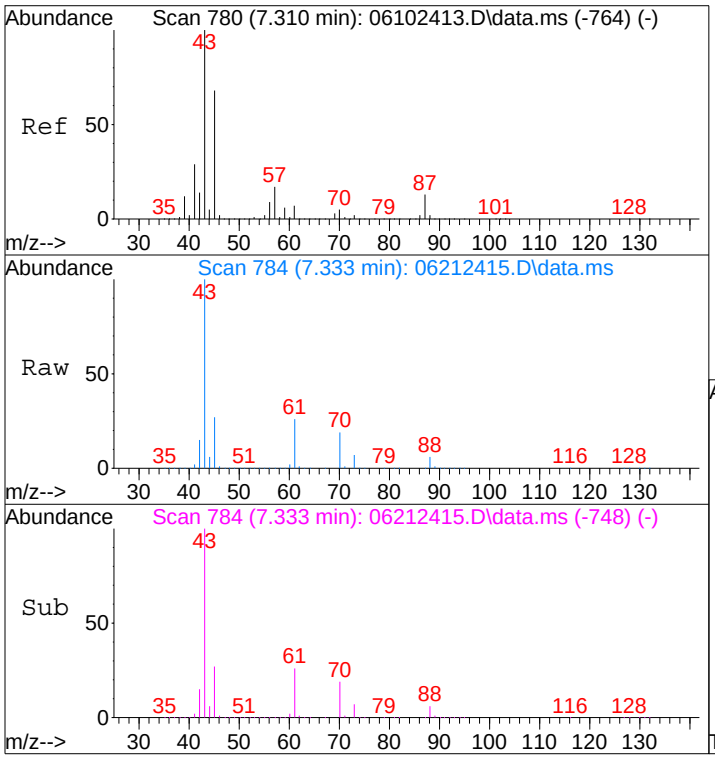


#27
2-Butanone (MEK)
Concen: 4.42 ng
RT: 6.70 min Scan# 673
Delta R.T. -0.018 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion: 72 Resp: 47184

Ion	Ratio	Lower	Upper
72	100		
43	534.4	506.8	546.8

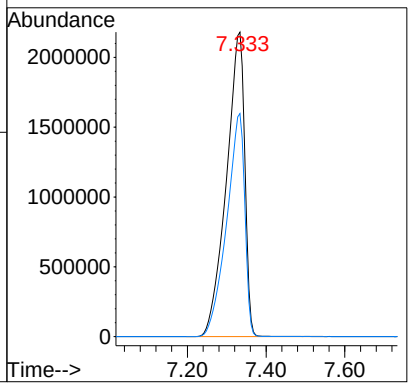


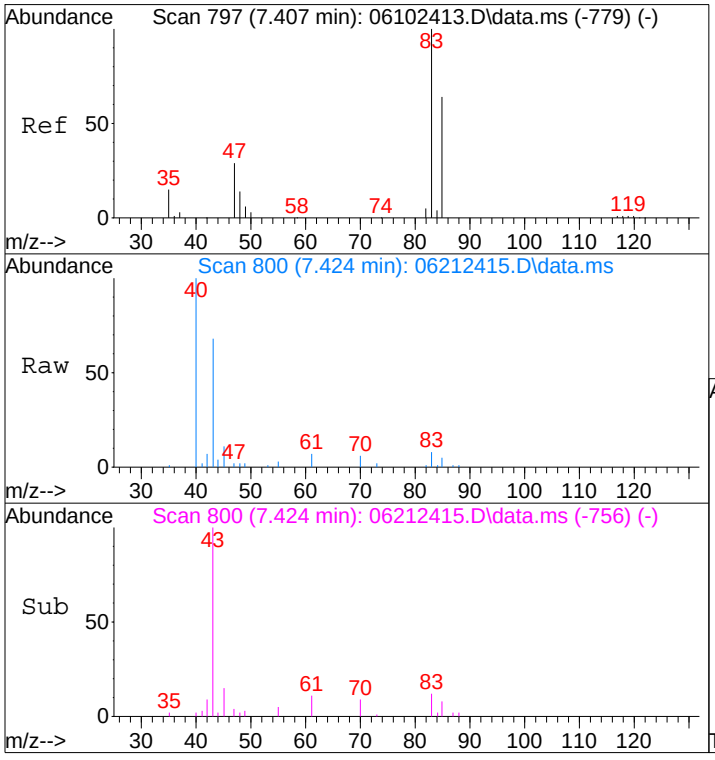


#30
Ethyl Acetate
Concen: 1080.67 ng
RT: 7.33 min Scan# 784
Delta R.T. 0.006 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion: 61 Resp: 7040667

Ion	Ratio	Lower	Upper
61	100		
70	72.3	53.5	93.5

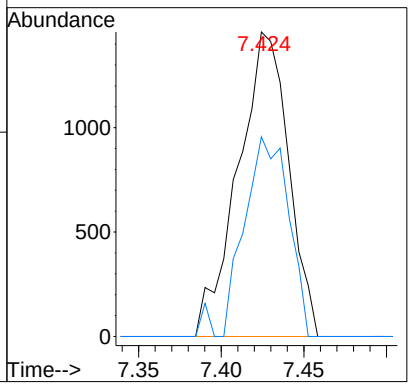


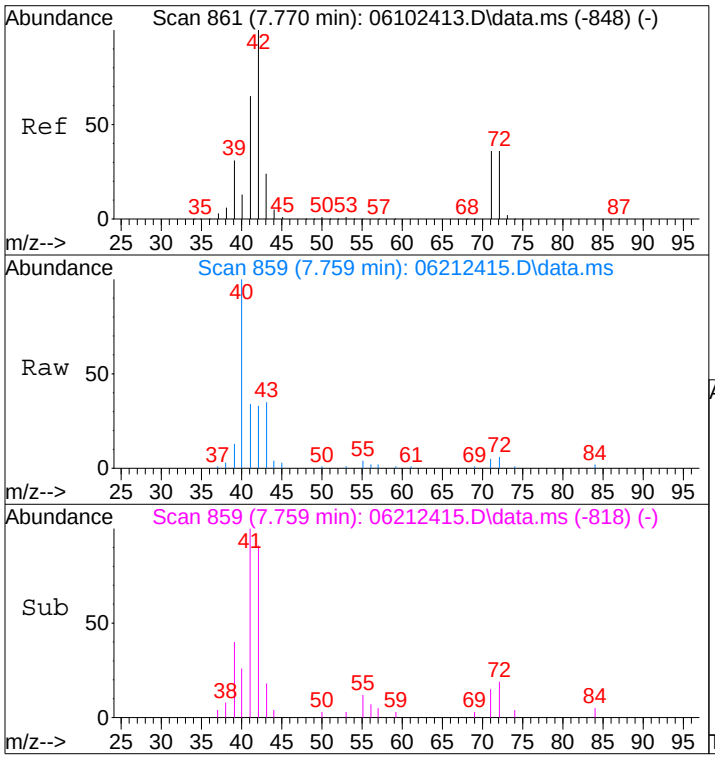


#32
Chloroform
Concen: 0.09 ng
RT: 7.42 min Scan# 800
Delta R.T. 0.000 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion: 83 Resp: 3095

Ion	Ratio	Lower	Upper
83	100		
85	57.1	44.4	84.4

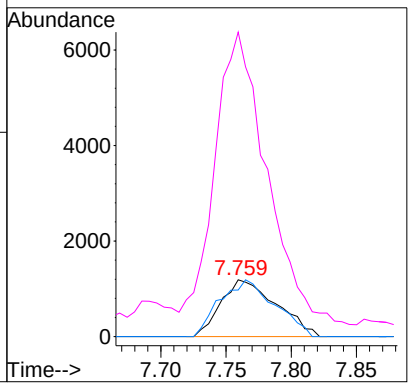


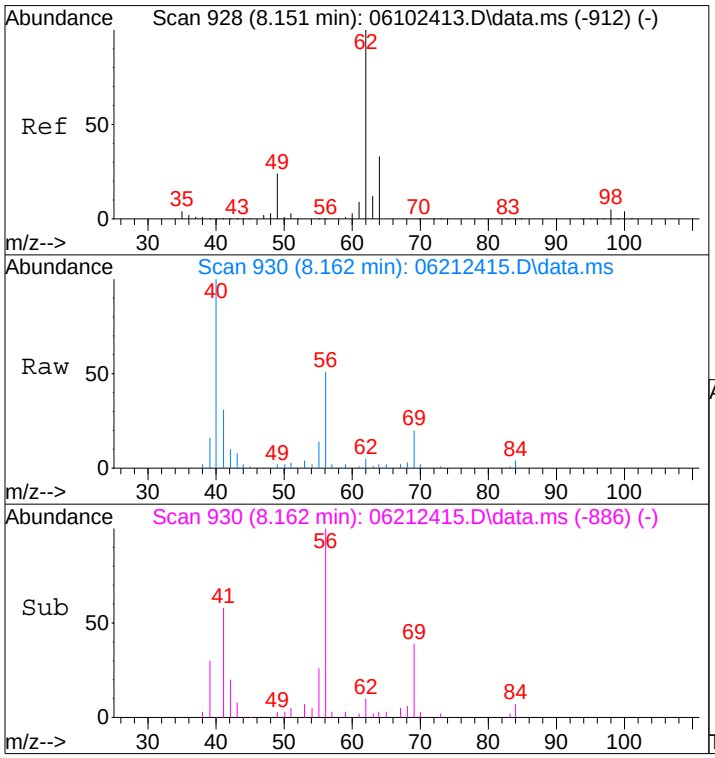


#34
Tetrahydrofuran (THF)
Concen: 0.36 ng
RT: 7.76 min Scan# 859
Delta R.T. -0.016 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion: 72 Resp: 3513

Ion	Ratio	Lower	Upper
72	100		
71	99.0	79.4	119.4
42	542.2	260.8	300.8#

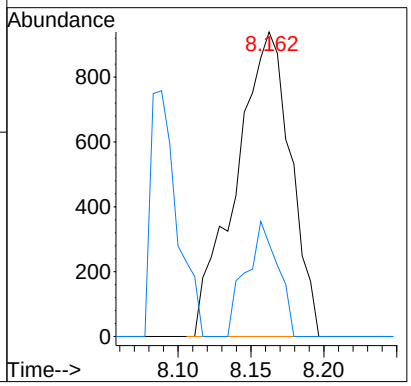


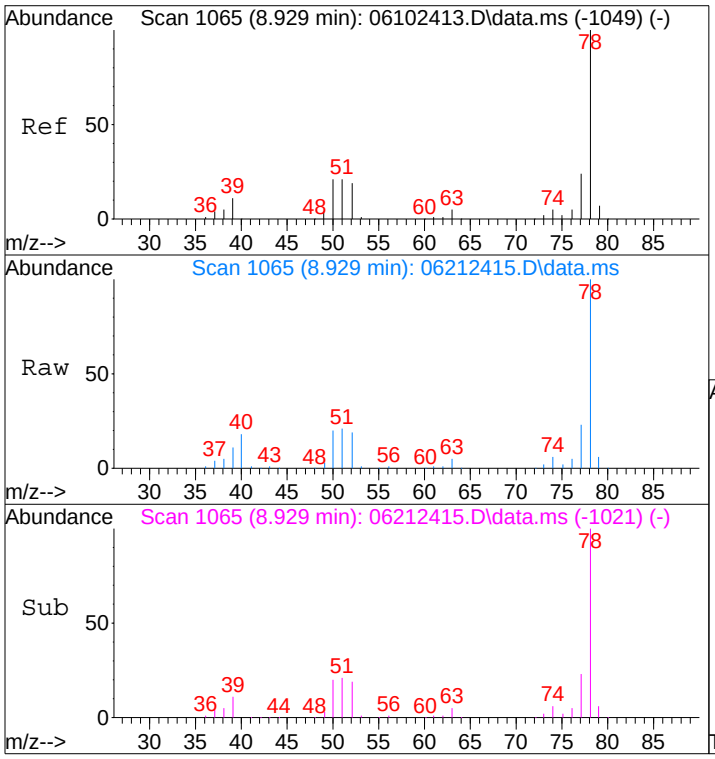


#36
1,2-Dichloroethane
Concen: 0.07 ng
RT: 8.16 min Scan# 930
Delta R.T. 0.001 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion: 62 Resp: 2453

Ion	Ratio	Lower	Upper
62	100		
64	22.2	12.0	52.0

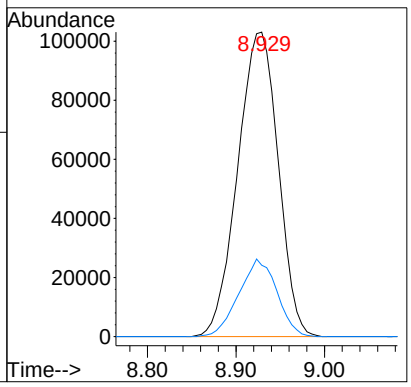


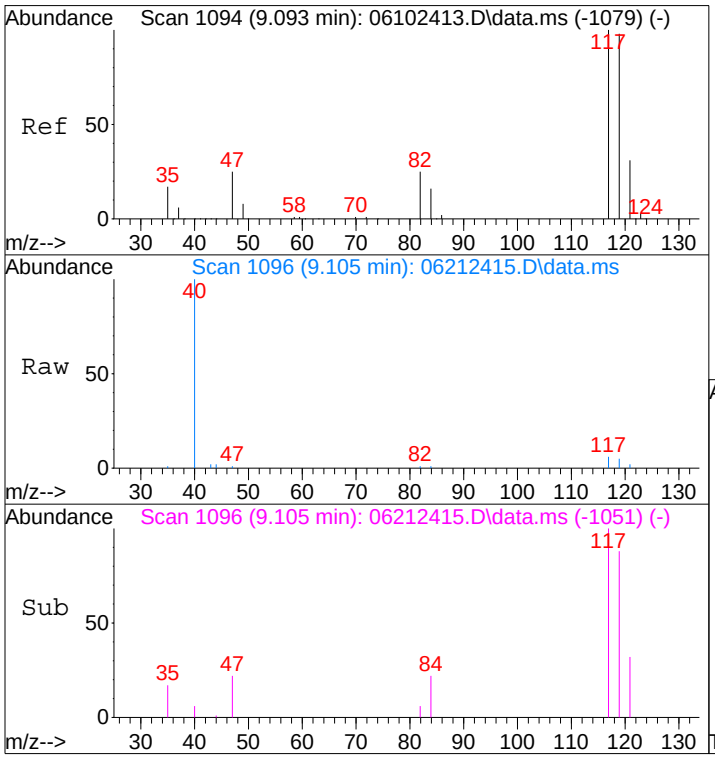


#41
Benzene
Concen: 4.60 ng
RT: 8.93 min Scan# 1065
Delta R.T. -0.001 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion: 78 Resp: 327306

Ion	Ratio	Lower	Upper
78	100		
77	24.0	4.0	44.0

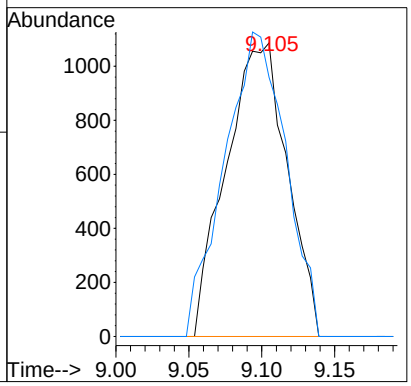


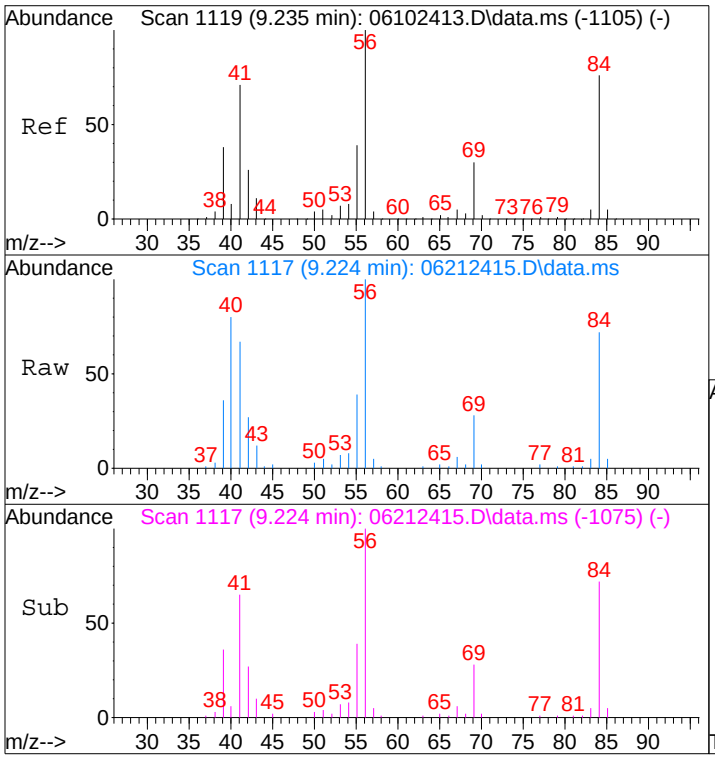


#42
Carbon Tetrachloride
Concen: 0.10 ng
RT: 9.11 min Scan# 1096
Delta R.T. 0.005 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion:117 Resp: 3163

Ion	Ratio	Lower	Upper
117	100		
119	104.3	77.3	117.3

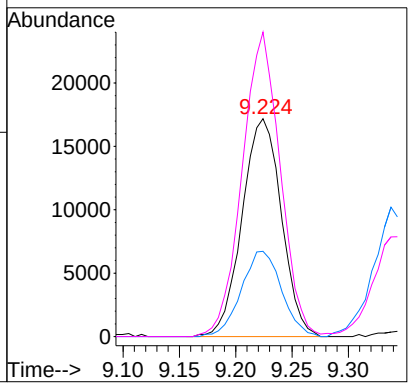


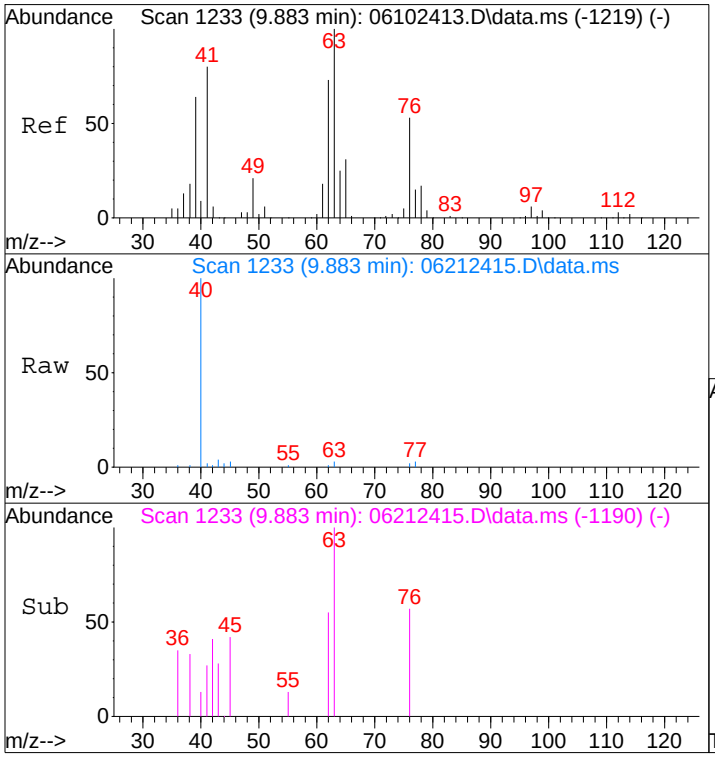


#43
Cyclohexane
Concen: 1.81 ng
RT: 9.22 min Scan# 1117
Delta R.T. -0.012 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion: 84 Resp: 41824

Ion	Ratio	Lower	Upper
84	100		
69	40.1	18.8	58.8
56	135.3	111.5	151.5

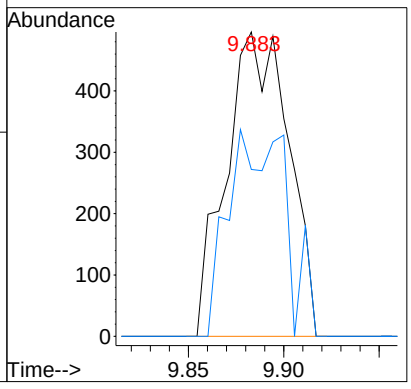


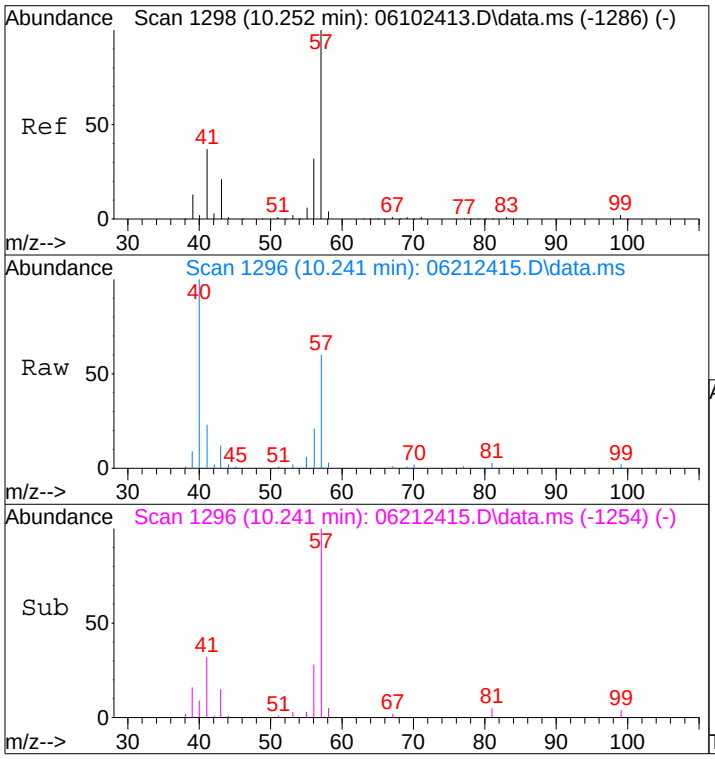


#45
1,2-Dichloropropane
Concen: 0.07 ng
RT: 9.88 min Scan# 1233
Delta R.T. -0.005 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion: 63 Resp: 1130

Ion	Ratio	Lower	Upper
63	100		
62	63.0	52.4	92.4

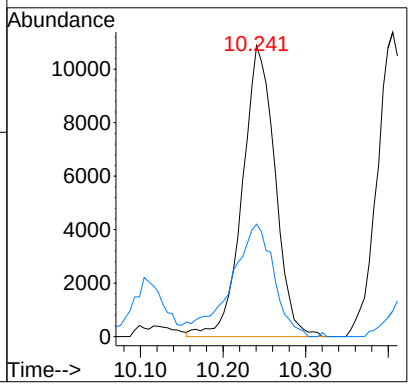


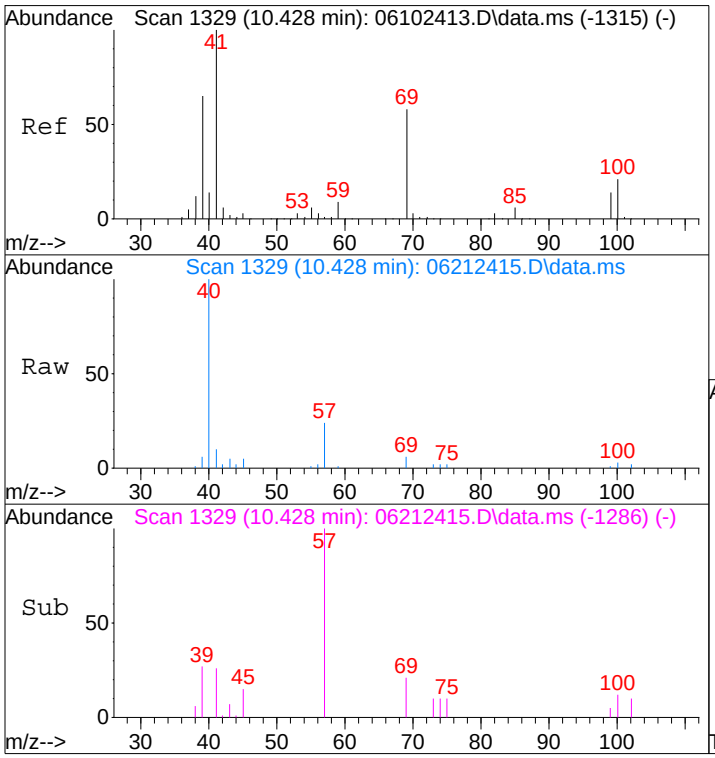


#49
2,2,4-Trimethylpentane (Isooctane)
Concen: 0.42 ng
RT: 10.24 min Scan# 1296
Delta R.T. -0.010 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion: 57 Resp: 29864

Ion	Ratio	Lower	Upper
57	100		
41	51.2	16.1	56.1

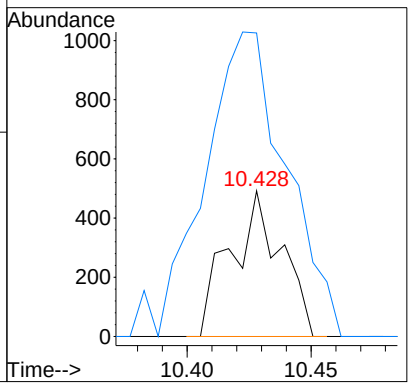


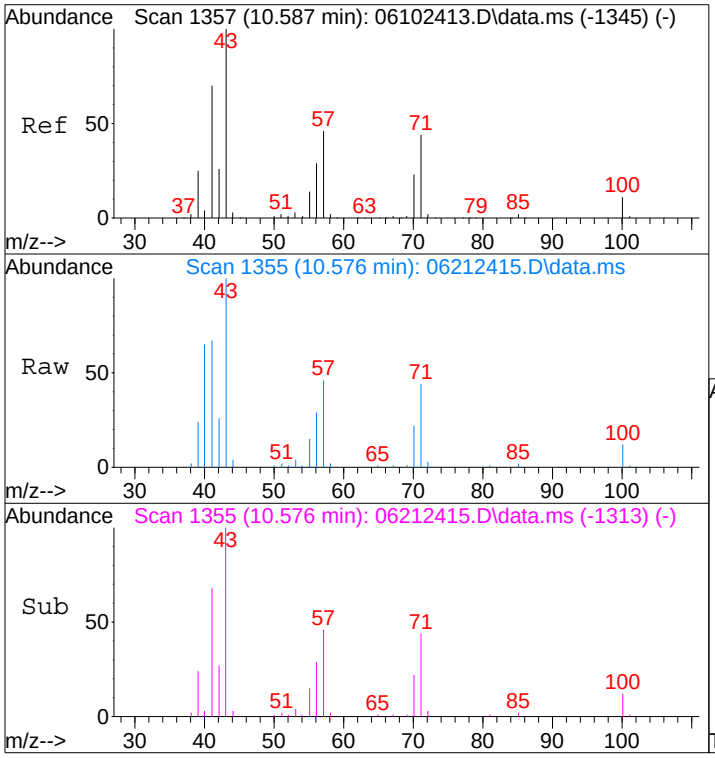


#50
Methyl Methacrylate
Concen: 0.12 ng
RT: 10.43 min Scan# 1329
Delta R.T. -0.004 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion:100 Resp: 704

Ion	Ratio	Lower	Upper
100	100		
69	340.2	254.2	294.2#

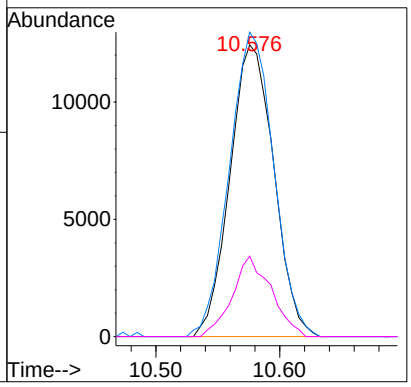


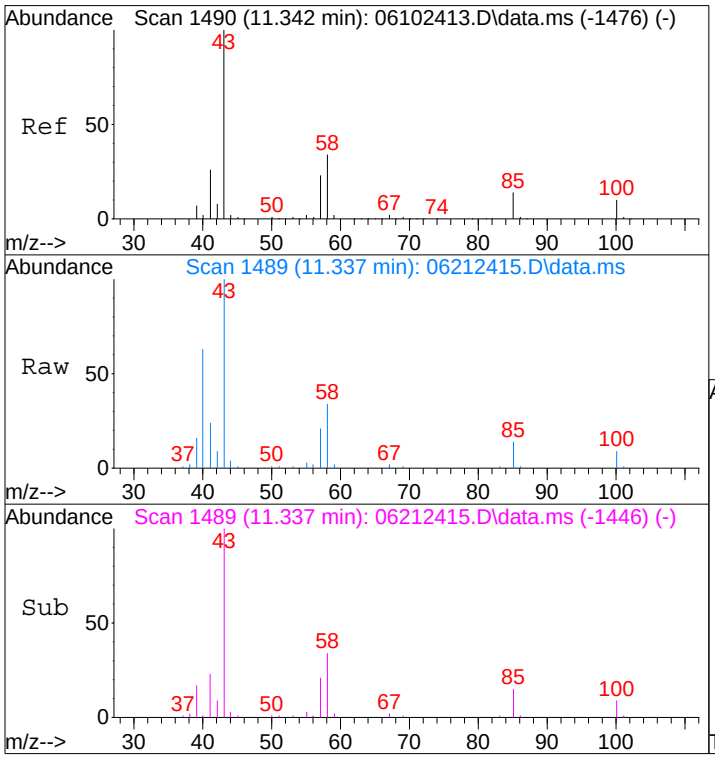


#51
n-Heptane
Concen: 2.04 ng
RT: 10.58 min Scan# 1355
Delta R.T. -0.009 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion: 71 Resp: 30680

Ion	Ratio	Lower	Upper
71	100		
57	105.2	83.9	123.9
100	24.3	4.8	44.8

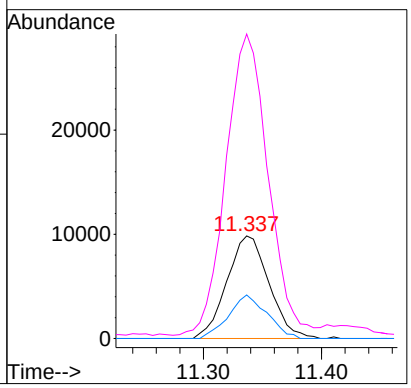


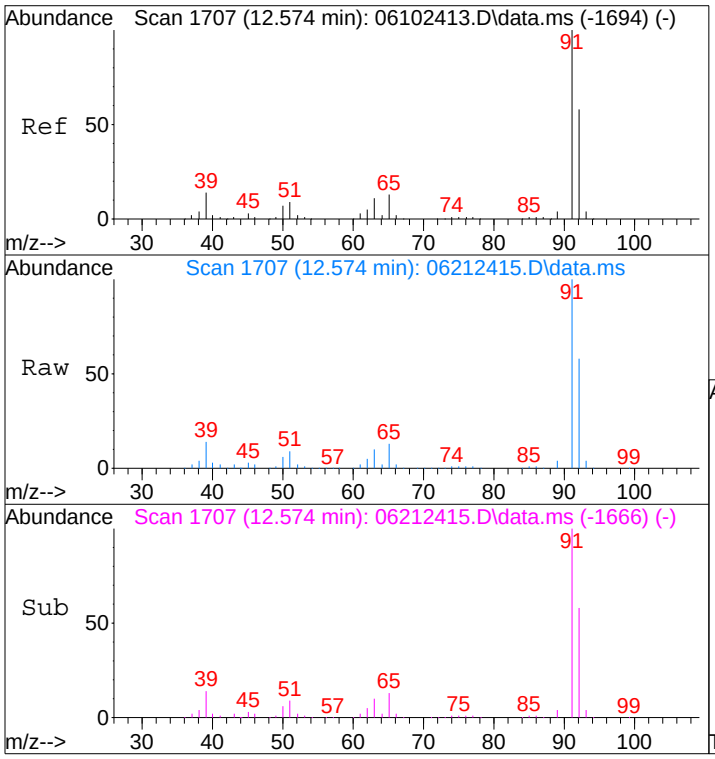


#53
4-Methyl-2-pentanone
Concen: 1.56 ng
RT: 11.34 min Scan# 1489
Delta R.T. -0.008 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion: 58 Resp: 24379

Ion	Ratio	Lower	Upper
58	100		
85	38.7	34.5	51.7
43	295.3	236.1	354.1

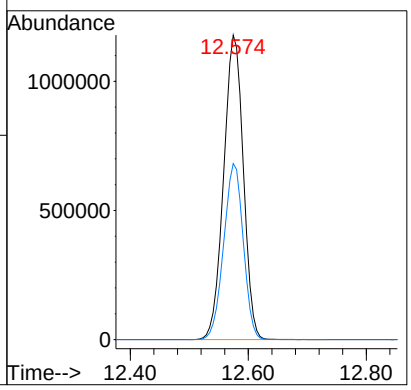


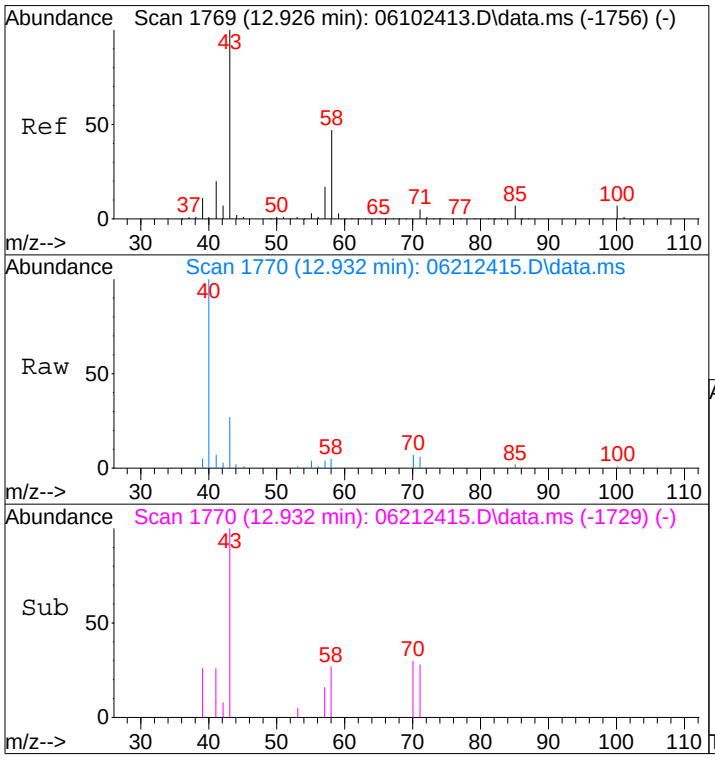


#58
Toluene
Concen: 38.08 ng
RT: 12.57 min Scan# 1707
Delta R.T. -0.017 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion: 91 Resp: 2721063

Ion	Ratio	Lower	Upper
91	100		
92	57.5	37.4	77.4

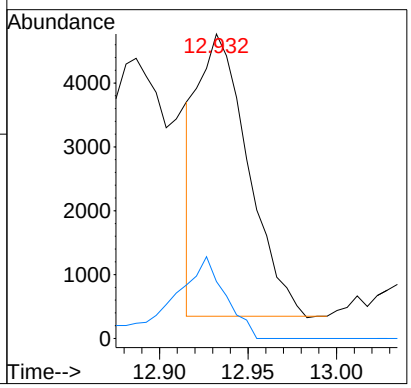


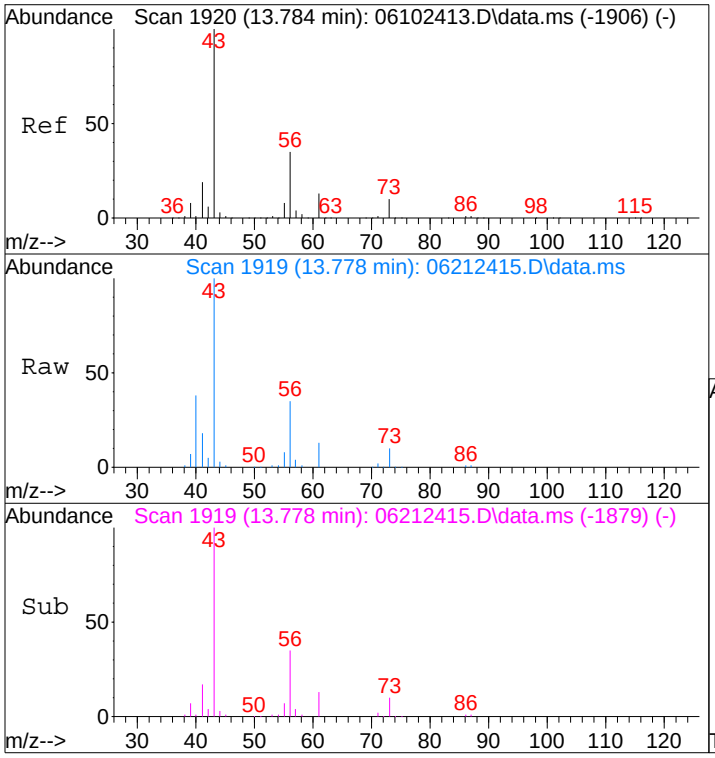


#59
2-Hexanone
Concen: 0.20 ng
RT: 12.93 min Scan# 1770
Delta R.T. -0.017 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion: 43 Resp: 8843

Ion	Ratio	Lower	Upper
43	100		
58	30.1	25.9	65.9

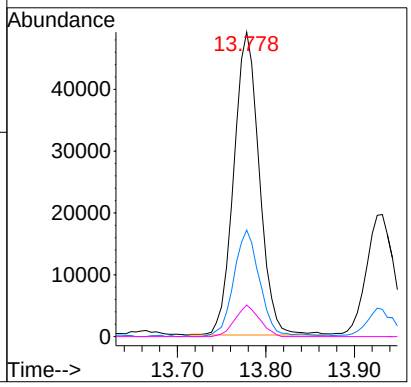


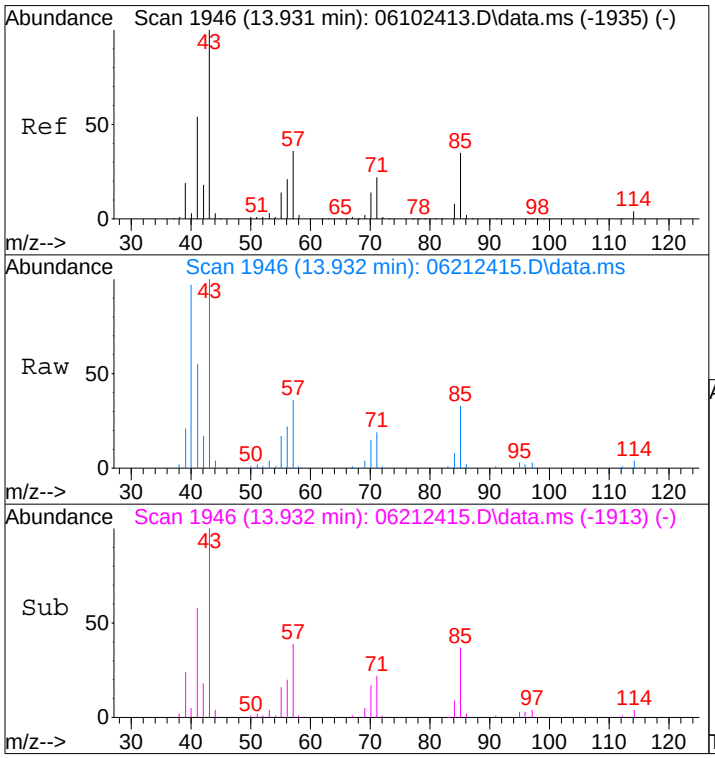


#62
n-Butyl Acetate
Concen: 2.09 ng
RT: 13.78 min Scan# 1919
Delta R.T. -0.023 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion: 43 Resp: 98397

Ion	Ratio	Lower	Upper
43	100		
56	36.1	14.3	54.3
73	10.0	0.0	30.4

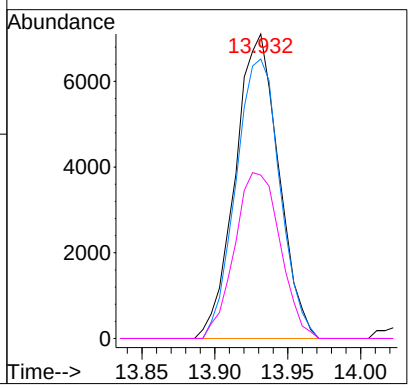


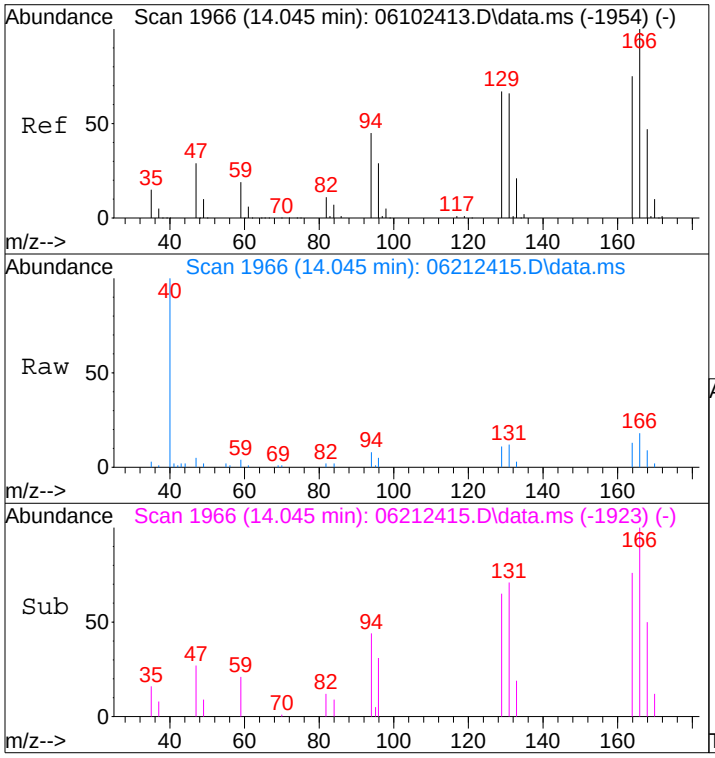


#63
n-Octane
Concen: 0.99 ng
RT: 13.93 min Scan# 1946
Delta R.T. -0.011 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion: 57 Resp: 14715

Ion	Ratio	Lower	Upper
57	100		
85	92.9	79.8	119.6
71	57.1	49.0	73.4

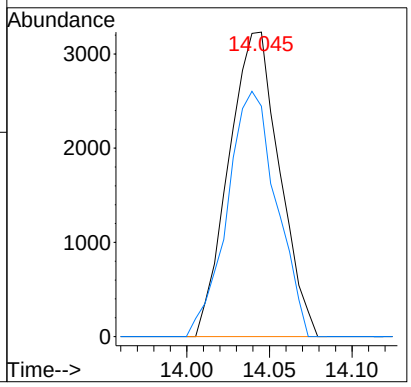


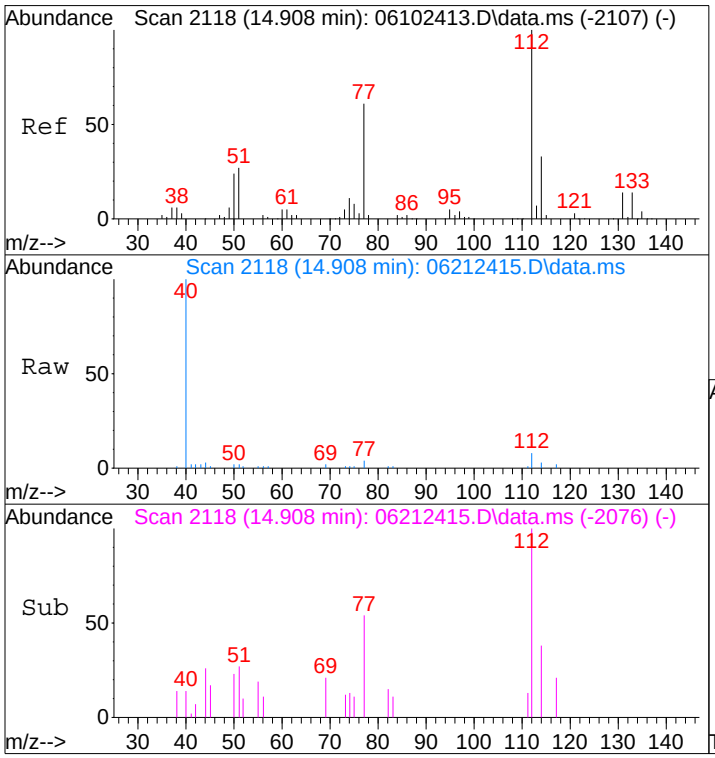


#64
Tetrachloroethene
Concen: 0.28 ng
RT: 14.05 min Scan# 1966
Delta R.T. -0.006 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion:166 Resp: 6898

Ion	Ratio	Lower	Upper
166	100		
164	78.2	56.9	96.9

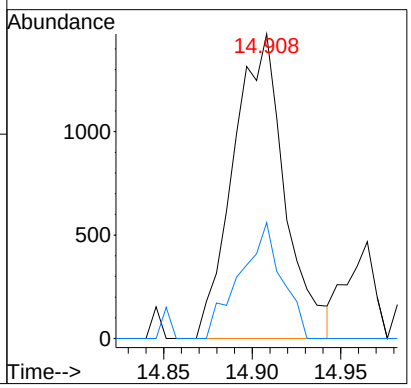


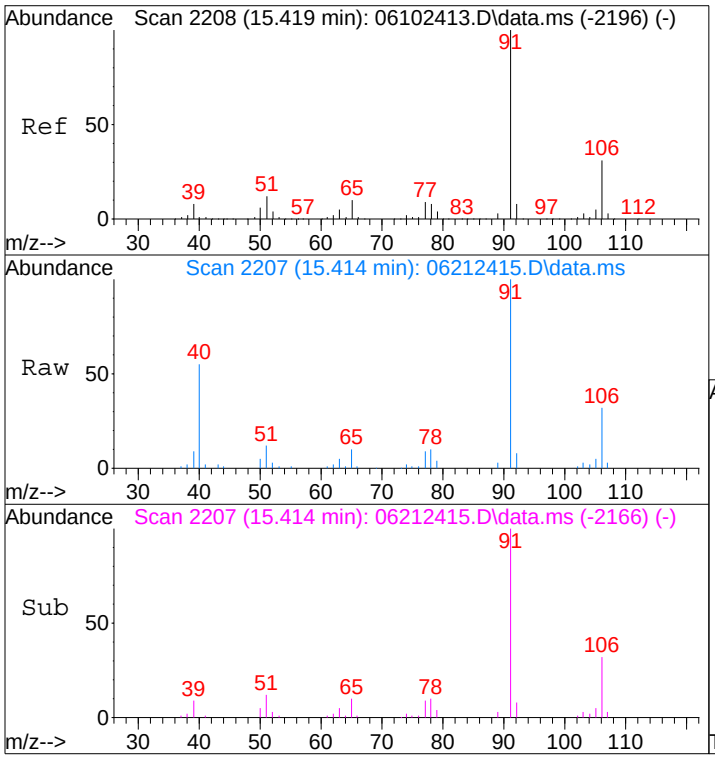


#65
Chlorobenzene
Concen: 0.06 ng
RT: 14.91 min Scan# 2118
Delta R.T. -0.011 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion:112 Resp: 2965

Ion	Ratio	Lower	Upper
112	100		
114	31.1	13.5	53.5

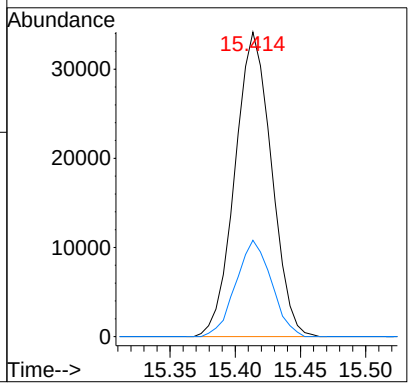


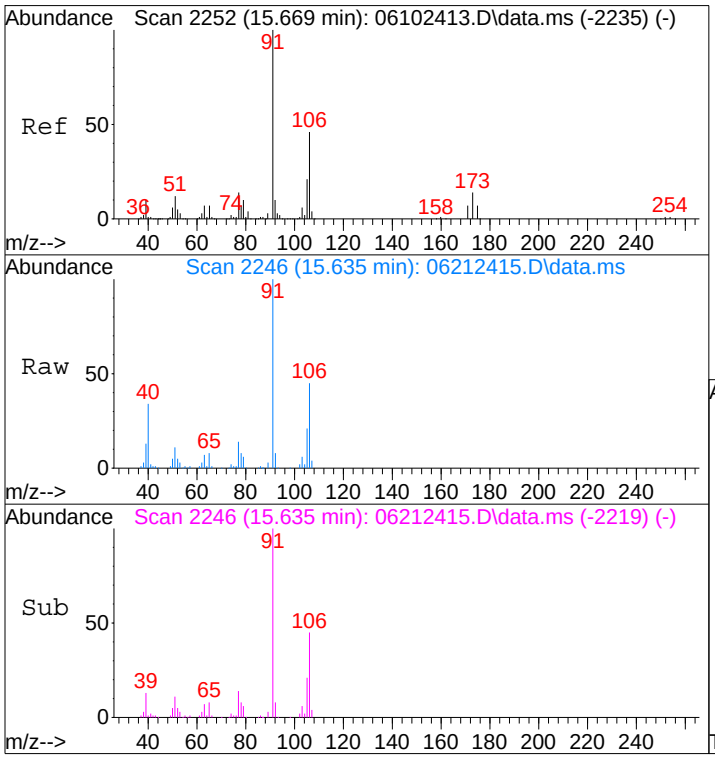


#66
Ethylbenzene
Concen: 0.81 ng
RT: 15.41 min Scan# 2207
Delta R.T. -0.017 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion: 91 Resp: 66417

Ion	Ratio	Lower	Upper
91	100		
106	30.9	10.7	50.7

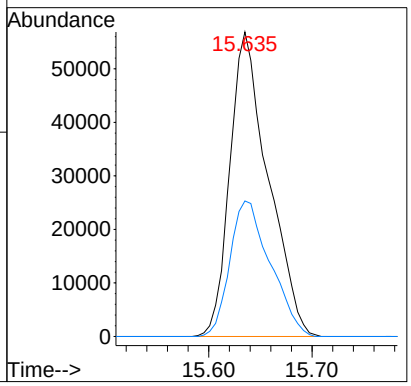


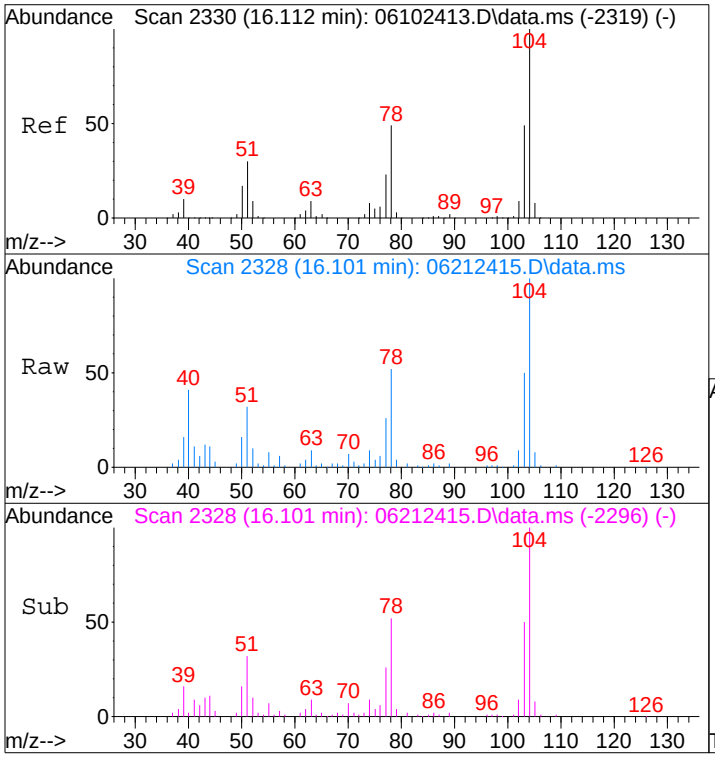


#67
m- & p-Xylenes
Concen: 2.13 ng
RT: 15.63 min Scan# 2246
Delta R.T. -0.045 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion: 91 Resp: 146521

Ion	Ratio	Lower	Upper
91	100		
106	46.9	25.9	65.9

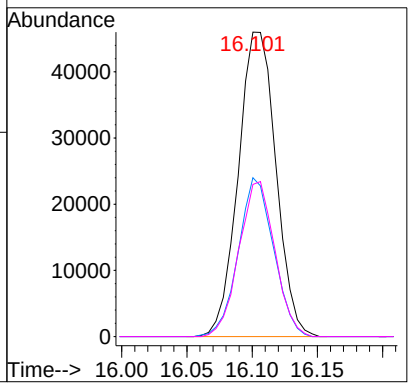


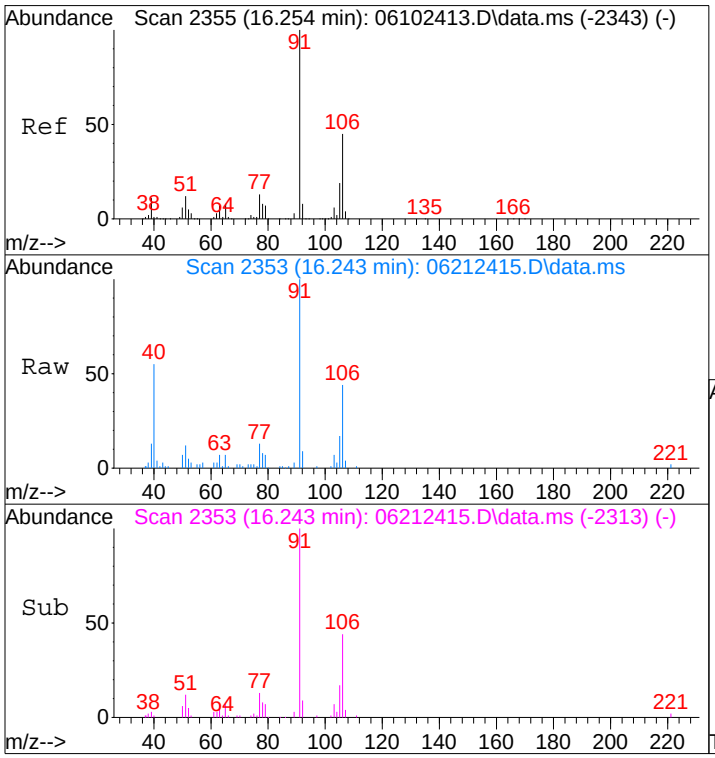


#69
Styrene
Concen: 1.99 ng
RT: 16.10 min Scan# 2328
Delta R.T. -0.017 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion:104 Resp: 92388

Ion	Ratio	Lower	Upper
104	100		
78	48.9	29.2	69.2
103	48.5	29.4	69.4

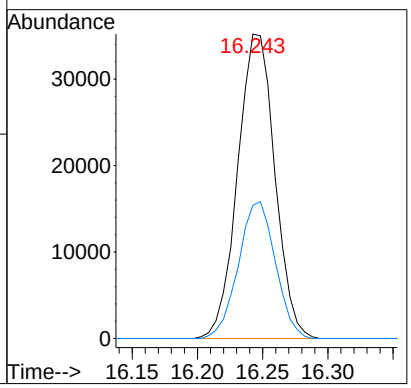


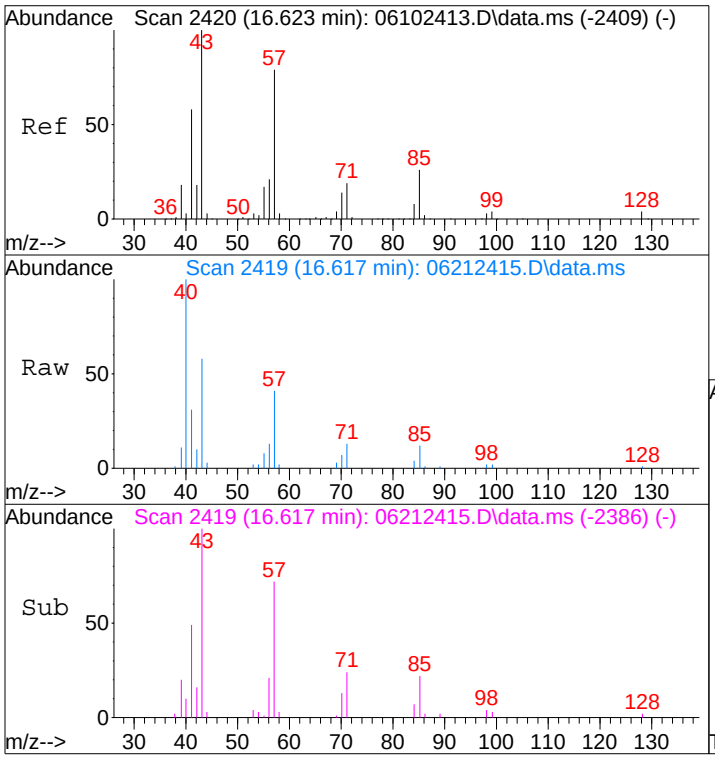


#70
o-Xylene
Concen: 1.03 ng
RT: 16.24 min Scan# 2353
Delta R.T. -0.023 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion: 91 Resp: 69737

Ion	Ratio	Lower	Upper
91	100		
106	44.8	24.5	64.5

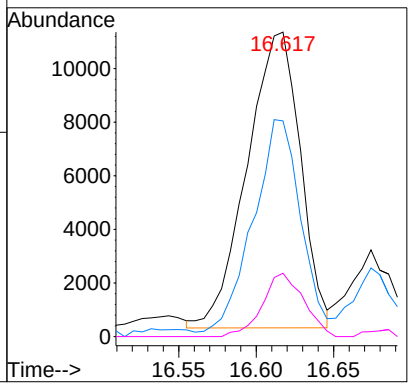


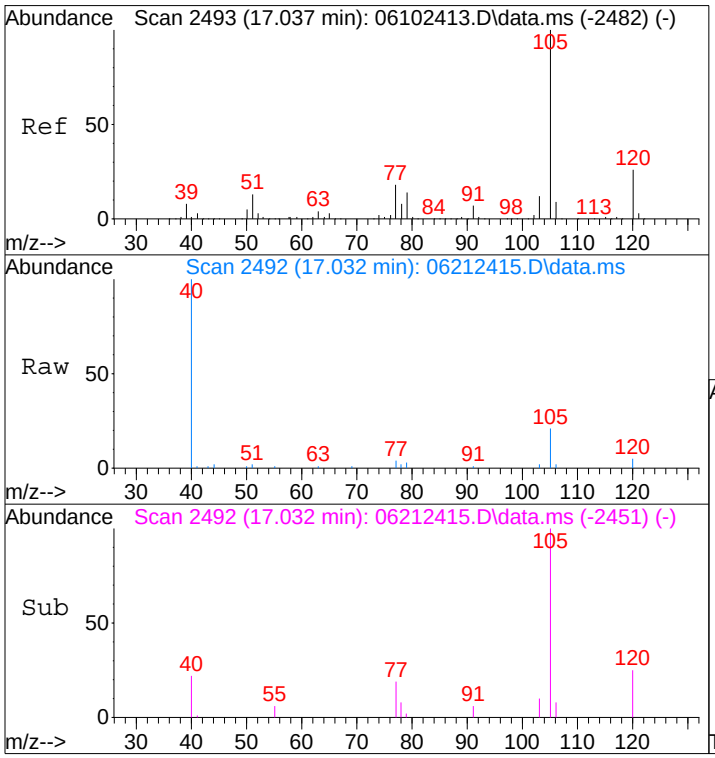


#71
n-Nonane
Concen: 0.67 ng
RT: 16.62 min Scan# 2419
Delta R.T. -0.011 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion: 43 Resp: 26383

Ion	Ratio	Lower	Upper
43	100		
57	67.5	58.2	98.2
85	16.6	5.9	45.9

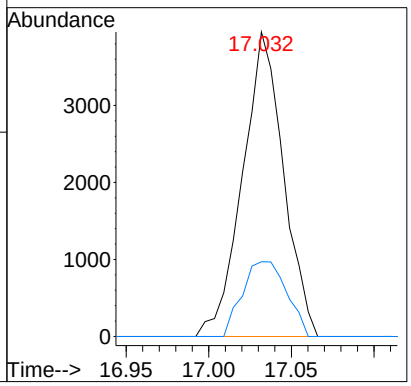


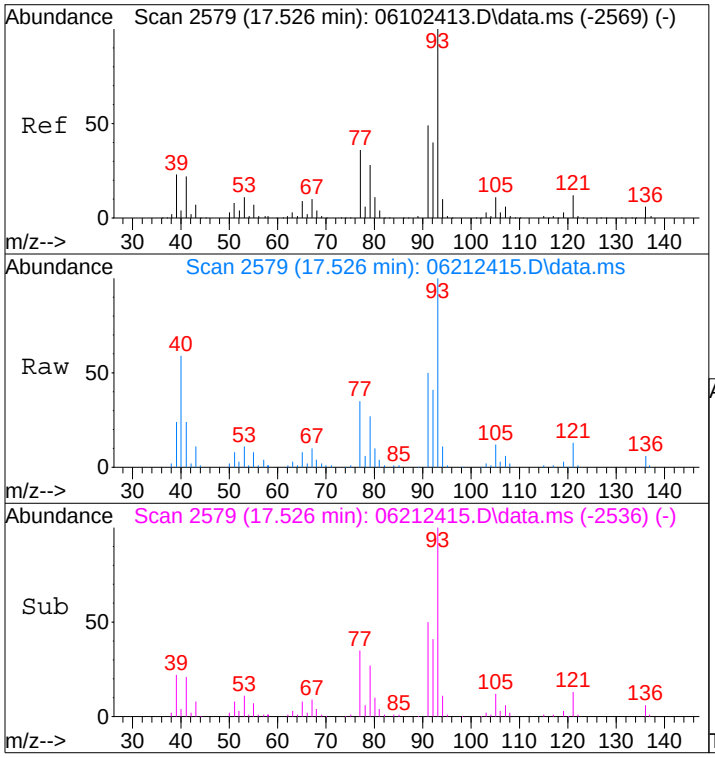


#74
Cumene
Concen: 0.08 ng
RT: 17.03 min Scan# 2492
Delta R.T. -0.017 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion:105 Resp: 6798

Ion	Ratio	Lower	Upper
105	100		
120	26.6	6.0	46.0

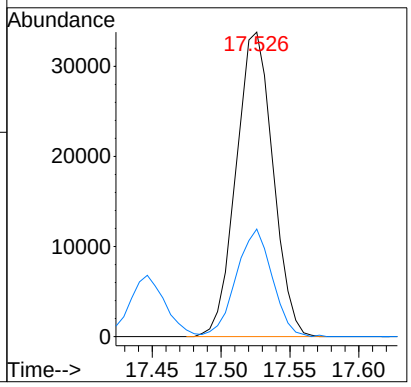


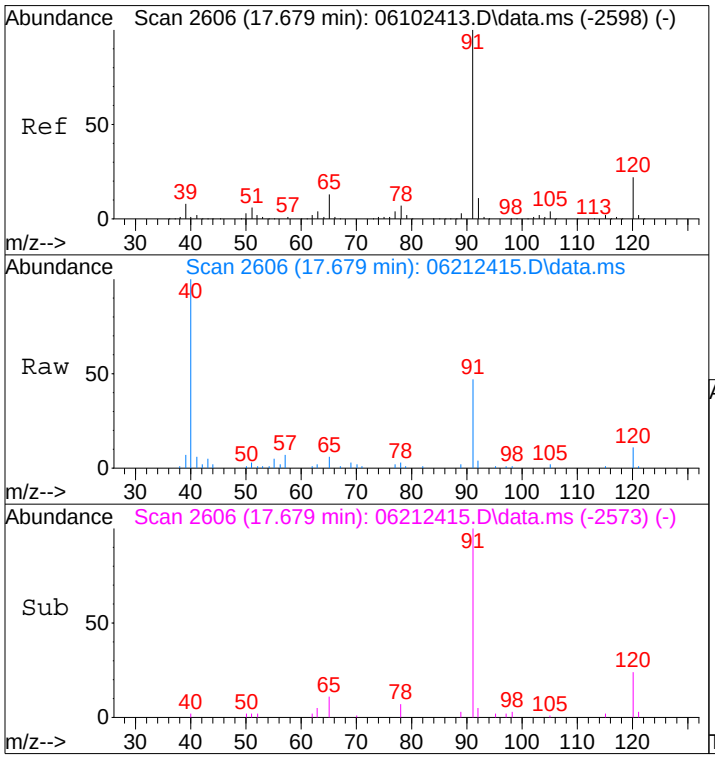


#75
alpha-Pinene
Concen: 1.60 ng
RT: 17.53 min Scan# 2579
Delta R.T. -0.006 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion: 93 Resp: 62967

Ion	Ratio	Lower	Upper
93	100		
77	34.5	15.3	55.3

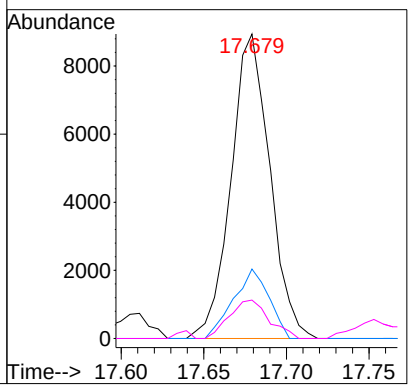


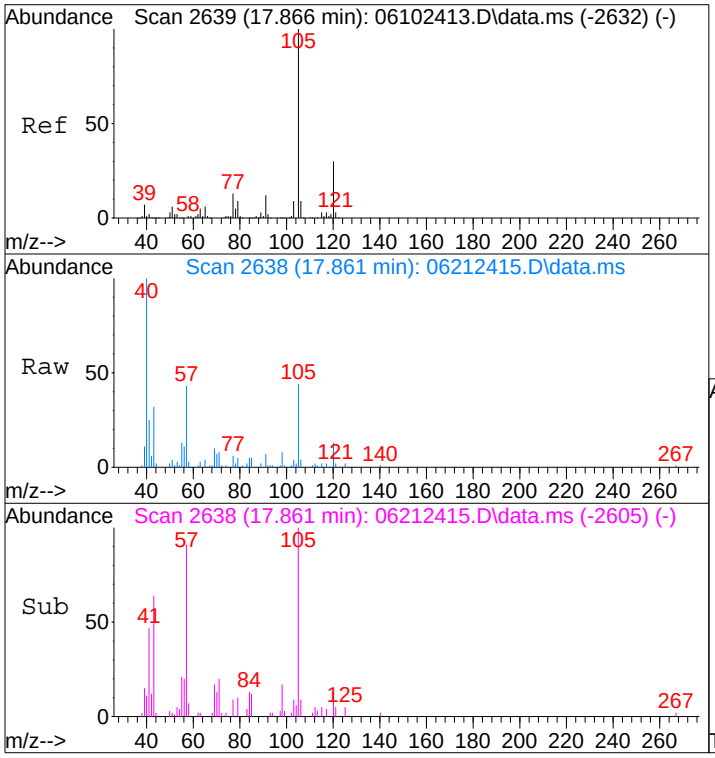


#76
n-Propylbenzene
Concen: 0.14 ng
RT: 17.68 min Scan# 2606
Delta R.T. -0.011 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion: 91 Resp: 14623

Ion	Ratio	Lower	Upper
91	100		
120	20.9	2.7	42.7
65	12.9	0.0	32.7

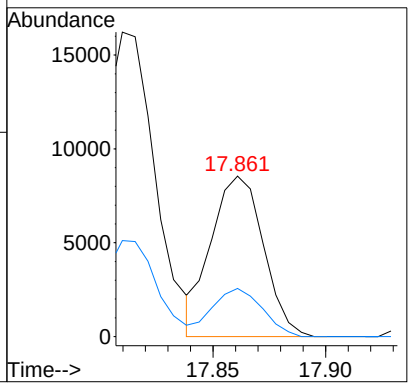


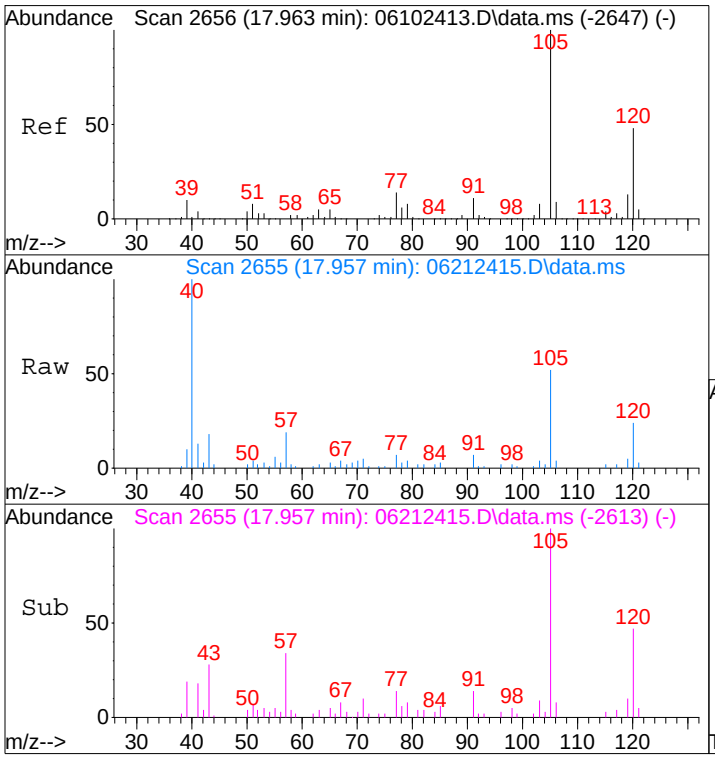


#78
4-Ethyltoluene
Concen: 0.17 ng
RT: 17.86 min Scan# 2638
Delta R.T. -0.011 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion:105 Resp: 13814

Ion	Ratio	Lower	Upper
105	100		
120	28.8	9.9	49.9

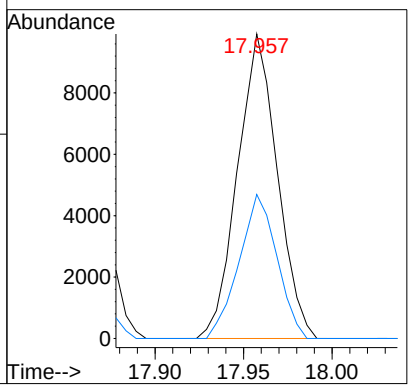


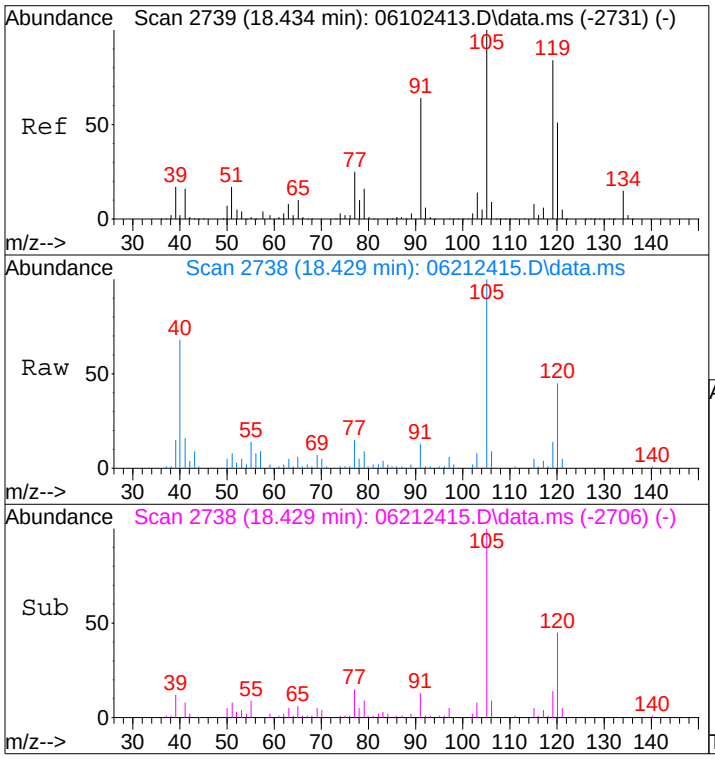


#79
1,3,5-Trimethylbenzene
Concen: 0.22 ng
RT: 17.96 min Scan# 2655
Delta R.T. -0.011 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion:105 Resp: 15497

Ion	Ratio	Lower	Upper
105	100		
120	45.0	28.0	68.0

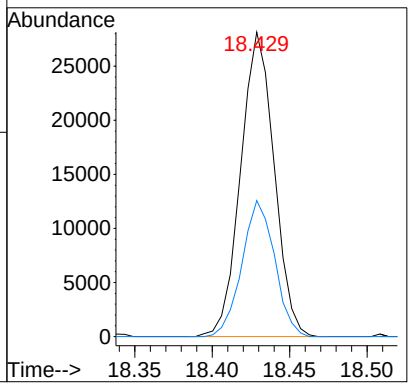


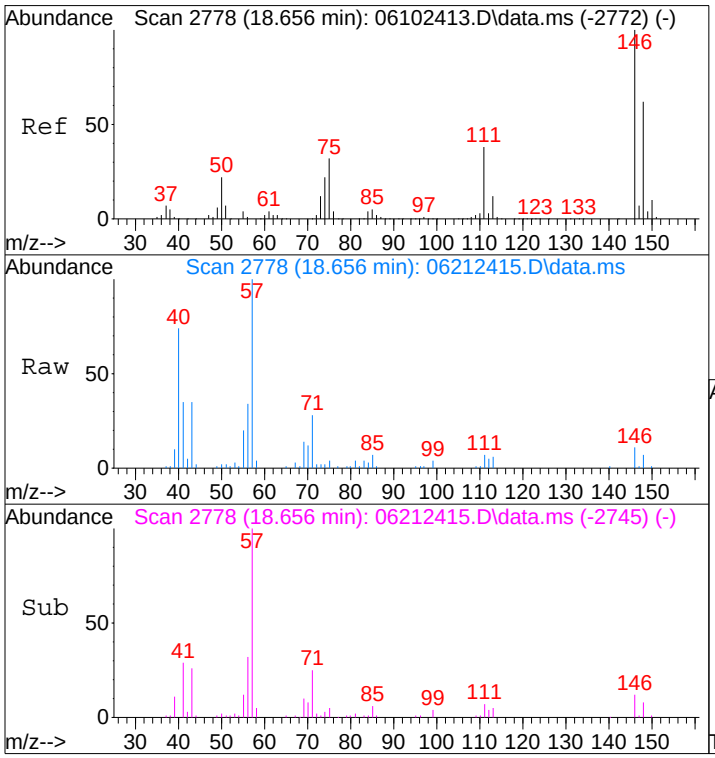


#82
1,2,4-Trimethylbenzene
Concen: 0.57 ng
RT: 18.43 min Scan# 2738
Delta R.T. -0.017 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion:105 Resp: 42470

Ion	Ratio	Lower	Upper
105	100		
120	43.7	31.9	71.9

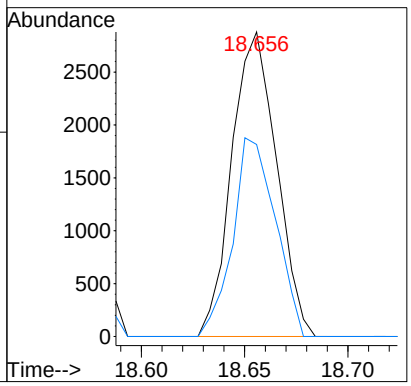


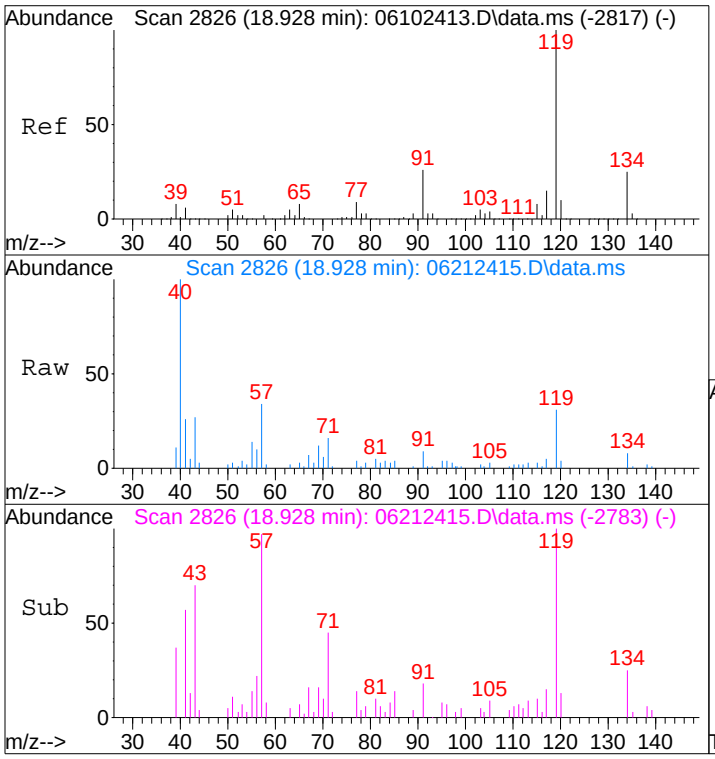


#86
1,4-Dichlorobenzene
Concen: 0.09 ng
RT: 18.66 min Scan# 2778
Delta R.T. -0.011 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion:146 Resp: 4336

Ion	Ratio	Lower	Upper
146	100		
148	62.2	43.3	83.3

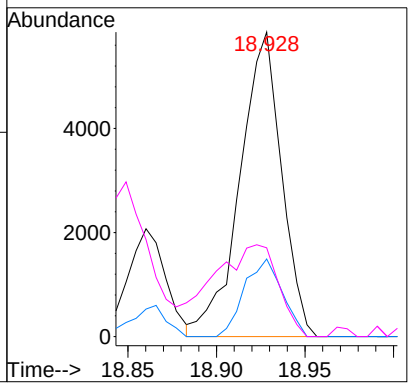


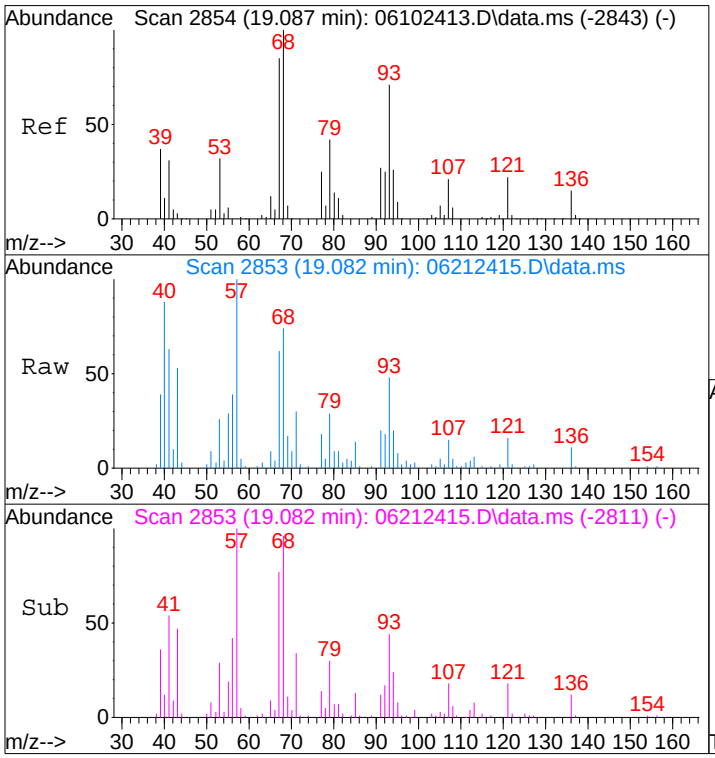


#88
4-Isopropyltoluene (p-Cymene)
Concen: 0.11 ng
RT: 18.93 min Scan# 2826
Delta R.T. -0.006 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion:119 Resp: 9556

Ion	Ratio	Lower	Upper
119	100		
134	23.3	4.9	44.9
91	48.3	5.8	45.8#

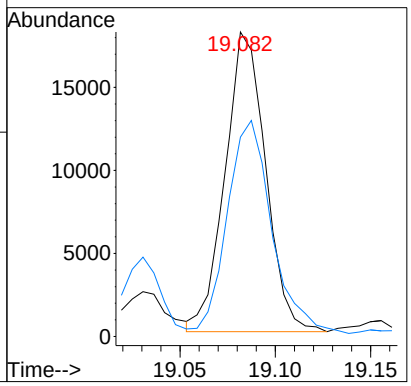




#91
d-Limonene
Concen: 1.06 ng
RT: 19.08 min Scan# 2853
Delta R.T. -0.011 min
Lab File: 06212415.D
Acq: 21 Jun 2024 18:06

Tgt Ion: 68 Resp: 26718

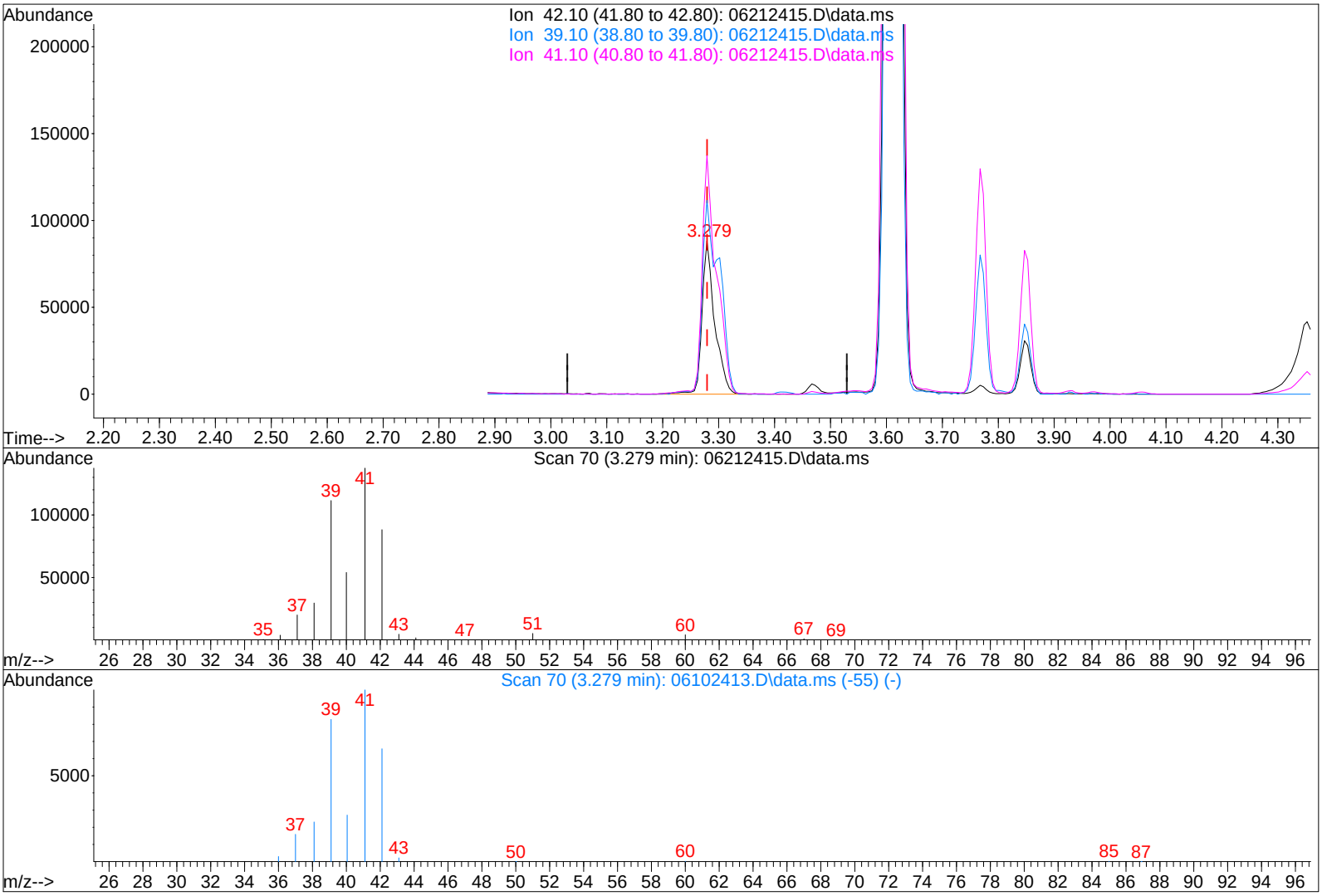
Ion	Ratio	Lower	Upper
68	100		
93	81.5	52.2	92.2



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\21\06212415.D Vial: 5
Acq On : 21 Jun 2024 18:06 Operator: SC
Sample : P2402249-057 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 24 08:54:10 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:53:58 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06212415.D\data.ms

(2) Propene (T)

3.279min (-0.001) 6.25ng

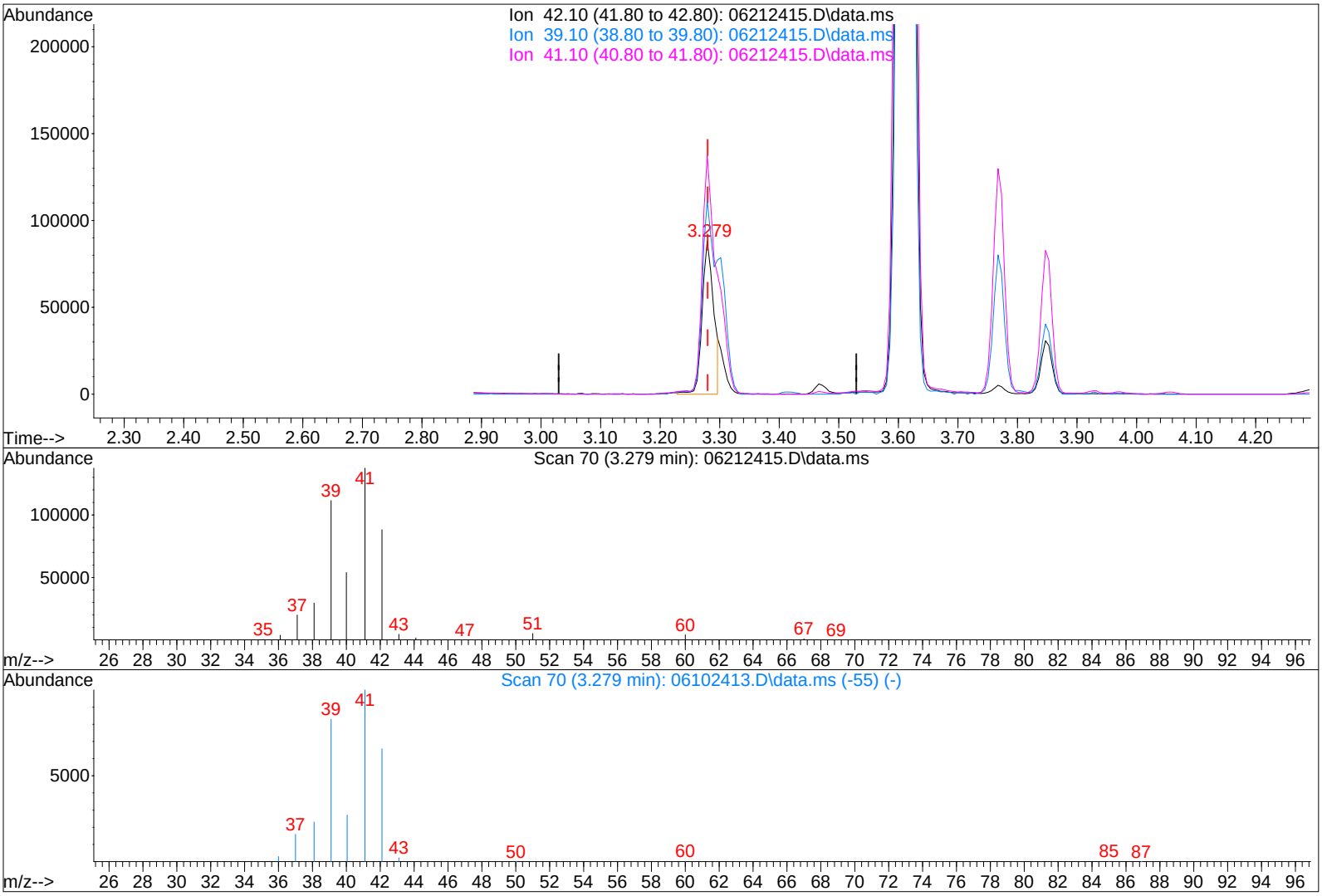
response 138987

Ion	Exp%	Act%
42.10	100	100
39.10	127.30	170.25#
41.10	154.30	176.25#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\21\06212415.D Vial: 5
Acq On : 21 Jun 2024 18:06 Operator: SC
Sample : P2402249-057 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 24 08:54:10 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:53:58 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06212415.D\data.ms

(2) Propene (T)

3.279min (-0.001) 5.34ng m

response 118683

Ion	Exp%	Act%
42.10	100	100
39.10	127.30	117.64
41.10	154.30	141.46
0.00	0.00	0.00

IPC

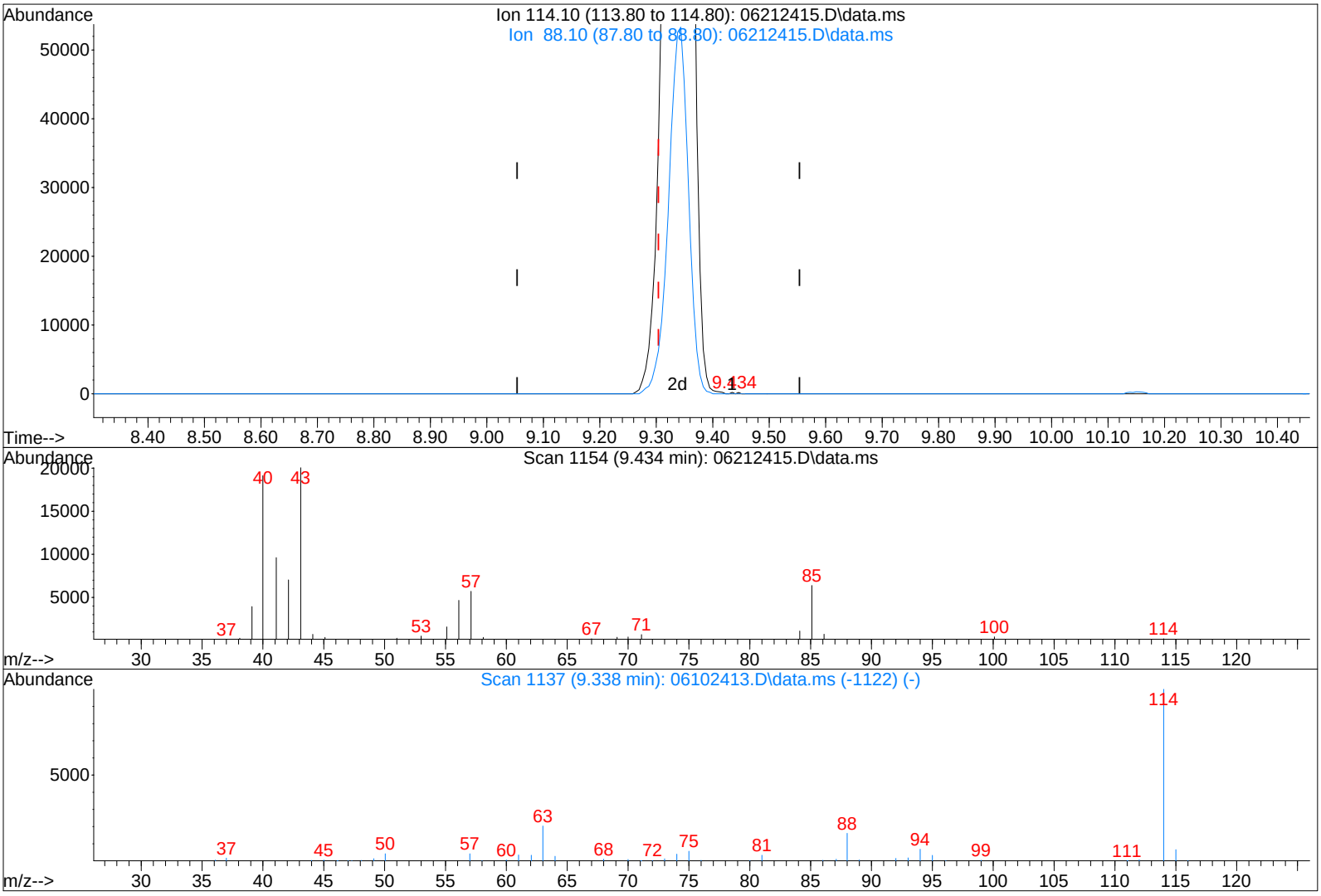
MJ 6/28/24

CG 6/29/24

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\21\06212415.D Vial: 5
Acq On : 21 Jun 2024 18:06 Operator: SC
Sample : P2402249-057 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 24 08:50:18 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06212415.D\data.ms

(37) 1,4-Difluorobenzene (IS2) (IR)

9.434min (+0.131) 12.50ng

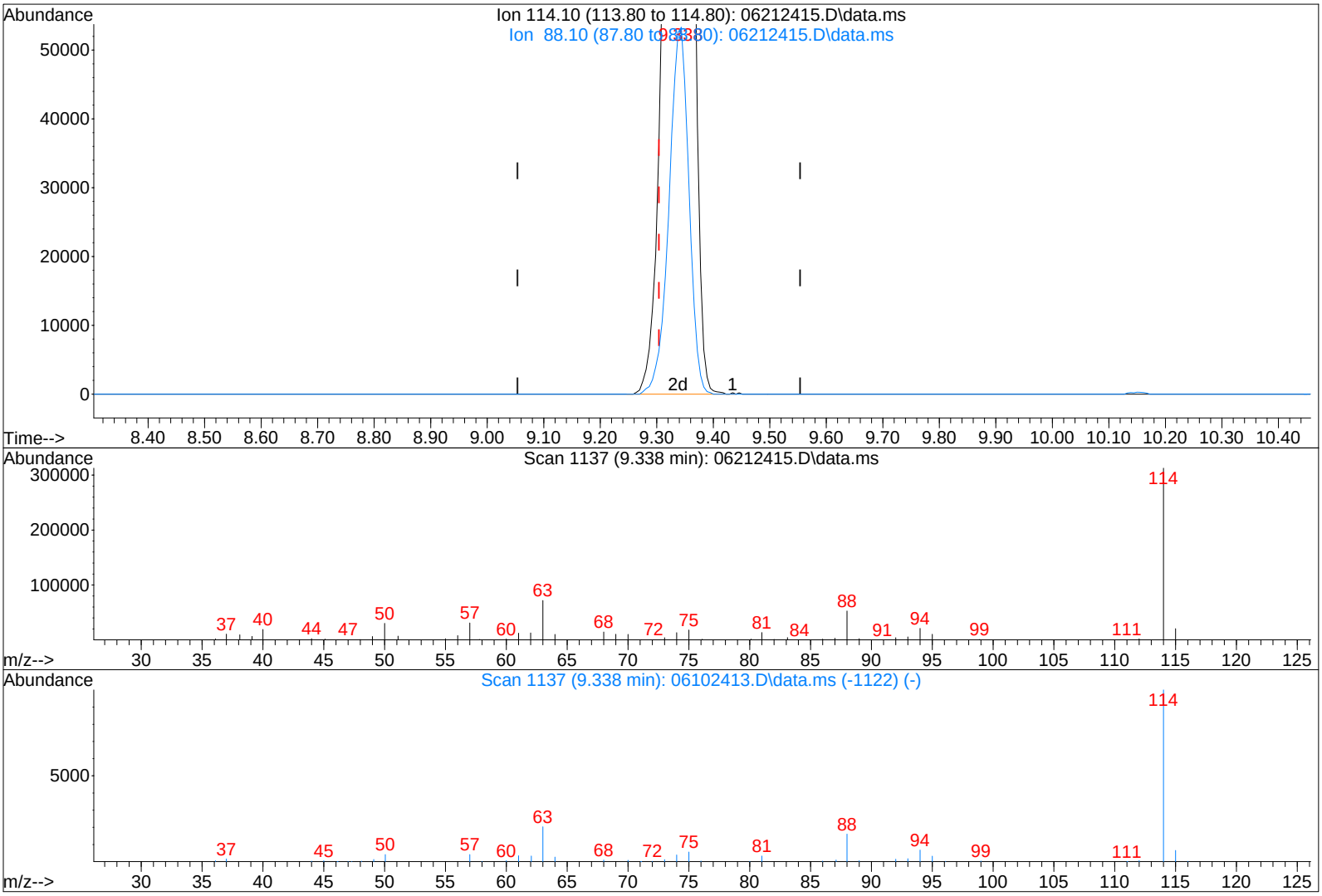
response 130

Ion	Exp%	Act%
114.10	100	100
88.10	16.70	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\21\06212415.D Vial: 5
Acq On : 21 Jun 2024 18:06 Operator: SC
Sample : P2402249-057 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 24 08:50:18 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06212415.D\data.ms

(37) 1,4-Difluorobenzene (IS2) (IR)

9.338min (+0.034) 12.50ng m

response 771698

Ion	Exp%	Act%
114.10	100	100
88.10	16.70	0.00
0.00	0.00	0.00
0.00	0.00	0.00

MP

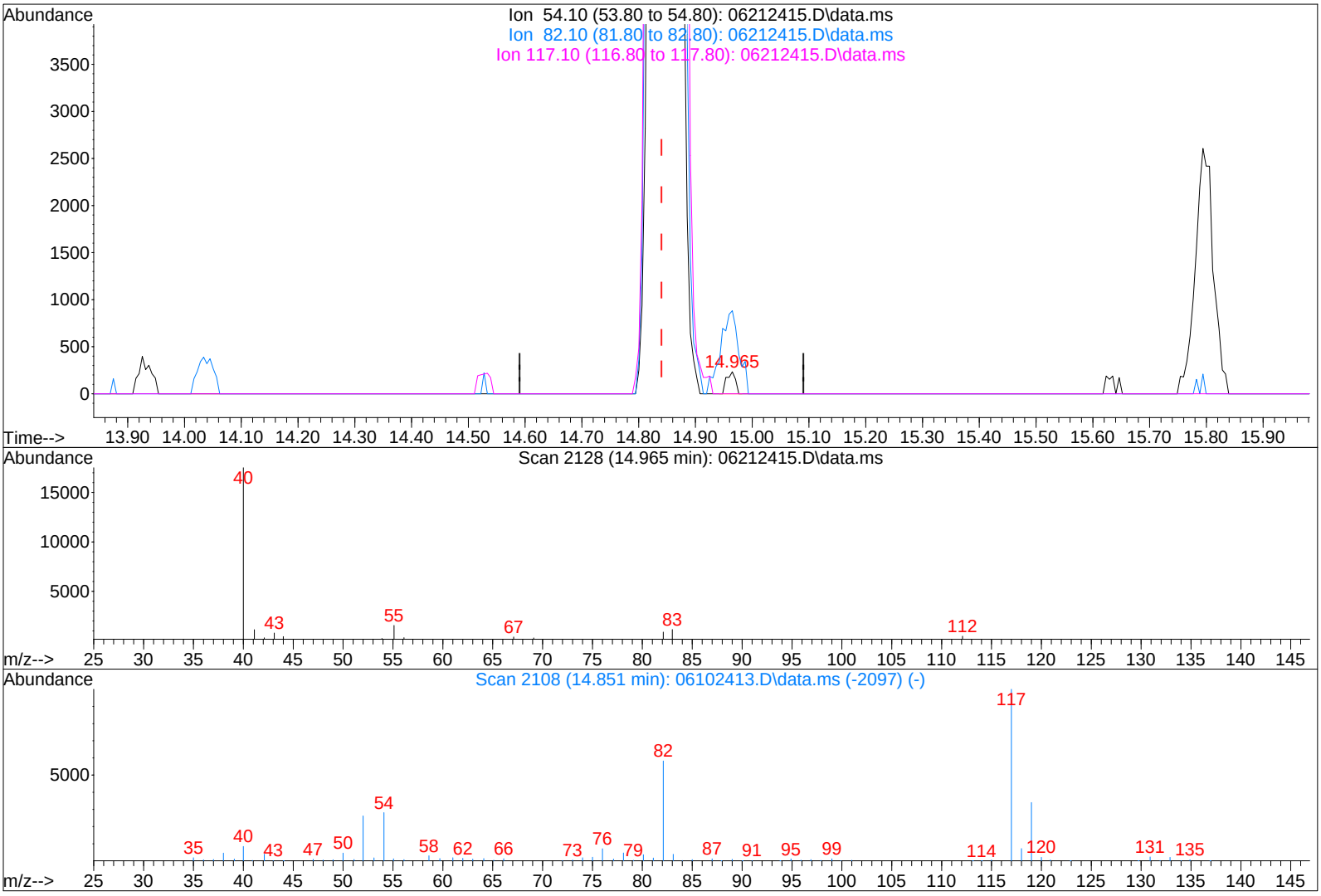
6/24/24

6/29/24

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\21\06212415.D Vial: 5
Acq On : 21 Jun 2024 18:06 Operator: SC
Sample : P2402249-057 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 24 08:50:18 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06212415.D\data.ms

(56) Chlorobenzene-d5 (IS3) (IR)

14.965min (+0.125) 12.50ng

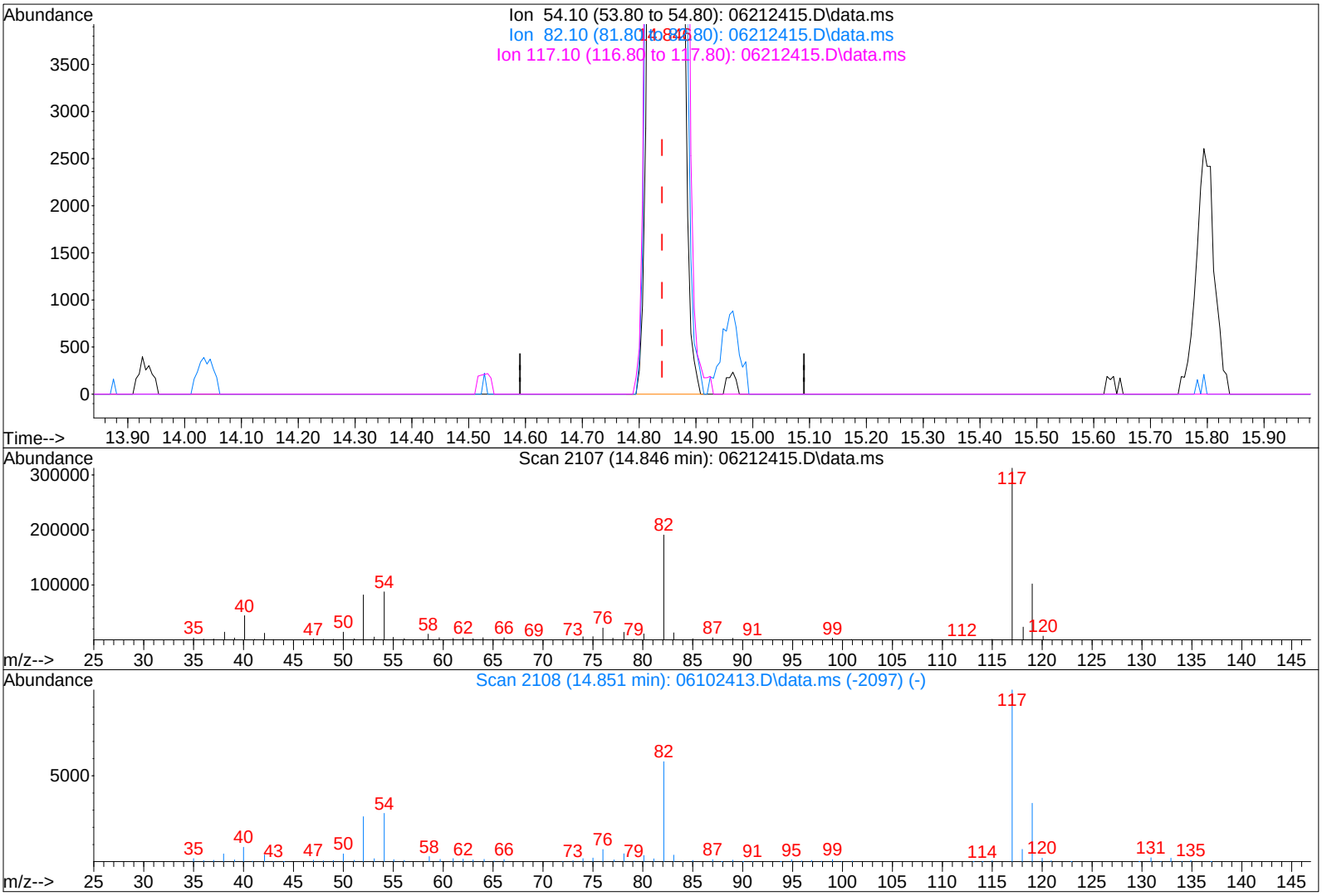
response 251

Ion	Exp%	Act%
54.10	100	100
82.10	218.60	791.24#
117.10	356.60	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\21\06212415.D Vial: 5
Acq On : 21 Jun 2024 18:06 Operator: SC
Sample : P2402249-057 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 24 08:50:18 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06212415.D\data.ms

(56) Chlorobenzene-d5 (IS3) (IR)

14.846min (+0.006) 12.50ng m

response 178704

Ion	Exp%	Act%
54.10	100	100
82.10	218.60	1.11#
117.10	356.60	0.00#
0.00	0.00	0.00

MP

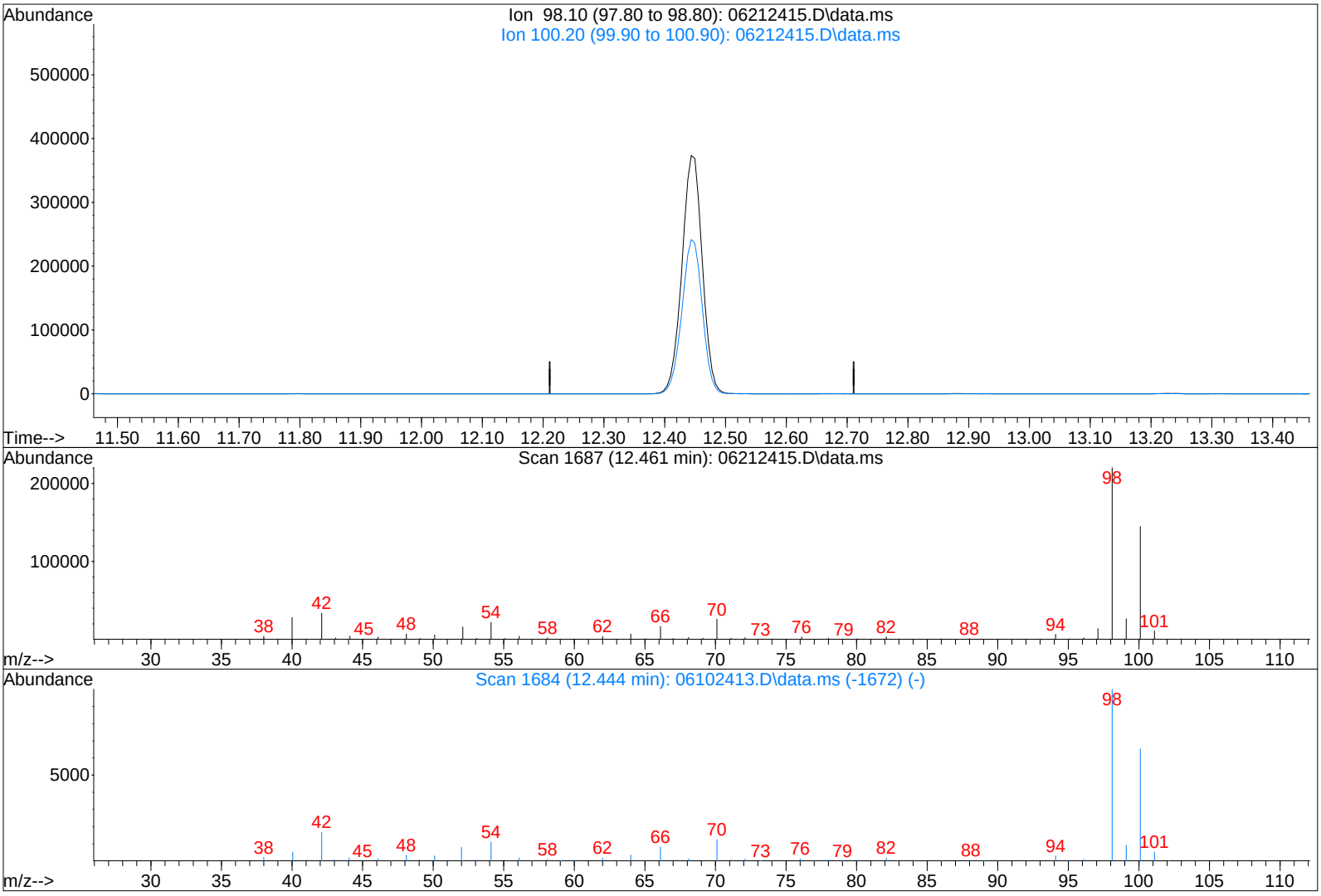
6/24/24

CG 6/29/24

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\21\06212415.D Vial: 5
Acq On : 21 Jun 2024 18:06 Operator: SC
Sample : P2402249-057 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 24 08:50:18 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06212415.D\data.ms

(57) Toluene-d8 (SS2) (S)

12.461min (-12.461) 0.00ng

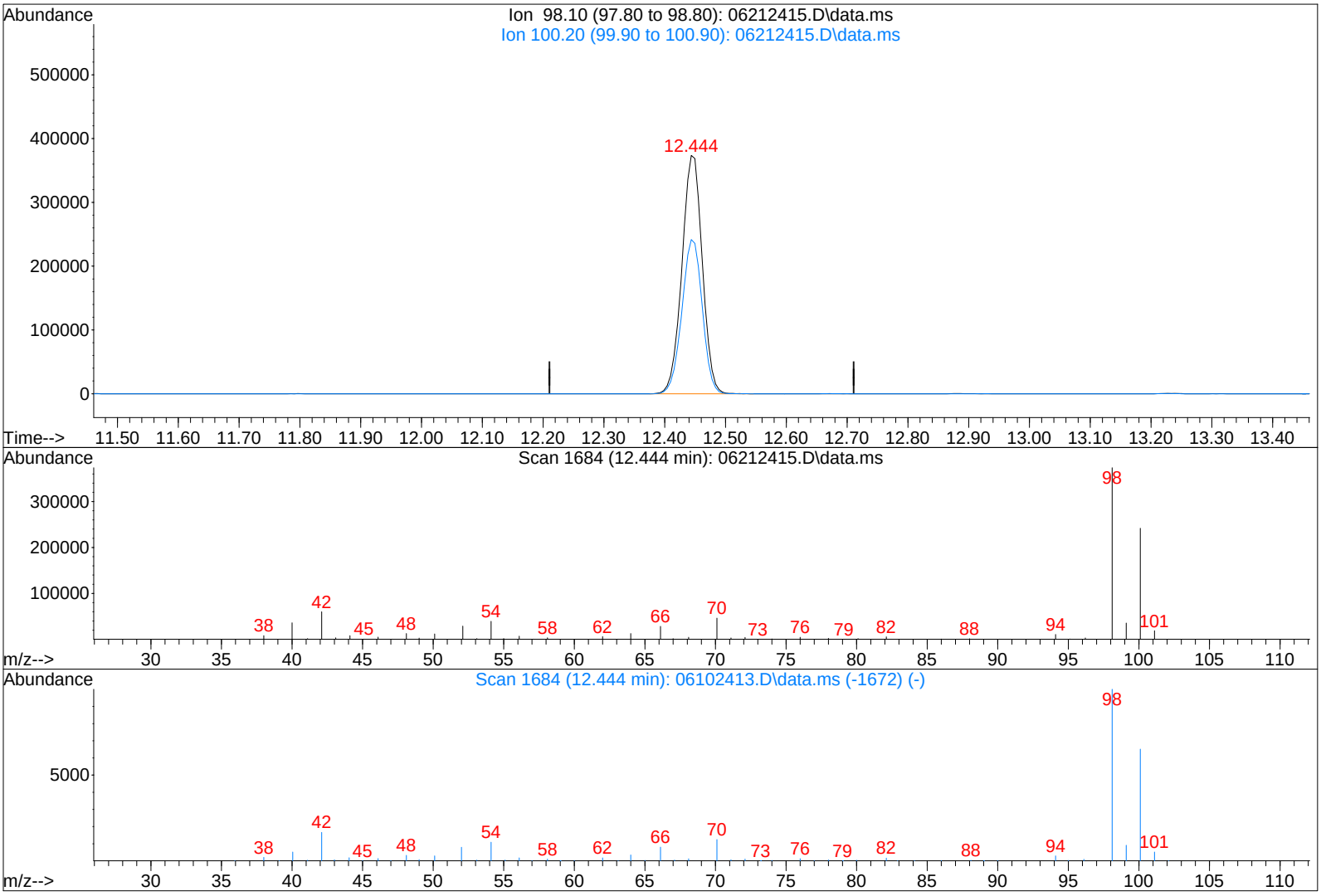
response 0

Ion	Exp%	Act%
98.10	100	0.00
100.20	64.40	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\21\06212415.D Vial: 5
Acq On : 21 Jun 2024 18:06 Operator: SC
Sample : P2402249-057 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 24 08:50:18 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06212415.D\data.ms

(57) Toluene-d8 (SS2) (S)

12.444min (-0.017) 12.68ng m

response 867372

Ion	Exp%	Act%
98.10	100	100
100.20	64.40	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

MP

6/24/24

6/29/24

Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\21\06212415.D Vial: 5
Acq On : 21 Jun 2024 18:06 Operator: SC
Sample : P2402249-057 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 16:42:43 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

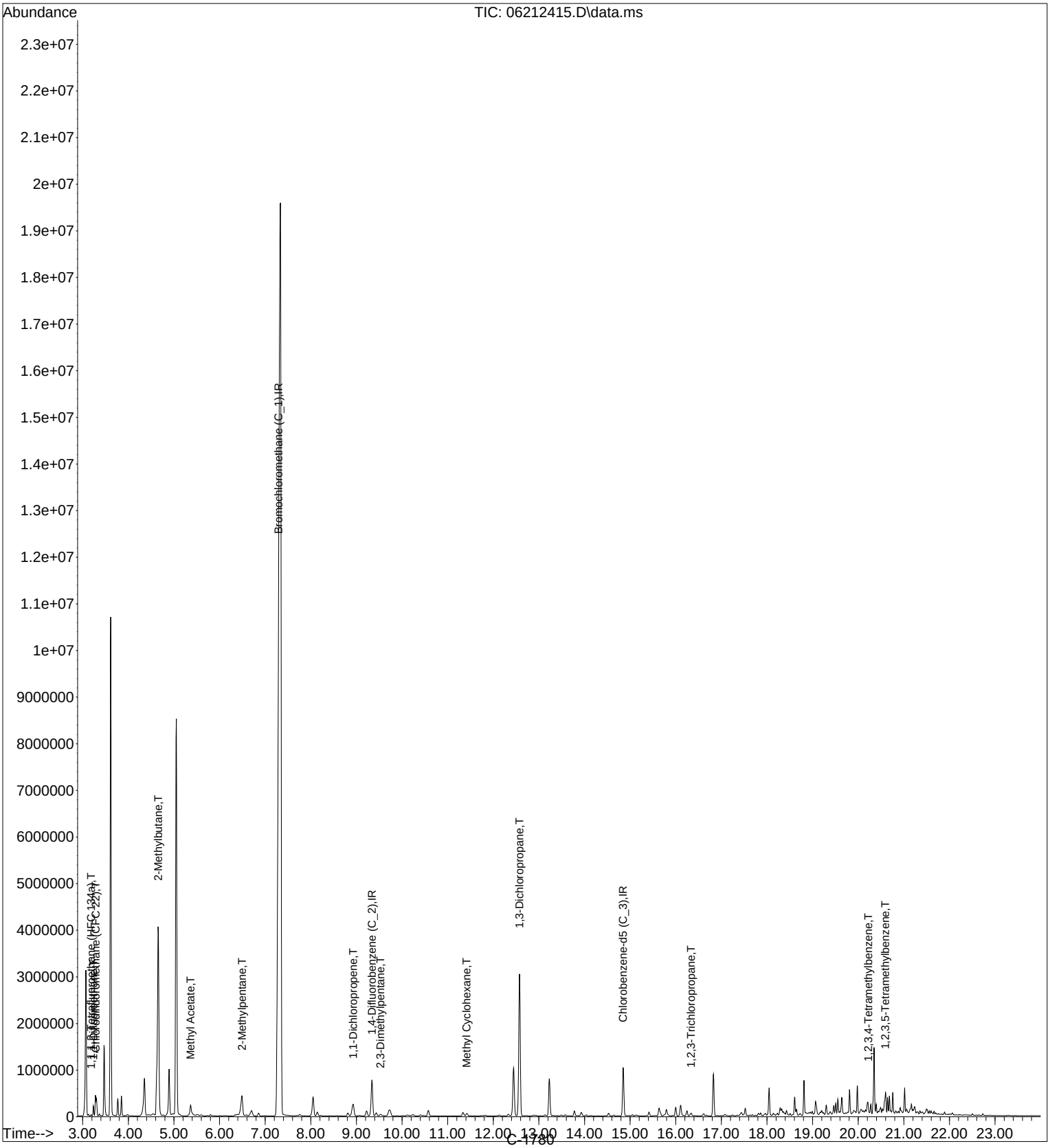
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Bromochloromethane (C 1)	7.29	130	173577	12.500 ng		0.04
16) 1,4-Difluorobenzene (C 2)	9.34	114	771563	12.500 ng		0.02
19) Chlorobenzene-d5 (C_3)	14.85	54	178684	12.500 ng		0.00
Target Compounds						Qvalue
2) Chloropentafluoroethane	3.13	85	155	N.D.		
3) 1,1,1,2-Tetrafluoroeth...	3.18	83	11354	0.637 ng		99
4) 1,1-Difluoroethane	3.23	65	53596	3.537 ng		91
5) Chlorodifluoromethane ...	3.28	67	1779	0.301 ng		90
6) 1-Chloro-1,1-Difluoroe...	3.49	65	2079	N.D.		
7) Dichlorofluoromethane ...	4.24	67	135	N.D.		
8) Vinylbromide	0.00	108	0	N.D.		
9) 2,2-Dichloro-1,1,1-tri...	0.00	83	0	N.D.		
10) 2-Methylbutane	4.65	57	885265	42.761 ng		96
11) Methyl Acetate	5.36	43	113602	1.942 ng	#	1
12) 2-Methylpentane	6.49	71	11765	0.783 ng	#	1
13) 2,2-Dichloropropane	0.00	77	0	N.D.		
14) 1,1-Dichloropropene	8.93	75	5088	0.206 ng	#	1
15) Thiophene	9.11	84	257	N.D.		
17) 2,3-Dimethylpentane	9.53	56	17139	0.459 ng		91
18) Dibromomethane	9.83	174	53	N.D.		
20) Methyl Cyclohexane	11.42	55	25347	0.827 ng		94
21) 1,3-Dichloropropane	12.57	76	13578	0.570 ng	#	1
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		
23) 1-Chlorohexane	0.00	91	0	N.D.		
24) 1,2,3-Trichloropropane	16.33	75	7224	0.303 ng	#	46
25) Bromobenzene	17.03	77	1258	N.D.		
26) 2-Chlorotoluene	17.61	91	1092	N.D.		
27) 4-Chlorotoluene	17.61	91	1092	N.D.		
28) Indane	19.12	117	5475	N.D.		
29) Indene	19.21	115	2152	N.D.		
30) 1,2,4,5-Tetramethylben...	20.18	119	4432	N.D.		
31) 1,2,3,4-Tetramethylben...	20.22	119	7468	0.121 ng		100
32) 1,2,3,5-Tetramethylben...	20.59	119	8132	0.139 ng		94
33) 1,2,3-Trichlorobenzene	21.19	180	52	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212415.D Vial: 5
Acq On : 21 Jun 2024 18:06 Operator: SC
Sample : P2402249-057 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 16:42:43 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



C-1780

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\21\
Data File : 06212415.D
Acq On : 21 Jun 2024 18:06
Operator : SC
Sample : P2402249-057 (400mL)
Misc : S37-06062402
ALS Vial : 5 Sample Multiplier: 1

MJ 6/28/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06212415.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.069	18	33	40	rBV	3124150	5189522	6.99%	3.782%
2	3.126	40	43	49	rVB	31282	35571	0.05%	0.026%
3	3.183	49	53	57	rBV	24673	22217	0.03%	0.016%
4	3.234	57	62	66	rBV	210557	249941	0.34%	0.182%
5	3.279	66	70	72	rVV	438091	560711	0.76%	0.409%
6	3.302	72	74	80	rVB	371627	434131	0.58%	0.316%
7	3.364	80	85	90	rBV	40547	53089	0.07%	0.039%
8	3.467	98	103	113	rBV	1508030	2182552	2.94%	1.591%
9	3.614	120	129	143	rVB	10690205	15717098	21.16%	11.454%
10	3.767	150	156	161	rBV	368499	484401	0.65%	0.353%
11	3.847	165	170	177	rVB	423920	552187	0.74%	0.402%
12	3.983	188	194	202	rVB4	24451	53617	0.07%	0.039%
13	4.352	240	259	267	rBV	806128	1904477	2.56%	1.388%
14	4.443	268	275	285	rVV4	24066	113372	0.15%	0.083%
15	4.551	285	294	300	rVV2	43444	167164	0.23%	0.122%
16	4.653	300	312	327	rVV2	4056431	9586679	12.91%	6.986%
17	4.761	327	331	338	rVV2	20589	40415	0.05%	0.029%
18	4.892	338	354	362	rVV	1003713	1925203	2.59%	1.403%
19	4.977	363	369	373	rVV4	46113	139009	0.19%	0.101%
20	5.051	373	382	409	rVB	8515080	15280486	20.58%	11.136%
21	5.363	423	437	457	rBV	230464	685094	0.92%	0.499%
22	5.516	458	464	472	rVV3	27919	91643	0.12%	0.067%
23	5.596	472	478	488	rVB4	23309	64114	0.09%	0.047%
24	5.738	497	503	508	rBV4	8159	14543	0.02%	0.011%
25	5.800	508	514	520	rBV	27230	48330	0.07%	0.035%
26	6.010	539	551	558	rBV4	7104	15788	0.02%	0.012%
27	6.118	558	570	575	rBV7	6882	25869	0.03%	0.019%
28	6.340	602	609	612	rBV	23225	46721	0.06%	0.034%
29	6.385	612	617	621	rVV2	33629	85786	0.12%	0.063%
30	6.487	622	635	646	rVV	432281	1356210	1.83%	0.988%
31	6.590	648	653	659	rVV7	20120	60148	0.08%	0.044%
32	6.703	659	673	685	rVB	113642	384006	0.52%	0.280%
33	6.856	692	700	710	rVB	60925	130192	0.18%	0.095%
34	7.333	759	784	810	rBV2	19579154	74265117	100.00%	54.121%
35	7.691	840	847	853	rBV3	8561	24458	0.03%	0.018%
36	7.759	853	859	870	rVB3	28425	73167	0.10%	0.053%
37	8.049	895	910	919	rBV	404448	1019193	1.37%	0.743%
38	8.145	919	927	934	rVV2	81944	186965	0.25%	0.136%
39	8.219	935	940	948	rVB4	12058	25614	0.03%	0.019%
40	8.583	994	1004	1009	rBV3	6220	17236	0.02%	0.013%

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\21\
Data File : 06212415.D
Acq On : 21 Jun 2024 18:06
Operator : SC
Sample : P2402249-057 (400mL)
Misc : S37-06062402
ALS Vial : 5 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

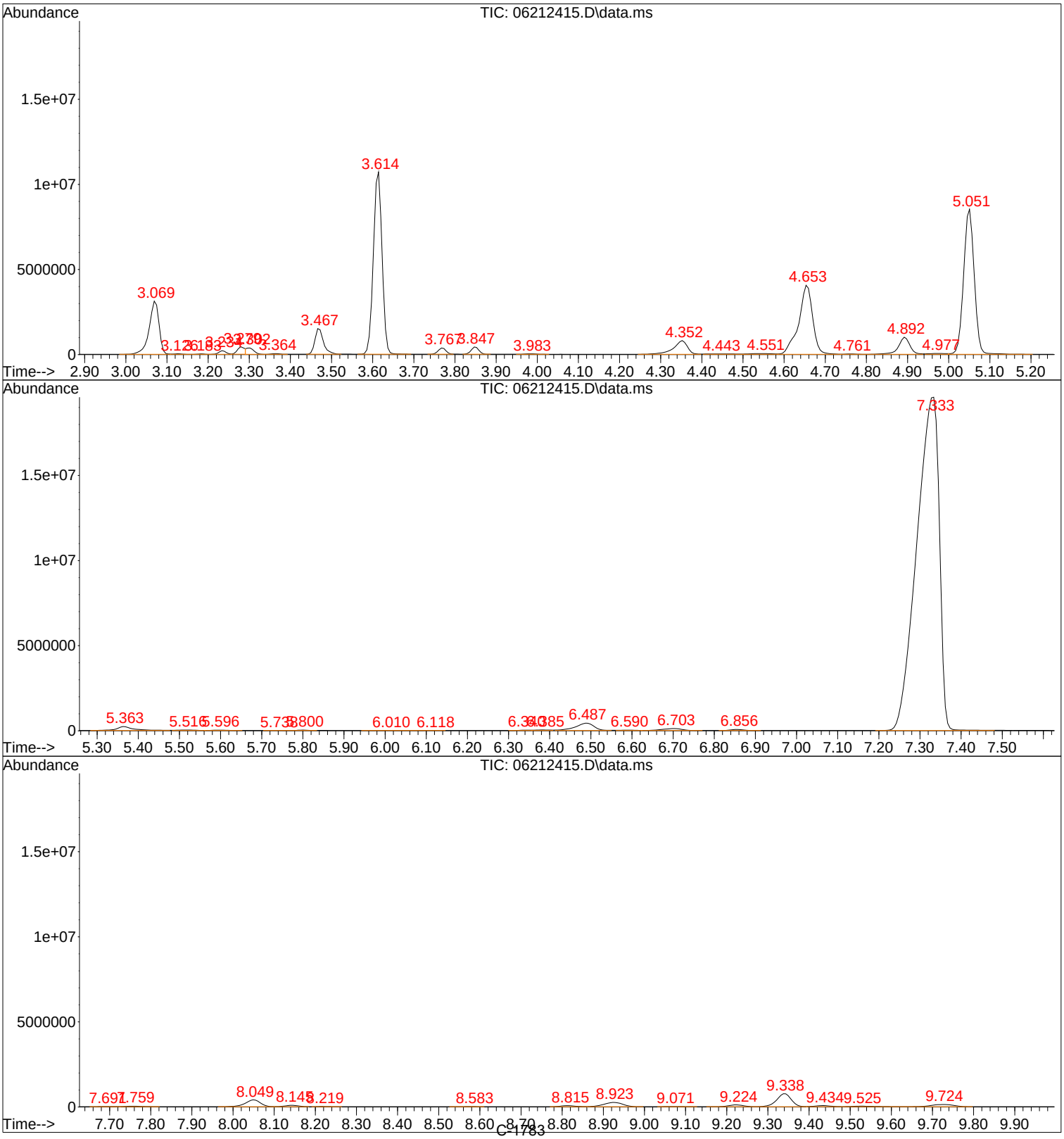
41	8.815	1037	1045	1053	rBV2	60823	147851	0.20%	0.108%
42	8.923	1053	1064	1077	rVB	249678	800917	1.08%	0.584%
43	9.071	1083	1090	1100	rVB5	11027	30990	0.04%	0.023%
44	9.224	1104	1117	1125	rBV	107453	268041	0.36%	0.195%
45	9.338	1125	1137	1147	rVV	762099	1880155	2.53%	1.370%
46	9.434	1147	1154	1163	rVV2	66024	170428	0.23%	0.124%
47	9.525	1163	1170	1188	rVV4	32888	117109	0.16%	0.085%
48	9.724	1188	1205	1218	rVB3	127187	494216	0.67%	0.360%

Sum of corrected areas: 137221743

Data Path : I:\MS09\DATA\2024 06\21\
Data File : 06212415.D
Acq On : 21 Jun 2024 18:06
Operator : SC
Sample : P2402249-057 (400mL)
Misc : S37-06062402
ALS Vial : 5 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\21\\
Data File : 06212415.D
Acq On : 21 Jun 2024 18:066
Operator : SCC
Sample : P2402249-057 (400mL))
Misc : S37-060624022
ALS Vial : 5 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\21\06212416.D Vial: 6
Acq On : 21 Jun 2024 18:38 Operator: SC
Sample : P2402249-058 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 17:29:26 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:53:58 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.36	130	138472	12.500	ng		0.07
37) 1,4-Difluorobenzene (IS2)	9.36	114	774822	12.500	ng		0.02
56) Chlorobenzene-d5 (IS3)	14.85	54	180401	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.08	65	387094	15.729	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 125.84%				
57) Toluene-d8 (SS2)	12.46	98	879711	12.743	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.92%				
73) Bromofluorobenzene (SS3)	16.83	174	303614	12.179	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.44%				
Target Compounds							Qvalue
2) Propene	3.27	42	41829m	2.360	ng		
3) Dichlorodifluoromethan...	3.35	85	20992	0.644	ng		98
4) Chloromethane	3.49	50	9184	0.412	ng		98
5) 1,2-Dichloro-1,1,2,2-t...	3.60	135	924	0.065	ng		83
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	3.84	54	444	N.D.			
8) Bromomethane	4.01	94	255	N.D.			
9) Chloroethane	0.00	64	0	N.D.	d		
10) Ethanol	4.38	45	869245	64.570	ng		100
11) Acetonitrile	0.00	41	0	N.D.	d		
12) Acrolein	0.00	56	0	N.D.	d		
13) Acetone	4.70	58	153590m	14.278	ng		
14) Trichlorofluoromethane	4.75	101	12777	0.388	ng		95
15) 2-Propanol (Isopropanol)	4.93	45	665008	15.342	ng		88
16) Acrylonitrile	0.00	53	0	N.D.	d		
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.40	59	199484	5.766	ng	#	74
19) Methylene Chloride	5.45	84	16485	1.083	ng		98
20) 3-Chloro-1-propene (Al...	0.00	41	0	N.D.	d		
21) Trichlorotrifluoroethane	5.58	151	4312	0.309	ng		95
22) Carbon Disulfide	5.60	76	11367	0.232	ng		99
23) trans-1,2-Dichloroethene	6.23	61	229	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	6.37	73	5348	0.149	ng		90
26) Vinyl Acetate	6.53	86	262798	105.873	ng	#	93
27) 2-Butanone (MEK)	6.74	72	27754	3.260	ng		95
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.	d		
30) Ethyl Acetate	7.40	61	26272453	5054.874	ng		98
31) n-Hexane	0.00	57	0	N.D.	d		
32) Chloroform	7.48	83	1814	0.067	ng		91
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.	d		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.20	62	1318	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	9.74	61	141	No Calib		#	
40) 1-Butanol	8.83	56	32133	No Calib			
41) Benzene	8.95	78	1604506	22.433	ng		100
42) Carbon Tetrachloride	9.13	117	2949	0.089	ng		92
43) Cyclohexane	9.22	84	18308	0.791	ng		96
44) tert-Amyl Methyl Ether	9.56	73	2079	N.D.			
45) 1,2-Dichloropropane	9.90	63	262	N.D.			
46) Bromodichloromethane	10.12	83	996	N.D.			
47) Trichloroethene	10.19	130	164	N.D.			
48) 1,4-Dioxane	10.16	88	149	N.D.			
49) 2,2,4-Trimethylpentane...	10.25	57	21725	0.307	ng		72
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212416.D Vial: 6
Acq On : 21 Jun 2024 18:38 Operator: SC
Sample : P2402249-058 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 17:29:26 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:53:58 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

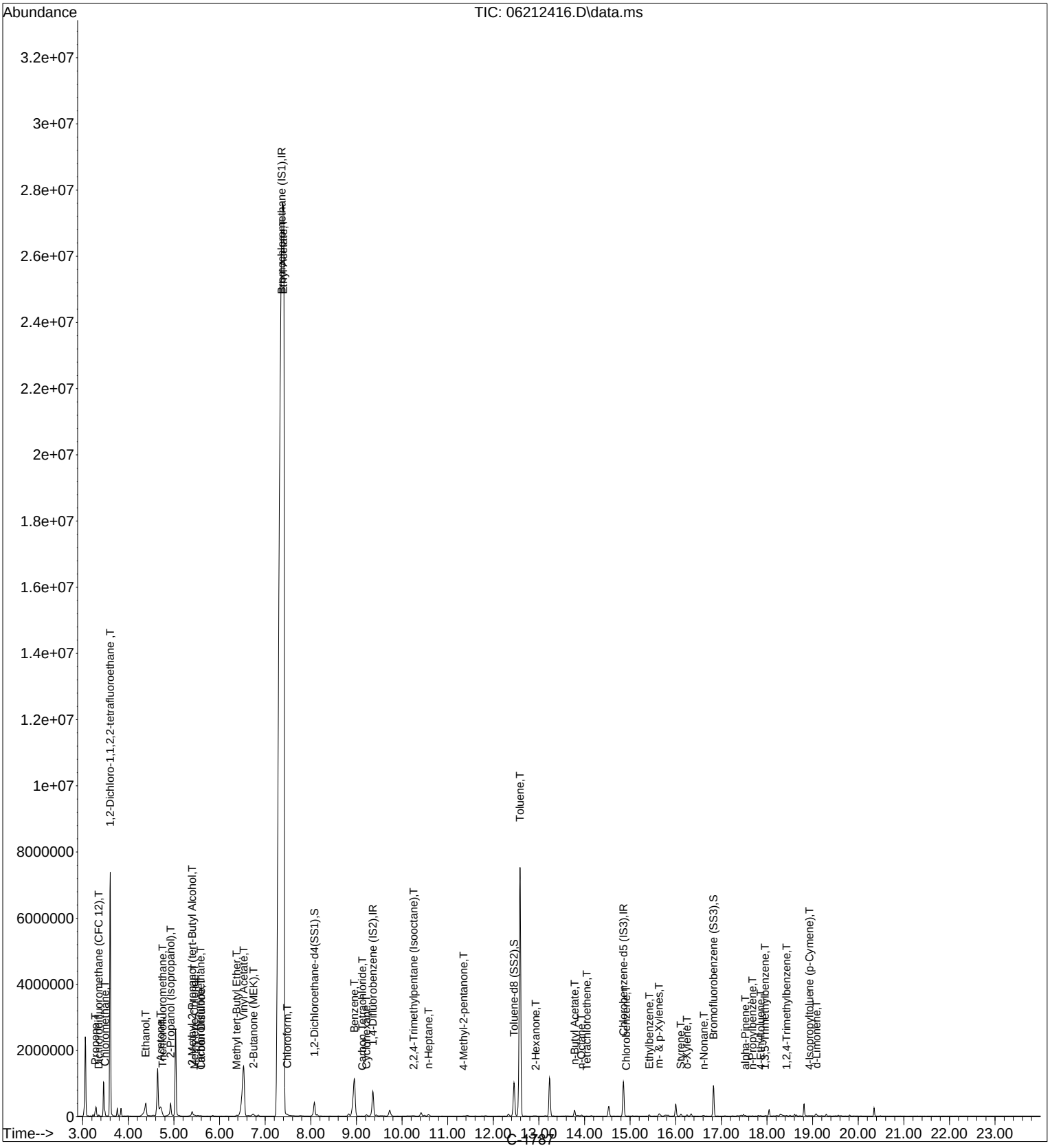
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	10.58	71	15104	1.001 ng		98
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	11.35	58	2043	0.130 ng	#	24
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	12.59	91	6930404	96.071 ng		99
59) 2-Hexanone	12.93	43	10851	0.240 ng		80
60) Dibromochloromethane	13.09	129	685	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	13.78	43	165522	3.482 ng		97
63) n-Octane	13.93	57	6097	0.407 ng		91
64) Tetrachloroethene	14.05	166	1767	0.071 ng		91
65) Chlorobenzene	14.91	112	3678	0.073 ng		89
66) Ethylbenzene	15.42	91	31786	0.385 ng		99
67) m- & p-Xylenes	15.63	91	62892	0.906 ng		99
68) Bromoform	15.68	173	840	N.D.		
69) Styrene	16.11	104	9413	0.201 ng		97
70) o-Xylene	16.25	91	24322	0.355 ng		98
71) n-Nonane	16.62	43	15190	0.382 ng		82
72) 1,1,2,2-Tetrachloroethane	16.21	83	677	N.D.		
74) Cumene	17.04	105	3246	N.D.		
75) alpha-Pinene	17.53	93	8330	0.209 ng		93
76) n-Propylbenzene	17.68	91	7062	0.068 ng		94
77) 3-Ethyltoluene	17.04	105	3246	No Calib		
78) 4-Ethyltoluene	17.86	105	5788	0.071 ng		96
79) 1,3,5-Trimethylbenzene	17.96	105	4820	0.068 ng		92
80) alpha-Methylstyrene	0.00	118	0	N.D.		
81) 2-Ethyltoluene	17.04	105	3246	No Calib		
82) 1,2,4-Trimethylbenzene	18.43	105	8788	0.117 ng		88
83) n-Decane	17.08	58	245	No Calib	#	
84) Benzyl Chloride	18.56	91	148	N.D.		
85) 1,3-Dichlorobenzene	18.58	146	665	N.D.		
86) 1,4-Dichlorobenzene	18.66	146	866	N.D.		
87) sec-Butylbenzene	18.75	105	1751	N.D.		
88) 4-Isopropyltoluene (p-...	18.93	119	4344	0.051 ng		81
89) 1,2,3-Trimethylbenzene	17.04	105	3246	No Calib		
90) 1,2-Dichlorobenzene	19.03	146	601	N.D.		
91) d-Limonene	19.09	68	10931	0.429 ng		97
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	17.86	58	383	No Calib	#	
94) 1,2,4-Trichlorobenzene	20.84	180	931	N.D.		
95) Naphthalene	20.94	128	743	N.D.		
96) n-Dodecane	18.93	58	180	No Calib	#	
97) Hexachlorobutadiene	21.30	225	885	N.D.		
98) Cyclohexanone	15.36	55	1930	No Calib	#	
99) tert-Butylbenzene	18.43	119	2162	N.D.		
100) n-Butylbenzene	19.38	91	1888	N.D.		
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212416.D Vial: 6
Acq On : 21 Jun 2024 18:38 Operator: SC
Sample : P2402249-058 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 17:29:26 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:53:58 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



C-1787

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212416.D Vial: 6
Acq On : 21 Jun 2024 18:38 Operator: SC
Sample : P2402249-058 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 17:29:26 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:53:58 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

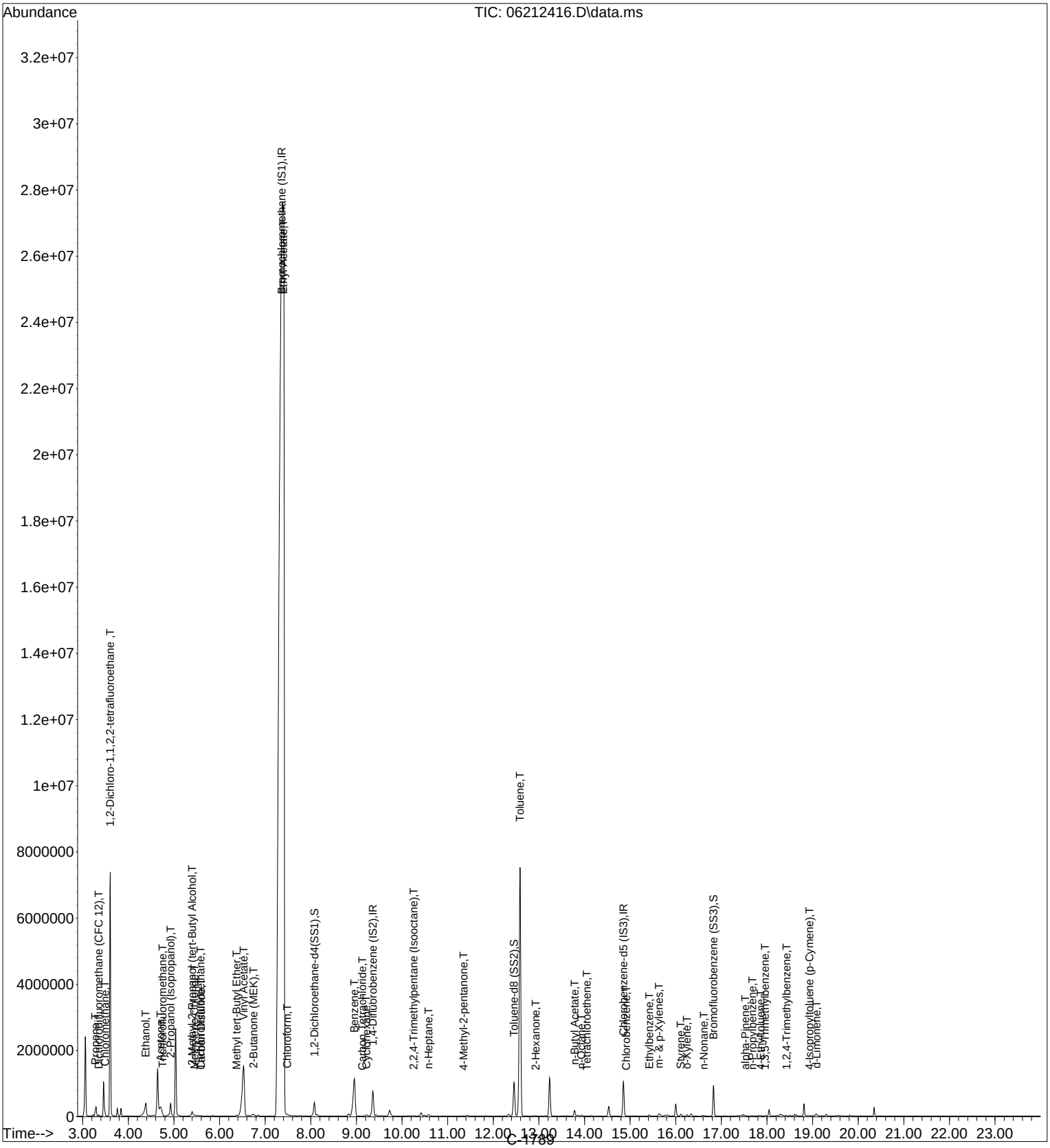
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.36	130	138472	12.500	ng		0.07
37) 1,4-Difluorobenzene (IS2)	9.36	114	774822	12.500	ng		0.02
56) Chlorobenzene-d5 (IS3)	14.85	54	180401	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.08	65	387094	15.729	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 125.84%				
57) Toluene-d8 (SS2)	12.46	98	879711	12.743	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.92%				
73) Bromofluorobenzene (SS3)	16.83	174	303614	12.179	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.44%				
Target Compounds							Qvalue
2) Propene	3.27	42	41829m	2.360	ng		
3) Dichlorodifluoromethan...	3.35	85	20992	0.644	ng		98
4) Chloromethane	3.49	50	9184	0.412	ng		98
5) 1,2-Dichloro-1,1,2,2-t...	3.60	135	924	0.065	ng		83
10) Ethanol	4.38	45	869245	64.570	ng		100
13) Acetone	4.70	58	153590m	14.278	ng		
14) Trichlorofluoromethane	4.75	101	12777	0.388	ng		95
15) 2-Propanol (Isopropanol)	4.93	45	665008	15.342	ng		88
18) 2-Methyl-2-Propanol (t...	5.40	59	199484	5.766	ng	#	74
19) Methylene Chloride	5.45	84	16485	1.083	ng		98
21) Trichlorotrifluoroethane	5.58	151	4312	0.309	ng		95
22) Carbon Disulfide	5.60	76	11367	0.232	ng		99
25) Methyl tert-Butyl Ether	6.37	73	5348	0.149	ng		90
26) Vinyl Acetate	6.53	86	262798	105.873	ng	#	93
27) 2-Butanone (MEK)	6.74	72	27754	3.260	ng		95
30) Ethyl Acetate	7.40	61	26272453	5054.874	ng		98
32) Chloroform	7.48	83	1814	0.067	ng		91
41) Benzene	8.95	78	1604506	22.433	ng		100
42) Carbon Tetrachloride	9.13	117	2949	0.089	ng		92
43) Cyclohexane	9.22	84	18308	0.791	ng		96
49) 2,2,4-Trimethylpentane...	10.25	57	21725	0.307	ng		72
51) n-Heptane	10.58	71	15104	1.001	ng		98
53) 4-Methyl-2-pentanone	11.35	58	2043	0.130	ng	#	24
58) Toluene	12.59	91	6930404	96.071	ng		99
59) 2-Hexanone	12.93	43	10851	0.240	ng		80
62) n-Butyl Acetate	13.78	43	165522	3.482	ng		97
63) n-Octane	13.93	57	6097	0.407	ng		91
64) Tetrachloroethene	14.05	166	1767	0.071	ng		91
65) Chlorobenzene	14.91	112	3678	0.073	ng		89
66) Ethylbenzene	15.42	91	31786	0.385	ng		99
67) m- & p-Xylenes	15.63	91	62892	0.906	ng		99
69) Styrene	16.11	104	9413	0.201	ng		97
70) o-Xylene	16.25	91	24322	0.355	ng		98
71) n-Nonane	16.62	43	15190	0.382	ng		82
75) alpha-Pinene	17.53	93	8330	0.209	ng		93
76) n-Propylbenzene	17.68	91	7062	0.068	ng		94
78) 4-Ethyltoluene	17.86	105	5788	0.071	ng		96
79) 1,3,5-Trimethylbenzene	17.96	105	4820	0.068	ng		92
82) 1,2,4-Trimethylbenzene	18.43	105	8788	0.117	ng		88
88) 4-Isopropyltoluene (p-...	18.93	119	4344	0.051	ng		81
91) d-Limonene	19.09	68	10931	0.429	ng		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

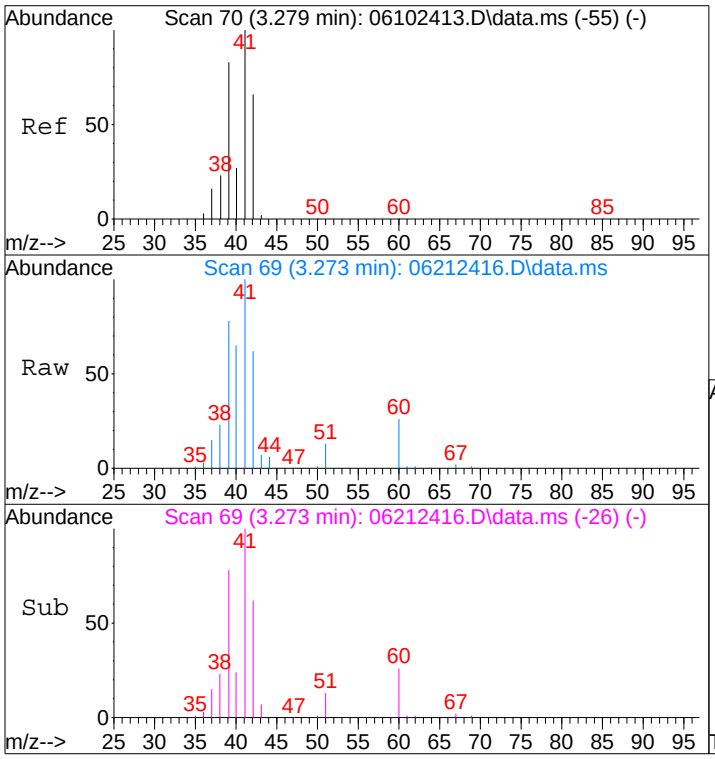
Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212416.D Vial: 6
Acq On : 21 Jun 2024 18:38 Operator: SC
Sample : P2402249-058 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 17:29:26 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:53:58 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



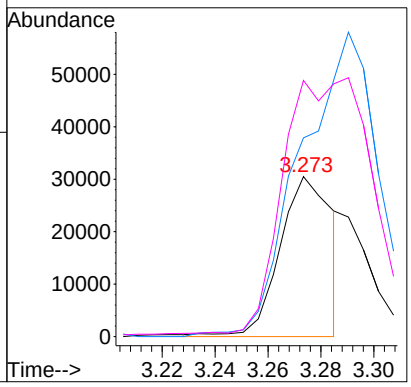
C-1789

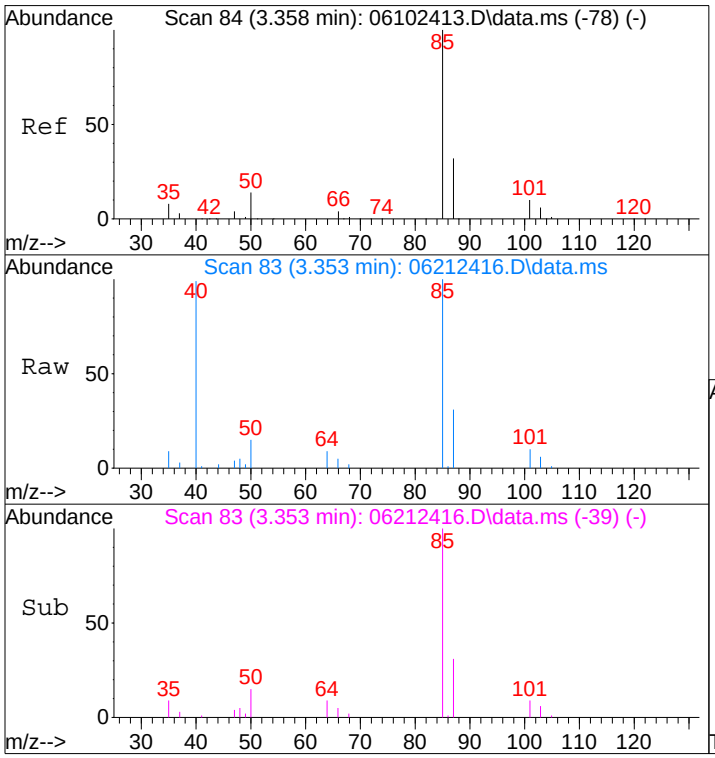


#2
Propene
Concen: 2.36 ng m
RT: 3.27 min Scan# 69
Delta R.T. -0.006 min
Lab File: 06212416.D
Acq: 21 Jun 2024 18:38

Tgt Ion: 42 Resp: 41829

Ion	Ratio	Lower	Upper
42	100		
39	145.7	107.3	147.3
41	168.9	134.3	174.3

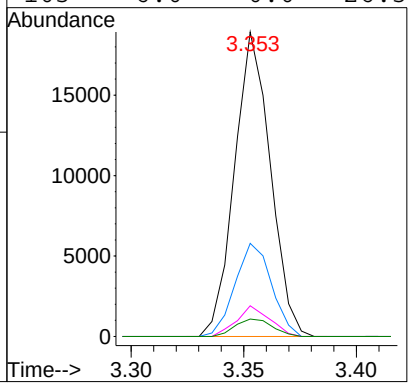


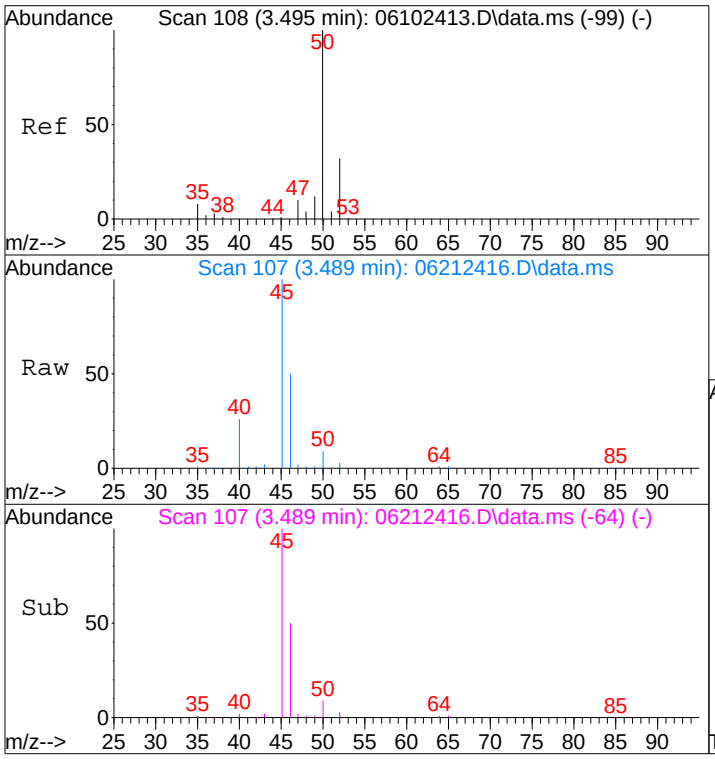


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.64 ng
RT: 3.35 min Scan# 83
Delta R.T. -0.001 min
Lab File: 06212416.D
Acq: 21 Jun 2024 18:38

Tgt Ion: 85 Resp: 20992

Ion	Ratio	Lower	Upper
85	100		
87	31.2	12.2	52.2
101	9.3	0.0	29.8
103	6.0	0.0	26.3

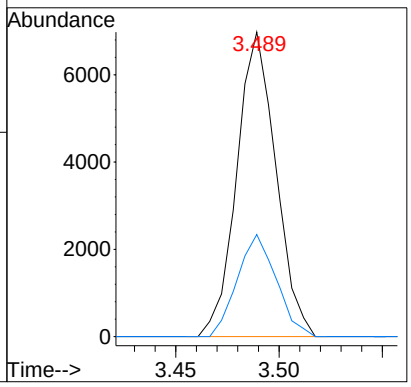


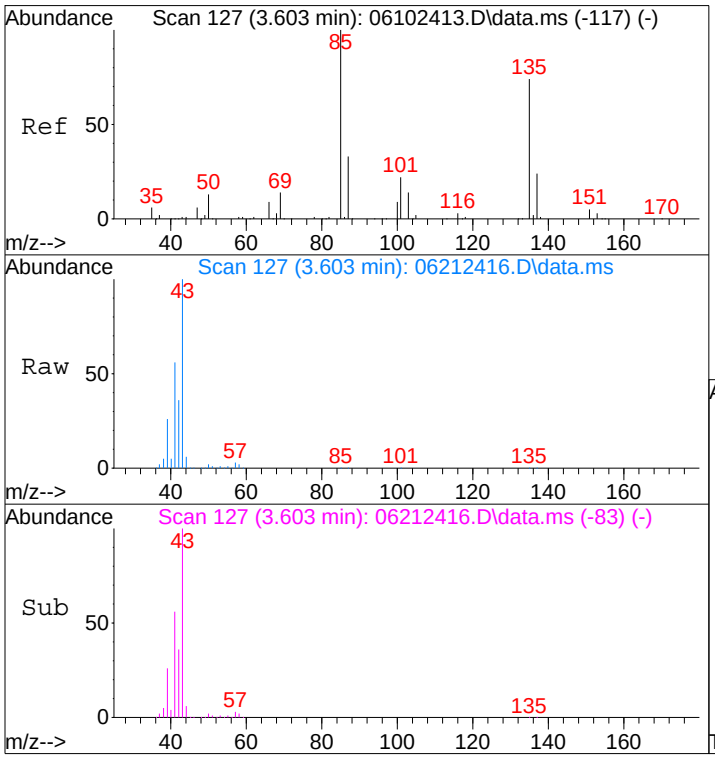


#4
Chloromethane
Concen: 0.41 ng
RT: 3.49 min Scan# 107
Delta R.T. -0.006 min
Lab File: 06212416.D
Acq: 21 Jun 2024 18:38

Tgt Ion: 50 Resp: 9184

Ion	Ratio	Lower	Upper
50	100		
52	33.4	12.4	52.4

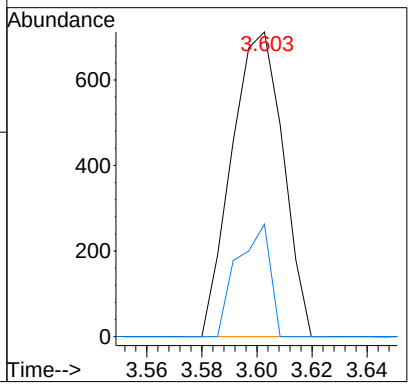


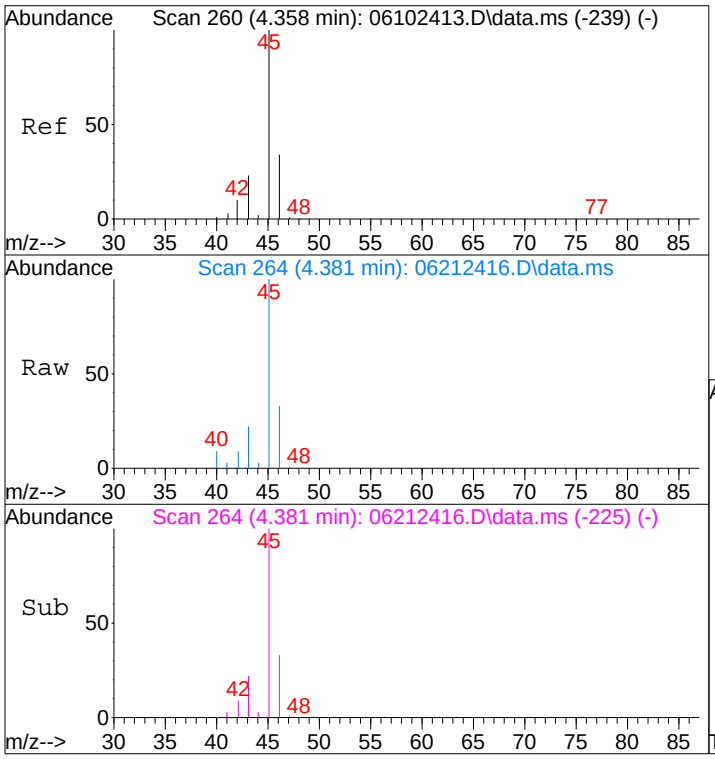


#5
1,2-Dichloro-1,1,2,2-tetrafluoroethane
Concen: 0.07 ng
RT: 3.60 min Scan# 127
Delta R.T. -0.000 min
Lab File: 06212416.D
Acq: 21 Jun 2024 18:38

Tgt Ion:135 Resp: 924

Ion	Ratio	Lower	Upper
135	100		
137	23.6	13.0	53.0

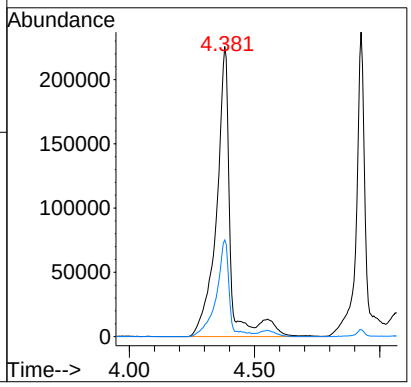


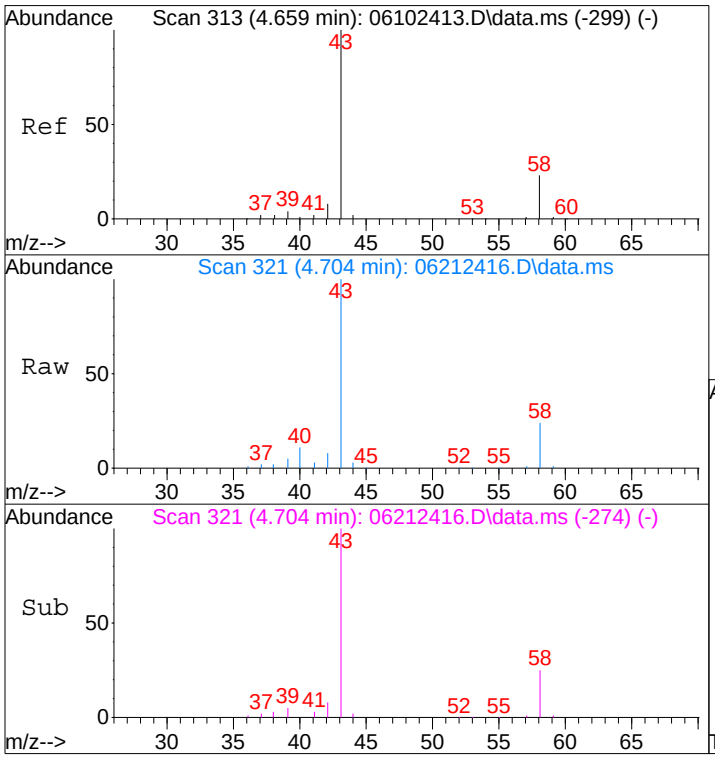


#10
Ethanol
Concen: 64.57 ng
RT: 4.38 min Scan# 264
Delta R.T. -0.027 min
Lab File: 06212416.D
Acq: 21 Jun 2024 18:38

Tgt Ion: 45 Resp: 869245

Ion	Ratio	Lower	Upper
45	100		
46	33.6	13.5	53.5

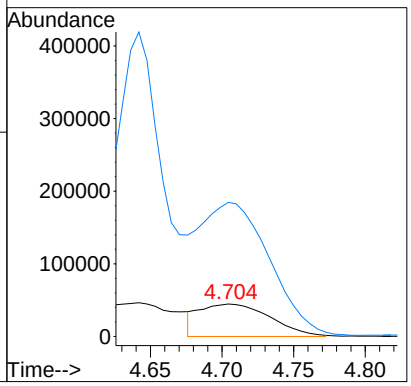


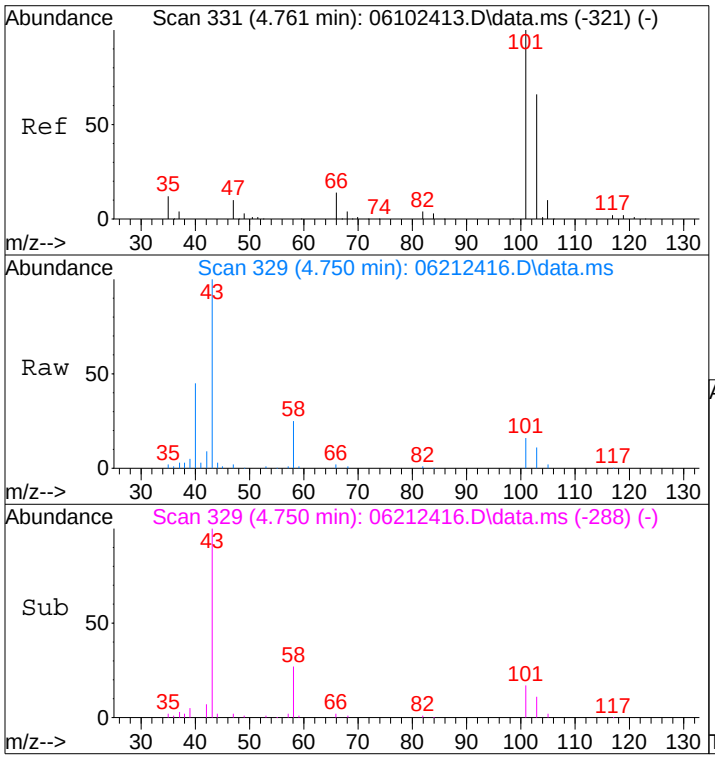


#13
Acetone
Concen: 14.28 ng m
RT: 4.70 min Scan# 321
Delta R.T. 0.019 min
Lab File: 06212416.D
Acq: 21 Jun 2024 18:38

Tgt Ion: 58 Resp: 153590

Ion	Ratio	Lower	Upper
58	100		
43	408.1	400.7	460.7

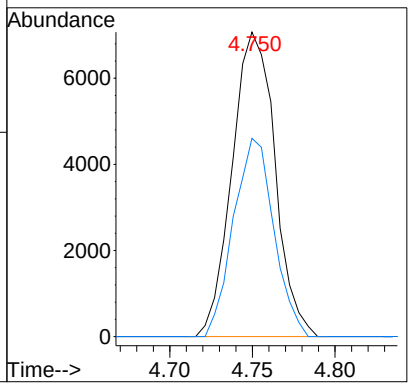


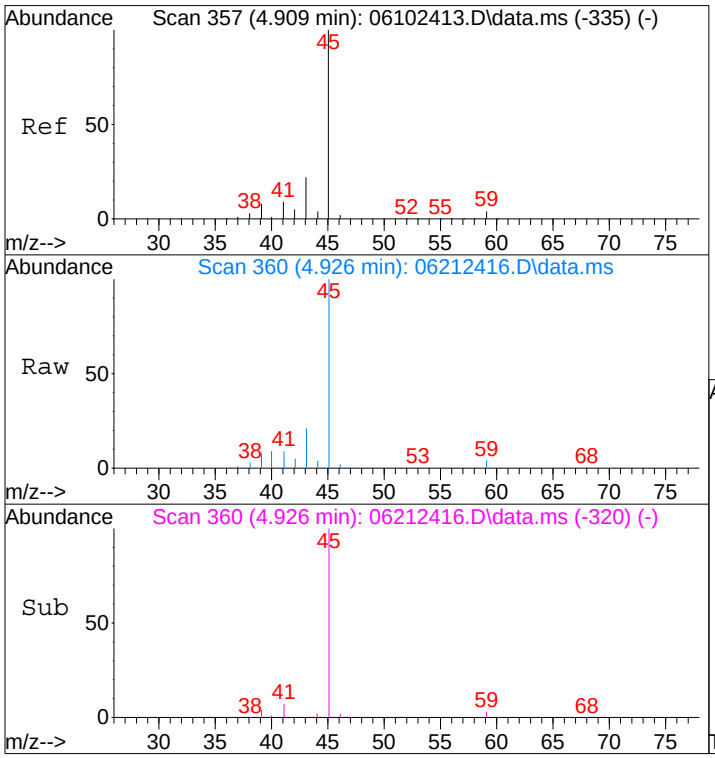


#14
Trichlorofluoromethane
Concen: 0.39 ng
RT: 4.75 min Scan# 329
Delta R.T. -0.015 min
Lab File: 06212416.D
Acq: 21 Jun 2024 18:38

Tgt Ion:101 Resp: 12777

Ion	Ratio	Lower	Upper
101	100		
103	61.1	44.9	84.9

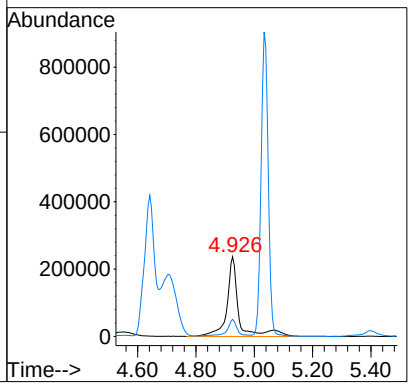


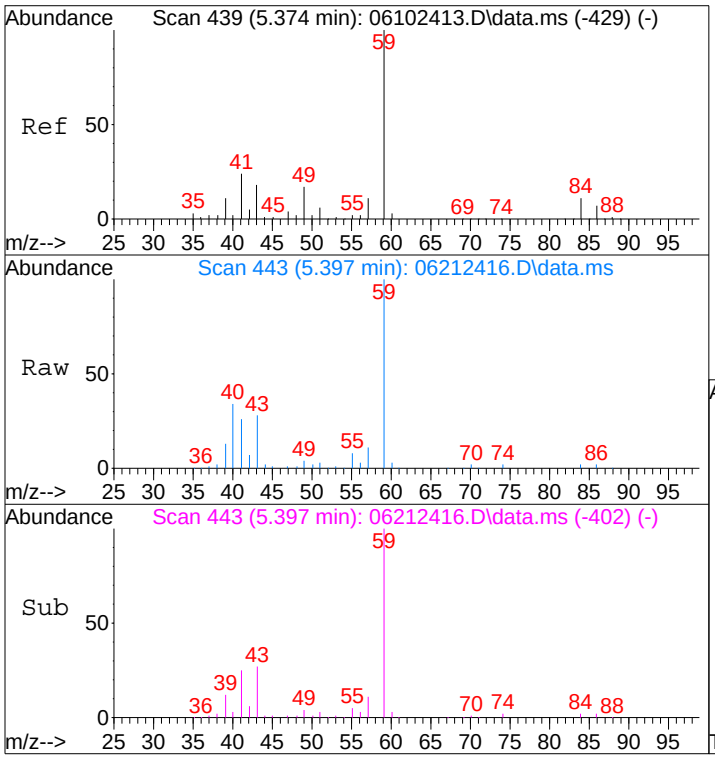


#15
2-Propanol (Isopropanol)
Concen: 15.34 ng
RT: 4.93 min Scan# 360
Delta R.T. -0.021 min
Lab File: 06212416.D
Acq: 21 Jun 2024 18:38

Tgt Ion: 45 Resp: 665008

Ion	Ratio	Lower	Upper
45	100		
43	16.8	2.5	42.5

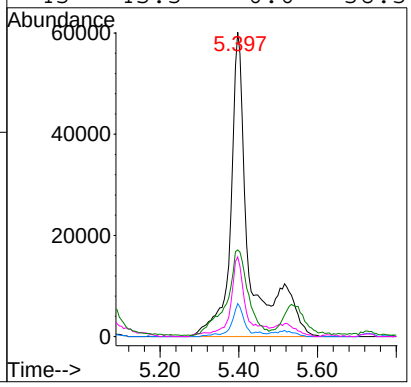


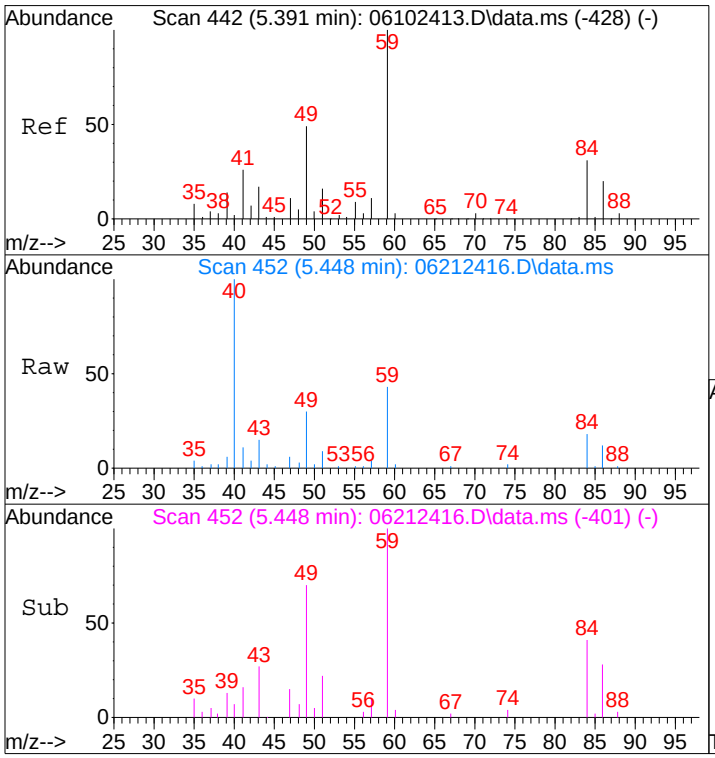


#18
2-Methyl-2-Propanol (tert-Butyl Alcohol
Concen: 5.77 ng
RT: 5.40 min Scan# 443
Delta R.T. -0.015 min
Lab File: 06212416.D
Acq: 21 Jun 2024 18:38

Tgt Ion: 59 Resp: 199484

Ion	Ratio	Lower	Upper
59	100		
57	9.4	0.0	30.9
41	24.3	0.9	40.9
43	45.3	0.0	38.3#

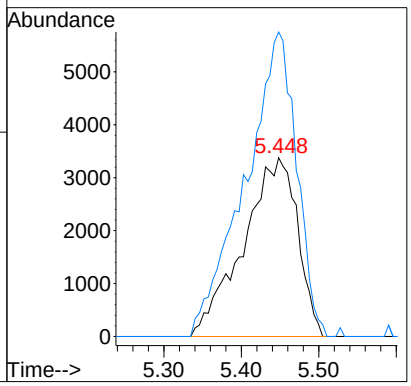


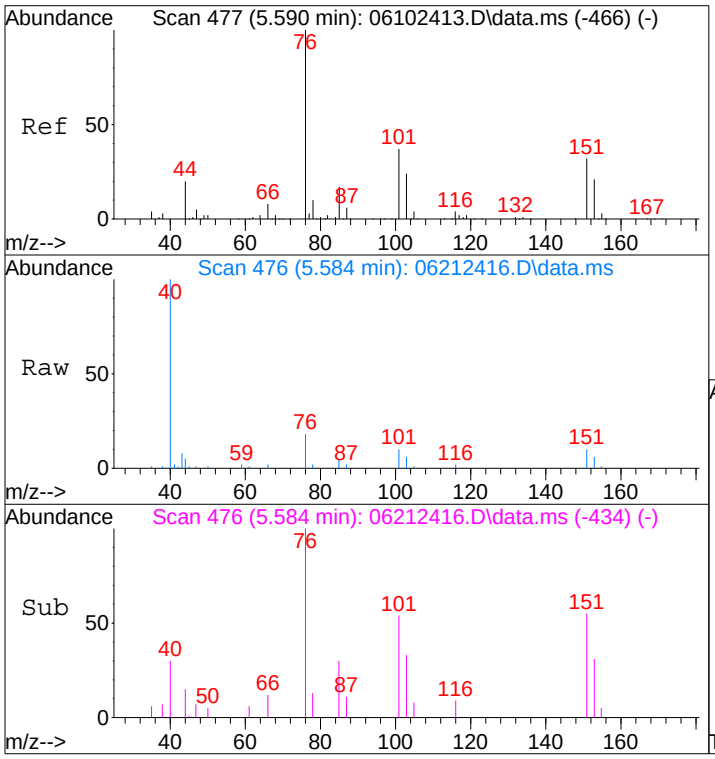


#19
Methylene Chloride
Concen: 1.08 ng
RT: 5.45 min Scan# 452
Delta R.T. 0.037 min
Lab File: 06212416.D
Acq: 21 Jun 2024 18:38

Tgt Ion: 84 Resp: 16485

Ion	Ratio	Lower	Upper
84	100		
49	160.7	132.9	182.9

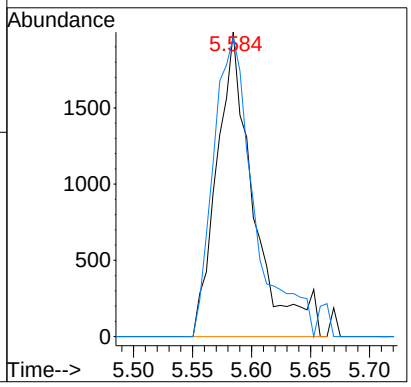


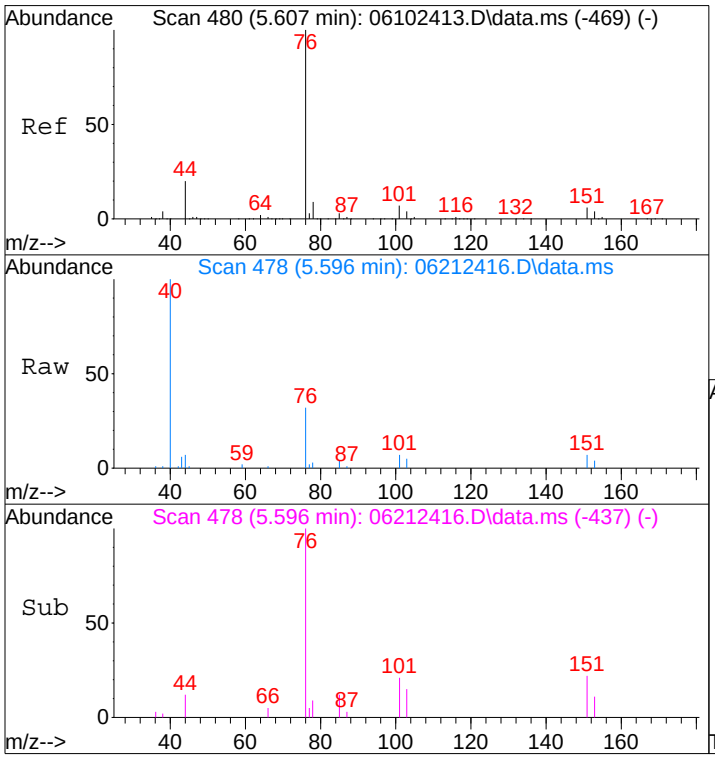


#21
Trichlorotrifluoroethane
Concen: 0.31 ng
RT: 5.58 min Scan# 476
Delta R.T. -0.014 min
Lab File: 06212416.D
Acq: 21 Jun 2024 18:38

Tgt Ion:151 Resp: 4312

Ion	Ratio	Lower	Upper
151	100		
101	109.6	95.0	135.0

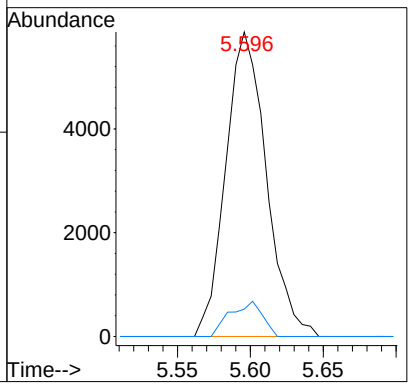


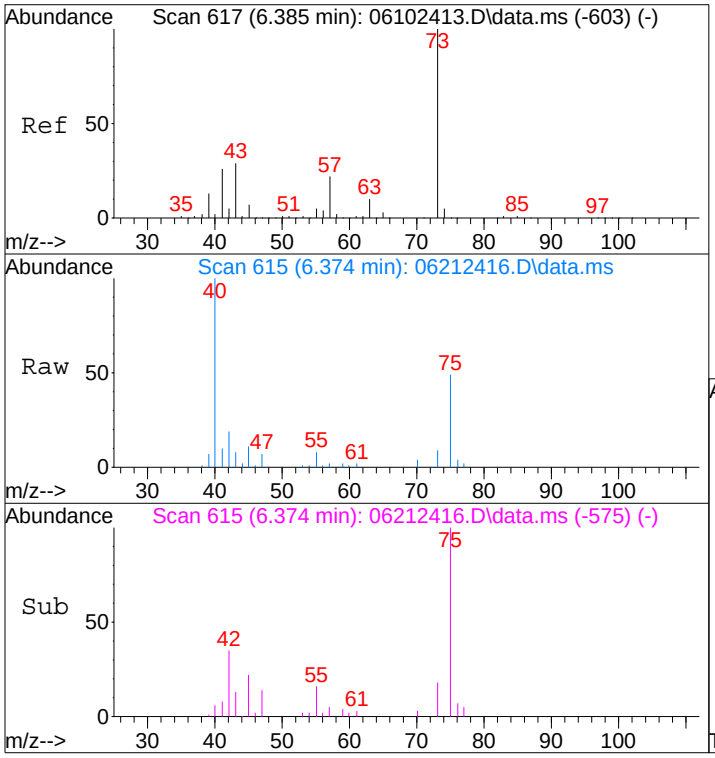


#22
Carbon Disulfide
Concen: 0.23 ng
RT: 5.60 min Scan# 478
Delta R.T. -0.020 min
Lab File: 06212416.D
Acq: 21 Jun 2024 18:38

Tgt Ion: 76 Resp: 11367

Ion	Ratio	Lower	Upper
76	100		
78	9.2	0.0	29.6

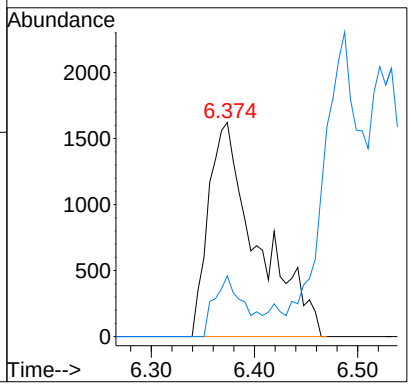


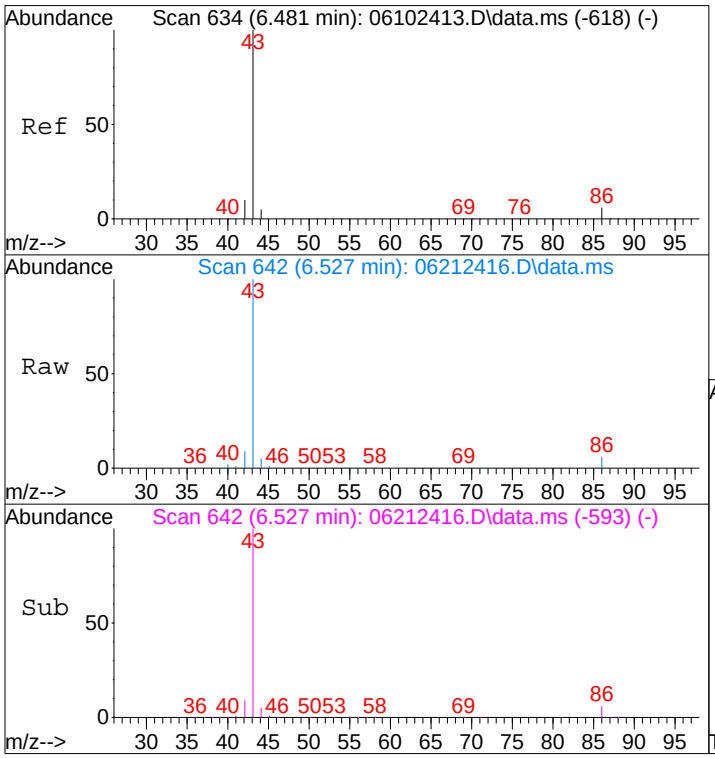


#25
Methyl tert-Butyl Ether
Concen: 0.15 ng
RT: 6.37 min Scan# 615
Delta R.T. -0.024 min
Lab File: 06212416.D
Acq: 21 Jun 2024 18:38

Tgt Ion: 73 Resp: 5348

Ion	Ratio	Lower	Upper
73	100		
57	17.6	2.3	42.3

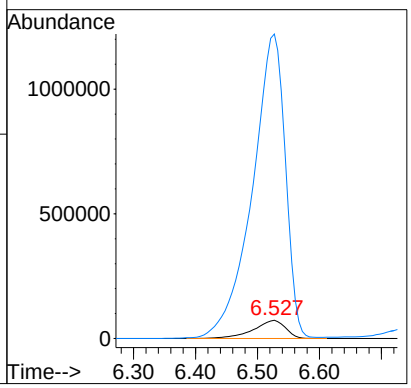


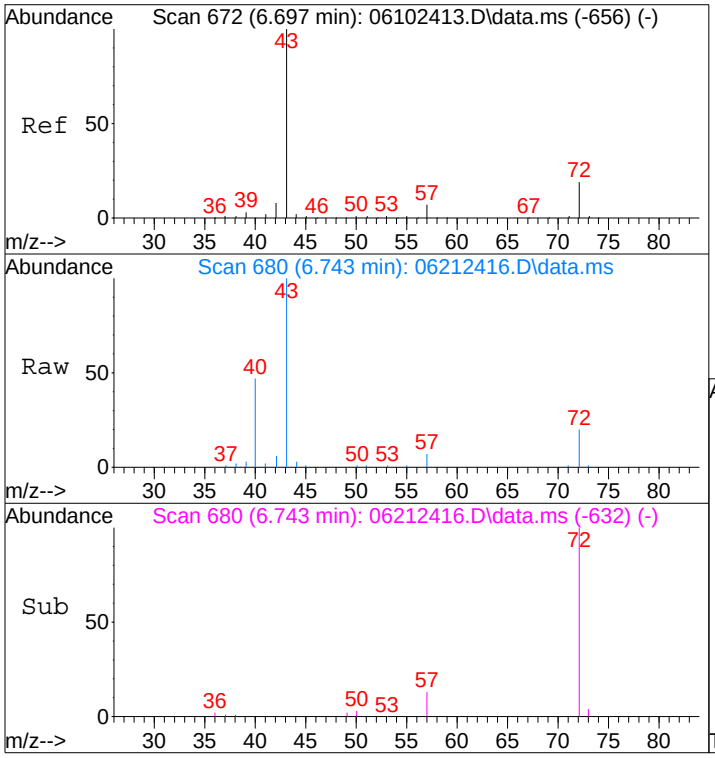


#26
Vinyl Acetate
Concen: 105.87 ng
RT: 6.53 min Scan# 642
Delta R.T. 0.027 min
Lab File: 06212416.D
Acq: 21 Jun 2024 18:38

Tgt Ion: 86 Resp: 262798

Ion	Ratio	Lower	Upper
86	100		
43	1733.7	1668.9	1708.9#

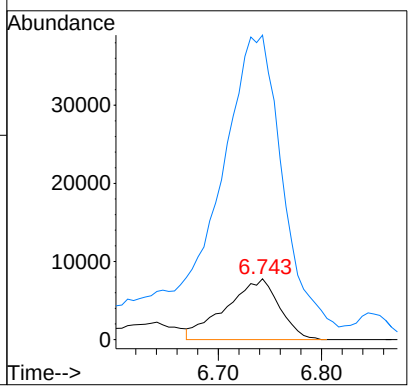


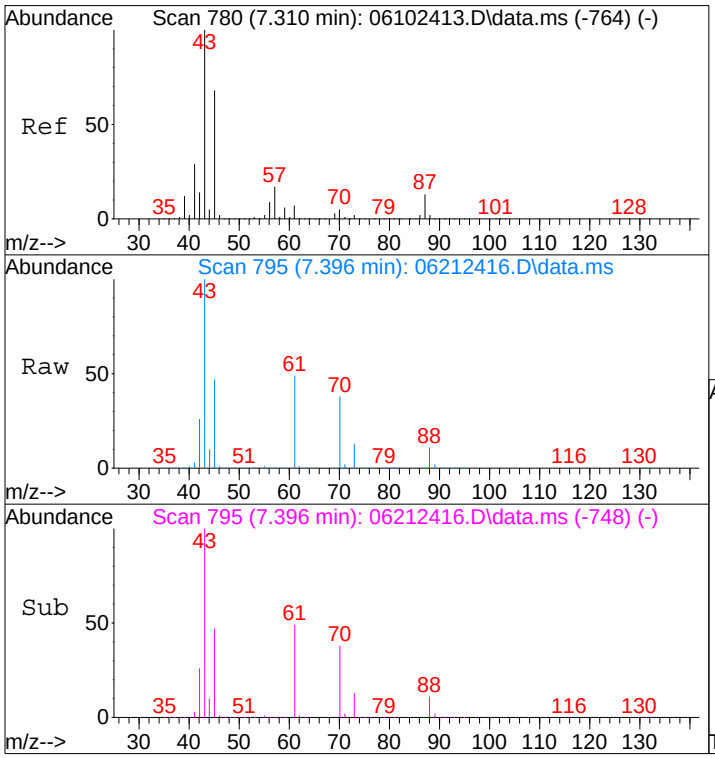


#27
2-Butanone (MEK)
Concen: 3.26 ng
RT: 6.74 min Scan# 680
Delta R.T. 0.022 min
Lab File: 06212416.D
Acq: 21 Jun 2024 18:38

Tgt Ion: 72 Resp: 27754

Ion	Ratio	Lower	Upper
72	100		
43	540.5	506.8	546.8

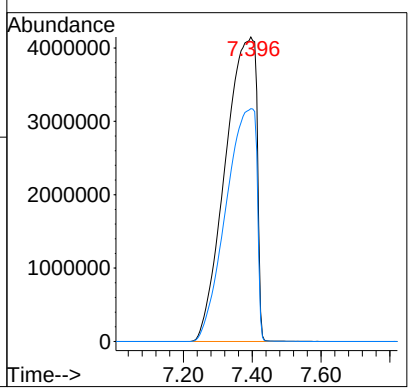


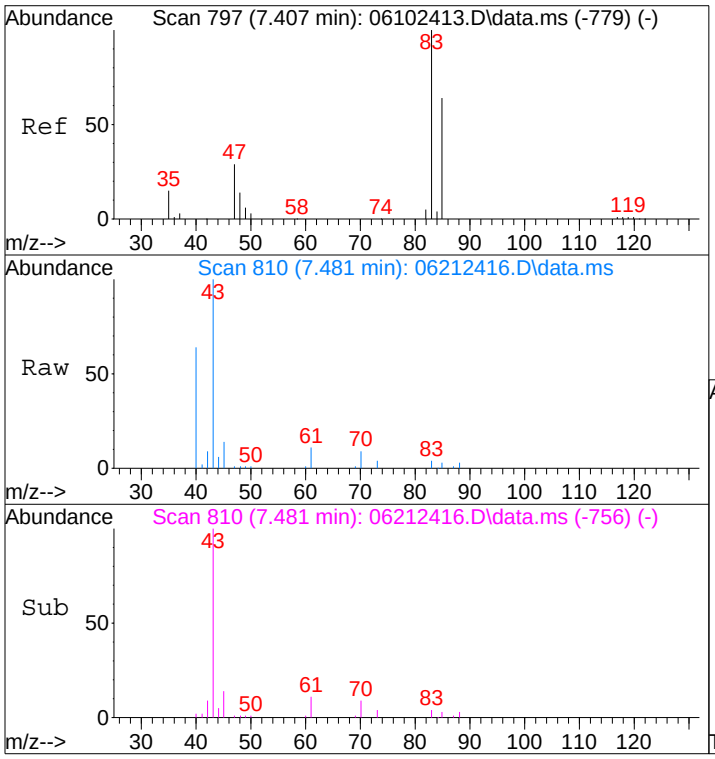


#30
Ethyl Acetate
Concen: 5054.87 ng
RT: 7.40 min Scan# 795
Delta R.T. 0.068 min
Lab File: 06212416.D
Acq: 21 Jun 2024 18:38

Tgt Ion: 61 Resp:26272453

Ion	Ratio	Lower	Upper
61	100		
70	74.9	53.5	93.5

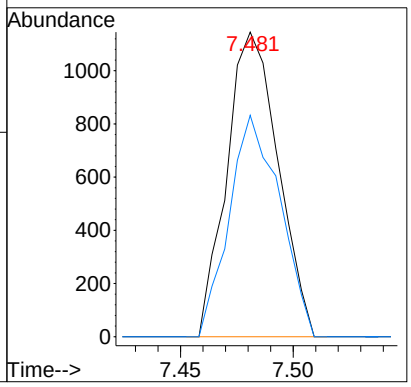


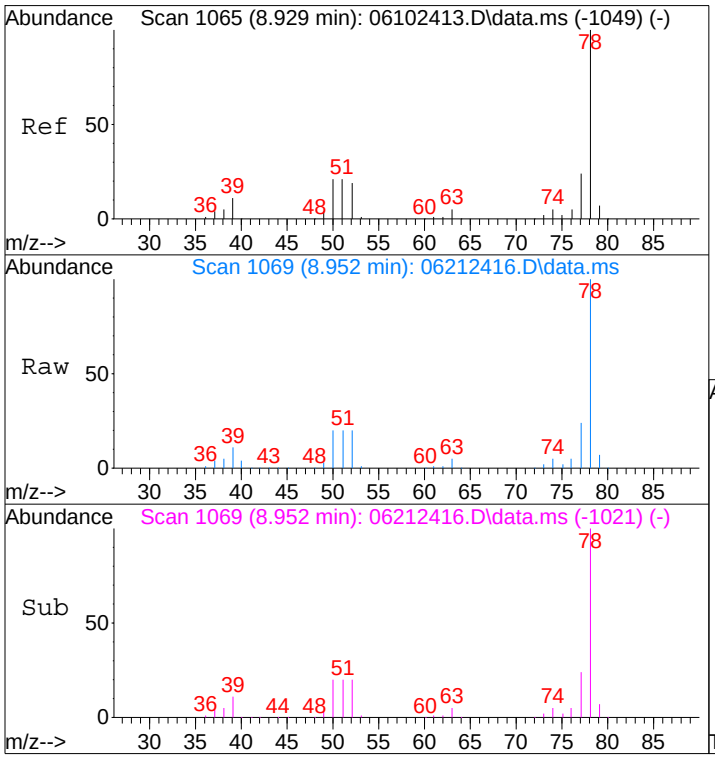


#32
Chloroform
Concen: 0.07 ng
RT: 7.48 min Scan# 810
Delta R.T. 0.057 min
Lab File: 06212416.D
Acq: 21 Jun 2024 18:38

Tgt Ion: 83 Resp: 1814

Ion	Ratio	Lower	Upper
83	100		
85	71.7	44.4	84.4

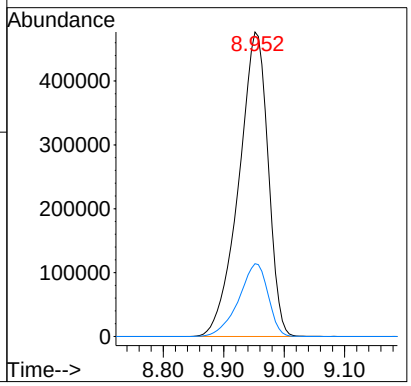


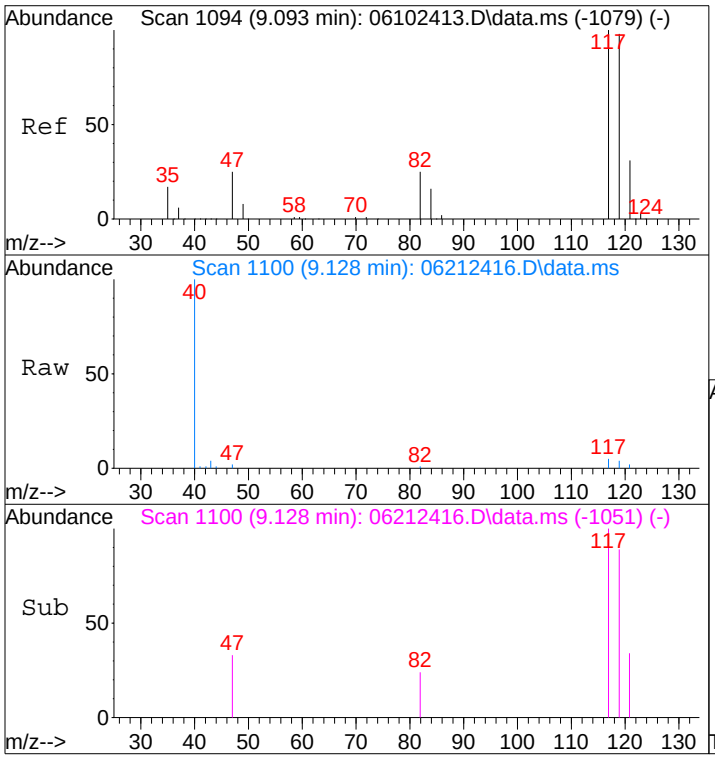


#41
Benzene
Concen: 22.43 ng
RT: 8.95 min Scan# 1069
Delta R.T. 0.022 min
Lab File: 06212416.D
Acq: 21 Jun 2024 18:38

Tgt Ion: 78 Resp: 1604506

Ion	Ratio	Lower	Upper
78	100		
77	23.9	4.0	44.0

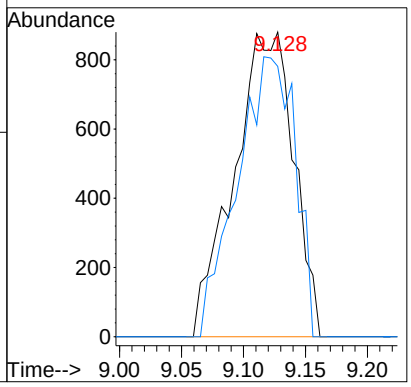


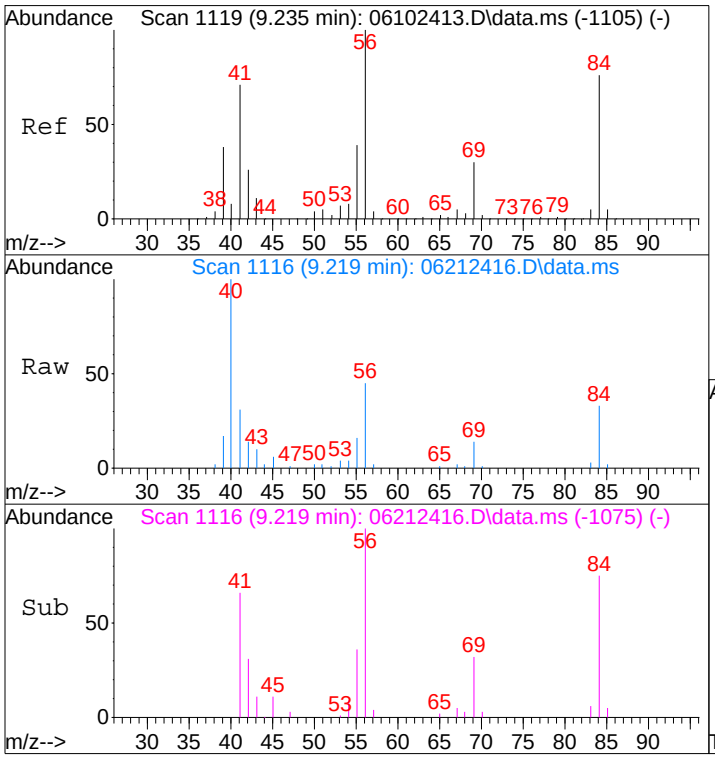


#42
Carbon Tetrachloride
Concen: 0.09 ng
RT: 9.13 min Scan# 1100
Delta R.T. 0.028 min
Lab File: 06212416.D
Acq: 21 Jun 2024 18:38

Tgt Ion:117 Resp: 2949

Ion	Ratio	Lower	Upper
117	100		
119	89.1	77.3	117.3

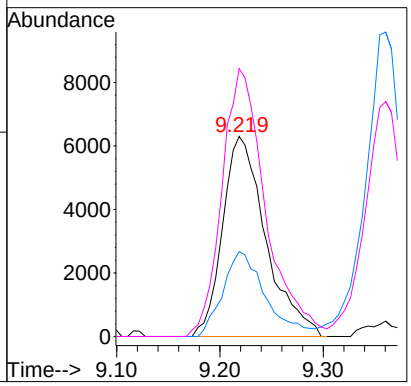


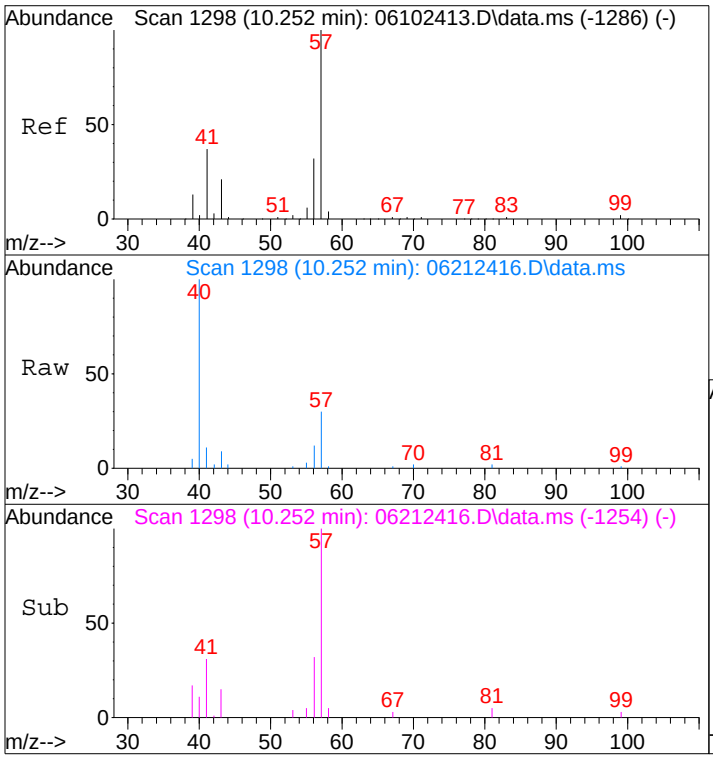


#43
Cyclohexane
Concen: 0.79 ng
RT: 9.22 min Scan# 1116
Delta R.T. -0.017 min
Lab File: 06212416.D
Acq: 21 Jun 2024 18:38

Tgt Ion: 84 Resp: 18308

Ion	Ratio	Lower	Upper
84	100		
69	42.0	18.8	58.8
56	135.7	111.5	151.5

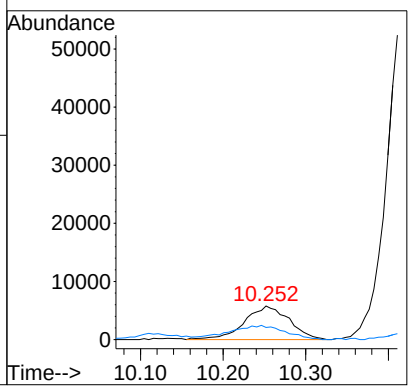


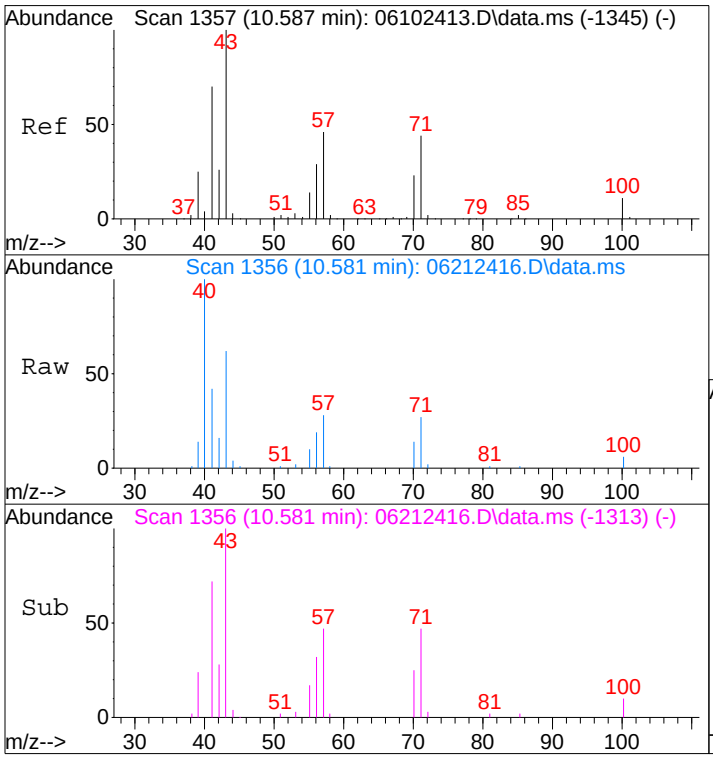


#49
2,2,4-Trimethylpentane (Isooctane)
Concen: 0.31 ng
RT: 10.25 min Scan# 1298
Delta R.T. 0.002 min
Lab File: 06212416.D
Acq: 21 Jun 2024 18:38

Tgt Ion: 57 Resp: 21725

Ion	Ratio	Lower	Upper
57	100		
41	52.4	16.1	56.1

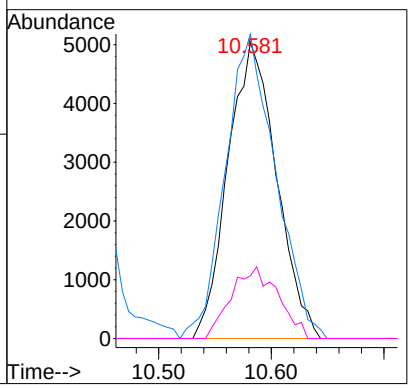


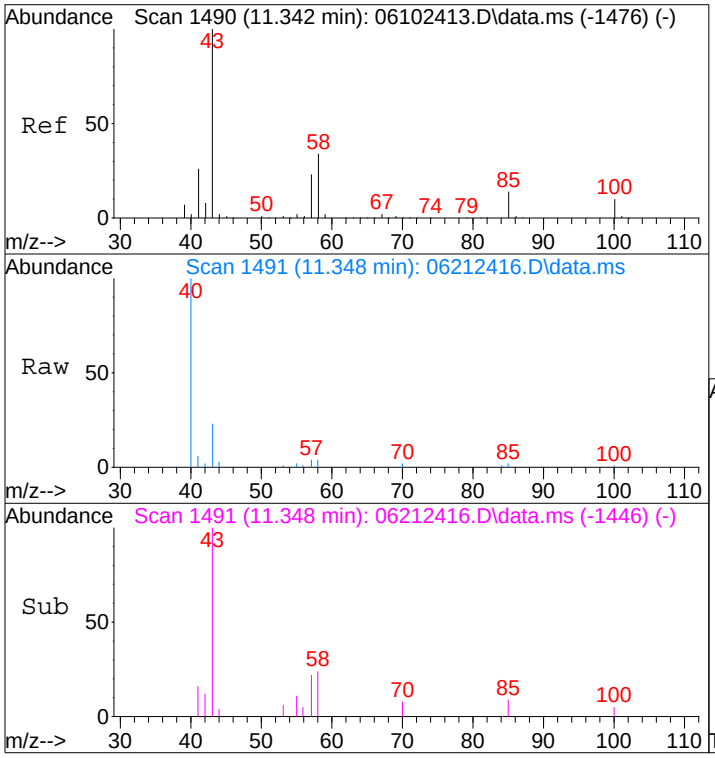


#51
n-Heptane
Concen: 1.00 ng
RT: 10.58 min Scan# 1356
Delta R.T. -0.003 min
Lab File: 06212416.D
Acq: 21 Jun 2024 18:38

Tgt Ion: 71 Resp: 15104

Ion	Ratio	Lower	Upper
71	100		
57	106.3	83.9	123.9
100	23.4	4.8	44.8

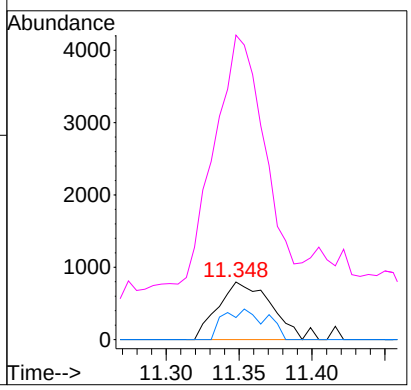


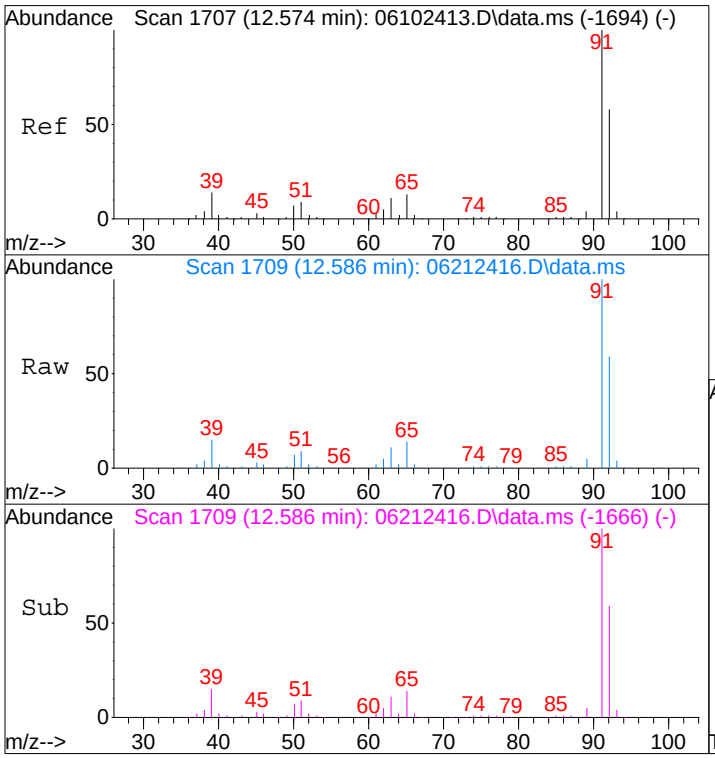


#53
4-Methyl-2-pentanone
Concen: 0.13 ng
RT: 11.35 min Scan# 1491
Delta R.T. 0.004 min
Lab File: 06212416.D
Acq: 21 Jun 2024 18:38

Tgt Ion: 58 Resp: 2043

Ion	Ratio	Lower	Upper
58	100		
85	42.4	34.5	51.7
43	464.5	236.1	354.1#

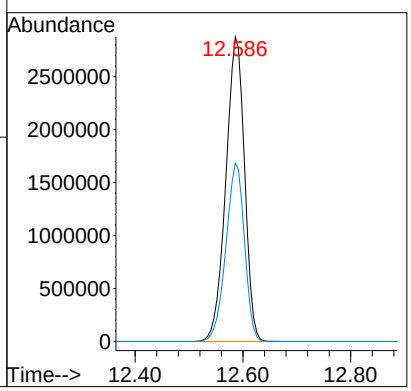


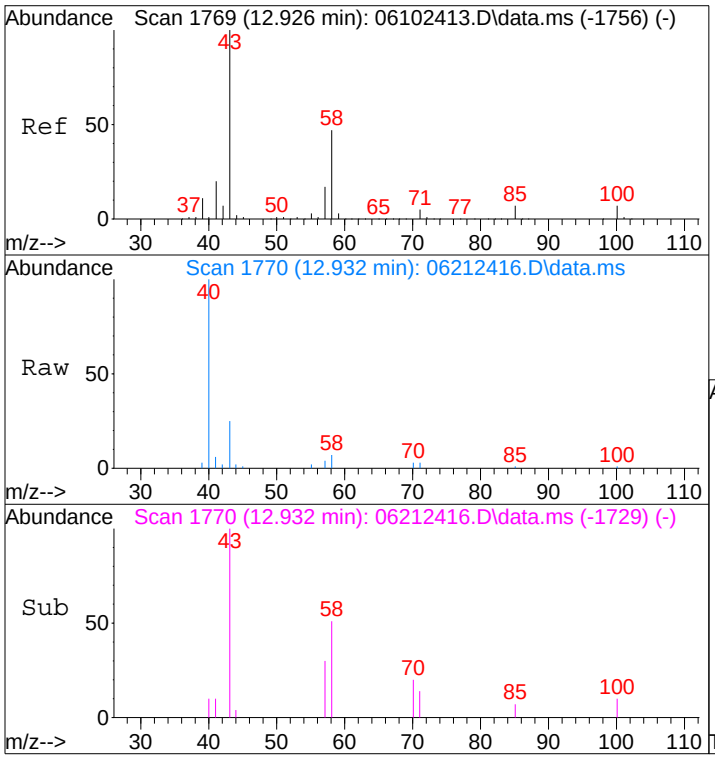


#58
Toluene
Concen: 96.07 ng
RT: 12.59 min Scan# 1709
Delta R.T. -0.006 min
Lab File: 06212416.D
Acq: 21 Jun 2024 18:38

Tgt Ion: 91 Resp: 6930404

Ion	Ratio	Lower	Upper
91	100		
92	58.2	37.4	77.4

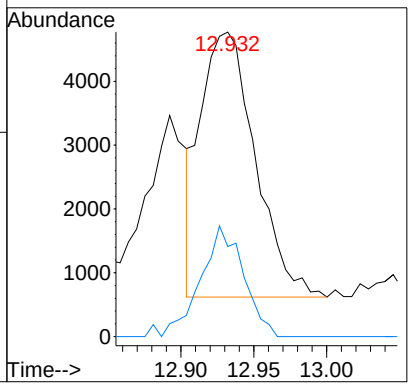


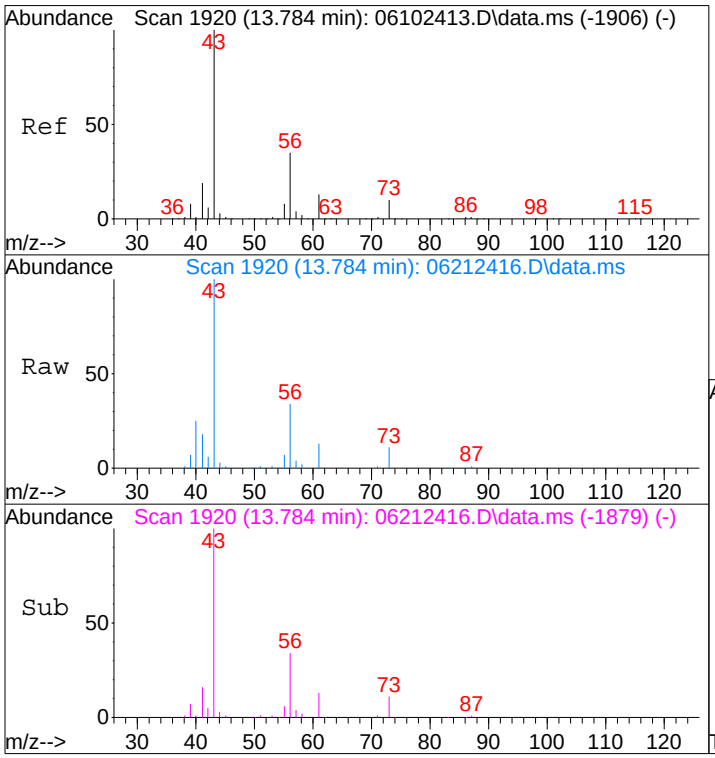


#59
2-Hexanone
Concen: 0.24 ng
RT: 12.93 min Scan# 1770
Delta R.T. -0.017 min
Lab File: 06212416.D
Acq: 21 Jun 2024 18:38

Tgt Ion: 43 Resp: 10851

Ion	Ratio	Lower	Upper
43	100		
58	32.9	25.9	65.9

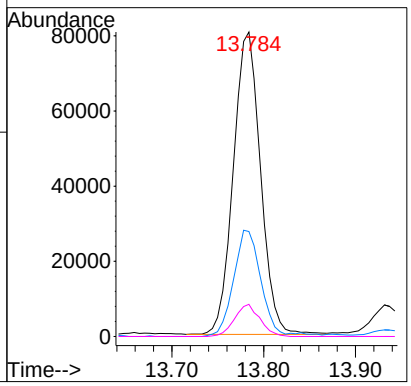


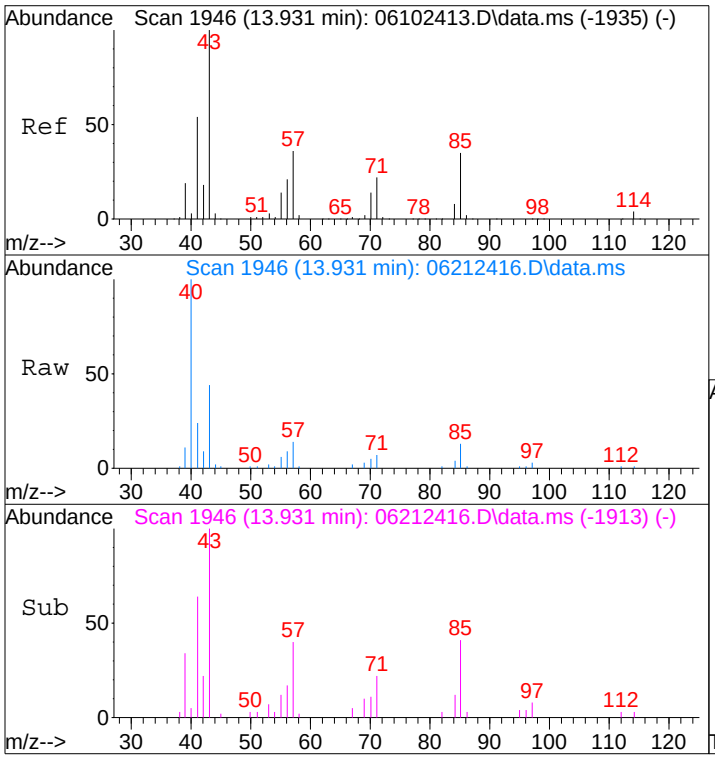


#62
n-Butyl Acetate
Concen: 3.48 ng
RT: 13.78 min Scan# 1920
Delta R.T. -0.017 min
Lab File: 06212416.D
Acq: 21 Jun 2024 18:38

Tgt Ion: 43 Resp: 165522

Ion	Ratio	Lower	Upper
43	100		
56	36.4	14.3	54.3
73	9.9	0.0	30.4

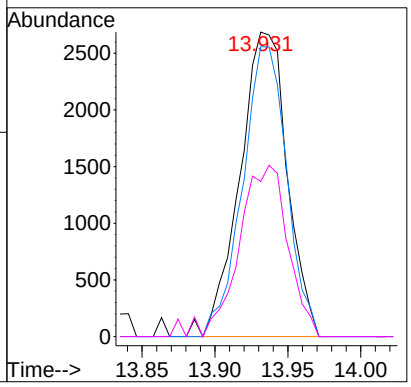


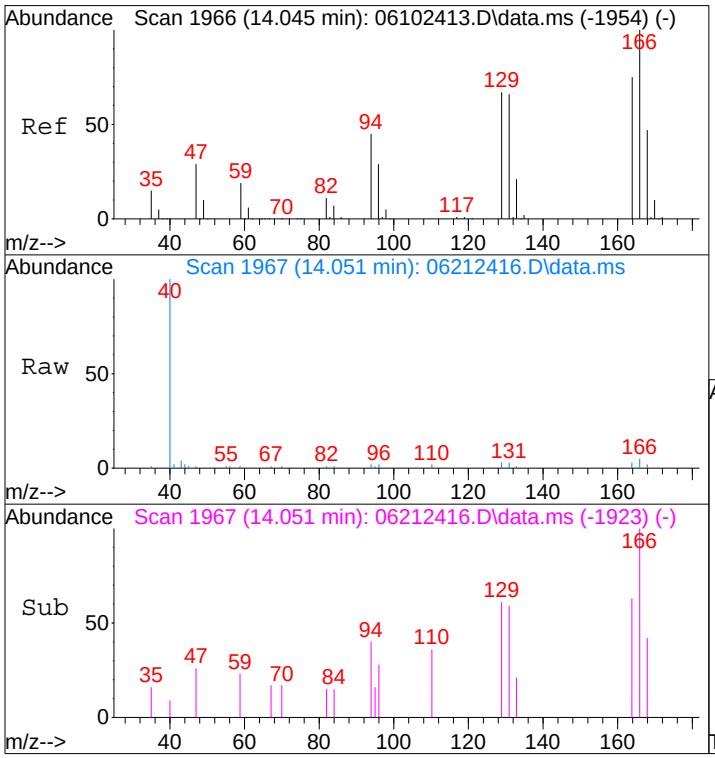


#63
n-Octane
Concen: 0.41 ng
RT: 13.93 min Scan# 1946
Delta R.T. -0.011 min
Lab File: 06212416.D
Acq: 21 Jun 2024 18:38

Tgt Ion: 57 Resp: 6097

Ion	Ratio	Lower	Upper
57	100		
85	88.6	79.8	119.6
71	57.7	49.0	73.4

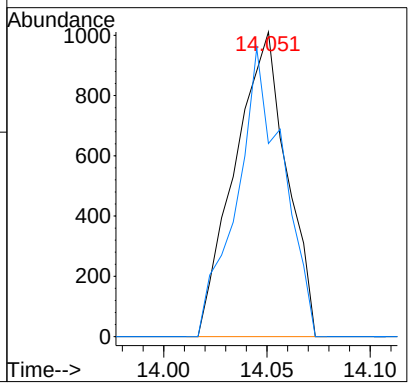


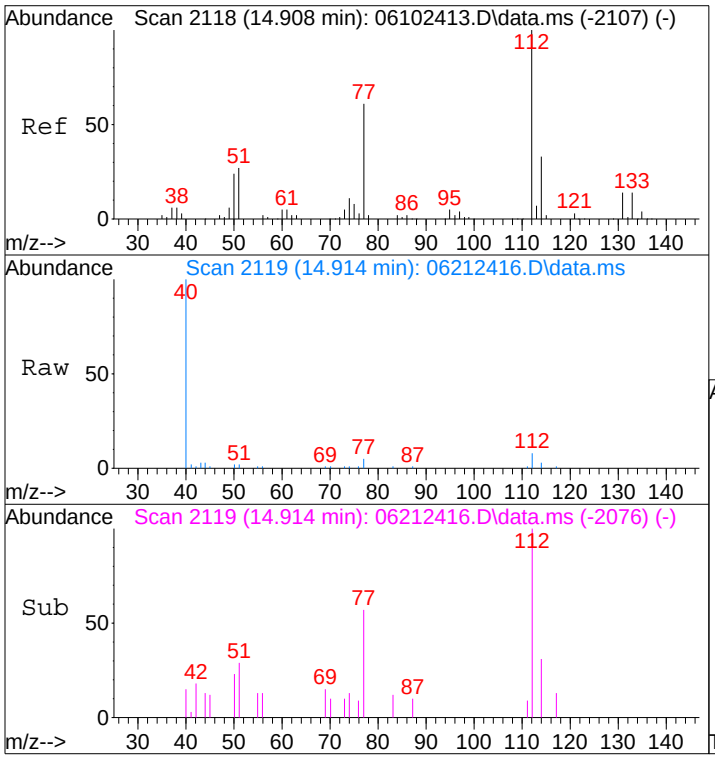


#64
Tetrachloroethene
Concen: 0.07 ng
RT: 14.05 min Scan# 1967
Delta R.T. -0.000 min
Lab File: 06212416.D
Acq: 21 Jun 2024 18:38

Tgt Ion:166 Resp: 1767

Ion	Ratio	Lower	Upper
166	100		
164	84.5	56.9	96.9

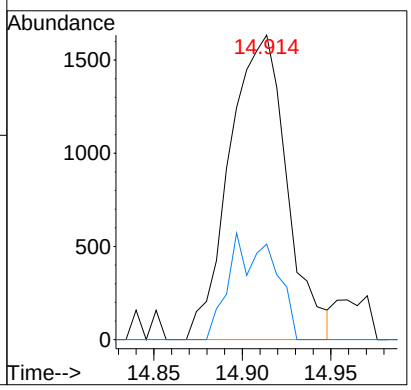


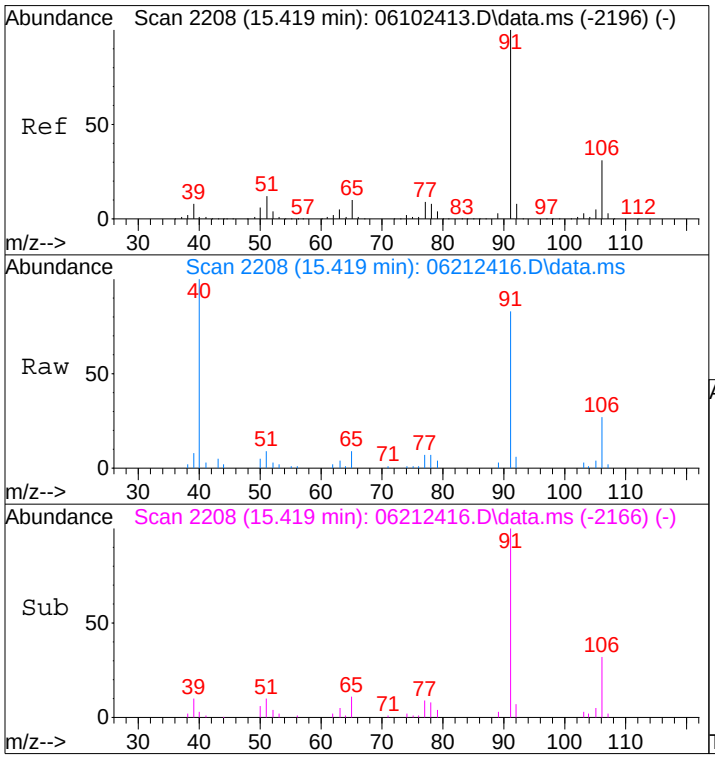


#65
Chlorobenzene
Concen: 0.07 ng
RT: 14.91 min Scan# 2119
Delta R.T. -0.006 min
Lab File: 06212416.D
Acq: 21 Jun 2024 18:38

Tgt Ion:112 Resp: 3678

Ion	Ratio	Lower	Upper
112	100		
114	27.2	13.5	53.5

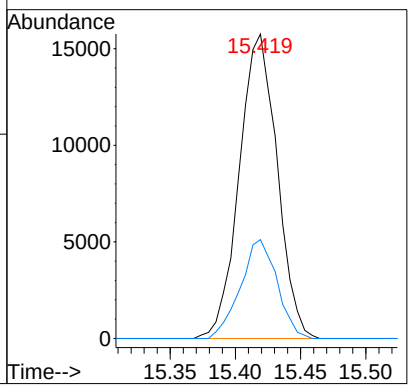


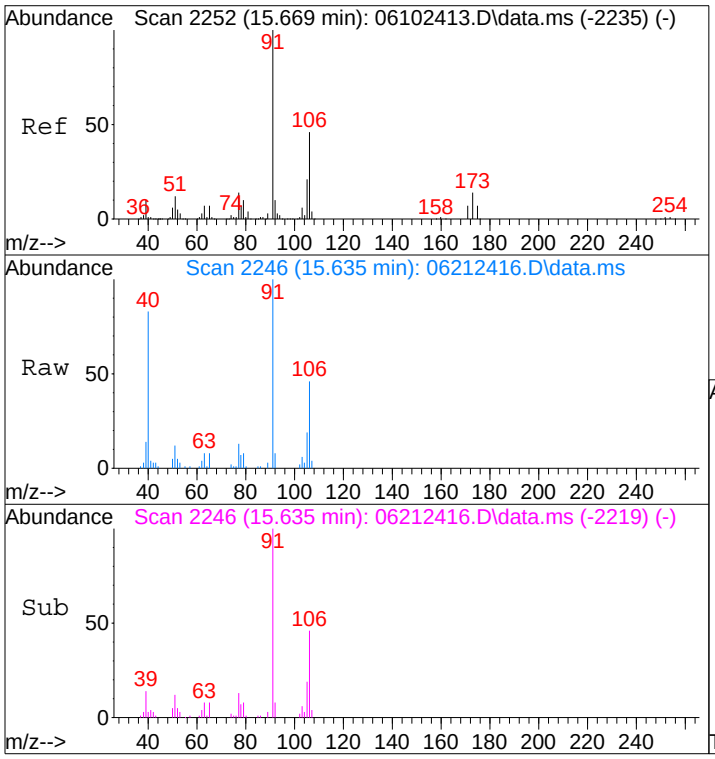


#66
Ethylbenzene
Concen: 0.39 ng
RT: 15.42 min Scan# 2208
Delta R.T. -0.011 min
Lab File: 06212416.D
Acq: 21 Jun 2024 18:38

Tgt Ion: 91 Resp: 31786

Ion	Ratio	Lower	Upper
91	100		
106	31.4	10.7	50.7

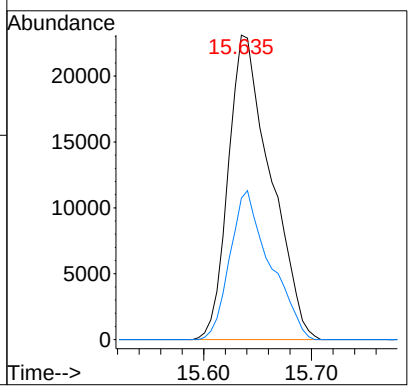


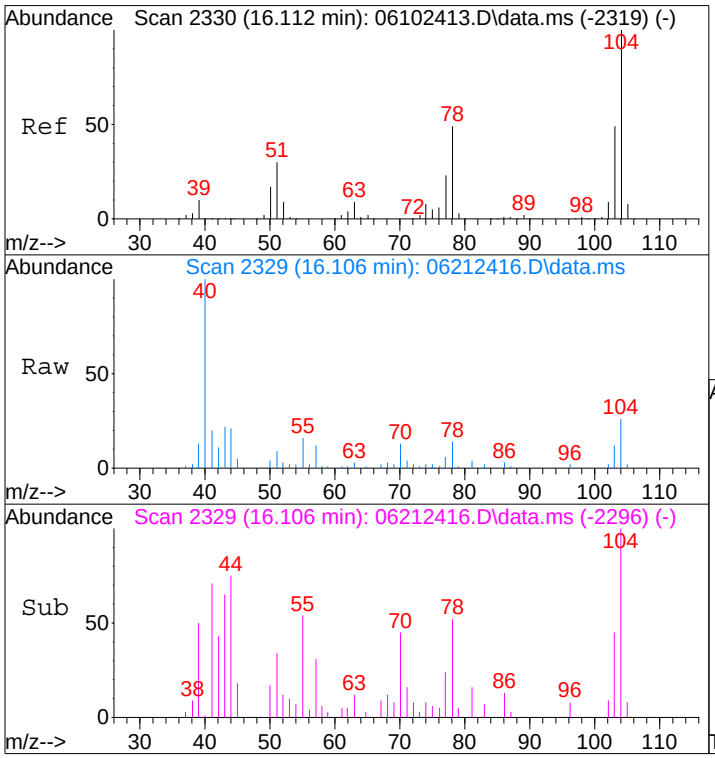


#67
m- & p-Xylenes
Concen: 0.91 ng
RT: 15.63 min Scan# 2246
Delta R.T. -0.045 min
Lab File: 06212416.D
Acq: 21 Jun 2024 18:38

Tgt Ion: 91 Resp: 62892

Ion	Ratio	Lower	Upper
91	100		
106	46.4	25.9	65.9

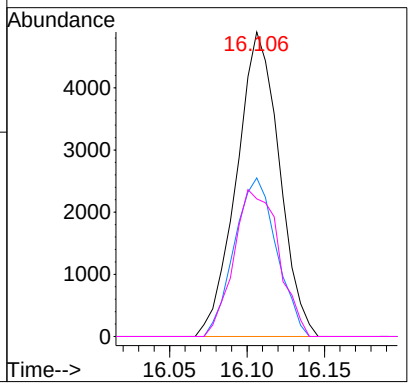


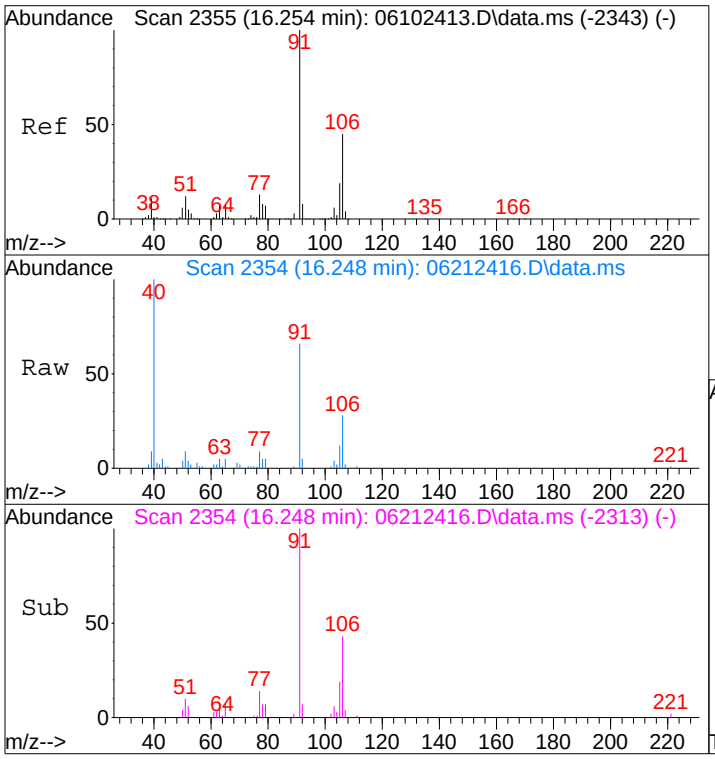


#69
Styrene
Concen: 0.20 ng
RT: 16.11 min Scan# 2329
Delta R.T. -0.011 min
Lab File: 06212416.D
Acq: 21 Jun 2024 18:38

Tgt Ion:104 Resp: 9413

Ion	Ratio	Lower	Upper
104	100		
78	51.5	29.2	69.2
103	50.5	29.4	69.4

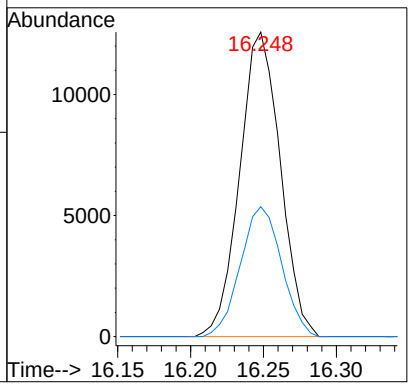


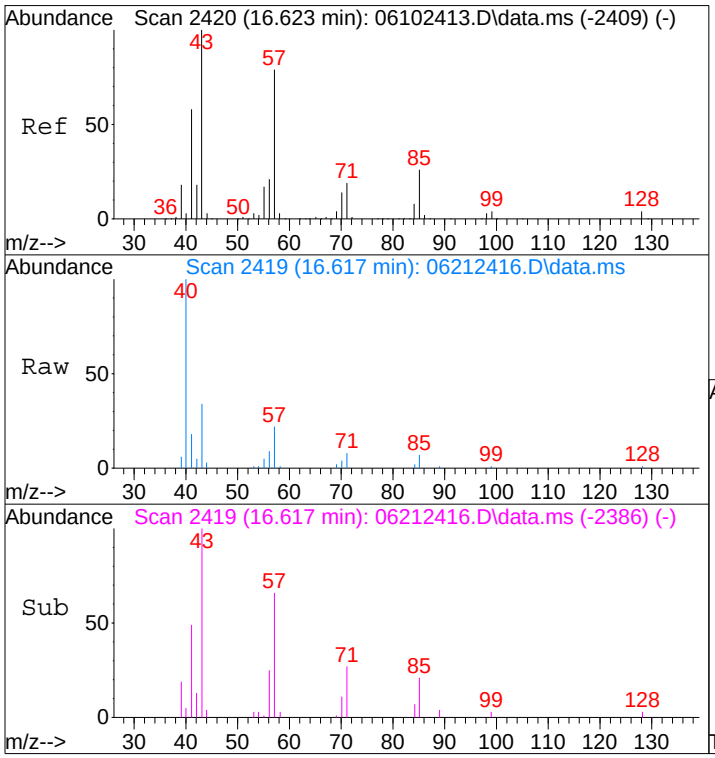


#70
o-Xylene
Concen: 0.36 ng
RT: 16.25 min Scan# 2354
Delta R.T. -0.017 min
Lab File: 06212416.D
Acq: 21 Jun 2024 18:38

Tgt Ion: 91 Resp: 24322

Ion	Ratio	Lower	Upper
91	100		
106	43.3	24.5	64.5

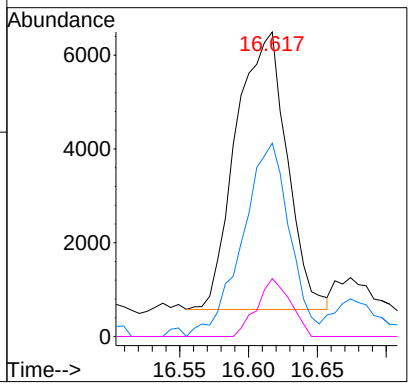


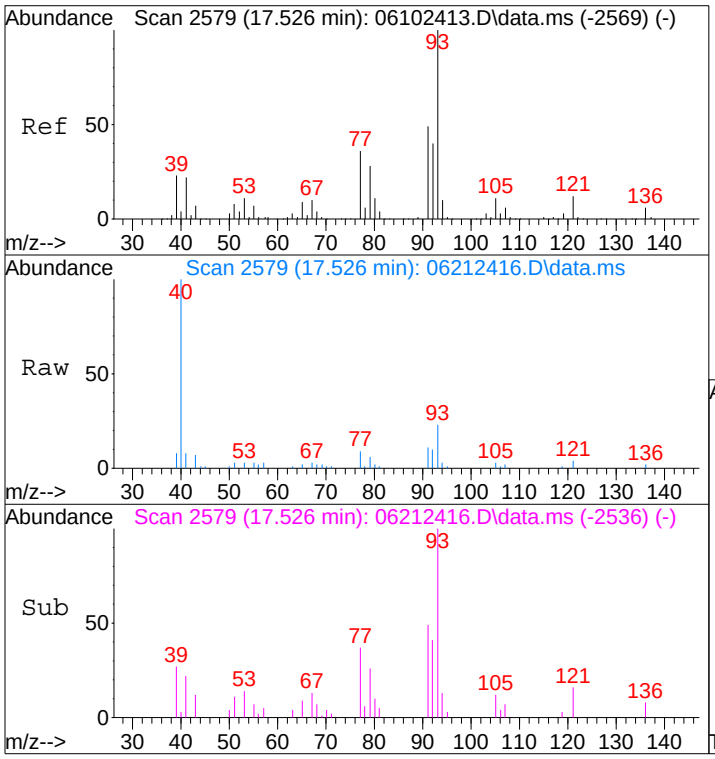


#71
n-Nonane
Concen: 0.38 ng
RT: 16.62 min Scan# 2419
Delta R.T. -0.011 min
Lab File: 06212416.D
Acq: 21 Jun 2024 18:38

Tgt Ion: 43 Resp: 15190

Ion	Ratio	Lower	Upper
43	100		
57	64.6	58.2	98.2
85	13.7	5.9	45.9

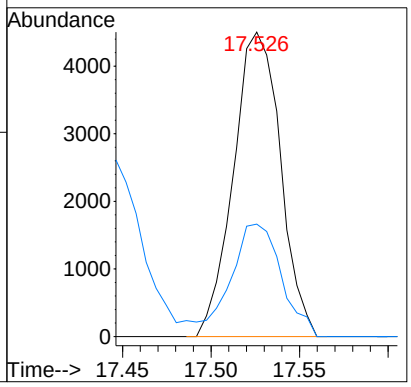


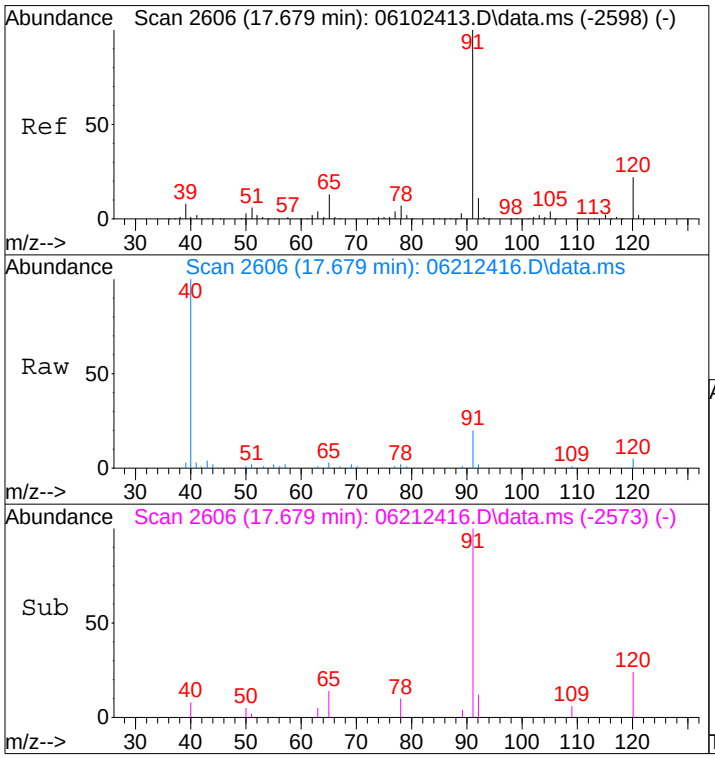


#75
alpha-Pinene
Concen: 0.21 ng
RT: 17.53 min Scan# 2579
Delta R.T. -0.006 min
Lab File: 06212416.D
Acq: 21 Jun 2024 18:38

Tgt Ion: 93 Resp: 8330

Ion	Ratio	Lower	Upper
93	100		
77	39.5	15.3	55.3

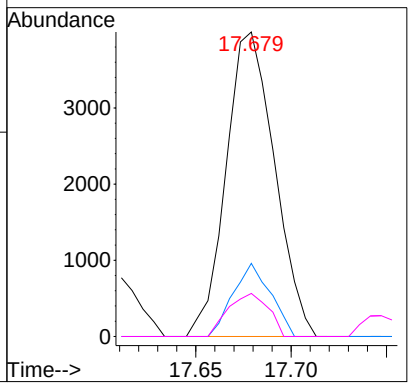


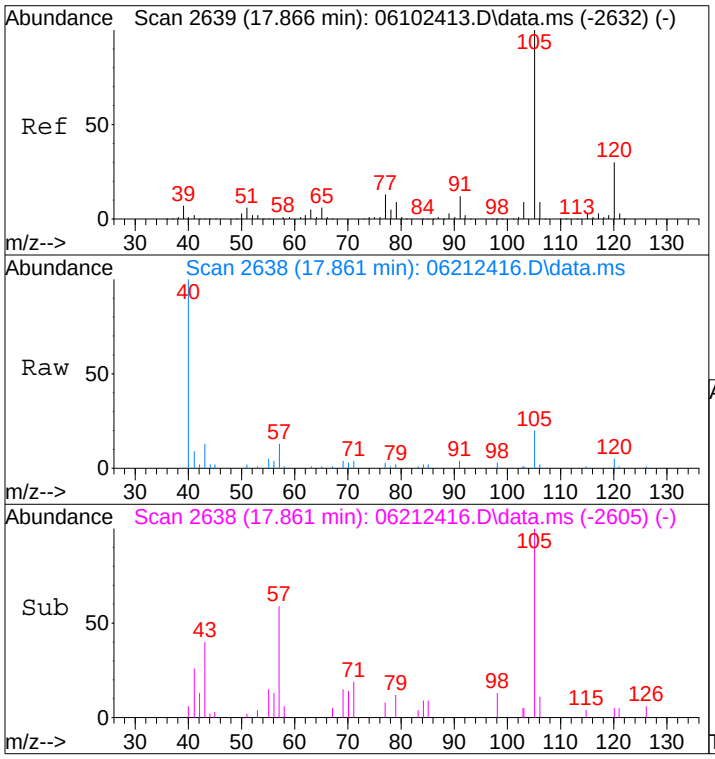


#76
n-Propylbenzene
Concen: 0.07 ng
RT: 17.68 min Scan# 2606
Delta R.T. -0.011 min
Lab File: 06212416.D
Acq: 21 Jun 2024 18:38

Tgt Ion: 91 Resp: 7062

Ion	Ratio	Lower	Upper
91	100		
120	18.6	2.7	42.7
65	11.7	0.0	32.7

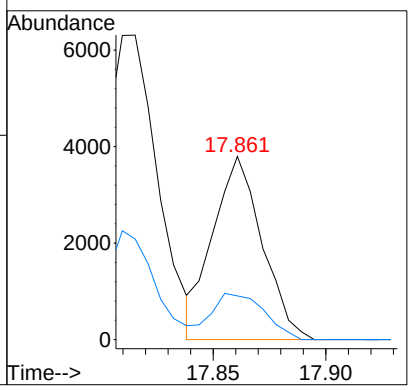


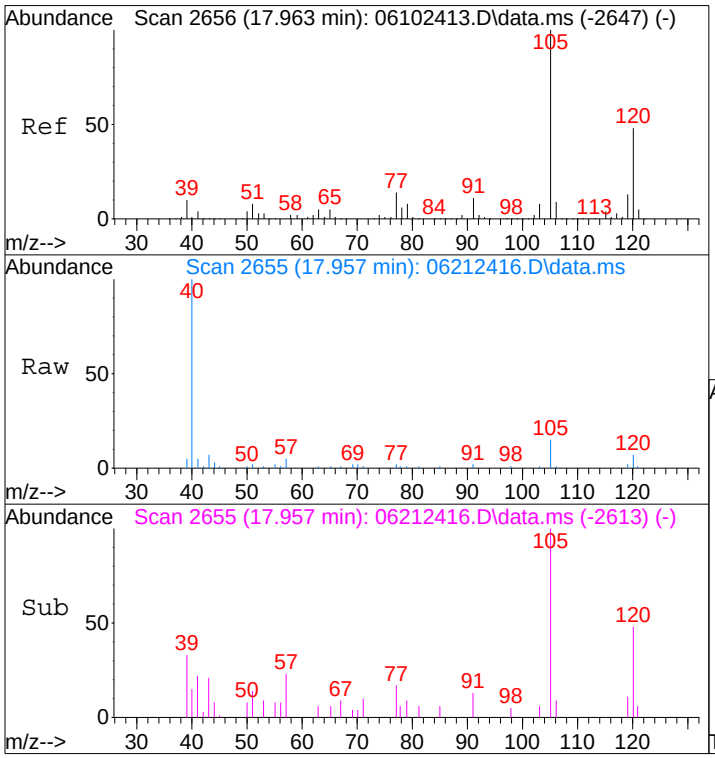


#78
4-Ethyltoluene
Concen: 0.07 ng
RT: 17.86 min Scan# 2638
Delta R.T. -0.011 min
Lab File: 06212416.D
Acq: 21 Jun 2024 18:38

Tgt Ion:105 Resp: 5788

Ion	Ratio	Lower	Upper
105	100		
120	27.5	9.9	49.9

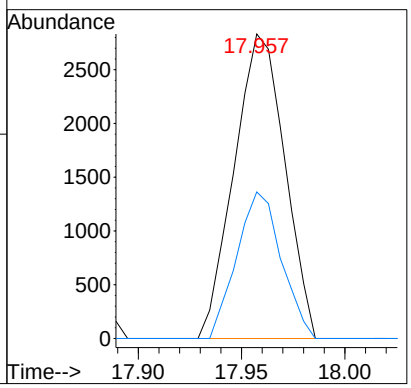


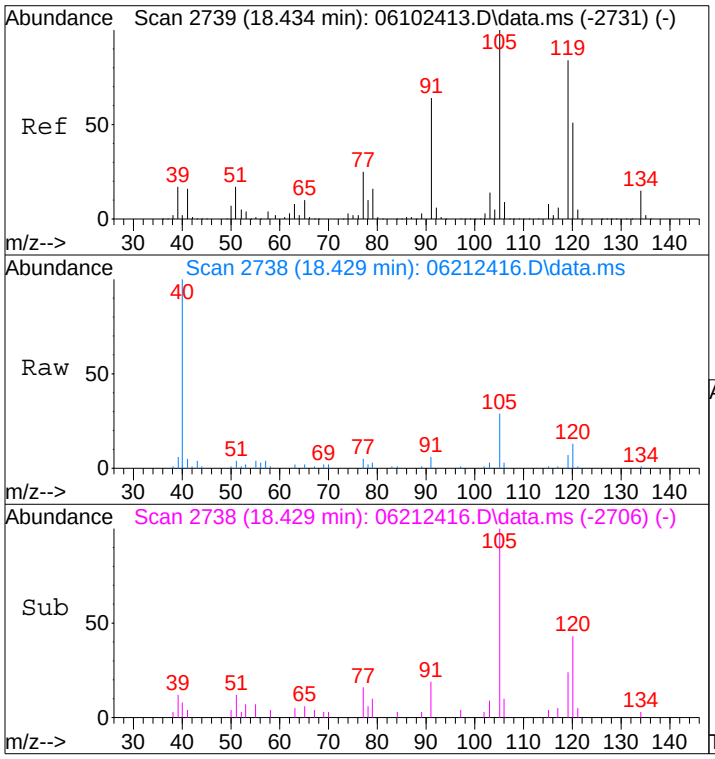


#79
1,3,5-Trimethylbenzene
Concen: 0.07 ng
RT: 17.96 min Scan# 2655
Delta R.T. -0.011 min
Lab File: 06212416.D
Acq: 21 Jun 2024 18:38

Tgt Ion:105 Resp: 4820

Ion	Ratio	Lower	Upper
105	100		
120	42.4	28.0	68.0

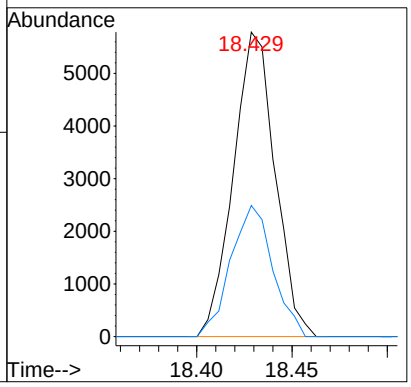


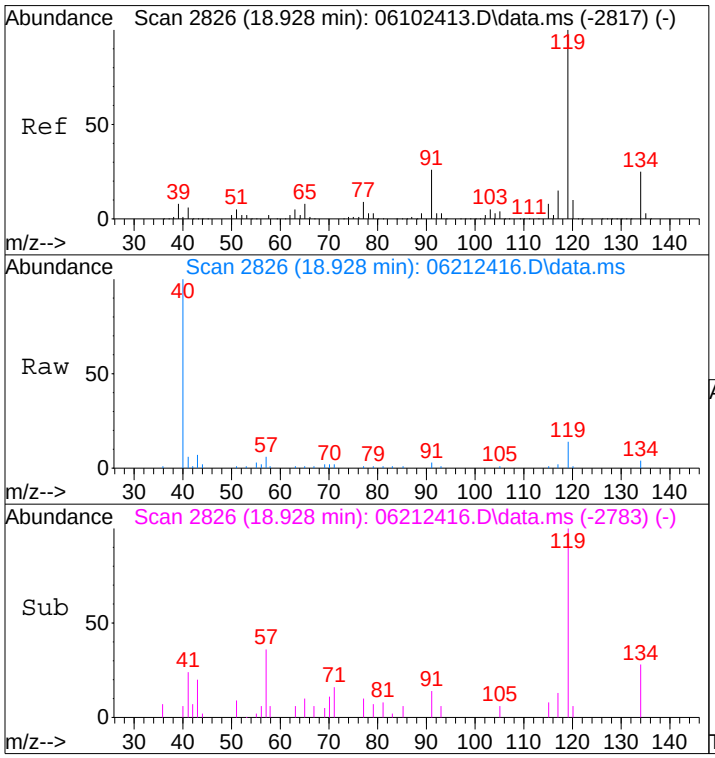


#82
1,2,4-Trimethylbenzene
Concen: 0.12 ng
RT: 18.43 min Scan# 2738
Delta R.T. -0.017 min
Lab File: 06212416.D
Acq: 21 Jun 2024 18:38

Tgt Ion:105 Resp: 8788

Ion	Ratio	Lower	Upper
105	100		
120	43.3	31.9	71.9

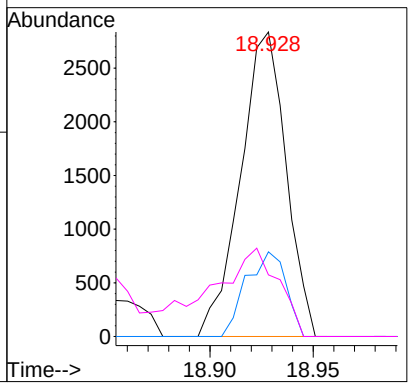


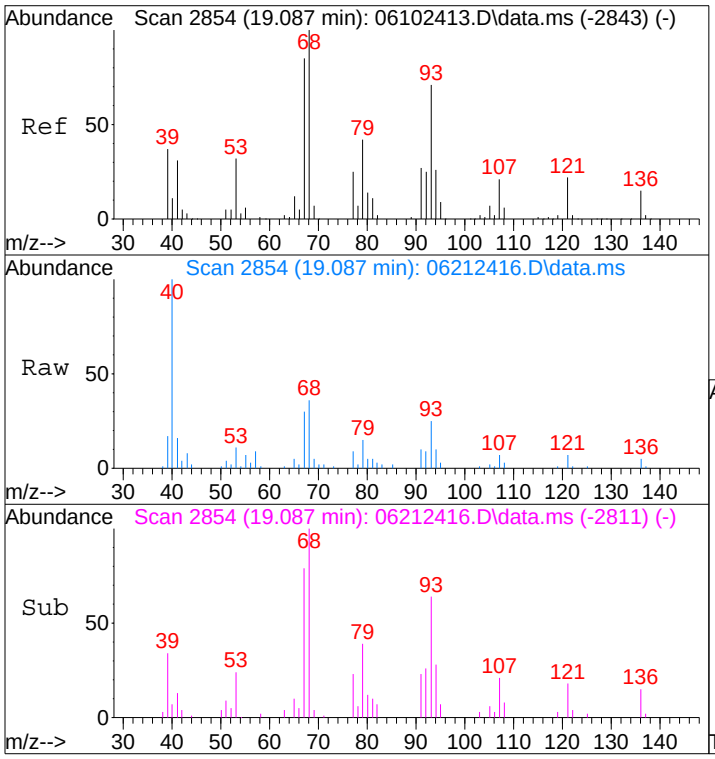


#88
4-Isopropyltoluene (p-Cymene)
Concen: 0.05 ng
RT: 18.93 min Scan# 2826
Delta R.T. -0.006 min
Lab File: 06212416.D
Acq: 21 Jun 2024 18:38

Tgt Ion:119 Resp: 4344

Ion	Ratio	Lower	Upper
119	100		
134	24.3	4.9	44.9
91	44.1	5.8	45.8

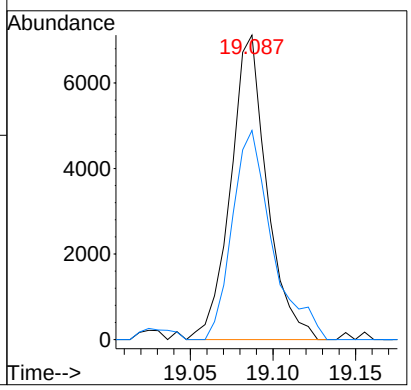




#91
d-Limonene
Concen: 0.43 ng
RT: 19.09 min Scan# 2854
Delta R.T. -0.006 min
Lab File: 06212416.D
Acq: 21 Jun 2024 18:38

Tgt Ion: 68 Resp: 10931

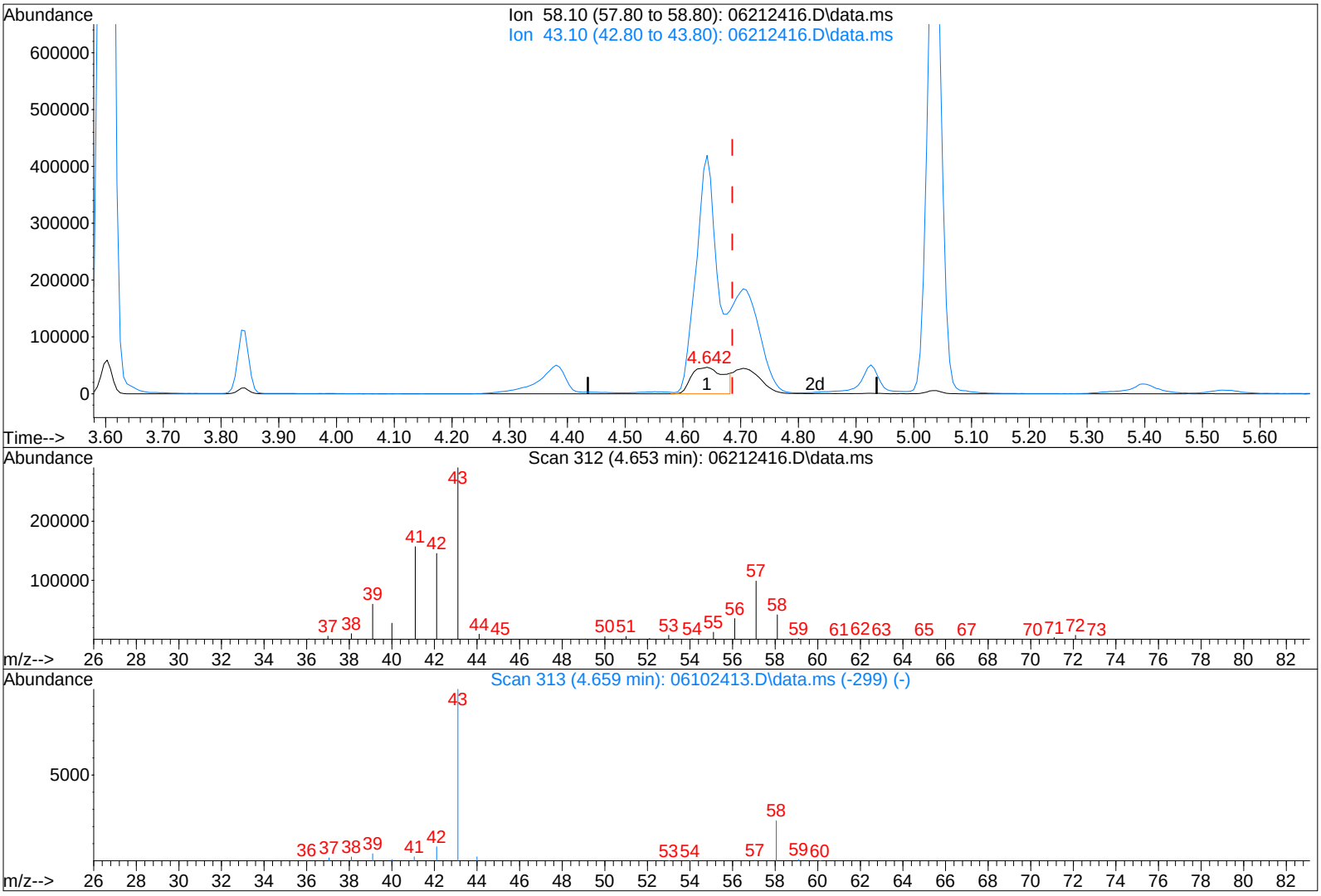
Ion	Ratio	Lower	Upper
68	100		
93	75.1	52.2	92.2



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\21\06212416.D Vial: 6
Acq On : 21 Jun 2024 18:38 Operator: SC
Sample : P2402249-058 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 24 08:54:30 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:53:58 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06212416.D\data.ms

(13) Acetone (T)

4.642min (-0.044) 16.93ng

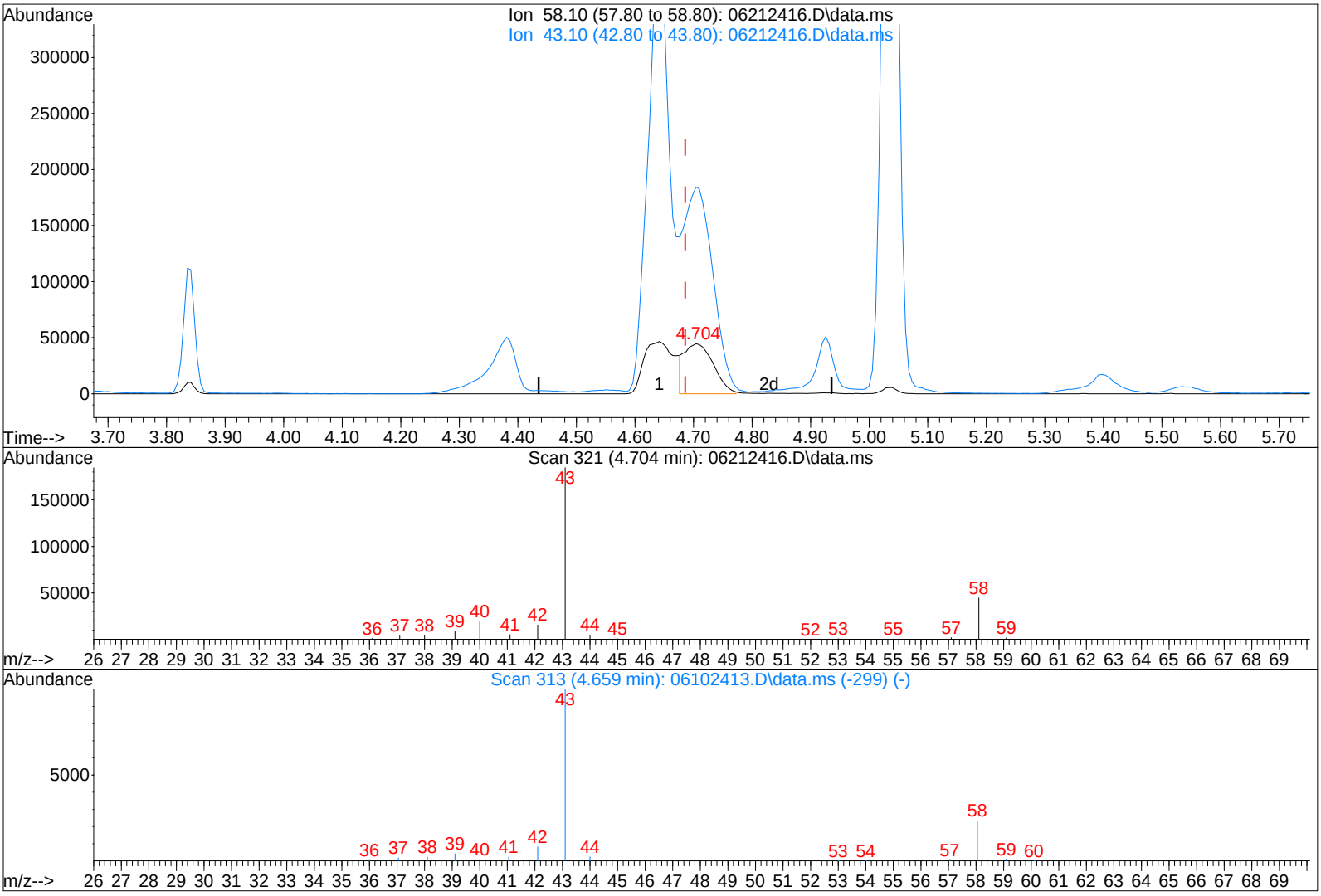
response 182105

Ion	Exp%	Act%
58.10	100	100
43.10	430.70	606.73#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\21\06212416.D Vial: 6
Acq On : 21 Jun 2024 18:38 Operator: SC
Sample : P2402249-058 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 24 08:54:30 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:53:58 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06212416.D\data.ms

(13) Acetone (T)

4.704min (+0.019) 14.28ng m

response 153590

Ion	Exp%	Act%
58.10	100	100
43.10	430.70	408.10
0.00	0.00	0.00
0.00	0.00	0.00

WP

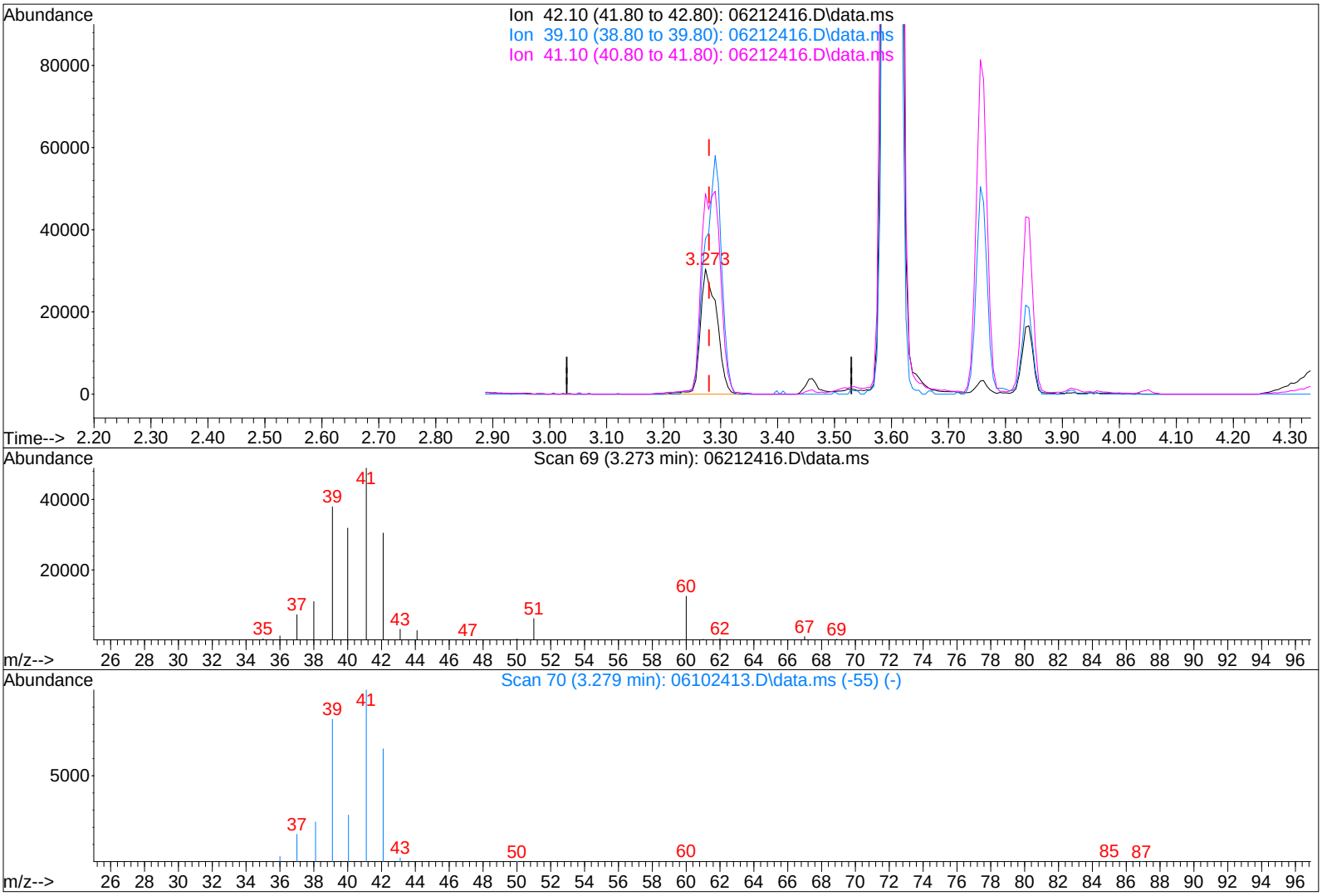
MJ 6/28/24

CG 6/29/24

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\21\06212416.D Vial: 6
Acq On : 21 Jun 2024 18:38 Operator: SC
Sample : P2402249-058 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 24 08:54:30 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:53:58 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06212416.D\data.ms

(2) Propene (T)

3.273min (-0.006) 3.43ng

response 60853

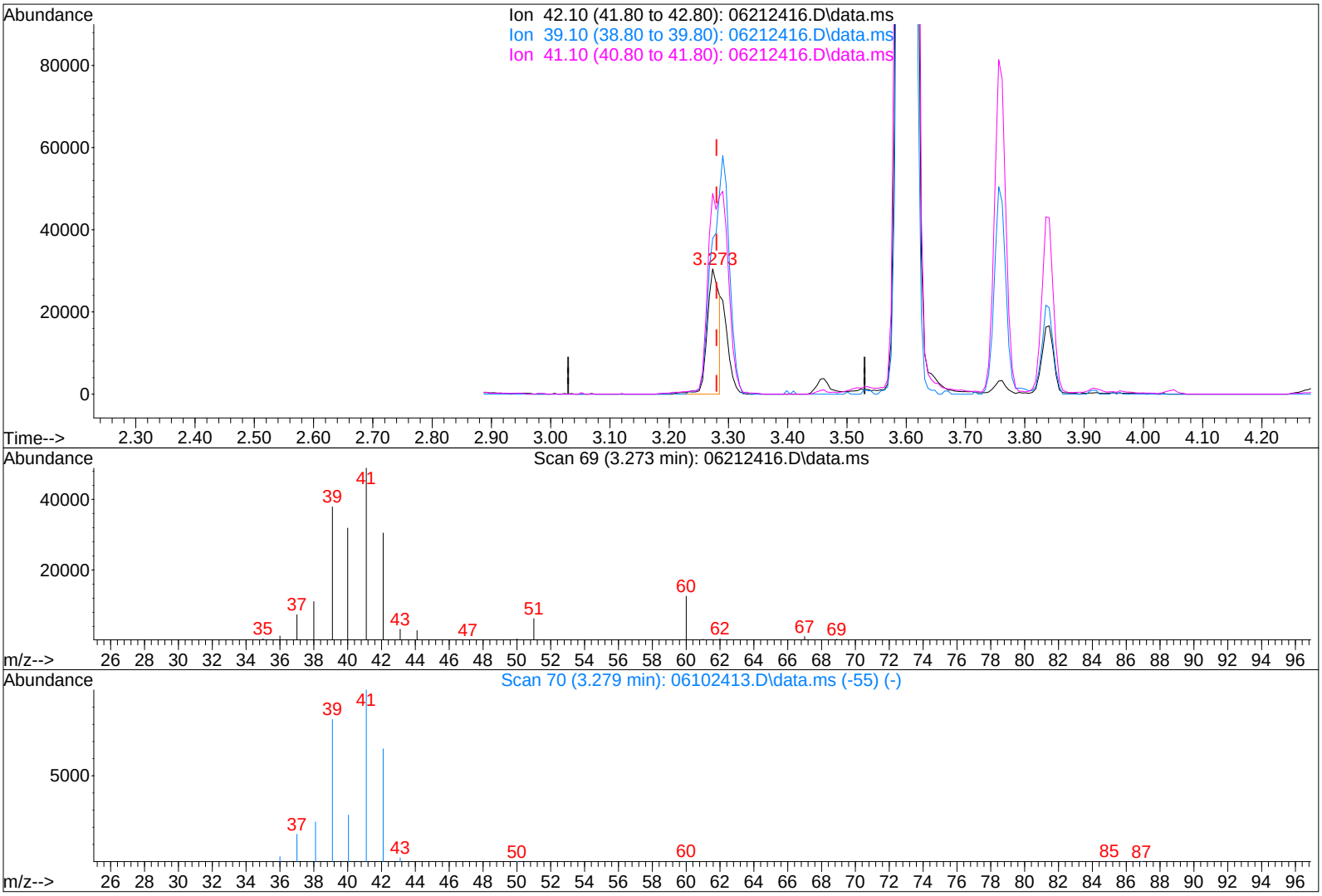
Ion	Exp%	Act%
42.10	100	100
39.10	127.30	193.33#
41.10	154.30	193.46#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\21\06212416.D Vial: 6
Acq On : 21 Jun 2024 18:38 Operator: SC
Sample : P2402249-058 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 24 08:54:30 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:53:58 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06212416.D\data.ms

(2) Propene (T)

3.273min (-0.006) 2.36ng m

response 41829

MJ 6/28/24

IPC

CG 6/29/24

Ion	Exp%	Act%
42.10	100	100
39.10	127.30	145.67
41.10	154.30	168.92
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\21\06212416.D Vial: 6
Acq On : 21 Jun 2024 18:38 Operator: SC
Sample : P2402249-058 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 16:42:45 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

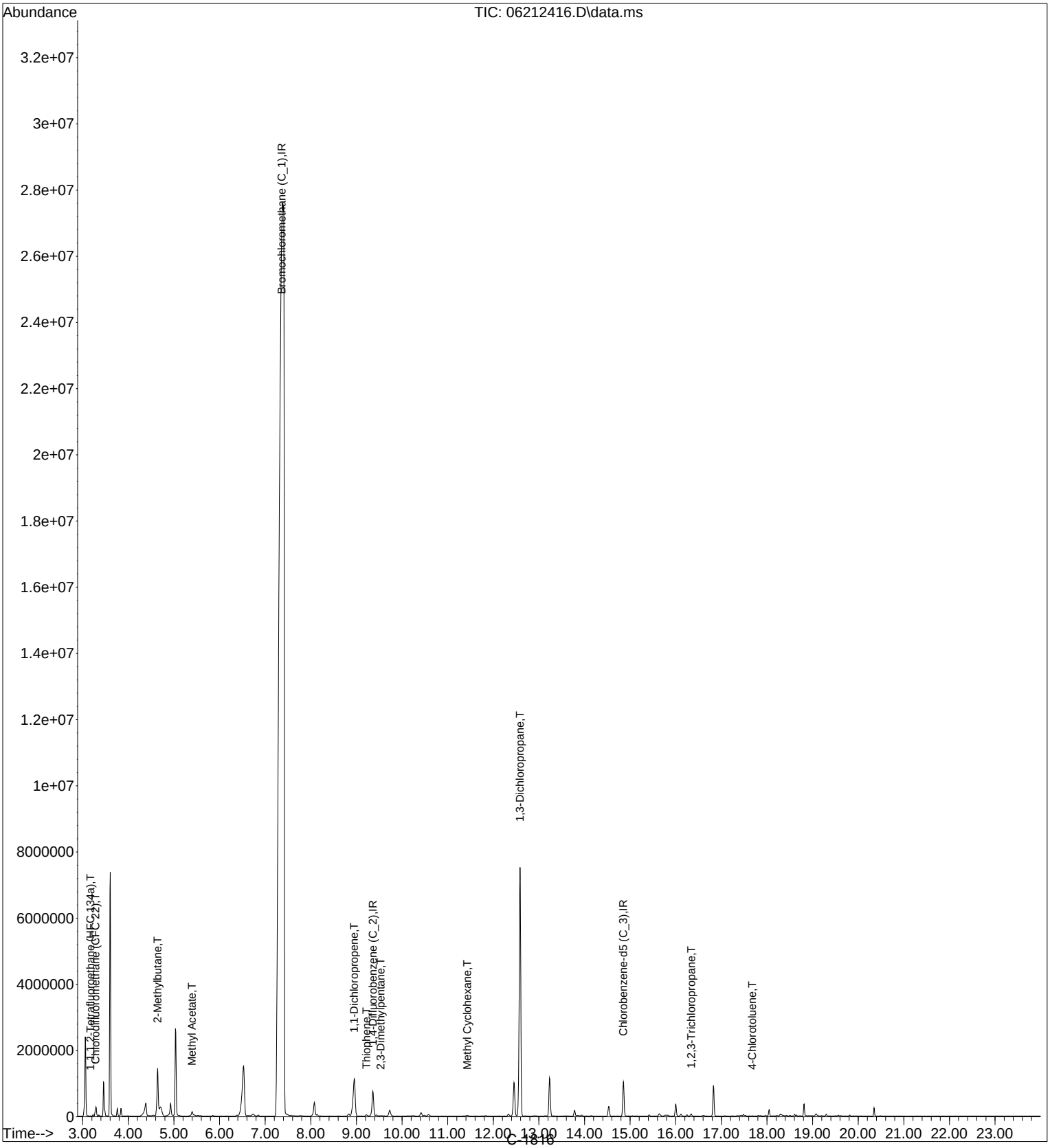
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.36	130	138472	12.500	ng		0.11
16) 1,4-Difluorobenzene (C 2)	9.36	114	774822	12.500	ng		0.04
19) Chlorobenzene-d5 (C_3)	14.85	54	180401	12.500	ng		0.00
Target Compounds							Qvalue
2) Chloropentafluoroethane	3.13	85	220	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.17	83	4743	0.334	ng	#	81
4) 1,1-Difluoroethane	0.00	65	0	N.D.			
5) Chlorodifluoromethane ...	3.28	67	1518	0.322	ng		98
6) 1-Chloro-1,1-Difluoroe...	3.48	65	1618	N.D.			
7) Dichlorofluoromethane ...	0.00	67	0	N.D.			
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	0.00	83	0	N.D.			
10) 2-Methylbutane	4.64	57	277745	16.817	ng		91
11) Methyl Acetate	5.40	43	65557	1.405	ng	#	1
12) 2-Methylpentane	6.62	71	307	N.D.			
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	8.95	75	30881	1.564	ng	#	1
15) Thiophene	9.22	84	18308	0.649	ng	#	36
17) 2,3-Dimethylpentane	9.53	56	9449	0.252	ng	#	75
18) Dibromomethane	9.85	174	353	N.D.			
20) Methyl Cyclohexane	11.43	55	13718	0.443	ng		93
21) 1,3-Dichloropropane	12.59	76	36144	1.503	ng	#	1
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	16.34	75	12596	0.523	ng	#	46
25) Bromobenzene	17.03	77	678	N.D.			
26) 2-Chlorotoluene	17.61	91	1207	N.D.			
27) 4-Chlorotoluene	17.68	91	7062	0.134	ng	#	41
28) Indane	19.12	117	793	N.D.			
29) Indene	19.21	115	331	N.D.			
30) 1,2,4,5-Tetramethylben...	0.00	119	0	N.D.			
31) 1,2,3,4-Tetramethylben...	0.00	119	0	N.D.			
32) 1,2,3,5-Tetramethylben...	0.00	119	0	N.D.			
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212416.D Vial: 6
Acq On : 21 Jun 2024 18:38 Operator: SC
Sample : P2402249-058 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 16:42:45 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\21\
Data File : 06212416.D
Acq On : 21 Jun 2024 18:38
Operator : SC
Sample : P2402249-058 (400mL)
Misc : S37-06062402
ALS Vial : 6 Sample Multiplier: 1

MJ 6/28/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06212416.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.058	20	31	39	rBV	2398917	3932603	1.92%	1.598%
2	3.114	39	41	46	rVB2	16616	18868	0.01%	0.008%
3	3.171	48	51	56	rBV2	9691	10093	0.00%	0.004%
4	3.228	56	61	64	rBV	44551	51661	0.03%	0.021%
5	3.290	64	72	79	rVB4	279093	549662	0.27%	0.223%
6	3.353	79	83	89	rBV	36241	43328	0.02%	0.018%
7	3.455	96	101	112	rBV	1026815	1563053	0.76%	0.635%
8	3.603	118	127	146	rVB	7365541	10197547	4.98%	4.143%
9	3.756	148	154	160	rBV	232011	313860	0.15%	0.128%
10	3.836	162	168	174	rVB	224988	308232	0.15%	0.125%
11	3.989	185	195	203	rVB4	8564	20517	0.01%	0.008%
12	4.381	238	264	272	rBV	387791	1300638	0.63%	0.528%
13	4.642	301	310	316	rBV	1428350	2853331	1.39%	1.159%
14	4.926	336	360	372	rBV	376095	914568	0.45%	0.372%
15	5.034	372	379	408	rVB	2646751	4585551	2.24%	1.863%
16	5.397	421	443	460	rBV	139146	469541	0.23%	0.191%
17	5.522	461	465	473	rVV5	22440	71711	0.03%	0.029%
18	5.584	473	476	485	rVB4	17139	33290	0.02%	0.014%
19	5.851	514	523	530	rBV	24309	49346	0.02%	0.020%
20	6.158	575	577	586	rVB4	5773	11058	0.01%	0.004%
21	6.379	608	616	620	rBV3	29930	75752	0.04%	0.031%
22	6.527	620	642	653	rVV	1512381	5684541	2.77%	2.310%
23	6.635	655	661	666	rVV5	19347	62000	0.03%	0.025%
24	6.743	667	680	692	rVV	57538	242170	0.12%	0.098%
25	6.851	692	699	706	rVB2	34541	73709	0.04%	0.030%
26	7.379	759	792	831	rBV3	27590825	204898180	100.00%	83.254%
27	7.771	854	861	877	rVB6	12861	45258	0.02%	0.018%
28	8.077	896	915	922	rBV	413208	1029739	0.50%	0.418%
29	8.134	922	925	934	rVV2	44091	97075	0.05%	0.039%
30	8.219	936	940	945	rVB5	5368	10993	0.01%	0.004%
31	8.605	1000	1008	1013	rVB3	5315	13455	0.01%	0.005%
32	8.827	1037	1047	1053	rBV	64006	158104	0.08%	0.064%
33	8.952	1053	1069	1085	rVB	1132093	3818191	1.86%	1.551%
34	9.219	1107	1116	1126	rBV3	39469	114593	0.06%	0.047%
35	9.360	1126	1141	1150	rVV	750971	1873359	0.91%	0.761%
36	9.434	1150	1154	1165	rVB3	30960	74745	0.04%	0.030%
37	9.531	1165	1171	1173	rBV3	8269	15047	0.01%	0.006%
38	9.610	1183	1185	1191	rVB3	9565	14270	0.01%	0.006%
39	9.730	1191	1206	1223	rVB2	174181	513447	0.25%	0.209%

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\21\
Data File : 06212416.D
Acq On : 21 Jun 2024 18:38
Operator : SC
Sample : P2402249-058 (400mL)
Misc : S37-06062402
ALS Vial : 6 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

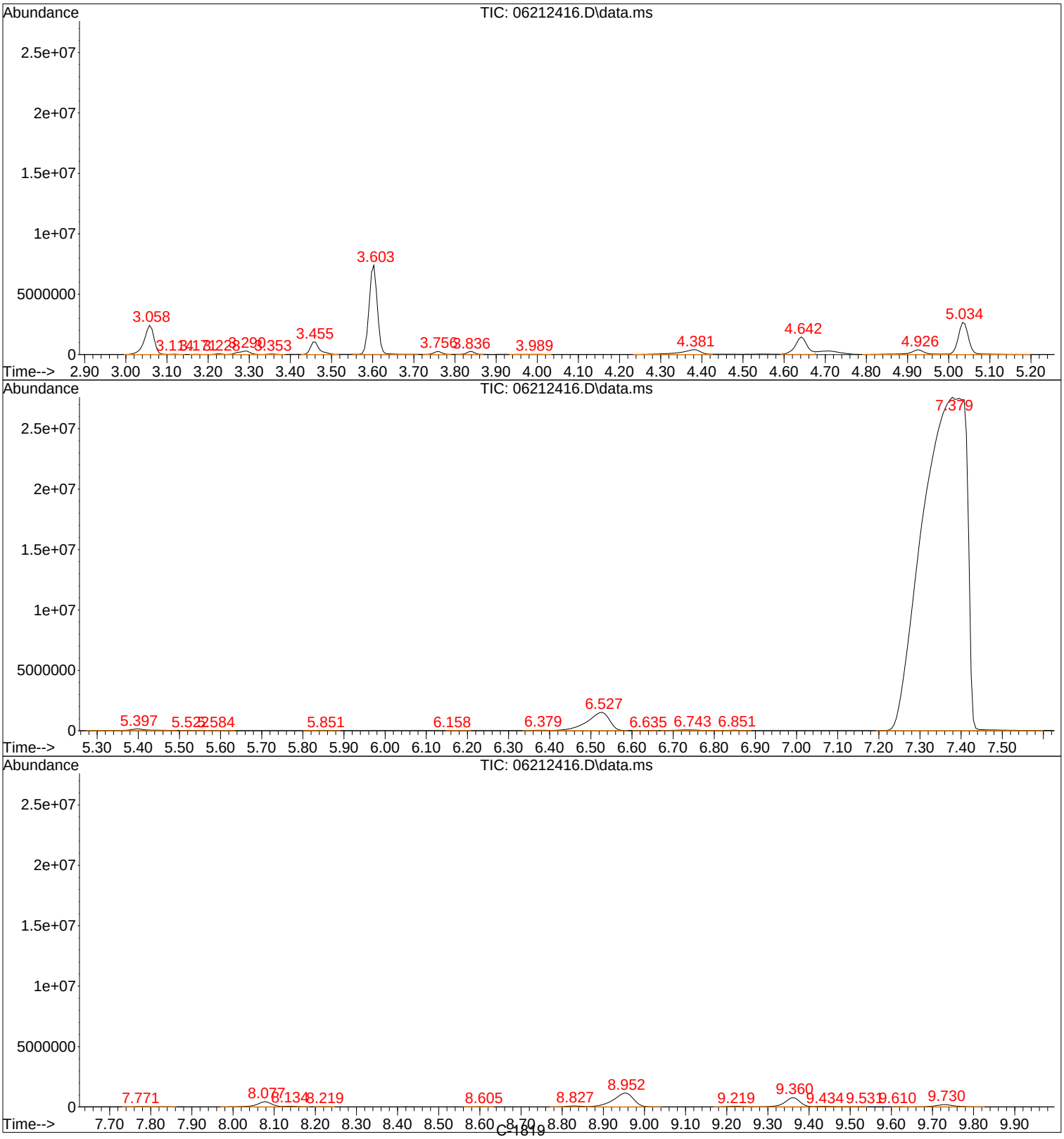
Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Sum of corrected areas: 246113086

Data Path : I:\MS09\DATA\2024 06\21\
Data File : 06212416.D
Acq On : 21 Jun 2024 18:38
Operator : SC
Sample : P2402249-058 (400mL)
Misc : S37-06062402
ALS Vial : 6 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\21\\
Data File : 06212416.D
Acq On : 21 Jun 2024 18:388
Operator : SCC
Sample : P2402249-058 (400mL))
Misc : S37-060624022
ALS Vial : 6 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\21\06212417.D Vial: 7
Acq On : 22 Jun 2024 8:11 Operator: SC
Sample : P2402249-059 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 17:35:34 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.22	130	205189	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	882244	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	205304	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	436639	11.973	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 95.76%				
57) Toluene-d8 (SS2)	12.43	98	985008	12.537	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.32%				
73) Bromofluorobenzene (SS3)	16.82	174	347536	12.250	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.00%				
Target Compounds							Qvalue
2) Propene	0.00	42	0	N.D. d			
3) Dichlorodifluoromethan...	3.36	85	30291m	0.627	ng		
4) Chloromethane	3.49	50	4009	0.121	ng		97
5) 1,2-Dichloro-1,1,2,2-t...	3.61	135	2432	0.116	ng		95
6) Vinyl Chloride	3.69	62	4141	0.131	ng		99
7) 1,3-Butadiene	3.78	54	163	N.D.			
8) Bromomethane	4.01	94	967	0.058	ng		96
9) Chloroethane	4.15	64	1504	0.114	ng		98
10) Ethanol	4.29	45	16320	0.818	ng		96
11) Acetonitrile	0.00	41	0	N.D. d			
12) Acrolein	4.53	56	3711	0.251	ng		100
13) Acetone	4.63	58	40256	2.525	ng		97
14) Trichlorofluoromethane	4.75	101	184697	3.781	ng		99
15) 2-Propanol (Isopropanol)	0.00	45	0	N.D. d			
16) Acrylonitrile	5.04	53	526	N.D.			
17) 1,1-Dichloroethene	5.26	96	2621	0.140	ng	#	86
18) 2-Methyl-2-Propanol (t...	5.34	59	1171	N.D.			
19) Methylene Chloride	5.34	84	2938	0.130	ng		97
20) 3-Chloro-1-propene (Al...	5.44	41	725	N.D.			
21) Trichlorotrifluoroethane	5.58	151	47055	2.277	ng		99
22) Carbon Disulfide	5.59	76	454052	6.244	ng		99
23) trans-1,2-Dichloroethene	6.12	61	3507	0.109	ng		99
24) 1,1-Dichloroethane	6.31	63	477	N.D.			
25) Methyl tert-Butyl Ether	6.31	73	1442	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D. d			
27) 2-Butanone (MEK)	6.67	72	4723	0.374	ng	#	69
28) cis-1,2-Dichloroethene	7.06	61	1838	0.058	ng		92
29) Diisopropyl Ether	0.00	87	0	N.D. d			
30) Ethyl Acetate	7.28	61	65887	8.555	ng		96
31) n-Hexane	7.30	57	3590	0.106	ng	#	95
32) Chloroform	7.35	83	32484	0.808	ng		100
34) Tetrahydrofuran (THF)	7.77	72	296	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	843	N.D.			
38) 1,1,1-Trichloroethane	8.39	97	128	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.81	56	4907	No Calib			
41) Benzene	8.89	78	12733	0.156	ng		99
42) Carbon Tetrachloride	9.06	117	2710	0.072	ng		99
43) Cyclohexane	9.22	84	4048	0.154	ng		95
44) tert-Amyl Methyl Ether	9.52	73	165	N.D.			
45) 1,2-Dichloropropane	9.85	63	174	N.D.			
46) Bromodichloromethane	10.07	83	4339	0.132	ng		96
47) Trichloroethene	10.14	130	3433	0.144	ng		99
48) 1,4-Dioxane	10.12	88	1720	0.114	ng		91
49) 2,2,4-Trimethylpentane...	10.22	57	1255	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

C-1821

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212417.D Vial: 7
Acq On : 22 Jun 2024 8:11 Operator: SC
Sample : P2402249-059 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 17:35:34 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

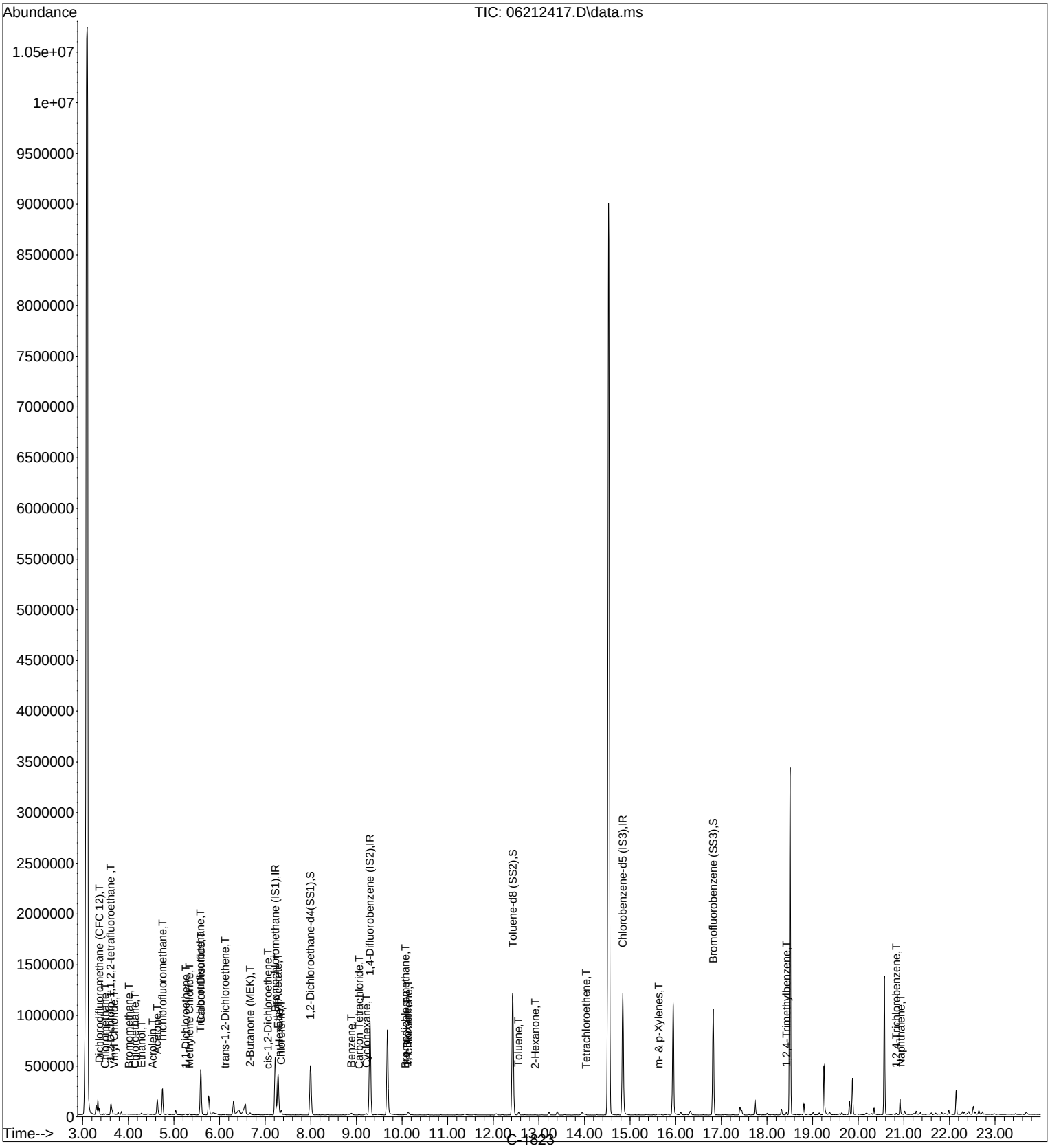
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	10.55	71	827	N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	11.33	58	433	N.D.	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
58) Toluene	12.55	91	19467	0.237 ng	97
59) 2-Hexanone	12.92	43	4114	0.080 ng	77
60) Dibromochloromethane	13.06	129	1125	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	0.00	43	0	N.D. d	
63) n-Octane	0.00	57	0	N.D. d	
64) Tetrachloroethene	14.03	166	1490	0.053 ng	98
65) Chlorobenzene	14.90	112	1292	N.D.	
66) Ethylbenzene	15.40	91	2464	N.D.	
67) m- & p-Xylenes	15.63	91	4887	0.062 ng	95
68) Bromoform	15.67	173	947	N.D.	
69) Styrene	16.10	104	1046	N.D.	
70) o-Xylene	16.24	91	1944	N.D.	
71) n-Nonane	16.61	43	1728	N.D.	
72) 1,1,2,2-Tetrachloroethane	16.21	83	654	N.D.	
74) Cumene	17.03	105	1750	N.D.	
75) alpha-Pinene	0.00	93	0	N.D.	
76) n-Propylbenzene	17.67	91	2932	N.D.	
77) 3-Ethyltoluene	17.03	105	1750	No Calib	
78) 4-Ethyltoluene	17.86	105	2031	N.D.	
79) 1,3,5-Trimethylbenzene	17.96	105	1381	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.03	105	1750	No Calib	
82) 1,2,4-Trimethylbenzene	18.43	105	9362	0.110 ng	90
83) n-Decane	0.00	58	0	N.D.	
84) Benzyl Chloride	18.56	91	1159	N.D.	
85) 1,3-Dichlorobenzene	18.57	146	1548	N.D.	
86) 1,4-Dichlorobenzene	18.65	146	1949	N.D.	
87) sec-Butylbenzene	18.74	105	1791	N.D.	
88) 4-Isopropyltoluene (p-...	18.92	119	2502	N.D.	
89) 1,2,3-Trimethylbenzene	17.03	105	1750	No Calib	
90) 1,2-Dichlorobenzene	19.02	146	1392	N.D.	
91) d-Limonene	19.08	68	339	N.D.	
92) 1,2-Dibromo-3-Chloropr...	19.50	157	448	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	3619	0.084 ng	96
95) Naphthalene	20.94	128	8386	0.077 ng	99
96) n-Dodecane	0.00	58	0	N.D.	
97) Hexachlorobutadiene	21.30	225	956	N.D.	
98) Cyclohexanone	15.42	55	129	No Calib #	
99) tert-Butylbenzene	18.42	119	2399	N.D.	
100) n-Butylbenzene	19.38	91	3003	N.D.	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212417.D Vial: 7
Acq On : 22 Jun 2024 8:11 Operator: SC
Sample : P2402249-059 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 17:35:34 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



C-1823

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212417.D Vial: 7
Acq On : 22 Jun 2024 8:11 Operator: SC
Sample : P2402249-059 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 17:35:34 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

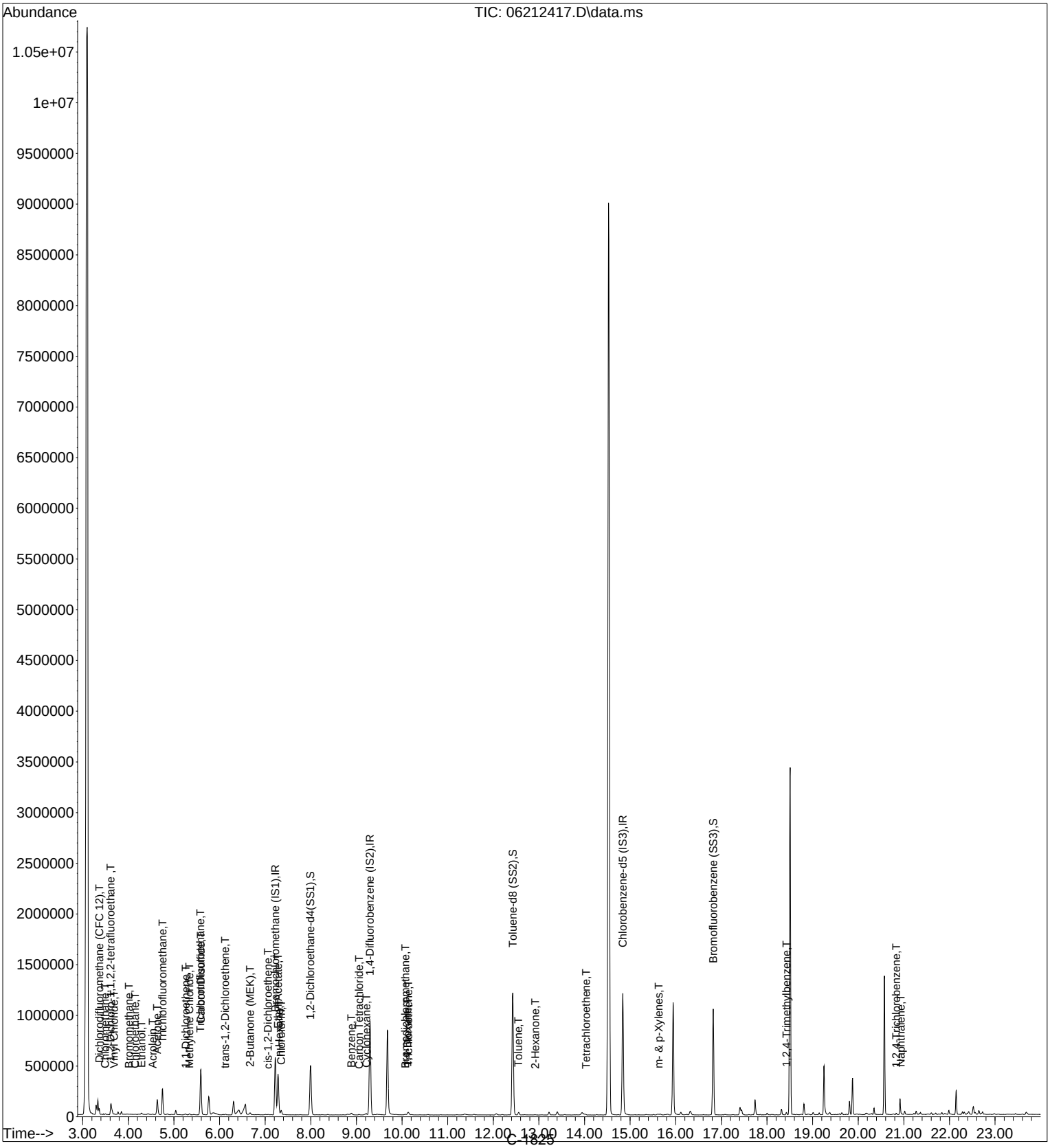
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.22	130	205189	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	882244	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	205304	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	436639	11.973	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 95.76%				
57) Toluene-d8 (SS2)	12.43	98	985008	12.537	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.32%				
73) Bromofluorobenzene (SS3)	16.82	174	347536	12.250	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.00%				
Target Compounds							Qvalue
3) Dichlorodifluoromethan...	3.36	85	30291m	0.627	ng		
4) Chloromethane	3.49	50	4009	0.121	ng		97
5) 1,2-Dichloro-1,1,2,2-t...	3.61	135	2432	0.116	ng		95
6) Vinyl Chloride	3.69	62	4141	0.131	ng		99
8) Bromomethane	4.01	94	967	0.058	ng		96
9) Chloroethane	4.15	64	1504	0.114	ng		98
10) Ethanol	4.29	45	16320	0.818	ng		96
12) Acrolein	4.53	56	3711	0.251	ng		100
13) Acetone	4.63	58	40256	2.525	ng		97
14) Trichlorofluoromethane	4.75	101	184697	3.781	ng		99
17) 1,1-Dichloroethene	5.26	96	2621	0.140	ng	#	86
19) Methylene Chloride	5.34	84	2938	0.130	ng		97
21) Trichlorotrifluoroethane	5.58	151	47055	2.277	ng		99
22) Carbon Disulfide	5.59	76	454052	6.244	ng		99
23) trans-1,2-Dichloroethene	6.12	61	3507	0.109	ng		99
27) 2-Butanone (MEK)	6.67	72	4723	0.374	ng	#	69
28) cis-1,2-Dichloroethene	7.06	61	1838	0.058	ng		92
30) Ethyl Acetate	7.28	61	65887	8.555	ng		96
31) n-Hexane	7.30	57	3590	0.106	ng	#	95
32) Chloroform	7.35	83	32484	0.808	ng		100
41) Benzene	8.89	78	12733	0.156	ng		99
42) Carbon Tetrachloride	9.06	117	2710	0.072	ng		99
43) Cyclohexane	9.22	84	4048	0.154	ng		95
46) Bromodichloromethane	10.07	83	4339	0.132	ng		96
47) Trichloroethene	10.14	130	3433	0.144	ng		99
48) 1,4-Dioxane	10.12	88	1720	0.114	ng		91
58) Toluene	12.55	91	19467	0.237	ng		97
59) 2-Hexanone	12.92	43	4114	0.080	ng		77
64) Tetrachloroethene	14.03	166	1490	0.053	ng		98
67) m- & p-Xylenes	15.63	91	4887	0.062	ng		95
82) 1,2,4-Trimethylbenzene	18.43	105	9362	0.110	ng		90
94) 1,2,4-Trichlorobenzene	20.84	180	3619	0.084	ng		96
95) Naphthalene	20.94	128	8386	0.077	ng		99

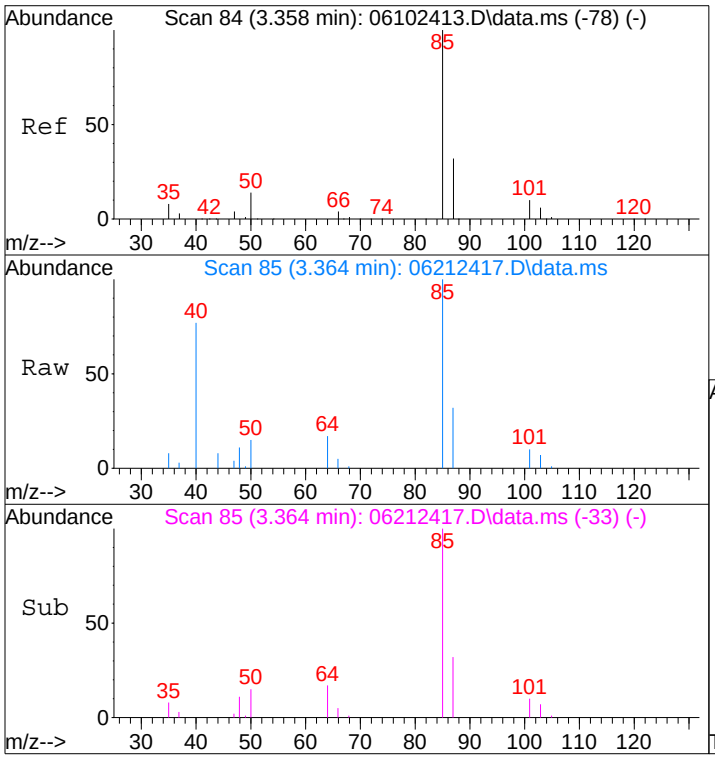
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212417.D Vial: 7
Acq On : 22 Jun 2024 8:11 Operator: SC
Sample : P2402249-059 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 17:35:34 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

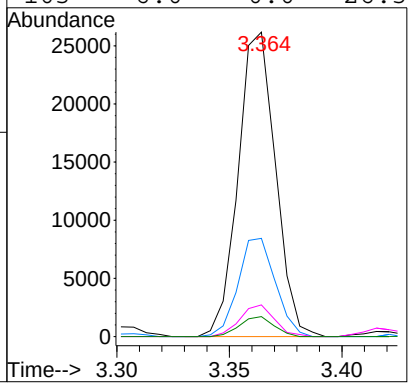


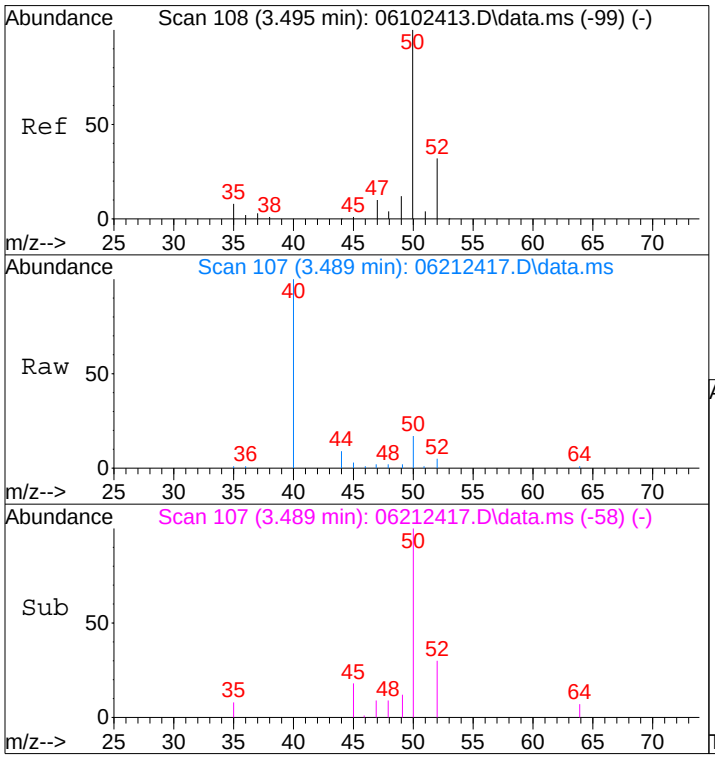


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.63 ng m
RT: 3.36 min Scan# 85
Delta R.T. 0.045 min
Lab File: 06212417.D
Acq: 22 Jun 2024 8:11

Tgt Ion: 85 Resp: 30291

Ion	Ratio	Lower	Upper
85	100		
87	32.3	12.2	52.2
101	9.3	0.0	29.8
103	6.0	0.0	26.3

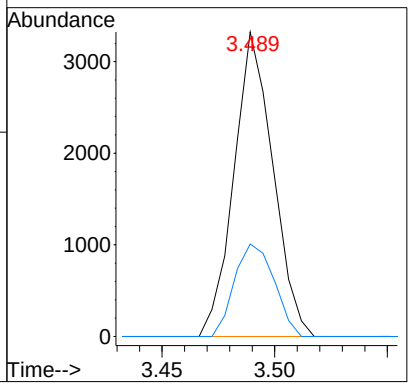


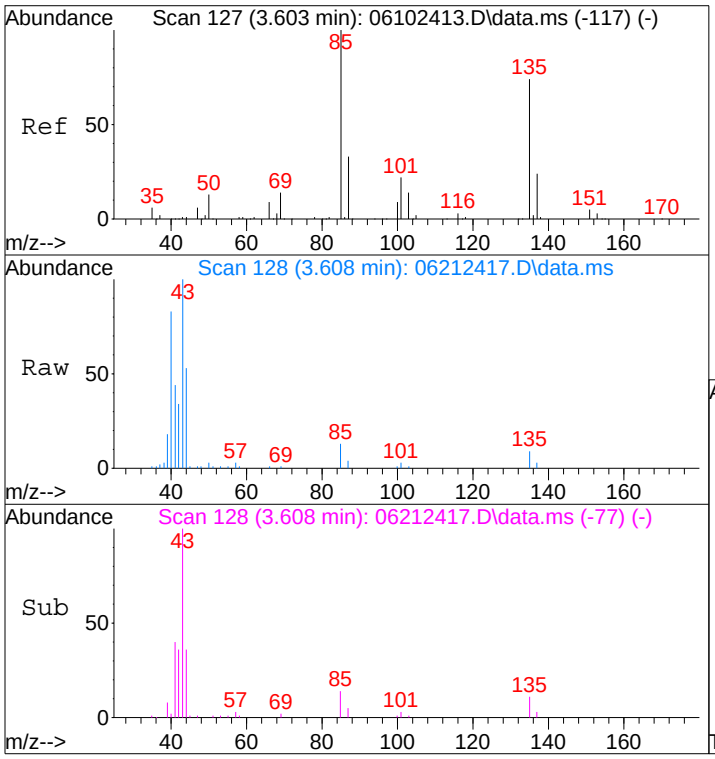


#4
Chloromethane
Concen: 0.12 ng
RT: 3.49 min Scan# 107
Delta R.T. 0.029 min
Lab File: 06212417.D
Acq: 22 Jun 2024 8:11

Tgt Ion: 50 Resp: 4009

Ion	Ratio	Lower	Upper
50	100		
52	30.9	12.4	52.4

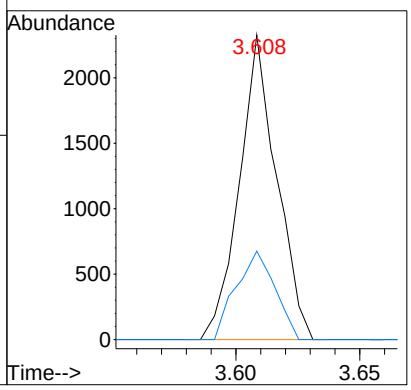


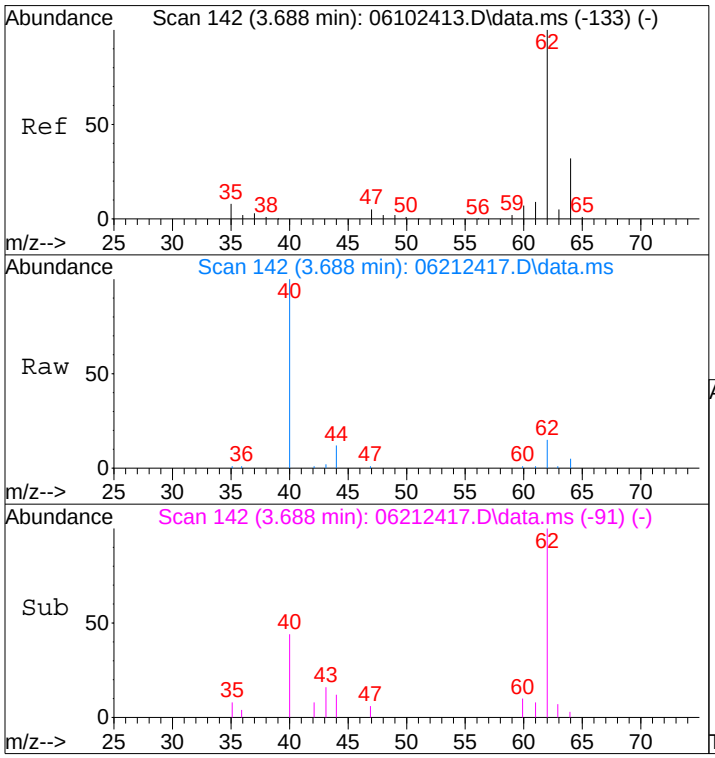


#5
1,2-Dichloro-1,1,2,2-tetrafluoroethane
Concen: 0.12 ng
RT: 3.61 min Scan# 128
Delta R.T. 0.042 min
Lab File: 06212417.D
Acq: 22 Jun 2024 8:11

Tgt Ion:135 Resp: 2432

Ion	Ratio	Lower	Upper
135	100		
137	30.3	13.0	53.0

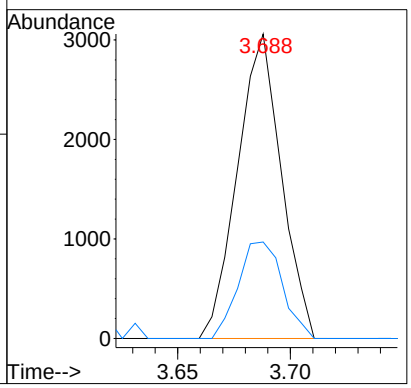


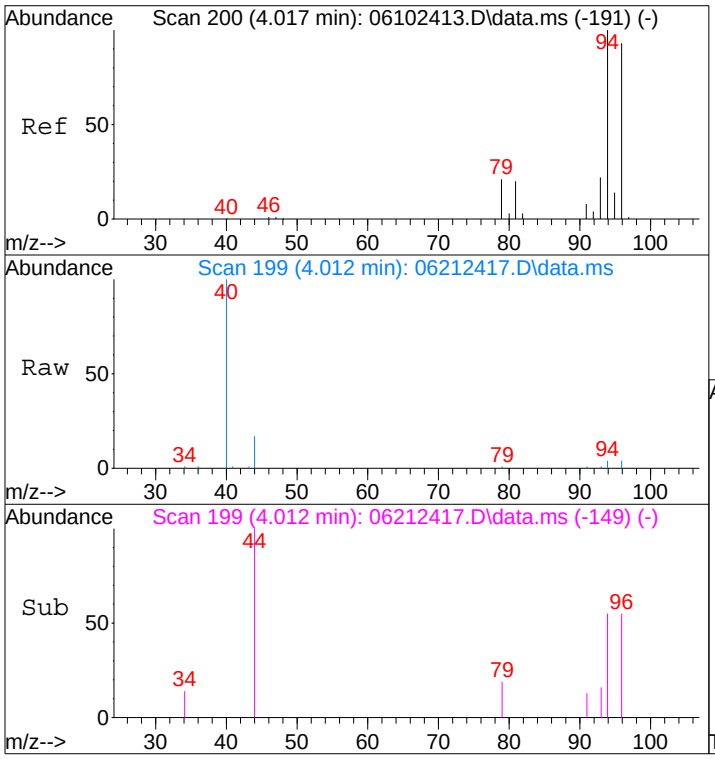


#6
Vinyl Chloride
Concen: 0.13 ng
RT: 3.69 min Scan# 142
Delta R.T. 0.037 min
Lab File: 06212417.D
Acq: 22 Jun 2024 8:11

Tgt Ion: 62 Resp: 4141

Ion	Ratio	Lower	Upper
62	100		
64	32.0	11.6	51.6

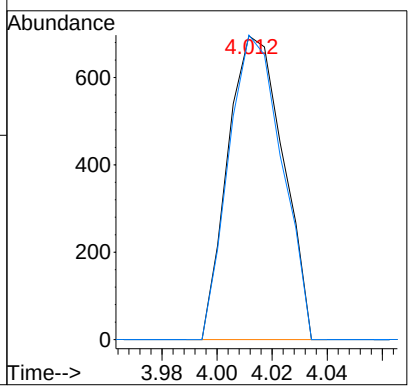


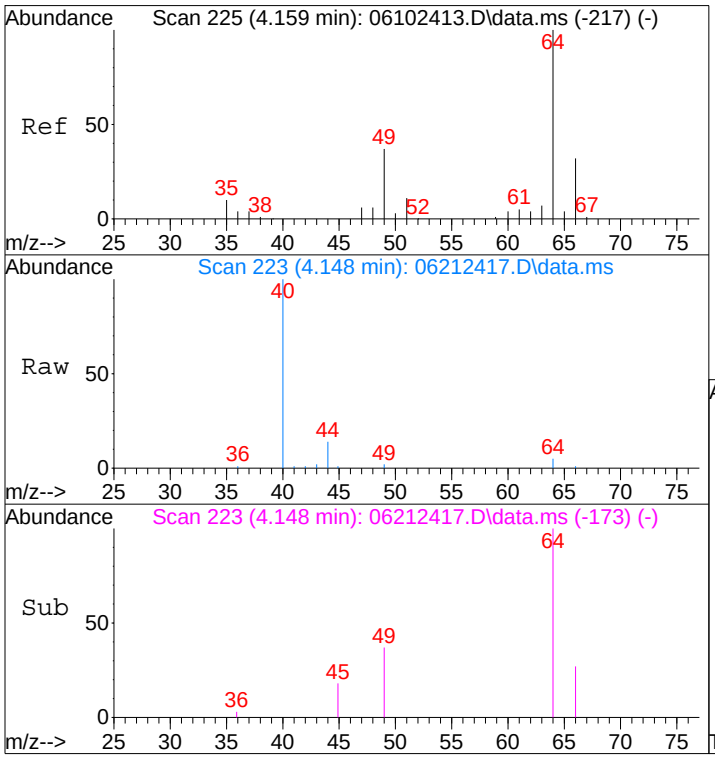


#8
Bromomethane
Concen: 0.06 ng
RT: 4.01 min Scan# 199
Delta R.T. 0.035 min
Lab File: 06212417.D
Acq: 22 Jun 2024 8:11

Tgt Ion: 94 Resp: 967

Ion	Ratio	Lower	Upper
94	100		
96	96.7	73.2	113.2

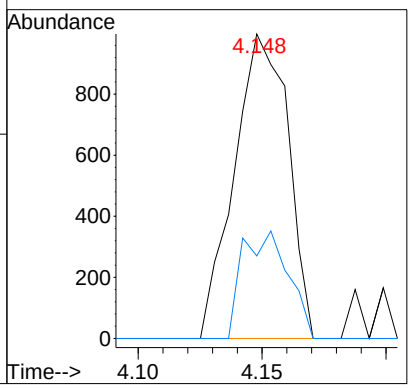


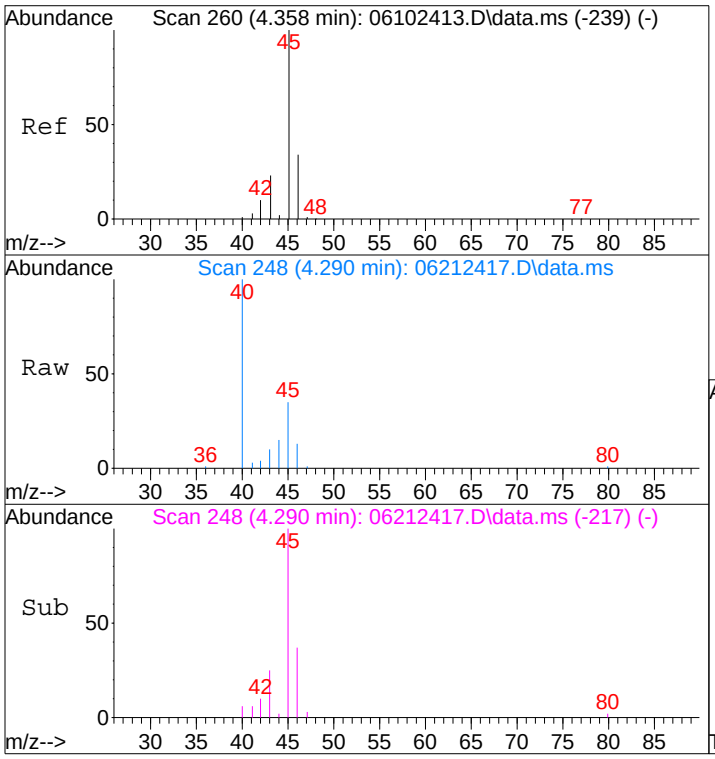


#9
Chloroethane
Concen: 0.11 ng
RT: 4.15 min Scan# 223
Delta R.T. 0.032 min
Lab File: 06212417.D
Acq: 22 Jun 2024 8:11

Tgt Ion: 64 Resp: 1504

Ion	Ratio	Lower	Upper
64	100		
66	30.1	11.4	51.4

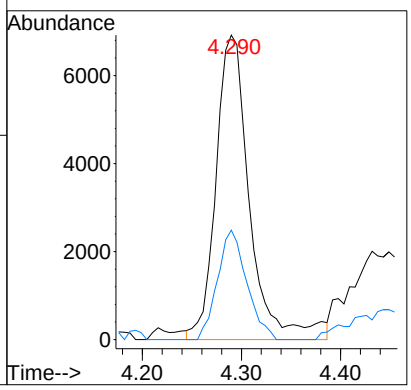


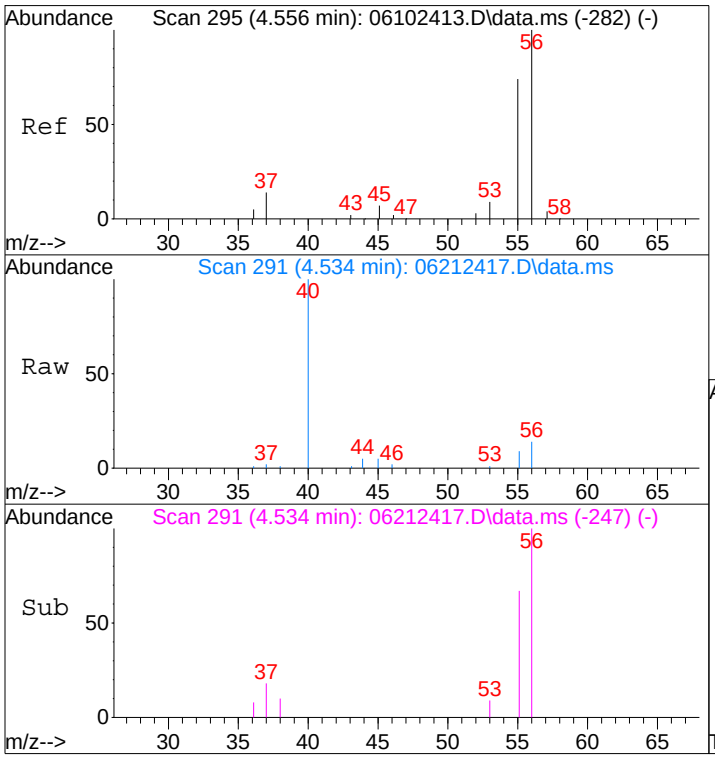


#10
Ethanol
Concen: 0.82 ng
RT: 4.29 min Scan# 248
Delta R.T. -0.073 min
Lab File: 06212417.D
Acq: 22 Jun 2024 8:11

Tgt Ion: 45 Resp: 16320

Ion	Ratio	Lower	Upper
45	100		
46	31.2	13.5	53.5

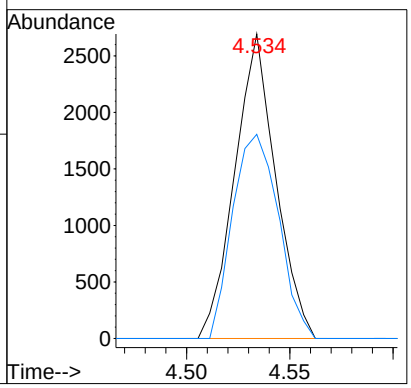


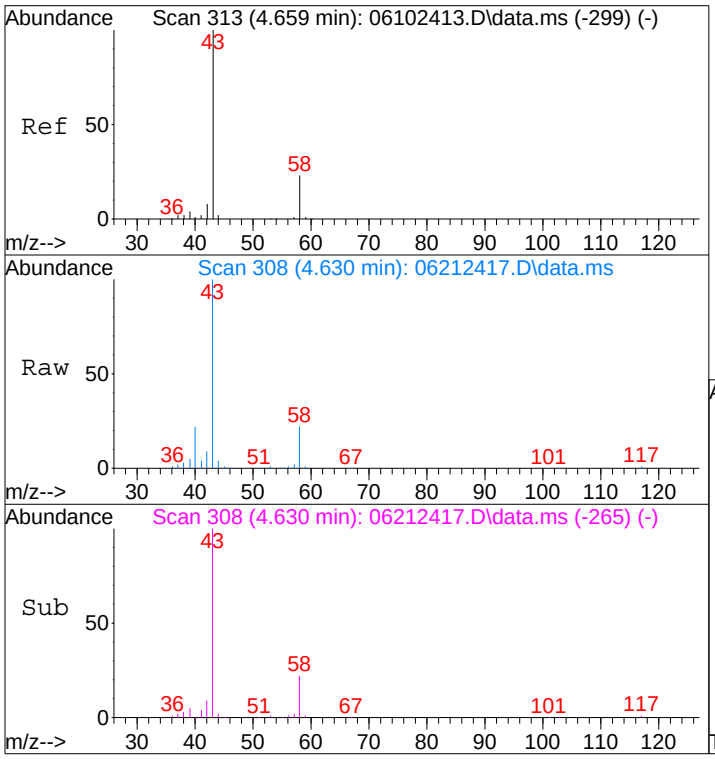


#12
Acrolein
Concen: 0.25 ng
RT: 4.53 min Scan# 291
Delta R.T. 0.002 min
Lab File: 06212417.D
Acq: 22 Jun 2024 8:11

Tgt Ion: 56 Resp: 3711

Ion	Ratio	Lower	Upper
56	100		
55	75.3	55.5	95.5

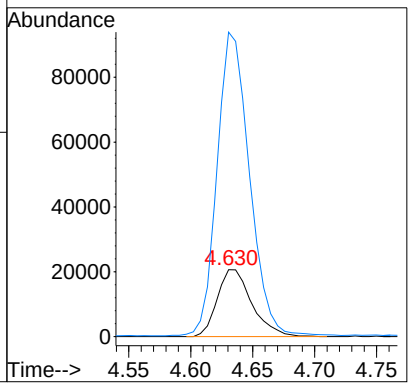


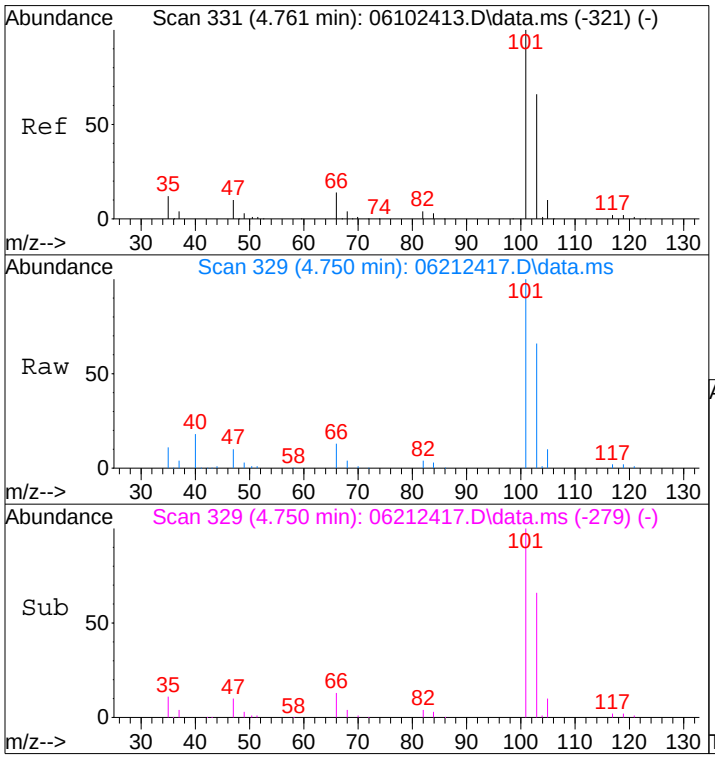


#13
Acetone
Concen: 2.53 ng
RT: 4.63 min Scan# 308
Delta R.T. -0.008 min
Lab File: 06212417.D
Acq: 22 Jun 2024 8:11

Tgt Ion: 58 Resp: 40256

Ion	Ratio	Lower	Upper
58	100		
43	424.3	400.7	460.7

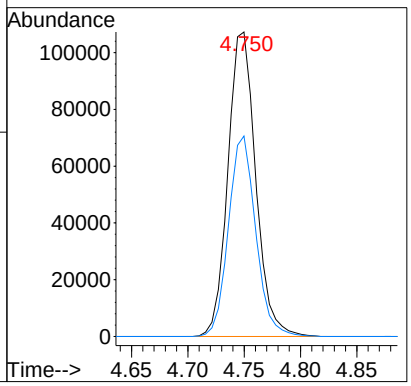


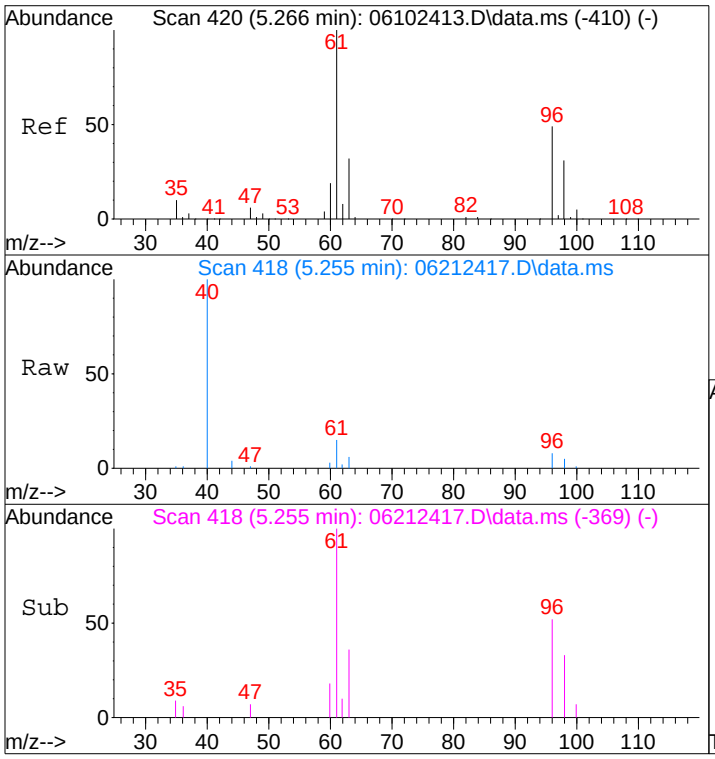


#14
Trichlorofluoromethane
Concen: 3.78 ng
RT: 4.75 min Scan# 329
Delta R.T. 0.033 min
Lab File: 06212417.D
Acq: 22 Jun 2024 8:11

Tgt Ion:101 Resp: 184697

Ion	Ratio	Lower	Upper
101	100		
103	64.4	44.9	84.9

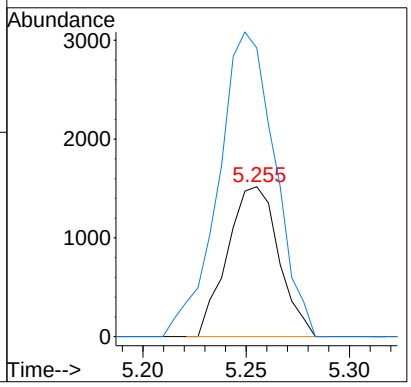


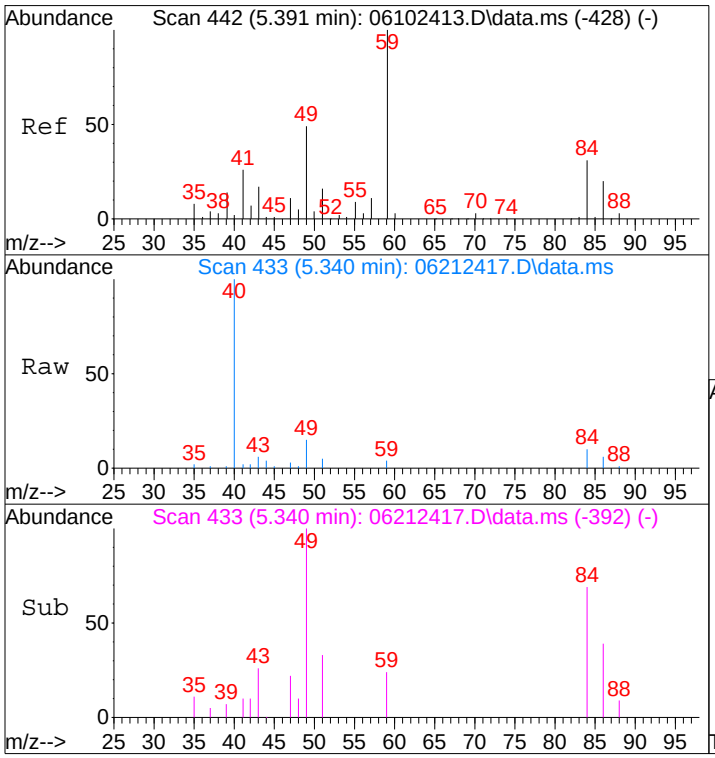


#17
1,1-Dichloroethene
Concen: 0.14 ng
RT: 5.26 min Scan# 418
Delta R.T. 0.028 min
Lab File: 06212417.D
Acq: 22 Jun 2024 8:11

Tgt Ion: 96 Resp: 2621

Ion	Ratio	Lower	Upper
96	100		
61	224.2	182.9	222.9#

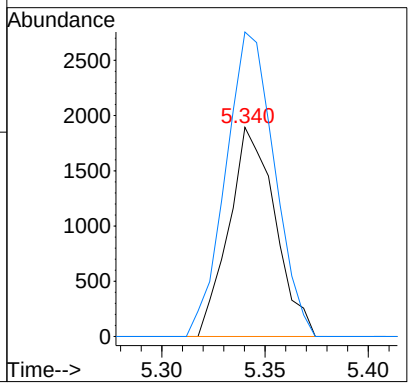


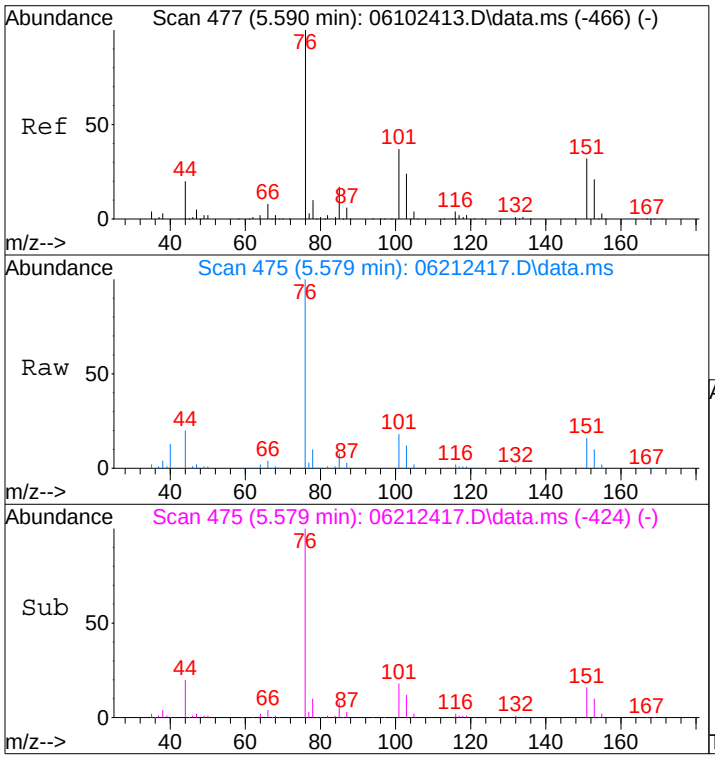


#19
Methylene Chloride
Concen: 0.13 ng
RT: 5.34 min Scan# 433
Delta R.T. -0.016 min
Lab File: 06212417.D
Acq: 22 Jun 2024 8:11

Tgt Ion: 84 Resp: 2938

Ion	Ratio	Lower	Upper
84	100		
49	154.2	132.9	182.9

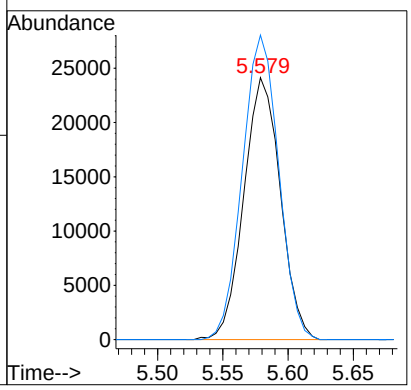


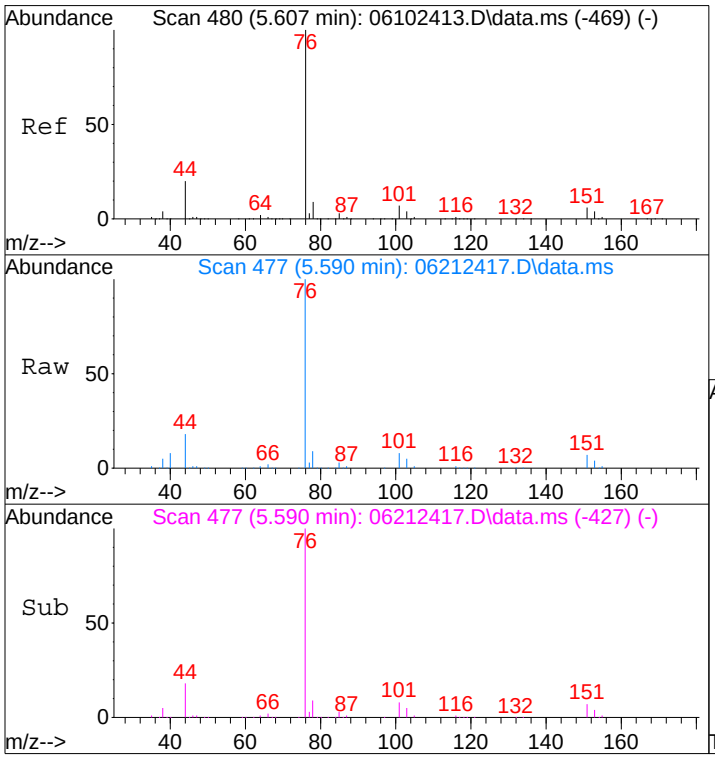


#21
Trichlorotrifluoroethane
Concen: 2.28 ng
RT: 5.58 min Scan# 475
Delta R.T. 0.037 min
Lab File: 06212417.D
Acq: 22 Jun 2024 8:11

Tgt Ion:151 Resp: 47055

Ion	Ratio	Lower	Upper
151	100		
101	115.7	95.0	135.0

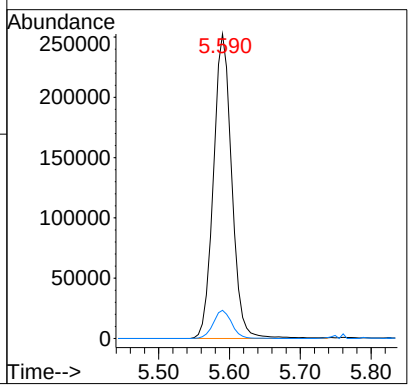


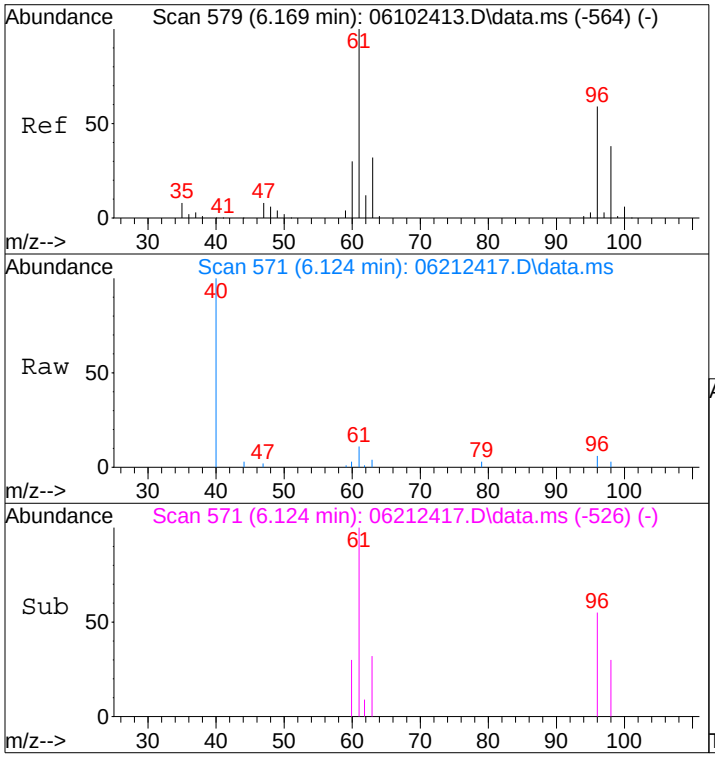


#22
Carbon Disulfide
Concen: 6.24 ng
RT: 5.59 min Scan# 477
Delta R.T. 0.032 min
Lab File: 06212417.D
Acq: 22 Jun 2024 8:11

Tgt Ion: 76 Resp: 454052

Ion	Ratio	Lower	Upper
76	100		
78	9.3	0.0	29.6

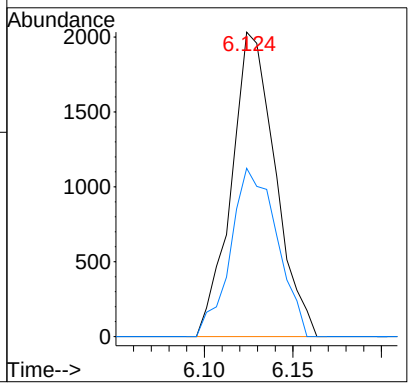


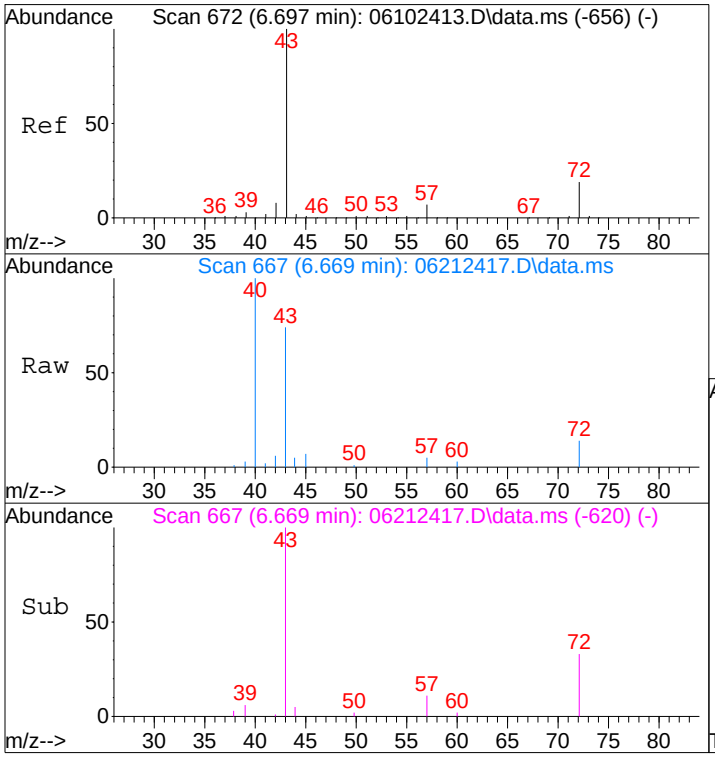


#23
trans-1,2-Dichloroethene
Concen: 0.11 ng
RT: 6.12 min Scan# 571
Delta R.T. 0.004 min
Lab File: 06212417.D
Acq: 22 Jun 2024 8:11

Tgt Ion: 61 Resp: 3507

Ion	Ratio	Lower	Upper
61	100		
96	58.4	39.0	79.0

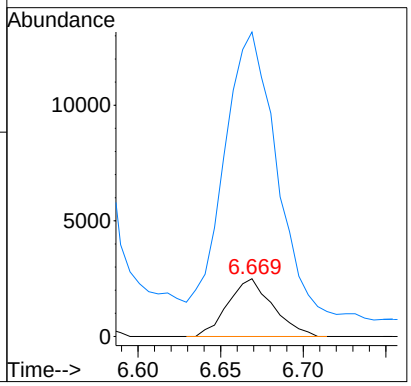


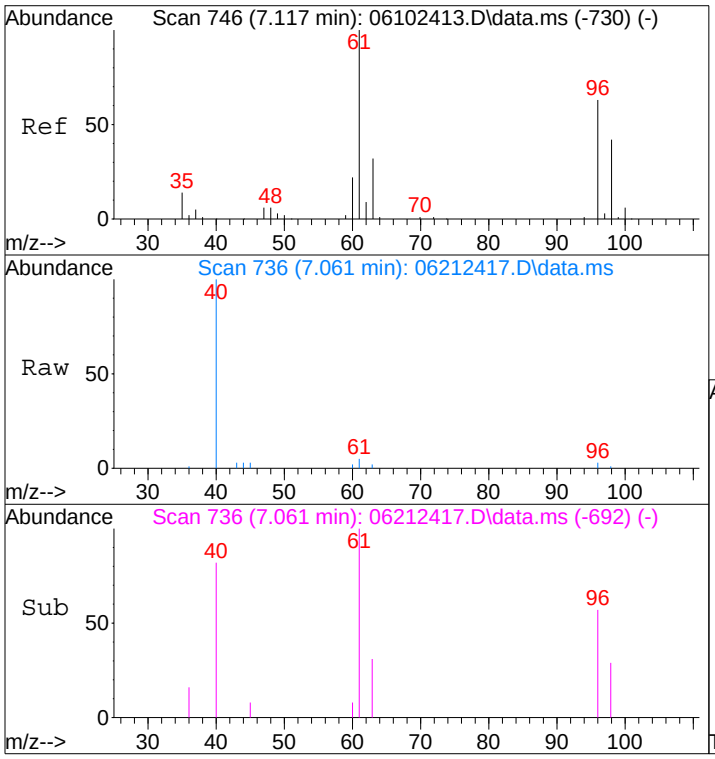


#27
2-Butanone (MEK)
Concen: 0.37 ng
RT: 6.67 min Scan# 667
Delta R.T. 0.016 min
Lab File: 06212417.D
Acq: 22 Jun 2024 8:11

Tgt Ion: 72 Resp: 4723

Ion	Ratio	Lower	Upper
72	100		
43	616.1	506.8	546.8#

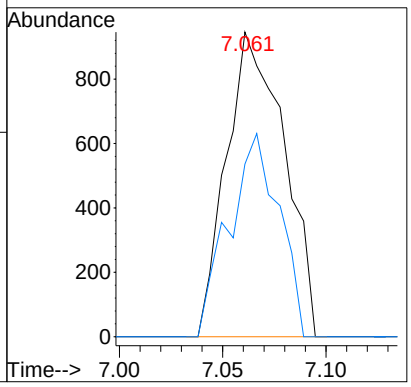


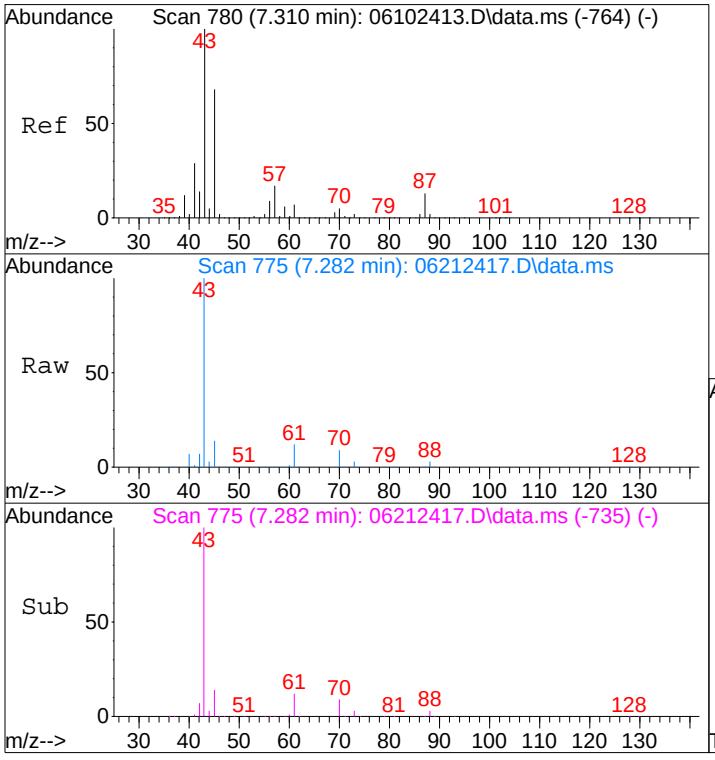


#28
cis-1,2-Dichloroethene
Concen: 0.06 ng
RT: 7.06 min Scan# 736
Delta R.T. -0.002 min
Lab File: 06212417.D
Acq: 22 Jun 2024 8:11

Tgt Ion: 61 Resp: 1838

Ion	Ratio	Lower	Upper
61	100		
96	57.8	44.2	84.2

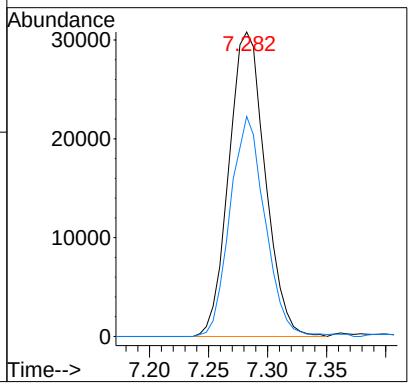


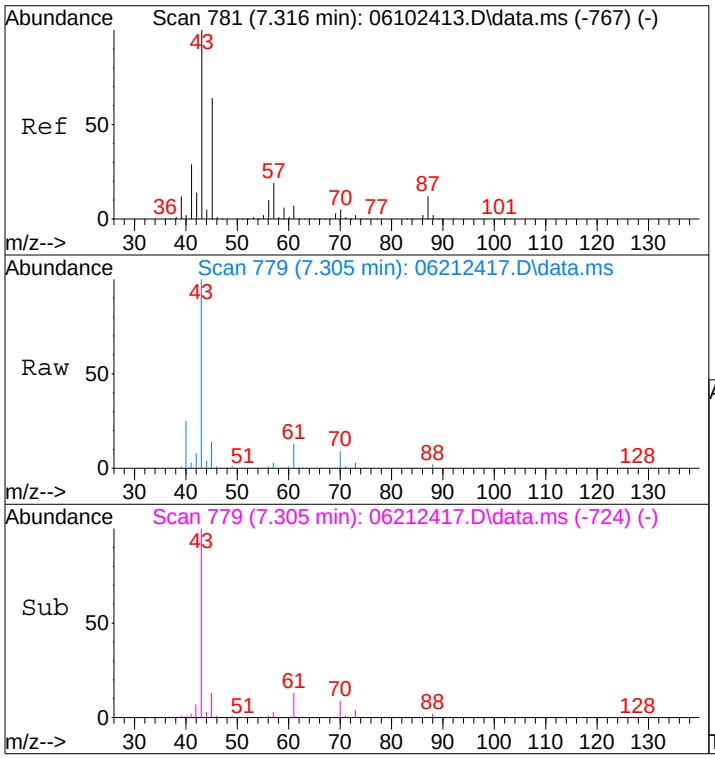


#30
Ethyl Acetate
Concen: 8.55 ng
RT: 7.28 min Scan# 775
Delta R.T. 0.029 min
Lab File: 06212417.D
Acq: 22 Jun 2024 8:11

Tgt Ion: 61 Resp: 65887

Ion	Ratio	Lower	Upper
61	100		
70	69.8	53.5	93.5

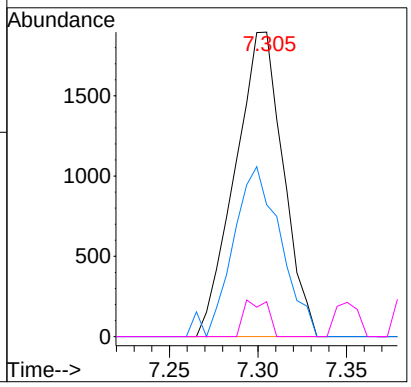


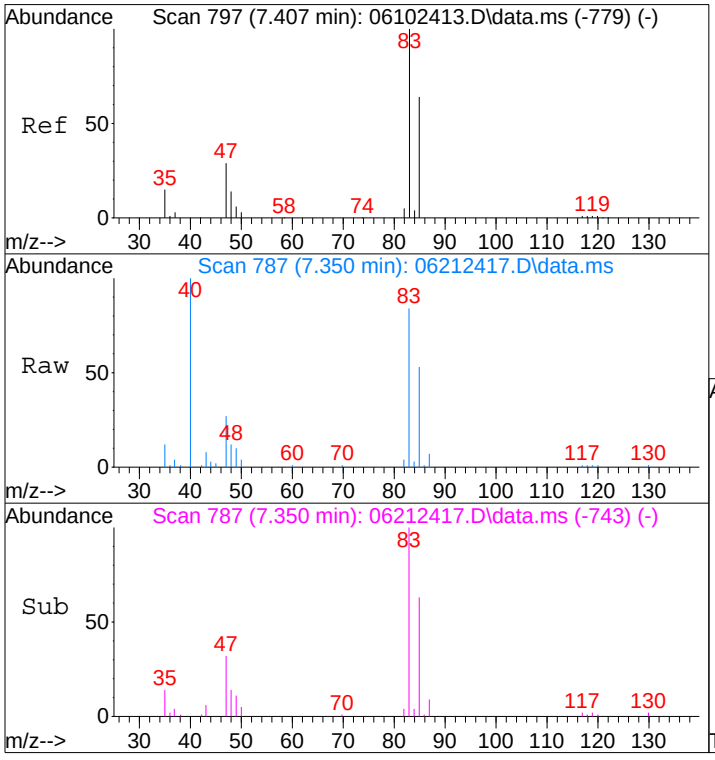


#31
n-Hexane
Concen: 0.11 ng
RT: 7.30 min Scan# 779
Delta R.T. 0.063 min
Lab File: 06212417.D
Acq: 22 Jun 2024 8:11

Tgt Ion: 57 Resp: 3590

Ion	Ratio	Lower	Upper
57	100		
56	55.4	42.5	63.7
86	6.0	9.5	14.3#

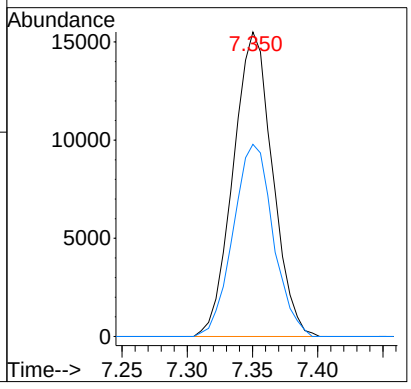


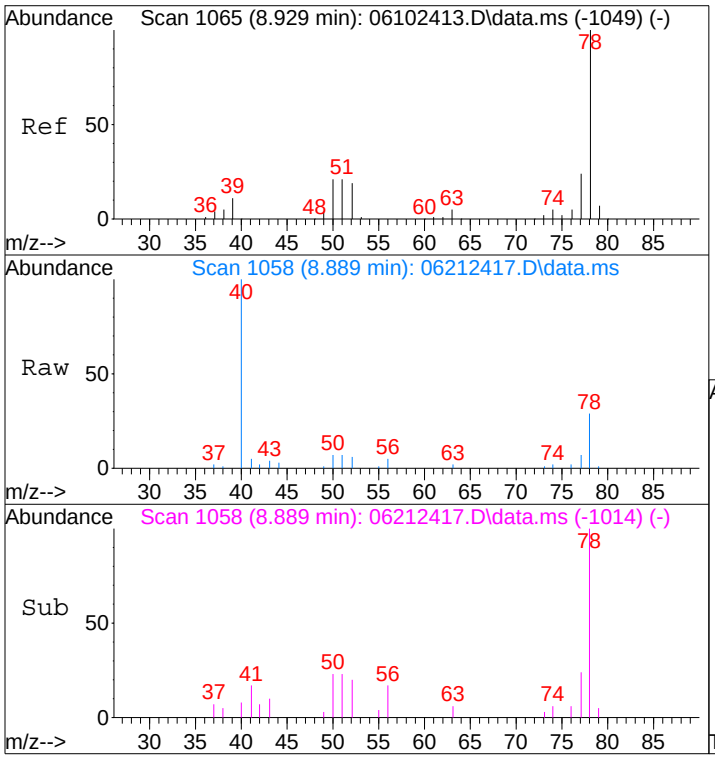


#32
Chloroform
Concen: 0.81 ng
RT: 7.35 min Scan# 787
Delta R.T. 0.002 min
Lab File: 06212417.D
Acq: 22 Jun 2024 8:11

Tgt Ion: 83 Resp: 32484

Ion	Ratio	Lower	Upper
83	100		
85	64.3	44.4	84.4

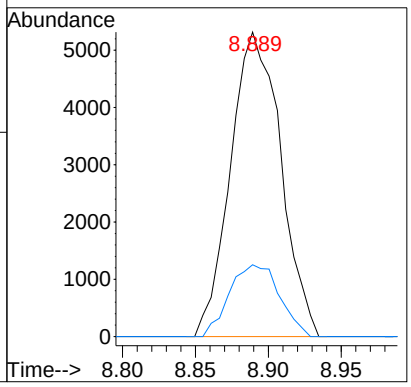


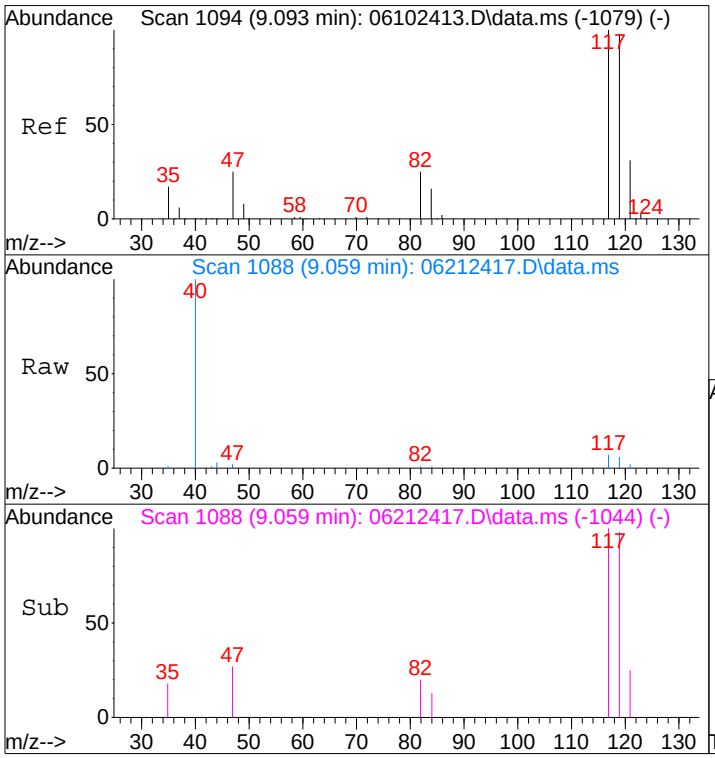


#41
Benzene
Concen: 0.16 ng
RT: 8.89 min Scan# 1058
Delta R.T. -0.002 min
Lab File: 06212417.D
Acq: 22 Jun 2024 8:11

Tgt Ion: 78 Resp: 12733

Ion	Ratio	Lower	Upper
78	100		
77	23.5	4.0	44.0

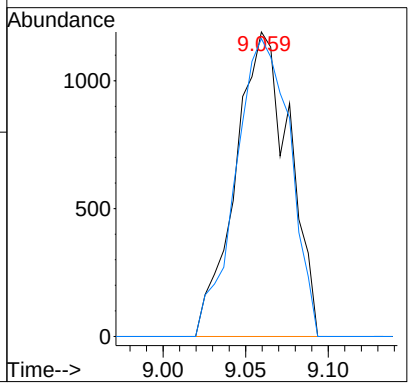


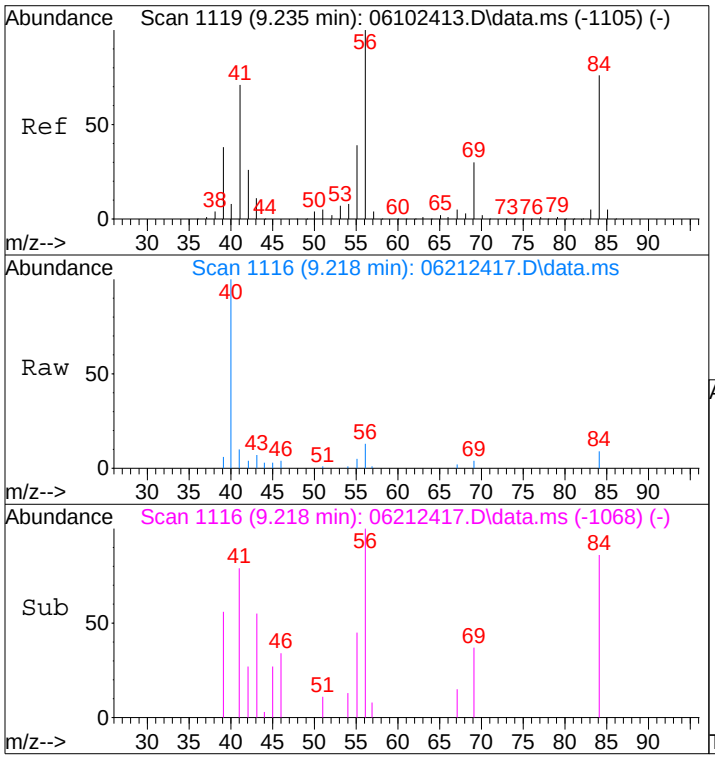


#42
Carbon Tetrachloride
Concen: 0.07 ng
RT: 9.06 min Scan# 1088
Delta R.T. -0.001 min
Lab File: 06212417.D
Acq: 22 Jun 2024 8:11

Tgt Ion:117 Resp: 2710

Ion	Ratio	Lower	Upper
117	100		
119	98.5	77.3	117.3

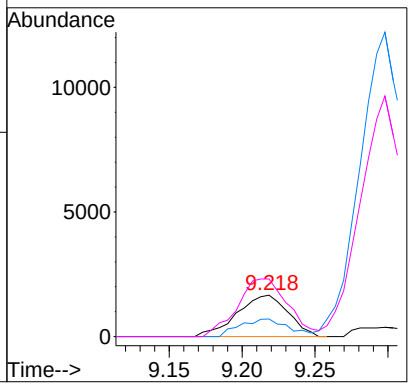


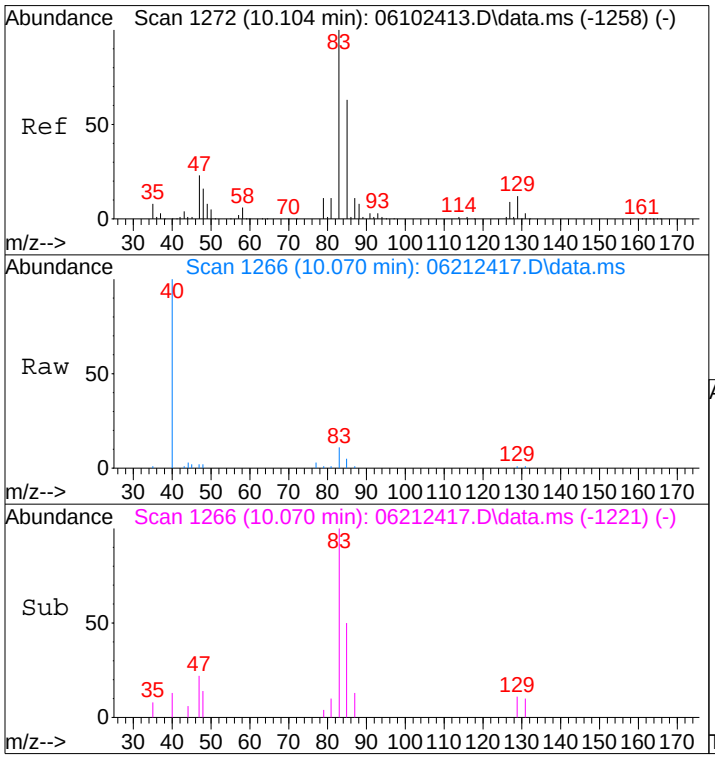


#43
Cyclohexane
Concen: 0.15 ng
RT: 9.22 min Scan# 1116
Delta R.T. 0.022 min
Lab File: 06212417.D
Acq: 22 Jun 2024 8:11

Tgt Ion: 84 Resp: 4048

Ion	Ratio	Lower	Upper
84	100		
69	39.9	18.8	58.8
56	138.1	111.5	151.5

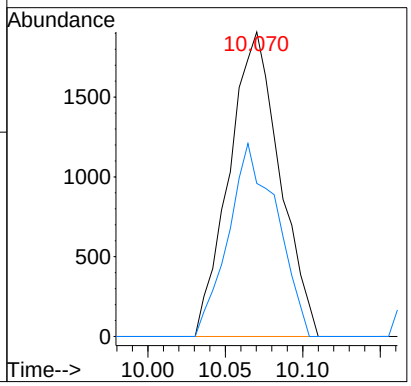


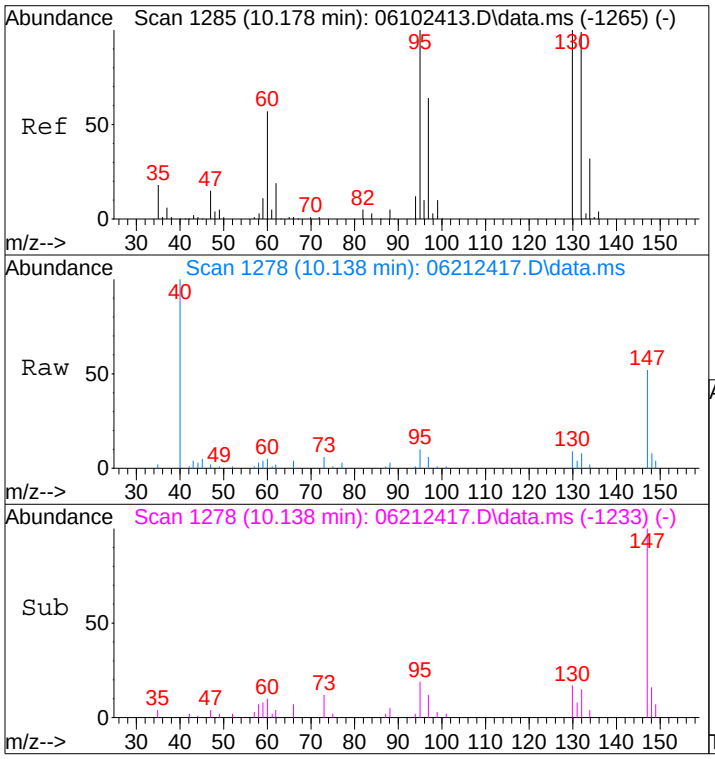


#46
Bromodichloromethane
Concen: 0.13 ng
RT: 10.07 min Scan# 1266
Delta R.T. 0.005 min
Lab File: 06212417.D
Acq: 22 Jun 2024 8:11

Tgt Ion: 83 Resp: 4339

Ion	Ratio	Lower	Upper
83	100		
85	60.8	43.8	83.8

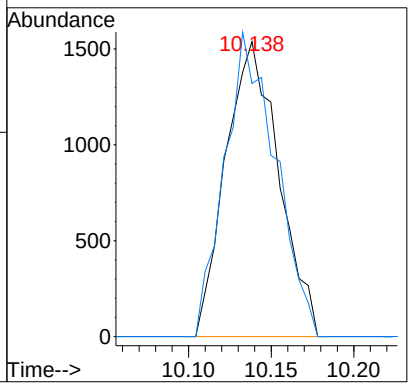


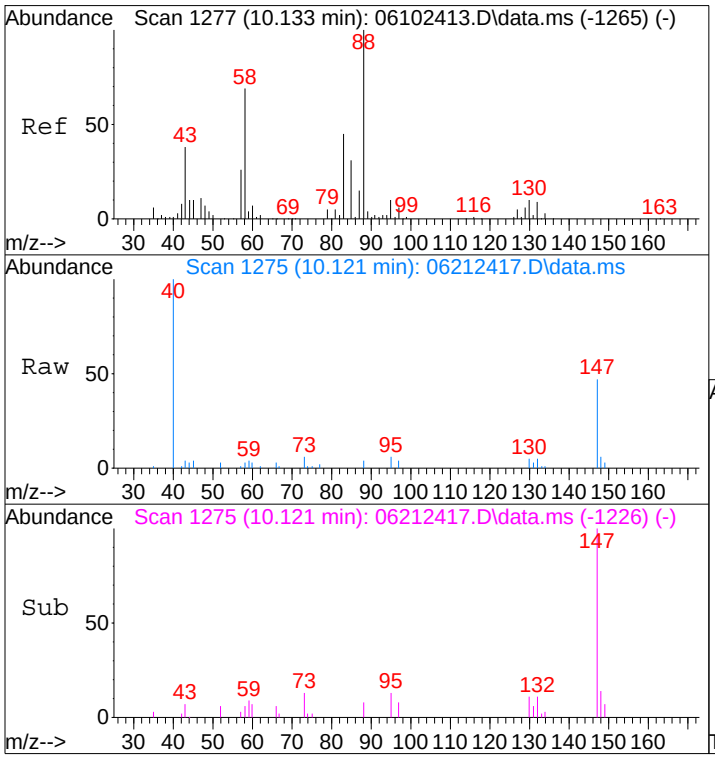


#47
Trichloroethene
Concen: 0.14 ng
RT: 10.14 min Scan# 1278
Delta R.T. 0.005 min
Lab File: 06212417.D
Acq: 22 Jun 2024 8:11

Tgt Ion:130 Resp: 3433

Ion	Ratio	Lower	Upper
130	100		
132	98.7	77.9	117.9

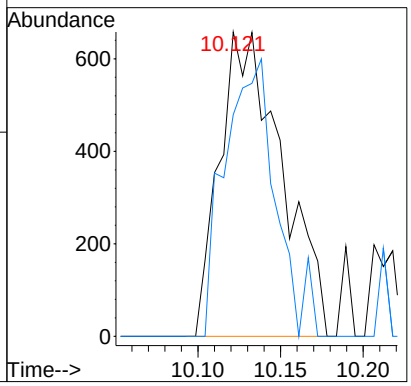


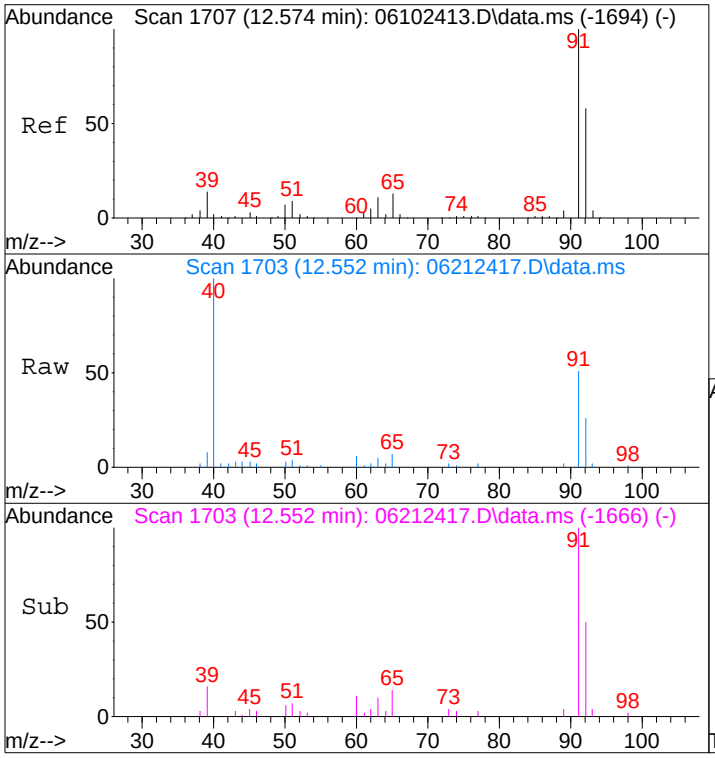


#48
1,4-Dioxane
Concen: 0.11 ng
RT: 10.12 min Scan# 1275
Delta R.T. 0.028 min
Lab File: 06212417.D
Acq: 22 Jun 2024 8:11

Tgt Ion: 88 Resp: 1720

Ion	Ratio	Lower	Upper
88	100		
58	74.9	47.6	87.6

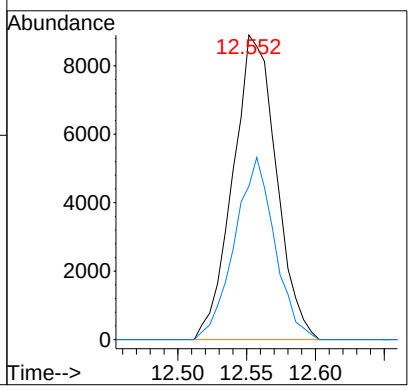


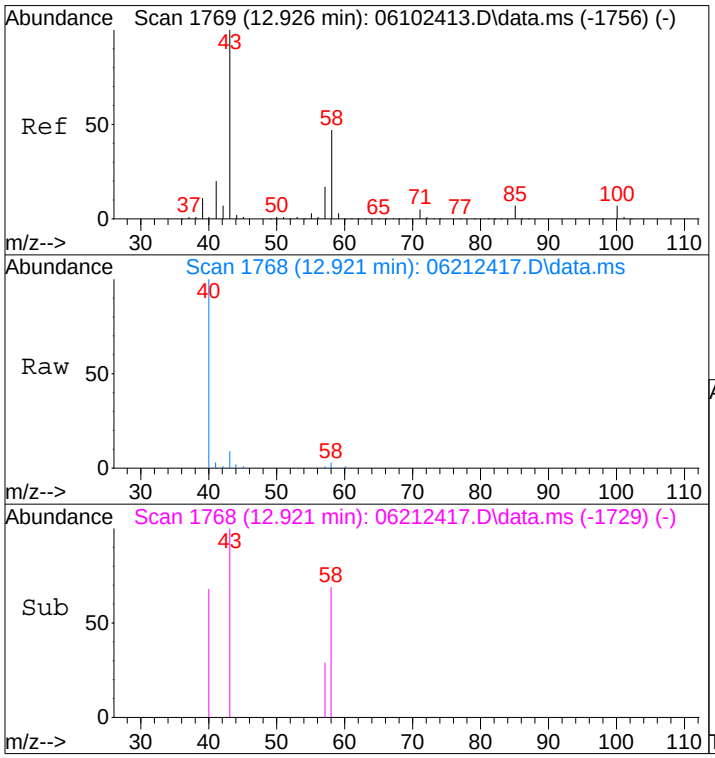


#58
Toluene
Concen: 0.24 ng
RT: 12.55 min Scan# 1703
Delta R.T. -0.040 min
Lab File: 06212417.D
Acq: 22 Jun 2024 8:11

Tgt Ion: 91 Resp: 19467

Ion	Ratio	Lower	Upper
91	100		
92	55.5	37.4	77.4

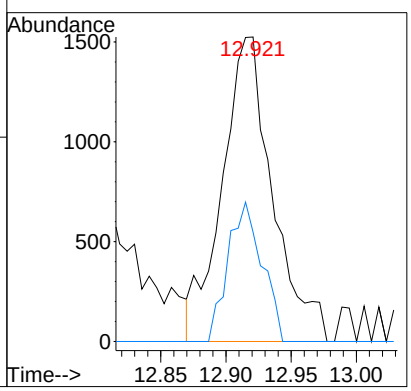


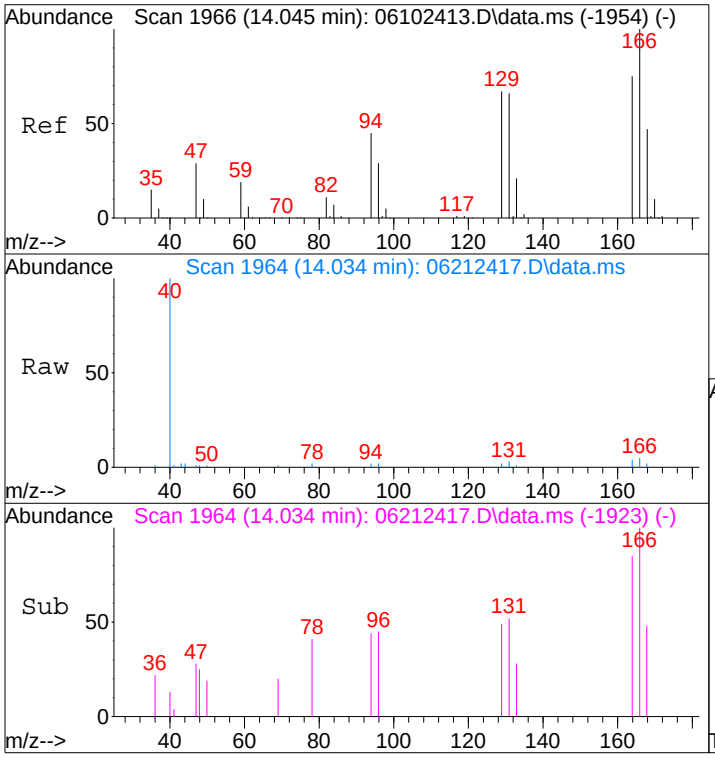


#59
2-Hexanone
Concen: 0.08 ng
RT: 12.92 min Scan# 1768
Delta R.T. -0.028 min
Lab File: 06212417.D
Acq: 22 Jun 2024 8:11

Tgt Ion: 43 Resp: 4114

Ion	Ratio	Lower	Upper
43	100		
58	30.8	25.9	65.9

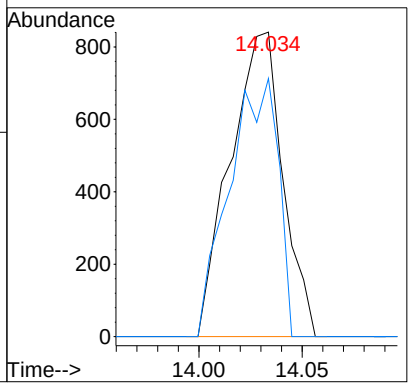


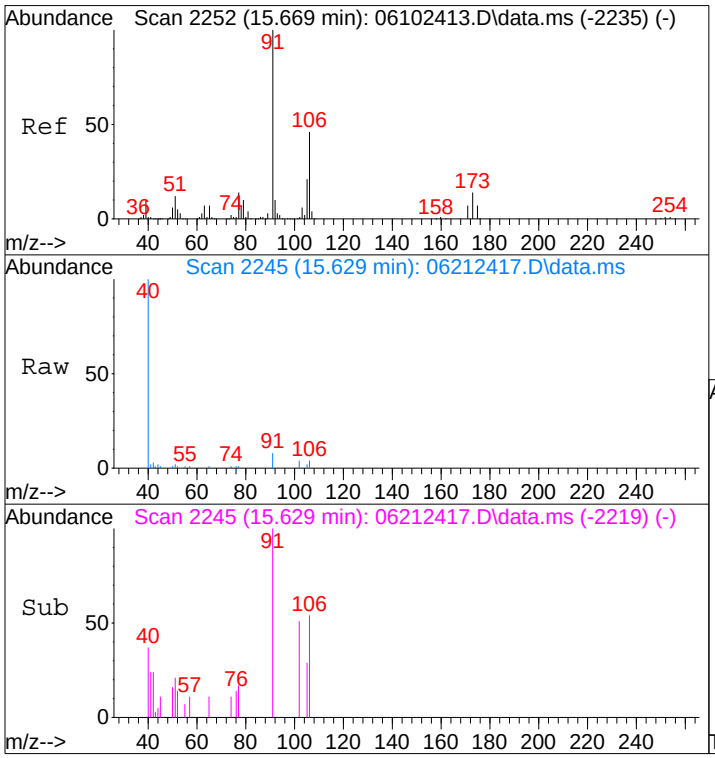


#64
Tetrachloroethene
Concen: 0.05 ng
RT: 14.03 min Scan# 1964
Delta R.T. -0.017 min
Lab File: 06212417.D
Acq: 22 Jun 2024 8:11

Tgt Ion:166 Resp: 1490

Ion	Ratio	Lower	Upper
166	100		
164	78.7	56.9	96.9

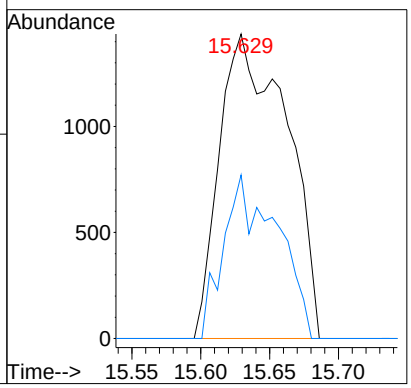


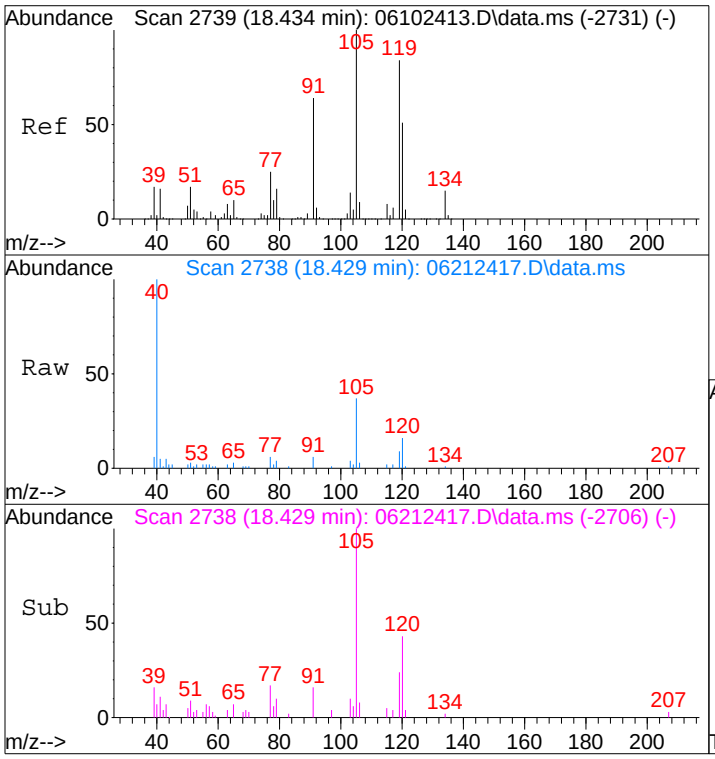


#67
m- & p-Xylenes
Concen: 0.06 ng
RT: 15.63 min Scan# 2245
Delta R.T. -0.051 min
Lab File: 06212417.D
Acq: 22 Jun 2024 8:11

Tgt Ion: 91 Resp: 4887

Ion	Ratio	Lower	Upper
91	100		
106	42.7	25.9	65.9

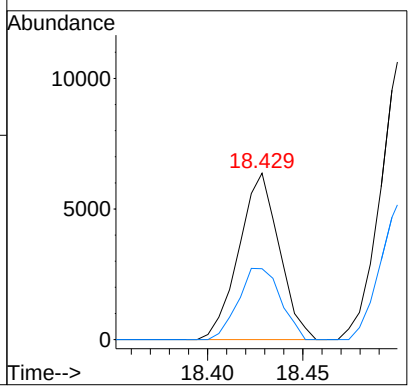


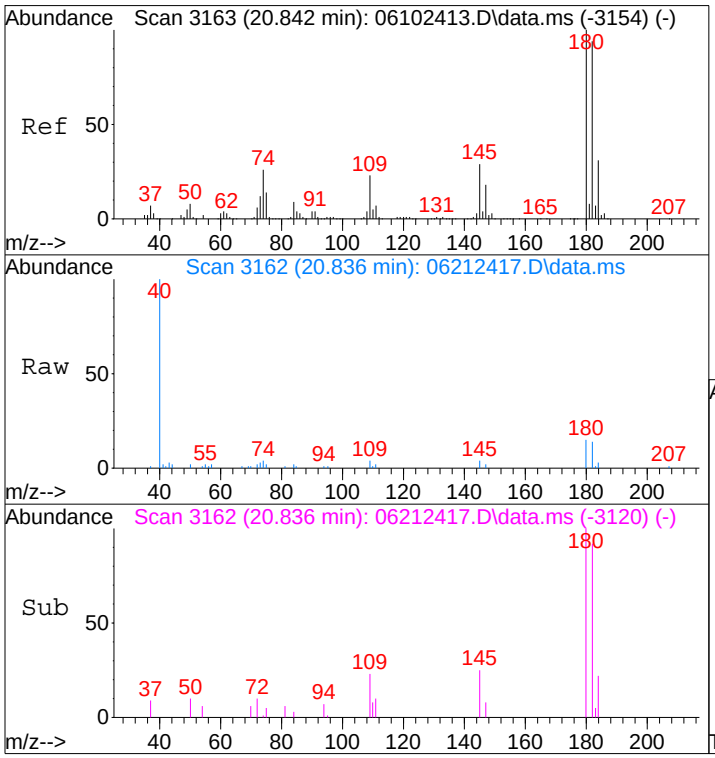


#82
1,2,4-Trimethylbenzene
Concen: 0.11 ng
RT: 18.43 min Scan# 2738
Delta R.T. -0.017 min
Lab File: 06212417.D
Acq: 22 Jun 2024 8:11

Tgt Ion:105 Resp: 9362

Ion	Ratio	Lower	Upper
105	100		
120	44.9	31.9	71.9

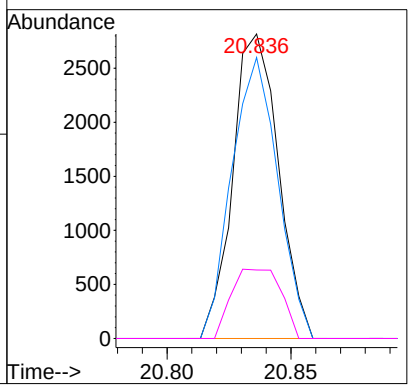


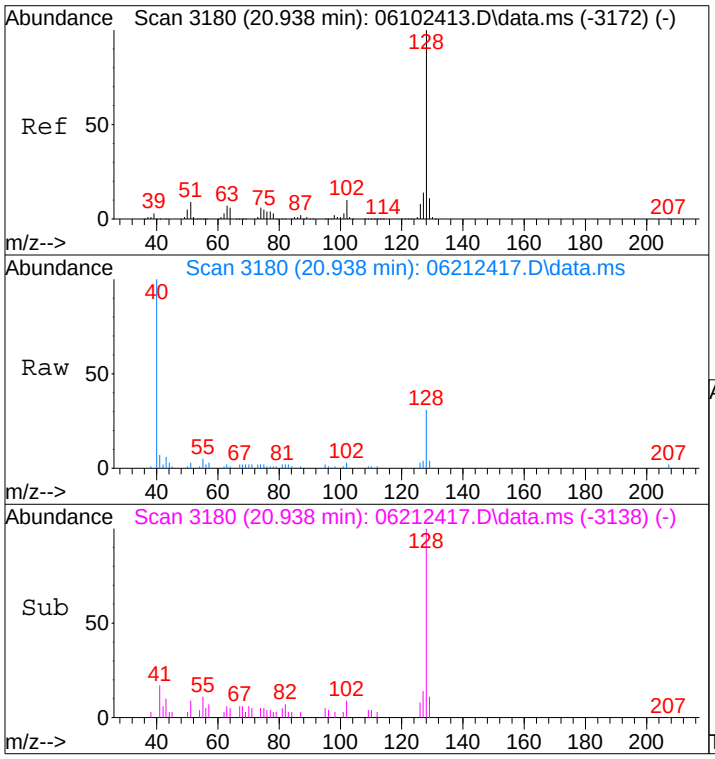


#94
1,2,4-Trichlorobenzene
Concen: 0.08 ng
RT: 20.84 min Scan# 3162
Delta R.T. -0.011 min
Lab File: 06212417.D
Acq: 22 Jun 2024 8:11

Tgt Ion:180 Resp: 3619

Ion	Ratio	Lower	Upper
180	100		
182	93.1	75.9	113.9
184	24.8	24.6	37.0

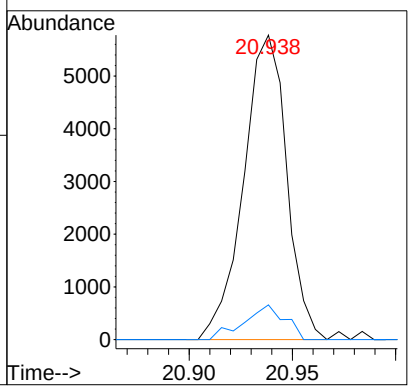




#95
Naphthalene
Concen: 0.08 ng
RT: 20.94 min Scan# 3180
Delta R.T. -0.011 min
Lab File: 06212417.D
Acq: 22 Jun 2024 8:11

Tgt Ion:128 Resp: 8386

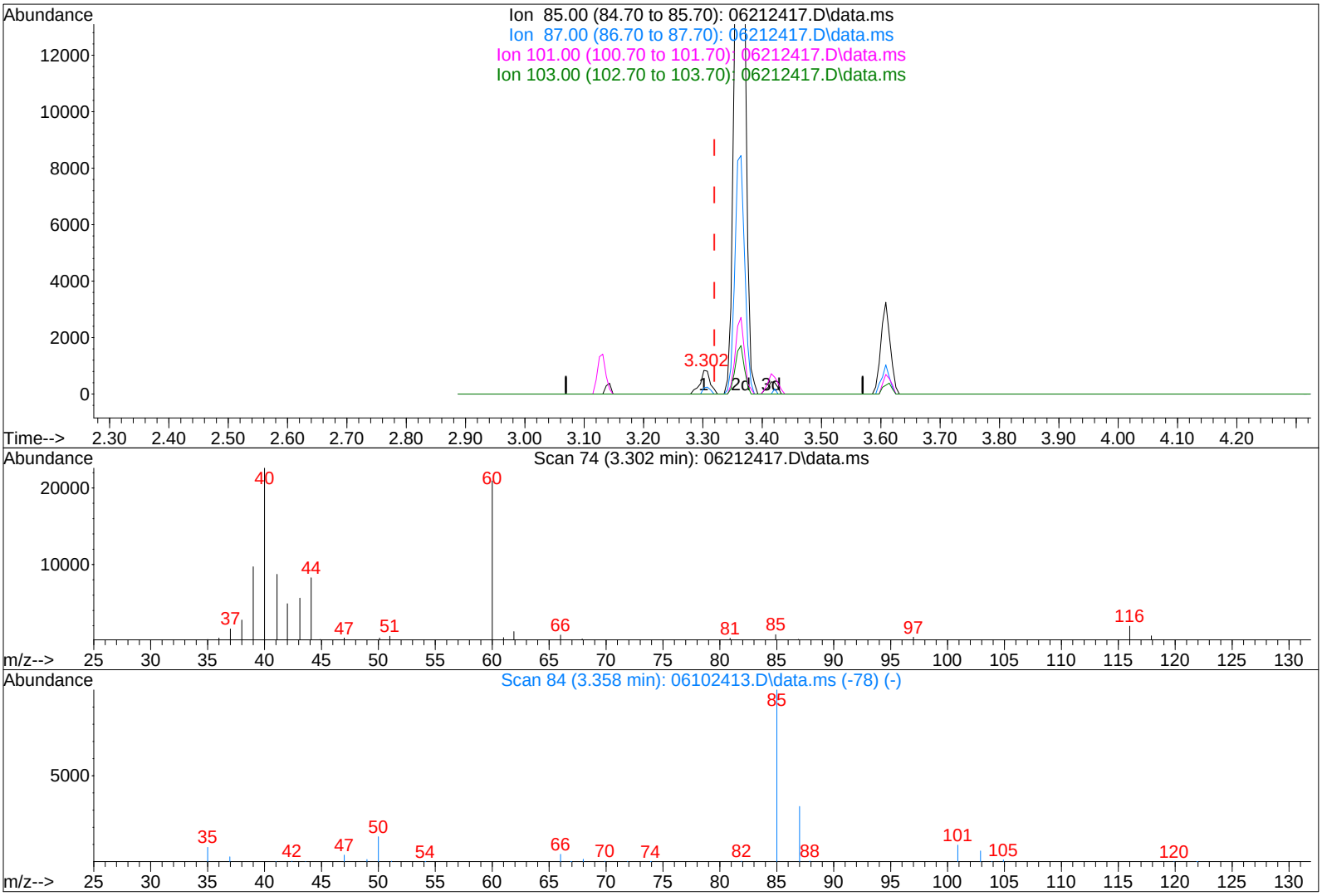
Ion	Ratio	Lower	Upper
128	100		
129	10.8	0.0	31.2



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\21\06212417.D Vial: 7
Acq On : 22 Jun 2024 8:11 Operator: SC
Sample : P2402249-059 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 24 08:55:26 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06212417.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.302min (-0.018) 0.02ng

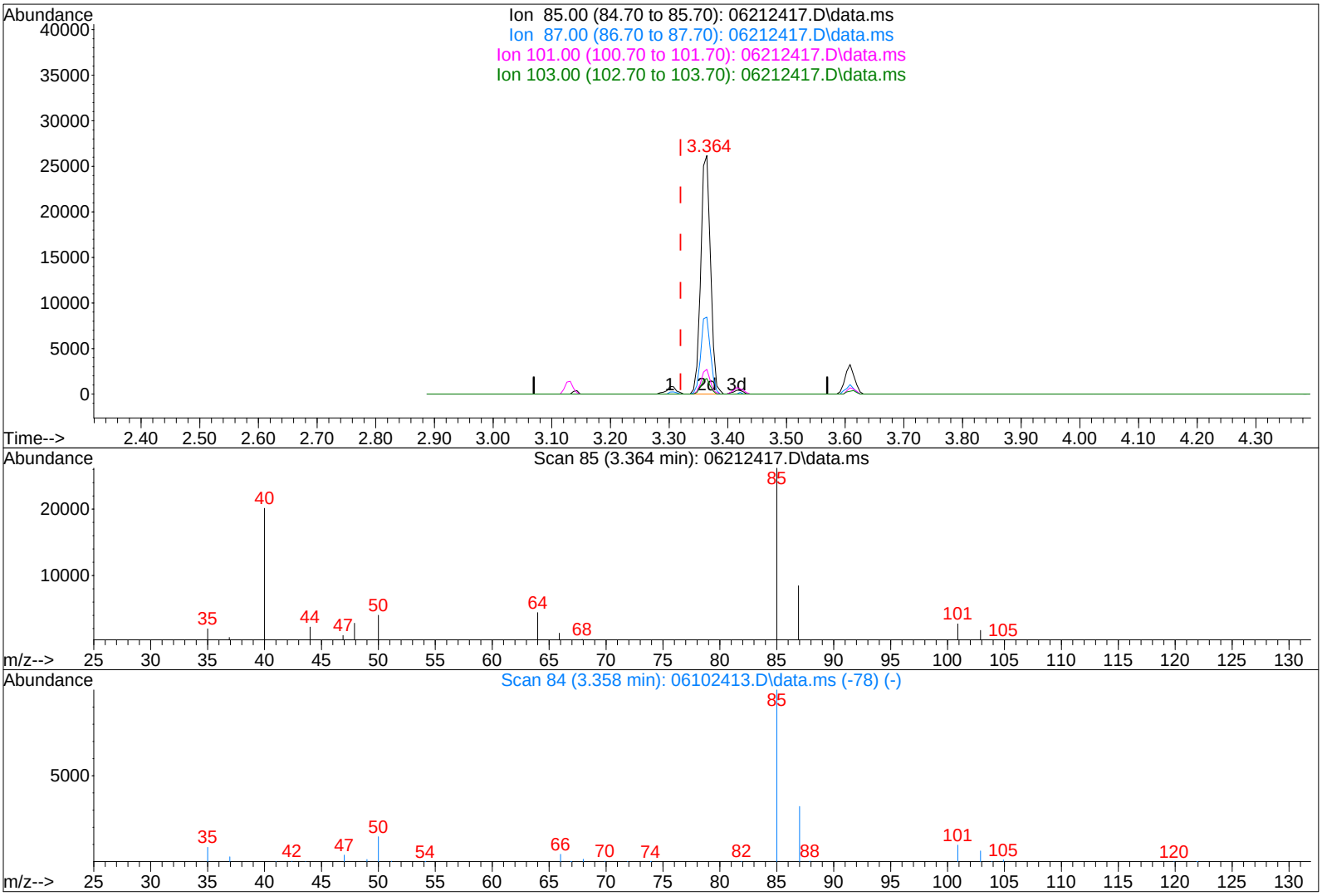
response 993

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	21.25
101.00	9.80	0.00
103.00	6.30	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\21\06212417.D Vial: 7
Acq On : 22 Jun 2024 8:11 Operator: SC
Sample : P2402249-059 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 24 08:55:26 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06212417.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.364min (+0.045) 0.63ng m

response 30291

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	32.29
101.00	9.80	9.31
103.00	6.30	6.04

MJ 6/28/24

WP

CG 6/29/24

Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\21\06212417.D Vial: 7
Acq On : 22 Jun 2024 8:11 Operator: SC
Sample : P2402249-059 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 16:42:47 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

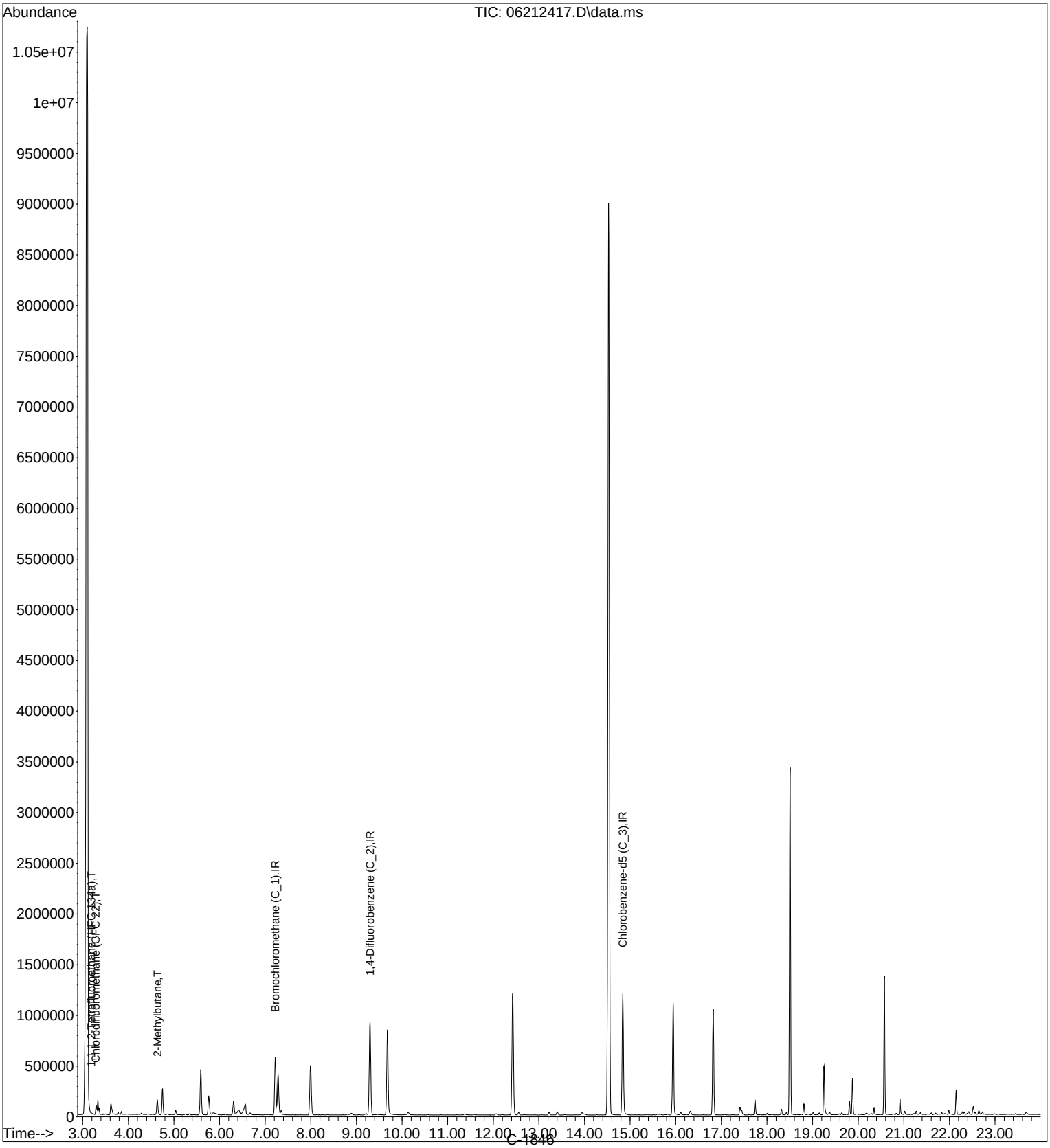
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.22	130	205532	12.500	ng		-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	882244	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	205304	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	3.14	85	231	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.19	83	2373	0.113	ng	#	1
4) 1,1-Difluoroethane	3.23	65	337	N.D.			
5) Chlorodifluoromethane ...	3.28	67	1169	0.167	ng		100
6) 1-Chloro-1,1-Difluoroe...	3.50	65	834	N.D.			
7) Dichlorofluoromethane ...	4.23	67	1206	N.D.			
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	4.60	83	125	N.D.			
10) 2-Methylbutane	4.64	57	6613	0.270	ng	#	44
11) Methyl Acetate	5.33	43	2244	N.D.			
12) 2-Methylpentane	6.47	71	468	N.D.			
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	9.03	84	57	N.D.			
17) 2,3-Dimethylpentane	9.46	56	676	N.D.			
18) Dibromomethane	9.79	174	464	N.D.			
20) Methyl Cyclohexane	11.40	55	70	N.D.			
21) 1,3-Dichloropropane	0.00	76	0	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	16.39	75	182	N.D.			
25) Bromobenzene	17.09	77	127	N.D.			
26) 2-Chlorotoluene	17.61	91	1308	N.D.			
27) 4-Chlorotoluene	17.61	91	1308	N.D.			
28) Indane	19.11	117	449	N.D.			
29) Indene	19.20	115	56	N.D.			
30) 1,2,4,5-Tetramethylben...	20.26	119	275	N.D.			
31) 1,2,3,4-Tetramethylben...	20.26	119	275	N.D.			
32) 1,2,3,5-Tetramethylben...	20.57	119	6154	N.D.			
33) 1,2,3-Trichlorobenzene	21.19	180	189	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212417.D Vial: 7
Acq On : 22 Jun 2024 8:11 Operator: SC
Sample : P2402249-059 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 16:42:47 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



C-1848

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\21\
Data File : 06212417.D
Acq On : 22 Jun 2024 8:11
Operator : SC
Sample : P2402249-059 (400mL)
Misc : S37-06062402
ALS Vial : 7 Sample Multiplier: 1

MJ 6/28/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06212417.D\data.ms

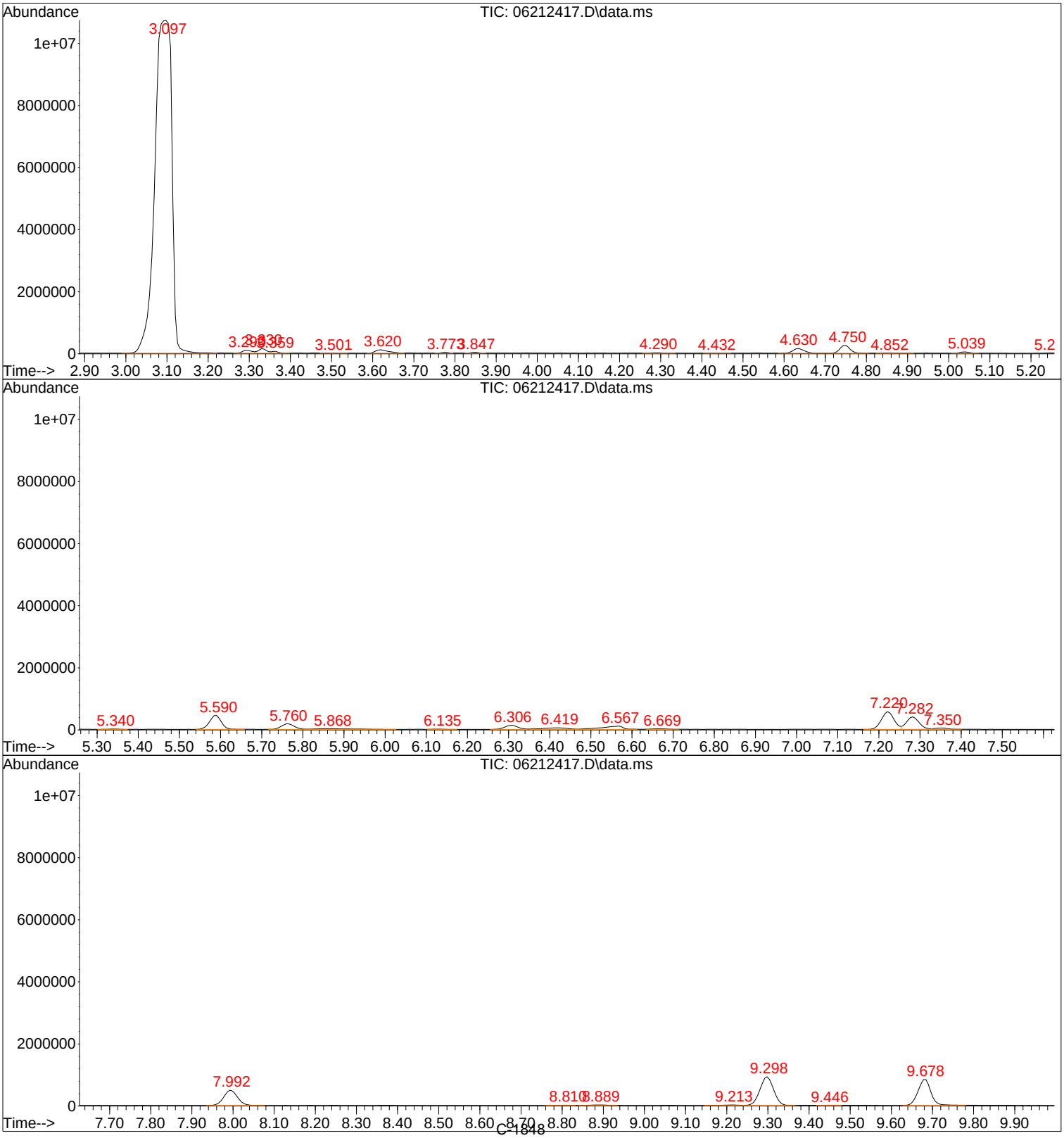
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.097	19	38	60	rBV	10721679	30816457	100.00%	73.173%
2	3.290	67	72	76	rBV2	90938	149809	0.49%	0.356%
3	3.330	76	79	83	rVV	143624	205917	0.67%	0.489%
4	3.359	83	84	91	rVB	58279	56540	0.18%	0.134%
5	3.501	104	109	116	rVB5	8014	13345	0.04%	0.032%
6	3.620	124	130	140	rBV3	108222	245942	0.80%	0.584%
7	3.773	153	157	161	rBV	22119	27838	0.09%	0.066%
8	3.847	166	170	175	rBV	27001	34673	0.11%	0.082%
9	4.290	242	248	256	rVB	12696	26881	0.09%	0.064%
10	4.432	268	273	280	rVB	7319	15357	0.05%	0.036%
11	4.630	300	308	321	rVB	147569	296545	0.96%	0.704%
12	4.750	321	329	339	rVV	254598	439117	1.42%	1.043%
13	4.852	342	347	358	rVB5	8644	20551	0.07%	0.049%
14	5.039	374	380	386	rVB	40601	66052	0.21%	0.157%
15	5.249	408	417	424	rBV6	9722	22487	0.07%	0.053%
16	5.340	426	433	439	rVB2	10572	19212	0.06%	0.046%
17	5.590	468	477	489	rBV	447477	886731	2.88%	2.106%
18	5.760	499	507	517	rBV	178164	384030	1.25%	0.912%
19	5.868	517	526	554	rVB	20098	126713	0.41%	0.301%
20	6.135	567	573	580	rVB3	5884	11364	0.04%	0.027%
21	6.306	594	603	610	rBV	131280	292708	0.95%	0.695%
22	6.419	611	623	631	rVV4	47158	190685	0.62%	0.453%
23	6.567	631	649	657	rVV	103011	369717	1.20%	0.878%
24	6.669	661	667	675	rVB	18723	44210	0.14%	0.105%
25	7.220	754	764	770	rBV	565913	1225057	3.98%	2.909%
26	7.282	770	775	783	rVV	399961	843059	2.74%	2.002%
27	7.350	783	787	796	rVB	40796	80020	0.26%	0.190%
28	7.992	890	900	915	rBV	487789	1140207	3.70%	2.707%
29	8.810	1035	1044	1048	rBV4	7799	17634	0.06%	0.042%
30	8.889	1049	1058	1066	rVB3	14665	44182	0.14%	0.105%
31	9.213	1103	1115	1120	rBV5	12730	36388	0.12%	0.086%
32	9.298	1120	1130	1142	rVB	924447	2129709	6.91%	5.057%
33	9.446	1151	1156	1162	rBV5	4367	10605	0.03%	0.025%
34	9.678	1188	1197	1215	rBV	833143	1824591	5.92%	4.332%

Sum of corrected areas: 42114333

Data Path : I:\MS09\DATA\2024 06\21\
Data File : 06212417.D
Acq On : 22 Jun 2024 8:11
Operator : SC
Sample : P2402249-059 (400mL)
Misc : S37-06062402
ALS Vial : 7 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\21\\
Data File : 06212417.D
Acq On : 22 Jun 2024 8:111
Operator : SCC
Sample : P2402249-059 (400mL))
Misc : S37-060624022
ALS Vial : 7 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

						Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212418.D Vial: 8
Acq On : 22 Jun 2024 8:43 Operator: SC
Sample : P2402249-060 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 17:43:17 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	181908	12.500	ng		0.01
37) 1,4-Difluorobenzene (IS2)	9.30	114	795958	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	181779	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	399243	12.349	ng		0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.80%				
57) Toluene-d8 (SS2)	12.43	98	879373	12.641	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.12%				
73) Bromofluorobenzene (SS3)	16.82	174	308382	12.277	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.24%				
Target Compounds							Qvalue
2) Propene	3.23	42	251	N.D.			
3) Dichlorodifluoromethan...	3.36	85	23964m	0.560	ng		
4) Chloromethane	3.49	50	54197	1.852	ng		97
5) 1,2-Dichloro-1,1,2,2-t...	3.61	135	800	N.D.			
6) Vinyl Chloride	3.69	62	627	N.D.			
7) 1,3-Butadiene	3.77	54	854	N.D.			
8) Bromomethane	4.02	94	2693	0.181	ng		100
9) Chloroethane	4.15	64	2238	0.191	ng		88
10) Ethanol	4.30	45	77851	4.402	ng		99
11) Acetonitrile	0.00	41	0	N.D. d			
12) Acrolein	4.52	56	32057	2.449	ng		95
13) Acetone	4.62	58	417706	29.559	ng	#	72
14) Trichlorofluoromethane	4.75	101	280523	6.478	ng		99
15) 2-Propanol (Isopropanol)	4.86	45	44272	0.777	ng		92
16) Acrylonitrile	4.99	53	2280	0.086	ng		98
17) 1,1-Dichloroethene	5.26	96	354	N.D.			
18) 2-Methyl-2-Propanol (t...	5.33	59	20962	0.461	ng	#	41
19) Methylene Chloride	5.35	84	5855	0.293	ng		95
20) 3-Chloro-1-propene (Al...	5.45	41	1653	N.D.			
21) Trichlorotrifluoroethane	5.58	151	134634	7.349	ng		96
22) Carbon Disulfide	5.59	76	58689	0.910	ng		79
23) trans-1,2-Dichloroethene	6.13	61	829	N.D.			
24) 1,1-Dichloroethane	6.32	63	273	N.D.			
25) Methyl tert-Butyl Ether	6.31	73	2156	N.D.			
26) Vinyl Acetate	6.43	86	25781	7.906	ng	#	12
27) 2-Butanone (MEK)	6.66	72	52720	4.714	ng		96
28) cis-1,2-Dichloroethene	7.07	61	620	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D. d			
30) Ethyl Acetate	7.29	61	31017	4.543	ng		94
31) n-Hexane	0.00	57	0	N.D. d			
32) Chloroform	7.36	83	63755	1.789	ng		100
34) Tetrahydrofuran (THF)	7.76	72	1635	0.160	ng	#	1
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	411	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	9.66	61	43405	No Calib		#	
40) 1-Butanol	8.81	56	23210	No Calib		#	
41) Benzene	8.90	78	18953	0.258	ng		98
42) Carbon Tetrachloride	9.08	117	572	N.D.			
43) Cyclohexane	9.21	84	1005	N.D.			
44) tert-Amyl Methyl Ether	9.59	73	521	N.D.			
45) 1,2-Dichloropropane	9.87	63	126	N.D.			
46) Bromodichloromethane	10.08	83	1077	N.D.			
47) Trichloroethene	10.14	130	1397	0.065	ng		98
48) 1,4-Dioxane	10.12	88	1087	0.080	ng		96
49) 2,2,4-Trimethylpentane...	0.00	57	0	N.D. d			
50) Methyl Methacrylate	10.33	100	197	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212418.D Vial: 8
Acq On : 22 Jun 2024 8:43 Operator: SC
Sample : P2402249-060 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 17:43:17 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

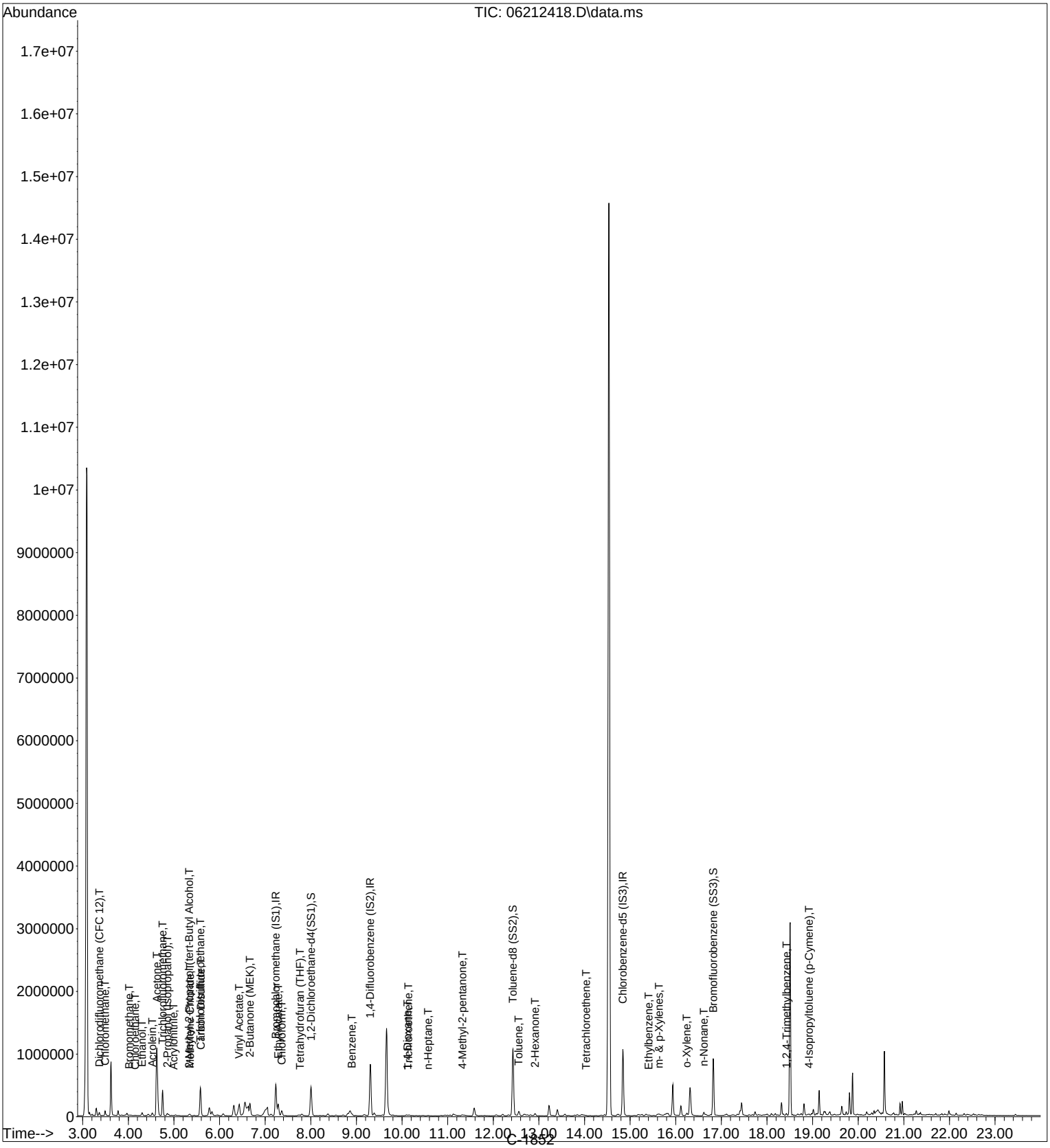
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	10.57	71	1462	0.094 ng	#	90
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	11.33	58	3502	0.217 ng	#	57
54) trans-1,3-Dichloropropene	11.98	75	202	N.D.		
55) 1,1,2-Trichloroethane	12.19	97	320	N.D.		
58) Toluene	12.56	91	57288	0.788 ng		99
59) 2-Hexanone	12.92	43	31963	0.701 ng		98
60) Dibromochloromethane	13.08	129	736	N.D.		
61) 1,2-Dibromoethane	13.41	107	115	N.D.		
62) n-Butyl Acetate	13.78	43	2382	N.D.		
63) n-Octane	0.00	57	0	N.D. d		
64) Tetrachloroethene	14.03	166	1802	0.072 ng		83
65) Chlorobenzene	14.89	112	2289	N.D.		
66) Ethylbenzene	15.41	91	4544	0.055 ng		96
67) m- & p-Xylenes	15.63	91	17919	0.256 ng		99
68) Bromoform	15.67	173	905	N.D.		
69) Styrene	16.10	104	1992	N.D.		
70) o-Xylene	16.24	91	7874	0.114 ng		83
71) n-Nonane	16.62	43	12606	0.314 ng	#	79
72) 1,1,2,2-Tetrachloroethane	16.20	83	873	N.D.		
74) Cumene	17.03	105	1650	N.D.		
75) alpha-Pinene	17.53	93	949	N.D.		
76) n-Propylbenzene	17.68	91	4561	N.D.		
77) 3-Ethyltoluene	17.03	105	1650	No Calib		
78) 4-Ethyltoluene	17.86	105	3125	N.D.		
79) 1,3,5-Trimethylbenzene	17.95	105	3497	N.D.		
80) alpha-Methylstyrene	17.12	118	137	No Calib	#	
81) 2-Ethyltoluene	17.03	105	1650	No Calib		
82) 1,2,4-Trimethylbenzene	18.43	105	8605	0.114 ng		93
83) n-Decane	17.12	58	4452	No Calib	#	
84) Benzyl Chloride	18.60	91	706	N.D.		
85) 1,3-Dichlorobenzene	18.58	146	1481	N.D.		
86) 1,4-Dichlorobenzene	18.65	146	1055	N.D.		
87) sec-Butylbenzene	18.74	105	1979	N.D.		
88) 4-Isopropyltoluene (p-...	18.92	119	8535	0.099 ng		95
89) 1,2,3-Trimethylbenzene	17.03	105	1650	No Calib		
90) 1,2-Dichlorobenzene	19.03	146	942	N.D.		
91) d-Limonene	0.00	68	0	N.D. d		
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	17.88	58	842	No Calib	#	
94) 1,2,4-Trichlorobenzene	20.84	180	1211	N.D.		
95) Naphthalene	20.94	128	4301	N.D.		
96) n-Dodecane	18.88	58	1193	No Calib	#	
97) Hexachlorobutadiene	21.30	225	1080	N.D.		
98) Cyclohexanone	15.44	55	257	No Calib	#	
99) tert-Butylbenzene	18.42	119	2466	N.D.		
100) n-Butylbenzene	0.00	91	0	N.D. d		
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212418.D Vial: 8
Acq On : 22 Jun 2024 8:43 Operator: SC
Sample : P2402249-060 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 17:43:17 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212418.D Vial: 8
Acq On : 22 Jun 2024 8:43 Operator: SC
Sample : P2402249-060 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 17:43:17 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

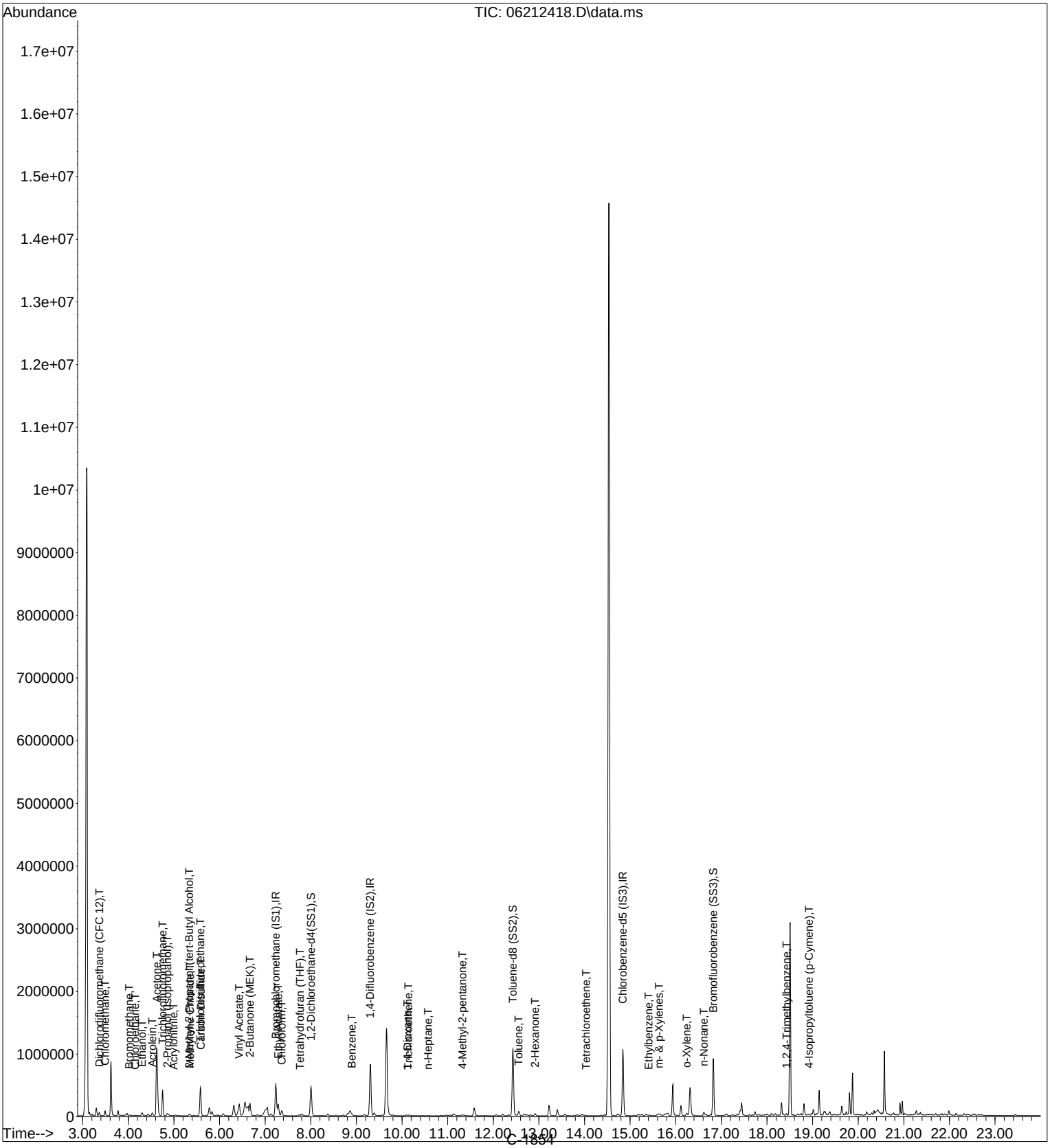
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	181908	12.500	ng		0.01
37) 1,4-Difluorobenzene (IS2)	9.30	114	795958	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	181779	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	399243	12.349	ng		0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.80%				
57) Toluene-d8 (SS2)	12.43	98	879373	12.641	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.12%				
73) Bromofluorobenzene (SS3)	16.82	174	308382	12.277	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.24%				
Target Compounds							Qvalue
3) Dichlorodifluoromethan...	3.36	85	23964m	0.560	ng		
4) Chloromethane	3.49	50	54197	1.852	ng		97
8) Bromomethane	4.02	94	2693	0.181	ng		100
9) Chloroethane	4.15	64	2238	0.191	ng		88
10) Ethanol	4.30	45	77851	4.402	ng		99
12) Acrolein	4.52	56	32057	2.449	ng		95
13) Acetone	4.62	58	417706	29.559	ng	#	72
14) Trichlorofluoromethane	4.75	101	280523	6.478	ng		99
15) 2-Propanol (Isopropanol)	4.86	45	44272	0.777	ng		92
16) Acrylonitrile	4.99	53	2280	0.086	ng		98
18) 2-Methyl-2-Propanol (t...	5.33	59	20962	0.461	ng	#	41
19) Methylene Chloride	5.35	84	5855	0.293	ng		95
21) Trichlorotrifluoroethane	5.58	151	134634	7.349	ng		96
22) Carbon Disulfide	5.59	76	58689	0.910	ng		79
26) Vinyl Acetate	6.43	86	25781	7.906	ng	#	12
27) 2-Butanone (MEK)	6.66	72	52720	4.714	ng		96
30) Ethyl Acetate	7.29	61	31017	4.543	ng		94
32) Chloroform	7.36	83	63755	1.789	ng		100
34) Tetrahydrofuran (THF)	7.76	72	1635	0.160	ng	#	1
41) Benzene	8.90	78	18953	0.258	ng		98
47) Trichloroethene	10.14	130	1397	0.065	ng		98
48) 1,4-Dioxane	10.12	88	1087	0.080	ng		96
51) n-Heptane	10.57	71	1462	0.094	ng	#	90
53) 4-Methyl-2-pentanone	11.33	58	3502	0.217	ng	#	57
58) Toluene	12.56	91	57288	0.788	ng		99
59) 2-Hexanone	12.92	43	31963	0.701	ng		98
64) Tetrachloroethene	14.03	166	1802	0.072	ng		83
66) Ethylbenzene	15.41	91	4544	0.055	ng		96
67) m- & p-Xylenes	15.63	91	17919	0.256	ng		99
70) o-Xylene	16.24	91	7874	0.114	ng		83
71) n-Nonane	16.62	43	12606	0.314	ng	#	79
82) 1,2,4-Trimethylbenzene	18.43	105	8605	0.114	ng		93
88) 4-Isopropyltoluene (p-...	18.92	119	8535	0.099	ng		95

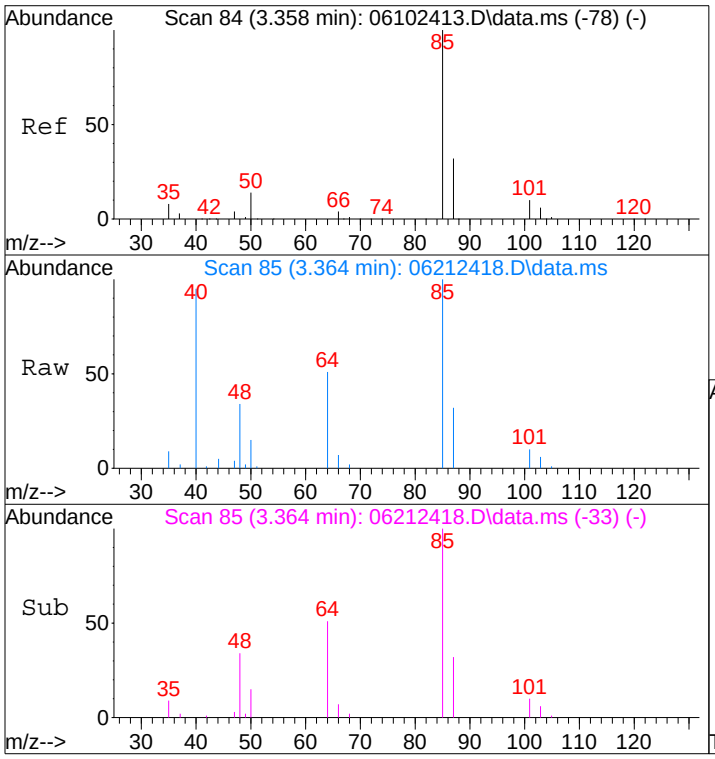
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212418.D Vial: 8
Acq On : 22 Jun 2024 8:43 Operator: SC
Sample : P2402249-060 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 17:43:17 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

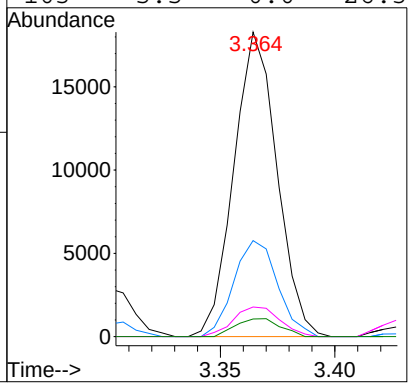


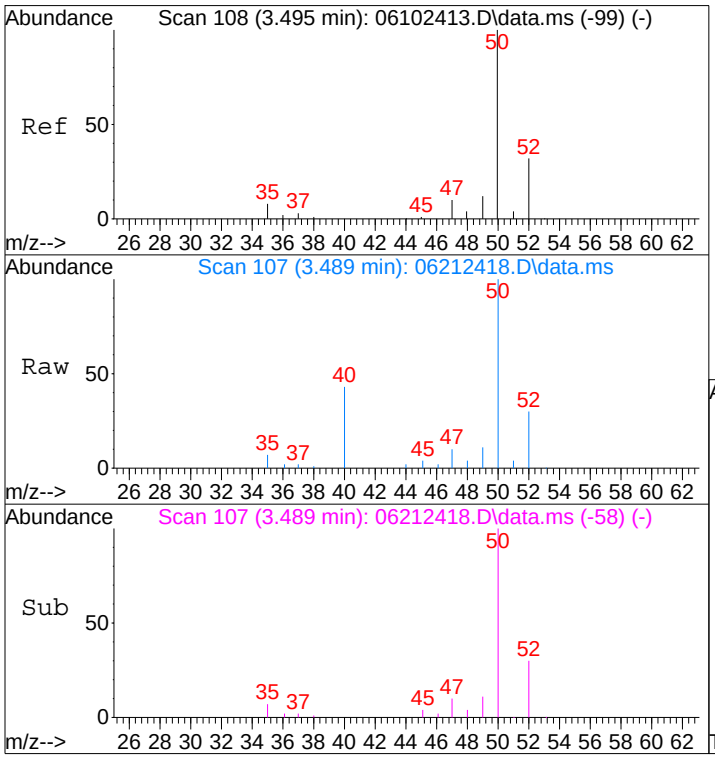


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.56 ng m
RT: 3.36 min Scan# 85
Delta R.T. 0.045 min
Lab File: 06212418.D
Acq: 22 Jun 2024 8:43

Tgt Ion: 85 Resp: 23964

Ion	Ratio	Lower	Upper
85	100		
87	32.0	12.2	52.2
101	10.6	0.0	29.8
103	5.5	0.0	26.3

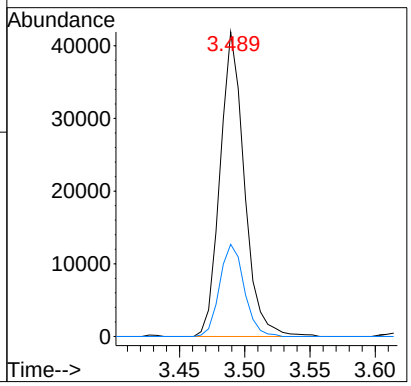


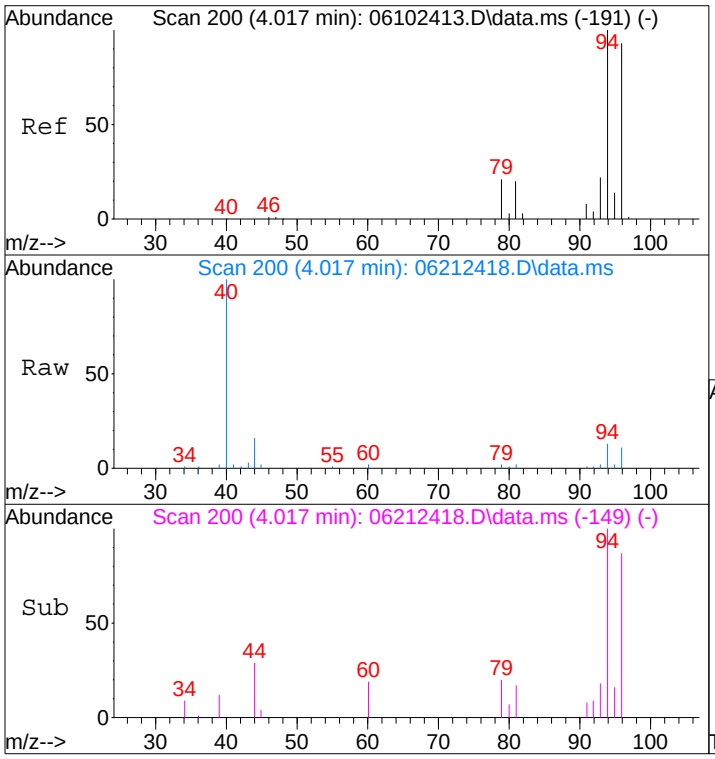


#4
Chloromethane
Concen: 1.85 ng
RT: 3.49 min Scan# 107
Delta R.T. 0.029 min
Lab File: 06212418.D
Acq: 22 Jun 2024 8:43

Tgt Ion: 50 Resp: 54197

Ion	Ratio	Lower	Upper
50	100		
52	30.6	12.4	52.4

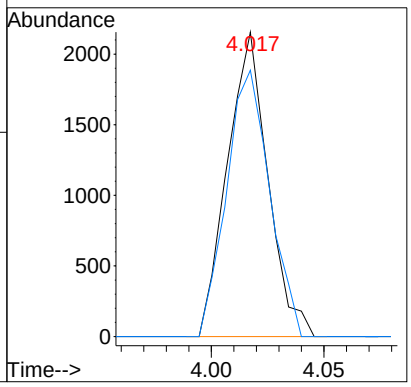


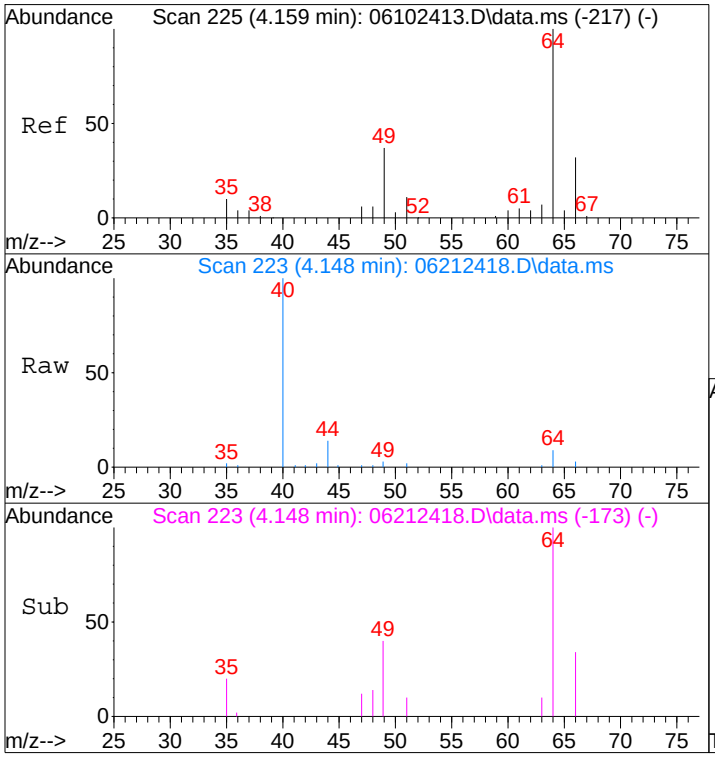


#8
Bromomethane
Concen: 0.18 ng
RT: 4.02 min Scan# 200
Delta R.T. 0.041 min
Lab File: 06212418.D
Acq: 22 Jun 2024 8:43

Tgt Ion: 94 Resp: 2693

Ion	Ratio	Lower	Upper
94	100		
96	93.1	73.2	113.2

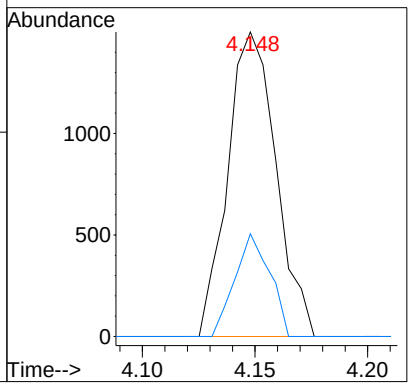


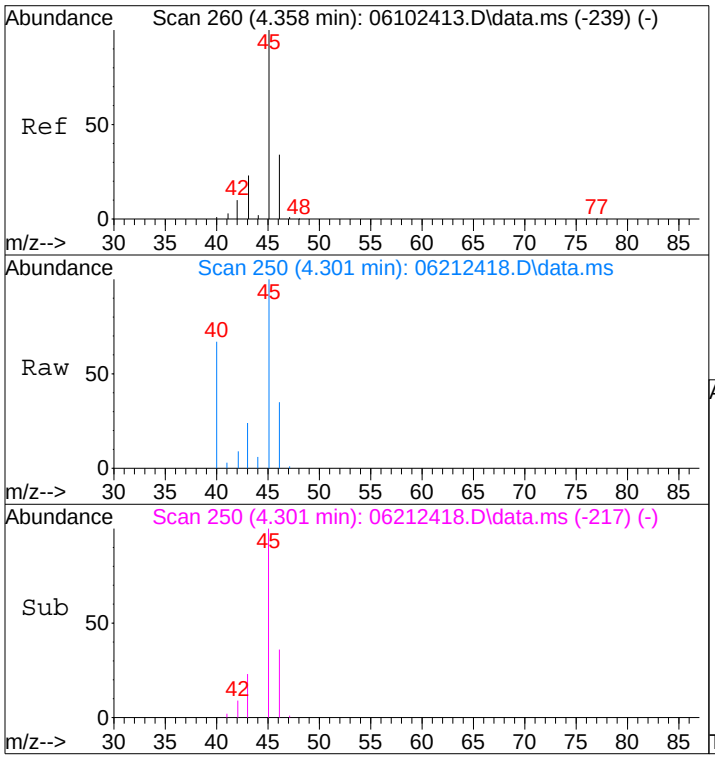


#9
Chloroethane
Concen: 0.19 ng
RT: 4.15 min Scan# 223
Delta R.T. 0.032 min
Lab File: 06212418.D
Acq: 22 Jun 2024 8:43

Tgt Ion: 64 Resp: 2238

Ion	Ratio	Lower	Upper
64	100		
66	24.5	11.4	51.4

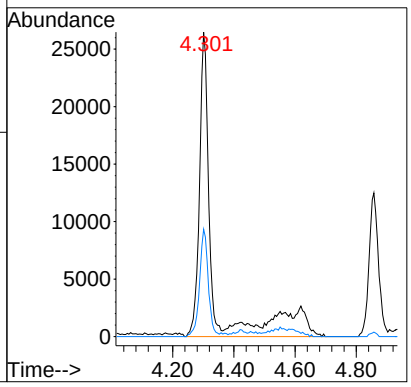


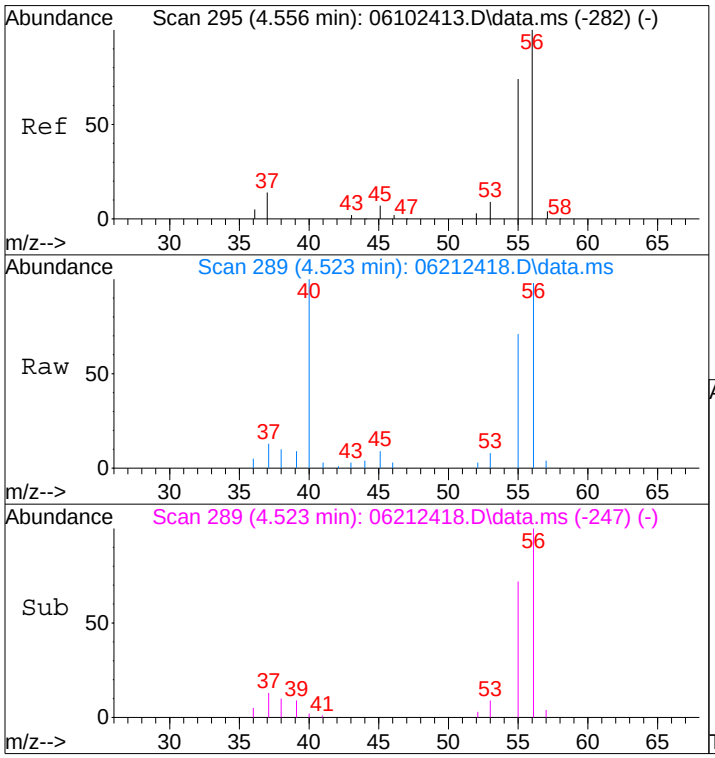


#10
Ethanol
Concen: 4.40 ng
RT: 4.30 min Scan# 250
Delta R.T. -0.062 min
Lab File: 06212418.D
Acq: 22 Jun 2024 8:43

Tgt Ion: 45 Resp: 77851

Ion	Ratio	Lower	Upper
45	100		
46	33.2	13.5	53.5

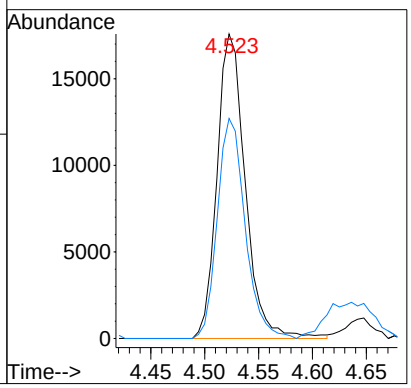


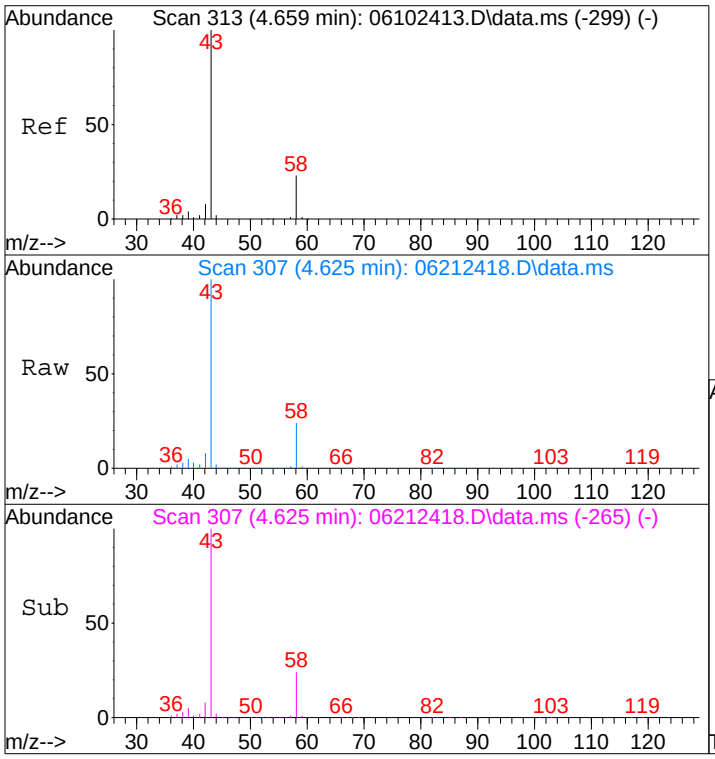


#12
Acrolein
Concen: 2.45 ng
RT: 4.52 min Scan# 289
Delta R.T. -0.009 min
Lab File: 06212418.D
Acq: 22 Jun 2024 8:43

Tgt Ion: 56 Resp: 32057

Ion	Ratio	Lower	Upper
56	100		
55	71.0	55.5	95.5

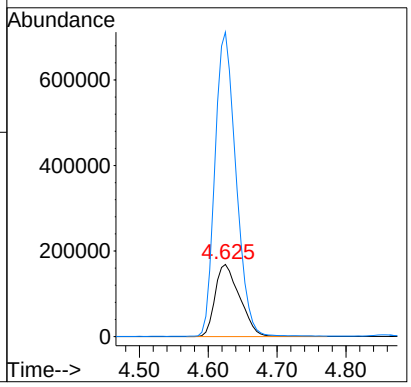


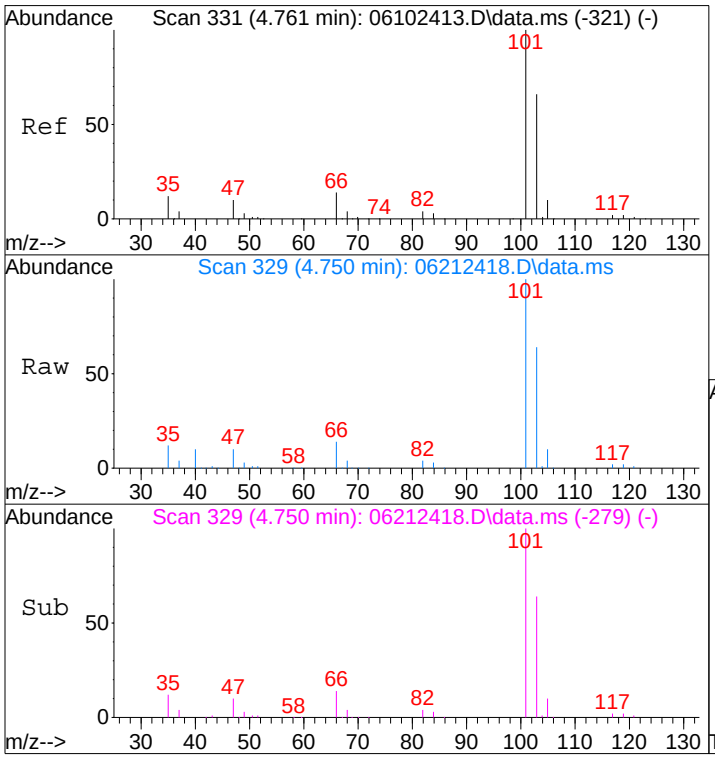


#13
Acetone
Concen: 29.56 ng
RT: 4.62 min Scan# 307
Delta R.T. -0.013 min
Lab File: 06212418.D
Acq: 22 Jun 2024 8:43

Tgt Ion: 58 Resp: 417706

Ion	Ratio	Lower	Upper
58	100		
43	362.0	400.7	460.7#

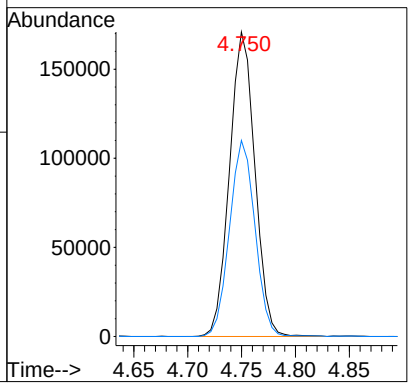


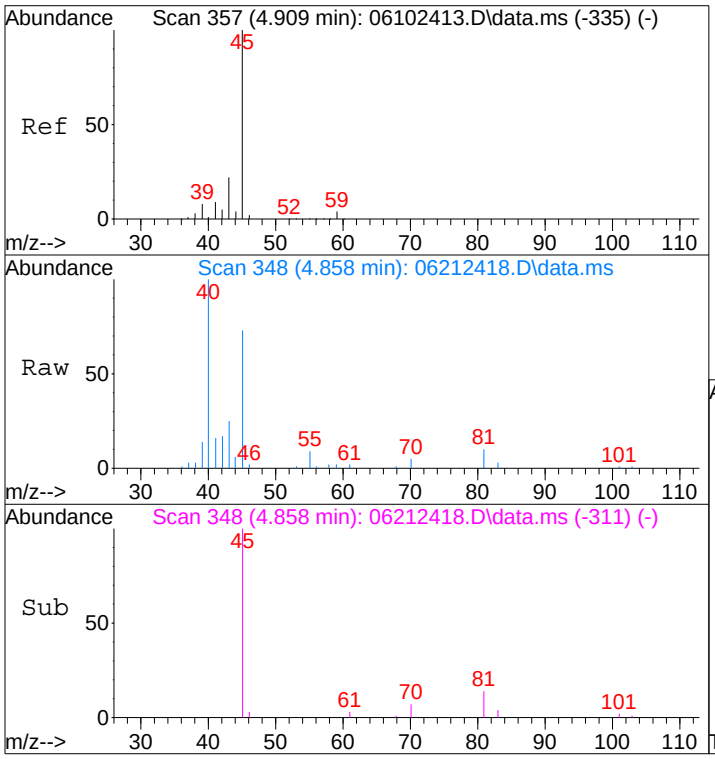


#14
Trichlorofluoromethane
Concen: 6.48 ng
RT: 4.75 min Scan# 329
Delta R.T. 0.033 min
Lab File: 06212418.D
Acq: 22 Jun 2024 8:43

Tgt Ion:101 Resp: 280523

Ion	Ratio	Lower	Upper
101	100		
103	64.5	44.9	84.9

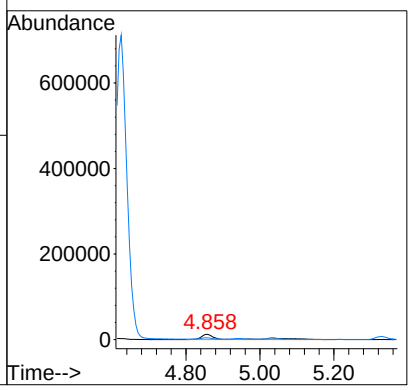


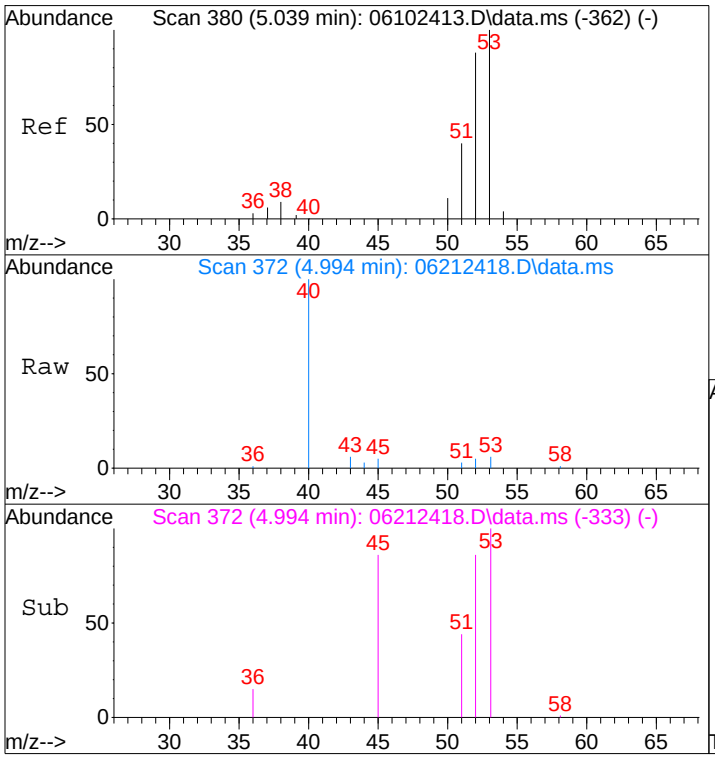


#15
2-Propanol (Isopropanol)
Concen: 0.78 ng
RT: 4.86 min Scan# 348
Delta R.T. -0.039 min
Lab File: 06212418.D
Acq: 22 Jun 2024 8:43

Tgt Ion: 45 Resp: 44272

Ion	Ratio	Lower	Upper
45	100		
43	26.1	2.5	42.5

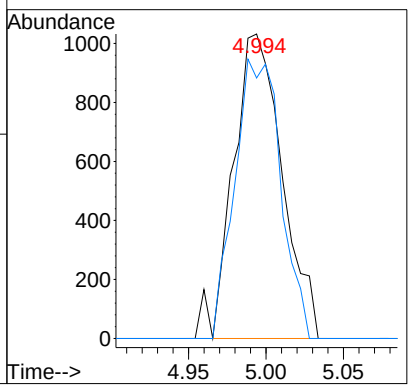


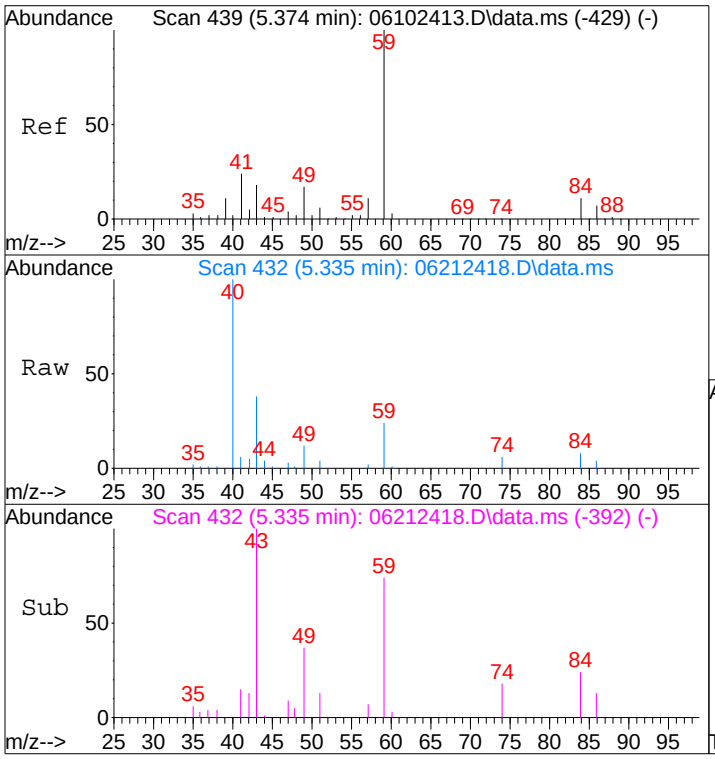


#16
Acrylonitrile
Concen: 0.09 ng
RT: 4.99 min Scan# 372
Delta R.T. -0.026 min
Lab File: 06212418.D
Acq: 22 Jun 2024 8:43

Tgt Ion: 53 Resp: 2280

Ion	Ratio	Lower	Upper
53	100		
52	85.5	67.3	107.3

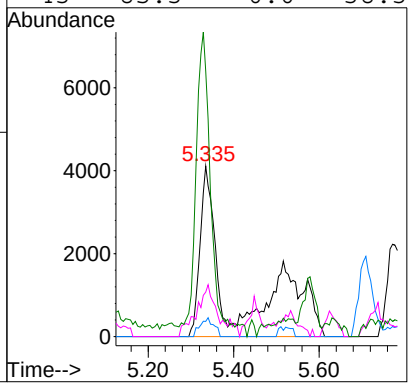


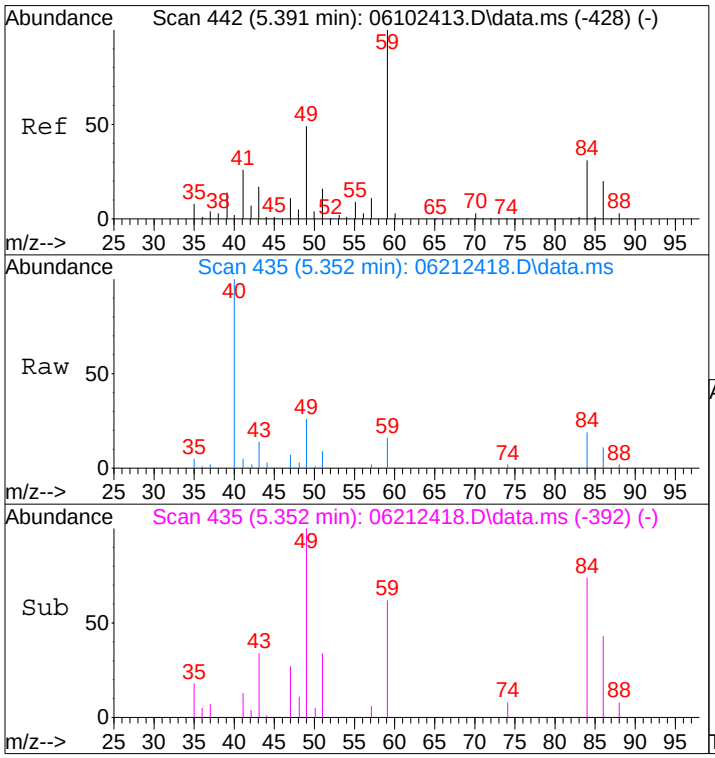


#18
2-Methyl-2-Propanol (tert-Butyl Alcohol
Concen: 0.46 ng
RT: 5.33 min Scan# 432
Delta R.T. -0.022 min
Lab File: 06212418.D
Acq: 22 Jun 2024 8:43

Tgt Ion: 59 Resp: 20962

Ion	Ratio	Lower	Upper
59	100		
57	4.8	0.0	30.9
41	21.0	0.9	40.9
43	85.3	0.0	38.3#

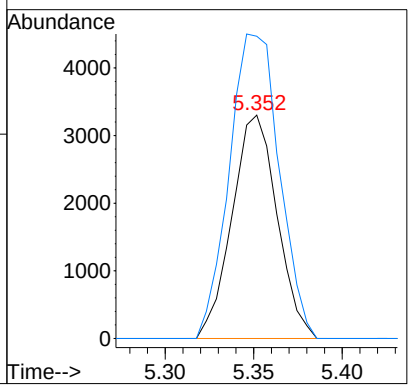


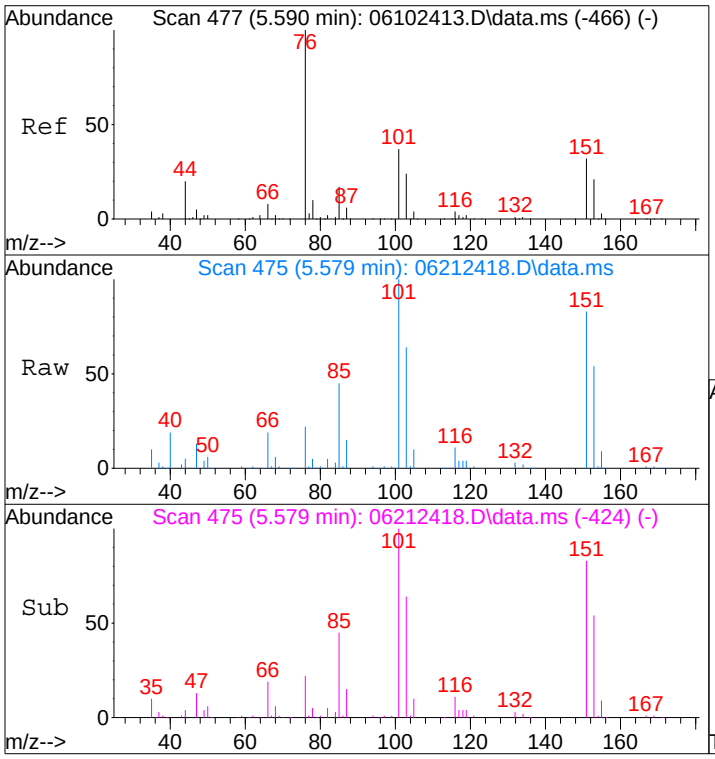


#19
Methylene Chloride
Concen: 0.29 ng
RT: 5.35 min Scan# 435
Delta R.T. -0.005 min
Lab File: 06212418.D
Acq: 22 Jun 2024 8:43

Tgt Ion: 84 Resp: 5855

Ion	Ratio	Lower	Upper
84	100		
49	151.3	132.9	182.9

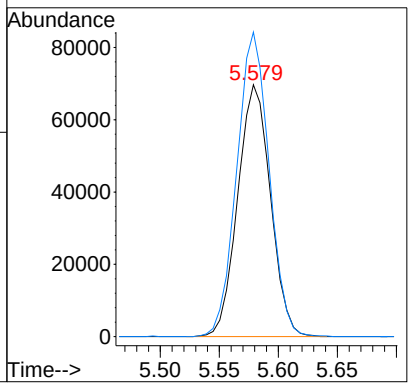


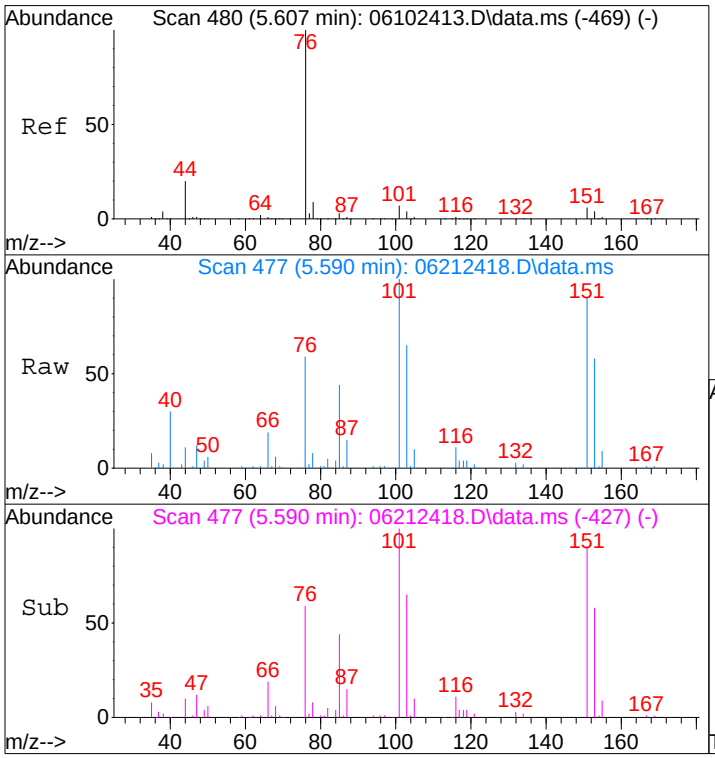


#21
Trichlorotrifluoroethane
Concen: 7.35 ng
RT: 5.58 min Scan# 475
Delta R.T. 0.037 min
Lab File: 06212418.D
Acq: 22 Jun 2024 8:43

Tgt Ion:151 Resp: 134634

Ion	Ratio	Lower	Upper
151	100		
101	119.4	95.0	135.0

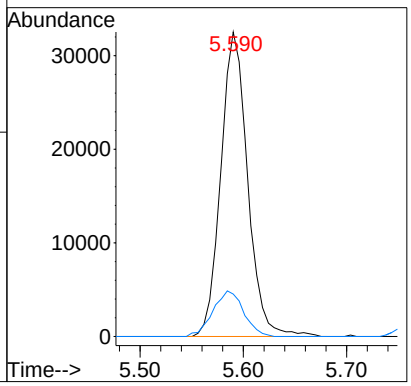


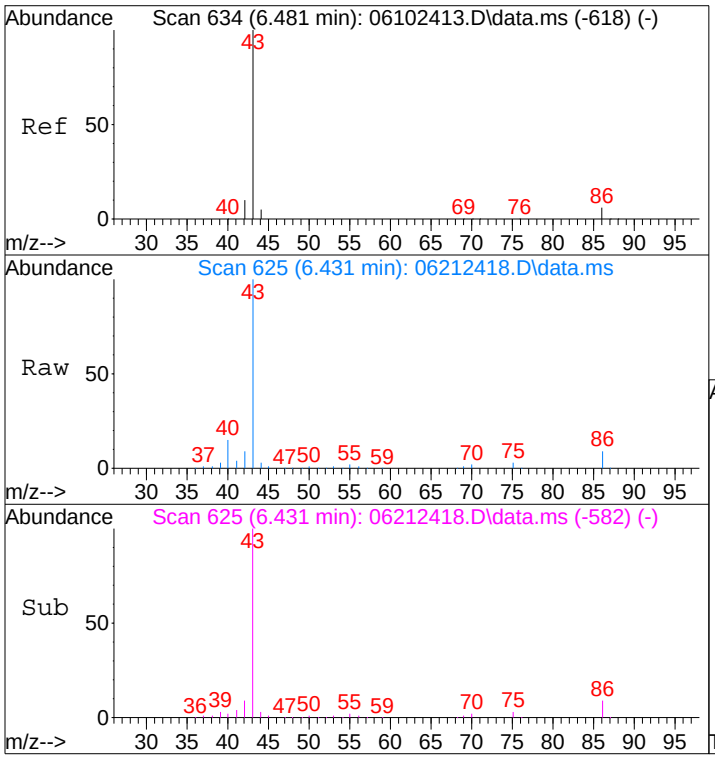


#22
Carbon Disulfide
Concen: 0.91 ng
RT: 5.59 min Scan# 477
Delta R.T. 0.032 min
Lab File: 06212418.D
Acq: 22 Jun 2024 8:43

Tgt Ion: 76 Resp: 58689

Ion	Ratio	Lower	Upper
76	100		
78	17.1	0.0	29.6

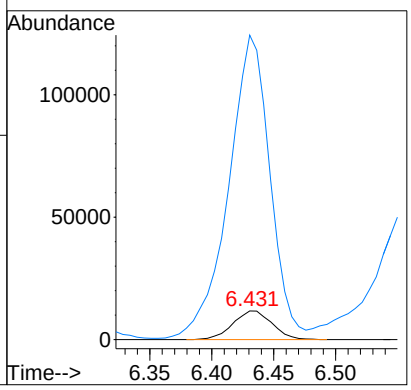


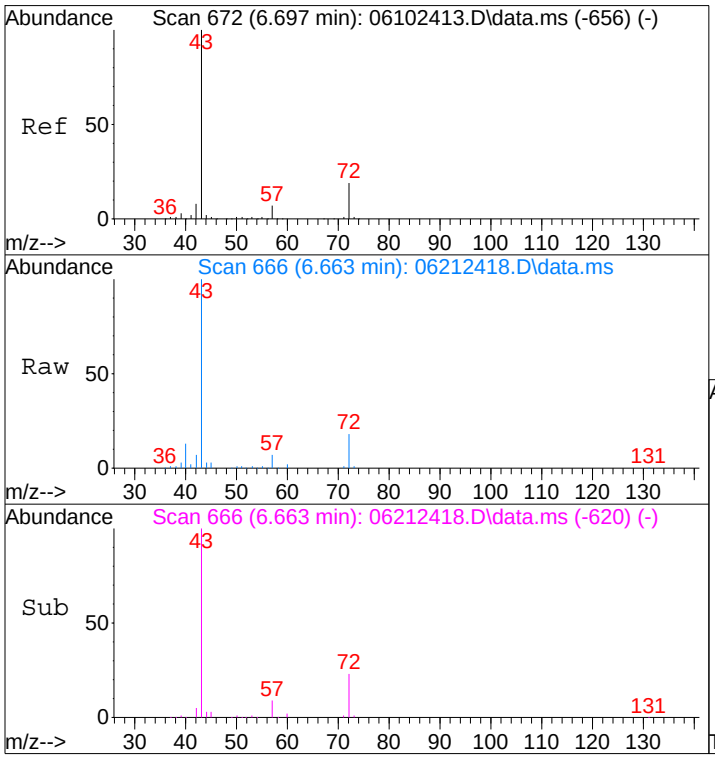


#26
Vinyl Acetate
Concen: 7.91 ng
RT: 6.43 min Scan# 625
Delta R.T. -0.004 min
Lab File: 06212418.D
Acq: 22 Jun 2024 8:43

Tgt Ion: 86 Resp: 25781

Ion	Ratio	Lower	Upper
86	100		
43	1113.4	1668.9	1708.9#

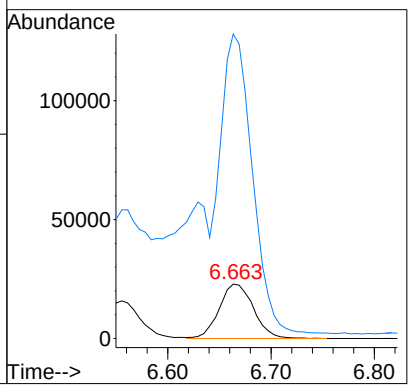


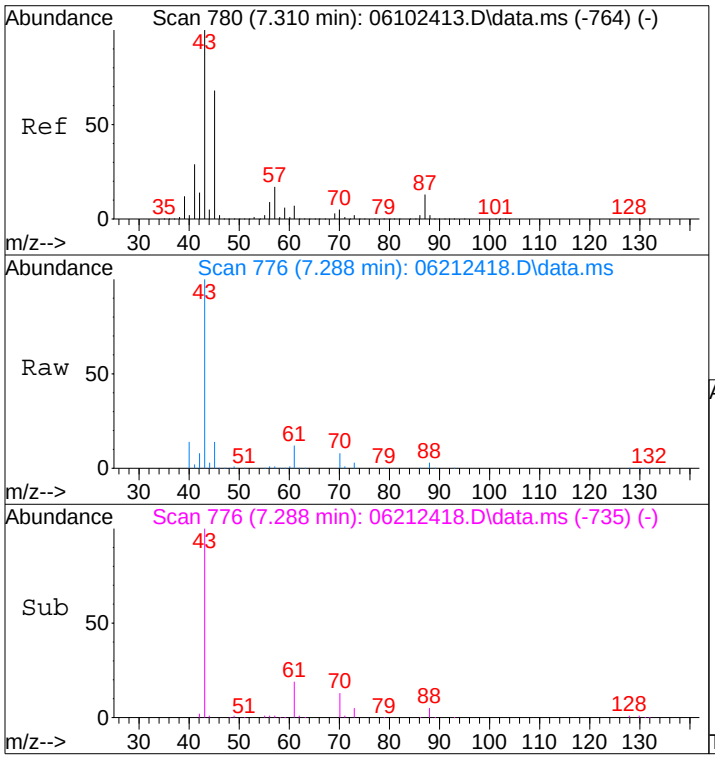


#27
2-Butanone (MEK)
Concen: 4.71 ng
RT: 6.66 min Scan# 666
Delta R.T. 0.010 min
Lab File: 06212418.D
Acq: 22 Jun 2024 8:43

Tgt Ion: 72 Resp: 52720

Ion	Ratio	Lower	Upper
72	100		
43	515.5	506.8	546.8

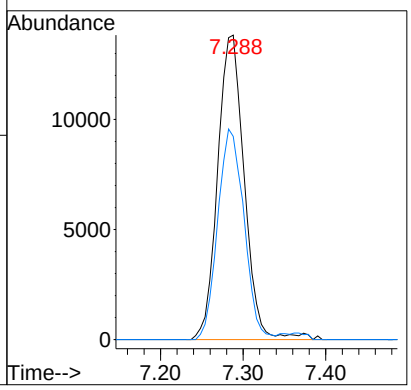


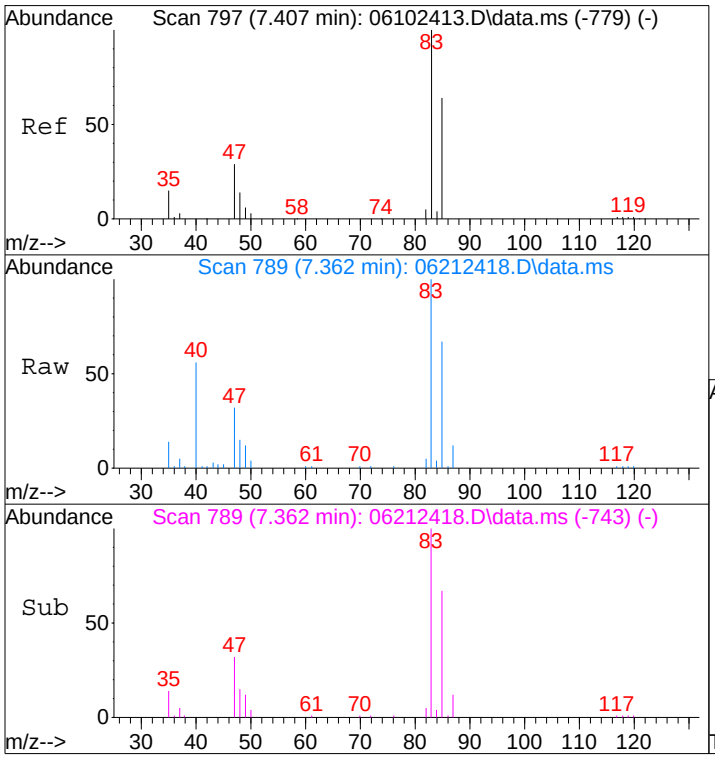


#30
Ethyl Acetate
Concen: 4.54 ng
RT: 7.29 min Scan# 776
Delta R.T. 0.035 min
Lab File: 06212418.D
Acq: 22 Jun 2024 8:43

Tgt Ion: 61 Resp: 31017

Ion	Ratio	Lower	Upper
61	100		
70	68.2	53.5	93.5

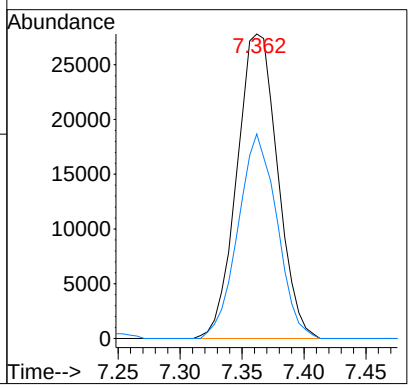


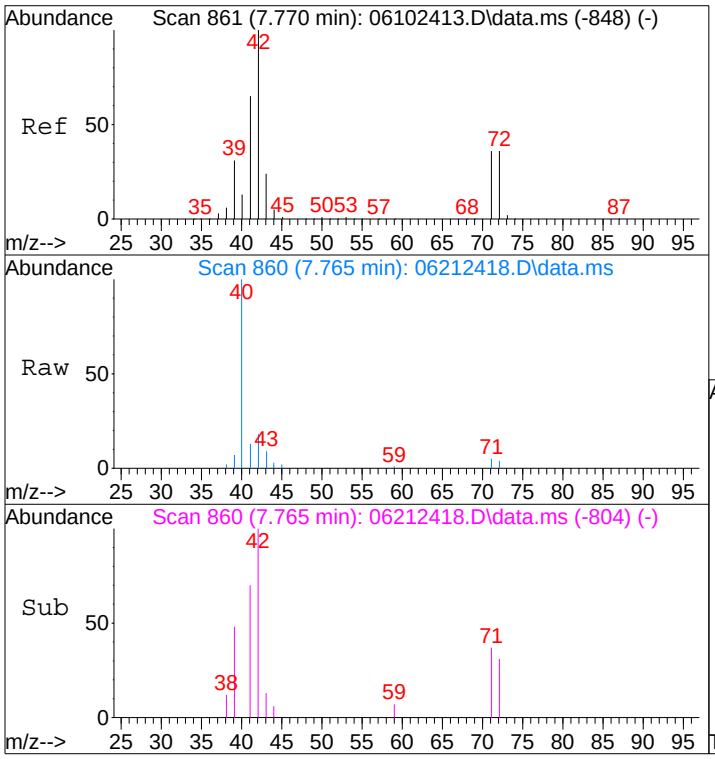


#32
Chloroform
Concen: 1.79 ng
RT: 7.36 min Scan# 789
Delta R.T. 0.013 min
Lab File: 06212418.D
Acq: 22 Jun 2024 8:43

Tgt Ion: 83 Resp: 63755

Ion	Ratio	Lower	Upper
83	100		
85	64.2	44.4	84.4

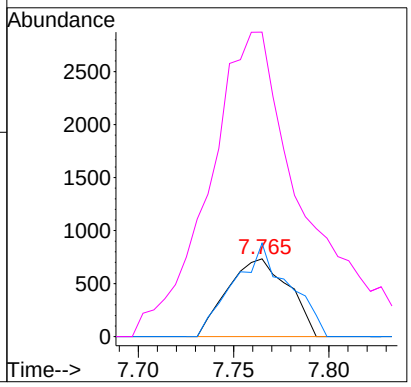


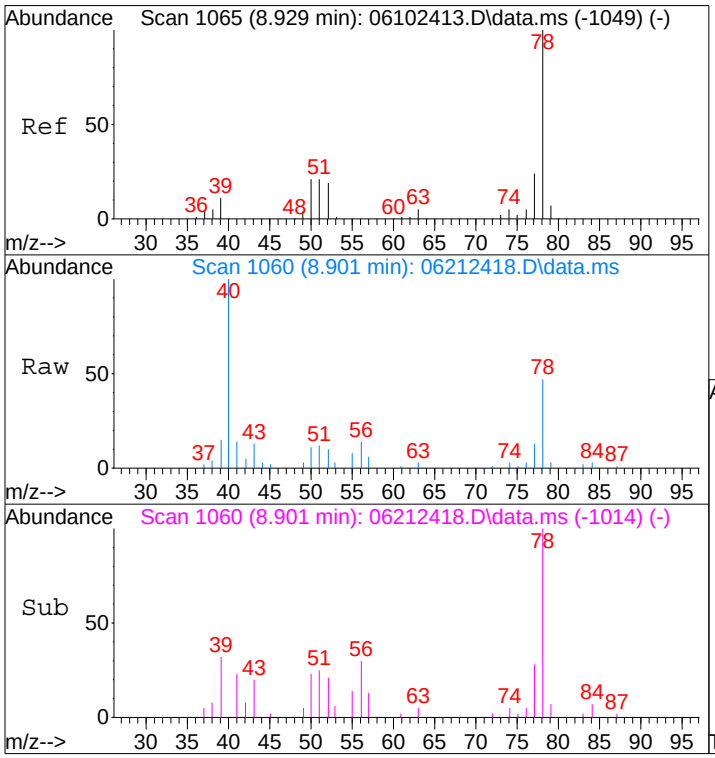


#34
Tetrahydrofuran (THF)
Concen: 0.16 ng
RT: 7.76 min Scan# 860
Delta R.T. 0.068 min
Lab File: 06212418.D
Acq: 22 Jun 2024 8:43

Tgt Ion: 72 Resp: 1635

Ion	Ratio	Lower	Upper
72	100		
71	108.2	79.4	119.4
42	659.2	260.8	300.8#

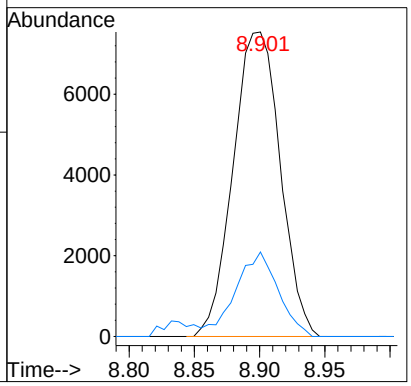


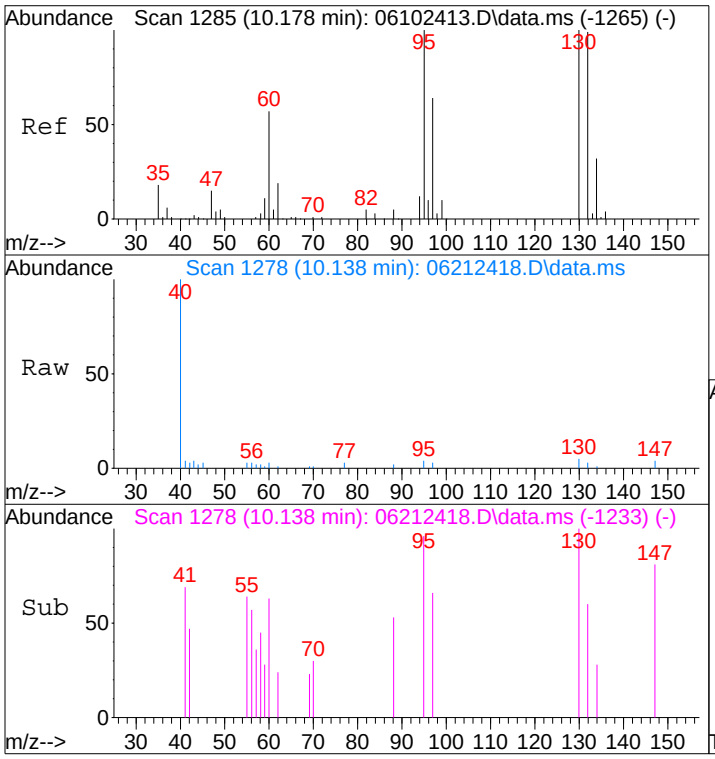


#41
Benzene
Concen: 0.26 ng
RT: 8.90 min Scan# 1060
Delta R.T. 0.009 min
Lab File: 06212418.D
Acq: 22 Jun 2024 8:43

Tgt Ion: 78 Resp: 18953

Ion	Ratio	Lower	Upper
78	100		
77	25.0	4.0	44.0

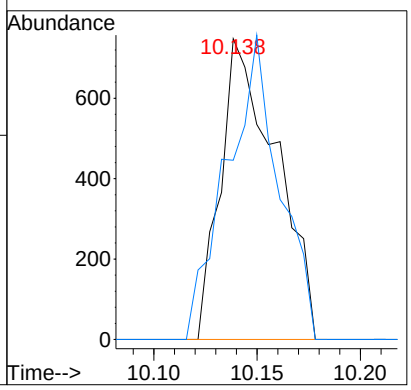


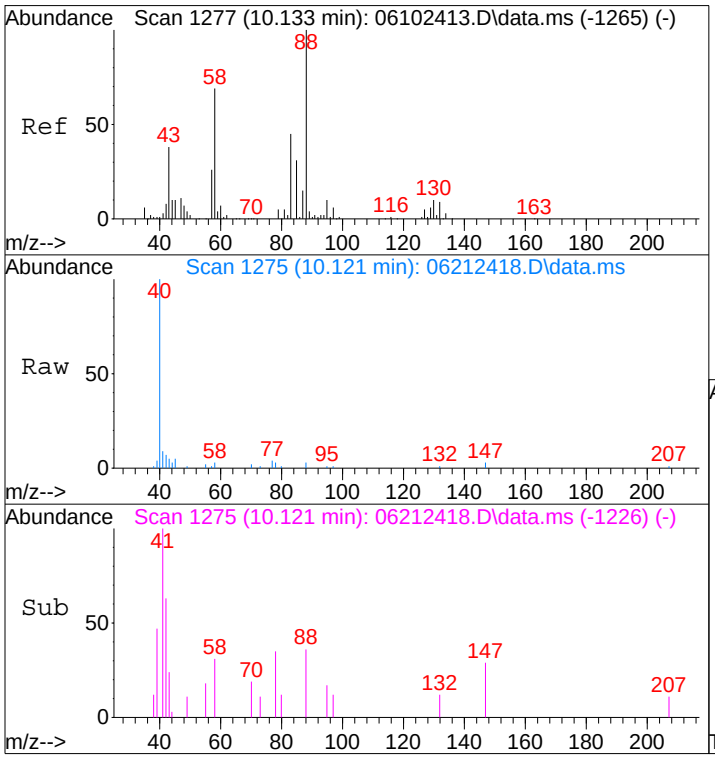


#47
Trichloroethene
Concen: 0.07 ng
RT: 10.14 min Scan# 1278
Delta R.T. 0.005 min
Lab File: 06212418.D
Acq: 22 Jun 2024 8:43

Tgt Ion:130 Resp: 1397

Ion	Ratio	Lower	Upper
130	100		
132	95.6	77.9	117.9

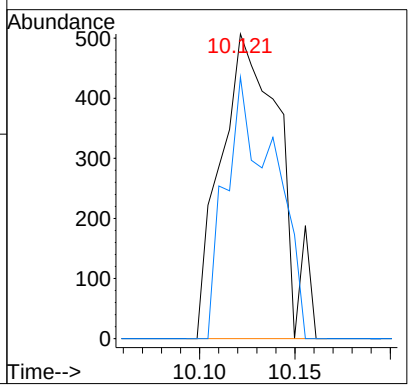


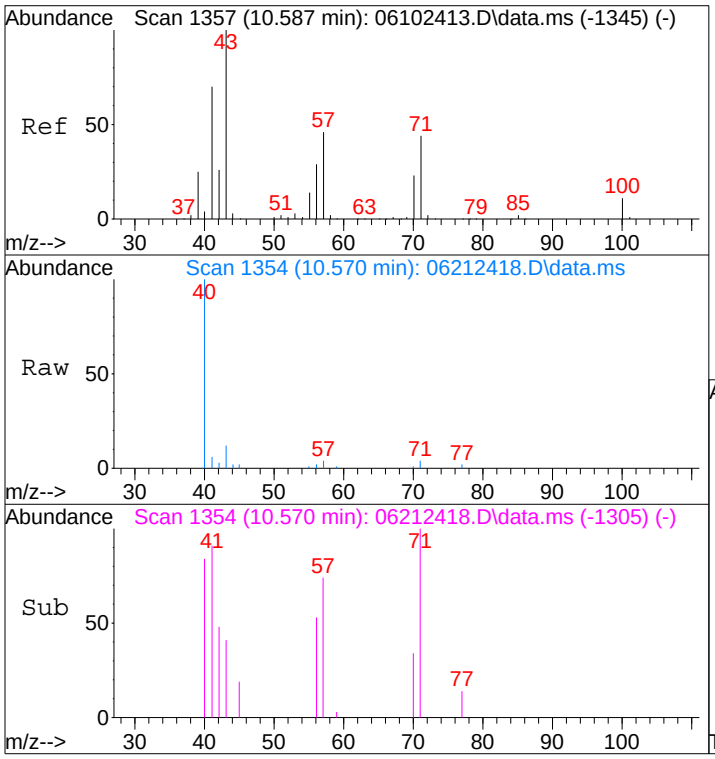


#48
1,4-Dioxane
Concen: 0.08 ng
RT: 10.12 min Scan# 1275
Delta R.T. 0.028 min
Lab File: 06212418.D
Acq: 22 Jun 2024 8:43

Tgt Ion: 88 Resp: 1087

Ion	Ratio	Lower	Upper
88	100		
58	71.2	47.6	87.6

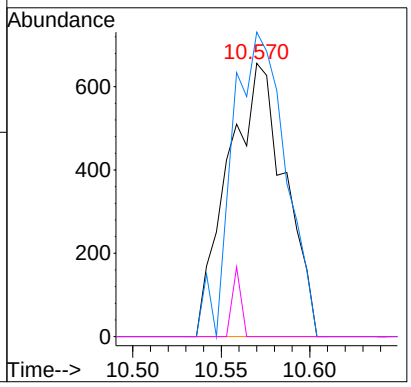


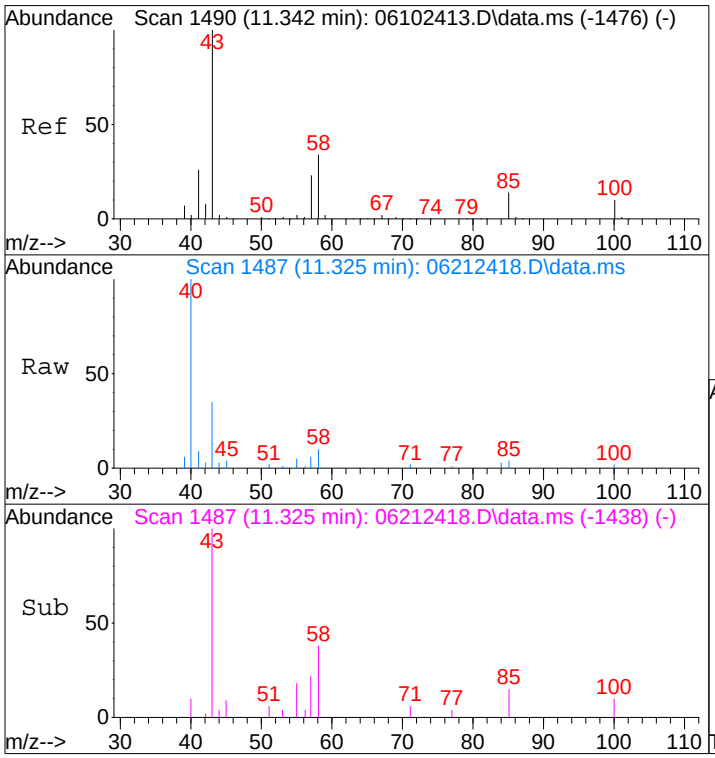


#51
n-Heptane
Concen: 0.09 ng
RT: 10.57 min Scan# 1354
Delta R.T. 0.030 min
Lab File: 06212418.D
Acq: 22 Jun 2024 8:43

Tgt Ion: 71 Resp: 1462

Ion	Ratio	Lower	Upper
71	100		
57	104.6	83.9	123.9
100	0.0	4.8	44.8#

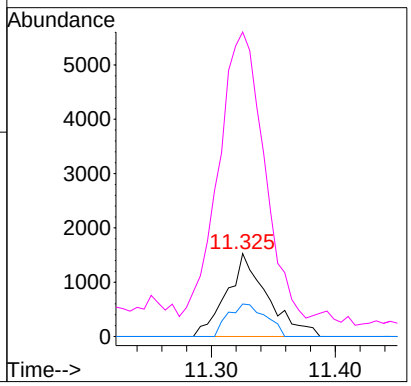


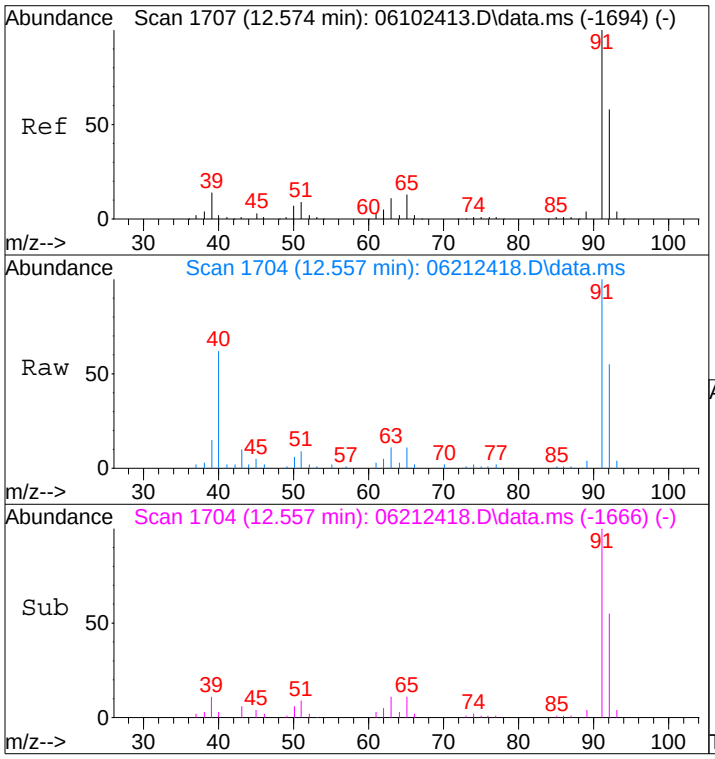


#53
4-Methyl-2-pentanone
Concen: 0.22 ng
RT: 11.33 min Scan# 1487
Delta R.T. 0.029 min
Lab File: 06212418.D
Acq: 22 Jun 2024 8:43

Tgt Ion: 58 Resp: 3502

Ion	Ratio	Lower	Upper
58	100		
85	36.2	34.5	51.7
43	386.6	236.1	354.1#

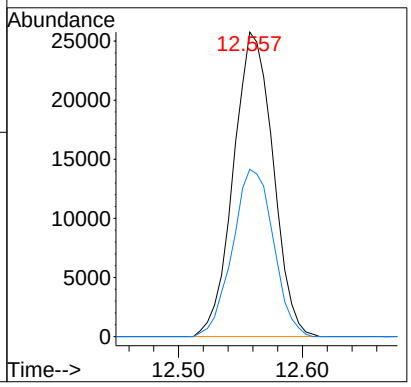


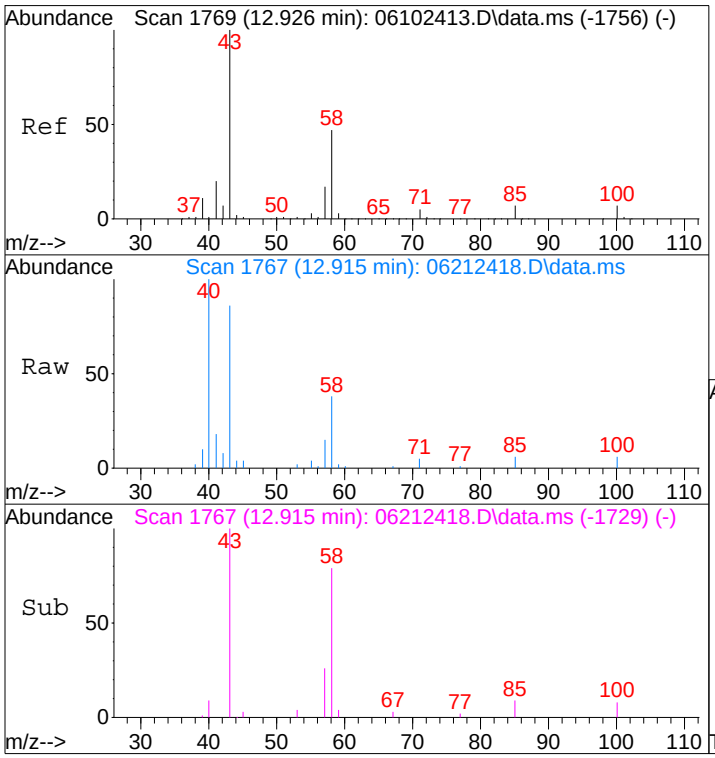


#58
Toluene
Concen: 0.79 ng
RT: 12.56 min Scan# 1704
Delta R.T. -0.034 min
Lab File: 06212418.D
Acq: 22 Jun 2024 8:43

Tgt Ion: 91 Resp: 57288

Ion	Ratio	Lower	Upper
91	100		
92	56.6	37.4	77.4

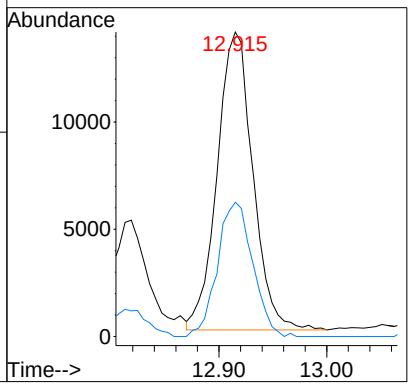


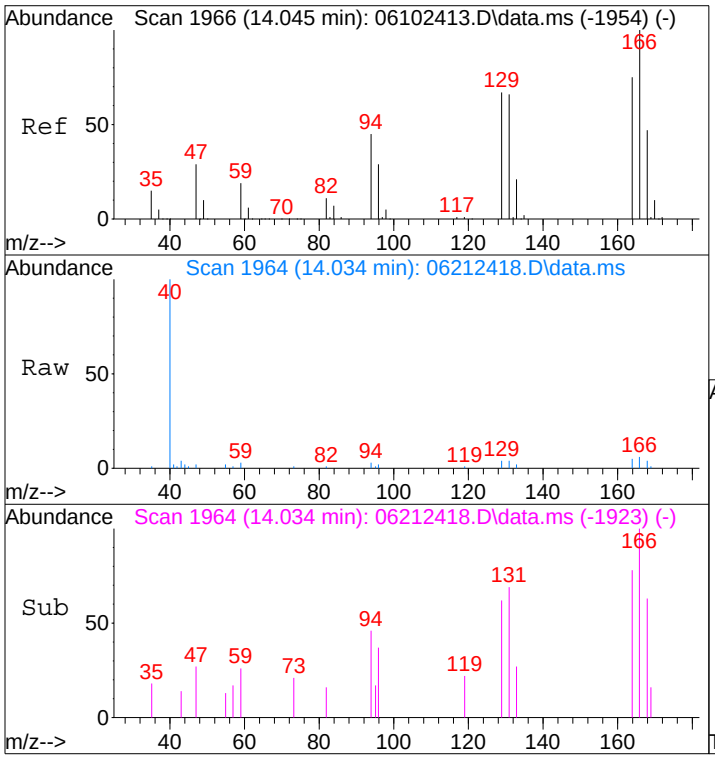


#59
2-Hexanone
Concen: 0.70 ng
RT: 12.92 min Scan# 1767
Delta R.T. -0.034 min
Lab File: 06212418.D
Acq: 22 Jun 2024 8:43

Tgt Ion: 43 Resp: 31963

Ion	Ratio	Lower	Upper
43	100		
58	44.4	25.9	65.9

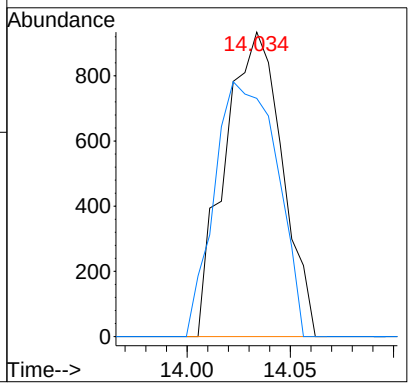


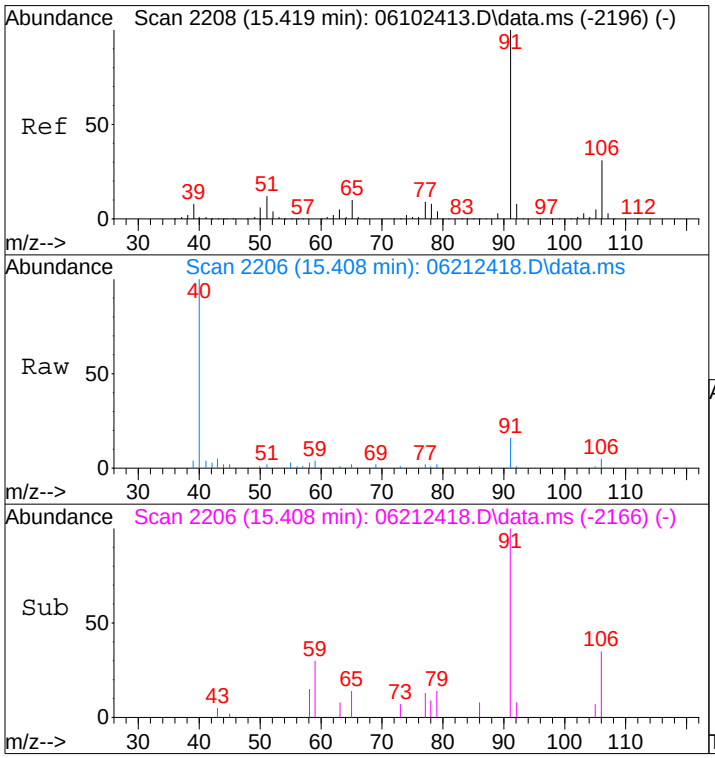


#64
Tetrachloroethene
Concen: 0.07 ng
RT: 14.03 min Scan# 1964
Delta R.T. -0.017 min
Lab File: 06212418.D
Acq: 22 Jun 2024 8:43

Tgt Ion:166 Resp: 1802

Ion	Ratio	Lower	Upper
166	100		
164	91.2	56.9	96.9

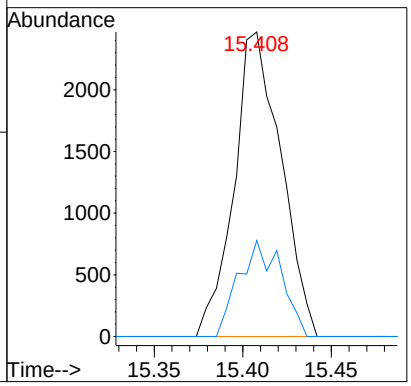


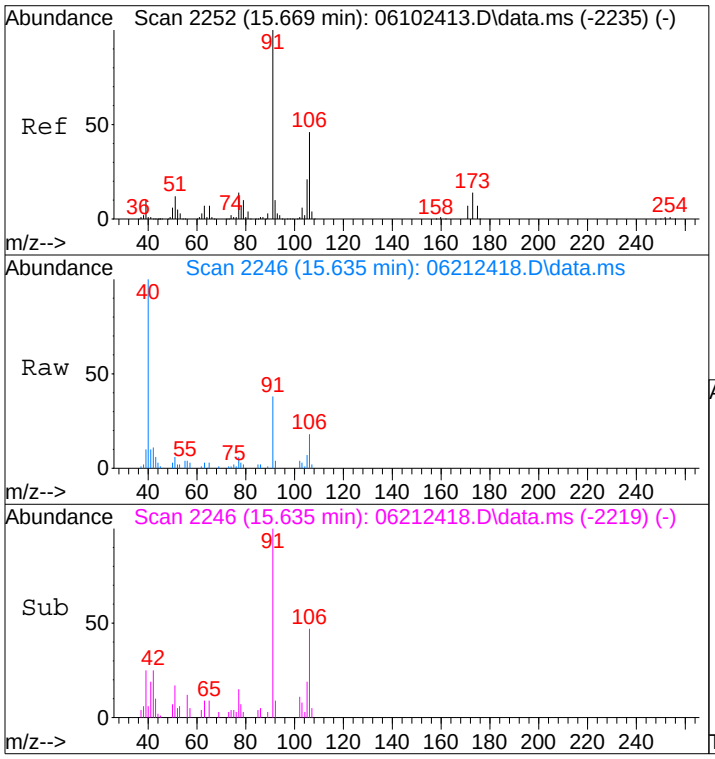


#66
Ethylbenzene
Concen: 0.05 ng
RT: 15.41 min Scan# 2206
Delta R.T. -0.023 min
Lab File: 06212418.D
Acq: 22 Jun 2024 8:43

Tgt Ion: 91 Resp: 4544

Ion	Ratio	Lower	Upper
91	100		
106	28.4	10.7	50.7

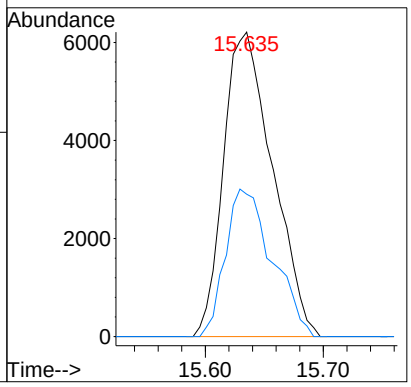


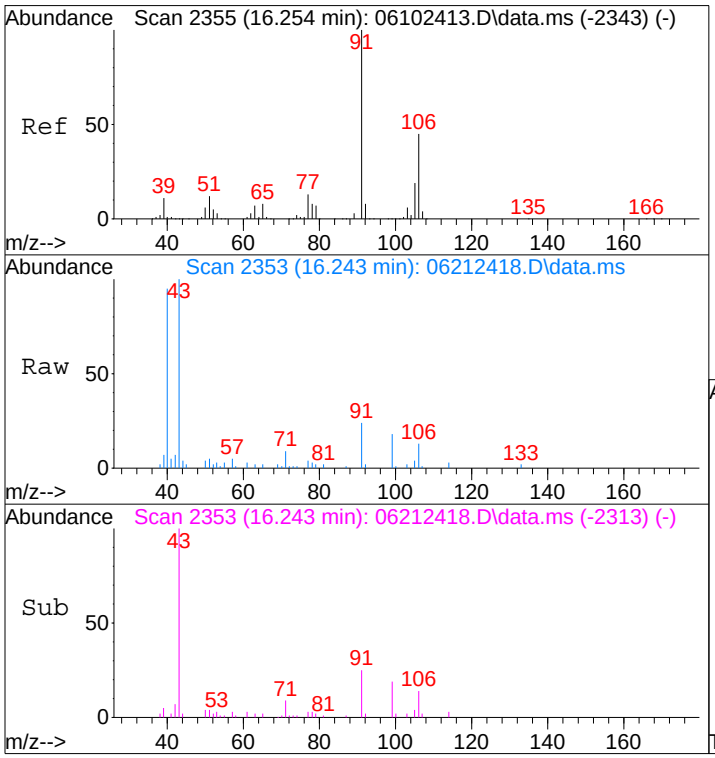


#67
m- & p-Xylenes
Concen: 0.26 ng
RT: 15.63 min Scan# 2246
Delta R.T. -0.045 min
Lab File: 06212418.D
Acq: 22 Jun 2024 8:43

Tgt Ion: 91 Resp: 17919

Ion	Ratio	Lower	Upper
91	100		
106	46.3	25.9	65.9

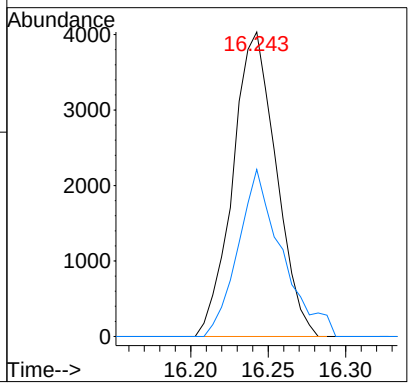


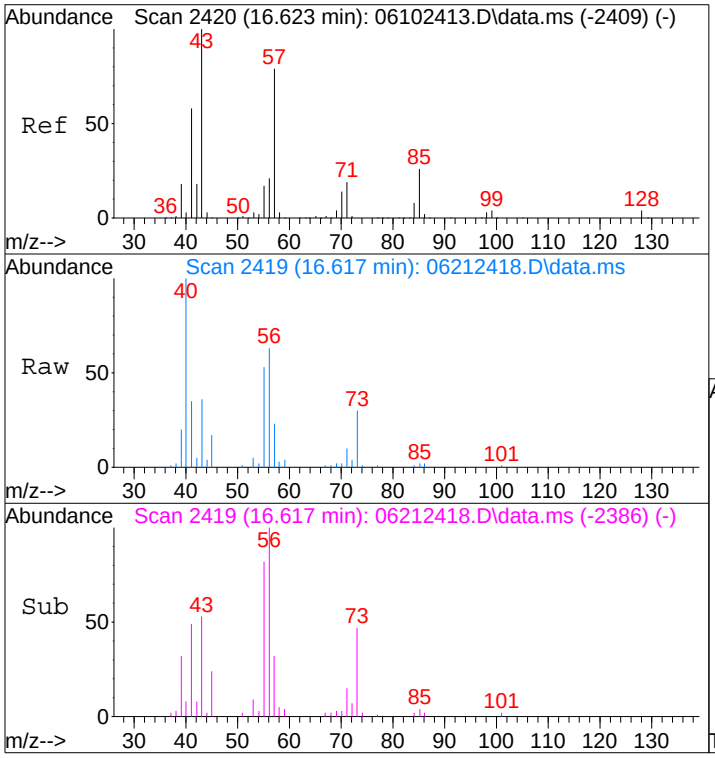


#70
o-Xylene
Concen: 0.11 ng
RT: 16.24 min Scan# 2353
Delta R.T. -0.023 min
Lab File: 06212418.D
Acq: 22 Jun 2024 8:43

Tgt Ion: 91 Resp: 7874

Ion	Ratio	Lower	Upper
91	100		
106	55.5	24.5	64.5

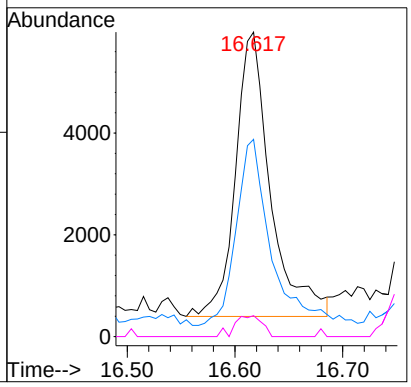


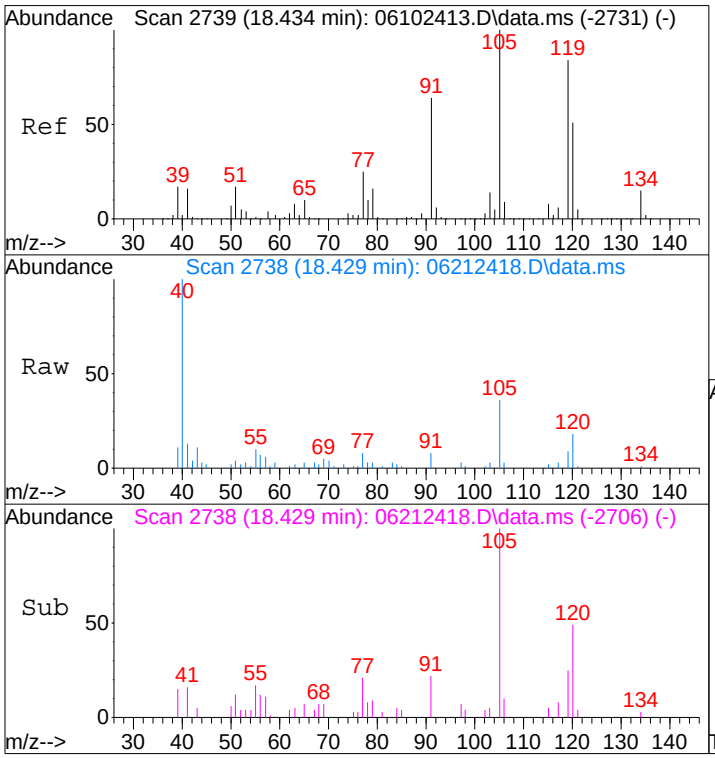


#71
n-Nonane
Concen: 0.31 ng
RT: 16.62 min Scan# 2419
Delta R.T. -0.011 min
Lab File: 06212418.D
Acq: 22 Jun 2024 8:43

Tgt Ion: 43 Resp: 12606

Ion	Ratio	Lower	Upper
43	100		
57	65.6	58.2	98.2
85	5.8	5.9	45.9#

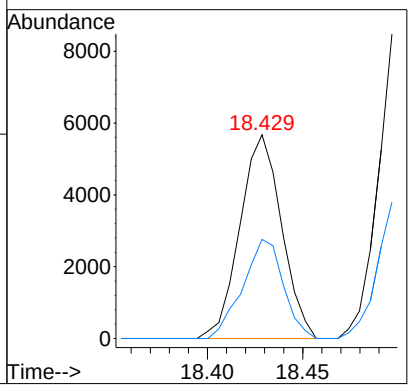


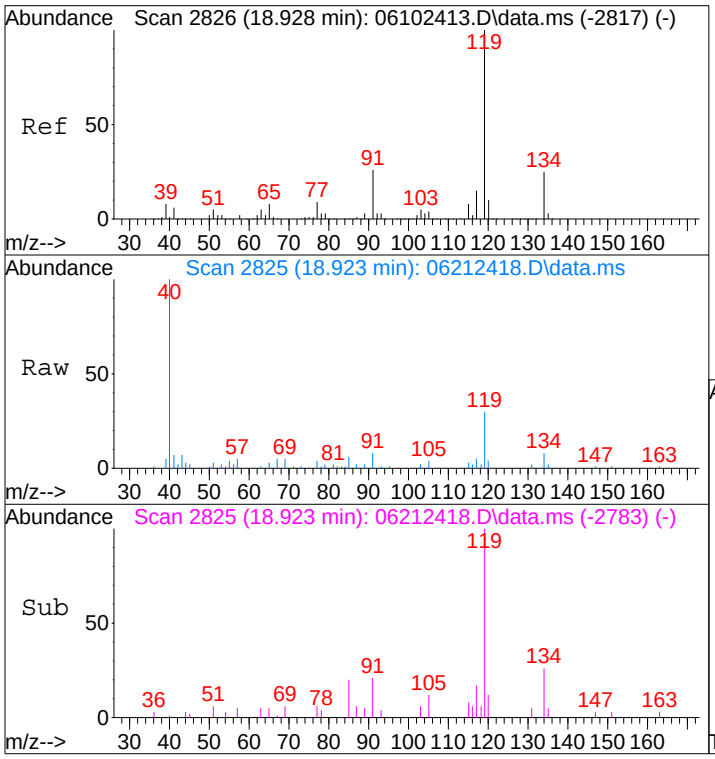


#82
1,2,4-Trimethylbenzene
Concen: 0.11 ng
RT: 18.43 min Scan# 2738
Delta R.T. -0.017 min
Lab File: 06212418.D
Acq: 22 Jun 2024 8:43

Tgt Ion:105 Resp: 8605

Ion	Ratio	Lower	Upper
105	100		
120	47.3	31.9	71.9

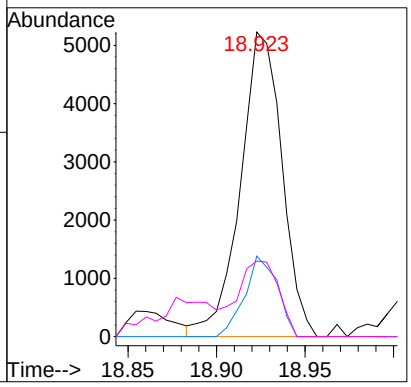




#88
4-Isopropyltoluene (p-Cymene)
Concen: 0.10 ng
RT: 18.92 min Scan# 2825
Delta R.T. -0.011 min
Lab File: 06212418.D
Acq: 22 Jun 2024 8:43

Tgt Ion:119 Resp: 8535

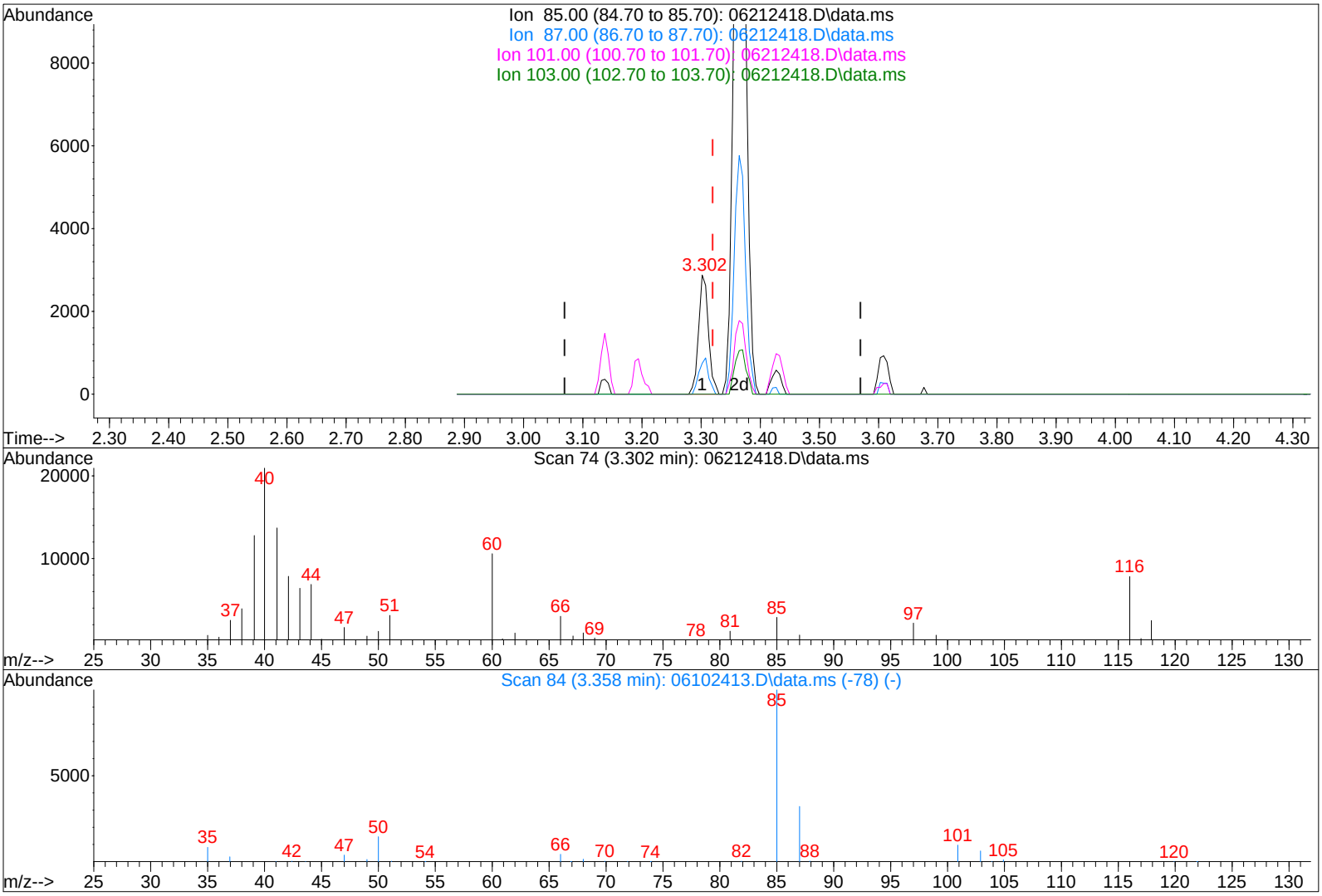
Ion	Ratio	Lower	Upper
119	100		
134	20.8	4.9	44.9
91	24.7	5.8	45.8



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\21\06212418.D Vial: 8
Acq On : 22 Jun 2024 8:43 Operator: SC
Sample : P2402249-060 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 24 08:55:42 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06212418.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.302min (-0.018) 0.08ng

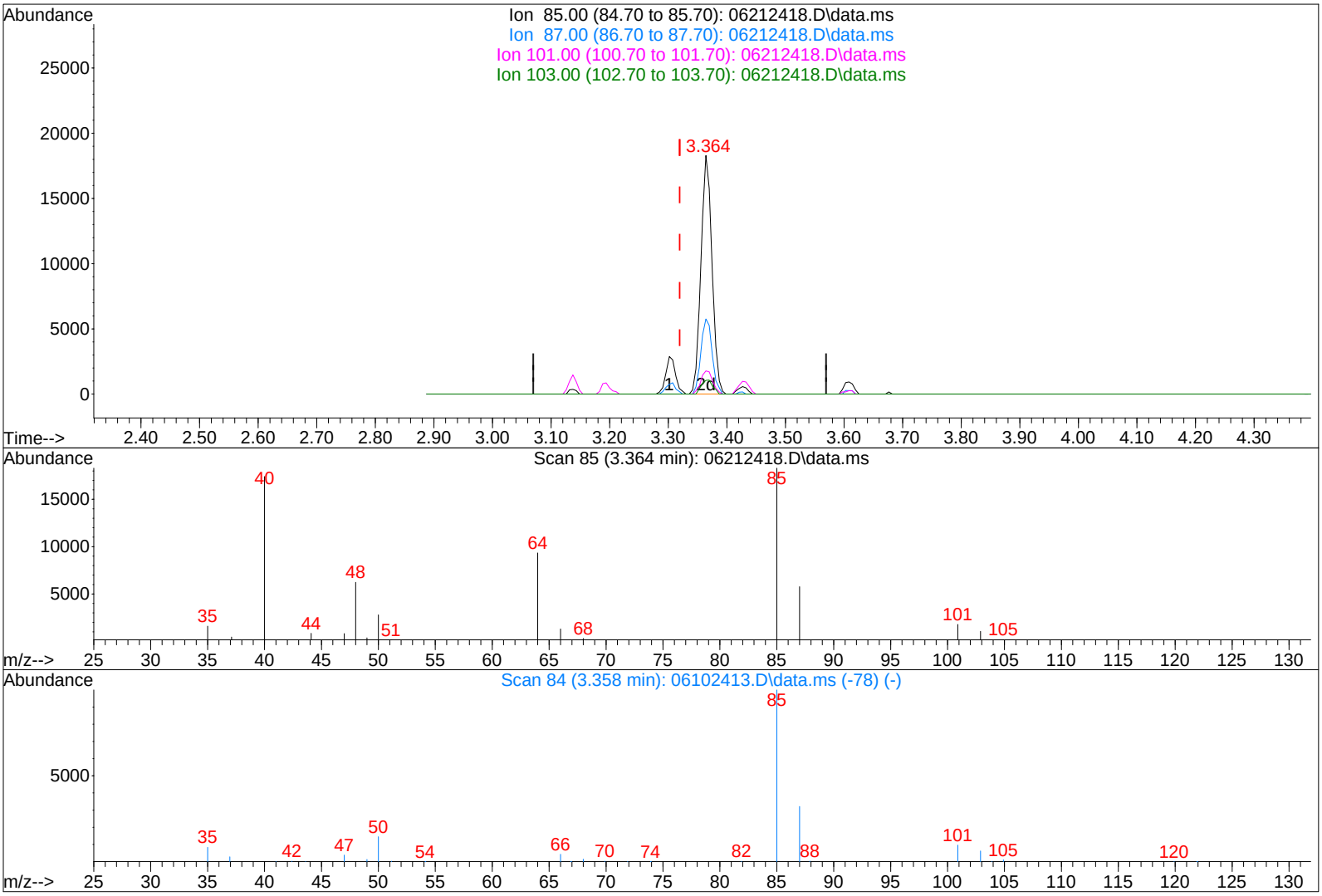
response 3335

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	29.81
101.00	9.80	0.00
103.00	6.30	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\21\06212418.D Vial: 8
Acq On : 22 Jun 2024 8:43 Operator: SC
Sample : P2402249-060 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 24 08:55:42 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06212418.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.364min (+0.045) 0.56ng m

response 23964

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	32.00
101.00	9.80	10.55
103.00	6.30	5.52

WP

MJ 6/28/24

CG 6/29/24

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212418.D Vial: 8
Acq On : 22 Jun 2024 8:43 Operator: SC
Sample : P2402249-060 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 16:42:49 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

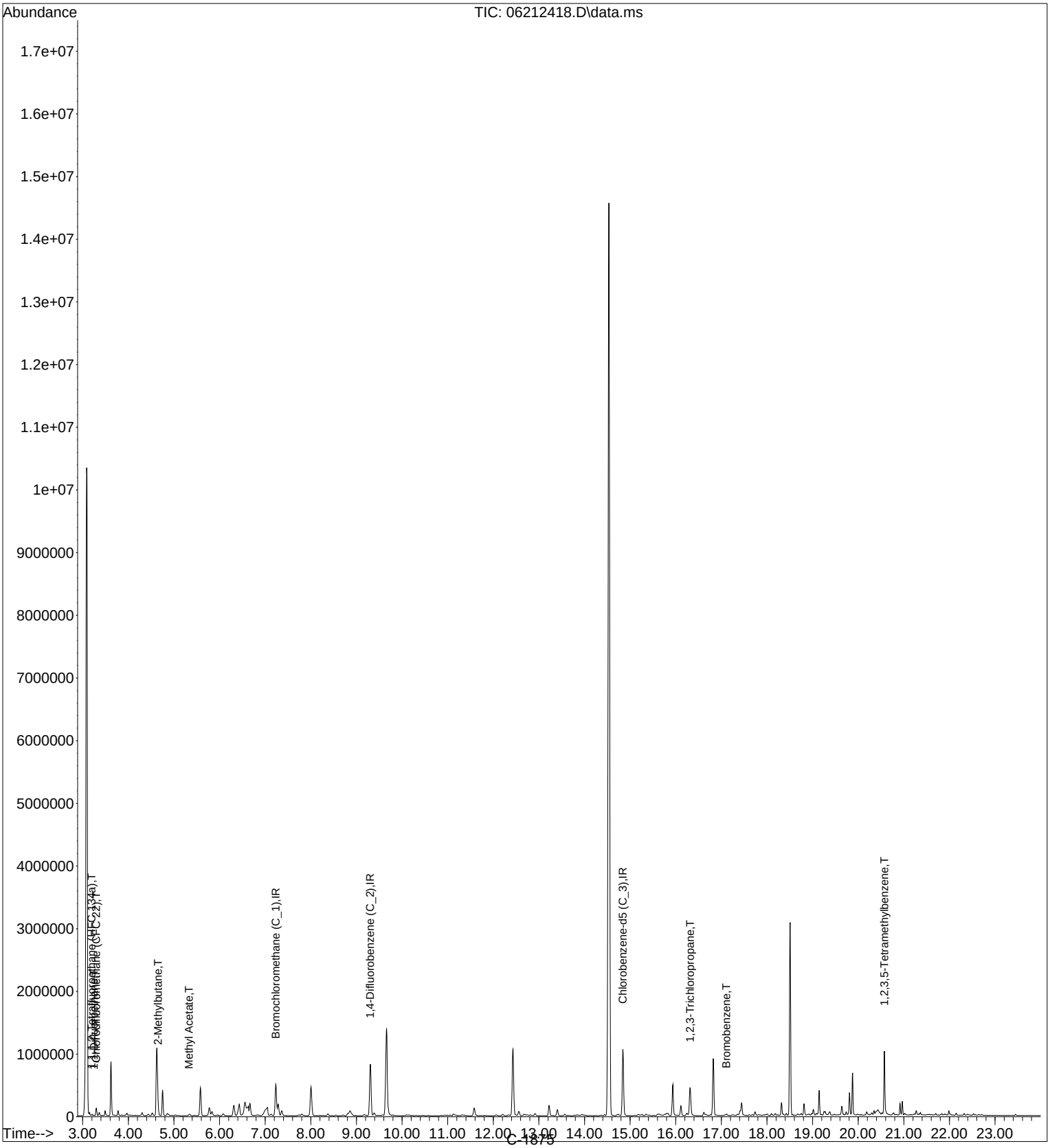
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	181908	12.500	ng		-0.02
16) 1,4-Difluorobenzene (C 2)	9.30	114	796927	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	181779	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	3.14	85	325	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.19	83	2354	0.126	ng	#	1
4) 1,1-Difluoroethane	3.25	65	1786	0.112	ng		91
5) Chlorodifluoromethane ...	3.30	67	1083	0.175	ng	#	57
6) 1-Chloro-1,1-Difluoroe...	3.51	65	679	N.D.			
7) Dichlorofluoromethane ...	4.24	67	490	N.D.			
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	4.58	83	229	N.D.			
10) 2-Methylbutane	4.65	57	31304	1.443	ng	#	1
11) Methyl Acetate	5.33	43	17878	0.292	ng	#	51
12) 2-Methylpentane	6.48	71	275	N.D.			
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	8.99	84	979	N.D.			
17) 2,3-Dimethylpentane	9.51	56	589	N.D.			
18) Dibromomethane	9.80	174	197	N.D.			
20) Methyl Cyclohexane	11.40	55	1179	N.D.			
21) 1,3-Dichloropropane	12.55	76	111	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	15.19	91	939	N.D.			
24) 1,2,3-Trichloropropane	16.32	75	25204	1.039	ng	#	46
25) Bromobenzene	17.11	77	9528	0.335	ng	#	15
26) 2-Chlorotoluene	17.60	91	1144	N.D.			
27) 4-Chlorotoluene	17.68	91	4561	N.D.			
28) Indane	19.12	117	1529	N.D.			
29) Indene	19.20	115	413	N.D.			
30) 1,2,4,5-Tetramethylben...	20.18	119	1066	N.D.			
31) 1,2,3,4-Tetramethylben...	20.22	119	3562	N.D.			
32) 1,2,3,5-Tetramethylben...	20.58	119	6005	0.101	ng		90
33) 1,2,3-Trichlorobenzene	21.27	180	152	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212418.D Vial: 8
Acq On : 22 Jun 2024 8:43 Operator: SC
Sample : P2402249-060 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 16:42:49 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



C-1875

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\21\
Data File : 06212418.D
Acq On : 22 Jun 2024 8:43
Operator : SC
Sample : P2402249-060 (400mL)
Misc : S37-06062402
ALS Vial : 8 Sample Multiplier: 1

MJ 6/28/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06212418.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.086	20	36	45	rBV	10336633	22333992	100.00%	54.720%
2	3.149	45	47	52	rVV	47835	51744	0.23%	0.127%
3	3.205	52	57	60	rVB3	18785	25179	0.11%	0.062%
4	3.296	68	73	79	rBV3	115466	184930	0.83%	0.453%
5	3.364	79	85	92	rVB2	49431	82377	0.37%	0.202%
6	3.489	103	107	116	rVB2	73464	108168	0.48%	0.265%
7	3.620	123	130	152	rBV	857160	1305911	5.85%	3.200%
8	3.773	152	157	166	rVB	74176	106221	0.48%	0.260%
9	3.966	187	191	196	rVB	33190	49761	0.22%	0.122%
10	4.051	204	206	214	rVB2	7998	11813	0.05%	0.029%
11	4.301	243	250	259	rVB	45400	87808	0.39%	0.215%
12	4.437	266	274	283	rBV2	20170	43439	0.19%	0.106%
13	4.523	283	289	296	rVV	41670	77973	0.35%	0.191%
14	4.625	299	307	322	rVV	1078548	2405105	10.77%	5.893%
15	4.750	322	329	341	rVV	406309	663224	2.97%	1.625%
16	4.852	341	347	359	rVB4	34317	85265	0.38%	0.209%
17	5.034	375	379	384	rVB	10289	14302	0.06%	0.035%
18	5.346	424	434	442	rBV6	22806	60581	0.27%	0.148%
19	5.443	445	451	458	rBV5	7250	13042	0.06%	0.032%
20	5.579	467	475	484	rBV2	442674	875905	3.92%	2.146%
21	5.772	500	509	516	rBV	123632	297330	1.33%	0.728%
22	5.834	516	520	532	rVB	62548	128795	0.58%	0.316%
23	5.942	533	539	543	rVV4	8496	17182	0.08%	0.042%
24	5.971	543	544	553	rVB3	8207	11394	0.05%	0.028%
25	6.078	555	563	571	rBV2	30914	72619	0.33%	0.178%
26	6.311	594	604	613	rBV	167905	412457	1.85%	1.011%
27	6.431	613	625	632	rBV	175519	457634	2.05%	1.121%
28	6.555	632	647	655	rBV2	207313	720811	3.23%	1.766%
29	6.663	662	666	679	rVB	191878	413845	1.85%	1.014%
30	6.811	686	692	693	rBV3	7825	10533	0.05%	0.026%
31	7.049	709	734	742	rBV	132432	597900	2.68%	1.465%
32	7.123	742	747	757	rVB2	20287	48499	0.22%	0.119%
33	7.231	757	766	772	rBV	496507	1129608	5.06%	2.768%
34	7.282	772	775	783	rVV	182570	364754	1.63%	0.894%
35	7.362	783	789	800	rVB2	75704	165454	0.74%	0.405%
36	7.725	846	853	854	rBV2	10100	17454	0.08%	0.043%
37	7.805	862	867	878	rVB	23104	53734	0.24%	0.132%
38	8.003	889	902	917	rBV	459623	1101891	4.93%	2.700%
39	8.208	931	938	944	rBV2	6264	12586	0.06%	0.031%
40	8.372	957	967	976	rBV	29670	74081	0.33%	0.182%

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\21\
Data File : 06212418.D
Acq On : 22 Jun 2024 8:43
Operator : SC
Sample : P2402249-060 (400mL)
Misc : S37-06062402
ALS Vial : 8 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

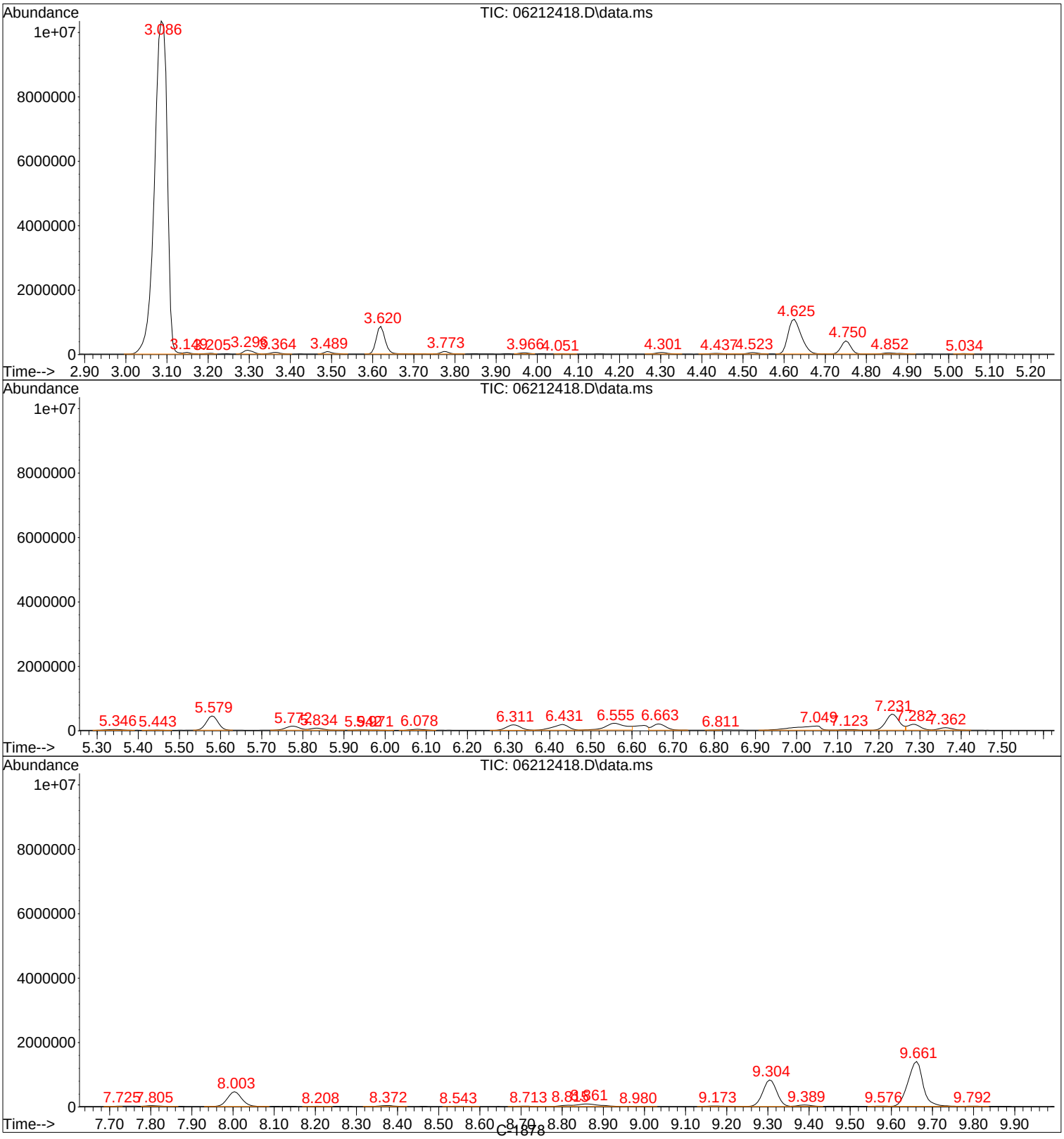
41	8.543	991	997	1007	rVB3	9369	22422	0.10%	0.055%
42	8.713	1019	1027	1034	rVB4	12930	32861	0.15%	0.081%
43	8.815	1034	1045	1047	rBV2	39308	88271	0.40%	0.216%
44	8.861	1047	1053	1069	rVV6	79966	284970	1.28%	0.698%
45	8.980	1069	1074	1083	rVB4	6184	18044	0.08%	0.044%
46	9.173	1100	1108	1121	rBV7	16000	54594	0.24%	0.134%
47	9.304	1121	1131	1140	rBV	822124	1936699	8.67%	4.745%
48	9.389	1140	1146	1154	rVB	41409	93221	0.42%	0.228%
49	9.576	1173	1179	1183	rBV2	8080	16070	0.07%	0.039%
50	9.661	1183	1194	1215	rVV	1391617	3554656	15.92%	8.709%
51	9.792	1215	1217	1225	rVB4	8861	18148	0.08%	0.044%

Sum of corrected areas: 40815257

Data Path : I:\MS09\DATA\2024 06\21\
Data File : 06212418.D
Acq On : 22 Jun 2024 8:43
Operator : SC
Sample : P2402249-060 (400mL)
Misc : S37-06062402
ALS Vial : 8 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\21\\
Data File : 06212418.D
Acq On : 22 Jun 2024 8:433
Operator : SCC
Sample : P2402249-060 (400mL))
Misc : S37-060624022
ALS Vial : 8 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222408.D Vial: 11
Acq On : 22 Jun 2024 17:00 Operator: MC/MJ
Sample : P2402249-061 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/29/24

Quant Time: Jun 29 10:31:07 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	166474	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	737169	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	179826	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	370758	12.531	ng		0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.24%				
57) Toluene-d8 (SS2)	12.43	98	833468	12.112	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.88%				
73) Bromofluorobenzene (SS3)	16.83	174	320110	12.882	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.04%				
Target Compounds							Qvalue
2) Propene	0.00	42	0	N.D. d			
3) Dichlorodifluoromethan...	3.37	85	21050m	0.537	ng		
4) Chloromethane	3.50	50	1774	0.066	ng		91
5) 1,2-Dichloro-1,1,2,2-t...	3.61	135	460	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	4.02	94	178	N.D.			
9) Chloroethane	4.15	64	179	N.D.			
10) Ethanol	4.36	45	217	N.D.			
11) Acetonitrile	0.00	41	0	N.D. d			
12) Acrolein	4.53	56	3800	0.317	ng		96
13) Acetone	4.63	58	32755	2.533	ng	#	82
14) Trichlorofluoromethane	4.75	101	267856	6.759	ng		99
15) 2-Propanol (Isopropanol)	0.00	45	0	N.D. d			
16) Acrylonitrile	5.04	53	308	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.33	59	858	N.D.			
19) Methylene Chloride	5.35	84	1640	0.090	ng		93
20) 3-Chloro-1-propene (Al...	5.47	41	224	N.D.			
21) Trichlorotrifluoroethane	5.58	151	155402	9.269	ng		99
22) Carbon Disulfide	5.60	76	927332	15.718	ng		100
23) trans-1,2-Dichloroethene	6.14	61	130	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	6.42	86	2734	0.916	ng	#	14
27) 2-Butanone (MEK)	6.66	72	4314	0.422	ng	#	85
28) cis-1,2-Dichloroethene	7.08	61	596	N.D.			
29) Diisopropyl Ether	7.29	87	285	N.D.			
30) Ethyl Acetate	7.29	61	25938	4.151	ng		97
31) n-Hexane	7.30	57	2093	0.076	ng	#	83
32) Chloroform	7.35	83	56384	1.729	ng		99
34) Tetrahydrofuran (THF)	7.78	72	253	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.12	62	257	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	9.60	61	10178	No Calib		#	
40) 1-Butanol	8.80	56	4355	No Calib		#	
41) Benzene	8.90	78	6512	0.096	ng		99
42) Carbon Tetrachloride	0.00	117	0	N.D.			
43) Cyclohexane	9.22	84	365	N.D.			
44) tert-Amyl Methyl Ether	9.61	73	614	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.07	83	1218	N.D.			
47) Trichloroethene	10.14	130	2031	0.102	ng		95
48) 1,4-Dioxane	0.00	88	0	N.D. d			
49) 2,2,4-Trimethylpentane...	10.23	57	558	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222408.D Vial: 11
Acq On : 22 Jun 2024 17:00 Operator: MC/MJ
Sample : P2402249-061 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:31:07 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

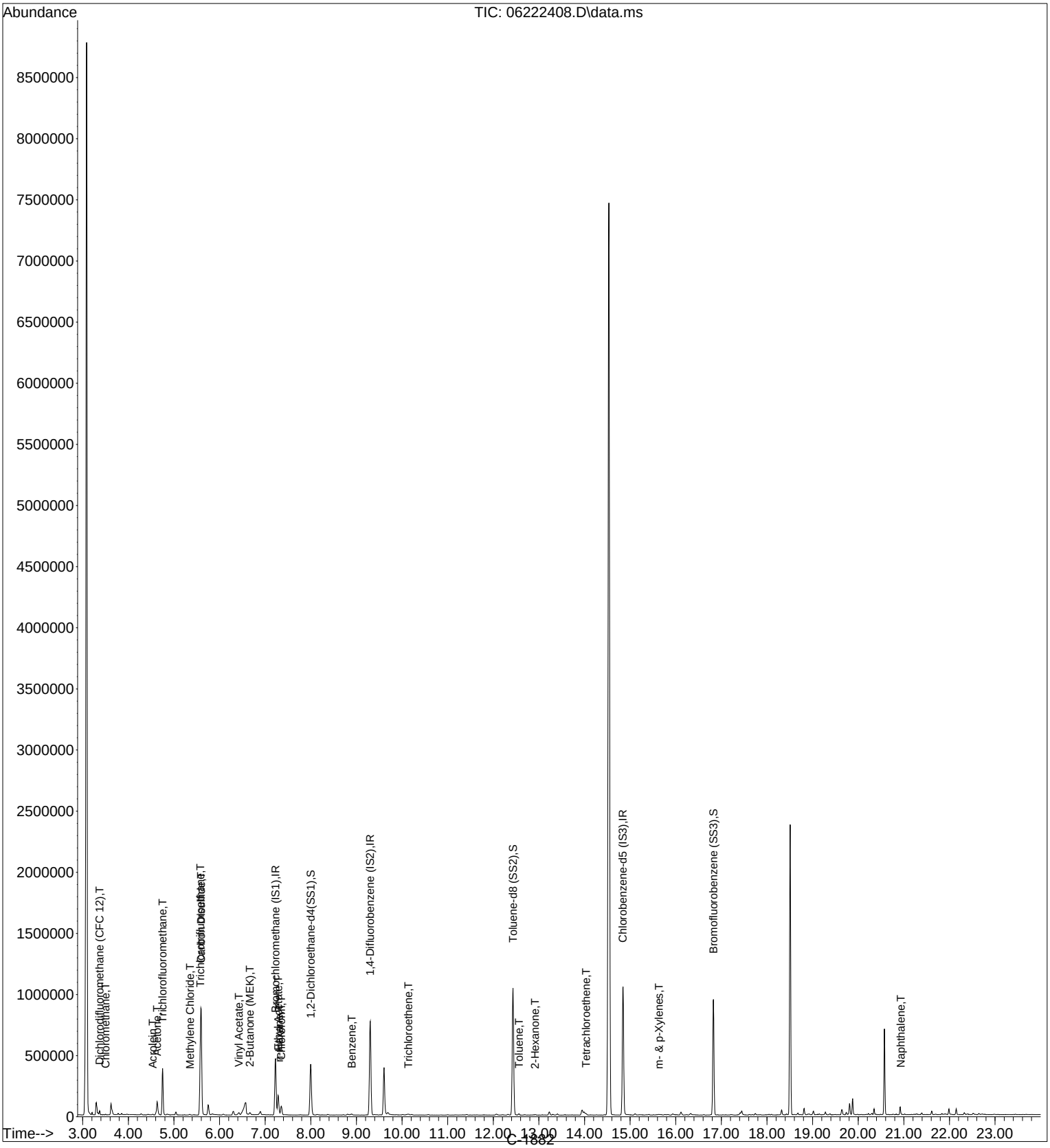
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	10.58	71	687	N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	11.33	58	392	N.D.	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	12.18	97	136	N.D.	
58) Toluene	12.56	91	9588	0.133 ng	97
59) 2-Hexanone	12.91	43	3587	0.080 ng	81
60) Dibromochloromethane	13.07	129	537	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	13.78	43	643	N.D.	
63) n-Octane	13.93	57	670	N.D.	
64) Tetrachloroethene	14.03	166	1525	0.062 ng	95
65) Chlorobenzene	14.90	112	879	N.D.	
66) Ethylbenzene	15.41	91	2535	N.D.	
67) m- & p-Xylenes	15.63	91	4504	0.065 ng	99
68) Bromoform	15.67	173	892	N.D.	
69) Styrene	16.10	104	1361	N.D.	
70) o-Xylene	16.24	91	2149	N.D.	
71) n-Nonane	16.61	43	1980	N.D.	
72) 1,1,2,2-Tetrachloroethane	16.21	83	522	N.D.	
74) Cumene	17.04	105	1380	N.D.	
75) alpha-Pinene	0.00	93	0	N.D.	
76) n-Propylbenzene	17.68	91	2412	N.D.	
77) 3-Ethyltoluene	17.04	105	1380	No Calib	
78) 4-Ethyltoluene	17.87	105	1689	N.D.	
79) 1,3,5-Trimethylbenzene	17.96	105	1175	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.04	105	1380	No Calib	
82) 1,2,4-Trimethylbenzene	18.43	105	3140	N.D.	
83) n-Decane	17.09	58	232	No Calib #	
84) Benzyl Chloride	18.56	91	509	N.D.	
85) 1,3-Dichlorobenzene	18.58	146	1021	N.D.	
86) 1,4-Dichlorobenzene	18.66	146	1020	N.D.	
87) sec-Butylbenzene	18.74	105	1639	N.D.	
88) 4-Isopropyltoluene (p-...	18.93	119	3007	N.D.	
89) 1,2,3-Trimethylbenzene	17.04	105	1380	No Calib	
90) 1,2-Dichlorobenzene	19.04	146	818	N.D.	
91) d-Limonene	19.01	68	102	N.D.	
92) 1,2-Dibromo-3-Chloropr...	19.51	157	236	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	1507	N.D.	
95) Naphthalene	20.94	128	5188	0.054 ng	98
96) n-Dodecane	0.00	58	0	N.D.	
97) Hexachlorobutadiene	21.30	225	974	N.D.	
98) Cyclohexanone	15.41	55	1279	No Calib #	
99) tert-Butylbenzene	18.43	119	1549	N.D.	
100) n-Butylbenzene	19.39	91	2376	N.D.	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222408.D Vial: 11
Acq On : 22 Jun 2024 17:00 Operator: MC/MJ
Sample : P2402249-061 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:31:07 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT/LSC Reviewed)

MJ 6/29/24

Data File : I:\MS09\DATA\2024 06\22\06222408.D Vial: 11
Acq On : 22 Jun 2024 17:00 Operator: MC/MJ
Sample : P2402249-061 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:31:07 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

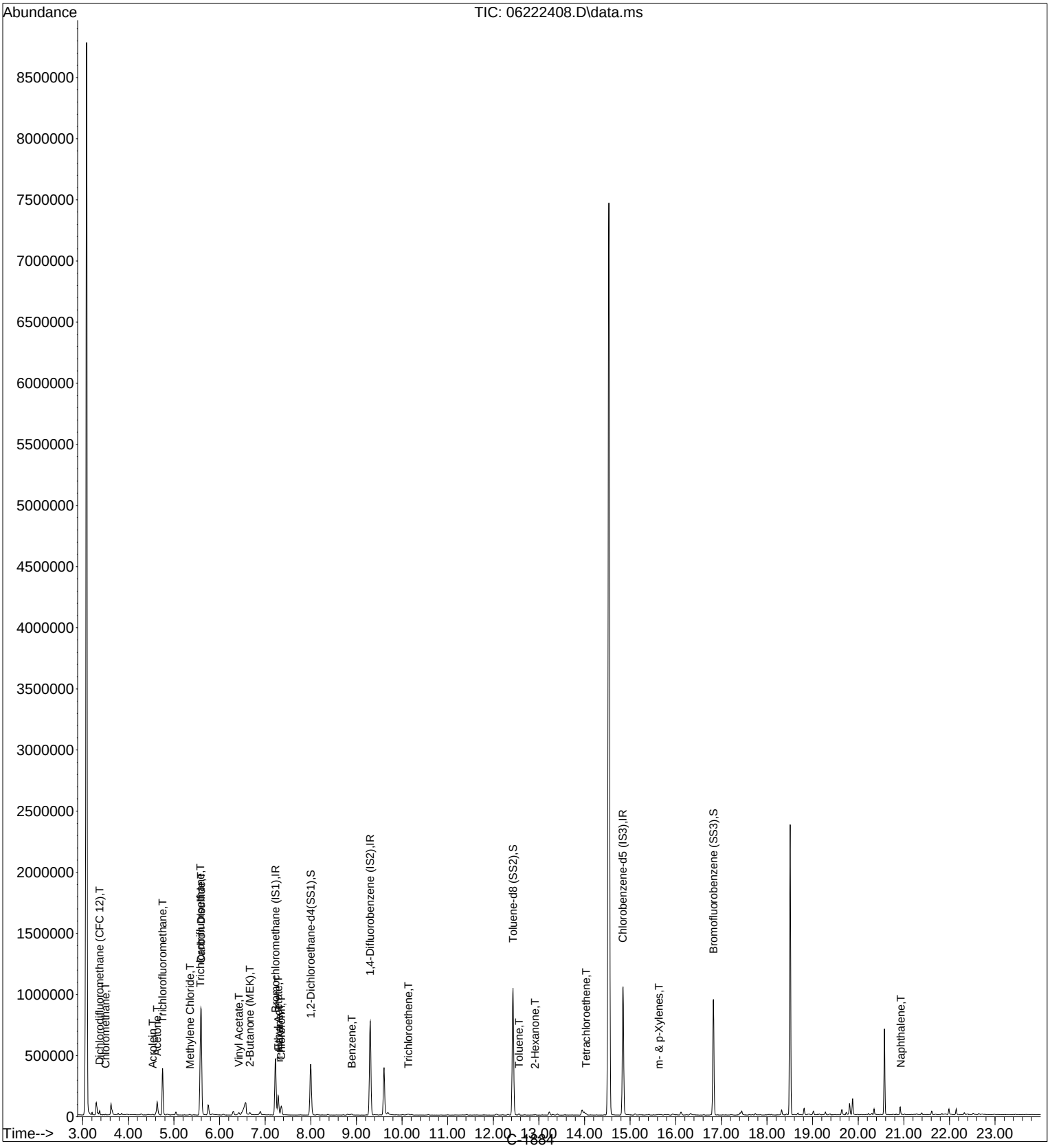
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	166474	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	737169	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	179826	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	370758	12.531	ng		0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.24%				
57) Toluene-d8 (SS2)	12.43	98	833468	12.112	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.88%				
73) Bromofluorobenzene (SS3)	16.83	174	320110	12.882	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.04%				
Target Compounds							Qvalue
3) Dichlorodifluoromethan...	3.37	85	21050m	0.537	ng		
4) Chloromethane	3.50	50	1774	0.066	ng		91
12) Acrolein	4.53	56	3800	0.317	ng		96
13) Acetone	4.63	58	32755	2.533	ng	#	82
14) Trichlorofluoromethane	4.75	101	267856	6.759	ng		99
19) Methylene Chloride	5.35	84	1640	0.090	ng		93
21) Trichlorotrifluoroethane	5.58	151	155402	9.269	ng		99
22) Carbon Disulfide	5.60	76	927332	15.718	ng		100
26) Vinyl Acetate	6.42	86	2734	0.916	ng	#	14
27) 2-Butanone (MEK)	6.66	72	4314	0.422	ng	#	85
30) Ethyl Acetate	7.29	61	25938	4.151	ng		97
31) n-Hexane	7.30	57	2093	0.076	ng	#	83
32) Chloroform	7.35	83	56384	1.729	ng		99
41) Benzene	8.90	78	6512	0.096	ng		99
47) Trichloroethene	10.14	130	2031	0.102	ng		95
58) Toluene	12.56	91	9588	0.133	ng		97
59) 2-Hexanone	12.91	43	3587	0.080	ng		81
64) Tetrachloroethene	14.03	166	1525	0.062	ng		95
67) m- & p-Xylenes	15.63	91	4504	0.065	ng		99
95) Naphthalene	20.94	128	5188	0.054	ng		98

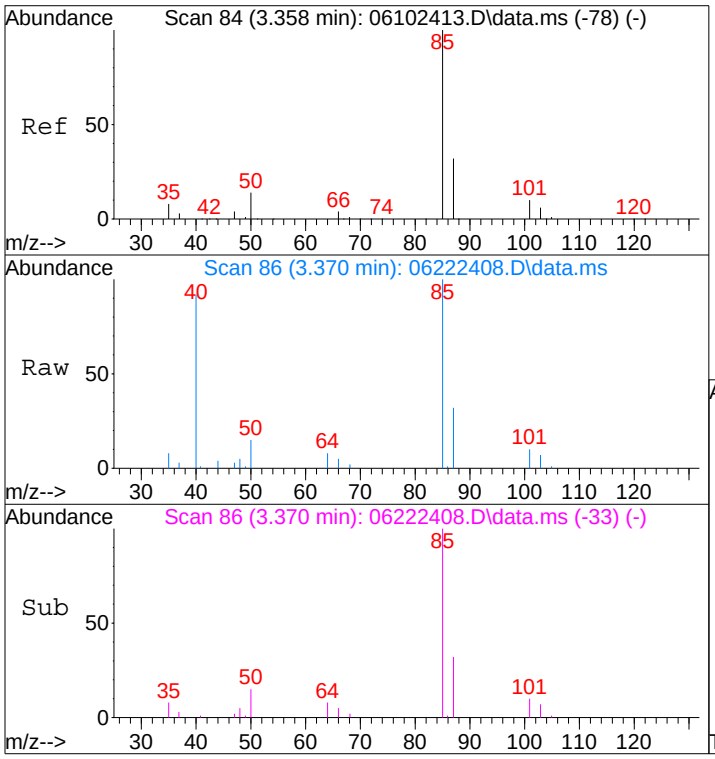
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222408.D Vial: 11
Acq On : 22 Jun 2024 17:00 Operator: MC/MJ
Sample : P2402249-061 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:31:07 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

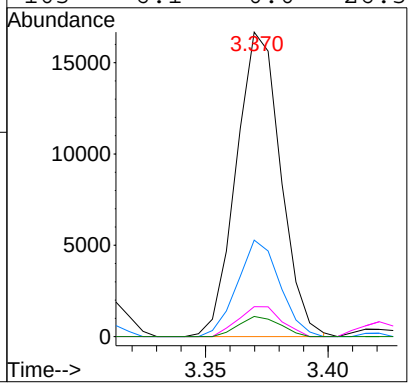


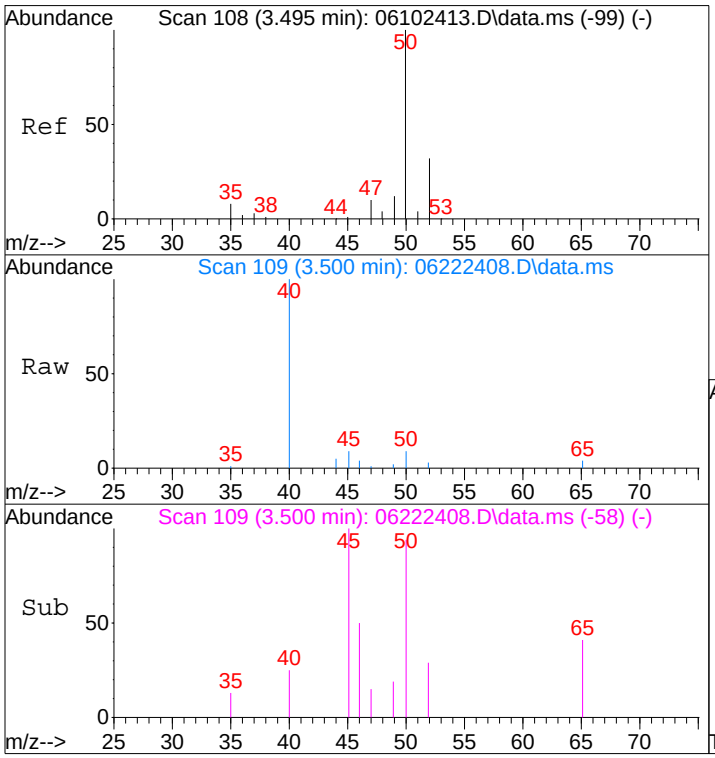


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.54 ng m
RT: 3.37 min Scan# 86
Delta R.T. 0.050 min
Lab File: 06222408.D
Acq: 22 Jun 2024 17:00

Tgt Ion: 85 Resp: 21050

Ion	Ratio	Lower	Upper
85	100		
87	30.4	12.2	52.2
101	9.6	0.0	29.8
103	6.1	0.0	26.3

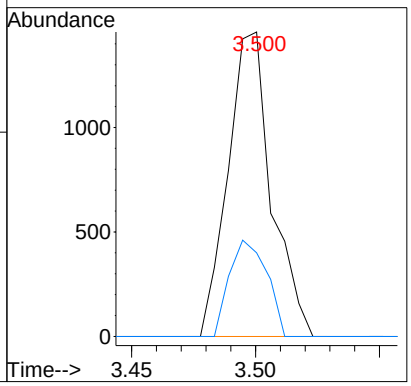


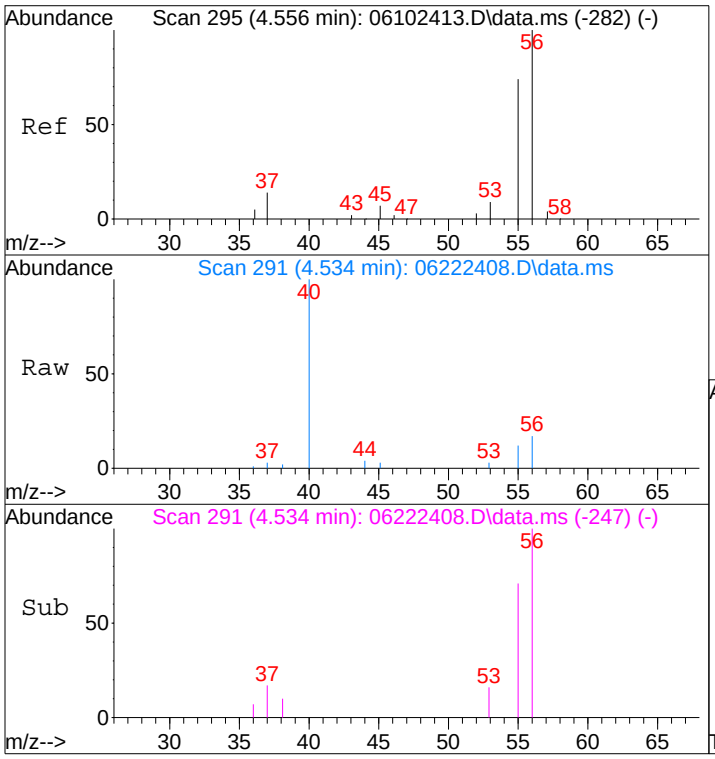


#4
Chloromethane
Concen: 0.07 ng
RT: 3.50 min Scan# 109
Delta R.T. 0.041 min
Lab File: 06222408.D
Acq: 22 Jun 2024 17:00

Tgt Ion: 50 Resp: 1774

Ion	Ratio	Lower	Upper
50	100		
52	27.3	12.4	52.4

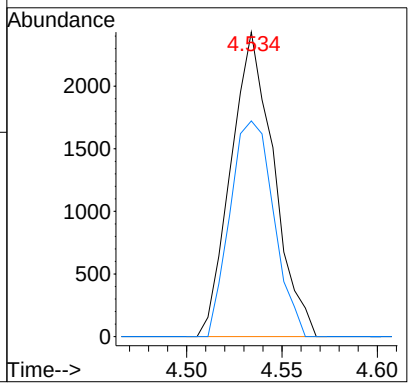


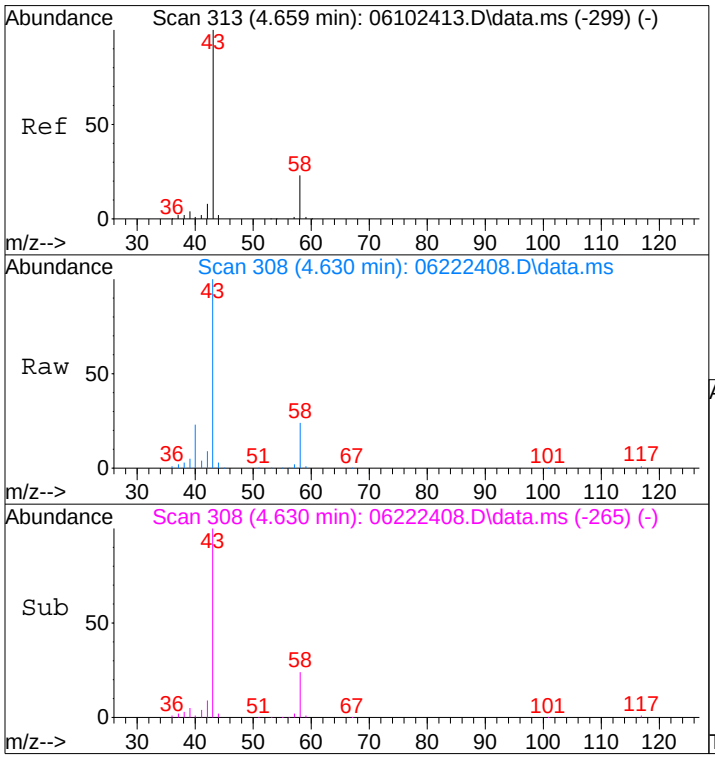


#12
Acrolein
Concen: 0.32 ng
RT: 4.53 min Scan# 291
Delta R.T. 0.002 min
Lab File: 06222408.D
Acq: 22 Jun 2024 17:00

Tgt Ion: 56 Resp: 3800

Ion	Ratio	Lower	Upper
56	100		
55	72.1	55.5	95.5

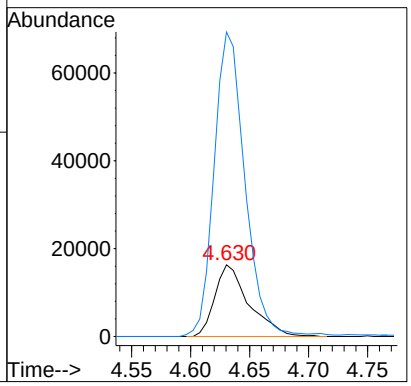


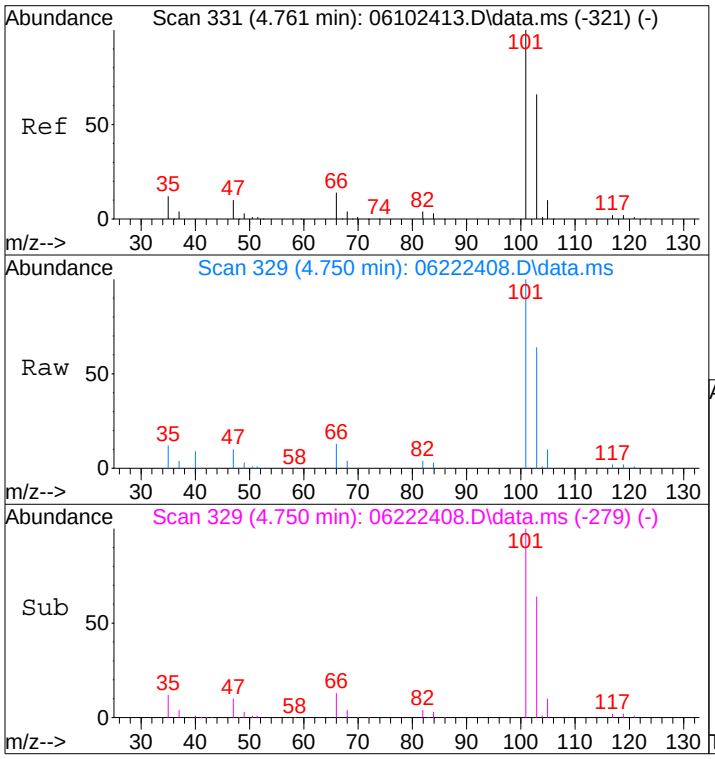


#13
Acetone
Concen: 2.53 ng
RT: 4.63 min Scan# 308
Delta R.T. -0.008 min
Lab File: 06222408.D
Acq: 22 Jun 2024 17:00

Tgt Ion: 58 Resp: 32755

Ion	Ratio	Lower	Upper
58	100		
43	385.1	400.7	460.7#

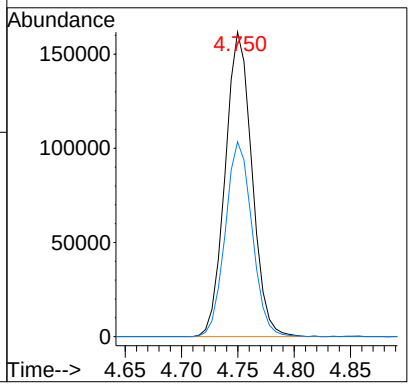


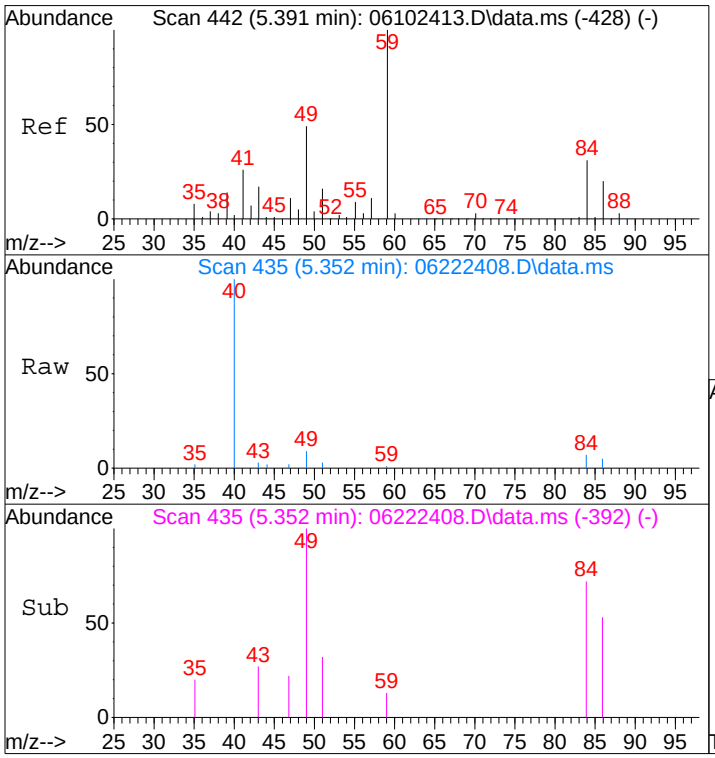


#14
Trichlorofluoromethane
Concen: 6.76 ng
RT: 4.75 min Scan# 329
Delta R.T. 0.033 min
Lab File: 06222408.D
Acq: 22 Jun 2024 17:00

Tgt Ion:101 Resp: 267856

Ion	Ratio	Lower	Upper
101	100		
103	64.1	44.9	84.9

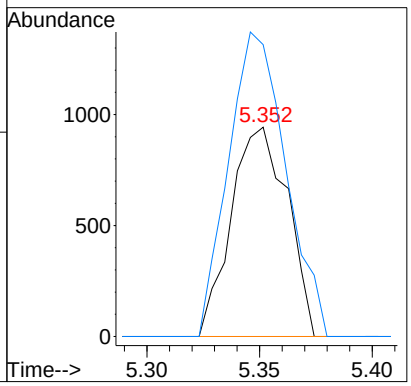


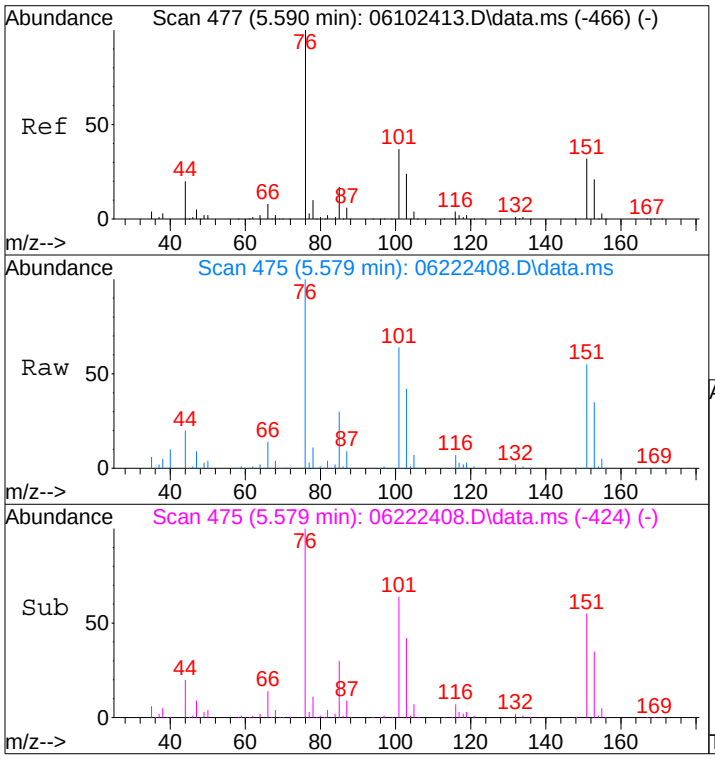


#19
Methylene Chloride
Concen: 0.09 ng
RT: 5.35 min Scan# 435
Delta R.T. -0.005 min
Lab File: 06222408.D
Acq: 22 Jun 2024 17:00

Tgt Ion: 84 Resp: 1640

Ion	Ratio	Lower	Upper
84	100		
49	148.5	132.9	182.9

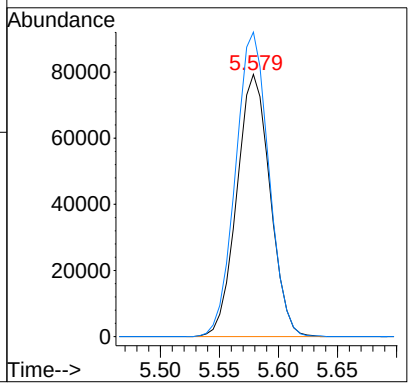


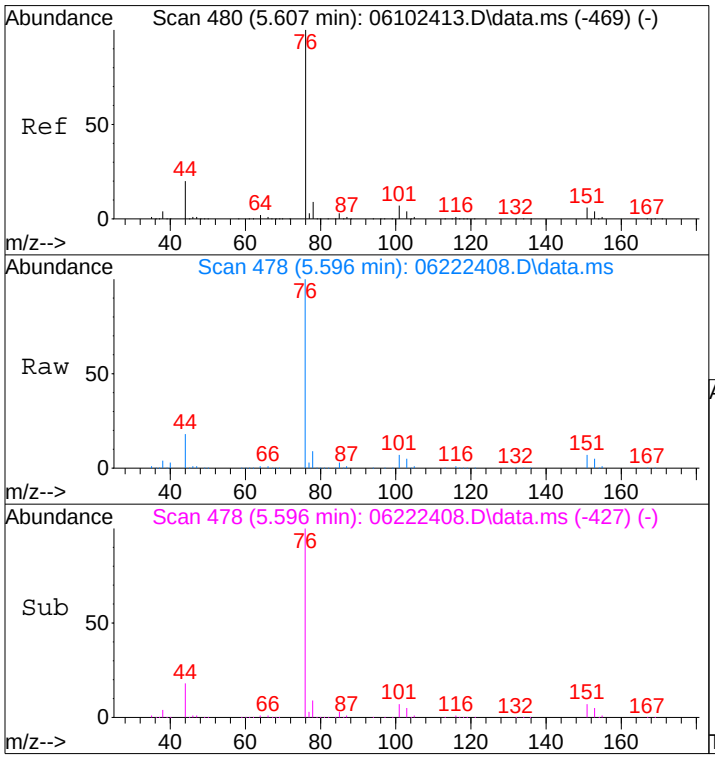


#21
Trichlorotrifluoroethane
Concen: 9.27 ng
RT: 5.58 min Scan# 475
Delta R.T. 0.037 min
Lab File: 06222408.D
Acq: 22 Jun 2024 17:00

Tgt Ion:151 Resp: 155402

Ion	Ratio	Lower	Upper
151	100		
101	116.3	95.0	135.0

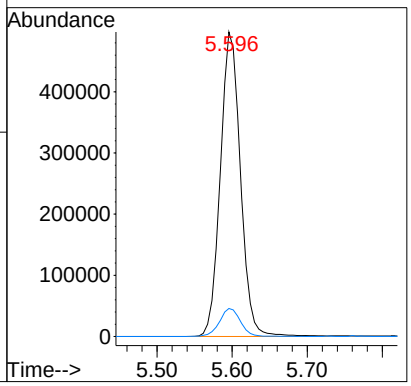


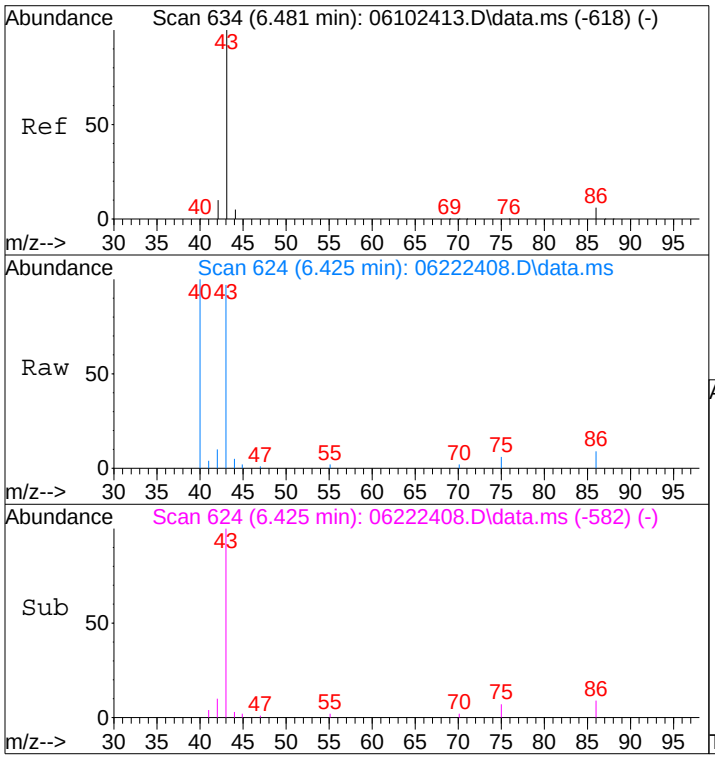


#22
Carbon Disulfide
Concen: 15.72 ng
RT: 5.60 min Scan# 478
Delta R.T. 0.037 min
Lab File: 06222408.D
Acq: 22 Jun 2024 17:00

Tgt Ion: 76 Resp: 927332

Ion	Ratio	Lower	Upper
76	100		
78	9.6	0.0	29.6

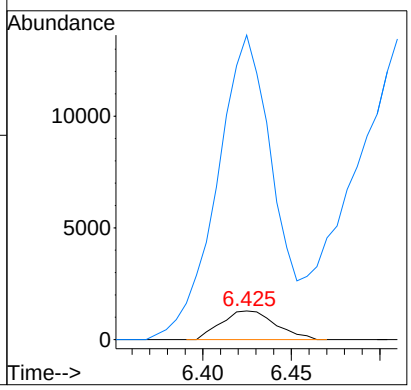


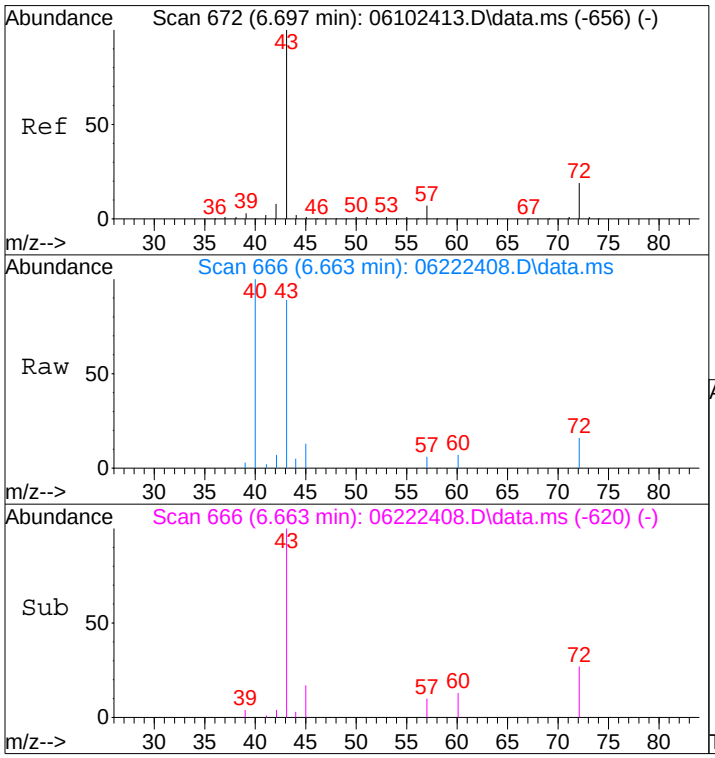


#26
Vinyl Acetate
Concen: 0.92 ng
RT: 6.42 min Scan# 624
Delta R.T. -0.009 min
Lab File: 06222408.D
Acq: 22 Jun 2024 17:00

Tgt Ion: 86 Resp: 2734

Ion	Ratio	Lower	Upper
86	100		
43	1128.4	1668.9	1708.9#

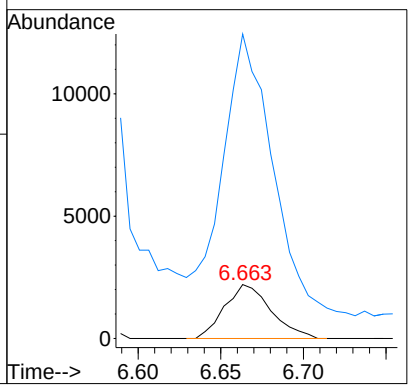


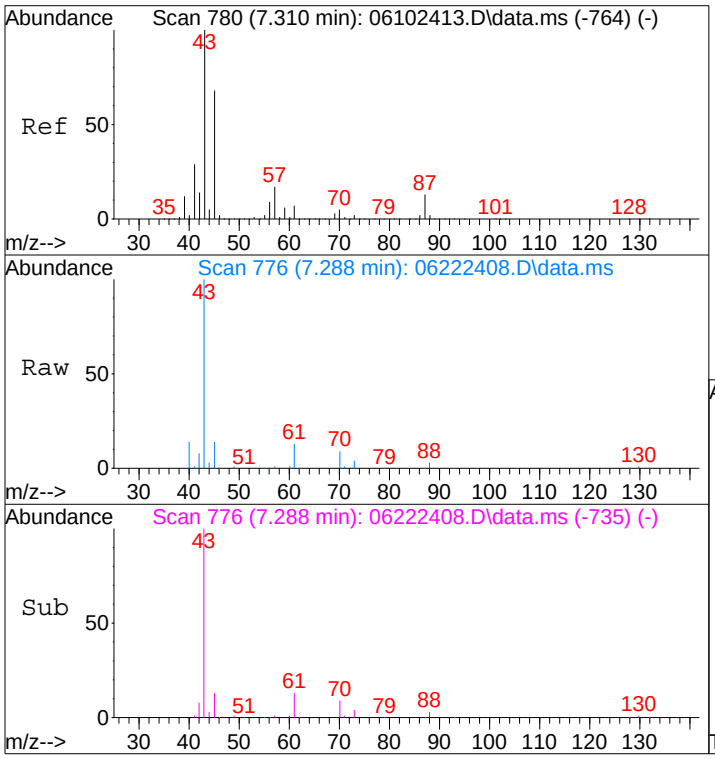


#27
2-Butanone (MEK)
Concen: 0.42 ng
RT: 6.66 min Scan# 666
Delta R.T. 0.010 min
Lab File: 06222408.D
Acq: 22 Jun 2024 17:00

Tgt Ion: 72 Resp: 4314

Ion	Ratio	Lower	Upper
72	100		
43	568.4	506.8	546.8#

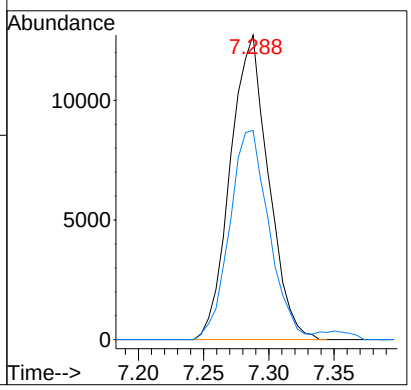


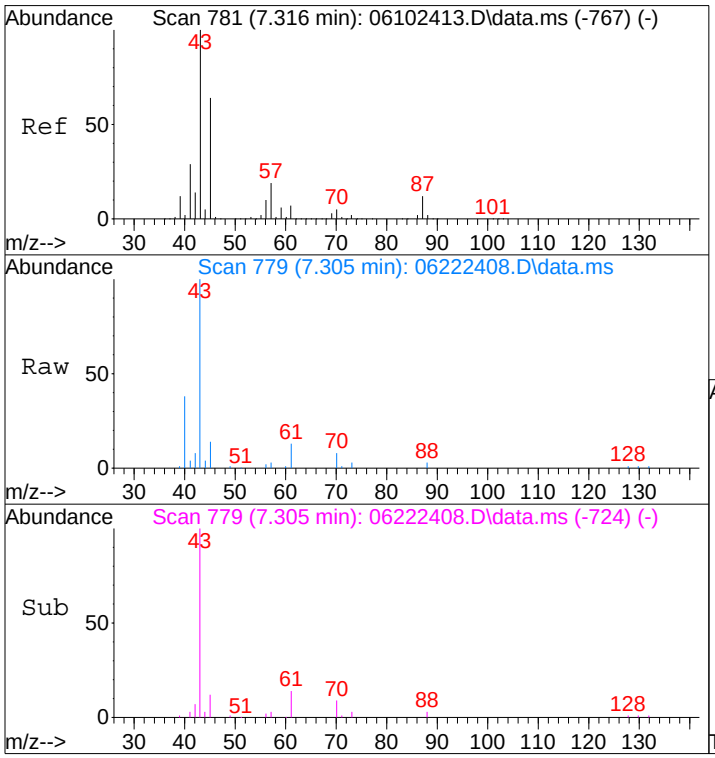


#30
Ethyl Acetate
Concen: 4.15 ng
RT: 7.29 min Scan# 776
Delta R.T. 0.034 min
Lab File: 06222408.D
Acq: 22 Jun 2024 17:00

Tgt Ion: 61 Resp: 25938

Ion	Ratio	Lower	Upper
61	100		
70	71.1	53.5	93.5

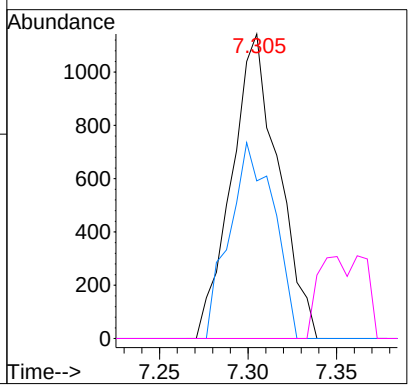


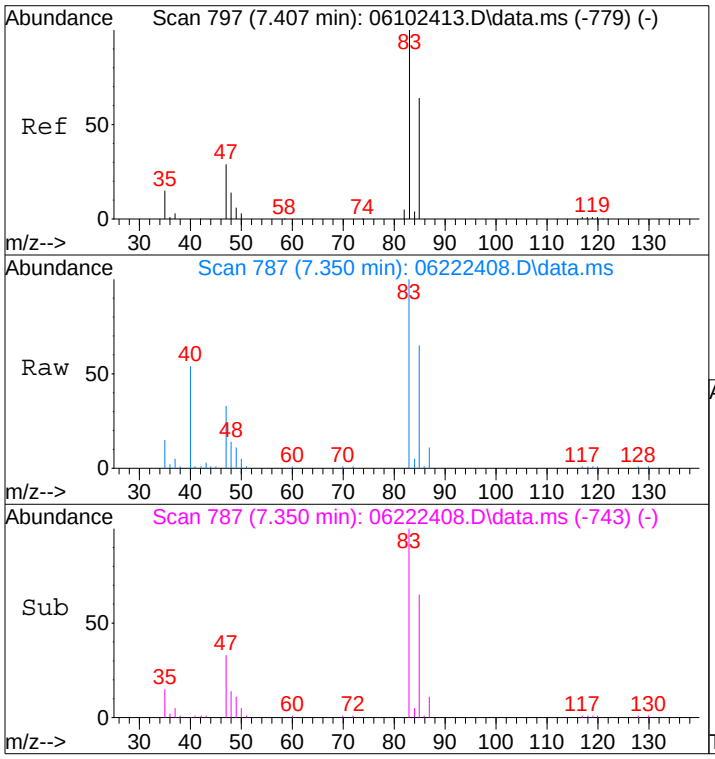


#31
n-Hexane
Concen: 0.08 ng
RT: 7.30 min Scan# 779
Delta R.T. 0.063 min
Lab File: 06222408.D
Acq: 22 Jun 2024 17:00

Tgt Ion: 57 Resp: 2093

Ion	Ratio	Lower	Upper
57	100		
56	61.2	42.5	63.7
86	27.6	9.5	14.3#

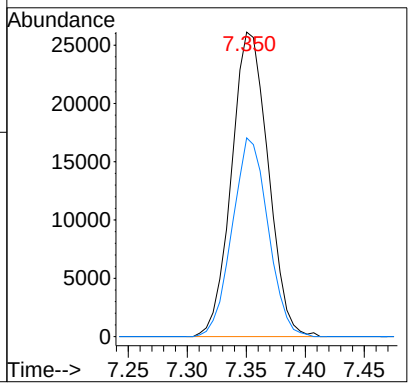


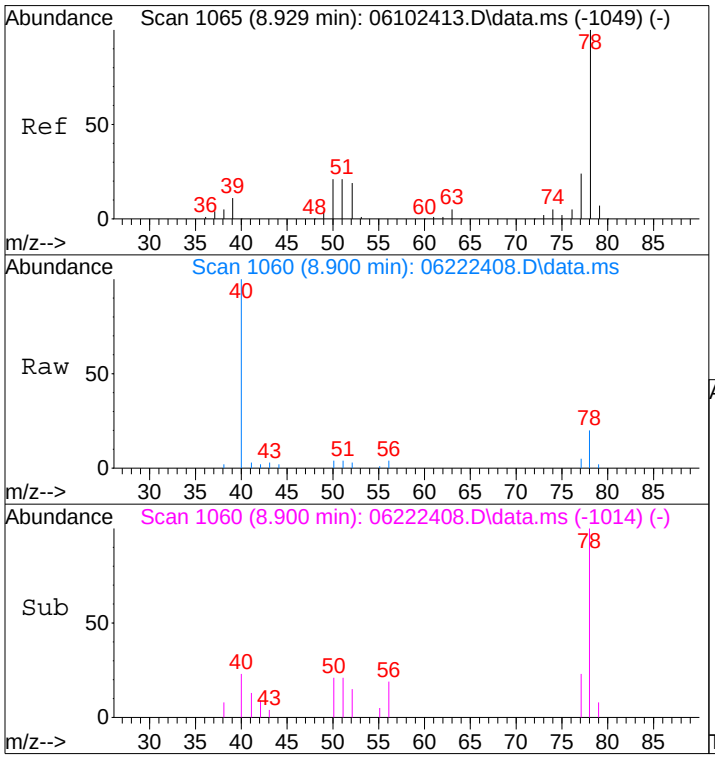


#32
Chloroform
Concen: 1.73 ng
RT: 7.35 min Scan# 787
Delta R.T. 0.001 min
Lab File: 06222408.D
Acq: 22 Jun 2024 17:00

Tgt Ion: 83 Resp: 56384

Ion	Ratio	Lower	Upper
83	100		
85	63.9	44.4	84.4

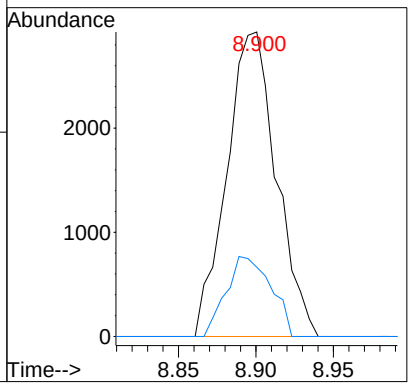


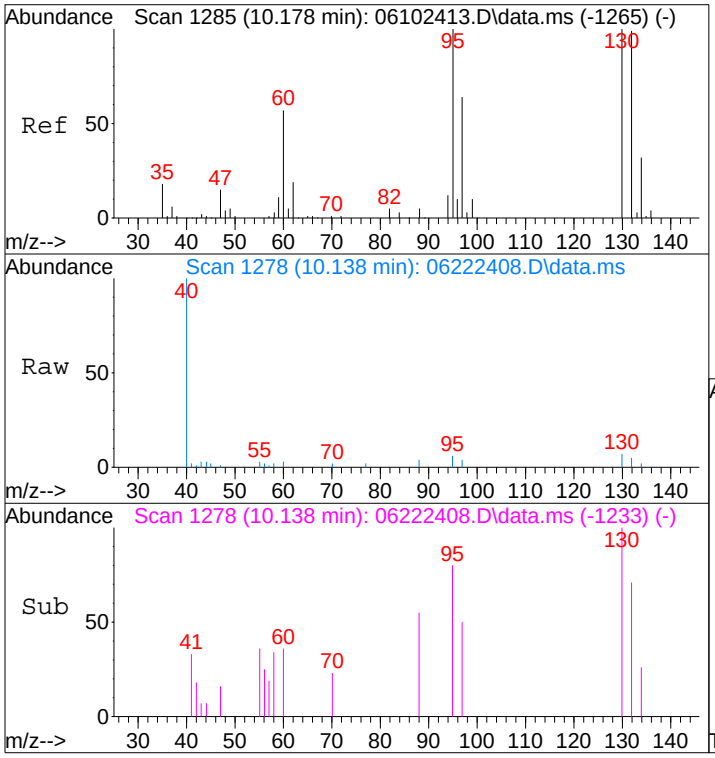


#41
Benzene
Concen: 0.10 ng
RT: 8.90 min Scan# 1060
Delta R.T. 0.009 min
Lab File: 06222408.D
Acq: 22 Jun 2024 17:00

Tgt Ion: 78 Resp: 6512

Ion	Ratio	Lower	Upper
78	100		
77	23.7	4.0	44.0

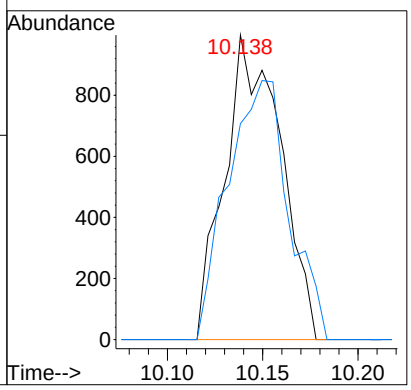


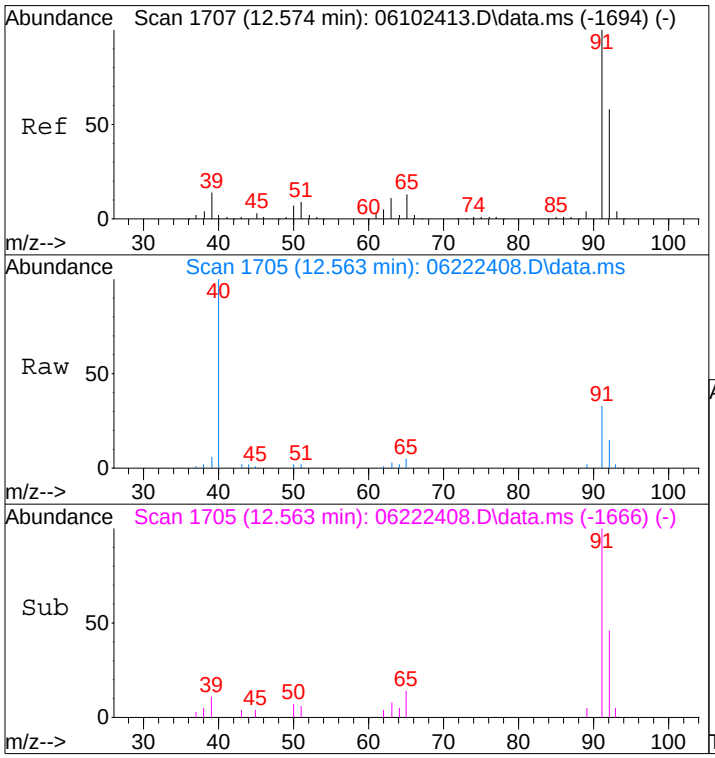


#47
Trichloroethene
Concen: 0.10 ng
RT: 10.14 min Scan# 1278
Delta R.T. 0.005 min
Lab File: 06222408.D
Acq: 22 Jun 2024 17:00

Tgt Ion:130 Resp: 2031

Ion	Ratio	Lower	Upper
130	100		
132	93.1	77.9	117.9

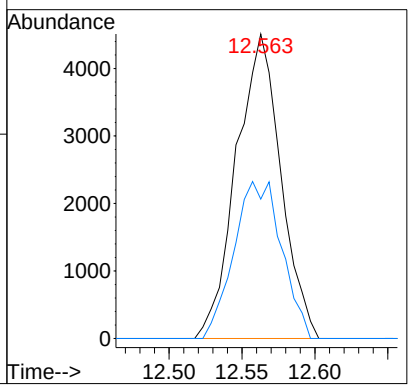


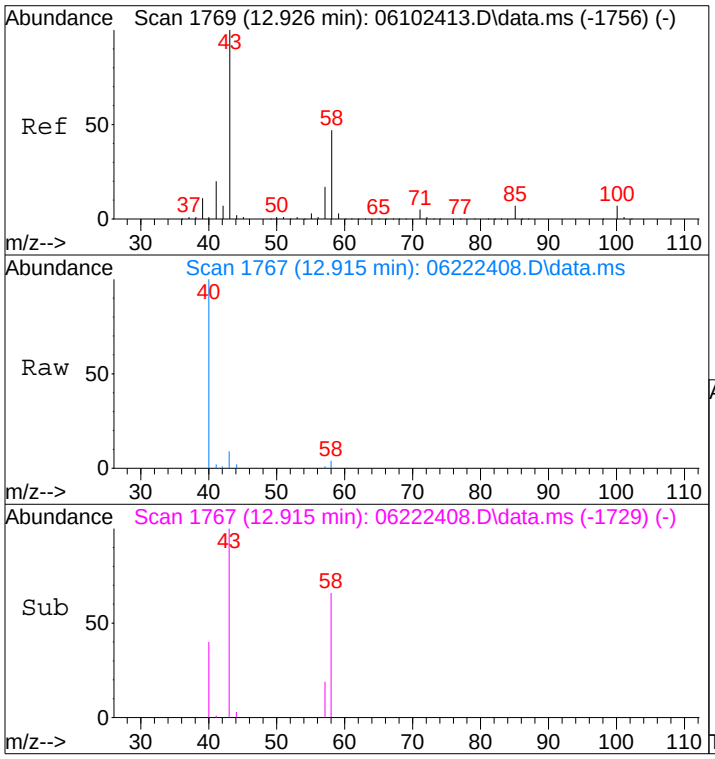


#58
Toluene
Concen: 0.13 ng
RT: 12.56 min Scan# 1705
Delta R.T. -0.029 min
Lab File: 06222408.D
Acq: 22 Jun 2024 17:00

Tgt Ion: 91 Resp: 9588

Ion	Ratio	Lower	Upper
91	100		
92	55.2	37.4	77.4

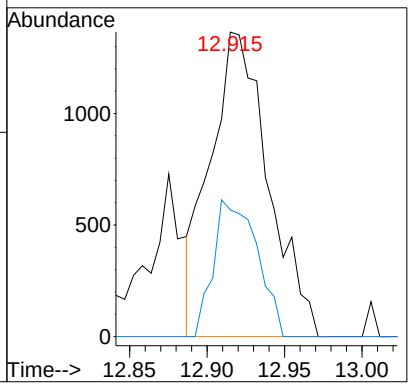


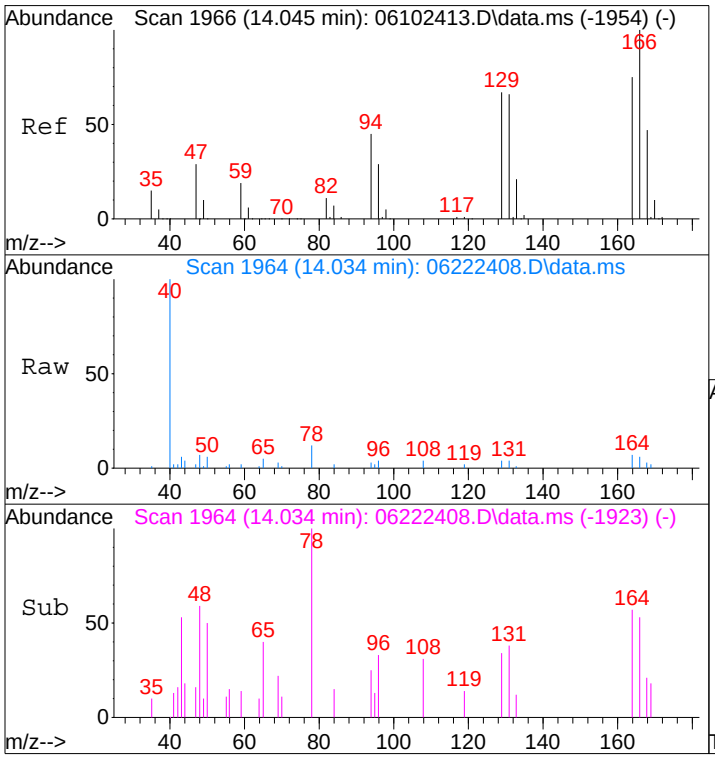


#59
2-Hexanone
Concen: 0.08 ng
RT: 12.91 min Scan# 1767
Delta R.T. -0.034 min
Lab File: 06222408.D
Acq: 22 Jun 2024 17:00

Tgt Ion: 43 Resp: 3587

Ion	Ratio	Lower	Upper
43	100		
58	33.5	25.9	65.9

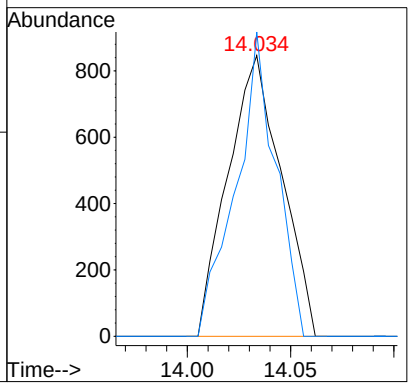


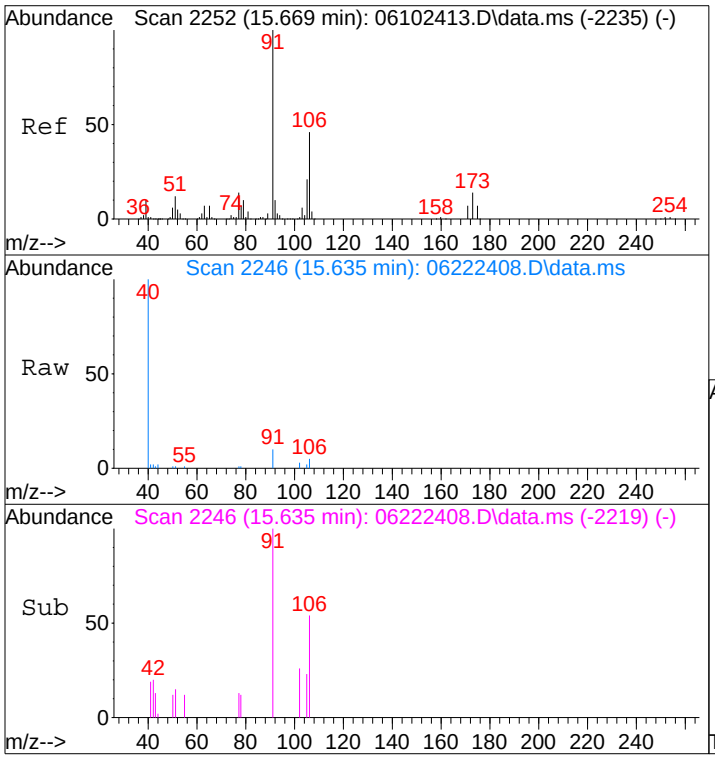


#64
Tetrachloroethene
Concen: 0.06 ng
RT: 14.03 min Scan# 1964
Delta R.T. -0.017 min
Lab File: 06222408.D
Acq: 22 Jun 2024 17:00

Tgt Ion:166 Resp: 1525

Ion	Ratio	Lower	Upper
166	100		
164	80.9	56.9	96.9

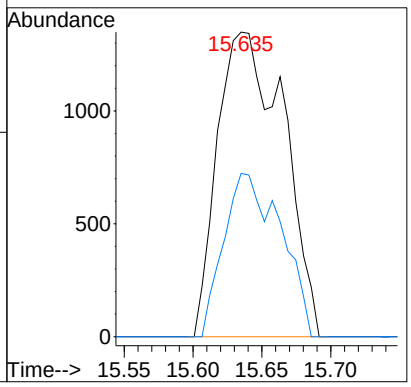


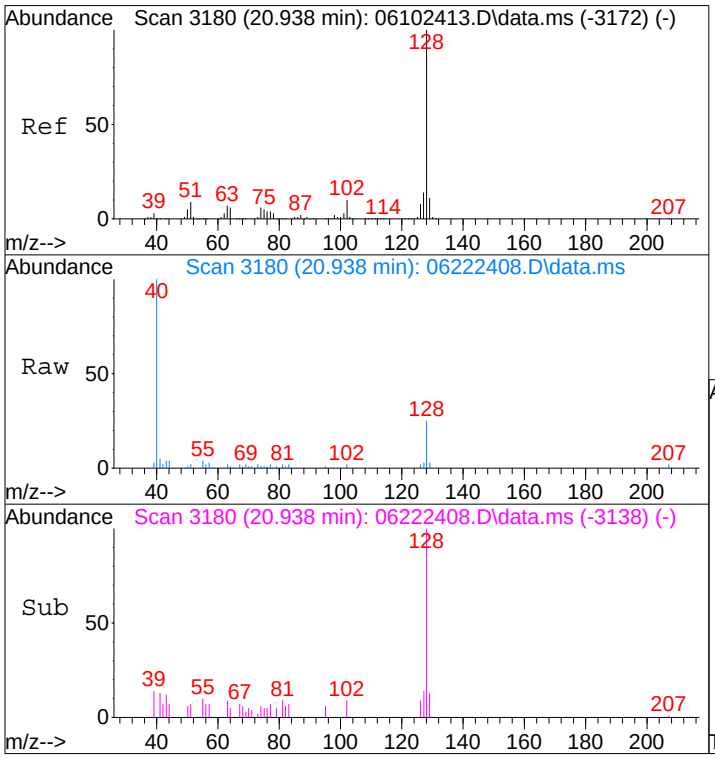


#67
m- & p-Xylenes
Concen: 0.07 ng
RT: 15.63 min Scan# 2246
Delta R.T. -0.046 min
Lab File: 06222408.D
Acq: 22 Jun 2024 17:00

Tgt Ion: 91 Resp: 4504

Ion	Ratio	Lower	Upper
91	100		
106	46.3	25.9	65.9

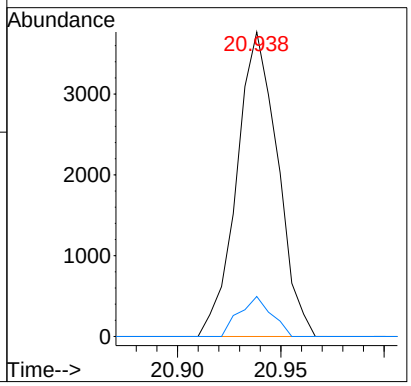




#95
Naphthalene
Concen: 0.05 ng
RT: 20.94 min Scan# 3180
Delta R.T. -0.011 min
Lab File: 06222408.D
Acq: 22 Jun 2024 17:00

Tgt Ion:128 Resp: 5188

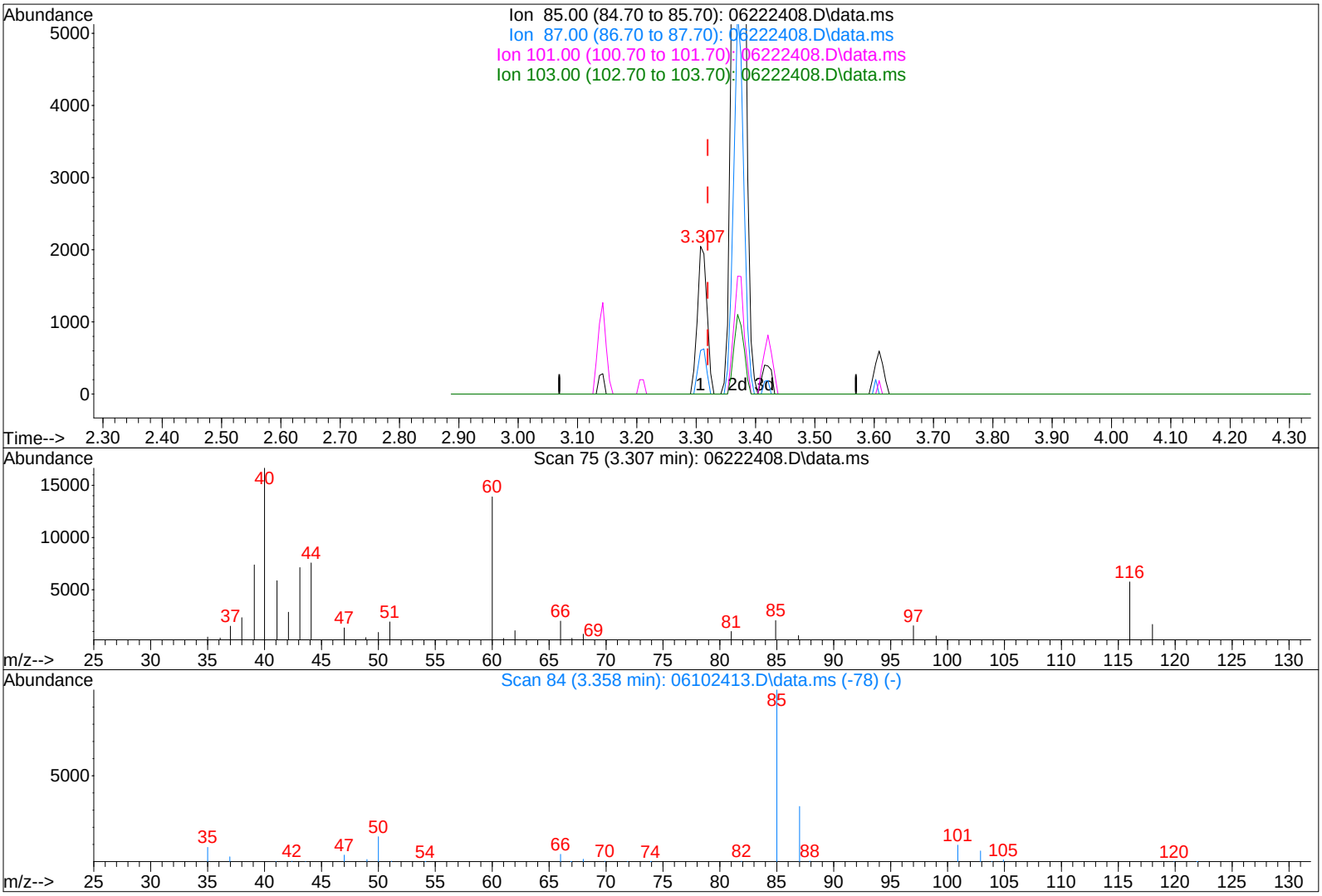
Ion	Ratio	Lower	Upper
128	100		
129	10.4	0.0	31.2



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\22\06222408.D Vial: 11
Acq On : 22 Jun 2024 17:00 Operator: MC/MJ
Sample : P2402249-061 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 13:51:28 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06222408.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.307min (-0.012) 0.06ng

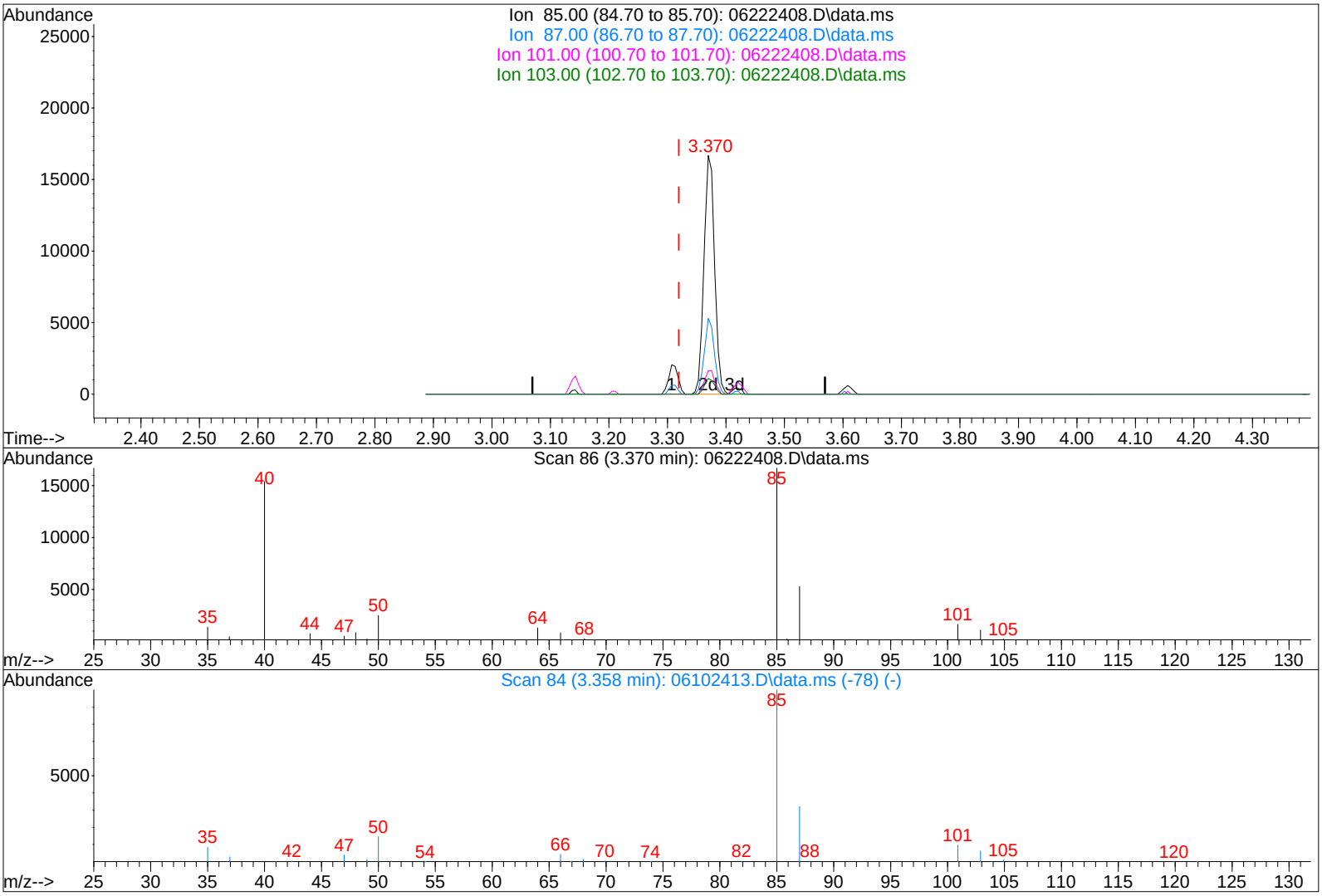
response 2296

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	26.83
101.00	9.80	0.00
103.00	6.30	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\22\06222408.D Vial: 11
Acq On : 22 Jun 2024 17:00 Operator: MC/MJ
Sample : P2402249-061 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 13:51:28 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06222408.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.370min (+0.050) 0.54ng m

response 21050

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	30.37
101.00	9.80	9.61
103.00	6.30	6.14

MJ 6/29/24

WP

CG 6/29/24

Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\22\06222408.D Vial: 11
Acq On : 22 Jun 2024 17:00 Operator: MC/MJ
Sample : P2402249-061 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 16:46:16 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

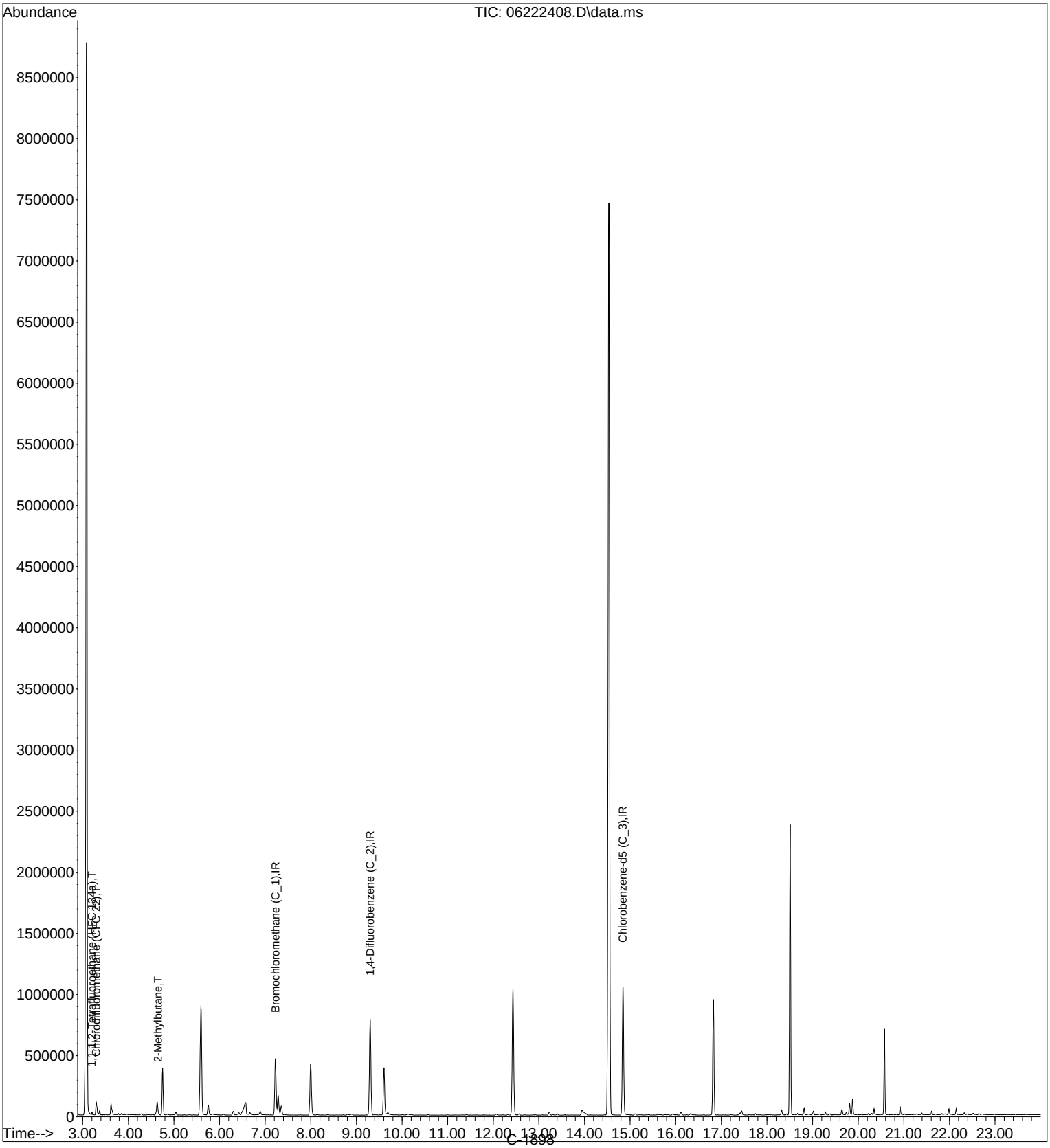
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	168155	12.500	ng		-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	737995	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	179826	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	3.14	85	184	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.20	83	2307	0.134	ng	#	1
4) 1,1-Difluoroethane	0.00	65	0	N.D.			
5) Chlorodifluoromethane ...	3.30	67	986	0.172	ng		91
6) 1-Chloro-1,1-Difluoroe...	3.51	65	640	N.D.			
7) Dichlorofluoromethane ...	4.23	67	318	N.D.			
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	4.56	83	83	N.D.			
10) 2-Methylbutane	4.65	57	4758	0.237	ng	#	46
11) Methyl Acetate	5.33	43	1605	N.D.			
12) 2-Methylpentane	6.49	71	237	N.D.			
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	9.03	84	56	N.D.			
17) 2,3-Dimethylpentane	9.54	56	382	N.D.			
18) Dibromomethane	9.80	174	235	N.D.			
20) Methyl Cyclohexane	11.42	55	2520	N.D.			
21) 1,3-Dichloropropane	0.00	76	0	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	15.20	91	60	N.D.			
24) 1,2,3-Trichloropropane	16.32	75	325	N.D.			
25) Bromobenzene	17.03	77	249	N.D.			
26) 2-Chlorotoluene	17.61	91	1057	N.D.			
27) 4-Chlorotoluene	17.68	91	2412	N.D.			
28) Indane	19.12	117	544	N.D.			
29) Indene	19.21	115	218	N.D.			
30) 1,2,4,5-Tetramethylben...	20.18	119	208	N.D.			
31) 1,2,3,4-Tetramethylben...	20.22	119	475	N.D.			
32) 1,2,3,5-Tetramethylben...	20.57	119	3521	N.D.			
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222408.D Vial: 11
Acq On : 22 Jun 2024 17:00 Operator: MC/MJ
Sample : P2402249-061 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 16:46:16 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



C-1898

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\22\
Data File : 06222408.D
Acq On : 22 Jun 2024 17:00
Operator : MC/MJ
Sample : P2402249-061 (400mL)
Misc : S37-06062402
ALS Vial : 11 Sample Multiplier: 1

MJ 6/28/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06222408.D\data.ms

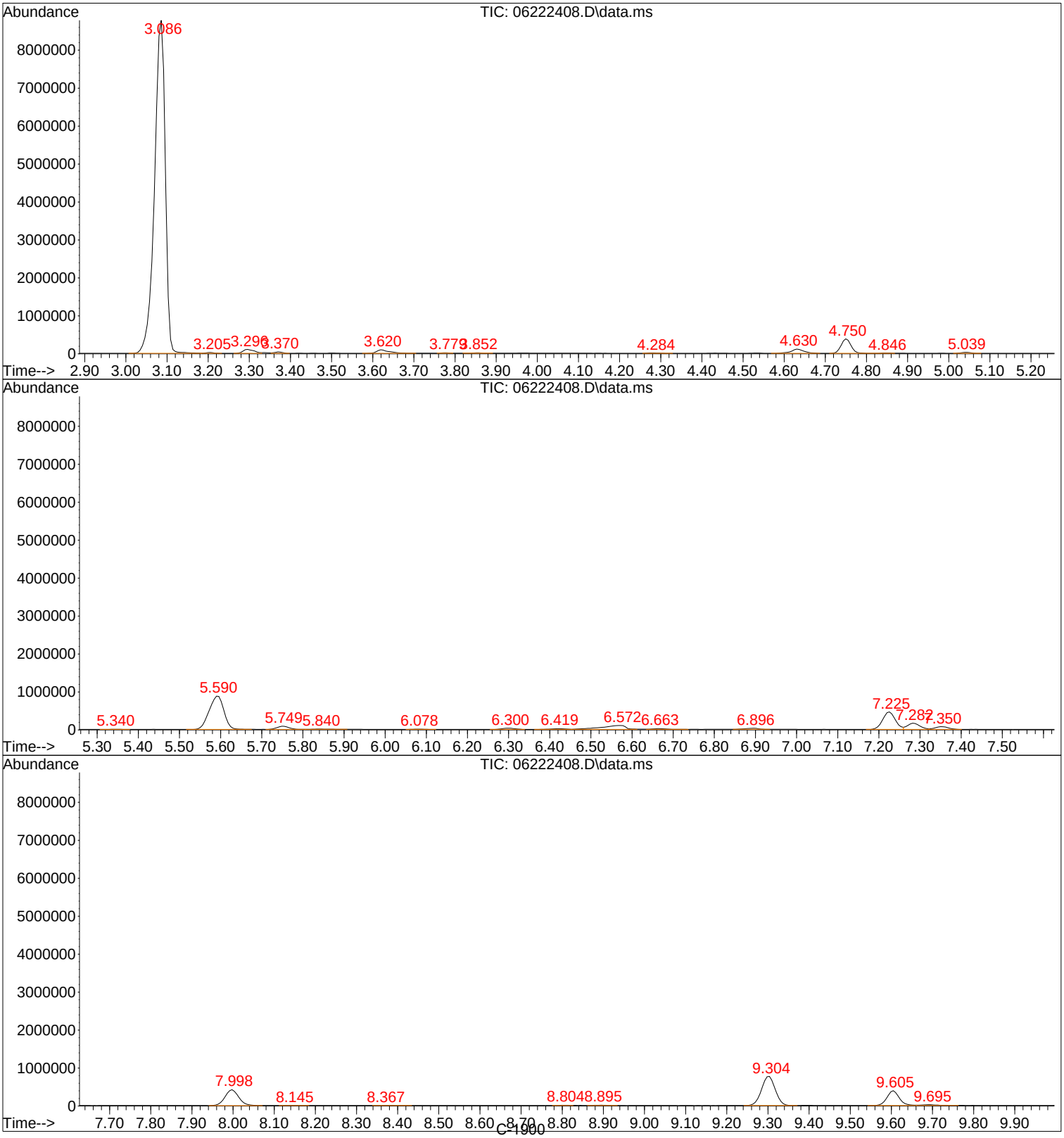
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.086	22	36	53	rBV	8772677	15968934	100.00%	62.592%
2	3.205	53	57	62	rVB2	20173	21809	0.14%	0.085%
3	3.296	67	73	79	rVV	101190	190132	1.19%	0.745%
4	3.370	83	86	91	rVB	33745	41863	0.26%	0.164%
5	3.620	122	130	145	rBV	90870	186985	1.17%	0.733%
6	3.779	154	158	161	rBV	9784	12067	0.08%	0.047%
7	3.852	165	171	178	rBV2	10063	13724	0.09%	0.054%
8	4.284	242	247	255	rVB2	9313	18705	0.12%	0.073%
9	4.630	297	308	318	rBV	108462	233719	1.46%	0.916%
10	4.750	322	329	342	rBV	381170	632467	3.96%	2.479%
11	4.846	342	346	350	rBV4	6791	11718	0.07%	0.046%
12	5.039	375	380	387	rVB2	24070	40057	0.25%	0.157%
13	5.340	427	433	440	rVB3	5276	11298	0.07%	0.044%
14	5.590	464	477	492	rBV2	876641	2187363	13.70%	8.574%
15	5.749	498	505	515	rBV	81315	162994	1.02%	0.639%
16	5.840	515	521	533	rVV7	7935	20352	0.13%	0.080%
17	6.078	558	563	571	rVB3	6261	12209	0.08%	0.048%
18	6.300	594	602	609	rBV2	30953	68724	0.43%	0.269%
19	6.419	613	623	629	rVV	18682	48212	0.30%	0.189%
20	6.572	629	650	657	rVV3	99887	418793	2.62%	1.642%
21	6.663	661	666	679	rVB	17993	40776	0.26%	0.160%
22	6.896	698	707	714	rVB	26394	58376	0.37%	0.229%
23	7.225	755	765	771	rBV	461700	990579	6.20%	3.883%
24	7.282	771	775	782	rVV2	161455	333795	2.09%	1.308%
25	7.350	782	787	796	rVB	72041	154520	0.97%	0.606%
26	7.998	891	901	914	rBV	417316	957541	6.00%	3.753%
27	8.145	921	927	934	rVB2	4592	11064	0.07%	0.043%
28	8.367	961	966	978	rVB5	5026	12011	0.08%	0.047%
29	8.804	1038	1043	1047	rBV3	6413	12014	0.08%	0.047%
30	8.895	1053	1059	1066	rVB3	8394	19630	0.12%	0.077%
31	9.304	1120	1131	1143	rBV	765684	1770610	11.09%	6.940%
32	9.605	1173	1184	1194	rBV	387524	798556	5.00%	3.130%
33	9.695	1194	1200	1212	rVB3	17925	51114	0.32%	0.200%

Sum of corrected areas: 25512711

Data Path : I:\MS09\DATA\2024 06\22\
Data File : 06222408.D
Acq On : 22 Jun 2024 17:00
Operator : MC/MJ
Sample : P2402249-061 (400mL)
Misc : S37-06062402
ALS Vial : 11 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\22\\
Data File : 06222408.D
Acq On : 22 Jun 2024 17:000
Operator : MC/MJJ
Sample : P2402249-061 (400mL))
Misc : S37-060624022
ALS Vial : 11 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT/LSC Reviewed)

MJ 6/29/24

Data File : I:\MS09\DATA\2024 06\22\06222409.D Vial: 12
Acq On : 22 Jun 2024 17:32 Operator: MC/MJ
Sample : P2402249-062 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:31:53 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	164963	12.500	ng		0.01
37) 1,4-Difluorobenzene (IS2)	9.30	114	717712	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	178304	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	368716	12.576	ng		0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.64%				
57) Toluene-d8 (SS2)	12.43	98	815373	11.950	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 95.60%				
73) Bromofluorobenzene (SS3)	16.83	174	317979	12.906	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.28%				
Target Compounds							Qvalue
2) Propene	3.30	42	7947	0.376	ng	#	81
3) Dichlorodifluoromethan...	3.36	85	20240m	0.521	ng		
4) Chloromethane	3.49	50	7608	0.287	ng		98
5) 1,2-Dichloro-1,1,2,2-t...	3.61	135	522	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	3.77	54	301	N.D.			
8) Bromomethane	4.02	94	1129	0.084	ng		83
9) Chloroethane	0.00	64	0	N.D.	d		
10) Ethanol	4.29	45	38685	2.412	ng		76
11) Acetonitrile	0.00	41	0	N.D.	d		
12) Acrolein	4.53	56	9180	0.773	ng		98
13) Acetone	4.63	58	130728	10.201	ng	#	79
14) Trichlorofluoromethane	4.76	101	1600250	40.747	ng		100
15) 2-Propanol (Isopropanol)	0.00	45	0	N.D.	d		
16) Acrylonitrile	5.04	53	363	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.33	59	3364	0.082	ng	#	1
19) Methylene Chloride	5.35	84	1713	0.094	ng		92
20) 3-Chloro-1-propene (Al...	5.45	41	418	N.D.			
21) Trichlorotrifluoroethane	5.58	151	5047016	303.790	ng		92
22) Carbon Disulfide	0.00	76	0	N.D.	d		
23) trans-1,2-Dichloroethene	6.14	61	211	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	6.31	73	272	N.D.			
26) Vinyl Acetate	6.42	86	12356	4.178	ng	#	4
27) 2-Butanone (MEK)	6.66	72	22351	2.204	ng		97
28) cis-1,2-Dichloroethene	7.08	61	1037	N.D.			
29) Diisopropyl Ether	7.25	87	220	N.D.			
30) Ethyl Acetate	7.29	61	14635	2.364	ng		97
31) n-Hexane	7.30	57	1313	N.D.			
32) Chloroform	7.36	83	156789	4.851	ng		99
34) Tetrahydrofuran (THF)	7.77	72	437	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.12	62	283	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	9.62	61	14509	No Calib		#	
40) 1-Butanol	8.81	56	12296	No Calib		#	
41) Benzene	8.90	78	7186	0.108	ng		98
42) Carbon Tetrachloride	9.08	117	348	N.D.			
43) Cyclohexane	9.24	84	243	N.D.			
44) tert-Amyl Methyl Ether	9.60	73	165	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.08	83	12586	0.472	ng		99
47) Trichloroethene	10.15	130	3550	0.184	ng		87
48) 1,4-Dioxane	10.12	88	463	N.D.			
49) 2,2,4-Trimethylpentane...	10.22	57	556	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

C-1902

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222409.D Vial: 12
Acq On : 22 Jun 2024 17:32 Operator: MC/MJ
Sample : P2402249-062 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:31:53 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

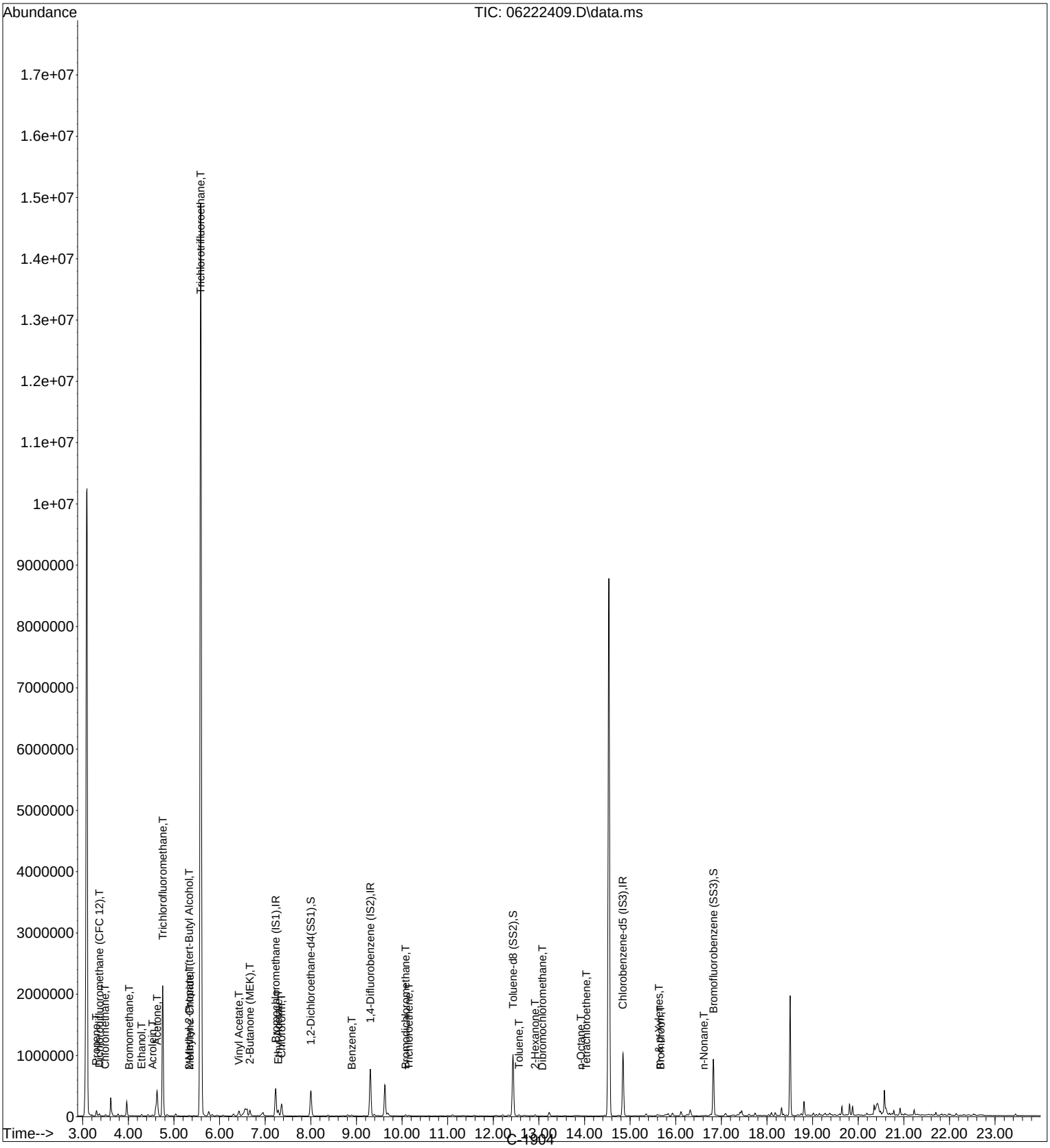
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	10.58	71	625	N.D.		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	0.00	58	0	N.D. d		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	12.56	91	13884	0.195 ng		99
59) 2-Hexanone	12.92	43	17981	0.402 ng		95
60) Dibromochloromethane	13.07	129	1876	0.076 ng		95
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	13.78	43	1520	N.D.		
63) n-Octane	13.92	57	770	0.052 ng		92
64) Tetrachloroethene	14.04	166	1390	0.057 ng		96
65) Chlorobenzene	14.90	112	997	N.D.		
66) Ethylbenzene	15.41	91	2445	N.D.		
67) m- & p-Xylenes	15.63	91	6047	0.088 ng		99
68) Bromoform	15.67	173	1190	0.055 ng		81
69) Styrene	16.10	104	1321	N.D.		
70) o-Xylene	16.25	91	2453	N.D.		
71) n-Nonane	16.62	43	2231	0.057 ng	#	71
72) 1,1,2,2-Tetrachloroethane	16.21	83	547	N.D.		
74) Cumene	17.04	105	1231	N.D.		
75) alpha-Pinene	17.52	93	124	N.D.		
76) n-Propylbenzene	17.68	91	2944	N.D.		
77) 3-Ethyltoluene	17.04	105	1231	No Calib		
78) 4-Ethyltoluene	17.86	105	1400	N.D.		
79) 1,3,5-Trimethylbenzene	17.96	105	1245	N.D.		
80) alpha-Methylstyrene	0.00	118	0	N.D.		
81) 2-Ethyltoluene	17.04	105	1231	No Calib		
82) 1,2,4-Trimethylbenzene	18.42	105	1957	N.D.		
83) n-Decane	17.09	58	11485	No Calib	#	
84) Benzyl Chloride	18.56	91	2402	N.D.		
85) 1,3-Dichlorobenzene	18.58	146	906	N.D.		
86) 1,4-Dichlorobenzene	18.65	146	992	N.D.		
87) sec-Butylbenzene	18.75	105	2099	N.D.		
88) 4-Isopropyltoluene (p-...	18.92	119	3033	N.D.		
89) 1,2,3-Trimethylbenzene	17.04	105	1231	No Calib		
90) 1,2-Dichlorobenzene	19.04	146	857	N.D.		
91) d-Limonene	19.08	68	1083	N.D.		
92) 1,2-Dibromo-3-Chloropr...	19.51	157	198	N.D.		
93) n-Undecane	17.87	58	1101	No Calib	#	
94) 1,2,4-Trichlorobenzene	20.84	180	1442	N.D.		
95) Naphthalene	20.94	128	2244	N.D.		
96) n-Dodecane	18.89	58	1242	No Calib	#	
97) Hexachlorobutadiene	21.30	225	969	N.D.		
98) Cyclohexanone	15.52	55	1446	No Calib	#	
99) tert-Butylbenzene	18.42	119	1494	N.D.		
100) n-Butylbenzene	19.38	91	2497	N.D.		
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222409.D Vial: 12
Acq On : 22 Jun 2024 17:32 Operator: MC/MJ
Sample : P2402249-062 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:31:53 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



C-1904

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222409.D Vial: 12
Acq On : 22 Jun 2024 17:32 Operator: MC/MJ
Sample : P2402249-062 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/29/24

Quant Time: Jun 29 10:31:53 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

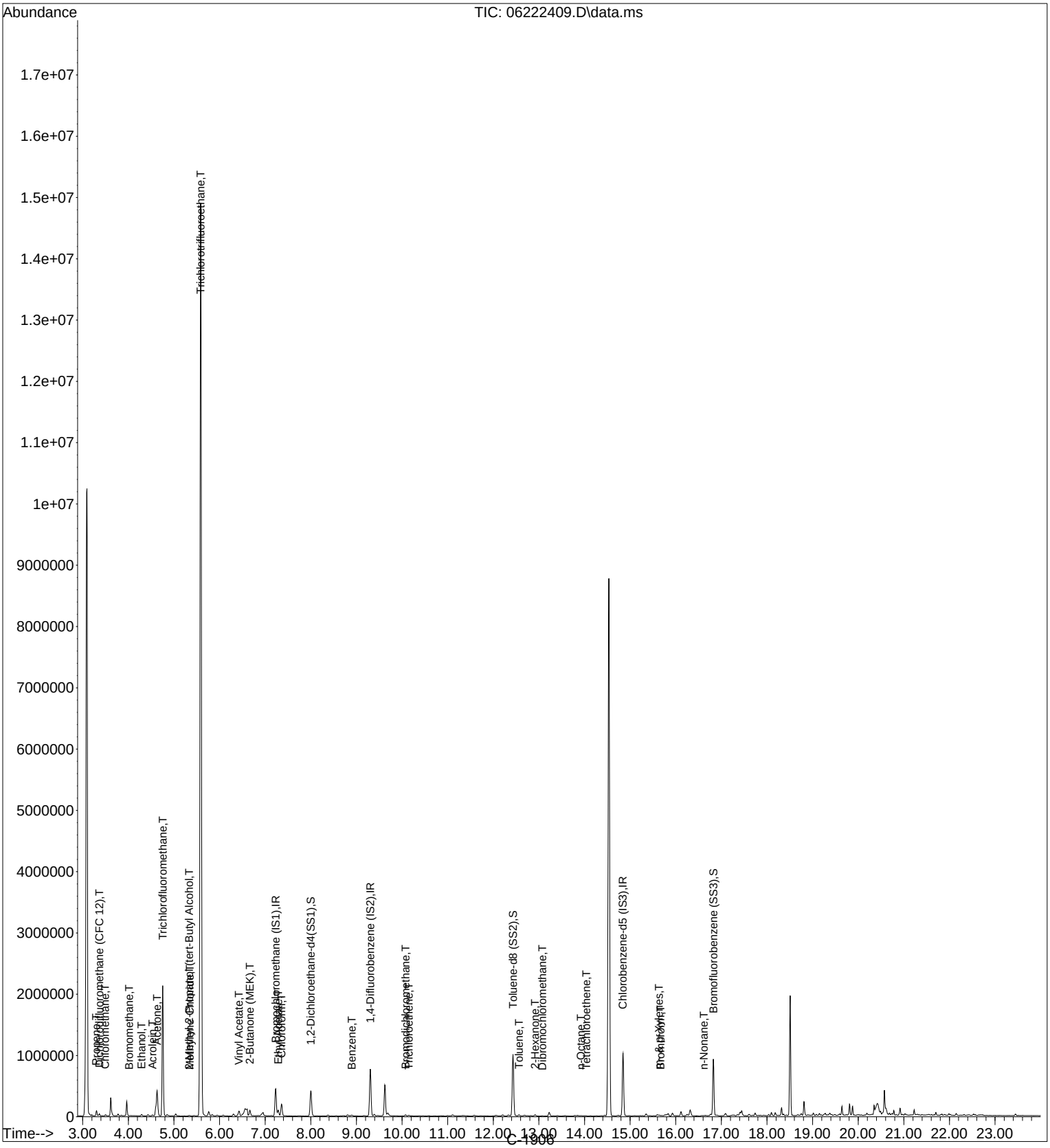
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	164963	12.500	ng		0.01
37) 1,4-Difluorobenzene (IS2)	9.30	114	717712	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	178304	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	368716	12.576	ng		0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.64%				
57) Toluene-d8 (SS2)	12.43	98	815373	11.950	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 95.60%				
73) Bromofluorobenzene (SS3)	16.83	174	317979	12.906	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.28%				
Target Compounds							Qvalue
2) Propene	3.30	42	7947	0.376	ng	#	81
3) Dichlorodifluoromethan...	3.36	85	20240m	0.521	ng		
4) Chloromethane	3.49	50	7608	0.287	ng		98
8) Bromomethane	4.02	94	1129	0.084	ng		83
10) Ethanol	4.29	45	38685	2.412	ng		76
12) Acrolein	4.53	56	9180	0.773	ng		98
13) Acetone	4.63	58	130728	10.201	ng	#	79
14) Trichlorofluoromethane	4.76	101	1600250	40.747	ng		100
18) 2-Methyl-2-Propanol (t...	5.33	59	3364	0.082	ng	#	1
19) Methylene Chloride	5.35	84	1713	0.094	ng		92
21) Trichlorotrifluoroethane	5.58	151	5047016	303.790	ng		92
26) Vinyl Acetate	6.42	86	12356	4.178	ng	#	4
27) 2-Butanone (MEK)	6.66	72	22351	2.204	ng		97
30) Ethyl Acetate	7.29	61	14635	2.364	ng		97
32) Chloroform	7.36	83	156789	4.851	ng		99
41) Benzene	8.90	78	7186	0.108	ng		98
46) Bromodichloromethane	10.08	83	12586	0.472	ng		99
47) Trichloroethene	10.15	130	3550	0.184	ng		87
58) Toluene	12.56	91	13884	0.195	ng		99
59) 2-Hexanone	12.92	43	17981	0.402	ng		95
60) Dibromochloromethane	13.07	129	1876	0.076	ng		95
63) n-Octane	13.92	57	770	0.052	ng		92
64) Tetrachloroethene	14.04	166	1390	0.057	ng		96
67) m- & p-Xylenes	15.63	91	6047	0.088	ng		99
68) Bromoform	15.67	173	1190	0.055	ng		81
71) n-Nonane	16.62	43	2231	0.057	ng	#	71

(#) = qualifier out of range (m) = manual integration (+) = signals summed

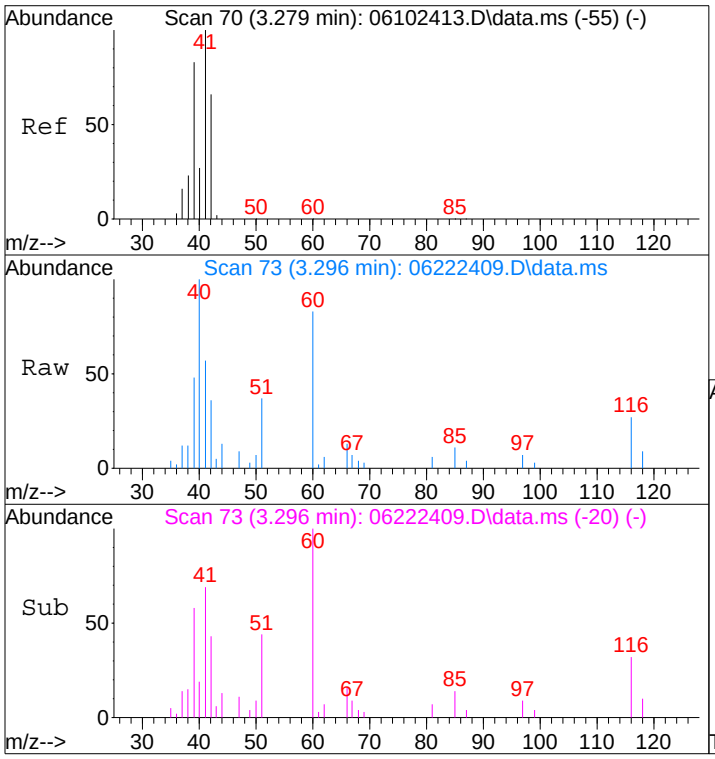
Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222409.D Vial: 12
Acq On : 22 Jun 2024 17:32 Operator: MC/MJ
Sample : P2402249-062 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:31:53 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



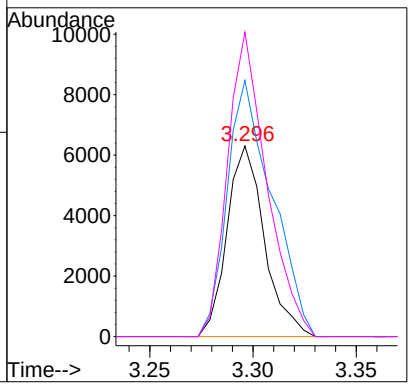
C-1900

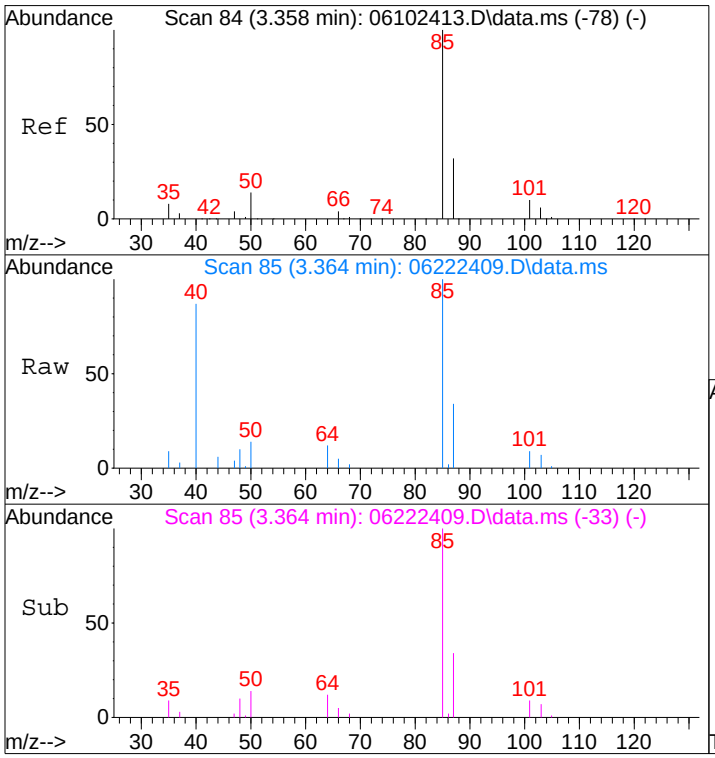


#2
Propene
Concen: 0.38 ng
RT: 3.30 min Scan# 73
Delta R.T. 0.050 min
Lab File: 06222409.D
Acq: 22 Jun 2024 17:32

Tgt Ion: 42 Resp: 7947

Ion	Ratio	Lower	Upper
42	100		
39	160.5	107.3	147.3#
41	167.3	134.3	174.3

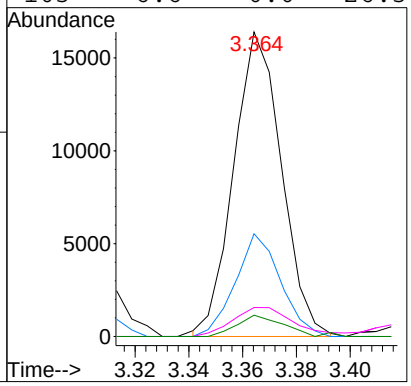


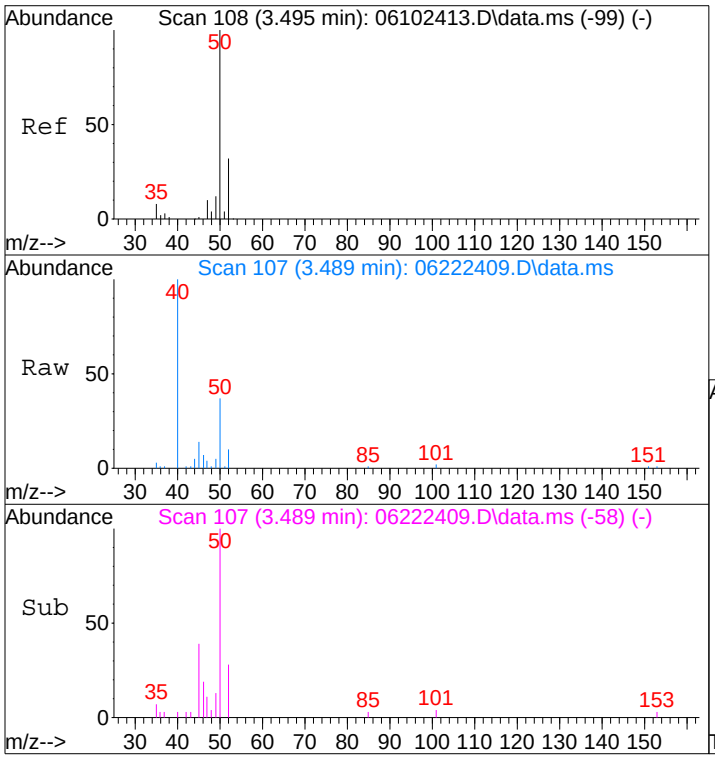


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.52 ng m
RT: 3.36 min Scan# 85
Delta R.T. 0.045 min
Lab File: 06222409.D
Acq: 22 Jun 2024 17:32

Tgt Ion: 85 Resp: 20240

Ion	Ratio	Lower	Upper
85	100		
87	32.0	12.2	52.2
101	12.3	0.0	29.8
103	6.6	0.0	26.3

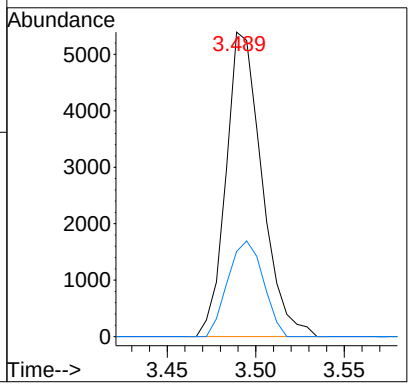


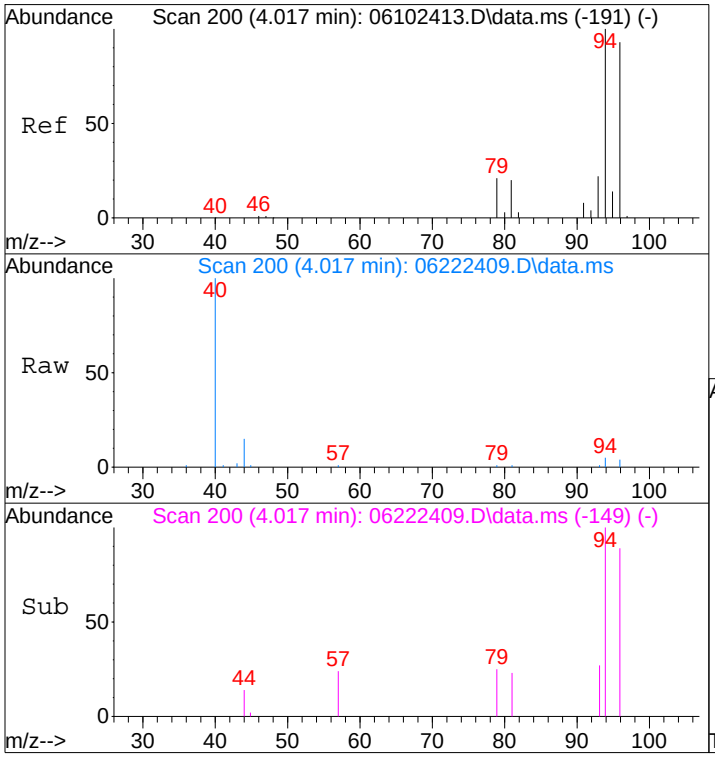


#4
Chloromethane
Concen: 0.29 ng
RT: 3.49 min Scan# 107
Delta R.T. 0.029 min
Lab File: 06222409.D
Acq: 22 Jun 2024 17:32

Tgt Ion: 50 Resp: 7608

Ion	Ratio	Lower	Upper
50	100		
52	31.0	12.4	52.4

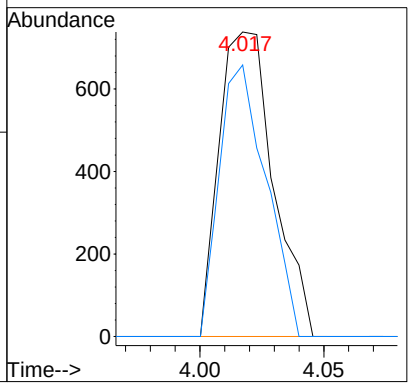


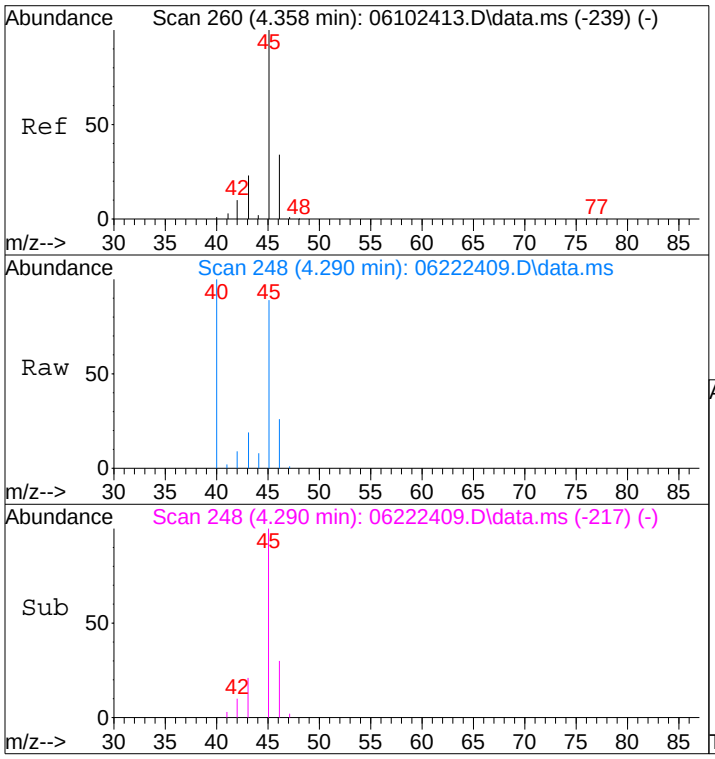


#8
Bromomethane
Concen: 0.08 ng
RT: 4.02 min Scan# 200
Delta R.T. 0.041 min
Lab File: 06222409.D
Acq: 22 Jun 2024 17:32

Tgt Ion: 94 Resp: 1129

Ion	Ratio	Lower	Upper
94	100		
96	76.8	73.2	113.2

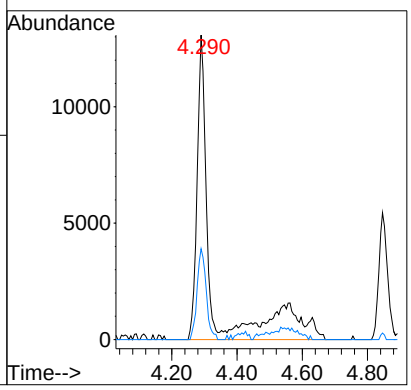


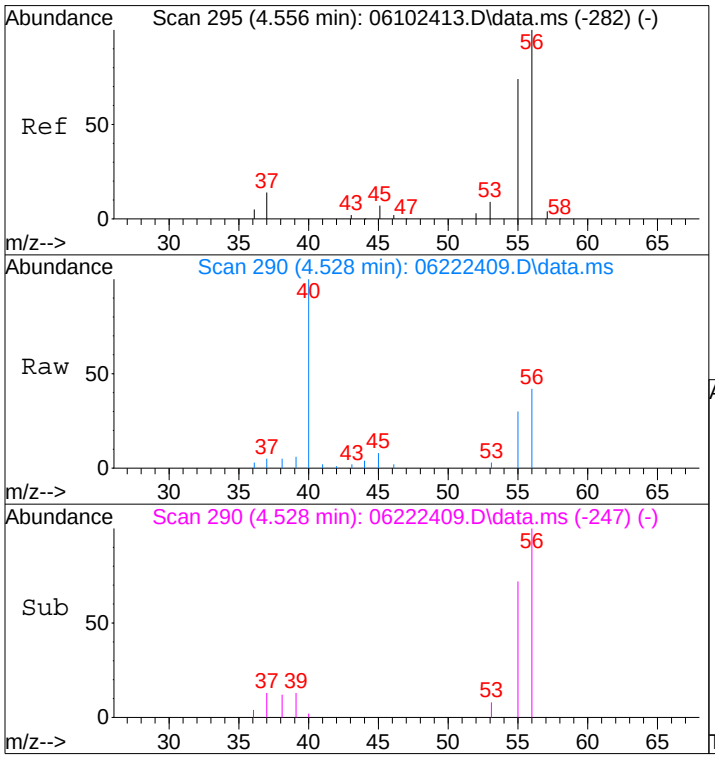


#10
Ethanol
Concen: 2.41 ng
RT: 4.29 min Scan# 248
Delta R.T. -0.073 min
Lab File: 06222409.D
Acq: 22 Jun 2024 17:32

Tgt Ion: 45 Resp: 38685

Ion	Ratio	Lower	Upper
45	100		
46	19.6	13.5	53.5

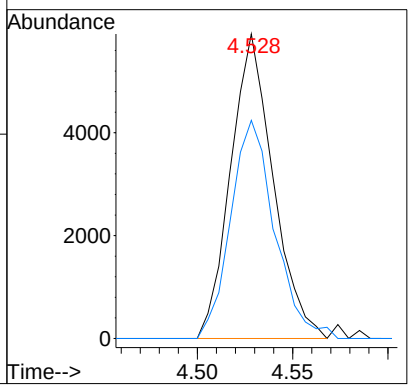


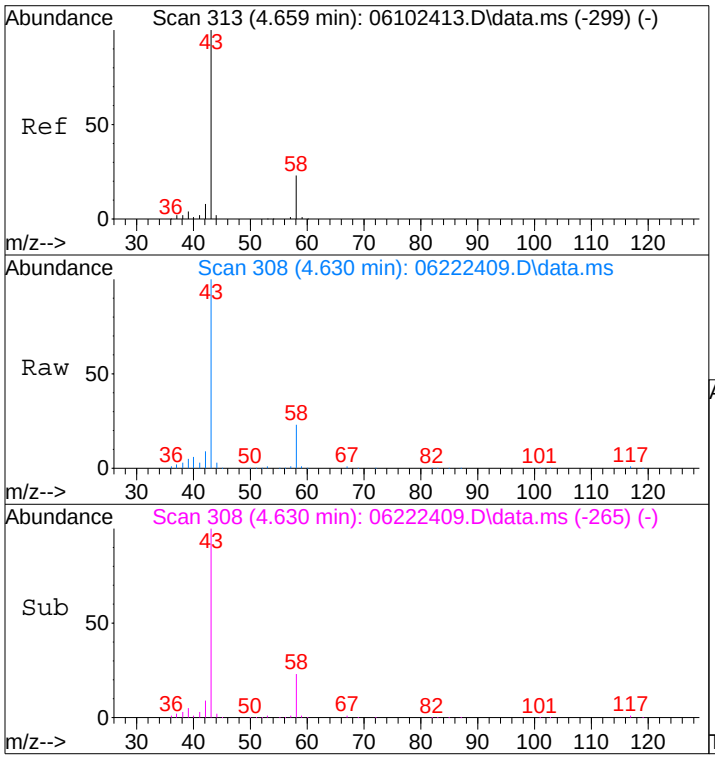


#12
Acrolein
Concen: 0.77 ng
RT: 4.53 min Scan# 290
Delta R.T. -0.003 min
Lab File: 06222409.D
Acq: 22 Jun 2024 17:32

Tgt Ion: 56 Resp: 9180

Ion	Ratio	Lower	Upper
56	100		
55	74.1	55.5	95.5

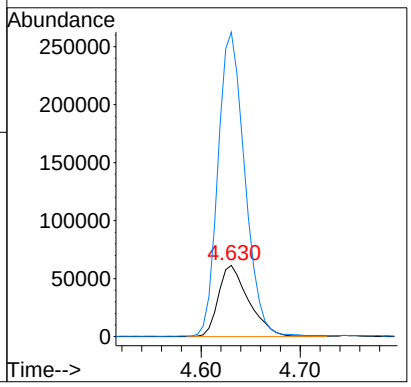


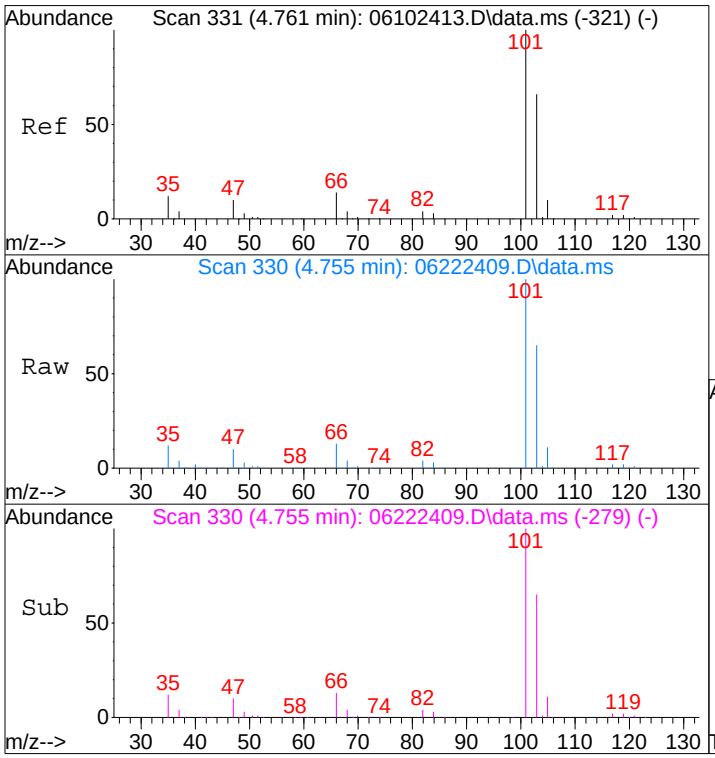


#13
Acetone
Concen: 10.20 ng
RT: 4.63 min Scan# 308
Delta R.T. -0.008 min
Lab File: 06222409.D
Acq: 22 Jun 2024 17:32

Tgt Ion: 58 Resp: 130728

Ion	Ratio	Lower	Upper
58	100		
43	377.5	400.7	460.7#

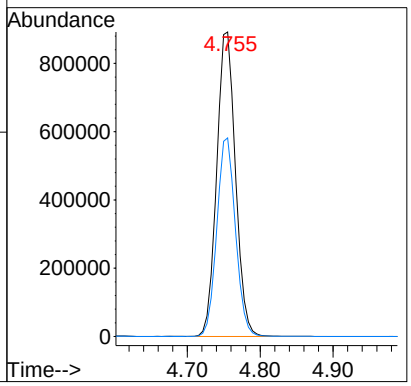


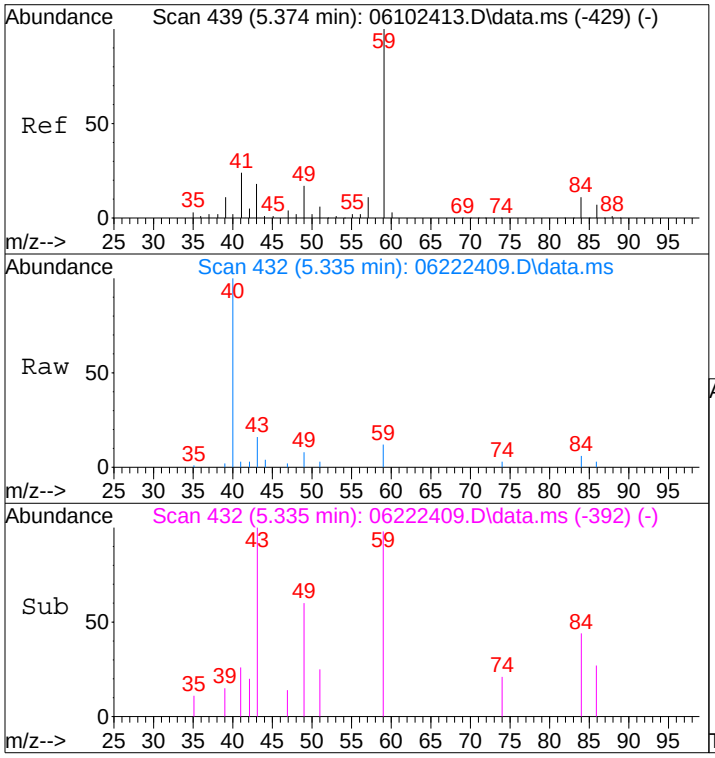


#14
Trichlorofluoromethane
Concen: 40.75 ng
RT: 4.76 min Scan# 330
Delta R.T. 0.039 min
Lab File: 06222409.D
Acq: 22 Jun 2024 17:32

Tgt Ion:101 Resp: 1600250

Ion	Ratio	Lower	Upper
101	100		
103	64.7	44.9	84.9

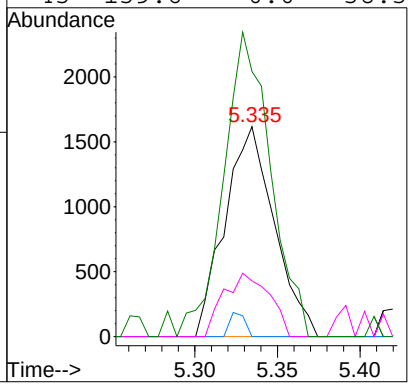


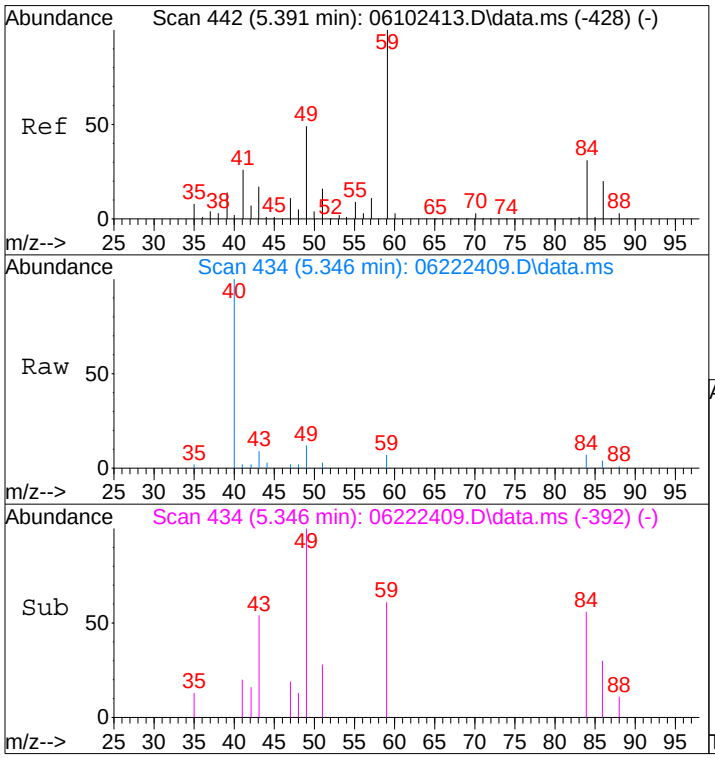


#18
2-Methyl-2-Propanol (tert-Butyl Alcohol
Concen: 0.08 ng
RT: 5.33 min Scan# 432
Delta R.T. -0.022 min
Lab File: 06222409.D
Acq: 22 Jun 2024 17:32

Tgt Ion: 59 Resp: 3364

Ion	Ratio	Lower	Upper
59	100		
57	3.5	0.0	30.9
41	27.9	0.9	40.9
43	139.6	0.0	38.3#

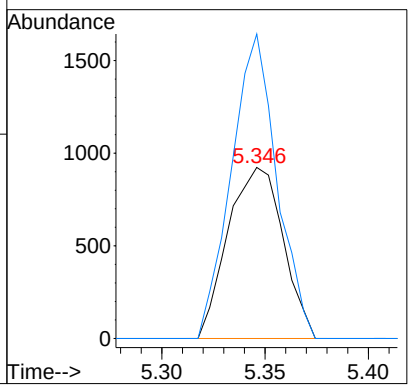


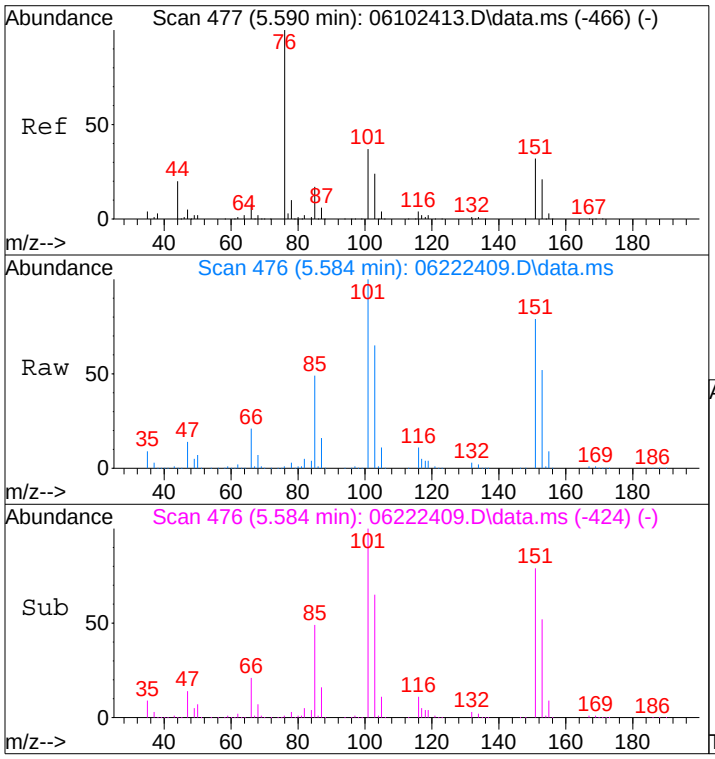


#19
Methylene Chloride
Concen: 0.09 ng
RT: 5.35 min Scan# 434
Delta R.T. -0.011 min
Lab File: 06222409.D
Acq: 22 Jun 2024 17:32

Tgt Ion: 84 Resp: 1713

Ion	Ratio	Lower	Upper
84	100		
49	147.2	132.9	182.9

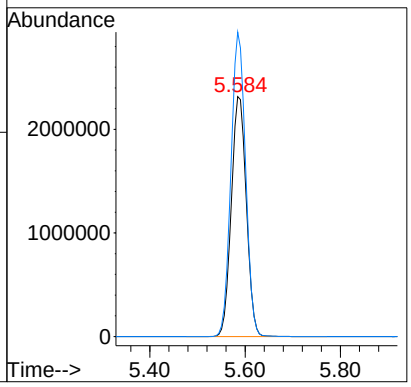


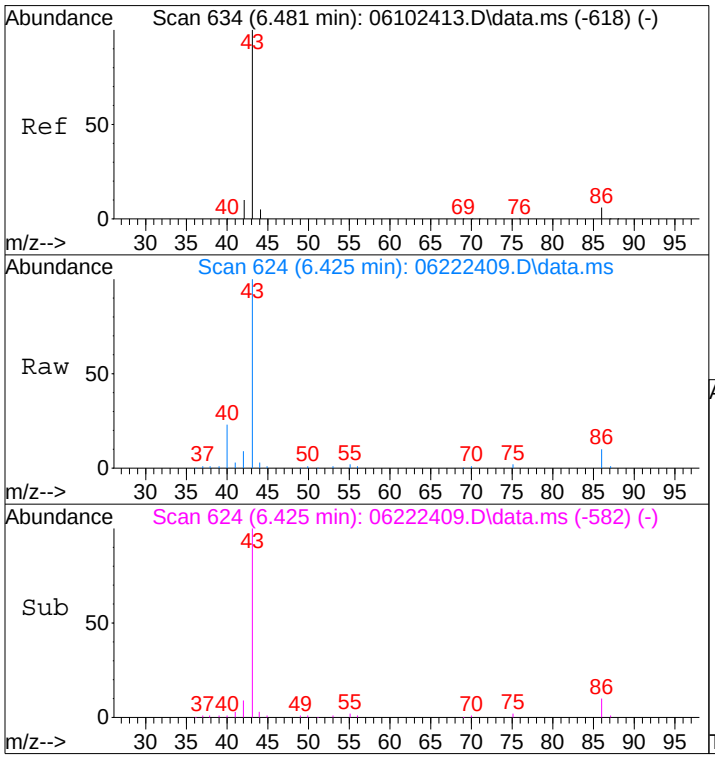


#21
Trichlorotrifluoroethane
Concen: 303.79 ng
RT: 5.58 min Scan# 476
Delta R.T. 0.043 min
Lab File: 06222409.D
Acq: 22 Jun 2024 17:32

Tgt Ion:151 Resp: 5047016

Ion	Ratio	Lower	Upper
151	100		
101	123.3	95.0	135.0

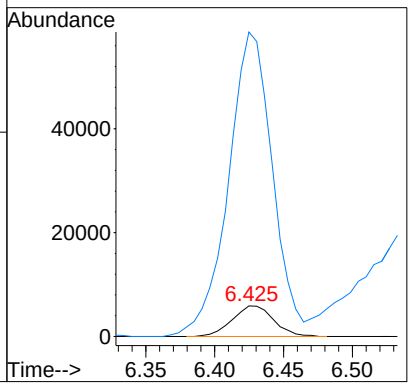


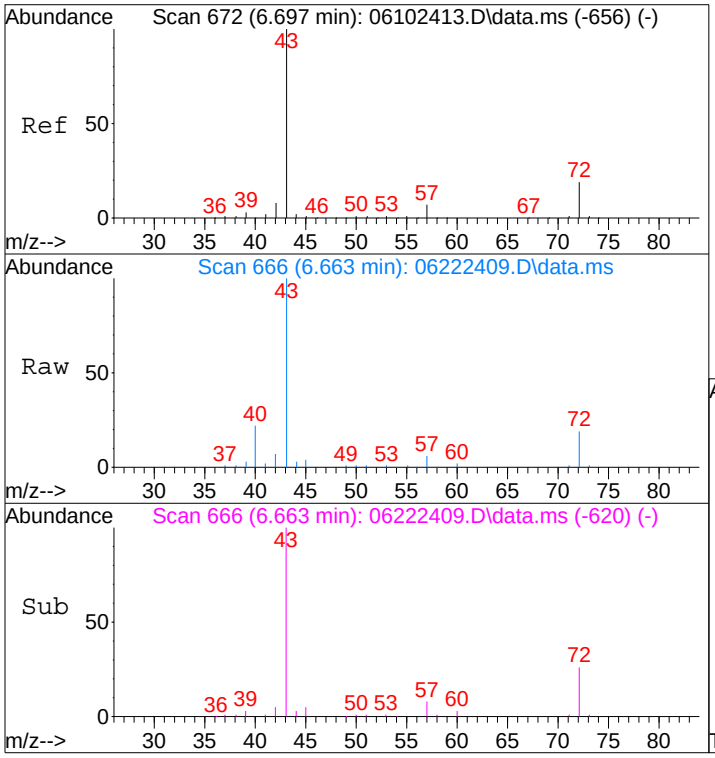


#26
Vinyl Acetate
Concen: 4.18 ng
RT: 6.42 min Scan# 624
Delta R.T. -0.009 min
Lab File: 06222409.D
Acq: 22 Jun 2024 17:32

Tgt Ion: 86 Resp: 12356

Ion	Ratio	Lower	Upper
86	100		
43	1062.1	1668.9	1708.9#

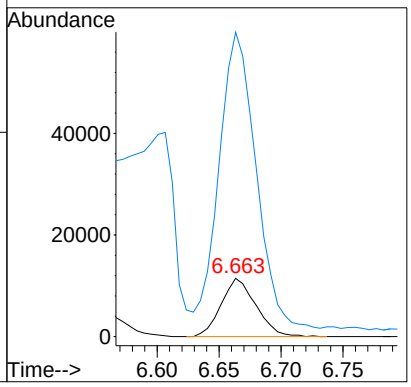


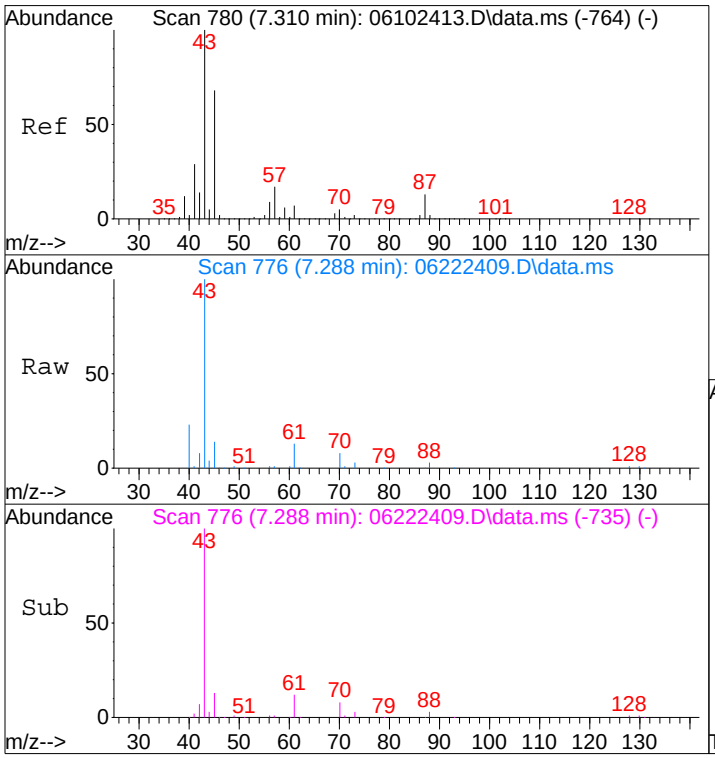


#27
2-Butanone (MEK)
Concen: 2.20 ng
RT: 6.66 min Scan# 666
Delta R.T. 0.010 min
Lab File: 06222409.D
Acq: 22 Jun 2024 17:32

Tgt Ion: 72 Resp: 22351

Ion	Ratio	Lower	Upper
72	100		
43	536.6	506.8	546.8

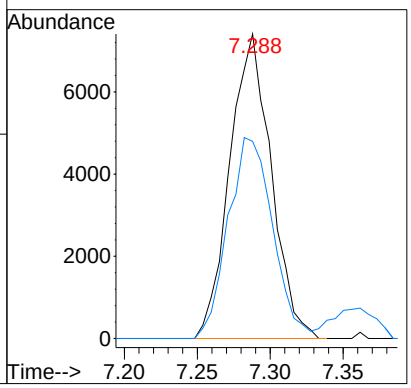


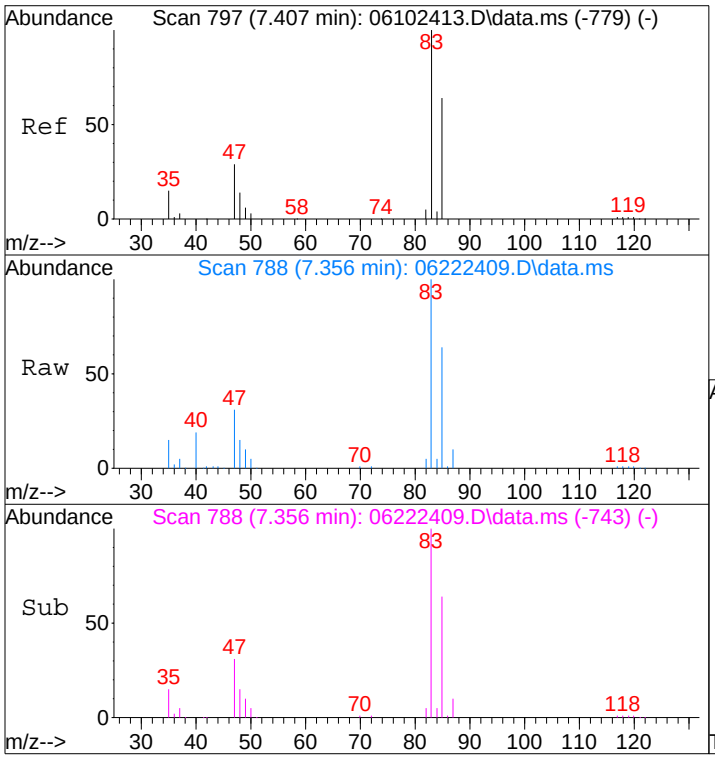


#30
Ethyl Acetate
Concen: 2.36 ng
RT: 7.29 min Scan# 776
Delta R.T. 0.034 min
Lab File: 06222409.D
Acq: 22 Jun 2024 17:32

Tgt Ion: 61 Resp: 14635

Ion	Ratio	Lower	Upper
61	100		
70	71.0	53.5	93.5

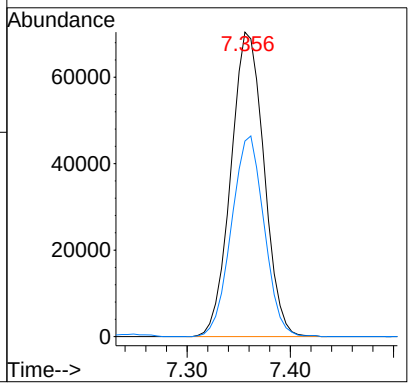


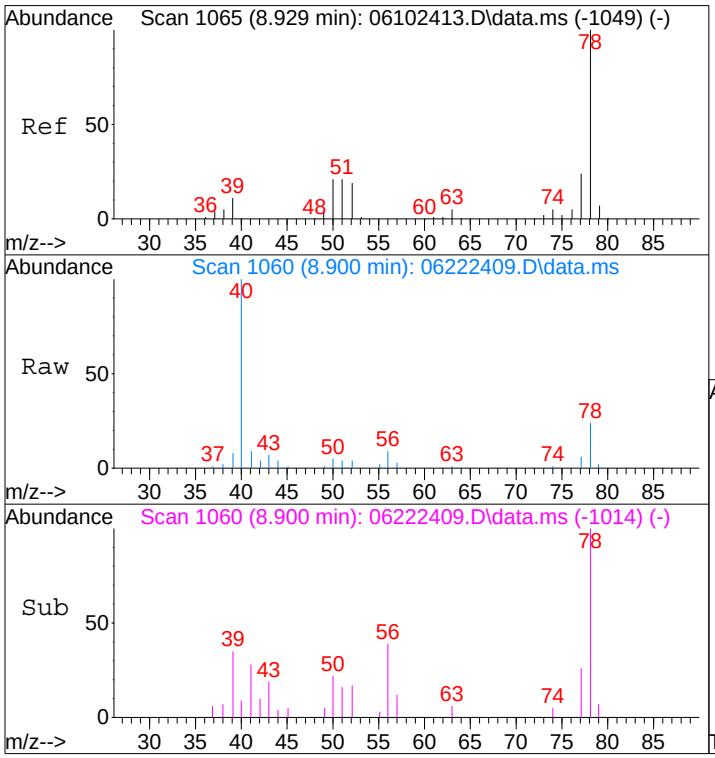


#32
Chloroform
Concen: 4.85 ng
RT: 7.36 min Scan# 788
Delta R.T. 0.007 min
Lab File: 06222409.D
Acq: 22 Jun 2024 17:32

Tgt Ion: 83 Resp: 156789

Ion	Ratio	Lower	Upper
83	100		
85	65.2	44.4	84.4

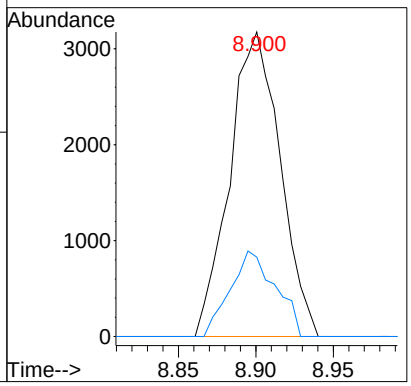


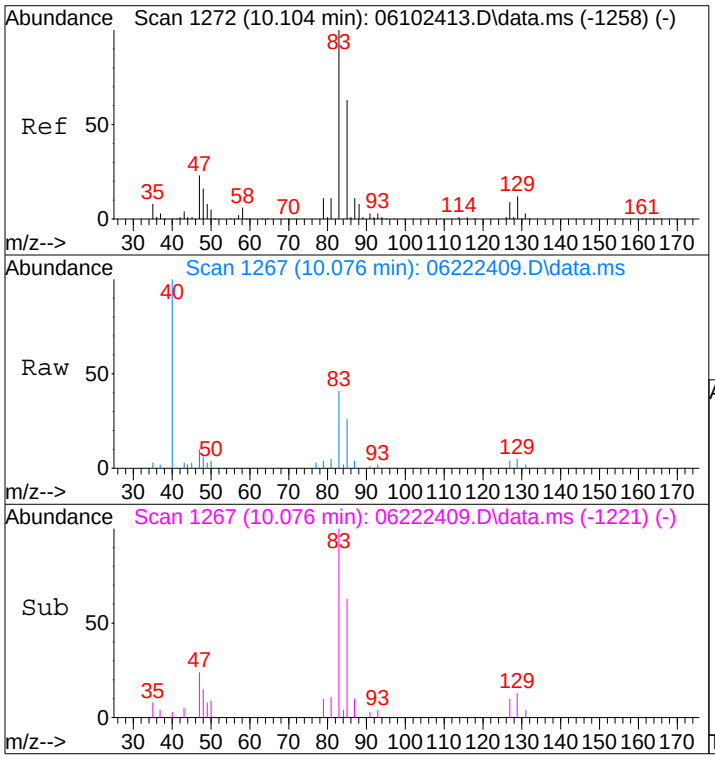


#41
Benzene
Concen: 0.11 ng
RT: 8.90 min Scan# 1060
Delta R.T. 0.009 min
Lab File: 06222409.D
Acq: 22 Jun 2024 17:32

Tgt Ion: 78 Resp: 7186

Ion	Ratio	Lower	Upper
78	100		
77	25.2	4.0	44.0

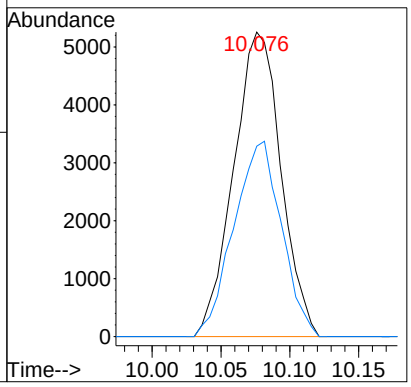


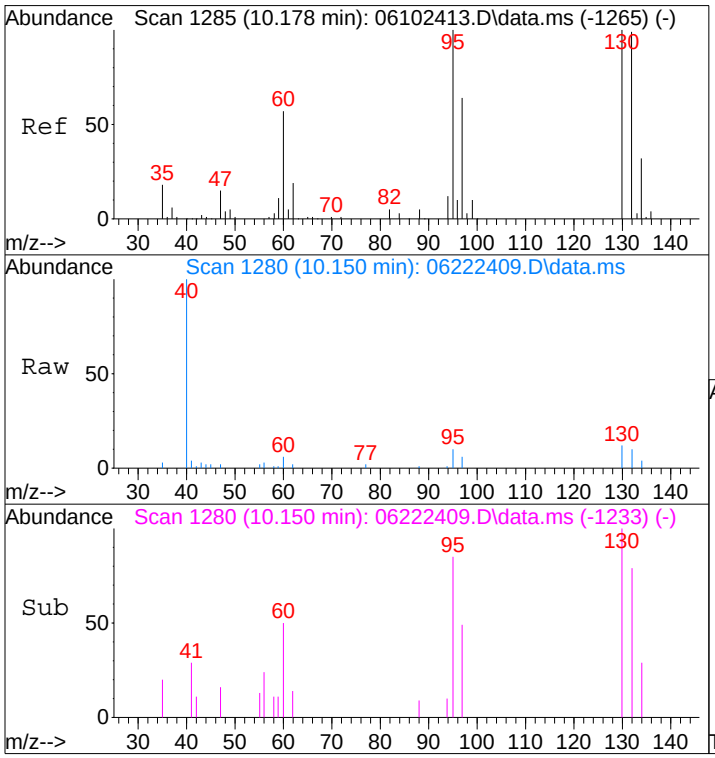


#46
Bromodichloromethane
Concen: 0.47 ng
RT: 10.08 min Scan# 1267
Delta R.T. 0.010 min
Lab File: 06222409.D
Acq: 22 Jun 2024 17:32

Tgt Ion: 83 Resp: 12586

Ion	Ratio	Lower	Upper
83	100		
85	64.5	43.8	83.8

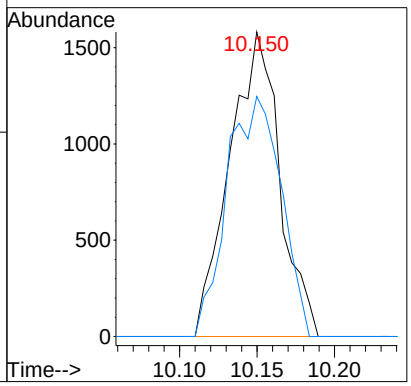


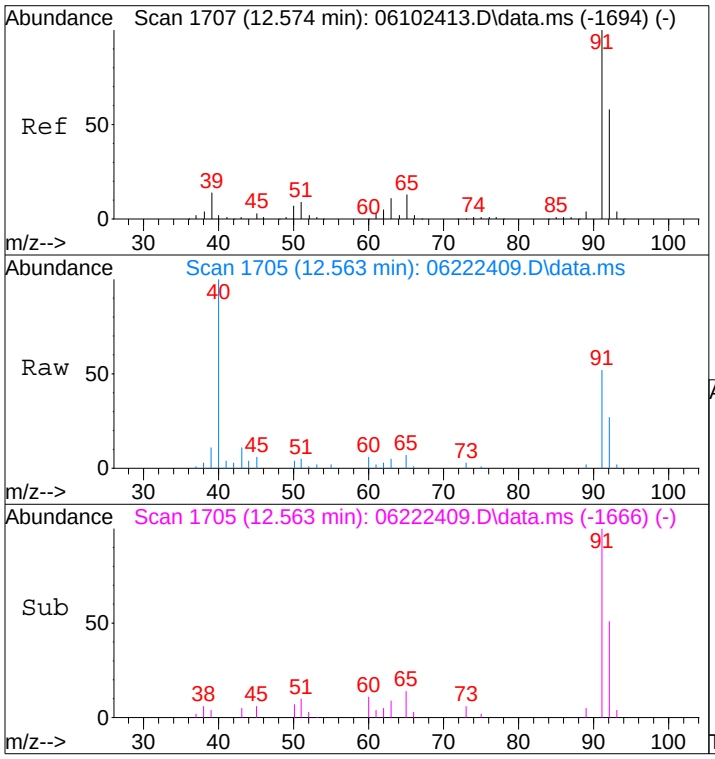


#47
Trichloroethene
Concen: 0.18 ng
RT: 10.15 min Scan# 1280
Delta R.T. 0.016 min
Lab File: 06222409.D
Acq: 22 Jun 2024 17:32

Tgt Ion:130 Resp: 3550

Ion	Ratio	Lower	Upper
130	100		
132	85.5	77.9	117.9

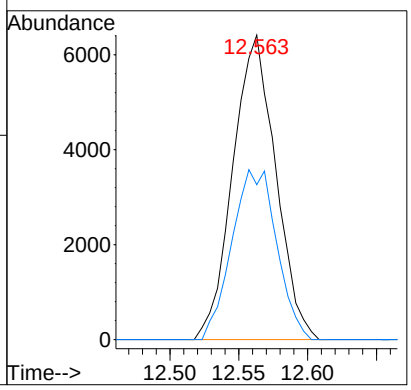


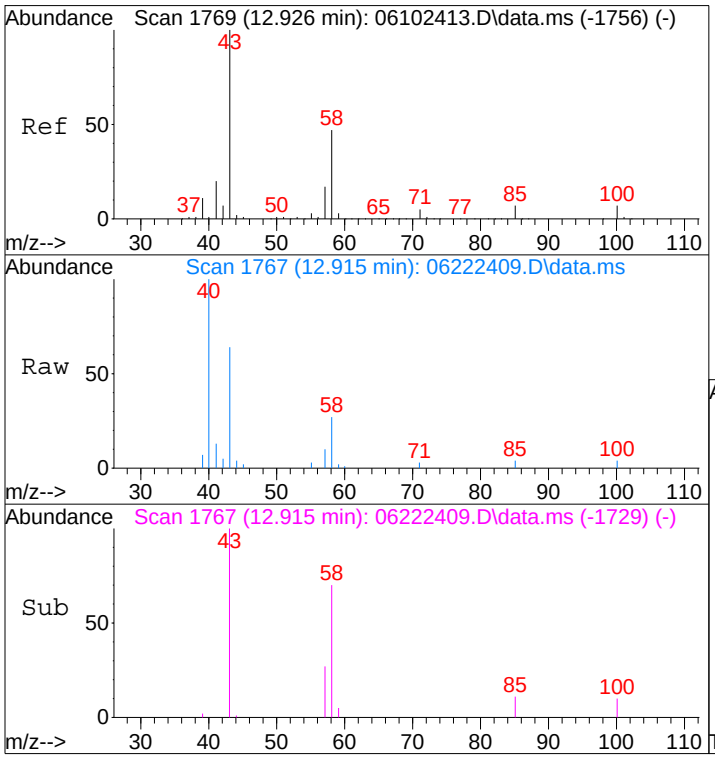


#58
Toluene
Concen: 0.19 ng
RT: 12.56 min Scan# 1705
Delta R.T. -0.028 min
Lab File: 06222409.D
Acq: 22 Jun 2024 17:32

Tgt Ion: 91 Resp: 13884

Ion	Ratio	Lower	Upper
91	100		
92	58.3	37.4	77.4

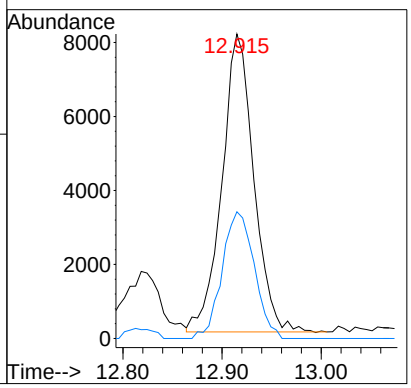


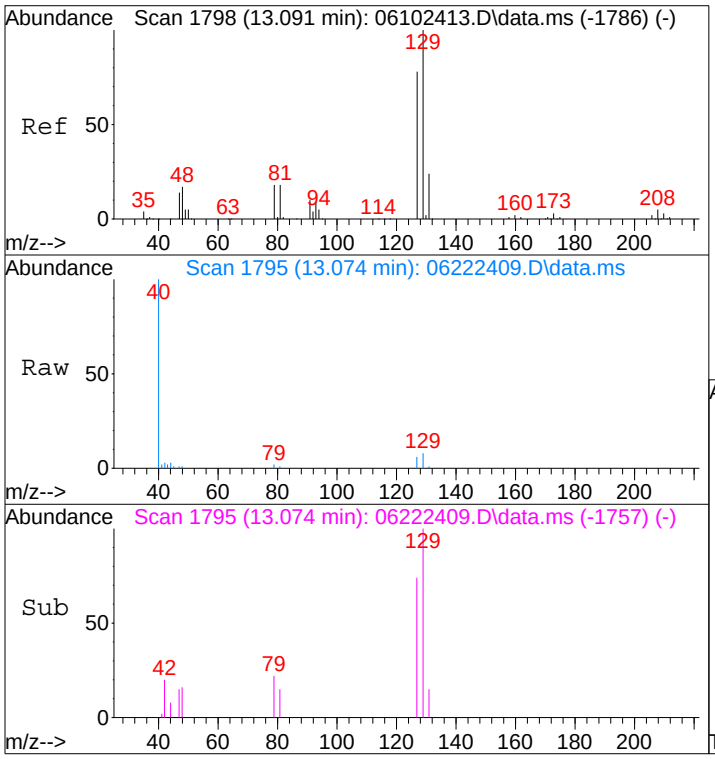


#59
2-Hexanone
Concen: 0.40 ng
RT: 12.92 min Scan# 1767
Delta R.T. -0.034 min
Lab File: 06222409.D
Acq: 22 Jun 2024 17:32

Tgt Ion: 43 Resp: 17981

Ion	Ratio	Lower	Upper
43	100		
58	42.9	25.9	65.9

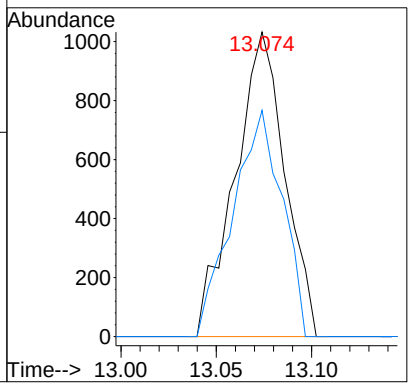


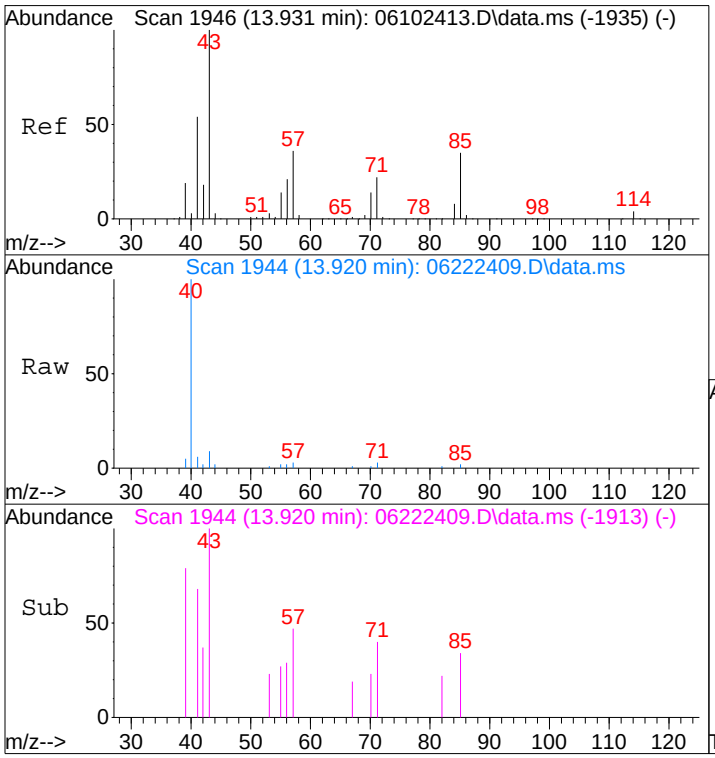


#60
Dibromochloromethane
Concen: 0.08 ng
RT: 13.07 min Scan# 1795
Delta R.T. -0.034 min
Lab File: 06222409.D
Acq: 22 Jun 2024 17:32

Tgt Ion:129 Resp: 1876

Ion	Ratio	Lower	Upper
129	100		
127	73.6	58.1	98.1

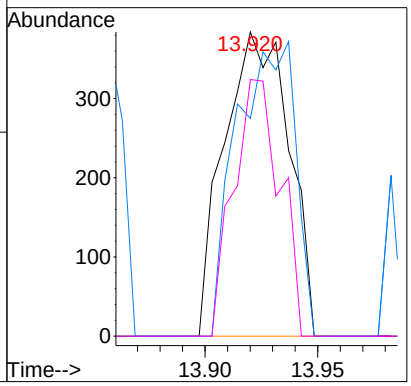


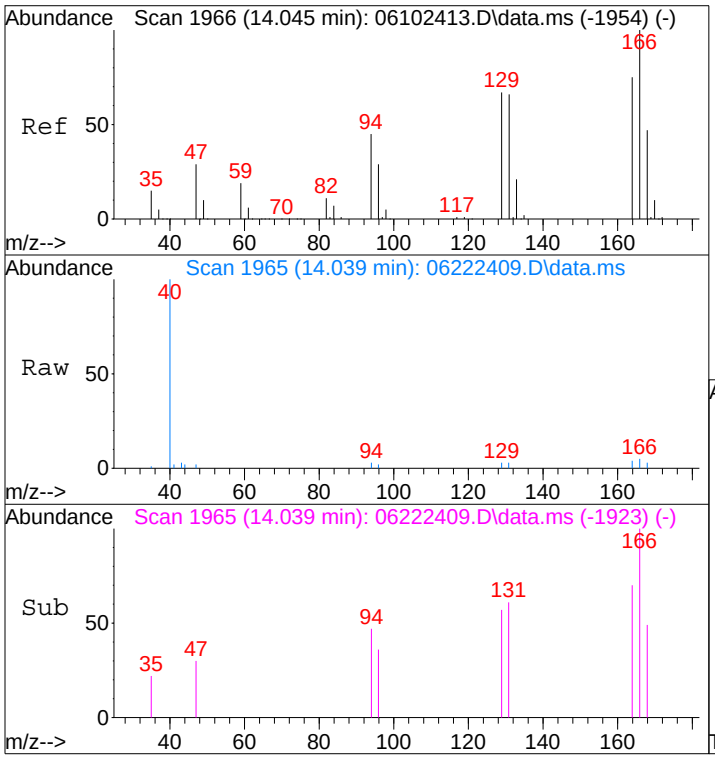


#63
n-Octane
Concen: 0.05 ng
RT: 13.92 min Scan# 1944
Delta R.T. -0.023 min
Lab File: 06222409.D
Acq: 22 Jun 2024 17:32

Tgt Ion: 57 Resp: 770

Ion	Ratio	Lower	Upper
57	100		
85	87.7	79.8	119.6
71	60.9	49.0	73.4

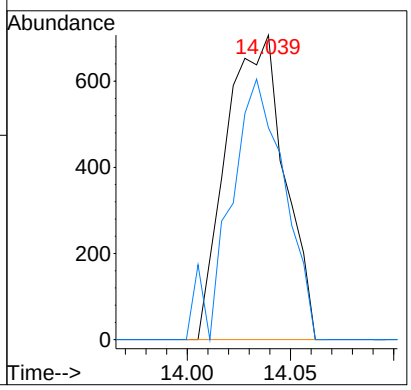


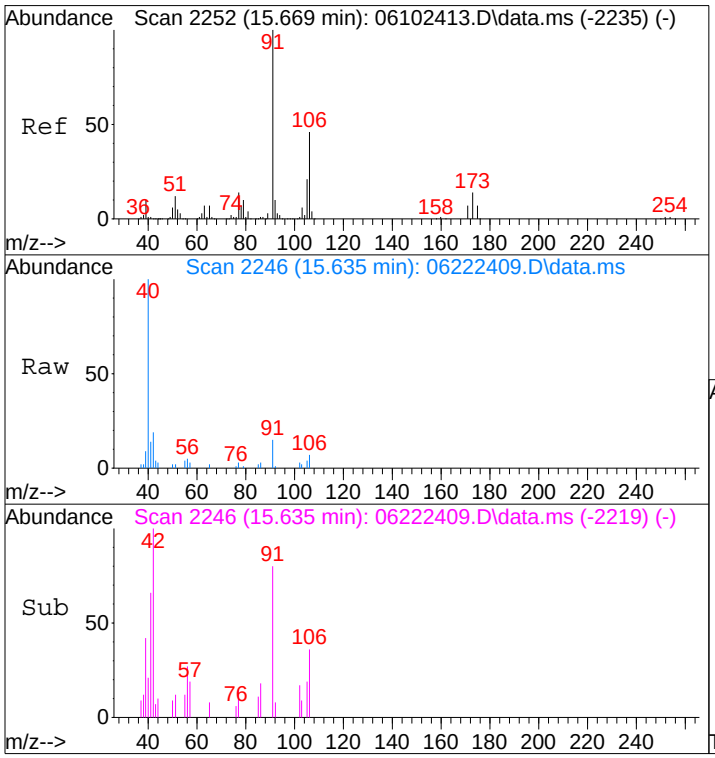


#64
Tetrachloroethene
Concen: 0.06 ng
RT: 14.04 min Scan# 1965
Delta R.T. -0.011 min
Lab File: 06222409.D
Acq: 22 Jun 2024 17:32

Tgt Ion:166 Resp: 1390

Ion	Ratio	Lower	Upper
166	100		
164	80.0	56.9	96.9

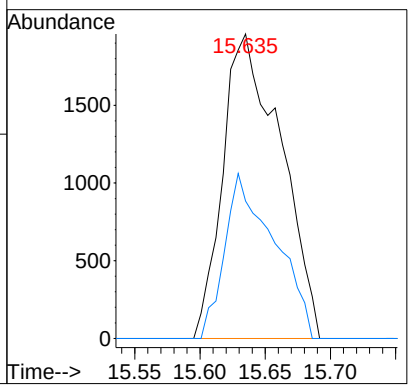


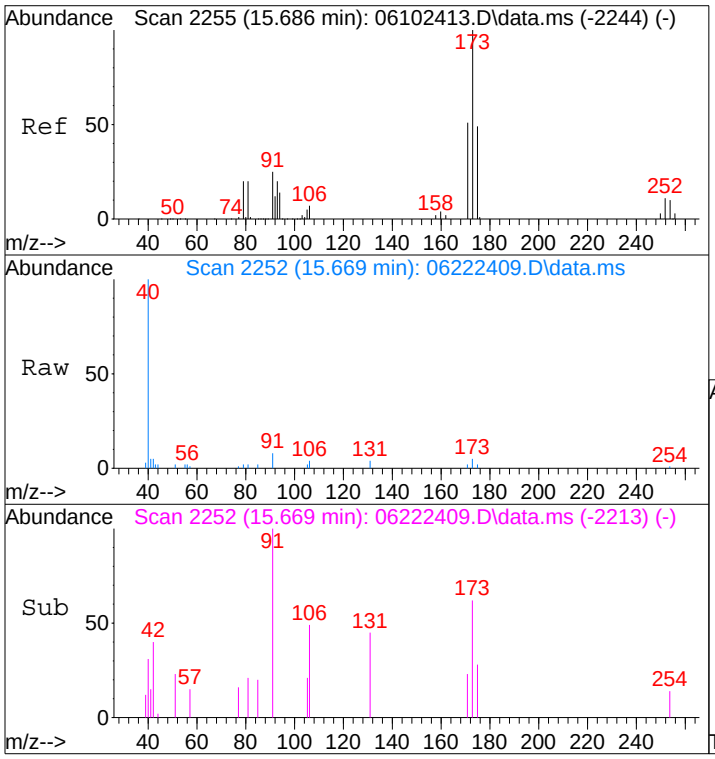


#67
m- & p-Xylenes
Concen: 0.09 ng
RT: 15.63 min Scan# 2246
Delta R.T. -0.046 min
Lab File: 06222409.D
Acq: 22 Jun 2024 17:32

Tgt Ion: 91 Resp: 6047

Ion	Ratio	Lower	Upper
91	100		
106	46.4	25.9	65.9

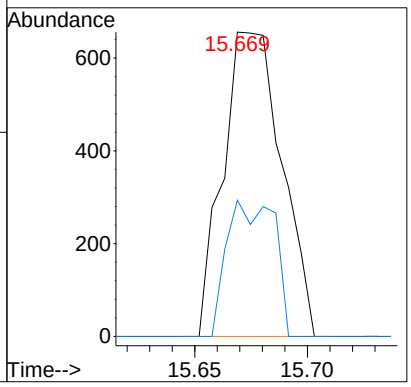


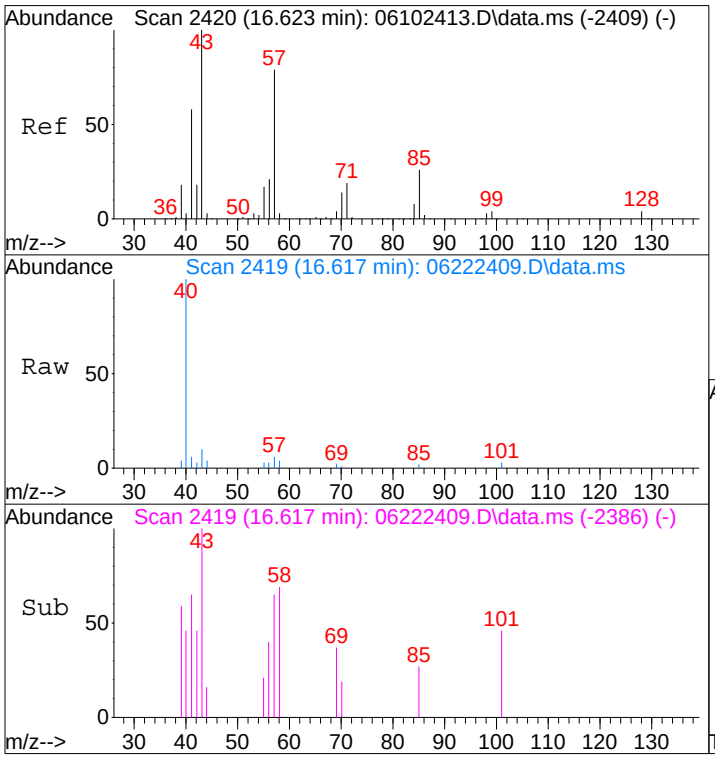


#68
Bromoform
Concen: 0.05 ng
RT: 15.67 min Scan# 2252
Delta R.T. -0.028 min
Lab File: 06222409.D
Acq: 22 Jun 2024 17:32

Tgt Ion:173 Resp: 1190

Ion	Ratio	Lower	Upper
173	100		
175	36.3	29.5	69.5

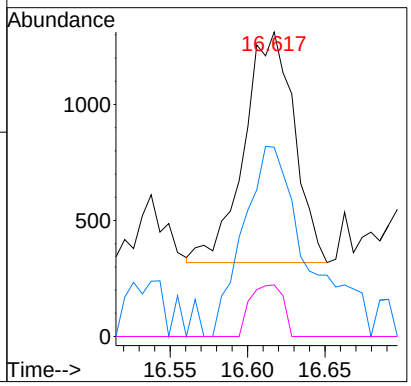




#71
n-Nonane
Concen: 0.06 ng
RT: 16.62 min Scan# 2419
Delta R.T. -0.011 min
Lab File: 06222409.D
Acq: 22 Jun 2024 17:32

Tgt Ion: 43 Resp: 2231

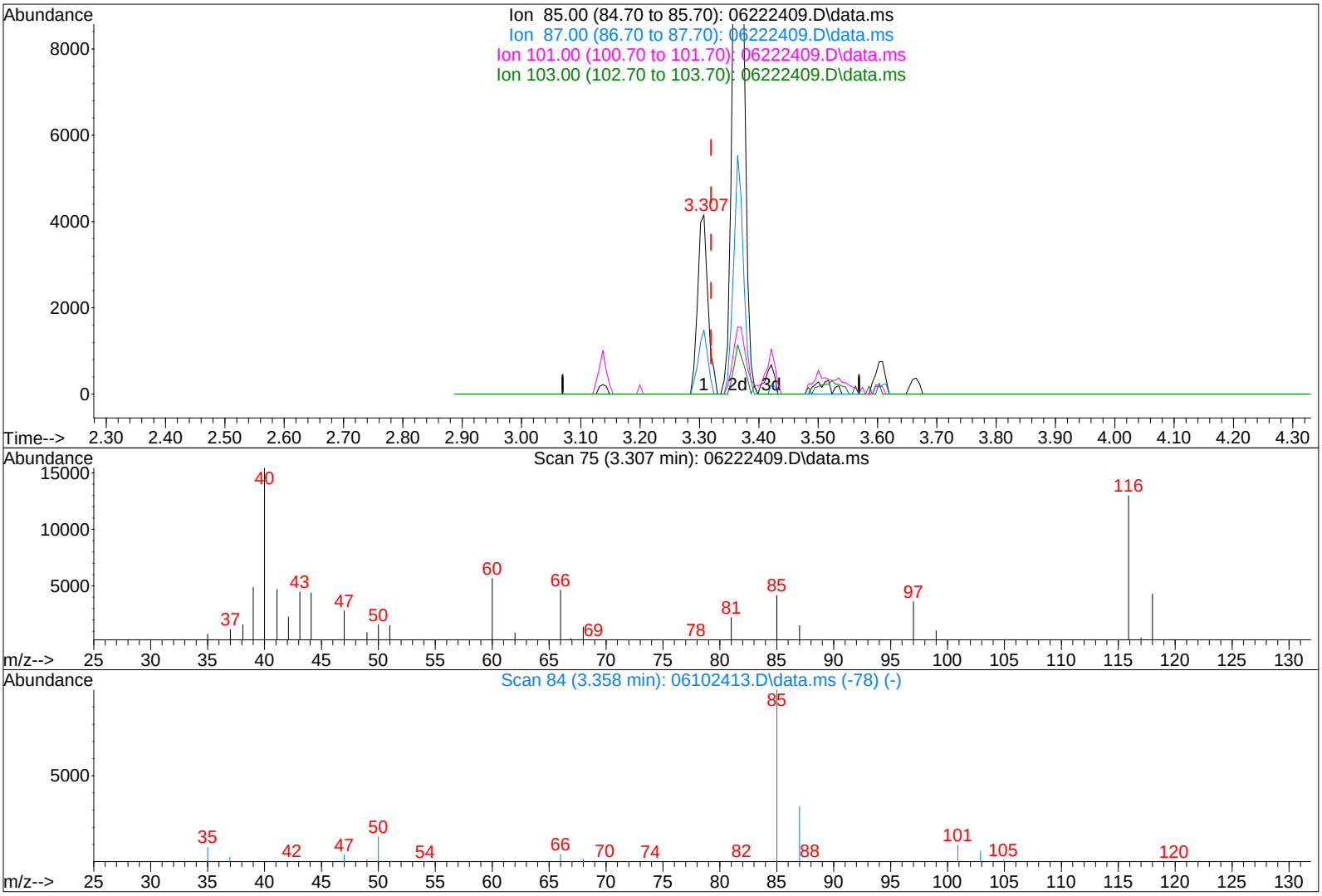
Ion	Ratio	Lower	Upper
43	100		
57	105.7	58.2	98.2#
85	14.8	5.9	45.9



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\22\06222409.D Vial: 12
Acq On : 22 Jun 2024 17:32 Operator: MC/MJ
Sample : P2402249-062 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 13:53:40 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06222409.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.307min (-0.012) 0.13ng

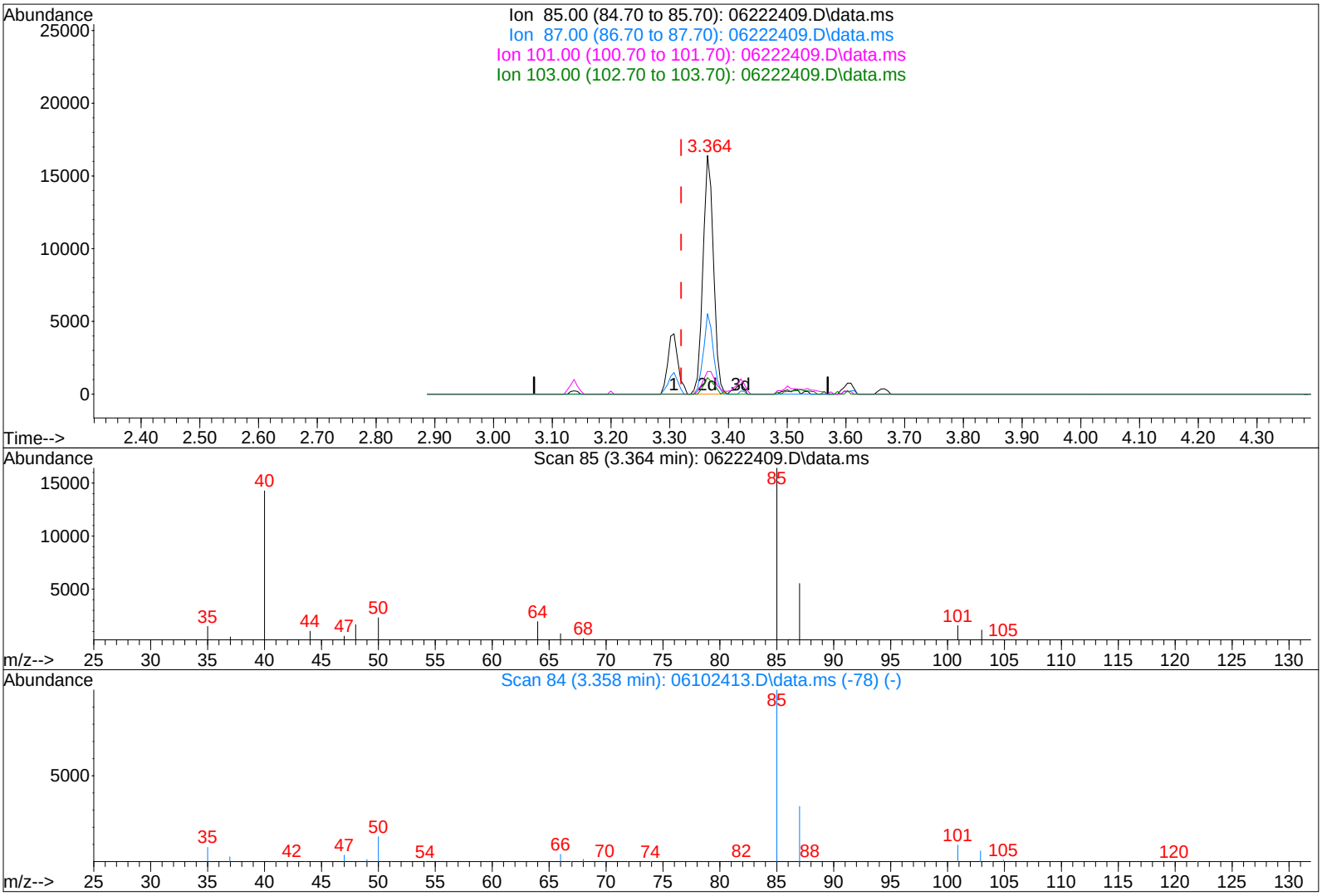
response 5006

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	33.38
101.00	9.80	0.00
103.00	6.30	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\22\06222409.D Vial: 12
Acq On : 22 Jun 2024 17:32 Operator: MC/MJ
Sample : P2402249-062 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 13:53:40 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06222409.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.364min (+0.045) 0.52ng m

response 20240

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	31.99
101.00	9.80	12.29
103.00	6.30	6.65

MJ 6/29/24

WP

CG 6/29/24

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222409.D Vial: 12
Acq On : 22 Jun 2024 17:32 Operator: MC/MJ
Sample : P2402249-062 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 16:46:17 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

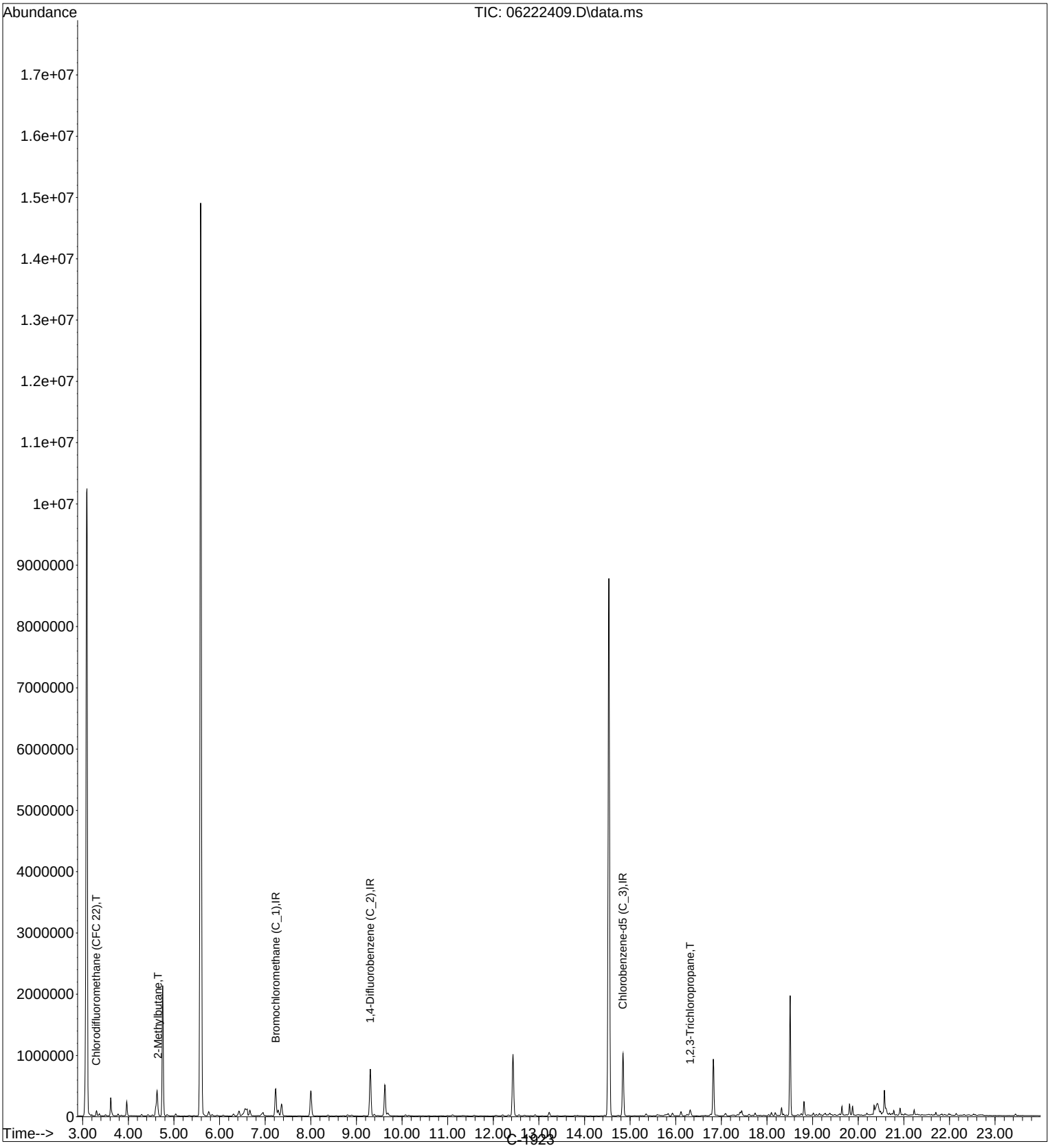
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	164963	12.500 ng		-0.02
16) 1,4-Difluorobenzene (C 2)	9.30	114	719071	12.500 ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	178304	12.500 ng		-0.01
Target Compounds						Qvalue
2) Chloropentafluoroethane	3.14	85	197	N.D.		
3) 1,1,1,2-Tetrafluoroeth...	3.19	83	1401	N.D.		
4) 1,1-Difluoroethane	3.24	65	213	N.D.		
5) Chlorodifluoromethane ...	3.30	67	1501	0.267 ng		95
6) 1-Chloro-1,1-Difluoroe...	3.50	65	477	N.D.		
7) Dichlorofluoromethane ...	4.23	67	1055	N.D.		
8) Vinylbromide	0.00	108	0	N.D.		
9) 2,2-Dichloro-1,1,1-tri...	4.56	83	1288	N.D.		
10) 2-Methylbutane	4.65	57	15140	0.769 ng	#	33
11) Methyl Acetate	5.33	43	4697	N.D.		
12) 2-Methylpentane	6.49	71	347	N.D.		
13) 2,2-Dichloropropane	0.00	77	0	N.D.		
14) 1,1-Dichloropropene	0.00	75	0	N.D.		
15) Thiophene	8.99	84	53	N.D.		
17) 2,3-Dimethylpentane	9.53	56	188	N.D.		
18) Dibromomethane	9.79	174	95	N.D.		
20) Methyl Cyclohexane	11.41	55	378	N.D.		
21) 1,3-Dichloropropane	0.00	76	0	N.D.		
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		
23) 1-Chlorohexane	15.20	91	248	N.D.		
24) 1,2,3-Trichloropropane	16.32	75	4961	0.208 ng	#	46
25) Bromobenzene	17.10	77	182	N.D.		
26) 2-Chlorotoluene	17.61	91	1110	N.D.		
27) 4-Chlorotoluene	17.61	91	1110	N.D.		
28) Indane	19.12	117	425	N.D.		
29) Indene	0.00	115	0	N.D.		
30) 1,2,4,5-Tetramethylben...	20.22	119	694	N.D.		
31) 1,2,3,4-Tetramethylben...	20.22	119	694	N.D.		
32) 1,2,3,5-Tetramethylben...	20.57	119	2453	N.D.		
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222409.D Vial: 12
Acq On : 22 Jun 2024 17:32 Operator: MC/MJ
Sample : P2402249-062 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 16:46:17 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



C-1923

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242413.D Vial: 5
Acq On : 24 Jun 2024 14:13 Operator: SC
Sample : P2402249-062Dil (40mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 24 14:43:50 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/24/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	180603	12.500	ng		-0.05
37) 1,4-Difluorobenzene (IS2)	9.30	114	788510	12.500	ng		-0.03
56) Chlorobenzene-d5 (IS3)	14.84	54	178311	12.500	ng		-0.01
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	386976	12.056	ng		-0.04
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.48%				
57) Toluene-d8 (SS2)	12.43	98	880146	12.899	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.20%				
73) Bromofluorobenzene (SS3)	16.83	174	302716	12.286	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.32%				
Target Compounds							Qvalue
2) Propene	3.32	42	884	N.D.			
3) Dichlorodifluoromethan...	3.34	85	481	N.D.			
4) Chloromethane	3.53	50	1142	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.38	45	63	N.D.			
11) Acetonitrile	4.51	41	55	N.D.			
12) Acrolein	4.54	56	942	0.072	ng		96
13) Acetone	4.64	58	16311	1.163	ng	#	64
14) Trichlorofluoromethane	4.76	101	147709	3.435	ng		98
15) 2-Propanol (Isopropanol)	4.86	45	1583	N.D.			
16) Acrylonitrile	4.99	53	693	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.35	59	178	N.D.			
19) Methylene Chloride	5.35	84	1036	0.052	ng		92
20) 3-Chloro-1-propene (Al...	5.45	41	176	N.D.			
21) Trichlorotrifluoroethane	5.58	151	477385	26.246	ng		97
22) Carbon Disulfide	5.60	76	9415	0.147	ng	#	1
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D.	d		
27) 2-Butanone (MEK)	6.68	72	1870	0.168	ng	#	51
28) cis-1,2-Dichloroethene	7.07	61	202	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.	d		
30) Ethyl Acetate	7.30	61	1360	0.201	ng		92
31) n-Hexane	0.00	57	0	N.D.			
32) Chloroform	7.35	83	14787	0.418	ng		98
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.10	62	126	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.82	56	1107	No Calib		#	
41) Benzene	8.90	78	2166	N.D.			
42) Carbon Tetrachloride	0.00	117	0	N.D.			
43) Cyclohexane	9.29	84	873	N.D.			
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.07	83	1651	0.056	ng		95
47) Trichloroethene	10.14	130	491	N.D.			
48) 1,4-Dioxane	10.14	88	117	N.D.			
49) 2,2,4-Trimethylpentane...	0.00	57	0	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242413.D Vial: 5
Acq On : 24 Jun 2024 14:13 Operator: SC
Sample : P2402249-062Dil (40mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 24 14:43:50 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

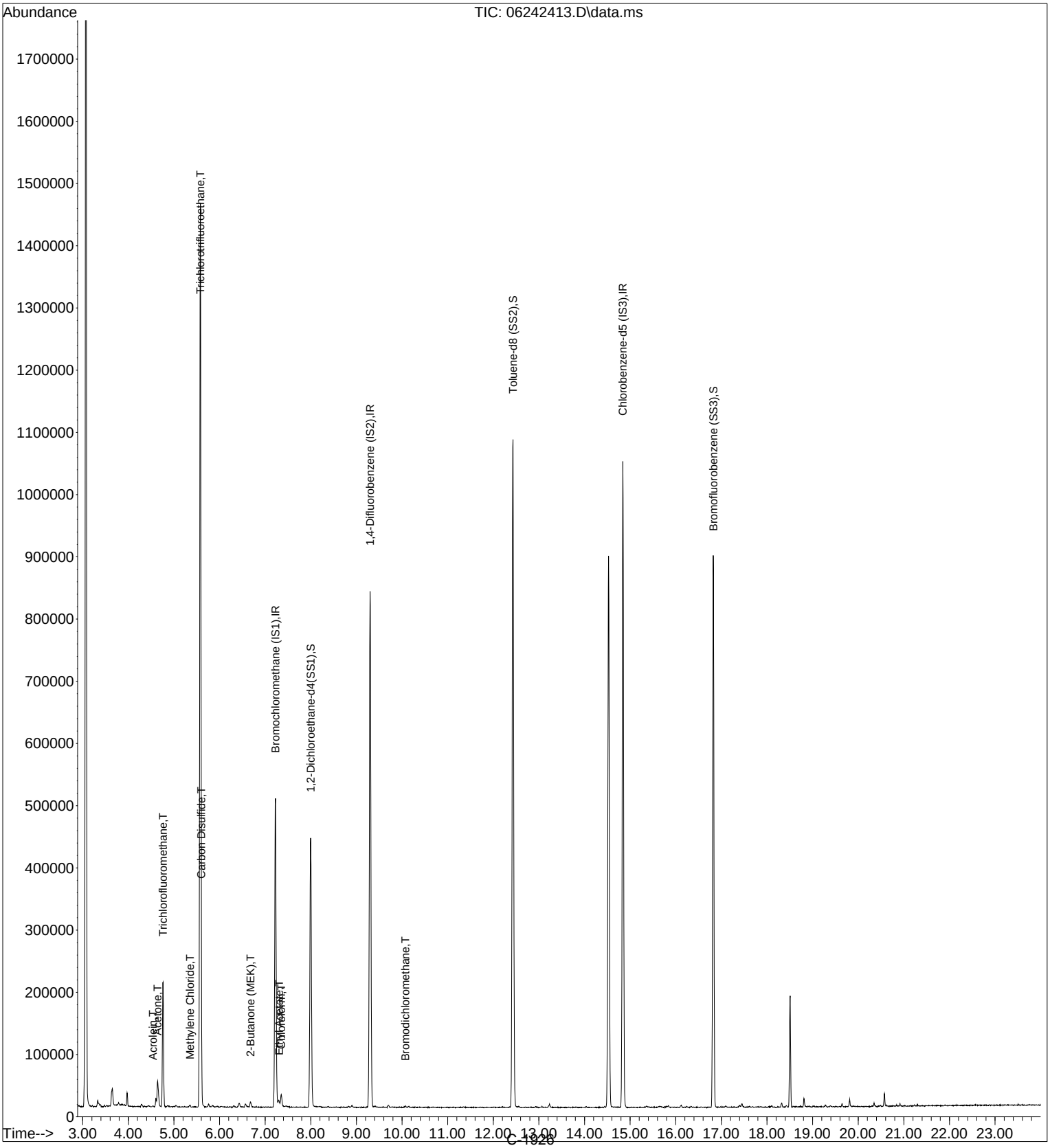
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	0.00	71	0	N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
58) Toluene	12.56	91	2111	N.D.	
59) 2-Hexanone	12.93	43	1516	N.D.	
60) Dibromochloromethane	13.07	129	799	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	0.00	43	0	N.D.	
63) n-Octane	0.00	57	0	N.D.	
64) Tetrachloroethene	14.03	166	504	N.D.	
65) Chlorobenzene	14.90	112	669	N.D.	
66) Ethylbenzene	15.41	91	980	N.D.	
67) m- & p-Xylenes	15.63	91	1426	N.D.	
68) Bromoform	15.67	173	734	N.D.	
69) Styrene	0.00	104	0	N.D.	
70) o-Xylene	16.24	91	948	N.D.	
71) n-Nonane	0.00	43	0	N.D.	
72) 1,1,2,2-Tetrachloroethane	16.22	83	410	N.D.	
74) Cumene	17.03	105	909	N.D.	
75) alpha-Pinene	0.00	93	0	N.D.	
76) n-Propylbenzene	17.68	91	1258	N.D.	
77) 3-Ethyltoluene	17.03	105	909	No Calib	
78) 4-Ethyltoluene	17.86	105	877	N.D.	
79) 1,3,5-Trimethylbenzene	17.96	105	543	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.03	105	909	No Calib	
82) 1,2,4-Trimethylbenzene	18.43	105	699	N.D.	
83) n-Decane	17.09	58	715	No Calib	#
84) Benzyl Chloride	0.00	91	0	N.D.	
85) 1,3-Dichlorobenzene	18.58	146	668	N.D.	
86) 1,4-Dichlorobenzene	18.65	146	548	N.D.	
87) sec-Butylbenzene	18.74	105	1212	N.D.	
88) 4-Isopropyltoluene (p-...	18.93	119	1015	N.D.	
89) 1,2,3-Trimethylbenzene	17.03	105	909	No Calib	
90) 1,2-Dichlorobenzene	19.03	146	509	N.D.	
91) d-Limonene	0.00	68	0	N.D.	
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	804	N.D.	
95) Naphthalene	20.94	128	658	N.D.	
96) n-Dodecane	0.00	58	0	N.D.	
97) Hexachlorobutadiene	21.30	225	793	N.D.	
98) Cyclohexanone	15.36	55	633	No Calib	#
99) tert-Butylbenzene	0.00	119	0	N.D.	d
100) n-Butylbenzene	19.39	91	920	N.D.	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242413.D Vial: 5
Acq On : 24 Jun 2024 14:13 Operator: SC
Sample : P2402249-062Dil (40mL) Inst : MS09
Misc : S37-06062402

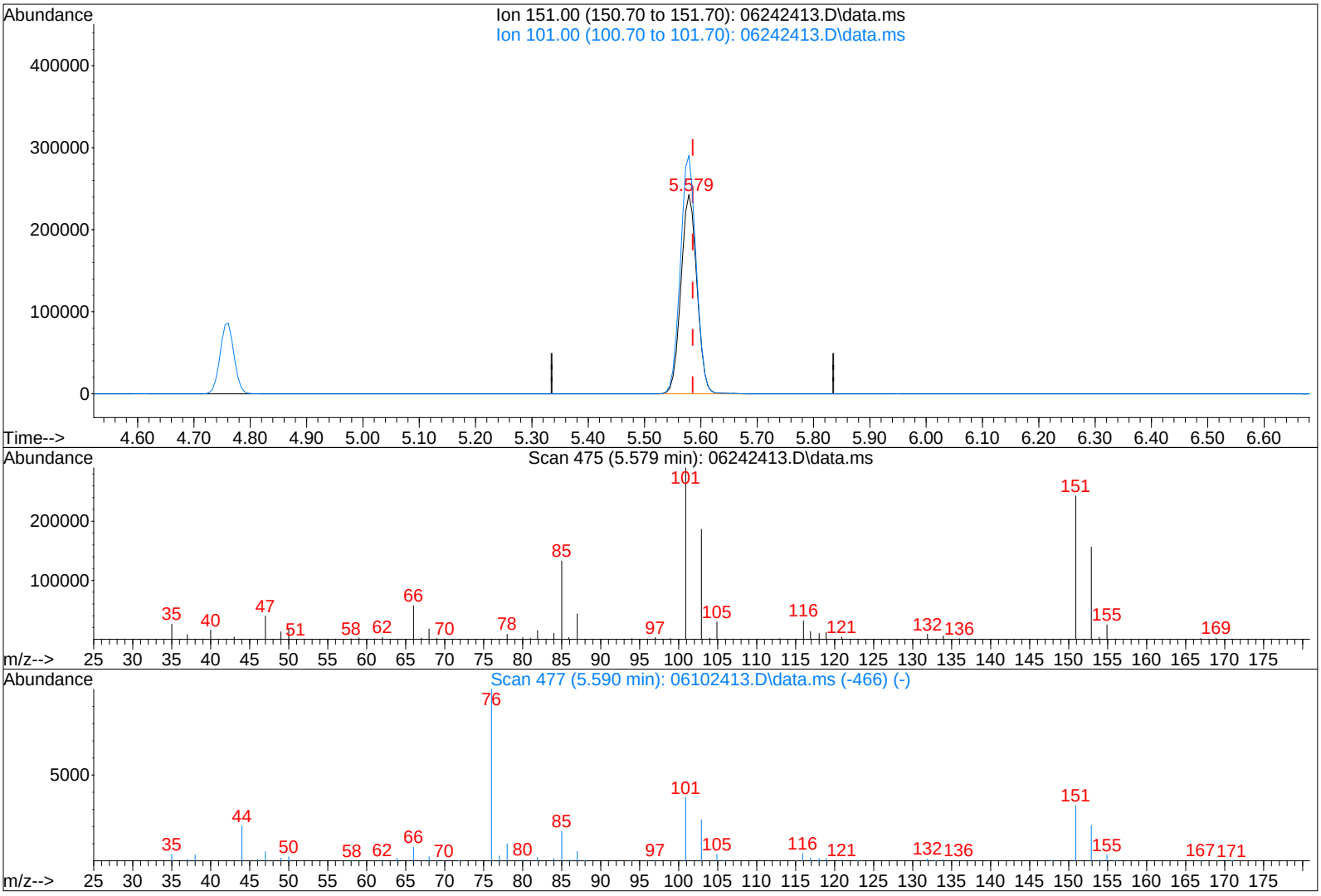
Quant Time: Jun 24 14:43:50 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\24\06242413.D Vial: 5
Acq On : 24 Jun 2024 14:13 Operator: SC
Sample : P2402249-062Dil (40mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 24 14:43:02 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06242413.D\data.ms

(21) Trichlorotrifluoroethane (T)

5.579min (-0.007) 26.25ng

response 477385

Ion	Exp%	Act%
151.00	100	100
101.00	115.00	118.77
0.00	0.00	0.00
0.00	0.00	0.00

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\22\
Data File : 06222409.D
Acq On : 22 Jun 2024 17:32
Operator : MC/MJ
Sample : P2402249-062 (400mL)
Misc : S37-06062402
ALS Vial : 12 Sample Multiplier: 1

MJ 6/28/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06222409.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.092	17	37	53	rBV	10238983	21902211	69.07%	32.749%
2	3.200	53	56	61	rVB	18283	20668	0.07%	0.031%
3	3.302	68	74	79	rBV4	83718	135070	0.43%	0.202%
4	3.364	82	85	91	rVB	33946	43997	0.14%	0.066%
5	3.501	104	109	117	rBV4	17896	32429	0.10%	0.048%
6	3.614	123	129	147	rBV	296049	483752	1.53%	0.723%
7	3.773	152	157	163	rVV	28242	40091	0.13%	0.060%
8	3.847	166	170	177	rVB2	8463	12229	0.04%	0.018%
9	3.966	186	191	198	rVB	233382	333655	1.05%	0.499%
10	4.290	241	248	258	rVB	22831	43433	0.14%	0.065%
11	4.432	265	273	281	rBV	19236	41471	0.13%	0.062%
12	4.528	284	290	295	rVV2	15406	31066	0.10%	0.046%
13	4.630	295	308	321	rVV2	411079	1062410	3.35%	1.589%
14	4.750	321	329	342	rVV	2123263	3813807	12.03%	5.703%
15	4.852	342	347	357	rVB3	20590	47113	0.15%	0.070%
16	5.039	374	380	393	rVB	32426	56546	0.18%	0.085%
17	5.340	427	433	439	rVB7	9039	19379	0.06%	0.029%
18	5.437	445	450	457	rBV4	6967	13506	0.04%	0.020%
19	5.584	464	476	498	rBV	14896479	31710177	100.00%	47.414%
20	5.760	500	507	515	rVV	69369	152477	0.48%	0.228%
21	5.840	515	521	531	rVV2	21262	49101	0.15%	0.073%
22	5.954	531	541	549	rVB5	11931	33601	0.11%	0.050%
23	6.078	558	563	571	rVB3	12696	24476	0.08%	0.037%
24	6.306	594	603	610	rBV2	32348	69928	0.22%	0.105%
25	6.425	612	624	631	rBV	79639	190379	0.60%	0.285%
26	6.561	631	648	653	rBV2	113589	428347	1.35%	0.640%
27	6.663	660	666	681	rVB	89786	186292	0.59%	0.279%
28	6.953	703	717	730	rVB2	54641	166630	0.53%	0.249%
29	7.140	744	750	756	rVB5	6261	12790	0.04%	0.019%
30	7.231	756	766	772	rBV	442673	1002257	3.16%	1.499%
31	7.282	772	775	781	rVV	92690	181766	0.57%	0.272%
32	7.356	781	788	800	rVB	193033	431273	1.36%	0.645%
33	7.998	891	901	918	rBV	407146	956110	3.02%	1.430%
34	8.372	961	967	975	rVB2	14017	29433	0.09%	0.044%
35	8.713	1020	1027	1034	rVB5	6236	15357	0.05%	0.023%
36	8.810	1037	1044	1050	rVV3	17557	44680	0.14%	0.067%
37	8.895	1052	1059	1067	rVB8	13541	39387	0.12%	0.059%
38	9.167	1100	1107	1113	rBV4	6705	15699	0.05%	0.023%
39	9.304	1120	1131	1141	rBV	765604	1738286	5.48%	2.599%
40	9.389	1141	1146	1153	rVV	23504	48982	0.15%	0.073%

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\22\
Data File : 06222409.D
Acq On : 22 Jun 2024 17:32
Operator : MC/MJ
Sample : P2402249-062 (400mL)
Misc : S37-06062402
ALS Vial : 12 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

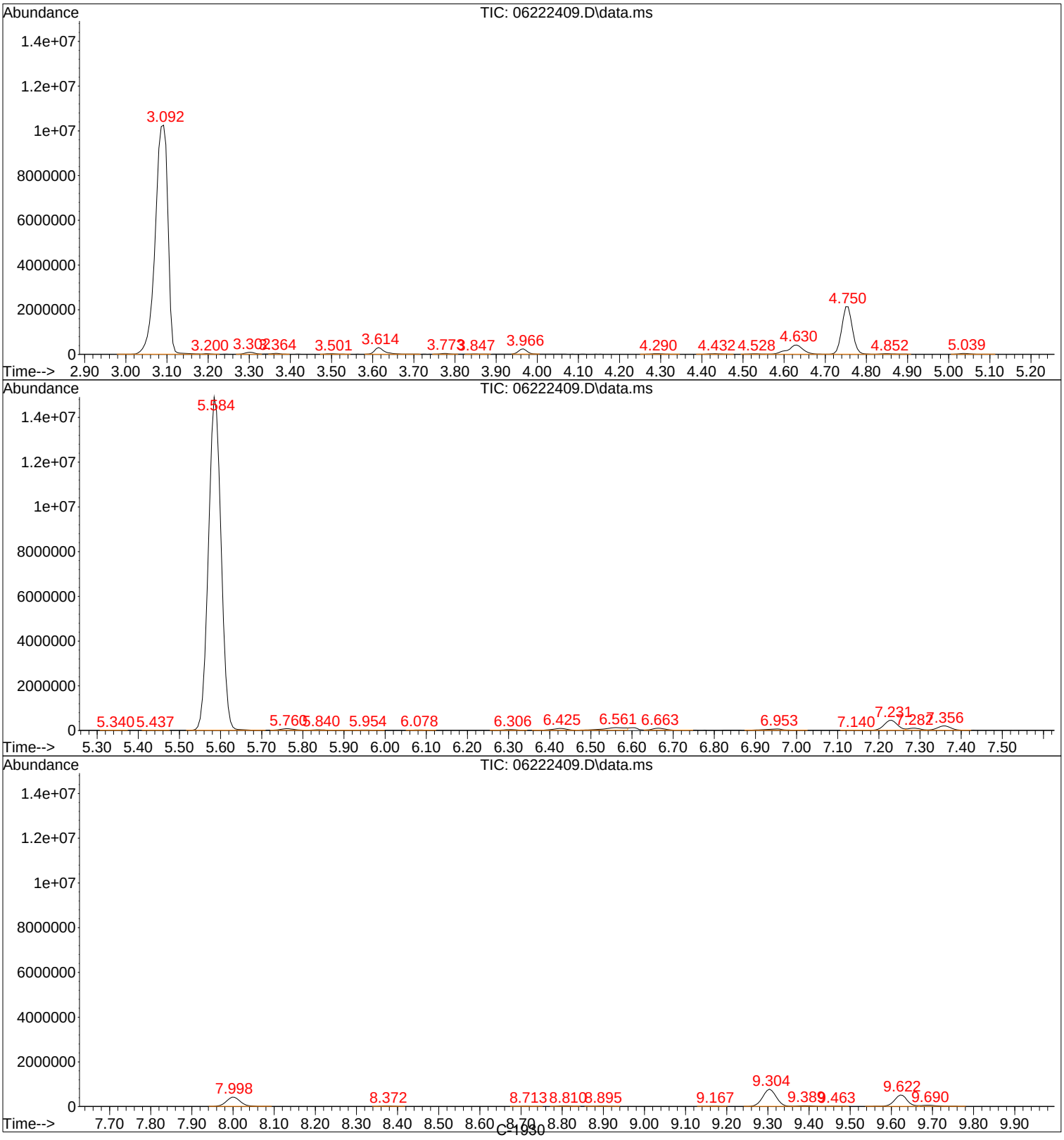
41	9.463	1153	1159	1165	rVV4	4906	11655	0.04%	0.017%
42	9.622	1172	1187	1195	rBV	503247	1092771	3.45%	1.634%
43	9.690	1195	1199	1215	rVB3	45975	113994	0.36%	0.170%

Sum of corrected areas: 66878681

Data Path : I:\MS09\DATA\2024 06\22\
Data File : 06222409.D
Acq On : 22 Jun 2024 17:32
Operator : MC/MJ
Sample : P2402249-062 (400mL)
Misc : S37-06062402
ALS Vial : 12 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\22\\
Data File : 06222409.D
Acq On : 22 Jun 2024 17:322
Operator : MC/MJJ
Sample : P2402249-062 (400mL))
Misc : S37-060624022
ALS Vial : 12 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\24\06242407.D Vial: 1
Acq On : 24 Jun 2024 10:50 Operator: SC
Sample : P2402249-063 (2.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:20:50 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.22	130	211503	12.500	ng		-0.06
37) 1,4-Difluorobenzene (IS2)	9.30	114	924695	12.500	ng		-0.03
56) Chlorobenzene-d5 (IS3)	14.84	54	207327	12.500	ng		-0.01
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	446446	11.876	ng		-0.04
Spiked Amount 12.500	Range 70 - 130		Recovery = 95.04%				
57) Toluene-d8 (SS2)	12.43	98	1030661	12.991	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.92%				
73) Bromofluorobenzene (SS3)	16.82	174	343661	11.995	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.00%				
Target Compounds							Qvalue
2) Propene	0.00	42	0	N.D.	d		
3) Dichlorodifluoromethan...	3.32	85	4356	0.088	ng	#	89
4) Chloromethane	3.52	50	212	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	3.80	54	227	N.D.			
8) Bromomethane	4.01	94	108	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.41	45	182	N.D.			
11) Acetonitrile	4.45	41	1089	N.D.			
12) Acrolein	4.55	56	393	N.D.			
13) Acetone	4.65	58	5722	0.348	ng	#	79
14) Trichlorofluoromethane	4.75	101	2621109	52.056	ng		100
15) 2-Propanol (Isopropanol)	4.89	45	1549	N.D.			
16) Acrylonitrile	4.99	53	1232	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	0.00	59	0	N.D.			
19) Methylene Chloride	5.35	84	1377	0.059	ng		97
20) 3-Chloro-1-propene (Al...	5.45	41	613	N.D.			
21) Trichlorotrifluoroethane	5.58	151	2669945	125.346	ng		91
22) Carbon Disulfide	5.60	76	1939	N.D.			
23) trans-1,2-Dichloroethene	6.14	61	112	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D.			
27) 2-Butanone (MEK)	6.68	72	475	N.D.			
28) cis-1,2-Dichloroethene	7.07	61	271	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.			
30) Ethyl Acetate	7.30	61	223	N.D.			
31) n-Hexane	7.30	57	646	N.D.			
32) Chloroform	7.35	83	559	N.D.			
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	371	N.D.			
38) 1,1,1-Trichloroethane	8.40	97	592	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.84	56	513	No Calib		#	
41) Benzene	8.89	78	4633	0.054	ng		98
42) Carbon Tetrachloride	0.00	117	0	N.D.			
43) Cyclohexane	9.21	84	120	N.D.			
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.07	83	553	N.D.			
47) Trichloroethene	10.14	130	1190	N.D.			
48) 1,4-Dioxane	10.15	88	469	N.D.			
49) 2,2,4-Trimethylpentane...	10.23	57	2571	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242407.D Vial: 1
Acq On : 24 Jun 2024 10:50 Operator: SC
Sample : P2402249-063 (2.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:20:50 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

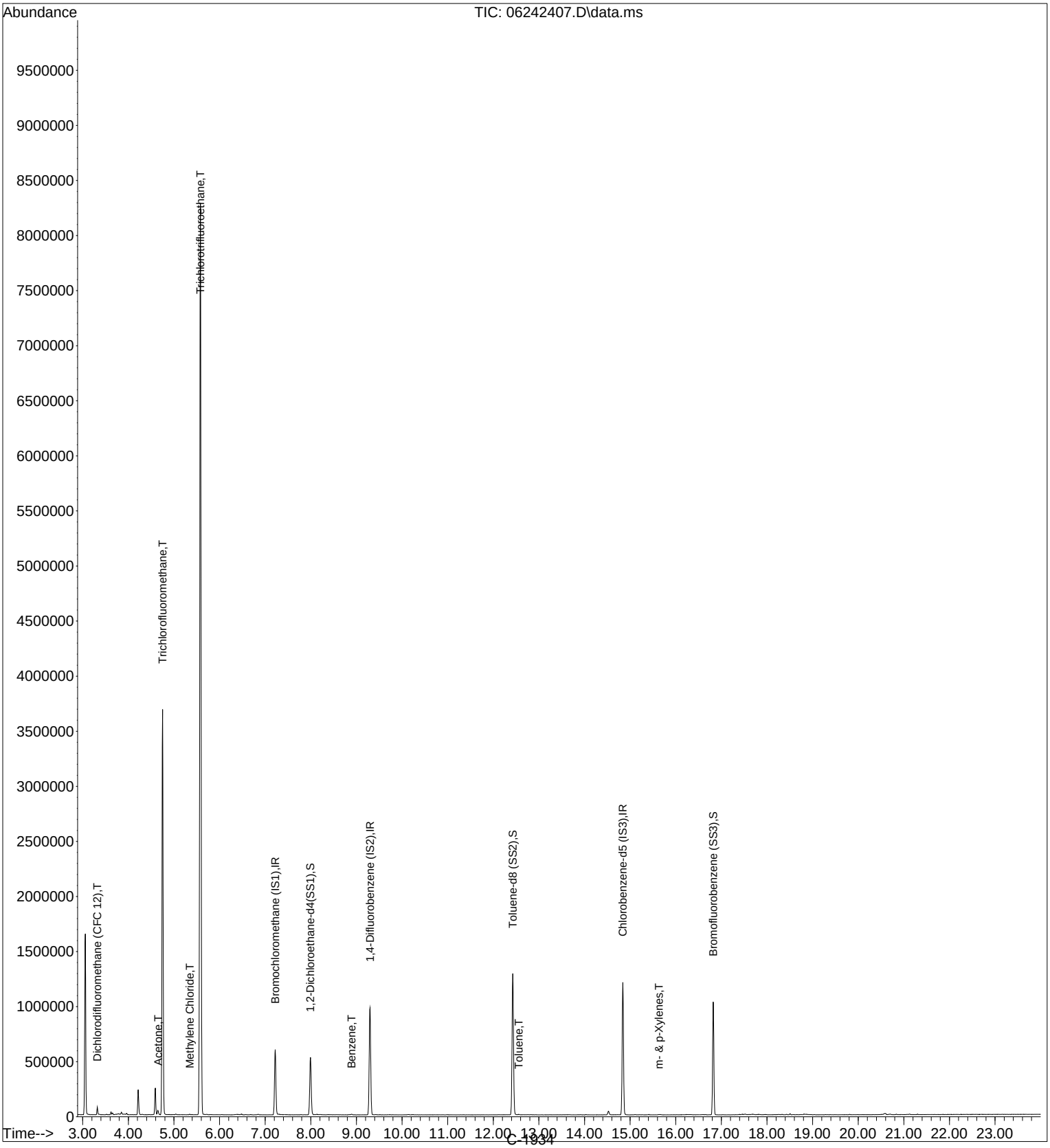
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	0.00	71	0	N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
58) Toluene	12.56	91	4366	0.053 ng	97
59) 2-Hexanone	12.93	43	1584	N.D.	
60) Dibromochloromethane	13.06	129	680	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	13.78	43	312	N.D.	
63) n-Octane	0.00	57	0	N.D.	
64) Tetrachloroethene	14.03	166	1064	N.D.	
65) Chlorobenzene	14.89	112	1037	N.D.	
66) Ethylbenzene	15.40	91	3426	N.D.	
67) m- & p-Xylenes	15.63	91	4126	0.052 ng	93
68) Bromoform	15.67	173	737	N.D.	
69) Styrene	16.10	104	216	N.D.	
70) o-Xylene	16.24	91	1826	N.D.	
71) n-Nonane	16.61	43	383	N.D.	
72) 1,1,2,2-Tetrachloroethane	16.21	83	590	N.D.	
74) Cumene	17.03	105	1510	N.D.	
75) alpha-Pinene	17.52	93	1311	N.D.	
76) n-Propylbenzene	17.68	91	3433	N.D.	
77) 3-Ethyltoluene	17.03	105	1510	No Calib	
78) 4-Ethyltoluene	17.87	105	1807	N.D.	
79) 1,3,5-Trimethylbenzene	0.00	105	0	N.D. d	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.03	105	1510	No Calib	
82) 1,2,4-Trimethylbenzene	18.43	105	1028	N.D.	
83) n-Decane	0.00	58	0	N.D.	
84) Benzyl Chloride	18.56	91	885	N.D.	
85) 1,3-Dichlorobenzene	18.58	146	971	N.D.	
86) 1,4-Dichlorobenzene	18.65	146	1058	N.D.	
87) sec-Butylbenzene	18.74	105	1638	N.D.	
88) 4-Isopropyltoluene (p-...	18.92	119	1331	N.D.	
89) 1,2,3-Trimethylbenzene	17.03	105	1510	No Calib	
90) 1,2-Dichlorobenzene	19.03	146	844	N.D.	
91) d-Limonene	0.00	68	0	N.D.	
92) 1,2-Dibromo-3-Chloropr...	19.51	157	211	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	1649	N.D.	
95) Naphthalene	20.94	128	2006	N.D.	
96) n-Dodecane	0.00	58	0	N.D.	
97) Hexachlorobutadiene	21.30	225	923	N.D.	
98) Cyclohexanone	15.51	55	171	No Calib #	
99) tert-Butylbenzene	18.43	119	1237	N.D.	
100) n-Butylbenzene	19.39	91	1001	N.D.	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242407.D Vial: 1
Acq On : 24 Jun 2024 10:50 Operator: SC
Sample : P2402249-063 (2.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:20:50 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242407.D Vial: 1
Acq On : 24 Jun 2024 10:50 Operator: SC
Sample : P2402249-063 (2.0mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 14:20:50 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

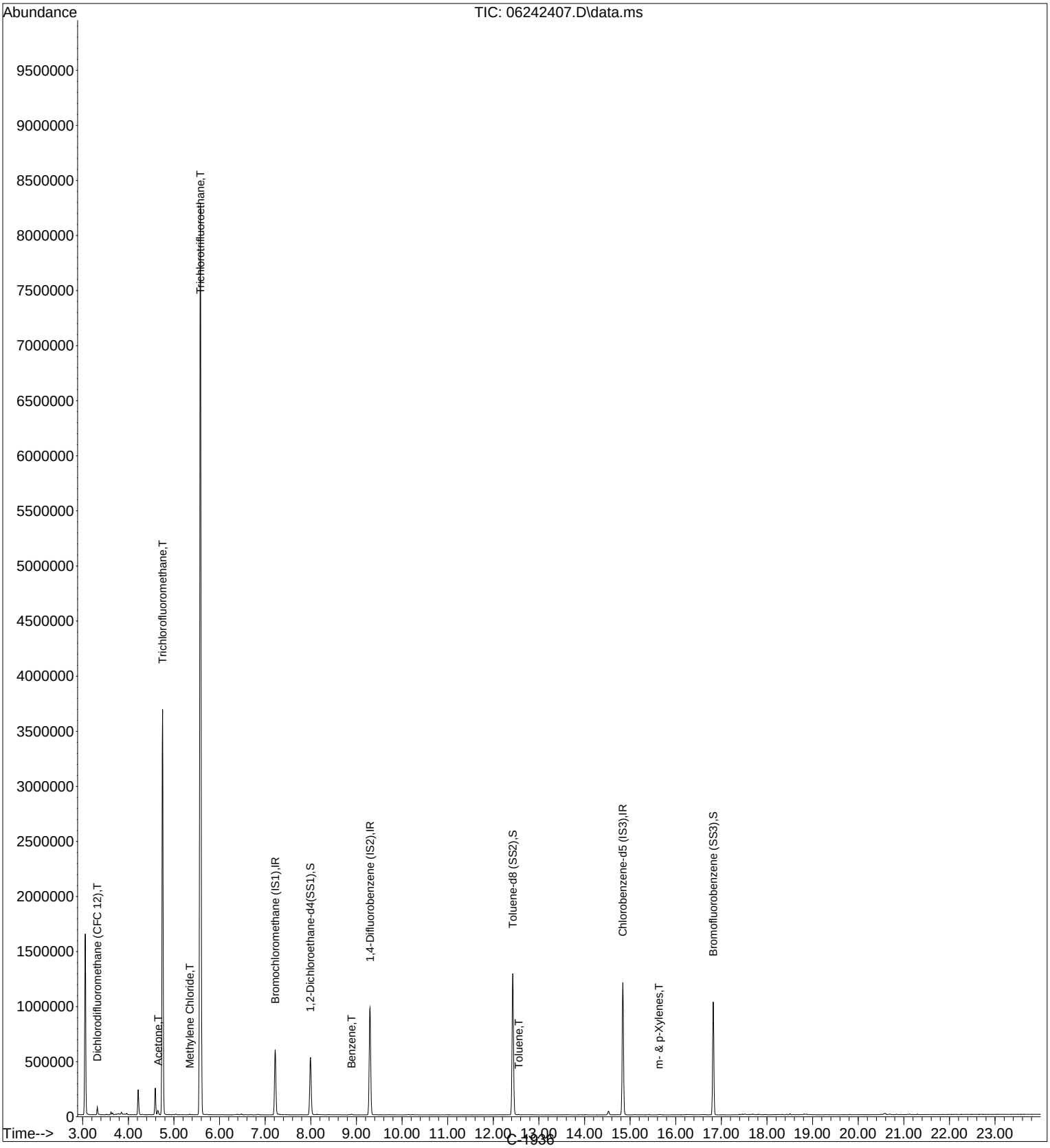
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.22	130	211503	12.500	ng		-0.06
37) 1,4-Difluorobenzene (IS2)	9.30	114	924695	12.500	ng		-0.03
56) Chlorobenzene-d5 (IS3)	14.84	54	207327	12.500	ng		-0.01
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	446446	11.876	ng		-0.04
Spiked Amount 12.500	Range 70 - 130		Recovery = 95.04%				
57) Toluene-d8 (SS2)	12.43	98	1030661	12.991	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.92%				
73) Bromofluorobenzene (SS3)	16.82	174	343661	11.995	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.00%				
Target Compounds							Qvalue
3) Dichlorodifluoromethan...	3.32	85	4356	0.088	ng	#	89
13) Acetone	4.65	58	5722	0.348	ng	#	79
14) Trichlorofluoromethane	4.75	101	2621109	52.056	ng		100
19) Methylene Chloride	5.35	84	1377	0.059	ng		97
21) Trichlorotrifluoroethane	5.58	151	2669945	125.346	ng		91
41) Benzene	8.89	78	4633	0.054	ng		98
58) Toluene	12.56	91	4366	0.053	ng		97
67) m- & p-Xylenes	15.63	91	4126	0.052	ng		93

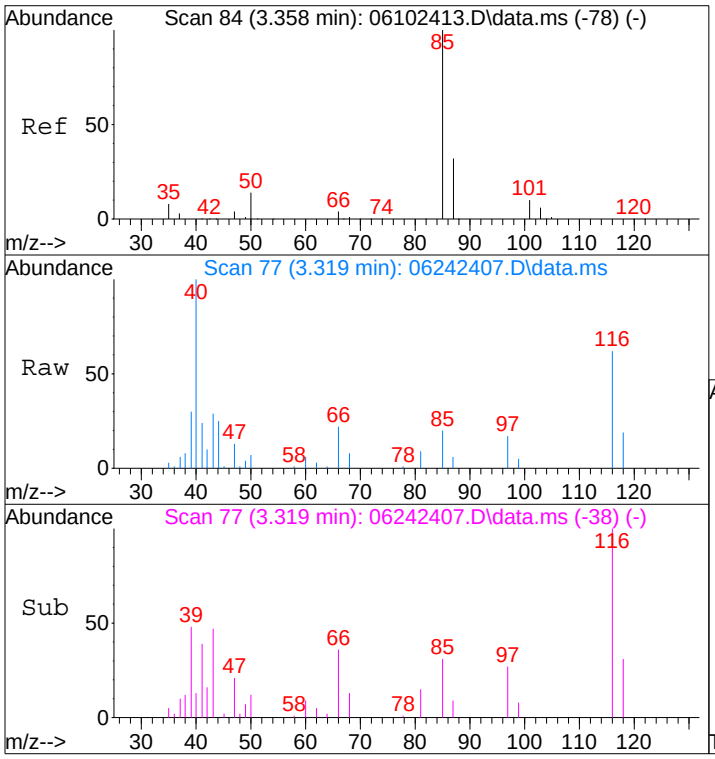
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242407.D Vial: 1
Acq On : 24 Jun 2024 10:50 Operator: SC
Sample : P2402249-063 (2.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:20:50 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

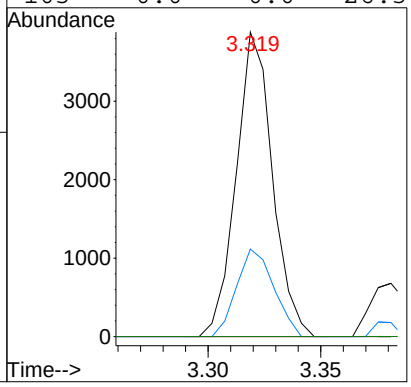


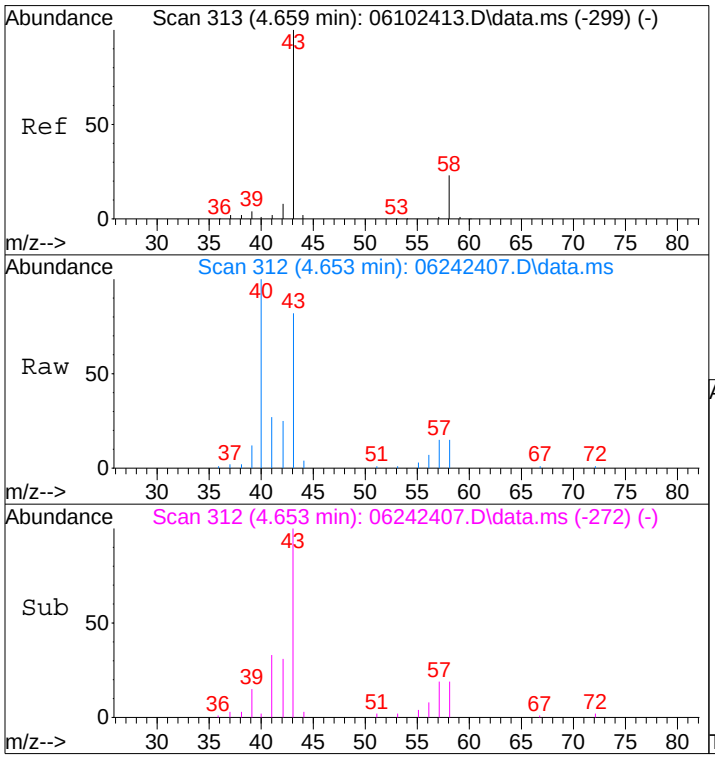


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.09 ng
RT: 3.32 min Scan# 77
Delta R.T. -0.027 min
Lab File: 06242407.D
Acq: 24 Jun 2024 10:50

Tgt Ion: 85 Resp: 4356

Ion	Ratio	Lower	Upper
85	100		
87	29.5	12.2	52.2
101	0.0	0.0	29.8
103	0.0	0.0	26.3

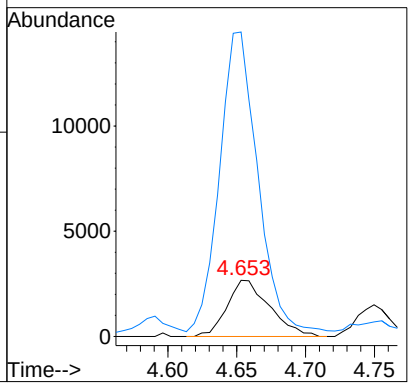


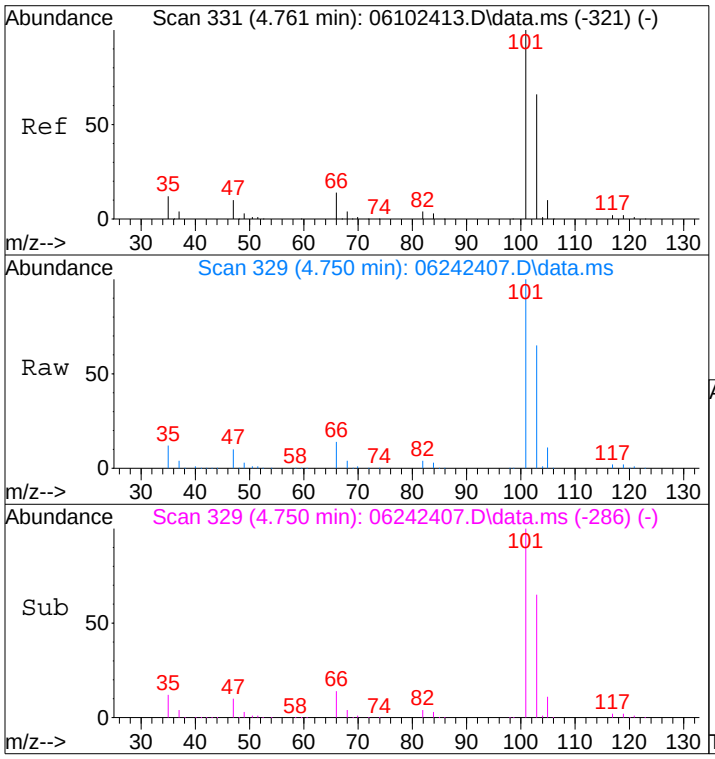


#13
Acetone
Concen: 0.35 ng
RT: 4.65 min Scan# 312
Delta R.T. -0.022 min
Lab File: 06242407.D
Acq: 24 Jun 2024 10:50

Tgt Ion: 58 Resp: 5722

Ion	Ratio	Lower	Upper
58	100		
43	483.2	400.7	460.7#

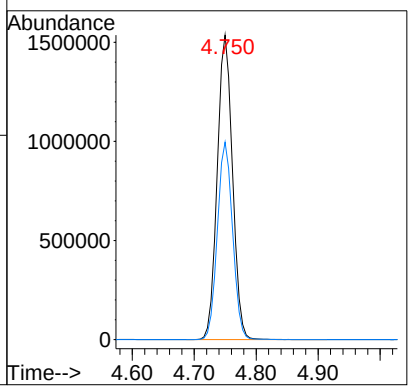


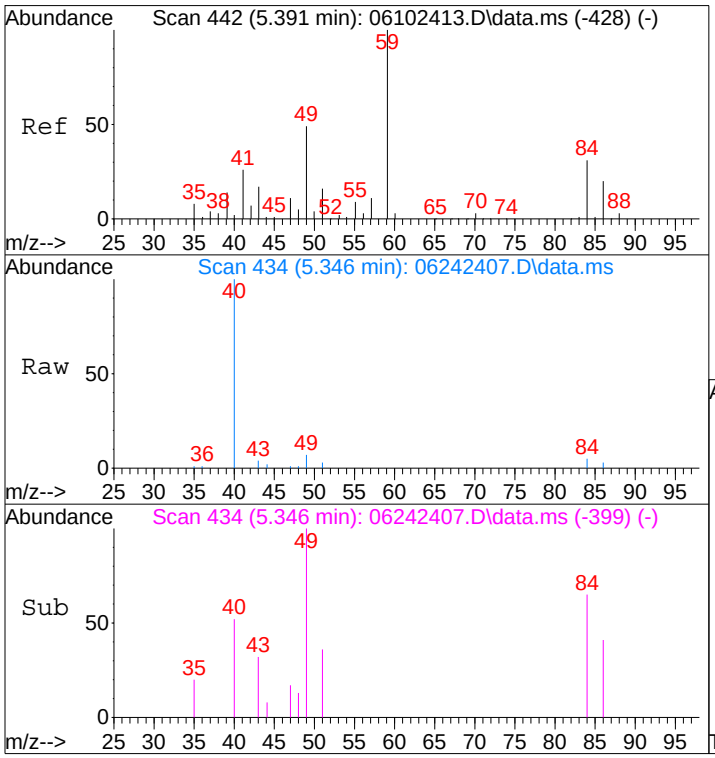


#14
Trichlorofluoromethane
Concen: 52.06 ng
RT: 4.75 min Scan# 329
Delta R.T. -0.004 min
Lab File: 06242407.D
Acq: 24 Jun 2024 10:50

Tgt Ion:101 Resp: 2621109

Ion	Ratio	Lower	Upper
101	100		
103	64.7	44.9	84.9

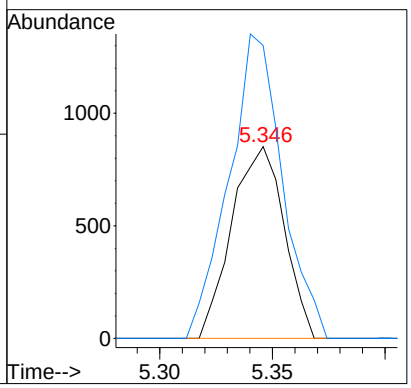


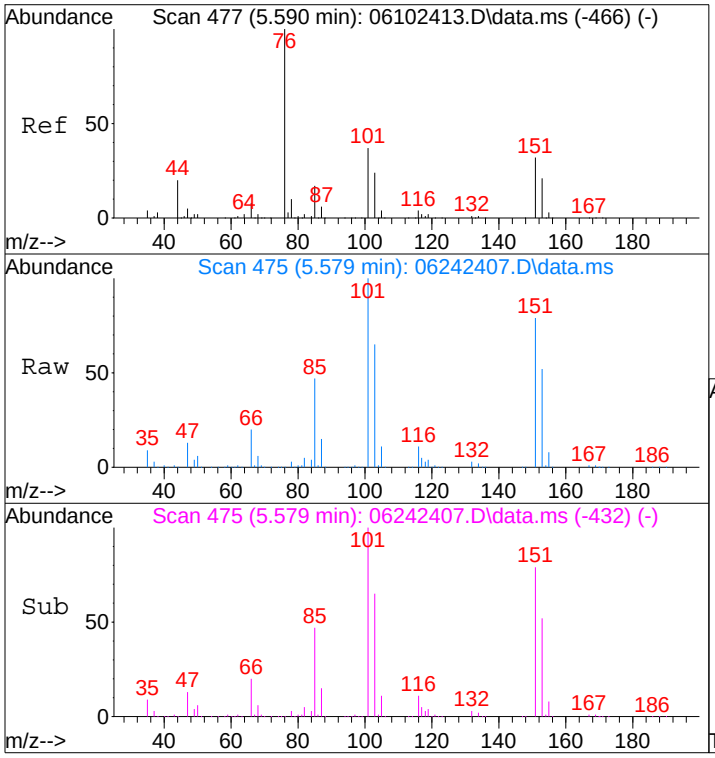


#19
Methylene Chloride
Concen: 0.06 ng
RT: 5.35 min Scan# 434
Delta R.T. -0.053 min
Lab File: 06242407.D
Acq: 24 Jun 2024 10:50

Tgt Ion: 84 Resp: 1377

Ion	Ratio	Lower	Upper
84	100		
49	162.1	132.9	182.9

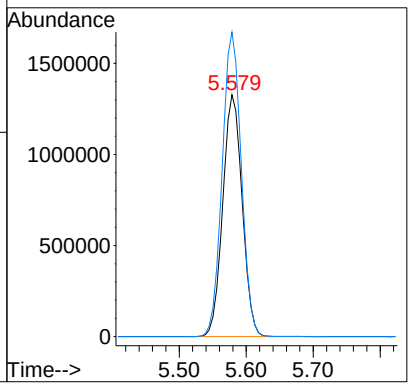


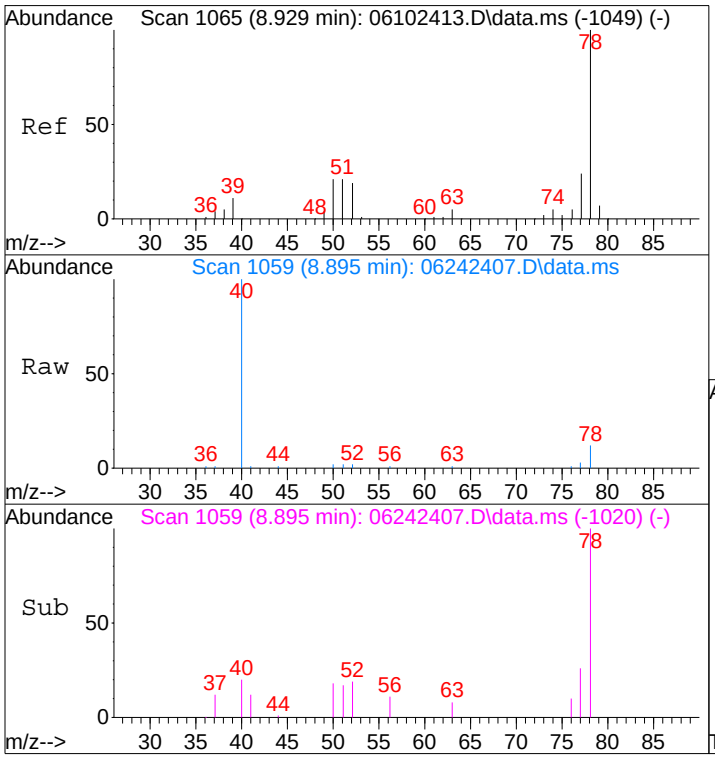


#21
Trichlorotrifluoroethane
Concen: 125.35 ng
RT: 5.58 min Scan# 475
Delta R.T. -0.007 min
Lab File: 06242407.D
Acq: 24 Jun 2024 10:50

Tgt Ion:151 Resp: 2669945

Ion	Ratio	Lower	Upper
151	100		
101	124.3	95.0	135.0

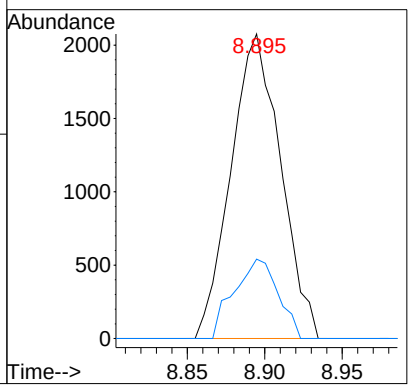


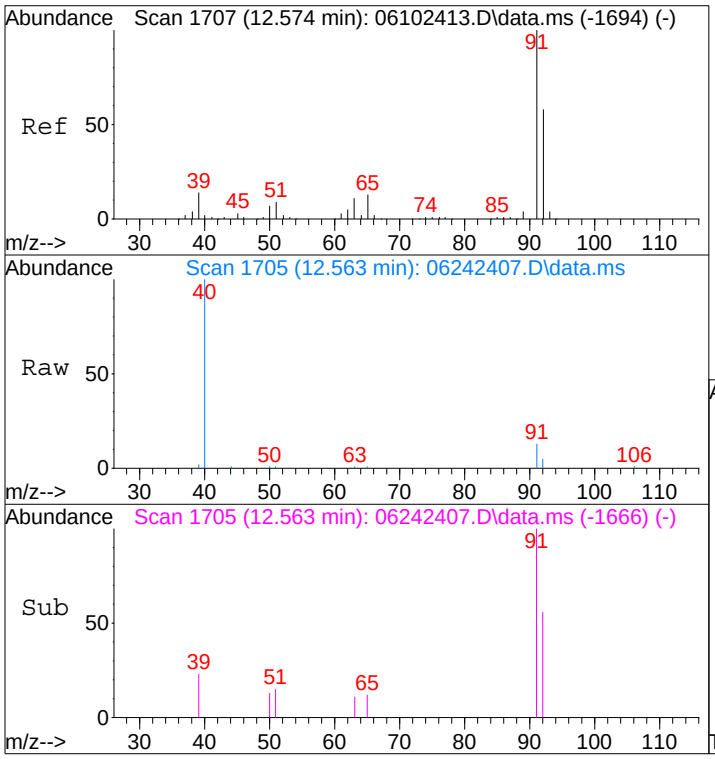


#41
Benzene
Concen: 0.05 ng
RT: 8.89 min Scan# 1059
Delta R.T. -0.030 min
Lab File: 06242407.D
Acq: 24 Jun 2024 10:50

Tgt Ion: 78 Resp: 4633

Ion	Ratio	Lower	Upper
78	100		
77	23.2	4.0	44.0

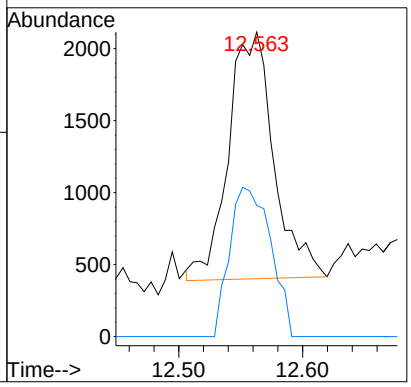


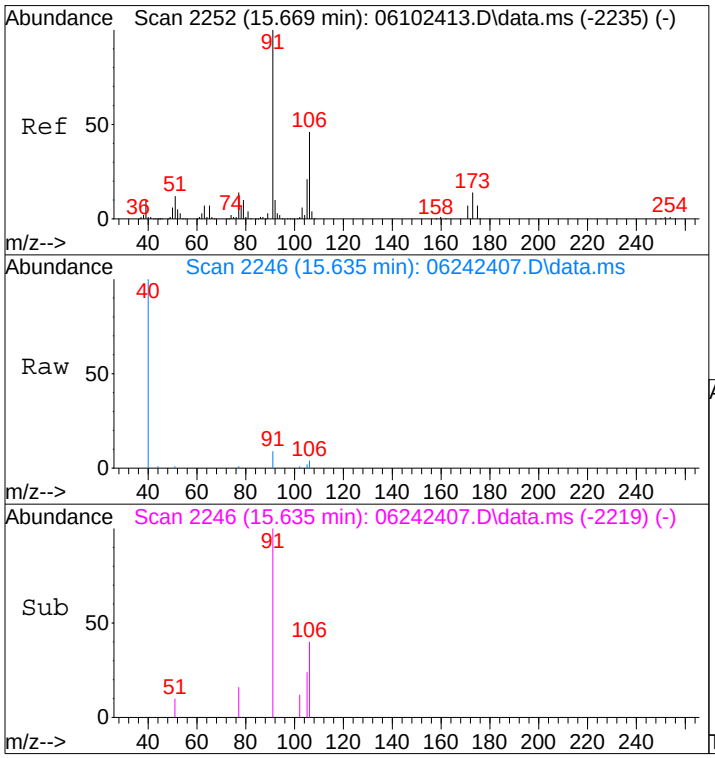


#58
Toluene
Concen: 0.05 ng
RT: 12.56 min Scan# 1705
Delta R.T. -0.029 min
Lab File: 06242407.D
Acq: 24 Jun 2024 10:50

Tgt Ion: 91 Resp: 4366

Ion	Ratio	Lower	Upper
91	100		
92	54.8	37.4	77.4

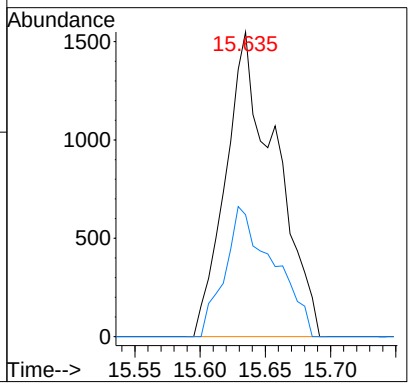




#67
m- & p-Xylenes
Concen: 0.05 ng
RT: 15.63 min Scan# 2246
Delta R.T. -0.046 min
Lab File: 06242407.D
Acq: 24 Jun 2024 10:50

Tgt Ion: 91 Resp: 4126

Ion	Ratio	Lower	Upper
91	100		
106	41.4	25.9	65.9



Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\24\06242407.D Vial: 1
Acq On : 24 Jun 2024 10:50 Operator: SC
Sample : P2402249-063 (2.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 16:53:18 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

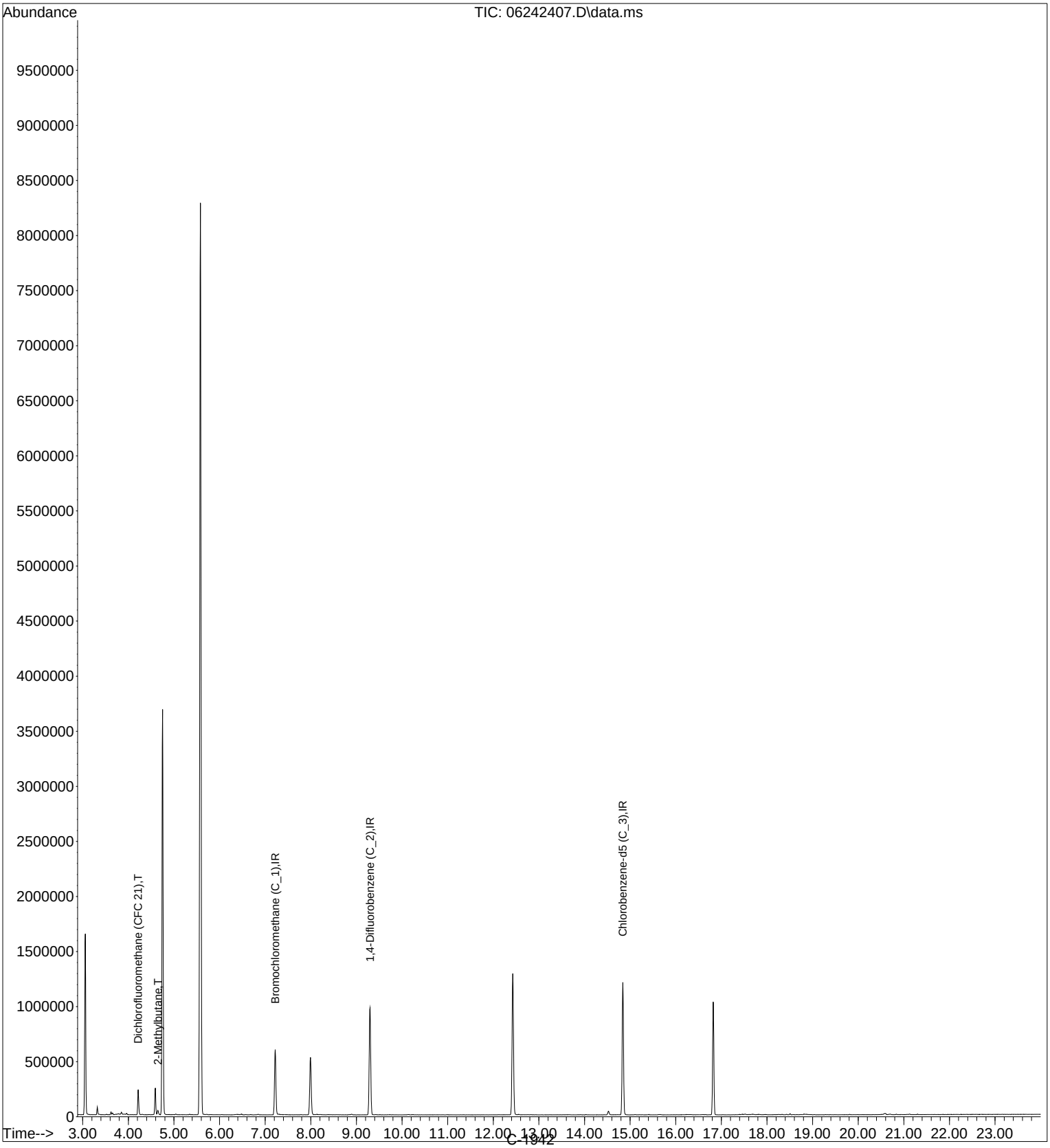
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (C 1)	7.22	130	214076	12.500	ng	-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	927047	12.500	ng	-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	207327	12.500	ng	-0.01
Target Compounds						Qvalue
2) Chloropentafluoroethane	0.00	85	0	N.D.		
3) 1,1,1,2-Tetrafluoroeth...	0.00	83	0	N.D.		
4) 1,1-Difluoroethane	3.26	65	61	N.D.		
5) Chlorodifluoromethane ...	0.00	67	0	N.D.		
6) 1-Chloro-1,1-Difluoroe...	0.00	65	0	N.D.		
7) Dichlorofluoromethane ...	4.22	67	185970	3.788	ng	100
8) Vinylbromide	0.00	108	0	N.D.		
9) 2,2-Dichloro-1,1,1-tri...	0.00	83	0	N.D.	d	
10) 2-Methylbutane	4.65	57	6562	0.257	ng	92
11) Methyl Acetate	5.35	43	2319	N.D.		
12) 2-Methylpentane	6.48	71	1292	N.D.		
13) 2,2-Dichloropropane	0.00	77	0	N.D.		
14) 1,1-Dichloropropene	0.00	75	0	N.D.		
15) Thiophene	0.00	84	0	N.D.		
17) 2,3-Dimethylpentane	9.52	56	784	N.D.		
18) Dibromomethane	9.80	174	421	N.D.		
20) Methyl Cyclohexane	11.42	55	143	N.D.		
21) 1,3-Dichloropropane	0.00	76	0	N.D.		
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		
23) 1-Chlorohexane	0.00	91	0	N.D.		
24) 1,2,3-Trichloropropane	0.00	75	0	N.D.		
25) Bromobenzene	0.00	77	0	N.D.		
26) 2-Chlorotoluene	17.61	91	1809	N.D.		
27) 4-Chlorotoluene	17.68	91	3433	N.D.		
28) Indane	0.00	117	0	N.D.		
29) Indene	0.00	115	0	N.D.		
30) 1,2,4,5-Tetramethylben...	0.00	119	0	N.D.		
31) 1,2,3,4-Tetramethylben...	0.00	119	0	N.D.		
32) 1,2,3,5-Tetramethylben...	0.00	119	0	N.D.		
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242407.D Vial: 1
Acq On : 24 Jun 2024 10:50 Operator: SC
Sample : P2402249-063 (2.0mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 16:53:18 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

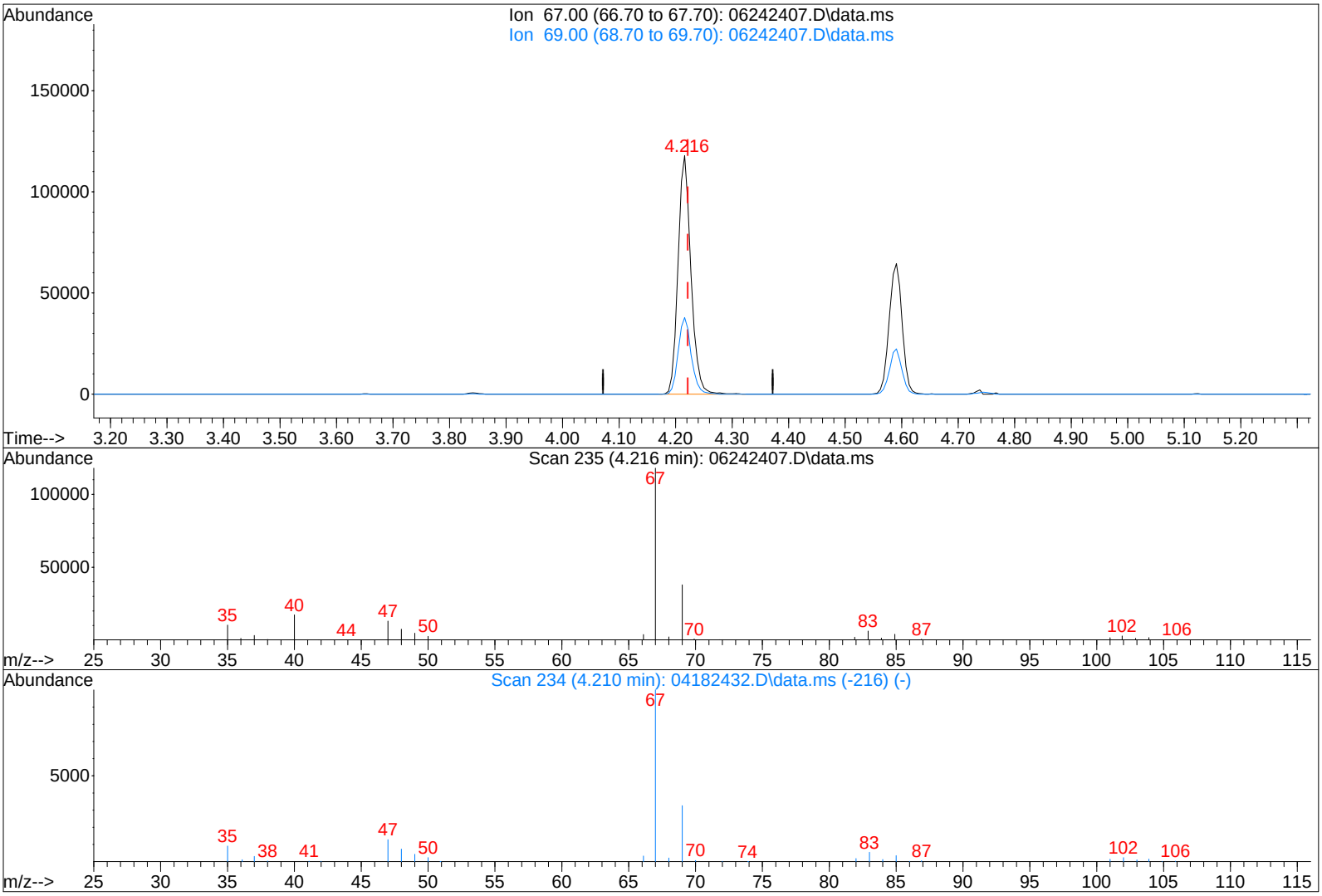


Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\24\06242407.D Vial: 1
Acq On : 24 Jun 2024 10:50 Operator: SC
Sample : P2402249-063 (2.0mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 16:49:02 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06242407.D\data.ms

(7) Dichlorofluoromethane (CFC 21) (T)

4.216min (-0.006) 3.79ng

response 185970

Ion	Exp%	Act%
67.00	100	100
69.00	32.40	32.46
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242408.D Vial: 1
Acq On : 24 Jun 2024 11:23 Operator: SC
Sample : P2402249-063Dil (0.5mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 24 11:45:41 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/24/24

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	209439	12.500	ng	-0.05
37) 1,4-Difluorobenzene (IS2)	9.30	114	924223	12.500	ng	-0.03
56) Chlorobenzene-d5 (IS3)	14.84	54	207081	12.500	ng	-0.01
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4(...	8.00	65	450041	12.090	ng	-0.04
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.72%			
57) Toluene-d8 (SS2)	12.43	98	1033680	13.044	ng	-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 104.32%			
73) Bromofluorobenzene (SS3)	16.82	174	348804	12.189	ng	-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.52%			
Target Compounds						Qvalue
2) Propene	3.33	42	892	N.D.		
3) Dichlorodifluoromethan...	3.34	85	830	N.D.		
4) Chloromethane	0.00	50	0	N.D.		
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.		
6) Vinyl Chloride	0.00	62	0	N.D.		
7) 1,3-Butadiene	0.00	54	0	N.D.		
8) Bromomethane	0.00	94	0	N.D.		
9) Chloroethane	0.00	64	0	N.D.		
10) Ethanol	4.40	45	54	N.D.		
11) Acetonitrile	4.47	41	419	N.D.		
12) Acrolein	4.55	56	90	N.D.		
13) Acetone	0.00	58	0	N.D. d		
14) Trichlorofluoromethane	4.76	101	547581	10.982	ng	99
15) 2-Propanol (Isopropanol)	4.91	45	1437	N.D.		
16) Acrylonitrile	5.01	53	896	N.D.		
17) 1,1-Dichloroethene	0.00	96	0	N.D.		
18) 2-Methyl-2-Propanol (t...	0.00	59	0	N.D.		
19) Methylene Chloride	5.36	84	1243	0.054	ng	95
20) 3-Chloro-1-propene (Al...	5.45	41	257	N.D.		
21) Trichlorotrifluoroethane	5.58	151	556705	26.393	ng	94
22) Carbon Disulfide	5.61	76	742	N.D.		
23) trans-1,2-Dichloroethene	6.14	61	296	N.D.		
24) 1,1-Dichloroethane	0.00	63	0	N.D.		
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.		
26) Vinyl Acetate	0.00	86	0	N.D.		
27) 2-Butanone (MEK)	6.68	72	364	N.D.		
28) cis-1,2-Dichloroethene	7.07	61	120	N.D.		
29) Diisopropyl Ether	0.00	87	0	N.D.		
30) Ethyl Acetate	0.00	61	0	N.D.		
31) n-Hexane	7.31	57	802	N.D.		
32) Chloroform	7.36	83	577	N.D.		
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	8.11	62	399	N.D.		
38) 1,1,1-Trichloroethane	8.39	97	654	N.D.		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	8.87	56	611	No Calib	#	
41) Benzene	8.89	78	2519	N.D.		
42) Carbon Tetrachloride	0.00	117	0	N.D.		
43) Cyclohexane	9.24	84	406	N.D.		
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	0.00	63	0	N.D.		
46) Bromodichloromethane	10.07	83	613	N.D.		
47) Trichloroethene	10.15	130	1274	0.051	ng	88
48) 1,4-Dioxane	10.14	88	373	N.D.		
49) 2,2,4-Trimethylpentane...	10.25	57	2810	N.D.		
50) Methyl Methacrylate	0.00	100	0	N.D.		

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242408.D Vial: 1
Acq On : 24 Jun 2024 11:23 Operator: SC
Sample : P2402249-063Dil (0.5mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 24 11:45:41 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

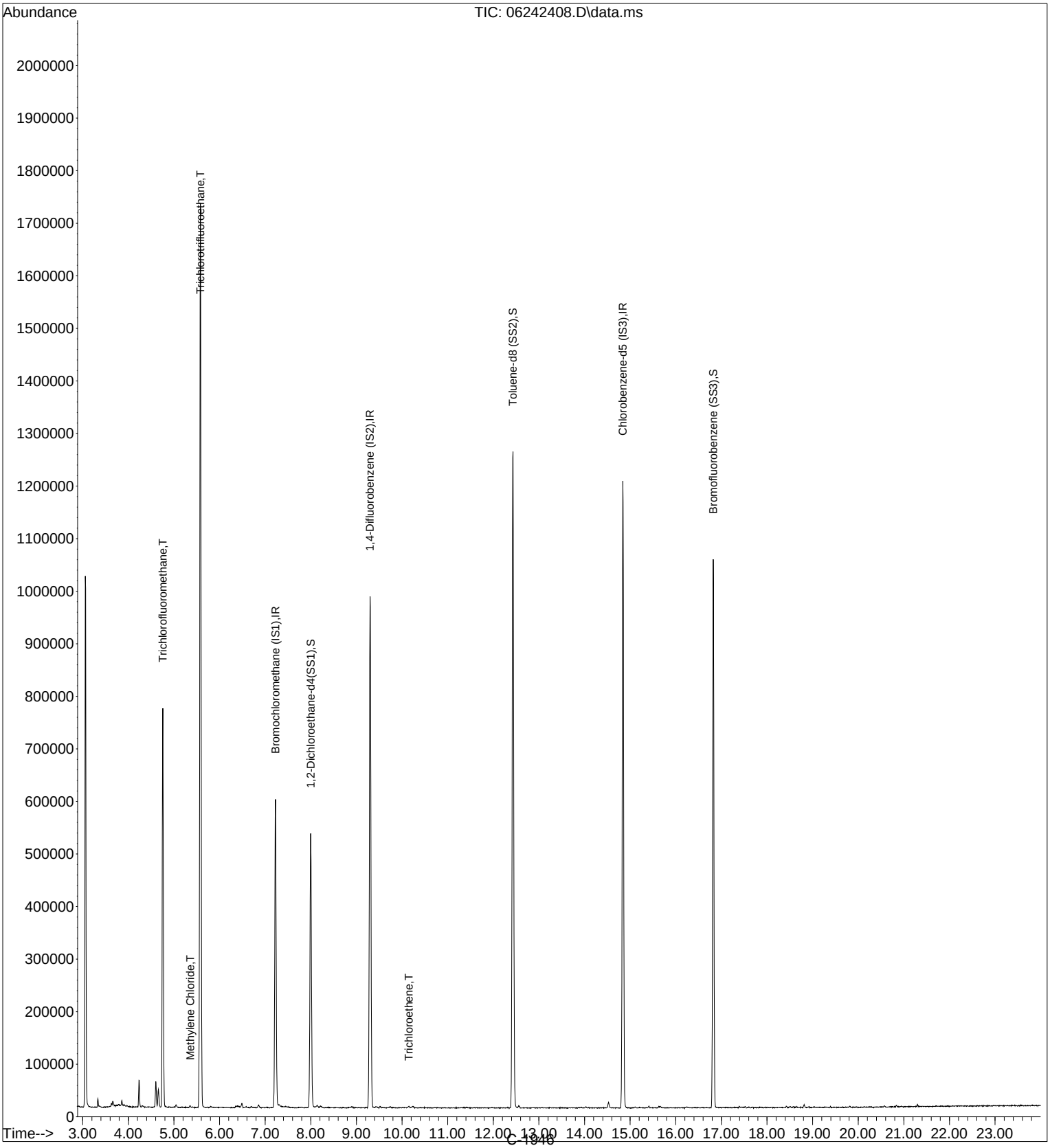
Internal Standards	R.T.	QIon	Response	Conc Units Dev(Min)
51) n-Heptane	0.00	71	0	N.D.
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.
58) Toluene	12.56	91	3862	N.D.
59) 2-Hexanone	12.95	43	680	N.D.
60) Dibromochloromethane	13.08	129	667	N.D.
61) 1,2-Dibromoethane	0.00	107	0	N.D.
62) n-Butyl Acetate	0.00	43	0	N.D.
63) n-Octane	0.00	57	0	N.D.
64) Tetrachloroethene	14.03	166	919	N.D.
65) Chlorobenzene	14.89	112	855	N.D.
66) Ethylbenzene	15.41	91	3445	N.D.
67) m- & p-Xylenes	15.64	91	3734	N.D.
68) Bromoform	15.67	173	761	N.D.
69) Styrene	16.09	104	201	N.D.
70) o-Xylene	16.24	91	1382	N.D.
71) n-Nonane	16.62	43	204	N.D.
72) 1,1,2,2-Tetrachloroethane	16.22	83	488	N.D.
74) Cumene	17.03	105	1331	N.D.
75) alpha-Pinene	17.52	93	1064	N.D.
76) n-Propylbenzene	17.68	91	1488	N.D.
77) 3-Ethyltoluene	17.03	105	1331	No Calib
78) 4-Ethyltoluene	17.86	105	1132	N.D.
79) 1,3,5-Trimethylbenzene	17.96	105	756	N.D.
80) alpha-Methylstyrene	0.00	118	0	N.D.
81) 2-Ethyltoluene	17.03	105	1331	No Calib
82) 1,2,4-Trimethylbenzene	18.43	105	931	N.D.
83) n-Decane	0.00	58	0	N.D.
84) Benzyl Chloride	18.57	91	239	N.D.
85) 1,3-Dichlorobenzene	18.58	146	979	N.D.
86) 1,4-Dichlorobenzene	18.65	146	840	N.D.
87) sec-Butylbenzene	18.74	105	1323	N.D.
88) 4-Isopropyltoluene (p-...	18.92	119	994	N.D.
89) 1,2,3-Trimethylbenzene	17.03	105	1331	No Calib
90) 1,2-Dichlorobenzene	19.03	146	816	N.D.
91) d-Limonene	0.00	68	0	N.D.
92) 1,2-Dibromo-3-Chloropr...	19.51	157	127	N.D.
93) n-Undecane	0.00	58	0	N.D.
94) 1,2,4-Trichlorobenzene	20.84	180	1128	N.D.
95) Naphthalene	20.94	128	1092	N.D.
96) n-Dodecane	0.00	58	0	N.D.
97) Hexachlorobutadiene	21.30	225	860	N.D.
98) Cyclohexanone	15.51	55	129	No Calib #
99) tert-Butylbenzene	18.43	119	1230	N.D.
100) n-Butylbenzene	19.39	91	884	N.D.
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242408.D Vial: 1
Acq On : 24 Jun 2024 11:23 Operator: SC
Sample : P2402249-063Dil (0.5mL) Inst : MS09
Misc : S37-06062402

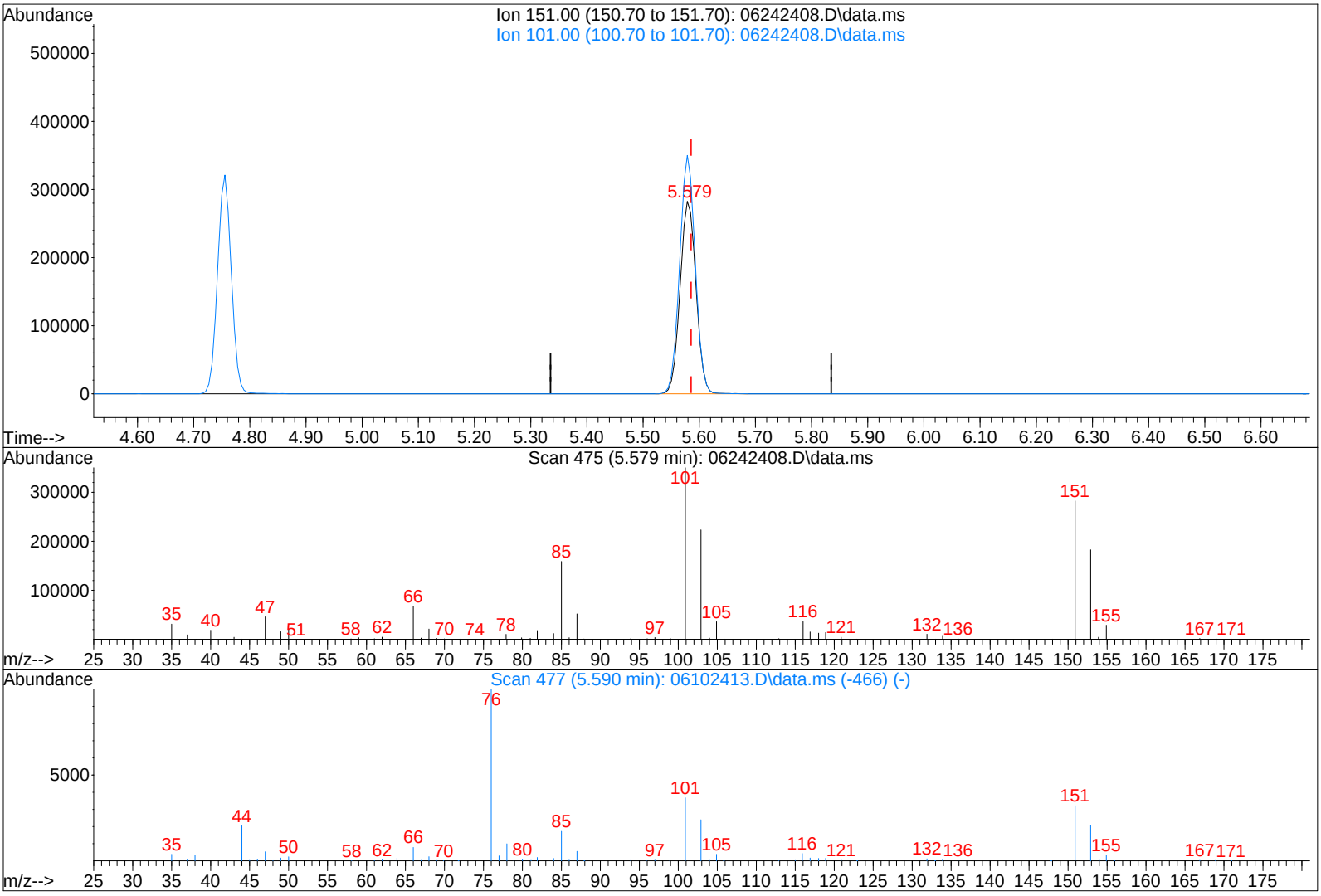
Quant Time: Jun 24 11:45:41 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\24\06242408.D Vial: 1
Acq On : 24 Jun 2024 11:23 Operator: SC
Sample : P2402249-063Dil (0.5mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 24 11:45:33 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06242408.D\data.ms

(21) Trichlorotrifluoroethane (T)

5.579min (-0.007) 26.39ng

response 556705

Ion	Exp%	Act%
151.00	100	100
101.00	115.00	121.16
0.00	0.00	0.00
0.00	0.00	0.00

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\24\
Data File : 06242407.D
Acq On : 24 Jun 2024 10:50
Operator : SC
Sample : P2402249-063 (2.0mL)
Misc : S37-06062402
ALS Vial : 1 Sample Multiplier: 1

MJ 6/28/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06242407.D\data.ms

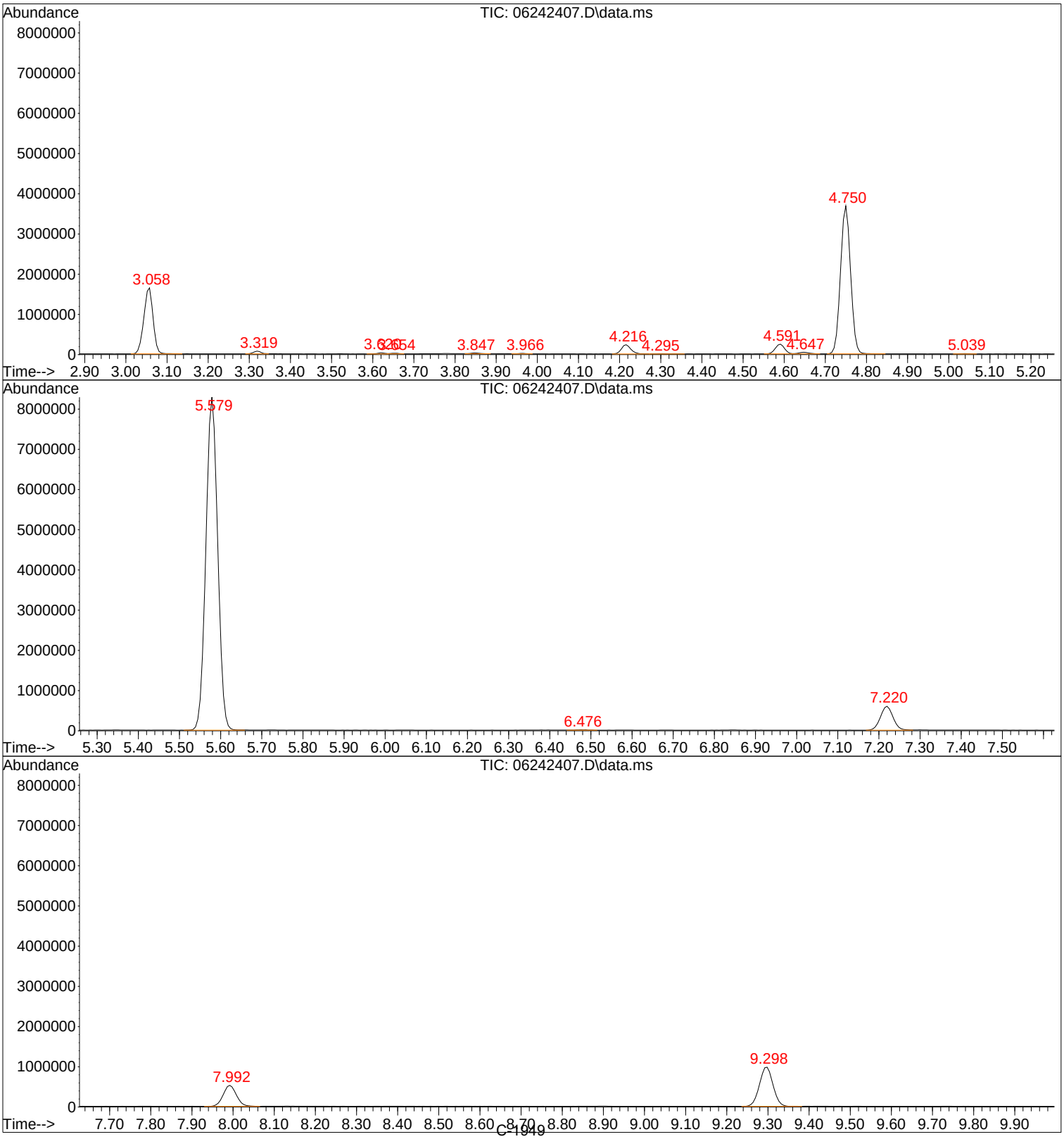
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.058	23	31	45	rBV	1642647	2560656	15.54%	8.265%
2	3.319	72	77	82	rBV2	68852	88844	0.54%	0.287%
3	3.620	124	130	133	rBV	25649	33720	0.20%	0.109%
4	3.654	133	136	140	rVB2	14846	20460	0.12%	0.066%
5	3.847	166	170	177	rVB	18393	24120	0.15%	0.078%
6	3.966	186	191	195	rVB2	13176	18628	0.11%	0.060%
7	4.216	229	235	245	rBV	228978	364708	2.21%	1.177%
8	4.295	245	249	260	rVB3	3987	10699	0.06%	0.035%
9	4.591	294	301	306	rBV	240624	373621	2.27%	1.206%
10	4.647	306	311	318	rVB3	38866	69090	0.42%	0.223%
11	4.750	321	329	346	rBV	3679525	6260522	37.99%	20.208%
12	5.039	375	380	385	rVB3	6608	10033	0.06%	0.032%
13	5.579	463	475	489	rBV	8277334	16479503	100.00%	53.192%
14	6.476	627	633	640	rVB2	7442	15435	0.09%	0.050%
15	7.220	755	764	775	rBV	592078	1257515	7.63%	4.059%
16	7.992	889	900	913	rBV	521041	1161428	7.05%	3.749%
17	9.298	1119	1130	1145	rBV	972646	2232040	13.54%	7.205%

Sum of corrected areas: 30981022

Data Path : I:\MS09\DATA\2024 06\24\
Data File : 06242407.D
Acq On : 24 Jun 2024 10:50
Operator : SC
Sample : P2402249-063 (2.0mL)
Misc : S37-06062402
ALS Vial : 1 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : I:\MS09\DATA\2024 06\24\
Data File : 06242407.D
Acq On : 24 Jun 2024 10:50
Operator : SC
Sample : P2402249-063 (2.0mL)
Misc : S37-06062402
ALS Vial : 1 Sample Multiplier: 1

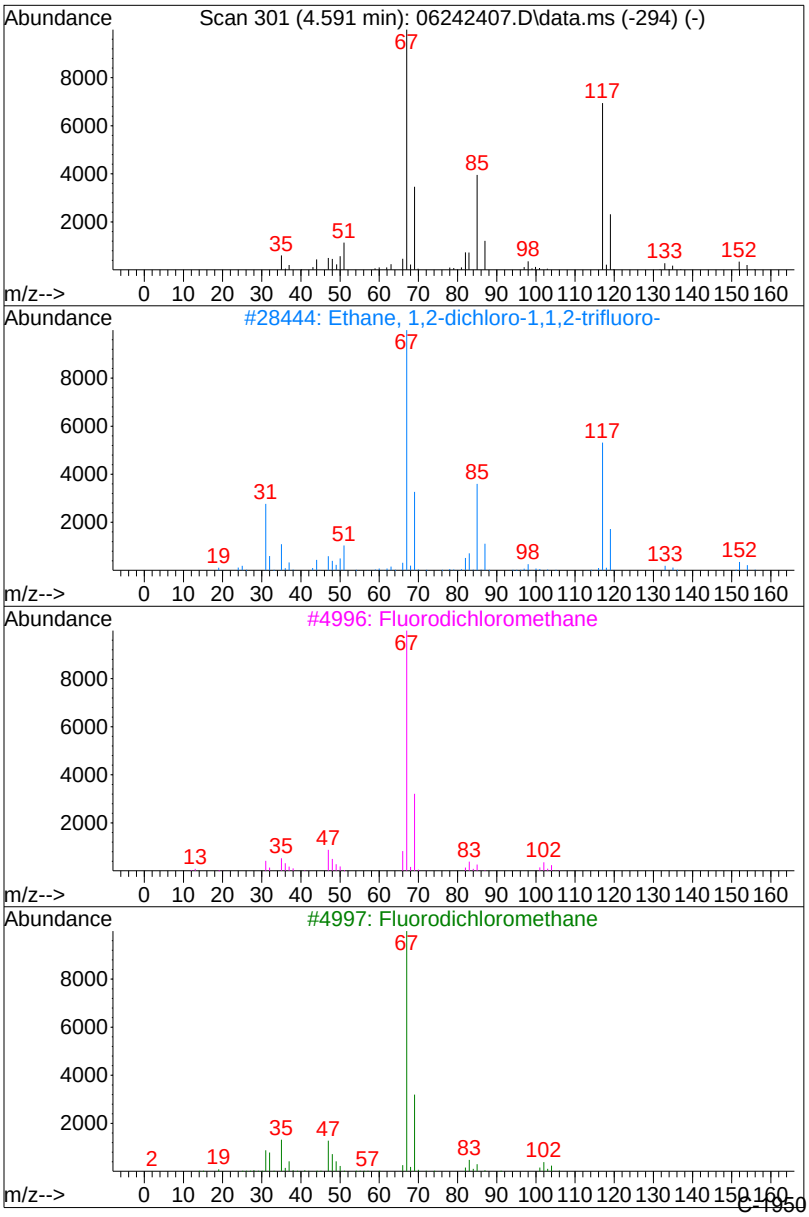
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

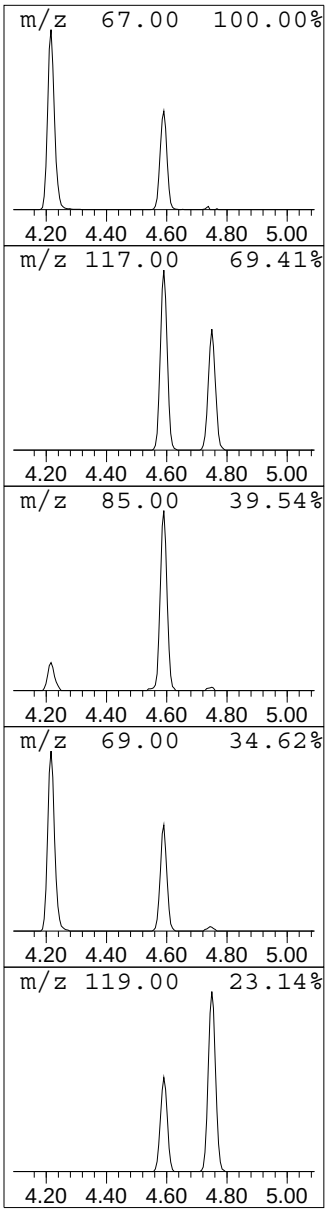
TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P

****
Peak Number 3 Ethane, 1,2-dichloro-1,1,2-... Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.591	3.71 ng	373621	Bromochloromethane (IS1)	7.220

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Ethane, 1,2-dichloro-1,1,2-trifl...	152	C2HCl2F3	000354-23-4	91
2	Fluorodichloromethane	102	CHCl2F	000075-43-4	25
3	Fluorodichloromethane	102	CHCl2F	000075-43-4	25
4	Cyclopropane, 1,2-dimethyl-3-met...	82	C6H10	062338-02-7	12
5	Fluorodichloromethane	102	CHCl2F	000075-43-4	12





Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024_06\24\
Data File : 06242407.D
Acq On : 24 Jun 2024 10:50
Operator : SC
Sample : P2402249-063 (2.0mL)
Misc : S37-06062402
ALS Vial : 1 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Ethane, 1,2-dic...	4.591	3.7	ng	373621	1	7.220	1257520	12.5

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242410.D Vial: 7
Acq On : 24 Jun 2024 12:27 Operator: SC
Sample : P2402249-064 (400mL)PF2 Inst : MS09
Misc : S37-06062402

MJ 6/29/24

Quant Time: Jun 29 10:40:23 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	187950	12.500	ng		-0.05
37) 1,4-Difluorobenzene (IS2)	9.30	114	821946	12.500	ng		-0.03
56) Chlorobenzene-d5 (IS3)	14.84	54	188403	12.500	ng		-0.01
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	402634	12.053	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.40%				
57) Toluene-d8 (SS2)	12.43	98	924519	12.823	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.56%				
73) Bromofluorobenzene (SS3)	16.83	174	321638	12.354	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.80%				
Target Compounds							Qvalue
2) Propene	3.29	42	28233	1.173	ng	#	52
3) Dichlorodifluoromethan...	3.36	85	24272m	0.549	ng		
4) Chloromethane	3.49	50	4232	0.140	ng		98
5) 1,2-Dichloro-1,1,2,2-t...	3.61	135	423	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	3.78	54	273	N.D.			
8) Bromomethane	4.02	94	226	N.D.			
9) Chloroethane	4.15	64	131	N.D.			
10) Ethanol	4.30	45	151499	8.291	ng		100
11) Acetonitrile	0.00	41	0	N.D.	d		
12) Acrolein	4.53	56	3871	0.286	ng		95
13) Acetone	4.63	58	91402	6.260	ng	#	20
14) Trichlorofluoromethane	4.76	101	233346	5.215	ng		99
15) 2-Propanol (Isopropanol)	4.86	45	141645	2.408	ng		91
16) Acrylonitrile	0.00	53	0	N.D.	d		
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	0.00	59	0	N.D.	d		
19) Methylene Chloride	5.35	84	9254	0.448	ng		99
20) 3-Chloro-1-propene (Al...	5.45	41	826	N.D.			
21) Trichlorotrifluoroethane	5.58	151	395053	20.871	ng		96
22) Carbon Disulfide	0.00	76	0	N.D.	d		
23) trans-1,2-Dichloroethene	6.14	61	316	N.D.			
24) 1,1-Dichloroethane	6.31	63	138	N.D.			
25) Methyl tert-Butyl Ether	6.39	73	655	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D.	d		
27) 2-Butanone (MEK)	6.67	72	14698	1.272	ng	#	90
28) cis-1,2-Dichloroethene	7.08	61	248	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.	d		
30) Ethyl Acetate	7.29	61	82535	11.700	ng		96
31) n-Hexane	7.31	57	20458	0.662	ng		98
32) Chloroform	7.36	83	10099	0.274	ng		98
34) Tetrahydrofuran (THF)	7.78	72	2500	0.237	ng	#	54
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.12	62	1268	N.D.			
38) 1,1,1-Trichloroethane	8.39	97	106	N.D.			
39) Isopropyl Acetate	9.59	61	716	No Calib		#	
40) 1-Butanol	8.80	56	11700	No Calib		#	
41) Benzene	8.90	78	14238	0.188	ng		96
42) Carbon Tetrachloride	9.07	117	2124	0.060	ng		92
43) Cyclohexane	9.22	84	6896	0.281	ng		91
44) tert-Amyl Methyl Ether	9.62	73	112	N.D.			
45) 1,2-Dichloropropane	9.87	63	1732	0.095	ng		89
46) Bromodichloromethane	10.08	83	778	N.D.			
47) Trichloroethene	10.16	130	855	N.D.			
48) 1,4-Dioxane	10.13	88	451	N.D.			
49) 2,2,4-Trimethylpentane...	0.00	57	0	N.D.	d		
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242410.D Vial: 7
Acq On : 24 Jun 2024 12:27 Operator: SC
Sample : P2402249-064 (400mL)PF2 Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:40:23 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

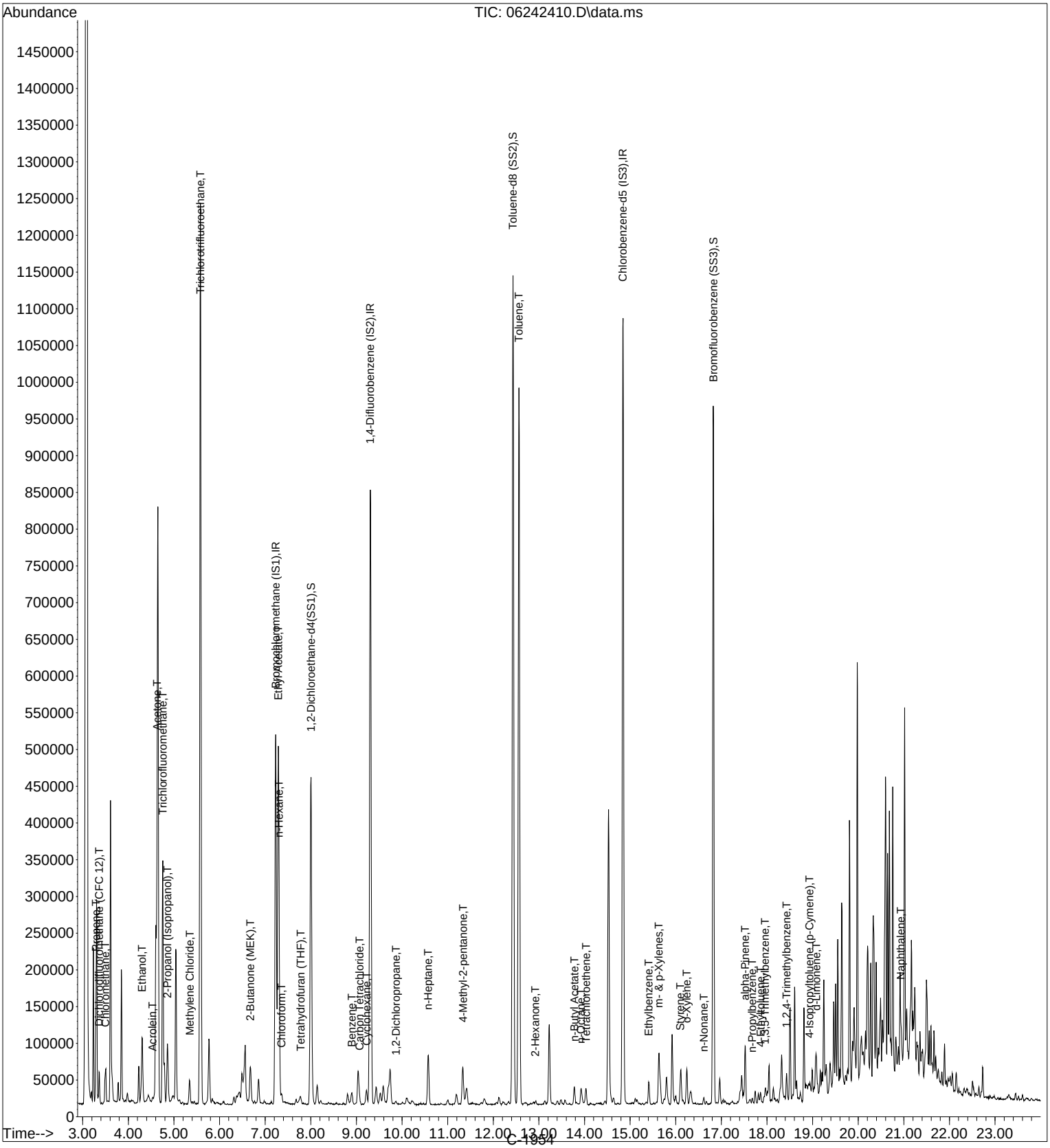
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	10.57	71	16895	1.056 ng		97
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	11.34	58	16396	0.983 ng		88
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	12.56	91	859515	11.409 ng		100
59) 2-Hexanone	12.92	43	5011	0.106 ng	#	59
60) Dibromochloromethane	13.07	129	677	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	13.78	43	24275	0.489 ng		98
63) n-Octane	13.92	57	4103	0.263 ng		93
64) Tetrachloroethene	14.03	166	7472	0.289 ng		99
65) Chlorobenzene	14.91	112	1296	N.D.		
66) Ethylbenzene	15.41	91	25247	0.293 ng		100
67) m- & p-Xylenes	15.63	91	61444	0.848 ng		98
68) Bromoform	15.67	173	823	N.D.		
69) Styrene	16.10	104	13553	0.277 ng		98
70) o-Xylene	16.24	91	31566	0.442 ng		99
71) n-Nonane	16.62	43	5275	0.127 ng		90
72) 1,1,2,2-Tetrachloroethane	16.20	83	655	N.D.		
74) Cumene	17.03	105	3150	N.D.		
75) alpha-Pinene	17.52	93	32304	0.777 ng		100
76) n-Propylbenzene	17.68	91	5586	0.052 ng		91
77) 3-Ethyltoluene	17.03	105	3150	No Calib		
78) 4-Ethyltoluene	17.86	105	5121	0.060 ng		92
79) 1,3,5-Trimethylbenzene	17.96	105	5367	0.072 ng		99
80) alpha-Methylstyrene	0.00	118	0	N.D.		
81) 2-Ethyltoluene	17.03	105	3150	No Calib		
82) 1,2,4-Trimethylbenzene	18.43	105	14593	0.186 ng		90
83) n-Decane	17.10	58	115	No Calib	#	
84) Benzyl Chloride	18.56	91	672	N.D.		
85) 1,3-Dichlorobenzene	18.58	146	865	N.D.		
86) 1,4-Dichlorobenzene	18.65	146	2267	N.D.		
87) sec-Butylbenzene	18.74	105	2304	N.D.		
88) 4-Isopropyltoluene (p-...	18.93	119	5479	0.061 ng		90
89) 1,2,3-Trimethylbenzene	17.03	105	3150	No Calib		
90) 1,2-Dichlorobenzene	19.03	146	922	N.D.		
91) d-Limonene	19.08	68	8532	0.320 ng		84
92) 1,2-Dibromo-3-Chloropr...	19.51	157	127	N.D.		
93) n-Undecane	17.87	58	225	No Calib	#	
94) 1,2,4-Trichlorobenzene	20.83	180	1459	N.D.		
95) Naphthalene	20.94	128	6656	0.066 ng		82
96) n-Dodecane	18.95	58	553	No Calib	#	
97) Hexachlorobutadiene	21.30	225	896	N.D.		
98) Cyclohexanone	15.49	55	199	No Calib	#	
99) tert-Butylbenzene	18.51	119	2710	N.D.		
100) n-Butylbenzene	0.00	91	0	N.D. d		
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242410.D Vial: 7
Acq On : 24 Jun 2024 12:27 Operator: SC
Sample : P2402249-064 (400mL)PF2 Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:40:23 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242410.D Vial: 7
Acq On : 24 Jun 2024 12:27 Operator: SC
Sample : P2402249-064 (400mL)PF2 Inst : MS09
Misc : S37-06062402

MJ 6/29/24

Quant Time: Jun 29 10:40:23 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

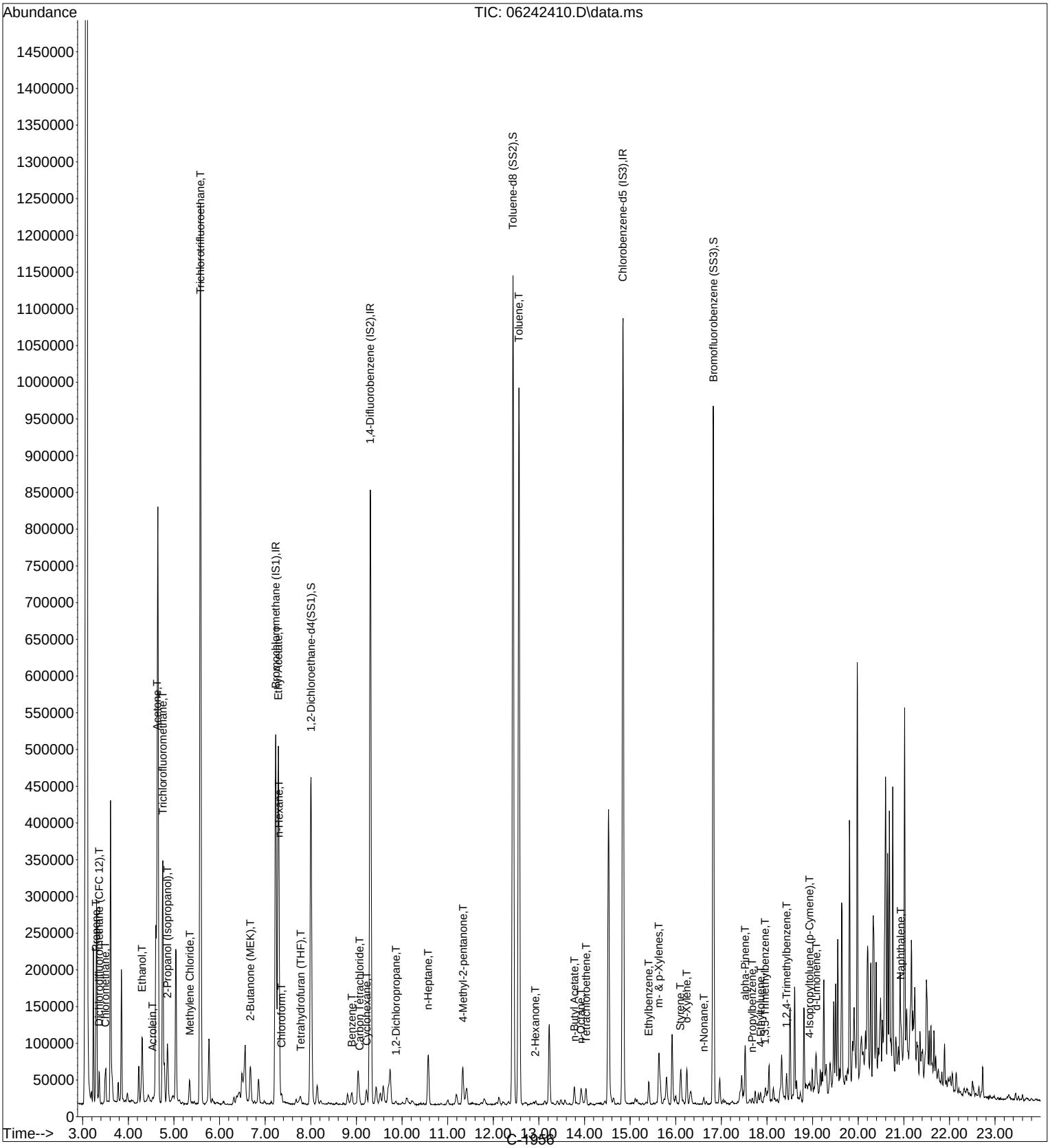
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	187950	12.500	ng		-0.05
37) 1,4-Difluorobenzene (IS2)	9.30	114	821946	12.500	ng		-0.03
56) Chlorobenzene-d5 (IS3)	14.84	54	188403	12.500	ng		-0.01
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	402634	12.053	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.40%				
57) Toluene-d8 (SS2)	12.43	98	924519	12.823	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.56%				
73) Bromofluorobenzene (SS3)	16.83	174	321638	12.354	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.80%				
Target Compounds							Qvalue
2) Propene	3.29	42	28233	1.173	ng	#	52
3) Dichlorodifluoromethan...	3.36	85	24272m	0.549	ng		
4) Chloromethane	3.49	50	4232	0.140	ng		98
10) Ethanol	4.30	45	151499	8.291	ng		100
12) Acrolein	4.53	56	3871	0.286	ng		95
13) Acetone	4.63	58	91402	6.260	ng	#	20
14) Trichlorofluoromethane	4.76	101	233346	5.215	ng		99
15) 2-Propanol (Isopropanol)	4.86	45	141645	2.408	ng		91
19) Methylene Chloride	5.35	84	9254	0.448	ng		99
21) Trichlorotrifluoroethane	5.58	151	395053	20.871	ng		96
27) 2-Butanone (MEK)	6.67	72	14698	1.272	ng	#	90
30) Ethyl Acetate	7.29	61	82535	11.700	ng		96
31) n-Hexane	7.31	57	20458	0.662	ng		98
32) Chloroform	7.36	83	10099	0.274	ng		98
34) Tetrahydrofuran (THF)	7.78	72	2500	0.237	ng	#	54
41) Benzene	8.90	78	14238	0.188	ng		96
42) Carbon Tetrachloride	9.07	117	2124	0.060	ng		92
43) Cyclohexane	9.22	84	6896	0.281	ng		91
45) 1,2-Dichloropropane	9.87	63	1732	0.095	ng		89
51) n-Heptane	10.57	71	16895	1.056	ng		97
53) 4-Methyl-2-pentanone	11.34	58	16396	0.983	ng		88
58) Toluene	12.56	91	859515	11.409	ng		100
59) 2-Hexanone	12.92	43	5011	0.106	ng	#	59
62) n-Butyl Acetate	13.78	43	24275	0.489	ng		98
63) n-Octane	13.92	57	4103	0.263	ng		93
64) Tetrachloroethene	14.03	166	7472	0.289	ng		99
66) Ethylbenzene	15.41	91	25247	0.293	ng		100
67) m- & p-Xylenes	15.63	91	61444	0.848	ng		98
69) Styrene	16.10	104	13553	0.277	ng		98
70) o-Xylene	16.24	91	31566	0.442	ng		99
71) n-Nonane	16.62	43	5275	0.127	ng		90
75) alpha-Pinene	17.52	93	32304	0.777	ng		100
76) n-Propylbenzene	17.68	91	5586	0.052	ng		91
78) 4-Ethyltoluene	17.86	105	5121	0.060	ng		92
79) 1,3,5-Trimethylbenzene	17.96	105	5367	0.072	ng		99
82) 1,2,4-Trimethylbenzene	18.43	105	14593	0.186	ng		90
88) 4-Isopropyltoluene (p-...	18.93	119	5479	0.061	ng		90
91) d-Limonene	19.08	68	8532	0.320	ng		84
95) Naphthalene	20.94	128	6656	0.066	ng		82

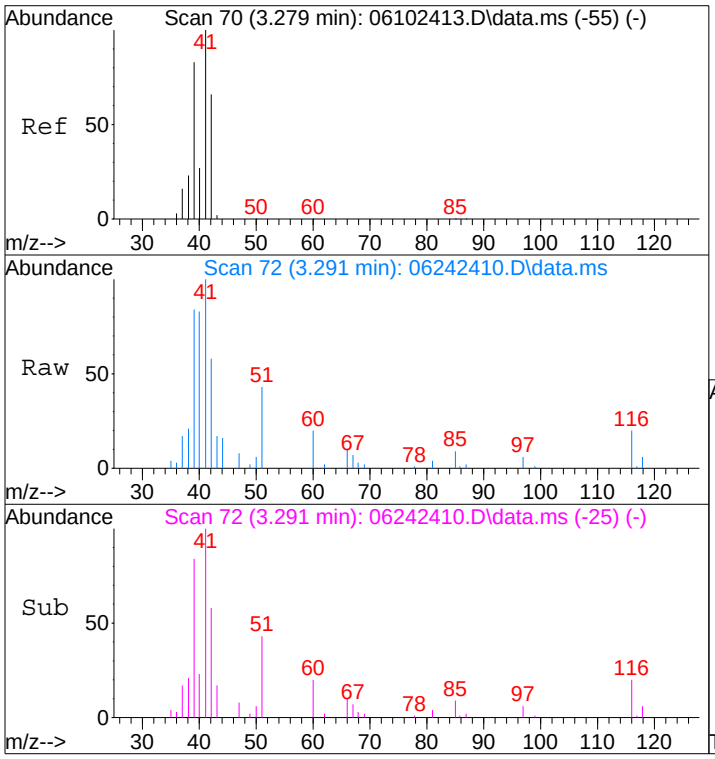
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242410.D Vial: 7
Acq On : 24 Jun 2024 12:27 Operator: SC
Sample : P2402249-064 (400mL)PF2 Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:40:23 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

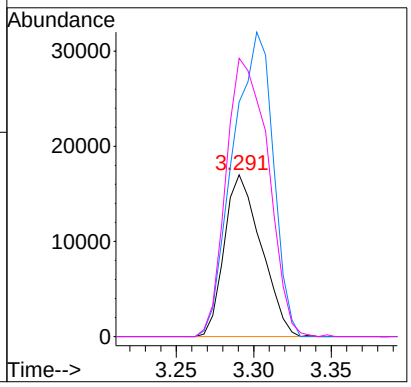


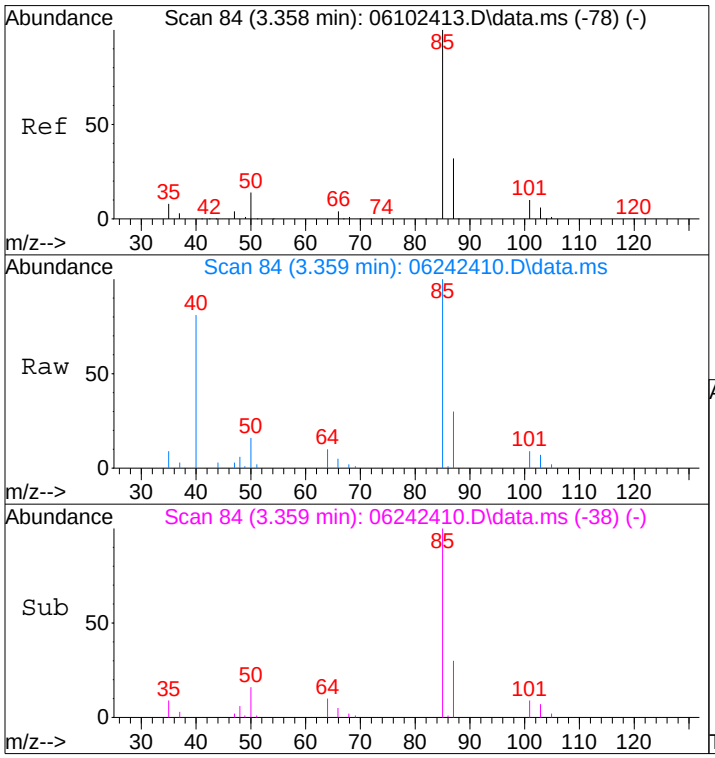


#2
Propene
Concen: 1.17 ng
RT: 3.29 min Scan# 72
Delta R.T. 0.018 min
Lab File: 06242410.D
Acq: 24 Jun 2024 12:27

Tgt Ion: 42 Resp: 28233

Ion	Ratio	Lower	Upper
42	100		
39	205.5	107.3	147.3#
41	195.3	134.3	174.3#

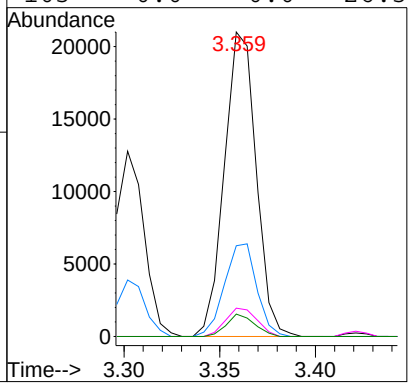


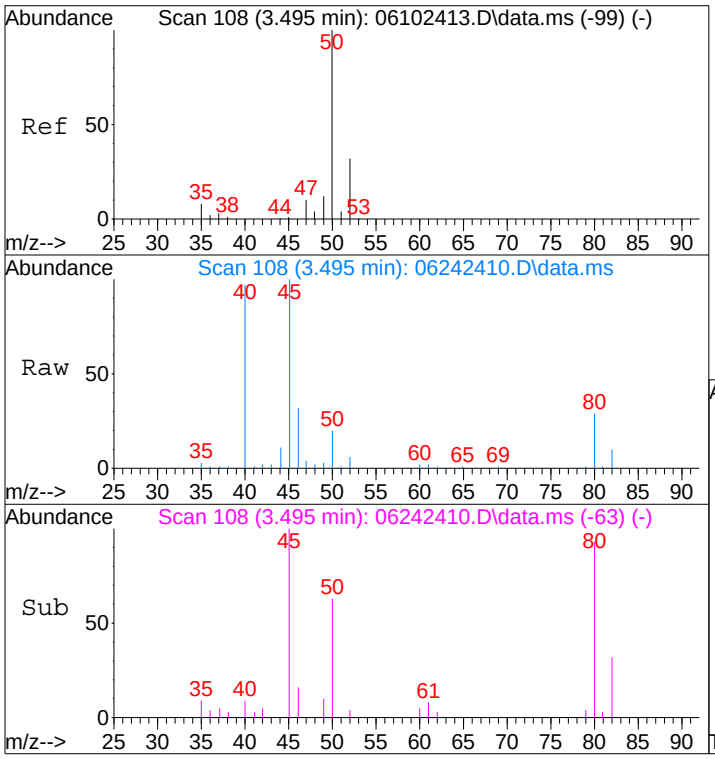


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.55 ng m
RT: 3.36 min Scan# 84
Delta R.T. 0.013 min
Lab File: 06242410.D
Acq: 24 Jun 2024 12:27

Tgt Ion: 85 Resp: 24272

Ion	Ratio	Lower	Upper
85	100		
87	17.1	12.2	52.2
101	0.0	0.0	29.8
103	0.0	0.0	26.3

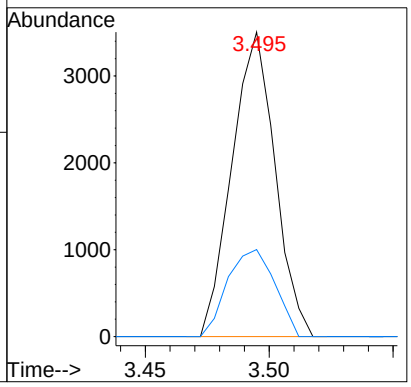


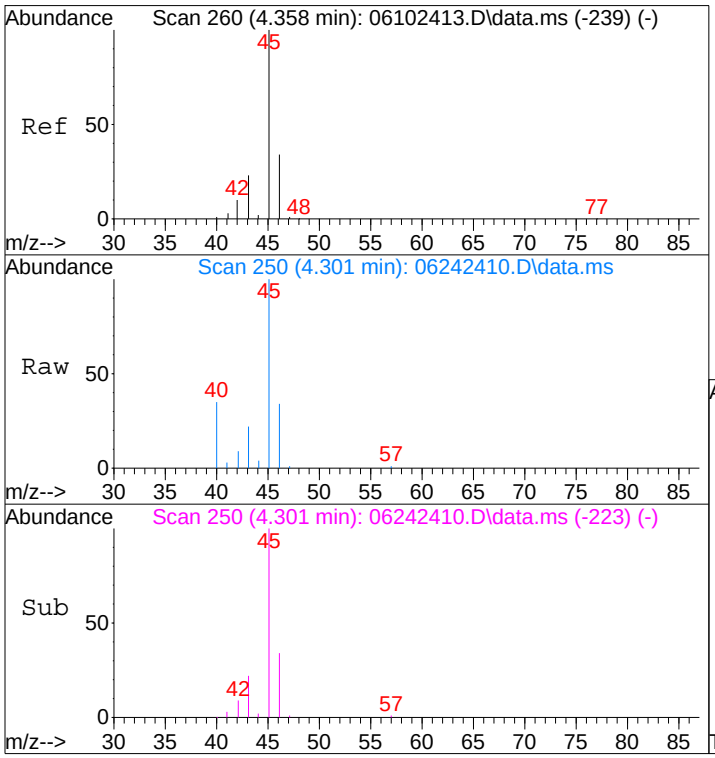


#4
Chloromethane
Concen: 0.14 ng
RT: 3.49 min Scan# 108
Delta R.T. 0.008 min
Lab File: 06242410.D
Acq: 24 Jun 2024 12:27

Tgt Ion: 50 Resp: 4232

Ion	Ratio	Lower	Upper
50	100		
52	31.5	12.4	52.4

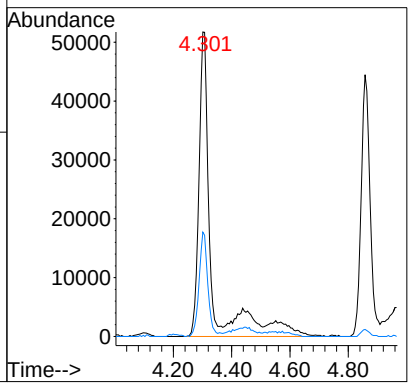


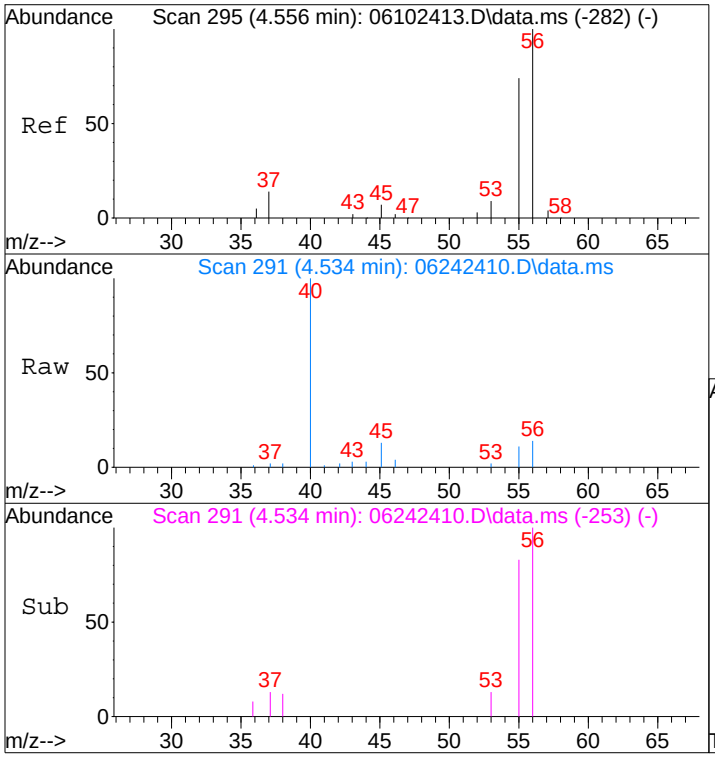


#10
Ethanol
Concen: 8.29 ng
RT: 4.30 min Scan# 250
Delta R.T. -0.096 min
Lab File: 06242410.D
Acq: 24 Jun 2024 12:27

Tgt Ion: 45 Resp: 151499

Ion	Ratio	Lower	Upper
45	100		
46	33.2	13.5	53.5

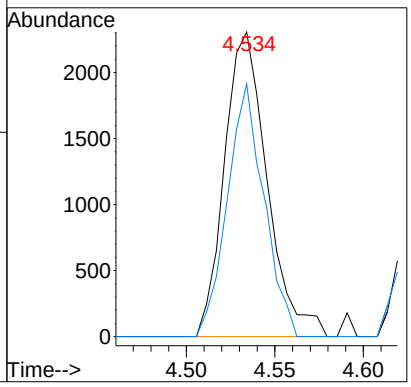


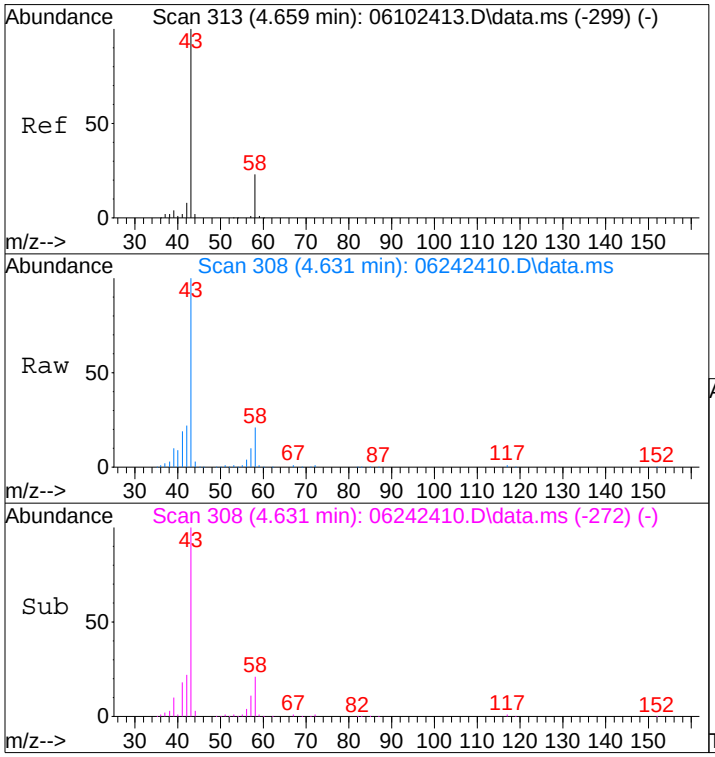


#12
Acrolein
Concen: 0.29 ng
RT: 4.53 min Scan# 291
Delta R.T. -0.033 min
Lab File: 06242410.D
Acq: 24 Jun 2024 12:27

Tgt Ion: 56 Resp: 3871

Ion	Ratio	Lower	Upper
56	100		
55	71.1	55.5	95.5

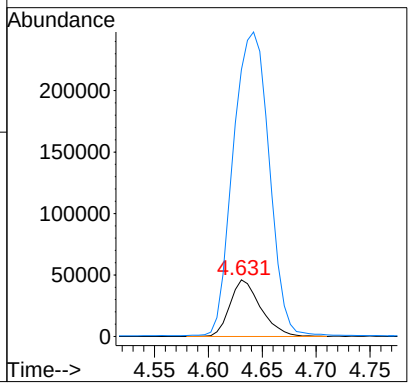


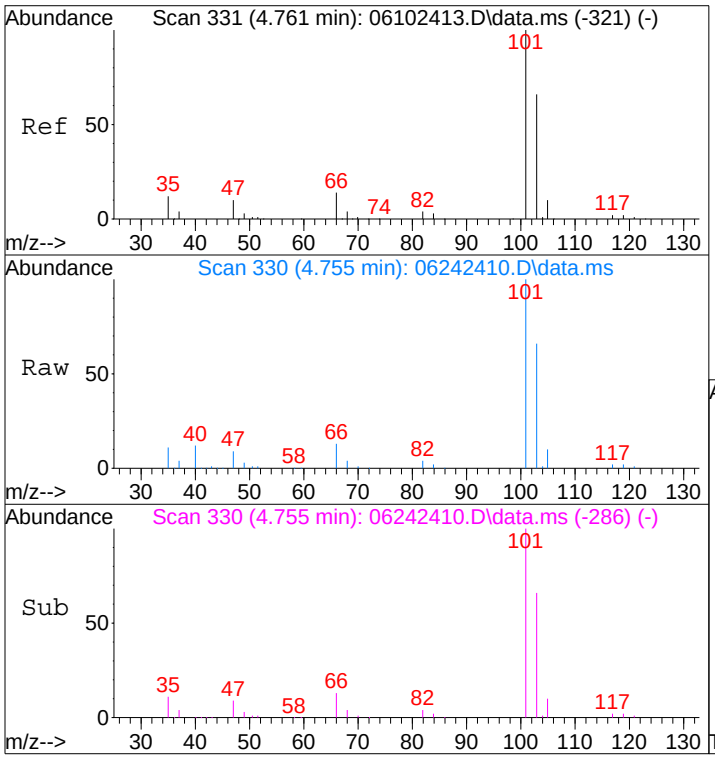


#13
Acetone
Concen: 6.26 ng
RT: 4.63 min Scan# 308
Delta R.T. -0.044 min
Lab File: 06242410.D
Acq: 24 Jun 2024 12:27

Tgt Ion: 58 Resp: 91402

Ion	Ratio	Lower	Upper
58	100		
43	628.8	400.7	460.7#

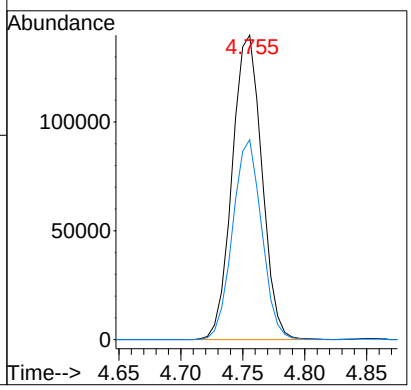


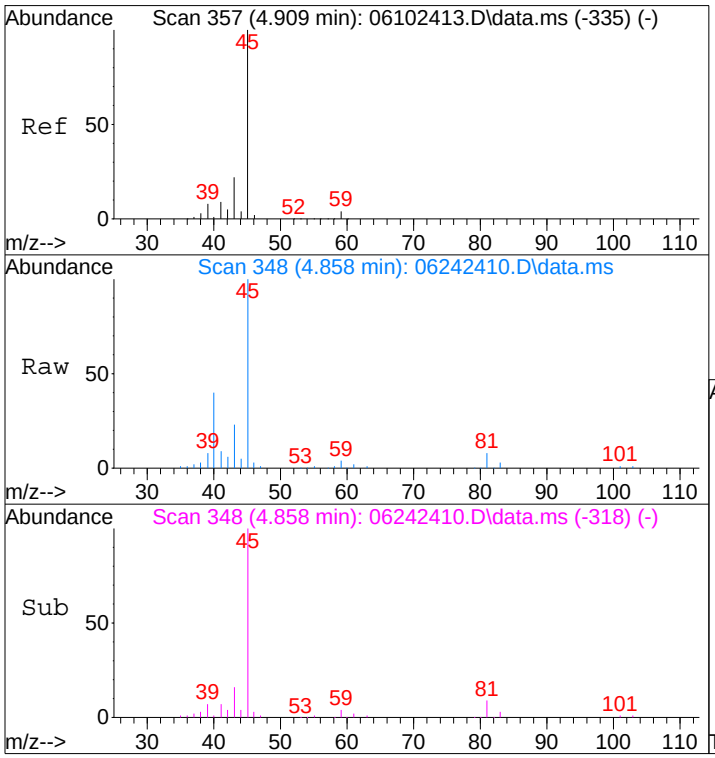


#14
Trichlorofluoromethane
Concen: 5.22 ng
RT: 4.76 min Scan# 330
Delta R.T. 0.002 min
Lab File: 06242410.D
Acq: 24 Jun 2024 12:27

Tgt Ion:101 Resp: 233346

Ion	Ratio	Lower	Upper
101	100		
103	64.4	44.9	84.9

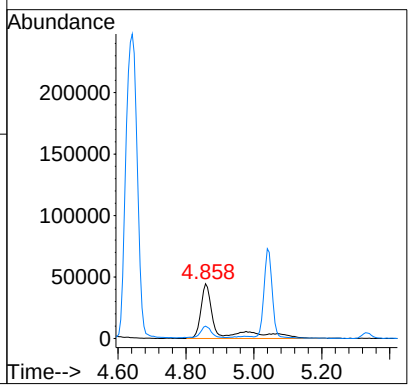


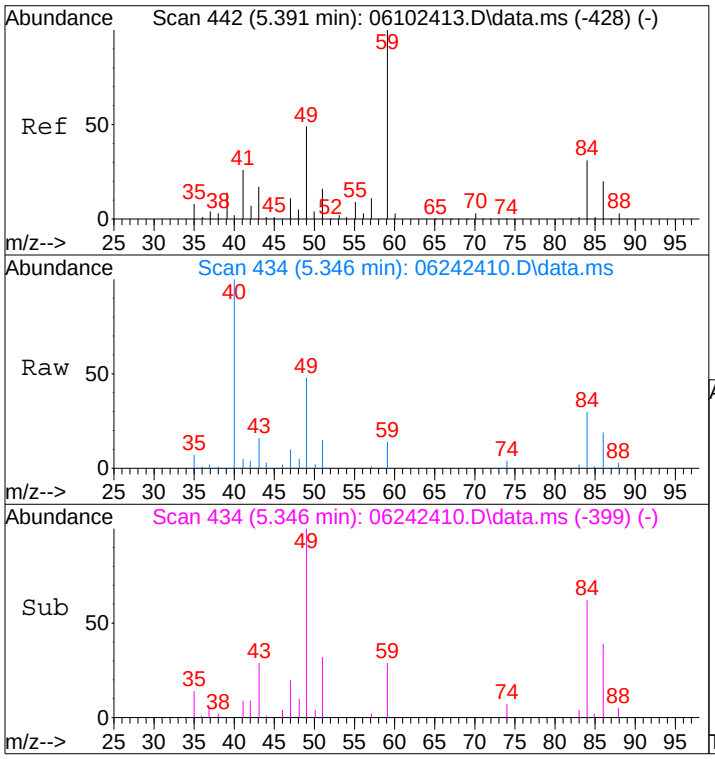


#15
2-Propanol (Isopropanol)
Concen: 2.41 ng
RT: 4.86 min Scan# 348
Delta R.T. -0.077 min
Lab File: 06242410.D
Acq: 24 Jun 2024 12:27

Tgt Ion: 45 Resp: 141645

Ion	Ratio	Lower	Upper
45	100		
43	18.4	2.5	42.5

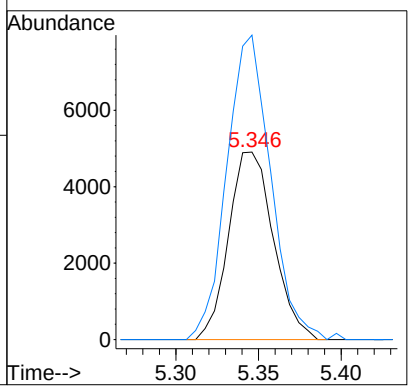


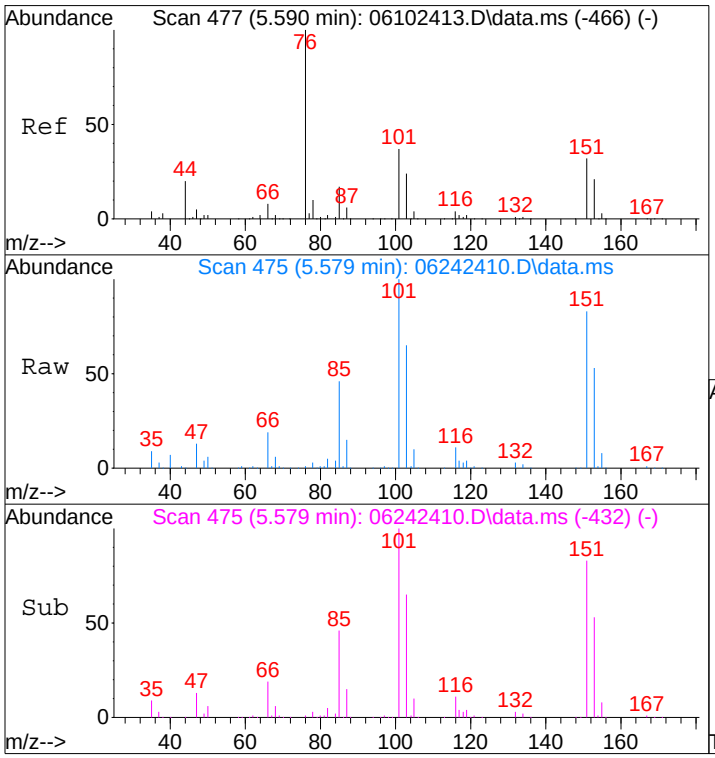


#19
Methylene Chloride
Concen: 0.45 ng
RT: 5.35 min Scan# 434
Delta R.T. -0.053 min
Lab File: 06242410.D
Acq: 24 Jun 2024 12:27

Tgt Ion: 84 Resp: 9254

Ion	Ratio	Lower	Upper
84	100		
49	159.3	132.9	182.9

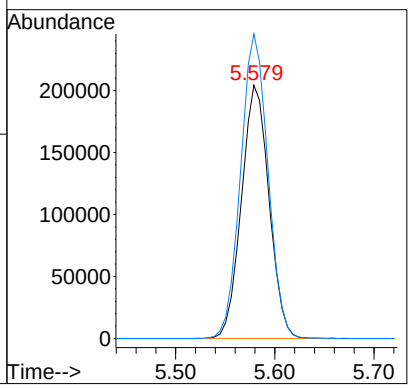


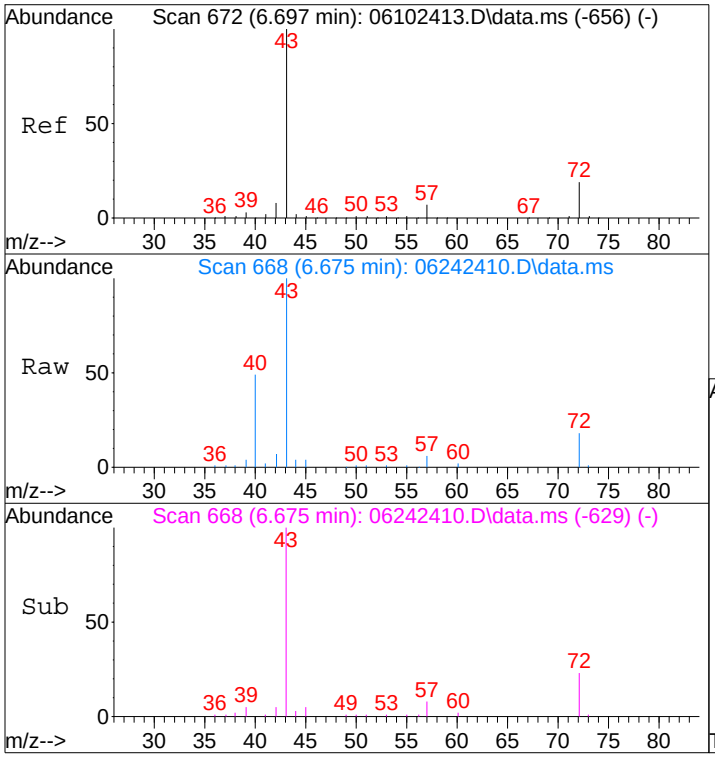


#21
Trichlorotrifluoroethane
Concen: 20.87 ng
RT: 5.58 min Scan# 475
Delta R.T. -0.007 min
Lab File: 06242410.D
Acq: 24 Jun 2024 12:27

Tgt Ion:151 Resp: 395053

Ion	Ratio	Lower	Upper
151	100		
101	119.5	95.0	135.0

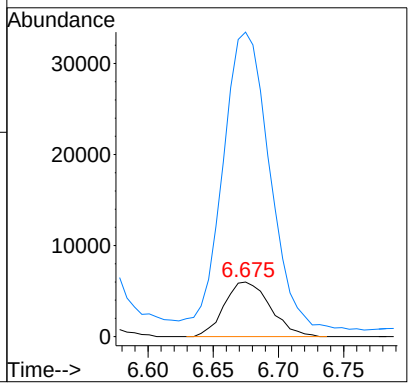


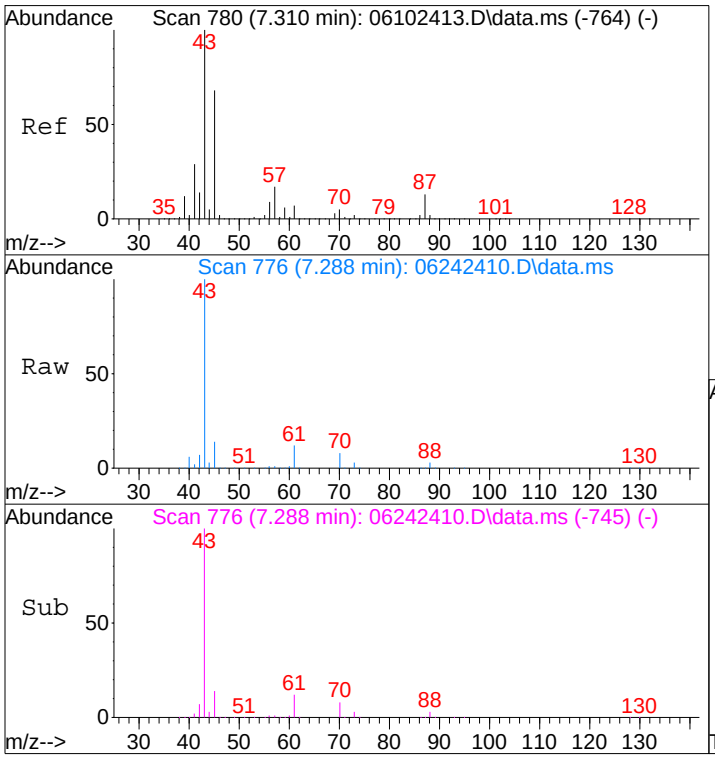


#27
2-Butanone (MEK)
Concen: 1.27 ng
RT: 6.67 min Scan# 668
Delta R.T. -0.031 min
Lab File: 06242410.D
Acq: 24 Jun 2024 12:27

Tgt Ion: 72 Resp: 14698

Ion	Ratio	Lower	Upper
72	100		
43	556.7	506.8	546.8#

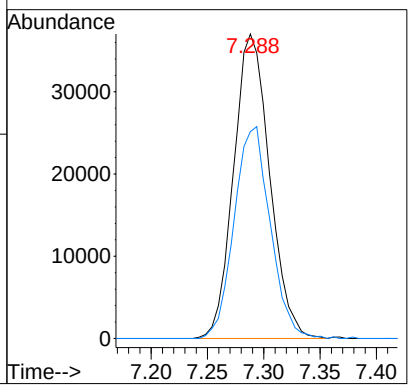


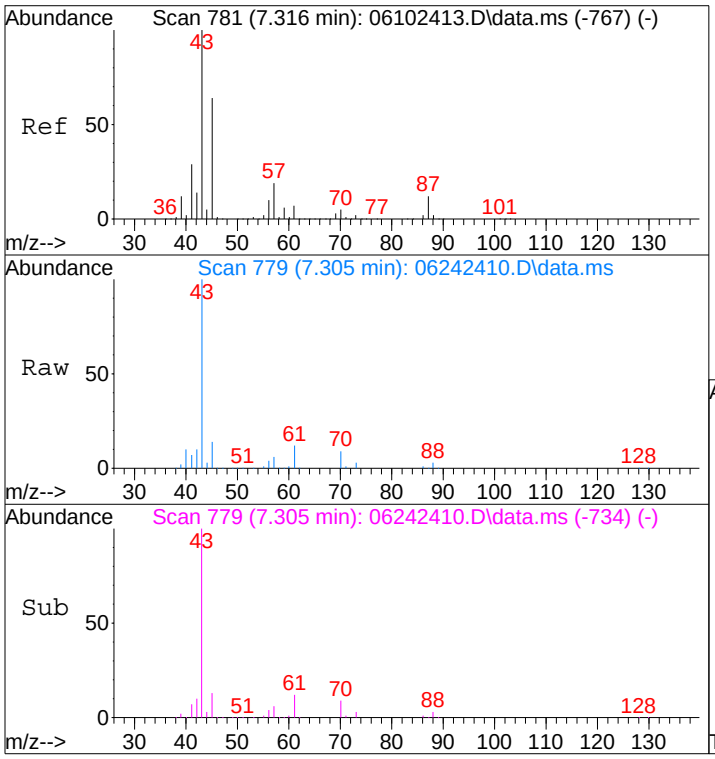


#30
Ethyl Acetate
Concen: 11.70 ng
RT: 7.29 min Scan# 776
Delta R.T. -0.023 min
Lab File: 06242410.D
Acq: 24 Jun 2024 12:27

Tgt Ion: 61 Resp: 82535

Ion	Ratio	Lower	Upper
61	100		
70	69.7	53.5	93.5

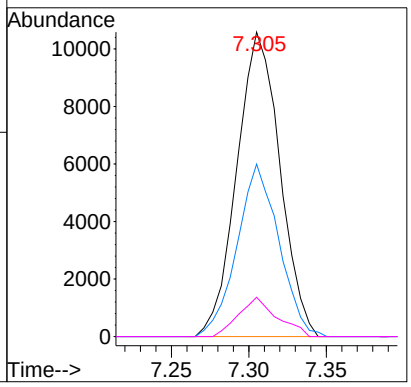


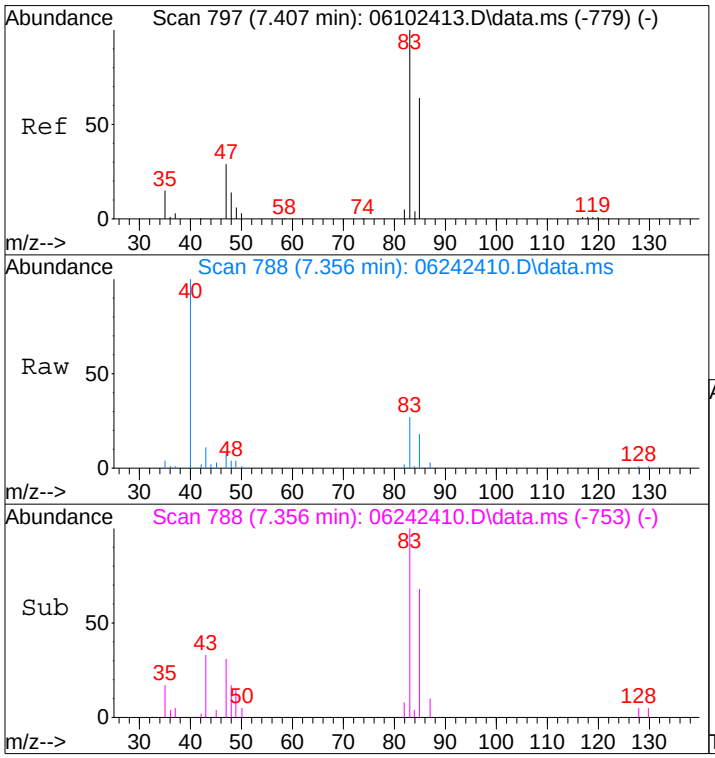


#31
n-Hexane
Concen: 0.66 ng
RT: 7.31 min Scan# 779
Delta R.T. 0.006 min
Lab File: 06242410.D
Acq: 24 Jun 2024 12:27

Tgt Ion: 57 Resp: 20458

Ion	Ratio	Lower	Upper
57	100		
56	55.0	42.5	63.7
86	11.5	9.5	14.3

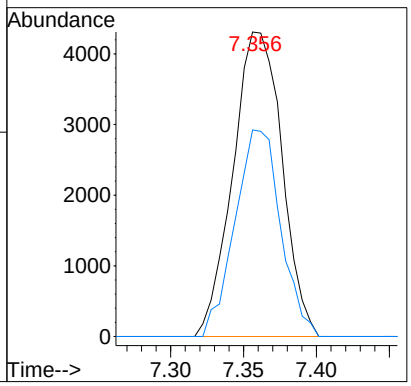


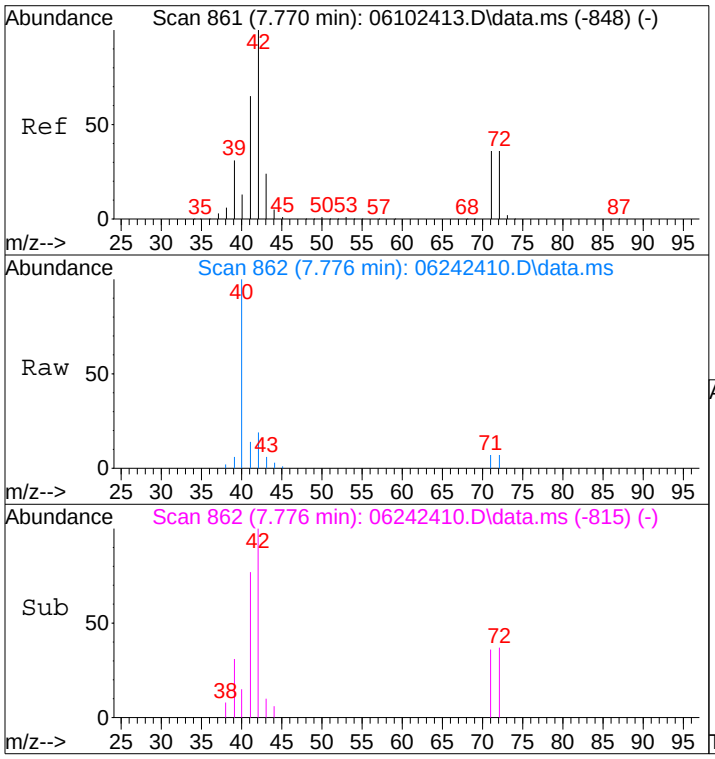


#32
Chloroform
Concen: 0.27 ng
RT: 7.36 min Scan# 788
Delta R.T. -0.051 min
Lab File: 06242410.D
Acq: 24 Jun 2024 12:27

Tgt Ion: 83 Resp: 10099

Ion	Ratio	Lower	Upper
83	100		
85	63.2	44.4	84.4

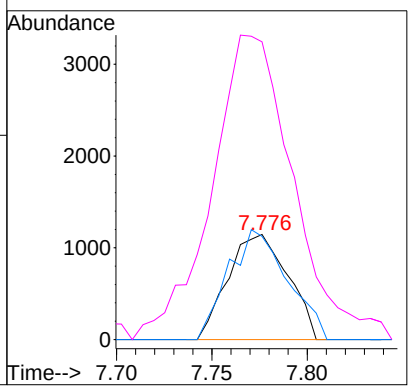


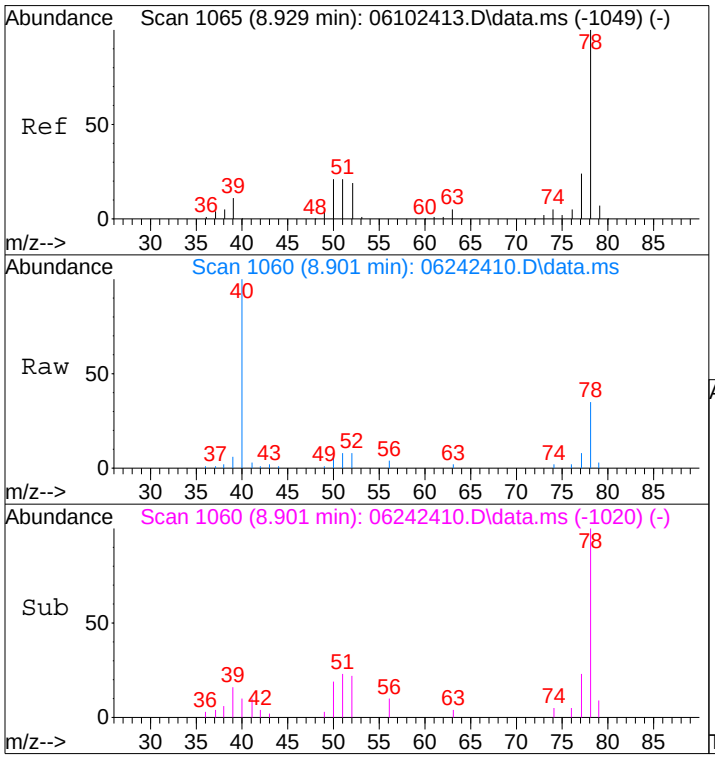


#34
Tetrahydrofuran (THF)
Concen: 0.24 ng
RT: 7.78 min Scan# 862
Delta R.T. 0.019 min
Lab File: 06242410.D
Acq: 24 Jun 2024 12:27

Tgt Ion: 72 Resp: 2500

Ion	Ratio	Lower	Upper
72	100		
71	103.6	79.4	119.4
42	394.8	260.8	300.8#

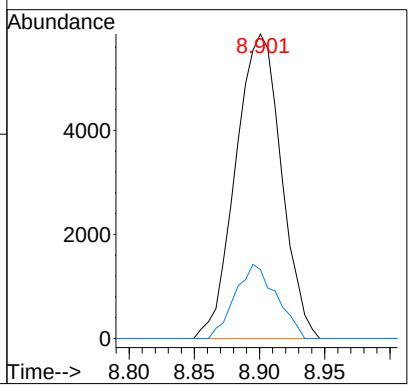


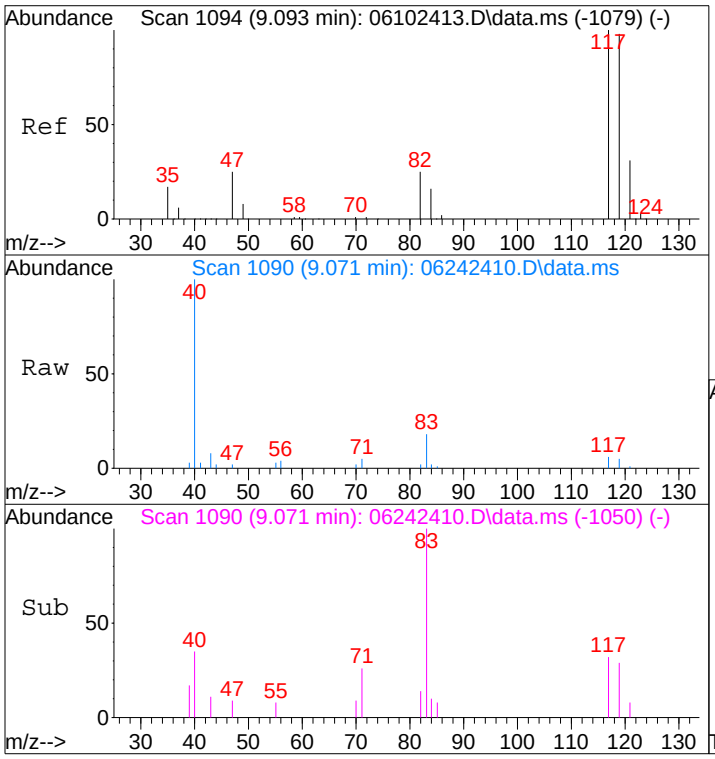


#41
Benzene
Concen: 0.19 ng
RT: 8.90 min Scan# 1060
Delta R.T. -0.024 min
Lab File: 06242410.D
Acq: 24 Jun 2024 12:27

Tgt Ion: 78 Resp: 14238

Ion	Ratio	Lower	Upper
78	100		
77	22.1	4.0	44.0

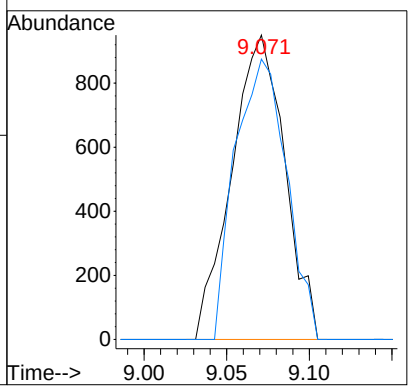


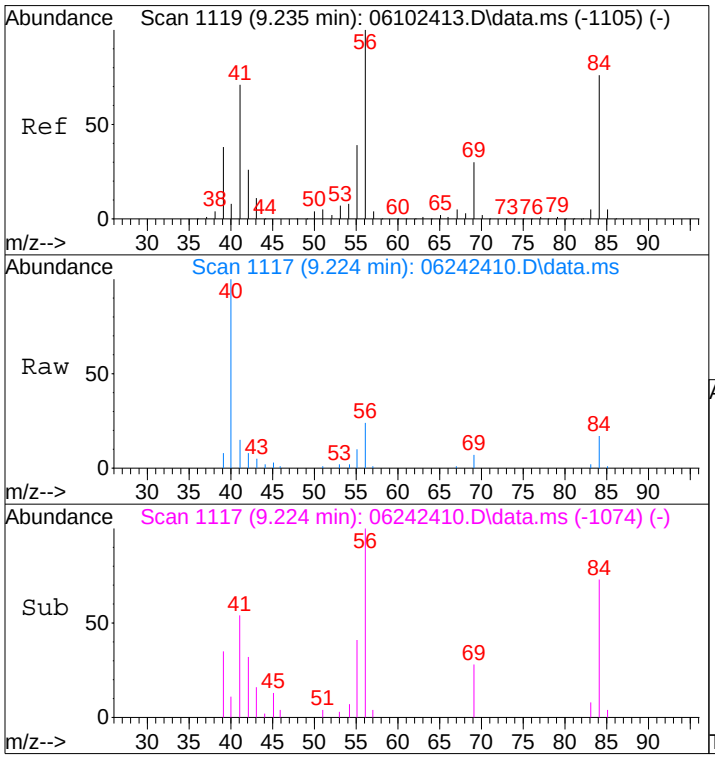


#42
Carbon Tetrachloride
Concen: 0.06 ng
RT: 9.07 min Scan# 1090
Delta R.T. -0.023 min
Lab File: 06242410.D
Acq: 24 Jun 2024 12:27

Tgt Ion:117 Resp: 2124

Ion	Ratio	Lower	Upper
117	100		
119	89.1	77.3	117.3

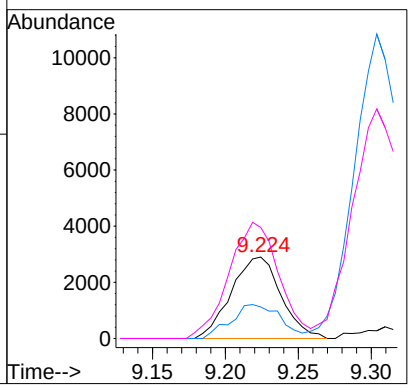


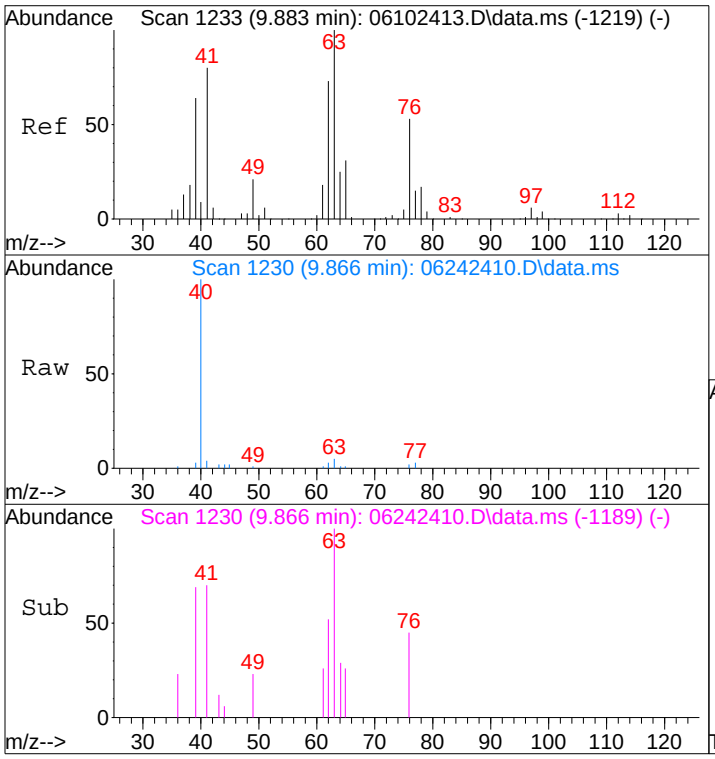


#43
Cyclohexane
Concen: 0.28 ng
RT: 9.22 min Scan# 1117
Delta R.T. -0.006 min
Lab File: 06242410.D
Acq: 24 Jun 2024 12:27

Tgt Ion: 84 Resp: 6896

Ion	Ratio	Lower	Upper
84	100		
69	41.2	18.8	58.8
56	143.2	111.5	151.5

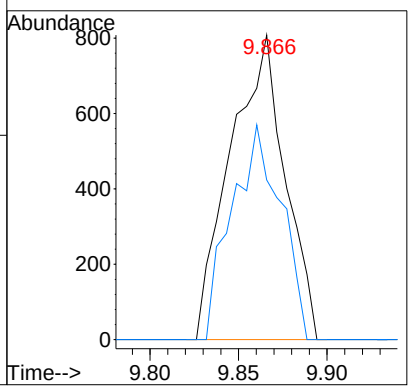


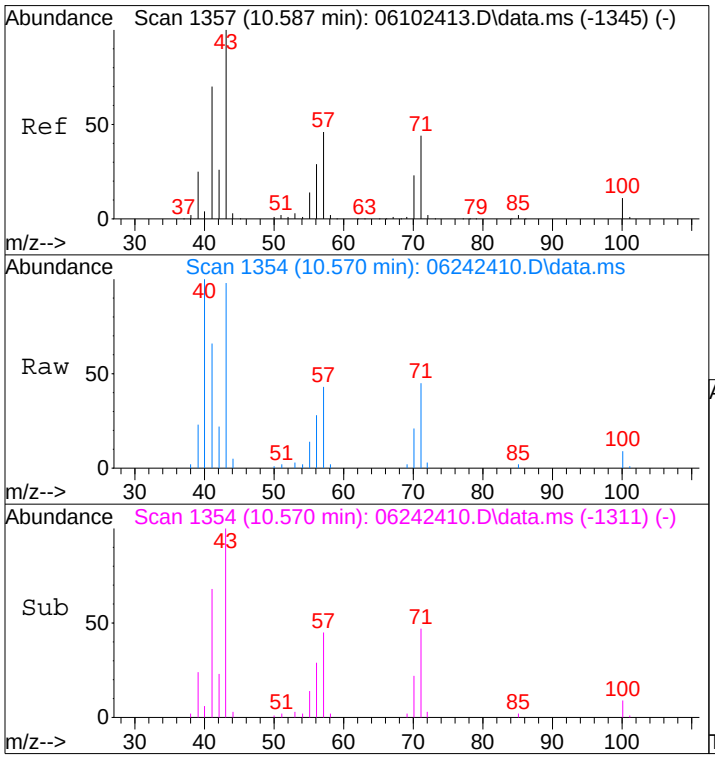


#45
1,2-Dichloropropane
Concen: 0.09 ng
RT: 9.87 min Scan# 1230
Delta R.T. -0.016 min
Lab File: 06242410.D
Acq: 24 Jun 2024 12:27

Tgt Ion: 63 Resp: 1732

Ion	Ratio	Lower	Upper
63	100		
62	63.3	52.4	92.4

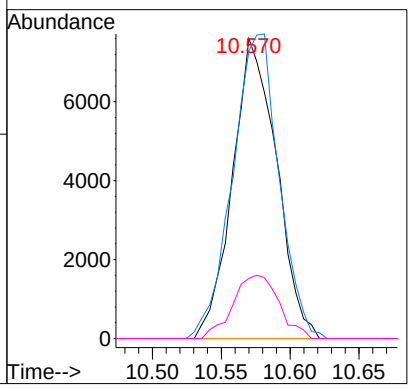


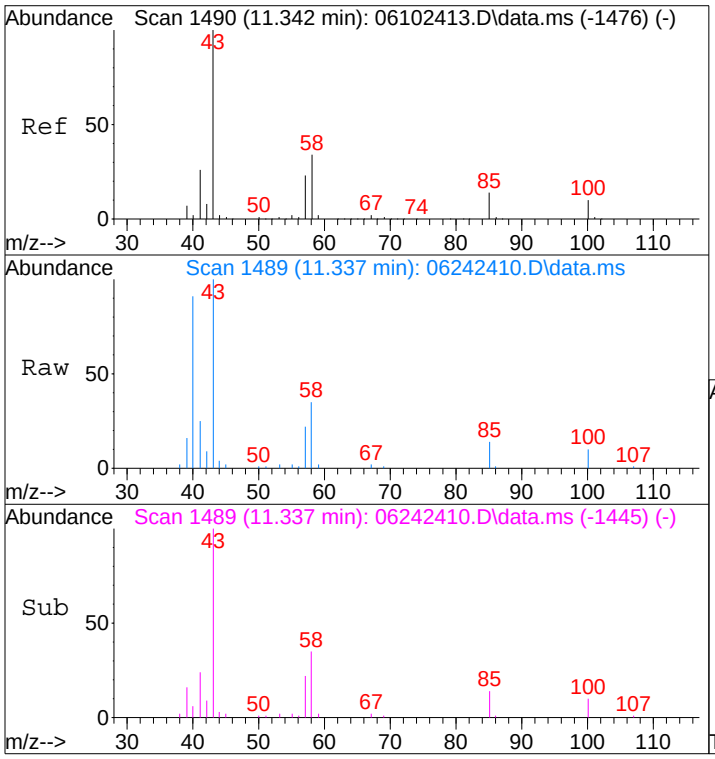


#51
n-Heptane
Concen: 1.06 ng
RT: 10.57 min Scan# 1354
Delta R.T. -0.008 min
Lab File: 06242410.D
Acq: 24 Jun 2024 12:27

Tgt Ion: 71 Resp: 16895

Ion	Ratio	Lower	Upper
71	100		
57	106.9	83.9	123.9
100	22.0	4.8	44.8

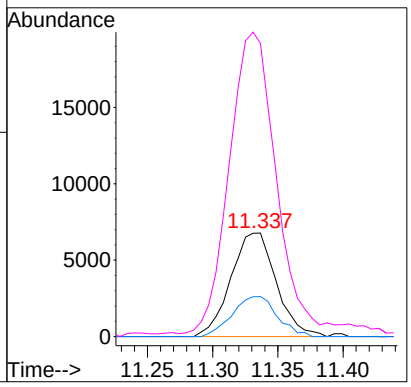


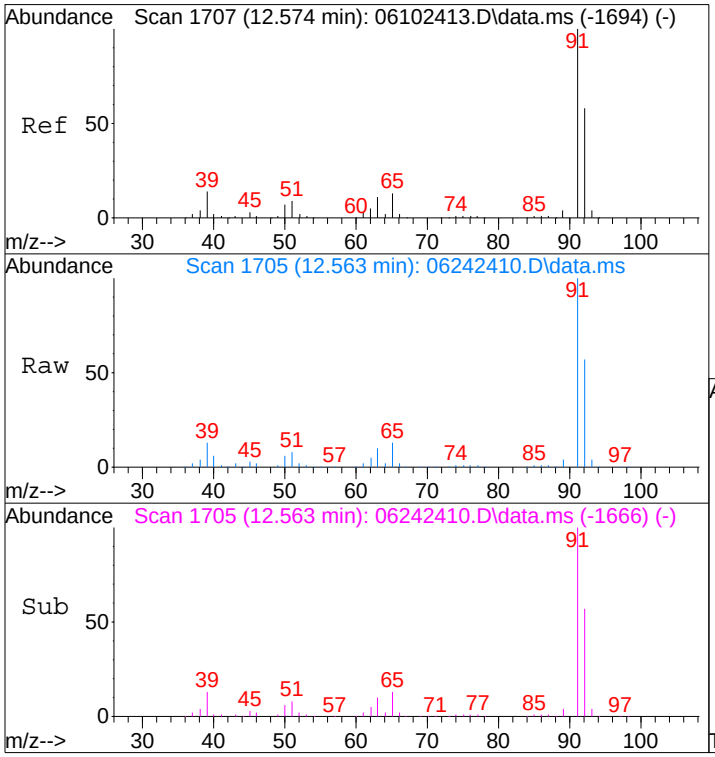


#53
4-Methyl-2-pentanone
Concen: 0.98 ng
RT: 11.34 min Scan# 1489
Delta R.T. -0.001 min
Lab File: 06242410.D
Acq: 24 Jun 2024 12:27

Tgt Ion: 58 Resp: 16396

Ion	Ratio	Lower	Upper
58	100		
85	38.2	34.5	51.7
43	320.1	236.1	354.1

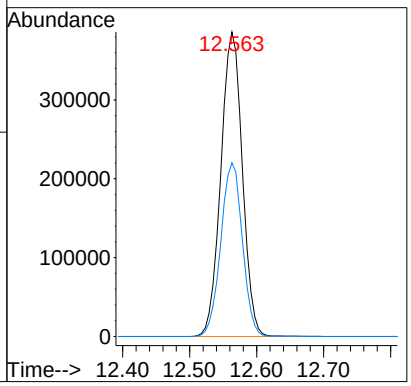


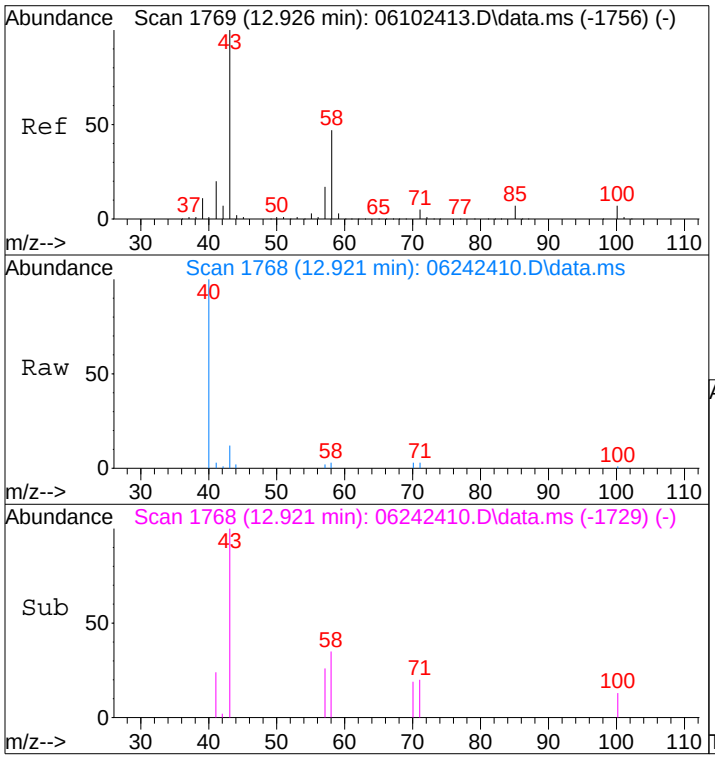


#58
Toluene
Concen: 11.41 ng
RT: 12.56 min Scan# 1705
Delta R.T. -0.028 min
Lab File: 06242410.D
Acq: 24 Jun 2024 12:27

Tgt Ion: 91 Resp: 859515

Ion	Ratio	Lower	Upper
91	100		
92	57.3	37.4	77.4

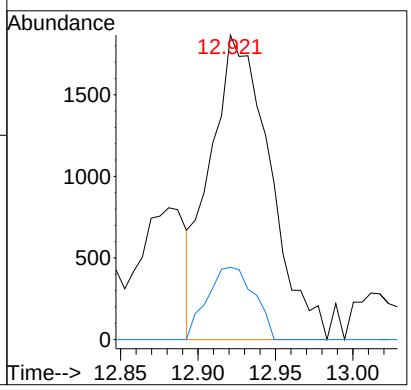


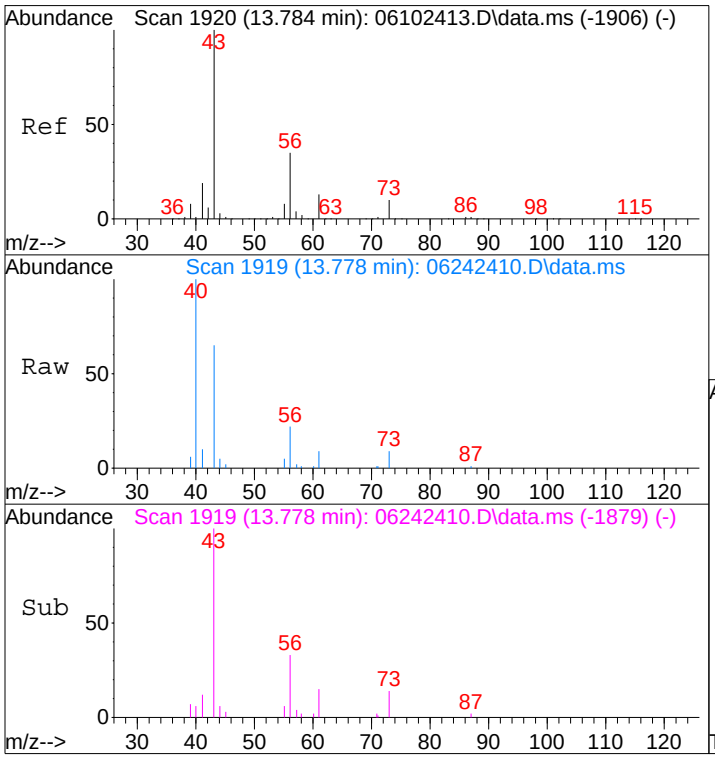


#59
2-Hexanone
Concen: 0.11 ng
RT: 12.92 min Scan# 1768
Delta R.T. -0.028 min
Lab File: 06242410.D
Acq: 24 Jun 2024 12:27

Tgt Ion: 43 Resp: 5011

Ion	Ratio	Lower	Upper
43	100		
58	18.6	25.9	65.9#

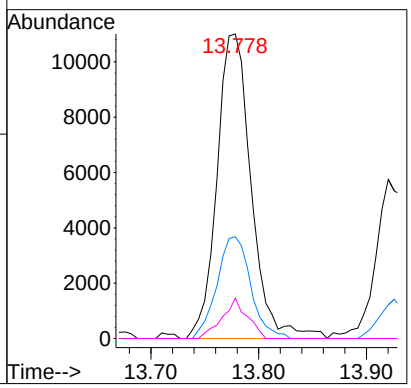


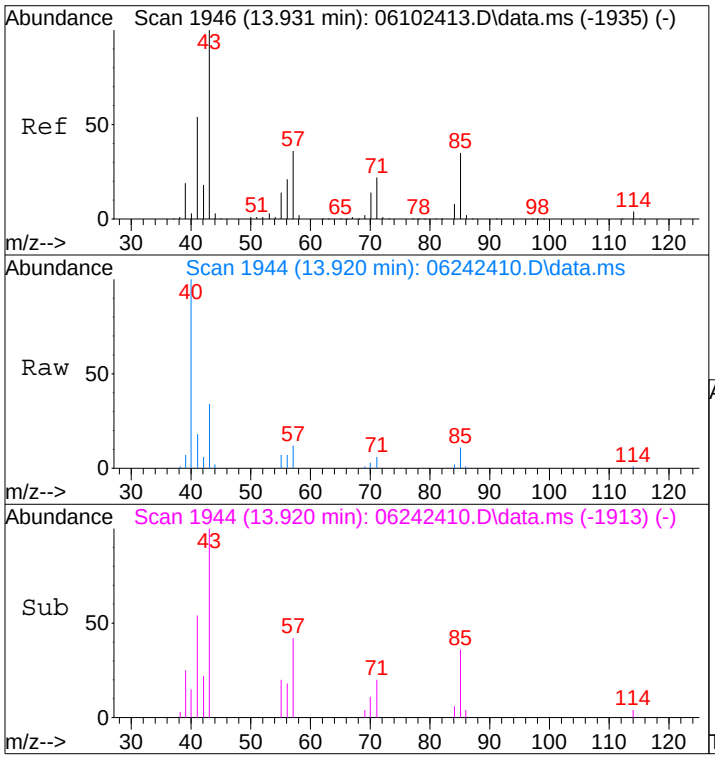


#62
n-Butyl Acetate
Concen: 0.49 ng
RT: 13.78 min Scan# 1919
Delta R.T. -0.023 min
Lab File: 06242410.D
Acq: 24 Jun 2024 12:27

Tgt Ion: 43 Resp: 24275

Ion	Ratio	Lower	Upper
43	100		
56	32.9	14.3	54.3
73	9.7	0.0	30.4

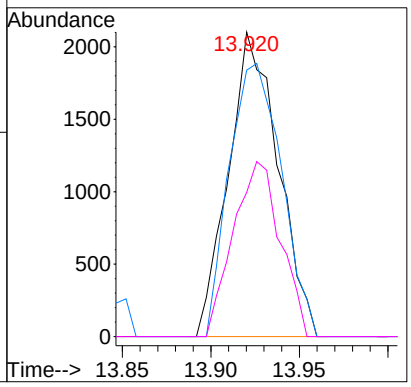


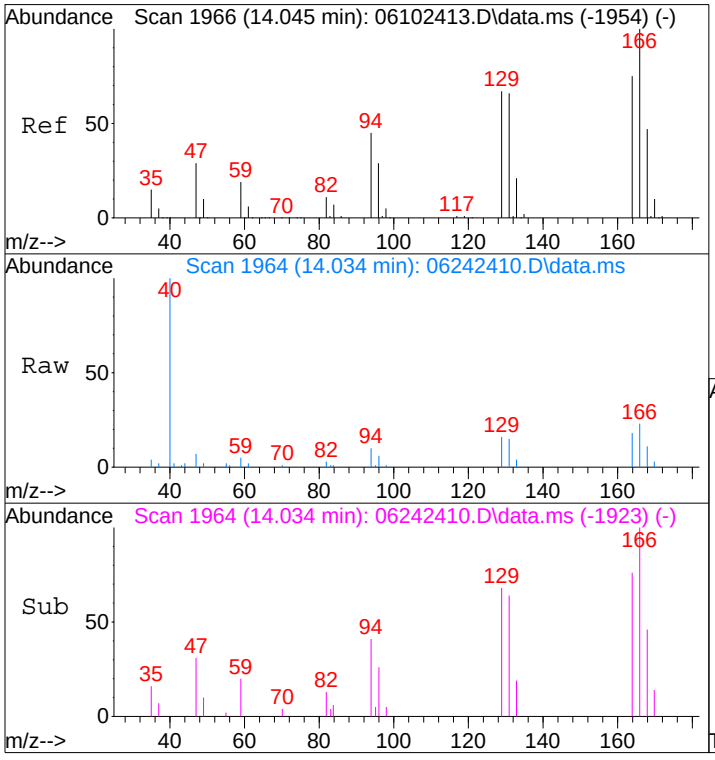


#63
n-Octane
Concen: 0.26 ng
RT: 13.92 min Scan# 1944
Delta R.T. -0.023 min
Lab File: 06242410.D
Acq: 24 Jun 2024 12:27

Tgt Ion: 57 Resp: 4103

Ion	Ratio	Lower	Upper
57	100		
85	94.4	79.8	119.6
71	54.5	49.0	73.4

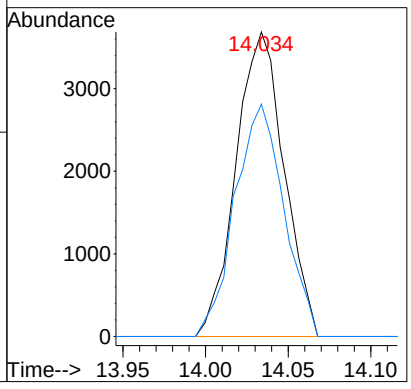


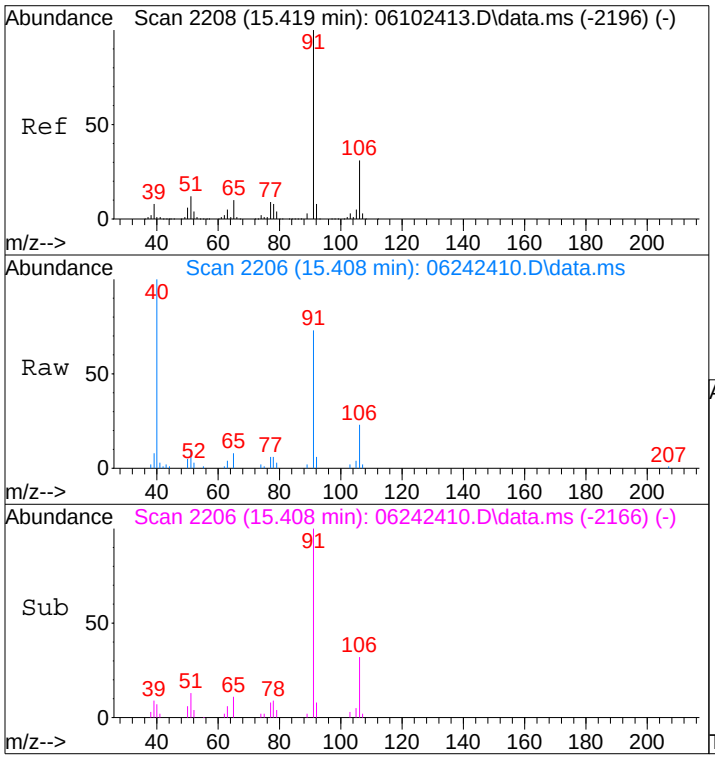


#64
Tetrachloroethene
Concen: 0.29 ng
RT: 14.03 min Scan# 1964
Delta R.T. -0.017 min
Lab File: 06242410.D
Acq: 24 Jun 2024 12:27

Tgt Ion:166 Resp: 7472

Ion	Ratio	Lower	Upper
166	100		
164	77.5	56.9	96.9

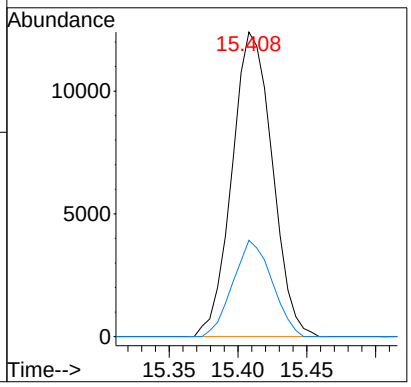


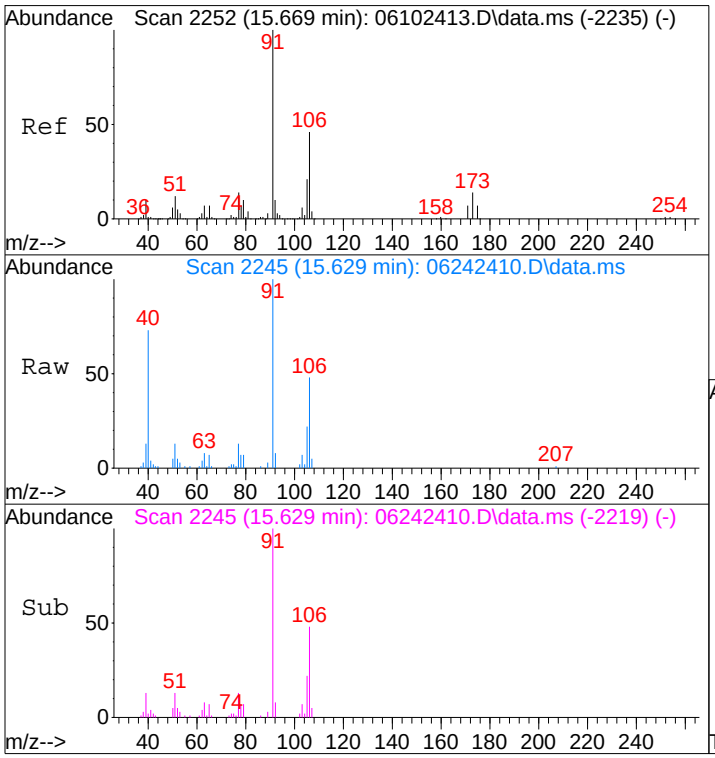


#66
Ethylbenzene
Concen: 0.29 ng
RT: 15.41 min Scan# 2206
Delta R.T. -0.023 min
Lab File: 06242410.D
Acq: 24 Jun 2024 12:27

Tgt Ion: 91 Resp: 25247

Ion	Ratio	Lower	Upper
91	100		
106	30.7	10.7	50.7

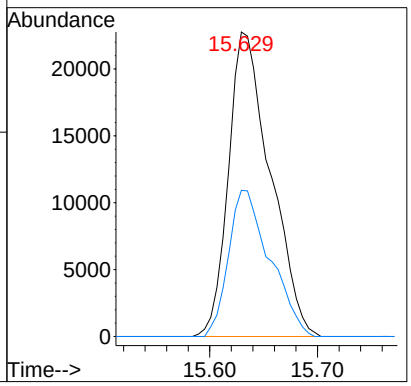


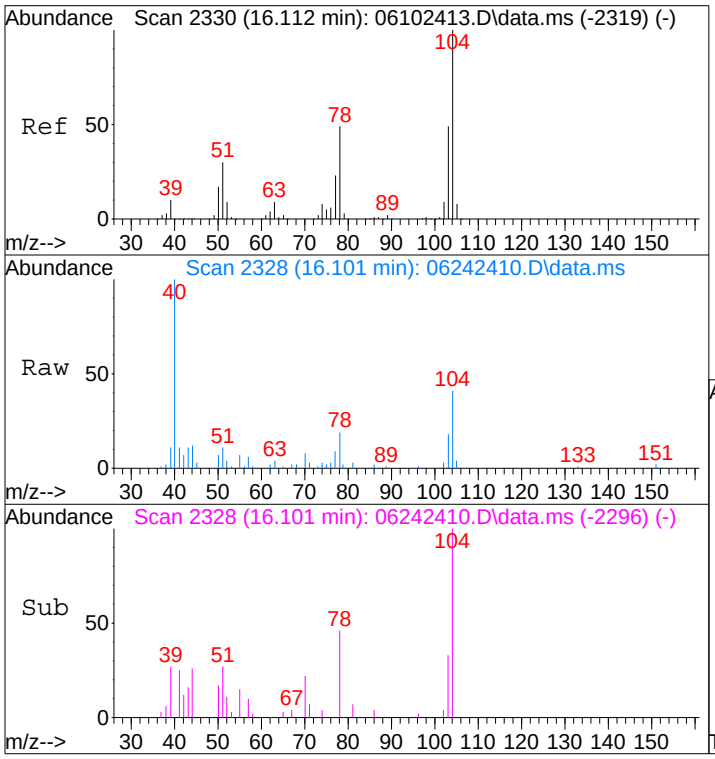


#67
m- & p-Xylenes
Concen: 0.85 ng
RT: 15.63 min Scan# 2245
Delta R.T. -0.051 min
Lab File: 06242410.D
Acq: 24 Jun 2024 12:27

Tgt Ion: 91 Resp: 61444

Ion	Ratio	Lower	Upper
91	100		
106	47.5	25.9	65.9

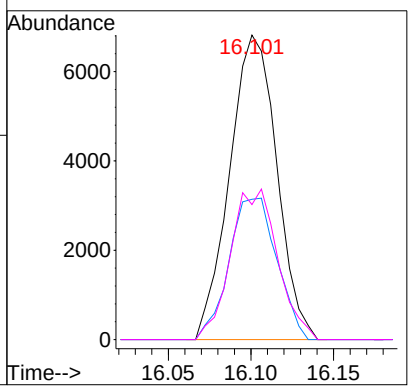


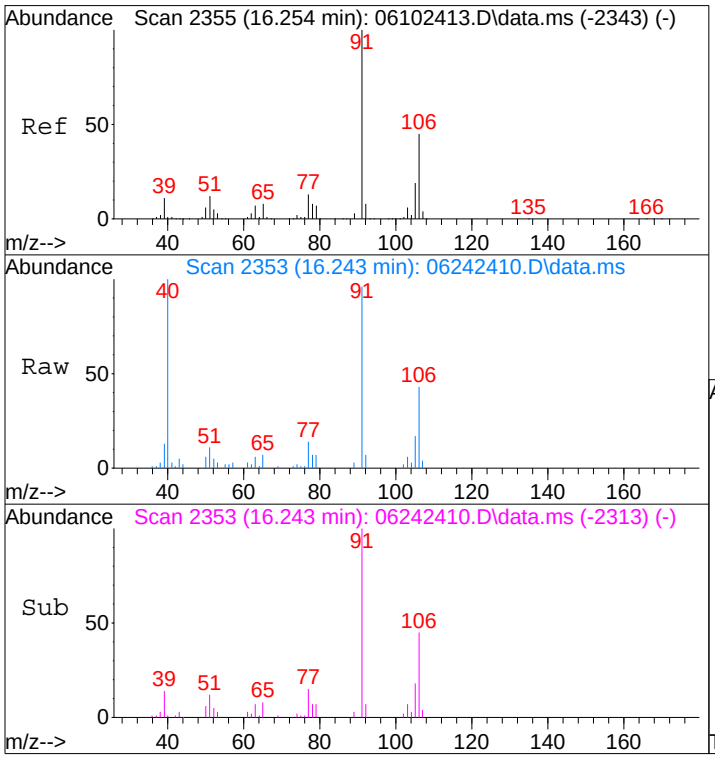


#69
Styrene
Concen: 0.28 ng
RT: 16.10 min Scan# 2328
Delta R.T. -0.017 min
Lab File: 06242410.D
Acq: 24 Jun 2024 12:27

Tgt Ion:104 Resp: 13553

Ion	Ratio	Lower	Upper
104	100		
78	47.1	29.2	69.2
103	49.2	29.4	69.4

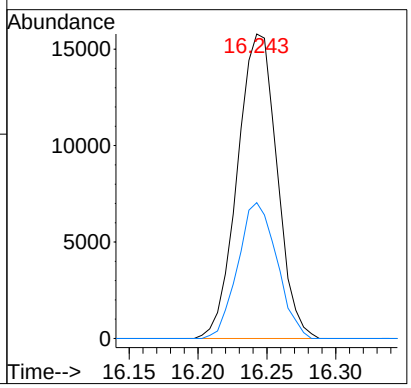


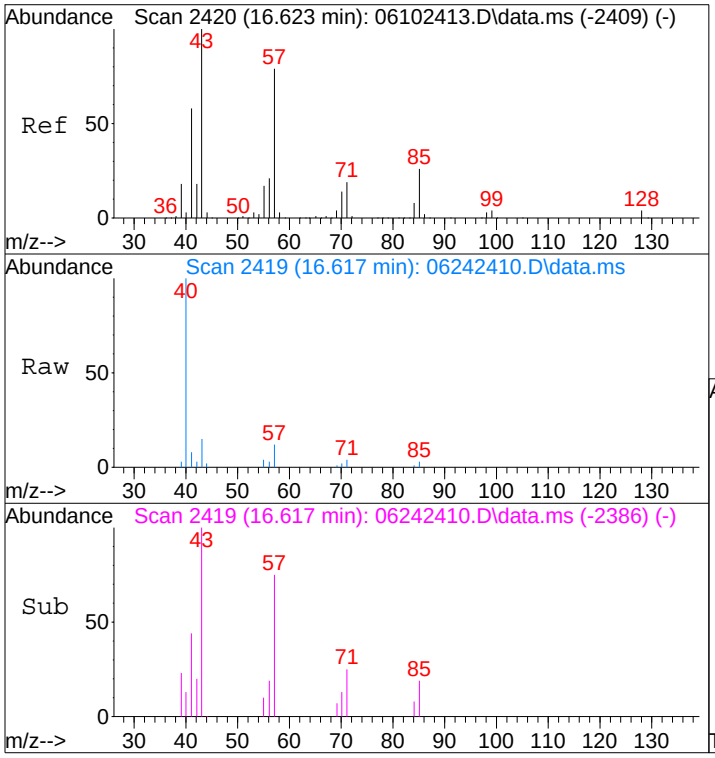


#70
o-Xylene
Concen: 0.44 ng
RT: 16.24 min Scan# 2353
Delta R.T. -0.023 min
Lab File: 06242410.D
Acq: 24 Jun 2024 12:27

Tgt Ion: 91 Resp: 31566

Ion	Ratio	Lower	Upper
91	100		
106	44.0	24.5	64.5

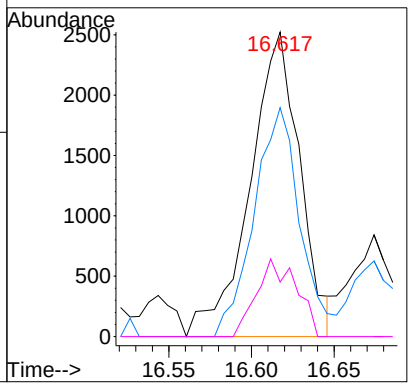


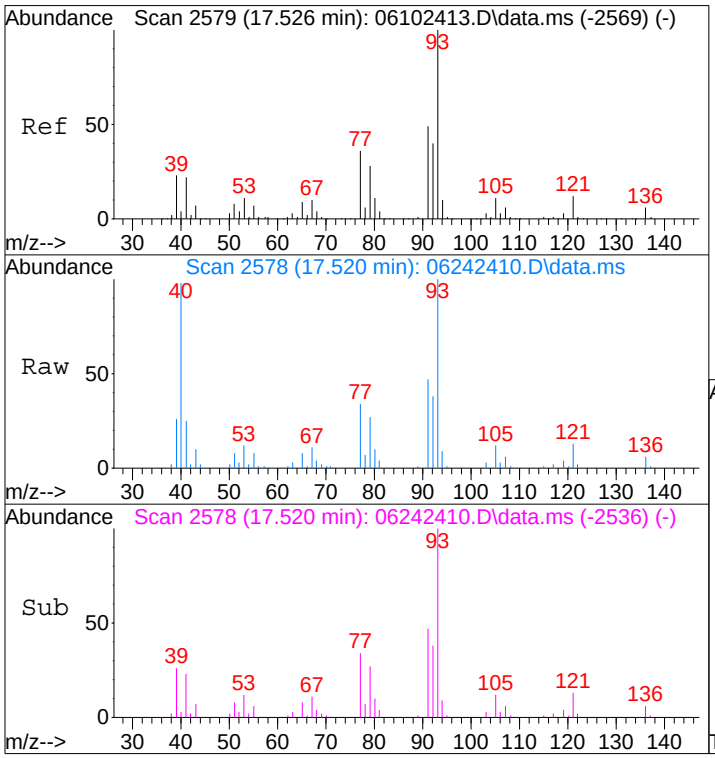


#71
n-Nonane
Concen: 0.13 ng
RT: 16.62 min Scan# 2419
Delta R.T. -0.011 min
Lab File: 06242410.D
Acq: 24 Jun 2024 12:27

Tgt Ion: 43 Resp: 5275

Ion	Ratio	Lower	Upper
43	100		
57	69.6	58.2	98.2
85	20.4	5.9	45.9

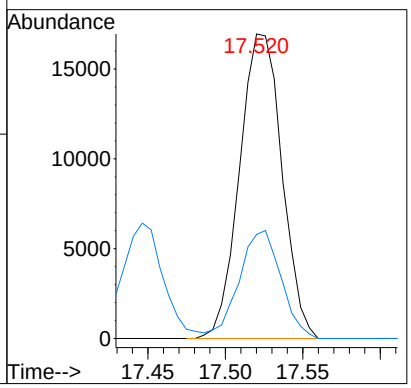


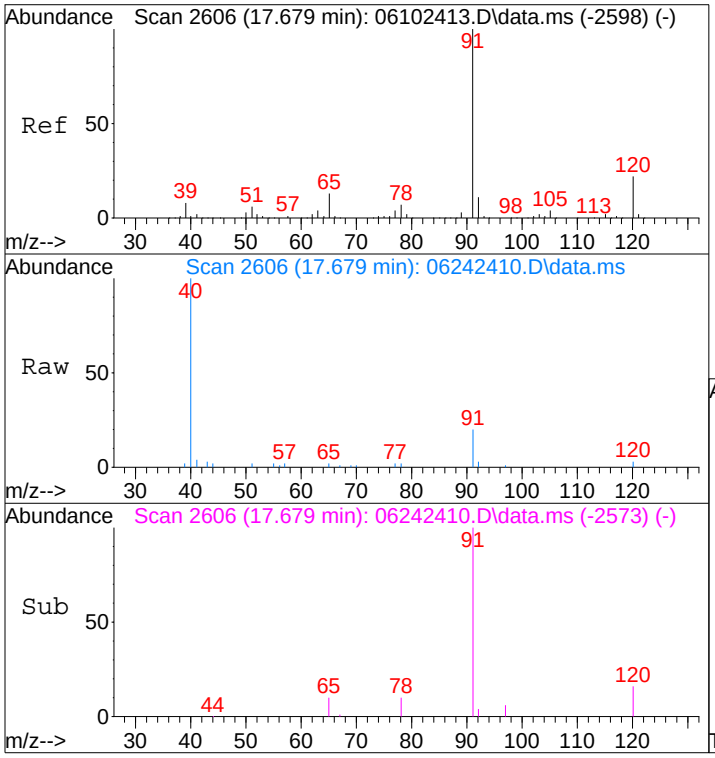


#75
alpha-Pinene
Concen: 0.78 ng
RT: 17.52 min Scan# 2578
Delta R.T. -0.011 min
Lab File: 06242410.D
Acq: 24 Jun 2024 12:27

Tgt Ion: 93 Resp: 32304

Ion	Ratio	Lower	Upper
93	100		
77	35.1	15.3	55.3

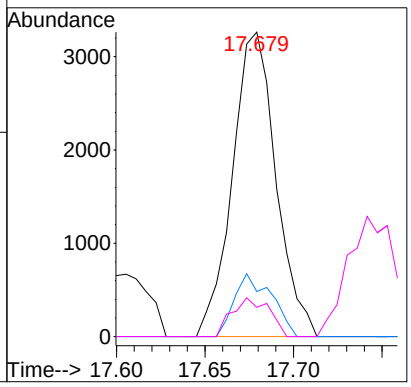


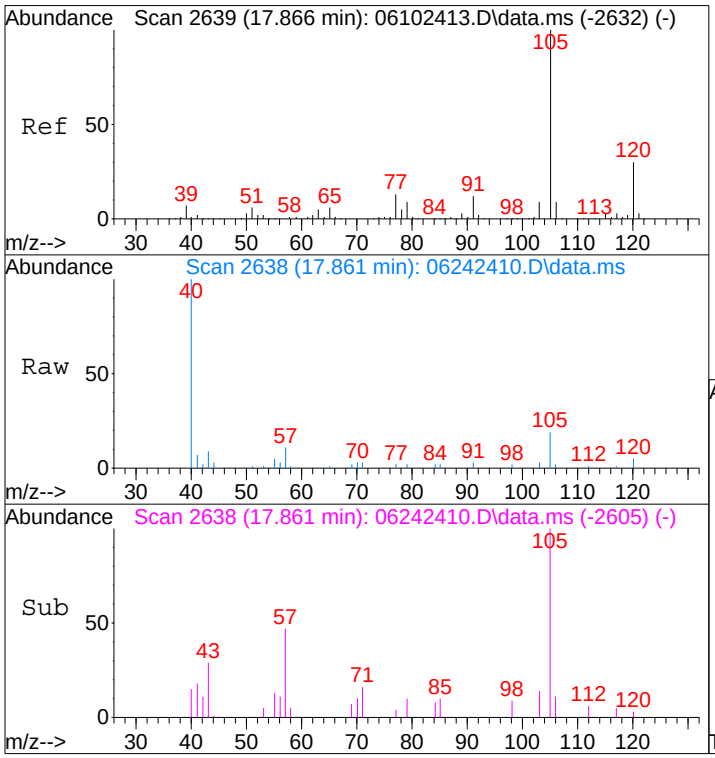


#76
n-Propylbenzene
Concen: 0.05 ng
RT: 17.68 min Scan# 2606
Delta R.T. -0.011 min
Lab File: 06242410.D
Acq: 24 Jun 2024 12:27

Tgt Ion: 91 Resp: 5586

Ion	Ratio	Lower	Upper
91	100		
120	17.6	2.7	42.7
65	10.8	0.0	32.7

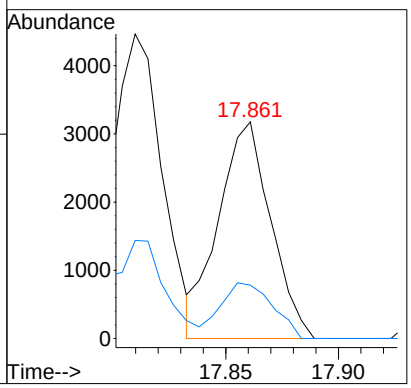


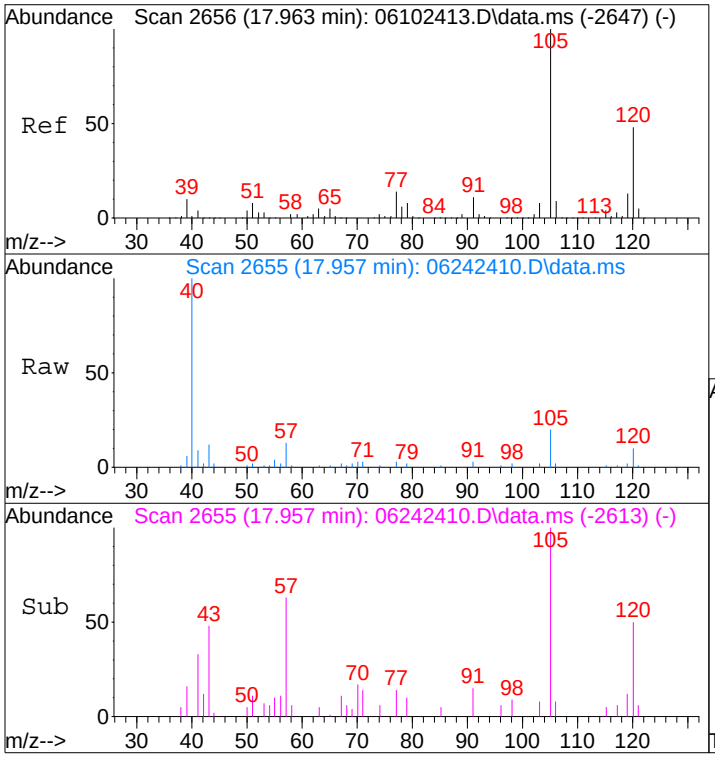


#78
4-Ethyltoluene
Concen: 0.06 ng
RT: 17.86 min Scan# 2638
Delta R.T. -0.011 min
Lab File: 06242410.D
Acq: 24 Jun 2024 12:27

Tgt Ion:105 Resp: 5121

Ion	Ratio	Lower	Upper
105	100		
120	25.4	9.9	49.9

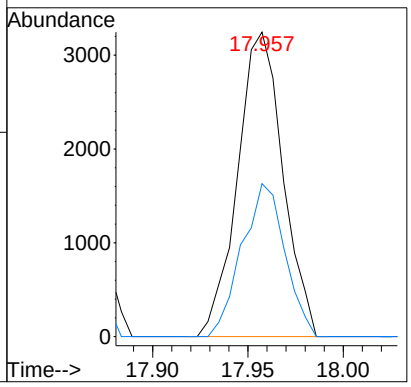


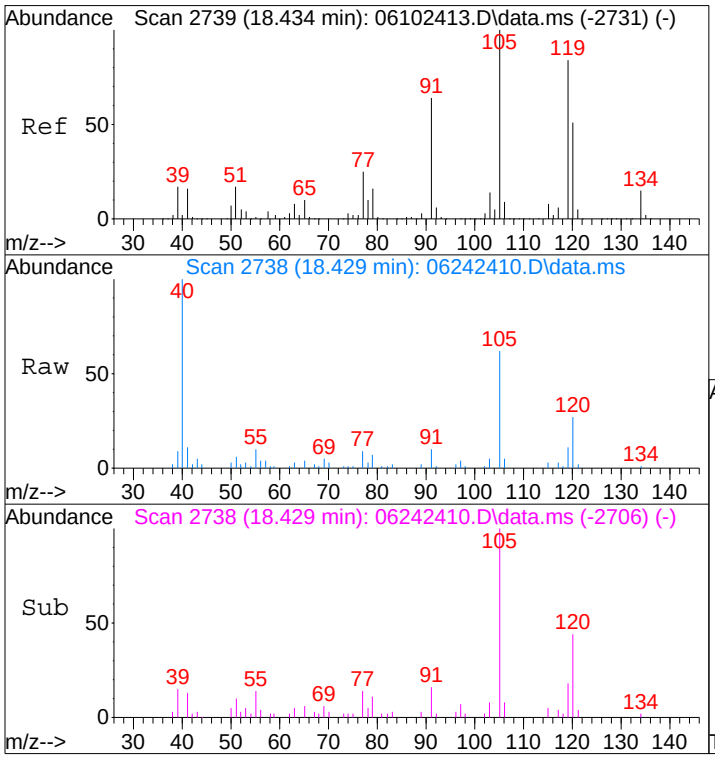


#79
1,3,5-Trimethylbenzene
Concen: 0.07 ng
RT: 17.96 min Scan# 2655
Delta R.T. -0.011 min
Lab File: 06242410.D
Acq: 24 Jun 2024 12:27

Tgt Ion:105 Resp: 5367

Ion	Ratio	Lower	Upper
105	100		
120	47.6	28.0	68.0

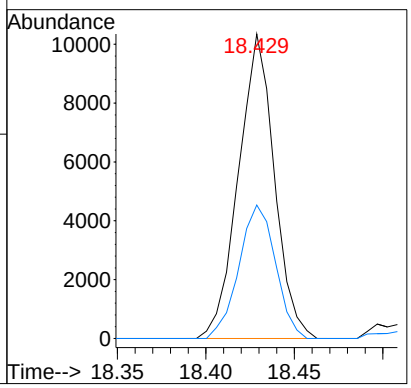


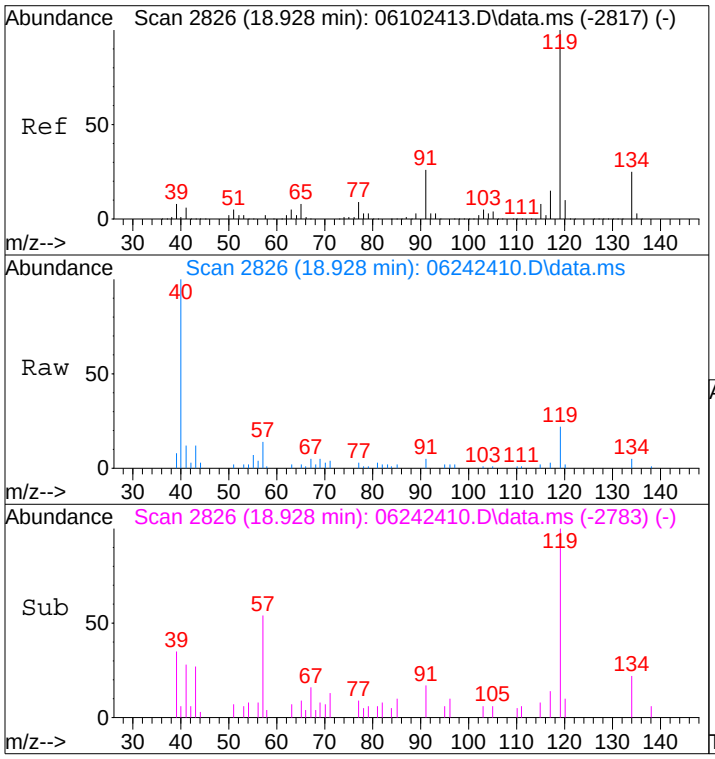


#82
1,2,4-Trimethylbenzene
Concen: 0.19 ng
RT: 18.43 min Scan# 2738
Delta R.T. -0.017 min
Lab File: 06242410.D
Acq: 24 Jun 2024 12:27

Tgt Ion:105 Resp: 14593

Ion	Ratio	Lower	Upper
105	100		
120	44.7	31.9	71.9

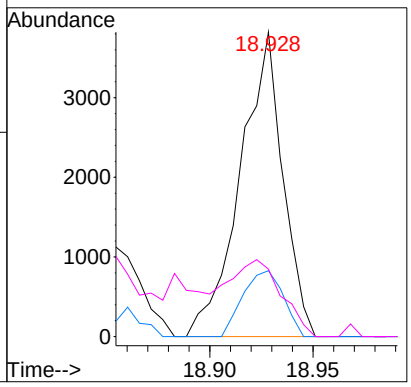


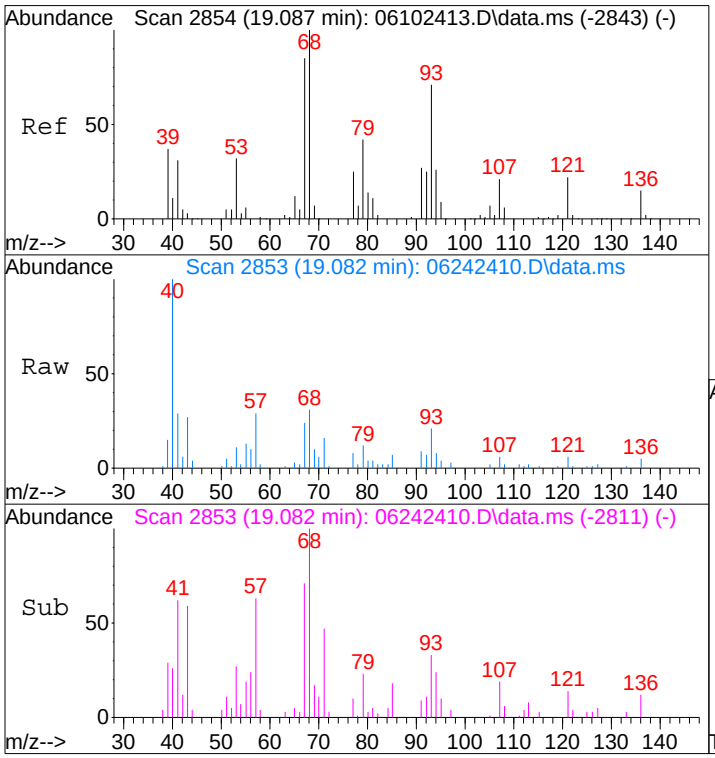


#88
4-Isopropyltoluene (p-Cymene)
Concen: 0.06 ng
RT: 18.93 min Scan# 2826
Delta R.T. -0.006 min
Lab File: 06242410.D
Acq: 24 Jun 2024 12:27

Tgt Ion:119 Resp: 5479

Ion	Ratio	Lower	Upper
119	100		
134	20.6	4.9	44.9
91	31.9	5.8	45.8

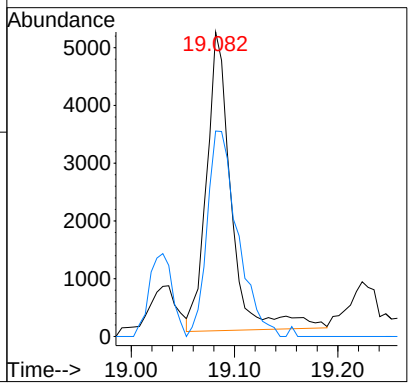


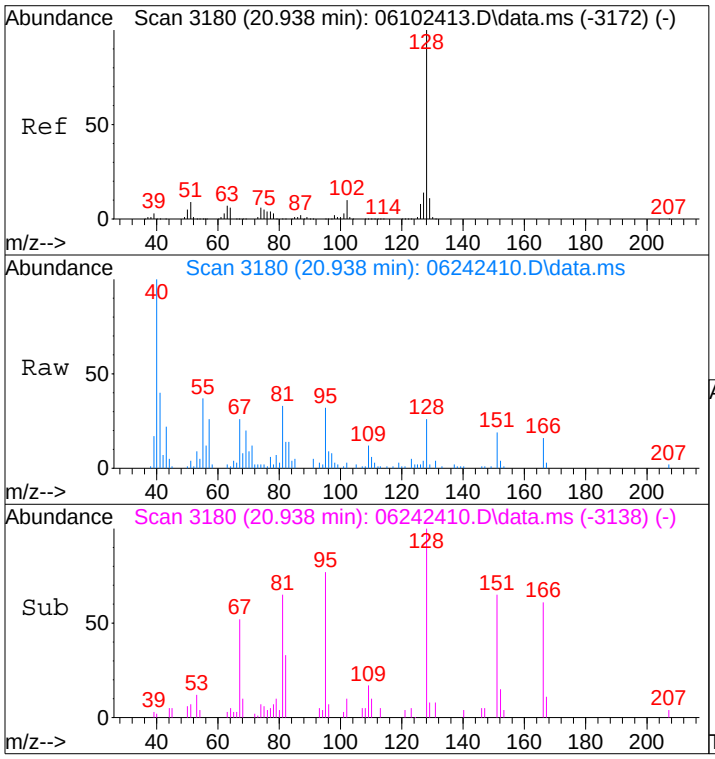


#91
d-Limonene
Concen: 0.32 ng
RT: 19.08 min Scan# 2853
Delta R.T. -0.011 min
Lab File: 06242410.D
Acq: 24 Jun 2024 12:27

Tgt Ion: 68 Resp: 8532

Ion	Ratio	Lower	Upper
68	100		
93	85.2	52.2	92.2

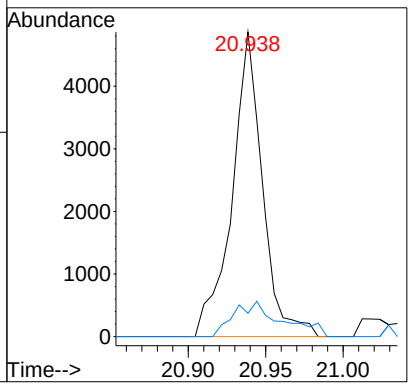




#95
Naphthalene
Concen: 0.07 ng
RT: 20.94 min Scan# 3180
Delta R.T. -0.011 min
Lab File: 06242410.D
Acq: 24 Jun 2024 12:27

Tgt Ion:128 Resp: 6656

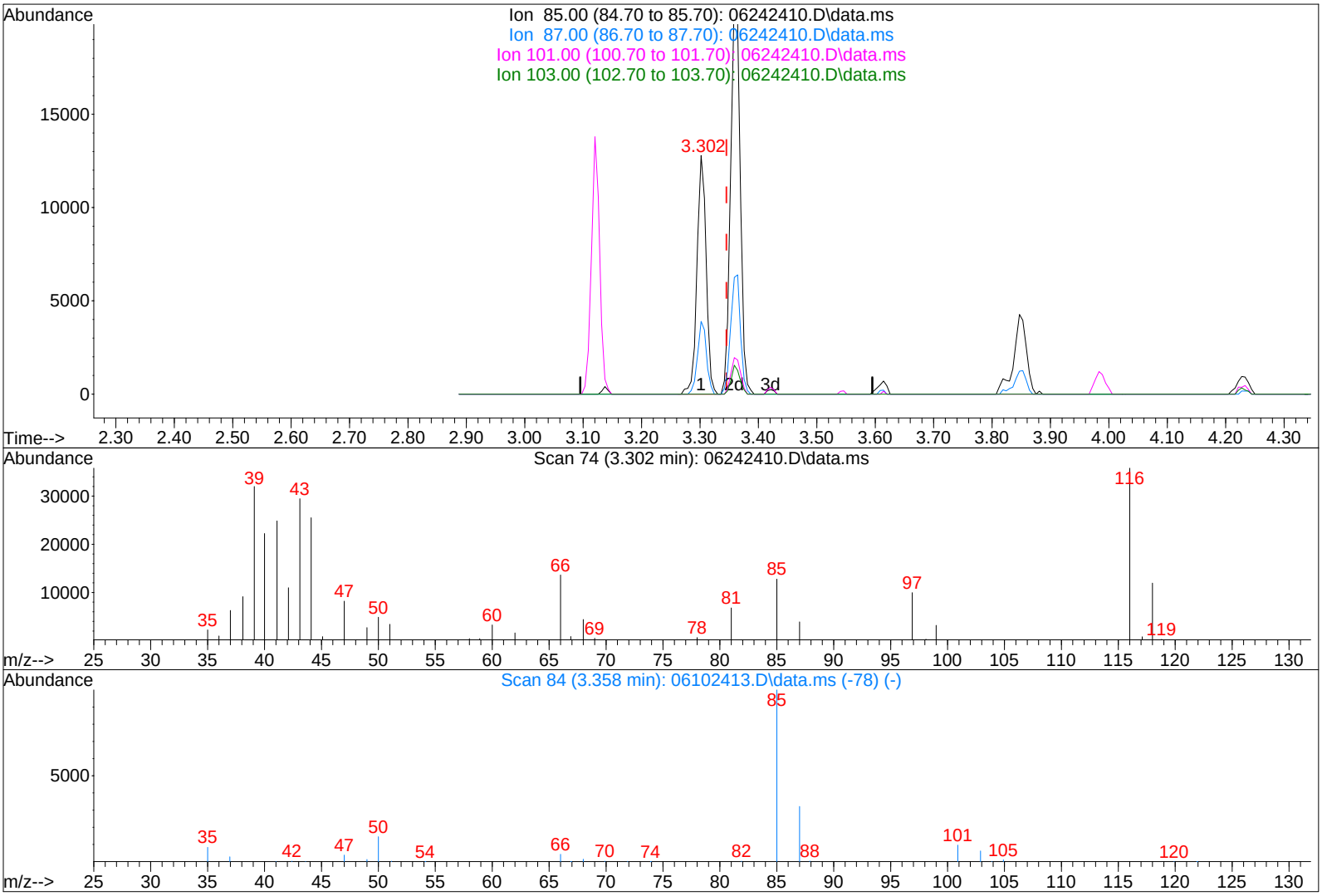
Ion	Ratio	Lower	Upper
128	100		
129	18.1	0.0	31.2



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\24\06242410.D Vial: 7
Acq On : 24 Jun 2024 12:27 Operator: SC
Sample : P2402249-064 (400mL)PF2 Inst : MS09
Misc : S37-06062402

Quant Time: Jun 24 13:23:16 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06242410.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.302min (-0.044) 0.32ng

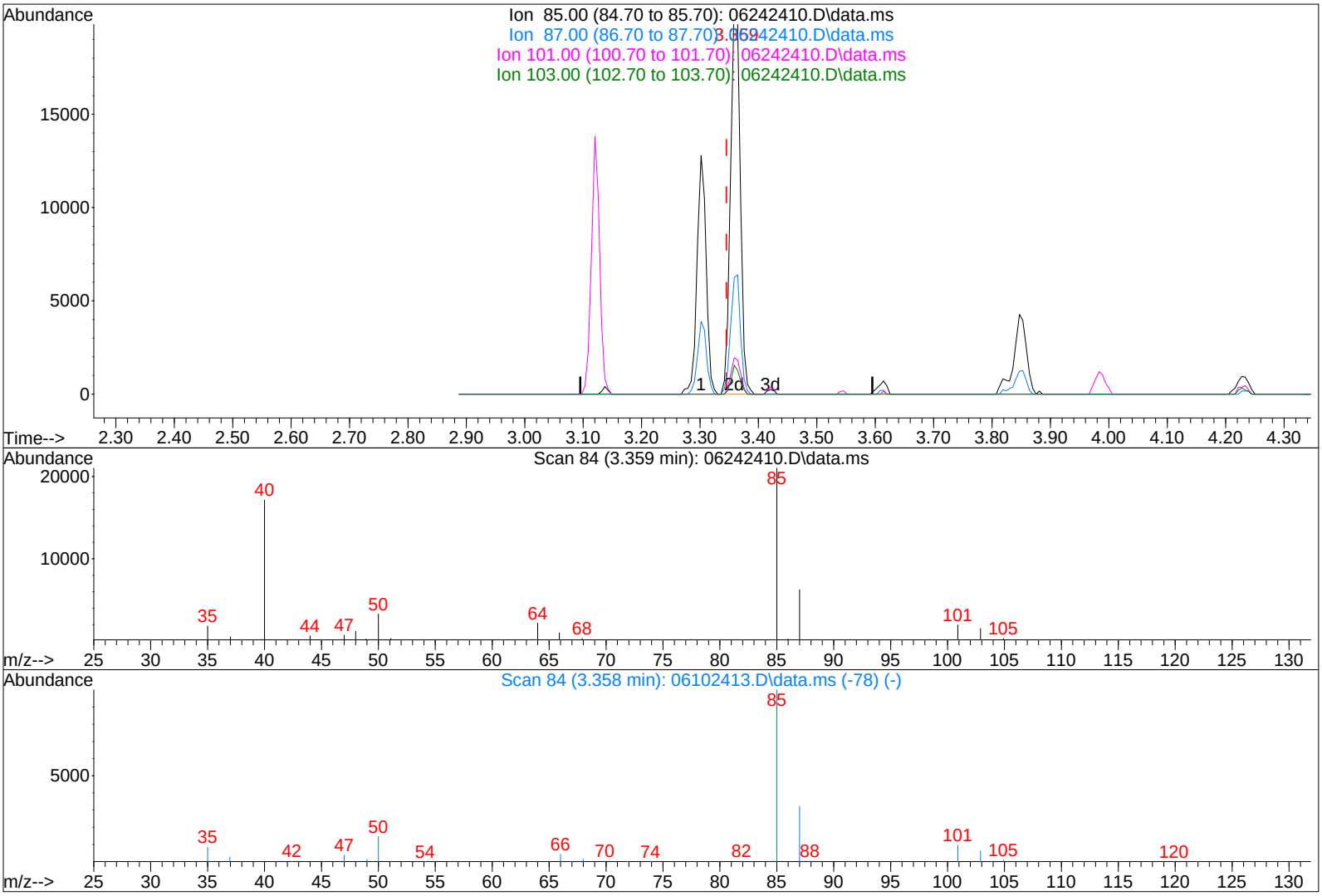
response 13949

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	29.77
101.00	9.80	0.00
103.00	6.30	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\24\06242410.D Vial: 7
Acq On : 24 Jun 2024 12:27 Operator: SC
Sample : P2402249-064 (400mL)PF2 Inst : MS09
Misc : S37-06062402

Quant Time: Jun 24 13:23:16 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06242410.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.359min (+0.013) 0.55ng m

response 24272

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	17.11
101.00	9.80	0.00
103.00	6.30	0.00

MP

6/24/24

6/29/24

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242410.D Vial: 7
Acq On : 24 Jun 2024 12:27 Operator: SC
Sample : P2402249-064 (400mL)PF2 Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 16:53:55 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

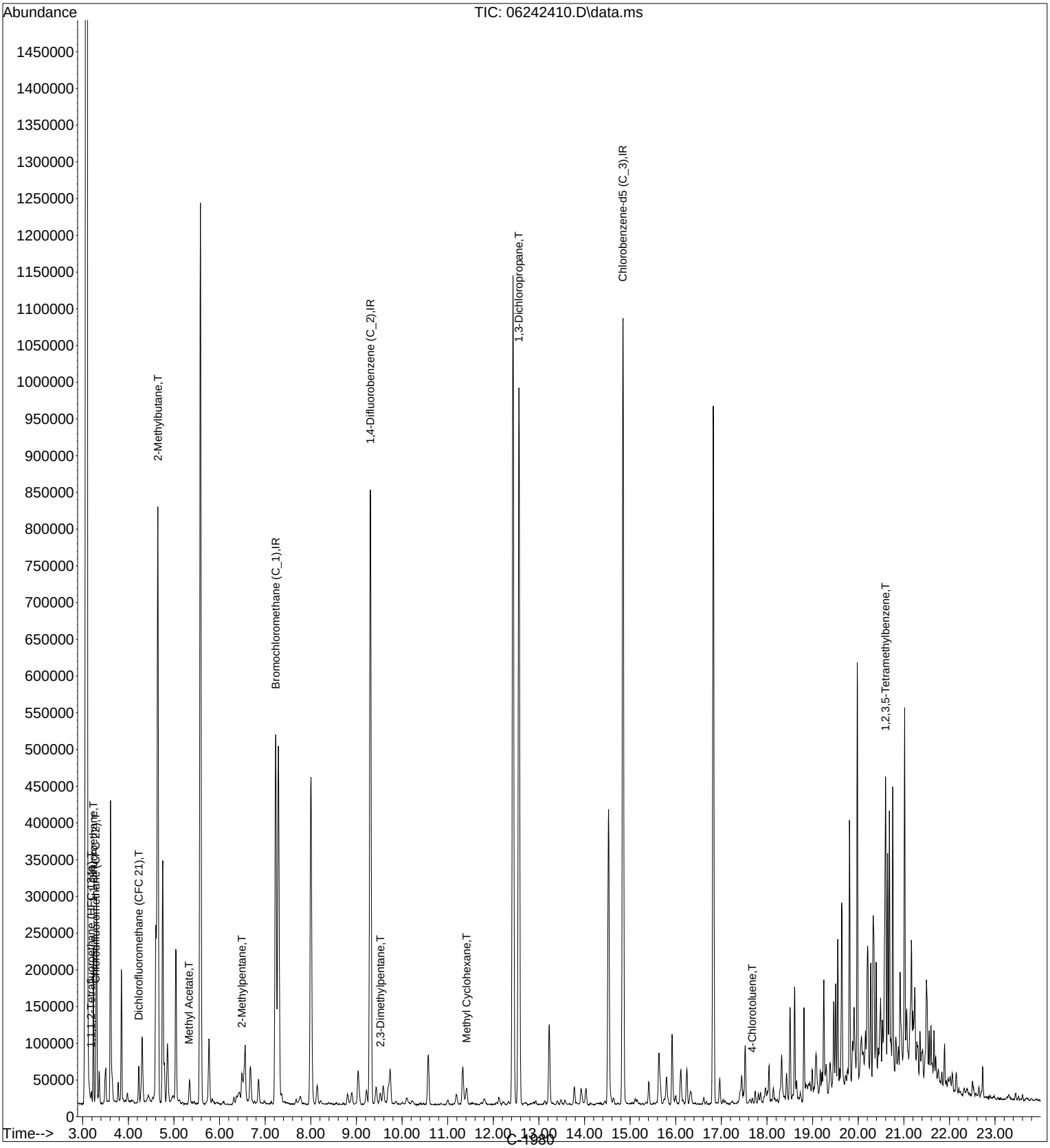
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	188393	12.500	ng		-0.02
16) 1,4-Difluorobenzene (C 2)	9.30	114	823394	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	188403	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	3.14	85	257	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.18	83	6498	0.336	ng	#	41
4) 1,1-Difluoroethane	3.23	65	50713	3.083	ng		92
5) Chlorodifluoromethane ...	3.28	67	4082	0.636	ng	#	78
6) 1-Chloro-1,1-Difluoroe...	3.51	65	934	N.D.			
7) Dichlorofluoromethane ...	4.23	67	38088	0.882	ng		99
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	0.00	83	0	N.D.	d		
10) 2-Methylbutane	4.65	57	151371	6.737	ng		96
11) Methyl Acetate	5.33	43	9431	0.149	ng	#	56
12) 2-Methylpentane	6.49	71	5924	0.363	ng	#	1
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	9.04	84	2769	N.D.			
17) 2,3-Dimethylpentane	9.53	56	7876	0.198	ng		92
18) Dibromomethane	9.80	174	299	N.D.			
20) Methyl Cyclohexane	11.42	55	9269	0.287	ng		92
21) 1,3-Dichloropropane	12.56	76	4167	0.166	ng	#	1
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	16.33	75	925	N.D.			
25) Bromobenzene	17.03	77	567	N.D.			
26) 2-Chlorotoluene	17.61	91	1177	N.D.			
27) 4-Chlorotoluene	17.68	91	5586	0.101	ng	#	41
28) Indane	19.11	117	3150	N.D.			
29) Indene	19.21	115	1627	N.D.			
30) 1,2,4,5-Tetramethylben...	20.18	119	3592	N.D.			
31) 1,2,3,4-Tetramethylben...	20.22	119	5529	N.D.			
32) 1,2,3,5-Tetramethylben...	20.60	119	7117	0.115	ng		88
33) 1,2,3-Trichlorobenzene	21.21	180	60	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242410.D Vial: 7
Acq On : 24 Jun 2024 12:27 Operator: SC
Sample : P2402249-064 (400mL)PF2 Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 16:53:55 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

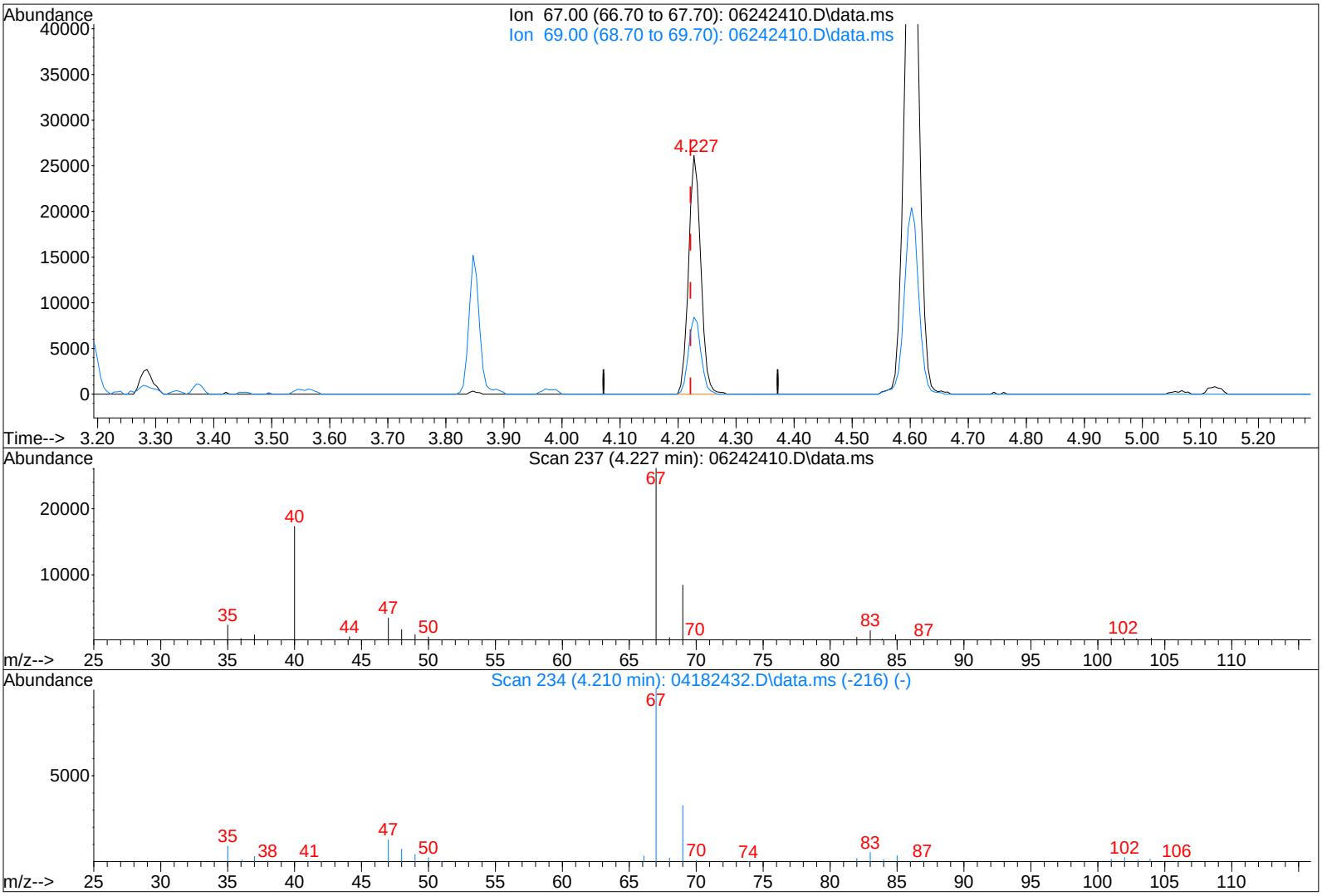


Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\24\06242410.D Vial: 7
Acq On : 24 Jun 2024 12:27 Operator: SC
Sample : P2402249-064 (400mL)PF2 Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 16:49:03 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06242410.D\data.ms

(7) Dichlorofluoromethane (CFC 21) (T)

4.227min (+0.006) 0.88ng

response 38088

Ion	Exp%	Act%
67.00	100	100
69.00	32.40	32.98
0.00	0.00	0.00
0.00	0.00	0.00

LSC Area Percent Report

MJ 6/28/24

Data Path : I:\MS09\DATA\2024 06\24\
Data File : 06242410.D
Acq On : 24 Jun 2024 12:27
Operator : SC
Sample : P2402249-064 (400mL)PF2
Misc : S37-06062402
ALS Vial : 7 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06242410.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.086	23	36	51	rBV	8960005	16665666	100.00%	53.561%
2	3.194	51	55	58	rVV3	16385	26100	0.16%	0.084%
3	3.234	58	62	66	rVV	212674	233380	1.40%	0.750%
4	3.302	66	74	79	rVV3	278388	439457	2.64%	1.412%
5	3.359	79	84	91	rVB3	43680	68259	0.41%	0.219%
6	3.506	97	110	114	rBV3	48313	103853	0.62%	0.334%
7	3.608	123	128	143	rBV	409964	603972	3.62%	1.941%
8	3.779	154	158	163	rBV	25975	33829	0.20%	0.109%
9	3.847	163	170	175	rBV	178397	232504	1.40%	0.747%
10	3.978	188	193	198	rBV5	11052	18143	0.11%	0.058%
11	4.227	231	237	242	rBV	49650	73240	0.44%	0.235%
12	4.301	242	250	259	rVB	87556	185984	1.12%	0.598%
13	4.438	265	274	282	rBV6	8468	22138	0.13%	0.071%
14	4.534	286	291	294	rBV3	6094	11017	0.07%	0.035%
15	4.602	294	303	305	rBV	236146	379836	2.28%	1.221%
16	4.648	305	311	322	rVB3	811365	1601357	9.61%	5.147%
17	4.756	322	330	335	rBV	329700	576262	3.46%	1.852%
18	4.858	341	348	357	rVV	78687	158689	0.95%	0.510%
19	4.977	359	369	374	rVV5	9250	31668	0.19%	0.102%
20	5.039	374	380	391	rVV	209551	363564	2.18%	1.168%
21	5.340	425	433	440	rBV2	33133	66656	0.40%	0.214%
22	5.579	466	475	488	rVB	1226617	2388195	14.33%	7.675%
23	5.766	492	508	517	rBV	89475	197417	1.18%	0.634%
24	6.317	596	605	610	rBV3	10700	25379	0.15%	0.082%
25	6.374	610	615	617	rVV2	12033	22406	0.13%	0.072%
26	6.436	618	626	630	rVV2	16940	56270	0.34%	0.181%
27	6.487	630	635	640	rVV	42005	104465	0.63%	0.336%
28	6.561	640	648	658	rVV	80164	212301	1.27%	0.682%
29	6.675	660	668	680	rVB	49709	128983	0.77%	0.415%
30	6.856	690	700	710	rVB2	32576	69610	0.42%	0.224%
31	7.231	755	766	771	rBV	503258	1128138	6.77%	3.626%
32	7.288	771	776	786	rVV	485958	1127931	6.77%	3.625%
33	7.356	786	788	794	rVB	11910	20027	0.12%	0.064%
34	7.680	838	845	850	rBV3	7413	15657	0.09%	0.050%
35	7.771	851	861	870	rVB6	10187	32903	0.20%	0.106%
36	8.003	891	902	917	rBV	445316	1062796	6.38%	3.416%
37	8.140	917	926	934	rBV2	25750	61402	0.37%	0.197%
38	8.219	934	940	947	rVB6	4645	10057	0.06%	0.032%
39	8.804	1035	1043	1051	rBV3	14821	35739	0.21%	0.115%
40	8.901	1051	1060	1068	rVB2	15902	42003	0.25%	0.135%

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\24\
Data File : 06242410.D
Acq On : 24 Jun 2024 12:27
Operator : SC
Sample : P2402249-064 (400mL)PF2
Misc : S37-06062402
ALS Vial : 7 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

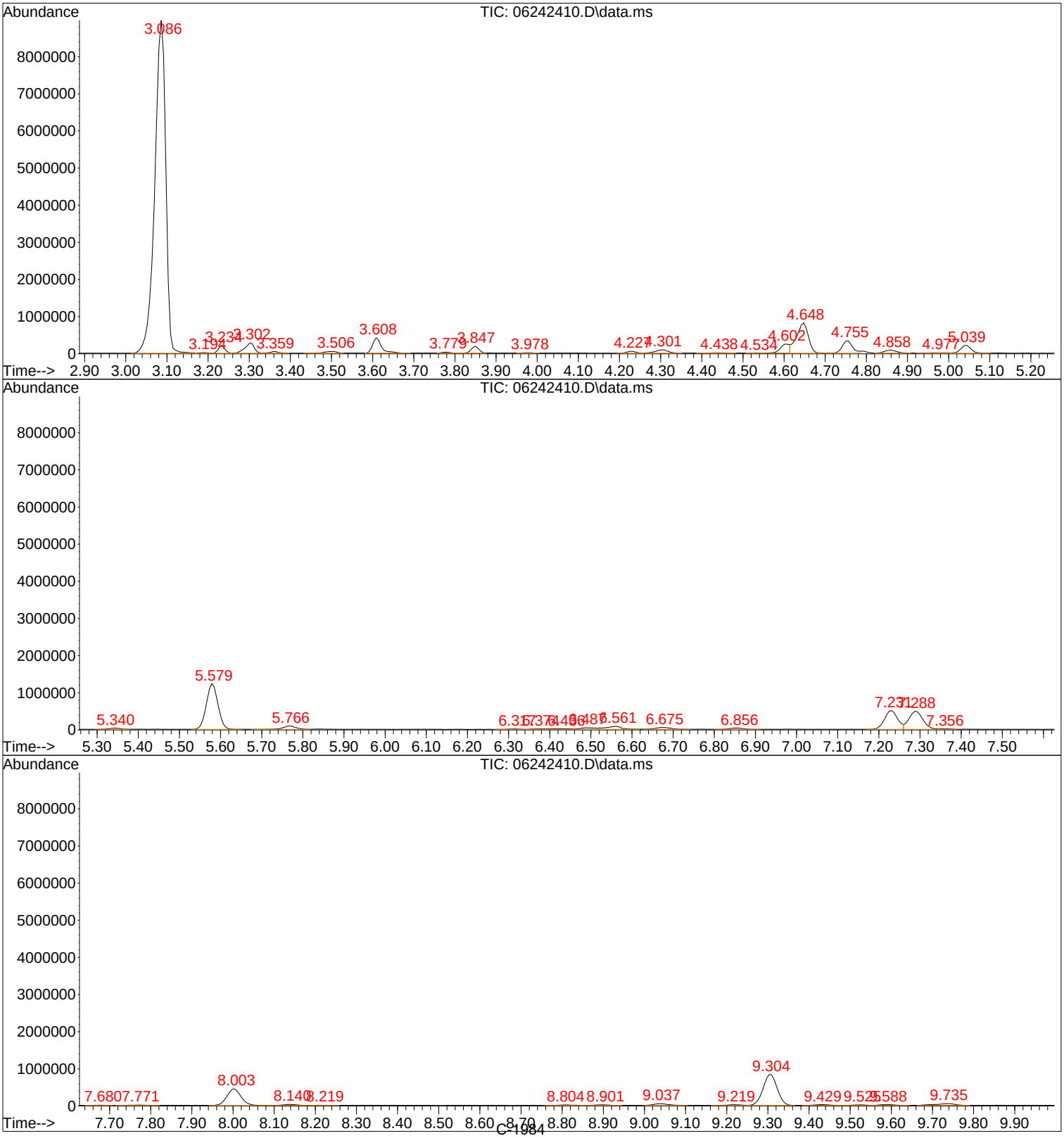
41	9.037	1077	1084	1096	rVB2	45563	119412	0.72%	0.384%
42	9.219	1106	1116	1122	rBV3	19434	48120	0.29%	0.155%
43	9.304	1122	1131	1142	rVV	836727	1984937	11.91%	6.379%
44	9.429	1145	1153	1162	rVV3	23595	60966	0.37%	0.196%
45	9.525	1162	1170	1175	rVV4	15047	38152	0.23%	0.123%
46	9.588	1175	1181	1191	rVV	24471	63328	0.38%	0.204%
47	9.735	1194	1207	1217	rVB4	46928	163076	0.98%	0.524%

Sum of corrected areas: 31115244

Data Path : I:\MS09\DATA\2024 06\24\
Data File : 06242410.D
Acq On : 24 Jun 2024 12:27
Operator : SC
Sample : P2402249-064 (400mL)PF2
Misc : S37-06062402
ALS Vial : 7 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\24\\
Data File : 06242410.D
Acq On : 24 Jun 2024 12:277
Operator : SCC
Sample : P2402249-064 (400mL)PF22
Misc : S37-060624022
ALS Vial : 7 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

					|--Internal Standard---|		
TIC Top Hit name	RT	EstConc	Units	Response	# RT Resp Conc

No Library Search Compounds Detected
****

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222414.D Vial: 6
Acq On : 22 Jun 2024 20:15 Operator: MC/MJ
Sample : P2402249-065 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/29/24

Quant Time: Jun 29 10:33:18 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	179219	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	790370	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	187881	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	381235	11.969	ng		0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 95.76%				
57) Toluene-d8 (SS2)	12.43	98	891722	12.403	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.20%				
73) Bromofluorobenzene (SS3)	16.83	174	334941	12.901	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.20%				
Target Compounds							Qvalue
2) Propene	0.00	42	0	N.D. d			
3) Dichlorodifluoromethan...	3.36	85	21673m	0.514	ng		
4) Chloromethane	3.49	50	3379	0.117	ng		95
5) 1,2-Dichloro-1,1,2,2-t...	3.60	135	480	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	3.77	54	366	N.D.			
8) Bromomethane	4.01	94	302	N.D.			
9) Chloroethane	4.15	64	339	N.D.			
10) Ethanol	4.28	45	74255	4.262	ng		100
11) Acetonitrile	0.00	41	0	N.D. d			
12) Acrolein	4.52	56	5444	0.422	ng		97
13) Acetone	4.62	58	109994	7.900	ng		92
14) Trichlorofluoromethane	4.75	101	860425	20.166	ng		99
15) 2-Propanol (Isopropanol)	4.84	45	75766	1.351	ng		82
16) Acrylonitrile	5.04	53	1202	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.32	59	15637	0.349	ng	#	60
19) Methylene Chloride	5.34	84	6929	0.352	ng		96
20) 3-Chloro-1-propene (Al...	5.40	41	1556	N.D.			
21) Trichlorotrifluoroethane	5.58	151	651534	36.098	ng		96
22) Carbon Disulfide	0.00	76	0	N.D. d			
23) trans-1,2-Dichloroethene	6.13	61	300	N.D.			
24) 1,1-Dichloroethane	6.31	63	286	N.D.			
25) Methyl tert-Butyl Ether	6.31	73	1193	N.D.			
26) Vinyl Acetate	6.43	86	6726	2.094	ng	#	5
27) 2-Butanone (MEK)	6.66	72	20837	1.891	ng		95
28) cis-1,2-Dichloroethene	7.07	61	198	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D. d			
30) Ethyl Acetate	7.28	61	10191	1.515	ng		96
31) n-Hexane	7.30	57	19320	0.655	ng		97
32) Chloroform	7.36	83	32164	0.916	ng		99
34) Tetrahydrofuran (THF)	7.76	72	4529	0.451	ng	#	68
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	1375	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	9.64	61	18633	No Calib		#	
40) 1-Butanol	8.80	56	25621	No Calib		#	
41) Benzene	8.90	78	12094	0.166	ng		100
42) Carbon Tetrachloride	9.07	117	491	N.D.			
43) Cyclohexane	9.22	84	3177	0.135	ng		89
44) tert-Amyl Methyl Ether	9.58	73	104	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D. d			
46) Bromodichloromethane	10.07	83	1263	N.D.			
47) Trichloroethene	10.15	130	1252	0.059	ng	#	78
48) 1,4-Dioxane	10.12	88	5312	0.395	ng		99
49) 2,2,4-Trimethylpentane...	10.23	57	2393	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222414.D Vial: 6
Acq On : 22 Jun 2024 20:15 Operator: MC/MJ
Sample : P2402249-065 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:33:18 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

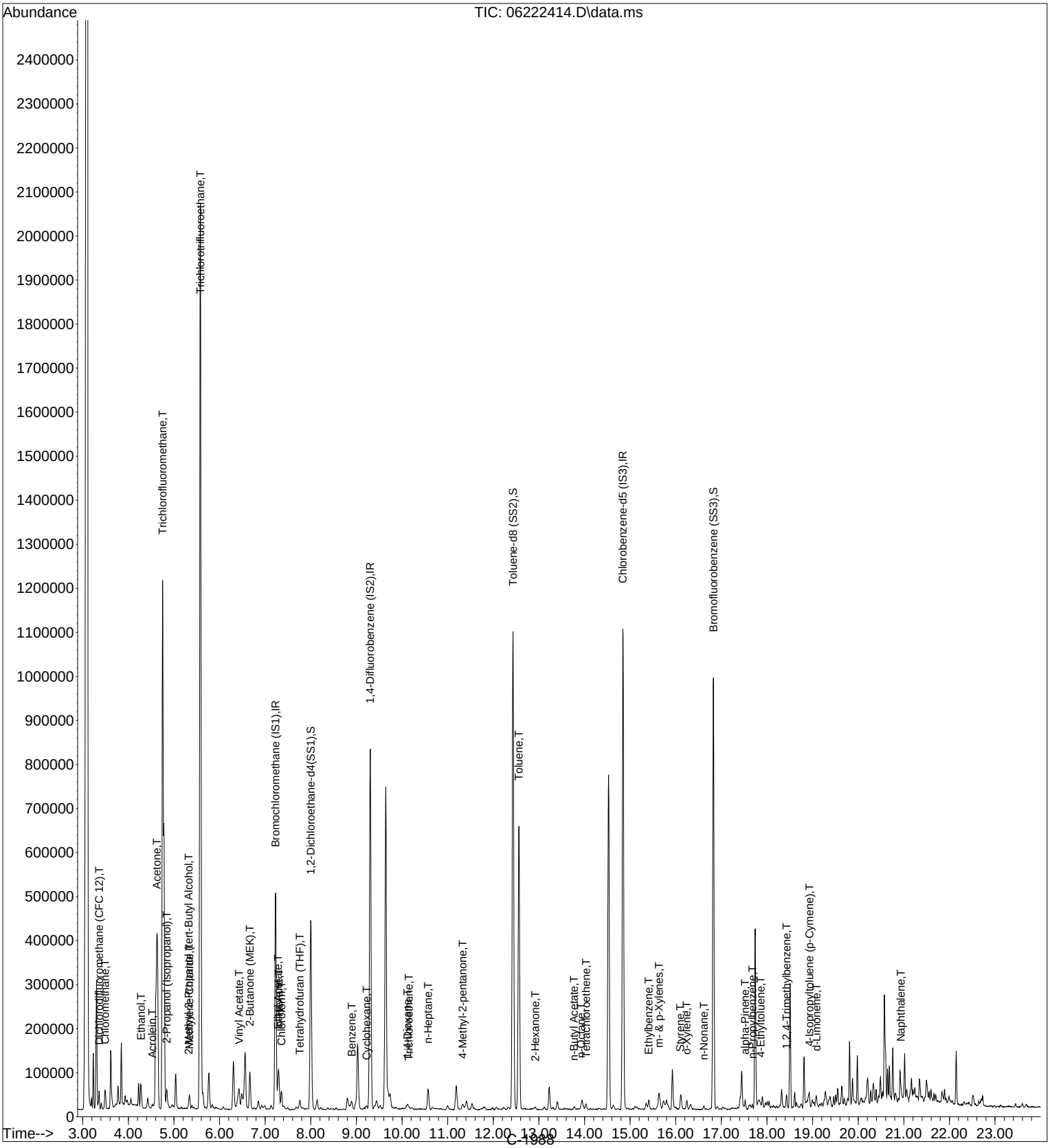
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	10.57	71	11746	0.763 ng		98
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	11.33	58	3780	0.236 ng	#	43
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	12.18	97	143	N.D.		
58) Toluene	12.56	91	561274	7.471 ng		100
59) 2-Hexanone	12.92	43	5877	0.125 ng		76
60) Dibromochloromethane	13.07	129	668	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	13.77	43	7768	0.157 ng		95
63) n-Octane	13.93	57	1139	0.073 ng		92
64) Tetrachloroethene	14.03	166	4173	0.162 ng		98
65) Chlorobenzene	14.90	112	1373	N.D.		
66) Ethylbenzene	15.41	91	14728	0.171 ng		99
67) m- & p-Xylenes	15.63	91	29134	0.403 ng		96
68) Bromoform	15.68	173	791	N.D.		
69) Styrene	16.10	104	7162	0.147 ng		99
70) o-Xylene	16.24	91	12457	0.175 ng		97
71) n-Nonane	16.62	43	3874	0.094 ng		99
72) 1,1,2,2-Tetrachloroethane	16.21	83	673	N.D.		
74) Cumene	17.03	105	3422	N.D.		
75) alpha-Pinene	17.52	93	7447	0.180 ng		93
76) n-Propylbenzene	17.68	91	7180	0.067 ng		98
77) 3-Ethyltoluene	17.03	105	3422	No Calib		
78) 4-Ethyltoluene	17.86	105	4582	0.054 ng		98
79) 1,3,5-Trimethylbenzene	17.96	105	3602	N.D.		
80) alpha-Methylstyrene	0.00	118	0	N.D.		
81) 2-Ethyltoluene	17.03	105	3422	No Calib		
82) 1,2,4-Trimethylbenzene	18.43	105	13468	0.172 ng		92
83) n-Decane	17.09	58	421	No Calib	#	
84) Benzyl Chloride	18.56	91	409	N.D.		
85) 1,3-Dichlorobenzene	18.57	146	876	N.D.		
86) 1,4-Dichlorobenzene	18.66	146	1499	N.D.		
87) sec-Butylbenzene	18.74	105	2872	N.D.		
88) 4-Isopropyltoluene (p-...	18.93	119	16822	0.189 ng		83
89) 1,2,3-Trimethylbenzene	17.03	105	3422	No Calib		
90) 1,2-Dichlorobenzene	19.04	146	915	N.D.		
91) d-Limonene	19.09	68	3687	0.139 ng		94
92) 1,2-Dibromo-3-Chloropr...	19.52	157	261	N.D.		
93) n-Undecane	0.00	58	0	N.D.		
94) 1,2,4-Trichlorobenzene	20.84	180	1209	N.D.		
95) Naphthalene	20.94	128	9915	0.099 ng		91
96) n-Dodecane	18.93	58	241	No Calib	#	
97) Hexachlorobutadiene	21.30	225	859	N.D.		
98) Cyclohexanone	15.51	55	1536	No Calib	#	
99) tert-Butylbenzene	18.43	119	3058	N.D.		
100) n-Butylbenzene	0.00	91	0	N.D. d		
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222414.D Vial: 6
Acq On : 22 Jun 2024 20:15 Operator: MC/MJ
Sample : P2402249-065 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:33:18 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222414.D Vial: 6
Acq On : 22 Jun 2024 20:15 Operator: MC/MJ
Sample : P2402249-065 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/29/24

Quant Time: Jun 29 10:33:18 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

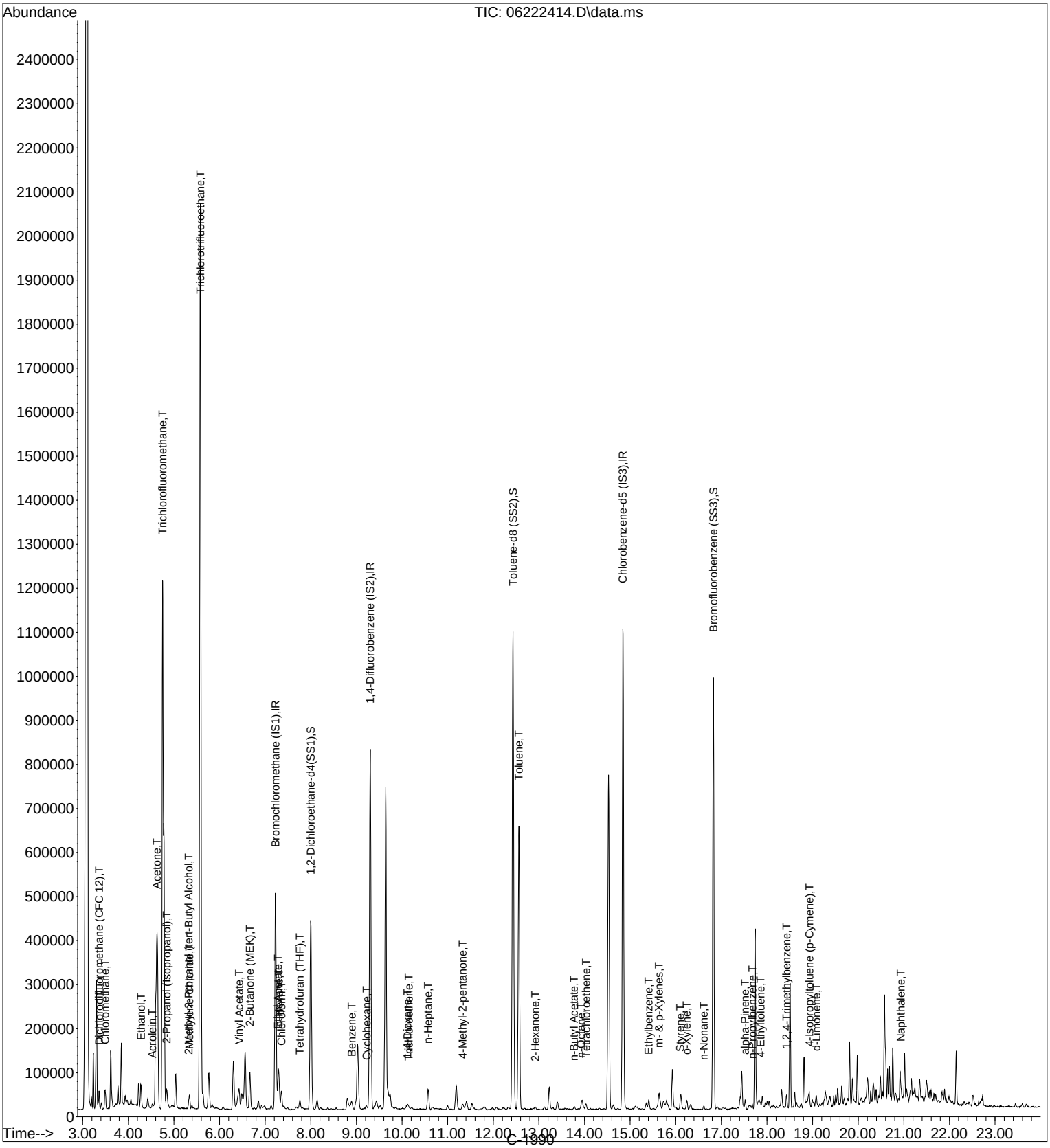
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	179219	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	790370	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	187881	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	381235	11.969	ng		0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 95.76%				
57) Toluene-d8 (SS2)	12.43	98	891722	12.403	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.20%				
73) Bromofluorobenzene (SS3)	16.83	174	334941	12.901	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.20%				
Target Compounds							Qvalue
3) Dichlorodifluoromethan...	3.36	85	21673m	0.514	ng		
4) Chloromethane	3.49	50	3379	0.117	ng		95
10) Ethanol	4.28	45	74255	4.262	ng		100
12) Acrolein	4.52	56	5444	0.422	ng		97
13) Acetone	4.62	58	109994	7.900	ng		92
14) Trichlorofluoromethane	4.75	101	860425	20.166	ng		99
15) 2-Propanol (Isopropanol)	4.84	45	75766	1.351	ng		82
18) 2-Methyl-2-Propanol (t...	5.32	59	15637	0.349	ng	#	60
19) Methylene Chloride	5.34	84	6929	0.352	ng		96
21) Trichlorotrifluoroethane	5.58	151	651534	36.098	ng		96
26) Vinyl Acetate	6.43	86	6726	2.094	ng	#	5
27) 2-Butanone (MEK)	6.66	72	20837	1.891	ng		95
30) Ethyl Acetate	7.28	61	10191	1.515	ng		96
31) n-Hexane	7.30	57	19320	0.655	ng		97
32) Chloroform	7.36	83	32164	0.916	ng		99
34) Tetrahydrofuran (THF)	7.76	72	4529	0.451	ng	#	68
41) Benzene	8.90	78	12094	0.166	ng		100
43) Cyclohexane	9.22	84	3177	0.135	ng		89
47) Trichloroethene	10.15	130	1252	0.059	ng	#	78
48) 1,4-Dioxane	10.12	88	5312	0.395	ng		99
51) n-Heptane	10.57	71	11746	0.763	ng		98
53) 4-Methyl-2-pentanone	11.33	58	3780	0.236	ng	#	43
58) Toluene	12.56	91	561274	7.471	ng		100
59) 2-Hexanone	12.92	43	5877	0.125	ng		76
62) n-Butyl Acetate	13.77	43	7768	0.157	ng		95
63) n-Octane	13.93	57	1139	0.073	ng		92
64) Tetrachloroethene	14.03	166	4173	0.162	ng		98
66) Ethylbenzene	15.41	91	14728	0.171	ng		99
67) m- & p-Xylenes	15.63	91	29134	0.403	ng		96
69) Styrene	16.10	104	7162	0.147	ng		99
70) o-Xylene	16.24	91	12457	0.175	ng		97
71) n-Nonane	16.62	43	3874	0.094	ng		99
75) alpha-Pinene	17.52	93	7447	0.180	ng		93
76) n-Propylbenzene	17.68	91	7180	0.067	ng		98
78) 4-Ethyltoluene	17.86	105	4582	0.054	ng		98
82) 1,2,4-Trimethylbenzene	18.43	105	13468	0.172	ng		92
88) 4-Isopropyltoluene (p-...	18.93	119	16822	0.189	ng		83
91) d-Limonene	19.09	68	3687	0.139	ng		94
95) Naphthalene	20.94	128	9915	0.099	ng		91

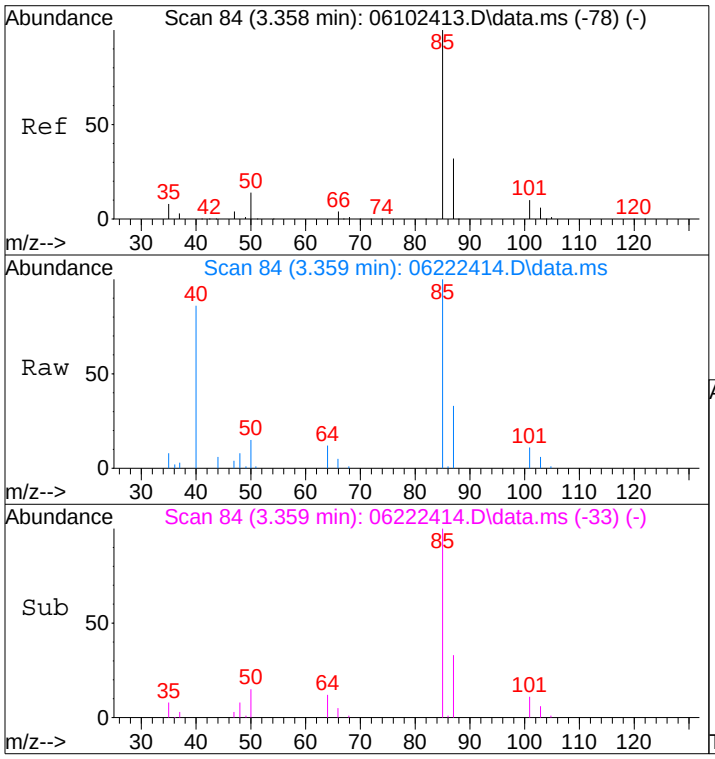
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222414.D Vial: 6
Acq On : 22 Jun 2024 20:15 Operator: MC/MJ
Sample : P2402249-065 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:33:18 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

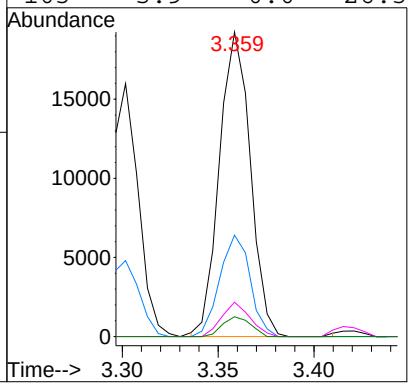


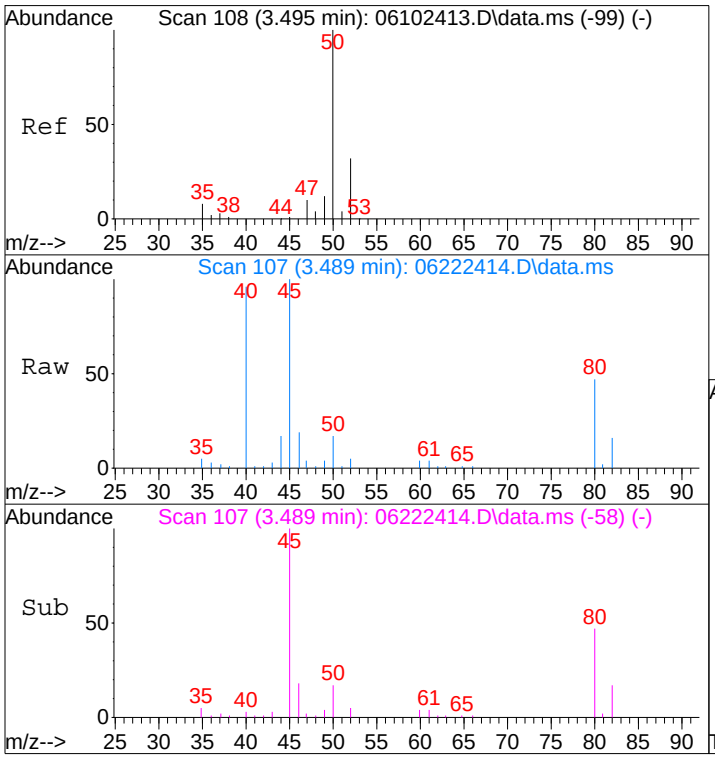


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.51 ng m
RT: 3.36 min Scan# 84
Delta R.T. 0.039 min
Lab File: 06222414.D
Acq: 22 Jun 2024 20:15

Tgt Ion: 85 Resp: 21673

Ion	Ratio	Lower	Upper
85	100		
87	32.6	12.2	52.2
101	10.3	0.0	29.8
103	5.9	0.0	26.3

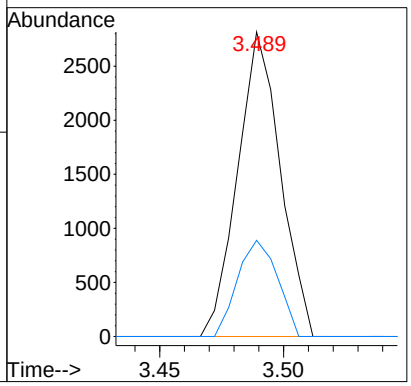


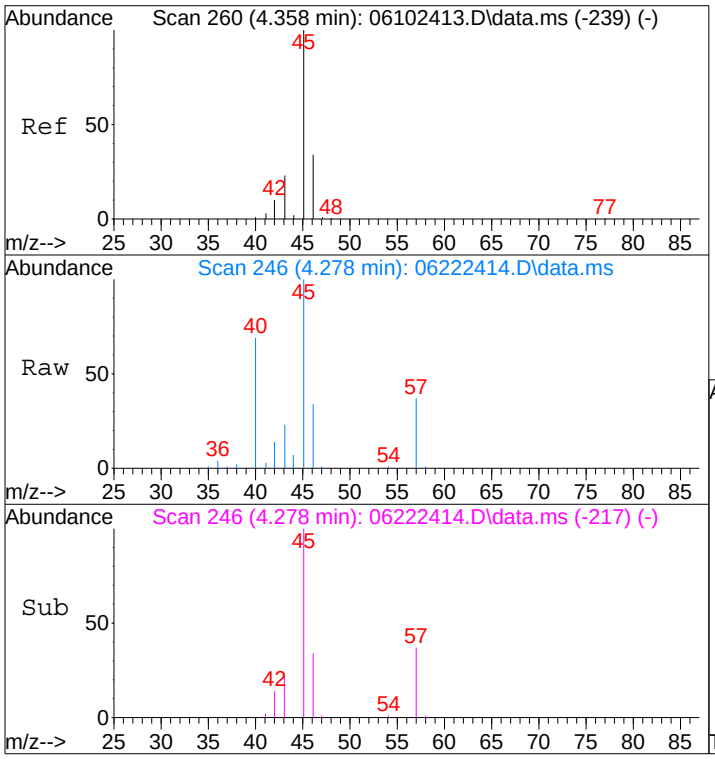


#4
Chloromethane
Concen: 0.12 ng
RT: 3.49 min Scan# 107
Delta R.T. 0.029 min
Lab File: 06222414.D
Acq: 22 Jun 2024 20:15

Tgt Ion: 50 Resp: 3379

Ion	Ratio	Lower	Upper
50	100		
52	29.6	12.4	52.4

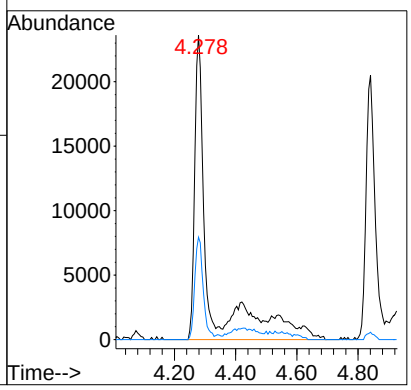


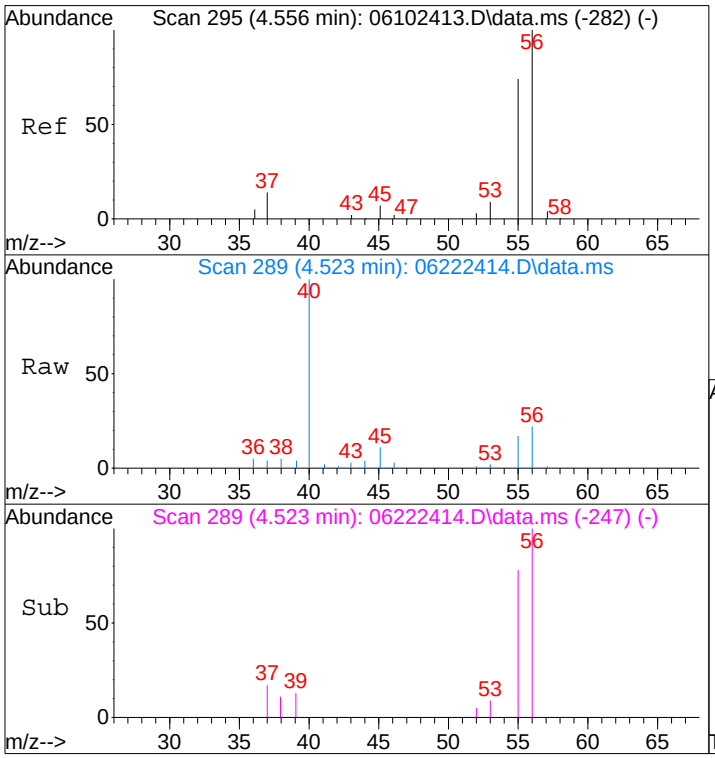


#10
Ethanol
Concen: 4.26 ng
RT: 4.28 min Scan# 246
Delta R.T. -0.085 min
Lab File: 06222414.D
Acq: 22 Jun 2024 20:15

Tgt Ion: 45 Resp: 74255

Ion	Ratio	Lower	Upper
45	100		
46	33.3	13.5	53.5

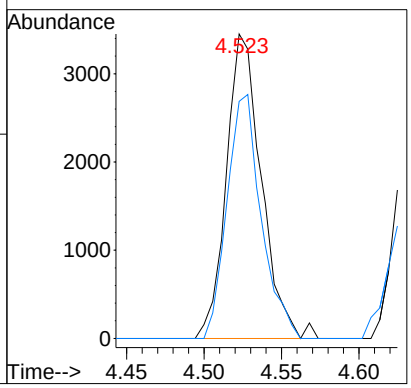


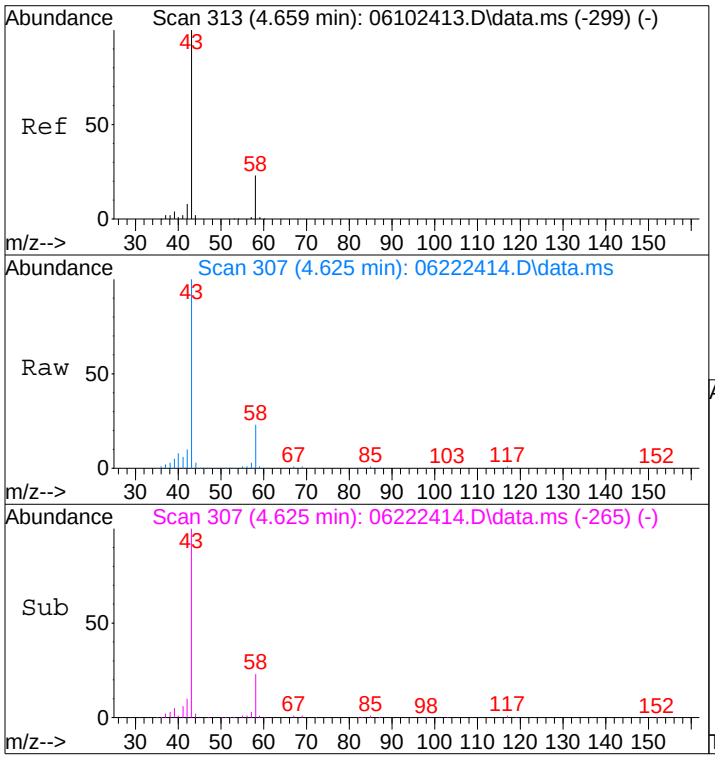


#12
Acrolein
Concen: 0.42 ng
RT: 4.52 min Scan# 289
Delta R.T. -0.009 min
Lab File: 06222414.D
Acq: 22 Jun 2024 20:15

Tgt Ion: 56 Resp: 5444

Ion	Ratio	Lower	Upper
56	100		
55	78.1	55.5	95.5

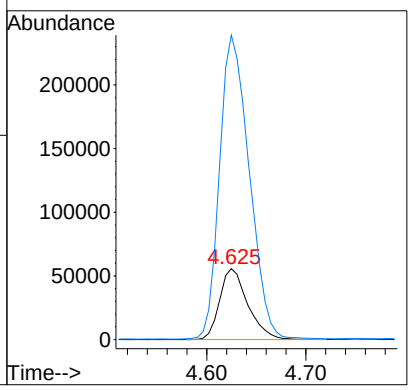


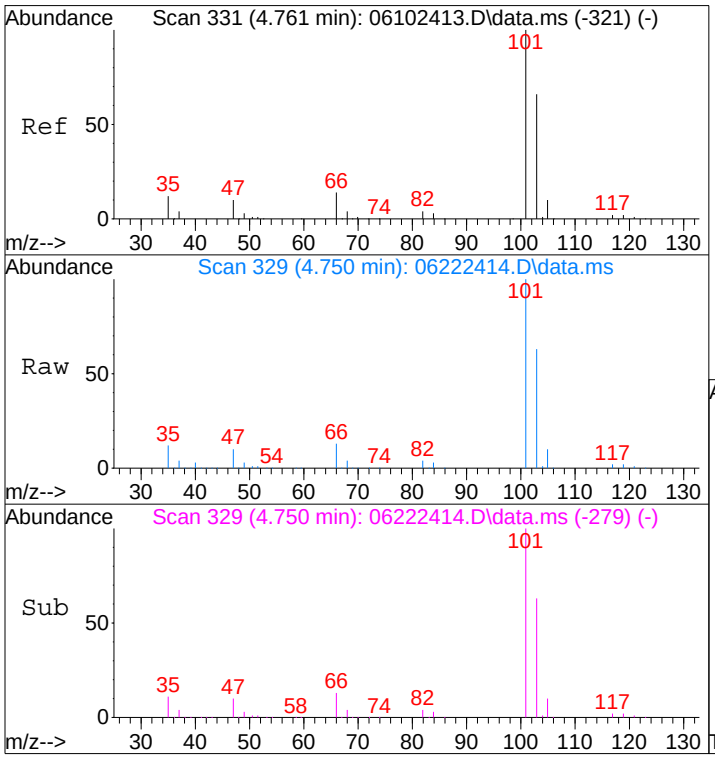


#13
Acetone
Concen: 7.90 ng
RT: 4.62 min Scan# 307
Delta R.T. -0.013 min
Lab File: 06222414.D
Acq: 22 Jun 2024 20:15

Tgt Ion: 58 Resp: 109994

Ion	Ratio	Lower	Upper
58	100		
43	451.2	400.7	460.7

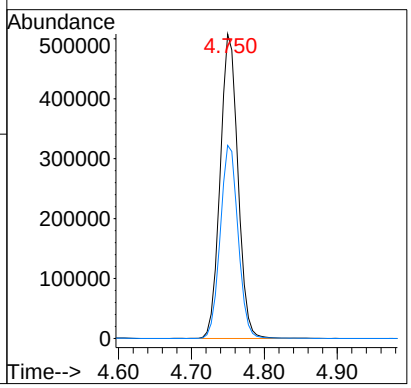


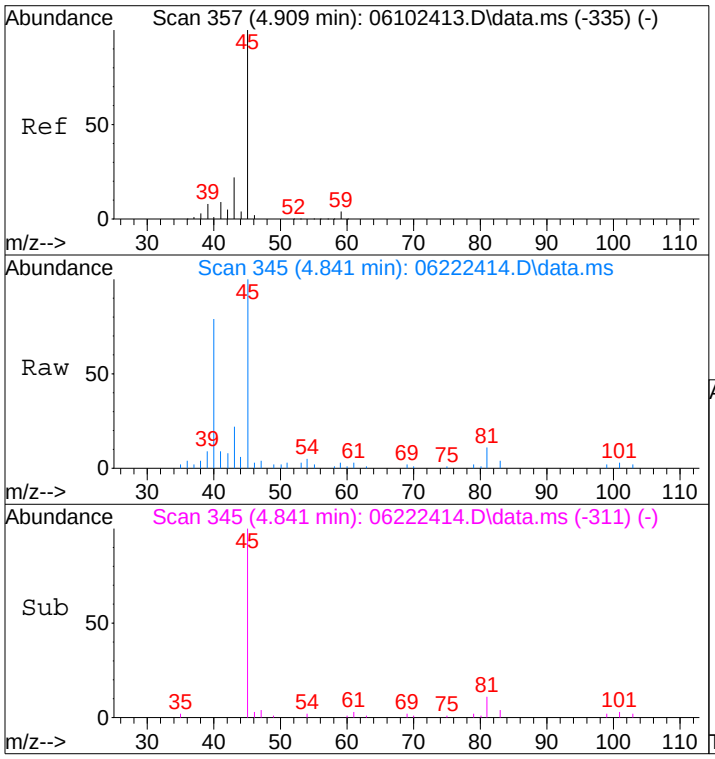


#14
Trichlorofluoromethane
Concen: 20.17 ng
RT: 4.75 min Scan# 329
Delta R.T. 0.033 min
Lab File: 06222414.D
Acq: 22 Jun 2024 20:15

Tgt Ion:101 Resp: 860425

Ion	Ratio	Lower	Upper
101	100		
103	63.9	44.9	84.9

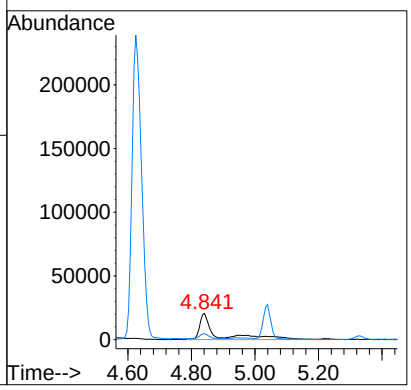


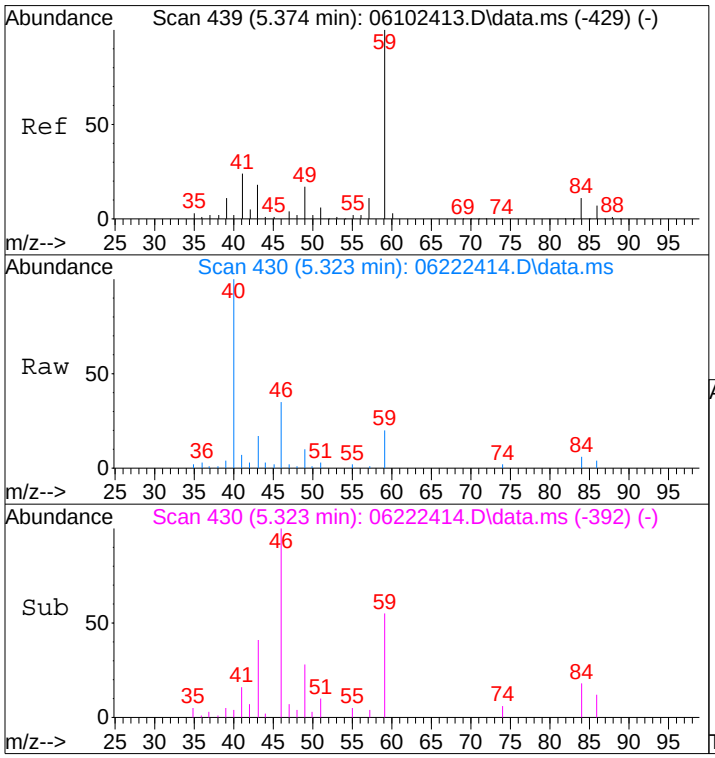


#15
2-Propanol (Isopropanol)
Concen: 1.35 ng
RT: 4.84 min Scan# 345
Delta R.T. -0.056 min
Lab File: 06222414.D
Acq: 22 Jun 2024 20:15

Tgt Ion: 45 Resp: 75766

Ion	Ratio	Lower	Upper
45	100		
43	14.0	2.5	42.5

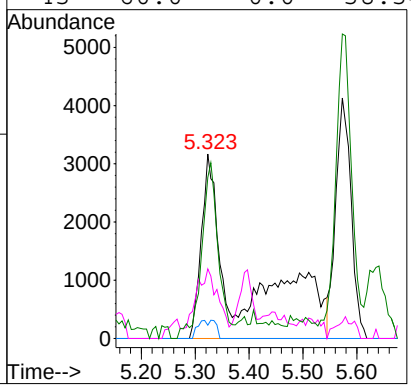


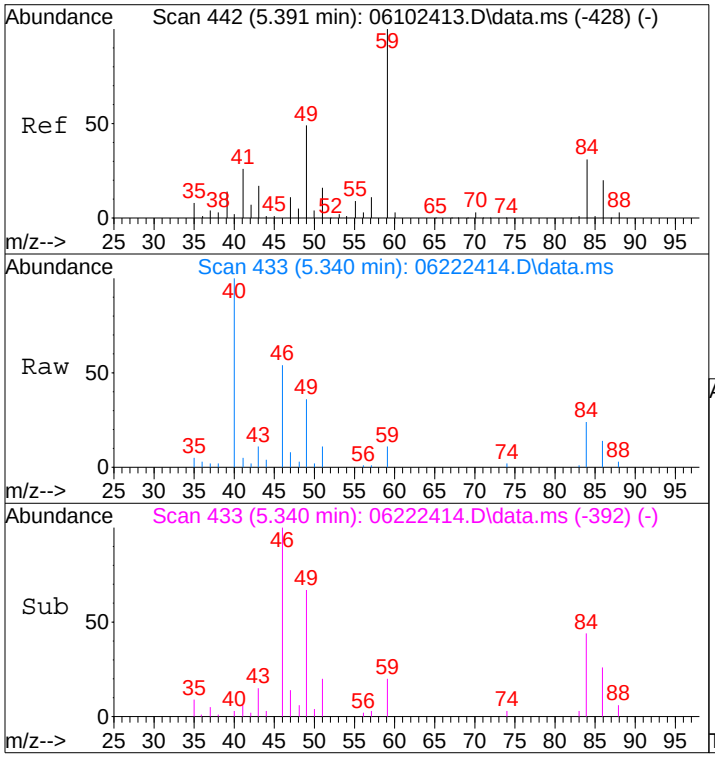


#18
2-Methyl-2-Propanol (tert-Butyl Alcohol
Concen: 0.35 ng
RT: 5.32 min Scan# 430
Delta R.T. -0.034 min
Lab File: 06222414.D
Acq: 22 Jun 2024 20:15

Tgt Ion: 59 Resp: 15637

Ion	Ratio	Lower	Upper
59	100		
57	4.6	0.0	30.9
41	22.9	0.9	40.9
43	60.0	0.0	38.3#

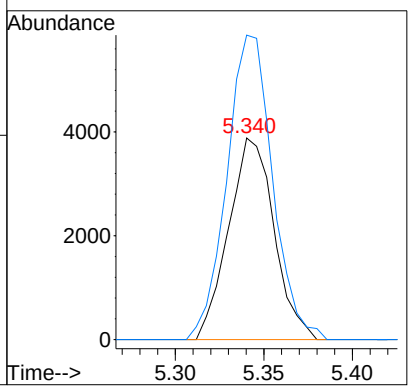


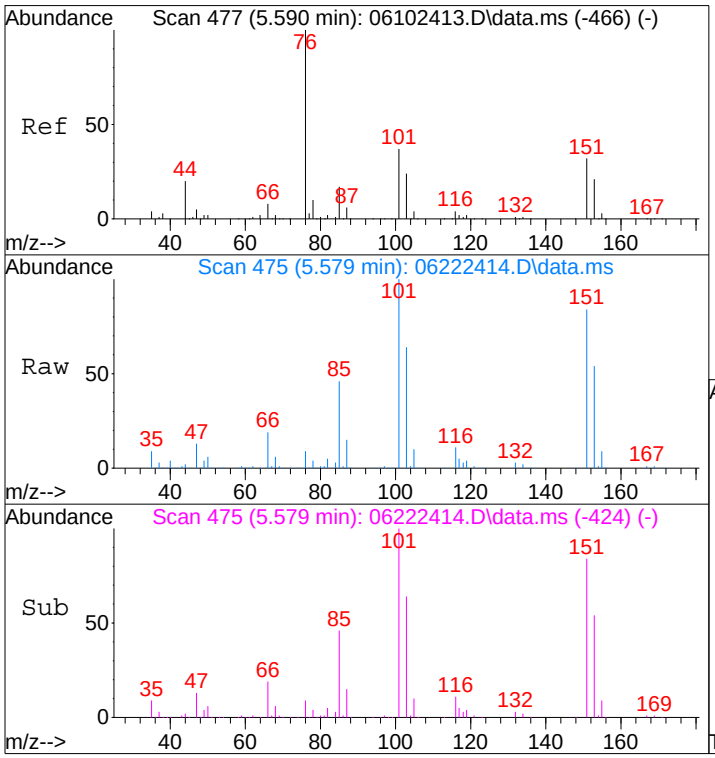


#19
Methylene Chloride
Concen: 0.35 ng
RT: 5.34 min Scan# 433
Delta R.T. -0.016 min
Lab File: 06222414.D
Acq: 22 Jun 2024 20:15

Tgt Ion: 84 Resp: 6929

Ion	Ratio	Lower	Upper
84	100		
49	152.3	132.9	182.9

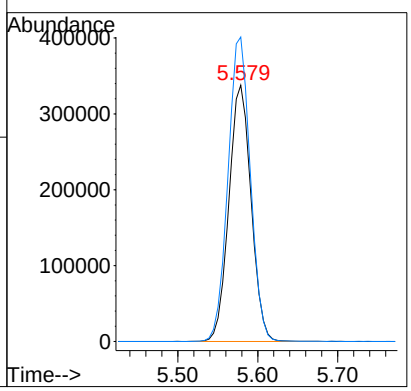


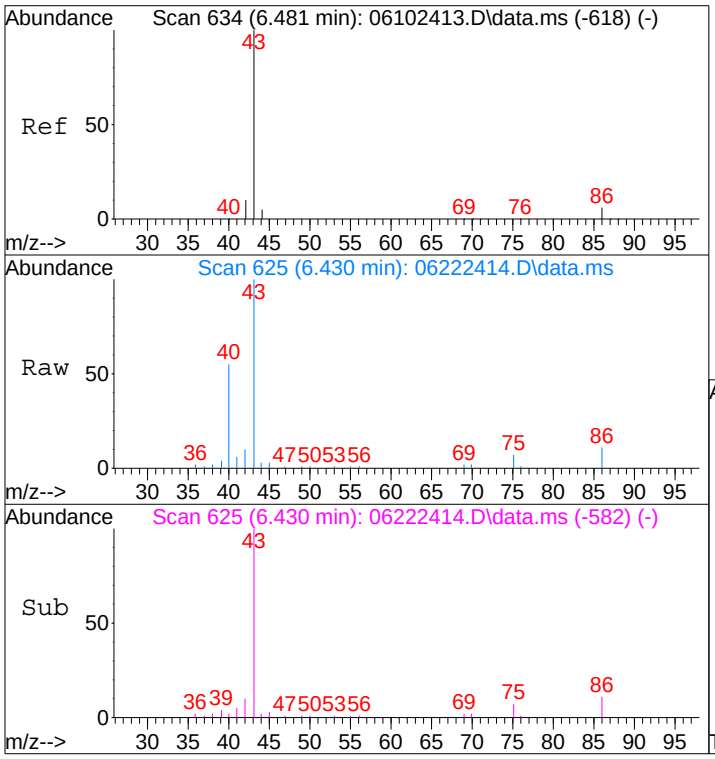


#21
Trichlorotrifluoroethane
Concen: 36.10 ng
RT: 5.58 min Scan# 475
Delta R.T. 0.037 min
Lab File: 06222414.D
Acq: 22 Jun 2024 20:15

Tgt Ion:151 Resp: 651534

Ion	Ratio	Lower	Upper
151	100		
101	119.4	95.0	135.0

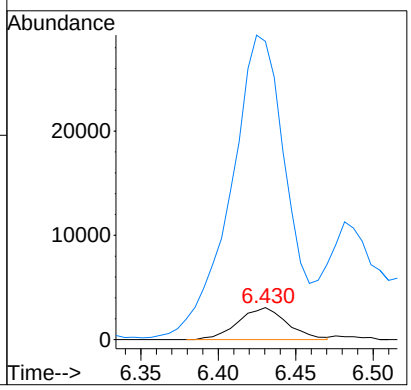


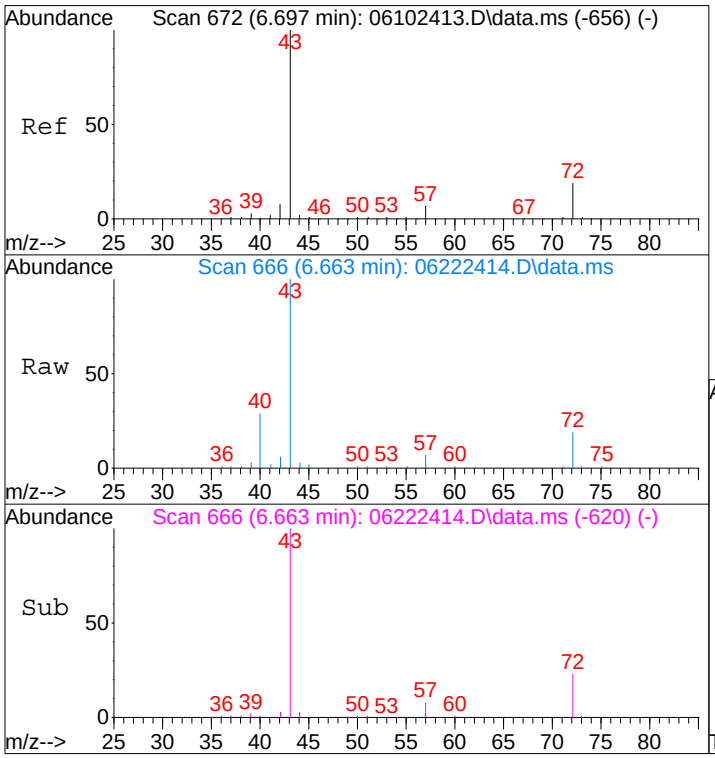


#26
Vinyl Acetate
Concen: 2.09 ng
RT: 6.43 min Scan# 625
Delta R.T. -0.004 min
Lab File: 06222414.D
Acq: 22 Jun 2024 20:15

Tgt Ion: 86 Resp: 6726

Ion	Ratio	Lower	Upper
86	100		
43	1070.3	1668.9	1708.9#

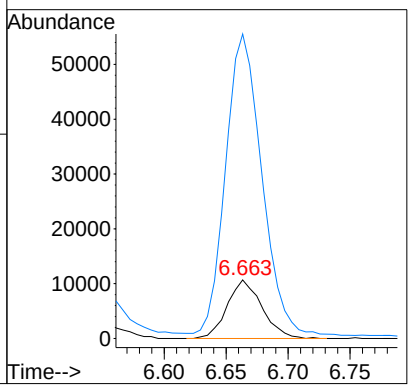


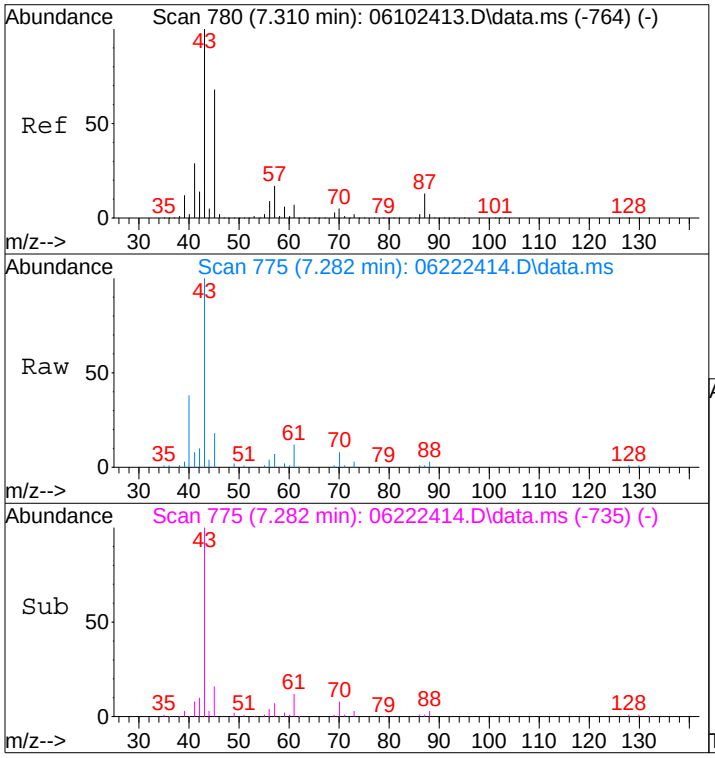


#27
2-Butanone (MEK)
Concen: 1.89 ng
RT: 6.66 min Scan# 666
Delta R.T. 0.010 min
Lab File: 06222414.D
Acq: 22 Jun 2024 20:15

Tgt Ion: 72 Resp: 20837

Ion	Ratio	Lower	Upper
72	100		
43	542.4	506.8	546.8

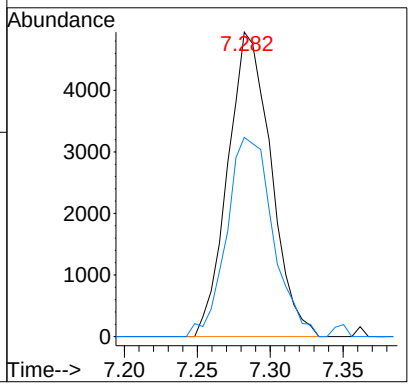


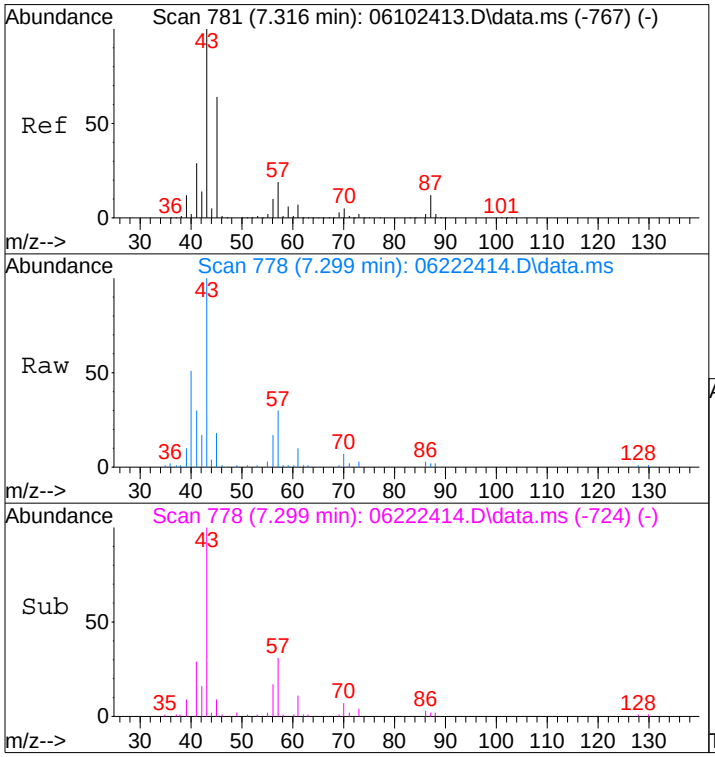


#30
Ethyl Acetate
Concen: 1.51 ng
RT: 7.28 min Scan# 775
Delta R.T. 0.029 min
Lab File: 06222414.D
Acq: 22 Jun 2024 20:15

Tgt Ion: 61 Resp: 10191

Ion	Ratio	Lower	Upper
61	100		
70	70.0	53.5	93.5

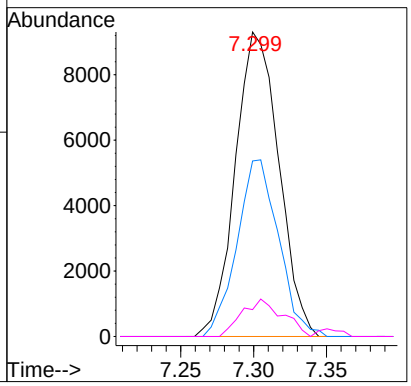


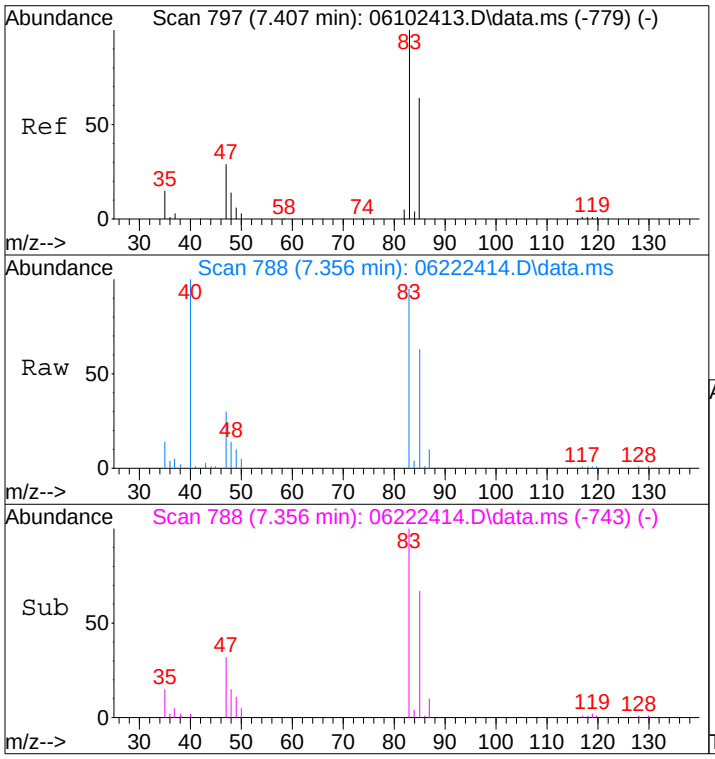


#31
n-Hexane
Concen: 0.66 ng
RT: 7.30 min Scan# 778
Delta R.T. 0.057 min
Lab File: 06222414.D
Acq: 22 Jun 2024 20:15

Tgt Ion: 57 Resp: 19320

Ion	Ratio	Lower	Upper
57	100		
56	55.4	42.5	63.7
86	11.5	9.5	14.3

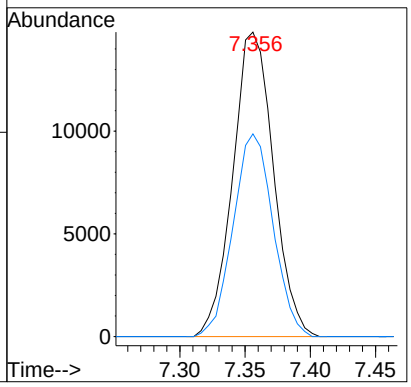


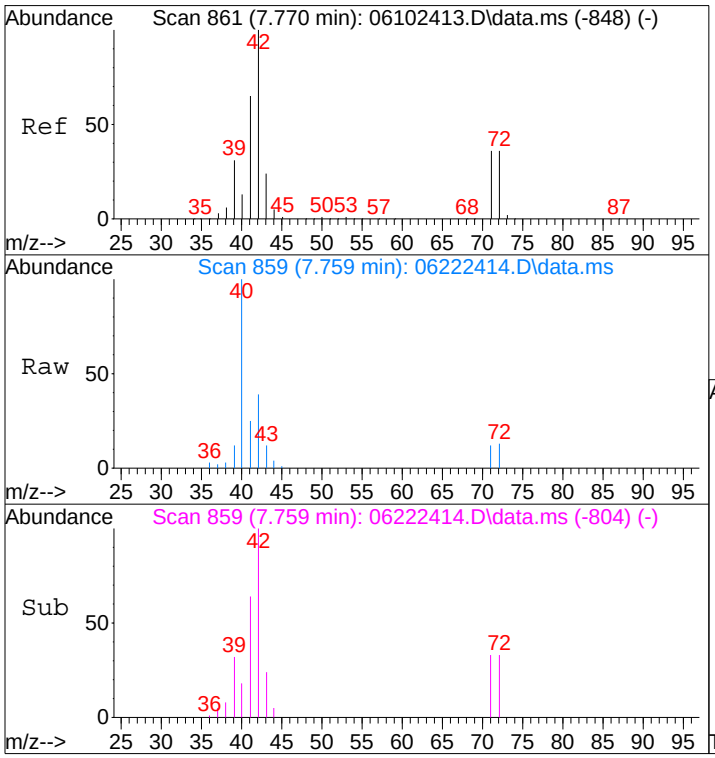


#32
Chloroform
Concen: 0.92 ng
RT: 7.36 min Scan# 788
Delta R.T. 0.007 min
Lab File: 06222414.D
Acq: 22 Jun 2024 20:15

Tgt Ion: 83 Resp: 32164

Ion	Ratio	Lower	Upper
83	100		
85	65.3	44.4	84.4

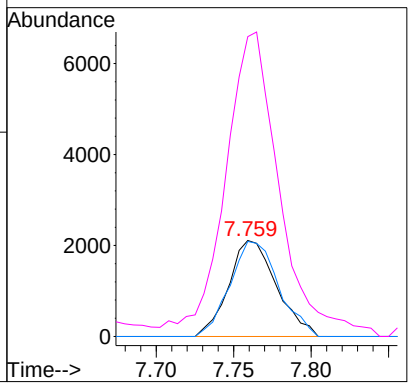


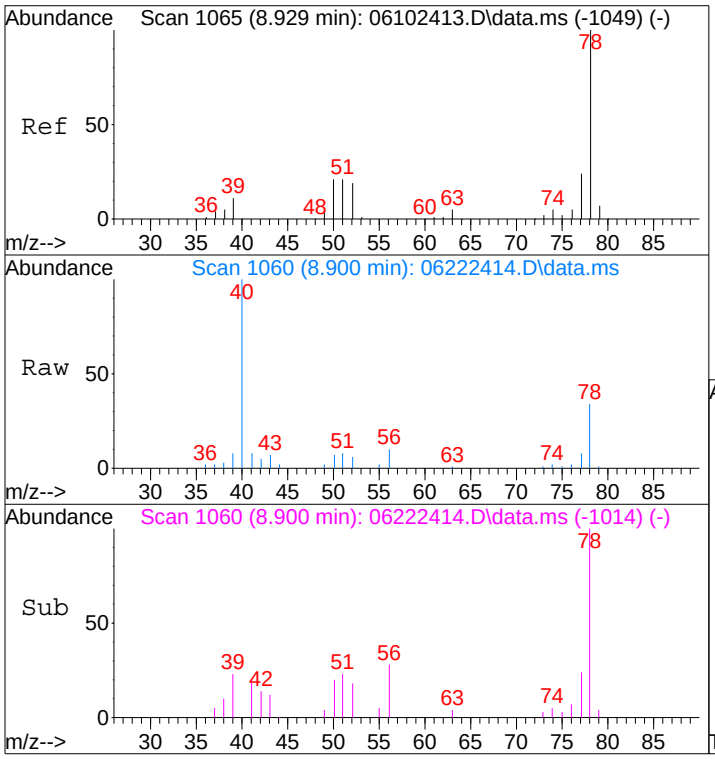


#34
Tetrahydrofuran (THF)
Concen: 0.45 ng
RT: 7.76 min Scan# 859
Delta R.T. 0.062 min
Lab File: 06222414.D
Acq: 22 Jun 2024 20:15

Tgt Ion: 72 Resp: 4529

Ion	Ratio	Lower	Upper
72	100		
71	101.1	79.4	119.4
42	362.2	260.8	300.8#

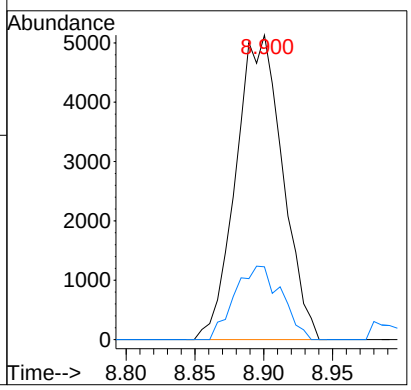


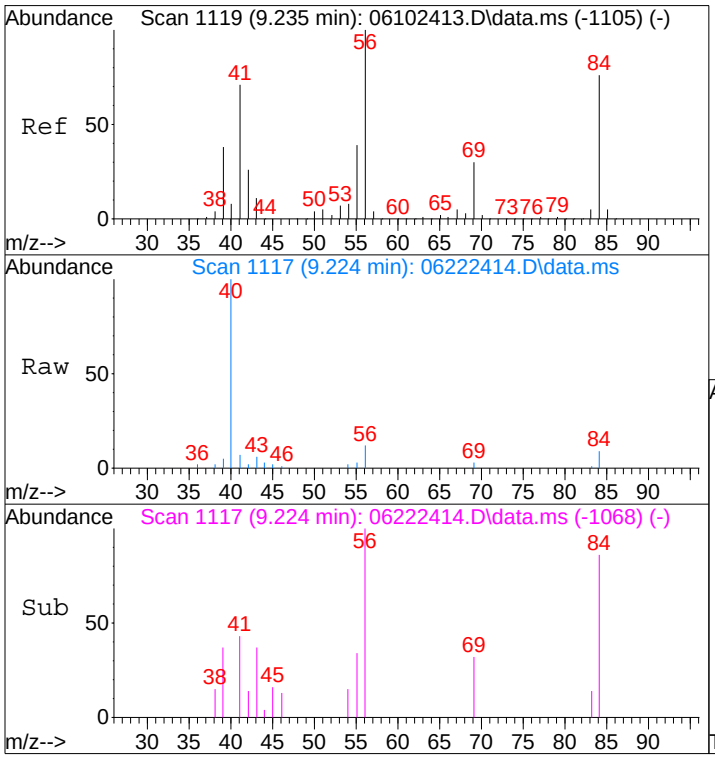


#41
Benzene
Concen: 0.17 ng
RT: 8.90 min Scan# 1060
Delta R.T. 0.009 min
Lab File: 06222414.D
Acq: 22 Jun 2024 20:15

Tgt Ion: 78 Resp: 12094

Ion	Ratio	Lower	Upper
78	100		
77	24.1	4.0	44.0

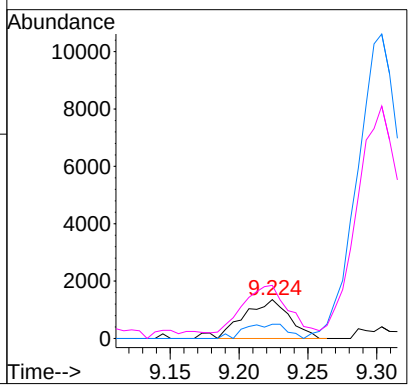


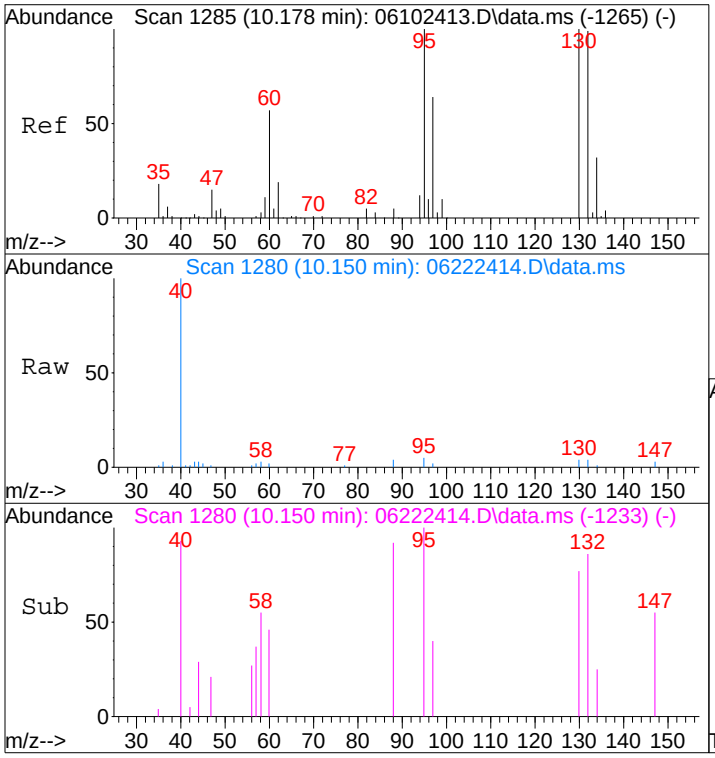


#43
Cyclohexane
Concen: 0.13 ng
RT: 9.22 min Scan# 1117
Delta R.T. 0.028 min
Lab File: 06222414.D
Acq: 22 Jun 2024 20:15

Tgt Ion: 84 Resp: 3177

Ion	Ratio	Lower	Upper
84	100		
69	33.9	18.8	58.8
56	145.0	111.5	151.5

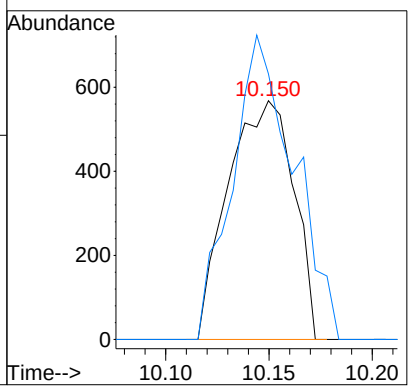


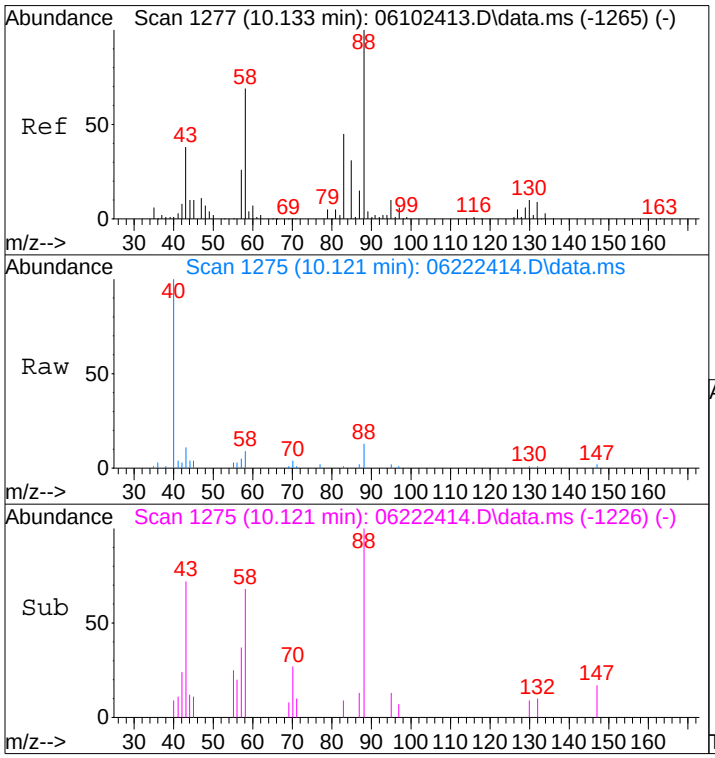


#47
Trichloroethene
Concen: 0.06 ng
RT: 10.15 min Scan# 1280
Delta R.T. 0.016 min
Lab File: 06222414.D
Acq: 22 Jun 2024 20:15

Tgt Ion:130 Resp: 1252

Ion	Ratio	Lower	Upper
130	100		
132	119.3	77.9	117.9#

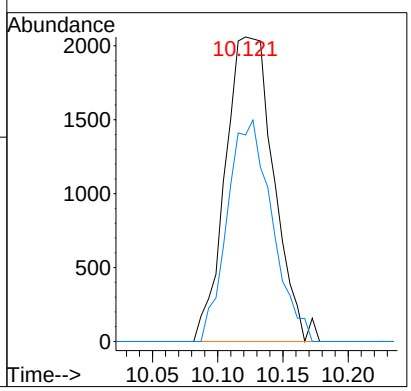


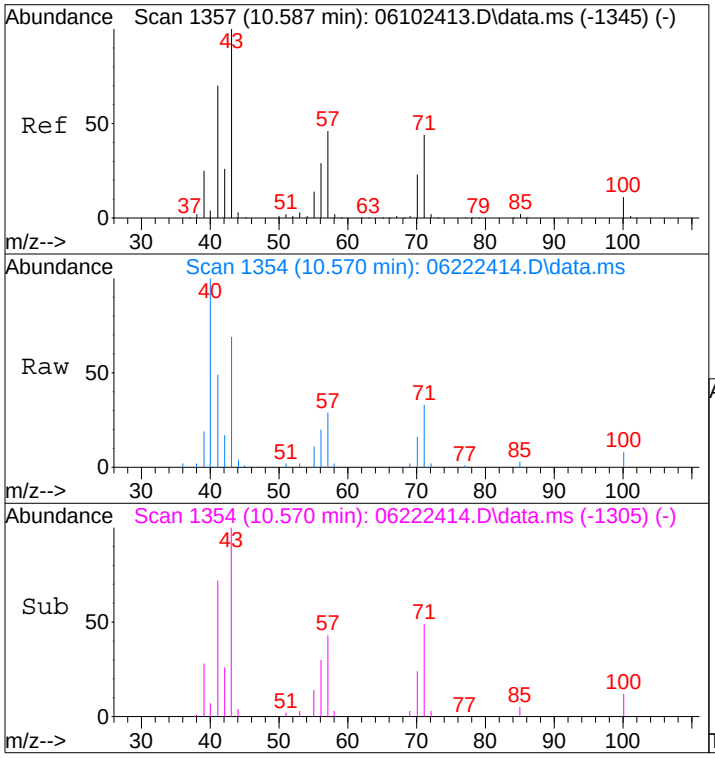


#48
1,4-Dioxane
Concen: 0.39 ng
RT: 10.12 min Scan# 1275
Delta R.T. 0.028 min
Lab File: 06222414.D
Acq: 22 Jun 2024 20:15

Tgt Ion: 88 Resp: 5312

Ion	Ratio	Lower	Upper
88	100		
58	67.2	47.6	87.6

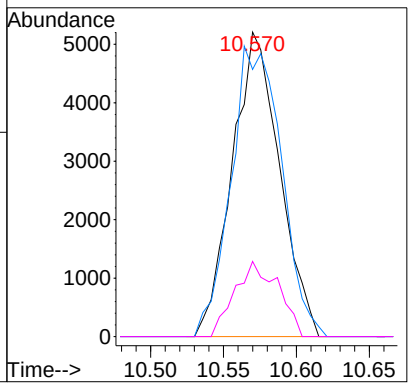


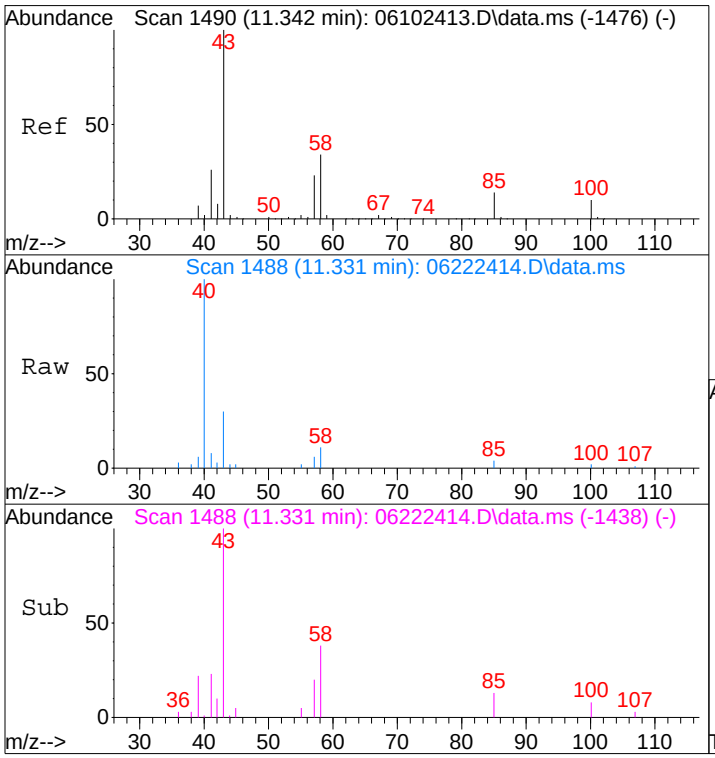


#51
n-Heptane
Concen: 0.76 ng
RT: 10.57 min Scan# 1354
Delta R.T. 0.030 min
Lab File: 06222414.D
Acq: 22 Jun 2024 20:15

Tgt Ion: 71 Resp: 11746

Ion	Ratio	Lower	Upper
71	100		
57	101.8	83.9	123.9
100	22.7	4.8	44.8

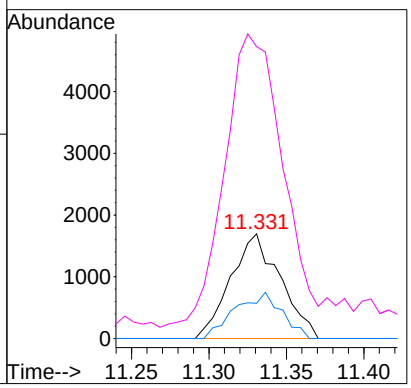


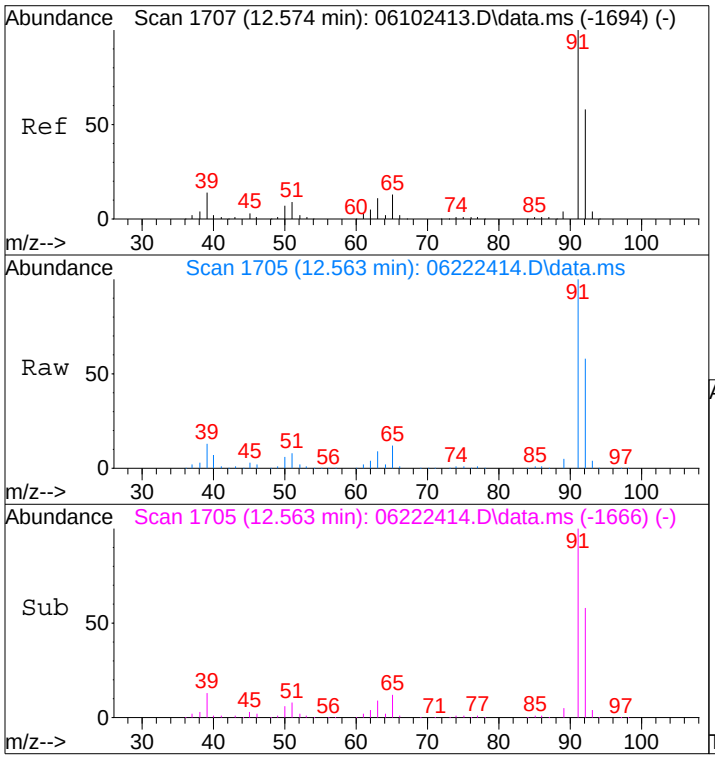


#53
4-Methyl-2-pentanone
Concen: 0.24 ng
RT: 11.33 min Scan# 1488
Delta R.T. 0.035 min
Lab File: 06222414.D
Acq: 22 Jun 2024 20:15

Tgt Ion: 58 Resp: 3780

Ion	Ratio	Lower	Upper
58	100		
85	41.4	34.5	51.7
43	420.7	236.1	354.1#

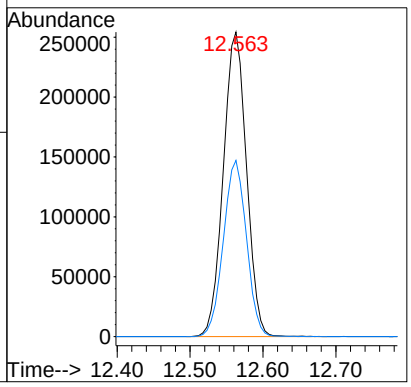


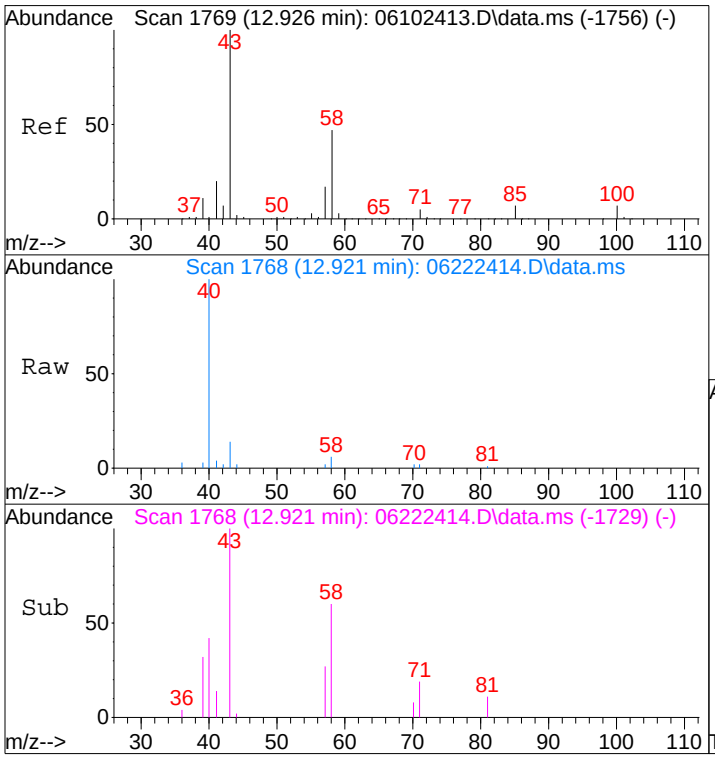


#58
Toluene
Concen: 7.47 ng
RT: 12.56 min Scan# 1705
Delta R.T. -0.028 min
Lab File: 06222414.D
Acq: 22 Jun 2024 20:15

Tgt Ion: 91 Resp: 561274

Ion	Ratio	Lower	Upper
91	100		
92	57.7	37.4	77.4

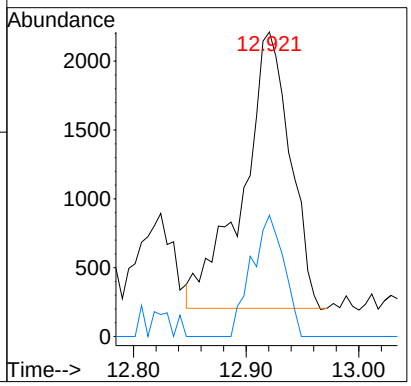


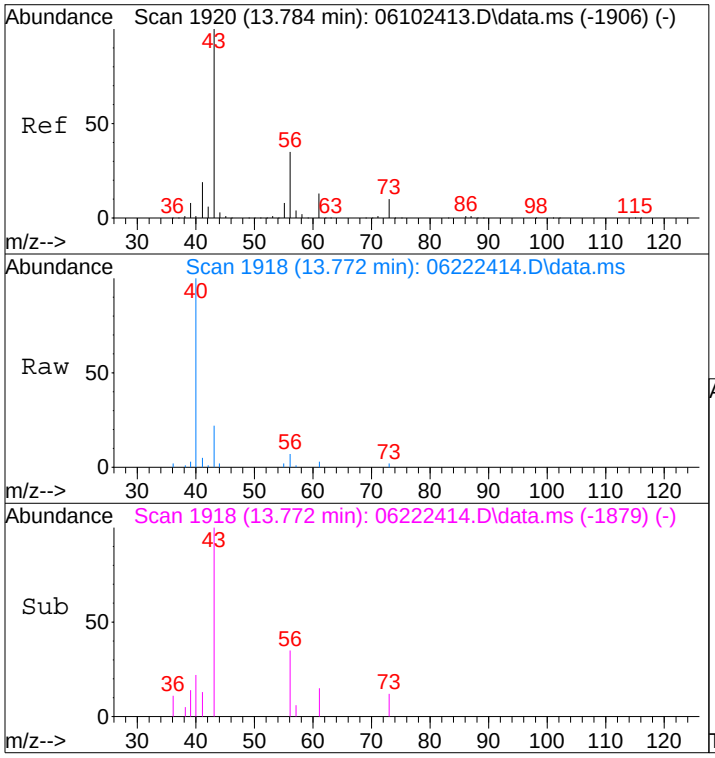


#59
2-Hexanone
Concen: 0.12 ng
RT: 12.92 min Scan# 1768
Delta R.T. -0.028 min
Lab File: 06222414.D
Acq: 22 Jun 2024 20:15

Tgt Ion: 43 Resp: 5877

Ion	Ratio	Lower	Upper
43	100		
58	30.0	25.9	65.9

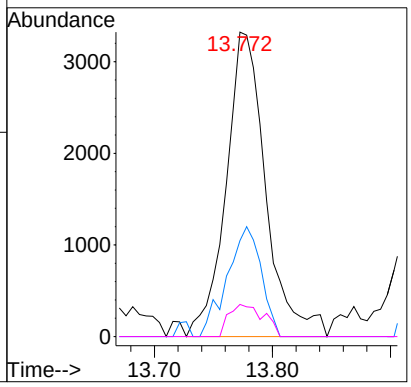


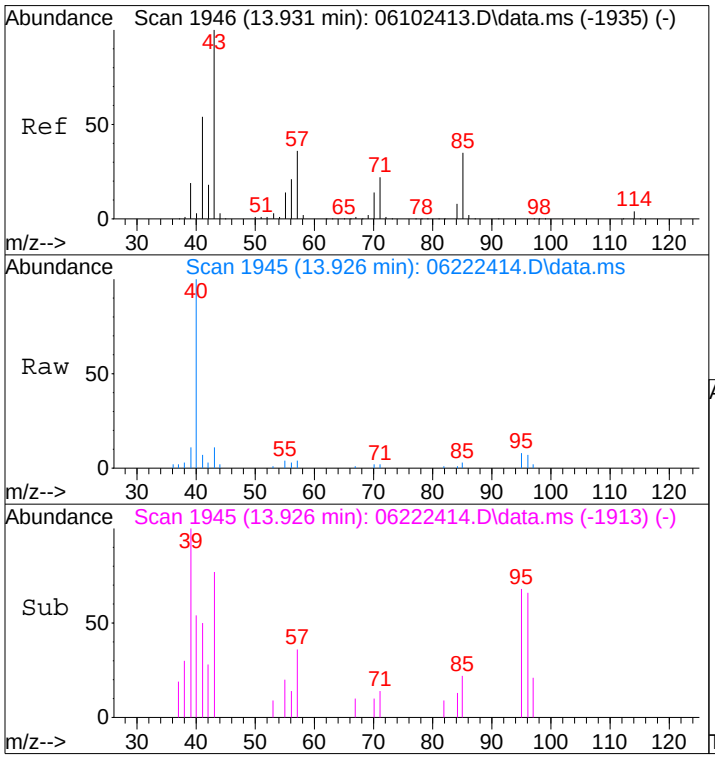


#62
n-Butyl Acetate
Concen: 0.16 ng
RT: 13.77 min Scan# 1918
Delta R.T. -0.028 min
Lab File: 06222414.D
Acq: 22 Jun 2024 20:15

Tgt Ion: 43 Resp: 7768

Ion	Ratio	Lower	Upper
43	100		
56	30.9	14.3	54.3
73	9.2	0.0	30.4

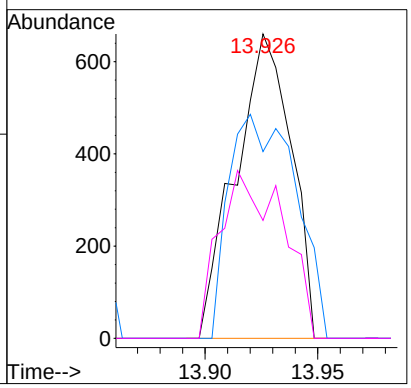


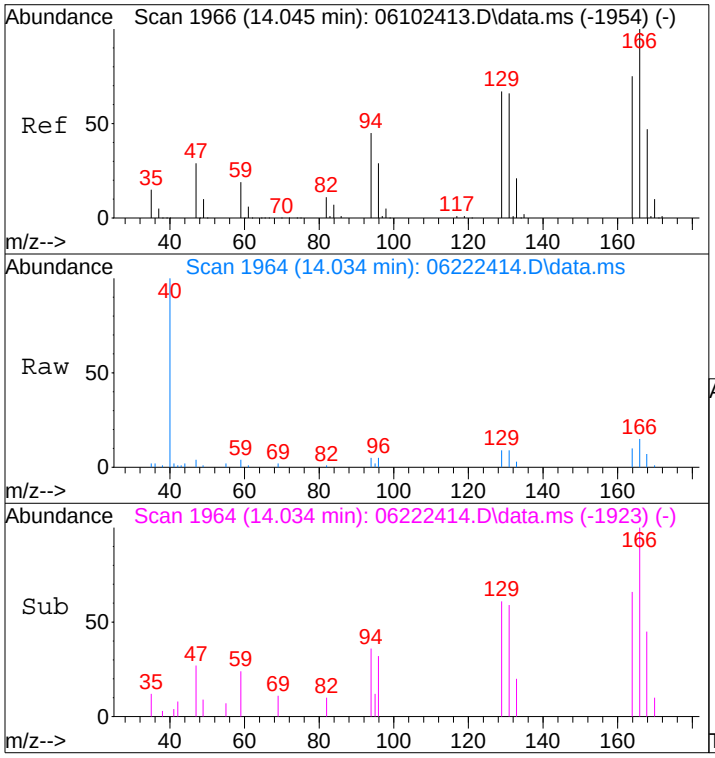


#63
n-Octane
Concen: 0.07 ng
RT: 13.93 min Scan# 1945
Delta R.T. -0.017 min
Lab File: 06222414.D
Acq: 22 Jun 2024 20:15

Tgt Ion: 57 Resp: 1139

Ion	Ratio	Lower	Upper
57	100		
85	88.5	79.8	119.6
71	62.6	49.0	73.4

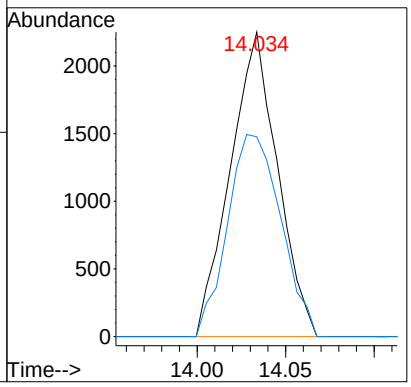


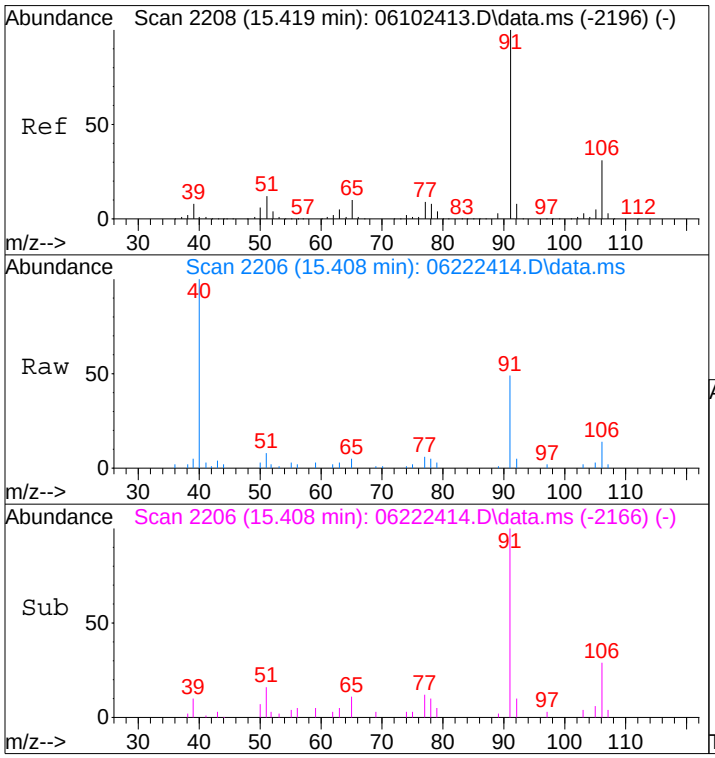


#64
Tetrachloroethene
Concen: 0.16 ng
RT: 14.03 min Scan# 1964
Delta R.T. -0.017 min
Lab File: 06222414.D
Acq: 22 Jun 2024 20:15

Tgt Ion:166 Resp: 4173

Ion	Ratio	Lower	Upper
166	100		
164	74.8	56.9	96.9

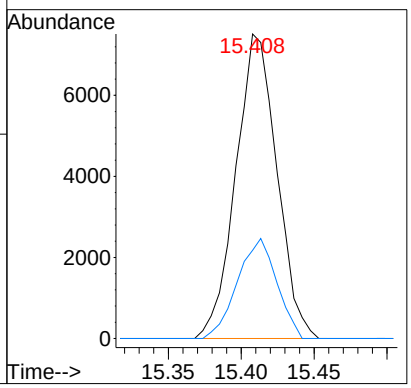


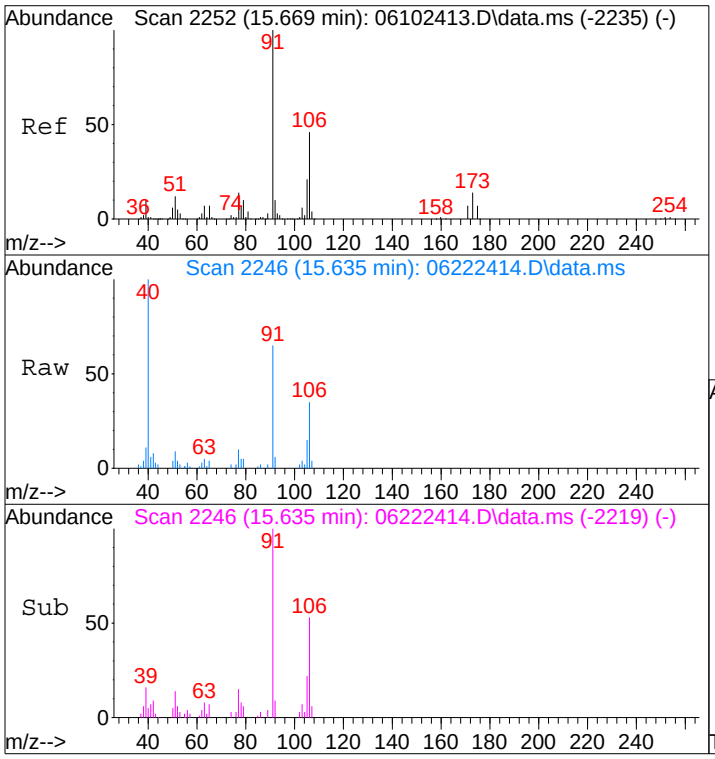


#66
Ethylbenzene
Concen: 0.17 ng
RT: 15.41 min Scan# 2206
Delta R.T. -0.023 min
Lab File: 06222414.D
Acq: 22 Jun 2024 20:15

Tgt Ion: 91 Resp: 14728

Ion	Ratio	Lower	Upper
91	100		
106	31.4	10.7	50.7

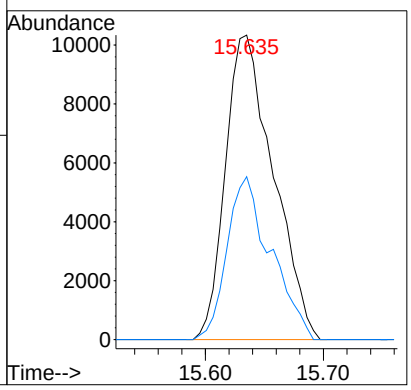


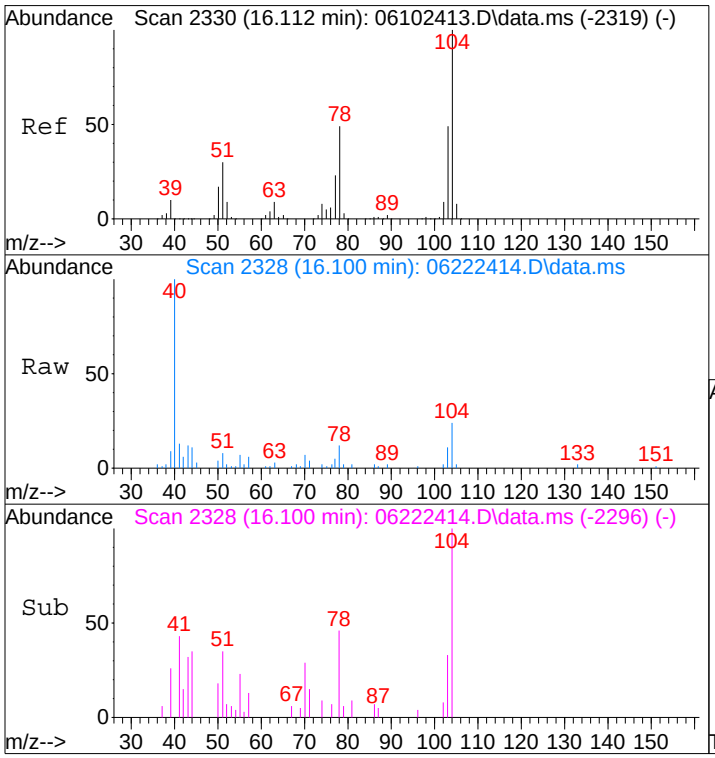


#67
m- & p-Xylenes
Concen: 0.40 ng
RT: 15.63 min Scan# 2246
Delta R.T. -0.046 min
Lab File: 06222414.D
Acq: 22 Jun 2024 20:15

Tgt Ion: 91 Resp: 29134

Ion	Ratio	Lower	Upper
91	100		
106	48.8	25.9	65.9

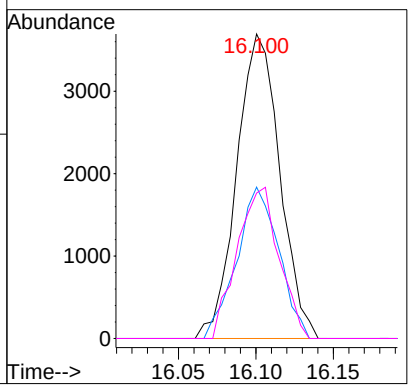


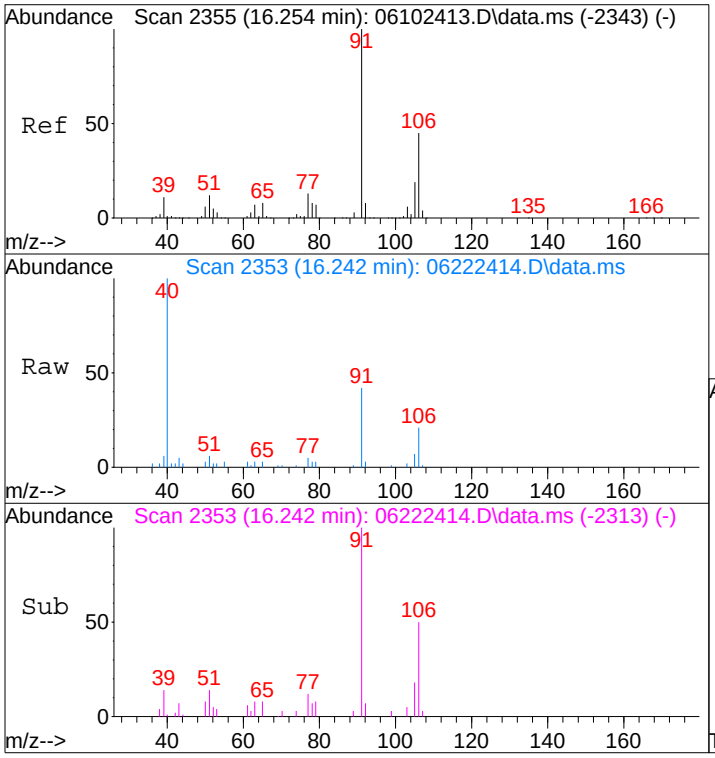


#69
Styrene
Concen: 0.15 ng
RT: 16.10 min Scan# 2328
Delta R.T. -0.017 min
Lab File: 06222414.D
Acq: 22 Jun 2024 20:15

Tgt Ion:104 Resp: 7162

Ion	Ratio	Lower	Upper
104	100		
78	48.6	29.2	69.2
103	48.3	29.4	69.4

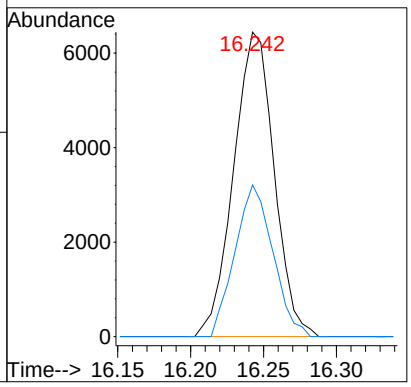


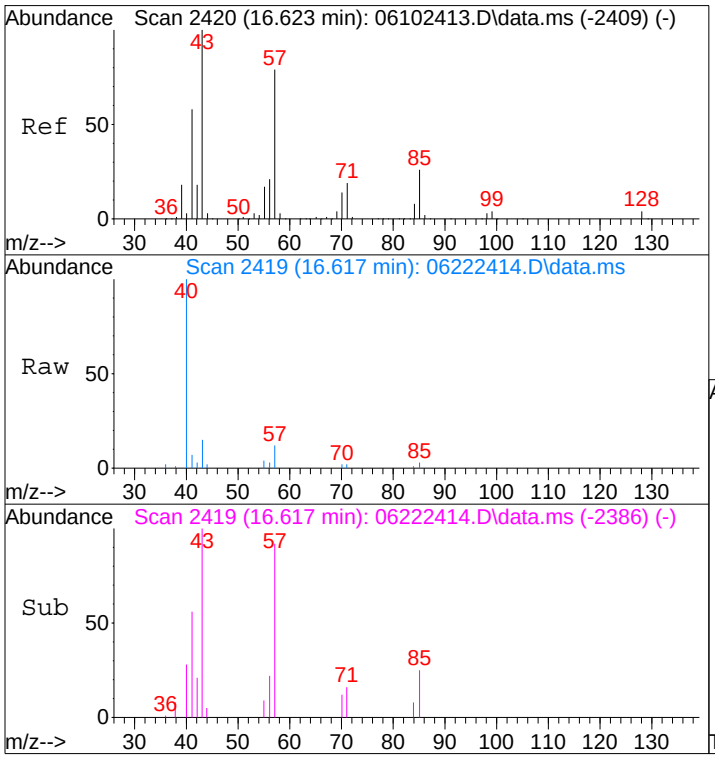


#70
o-Xylene
Concen: 0.17 ng
RT: 16.24 min Scan# 2353
Delta R.T. -0.023 min
Lab File: 06222414.D
Acq: 22 Jun 2024 20:15

Tgt Ion: 91 Resp: 12457

Ion	Ratio	Lower	Upper
91	100		
106	46.6	24.5	64.5

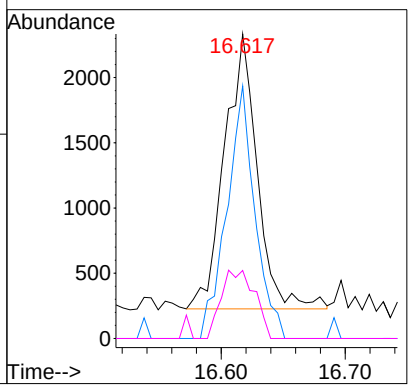


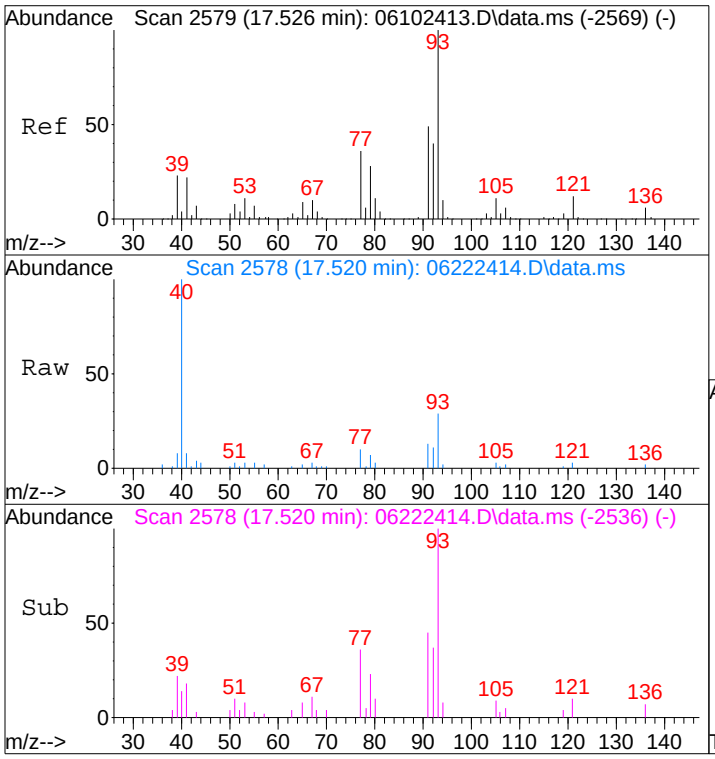


#71
n-Nonane
Concen: 0.09 ng
RT: 16.62 min Scan# 2419
Delta R.T. -0.011 min
Lab File: 06222414.D
Acq: 22 Jun 2024 20:15

Tgt Ion: 43 Resp: 3874

Ion	Ratio	Lower	Upper
43	100		
57	79.0	58.2	98.2
85	25.4	5.9	45.9

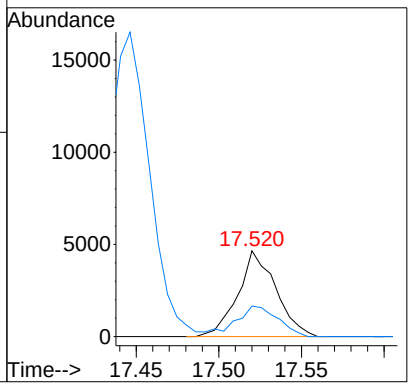


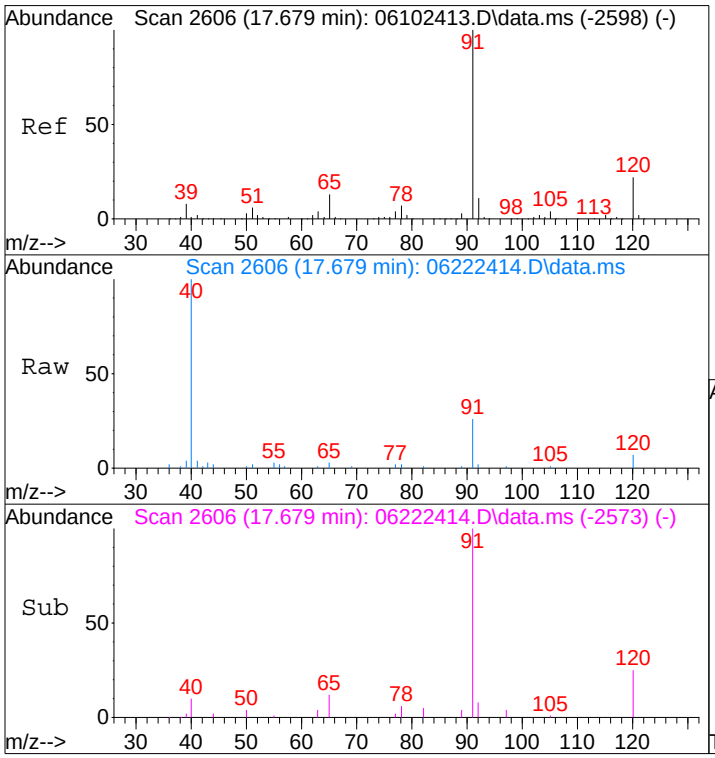


#75
alpha-Pinene
Concen: 0.18 ng
RT: 17.52 min Scan# 2578
Delta R.T. -0.011 min
Lab File: 06222414.D
Acq: 22 Jun 2024 20:15

Tgt Ion: 93 Resp: 7447

Ion	Ratio	Lower	Upper
93	100		
77	39.3	15.3	55.3

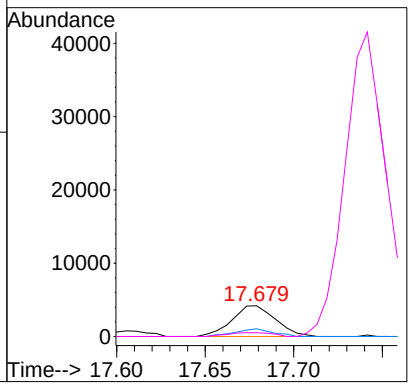


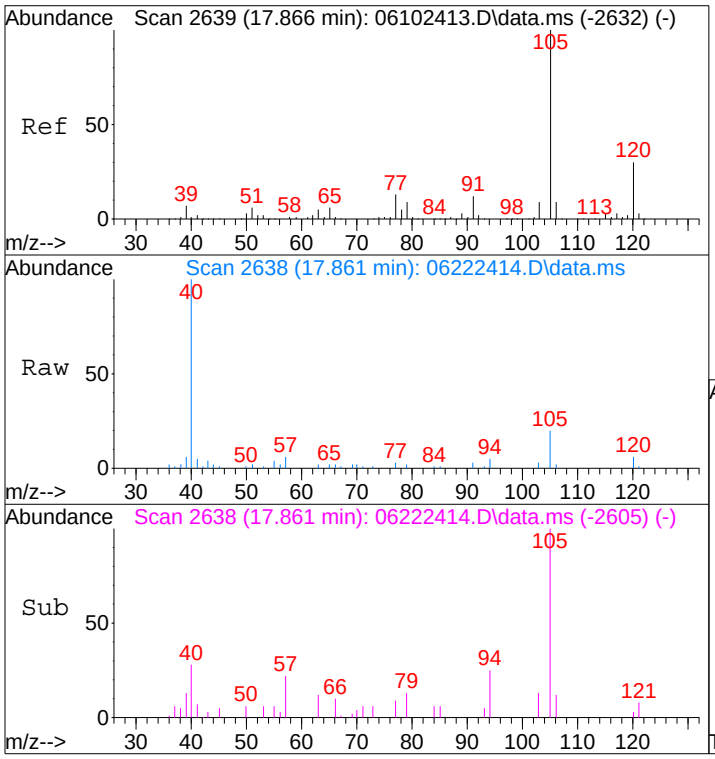


#76
n-Propylbenzene
Concen: 0.07 ng
RT: 17.68 min Scan# 2606
Delta R.T. -0.011 min
Lab File: 06222414.D
Acq: 22 Jun 2024 20:15

Tgt Ion: 91 Resp: 7180

Ion	Ratio	Lower	Upper
91	100		
120	21.6	2.7	42.7
65	12.8	0.0	32.7

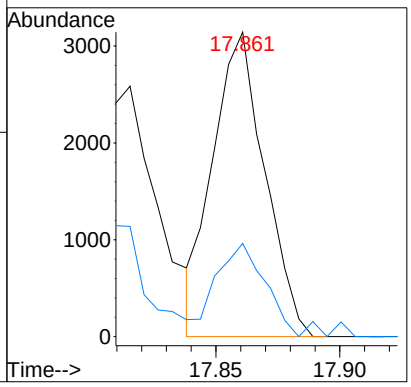


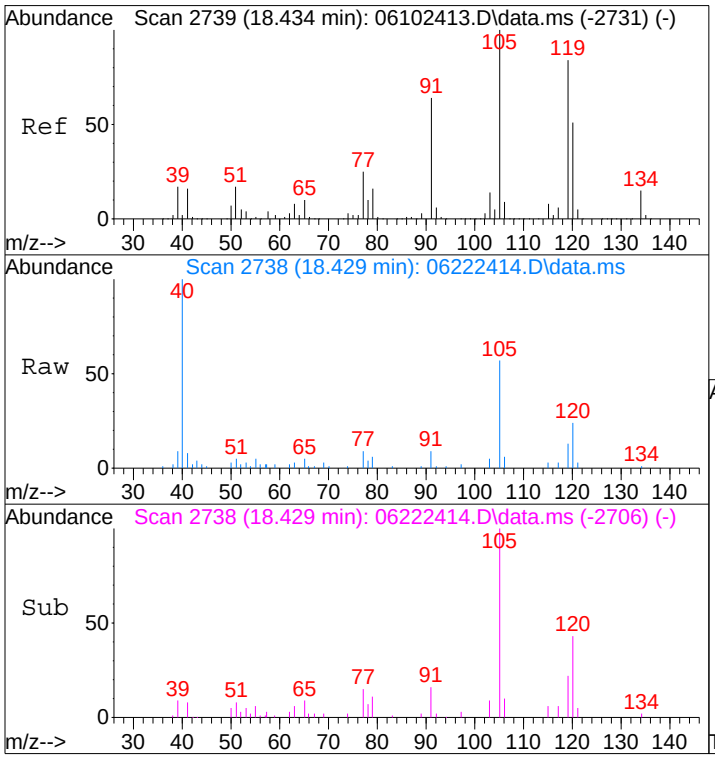


#78
4-Ethyltoluene
Concen: 0.05 ng
RT: 17.86 min Scan# 2638
Delta R.T. -0.011 min
Lab File: 06222414.D
Acq: 22 Jun 2024 20:15

Tgt Ion:105 Resp: 4582

Ion	Ratio	Lower	Upper
105	100		
120	29.0	9.9	49.9

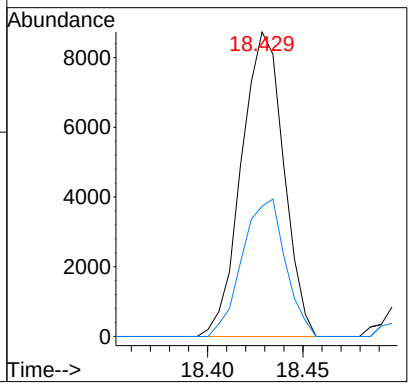


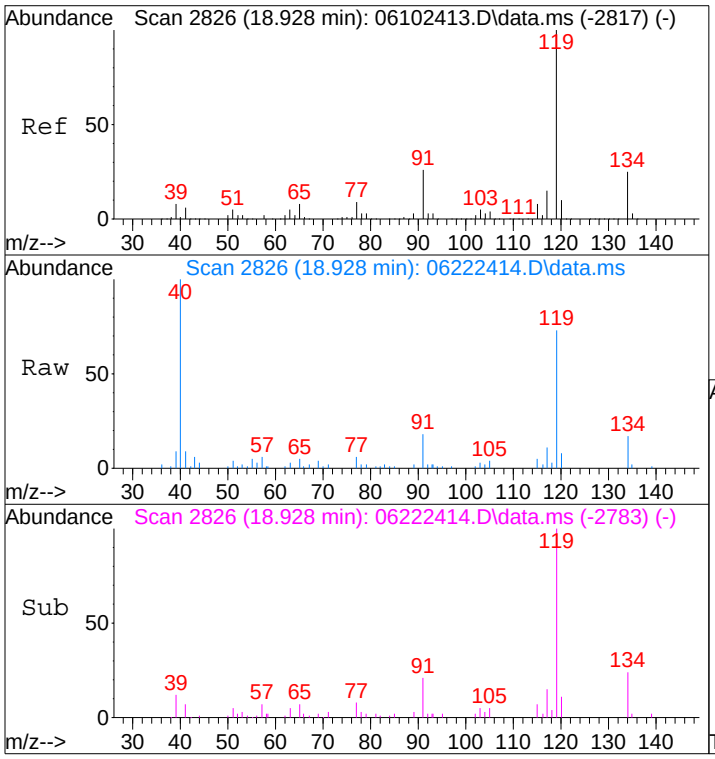


#82
1,2,4-Trimethylbenzene
Concen: 0.17 ng
RT: 18.43 min Scan# 2738
Delta R.T. -0.017 min
Lab File: 06222414.D
Acq: 22 Jun 2024 20:15

Tgt Ion:105 Resp: 13468

Ion	Ratio	Lower	Upper
105	100		
120	46.0	31.9	71.9

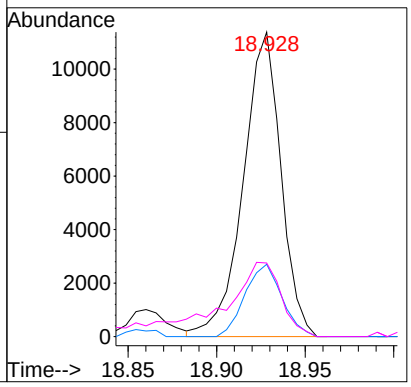


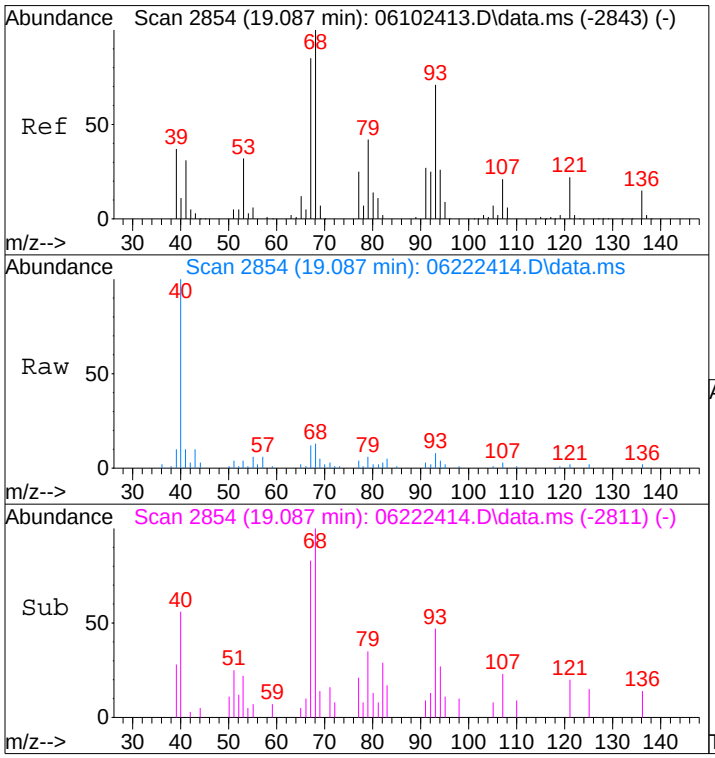


#88
4-Isopropyltoluene (p-Cymene)
Concen: 0.19 ng
RT: 18.93 min Scan# 2826
Delta R.T. -0.006 min
Lab File: 06222414.D
Acq: 22 Jun 2024 20:15

Tgt Ion:119 Resp: 16822

Ion	Ratio	Lower	Upper
119	100		
134	23.3	4.9	44.9
91	41.1	5.8	45.8

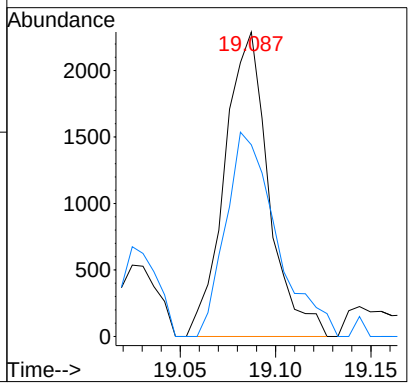


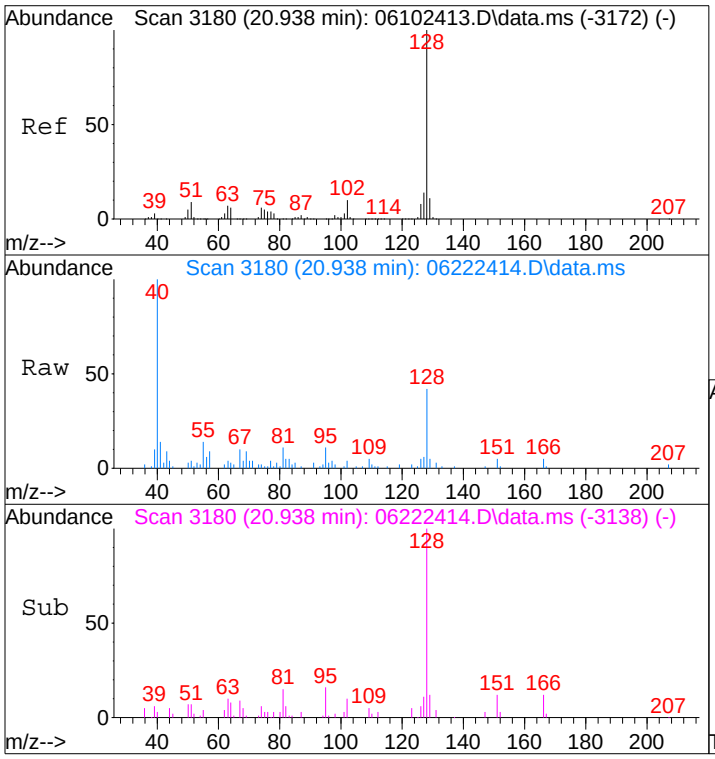


#91
d-Limonene
Concen: 0.14 ng
RT: 19.09 min Scan# 2854
Delta R.T. -0.006 min
Lab File: 06222414.D
Acq: 22 Jun 2024 20:15

Tgt Ion: 68 Resp: 3687

Ion	Ratio	Lower	Upper
68	100		
93	77.4	52.2	92.2

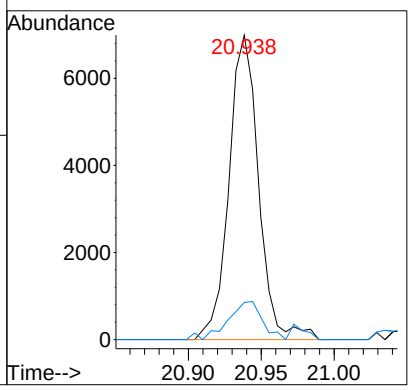




#95
Naphthalene
Concen: 0.10 ng
RT: 20.94 min Scan# 3180
Delta R.T. -0.011 min
Lab File: 06222414.D
Acq: 22 Jun 2024 20:15

Tgt Ion:128 Resp: 9915

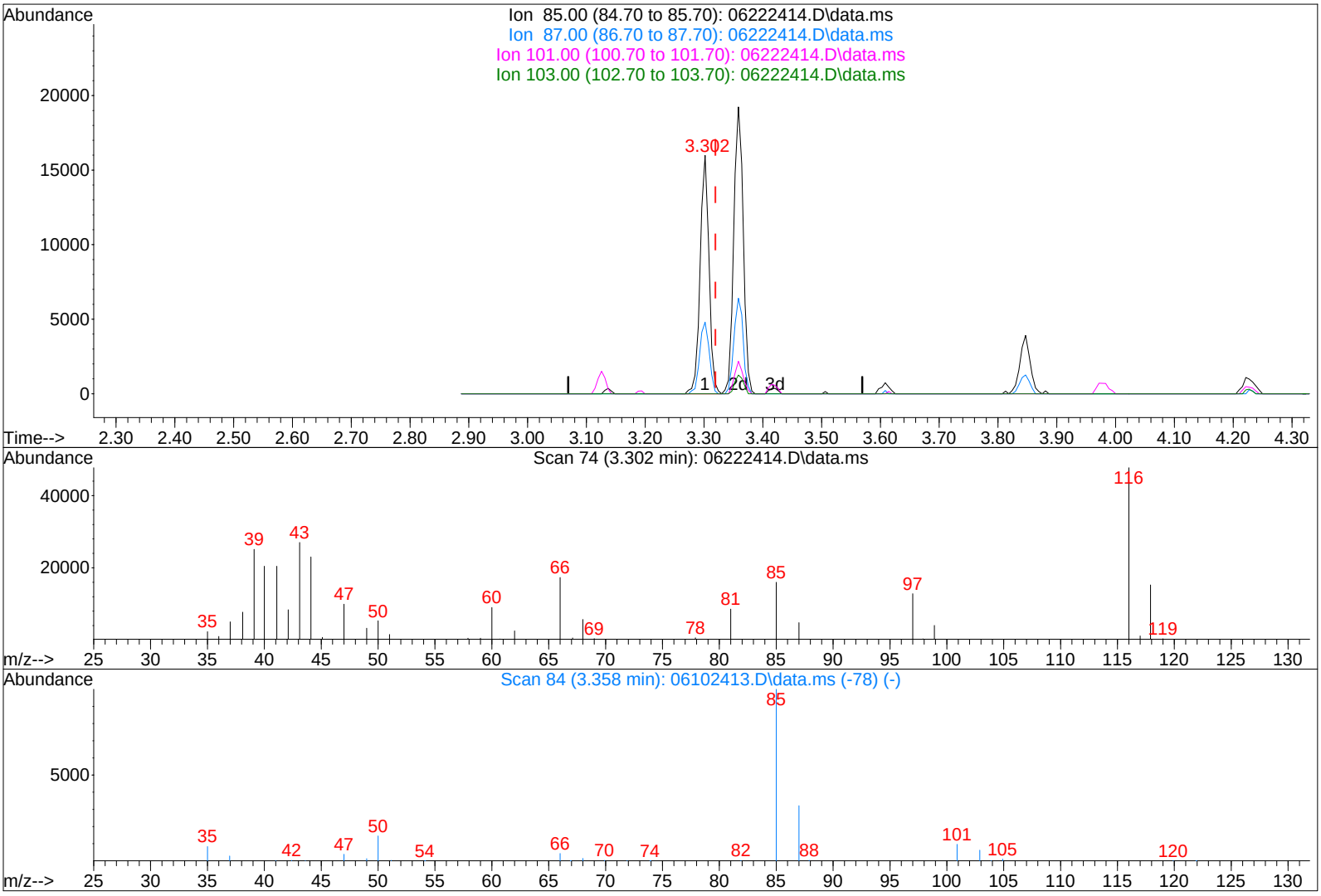
Ion	Ratio	Lower	Upper
128	100		
129	14.5	0.0	31.2



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\22\06222414.D Vial: 6
Acq On : 22 Jun 2024 20:15 Operator: MC/MJ
Sample : P2402249-065 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:01:53 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06222414.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.302min (-0.018) 0.40ng

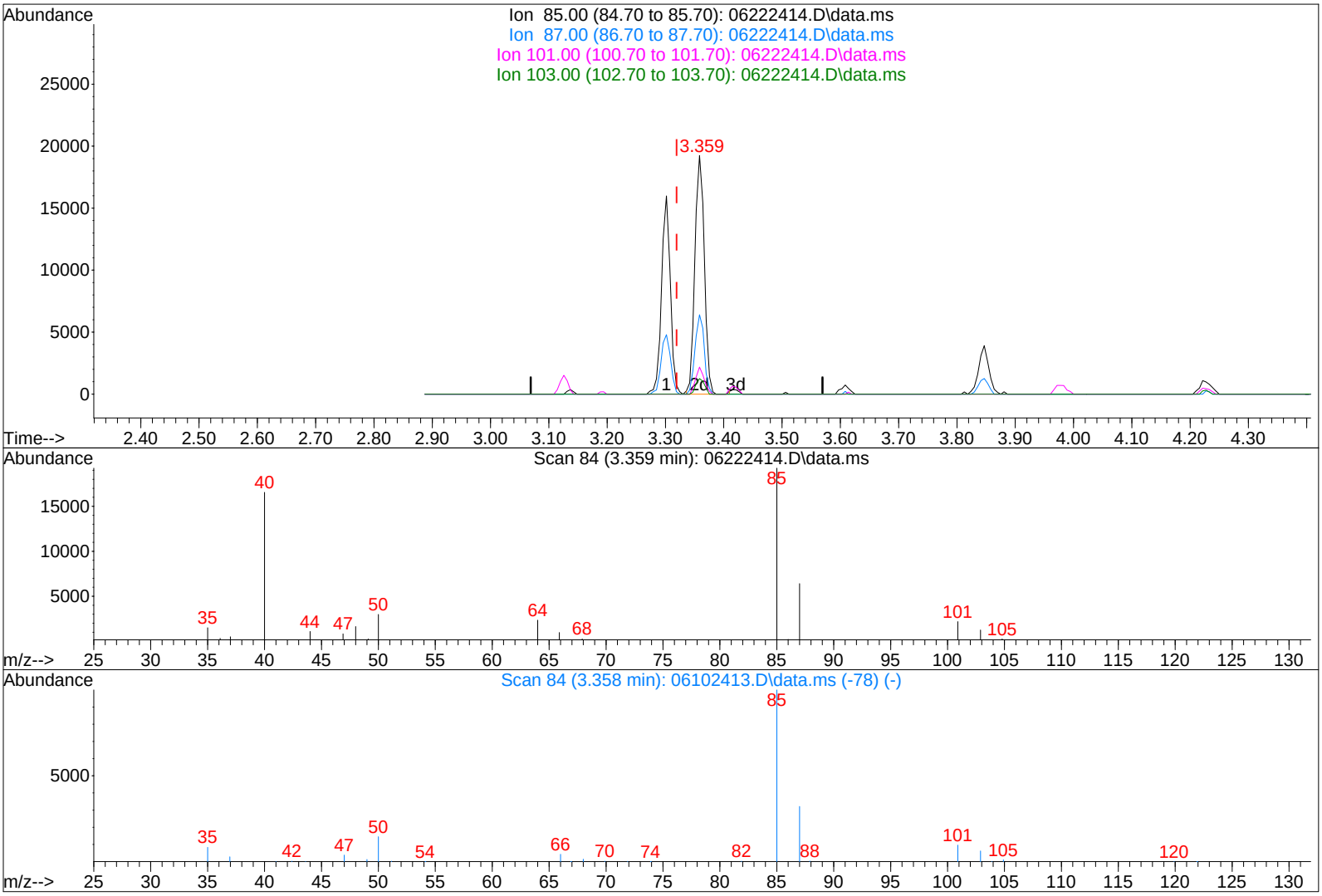
response 16746

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	32.60
101.00	9.80	0.00
103.00	6.30	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\22\06222414.D Vial: 6
Acq On : 22 Jun 2024 20:15 Operator: MC/MJ
Sample : P2402249-065 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:01:53 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06222414.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.359min (+0.039) 0.51ng m

response 21673

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	32.63
101.00	9.80	10.30
103.00	6.30	5.93

MJ 6/29/24

WP

CG 6/29/24

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222414.D Vial: 6
Acq On : 22 Jun 2024 20:15 Operator: MC/MJ
Sample : P2402249-065 (400mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 16:47:15 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

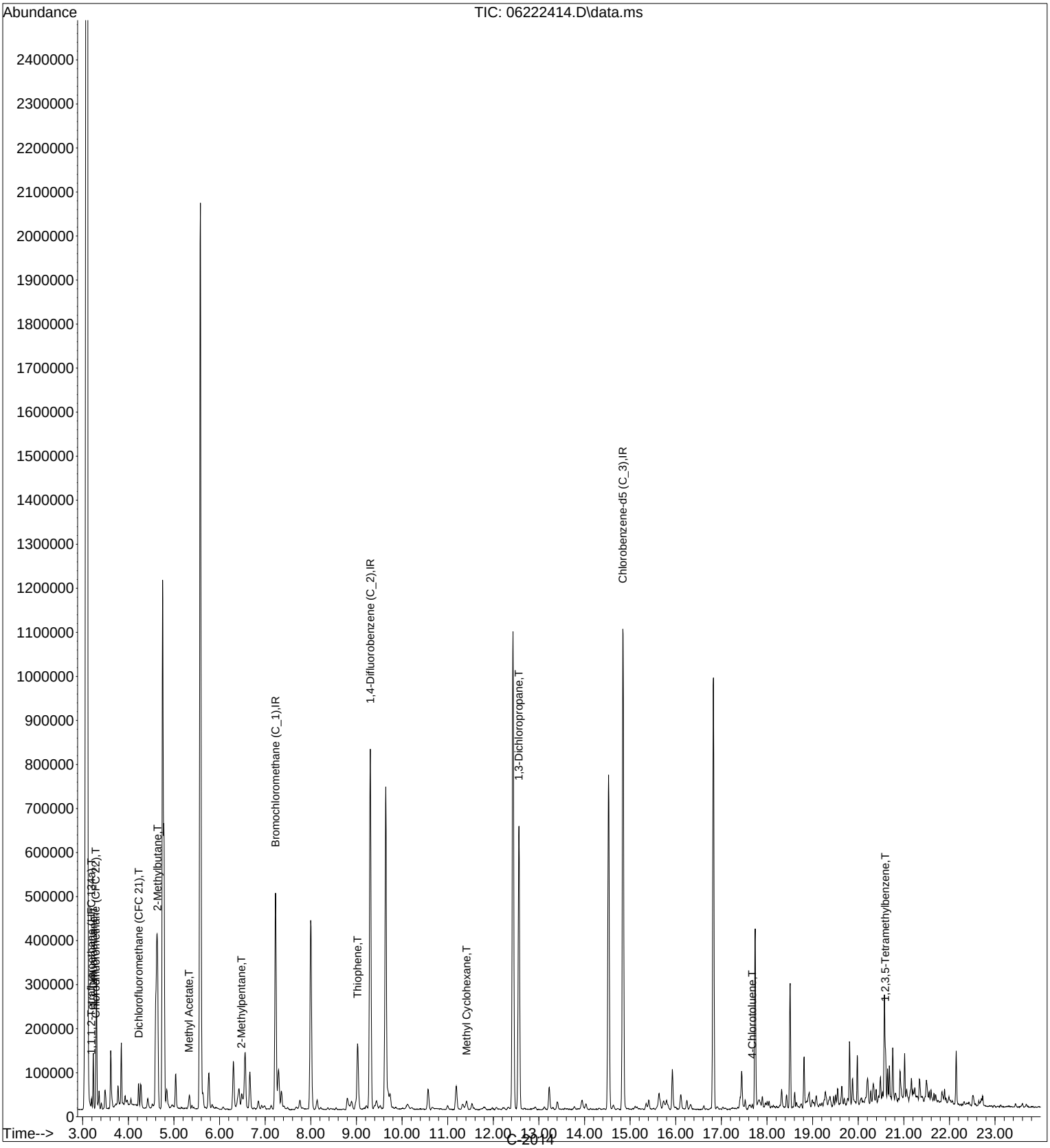
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	179721	12.500	ng		-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	790697	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	187881	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	3.14	85	260	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.19	83	1938	0.105	ng	#	1
4) 1,1-Difluoroethane	3.23	65	29723	1.894	ng		93
5) Chlorodifluoromethane ...	3.28	67	4029	0.658	ng		87
6) 1-Chloro-1,1-Difluoroe...	3.51	65	678	N.D.			
7) Dichlorofluoromethane ...	4.23	67	44031	1.068	ng		100
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	0.00	83	0	N.D.	d		
10) 2-Methylbutane	4.64	57	49427	2.306	ng	#	82
11) Methyl Acetate	5.33	43	8126	0.134	ng	#	7
12) 2-Methylpentane	6.48	71	5283	0.340	ng	#	1
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	9.03	84	8311	0.227	ng	#	21
17) 2,3-Dimethylpentane	9.53	56	3780	N.D.			
18) Dibromomethane	9.81	174	121	N.D.			
20) Methyl Cyclohexane	11.42	55	7653	0.237	ng		98
21) 1,3-Dichloropropane	12.56	76	2684	0.107	ng	#	1
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	16.34	75	751	N.D.			
25) Bromobenzene	17.03	77	753	N.D.			
26) 2-Chlorotoluene	17.61	91	1192	N.D.			
27) 4-Chlorotoluene	17.68	91	7180	0.131	ng	#	41
28) Indane	19.12	117	1604	N.D.			
29) Indene	19.21	115	552	N.D.			
30) 1,2,4,5-Tetramethylben...	20.18	119	1977	N.D.			
31) 1,2,3,4-Tetramethylben...	20.22	119	2860	N.D.			
32) 1,2,3,5-Tetramethylben...	20.59	119	7216	0.117	ng		98
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222414.D Vial: 6
Acq On : 22 Jun 2024 20:15 Operator: MC/MJ
Sample : P2402249-065 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 16:47:15 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

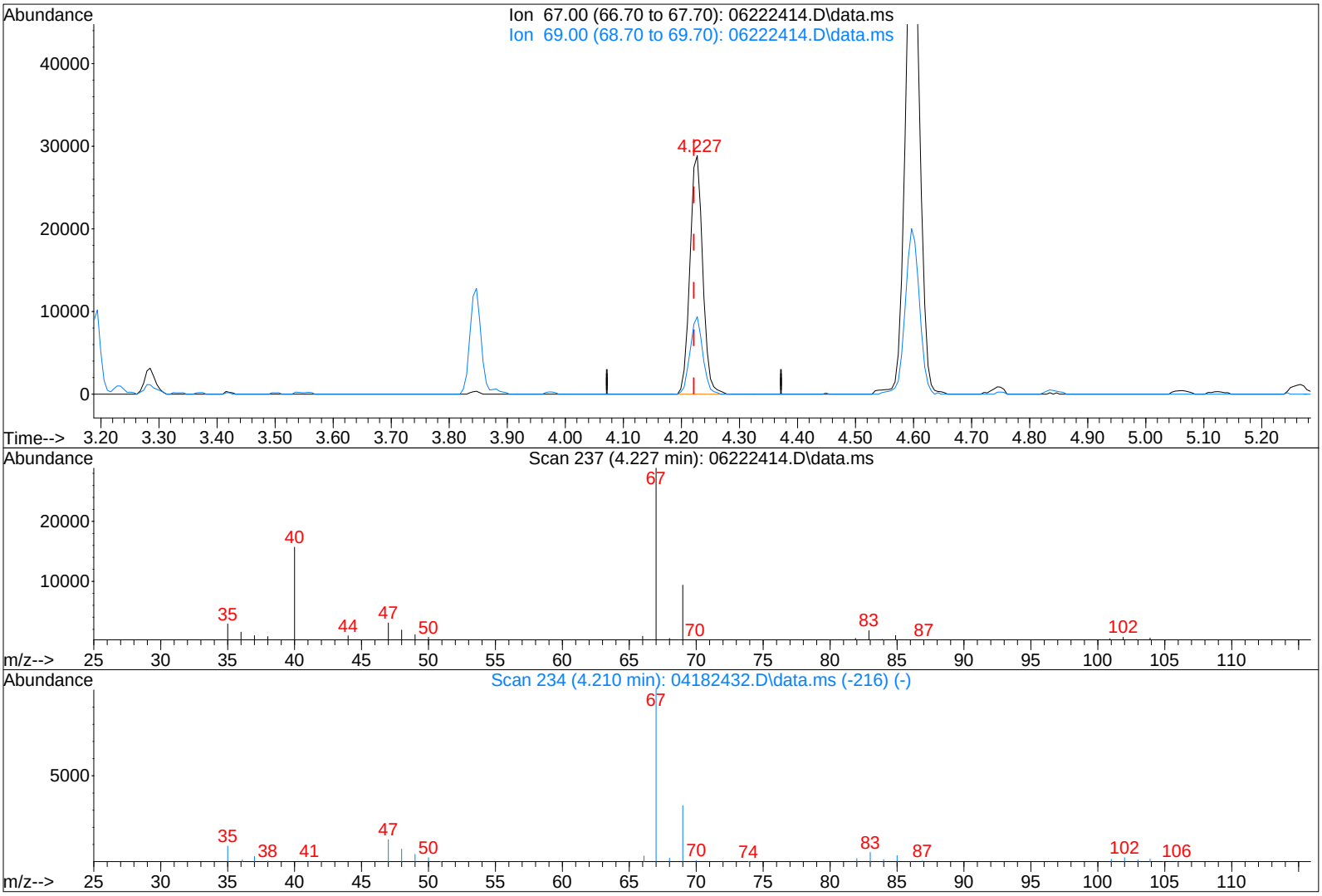


Quantitation Report (Qedit)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\22\06222414.D Vial: 6
Acq On : 22 Jun 2024 20:15 Operator: MC/MJ
Sample : P2402249-065 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 16:46:18 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06222414.D\data.ms

(7) Dichlorofluoromethane (CFC 21) (T)

4.227min (+0.006) 1.07ng

response 44031

Ion	Exp%	Act%
67.00	100	100
69.00	32.40	32.19
0.00	0.00	0.00
0.00	0.00	0.00

LSC Area Percent Report

MJ 6/28/24

Data Path : I:\MS09\DATA\2024 06\22\
Data File : 06222414.D
Acq On : 22 Jun 2024 20:15
Operator : MC/MJ
Sample : P2402249-065 (400mL)
Misc : S37-06062402
ALS Vial : 6 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06222414.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.092	19	37	51	rBV	10469385	24312877	100.00%	57.062%
2	3.194	51	55	58	rVV	24247	31903	0.13%	0.075%
3	3.234	58	62	67	rVV	127308	149813	0.62%	0.352%
4	3.302	67	74	79	rVV3	292588	429553	1.77%	1.008%
5	3.359	79	84	88	rVV2	40953	57448	0.24%	0.135%
6	3.410	88	93	98	rVB2	13487	20278	0.08%	0.048%
7	3.489	98	107	113	rBV4	43091	84708	0.35%	0.199%
8	3.614	123	129	140	rBV3	131864	223812	0.92%	0.525%
9	3.773	150	157	164	rBV	42834	61785	0.25%	0.145%
10	3.847	164	170	174	rVV	138399	174222	0.72%	0.409%
11	3.932	180	185	189	rBV2	19990	29974	0.12%	0.070%
12	3.972	189	192	197	rVB5	10482	16826	0.07%	0.039%
13	4.057	203	207	215	rVB2	13647	19128	0.08%	0.045%
14	4.227	232	237	241	rBV	50274	73145	0.30%	0.172%
15	4.273	241	245	258	rVB2	54477	104583	0.43%	0.245%
16	4.426	264	272	283	rBV2	21363	45420	0.19%	0.107%
17	4.523	284	289	293	rVV2	9264	16913	0.07%	0.040%
18	4.630	295	308	321	rVB3	397257	1363427	5.61%	3.200%
19	4.750	321	329	341	rBV2	1200530	2970167	12.22%	6.971%
20	4.841	341	345	356	rVV2	43120	98094	0.40%	0.230%
21	4.960	360	366	370	rVV4	8211	20774	0.09%	0.049%
22	5.039	374	380	391	rVB	77901	137625	0.57%	0.323%
23	5.340	424	433	438	rBV4	30764	65656	0.27%	0.154%
24	5.579	464	475	483	rBV2	2056725	4106786	16.89%	9.639%
25	5.766	498	508	515	rBV	80361	174881	0.72%	0.410%
26	5.834	515	520	527	rVB3	7774	16248	0.07%	0.038%
27	6.078	557	563	569	rBV3	5653	12615	0.05%	0.030%
28	6.300	592	602	612	rBV	108756	251888	1.04%	0.591%
29	6.425	612	624	630	rVV2	47050	158202	0.65%	0.371%
30	6.482	630	634	640	rVV2	35219	91730	0.38%	0.215%
31	6.561	640	648	660	rVV4	128599	321167	1.32%	0.754%
32	6.663	660	666	678	rVB	84304	173630	0.71%	0.408%
33	6.851	690	699	707	rBV2	17843	40323	0.17%	0.095%
34	6.919	707	711	716	rVV2	8444	16774	0.07%	0.039%
35	6.981	716	722	729	rVB5	7381	20528	0.08%	0.048%
36	7.129	744	748	756	rVB6	8404	15922	0.07%	0.037%
37	7.225	756	765	772	rBV	491003	1070937	4.40%	2.513%
38	7.294	772	777	783	rVV3	89046	218343	0.90%	0.512%
39	7.356	783	788	795	rVV	39906	89024	0.37%	0.209%
40	7.407	795	797	805	rVB6	6429	11437	0.05%	0.027%

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\22\
Data File : 06222414.D
Acq On : 22 Jun 2024 20:15
Operator : MC/MJ
Sample : P2402249-065 (400mL)
Misc : S37-06062402
ALS Vial : 6 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

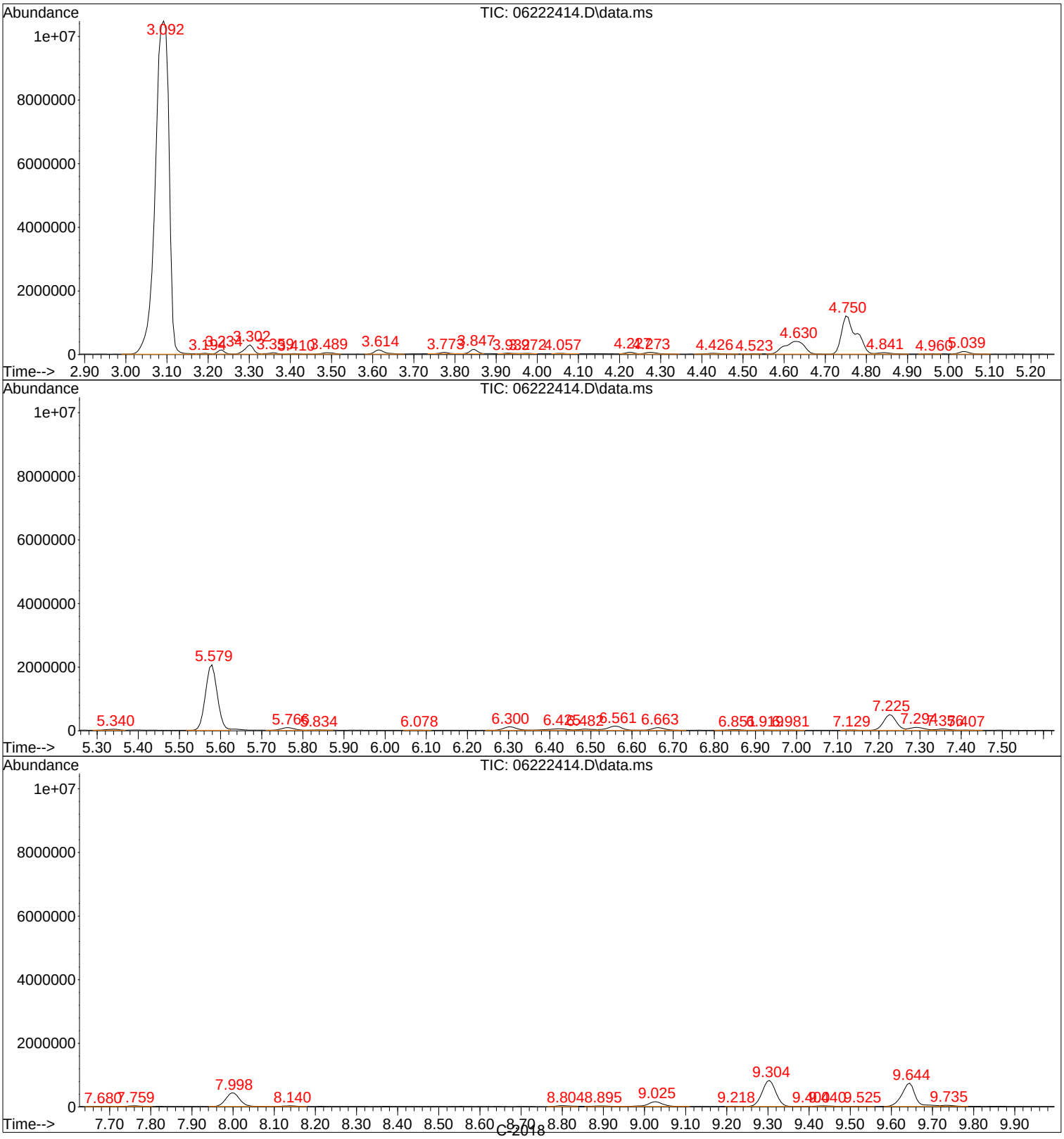
41	7.680	838	845	851	rBV8	6208	17062	0.07%	0.040%
42	7.759	851	859	867	rVV2	19372	44483	0.18%	0.104%
43	7.998	891	901	914	rVB	429530	1007528	4.14%	2.365%
44	8.140	914	926	933	rBV2	21883	51698	0.21%	0.121%
45	8.804	1036	1043	1049	rBV3	26106	68395	0.28%	0.161%
46	8.895	1052	1059	1069	rVV4	18674	54495	0.22%	0.128%
47	9.025	1069	1082	1097	rVB	149008	380749	1.57%	0.894%
48	9.218	1112	1116	1121	rBV5	5526	10766	0.04%	0.025%
49	9.304	1121	1131	1142	rVB	816638	1885277	7.75%	4.425%
50	9.400	1142	1148	1149	rBV3	7276	11787	0.05%	0.028%
51	9.440	1149	1155	1162	rVB6	16378	41129	0.17%	0.097%
52	9.525	1162	1170	1176	rVB4	7367	17890	0.07%	0.042%
53	9.644	1180	1191	1204	rBV	729571	1655276	6.81%	3.885%
54	9.735	1204	1207	1216	rVB2	31358	62670	0.26%	0.147%

Sum of corrected areas: 42607771

Data Path : I:\MS09\DATA\2024 06\22\
Data File : 06222414.D
Acq On : 22 Jun 2024 20:15
Operator : MC/MJ
Sample : P2402249-065 (400mL)
Misc : S37-06062402
ALS Vial : 6 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\22\\
Data File : 06222414.D
Acq On : 22 Jun 2024 20:155
Operator : MC/MJJ
Sample : P2402249-065 (400mL))
Misc : S37-060624022
ALS Vial : 6 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

						--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222415.D Vial: 7
Acq On : 22 Jun 2024 20:47 Operator: MC/MJ
Sample : P2402249-066 (100mL) Inst : MS09
Misc : S37-06062402

MJ 6/29/24

Quant Time: Jun 29 10:34:14 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	177363	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	773064	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	181880	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	379357	12.034	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.24%				
57) Toluene-d8 (SS2)	12.43	98	874548	12.565	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.56%				
73) Bromofluorobenzene (SS3)	16.83	174	324106	12.896	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.20%				
Target Compounds							Qvalue
2) Propene	0.00	42	0	N.D.	d		
3) Dichlorodifluoromethan...	3.38	85	5135m	0.123	ng		
4) Chloromethane	3.51	50	902	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.40	45	208	N.D.			
11) Acetonitrile	4.43	41	1603	N.D.			
12) Acrolein	4.54	56	616	N.D.			
13) Acetone	4.64	58	17098	1.241	ng	#	81
14) Trichlorofluoromethane	4.76	101	4103305	97.178	ng		100
15) 2-Propanol (Isopropanol)	4.85	45	2601	N.D.			
16) Acrylonitrile	4.99	53	979	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	0.00	59	0	N.D.			
19) Methylene Chloride	5.35	84	1270	0.065	ng		97
20) 3-Chloro-1-propene (Al...	5.46	41	499	N.D.			
21) Trichlorotrifluoroethane	5.58	151	1827798	102.327	ng		93
22) Carbon Disulfide	0.00	76	0	N.D.	d		
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D.			
27) 2-Butanone (MEK)	6.67	72	2034	0.187	ng	#	56
28) cis-1,2-Dichloroethene	7.07	61	162	N.D.			
29) Diisopropyl Ether	7.31	87	640	N.D.			
30) Ethyl Acetate	0.00	61	0	N.D.	d		
31) n-Hexane	7.31	57	628	N.D.			
32) Chloroform	7.35	83	20910	0.602	ng		99
34) Tetrahydrofuran (THF)	7.78	72	139	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	358	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.83	56	843	No Calib		#	
41) Benzene	8.89	78	2708	N.D.			
42) Carbon Tetrachloride	0.00	117	0	N.D.			
43) Cyclohexane	9.29	84	725	N.D.			
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.07	83	1121	N.D.			
47) Trichloroethene	10.14	130	1795	0.086	ng		97
48) 1,4-Dioxane	10.13	88	222	N.D.			
49) 2,2,4-Trimethylpentane...	10.23	57	105	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222415.D Vial: 7
Acq On : 22 Jun 2024 20:47 Operator: MC/MJ
Sample : P2402249-066 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:34:14 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

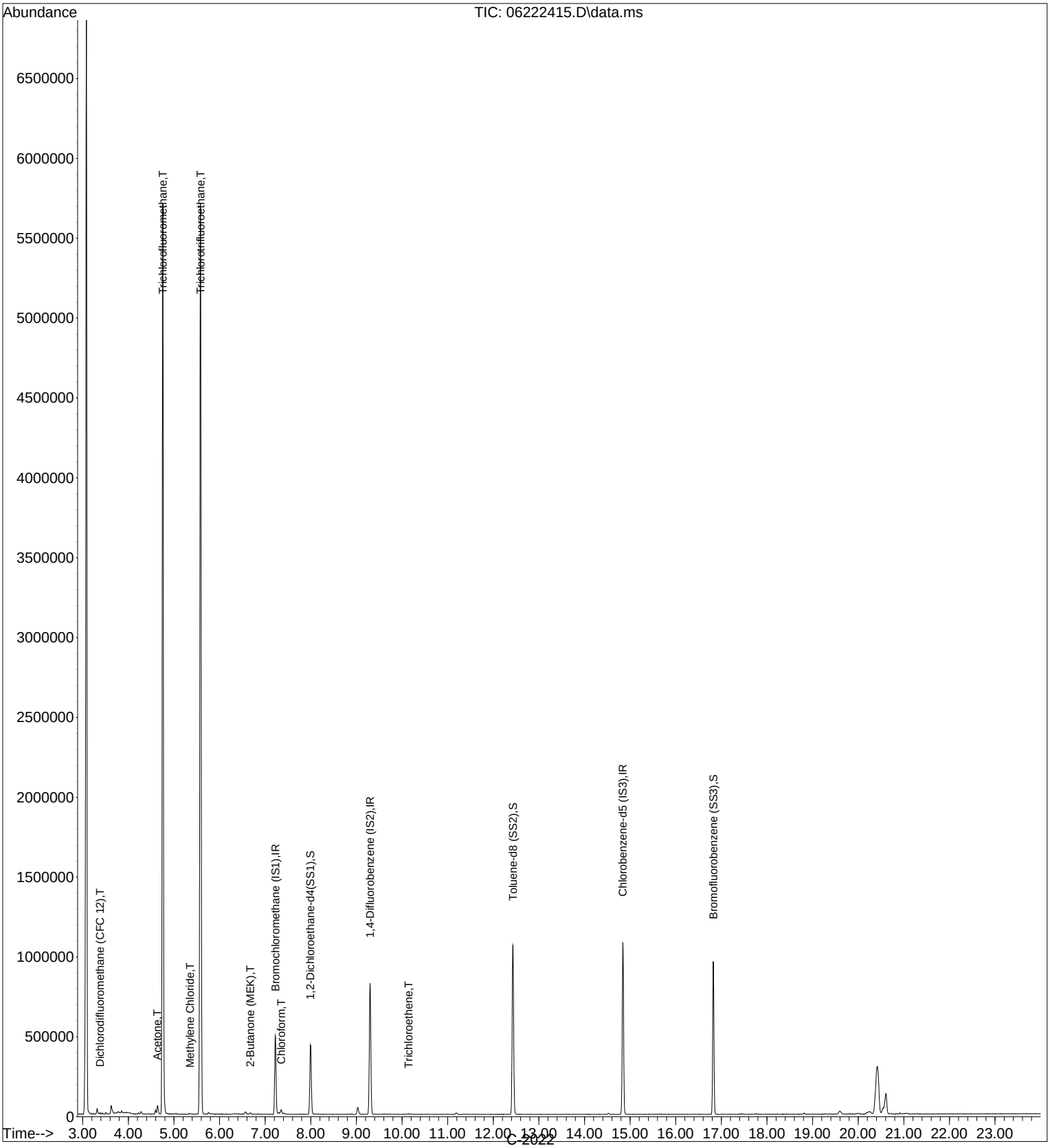
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
51) n-Heptane	0.00	71	0	N.D.		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	11.20	58	117	N.D.		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	12.56	91	1077	N.D.		
59) 2-Hexanone	0.00	43	0	N.D.		
60) Dibromochloromethane	13.07	129	691	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	0.00	43	0	N.D.		
63) n-Octane	0.00	57	0	N.D.		
64) Tetrachloroethene	14.03	166	416	N.D.		
65) Chlorobenzene	14.90	112	675	N.D.		
66) Ethylbenzene	15.41	91	1066	N.D.		
67) m- & p-Xylenes	15.65	91	1948	N.D.		
68) Bromoform	15.67	173	821	N.D.		
69) Styrene	0.00	104	0	N.D.		
70) o-Xylene	16.24	91	954	N.D.		
71) n-Nonane	16.62	43	182	N.D.		
72) 1,1,2,2-Tetrachloroethane	16.21	83	484	N.D.		
74) Cumene	17.03	105	1208	N.D.		
75) alpha-Pinene	0.00	93	0	N.D.		
76) n-Propylbenzene	17.68	91	1378	N.D.		
77) 3-Ethyltoluene	17.03	105	1208	No Calib		#
78) 4-Ethyltoluene	17.86	105	1017	N.D.		
79) 1,3,5-Trimethylbenzene	17.96	105	692	N.D.		
80) alpha-Methylstyrene	0.00	118	0	N.D.		
81) 2-Ethyltoluene	17.03	105	1208	No Calib		#
82) 1,2,4-Trimethylbenzene	18.43	105	768	N.D.		
83) n-Decane	0.00	58	0	N.D.		
84) Benzyl Chloride	0.00	91	0	N.D.		
85) 1,3-Dichlorobenzene	18.58	146	690	N.D.		
86) 1,4-Dichlorobenzene	18.66	146	777	N.D.		
87) sec-Butylbenzene	18.74	105	1348	N.D.		
88) 4-Isopropyltoluene (p-...	18.92	119	976	N.D.		
89) 1,2,3-Trimethylbenzene	17.03	105	1208	No Calib		#
90) 1,2-Dichlorobenzene	19.04	146	721	N.D.		
91) d-Limonene	0.00	68	0	N.D.		
92) 1,2-Dibromo-3-Chloropr...	19.51	157	129	N.D.		
93) n-Undecane	0.00	58	0	N.D.		
94) 1,2,4-Trichlorobenzene	20.84	180	1077	N.D.		
95) Naphthalene	20.94	128	622	N.D.		
96) n-Dodecane	0.00	58	0	N.D.		
97) Hexachlorobutadiene	21.30	225	889	N.D.		
98) Cyclohexanone	15.41	55	476	No Calib		#
99) tert-Butylbenzene	18.43	119	1166	N.D.		
100) n-Butylbenzene	19.39	91	995	N.D.		
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222415.D Vial: 7
Acq On : 22 Jun 2024 20:47 Operator: MC/MJ
Sample : P2402249-066 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:34:14 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



C-2022

Quantitation Report (QT/LSC Reviewed)

MJ 6/29/24

Data File : I:\MS09\DATA\2024 06\22\06222415.D Vial: 7
Acq On : 22 Jun 2024 20:47 Operator: MC/MJ
Sample : P2402249-066 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:34:14 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

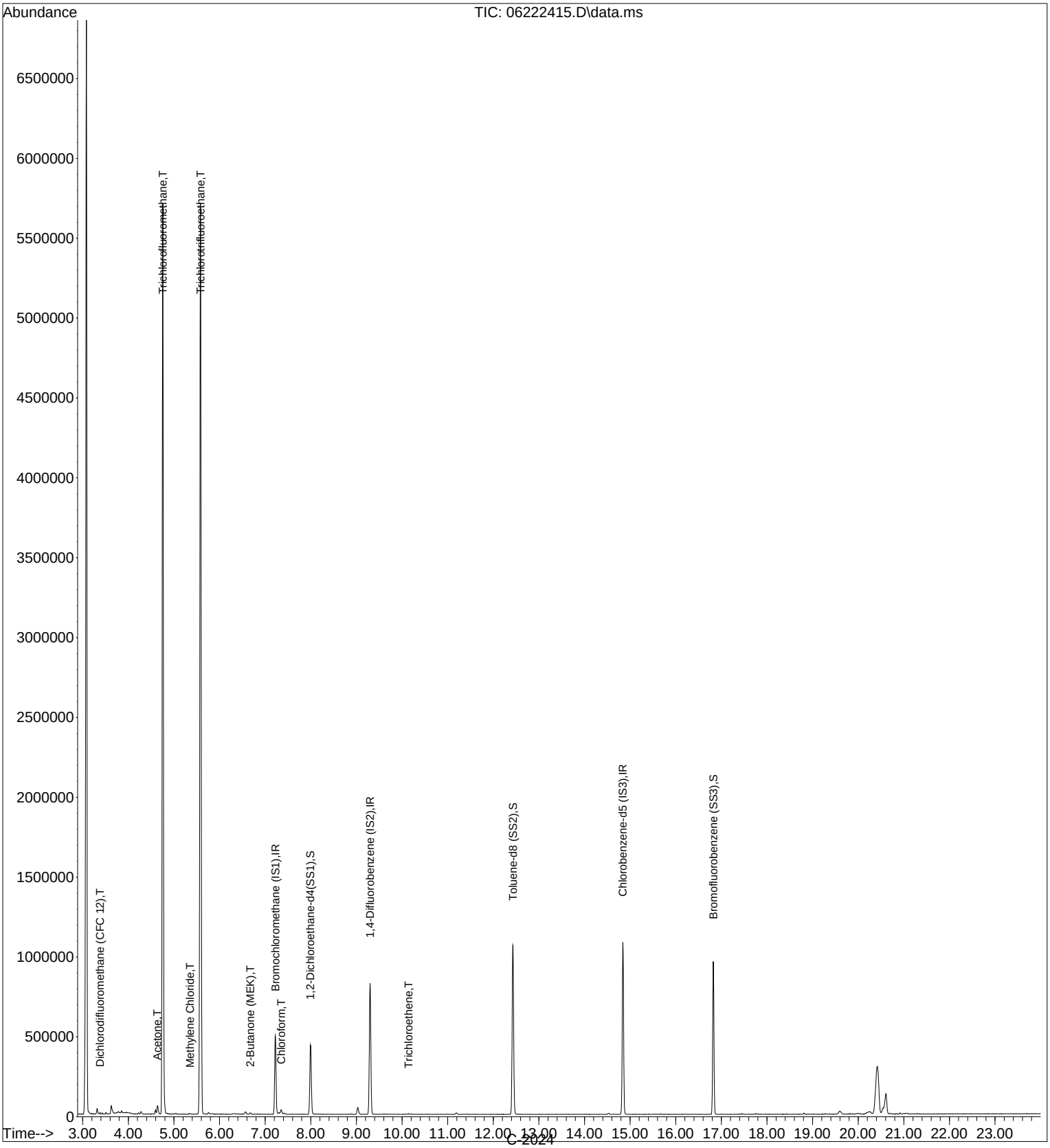
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	177363	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	773064	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	181880	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	379357	12.034	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.24%				
57) Toluene-d8 (SS2)	12.43	98	874548	12.565	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.56%				
73) Bromofluorobenzene (SS3)	16.83	174	324106	12.896	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.20%				
Target Compounds							Qvalue
3) Dichlorodifluoromethan...	3.38	85	5135m	0.123	ng		
13) Acetone	4.64	58	17098	1.241	ng	#	81
14) Trichlorofluoromethane	4.76	101	4103305	97.178	ng		100
19) Methylene Chloride	5.35	84	1270	0.065	ng		97
21) Trichlorotrifluoroethane	5.58	151	1827798	102.327	ng		93
27) 2-Butanone (MEK)	6.67	72	2034	0.187	ng	#	56
32) Chloroform	7.35	83	20910	0.602	ng		99
47) Trichloroethene	10.14	130	1795	0.086	ng		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

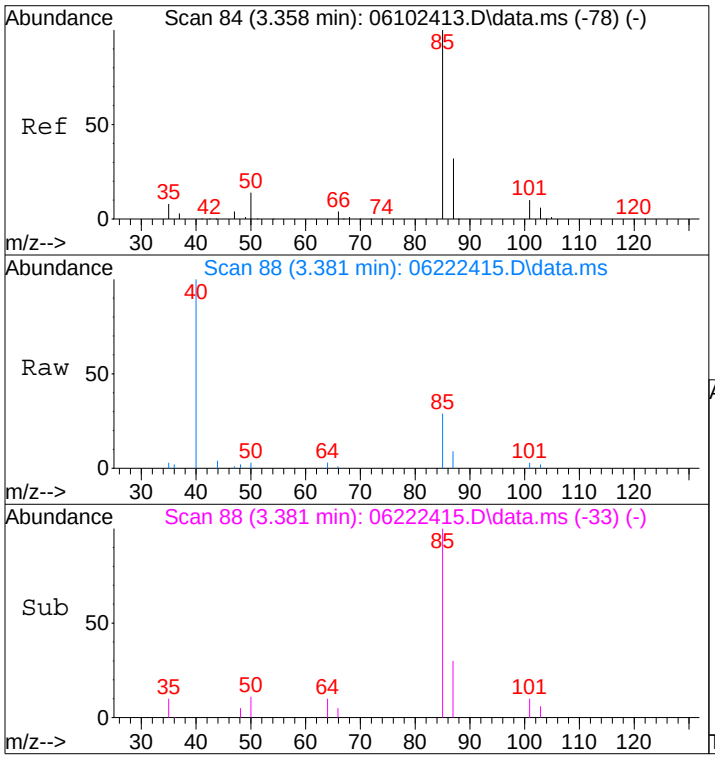
Quantitation Report (QT/LSC Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222415.D Vial: 7
Acq On : 22 Jun 2024 20:47 Operator: MC/MJ
Sample : P2402249-066 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 10:34:14 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



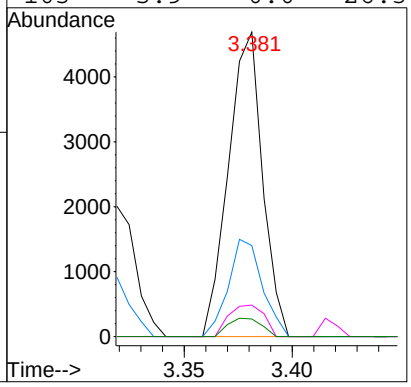
C-2024

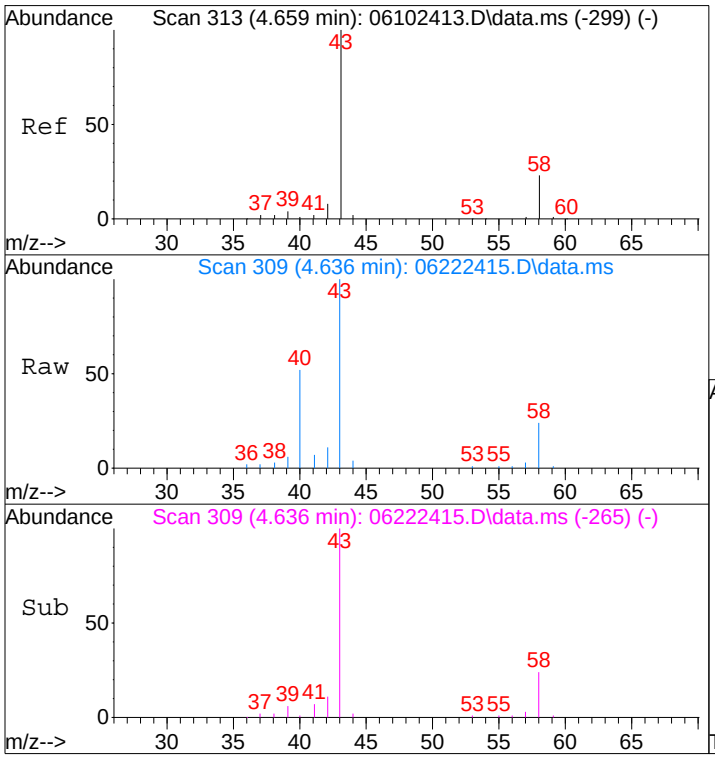


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.12 ng m
RT: 3.38 min Scan# 88
Delta R.T. 0.062 min
Lab File: 06222415.D
Acq: 22 Jun 2024 20:47

Tgt Ion: 85 Resp: 5135

Ion	Ratio	Lower	Upper
85	100		
87	31.9	12.2	52.2
101	10.7	0.0	29.8
103	5.9	0.0	26.3

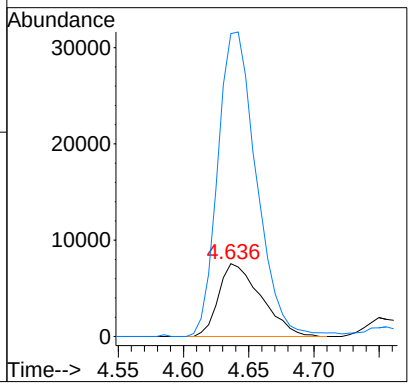


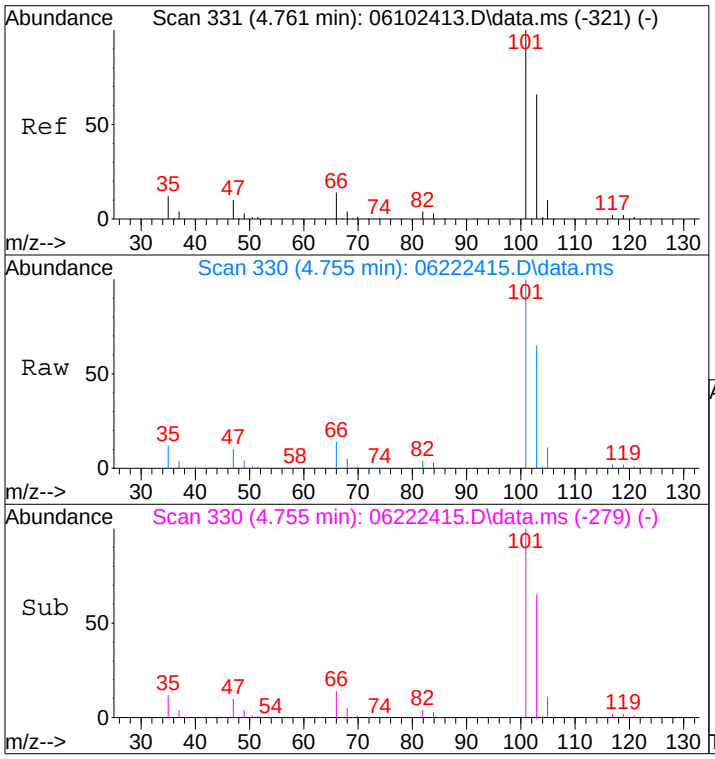


#13
Acetone
Concen: 1.24 ng
RT: 4.64 min Scan# 309
Delta R.T. -0.002 min
Lab File: 06222415.D
Acq: 22 Jun 2024 20:47

Tgt Ion: 58 Resp: 17098

Ion	Ratio	Lower	Upper
58	100		
43	382.5	400.7	460.7#

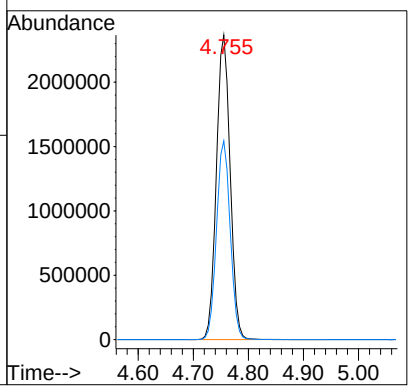


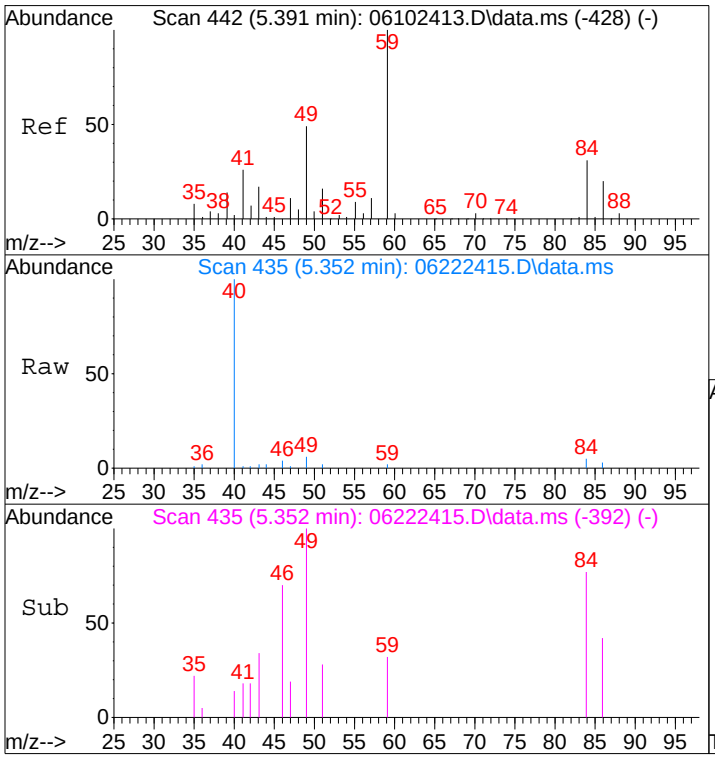


#14
Trichlorofluoromethane
Concen: 97.18 ng
RT: 4.76 min Scan# 330
Delta R.T. 0.039 min
Lab File: 06222415.D
Acq: 22 Jun 2024 20:47

Tgt Ion:101 Resp: 4103305

Ion	Ratio	Lower	Upper
101	100		
103	65.1	44.9	84.9

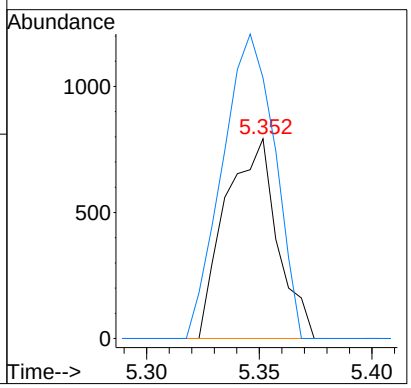


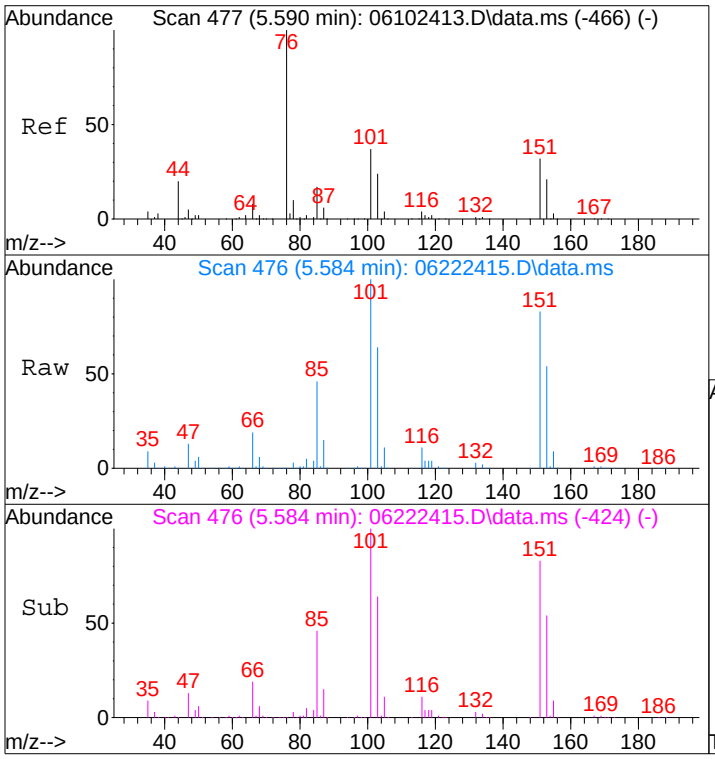


#19
Methylene Chloride
Concen: 0.07 ng
RT: 5.35 min Scan# 435
Delta R.T. -0.005 min
Lab File: 06222415.D
Acq: 22 Jun 2024 20:47

Tgt Ion: 84 Resp: 1270

Ion	Ratio	Lower	Upper
84	100		
49	154.2	132.9	182.9

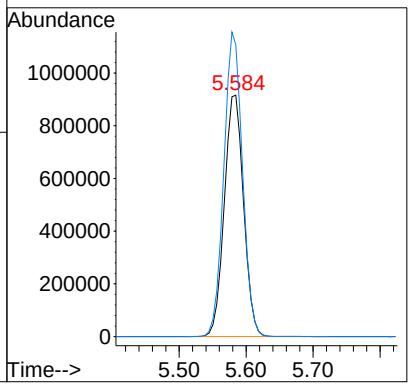


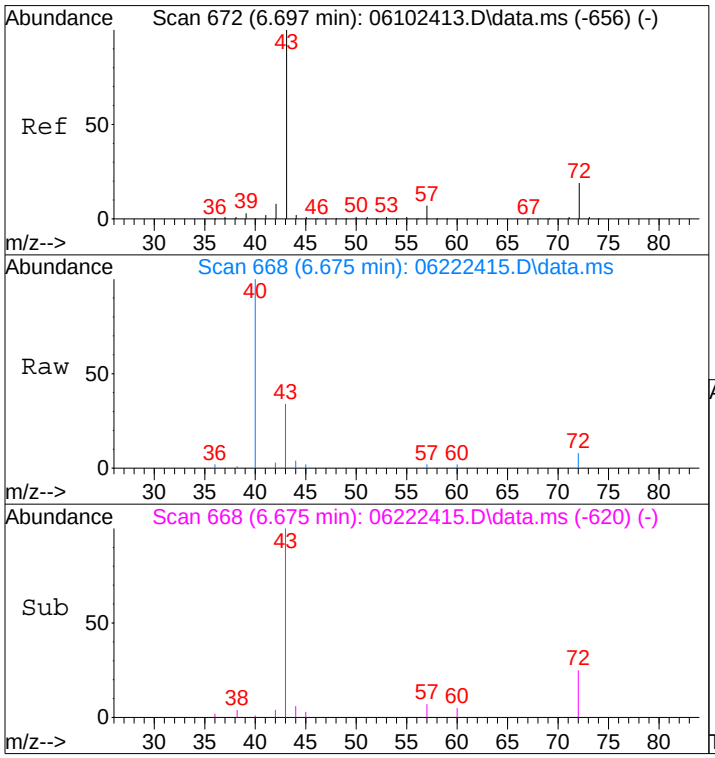


#21
Trichlorotrifluoroethane
Concen: 102.33 ng
RT: 5.58 min Scan# 476
Delta R.T. 0.043 min
Lab File: 06222415.D
Acq: 22 Jun 2024 20:47

Tgt Ion:151 Resp: 1827798

Ion	Ratio	Lower	Upper
151	100		
101	122.2	95.0	135.0

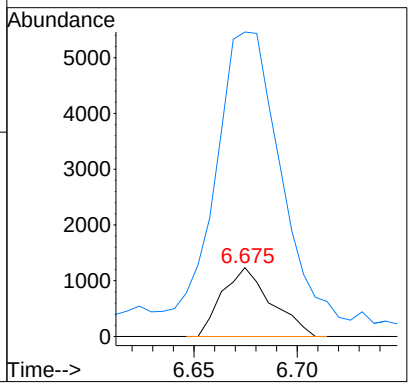


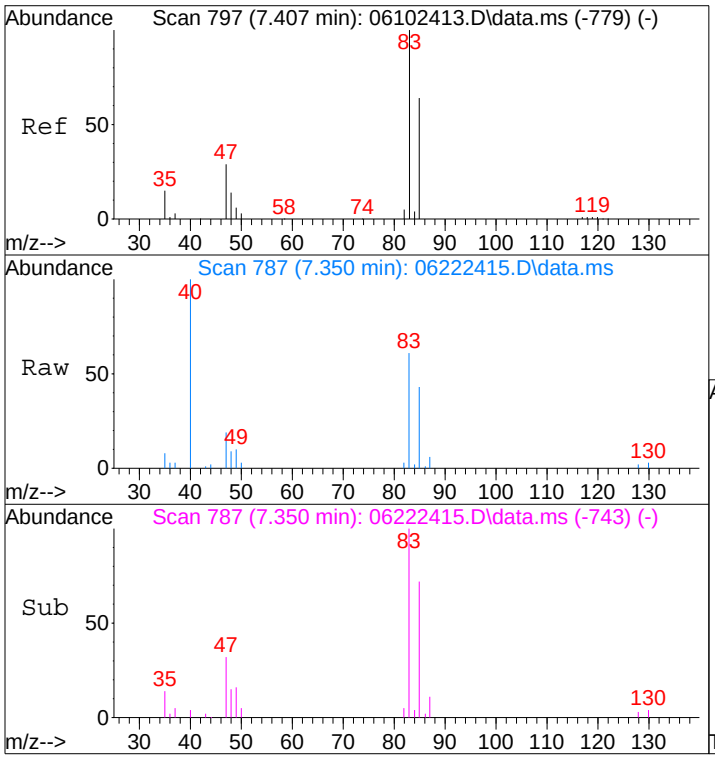


#27
2-Butanone (MEK)
Concen: 0.19 ng
RT: 6.67 min Scan# 668
Delta R.T. 0.022 min
Lab File: 06222415.D
Acq: 22 Jun 2024 20:47

Tgt Ion: 72 Resp: 2034

Ion	Ratio	Lower	Upper
72	100		
43	652.7	506.8	546.8#

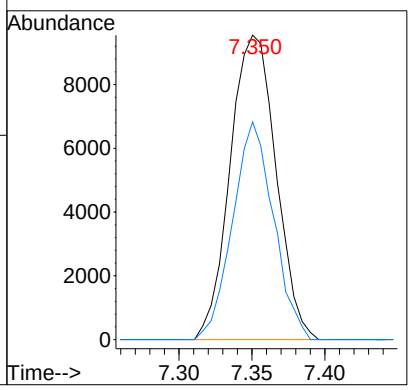


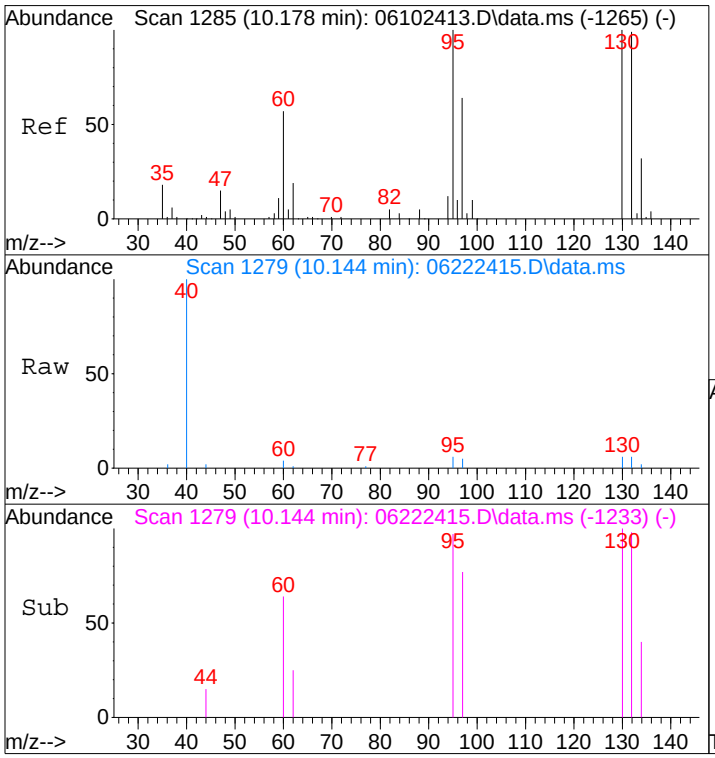


#32
Chloroform
Concen: 0.60 ng
RT: 7.35 min Scan# 787
Delta R.T. 0.002 min
Lab File: 06222415.D
Acq: 22 Jun 2024 20:47

Tgt Ion: 83 Resp: 20910

Ion	Ratio	Lower	Upper
83	100		
85	63.8	44.4	84.4

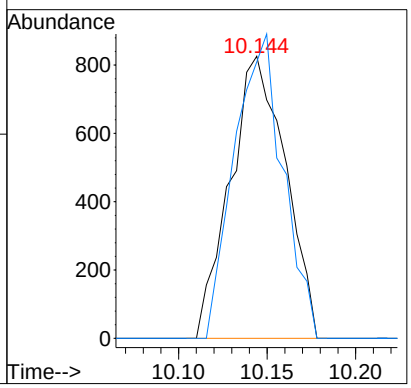




#47
Trichloroethene
Concen: 0.09 ng
RT: 10.14 min Scan# 1279
Delta R.T. 0.011 min
Lab File: 06222415.D
Acq: 22 Jun 2024 20:47

Tgt Ion:130 Resp: 1795

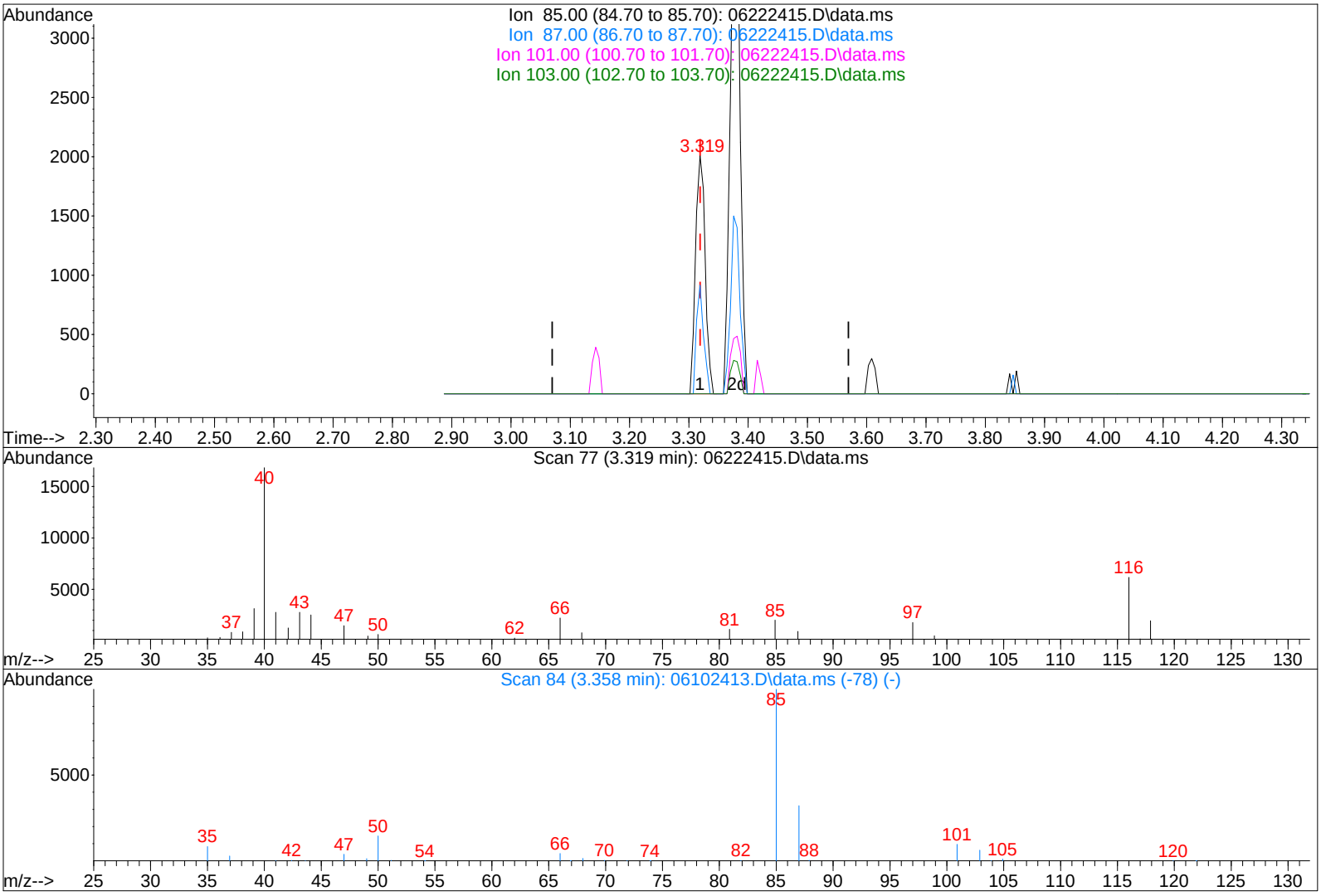
Ion	Ratio	Lower	Upper
130	100		
132	94.8	77.9	117.9



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\22\06222415.D Vial: 7
Acq On : 22 Jun 2024 20:47 Operator: MC/MJ
Sample : P2402249-066 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:02:32 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06222415.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.319min (-0.001) 0.05ng

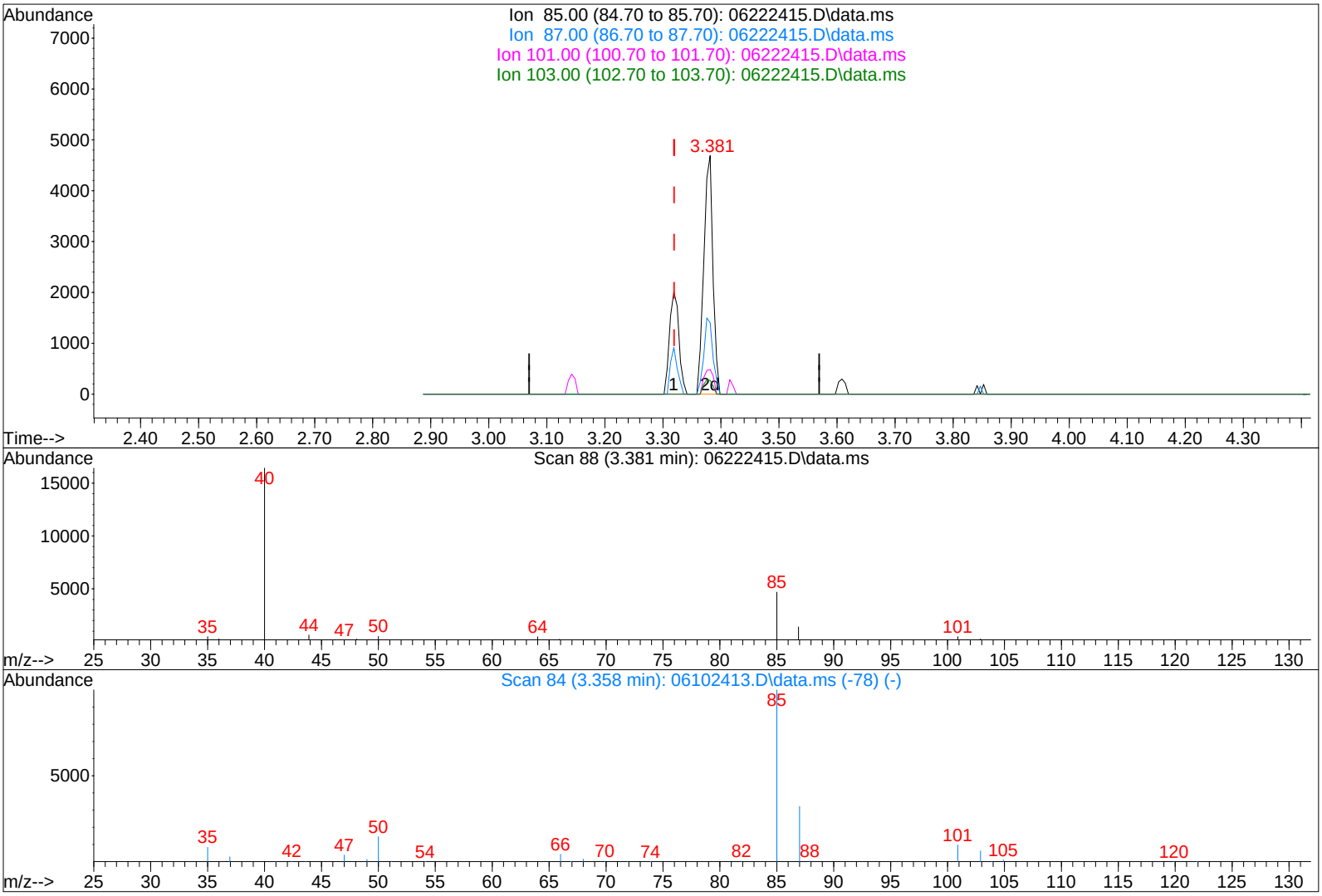
response 2259

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	34.13
101.00	9.80	0.00
103.00	6.30	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\22\06222415.D Vial: 7
Acq On : 22 Jun 2024 20:47 Operator: MC/MJ
Sample : P2402249-066 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 14:02:32 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06222415.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

3.381min (+0.062) 0.12ng m

response 5135

Ion	Exp%	Act%
85.00	100	100
87.00	32.20	31.86
101.00	9.80	10.73
103.00	6.30	5.92

WP

MJ 6/29/24

CG 6/29/24

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222415.D Vial: 7
Acq On : 22 Jun 2024 20:47 Operator: MC/MJ
Sample : P2402249-066 (100mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 16:46:19 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

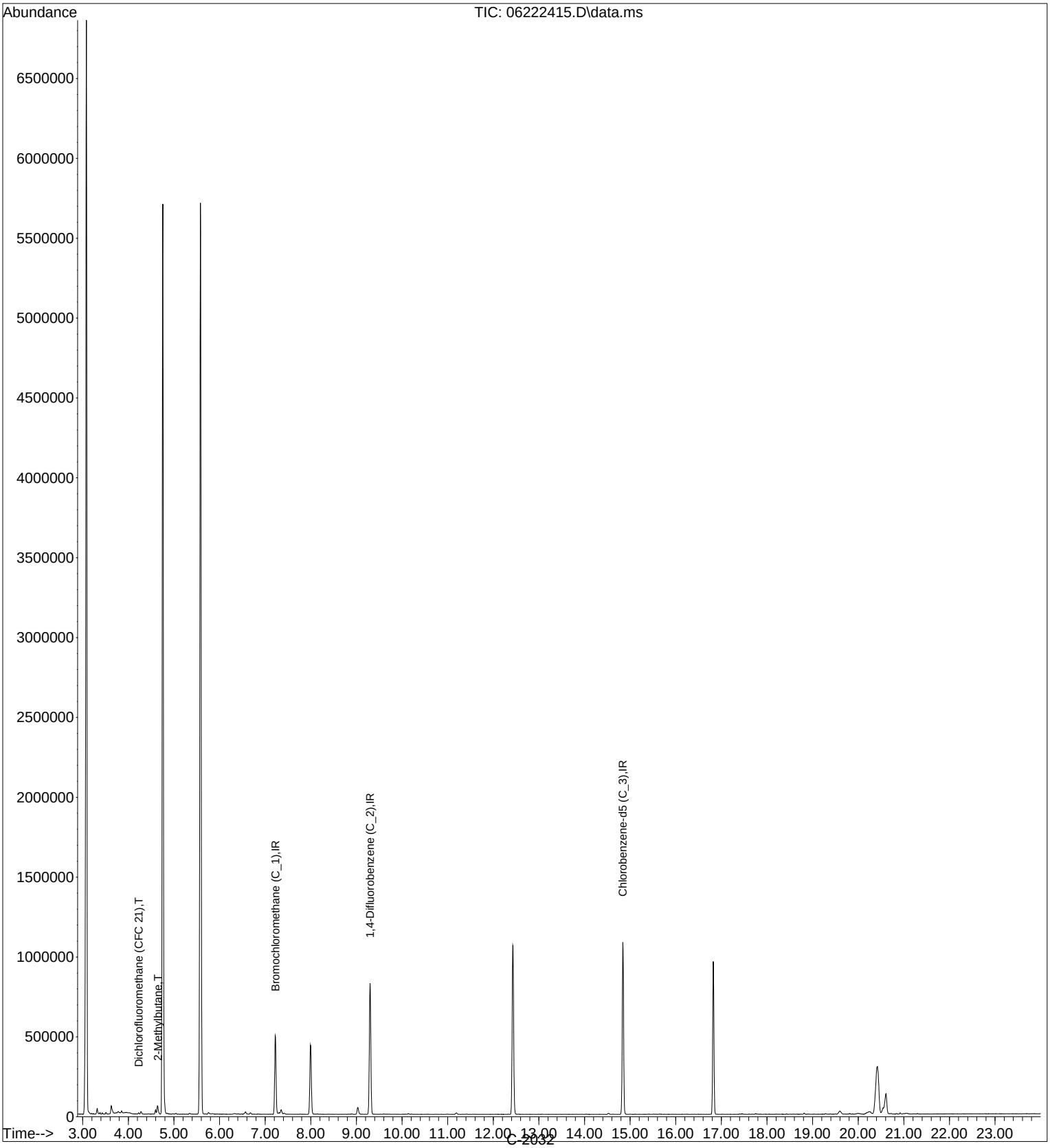
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	179526	12.500	ng		-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	773946	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	181880	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	0.00	85	0	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.21	83	342	N.D.			
4) 1,1-Difluoroethane	0.00	65	0	N.D.			
5) Chlorodifluoromethane ...	3.30	67	422	N.D.			
6) 1-Chloro-1,1-Difluoroe...	0.00	65	0	N.D.			
7) Dichlorofluoromethane ...	4.23	67	6037	0.147	ng		100
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	4.55	83	380	N.D.			
10) 2-Methylbutane	4.65	57	3306	0.154	ng	#	66
11) Methyl Acetate	5.35	43	895	N.D.			
12) 2-Methylpentane	6.48	71	247	N.D.			
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	9.03	84	2325	N.D.			
17) 2,3-Dimethylpentane	9.53	56	143	N.D.			
18) Dibromomethane	9.79	174	240	N.D.			
20) Methyl Cyclohexane	11.41	55	929	N.D.			
21) 1,3-Dichloropropane	0.00	76	0	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	0.00	75	0	N.D.			
25) Bromobenzene	0.00	77	0	N.D.			
26) 2-Chlorotoluene	17.61	91	965	N.D.			
27) 4-Chlorotoluene	17.61	91	965	N.D.			
28) Indane	0.00	117	0	N.D.			
29) Indene	0.00	115	0	N.D.			
30) 1,2,4,5-Tetramethylben...	20.24	119	127	N.D.			
31) 1,2,3,4-Tetramethylben...	20.24	119	127	N.D.			
32) 1,2,3,5-Tetramethylben...	20.60	119	3475	N.D.			
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222415.D Vial: 7
Acq On : 22 Jun 2024 20:47 Operator: MC/MJ
Sample : P2402249-066 (100mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 16:46:19 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



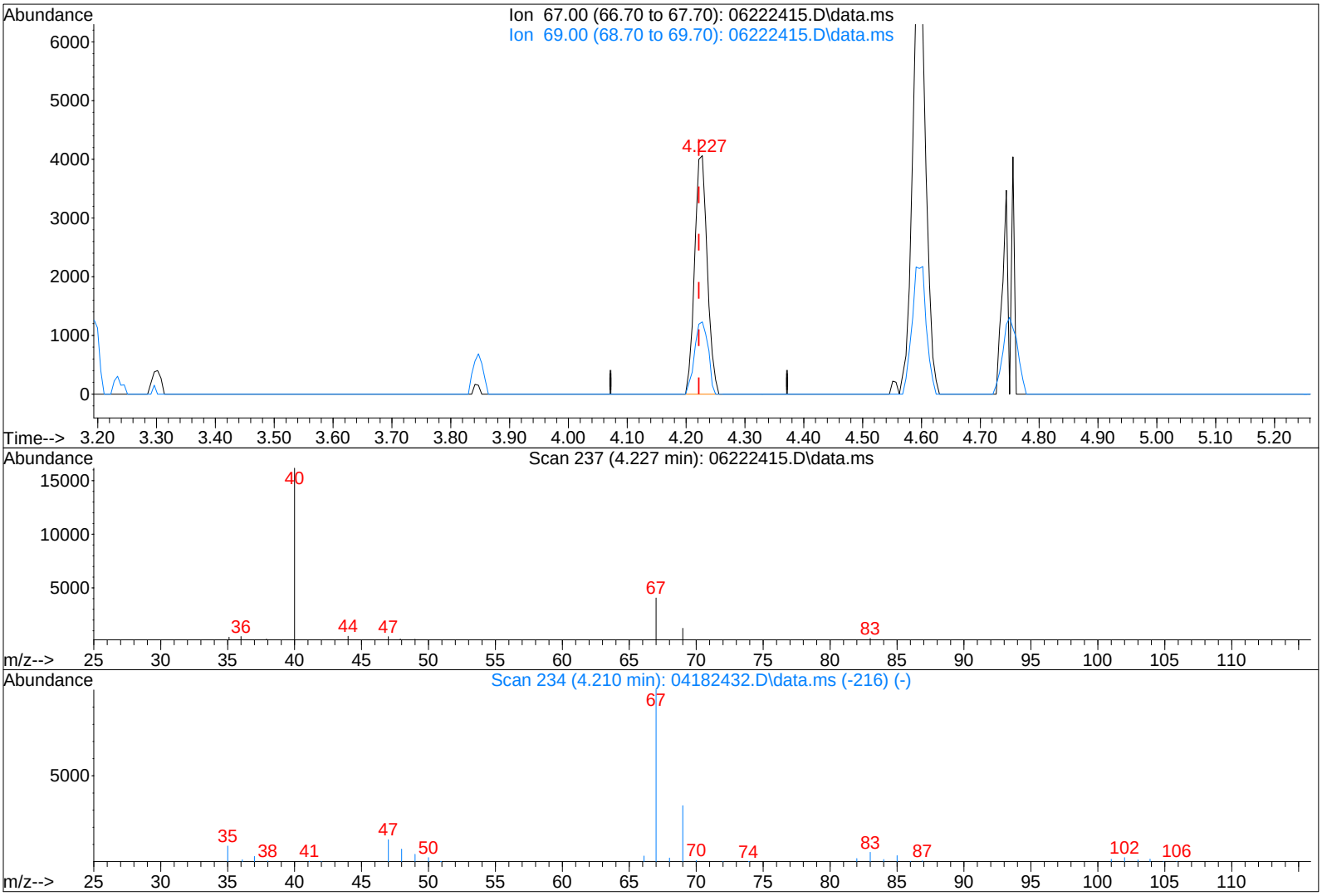
C-2032

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\22\06222415.D Vial: 7
Acq On : 22 Jun 2024 20:47 Operator: MC/MJ
Sample : P2402249-066 (100mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 16:46:19 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06222415.D\data.ms

(7) Dichlorofluoromethane (CFC 21) (T)

4.227min (+0.006) 0.15ng

response 6037

Ion	Exp%	Act%
67.00	100	100
69.00	32.40	32.53
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242414.D Vial: 6
Acq On : 24 Jun 2024 14:45 Operator: SC
Sample : P2402249-066Dil (50mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 24 15:08:00 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/24/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	173303	12.500	ng		-0.05
37) 1,4-Difluorobenzene (IS2)	9.30	114	755083	12.500	ng		-0.03
56) Chlorobenzene-d5 (IS3)	14.84	54	167857	12.500	ng		-0.01
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	374089	12.145	ng		-0.04
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.20%				
57) Toluene-d8 (SS2)	12.43	98	836932	13.029	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 104.24%				
73) Bromofluorobenzene (SS3)	16.82	174	287014	12.374	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.96%				
Target Compounds							Qvalue
2) Propene	0.00	42	0	N.D.	d		
3) Dichlorodifluoromethan...	3.32	85	964	N.D.			
4) Chloromethane	3.52	50	514	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.42	45	56	N.D.			
11) Acetonitrile	4.44	41	696	N.D.			
12) Acrolein	4.56	56	319	N.D.			
13) Acetone	4.65	58	8527	0.633	ng	#	87
14) Trichlorofluoromethane	4.76	101	1978858	47.963	ng		100
15) 2-Propanol (Isopropanol)	4.89	45	1346	N.D.			
16) Acrylonitrile	5.00	53	618	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.40	59	982	N.D.			
19) Methylene Chloride	5.35	84	1097	0.058	ng		90
20) 3-Chloro-1-propene (Al...	5.45	41	183	N.D.			
21) Trichlorotrifluoroethane	5.58	151	864059	49.506	ng		97
22) Carbon Disulfide	0.00	76	0	N.D.	d		
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D.			
27) 2-Butanone (MEK)	6.69	72	815	0.076	ng	#	11
28) cis-1,2-Dichloroethene	7.07	61	125	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.	d		
30) Ethyl Acetate	7.31	61	118	N.D.			
31) n-Hexane	7.32	57	115	N.D.			
32) Chloroform	7.35	83	9836	0.290	ng		100
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.12	62	267	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	0.00	56	0	N.D.			
41) Benzene	8.89	78	2174	N.D.			
42) Carbon Tetrachloride	0.00	117	0	N.D.			
43) Cyclohexane	0.00	84	0	N.D.			
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.07	83	639	N.D.			
47) Trichloroethene	10.14	130	972	N.D.			
48) 1,4-Dioxane	10.15	88	115	N.D.			
49) 2,2,4-Trimethylpentane...	0.00	57	0	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242414.D Vial: 6
Acq On : 24 Jun 2024 14:45 Operator: SC
Sample : P2402249-066Dil (50mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 24 15:08:00 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

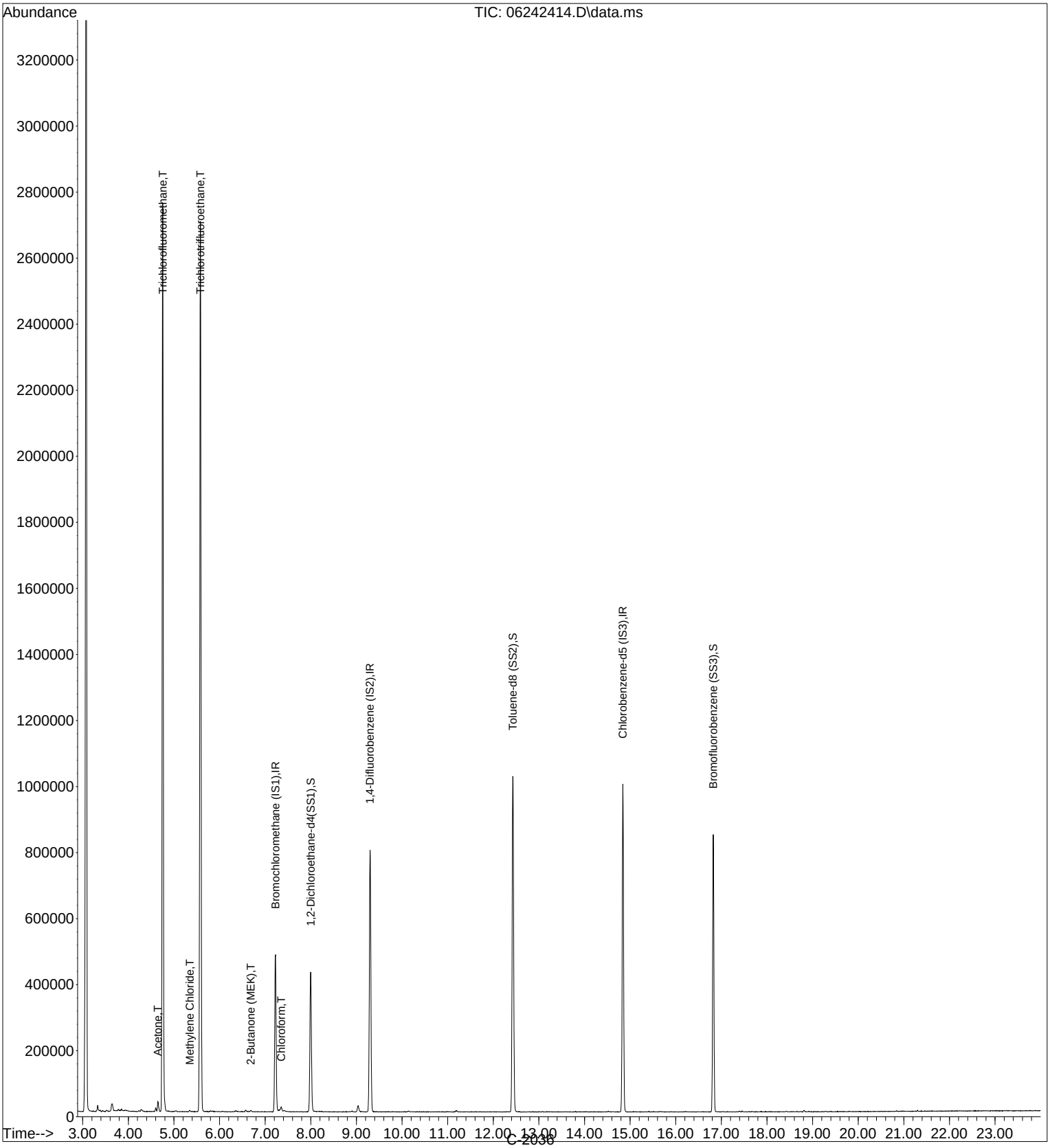
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
51) n-Heptane	0.00	71	0	N.D.		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	12.56	91	802	N.D.		
59) 2-Hexanone	0.00	43	0	N.D.		
60) Dibromochloromethane	13.08	129	505	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	0.00	43	0	N.D.		
63) n-Octane	0.00	57	0	N.D.		
64) Tetrachloroethene	14.02	166	411	N.D.		
65) Chlorobenzene	14.90	112	784	N.D.		
66) Ethylbenzene	15.42	91	1043	N.D.		
67) m- & p-Xylenes	15.64	91	1633	N.D.		
68) Bromoform	15.67	173	571	N.D.		
69) Styrene	0.00	104	0	N.D.		
70) o-Xylene	16.24	91	796	N.D.		
71) n-Nonane	0.00	43	0	N.D.		
72) 1,1,2,2-Tetrachloroethane	16.21	83	418	N.D.		
74) Cumene	17.03	105	921	N.D.		
75) alpha-Pinene	0.00	93	0	N.D.		
76) n-Propylbenzene	17.68	91	1171	N.D.		
77) 3-Ethyltoluene	17.03	105	921	No Calib		
78) 4-Ethyltoluene	17.86	105	649	N.D.		
79) 1,3,5-Trimethylbenzene	17.96	105	361	N.D.		
80) alpha-Methylstyrene	0.00	118	0	N.D.		
81) 2-Ethyltoluene	17.03	105	921	No Calib		
82) 1,2,4-Trimethylbenzene	18.43	105	463	N.D.		
83) n-Decane	0.00	58	0	N.D.		
84) Benzyl Chloride	0.00	91	0	N.D.		
85) 1,3-Dichlorobenzene	18.58	146	591	N.D.		
86) 1,4-Dichlorobenzene	18.66	146	490	N.D.		
87) sec-Butylbenzene	18.74	105	901	N.D.		
88) 4-Isopropyltoluene (p-...	18.92	119	748	N.D.		
89) 1,2,3-Trimethylbenzene	17.03	105	921	No Calib		
90) 1,2-Dichlorobenzene	19.04	146	480	N.D.		
91) d-Limonene	0.00	68	0	N.D.		
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	0.00	58	0	N.D.		
94) 1,2,4-Trichlorobenzene	20.84	180	811	N.D.		
95) Naphthalene	20.94	128	341	N.D.		
96) n-Dodecane	0.00	58	0	N.D.		
97) Hexachlorobutadiene	21.30	225	684	N.D.		
98) Cyclohexanone	15.41	55	232	No Calib	#	
99) tert-Butylbenzene	18.43	119	781	N.D.		
100) n-Butylbenzene	19.38	91	585	N.D.		
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242414.D Vial: 6
Acq On : 24 Jun 2024 14:45 Operator: SC
Sample : P2402249-066Dil (50mL) Inst : MS09
Misc : S37-06062402

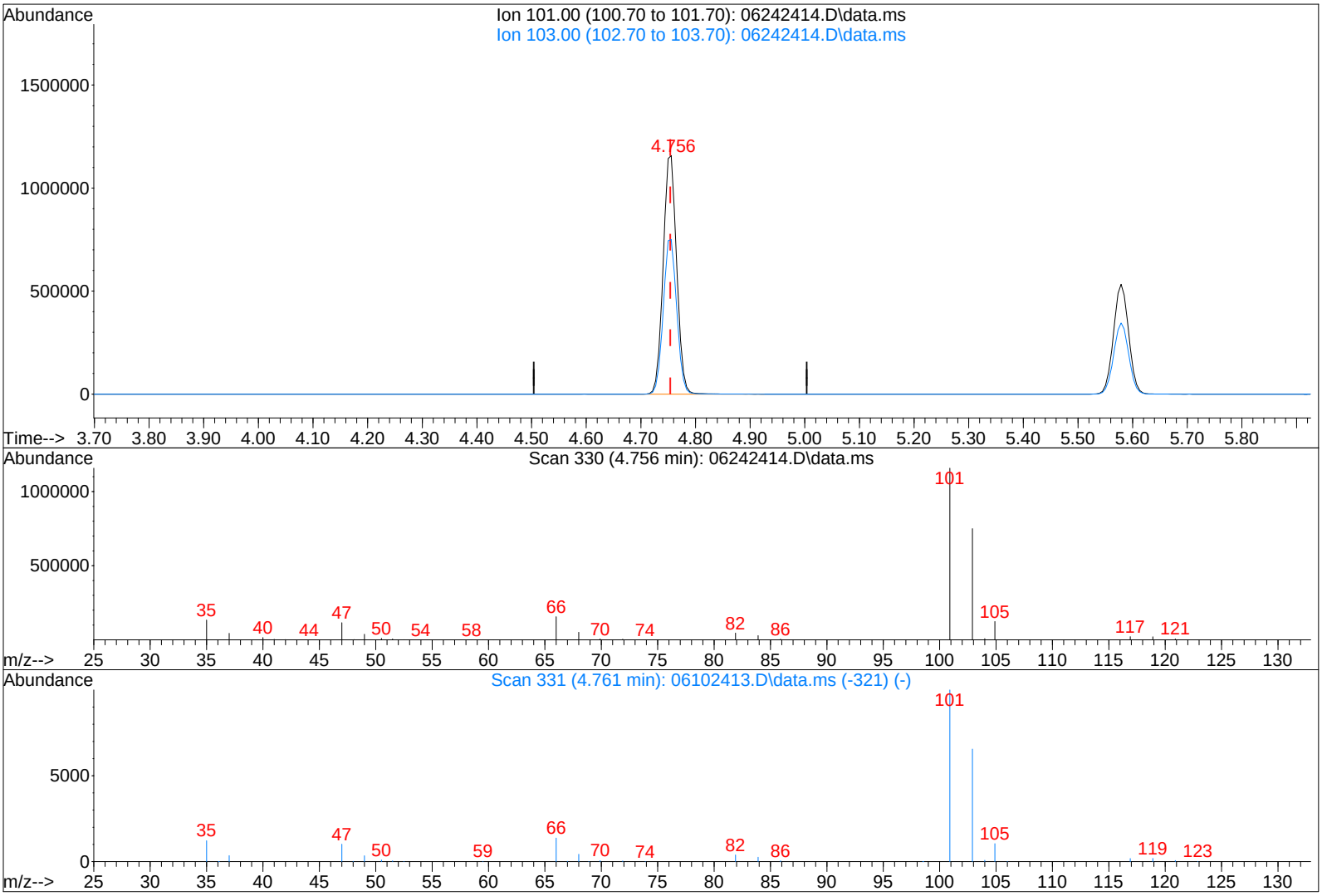
Quant Time: Jun 24 15:08:00 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\24\06242414.D Vial: 6
Acq On : 24 Jun 2024 14:45 Operator: SC
Sample : P2402249-066Dil (50mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 24 15:06:55 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06242414.D\data.ms

(14) Trichlorofluoromethane (T)

4.756min (+0.002) 47.96ng

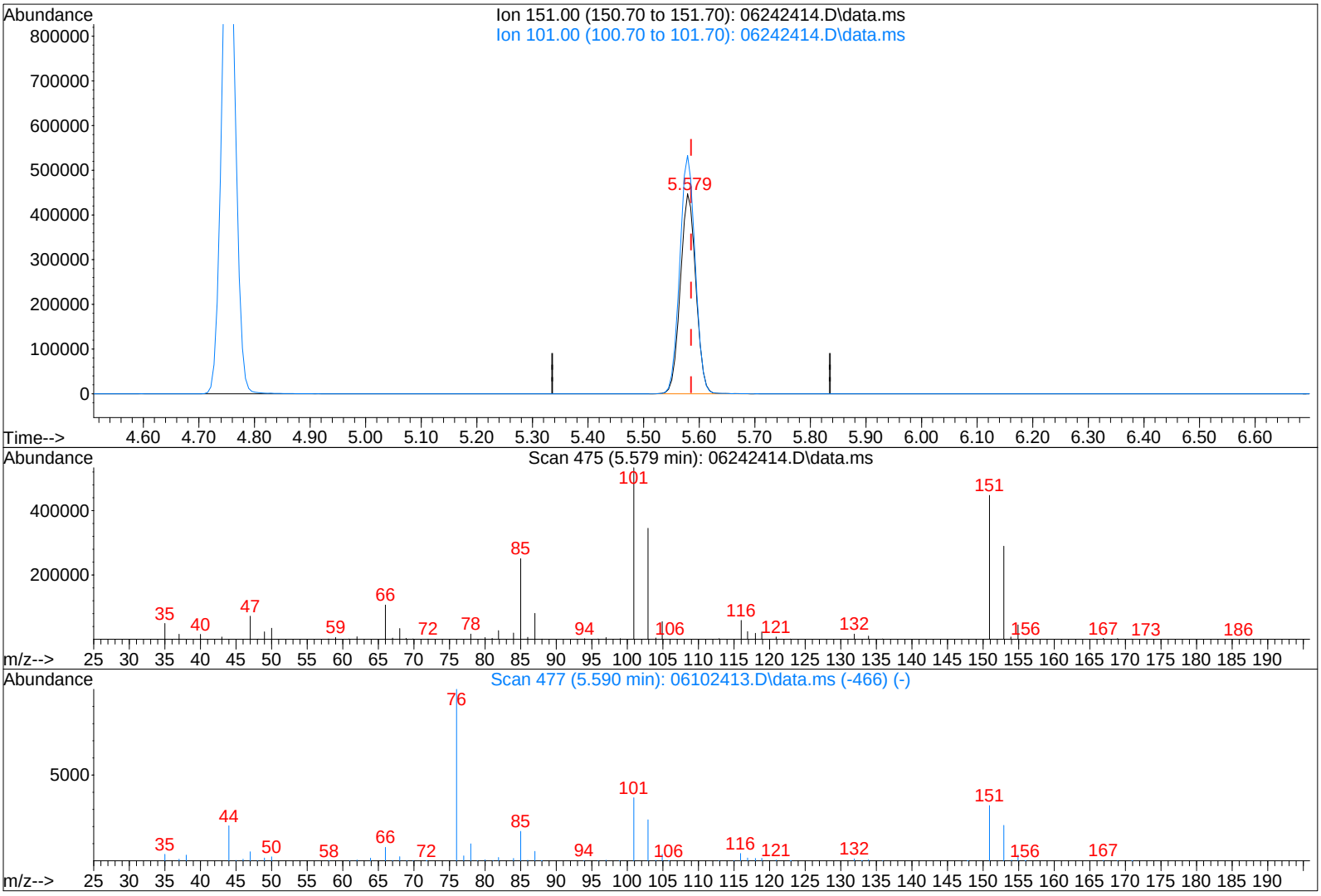
response 1978858

Ion	Exp%	Act%
101.00	100	100
103.00	64.90	64.97
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\24\06242414.D Vial: 6
Acq On : 24 Jun 2024 14:45 Operator: SC
Sample : P2402249-066Dil (50mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 24 15:06:55 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06242414.D\data.ms

(21) Trichlorotrifluoroethane (T)

5.579min (-0.007) 49.51ng

response 864059

Ion	Exp%	Act%
151.00	100	100
101.00	115.00	118.76
0.00	0.00	0.00
0.00	0.00	0.00

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\22\
Data File : 06222415.D
Acq On : 22 Jun 2024 20:47
Operator : MC/MJ
Sample : P2402249-066 (100mL)
Misc : S37-06062402
ALS Vial : 7 Sample Multiplier: 1

MJ 6/28/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06222415.D\data.ms

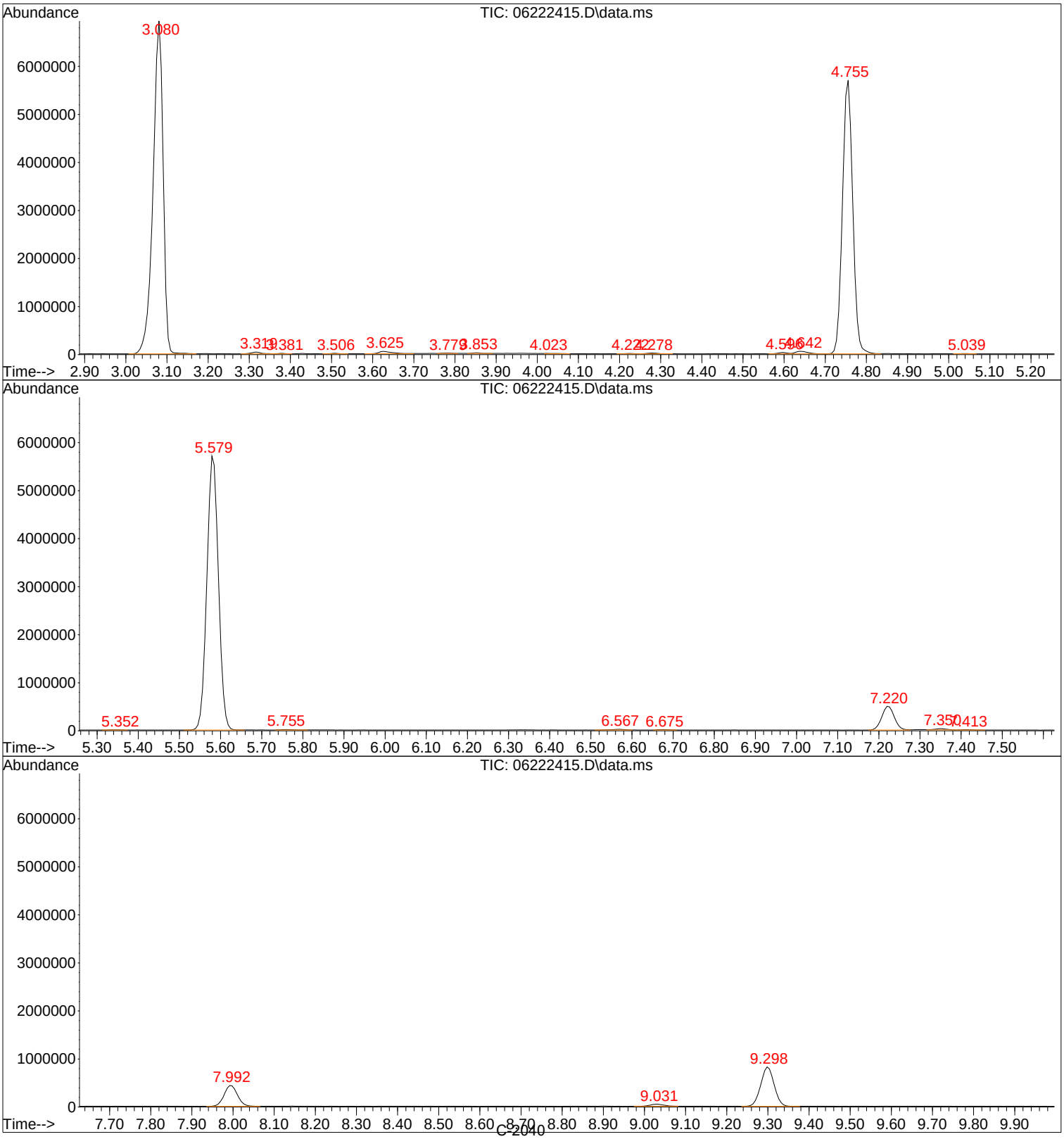
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.080	22	35	51	rBV	6930115	11790599	100.00%	31.484%
2	3.319	70	77	84	rBV4	35218	58876	0.50%	0.157%
3	3.381	84	88	92	rVB	9871	12338	0.10%	0.033%
4	3.506	105	110	116	rBV	10815	16317	0.14%	0.044%
5	3.625	123	131	144	rBV	49864	116863	0.99%	0.312%
6	3.779	154	158	163	rBV3	8281	13808	0.12%	0.037%
7	3.853	167	171	178	rVB3	13443	19101	0.16%	0.051%
8	4.023	200	201	211	rVB3	6619	10627	0.09%	0.028%
9	4.222	231	236	241	rBV	7367	11128	0.09%	0.030%
10	4.278	241	246	255	rVB2	14737	25896	0.22%	0.069%
11	4.596	296	302	305	rBV	26249	39354	0.33%	0.105%
12	4.642	305	310	321	rVB	51779	106831	0.91%	0.285%
13	4.755	321	330	344	rBV	5697537	9924839	84.18%	26.502%
14	5.039	375	380	385	rVB2	6036	10072	0.09%	0.027%
15	5.352	428	435	439	rBV3	5353	10321	0.09%	0.028%
16	5.579	463	475	489	rBV	5704570	11160598	94.66%	29.802%
17	5.755	502	506	516	rBV2	9845	21551	0.18%	0.058%
18	6.567	639	649	655	rBV5	15534	38217	0.32%	0.102%
19	6.675	664	668	674	rVB	9095	17276	0.15%	0.046%
20	7.220	756	764	774	rBV	492769	1048534	8.89%	2.800%
21	7.350	781	787	794	rVB2	25265	51875	0.44%	0.139%
22	7.413	794	798	806	rVB	7203	14385	0.12%	0.038%
23	7.992	890	900	913	rBV	433255	979086	8.30%	2.614%
24	9.031	1073	1083	1092	rBV2	43210	102155	0.87%	0.273%
25	9.298	1119	1130	1144	rBV	819738	1848723	15.68%	4.937%

Sum of corrected areas: 37449370

Data Path : I:\MS09\DATA\2024 06\22\
Data File : 06222415.D
Acq On : 22 Jun 2024 20:47
Operator : MC/MJ
Sample : P2402249-066 (100mL)
Misc : S37-06062402
ALS Vial : 7 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\22\\
Data File : 06222415.D
Acq On : 22 Jun 2024 20:477
Operator : MC/MJJ
Sample : P2402249-066 (100mL))
Misc : S37-060624022
ALS Vial : 7 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242411.D Vial: 8
Acq On : 24 Jun 2024 12:59 Operator: SC
Sample : P2402249-067 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 24 13:32:51 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/24/24

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	182934	12.500 ng		-0.05
37) 1,4-Difluorobenzene (IS2)	9.30	114	802984	12.500 ng		-0.03
56) Chlorobenzene-d5 (IS3)	14.84	54	183505	12.500 ng		-0.01
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4(...	8.00	65	393322	12.097 ng		-0.04
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.80%			
57) Toluene-d8 (SS2)	12.43	98	899954	12.816 ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.56%			
73) Bromofluorobenzene (SS3)	16.83	174	309665	12.212 ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.68%			
Target Compounds						Qvalue
2) Propene	0.00	42	0	N.D. d		
3) Dichlorodifluoromethan...	3.37	85	23722	0.551 ng		100
4) Chloromethane	3.50	50	10422	0.354 ng		100
5) 1,2-Dichloro-1,1,2,2-t...	3.61	135	402	N.D.		
6) Vinyl Chloride	0.00	62	0	N.D.		
7) 1,3-Butadiene	0.00	54	0	N.D.		
8) Bromomethane	4.01	94	565	N.D.		
9) Chloroethane	4.15	64	214	N.D.		
10) Ethanol	4.28	45	80389	4.520 ng		81
11) Acetonitrile	0.00	41	0	N.D. d		
12) Acrolein	4.53	56	1732	0.132 ng		92
13) Acetone	4.62	58	99579	7.007 ng	#	87
14) Trichlorofluoromethane	4.76	101	11365	0.261 ng		99
15) 2-Propanol (Isopropanol)	4.85	45	13566	0.237 ng		89
16) Acrylonitrile	5.02	53	63	N.D.		
17) 1,1-Dichloroethene	0.00	96	0	N.D.		
18) 2-Methyl-2-Propanol (t...	5.33	59	965	N.D.		
19) Methylene Chloride	5.35	84	2454	0.122 ng		94
20) 3-Chloro-1-propene (Al...	5.46	41	363	N.D.		
21) Trichlorotrifluoroethane	5.59	151	2576	0.140 ng		97
22) Carbon Disulfide	5.59	76	96986	1.496 ng		98
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.		
24) 1,1-Dichloroethane	0.00	63	0	N.D.		
25) Methyl tert-Butyl Ether	6.30	73	411	N.D.		
26) Vinyl Acetate	0.00	86	0	N.D. d		
27) 2-Butanone (MEK)	6.67	72	3712	0.330 ng	#	89
28) cis-1,2-Dichloroethene	7.08	61	144	N.D.		
29) Diisopropyl Ether	0.00	87	0	N.D.		
30) Ethyl Acetate	7.29	61	2961	0.431 ng		98
31) n-Hexane	7.30	57	1648	0.055 ng	#	86
32) Chloroform	7.35	83	825	N.D.		
34) Tetrahydrofuran (THF)	7.78	72	177	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	8.11	62	842	N.D.		
38) 1,1,1-Trichloroethane	8.40	97	130	N.D.		
39) Isopropyl Acetate	9.54	61	1233	No Calib	#	
40) 1-Butanol	8.80	56	6115	No Calib		
41) Benzene	8.89	78	3850	0.052 ng		95
42) Carbon Tetrachloride	9.07	117	3096	0.090 ng		99
43) Cyclohexane	9.21	84	334	N.D.		
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	9.85	63	175	N.D.		
46) Bromodichloromethane	10.08	83	449	N.D.		
47) Trichloroethene	10.14	130	550	N.D.		
48) 1,4-Dioxane	10.13	88	992	0.073 ng		98
49) 2,2,4-Trimethylpentane...	10.25	57	727	N.D.		
50) Methyl Methacrylate	0.00	100	0	N.D.		

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242411.D Vial: 8
Acq On : 24 Jun 2024 12:59 Operator: SC
Sample : P2402249-067 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 24 13:32:51 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

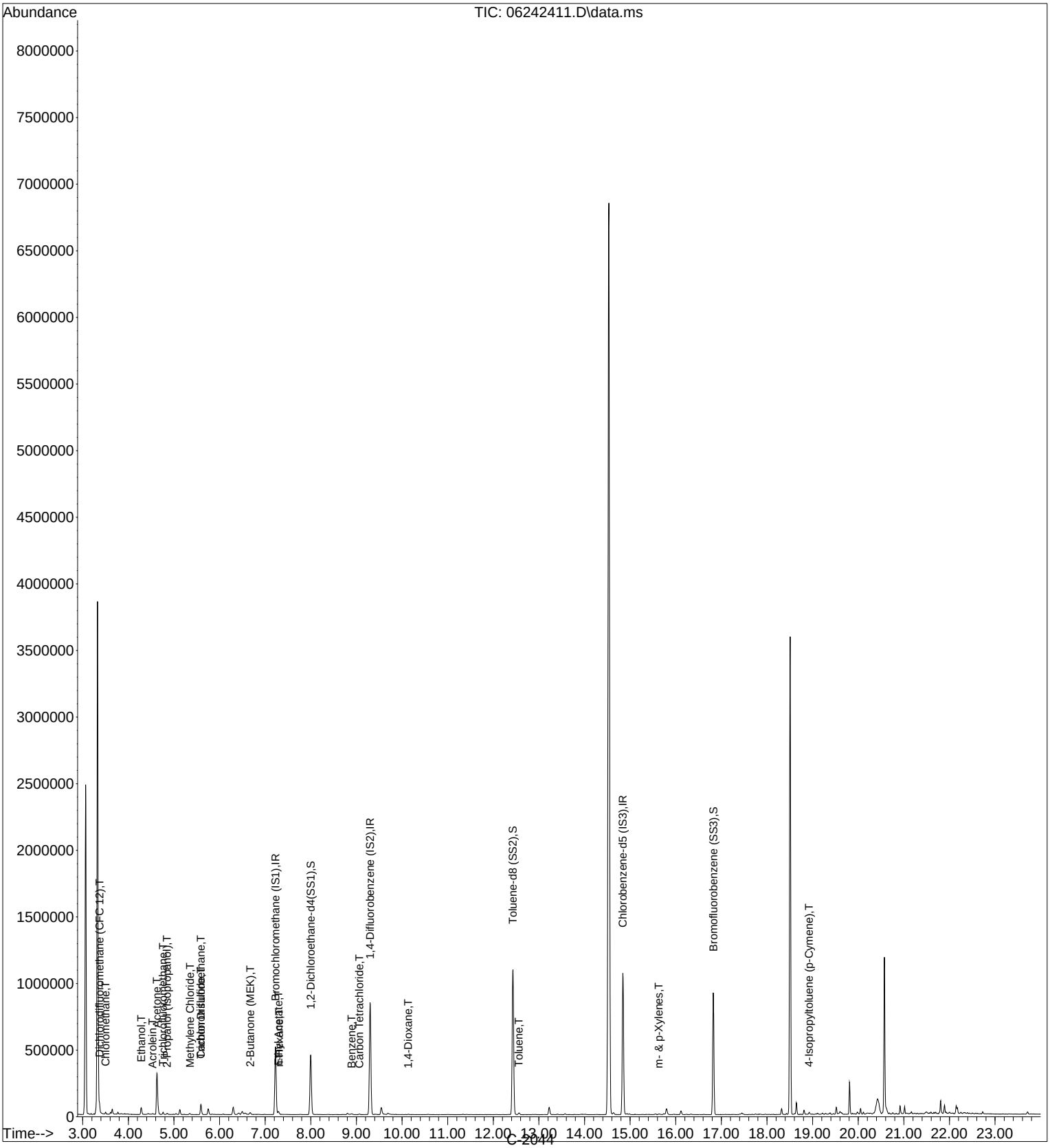
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	10.58	71	604	N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	11.34	58	649	N.D.	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
58) Toluene	12.56	91	7578	0.103 ng	95
59) 2-Hexanone	12.92	43	2075	N.D.	
60) Dibromochloromethane	13.07	129	448	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	13.78	43	2298	N.D.	
63) n-Octane	13.92	57	487	N.D.	
64) Tetrachloroethene	14.03	166	640	N.D.	
65) Chlorobenzene	14.90	112	953	N.D.	
66) Ethylbenzene	15.41	91	2447	N.D.	
67) m- & p-Xylenes	15.63	91	5244	0.074 ng	94
68) Bromoform	15.68	173	728	N.D.	
69) Styrene	16.11	104	211	N.D.	
70) o-Xylene	16.25	91	2054	N.D.	
71) n-Nonane	16.61	43	1080	N.D.	
72) 1,1,2,2-Tetrachloroethane	16.21	83	539	N.D.	
74) Cumene	17.03	105	1286	N.D.	
75) alpha-Pinene	17.52	93	142	N.D.	
76) n-Propylbenzene	17.68	91	1982	N.D.	
77) 3-Ethyltoluene	17.03	105	1286	No Calib	
78) 4-Ethyltoluene	17.86	105	1262	N.D.	
79) 1,3,5-Trimethylbenzene	17.96	105	1143	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.03	105	1286	No Calib	
82) 1,2,4-Trimethylbenzene	18.43	105	2350	N.D.	
83) n-Decane	0.00	58	0	N.D.	
84) Benzyl Chloride	18.50	91	2070	N.D.	
85) 1,3-Dichlorobenzene	18.58	146	837	N.D.	
86) 1,4-Dichlorobenzene	18.66	146	932	N.D.	
87) sec-Butylbenzene	18.74	105	1464	N.D.	
88) 4-Isopropyltoluene (p-...	18.92	119	8589	0.099 ng	94
89) 1,2,3-Trimethylbenzene	17.03	105	1286	No Calib	
90) 1,2-Dichlorobenzene	19.03	146	789	N.D.	
91) d-Limonene	19.11	68	470	N.D.	
92) 1,2-Dibromo-3-Chloropr...	19.51	157	101	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	1299	N.D.	
95) Naphthalene	20.94	128	2394	N.D.	
96) n-Dodecane	0.00	58	0	N.D.	
97) Hexachlorobutadiene	21.30	225	888	N.D.	
98) Cyclohexanone	15.50	55	113	No Calib #	
99) tert-Butylbenzene	18.43	119	1420	N.D.	
100) n-Butylbenzene	19.39	91	2702	N.D.	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242411.D Vial: 8
Acq On : 24 Jun 2024 12:59 Operator: SC
Sample : P2402249-067 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 24 13:32:51 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242411.D Vial: 8
Acq On : 24 Jun 2024 12:59 Operator: SC
Sample : P2402249-067 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 24 13:32:51 2024 6/24/24
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

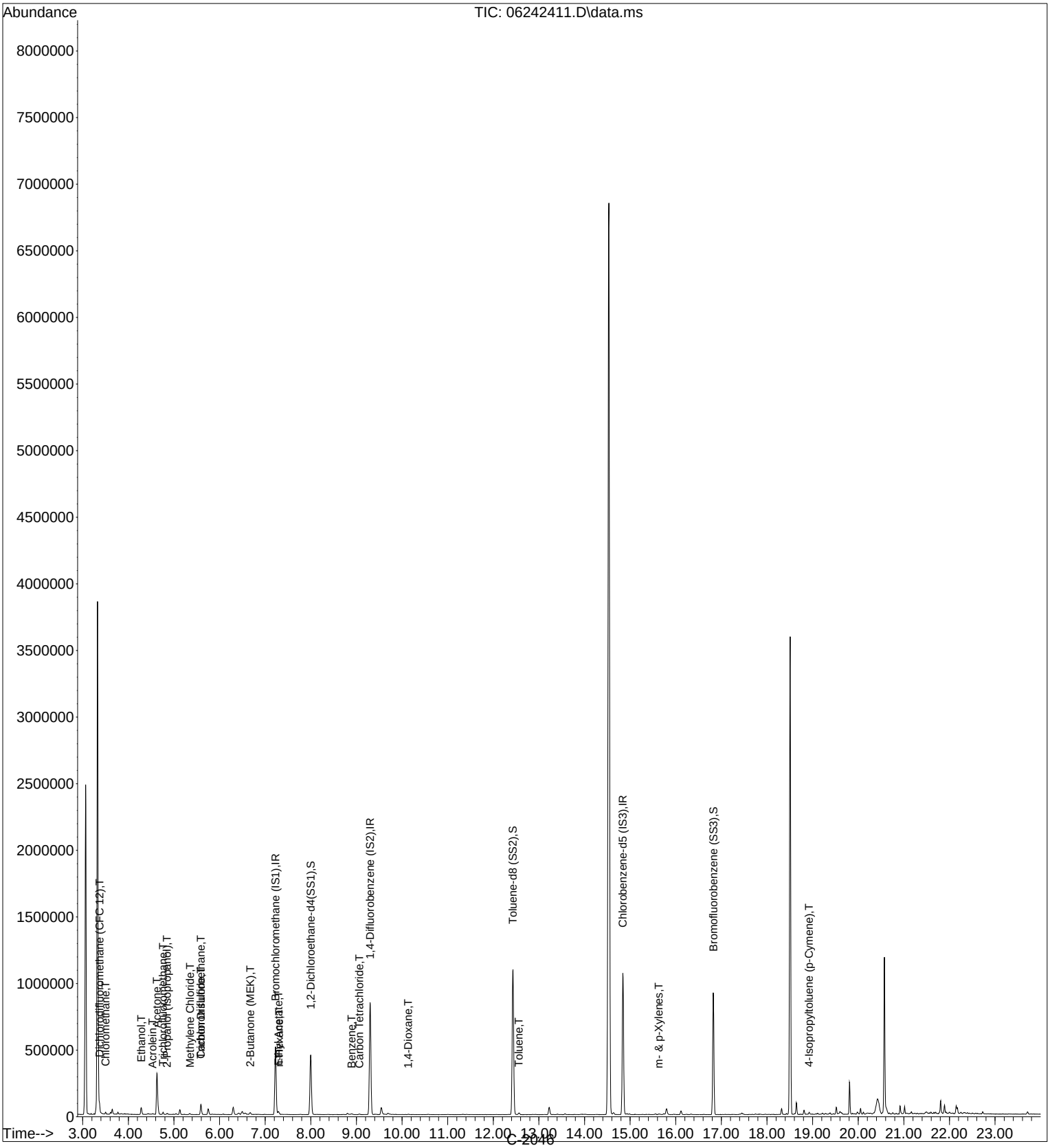
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	182934	12.500	ng		-0.05
37) 1,4-Difluorobenzene (IS2)	9.30	114	802984	12.500	ng		-0.03
56) Chlorobenzene-d5 (IS3)	14.84	54	183505	12.500	ng		-0.01
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	393322	12.097	ng		-0.04
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.80%				
57) Toluene-d8 (SS2)	12.43	98	899954	12.816	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.56%				
73) Bromofluorobenzene (SS3)	16.83	174	309665	12.212	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.68%				
Target Compounds							Qvalue
3) Dichlorodifluoromethan...	3.37	85	23722	0.551	ng		100
4) Chloromethane	3.50	50	10422	0.354	ng		100
10) Ethanol	4.28	45	80389	4.520	ng		81
12) Acrolein	4.53	56	1732	0.132	ng		92
13) Acetone	4.62	58	99579	7.007	ng	#	87
14) Trichlorofluoromethane	4.76	101	11365	0.261	ng		99
15) 2-Propanol (Isopropanol)	4.85	45	13566	0.237	ng		89
19) Methylene Chloride	5.35	84	2454	0.122	ng		94
21) Trichlorotrifluoroethane	5.59	151	2576	0.140	ng		97
22) Carbon Disulfide	5.59	76	96986	1.496	ng		98
27) 2-Butanone (MEK)	6.67	72	3712	0.330	ng	#	89
30) Ethyl Acetate	7.29	61	2961	0.431	ng		98
31) n-Hexane	7.30	57	1648	0.055	ng	#	86
41) Benzene	8.89	78	3850	0.052	ng		95
42) Carbon Tetrachloride	9.07	117	3096	0.090	ng		99
48) 1,4-Dioxane	10.13	88	992	0.073	ng		98
58) Toluene	12.56	91	7578	0.103	ng		95
67) m- & p-Xylenes	15.63	91	5244	0.074	ng		94
88) 4-Isopropyltoluene (p-...	18.92	119	8589	0.099	ng		94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

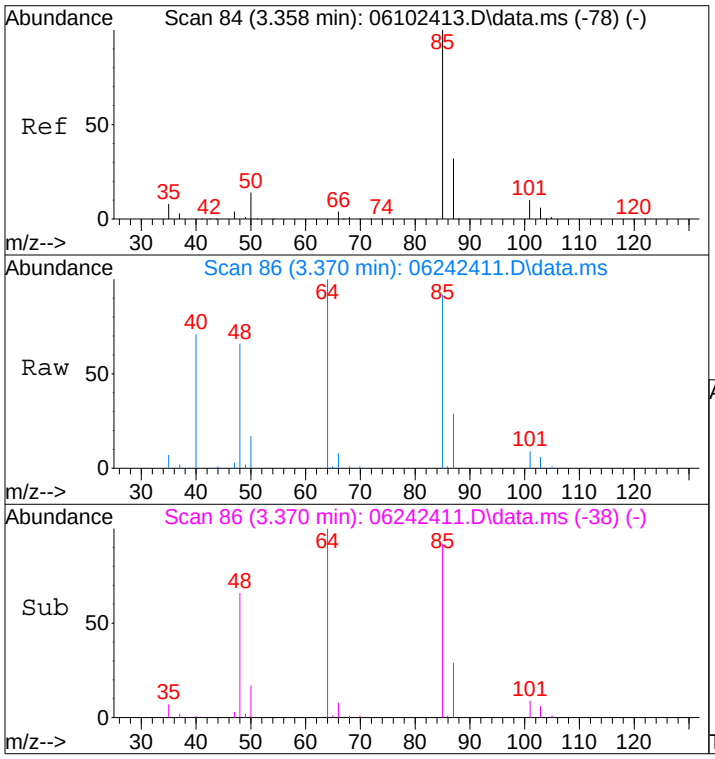
Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242411.D Vial: 8
Acq On : 24 Jun 2024 12:59 Operator: SC
Sample : P2402249-067 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 24 13:32:51 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



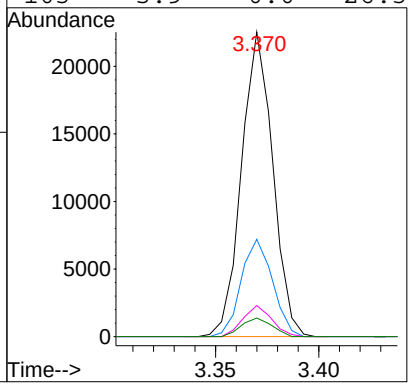
C-2048

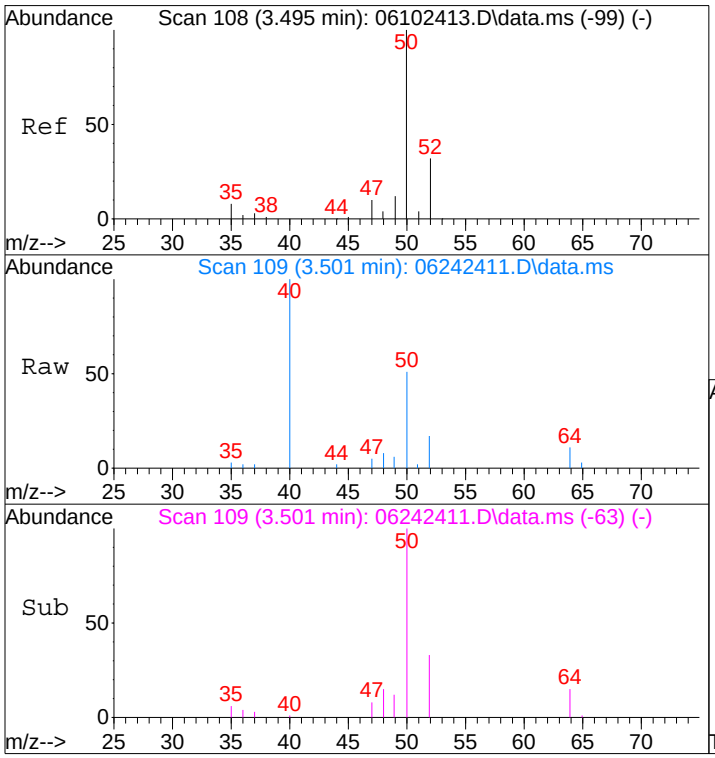


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.55 ng
RT: 3.37 min Scan# 86
Delta R.T. 0.024 min
Lab File: 06242411.D
Acq: 24 Jun 2024 12:59

Tgt Ion: 85 Resp: 23722

Ion	Ratio	Lower	Upper
85	100		
87	32.1	12.2	52.2
101	9.5	0.0	29.8
103	5.9	0.0	26.3

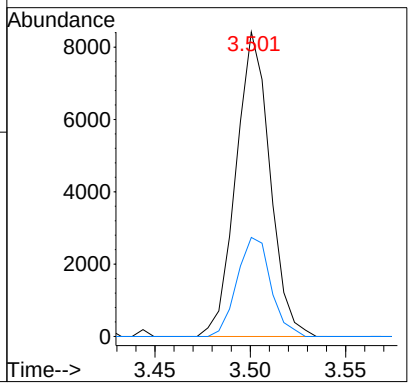


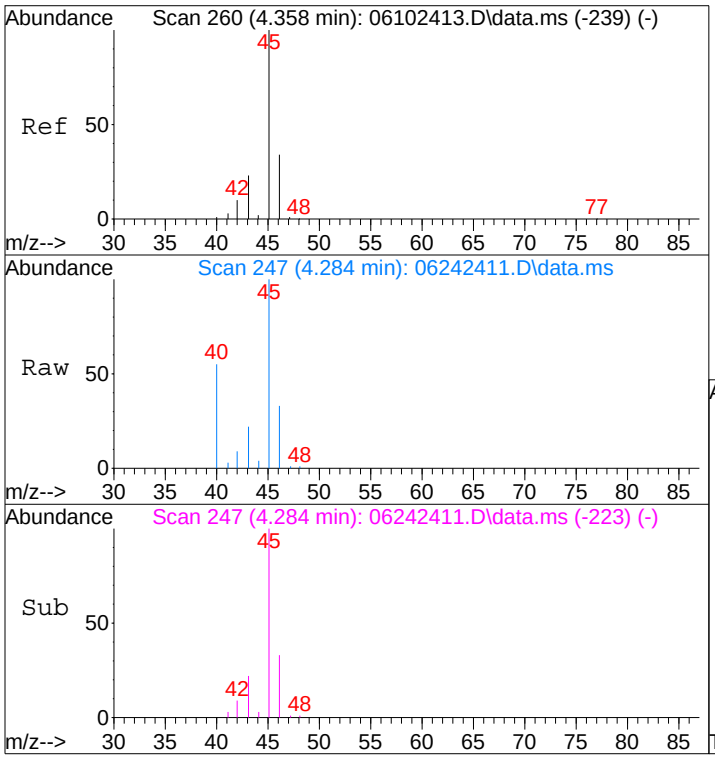


#4
Chloromethane
Concen: 0.35 ng
RT: 3.50 min Scan# 109
Delta R.T. 0.014 min
Lab File: 06242411.D
Acq: 24 Jun 2024 12:59

Tgt Ion: 50 Resp: 10422

Ion	Ratio	Lower	Upper
50	100		
52	32.4	12.4	52.4

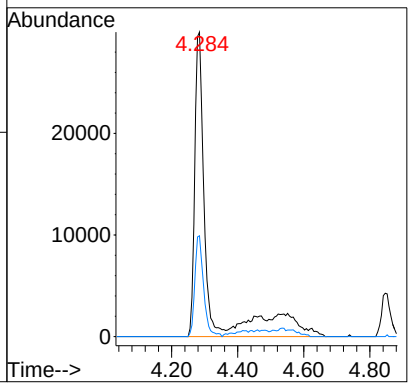


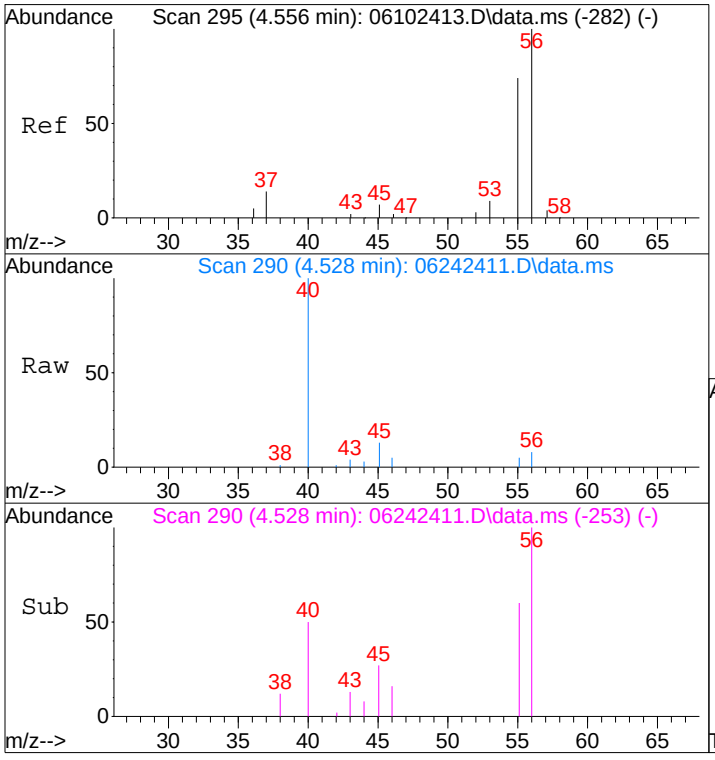


#10
Ethanol
Concen: 4.52 ng
RT: 4.28 min Scan# 247
Delta R.T. -0.114 min
Lab File: 06242411.D
Acq: 24 Jun 2024 12:59

Tgt Ion: 45 Resp: 80389

Ion	Ratio	Lower	Upper
45	100		
46	22.7	13.5	53.5

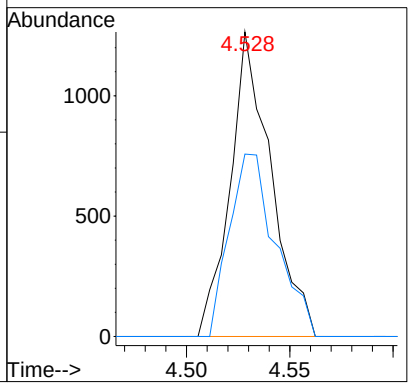


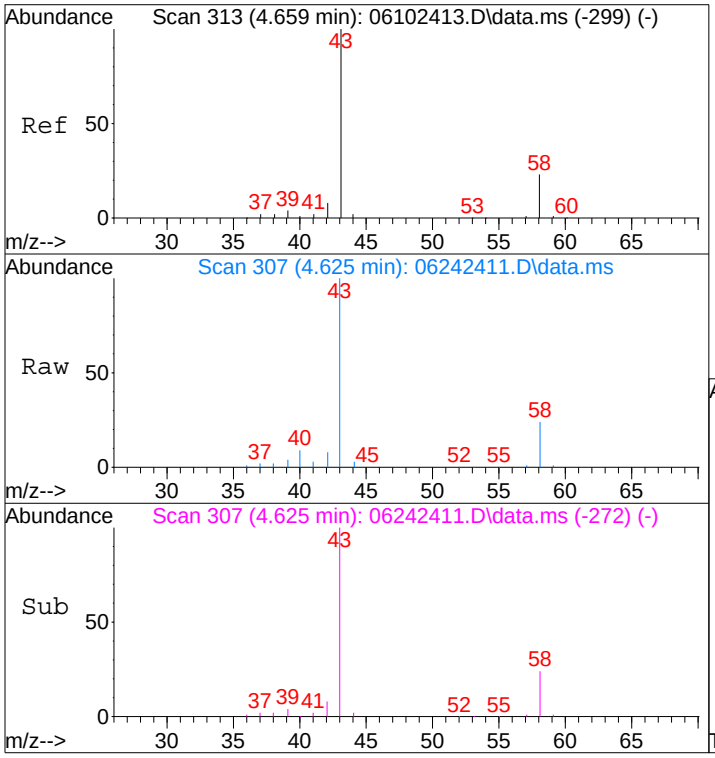


#12
Acrolein
Concen: 0.13 ng
RT: 4.53 min Scan# 290
Delta R.T. -0.039 min
Lab File: 06242411.D
Acq: 24 Jun 2024 12:59

Tgt Ion: 56 Resp: 1732

Ion	Ratio	Lower	Upper
56	100		
55	68.5	55.5	95.5

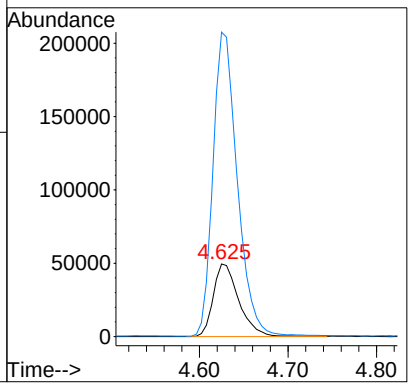


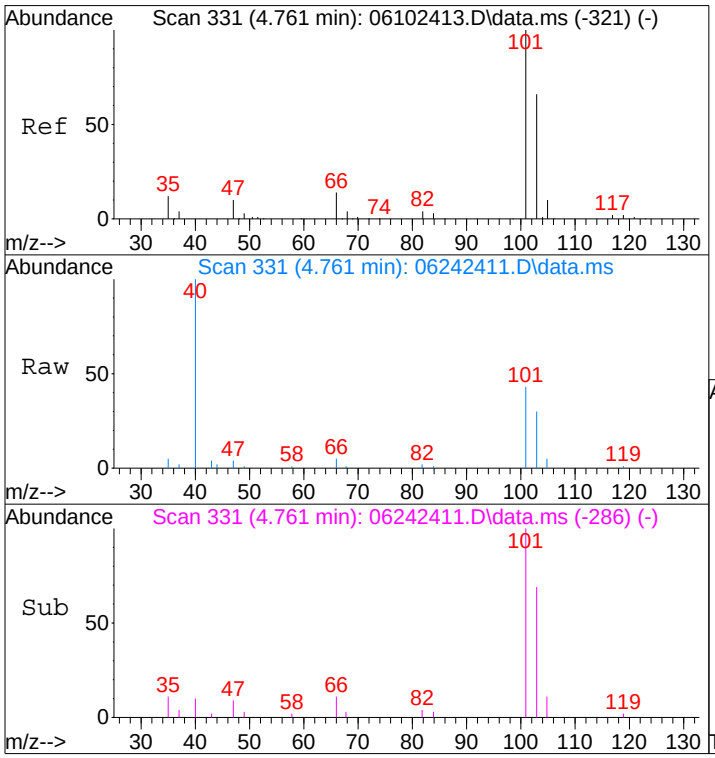


#13
Acetone
Concen: 7.01 ng
RT: 4.62 min Scan# 307
Delta R.T. -0.050 min
Lab File: 06242411.D
Acq: 24 Jun 2024 12:59

Tgt Ion: 58 Resp: 99579

Ion	Ratio	Lower	Upper
58	100		
43	398.9	400.7	460.7#

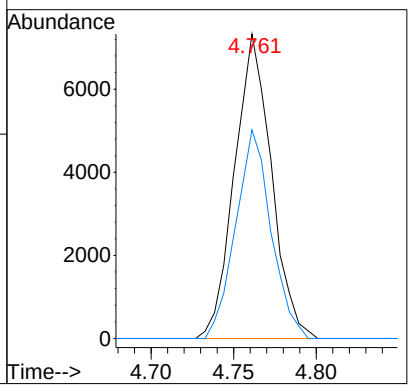


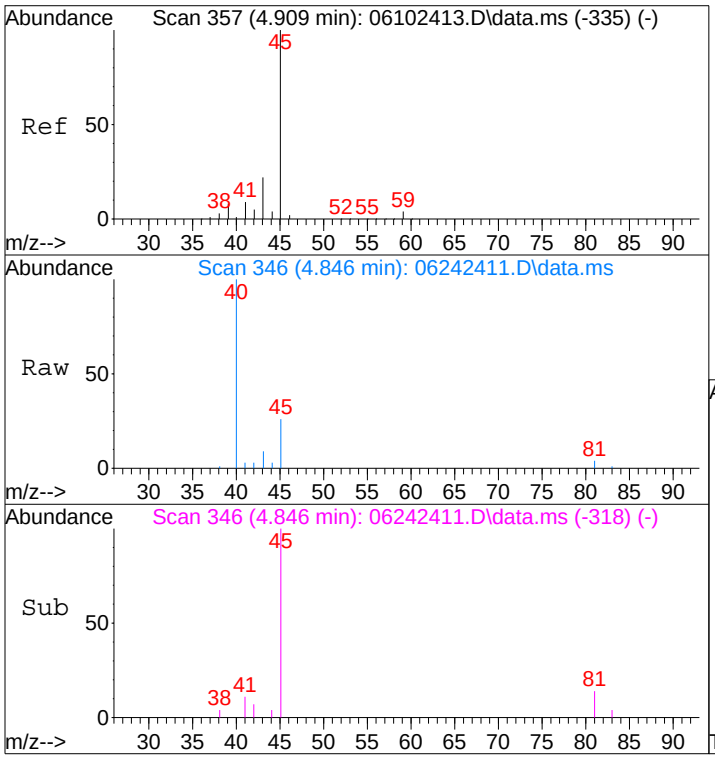


#14
Trichlorofluoromethane
Concen: 0.26 ng
RT: 4.76 min Scan# 331
Delta R.T. 0.007 min
Lab File: 06242411.D
Acq: 24 Jun 2024 12:59

Tgt Ion:101 Resp: 11365

Ion	Ratio	Lower	Upper
101	100		
103	65.8	44.9	84.9

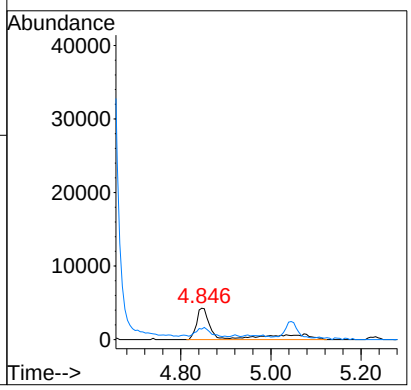


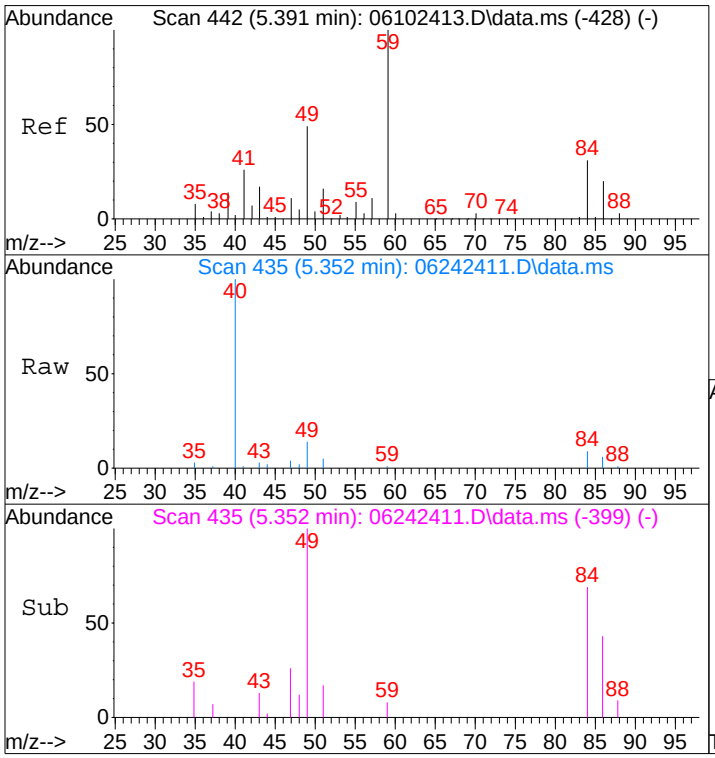


#15
2-Propanol (Isopropanol)
Concen: 0.24 ng
RT: 4.85 min Scan# 346
Delta R.T. -0.089 min
Lab File: 06242411.D
Acq: 24 Jun 2024 12:59

Tgt Ion: 45 Resp: 13566

Ion	Ratio	Lower	Upper
45	100		
43	27.9	2.5	42.5

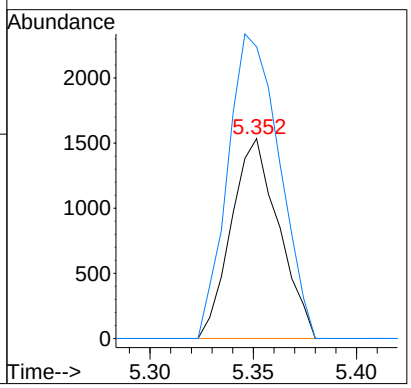


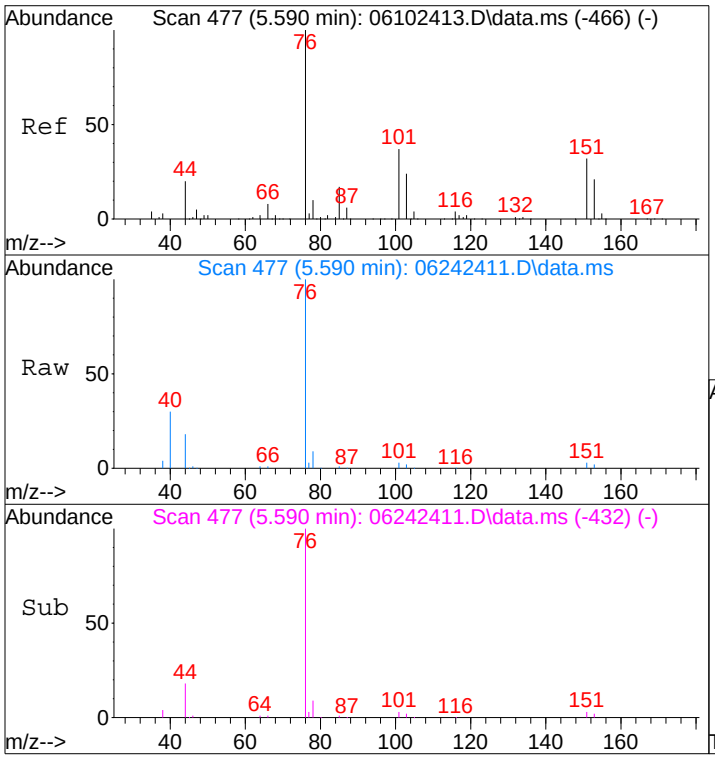


#19
Methylene Chloride
Concen: 0.12 ng
RT: 5.35 min Scan# 435
Delta R.T. -0.047 min
Lab File: 06242411.D
Acq: 24 Jun 2024 12:59

Tgt Ion: 84 Resp: 2454

Ion	Ratio	Lower	Upper
84	100		
49	165.6	132.9	182.9

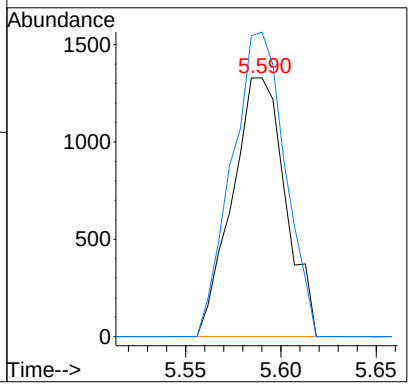


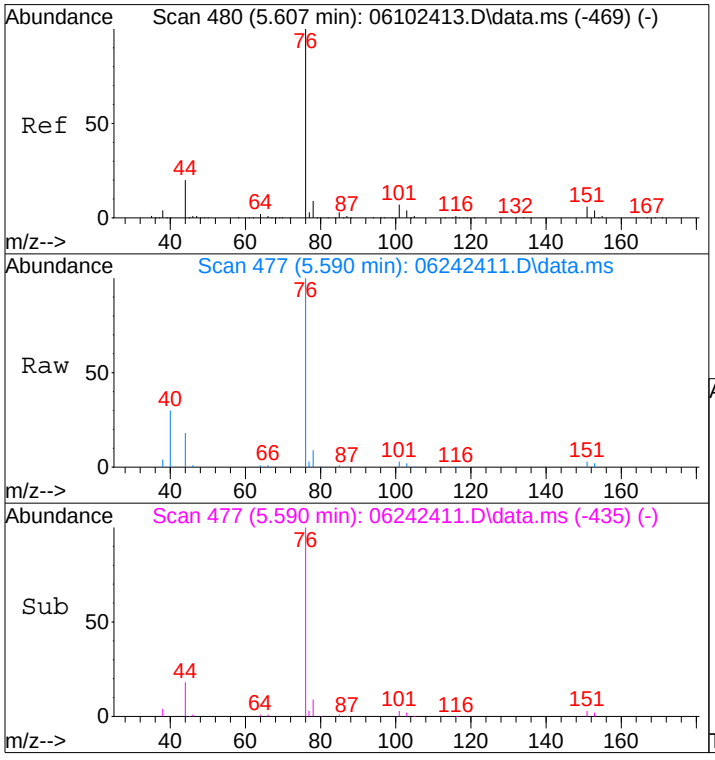


#21
Trichlorotrifluoroethane
Concen: 0.14 ng
RT: 5.59 min Scan# 477
Delta R.T. 0.005 min
Lab File: 06242411.D
Acq: 24 Jun 2024 12:59

Tgt Ion:151 Resp: 2576

Ion	Ratio	Lower	Upper
151	100		
101	117.9	95.0	135.0

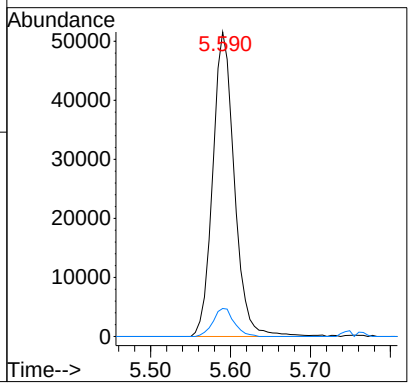


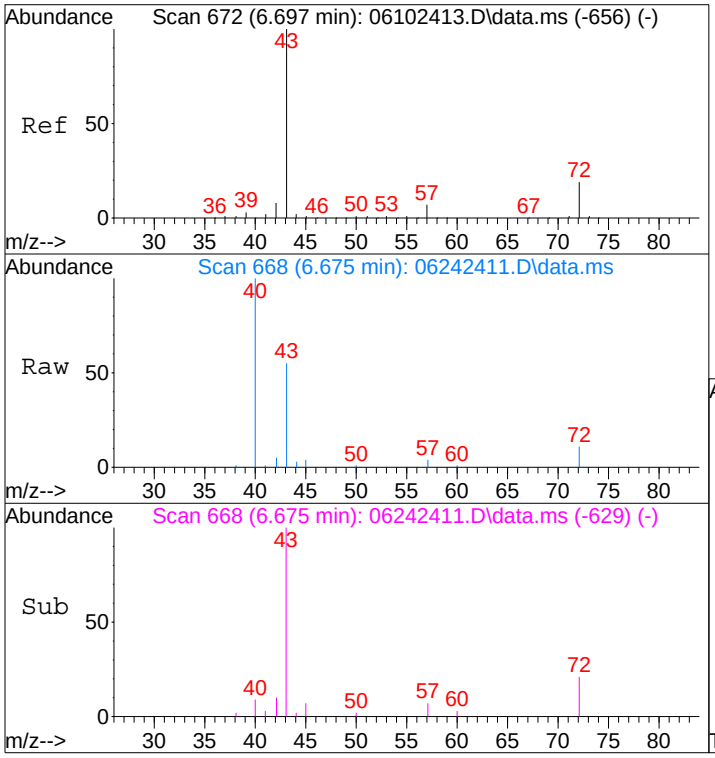


#22
Carbon Disulfide
Concen: 1.50 ng
RT: 5.59 min Scan# 477
Delta R.T. -0.012 min
Lab File: 06242411.D
Acq: 24 Jun 2024 12:59

Tgt Ion: 76 Resp: 96986

Ion	Ratio	Lower	Upper
76	100		
78	9.0	0.0	29.6

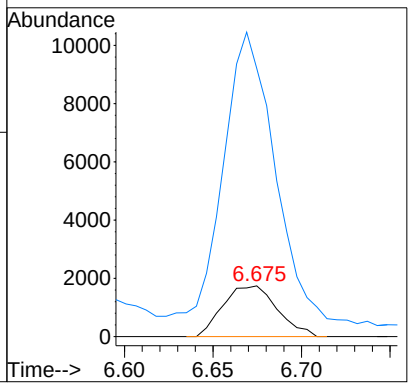


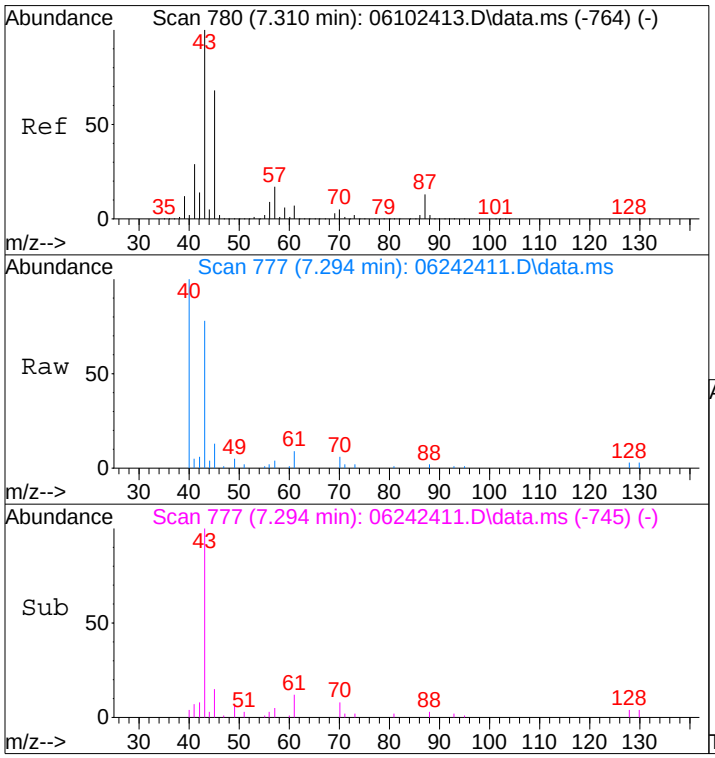


#27
2-Butanone (MEK)
Concen: 0.33 ng
RT: 6.67 min Scan# 668
Delta R.T. -0.031 min
Lab File: 06242411.D
Acq: 24 Jun 2024 12:59

Tgt Ion: 72 Resp: 3712

Ion	Ratio	Lower	Upper
72	100		
43	557.2	506.8	546.8#

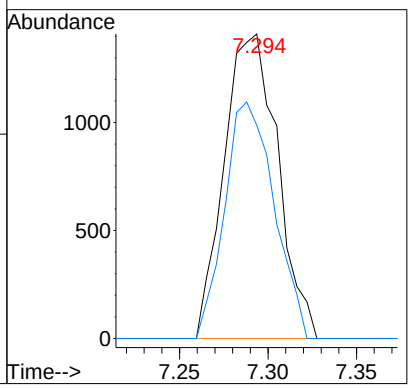


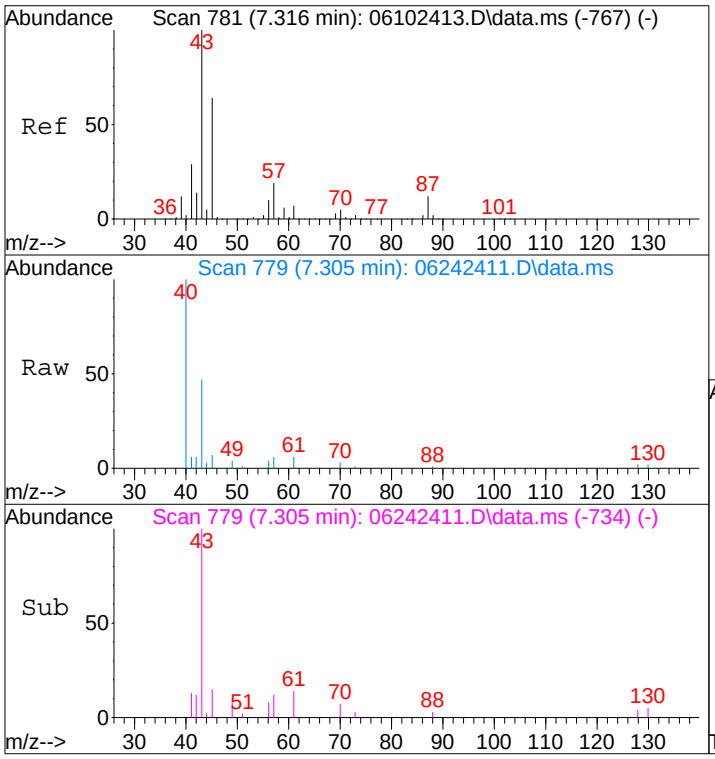


#30
Ethyl Acetate
Concen: 0.43 ng
RT: 7.29 min Scan# 777
Delta R.T. -0.017 min
Lab File: 06242411.D
Acq: 24 Jun 2024 12:59

Tgt Ion: 61 Resp: 2961

Ion	Ratio	Lower	Upper
61	100		
70	71.8	53.5	93.5

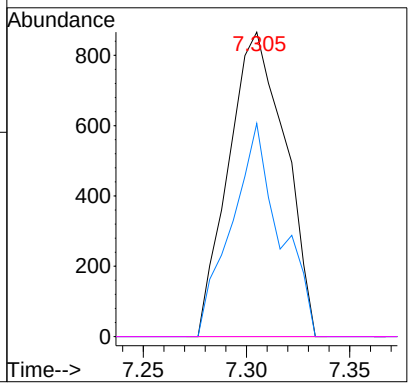


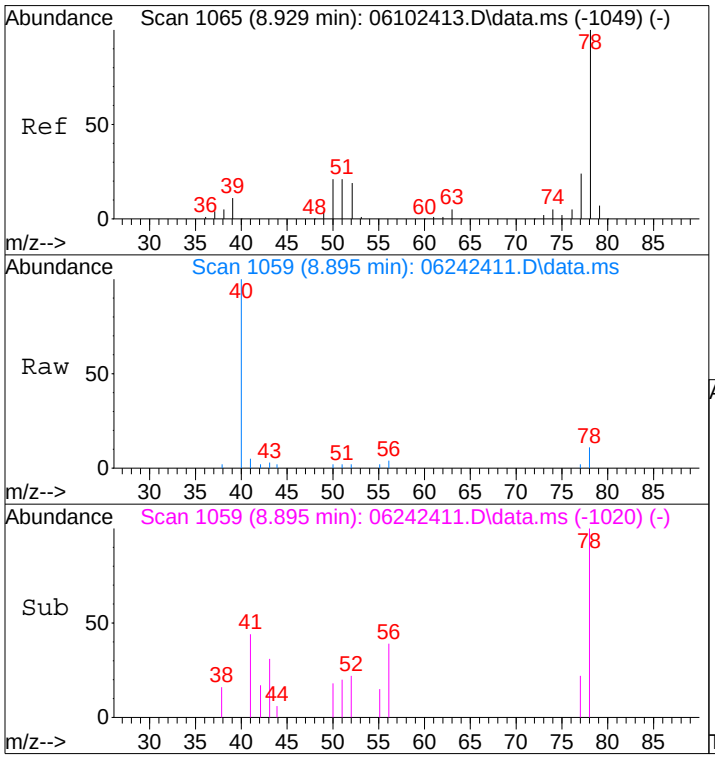


#31
n-Hexane
Concen: 0.05 ng
RT: 7.30 min Scan# 779
Delta R.T. 0.006 min
Lab File: 06242411.D
Acq: 24 Jun 2024 12:59

Tgt Ion: 57 Resp: 1648

Ion	Ratio	Lower	Upper
57	100		
56	60.0	42.5	63.7
86	0.0	9.5	14.3#

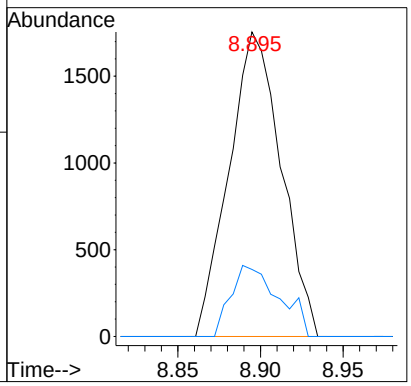


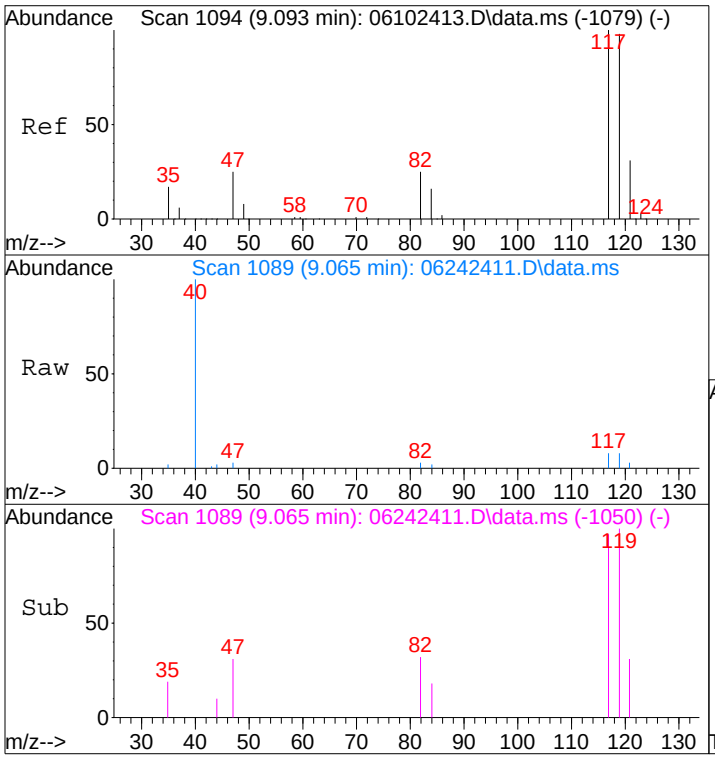


#41
Benzene
Concen: 0.05 ng
RT: 8.89 min Scan# 1059
Delta R.T. -0.029 min
Lab File: 06242411.D
Acq: 24 Jun 2024 12:59

Tgt Ion: 78 Resp: 3850

Ion	Ratio	Lower	Upper
78	100		
77	21.4	4.0	44.0

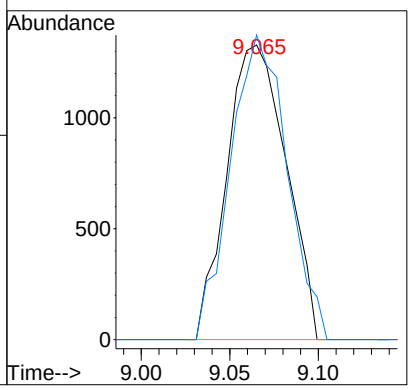


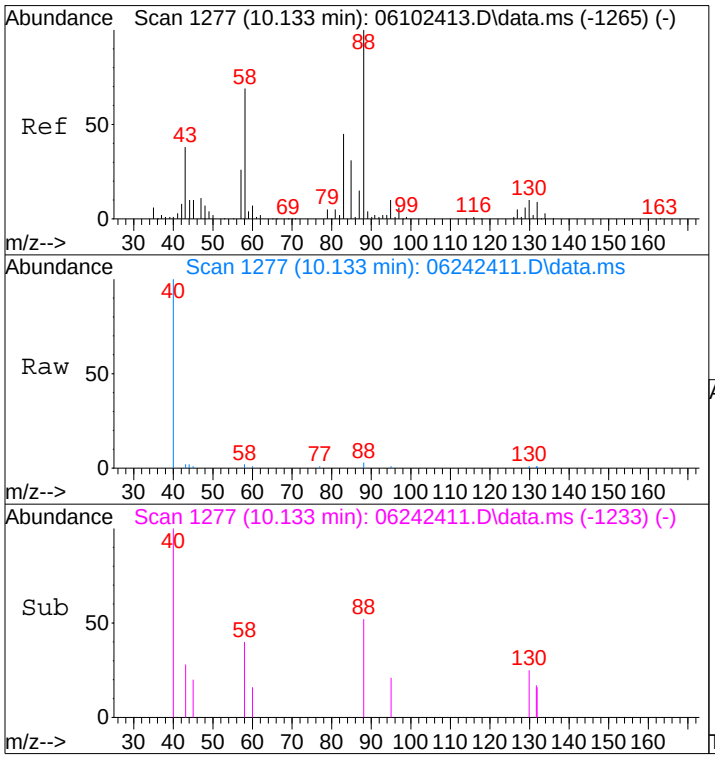


#42
Carbon Tetrachloride
Concen: 0.09 ng
RT: 9.07 min Scan# 1089
Delta R.T. -0.029 min
Lab File: 06242411.D
Acq: 24 Jun 2024 12:59

Tgt Ion:117 Resp: 3096

Ion	Ratio	Lower	Upper
117	100		
119	98.6	77.3	117.3

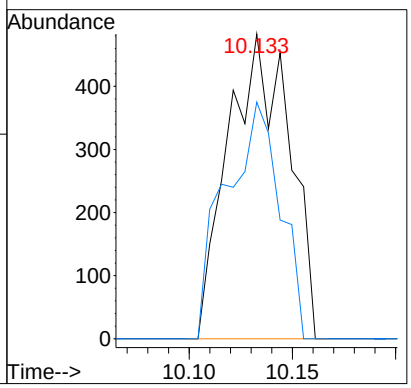


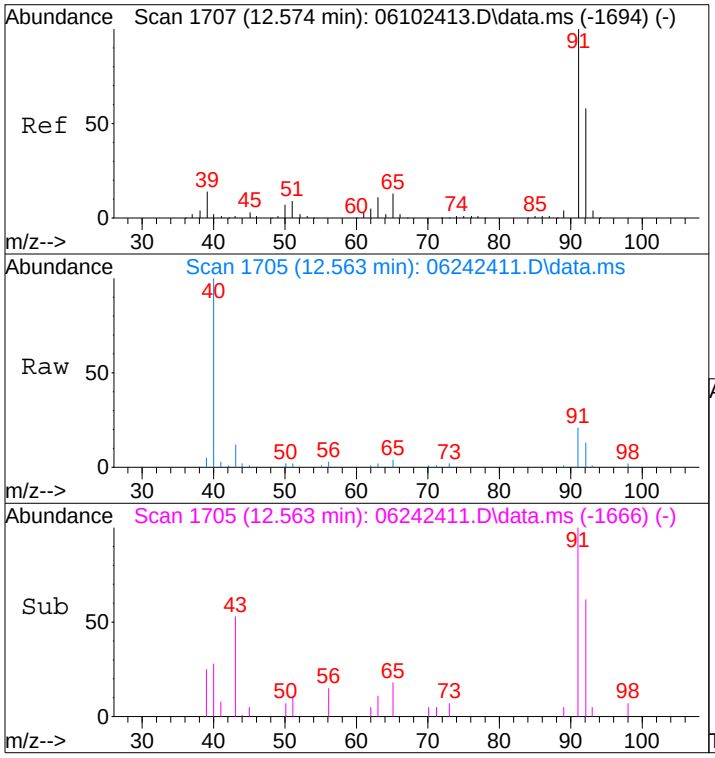


#48
1,4-Dioxane
Concen: 0.07 ng
RT: 10.13 min Scan# 1277
Delta R.T. 0.002 min
Lab File: 06242411.D
Acq: 24 Jun 2024 12:59

Tgt Ion: 88 Resp: 992

Ion	Ratio	Lower	Upper
88	100		
58	69.6	47.6	87.6

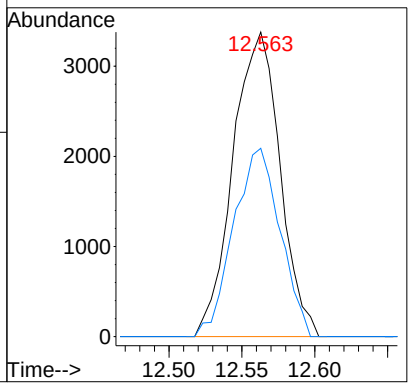


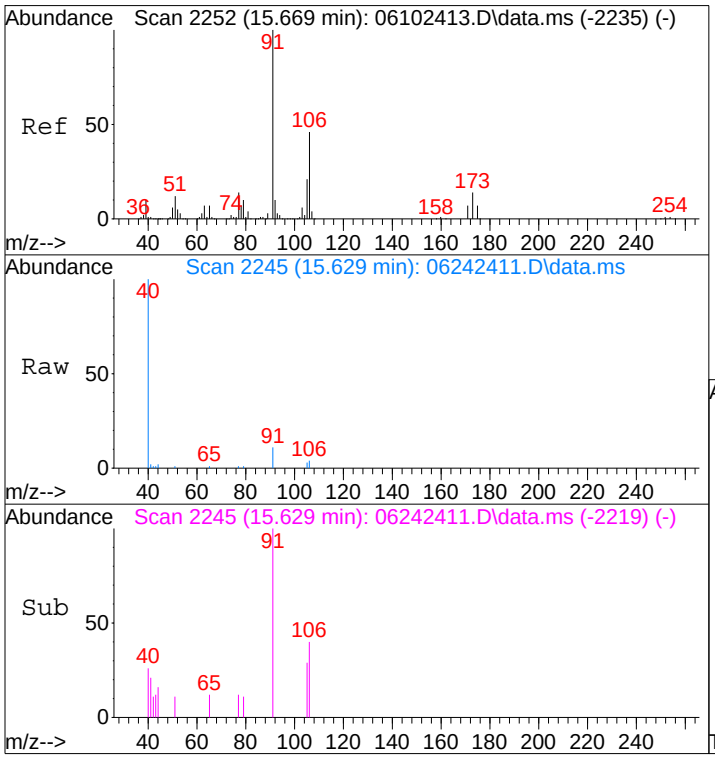


#58
Toluene
Concen: 0.10 ng
RT: 12.56 min Scan# 1705
Delta R.T. -0.028 min
Lab File: 06242411.D
Acq: 24 Jun 2024 12:59

Tgt Ion: 91 Resp: 7578

Ion	Ratio	Lower	Upper
91	100		
92	61.3	37.4	77.4

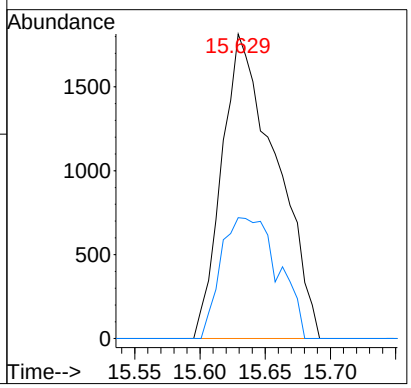


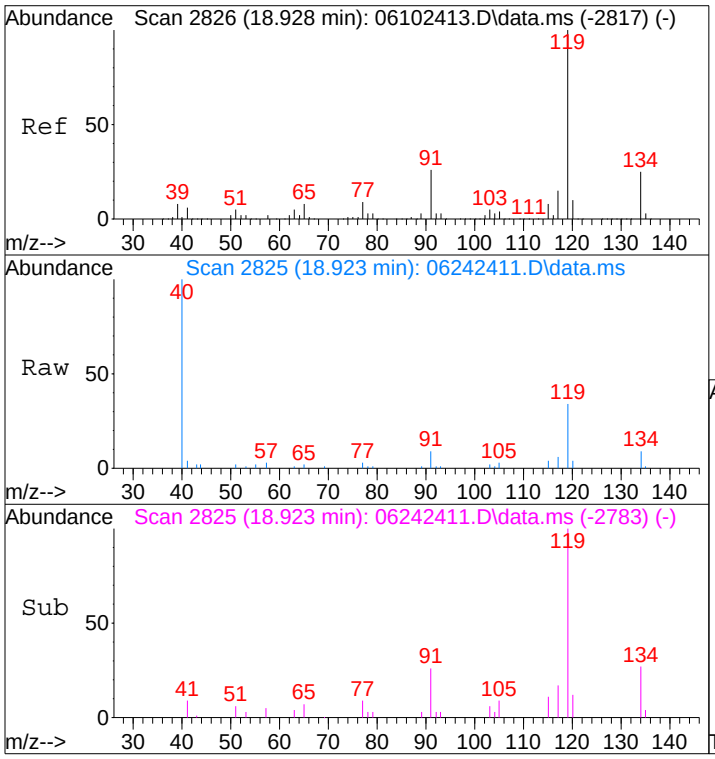


#67
m- & p-Xylenes
Concen: 0.07 ng
RT: 15.63 min Scan# 2245
Delta R.T. -0.051 min
Lab File: 06242411.D
Acq: 24 Jun 2024 12:59

Tgt Ion: 91 Resp: 5244

Ion	Ratio	Lower	Upper
91	100		
106	41.9	25.9	65.9

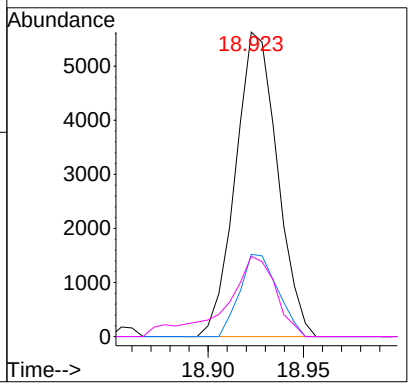




#88
4-Isopropyltoluene (p-Cymene)
Concen: 0.10 ng
RT: 18.92 min Scan# 2825
Delta R.T. -0.011 min
Lab File: 06242411.D
Acq: 24 Jun 2024 12:59

Tgt Ion:119 Resp: 8589

Ion	Ratio	Lower	Upper
119	100		
134	24.6	4.9	44.9
91	31.7	5.8	45.8



Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\24\06242411.D Vial: 8
Acq On : 24 Jun 2024 12:59 Operator: SC
Sample : P2402249-067 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 16:49:05 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

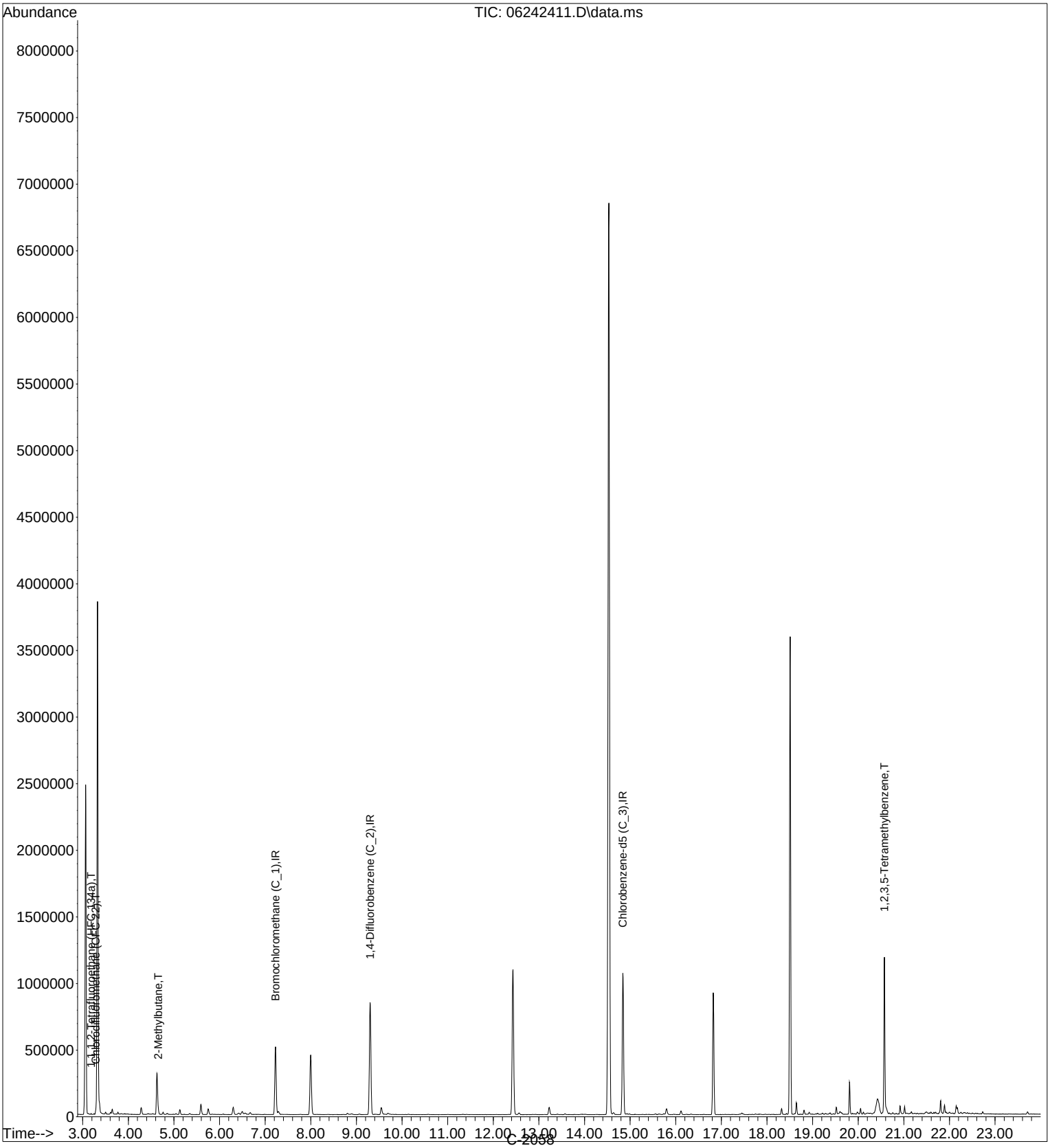
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	183516	12.500	ng		-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	805191	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	183505	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	3.15	85	333	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.18	83	2948	0.157	ng		86
4) 1,1-Difluoroethane	3.24	65	272	N.D.			
5) Chlorodifluoromethane ...	3.28	67	1352	0.216	ng		97
6) 1-Chloro-1,1-Difluoroe...	3.49	65	872	N.D.			
7) Dichlorofluoromethane ...	0.00	67	0	N.D.			
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	0.00	83	0	N.D.			
10) 2-Methylbutane	4.65	57	5391	0.246	ng	#	1
11) Methyl Acetate	5.33	43	2787	N.D.			
12) 2-Methylpentane	6.48	71	577	N.D.			
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	9.06	84	389	N.D.			
17) 2,3-Dimethylpentane	9.54	56	124	N.D.			
18) Dibromomethane	9.80	174	274	N.D.			
20) Methyl Cyclohexane	11.42	55	1124	N.D.			
21) 1,3-Dichloropropane	0.00	76	0	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	0.00	75	0	N.D.			
25) Bromobenzene	17.03	77	72	N.D.			
26) 2-Chlorotoluene	17.61	91	963	N.D.			
27) 4-Chlorotoluene	17.61	91	963	N.D.			
28) Indane	19.11	117	172	N.D.			
29) Indene	0.00	115	0	N.D.			
30) 1,2,4,5-Tetramethylben...	20.18	119	381	N.D.			
31) 1,2,3,4-Tetramethylben...	20.22	119	512	N.D.			
32) 1,2,3,5-Tetramethylben...	20.57	119	6100	0.102	ng	#	79
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242411.D Vial: 8
Acq On : 24 Jun 2024 12:59 Operator: SC
Sample : P2402249-067 (400mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 16:49:05 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



C-2058

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\24\
Data File : 06242411.D
Acq On : 24 Jun 2024 12:59
Operator : SC
Sample : P2402249-067 (400mL)
Misc : S37-06062402
ALS Vial : 8 Sample Multiplier: 1

MJ 6/28/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06242411.D\data.ms

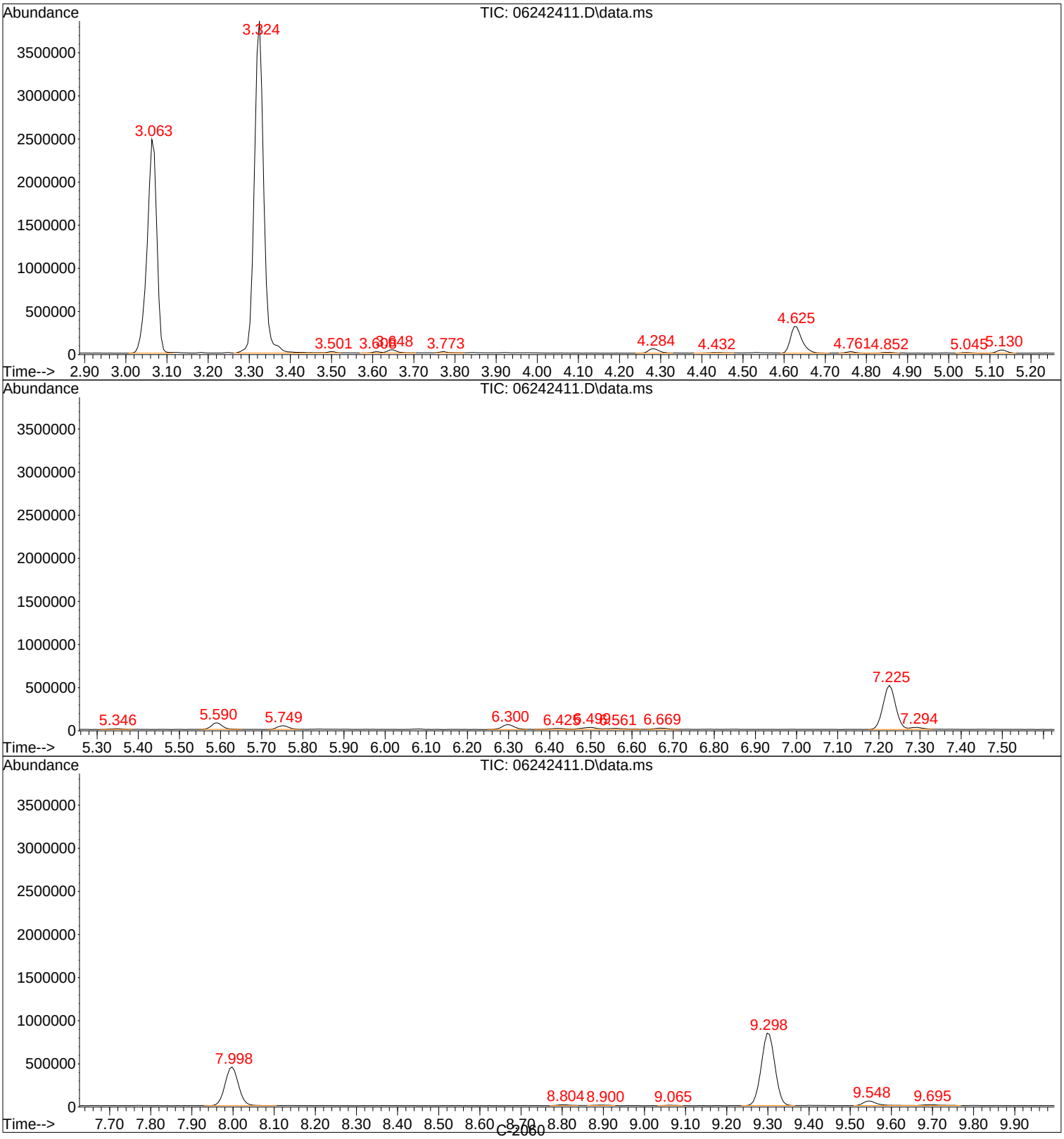
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.063	22	32	41	rBV	2475791	4027386	66.25%	25.385%
2	3.324	67	78	105	rBV	3850107	6079183	100.00%	38.318%
3	3.501	105	109	113	rVB	14262	18087	0.30%	0.114%
4	3.608	121	128	131	rBV2	14619	21752	0.36%	0.137%
5	3.648	131	135	145	rVB	36693	58302	0.96%	0.367%
6	3.773	153	157	166	rBV	14812	19310	0.32%	0.122%
7	4.284	239	247	255	rBV	51550	96205	1.58%	0.606%
8	4.432	264	273	281	rBV3	5880	16955	0.28%	0.107%
9	4.625	301	307	322	rVB	309545	602180	9.91%	3.796%
10	4.761	326	331	339	rVB	17759	26464	0.44%	0.167%
11	4.852	339	347	352	rBV4	8171	17324	0.28%	0.109%
12	5.045	376	381	389	rVB3	6734	12222	0.20%	0.077%
13	5.130	389	396	402	rVB	36884	64252	1.06%	0.405%
14	5.346	427	434	441	rBV4	8801	17494	0.29%	0.110%
15	5.590	470	477	488	rBV	76168	141547	2.33%	0.892%
16	5.749	499	505	513	rBV	42075	80565	1.33%	0.508%
17	6.300	593	602	610	rBV	55425	116551	1.92%	0.735%
18	6.425	613	624	629	rVV3	10987	29409	0.48%	0.185%
19	6.499	629	637	643	rVV3	22616	59640	0.98%	0.376%
20	6.561	644	648	659	rVV4	10903	28267	0.46%	0.178%
21	6.669	661	667	675	rVB2	13772	29121	0.48%	0.184%
22	7.225	756	765	773	rBV	509528	1090676	17.94%	6.875%
23	7.294	773	777	784	rVB	22399	45813	0.75%	0.289%
24	7.998	889	901	920	rBV	449035	1022103	16.81%	6.442%
25	8.804	1037	1043	1049	rBV2	10274	21851	0.36%	0.138%
26	8.901	1053	1060	1065	rVB5	5577	13402	0.22%	0.084%
27	9.065	1083	1089	1094	rBV4	5276	10632	0.17%	0.067%
28	9.298	1119	1130	1142	rBV	841056	1940568	31.92%	12.232%
29	9.548	1167	1174	1194	rBV	52159	127894	2.10%	0.806%
30	9.695	1194	1200	1213	rVB3	10096	29890	0.49%	0.188%

Sum of corrected areas: 15865045

Data Path : I:\MS09\DATA\2024 06\24\
Data File : 06242411.D
Acq On : 24 Jun 2024 12:59
Operator : SC
Sample : P2402249-067 (400mL)
Misc : S37-06062402
ALS Vial : 8 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\24\\
Data File : 06242411.D
Acq On : 24 Jun 2024 12:599
Operator : SCC
Sample : P2402249-067 (400mL))
Misc : S37-060624022
ALS Vial : 8 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172404.D Vial: 2
Acq On : 17 Jun 2024 10:26 Operator: SC
Sample : MB R09061724 1000mL Inst : MS09
Misc : S37-06062402/AC00880

6/17/24

Quant Time: Jun 17 10:53:00 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Jun 12 10:31:44 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	170356	12.500	ng	0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	758532	12.500	ng	-0.02
56) Chlorobenzene-d5 (IS3)	14.84	54	167268	12.500	ng	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4(...	7.99	65	369330	12.198	ng	0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.60%			
57) Toluene-d8 (SS2)	12.43	98	839901	13.121	ng	-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 104.96%			
73) Bromofluorobenzene (SS3)	16.83	174	275795	11.932	ng	-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 95.44%			
Target Compounds						Qvalue
2) Propene	3.32	42	1667	0.076	ng	87
3) Dichlorodifluoromethan...	0.00	85	0	N.D.		
4) Chloromethane	0.00	50	0	N.D.		
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.		
6) Vinyl Chloride	0.00	62	0	N.D.		
7) 1,3-Butadiene	0.00	54	0	N.D.		
8) Bromomethane	0.00	94	0	N.D.		
9) Chloroethane	0.00	64	0	N.D.		
10) Ethanol	4.43	45	60	N.D.		
11) Acetonitrile	4.44	41	1070	N.D.		
12) Acrolein	4.55	56	432	N.D.		
13) Acetone	4.65	58	7853	0.593	ng	92
14) Trichlorofluoromethane	0.00	101	0	N.D.		
15) 2-Propanol (Isopropanol)	4.91	45	424	N.D.		
16) Acrylonitrile	4.99	53	1107	N.D.		
17) 1,1-Dichloroethene	0.00	96	0	N.D.		
18) 2-Methyl-2-Propanol (t...	0.00	59	0	N.D.		
19) Methylene Chloride	5.35	84	998	0.053	ng	93
20) 3-Chloro-1-propene (Al...	5.47	41	325	N.D.		
21) Trichlorotrifluoroethane	0.00	151	0	N.D.		
22) Carbon Disulfide	5.62	76	1033	N.D.		
23) trans-1,2-Dichloroethene	6.14	61	257	N.D.		
24) 1,1-Dichloroethane	0.00	63	0	N.D.		
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.		
26) Vinyl Acetate	0.00	86	0	N.D.		
27) 2-Butanone (MEK)	0.00	72	0	N.D.		
28) cis-1,2-Dichloroethene	7.08	61	186	N.D.		
29) Diisopropyl Ether	0.00	87	0	N.D.		
30) Ethyl Acetate	0.00	61	0	N.D.		
31) n-Hexane	0.00	57	0	N.D.		
32) Chloroform	7.36	83	358	N.D.		
34) Tetrahydrofuran (THF)	7.79	72	171	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	8.11	62	341	N.D.		
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	8.85	56	491	No Calib		
41) Benzene	8.89	78	1577	N.D.		
42) Carbon Tetrachloride	0.00	117	0	N.D.		
43) Cyclohexane	0.00	84	0	N.D.		
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	0.00	63	0	N.D.		
46) Bromodichloromethane	10.08	83	523	N.D.		
47) Trichloroethene	10.15	130	477	N.D.		
48) 1,4-Dioxane	10.16	88	117	N.D.		
49) 2,2,4-Trimethylpentane...	0.00	57	0	N.D.		
50) Methyl Methacrylate	0.00	100	0	N.D.		

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172404.D Vial: 2
Acq On : 17 Jun 2024 10:26 Operator: SC
Sample : MB R09061724 1000mL Inst : MS09
Misc : S37-06062402/AC00880

Quant Time: Jun 17 10:53:00 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Jun 12 10:31:44 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

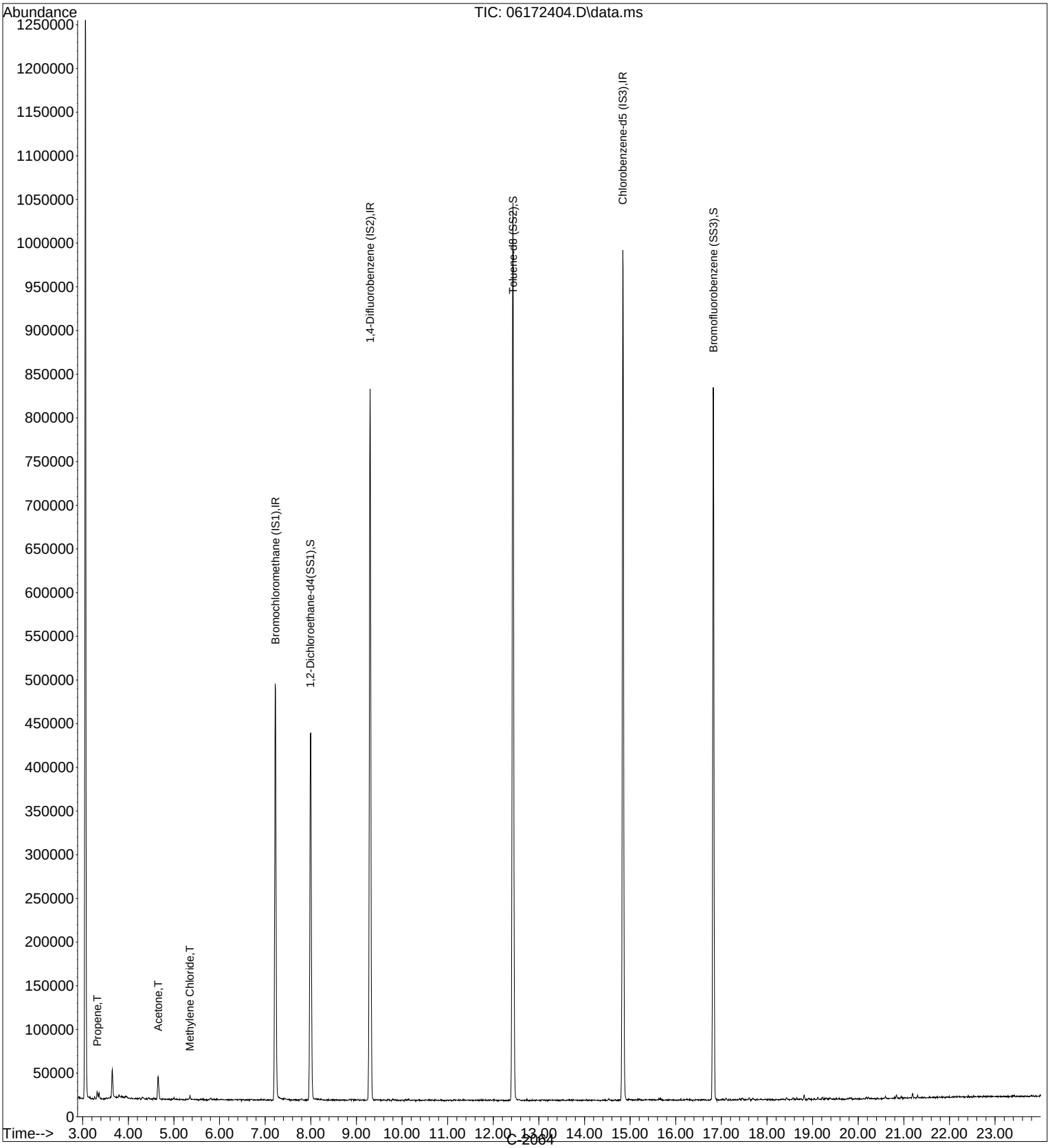
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
51) n-Heptane	0.00	71	0	N.D.		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	12.57	91	1140	N.D.		
59) 2-Hexanone	12.95	43	308	N.D.		
60) Dibromochloromethane	13.07	129	515	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	0.00	43	0	N.D.		
63) n-Octane	0.00	57	0	N.D.		
64) Tetrachloroethene	14.02	166	398	N.D.		
65) Chlorobenzene	14.89	112	729	N.D.		
66) Ethylbenzene	15.41	91	1881	N.D.		
67) m- & p-Xylenes	15.66	91	2488	N.D.		
68) Bromoform	15.67	173	586	N.D.		
69) Styrene	0.00	104	0	N.D.		
70) o-Xylene	16.24	91	1226	N.D.		
71) n-Nonane	16.61	43	114	N.D.		
72) 1,1,2,2-Tetrachloroethane	16.21	83	453	N.D.		
74) Cumene	17.03	105	1130	N.D.		
75) alpha-Pinene	0.00	93	0	N.D.		
76) n-Propylbenzene	17.70	91	3117	N.D.		
77) 3-Ethyltoluene	17.03	105	1130	No Calib		#
78) 4-Ethyltoluene	17.86	105	942	N.D.		
79) 1,3,5-Trimethylbenzene	17.97	105	559	N.D.		
80) alpha-Methylstyrene	0.00	118	0	N.D.		
81) 2-Ethyltoluene	17.03	105	1130	No Calib		#
82) 1,2,4-Trimethylbenzene	18.43	105	780	N.D.		
83) n-Decane	0.00	58	0	N.D.		
84) Benzyl Chloride	18.56	91	656	N.D.		
85) 1,3-Dichlorobenzene	18.58	146	945	N.D.		
86) 1,4-Dichlorobenzene	18.66	146	853	N.D.		
87) sec-Butylbenzene	18.74	105	1038	N.D.		
88) 4-Isopropyltoluene (p-...	18.93	119	893	N.D.		
89) 1,2,3-Trimethylbenzene	17.03	105	1130	No Calib		#
90) 1,2-Dichlorobenzene	19.03	146	606	N.D.		
91) d-Limonene	0.00	68	0	N.D.		
92) 1,2-Dibromo-3-Chloropr...	19.52	157	116	N.D.		
93) n-Undecane	0.00	58	0	N.D.		
94) 1,2,4-Trichlorobenzene	20.84	180	1582	N.D.		
95) Naphthalene	20.94	128	1598	N.D.		
96) n-Dodecane	0.00	58	0	N.D.		
97) Hexachlorobutadiene	21.30	225	638	N.D.		
98) Cyclohexanone	0.00	55	0	N.D.		
99) tert-Butylbenzene	18.43	119	885	N.D.		
100) n-Butylbenzene	19.39	91	779	N.D.		
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172404.D Vial: 2
Acq On : 17 Jun 2024 10:26 Operator: SC
Sample : MB R09061724 1000mL Inst : MS09
Misc : S37-06062402/AC00880

Quant Time: Jun 17 10:53:00 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Jun 12 10:31:44 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172404.D Vial: 2
Acq On : 17 Jun 2024 10:26 Operator: SC
Sample : MB R09061724 1000mL Inst : MS09
Misc : S37-06062402/AC00880

Quant Time: Jun 17 14:49:37 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/17/24

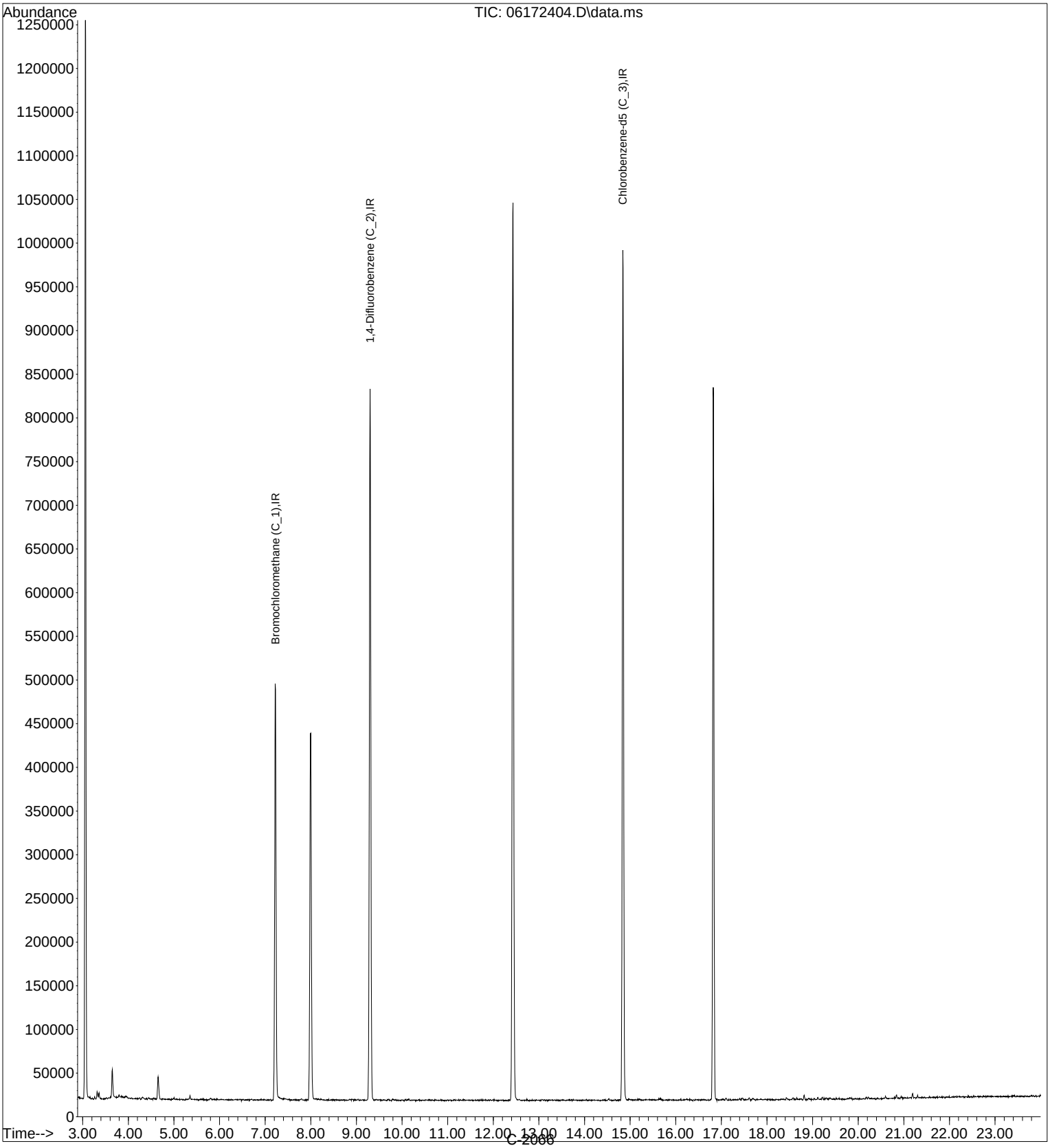
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	172168	12.500	ng	-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	760210	12.500	ng	-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	167268	12.500	ng	-0.01
Target Compounds						Qvalue
2) Chloropentafluoroethane	3.16	85	479	N.D.		
3) 1,1,1,2-Tetrafluoroeth...	3.22	83	393	N.D.		
4) 1,1-Difluoroethane	3.26	65	445	N.D.		
5) Chlorodifluoromethane ...	0.00	67	0	N.D.		
6) 1-Chloro-1,1-Difluoroe...	3.52	65	966	N.D.		
7) Dichlorofluoromethane ...	4.25	67	981	N.D.		
8) Vinylbromide	4.45	108	424	N.D.		
9) 2,2-Dichloro-1,1,1-tri...	4.56	83	417	N.D.		
10) 2-Methylbutane	4.68	57	609	N.D.		
11) Methyl Acetate	5.35	43	1809	N.D.		
12) 2-Methylpentane	0.00	71	0	N.D.		
13) 2,2-Dichloropropane	0.00	77	0	N.D.		
14) 1,1-Dichloropropene	8.73	75	76	N.D.		
15) Thiophene	9.04	84	454	N.D.		
17) 2,3-Dimethylpentane	9.52	56	230	N.D.		
18) Dibromomethane	9.80	174	588	N.D.		
20) Methyl Cyclohexane	11.43	55	52	N.D.		
21) 1,3-Dichloropropane	12.58	76	263	N.D.		
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		
23) 1-Chlorohexane	15.19	91	410	N.D.		
24) 1,2,3-Trichloropropane	16.40	75	203	N.D.		
25) Bromobenzene	17.10	77	981	N.D.		
26) 2-Chlorotoluene	17.61	91	1868	N.D.		
27) 4-Chlorotoluene	17.61	91	1867	N.D.		
28) Indane	19.11	117	1286	N.D.		
29) Indene	19.21	115	1857	N.D.		
30) 1,2,4,5-Tetramethylben...	20.18	119	1663	N.D.		
31) 1,2,3,4-Tetramethylben...	20.22	119	1579	N.D.		
32) 1,2,3,5-Tetramethylben...	20.60	119	1542	N.D.		
33) 1,2,3-Trichlorobenzene	21.19	180	1861	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172404.D Vial: 2
Acq On : 17 Jun 2024 10:26 Operator: SC
Sample : MB R09061724 1000mL Inst : MS09
Misc : S37-06062402/AC00880

Quant Time: Jun 17 14:49:37 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



C-2008

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182404.D Vial: 2
Acq On : 18 Jun 2024 10:57 Operator: SC
Sample : MB R09061824 1000mL Inst : MS09
Misc : S37-06062402/AC00880

Quant Time: Jun 18 11:31:26 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/18/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	137927	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	609777	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	137507	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	308318	12.577	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.64%				
57) Toluene-d8 (SS2)	12.43	98	674528	12.819	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.56%				
73) Bromofluorobenzene (SS3)	16.83	174	239363	12.597	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.80%				
Target Compounds							Qvalue
2) Propene	3.32	42	1138	0.064	ng		96
3) Dichlorodifluoromethan...	0.00	85	0	N.D.			
4) Chloromethane	0.00	50	0	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.39	45	65	N.D.			
11) Acetonitrile	4.49	41	52	N.D.			
12) Acrolein	4.56	56	285	N.D.			
13) Acetone	4.66	58	5442	0.508	ng		89
14) Trichlorofluoromethane	0.00	101	0	N.D.			
15) 2-Propanol (Isopropanol)	4.90	45	60	N.D.			
16) Acrylonitrile	5.01	53	775	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	0.00	59	0	N.D.			
19) Methylene Chloride	5.36	84	877	0.058	ng	#	79
20) 3-Chloro-1-propene (Al...	5.46	41	227	N.D.			
21) Trichlorotrifluoroethane	0.00	151	0	N.D.			
22) Carbon Disulfide	5.61	76	544	N.D.			
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D.			
27) 2-Butanone (MEK)	0.00	72	0	N.D.			
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.			
30) Ethyl Acetate	0.00	61	0	N.D.			
31) n-Hexane	0.00	57	0	N.D.			
32) Chloroform	7.35	83	229	N.D.			
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	197	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.86	56	227	No Calib		#	
41) Benzene	8.91	78	1757	N.D.			
42) Carbon Tetrachloride	0.00	117	0	N.D.			
43) Cyclohexane	9.30	84	695	N.D.			
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.08	83	269	N.D.			
47) Trichloroethene	10.14	130	220	N.D.			
48) 1,4-Dioxane	0.00	88	0	N.D.			
49) 2,2,4-Trimethylpentane...	0.00	57	0	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182404.D Vial: 2
Acq On : 18 Jun 2024 10:57 Operator: SC
Sample : MB R09061824 1000mL Inst : MS09
Misc : S37-06062402/AC00880

Quant Time: Jun 18 11:31:26 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

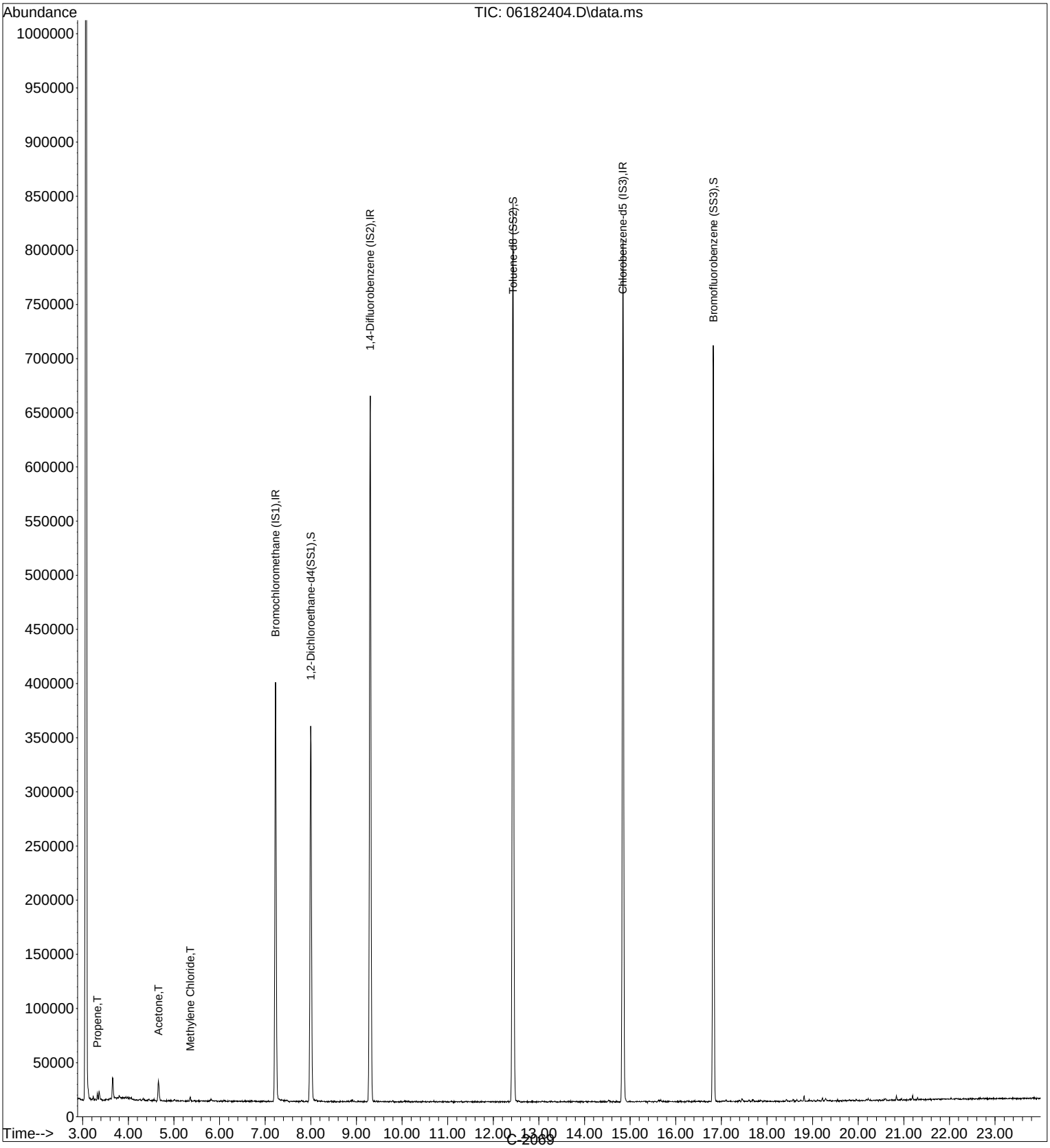
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
51) n-Heptane	0.00	71	0	N.D.		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	12.56	91	918	N.D.		
59) 2-Hexanone	0.00	43	0	N.D.		
60) Dibromochloromethane	13.07	129	503	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	0.00	43	0	N.D.		
63) n-Octane	0.00	57	0	N.D.		
64) Tetrachloroethene	14.03	166	252	N.D.		
65) Chlorobenzene	14.90	112	638	N.D.		
66) Ethylbenzene	15.41	91	1412	N.D.		
67) m- & p-Xylenes	15.66	91	1175	N.D.		
68) Bromoform	15.67	173	453	N.D.		
69) Styrene	0.00	104	0	N.D.		
70) o-Xylene	16.25	91	920	N.D.		
71) n-Nonane	0.00	43	0	N.D.		
72) 1,1,2,2-Tetrachloroethane	16.21	83	253	N.D.		
74) Cumene	17.04	105	857	N.D.		
75) alpha-Pinene	0.00	93	0	N.D.		
76) n-Propylbenzene	17.69	91	2428	N.D.		
77) 3-Ethyltoluene	17.04	105	857	No Calib		#
78) 4-Ethyltoluene	17.86	105	793	N.D.		
79) 1,3,5-Trimethylbenzene	17.96	105	513	N.D.		
80) alpha-Methylstyrene	0.00	118	0	N.D.		
81) 2-Ethyltoluene	17.04	105	857	No Calib		#
82) 1,2,4-Trimethylbenzene	18.43	105	585	N.D.		
83) n-Decane	0.00	58	0	N.D.		
84) Benzyl Chloride	18.57	91	425	N.D.		
85) 1,3-Dichlorobenzene	18.58	146	688	N.D.		
86) 1,4-Dichlorobenzene	18.66	146	665	N.D.		
87) sec-Butylbenzene	18.74	105	830	N.D.		
88) 4-Isopropyltoluene (p-...	18.93	119	609	N.D.		
89) 1,2,3-Trimethylbenzene	17.04	105	857	No Calib		#
90) 1,2-Dichlorobenzene	19.04	146	539	N.D.		
91) d-Limonene	0.00	68	0	N.D.		
92) 1,2-Dibromo-3-Chloropr...	19.51	157	105	N.D.		
93) n-Undecane	0.00	58	0	N.D.		
94) 1,2,4-Trichlorobenzene	20.84	180	1243	N.D.		
95) Naphthalene	20.94	128	1291	N.D.		
96) n-Dodecane	0.00	58	0	N.D.		
97) Hexachlorobutadiene	21.30	225	656	N.D.		
98) Cyclohexanone	0.00	55	0	N.D.		
99) tert-Butylbenzene	18.42	119	849	N.D.		
100) n-Butylbenzene	19.38	91	720	N.D.		
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182404.D Vial: 2
Acq On : 18 Jun 2024 10:57 Operator: SC
Sample : MB R09061824 1000mL Inst : MS09
Misc : S37-06062402/AC00880

Quant Time: Jun 18 11:31:26 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182404.D Vial: 2
Acq On : 18 Jun 2024 10:57 Operator: SC
Sample : MB R09061824 1000mL Inst : MS09
Misc : S37-06062402/AC00880

Quant Time: Jun 18 11:32:12 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/18/24

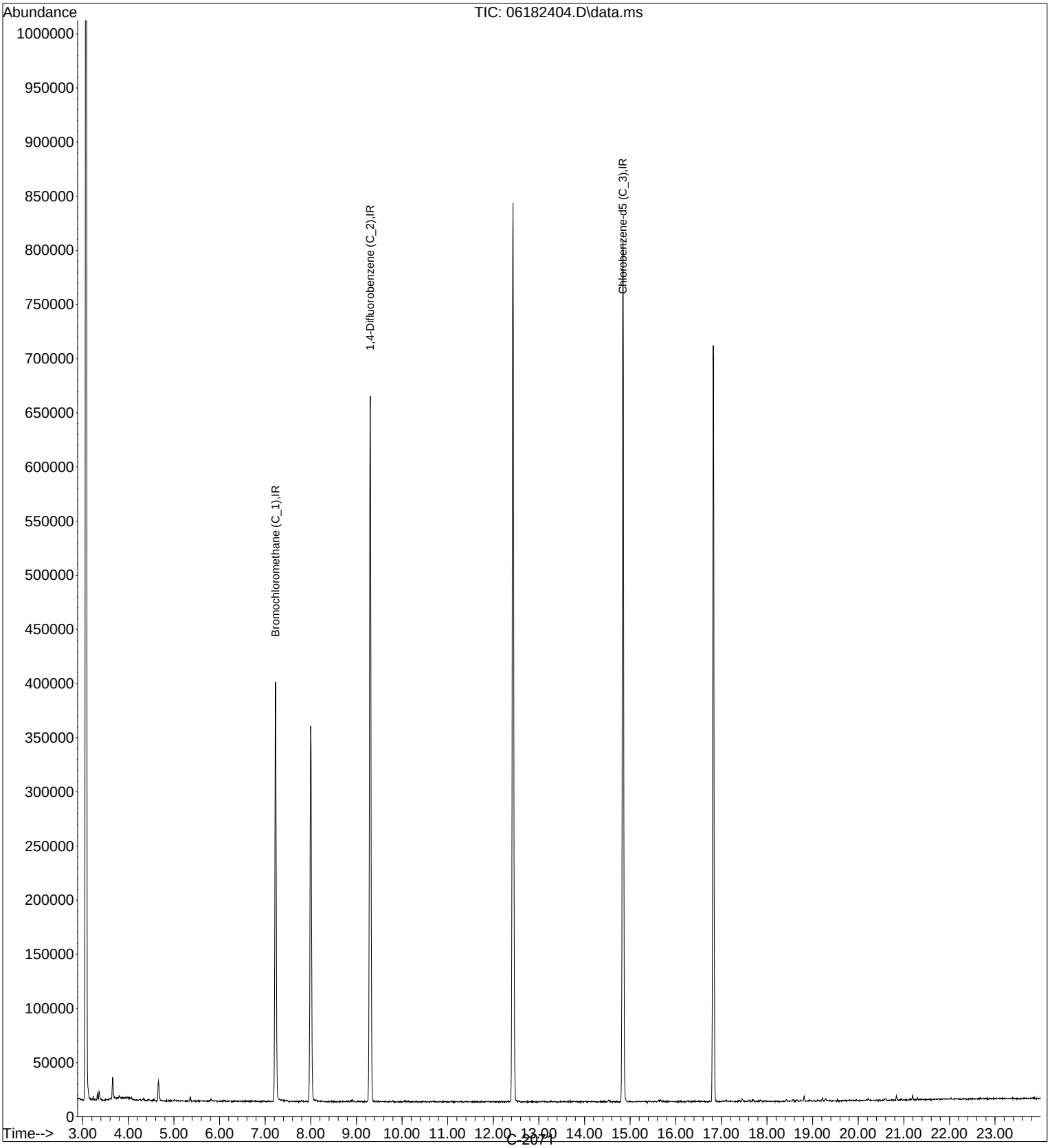
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	138680	12.500	ng	-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	610793	12.500	ng	-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	137507	12.500	ng	-0.01
Target Compounds						Qvalue
2) Chloropentafluoroethane	3.16	85	322	N.D.		
3) 1,1,1,2-Tetrafluoroeth...	3.22	83	348	N.D.		
4) 1,1-Difluoroethane	3.27	65	328	N.D.		
5) Chlorodifluoromethane ...	0.00	67	0	N.D.		
6) 1-Chloro-1,1-Difluoroe...	3.52	65	816	N.D.		
7) Dichlorofluoromethane ...	4.26	67	695	N.D.		
8) Vinylbromide	4.45	108	236	N.D.		
9) 2,2-Dichloro-1,1,1-tri...	4.57	83	257	N.D.		
10) 2-Methylbutane	4.67	57	363	N.D.		
11) Methyl Acetate	5.36	43	1254	N.D.		
12) 2-Methylpentane	0.00	71	0	N.D.		
13) 2,2-Dichloropropane	0.00	77	0	N.D.		
14) 1,1-Dichloropropene	0.00	75	0	N.D.		
15) Thiophene	9.04	84	347	N.D.		
17) 2,3-Dimethylpentane	9.52	56	126	N.D.		
18) Dibromomethane	9.80	174	456	N.D.		
20) Methyl Cyclohexane	11.41	55	110	N.D.		
21) 1,3-Dichloropropane	0.00	76	0	N.D.		
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		
23) 1-Chlorohexane	15.20	91	248	N.D.		
24) 1,2,3-Trichloropropane	16.40	75	186	N.D.		
25) Bromobenzene	17.09	77	561	N.D.		
26) 2-Chlorotoluene	17.61	91	1538	N.D.		
27) 4-Chlorotoluene	17.61	91	1538	N.D.		
28) Indane	19.12	117	967	N.D.		
29) Indene	19.22	115	1302	N.D.		
30) 1,2,4,5-Tetramethylben...	20.18	119	1175	N.D.		
31) 1,2,3,4-Tetramethylben...	20.18	119	1175	N.D.		
32) 1,2,3,5-Tetramethylben...	20.60	119	1161	N.D.		
33) 1,2,3-Trichlorobenzene	21.19	180	1463	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182404.D Vial: 2
Acq On : 18 Jun 2024 10:57 Operator: SC
Sample : MB R09061824 1000mL Inst : MS09
Misc : S37-06062402/AC00880

Quant Time: Jun 18 11:32:12 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192404.D Vial: 2
Acq On : 19 Jun 2024 10:28 Operator: SC
Sample : MB R09061924 1000mL Inst : MS09
Misc : S37-06062402/AC00880

6/19/24

Quant Time: Jun 19 11:05:16 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	147452	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	639041	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	146689	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	328750	12.544	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.32%				
57) Toluene-d8 (SS2)	12.43	98	710630	12.659	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.28%				
73) Bromofluorobenzene (SS3)	16.83	174	260200	12.837	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.72%				
Target Compounds							Qvalue
2) Propene	3.32	42	1063	0.056	ng	#	91
3) Dichlorodifluoromethan...	0.00	85	0	N.D.			
4) Chloromethane	0.00	50	0	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.31	45	2229	0.155	ng		89
11) Acetonitrile	4.45	41	843	N.D.			
12) Acrolein	4.55	56	248	N.D.			
13) Acetone	4.66	58	5554	0.485	ng		100
14) Trichlorofluoromethane	0.00	101	0	N.D.			
15) 2-Propanol (Isopropanol)	4.90	45	57	N.D.			
16) Acrylonitrile	5.00	53	774	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	0.00	59	0	N.D.			
19) Methylene Chloride	5.35	84	978	0.060	ng		94
20) 3-Chloro-1-propene (Al...	5.45	41	131	N.D.			
21) Trichlorotrifluoroethane	0.00	151	0	N.D.			
22) Carbon Disulfide	5.62	76	542	N.D.			
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D.			
27) 2-Butanone (MEK)	0.00	72	0	N.D.			
28) cis-1,2-Dichloroethene	7.07	61	109	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.			
30) Ethyl Acetate	0.00	61	0	N.D.			
31) n-Hexane	0.00	57	0	N.D.			
32) Chloroform	7.34	83	143	N.D.			
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	217	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	0.00	56	0	N.D.			
41) Benzene	8.89	78	1752	N.D.			
42) Carbon Tetrachloride	0.00	117	0	N.D.			
43) Cyclohexane	0.00	84	0	N.D.	d		
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.08	83	344	N.D.			
47) Trichloroethene	10.13	130	389	N.D.			
48) 1,4-Dioxane	0.00	88	0	N.D.			
49) 2,2,4-Trimethylpentane...	0.00	57	0	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192404.D Vial: 2
Acq On : 19 Jun 2024 10:28 Operator: SC
Sample : MB R09061924 1000mL Inst : MS09
Misc : S37-06062402/AC00880

Quant Time: Jun 19 11:05:16 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

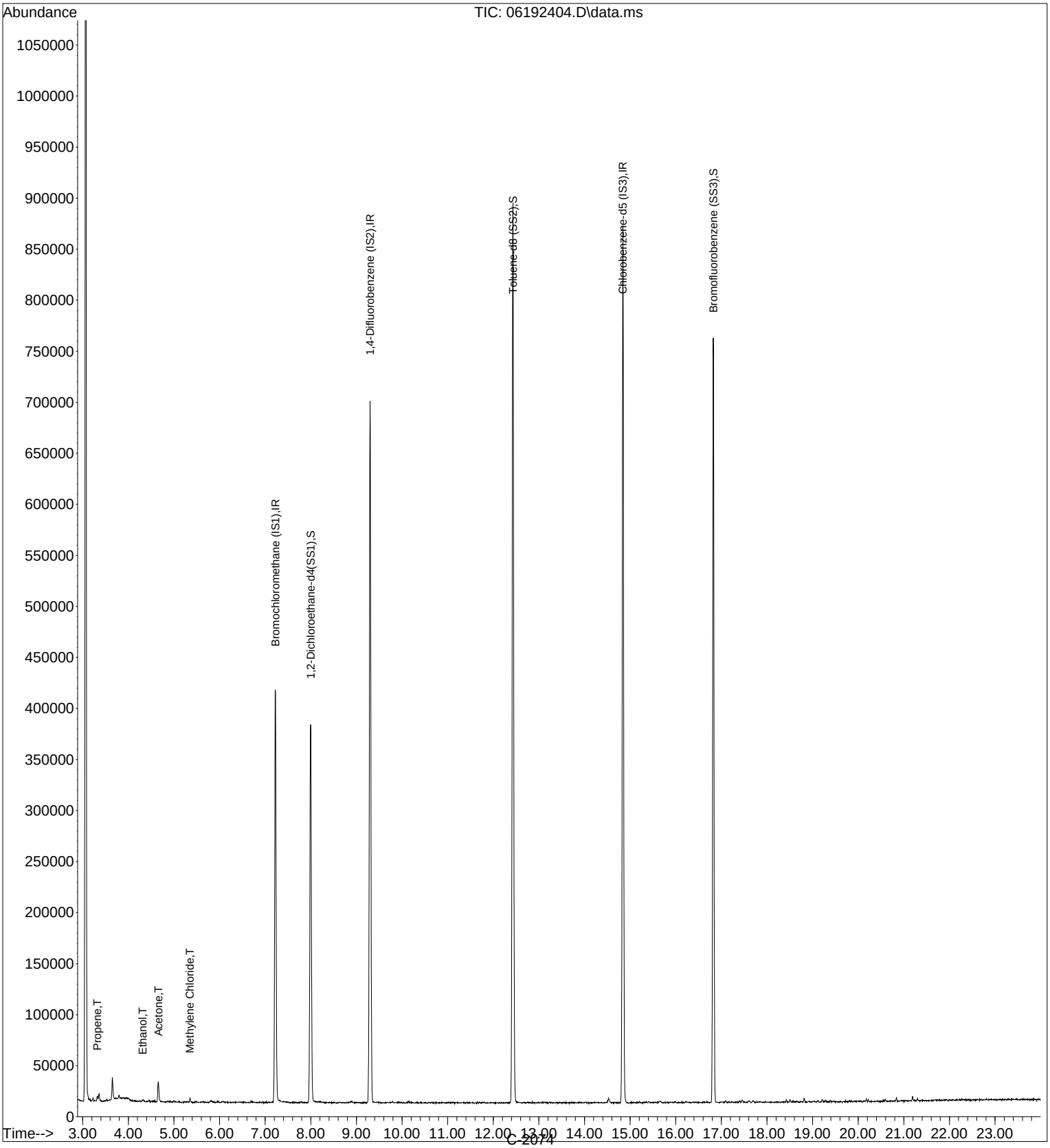
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
51) n-Heptane	0.00	71	0	N.D.		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	12.57	91	909	N.D.		
59) 2-Hexanone	0.00	43	0	N.D.		
60) Dibromochloromethane	13.07	129	431	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	0.00	43	0	N.D.		
63) n-Octane	0.00	57	0	N.D.		
64) Tetrachloroethene	14.03	166	439	N.D.		
65) Chlorobenzene	14.90	112	650	N.D.		
66) Ethylbenzene	15.41	91	1442	N.D.		
67) m- & p-Xylenes	15.64	91	1179	N.D.		
68) Bromoform	15.67	173	538	N.D.		
69) Styrene	0.00	104	0	N.D.		
70) o-Xylene	16.24	91	782	N.D.		
71) n-Nonane	0.00	43	0	N.D.		
72) 1,1,2,2-Tetrachloroethane	16.22	83	199	N.D.		
74) Cumene	17.03	105	975	N.D.		
75) alpha-Pinene	0.00	93	0	N.D.		
76) n-Propylbenzene	17.70	91	2333	N.D.		
77) 3-Ethyltoluene	17.03	105	975	No Calib		#
78) 4-Ethyltoluene	17.87	105	793	N.D.		
79) 1,3,5-Trimethylbenzene	17.96	105	548	N.D.		
80) alpha-Methylstyrene	0.00	118	0	N.D.		
81) 2-Ethyltoluene	17.03	105	975	No Calib		#
82) 1,2,4-Trimethylbenzene	18.44	105	581	N.D.		
83) n-Decane	0.00	58	0	N.D.		
84) Benzyl Chloride	18.56	91	443	N.D.		
85) 1,3-Dichlorobenzene	18.58	146	699	N.D.		
86) 1,4-Dichlorobenzene	18.66	146	726	N.D.		
87) sec-Butylbenzene	18.74	105	892	N.D.		
88) 4-Isopropyltoluene (p-...	18.93	119	634	N.D.		
89) 1,2,3-Trimethylbenzene	17.03	105	975	No Calib		#
90) 1,2-Dichlorobenzene	19.04	146	606	N.D.		
91) d-Limonene	0.00	68	0	N.D.		
92) 1,2-Dibromo-3-Chloropr...	19.52	157	111	N.D.		
93) n-Undecane	0.00	58	0	N.D.		
94) 1,2,4-Trichlorobenzene	20.84	180	1218	N.D.		
95) Naphthalene	20.94	128	1035	N.D.		
96) n-Dodecane	0.00	58	0	N.D.		
97) Hexachlorobutadiene	21.30	225	600	N.D.		
98) Cyclohexanone	0.00	55	0	N.D.		
99) tert-Butylbenzene	18.43	119	775	N.D.		
100) n-Butylbenzene	19.39	91	837	N.D.		
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192404.D Vial: 2
Acq On : 19 Jun 2024 10:28 Operator: SC
Sample : MB R09061924 1000mL Inst : MS09
Misc : S37-06062402/AC00880

Quant Time: Jun 19 11:05:16 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192404.D Vial: 2
Acq On : 19 Jun 2024 10:28 Operator: SC
Sample : MB R09061924 1000mL Inst : MS09
Misc : S37-06062402/AC00880

Quant Time: Jun 19 11:05:46 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/19/24

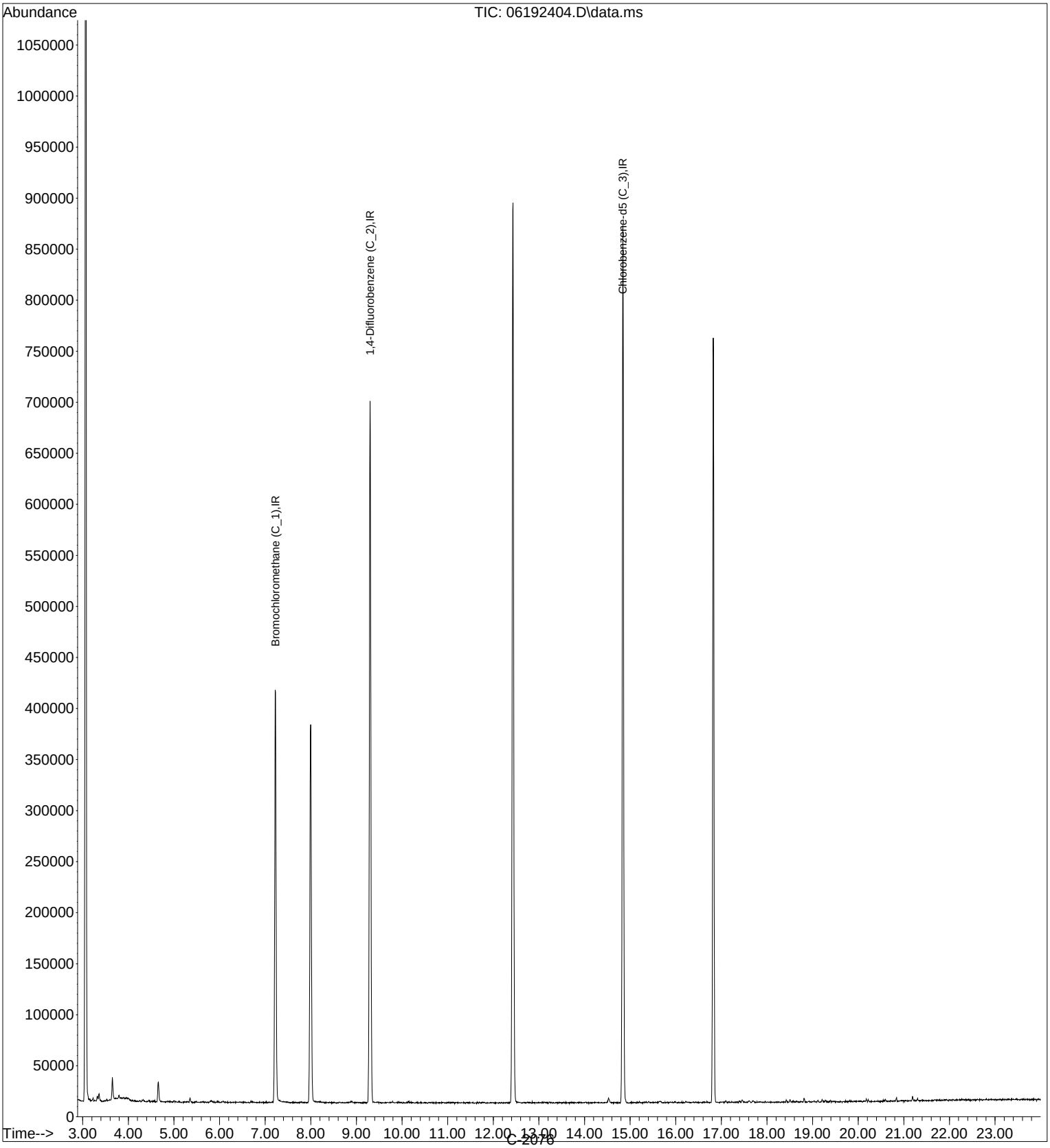
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	147452	12.500	ng	-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	640968	12.500	ng	-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	146689	12.500	ng	-0.01
Target Compounds						Qvalue
2) Chloropentafluoroethane	3.16	85	393	N.D.		
3) 1,1,1,2-Tetrafluoroeth...	3.21	83	506	N.D.		
4) 1,1-Difluoroethane	3.26	65	439	N.D.		
5) Chlorodifluoromethane ...	3.31	67	67	N.D.		
6) 1-Chloro-1,1-Difluoroe...	3.52	65	1004	N.D.		
7) Dichlorofluoromethane ...	4.24	67	975	N.D.		
8) Vinylbromide	4.45	108	231	N.D.		
9) 2,2-Dichloro-1,1,1-tri...	4.56	83	430	N.D.		
10) 2-Methylbutane	4.66	57	553	N.D.		
11) Methyl Acetate	5.35	43	1418	N.D.		
12) 2-Methylpentane	0.00	71	0	N.D.		
13) 2,2-Dichloropropane	0.00	77	0	N.D.		
14) 1,1-Dichloropropene	8.74	75	52	N.D.		
15) Thiophene	9.03	84	313	N.D.		
17) 2,3-Dimethylpentane	9.53	56	108	N.D.		
18) Dibromomethane	9.83	174	60	N.D.		
20) Methyl Cyclohexane	0.00	55	0	N.D.		
21) 1,3-Dichloropropane	12.59	76	213	N.D.		
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		
23) 1-Chlorohexane	15.20	91	530	N.D.		
24) 1,2,3-Trichloropropane	16.39	75	312	N.D.		
25) Bromobenzene	17.11	77	841	N.D.		
26) 2-Chlorotoluene	17.61	91	1688	N.D.		
27) 4-Chlorotoluene	17.61	91	1688	N.D.		
28) Indane	19.12	117	1085	N.D.		
29) Indene	19.21	115	1389	N.D.		
30) 1,2,4,5-Tetramethylben...	20.18	119	1391	N.D.		
31) 1,2,3,4-Tetramethylben...	20.22	119	1455	N.D.		
32) 1,2,3,5-Tetramethylben...	20.59	119	1430	N.D.		
33) 1,2,3-Trichlorobenzene	21.19	180	1464	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192404.D Vial: 2
Acq On : 19 Jun 2024 10:28 Operator: SC
Sample : MB R09061924 1000mL Inst : MS09
Misc : S37-06062402/AC00880

Quant Time: Jun 19 11:05:46 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202404.D Vial: 2
Acq On : 20 Jun 2024 11:20 Operator: SC
Sample : MB R09062024 1000mL Inst : MS09
Misc : S37-06062402/AC00880

Quant Time: Jun 20 12:20:48 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/20/24

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	174073	12.500	ng	0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	768403	12.500	ng	0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	177806	12.500	ng	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4(...	8.00	65	379155	12.255	ng	0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.08%			
57) Toluene-d8 (SS2)	12.43	98	867453	12.749	ng	-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.00%			
73) Bromofluorobenzene (SS3)	16.83	174	297225	12.097	ng	-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.80%			
Target Compounds						Qvalue
2) Propene	0.00	42	0	N.D. d		
3) Dichlorodifluoromethan...	0.00	85	0	N.D.		
4) Chloromethane	0.00	50	0	N.D.		
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.		
6) Vinyl Chloride	0.00	62	0	N.D.		
7) 1,3-Butadiene	0.00	54	0	N.D.		
8) Bromomethane	0.00	94	0	N.D.		
9) Chloroethane	0.00	64	0	N.D.		
10) Ethanol	4.38	45	119	N.D.		
11) Acetonitrile	4.45	41	1185	N.D.		
12) Acrolein	4.56	56	407	N.D.		
13) Acetone	4.66	58	7499	0.555	ng	94
14) Trichlorofluoromethane	4.77	101	256	N.D.		
15) 2-Propanol (Isopropanol)	4.91	45	308	N.D.		
16) Acrylonitrile	4.99	53	962	N.D.		
17) 1,1-Dichloroethene	0.00	96	0	N.D.		
18) 2-Methyl-2-Propanol (t...	0.00	59	0	N.D.		
19) Methylene Chloride	5.36	84	1273	0.067	ng	95
20) 3-Chloro-1-propene (Al...	5.46	41	356	N.D.		
21) Trichlorotrifluoroethane	0.00	151	0	N.D.		
22) Carbon Disulfide	5.62	76	648	N.D.		
23) trans-1,2-Dichloroethene	6.14	61	122	N.D.		
24) 1,1-Dichloroethane	0.00	63	0	N.D.		
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.		
26) Vinyl Acetate	0.00	86	0	N.D.		
27) 2-Butanone (MEK)	6.70	72	186	N.D.		
28) cis-1,2-Dichloroethene	7.07	61	246	N.D.		
29) Diisopropyl Ether	0.00	87	0	N.D.		
30) Ethyl Acetate	0.00	61	0	N.D.		
31) n-Hexane	0.00	57	0	N.D.		
32) Chloroform	7.34	83	302	N.D.		
34) Tetrahydrofuran (THF)	7.79	72	158	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	8.11	62	188	N.D.		
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	8.86	56	132	No Calib	#	
41) Benzene	8.89	78	2093	N.D.		
42) Carbon Tetrachloride	0.00	117	0	N.D.		
43) Cyclohexane	9.29	84	1006	N.D.		
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	0.00	63	0	N.D.		
46) Bromodichloromethane	10.07	83	499	N.D.		
47) Trichloroethene	10.15	130	418	N.D.		
48) 1,4-Dioxane	10.15	88	116	N.D.		
49) 2,2,4-Trimethylpentane...	0.00	57	0	N.D.		
50) Methyl Methacrylate	0.00	100	0	N.D.		

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202404.D Vial: 2
Acq On : 20 Jun 2024 11:20 Operator: SC
Sample : MB R09062024 1000mL Inst : MS09
Misc : S37-06062402/AC00880

Quant Time: Jun 20 12:20:48 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

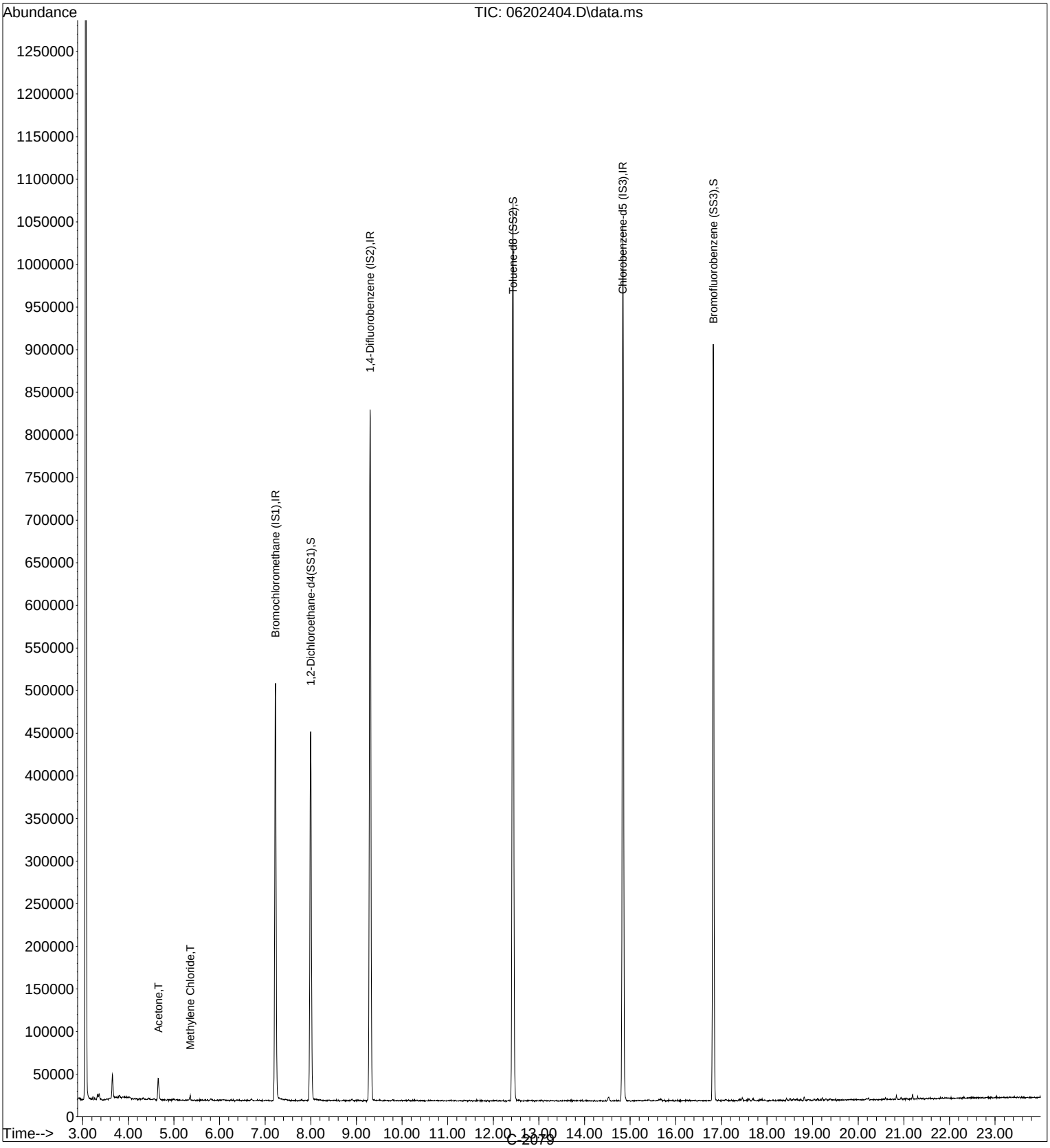
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
51) n-Heptane	0.00	71	0	N.D.		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	12.56	91	1210	N.D.		
59) 2-Hexanone	12.94	43	113	N.D.		
60) Dibromochloromethane	13.07	129	580	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	0.00	43	0	N.D.		
63) n-Octane	0.00	57	0	N.D.		
64) Tetrachloroethene	14.03	166	383	N.D.		
65) Chlorobenzene	14.89	112	872	N.D.		
66) Ethylbenzene	15.41	91	2010	N.D.		
67) m- & p-Xylenes	15.72	91	120	N.D.		
68) Bromoform	15.67	173	687	N.D.		
69) Styrene	0.00	104	0	N.D.		
70) o-Xylene	16.25	91	1094	N.D.		
71) n-Nonane	0.00	43	0	N.D.		
72) 1,1,2,2-Tetrachloroethane	16.21	83	433	N.D.		
74) Cumene	17.04	105	1183	N.D.		
75) alpha-Pinene	0.00	93	0	N.D.		
76) n-Propylbenzene	17.70	91	2951	N.D.		
77) 3-Ethyltoluene	17.04	105	1183	No Calib		#
78) 4-Ethyltoluene	17.86	105	878	N.D.		
79) 1,3,5-Trimethylbenzene	17.95	105	614	N.D.		
80) alpha-Methylstyrene	0.00	118	0	N.D.		
81) 2-Ethyltoluene	17.04	105	1183	No Calib		#
82) 1,2,4-Trimethylbenzene	18.43	105	803	N.D.		
83) n-Decane	0.00	58	0	N.D.		
84) Benzyl Chloride	18.57	91	487	N.D.		
85) 1,3-Dichlorobenzene	18.58	146	899	N.D.		
86) 1,4-Dichlorobenzene	18.66	146	972	N.D.		
87) sec-Butylbenzene	18.74	105	1092	N.D.		
88) 4-Isopropyltoluene (p-...	18.93	119	833	N.D.		
89) 1,2,3-Trimethylbenzene	17.04	105	1183	No Calib		#
90) 1,2-Dichlorobenzene	19.03	146	729	N.D.		
91) d-Limonene	0.00	68	0	N.D.		
92) 1,2-Dibromo-3-Chloropr...	19.51	157	110	N.D.		
93) n-Undecane	0.00	58	0	N.D.		
94) 1,2,4-Trichlorobenzene	20.84	180	1647	N.D.		
95) Naphthalene	20.94	128	1650	N.D.		
96) n-Dodecane	0.00	58	0	N.D.		
97) Hexachlorobutadiene	21.30	225	752	N.D.		
98) Cyclohexanone	0.00	55	0	N.D.		
99) tert-Butylbenzene	18.43	119	983	N.D.		
100) n-Butylbenzene	19.39	91	854	N.D.		
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202404.D Vial: 2
Acq On : 20 Jun 2024 11:20 Operator: SC
Sample : MB R09062024 1000mL Inst : MS09
Misc : S37-06062402/AC00880

Quant Time: Jun 20 12:20:48 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202404.D Vial: 2
Acq On : 20 Jun 2024 11:20 Operator: SC
Sample : MB R09062024 1000mL Inst : MS09
Misc : S37-06062402/AC00880

Quant Time: Jun 20 12:23:29 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/20/24

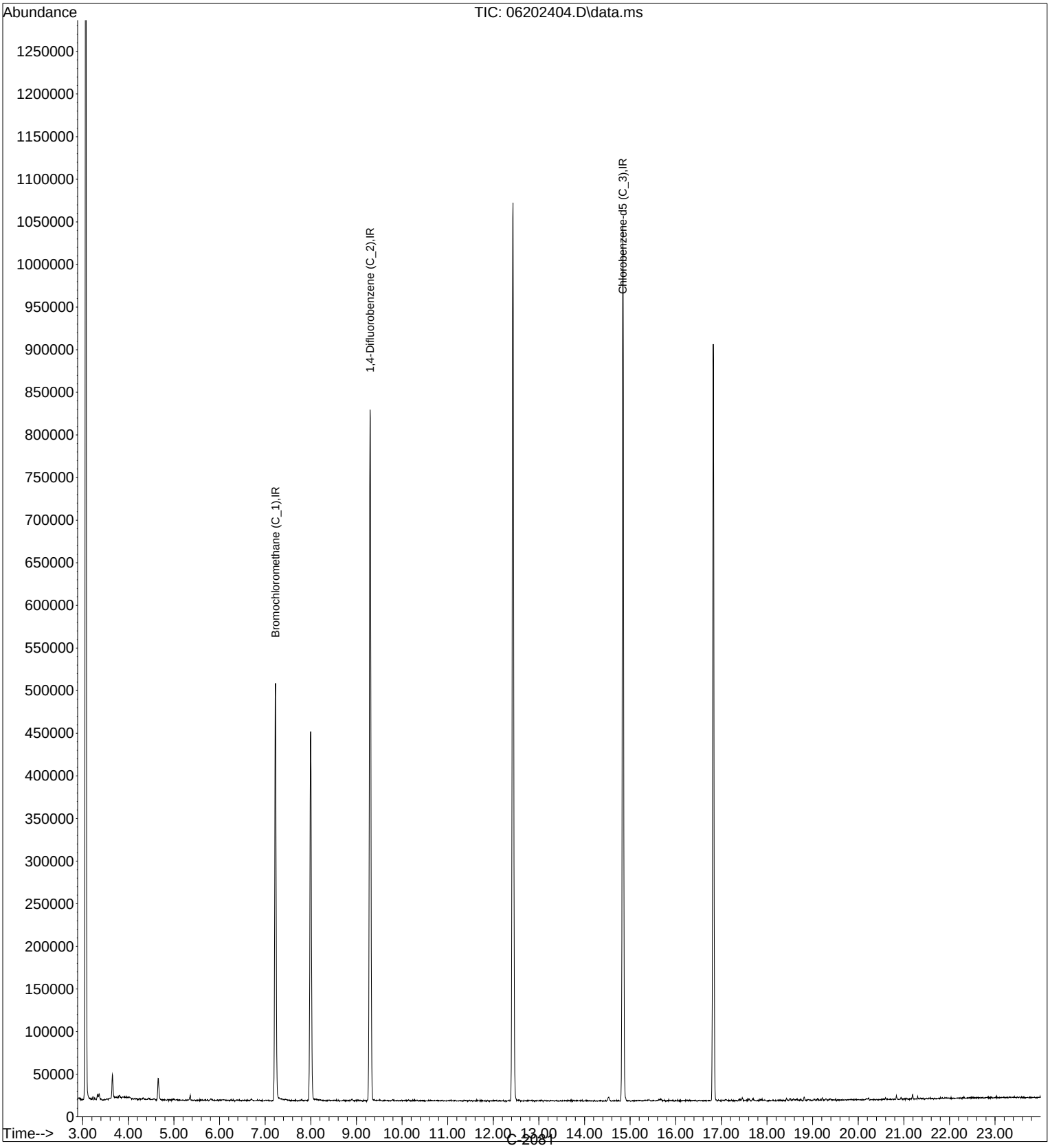
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	175757	12.500	ng	-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	771122	12.500	ng	-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	177806	12.500	ng	-0.01
Target Compounds						Qvalue
2) Chloropentafluoroethane	3.16	85	468	N.D.		
3) 1,1,1,2-Tetrafluoroeth...	3.22	83	447	N.D.		
4) 1,1-Difluoroethane	3.26	65	406	N.D.		
5) Chlorodifluoromethane ...	0.00	67	0	N.D.		
6) 1-Chloro-1,1-Difluoroe...	3.52	65	912	N.D.		
7) Dichlorofluoromethane ...	4.24	67	914	N.D.		
8) Vinylbromide	4.45	108	328	N.D.		
9) 2,2-Dichloro-1,1,1-tri...	4.57	83	393	N.D.		
10) 2-Methylbutane	4.66	57	570	N.D.		
11) Methyl Acetate	5.35	43	1727	N.D.		
12) 2-Methylpentane	0.00	71	0	N.D.		
13) 2,2-Dichloropropane	0.00	77	0	N.D.		
14) 1,1-Dichloropropene	8.75	75	60	N.D.		
15) Thiophene	9.03	84	471	N.D.		
17) 2,3-Dimethylpentane	9.52	56	107	N.D.		
18) Dibromomethane	9.80	174	532	N.D.		
20) Methyl Cyclohexane	11.43	55	64	N.D.		
21) 1,3-Dichloropropane	12.59	76	361	N.D.		
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		
23) 1-Chlorohexane	15.18	91	827	N.D.		
24) 1,2,3-Trichloropropane	16.40	75	283	N.D.		
25) Bromobenzene	17.10	77	972	N.D.		
26) 2-Chlorotoluene	17.61	91	1969	N.D.		
27) 4-Chlorotoluene	17.61	91	1969	N.D.		
28) Indane	19.11	117	1313	N.D.		
29) Indene	19.21	115	1637	N.D.		
30) 1,2,4,5-Tetramethylben...	20.18	119	1593	N.D.		
31) 1,2,3,4-Tetramethylben...	20.22	119	1529	N.D.		
32) 1,2,3,5-Tetramethylben...	20.60	119	1512	N.D.		
33) 1,2,3-Trichlorobenzene	21.19	180	1894	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202404.D Vial: 2
Acq On : 20 Jun 2024 11:20 Operator: SC
Sample : MB R09062024 1000mL Inst : MS09
Misc : S37-06062402/AC00880

Quant Time: Jun 20 12:23:29 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212404.D Vial: 2
Acq On : 21 Jun 2024 12:01 Operator: SC
Sample : MB R09062124 1000mL Inst : MS09
Misc : S37-06062402/AC00880

Quant Time: Jun 21 12:40:21 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/21/24

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	175811	12.500	ng	0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	778052	12.500	ng	0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	177159	12.500	ng	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4(...	8.00	65	379653	12.150	ng	0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.20%			
57) Toluene-d8 (SS2)	12.43	98	882908	13.023	ng	-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 104.16%			
73) Bromofluorobenzene (SS3)	16.83	174	300184	12.262	ng	-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.08%			
Target Compounds						Qvalue
2) Propene	3.32	42	1058	N.D.		
3) Dichlorodifluoromethan...	0.00	85	0	N.D.		
4) Chloromethane	0.00	50	0	N.D.		
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.		
6) Vinyl Chloride	0.00	62	0	N.D.		
7) 1,3-Butadiene	0.00	54	0	N.D.		
8) Bromomethane	0.00	94	0	N.D.		
9) Chloroethane	0.00	64	0	N.D.		
10) Ethanol	4.32	45	2905	0.170	ng	92
11) Acetonitrile	4.45	41	1058	N.D.		
12) Acrolein	4.56	56	472	N.D.		
13) Acetone	4.66	58	6947	0.509	ng	89
14) Trichlorofluoromethane	0.00	101	0	N.D.		
15) 2-Propanol (Isopropanol)	4.91	45	301	N.D.		
16) Acrylonitrile	4.99	53	995	N.D.		
17) 1,1-Dichloroethene	0.00	96	0	N.D.		
18) 2-Methyl-2-Propanol (t...	0.00	59	0	N.D.		
19) Methylene Chloride	5.35	84	1177	0.061	ng	98
20) 3-Chloro-1-propene (Al...	5.46	41	197	N.D.		
21) Trichlorotrifluoroethane	0.00	151	0	N.D.		
22) Carbon Disulfide	5.62	76	1781	N.D.		
23) trans-1,2-Dichloroethene	6.14	61	136	N.D.		
24) 1,1-Dichloroethane	0.00	63	0	N.D.		
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.		
26) Vinyl Acetate	0.00	86	0	N.D.		
27) 2-Butanone (MEK)	6.70	72	188	N.D.		
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.		
29) Diisopropyl Ether	0.00	87	0	N.D.		
30) Ethyl Acetate	0.00	61	0	N.D.		
31) n-Hexane	0.00	57	0	N.D.		
32) Chloroform	7.36	83	241	N.D.		
34) Tetrahydrofuran (THF)	7.79	72	120	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	8.12	62	374	N.D.		
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	8.86	56	165	No Calib	#	
41) Benzene	8.91	78	1394	N.D.		
42) Carbon Tetrachloride	0.00	117	0	N.D.		
43) Cyclohexane	9.29	84	998	N.D.		
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	0.00	63	0	N.D.		
46) Bromodichloromethane	10.07	83	463	N.D.		
47) Trichloroethene	10.15	130	581	N.D.		
48) 1,4-Dioxane	0.00	88	0	N.D.		
49) 2,2,4-Trimethylpentane...	0.00	57	0	N.D.		
50) Methyl Methacrylate	0.00	100	0	N.D.		

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212404.D Vial: 2
Acq On : 21 Jun 2024 12:01 Operator: SC
Sample : MB R09062124 1000mL Inst : MS09
Misc : S37-06062402/AC00880

Quant Time: Jun 21 12:40:21 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

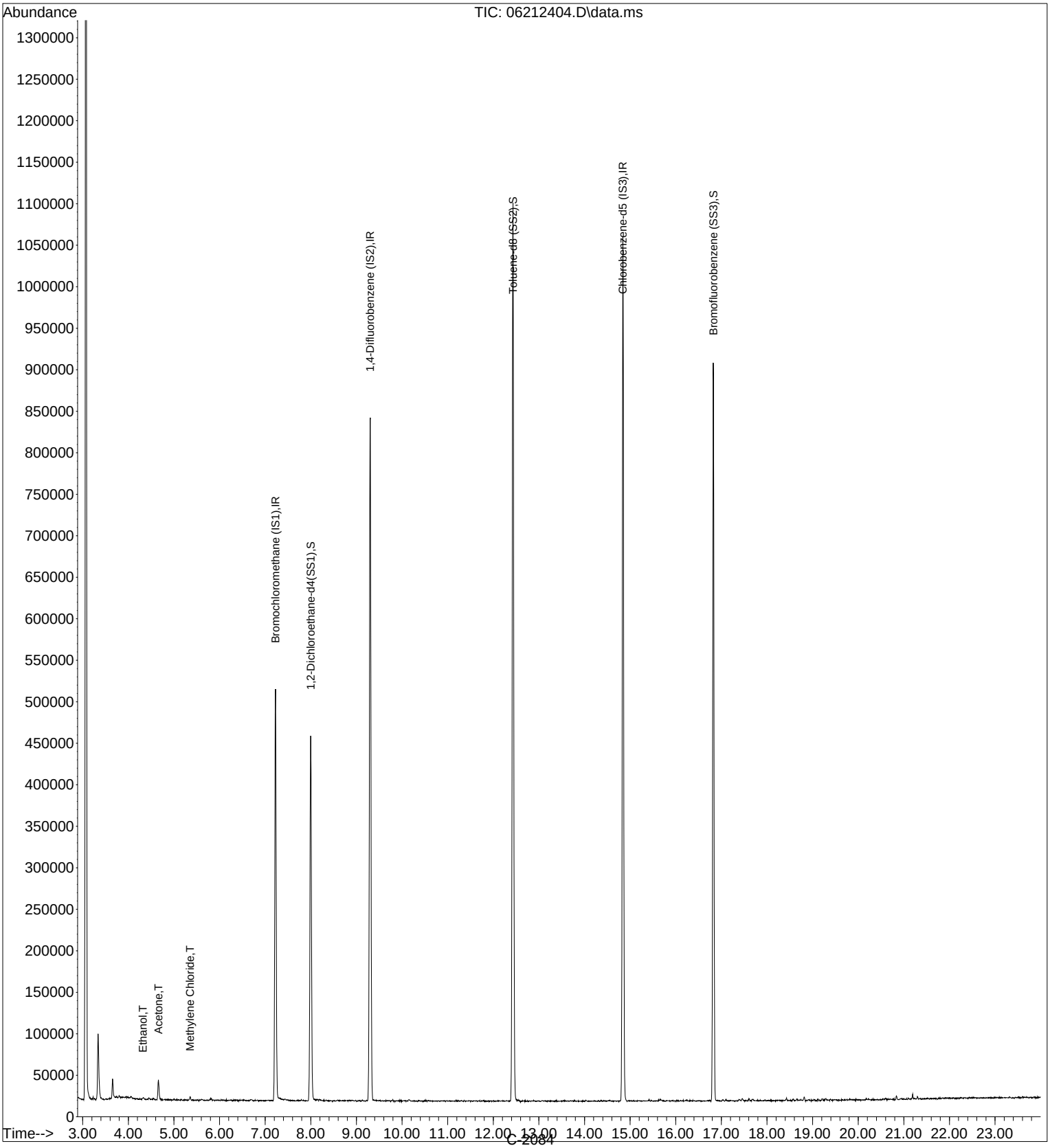
Internal Standards	R.T.	QIon	Response	Conc Units Dev(Min)
51) n-Heptane	0.00	71	0	N.D.
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.
55) 1,1,2-Trichloroethane	12.18	97	114	N.D.
58) Toluene	12.56	91	1317	N.D.
59) 2-Hexanone	0.00	43	0	N.D.
60) Dibromochloromethane	13.07	129	514	N.D.
61) 1,2-Dibromoethane	0.00	107	0	N.D.
62) n-Butyl Acetate	0.00	43	0	N.D.
63) n-Octane	0.00	57	0	N.D.
64) Tetrachloroethene	14.03	166	457	N.D.
65) Chlorobenzene	14.90	112	716	N.D.
66) Ethylbenzene	15.41	91	2319	N.D.
67) m- & p-Xylenes	15.73	91	116	N.D.
68) Bromoform	15.67	173	785	N.D.
69) Styrene	0.00	104	0	N.D.
70) o-Xylene	16.24	91	1322	N.D.
71) n-Nonane	0.00	43	0	N.D.
72) 1,1,2,2-Tetrachloroethane	16.21	83	444	N.D.
74) Cumene	17.03	105	1236	N.D.
75) alpha-Pinene	0.00	93	0	N.D.
76) n-Propylbenzene	17.70	91	2957	N.D.
77) 3-Ethyltoluene	17.03	105	1236	No Calib
78) 4-Ethyltoluene	17.86	105	893	N.D.
79) 1,3,5-Trimethylbenzene	17.96	105	600	N.D.
80) alpha-Methylstyrene	0.00	118	0	N.D.
81) 2-Ethyltoluene	17.03	105	1236	No Calib
82) 1,2,4-Trimethylbenzene	18.43	105	724	N.D.
83) n-Decane	0.00	58	0	N.D.
84) Benzyl Chloride	18.57	91	488	N.D.
85) 1,3-Dichlorobenzene	18.58	146	923	N.D.
86) 1,4-Dichlorobenzene	18.66	146	874	N.D.
87) sec-Butylbenzene	18.74	105	922	N.D.
88) 4-Isopropyltoluene (p-...	18.93	119	731	N.D.
89) 1,2,3-Trimethylbenzene	17.03	105	1236	No Calib
90) 1,2-Dichlorobenzene	19.04	146	716	N.D.
91) d-Limonene	0.00	68	0	N.D.
92) 1,2-Dibromo-3-Chloropr...	19.50	157	184	N.D.
93) n-Undecane	0.00	58	0	N.D.
94) 1,2,4-Trichlorobenzene	20.84	180	1745	N.D.
95) Naphthalene	20.94	128	1658	N.D.
96) n-Dodecane	0.00	58	0	N.D.
97) Hexachlorobutadiene	21.30	225	753	N.D.
98) Cyclohexanone	0.00	55	0	N.D.
99) tert-Butylbenzene	18.43	119	976	N.D.
100) n-Butylbenzene	19.39	91	929	N.D.
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212404.D Vial: 2
Acq On : 21 Jun 2024 12:01 Operator: SC
Sample : MB R09062124 1000mL Inst : MS09
Misc : S37-06062402/AC00880

Quant Time: Jun 21 12:40:21 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212404.D Vial: 2
Acq On : 21 Jun 2024 12:01 Operator: SC
Sample : MB R09062124 1000mL Inst : MS09
Misc : S37-06062402/AC00880

Quant Time: Jun 21 12:41:05 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/21/24

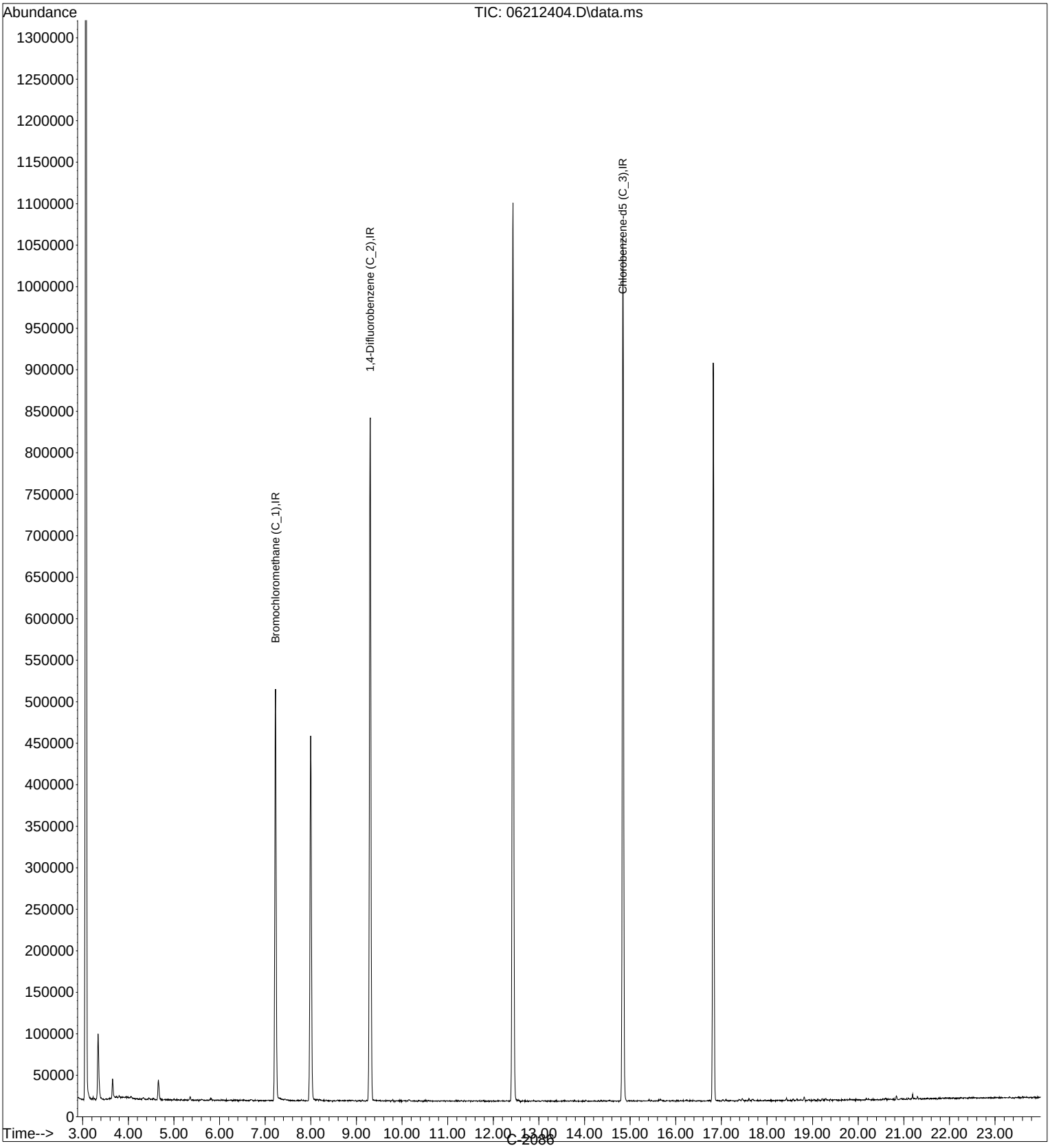
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	175811	12.500	ng	-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	780529	12.500	ng	-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	177159	12.500	ng	-0.01
Target Compounds						Qvalue
2) Chloropentafluoroethane	3.16	85	291	N.D.		
3) 1,1,1,2-Tetrafluoroeth...	3.21	83	221	N.D.		
4) 1,1-Difluoroethane	3.25	65	358	N.D.		
5) Chlorodifluoromethane ...	0.00	67	0	N.D.		
6) 1-Chloro-1,1-Difluoroe...	3.53	65	478	N.D.		
7) Dichlorofluoromethane ...	4.25	67	533	N.D.		
8) Vinylbromide	4.45	108	173	N.D.		
9) 2,2-Dichloro-1,1,1-tri...	4.57	83	237	N.D.		
10) 2-Methylbutane	4.68	57	599	N.D.		
11) Methyl Acetate	5.35	43	1661	N.D.		
12) 2-Methylpentane	0.00	71	0	N.D.		
13) 2,2-Dichloropropane	0.00	77	0	N.D.		
14) 1,1-Dichloropropene	0.00	75	0	N.D.		
15) Thiophene	9.03	84	190	N.D.		
17) 2,3-Dimethylpentane	0.00	56	0	N.D.		
18) Dibromomethane	9.80	174	519	N.D.		
20) Methyl Cyclohexane	0.00	55	0	N.D.		
21) 1,3-Dichloropropane	12.59	76	118	N.D.		
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		
23) 1-Chlorohexane	15.20	91	1039	N.D.		
24) 1,2,3-Trichloropropane	16.39	75	161	N.D.		
25) Bromobenzene	17.10	77	751	N.D.		
26) 2-Chlorotoluene	17.61	91	1829	N.D.		
27) 4-Chlorotoluene	17.61	91	1829	N.D.		
28) Indane	19.12	117	926	N.D.		
29) Indene	19.21	115	1377	N.D.		
30) 1,2,4,5-Tetramethylben...	20.18	119	1276	N.D.		
31) 1,2,3,4-Tetramethylben...	20.22	119	1218	N.D.		
32) 1,2,3,5-Tetramethylben...	20.60	119	1340	N.D.		
33) 1,2,3-Trichlorobenzene	21.19	180	1590	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212404.D Vial: 2
Acq On : 21 Jun 2024 12:01 Operator: SC
Sample : MB R09062124 1000mL Inst : MS09
Misc : S37-06062402/AC00880

Quant Time: Jun 21 12:41:05 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222403.D Vial: 2
Acq On : 22 Jun 2024 11:38 Operator: SC
Sample : MB R09062224 Inst : MS09
Misc : S37-06062402/AC00880

6/24/24

Quant Time: Jun 24 09:09:33 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	172858	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	759315	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	173918	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	380835	12.396	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.20%				
57) Toluene-d8 (SS2)	12.43	98	850734	12.783	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.24%				
73) Bromofluorobenzene (SS3)	16.82	174	305337	12.705	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.68%				
Target Compounds							Qvalue
2) Propene	3.32	42	1031	N.D.			
3) Dichlorodifluoromethan...	3.39	85	219	N.D.			
4) Chloromethane	0.00	50	0	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.36	45	234	N.D.			
11) Acetonitrile	4.44	41	912	N.D.			
12) Acrolein	4.55	56	1577	0.127	ng		92
13) Acetone	0.00	58	0	N.D.	d		
14) Trichlorofluoromethane	4.76	101	262	N.D.			
15) 2-Propanol (Isopropanol)	4.87	45	1545	N.D.			
16) Acrylonitrile	5.04	53	363	N.D.			
17) 1,1-Dichloroethene	5.27	96	111	N.D.			
18) 2-Methyl-2-Propanol (t...	0.00	59	0	N.D.			
19) Methylene Chloride	5.35	84	1192	0.063	ng		94
20) 3-Chloro-1-propene (Al...	5.45	41	281	N.D.			
21) Trichlorotrifluoroethane	5.58	151	822	N.D.			
22) Carbon Disulfide	5.61	76	1167	N.D.			
23) trans-1,2-Dichloroethene	6.14	61	111	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D.	d		
27) 2-Butanone (MEK)	6.69	72	2793	0.263	ng	#	90
28) cis-1,2-Dichloroethene	7.07	61	451	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.			
30) Ethyl Acetate	0.00	61	0	N.D.			
31) n-Hexane	7.30	57	4802	0.169	ng	#	93
32) Chloroform	7.36	83	1639	N.D.			
34) Tetrahydrofuran (THF)	7.79	72	225	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	360	N.D.			
38) 1,1,1-Trichloroethane	8.40	97	5229	0.148	ng		98
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.84	56	2017	No Calib			
41) Benzene	8.89	78	5326	0.076	ng		100
42) Carbon Tetrachloride	0.00	117	0	N.D.			
43) Cyclohexane	9.22	84	1971	0.087	ng		94
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.08	83	708	N.D.			
47) Trichloroethene	10.15	130	6711	0.328	ng		99
48) 1,4-Dioxane	10.14	88	420	N.D.			
49) 2,2,4-Trimethylpentane...	10.24	57	15790	0.228	ng		83
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222403.D Vial: 2
Acq On : 22 Jun 2024 11:38 Operator: SC
Sample : MB R09062224 Inst : MS09
Misc : S37-06062402/AC00880

Quant Time: Jun 24 09:09:33 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

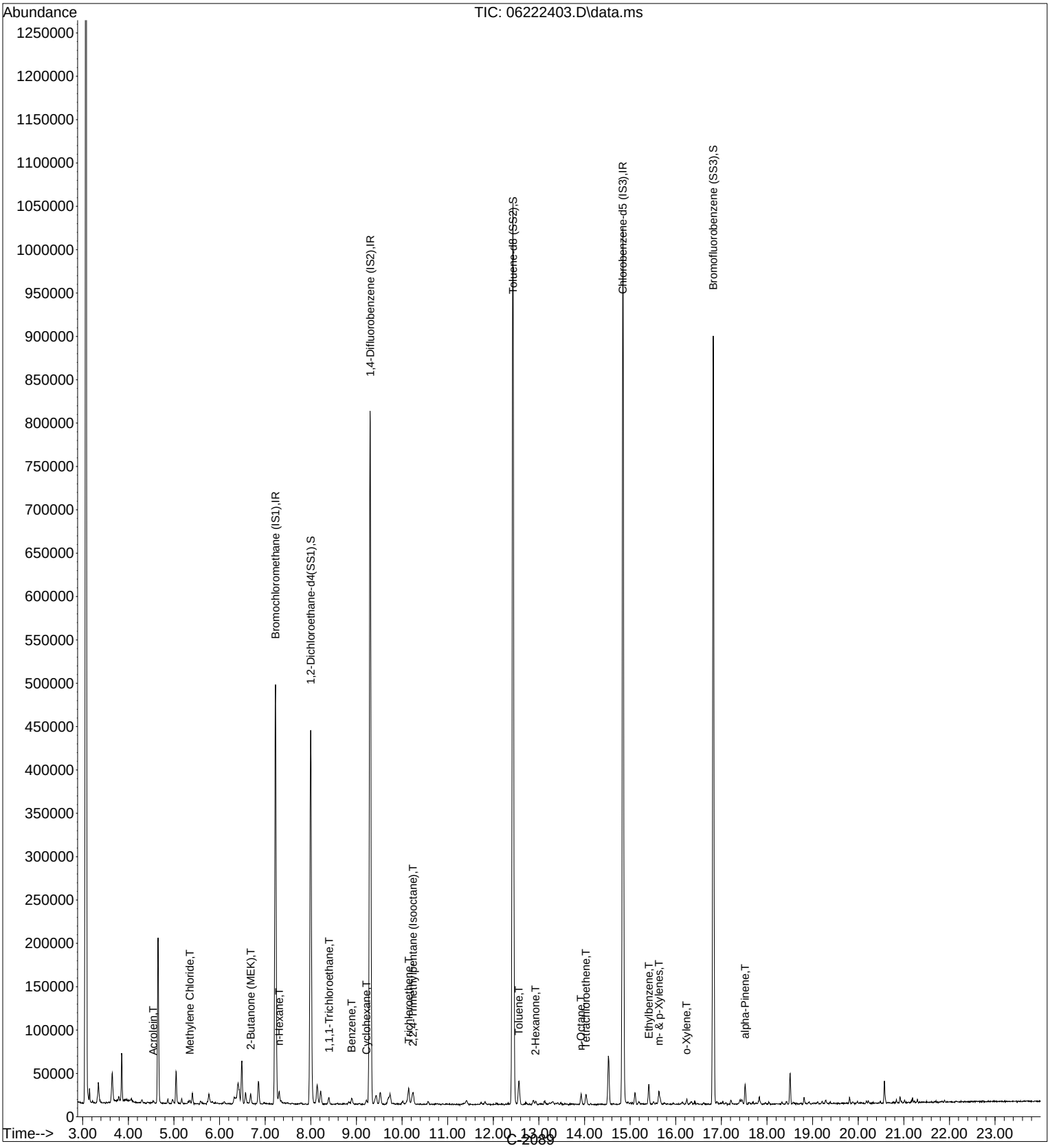
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	10.58	71	532	N.D.		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	12.56	91	21874	0.315 ng		99
59) 2-Hexanone	12.93	43	2713	0.062 ng	#	46
60) Dibromochloromethane	13.08	129	508	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	13.78	43	1000	N.D.		
63) n-Octane	13.92	57	1789	0.124 ng		92
64) Tetrachloroethene	14.03	166	3845	0.161 ng		99
65) Chlorobenzene	14.90	112	929	N.D.		
66) Ethylbenzene	15.41	91	19036	0.239 ng		95
67) m- & p-Xylenes	15.63	91	13511	0.202 ng		96
68) Bromoform	15.67	173	704	N.D.		
69) Styrene	16.10	104	390	N.D.		
70) o-Xylene	16.24	91	3801	0.058 ng		86
71) n-Nonane	16.61	43	935	N.D.		
72) 1,1,2,2-Tetrachloroethane	16.21	83	420	N.D.		
74) Cumene	17.03	105	2091	N.D.		
75) alpha-Pinene	17.52	93	8851	0.231 ng		93
76) n-Propylbenzene	17.68	91	3195	N.D.		
77) 3-Ethyltoluene	17.03	105	2091	No Calib		
78) 4-Ethyltoluene	17.86	105	1157	N.D.		
79) 1,3,5-Trimethylbenzene	17.95	105	938	N.D.		
80) alpha-Methylstyrene	0.00	118	0	N.D.		
81) 2-Ethyltoluene	17.03	105	2091	No Calib		
82) 1,2,4-Trimethylbenzene	18.43	105	1194	N.D.		
83) n-Decane	0.00	58	0	N.D.		
84) Benzyl Chloride	18.56	91	245	N.D.		
85) 1,3-Dichlorobenzene	18.58	146	791	N.D.		
86) 1,4-Dichlorobenzene	18.66	146	829	N.D.		
87) sec-Butylbenzene	18.74	105	1173	N.D.		
88) 4-Isopropyltoluene (p-...	18.92	119	1322	N.D.		
89) 1,2,3-Trimethylbenzene	17.03	105	2091	No Calib		
90) 1,2-Dichlorobenzene	19.04	146	802	N.D.		
91) d-Limonene	19.09	68	307	N.D.		
92) 1,2-Dibromo-3-Chloropr...	19.51	157	125	N.D.		
93) n-Undecane	0.00	58	0	N.D.		
94) 1,2,4-Trichlorobenzene	20.84	180	1459	N.D.		
95) Naphthalene	20.94	128	1100	N.D.		
96) n-Dodecane	0.00	58	0	N.D.		
97) Hexachlorobutadiene	21.30	225	952	N.D.		
98) Cyclohexanone	15.40	55	1052	No Calib	#	
99) tert-Butylbenzene	18.42	119	1255	N.D.		
100) n-Butylbenzene	19.38	91	851	N.D.		
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222403.D Vial: 2
Acq On : 22 Jun 2024 11:38 Operator: SC
Sample : MB R09062224 Inst : MS09
Misc : S37-06062402/AC00880

Quant Time: Jun 24 09:09:33 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222403.D Vial: 2
Acq On : 22 Jun 2024 11:38 Operator: SC
Sample : MB R09062224 Inst : MS09
Misc : S37-06062402/AC00880

Quant Time: Jun 24 09:39:53 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/24/24

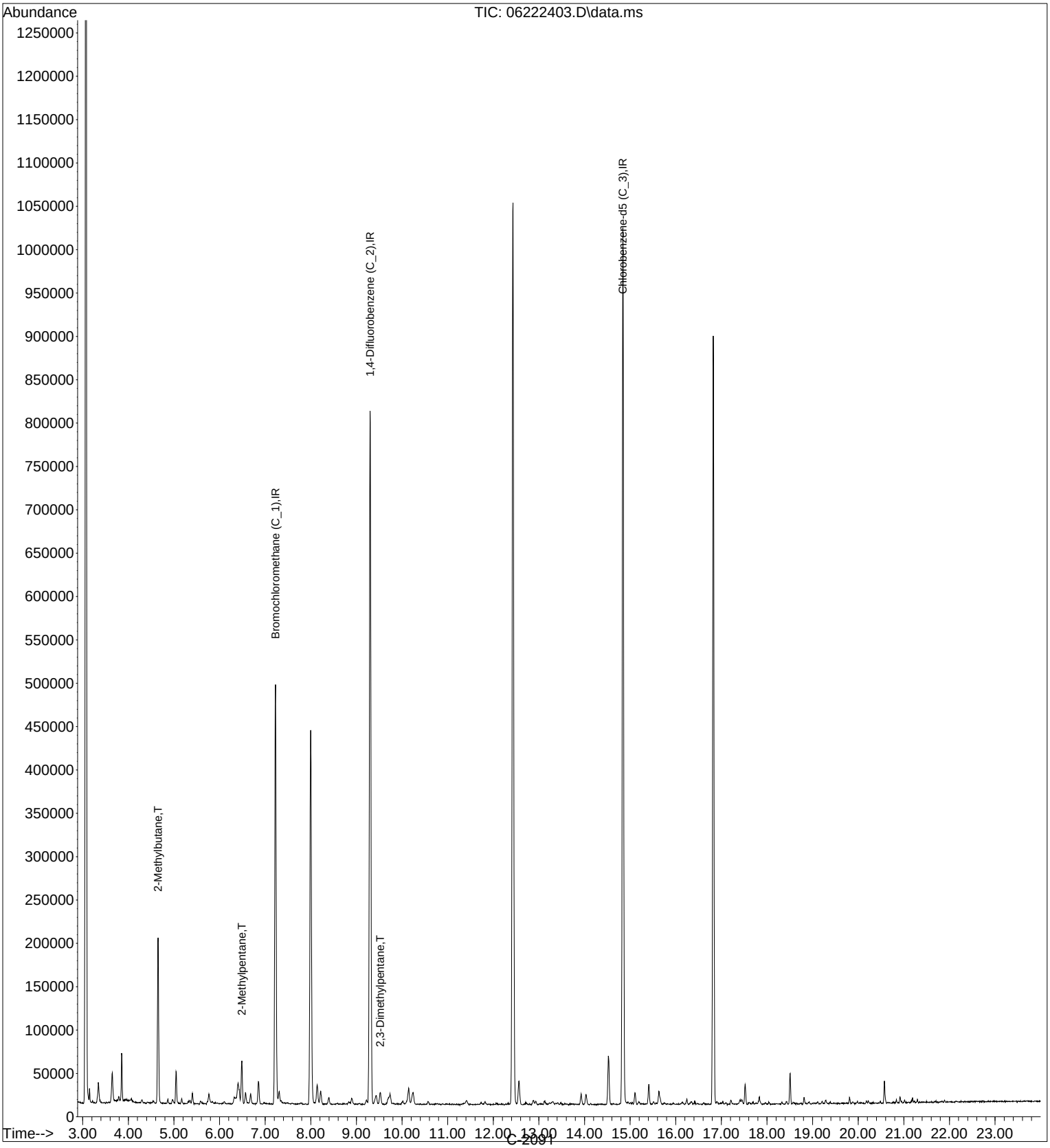
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	174959	12.500	ng	-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	760944	12.500	ng	-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	173918	12.500	ng	-0.01
Target Compounds						Qvalue
2) Chloropentafluoroethane	3.16	85	183	N.D.		
3) 1,1,1,2-Tetrafluoroeth...	3.21	83	148	N.D.		
4) 1,1-Difluoroethane	3.26	65	79	N.D.		
5) Chlorodifluoromethane ...	0.00	67	0	N.D.		
6) 1-Chloro-1,1-Difluoroe...	3.52	65	423	N.D.		
7) Dichlorofluoromethane ...	4.24	67	403	N.D.		
8) Vinylbromide	4.44	108	64	N.D.		
9) 2,2-Dichloro-1,1,1-tri...	4.56	83	278	N.D.		
10) 2-Methylbutane	4.65	57	34252	1.641	ng	93
11) Methyl Acetate	5.35	43	1662	N.D.		
12) 2-Methylpentane	6.49	71	9479	0.626	ng	71
13) 2,2-Dichloropropane	0.00	77	0	N.D.		
14) 1,1-Dichloropropene	0.00	75	0	N.D.		
15) Thiophene	9.05	84	292	N.D.		
17) 2,3-Dimethylpentane	9.52	56	7226	0.196	ng	97
18) Dibromomethane	9.80	174	494	N.D.		
20) Methyl Cyclohexane	11.42	55	2351	N.D.		
21) 1,3-Dichloropropane	12.56	76	143	N.D.		
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		
23) 1-Chlorohexane	15.21	91	849	N.D.		
24) 1,2,3-Trichloropropane	16.39	75	342	N.D.		
25) Bromobenzene	17.09	77	877	N.D.		
26) 2-Chlorotoluene	17.61	91	2013	N.D.		
27) 4-Chlorotoluene	17.68	91	3195	N.D.		
28) Indane	19.11	117	1384	N.D.		
29) Indene	19.21	115	1482	N.D.		
30) 1,2,4,5-Tetramethylben...	20.22	119	1844	N.D.		
31) 1,2,3,4-Tetramethylben...	20.22	119	1844	N.D.		
32) 1,2,3,5-Tetramethylben...	20.60	119	1960	N.D.		
33) 1,2,3-Trichlorobenzene	21.19	180	1903	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222403.D Vial: 2
Acq On : 22 Jun 2024 11:38 Operator: SC
Sample : MB R09062224 Inst : MS09
Misc : S37-06062402/AC00880

Quant Time: Jun 24 09:39:53 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242404.D Vial: 2
Acq On : 24 Jun 2024 9:02 Operator: MC/MJ
Sample : MB R09062424 1000mL Inst : MS09
Misc : S37-06062402/AC00880

Quant Time: Jun 24 09:32:24 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/24/24

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	188451	12.500	ng	0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	835953	12.500	ng	0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	184282	12.500	ng	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4(...	8.00	65	400165	11.947	ng	0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 95.60%			
57) Toluene-d8 (SS2)	12.43	98	924515	13.110	ng	-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 104.88%			
73) Bromofluorobenzene (SS3)	16.83	174	307193	12.063	ng	-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.48%			
Target Compounds						Qvalue
2) Propene	3.32	42	1087	N.D.		
3) Dichlorodifluoromethan...	0.00	85	0	N.D.		
4) Chloromethane	0.00	50	0	N.D.		
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.		
6) Vinyl Chloride	0.00	62	0	N.D.		
7) 1,3-Butadiene	0.00	54	0	N.D.		
8) Bromomethane	0.00	94	0	N.D.		
9) Chloroethane	0.00	64	0	N.D.		
10) Ethanol	4.39	45	111	N.D.		
11) Acetonitrile	4.45	41	1184	N.D.		
12) Acrolein	4.56	56	566	N.D.		
13) Acetone	4.66	58	8254	0.564	ng	95
14) Trichlorofluoromethane	0.00	101	0	N.D.		
15) 2-Propanol (Isopropanol)	4.91	45	453	N.D.		
16) Acrylonitrile	4.99	53	1064	N.D.		
17) 1,1-Dichloroethene	0.00	96	0	N.D.		
18) 2-Methyl-2-Propanol (t...	0.00	59	0	N.D.		
19) Methylene Chloride	5.36	84	1304	0.063	ng	94
20) 3-Chloro-1-propene (Al...	0.00	41	0	N.D.		
21) Trichlorotrifluoroethane	0.00	151	0	N.D.		
22) Carbon Disulfide	5.61	76	990	N.D.		
23) trans-1,2-Dichloroethene	6.15	61	143	N.D.		
24) 1,1-Dichloroethane	0.00	63	0	N.D.		
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.		
26) Vinyl Acetate	0.00	86	0	N.D.		
27) 2-Butanone (MEK)	6.69	72	169	N.D.		
28) cis-1,2-Dichloroethene	7.08	61	235	N.D.		
29) Diisopropyl Ether	0.00	87	0	N.D.		
30) Ethyl Acetate	0.00	61	0	N.D.		
31) n-Hexane	0.00	57	0	N.D.		
32) Chloroform	7.34	83	348	N.D.		
34) Tetrahydrofuran (THF)	7.80	72	187	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	8.11	62	260	N.D.		
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	8.84	56	167	No Calib	#	
41) Benzene	8.91	78	1259	N.D.		
42) Carbon Tetrachloride	0.00	117	0	N.D.		
43) Cyclohexane	9.30	84	865	N.D.		
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	0.00	63	0	N.D.		
46) Bromodichloromethane	10.08	83	535	N.D.		
47) Trichloroethene	10.16	130	553	N.D.		
48) 1,4-Dioxane	10.16	88	180	N.D.		
49) 2,2,4-Trimethylpentane...	0.00	57	0	N.D.		
50) Methyl Methacrylate	0.00	100	0	N.D.		

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242404.D Vial: 2
Acq On : 24 Jun 2024 9:02 Operator: MC/MJ
Sample : MB R09062424 1000mL Inst : MS09
Misc : S37-06062402/AC00880

Quant Time: Jun 24 09:32:24 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

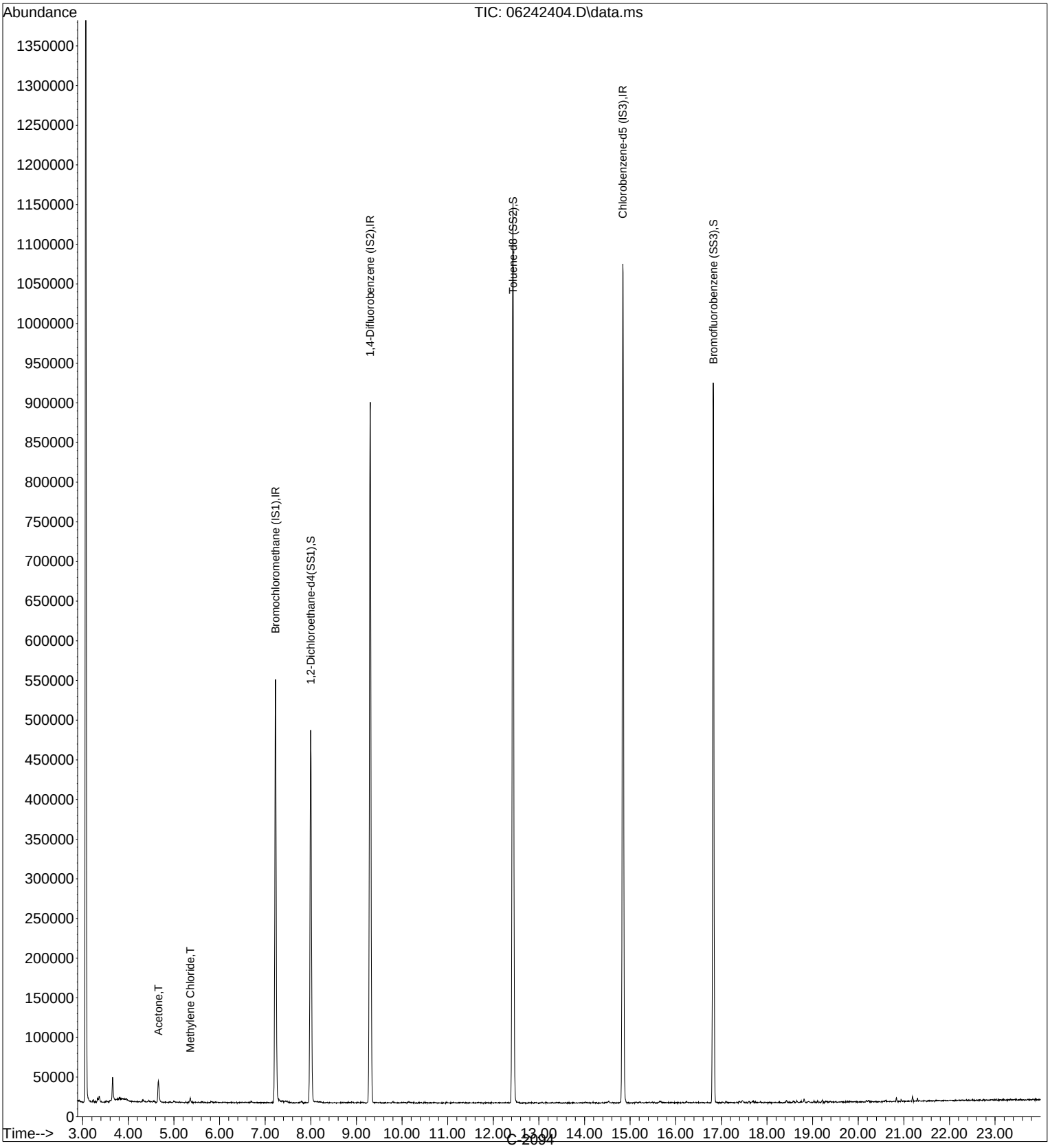
Internal Standards	R.T.	QIon	Response	Conc Units Dev(Min)
51) n-Heptane	0.00	71	0	N.D.
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.
58) Toluene	12.57	91	1217	N.D.
59) 2-Hexanone	12.94	43	235	N.D.
60) Dibromochloromethane	13.07	129	473	N.D.
61) 1,2-Dibromoethane	0.00	107	0	N.D.
62) n-Butyl Acetate	0.00	43	0	N.D.
63) n-Octane	0.00	57	0	N.D.
64) Tetrachloroethene	14.03	166	423	N.D.
65) Chlorobenzene	14.90	112	868	N.D.
66) Ethylbenzene	15.41	91	2311	N.D.
67) m- & p-Xylenes	15.65	91	1552	N.D.
68) Bromoform	15.67	173	657	N.D.
69) Styrene	0.00	104	0	N.D.
70) o-Xylene	16.25	91	1307	N.D.
71) n-Nonane	0.00	43	0	N.D.
72) 1,1,2,2-Tetrachloroethane	16.21	83	516	N.D.
74) Cumene	17.04	105	1214	N.D.
75) alpha-Pinene	0.00	93	0	N.D.
76) n-Propylbenzene	17.69	91	3030	N.D.
77) 3-Ethyltoluene	17.04	105	1214	No Calib
78) 4-Ethyltoluene	17.86	105	1071	N.D.
79) 1,3,5-Trimethylbenzene	17.96	105	724	N.D.
80) alpha-Methylstyrene	0.00	118	0	N.D.
81) 2-Ethyltoluene	17.04	105	1214	No Calib
82) 1,2,4-Trimethylbenzene	18.43	105	778	N.D.
83) n-Decane	0.00	58	0	N.D.
84) Benzyl Chloride	18.56	91	573	N.D.
85) 1,3-Dichlorobenzene	18.58	146	930	N.D.
86) 1,4-Dichlorobenzene	18.66	146	870	N.D.
87) sec-Butylbenzene	18.74	105	1138	N.D.
88) 4-Isopropyltoluene (p-...	18.93	119	897	N.D.
89) 1,2,3-Trimethylbenzene	17.04	105	1214	No Calib
90) 1,2-Dichlorobenzene	19.03	146	761	N.D.
91) d-Limonene	0.00	68	0	N.D.
92) 1,2-Dibromo-3-Chloropr...	19.51	157	183	N.D.
93) n-Undecane	0.00	58	0	N.D.
94) 1,2,4-Trichlorobenzene	20.84	180	1656	N.D.
95) Naphthalene	20.94	128	1801	N.D.
96) n-Dodecane	0.00	58	0	N.D.
97) Hexachlorobutadiene	21.30	225	744	N.D.
98) Cyclohexanone	0.00	55	0	N.D.
99) tert-Butylbenzene	18.42	119	1015	N.D.
100) n-Butylbenzene	19.38	91	1092	N.D.
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242404.D Vial: 2
Acq On : 24 Jun 2024 9:02 Operator: MC/MJ
Sample : MB R09062424 1000mL Inst : MS09
Misc : S37-06062402/AC00880

Quant Time: Jun 24 09:32:24 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242404.D Vial: 2
Acq On : 24 Jun 2024 9:02 Operator: MC/MJ
Sample : MB R09062424 1000mL Inst : MS09
Misc : S37-06062402/AC00880

Quant Time: Jun 24 09:34:33 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/24/24

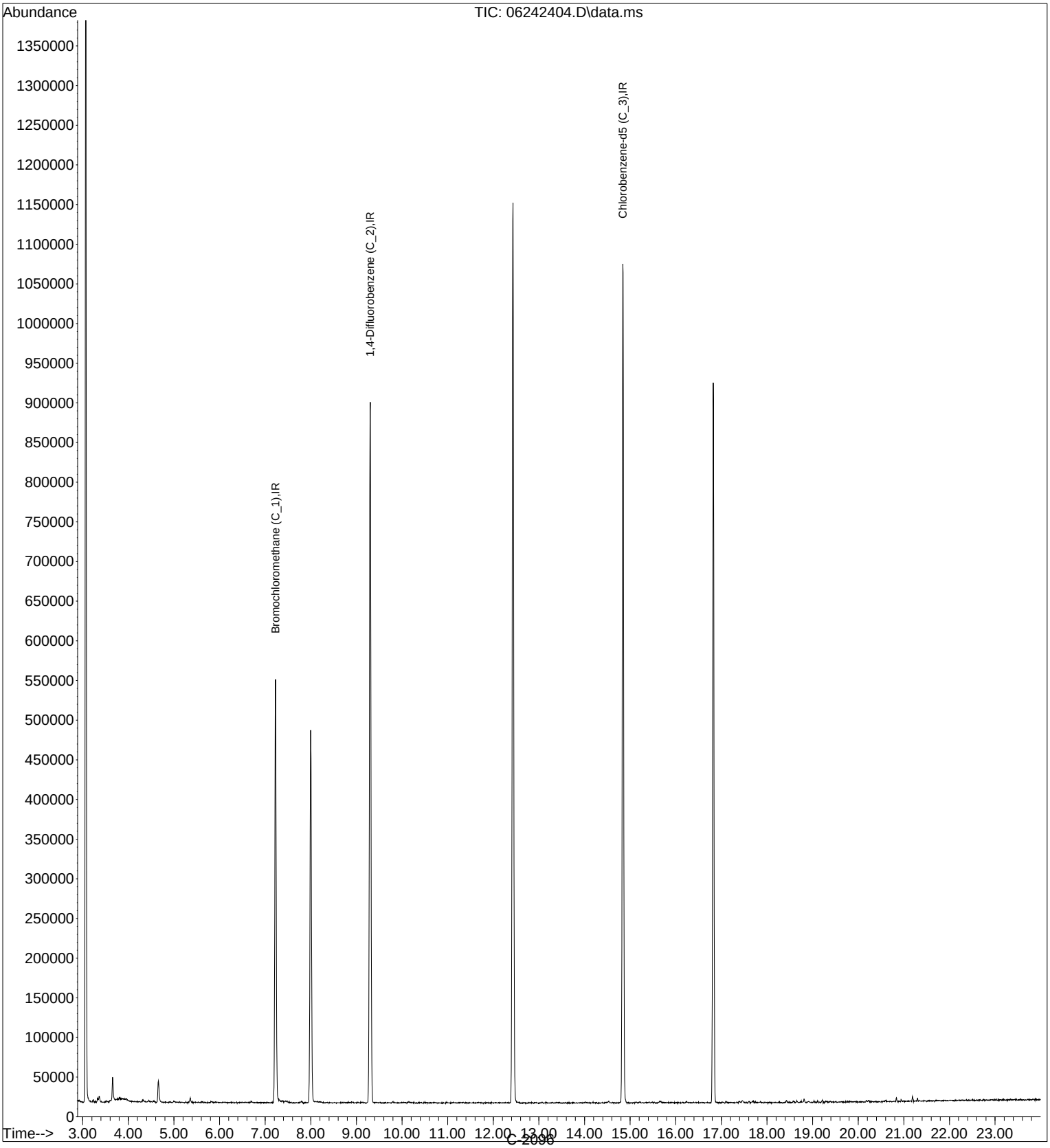
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	191205	12.500	ng	-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	838347	12.500	ng	-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	184282	12.500	ng	-0.01
Target Compounds						Qvalue
2) Chloropentafluoroethane	3.17	85	261	N.D.		
3) 1,1,1,2-Tetrafluoroeth...	3.22	83	243	N.D.		
4) 1,1-Difluoroethane	3.27	65	270	N.D.		
5) Chlorodifluoromethane ...	3.32	67	66	N.D.		
6) 1-Chloro-1,1-Difluoroe...	3.53	65	683	N.D.		
7) Dichlorofluoromethane ...	4.25	67	546	N.D.		
8) Vinylbromide	4.45	108	192	N.D.		
9) 2,2-Dichloro-1,1,1-tri...	4.57	83	399	N.D.		
10) 2-Methylbutane	4.67	57	646	N.D.		
11) Methyl Acetate	5.36	43	1769	N.D.		
12) 2-Methylpentane	0.00	71	0	N.D.		
13) 2,2-Dichloropropane	0.00	77	0	N.D.		
14) 1,1-Dichloropropene	0.00	75	0	N.D.		
15) Thiophene	9.04	84	220	N.D.		
17) 2,3-Dimethylpentane	0.00	56	0	N.D.		
18) Dibromomethane	9.79	174	510	N.D.		
20) Methyl Cyclohexane	0.00	55	0	N.D.		
21) 1,3-Dichloropropane	12.60	76	56	N.D.		
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		
23) 1-Chlorohexane	15.20	91	760	N.D.		
24) 1,2,3-Trichloropropane	16.38	75	334	N.D.		
25) Bromobenzene	17.09	77	934	N.D.		
26) 2-Chlorotoluene	17.61	91	2086	N.D.		
27) 4-Chlorotoluene	17.69	91	3030	N.D.		
28) Indane	19.11	117	1315	N.D.		
29) Indene	19.21	115	1558	N.D.		
30) 1,2,4,5-Tetramethylben...	20.18	119	1537	N.D.		
31) 1,2,3,4-Tetramethylben...	20.18	119	1537	N.D.		
32) 1,2,3,5-Tetramethylben...	20.59	119	1508	N.D.		
33) 1,2,3-Trichlorobenzene	21.19	180	1859	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242404.D Vial: 2
Acq On : 24 Jun 2024 9:02 Operator: MC/MJ
Sample : MB R09062424 1000mL Inst : MS09
Misc : S37-06062402/AC00880

Quant Time: Jun 24 09:34:33 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172405.D Vial: 2
Acq On : 17 Jun 2024 10:58 Operator: SC
Sample : LCS R09061724 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

Quant Time: Jun 17 11:20:40 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Jun 12 10:31:44 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/17/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.28	130	178083	12.500	ng		0.05
37) 1,4-Difluorobenzene (IS2)	9.34	114	785782	12.500	ng		0.02
56) Chlorobenzene-d5 (IS3)	14.85	54	178840	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.04	65	382324	12.079	ng		0.05
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.64%				
57) Toluene-d8 (SS2)	12.45	98	872177	12.744	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.92%				
73) Bromofluorobenzene (SS3)	16.83	174	298117	12.063	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.48%				
Target Compounds							Qvalue
2) Propene	3.28	42	569775	24.991	ng		98
3) Dichlorodifluoromethan...	3.36	85	923114	22.026	ng		99
4) Chloromethane	3.49	50	759757	26.517	ng		100
5) 1,2-Dichloro-1,1,2,2-t...	3.60	135	447834	24.641	ng		100
6) Vinyl Chloride	3.69	62	715772	26.175	ng		100
7) 1,3-Butadiene	3.80	54	555058	26.870	ng		96
8) Bromomethane	4.02	94	395372	27.151	ng		99
9) Chloroethane	4.16	64	304648	26.587	ng		99
10) Ethanol	4.36	45	2282810	131.856	ng		100
11) Acetonitrile	4.48	41	1030071	23.698	ng		99
12) Acrolein	4.56	56	702081	54.787	ng		100
13) Acetone	4.66	58	1747117	126.289	ng		91
14) Trichlorofluoromethane	4.76	101	938563	22.138	ng		100
15) 2-Propanol (Isopropanol)	4.91	45	3048554	54.688	ng		97
16) Acrylonitrile	5.04	53	1351261	52.081	ng		100
17) 1,1-Dichloroethene	5.27	96	419186	25.846	ng		98
18) 2-Methyl-2-Propanol (t...	5.37	59	2634943	59.220	ng		99
19) Methylene Chloride	5.39	84	444938	22.721	ng		98
20) 3-Chloro-1-propene (Al...	5.48	41	906666	25.944	ng		98
21) Trichlorotrifluoroethane	5.59	151	427078	23.813	ng		95
22) Carbon Disulfide	5.61	76	3352837	53.126	ng		100
23) trans-1,2-Dichloroethene	6.17	61	755871	26.981	ng		99
24) 1,1-Dichloroethane	6.36	63	891009	26.728	ng		100
25) Methyl tert-Butyl Ether	6.39	73	1388546	30.024	ng		99
26) Vinyl Acetate	6.48	86	465362	145.779	ng	#	94
27) 2-Butanone (MEK)	6.70	72	576159	52.629	ng		99
28) cis-1,2-Dichloroethene	7.12	61	715242	26.030	ng		99
29) Diisopropyl Ether	7.31	87	692058	53.374	ng	#	95
30) Ethyl Acetate	7.31	61	358792	53.677	ng		99
31) n-Hexane	7.32	57	820884	28.028	ng		99
32) Chloroform	7.41	83	869504	24.920	ng		100
34) Tetrahydrofuran (THF)	7.77	72	516769	51.743	ng		96
35) Ethyl tert-Butyl Ether	7.85	87	978545	56.836	ng		96
36) 1,2-Dichloroethane	8.15	62	802696	22.978	ng		99
38) 1,1,1-Trichloroethane	8.43	97	831679	22.796	ng		100
39) Isopropyl Acetate	9.62	61	1443	No Calib		#	
40) 1-Butanol	8.84	56	2962	No Calib			
41) Benzene	8.93	78	1706334	23.523	ng		100
42) Carbon Tetrachloride	9.10	117	768656	22.847	ng		100
43) Cyclohexane	9.24	84	1277689	54.423	ng		97
44) tert-Amyl Methyl Ether	9.62	73	2563376	56.154	ng		99
45) 1,2-Dichloropropane	9.88	63	466176	26.624	ng		100
46) Bromodichloromethane	10.10	83	722073	24.742	ng		100
47) Trichloroethene	10.18	130	480672	22.699	ng		100
48) 1,4-Dioxane	10.14	88	365897	27.340	ng		97
49) 2,2,4-Trimethylpentane...	10.26	57	1974903	27.538	ng		96
50) Methyl Methacrylate	10.43	100	342326	55.688	ng		96

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172405.D Vial: 2
Acq On : 17 Jun 2024 10:58 Operator: SC
Sample : LCS R09061724 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

Quant Time: Jun 17 11:20:40 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Jun 12 10:31:44 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

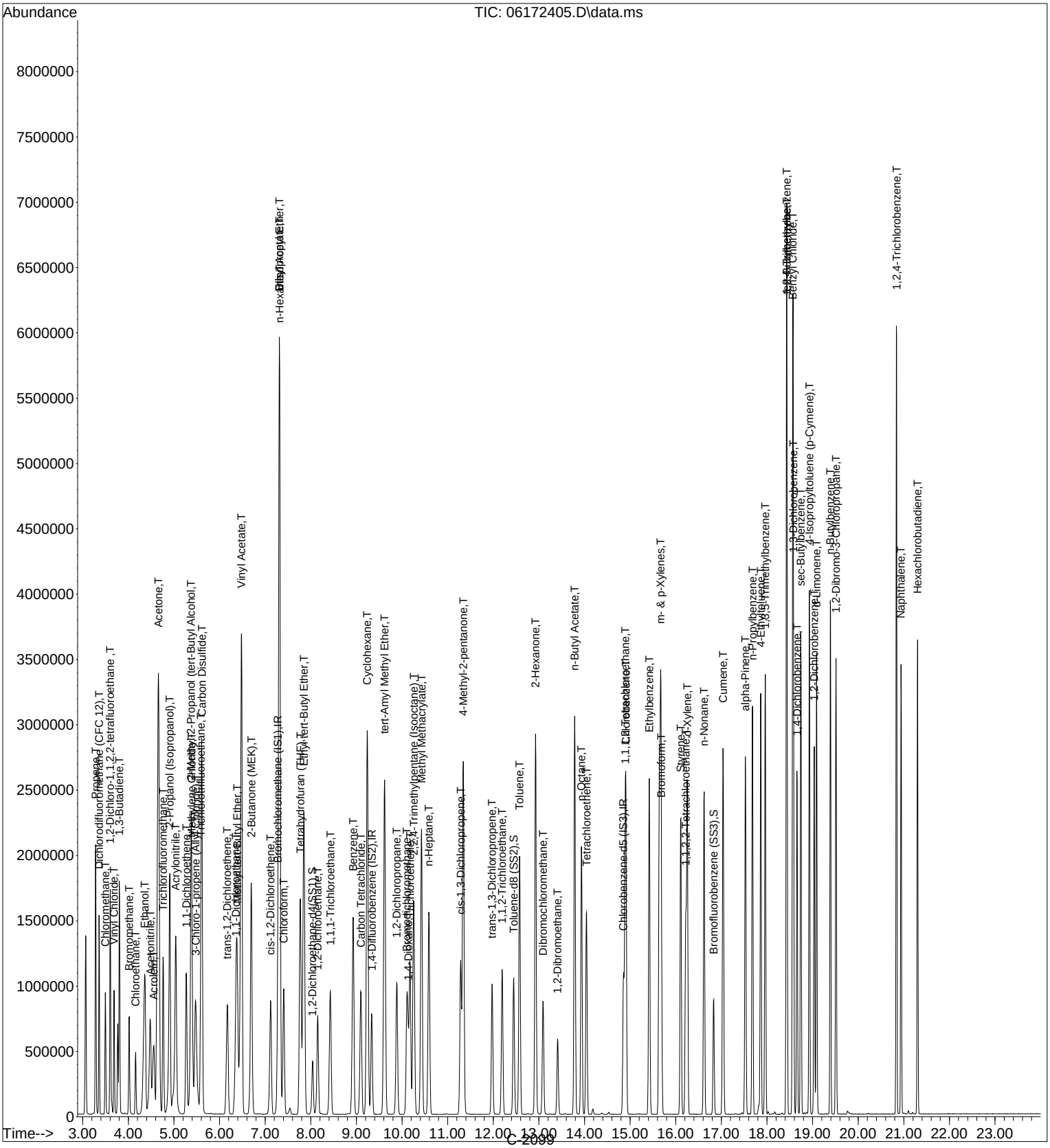
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	10.59	71	422082	27.589 ng		98
52) cis-1,3-Dichloropropene	11.29	75	818606	27.330 ng		100
53) 4-Methyl-2-pentanone	11.34	58	932654	58.497 ng		98
54) trans-1,3-Dichloropropene	11.97	75	674018	24.947 ng		100
55) 1,1,2-Trichloroethane	12.19	97	433892	25.279 ng		99
58) Toluene	12.57	91	1789013	25.016 ng		100
59) 2-Hexanone	12.93	43	2613549	58.294 ng		98
60) Dibromochloromethane	13.09	129	585706	23.691 ng		99
61) 1,2-Dibromoethane	13.41	107	496385	24.680 ng		100
62) n-Butyl Acetate	13.78	43	2904032	61.617 ng		99
63) n-Octane	13.93	57	420197	28.328 ng		97
64) Tetrachloroethene	14.05	166	565447	23.001 ng		100
65) Chlorobenzene	14.91	112	1181484	23.572 ng		100
66) Ethylbenzene	15.42	91	2140641	26.163 ng		100
67) m- & p-Xylenes	15.67	91	3528371	51.286 ng		100
68) Bromoform	15.69	173	548685	25.060 ng		99
69) Styrene	16.11	104	1225707	26.415 ng		99
70) o-Xylene	16.25	91	1734263	25.562 ng		100
71) n-Nonane	16.62	43	1138563	28.870 ng		99
72) 1,1,2,2-Tetrachloroethane	16.22	83	789699	25.424 ng		99
74) Cumene	17.04	105	2080519	24.564 ng		100
75) alpha-Pinene	17.53	93	1104058	27.981 ng		98
76) n-Propylbenzene	17.68	91	2574518	25.179 ng		99
77) 3-Ethyltoluene	17.04	105	2080519	No Calib		
78) 4-Ethyltoluene	17.87	105	2076026	25.708 ng		100
79) 1,3,5-Trimethylbenzene	17.96	105	1817568	25.764 ng		99
80) alpha-Methylstyrene	17.03	118	4204	No Calib	#	
81) 2-Ethyltoluene	17.04	105	2080519	No Calib		
82) 1,2,4-Trimethylbenzene	18.43	105	1865021	25.077 ng		99
83) n-Decane	17.04	58	16913	No Calib		
84) Benzyl Chloride	18.56	91	3266738	54.649 ng		100
85) 1,3-Dichlorobenzene	18.58	146	1043746	21.292 ng		99
86) 1,4-Dichlorobenzene	18.66	146	997619	20.884 ng		100
87) sec-Butylbenzene	18.74	105	2337050	24.838 ng		99
88) 4-Isopropyltoluene (p-...	18.93	119	2067883	24.444 ng		100
89) 1,2,3-Trimethylbenzene	17.04	105	2080519	No Calib		
90) 1,2-Dichlorobenzene	19.04	146	1028302	21.609 ng		100
91) d-Limonene	19.09	68	708788	28.034 ng		96
92) 1,2-Dibromo-3-Chloropr...	19.51	157	804179	48.730 ng		99
93) n-Undecane	17.87	58	38532	No Calib	#	
94) 1,2,4-Trichlorobenzene	20.84	180	1593969	42.433 ng		100
95) Naphthalene	20.94	128	2081211	21.837 ng		100
96) n-Dodecane	18.93	58	53951	No Calib	#	
97) Hexachlorobutadiene	21.30	225	603317	19.536 ng		99
98) Cyclohexanone	15.43	55	9799	No Calib	#	
99) tert-Butylbenzene	18.43	119	1780156	24.980 ng		100
100) n-Butylbenzene	19.39	91	1957925	24.736 ng		99
101) 1,1,1,2-Tetrachloroethane	14.89	131	480751	25.255 ng		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172405.D Vial: 2
Acq On : 17 Jun 2024 10:58 Operator: SC
Sample : LCS R09061724 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

Quant Time: Jun 17 11:20:40 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Jun 12 10:31:44 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172406.D Vial: 2
Acq On : 17 Jun 2024 11:31 Operator: SC
Sample : LCSD R09061724 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

Quant Time: Jun 17 11:54:29 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Jun 12 10:31:44 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/17/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.28	130	178847	12.500	ng		0.05
37) 1,4-Difluorobenzene (IS2)	9.34	114	788405	12.500	ng		0.02
56) Chlorobenzene-d5 (IS3)	14.85	54	179600	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.04	65	383990	12.080	ng		0.06
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.64%				
57) Toluene-d8 (SS2)	12.45	98	879910	12.803	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.40%				
73) Bromofluorobenzene (SS3)	16.83	174	302163	12.175	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.44%				
Target Compounds							Qvalue
2) Propene	3.28	42	573523	25.048	ng		98
3) Dichlorodifluoromethan...	3.36	85	936867	22.259	ng		100
4) Chloromethane	3.49	50	779173	27.079	ng		100
5) 1,2-Dichloro-1,1,2,2-t...	3.60	135	437528	23.971	ng		100
6) Vinyl Chloride	3.69	62	696342	25.356	ng		100
7) 1,3-Butadiene	3.80	54	576319	27.780	ng		96
8) Bromomethane	4.02	94	388300	26.552	ng		100
9) Chloroethane	4.16	64	305461	26.544	ng		100
10) Ethanol	4.36	45	2330026	134.009	ng		100
11) Acetonitrile	4.48	41	1056349	24.199	ng		100
12) Acrolein	4.56	56	719381	55.897	ng		100
13) Acetone	4.66	58	1779015	128.045	ng		91
14) Trichlorofluoromethane	4.76	101	943498	22.159	ng		100
15) 2-Propanol (Isopropanol)	4.91	45	3133311	55.968	ng		97
16) Acrylonitrile	5.04	53	1372624	52.679	ng		100
17) 1,1-Dichloroethene	5.27	96	423074	25.974	ng		99
18) 2-Methyl-2-Propanol (t...	5.38	59	2670843	59.771	ng		99
19) Methylene Chloride	5.39	84	454734	23.122	ng		98
20) 3-Chloro-1-propene (Al...	5.48	41	917147	26.132	ng		99
21) Trichlorotrifluoroethane	5.59	151	428805	23.807	ng		94
22) Carbon Disulfide	5.61	76	3379346	53.317	ng		100
23) trans-1,2-Dichloroethene	6.17	61	774223	27.518	ng		98
24) 1,1-Dichloroethane	6.36	63	905422	27.044	ng		100
25) Methyl tert-Butyl Ether	6.39	73	1404199	30.233	ng		98
26) Vinyl Acetate	6.48	86	474583	148.032	ng	#	94
27) 2-Butanone (MEK)	6.70	72	583138	53.039	ng		98
28) cis-1,2-Dichloroethene	7.12	61	726991	26.344	ng		99
29) Diisopropyl Ether	7.31	87	698383	53.632	ng	#	94
30) Ethyl Acetate	7.31	61	365387	54.431	ng		100
31) n-Hexane	7.32	57	832405	28.300	ng		99
32) Chloroform	7.41	83	878867	25.081	ng		100
34) Tetrahydrofuran (THF)	7.77	72	527376	52.580	ng		95
35) Ethyl tert-Butyl Ether	7.85	87	986986	57.081	ng		96
36) 1,2-Dichloroethane	8.15	62	813551	23.189	ng		100
38) 1,1,1-Trichloroethane	8.43	97	834614	22.800	ng		100
39) Isopropyl Acetate	9.62	61	1628	No Calib		#	
40) 1-Butanol	8.83	56	2709	No Calib			
41) Benzene	8.93	78	1724611	23.696	ng		100
42) Carbon Tetrachloride	9.10	117	772414	22.882	ng		100
43) Cyclohexane	9.24	84	1294970	54.976	ng		96
44) tert-Amyl Methyl Ether	9.62	73	2600275	56.772	ng		99
45) 1,2-Dichloropropane	9.88	63	472645	26.903	ng		99
46) Bromodichloromethane	10.11	83	728286	24.872	ng		99
47) Trichloroethene	10.18	130	482031	22.688	ng		100
48) 1,4-Dioxane	10.14	88	374739	27.907	ng		97
49) 2,2,4-Trimethylpentane...	10.26	57	2016711	28.028	ng		96
50) Methyl Methacrylate	10.43	100	348070	56.434	ng		95

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172406.D Vial: 2
Acq On : 17 Jun 2024 11:31 Operator: SC
Sample : LCSD R09061724 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

Quant Time: Jun 17 11:54:29 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Jun 12 10:31:44 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

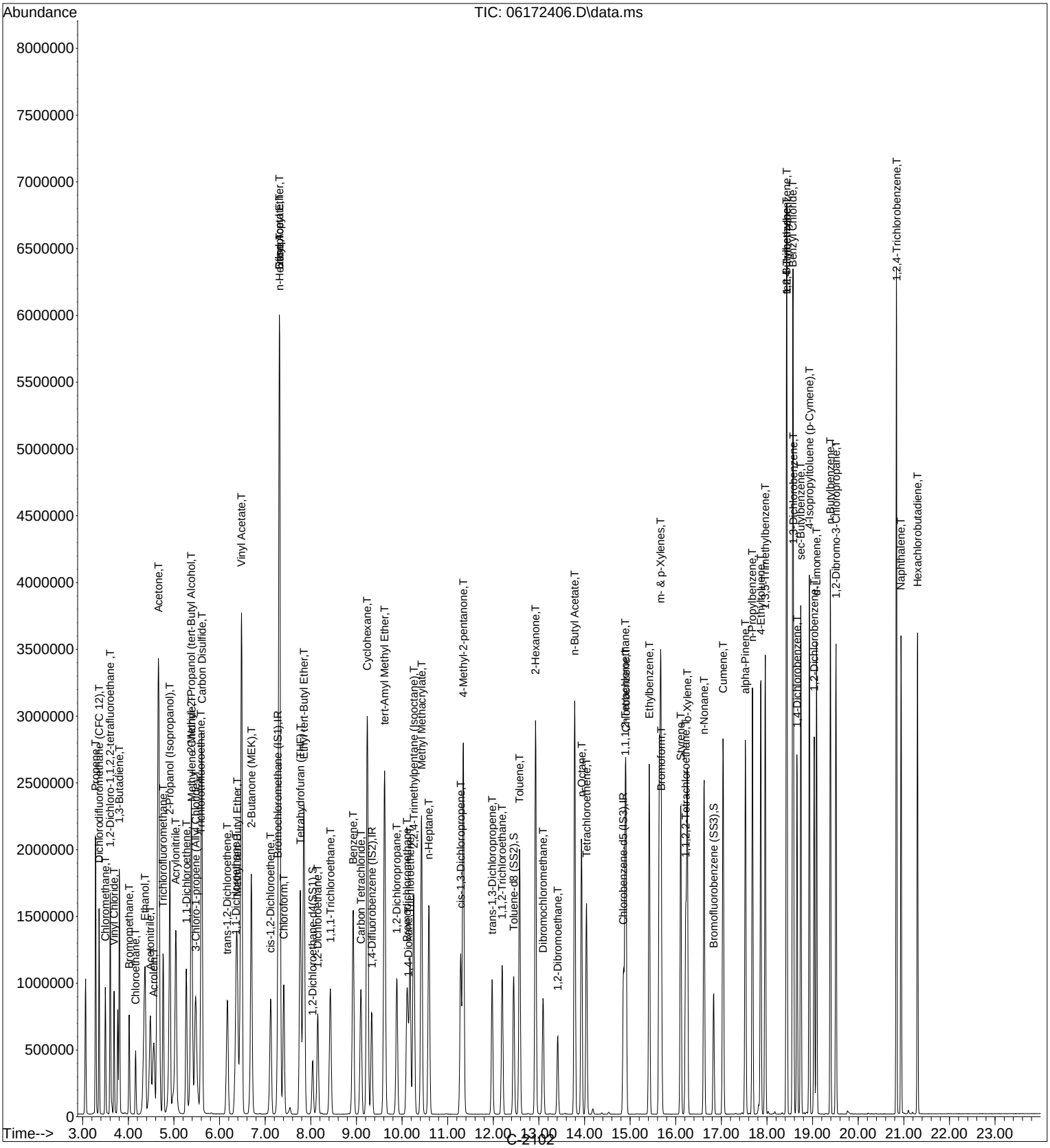
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	10.59	71	431220	28.093 ng		99
52) cis-1,3-Dichloropropene	11.29	75	828655	27.573 ng		100
53) 4-Methyl-2-pentanone	11.34	58	945851	59.128 ng		100
54) trans-1,3-Dichloropropene	11.98	75	691049	25.492 ng		100
55) 1,1,2-Trichloroethane	12.19	97	438939	25.488 ng		99
58) Toluene	12.57	91	1811685	25.226 ng		100
59) 2-Hexanone	12.93	43	2678272	59.484 ng		99
60) Dibromochloromethane	13.09	129	592633	23.870 ng		100
61) 1,2-Dibromoethane	13.41	107	505174	25.011 ng		100
62) n-Butyl Acetate	13.78	43	2978728	62.934 ng		99
63) n-Octane	13.94	57	431685	28.979 ng		97
64) Tetrachloroethene	14.05	166	570914	23.126 ng		100
65) Chlorobenzene	14.91	112	1199694	23.834 ng		99
66) Ethylbenzene	15.42	91	2172256	26.437 ng		99
67) m- & p-Xylenes	15.67	91	3583887	51.873 ng		100
68) Bromoform	15.69	173	552592	25.132 ng		99
69) Styrene	16.11	104	1240682	26.625 ng		99
70) o-Xylene	16.25	91	1757155	25.790 ng		100
71) n-Nonane	16.62	43	1163489	29.378 ng		99
72) 1,1,2,2-Tetrachloroethane	16.22	83	805935	25.837 ng		99
74) Cumene	17.04	105	2109718	24.804 ng		99
75) alpha-Pinene	17.53	93	1122642	28.331 ng		98
76) n-Propylbenzene	17.68	91	2590335	25.227 ng		99
77) 3-Ethyltoluene	17.04	105	2109718	No Calib		
78) 4-Ethyltoluene	17.87	105	2096629	25.853 ng		100
79) 1,3,5-Trimethylbenzene	17.96	105	1831803	25.856 ng		100
80) alpha-Methylstyrene	17.04	118	4276	No Calib	#	
81) 2-Ethyltoluene	17.04	105	2109718	No Calib		
82) 1,2,4-Trimethylbenzene	18.43	105	1885180	25.241 ng		100
83) n-Decane	17.05	58	18961	No Calib		
84) Benzyl Chloride	18.56	91	3328746	55.451 ng		100
85) 1,3-Dichlorobenzene	18.58	146	1055101	21.433 ng		99
86) 1,4-Dichlorobenzene	18.66	146	1010269	21.059 ng		100
87) sec-Butylbenzene	18.74	105	2362826	25.005 ng		99
88) 4-Isopropyltoluene (p-...	18.93	119	2084712	24.538 ng		100
89) 1,2,3-Trimethylbenzene	17.04	105	2109718	No Calib		
90) 1,2-Dichlorobenzene	19.04	146	1039539	21.753 ng		100
91) d-Limonene	19.09	68	720177	28.363 ng		97
92) 1,2-Dibromo-3-Chloropr...	19.51	157	818479	49.387 ng		100
93) n-Undecane	17.86	58	34198	No Calib		
94) 1,2,4-Trichlorobenzene	20.84	180	1627972	43.155 ng		100
95) Naphthalene	20.94	128	2147889	22.441 ng		100
96) n-Dodecane	18.93	58	53912	No Calib	#	
97) Hexachlorobutadiene	21.30	225	614683	19.820 ng		99
98) Cyclohexanone	15.43	55	10031	No Calib	#	
99) tert-Butylbenzene	18.43	119	1792088	25.041 ng		100
100) n-Butylbenzene	19.39	91	1981313	24.926 ng		99
101) 1,1,1,2-Tetrachloroethane	14.89	131	489465	25.604 ng		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172406.D Vial: 2
Acq On : 17 Jun 2024 11:31 Operator: SC
Sample : LCSD R09061724 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

Quant Time: Jun 17 11:54:29 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Jun 12 10:31:44 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182405.D Vial: 2
Acq On : 18 Jun 2024 11:29 Operator: SC
Sample : LCS R09061824 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

6/18/24

Quant Time: Jun 18 11:52:25 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	7.27	130	145213	12.500	ng	0.05
37) 1,4-Difluorobenzene (IS2)	9.33	114	632223	12.500	ng	0.03
56) Chlorobenzene-d5 (IS3)	14.85	54	148375	12.500	ng	0.01
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4(...	8.04	65	317518	12.303	ng	0.06
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.40%			
57) Toluene-d8 (SS2)	12.44	98	707153	12.454	ng	-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.60%			
73) Bromofluorobenzene (SS3)	16.83	174	258252	12.596	ng	0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.80%			
Target Compounds						Qvalue
2) Propene	3.27	42	441201	23.732	ng	100
3) Dichlorodifluoromethan...	3.35	85	772449	22.603	ng	100
4) Chloromethane	3.49	50	560469	23.989	ng	100
5) 1,2-Dichloro-1,1,2,2-t...	3.60	135	375832	25.360	ng	99
6) Vinyl Chloride	3.68	62	563181	25.257	ng	100
7) 1,3-Butadiene	3.80	54	407355	24.184	ng	95
8) Bromomethane	4.01	94	301268	25.372	ng	100
9) Chloroethane	4.15	64	226889	24.283	ng	100
10) Ethanol	4.36	45	1652408	117.048	ng	100
11) Acetonitrile	4.48	41	746781	21.070	ng	99
12) Acrolein	4.55	56	509479	48.757	ng	99
13) Acetone	4.65	58	1312225	116.324	ng	96
14) Trichlorofluoromethane	4.76	101	784255	22.686	ng	100
15) 2-Propanol (Isopropanol)	4.90	45	2246076	49.413	ng	99
16) Acrylonitrile	5.03	53	1011736	47.822	ng	100
17) 1,1-Dichloroethene	5.27	96	328608	24.847	ng	99
18) 2-Methyl-2-Propanol (t...	5.37	59	2066102	56.947	ng	99
19) Methylene Chloride	5.39	84	345661	21.647	ng	100
20) 3-Chloro-1-propene (Al...	5.47	41	666459	23.387	ng	99
21) Trichlorotrifluoroethane	5.59	151	353489	24.171	ng	99
22) Carbon Disulfide	5.61	76	2607577	50.669	ng	100
23) trans-1,2-Dichloroethene	6.17	61	588914	25.780	ng	100
24) 1,1-Dichloroethane	6.36	63	690679	25.408	ng	100
25) Methyl tert-Butyl Ether	6.38	73	1117976	29.645	ng	100
26) Vinyl Acetate	6.48	86	362445	139.240	ng	100
27) 2-Butanone (MEK)	6.69	72	441853	49.497	ng	99
28) cis-1,2-Dichloroethene	7.12	61	559576	24.974	ng	100
29) Diisopropyl Ether	7.31	87	545540	51.598	ng	99
30) Ethyl Acetate	7.31	61	271962	49.897	ng	98
31) n-Hexane	7.31	57	628230	26.305	ng	100
32) Chloroform	7.40	83	703269	24.718	ng	99
34) Tetrahydrofuran (THF)	7.77	72	401161	49.260	ng	99
35) Ethyl tert-Butyl Ether	7.84	87	789326	56.223	ng	99
36) 1,2-Dichloroethane	8.15	62	659077	23.137	ng	99
38) 1,1,1-Trichloroethane	8.42	97	688554	23.457	ng	100
39) Isopropyl Acetate	9.61	61	1188	No Calib	#	
40) 1-Butanol	8.83	56	2044	No Calib		
41) Benzene	8.92	78	1324321	22.691	ng	100
42) Carbon Tetrachloride	9.09	117	649900	24.009	ng	100
43) Cyclohexane	9.24	84	1003506	53.126	ng	100
44) tert-Amyl Methyl Ether	9.62	73	2025408	55.145	ng	99
45) 1,2-Dichloropropane	9.88	63	351760	24.969	ng	100
46) Bromodichloromethane	10.10	83	584365	24.886	ng	99
47) Trichloroethene	10.17	130	386505	22.685	ng	100
48) 1,4-Dioxane	10.13	88	289468	26.882	ng	100
49) 2,2,4-Trimethylpentane...	10.25	57	1507014	26.118	ng	98
50) Methyl Methacrylate	10.42	100	269649	54.520	ng	97

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182405.D Vial: 2
Acq On : 18 Jun 2024 11:29 Operator: SC
Sample : LCS R09061824 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

Quant Time: Jun 18 11:52:25 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

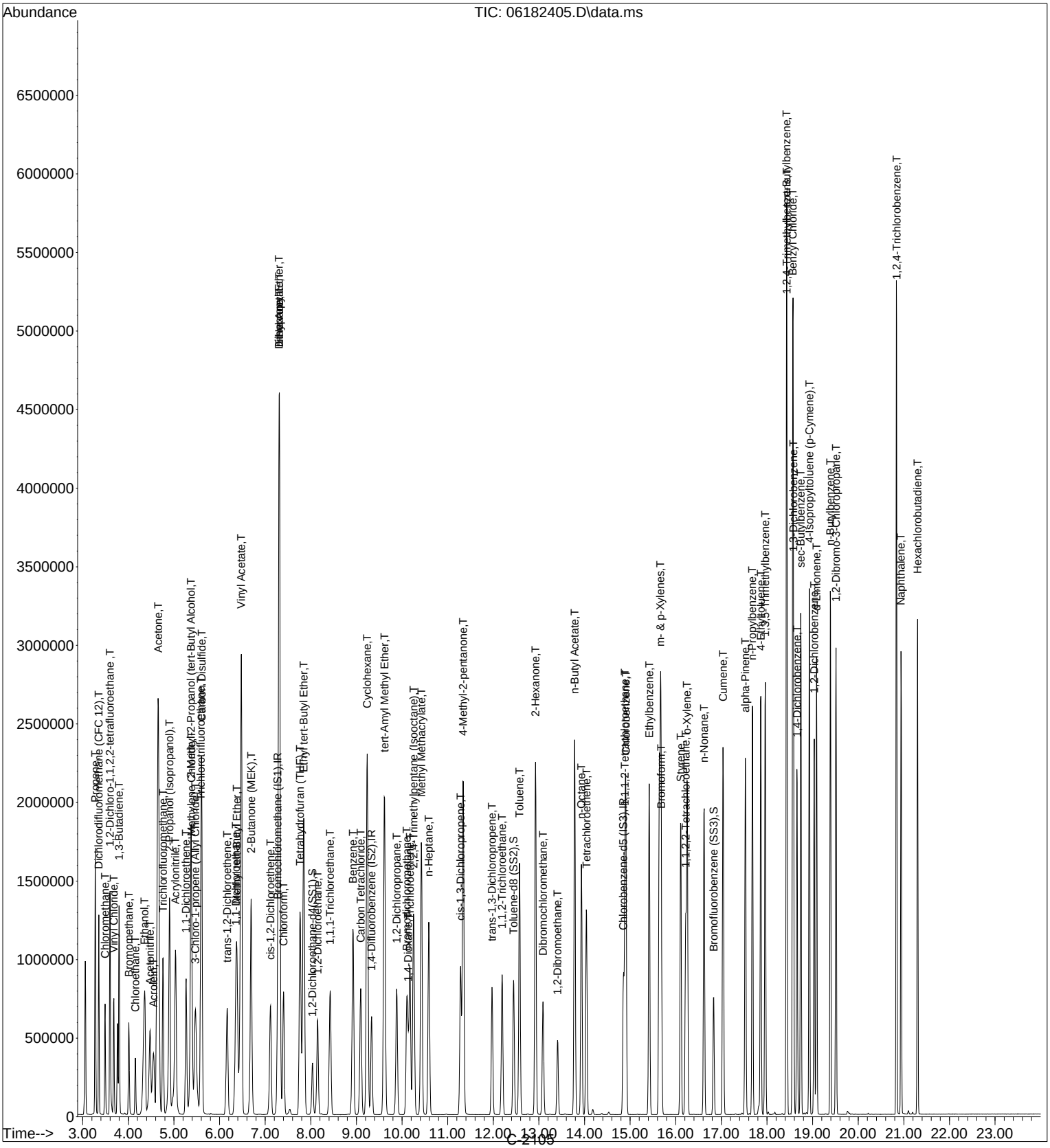
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	10.59	71	328183	26.662 ng		100
52) cis-1,3-Dichloropropene	11.29	75	642685	26.668 ng		100
53) 4-Methyl-2-pentanone	11.34	58	715618	55.786 ng		99
54) trans-1,3-Dichloropropene	11.97	75	540225	24.852 ng		100
55) 1,1,2-Trichloroethane	12.19	97	344527	24.948 ng		100
58) Toluene	12.57	91	1417234	23.887 ng		100
59) 2-Hexanone	12.93	43	2011568	54.079 ng		99
60) Dibromochloromethane	13.09	129	484089	23.601 ng		100
61) 1,2-Dibromoethane	13.41	107	402889	24.145 ng		100
62) n-Butyl Acetate	13.78	43	2219584	56.764 ng		99
63) n-Octane	13.93	57	321384	26.115 ng		100
64) Tetrachloroethene	14.05	166	472825	23.183 ng		100
65) Chlorobenzene	14.91	112	960388	23.096 ng		100
66) Ethylbenzene	15.42	91	1722099	25.369 ng		100
67) m- & p-Xylenes	15.66	91	2872349	50.323 ng		100
68) Bromoform	15.69	173	466285	25.669 ng		100
69) Styrene	16.11	104	995124	25.849 ng		99
70) o-Xylene	16.25	91	1419494	25.219 ng		100
71) n-Nonane	16.62	43	883439	27.001 ng		100
72) 1,1,2,2-Tetrachloroethane	16.22	83	633048	24.566 ng		100
74) Cumene	17.04	105	1711600	24.358 ng		100
75) alpha-Pinene	17.53	93	896006	27.370 ng		99
76) n-Propylbenzene	17.68	91	2093444	24.678 ng		100
77) 3-Ethyltoluene	17.04	105	1711600	No Calib		
78) 4-Ethyltoluene	17.87	105	1708948	25.507 ng		100
79) 1,3,5-Trimethylbenzene	17.96	105	1507089	25.749 ng		99
80) alpha-Methylstyrene	17.03	118	3459	No Calib	#	
81) 2-Ethyltoluene	17.04	105	1711600	No Calib		
82) 1,2,4-Trimethylbenzene	18.43	105	1557205	25.238 ng		99
83) n-Decane	17.03	58	15564	No Calib		
84) Benzyl Chloride	18.57	91	2717140	54.788 ng		100
85) 1,3-Dichlorobenzene	18.58	146	881776	21.681 ng		99
86) 1,4-Dichlorobenzene	18.66	146	842313	21.253 ng		100
87) sec-Butylbenzene	18.74	105	1950775	24.989 ng		99
88) 4-Isopropyltoluene (p-...	18.93	119	1732371	24.682 ng		100
89) 1,2,3-Trimethylbenzene	17.04	105	1711600	No Calib		
90) 1,2-Dichlorobenzene	19.04	146	874363	22.147 ng		99
91) d-Limonene	19.09	68	569681	27.158 ng		99
92) 1,2-Dibromo-3-Chloropr...	19.51	157	686422	50.135 ng		100
93) n-Undecane	17.86	58	24715	No Calib		
94) 1,2,4-Trichlorobenzene	20.84	180	1392569	44.684 ng		100
95) Naphthalene	20.94	128	1784499	22.568 ng		100
96) n-Dodecane	18.93	58	40334	No Calib	#	
97) Hexachlorobutadiene	21.30	225	533881	20.837 ng		100
98) Cyclohexanone	15.43	55	7428	No Calib	#	
99) tert-Butylbenzene	18.43	119	1490085	25.203 ng		100
100) n-Butylbenzene	19.39	91	1631687	24.848 ng		100
101) 1,1,1,2-Tetrachloroethane	14.89	131	403097	25.524 ng		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182405.D Vial: 2
Acq On : 18 Jun 2024 11:29 Operator: SC
Sample : LCS R09061824 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

Quant Time: Jun 18 11:52:25 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182406.D Vial: 2
Acq On : 18 Jun 2024 12:01 Operator: SC
Sample : LCSD R09061824 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

Quant Time: Jun 18 12:23:22 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) 6/18/24
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	7.27	130	151175	12.500	ng	0.05
37) 1,4-Difluorobenzene (IS2)	9.33	114	659300	12.500	ng	0.03
56) Chlorobenzene-d5 (IS3)	14.85	54	155227	12.500	ng	0.01
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4(...	8.04	65	332176	12.363	ng	0.06
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.88%			
57) Toluene-d8 (SS2)	12.44	98	741234	12.478	ng	-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.84%			
73) Bromofluorobenzene (SS3)	16.83	174	263756	12.296	ng	0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.40%			
Target Compounds						Qvalue
2) Propene	3.27	42	462287	23.886	ng	99
3) Dichlorodifluoromethan...	3.35	85	794624	22.335	ng	100
4) Chloromethane	3.49	50	603340	24.806	ng	99
5) 1,2-Dichloro-1,1,2,2-t...	3.60	135	377178	24.447	ng	100
6) Vinyl Chloride	3.68	62	566135	24.388	ng	100
7) 1,3-Butadiene	3.80	54	421833	24.056	ng	98
8) Bromomethane	4.01	94	314052	25.405	ng	99
9) Chloroethane	4.15	64	240122	24.686	ng	99
10) Ethanol	4.36	45	1776122	120.850	ng	100
11) Acetonitrile	4.48	41	804908	21.814	ng	98
12) Acrolein	4.55	56	546432	50.231	ng	100
13) Acetone	4.65	58	1390850	118.431	ng	96
14) Trichlorofluoromethane	4.76	101	808881	22.475	ng	99
15) 2-Propanol (Isopropanol)	4.90	45	2409706	50.922	ng	98
16) Acrylonitrile	5.03	53	1080715	49.068	ng	100
17) 1,1-Dichloroethene	5.27	96	343490	24.948	ng	100
18) 2-Methyl-2-Propanol (t...	5.37	59	2200644	58.263	ng	99
19) Methylene Chloride	5.39	84	363529	21.868	ng	100
20) 3-Chloro-1-propene (Al...	5.47	41	717828	24.196	ng	100
21) Trichlorotrifluoroethane	5.59	151	359807	23.633	ng	96
22) Carbon Disulfide	5.61	76	2737062	51.088	ng	100
23) trans-1,2-Dichloroethene	6.17	61	620391	26.087	ng	99
24) 1,1-Dichloroethane	6.35	63	728019	25.725	ng	100
25) Methyl tert-Butyl Ether	6.38	73	1166028	29.700	ng	99
26) Vinyl Acetate	6.48	86	381883	140.921	ng	98
27) 2-Butanone (MEK)	6.69	72	466177	50.162	ng	99
28) cis-1,2-Dichloroethene	7.12	61	589545	25.274	ng	100
29) Diisopropyl Ether	7.30	87	571203	51.895	ng	98
30) Ethyl Acetate	7.31	61	289421	51.006	ng	99
31) n-Hexane	7.31	57	660847	26.580	ng	100
32) Chloroform	7.40	83	729635	24.633	ng	100
34) Tetrahydrofuran (THF)	7.76	72	422745	49.863	ng	98
35) Ethyl tert-Butyl Ether	7.84	87	824514	56.413	ng	99
36) 1,2-Dichloroethane	8.15	62	684513	23.082	ng	99
38) 1,1,1-Trichloroethane	8.42	97	712579	23.278	ng	100
39) Isopropyl Acetate	9.62	61	1263	No Calib	#	
40) 1-Butanol	8.84	56	2069	No Calib		
41) Benzene	8.92	78	1395881	22.935	ng	100
42) Carbon Tetrachloride	9.09	117	664781	23.550	ng	100
43) Cyclohexane	9.24	84	1051528	53.382	ng	98
44) tert-Amyl Methyl Ether	9.62	73	2123862	55.451	ng	99
45) 1,2-Dichloropropane	9.88	63	374991	25.524	ng	100
46) Bromodichloromethane	10.10	83	604948	24.705	ng	100
47) Trichloroethene	10.17	130	403069	22.686	ng	100
48) 1,4-Dioxane	10.13	88	301713	26.869	ng	99
49) 2,2,4-Trimethylpentane...	10.25	57	1597627	26.551	ng	98
50) Methyl Methacrylate	10.42	100	282086	54.692	ng	97

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182406.D Vial: 2
Acq On : 18 Jun 2024 12:01 Operator: SC
Sample : LCSD R09061824 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

Quant Time: Jun 18 12:23:22 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

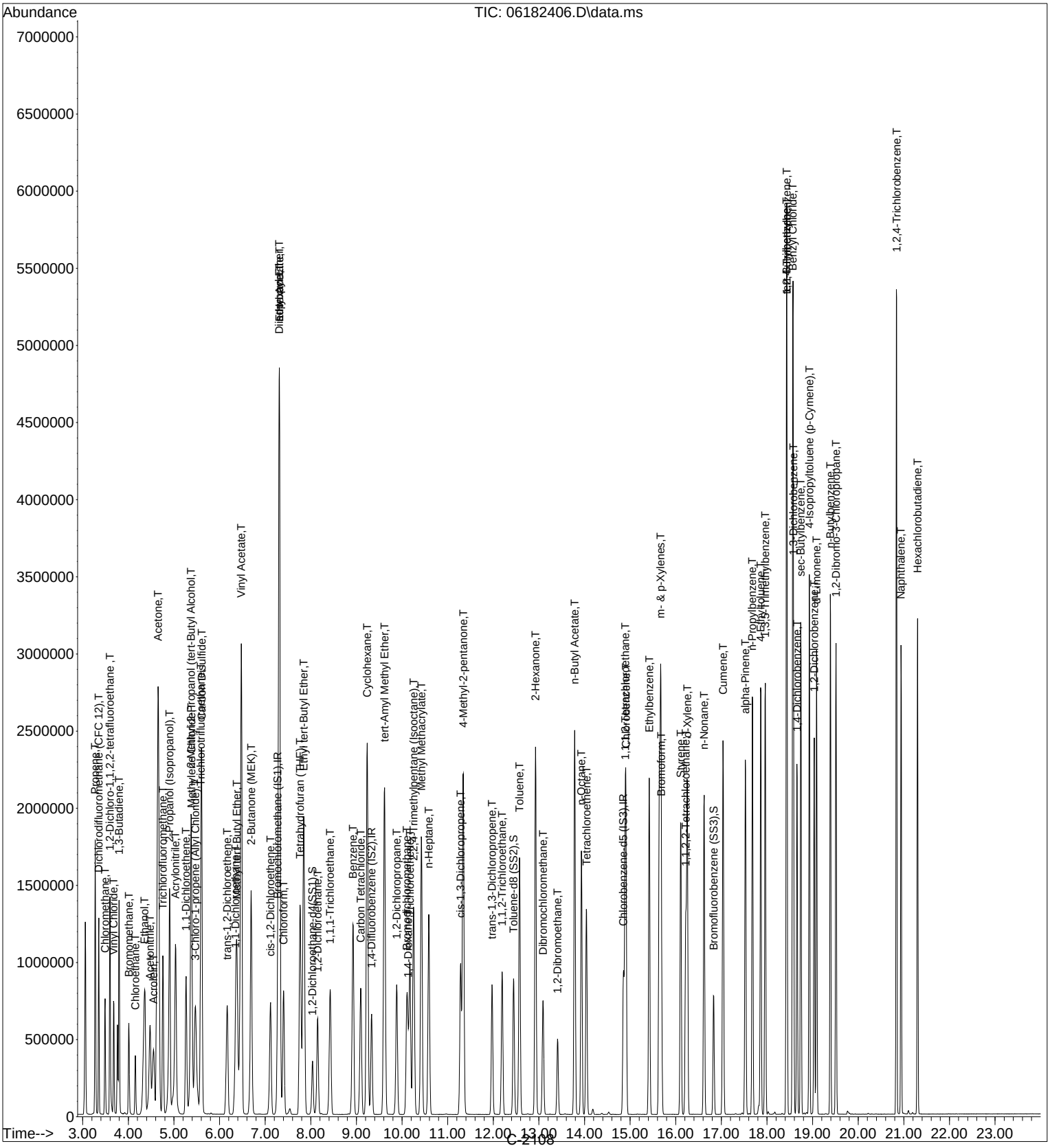
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	10.59	71	345948	26.951 ng		100
52) cis-1,3-Dichloropropene	11.29	75	671227	26.709 ng		100
53) 4-Methyl-2-pentanone	11.34	58	759332	56.763 ng		99
54) trans-1,3-Dichloropropene	11.97	75	564842	24.917 ng		100
55) 1,1,2-Trichloroethane	12.19	97	358546	24.897 ng		99
58) Toluene	12.57	91	1485109	23.926 ng		100
59) 2-Hexanone	12.93	43	2140254	54.999 ng		99
60) Dibromochloromethane	13.09	129	500682	23.332 ng		100
61) 1,2-Dibromoethane	13.41	107	416850	23.879 ng		100
62) n-Butyl Acetate	13.78	43	2356931	57.616 ng		99
63) n-Octane	13.93	57	342275	26.585 ng		99
64) Tetrachloroethene	14.05	166	483822	22.675 ng		100
65) Chlorobenzene	14.91	112	996164	22.898 ng		100
66) Ethylbenzene	15.42	91	1793782	25.259 ng		100
67) m- & p-Xylenes	15.67	91	2980033	49.905 ng		100
68) Bromoform	15.69	173	475329	25.012 ng		100
69) Styrene	16.11	104	1030102	25.577 ng		99
70) o-Xylene	16.25	91	1463687	24.856 ng		100
71) n-Nonane	16.62	43	927703	27.102 ng		100
72) 1,1,2,2-Tetrachloroethane	16.22	83	656671	24.357 ng		100
74) Cumene	17.04	105	1764248	23.999 ng		100
75) alpha-Pinene	17.53	93	926949	27.066 ng		99
76) n-Propylbenzene	17.68	91	2169129	24.441 ng		100
77) 3-Ethyltoluene	17.04	105	1764248	No Calib		
78) 4-Ethyltoluene	17.86	105	1762548	25.146 ng		100
79) 1,3,5-Trimethylbenzene	17.96	105	1542630	25.193 ng		99
80) alpha-Methylstyrene	17.04	118	3596	No Calib	#	
81) 2-Ethyltoluene	17.04	105	1764248	No Calib		
82) 1,2,4-Trimethylbenzene	18.43	105	1601821	24.815 ng		100
83) n-Decane	17.03	58	15811	No Calib		
84) Benzyl Chloride	18.56	91	2804905	54.061 ng		100
85) 1,3-Dichlorobenzene	18.58	146	899350	21.137 ng		99
86) 1,4-Dichlorobenzene	18.66	146	860356	20.750 ng		99
87) sec-Butylbenzene	18.74	105	1997814	24.462 ng		99
88) 4-Isopropyltoluene (p-...	18.93	119	1783556	24.290 ng		100
89) 1,2,3-Trimethylbenzene	17.04	105	1764248	No Calib		
90) 1,2-Dichlorobenzene	19.04	146	887971	21.499 ng		100
91) d-Limonene	19.09	68	592167	26.984 ng		98
92) 1,2-Dibromo-3-Chloropr...	19.51	157	702879	49.071 ng		99
93) n-Undecane	17.86	58	29722	No Calib		
94) 1,2,4-Trichlorobenzene	20.84	180	1415754	43.422 ng		100
95) Naphthalene	20.94	128	1833193	22.160 ng		100
96) n-Dodecane	18.93	58	53245	No Calib	#	
97) Hexachlorobutadiene	21.30	225	542251	20.230 ng		100
98) Cyclohexanone	15.43	55	8027	No Calib	#	
99) tert-Butylbenzene	18.43	119	1521090	24.591 ng		100
100) n-Butylbenzene	19.39	91	1673269	24.356 ng		100
101) 1,1,1,2-Tetrachloroethane	14.89	131	413493	25.026 ng		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182406.D Vial: 2
Acq On : 18 Jun 2024 12:01 Operator: SC
Sample : LCSD R09061824 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

Quant Time: Jun 18 12:23:22 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192405.D Vial: 2
Acq On : 19 Jun 2024 11:00 Operator: SC
Sample : LCS R09061924 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

Quant Time: Jun 19 11:23:47 2024 6/19/24
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.28	130	151516	12.500	ng		0.05
37) 1,4-Difluorobenzene (IS2)	9.33	114	656263	12.500	ng		0.03
56) Chlorobenzene-d5 (IS3)	14.85	54	155570	12.500	ng		0.01
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.04	65	334882	12.436	ng		0.06
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.52%				
57) Toluene-d8 (SS2)	12.44	98	728691	12.240	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.92%				
73) Bromofluorobenzene (SS3)	16.83	174	277618	12.914	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.28%				
Target Compounds							Qvalue
2) Propene	3.28	42	435740	22.464	ng		99
3) Dichlorodifluoromethan...	3.36	85	785730	22.035	ng		100
4) Chloromethane	3.49	50	555796	22.800	ng		99
5) 1,2-Dichloro-1,1,2,2-t...	3.60	135	388527	25.126	ng		100
6) Vinyl Chloride	3.68	62	565751	24.316	ng		99
7) 1,3-Butadiene	3.80	54	445460	25.346	ng		98
8) Bromomethane	4.02	94	308440	24.895	ng		100
9) Chloroethane	4.16	64	227002	23.285	ng		99
10) Ethanol	4.36	45	1662018	112.832	ng		100
11) Acetonitrile	4.48	41	740085	20.012	ng		99
12) Acrolein	4.56	56	516073	47.333	ng		100
13) Acetone	4.66	58	1326374	112.687	ng		100
14) Trichlorofluoromethane	4.76	101	831627	23.055	ng		99
15) 2-Propanol (Isopropanol)	4.90	45	2251213	47.466	ng		100
16) Acrylonitrile	5.03	53	1021671	46.283	ng		100
17) 1,1-Dichloroethene	5.27	96	336082	24.355	ng		99
18) 2-Methyl-2-Propanol (t...	5.37	59	2107189	55.663	ng		100
19) Methylene Chloride	5.39	84	353303	21.205	ng		99
20) 3-Chloro-1-propene (Al...	5.47	41	664919	22.362	ng		99
21) Trichlorotrifluoroethane	5.59	151	368461	24.147	ng		100
22) Carbon Disulfide	5.61	76	2644037	49.241	ng		100
23) trans-1,2-Dichloroethene	6.17	61	599154	25.137	ng		100
24) 1,1-Dichloroethane	6.35	63	697313	24.585	ng		100
25) Methyl tert-Butyl Ether	6.38	73	1149484	29.213	ng		100
26) Vinyl Acetate	6.48	86	373831	137.639	ng	#	97
27) 2-Butanone (MEK)	6.69	72	448308	48.131	ng		98
28) cis-1,2-Dichloroethene	7.12	61	570179	24.389	ng		99
29) Diisopropyl Ether	7.30	87	556739	50.467	ng		98
30) Ethyl Acetate	7.31	61	274754	48.312	ng		98
31) n-Hexane	7.32	57	632928	25.400	ng		100
32) Chloroform	7.40	83	726654	24.477	ng		99
34) Tetrahydrofuran (THF)	7.76	72	404721	47.630	ng		98
35) Ethyl tert-Butyl Ether	7.84	87	817418	55.802	ng		98
36) 1,2-Dichloroethane	8.15	62	697118	23.455	ng		99
38) 1,1,1-Trichloroethane	8.42	97	726153	23.831	ng		100
39) Isopropyl Acetate	9.62	61	1476	No Calib		#	
40) 1-Butanol	8.83	56	1868	No Calib			
41) Benzene	8.92	78	1345305	22.207	ng		100
42) Carbon Tetrachloride	9.09	117	691201	24.599	ng		100
43) Cyclohexane	9.24	84	1023542	52.202	ng		99
44) tert-Amyl Methyl Ether	9.61	73	2081093	54.586	ng		100
45) 1,2-Dichloropropane	9.88	63	354138	24.217	ng		100
46) Bromodichloromethane	10.10	83	603363	24.754	ng		99
47) Trichloroethene	10.17	130	404236	22.857	ng		100
48) 1,4-Dioxane	10.13	88	292608	26.178	ng		100
49) 2,2,4-Trimethylpentane...	10.25	57	1512675	25.256	ng		100
50) Methyl Methacrylate	10.42	100	277925	54.135	ng		99

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192405.D Vial: 2
Acq On : 19 Jun 2024 11:00 Operator: SC
Sample : LCS R09061924 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

Quant Time: Jun 19 11:23:47 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

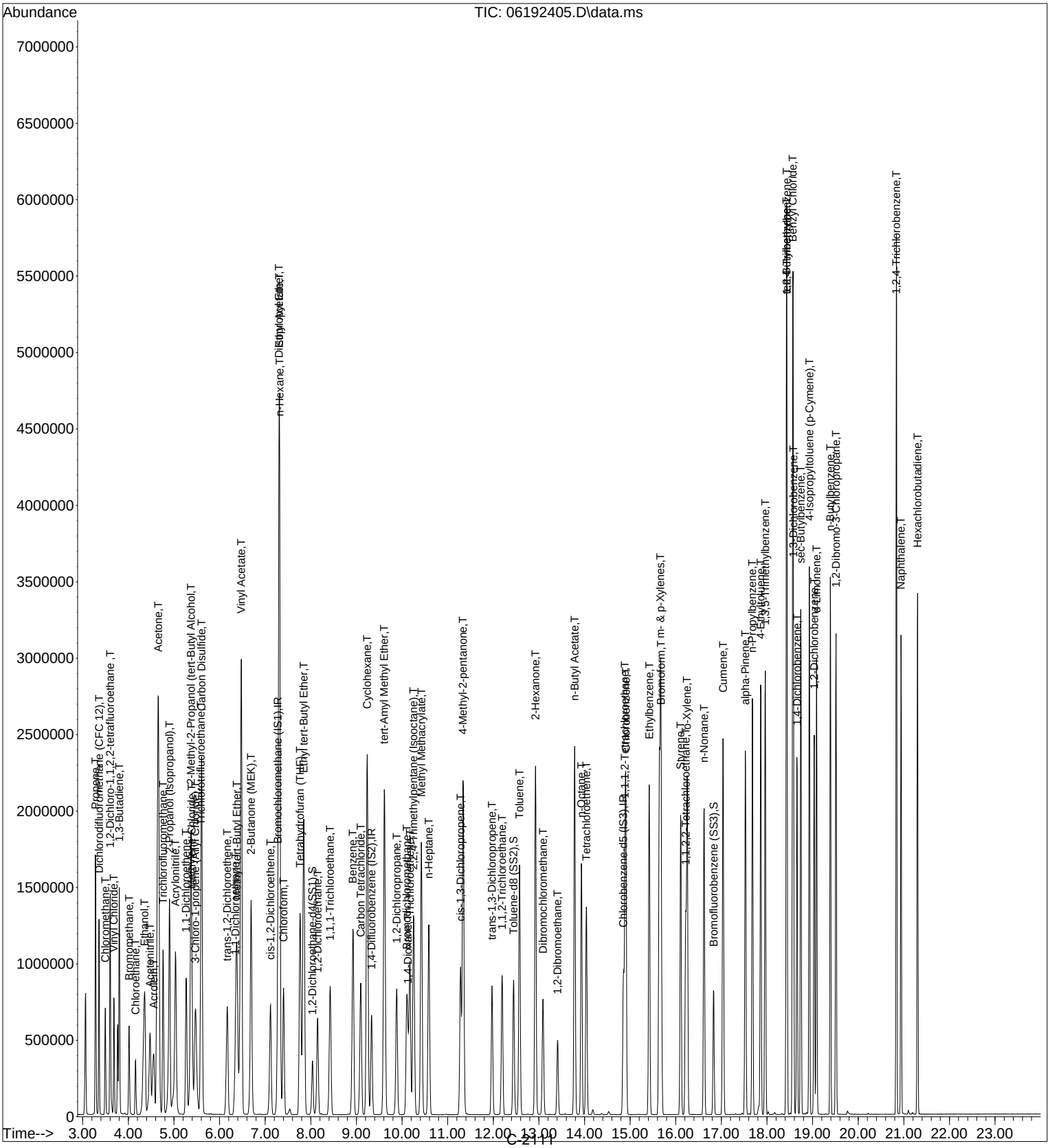
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	10.59	71	332216	26.001 ng	99
52) cis-1,3-Dichloropropene	11.29	75	649922	25.981 ng	99
53) 4-Methyl-2-pentanone	11.34	58	717591	53.891 ng	100
54) trans-1,3-Dichloropropene	11.97	75	551375	24.435 ng	100
55) 1,1,2-Trichloroethane	12.19	97	353497	24.660 ng	99
58) Toluene	12.57	91	1458735	23.449 ng	100
59) 2-Hexanone	12.93	43	2028761	52.019 ng	99
60) Dibromochloromethane	13.09	129	508915	23.664 ng	100
61) 1,2-Dibromoethane	13.41	107	408150	23.329 ng	99
62) n-Butyl Acetate	13.78	43	2228370	54.353 ng	100
63) n-Octane	13.93	57	326697	25.319 ng	100
64) Tetrachloroethene	14.04	166	498849	23.328 ng	99
65) Chlorobenzene	14.91	112	992571	22.765 ng	100
66) Ethylbenzene	15.42	91	1784686	25.075 ng	100
67) m- & p-Xylenes	15.66	91	3000780	50.142 ng	100
68) Bromoform	15.68	173	498972	26.198 ng	100
69) Styrene	16.11	104	1027343	25.452 ng	99
70) o-Xylene	16.25	91	1471260	24.929 ng	99
71) n-Nonane	16.62	43	888425	25.897 ng	99
72) 1,1,2,2-Tetrachloroethane	16.22	83	641044	23.725 ng	100
74) Cumene	17.04	105	1785513	24.235 ng	100
75) alpha-Pinene	17.53	93	931960	27.152 ng	100
76) n-Propylbenzene	17.68	91	2170939	24.408 ng	100
77) 3-Ethyltoluene	17.04	105	1785513	No Calib	
78) 4-Ethyltoluene	17.86	105	1779565	25.333 ng	100
79) 1,3,5-Trimethylbenzene	17.96	105	1575441	25.672 ng	99
80) alpha-Methylstyrene	17.04	118	3991	No Calib #	
81) 2-Ethyltoluene	17.04	105	1785513	No Calib	
82) 1,2,4-Trimethylbenzene	18.43	105	1630722	25.207 ng	99
83) n-Decane	17.04	58	13126	No Calib	
84) Benzyl Chloride	18.56	91	2840306	54.623 ng	100
85) 1,3-Dichlorobenzene	18.58	146	929589	21.800 ng	99
86) 1,4-Dichlorobenzene	18.66	146	884072	21.275 ng	100
87) sec-Butylbenzene	18.74	105	2033877	24.849 ng	100
88) 4-Isopropyltoluene (p-...	18.93	119	1829206	24.857 ng	100
89) 1,2,3-Trimethylbenzene	17.04	105	1785513	No Calib	
90) 1,2-Dichlorobenzene	19.04	146	915931	22.127 ng	100
91) d-Limonene	19.09	68	588851	26.774 ng	100
92) 1,2-Dibromo-3-Chloropr...	19.51	157	729058	50.786 ng	100
93) n-Undecane	17.86	58	32041	No Calib	
94) 1,2,4-Trichlorobenzene	20.84	180	1470515	45.003 ng	99
95) Naphthalene	20.94	128	1855708	22.383 ng	100
96) n-Dodecane	18.93	58	45589	No Calib #	
97) Hexachlorobutadiene	21.30	225	576742	21.469 ng	99
98) Cyclohexanone	15.42	55	7787	No Calib	
99) tert-Butylbenzene	18.43	119	1575442	25.414 ng	100
100) n-Butylbenzene	19.39	91	1695586	24.626 ng	100
101) 1,1,1,2-Tetrachloroethane	14.89	131	425719	25.709 ng	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192405.D Vial: 2
Acq On : 19 Jun 2024 11:00 Operator: SC
Sample : LCS R09061924 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

Quant Time: Jun 19 11:23:47 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



C-2111

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192406.D Vial: 2
Acq On : 19 Jun 2024 11:32 Operator: SC
Sample : LCSD R09061924 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

Quant Time: Jun 19 11:54:07 2024 6/19/24
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	7.27	130	166649	12.500	ng	0.05
37) 1,4-Difluorobenzene (IS2)	9.33	114	724520	12.500	ng	0.03
56) Chlorobenzene-d5 (IS3)	14.85	54	169324	12.500	ng	0.01
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4(...	8.04	65	366092	12.360	ng	0.06
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.88%			
57) Toluene-d8 (SS2)	12.44	98	802340	12.382	ng	-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.04%			
73) Bromofluorobenzene (SS3)	16.83	174	294899	12.604	ng	0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.80%			
Target Compounds						Qvalue
2) Propene	3.28	42	466641	21.872	ng	99
3) Dichlorodifluoromethan...	3.35	85	843303	21.502	ng	100
4) Chloromethane	3.49	50	619237	23.095	ng	100
5) 1,2-Dichloro-1,1,2,2-t...	3.60	135	392022	23.050	ng	100
6) Vinyl Chloride	3.68	62	587079	22.942	ng	100
7) 1,3-Butadiene	3.80	54	499659	25.848	ng	97
8) Bromomethane	4.01	94	327173	24.009	ng	100
9) Chloroethane	4.15	64	246056	22.947	ng	100
10) Ethanol	4.36	45	1840730	113.616	ng	100
11) Acetonitrile	4.48	41	825413	20.293	ng	99
12) Acrolein	4.55	56	573833	47.852	ng	100
13) Acetone	4.65	58	1444428	111.573	ng	98
14) Trichlorofluoromethane	4.76	101	869326	21.912	ng	99
15) 2-Propanol (Isopropanol)	4.90	45	2511882	48.152	ng	99
16) Acrylonitrile	5.03	53	1107960	45.634	ng	100
17) 1,1-Dichloroethene	5.27	96	359859	23.710	ng	100
18) 2-Methyl-2-Propanol (t...	5.37	59	2306230	55.389	ng	99
19) Methylene Chloride	5.39	84	377841	20.619	ng	99
20) 3-Chloro-1-propene (Al...	5.47	41	748745	22.895	ng	99
21) Trichlorotrifluoroethane	5.59	151	387092	23.064	ng	99
22) Carbon Disulfide	5.61	76	2850208	48.260	ng	100
23) trans-1,2-Dichloroethene	6.17	61	645344	24.616	ng	100
24) 1,1-Dichloroethane	6.36	63	752934	24.135	ng	99
25) Methyl tert-Butyl Ether	6.38	73	1224344	28.290	ng	100
26) Vinyl Acetate	6.48	86	397383	133.025	ng	99
27) 2-Butanone (MEK)	6.69	72	484638	47.306	ng	99
28) cis-1,2-Dichloroethene	7.12	61	615745	23.946	ng	100
29) Diisopropyl Ether	7.31	87	597818	49.270	ng	99
30) Ethyl Acetate	7.31	61	299110	47.819	ng	99
31) n-Hexane	7.31	57	685158	24.999	ng	100
32) Chloroform	7.41	83	778044	23.829	ng	100
34) Tetrahydrofuran (THF)	7.76	72	439406	47.016	ng	99
35) Ethyl tert-Butyl Ether	7.84	87	866110	53.757	ng	99
36) 1,2-Dichloroethane	8.15	62	734172	22.458	ng	100
38) 1,1,1-Trichloroethane	8.42	97	766929	22.798	ng	99
39) Isopropyl Acetate	9.62	61	1501	No Calib	#	
40) 1-Butanol	8.83	56	2231	No Calib		
41) Benzene	8.92	78	1450214	21.683	ng	100
42) Carbon Tetrachloride	9.09	117	718862	23.173	ng	100
43) Cyclohexane	9.24	84	1101035	50.864	ng	100
44) tert-Amyl Methyl Ether	9.62	73	2240135	53.222	ng	100
45) 1,2-Dichloropropane	9.88	63	386831	23.960	ng	100
46) Bromodichloromethane	10.10	83	644376	23.946	ng	100
47) Trichloroethene	10.17	130	428298	21.936	ng	99
48) 1,4-Dioxane	10.13	88	317474	25.727	ng	100
49) 2,2,4-Trimethylpentane...	10.25	57	1652178	24.986	ng	99
50) Methyl Methacrylate	10.42	100	297687	52.521	ng	99

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192406.D Vial: 2
Acq On : 19 Jun 2024 11:32 Operator: SC
Sample : LCSD R09061924 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

Quant Time: Jun 19 11:54:07 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

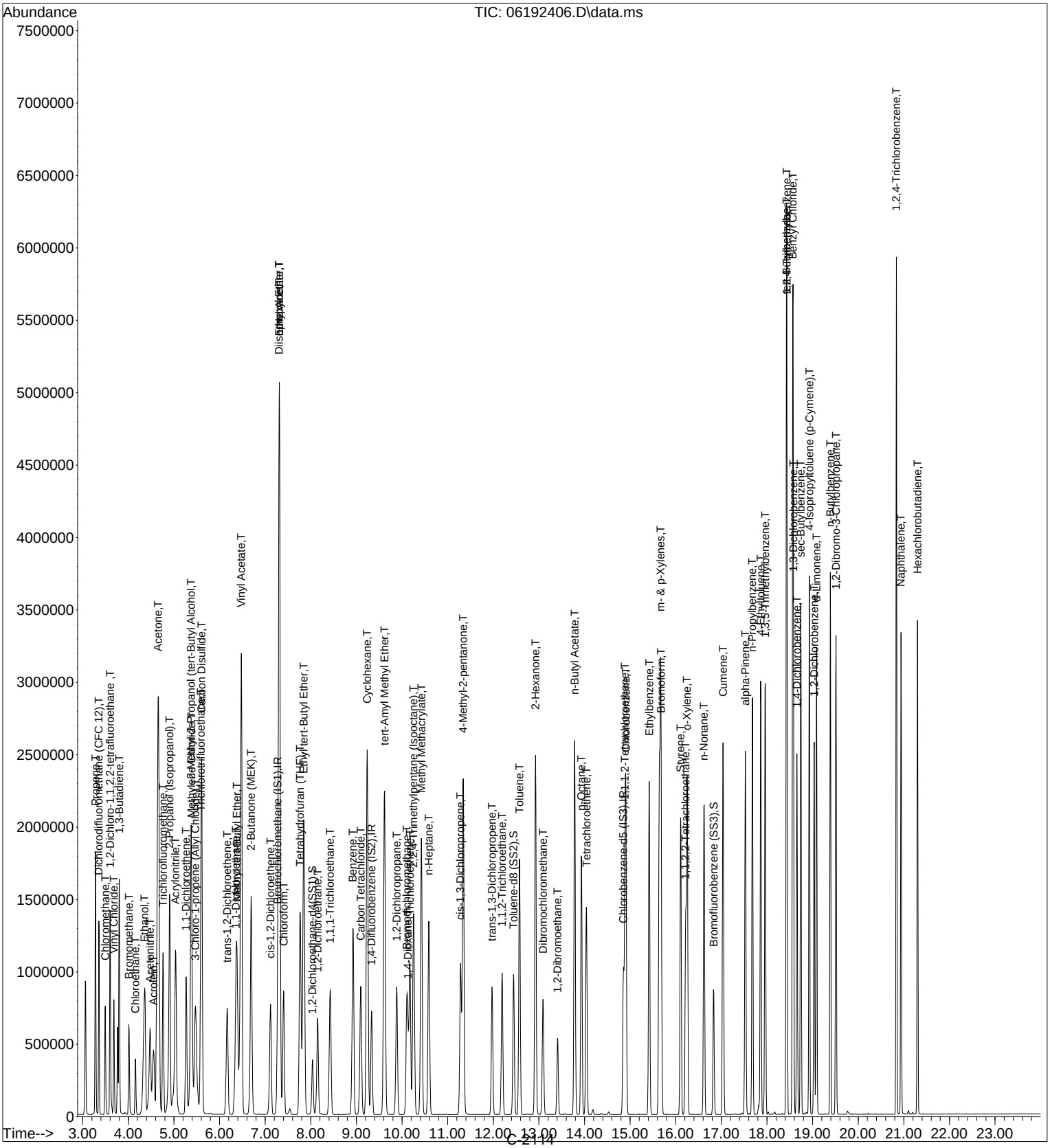
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
51) n-Heptane	10.59	71	359178	25.463	ng		99
52) cis-1,3-Dichloropropene	11.28	75	703942	25.489	ng		100
53) 4-Methyl-2-pentanone	11.34	58	784711	53.380	ng		99
54) trans-1,3-Dichloropropene	11.97	75	592295	23.776	ng		100
55) 1,1,2-Trichloroethane	12.19	97	374569	23.668	ng		100
58) Toluene	12.57	91	1567698	23.154	ng		100
59) 2-Hexanone	12.93	43	2211505	52.098	ng		99
60) Dibromochloromethane	13.09	129	533846	22.807	ng		100
61) 1,2-Dibromoethane	13.41	107	438936	23.050	ng		100
62) n-Butyl Acetate	13.78	43	2433635	54.538	ng		100
63) n-Octane	13.93	57	354948	25.274	ng		100
64) Tetrachloroethene	14.05	166	518808	22.290	ng		100
65) Chlorobenzene	14.91	112	1052580	22.181	ng		100
66) Ethylbenzene	15.42	91	1896617	24.483	ng		100
67) m- & p-Xylenes	15.67	91	3167504	48.628	ng		100
68) Bromoform	15.68	173	516906	24.936	ng		100
69) Styrene	16.11	104	1086959	24.742	ng		100
70) o-Xylene	16.25	91	1551412	24.152	ng		100
71) n-Nonane	16.62	43	965030	25.845	ng		100
72) 1,1,2,2-Tetrachloroethane	16.21	83	689822	23.457	ng		100
74) Cumene	17.04	105	1878809	23.429	ng		100
75) alpha-Pinene	17.53	93	983886	26.336	ng		99
76) n-Propylbenzene	17.68	91	2298427	23.742	ng		100
77) 3-Ethyltoluene	17.04	105	1878809	No Calib			
78) 4-Ethyltoluene	17.86	105	1875884	24.535	ng		100
79) 1,3,5-Trimethylbenzene	17.96	105	1644414	24.619	ng		99
80) alpha-Methylstyrene	17.04	118	4125	No Calib		#	
81) 2-Ethyltoluene	17.04	105	1878809	No Calib			
82) 1,2,4-Trimethylbenzene	18.43	105	1710407	24.291	ng		99
83) n-Decane	17.04	58	14402	No Calib			
84) Benzyl Chloride	18.56	91	2984719	52.737	ng		100
85) 1,3-Dichlorobenzene	18.58	146	969434	20.887	ng		99
86) 1,4-Dichlorobenzene	18.66	146	920639	20.355	ng		99
87) sec-Butylbenzene	18.74	105	2133206	23.945	ng		100
88) 4-Isopropyltoluene (p-...	18.93	119	1896369	23.676	ng		100
89) 1,2,3-Trimethylbenzene	17.04	105	1878809	No Calib			
90) 1,2-Dichlorobenzene	19.04	146	953666	21.167	ng		100
91) d-Limonene	19.09	68	624985	26.108	ng		99
92) 1,2-Dibromo-3-Chloropr...	19.51	157	753202	48.206	ng		99
93) n-Undecane	17.86	58	28141	No Calib			
94) 1,2,4-Trichlorobenzene	20.84	180	1523783	42.845	ng		100
95) Naphthalene	20.94	128	1949247	21.602	ng		100
96) n-Dodecane	18.93	58	42837	No Calib		#	
97) Hexachlorobutadiene	21.30	225	595280	20.359	ng		99
98) Cyclohexanone	15.42	55	8416	No Calib		#	
99) tert-Butylbenzene	18.43	119	1639460	24.298	ng		100
100) n-Butylbenzene	19.39	91	1770063	23.620	ng		100
101) 1,1,1,2-Tetrachloroethane	14.89	131	443049	24.583	ng		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192406.D Vial: 2
Acq On : 19 Jun 2024 11:32 Operator: SC
Sample : LCSD R09061924 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

Quant Time: Jun 19 11:54:07 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202405.D Vial: 2
Acq On : 20 Jun 2024 11:52 Operator: SC
Sample : LCS R09062024 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

Quant Time: Jun 20 12:21:25 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/20/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.28	130	185769	12.500	ng		0.05
37) 1,4-Difluorobenzene (IS2)	9.33	114	808795	12.500	ng		0.03
56) Chlorobenzene-d5 (IS3)	14.85	54	189530	12.500	ng		0.01
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.04	65	396009	11.994	ng		0.06
Spiked Amount 12.500	Range 70 - 130		Recovery = 95.92%				
57) Toluene-d8 (SS2)	12.45	98	904180	12.466	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.76%				
73) Bromofluorobenzene (SS3)	16.83	174	318679	12.168	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.36%				
Target Compounds							Qvalue
2) Propene	3.28	42	554527	23.316	ng		98
3) Dichlorodifluoromethan...	3.36	85	916152	20.955	ng		100
4) Chloromethane	3.49	50	742637	24.847	ng		100
5) 1,2-Dichloro-1,1,2,2-t...	3.60	135	442929	23.363	ng		100
6) Vinyl Chloride	3.69	62	712425	24.975	ng		100
7) 1,3-Butadiene	3.80	54	555836	25.795	ng		98
8) Bromomethane	4.02	94	386562	25.448	ng		100
9) Chloroethane	4.16	64	302128	25.276	ng		100
10) Ethanol	4.36	45	2228260	123.380	ng		100
11) Acetonitrile	4.48	41	1007636	22.223	ng		99
12) Acrolein	4.56	56	690428	51.649	ng		100
13) Acetone	4.66	58	1721452	119.285	ng		91
14) Trichlorofluoromethane	4.76	101	942509	21.311	ng		99
15) 2-Propanol (Isopropanol)	4.91	45	2964432	50.979	ng		98
16) Acrylonitrile	5.04	53	1327990	49.067	ng		100
17) 1,1-Dichloroethene	5.27	96	411825	24.341	ng		100
18) 2-Methyl-2-Propanol (t...	5.38	59	2608624	56.203	ng		99
19) Methylene Chloride	5.39	84	441005	21.588	ng		98
20) 3-Chloro-1-propene (Al...	5.48	41	887125	24.334	ng		99
21) Trichlorotrifluoroethane	5.59	151	423998	22.663	ng		96
22) Carbon Disulfide	5.61	76	3302261	50.159	ng		100
23) trans-1,2-Dichloroethene	6.17	61	742923	25.422	ng		99
24) 1,1-Dichloroethane	6.36	63	876839	25.214	ng		100
25) Methyl tert-Butyl Ether	6.39	73	1379144	28.587	ng		98
26) Vinyl Acetate	6.48	86	456906	137.208	ng	#	96
27) 2-Butanone (MEK)	6.70	72	565635	49.530	ng		98
28) cis-1,2-Dichloroethene	7.12	61	706419	24.645	ng		100
29) Diisopropyl Ether	7.31	87	679800	50.260	ng	#	95
30) Ethyl Acetate	7.31	61	352951	50.619	ng		100
31) n-Hexane	7.32	57	802039	26.252	ng		100
32) Chloroform	7.41	83	862031	23.684	ng		100
34) Tetrahydrofuran (THF)	7.77	72	513763	49.314	ng		97
35) Ethyl tert-Butyl Ether	7.85	87	969262	53.967	ng		96
36) 1,2-Dichloroethane	8.15	62	796757	21.864	ng		99
38) 1,1,1-Trichloroethane	8.43	97	822457	21.902	ng		100
39) Isopropyl Acetate	9.61	61	1538	No Calib		#	
40) 1-Butanol	8.84	56	2816	No Calib			
41) Benzene	8.93	78	1676293	22.452	ng		100
42) Carbon Tetrachloride	9.09	117	761771	21.998	ng		100
43) Cyclohexane	9.24	84	1256601	52.002	ng		97
44) tert-Amyl Methyl Ether	9.62	73	2514034	53.506	ng		100
45) 1,2-Dichloropropane	9.88	63	458503	25.440	ng		100
46) Bromodichloromethane	10.10	83	716075	23.838	ng		99
47) Trichloroethene	10.17	130	474655	21.777	ng		100
48) 1,4-Dioxane	10.13	88	359665	26.109	ng		97
49) 2,2,4-Trimethylpentane...	10.25	57	1946315	26.368	ng		96
50) Methyl Methacrylate	10.43	100	333054	52.638	ng		95

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202405.D Vial: 2
Acq On : 20 Jun 2024 11:52 Operator: SC
Sample : LCS R09062024 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

Quant Time: Jun 20 12:21:25 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

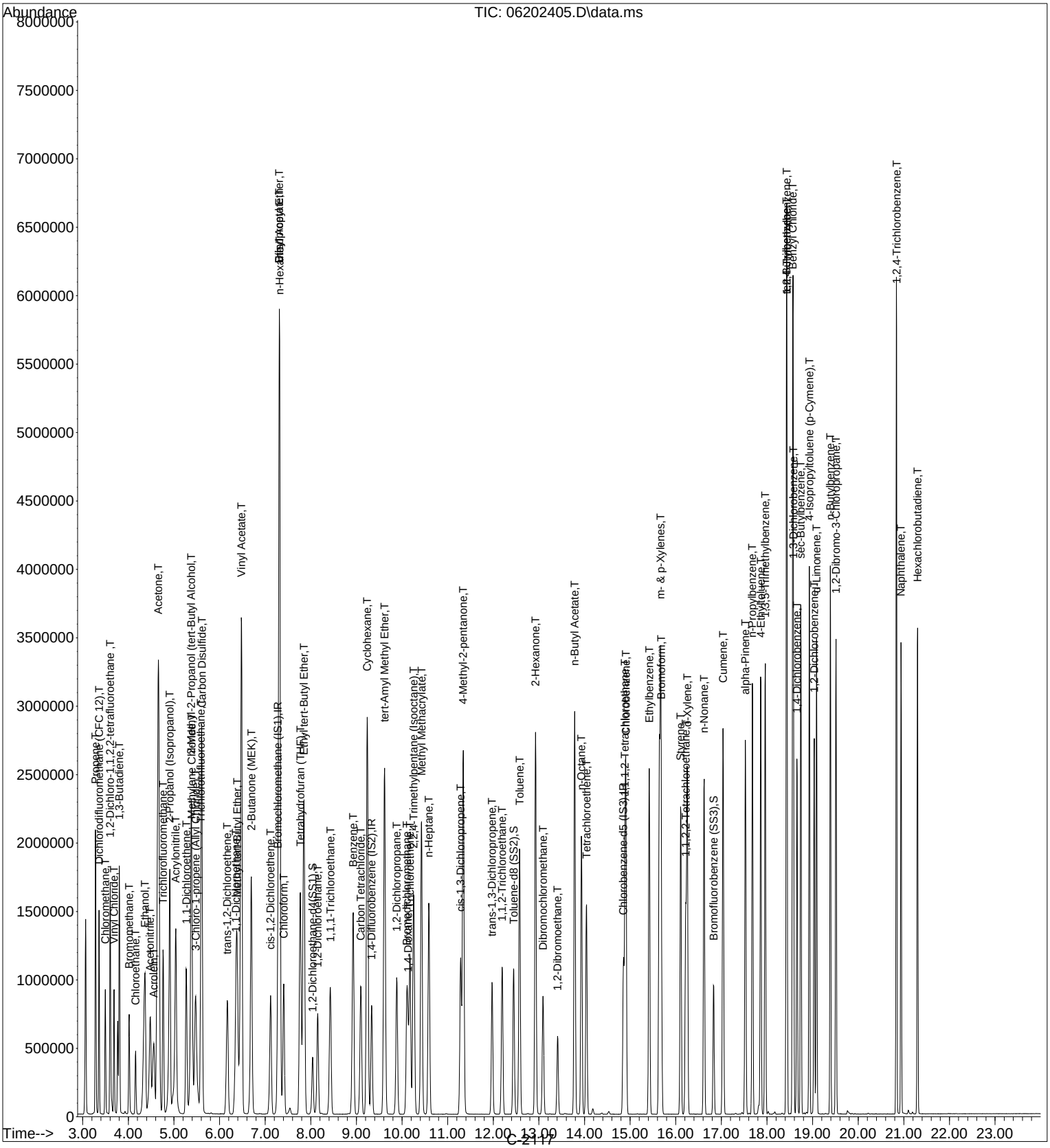
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	10.59	71	416932	26.477 ng		99
52) cis-1,3-Dichloropropene	11.29	75	797094	25.855 ng		100
53) 4-Methyl-2-pentanone	11.34	58	908597	55.367 ng		99
54) trans-1,3-Dichloropropene	11.97	75	650231	23.382 ng		100
55) 1,1,2-Trichloroethane	12.19	97	426563	24.145 ng		99
58) Toluene	12.58	91	1758772	23.206 ng		100
59) 2-Hexanone	12.93	43	2529264	53.232 ng		99
60) Dibromochloromethane	13.09	129	580727	22.165 ng		100
61) 1,2-Dibromoethane	13.41	107	489948	22.986 ng		99
62) n-Butyl Acetate	13.78	43	2784761	55.754 ng		99
63) n-Octane	13.93	57	414193	26.348 ng		97
64) Tetrachloroethene	14.05	166	559263	21.467 ng		100
65) Chlorobenzene	14.91	112	1168110	21.991 ng		100
66) Ethylbenzene	15.42	91	2106637	24.295 ng		100
67) m- & p-Xylenes	15.67	91	3490239	47.871 ng		100
68) Bromoform	15.68	173	543874	23.439 ng		100
69) Styrene	16.11	104	1201039	24.424 ng		100
70) o-Xylene	16.25	91	1713557	23.833 ng		100
71) n-Nonane	16.62	43	1123444	26.880 ng		99
72) 1,1,2,2-Tetrachloroethane	16.22	83	782731	23.779 ng		100
74) Cumene	17.04	105	2061343	22.965 ng		100
75) alpha-Pinene	17.53	93	1093195	26.143 ng		99
76) n-Propylbenzene	17.68	91	2534865	23.393 ng		99
77) 3-Ethyltoluene	17.04	105	2061343	No Calib		
78) 4-Ethyltoluene	17.87	105	2040149	23.838 ng		100
79) 1,3,5-Trimethylbenzene	17.96	105	1786394	23.894 ng		100
80) alpha-Methylstyrene	17.04	118	4267	No Calib	#	
81) 2-Ethyltoluene	17.04	105	2061343	No Calib		
82) 1,2,4-Trimethylbenzene	18.43	105	1844540	23.403 ng		99
83) n-Decane	17.05	58	19149	No Calib		
84) Benzyl Chloride	18.56	91	3175326	50.124 ng		100
85) 1,3-Dichlorobenzene	18.58	146	1027883	19.786 ng		100
86) 1,4-Dichlorobenzene	18.66	146	978983	19.338 ng		99
87) sec-Butylbenzene	18.74	105	2309994	23.165 ng		100
88) 4-Isopropyltoluene (p-...	18.93	119	2042761	22.785 ng		100
89) 1,2,3-Trimethylbenzene	17.04	105	2061343	No Calib		
90) 1,2-Dichlorobenzene	19.04	146	1014699	20.121 ng		100
91) d-Limonene	19.09	68	695999	25.975 ng		97
92) 1,2-Dibromo-3-Chloropr...	19.51	157	799370	45.706 ng		99
93) n-Undecane	17.86	58	34678	No Calib		
94) 1,2,4-Trichlorobenzene	20.84	180	1591897	39.988 ng		100
95) Naphthalene	20.94	128	2067805	20.472 ng		100
96) n-Dodecane	18.93	58	51584	No Calib	#	
97) Hexachlorobutadiene	21.30	225	601222	18.370 ng		100
98) Cyclohexanone	15.44	55	8999	No Calib		
99) tert-Butylbenzene	18.43	119	1759260	23.294 ng		100
100) n-Butylbenzene	19.39	91	1921211	22.904 ng		100
101) 1,1,1,2-Tetrachloroethane	14.89	131	478306	23.709 ng		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202405.D Vial: 2
Acq On : 20 Jun 2024 11:52 Operator: SC
Sample : LCS R09062024 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

Quant Time: Jun 20 12:21:25 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202406.D Vial: 2
Acq On : 20 Jun 2024 12:24 Operator: SC
Sample : LCSD R09062024 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

Quant Time: Jun 20 13:16:55 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/20/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.27	130	187127	12.500	ng		0.05
37) 1,4-Difluorobenzene (IS2)	9.33	114	813029	12.500	ng		0.03
56) Chlorobenzene-d5 (IS3)	14.85	54	188863	12.500	ng		0.01
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.04	65	399357	12.008	ng		0.06
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.08%				
57) Toluene-d8 (SS2)	12.44	98	914622	12.655	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.20%				
73) Bromofluorobenzene (SS3)	16.83	174	316831	12.140	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.12%				
Target Compounds							Qvalue
2) Propene	3.28	42	578256	24.138	ng		98
3) Dichlorodifluoromethan...	3.36	85	926448	21.037	ng		100
4) Chloromethane	3.49	50	768221	25.517	ng		100
5) 1,2-Dichloro-1,1,2,2-t...	3.60	135	441764	23.132	ng		99
6) Vinyl Chloride	3.68	62	696334	24.233	ng		100
7) 1,3-Butadiene	3.80	54	572308	26.366	ng		98
8) Bromomethane	4.01	94	390675	25.532	ng		100
9) Chloroethane	4.16	64	304634	25.301	ng		100
10) Ethanol	4.36	45	2309335	126.942	ng		100
11) Acetonitrile	4.48	41	1048630	22.959	ng		99
12) Acrolein	4.56	56	714471	53.059	ng		100
13) Acetone	4.66	58	1769662	121.736	ng		92
14) Trichlorofluoromethane	4.76	101	958729	21.521	ng		99
15) 2-Propanol (Isopropanol)	4.90	45	3086505	52.693	ng		97
16) Acrylonitrile	5.03	53	1374108	50.402	ng		100
17) 1,1-Dichloroethene	5.27	96	423520	24.851	ng		99
18) 2-Methyl-2-Propanol (t...	5.37	59	2682762	57.381	ng		99
19) Methylene Chloride	5.39	84	451935	21.963	ng		98
20) 3-Chloro-1-propene (Al...	5.47	41	916977	24.971	ng		99
21) Trichlorotrifluoroethane	5.59	151	429514	22.791	ng		94
22) Carbon Disulfide	5.61	76	3371157	50.834	ng		100
23) trans-1,2-Dichloroethene	6.17	61	769310	26.134	ng		98
24) 1,1-Dichloroethane	6.36	63	900947	25.720	ng		100
25) Methyl tert-Butyl Ether	6.39	73	1404177	28.895	ng		98
26) Vinyl Acetate	6.48	86	468415	139.643	ng	#	94
27) 2-Butanone (MEK)	6.69	72	584332	50.796	ng		98
28) cis-1,2-Dichloroethene	7.12	61	726712	25.169	ng		99
29) Diisopropyl Ether	7.31	87	698827	51.291	ng	#	94
30) Ethyl Acetate	7.31	61	363306	51.726	ng		99
31) n-Hexane	7.31	57	826672	26.861	ng		99
32) Chloroform	7.40	83	884408	24.122	ng		100
34) Tetrahydrofuran (THF)	7.76	72	527340	50.250	ng		95
35) Ethyl tert-Butyl Ether	7.84	87	992923	54.883	ng		96
36) 1,2-Dichloroethane	8.15	62	817677	22.275	ng		99
38) 1,1,1-Trichloroethane	8.42	97	840802	22.273	ng		100
39) Isopropyl Acetate	9.62	61	1630	No Calib		#	
40) 1-Butanol	8.83	56	2852	No Calib			
41) Benzene	8.92	78	1724622	22.979	ng		100
42) Carbon Tetrachloride	9.09	117	780410	22.419	ng		100
43) Cyclohexane	9.24	84	1290607	53.131	ng		96
44) tert-Amyl Methyl Ether	9.62	73	2599474	55.036	ng		99
45) 1,2-Dichloropropane	9.88	63	471328	26.016	ng		100
46) Bromodichloromethane	10.10	83	731860	24.237	ng		100
47) Trichloroethene	10.17	130	484847	22.129	ng		100
48) 1,4-Dioxane	10.13	88	371886	26.856	ng		97
49) 2,2,4-Trimethylpentane...	10.25	57	2006722	27.044	ng		96
50) Methyl Methacrylate	10.42	100	343759	54.047	ng		94

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202406.D Vial: 2
Acq On : 20 Jun 2024 12:24 Operator: SC
Sample : LCSD R09062024 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

Quant Time: Jun 20 13:16:55 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

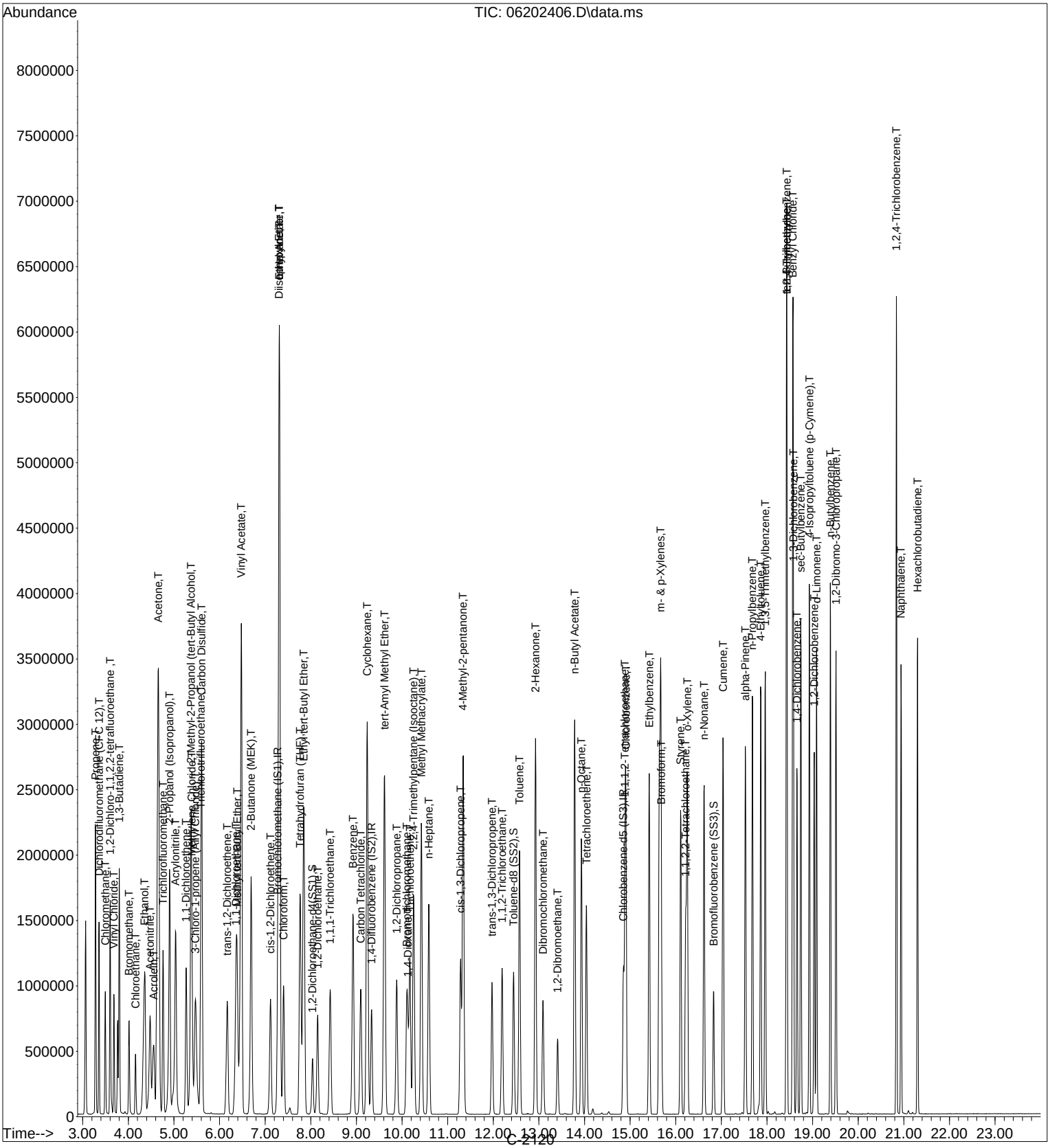
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
51) n-Heptane	10.59	71	428135	27.047	ng		99
52) cis-1,3-Dichloropropene	11.29	75	821893	26.520	ng		100
53) 4-Methyl-2-pentanone	11.34	58	942068	57.108	ng		99
54) trans-1,3-Dichloropropene	11.97	75	673684	24.099	ng		100
55) 1,1,2-Trichloroethane	12.19	97	437825	24.654	ng		99
58) Toluene	12.57	91	1813742	24.016	ng		100
59) 2-Hexanone	12.93	43	2626048	55.464	ng		99
60) Dibromochloromethane	13.09	129	592836	22.707	ng		100
61) 1,2-Dibromoethane	13.41	107	497624	23.429	ng		100
62) n-Butyl Acetate	13.78	43	2894668	58.159	ng		99
63) n-Octane	13.93	57	429231	27.401	ng		97
64) Tetrachloroethene	14.05	166	571069	21.997	ng		100
65) Chlorobenzene	14.91	112	1198835	22.649	ng		99
66) Ethylbenzene	15.42	91	2163754	25.042	ng		100
67) m- & p-Xylenes	15.67	91	3582613	49.311	ng		100
68) Bromoform	15.69	173	556764	24.080	ng		99
69) Styrene	16.11	104	1238949	25.284	ng		99
70) o-Xylene	16.25	91	1758907	24.550	ng		100
71) n-Nonane	16.62	43	1159768	27.847	ng		99
72) 1,1,2,2-Tetrachloroethane	16.21	83	805585	24.559	ng		100
74) Cumene	17.04	105	2106850	23.555	ng		100
75) alpha-Pinene	17.53	93	1120443	26.889	ng		99
76) n-Propylbenzene	17.68	91	2596919	24.050	ng		99
77) 3-Ethyltoluene	17.04	105	2106850	No Calib			
78) 4-Ethyltoluene	17.86	105	2096521	24.584	ng		100
79) 1,3,5-Trimethylbenzene	17.96	105	1835546	24.638	ng		99
80) alpha-Methylstyrene	17.04	118	4498	No Calib		#	
81) 2-Ethyltoluene	17.04	105	2106850	No Calib			
82) 1,2,4-Trimethylbenzene	18.43	105	1889774	24.062	ng		99
83) n-Decane	17.04	58	17633	No Calib			
84) Benzyl Chloride	18.57	91	3268767	51.781	ng		100
85) 1,3-Dichlorobenzene	18.58	146	1055425	20.388	ng		99
86) 1,4-Dichlorobenzene	18.66	146	1004034	19.903	ng		100
87) sec-Butylbenzene	18.74	105	2368412	23.835	ng		99
88) 4-Isopropyltoluene (p-...	18.93	119	2086805	23.358	ng		100
89) 1,2,3-Trimethylbenzene	17.04	105	2106850	No Calib			
90) 1,2-Dichlorobenzene	19.04	146	1034458	20.585	ng		100
91) d-Limonene	19.09	68	716638	26.840	ng		97
92) 1,2-Dibromo-3-Chloropr...	19.51	157	814182	46.718	ng		99
93) n-Undecane	17.86	58	41095	No Calib		#	
94) 1,2,4-Trichlorobenzene	20.84	180	1602683	40.401	ng		100
95) Naphthalene	20.94	128	2098202	20.847	ng		100
96) n-Dodecane	18.93	58	52546	No Calib		#	
97) Hexachlorobutadiene	21.30	225	615402	18.870	ng		100
98) Cyclohexanone	15.43	55	9484	No Calib			
99) tert-Butylbenzene	18.43	119	1799493	23.911	ng		100
100) n-Butylbenzene	19.39	91	1976649	23.648	ng		100
101) 1,1,1,2-Tetrachloroethane	14.89	131	490136	24.382	ng		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202406.D Vial: 2
Acq On : 20 Jun 2024 12:24 Operator: SC
Sample : LCSD R09062024 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

Quant Time: Jun 20 13:16:55 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212405.D Vial: 2
Acq On : 21 Jun 2024 12:33 Operator: SC
Sample : LCS R09062124 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

Quant Time: Jun 21 13:36:29 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/21/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.28	130	187906	12.500	ng		0.05
37) 1,4-Difluorobenzene (IS2)	9.33	114	814406	12.500	ng		0.03
56) Chlorobenzene-d5 (IS3)	14.85	54	191111	12.500	ng		0.01
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.04	65	399524	11.963	ng		0.06
Spiked Amount 12.500	Range 70 - 130		Recovery = 95.68%				
57) Toluene-d8 (SS2)	12.45	98	915882	12.523	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.16%				
73) Bromofluorobenzene (SS3)	16.83	174	320483	12.136	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.12%				
Target Compounds							Qvalue
2) Propene	3.28	42	555018	23.071	ng		98
3) Dichlorodifluoromethan...	3.35	85	915901	20.711	ng		100
4) Chloromethane	3.49	50	758732	25.097	ng		100
5) 1,2-Dichloro-1,1,2,2-t...	3.60	135	451244	23.530	ng		100
6) Vinyl Chloride	3.68	62	725846	25.156	ng		99
7) 1,3-Butadiene	3.80	54	578881	26.559	ng		97
8) Bromomethane	4.01	94	396375	25.797	ng		99
9) Chloroethane	4.15	64	307892	25.466	ng		99
10) Ethanol	4.36	45	2293868	125.569	ng		100
11) Acetonitrile	4.48	41	1034262	22.551	ng		100
12) Acrolein	4.56	56	708508	52.398	ng		100
13) Acetone	4.66	58	1762703	120.755	ng		90
14) Trichlorofluoromethane	4.76	101	946956	21.168	ng		99
15) 2-Propanol (Isopropanol)	4.91	45	3074623	52.272	ng		97
16) Acrylonitrile	5.03	53	1361615	49.737	ng		100
17) 1,1-Dichloroethene	5.27	96	420772	24.587	ng		99
18) 2-Methyl-2-Propanol (t...	5.37	59	2669939	56.870	ng		99
19) Methylene Chloride	5.39	84	451179	21.835	ng		98
20) 3-Chloro-1-propene (Al...	5.47	41	915663	24.832	ng		98
21) Trichlorotrifluoroethane	5.59	151	428678	22.652	ng		95
22) Carbon Disulfide	5.61	76	3365629	50.541	ng		100
23) trans-1,2-Dichloroethene	6.17	61	759653	25.699	ng		99
24) 1,1-Dichloroethane	6.36	63	893520	25.402	ng		99
25) Methyl tert-Butyl Ether	6.38	73	1399454	28.678	ng		98
26) Vinyl Acetate	6.48	86	462091	137.187	ng	#	94
27) 2-Butanone (MEK)	6.69	72	580210	50.228	ng		99
28) cis-1,2-Dichloroethene	7.12	61	723291	24.946	ng		99
29) Diisopropyl Ether	7.30	87	690461	50.467	ng	#	94
30) Ethyl Acetate	7.31	61	358297	50.801	ng		99
31) n-Hexane	7.31	57	819344	26.513	ng		100
32) Chloroform	7.41	83	879006	23.875	ng		100
34) Tetrahydrofuran (THF)	7.76	72	522540	49.586	ng		96
35) Ethyl tert-Butyl Ether	7.85	87	990502	54.523	ng		96
36) 1,2-Dichloroethane	8.15	62	806283	21.874	ng		99
38) 1,1,1-Trichloroethane	8.43	97	832964	22.029	ng		100
39) Isopropyl Acetate	9.61	61	1641	No Calib		#	
40) 1-Butanol	8.84	56	2975	No Calib			
41) Benzene	8.92	78	1712115	22.774	ng		100
42) Carbon Tetrachloride	9.09	117	771727	22.132	ng		100
43) Cyclohexane	9.24	84	1286277	52.863	ng		97
44) tert-Amyl Methyl Ether	9.62	73	2572763	54.378	ng		99
45) 1,2-Dichloropropane	9.88	63	465095	25.628	ng		99
46) Bromodichloromethane	10.10	83	724541	23.954	ng		100
47) Trichloroethene	10.17	130	480243	21.882	ng		100
48) 1,4-Dioxane	10.14	88	368112	26.538	ng		98
49) 2,2,4-Trimethylpentane...	10.25	57	1995759	26.851	ng		96
50) Methyl Methacrylate	10.42	100	339328	53.261	ng		94

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212405.D Vial: 2
Acq On : 21 Jun 2024 12:33 Operator: SC
Sample : LCS R09062124 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

Quant Time: Jun 21 13:36:29 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

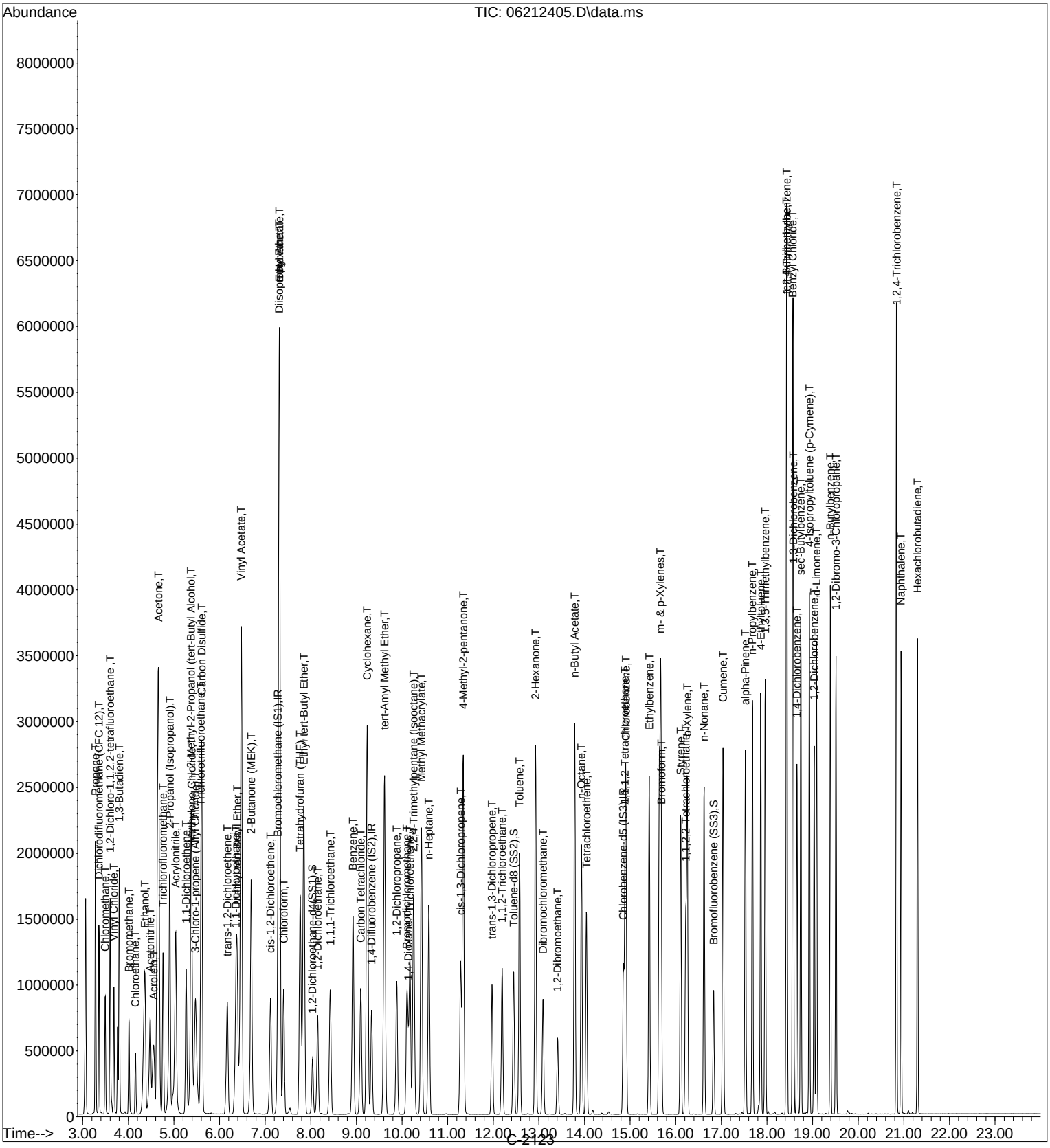
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	10.59	71	426028	26.869 ng		99
52) cis-1,3-Dichloropropene	11.29	75	814453	26.236 ng		99
53) 4-Methyl-2-pentanone	11.34	58	933983	56.522 ng		99
54) trans-1,3-Dichloropropene	11.97	75	662648	23.664 ng		100
55) 1,1,2-Trichloroethane	12.19	97	437335	24.584 ng		100
58) Toluene	12.57	91	1797127	23.516 ng		100
59) 2-Hexanone	12.93	43	2572320	53.690 ng		99
60) Dibromochloromethane	13.09	129	590971	22.369 ng		100
61) 1,2-Dibromoethane	13.41	107	496044	23.080 ng		100
62) n-Butyl Acetate	13.78	43	2843045	56.450 ng		99
63) n-Octane	13.93	57	424989	26.811 ng		97
64) Tetrachloroethene	14.04	166	564235	21.478 ng		100
65) Chlorobenzene	14.91	112	1193436	22.282 ng		99
66) Ethylbenzene	15.42	91	2143368	24.514 ng		100
67) m- & p-Xylenes	15.66	91	3552414	48.320 ng		100
68) Bromoform	15.69	173	551045	23.552 ng		100
69) Styrene	16.11	104	1222847	24.662 ng		99
70) o-Xylene	16.25	91	1736919	23.958 ng		100
71) n-Nonane	16.62	43	1146526	27.206 ng		99
72) 1,1,2,2-Tetrachloroethane	16.22	83	799420	24.085 ng		100
74) Cumene	17.04	105	2090941	23.102 ng		99
75) alpha-Pinene	17.53	93	1109650	26.317 ng		98
76) n-Propylbenzene	17.68	91	2572590	23.545 ng		99
77) 3-Ethyltoluene	17.04	105	2090941	No Calib		
78) 4-Ethyltoluene	17.87	105	2070567	23.994 ng		100
79) 1,3,5-Trimethylbenzene	17.96	105	1808680	23.992 ng		99
80) alpha-Methylstyrene	17.04	118	4071	No Calib	#	
81) 2-Ethyltoluene	17.04	105	2090941	No Calib		
82) 1,2,4-Trimethylbenzene	18.43	105	1867895	23.503 ng		100
83) n-Decane	17.04	58	18794	No Calib		
84) Benzyl Chloride	18.56	91	3189215	49.926 ng		100
85) 1,3-Dichlorobenzene	18.58	146	1041112	19.875 ng		99
86) 1,4-Dichlorobenzene	18.66	146	996496	19.521 ng		100
87) sec-Butylbenzene	18.74	105	2341325	23.285 ng		99
88) 4-Isopropyltoluene (p-...	18.93	119	2066396	22.858 ng		100
89) 1,2,3-Trimethylbenzene	17.04	105	2090941	No Calib		
90) 1,2-Dichlorobenzene	19.04	146	1023810	20.134 ng		100
91) d-Limonene	19.09	68	711740	26.343 ng		97
92) 1,2-Dibromo-3-Chloropr...	19.51	157	810044	45.934 ng		99
93) n-Undecane	17.87	58	40457	No Calib	#	
94) 1,2,4-Trichlorobenzene	20.84	180	1593525	39.698 ng		100
95) Naphthalene	20.94	128	2081915	20.442 ng		100
96) n-Dodecane	18.93	58	56663	No Calib	#	
97) Hexachlorobutadiene	21.30	225	608659	18.444 ng		100
98) Cyclohexanone	15.43	55	9102	No Calib		
99) tert-Butylbenzene	18.43	119	1782949	23.413 ng		100
100) n-Butylbenzene	19.39	91	1944470	22.989 ng		99
101) 1,1,1,2-Tetrachloroethane	14.89	131	487420	23.961 ng		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212405.D Vial: 2
Acq On : 21 Jun 2024 12:33 Operator: SC
Sample : LCS R09062124 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

Quant Time: Jun 21 13:36:29 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212406.D Vial: 2
Acq On : 21 Jun 2024 13:05 Operator: SC
Sample : LCSD R09062124 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

Quant Time: Jun 21 13:38:38 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/21/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.28	130	183279	12.500	ng		0.05
37) 1,4-Difluorobenzene (IS2)	9.33	114	802798	12.500	ng		0.03
56) Chlorobenzene-d5 (IS3)	14.85	54	188262	12.500	ng		0.01
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.04	65	394626	12.115	ng		0.06
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.88%				
57) Toluene-d8 (SS2)	12.45	98	900926	12.505	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.08%				
73) Bromofluorobenzene (SS3)	16.83	174	312467	12.011	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.08%				
Target Compounds							Qvalue
2) Propene	3.28	42	591255	25.198	ng		98
3) Dichlorodifluoromethan...	3.36	85	951946	22.070	ng		100
4) Chloromethane	3.49	50	774054	26.250	ng		100
5) 1,2-Dichloro-1,1,2,2-t...	3.60	135	447426	23.920	ng		100
6) Vinyl Chloride	3.69	62	708852	25.187	ng		100
7) 1,3-Butadiene	3.80	54	579594	27.263	ng		96
8) Bromomethane	4.02	94	387264	25.840	ng		100
9) Chloroethane	4.16	64	306719	26.009	ng		100
10) Ethanol	4.36	45	2329902	130.761	ng		100
11) Acetonitrile	4.48	41	1062054	23.742	ng		99
12) Acrolein	4.56	56	719597	54.562	ng		99
13) Acetone	4.66	58	1786903	125.503	ng		91
14) Trichlorofluoromethane	4.76	101	957185	21.937	ng		99
15) 2-Propanol (Isopropanol)	4.90	45	3068434	53.484	ng		97
16) Acrylonitrile	5.04	53	1382525	51.776	ng		99
17) 1,1-Dichloroethene	5.27	96	424242	25.416	ng		100
18) 2-Methyl-2-Propanol (t...	5.37	59	2659047	58.068	ng		99
19) Methylene Chloride	5.39	84	453977	22.525	ng		97
20) 3-Chloro-1-propene (Al...	5.47	41	915008	25.440	ng		99
21) Trichlorotrifluoroethane	5.59	151	430118	23.302	ng		95
22) Carbon Disulfide	5.61	76	3394674	52.264	ng		100
23) trans-1,2-Dichloroethene	6.17	61	772292	26.786	ng		99
24) 1,1-Dichloroethane	6.36	63	909067	26.496	ng		100
25) Methyl tert-Butyl Ether	6.39	73	1423404	29.905	ng		98
26) Vinyl Acetate	6.48	86	474184	144.331	ng	#	94
27) 2-Butanone (MEK)	6.69	72	589438	52.315	ng		98
28) cis-1,2-Dichloroethene	7.12	61	733801	25.948	ng		99
29) Diisopropyl Ether	7.31	87	702179	52.620	ng	#	93
30) Ethyl Acetate	7.31	61	367710	53.452	ng		100
31) n-Hexane	7.32	57	835092	27.705	ng		99
32) Chloroform	7.41	83	887600	24.717	ng		100
34) Tetrahydrofuran (THF)	7.77	72	530256	51.589	ng		95
35) Ethyl tert-Butyl Ether	7.85	87	1003406	56.627	ng		96
36) 1,2-Dichloroethane	8.15	62	820923	22.833	ng		100
38) 1,1,1-Trichloroethane	8.43	97	842466	22.602	ng		100
39) Isopropyl Acetate	9.60	61	1519	No Calib		#	
40) 1-Butanol	8.83	56	2754	No Calib			
41) Benzene	8.93	78	1740220	23.482	ng		100
42) Carbon Tetrachloride	9.09	117	782482	22.765	ng		100
43) Cyclohexane	9.24	84	1304272	54.378	ng		96
44) tert-Amyl Methyl Ether	9.62	73	2609244	55.947	ng		99
45) 1,2-Dichloropropane	9.88	63	475003	26.553	ng		100
46) Bromodichloromethane	10.10	83	732575	24.569	ng		99
47) Trichloroethene	10.17	130	485784	22.454	ng		100
48) 1,4-Dioxane	10.13	88	375539	27.465	ng		98
49) 2,2,4-Trimethylpentane...	10.25	57	2024483	27.631	ng		96
50) Methyl Methacrylate	10.43	100	345346	54.989	ng		94

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212406.D Vial: 2
Acq On : 21 Jun 2024 13:05 Operator: SC
Sample : LCSD R09062124 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

Quant Time: Jun 21 13:38:38 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

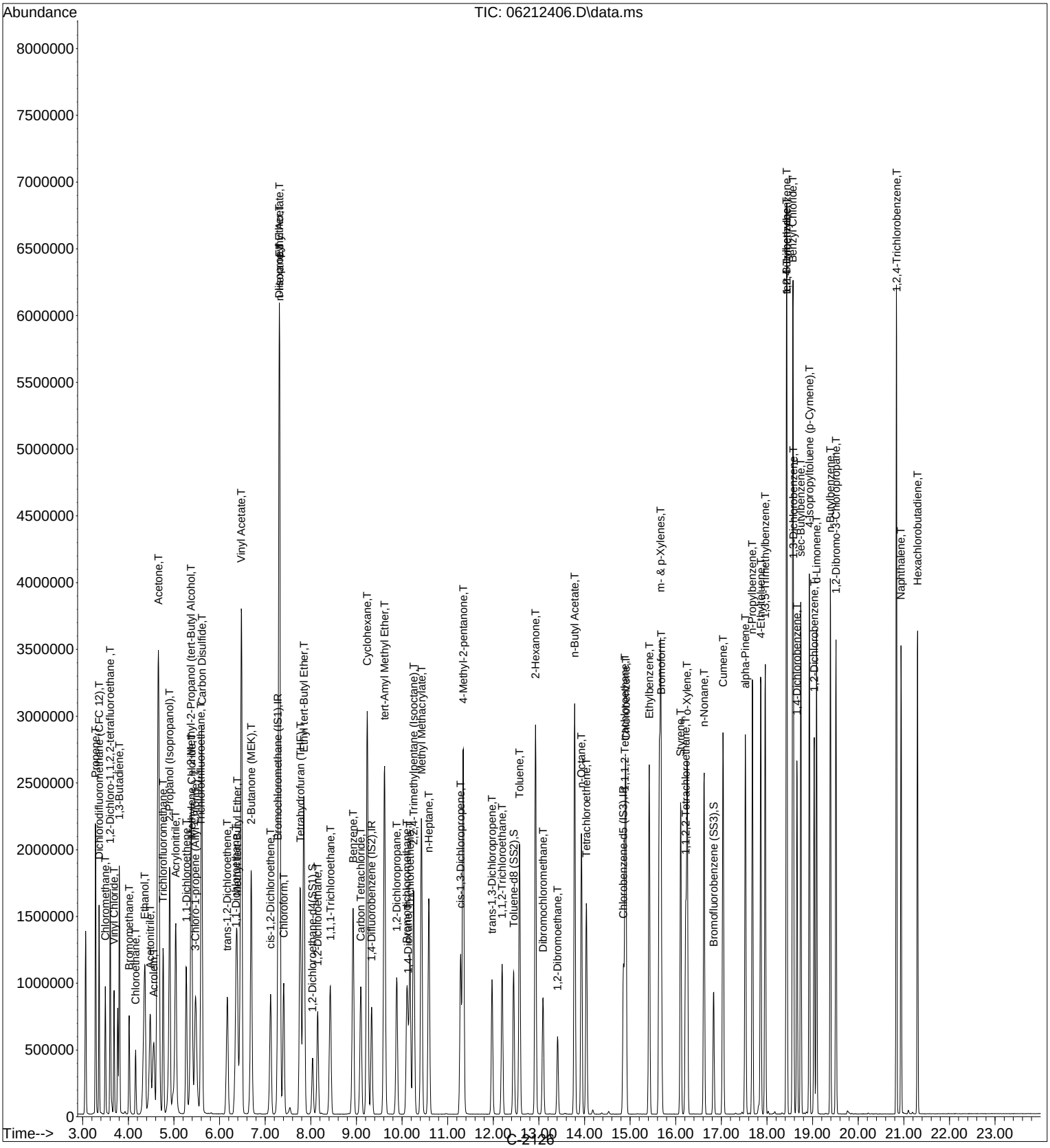
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	10.59	71	432873	27.695 ng		99
52) cis-1,3-Dichloropropene	11.29	75	827347	27.036 ng		99
53) 4-Methyl-2-pentanone	11.34	58	950417	58.348 ng		99
54) trans-1,3-Dichloropropene	11.97	75	678221	24.571 ng		100
55) 1,1,2-Trichloroethane	12.19	97	441549	25.180 ng		99
58) Toluene	12.57	91	1821783	24.200 ng		100
59) 2-Hexanone	12.93	43	2637558	55.885 ng		99
60) Dibromochloromethane	13.09	129	596365	22.915 ng		100
61) 1,2-Dibromoethane	13.41	107	501003	23.663 ng		99
62) n-Butyl Acetate	13.78	43	2918820	58.831 ng		99
63) n-Octane	13.93	57	433526	27.764 ng		96
64) Tetrachloroethene	14.04	166	569869	22.021 ng		100
65) Chlorobenzene	14.91	112	1204405	22.827 ng		100
66) Ethylbenzene	15.42	91	2175316	25.256 ng		100
67) m- & p-Xylenes	15.67	91	3595794	49.650 ng		100
68) Bromoform	15.68	173	553738	24.025 ng		100
69) Styrene	16.11	104	1237063	25.326 ng		100
70) o-Xylene	16.25	91	1768203	24.758 ng		100
71) n-Nonane	16.62	43	1170455	28.194 ng		99
72) 1,1,2,2-Tetrachloroethane	16.22	83	809343	24.753 ng		99
74) Cumene	17.04	105	2116312	23.736 ng		100
75) alpha-Pinene	17.53	93	1127843	27.153 ng		98
76) n-Propylbenzene	17.68	91	2611321	24.261 ng		99
77) 3-Ethyltoluene	17.04	105	2116312	No Calib		
78) 4-Ethyltoluene	17.87	105	2095257	24.647 ng		100
79) 1,3,5-Trimethylbenzene	17.96	105	1835453	24.715 ng		100
80) alpha-Methylstyrene	17.04	118	4387	No Calib	#	
81) 2-Ethyltoluene	17.04	105	2116312	No Calib		
82) 1,2,4-Trimethylbenzene	18.43	105	1888076	24.117 ng		100
83) n-Decane	17.04	58	20145	No Calib		
84) Benzyl Chloride	18.56	91	3259683	51.802 ng		100
85) 1,3-Dichlorobenzene	18.58	146	1052603	20.398 ng		99
86) 1,4-Dichlorobenzene	18.66	146	1003200	19.950 ng		100
87) sec-Butylbenzene	18.74	105	2378062	24.009 ng		99
88) 4-Isopropyltoluene (p-...	18.93	119	2098984	23.570 ng		100
89) 1,2,3-Trimethylbenzene	17.04	105	2116312	No Calib		
90) 1,2-Dichlorobenzene	19.04	146	1033591	20.634 ng		99
91) d-Limonene	19.09	68	721276	27.100 ng		97
92) 1,2-Dibromo-3-Chloropr...	19.51	157	813367	46.820 ng		99
93) n-Undecane	17.86	58	37651	No Calib	#	
94) 1,2,4-Trichlorobenzene	20.84	180	1604093	40.566 ng		100
95) Naphthalene	20.94	128	2104652	20.978 ng		100
96) n-Dodecane	18.93	58	51324	No Calib	#	
97) Hexachlorobutadiene	21.30	225	615800	18.942 ng		100
98) Cyclohexanone	15.43	55	9389	No Calib		
99) tert-Butylbenzene	18.43	119	1802732	24.031 ng		100
100) n-Butylbenzene	19.39	91	1979051	23.752 ng		99
101) 1,1,1,2-Tetrachloroethane	14.89	131	493329	24.619 ng		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212406.D Vial: 2
Acq On : 21 Jun 2024 13:05 Operator: SC
Sample : LCSD R09062124 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

Quant Time: Jun 21 13:38:38 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222404.D Vial: 2
Acq On : 22 Jun 2024 12:10 Operator: SC
Sample : LCS R09062224 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

6/24/24

Quant Time: Jun 24 09:50:00 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	7.28	130	178257	12.500	ng	0.00
37) 1,4-Difluorobenzene (IS2)	9.33	114	778177	12.500	ng	0.00
56) Chlorobenzene-d5 (IS3)	14.85	54	184157	12.500	ng	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4(...	8.04	65	390826	12.336	ng	0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.72%			
57) Toluene-d8 (SS2)	12.44	98	874148	12.404	ng	-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.20%			
73) Bromofluorobenzene (SS3)	16.83	174	319014	12.536	ng	0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.32%			
Target Compounds						Qvalue
2) Propene	3.28	42	497020	21.779	ng	100
3) Dichlorodifluoromethan...	3.36	85	892693	21.279	ng	100
4) Chloromethane	3.49	50	685832	23.914	ng	100
5) 1,2-Dichloro-1,1,2,2-t...	3.60	135	437073	24.025	ng	100
6) Vinyl Chloride	3.68	62	679753	24.833	ng	100
7) 1,3-Butadiene	3.80	54	542614	26.242	ng	98
8) Bromomethane	4.02	94	358036	24.563	ng	99
9) Chloroethane	4.15	64	276085	24.071	ng	99
10) Ethanol	4.36	45	2047017	118.121	ng	100
11) Acetonitrile	4.48	41	911671	20.954	ng	99
12) Acrolein	4.56	56	631551	49.235	ng	100
13) Acetone	4.66	58	1597780	115.381	ng	95
14) Trichlorofluoromethane	4.76	101	929069	21.893	ng	100
15) 2-Propanol (Isopropanol)	4.90	45	2806281	50.293	ng	99
16) Acrylonitrile	5.03	53	1227653	47.271	ng	100
17) 1,1-Dichloroethene	5.27	96	394420	24.295	ng	99
18) 2-Methyl-2-Propanol (t...	5.37	59	2532469	56.862	ng	99
19) Methylene Chloride	5.39	84	418327	21.341	ng	99
20) 3-Chloro-1-propene (Al...	5.47	41	829739	23.719	ng	100
21) Trichlorotrifluoroethane	5.59	151	416545	23.203	ng	97
22) Carbon Disulfide	5.61	76	3132437	49.585	ng	100
23) trans-1,2-Dichloroethene	6.17	61	706405	25.191	ng	100
24) 1,1-Dichloroethane	6.36	63	825846	24.749	ng	99
25) Methyl tert-Butyl Ether	6.38	73	1353064	29.228	ng	99
26) Vinyl Acetate	6.48	86	447324	139.991	ng	99
27) 2-Butanone (MEK)	6.69	72	534309	48.759	ng	100
28) cis-1,2-Dichloroethene	7.12	61	672479	24.449	ng	100
29) Diisopropyl Ether	7.31	87	653006	50.313	ng	99
30) Ethyl Acetate	7.31	61	329831	49.297	ng	99
31) n-Hexane	7.32	57	758154	25.861	ng	100
32) Chloroform	7.40	83	838509	24.008	ng	99
34) Tetrahydrofuran (THF)	7.76	72	482774	48.292	ng	99
35) Ethyl tert-Butyl Ether	7.84	87	955026	55.415	ng	99
36) 1,2-Dichloroethane	8.15	62	793793	22.701	ng	100
38) 1,1,1-Trichloroethane	8.42	97	817932	22.638	ng	100
39) Isopropyl Acetate	9.61	61	1476	No Calib	#	
40) 1-Butanol	8.82	56	2586	No Calib		
41) Benzene	8.92	78	1588670	22.115	ng	100
42) Carbon Tetrachloride	9.09	117	762251	22.878	ng	100
43) Cyclohexane	9.24	84	1199023	51.571	ng	99
44) tert-Amyl Methyl Ether	9.62	73	2457795	54.367	ng	99
45) 1,2-Dichloropropane	9.88	63	426495	24.595	ng	100
46) Bromodichloromethane	10.10	83	694796	24.040	ng	100
47) Trichloroethene	10.17	130	463521	22.103	ng	99
48) 1,4-Dioxane	10.13	88	346608	26.151	ng	99
49) 2,2,4-Trimethylpentane...	10.25	57	1807263	25.447	ng	98
50) Methyl Methacrylate	10.42	100	324579	53.317	ng	98

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222404.D Vial: 2
Acq On : 22 Jun 2024 12:10 Operator: SC
Sample : LCS R09062224 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

Quant Time: Jun 24 09:50:00 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

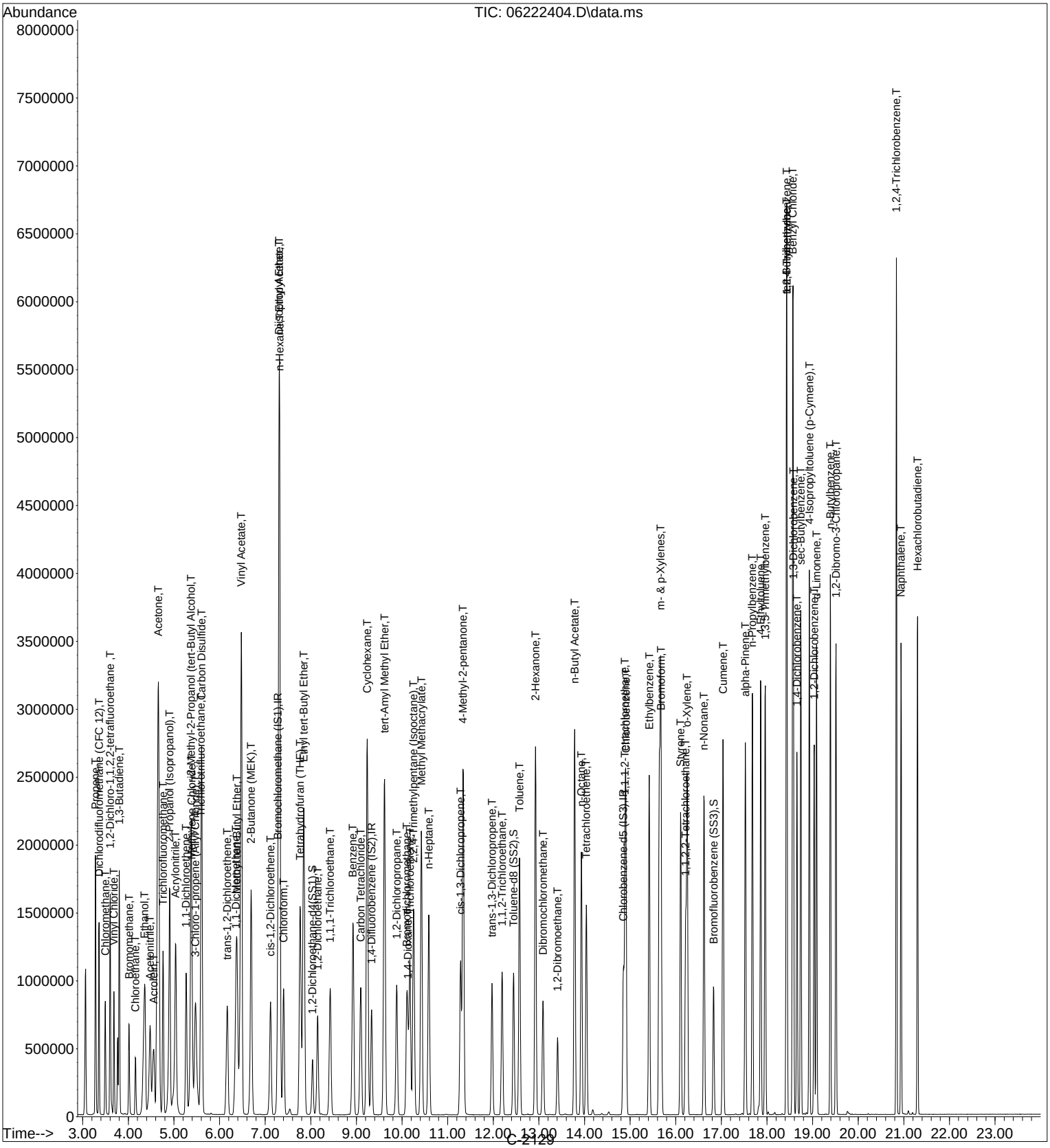
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	10.59	71	393025	25.941 ng		100
52) cis-1,3-Dichloropropene	11.29	75	770561	25.977 ng		100
53) 4-Methyl-2-pentanone	11.34	58	862395	54.619 ng		99
54) trans-1,3-Dichloropropene	11.97	75	641948	23.992 ng		100
55) 1,1,2-Trichloroethane	12.19	97	410741	24.164 ng		100
58) Toluene	12.57	91	1703779	23.137 ng		100
59) 2-Hexanone	12.93	43	2439385	52.838 ng		99
60) Dibromochloromethane	13.09	129	576588	22.649 ng		100
61) 1,2-Dibromoethane	13.41	107	474547	22.913 ng		100
62) n-Butyl Acetate	13.78	43	2689376	55.415 ng		99
63) n-Octane	13.93	57	392263	25.681 ng		98
64) Tetrachloroethene	14.04	166	560050	22.124 ng		99
65) Chlorobenzene	14.91	112	1144486	22.175 ng		99
66) Ethylbenzene	15.42	91	2054544	24.386 ng		100
67) m- & p-Xylenes	15.67	91	3422734	48.314 ng		100
68) Bromoform	15.68	173	549923	24.392 ng		100
69) Styrene	16.11	104	1178102	24.656 ng		99
70) o-Xylene	16.25	91	1678781	24.030 ng		100
71) n-Nonane	16.62	43	1059005	26.078 ng		99
72) 1,1,2,2-Tetrachloroethane	16.21	83	747586	23.373 ng		99
74) Cumene	17.04	105	2029485	23.270 ng		100
75) alpha-Pinene	17.53	93	1071286	26.366 ng		99
76) n-Propylbenzene	17.68	91	2473328	23.491 ng		100
77) 3-Ethyltoluene	17.04	105	2029485	No Calib		
78) 4-Ethyltoluene	17.86	105	2008048	24.148 ng		100
79) 1,3,5-Trimethylbenzene	17.96	105	1772989	24.406 ng		100
80) alpha-Methylstyrene	17.03	118	4408	No Calib		
81) 2-Ethyltoluene	17.04	105	2029485	No Calib		
82) 1,2,4-Trimethylbenzene	18.43	105	1832683	23.931 ng		99
83) n-Decane	17.04	58	16574	No Calib		
84) Benzyl Chloride	18.56	91	3182744	51.707 ng		100
85) 1,3-Dichlorobenzene	18.58	146	1028694	20.379 ng		99
86) 1,4-Dichlorobenzene	18.66	146	978115	19.884 ng		99
87) sec-Butylbenzene	18.74	105	2294242	23.679 ng		99
88) 4-Isopropyltoluene (p-...	18.93	119	2043496	23.458 ng		100
89) 1,2,3-Trimethylbenzene	17.04	105	2029485	No Calib		
90) 1,2-Dichlorobenzene	19.04	146	1020440	20.825 ng		100
91) d-Limonene	19.09	68	679159	26.086 ng		98
92) 1,2-Dibromo-3-Chloropr...	19.51	157	809041	47.609 ng		100
93) n-Undecane	17.86	58	30299	No Calib		
94) 1,2,4-Trichlorobenzene	20.84	180	1614806	41.747 ng		100
95) Naphthalene	20.94	128	2081256	21.207 ng		100
96) n-Dodecane	18.93	58	47323	No Calib	#	
97) Hexachlorobutadiene	21.30	225	626313	19.695 ng		100
98) Cyclohexanone	15.43	55	9053	No Calib	#	
99) tert-Butylbenzene	18.43	119	1756492	23.936 ng		100
100) n-Butylbenzene	19.39	91	1910673	23.443 ng		100
101) 1,1,1,2-Tetrachloroethane	14.89	131	477511	24.361 ng		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222404.D Vial: 2
Acq On : 22 Jun 2024 12:10 Operator: SC
Sample : LCS R09062224 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

Quant Time: Jun 24 09:50:00 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222405.D Vial: 2
Acq On : 22 Jun 2024 12:43 Operator: SC
Sample : LCSD R09062224 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

Quant Time: Jun 22 14:09:00 2024 6/24/24
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	7.28	130	185847	12.500	ng	0.05
37) 1,4-Difluorobenzene (IS2)	9.33	114	812299	12.500	ng	0.03
56) Chlorobenzene-d5 (IS3)	14.85	54	191650	12.500	ng	0.01
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4(...	8.04	65	404126	12.235	ng	0.06
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.84%			
57) Toluene-d8 (SS2)	12.44	98	908690	12.390	ng	-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.12%			
73) Bromofluorobenzene (SS3)	16.83	174	327805	12.378	ng	0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.04%			
Target Compounds						Qvalue
2) Propene	3.28	42	529137	22.239	ng	99
3) Dichlorodifluoromethan...	3.36	85	926114	21.174	ng	100
4) Chloromethane	3.49	50	725199	24.254	ng	100
5) 1,2-Dichloro-1,1,2,2-t...	3.60	135	438058	23.096	ng	100
6) Vinyl Chloride	3.68	62	677205	23.730	ng	100
7) 1,3-Butadiene	3.80	54	579546	26.884	ng	98
8) Bromomethane	4.02	94	382228	25.152	ng	100
9) Chloroethane	4.16	64	288698	24.143	ng	99
10) Ethanol	4.36	45	2162874	119.710	ng	100
11) Acetonitrile	4.48	41	970379	21.393	ng	98
12) Acrolein	4.56	56	675368	50.501	ng	99
13) Acetone	4.66	58	1682196	116.516	ng	94
14) Trichlorofluoromethane	4.76	101	952562	21.530	ng	99
15) 2-Propanol (Isopropanol)	4.91	45	2971318	51.076	ng	98
16) Acrylonitrile	5.04	53	1295435	47.844	ng	100
17) 1,1-Dichloroethene	5.27	96	407403	24.070	ng	100
18) 2-Methyl-2-Propanol (t...	5.38	59	2622781	56.484	ng	99
19) Methylene Chloride	5.39	84	435330	21.302	ng	99
20) 3-Chloro-1-propene (Al...	5.48	41	886610	24.310	ng	98
21) Trichlorotrifluoroethane	5.59	151	428729	22.906	ng	97
22) Carbon Disulfide	5.61	76	3247017	49.300	ng	100
23) trans-1,2-Dichloroethene	6.17	61	738194	25.249	ng	99
24) 1,1-Dichloroethane	6.36	63	862566	24.793	ng	100
25) Methyl tert-Butyl Ether	6.39	73	1400948	29.027	ng	99
26) Vinyl Acetate	6.48	86	463049	138.994	ng	97
27) 2-Butanone (MEK)	6.70	72	556502	48.710	ng	98
28) cis-1,2-Dichloroethene	7.12	61	700454	24.426	ng	100
29) Diisopropyl Ether	7.30	87	677232	50.049	ng	97
30) Ethyl Acetate	7.32	61	347199	49.773	ng	100
31) n-Hexane	7.32	57	787702	25.771	ng	99
32) Chloroform	7.41	83	866938	23.808	ng	99
34) Tetrahydrofuran (THF)	7.77	72	502574	48.220	ng	97
35) Ethyl tert-Butyl Ether	7.85	87	988655	55.024	ng	98
36) 1,2-Dichloroethane	8.15	62	807998	22.163	ng	100
38) 1,1,1-Trichloroethane	8.43	97	835609	22.156	ng	100
39) Isopropyl Acetate	9.62	61	1602	No Calib	#	
40) 1-Butanol	8.83	56	2562	No Calib	#	
41) Benzene	8.93	78	1657396	22.103	ng	100
42) Carbon Tetrachloride	9.10	117	786155	22.604	ng	99
43) Cyclohexane	9.24	84	1248283	51.435	ng	98
44) tert-Amyl Methyl Ether	9.62	73	2547197	53.978	ng	99
45) 1,2-Dichloropropane	9.88	63	448671	24.787	ng	99
46) Bromodichloromethane	10.10	83	714428	23.681	ng	100
47) Trichloroethene	10.18	130	474323	21.668	ng	100
48) 1,4-Dioxane	10.14	88	359740	26.002	ng	98
49) 2,2,4-Trimethylpentane...	10.25	57	1903130	25.671	ng	98
50) Methyl Methacrylate	10.43	100	336075	52.887	ng	97

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222405.D Vial: 2
Acq On : 22 Jun 2024 12:43 Operator: SC
Sample : LCSD R09062224 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

Quant Time: Jun 22 14:09:00 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

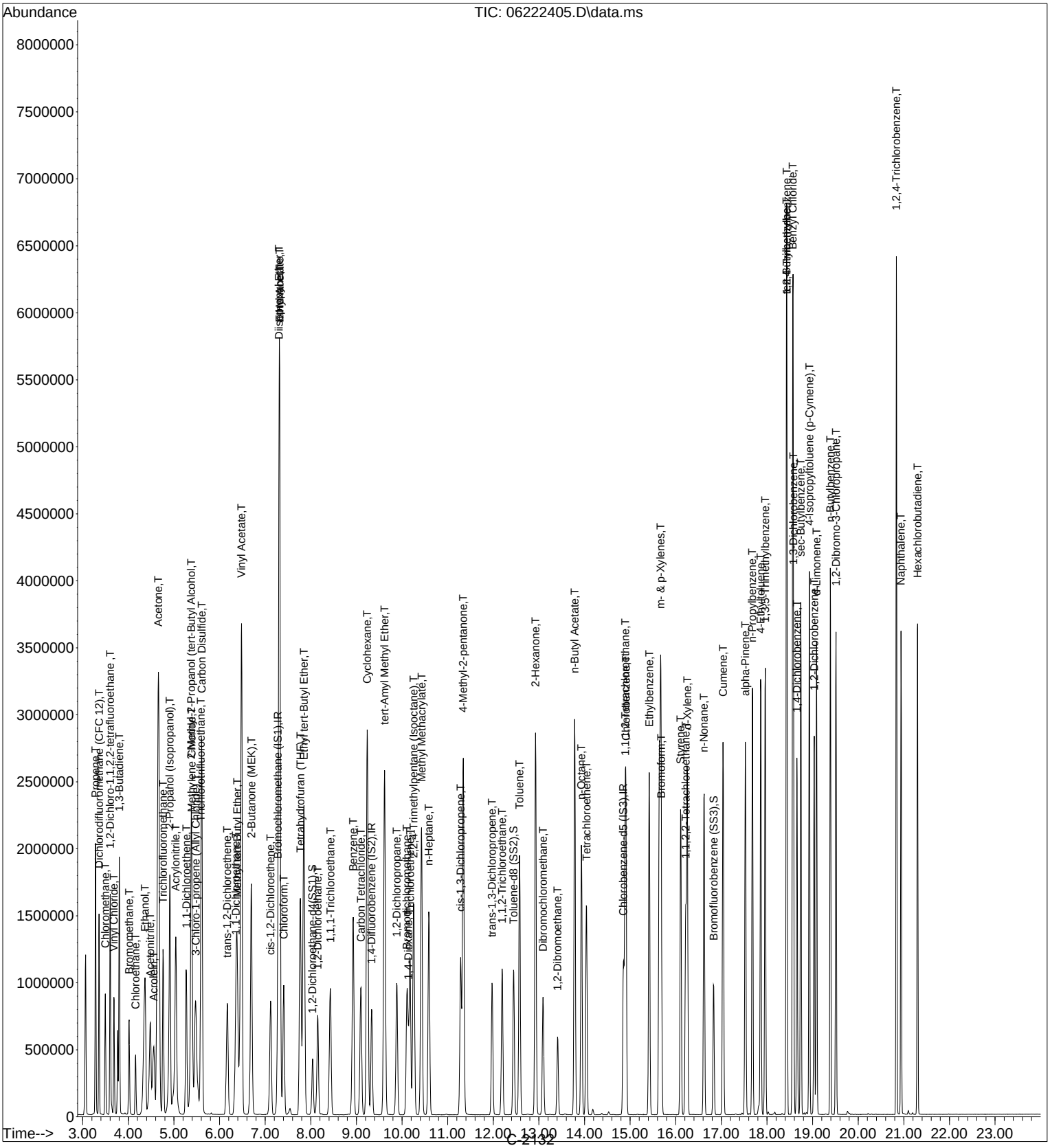
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	10.59	71	410698	25.969 ng		100
52) cis-1,3-Dichloropropene	11.29	75	797253	25.748 ng		100
53) 4-Methyl-2-pentanone	11.34	58	901371	54.690 ng		99
54) trans-1,3-Dichloropropene	11.97	75	665931	23.843 ng		100
55) 1,1,2-Trichloroethane	12.19	97	425688	23.992 ng		100
58) Toluene	12.57	91	1767969	23.070 ng		100
59) 2-Hexanone	12.93	43	2552313	53.123 ng		99
60) Dibromochloromethane	13.09	129	589889	22.265 ng		100
61) 1,2-Dibromoethane	13.41	107	492471	22.849 ng		100
62) n-Butyl Acetate	13.78	43	2820817	55.851 ng		99
63) n-Octane	13.93	57	408280	25.685 ng		98
64) Tetrachloroethene	14.05	166	570895	21.671 ng		100
65) Chlorobenzene	14.91	112	1175138	21.879 ng		100
66) Ethylbenzene	15.42	91	2117991	24.156 ng		100
67) m- & p-Xylenes	15.67	91	3529833	47.878 ng		100
68) Bromoform	15.69	173	559663	23.853 ng		100
69) Styrene	16.11	104	1211615	24.366 ng		99
70) o-Xylene	16.25	91	1723618	23.707 ng		99
71) n-Nonane	16.62	43	1101858	26.072 ng		99
72) 1,1,2,2-Tetrachloroethane	16.22	83	777817	23.368 ng		100
74) Cumene	17.04	105	2085942	22.982 ng		100
75) alpha-Pinene	17.53	93	1100366	26.023 ng		99
76) n-Propylbenzene	17.68	91	2558024	23.346 ng		100
77) 3-Ethyltoluene	17.04	105	2085942	No Calib		
78) 4-Ethyltoluene	17.86	105	2108771	24.368 ng		99
79) 1,3,5-Trimethylbenzene	17.96	105	1826401	24.159 ng		99
80) alpha-Methylstyrene	17.03	118	4348	No Calib	#	
81) 2-Ethyltoluene	17.04	105	2085942	No Calib		
82) 1,2,4-Trimethylbenzene	18.43	105	1881861	23.612 ng		99
83) n-Decane	17.04	58	15964	No Calib		
84) Benzyl Chloride	18.56	91	3279882	51.201 ng		100
85) 1,3-Dichlorobenzene	18.58	146	1053390	20.052 ng		100
86) 1,4-Dichlorobenzene	18.66	146	1000760	19.549 ng		100
87) sec-Butylbenzene	18.74	105	2341629	23.223 ng		100
88) 4-Isopropyltoluene (p-...	18.93	119	2087303	23.024 ng		100
89) 1,2,3-Trimethylbenzene	17.04	105	2085942	No Calib		
90) 1,2-Dichlorobenzene	19.04	146	1040199	20.398 ng		100
91) d-Limonene	19.09	68	699587	25.820 ng		98
92) 1,2-Dibromo-3-Chloropr...	19.51	157	823783	46.581 ng		100
93) n-Undecane	17.86	58	35219	No Calib		
94) 1,2,4-Trichlorobenzene	20.84	180	1649858	40.986 ng		100
95) Naphthalene	20.94	128	2129292	20.848 ng		100
96) n-Dodecane	18.93	58	50297	No Calib	#	
97) Hexachlorobutadiene	21.30	225	636575	19.235 ng		100
98) Cyclohexanone	15.42	55	9208	No Calib		
99) tert-Butylbenzene	18.43	119	1797738	23.540 ng		100
100) n-Butylbenzene	19.39	91	1965570	23.173 ng		100
101) 1,1,1,2-Tetrachloroethane	14.89	131	487324	23.889 ng		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222405.D Vial: 2
Acq On : 22 Jun 2024 12:43 Operator: SC
Sample : LCSD R09062224 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

Quant Time: Jun 22 14:09:00 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242405.D Vial: 2
Acq On : 24 Jun 2024 9:35 Operator: MC/MJ
Sample : LCS R09062424 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

Quant Time: Jun 24 09:56:55 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/24/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.27	130	200238	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.33	114	868049	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.85	54	197490	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.04	65	422289	11.866	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 94.96%				
57) Toluene-d8 (SS2)	12.44	98	968847	12.820	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.56%				
73) Bromofluorobenzene (SS3)	16.83	174	331634	12.152	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.20%				
Target Compounds							Qvalue
2) Propene	3.28	42	598156	23.333	ng		98
3) Dichlorodifluoromethan...	3.35	85	997292	21.163	ng		99
4) Chloromethane	3.49	50	812811	25.230	ng		99
5) 1,2-Dichloro-1,1,2,2-t...	3.60	135	486683	23.815	ng		100
6) Vinyl Chloride	3.68	62	781026	25.401	ng		100
7) 1,3-Butadiene	3.80	54	622737	26.811	ng		97
8) Bromomethane	4.01	94	413341	25.244	ng		100
9) Chloroethane	4.15	64	328965	25.533	ng		100
10) Ethanol	4.36	45	2448529	125.780	ng		100
11) Acetonitrile	4.48	41	1102665	22.562	ng		99
12) Acrolein	4.55	56	751627	52.164	ng		100
13) Acetone	4.65	58	1875598	120.575	ng		91
14) Trichlorofluoromethane	4.76	101	1002215	21.024	ng		100
15) 2-Propanol (Isopropanol)	4.90	45	3259386	52.001	ng		97
16) Acrylonitrile	5.03	53	1452061	49.774	ng		100
17) 1,1-Dichloroethene	5.27	96	449602	24.654	ng		99
18) 2-Methyl-2-Propanol (t...	5.37	59	2782092	55.609	ng		99
19) Methylene Chloride	5.39	84	478681	21.740	ng		98
20) 3-Chloro-1-propene (Al...	5.47	41	975332	24.821	ng		98
21) Trichlorotrifluoroethane	5.59	151	455167	22.571	ng		95
22) Carbon Disulfide	5.61	76	3604758	50.798	ng		100
23) trans-1,2-Dichloroethene	6.17	61	813089	25.812	ng		99
24) 1,1-Dichloroethane	6.36	63	955077	25.480	ng		100
25) Methyl tert-Butyl Ether	6.38	73	1494006	28.730	ng		98
26) Vinyl Acetate	6.48	86	502949	140.121	ng	#	94
27) 2-Butanone (MEK)	6.69	72	617984	50.204	ng		97
28) cis-1,2-Dichloroethene	7.12	61	775201	25.090	ng		99
29) Diisopropyl Ether	7.31	87	740853	50.816	ng	#	93
30) Ethyl Acetate	7.31	61	384245	51.125	ng		100
31) n-Hexane	7.31	57	883336	26.823	ng		99
32) Chloroform	7.40	83	929699	23.697	ng		100
34) Tetrahydrofuran (THF)	7.76	72	557930	49.684	ng		95
35) Ethyl tert-Butyl Ether	7.84	87	1052663	54.376	ng		96
36) 1,2-Dichloroethane	8.15	62	857783	21.838	ng		100
38) 1,1,1-Trichloroethane	8.42	97	875508	21.723	ng		100
39) Isopropyl Acetate	9.61	61	1881	No Calib		#	
40) 1-Butanol	8.83	56	3254	No Calib		#	
41) Benzene	8.92	78	1834343	22.892	ng		100
42) Carbon Tetrachloride	9.09	117	812387	21.858	ng		100
43) Cyclohexane	9.24	84	1370961	52.862	ng		96
44) tert-Amyl Methyl Ether	9.62	73	2734292	54.221	ng		99
45) 1,2-Dichloropropane	9.88	63	500857	25.893	ng		100
46) Bromodichloromethane	10.10	83	771372	23.926	ng		99
47) Trichloroethene	10.17	130	514763	22.005	ng		100
48) 1,4-Dioxane	10.13	88	393267	26.600	ng		97
49) 2,2,4-Trimethylpentane...	10.25	57	2130577	26.894	ng		96
50) Methyl Methacrylate	10.42	100	366496	53.970	ng		95

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242405.D Vial: 2
Acq On : 24 Jun 2024 9:35 Operator: MC/MJ
Sample : LCS R09062424 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

Quant Time: Jun 24 09:56:55 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

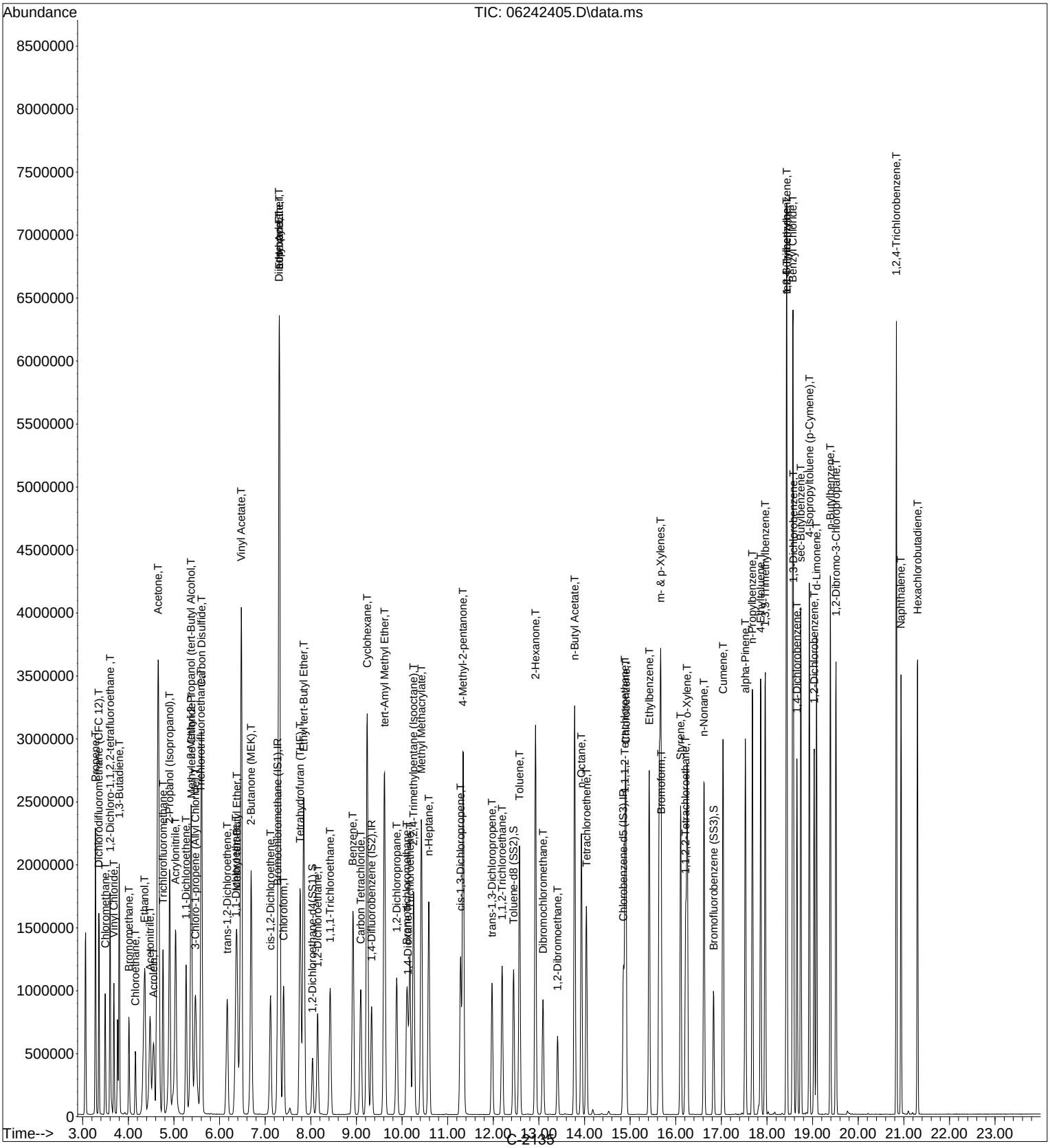
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	10.59	71	456724	27.024 ng		99
52) cis-1,3-Dichloropropene	11.29	75	868163	26.238 ng		100
53) 4-Methyl-2-pentanone	11.34	58	998585	56.697 ng		99
54) trans-1,3-Dichloropropene	11.97	75	709478	23.771 ng		99
55) 1,1,2-Trichloroethane	12.19	97	463858	24.464 ng		99
58) Toluene	12.57	91	1919311	24.304 ng		100
59) 2-Hexanone	12.93	43	2783182	56.215 ng		99
60) Dibromochloromethane	13.09	129	622988	22.819 ng		99
61) 1,2-Dibromoethane	13.41	107	527447	23.748 ng		100
62) n-Butyl Acetate	13.78	43	3086313	59.300 ng		99
63) n-Octane	13.93	57	452117	27.601 ng		97
64) Tetrachloroethene	14.05	166	602235	22.184 ng		100
65) Chlorobenzene	14.91	112	1264539	22.847 ng		100
66) Ethylbenzene	15.42	91	2282731	25.265 ng		100
67) m- & p-Xylenes	15.67	91	3766578	49.578 ng		100
68) Bromoform	15.69	173	584786	24.187 ng		99
69) Styrene	16.11	104	1310115	25.568 ng		99
70) o-Xylene	16.25	91	1855728	24.770 ng		99
71) n-Nonane	16.62	43	1229991	28.243 ng		99
72) 1,1,2,2-Tetrachloroethane	16.21	83	852809	24.863 ng		100
74) Cumene	17.04	105	2237488	23.923 ng		100
75) alpha-Pinene	17.53	93	1188936	27.286 ng		98
76) n-Propylbenzene	17.68	91	2741436	24.280 ng		99
77) 3-Ethyltoluene	17.04	105	2237488	No Calib		
78) 4-Ethyltoluene	17.86	105	2252444	25.258 ng		99
79) 1,3,5-Trimethylbenzene	17.96	105	1930178	24.776 ng		100
80) alpha-Methylstyrene	17.03	118	4509	No Calib	#	
81) 2-Ethyltoluene	17.04	105	2237488	No Calib		
82) 1,2,4-Trimethylbenzene	18.43	105	1990942	24.242 ng		99
83) n-Decane	17.04	58	25811	No Calib		
84) Benzyl Chloride	18.57	91	3347543	50.712 ng		100
85) 1,3-Dichlorobenzene	18.58	146	1098772	20.298 ng		100
86) 1,4-Dichlorobenzene	18.66	146	1045839	19.826 ng		100
87) sec-Butylbenzene	18.74	105	2486894	23.934 ng		99
88) 4-Isopropyltoluene (p-...	18.93	119	2191035	23.454 ng		100
89) 1,2,3-Trimethylbenzene	17.04	105	2237488	No Calib		
90) 1,2-Dichlorobenzene	19.04	146	1085929	20.665 ng		100
91) d-Limonene	19.09	68	761147	27.261 ng		95
92) 1,2-Dibromo-3-Chloropr...	19.51	157	838412	46.007 ng		99
93) n-Undecane	17.86	58	41984	No Calib	#	
94) 1,2,4-Trichlorobenzene	20.84	180	1618609	39.020 ng		100
95) Naphthalene	20.94	128	2091517	19.873 ng		100
96) n-Dodecane	18.93	58	54556	No Calib	#	
97) Hexachlorobutadiene	21.30	225	621238	18.217 ng		99
98) Cyclohexanone	15.43	55	9414	No Calib		
99) tert-Butylbenzene	18.43	119	1899352	24.135 ng		100
100) n-Butylbenzene	19.39	91	2072104	23.707 ng		99
101) 1,1,1,2-Tetrachloroethane	14.89	131	517425	24.615 ng		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242405.D Vial: 2
Acq On : 24 Jun 2024 9:35 Operator: MC/MJ
Sample : LCS R09062424 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

Quant Time: Jun 24 09:56:55 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242406.D Vial: 2
Acq On : 24 Jun 2024 10:07 Operator: MC/MJ
Sample : LCSD R09062424 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

Quant Time: Jun 24 10:31:40 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) 6/24/24
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.28	130	197758	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.34	114	866637	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.85	54	196130	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.04	65	422023	12.007	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.08%				
57) Toluene-d8 (SS2)	12.45	98	970059	12.925	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.36%				
73) Bromofluorobenzene (SS3)	16.83	174	326868	12.061	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.48%				
Target Compounds							Qvalue
2) Propene	3.28	42	627022	24.766	ng		98
3) Dichlorodifluoromethan...	3.36	85	1007079	21.639	ng		100
4) Chloromethane	3.49	50	830966	26.117	ng		100
5) 1,2-Dichloro-1,1,2,2-t...	3.60	135	474966	23.534	ng		100
6) Vinyl Chloride	3.69	62	749809	24.692	ng		100
7) 1,3-Butadiene	3.80	54	624241	27.213	ng		98
8) Bromomethane	4.02	94	417824	25.838	ng		100
9) Chloroethane	4.16	64	327612	25.747	ng		99
10) Ethanol	4.36	45	2501124	130.093	ng		100
11) Acetonitrile	4.48	41	1133275	23.479	ng		100
12) Acrolein	4.56	56	767868	53.959	ng		100
13) Acetone	4.66	58	1918664	124.891	ng		91
14) Trichlorofluoromethane	4.76	101	1008619	21.424	ng		99
15) 2-Propanol (Isopropanol)	4.91	45	3297373	53.267	ng		97
16) Acrylonitrile	5.04	53	1479026	51.334	ng		100
17) 1,1-Dichloroethene	5.27	96	456539	25.348	ng		98
18) 2-Methyl-2-Propanol (t...	5.38	59	2811079	56.893	ng		99
19) Methylene Chloride	5.39	84	487489	22.417	ng		98
20) 3-Chloro-1-propene (Al...	5.48	41	997525	25.704	ng		98
21) Trichlorotrifluoroethane	5.59	151	459837	23.088	ng		94
22) Carbon Disulfide	5.61	76	3634477	51.859	ng		100
23) trans-1,2-Dichloroethene	6.17	61	827073	26.586	ng		99
24) 1,1-Dichloroethane	6.36	63	973473	26.296	ng		100
25) Methyl tert-Butyl Ether	6.39	73	1510506	29.412	ng		98
26) Vinyl Acetate	6.48	86	504703	142.373	ng	#	93
27) 2-Butanone (MEK)	6.70	72	623511	51.288	ng		96
28) cis-1,2-Dichloroethene	7.12	61	785325	25.737	ng		99
29) Diisopropyl Ether	7.31	87	755094	52.442	ng	#	93
30) Ethyl Acetate	7.32	61	394639	53.166	ng		99
31) n-Hexane	7.32	57	900733	27.695	ng		99
32) Chloroform	7.41	83	941299	24.294	ng		100
34) Tetrahydrofuran (THF)	7.77	72	565479	50.987	ng		94
35) Ethyl tert-Butyl Ether	7.85	87	1067836	55.851	ng		96
36) 1,2-Dichloroethane	8.15	62	868778	22.395	ng		100
38) 1,1,1-Trichloroethane	8.43	97	884937	21.993	ng		99
39) Isopropyl Acetate	9.62	61	1620	No Calib		#	
40) 1-Butanol	8.83	56	3121	No Calib		#	
41) Benzene	8.93	78	1864185	23.302	ng		100
42) Carbon Tetrachloride	9.10	117	818892	22.069	ng		99
43) Cyclohexane	9.24	84	1395175	53.883	ng		96
44) tert-Amyl Methyl Ether	9.62	73	2775523	55.128	ng		99
45) 1,2-Dichloropropane	9.88	63	510331	26.426	ng		100
46) Bromodichloromethane	10.11	83	780677	24.254	ng		100
47) Trichloroethene	10.17	130	519706	22.253	ng		99
48) 1,4-Dioxane	10.14	88	401048	27.170	ng		97
49) 2,2,4-Trimethylpentane...	10.26	57	2179983	27.562	ng		96
50) Methyl Methacrylate	10.43	100	373348	55.069	ng		95

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242406.D Vial: 2
Acq On : 24 Jun 2024 10:07 Operator: MC/MJ
Sample : LCSD R09062424 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

Quant Time: Jun 24 10:31:40 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

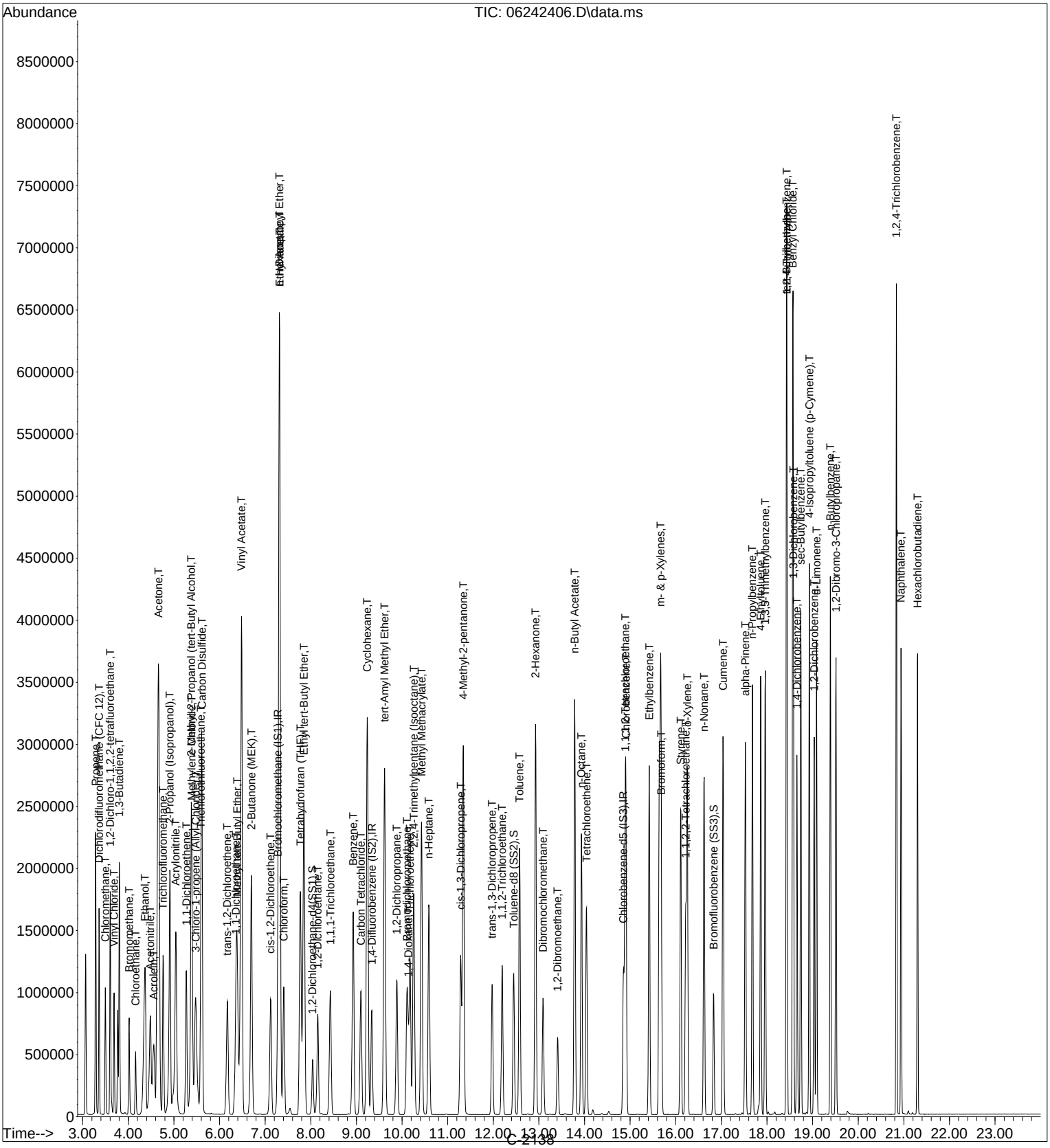
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	10.59	71	463157	27.450 ng		98
52) cis-1,3-Dichloropropene	11.29	75	886267	26.828 ng		100
53) 4-Methyl-2-pentanone	11.34	58	1023309	58.195 ng		99
54) trans-1,3-Dichloropropene	11.97	75	720794	24.189 ng		100
55) 1,1,2-Trichloroethane	12.19	97	471847	24.926 ng		99
58) Toluene	12.57	91	1951019	24.877 ng		100
59) 2-Hexanone	12.93	43	2856865	58.103 ng		99
60) Dibromochloromethane	13.09	129	635861	23.452 ng		100
61) 1,2-Dibromoethane	13.41	107	538315	24.406 ng		100
62) n-Butyl Acetate	13.78	43	3168819	61.308 ng		99
63) n-Octane	13.93	57	462376	28.423 ng		97
64) Tetrachloroethene	14.05	166	610967	22.662 ng		100
65) Chlorobenzene	14.91	112	1288625	23.444 ng		99
66) Ethylbenzene	15.42	91	2321218	25.869 ng		100
67) m- & p-Xylenes	15.67	91	3832388	50.794 ng		100
68) Bromoform	15.69	173	592314	24.668 ng		99
69) Styrene	16.11	104	1329868	26.134 ng		99
70) o-Xylene	16.25	91	1886398	25.354 ng		99
71) n-Nonane	16.62	43	1258792	29.105 ng		99
72) 1,1,2,2-Tetrachloroethane	16.22	83	869989	25.540 ng		100
74) Cumene	17.04	105	2269838	24.437 ng		100
75) alpha-Pinene	17.53	93	1198905	27.706 ng		98
76) n-Propylbenzene	17.68	91	2787056	24.855 ng		99
77) 3-Ethyltoluene	17.04	105	2269838	No Calib		
78) 4-Ethyltoluene	17.86	105	2243760	25.335 ng		99
79) 1,3,5-Trimethylbenzene	17.96	105	1960348	25.338 ng		100
80) alpha-Methylstyrene	17.03	118	4619	No Calib	#	
81) 2-Ethyltoluene	17.04	105	2269838	No Calib		
82) 1,2,4-Trimethylbenzene	18.43	105	2021814	24.789 ng		99
83) n-Decane	17.03	58	22611	No Calib		
84) Benzyl Chloride	18.57	91	3424479	52.238 ng		100
85) 1,3-Dichlorobenzene	18.58	146	1120772	20.848 ng		100
86) 1,4-Dichlorobenzene	18.66	146	1065357	20.336 ng		99
87) sec-Butylbenzene	18.74	105	2537587	24.591 ng		99
88) 4-Isopropyltoluene (p-...	18.93	119	2236334	24.104 ng		99
89) 1,2,3-Trimethylbenzene	17.04	105	2269838	No Calib		
90) 1,2-Dichlorobenzene	19.04	146	1112035	21.309 ng		100
91) d-Limonene	19.09	68	776853	28.017 ng		96
92) 1,2-Dibromo-3-Chloropr...	19.51	157	864555	47.770 ng		99
93) n-Undecane	17.86	58	38497	No Calib		
94) 1,2,4-Trichlorobenzene	20.84	180	1704851	41.384 ng		100
95) Naphthalene	20.94	128	2204489	21.091 ng		100
96) n-Dodecane	18.93	58	55491	No Calib	#	
97) Hexachlorobutadiene	21.30	225	645877	19.070 ng		100
98) Cyclohexanone	15.43	55	9487	No Calib		
99) tert-Butylbenzene	18.43	119	1924970	24.631 ng		100
100) n-Butylbenzene	19.39	91	2114226	24.356 ng		99
101) 1,1,1,2-Tetrachloroethane	14.89	131	517879	24.807 ng		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242406.D Vial: 2
Acq On : 24 Jun 2024 10:07 Operator: MC/MJ
Sample : LCSD R09062424 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

Quant Time: Jun 24 10:31:40 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 09:49:47 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192414.D Vial: 8
Acq On : 19 Jun 2024 15:51 Operator: SC
Sample : P2402249-029dup (50mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 16:22:55 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/19/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	133582	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	572045	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	132996	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	300561	12.660	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.28%				
57) Toluene-d8 (SS2)	12.43	98	628784	12.355	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.80%				
73) Bromofluorobenzene (SS3)	16.83	174	239843	13.051	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 104.40%				
Target Compounds							Qvalue
2) Propene	3.32	42	456	N.D.			
3) Dichlorodifluoromethan...	3.39	85	2327	0.074	ng	#	90
4) Chloromethane	3.52	50	220	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.44	45	294	N.D.			
11) Acetonitrile	4.44	41	111	N.D.			
12) Acrolein	4.54	56	187	N.D.			
13) Acetone	4.64	58	31727	3.057	ng		92
14) Trichlorofluoromethane	4.76	101	2964794	93.228	ng		100
15) 2-Propanol (Isopropanol)	4.86	45	2562	0.061	ng	#	53
16) Acrylonitrile	4.99	53	304	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	5.37	59	55	N.D.			
19) Methylene Chloride	5.35	84	890	0.061	ng		99
20) 3-Chloro-1-propene (Al...	5.45	41	140	N.D.			
21) Trichlorotrifluoroethane	5.58	151	455189	33.835	ng		98
22) Carbon Disulfide	5.61	76	1666	N.D.			
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D.			
27) 2-Butanone (MEK)	6.68	72	976	0.119	ng	#	61
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	7.36	87	136	N.D.			
30) Ethyl Acetate	7.30	61	1042	0.208	ng		84
31) n-Hexane	7.31	57	198	N.D.			
32) Chloroform	7.36	83	3069	0.117	ng		98
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	379	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.84	56	692	No Calib			
41) Benzene	8.89	78	1209	N.D.			
42) Carbon Tetrachloride	0.00	117	0	N.D.			
43) Cyclohexane	0.00	84	0	N.D.	d		
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	9.85	63	426	N.D.			
46) Bromodichloromethane	10.07	83	915	N.D.			
47) Trichloroethene	10.14	130	573	N.D.			
48) 1,4-Dioxane	0.00	88	0	N.D.			
49) 2,2,4-Trimethylpentane...	0.00	57	0	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192414.D Vial: 8
Acq On : 19 Jun 2024 15:51 Operator: SC
Sample : P2402249-029dup (50mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 16:22:55 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

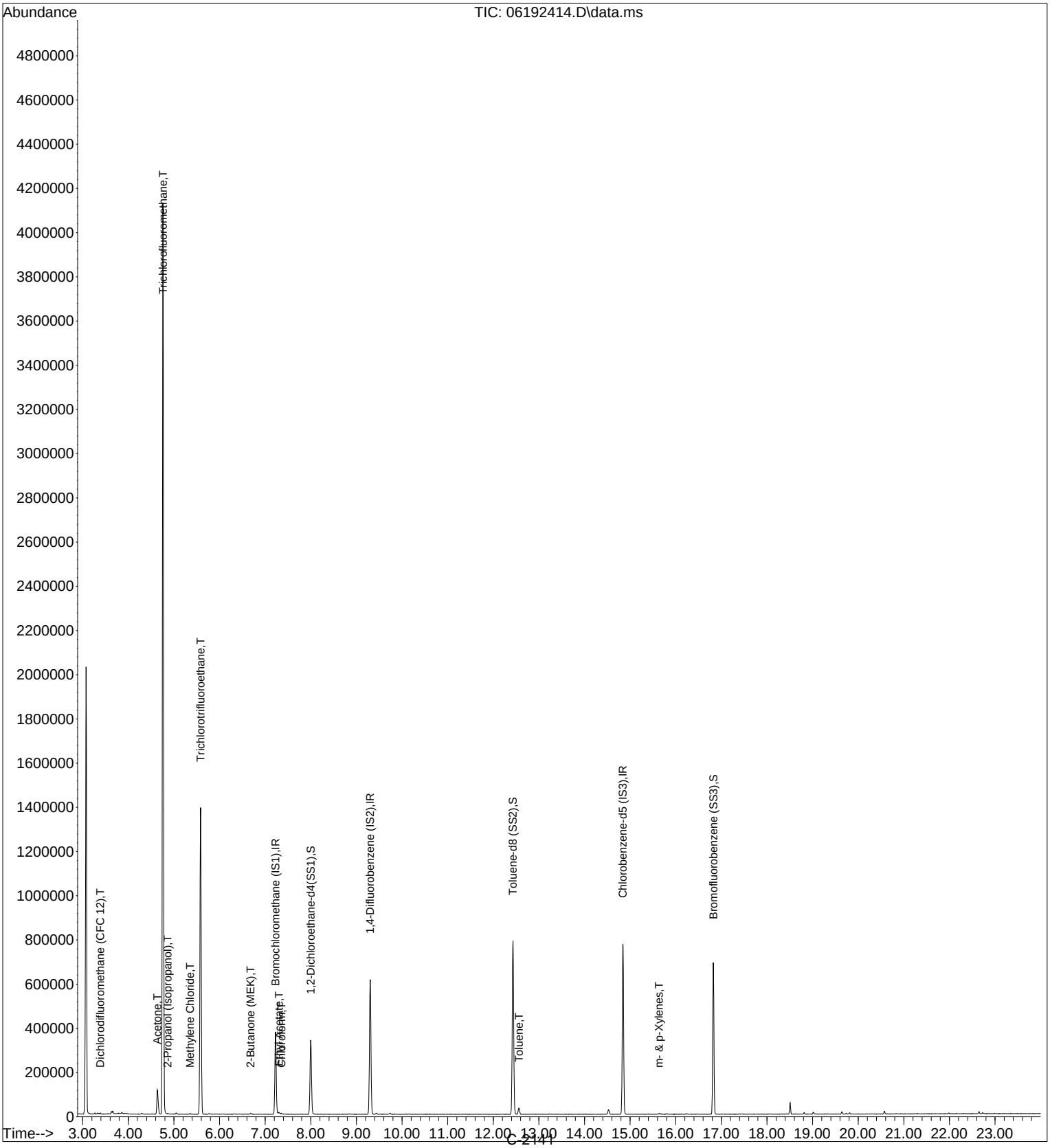
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	10.58	71	123	N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
58) Toluene	12.56	91	25343	0.477 ng	98
59) 2-Hexanone	0.00	43	0	N.D.	
60) Dibromochloromethane	13.07	129	422	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	13.79	43	243	N.D.	
63) n-Octane	0.00	57	0	N.D.	
64) Tetrachloroethene	14.03	166	383	N.D.	
65) Chlorobenzene	14.90	112	588	N.D.	
66) Ethylbenzene	15.41	91	1642	N.D.	
67) m- & p-Xylenes	15.63	91	4021	0.079 ng	99
68) Bromoform	15.67	173	511	N.D.	
69) Styrene	16.11	104	276	N.D.	
70) o-Xylene	16.25	91	2432	N.D.	
71) n-Nonane	0.00	43	0	N.D.	
72) 1,1,2,2-Tetrachloroethane	16.21	83	173	N.D.	
74) Cumene	17.03	105	610	N.D.	
75) alpha-Pinene	17.52	93	332	N.D.	
76) n-Propylbenzene	17.68	91	826	N.D.	
77) 3-Ethyltoluene	17.03	105	610	No Calib	
78) 4-Ethyltoluene	17.86	105	535	N.D.	
79) 1,3,5-Trimethylbenzene	17.96	105	317	N.D.	
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.03	105	610	No Calib	
82) 1,2,4-Trimethylbenzene	18.43	105	618	N.D.	
83) n-Decane	0.00	58	0	N.D.	
84) Benzyl Chloride	0.00	91	0	N.D.	
85) 1,3-Dichlorobenzene	18.58	146	391	N.D.	
86) 1,4-Dichlorobenzene	18.66	146	491	N.D.	
87) sec-Butylbenzene	18.75	105	726	N.D.	
88) 4-Isopropyltoluene (p-...	18.92	119	612	N.D.	
89) 1,2,3-Trimethylbenzene	17.03	105	610	No Calib	
90) 1,2-Dichlorobenzene	19.04	146	454	N.D.	
91) d-Limonene	19.09	68	120	N.D.	
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.	
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	518	N.D.	
95) Naphthalene	20.94	128	426	N.D.	
96) n-Dodecane	0.00	58	0	N.D.	
97) Hexachlorobutadiene	21.30	225	627	N.D.	
98) Cyclohexanone	0.00	55	0	N.D.	
99) tert-Butylbenzene	18.42	119	651	N.D.	
100) n-Butylbenzene	19.39	91	446	N.D.	
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192414.D Vial: 8
Acq On : 19 Jun 2024 15:51 Operator: SC
Sample : P2402249-029dup (50mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 16:22:55 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192414.D Vial: 8
Acq On : 19 Jun 2024 15:51 Operator: SC
Sample : P2402249-029dup (50mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 16:22:55 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/19/24

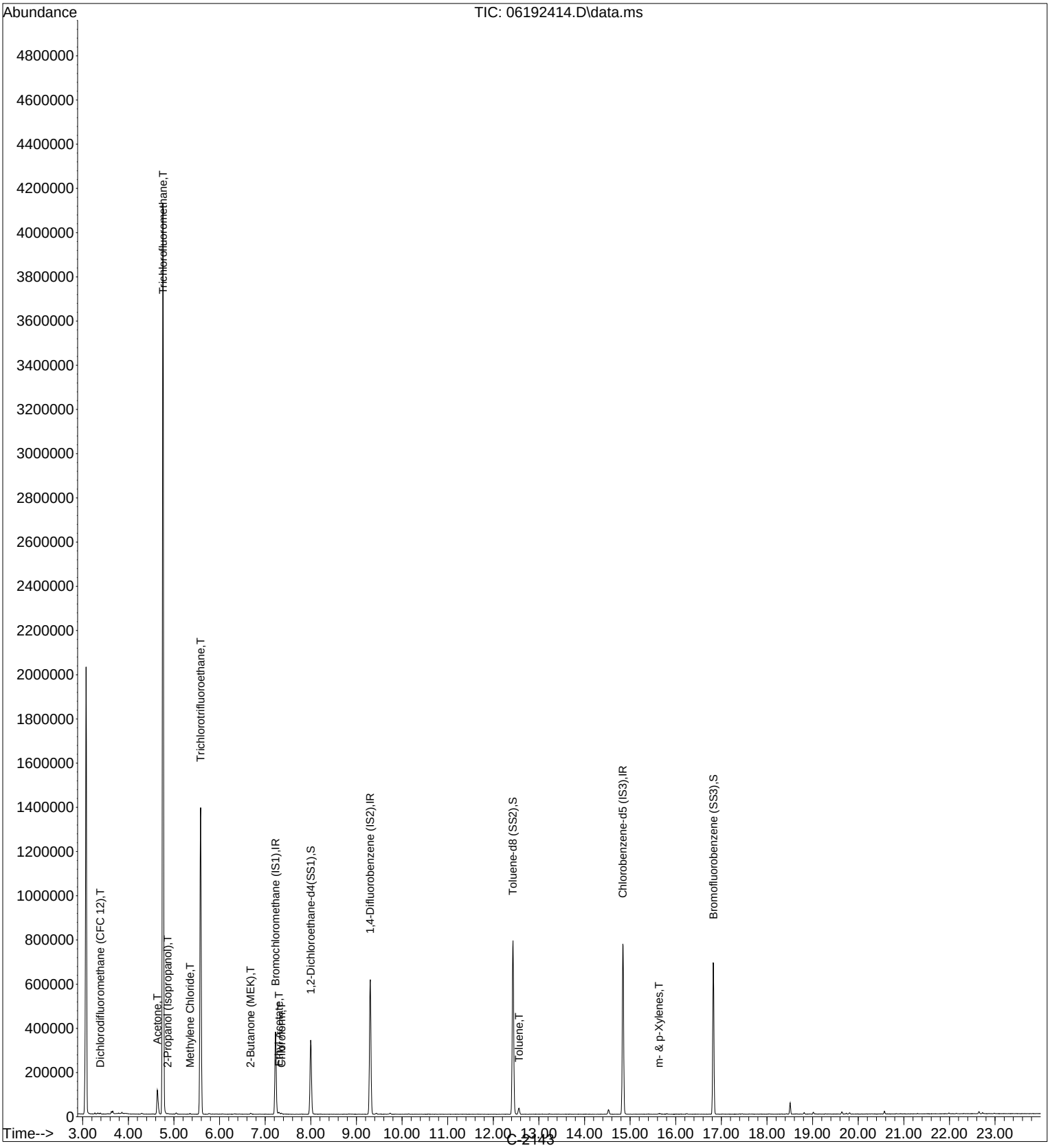
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	133582	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	572045	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	132996	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	300561	12.660	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.28%				
57) Toluene-d8 (SS2)	12.43	98	628784	12.355	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.80%				
73) Bromofluorobenzene (SS3)	16.83	174	239843	13.051	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 104.40%				
Target Compounds							Qvalue
3) Dichlorodifluoromethan...	3.39	85	2327	0.074	ng	#	90
13) Acetone	4.64	58	31727	3.057	ng		92
14) Trichlorofluoromethane	4.76	101	2964794	93.228	ng		100
15) 2-Propanol (Isopropanol)	4.86	45	2562	0.061	ng	#	53
19) Methylene Chloride	5.35	84	890	0.061	ng		99
21) Trichlorotrifluoroethane	5.58	151	455189	33.835	ng		98
27) 2-Butanone (MEK)	6.68	72	976	0.119	ng	#	61
30) Ethyl Acetate	7.30	61	1042	0.208	ng		84
32) Chloroform	7.36	83	3069	0.117	ng		98
58) Toluene	12.56	91	25343	0.477	ng		98
67) m- & p-Xylenes	15.63	91	4021	0.079	ng		99

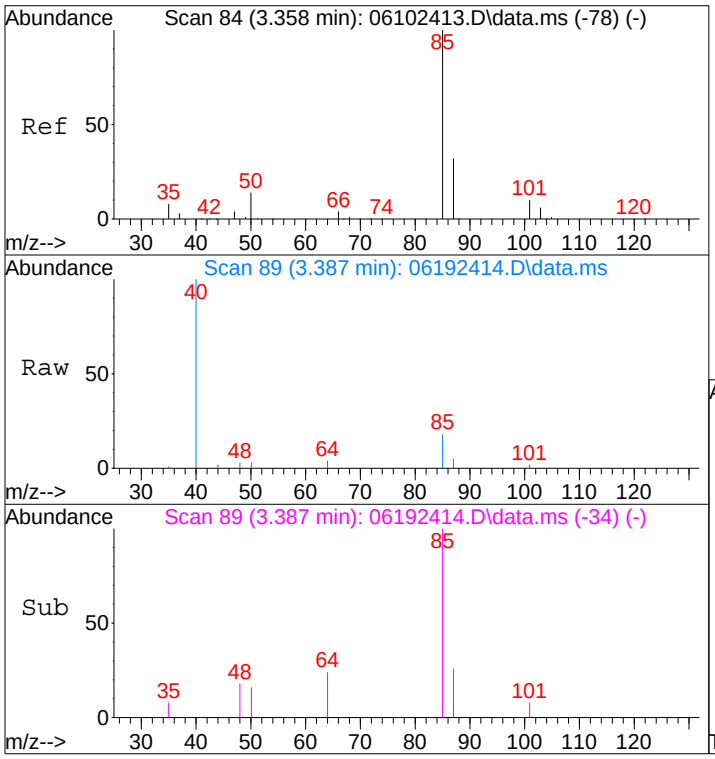
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192414.D Vial: 8
Acq On : 19 Jun 2024 15:51 Operator: SC
Sample : P2402249-029dup (50mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 19 16:22:55 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

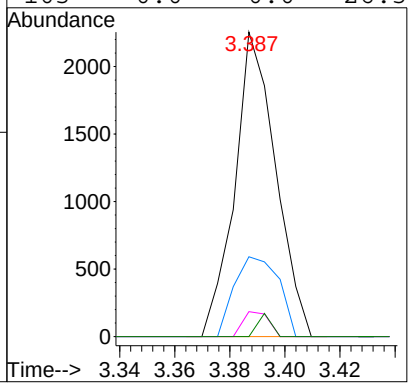


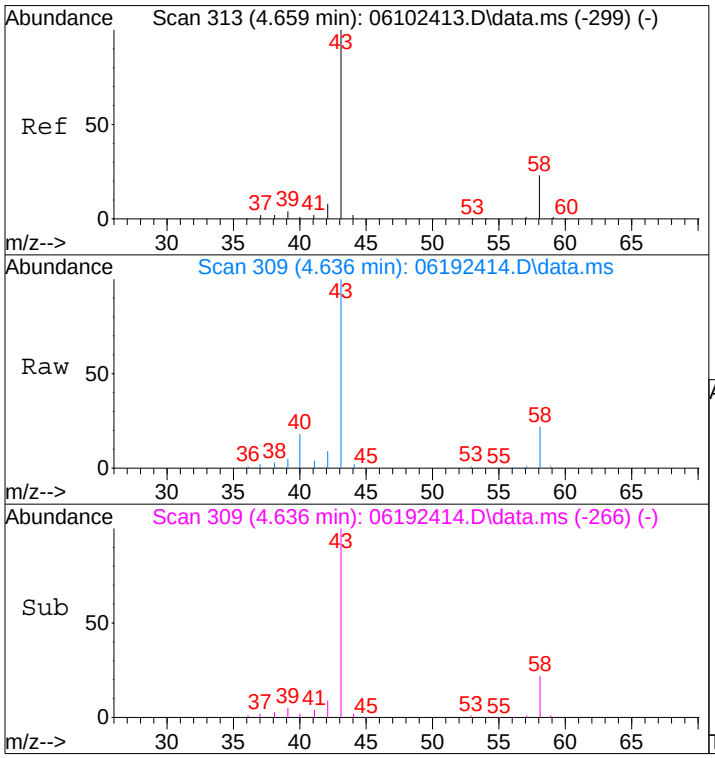


#3
Dichlorodifluoromethane (CFC 12)
Concen: 0.07 ng
RT: 3.39 min Scan# 89
Delta R.T. 0.065 min
Lab File: 06192414.D
Acq: 19 Jun 2024 15:51

Tgt Ion: 85 Resp: 2327

Ion	Ratio	Lower	Upper
85	100		
87	28.4	12.2	52.2
101	5.2	0.0	29.8
103	0.0	0.0	26.3

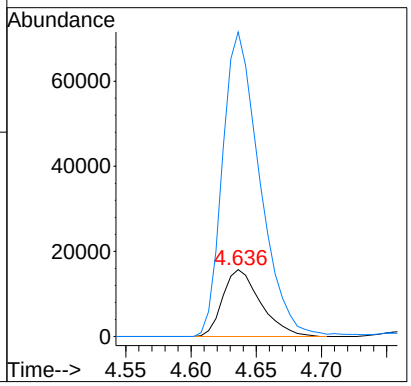


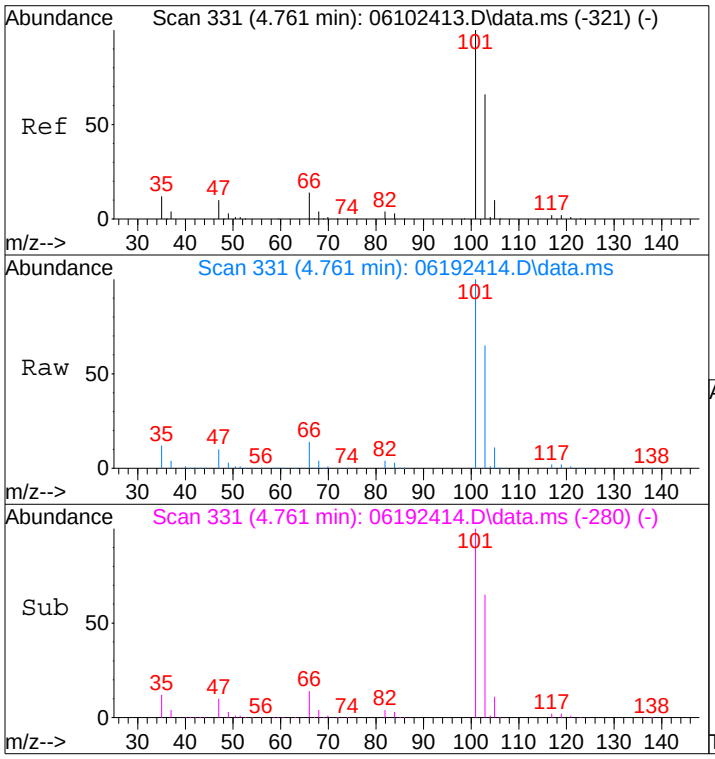


#13
Acetone
Concen: 3.06 ng
RT: 4.64 min Scan# 309
Delta R.T. -0.006 min
Lab File: 06192414.D
Acq: 19 Jun 2024 15:51

Tgt Ion: 58 Resp: 31727

Ion	Ratio	Lower	Upper
58	100		
43	450.7	400.7	460.7

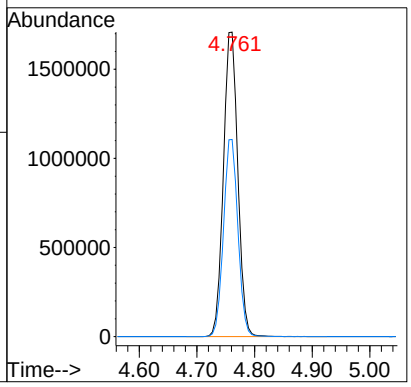


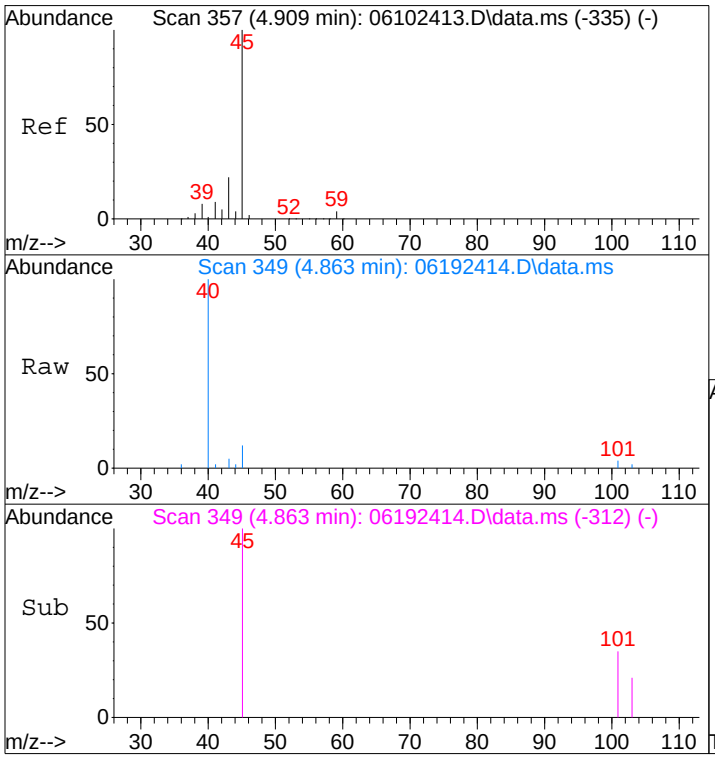


#14
Trichlorofluoromethane
Concen: 93.23 ng
RT: 4.76 min Scan# 331
Delta R.T. 0.040 min
Lab File: 06192414.D
Acq: 19 Jun 2024 15:51

Tgt Ion:101 Resp: 2964794

Ion	Ratio	Lower	Upper
101	100		
103	64.7	44.9	84.9

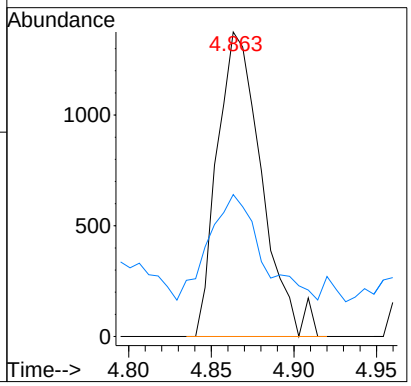


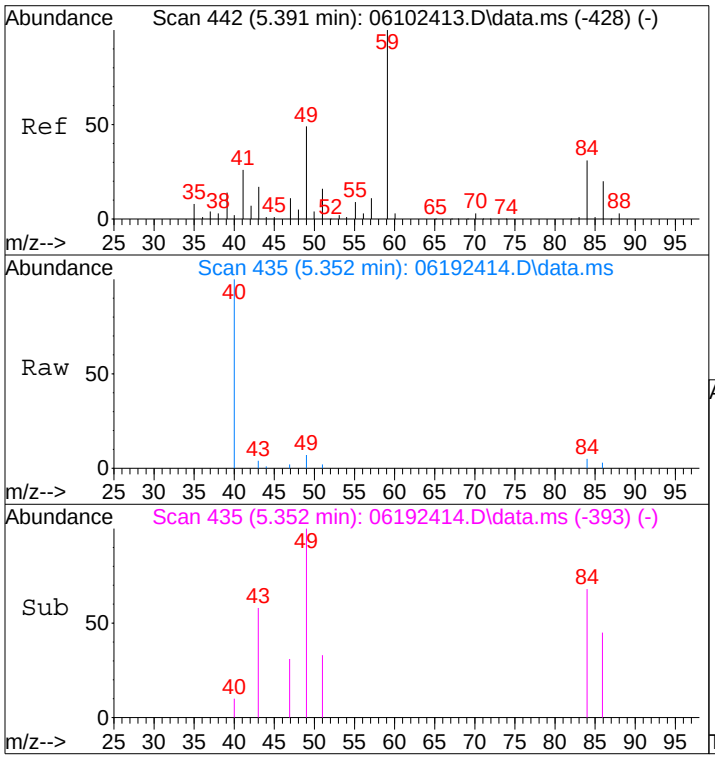


#15
2-Propanol (Isopropanol)
Concen: 0.06 ng
RT: 4.86 min Scan# 349
Delta R.T. -0.037 min
Lab File: 06192414.D
Acq: 19 Jun 2024 15:51

Tgt Ion: 45 Resp: 2562

Ion	Ratio	Lower	Upper
45	100		
43	0.0	2.5	42.5#

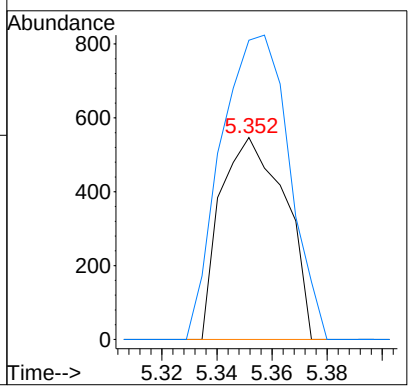


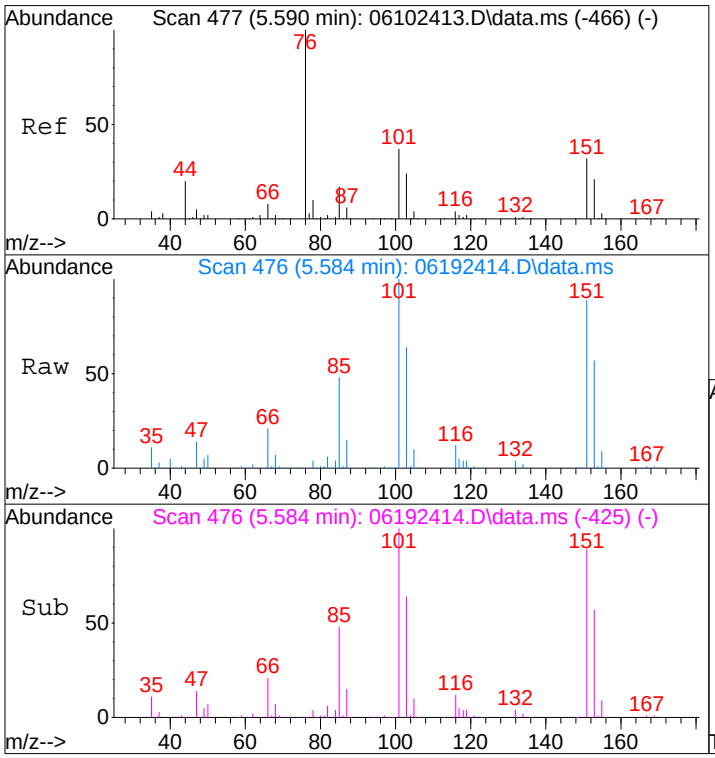


#19
Methylene Chloride
Concen: 0.06 ng
RT: 5.35 min Scan# 435
Delta R.T. -0.009 min
Lab File: 06192414.D
Acq: 19 Jun 2024 15:51

Tgt Ion: 84 Resp: 890

Ion	Ratio	Lower	Upper
84	100		
49	159.7	132.9	182.9

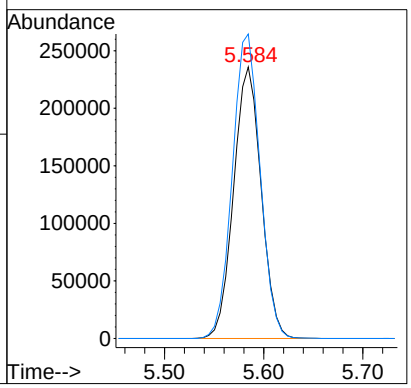


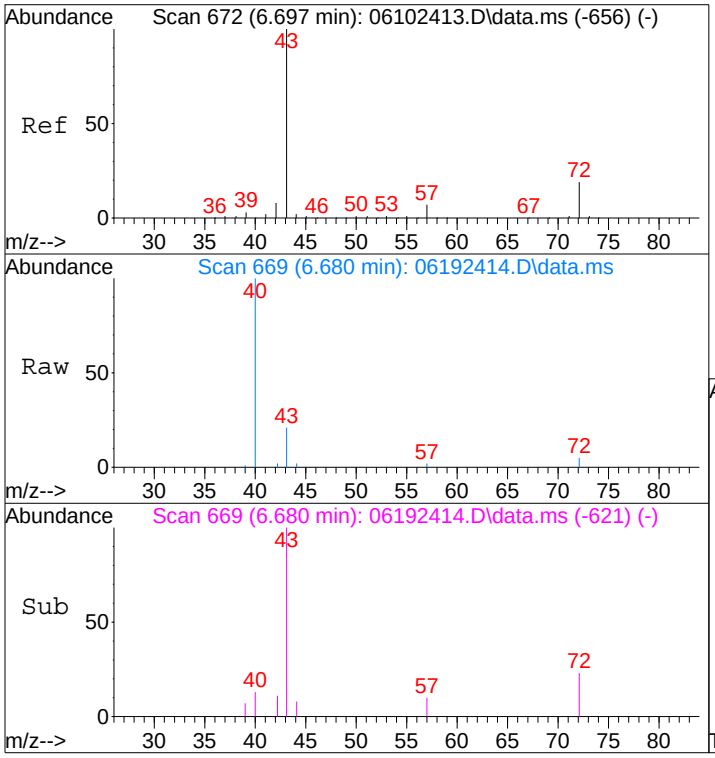


#21
Trichlorotrifluoroethane
Concen: 33.84 ng
RT: 5.58 min Scan# 476
Delta R.T. 0.038 min
Lab File: 06192414.D
Acq: 19 Jun 2024 15:51

Tgt Ion:151 Resp: 455189

Ion	Ratio	Lower	Upper
151	100		
101	113.0	95.0	135.0

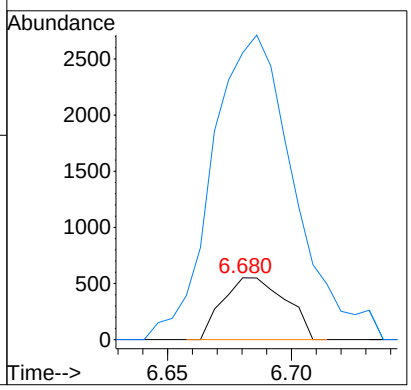


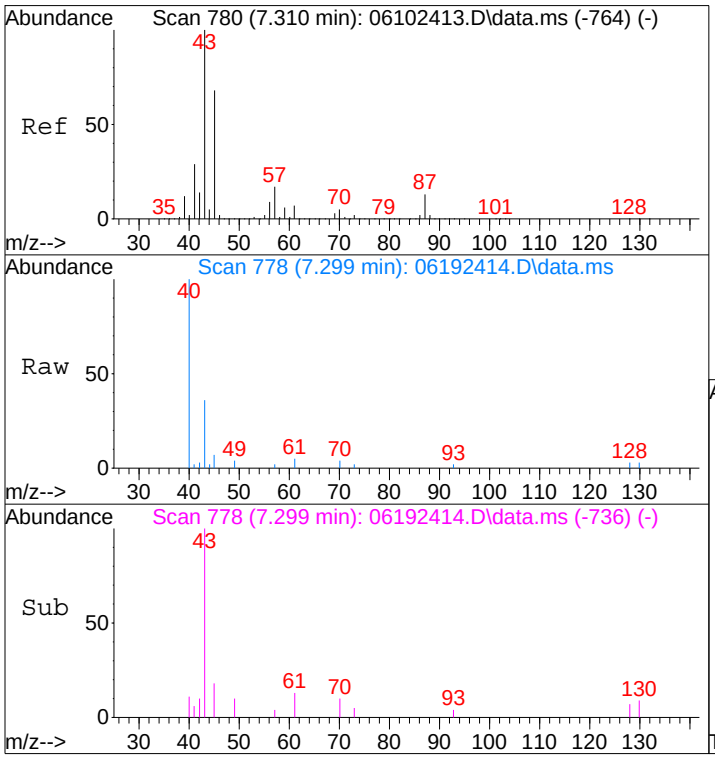


#27
2-Butanone (MEK)
Concen: 0.12 ng
RT: 6.68 min Scan# 669
Delta R.T. 0.022 min
Lab File: 06192414.D
Acq: 19 Jun 2024 15:51

Tgt Ion: 72 Resp: 976

Ion	Ratio	Lower	Upper
72	100		
43	638.6	506.8	546.8#

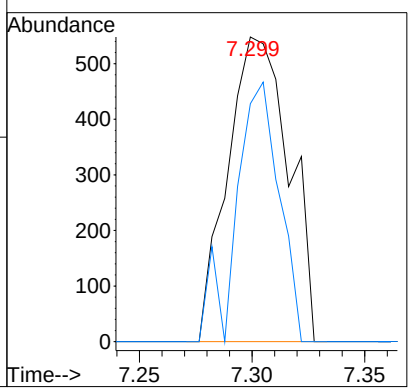


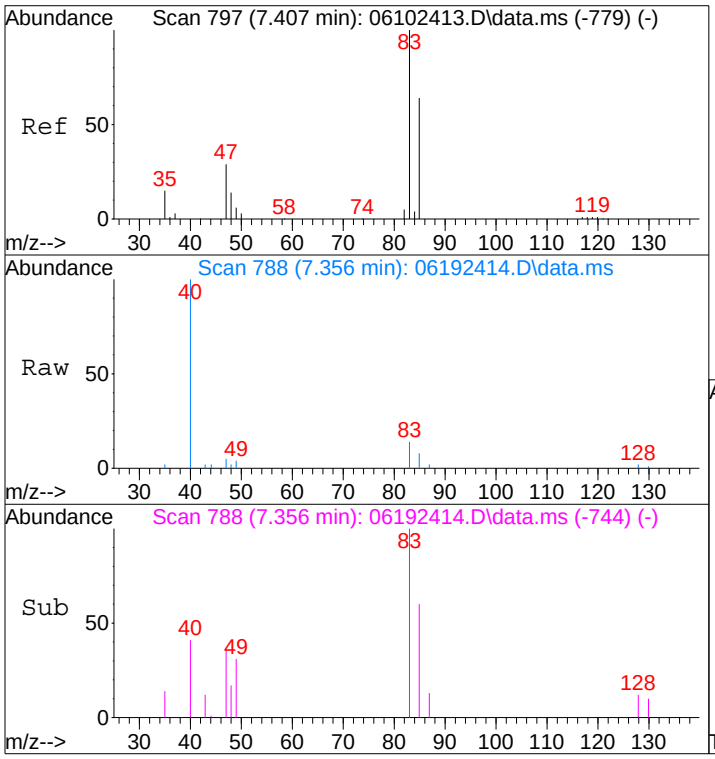


#30
Ethyl Acetate
Concen: 0.21 ng
RT: 7.30 min Scan# 778
Delta R.T. 0.040 min
Lab File: 06192414.D
Acq: 19 Jun 2024 15:51

Tgt Ion: 61 Resp: 1042

Ion	Ratio	Lower	Upper
61	100		
70	59.7	53.5	93.5

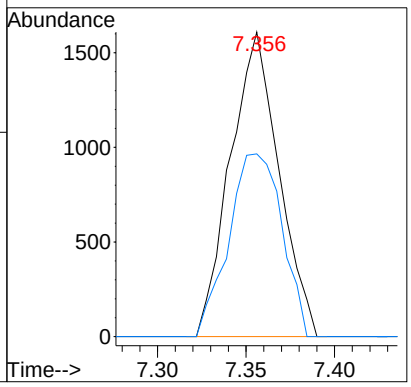


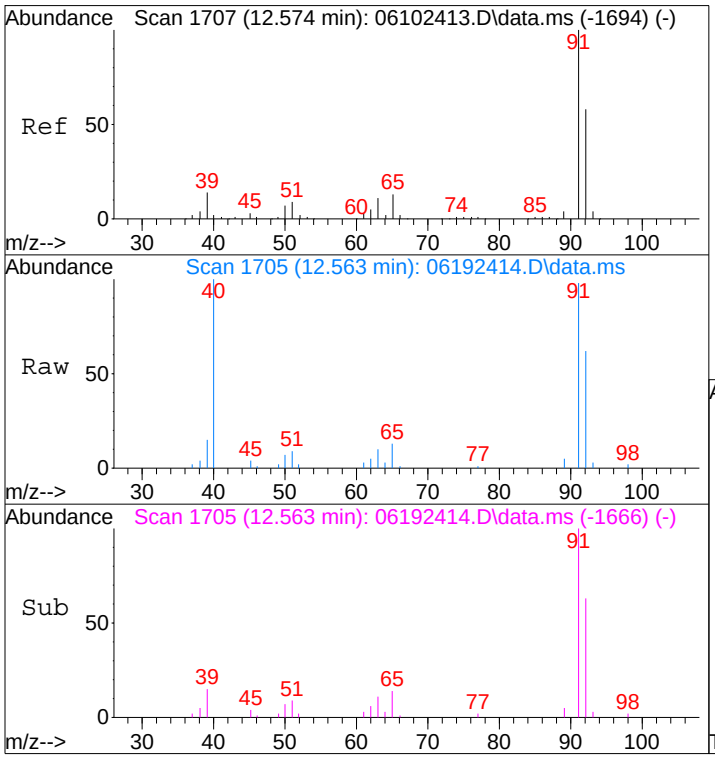


#32
Chloroform
Concen: 0.12 ng
RT: 7.36 min Scan# 788
Delta R.T. 0.001 min
Lab File: 06192414.D
Acq: 19 Jun 2024 15:51

Tgt Ion: 83 Resp: 3069

Ion	Ratio	Lower	Upper
83	100		
85	65.9	44.4	84.4

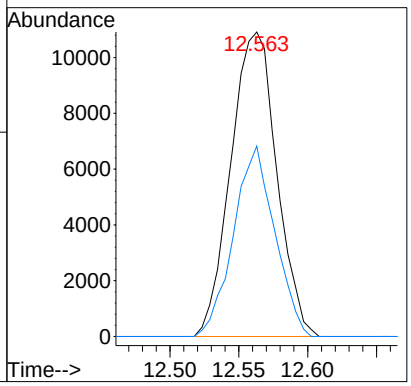


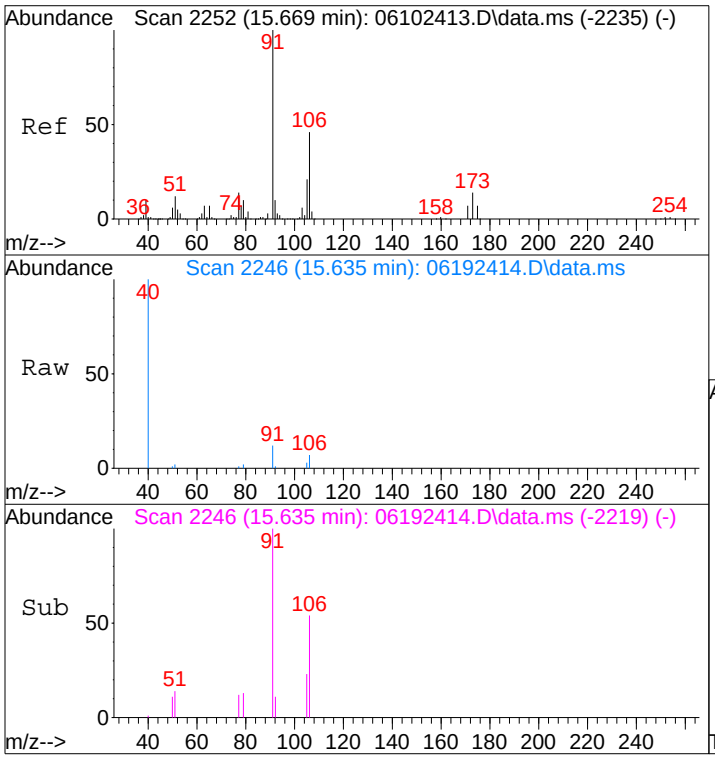


#58
Toluene
Concen: 0.48 ng
RT: 12.56 min Scan# 1705
Delta R.T. -0.028 min
Lab File: 06192414.D
Acq: 19 Jun 2024 15:51

Tgt Ion: 91 Resp: 25343

Ion	Ratio	Lower	Upper
91	100		
92	56.1	37.4	77.4

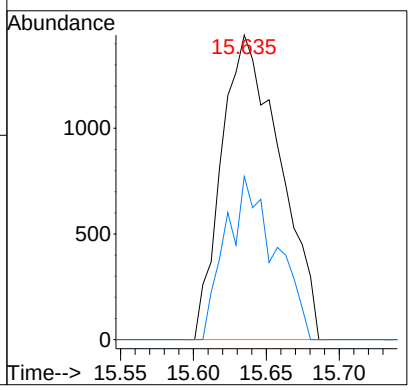




#67
m- & p-Xylenes
Concen: 0.08 ng
RT: 15.63 min Scan# 2246
Delta R.T. -0.046 min
Lab File: 06192414.D
Acq: 19 Jun 2024 15:51

Tgt Ion: 91 Resp: 4021

Ion	Ratio	Lower	Upper
91	100		
106	45.4	25.9	65.9



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192414.D Vial: 8
Acq On : 19 Jun 2024 15:51 Operator: SC
Sample : P2402249-029dup (50mL) Inst : MS09
Misc : S37-06062402

MJ 6/29/24

Quant Time: Jun 29 08:57:46 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

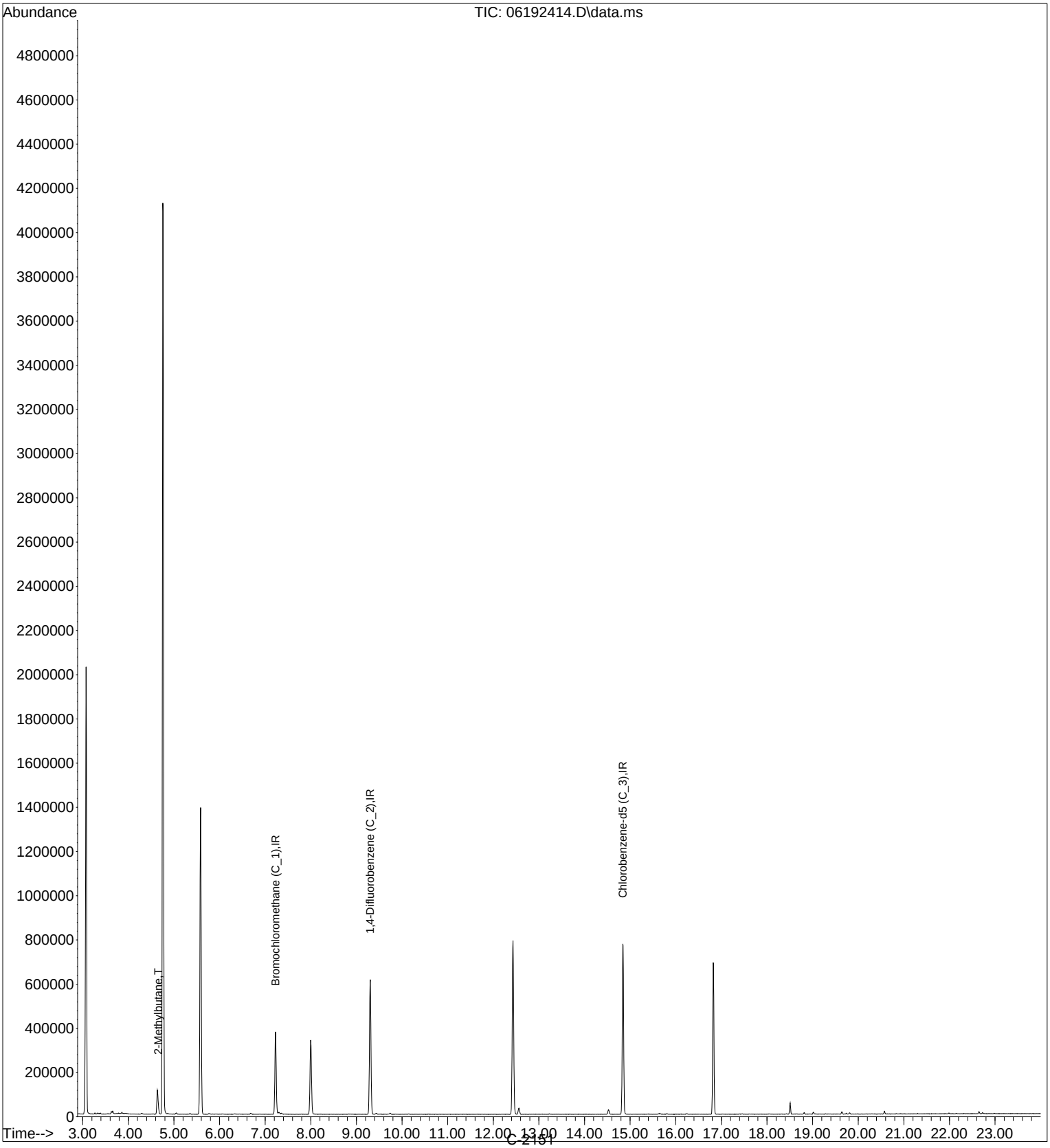
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	134276	12.500	ng		-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	572986	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	132996	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	0.00	85	0	N.D.			
3) 1,1,1,2-Tetrafluoroeth...	3.21	83	255	N.D.			
4) 1,1-Difluoroethane	3.27	65	1138	N.D.			
5) Chlorodifluoromethane ...	0.00	67	0	N.D.			
6) 1-Chloro-1,1-Difluoroe...	0.00	65	0	N.D.			
7) Dichlorofluoromethane ...	0.00	67	0	N.D.			
8) Vinylbromide	0.00	108	0	N.D.			
9) 2,2-Dichloro-1,1,1-tri...	0.00	83	0	N.D.			
10) 2-Methylbutane	4.65	57	3668	0.229	ng	#	1
11) Methyl Acetate	5.35	43	1078	N.D.			
12) 2-Methylpentane	0.00	71	0	N.D.			
13) 2,2-Dichloropropane	0.00	77	0	N.D.			
14) 1,1-Dichloropropene	0.00	75	0	N.D.			
15) Thiophene	0.00	84	0	N.D.			
17) 2,3-Dimethylpentane	9.52	56	568	N.D.			
18) Dibromomethane	9.79	174	51	N.D.			
20) Methyl Cyclohexane	0.00	55	0	N.D.			
21) 1,3-Dichloropropane	0.00	76	0	N.D.			
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.			
23) 1-Chlorohexane	0.00	91	0	N.D.			
24) 1,2,3-Trichloropropane	0.00	75	0	N.D.			
25) Bromobenzene	0.00	77	0	N.D.			
26) 2-Chlorotoluene	17.61	91	651	N.D.			
27) 4-Chlorotoluene	17.68	91	826	N.D.			
28) Indane	19.02	117	750	N.D.			
29) Indene	0.00	115	0	N.D.			
30) 1,2,4,5-Tetramethylben...	0.00	119	0	N.D.			
31) 1,2,3,4-Tetramethylben...	0.00	119	0	N.D.			
32) 1,2,3,5-Tetramethylben...	0.00	119	0	N.D.			
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192414.D Vial: 8
Acq On : 19 Jun 2024 15:51 Operator: SC
Sample : P2402249-029dup (50mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 29 08:57:46 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



C-2151

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\19\
Data File : 06192414.D
Acq On : 19 Jun 2024 15:51
Operator : SC
Sample : P2402249-029dup (50mL)
Misc : S37-06062402
ALS Vial : 8 Sample Multiplier: 1

MJ 6/28/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06192414.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.075	23	34	46	rBV	2022898	3228987	45.42%	19.876%
2	3.625	127	131	134	rBV2	10618	15174	0.21%	0.093%
3	3.654	134	136	143	rVB	12283	16945	0.24%	0.104%
4	4.636	297	309	322	rBV	109508	231619	3.26%	1.426%
5	4.755	322	330	345	rBV	4121494	7108916	100.00%	43.758%
6	5.584	466	476	489	rVB	1387782	2709681	38.12%	16.679%
7	7.225	756	765	774	rBV	373223	778404	10.95%	4.791%
8	7.299	776	778	784	rVB2	7073	11455	0.16%	0.071%
9	7.998	890	901	914	rBV	336190	750243	10.55%	4.618%
10	9.304	1116	1131	1144	rBV	609500	1382605	19.45%	8.510%
11	9.735	1197	1207	1214	rVB3	5281	11997	0.17%	0.074%

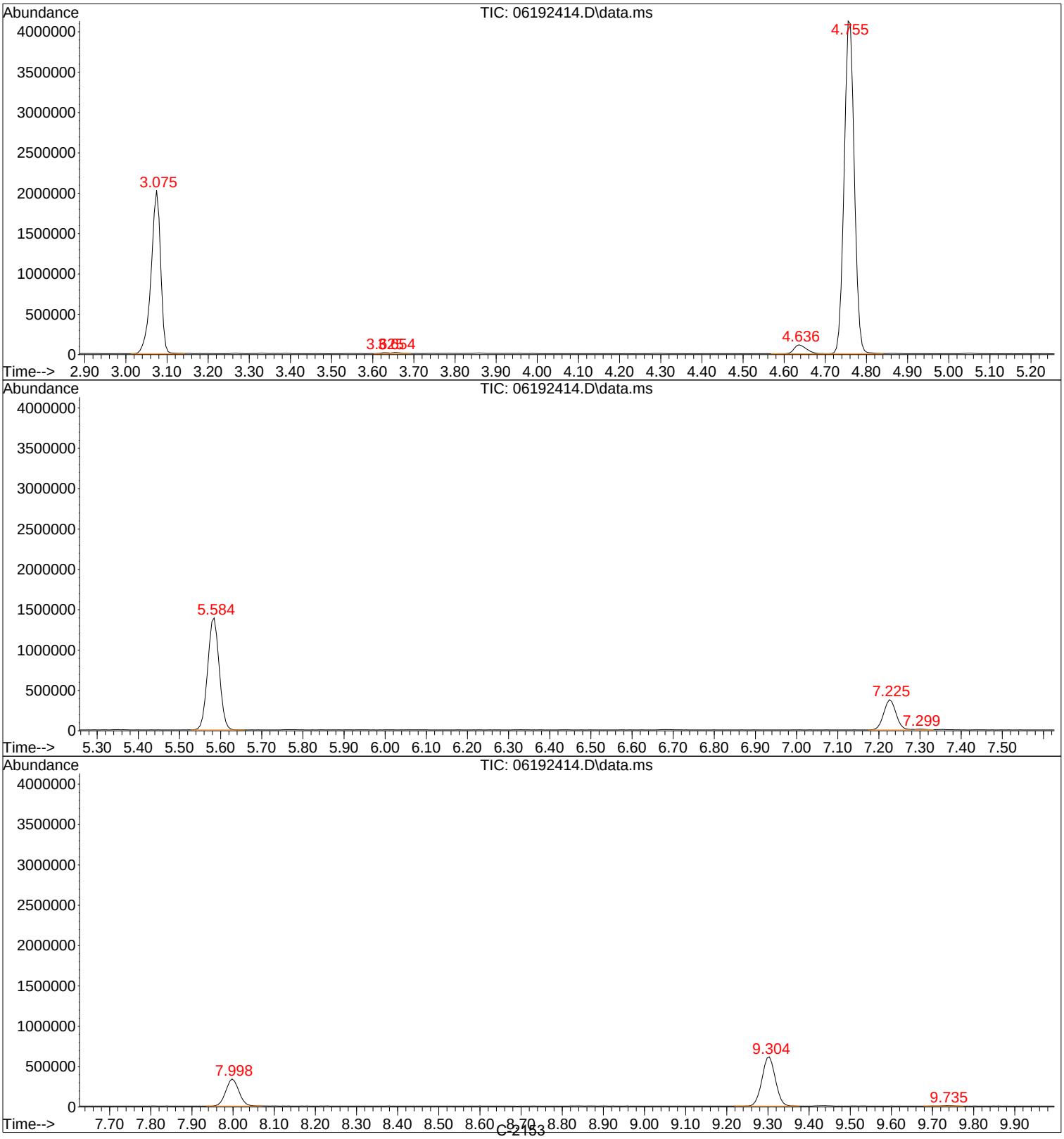
Sum of corrected areas: 16246026

LSC Report - Integrated Chromatogram

Data Path : I:\MS09\DATA\2024 06\19\
Data File : 06192414.D
Acq On : 19 Jun 2024 15:51
Operator : SC
Sample : P2402249-029dup (50mL)
Misc : S37-06062402
ALS Vial : 8 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\19\\
Data File : 06192414.D
Acq On : 19 Jun 2024 15:511
Operator : SCC
Sample : P2402249-029dup (50mL))
Misc : S37-060624022
ALS Vial : 8 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

					|--Internal Standard---|		
TIC Top Hit name	RT	EstConc	Units	Response	# RT Resp Conc

No Library Search Compounds Detected
****

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202421.D Vial: 10
Acq On : 20 Jun 2024 20:45 Operator: SC
Sample : P2402249-048dup (20mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 12:07:38 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	145042	12.500 ng	0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	622500	12.500 ng	0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	144169	12.500 ng	0.00
System Monitoring Compounds					
33) 1,2-Dichloroethane-d4(...	7.99	65	321853	12.485 ng	0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.92%		
57) Toluene-d8 (SS2)	12.43	98	688578	12.481 ng	-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.84%		
73) Bromofluorobenzene (SS3)	16.83	174	257522	12.927 ng	-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.44%		
Target Compounds					Qvalue
2) Propene	3.32	42	643	N.D.	
3) Dichlorodifluoromethan...	3.34	85	448	N.D.	
4) Chloromethane	3.39	50	118	N.D.	
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.	
6) Vinyl Chloride	0.00	62	0	N.D.	
7) 1,3-Butadiene	0.00	54	0	N.D.	
8) Bromomethane	0.00	94	0	N.D.	
9) Chloroethane	0.00	64	0	N.D.	
10) Ethanol	4.30	45	2696	0.191 ng	98
11) Acetonitrile	4.45	41	54	N.D.	
12) Acrolein	0.00	56	0	N.D.	
13) Acetone	4.66	58	2477	0.220 ng	97
14) Trichlorofluoromethane	4.76	101	2524190	73.102 ng	100
15) 2-Propanol (Isopropanol)	4.89	45	936	N.D.	
16) Acrylonitrile	5.00	53	349	N.D.	
17) 1,1-Dichloroethene	0.00	96	0	N.D.	
18) 2-Methyl-2-Propanol (t...	0.00	59	0	N.D.	
19) Methylene Chloride	5.35	84	870	0.055 ng	92
20) 3-Chloro-1-propene (Al...	0.00	41	0	N.D.	
21) Trichlorotrifluoroethane	5.58	151	1366689	93.562 ng	97
22) Carbon Disulfide	0.00	76	0	N.D. d	
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.	
24) 1,1-Dichloroethane	0.00	63	0	N.D.	
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.	
26) Vinyl Acetate	0.00	86	0	N.D.	
27) 2-Butanone (MEK)	0.00	72	0	N.D.	
28) cis-1,2-Dichloroethene	7.08	61	114	N.D.	
29) Diisopropyl Ether	0.00	87	0	N.D. d	
30) Ethyl Acetate	0.00	61	0	N.D.	
31) n-Hexane	0.00	57	0	N.D.	
32) Chloroform	7.35	83	3136	0.110 ng	94
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.	
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.	
36) 1,2-Dichloroethane	0.00	62	0	N.D.	
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.	
39) Isopropyl Acetate	0.00	61	0	N.D.	
40) 1-Butanol	8.85	56	121	No Calib	
41) Benzene	8.90	78	1144	N.D.	
42) Carbon Tetrachloride	0.00	117	0	N.D.	
43) Cyclohexane	0.00	84	0	N.D.	
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.	
45) 1,2-Dichloropropane	0.00	63	0	N.D.	
46) Bromodichloromethane	10.06	83	569	N.D.	
47) Trichloroethene	10.14	130	1274	0.076 ng	94
48) 1,4-Dioxane	0.00	88	0	N.D.	
49) 2,2,4-Trimethylpentane...	0.00	57	0	N.D.	
50) Methyl Methacrylate	0.00	100	0	N.D.	

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202421.D Vial: 10
Acq On : 20 Jun 2024 20:45 Operator: SC
Sample : P2402249-048dup (20mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 12:07:38 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

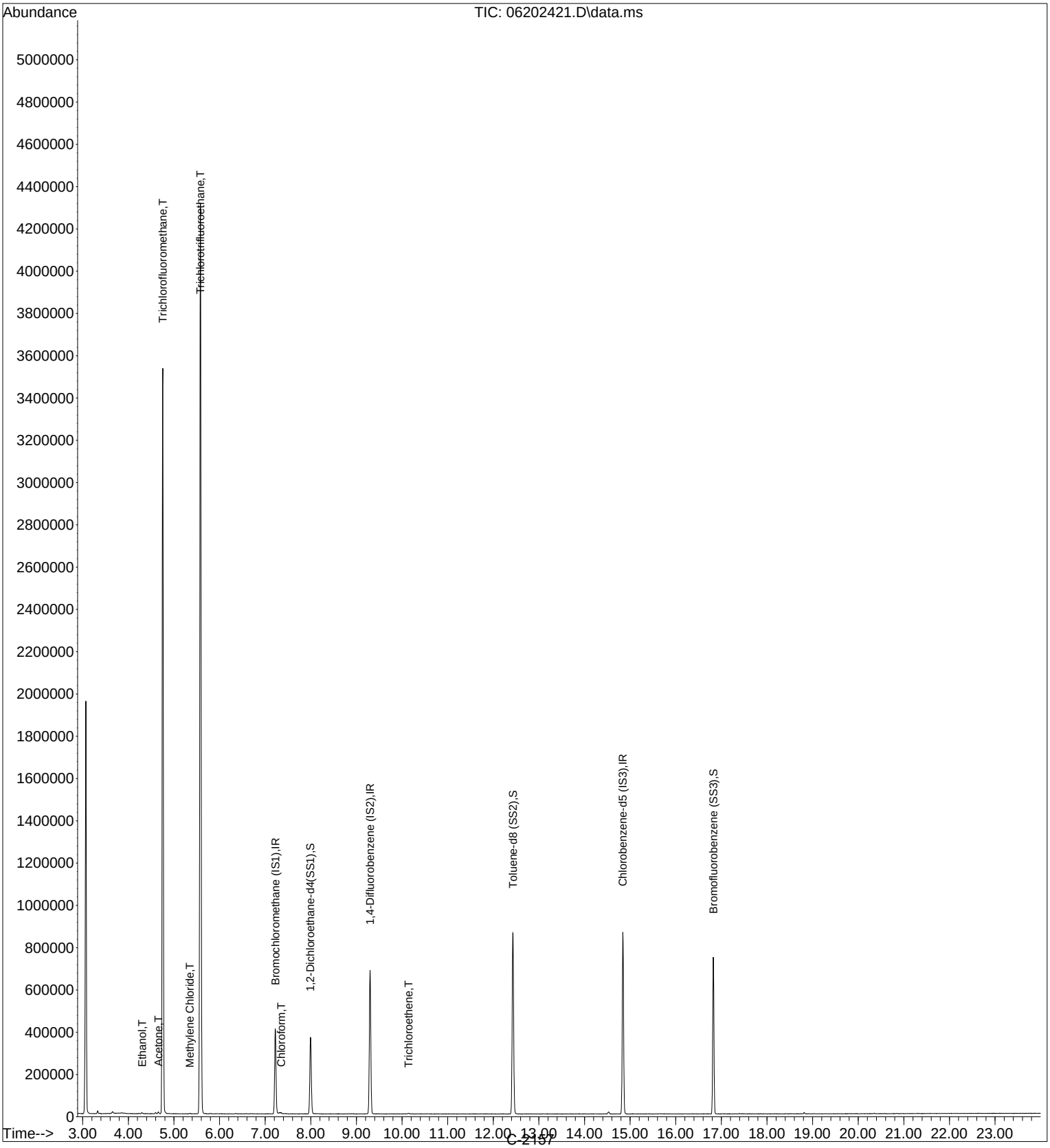
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
51) n-Heptane	0.00	71	0	N.D.		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	12.56	91	763	N.D.		
59) 2-Hexanone	0.00	43	0	N.D.		
60) Dibromochloromethane	13.07	129	458	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	0.00	43	0	N.D.		
63) n-Octane	0.00	57	0	N.D.		
64) Tetrachloroethene	14.03	166	375	N.D.		
65) Chlorobenzene	14.89	112	475	N.D.		
66) Ethylbenzene	15.41	91	787	N.D.		
67) m- & p-Xylenes	15.66	91	789	N.D.		
68) Bromoform	15.68	173	621	N.D.		
69) Styrene	0.00	104	0	N.D.		
70) o-Xylene	16.24	91	520	N.D.		
71) n-Nonane	0.00	43	0	N.D.		
72) 1,1,2,2-Tetrachloroethane	16.21	83	307	N.D.		
74) Cumene	17.03	105	649	N.D.		
75) alpha-Pinene	0.00	93	0	N.D.		
76) n-Propylbenzene	17.67	91	823	N.D.		
77) 3-Ethyltoluene	17.03	105	649	No Calib		#
78) 4-Ethyltoluene	17.86	105	574	N.D.		
79) 1,3,5-Trimethylbenzene	17.96	105	407	N.D.		
80) alpha-Methylstyrene	0.00	118	0	N.D.		
81) 2-Ethyltoluene	17.03	105	649	No Calib		#
82) 1,2,4-Trimethylbenzene	18.43	105	450	N.D.		
83) n-Decane	0.00	58	0	N.D.		
84) Benzyl Chloride	0.00	91	0	N.D.		
85) 1,3-Dichlorobenzene	18.58	146	533	N.D.		
86) 1,4-Dichlorobenzene	18.66	146	450	N.D.		
87) sec-Butylbenzene	18.74	105	694	N.D.		
88) 4-Isopropyltoluene (p-...	18.93	119	457	N.D.		
89) 1,2,3-Trimethylbenzene	17.03	105	649	No Calib		#
90) 1,2-Dichlorobenzene	19.04	146	474	N.D.		
91) d-Limonene	0.00	68	0	N.D.		
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	0.00	58	0	N.D.		
94) 1,2,4-Trichlorobenzene	20.84	180	407	N.D.		
95) Naphthalene	20.94	128	179	N.D.		
96) n-Dodecane	0.00	58	0	N.D.		
97) Hexachlorobutadiene	21.30	225	658	N.D.		
98) Cyclohexanone	0.00	55	0	N.D.		
99) tert-Butylbenzene	18.43	119	589	N.D.		
100) n-Butylbenzene	19.39	91	358	N.D.		
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202421.D Vial: 10
Acq On : 20 Jun 2024 20:45 Operator: SC
Sample : P2402249-048dup (20mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 12:07:38 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202421.D Vial: 10
Acq On : 20 Jun 2024 20:45 Operator: SC
Sample : P2402249-048dup (20mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 12:07:38 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

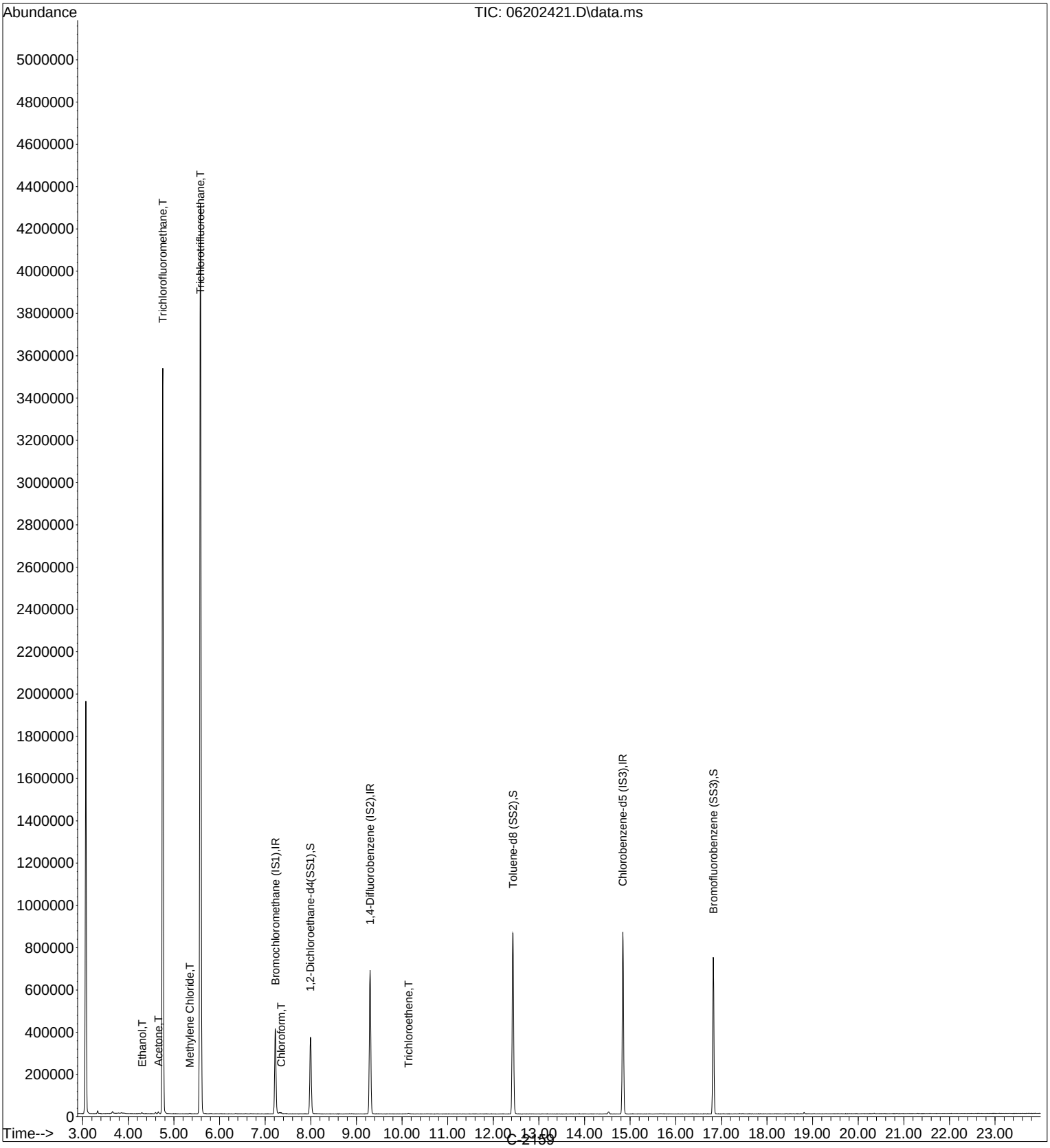
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	145042	12.500	ng	0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	622500	12.500	ng	0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	144169	12.500	ng	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4(...	7.99	65	321853	12.485	ng	0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.92%			
57) Toluene-d8 (SS2)	12.43	98	688578	12.481	ng	-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.84%			
73) Bromofluorobenzene (SS3)	16.83	174	257522	12.927	ng	-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.44%			
Target Compounds						Qvalue
10) Ethanol	4.30	45	2696	0.191	ng	98
13) Acetone	4.66	58	2477	0.220	ng	97
14) Trichlorofluoromethane	4.76	101	2524190	73.102	ng	100
19) Methylene Chloride	5.35	84	870	0.055	ng	92
21) Trichlorotrifluoroethane	5.58	151	1366689	93.562	ng	97
32) Chloroform	7.35	83	3136	0.110	ng	94
47) Trichloroethene	10.14	130	1274	0.076	ng	94

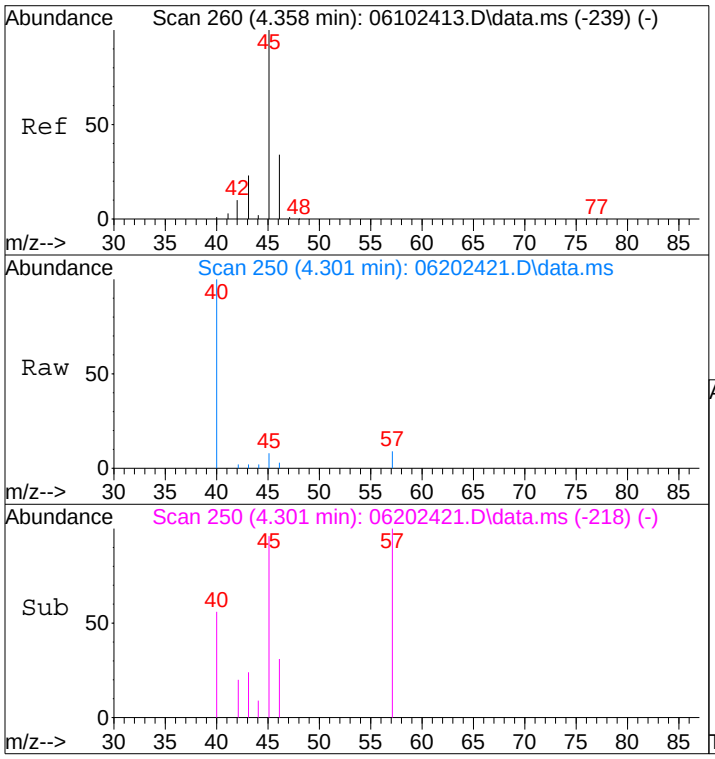
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202421.D Vial: 10
Acq On : 20 Jun 2024 20:45 Operator: SC
Sample : P2402249-048dup (20mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 12:07:38 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

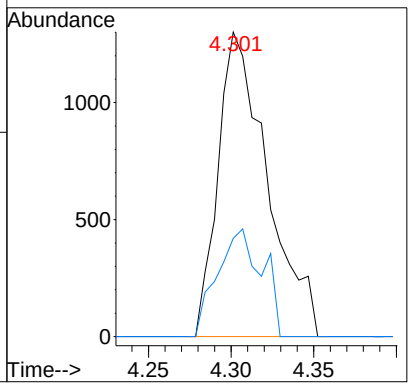


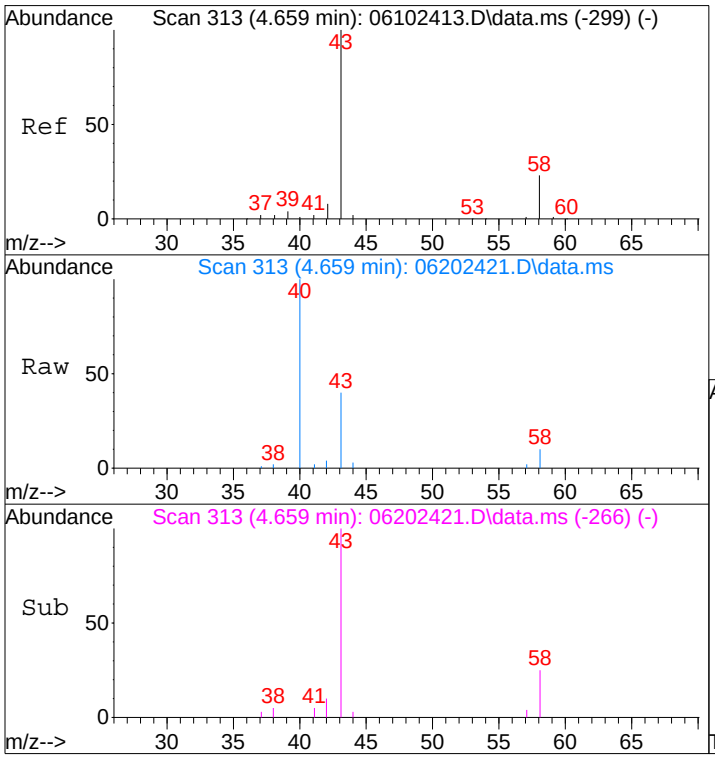


#10
Ethanol
Concen: 0.19 ng
RT: 4.30 min Scan# 250
Delta R.T. -0.066 min
Lab File: 06202421.D
Acq: 20 Jun 2024 20:45

Tgt Ion: 45 Resp: 2696

Ion	Ratio	Lower	Upper
45	100		
46	32.1	13.5	53.5

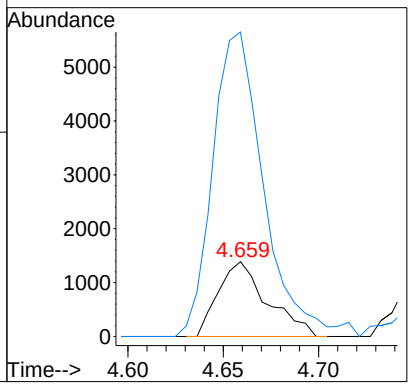


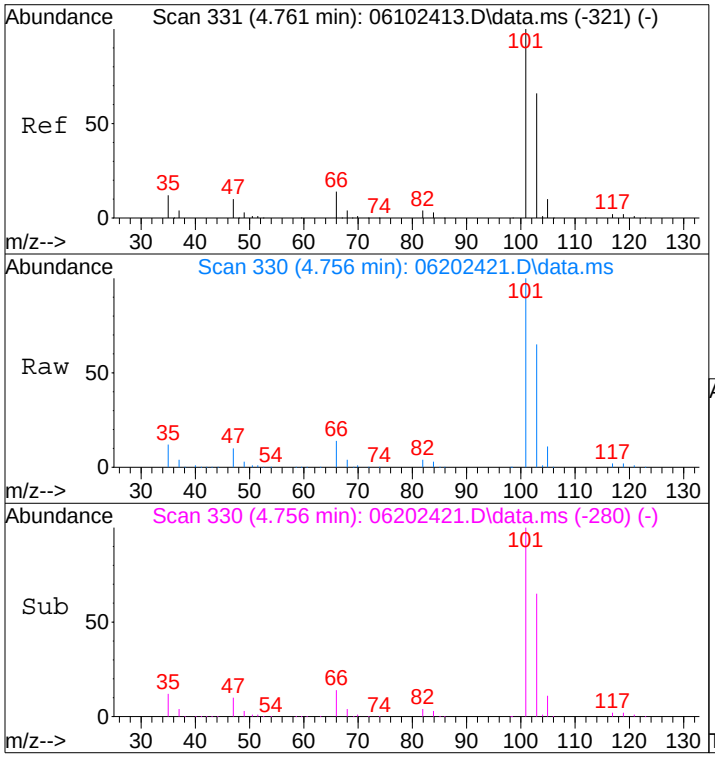


#13
Acetone
Concen: 0.22 ng
RT: 4.66 min Scan# 313
Delta R.T. 0.017 min
Lab File: 06202421.D
Acq: 20 Jun 2024 20:45

Tgt Ion: 58 Resp: 2477

Ion	Ratio	Lower	Upper
58	100		
43	424.4	400.7	460.7

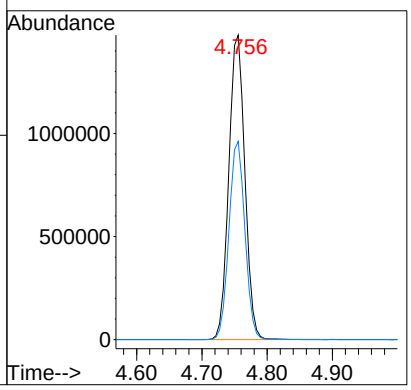


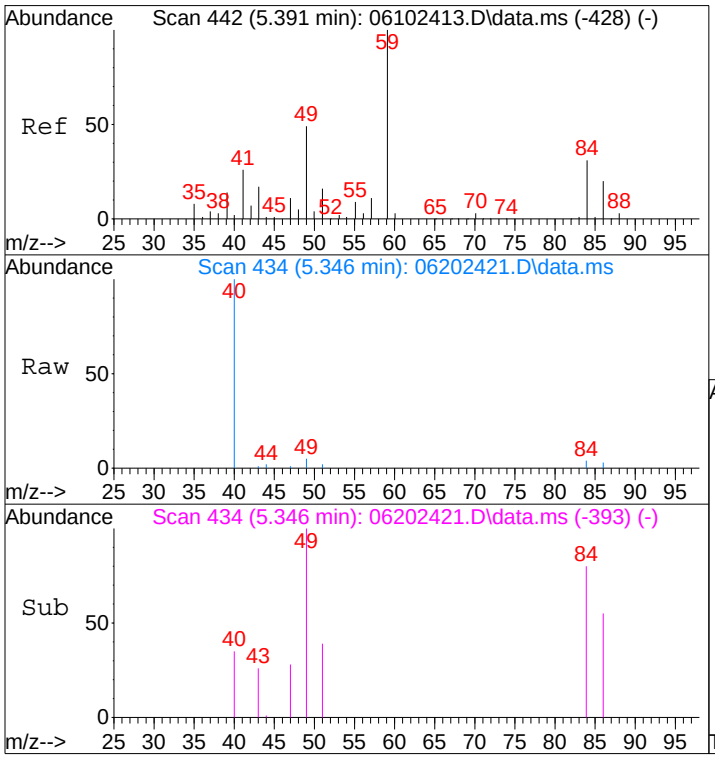


#14
Trichlorofluoromethane
Concen: 73.10 ng
RT: 4.76 min Scan# 330
Delta R.T. 0.035 min
Lab File: 06202421.D
Acq: 20 Jun 2024 20:45

Tgt Ion:101 Resp: 2524190

Ion	Ratio	Lower	Upper
101	100		
103	64.7	44.9	84.9

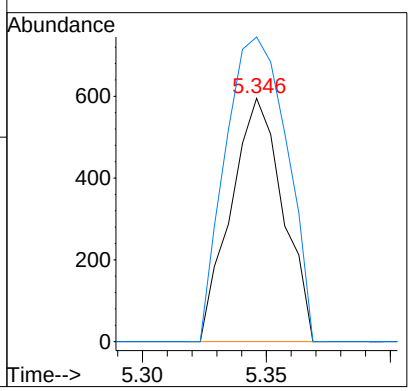


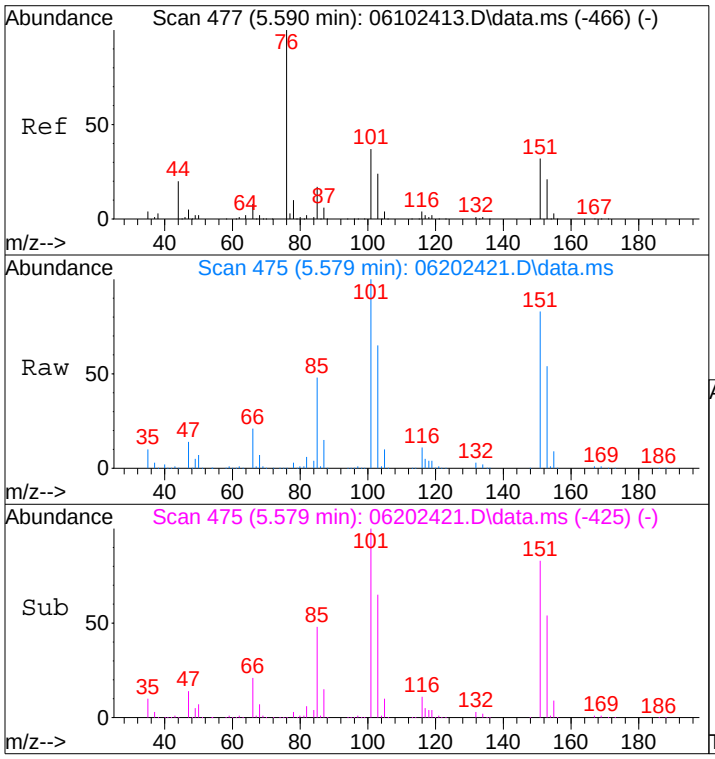


#19
Methylene Chloride
Concen: 0.05 ng
RT: 5.35 min Scan# 434
Delta R.T. -0.015 min
Lab File: 06202421.D
Acq: 20 Jun 2024 20:45

Tgt Ion: 84 Resp: 870

Ion	Ratio	Lower	Upper
84	100		
49	147.6	132.9	182.9

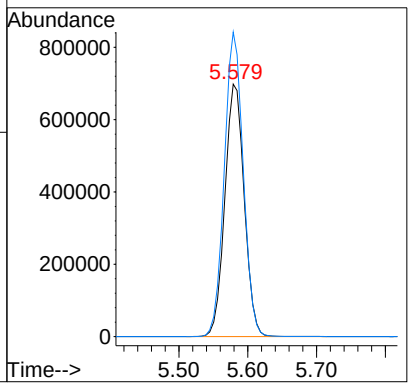


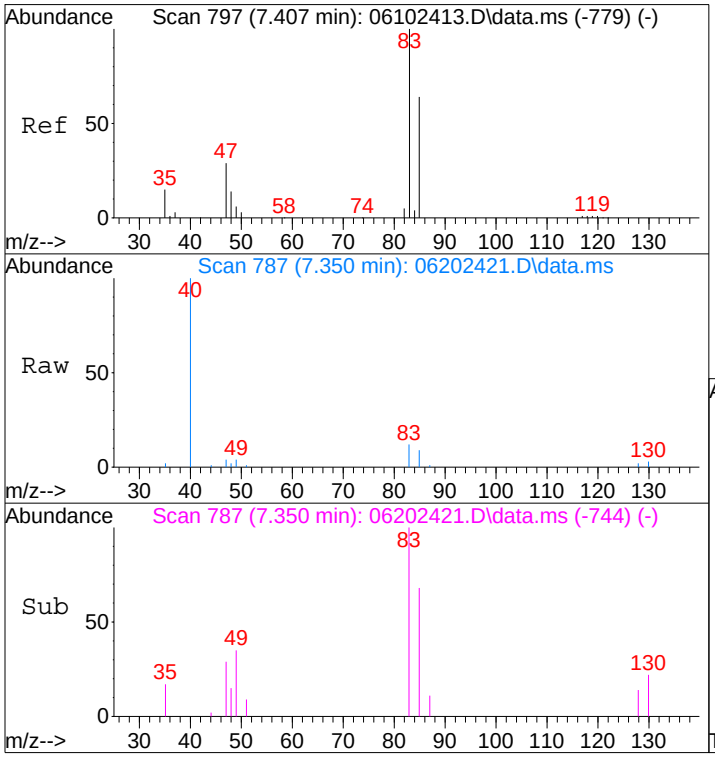


#21
Trichlorotrifluoroethane
Concen: 93.56 ng
RT: 5.58 min Scan# 475
Delta R.T. 0.033 min
Lab File: 06202421.D
Acq: 20 Jun 2024 20:45

Tgt Ion:151 Resp: 1366689

Ion	Ratio	Lower	Upper
151	100		
101	117.9	95.0	135.0

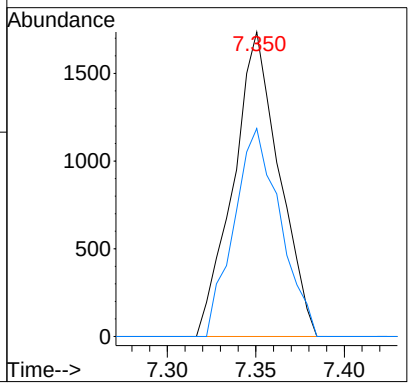


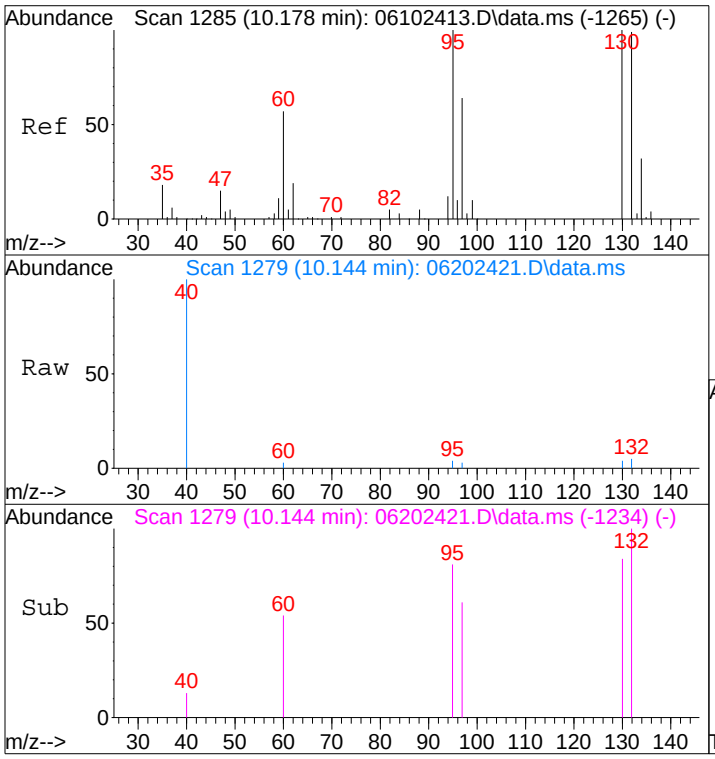


#32
Chloroform
Concen: 0.11 ng
RT: 7.35 min Scan# 787
Delta R.T. -0.004 min
Lab File: 06202421.D
Acq: 20 Jun 2024 20:45

Tgt Ion: 83 Resp: 3136

Ion	Ratio	Lower	Upper
83	100		
85	68.9	44.4	84.4

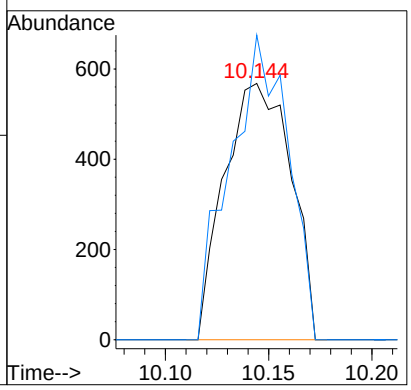




#47
Trichloroethene
Concen: 0.08 ng
RT: 10.14 min Scan# 1279
Delta R.T. 0.005 min
Lab File: 06202421.D
Acq: 20 Jun 2024 20:45

Tgt Ion:130 Resp: 1274

Ion	Ratio	Lower	Upper
130	100		
132	104.0	77.9	117.9



Quantitation Report (QT Reviewed)

MJ 6/28/24

Data File : I:\MS09\DATA\2024 06\20\06202421.D Vial: 10
Acq On : 20 Jun 2024 20:45 Operator: SC
Sample : P2402249-048dup (20mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:28:04 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

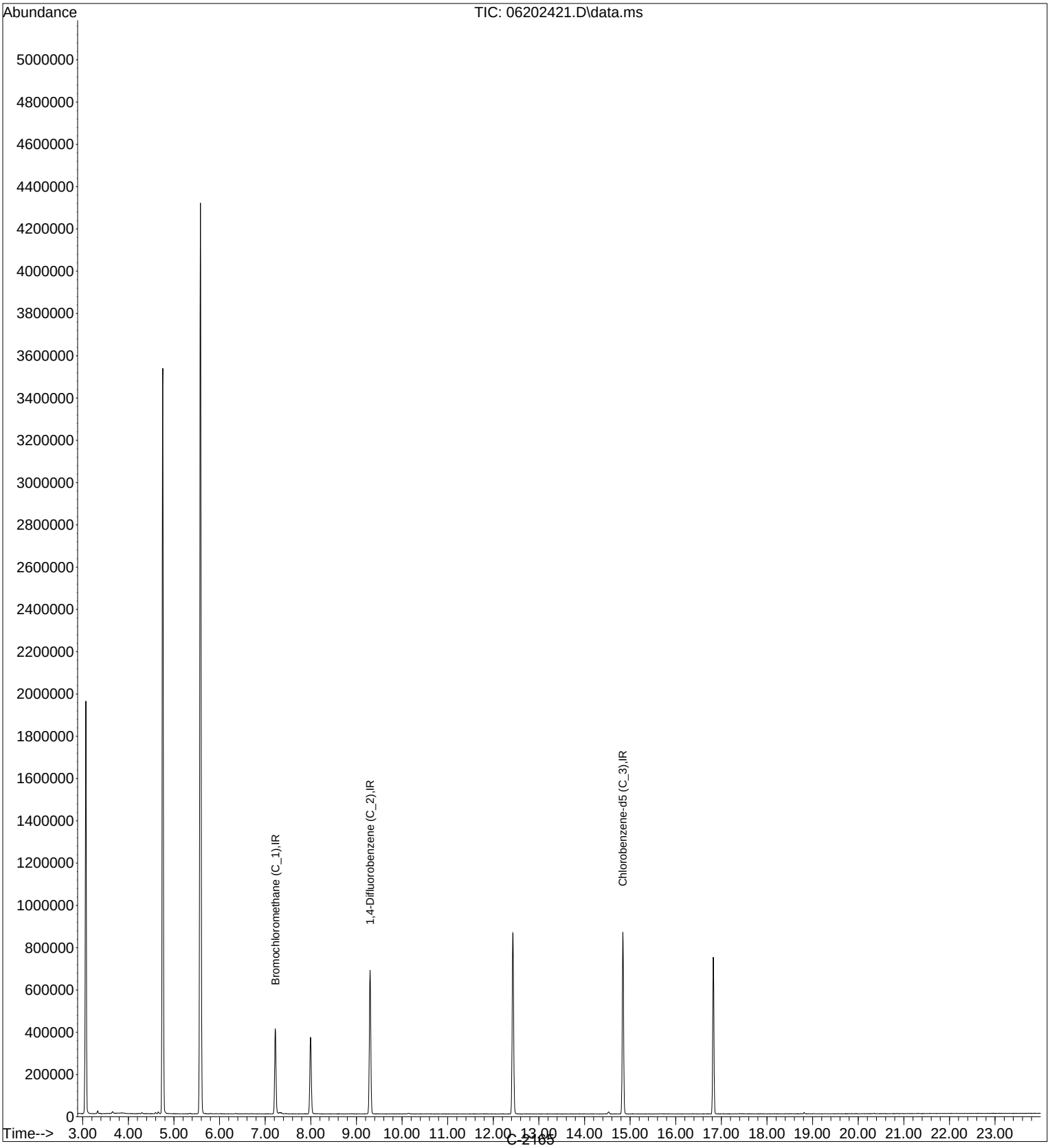
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	146315	12.500	ng	-0.03
16) 1,4-Difluorobenzene (C 2)	9.30	114	623902	12.500	ng	-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	144169	12.500	ng	-0.01
Target Compounds						Qvalue
2) Chloropentafluoroethane	0.00	85	0	N.D.		
3) 1,1,1,2-Tetrafluoroeth...	0.00	83	0	N.D.		
4) 1,1-Difluoroethane	0.00	65	0	N.D.		
5) Chlorodifluoromethane ...	0.00	67	0	N.D.		
6) 1-Chloro-1,1-Difluoroe...	0.00	65	0	N.D.		
7) Dichlorofluoromethane ...	4.23	67	1785	N.D.		
8) Vinylbromide	0.00	108	0	N.D.		
9) 2,2-Dichloro-1,1,1-tri...	4.60	83	59	N.D.		
10) 2-Methylbutane	4.66	57	143	N.D.		
11) Methyl Acetate	5.35	43	339	N.D.		
12) 2-Methylpentane	0.00	71	0	N.D.		
13) 2,2-Dichloropropane	0.00	77	0	N.D.		
14) 1,1-Dichloropropene	0.00	75	0	N.D.		
15) Thiophene	0.00	84	0	N.D.		
17) 2,3-Dimethylpentane	0.00	56	0	N.D.		
18) Dibromomethane	9.81	174	64	N.D.		
20) Methyl Cyclohexane	0.00	55	0	N.D.		
21) 1,3-Dichloropropane	0.00	76	0	N.D.		
22) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		
23) 1-Chlorohexane	0.00	91	0	N.D.		
24) 1,2,3-Trichloropropane	0.00	75	0	N.D.		
25) Bromobenzene	0.00	77	0	N.D.		
26) 2-Chlorotoluene	17.61	91	531	N.D.		
27) 4-Chlorotoluene	17.67	91	823	N.D.		
28) Indane	0.00	117	0	N.D.		
29) Indene	0.00	115	0	N.D.		
30) 1,2,4,5-Tetramethylben...	0.00	119	0	N.D.		
31) 1,2,3,4-Tetramethylben...	0.00	119	0	N.D.		
32) 1,2,3,5-Tetramethylben...	0.00	119	0	N.D.		
33) 1,2,3-Trichlorobenzene	0.00	180	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202421.D Vial: 10
Acq On : 20 Jun 2024 20:45 Operator: SC
Sample : P2402249-048dup (20mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 15:28:04 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



C-2109

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222407.D Vial: 10
Acq On : 22 Jun 2024 16:27 Operator: MC/MJ
Sample : P2402249-048Dildup (15mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 13:47:07 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.22	130	174460	12.500	ng		0.00
37) 1,4-Difluorobenzene (IS2)	9.30	114	767760	12.500	ng		0.00
56) Chlorobenzene-d5 (IS3)	14.84	54	181235	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	384058	12.386	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.12%				
57) Toluene-d8 (SS2)	12.43	98	865769	12.483	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.84%				
73) Bromofluorobenzene (SS3)	16.82	174	319746	12.767	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.16%				
Target Compounds							Qvalue
2) Propene	3.32	42	626	N.D.			
3) Dichlorodifluoromethan...	3.32	85	397	N.D.			
4) Chloromethane	0.00	50	0	N.D.			
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	4.36	45	53	N.D.			
11) Acetonitrile	4.45	41	273	N.D.			
12) Acrolein	0.00	56	0	N.D.			
13) Acetone	4.65	58	3251	0.240	ng	#	83
14) Trichlorofluoromethane	4.74	101	1860428	44.794	ng		100
15) 2-Propanol (Isopropanol)	4.89	45	1312	N.D.			
16) Acrylonitrile	4.99	53	664	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	0.00	59	0	N.D.			
19) Methylene Chloride	5.35	84	978	0.051	ng		96
20) 3-Chloro-1-propene (Al...	5.45	41	115	N.D.			
21) Trichlorotrifluoroethane	5.57	151	1011089	57.546	ng		96
22) Carbon Disulfide	0.00	76	0	N.D.	d		
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D.			
27) 2-Butanone (MEK)	0.00	72	0	N.D.			
28) cis-1,2-Dichloroethene	7.07	61	261	N.D.			
29) Diisopropyl Ether	7.31	87	512	N.D.			
30) Ethyl Acetate	0.00	61	0	N.D.			
31) n-Hexane	0.00	57	0	N.D.			
32) Chloroform	7.34	83	2469	0.072	ng		97
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.			
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	8.11	62	212	N.D.			
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.			
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.84	56	1340	No Calib			
41) Benzene	8.89	78	1748	N.D.			
42) Carbon Tetrachloride	0.00	117	0	N.D.			
43) Cyclohexane	9.28	84	967	N.D.			
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	0.00	63	0	N.D.			
46) Bromodichloromethane	10.08	83	534	N.D.			
47) Trichloroethene	10.14	130	1317	0.064	ng		83
48) 1,4-Dioxane	10.14	88	128	N.D.			
49) 2,2,4-Trimethylpentane...	0.00	57	0	N.D.			
50) Methyl Methacrylate	0.00	100	0	N.D.			

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222407.D Vial: 10
Acq On : 22 Jun 2024 16:27 Operator: MC/MJ
Sample : P2402249-048Dildup (15mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 13:47:07 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

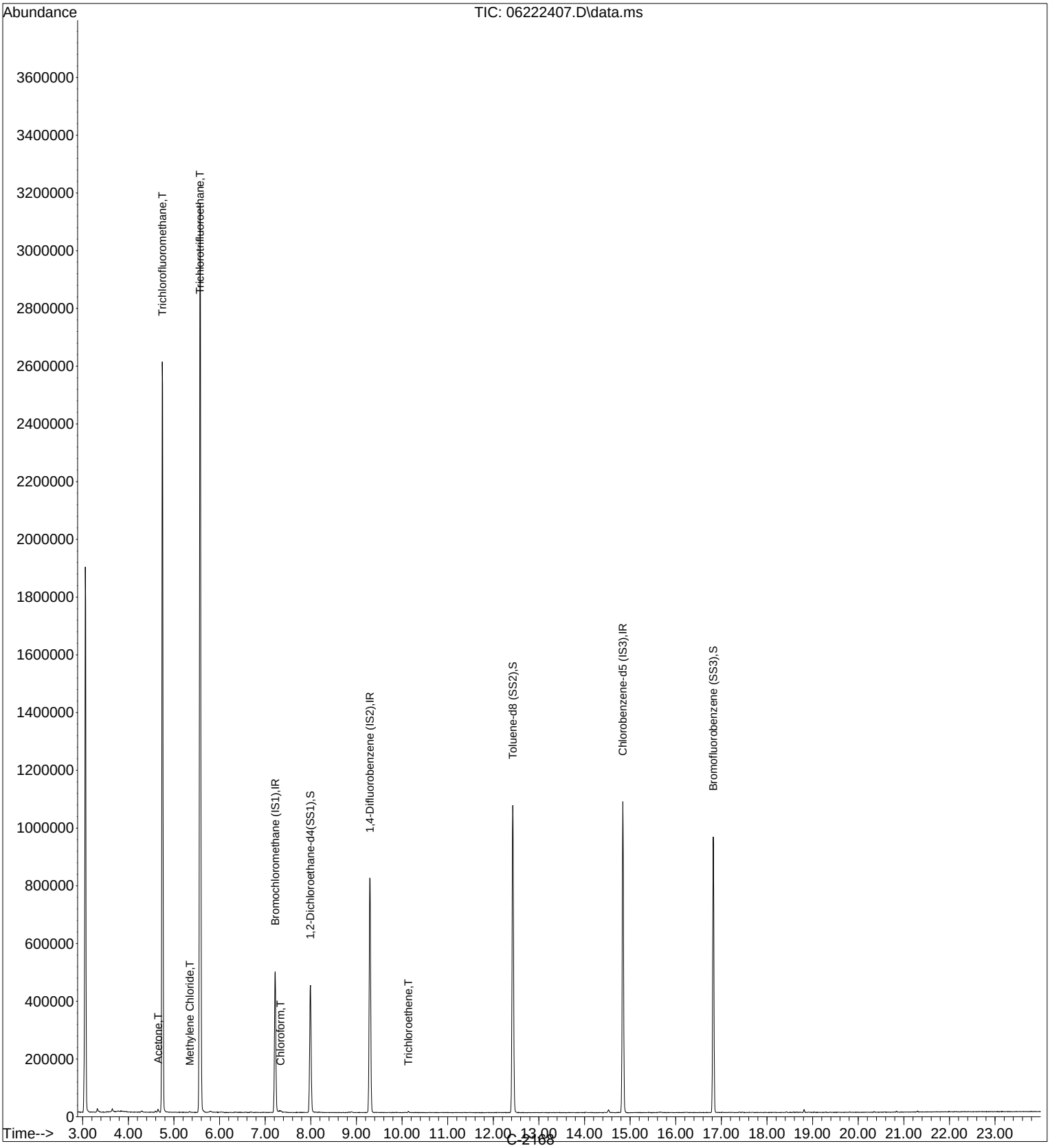
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
51) n-Heptane	0.00	71	0	N.D.		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	12.17	97	115	N.D.		
58) Toluene	12.56	91	1292	N.D.		
59) 2-Hexanone	0.00	43	0	N.D.		
60) Dibromochloromethane	13.06	129	562	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	0.00	43	0	N.D.		
63) n-Octane	0.00	57	0	N.D.		
64) Tetrachloroethene	14.03	166	409	N.D.		
65) Chlorobenzene	14.90	112	820	N.D.		
66) Ethylbenzene	15.40	91	1122	N.D.		
67) m- & p-Xylenes	15.64	91	1016	N.D.		
68) Bromoform	15.67	173	731	N.D.		
69) Styrene	0.00	104	0	N.D.		
70) o-Xylene	16.24	91	1021	N.D.		
71) n-Nonane	16.61	43	166	N.D.		
72) 1,1,2,2-Tetrachloroethane	16.21	83	432	N.D.		
74) Cumene	17.04	105	1111	N.D.		
75) alpha-Pinene	0.00	93	0	N.D.		
76) n-Propylbenzene	17.68	91	1277	N.D.		
77) 3-Ethyltoluene	17.04	105	1111	No Calib		#
78) 4-Ethyltoluene	17.86	105	910	N.D.		
79) 1,3,5-Trimethylbenzene	17.96	105	615	N.D.		
80) alpha-Methylstyrene	0.00	118	0	N.D.		
81) 2-Ethyltoluene	17.04	105	1111	No Calib		#
82) 1,2,4-Trimethylbenzene	18.43	105	736	N.D.		
83) n-Decane	0.00	58	0	N.D.		
84) Benzyl Chloride	0.00	91	0	N.D.		
85) 1,3-Dichlorobenzene	18.58	146	821	N.D.		
86) 1,4-Dichlorobenzene	18.66	146	791	N.D.		
87) sec-Butylbenzene	18.74	105	985	N.D.		
88) 4-Isopropyltoluene (p-...	18.93	119	770	N.D.		
89) 1,2,3-Trimethylbenzene	17.04	105	1111	No Calib		#
90) 1,2-Dichlorobenzene	19.04	146	786	N.D.		
91) d-Limonene	0.00	68	0	N.D.		
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	0.00	58	0	N.D.		
94) 1,2,4-Trichlorobenzene	20.84	180	1199	N.D.		
95) Naphthalene	20.94	128	860	N.D.		
96) n-Dodecane	0.00	58	0	N.D.		
97) Hexachlorobutadiene	21.30	225	877	N.D.		
98) Cyclohexanone	0.00	55	0	N.D.		
99) tert-Butylbenzene	18.43	119	1035	N.D.		
100) n-Butylbenzene	19.39	91	697	N.D.		
101) 1,1,1,2-Tetrachloroethane	0.00	131	0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222407.D Vial: 10
Acq On : 22 Jun 2024 16:27 Operator: MC/MJ
Sample : P2402249-048Dildup (15mL) Inst : MS09
Misc : S37-06062402

Quant Time: Jun 28 13:47:07 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

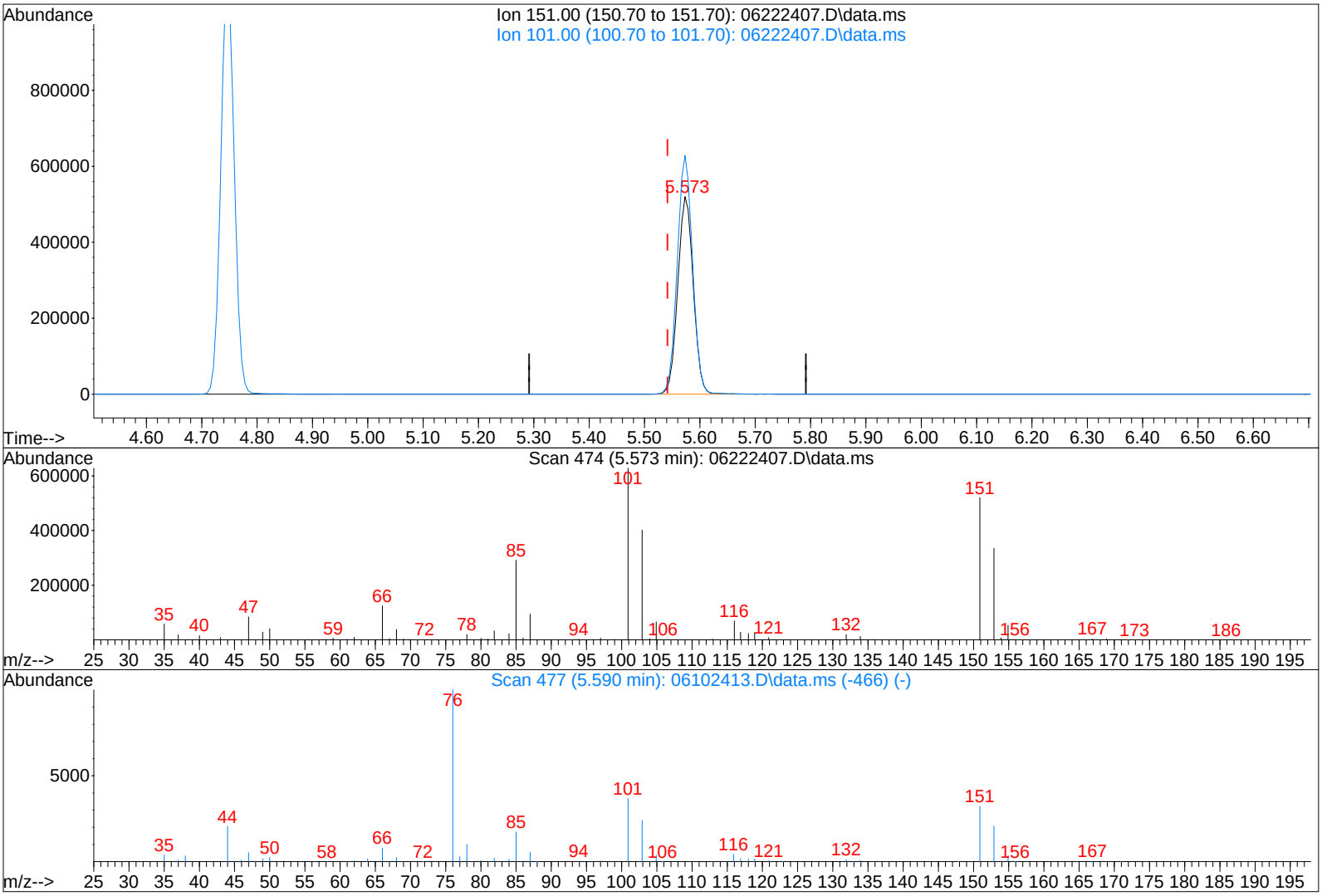


Quantitation Report (Qedit)

Data File : I:\MS09\DATA\2024 06\22\06222407.D Vial: 10
Acq On : 22 Jun 2024 16:27 Operator: MC/MJ
Sample : P2402249-048Dildup (15mL) Inst : MS09
Misc : S37-06062402

MJ 6/28/24

Quant Time: Jun 28 13:47:07 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 24 08:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



TIC: 06222407.D\data.ms

(21) Trichlorotrifluoroethane (T)

5.573min (+0.031) 57.55ng

response 1011089

Ion	Exp%	Act%
151.00	100	100
101.00	115.00	119.49
0.00	0.00	0.00
0.00	0.00	0.00

LSC Area Percent Report

Data Path : I:\MS09\DATA\2024 06\20\
Data File : 06202421.D
Acq On : 20 Jun 2024 20:45
Operator : SC
Sample : P2402249-048dup (20mL)
Misc : S37-06062402
ALS Vial : 10 Sample Multiplier: 1

MJ 6/28/24

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 10000 Area counts
Start Thrs: 0.15 Max Peaks: 200
Stop Thrs : 0.05 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Signal : TIC: 06202421.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.069	23	33	50	rVB	1951441	3034019	36.65%	14.747%
2	3.330	74	79	82	rBV3	12823	17460	0.21%	0.085%
3	3.654	129	136	145	rBV2	8863	18347	0.22%	0.089%
4	4.301	243	250	258	rBV3	5197	12418	0.15%	0.060%
5	4.597	296	302	308	rBV3	6318	10262	0.12%	0.050%
6	4.659	308	313	318	rBV	8521	14473	0.17%	0.070%
7	4.756	321	330	345	rBV	3525946	6027965	72.82%	29.300%
8	5.579	464	475	491	rBV	4308628	8277925	100.00%	40.236%
9	7.220	755	764	776	rBV	403263	853262	10.31%	4.147%
10	7.992	891	900	912	rBV	363351	809060	9.77%	3.933%
11	9.298	1119	1130	1141	rBV	679078	1498152	18.10%	7.282%

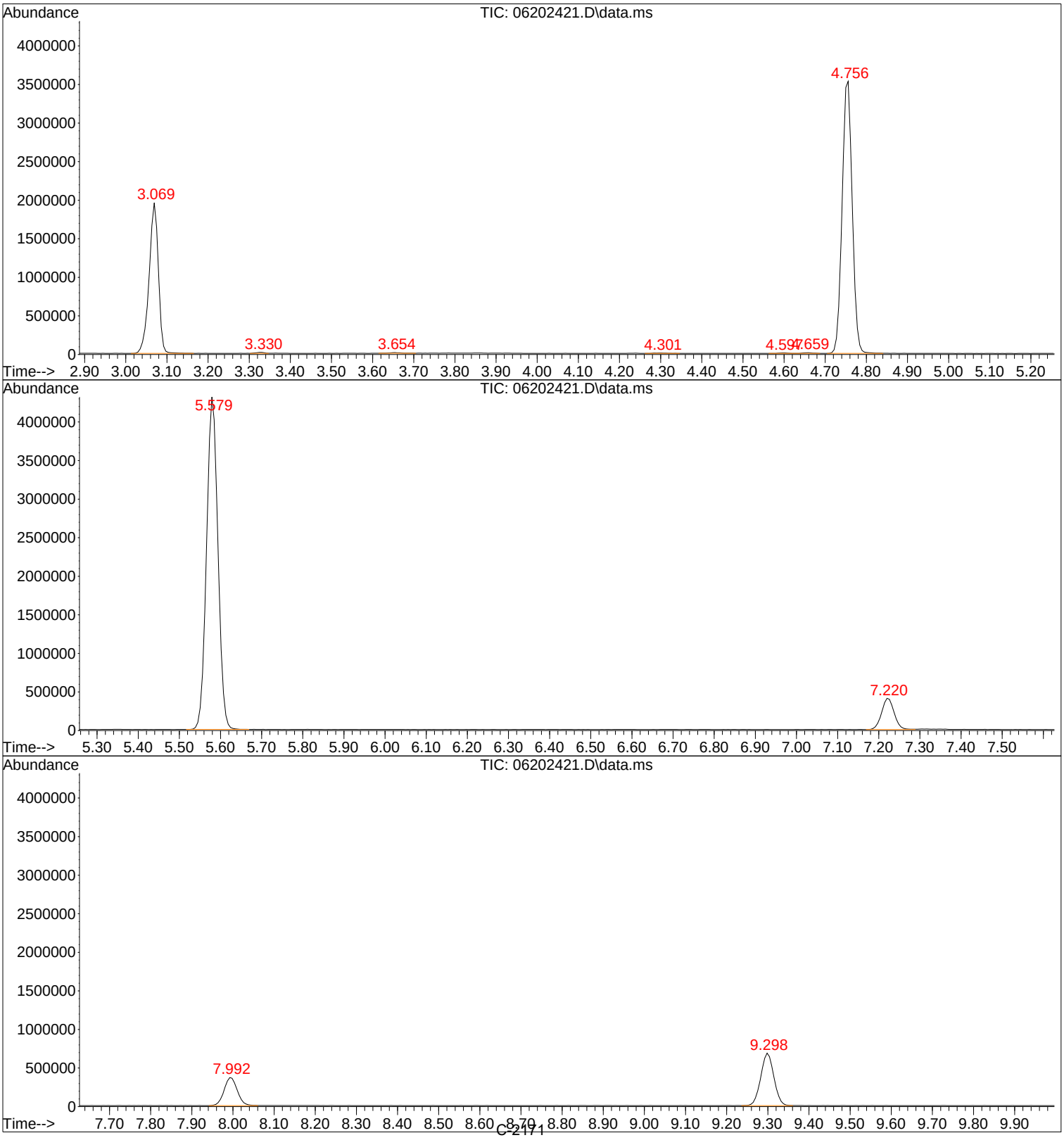
Sum of corrected areas: 20573343

LSC Report - Integrated Chromatogram

Data Path : I:\MS09\DATA\2024 06\20\
Data File : 06202421.D
Acq On : 20 Jun 2024 20:45
Operator : SC
Sample : P2402249-048dup (20mL)
Misc : S37-06062402
ALS Vial : 10 Sample Multiplier: 1

Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

TIC Library : L:\DATABASE\NIST17\NIST17.L
TIC Integration Parameters: LSCINT.P



Tentatively Identified Compound (LSC) summary

Data Path : I:\MS09\DATA\2024 06\20\\
Data File : 06202421.D
Acq On : 20 Jun 2024 20:455
Operator : SCC
Sample : P2402249-048dup (20mL))
Misc : S37-060624022
ALS Vial : 10 Sample Multiplier: 11

Quant Method : I:\MS09\METHODS\R09061024.MM
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS))

TIC Library : L:\DATABASE\NIST17\NIST17.LL
TIC Integration Parameters: LSCINT.PP

						--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc

No Library Search Compounds Detected
****

Response Factor Report MS09

Method Path : I:\MS09\METHODS\
Method File : R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
Last Update : Tue Jun 11 08:51:10 2024
Response Via : Initial Calibration

6/11/24

Calibration Files
0.1 =06102408.D 0.2 =06102409.D 0.5 =06102410.D 1.0 =06102411.D 5.0 =06102412.D 25 =06102
100 =06102415.D

		Compound	0.1	0.2	0.5	1.0	5.0	25	50	100	Avg	%RSD
1)	IR	Bromochloromethane...	----------ISTD----------									
2)	T	Propene	1.646	1.534	1.522	1.474	1.616	1.444	1.660	1.907	1.600	9.17
3)	T	Dichlorodifluo...	3.134	3.115	3.190	3.185	3.023	2.719	2.673	2.496	2.942	9.22
4)	T	Chloromethane	2.003	2.148	2.056	2.159	1.997	1.955	2.048	1.723	2.011	6.79
5)	T	1,2-Dichloro-1...	1.323	1.316	1.327	1.368	1.286	1.235	1.210	1.141	1.276	5.86
6)	T	Vinyl Chloride	1.888	1.952	1.973	1.998	1.918	1.886	1.907	1.833	1.919	2.79
7)	T	1,3-Butadiene	1.377	1.401	1.405	1.451	1.435	1.478	1.577	1.476	1.450	4.33
8)	T	Bromomethane	1.075	1.063	1.053	1.075	0.960	1.014	1.004	0.934	1.022	5.29
9)	T	Chloroethane	0.769	0.799	0.820	0.797	0.810	0.786	0.828	0.826	0.804	2.57
10)	T	Ethanol	1.187	1.020	1.296	1.280	1.207	1.180	1.272	1.279	1.215	7.52
11)	T	Acetonitrile			2.848	2.966	2.878	2.753	3.016	3.845	3.051	13.10
12)	T	Acrolein	0.884	0.860	0.870	0.886	0.895	0.894	0.948	0.959	0.899	3.93
13)	T	Acetone	1.125	1.034	0.963	0.932	0.903	0.911	0.954	0.947	0.971	7.62
14)	T	Trichlorofluor...	3.018	3.085	3.090	3.108	2.978	2.883	2.887	2.758	2.976	4.18
15)	T	2-Propanol (Is...	4.265	4.227	4.002	4.079	3.693	4.107	3.903	3.026	3.913	10.27
16)	T	Acrylonitrile	1.840	1.776	1.725	1.746	1.771	1.819	1.929	1.962	1.821	4.70
17)	T	1,1-Dichloroet...	1.136	1.165	1.156	1.131	1.108	1.117	1.154	1.140	1.138	1.73
18)	T	2-Methyl-2-Pro...			3.249	3.255	3.195	3.469	3.356	2.214	3.123	14.60
19)	T	Methylene Chlo...	1.779	1.631	1.301	1.303	1.216	1.218	1.288	1.260	1.375	15.32
20)	T	3-Chloro-1-pro...	2.157	2.824	2.744	1.985	2.597	2.473	2.511	2.333	2.453	11.61
21)	T	Trichlorotrifl...	1.272	1.288	1.300	1.279	1.251	1.240	1.248	1.193	1.259	2.68
22)	T	Carbon Disulfide	4.466	4.402	4.327	4.387	4.319	4.421	4.626	4.491	4.430	2.24
23)	T	trans-1,2-Dich...	1.921	1.890	1.863	1.942	1.935	1.991	2.099	2.091	1.966	4.47
24)	T	1,1-Dichloroet...	2.312	2.236	2.336	2.352	2.288	2.316	2.446	2.433	2.340	3.02
25)	T	Methyl tert-Bu...	2.703	2.691	2.931	3.015	3.399	3.547	3.833	3.851	3.246	14.64
26)	T	Vinyl Acetate			0.179	0.196	0.221	0.240	0.254	0.254	0.224	13.90
27)	T	2-Butanone (MEK)	0.701	0.744	0.718	0.782	0.759	0.784	0.831	0.829	0.768	6.18
28)	T	cis-1,2-Dichlo...	2.063	1.867	1.819	1.870	1.882	1.913	2.015	2.001	1.929	4.48
29)	T	Diisopropyl Ether	0.807	0.884	0.913	0.918	0.893	0.928	0.975	0.963	0.910	5.72
30)	T	Ethyl Acetate	0.439	0.408	0.440	0.445	0.458	0.495	0.533	0.537	0.469	10.03
31)	T	n-Hexane	1.817	1.982	2.041	2.016	2.014	2.103	2.249	2.225	2.056	6.74
32)	T	Chloroform	2.636	2.494	2.503	2.456	2.375	2.363	2.415	2.352	2.449	3.89
33)	S	1,2-Dichloroet...	2.211	2.248	2.231	2.238	2.240	2.186	2.206	2.212	2.222	0.95
34)	T	Tetrahydrofura...	0.663	0.678	0.652	0.670	0.699	0.722	0.762	0.762	0.701	6.21
35)	T	Ethyl tert-But...	0.960	1.122	1.143	1.184	1.221	1.298	1.362	1.379	1.209	11.49
36)	T	1,2-Dichloroet...	2.477	2.519	2.427	2.474	2.425	2.438	2.473	2.384	2.452	1.70
37)	IR	1,4-Difluorobenzen...	----------ISTD----------									
38)	T	1,1,1-Trichlor...	0.624	0.611	0.575	0.577	0.571	0.576	0.570	0.540	0.580	4.47
39)	T	Isopropyl Acetate									0.000	-1.00
40)	T	1-Butanol									0.000	-1.00
41)	T	Benzene	1.367	1.244	1.119	1.114	1.080	1.098	1.120	1.088	1.154	8.68
42)	T	Carbon Tetrach...	0.519	0.542	0.551	0.544	0.536	0.547	0.537	0.505	0.535	2.90
43)	T	Cyclohexane	0.339	0.337	0.366	0.374	0.382	0.394	0.405	0.391	0.373	6.70
44)	T	tert-Amyl Meth...	0.645	0.654	0.686	0.701	0.745	0.790	0.810	0.780	0.726	8.78
45)	T	1,2-Dichloropr...	0.273	0.270	0.277	0.279	0.274	0.277	0.290	0.288	0.279	2.47
46)	T	Bromodichlorom...	0.487	0.504	0.448	0.453	0.446	0.461	0.464	0.451	0.464	4.49
47)	T	Trichloroethene	0.379	0.352	0.343	0.328	0.324	0.329	0.327	0.313	0.337	6.21
48)	T	1,4-Dioxane	0.211	0.191	0.195	0.200	0.218	0.227	0.232	0.229	0.213	7.56
49)	T	2,2,4-Trimethy...	1.036	1.083	1.118	1.128	1.148	1.183	1.228	1.203	1.141	5.56
50)	T	Methyl Methacr...	0.072	0.087	0.095	0.096	0.103	0.110	0.111	0.108	0.098	13.82
51)	T	n-Heptane	0.210	0.216	0.241	0.243	0.250	0.257	0.267	0.263	0.243	8.68
52)	T	cis-1,3-Dichlo...	0.400	0.416	0.421	0.450	0.496	0.535	0.552	0.543	0.476	13.05
53)	T	4-Methyl-2-pen...	0.214	0.225	0.233	0.241	0.259	0.279	0.290	0.287	0.254	11.59
54)	T	trans-1,3-Dich...	0.336	0.357	0.374	0.402	0.450	0.498	0.516	0.506	0.430	16.75

55)	T	1,1,2-Trichlor...	0.276	0.277	0.263	0.273	0.269	0.275	0.281	0.271	0.273	2.03
56)	IR	Chlorobenzene-d5 (...	----------ISTD----------									
57)	S	Toluene-d8 (SS2)	4.904	4.824	4.853	4.806	4.748	4.748	4.735	4.651	4.783	1.66
58)	T	Toluene	5.754	5.114	5.039	4.848	4.804	4.881	4.921	4.626	4.998	6.78
59)	T	2-Hexanone	2.764	2.758	2.850	2.987	3.233	3.463	3.598	3.416	3.134	10.74
60)	T	Dibromochlorom...	1.917	1.775	1.716	1.693	1.692	1.715	1.712	1.604	1.728	5.18
61)	T	1,2-Dibromoethane	1.215	1.381	1.358	1.438	1.443	1.483	1.506	1.421	1.406	6.47
62)	T	n-Butyl Acetate	2.726	2.772	2.868	3.078	3.502	3.776	3.928	3.705	3.294	14.82
63)	T	n-Octane	0.934	0.958	0.964	1.033	1.054	1.092	1.141	1.118	1.037	7.53
64)	T	Tetrachloroethene	1.965	1.799	1.768	1.734	1.672	1.661	1.642	1.505	1.718	7.84
65)	T	Chlorobenzene	3.983	3.698	3.499	3.430	3.361	3.433	3.436	3.186	3.503	6.86
66)	T	Ethylbenzene	5.843	5.535	5.583	5.604	5.759	5.973	5.951	5.502	5.719	3.29
67)	T	m- & p-Xylenes	4.737	4.568	4.617	4.745	4.853	5.108	5.119	4.723	4.809	4.30
68)	T	Bromoform	1.795	1.480	1.467	1.460	1.475	1.574	1.561	1.430	1.530	7.72
69)	T	Styrene	2.782	2.878	2.996	3.104	3.422	3.669	3.677	3.417	3.243	10.79
70)	T	o-Xylene	4.784	4.548	4.535	4.776	4.808	4.979	4.940	4.567	4.742	3.69
71)	T	n-Nonane	2.307	2.390	2.538	2.705	2.885	3.055	3.158	3.014	2.756	11.63
72)	T	1,1,2,2-Tetrac...	2.403	2.111	2.088	2.081	2.116	2.192	2.239	2.138	2.171	4.97
73)	S	Bromofluoroben...	1.755	1.752	1.760	1.754	1.755	1.744	1.682	1.616	1.727	2.98
74)	T	Cumene	6.278	5.929	5.894	5.824	5.978	6.081	5.983	5.393	5.920	4.28
75)	T	alpha-Pinene	2.359	2.346	2.536	2.683	2.968	3.125	3.134	2.910	2.758	11.69
76)	T	n-Propylbenzene	7.154	6.927	6.972	7.121	7.345	7.529	7.448	6.676	7.147	4.02
77)	T	3-Ethyltoluene									0.000	-1.00
78)	T	4-Ethyltoluene	5.297	5.379	5.405	5.638	5.877	6.113	5.973	5.473	5.644	5.44
79)	T	1,3,5-Trimethy...	4.505	4.590	4.881	5.041	5.175	5.322	5.219	4.713	4.931	6.20
80)	T	alpha-Methylst...									0.000	-1.00
81)	T	2-Ethyltoluene									0.000	-1.00
82)	T	1,2,4-Trimethy...	4.796	4.701	4.901	5.240	5.490	5.805	5.656	4.995	5.198	7.98
83)	T	n-Decane									0.000	-1.00
84)	T	Benzyl Chloride	3.017	3.339	3.449	3.812	4.595	5.352	5.336	4.524	4.178	21.66
85)	T	1,3-Dichlorobe...	3.766	3.571	3.305	3.381	3.420	3.540	3.416	3.010	3.426	6.43
86)	T	1,4-Dichlorobe...	3.643	3.370	3.232	3.242	3.325	3.503	3.375	3.022	3.339	5.58
87)	T	sec-Butylbenzene	6.384	6.275	6.448	6.636	6.874	7.085	6.866	6.044	6.577	5.34
88)	T	4-Isopropyltol...	5.742	5.719	5.717	5.942	6.242	6.423	6.154	5.365	5.913	5.83
89)	T	1,2,3-Trimethy...									0.000	-1.00
90)	T	1,2-Dichlorobe...	3.633	3.469	3.224	3.351	3.322	3.404	3.272	2.934	3.326	6.10
91)	T	d-Limonene	1.321	1.540	1.514	1.654	1.880	2.081	2.128	2.020	1.767	17.02
92)	T	1,2-Dibromo-3-...	1.101	1.127	1.031	1.101	1.211	1.285	1.250	1.121	1.153	7.49
93)	T	n-Undecane									0.000	-1.00
94)	T	1,2,4-Trichlor...	2.584	2.513	2.422	2.484	2.768	2.994	2.845	2.395	2.626	8.31
95)	T	Naphthalene	5.479	5.795	5.465	6.096	7.129	8.362	8.053	6.913	6.662	17.03
96)	T	n-Dodecane									0.000	-1.00
97)	T	Hexachlorobuta...	2.624	2.519	2.121	2.077	2.067	2.072	2.008	1.780	2.159	12.83
98)	T	Cyclohexanone									0.000	-1.00
99)	T	tert-Butylbenzene	5.096	4.816	4.807	5.031	5.198	5.326	5.117	4.455	4.981	5.55
100)	T	n-Butylbenzene	4.961	5.186	5.244	5.463	5.905	6.159	6.006	5.335	5.532	7.88
101)	T	1,1,1,2-Tetrac...	1.341	1.247	1.340	1.344	1.363	1.387	1.368	1.255	1.331	3.89

(#) = Out of Range

R09061024.M Tue Jun 11 08:53:01 2024

6/12/24

Primary Source Standards Concentrations (Working & Initial Calibration)

1ng/L Std. ID:
4ng/L Std. ID: S37-06102404
20ng/L Std. ID: S37-06102403
40ng/L Std. ID:
200ng/L Std. ID: S37-06102402
1000ng/L Std. ID:

Dilution Factors:		1	5	25	50	250	1000	Working STD Conc.(ng/L):	4	4	20	20	200	200	200	200
	Source Std.		Primary Working Standards					Injection (L):	0.025	0.050	0.0250	0.050	0.025	0.125	0.25	0.50
Compounds	mg/m³	1000ng/L	200ng/L	40ng/L	20ng/L	4ng/L	1ng/L	ICAL Points:	0.1ng	0.2ng	0.5ng	1ng	5ng	25ng	50ng	100ng
Propene	1.05	1050	210	42.0	21.0	4.20	1.05		0.105	0.210	0.525	1.05	5.25	26.25	52.5	105
Dichlorodifluoromethane	1.04	1040	208	41.6	20.8	4.16	1.04		0.104	0.208	0.520	1.04	5.20	26.00	52.0	104
Chloromethane	1.07	1070	214	42.8	21.4	4.28	1.07		0.107	0.214	0.535	1.07	5.35	26.75	53.5	107
Freon-114	1.09	1090	218	43.6	21.8	4.36	1.09		0.109	0.218	0.545	1.09	5.45	27.25	54.5	109
Vinyl Chloride	1.06	1060	212	42.4	21.2	4.24	1.06		0.106	0.212	0.530	1.06	5.30	26.50	53.0	106
1,3-Butadiene	1.06	1060	212	42.4	21.2	4.24	1.06		0.106	0.212	0.530	1.06	5.30	26.50	53.0	106
Bromomethane	1.02	1020	204	40.8	20.4	4.08	1.02		0.102	0.204	0.510	1.02	5.10	25.50	51.0	102
Chloroethane	1.10	1100	220	44.0	22.0	4.40	1.10		0.110	0.220	0.550	1.10	5.50	27.50	55.0	110
Ethanol	4.91	4910	982	196.4	98.2	19.64	4.91		0.491	0.982	2.455	4.91	24.55	122.75	245.5	491
Acetonitrile	0.96	960	192	38.4	19.2	3.84	0.96		0.096	0.192	0.480	0.96	4.80	24.00	48.0	96
Acrolein	2.15	2150	430	86.0	43.0	8.60	2.15		0.215	0.430	1.075	2.15	10.75	53.75	107.5	215
Acetone	5.11	5110	1022	204.4	102.2	20.44	5.11		0.511	1.022	2.555	5.11	25.55	127.75	255.5	511
Trichlorofluoromethane	1.01	1010	202	40.4	20.2	4.04	1.01		0.101	0.202	0.505	1.01	5.05	25.25	50.5	101
Isopropanol	1.98	1980	396	79.2	39.6	7.92	1.98		0.198	0.396	0.990	1.98	9.90	49.50	99.0	198
Acrylonitrile	2.00	2000	400	80.0	40.0	8.00	2.00		0.200	0.400	1.000	2.00	10.00	50.00	100.0	200
1,1-Dichloroethene	0.90	900	180	36.0	18.0	3.60	0.90		0.090	0.180	0.450	0.90	4.50	22.50	45.0	90
tert-Butanol	2.08	2080	416	83.2	41.6	8.32	2.08		0.208	0.416	1.040	2.08	10.40	52.00	104.0	208
Methylene Chloride	0.91	910	182	36.4	18.2	3.64	0.91		0.091	0.182	0.455	0.91	4.55	22.75	45.5	91
Allyl Chloride	1.08	1080	216	43.2	21.6	4.32	1.08		0.108	0.216	0.540	1.08	5.40	27.00	54.0	108
Trichlorotrifluoroethane	0.90	900	180	36.0	18.0	3.60	0.90		0.090	0.180	0.450	0.90	4.50	22.50	45.0	90
Carbon Disulfide	2.07	2070	414	82.8	41.4	8.28	2.07		0.207	0.414	1.035	2.07	10.35	51.75	103.5	207
trans-1,2-Dichloroethene	1.05	1050	210	42.0	21.0	4.20	1.05		0.105	0.210	0.525	1.05	5.25	26.25	52.5	105
1,1-Dichloroethane	1.03	1030	206	41.2	20.6	4.12	1.03		0.103	0.206	0.515	1.03	5.15	25.75	51.5	103
Methyl tert-Butyl Ether	1.07	1070	214	42.8	21.4	4.28	1.07		0.107	0.214	0.535	1.07	5.35	26.75	53.5	107
Vinyl Acetate	5.37	5370	1074	214.8	107.4	21.48	5.37		0.537	1.074	2.685	5.37	26.85	134.25	268.5	537
2-Butanone	2.03	2030	406	81.2	40.6	8.12	2.03		0.203	0.406	1.015	2.03	10.15	50.75	101.5	203
cis-1,2-Dichloroethene	1.03	1030	206	41.2	20.6	4.12	1.03		0.103	0.206	0.515	1.03	5.15	25.75	51.5	103
Diisopropyl Ether	2.10	2100	420	84.0	42.0	8.40	2.10		0.210	0.420	1.050	2.10	10.50	52.50	105.0	210
Ethyl Acetate	1.96	1960	392	78.4	39.2	7.84	1.96		0.196	0.392	0.980	1.96	9.80	49.00	98.0	196
n-Hexane	1.05	1050	210	42.0	21.0	4.20	1.05		0.105	0.210	0.525	1.05	5.25	26.25	52.5	105
Chloroform	1.07	1070	214	42.8	21.4	4.28	1.07		0.107	0.214	0.535	1.07	5.35	26.75	53.5	107
Tetrahydrofuran	1.89	1890	378	75.6	37.8	7.56	1.89		0.189	0.378	0.945	1.89	9.45	47.25	94.5	189
Ethyl tert-Butyl Ether	2.11	2110	422	84.4	42.2	8.44	2.11		0.211	0.422	1.055	2.11	10.55	52.75	105.5	211
1,2-Dichloroethane	1.02	1020	204	40.8	20.4	4.08	1.02		0.102	0.204	0.510	1.02	5.10	25.50	51.0	102
1,1,1-Trichloroethane	1.03	1030	206	41.2	20.6	4.12	1.03		0.103	0.206	0.515	1.03	5.15	25.75	51.5	103
Benzene	1.02	1020	204	40.8	20.4	4.08	1.02		0.102	0.204	0.510	1.02	5.10	25.50	51.0	102
Carbon Tetrachloride	1.03	1030	206	41.2	20.6	4.12	1.03		0.103	0.206	0.515	1.03	5.15	25.75	51.5	103
Cyclohexane	2.10	2100	420	84.0	42.0	8.40	2.10		0.210	0.420	1.050	2.10	10.50	52.50	105.0	210
tert-Amyl Methyl Ether	2.11	2110	422	84.4	42.2	8.44	2.11		0.211	0.422	1.055	2.11	10.55	52.75	105.5	211
1,2-Dichloropropane	1.08	1080	216	43.2	21.6	4.32	1.08		0.108	0.216	0.540	1.08	5.40	27.00	54.0	108
Bromodichloromethane	1.06	1060	212	42.4	21.2	4.24	1.06		0.106	0.212	0.530	1.06	5.30	26.50	53.0	106
Trichloroethene	1.03	1030	206	41.2	20.6	4.12	1.03		0.103	0.206	0.515	1.03	5.15	25.75	51.5	103
1,4-Dioxane	1.04	1040	208	41.6	20.8	4.16	1.04		0.104	0.208	0.520	1.04	5.20	26.00	52.0	104
Isooctane	1.07	1070	214	42.8	21.4	4.28	1.07		0.107	0.214	0.535	1.07	5.35	26.75	53.5	107
Methyl Methacrylate	2.11	2110	422	84.4	42.2	8.44	2.11		0.211	0.422	1.055	2.11	10.55	52.75	105.5	211
n-Heptane	1.05	1050	210	42.0	21.0	4.20	1.05		0.105	0.210	0.525	1.05	5.25	26.25	52.5	105

Primary Source Standards Concentrations (Working & Initial Calibration)

1ng/L Std. ID:
4ng/L Std. ID: S37-06102404
20ng/L Std. ID: S37-06102403
40ng/L Std. ID:
200ng/L Std. ID: S37-06102402
1000ng/L Std. ID:

Dilution Factors:		1	5	25	50	250	1000	Working STD Conc.(ng/L):	4	4	20	20	200	200	200	200
	Source Std.		Primary Working Standards					Injection (L):	0.025	0.050	0.0250	0.050	0.025	0.125	0.25	0.50
Compounds	mg/m^3	1000ng/L	200ng/L	40ng/L	20ng/L	4ng/L	1ng/L	ICAL Points:	0.1ng	0.2ng	0.5ng	1ng	5ng	25ng	50ng	100ng
cis-1,3-Dichloropropene	1.05	1050	210	42.0	21.0	4.20	1.05		0.105	0.210	0.525	1.05	5.25	26.25	52.5	105
4-Methyl-2-pentanone	2.10	2100	420	84.0	42.0	8.40	2.10		0.210	0.420	1.050	2.10	10.50	52.50	105.0	210
trans-1,3-Dichloropropene	0.98	980	196	39.2	19.6	3.92	0.98		0.098	0.196	0.490	0.98	4.90	24.50	49.0	98
1,1,2-Trichloroethane	1.09	1090	218	43.6	21.8	4.36	1.09		0.109	0.218	0.545	1.09	5.45	27.25	54.5	109
Toluene	1.08	1080	216	43.2	21.6	4.32	1.08		0.108	0.216	0.540	1.08	5.40	27.00	54.0	108
2-Hexanone	2.04	2040	408	81.6	40.8	8.16	2.04		0.204	0.408	1.020	2.04	10.20	51.00	102.0	204
Dibromochloromethane	1.02	1020	204	40.8	20.4	4.08	1.02		0.102	0.204	0.510	1.02	5.10	25.50	51.0	102
1,2-Dibromoethane	1.03	1030	206	41.2	20.6	4.12	1.03		0.103	0.206	0.515	1.03	5.15	25.75	51.5	103
n-Butyl Acetate	2.08	2080	416	83.2	41.6	8.32	2.08		0.208	0.416	1.040	2.08	10.40	52.00	104.0	208
n-Octane	1.06	1060	212	42.4	21.2	4.24	1.06		0.106	0.212	0.530	1.06	5.30	26.50	53.0	106
Tetrachloroethene	1.07	1070	214	42.8	21.4	4.28	1.07		0.107	0.214	0.535	1.07	5.35	26.75	53.5	107
Chlorobenzene	1.07	1070	214	42.8	21.4	4.28	1.07		0.107	0.214	0.535	1.07	5.35	26.75	53.5	107
Ethylbenzene	1.09	1090	218	43.6	21.8	4.36	1.09		0.109	0.218	0.545	1.09	5.45	27.25	54.5	109
m-&p-Xylene	2.14	2140	428	85.6	42.8	8.56	2.14		0.214	0.428	1.070	2.14	10.70	53.50	107.0	214
Bromoform	1.09	1090	218	43.6	21.8	4.36	1.09		0.109	0.218	0.545	1.09	5.45	27.25	54.5	109
Styrene	1.06	1060	212	42.4	21.2	4.24	1.06		0.106	0.212	0.530	1.06	5.30	26.50	53.0	106
o-Xylene	1.08	1080	216	43.2	21.6	4.32	1.08		0.108	0.216	0.540	1.08	5.40	27.00	54.0	108
n-Nonane	1.04	1040	208	41.6	20.8	4.16	1.04		0.104	0.208	0.520	1.04	5.20	26.00	52.0	104
1,1,2,2-Tetrachloroethane	1.08	1080	216	43.2	21.6	4.32	1.08		0.108	0.216	0.540	1.08	5.40	27.00	54.0	108
Cumene	1.04	1040	208	41.6	20.8	4.16	1.04		0.104	0.208	0.520	1.04	5.20	26.00	52.0	104
alpha-Pinene	1.07	1070	214	42.8	21.4	4.28	1.07		0.107	0.214	0.535	1.07	5.35	26.75	53.5	107
n-Propylbenzene	1.03	1030	206	41.2	20.6	4.12	1.03		0.103	0.206	0.515	1.03	5.15	25.75	51.5	103
4-Ethyltoluene	1.03	1030	206	41.2	20.6	4.12	1.03		0.103	0.206	0.515	1.03	5.15	25.75	51.5	103
1,3,5-Trimethylbenzene	1.08	1080	216	43.2	21.6	4.32	1.08		0.108	0.216	0.540	1.08	5.40	27.00	54.0	108
1,2,4-Trimethylbenzene	1.04	1040	208	41.6	20.8	4.16	1.04		0.104	0.208	0.520	1.04	5.20	26.00	52.0	104
Benzyl Chloride	2.07	2070	414	82.8	41.4	8.28	2.07		0.207	0.414	1.035	2.07	10.35	51.75	103.5	207
1,3-Dichlorobenzene	1.03	1030	206	41.2	20.6	4.12	1.03		0.103	0.206	0.515	1.03	5.15	25.75	51.5	103
1,4-Dichlorobenzene	1.04	1040	208	41.6	20.8	4.16	1.04		0.104	0.208	0.520	1.04	5.20	26.00	52.0	104
sec-Butylbenzene	1.03	1030	206	41.2	20.6	4.12	1.03		0.103	0.206	0.515	1.03	5.15	25.75	51.5	103
p-Isopropyltoluene	1.02	1020	204	40.8	20.4	4.08	1.02		0.102	0.204	0.510	1.02	5.10	25.50	51.0	102
1,2-Dichlorobenzene	1.03	1030	206	41.2	20.6	4.12	1.03		0.103	0.206	0.515	1.03	5.15	25.75	51.5	103
d-Limonene	1.00	1000	200	40.0	20.0	4.00	1.00		0.100	0.200	0.500	1.00	5.00	25.00	50.0	100
1,2-Dibromo-3-chloropropane	2.06	2060	412	82.4	41.2	8.24	2.06		0.206	0.412	1.030	2.06	10.30	51.50	103.0	206
1,2,4-Trichlorobenzene	2.14	2140	428	85.6	42.8	8.56	2.14		0.214	0.428	1.070	2.14	10.70	53.50	107.0	214
Naphthalene	1.01	1010	202	40.4	20.2	4.04	1.01		0.101	0.202	0.505	1.01	5.05	25.25	50.5	101
Hexachloro-1,3-butadiene	1.01	1010	202	40.4	20.2	4.04	1.01		0.101	0.202	0.505	1.01	5.05	25.25	50.5	101
tert-Butylbenzene	1.04	1040	208	41.6	20.8	4.16	1.04		0.104	0.208	0.520	1.04	5.20	26.00	52.0	104
n-Butylbenzene	1.00	1000	200	40.0	20.0	4.00	1.00		0.100	0.200	0.500	1.00	5.00	25.00	50.0	100
1,1,1,2-Tetrachloroethane	1.07	1070	214	42.8	21.4	4.28	1.07		0.107	0.214	0.535	1.07	5.35	26.75	53.5	107

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\10\06102408.D Vial: 5
Acq On : 10 Jun 2024 15:53 Operator: SC
Sample : 0.1ng TO-15 ICAL STD Inst : MS09
Misc : S37-06062402/S37-06102404 (7/10)

Quant Time: Jun 11 08:45:30 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Tue Jun 11 08:36:43 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/11/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.22	130	136185	12.500	ng		-0.06
37) 1,4-Difluorobenzene (IS2)	9.30	114	586898	12.500	ng		-0.04
56) Chlorobenzene-d5 (IS3)	14.84	54	130630	12.500	ng		-0.01
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	7.99	65	301161	13.958	ng		-0.05
Spiked Amount 12.500	Range 70 - 130		Recovery = 111.68%				
57) Toluene-d8 (SS2)	12.43	98	640584	12.909	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.28%				
73) Bromofluorobenzene (SS3)	16.83	174	229230	13.207	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 105.68%				
Target Compounds							Qvalue
2) Propene	3.32	42	1883	0.102	ng		98
3) Dichlorodifluoromethan...	3.39	85	3551	0.136	ng	#	95
4) Chloromethane	3.52	50	2335	0.099	ng		99
5) 1,2-Dichloro-1,1,2,2-t...	3.62	135	1571	0.133	ng		96
6) Vinyl Chloride	3.70	62	2180	0.115	ng		96
7) 1,3-Butadiene	3.82	54	1590	0.115	ng		94
8) Bromomethane	4.03	94	1195	0.117	ng		98
9) Chloroethane	4.18	64	921	0.113	ng		85
10) Ethanol	4.28	45	6352	0.421	ng		96
11) Acetonitrile	4.44	41	2708	0.077	ng	#	1
12) Acrolein	4.54	56	2070	0.201	ng		92
13) Acetone	4.64	58	6263	0.588	ng		100
14) Trichlorofluoromethane	4.77	101	3321	0.129	ng		97
15) 2-Propanol (Isopropanol)	4.86	45	9201	0.197	ng		92
16) Acrylonitrile	4.99	53	4009	0.191	ng		94
17) 1,1-Dichloroethene	5.27	96	1114	0.100	ng		97
18) 2-Methyl-2-Propanol (t...	5.40	59	6886m	0.228	ng		
19) Methylene Chloride	5.35	84	1764	0.125	ng		98
20) 3-Chloro-1-propene (Al...	5.46	41	2538	0.096	ng		93
21) Trichlorotrifluoroethane	5.58	151	1247	0.111	ng		94
22) Carbon Disulfide	5.61	76	10071	0.234	ng		96
23) trans-1,2-Dichloroethene	6.14	61	2197	0.110	ng		88
24) 1,1-Dichloroethane	6.31	63	2595	0.111	ng		95
25) Methyl tert-Butyl Ether	6.40	73	3151	0.104	ng		90
26) Vinyl Acetate	6.45	86	765	0.351	ng	#	19
27) 2-Butanone (MEK)	6.67	72	1550	0.206	ng	#	75
28) cis-1,2-Dichloroethene	7.07	61	2315	0.120	ng		95
29) Diisopropyl Ether	7.30	87	1846	0.202	ng	#	88
30) Ethyl Acetate	7.29	61	938	0.191	ng	#	70
31) n-Hexane	7.30	57	2078	0.090	ng	#	92
32) Chloroform	7.36	83	3073	0.138	ng		97
34) Tetrahydrofuran (THF)	7.77	72	1365	0.199	ng	#	91
35) Ethyl tert-Butyl Ether	7.84	87	2206	0.195	ng		93
36) 1,2-Dichloroethane	8.11	62	2753	0.129	ng		98
38) 1,1,1-Trichloroethane	8.39	97	3018	0.136	ng		91
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.84	56	254	No Calib		#	
41) Benzene	8.90	78	6545	0.137	ng		99
42) Carbon Tetrachloride	9.07	117	2511	0.124	ng		97
43) Cyclohexane	9.22	84	3343	0.206	ng		98
44) tert-Amyl Methyl Ether	9.61	73	6386	0.227	ng		95
45) 1,2-Dichloropropane	9.85	63	1385	0.110	ng		96
46) Bromodichloromethane	10.07	83	2426	0.136	ng		96
47) Trichloroethene	10.14	130	1835	0.133	ng		95
48) 1,4-Dioxane	10.13	88	1031	0.116	ng		98
49) 2,2,4-Trimethylpentane...	10.23	57	5206	0.092	ng		98
50) Methyl Methacrylate	10.41	100	712	0.172	ng	#	67

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\10\06102408.D Vial: 5
Acq On : 10 Jun 2024 15:53 Operator: SC
Sample : 0.1ng TO-15 ICAL STD Inst : MS09
Misc : S37-06062402/S37-06102404 (7/10)

Quant Time: Jun 11 08:45:30 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Tue Jun 11 08:36:43 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

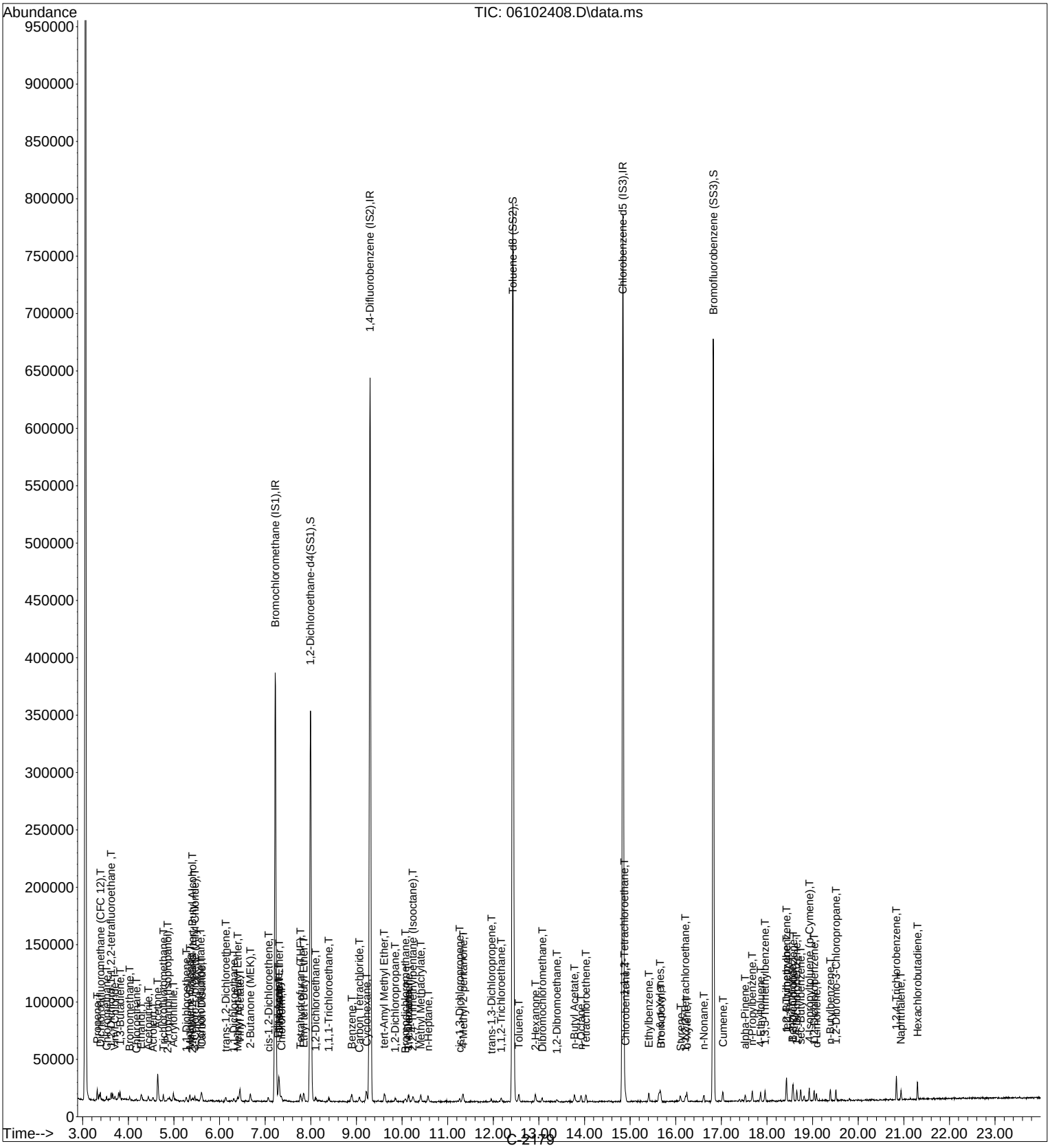
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	10.58	71	1033	0.098 ng	#	88
52) cis-1,3-Dichloropropene	11.26	75	1973	0.098 ng		93
53) 4-Methyl-2-pentanone	11.34	58	2113	0.181 ng		92
54) trans-1,3-Dichloropropene	11.96	75	1544	0.089 ng		82
55) 1,1,2-Trichloroethane	12.17	97	1410	0.125 ng		97
58) Toluene	12.56	91	6494	0.142 ng		93
59) 2-Hexanone	12.93	43	5893	0.188 ng		94
60) Dibromochloromethane	13.07	129	2043	0.138 ng		100
61) 1,2-Dibromoethane	13.39	107	1308	0.103 ng		87
62) n-Butyl Acetate	13.78	43	5925	0.170 ng		94
63) n-Octane	13.93	57	1035	0.096 ng	#	85
64) Tetrachloroethene	14.03	166	2197	0.150 ng		98
65) Chlorobenzene	14.90	112	4454	0.141 ng		96
66) Ethylbenzene	15.41	91	6656	0.126 ng		97
67) m- & p-Xylenes	15.66	91	10593	0.243 ng		100
68) Bromoform	15.67	173	2045	0.164 ng		94
69) Styrene	16.11	104	3082	0.102 ng		94
70) o-Xylene	16.25	91	5399	0.126 ng		94
71) n-Nonane	16.62	43	2507	0.082 ng		94
72) 1,1,2,2-Tetrachloroethane	16.21	83	2712	0.143 ng		93
74) Cumene	17.04	105	6823	0.129 ng		96
75) alpha-Pinene	17.52	93	2638	0.102 ng		95
76) n-Propylbenzene	17.68	91	7701	0.121 ng		99
77) 3-Ethyltoluene	17.04	105	6823	No Calib		
78) 4-Ethyltoluene	17.86	105	5702	0.111 ng		99
79) 1,3,5-Trimethylbenzene	17.96	105	5085	0.115 ng		97
80) alpha-Methylstyrene	0.00	118	0	N.D.		
81) 2-Ethyltoluene	17.04	105	6823	No Calib		
82) 1,2,4-Trimethylbenzene	18.43	105	5213	0.112 ng		96
83) n-Decane	0.00	58	0	N.D.		
84) Benzyl Chloride	18.56	91	6527	0.178 ng		95
85) 1,3-Dichlorobenzene	18.58	146	4054	0.145 ng		97
86) 1,4-Dichlorobenzene	18.65	146	3959	0.147 ng		94
87) sec-Butylbenzene	18.74	105	6872	0.116 ng		98
88) 4-Isopropyltoluene (p-...	18.93	119	6121	0.118 ng		100
89) 1,2,3-Trimethylbenzene	17.04	105	6823	No Calib		
90) 1,2-Dichlorobenzene	19.04	146	3910	0.145 ng		97
91) d-Limonene	19.09	68	1380	0.088 ng		96
92) 1,2-Dibromo-3-Chloropr...	19.51	157	2371	0.251 ng		93
93) n-Undecane	0.00	58	0	N.D.		
94) 1,2,4-Trichlorobenzene	20.84	180	5779	0.299 ng		96
95) Naphthalene	20.94	128	5783	0.103 ng		97
96) n-Dodecane	0.00	58	0	N.D.		
97) Hexachlorobutadiene	21.30	225	2770	0.171 ng		98
98) Cyclohexanone	0.00	55	0	N.D.		
99) tert-Butylbenzene	18.43	119	5539	0.125 ng		98
100) n-Butylbenzene	19.39	91	5184	0.108 ng		96
101) 1,1,1,2-Tetrachloroethane	14.87	131	1499	0.132 ng	#	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\10\06102408.D Vial: 5
Acq On : 10 Jun 2024 15:53 Operator: SC
Sample : 0.1ng TO-15 ICAL STD Inst : MS09
Misc : S37-06062402/S37-06102404 (7/10)

Quant Time: Jun 11 08:45:30 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Tue Jun 11 08:36:43 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\10\06102409.D Vial: 5
Acq On : 10 Jun 2024 16:25 Operator: SC
Sample : 0.2ng TO-15 ICAL STD Inst : MS09
Misc : S37-06062402/S37-06102404 (7/10)

Quant Time: Jun 11 08:42:57 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Tue Jun 11 08:36:43 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/11/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	133733	12.500	ng		-0.05
37) 1,4-Difluorobenzene (IS2)	9.30	114	578136	12.500	ng		-0.03
56) Chlorobenzene-d5 (IS3)	14.84	54	131302	12.500	ng		-0.01
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	300686	14.191	ng		-0.04
Spiked Amount 12.500	Range 70 - 130		Recovery = 113.52%				
57) Toluene-d8 (SS2)	12.43	98	633356	12.698	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.60%				
73) Bromofluorobenzene (SS3)	16.83	174	229987	13.183	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 105.44%				
Target Compounds							Qvalue
2) Propene	3.32	42	3446	0.189	ng		99
3) Dichlorodifluoromethan...	3.39	85	6931	0.270	ng		99
4) Chloromethane	3.52	50	4918	0.212	ng		96
5) 1,2-Dichloro-1,1,2,2-t...	3.63	135	3069	0.264	ng		97
6) Vinyl Chloride	3.70	62	4428	0.238	ng		99
7) 1,3-Butadiene	3.82	54	3178	0.233	ng		91
8) Bromomethane	4.03	94	2320	0.231	ng		97
9) Chloroethane	4.18	64	1881	0.235	ng		97
10) Ethanol	4.28	45	10711	0.723	ng		96
11) Acetonitrile	4.44	41	5755	0.166	ng	#	24
12) Acrolein	4.54	56	3957	0.392	ng		90
13) Acetone	4.64	58	11303	1.080	ng		98
14) Trichlorofluoromethane	4.77	101	6667	0.263	ng		98
15) 2-Propanol (Isopropanol)	4.86	45	17909	0.391	ng		92
16) Acrylonitrile	4.99	53	7602	0.368	ng		99
17) 1,1-Dichloroethene	5.27	96	2244	0.206	ng		92
18) 2-Methyl-2-Propanol (t...	5.40	59	13735	0.464	ng		85
19) Methylene Chloride	5.35	84	3176	0.230	ng		96
20) 3-Chloro-1-propene (Al...	5.46	41	6527	0.252	ng		84
21) Trichlorotrifluoroethane	5.59	151	2480	0.224	ng		99
22) Carbon Disulfide	5.61	76	19499	0.461	ng		97
23) trans-1,2-Dichloroethene	6.14	61	4246	0.217	ng		97
24) 1,1-Dichloroethane	6.32	63	4929	0.214	ng		99
25) Methyl tert-Butyl Ether	6.40	73	6160	0.206	ng		100
26) Vinyl Acetate	6.44	86	1898	0.886	ng	#	91
27) 2-Butanone (MEK)	6.67	72	3232	0.437	ng		94
28) cis-1,2-Dichloroethene	7.07	61	4114	0.217	ng		95
29) Diisopropyl Ether	7.30	87	3974	0.443	ng	#	93
30) Ethyl Acetate	7.29	61	1710	0.354	ng		88
31) n-Hexane	7.30	57	4453	0.197	ng	#	93
32) Chloroform	7.36	83	5709	0.261	ng		98
34) Tetrahydrofuran (THF)	7.77	72	2740	0.406	ng		97
35) Ethyl tert-Butyl Ether	7.84	87	5064	0.457	ng		94
36) 1,2-Dichloroethane	8.11	62	5498	0.262	ng		96
38) 1,1,1-Trichloroethane	8.40	97	5818	0.267	ng		96
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.85	56	112	No Calib		#	
41) Benzene	8.89	78	11741	0.249	ng		93
42) Carbon Tetrachloride	9.07	117	5165	0.260	ng		97
43) Cyclohexane	9.22	84	6541	0.409	ng		97
44) tert-Amyl Methyl Ether	9.62	73	12760	0.461	ng		98
45) 1,2-Dichloropropane	9.86	63	2695	0.217	ng		96
46) Bromodichloromethane	10.07	83	4941	0.281	ng		91
47) Trichloroethene	10.14	130	3351	0.247	ng		93
48) 1,4-Dioxane	10.13	88	1838	0.210	ng		86
49) 2,2,4-Trimethylpentane...	10.24	57	10720	0.193	ng		99
50) Methyl Methacrylate	10.42	100	1697	0.416	ng		95

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\10\06102409.D Vial: 5
Acq On : 10 Jun 2024 16:25 Operator: SC
Sample : 0.2ng TO-15 ICAL STD Inst : MS09
Misc : S37-06062402/S37-06102404 (7/10)

Quant Time: Jun 11 08:42:57 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Tue Jun 11 08:36:43 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

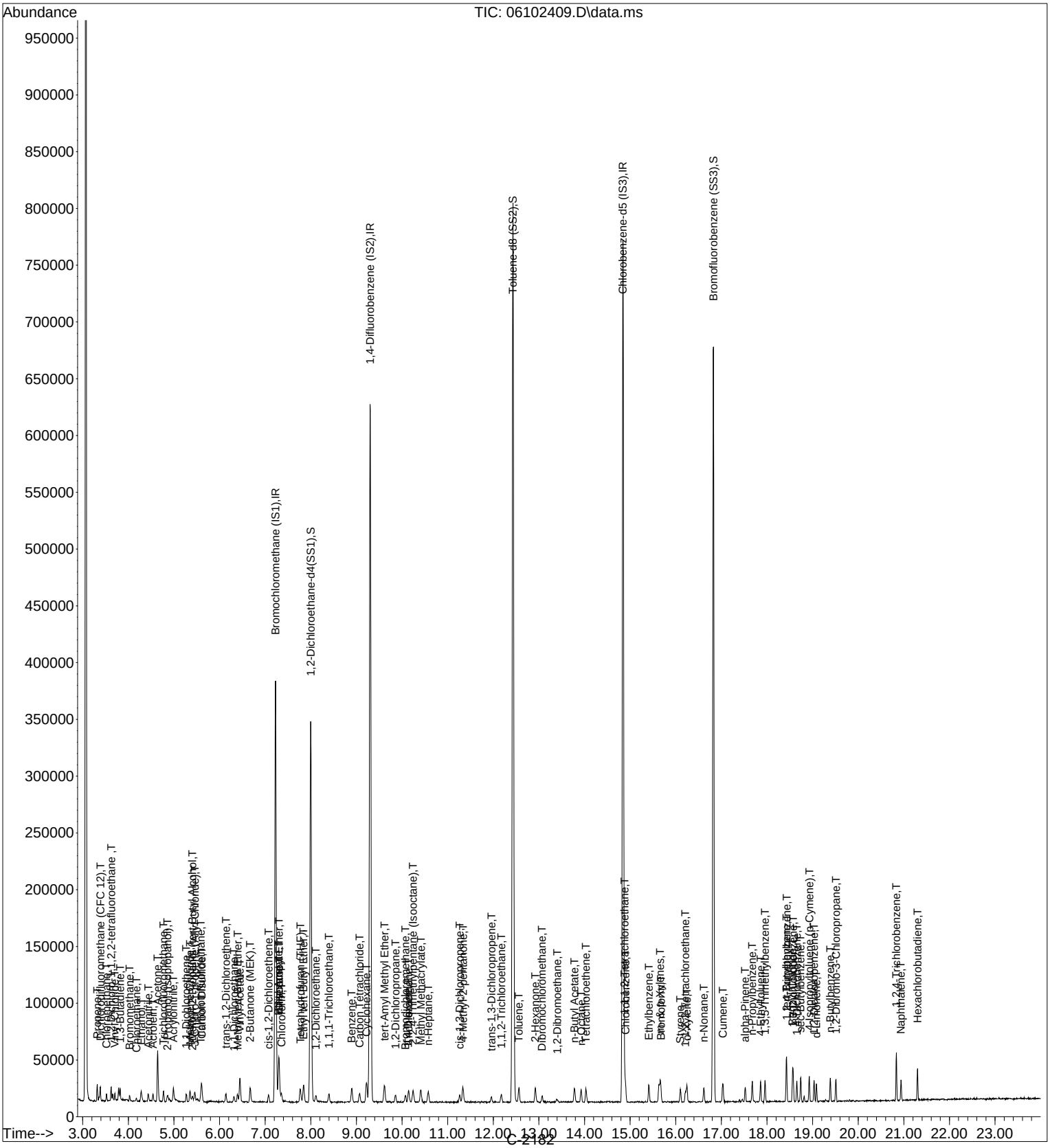
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	10.58	71	2095	0.202 ng	95
52) cis-1,3-Dichloropropene	11.26	75	4036	0.203 ng	98
53) 4-Methyl-2-pentanone	11.34	58	4366	0.380 ng	98
54) trans-1,3-Dichloropropene	11.96	75	3240	0.190 ng	99
55) 1,1,2-Trichloroethane	12.18	97	2794	0.250 ng	97
58) Toluene	12.56	91	11604	0.253 ng	98
59) 2-Hexanone	12.92	43	11818	0.374 ng	99
60) Dibromochloromethane	13.07	129	3803	0.255 ng	98
61) 1,2-Dibromoethane	13.40	107	2989	0.234 ng	97
62) n-Butyl Acetate	13.78	43	12112	0.345 ng	98
63) n-Octane	13.93	57	2134	0.198 ng	90
64) Tetrachloroethene	14.03	166	4044	0.275 ng	95
65) Chlorobenzene	14.90	112	8312	0.263 ng	97
66) Ethylbenzene	15.41	91	12675	0.239 ng	97
67) m- & p-Xylenes	15.66	91	20538	0.468 ng	99
68) Bromoform	15.67	173	3390	0.270 ng	98
69) Styrene	16.10	104	6410	0.210 ng	94
70) o-Xylene	16.25	91	10319	0.240 ng	98
71) n-Nonane	16.62	43	5222	0.169 ng	97
72) 1,1,2,2-Tetrachloroethane	16.21	83	4789	0.251 ng	99
74) Cumene	17.03	105	12955	0.243 ng	99
75) alpha-Pinene	17.52	93	5274	0.202 ng	97
76) n-Propylbenzene	17.68	91	14988	0.235 ng	99
77) 3-Ethyltoluene	17.03	105	12955	No Calib	
78) 4-Ethyltoluene	17.86	105	11640	0.225 ng	95
79) 1,3,5-Trimethylbenzene	17.96	105	10414	0.235 ng	96
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	17.03	105	12955	No Calib	
82) 1,2,4-Trimethylbenzene	18.43	105	10271	0.219 ng	96
83) n-Decane	0.00	58	0	N.D.	
84) Benzyl Chloride	18.56	91	14522	0.393 ng	98
85) 1,3-Dichlorobenzene	18.58	146	7727	0.276 ng	99
86) 1,4-Dichlorobenzene	18.66	146	7363	0.272 ng	95
87) sec-Butylbenzene	18.74	105	13578	0.228 ng	98
88) 4-Isopropyltoluene (p-...	18.93	119	12254	0.234 ng	99
89) 1,2,3-Trimethylbenzene	17.03	105	12955	No Calib	
90) 1,2-Dichlorobenzene	19.03	146	7507	0.276 ng	97
91) d-Limonene	19.08	68	3235	0.205 ng	96
92) 1,2-Dibromo-3-Chloropr...	19.51	157	4876	0.514 ng	97
93) n-Undecane	0.00	58	0	N.D.	
94) 1,2,4-Trichlorobenzene	20.84	180	11298	0.581 ng	94
95) Naphthalene	20.94	128	12297	0.218 ng	100
96) n-Dodecane	18.92	58	212	No Calib #	
97) Hexachlorobutadiene	21.30	225	5344	0.329 ng	96
98) Cyclohexanone	0.00	55	0	N.D.	
99) tert-Butylbenzene	18.43	119	10522	0.236 ng	98
100) n-Butylbenzene	19.39	91	10894	0.226 ng	99
101) 1,1,1,2-Tetrachloroethane	14.88	131	2803	0.246 ng	87

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\10\06102409.D Vial: 5
Acq On : 10 Jun 2024 16:25 Operator: SC
Sample : 0.2ng TO-15 ICAL STD Inst : MS09
Misc : S37-06062402/S37-06102404 (7/10)

Quant Time: Jun 11 08:42:57 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Tue Jun 11 08:36:43 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\10\06102410.D Vial: 6
Acq On : 10 Jun 2024 16:57 Operator: SC
Sample : 0.5ng TO-15 ICAL STD Inst : MS09
Misc : S37-06062402/S37-06102403 (7/10)

Quant Time: Jun 11 08:41:44 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Tue Jun 11 08:36:43 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/11/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	135200	12.500	ng		-0.05
37) 1,4-Difluorobenzene (IS2)	9.30	114	585685	12.500	ng		-0.04
56) Chlorobenzene-d5 (IS3)	14.84	54	131866	12.500	ng		-0.01
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	301685	14.084	ng		-0.04
Spiked Amount 12.500	Range 70 - 130		Recovery = 112.64%				
57) Toluene-d8 (SS2)	12.43	98	640007	12.777	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.24%				
73) Bromofluorobenzene (SS3)	16.83	174	232079	13.246	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 106.00%				
Target Compounds							Qvalue
2) Propene	3.30	42	8645	0.469	ng		98
3) Dichlorodifluoromethan...	3.38	85	17944	0.691	ng		98
4) Chloromethane	3.51	50	11899	0.506	ng		100
5) 1,2-Dichloro-1,1,2,2-t...	3.61	135	7821	0.665	ng		99
6) Vinyl Chloride	3.69	62	11312	0.602	ng		98
7) 1,3-Butadiene	3.81	54	8054	0.585	ng		95
8) Bromomethane	4.02	94	5809	0.571	ng		100
9) Chloroethane	4.16	64	4878	0.604	ng		99
10) Ethanol	4.27	45	34413	2.298	ng		87
11) Acetonitrile	4.43	41	14784	0.423	ng		79
12) Acrolein	4.53	56	10115	0.992	ng		99
13) Acetone	4.63	58	26605	2.514	ng		100
14) Trichlorofluoromethane	4.76	101	16880	0.658	ng		100
15) 2-Propanol (Isopropanol)	4.83	45	42851	0.926	ng		85
16) Acrylonitrile	4.98	53	18660	0.893	ng		95
17) 1,1-Dichloroethene	5.26	96	5628	0.511	ng		94
18) 2-Methyl-2-Propanol (t...	5.32	59	36551	1.222	ng		94
19) Methylene Chloride	5.35	84	6404	0.459	ng		98
20) 3-Chloro-1-propene (Al...	5.45	41	16026	0.612	ng		92
21) Trichlorotrifluoroethane	5.58	151	6328	0.566	ng		95
22) Carbon Disulfide	5.60	76	48435	1.134	ng		100
23) trans-1,2-Dichloroethene	6.13	61	10579	0.534	ng		96
24) 1,1-Dichloroethane	6.31	63	13012	0.559	ng		99
25) Methyl tert-Butyl Ether	6.38	73	16960	0.562	ng		99
26) Vinyl Acetate	6.44	86	5200	2.402	ng		98
27) 2-Butanone (MEK)	6.66	72	7880	1.054	ng	#	83
28) cis-1,2-Dichloroethene	7.07	61	10135	0.529	ng		99
29) Diisopropyl Ether	7.29	87	10370	1.144	ng	#	91
30) Ethyl Acetate	7.28	61	4659	0.954	ng		99
31) n-Hexane	7.30	57	11587	0.508	ng		99
32) Chloroform	7.36	83	14482	0.656	ng		99
34) Tetrahydrofuran (THF)	7.75	72	6667	0.977	ng		95
35) Ethyl tert-Butyl Ether	7.83	87	13041	1.164	ng		99
36) 1,2-Dichloroethane	8.11	62	13385	0.630	ng		98
38) 1,1,1-Trichloroethane	8.40	97	13880	0.628	ng		98
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.83	56	177	No Calib			
41) Benzene	8.89	78	26751	0.559	ng		97
42) Carbon Tetrachloride	9.07	117	13301	0.661	ng		98
43) Cyclohexane	9.22	84	18013	1.113	ng		99
44) tert-Amyl Methyl Ether	9.60	73	33889	1.207	ng		97
45) 1,2-Dichloropropane	9.85	63	7015	0.556	ng		97
46) Bromodichloromethane	10.08	83	11124	0.625	ng		98
47) Trichloroethene	10.14	130	8276	0.602	ng		97
48) 1,4-Dioxane	10.12	88	4750	0.535	ng		98
49) 2,2,4-Trimethylpentane...	10.24	57	28018	0.498	ng		99
50) Methyl Methacrylate	10.41	100	4692	1.136	ng		93

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\10\06102410.D Vial: 6
Acq On : 10 Jun 2024 16:57 Operator: SC
Sample : 0.5ng TO-15 ICAL STD Inst : MS09
Misc : S37-06062402/S37-06102403 (7/10)

Quant Time: Jun 11 08:41:44 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Tue Jun 11 08:36:43 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

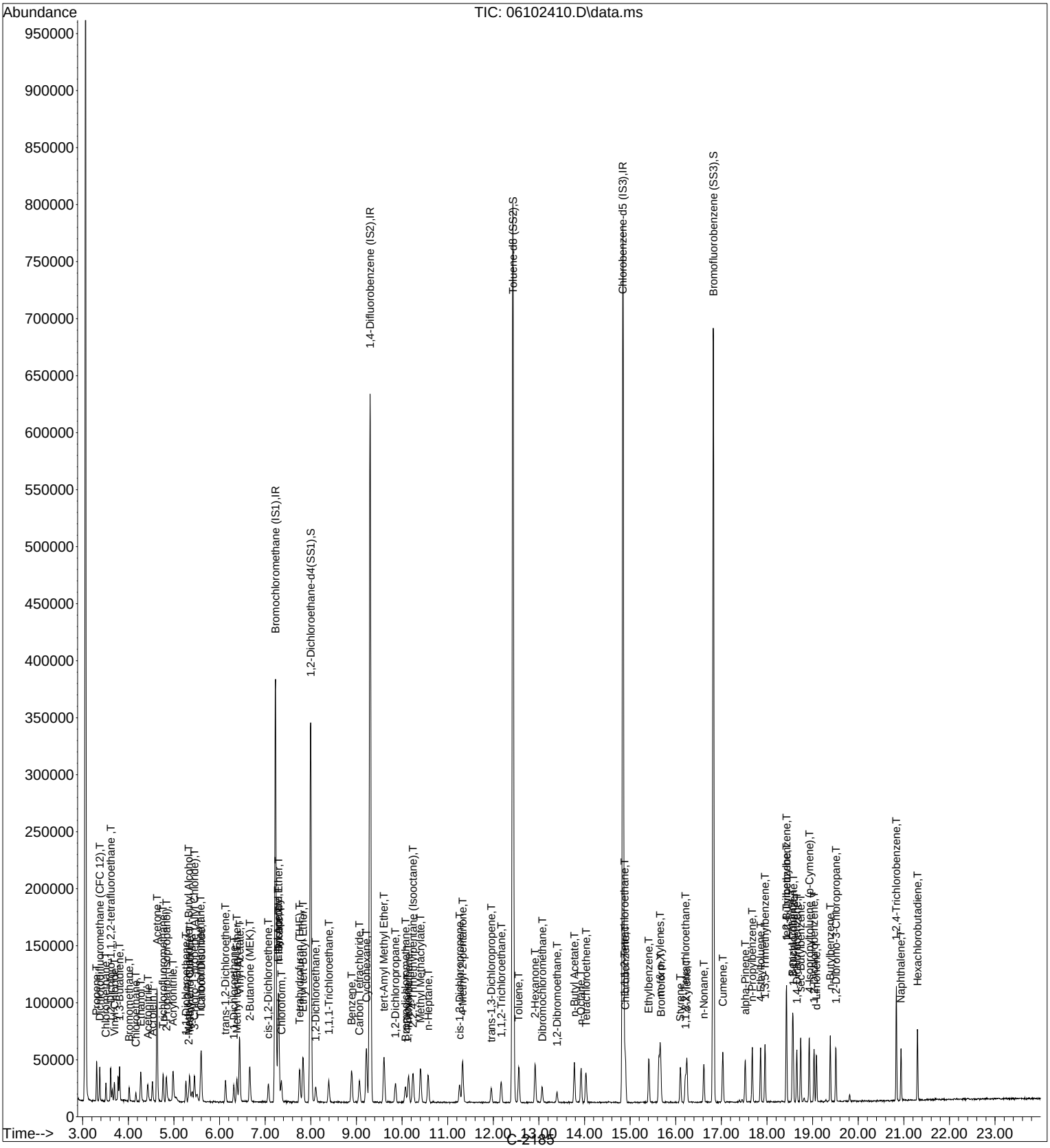
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	10.58	71	5928	0.565 ng		97
52) cis-1,3-Dichloropropene	11.26	75	10365	0.514 ng		100
53) 4-Methyl-2-pentanone	11.33	58	11486	0.988 ng		99
54) trans-1,3-Dichloropropene	11.96	75	8583	0.496 ng		97
55) 1,1,2-Trichloroethane	12.18	97	6704	0.593 ng		98
58) Toluene	12.56	91	28707	0.624 ng		97
59) 2-Hexanone	12.92	43	30668	0.967 ng		98
60) Dibromochloromethane	13.07	129	9234	0.616 ng		99
61) 1,2-Dibromoethane	13.40	107	7377	0.575 ng		99
62) n-Butyl Acetate	13.78	43	31462	0.893 ng		100
63) n-Octane	13.92	57	5388	0.497 ng		94
64) Tetrachloroethene	14.03	166	9980	0.676 ng		97
65) Chlorobenzene	14.90	112	19750	0.621 ng		99
66) Ethylbenzene	15.41	91	32096	0.602 ng		99
67) m- & p-Xylenes	15.66	91	52114	1.183 ng		98
68) Bromoform	15.67	173	8435	0.669 ng		99
69) Styrene	16.10	104	16751	0.547 ng		96
70) o-Xylene	16.24	91	25832	0.597 ng		100
71) n-Nonane	16.62	43	13923	0.450 ng		98
72) 1,1,2,2-Tetrachloroethane	16.21	83	11894	0.622 ng		99
74) Cumene	17.03	105	32334	0.604 ng		96
75) alpha-Pinene	17.53	93	14314	0.547 ng		99
76) n-Propylbenzene	17.68	91	37880	0.591 ng		100
77) 3-Ethyltoluene	17.03	105	32334	No Calib		
78) 4-Ethyltoluene	17.86	105	29362	0.564 ng		99
79) 1,3,5-Trimethylbenzene	17.96	105	27805	0.625 ng		99
80) alpha-Methylstyrene	17.04	118	122	No Calib	#	
81) 2-Ethyltoluene	17.03	105	32334	No Calib		
82) 1,2,4-Trimethylbenzene	18.43	105	26887	0.572 ng		98
83) n-Decane	0.00	58	0	N.D.		
84) Benzyl Chloride	18.56	91	37653	1.015 ng		100
85) 1,3-Dichlorobenzene	18.58	146	17958	0.638 ng		97
86) 1,4-Dichlorobenzene	18.66	146	17732	0.652 ng		97
87) sec-Butylbenzene	18.74	105	35030	0.586 ng		99
88) 4-Isopropyltoluene (p-...	18.93	119	30758	0.586 ng		99
89) 1,2,3-Trimethylbenzene	17.03	105	32334	No Calib		
90) 1,2-Dichlorobenzene	19.03	146	17514	0.642 ng		99
91) d-Limonene	19.08	68	7986	0.504 ng		97
92) 1,2-Dibromo-3-Chloropr...	19.51	157	11201	1.177 ng		95
93) n-Undecane	17.86	58	479	No Calib		
94) 1,2,4-Trichlorobenzene	20.84	180	27334	1.400 ng		98
95) Naphthalene	20.94	128	29115	0.515 ng		98
96) n-Dodecane	18.92	58	955	No Calib	#	
97) Hexachlorobutadiene	21.30	225	11301	0.693 ng		100
98) Cyclohexanone	0.00	55	0	N.D.		
99) tert-Butylbenzene	18.43	119	26370	0.590 ng		99
100) n-Butylbenzene	19.39	91	27662	0.571 ng		96
101) 1,1,1,2-Tetrachloroethane	14.88	131	7563	0.660 ng		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\10\06102410.D Vial: 6
Acq On : 10 Jun 2024 16:57 Operator: SC
Sample : 0.5ng TO-15 ICAL STD Inst : MS09
Misc : S37-06062402/S37-06102403 (7/10)

Quant Time: Jun 11 08:41:44 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Tue Jun 11 08:36:43 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\10\06102411.D Vial: 6
Acq On : 10 Jun 2024 17:29 Operator: SC
Sample : 1.0ng TO-15 ICAL STD Inst : MS09
Misc : S37-06062402/S37-06102403 (7/10)

Quant Time: Jun 11 08:40:24 2024 6/11/24
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Tue Jun 11 08:36:43 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.23	130	131087	12.500	ng		-0.04
37) 1,4-Difluorobenzene (IS2)	9.30	114	569215	12.500	ng		-0.03
56) Chlorobenzene-d5 (IS3)	14.85	54	129462	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.00	65	293392	14.126	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 113.04%				
57) Toluene-d8 (SS2)	12.43	98	622131	12.650	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.20%				
73) Bromofluorobenzene (SS3)	16.83	174	227082	13.201	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 105.60%				
Target Compounds							Qvalue
2) Propene	3.30	42	16227	0.909	ng		98
3) Dichlorodifluoromethan...	3.37	85	34733	1.379	ng		99
4) Chloromethane	3.51	50	24224	1.063	ng		98
5) 1,2-Dichloro-1,1,2,2-t...	3.61	135	15638	1.372	ng		96
6) Vinyl Chloride	3.69	62	22212	1.220	ng		98
7) 1,3-Butadiene	3.81	54	16131	1.208	ng		93
8) Bromomethane	4.02	94	11501	1.166	ng		98
9) Chloroethane	4.16	64	9192	1.174	ng		95
10) Ethanol	4.28	45	65908	4.538	ng		83
11) Acetonitrile	4.43	41	29861	0.880	ng		72
12) Acrolein	4.53	56	19982	2.020	ng		98
13) Acetone	4.62	58	49935	4.867	ng		95
14) Trichlorofluoromethane	4.76	101	32915	1.324	ng		98
15) 2-Propanol (Isopropanol)	4.83	45	84706	1.888	ng		88
16) Acrylonitrile	4.99	53	36630	1.809	ng		100
17) 1,1-Dichloroethene	5.26	96	10678	1.000	ng		99
18) 2-Methyl-2-Propanol (t...	5.32	59	71004	2.448	ng		93
19) Methylene Chloride	5.35	84	12437	0.919	ng		98
20) 3-Chloro-1-propene (Al...	5.45	41	22486	0.885	ng		91
21) Trichlorotrifluoroethane	5.58	151	12070	1.113	ng		99
22) Carbon Disulfide	5.60	76	95243	2.299	ng		100
23) trans-1,2-Dichloroethene	6.13	61	21381	1.114	ng		99
24) 1,1-Dichloroethane	6.32	63	25400	1.125	ng		99
25) Methyl tert-Butyl Ether	6.38	73	33828	1.156	ng		99
26) Vinyl Acetate	6.44	86	11060	5.270	ng		98
27) 2-Butanone (MEK)	6.66	72	16647	2.296	ng		96
28) cis-1,2-Dichloroethene	7.07	61	20198	1.087	ng		98
29) Diisopropyl Ether	7.29	87	20213	2.299	ng	#	94
30) Ethyl Acetate	7.28	61	9141	1.931	ng		95
31) n-Hexane	7.30	57	22204	1.004	ng		98
32) Chloroform	7.36	83	27557	1.288	ng		100
34) Tetrahydrofuran (THF)	7.75	72	13282	2.007	ng		93
35) Ethyl tert-Butyl Ether	7.83	87	26203	2.412	ng		100
36) 1,2-Dichloroethane	8.12	62	26460	1.285	ng		99
38) 1,1,1-Trichloroethane	8.40	97	27069	1.260	ng		99
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.84	56	114	No Calib			
41) Benzene	8.90	78	51761	1.113	ng		98
42) Carbon Tetrachloride	9.07	117	25524	1.305	ng		99
43) Cyclohexane	9.22	84	35722	2.271	ng		99
44) tert-Amyl Methyl Ether	9.60	73	67386	2.470	ng		98
45) 1,2-Dichloropropane	9.86	63	13725	1.120	ng		97
46) Bromodichloromethane	10.08	83	21877	1.265	ng		99
47) Trichloroethene	10.15	130	15406	1.153	ng		99
48) 1,4-Dioxane	10.12	88	9483	1.099	ng		98
49) 2,2,4-Trimethylpentane...	10.24	57	54965	1.006	ng		99
50) Methyl Methacrylate	10.41	100	9177	2.286	ng		99

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\10\06102411.D Vial: 6
Acq On : 10 Jun 2024 17:29 Operator: SC
Sample : 1.0ng TO-15 ICAL STD Inst : MS09
Misc : S37-06062402/S37-06102403 (7/10)

Quant Time: Jun 11 08:40:24 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Tue Jun 11 08:36:43 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

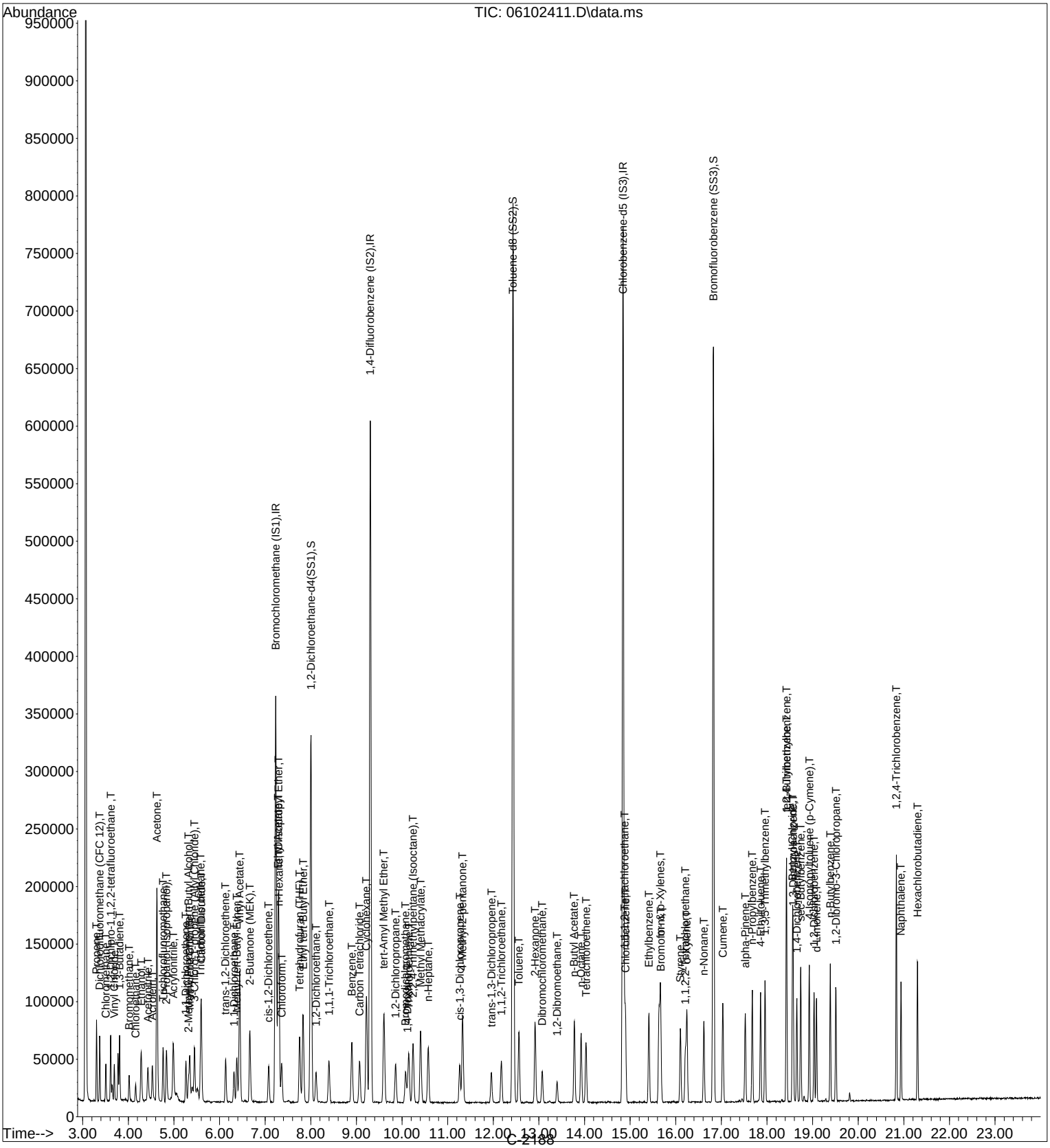
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	10.58	71	11600	1.138 ng		99
52) cis-1,3-Dichloropropene	11.27	75	21520	1.098 ng		99
53) 4-Methyl-2-pentanone	11.33	58	23086	2.043 ng		94
54) trans-1,3-Dichloropropene	11.96	75	17927	1.067 ng		97
55) 1,1,2-Trichloroethane	12.18	97	13568	1.235 ng		97
58) Toluene	12.56	91	54227	1.200 ng		99
59) 2-Hexanone	12.91	43	63119	2.028 ng		100
60) Dibromochloromethane	13.07	129	17889	1.215 ng		100
61) 1,2-Dibromoethane	13.40	107	15344	1.218 ng		97
62) n-Butyl Acetate	13.77	43	66315	1.916 ng		100
63) n-Octane	13.93	57	11345	1.066 ng		98
64) Tetrachloroethene	14.03	166	19216	1.325 ng		98
65) Chlorobenzene	14.90	112	38013	1.218 ng		100
66) Ethylbenzene	15.41	91	63267	1.210 ng		100
67) m- & p-Xylenes	15.66	91	105174	2.431 ng		99
68) Bromoform	15.67	173	16480	1.332 ng		100
69) Styrene	16.10	104	34078	1.133 ng		98
70) o-Xylene	16.24	91	53420	1.258 ng		99
71) n-Nonane	16.62	43	29137	0.958 ng		99
72) 1,1,2,2-Tetrachloroethane	16.21	83	23281	1.240 ng		98
74) Cumene	17.03	105	62728	1.193 ng		99
75) alpha-Pinene	17.53	93	29738	1.158 ng		98
76) n-Propylbenzene	17.68	91	75964	1.208 ng		99
77) 3-Ethyltoluene	17.03	105	62728	No Calib		
78) 4-Ethyltoluene	17.86	105	60140	1.177 ng		100
79) 1,3,5-Trimethylbenzene	17.96	105	56389	1.292 ng		98
80) alpha-Methylstyrene	17.03	118	338	No Calib	#	
81) 2-Ethyltoluene	17.03	105	62728	No Calib		
82) 1,2,4-Trimethylbenzene	18.43	105	56443	1.223 ng		100
83) n-Decane	17.03	58	461	No Calib	#	
84) Benzyl Chloride	18.56	91	81725	2.244 ng		99
85) 1,3-Dichlorobenzene	18.58	146	36068	1.305 ng		98
86) 1,4-Dichlorobenzene	18.66	146	34924	1.309 ng		100
87) sec-Butylbenzene	18.74	105	70791	1.206 ng		99
88) 4-Isopropyltoluene (p-...	18.93	119	62767	1.217 ng		99
89) 1,2,3-Trimethylbenzene	17.03	105	62728	No Calib		
90) 1,2-Dichlorobenzene	19.03	146	35747	1.334 ng		98
91) d-Limonene	19.09	68	17129	1.100 ng		98
92) 1,2-Dibromo-3-Chloropr...	19.51	157	23486	2.513 ng		96
93) n-Undecane	17.86	58	814	No Calib		
94) 1,2,4-Trichlorobenzene	20.84	180	55057	2.872 ng		98
95) Naphthalene	20.94	128	63766	1.148 ng		100
96) n-Dodecane	18.93	58	1679	No Calib	#	
97) Hexachlorobutadiene	21.30	225	21725	1.356 ng		99
98) Cyclohexanone	0.00	55	0	N.D.		
99) tert-Butylbenzene	18.43	119	54192	1.234 ng		99
100) n-Butylbenzene	19.39	91	56576	1.190 ng		98
101) 1,1,1,2-Tetrachloroethane	14.88	131	14898	1.324 ng		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\10\06102411.D Vial: 6
Acq On : 10 Jun 2024 17:29 Operator: SC
Sample : 1.0ng TO-15 ICAL STD Inst : MS09
Misc : S37-06062402/S37-06102403 (7/10)

Quant Time: Jun 11 08:40:24 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Tue Jun 11 08:36:43 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\10\06102412.D Vial: 6
Acq On : 10 Jun 2024 18:01 Operator: SC
Sample : 5.0ng TO-15 ICAL STD Inst : MS09
Misc : S37-06062402/S37-06102403 (7/10)

Quant Time: Jun 11 08:39:17 2024 6/11/24
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Tue Jun 11 08:36:43 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.25	130	133525	12.500	ng		-0.03
37) 1,4-Difluorobenzene (IS2)	9.32	114	574477	12.500	ng		-0.02
56) Chlorobenzene-d5 (IS3)	14.85	54	132276	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.01	65	299097	14.138	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 113.12%				
57) Toluene-d8 (SS2)	12.44	98	628101	12.500	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.00%				
73) Bromofluorobenzene (SS3)	16.83	174	232155	13.209	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 105.68%				
Target Compounds							Qvalue
2) Propene	3.28	42	90612	4.982	ng		100
3) Dichlorodifluoromethan...	3.36	85	167912	6.543	ng		100
4) Chloromethane	3.49	50	114109	4.916	ng		100
5) 1,2-Dichloro-1,1,2,2-t...	3.60	135	74856	6.445	ng		99
6) Vinyl Chloride	3.68	62	108614	5.857	ng		100
7) 1,3-Butadiene	3.80	54	81244	5.973	ng		97
8) Bromomethane	4.01	94	52276	5.203	ng		99
9) Chloroethane	4.15	64	47566	5.962	ng		98
10) Ethanol	4.31	45	316545	21.400	ng		100
11) Acetonitrile	4.44	41	147565	4.271	ng		100
12) Acrolein	4.52	56	102809	10.205	ng		96
13) Acetone	4.62	58	246402	23.580	ng		100
14) Trichlorofluoromethane	4.76	101	160636	6.343	ng		99
15) 2-Propanol (Isopropanol)	4.86	45	390540	8.547	ng		95
16) Acrylonitrile	5.00	53	189130	9.167	ng		99
17) 1,1-Dichloroethene	5.26	96	53263	4.895	ng		99
18) 2-Methyl-2-Propanol (t...	5.33	59	354974	12.014	ng		96
19) Methylene Chloride	5.36	84	59106	4.289	ng		99
20) 3-Chloro-1-propene (Al...	5.45	41	149803	5.789	ng		95
21) Trichlorotrifluoroethane	5.58	151	60140	5.443	ng		98
22) Carbon Disulfide	5.60	76	477507	11.315	ng		99
23) trans-1,2-Dichloroethene	6.14	61	108511	5.549	ng		100
24) 1,1-Dichloroethane	6.33	63	125870	5.472	ng		100
25) Methyl tert-Butyl Ether	6.37	73	194229	6.514	ng		99
26) Vinyl Acetate	6.45	86	63345	29.631	ng	#	97
27) 2-Butanone (MEK)	6.67	72	82333	11.149	ng		99
28) cis-1,2-Dichloroethene	7.09	61	103544	5.470	ng		100
29) Diisopropyl Ether	7.29	87	100166	11.184	ng		99
30) Ethyl Acetate	7.29	61	47974	9.950	ng		99
31) n-Hexane	7.31	57	112935	5.013	ng		100
32) Chloroform	7.38	83	135755	6.228	ng		99
34) Tetrahydrofuran (THF)	7.75	72	70543	10.463	ng		99
35) Ethyl tert-Butyl Ether	7.83	87	137648	12.439	ng		99
36) 1,2-Dichloroethane	8.12	62	132134	6.299	ng		99
38) 1,1,1-Trichloroethane	8.41	97	135080	6.229	ng		100
39) Isopropyl Acetate	0.00	61	0	N.D.			
40) 1-Butanol	8.82	56	842	No Calib			
41) Benzene	8.91	78	253215	5.396	ng		100
42) Carbon Tetrachloride	9.08	117	126917	6.428	ng		100
43) Cyclohexane	9.22	84	184472	11.622	ng		98
44) tert-Amyl Methyl Ether	9.60	73	361153	13.118	ng		99
45) 1,2-Dichloropropane	9.87	63	68115	5.509	ng		98
46) Bromodichloromethane	10.09	83	108549	6.219	ng		99
47) Trichloroethene	10.16	130	76731	5.689	ng		99
48) 1,4-Dioxane	10.12	88	52032	5.975	ng		99
49) 2,2,4-Trimethylpentane...	10.24	57	282228	5.117	ng		100
50) Methyl Methacrylate	10.41	100	50084	12.360	ng		99

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\10\06102412.D Vial: 6
Acq On : 10 Jun 2024 18:01 Operator: SC
Sample : 5.0ng TO-15 ICAL STD Inst : MS09
Misc : S37-06062402/S37-06102403 (7/10)

Quant Time: Jun 11 08:39:17 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Tue Jun 11 08:36:43 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

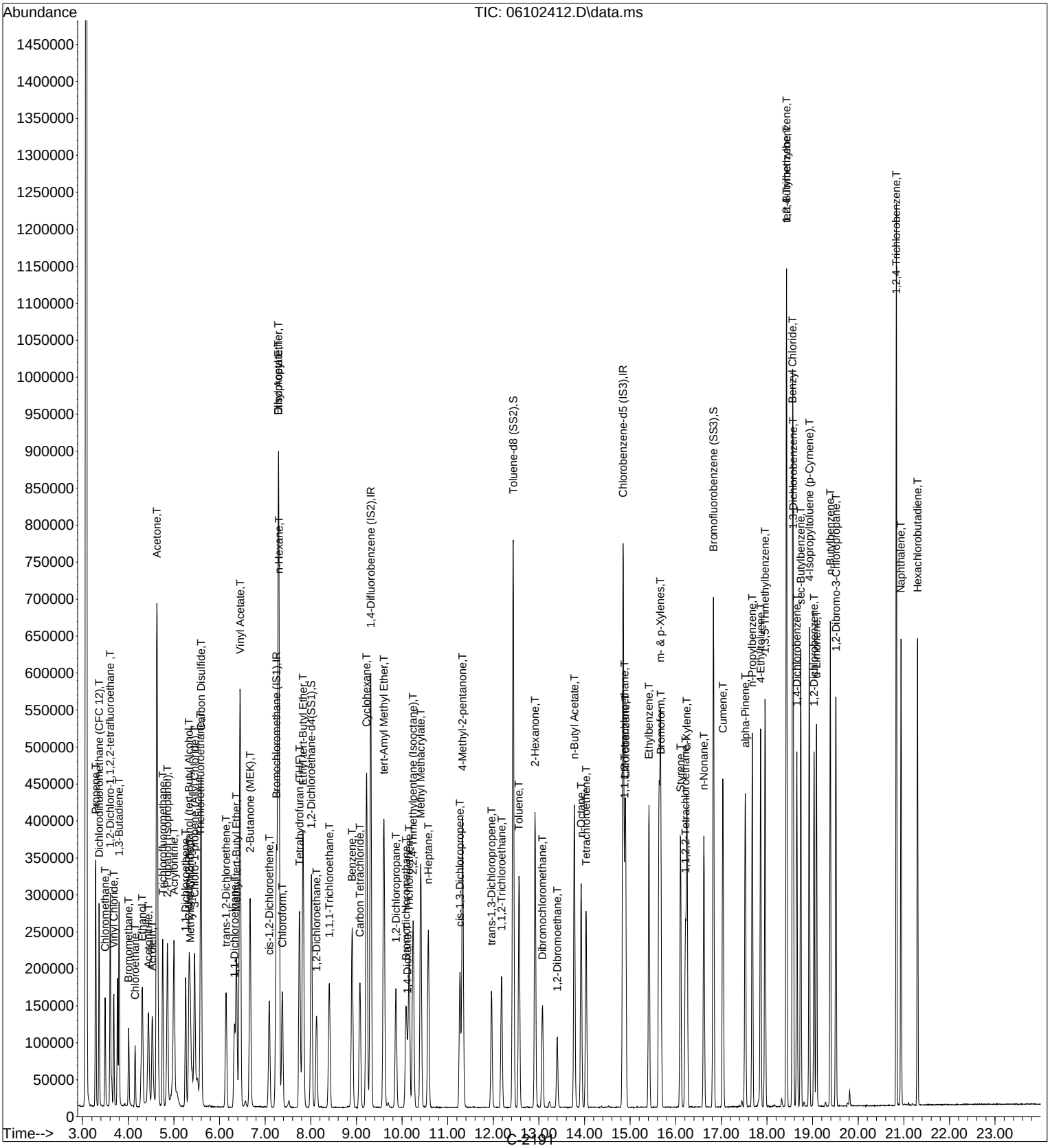
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	10.58	71	60398	5.872 ng		99
52) cis-1,3-Dichloropropene	11.27	75	119563	6.047 ng		100
53) 4-Methyl-2-pentanone	11.33	58	124990	10.962 ng		100
54) trans-1,3-Dichloropropene	11.96	75	101403	5.980 ng		99
55) 1,1,2-Trichloroethane	12.18	97	67362	6.078 ng		99
58) Toluene	12.56	91	274535	5.948 ng		100
59) 2-Hexanone	12.92	43	348951	10.971 ng		100
60) Dibromochloromethane	13.08	129	91333	6.072 ng		99
61) 1,2-Dibromoethane	13.40	107	78650	6.110 ng		99
62) n-Butyl Acetate	13.78	43	385355	10.898 ng		100
63) n-Octane	13.93	57	59135	5.439 ng		100
64) Tetrachloroethene	14.03	166	94661	6.390 ng		99
65) Chlorobenzene	14.90	112	190264	5.965 ng		100
66) Ethylbenzene	15.41	91	332149	6.216 ng		99
67) m- & p-Xylenes	15.66	91	549449	12.432 ng		99
68) Bromoform	15.67	173	85066	6.729 ng		100
69) Styrene	16.11	104	191913	6.244 ng		99
70) o-Xylene	16.24	91	274762	6.333 ng		99
71) n-Nonane	16.62	43	158774	5.112 ng		100
72) 1,1,2,2-Tetrachloroethane	16.21	83	120927	6.302 ng		100
74) Cumene	17.03	105	328934	6.123 ng		100
75) alpha-Pinene	17.53	93	168050	6.402 ng		100
76) n-Propylbenzene	17.68	91	400268	6.229 ng		99
77) 3-Ethyltoluene	17.03	105	328934	No Calib		
78) 4-Ethyltoluene	17.86	105	320285	6.135 ng		99
79) 1,3,5-Trimethylbenzene	17.96	105	295719	6.631 ng		100
80) alpha-Methylstyrene	17.03	118	1234	No Calib	#	
81) 2-Ethyltoluene	17.03	105	328934	No Calib		
82) 1,2,4-Trimethylbenzene	18.43	105	302094	6.405 ng		98
83) n-Decane	17.03	58	2927	No Calib		
84) Benzyl Chloride	18.56	91	503221	13.525 ng		99
85) 1,3-Dichlorobenzene	18.58	146	186398	6.601 ng		100
86) 1,4-Dichlorobenzene	18.66	146	182939	6.711 ng		99
87) sec-Butylbenzene	18.74	105	374627	6.248 ng		100
88) 4-Isopropyltoluene (p-...	18.93	119	336859	6.393 ng		100
89) 1,2,3-Trimethylbenzene	17.03	105	328934	No Calib		
90) 1,2-Dichlorobenzene	19.03	146	181043	6.614 ng		99
91) d-Limonene	19.09	68	99496	6.256 ng		97
92) 1,2-Dibromo-3-Chloropr...	19.51	157	132039	13.827 ng		98
93) n-Undecane	17.86	58	4719	No Calib		
94) 1,2,4-Trichlorobenzene	20.84	180	313464	16.002 ng		100
95) Naphthalene	20.94	128	380954	6.713 ng		100
96) n-Dodecane	18.92	58	9070	No Calib	#	
97) Hexachlorobutadiene	21.30	225	110448	6.749 ng		100
98) Cyclohexanone	15.42	55	793	No Calib	#	
99) tert-Butylbenzene	18.43	119	286037	6.377 ng		99
100) n-Butylbenzene	19.39	91	312458	6.430 ng		99
101) 1,1,1,2-Tetrachloroethane	14.88	131	77155	6.713 ng		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\10\06102412.D Vial: 6
Acq On : 10 Jun 2024 18:01 Operator: SC
Sample : 5.0ng TO-15 ICAL STD Inst : MS09
Misc : S37-06062402/S37-06102403 (7/10)

Quant Time: Jun 11 08:39:17 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Tue Jun 11 08:36:43 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\10\06102413.D Vial: 7
Acq On : 10 Jun 2024 18:34 Operator: SC
Sample : 25ng TO-15 ICAL STD Inst : MS09
Misc : S37-06062402/S37-06102402 (7/10)

Quant Time: Jun 11 08:36:57 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Tue Jun 11 08:36:43 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/11/24

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	7.28	130	140870	12.500	ng	0.00
37) 1,4-Difluorobenzene (IS2)	9.34	114	602502	12.500	ng	0.00
56) Chlorobenzene-d5 (IS3)	14.85	54	142011	12.500	ng	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4(...	8.04	65	307948	13.798	ng	0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 110.40%			
57) Toluene-d8 (SS2)	12.44	98	674215	12.498	ng	0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.00%			
73) Bromofluorobenzene (SS3)	16.83	174	247699	13.127	ng	0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 105.04%			
Target Compounds						Qvalue
2) Propene	3.28	42	427245	22.265	ng	100
3) Dichlorodifluoromethan...	3.36	85	796555	29.421	ng	100
4) Chloromethane	3.49	50	589335	24.068	ng	100
5) 1,2-Dichloro-1,1,2,2-t...	3.60	135	379248	30.951	ng	100
6) Vinyl Chloride	3.69	62	563186	28.787	ng	100
7) 1,3-Butadiene	3.80	54	441253	30.747	ng	100
8) Bromomethane	4.02	94	291330	27.485	ng	100
9) Chloroethane	4.16	64	243701	28.954	ng	100
10) Ethanol	4.36	45	1632975	104.639	ng	100
11) Acetonitrile	4.48	41	744568	20.424	ng	100
12) Acrolein	4.56	56	541401	50.938	ng	100
13) Acetone	4.66	58	1311535	118.964	ng	100
14) Trichlorofluoromethane	4.76	101	820412	30.708	ng	100
15) 2-Propanol (Isopropanol)	4.91	45	2290793	47.521	ng	100
16) Acrylonitrile	5.04	53	1025182	47.101	ng	100
17) 1,1-Dichloroethene	5.27	96	283137	24.662	ng	100
18) 2-Methyl-2-Propanol (t...	5.37	59	2033129	65.220	ng	100
19) Methylene Chloride	5.39	84	312162	21.470	ng	100
20) 3-Chloro-1-propene (Al...	5.48	41	752524	27.563	ng	100
21) Trichlorotrifluoroethane	5.59	151	314438	26.974	ng	100
22) Carbon Disulfide	5.61	76	2578200	57.910	ng	100
23) trans-1,2-Dichloroethene	6.17	61	589050	28.552	ng	100
24) 1,1-Dichloroethane	6.36	63	672016	27.689	ng	100
25) Methyl tert-Butyl Ether	6.38	73	1069364	33.996	ng	100
26) Vinyl Acetate	6.48	86	363368	161.112	ng	100
27) 2-Butanone (MEK)	6.70	72	448192	57.525	ng	100
28) cis-1,2-Dichloroethene	7.12	61	555070	27.792	ng	100
29) Diisopropyl Ether	7.31	87	549183	58.123	ng	100
30) Ethyl Acetate	7.31	61	273072	53.683	ng	100
31) n-Hexane	7.32	57	622207	26.181	ng	100
32) Chloroform	7.41	83	712337	30.974	ng	100
34) Tetrahydrofuran (THF)	7.77	72	384621	54.074	ng	100
35) Ethyl tert-Butyl Ether	7.85	87	771538	66.089	ng	100
36) 1,2-Dichloroethane	8.15	62	700558	31.655	ng	100
38) 1,1,1-Trichloroethane	8.42	97	714393	31.412	ng	100
39) Isopropyl Acetate	9.62	61	1235	No Calib	#	
40) 1-Butanol	8.82	56	1956	No Calib		
41) Benzene	8.93	78	1350031	27.433	ng	100
42) Carbon Tetrachloride	9.09	117	678466	32.766	ng	100
43) Cyclohexane	9.24	84	997816	59.941	ng	100
44) tert-Amyl Methyl Ether	9.62	73	2007671	69.532	ng	100
45) 1,2-Dichloropropane	9.88	63	361022	27.840	ng	100
46) Bromodichloromethane	10.10	83	588907	32.173	ng	100
47) Trichloroethene	10.18	130	408060	28.845	ng	100
48) 1,4-Dioxane	10.13	88	284418	31.143	ng	100
49) 2,2,4-Trimethylpentane...	10.25	57	1524859	26.358	ng	100
50) Methyl Methacrylate	10.43	100	279250	65.707	ng	100

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\10\06102413.D Vial: 7
Acq On : 10 Jun 2024 18:34 Operator: SC
Sample : 25ng TO-15 ICAL STD Inst : MS09
Misc : S37-06062402/S37-06102402 (7/10)

Quant Time: Jun 11 08:36:57 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Tue Jun 11 08:36:43 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

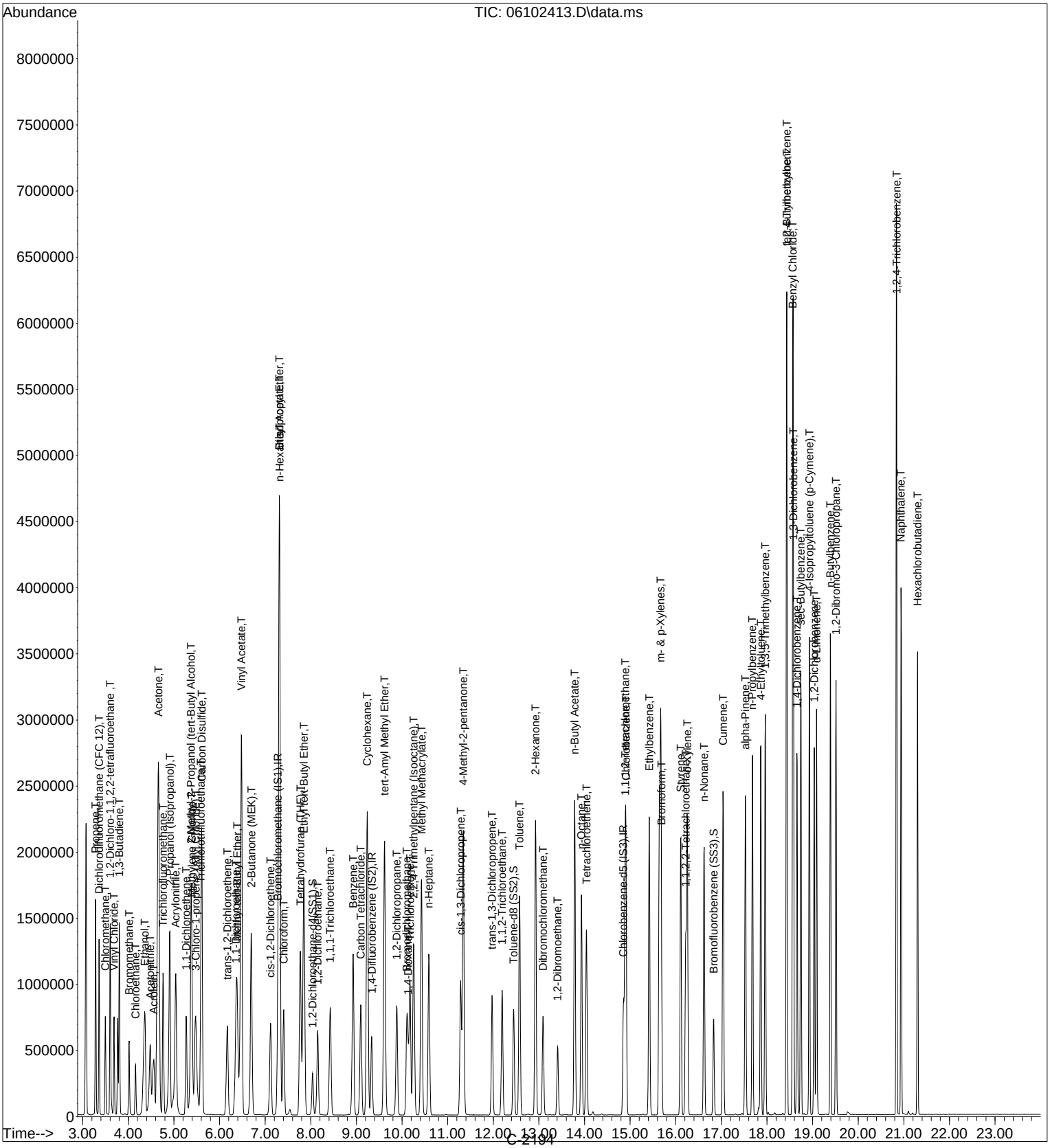
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) n-Heptane	10.59	71	325630	30.184 ng	100
52) cis-1,3-Dichloropropene	11.29	75	676360	32.614 ng	100
53) 4-Methyl-2-pentanone	11.34	58	706151	59.049 ng	100
54) trans-1,3-Dichloropropene	11.97	75	587602	33.038 ng	100
55) 1,1,2-Trichloroethane	12.19	97	361325	31.083 ng	100
58) Toluene	12.57	91	1497175	30.213 ng	100
59) 2-Hexanone	12.93	43	2006569	58.760 ng	100
60) Dibromochloromethane	13.09	129	496798	30.764 ng	100
61) 1,2-Dibromoethane	13.41	107	433763	31.385 ng	100
62) n-Butyl Acetate	13.78	43	2230605	58.758 ng	100
63) n-Octane	13.93	57	328618	28.154 ng	100
64) Tetrachloroethene	14.04	166	504653	31.731 ng	100
65) Chlorobenzene	14.91	112	1043433	30.468 ng	100
66) Ethylbenzene	15.42	91	1849042	32.229 ng	100
67) m- & p-Xylenes	15.67	91	3104440	65.426 ng	100
68) Bromoform	15.69	173	487178	35.898 ng	100
69) Styrene	16.11	104	1104600	33.476 ng	100
70) o-Xylene	16.25	91	1527341	32.790 ng	100
71) n-Nonane	16.62	43	902262	27.057 ng	100
72) 1,1,2,2-Tetrachloroethane	16.22	83	672238	32.632 ng	100
74) Cumene	17.04	105	1796137	31.143 ng	100
75) alpha-Pinene	17.53	93	949806	33.704 ng	100
76) n-Propylbenzene	17.68	91	2202677	31.928 ng	100
77) 3-Ethyltoluene	17.04	105	1796137	No Calib	
78) 4-Ethyltoluene	17.87	105	1788323	31.906 ng	100
79) 1,3,5-Trimethylbenzene	17.96	105	1632580	34.098 ng	100
80) alpha-Methylstyrene	17.04	118	3968	No Calib	
81) 2-Ethyltoluene	17.04	105	1796137	No Calib	
82) 1,2,4-Trimethylbenzene	18.43	105	1714831	33.865 ng	100
83) n-Decane	17.04	58	16804	No Calib	
84) Benzyl Chloride	18.56	91	3146735	78.776 ng	100
85) 1,3-Dichlorobenzene	18.58	146	1035546	34.159 ng	100
86) 1,4-Dichlorobenzene	18.66	146	1034662	35.353 ng	100
87) sec-Butylbenzene	18.74	105	2072664	32.196 ng	100
88) 4-Isopropyltoluene (p-...	18.93	119	1860852	32.897 ng	100
89) 1,2,3-Trimethylbenzene	17.04	105	1796137	No Calib	
90) 1,2-Dichlorobenzene	19.04	146	995794	33.887 ng	100
91) d-Limonene	19.09	68	591107	34.619 ng	100
92) 1,2-Dibromo-3-Chloropr...	19.51	157	751728	73.324 ng	100
93) n-Undecane	17.86	58	28268	No Calib	
94) 1,2,4-Trichlorobenzene	20.84	180	1819488	86.518 ng	100
95) Naphthalene	20.94	128	2398705	39.373 ng	100
96) n-Dodecane	18.93	58	43416	No Calib #	
97) Hexachlorobutadiene	21.30	225	594357	33.830 ng	100
98) Cyclohexanone	15.44	55	7212	No Calib	
99) tert-Butylbenzene	18.43	119	1573349	32.674 ng	100
100) n-Butylbenzene	19.39	91	1749224	33.531 ng	100
101) 1,1,1,2-Tetrachloroethane	14.89	131	421544	34.164 ng	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\10\06102413.D Vial: 7
Acq On : 10 Jun 2024 18:34 Operator: SC
Sample : 25ng TO-15 ICAL STD Inst : MS09
Misc : S37-06062402/S37-06102402 (7/10)

Quant Time: Jun 11 08:36:57 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Tue Jun 11 08:36:43 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\10\06102414.D Vial: 7
Acq On : 10 Jun 2024 19:06 Operator: SC
Sample : 50ng TO-15 ICAL STD Inst : MS09
Misc : S37-06062402/S37-06102402 (7/10)

6/11/24

Quant Time: Jun 11 08:45:58 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Tue Jun 11 08:36:43 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	7.28	130	146494	12.500	ng	0.00
37) 1,4-Difluorobenzene (IS2)	9.34	114	639813	12.500	ng	0.00
56) Chlorobenzene-d5 (IS3)	14.86	54	150942	12.500	ng	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4(...	8.05	65	323187	13.924	ng	0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 111.36%			
57) Toluene-d8 (SS2)	12.45	98	714667	12.464	ng	0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.68%			
73) Bromofluorobenzene (SS3)	16.83	174	253957	12.662	ng	0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.28%			
Target Compounds						Qvalue
2) Propene	3.28	42	1021125	51.172	ng	100
3) Dichlorodifluoromethan...	3.35	85	1629001	57.858	ng	100
4) Chloromethane	3.49	50	1284359	50.438	ng	100
5) 1,2-Dichloro-1,1,2,2-t...	3.60	135	772762	60.646	ng	100
6) Vinyl Chloride	3.69	62	1184708	58.231	ng	100
7) 1,3-Butadiene	3.80	54	979731	65.648	ng	97
8) Bromomethane	4.02	94	599831	54.417	ng	99
9) Chloroethane	4.16	64	533863	60.994	ng	100
10) Ethanol	4.38	45	3660468	225.554	ng	100
11) Acetonitrile	4.49	41	1696836	44.759	ng	99
12) Acrolein	4.57	56	1194138	108.039	ng	100
13) Acetone	4.67	58	2857503	249.243	ng	96
14) Trichlorofluoromethane	4.76	101	1708786	61.504	ng	100
15) 2-Propanol (Isopropanol)	4.92	45	4528664	90.338	ng	98
16) Acrylonitrile	5.05	53	2261237	99.901	ng	100
17) 1,1-Dichloroethene	5.27	96	608458	50.965	ng	99
18) 2-Methyl-2-Propanol (t...	5.39	59	4090399	126.178	ng	98
19) Methylene Chloride	5.40	84	686685	45.416	ng	99
20) 3-Chloro-1-propene (Al...	5.48	41	1588910	55.963	ng	98
21) Trichlorotrifluoroethane	5.59	151	658410	54.313	ng	97
22) Carbon Disulfide	5.61	76	5611665	121.206	ng	100
23) trans-1,2-Dichloroethene	6.18	61	1291417	60.193	ng	99
24) 1,1-Dichloroethane	6.36	63	1476353	58.495	ng	100
25) Methyl tert-Butyl Ether	6.39	73	2403482	73.475	ng	99
26) Vinyl Acetate	6.49	86	800208	341.178	ng	98
27) 2-Butanone (MEK)	6.70	72	988094	121.953	ng	99
28) cis-1,2-Dichloroethene	7.12	61	1216077	58.551	ng	99
29) Diisopropyl Ether	7.32	87	1199495	122.075	ng	99
30) Ethyl Acetate	7.32	61	611958	115.685	ng	99
31) n-Hexane	7.32	57	1383683	55.986	ng	100
32) Chloroform	7.41	83	1514155	63.311	ng	100
34) Tetrahydrofuran (THF)	7.78	72	843605	114.049	ng	98
35) Ethyl tert-Butyl Ether	7.86	87	1683863	138.700	ng	98
36) 1,2-Dichloroethane	8.16	62	1477876	64.215	ng	100
38) 1,1,1-Trichloroethane	8.44	97	1501264	62.162	ng	100
39) Isopropyl Acetate	9.62	61	2792	No Calib	#	
40) 1-Butanol	8.84	56	3918	No Calib		
41) Benzene	8.93	78	2923441	55.942	ng	100
42) Carbon Tetrachloride	9.10	117	1415624	64.380	ng	100
43) Cyclohexane	9.24	84	2174871	123.031	ng	98
44) tert-Amyl Methyl Ether	9.62	73	4374035	142.652	ng	100
45) 1,2-Dichloropropane	9.89	63	800363	58.121	ng	100
46) Bromodichloromethane	10.11	83	1259543	64.797	ng	100
47) Trichloroethene	10.18	130	861246	57.330	ng	100
48) 1,4-Dioxane	10.14	88	617705	63.692	ng	98
49) 2,2,4-Trimethylpentane...	10.26	57	3362057	54.727	ng	99
50) Methyl Methacrylate	10.43	100	601801	133.345	ng	96

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\10\06102414.D Vial: 7
Acq On : 10 Jun 2024 19:06 Operator: SC
Sample : 50ng TO-15 ICAL STD Inst : MS09
Misc : S37-06062402/S37-06102402 (7/10)

Quant Time: Jun 11 08:45:58 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Tue Jun 11 08:36:43 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

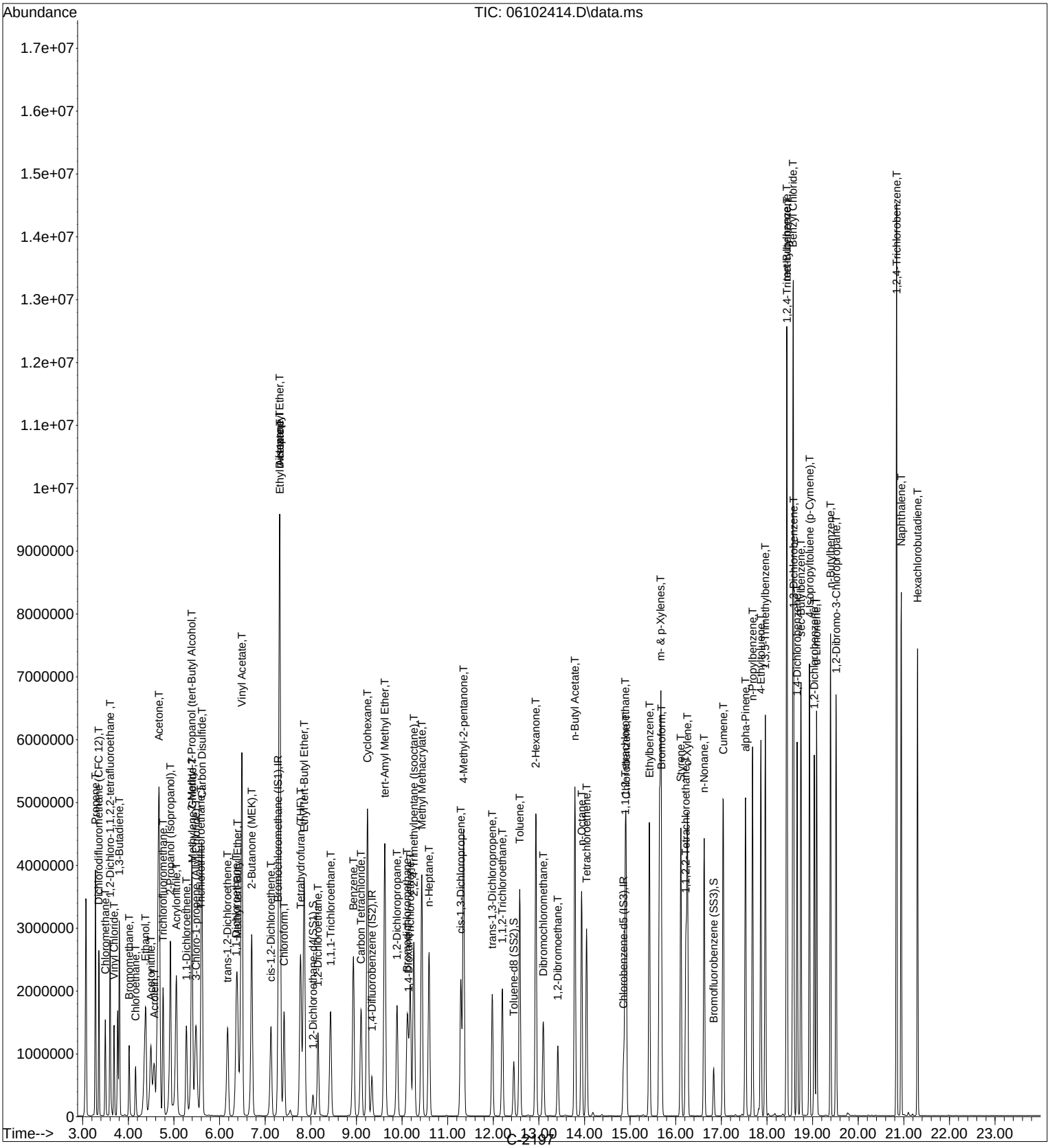
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
51) n-Heptane	10.59	71	717947	62.669	ng		99
52) cis-1,3-Dichloropropene	11.29	75	1482235	67.306	ng		100
53) 4-Methyl-2-pentanone	11.35	58	1560458	122.878	ng		99
54) trans-1,3-Dichloropropene	11.98	75	1293052	68.462	ng		100
55) 1,1,2-Trichloroethane	12.20	97	782860	63.419	ng		99
58) Toluene	12.58	91	3208738	60.920	ng		100
59) 2-Hexanone	12.93	43	4431756	122.101	ng		99
60) Dibromochloromethane	13.10	129	1054245	61.421	ng		100
61) 1,2-Dibromoethane	13.41	107	936582	63.757	ng		100
62) n-Butyl Acetate	13.79	43	4932460	122.242	ng		99
63) n-Octane	13.94	57	730154	58.855	ng		98
64) Tetrachloroethene	14.05	166	1061107	62.771	ng		100
65) Chlorobenzene	14.91	112	2219464	60.974	ng		100
66) Ethylbenzene	15.42	91	3916290	64.223	ng		100
67) m- & p-Xylenes	15.67	91	6613921	131.141	ng		100
68) Bromoform	15.69	173	1027538	71.235	ng		100
69) Styrene	16.11	104	2353511	67.106	ng		99
70) o-Xylene	16.25	91	3221073	65.060	ng		100
71) n-Nonane	16.62	43	1983026	55.948	ng		100
72) 1,1,2,2-Tetrachloroethane	16.22	83	1460001	66.678	ng		100
74) Cumene	17.04	105	3756564	61.280	ng		100
75) alpha-Pinene	17.53	93	2024964	67.605	ng		100
76) n-Propylbenzene	17.68	91	4631979	63.169	ng		100
77) 3-Ethyltoluene	17.04	105	3756564	No Calib			
78) 4-Ethyltoluene	17.87	105	3714760	62.355	ng		100
79) 1,3,5-Trimethylbenzene	17.96	105	3403122	66.871	ng		99
80) alpha-Methylstyrene	17.04	118	7085	No Calib		#	
81) 2-Ethyltoluene	17.04	105	3756564	No Calib			
82) 1,2,4-Trimethylbenzene	18.44	105	3551497	65.986	ng		99
83) n-Decane	17.04	58	28854	No Calib			
84) Benzyl Chloride	18.57	91	6669401	157.084	ng		100
85) 1,3-Dichlorobenzene	18.59	146	2124617	65.936	ng		100
86) 1,4-Dichlorobenzene	18.66	146	2119087	68.122	ng		99
87) sec-Butylbenzene	18.75	105	4270128	62.405	ng		99
88) 4-Isopropyltoluene (p-...	18.93	119	3789986	63.037	ng		99
89) 1,2,3-Trimethylbenzene	17.04	105	3756564	No Calib			
90) 1,2-Dichlorobenzene	19.04	146	2034527	65.139	ng		100
91) d-Limonene	19.09	68	1284834	70.797	ng		98
92) 1,2-Dibromo-3-Chloropr...	19.52	157	1555142	142.714	ng		97
93) n-Undecane	17.87	58	56525	No Calib			
94) 1,2,4-Trichlorobenzene	20.84	180	3675779	164.443	ng		99
95) Naphthalene	20.94	128	4910505	75.833	ng		99
96) n-Dodecane	18.93	58	93223	No Calib		#	
97) Hexachlorobutadiene	21.30	225	1224758	65.587	ng		100
98) Cyclohexanone	15.43	55	16909	No Calib		#	
99) tert-Butylbenzene	18.43	119	3213283	62.782	ng		100
100) n-Butylbenzene	19.39	91	3625990	65.395	ng		99
101) 1,1,1,2-Tetrachloroethane	14.89	131	883483	67.365	ng		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\10\06102414.D Vial: 7
Acq On : 10 Jun 2024 19:06 Operator: SC
Sample : 50ng TO-15 ICAL STD Inst : MS09
Misc : S37-06062402/S37-06102402 (7/10)

Quant Time: Jun 11 08:45:58 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Tue Jun 11 08:36:43 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\10\06102415.D Vial: 7
Acq On : 10 Jun 2024 19:38 Operator: SC
Sample : 100ng TO-15 ICAL STD Inst : MS09
Misc : S37-06062402/S37-06102402 (7/10)

Quant Time: Jun 11 08:47:16 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Tue Jun 11 08:36:43 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/11/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.30	130	157593	12.500	ng		0.03
37) 1,4-Difluorobenzene (IS2)	9.35	114	697275	12.500	ng		0.02
56) Chlorobenzene-d5 (IS3)	14.86	54	167960	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.07	65	348540	13.959	ng		0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 111.68%				
57) Toluene-d8 (SS2)	12.46	98	781109	12.243	ng		0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.92%				
73) Bromofluorobenzene (SS3)	16.84	174	271466	12.164	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.28%				
Target Compounds							Qvalue
2) Propene	3.28	42	2524231	117.588	ng		99
3) Dichlorodifluoromethan...	3.36	85	3272651	108.050	ng		99
4) Chloromethane	3.50	50	2323870	84.834	ng		99
5) 1,2-Dichloro-1,1,2,2-t...	3.61	135	1568509	114.426	ng		100
6) Vinyl Chloride	3.69	62	2448950	111.894	ng		99
7) 1,3-Butadiene	3.81	54	1971983	122.829	ng		95
8) Bromomethane	4.02	94	1200468	101.237	ng		100
9) Chloroethane	4.16	64	1144964	121.599	ng		99
10) Ethanol	4.41	45	7917888	453.530	ng		99
11) Acetonitrile	4.52	41	4653286	114.100	ng		95
12) Acrolein	4.59	56	2599328	218.609	ng		100
13) Acetone	4.69	58	6101417	494.709	ng	#	88
14) Trichlorofluoromethane	4.77	101	3511412	117.485	ng		100
15) 2-Propanol (Isopropanol)	4.95	45	7553903	140.073	ng		98
16) Acrylonitrile	5.08	53	4946640	203.151	ng		99
17) 1,1-Dichloroethene	5.29	96	1293422	100.707	ng		99
18) 2-Methyl-2-Propanol (t...	5.42	59	5804649	166.447	ng	#	45
19) Methylene Chloride	5.42	84	1445609	88.876	ng		98
20) 3-Chloro-1-propene (Al...	5.50	41	3176085	103.987	ng		94
21) Trichlorotrifluoroethane	5.61	151	1353530	103.790	ng		95
22) Carbon Disulfide	5.62	76	11720460	235.321	ng		99
23) trans-1,2-Dichloroethene	6.19	61	2768120	119.936	ng		98
24) 1,1-Dichloroethane	6.39	63	3159870	116.381	ng		100
25) Methyl tert-Butyl Ether	6.41	73	5195480	147.642	ng		98
26) Vinyl Acetate	6.51	86	1717159	680.569	ng	#	94
27) 2-Butanone (MEK)	6.73	72	2121963	243.453	ng		98
28) cis-1,2-Dichloroethene	7.15	61	2598519	116.300	ng		98
29) Diisopropyl Ether	7.33	87	2548868	241.134	ng	#	96
30) Ethyl Acetate	7.34	61	1325854	232.988	ng		97
31) n-Hexane	7.33	57	2945109	110.772	ng		100
32) Chloroform	7.44	83	3172270	123.300	ng		99
34) Tetrahydrofuran (THF)	7.79	72	1816791	228.318	ng	#	90
35) Ethyl tert-Butyl Ether	7.87	87	3667175	280.792	ng		98
36) 1,2-Dichloroethane	8.17	62	3065761	123.829	ng		99
38) 1,1,1-Trichloroethane	8.45	97	3103452	117.913	ng		99
39) Isopropyl Acetate	9.63	61	5583	No Calib		#	
40) 1-Butanol	8.85	56	7890	No Calib			
41) Benzene	8.95	78	6188887	108.668	ng		99
42) Carbon Tetrachloride	9.12	117	2901522	121.082	ng		100
43) Cyclohexane	9.25	84	4580277	237.751	ng		96
44) tert-Amyl Methyl Ether	9.63	73	9176664	274.619	ng		99
45) 1,2-Dichloropropane	9.91	63	1733088	115.482	ng		100
46) Bromodichloromethane	10.13	83	2663944	125.753	ng		100
47) Trichloroethene	10.20	130	1795979	109.699	ng		100
48) 1,4-Dioxane	10.16	88	1328829	125.725	ng		96
49) 2,2,4-Trimethylpentane...	10.27	57	7181187	107.261	ng		99
50) Methyl Methacrylate	10.45	100	1276863	259.608	ng		94

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\10\06102415.D Vial: 7
Acq On : 10 Jun 2024 19:38 Operator: SC
Sample : 100ng TO-15 ICAL STD Inst : MS09
Misc : S37-06062402/S37-06102402 (7/10)

Quant Time: Jun 11 08:47:16 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Tue Jun 11 08:36:43 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

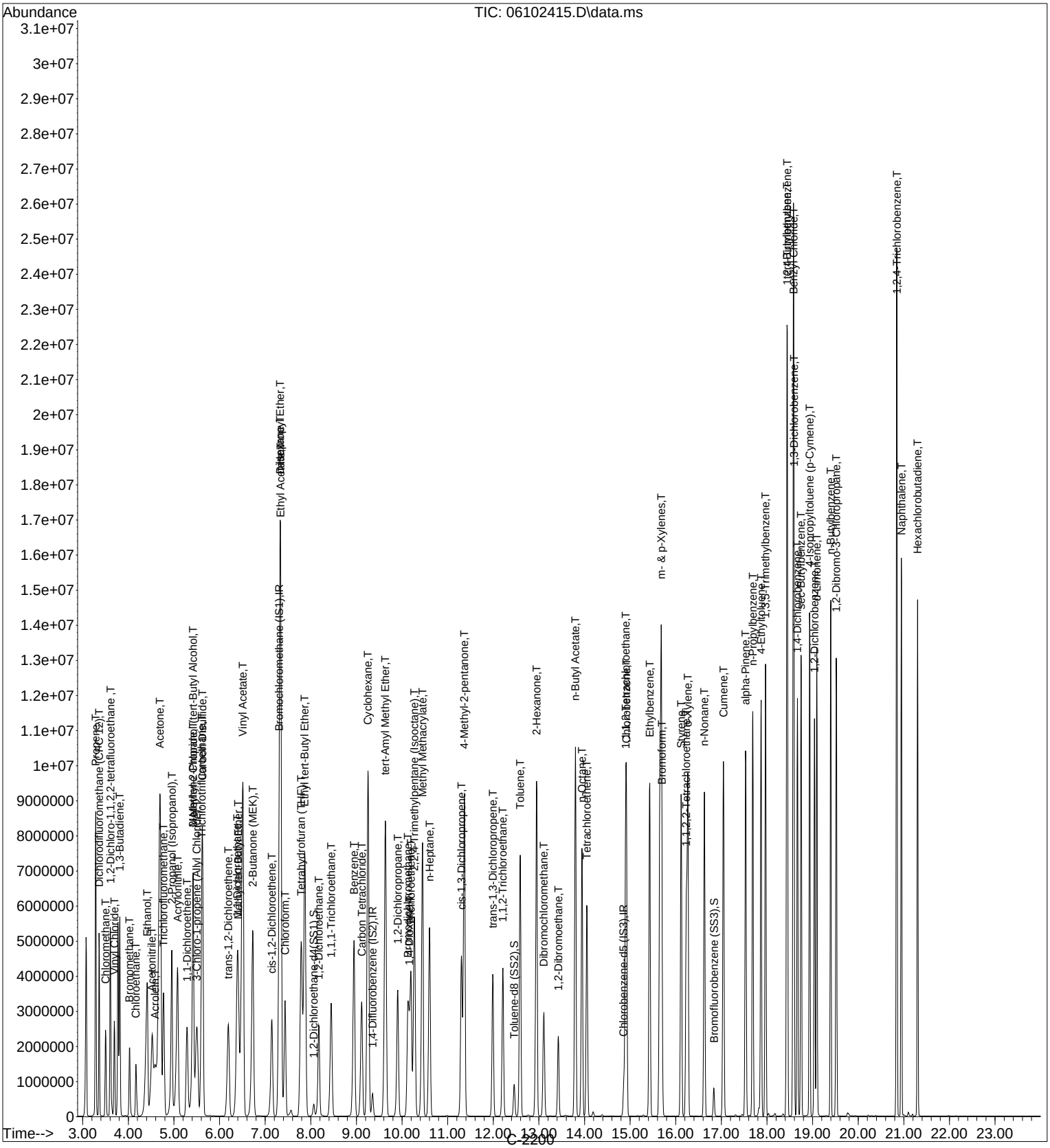
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
51) n-Heptane	10.60	71	1541936	123.502	ng		99
52) cis-1,3-Dichloropropene	11.30	75	3180132	132.504	ng		100
53) 4-Methyl-2-pentanone	11.36	58	3357769	242.618	ng		96
54) trans-1,3-Dichloropropene	11.99	75	2768273	134.491	ng		100
55) 1,1,2-Trichloroethane	12.21	97	1648566	122.543	ng		98
58) Toluene	12.59	91	6713298	114.543	ng		99
59) 2-Hexanone	12.95	43	9363461	231.838	ng		98
60) Dibromochloromethane	13.11	129	2198300	115.097	ng		100
61) 1,2-Dibromoethane	13.43	107	1967337	120.355	ng		100
62) n-Butyl Acetate	13.80	43	10354735	230.622	ng		98
63) n-Octane	13.94	57	1591978	115.321	ng		97
64) Tetrachloroethene	14.05	166	2163321	115.007	ng		99
65) Chlorobenzene	14.92	112	4580203	113.080	ng		100
66) Ethylbenzene	15.43	91	8058334	118.758	ng		100
67) m- & p-Xylenes	15.68	91	13579936	241.981	ng		100
68) Bromoform	15.70	173	2094379	130.483	ng		100
69) Styrene	16.12	104	4866494	124.699	ng		98
70) o-Xylene	16.27	91	6626865	120.289	ng		100
71) n-Nonane	16.63	43	4211328	106.777	ng		99
72) 1,1,2,2-Tetrachloroethane	16.23	83	3103125	127.360	ng		99
74) Cumene	17.05	105	7535919	110.477	ng		99
75) alpha-Pinene	17.53	93	4183886	125.529	ng		99
76) n-Propylbenzene	17.69	91	9240096	113.244	ng		99
77) 3-Ethyltoluene	17.05	105	7535919	No Calib			
78) 4-Ethyltoluene	17.87	105	7574273	114.258	ng		100
79) 1,3,5-Trimethylbenzene	17.97	105	6839967	120.787	ng		99
80) alpha-Methylstyrene	17.04	118	13240	No Calib		#	
81) 2-Ethyltoluene	17.05	105	7535919	No Calib			
82) 1,2,4-Trimethylbenzene	18.45	105	6979846	116.543	ng		100
83) n-Decane	17.05	58	64639	No Calib			
84) Benzyl Chloride	18.58	91	12584001	266.360	ng		97
85) 1,3-Dichlorobenzene	18.59	146	4165840	116.185	ng		100
86) 1,4-Dichlorobenzene	18.67	146	4222416	121.984	ng		99
87) sec-Butylbenzene	18.75	105	8365270	109.867	ng		98
88) 4-Isopropyltoluene (p-...	18.93	119	7353254	109.912	ng		97
89) 1,2,3-Trimethylbenzene	17.05	105	7535919	No Calib			
90) 1,2-Dichlorobenzene	19.04	146	4060659	116.836	ng		100
91) d-Limonene	19.09	68	2713641	134.376	ng		96
92) 1,2-Dibromo-3-Chloropr...	19.52	157	3103967	255.987	ng		95
93) n-Undecane	17.87	58	125204	No Calib			
94) 1,2,4-Trichlorobenzene	20.85	180	6885654	276.832	ng		99
95) Naphthalene	20.95	128	9382356	130.211	ng		97
96) n-Dodecane	18.93	58	199453	No Calib		#	
97) Hexachlorobutadiene	21.30	225	2415423	116.242	ng		100
98) Cyclohexanone	15.44	55	39846	No Calib		#	
99) tert-Butylbenzene	18.44	119	6225903	109.318	ng		99
100) n-Butylbenzene	19.40	91	7168902	116.192	ng		98
101) 1,1,1,2-Tetrachloroethane	14.90	131	1803898	123.611	ng		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\10\06102415.D Vial: 7
Acq On : 10 Jun 2024 19:38 Operator: SC
Sample : 100ng TO-15 ICAL STD Inst : MS09
Misc : S37-06062402/S37-06102402 (7/10)

Quant Time: Jun 11 08:47:16 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Tue Jun 11 08:36:43 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\10\06102417.D Vial: 2
Acq On : 10 Jun 2024 20:43 Operator: SC
Sample : ICV R09061024 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

Quant Time: Jun 11 08:55:24 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Tue Jun 11 08:55:14 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/11/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.27	130	166971	12.500	ng		-0.03
37) 1,4-Difluorobenzene (IS2)	9.33	114	732665	12.500	ng		-0.02
56) Chlorobenzene-d5 (IS3)	14.85	54	170282	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.04	65	360473	12.147	ng		-0.03
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.20%				
57) Toluene-d8 (SS2)	12.44	98	818187	12.556	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.48%				
73) Bromofluorobenzene (SS3)	16.83	174	281966	11.983	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 95.84%				
Target Compounds							Qvalue
2) Propene	3.28	42	540918	25.305	ng		99
3) Dichlorodifluoromethan...	3.36	85	907013	23.082	ng		100
4) Chloromethane	3.49	50	743209	27.666	ng		100
5) 1,2-Dichloro-1,1,2,2-t...	3.60	135	425566	24.974	ng		99
6) Vinyl Chloride	3.68	62	658958	25.701	ng		100
7) 1,3-Butadiene	3.80	54	483122	24.944	ng		95
8) Bromomethane	4.02	94	369030	27.029	ng		100
9) Chloroethane	4.16	64	292634	27.238	ng		100
10) Ethanol	4.36	45	2231066	137.444	ng		100
11) Acetonitrile	4.48	41	1013824	24.877	ng		99
12) Acrolein	4.55	56	687442	57.215	ng		100
13) Acetone	4.66	58	1698962	130.981	ng		92
14) Trichlorofluoromethane	4.76	101	911932	22.941	ng		100
15) 2-Propanol (Isopropanol)	4.90	45	3048616	58.329	ng		97
16) Acrylonitrile	5.03	53	1323151	54.392	ng		100
17) 1,1-Dichloroethene	5.27	96	406254	26.716	ng		99
18) 2-Methyl-2-Propanol (t...	5.37	59	2541681	60.926	ng		99
19) Methylene Chloride	5.39	84	433025	23.584	ng		97
20) 3-Chloro-1-propene (Al...	5.47	41	884281	26.987	ng		98
21) Trichlorotrifluoroethane	5.59	151	414986	24.678	ng		96
22) Carbon Disulfide	5.61	76	3223907	54.482	ng		100
23) trans-1,2-Dichloroethene	6.17	61	742180	28.256	ng		99
24) 1,1-Dichloroethane	6.36	63	867458	27.753	ng		100
25) Methyl tert-Butyl Ether	6.38	73	1314142	30.306	ng		98
26) Vinyl Acetate	6.48	86	453314	151.455	ng	#	95
27) 2-Butanone (MEK)	6.69	72	557658	54.329	ng		96
28) cis-1,2-Dichloroethene	7.12	61	698909	27.128	ng		100
29) Diisopropyl Ether	7.30	87	665982	54.781	ng	#	93
30) Ethyl Acetate	7.31	61	348864	55.666	ng		100
31) n-Hexane	7.32	57	791651	28.829	ng		99
32) Chloroform	7.40	83	849792	25.976	ng		100
34) Tetrahydrofuran (THF)	7.76	72	504256	53.851	ng		95
35) Ethyl tert-Butyl Ether	7.84	87	939025	58.170	ng		97
36) 1,2-Dichloroethane	8.15	62	788855	24.084	ng		100
38) 1,1,1-Trichloroethane	8.42	97	807077	23.725	ng		100
39) Isopropyl Acetate	9.62	61	1414	No Calib		#	
40) 1-Butanol	8.83	56	2681	No Calib			
41) Benzene	8.92	78	1655157	24.472	ng		100
42) Carbon Tetrachloride	9.09	117	750399	23.921	ng		100
43) Cyclohexane	9.24	84	1237339	56.525	ng		96
44) tert-Amyl Methyl Ether	9.62	73	2477197	58.200	ng		99
45) 1,2-Dichloropropane	9.88	63	454063	27.812	ng		100
46) Bromodichloromethane	10.10	83	702790	25.827	ng		100
47) Trichloroethene	10.17	130	466544	23.629	ng		100
48) 1,4-Dioxane	10.13	88	357175	28.623	ng		96
49) 2,2,4-Trimethylpentane...	10.25	57	1922827	28.756	ng		96
50) Methyl Methacrylate	10.43	100	329813	57.543	ng		94

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\10\06102417.D Vial: 2
Acq On : 10 Jun 2024 20:43 Operator: SC
Sample : ICV R09061024 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

Quant Time: Jun 11 08:55:24 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Tue Jun 11 08:55:14 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

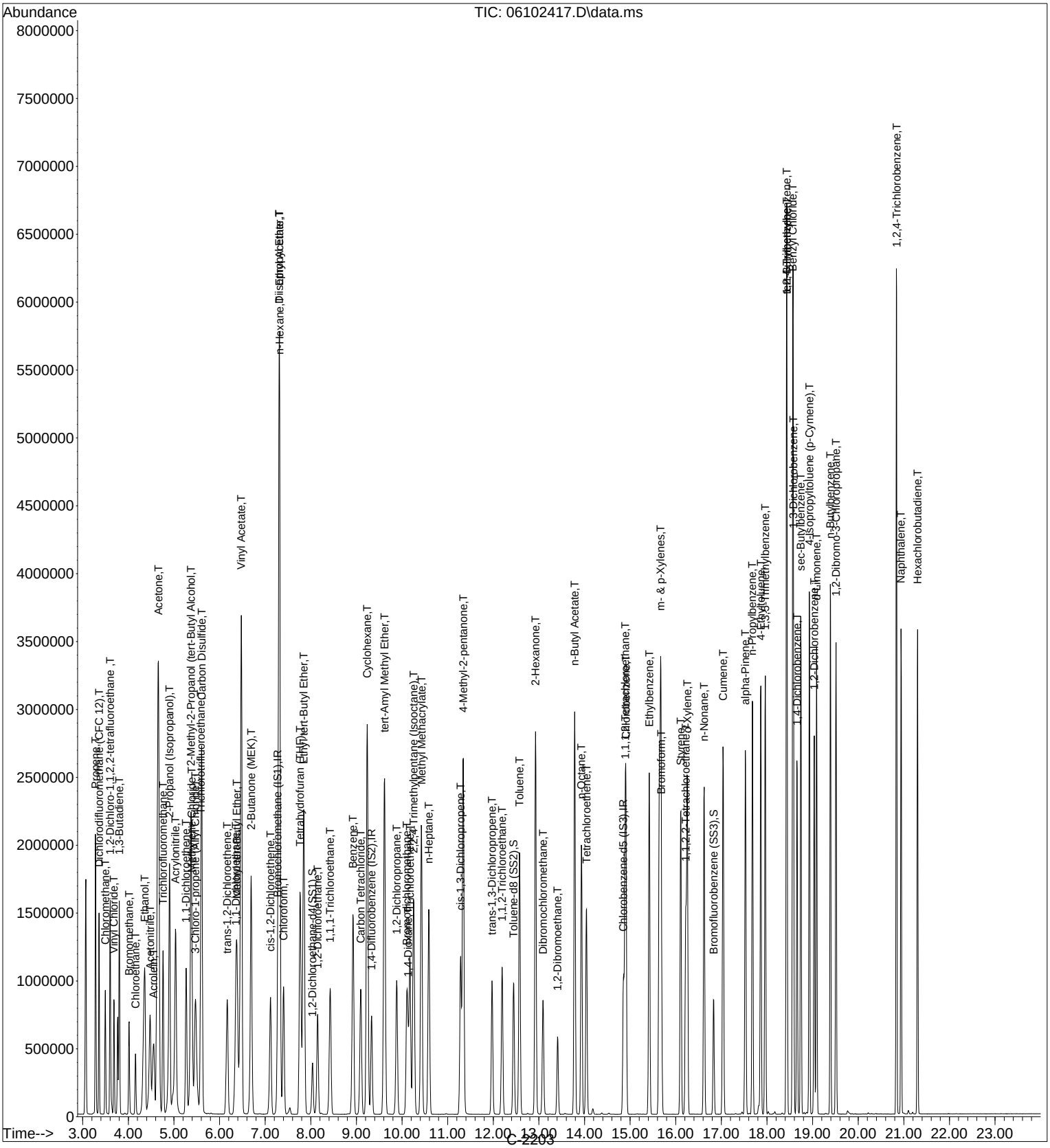
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	10.59	71	412362	28.908 ng		99
52) cis-1,3-Dichloropropene	11.29	75	798696	28.598 ng		100
53) 4-Methyl-2-pentanone	11.34	58	906698	60.992 ng		99
54) trans-1,3-Dichloropropene	11.97	75	660858	26.233 ng		100
55) 1,1,2-Trichloroethane	12.19	97	421781	26.355 ng		99
58) Toluene	12.57	91	1736087	25.496 ng		100
59) 2-Hexanone	12.93	43	2548461	59.699 ng		99
60) Dibromochloromethane	13.09	129	570837	24.250 ng		100
61) 1,2-Dibromoethane	13.41	107	485344	25.344 ng		100
62) n-Butyl Acetate	13.78	43	2816123	62.755 ng		99
63) n-Octane	13.93	57	412164	29.183 ng		97
64) Tetrachloroethene	14.04	166	546733	23.358 ng		100
65) Chlorobenzene	14.91	112	1155523	24.213 ng		100
66) Ethylbenzene	15.42	91	2076064	26.649 ng		100
67) m- & p-Xylenes	15.67	91	3429845	52.360 ng		100
68) Bromoform	15.69	173	535022	25.664 ng		100
69) Styrene	16.11	104	1201955	27.205 ng		99
70) o-Xylene	16.25	91	1679756	26.003 ng		100
71) n-Nonane	16.62	43	1113843	29.663 ng		99
72) 1,1,2,2-Tetrachloroethane	16.22	83	773424	26.152 ng		99
74) Cumene	17.04	105	2026344	25.127 ng		99
75) alpha-Pinene	17.53	93	1072245	28.540 ng		99
76) n-Propylbenzene	17.68	91	2492866	25.606 ng		99
77) 3-Ethyltoluene	17.04	105	2026344	No Calib		
78) 4-Ethyltoluene	17.87	105	2015758	26.216 ng		100
79) 1,3,5-Trimethylbenzene	17.96	105	1753157	26.100 ng		100
80) alpha-Methylstyrene	17.04	118	4087	No Calib	#	
81) 2-Ethyltoluene	17.04	105	2026344	No Calib		
82) 1,2,4-Trimethylbenzene	18.43	105	1815628	25.640 ng		99
83) n-Decane	17.03	58	18535	No Calib		
84) Benzyl Chloride	18.56	91	3236877	56.871 ng		100
85) 1,3-Dichlorobenzene	18.58	146	1030770	22.084 ng		99
86) 1,4-Dichlorobenzene	18.66	146	989839	21.762 ng		99
87) sec-Butylbenzene	18.74	105	2264636	25.278 ng		99
88) 4-Isopropyltoluene (p-...	18.93	119	2002679	24.863 ng		100
89) 1,2,3-Trimethylbenzene	17.04	105	2026344	No Calib		
90) 1,2-Dichlorobenzene	19.04	146	1012807	22.354 ng		100
91) d-Limonene	19.09	68	688772	28.611 ng		97
92) 1,2-Dibromo-3-Chloropr...	19.51	157	793502	50.499 ng		99
93) n-Undecane	17.87	58	36540	No Calib	#	
94) 1,2,4-Trichlorobenzene	20.84	180	1627660	45.508 ng		100
95) Naphthalene	20.94	128	2160797	23.811 ng		100
96) n-Dodecane	18.93	58	54002	No Calib	#	
97) Hexachlorobutadiene	21.30	225	596313	20.280 ng		100
98) Cyclohexanone	15.43	55	9614	No Calib		
99) tert-Butylbenzene	18.43	119	1721137	25.365 ng		100
100) n-Butylbenzene	19.39	91	1909180	25.333 ng		99
101) 1,1,1,2-Tetrachloroethane	14.89	131	473282	26.112 ng		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\10\06102417.D Vial: 2
Acq On : 10 Jun 2024 20:43 Operator: SC
Sample : ICV R09061024 25ng Inst : MS09
Misc : S37-06062402/S37-05292406 (6/28)

Quant Time: Jun 11 08:55:24 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Tue Jun 11 08:55:14 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



ALS Environmental

LCS Acceptance Criteria

6/11/24

ICV R09061024_25ng

	RT
Bromochloromethane (IS1)	7.27
1,4-Difluorobenzene (IS2)	9.33
Chlorobenzene-d5 (IS3)	14.85

Datafile: 06102417.D
Instrument: MS-09
Date: 6/10/2024

CAS No	Analyte	Amount Found	Spike Amount	% REC	ALS LCS Limits	ALS Pass/Fail	70-130 LCS Limits	70-130 Pass/Fail	DOD LCS Limits	DOD Pass/Fail
115-07-1	Propene	25.305	26.5	95	50-133	ok	70-130	ok	57-136	ok
75-71-8	Dichlorodifluoromethane	23.082	25.5	91	66-122	ok	70-130	ok	59-128	ok
74-87-3	Chloromethane	27.666	26.0	106	56-131	ok	70-130	ok	59-132	ok
76-14-2	Freon 114	24.974	26.0	96	63-120	ok	70-130	ok	63-121	ok
75-01-4	Vinyl Chloride	25.701	26.5	97	57-129	ok	70-130	ok	64-127	ok
106-99-0	1,3-Butadiene	24.944	26.5	94	62-132	ok	70-130	ok	66-134	ok
74-83-9	Bromomethane	27.029	26.3	103	72-120	ok	70-130	ok	63-134	ok
75-00-3	Chloroethane	27.238	26.5	103	67-123	ok	70-130	ok	63-127	ok
64-17-5	Ethanol	137.444	139	99	52-120	ok	70-130	ok	59-125	ok
75-05-8	Acetonitrile	24.877	26.8	93	50-114	ok	70-130	ok	63-132	ok
107-02-8	Acrolein	57.215	53.3	107	63-125	ok	70-130	ok	62-126	ok
67-64-1	Acetone	130.981	132	99	61-120	ok	70-130	ok	58-128	ok
75-69-4	Trichlorofluoromethane	22.941	26.3	87	65-122	ok	70-130	ok	62-126	ok
67-63-0	Isopropanol	58.329	52.3	112	59-132	ok	70-130	ok	52-125	ok
107-13-1	Acrylonitrile	54.392	53.0	103	60-128	ok	70-130	ok	71-137	ok
75-35-4	1,1-Dichloroethene	26.716	26.0	103	75-120	ok	70-130	ok	61-133	ok
75-65-0	tert-Butanol	60.926	51.3	119	60-143	ok	70-130	ok	24-150	ok
75-09-2	Methylene Chloride	23.584	26.0	91	71-123	ok	70-130	ok	62-115	ok
107-05-1	Allyl Chloride	26.987	26.8	101	50-118	ok	70-130	ok	71-131	ok
76-13-1	Trichlorotrifluoroethane	24.678	26.3	94	65-121	ok	70-130	ok	66-126	ok
75-15-0	Carbon Disulfide	54.482	53.8	101	69-115	ok	70-130	ok	57-134	ok
156-60-5	trans-1,2-Dichloroethene	28.256	27.3	104	67-123	ok	70-130	ok	67-124	ok
75-34-3	1,1-Dichloroethane	27.753	27.0	103	66-120	ok	70-130	ok	68-126	ok
1634-04-4	Methyl tert-Butyl Ether	30.306	27.0	112	65-124	ok	70-130	ok	66-126	ok
108-05-4	Vinyl Acetate	151.455	137	111	76-147	ok	70-130	ok	56-139	ok
78-93-3	2-Butanone	54.329	51.8	105	70-125	ok	70-130	ok	67-130	ok
156-59-2	cis-1,2-Dichloroethene	27.128	27.0	100	64-120	ok	70-130	ok	70-121	ok
108-20-3	Diisopropyl Ether	54.781	53.3	103	64-120	ok	70-130	ok	70-117	ok
141-78-6	Ethyl Acetate	55.666	49.8	112	56-120	ok	70-130	ok	65-128	ok
110-54-3	n-Hexane	28.829	26.5	109	60-125	ok	70-130	ok	63-120	ok
67-66-3	Chloroform	25.976	27.0	96	64-121	ok	70-130	ok	68-123	ok
109-99-9	Tetrahydrofuran	53.851	50.5	107	67-117	ok	70-130	ok	64-123	ok
637-92-3	Ethyl tert-Butyl Ether	58.170	53.0	110	69-121	ok	70-130	ok	61-130	ok
107-06-2	1,2-Dichloroethane	24.084	25.8	93	64-138	ok	70-130	ok	65-128	ok
71-55-6	1,1,1-Trichloroethane	23.725	26.3	90	67-125	ok	70-130	ok	68-125	ok
108-21-4	Isopropyl Acetate	0.000	#N/A	#N/A	-	#N/A	70-130	#N/A	65-129	#N/A
71-36-3	1-Butanol	0.000	#N/A	#N/A	-	#N/A	70-130	#N/A	62-133	#N/A
71-43-2	Benzene	24.472	25.8	95	73-128	ok	70-130	ok	69-119	ok
56-23-5	Carbon Tetrachloride	23.921	26.3	91	71-134	ok	70-130	ok	68-132	ok
110-82-7	Cyclohexane	56.525	53.5	106	71-118	ok	70-130	ok	70-117	ok
994-05-8	tert-Amyl Methyl Ether	58.200	53.0	110	70-126	ok	70-130	ok	62-133	ok
78-87-5	1,2-Dichloropropane	27.812	26.8	104	68-121	ok	70-130	ok	69-123	ok
75-27-4	Bromodichloromethane	25.827	27.3	95	70-125	ok	70-130	ok	72-128	ok
79-01-6	Trichloroethene	23.629	26.8	88	68-124	ok	70-130	ok	71-123	ok
123-91-1	1,4-Dioxane	28.623	26.8	107	76-127	ok	70-130	ok	71-122	ok
540-84-1	Isooctane	28.756	26.8	107	62-124	ok	70-130	ok	68-121	ok
80-62-6	Methyl Methacrylate	57.543	53.5	108	77-118	ok	70-130	ok	70-128	ok
142-82-5	n-Heptane	28.908	26.8	108	72-121	ok	70-130	ok	69-123	ok
10061-01-5	cis-1,3-Dichloropropene	28.598	26.5	108	87-137	ok	70-130	ok	70-128	ok
108-10-1	4-Methyl-2-pentanone	60.992	53.3	114	67-137	ok	70-130	ok	67-130	ok

ALS Environmental

LCS Acceptance Criteria

ICV R09061024_25ng

	RT
Bromochloromethane (IS1)	7.27
1,4-Difluorobenzene (IS2)	9.33
Chlorobenzene-d5 (IS3)	14.85

Datafile: 06102417.D
Instrument: MS-09
Date: 6/10/2024

CAS No	Analyte	Amount Found	Spike Amount	% REC	ALS LCS Limits	ALS Pass/Fail	70-130 LCS Limits	70-130 Pass/Fail	DOD LCS Limits	DOD Pass/Fail
10061-02-6	trans-1,3-Dichloropropene	26.233	24.5	107	73-127	ok	70-130	ok	75-133	ok
79-00-5	1,1,2-Trichloroethane	26.355	27.0	98	71-119	ok	70-130	ok	73-119	ok
108-88-3	Toluene	25.496	26.8	95	64-121	ok	70-130	ok	66-119	ok
591-78-6	2-Hexanone	59.699	53.3	112	70-136	ok	70-130	ok	62-128	ok
124-48-1	Dibromochloromethane	24.250	26.8	90	67-128	ok	70-130	ok	70-130	ok
106-93-4	1,2-Dibromoethane	25.344	25.8	98	69-129	ok	70-130	ok	74-122	ok
123-86-4	Butyl Acetate	62.755	53.3	118	70-135	ok	70-130	ok	65-134	ok
111-65-9	n-Octane	29.183	26.8	109	66-124	ok	70-130	ok	69-121	ok
127-18-4	Tetrachloroethene	23.358	26.8	87	55-132	ok	70-130	ok	66-124	ok
108-90-7	Chlorobenzene	24.213	27.3	89	63-124	ok	70-130	ok	70-119	ok
100-41-4	Ethylbenzene	26.649	27.3	98	64-119	ok	70-130	ok	70-124	ok
179601-23-1	m- & p-Xylene	52.360	54.0	97	64-121	ok	70-130	ok	61-134	ok
75-25-2	Bromoform	25.664	27.3	94	63-132	ok	70-130	ok	66-139	ok
100-42-5	Styrene	27.205	26.8	102	71-125	ok	70-130	ok	73-127	ok
95-47-6	o-Xylene	26.003	27.0	96	66-122	ok	70-130	ok	67-125	ok
111-84-2	n-Nonane	29.663	26.8	111	65-129	ok	70-130	ok	63-128	ok
79-34-5	1,1,2,2-Tetrachloroethane	26.152	27.0	97	71-128	ok	70-130	ok	65-127	ok
98-82-8	Cumene	25.127	26.5	95	66-126	ok	70-130	ok	68-124	ok
80-56-8	alpha-Pinene	28.540	27.0	106	65-129	ok	70-130	ok	62-136	ok
103-65-1	n-Propylbenzene	25.606	26.8	96	67-126	ok	70-130	ok	69-123	ok
620-14-4	3-Ethyltoluene	0.000	#N/A	#N/A	-	#N/A	70-130	#N/A	62-123	#N/A
622-96-8	4-Ethyltoluene	26.216	27.3	96	67-128	ok	70-130	ok	67-129	ok
108-67-8	1,3,5-Trimethylbenzene	26.100	27.3	96	66-125	ok	70-130	ok	67-130	ok
98-83-9	alpha-Methylstyrene	0.000	#N/A	#N/A	-	#N/A	70-130	#N/A	67-128	#N/A
611-14-3	2-Ethyltoluene	0.000	#N/A	#N/A	-	#N/A	70-130	#N/A	66-121	#N/A
95-63-6	1,2,4-Trimethylbenzene	25.640	26.5	97	67-130	ok	70-130	ok	66-132	ok
124-18-5	n-Decane	0.000	#N/A	#N/A	-	#N/A	70-130	#N/A	70-118	#N/A
100-44-7	Benzyl Chloride	56.871	53.8	106	58-151	ok	70-130	ok	50-147	ok
541-73-1	1,3-Dichlorobenzene	22.084	26.8	82	57-135	ok	70-130	ok	65-130	ok
106-46-7	1,4-Dichlorobenzene	21.762	26.8	81	56-129	ok	70-130	ok	60-131	ok
135-98-8	sec-Butylbenzene	25.278	26.5	95	64-132	ok	70-130	ok	68-125	ok
99-87-6	p-Isopropyltoluene	24.863	26.3	95	65-125	ok	70-130	ok	67-130	ok
526-73-8	1,2,3-Trimethylbenzene	0.000	#N/A	#N/A	-	#N/A	70-130	#N/A	60-134	#N/A
95-50-1	1,2-Dichlorobenzene	22.354	26.5	84	57-138	ok	70-130	ok	63-129	ok
5989-27-5	d-Limonene	28.611	26.0	110	70-129	ok	70-130	ok	65-136	ok
96-12-8	1,2-Dibromo-3-Chloropropane	50.499	53.3	95	63-138	ok	70-130	ok	73-133	ok
1120-21-4	n-Undecane	0.000	#N/A	#N/A	-	#N/A	70-130	#N/A	69-123	#N/A
120-82-1	1,2,4-Trichlorobenzene	45.508	55.0	83	50-137	ok	70-130	ok	55-142	ok
91-20-3	Naphthalene	23.811	27.5	87	50-157	ok	70-130	ok	57-138	ok
112-40-3	n-Dodecane	0.000	#N/A	#N/A	-	#N/A	70-130	#N/A	62-147	#N/A
87-68-3	Hexachloro-1,3-butadiene	20.280	26.8	76	50-133	ok	70-130	ok	56-138	ok
108-94-1	Cyclohexanone	0.000	#N/A	#N/A	-	#N/A	70-130	#N/A	61-132	#N/A
98-06-6	tert-Butylbenzene	25.365	26.8	95	63-130	ok	70-130	ok	65-124	ok
104-51-8	n-Butylbenzene	25.333	26.3	96	69-133	ok	70-130	ok	66-130	ok

Response Factor Report MS09

Method Path : I:\MS09\METHODS\
Method File : C09041824.M
Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
Last Update : Fri Apr 19 11:07:52 2024
Response Via : Initial Calibration

4/19/24

Calibration Files
0.40=04182428.D 1.0 =04182429.D 2.5 =04182430.D 5.0 =04182431.D 25 =04182432.D 50 =04182

		Compound	0.40	1.0	2.5	5.0	25	50	100	Avg	%RSD
1)	IR	Bromochloromethane...	----------	ISTD	----------						
2)	T	Chloropentaflu...	1.847	1.723	1.621	1.619	1.477	1.365	1.233	1.555	13.60
3)	T	1,1,1,2-Tetraf...	1.479	1.392	1.321	1.294	1.217	1.182	1.093	1.283	10.19
4)	T	1,1-Difluoroet...	1.308	1.174	1.107	1.083	1.043	1.013	0.912	1.091	11.52
5)	T	Chlorodifluoro...	0.484	0.448	0.432	0.428	0.411	0.400	0.378	0.426	8.10
6)	T	1-Chloro-1,1-D...	3.256	3.006	2.887	2.826	2.670	2.598	2.470	2.816	9.42
7)	T	Dichlorofluoro...	3.244	3.057	2.921	2.876	2.754	2.673	2.540	2.866	8.29
8)	T	Vinylbromide	1.221	1.134	1.070	1.047	1.042	1.007	0.966	1.070	7.92
9)	T	2,2-Dichloro-1...	1.981	1.829	1.725	1.735	1.658	1.641	1.573	1.735	7.83
10)	T	2-Methylbutane	1.762	1.590	1.501	1.493	1.408	1.376	1.307	1.491	10.14
11)	T	Methyl Acetate	4.737	4.411	4.247	4.192	4.068	4.019	3.813	4.212	7.08
12)	T	2-Methylpentane	1.246	1.137	1.083	1.069	1.034	1.025	0.981	1.082	8.08
13)	T	2,2-Dichloropr...	2.172	2.039	2.013	2.027	2.017	2.029	1.972	2.038	3.08
14)	T	1,1-Dichloropr...	2.012	1.863	1.743	1.742	1.731	1.726	1.660	1.782	6.60
15)	T	Thiophene	2.870	2.624	2.549	2.511	2.484	2.446	2.341	2.546	6.57
16)	IR	1,4-Difluorobenzen...	----------	ISTD	----------						
17)	T	2,3-Dimethylpe...	0.689	0.634	0.602	0.599	0.583	0.575	0.552	0.605	7.45
18)	T	Dibromomethane	0.257	0.225	0.217	0.214	0.218	0.216	0.210	0.222	7.13
19)	IR	Chlorobenzene-d5 (...	----------	ISTD	----------						
20)	T	Methyl Cyclohe...	2.458	2.253	2.108	2.118	2.078	2.024	1.975	2.145	7.60
21)	T	1,3-Dichloropr...	1.857	1.738	1.640	1.642	1.622	1.599	1.567	1.666	5.96
22)	T	1,1,1,2-Tetrac...	1.183	1.111	1.085	1.089	1.103	1.087	1.054	1.102	3.63
23)	T	1-Chlorohexane	1.697	1.552	1.491	1.529	1.540	1.526	1.488	1.546	4.58
24)	T	1,2,3-Trichlor...	1.791	1.678	1.613	1.615	1.688	1.666	1.630	1.669	3.70
25)	T	Bromobenzene	2.054	1.977	1.852	1.848	2.001	1.999	1.974	1.958	4.00
26)	T	2-Chlorotoluene	4.040	3.714	3.489	3.496	3.602	3.530	3.391	3.609	5.96
27)	T	4-Chlorotoluene	4.021	3.674	3.472	3.469	3.740	3.675	3.539	3.655	5.28
28)	T	Indane	4.320	4.110	4.034	4.059	4.339	4.187	3.890	4.134	3.89
29)	T	Indene	2.823	2.822	2.840	2.921	3.715	3.630	3.446	3.171	12.86
30)	T	1,2,4,5-Tetram...	4.113	4.029	3.992	4.111	4.799	4.560	4.319	4.275	7.09
31)	T	1,2,3,4-Tetram...	4.339	4.291	4.214	4.224	4.612	4.467	4.029	4.311	4.37
32)	T	1,2,3,5-Tetram...	3.953	3.912	3.861	3.924	4.546	4.382	4.059	4.091	6.50
33)	T	1,2,3-Trichlor...	1.359	1.323	1.296	1.317	1.754	1.732	1.673	1.494	14.31

(#) = Out of Range

C09041824.M Fri Apr 19 11:08:06 2024

4/25/24

Std#: **Working Standards**

(1) 200 ng/L Working Std. ID: S37-04092404

(2) 20 ng/L Working Std. ID: S37-04092405

Injection Amts.(L):	0.020	0.050	0.125	0.250	0.125	0.250	0.500
Standards Used:	(2)	(2)	(2)	(2)	(1)	(1)	(1)
Compounds/ Concentrations (ng):	0.4ng	1.0ng	2.5ng	5.0ng	25ng	50ng	100ng
Vinyl bromide	0.400	1.000	2.500	5.00	25.00	50.0	100
2-Methylbutane (Isopentane)	0.408	1.020	2.550	5.10	25.50	51.0	102
2-Methylpentane	0.400	1.000	2.500	5.00	25.00	50.0	100
2,2-Dichloropropane	0.396	0.990	2.475	4.95	24.75	49.5	99
1,1-Dichloropropene	0.416	1.040	2.600	5.20	26.00	52.0	104
Thiophene	0.404	1.010	2.525	5.05	25.25	50.5	101
2,3-Dimethylpentane	0.416	1.040	2.600	5.20	26.00	52.0	104
Dibromomethane	0.428	1.070	2.675	5.35	26.75	53.5	107
1,3-Dichloropropane	0.416	1.040	2.600	5.20	26.00	52.0	104
1,1,1,2-Tetrachloroethane	0.348	0.870	2.175	4.35	21.75	43.5	87
1-Chlorohexane	0.412	1.030	2.575	5.15	25.75	51.5	103
1,2,3-Trichloropropane	0.420	1.050	2.625	5.25	26.25	52.5	105
Bromobenzene	0.420	1.050	2.625	5.25	26.25	52.5	105
2-Chlorotoluene	0.424	1.060	2.650	5.30	26.50	53.0	106
4-Chlorotoluene	0.404	1.010	2.525	5.05	25.25	50.5	101
Indane	0.396	0.990	2.475	4.95	24.75	49.5	99
Indene	0.376	0.940	2.350	4.70	23.50	47.0	94
1,2,4,5-Tetramethylbenzene	0.404	1.010	2.525	5.05	25.25	50.5	101
1,2,3,4-Tetramethylbenzene	0.412	1.030	2.575	5.15	25.75	51.5	103
1,2,3,5-Tetramethylbenzene	0.404	1.010	2.525	5.05	25.25	50.5	101
1,2,3-Trichlorobenzene	0.420	1.050	2.625	5.25	26.25	52.5	105
Chloropentafluoroethane (R115)	0.396	0.990	2.475	4.95	24.75	49.5	99
2,2-Dichloro-1,1,1-trifluoroethane (R123)	0.416	1.040	2.600	5.20	26.00	52.0	104
1,1-Difluoroethane (R152a)	0.424	1.060	2.650	5.30	26.50	53.0	106
Chlorodifluoromethane (R22)	0.416	1.040	2.600	5.20	26.00	52.0	104
Dichlorofluoromethane (R21)	0.396	0.990	2.475	4.95	24.75	49.5	99
1,1,1,2-Tetrafluoroethane (R134a)	0.400	1.000	2.500	5.00	25.00	50.0	100
1-Chloro-1,1-Difluoroethane	0.416	1.040	2.600	5.20	26.00	52.0	104
Methyl Acetate	0.384	0.960	2.400	4.80	24.00	48.0	96
Methylcyclohexane	0.428	1.070	2.675	5.35	26.75	53.5	107
Chlorotrifluoroethene	0.408	1.020	2.550	5.10	25.50	51.0	102

Calibration Status Report MS09

Method : I:\MS09\METHODS\C09041824.M (RTE Integrator)
Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
Last Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration

4/19/24

#	ID	Conc	ISTD Conc	Path\File
1	0.40	0	13	I:\MS09\DATA\2024_04\18\04182428.D
2	1.0	1	13	I:\MS09\DATA\2024_04\18\04182429.D
3	2.5	2	13	I:\MS09\DATA\2024_04\18\04182430.D
4	5.0	5	13	I:\MS09\DATA\2024_04\18\04182431.D
5	25	25	13	I:\MS09\DATA\2024_04\18\04182432.D
6	50	50	13	I:\MS09\DATA\2024_04\18\04182433.D
7	100	99	13	I:\MS09\DATA\2024_04\18\04182434.D

#	ID	Update Time	Quant Time	Acquisition Time
1	0.40	Apr 19 11:06 2024	Apr 19 11:00 2024	19 Apr 2024 00:34
2	1.0	Apr 19 11:06 2024	Apr 19 10:59 2024	19 Apr 2024 1:06
3	2.5	Apr 19 11:06 2024	Apr 19 10:58 2024	19 Apr 2024 1:38
4	5.0	Apr 19 11:07 2024	Apr 19 10:57 2024	19 Apr 2024 2:10
5	25	Apr 19 11:07 2024	Apr 19 10:55 2024	19 Apr 2024 2:42
6	50	Apr 19 11:07 2024	Apr 19 11:01 2024	19 Apr 2024 3:14
7	100	Apr 19 11:07 2024	Apr 19 11:03 2024	19 Apr 2024 3:46

C09041824.M Fri Apr 19 11:11:02 2024

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 04\18\04182428.D Vial: 14
Acq On : 19 Apr 2024 00:34 Operator: SC
Sample : 0.4ng TO-15 Custom ICAL Inst : MS09
Misc : S37-03252401/S37-04042405 (5/4)

Quant Time: Apr 19 11:00:35 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 10:57:22 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

4/19/24

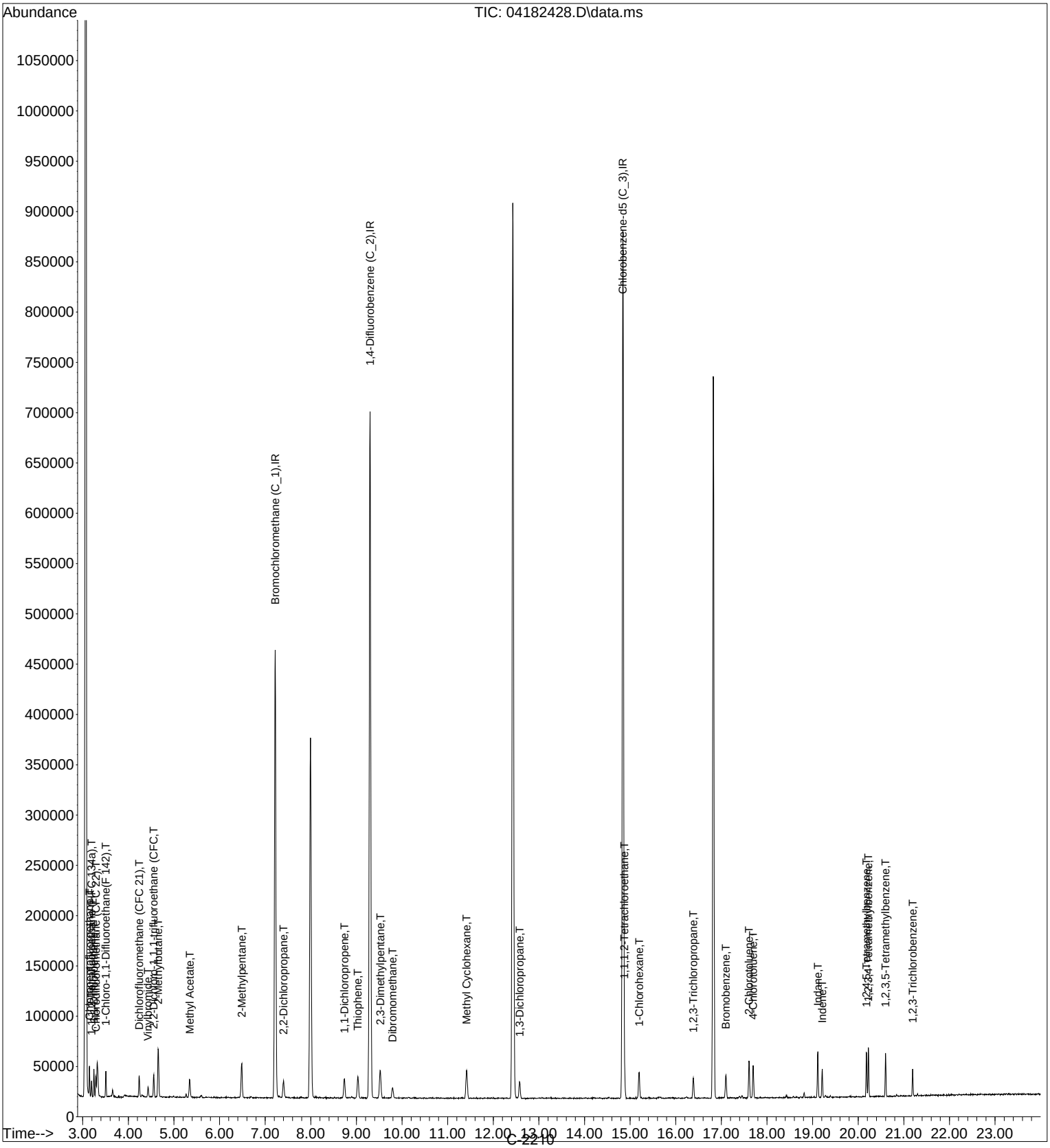
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.22	130	147263	12.500	ng		-0.01
16) 1,4-Difluorobenzene (C 2)	9.30	114	635436	12.500	ng		0.00
19) Chlorobenzene-d5 (C_3)	14.84	54	156061	12.500	ng		0.00
Target Compounds							Qvalue
2) Chloropentafluoroethane	3.15	85	8618	0.529	ng		99
3) 1,1,1,2-Tetrafluoroeth...	3.19	83	6968	0.610	ng		99
4) 1,1-Difluoroethane	3.24	65	6533	0.536	ng		86
5) Chlorodifluoromethane ...	3.29	67	2373	0.638	ng		97
6) 1-Chloro-1,1-Difluoroe...	3.51	65	15955	0.655	ng	#	99
7) Dichlorofluoromethane ...	4.24	67	15135	0.529	ng		99
8) Vinylbromide	4.43	108	5755	0.477	ng		100
9) 2,2-Dichloro-1,1,1-tri...	4.56	83	9710	0.505	ng		99
10) 2-Methylbutane	4.66	57	8468	0.654	ng		96
11) Methyl Acetate	5.35	43	21428	0.701	ng		99
12) 2-Methylpentane	6.49	71	5872	0.499	ng		93
13) 2,2-Dichloropropane	7.40	77	10134	0.566	ng		98
14) 1,1-Dichloropropene	8.74	75	9859	0.540	ng		97
15) Thiophene	9.03	84	13658	0.480	ng		99
17) 2,3-Dimethylpentane	9.53	56	14574	0.638	ng		99
18) Dibromomethane	9.79	174	5584	0.504	ng		96
20) Methyl Cyclohexane	11.42	55	13134	0.471	ng		98
21) 1,3-Dichloropropane	12.58	76	9644	0.333	ng		99
22) 1,1,1,2-Tetrachloroethane	14.87	131	5139	0.280	ng		99
23) 1-Chlorohexane	15.20	91	8731	0.318	ng		99
24) 1,2,3-Trichloropropane	16.38	75	9389	0.332	ng		98
25) Bromobenzene	17.10	77	10770	0.328	ng		98
26) 2-Chlorotoluene	17.61	91	21387	0.367	ng		99
27) 4-Chlorotoluene	17.70	91	20280	0.335	ng		95
28) Indane	19.12	117	21357	0.303	ng		97
29) Indene	19.21	115	13252	0.232	ng		99
30) 1,2,4,5-Tetramethylben...	20.18	119	20748	0.360	ng		97
31) 1,2,3,4-Tetramethylben...	20.22	119	22319	0.366	ng		99
32) 1,2,3,5-Tetramethylben...	20.60	119	19937	0.376	ng		99
33) 1,2,3-Trichlorobenzene	21.19	180	7127	0.334	ng		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 04\18\04182428.D Vial: 14
Acq On : 19 Apr 2024 00:34 Operator: SC
Sample : 0.4ng TO-15 Custom ICAL Inst : MS09
Misc : S37-03252401/S37-04042405 (5/4)

Quant Time: Apr 19 11:00:35 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 10:57:22 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 04\18\04182429.D Vial: 14
Acq On : 19 Apr 2024 1:06 Operator: SC
Sample : 1.0ng TO-15 Custom ICAL Inst : MS09
Misc : S37-03252401/S37-04042405 (5/4)

Quant Time: Apr 19 10:59:06 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 10:57:22 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

4/19/24

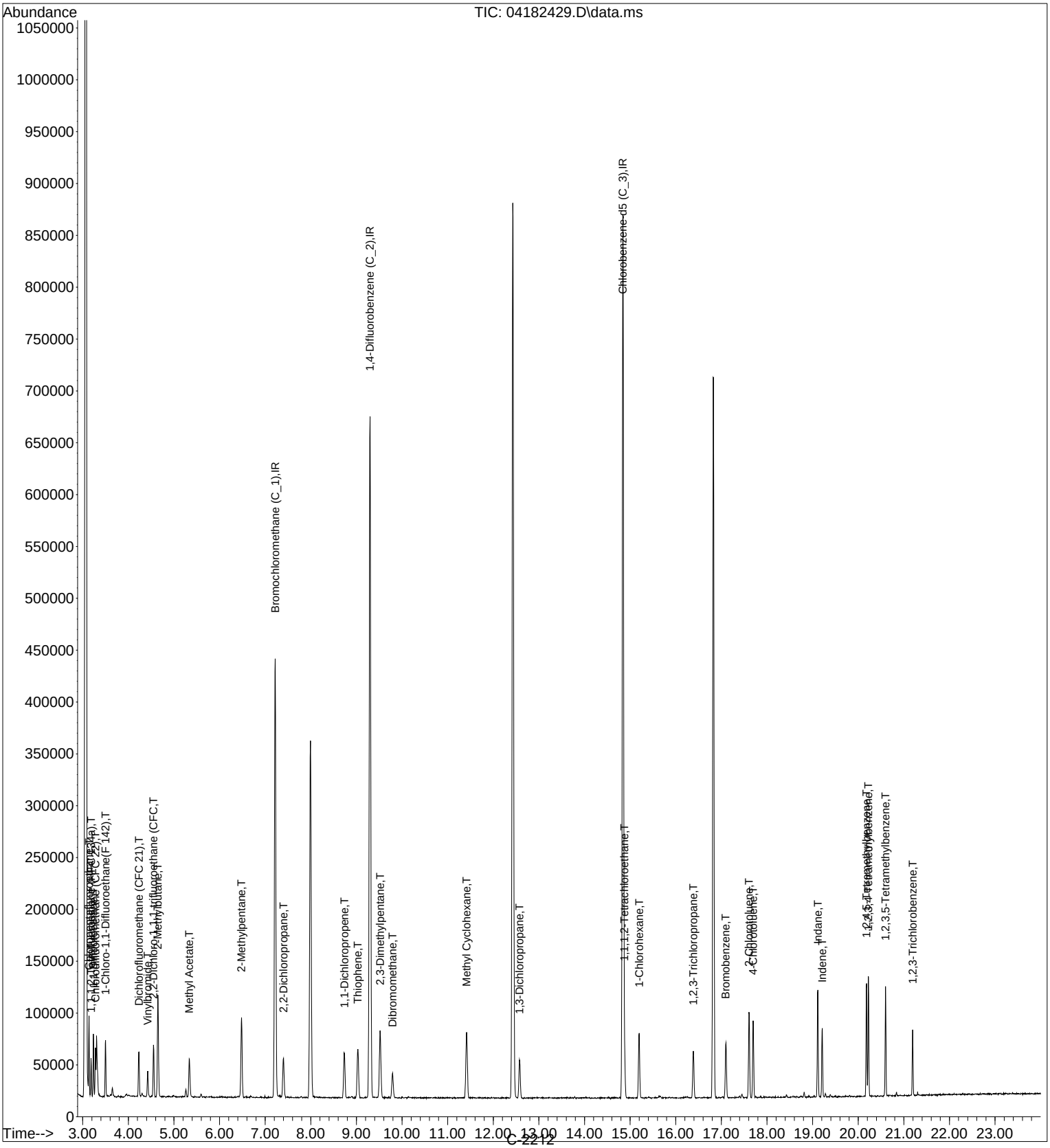
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (C 1)	7.22	130	143906	12.500	ng	-0.01
16) 1,4-Difluorobenzene (C 2)	9.30	114	619156	12.500	ng	0.00
19) Chlorobenzene-d5 (C_3)	14.84	54	150972	12.500	ng	0.00
Target Compounds						Qvalue
2) Chloropentafluoroethane	3.14	85	19643	1.235	ng	99
3) 1,1,1,2-Tetrafluoroeth...	3.18	83	16031	1.437	ng	99
4) 1,1-Difluoroethane	3.23	65	14331	1.203	ng	92
5) Chlorodifluoromethane ...	3.28	67	5368	1.476	ng	100
6) 1-Chloro-1,1-Difluoroe...	3.50	65	35986	1.511	ng	99
7) Dichlorofluoromethane ...	4.23	67	34842	1.246	ng	99
8) Vinylbromide	4.43	108	13050	1.107	ng	99
9) 2,2-Dichloro-1,1,1-tri...	4.55	83	21902	1.166	ng	100
10) 2-Methylbutane	4.65	57	18671	1.475	ng	95
11) Methyl Acetate	5.33	43	48755	1.631	ng	100
12) 2-Methylpentane	6.48	71	13095	1.139	ng	94
13) 2,2-Dichloropropane	7.40	77	23241	1.329	ng	98
14) 1,1-Dichloropropene	8.74	75	22309	1.251	ng	97
15) Thiophene	9.03	84	30513	1.098	ng	100
17) 2,3-Dimethylpentane	9.52	56	32666	1.468	ng	98
18) Dibromomethane	9.79	174	11922	1.105	ng	99
20) Methyl Cyclohexane	11.42	55	29117	1.079	ng	100
21) 1,3-Dichloropropane	12.57	76	21831	0.780	ng	100
22) 1,1,1,2-Tetrachloroethane	14.87	131	11675	0.656	ng	97
23) 1-Chlorohexane	15.20	91	19309	0.726	ng	98
24) 1,2,3-Trichloropropane	16.38	75	21285	0.777	ng	100
25) Bromobenzene	17.09	77	25072	0.790	ng	99
26) 2-Chlorotoluene	17.61	91	47544	0.843	ng	99
27) 4-Chlorotoluene	17.70	91	44812	0.765	ng	97
28) Indane	19.12	117	49148	0.721	ng	99
29) Indene	19.21	115	32042	0.580	ng	99
30) 1,2,4,5-Tetramethylben...	20.18	119	49152	0.881	ng	100
31) 1,2,3,4-Tetramethylben...	20.22	119	53379	0.905	ng	98
32) 1,2,3,5-Tetramethylben...	20.60	119	47721	0.929	ng	99
33) 1,2,3-Trichlorobenzene	21.19	180	16784	0.812	ng	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 04\18\04182429.D Vial: 14
Acq On : 19 Apr 2024 1:06 Operator: SC
Sample : 1.0ng TO-15 Custom ICAL Inst : MS09
Misc : S37-03252401/S37-04042405 (5/4)

Quant Time: Apr 19 10:59:06 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 10:57:22 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 04\18\04182430.D Vial: 14
Acq On : 19 Apr 2024 1:38 Operator: SC
Sample : 2.5ng TO-15 Custom ICAL Inst : MS09
Misc : S37-03252401/S37-04042405 (5/4)

4/19/24

Quant Time: Apr 19 10:58:26 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 10:57:22 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

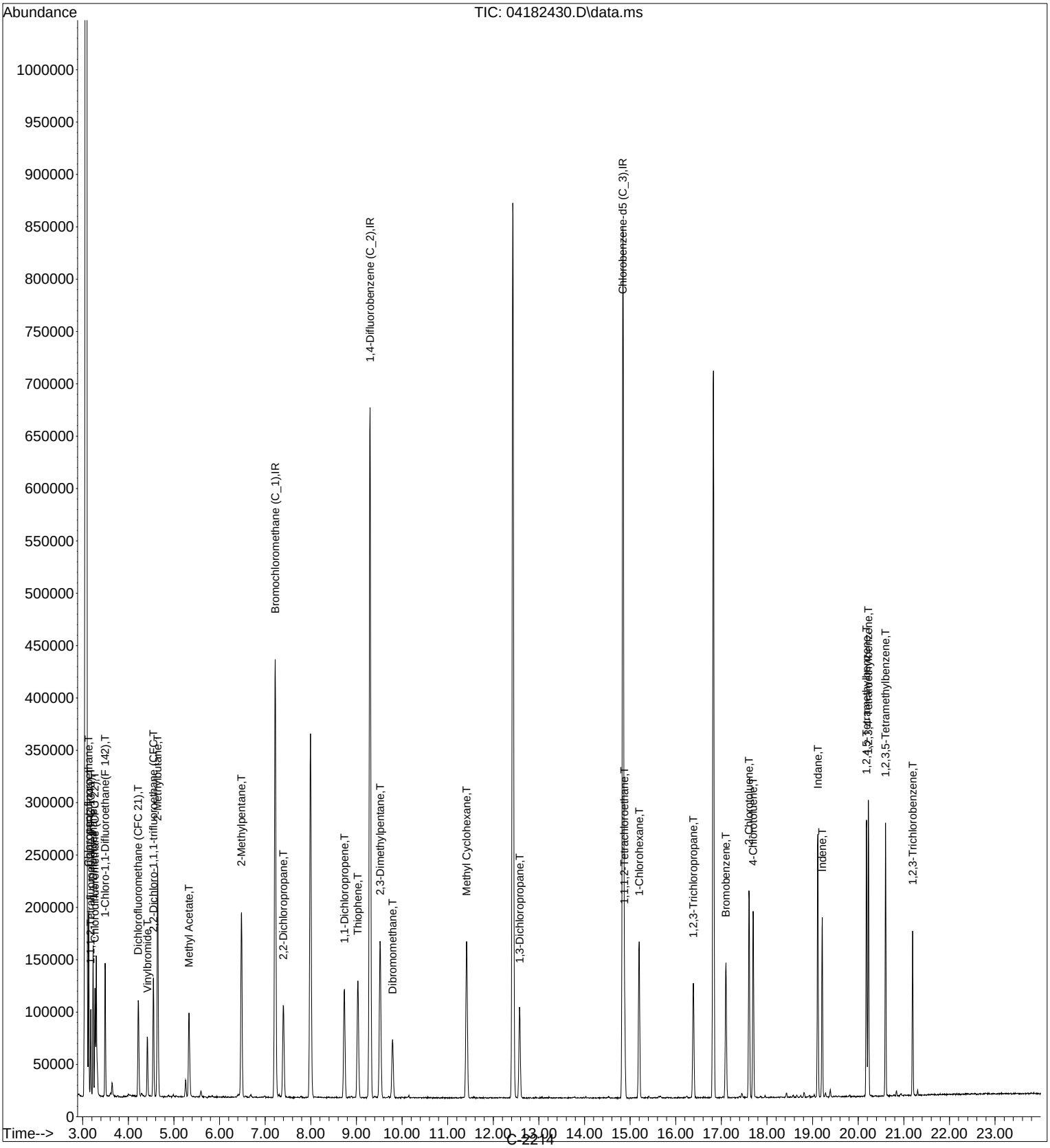
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (C 1)	7.22	130	142497	12.500	ng	-0.01
16) 1,4-Difluorobenzene (C 2)	9.30	114	621413	12.500	ng	0.00
19) Chlorobenzene-d5 (C_3)	14.84	54	150477	12.500	ng	0.00
Target Compounds						Qvalue
2) Chloropentafluoroethane	3.13	85	45736	2.903	ng	99
3) 1,1,1,2-Tetrafluoroeth...	3.18	83	37654	3.408	ng	100
4) 1,1-Difluoroethane	3.23	65	33451	2.835	ng	92
5) Chlorodifluoromethane ...	3.27	67	12810	3.558	ng	98
6) 1-Chloro-1,1-Difluoroe...	3.49	65	85569	3.629	ng	99
7) Dichlorofluoromethane ...	4.22	67	82417	2.977	ng	99
8) Vinylbromide	4.42	108	30498	2.613	ng	99
9) 2,2-Dichloro-1,1,1-tri...	4.55	83	51137	2.750	ng	100
10) 2-Methylbutane	4.64	57	43632	3.481	ng	97
11) Methyl Acetate	5.33	43	116198	3.926	ng	99
12) 2-Methylpentane	6.48	71	30866	2.711	ng	94
13) 2,2-Dichloropropane	7.40	77	56803	3.281	ng	99
14) 1,1-Dichloropropene	8.74	75	51659	2.926	ng	99
15) Thiophene	9.03	84	73359	2.665	ng	99
17) 2,3-Dimethylpentane	9.52	56	77850	3.485	ng	99
18) Dibromomethane	9.79	174	28855	2.664	ng	99
20) Methyl Cyclohexane	11.42	55	67896	2.524	ng	98
21) 1,3-Dichloropropane	12.58	76	51323	1.840	ng	99
22) 1,1,1,2-Tetrachloroethane	14.87	131	28409	1.603	ng	99
23) 1-Chlorohexane	15.20	91	46217	1.743	ng	97
24) 1,2,3-Trichloropropane	16.38	75	50973	1.867	ng	100
25) Bromobenzene	17.10	77	58530	1.849	ng	99
26) 2-Chlorotoluene	17.61	91	111297	1.979	ng	100
27) 4-Chlorotoluene	17.70	91	105525	1.807	ng	99
28) Indane	19.12	117	120201	1.768	ng	99
29) Indene	19.21	115	80354	1.460	ng	100
30) 1,2,4,5-Tetramethylben...	20.18	119	121340	2.181	ng	100
31) 1,2,3,4-Tetramethylben...	20.22	119	130627	2.222	ng	99
32) 1,2,3,5-Tetramethylben...	20.60	119	117359	2.293	ng	99
33) 1,2,3-Trichlorobenzene	21.19	180	40953	1.989	ng	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 04\18\04182430.D Vial: 14
Acq On : 19 Apr 2024 1:38 Operator: SC
Sample : 2.5ng TO-15 Custom ICAL Inst : MS09
Misc : S37-03252401/S37-04042405 (5/4)

Quant Time: Apr 19 10:58:26 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 10:57:22 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 04\18\04182431.D Vial: 14
Acq On : 19 Apr 2024 2:10 Operator: SC
Sample : 5.0ng TO-15 Custom ICAL Inst : MS09
Misc : S37-03252401/S37-04042405 (5/4)

4/19/24

Quant Time: Apr 19 10:57:46 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 10:57:22 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

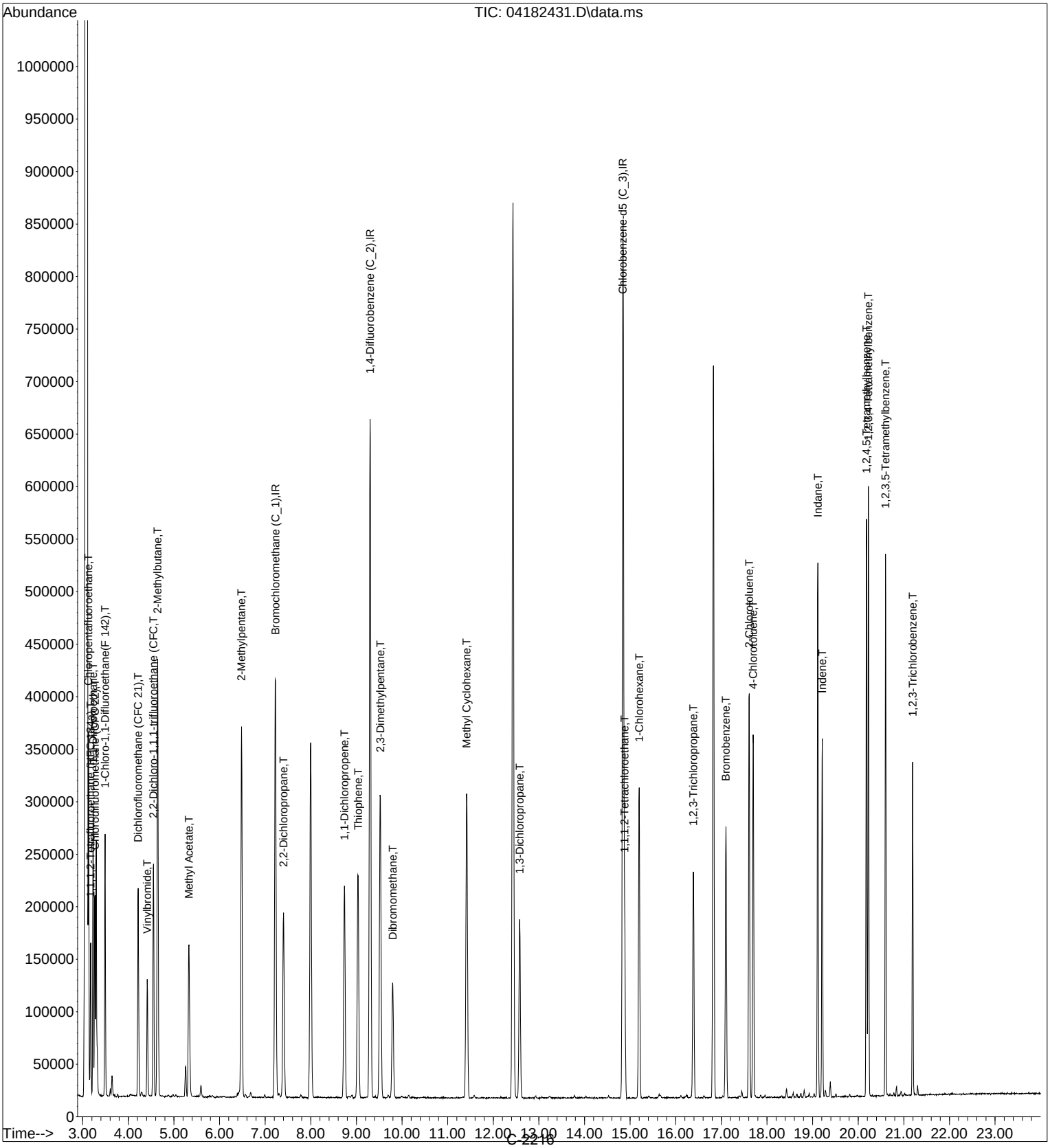
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	140225	12.500	ng	0.00
16) 1,4-Difluorobenzene (C 2)	9.30	114	611807	12.500	ng	0.00
19) Chlorobenzene-d5 (C_3)	14.84	54	148306	12.500	ng	0.00
Target Compounds						Qvalue
2) Chloropentafluoroethane	3.13	85	89881	5.798	ng	99
3) 1,1,1,2-Tetrafluoroeth...	3.18	83	72564	6.674	ng	98
4) 1,1-Difluoroethane	3.23	65	64375	5.544	ng	93
5) Chlorodifluoromethane ...	3.27	67	24978	7.050	ng	100
6) 1-Chloro-1,1-Difluoroe...	3.49	65	164829	7.103	ng	100
7) Dichlorofluoromethane ...	4.22	67	159676	5.860	ng	100
8) Vinylbromide	4.41	108	58741	5.114	ng	99
9) 2,2-Dichloro-1,1,1-tri...	4.55	83	101180	5.530	ng	100
10) 2-Methylbutane	4.64	57	85417	6.925	ng	98
11) Methyl Acetate	5.33	43	225722	7.750	ng	99
12) 2-Methylpentane	6.48	71	59985	5.353	ng	94
13) 2,2-Dichloropropane	7.40	77	112559	6.607	ng	99
14) 1,1-Dichloropropene	8.74	75	101620	5.849	ng	100
15) Thiophene	9.04	84	142229	5.251	ng	100
17) 2,3-Dimethylpentane	9.53	56	152345	6.928	ng	99
18) Dibromomethane	9.80	174	55965	5.248	ng	99
20) Methyl Cyclohexane	11.42	55	134455	5.072	ng	100
21) 1,3-Dichloropropane	12.58	76	101273	3.685	ng	100
22) 1,1,1,2-Tetrachloroethane	14.88	131	56204	3.217	ng	100
23) 1-Chlorohexane	15.20	91	93435	3.576	ng	100
24) 1,2,3-Trichloropropane	16.38	75	100570	3.737	ng	100
25) Bromobenzene	17.10	77	115094	3.690	ng	98
26) 2-Chlorotoluene	17.61	91	219850	3.966	ng	100
27) 4-Chlorotoluene	17.70	91	207821	3.610	ng	100
28) Indane	19.12	117	238356	3.558	ng	100
29) Indene	19.21	115	162885	3.003	ng	99
30) 1,2,4,5-Tetramethylben...	20.18	119	246287	4.491	ng	100
31) 1,2,3,4-Tetramethylben...	20.22	119	258096	4.455	ng	99
32) 1,2,3,5-Tetramethylben...	20.60	119	235082	4.660	ng	99
33) 1,2,3-Trichlorobenzene	21.19	180	82042	4.042	ng	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 04\18\04182431.D Vial: 14
Acq On : 19 Apr 2024 2:10 Operator: SC
Sample : 5.0ng TO-15 Custom ICAL Inst : MS09
Misc : S37-03252401/S37-04042405 (5/4)

Quant Time: Apr 19 10:57:46 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 10:57:22 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 04\18\04182432.D Vial: 15
Acq On : 19 Apr 2024 2:42 Operator: SC
Sample : 25ng TO-15 Custom ICAL Inst : MS09
Misc : S37-03252401/S37-04042404 (5/4)

4/19/24

Quant Time: Apr 19 10:55:28 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 10:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

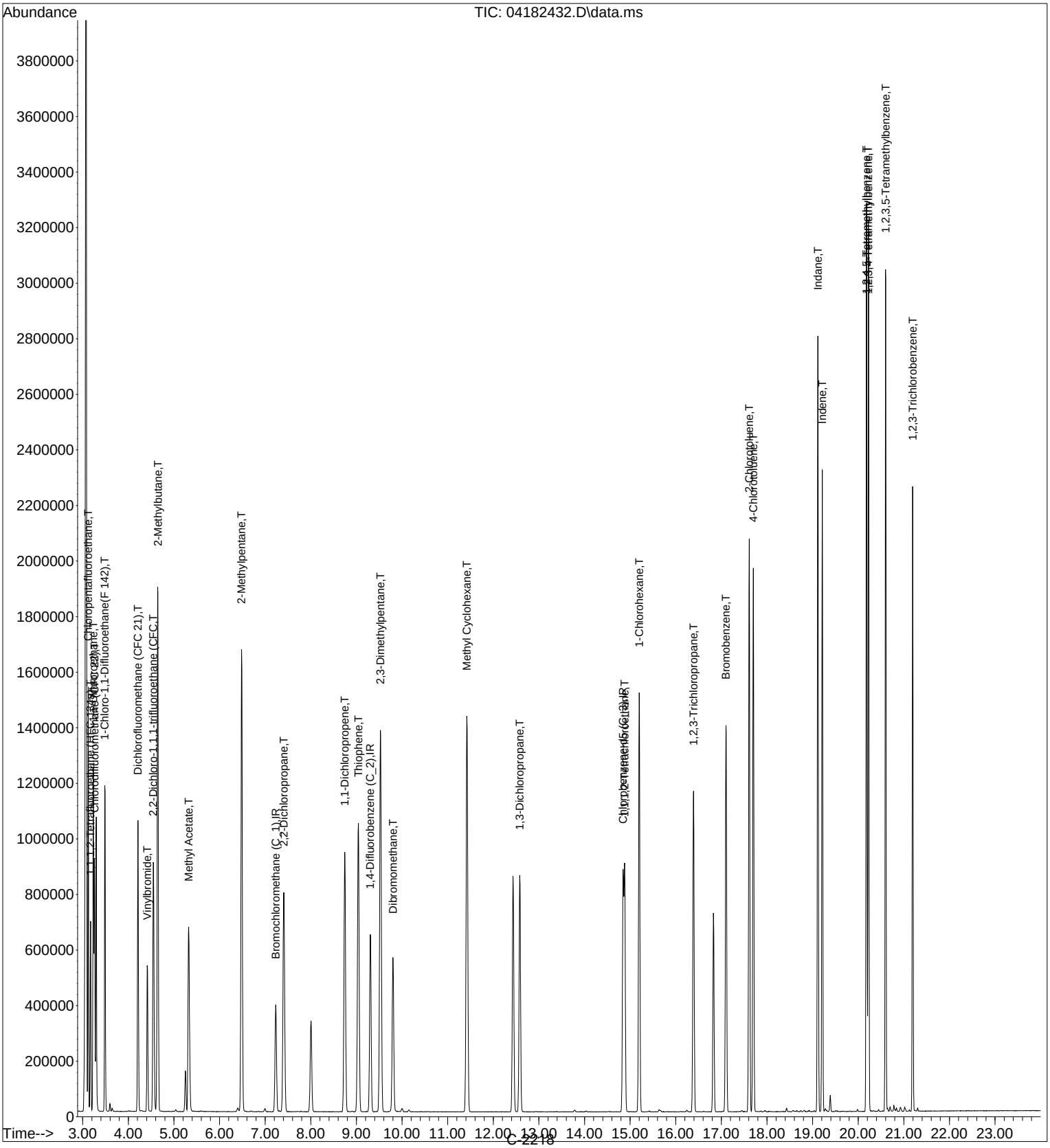
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	141875	12.500	ng	0.00
16) 1,4-Difluorobenzene (C 2)	9.30	114	613182	12.500	ng	0.00
19) Chlorobenzene-d5 (C_3)	14.85	54	150877	12.500	ng	0.00
Target Compounds						Qvalue
2) Chloropentafluoroethane	3.12	85	414990	26.457	ng	99
3) 1,1,1,2-Tetrafluoroeth...	3.17	83	345389	31.397	ng	100
4) 1,1-Difluoroethane	3.23	65	313636	26.696	ng	90
5) Chlorodifluoromethane ...	3.26	67	121161	33.802	ng	98
6) 1-Chloro-1,1-Difluoroe...	3.48	65	787929	33.559	ng	100
7) Dichlorofluoromethane ...	4.21	67	773582	28.061	ng	100
8) Vinylbromide	4.41	108	295681	25.443	ng	100
9) 2,2-Dichloro-1,1,1-tri...	4.55	83	489170	26.426	ng	100
10) 2-Methylbutane	4.65	57	407391	32.644	ng	95
11) Methyl Acetate	5.32	43	1108009	37.603	ng	99
12) 2-Methylpentane	6.48	71	293494	25.888	ng	99
13) 2,2-Dichloropropane	7.41	77	566482	32.867	ng	100
14) 1,1-Dichloropropene	8.74	75	510959	29.067	ng	100
15) Thiophene	9.04	84	711888	25.976	ng	99
17) 2,3-Dimethylpentane	9.53	56	743931	33.754	ng	99
18) Dibromomethane	9.80	174	286128	26.772	ng	98
20) Methyl Cyclohexane	11.42	55	670865	24.875	ng	99
21) 1,3-Dichloropropane	12.58	76	509121	18.209	ng	100
22) 1,1,1,2-Tetrachloroethane	14.88	131	289440	16.284	ng	98
23) 1-Chlorohexane	15.20	91	478619	18.004	ng	99
24) 1,2,3-Trichloropropane	16.39	75	534816	19.536	ng	100
25) Bromobenzene	17.10	77	634073	19.981	ng	96
26) 2-Chlorotoluene	17.61	91	1152281	20.433	ng	100
27) 4-Chlorotoluene	17.70	91	1139995	19.467	ng	100
28) Indane	19.12	117	1296361	19.023	ng	100
29) Indene	19.21	115	1053874	19.098	ng	100
30) 1,2,4,5-Tetramethylben...	20.18	119	1462457	26.216	ng	99
31) 1,2,3,4-Tetramethylben...	20.22	119	1433440	24.324	ng	99
32) 1,2,3,5-Tetramethylben...	20.60	119	1385371	26.995	ng	99
33) 1,2,3-Trichlorobenzene	21.19	180	555685	26.912	ng	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 04\18\04182432.D Vial: 15
Acq On : 19 Apr 2024 2:42 Operator: SC
Sample : 25ng TO-15 Custom ICAL Inst : MS09
Misc : S37-03252401/S37-04042404 (5/4)

Quant Time: Apr 19 10:55:28 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 10:55:17 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 04\18\04182433.D Vial: 15
Acq On : 19 Apr 2024 3:14 Operator: SC
Sample : 50ng TO-15 Custom ICAL Inst : MS09
Misc : S37-03252401/S37-04042404 (5/4)

Quant Time: Apr 19 11:01:46 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 10:57:22 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

4/19/24

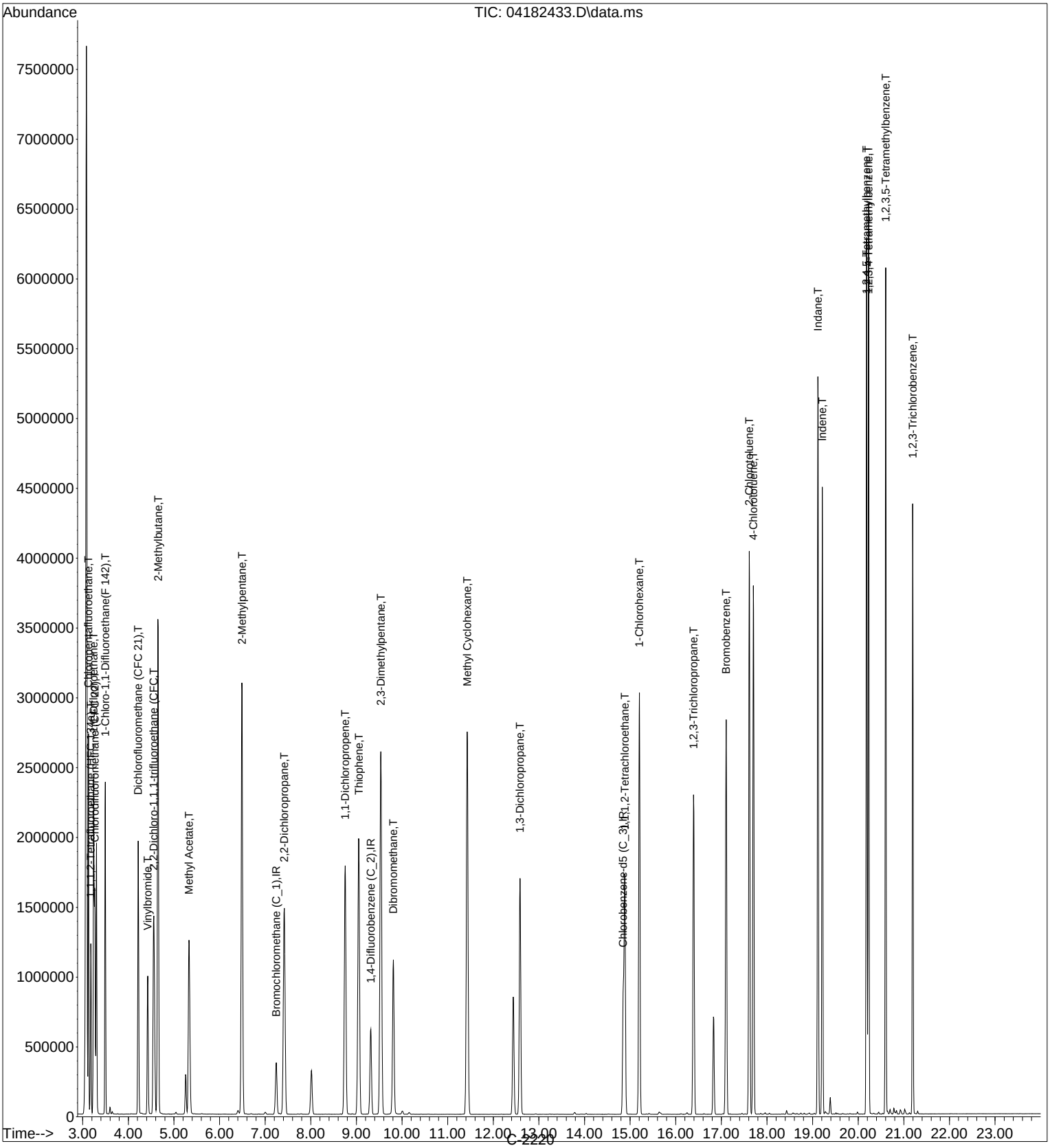
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (C 1)	7.24	130	141063	12.500	ng	0.01
16) 1,4-Difluorobenzene (C 2)	9.31	114	609582	12.500	ng	0.01
19) Chlorobenzene-d5 (C_3)	14.85	54	151721	12.500	ng	0.00
Target Compounds						Qvalue
2) Chloropentafluoroethane	3.13	85	762380	48.883	ng	100
3) 1,1,1,2-Tetrafluoroeth...	3.18	83	666744	60.957	ng	99
4) 1,1-Difluoroethane	3.24	65	605930	51.873	ng	99
5) Chlorodifluoromethane ...	3.26	67	234890	65.908	ng	99
6) 1-Chloro-1,1-Difluoroe...	3.49	65	1524743	65.315	ng	100
7) Dichlorofluoromethane ...	4.22	67	1493283	54.480	ng	100
8) Vinylbromide	4.43	108	568165	49.172	ng	99
9) 2,2-Dichloro-1,1,1-tri...	4.56	83	962981	52.322	ng	100
10) 2-Methylbutane	4.65	57	791752	63.809	ng	99
11) Methyl Acetate	5.33	43	2177200	74.313	ng	100
12) 2-Methylpentane	6.49	71	578457	51.318	ng	98
13) 2,2-Dichloropropane	7.42	77	1133174	66.125	ng	100
14) 1,1-Dichloropropene	8.75	75	1012828	57.948	ng	100
15) Thiophene	9.05	84	1394070	51.162	ng	99
17) 2,3-Dimethylpentane	9.54	56	1457697	66.529	ng	100
18) Dibromomethane	9.81	174	563028	52.993	ng	99
20) Methyl Cyclohexane	11.43	55	1314504	48.469	ng	100
21) 1,3-Dichloropropane	12.59	76	1009301	35.897	ng	99
22) 1,1,1,2-Tetrachloroethane	14.89	131	573915	32.108	ng	100
23) 1-Chlorohexane	15.20	91	953777	35.679	ng	100
24) 1,2,3-Trichloropropane	16.39	75	1061932	38.575	ng	100
25) Bromobenzene	17.11	77	1273867	39.919	ng	99
26) 2-Chlorotoluene	17.61	91	2270564	40.039	ng	100
27) 4-Chlorotoluene	17.70	91	2252431	38.249	ng	100
28) Indane	19.12	117	2515858	36.712	ng	99
29) Indene	19.21	115	2070974	37.320	ng	100
30) 1,2,4,5-Tetramethylben...	20.18	119	2795310	49.830	ng	100
31) 1,2,3,4-Tetramethylben...	20.23	119	2792137	47.116	ng	100
32) 1,2,3,5-Tetramethylben...	20.60	119	2685833	52.045	ng	100
33) 1,2,3-Trichlorobenzene	21.19	180	1103849	53.162	ng	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 04\18\04182433.D Vial: 15
Acq On : 19 Apr 2024 3:14 Operator: SC
Sample : 50ng TO-15 Custom ICAL Inst : MS09
Misc : S37-03252401/S37-04042404 (5/4)

Quant Time: Apr 19 11:01:46 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 10:57:22 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 04\18\04182434.D Vial: 15
Acq On : 19 Apr 2024 3:46 Operator: SC
Sample : 100ng TO-15 Custom ICAL Inst : MS09
Misc : S37-03252401/S37-04042404 (5/4)

Quant Time: Apr 19 11:03:31 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 10:57:22 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

4/19/24

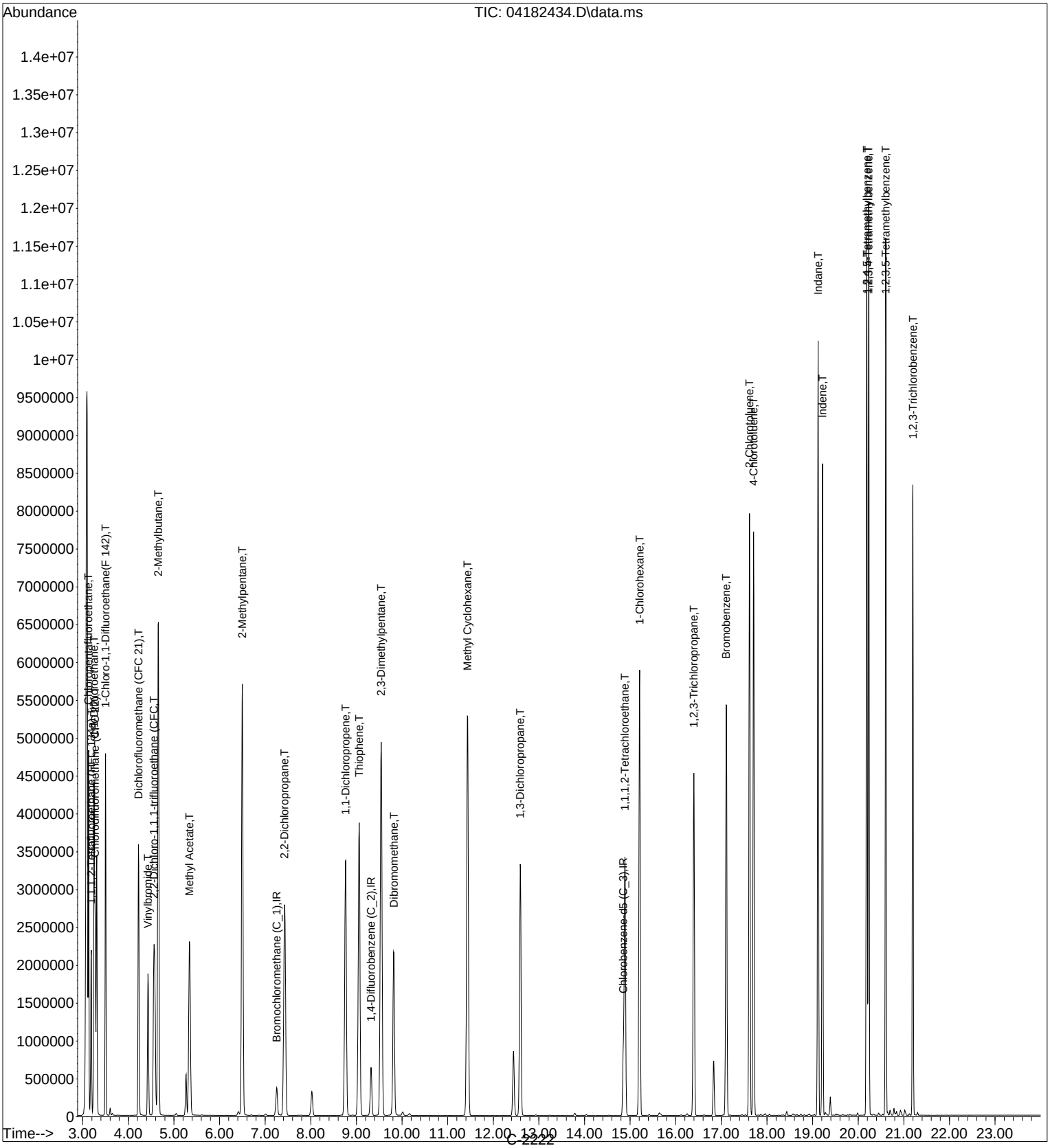
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (C 1)	7.25	130	146085	12.500	ng	0.02
16) 1,4-Difluorobenzene (C 2)	9.32	114	627116	12.500	ng	0.02
19) Chlorobenzene-d5 (C_3)	14.85	54	155220	12.500	ng	0.00
Target Compounds						Qvalue
2) Chloropentafluoroethane	3.13	85	1426260	88.307	ng	99
3) 1,1,1,2-Tetrafluoroeth...	3.19	83	1277745	112.802	ng	99
4) 1,1-Difluoroethane	3.25	65	1129221	93.347	ng	99
5) Chlorodifluoromethane ...	3.27	67	459326	124.452	ng	100
6) 1-Chloro-1,1-Difluoroe...	3.50	65	3002422	124.193	ng	100
7) Dichlorofluoromethane ...	4.22	67	2938485	103.521	ng	99
8) Vinylbromide	4.43	108	1128751	94.330	ng	99
9) 2,2-Dichloro-1,1,1-tri...	4.56	83	1912080	100.318	ng	100
10) 2-Methylbutane	4.66	57	1558277	121.267	ng	99
11) Methyl Acetate	5.34	43	4277598	140.986	ng	99
12) 2-Methylpentane	6.50	71	1146046	98.176	ng	96
13) 2,2-Dichloropropane	7.42	77	2282131	128.592	ng	100
14) 1,1-Dichloropropene	8.76	75	2017584	111.467	ng	99
15) Thiophene	9.06	84	2763042	97.917	ng	98
17) 2,3-Dimethylpentane	9.54	56	2879416	127.742	ng	99
18) Dibromomethane	9.82	174	1125829	103.001	ng	97
20) Methyl Cyclohexane	11.43	55	2624617	94.594	ng	99
21) 1,3-Dichloropropane	12.59	76	2023148	70.333	ng	99
22) 1,1,1,2-Tetrachloroethane	14.89	131	1138905	62.281	ng	100
23) 1-Chlorohexane	15.21	91	1902983	69.582	ng	100
24) 1,2,3-Trichloropropane	16.40	75	2124826	75.445	ng	100
25) Bromobenzene	17.11	77	2573791	78.836	ng	97
26) 2-Chlorotoluene	17.62	91	4463359	76.933	ng	100
27) 4-Chlorotoluene	17.71	91	4438155	73.666	ng	100
28) Indane	19.12	117	4782288	68.211	ng	98
29) Indene	19.22	115	4022238	70.849	ng	100
30) 1,2,4,5-Tetramethylben...	20.19	119	5416452	94.378	ng	99
31) 1,2,3,4-Tetramethylben...	20.23	119	5153038	84.994	ng	98
32) 1,2,3,5-Tetramethylben...	20.60	119	5090846	96.425	ng	99
33) 1,2,3-Trichlorobenzene	21.20	180	2180976	102.670	ng	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 04\18\04182434.D Vial: 15
Acq On : 19 Apr 2024 3:46 Operator: SC
Sample : 100ng TO-15 Custom ICAL Inst : MS09
Misc : S37-03252401/S37-04042404 (5/4)

Quant Time: Apr 19 11:03:31 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 10:57:22 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 04\18\04182437.D Vial: 16
Acq On : 19 Apr 2024 5:22 Operator: SC
Sample : ICV R09041824 25ng Inst : MS09
Misc : S37-03252401/S37-04092401 (5/9)

Quant Time: Apr 19 11:20:28 2024 4/19/24
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:18:24 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

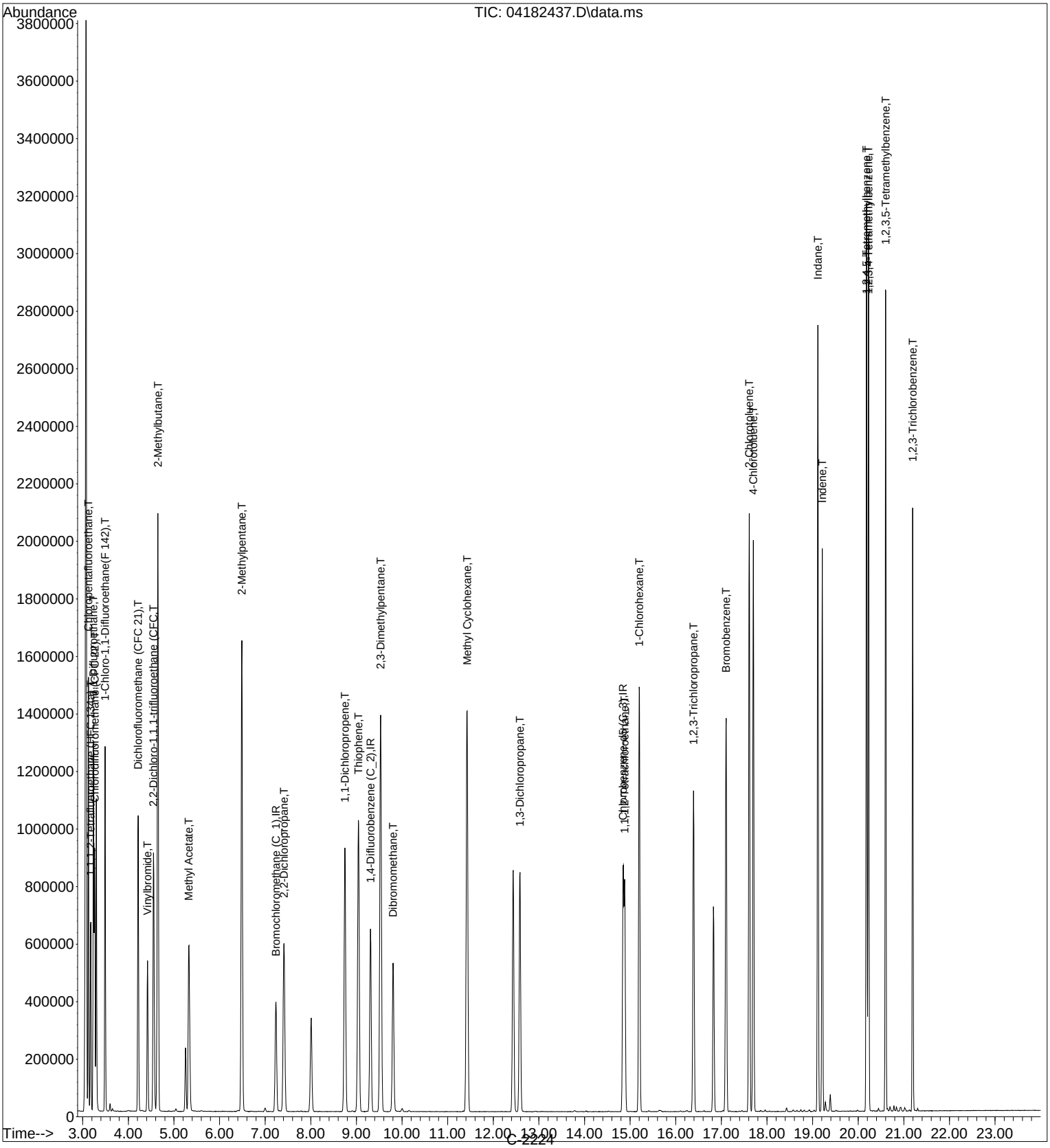
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (C 1)	7.24	130	144348	12.500	ng	-0.02
16) 1,4-Difluorobenzene (C 2)	9.31	114	614223	12.500	ng	-0.01
19) Chlorobenzene-d5 (C_3)	14.85	54	151147	12.500	ng	0.00
Target Compounds						Qvalue
2) Chloropentafluoroethane	3.13	85	428252	23.849	ng	99
3) 1,1,1,2-Tetrafluoroeth...	3.18	83	350752	23.681	ng	99
4) 1,1-Difluoroethane	3.23	65	320394	25.422	ng	99
5) Chlorodifluoromethane ...	3.26	67	121707	24.743	ng	99
6) 1-Chloro-1,1-Difluoroe...	3.49	65	806878	24.812	ng	100
7) Dichlorofluoromethane ...	4.22	67	780567	23.582	ng	100
8) Vinylbromide	4.42	108	285142	23.086	ng	99
9) 2,2-Dichloro-1,1,1-tri...	4.55	83	478770	23.902	ng	100
10) 2-Methylbutane	4.65	57	422804	24.558	ng	91
11) Methyl Acetate	5.32	43	996845	20.493	ng	100
12) 2-Methylpentane	6.49	71	286843	22.951	ng	98
13) 2,2-Dichloropropane	7.41	77	426622	18.123	ng	99
14) 1,1-Dichloropropene	8.75	75	499576	24.270	ng	100
15) Thiophene	9.04	84	702913	23.905	ng	99
17) 2,3-Dimethylpentane	9.53	56	746100	25.102	ng	100
18) Dibromomethane	9.80	174	265885	24.344	ng	99
20) Methyl Cyclohexane	11.43	55	662282	25.534	ng	100
21) 1,3-Dichloropropane	12.59	76	500950	24.863	ng	99
22) 1,1,1,2-Tetrachloroethane	14.88	131	250826	18.829	ng	99
23) 1-Chlorohexane	15.20	91	472467	25.271	ng	100
24) 1,2,3-Trichloropropane	16.39	75	515992	25.573	ng	100
25) Bromobenzene	17.11	77	627535	26.507	ng	100
26) 2-Chlorotoluene	17.61	91	1155375	26.477	ng	99
27) 4-Chlorotoluene	17.70	91	1148319	25.979	ng	100
28) Indane	19.12	117	1261146	25.227	ng	100
29) Indene	19.21	115	904310	23.583	ng	100
30) 1,2,4,5-Tetramethylben...	20.18	119	1388917	26.871	ng	100
31) 1,2,3,4-Tetramethylben...	20.23	119	1370412	26.291	ng	100
32) 1,2,3,5-Tetramethylben...	20.60	119	1314792	26.580	ng	100
33) 1,2,3-Trichlorobenzene	21.19	180	520610	28.828	ng	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 04\18\04182437.D Vial: 16
Acq On : 19 Apr 2024 5:22 Operator: SC
Sample : ICV R09041824 25ng Inst : MS09
Misc : S37-03252401/S37-04092401 (5/9)

Quant Time: Apr 19 11:20:28 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:18:24 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



ALS Environmental

ICV / LCS Custom Report Acceptance Criteria

ICV R09041824_25ng

4/19/24

	RT
Bromochloromethane (IS1)	7.24
1,4-Difluorobenzene (IS2)	9.31
Chlorobenzene-d5 (IS3)	14.85

Datafile: 04182437.D
Instrument: MS-09
Date: 4/19/2024

CAS No	Analyte	Amount Found	Spike Amount	% REC	ALS LCS Limits	Pass/Fail
76-15-3	Chloropentafluoroethane	23.849	25.5	94	-	#VALUE!
811-97-2	1,1,1,2-Tetrafluoroethane (HFC 134a)	23.681	25.3	94	70-130	ok
75-37-6	1,1-Difluoroethane	25.422	26.3	97	70-130	ok
75-45-6	Chlorodifluoromethane (CFC 22)	24.743	26.3	94	70-130	ok
75-68-3	1-Chloro-1,1-Difluoroethane(F 142)	24.812	26.0	95	70-130	ok
75-43-4	Dichlorofluoromethane (CFC 21)	23.582	25.0	94	70-130	ok
593-60-2	Vinylbromide	23.086	24.8	93	70-130	ok
306-83-2	2,2-Dichloro-1,1,1-trifluoroethane (CFC	23.902	26.3	91	70-130	ok
78-78-4	2-Methylbutane	24.558	25.5	96	70-130	ok
79-20-9	Methyl Acetate	20.493	24.5	84	70-130	ok
107-83-5	2-Methylpentane	22.951	25.0	92	70-130	ok
594-20-7	2,2-Dichloropropane	18.123	24.8	73	70-130	ok
563-58-6	1,1-Dichloropropene	24.270	25.8	94	70-130	ok
110-02-1	Thiophene	23.905	25.3	94	70-130	ok
565-59-3	2,3-Dimethylpentane	25.102	26.0	97	70-130	ok
74-95-3	Dibromomethane	24.344	26.8	91	70-130	ok
108-87-2	Methyl Cyclohexane	25.534	26.8	95	70-130	ok
142-28-9	1,3-Dichloropropane	24.863	26.0	96	70-130	ok
630-20-6	1,1,1,2-Tetrachloroethane	18.829	27.3	69	70-130	FAIL
544-10-5	1-Chlorohexane	25.271	25.8	98	70-130	ok
96-18-4	1,2,3-Trichloropropane	25.573	26.3	97	70-130	ok
108-86-1	Bromobenzene	26.507	26.3	101	70-130	ok
95-49-8	2-Chlorotoluene	26.477	26.5	100	70-130	ok
106-43-4	4-Chlorotoluene	25.979	25.3	103	70-130	ok
496-11-7	Indan	25.227	24.8	102	70-130	ok
95-13-6	Indene	23.583	23.5	100	70-130	ok
95-93-2	1,2,4,5-Tetramethylbenzene	26.871	25.0	107	70-130	ok
488-23-3	1,2,3,4-Tetramethylbenzene	26.291	25.5	103	70-130	ok
527-53-7	1,2,3,5-Tetramethylbenzene	26.580	25.0	106	70-130	ok
87-61-6	1,2,3-Trichlorobenzene	28.828	25.8	112	70-130	ok

ALS Environmental

ICV / LCS Custom Report Acceptance Criteria

ICV R09041824_25ng

	RT
Bromochloromethane (IS1)	7.24
1,4-Difluorobenzene (IS2)	9.31
Chlorobenzene-d5 (IS3)	14.85

Datafile: 04182437.D
Instrument: MS-09
Date: 4/19/2024

CAS No	Analyte	Amount Found	Spike Amount	% REC	ALS LCS Limits	Pass/Fail

Evaluate Continuing Calibration Report

Data File : I:\MS09\DATA\2024 06\17\06172402.D Vial: 2
Acq On : 17 Jun 2024 9:22 Operator: SC
Sample : CCV R09061724 25ng Inst : MS09
Misc : S37-06062402/S37-05292404 (6/28)

Quant Time: Jun 17 09:44:09 2024 6/17/24
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Jun 12 10:31:44 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	IR	Bromochloromethane (IS1)	1.000	1.000	0.0	129	0.05
2	T	Propene	1.600	1.488	7.0	133	0.02
3	T	Dichlorodifluoromethane (CF	2.942	2.510	14.7	119	0.03
4	T	Chloromethane	2.011	2.097	-4.3	138	0.02
5	T	1,2-Dichloro-1,1,2,2-tetraf	1.276	1.170	8.3	122	0.03
6	T	Vinyl Chloride	1.919	1.964	-2.3	134	0.03
7	T	1,3-Butadiene	1.450	1.527	-5.3	133	0.02
8	T	Bromomethane	1.022	1.078	-5.5	137	0.03
9	T	Chloroethane	0.804	0.848	-5.5	139	0.03
10	T	Ethanol	1.215	1.297	-6.7	141	-0.01
11	T	Acetonitrile	3.051	3.068	-0.6	143	0.00
12	T	Acrolein	0.899	0.956	-6.3	138	0.01
13	T	Acetone	0.971	0.968	0.3	137	0.01
14	T	Trichlorofluoromethane	2.976	2.670	10.3	119	0.04
15	T	2-Propanol (Isopropanol)	3.913	4.309	-10.1	135	0.00
16	T	Acrylonitrile	1.821	1.940	-6.5	137	0.00
17	T	1,1-Dichloroethene	1.138	1.122	1.4	129	0.03
18	T	2-Methyl-2-Propanol (tert-B	3.123	3.533	-13.1	131	0.00
19	T	Methylene Chloride	1.375	1.261	8.3	133	0.03
20	T	3-Chloro-1-propene (Allyl C	2.453	2.603	-6.1	136	0.03
21	T	Trichlorotrifluoroethane	1.259	1.177	6.5	122	0.04
22	T	Carbon Disulfide	4.430	4.555	-2.8	133	0.04
23	T	trans-1,2-Dichloroethene	1.966	2.038	-3.7	132	0.04
24	T	1,1-Dichloroethane	2.340	2.395	-2.4	133	0.03
25	T	Methyl tert-Butyl Ether	3.246	3.628	-11.8	132	0.04
26	T	Vinyl Acetate	0.224	0.246	-9.8	132	0.03
27	T	2-Butanone (MEK)	0.768	0.815	-6.1	134	0.03
28	T	cis-1,2-Dichloroethene	1.929	1.940	-0.6	131	0.04
29	T	Diisopropyl Ether	0.910	0.948	-4.2	131	0.05
30	T	Ethyl Acetate	0.469	0.521	-11.1	136	0.05
31	T	n-Hexane	2.056	2.201	-7.1	135	0.06
32	T	Chloroform	2.449	2.286	6.7	125	0.04
33	S	1,2-Dichloroethane-d4(SS1)	2.222	2.129	4.2	125	0.05
34	T	Tetrahydrofuran (THF)	0.701	0.752	-7.3	134	0.06
35	T	Ethyl tert-Butyl Ether	1.209	1.312	-8.5	130	0.06
36	T	1,2-Dichloroethane	2.452	2.258	7.9	119	0.06
37	IR	1,4-Difluorobenzene (IS2)	1.000	1.000	0.0	133	0.02
38	T	1,1,1-Trichloroethane	0.580	0.519	10.5	120	0.01
39	T	Isopropyl Acetate	0.000	0.000	0.0	136	0.02
40	T	1-Butanol	0.000	0.000	0.0	225#	0.00
41	T	Benzene	1.154	1.090	5.5	132	0.02
42	T	Carbon Tetrachloride	0.535	0.478	10.7	116	0.02
43	T	Cyclohexane	0.373	0.390	-4.6	131	0.02
44	T	tert-Amyl Methyl Ether	0.726	0.783	-7.9	132	0.02
45	T	1,2-Dichloropropane	0.279	0.285	-2.2	137	0.02
46	T	Bromodichloromethane	0.464	0.429	7.5	124	0.02
47	T	Trichloroethene	0.337	0.307	8.9	124	0.02
48	T	1,4-Dioxane	0.213	0.226	-6.1	132	0.02
49	T	2,2,4-Trimethylpentane (Iso	1.141	1.210	-6.0	136	0.03
50	T	Methyl Methacrylate	0.098	0.105	-7.1	127	0.02
51	T	n-Heptane	0.243	0.259	-6.6	134	0.03
52	T	cis-1,3-Dichloropropene	0.476	0.520	-9.2	129	0.03
53	T	4-Methyl-2-pentanone	0.254	0.286	-12.6	136	0.03
54	T	trans-1,3-Dichloropropene	0.430	0.471	-9.5	126	0.03
55	T	1,1,2-Trichloroethane	0.273	0.266	2.6	129	0.03

Evaluate Continuing Calibration Report

Data File : I:\MS09\DATA\2024 06\17\06172402.D Vial: 2
Acq On : 17 Jun 2024 9:22 Operator: SC
Sample : CCV R09061724 25ng Inst : MS09
Misc : S37-06062402/S37-05292404 (6/28)

Quant Time: Jun 17 09:44:09 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Jun 12 10:31:44 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
56	IR	Chlorobenzene-d5 (IS3)	1.000	1.000	0.0	126	0.00
57	S	Toluene-d8 (SS2)	4.783	4.956	-3.6	131	-0.02
58	T	Toluene	4.998	4.937	1.2	127	-0.02
59	T	2-Hexanone	3.134	3.671	-17.1	134	-0.02
60	T	Dibromochloromethane	1.728	1.627	5.8	120	-0.02
61	T	1,2-Dibromoethane	1.406	1.468	-4.4	125	-0.02
62	T	n-Butyl Acetate	3.294	4.040	-22.6	135	-0.02
63	T	n-Octane	1.037	1.154	-11.3	133	-0.01
64	T	Tetrachloroethene	1.718	1.566	8.8	119	-0.01
65	T	Chlorobenzene	3.503	3.338	4.7	122	-0.01
66	T	Ethylbenzene	5.719	5.868	-2.6	124	-0.01
67	T	m- & p-Xylenes	4.809	4.939	-2.7	122	-0.02
68	T	Bromoform	1.530	1.435	6.2	115	-0.02
69	T	Styrene	3.243	3.501	-8.0	120	-0.01
70	T	o-Xylene	4.742	4.795	-1.1	121	-0.01
71	T	n-Nonane	2.756	3.175	-15.2	131	-0.01
72	T	1,1,2,2-Tetrachloroethane	2.171	2.196	-1.2	126	-0.01
73	S	Bromofluorobenzene (SS3)	1.727	1.674	3.1	121	0.00
74	T	Cumene	5.920	5.821	1.7	121	-0.01
75	T	alpha-Pinene	2.758	3.017	-9.4	122	0.00
76	T	n-Propylbenzene	7.147	7.228	-1.1	121	-0.01
77	T	3-Ethyltoluene	0.000	0.000	0.0	121	-0.01
78	T	4-Ethyltoluene	5.644	5.753	-1.9	119	-0.01
79	T	1,3,5-Trimethylbenzene	4.931	4.993	-1.3	118	0.00
80	T	alpha-Methylstyrene	0.000	0.000	0.0	108	0.00
81	T	2-Ethyltoluene	0.000	0.000	0.0	121	-0.01
82	T	1,2,4-Trimethylbenzene	5.198	5.365	-3.2	116	-0.01
83	T	n-Decane	0.000	0.000	0.0	102	-0.01
84	T	Benzyl Chloride	4.178	4.719	-12.9	111	-0.02
85	T	1,3-Dichlorobenzene	3.426	3.127	8.7	111	-0.01
86	T	1,4-Dichlorobenzene	3.339	3.018	9.6	109	0.00
87	T	sec-Butylbenzene	6.577	6.610	-0.5	118	0.00
88	T	4-Isopropyltoluene (p-Cymen	5.913	5.924	-0.2	116	0.00
89	T	1,2,3-Trimethylbenzene	0.000	0.000	0.0	121	-0.01
90	T	1,2-Dichlorobenzene	3.326	3.053	8.2	113	0.00
91	T	d-Limonene	1.767	1.983	-12.2	120	0.00
92	T	1,2-Dibromo-3-Chloropropane	1.153	1.143	0.9	112	0.00
93	T	n-Undecane	0.000	0.000	0.0	119	-0.01
94	T	1,2,4-Trichlorobenzene	2.626	2.392	8.9	101	0.00
95	T	Naphthalene	6.662	6.338	4.9	95	-0.01
96	T	n-Dodecane	0.000	0.000	0.0	143	-0.01
97	T	Hexachlorobutadiene	2.159	1.794	16.9	109	0.00
98	T	Cyclohexanone	0.000	0.000	0.0	29#	-0.02
99	T	tert-Butylbenzene	4.981	4.922	1.2	116	-0.01
100	T	n-Butylbenzene	5.532	5.654	-2.2	116	-0.01
101	T	1,1,1,2-Tetrachloroethane	1.331	1.317	1.1	120	-0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172402.D Vial: 2
Acq On : 17 Jun 2024 9:22 Operator: SC
Sample : CCV R09061724 25ng Inst : MS09
Misc : S37-06062402/S37-05292404 (6/28)

Quant Time: Jun 17 09:44:09 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Jun 12 10:31:44 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/17/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.28	130	181362	12.500	ng		0.05
37) 1,4-Difluorobenzene (IS2)	9.33	114	800359	12.500	ng		0.02
56) Chlorobenzene-d5 (IS3)	14.85	54	178868	12.500	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.04	65	386140	11.979	ng		0.05
Spiked Amount 12.500	Range 70 - 130		Recovery = 95.84%				
57) Toluene-d8 (SS2)	12.44	98	886417	12.950	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 103.60%				
73) Bromofluorobenzene (SS3)	16.83	174	299506	12.118	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.96%				
Target Compounds							Qvalue
2) Propene	3.27	42	566618	24.404	ng		98
3) Dichlorodifluoromethan...	3.35	85	946851	22.184	ng		100
4) Chloromethane	3.49	50	813905	27.893	ng		100
5) 1,2-Dichloro-1,1,2,2-t...	3.60	135	462589	24.992	ng		99
6) Vinyl Chloride	3.68	62	755215	27.118	ng		100
7) 1,3-Butadiene	3.80	54	587301	27.917	ng		96
8) Bromomethane	4.01	94	398758	26.888	ng		99
9) Chloroethane	4.15	64	338155	28.978	ng		100
10) Ethanol	4.36	45	2309925	131.010	ng		100
11) Acetonitrile	4.48	41	1068242	24.132	ng		99
12) Acrolein	4.55	56	745399	57.116	ng		99
13) Acetone	4.66	58	1793562	127.302	ng		90
14) Trichlorofluoromethane	4.76	101	978204	22.656	ng		99
15) 2-Propanol (Isopropanol)	4.90	45	3094656	54.511	ng		97
16) Acrylonitrile	5.03	53	1407417	53.265	ng		100
17) 1,1-Dichloroethene	5.27	96	366169	22.169	ng		99
18) 2-Methyl-2-Propanol (t...	5.37	59	2665161	58.816	ng		99
19) Methylene Chloride	5.39	84	416093	20.864	ng		98
20) 3-Chloro-1-propene (Al...	5.47	41	1019863	28.655	ng		100
21) Trichlorotrifluoroethane	5.59	151	384145	21.032	ng		96
22) Carbon Disulfide	5.61	76	3419999	53.210	ng		100
23) trans-1,2-Dichloroethene	6.17	61	776161	27.205	ng		99
24) 1,1-Dichloroethane	6.35	63	894803	26.356	ng		100
25) Methyl tert-Butyl Ether	6.38	73	1408106	29.897	ng		98
26) Vinyl Acetate	6.48	86	478833	147.287	ng	#	96
27) 2-Butanone (MEK)	6.69	72	600313	53.844	ng		98
28) cis-1,2-Dichloroethene	7.12	61	724708	25.897	ng		100
29) Diisopropyl Ether	7.31	87	722070	54.682	ng	#	96
30) Ethyl Acetate	7.31	61	370380	54.409	ng		99
31) n-Hexane	7.31	57	838321	28.106	ng		99
32) Chloroform	7.40	83	887270	24.969	ng		99
34) Tetrahydrofuran (THF)	7.76	72	515482	50.681	ng		96
35) Ethyl tert-Butyl Ether	7.84	87	1004127	57.267	ng		96
36) 1,2-Dichloroethane	8.15	62	835533	23.485	ng		100
38) 1,1,1-Trichloroethane	8.42	97	855083	23.010	ng		100
39) Isopropyl Acetate	9.62	61	1676	No Calib		#	
40) 1-Butanol	8.82	56	4396	No Calib			
41) Benzene	8.92	78	1779589	24.087	ng		100
42) Carbon Tetrachloride	9.09	117	788651	23.014	ng		100
43) Cyclohexane	9.24	84	1310508	54.804	ng		97
44) tert-Amyl Methyl Ether	9.62	73	2645542	56.898	ng		99
45) 1,2-Dichloropropane	9.88	63	493306	27.660	ng		100
46) Bromodichloromethane	10.10	83	727725	24.481	ng		100
47) Trichloroethene	10.17	130	505761	23.449	ng		100
48) 1,4-Dioxane	10.13	88	376249	27.601	ng		97
49) 2,2,4-Trimethylpentane...	10.25	57	2072163	28.368	ng		96
50) Methyl Methacrylate	10.42	100	355425	56.766	ng		94

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172402.D Vial: 2
Acq On : 17 Jun 2024 9:22 Operator: SC
Sample : CCV R09061724 25ng Inst : MS09
Misc : S37-06062402/S37-05292404 (6/28)

Quant Time: Jun 17 09:44:09 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Jun 12 10:31:44 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

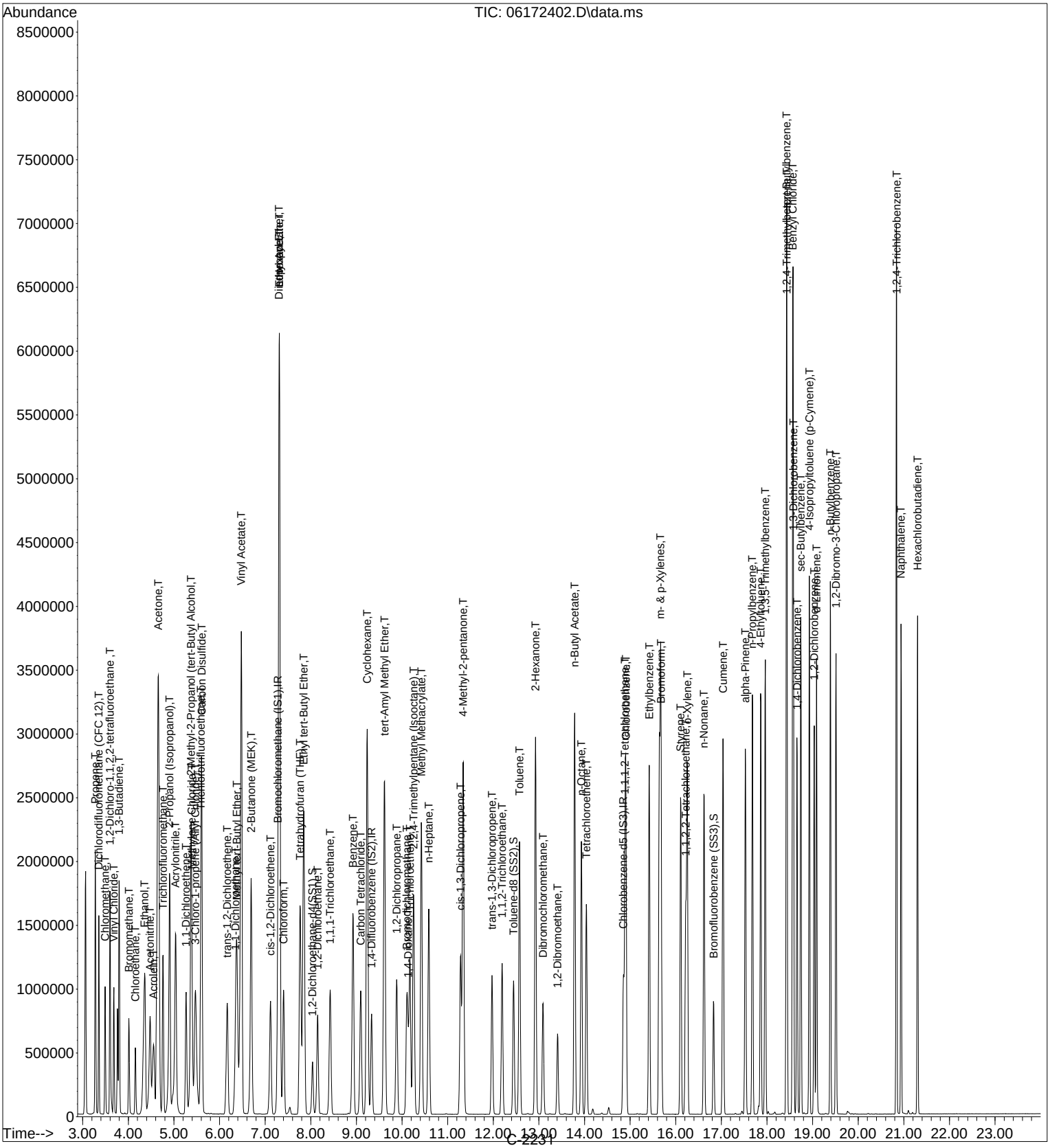
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	10.59	71	434872	27.908 ng		99
52) cis-1,3-Dichloropropene	11.29	75	874556	28.666 ng		100
53) 4-Methyl-2-pentanone	11.34	58	960213	59.129 ng		98
54) trans-1,3-Dichloropropene	11.97	75	738533	26.837 ng		100
55) 1,1,2-Trichloroethane	12.19	97	464902	26.593 ng		99
58) Toluene	12.57	91	1907538	26.670 ng		100
59) 2-Hexanone	12.93	43	2679337	59.752 ng		98
60) Dibromochloromethane	13.09	129	593770	24.013 ng		100
61) 1,2-Dibromoethane	13.41	107	540921	26.890 ng		99
62) n-Butyl Acetate	13.78	43	3006013	63.771 ng		99
63) n-Octane	13.93	57	437586	29.496 ng		98
64) Tetrachloroethene	14.04	166	599301	24.375 ng		100
65) Chlorobenzene	14.91	112	1277634	25.487 ng		100
66) Ethylbenzene	15.42	91	2288004	27.960 ng		100
67) m- & p-Xylenes	15.66	91	3781402	54.955 ng		100
68) Bromoform	15.68	173	559510	25.551 ng		99
69) Styrene	16.11	104	1327693	28.609 ng		99
70) o-Xylene	16.25	91	1852637	27.303 ng		99
71) n-Nonane	16.62	43	1181090	29.944 ng		99
72) 1,1,2,2-Tetrachloroethane	16.22	83	848381	27.309 ng		100
74) Cumene	17.04	105	2165645	25.565 ng		100
75) alpha-Pinene	17.53	93	1154911	29.265 ng		99
76) n-Propylbenzene	17.68	91	2663394	26.044 ng		99
77) 3-Ethyltoluene	17.04	105	2165645	No Calib		
78) 4-Ethyltoluene	17.86	105	2119933	26.247 ng		100
79) 1,3,5-Trimethylbenzene	17.96	105	1928961	27.338 ng		100
80) alpha-Methylstyrene	17.04	118	4301	No Calib	#	
81) 2-Ethyltoluene	17.04	105	2165645	No Calib		
82) 1,2,4-Trimethylbenzene	18.43	105	1996202	26.837 ng		100
83) n-Decane	17.04	58	17189	No Calib		
84) Benzyl Chloride	18.56	91	3494374	58.448 ng		100
85) 1,3-Dichlorobenzene	18.58	146	1152359	23.504 ng		100
86) 1,4-Dichlorobenzene	18.66	146	1122790	23.500 ng		99
87) sec-Butylbenzene	18.74	105	2435732	25.882 ng		100
88) 4-Isopropyltoluene (p-...	18.93	119	2161497	25.546 ng		99
89) 1,2,3-Trimethylbenzene	17.04	105	2165645	No Calib		
90) 1,2-Dichlorobenzene	19.04	146	1125078	23.639 ng		100
91) d-Limonene	19.09	68	709494	28.057 ng		97
92) 1,2-Dibromo-3-Chloropr...	19.51	157	841964	51.012 ng		99
93) n-Undecane	17.86	58	33760	No Calib		
94) 1,2,4-Trichlorobenzene	20.84	180	1831051	48.737 ng		100
95) Naphthalene	20.94	128	2290158	24.025 ng		100
96) n-Dodecane	18.92	58	62201	No Calib	#	
97) Hexachlorobutadiene	21.30	225	648217	20.987 ng		99
98) Cyclohexanone	15.42	55	2113	No Calib	#	
99) tert-Butylbenzene	18.43	119	1831293	25.693 ng		100
100) n-Butylbenzene	19.39	91	2022774	25.552 ng		99
101) 1,1,1,2-Tetrachloroethane	14.89	131	504176	26.482 ng		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172402.D Vial: 2
Acq On : 17 Jun 2024 9:22 Operator: SC
Sample : CCV R09061724 25ng Inst : MS09
Misc : S37-06062402/S37-05292404 (6/28)

Quant Time: Jun 17 09:44:09 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Jun 12 10:31:44 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Evaluate Continuing Calibration Report

Data File : I:\MS09\DATA\2024 06\17\06172403.D Vial: 3
Acq On : 17 Jun 2024 9:54 Operator: SC
Sample : CCV C09061724 25ng Inst : MS09
Misc : S37-06062402/S37-06052406 (7/4)

6/17/24

Quant Time: Jun 17 14:48:27 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	IR	Bromochloromethane (C 1)	1.000	1.000	0.0	123	-0.02
2	T	Chloropentafluoroethane	1.555	1.592	-2.4	133	0.00
3	T	1,1,1,2-Tetrafluoroethane (	1.283	1.405	-9.5	142	-0.01
4	T	1,1-Difluoroethane	1.091	1.102	-1.0	130	-0.01
5	T	Chlorodifluoromethane (CFC	0.426	0.465	-9.2	139	0.00
6	T	1-Chloro-1,1-Difluoroethane	2.816	3.020	-7.2	139	0.00
7	T	Dichlorofluoromethane (CFC	2.866	3.030	-5.7	135	0.00
8	T	Vinylbromide	1.070	1.088	-1.7	128	0.00
9	T	2,2-Dichloro-1,1,1-trifluor	1.735	1.770	-2.0	131	0.00
10	T	2-Methylbutane	1.491	1.338	10.3	117	-0.01
11	T	Methyl Acetate	4.212	3.588	14.8	108	-0.01
12	T	2-Methylpentane	1.082	1.130	-4.4	134	-0.01
13	T	2,2-Dichloropropane	2.038	2.290	-12.4	140	-0.01
14	T	1,1-Dichloropropene	1.782	1.874	-5.2	133	-0.02
15	T	Thiophene	2.546	2.674	-5.0	132	-0.01
16	IR	1,4-Difluorobenzene (C 2)	1.000	1.000	0.0	126	-0.01
17	T	2,3-Dimethylpentane	0.605	0.542	10.4	117	-0.01
18	T	Dibromomethane	0.222	0.226	-1.8	131	-0.02
19	IR	Chlorobenzene-d5 (C 3)	1.000	1.000	0.0	114	0.00
20	T	Methyl Cyclohexane	2.145	2.094	2.4	115	-0.01
21	T	1,3-Dichloropropane	1.666	1.982	-19.0	139	0.00
22	T	1,1,1,2-Tetrachloroethane	1.102	1.263	-14.6	131	0.00
23	T	1-Chlorohexane	1.546	1.788	-15.7	132	-0.01
24	T	1,2,3-Trichloropropane	1.669	2.035	-21.9	138	0.00
25	T	Bromobenzene	1.958	2.379	-21.5	136	0.00
26	T	2-Chlorotoluene	3.609	4.188	-16.0	133	0.00
27	T	4-Chlorotoluene	3.655	4.384	-19.9	134	0.00
28	T	Indane	4.134	4.999	-20.9	131	0.00
29	T	Indene	3.171	4.443	-40.1#	136	0.00
30	T	1,2,4,5-Tetramethylbenzene	4.275	5.495	-28.5	131	0.00
31	T	1,2,3,4-Tetramethylbenzene	4.311	5.524	-28.1	137	0.00
32	T	1,2,3,5-Tetramethylbenzene	4.091	5.351	-30.8#	134	0.00
33	T	1,2,3-Trichlorobenzene	1.494	2.213	-48.1#	144	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172403.D Vial: 3
Acq On : 17 Jun 2024 9:54 Operator: SC
Sample : CCV C09061724 25ng Inst : MS09
Misc : S37-06062402/S37-06052406 (7/4)

Quant Time: Jun 17 14:48:27 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/17/24

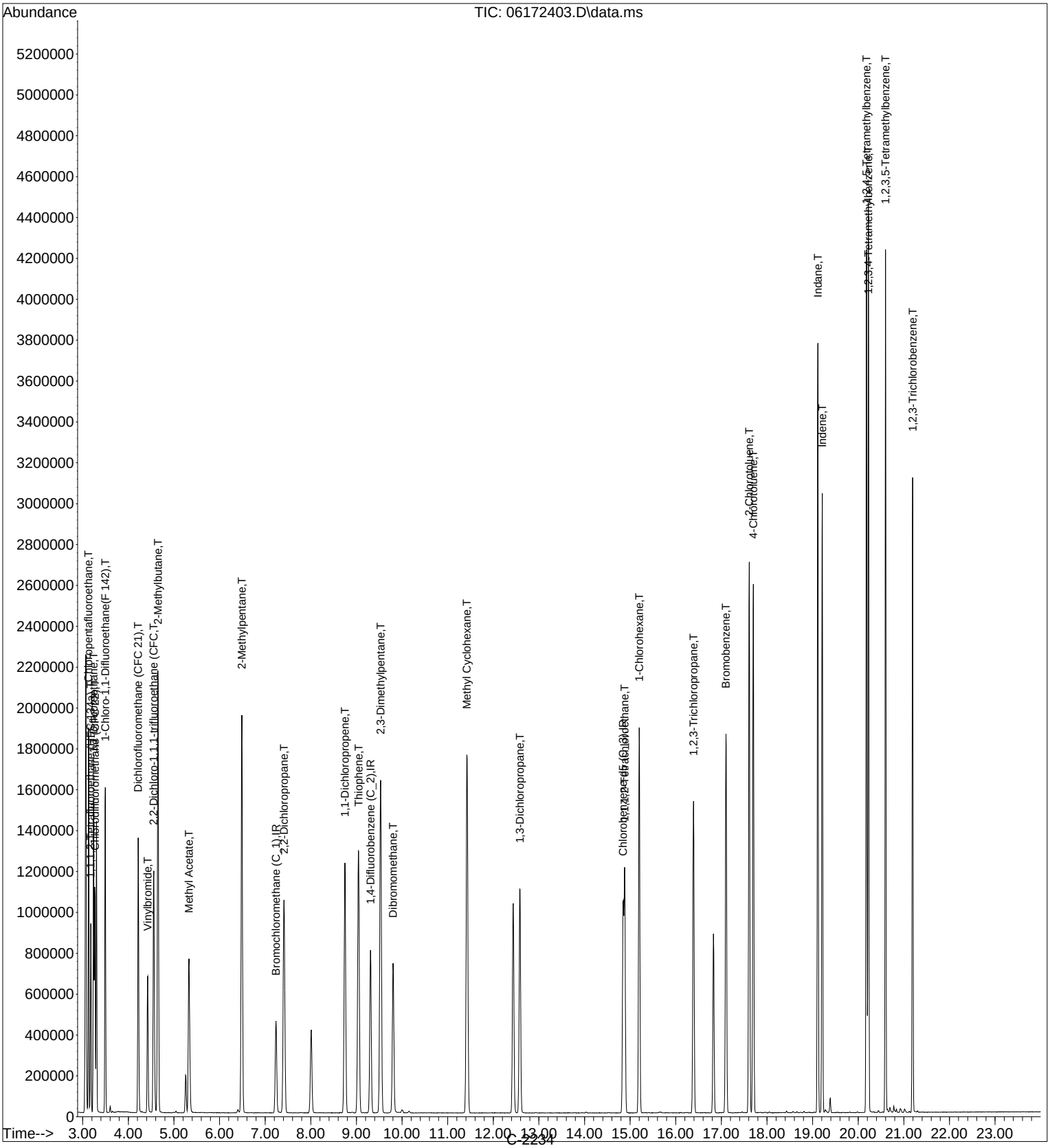
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (C 1)	7.24	130	174491	12.500	ng	-0.02
16) 1,4-Difluorobenzene (C 2)	9.31	114	772939	12.500	ng	-0.01
19) Chlorobenzene-d5 (C_3)	14.85	54	172102	12.500	ng	0.00
Target Compounds						**Qvalue**
2) Chloropentafluoroethane	3.13	85	549866	25.331	ng	98
3) 1,1,1,2-Tetrafluoroeth...	3.18	83	490395	27.390	ng	97
4) 1,1-Difluoroethane	3.24	65	407623	26.756	ng	99
5) Chlorodifluoromethane ...	3.27	67	168636	28.361	ng	99
6) 1-Chloro-1,1-Difluoroe...	3.49	65	1096151	27.885	ng	99
7) Dichlorofluoromethane ...	4.22	67	1046880	26.164	ng	100
8) Vinylbromide	4.43	108	379638	25.427	ng	100
9) 2,2-Dichloro-1,1,1-tri...	4.56	83	642369	26.529	ng	99
10) 2-Methylbutane	4.65	57	476315	22.887	ng	94
11) Methyl Acetate	5.33	43	1202129	20.444	ng	95
12) 2-Methylpentane	6.49	71	394524	26.113	ng	71
13) 2,2-Dichloropropane	7.41	77	791187	27.804	ng	98
14) 1,1-Dichloropropene	8.75	75	680029	27.330	ng	95
15) Thiophene	9.05	84	942477	26.516	ng	93
17) 2,3-Dimethylpentane	9.53	56	872084	23.316	ng	96
18) Dibromomethane	9.80	174	374369	27.239	ng	98
20) Methyl Cyclohexane	11.42	55	771386	26.120	ng	86
21) 1,3-Dichloropropane	12.59	76	709493	30.925	ng	90
22) 1,1,1,2-Tetrachloroethane	14.88	131	378354	24.944	ng	99
23) 1-Chlorohexane	15.20	91	633798	29.772	ng	93
24) 1,2,3-Trichloropropane	16.39	75	735541	32.015	ng	98
25) Bromobenzene	17.10	77	859784	31.895	ng	99
26) 2-Chlorotoluene	17.61	91	1527894	30.750	ng	100
27) 4-Chlorotoluene	17.70	91	1524094	30.282	ng	100
28) Indane	19.12	117	1703530	29.928	ng	99
29) Indene	19.21	115	1437443	32.922	ng	100
30) 1,2,4,5-Tetramethylben...	20.18	119	1910187	32.456	ng	98
31) 1,2,3,4-Tetramethylben...	20.22	119	1958397	32.996	ng	97
32) 1,2,3,5-Tetramethylben...	20.60	119	1860194	33.027	ng	99
33) 1,2,3-Trichlorobenzene	21.19	180	799649	38.888	ng	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\17\06172403.D Vial: 3
Acq On : 17 Jun 2024 9:54 Operator: SC
Sample : CCV C09061724 25ng Inst : MS09
Misc : S37-06062402/S37-06052406 (7/4)

Quant Time: Jun 17 14:48:27 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Evaluate Continuing Calibration Report

Data File : I:\MS09\DATA\2024 06\18\06182402.D Vial: 2
Acq On : 18 Jun 2024 9:52 Operator: SC
Sample : CCV R09061824 25ng Inst : MS09
Misc : S37-06062402/S37-05292404 (6/28)

Quant Time: Jun 18 10:13:53 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/18/24

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	IR	Bromochloromethane (IS1)	1.000	1.000	0.0	101	0.05
2	T	Propene	1.600	1.371	14.3	96	0.02
3	T	Dichlorodifluoromethane (CF	2.942	2.548	13.4	95	0.03
4	T	Chloromethane	2.011	1.870	7.0	97	0.03
5	T	1,2-Dichloro-1,1,2,2-tetraf	1.276	1.201	5.9	98	0.03
6	T	Vinyl Chloride	1.919	1.845	3.9	99	0.03
7	T	1,3-Butadiene	1.450	1.287	11.2	88	0.03
8	T	Bromomethane	1.022	1.015	0.7	101	0.03
9	T	Chloroethane	0.804	0.767	4.6	99	0.03
10	T	Ethanol	1.215	1.145	5.8	98	0.00
11	T	Acetonitrile	3.051	2.681	12.1	98	0.00
12	T	Acrolein	0.899	0.846	5.9	96	0.02
13	T	Acetone	0.971	0.891	8.2	99	0.01
14	T	Trichlorofluoromethane	2.976	2.779	6.6	97	0.04
15	T	2-Propanol (Isopropanol)	3.913	3.967	-1.4	98	0.00
16	T	Acrylonitrile	1.821	1.781	2.2	99	0.00
17	T	1,1-Dichloroethene	1.138	1.086	4.6	98	0.03
18	T	2-Methyl-2-Propanol (tert-B	3.123	3.547	-13.6	103	0.01
19	T	Methylene Chloride	1.375	1.198	12.9	99	0.02
20	T	3-Chloro-1-propene (Allyl C	2.453	2.405	2.0	98	0.03
21	T	Trichlorotrifluoroethane	1.259	1.207	4.1	98	0.04
22	T	Carbon Disulfide	4.430	4.355	1.7	100	0.04
23	T	trans-1,2-Dichloroethene	1.966	1.936	1.5	98	0.04
24	T	1,1-Dichloroethane	2.340	2.258	3.5	99	0.04
25	T	Methyl tert-Butyl Ether	3.246	3.629	-11.8	103	0.04
26	T	Vinyl Acetate	0.224	0.236	-5.4	99	0.04
27	T	2-Butanone (MEK)	0.768	0.778	-1.3	100	0.03
28	T	cis-1,2-Dichloroethene	1.929	1.866	3.3	99	0.05
29	T	Diisopropyl Ether	0.910	0.924	-1.5	101	0.06
30	T	Ethyl Acetate	0.469	0.489	-4.3	100	0.05
31	T	n-Hexane	2.056	2.083	-1.3	100	0.06
32	T	Chloroform	2.449	2.294	6.3	98	0.05
33	S	1,2-Dichloroethane-d4(SS1)	2.222	2.217	0.2	103	0.06
34	T	Tetrahydrofuran (THF)	0.701	0.714	-1.9	100	0.07
35	T	Ethyl tert-Butyl Ether	1.209	1.317	-8.9	103	0.06
36	T	1,2-Dichloroethane	2.452	2.331	4.9	97	0.07
37	IR	1,4-Difluorobenzene (IS2)	1.000	1.000	0.0	104	0.03
38	T	1,1,1-Trichloroethane	0.580	0.542	6.6	98	0.02
39	T	Isopropyl Acetate	0.000	0.000	0.0	103	0.03
40	T	1-Butanol	0.000	0.000	0.0	145	0.03
41	T	Benzene	1.154	1.050	9.0	99	0.03
42	T	Carbon Tetrachloride	0.535	0.511	4.5	97	0.03
43	T	Cyclohexane	0.373	0.378	-1.3	99	0.03
44	T	tert-Amyl Methyl Ether	0.726	0.775	-6.7	102	0.04
45	T	1,2-Dichloropropane	0.279	0.267	4.3	100	0.03
46	T	Bromodichloromethane	0.464	0.433	6.7	97	0.03
47	T	Trichloroethene	0.337	0.311	7.7	98	0.03
48	T	1,4-Dioxane	0.213	0.222	-4.2	101	0.03
49	T	2,2,4-Trimethylpentane (Iso	1.141	1.133	0.7	99	0.04
50	T	Methyl Methacrylate	0.098	0.104	-6.1	98	0.03
51	T	n-Heptane	0.243	0.247	-1.6	100	0.04
52	T	cis-1,3-Dichloropropene	0.476	0.505	-6.1	98	0.04
53	T	4-Methyl-2-pentanone	0.254	0.270	-6.3	100	0.04
54	T	trans-1,3-Dichloropropene	0.430	0.467	-8.6	97	0.05
55	T	1,1,2-Trichloroethane	0.273	0.262	4.0	99	0.05

Evaluate Continuing Calibration Report

Data File : I:\MS09\DATA\2024 06\18\06182402.D Vial: 2
Acq On : 18 Jun 2024 9:52 Operator: SC
Sample : CCV R09061824 25ng Inst : MS09
Misc : S37-06062402/S37-05292404 (6/28)

Quant Time: Jun 18 10:13:53 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
56	IR	Chlorobenzene-d5 (IS3)	1.000	1.000	0.0	102	0.01
57	S	Toluene-d8 (SS2)	4.783	4.769	0.3	103	-0.02
58	T	Toluene	4.998	4.698	6.0	98	-0.02
59	T	2-Hexanone	3.134	3.359	-7.2	99	-0.02
60	T	Dibromochloromethane	1.728	1.635	5.4	97	-0.02
61	T	1,2-Dibromoethane	1.406	1.406	0.0	97	-0.02
62	T	n-Butyl Acetate	3.294	3.660	-11.1	99	-0.02
63	T	n-Octane	1.037	1.055	-1.7	99	-0.01
64	T	Tetrachloroethene	1.718	1.583	7.9	97	0.00
65	T	Chlorobenzene	3.503	3.253	7.1	97	-0.01
66	T	Ethylbenzene	5.719	5.680	0.7	97	-0.01
67	T	m- & p-Xylenes	4.809	4.847	-0.8	97	-0.01
68	T	Bromoform	1.530	1.473	3.7	96	-0.02
69	T	Styrene	3.243	3.417	-5.4	95	-0.01
70	T	o-Xylene	4.742	4.715	0.6	97	-0.02
71	T	n-Nonane	2.756	2.916	-5.8	97	-0.01
72	T	1,1,2,2-Tetrachloroethane	2.171	2.082	4.1	97	-0.01
73	S	Bromofluorobenzene (SS3)	1.727	1.743	-0.9	102	0.00
74	T	Cumene	5.920	5.788	2.2	97	-0.01
75	T	alpha-Pinene	2.758	2.962	-7.4	97	0.00
76	T	n-Propylbenzene	7.147	7.106	0.6	96	0.00
77	T	3-Ethyltoluene	0.000	0.000	0.0	97	-0.01
78	T	4-Ethyltoluene	5.644	5.725	-1.4	96	-0.01
79	T	1,3,5-Trimethylbenzene	4.931	5.006	-1.5	96	0.00
80	T	alpha-Methylstyrene	0.000	0.000	0.0	90	-0.01
81	T	2-Ethyltoluene	0.000	0.000	0.0	97	-0.01
82	T	1,2,4-Trimethylbenzene	5.198	5.420	-4.3	95	-0.01
83	T	n-Decane	0.000	0.000	0.0	80	-0.02
84	T	Benzyl Chloride	4.178	4.750	-13.7	91	-0.02
85	T	1,3-Dichlorobenzene	3.426	3.190	6.9	92	-0.01
86	T	1,4-Dichlorobenzene	3.339	3.079	7.8	90	-0.01
87	T	sec-Butylbenzene	6.577	6.647	-1.1	96	0.00
88	T	4-Isopropyltoluene (p-Cymen	5.913	6.002	-1.5	95	0.00
89	T	1,2,3-Trimethylbenzene	0.000	0.000	0.0	97	-0.01
90	T	1,2-Dichlorobenzene	3.326	3.096	6.9	93	0.00
91	T	d-Limonene	1.767	1.934	-9.5	95	0.00
92	T	1,2-Dibromo-3-Chloropropane	1.153	1.169	-1.4	93	0.00
93	T	n-Undecane	0.000	0.000	0.0	90	-0.01
94	T	1,2,4-Trichlorobenzene	2.626	2.477	5.7	84	0.00
95	T	Naphthalene	6.662	6.417	3.7	78	-0.01
96	T	n-Dodecane	0.000	0.000	0.0	98	0.00
97	T	Hexachlorobutadiene	2.159	1.917	11.2	94	0.00
98	T	Cyclohexanone	0.000	0.000	0.0	21#	-0.02
99	T	tert-Butylbenzene	4.981	4.967	0.3	95	-0.01
100	T	n-Butylbenzene	5.532	5.669	-2.5	94	-0.01
101	T	1,1,1,2-Tetrachloroethane	1.331	1.319	0.9	97	-0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182402.D Vial: 2
Acq On : 18 Jun 2024 9:52 Operator: SC
Sample : CCV R09061824 25ng Inst : MS09
Misc : S37-06062402/S37-05292404 (6/28)

Quant Time: Jun 18 10:13:53 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/18/24

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	7.28	130	142361	12.500	ng	0.05
37) 1,4-Difluorobenzene (IS2)	9.33	114	624540	12.500	ng	0.03
56) Chlorobenzene-d5 (IS3)	14.85	54	145001	12.500	ng	0.01
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4(...	8.04	65	315685	12.477	ng	0.06
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.84%			
57) Toluene-d8 (SS2)	12.44	98	691452	12.461	ng	-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 99.68%			
73) Bromofluorobenzene (SS3)	16.83	174	252785	12.616	ng	0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.96%			
Target Compounds						Qvalue
2) Propene	3.27	42	409865	22.488	ng	100
3) Dichlorodifluoromethan...	3.35	85	754449	22.519	ng	100
4) Chloromethane	3.49	50	569648	24.871	ng	100
5) 1,2-Dichloro-1,1,2,2-t...	3.60	135	372743	25.655	ng	100
6) Vinyl Chloride	3.68	62	556945	25.477	ng	100
7) 1,3-Butadiene	3.80	54	388436	23.523	ng	97
8) Bromomethane	4.01	94	294896	25.333	ng	99
9) Chloroethane	4.15	64	240267	26.230	ng	99
10) Ethanol	4.36	45	1601141	115.689	ng	99
11) Acetonitrile	4.48	41	732775	21.089	ng	99
12) Acrolein	4.55	56	517856	50.551	ng	100
13) Acetone	4.65	58	1296201	117.205	ng	98
14) Trichlorofluoromethane	4.76	101	799199	23.581	ng	99
15) 2-Propanol (Isopropanol)	4.90	45	2236192	50.181	ng	99
16) Acrylonitrile	5.03	53	1014019	48.890	ng	99
17) 1,1-Dichloroethene	5.27	96	278162	21.454	ng	100
18) 2-Methyl-2-Propanol (t...	5.37	59	2100326	59.050	ng	99
19) Methylene Chloride	5.39	84	310334	19.824	ng	100
20) 3-Chloro-1-propene (Al...	5.47	41	739548	26.472	ng	99
21) Trichlorotrifluoroethane	5.59	151	309234	21.569	ng	99
22) Carbon Disulfide	5.61	76	2566641	50.873	ng	100
23) trans-1,2-Dichloroethene	6.17	61	578762	25.843	ng	99
24) 1,1-Dichloroethane	6.36	63	662264	24.851	ng	99
25) Methyl tert-Butyl Ether	6.38	73	1105538	29.903	ng	100
26) Vinyl Acetate	6.48	86	361508	141.662	ng	97
27) 2-Butanone (MEK)	6.69	72	449585	51.372	ng	97
28) cis-1,2-Dichloroethene	7.12	61	547164	24.909	ng	99
29) Diisopropyl Ether	7.30	87	552479	53.301	ng	98
30) Ethyl Acetate	7.31	61	272832	51.059	ng	98
31) n-Hexane	7.31	57	622878	26.604	ng	100
32) Chloroform	7.40	83	698846	25.055	ng	100
34) Tetrahydrofuran (THF)	7.77	72	384461	48.155	ng	99
35) Ethyl tert-Butyl Ether	7.84	87	790926	57.465	ng	100
36) 1,2-Dichloroethane	8.15	62	676859	24.237	ng	100
38) 1,1,1-Trichloroethane	8.42	97	697547	24.055	ng	100
39) Isopropyl Acetate	9.61	61	1269	No Calib	#	
40) 1-Butanol	8.83	56	2834	No Calib		
41) Benzene	8.92	78	1337902	23.206	ng	100
42) Carbon Tetrachloride	9.09	117	657854	24.601	ng	99
43) Cyclohexane	9.24	84	991904	53.158	ng	100
44) tert-Amyl Methyl Ether	9.62	73	2042520	56.295	ng	99
45) 1,2-Dichloropropane	9.88	63	359662	25.844	ng	100
46) Bromodichloromethane	10.10	83	573883	24.741	ng	100
47) Trichloroethene	10.17	130	400256	23.782	ng	100
48) 1,4-Dioxane	10.13	88	288277	27.101	ng	99
49) 2,2,4-Trimethylpentane...	10.25	57	1514440	26.570	ng	99
50) Methyl Methacrylate	10.43	100	274644	56.213	ng	100

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182402.D Vial: 2
Acq On : 18 Jun 2024 9:52 Operator: SC
Sample : CCV R09061824 25ng Inst : MS09
Misc : S37-06062402/S37-05292404 (6/28)

Quant Time: Jun 18 10:13:53 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

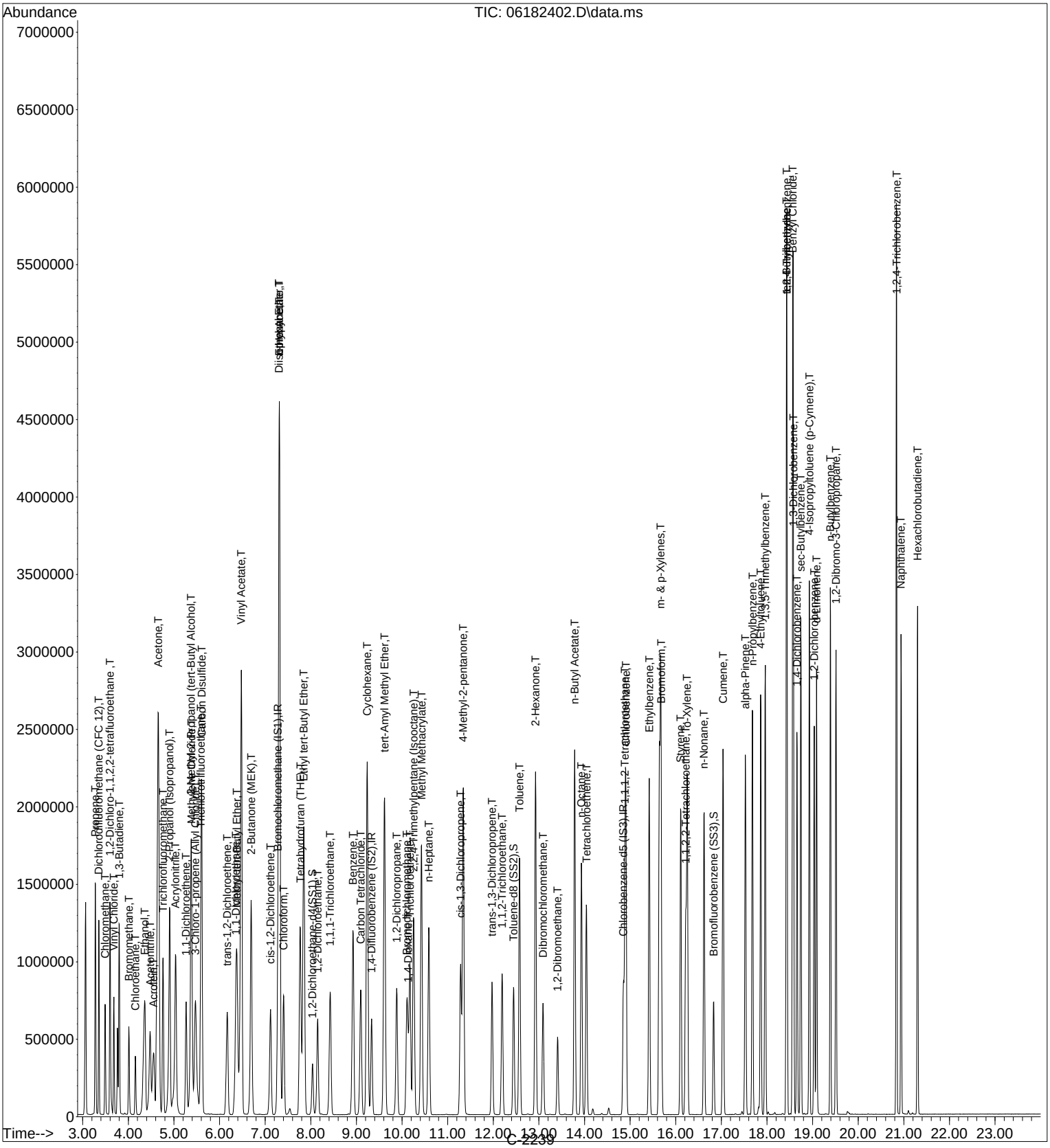
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
51) n-Heptane	10.59	71	324403	26.679	ng		100
52) cis-1,3-Dichloropropene	11.29	75	661792	27.799	ng		100
53) 4-Methyl-2-pentanone	11.34	58	707057	55.797	ng		99
54) trans-1,3-Dichloropropene	11.97	75	571828	26.629	ng		100
55) 1,1,2-Trichloroethane	12.19	97	356534	26.135	ng		99
58) Toluene	12.57	91	1471333	25.375	ng		100
59) 2-Hexanone	12.93	43	1986911	54.659	ng		99
60) Dibromochloromethane	13.09	129	483718	24.132	ng		100
61) 1,2-Dibromoethane	13.41	107	420007	25.756	ng		100
62) n-Butyl Acetate	13.78	43	2207918	57.780	ng		99
63) n-Octane	13.93	57	324389	26.972	ng		100
64) Tetrachloroethene	14.04	166	491230	24.646	ng		100
65) Chlorobenzene	14.91	112	1009517	24.842	ng		100
66) Ethylbenzene	15.42	91	1795418	27.065	ng		100
67) m- & p-Xylenes	15.67	91	3008083	53.927	ng		100
68) Bromoform	15.68	173	465558	26.226	ng		100
69) Styrene	16.11	104	1050392	27.920	ng		100
70) o-Xylene	16.25	91	1476684	26.845	ng		100
71) n-Nonane	16.62	43	879496	27.506	ng		100
72) 1,1,2,2-Tetrachloroethane	16.22	83	651991	25.889	ng		100
74) Cumene	17.04	105	1745710	25.421	ng		99
75) alpha-Pinene	17.53	93	919138	28.730	ng		100
76) n-Propylbenzene	17.68	91	2122694	25.605	ng		100
77) 3-Ethyltoluene	17.04	105	1745710	No Calib			
78) 4-Ethyltoluene	17.86	105	1710112	26.118	ng		100
79) 1,3,5-Trimethylbenzene	17.96	105	1567874	27.411	ng		99
80) alpha-Methylstyrene	17.03	118	3557	No Calib		#	
81) 2-Ethyltoluene	17.04	105	1745710	No Calib			
82) 1,2,4-Trimethylbenzene	18.43	105	1634831	27.112	ng		100
83) n-Decane	17.03	58	13515	No Calib			
84) Benzyl Chloride	18.56	91	2851297	58.831	ng		100
85) 1,3-Dichlorobenzene	18.58	146	952977	23.977	ng		100
86) 1,4-Dichlorobenzene	18.66	146	928523	23.973	ng		100
87) sec-Butylbenzene	18.74	105	1985400	26.025	ng		100
88) 4-Isopropyltoluene (p-...	18.93	119	1775257	25.882	ng		100
89) 1,2,3-Trimethylbenzene	17.04	105	1745710	No Calib			
90) 1,2-Dichlorobenzene	19.04	146	924857	23.971	ng		100
91) d-Limonene	19.09	68	560725	27.353	ng		99
92) 1,2-Dibromo-3-Chloropr...	19.51	157	698583	52.210	ng		99
93) n-Undecane	17.86	58	25346	No Calib			
94) 1,2,4-Trichlorobenzene	20.84	180	1537049	50.467	ng		100
95) Naphthalene	20.94	128	1879648	24.324	ng		100
96) n-Dodecane	18.93	58	42761	No Calib		#	
97) Hexachlorobutadiene	21.30	225	561430	22.422	ng		100
98) Cyclohexanone	15.42	55	1491	No Calib		#	
99) tert-Butylbenzene	18.43	119	1498169	25.929	ng		100
100) n-Butylbenzene	19.39	91	1644047	25.618	ng		100
101) 1,1,1,2-Tetrachloroethane	14.89	131	409345	26.522	ng		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182402.D Vial: 2
Acq On : 18 Jun 2024 9:52 Operator: SC
Sample : CCV R09061824 25ng Inst : MS09
Misc : S37-06062402/S37-05292404 (6/28)

Quant Time: Jun 18 10:13:53 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



C-2239

Evaluate Continuing Calibration Report

Data File : I:\MS09\DATA\2024 06\18\06182403.D Vial: 3
Acq On : 18 Jun 2024 10:24 Operator: SC
Sample : CCV C09061824 25ng Inst : MS09
Misc : S37-06062402/S37-06052406 (7/4)

Quant Time: Jun 18 10:56:32 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/18/24

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	IR	Bromochloromethane (C 1)	1.000	1.000	0.0	99	-0.02
2	T	Chloropentafluoroethane	1.555	1.575	-1.3	106	0.00
3	T	1,1,1,2-Tetrafluoroethane (	1.283	1.471	-14.7	120	-0.01
4	T	1,1-Difluoroethane	1.091	1.072	1.7	102	-0.01
5	T	Chlorodifluoromethane (CFC	0.426	0.490	-15.0	118	0.00
6	T	1-Chloro-1,1-Difluoroethane	2.816	3.178	-12.9	118	0.00
7	T	Dichlorofluoromethane (CFC	2.866	2.947	-2.8	106	0.00
8	T	Vinylbromide	1.070	1.075	-0.5	102	0.00
9	T	2,2-Dichloro-1,1,1-trifluor	1.735	1.723	0.7	103	0.00
10	T	2-Methylbutane	1.491	1.267	15.0	89	0.00
11	T	Methyl Acetate	4.212	3.352	20.4	82	-0.01
12	T	2-Methylpentane	1.082	1.083	-0.1	104	-0.01
13	T	2,2-Dichloropropane	2.038	2.328	-14.2	114	-0.01
14	T	1,1-Dichloropropene	1.782	1.846	-3.6	106	-0.02
15	T	Thiophene	2.546	2.614	-2.7	104	-0.01
16	IR	1,4-Difluorobenzene (C 2)	1.000	1.000	0.0	100	-0.01
17	T	2,3-Dimethylpentane	0.605	0.525	13.2	90	-0.01
18	T	Dibromomethane	0.222	0.237	-6.8	109	-0.02
19	IR	Chlorobenzene-d5 (C 3)	1.000	1.000	0.0	93	0.00
20	T	Methyl Cyclohexane	2.145	1.990	7.2	89	0.00
21	T	1,3-Dichloropropane	1.666	1.904	-14.3	109	0.00
22	T	1,1,1,2-Tetrachloroethane	1.102	1.299	-17.9	109	0.00
23	T	1-Chlorohexane	1.546	1.736	-12.3	105	0.00
24	T	1,2,3-Trichloropropane	1.669	1.978	-18.5	109	0.00
25	T	Bromobenzene	1.958	2.336	-19.3	108	0.00
26	T	2-Chlorotoluene	3.609	4.163	-15.4	107	0.00
27	T	4-Chlorotoluene	3.655	4.365	-19.4	108	0.00
28	T	Indane	4.134	5.026	-21.6	107	0.00
29	T	Indene	3.171	4.456	-40.5#	111	0.00
30	T	1,2,4,5-Tetramethylbenzene	4.275	5.648	-32.1#	109	0.00
31	T	1,2,3,4-Tetramethylbenzene	4.311	5.650	-31.1#	114	0.00
32	T	1,2,3,5-Tetramethylbenzene	4.091	5.507	-34.6#	112	0.00
33	T	1,2,3-Trichlorobenzene	1.494	2.326	-55.7#	123	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182403.D Vial: 3
Acq On : 18 Jun 2024 10:24 Operator: SC
Sample : CCV C09061824 25ng Inst : MS09
Misc : S37-06062402/S37-06052406 (7/4)

Quant Time: Jun 18 10:56:32 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/18/24

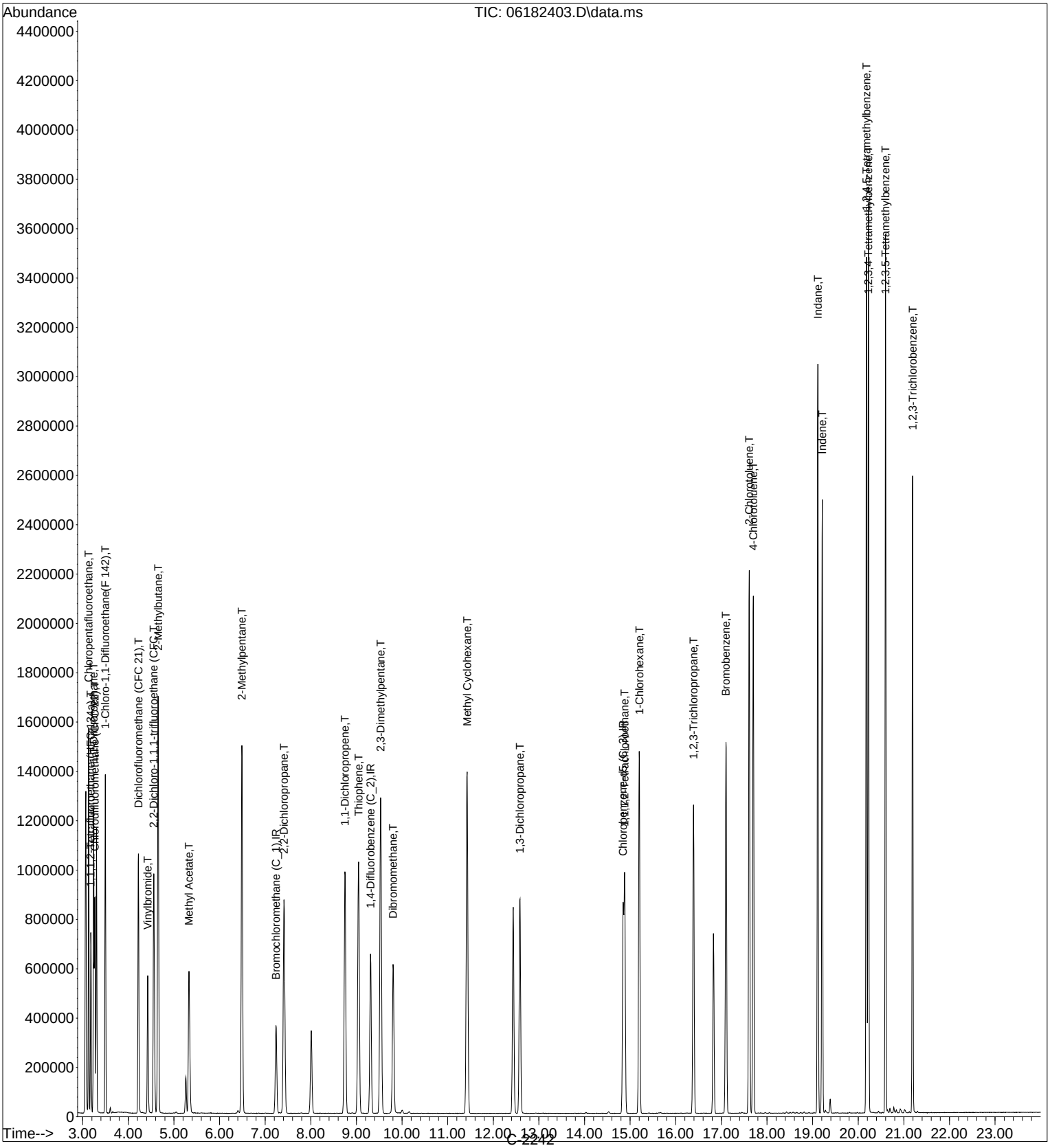
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.24	130	140642	12.500	ng		-0.02
16) 1,4-Difluorobenzene (C 2)	9.31	114	616171	12.500	ng		-0.01
19) Chlorobenzene-d5 (C_3)	14.85	54	139890	12.500	ng		0.00
Target Compounds							Qvalue
2) Chloropentafluoroethane	3.13	85	438619	25.069	ng		97
3) 1,1,1,2-Tetrafluoroeth...	3.18	83	413773	28.672	ng		91
4) 1,1-Difluoroethane	3.24	65	319641	26.030	ng		96
5) Chlorodifluoromethane ...	3.27	67	143211	29.882	ng		100
6) 1-Chloro-1,1-Difluoroe...	3.49	65	929811	29.346	ng		98
7) Dichlorofluoromethane ...	4.22	67	820543	25.443	ng		100
8) Vinylbromide	4.43	108	302334	25.123	ng		100
9) 2,2-Dichloro-1,1,1-tri...	4.56	83	503980	25.823	ng		98
10) 2-Methylbutane	4.65	57	363472	21.668	ng		94
11) Methyl Acetate	5.33	43	905229	19.100	ng	#	94
12) 2-Methylpentane	6.49	71	304771	25.027	ng	#	67
13) 2,2-Dichloropropane	7.41	77	648179	28.261	ng		98
14) 1,1-Dichloropropene	8.75	75	540053	26.928	ng		96
15) Thiophene	9.05	84	742631	25.922	ng		92
17) 2,3-Dimethylpentane	9.53	56	672227	22.545	ng		95
18) Dibromomethane	9.80	174	312852	28.554	ng		95
20) Methyl Cyclohexane	11.43	55	595759	24.818	ng		84
21) 1,3-Dichloropropane	12.59	76	554073	29.712	ng		91
22) 1,1,1,2-Tetrachloroethane	14.88	131	316253	25.651	ng		99
23) 1-Chlorohexane	15.20	91	500302	28.913	ng		92
24) 1,2,3-Trichloropropane	16.39	75	581177	31.122	ng		100
25) Bromobenzene	17.10	77	686386	31.326	ng		97
26) 2-Chlorotoluene	17.61	91	1234566	30.568	ng		99
27) 4-Chlorotoluene	17.70	91	1233566	30.154	ng		99
28) Indane	19.12	117	1392111	30.088	ng		99
29) Indene	19.21	115	1171932	33.022	ng		100
30) 1,2,4,5-Tetramethylben...	20.18	119	1595905	33.360	ng		99
31) 1,2,3,4-Tetramethylben...	20.22	119	1628117	33.748	ng		99
32) 1,2,3,5-Tetramethylben...	20.60	119	1556101	33.990	ng		99
33) 1,2,3-Trichlorobenzene	21.19	180	683415	40.888	ng		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\18\06182403.D Vial: 3
Acq On : 18 Jun 2024 10:24 Operator: SC
Sample : CCV C09061824 25ng Inst : MS09
Misc : S37-06062402/S37-06052406 (7/4)

Quant Time: Jun 18 10:56:32 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Evaluate Continuing Calibration Report

Data File : I:\MS09\DATA\2024 06\19\06192402.D Vial: 2
Acq On : 19 Jun 2024 9:23 Operator: SC
Sample : CCV R09061924 25ng Inst : MS09
Misc : S37-06062402/S37-05292404 (6/28)

Quant Time: Jun 19 09:46:44 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/19/24

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	IR	Bromochloromethane (IS1)	1.000	1.000	0.0	103	0.05
2	T	Propene	1.600	1.268	20.8	90	0.02
3	T	Dichlorodifluoromethane (CF	2.942	2.585	12.1	98	0.03
4	T	Chloromethane	2.011	1.740	13.5	91	0.03
5	T	1,2-Dichloro-1,1,2,2-tetraf	1.276	1.178	7.7	98	0.03
6	T	Vinyl Chloride	1.919	1.783	7.1	97	0.03
7	T	1,3-Butadiene	1.450	1.492	-2.9	104	0.02
8	T	Bromomethane	1.022	0.974	4.7	99	0.03
9	T	Chloroethane	0.804	0.712	11.4	93	0.03
10	T	Ethanol	1.215	1.066	12.3	93	-0.01
11	T	Acetonitrile	3.051	2.439	20.1	91	0.00
12	T	Acrolein	0.899	0.811	9.8	93	0.02
13	T	Acetone	0.971	0.847	12.8	95	0.01
14	T	Trichlorofluoromethane	2.976	2.861	3.9	102	0.03
15	T	2-Propanol (Isopropanol)	3.913	3.761	3.9	94	0.00
16	T	Acrylonitrile	1.821	1.680	7.7	95	0.00
17	T	1,1-Dichloroethene	1.138	1.054	7.4	97	0.03
18	T	2-Methyl-2-Propanol (tert-B	3.123	3.470	-11.1	103	0.00
19	T	Methylene Chloride	1.375	1.155	16.0	97	0.02
20	T	3-Chloro-1-propene (Allyl C	2.453	2.257	8.0	94	0.03
21	T	Trichlorotrifluoroethane	1.259	1.226	2.6	101	0.04
22	T	Carbon Disulfide	4.430	4.226	4.6	98	0.04
23	T	trans-1,2-Dichloroethene	1.966	1.876	4.6	97	0.04
24	T	1,1-Dichloroethane	2.340	2.176	7.0	96	0.04
25	T	Methyl tert-Butyl Ether	3.246	3.600	-10.9	104	0.04
26	T	Vinyl Acetate	0.224	0.230	-2.7	98	0.04
27	T	2-Butanone (MEK)	0.768	0.740	3.6	97	0.03
28	T	cis-1,2-Dichloroethene	1.929	1.811	6.1	97	0.04
29	T	Diisopropyl Ether	0.910	0.898	1.3	99	0.06
30	T	Ethyl Acetate	0.469	0.462	1.5	96	0.05
31	T	n-Hexane	2.056	1.977	3.8	96	0.06
32	T	Chloroform	2.449	2.289	6.5	99	0.05
33	S	1,2-Dichloroethane-d4(SS1)	2.222	2.254	-1.4	106	0.05
34	T	Tetrahydrofuran (THF)	0.701	0.687	2.0	98	0.06
35	T	Ethyl tert-Butyl Ether	1.209	1.307	-8.1	103	0.06
36	T	1,2-Dichloroethane	2.452	2.362	3.7	99	0.06
37	IR	1,4-Difluorobenzene (IS2)	1.000	1.000	0.0	104	0.03
38	T	1,1,1-Trichloroethane	0.580	0.566	2.4	102	0.02
39	T	Isopropyl Acetate	0.000	0.000	0.0	94	0.03
40	T	1-Butanol	0.000	0.000	0.0	143	0.03
41	T	Benzene	1.154	1.029	10.8	97	0.03
42	T	Carbon Tetrachloride	0.535	0.539	-0.7	102	0.03
43	T	Cyclohexane	0.373	0.375	-0.5	99	0.03
44	T	tert-Amyl Methyl Ether	0.726	0.776	-6.9	102	0.03
45	T	1,2-Dichloropropane	0.279	0.256	8.2	96	0.03
46	T	Bromodichloromethane	0.464	0.444	4.3	100	0.03
47	T	Trichloroethene	0.337	0.316	6.2	99	0.03
48	T	1,4-Dioxane	0.213	0.218	-2.3	99	0.03
49	T	2,2,4-Trimethylpentane (Iso	1.141	1.093	4.2	96	0.04
50	T	Methyl Methacrylate	0.098	0.104	-6.1	98	0.03
51	T	n-Heptane	0.243	0.243	0.0	98	0.04
52	T	cis-1,3-Dichloropropene	0.476	0.502	-5.5	97	0.04
53	T	4-Methyl-2-pentanone	0.254	0.263	-3.5	97	0.03
54	T	trans-1,3-Dichloropropene	0.430	0.467	-8.6	97	0.05
55	T	1,1,2-Trichloroethane	0.273	0.262	4.0	99	0.05

Evaluate Continuing Calibration Report

Data File : I:\MS09\DATA\2024 06\19\06192402.D Vial: 2
Acq On : 19 Jun 2024 9:23 Operator: SC
Sample : CCV R09061924 25ng Inst : MS09
Misc : S37-06062402/S37-05292404 (6/28)

Quant Time: Jun 19 09:46:44 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
56	IR	Chlorobenzene-d5 (IS3)	1.000	1.000	0.0	105	0.01
57	S	Toluene-d8 (SS2)	4.783	4.646	2.9	103	-0.02
58	T	Toluene	4.998	4.607	7.8	99	-0.02
59	T	2-Hexanone	3.134	3.198	-2.0	97	-0.02
60	T	Dibromochloromethane	1.728	1.642	5.0	101	-0.02
61	T	1,2-Dibromoethane	1.406	1.392	1.0	99	-0.02
62	T	n-Butyl Acetate	3.294	3.466	-5.2	97	-0.02
63	T	n-Octane	1.037	1.011	2.5	98	-0.01
64	T	Tetrachloroethene	1.718	1.623	5.5	103	-0.01
65	T	Chlorobenzene	3.503	3.237	7.6	99	-0.01
66	T	Ethylbenzene	5.719	5.630	1.6	99	-0.01
67	T	m- & p-Xylenes	4.809	4.832	-0.5	100	-0.01
68	T	Bromoform	1.530	1.535	-0.3	103	-0.02
69	T	Styrene	3.243	3.396	-4.7	97	-0.01
70	T	o-Xylene	4.742	4.711	0.7	100	-0.02
71	T	n-Nonane	2.756	2.817	-2.2	97	-0.01
72	T	1,1,2,2-Tetrachloroethane	2.171	2.035	6.3	98	-0.02
73	S	Bromofluorobenzene (SS3)	1.727	1.804	-4.5	109	-0.01
74	T	Cumene	5.920	5.797	2.1	100	-0.01
75	T	alpha-Pinene	2.758	2.960	-7.3	100	0.00
76	T	n-Propylbenzene	7.147	7.106	0.6	99	-0.01
77	T	3-Ethyltoluene	0.000	0.000	0.0	100	-0.01
78	T	4-Ethyltoluene	5.644	5.885	-4.3	101	-0.01
79	T	1,3,5-Trimethylbenzene	4.931	5.112	-3.7	101	0.00
80	T	alpha-Methylstyrene	0.000	0.000	0.0	100	-0.01
81	T	2-Ethyltoluene	0.000	0.000	0.0	100	-0.01
82	T	1,2,4-Trimethylbenzene	5.198	5.545	-6.7	101	-0.01
83	T	n-Decane	0.000	0.000	0.0	85	-0.02
84	T	Benzyl Chloride	4.178	4.824	-15.5	95	-0.02
85	T	1,3-Dichlorobenzene	3.426	3.310	3.4	98	-0.01
86	T	1,4-Dichlorobenzene	3.339	3.159	5.4	95	-0.01
87	T	sec-Butylbenzene	6.577	6.751	-2.6	100	0.00
88	T	4-Isopropyltoluene (p-Cymen	5.913	6.148	-4.0	101	0.00
89	T	1,2,3-Trimethylbenzene	0.000	0.000	0.0	100	-0.01
90	T	1,2-Dichlorobenzene	3.326	3.206	3.6	99	0.00
91	T	d-Limonene	1.767	1.921	-8.7	97	0.00
92	T	1,2-Dibromo-3-Chloropropane	1.153	1.208	-4.8	99	0.00
93	T	n-Undecane	0.000	0.000	0.0	88	-0.01
94	T	1,2,4-Trichlorobenzene	2.626	2.574	2.0	91	-0.01
95	T	Naphthalene	6.662	6.531	2.0	82	-0.01
96	T	n-Dodecane	0.000	0.000	0.0	92	0.00
97	T	Hexachlorobutadiene	2.159	2.035	5.7	103	0.00
98	T	Cyclohexanone	0.000	0.000	0.0	19#	-0.02
99	T	tert-Butylbenzene	4.981	5.123	-2.9	101	-0.01
100	T	n-Butylbenzene	5.532	5.743	-3.8	98	-0.01
101	T	1,1,1,2-Tetrachloroethane	1.331	1.341	-0.8	102	-0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192402.D Vial: 2
Acq On : 19 Jun 2024 9:23 Operator: SC
Sample : CCV R09061924 25ng Inst : MS09
Misc : S37-06062402/S37-05292404 (6/28)

Quant Time: Jun 19 09:46:44 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/19/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.27	130	144569	12.500	ng		0.05
37) 1,4-Difluorobenzene (IS2)	9.33	114	623668	12.500	ng		0.03
56) Chlorobenzene-d5 (IS3)	14.85	54	149579	12.500	ng		0.01
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.03	65	325854	12.682	ng		0.05
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.44%				
57) Toluene-d8 (SS2)	12.44	98	694879	12.140	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.12%				
73) Bromofluorobenzene (SS3)	16.83	174	269775	13.052	ng		-0.01
Spiked Amount 12.500	Range 70 - 130		Recovery = 104.40%				
Target Compounds							Qvalue
2) Propene	3.27	42	385084	20.806	ng		98
3) Dichlorodifluoromethan...	3.35	85	777448	22.851	ng		100
4) Chloromethane	3.49	50	538402	23.148	ng		100
5) 1,2-Dichloro-1,1,2,2-t...	3.60	135	371361	25.170	ng		100
6) Vinyl Chloride	3.68	62	546585	24.622	ng		100
7) 1,3-Butadiene	3.80	54	457188	27.263	ng		98
8) Bromomethane	4.01	94	287270	24.301	ng		100
9) Chloroethane	4.15	64	226382	24.337	ng		99
10) Ethanol	4.35	45	1512828	107.639	ng		99
11) Acetonitrile	4.47	41	676933	19.184	ng		98
12) Acrolein	4.55	56	504191	48.466	ng		100
13) Acetone	4.65	58	1251769	111.459	ng		97
14) Trichlorofluoromethane	4.76	101	835633	24.279	ng		99
15) 2-Propanol (Isopropanol)	4.90	45	2153301	47.583	ng		99
16) Acrylonitrile	5.03	53	971276	46.114	ng		99
17) 1,1-Dichloroethene	5.27	96	274344	20.837	ng		100
18) 2-Methyl-2-Propanol (t...	5.37	59	2087163	57.783	ng		99
19) Methylene Chloride	5.39	84	303825	19.112	ng		98
20) 3-Chloro-1-propene (Al...	5.47	41	704762	24.841	ng		98
21) Trichlorotrifluoroethane	5.59	151	318957	21.907	ng		98
22) Carbon Disulfide	5.61	76	2529084	49.363	ng		100
23) trans-1,2-Dichloroethene	6.16	61	569588	25.045	ng		100
24) 1,1-Dichloroethane	6.35	63	648021	23.945	ng		100
25) Methyl tert-Butyl Ether	6.38	73	1113781	29.666	ng		99
26) Vinyl Acetate	6.48	86	357599	137.990	ng	#	96
27) 2-Butanone (MEK)	6.69	72	434571	48.898	ng		97
28) cis-1,2-Dichloroethene	7.11	61	539261	24.175	ng		99
29) Diisopropyl Ether	7.31	87	544956	51.772	ng	#	95
30) Ethyl Acetate	7.31	61	261844	48.255	ng		97
31) n-Hexane	7.31	57	600351	25.250	ng		99
32) Chloroform	7.40	83	708106	24.999	ng		100
34) Tetrahydrofuran (THF)	7.77	72	375191	46.276	ng		96
35) Ethyl tert-Butyl Ether	7.84	87	797537	57.061	ng		98
36) 1,2-Dichloroethane	8.15	62	696653	24.565	ng		99
38) 1,1,1-Trichloroethane	8.42	97	727559	25.126	ng		100
39) Isopropyl Acetate	9.61	61	1162	No Calib		#	
40) 1-Butanol	8.83	56	2793	No Calib			
41) Benzene	8.92	78	1309515	22.746	ng		100
42) Carbon Tetrachloride	9.09	117	692492	25.933	ng		100
43) Cyclohexane	9.24	84	983000	52.754	ng		97
44) tert-Amyl Methyl Ether	9.61	73	2042922	56.385	ng		99
45) 1,2-Dichloropropane	9.88	63	345317	24.847	ng		99
46) Bromodichloromethane	10.10	83	587069	25.345	ng		100
47) Trichloroethene	10.17	130	405928	24.152	ng		100
48) 1,4-Dioxane	10.13	88	282836	26.627	ng		99
49) 2,2,4-Trimethylpentane...	10.25	57	1458797	25.629	ng		98
50) Methyl Methacrylate	10.42	100	274395	56.241	ng		98

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192402.D Vial: 2
Acq On : 19 Jun 2024 9:23 Operator: SC
Sample : CCV R09061924 25ng Inst : MS09
Misc : S37-06062402/S37-05292404 (6/28)

Quant Time: Jun 19 09:46:44 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

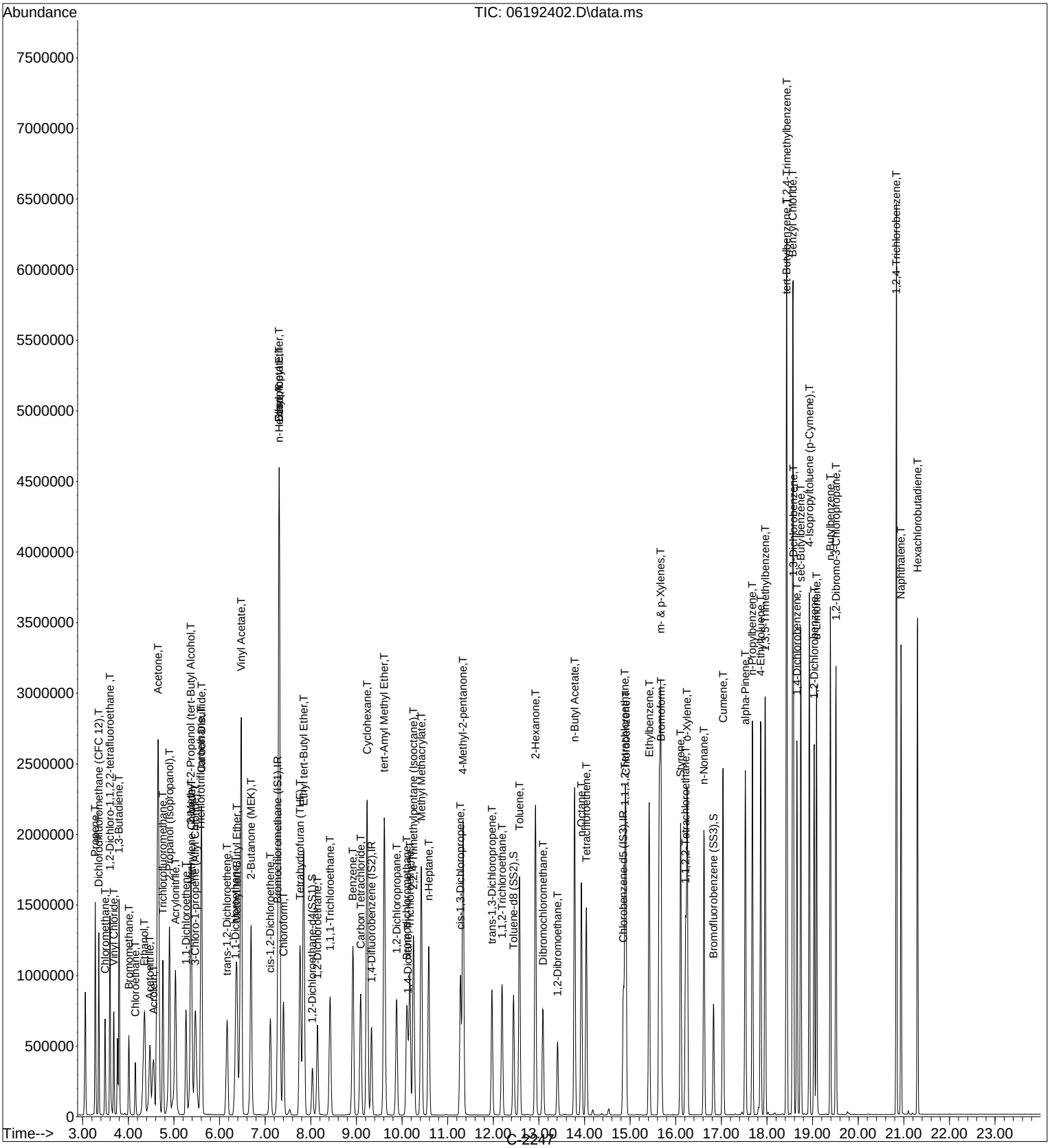
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	10.59	71	317936	26.184 ng		99
52) cis-1,3-Dichloropropene	11.28	75	657500	27.657 ng		100
53) 4-Methyl-2-pentanone	11.34	58	688458	54.405 ng		99
54) trans-1,3-Dichloropropene	11.97	75	571219	26.638 ng		100
55) 1,1,2-Trichloroethane	12.19	97	355940	26.128 ng		99
58) Toluene	12.57	91	1488415	24.884 ng		100
59) 2-Hexanone	12.93	43	1951387	52.039 ng		100
60) Dibromochloromethane	13.09	129	500948	24.226 ng		100
61) 1,2-Dibromoethane	13.41	107	428935	25.499 ng		99
62) n-Butyl Acetate	13.78	43	2157001	54.719 ng		100
63) n-Octane	13.93	57	320461	25.830 ng		99
64) Tetrachloroethene	14.04	166	519424	25.263 ng		100
65) Chlorobenzene	14.91	112	1036285	24.720 ng		100
66) Ethylbenzene	15.42	91	1835870	26.828 ng		100
67) m- & p-Xylenes	15.67	91	3093600	53.763 ng		100
68) Bromoform	15.68	173	500686	27.341 ng		100
69) Styrene	16.11	104	1076876	27.748 ng		100
70) o-Xylene	16.25	91	1522158	26.825 ng		100
71) n-Nonane	16.62	43	876527	26.574 ng		99
72) 1,1,2,2-Tetrachloroethane	16.21	83	657365	25.304 ng		100
74) Cumene	17.04	105	1803465	25.459 ng		100
75) alpha-Pinene	17.53	93	947634	28.714 ng		100
76) n-Propylbenzene	17.68	91	2189636	25.604 ng		100
77) 3-Ethyltoluene	17.04	105	1803465	No Calib		
78) 4-Ethyltoluene	17.86	105	1813375	26.848 ng		99
79) 1,3,5-Trimethylbenzene	17.96	105	1651516	27.990 ng		100
80) alpha-Methylstyrene	17.03	118	3951	No Calib	#	
81) 2-Ethyltoluene	17.04	105	1803465	No Calib		
82) 1,2,4-Trimethylbenzene	18.43	105	1725253	27.736 ng		99
83) n-Decane	17.03	58	14230	No Calib		
84) Benzyl Chloride	18.57	91	2987174	59.748 ng		100
85) 1,3-Dichlorobenzene	18.58	146	1019905	24.876 ng		99
86) 1,4-Dichlorobenzene	18.66	146	982792	24.598 ng		99
87) sec-Butylbenzene	18.74	105	2080269	26.434 ng		100
88) 4-Isopropyltoluene (p-...	18.93	119	1876144	26.515 ng		100
89) 1,2,3-Trimethylbenzene	17.04	105	1803465	No Calib		
90) 1,2-Dichlorobenzene	19.04	146	987926	24.822 ng		99
91) d-Limonene	19.09	68	574740	27.179 ng		99
92) 1,2-Dibromo-3-Chloropr...	19.51	157	744492	53.938 ng		100
93) n-Undecane	17.86	58	24821	No Calib	#	
94) 1,2,4-Trichlorobenzene	20.84	180	1648048	52.456 ng		100
95) Naphthalene	20.94	128	1973232	24.754 ng		100
96) n-Dodecane	18.93	58	40044	No Calib	#	
97) Hexachlorobutadiene	21.30	225	614962	23.809 ng		100
98) Cyclohexanone	15.42	55	1385	No Calib	#	
99) tert-Butylbenzene	18.43	119	1593904	26.742 ng		100
100) n-Butylbenzene	19.39	91	1718164	25.954 ng		100
101) 1,1,1,2-Tetrachloroethane	14.89	131	429283	26.963 ng		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192402.D Vial: 2
Acq On : 19 Jun 2024 9:23 Operator: SC
Sample : CCV R09061924 25ng Inst : MS09
Misc : S37-06062402/S37-05292404 (6/28)

Quant Time: Jun 19 09:46:44 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Evaluate Continuing Calibration Report

Data File : I:\MS09\DATA\2024 06\19\06192403.D Vial: 3
Acq On : 19 Jun 2024 9:56 Operator: SC
Sample : CCV C09061924 25ng Inst : MS09
Misc : S37-06062402/S37-06052406 (7/4)

Quant Time: Jun 19 10:20:32 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/19/24

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	IR	Bromochloromethane (C 1)	1.000	1.000	0.0	105	-0.02
2	T	Chloropentafluoroethane	1.555	1.490	4.2	106	0.00
3	T	1,1,1,2-Tetrafluoroethane (	1.283	1.456	-13.5	126	0.00
4	T	1,1-Difluoroethane	1.091	1.014	7.1	102	-0.01
5	T	Chlorodifluoromethane (CFC	0.426	0.486	-14.1	125	0.00
6	T	1-Chloro-1,1-Difluoroethane	2.816	3.177	-12.8	125	0.00
7	T	Dichlorofluoromethane (CFC	2.866	2.886	-0.7	110	0.00
8	T	Vinylbromide	1.070	1.046	2.2	106	0.00
9	T	2,2-Dichloro-1,1,1-trifluor	1.735	1.653	4.7	105	0.00
10	T	2-Methylbutane	1.491	1.216	18.4	91	0.00
11	T	Methyl Acetate	4.212	3.170	24.7	82	-0.01
12	T	2-Methylpentane	1.082	1.029	4.9	105	-0.01
13	T	2,2-Dichloropropane	2.038	2.315	-13.6	121	-0.01
14	T	1,1-Dichloropropene	1.782	1.782	0.0	109	-0.02
15	T	Thiophene	2.546	2.513	1.3	107	-0.01
16	IR	1,4-Difluorobenzene (C 2)	1.000	1.000	0.0	106	-0.01
17	T	2,3-Dimethylpentane	0.605	0.504	16.7	92	-0.01
18	T	Dibromomethane	0.222	0.240	-8.1	116	-0.02
19	IR	Chlorobenzene-d5 (C 3)	1.000	1.000	0.0	99	0.00
20	T	Methyl Cyclohexane	2.145	1.894	11.7	90	0.00
21	T	1,3-Dichloropropane	1.666	1.812	-8.8	111	0.00
22	T	1,1,1,2-Tetrachloroethane	1.102	1.273	-15.5	115	0.00
23	T	1-Chlorohexane	1.546	1.660	-7.4	107	-0.01
24	T	1,2,3-Trichloropropane	1.669	1.881	-12.7	110	0.00
25	T	Bromobenzene	1.958	2.232	-14.0	111	0.00
26	T	2-Chlorotoluene	3.609	4.033	-11.7	111	0.00
27	T	4-Chlorotoluene	3.655	4.242	-16.1	112	0.00
28	T	Indane	4.134	4.858	-17.5	111	0.00
29	T	Indene	3.171	4.344	-37.0#	116	0.00
30	T	1,2,4,5-Tetramethylbenzene	4.275	5.518	-29.1	114	0.00
31	T	1,2,3,4-Tetramethylbenzene	4.311	5.549	-28.7	119	0.00
32	T	1,2,3,5-Tetramethylbenzene	4.091	5.391	-31.8#	118	0.00
33	T	1,2,3-Trichlorobenzene	1.494	2.299	-53.9#	130	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192403.D Vial: 3
Acq On : 19 Jun 2024 9:56 Operator: SC
Sample : CCV C09061924 25ng Inst : MS09
Misc : S37-06062402/S37-06052406 (7/4)

Quant Time: Jun 19 10:20:32 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/19/24

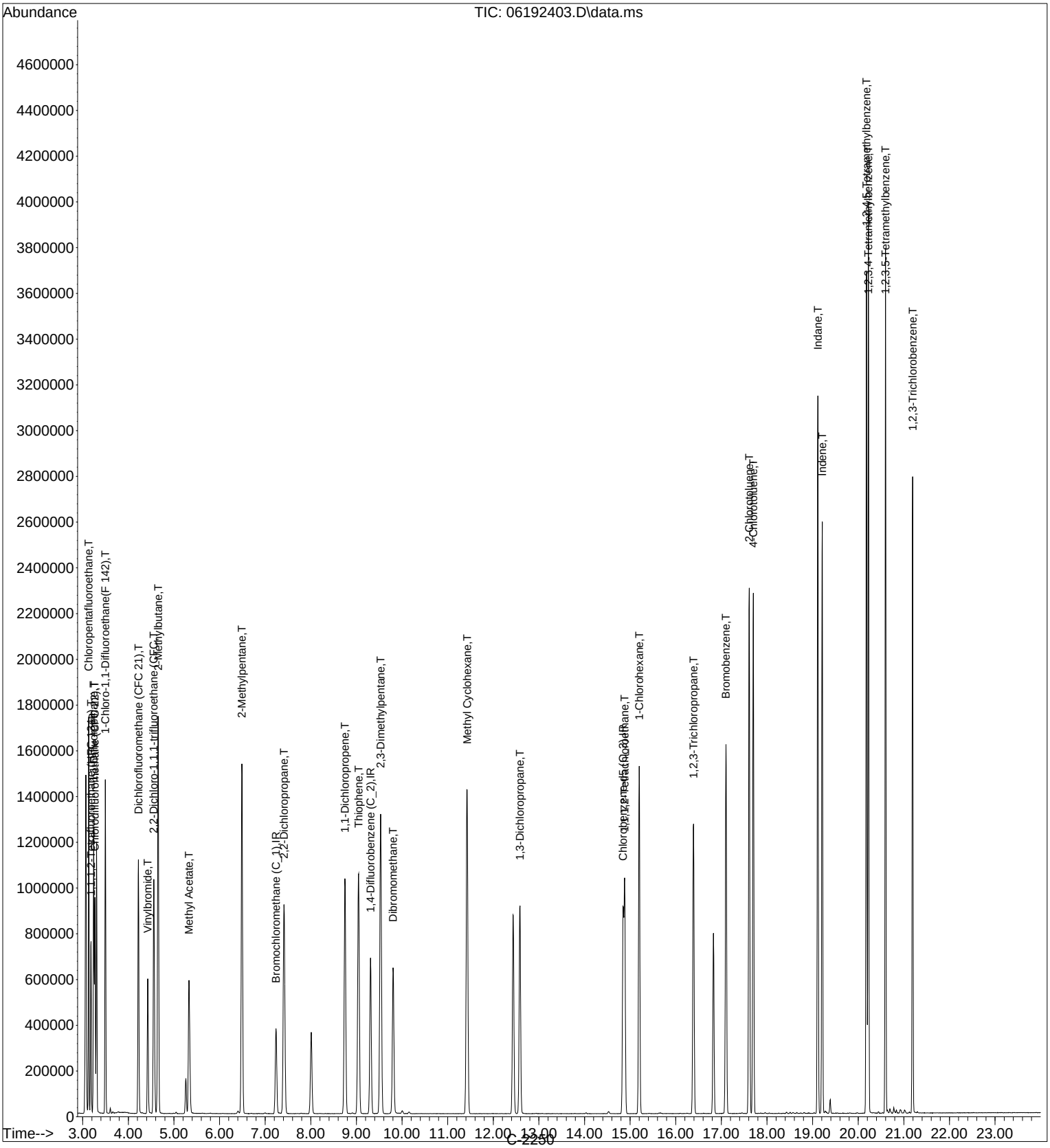
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.24	130	149600	12.500	ng		-0.02
16) 1,4-Difluorobenzene (C 2)	9.31	114	648741	12.500	ng		-0.01
19) Chlorobenzene-d5 (C_3)	14.85	54	149628	12.500	ng		0.00
Target Compounds							Qvalue
2) Chloropentafluoroethane	3.13	85	441497	23.723	ng		93
3) 1,1,1,2-Tetrafluoroeth...	3.18	83	435567	28.375	ng		88
4) 1,1-Difluoroethane	3.24	65	321437	24.609	ng		90
5) Chlorodifluoromethane ...	3.27	67	151156	29.651	ng		99
6) 1-Chloro-1,1-Difluoroe...	3.49	65	988724	29.337	ng		97
7) Dichlorofluoromethane ...	4.22	67	854749	24.916	ng		100
8) Vinylbromide	4.43	108	313022	24.454	ng		100
9) 2,2-Dichloro-1,1,1-tri...	4.56	83	514406	24.779	ng		99
10) 2-Methylbutane	4.65	57	371087	20.798	ng		93
11) Methyl Acetate	5.33	43	910402	18.059	ng	#	94
12) 2-Methylpentane	6.49	71	307937	23.773	ng	#	67
13) 2,2-Dichloropropane	7.41	77	685684	28.106	ng		97
14) 1,1-Dichloropropene	8.75	75	554439	25.990	ng		97
15) Thiophene	9.05	84	759406	24.920	ng		92
17) 2,3-Dimethylpentane	9.53	56	680748	21.685	ng		94
18) Dibromomethane	9.80	174	332622	28.834	ng		93
20) Methyl Cyclohexane	11.43	55	606512	23.621	ng		84
21) 1,3-Dichloropropane	12.59	76	563827	28.268	ng		91
22) 1,1,1,2-Tetrachloroethane	14.88	131	331425	25.132	ng		99
23) 1-Chlorohexane	15.20	91	511582	27.641	ng		92
24) 1,2,3-Trichloropropane	16.39	75	590963	29.586	ng		99
25) Bromobenzene	17.10	77	701377	29.927	ng		94
26) 2-Chlorotoluene	17.61	91	1279292	29.614	ng		99
27) 4-Chlorotoluene	17.70	91	1282238	29.304	ng		98
28) Indane	19.12	117	1439255	29.083	ng		99
29) Indene	19.21	115	1221917	32.190	ng		100
30) 1,2,4,5-Tetramethylben...	20.18	119	1667790	32.594	ng		99
31) 1,2,3,4-Tetramethylben...	20.22	119	1710369	33.146	ng		99
32) 1,2,3,5-Tetramethylben...	20.60	119	1629337	33.273	ng		99
33) 1,2,3-Trichlorobenzene	21.19	180	722338	40.404	ng		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\19\06192403.D Vial: 3
Acq On : 19 Jun 2024 9:56 Operator: SC
Sample : CCV C09061924 25ng Inst : MS09
Misc : S37-06062402/S37-06052406 (7/4)

Quant Time: Jun 19 10:20:32 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Evaluate Continuing Calibration Report

Data File : I:\MS09\DATA\2024 06\20\06202402.D Vial: 2
Acq On : 20 Jun 2024 10:15 Operator: SC
Sample : CCV R09062024 25ng Inst : MS09
Misc : S37-06062402/S37-05292404 (6/28)

Quant Time: Jun 20 10:37:41 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/20/24

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	IR	Bromochloromethane (IS1)	1.000	1.000	0.0	132	0.05
2	T	Propene	1.600	1.428	10.8	131	0.03
3	T	Dichlorodifluoromethane (CF	2.942	2.421	17.7	118	0.03
4	T	Chloromethane	2.011	1.986	1.2	134	0.03
5	T	1,2-Dichloro-1,1,2,2-tetraf	1.276	1.119	12.3	120	0.03
6	T	Vinyl Chloride	1.919	1.891	1.5	133	0.03
7	T	1,3-Butadiene	1.450	1.505	-3.8	135	0.03
8	T	Bromomethane	1.022	1.031	-0.9	135	0.03
9	T	Chloroethane	0.804	0.804	0.0	135	0.03
10	T	Ethanol	1.215	1.237	-1.8	139	0.00
11	T	Acetonitrile	3.051	2.917	4.4	140	0.00
12	T	Acrolein	0.899	0.914	-1.7	135	0.02
13	T	Acetone	0.971	0.927	4.5	135	0.02
14	T	Trichlorofluoromethane	2.976	2.588	13.0	119	0.04
15	T	2-Propanol (Isopropanol)	3.913	4.129	-5.5	133	0.00
16	T	Acrylonitrile	1.821	1.854	-1.8	135	0.00
17	T	1,1-Dichloroethene	1.138	1.076	5.4	128	0.03
18	T	2-Methyl-2-Propanol (tert-B	3.123	3.426	-9.7	131	0.01
19	T	Methylene Chloride	1.375	1.204	12.4	131	0.02
20	T	3-Chloro-1-propene (Allyl C	2.453	2.481	-1.1	133	0.03
21	T	Trichlorotrifluoroethane	1.259	1.128	10.4	120	0.04
22	T	Carbon Disulfide	4.430	4.338	2.1	130	0.04
23	T	trans-1,2-Dichloroethene	1.966	1.945	1.1	129	0.04
24	T	1,1-Dichloroethane	2.340	2.278	2.6	130	0.04
25	T	Methyl tert-Butyl Ether	3.246	3.489	-7.5	130	0.04
26	T	Vinyl Acetate	0.224	0.230	-2.7	127	0.04
27	T	2-Butanone (MEK)	0.768	0.779	-1.4	132	0.03
28	T	cis-1,2-Dichloroethene	1.929	1.863	3.4	129	0.05
29	T	Diisopropyl Ether	0.910	0.900	1.1	128	0.06
30	T	Ethyl Acetate	0.469	0.496	-5.8	133	0.05
31	T	n-Hexane	2.056	2.107	-2.5	133	0.06
32	T	Chloroform	2.449	2.208	9.8	124	0.05
33	S	1,2-Dichloroethane-d4(SS1)	2.222	2.137	3.8	129	0.06
34	T	Tetrahydrofuran (THF)	0.701	0.719	-2.6	132	0.06
35	T	Ethyl tert-Butyl Ether	1.209	1.255	-3.8	128	0.06
36	T	1,2-Dichloroethane	2.452	2.186	10.8	119	0.07
37	IR	1,4-Difluorobenzene (IS2)	1.000	1.000	0.0	135	0.03
38	T	1,1,1-Trichloroethane	0.580	0.509	12.2	119	0.02
39	T	Isopropyl Acetate	0.000	0.000	0.0	129	0.03
40	T	1-Butanol	0.000	0.000	0.0	222#	0.03
41	T	Benzene	1.154	1.051	8.9	129	0.03
42	T	Carbon Tetrachloride	0.535	0.468	12.5	115	0.03
43	T	Cyclohexane	0.373	0.378	-1.3	129	0.03
44	T	tert-Amyl Methyl Ether	0.726	0.754	-3.9	128	0.04
45	T	1,2-Dichloropropane	0.279	0.275	1.4	133	0.03
46	T	Bromodichloromethane	0.464	0.418	9.9	122	0.03
47	T	Trichloroethene	0.337	0.299	11.3	122	0.03
48	T	1,4-Dioxane	0.213	0.219	-2.8	130	0.03
49	T	2,2,4-Trimethylpentane (Iso	1.141	1.167	-2.3	133	0.04
50	T	Methyl Methacrylate	0.098	0.102	-4.1	125	0.03
51	T	n-Heptane	0.243	0.250	-2.9	131	0.04
52	T	cis-1,3-Dichloropropene	0.476	0.496	-4.2	125	0.04
53	T	4-Methyl-2-pentanone	0.254	0.273	-7.5	132	0.04
54	T	trans-1,3-Dichloropropene	0.430	0.443	-3.0	120	0.05
55	T	1,1,2-Trichloroethane	0.273	0.255	6.6	125	0.05

Evaluate Continuing Calibration Report

Data File : I:\MS09\DATA\2024 06\20\06202402.D Vial: 2
Acq On : 20 Jun 2024 10:15 Operator: SC
Sample : CCV R09062024 25ng Inst : MS09
Misc : S37-06062402/S37-05292404 (6/28)

Quant Time: Jun 20 10:37:41 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
56	IR	Chlorobenzene-d5 (IS3)	1.000	1.000	0.0	133	0.01
57	S	Toluene-d8 (SS2)	4.783	4.811	-0.6	135	-0.02
58	T	Toluene	4.998	4.581	8.3	125	-0.02
59	T	2-Hexanone	3.134	3.327	-6.2	128	-0.02
60	T	Dibromochloromethane	1.728	1.520	12.0	118	-0.02
61	T	1,2-Dibromoethane	1.406	1.346	4.3	121	-0.02
62	T	n-Butyl Acetate	3.294	3.616	-9.8	127	-0.02
63	T	n-Octane	1.037	1.074	-3.6	131	-0.01
64	T	Tetrachloroethene	1.718	1.472	14.3	118	0.00
65	T	Chlorobenzene	3.503	3.104	11.4	120	-0.01
66	T	Ethylbenzene	5.719	5.433	5.0	121	-0.01
67	T	m- & p-Xylenes	4.809	4.597	4.4	120	-0.01
68	T	Bromoform	1.530	1.337	12.6	113	-0.02
69	T	Styrene	3.243	3.234	0.3	117	0.00
70	T	o-Xylene	4.742	4.467	5.8	119	-0.01
71	T	n-Nonane	2.756	2.942	-6.7	128	-0.01
72	T	1,1,2,2-Tetrachloroethane	2.171	2.041	6.0	124	-0.01
73	S	Bromofluorobenzene (SS3)	1.727	1.680	2.7	128	0.00
74	T	Cumene	5.920	5.410	8.6	118	-0.01
75	T	alpha-Pinene	2.758	2.800	-1.5	119	0.00
76	T	n-Propylbenzene	7.147	6.705	6.2	119	-0.01
77	T	3-Ethyltoluene	0.000	0.000	0.0	118	-0.01
78	T	4-Ethyltoluene	5.644	5.348	5.2	116	0.00
79	T	1,3,5-Trimethylbenzene	4.931	4.660	5.5	117	0.00
80	T	alpha-Methylstyrene	0.000	0.000	0.0	115	0.00
81	T	2-Ethyltoluene	0.000	0.000	0.0	118	-0.01
82	T	1,2,4-Trimethylbenzene	5.198	4.984	4.1	114	-0.01
83	T	n-Decane	0.000	0.000	0.0	124	-0.02
84	T	Benzyl Chloride	4.178	4.267	-2.1	106	-0.02
85	T	1,3-Dichlorobenzene	3.426	2.907	15.1	109	-0.01
86	T	1,4-Dichlorobenzene	3.339	2.805	16.0	107	-0.01
87	T	sec-Butylbenzene	6.577	6.146	6.6	115	0.00
88	T	4-Isopropyltoluene (p-Cymen	5.913	5.481	7.3	114	0.00
89	T	1,2,3-Trimethylbenzene	0.000	0.000	0.0	118	-0.01
90	T	1,2-Dichlorobenzene	3.326	2.826	15.0	111	0.00
91	T	d-Limonene	1.767	1.835	-3.8	117	0.00
92	T	1,2-Dibromo-3-Chloropropane	1.153	1.048	9.1	109	0.00
93	T	n-Undecane	0.000	0.000	0.0	127	-0.01
94	T	1,2,4-Trichlorobenzene	2.626	2.203	16.1	98	0.00
95	T	Naphthalene	6.662	5.768	13.4	92	-0.01
96	T	n-Dodecane	0.000	0.000	0.0	132	0.00
97	T	Hexachlorobutadiene	2.159	1.683	22.0	108	0.00
98	T	Cyclohexanone	0.000	0.000	0.0	22#	-0.01
99	T	tert-Butylbenzene	4.981	4.577	8.1	114	-0.01
100	T	n-Butylbenzene	5.532	5.226	5.5	113	-0.01
101	T	1,1,1,2-Tetrachloroethane	1.331	1.216	8.6	117	-0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202402.D Vial: 2
Acq On : 20 Jun 2024 10:15 Operator: SC
Sample : CCV R09062024 25ng Inst : MS09
Misc : S37-06062402/S37-05292404 (6/28)

Quant Time: Jun 20 10:37:41 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/20/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.27	130	186495	12.500	ng		0.05
37) 1,4-Difluorobenzene (IS2)	9.33	114	810970	12.500	ng		0.03
56) Chlorobenzene-d5 (IS3)	14.85	54	188993	12.500	ng		0.01
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.04	65	398465	12.021	ng		0.06
Spiked Amount 12.500	Range 70 - 130		Recovery = 96.16%				
57) Toluene-d8 (SS2)	12.44	98	909154	12.571	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.56%				
73) Bromofluorobenzene (SS3)	16.83	174	317541	12.159	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 97.28%				
Target Compounds							Qvalue
2) Propene	3.28	42	559074	23.416	ng		99
3) Dichlorodifluoromethan...	3.35	85	939128	21.397	ng		100
4) Chloromethane	3.49	50	792501	26.412	ng		100
5) 1,2-Dichloro-1,1,2,2-t...	3.60	135	454920	23.902	ng		100
6) Vinyl Chloride	3.68	62	747512	26.103	ng		100
7) 1,3-Butadiene	3.80	54	595211	27.515	ng		97
8) Bromomethane	4.01	94	392124	25.713	ng		100
9) Chloroethane	4.15	64	329999	27.501	ng		100
10) Ethanol	4.36	45	2264734	124.912	ng		100
11) Acetonitrile	4.48	41	1044329	22.943	ng		99
12) Acrolein	4.55	56	733217	54.636	ng		100
13) Acetone	4.66	58	1766357	121.920	ng		91
14) Trichlorofluoromethane	4.76	101	974903	21.958	ng		99
15) 2-Propanol (Isopropanol)	4.90	45	3049044	52.230	ng		97
16) Acrylonitrile	5.03	53	1382879	50.896	ng		100
17) 1,1-Dichloroethene	5.27	96	361355	21.275	ng		99
18) 2-Methyl-2-Propanol (t...	5.37	59	2658268	57.050	ng		99
19) Methylene Chloride	5.39	84	408744	19.931	ng		98
20) 3-Chloro-1-propene (Al...	5.47	41	999581	27.312	ng		100
21) Trichlorotrifluoroethane	5.59	151	378549	20.155	ng		96
22) Carbon Disulfide	5.61	76	3349035	50.672	ng		100
23) trans-1,2-Dichloroethene	6.17	61	761818	25.967	ng		99
24) 1,1-Dichloroethane	6.36	63	875209	25.069	ng		100
25) Methyl tert-Butyl Ether	6.38	73	1392323	28.748	ng		99
26) Vinyl Acetate	6.48	86	461031	137.908	ng	#	94
27) 2-Butanone (MEK)	6.69	72	589966	51.459	ng		98
28) cis-1,2-Dichloroethene	7.12	61	715892	24.878	ng		99
29) Diisopropyl Ether	7.31	87	704796	51.905	ng	#	95
30) Ethyl Acetate	7.31	61	362873	51.839	ng		99
31) n-Hexane	7.31	57	825323	26.909	ng		100
32) Chloroform	7.40	83	881152	24.115	ng		100
34) Tetrahydrofuran (THF)	7.76	72	506681	48.445	ng		97
35) Ethyl tert-Butyl Ether	7.84	87	987925	54.792	ng		97
36) 1,2-Dichloroethane	8.15	62	831654	22.733	ng		99
38) 1,1,1-Trichloroethane	8.42	97	850096	22.577	ng		100
39) Isopropyl Acetate	9.61	61	1596	No Calib		#	
40) 1-Butanol	8.83	56	4344	No Calib			
41) Benzene	8.92	78	1738042	23.216	ng		100
42) Carbon Tetrachloride	9.09	117	781246	22.500	ng		99
43) Cyclohexane	9.24	84	1286017	53.076	ng		97
44) tert-Amyl Methyl Ether	9.62	73	2578938	54.740	ng		100
45) 1,2-Dichloropropane	9.88	63	481792	26.661	ng		100
46) Bromodichloromethane	10.10	83	717952	23.836	ng		100
47) Trichloroethene	10.17	130	498726	22.820	ng		99
48) 1,4-Dioxane	10.13	88	370080	26.793	ng		98
49) 2,2,4-Trimethylpentane...	10.25	57	2025145	27.362	ng		96
50) Methyl Methacrylate	10.42	100	349604	55.106	ng		95

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202402.D Vial: 2
Acq On : 20 Jun 2024 10:15 Operator: SC
Sample : CCV R09062024 25ng Inst : MS09
Misc : S37-06062402/S37-05292404 (6/28)

Quant Time: Jun 20 10:37:41 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

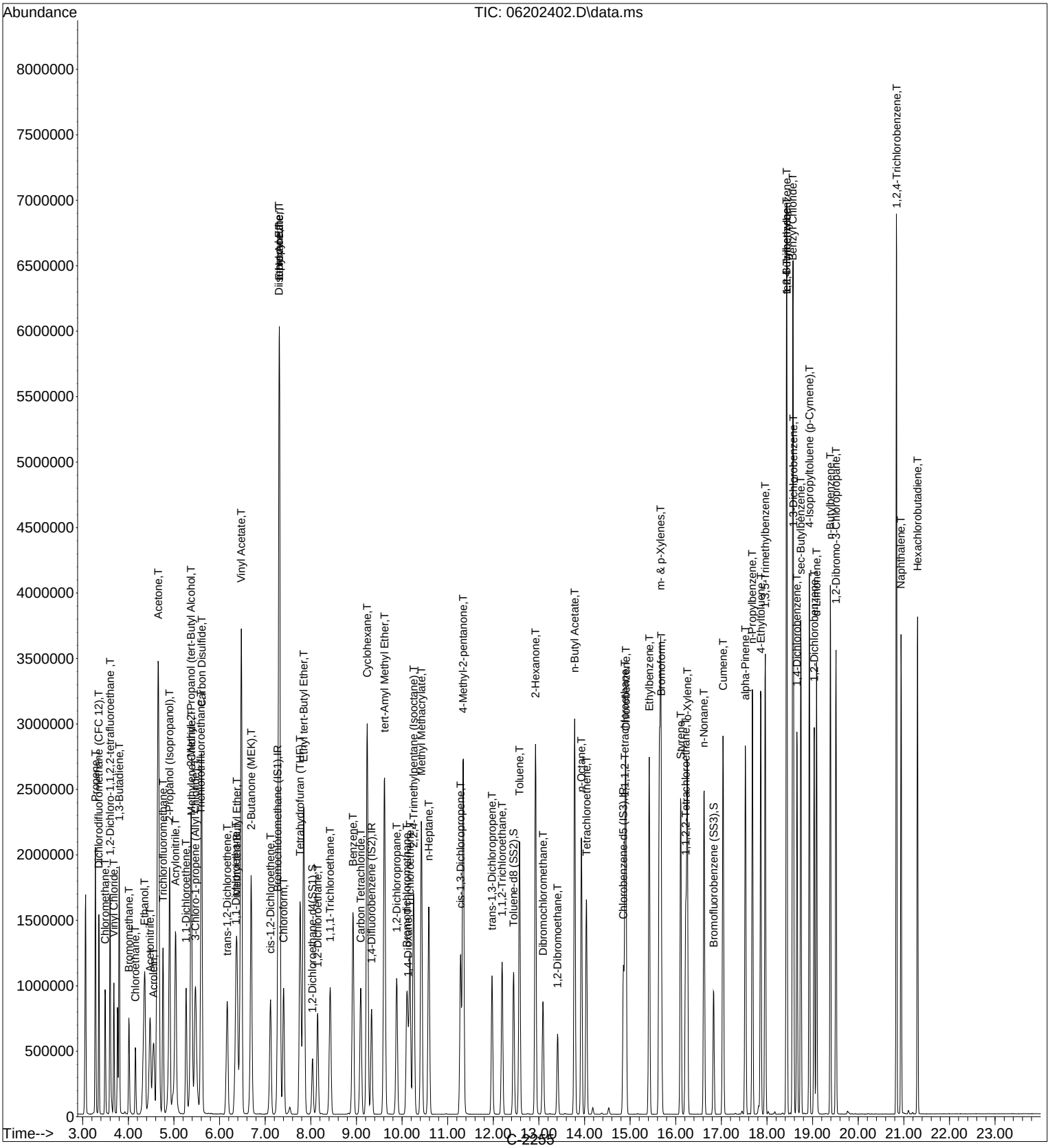
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	10.59	71	425859	26.972 ng		99
52) cis-1,3-Dichloropropene	11.29	75	845486	27.351 ng		99
53) 4-Methyl-2-pentanone	11.34	58	929490	56.488 ng		99
54) trans-1,3-Dichloropropene	11.97	75	704705	25.273 ng		100
55) 1,1,2-Trichloroethane	12.19	97	450885	25.453 ng		99
58) Toluene	12.57	91	1870109	24.745 ng		100
59) 2-Hexanone	12.93	43	2565752	54.153 ng		99
60) Dibromochloromethane	13.09	129	586098	22.433 ng		100
61) 1,2-Dibromoethane	13.41	107	524057	24.656 ng		100
62) n-Butyl Acetate	13.78	43	2842561	57.072 ng		99
63) n-Octane	13.93	57	430208	27.445 ng		97
64) Tetrachloroethene	14.05	166	595259	22.913 ng		100
65) Chlorobenzene	14.91	112	1255558	23.705 ng		100
66) Ethylbenzene	15.42	91	2238546	25.890 ng		100
67) m- & p-Xylenes	15.67	91	3718837	51.151 ng		100
68) Bromoform	15.68	173	550990	23.814 ng		100
69) Styrene	16.11	104	1295686	26.423 ng		99
70) o-Xylene	16.25	91	1823402	25.432 ng		100
71) n-Nonane	16.62	43	1156572	27.752 ng		99
72) 1,1,2,2-Tetrachloroethane	16.22	83	833060	25.379 ng		100
74) Cumene	17.04	105	2126584	23.759 ng		99
75) alpha-Pinene	17.53	93	1132267	27.154 ng		99
76) n-Propylbenzene	17.68	91	2610378	24.158 ng		99
77) 3-Ethyltoluene	17.04	105	2126584	No Calib		
78) 4-Ethyltoluene	17.87	105	2082250	24.400 ng		100
79) 1,3,5-Trimethylbenzene	17.96	105	1902282	25.516 ng		99
80) alpha-Methylstyrene	17.04	118	4567	No Calib	#	
81) 2-Ethyltoluene	17.04	105	2126584	No Calib		
82) 1,2,4-Trimethylbenzene	18.43	105	1959278	24.929 ng		100
83) n-Decane	17.03	58	20787	No Calib		
84) Benzyl Chloride	18.56	91	3338701	52.852 ng		100
85) 1,3-Dichlorobenzene	18.58	146	1131582	21.844 ng		100
86) 1,4-Dichlorobenzene	18.66	146	1102513	21.840 ng		100
87) sec-Butylbenzene	18.74	105	2392914	24.065 ng		100
88) 4-Isopropyltoluene (p-...	18.93	119	2112999	23.635 ng		100
89) 1,2,3-Trimethylbenzene	17.04	105	2126584	No Calib		
90) 1,2-Dichlorobenzene	19.04	146	1100417	21.883 ng		100
91) d-Limonene	19.09	68	693662	25.961 ng		98
92) 1,2-Dibromo-3-Chloropr...	19.51	157	816081	46.794 ng		99
93) n-Undecane	17.86	58	35825	No Calib		
94) 1,2,4-Trichlorobenzene	20.84	180	1781692	44.883 ng		100
95) Naphthalene	20.94	128	2201858	21.862 ng		100
96) n-Dodecane	18.93	58	57260	No Calib	#	
97) Hexachlorobutadiene	21.30	225	642371	19.683 ng		99
98) Cyclohexanone	15.42	55	1583	No Calib	#	
99) tert-Butylbenzene	18.43	119	1799291	23.892 ng		100
100) n-Butylbenzene	19.39	91	1975381	23.616 ng		99
101) 1,1,1,2-Tetrachloroethane	14.89	131	491892	24.452 ng		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202402.D Vial: 2
Acq On : 20 Jun 2024 10:15 Operator: SC
Sample : CCV R09062024 25ng Inst : MS09
Misc : S37-06062402/S37-05292404 (6/28)

Quant Time: Jun 20 10:37:41 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Evaluate Continuing Calibration Report

Data File : I:\MS09\DATA\2024 06\20\06202403.D Vial: 3
Acq On : 20 Jun 2024 10:47 Operator: SC
Sample : CCV C09062024 25ng Inst : MS09
Misc : S37-06062402/S37-06052406 (7/4)

Quant Time: Jun 20 11:16:56 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/20/24

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	IR	Bromochloromethane (C 1)	1.000	1.000	0.0	125	-0.02
2	T	Chloropentafluoroethane	1.555	1.528	1.7	129	0.00
3	T	1,1,1,2-Tetrafluoroethane (	1.283	1.375	-7.2	141	-0.01
4	T	1,1-Difluoroethane	1.091	1.069	2.0	128	-0.01
5	T	Chlorodifluoromethane (CFC	0.426	0.460	-8.0	139	0.00
6	T	1-Chloro-1,1-Difluoroethane	2.816	2.969	-5.4	138	0.00
7	T	Dichlorofluoromethane (CFC	2.866	2.962	-3.3	134	0.00
8	T	Vinylbromide	1.070	1.064	0.6	127	0.00
9	T	2,2-Dichloro-1,1,1-trifluor	1.735	1.730	0.3	130	0.00
10	T	2-Methylbutane	1.491	1.303	12.6	115	0.00
11	T	Methyl Acetate	4.212	3.461	17.8	106	-0.01
12	T	2-Methylpentane	1.082	1.088	-0.6	131	-0.01
13	T	2,2-Dichloropropane	2.038	2.213	-8.6	137	-0.01
14	T	1,1-Dichloropropene	1.782	1.820	-2.1	131	-0.02
15	T	Thiophene	2.546	2.610	-2.5	131	-0.02
16	IR	1,4-Difluorobenzene (C 2)	1.000	1.000	0.0	127	-0.01
17	T	2,3-Dimethylpentane	0.605	0.529	12.6	115	-0.01
18	T	Dibromomethane	0.222	0.224	-0.9	130	-0.02
19	IR	Chlorobenzene-d5 (C 3)	1.000	1.000	0.0	117	0.00
20	T	Methyl Cyclohexane	2.145	2.009	6.3	113	-0.01
21	T	1,3-Dichloropropane	1.666	1.875	-12.5	135	-0.01
22	T	1,1,1,2-Tetrachloroethane	1.102	1.222	-10.9	130	0.00
23	T	1-Chlorohexane	1.546	1.684	-8.9	128	-0.01
24	T	1,2,3-Trichloropropane	1.669	1.931	-15.7	134	0.00
25	T	Bromobenzene	1.958	2.287	-16.8	134	0.00
26	T	2-Chlorotoluene	3.609	4.022	-11.4	131	0.00
27	T	4-Chlorotoluene	3.655	4.213	-15.3	132	0.00
28	T	Indane	4.134	4.786	-15.8	129	0.00
29	T	Indene	3.171	4.246	-33.9#	134	0.00
30	T	1,2,4,5-Tetramethylbenzene	4.275	5.325	-24.6	130	0.00
31	T	1,2,3,4-Tetramethylbenzene	4.311	5.337	-23.8	136	0.00
32	T	1,2,3,5-Tetramethylbenzene	4.091	5.161	-26.2	133	0.00
33	T	1,2,3-Trichlorobenzene	1.494	2.136	-43.0#	143	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202403.D Vial: 3
Acq On : 20 Jun 2024 10:47 Operator: SC
Sample : CCV C09062024 25ng Inst : MS09
Misc : S37-06062402/S37-06052406 (7/4)

Quant Time: Jun 20 11:16:56 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/20/24

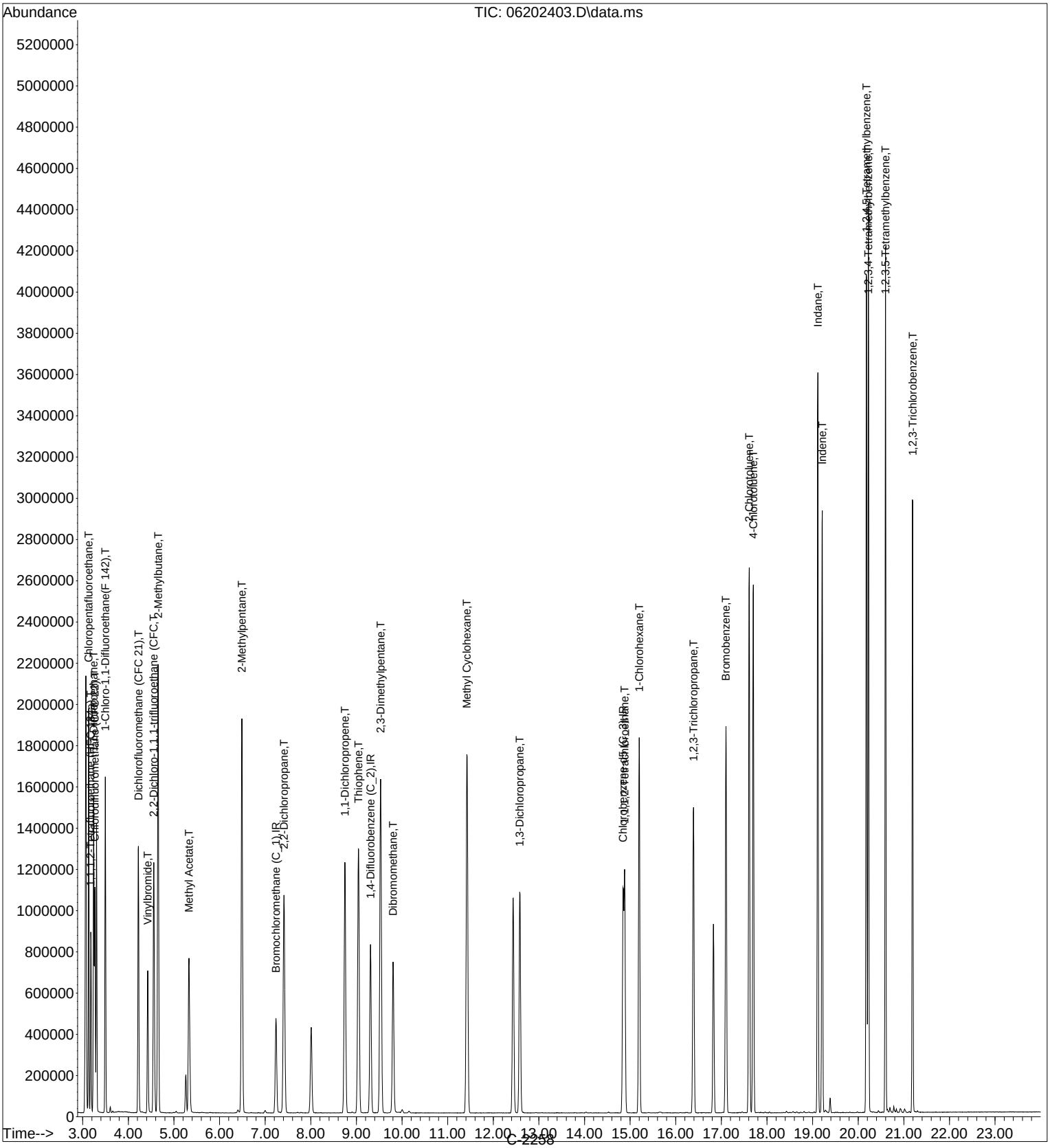
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (C 1)	7.24	130	176646	12.500	ng	-0.02
16) 1,4-Difluorobenzene (C 2)	9.31	114	779008	12.500	ng	-0.01
19) Chlorobenzene-d5 (C_3)	14.85	54	176838	12.500	ng	0.00
Target Compounds						Qvalue
2) Chloropentafluoroethane	3.13	85	534597	24.327	ng	98
3) 1,1,1,2-Tetrafluoroeth...	3.18	83	485871	26.806	ng	95
4) 1,1-Difluoroethane	3.24	65	400234	25.950	ng	100
5) Chlorodifluoromethane ...	3.27	67	168953	28.068	ng	99
6) 1-Chloro-1,1-Difluoroe...	3.49	65	1091050	27.416	ng	99
7) Dichlorofluoromethane ...	4.22	67	1035835	25.572	ng	100
8) Vinylbromide	4.43	108	376042	24.879	ng	100
9) 2,2-Dichloro-1,1,1-tri...	4.56	83	635678	25.933	ng	98
10) 2-Methylbutane	4.65	57	469715	22.294	ng	94
11) Methyl Acetate	5.33	43	1173920	19.720	ng	95
12) 2-Methylpentane	6.49	71	384442	25.135	ng	71
13) 2,2-Dichloropropane	7.41	77	774114	26.872	ng	98
14) 1,1-Dichloropropene	8.75	75	668880	26.554	ng	95
15) Thiophene	9.04	84	931185	25.878	ng	92
17) 2,3-Dimethylpentane	9.53	56	857106	22.737	ng	96
18) Dibromomethane	9.80	174	372611	26.900	ng	98
20) Methyl Cyclohexane	11.42	55	760298	25.055	ng	87
21) 1,3-Dichloropropane	12.58	76	689621	29.254	ng	90
22) 1,1,1,2-Tetrachloroethane	14.88	131	376024	24.127	ng	99
23) 1-Chlorohexane	15.20	91	613388	28.042	ng	93
24) 1,2,3-Trichloropropane	16.39	75	717181	30.380	ng	99
25) Bromobenzene	17.10	77	849139	30.657	ng	99
26) 2-Chlorotoluene	17.61	91	1507833	29.534	ng	100
27) 4-Chlorotoluene	17.70	91	1504764	29.098	ng	100
28) Indane	19.12	117	1675658	28.650	ng	99
29) Indene	19.21	115	1411440	31.461	ng	100
30) 1,2,4,5-Tetramethylben...	20.18	119	1902254	31.455	ng	99
31) 1,2,3,4-Tetramethylben...	20.22	119	1944190	31.880	ng	99
32) 1,2,3,5-Tetramethylben...	20.60	119	1843582	31.856	ng	99
33) 1,2,3-Trichlorobenzene	21.19	180	793086	37.536	ng	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\20\06202403.D Vial: 3
Acq On : 20 Jun 2024 10:47 Operator: SC
Sample : CCV C09062024 25ng Inst : MS09
Misc : S37-06062402/S37-06052406 (7/4)

Quant Time: Jun 20 11:16:56 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Evaluate Continuing Calibration Report

Data File : I:\MS09\DATA\2024 06\21\06212402.D Vial: 2
Acq On : 21 Jun 2024 10:56 Operator: SC
Sample : CCV R09062124 25ng Inst : MS09
Misc : S37-06062402/S37-05292404 (6/28)

Quant Time: Jun 21 11:23:29 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/21/24

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	IR	Bromochloromethane (IS1)	1.000	1.000	0.0	136	0.05
2	T	Propene	1.600	1.382	13.6	130	0.02
3	T	Dichlorodifluoromethane (CF	2.942	2.322	21.1	116	0.03
4	T	Chloromethane	2.011	1.956	2.7	136	0.03
5	T	1,2-Dichloro-1,1,2,2-tetraf	1.276	1.106	13.3	122	0.03
6	T	Vinyl Chloride	1.919	1.867	2.7	135	0.03
7	T	1,3-Butadiene	1.450	1.473	-1.6	136	0.02
8	T	Bromomethane	1.022	1.017	0.5	137	0.03
9	T	Chloroethane	0.804	0.798	0.7	138	0.03
10	T	Ethanol	1.215	1.228	-1.1	142	0.00
11	T	Acetonitrile	3.051	2.893	5.2	143	0.00
12	T	Acrolein	0.899	0.902	-0.3	137	0.02
13	T	Acetone	0.971	0.919	5.4	137	0.01
14	T	Trichlorofluoromethane	2.976	2.512	15.6	119	0.03
15	T	2-Propanol (Isopropanol)	3.913	4.062	-3.8	135	0.00
16	T	Acrylonitrile	1.821	1.838	-0.9	138	0.00
17	T	1,1-Dichloroethene	1.138	1.063	6.6	130	0.03
18	T	2-Methyl-2-Propanol (tert-B	3.123	3.368	-7.8	132	0.01
19	T	Methylene Chloride	1.375	1.190	13.5	133	0.02
20	T	3-Chloro-1-propene (Allyl C	2.453	2.474	-0.9	136	0.03
21	T	Trichlorotrifluoroethane	1.259	1.107	12.1	121	0.04
22	T	Carbon Disulfide	4.430	4.285	3.3	132	0.04
23	T	trans-1,2-Dichloroethene	1.966	1.923	2.2	131	0.04
24	T	1,1-Dichloroethane	2.340	2.245	4.1	132	0.04
25	T	Methyl tert-Butyl Ether	3.246	3.429	-5.6	132	0.04
26	T	Vinyl Acetate	0.224	0.227	-1.3	129	0.04
27	T	2-Butanone (MEK)	0.768	0.769	-0.1	134	0.03
28	T	cis-1,2-Dichloroethene	1.929	1.834	4.9	131	0.05
29	T	Diisopropyl Ether	0.910	0.888	2.4	130	0.06
30	T	Ethyl Acetate	0.469	0.492	-4.9	135	0.05
31	T	n-Hexane	2.056	2.079	-1.1	135	0.06
32	T	Chloroform	2.449	2.164	11.6	125	0.05
33	S	1,2-Dichloroethane-d4(SS1)	2.222	2.122	4.5	132	0.06
34	T	Tetrahydrofuran (THF)	0.701	0.703	-0.3	133	0.06
35	T	Ethyl tert-Butyl Ether	1.209	1.239	-2.5	130	0.06
36	T	1,2-Dichloroethane	2.452	2.133	13.0	119	0.07
37	IR	1,4-Difluorobenzene (IS2)	1.000	1.000	0.0	139	0.03
38	T	1,1,1-Trichloroethane	0.580	0.496	14.5	119	0.02
39	T	Isopropyl Acetate	0.000	0.000	0.0	131	0.04
40	T	1-Butanol	0.000	0.000	0.0	240#	0.03
41	T	Benzene	1.154	1.040	9.9	131	0.03
42	T	Carbon Tetrachloride	0.535	0.453	15.3	115	0.03
43	T	Cyclohexane	0.373	0.370	0.8	130	0.03
44	T	tert-Amyl Methyl Ether	0.726	0.745	-2.6	131	0.04
45	T	1,2-Dichloropropane	0.279	0.272	2.5	136	0.03
46	T	Bromodichloromethane	0.464	0.411	11.4	123	0.03
47	T	Trichloroethene	0.337	0.291	13.6	123	0.03
48	T	1,4-Dioxane	0.213	0.215	-0.9	131	0.03
49	T	2,2,4-Trimethylpentane (Iso	1.141	1.158	-1.5	136	0.04
50	T	Methyl Methacrylate	0.098	0.100	-2.0	127	0.03
51	T	n-Heptane	0.243	0.248	-2.1	133	0.04
52	T	cis-1,3-Dichloropropene	0.476	0.489	-2.7	127	0.04
53	T	4-Methyl-2-pentanone	0.254	0.270	-6.3	134	0.04
54	T	trans-1,3-Dichloropropene	0.430	0.435	-1.2	121	0.05
55	T	1,1,2-Trichloroethane	0.273	0.252	7.7	127	0.05

Evaluate Continuing Calibration Report

Data File : I:\MS09\DATA\2024 06\21\06212402.D Vial: 2
Acq On : 21 Jun 2024 10:56 Operator: SC
Sample : CCV R09062124 25ng Inst : MS09
Misc : S37-06062402/S37-05292404 (6/28)

Quant Time: Jun 21 11:23:29 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
56	IR	Chlorobenzene-d5 (IS3)	1.000	1.000	0.0	135	0.01
57	S	Toluene-d8 (SS2)	4.783	4.877	-2.0	139	-0.02
58	T	Toluene	4.998	4.565	8.7	127	-0.02
59	T	2-Hexanone	3.134	3.328	-6.2	130	-0.02
60	T	Dibromochloromethane	1.728	1.504	13.0	119	-0.02
61	T	1,2-Dibromoethane	1.406	1.337	4.9	122	-0.02
62	T	n-Butyl Acetate	3.294	3.611	-9.6	129	-0.02
63	T	n-Octane	1.037	1.072	-3.4	133	-0.01
64	T	Tetrachloroethene	1.718	1.441	16.1	118	0.00
65	T	Chlorobenzene	3.503	3.083	12.0	122	-0.01
66	T	Ethylbenzene	5.719	5.413	5.4	123	-0.01
67	T	m- & p-Xylenes	4.809	4.548	5.4	121	-0.01
68	T	Bromoform	1.530	1.313	14.2	113	-0.01
69	T	Styrene	3.243	3.213	0.9	119	-0.01
70	T	o-Xylene	4.742	4.438	6.4	121	-0.02
71	T	n-Nonane	2.756	2.937	-6.6	130	0.00
72	T	1,1,2,2-Tetrachloroethane	2.171	2.029	6.5	125	-0.02
73	S	Bromofluorobenzene (SS3)	1.727	1.696	1.8	132	0.00
74	T	Cumene	5.920	5.395	8.9	120	-0.01
75	T	alpha-Pinene	2.758	2.790	-1.2	121	0.00
76	T	n-Propylbenzene	7.147	6.652	6.9	120	-0.01
77	T	3-Ethyltoluene	0.000	0.000	0.0	120	-0.01
78	T	4-Ethyltoluene	5.644	5.314	5.8	118	-0.01
79	T	1,3,5-Trimethylbenzene	4.931	4.601	6.7	117	0.00
80	T	alpha-Methylstyrene	0.000	0.000	0.0	115	0.00
81	T	2-Ethyltoluene	0.000	0.000	0.0	120	-0.01
82	T	1,2,4-Trimethylbenzene	5.198	4.950	4.8	115	-0.01
83	T	n-Decane	0.000	0.000	0.0	118	-0.02
84	T	Benzyl Chloride	4.178	4.213	-0.8	107	-0.02
85	T	1,3-Dichlorobenzene	3.426	2.877	16.0	110	-0.01
86	T	1,4-Dichlorobenzene	3.339	2.779	16.8	107	-0.01
87	T	sec-Butylbenzene	6.577	6.117	7.0	117	0.00
88	T	4-Isopropyltoluene (p-Cymen	5.913	5.413	8.5	114	0.00
89	T	1,2,3-Trimethylbenzene	0.000	0.000	0.0	120	-0.01
90	T	1,2-Dichlorobenzene	3.326	2.793	16.0	111	0.00
91	T	d-Limonene	1.767	1.836	-3.9	119	0.00
92	T	1,2-Dibromo-3-Chloropropane	1.153	1.040	9.8	110	0.00
93	T	n-Undecane	0.000	0.000	0.0	122	-0.01
94	T	1,2,4-Trichlorobenzene	2.626	2.147	18.2	97	0.00
95	T	Naphthalene	6.662	5.679	14.8	92	-0.01
96	T	n-Dodecane	0.000	0.000	0.0	121	0.00
97	T	Hexachlorobutadiene	2.159	1.644	23.9	107	0.00
98	T	Cyclohexanone	0.000	0.000	0.0	20#	0.00
99	T	tert-Butylbenzene	4.981	4.548	8.7	116	-0.01
100	T	n-Butylbenzene	5.532	5.154	6.8	113	-0.01
101	T	1,1,1,2-Tetrachloroethane	1.331	1.208	9.2	118	-0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212402.D Vial: 2
Acq On : 21 Jun 2024 10:56 Operator: SC
Sample : CCV R09062124 25ng Inst : MS09
Misc : S37-06062402/S37-05292404 (6/28)

Quant Time: Jun 21 11:23:29 2024 6/21/24
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.27	130	191796	12.500	ng		0.05
37) 1,4-Difluorobenzene (IS2)	9.33	114	834750	12.500	ng		0.03
56) Chlorobenzene-d5 (IS3)	14.85	54	192286	12.500	ng		0.01
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.04	65	407030	11.940	ng		0.06
Spiked Amount 12.500	Range 70 - 130		Recovery = 95.52%				
57) Toluene-d8 (SS2)	12.44	98	937780	12.744	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.92%				
73) Bromofluorobenzene (SS3)	16.83	174	326104	12.273	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.16%				
Target Compounds							Qvalue
2) Propene	3.27	42	556432	22.661	ng		98
3) Dichlorodifluoromethan...	3.35	85	926411	20.524	ng		100
4) Chloromethane	3.49	50	802817	26.017	ng		99
5) 1,2-Dichloro-1,1,2,2-t...	3.60	135	462383	23.622	ng		100
6) Vinyl Chloride	3.68	62	759237	25.779	ng		100
7) 1,3-Butadiene	3.80	54	599011	26.925	ng		98
8) Bromomethane	4.01	94	398039	25.380	ng		100
9) Chloroethane	4.15	64	336752	27.288	ng		99
10) Ethanol	4.36	45	2312242	124.007	ng		100
11) Acetonitrile	4.48	41	1065300	22.757	ng		98
12) Acrolein	4.55	56	743812	53.894	ng		100
13) Acetone	4.65	58	1800866	120.867	ng		90
14) Trichlorofluoromethane	4.76	101	973088	21.311	ng		100
15) 2-Propanol (Isopropanol)	4.90	45	3085456	51.393	ng		97
16) Acrylonitrile	5.03	53	1410214	50.468	ng		100
17) 1,1-Dichloroethene	5.27	96	366867	21.003	ng		98
18) 2-Methyl-2-Propanol (t...	5.37	59	2687615	56.085	ng		99
19) Methylene Chloride	5.39	84	415255	19.689	ng		98
20) 3-Chloro-1-propene (Al...	5.47	41	1024740	27.226	ng		99
21) Trichlorotrifluoroethane	5.58	151	382020	19.778	ng		96
22) Carbon Disulfide	5.61	76	3402770	50.062	ng		100
23) trans-1,2-Dichloroethene	6.16	61	774490	25.669	ng		99
24) 1,1-Dichloroethane	6.35	63	886802	24.699	ng		100
25) Methyl tert-Butyl Ether	6.38	73	1407534	28.259	ng		98
26) Vinyl Acetate	6.48	86	467253	135.906	ng	#	95
27) 2-Butanone (MEK)	6.69	72	598838	50.790	ng		99
28) cis-1,2-Dichloroethene	7.12	61	724742	24.489	ng		99
29) Diisopropyl Ether	7.30	87	715491	51.236	ng	#	94
30) Ethyl Acetate	7.31	61	369836	51.374	ng		99
31) n-Hexane	7.31	57	837376	26.547	ng		100
32) Chloroform	7.40	83	888193	23.635	ng		100
34) Tetrahydrofuran (THF)	7.76	72	509780	47.394	ng		95
35) Ethyl tert-Butyl Ether	7.84	87	1002898	54.085	ng		97
36) 1,2-Dichloroethane	8.15	62	834738	22.187	ng		100
38) 1,1,1-Trichloroethane	8.42	97	852639	21.999	ng		100
39) Isopropyl Acetate	9.62	61	1617	No Calib		#	
40) 1-Butanol	8.83	56	4693	No Calib			
41) Benzene	8.92	78	1770416	22.975	ng		100
42) Carbon Tetrachloride	9.09	117	779215	21.802	ng		99
43) Cyclohexane	9.24	84	1298948	52.083	ng		96
44) tert-Amyl Methyl Ether	9.62	73	2625935	54.150	ng		99
45) 1,2-Dichloropropane	9.88	63	490361	26.362	ng		100
46) Bromodichloromethane	10.10	83	726984	23.449	ng		100
47) Trichloroethene	10.17	130	501189	22.280	ng		100
48) 1,4-Dioxane	10.13	88	373620	26.279	ng		97
49) 2,2,4-Trimethylpentane...	10.25	57	2067819	27.143	ng		96
50) Methyl Methacrylate	10.43	100	353631	54.153	ng		95

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212402.D Vial: 2
Acq On : 21 Jun 2024 10:56 Operator: SC
Sample : CCV R09062124 25ng Inst : MS09
Misc : S37-06062402/S37-05292404 (6/28)

Quant Time: Jun 21 11:23:29 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

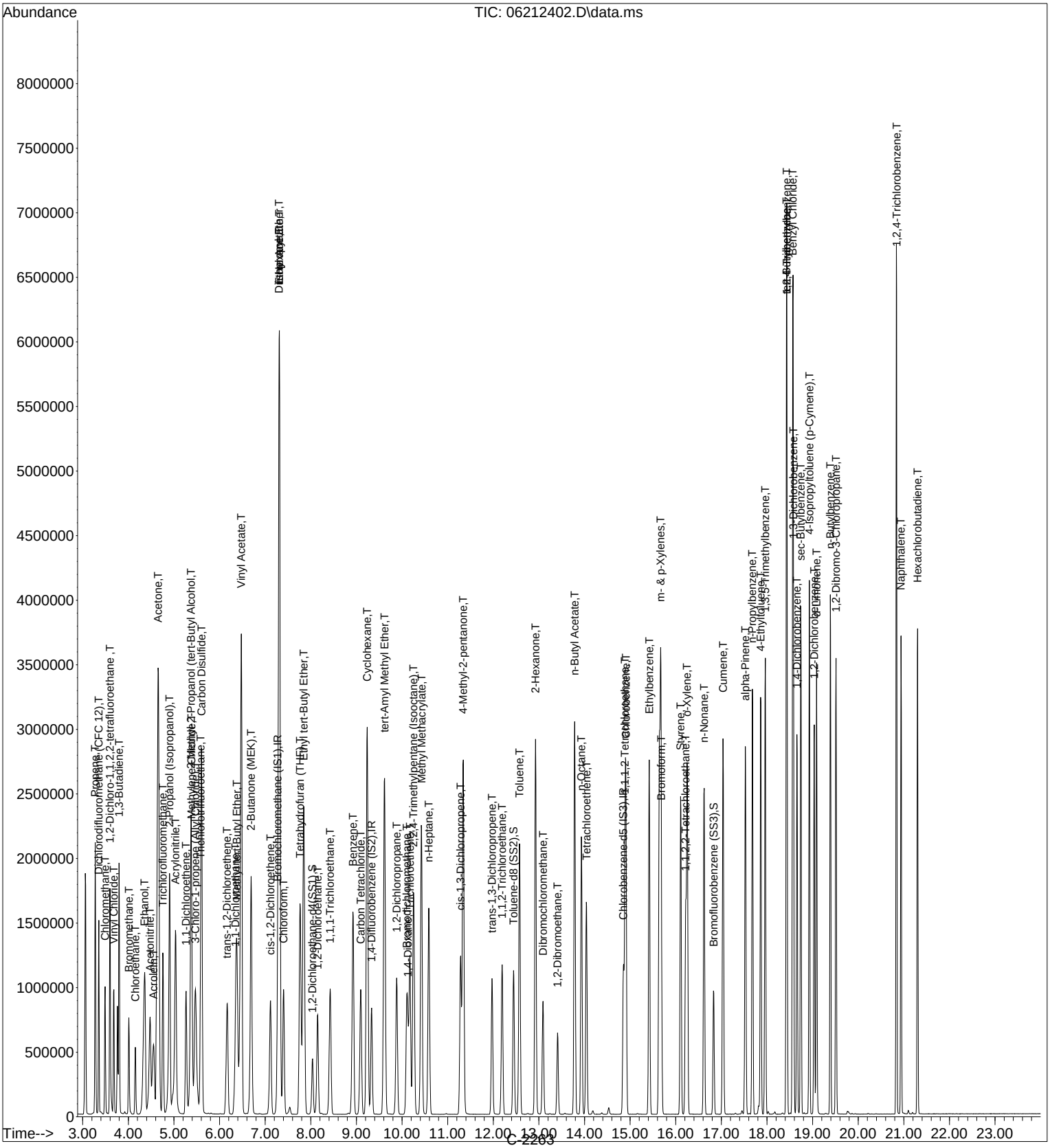
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	10.59	71	434454	26.732 ng		99
52) cis-1,3-Dichloropropene	11.29	75	856652	26.922 ng		100
53) 4-Methyl-2-pentanone	11.34	58	947351	55.934 ng		98
54) trans-1,3-Dichloropropene	11.97	75	712399	24.821 ng		100
55) 1,1,2-Trichloroethane	12.19	97	458780	25.161 ng		99
58) Toluene	12.57	91	1895938	24.658 ng		100
59) 2-Hexanone	12.93	43	2610740	54.159 ng		99
60) Dibromochloromethane	13.09	129	590067	22.198 ng		100
61) 1,2-Dibromoethane	13.41	107	529527	24.487 ng		100
62) n-Butyl Acetate	13.78	43	2888159	56.995 ng		99
63) n-Octane	13.93	57	436948	27.397 ng		97
64) Tetrachloroethene	14.05	166	593073	22.438 ng		100
65) Chlorobenzene	14.91	112	1268487	23.539 ng		100
66) Ethylbenzene	15.42	91	2269244	25.795 ng		100
67) m- & p-Xylenes	15.67	91	3743090	50.603 ng		100
68) Bromoform	15.69	173	550578	23.388 ng		100
69) Styrene	16.11	104	1309709	26.252 ng		99
70) o-Xylene	16.25	91	1843397	25.271 ng		100
71) n-Nonane	16.62	43	1174657	27.703 ng		99
72) 1,1,2,2-Tetrachloroethane	16.21	83	842694	25.233 ng		100
74) Cumene	17.04	105	2157891	23.696 ng		100
75) alpha-Pinene	17.53	93	1148170	27.064 ng		98
76) n-Propylbenzene	17.68	91	2634903	23.968 ng		99
77) 3-Ethyltoluene	17.04	105	2157891	No Calib		
78) 4-Ethyltoluene	17.86	105	2104786	24.241 ng		100
79) 1,3,5-Trimethylbenzene	17.96	105	1910906	25.193 ng		100
80) alpha-Methylstyrene	17.04	118	4581	No Calib	#	
81) 2-Ethyltoluene	17.04	105	2157891	No Calib		
82) 1,2,4-Trimethylbenzene	18.43	105	1979584	24.756 ng		100
83) n-Decane	17.03	58	19805	No Calib		
84) Benzyl Chloride	18.56	91	3353490	52.177 ng		100
85) 1,3-Dichlorobenzene	18.58	146	1139790	21.625 ng		99
86) 1,4-Dichlorobenzene	18.66	146	1111384	21.638 ng		100
87) sec-Butylbenzene	18.74	105	2422919	23.950 ng		99
88) 4-Isopropyltoluene (p-...	18.93	119	2123133	23.342 ng		100
89) 1,2,3-Trimethylbenzene	17.04	105	2157891	No Calib		
90) 1,2-Dichlorobenzene	19.04	146	1106486	21.626 ng		100
91) d-Limonene	19.09	68	706249	25.980 ng		97
92) 1,2-Dibromo-3-Chloropr...	19.51	157	823527	46.413 ng		99
93) n-Undecane	17.86	58	34613	No Calib		
94) 1,2,4-Trichlorobenzene	20.84	180	1767027	43.751 ng		100
95) Naphthalene	20.94	128	2206005	21.528 ng		100
96) n-Dodecane	18.93	58	52348	No Calib	#	
97) Hexachlorobutadiene	21.30	225	638553	19.231 ng		100
98) Cyclohexanone	15.43	55	1457	No Calib	#	
99) tert-Butylbenzene	18.43	119	1818899	23.739 ng		100
100) n-Butylbenzene	19.39	91	1982157	23.291 ng		99
101) 1,1,1,2-Tetrachloroethane	14.89	131	497069	24.286 ng		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212402.D Vial: 2
Acq On : 21 Jun 2024 10:56 Operator: SC
Sample : CCV R09062124 25ng Inst : MS09
Misc : S37-06062402/S37-05292404 (6/28)

Quant Time: Jun 21 11:23:29 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Evaluate Continuing Calibration Report

Data File : I:\MS09\DATA\2024 06\21\06212403.D Vial: 3
Acq On : 21 Jun 2024 11:28 Operator: SC
Sample : CCV C09062124 25ng Inst : MS09
Misc : S37-06062402/S37-06052406 (7/4)

Quant Time: Jun 21 12:00:11 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/21/24

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	IR	Bromochloromethane (C 1)	1.000	1.000	0.0	129	-0.02
2	T	Chloropentafluoroethane	1.555	1.473	5.3	129	0.00
3	T	1,1,1,2-Tetrafluoroethane (	1.283	1.319	-2.8	140	0.00
4	T	1,1-Difluoroethane	1.091	1.044	4.3	129	-0.01
5	T	Chlorodifluoromethane (CFC	0.426	0.440	-3.3	138	0.00
6	T	1-Chloro-1,1-Difluoroethane	2.816	2.849	-1.2	138	0.00
7	T	Dichlorofluoromethane (CFC	2.866	2.860	0.2	134	0.00
8	T	Vinylbromide	1.070	1.037	3.1	128	0.00
9	T	2,2-Dichloro-1,1,1-trifluor	1.735	1.687	2.8	131	0.00
10	T	2-Methylbutane	1.491	1.262	15.4	116	0.00
11	T	Methyl Acetate	4.212	3.399	19.3	108	-0.01
12	T	2-Methylpentane	1.082	1.060	2.0	132	0.00
13	T	2,2-Dichloropropane	2.038	2.145	-5.3	137	-0.01
14	T	1,1-Dichloropropene	1.782	1.778	0.2	132	-0.02
15	T	Thiophene	2.546	2.543	0.1	132	-0.01
16	IR	1,4-Difluorobenzene (C 2)	1.000	1.000	0.0	132	-0.01
17	T	2,3-Dimethylpentane	0.605	0.517	14.5	117	-0.01
18	T	Dibromomethane	0.222	0.217	2.3	131	-0.02
19	IR	Chlorobenzene-d5 (C 3)	1.000	1.000	0.0	122	0.00
20	T	Methyl Cyclohexane	2.145	1.959	8.7	115	0.00
21	T	1,3-Dichloropropane	1.666	1.818	-9.1	137	0.00
22	T	1,1,1,2-Tetrachloroethane	1.102	1.185	-7.5	131	0.00
23	T	1-Chlorohexane	1.546	1.642	-6.2	130	-0.01
24	T	1,2,3-Trichloropropane	1.669	1.873	-12.2	135	0.00
25	T	Bromobenzene	1.958	2.197	-12.2	134	0.00
26	T	2-Chlorotoluene	3.609	3.907	-8.3	132	0.00
27	T	4-Chlorotoluene	3.655	4.078	-11.6	133	0.00
28	T	Indane	4.134	4.618	-11.7	130	0.00
29	T	Indene	3.171	4.085	-28.8	134	0.00
30	T	1,2,4,5-Tetramethylbenzene	4.275	5.105	-19.4	130	0.00
31	T	1,2,3,4-Tetramethylbenzene	4.311	5.146	-19.4	136	0.00
32	T	1,2,3,5-Tetramethylbenzene	4.091	4.963	-21.3	133	0.00
33	T	1,2,3-Trichlorobenzene	1.494	2.053	-37.4#	143	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212403.D Vial: 3
Acq On : 21 Jun 2024 11:28 Operator: SC
Sample : CCV C09062124 25ng Inst : MS09
Misc : S37-06062402/S37-06052406 (7/4)

Quant Time: Jun 21 12:00:11 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/21/24

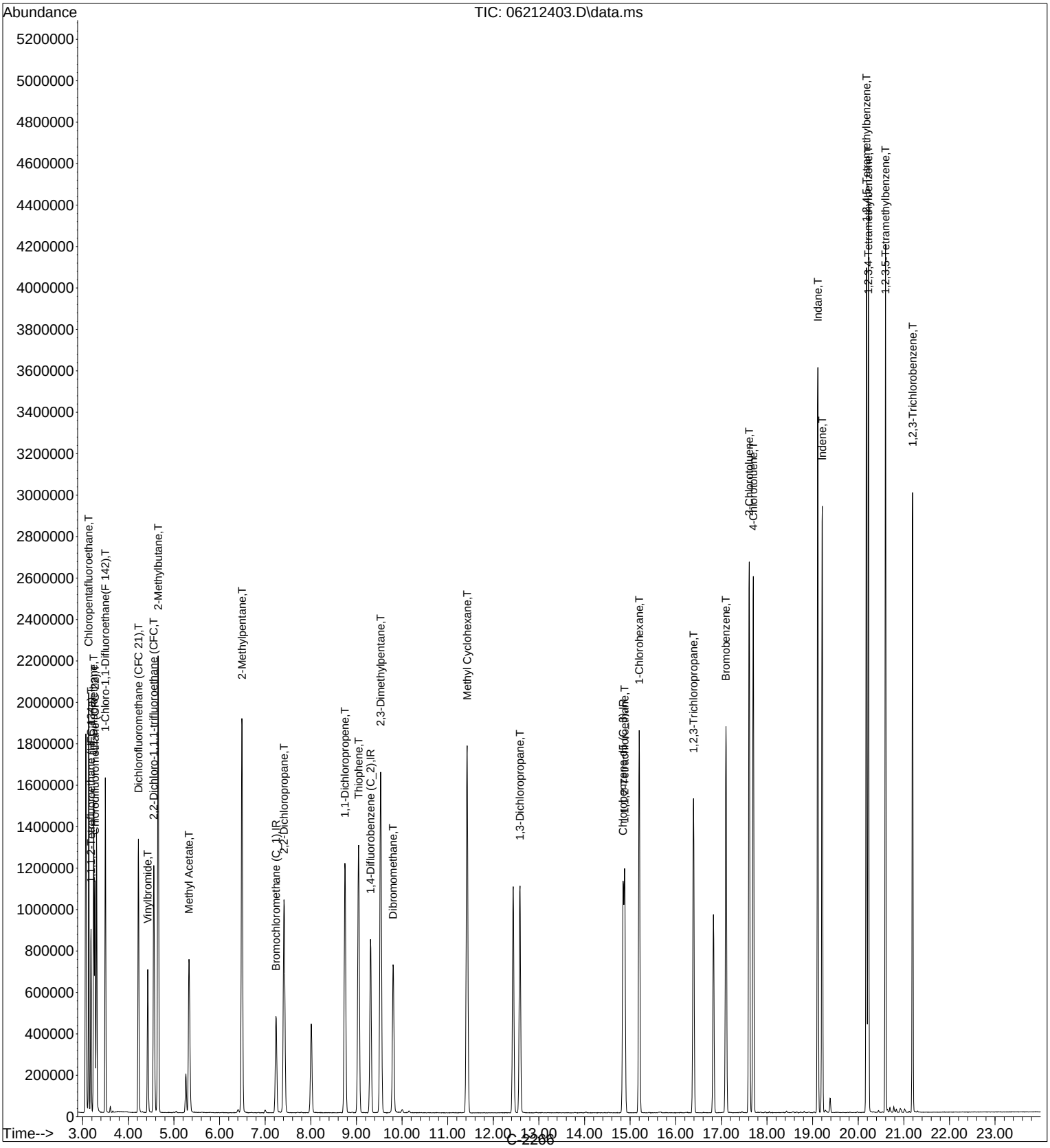
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (C 1)	7.24	130	183040	12.500	ng	-0.02
16) 1,4-Difluorobenzene (C 2)	9.31	114	809051	12.500	ng	-0.01
19) Chlorobenzene-d5 (C_3)	14.85	54	183891	12.500	ng	0.00
Target Compounds						Qvalue
2) Chloropentafluoroethane	3.13	85	533843	23.444	ng	98
3) 1,1,1,2-Tetrafluoroeth...	3.18	83	482830	25.708	ng	96
4) 1,1-Difluoroethane	3.24	65	405204	25.355	ng	99
5) Chlorodifluoromethane ...	3.27	67	167586	26.868	ng	100
6) 1-Chloro-1,1-Difluoroe...	3.49	65	1084500	26.300	ng	99
7) Dichlorofluoromethane ...	4.22	67	1036475	24.694	ng	100
8) Vinylbromide	4.43	108	379542	24.233	ng	100
9) 2,2-Dichloro-1,1,1-tri...	4.56	83	642106	25.280	ng	98
10) 2-Methylbutane	4.65	57	471403	21.593	ng	96
11) Methyl Acetate	5.33	43	1194446	19.364	ng	95
12) 2-Methylpentane	6.49	71	387954	24.479	ng	72
13) 2,2-Dichloropropane	7.41	77	777538	26.048	ng	98
14) 1,1-Dichloropropene	8.75	75	676805	25.930	ng	94
15) Thiophene	9.05	84	940295	25.219	ng	93
17) 2,3-Dimethylpentane	9.53	56	870213	22.228	ng	96
18) Dibromomethane	9.80	174	374872	26.058	ng	98
20) Methyl Cyclohexane	11.43	55	771019	24.433	ng	86
21) 1,3-Dichloropropane	12.59	76	695513	28.373	ng	90
22) 1,1,1,2-Tetrachloroethane	14.88	131	379208	23.398	ng	99
23) 1-Chlorohexane	15.20	91	622194	27.354	ng	92
24) 1,2,3-Trichloropropane	16.39	75	723153	29.458	ng	99
25) Bromobenzene	17.10	77	848347	29.453	ng	99
26) 2-Chlorotoluene	17.61	91	1523081	28.688	ng	100
27) 4-Chlorotoluene	17.70	91	1514935	28.171	ng	100
28) Indane	19.12	117	1681541	27.647	ng	99
29) Indene	19.21	115	1412216	30.271	ng	100
30) 1,2,4,5-Tetramethylben...	20.18	119	1896395	30.156	ng	99
31) 1,2,3,4-Tetramethylben...	20.22	119	1949351	30.738	ng	99
32) 1,2,3,5-Tetramethylben...	20.60	119	1843590	30.634	ng	99
33) 1,2,3-Trichlorobenzene	21.19	180	792752	36.081	ng	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\21\06212403.D Vial: 3
Acq On : 21 Jun 2024 11:28 Operator: SC
Sample : CCV C09062124 25ng Inst : MS09
Misc : S37-06062402/S37-06052406 (7/4)

Quant Time: Jun 21 12:00:11 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Evaluate Continuing Calibration Report

Data File : I:\MS09\DATA\2024 06\22\06222401.D Vial: 2
Acq On : 22 Jun 2024 9:47 Operator: SC
Sample : CCV R09062224 25ng Inst : MS09
Misc : S37-06062402/S37-05292404 (6/28)

Quant Time: Jun 22 10:18:32 2024 6/24/24
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	IR	Bromochloromethane (IS1)	1.000	1.000	0.0	127	0.06
2	T	Propene	1.600	1.366	14.6	120	0.03
3	T	Dichlorodifluoromethane (CF	2.942	2.484	15.6	116	0.04
4	T	Chloromethane	2.011	1.901	5.5	123	0.04
5	T	1,2-Dichloro-1,1,2,2-tetraf	1.276	1.138	10.8	117	0.04
6	T	Vinyl Chloride	1.919	1.862	3.0	125	0.04
7	T	1,3-Butadiene	1.450	1.507	-3.9	129	0.03
8	T	Bromomethane	1.022	1.017	0.5	127	0.04
9	T	Chloroethane	0.804	0.761	5.3	123	0.04
10	T	Ethanol	1.215	1.161	4.4	125	0.00
11	T	Acetonitrile	3.051	2.718	10.9	125	0.01
12	T	Acrolein	0.899	0.859	4.4	122	0.03
13	T	Acetone	0.971	0.885	8.9	123	0.02
14	T	Trichlorofluoromethane	2.976	2.655	10.8	117	0.04
15	T	2-Propanol (Isopropanol)	3.913	3.955	-1.1	122	0.01
16	T	Acrylonitrile	1.821	1.763	3.2	123	0.02
17	T	1,1-Dichloroethene	1.138	1.058	7.0	120	0.04
18	T	2-Methyl-2-Propanol (tert-B	3.123	3.513	-12.5	128	0.02
19	T	Methylene Chloride	1.375	1.168	15.1	122	0.03
20	T	3-Chloro-1-propene (Allyl C	2.453	2.434	0.8	125	0.04
21	T	Trichlorotrifluoroethane	1.259	1.154	8.3	118	0.05
22	T	Carbon Disulfide	4.430	4.243	4.2	122	0.05
23	T	trans-1,2-Dichloroethene	1.966	1.899	3.4	121	0.05
24	T	1,1-Dichloroethane	2.340	2.219	5.2	122	0.05
25	T	Methyl tert-Butyl Ether	3.246	3.642	-12.2	130	0.05
26	T	Vinyl Acetate	0.224	0.234	-4.5	124	0.04
27	T	2-Butanone (MEK)	0.768	0.756	1.6	122	0.04
28	T	cis-1,2-Dichloroethene	1.929	1.834	4.9	122	0.06
29	T	Diisopropyl Ether	0.910	0.894	1.8	122	0.07
30	T	Ethyl Acetate	0.469	0.479	-2.1	123	0.06
31	T	n-Hexane	2.056	2.037	0.9	123	0.07
32	T	Chloroform	2.449	2.218	9.4	119	0.06
33	S	1,2-Dichloroethane-d4(SS1)	2.222	2.181	1.8	127	0.07
34	T	Tetrahydrofuran (THF)	0.701	0.694	1.0	122	0.07
35	T	Ethyl tert-Butyl Ether	1.209	1.304	-7.9	127	0.07
36	T	1,2-Dichloroethane	2.452	2.236	8.8	116	0.07
37	IR	1,4-Difluorobenzene (IS2)	1.000	1.000	0.0	128	0.03
38	T	1,1,1-Trichloroethane	0.580	0.525	9.5	117	0.03
39	T	Isopropyl Acetate	0.000	0.000	0.0	119	0.03
40	T	1-Butanol	0.000	0.000	0.0	194	0.04
41	T	Benzene	1.154	1.042	9.7	121	0.04
42	T	Carbon Tetrachloride	0.535	0.493	7.9	115	0.03
43	T	Cyclohexane	0.373	0.372	0.3	121	0.04
44	T	tert-Amyl Methyl Ether	0.726	0.771	-6.2	125	0.04
45	T	1,2-Dichloropropane	0.279	0.264	5.4	122	0.04
46	T	Bromodichloromethane	0.464	0.424	8.6	118	0.04
47	T	Trichloroethene	0.337	0.303	10.1	118	0.04
48	T	1,4-Dioxane	0.213	0.217	-1.9	123	0.04
49	T	2,2,4-Trimethylpentane (Iso	1.141	1.129	1.1	122	0.05
50	T	Methyl Methacrylate	0.098	0.102	-4.1	119	0.04
51	T	n-Heptane	0.243	0.246	-1.2	123	0.05
52	T	cis-1,3-Dichloropropene	0.476	0.499	-4.8	119	0.05
53	T	4-Methyl-2-pentanone	0.254	0.267	-5.1	123	0.05
54	T	trans-1,3-Dichloropropene	0.430	0.459	-6.7	118	0.06
55	T	1,1,2-Trichloroethane	0.273	0.255	6.6	119	0.06

Evaluate Continuing Calibration Report

Data File : I:\MS09\DATA\2024 06\22\06222401.D Vial: 2
Acq On : 22 Jun 2024 9:47 Operator: SC
Sample : CCV R09062224 25ng Inst : MS09
Misc : S37-06062402/S37-05292404 (6/28)

Quant Time: Jun 22 10:18:32 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
56	IR	Chlorobenzene-d5 (IS3)	1.000	1.000	0.0	127	0.01
57	S	Toluene-d8 (SS2)	4.783	4.782	0.0	128	-0.02
58	T	Toluene	4.998	4.593	8.1	119	-0.02
59	T	2-Hexanone	3.134	3.331	-6.3	122	-0.02
60	T	Dibromochloromethane	1.728	1.563	9.5	115	-0.02
61	T	1,2-Dibromoethane	1.406	1.368	2.7	117	-0.02
62	T	n-Butyl Acetate	3.294	3.641	-10.5	122	-0.02
63	T	n-Octane	1.037	1.043	-0.6	121	-0.01
64	T	Tetrachloroethene	1.718	1.529	11.0	117	0.00
65	T	Chlorobenzene	3.503	3.147	10.2	116	-0.01
66	T	Ethylbenzene	5.719	5.527	3.4	117	-0.01
67	T	m- & p-Xylenes	4.809	4.685	2.6	116	-0.01
68	T	Bromoform	1.530	1.413	7.6	114	-0.02
69	T	Styrene	3.243	3.291	-1.5	114	-0.01
70	T	o-Xylene	4.742	4.532	4.4	115	-0.01
71	T	n-Nonane	2.756	2.873	-4.2	119	0.00
72	T	1,1,2,2-Tetrachloroethane	2.171	2.025	6.7	117	-0.02
73	S	Bromofluorobenzene (SS3)	1.727	1.747	-1.2	127	0.00
74	T	Cumene	5.920	5.551	6.2	116	-0.01
75	T	alpha-Pinene	2.758	2.866	-3.9	116	0.00
76	T	n-Propylbenzene	7.147	6.835	4.4	115	-0.01
77	T	3-Ethyltoluene	0.000	0.000	0.0	116	-0.01
78	T	4-Ethyltoluene	5.644	5.496	2.6	114	0.00
79	T	1,3,5-Trimethylbenzene	4.931	4.801	2.6	114	0.00
80	T	alpha-Methylstyrene	0.000	0.000	0.0	107	0.00
81	T	2-Ethyltoluene	0.000	0.000	0.0	116	-0.01
82	T	1,2,4-Trimethylbenzene	5.198	5.162	0.7	113	-0.01
83	T	n-Decane	0.000	0.000	0.0	94	-0.01
84	T	Benzyl Chloride	4.178	4.529	-8.4	107	-0.02
85	T	1,3-Dichlorobenzene	3.426	3.025	11.7	108	-0.01
86	T	1,4-Dichlorobenzene	3.339	2.915	12.7	105	-0.01
87	T	sec-Butylbenzene	6.577	6.352	3.4	114	0.00
88	T	4-Isopropyltoluene (p-Cymen	5.913	5.684	3.9	112	0.00
89	T	1,2,3-Trimethylbenzene	0.000	0.000	0.0	116	-0.01
90	T	1,2-Dichlorobenzene	3.326	2.945	11.5	110	0.00
91	T	d-Limonene	1.767	1.856	-5.0	113	0.00
92	T	1,2-Dibromo-3-Chloropropane	1.153	1.113	3.5	110	0.00
93	T	n-Undecane	0.000	0.000	0.0	105	-0.01
94	T	1,2,4-Trichlorobenzene	2.626	2.317	11.8	98	-0.01
95	T	Naphthalene	6.662	6.034	9.4	91	-0.01
96	T	n-Dodecane	0.000	0.000	0.0	113	0.00
97	T	Hexachlorobutadiene	2.159	1.803	16.5	110	0.00
98	T	Cyclohexanone	0.000	0.000	0.0	21#	0.00
99	T	tert-Butylbenzene	4.981	4.765	4.3	113	-0.01
100	T	n-Butylbenzene	5.532	5.393	2.5	111	-0.01
101	T	1,1,1,2-Tetrachloroethane	1.331	1.266	4.9	116	-0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222401.D Vial: 2
Acq On : 22 Jun 2024 9:47 Operator: SC
Sample : CCV R09062224 25ng Inst : MS09
Misc : S37-06062402/S37-05292404 (6/28)

Quant Time: Jun 22 10:18:32 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/24/24

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	7.28	130	178731	12.500	ng	0.05
37) 1,4-Difluorobenzene (IS2)	9.33	114	771512	12.500	ng	0.03
56) Chlorobenzene-d5 (IS3)	14.85	54	179926	12.500	ng	0.01
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4(...	8.04	65	389724	12.269	ng	0.06
Spiked Amount 12.500	Range 70 - 130		Recovery = 98.16%			
57) Toluene-d8 (SS2)	12.44	98	860349	12.495	ng	-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 100.00%			
73) Bromofluorobenzene (SS3)	16.83	174	314406	12.646	ng	0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 101.20%			
Target Compounds						Qvalue
2) Propene	3.28	42	512788	22.410	ng	99
3) Dichlorodifluoromethan...	3.36	85	923593	21.957	ng	99
4) Chloromethane	3.49	50	727009	25.282	ng	100
5) 1,2-Dichloro-1,1,2,2-t...	3.60	135	443262	24.301	ng	100
6) Vinyl Chloride	3.69	62	705556	25.708	ng	100
7) 1,3-Butadiene	3.80	54	571064	27.545	ng	99
8) Bromomethane	4.02	94	370647	25.361	ng	100
9) Chloroethane	4.16	64	299131	26.011	ng	99
10) Ethanol	4.36	45	2038147	117.298	ng	99
11) Acetonitrile	4.48	41	932789	21.383	ng	99
12) Acrolein	4.56	56	659909	51.310	ng	99
13) Acetone	4.66	58	1615917	116.382	ng	96
14) Trichlorofluoromethane	4.76	101	958598	22.529	ng	99
15) 2-Propanol (Isopropanol)	4.91	45	2799359	50.036	ng	99
16) Acrylonitrile	5.04	53	1260666	48.414	ng	99
17) 1,1-Dichloroethene	5.27	96	340282	20.905	ng	100
18) 2-Methyl-2-Propanol (t...	5.37	59	2612012	58.492	ng	99
19) Methylene Chloride	5.39	84	379950	19.332	ng	99
20) 3-Chloro-1-propene (Al...	5.48	41	939494	26.786	ng	100
21) Trichlorotrifluoroethane	5.59	151	371187	20.621	ng	98
22) Carbon Disulfide	5.61	76	3139543	49.566	ng	100
23) trans-1,2-Dichloroethene	6.17	61	712681	25.347	ng	100
24) 1,1-Dichloroethane	6.36	63	816996	24.419	ng	100
25) Methyl tert-Butyl Ether	6.39	73	1393140	30.014	ng	100
26) Vinyl Acetate	6.48	86	448921	140.119	ng	99
27) 2-Butanone (MEK)	6.70	72	548660	49.935	ng	100
28) cis-1,2-Dichloroethene	7.12	61	675181	24.483	ng	99
29) Diisopropyl Ether	7.31	87	671422	51.595	ng	98
30) Ethyl Acetate	7.31	61	335802	50.056	ng	99
31) n-Hexane	7.32	57	764628	26.013	ng	100
32) Chloroform	7.41	83	848489	24.229	ng	100
34) Tetrahydrofuran (THF)	7.77	72	469118	46.802	ng	100
35) Ethyl tert-Butyl Ether	7.85	87	983671	56.926	ng	99
36) 1,2-Dichloroethane	8.15	62	815390	23.256	ng	99
38) 1,1,1-Trichloroethane	8.43	97	835061	23.312	ng	100
39) Isopropyl Acetate	9.60	61	1475	No Calib	#	
40) 1-Butanol	8.83	56	3798	No Calib		
41) Benzene	8.93	78	1639874	23.025	ng	100
42) Carbon Tetrachloride	9.09	117	783438	23.717	ng	100
43) Cyclohexane	9.24	84	1204631	52.260	ng	98
44) tert-Amyl Methyl Ether	9.62	73	2510195	56.006	ng	99
45) 1,2-Dichloropropane	9.88	63	439717	25.577	ng	100
46) Bromodichloromethane	10.10	83	693414	24.199	ng	100
47) Trichloroethene	10.17	130	481982	23.182	ng	99
48) 1,4-Dioxane	10.13	88	348494	26.521	ng	99
49) 2,2,4-Trimethylpentane...	10.25	57	1864633	26.482	ng	98
50) Methyl Methacrylate	10.43	100	332231	55.046	ng	98

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222401.D Vial: 2
Acq On : 22 Jun 2024 9:47 Operator: SC
Sample : CCV R09062224 25ng Inst : MS09
Misc : S37-06062402/S37-05292404 (6/28)

Quant Time: Jun 22 10:18:32 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

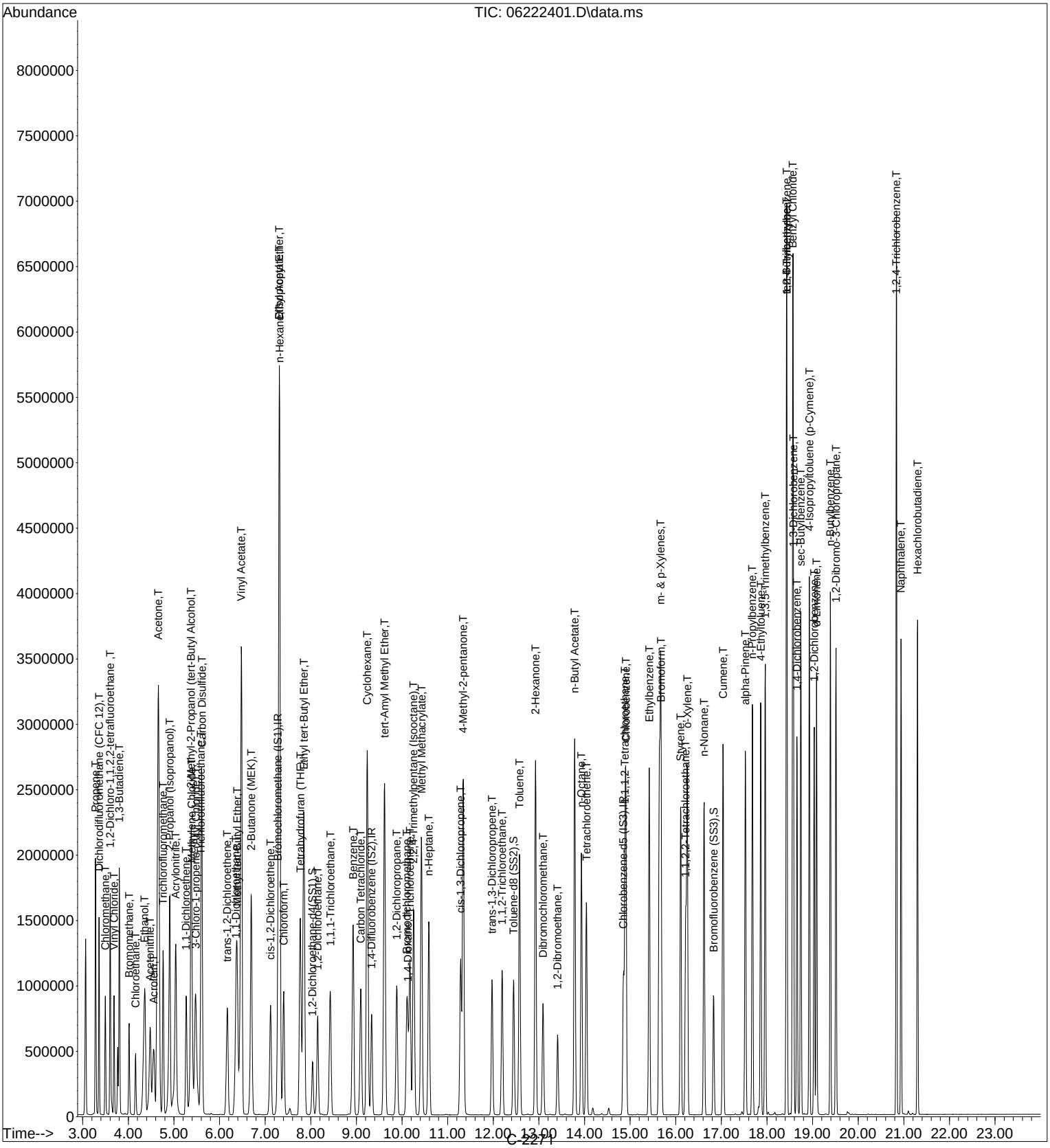
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	10.59	71	398973	26.561 ng		99
52) cis-1,3-Dichloropropene	11.29	75	807736	27.466 ng		100
53) 4-Methyl-2-pentanone	11.34	58	865159	55.268 ng		99
54) trans-1,3-Dichloropropene	11.97	75	693552	26.145 ng		100
55) 1,1,2-Trichloroethane	12.19	97	429301	25.474 ng		100
58) Toluene	12.57	91	1785137	24.811 ng		100
59) 2-Hexanone	12.93	43	2445619	54.219 ng		99
60) Dibromochloromethane	13.09	129	573635	23.062 ng		100
61) 1,2-Dibromoethane	13.41	107	507169	25.064 ng		100
62) n-Butyl Acetate	13.78	43	2725396	57.478 ng		99
63) n-Octane	13.93	57	397810	26.657 ng		99
64) Tetrachloroethene	14.05	166	588861	23.809 ng		99
65) Chlorobenzene	14.91	112	1211652	24.028 ng		100
66) Ethylbenzene	15.42	91	2168039	26.338 ng		100
67) m- & p-Xylenes	15.67	91	3607820	52.124 ng		100
68) Bromoform	15.68	173	554210	25.160 ng		100
69) Styrene	16.11	104	1255293	26.890 ng		100
70) o-Xylene	16.25	91	1761310	25.804 ng		99
71) n-Nonane	16.62	43	1075166	27.098 ng		100
72) 1,1,2,2-Tetrachloroethane	16.21	83	787148	25.189 ng		100
74) Cumene	17.04	105	2077477	24.380 ng		100
75) alpha-Pinene	17.53	93	1103563	27.799 ng		99
76) n-Propylbenzene	17.68	91	2533210	24.626 ng		100
77) 3-Ethyltoluene	17.04	105	2077477	No Calib		
78) 4-Ethyltoluene	17.87	105	2037213	25.075 ng		100
79) 1,3,5-Trimethylbenzene	17.96	105	1865694	26.286 ng		99
80) alpha-Methylstyrene	17.04	118	4242	No Calib	#	
81) 2-Ethyltoluene	17.04	105	2077477	No Calib		
82) 1,2,4-Trimethylbenzene	18.43	105	1931724	25.817 ng		100
83) n-Decane	17.04	58	15827	No Calib		
84) Benzyl Chloride	18.56	91	3373511	56.095 ng		100
85) 1,3-Dichlorobenzene	18.58	146	1121352	22.737 ng		100
86) 1,4-Dichlorobenzene	18.66	146	1090841	22.697 ng		100
87) sec-Butylbenzene	18.74	105	2354180	24.869 ng		100
88) 4-Isopropyltoluene (p-...	18.93	119	2086474	24.515 ng		100
89) 1,2,3-Trimethylbenzene	17.04	105	2077477	No Calib		
90) 1,2-Dichlorobenzene	19.04	146	1091608	22.801 ng		100
91) d-Limonene	19.09	68	667804	26.253 ng		99
92) 1,2-Dibromo-3-Chloropr...	19.51	157	825087	49.695 ng		100
93) n-Undecane	17.86	58	29797	No Calib		
94) 1,2,4-Trichlorobenzene	20.84	180	1783934	47.204 ng		100
95) Naphthalene	20.94	128	2193101	22.872 ng		100
96) n-Dodecane	18.93	58	49253	No Calib	#	
97) Hexachlorobutadiene	21.30	225	655132	21.086 ng		100
98) Cyclohexanone	15.43	55	1495	No Calib	#	
99) tert-Butylbenzene	18.43	119	1783127	24.870 ng		100
100) n-Butylbenzene	19.39	91	1940671	24.371 ng		100
101) 1,1,1,2-Tetrachloroethane	14.89	131	487566	25.459 ng		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222401.D Vial: 2
Acq On : 22 Jun 2024 9:47 Operator: SC
Sample : CCV R09062224 25ng Inst : MS09
Misc : S37-06062402/S37-05292404 (6/28)

Quant Time: Jun 22 10:18:32 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Evaluate Continuing Calibration Report

Data File : I:\MS09\DATA\2024 06\22\06222402.D Vial: 3
Acq On : 22 Jun 2024 11:06 Operator: SC
Sample : CCV C09062224 25ng Inst : MS09
Misc : S37-06062402/S37-06052406 (7/4)

Quant Time: Jun 24 09:38:50 2024 6/24/24
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	IR	Bromochloromethane (C 1)	1.000	1.000	0.0	138	-0.02
2	T	Chloropentafluoroethane	1.555	1.365	12.2	128	0.00
3	T	1,1,1,2-Tetrafluoroethane (	1.283	1.263	1.6	143	-0.02
4	T	1,1-Difluoroethane	1.091	0.948	13.1	126	-0.02
5	T	Chlorodifluoromethane (CFC	0.426	0.420	1.4	141	-0.01
6	T	1-Chloro-1,1-Difluoroethane	2.816	2.748	2.4	142	-0.02
7	T	Dichlorofluoromethane (CFC	2.866	2.624	8.4	132	-0.01
8	T	Vinylbromide	1.070	0.954	10.8	127	-0.02
9	T	2,2-Dichloro-1,1,1-trifluor	1.735	1.525	12.1	127	-0.02
10	T	2-Methylbutane	1.491	1.124	24.6	110	-0.02
11	T	Methyl Acetate	4.212	3.004	28.7	102	-0.02
12	T	2-Methylpentane	1.082	0.951	12.1	127	-0.02
13	T	2,2-Dichloropropane	2.038	2.027	0.5	139	-0.02
14	T	1,1-Dichloropropene	1.782	1.608	9.8	128	-0.02
15	T	Thiophene	2.546	2.272	10.8	126	-0.02
16	IR	1,4-Difluorobenzene (C 2)	1.000	1.000	0.0	139	-0.02
17	T	2,3-Dimethylpentane	0.605	0.461	23.8	110	-0.02
18	T	Dibromomethane	0.222	0.205	7.7	131	-0.02
19	IR	Chlorobenzene-d5 (C 3)	1.000	1.000	0.0	128	-0.01
20	T	Methyl Cyclohexane	2.145	1.754	18.2	108	-0.02
21	T	1,3-Dichloropropane	1.666	1.670	-0.2	132	-0.01
22	T	1,1,1,2-Tetrachloroethane	1.102	1.113	-1.0	129	-0.01
23	T	1-Chlorohexane	1.546	1.514	2.1	126	-0.01
24	T	1,2,3-Trichloropropane	1.669	1.718	-2.9	130	-0.01
25	T	Bromobenzene	1.958	2.014	-2.9	129	0.00
26	T	2-Chlorotoluene	3.609	3.605	0.1	128	-0.01
27	T	4-Chlorotoluene	3.655	3.770	-3.1	129	-0.01
28	T	Indane	4.134	4.312	-4.3	127	-0.01
29	T	Indene	3.171	3.827	-20.7	132	-0.01
30	T	1,2,4,5-Tetramethylbenzene	4.275	4.838	-13.2	129	-0.01
31	T	1,2,3,4-Tetramethylbenzene	4.311	4.808	-11.5	133	0.00
32	T	1,2,3,5-Tetramethylbenzene	4.091	4.686	-14.5	132	0.00
33	T	1,2,3-Trichlorobenzene	1.494	1.955	-30.9#	143	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222402.D Vial: 3
Acq On : 22 Jun 2024 11:06 Operator: SC
Sample : CCV C09062224 25ng Inst : MS09
Misc : S37-06062402/S37-06052406 (7/4)

Quant Time: Jun 24 09:38:50 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/24/24

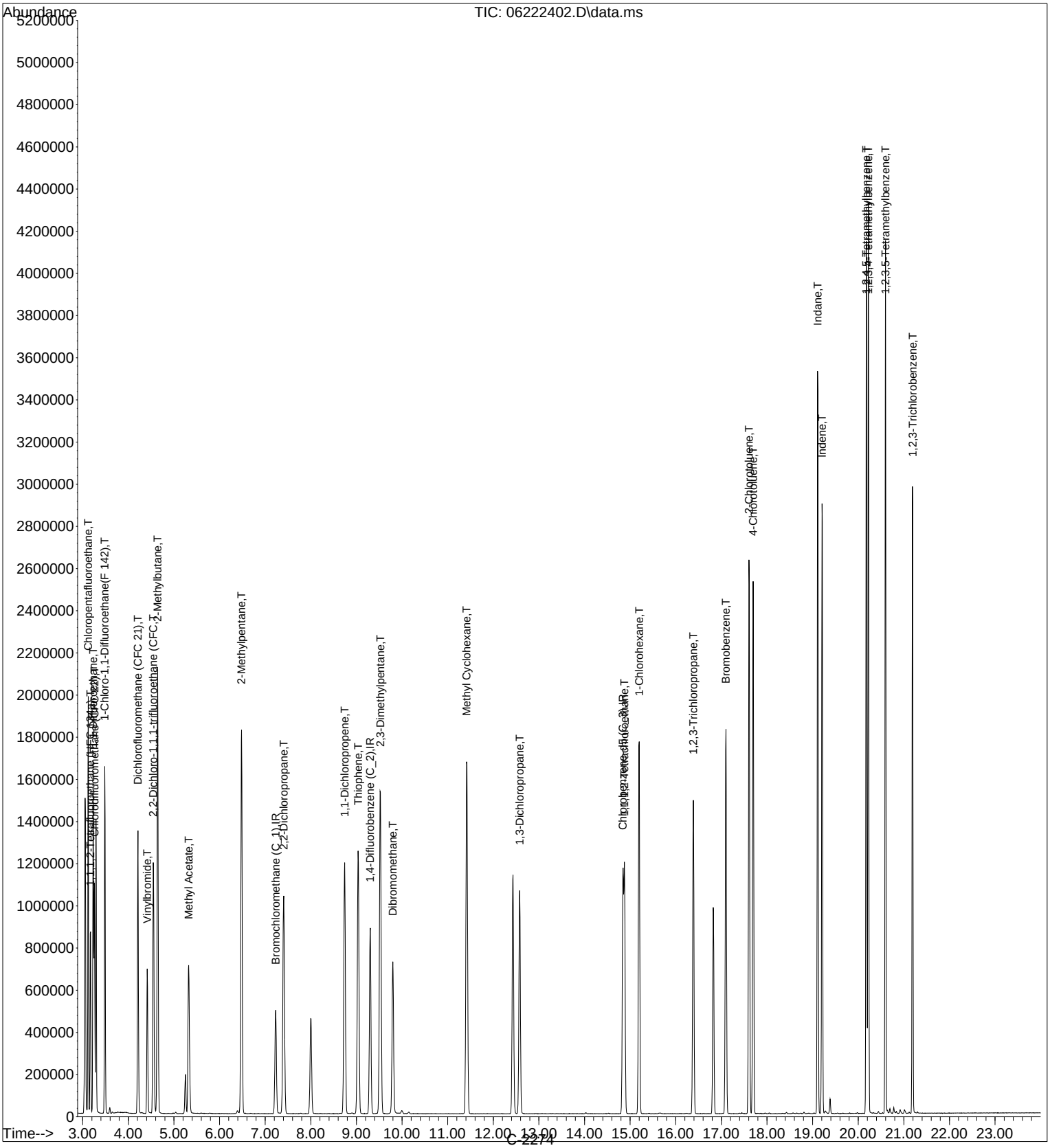
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (C 1)	7.23	130	196099	12.500	ng		-0.02
16) 1,4-Difluorobenzene (C 2)	9.30	114	853436	12.500	ng		-0.02
19) Chlorobenzene-d5 (C_3)	14.84	54	193005	12.500	ng		-0.01
Target Compounds							Qvalue
2) Chloropentafluoroethane	3.12	85	530009	21.726	ng		96
3) 1,1,1,2-Tetrafluoroeth...	3.17	83	495385	24.620	ng		93
4) 1,1-Difluoroethane	3.23	65	394253	23.027	ng		95
5) Chlorodifluoromethane ...	3.26	67	171256	25.628	ng		100
6) 1-Chloro-1,1-Difluoroe...	3.48	65	1121003	25.375	ng		98
7) Dichlorofluoromethane ...	4.21	67	1018977	22.660	ng		100
8) Vinylbromide	4.41	108	374320	22.308	ng		100
9) 2,2-Dichloro-1,1,1-tri...	4.55	83	621903	22.854	ng		99
10) 2-Methylbutane	4.64	57	449479	19.218	ng		95
11) Methyl Acetate	5.32	43	1131006	17.115	ng	#	94
12) 2-Methylpentane	6.48	71	373152	21.977	ng	#	68
13) 2,2-Dichloropropane	7.41	77	787097	24.613	ng		98
14) 1,1-Dichloropropene	8.74	75	656080	23.462	ng		96
15) Thiophene	9.04	84	900040	22.531	ng		92
17) 2,3-Dimethylpentane	9.53	56	819176	19.836	ng		95
18) Dibromomethane	9.80	174	374567	24.683	ng		95
20) Methyl Cyclohexane	11.42	55	724256	21.868	ng		85
21) 1,3-Dichloropropane	12.58	76	670466	26.059	ng		91
22) 1,1,1,2-Tetrachloroethane	14.87	131	373920	21.982	ng		99
23) 1-Chlorohexane	15.20	91	602069	25.219	ng		92
24) 1,2,3-Trichloropropane	16.38	75	696511	27.033	ng		99
25) Bromobenzene	17.10	77	816276	27.002	ng		97
26) 2-Chlorotoluene	17.61	91	1474942	26.470	ng		100
27) 4-Chlorotoluene	17.70	91	1469928	26.043	ng		99
28) Indane	19.11	117	1647898	25.815	ng		99
29) Indene	19.21	115	1388691	28.361	ng		100
30) 1,2,4,5-Tetramethylben...	20.18	119	1886308	28.579	ng		99
31) 1,2,3,4-Tetramethylben...	20.22	119	1911794	28.723	ng		99
32) 1,2,3,5-Tetramethylben...	20.60	119	1826840	28.922	ng		99
33) 1,2,3-Trichlorobenzene	21.19	180	792526	34.367	ng		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\22\06222402.D Vial: 3
Acq On : 22 Jun 2024 11:06 Operator: SC
Sample : CCV C09062224 25ng Inst : MS09
Misc : S37-06062402/S37-06052406 (7/4)

Quant Time: Jun 24 09:38:50 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Evaluate Continuing Calibration Report

Data File : I:\MS09\DATA\2024 06\24\06242402.D Vial: 2
Acq On : 24 Jun 2024 7:58 Operator: MC/MJ
Sample : CCV R09062424 25ng Inst : MS09
Misc : S37-06062402/S37-05292404 (6/28)

6/24/24

Quant Time: Jun 24 08:36:51 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	IR	Bromochloromethane (IS1)	1.000	1.000	0.0	141	0.05
2	T	Propene	1.600	1.478	7.6	145	0.03
3	T	Dichlorodifluoromethane (CF	2.942	2.451	16.7	127	0.04
4	T	Chloromethane	2.011	2.010	0.0	145	0.03
5	T	1,2-Dichloro-1,1,2,2-tetraf	1.276	1.122	12.1	128	0.03
6	T	Vinyl Chloride	1.919	1.910	0.5	143	0.03
7	T	1,3-Butadiene	1.450	1.525	-5.2	146	0.03
8	T	Bromomethane	1.022	1.037	-1.5	144	0.04
9	T	Chloroethane	0.804	0.806	-0.2	145	0.04
10	T	Ethanol	1.215	1.245	-2.5	149	0.00
11	T	Acetonitrile	3.051	2.937	3.7	151	0.01
12	T	Acrolein	0.899	0.916	-1.9	145	0.02
13	T	Acetone	0.971	0.933	3.9	145	0.02
14	T	Trichlorofluoromethane	2.976	2.557	14.1	125	0.04
15	T	2-Propanol (Isopropanol)	3.913	4.105	-4.9	141	0.00
16	T	Acrylonitrile	1.821	1.870	-2.7	145	0.02
17	T	1,1-Dichloroethene	1.138	1.087	4.5	138	0.04
18	T	2-Methyl-2-Propanol (tert-B	3.123	3.413	-9.3	139	0.02
19	T	Methylene Chloride	1.375	1.216	11.6	141	0.03
20	T	3-Chloro-1-propene (Allyl C	2.453	2.564	-4.5	146	0.04
21	T	Trichlorotrifluoroethane	1.259	1.131	10.2	129	0.04
22	T	Carbon Disulfide	4.430	4.400	0.7	141	0.04
23	T	trans-1,2-Dichloroethene	1.966	1.961	0.3	139	0.04
24	T	1,1-Dichloroethane	2.340	2.291	2.1	140	0.04
25	T	Methyl tert-Butyl Ether	3.246	3.543	-9.1	141	0.05
26	T	Vinyl Acetate	0.224	0.236	-5.4	139	0.04
27	T	2-Butanone (MEK)	0.768	0.785	-2.2	142	0.04
28	T	cis-1,2-Dichloroethene	1.929	1.878	2.6	139	0.05
29	T	Diisopropyl Ether	0.910	0.912	-0.2	139	0.06
30	T	Ethyl Acetate	0.469	0.509	-8.5	145	0.05
31	T	n-Hexane	2.056	2.143	-4.2	144	0.07
32	T	Chloroform	2.449	2.208	9.8	132	0.05
33	S	1,2-Dichloroethane-d4(SS1)	2.222	2.129	4.2	138	0.06
34	T	Tetrahydrofuran (THF)	0.701	0.725	-3.4	142	0.07
35	T	Ethyl tert-Butyl Ether	1.209	1.268	-4.9	138	0.07
36	T	1,2-Dichloroethane	2.452	2.182	11.0	126	0.07
37	IR	1,4-Difluorobenzene (IS2)	1.000	1.000	0.0	146	0.03
38	T	1,1,1-Trichloroethane	0.580	0.496	14.5	126	0.03
39	T	Isopropyl Acetate	0.000	0.000	0.0	149	0.04
40	T	1-Butanol	0.000	0.000	0.0	279#	0.03
41	T	Benzene	1.154	1.056	8.5	140	0.03
42	T	Carbon Tetrachloride	0.535	0.456	14.8	122	0.03
43	T	Cyclohexane	0.373	0.377	-1.1	139	0.03
44	T	tert-Amyl Methyl Ether	0.726	0.751	-3.4	139	0.04
45	T	1,2-Dichloropropane	0.279	0.275	1.4	144	0.03
46	T	Bromodichloromethane	0.464	0.412	11.2	130	0.03
47	T	Trichloroethene	0.337	0.297	11.9	132	0.03
48	T	1,4-Dioxane	0.213	0.217	-1.9	139	0.03
49	T	2,2,4-Trimethylpentane (Iso	1.141	1.167	-2.3	144	0.04
50	T	Methyl Methacrylate	0.098	0.102	-4.1	135	0.03
51	T	n-Heptane	0.243	0.250	-2.9	141	0.04
52	T	cis-1,3-Dichloropropene	0.476	0.497	-4.4	136	0.04
53	T	4-Methyl-2-pentanone	0.254	0.273	-7.5	143	0.04
54	T	trans-1,3-Dichloropropene	0.430	0.444	-3.3	130	0.05
55	T	1,1,2-Trichloroethane	0.273	0.254	7.0	135	0.05

Evaluate Continuing Calibration Report

Data File : I:\MS09\DATA\2024 06\24\06242402.D Vial: 2
Acq On : 24 Jun 2024 7:58 Operator: MC/MJ
Sample : CCV R09062424 25ng Inst : MS09
Misc : S37-06062402/S37-05292404 (6/28)

Quant Time: Jun 24 08:36:51 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
56	IR	Chlorobenzene-d5 (IS3)	1.000	1.000	0.0	139	0.01
57	S	Toluene-d8 (SS2)	4.783	4.896	-2.4	143	-0.02
58	T	Toluene	4.998	4.736	5.2	135	-0.02
59	T	2-Hexanone	3.134	3.503	-11.8	141	-0.02
60	T	Dibromochloromethane	1.728	1.574	8.9	127	-0.02
61	T	1,2-Dibromoethane	1.406	1.395	0.8	131	-0.02
62	T	n-Butyl Acetate	3.294	3.836	-16.5	141	-0.02
63	T	n-Octane	1.037	1.116	-7.6	142	-0.01
64	T	Tetrachloroethene	1.718	1.514	11.9	127	-0.01
65	T	Chlorobenzene	3.503	3.197	8.7	129	-0.01
66	T	Ethylbenzene	5.719	5.631	1.5	131	-0.01
67	T	m- & p-Xylenes	4.809	4.731	1.6	129	-0.01
68	T	Bromoform	1.530	1.379	9.9	122	-0.02
69	T	Styrene	3.243	3.345	-3.1	127	-0.01
70	T	o-Xylene	4.742	4.593	3.1	128	-0.02
71	T	n-Nonane	2.756	3.055	-10.8	139	-0.01
72	T	1,1,2,2-Tetrachloroethane	2.171	2.119	2.4	134	-0.02
73	S	Bromofluorobenzene (SS3)	1.727	1.653	4.3	132	0.00
74	T	Cumene	5.920	5.589	5.6	128	-0.01
75	T	alpha-Pinene	2.758	2.901	-5.2	129	0.00
76	T	n-Propylbenzene	7.147	6.906	3.4	127	-0.01
77	T	3-Ethyltoluene	0.000	0.000	0.0	128	-0.01
78	T	4-Ethyltoluene	5.644	5.508	2.4	125	-0.01
79	T	1,3,5-Trimethylbenzene	4.931	4.783	3.0	125	0.00
80	T	alpha-Methylstyrene	0.000	0.000	0.0	111	0.00
81	T	2-Ethyltoluene	0.000	0.000	0.0	128	-0.01
82	T	1,2,4-Trimethylbenzene	5.198	5.138	1.2	123	-0.01
83	T	n-Decane	0.000	0.000	0.0	114	-0.01
84	T	Benzyl Chloride	4.178	4.410	-5.6	114	-0.02
85	T	1,3-Dichlorobenzene	3.426	3.000	12.4	118	-0.01
86	T	1,4-Dichlorobenzene	3.339	2.874	13.9	114	-0.01
87	T	sec-Butylbenzene	6.577	6.325	3.8	124	0.00
88	T	4-Isopropyltoluene (p-Cymen	5.913	5.640	4.6	122	0.00
89	T	1,2,3-Trimethylbenzene	0.000	0.000	0.0	128	-0.01
90	T	1,2-Dichlorobenzene	3.326	2.907	12.6	119	0.00
91	T	d-Limonene	1.767	1.898	-7.4	127	0.00
92	T	1,2-Dibromo-3-Chloropropane	1.153	1.082	6.2	117	0.00
93	T	n-Undecane	0.000	0.000	0.0	131	-0.01
94	T	1,2,4-Trichlorobenzene	2.626	2.230	15.1	103	-0.01
95	T	Naphthalene	6.662	5.867	11.9	97	-0.01
96	T	n-Dodecane	0.000	0.000	0.0	159	0.00
97	T	Hexachlorobutadiene	2.159	1.686	21.9	113	0.00
98	T	Cyclohexanone	0.000	0.000	0.0	19#	-0.01
99	T	tert-Butylbenzene	4.981	4.738	4.9	124	-0.01
100	T	n-Butylbenzene	5.532	5.429	1.9	122	-0.01
101	T	1,1,1,2-Tetrachloroethane	1.331	1.251	6.0	125	-0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242402.D Vial: 2
Acq On : 24 Jun 2024 7:58 Operator: MC/MJ
Sample : CCV R09062424 25ng Inst : MS09
Misc : S37-06062402/S37-05292404 (6/28)

Quant Time: Jun 24 08:36:51 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/24/24

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	7.28	130	199039	12.500	ng		0.05
37) 1,4-Difluorobenzene (IS2)	9.33	114	878410	12.500	ng		0.03
56) Chlorobenzene-d5 (IS3)	14.85	54	197285	12.500	ng		0.01
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	8.04	65	423812	11.980	ng		0.06
Spiked Amount 12.500	Range 70 - 130		Recovery = 95.84%				
57) Toluene-d8 (SS2)	12.44	98	965933	12.794	ng		-0.02
Spiked Amount 12.500	Range 70 - 130		Recovery = 102.32%				
73) Bromofluorobenzene (SS3)	16.83	174	326134	11.963	ng		0.00
Spiked Amount 12.500	Range 70 - 130		Recovery = 95.68%				
Target Compounds							Qvalue
2) Propene	3.28	42	617985	24.252	ng		98
3) Dichlorodifluoromethan...	3.36	85	1014624	21.661	ng		99
4) Chloromethane	3.49	50	856257	26.739	ng		100
5) 1,2-Dichloro-1,1,2,2-t...	3.60	135	486813	23.965	ng		100
6) Vinyl Chloride	3.69	62	806044	26.373	ng		100
7) 1,3-Butadiene	3.80	54	643576	27.875	ng		98
8) Bromomethane	4.02	94	420923	25.862	ng		100
9) Chloroethane	4.16	64	352810	27.549	ng		99
10) Ethanol	4.36	45	2433972	125.786	ng		100
11) Acetonitrile	4.48	41	1122505	23.106	ng		99
12) Acrolein	4.56	56	783917	54.733	ng		100
13) Acetone	4.66	58	1897535	122.720	ng		91
14) Trichlorofluoromethane	4.76	101	1028254	21.700	ng		99
15) 2-Propanol (Isopropanol)	4.91	45	3235638	51.933	ng		97
16) Acrylonitrile	5.04	53	1488694	51.337	ng		100
17) 1,1-Dichloroethene	5.27	96	389323	21.477	ng		99
18) 2-Methyl-2-Propanol (t...	5.38	59	2825756	56.822	ng		99
19) Methylene Chloride	5.39	84	440566	20.129	ng		98
20) 3-Chloro-1-propene (Al...	5.48	41	1102441	28.225	ng		98
21) Trichlorotrifluoroethane	5.59	151	405294	20.219	ng		96
22) Carbon Disulfide	5.61	76	3625491	51.398	ng		100
23) trans-1,2-Dichloroethene	6.17	61	819770	26.181	ng		99
24) 1,1-Dichloroethane	6.36	63	939558	25.217	ng		99
25) Methyl tert-Butyl Ether	6.39	73	1509058	29.194	ng		98
26) Vinyl Acetate	6.48	86	503609	141.150	ng	#	96
27) 2-Butanone (MEK)	6.70	72	634193	51.831	ng		97
28) cis-1,2-Dichloroethene	7.12	61	770110	25.076	ng		99
29) Diisopropyl Ether	7.30	87	762478	52.614	ng	#	94
30) Ethyl Acetate	7.31	61	397002	53.141	ng		100
31) n-Hexane	7.32	57	895676	27.362	ng		99
32) Chloroform	7.41	83	940531	24.117	ng		100
34) Tetrahydrofuran (THF)	7.77	72	545111	48.835	ng		95
35) Ethyl tert-Butyl Ether	7.85	87	1064770	55.332	ng		95
36) 1,2-Dichloroethane	8.15	62	885985	22.692	ng		100
38) 1,1,1-Trichloroethane	8.43	97	897298	22.001	ng		99
39) Isopropyl Acetate	9.62	61	1846	No Calib		#	
40) 1-Butanol	8.83	56	5467	No Calib			
41) Benzene	8.93	78	1891705	23.329	ng		100
42) Carbon Tetrachloride	9.09	117	825732	21.955	ng		100
43) Cyclohexane	9.24	84	1389050	52.927	ng		97
44) tert-Amyl Methyl Ether	9.62	73	2784417	54.564	ng		99
45) 1,2-Dichloropropane	9.88	63	521216	26.628	ng		100
46) Bromodichloromethane	10.10	83	766880	23.506	ng		100
47) Trichloroethene	10.17	130	537792	22.719	ng		100
48) 1,4-Dioxane	10.13	88	396763	26.520	ng		97
49) 2,2,4-Trimethylpentane...	10.25	57	2194122	27.369	ng		96
50) Methyl Methacrylate	10.43	100	378086	55.020	ng		96

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242402.D Vial: 2
Acq On : 24 Jun 2024 7:58 Operator: MC/MJ
Sample : CCV R09062424 25ng Inst : MS09
Misc : S37-06062402/S37-05292404 (6/28)

Quant Time: Jun 24 08:36:51 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

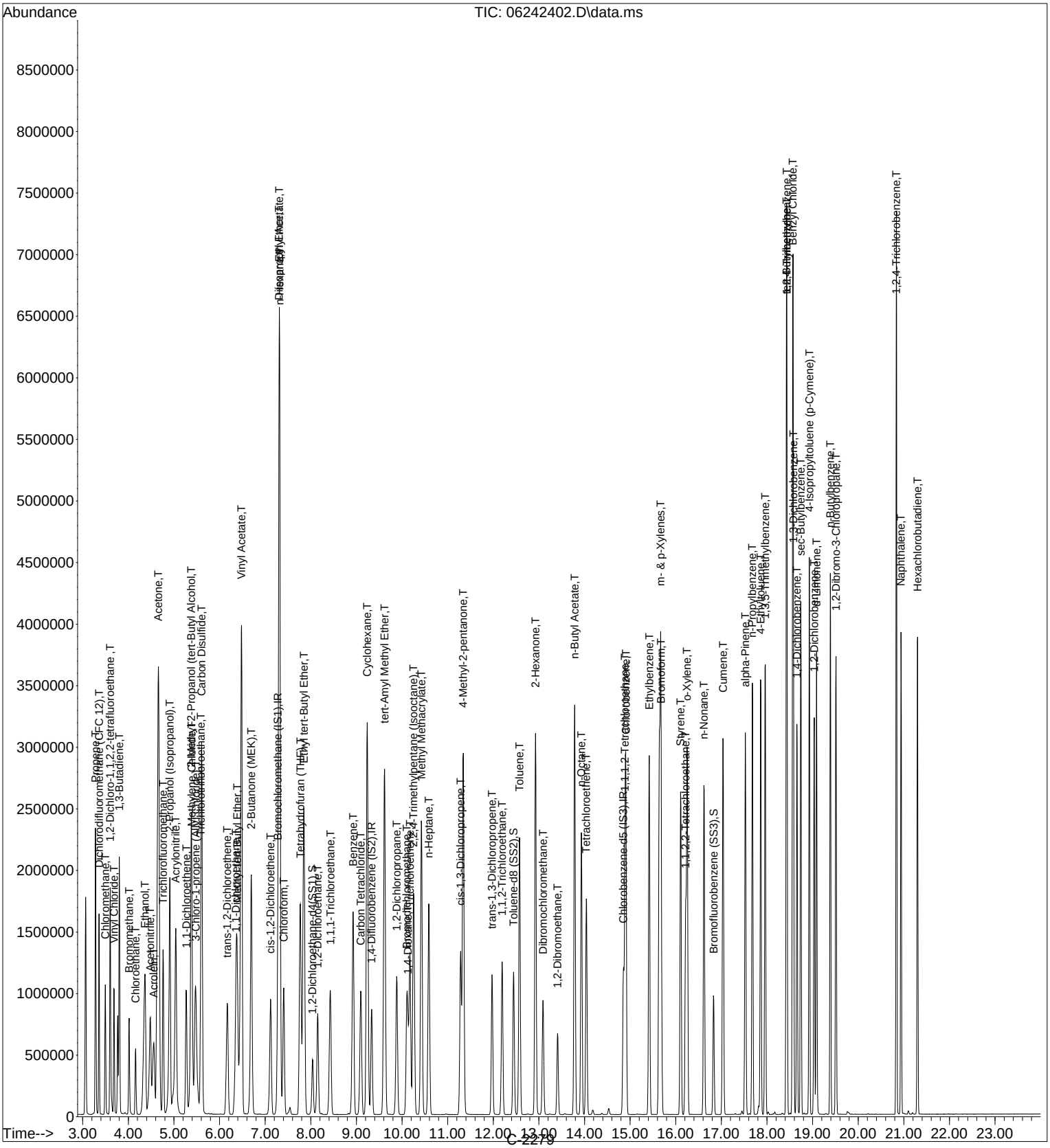
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
51) n-Heptane	10.59	71	460483	26.925 ng		99
52) cis-1,3-Dichloropropene	11.29	75	916865	27.383 ng		100
53) 4-Methyl-2-pentanone	11.34	58	1007575	56.532 ng		99
54) trans-1,3-Dichloropropene	11.97	75	764182	25.302 ng		100
55) 1,1,2-Trichloroethane	12.19	97	487233	25.394 ng		99
58) Toluene	12.57	91	2018007	25.580 ng		100
59) 2-Hexanone	12.93	43	2819531	57.008 ng		99
60) Dibromochloromethane	13.09	129	633315	23.221 ng		99
61) 1,2-Dibromoethane	13.41	107	566796	25.546 ng		100
62) n-Butyl Acetate	13.78	43	3147986	60.548 ng		99
63) n-Octane	13.93	57	466669	28.519 ng		97
64) Tetrachloroethene	14.04	166	639122	23.568 ng		99
65) Chlorobenzene	14.91	112	1349913	24.415 ng		99
66) Ethylbenzene	15.42	91	2421619	26.830 ng		100
67) m- & p-Xylenes	15.67	91	3994991	52.640 ng		100
68) Bromoform	15.68	173	593173	24.559 ng		100
69) Styrene	16.11	104	1398826	27.328 ng		99
70) o-Xylene	16.25	91	1957292	26.152 ng		99
71) n-Nonane	16.62	43	1253688	28.817 ng		99
72) 1,1,2,2-Tetrachloroethane	16.21	83	902841	26.349 ng		99
74) Cumene	17.04	105	2293329	24.545 ng		100
75) alpha-Pinene	17.53	93	1224897	28.141 ng		98
76) n-Propylbenzene	17.68	91	2806446	24.881 ng		100
77) 3-Ethyltoluene	17.04	105	2293329	No Calib		
78) 4-Ethyltoluene	17.86	105	2238413	25.127 ng		100
79) 1,3,5-Trimethylbenzene	17.96	105	2038316	26.192 ng		100
80) alpha-Methylstyrene	17.04	118	4388	No Calib	#	
81) 2-Ethyltoluene	17.04	105	2293329	No Calib		
82) 1,2,4-Trimethylbenzene	18.43	105	2108241	25.697 ng		99
83) n-Decane	17.04	58	19183	No Calib		
84) Benzyl Chloride	18.56	91	3601784	54.621 ng		100
85) 1,3-Dichlorobenzene	18.58	146	1219044	22.543 ng		100
86) 1,4-Dichlorobenzene	18.66	146	1179451	22.382 ng		100
87) sec-Butylbenzene	18.74	105	2570420	24.764 ng		99
88) 4-Isopropyltoluene (p-...	18.93	119	2269954	24.324 ng		99
89) 1,2,3-Trimethylbenzene	17.04	105	2293329	No Calib		
90) 1,2-Dichlorobenzene	19.04	146	1181318	22.504 ng		100
91) d-Limonene	19.09	68	748754	26.845 ng		97
92) 1,2-Dibromo-3-Chloropr...	19.51	157	879359	48.304 ng		100
93) n-Undecane	17.86	58	37023	No Calib		
94) 1,2,4-Trichlorobenzene	20.84	180	1883103	45.444 ng		100
95) Naphthalene	20.94	128	2338029	22.238 ng		100
96) n-Dodecane	18.93	58	69071	No Calib	#	
97) Hexachlorobutadiene	21.30	225	671729	19.718 ng		100
98) Cyclohexanone	15.42	55	1360	No Calib	#	
99) tert-Butylbenzene	18.43	119	1944362	24.733 ng		100
100) n-Butylbenzene	19.39	91	2141973	24.532 ng		99
101) 1,1,1,2-Tetrachloroethane	14.89	131	528336	25.160 ng		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242402.D Vial: 2
Acq On : 24 Jun 2024 7:58 Operator: MC/MJ
Sample : CCV R09062424 25ng Inst : MS09
Misc : S37-06062402/S37-05292404 (6/28)

Quant Time: Jun 24 08:36:51 2024
Quant Method : I:\MS09\METHODS\R09061024.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Jun 17 15:00:37 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M



Evaluate Continuing Calibration Report

Data File : I:\MS09\DATA\2024 06\24\06242403.D Vial: 3
Acq On : 24 Jun 2024 8:30 Operator: MC/MJ
Sample : CCV C09062424 25ng Inst : MS09
Misc : S37-06062402/S37-06052406 (7/4)

Quant Time: Jun 24 09:33:24 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/24/24

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	IR	Bromochloromethane (C 1)	1.000	1.000	0.0	136	-0.02
2	T	Chloropentafluoroethane	1.555	1.526	1.9	140	0.00
3	T	1,1,1,2-Tetrafluoroethane (	1.283	1.351	-5.3	151	-0.01
4	T	1,1-Difluoroethane	1.091	1.060	2.8	138	-0.01
5	T	Chlorodifluoromethane (CFC	0.426	0.451	-5.9	149	0.00
6	T	1-Chloro-1,1-Difluoroethane	2.816	2.905	-3.2	148	0.00
7	T	Dichlorofluoromethane (CFC	2.866	2.925	-2.1	144	0.00
8	T	Vinylbromide	1.070	1.054	1.5	137	0.00
9	T	2,2-Dichloro-1,1,1-trifluor	1.735	1.715	1.2	141	0.00
10	T	2-Methylbutane	1.491	1.300	12.8	125	0.00
11	T	Methyl Acetate	4.212	3.477	17.5	116	-0.01
12	T	2-Methylpentane	1.082	1.095	-1.2	144	-0.01
13	T	2,2-Dichloropropane	2.038	2.086	-2.4	140	-0.01
14	T	1,1-Dichloropropene	1.782	1.814	-1.8	142	-0.02
15	T	Thiophene	2.546	2.583	-1.5	141	-0.02
16	IR	1,4-Difluorobenzene (C 2)	1.000	1.000	0.0	139	-0.01
17	T	2,3-Dimethylpentane	0.605	0.528	12.7	126	-0.01
18	T	Dibromomethane	0.222	0.222	0.0	141	-0.02
19	IR	Chlorobenzene-d5 (C 3)	1.000	1.000	0.0	125	0.00
20	T	Methyl Cyclohexane	2.145	2.045	4.7	123	-0.01
21	T	1,3-Dichloropropane	1.666	1.919	-15.2	148	-0.01
22	T	1,1,1,2-Tetrachloroethane	1.102	1.236	-12.2	140	0.00
23	T	1-Chlorohexane	1.546	1.737	-12.4	141	-0.01
24	T	1,2,3-Trichloropropane	1.669	1.969	-18.0	146	-0.01
25	T	Bromobenzene	1.958	2.300	-17.5	144	0.00
26	T	2-Chlorotoluene	3.609	4.111	-13.9	143	0.00
27	T	4-Chlorotoluene	3.655	4.256	-16.4	142	-0.01
28	T	Indane	4.134	4.875	-17.9	141	0.00
29	T	Indene	3.171	4.284	-35.1#	144	0.00
30	T	1,2,4,5-Tetramethylbenzene	4.275	5.381	-25.9	140	-0.01
31	T	1,2,3,4-Tetramethylbenzene	4.311	5.341	-23.9	145	0.00
32	T	1,2,3,5-Tetramethylbenzene	4.091	5.183	-26.7	143	0.00
33	T	1,2,3-Trichlorobenzene	1.494	2.127	-42.4#	152	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242403.D Vial: 3
Acq On : 24 Jun 2024 8:30 Operator: MC/MJ
Sample : CCV C09062424 25ng Inst : MS09
Misc : S37-06062402/S37-06052406 (7/4)

Quant Time: Jun 24 09:33:24 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

6/24/24

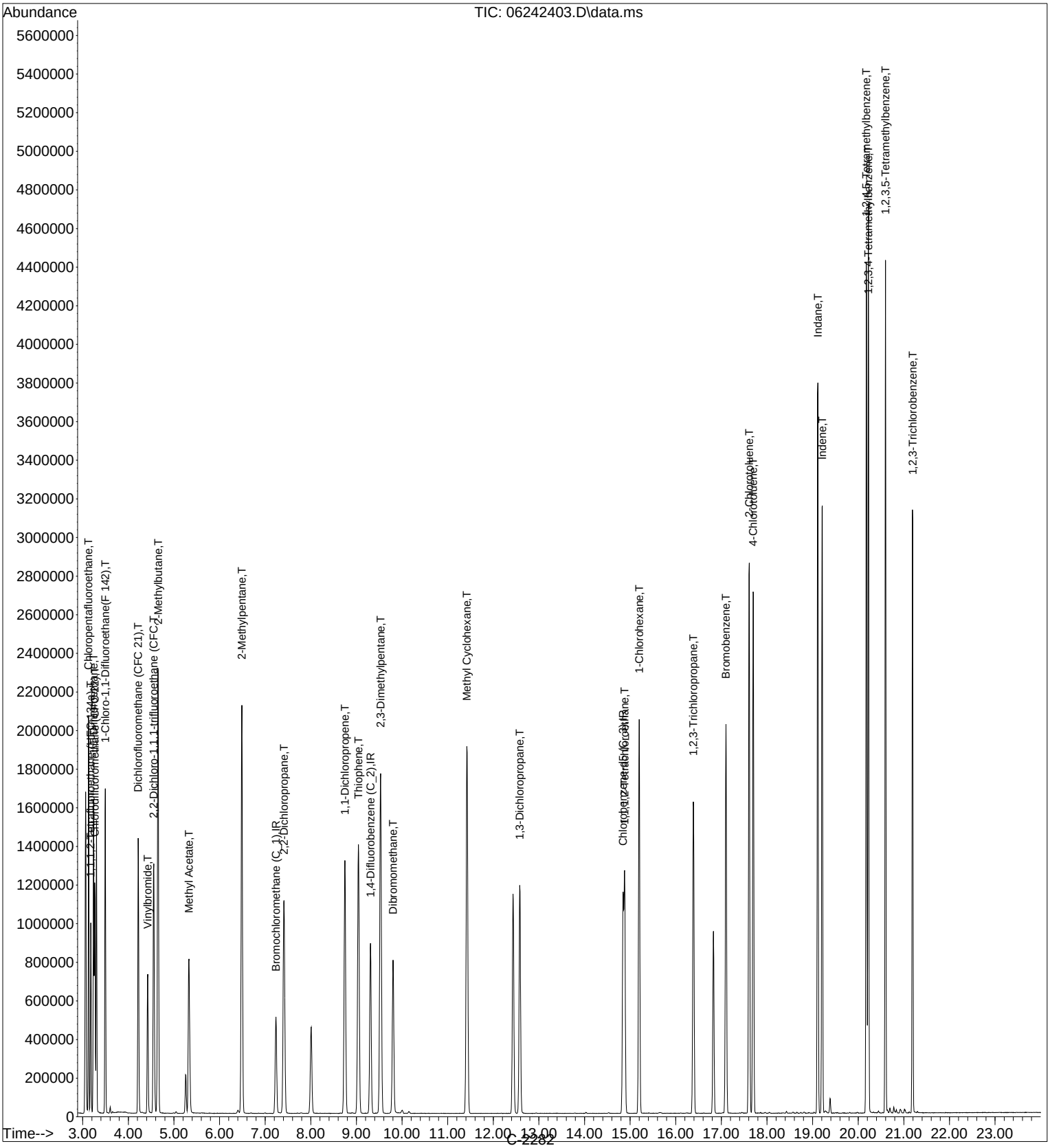
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (C 1)	7.24	130	192660	12.500	ng	-0.02
16) 1,4-Difluorobenzene (C 2)	9.31	114	852013	12.500	ng	-0.01
19) Chlorobenzene-d5 (C_3)	14.85	54	188716	12.500	ng	0.00
Target Compounds						Qvalue
2) Chloropentafluoroethane	3.13	85	582107	24.288	ng	97
3) 1,1,1,2-Tetrafluoroeth...	3.18	83	520421	26.326	ng	97
4) 1,1-Difluoroethane	3.24	65	432927	25.737	ng	99
5) Chlorodifluoromethane ...	3.26	67	180816	27.542	ng	100
6) 1-Chloro-1,1-Difluoroe...	3.49	65	1164302	26.825	ng	99
7) Dichlorofluoromethane ...	4.22	67	1115970	25.260	ng	100
8) Vinylbromide	4.43	108	406319	24.648	ng	100
9) 2,2-Dichloro-1,1,1-tri...	4.56	83	687396	25.711	ng	98
10) 2-Methylbutane	4.65	57	510955	22.236	ng	95
11) Methyl Acetate	5.33	43	1285996	19.808	ng	95
12) 2-Methylpentane	6.49	71	421799	25.286	ng	72
13) 2,2-Dichloropropane	7.41	77	795807	25.329	ng	99
14) 1,1-Dichloropropene	8.75	75	727031	26.464	ng	95
15) Thiophene	9.04	84	1005402	25.618	ng	93
17) 2,3-Dimethylpentane	9.53	56	935460	22.689	ng	96
18) Dibromomethane	9.80	174	404640	26.709	ng	98
20) Methyl Cyclohexane	11.42	55	825908	25.504	ng	86
21) 1,3-Dichloropropane	12.58	76	753392	29.948	ng	90
22) 1,1,1,2-Tetrachloroethane	14.88	131	406022	24.412	ng	100
23) 1-Chlorohexane	15.20	91	675198	28.925	ng	92
24) 1,2,3-Trichloropropane	16.38	75	780449	30.980	ng	98
25) Bromobenzene	17.10	77	911490	30.837	ng	99
26) 2-Chlorotoluene	17.61	91	1644860	30.190	ng	100
27) 4-Chlorotoluene	17.70	91	1622537	29.400	ng	99
28) Indane	19.12	117	1821505	29.183	ng	99
29) Indene	19.21	115	1519872	31.746	ng	100
30) 1,2,4,5-Tetramethylben...	20.18	119	2051113	31.782	ng	100
31) 1,2,3,4-Tetramethylben...	20.22	119	2076230	31.902	ng	99
32) 1,2,3,5-Tetramethylben...	20.60	119	1975840	31.992	ng	99
33) 1,2,3-Trichlorobenzene	21.19	180	842808	37.378	ng	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : I:\MS09\DATA\2024 06\24\06242403.D Vial: 3
Acq On : 24 Jun 2024 8:30 Operator: MC/MJ
Sample : CCV C09062424 25ng Inst : MS09
Misc : S37-06062402/S37-06052406 (7/4)

Quant Time: Jun 24 09:33:24 2024
Quant Method : I:\MS09\METHODS\C09041824.M
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
QLast Update : Fri Apr 19 11:07:52 2024
Response via : Initial Calibration
DataAcq Meth:TO15.M

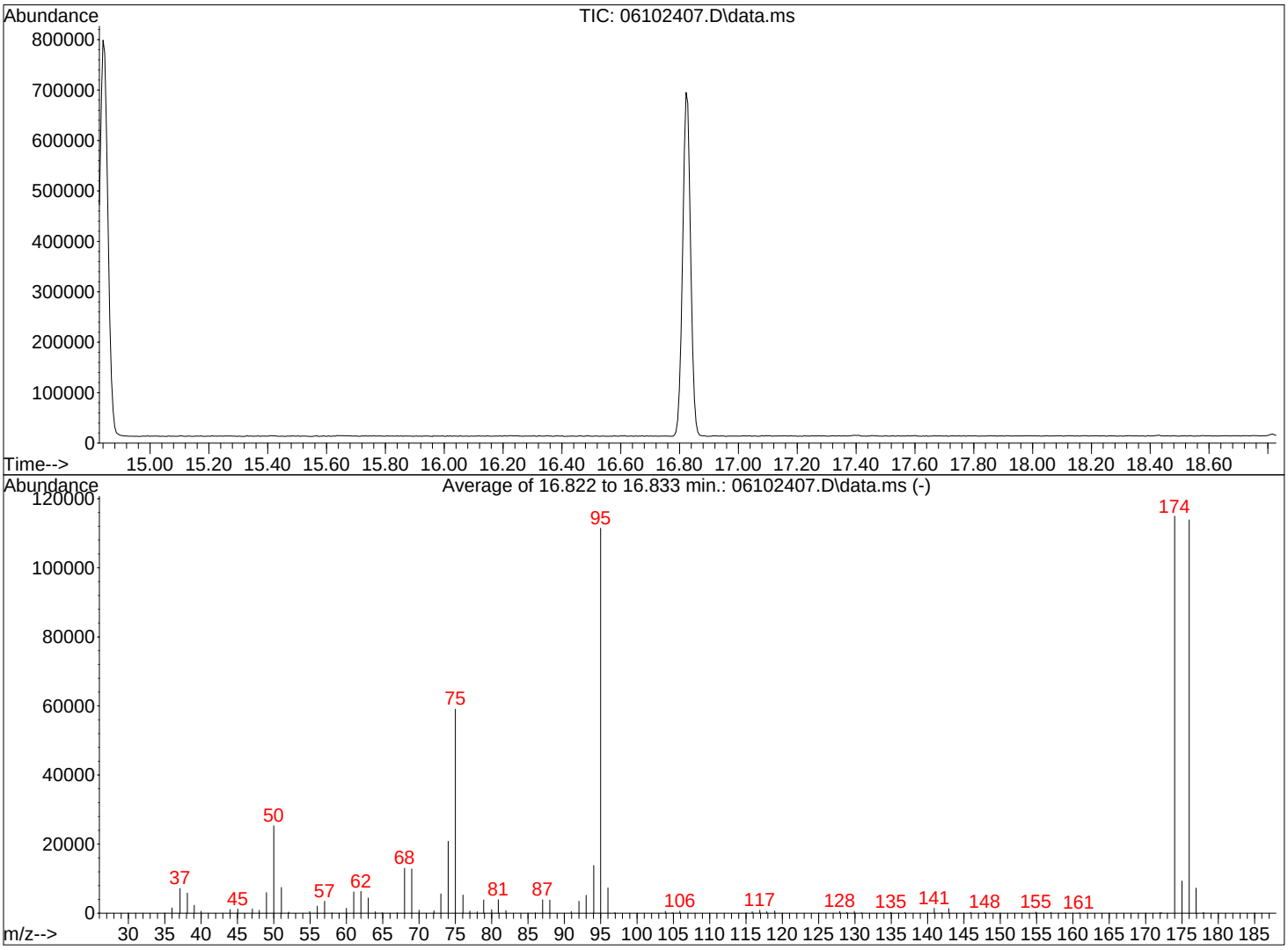


Data Path : I:\MS09\DATA\2024 06\10\
Data File : 06102407.D
Acq On : 10 Jun 2024 15:21
Operator : SC
Sample : 12.5ng TO-15 BFB STD
Misc : S37-06062402
ALS Vial : 2 Sample Multiplier: 1

6/11/24

Integration File: LSCINT.P

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
Last Update : Tue Jun 11 08:36:43 2024



AutoFind: Scans 2455, 2456, 2457; Background Corrected with Scan 2446

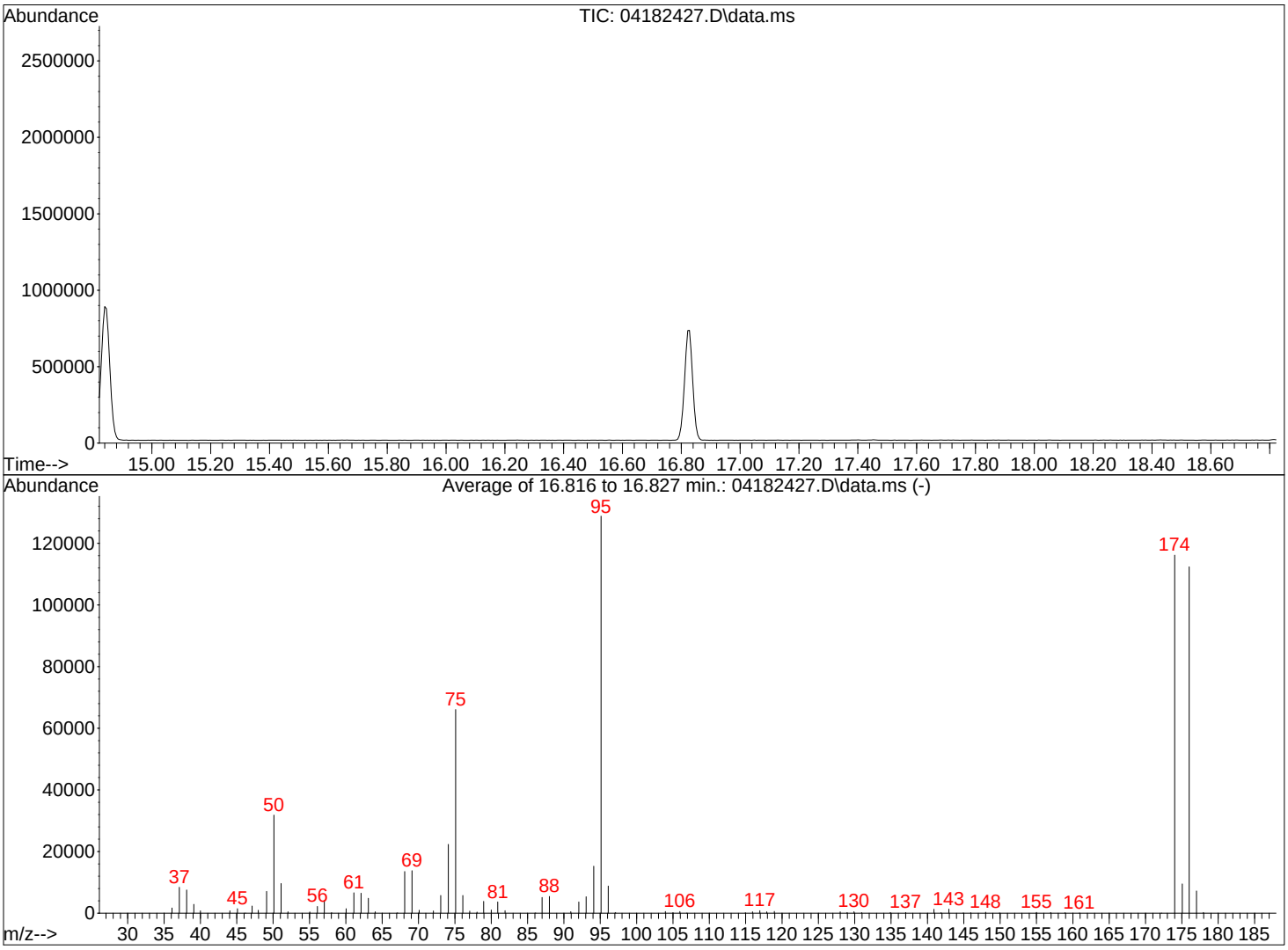
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	22.7	25312	PASS
75	95	30	66	53.0	59072	PASS
95	95	100	100	100.0	111459	PASS
96	95	5	9	6.6	7342	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	103.1	114941	PASS
175	174	4	9	8.1	9318	PASS
176	174	93	101	99.1	113851	PASS
177	176	5	9	6.4	7275	PASS

Data Path : I:\MS09\DATA\2024 04\18\
Data File : 04182427.D
Acq On : 19 Apr 2024 00:02
Operator : SC
Sample : 12.5ng TO-15 Custom BFB
Misc : S37-03252401
ALS Vial : 2 Sample Multiplier: 1

4/19/24

Integration File: RTEINTVB.P

Method : I:\MS09\METHODS\C09041824.M
Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
Last Update : Fri Apr 19 10:57:22 2024



AutoFind: Scans 2454, 2455, 2456; Background Corrected with Scan 2445

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	24.7	31811	PASS
75	95	30	66	51.3	66085	PASS
95	95	100	100	100.0	128813	PASS
96	95	5	9	6.9	8838	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	90.2	116160	PASS
175	174	4	9	8.2	9482	PASS
176	174	93	101	96.7	112363	PASS
177	176	5	9	6.4	7235	PASS

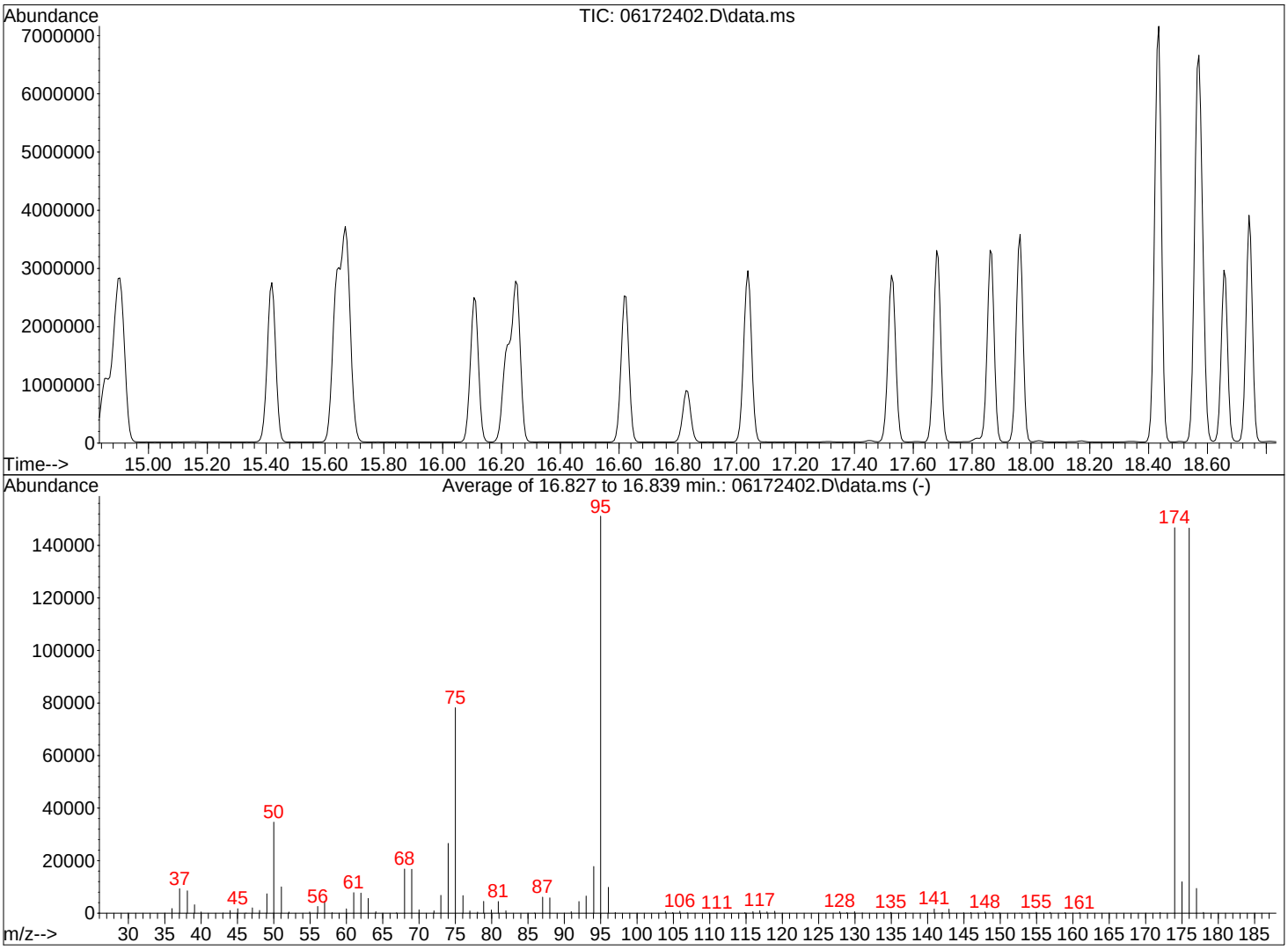
BFB

Data Path : I:\MS09\DATA\2024 06\17\
Data File : 06172402.D
Acq On : 17 Jun 2024 9:22
Operator : SC
Sample : CCV R09061724 25ng
Misc : S37-06062402/S37-05292404 (6/28)
ALS Vial : 2 Sample Multiplier: 1

6/17/24

Integration File: LSCINT.P

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
Last Update : Wed Jun 12 10:31:44 2024



AutoFind: Scans 2456, 2457, 2458; Background Corrected with Scan 2447

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	22.9	34640	PASS
75	95	30	66	51.8	78224	PASS
95	95	100	100	100.0	151133	PASS
96	95	5	9	6.5	9853	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	97.1	146763	PASS
175	174	4	9	8.2	11974	PASS
176	174	93	101	99.9	146603	PASS
177	176	5	9	6.5	9458	PASS

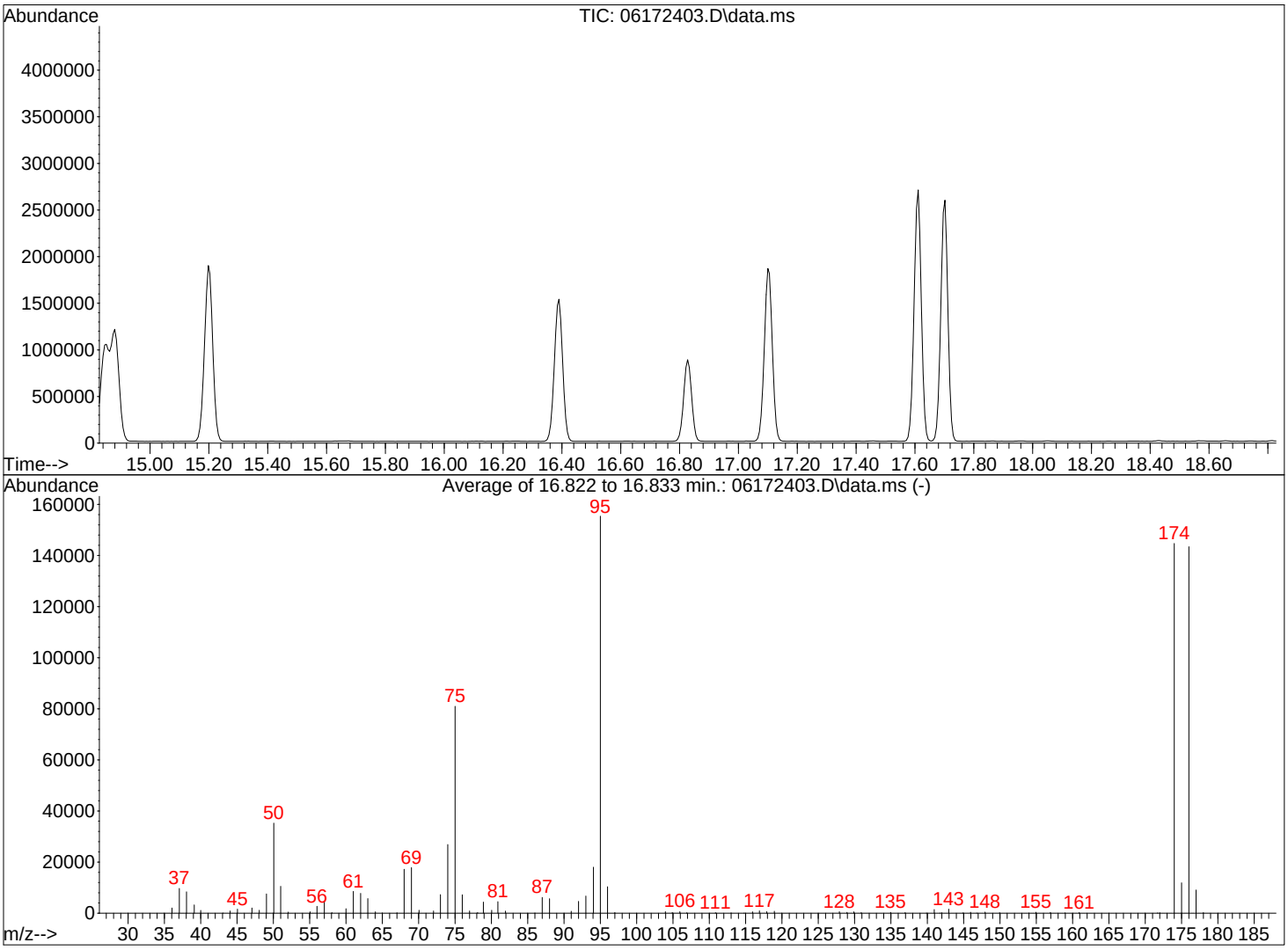
BFB

Data Path : I:\MS09\DATA\2024 06\17\
Data File : 06172403.D
Acq On : 17 Jun 2024 9:54
Operator : SC
Sample : CCV C09061724 25ng
Misc : S37-06062402/S37-06052406 (7/4)
ALS Vial : 3 Sample Multiplier: 1

6/17/24

Integration File: RTEINTVB.P

Method : I:\MS09\METHODS\C09041824.M
Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
Last Update : Fri Apr 19 11:07:52 2024



AutoFind: Scans 2455, 2456, 2457; Background Corrected with Scan 2445

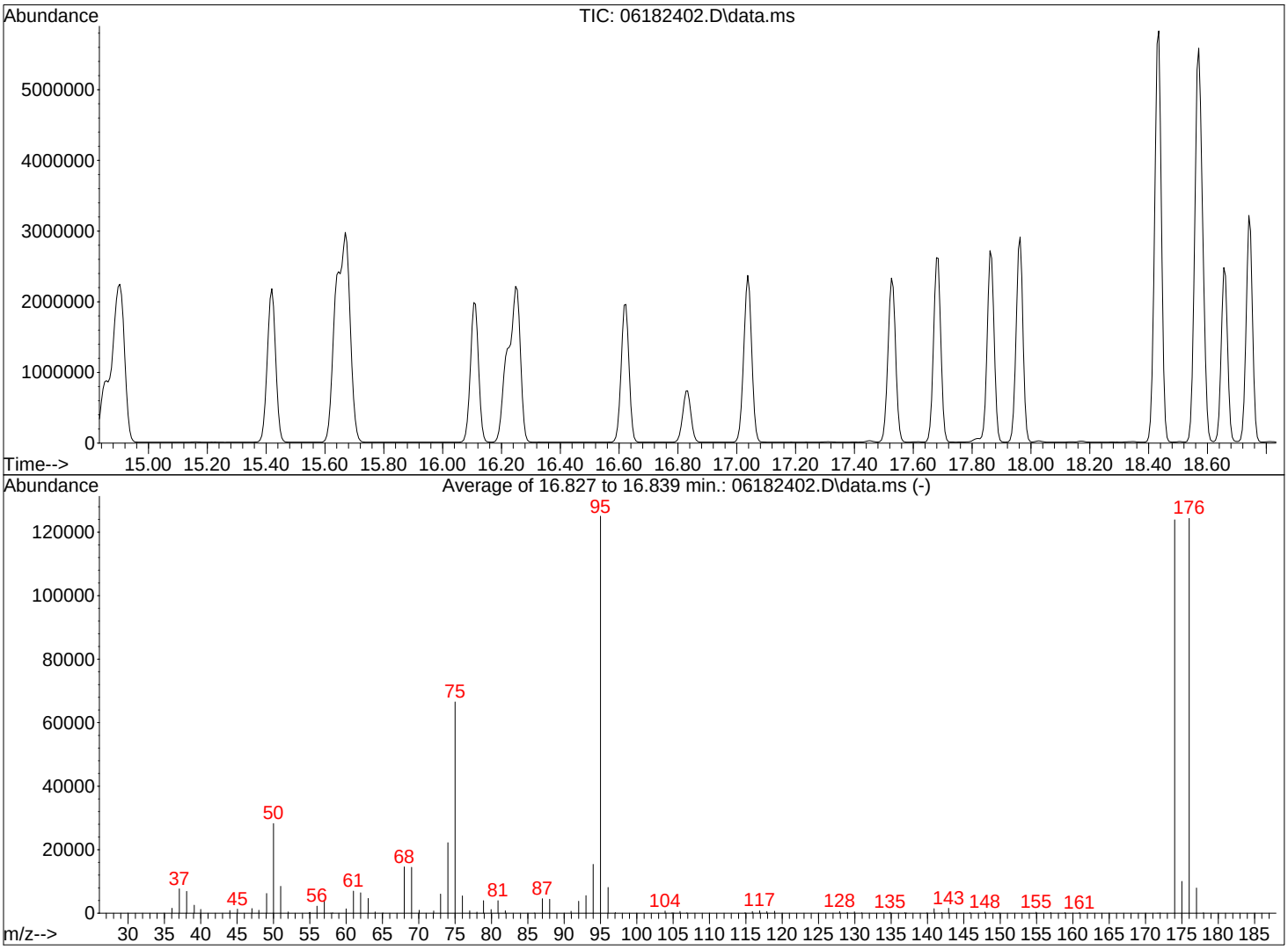
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	22.7	35240	PASS
75	95	30	66	52.1	80955	PASS
95	95	100	100	100.0	155392	PASS
96	95	5	9	6.7	10387	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	93.1	144725	PASS
175	174	4	9	8.2	11888	PASS
176	174	93	101	99.1	143424	PASS
177	176	5	9	6.4	9117	PASS

Data Path : I:\MS09\DATA\2024 06\18\
Data File : 06182402.D
Acq On : 18 Jun 2024 9:52
Operator : SC
Sample : CCV R09061824 25ng
Misc : S37-06062402/S37-05292404 (6/28)
ALS Vial : 2 Sample Multiplier: 1

6/18/24

Integration File: LSCINT.P

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
Last Update : Mon Jun 17 15:00:37 2024



AutoFind: Scans 2456, 2457, 2458; Background Corrected with Scan 2447

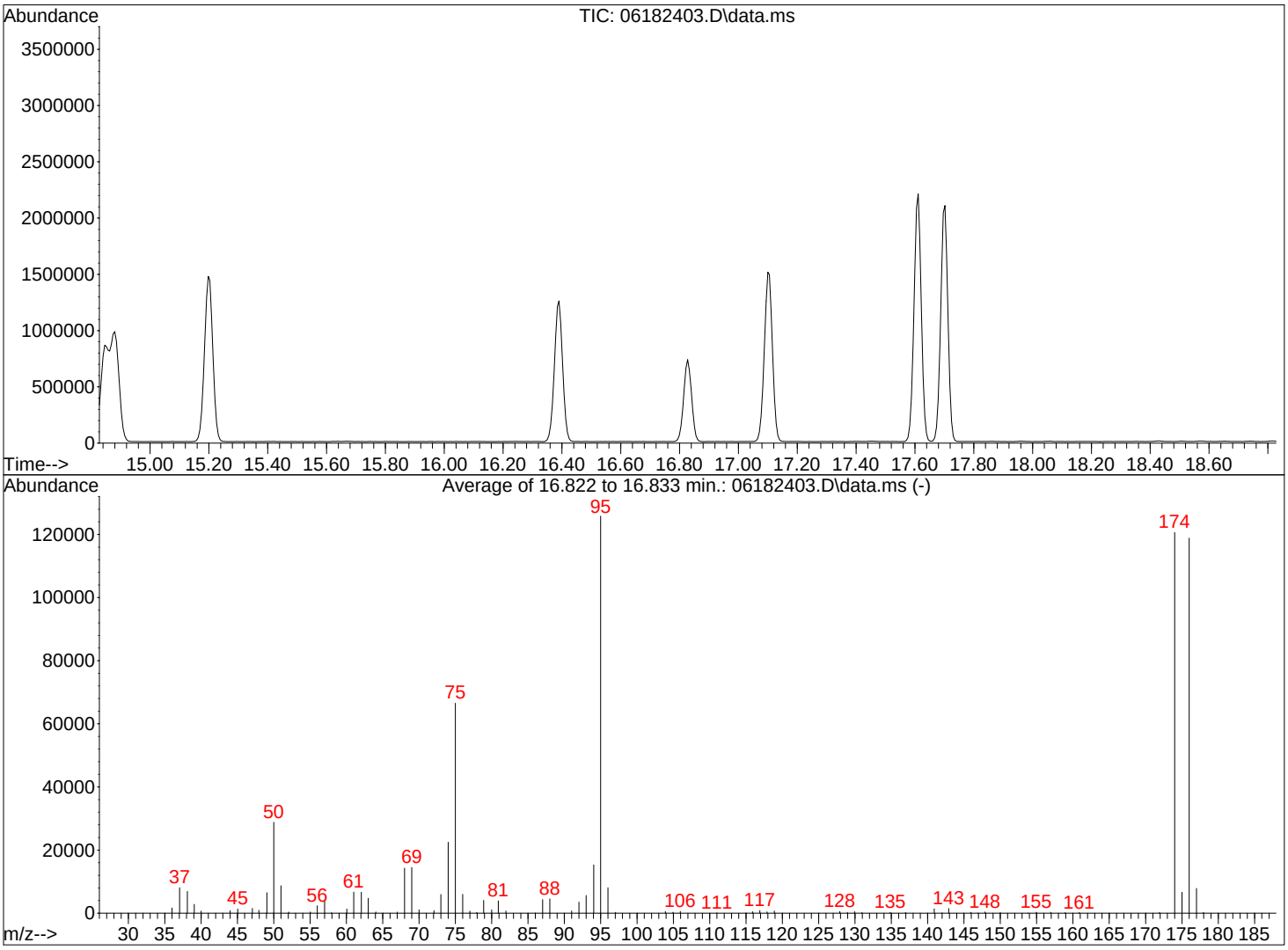
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	22.6	28240	PASS
75	95	30	66	53.2	66517	PASS
95	95	100	100	100.0	125043	PASS
96	95	5	9	6.5	8126	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	99.1	123893	PASS
175	174	4	9	8.1	10001	PASS
176	174	93	101	100.4	124344	PASS
177	176	5	9	6.4	7945	PASS

Data Path : I:\MS09\DATA\2024 06\18\
Data File : 06182403.D
Acq On : 18 Jun 2024 10:24
Operator : SC
Sample : CCV C09061824 25ng
Misc : S37-06062402/S37-06052406 (7/4)
ALS Vial : 3 Sample Multiplier: 1

6/18/24

Integration File: RTEINTVB.P

Method : I:\MS09\METHODS\C09041824.M
Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
Last Update : Fri Apr 19 11:07:52 2024



AutoFind: Scans 2455, 2456, 2457; Background Corrected with Scan 2445

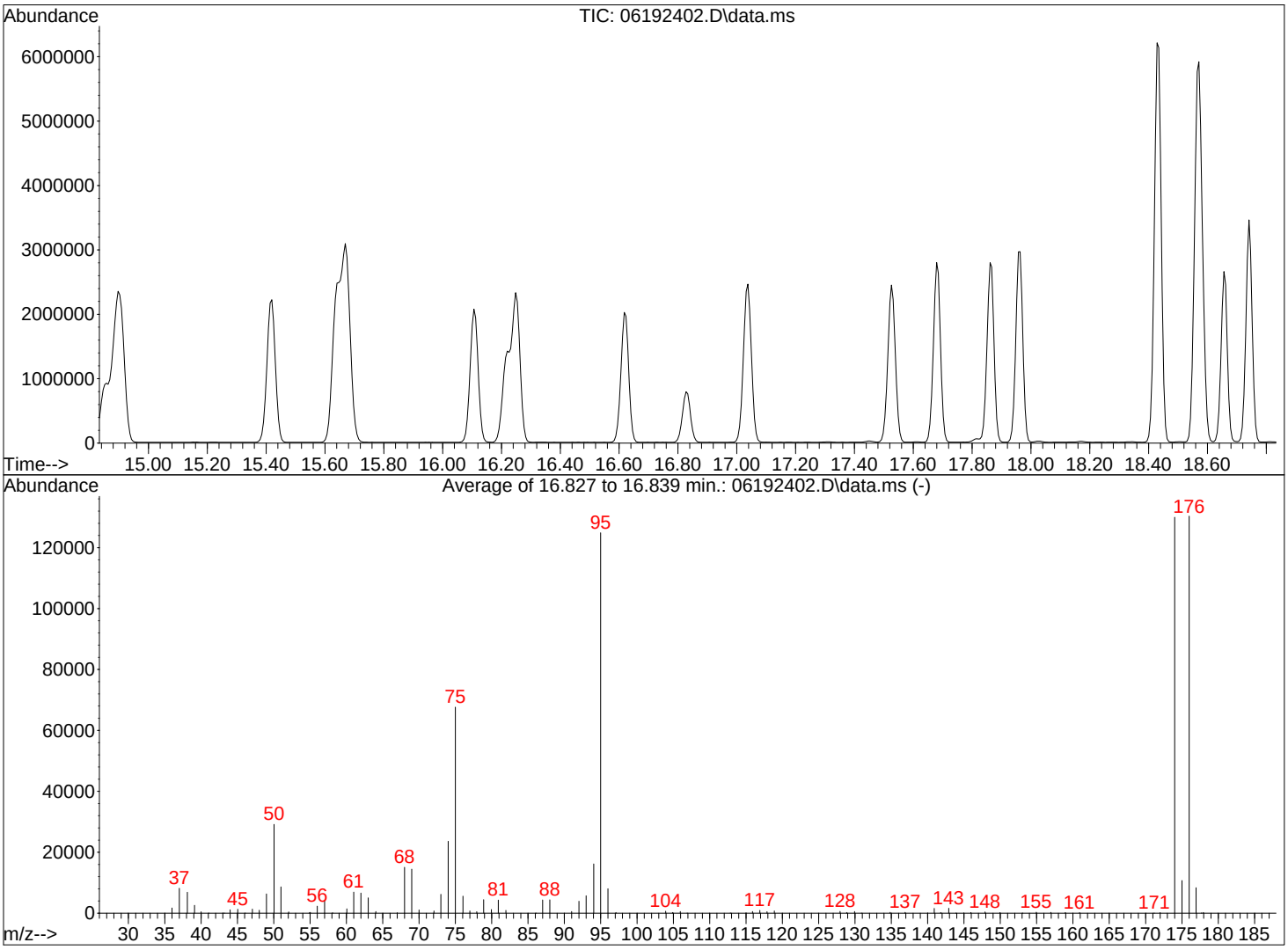
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	22.9	28813	PASS
75	95	30	66	52.9	66547	PASS
95	95	100	100	100.0	125797	PASS
96	95	5	9	6.4	8080	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	95.9	120643	PASS
175	174	4	9	5.5	6635	PASS
176	174	93	101	98.5	118835	PASS
177	176	5	9	6.6	7834	PASS

Data Path : I:\MS09\DATA\2024 06\19\
Data File : 06192402.D
Acq On : 19 Jun 2024 9:23
Operator : SC
Sample : CCV R09061924 25ng
Misc : S37-06062402/S37-05292404 (6/28)
ALS Vial : 2 Sample Multiplier: 1

6/19/24

Integration File: LSCINT.P

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
Last Update : Mon Jun 17 15:00:37 2024



AutoFind: Scans 2456, 2457, 2458; Background Corrected with Scan 2447

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	23.4	29168	PASS
75	95	30	66	54.2	67648	PASS
95	95	100	100	100.0	124896	PASS
96	95	5	9	6.4	8054	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	104.1	129987	PASS
175	174	4	9	8.2	10713	PASS
176	174	93	101	100.3	130331	PASS
177	176	5	9	6.4	8373	PASS

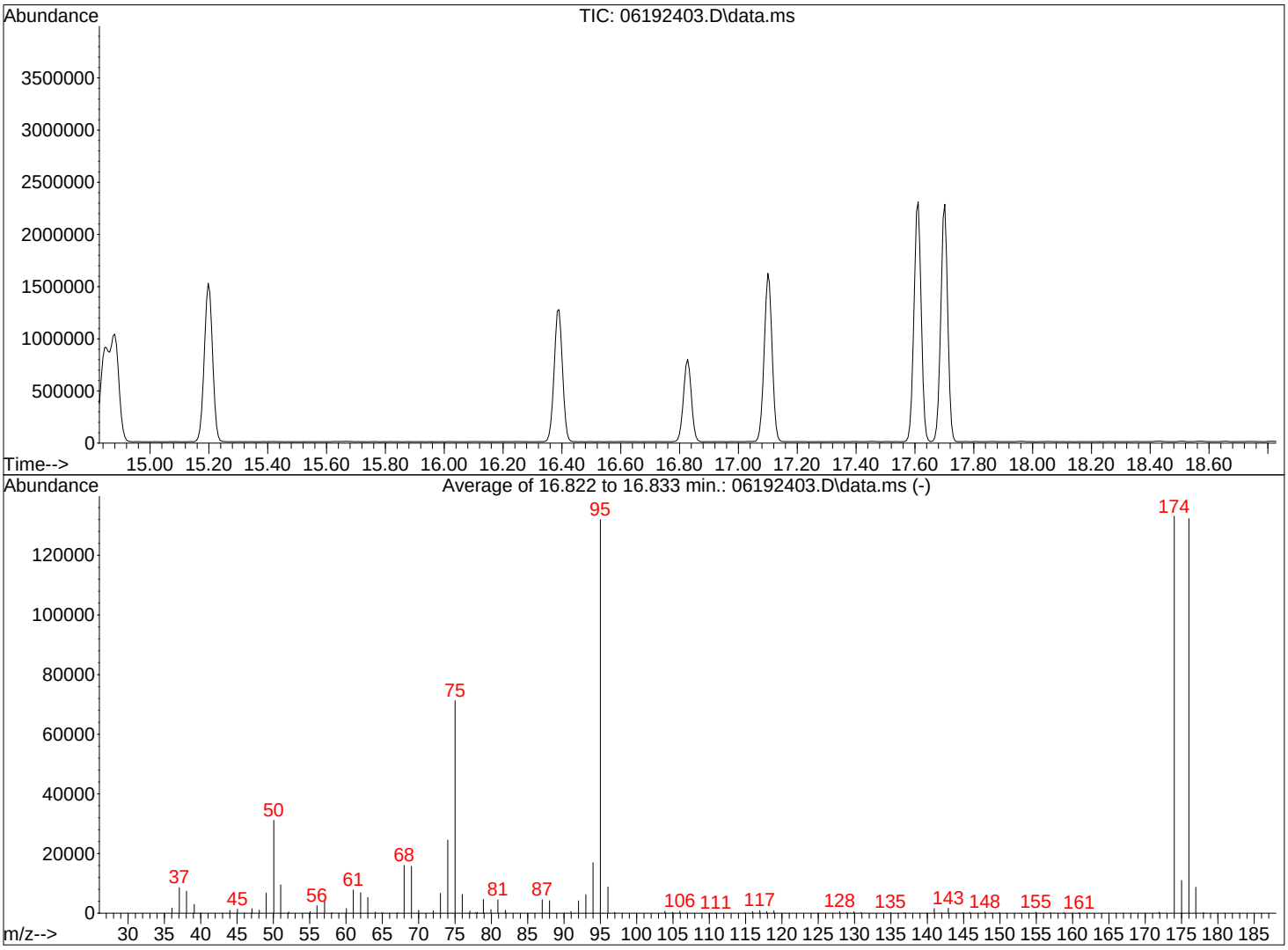
BFB

Data Path : I:\MS09\DATA\2024 06\19\
Data File : 06192403.D
Acq On : 19 Jun 2024 9:56
Operator : SC
Sample : CCV C09061924 25ng
Misc : S37-06062402/S37-06052406 (7/4)
ALS Vial : 3 Sample Multiplier: 1

Integration File: RTEINTVB.P

6/19/24

Method : I:\MS09\METHODS\C09041824.M
Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
Last Update : Fri Apr 19 11:07:52 2024



AutoFind: Scans 2455, 2456, 2457; Background Corrected with Scan 2445

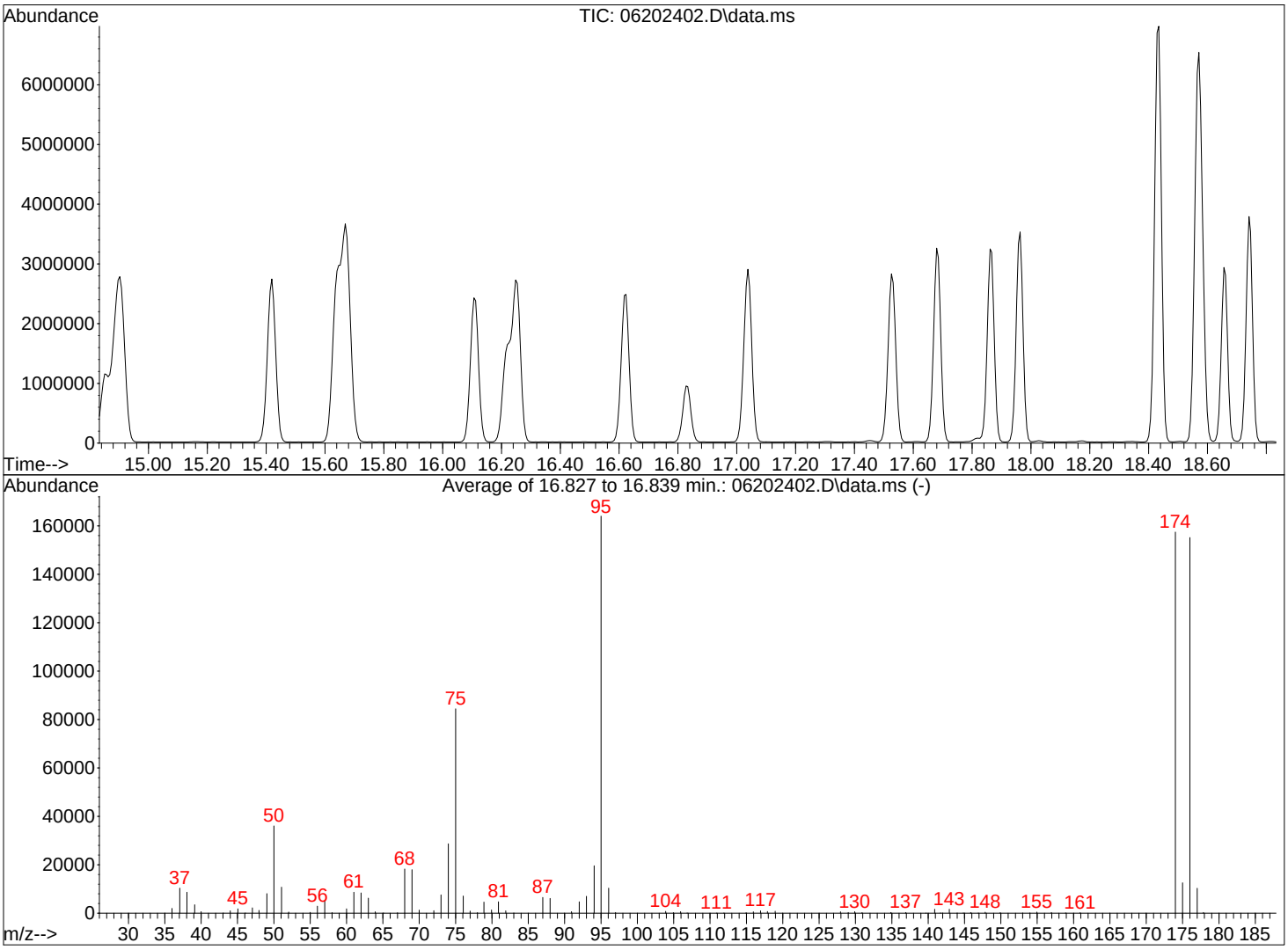
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	23.6	31163	PASS
75	95	30	66	54.0	71277	PASS
95	95	100	100	100.0	131941	PASS
96	95	5	9	6.7	8834	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	100.9	133128	PASS
175	174	4	9	8.2	10980	PASS
176	174	93	101	99.4	132352	PASS
177	176	5	9	6.6	8751	PASS

Data Path : I:\MS09\DATA\2024 06\20\
Data File : 06202402.D
Acq On : 20 Jun 2024 10:15
Operator : SC
Sample : CCV R09062024 25ng
Misc : S37-06062402/S37-05292404 (6/28)
ALS Vial : 2 Sample Multiplier: 1

6/20/24

Integration File: LSCINT.P

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
Last Update : Mon Jun 17 15:00:37 2024



AutoFind: Scans 2456, 2457, 2458; Background Corrected with Scan 2447

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	22.0	36075	PASS
75	95	30	66	51.5	84411	PASS
95	95	100	100	100.0	164032	PASS
96	95	5	9	6.3	10367	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	96.0	157483	PASS
175	174	4	9	8.0	12590	PASS
176	174	93	101	98.6	155200	PASS
177	176	5	9	6.6	10303	PASS

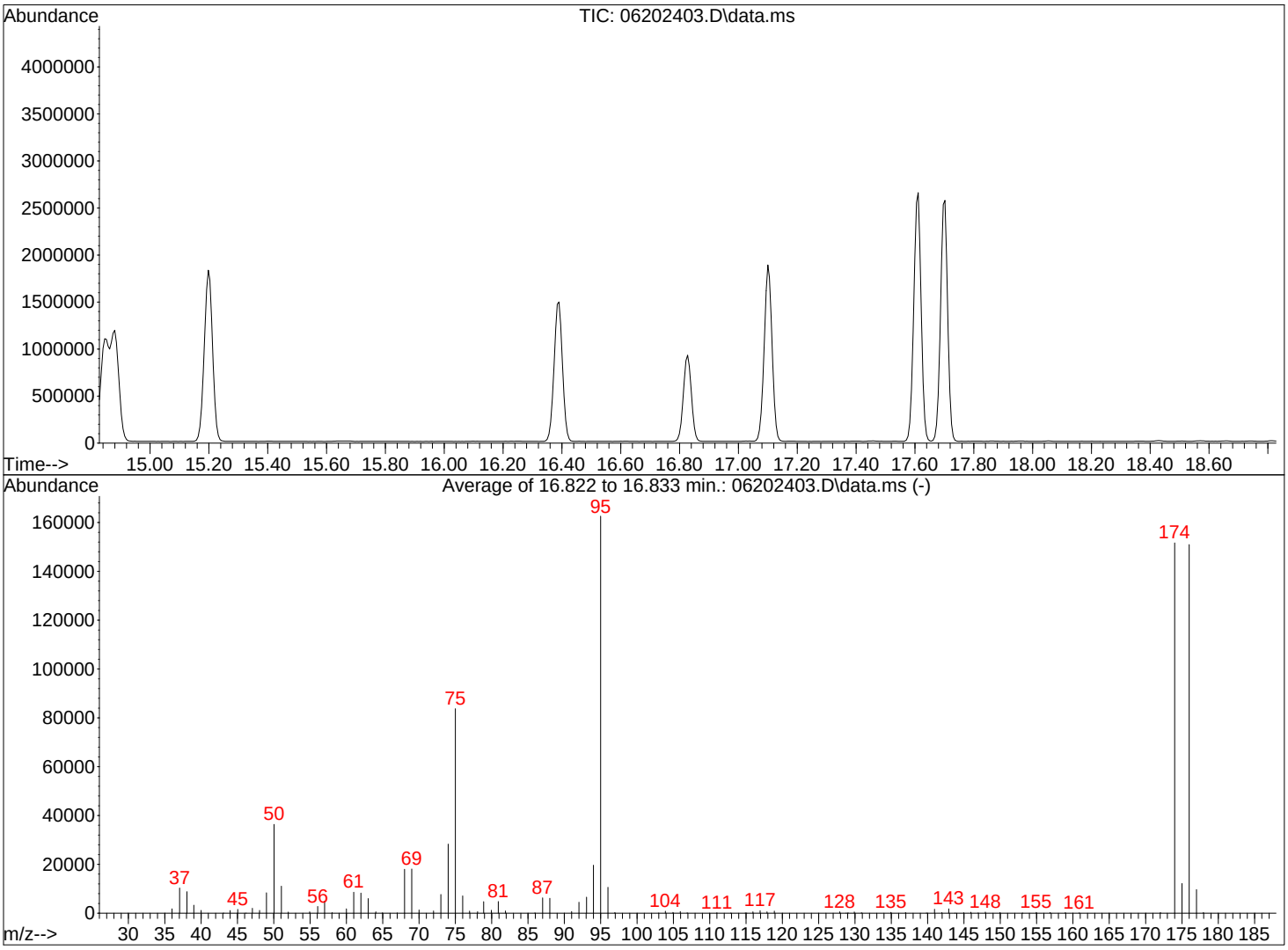
BFB

Data Path : I:\MS09\DATA\2024 06\20\
Data File : 06202403.D
Acq On : 20 Jun 2024 10:47
Operator : SC
Sample : CCV C09062024 25ng
Misc : S37-06062402/S37-06052406 (7/4)
ALS Vial : 3 Sample Multiplier: 1

6/20/24

Integration File: RTEINTVB.P

Method : I:\MS09\METHODS\C09041824.M
Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
Last Update : Fri Apr 19 11:07:52 2024



AutoFind: Scans 2455, 2456, 2457; Background Corrected with Scan 2445

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	22.4	36365	PASS
75	95	30	66	51.5	83749	PASS
95	95	100	100	100.0	162603	PASS
96	95	5	9	6.5	10589	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	93.3	151637	PASS
175	174	4	9	8.0	12161	PASS
176	174	93	101	99.6	150976	PASS
177	176	5	9	6.4	9676	PASS

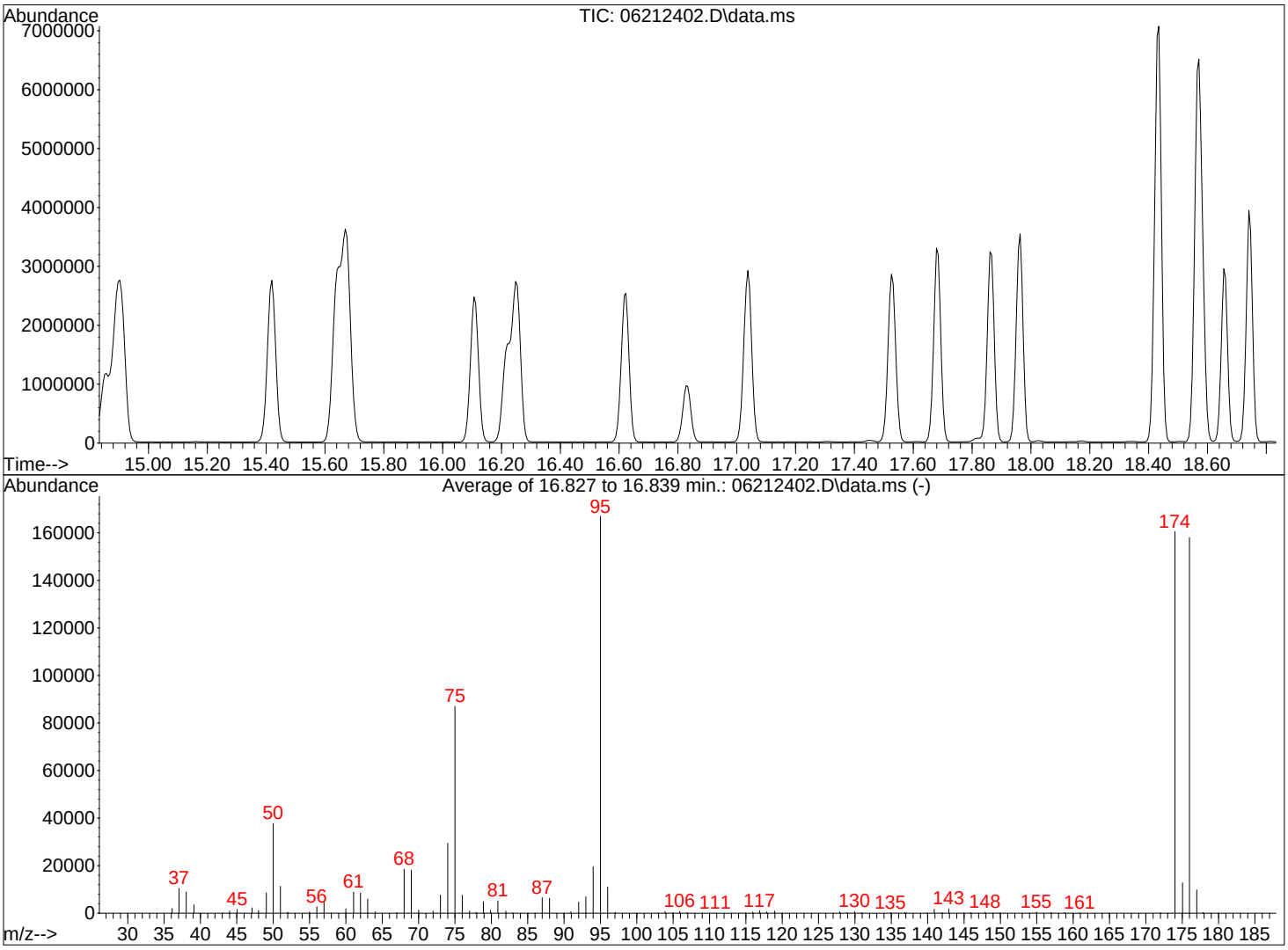
BFB

Data Path : I:\MS09\DATA\2024 06\21\
Data File : 06212402.D
Acq On : 21 Jun 2024 10:56
Operator : SC
Sample : CCV R09062124 25ng
Misc : S37-06062402/S37-05292404 (6/28)
ALS Vial : 2 Sample Multiplier: 1

Integration File: LSCINT.P

6/21/24

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
Last Update : Mon Jun 17 15:00:37 2024



AutoFind: Scans 2456, 2457, 2458; Background Corrected with Scan 2447

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	22.6	37685	PASS
75	95	30	66	52.1	87029	PASS
95	95	100	100	100.0	166976	PASS
96	95	5	9	6.6	11037	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	96.1	160448	PASS
175	174	4	9	8.0	12794	PASS
176	174	93	101	98.5	158037	PASS
177	176	5	9	6.2	9854	PASS

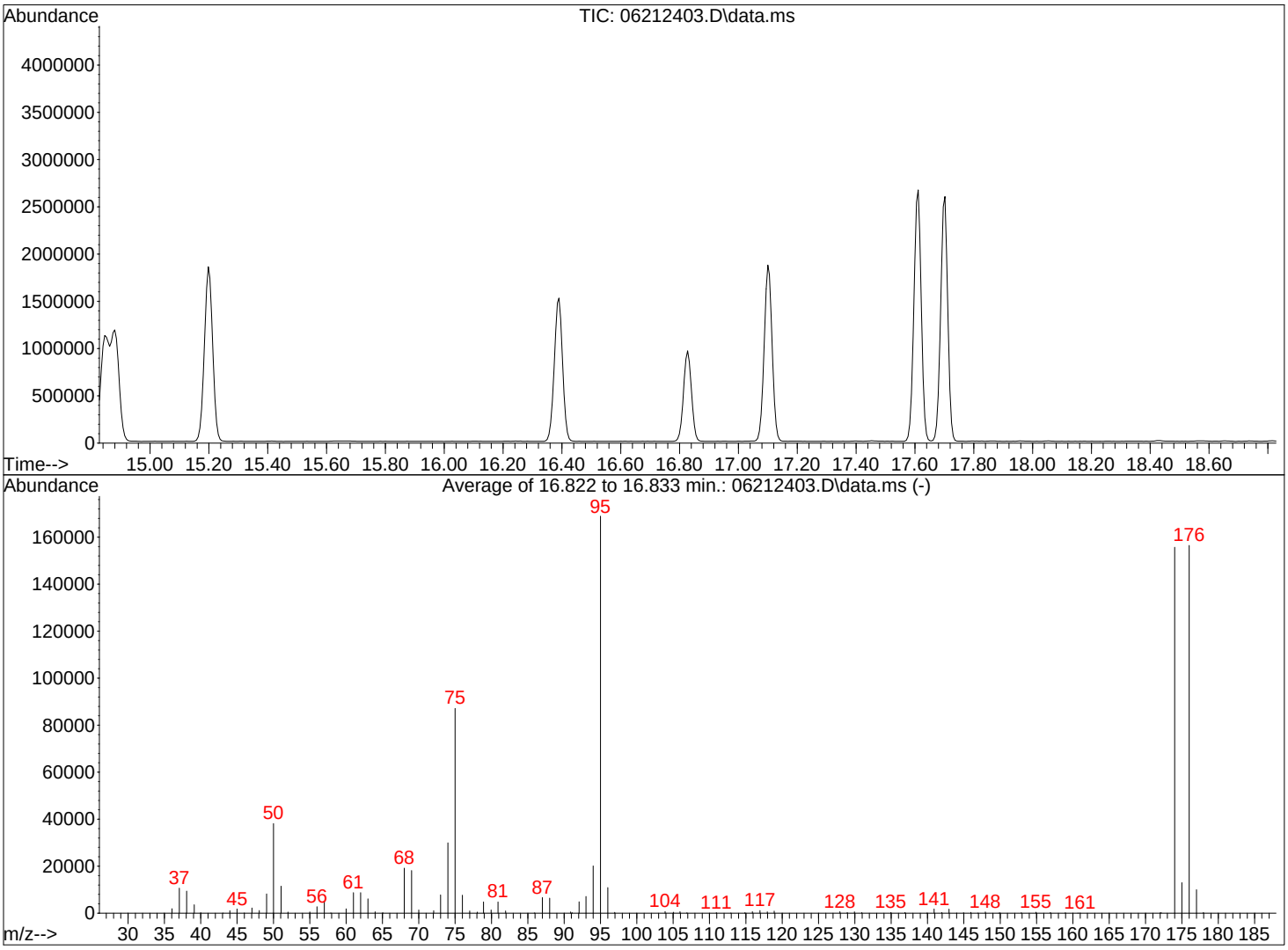
BFB

Data Path : I:\MS09\DATA\2024 06\21\
Data File : 06212403.D
Acq On : 21 Jun 2024 11:28
Operator : SC
Sample : CCV C09062124 25ng
Misc : S37-06062402/S37-06052406 (7/4)
ALS Vial : 3 Sample Multiplier: 1

6/21/24

Integration File: RTEINTVB.P

Method : I:\MS09\METHODS\C09041824.M
Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
Last Update : Fri Apr 19 11:07:52 2024



AutoFind: Scans 2455, 2456, 2457; Background Corrected with Scan 2445

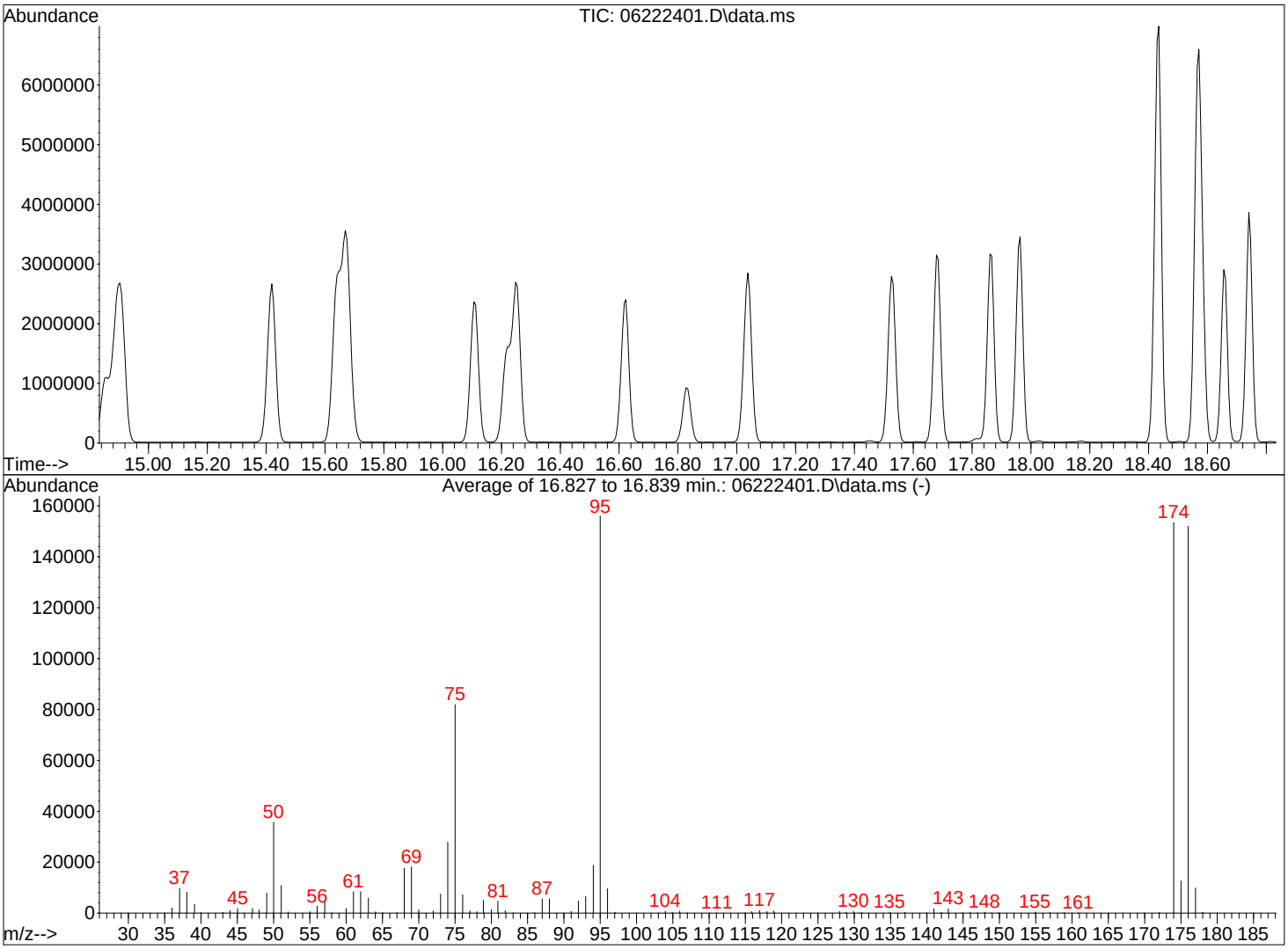
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	22.6	38160	PASS
75	95	30	66	51.6	87139	PASS
95	95	100	100	100.0	168939	PASS
96	95	5	9	6.4	10882	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	92.2	155733	PASS
175	174	4	9	8.3	12973	PASS
176	174	93	101	100.5	156480	PASS
177	176	5	9	6.4	10018	PASS

Data Path : I:\MS09\DATA\2024 06\22\
Data File : 06222401.D
Acq On : 22 Jun 2024 9:47
Operator : SC
Sample : CCV R09062224 25ng
Misc : S37-06062402/S37-05292404 (6/28)
ALS Vial : 2 Sample Multiplier: 1

6/24/24

Integration File: LSCINT.P

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
Last Update : Mon Jun 24 08:55:17 2024



AutoFind: Scans 2456, 2457, 2458; Background Corrected with Scan 2447

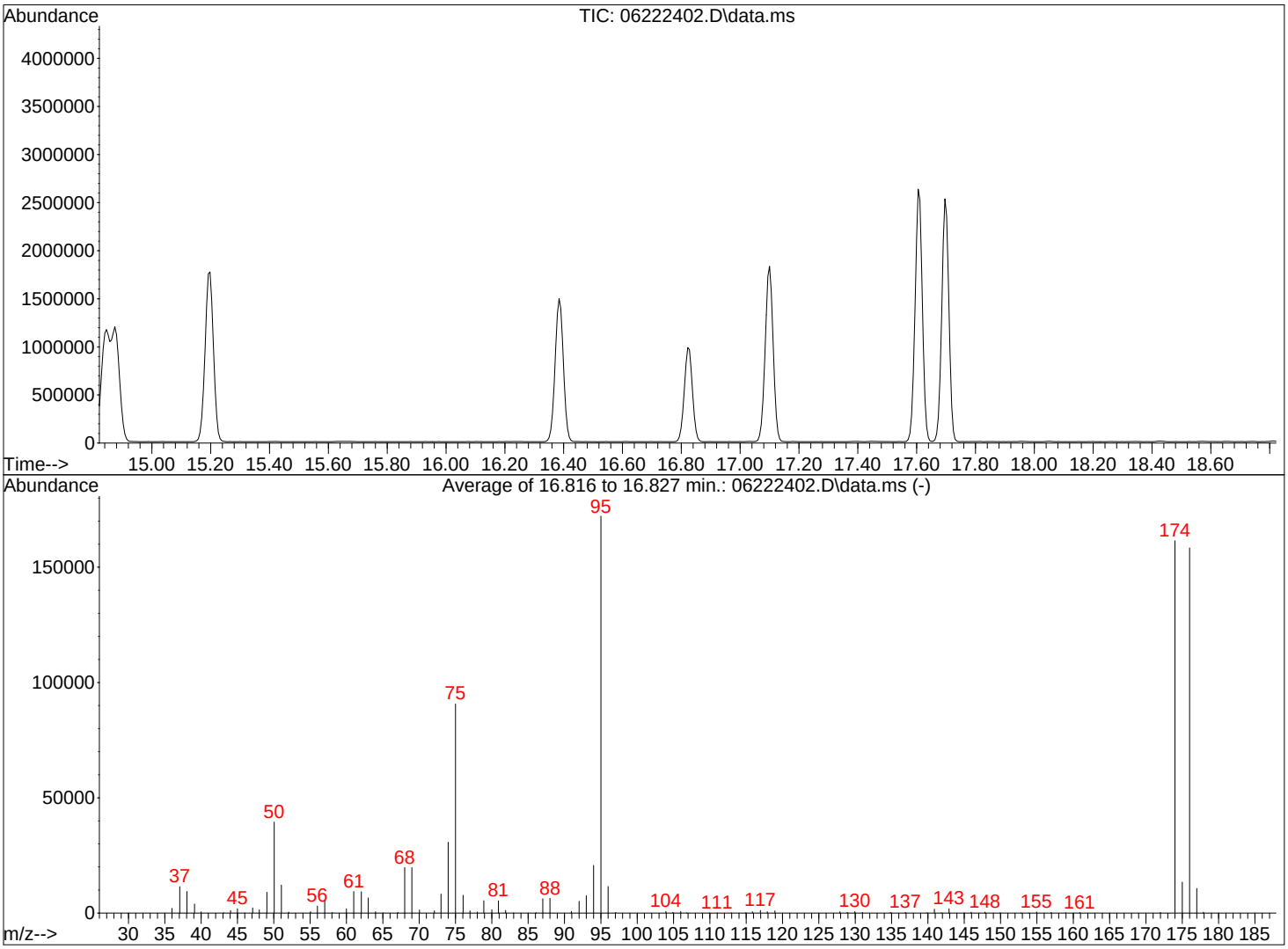
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	22.9	35725	PASS
75	95	30	66	52.5	81883	PASS
95	95	100	100	100.0	155989	PASS
96	95	5	9	6.2	9599	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	98.4	153472	PASS
175	174	4	9	8.3	12676	PASS
176	174	93	101	99.0	151957	PASS
177	176	5	9	6.5	9831	PASS

Data Path : I:\MS09\DATA\2024 06\22\
Data File : 06222402.D
Acq On : 22 Jun 2024 11:06
Operator : SC
Sample : CCV C09062224 25ng
Misc : S37-06062402/S37-06052406 (7/4)
ALS Vial : 3 Sample Multiplier: 1

Integration File: RTEINTVB.P

6/24/24

Method : I:\MS09\METHODS\C09041824.M
Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
Last Update : Fri Apr 19 11:07:52 2024



AutoFind: Scans 2454, 2455, 2456; Background Corrected with Scan 2444

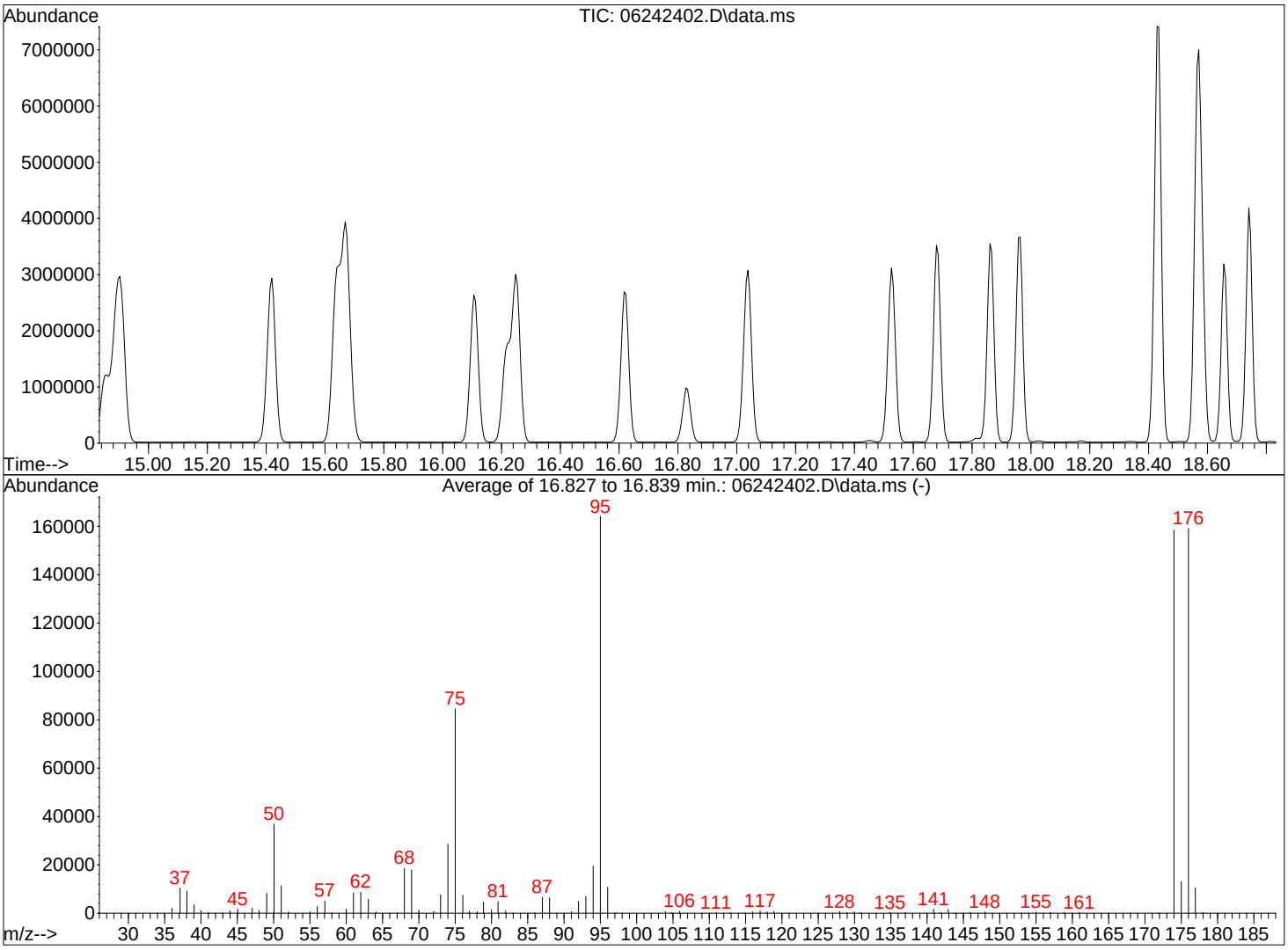
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	22.9	39512	PASS
75	95	30	66	52.7	90720	PASS
95	95	100	100	100.0	172181	PASS
96	95	5	9	6.7	11523	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	93.8	161515	PASS
175	174	4	9	8.3	13443	PASS
176	174	93	101	98.1	158421	PASS
177	176	5	9	6.7	10687	PASS

Data Path : I:\MS09\DATA\2024 06\24\
Data File : 06242402.D
Acq On : 24 Jun 2024 7:58
Operator : MC/MJ
Sample : CCV R09062424 25ng
Misc : S37-06062402/S37-05292404 (6/28)
ALS Vial : 2 Sample Multiplier: 1

6/24/24

Integration File: LSCINT.P

Method : I:\MS09\METHODS\R09061024.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
Last Update : Mon Jun 17 15:00:37 2024



AutoFind: Scans 2456, 2457, 2458; Background Corrected with Scan 2447

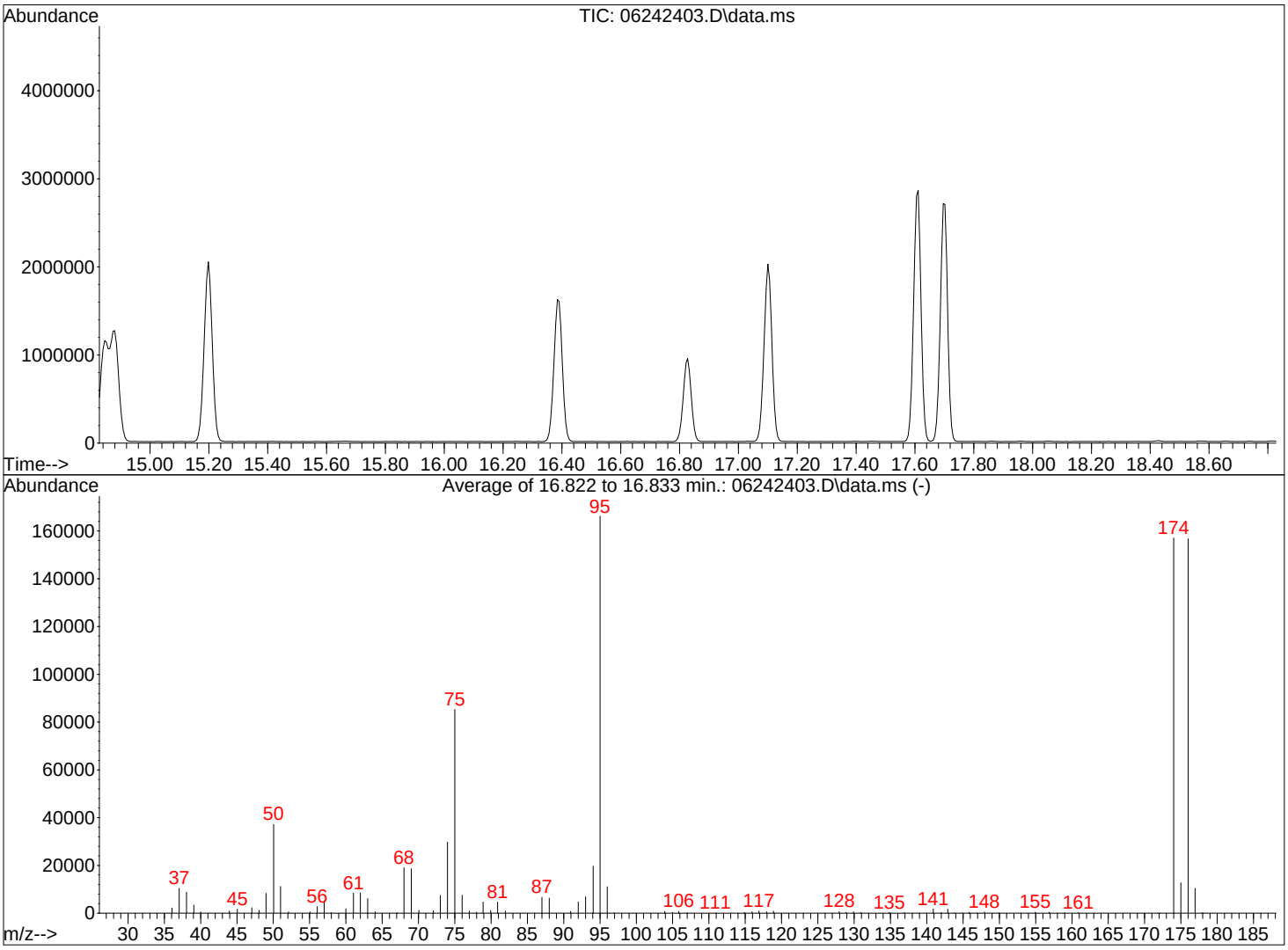
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	22.4	36819	PASS
75	95	30	66	51.4	84453	PASS
95	95	100	100	100.0	164203	PASS
96	95	5	9	6.6	10797	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	96.5	158443	PASS
175	174	4	9	8.3	13076	PASS
176	174	93	101	100.4	159104	PASS
177	176	5	9	6.6	10493	PASS

Data Path : I:\MS09\DATA\2024 06\24\
Data File : 06242403.D
Acq On : 24 Jun 2024 8:30
Operator : MC/MJ
Sample : CCV C09062424 25ng
Misc : S37-06062402/S37-06052406 (7/4)
ALS Vial : 3 Sample Multiplier: 1

6/24/24

Integration File: RTEINTVB.P

Method : I:\MS09\METHODS\C09041824.M
Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD
Last Update : Fri Apr 19 11:07:52 2024



AutoFind: Scans 2455, 2456, 2457; Background Corrected with Scan 2445

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	22.4	37197	PASS
75	95	30	66	51.3	85291	PASS
95	95	100	100	100.0	166208	PASS
96	95	5	9	6.7	11059	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	94.5	157077	PASS
175	174	4	9	8.1	12714	PASS
176	174	93	101	99.8	156736	PASS
177	176	5	9	6.6	10400	PASS

Injection Log

Directory: J:\MS09\DATA\2024_06\10\

	Date/Time	File Name	Sample ID	Misc Info	Operator	Vial	Comment
1	6/10/24 8:40	06102401.D	Blank	S37-06062402	SC	1	
2	6/10/24 9:13	06102402.D	CCV R09061024_25ng	S37-06062402/S37-05292404 (6/28)	SC	2	
3	6/10/24 9:45	06102403.D	CCV C09061024_25ng	S37-06062402/S37-06052406 (7/4)	SC	3	
4	6/10/24 10:23	06102404.D	Blank	S37-06062402	SC	1	
5	6/10/24 10:55	06102405.D	CCV R09061024_5.0ng	S37-06062402/S37-05292404 (6/28)	SC	2	
6	6/10/24 14:49	06102406.D	Blank	S37-06062402	SC	2	
7	6/10/24 15:21	06102407.D	12.5ng TO-15 BFB STD	S37-06062402	SC	2	Passed
8	6/10/24 15:53	06102408.D	0.1ng TO-15 ICAL STD	S37-06062402/S37-06102404 (7/10)	SC	5	
9	6/10/24 16:25	06102409.D	0.2ng TO-15 ICAL STD	S37-06062402/S37-06102404 (7/10)	SC	5	
10	6/10/24 16:57	06102410.D	0.5ng TO-15 ICAL STD	S37-06062402/S37-06102403 (7/10)	SC	6	
11	6/10/24 17:29	06102411.D	1.0ng TO-15 ICAL STD	S37-06062402/S37-06102403 (7/10)	SC	6	
12	6/10/24 18:01	06102412.D	5.0ng TO-15 ICAL STD	S37-06062402/S37-06102403 (7/10)	SC	6	
13	6/10/24 18:34	06102413.D	25ng TO-15 ICAL STD	S37-06062402/S37-06102402 (7/10)	SC	7	
14	6/10/24 19:06	06102414.D	50ng TO-15 ICAL STD	S37-06062402/S37-06102402 (7/10)	SC	7	
15	6/10/24 19:38	06102415.D	100ng TO-15 ICAL STD	S37-06062402/S37-06102402 (7/10)	SC	7	
16	6/10/24 20:10	06102416.D	Blank	S37-06062402	SC	2	
17	6/10/24 20:43	06102417.D	ICV R09061024_25ng	S37-06062402/S37-05292406 (6/28)	SC	2	Passed
18	6/10/24 21:15	06102418.D	ICV R09061024_25ng	S37-06062402/S37-05292406 (6/28)	SC	2	Passed
19							
20							
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22							6/11/24
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Injection Log

Directory: J:\MS09\DATA\2024_04\18\

27	4/19/24 0:02	04182427.D	12.5ng TO-15 Custom BFB	S37-03252401	SC	2	passed
28	4/19/24 0:34	04182428.D	0.4ng TO-15 Custom ICAL	S37-03252401/S37-04042405 (5/4)	SC	14	
29	4/19/24 1:06	04182429.D	1.0ng TO-15 Custom ICAL	S37-03252401/S37-04042405 (5/4)	SC	14	
30	4/19/24 1:38	04182430.D	2.5ng TO-15 Custom ICAL	S37-03252401/S37-04042405 (5/4)	SC	14	
31	4/19/24 2:10	04182431.D	5.0ng TO-15 Custom ICAL	S37-03252401/S37-04042405 (5/4)	SC	14	
32	4/19/24 2:42	04182432.D	25ng TO-15 Custom ICAL	S37-03252401/S37-04042404 (5/4)	SC	15	
33	4/19/24 3:14	04182433.D	50ng TO-15 Custom ICAL	S37-03252401/S37-04042404 (5/4)	SC	15	
34	4/19/24 3:46	04182434.D	100ng TO-15 Custom ICAL	S37-03252401/S37-04042404 (5/4)	SC	15	
35	4/19/24 4:18	04182435.D	Blank (100mL)	S37-03252401	SC	2	
36	4/19/24 4:50	04182436.D	ICV R09041824_25ng	S37-03252401/S37-04092401 (5/9)	SC	16	
37	4/19/24 5:22	04182437.D	ICV R09041824_25ng	S37-03252401/S37-04092401 (5/9)	SC	16	passed

Injection Log

Directory: I:\MS09\DATA\2024_06\17\

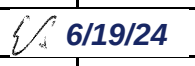
	Date/Time	File Name	Sample ID	Misc Info	Operator	Vial	Comment
1	6/17/24 8:49	06172401.D	Blank	S37-06062402	SC	1	
2	6/17/24 9:22	06172402.D	CCV R09061724_25ng	S37-06062402/S37-05292404 (6/28)	SC	2	Passed
3	6/17/24 9:54	06172403.D	CCV C09061724_25ng	S37-06062402/S37-06052406 (7/4)	SC	3	Passed
4	6/17/24 10:26	06172404.D	MB R09061724_1000mL	S37-06062402/AC00880	SC	2	Passed
5	6/17/24 10:58	06172405.D	LCS R09061724_25ng	S37-06062402/S37-05292406 (6/28)	SC	2	Passed
6	6/17/24 11:31	06172406.D	LCSD R09061724_25ng	S37-06062402/S37-05292406 (6/28)	SC	2	Passed
7	6/17/24 12:22	06172407.D	P2402401-002Dil (1.0mL)	S37-06062402	SC	1	
8	6/17/24 12:54	06172408.D	P2402401-003Dil (1.0mL)	S37-06062402	SC	1	not used
9	6/17/24 13:26	06172409.D	P2402421-001 (1000mL)	S37-06062402	SC	4	not used
10	6/17/24 13:59	06172410.D	P2402421-001 (100mL)	S37-06062402	SC	4	
11	6/17/24 14:31	06172411.D	P2402401-003Dil (4.0mL)	S37-06062402	SC	1	
12	6/17/24 15:03	06172412.D	P2402421-001Dup (100mL)	S37-06062402	SC	4	Passed
13	6/17/24 15:46	06172413.D	P2402249-006 (1.0mL)	S37-06062402	SC	1	
14	6/17/24 16:18	06172414.D	P2402421-001Dil (25mL)	S37-06062402	SC	4	
15	6/17/24 16:50	06172415.D	P2402421-001dup Dil(25mL)	S37-06062402	SC	4	Passed
16	6/17/24 17:22	06172416.D	P2402283-001 (400mL)	S37-06062402	SC	5	
17	6/17/24 17:54	06172417.D	P2402283-002 (400mL)	S37-06062402	SC	6	
18	6/17/24 18:26	06172418.D	P2402283-003 (400mL)	S37-06062402	SC	7	
19	6/17/24 18:59	06172419.D	P2402283-004 (400mL)	S37-06062402	SC	8	
20	6/17/24 19:31	06172420.D	P2402249-001 (400mL)	S37-06062402	SC	9	
21	6/17/24 20:03	06172421.D	P2402249-002 (400mL)	S37-06062402	SC	10	
22	6/17/24 20:36	06172422.D	P2402249-003 (400mL)	S37-06062402	SC	11	
23	6/17/24 21:09	06172423.D	P2402249-004 (400mL)	S37-06062402	SC	12	
24	6/17/24 21:41	06172424.D	P2402249-005 (400mL)	S37-06062402	SC	13	
25	6/17/24 22:13	06172425.D	P2402249-009 (400mL)	S37-06062402	SC	14	
26	6/17/24 22:46	06172426.D	P2402249-010 (400mL)	S37-06062402	SC	15	
27	6/17/24 23:18	06172427.D	P2402249-011 (400mL)	S37-06062402	SC	16	
28	6/18/24 8:41	06172428.D	P2402249-007 (1.0mL)	S37-06062402	SC	1	

6/18/24

Injection Log

Directory: I:\MS09\DATA\2024_06\18\

	Date/Time	File Name	Sample ID	Misc Info	Operator	Vial	Comment
1	6/18/24 9:20	06182401.D	Blank	S37-06062402	SC	1	
2	6/18/24 9:52	06182402.D	CCV R09061824_25ng	S37-06062402/S37-05292404 (6/28)	SC	2	Passed
3	6/18/24 10:24	06182403.D	CCV C09061824_25ng	S37-06062402/S37-06052406 (7/4)	SC	3	Passed
4	6/18/24 10:57	06182404.D	MB R09061824_1000mL	S37-06062402/AC00880	SC	2	Passed
5	6/18/24 11:29	06182405.D	LCS R09061824_25ng	S37-06062402/S37-05292406 (6/28)	SC	2	Passed
6	6/18/24 12:01	06182406.D	LCSD R09061824_25ng	S37-06062402/S37-05292406 (6/28)	SC	2	Passed
7	6/18/24 12:49	06182407.D	P2402249-008 (3.0mL)	S37-06062402	SC	1	
8	6/18/24 13:22	06182408.D	P2402249-012 (400mL)	S37-06062402	SC	5	
9	6/18/24 13:54	06182409.D	P2402249-013 (400mL)	S37-06062402	SC	6	
10	6/18/24 14:26	06182410.D	P2402249-014 (400mL)	S37-06062402	SC	7	
11	6/18/24 14:58	06182411.D	P2402249-015 (400mL)	S37-06062402	SC	8	
12	6/18/24 15:31	06182412.D	P2402249-007 (40mL)	S37-06062402	SC	4	
13	6/18/24 16:03	06182413.D	P2402249-013Dil (40mL)	S37-06062402	SC	6	
14	6/18/24 16:52	06182414.D	P2402249-024 (1.0mL)	S37-06062402	SC	1	
15	6/18/24 17:24	06182415.D	P2402249-007 (400mL)	S37-06062402	SC	4	
16	6/18/24 17:56	06182416.D	P2402249-026 (400mL)	S37-06062402	SC	5	
17	6/18/24 18:29	06182417.D	P2402249-027 (400mL)	S37-06062402	SC	6	
18	6/18/24 19:01	06182418.D	P2402249-028 (400mL)	S37-06062402	SC	7	
19	6/18/24 19:33	06182419.D	P2402249-029 (15mL)	S37-06062402	SC	8	
20	6/18/24 20:06	06182420.D	P2402249-029DUP (15mL)	S37-06062402	SC	8	Passed
21	6/18/24 20:38	06182421.D	P2402249-016 (400mL)	S37-06062402	SC	9	
22	6/18/24 21:11	06182422.D	P2402249-017 (400mL)	S37-06062402	SC	10	
23	6/18/24 21:43	06182423.D	P2402249-018 (400mL)	S37-06062402	SC	11	
24	6/18/24 22:15	06182424.D	P2402249-019 (400mL)	S37-06062402	SC	12	
25	6/18/24 22:48	06182425.D	P2402249-020 (400mL)	S37-06062402	SC	13	
26	6/18/24 23:20	06182426.D	P2402249-021 (400mL)	S37-06062402	SC	14	
27	6/18/24 23:52	06182427.D	P2402249-022 (400mL)	S37-06062402	SC	15	
28	6/19/24 0:24	06182428.D	P2402249-023 (400mL)	S37-06062402	SC	16	



Injection Log

Directory: I:\MS09\DATA\2024_06\19\

	Date/Time	File Name	Sample ID	Misc Info	Operator	Vial	Comment
1	6/19/24 8:51	06192401.D	Blank	S37-06062402	SC	1	
2	6/19/24 9:23	06192402.D	CCV R09061924_25ng	S37-06062402/S37-05292404 (6/28)	SC	2	Passed
3	6/19/24 9:56	06192403.D	CCV C09061924_25ng	S37-06062402/S37-06052406 (7/4)	SC	3	Passed
4	6/19/24 10:28	06192404.D	MB R09061924_1000mL	S37-06062402/AC00880	SC	2	Passed
5	6/19/24 11:00	06192405.D	LCS R09061924_25ng	S37-06062402/S37-05292406 (6/28)	SC	2	Passed
6	6/19/24 11:32	06192406.D	LCSD R09061924_25ng	S37-06062402/S37-05292406 (6/28)	SC	2	Passed
7	6/19/24 12:05	06192407.D	P2402249-024Dil (0.5mL)	S37-06062402	SC	1	not used
8	6/19/24 12:37	06192408.D	P2402249-026Dil (40mL)	S37-06062402	SC	5	
9	6/19/24 13:10	06192409.D	P2402249-028Dil (40mL)	S37-06062402	SC	7	
10	6/19/24 13:42	06192410.D	P2402249-029 (50mL)	S37-06062402	SC	8	
11	6/19/24 14:14	06192411.D	P2402249-029 (50mL)	S37-06062402	SC	8	
12	6/19/24 14:46	06192412.D	P2402249-017Dil (40mL)	S37-06062402	SC	10	
13	6/19/24 15:19	06192413.D	P2402249-023Dil (40mL)	S37-06062402	SC	16	
14	6/19/24 15:51	06192414.D	P2402249-029dup (50mL)	S37-06062402	SC	8	
15	6/19/24 16:50	06192415.D	P2402215-001 (1.0mL)	S37-06062402	SC	1	IS3 failed
16	6/19/24 17:22	06192416.D	P2402215-003 (20mL)	S37-06062402	SC	4	
17	6/19/24 17:54	06192417.D	P2402249-030 (400mL)	S37-06062402	SC	5	
18	6/19/24 18:26	06192418.D	P2402249-031 (100mL)	S37-06062402	SC	6	
19	6/19/24 18:59	06192419.D	P2402249-032 (100mL)	S37-06062402	SC	7	
20	6/19/24 19:31	06192420.D	P2402249-033 (40mL)	S37-06062402	SC	8	
21	6/19/24 20:03	06192421.D	P2402249-034 (40mL)	S37-06062402	SC	9	
22	6/19/24 20:36	06192422.D	P2402249-035 (40mL)	S37-06062402	SC	10	
23	6/19/24 21:08	06192423.D	P2402249-036 (400mL)	S37-06062402	SC	11	
24	6/19/24 21:41	06192424.D	P2402249-037 (400mL)	S37-06062402	SC	12	
25	6/19/24 22:13	06192425.D	P2402249-038 (400mL)	S37-06062402	SC	13	
26	6/19/24 22:46	06192426.D	P2402249-039 (100mL)	S37-06062402	SC	14	
27	6/19/24 23:18	06192427.D	P2402249-040 (100mL)	S37-06062402	SC	15	
28	6/19/24 23:50	06192428.D	P2402249-041 (400mL)	S37-06062402	SC	16	
29	6/20/24 8:40	06192429.D	P2402215-001 (0.5mL)	S37-06062402	SC	1	IS3 failed
30	6/20/24 9:12	06192430.D	P2402215-003 (40mL)	S37-06062402	SC	4	

6/20/24

Injection Log

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	Date/Time	File Name	Sample ID	Misc Info	Operator	Vial	Comment
1	6/20/24 9:43	06202401.D	Blank	S37-06062402	SC	1	
2	6/20/24 10:15	06202402.D	CCV R09062024_25ng	S37-06062402/S37-05292404 (6/28)	SC	2	Passed
3	6/20/24 10:47	06202403.D	CCV C09062024_25ng	S37-06062402/S37-06052406 (7/4)	SC	3	Passed
4	6/20/24 11:20	06202404.D	MB R09062024_1000mL	S37-06062402/AC00880	SC	2	Passed
5	6/20/24 11:52	06202405.D	LCS R09062024_25ng	S37-06062402/S37-05292406 (6/28)	SC	2	Passed
6	6/20/24 12:24	06202406.D	LCSD R09062024_25ng	S37-06062402/S37-05292406 (6/28)	SC	2	Passed
7	6/20/24 12:56	06202407.D	P2402249-024Dil (0.5mL)	S37-06062402	SC	1	
8	6/20/24 13:28	06202408.D	P2402249-031Dil (50mL)	S37-06062402	SC	6	
9	6/20/24 14:01	06202409.D	P2402249-032 (400mL)	S37-06062402	SC	7	
10	6/20/24 14:33	06202410.D	P2402249-040 (400mL)	S37-06062402	SC	15	
11	6/20/24 15:05	06202411.D	P2402249-033 (1.0mL)	S37-06062402	SC	1	
12	6/20/24 15:37	06202412.D	P2402249-024 (6.0mL)	S37-06062402	SC	1	
13	6/20/24 16:27	06202413.D	P2402249-033Dil (0.2mL)	S37-06062402	SC	1	
14	6/20/24 16:59	06202414.D	P2402249-042 (100mL)	S37-06062402	SC	4	
15	6/20/24 17:31	06202415.D	P2402249-043 (100mL)	S37-06062402	SC	5	
16	6/20/24 18:04	06202416.D	P2402249-044 (400mL)	S37-06062402	SC	6	
17	6/20/24 18:36	06202417.D	P2402249-045 (400mL)	S37-06062402	SC	7	
18	6/20/24 19:08	06202418.D	P2402249-046 (400mL)	S37-06062402	SC	8	
19	6/20/24 19:40	06202419.D	P2402249-047 (100mL)	S37-06062402	SC	9	
20	6/20/24 20:12	06202420.D	P2402249-048 (20mL)	S37-06062402	SC	10	
21	6/20/24 20:45	06202421.D	P2402249-048dup (20mL)	S37-06062402	SC	10	Passed
22	6/20/24 21:17	06202422.D	P2402249-049 (100mL)	S37-06062402	SC	11	
23	6/20/24 21:50	06202423.D	P2402249-050 (400mL)	S37-06062402	SC	12	
24	6/20/24 22:22	06202424.D	P2402249-051 (100mL)	S37-06062402	SC	13	
25	6/20/24 22:54	06202425.D	P2402249-053 (400mL)	S37-06062402	SC	14	
26	6/20/24 23:27	06202426.D	P2402249-054 (400mL)	S37-06062402	SC	15	
27	6/20/24 23:59	06202427.D	P2402249-055 (50mL)	S37-06062402	SC	16	
28	6/21/24 8:37	06202428.D	P2402523-001Dil (0.5mL)	S37-06062402	SC	1	
29	6/21/24 9:09	06202429.D	P2402523-001 (2.5mL)	S37-06062402	SC	1	
30	6/21/24 9:42	06202430.D	P2402522-001 (0.5mL)	S37-06062402	SC	1	

6/21/24

Injection Log

Directory: I:\MS09\DATA\2024_06\21\

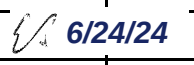
	Date/Time	File Name	Sample ID	Misc Info	Operator	Vial	Comment
1	6/21/24 10:24	06212401.D	Blank	S37-06062402	SC	1	
2	6/21/24 10:56	06212402.D	CCV R09062124_25ng	S37-06062402/S37-05292404 (6/28)	SC	2	Passed
3	6/21/24 11:28	06212403.D	CCV C09062124_25ng	S37-06062402/S37-06052406 (7/4)	SC	3	Passed
4	6/21/24 12:01	06212404.D	MB R09062124_1000mL	S37-06062402/AC00880	SC	2	Passed
5	6/21/24 12:33	06212405.D	LCS R09062124_25ng	S37-06062402/S37-05292406 (6/28)	SC	2	Passed
6	6/21/24 13:05	06212406.D	LCSD R09062124_25ng	S37-06062402/S37-05292406 (6/28)	SC	2	Passed
7	6/21/24 13:38	06212407.D	P2402249-042Dil (50mL)	S37-06062402	SC	4	
8	6/21/24 14:10	06212408.D	P2402249-043Dil (50mL)	S37-06062402	SC	5	
9	6/21/24 14:42	06212409.D	P2402249-044Dil (20mL)	S37-06062402	SC	6	
10	6/21/24 15:14	06212410.D	P2402522-001 (0.25mL)	S37-06062402	SC	1	
11	6/21/24 15:46	06212411.D	P2402522-002 (25mL)	S37-06062402	SC	7	
12	6/21/24 16:19	06212412.D	P2402522-002 (100mL)	S37-06062402	SC	7	
13	6/21/24 17:01	06212413.D	P2402249-025 (2.0mL)	S37-06062402	SC	1	
14	6/21/24 17:34	06212414.D	P2402249-056 (400mL)	S37-06062402	SC	4	
15	6/21/24 18:06	06212415.D	P2402249-057 (400mL)	S37-06062402	SC	5	
16	6/21/24 18:38	06212416.D	P2402249-058 (400mL)	S37-06062402	SC	6	
17	6/22/24 8:11	06212417.D	P2402249-059 (400mL)	S37-06062402	SC	7	
18	6/22/24 8:43	06212418.D	P2402249-060 (400mL)	S37-06062402	SC	8	
19	6/22/24 9:15	06212419.D	P2402249-047Dil (50mL)	S37-06062402	SC	9	
20	6/22/24 9:47	06212420.D	CCV END R09062124_25ng	S37-06062402/S37-05292404 (6/28)	SC	2	Passed

6/24/24

Injection Log

Directory: I:\MS09\DATA\2024_06\22\

	Date/Time	File Name	Sample ID	Misc Info	Operator	Vial	Comment
1	6/22/24 9:47	06222401.D	CCV R09062224_25ng	S37-06062402/S37-05292404 (6/28)	SC	2	Passed
2	6/22/24 11:06	06222402.D	CCV C09062224_25ng	S37-06062402/S37-06052406 (7/4)	SC	3	Passed
3	6/22/24 11:38	06222403.D	MB R09062224	S37-06062402/AC00880	SC	2	Passed
4	6/22/24 12:10	06222404.D	LCS R09062224_25ng	S37-06062402/S37-05292406 (6/28)	SC	2	Passed
5	6/22/24 12:43	06222405.D	LCSD R09062224_25ng	S37-06062402/S37-05292406 (6/28)	SC	2	Passed
6	6/22/24 15:55	06222406.D	P2402249-048Dil (15mL)	S37-06062402	MC/MJ	10	
7	6/22/24 16:27	06222407.D	P2402249-048Dildup (15mL)	S37-06062402	MC/MJ	10	Passed
8	6/22/24 17:00	06222408.D	P2402249-061 (400mL)	S37-06062402	MC/MJ	11	
9	6/22/24 17:32	06222409.D	P2402249-062 (400mL)	S37-06062402	MC/MJ	12	
10	6/22/24 18:05	06222410.D	P2402249-051Dil (50mL)	S37-06062402	MC/MJ	13	
11	6/22/24 18:37	06222411.D	P2402249-062 (400mL)	S37-06062402	MC/MJ	14	not used
12	6/22/24 19:10	06222412.D	P2402249-054Dil (40mL)	S37-06062402	MC/MJ	15	
13	6/22/24 19:42	06222413.D	P2402249-055Dil (25mL)	S37-06062402	MC/MJ	16	
14	6/22/24 20:15	06222414.D	P2402249-065 (400mL)	S37-06062402	MC/MJ	6	
15	6/22/24 20:47	06222415.D	P2402249-066 (100mL)	S37-06062402	MC/MJ	7	
16	6/22/24 23:54	06222416.D	P2402249-067 (100mL)	S37-06062402	MC/MJ	8	
17	6/23/24 0:27	06222417.D	CCV END R09062124_25ng	S37-06062402/S37-05292404 (6/28)	MC/MJ	2	Passed
18	6/23/24 0:59	06222418.D	P2402285-001 (400mL)	S37-06062402	MC/MJ	4	
19	6/23/24 1:32	06222419.D	P2402285-002 (400mL)	S37-06062402	MC/MJ	5	
20	6/23/24 2:04	06222420.D	P2402285-003 (400mL)	S37-06062402	MC/MJ	6	
21	6/23/24 2:36	06222421.D	P2402285-005 (1000mL)	S37-06062402	MC/MJ	9	
22	6/23/24 3:09	06222422.D	P2402285-006 (400mL)	S37-06062402	MC/MJ	10	
23	6/23/24 3:41	06222423.D	P2402285-007 (400mL)	S37-06062402	MC/MJ	12	
24	6/23/24 4:14	06222424.D	P2402285-008 (1000mL)	S37-06062402	MC/MJ	11	
25	6/23/24 4:46	06222425.D	P2402285-009 (400mL)	S37-06062402	MC/MJ	13	
26	6/23/24 5:19	06222426.D	P2402285-010 (1000mL)	S37-06062402	MC/MJ	14	
27	6/23/24 5:51	06222427.D	P2402285-011 (400mL)	S37-06062402	MC/MJ	15	
28	6/23/24 6:24	06222428.D	P2402285-012 (400mL)	S37-06062402	MC/MJ	16	
29	6/23/24 6:56	06222429.D	CCV END R09062124_25ng	S37-06062402/S37-05292404 (6/28)	MC/MJ	2	Passed



Injection Log

Directory: I:\MS09\DATA\2024_06\24\

	Date/Time	File Name	Sample ID	Misc Info	Operator	Vial	Comment
1	6/24/24 7:26	06242401.D	Blank	S37-06062402	MC/MJ	1	
2	6/24/24 7:58	06242402.D	CCV R09062424_25ng	S37-06062402/S37-05292404 (6/28)	MC/MJ	2	Passed
3	6/24/24 8:30	06242403.D	CCV C09062424_25ng	S37-06062402/S37-06052406 (7/4)	MC/MJ	3	Passed
4	6/24/24 9:02	06242404.D	MB R09062424_1000mL	S37-06062402/AC00880	MC/MJ	2	Passed
5	6/24/24 9:35	06242405.D	LCS R09062424_25ng	S37-06062402/S37-05292406 (6/28)	MC/MJ	2	Passed
6	6/24/24 10:07	06242406.D	LCSD R09062424_25ng	S37-06062402/S37-05292406 (6/28)	MC/MJ	2	Passed
7	6/24/24 10:50	06242407.D	P2402249-063 (2.0mL)	S37-06062402	SC	1	
8	6/24/24 11:23	06242408.D	P2402249-063Dil (0.5mL)	S37-06062402	SC	1	
9	6/24/24 11:55	06242409.D	P2402249-034Dil (4.0mL)	S37-06062402	SC	1	
10	6/24/24 12:27	06242410.D	P2402249-064 (400mL)PF2	S37-06062402	SC	7	
11	6/24/24 12:59	06242411.D	P2402249-067 (400mL)	S37-06062402	SC	8	
12	6/24/24 13:41	06242412.D	P2402249-052 (5.0mL)	S37-06062402	SC	1	
13	6/24/24 14:13	06242413.D	P2402249-062Dil (40mL)	S37-06062402	SC	5	
14	6/24/24 14:45	06242414.D	P2402249-066Dil (50mL)	S37-06062402	SC	6	
15	6/24/24 15:47	06242415.D	P2402285-004 (400mL)PF2	S37-06062402	SC	4	
16	6/24/24 16:19	06242416.D	P2402285-013 (400mL)	S37-06062402	SC	5	
17	6/24/24 16:51	06242417.D	P2402285-014 (400mL)	S37-06062402	SC	6	
18	6/24/24 17:24	06242418.D	P2402285-015 (400mL)	S37-06062402	SC	7	
19	6/24/24 17:56	06242419.D	P2402285-016 (400mL)	S37-06062402	SC	8	
20	6/24/24 18:28	06242420.D	P2402285-017 (400mL)	S37-06062402	SC	9	
21	6/24/24 19:01	06242421.D	P2402285-018 (1000mL)	S37-06062402	SC	10	
22	6/24/24 19:33	06242422.D	P2402285-018dup (1000mL)	S37-06062402	SC	10	Passed
23	6/24/24 20:06	06242423.D	P2402285-019 (400mL)	S37-06062402	SC	11	
24	6/24/24 20:38	06242424.D	P2402285-020 (400mL)	S37-06062402	SC	12	
25	6/24/24 21:11	06242425.D	P2402285-021 (400mL)	S37-06062402	SC	13	
26	6/24/24 21:43	06242426.D	P2402285-022 (400mL)	S37-06062402	SC	14	
27	6/24/24 22:15	06242427.D	P2402285-023 (400mL)	S37-06062402	SC	15	
28	6/24/24 22:47	06242428.D	P2402285-024 (400mL)	S37-06062402	SC	16	
29	6/24/24 23:20	06242429.D	P2402285-025 (1000mL)	S37-06062402	SC	4	
30	6/24/24 23:52	06242430.D	P2402285-026 (400mL)	S37-06062402	SC	5	
31	6/25/24 0:25	06242431.D	P2402285-027 (400mL)	S37-06062402	SC	6	
32	6/25/24 0:57	06242432.D	CCV END R09062424_25ng	S37-06062402/S37-05292404 (6/28)	SC	2	Passed

June 13, 2024 Service Request No:R2404650

Stephanie Portillo
NASA/WSTF/Navarro
P.O. Box 20
Las Cruces, NM 88004

Laboratory Results for: White Sands Test Facility

Dear Stephanie,

Enclosed are the results of the sample(s) submitted to our laboratory May 31, 2024
For your reference, these analyses have been assigned our service request number **R2404650.**

All testing was performed according to our laboratory's quality assurance program and met the requirements of the TNI standards except as noted in the case narrative report. Any testing not included in the lab's accreditation is identified on a Non-Certified Analytes report. All results are intended to be considered in their entirety. ALS Environmental is not responsible for use of less than the complete report. Results apply only to the individual samples submitted to the lab for analysis, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s), and represented by Laboratory Control Sample control limits. Any events, such as QC failures or Holding Time exceedances, which may add to the uncertainty are explained in the report narrative or are flagged with qualifiers. The flags are explained in the Report Qualifiers and Definitions page of this report.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Janice Jaeger
Project Manager

CC: Laurel Gardenhire

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Narrative Documents

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
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ALS Environmental

Client: NASA/WSTF/Navarro
Project: White Sands Test Facility
Sample Matrix: Water

Service Request: R2404650
Date Received: 05/31/2024

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level IV requested by the client.
Manual Integrations may have been used in the quantitation of the results in this report. Manual Integrations are readily identified in the raw data on the Quantitation Reports (Organics) by the automatic placement of an “m” next to the sample result. For Ion Chromatography, the manual integrations are identified by the automatic placement of “manipulated” or "manually integrated" in the upper left corner of the chromatogram (Hexavalent Chromium) or “M” by the result in the “Type” column (anions). The reason for the manual integration is noted on the “after” chromatogram, which is found with the original chromatogram and quantitation report. All integrations follow the lab SOP ADM-INT “Manual Integration.”

Sample Receipt:

Eighteen water samples were received for analysis at ALS Environmental on 05/31/2024. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Volatiles by GC/MS:

Method 8260C, 06/06/2024: The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.

Method 8260C, 06/06/2024: The upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.

Method 8260C, 06/08/2024: The upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.

Method 8260C, 06/08/2024: The upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.

Approved by _____ Date 06/13/2024

Sample Receipt Information

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client: NASA/WSTF/Navarro **Service Request:**R2404650
Project: White Sands Test Facility/23EC002B

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
R2404650-001	2405280840C 400-GV-125	5/28/2024	
R2404650-002	2405280841C 400-GV-125	5/28/2024	
R2404650-003	2405280842C 400-GV-125	5/28/2024	
R2404650-004	2405280700A 400-FV-131	5/28/2024	
R2404650-005	2405280852A 400-FV-131	5/28/2024	
R2404650-006	2405280853A 400-FV-131	5/28/2024	
R2404650-007	2405280854A 400-FV-131	5/28/2024	
R2404650-008	2405281002A 400-EV-131	5/28/2024	
R2404650-009	2405281003A 400-EV-131	5/28/2024	
R2404650-010	2405281010C 400-JV-150	5/28/2024	
R2404650-011	2405281011C 400-JV-150	5/28/2024	
R2404650-012	2405281430C 400-HV-147	5/28/2024	
R2404650-013	2405281431C 400-HV-147	5/28/2024	
R2404650-014	2405290700A PL-12-570	5/29/2024	
R2404650-015	2405290932A PL-12-570	5/29/2024	
R2404650-016	2405290933A PL-12-570	5/29/2024	
R2404650-017	2405291410A PL-12-800	5/29/2024	
R2404650-018	2405291411A PL-12-800	5/29/2024	

Date 5-30-24

WSTF CHAIN OF CUSTODY RECORD

Laboratory: ALS PO# 23EC002B

Address shipping questions to:
- ☐ Lori Minnick, 575-524-5119
- ☐ Other _____, 575-524-_____

Send sample receipt confirmation and analytical reports to:
- ☒ Stephanie Portillo stephanie.portillo@nasa.gov
- ☐ Other
- ☐ Other

Analytical Requirements: Method 8260D; Analysis VOA

Special Instructions

Return coolers and reusable packaging materials within 14 days as required in statement of work to:

Return Address:

NASA WSTF Environmental Department
12600 NASA Road; Bldg. 120
Las Cruces, NM 88012
Attn: Lori Minnick

Sample Number	Sample Location	# of Containers	Sample Matrix*	Analytical Requirements	Charge Number (WSTF Use Only)	Comments
240528084OC	400-GV-125	3	A	X	HDMU	
240528084IC	"	3	A	X	"	
240528084 2C	"	3	A	X	"	
240528070 0A	400-FV-131	3	A	X	"	
240528085 2A	"	3	A	X	"	
240528085 3A	"	3	A	X	"	
240528085 4A	"	3	A	X	"	
240528100 2A	400-EV-131	3	A	X	"	
240528100 3A	"	3	A	X	"	
240528101 0C	400-JV-150	3	A	X	"	
240528101 1C	"	3	A	X	"	
240528143 0C	400-HV-147	3	A	X	"	Bubbles: 2 of 3

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Lori Minnick	5-30-24 / 1100 HRS		5/31/24 07:15

* Sample Matrix: A – Aqueous; G – Gaseous; S – Solid

R2404650 5
NASA/WSTF/Navarro
White Sands Test Facility

Date 5-30-24

WSTF CHAIN OF CUSTODY RECORD

Laboratory: ALS PO# 23EC002B

Address shipping questions to:
- ☑ Lori Minnick, 575-524-5119
- ☐ Other _____, 575-524-_____

Send sample receipt confirmation and analytical reports to:
- ☒ Stephanie Portillo stephanie.portillo@nasa.gov
- ☐ Other
- ☐ Other

Analytical Requirements: Method 8260 VOA

Special Instructions

Return coolers and reusable packaging materials within 14 days as required in statement of work to:

Return Address:

NASA WSTF Environmental Department
12600 NASA Road; Bldg. 120
Las Cruces, NM 88012
Attn: Lori Minnick

Sample Number	Sample Location	# of Containers	Sample Matrix*	Analytical Requirements	Charge Number (WSTF Use Only)	Comments
240528143IC	400-HV-147	3	A	X	HWMU	Bubbles: A113
240529070OA	PL-12-570	3	A	X	X008	
240529093 2A	"	3	A	X	"	
240529093 3A	"	3	A	X	"	
240529141 0A	PL-12-800	3	A	X	"	
240529141 1A	"	3	A	X	"	

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
[signature]	5-30-24 / 1100 Hrs	[signature]	5/31/24 0715

* Sample Matrix: A – Aqueous; G – Gaseous; S – Solid

R2404650 5
NASA/WSTF/Navarro
White Sands Test Facility

R2404650 5
NASA/WSTF/Navarro
White Sands Test Facility

Cooler Receipt and Preservation Check Form

Project/Client NASA Folder Number

Cooler received on 5/31/24 by: TE COURIER: ALS UPS (FEDEX) VELOCITY CLIENT

1	Were **Custody seals** on outside of cooler?	(Y) N	5a	Did **VOA** vials have sig* **bubbles?**	(Y) N NA	*
2	**Custody papers** properly completed (ink, signed)?	(Y) N	5b	Sig* bubbles: **Alk?** Y N (NA) **Sulfide?**	Y N (NA)	
3	Did all bottles arrive in good **condition** (unbroken)?	(Y) N	6	Where did the bottles originate?	(ALS/ROC) CLIENT	
4	Circle: (**Wet Ice**) **Dry Ice Gel packs** present?	(Y) N	7	Soil VOA received as: Bulk Encore 5035set	(NA)	

8. Temperature Readings Date: 5/31/24 Time: 0805 ID: IR#12 (IR#11) From: Temp Blank (Sample Bottle)

Temp (°C)	1.5						
Within 0-6°C?	(Y) N	Y N	Y N	Y N	Y N	Y N	Y N
If <0°C, were samples frozen?	Y N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed (described below) Same Day Rule

&Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: SMO by TE on 5/31/24 at 0819
5035 samples placed in storage location: _____ by _____ on _____ at _____ within 48 hours of sampling? Y N

Cooler Breakdown/Preservation Check**: Date: _____ Time: _____ by: _____

9. Were all bottle labels complete (*i.e.* analysis, preservation, etc.)? YES NO
10. Did all bottle labels and tags agree with custody papers? YES NO
11. Were correct containers used for the tests indicated? YES NO
12. Were 5035 vials acceptable (no extra labels, not leaking)? YES NO N/A
13. Were dissolved metals filtered in the field? YES NO N/A
14. Air Samples: Cassettes / Tubes Intact Y / N with MS Y / N Canisters Pressurized Tedlar® Bags Inflated N/A

pH	Lot of test paper	Reagent	Preserved? Yes	Preserved? No	Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
≥12		NaOH								
≤2		HNO_3								
≤2		H_2SO_4								
<4		$NaHSO_4$								
5-9		For 608pest			No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, 522			If +, contact PM to add $Na_2S_2O_3$ (625, 608, CN), ascorbic (phenol).					
		$Na_2S_2O_3$								
		ZnAcetate	-	-			**VOAs and 1664 Not to be tested before analysis. Otherwise, all bottles of all samples with chemical preservatives are checked (not just representatives).			
		HCl	**	**						

Bottle lot numbers: _____
Explain all Discrepancies/ Other Comments:

*Noted on COC

HPROD	BULK
HTR	FLDT
SUB	HGFB
ALS	LL3541

Labels secondary reviewed by: _____ *significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

Miscellaneous Forms

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Phone (585) 288-5380 Fax (585) 288-8475
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REPORT QUALIFIERS AND DEFINITIONS

U	Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.
J	Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).
B	Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.
E	Inorganics- Concentration is estimated due to the serial dilution was outside control limits.
E	Organics- Concentration has exceeded the calibration range for that specific analysis.
D	Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.
*	Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.
H	Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.
#	Spike was diluted out.
+	Correlation coefficient for MSA is <0.995.
N	Inorganics- Matrix spike recovery was outside laboratory limits.
N	Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
S	Concentration has been determined using Method of Standard Additions (MSA).
W	Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
P	Concentration >40% difference between the two GC columns.
C	Confirmed by GC/MS
Q	DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).
X	See Case Narrative for discussion.
MRL LOQ	Method Reporting Limit. Also known as: Limit of Quantitation (LOQ) The lowest concentration at which the method analyte may be reliably quantified under the method conditions.
MDL	Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).
LOD	Limit of Detection. A value at or above the MDL which has been verified to be detectable.
ND	Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

Rochester Lab ID # for State Accreditations[1]

NELAP States
Florida ID # E87674
New Hampshire ID # 2941
New York ID # 10145
Pennsylvania ID# 68-786
Virginia #460167

Non-NELAP States
Connecticut ID #PH0556
Delaware Approved
Maine ID #NY01587
North Carolina #36701
North Carolina #676
Rhode Island LAO00333

[1] Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory. To verify NH accredited analytes, go to https://www4.des.state.nh.us/CertifiedLabs/Certified-Method.aspx.

ALS Laboratory Group

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Client: NASA/WSTF/Navarro **Service Request:** R2404650
Project: White Sands Test Facility/23EC002B

Non-Certified Analytes

Certifying Agency: New York Department of Health

Method	Matrix	Analyte
8260C	Water	2,2-Dichloro-1,1,1-trifluoroethane (CFC 123)
8260C	Water	Dichlorofluoromethane (CFC 21)

Client: NASA/WSTF/Navarro **Service Request:** R2404650
Project: White Sands Test Facility/23EC002B

Sample Name: 2405280840C 400-GV-125 **Date Collected:** 05/28/24
Lab Code: R2404650-001 **Date Received:** 05/31/24
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
8260C		KRUEST

Sample Name: 2405280840C 400-GV-125 **Date Collected:** 05/28/24
Lab Code: R2404650-001.R01 **Date Received:** 05/31/24
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
8260C		KRUEST

Sample Name: 2405280841C 400-GV-125 **Date Collected:** 05/28/24
Lab Code: R2404650-002 **Date Received:** 05/31/24
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
8260C		KRUEST

Sample Name: 2405280841C 400-GV-125 **Date Collected:** 05/28/24
Lab Code: R2404650-002.R01 **Date Received:** 05/31/24
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
8260C		KRUEST

Sample Name: 2405280842C 400-GV-125 **Date Collected:** 05/28/24
Lab Code: R2404650-003 **Date Received:** 05/31/24
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
8260C		KRUEST

Client: NASA/WSTF/Navarro **Service Request:** R2404650
Project: White Sands Test Facility/23EC002B

Sample Name: 2405280700A 400-FV-131 **Date Collected:** 05/28/24
Lab Code: R2404650-004 **Date Received:** 05/31/24
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
8260C		KRUEST

Sample Name: 2405280852A 400-FV-131 **Date Collected:** 05/28/24
Lab Code: R2404650-005 **Date Received:** 05/31/24
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
8260C		KRUEST

Sample Name: 2405280853A 400-FV-131 **Date Collected:** 05/28/24
Lab Code: R2404650-006 **Date Received:** 05/31/24
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
8260C		KRUEST

Sample Name: 2405280854A 400-FV-131 **Date Collected:** 05/28/24
Lab Code: R2404650-007 **Date Received:** 05/31/24
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
8260C		KRUEST

Sample Name: 2405281002A 400-EV-131 **Date Collected:** 05/28/24
Lab Code: R2404650-008 **Date Received:** 05/31/24
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
8260C		KRUEST

Client: NASA/WSTF/Navarro **Service Request:** R2404650
Project: White Sands Test Facility/23EC002B

Sample Name: 2405281002A 400-EV-131 **Date Collected:** 05/28/24
Lab Code: R2404650-008.R01 **Date Received:** 05/31/24
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
8260C		KRUEST

Sample Name: 2405281003A 400-EV-131 **Date Collected:** 05/28/24
Lab Code: R2404650-009 **Date Received:** 05/31/24
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
8260C		KRUEST

Sample Name: 2405281010C 400-JV-150 **Date Collected:** 05/28/24
Lab Code: R2404650-010 **Date Received:** 05/31/24
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
8260C		KRUEST

Sample Name: 2405281010C 400-JV-150 **Date Collected:** 05/28/24
Lab Code: R2404650-010.R01 **Date Received:** 05/31/24
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
8260C		KRUEST

Sample Name: 2405281011C 400-JV-150 **Date Collected:** 05/28/24
Lab Code: R2404650-011 **Date Received:** 05/31/24
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
8260C		KRUEST

Client: NASA/WSTF/Navarro **Service Request:** R2404650
Project: White Sands Test Facility/23EC002B

Sample Name: 2405281430C 400-HV-147 **Date Collected:** 05/28/24
Lab Code: R2404650-012 **Date Received:** 05/31/24
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
8260C		KRUEST

Sample Name: 2405281431C 400-HV-147 **Date Collected:** 05/28/24
Lab Code: R2404650-013 **Date Received:** 05/31/24
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
8260C		KRUEST

Sample Name: 2405290700A PL-12-570 **Date Collected:** 05/29/24
Lab Code: R2404650-014 **Date Received:** 05/31/24
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
8260C		KRUEST

Sample Name: 2405290932A PL-12-570 **Date Collected:** 05/29/24
Lab Code: R2404650-015 **Date Received:** 05/31/24
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
8260C		KRUEST

Sample Name: 2405290933A PL-12-570 **Date Collected:** 05/29/24
Lab Code: R2404650-016 **Date Received:** 05/31/24
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
8260C		KRUEST

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B		

Sample Name:	2405291410A PL-12-800	**Date Collected:**	05/29/24
Lab Code:	R2404650-017	**Date Received:**	05/31/24
Sample Matrix:	Water		

Analysis Method	Extracted/Digested By	Analyzed By
8260C		KRUEST

Sample Name:	2405291411A PL-12-800	**Date Collected:**	05/29/24
Lab Code:	R2404650-018	**Date Received:**	05/31/24
Sample Matrix:	Water		

Analysis Method	Extracted/Digested By	Analyzed By
8260C		KRUEST

PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

INORGANIC

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C or 6010D	3005A/3010A
6020A or 6020B	ILM05.3
9034 Sulfide Acid Soluble	9030B
SM 4500-CN-N-2016 Amenable and Residual Cyanide	SM 4500-CN-G and SM 4500-CN-B,C-2016
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C or 6010D	3050B
6020A or 6020B	3050B
6010C or 6010D TCLP (1311) extract	3005A/3010A
6010C or 6010D SPLP (1312) extract	3005A/3010A
7199	3060A
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction
For analytical methods not listed, the preparation method is the same as the analytical method reference.	

ORGANIC

Preparation Methods for Organic methods are listed in the header of the Results pages.

Regarding "Bulk/5035A":
For soil/solid samples submitted in soil jars for Volatiles analysis, the prep method is listed as "Bulk/5035A". The lab follows the closed-system EPA 5035A protocols once the sample is transferred to a sealed vial, but collection in bulk in soil jars does not follow the collection protocols listed in EPA 5035A. In accordance with the NYSDOH technical notice of October 2012, all results or reporting limits <200 ug/kg are to be considered estimated due to potential low bias.

Sample Results

ALS Environmental—Rochester Laboratory
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Volatile Organic Compounds by GC/MS

ALS Environmental—Rochester Laboratory
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Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Analytical Report

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	05/28/24
Sample Matrix:	Water	**Date Received:**	05/31/24 07:15
Sample Name:	2405280840C 400-GV-125	**Units:**	ug/L
Lab Code:	R2404650-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND U	1.0	0.20	1	06/06/24 19:05	
1,1,1-Trichloroethane (TCA)	ND U	1.0	0.20	1	06/06/24 19:05	
1,1,2,2-Tetrachloroethane	ND U	1.0	0.20	1	06/06/24 19:05	
1,1,2-Trichloroethane	ND U	1.0	0.20	1	06/06/24 19:05	
1,1,2-Trichloro-1,2,2-trifluoroethane	**56**	1.0	0.20	1	06/06/24 19:05	
1,1-Dichloroethane (1,1-DCA)	ND U	1.0	0.20	1	06/06/24 19:05	
1,1-Dichloroethene (1,1-DCE)	ND U	1.0	0.20	1	06/06/24 19:05	
1,2,3-Trichloropropane	ND U	1.0	0.26	1	06/06/24 19:05	
1,2-Dibromo-3-chloropropane (DBCP)	ND U	2.0	0.45	1	06/06/24 19:05	
1,2-Dibromoethane	ND U	1.0	0.20	1	06/06/24 19:05	
1,2-Dichloroethane	ND U	1.0	0.20	1	06/06/24 19:05	
1,2-Dichloropropane	ND U	1.0	0.20	1	06/06/24 19:05	
1,4-Dioxane	ND U	100	13	1	06/06/24 19:05	
2,2-Dichloro-1,1,1-trifluoroethane (CFC 123)	ND U	1.0	0.20	1	06/06/24 19:05	
2-Butanone (MEK)	ND U	5.0	0.78	1	06/06/24 19:05	
2-Chloro-1,3-butadiene	ND U	1.0	0.20	1	06/06/24 19:05	
2-Hexanone	ND U	5.0	0.20	1	06/06/24 19:05	
Isobutyl Alcohol	ND U	100	33	1	06/06/24 19:05	
2-Propanol	ND U	50	22	1	06/06/24 19:05	
Allyl Chloride	ND U	2.0	0.36	1	06/06/24 19:05	
4-Methyl-2-pentanone	ND U	5.0	0.20	1	06/06/24 19:05	
Acetone	ND U	10	5.0	1	06/06/24 19:05	
Acetonitrile	ND U	25	5.2	1	06/06/24 19:05	
Acrolein	ND U	10	0.90	1	06/06/24 19:05	
Acrylonitrile	ND U	5.0	0.90	1	06/06/24 19:05	
Benzene	ND U	1.0	0.20	1	06/06/24 19:05	
Bromodichloromethane	ND U	1.0	0.20	1	06/06/24 19:05	
Bromoform	ND U	1.0	0.25	1	06/06/24 19:05	
Bromomethane	ND U	2.0	0.70	1	06/06/24 19:05	
Carbon Disulfide	ND U	1.0	0.42	1	06/06/24 19:05	
Carbon Tetrachloride	ND U	1.0	0.34	1	06/06/24 19:05	
Chlorobenzene	ND U	1.0	0.20	1	06/06/24 19:05	
Chloroethane	ND U	2.0	0.23	1	06/06/24 19:05	
Chloroform	ND U	1.0	0.51	1	06/06/24 19:05	
Chloromethane	ND U	2.0	0.80	1	06/06/24 19:05	
Cyclohexane	ND U	10	0.60	1	06/06/24 19:05	
Dibromochloromethane	ND U	1.0	0.20	1	06/06/24 19:05	
Dibromomethane	ND U	1.0	0.20	1	06/06/24 19:05	
Dichlorodifluoromethane (CFC 12)	ND U	1.0	0.21	1	06/06/24 19:05	
Dichlorofluoromethane (CFC 21)	**3.1**	1.0	0.20	1	06/06/24 19:05	

Analytical Report

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	05/28/24
Sample Matrix:	Water	**Date Received:**	05/31/24 07:15
Sample Name:	2405280840C 400-GV-125	**Units:**	ug/L
Lab Code:	R2404650-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Q
Dichloromethane	ND	U	1.0	0.65	1	06/06/24 19:05	
Ethyl Methacrylate	ND	U	2.0	0.20	1	06/06/24 19:05	
Ethylbenzene	ND	U	1.0	0.20	1	06/06/24 19:05	
Iodomethane	ND	U	5.0	4.3	1	06/06/24 19:05	
Methacrylonitrile	ND	U	5.0	0.52	1	06/06/24 19:05	
Methyl Methacrylate	ND	U	2.0	0.51	1	06/06/24 19:05	
Methyl tert-Butyl Ether	ND	U	10	0.20	1	06/06/24 19:05	
Methylcyclohexane	ND	U	10	0.20	1	06/06/24 19:05	
Propionitrile	ND	U	5.0	3.0	1	06/06/24 19:05	
Styrene	ND	U	1.0	0.20	1	06/06/24 19:05	
Tetrachloroethene (PCE)	ND	U	1.0	0.21	1	06/06/24 19:05	
Tetrahydrofuran (THF)	ND	U	5.0	1.7	1	06/06/24 19:05	
Toluene	ND	U	1.0	0.20	1	06/06/24 19:05	
Trichloroethene (TCE)	**1.3**		1.0	0.20	1	06/06/24 19:05	
Trichlorofluoromethane (CFC 11)	**200**	**D**	2.5	0.60	2.5	06/08/24 03:15	
Vinyl Acetate	ND	U	5.0	1.1	1	06/06/24 19:05	
Vinyl Chloride	ND	U	1.0	0.20	1	06/06/24 19:05	
cis-1,2-Dichloroethene	ND	U	1.0	0.23	1	06/06/24 19:05	
cis-1,3-Dichloropropene	ND	U	1.0	0.20	1	06/06/24 19:05	
m,p-Xylenes	ND	U	2.0	0.20	1	06/06/24 19:05	
o-Xylene	ND	U	1.0	0.20	1	06/06/24 19:05	
trans-1,2-Dichloroethene	ND	U	1.0	0.20	1	06/06/24 19:05	
trans-1,3-Dichloropropene	ND	U	1.0	0.23	1	06/06/24 19:05	
trans-1,4-Dichloro-2-butene	ND	U	1.0	0.78	1	06/06/24 19:05	
1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	**3.2**		1.0	0.20	1	06/06/24 19:05	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	104	85 - 122	06/06/24 19:05	
Dibromofluoromethane	100	80 - 116	06/06/24 19:05	
Toluene-d8	104	87 - 121	06/06/24 19:05	

Tentatively Identified Compounds

CAS#	Compound Identification	RT	Result ug/L	Q
	unknown	0.97	28	J

Analytical Report

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	05/28/24
Sample Matrix:	Water	**Date Received:**	05/31/24 07:15
Sample Name:	2405280841C 400-GV-125	**Units:**	ug/L
Lab Code:	R2404650-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.20	1	06/06/24 19:28	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.20	1	06/06/24 19:28	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.20	1	06/06/24 19:28	
1,1,2-Trichloroethane	ND	U	1.0	0.20	1	06/06/24 19:28	
1,1,2-Trichloro-1,2,2-trifluoroethane	**51**		1.0	0.20	1	06/06/24 19:28	
1,1-Dichloroethane (1,1-DCA)	ND	U	1.0	0.20	1	06/06/24 19:28	
1,1-Dichloroethene (1,1-DCE)	ND	U	1.0	0.20	1	06/06/24 19:28	
1,2,3-Trichloropropane	ND	U	1.0	0.26	1	06/06/24 19:28	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.45	1	06/06/24 19:28	
1,2-Dibromoethane	ND	U	1.0	0.20	1	06/06/24 19:28	
1,2-Dichloroethane	ND	U	1.0	0.20	1	06/06/24 19:28	
1,2-Dichloropropane	ND	U	1.0	0.20	1	06/06/24 19:28	
1,4-Dioxane	ND	U	100	13	1	06/06/24 19:28	
2,2-Dichloro-1,1,1-trifluoroethane (CFC 123)	ND	U	1.0	0.20	1	06/06/24 19:28	
2-Butanone (MEK)	ND	U	5.0	0.78	1	06/06/24 19:28	
2-Chloro-1,3-butadiene	ND	U	1.0	0.20	1	06/06/24 19:28	
2-Hexanone	ND	U	5.0	0.20	1	06/06/24 19:28	
Isobutyl Alcohol	ND	U	100	33	1	06/06/24 19:28	
2-Propanol	ND	U	50	22	1	06/06/24 19:28	
Allyl Chloride	ND	U	2.0	0.36	1	06/06/24 19:28	
4-Methyl-2-pentanone	ND	U	5.0	0.20	1	06/06/24 19:28	
Acetone	ND	U	10	5.0	1	06/06/24 19:28	
Acetonitrile	ND	U	25	5.2	1	06/06/24 19:28	
Acrolein	ND	U	10	0.90	1	06/06/24 19:28	
Acrylonitrile	ND	U	5.0	0.90	1	06/06/24 19:28	
Benzene	ND	U	1.0	0.20	1	06/06/24 19:28	
Bromodichloromethane	ND	U	1.0	0.20	1	06/06/24 19:28	
Bromoform	ND	U	1.0	0.25	1	06/06/24 19:28	
Bromomethane	ND	U	2.0	0.70	1	06/06/24 19:28	
Carbon Disulfide	ND	U	1.0	0.42	1	06/06/24 19:28	
Carbon Tetrachloride	ND	U	1.0	0.34	1	06/06/24 19:28	
Chlorobenzene	ND	U	1.0	0.20	1	06/06/24 19:28	
Chloroethane	ND	U	2.0	0.23	1	06/06/24 19:28	
Chloroform	ND	U	1.0	0.51	1	06/06/24 19:28	
Chloromethane	ND	U	2.0	0.80	1	06/06/24 19:28	
Cyclohexane	ND	U	10	0.60	1	06/06/24 19:28	
Dibromochloromethane	ND	U	1.0	0.20	1	06/06/24 19:28	
Dibromomethane	ND	U	1.0	0.20	1	06/06/24 19:28	
Dichlorodifluoromethane (CFC 12)	ND	U	1.0	0.21	1	06/06/24 19:28	
Dichlorofluoromethane (CFC 21)	**3.0**		1.0	0.20	1	06/06/24 19:28	

Analytical Report

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	05/28/24
Sample Matrix:	Water	**Date Received:**	05/31/24 07:15
Sample Name:	2405280841C 400-GV-125	**Units:**	ug/L
Lab Code:	R2404650-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Q
Dichloromethane	ND	U	1.0	0.65	1	06/06/24 19:28	
Ethyl Methacrylate	ND	U	2.0	0.20	1	06/06/24 19:28	
Ethylbenzene	ND	U	1.0	0.20	1	06/06/24 19:28	
Iodomethane	ND	U	5.0	4.3	1	06/06/24 19:28	
Methacrylonitrile	ND	U	5.0	0.52	1	06/06/24 19:28	
Methyl Methacrylate	ND	U	2.0	0.51	1	06/06/24 19:28	
Methyl tert-Butyl Ether	ND	U	10	0.20	1	06/06/24 19:28	
Methylcyclohexane	ND	U	10	0.20	1	06/06/24 19:28	
Propionitrile	ND	U	5.0	3.0	1	06/06/24 19:28	
Styrene	ND	U	1.0	0.20	1	06/06/24 19:28	
Tetrachloroethene (PCE)	ND	U	1.0	0.21	1	06/06/24 19:28	
Tetrahydrofuran (THF)	ND	U	5.0	1.7	1	06/06/24 19:28	
Toluene	ND	U	1.0	0.20	1	06/06/24 19:28	
Trichloroethene (TCE)	**1.3**		1.0	0.20	1	06/06/24 19:28	
Trichlorofluoromethane (CFC 11)	**190**	**D**	2.5	0.60	2.5	06/08/24 03:38	
Vinyl Acetate	ND	U	5.0	1.1	1	06/06/24 19:28	
Vinyl Chloride	ND	U	1.0	0.20	1	06/06/24 19:28	
cis-1,2-Dichloroethene	ND	U	1.0	0.23	1	06/06/24 19:28	
cis-1,3-Dichloropropene	ND	U	1.0	0.20	1	06/06/24 19:28	
m,p-Xylenes	ND	U	2.0	0.20	1	06/06/24 19:28	
o-Xylene	ND	U	1.0	0.20	1	06/06/24 19:28	
trans-1,2-Dichloroethene	ND	U	1.0	0.20	1	06/06/24 19:28	
trans-1,3-Dichloropropene	ND	U	1.0	0.23	1	06/06/24 19:28	
trans-1,4-Dichloro-2-butene	ND	U	1.0	0.78	1	06/06/24 19:28	
1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	**3.0**		1.0	0.20	1	06/06/24 19:28	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	85 - 122	06/06/24 19:28	
Dibromofluoromethane	98	80 - 116	06/06/24 19:28	
Toluene-d8	101	87 - 121	06/06/24 19:28	

Tentatively Identified Compounds

CAS#	Compound Identification	RT	Result ug/L	Q
	unknown	0.97	28	J

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	05/28/24
Sample Matrix:	Water	**Date Received:**	05/31/24 07:15
Sample Name:	2405280842C 400-GV-125	**Units:**	ug/L
Lab Code:	R2404650-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND U	1.0	0.20	1	06/06/24 16:48	
1,1,1-Trichloroethane (TCA)	ND U	1.0	0.20	1	06/06/24 16:48	
1,1,2,2-Tetrachloroethane	ND U	1.0	0.20	1	06/06/24 16:48	
1,1,2-Trichloroethane	ND U	1.0	0.20	1	06/06/24 16:48	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND U	1.0	0.20	1	06/06/24 16:48	
1,1-Dichloroethane (1,1-DCA)	ND U	1.0	0.20	1	06/06/24 16:48	
1,1-Dichloroethene (1,1-DCE)	ND U	1.0	0.20	1	06/06/24 16:48	
1,2,3-Trichloropropane	ND U	1.0	0.26	1	06/06/24 16:48	
1,2-Dibromo-3-chloropropane (DBCP)	ND U	2.0	0.45	1	06/06/24 16:48	
1,2-Dibromoethane	ND U	1.0	0.20	1	06/06/24 16:48	
1,2-Dichloroethane	ND U	1.0	0.20	1	06/06/24 16:48	
1,2-Dichloropropane	ND U	1.0	0.20	1	06/06/24 16:48	
1,4-Dioxane	ND U	100	13	1	06/06/24 16:48	
2,2-Dichloro-1,1,1-trifluoroethane (CFC 123)	ND U	1.0	0.20	1	06/06/24 16:48	
2-Butanone (MEK)	ND U	5.0	0.78	1	06/06/24 16:48	
2-Chloro-1,3-butadiene	ND U	1.0	0.20	1	06/06/24 16:48	
2-Hexanone	ND U	5.0	0.20	1	06/06/24 16:48	
Isobutyl Alcohol	ND U	100	33	1	06/06/24 16:48	
2-Propanol	ND U	50	22	1	06/06/24 16:48	
Allyl Chloride	ND U	2.0	0.36	1	06/06/24 16:48	
4-Methyl-2-pentanone	ND U	5.0	0.20	1	06/06/24 16:48	
Acetone	ND U	10	5.0	1	06/06/24 16:48	
Acetonitrile	ND U	25	5.2	1	06/06/24 16:48	
Acrolein	ND U	10	0.90	1	06/06/24 16:48	
Acrylonitrile	ND U	5.0	0.90	1	06/06/24 16:48	
Benzene	ND U	1.0	0.20	1	06/06/24 16:48	
Bromodichloromethane	ND U	1.0	0.20	1	06/06/24 16:48	
Bromoform	ND U	1.0	0.25	1	06/06/24 16:48	
Bromomethane	ND U	2.0	0.70	1	06/06/24 16:48	
Carbon Disulfide	ND U	1.0	0.42	1	06/06/24 16:48	
Carbon Tetrachloride	ND U	1.0	0.34	1	06/06/24 16:48	
Chlorobenzene	ND U	1.0	0.20	1	06/06/24 16:48	
Chloroethane	ND U	2.0	0.23	1	06/06/24 16:48	
Chloroform	ND U	1.0	0.51	1	06/06/24 16:48	
Chloromethane	ND U	2.0	0.80	1	06/06/24 16:48	
Cyclohexane	ND U	10	0.60	1	06/06/24 16:48	
Dibromochloromethane	ND U	1.0	0.20	1	06/06/24 16:48	
Dibromomethane	ND U	1.0	0.20	1	06/06/24 16:48	
Dichlorodifluoromethane (CFC 12)	ND U	1.0	0.21	1	06/06/24 16:48	
Dichlorofluoromethane (CFC 21)	ND U	1.0	0.20	1	06/06/24 16:48	

Analytical Report

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	05/28/24
Sample Matrix:	Water	**Date Received:**	05/31/24 07:15
Sample Name:	2405280842C 400-GV-125	**Units:**	ug/L
Lab Code:	R2404650-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Dichloromethane	ND U	1.0	0.65	1	06/06/24 16:48	
Ethyl Methacrylate	ND U	2.0	0.20	1	06/06/24 16:48	
Ethylbenzene	ND U	1.0	0.20	1	06/06/24 16:48	
Iodomethane	ND U	5.0	4.3	1	06/06/24 16:48	
Methacrylonitrile	ND U	5.0	0.52	1	06/06/24 16:48	
Methyl Methacrylate	ND U	2.0	0.51	1	06/06/24 16:48	
Methyl tert-Butyl Ether	ND U	10	0.20	1	06/06/24 16:48	
Methylcyclohexane	ND U	10	0.20	1	06/06/24 16:48	
Propionitrile	ND U	5.0	3.0	1	06/06/24 16:48	
Styrene	ND U	1.0	0.20	1	06/06/24 16:48	
Tetrachloroethene (PCE)	ND U	1.0	0.21	1	06/06/24 16:48	
Tetrahydrofuran (THF)	ND U	5.0	1.7	1	06/06/24 16:48	
Toluene	ND U	1.0	0.20	1	06/06/24 16:48	
Trichloroethene (TCE)	ND U	1.0	0.20	1	06/06/24 16:48	
Trichlorofluoromethane (CFC 11)	ND U	1.0	0.24	1	06/06/24 16:48	
Vinyl Acetate	ND U	5.0	1.1	1	06/06/24 16:48	
Vinyl Chloride	ND U	1.0	0.20	1	06/06/24 16:48	
cis-1,2-Dichloroethene	ND U	1.0	0.23	1	06/06/24 16:48	
cis-1,3-Dichloropropene	ND U	1.0	0.20	1	06/06/24 16:48	
m,p-Xylenes	ND U	2.0	0.20	1	06/06/24 16:48	
o-Xylene	ND U	1.0	0.20	1	06/06/24 16:48	
trans-1,2-Dichloroethene	ND U	1.0	0.20	1	06/06/24 16:48	
trans-1,3-Dichloropropene	ND U	1.0	0.23	1	06/06/24 16:48	
trans-1,4-Dichloro-2-butene	ND U	1.0	0.78	1	06/06/24 16:48	
1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	ND U	1.0	0.20	1	06/06/24 16:48	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	85 - 122	06/06/24 16:48	
Dibromofluoromethane	94	80 - 116	06/06/24 16:48	
Toluene-d8	97	87 - 121	06/06/24 16:48	

Tentatively Identified Compounds

CAS#	Compound Identification	RT	Result ug/L	Q
	unknown	0.97	10	J

Analytical Report

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	05/28/24
Sample Matrix:	Water	**Date Received:**	05/31/24 07:15
Sample Name:	2405280700A 400-FV-131	**Units:**	ug/L
Lab Code:	R2404650-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND U	1.0	0.20	1	06/06/24 17:11	
1,1,1-Trichloroethane (TCA)	ND U	1.0	0.20	1	06/06/24 17:11	
1,1,2,2-Tetrachloroethane	ND U	1.0	0.20	1	06/06/24 17:11	
1,1,2-Trichloroethane	ND U	1.0	0.20	1	06/06/24 17:11	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND U	1.0	0.20	1	06/06/24 17:11	
1,1-Dichloroethane (1,1-DCA)	ND U	1.0	0.20	1	06/06/24 17:11	
1,1-Dichloroethene (1,1-DCE)	ND U	1.0	0.20	1	06/06/24 17:11	
1,2,3-Trichloropropane	ND U	1.0	0.26	1	06/06/24 17:11	
1,2-Dibromo-3-chloropropane (DBCP)	ND U	2.0	0.45	1	06/06/24 17:11	
1,2-Dibromoethane	ND U	1.0	0.20	1	06/06/24 17:11	
1,2-Dichloroethane	ND U	1.0	0.20	1	06/06/24 17:11	
1,2-Dichloropropane	ND U	1.0	0.20	1	06/06/24 17:11	
1,4-Dioxane	ND U	100	13	1	06/06/24 17:11	
2,2-Dichloro-1,1,1-trifluoroethane (CFC 123)	ND U	1.0	0.20	1	06/06/24 17:11	
2-Butanone (MEK)	ND U	5.0	0.78	1	06/06/24 17:11	
2-Chloro-1,3-butadiene	ND U	1.0	0.20	1	06/06/24 17:11	
2-Hexanone	ND U	5.0	0.20	1	06/06/24 17:11	
Isobutyl Alcohol	ND U	100	33	1	06/06/24 17:11	
2-Propanol	ND U	50	22	1	06/06/24 17:11	
Allyl Chloride	ND U	2.0	0.36	1	06/06/24 17:11	
4-Methyl-2-pentanone	ND U	5.0	0.20	1	06/06/24 17:11	
Acetone	ND U	10	5.0	1	06/06/24 17:11	
Acetonitrile	ND U	25	5.2	1	06/06/24 17:11	
Acrolein	ND U	10	0.90	1	06/06/24 17:11	
Acrylonitrile	ND U	5.0	0.90	1	06/06/24 17:11	
Benzene	ND U	1.0	0.20	1	06/06/24 17:11	
Bromodichloromethane	ND U	1.0	0.20	1	06/06/24 17:11	
Bromoform	ND U	1.0	0.25	1	06/06/24 17:11	
Bromomethane	ND U	2.0	0.70	1	06/06/24 17:11	
Carbon Disulfide	ND U	1.0	0.42	1	06/06/24 17:11	
Carbon Tetrachloride	ND U	1.0	0.34	1	06/06/24 17:11	
Chlorobenzene	ND U	1.0	0.20	1	06/06/24 17:11	
Chloroethane	ND U	2.0	0.23	1	06/06/24 17:11	
Chloroform	ND U	1.0	0.51	1	06/06/24 17:11	
Chloromethane	ND U	2.0	0.80	1	06/06/24 17:11	
Cyclohexane	ND U	10	0.60	1	06/06/24 17:11	
Dibromochloromethane	ND U	1.0	0.20	1	06/06/24 17:11	
Dibromomethane	ND U	1.0	0.20	1	06/06/24 17:11	
Dichlorodifluoromethane (CFC 12)	ND U	1.0	0.21	1	06/06/24 17:11	
Dichlorofluoromethane (CFC 21)	ND U	1.0	0.20	1	06/06/24 17:11	

Analytical Report

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	05/28/24
Sample Matrix:	Water	**Date Received:**	05/31/24 07:15
Sample Name:	2405280700A 400-FV-131	**Units:**	ug/L
Lab Code:	R2404650-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Dichloromethane	ND U	1.0	0.65	1	06/06/24 17:11	
Ethyl Methacrylate	ND U	2.0	0.20	1	06/06/24 17:11	
Ethylbenzene	ND U	1.0	0.20	1	06/06/24 17:11	
Iodomethane	ND U	5.0	4.3	1	06/06/24 17:11	
Methacrylonitrile	ND U	5.0	0.52	1	06/06/24 17:11	
Methyl Methacrylate	ND U	2.0	0.51	1	06/06/24 17:11	
Methyl tert-Butyl Ether	ND U	10	0.20	1	06/06/24 17:11	
Methylcyclohexane	ND U	10	0.20	1	06/06/24 17:11	
Propionitrile	ND U	5.0	3.0	1	06/06/24 17:11	
Styrene	ND U	1.0	0.20	1	06/06/24 17:11	
Tetrachloroethene (PCE)	ND U	1.0	0.21	1	06/06/24 17:11	
Tetrahydrofuran (THF)	ND U	5.0	1.7	1	06/06/24 17:11	
Toluene	ND U	1.0	0.20	1	06/06/24 17:11	
Trichloroethene (TCE)	ND U	1.0	0.20	1	06/06/24 17:11	
Trichlorofluoromethane (CFC 11)	ND U	1.0	0.24	1	06/06/24 17:11	
Vinyl Acetate	ND U	5.0	1.1	1	06/06/24 17:11	
Vinyl Chloride	ND U	1.0	0.20	1	06/06/24 17:11	
cis-1,2-Dichloroethene	ND U	1.0	0.23	1	06/06/24 17:11	
cis-1,3-Dichloropropene	ND U	1.0	0.20	1	06/06/24 17:11	
m,p-Xylenes	ND U	2.0	0.20	1	06/06/24 17:11	
o-Xylene	ND U	1.0	0.20	1	06/06/24 17:11	
trans-1,2-Dichloroethene	ND U	1.0	0.20	1	06/06/24 17:11	
trans-1,3-Dichloropropene	ND U	1.0	0.23	1	06/06/24 17:11	
trans-1,4-Dichloro-2-butene	ND U	1.0	0.78	1	06/06/24 17:11	
1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	ND U	1.0	0.20	1	06/06/24 17:11	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	85 - 122	06/06/24 17:11	
Dibromofluoromethane	99	80 - 116	06/06/24 17:11	
Toluene-d8	102	87 - 121	06/06/24 17:11	

Tentatively Identified Compounds

CAS#	Compound Identification	RT	Result ug/L	Q
	unknown	0.97	9.3	J

Analytical Report

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	05/28/24
Sample Matrix:	Water	**Date Received:**	05/31/24 07:15
Sample Name:	2405280852A 400-FV-131	**Units:**	ug/L
Lab Code:	R2404650-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND U	1.0	0.20	1	06/06/24 17:34	
1,1,1-Trichloroethane (TCA)	ND U	1.0	0.20	1	06/06/24 17:34	
1,1,2,2-Tetrachloroethane	ND U	1.0	0.20	1	06/06/24 17:34	
1,1,2-Trichloroethane	ND U	1.0	0.20	1	06/06/24 17:34	
1,1,2-Trichloro-1,2,2-trifluoroethane	**38**	1.0	0.20	1	06/06/24 17:34	
1,1-Dichloroethane (1,1-DCA)	ND U	1.0	0.20	1	06/06/24 17:34	
1,1-Dichloroethene (1,1-DCE)	ND U	1.0	0.20	1	06/06/24 17:34	
1,2,3-Trichloropropane	ND U	1.0	0.26	1	06/06/24 17:34	
1,2-Dibromo-3-chloropropane (DBCP)	ND U	2.0	0.45	1	06/06/24 17:34	
1,2-Dibromoethane	ND U	1.0	0.20	1	06/06/24 17:34	
1,2-Dichloroethane	ND U	1.0	0.20	1	06/06/24 17:34	
1,2-Dichloropropane	ND U	1.0	0.20	1	06/06/24 17:34	
1,4-Dioxane	ND U	100	13	1	06/06/24 17:34	
2,2-Dichloro-1,1,1-trifluoroethane (CFC 123)	ND U	1.0	0.20	1	06/06/24 17:34	
2-Butanone (MEK)	ND U	5.0	0.78	1	06/06/24 17:34	
2-Chloro-1,3-butadiene	ND U	1.0	0.20	1	06/06/24 17:34	
2-Hexanone	ND U	5.0	0.20	1	06/06/24 17:34	
Isobutyl Alcohol	ND U	100	33	1	06/06/24 17:34	
2-Propanol	ND U	50	22	1	06/06/24 17:34	
Allyl Chloride	ND U	2.0	0.36	1	06/06/24 17:34	
4-Methyl-2-pentanone	ND U	5.0	0.20	1	06/06/24 17:34	
Acetone	ND U	10	5.0	1	06/06/24 17:34	
Acetonitrile	ND U	25	5.2	1	06/06/24 17:34	
Acrolein	ND U	10	0.90	1	06/06/24 17:34	
Acrylonitrile	ND U	5.0	0.90	1	06/06/24 17:34	
Benzene	ND U	1.0	0.20	1	06/06/24 17:34	
Bromodichloromethane	ND U	1.0	0.20	1	06/06/24 17:34	
Bromoform	ND U	1.0	0.25	1	06/06/24 17:34	
Bromomethane	ND U	2.0	0.70	1	06/06/24 17:34	
Carbon Disulfide	ND U	1.0	0.42	1	06/06/24 17:34	
Carbon Tetrachloride	ND U	1.0	0.34	1	06/06/24 17:34	
Chlorobenzene	ND U	1.0	0.20	1	06/06/24 17:34	
Chloroethane	ND U	2.0	0.23	1	06/06/24 17:34	
Chloroform	ND U	1.0	0.51	1	06/06/24 17:34	
Chloromethane	ND U	2.0	0.80	1	06/06/24 17:34	
Cyclohexane	ND U	10	0.60	1	06/06/24 17:34	
Dibromochloromethane	ND U	1.0	0.20	1	06/06/24 17:34	
Dibromomethane	ND U	1.0	0.20	1	06/06/24 17:34	
Dichlorodifluoromethane (CFC 12)	ND U	1.0	0.21	1	06/06/24 17:34	
Dichlorofluoromethane (CFC 21)	**4.5**	1.0	0.20	1	06/06/24 17:34	

Analytical Report

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	05/28/24
Sample Matrix:	Water	**Date Received:**	05/31/24 07:15
Sample Name:	2405280852A 400-FV-131	**Units:**	ug/L
Lab Code:	R2404650-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Q
Dichloromethane	ND	U	1.0	0.65	1	06/06/24 17:34	
Ethyl Methacrylate	ND	U	2.0	0.20	1	06/06/24 17:34	
Ethylbenzene	ND	U	1.0	0.20	1	06/06/24 17:34	
Iodomethane	ND	U	5.0	4.3	1	06/06/24 17:34	
Methacrylonitrile	ND	U	5.0	0.52	1	06/06/24 17:34	
Methyl Methacrylate	ND	U	2.0	0.51	1	06/06/24 17:34	
Methyl tert-Butyl Ether	ND	U	10	0.20	1	06/06/24 17:34	
Methylcyclohexane	ND	U	10	0.20	1	06/06/24 17:34	
Propionitrile	ND	U	5.0	3.0	1	06/06/24 17:34	
Styrene	ND	U	1.0	0.20	1	06/06/24 17:34	
Tetrachloroethene (PCE)	ND	U	1.0	0.21	1	06/06/24 17:34	
Tetrahydrofuran (THF)	ND	U	5.0	1.7	1	06/06/24 17:34	
Toluene	ND	U	1.0	0.20	1	06/06/24 17:34	
Trichloroethene (TCE)	**0.65**	**J**	1.0	0.20	1	06/06/24 17:34	
Trichlorofluoromethane (CFC 11)	**100**		1.0	0.24	1	06/06/24 17:34	
Vinyl Acetate	ND	U	5.0	1.1	1	06/06/24 17:34	
Vinyl Chloride	ND	U	1.0	0.20	1	06/06/24 17:34	
cis-1,2-Dichloroethene	ND	U	1.0	0.23	1	06/06/24 17:34	
cis-1,3-Dichloropropene	ND	U	1.0	0.20	1	06/06/24 17:34	
m,p-Xylenes	ND	U	2.0	0.20	1	06/06/24 17:34	
o-Xylene	ND	U	1.0	0.20	1	06/06/24 17:34	
trans-1,2-Dichloroethene	ND	U	1.0	0.20	1	06/06/24 17:34	
trans-1,3-Dichloropropene	ND	U	1.0	0.23	1	06/06/24 17:34	
trans-1,4-Dichloro-2-butene	ND	U	1.0	0.78	1	06/06/24 17:34	
1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	**5.4**		1.0	0.20	1	06/06/24 17:34	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	85 - 122	06/06/24 17:34	
Dibromofluoromethane	98	80 - 116	06/06/24 17:34	
Toluene-d8	100	87 - 121	06/06/24 17:34	

Tentatively Identified Compounds

CAS#	Compound Identification	RT	Result ug/L	Q
	unknown	0.97	33	J

Analytical Report

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	05/28/24
Sample Matrix:	Water	**Date Received:**	05/31/24 07:15
Sample Name:	2405280853A 400-FV-131	**Units:**	ug/L
Lab Code:	R2404650-006	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND U	1.0	0.20	1	06/06/24 17:57	
1,1,1-Trichloroethane (TCA)	ND U	1.0	0.20	1	06/06/24 17:57	
1,1,2,2-Tetrachloroethane	ND U	1.0	0.20	1	06/06/24 17:57	
1,1,2-Trichloroethane	ND U	1.0	0.20	1	06/06/24 17:57	
1,1,2-Trichloro-1,2,2-trifluoroethane	**40**	1.0	0.20	1	06/06/24 17:57	
1,1-Dichloroethane (1,1-DCA)	ND U	1.0	0.20	1	06/06/24 17:57	
1,1-Dichloroethene (1,1-DCE)	ND U	1.0	0.20	1	06/06/24 17:57	
1,2,3-Trichloropropane	ND U	1.0	0.26	1	06/06/24 17:57	
1,2-Dibromo-3-chloropropane (DBCP)	ND U	2.0	0.45	1	06/06/24 17:57	
1,2-Dibromoethane	ND U	1.0	0.20	1	06/06/24 17:57	
1,2-Dichloroethane	ND U	1.0	0.20	1	06/06/24 17:57	
1,2-Dichloropropane	ND U	1.0	0.20	1	06/06/24 17:57	
1,4-Dioxane	ND U	100	13	1	06/06/24 17:57	
2,2-Dichloro-1,1,1-trifluoroethane (CFC 123)	ND U	1.0	0.20	1	06/06/24 17:57	
2-Butanone (MEK)	ND U	5.0	0.78	1	06/06/24 17:57	
2-Chloro-1,3-butadiene	ND U	1.0	0.20	1	06/06/24 17:57	
2-Hexanone	ND U	5.0	0.20	1	06/06/24 17:57	
Isobutyl Alcohol	ND U	100	33	1	06/06/24 17:57	
2-Propanol	ND U	50	22	1	06/06/24 17:57	
Allyl Chloride	ND U	2.0	0.36	1	06/06/24 17:57	
4-Methyl-2-pentanone	ND U	5.0	0.20	1	06/06/24 17:57	
Acetone	ND U	10	5.0	1	06/06/24 17:57	
Acetonitrile	ND U	25	5.2	1	06/06/24 17:57	
Acrolein	ND U	10	0.90	1	06/06/24 17:57	
Acrylonitrile	ND U	5.0	0.90	1	06/06/24 17:57	
Benzene	ND U	1.0	0.20	1	06/06/24 17:57	
Bromodichloromethane	ND U	1.0	0.20	1	06/06/24 17:57	
Bromoform	ND U	1.0	0.25	1	06/06/24 17:57	
Bromomethane	ND U	2.0	0.70	1	06/06/24 17:57	
Carbon Disulfide	ND U	1.0	0.42	1	06/06/24 17:57	
Carbon Tetrachloride	ND U	1.0	0.34	1	06/06/24 17:57	
Chlorobenzene	ND U	1.0	0.20	1	06/06/24 17:57	
Chloroethane	ND U	2.0	0.23	1	06/06/24 17:57	
Chloroform	ND U	1.0	0.51	1	06/06/24 17:57	
Chloromethane	ND U	2.0	0.80	1	06/06/24 17:57	
Cyclohexane	ND U	10	0.60	1	06/06/24 17:57	
Dibromochloromethane	ND U	1.0	0.20	1	06/06/24 17:57	
Dibromomethane	ND U	1.0	0.20	1	06/06/24 17:57	
Dichlorodifluoromethane (CFC 12)	ND U	1.0	0.21	1	06/06/24 17:57	
Dichlorofluoromethane (CFC 21)	**4.6**	1.0	0.20	1	06/06/24 17:57	

Analytical Report

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	05/28/24
Sample Matrix:	Water	**Date Received:**	05/31/24 07:15
Sample Name:	2405280853A 400-FV-131	**Units:**	ug/L
Lab Code:	R2404650-006	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Q
Dichloromethane	ND	U	1.0	0.65	1	06/06/24 17:57	
Ethyl Methacrylate	ND	U	2.0	0.20	1	06/06/24 17:57	
Ethylbenzene	ND	U	1.0	0.20	1	06/06/24 17:57	
Iodomethane	ND	U	5.0	4.3	1	06/06/24 17:57	
Methacrylonitrile	ND	U	5.0	0.52	1	06/06/24 17:57	
Methyl Methacrylate	ND	U	2.0	0.51	1	06/06/24 17:57	
Methyl tert-Butyl Ether	ND	U	10	0.20	1	06/06/24 17:57	
Methylcyclohexane	ND	U	10	0.20	1	06/06/24 17:57	
Propionitrile	ND	U	5.0	3.0	1	06/06/24 17:57	
Styrene	ND	U	1.0	0.20	1	06/06/24 17:57	
Tetrachloroethene (PCE)	ND	U	1.0	0.21	1	06/06/24 17:57	
Tetrahydrofuran (THF)	ND	U	5.0	1.7	1	06/06/24 17:57	
Toluene	ND	U	1.0	0.20	1	06/06/24 17:57	
Trichloroethene (TCE)	**0.63**	**J**	1.0	0.20	1	06/06/24 17:57	
Trichlorofluoromethane (CFC 11)	**100**		1.0	0.24	1	06/06/24 17:57	
Vinyl Acetate	ND	U	5.0	1.1	1	06/06/24 17:57	
Vinyl Chloride	ND	U	1.0	0.20	1	06/06/24 17:57	
cis-1,2-Dichloroethene	ND	U	1.0	0.23	1	06/06/24 17:57	
cis-1,3-Dichloropropene	ND	U	1.0	0.20	1	06/06/24 17:57	
m,p-Xylenes	ND	U	2.0	0.20	1	06/06/24 17:57	
o-Xylene	ND	U	1.0	0.20	1	06/06/24 17:57	
trans-1,2-Dichloroethene	ND	U	1.0	0.20	1	06/06/24 17:57	
trans-1,3-Dichloropropene	ND	U	1.0	0.23	1	06/06/24 17:57	
trans-1,4-Dichloro-2-butene	ND	U	1.0	0.78	1	06/06/24 17:57	
1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	**5.5**		1.0	0.20	1	06/06/24 17:57	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	85 - 122	06/06/24 17:57	
Dibromofluoromethane	97	80 - 116	06/06/24 17:57	
Toluene-d8	99	87 - 121	06/06/24 17:57	

Tentatively Identified Compounds

CAS#	Compound Identification	RT	Result ug/L	Q
	unknown	0.97	32	J

Analytical Report

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	05/28/24
Sample Matrix:	Water	**Date Received:**	05/31/24 07:15
Sample Name:	2405280854A 400-FV-131	**Units:**	ug/L
Lab Code:	R2404650-007	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND U	1.0	0.20	1	06/06/24 15:39	
1,1,1-Trichloroethane (TCA)	ND U	1.0	0.20	1	06/06/24 15:39	
1,1,2,2-Tetrachloroethane	ND U	1.0	0.20	1	06/06/24 15:39	
1,1,2-Trichloroethane	ND U	1.0	0.20	1	06/06/24 15:39	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND U	1.0	0.20	1	06/06/24 15:39	
1,1-Dichloroethane (1,1-DCA)	ND U	1.0	0.20	1	06/06/24 15:39	
1,1-Dichloroethene (1,1-DCE)	ND U	1.0	0.20	1	06/06/24 15:39	
1,2,3-Trichloropropane	ND U	1.0	0.26	1	06/06/24 15:39	
1,2-Dibromo-3-chloropropane (DBCP)	ND U	2.0	0.45	1	06/06/24 15:39	
1,2-Dibromoethane	ND U	1.0	0.20	1	06/06/24 15:39	
1,2-Dichloroethane	ND U	1.0	0.20	1	06/06/24 15:39	
1,2-Dichloropropane	ND U	1.0	0.20	1	06/06/24 15:39	
1,4-Dioxane	ND U	100	13	1	06/06/24 15:39	
2,2-Dichloro-1,1,1-trifluoroethane (CFC 123)	ND U	1.0	0.20	1	06/06/24 15:39	
2-Butanone (MEK)	ND U	5.0	0.78	1	06/06/24 15:39	
2-Chloro-1,3-butadiene	ND U	1.0	0.20	1	06/06/24 15:39	
2-Hexanone	ND U	5.0	0.20	1	06/06/24 15:39	
Isobutyl Alcohol	ND U	100	33	1	06/06/24 15:39	
2-Propanol	ND U	50	22	1	06/06/24 15:39	
Allyl Chloride	ND U	2.0	0.36	1	06/06/24 15:39	
4-Methyl-2-pentanone	ND U	5.0	0.20	1	06/06/24 15:39	
Acetone	ND U	10	5.0	1	06/06/24 15:39	
Acetonitrile	ND U	25	5.2	1	06/06/24 15:39	
Acrolein	ND U	10	0.90	1	06/06/24 15:39	
Acrylonitrile	ND U	5.0	0.90	1	06/06/24 15:39	
Benzene	ND U	1.0	0.20	1	06/06/24 15:39	
Bromodichloromethane	ND U	1.0	0.20	1	06/06/24 15:39	
Bromoform	ND U	1.0	0.25	1	06/06/24 15:39	
Bromomethane	ND U	2.0	0.70	1	06/06/24 15:39	
Carbon Disulfide	ND U	1.0	0.42	1	06/06/24 15:39	
Carbon Tetrachloride	ND U	1.0	0.34	1	06/06/24 15:39	
Chlorobenzene	ND U	1.0	0.20	1	06/06/24 15:39	
Chloroethane	ND U	2.0	0.23	1	06/06/24 15:39	
Chloroform	ND U	1.0	0.51	1	06/06/24 15:39	
Chloromethane	ND U	2.0	0.80	1	06/06/24 15:39	
Cyclohexane	ND U	10	0.60	1	06/06/24 15:39	
Dibromochloromethane	ND U	1.0	0.20	1	06/06/24 15:39	
Dibromomethane	ND U	1.0	0.20	1	06/06/24 15:39	
Dichlorodifluoromethane (CFC 12)	ND U	1.0	0.21	1	06/06/24 15:39	
Dichlorofluoromethane (CFC 21)	ND U	1.0	0.20	1	06/06/24 15:39	

Analytical Report

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	05/28/24
Sample Matrix:	Water	**Date Received:**	05/31/24 07:15
Sample Name:	2405280854A 400-FV-131	**Units:**	ug/L
Lab Code:	R2404650-007	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Dichloromethane	ND U	1.0	0.65	1	06/06/24 15:39	
Ethyl Methacrylate	ND U	2.0	0.20	1	06/06/24 15:39	
Ethylbenzene	ND U	1.0	0.20	1	06/06/24 15:39	
Iodomethane	ND U	5.0	4.3	1	06/06/24 15:39	
Methacrylonitrile	ND U	5.0	0.52	1	06/06/24 15:39	
Methyl Methacrylate	ND U	2.0	0.51	1	06/06/24 15:39	
Methyl tert-Butyl Ether	ND U	10	0.20	1	06/06/24 15:39	
Methylcyclohexane	ND U	10	0.20	1	06/06/24 15:39	
Propionitrile	ND U	5.0	3.0	1	06/06/24 15:39	
Styrene	ND U	1.0	0.20	1	06/06/24 15:39	
Tetrachloroethene (PCE)	ND U	1.0	0.21	1	06/06/24 15:39	
Tetrahydrofuran (THF)	ND U	5.0	1.7	1	06/06/24 15:39	
Toluene	ND U	1.0	0.20	1	06/06/24 15:39	
Trichloroethene (TCE)	ND U	1.0	0.20	1	06/06/24 15:39	
Trichlorofluoromethane (CFC 11)	ND U	1.0	0.24	1	06/06/24 15:39	
Vinyl Acetate	ND U	5.0	1.1	1	06/06/24 15:39	
Vinyl Chloride	ND U	1.0	0.20	1	06/06/24 15:39	
cis-1,2-Dichloroethene	ND U	1.0	0.23	1	06/06/24 15:39	
cis-1,3-Dichloropropene	ND U	1.0	0.20	1	06/06/24 15:39	
m,p-Xylenes	ND U	2.0	0.20	1	06/06/24 15:39	
o-Xylene	ND U	1.0	0.20	1	06/06/24 15:39	
trans-1,2-Dichloroethene	ND U	1.0	0.20	1	06/06/24 15:39	
trans-1,3-Dichloropropene	ND U	1.0	0.23	1	06/06/24 15:39	
trans-1,4-Dichloro-2-butene	ND U	1.0	0.78	1	06/06/24 15:39	
1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	ND U	1.0	0.20	1	06/06/24 15:39	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	85 - 122	06/06/24 15:39	
Dibromofluoromethane	101	80 - 116	06/06/24 15:39	
Toluene-d8	104	87 - 121	06/06/24 15:39	

Tentatively Identified Compounds

CAS#	Compound Identification	RT	Result ug/L	Q
	unknown	0.97	11	J

Analytical Report

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	05/28/24
Sample Matrix:	Water	**Date Received:**	05/31/24 07:15
Sample Name:	2405281002A 400-EV-131	**Units:**	ug/L
Lab Code:	R2404650-008	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.20	1	06/06/24 14:53	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.20	1	06/06/24 14:53	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.20	1	06/06/24 14:53	
1,1,2-Trichloroethane	ND	U	1.0	0.20	1	06/06/24 14:53	
1,1,2-Trichloro-1,2,2-trifluoroethane	**90**		1.0	0.20	1	06/06/24 14:53	
1,1-Dichloroethane (1,1-DCA)	ND	U	1.0	0.20	1	06/06/24 14:53	
1,1-Dichloroethene (1,1-DCE)	ND	U	1.0	0.20	1	06/06/24 14:53	
1,2,3-Trichloropropane	ND	U	1.0	0.26	1	06/06/24 14:53	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.45	1	06/06/24 14:53	
1,2-Dibromoethane	ND	U	1.0	0.20	1	06/06/24 14:53	
1,2-Dichloroethane	ND	U	1.0	0.20	1	06/06/24 14:53	
1,2-Dichloropropane	ND	U	1.0	0.20	1	06/06/24 14:53	
1,4-Dioxane	ND	U	100	13	1	06/06/24 14:53	
2,2-Dichloro-1,1,1-trifluoroethane (CFC 123)	ND	U	1.0	0.20	1	06/06/24 14:53	
2-Butanone (MEK)	ND	U	5.0	0.78	1	06/06/24 14:53	
2-Chloro-1,3-butadiene	ND	U	1.0	0.20	1	06/06/24 14:53	
2-Hexanone	ND	U	5.0	0.20	1	06/06/24 14:53	
Isobutyl Alcohol	ND	U	100	33	1	06/06/24 14:53	
2-Propanol	ND	U	50	22	1	06/06/24 14:53	
Allyl Chloride	ND	U	2.0	0.36	1	06/06/24 14:53	
4-Methyl-2-pentanone	ND	U	5.0	0.20	1	06/06/24 14:53	
Acetone	ND	U	10	5.0	1	06/06/24 14:53	
Acetonitrile	ND	U	25	5.2	1	06/06/24 14:53	
Acrolein	ND	U	10	0.90	1	06/06/24 14:53	
Acrylonitrile	ND	U	5.0	0.90	1	06/06/24 14:53	
Benzene	ND	U	1.0	0.20	1	06/06/24 14:53	
Bromodichloromethane	ND	U	1.0	0.20	1	06/06/24 14:53	
Bromoform	ND	U	1.0	0.25	1	06/06/24 14:53	
Bromomethane	ND	U	2.0	0.70	1	06/06/24 14:53	
Carbon Disulfide	ND	U	1.0	0.42	1	06/06/24 14:53	
Carbon Tetrachloride	ND	U	1.0	0.34	1	06/06/24 14:53	
Chlorobenzene	ND	U	1.0	0.20	1	06/06/24 14:53	
Chloroethane	ND	U	2.0	0.23	1	06/06/24 14:53	
Chloroform	ND	U	1.0	0.51	1	06/06/24 14:53	
Chloromethane	ND	U	2.0	0.80	1	06/06/24 14:53	
Cyclohexane	ND	U	10	0.60	1	06/06/24 14:53	
Dibromochloromethane	ND	U	1.0	0.20	1	06/06/24 14:53	
Dibromomethane	ND	U	1.0	0.20	1	06/06/24 14:53	
Dichlorodifluoromethane (CFC 12)	ND	U	1.0	0.21	1	06/06/24 14:53	
Dichlorofluoromethane (CFC 21)	**0.42**	**J**	1.0	0.20	1	06/06/24 14:53	

Analytical Report

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	05/28/24
Sample Matrix:	Water	**Date Received:**	05/31/24 07:15
Sample Name:	2405281002A 400-EV-131	**Units:**	ug/L
Lab Code:	R2404650-008	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Q
Dichloromethane	ND	U	1.0	0.65	1	06/06/24 14:53	
Ethyl Methacrylate	ND	U	2.0	0.20	1	06/06/24 14:53	
Ethylbenzene	ND	U	1.0	0.20	1	06/06/24 14:53	
Iodomethane	ND	U	5.0	4.3	1	06/06/24 14:53	
Methacrylonitrile	ND	U	5.0	0.52	1	06/06/24 14:53	
Methyl Methacrylate	ND	U	2.0	0.51	1	06/06/24 14:53	
Methyl tert-Butyl Ether	ND	U	10	0.20	1	06/06/24 14:53	
Methylcyclohexane	ND	U	10	0.20	1	06/06/24 14:53	
Propionitrile	ND	U	5.0	3.0	1	06/06/24 14:53	
Styrene	ND	U	1.0	0.20	1	06/06/24 14:53	
Tetrachloroethene (PCE)	ND	U	1.0	0.21	1	06/06/24 14:53	
Tetrahydrofuran (THF)	ND	U	5.0	1.7	1	06/06/24 14:53	
Toluene	ND	U	1.0	0.20	1	06/06/24 14:53	
Trichloroethene (TCE)	**1.3**		1.0	0.20	1	06/06/24 14:53	
Trichlorofluoromethane (CFC 11)	**410**	**D**	5.0	1.2	5	06/08/24 04:01	
Vinyl Acetate	ND	U	5.0	1.1	1	06/06/24 14:53	
Vinyl Chloride	ND	U	1.0	0.20	1	06/06/24 14:53	
cis-1,2-Dichloroethene	ND	U	1.0	0.23	1	06/06/24 14:53	
cis-1,3-Dichloropropene	ND	U	1.0	0.20	1	06/06/24 14:53	
m,p-Xylenes	ND	U	2.0	0.20	1	06/06/24 14:53	
o-Xylene	ND	U	1.0	0.20	1	06/06/24 14:53	
trans-1,2-Dichloroethene	ND	U	1.0	0.20	1	06/06/24 14:53	
trans-1,3-Dichloropropene	ND	U	1.0	0.23	1	06/06/24 14:53	
trans-1,4-Dichloro-2-butene	ND	U	1.0	0.78	1	06/06/24 14:53	
1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	ND	U	1.0	0.20	1	06/06/24 14:53	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	85 - 122	06/06/24 14:53	
Dibromofluoromethane	100	80 - 116	06/06/24 14:53	
Toluene-d8	103	87 - 121	06/06/24 14:53	

Tentatively Identified Compounds

CAS#	Compound Identification	RT	Result ug/L	Q
	unknown	0.96	28	J

Analytical Report

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	05/28/24
Sample Matrix:	Water	**Date Received:**	05/31/24 07:15
Sample Name:	2405281003A 400-EV-131	**Units:**	ug/L
Lab Code:	R2404650-009	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND U	1.0	0.20	1	06/08/24 02:52	
1,1,1-Trichloroethane (TCA)	ND U	1.0	0.20	1	06/08/24 02:52	
1,1,2,2-Tetrachloroethane	ND U	1.0	0.20	1	06/08/24 02:52	
1,1,2-Trichloroethane	ND U	1.0	0.20	1	06/08/24 02:52	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND U	1.0	0.20	1	06/08/24 02:52	
1,1-Dichloroethane (1,1-DCA)	ND U	1.0	0.20	1	06/08/24 02:52	
1,1-Dichloroethene (1,1-DCE)	ND U	1.0	0.20	1	06/08/24 02:52	
1,2,3-Trichloropropane	ND U	1.0	0.26	1	06/08/24 02:52	
1,2-Dibromo-3-chloropropane (DBCP)	ND U	2.0	0.45	1	06/08/24 02:52	
1,2-Dibromoethane	ND U	1.0	0.20	1	06/08/24 02:52	
1,2-Dichloroethane	ND U	1.0	0.20	1	06/08/24 02:52	
1,2-Dichloropropane	ND U	1.0	0.20	1	06/08/24 02:52	
1,4-Dioxane	ND U	100	13	1	06/08/24 02:52	
2,2-Dichloro-1,1,1-trifluoroethane (CFC 123)	ND U	1.0	0.20	1	06/08/24 02:52	
2-Butanone (MEK)	ND U	5.0	0.78	1	06/08/24 02:52	
2-Chloro-1,3-butadiene	ND U	1.0	0.20	1	06/08/24 02:52	
2-Hexanone	ND U	5.0	0.20	1	06/08/24 02:52	
Isobutyl Alcohol	ND U	100	33	1	06/08/24 02:52	
2-Propanol	ND U	50	22	1	06/08/24 02:52	
Allyl Chloride	ND U	2.0	0.36	1	06/08/24 02:52	
4-Methyl-2-pentanone	ND U	5.0	0.20	1	06/08/24 02:52	
Acetone	ND U	10	5.0	1	06/08/24 02:52	
Acetonitrile	ND U	25	5.2	1	06/08/24 02:52	
Acrolein	ND U	10	0.90	1	06/08/24 02:52	
Acrylonitrile	ND U	5.0	0.90	1	06/08/24 02:52	
Benzene	ND U	1.0	0.20	1	06/08/24 02:52	
Bromodichloromethane	ND U	1.0	0.20	1	06/08/24 02:52	
Bromoform	ND U	1.0	0.25	1	06/08/24 02:52	
Bromomethane	ND U	2.0	0.70	1	06/08/24 02:52	
Carbon Disulfide	ND U	1.0	0.42	1	06/08/24 02:52	
Carbon Tetrachloride	ND U	1.0	0.34	1	06/08/24 02:52	
Chlorobenzene	ND U	1.0	0.20	1	06/08/24 02:52	
Chloroethane	ND U	2.0	0.23	1	06/08/24 02:52	
Chloroform	ND U	1.0	0.51	1	06/08/24 02:52	
Chloromethane	ND U	2.0	0.80	1	06/08/24 02:52	
Cyclohexane	ND U	10	0.60	1	06/08/24 02:52	
Dibromochloromethane	ND U	1.0	0.20	1	06/08/24 02:52	
Dibromomethane	ND U	1.0	0.20	1	06/08/24 02:52	
Dichlorodifluoromethane (CFC 12)	ND U	1.0	0.21	1	06/08/24 02:52	
Dichlorofluoromethane (CFC 21)	ND U	1.0	0.20	1	06/08/24 02:52	

Analytical Report

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	05/28/24
Sample Matrix:	Water	**Date Received:**	05/31/24 07:15
Sample Name:	2405281003A 400-EV-131	**Units:**	ug/L
Lab Code:	R2404650-009	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Dichloromethane	ND U	1.0	0.65	1	06/08/24 02:52	
Ethyl Methacrylate	ND U	2.0	0.20	1	06/08/24 02:52	
Ethylbenzene	ND U	1.0	0.20	1	06/08/24 02:52	
Iodomethane	ND U	5.0	4.3	1	06/08/24 02:52	
Methacrylonitrile	ND U	5.0	0.52	1	06/08/24 02:52	
Methyl Methacrylate	ND U	2.0	0.51	1	06/08/24 02:52	
Methyl tert-Butyl Ether	ND U	10	0.20	1	06/08/24 02:52	
Methylcyclohexane	ND U	10	0.20	1	06/08/24 02:52	
Propionitrile	ND U	5.0	3.0	1	06/08/24 02:52	
Styrene	ND U	1.0	0.20	1	06/08/24 02:52	
Tetrachloroethene (PCE)	ND U	1.0	0.21	1	06/08/24 02:52	
Tetrahydrofuran (THF)	ND U	5.0	1.7	1	06/08/24 02:52	
Toluene	ND U	1.0	0.20	1	06/08/24 02:52	
Trichloroethene (TCE)	ND U	1.0	0.20	1	06/08/24 02:52	
Trichlorofluoromethane (CFC 11)	ND U	1.0	0.24	1	06/08/24 02:52	
Vinyl Acetate	ND U	5.0	1.1	1	06/08/24 02:52	
Vinyl Chloride	ND U	1.0	0.20	1	06/08/24 02:52	
cis-1,2-Dichloroethene	ND U	1.0	0.23	1	06/08/24 02:52	
cis-1,3-Dichloropropene	ND U	1.0	0.20	1	06/08/24 02:52	
m,p-Xylenes	ND U	2.0	0.20	1	06/08/24 02:52	
o-Xylene	ND U	1.0	0.20	1	06/08/24 02:52	
trans-1,2-Dichloroethene	ND U	1.0	0.20	1	06/08/24 02:52	
trans-1,3-Dichloropropene	ND U	1.0	0.23	1	06/08/24 02:52	
trans-1,4-Dichloro-2-butene	ND U	1.0	0.78	1	06/08/24 02:52	
1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	ND U	1.0	0.20	1	06/08/24 02:52	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	85 - 122	06/08/24 02:52	
Dibromofluoromethane	97	80 - 116	06/08/24 02:52	
Toluene-d8	99	87 - 121	06/08/24 02:52	

Tentatively Identified Compounds

CAS#	Compound Identification	RT	Result ug/L	Q
	unknown	0.97	9.8	J

Analytical Report

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	05/28/24
Sample Matrix:	Water	**Date Received:**	05/31/24 07:15
Sample Name:	2405281010C 400-JV-150	**Units:**	ug/L
Lab Code:	R2404650-010	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.20	1	06/06/24 18:20	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.20	1	06/06/24 18:20	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.20	1	06/06/24 18:20	
1,1,2-Trichloroethane	ND	U	1.0	0.20	1	06/06/24 18:20	
1,1,2-Trichloro-1,2,2-trifluoroethane	**110**		1.0	0.20	1	06/06/24 18:20	
1,1-Dichloroethane (1,1-DCA)	ND	U	1.0	0.20	1	06/06/24 18:20	
1,1-Dichloroethene (1,1-DCE)	ND	U	1.0	0.20	1	06/06/24 18:20	
1,2,3-Trichloropropane	ND	U	1.0	0.26	1	06/06/24 18:20	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.45	1	06/06/24 18:20	
1,2-Dibromoethane	ND	U	1.0	0.20	1	06/06/24 18:20	
1,2-Dichloroethane	ND	U	1.0	0.20	1	06/06/24 18:20	
1,2-Dichloropropane	ND	U	1.0	0.20	1	06/06/24 18:20	
1,4-Dioxane	ND	U	100	13	1	06/06/24 18:20	
2,2-Dichloro-1,1,1-trifluoroethane (CFC 123)	ND	U	1.0	0.20	1	06/06/24 18:20	
2-Butanone (MEK)	ND	U	5.0	0.78	1	06/06/24 18:20	
2-Chloro-1,3-butadiene	ND	U	1.0	0.20	1	06/06/24 18:20	
2-Hexanone	ND	U	5.0	0.20	1	06/06/24 18:20	
Isobutyl Alcohol	ND	U	100	33	1	06/06/24 18:20	
2-Propanol	ND	U	50	22	1	06/06/24 18:20	
Allyl Chloride	ND	U	2.0	0.36	1	06/06/24 18:20	
4-Methyl-2-pentanone	ND	U	5.0	0.20	1	06/06/24 18:20	
Acetone	ND	U	10	5.0	1	06/06/24 18:20	
Acetonitrile	ND	U	25	5.2	1	06/06/24 18:20	
Acrolein	ND	U	10	0.90	1	06/06/24 18:20	
Acrylonitrile	ND	U	5.0	0.90	1	06/06/24 18:20	
Benzene	ND	U	1.0	0.20	1	06/06/24 18:20	
Bromodichloromethane	ND	U	1.0	0.20	1	06/06/24 18:20	
Bromoform	ND	U	1.0	0.25	1	06/06/24 18:20	
Bromomethane	ND	U	2.0	0.70	1	06/06/24 18:20	
Carbon Disulfide	ND	U	1.0	0.42	1	06/06/24 18:20	
Carbon Tetrachloride	ND	U	1.0	0.34	1	06/06/24 18:20	
Chlorobenzene	ND	U	1.0	0.20	1	06/06/24 18:20	
Chloroethane	ND	U	2.0	0.23	1	06/06/24 18:20	
Chloroform	ND	U	1.0	0.51	1	06/06/24 18:20	
Chloromethane	ND	U	2.0	0.80	1	06/06/24 18:20	
Cyclohexane	ND	U	10	0.60	1	06/06/24 18:20	
Dibromochloromethane	ND	U	1.0	0.20	1	06/06/24 18:20	
Dibromomethane	ND	U	1.0	0.20	1	06/06/24 18:20	
Dichlorodifluoromethane (CFC 12)	ND	U	1.0	0.21	1	06/06/24 18:20	
Dichlorofluoromethane (CFC 21)	**1.6**		1.0	0.20	1	06/06/24 18:20	

Analytical Report

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	05/28/24
Sample Matrix:	Water	**Date Received:**	05/31/24 07:15
Sample Name:	2405281010C 400-JV-150	**Units:**	ug/L
Lab Code:	R2404650-010	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Q
Dichloromethane	ND	U	1.0	0.65	1	06/06/24 18:20	
Ethyl Methacrylate	ND	U	2.0	0.20	1	06/06/24 18:20	
Ethylbenzene	ND	U	1.0	0.20	1	06/06/24 18:20	
Iodomethane	ND	U	5.0	4.3	1	06/06/24 18:20	
Methacrylonitrile	ND	U	5.0	0.52	1	06/06/24 18:20	
Methyl Methacrylate	ND	U	2.0	0.51	1	06/06/24 18:20	
Methyl tert-Butyl Ether	ND	U	10	0.20	1	06/06/24 18:20	
Methylcyclohexane	ND	U	10	0.20	1	06/06/24 18:20	
Propionitrile	ND	U	5.0	3.0	1	06/06/24 18:20	
Styrene	ND	U	1.0	0.20	1	06/06/24 18:20	
Tetrachloroethene (PCE)	ND	U	1.0	0.21	1	06/06/24 18:20	
Tetrahydrofuran (THF)	ND	U	5.0	1.7	1	06/06/24 18:20	
Toluene	ND	U	1.0	0.20	1	06/06/24 18:20	
Trichloroethene (TCE)	**0.39**	**J**	1.0	0.20	1	06/06/24 18:20	
Trichlorofluoromethane (CFC 11)	**610**	**D**	5.0	1.2	5	06/08/24 04:24	
Vinyl Acetate	ND	U	5.0	1.1	1	06/06/24 18:20	
Vinyl Chloride	ND	U	1.0	0.20	1	06/06/24 18:20	
cis-1,2-Dichloroethene	ND	U	1.0	0.23	1	06/06/24 18:20	
cis-1,3-Dichloropropene	ND	U	1.0	0.20	1	06/06/24 18:20	
m,p-Xylenes	ND	U	2.0	0.20	1	06/06/24 18:20	
o-Xylene	ND	U	1.0	0.20	1	06/06/24 18:20	
trans-1,2-Dichloroethene	ND	U	1.0	0.20	1	06/06/24 18:20	
trans-1,3-Dichloropropene	ND	U	1.0	0.23	1	06/06/24 18:20	
trans-1,4-Dichloro-2-butene	ND	U	1.0	0.78	1	06/06/24 18:20	
1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	**0.59**	**J**	1.0	0.20	1	06/06/24 18:20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	100	85 - 122	06/06/24 18:20	
Dibromofluoromethane	99	80 - 116	06/06/24 18:20	
Toluene-d8	101	87 - 121	06/06/24 18:20	

Tentatively Identified Compounds

CAS#	Compound Identification	RT	Result ug/L	Q
	unknown	0.97	29	J

Analytical Report

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	05/28/24
Sample Matrix:	Water	**Date Received:**	05/31/24 07:15
Sample Name:	2405281011C 400-JV-150	**Units:**	ug/L
Lab Code:	R2404650-011	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND U	1.0	0.20	1	06/06/24 16:02	
1,1,1-Trichloroethane (TCA)	ND U	1.0	0.20	1	06/06/24 16:02	
1,1,2,2-Tetrachloroethane	ND U	1.0	0.20	1	06/06/24 16:02	
1,1,2-Trichloroethane	ND U	1.0	0.20	1	06/06/24 16:02	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND U	1.0	0.20	1	06/06/24 16:02	
1,1-Dichloroethane (1,1-DCA)	ND U	1.0	0.20	1	06/06/24 16:02	
1,1-Dichloroethene (1,1-DCE)	ND U	1.0	0.20	1	06/06/24 16:02	
1,2,3-Trichloropropane	ND U	1.0	0.26	1	06/06/24 16:02	
1,2-Dibromo-3-chloropropane (DBCP)	ND U	2.0	0.45	1	06/06/24 16:02	
1,2-Dibromoethane	ND U	1.0	0.20	1	06/06/24 16:02	
1,2-Dichloroethane	ND U	1.0	0.20	1	06/06/24 16:02	
1,2-Dichloropropane	ND U	1.0	0.20	1	06/06/24 16:02	
1,4-Dioxane	ND U	100	13	1	06/06/24 16:02	
2,2-Dichloro-1,1,1-trifluoroethane (CFC 123)	ND U	1.0	0.20	1	06/06/24 16:02	
2-Butanone (MEK)	ND U	5.0	0.78	1	06/06/24 16:02	
2-Chloro-1,3-butadiene	ND U	1.0	0.20	1	06/06/24 16:02	
2-Hexanone	ND U	5.0	0.20	1	06/06/24 16:02	
Isobutyl Alcohol	ND U	100	33	1	06/06/24 16:02	
2-Propanol	ND U	50	22	1	06/06/24 16:02	
Allyl Chloride	ND U	2.0	0.36	1	06/06/24 16:02	
4-Methyl-2-pentanone	ND U	5.0	0.20	1	06/06/24 16:02	
Acetone	ND U	10	5.0	1	06/06/24 16:02	
Acetonitrile	ND U	25	5.2	1	06/06/24 16:02	
Acrolein	ND U	10	0.90	1	06/06/24 16:02	
Acrylonitrile	ND U	5.0	0.90	1	06/06/24 16:02	
Benzene	ND U	1.0	0.20	1	06/06/24 16:02	
Bromodichloromethane	ND U	1.0	0.20	1	06/06/24 16:02	
Bromoform	ND U	1.0	0.25	1	06/06/24 16:02	
Bromomethane	ND U	2.0	0.70	1	06/06/24 16:02	
Carbon Disulfide	ND U	1.0	0.42	1	06/06/24 16:02	
Carbon Tetrachloride	ND U	1.0	0.34	1	06/06/24 16:02	
Chlorobenzene	ND U	1.0	0.20	1	06/06/24 16:02	
Chloroethane	ND U	2.0	0.23	1	06/06/24 16:02	
Chloroform	ND U	1.0	0.51	1	06/06/24 16:02	
Chloromethane	ND U	2.0	0.80	1	06/06/24 16:02	
Cyclohexane	ND U	10	0.60	1	06/06/24 16:02	
Dibromochloromethane	ND U	1.0	0.20	1	06/06/24 16:02	
Dibromomethane	ND U	1.0	0.20	1	06/06/24 16:02	
Dichlorodifluoromethane (CFC 12)	ND U	1.0	0.21	1	06/06/24 16:02	
Dichlorofluoromethane (CFC 21)	ND U	1.0	0.20	1	06/06/24 16:02	

Analytical Report

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	05/28/24
Sample Matrix:	Water	**Date Received:**	05/31/24 07:15
Sample Name:	2405281011C 400-JV-150	**Units:**	ug/L
Lab Code:	R2404650-011	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Dichloromethane	ND U	1.0	0.65	1	06/06/24 16:02	
Ethyl Methacrylate	ND U	2.0	0.20	1	06/06/24 16:02	
Ethylbenzene	ND U	1.0	0.20	1	06/06/24 16:02	
Iodomethane	ND U	5.0	4.3	1	06/06/24 16:02	
Methacrylonitrile	ND U	5.0	0.52	1	06/06/24 16:02	
Methyl Methacrylate	ND U	2.0	0.51	1	06/06/24 16:02	
Methyl tert-Butyl Ether	ND U	10	0.20	1	06/06/24 16:02	
Methylcyclohexane	ND U	10	0.20	1	06/06/24 16:02	
Propionitrile	ND U	5.0	3.0	1	06/06/24 16:02	
Styrene	ND U	1.0	0.20	1	06/06/24 16:02	
Tetrachloroethene (PCE)	ND U	1.0	0.21	1	06/06/24 16:02	
Tetrahydrofuran (THF)	ND U	5.0	1.7	1	06/06/24 16:02	
Toluene	ND U	1.0	0.20	1	06/06/24 16:02	
Trichloroethene (TCE)	ND U	1.0	0.20	1	06/06/24 16:02	
Trichlorofluoromethane (CFC 11)	ND U	1.0	0.24	1	06/06/24 16:02	
Vinyl Acetate	ND U	5.0	1.1	1	06/06/24 16:02	
Vinyl Chloride	ND U	1.0	0.20	1	06/06/24 16:02	
cis-1,2-Dichloroethene	ND U	1.0	0.23	1	06/06/24 16:02	
cis-1,3-Dichloropropene	ND U	1.0	0.20	1	06/06/24 16:02	
m,p-Xylenes	ND U	2.0	0.20	1	06/06/24 16:02	
o-Xylene	ND U	1.0	0.20	1	06/06/24 16:02	
trans-1,2-Dichloroethene	ND U	1.0	0.20	1	06/06/24 16:02	
trans-1,3-Dichloropropene	ND U	1.0	0.23	1	06/06/24 16:02	
trans-1,4-Dichloro-2-butene	ND U	1.0	0.78	1	06/06/24 16:02	
1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	ND U	1.0	0.20	1	06/06/24 16:02	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	85 - 122	06/06/24 16:02	
Dibromofluoromethane	98	80 - 116	06/06/24 16:02	
Toluene-d8	102	87 - 121	06/06/24 16:02	

Tentatively Identified Compounds

CAS#	Compound Identification	RT	Result ug/L	Q
	unknown	0.97	10	J

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	05/28/24
Sample Matrix:	Water	**Date Received:**	05/31/24 07:15
Sample Name:	2405281430C 400-HV-147	**Units:**	ug/L
Lab Code:	R2404650-012	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND	U	1.0	0.20	1	06/06/24 18:43	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.20	1	06/06/24 18:43	
1,1,2,2-Tetrachloroethane	ND	U	1.0	0.20	1	06/06/24 18:43	
1,1,2-Trichloroethane	ND	U	1.0	0.20	1	06/06/24 18:43	
1,1,2-Trichloro-1,2,2-trifluoroethane	**53**		1.0	0.20	1	06/06/24 18:43	
1,1-Dichloroethane (1,1-DCA)	ND	U	1.0	0.20	1	06/06/24 18:43	
1,1-Dichloroethene (1,1-DCE)	ND	U	1.0	0.20	1	06/06/24 18:43	
1,2,3-Trichloropropane	ND	U	1.0	0.26	1	06/06/24 18:43	
1,2-Dibromo-3-chloropropane (DBCP)	ND	U	2.0	0.45	1	06/06/24 18:43	
1,2-Dibromoethane	ND	U	1.0	0.20	1	06/06/24 18:43	
1,2-Dichloroethane	ND	U	1.0	0.20	1	06/06/24 18:43	
1,2-Dichloropropane	ND	U	1.0	0.20	1	06/06/24 18:43	
1,4-Dioxane	ND	U	100	13	1	06/06/24 18:43	
2,2-Dichloro-1,1,1-trifluoroethane (CFC 123)	ND	U	1.0	0.20	1	06/06/24 18:43	
2-Butanone (MEK)	ND	U	5.0	0.78	1	06/06/24 18:43	
2-Chloro-1,3-butadiene	ND	U	1.0	0.20	1	06/06/24 18:43	
2-Hexanone	ND	U	5.0	0.20	1	06/06/24 18:43	
Isobutyl Alcohol	ND	U	100	33	1	06/06/24 18:43	
2-Propanol	ND	U	50	22	1	06/06/24 18:43	
Allyl Chloride	ND	U	2.0	0.36	1	06/06/24 18:43	
4-Methyl-2-pentanone	ND	U	5.0	0.20	1	06/06/24 18:43	
Acetone	ND	U	10	5.0	1	06/06/24 18:43	
Acetonitrile	ND	U	25	5.2	1	06/06/24 18:43	
Acrolein	ND	U	10	0.90	1	06/06/24 18:43	
Acrylonitrile	ND	U	5.0	0.90	1	06/06/24 18:43	
Benzene	ND	U	1.0	0.20	1	06/06/24 18:43	
Bromodichloromethane	ND	U	1.0	0.20	1	06/06/24 18:43	
Bromoform	ND	U	1.0	0.25	1	06/06/24 18:43	
Bromomethane	ND	U	2.0	0.70	1	06/06/24 18:43	
Carbon Disulfide	ND	U	1.0	0.42	1	06/06/24 18:43	
Carbon Tetrachloride	ND	U	1.0	0.34	1	06/06/24 18:43	
Chlorobenzene	ND	U	1.0	0.20	1	06/06/24 18:43	
Chloroethane	ND	U	2.0	0.23	1	06/06/24 18:43	
Chloroform	**0.95**	**J**	1.0	0.51	1	06/06/24 18:43	
Chloromethane	ND	U	2.0	0.80	1	06/06/24 18:43	
Cyclohexane	ND	U	10	0.60	1	06/06/24 18:43	
Dibromochloromethane	ND	U	1.0	0.20	1	06/06/24 18:43	
Dibromomethane	ND	U	1.0	0.20	1	06/06/24 18:43	
Dichlorodifluoromethane (CFC 12)	ND	U	1.0	0.21	1	06/06/24 18:43	
Dichlorofluoromethane (CFC 21)	**3.0**		1.0	0.20	1	06/06/24 18:43	

Analytical Report

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	05/28/24
Sample Matrix:	Water	**Date Received:**	05/31/24 07:15
Sample Name:	2405281430C 400-HV-147	**Units:**	ug/L
Lab Code:	R2404650-012	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Q
Dichloromethane	ND	U	1.0	0.65	1	06/06/24 18:43	
Ethyl Methacrylate	ND	U	2.0	0.20	1	06/06/24 18:43	
Ethylbenzene	ND	U	1.0	0.20	1	06/06/24 18:43	
Iodomethane	ND	U	5.0	4.3	1	06/06/24 18:43	
Methacrylonitrile	ND	U	5.0	0.52	1	06/06/24 18:43	
Methyl Methacrylate	ND	U	2.0	0.51	1	06/06/24 18:43	
Methyl tert-Butyl Ether	ND	U	10	0.20	1	06/06/24 18:43	
Methylcyclohexane	ND	U	10	0.20	1	06/06/24 18:43	
Propionitrile	ND	U	5.0	3.0	1	06/06/24 18:43	
Styrene	ND	U	1.0	0.20	1	06/06/24 18:43	
Tetrachloroethene (PCE)	ND	U	1.0	0.21	1	06/06/24 18:43	
Tetrahydrofuran (THF)	ND	U	5.0	1.7	1	06/06/24 18:43	
Toluene	ND	U	1.0	0.20	1	06/06/24 18:43	
Trichloroethene (TCE)	**0.32**	**J**	1.0	0.20	1	06/06/24 18:43	
Trichlorofluoromethane (CFC 11)	**110**		1.0	0.24	1	06/06/24 18:43	
Vinyl Acetate	ND	U	5.0	1.1	1	06/06/24 18:43	
Vinyl Chloride	ND	U	1.0	0.20	1	06/06/24 18:43	
cis-1,2-Dichloroethene	ND	U	1.0	0.23	1	06/06/24 18:43	
cis-1,3-Dichloropropene	ND	U	1.0	0.20	1	06/06/24 18:43	
m,p-Xylenes	ND	U	2.0	0.20	1	06/06/24 18:43	
o-Xylene	ND	U	1.0	0.20	1	06/06/24 18:43	
trans-1,2-Dichloroethene	ND	U	1.0	0.20	1	06/06/24 18:43	
trans-1,3-Dichloropropene	ND	U	1.0	0.23	1	06/06/24 18:43	
trans-1,4-Dichloro-2-butene	ND	U	1.0	0.78	1	06/06/24 18:43	
1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	**1.0**		1.0	0.20	1	06/06/24 18:43	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	96	85 - 122	06/06/24 18:43	
Dibromofluoromethane	100	80 - 116	06/06/24 18:43	
Toluene-d8	102	87 - 121	06/06/24 18:43	

Tentatively Identified Compounds

CAS#	Compound Identification	RT	Result ug/L	Q
	unknown	0.96	29	J

Analytical Report

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	05/28/24
Sample Matrix:	Water	**Date Received:**	05/31/24 07:15
Sample Name:	2405281431C 400-HV-147	**Units:**	ug/L
Lab Code:	R2404650-013	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND U	1.0	0.20	1	06/06/24 16:25	
1,1,1-Trichloroethane (TCA)	ND U	1.0	0.20	1	06/06/24 16:25	
1,1,2,2-Tetrachloroethane	ND U	1.0	0.20	1	06/06/24 16:25	
1,1,2-Trichloroethane	ND U	1.0	0.20	1	06/06/24 16:25	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND U	1.0	0.20	1	06/06/24 16:25	
1,1-Dichloroethane (1,1-DCA)	ND U	1.0	0.20	1	06/06/24 16:25	
1,1-Dichloroethene (1,1-DCE)	ND U	1.0	0.20	1	06/06/24 16:25	
1,2,3-Trichloropropane	ND U	1.0	0.26	1	06/06/24 16:25	
1,2-Dibromo-3-chloropropane (DBCP)	ND U	2.0	0.45	1	06/06/24 16:25	
1,2-Dibromoethane	ND U	1.0	0.20	1	06/06/24 16:25	
1,2-Dichloroethane	ND U	1.0	0.20	1	06/06/24 16:25	
1,2-Dichloropropane	ND U	1.0	0.20	1	06/06/24 16:25	
1,4-Dioxane	ND U	100	13	1	06/06/24 16:25	
2,2-Dichloro-1,1,1-trifluoroethane (CFC 123)	ND U	1.0	0.20	1	06/06/24 16:25	
2-Butanone (MEK)	ND U	5.0	0.78	1	06/06/24 16:25	
2-Chloro-1,3-butadiene	ND U	1.0	0.20	1	06/06/24 16:25	
2-Hexanone	ND U	5.0	0.20	1	06/06/24 16:25	
Isobutyl Alcohol	ND U	100	33	1	06/06/24 16:25	
2-Propanol	ND U	50	22	1	06/06/24 16:25	
Allyl Chloride	ND U	2.0	0.36	1	06/06/24 16:25	
4-Methyl-2-pentanone	ND U	5.0	0.20	1	06/06/24 16:25	
Acetone	ND U	10	5.0	1	06/06/24 16:25	
Acetonitrile	ND U	25	5.2	1	06/06/24 16:25	
Acrolein	ND U	10	0.90	1	06/06/24 16:25	
Acrylonitrile	ND U	5.0	0.90	1	06/06/24 16:25	
Benzene	ND U	1.0	0.20	1	06/06/24 16:25	
Bromodichloromethane	ND U	1.0	0.20	1	06/06/24 16:25	
Bromoform	ND U	1.0	0.25	1	06/06/24 16:25	
Bromomethane	ND U	2.0	0.70	1	06/06/24 16:25	
Carbon Disulfide	ND U	1.0	0.42	1	06/06/24 16:25	
Carbon Tetrachloride	ND U	1.0	0.34	1	06/06/24 16:25	
Chlorobenzene	ND U	1.0	0.20	1	06/06/24 16:25	
Chloroethane	ND U	2.0	0.23	1	06/06/24 16:25	
Chloroform	ND U	1.0	0.51	1	06/06/24 16:25	
Chloromethane	ND U	2.0	0.80	1	06/06/24 16:25	
Cyclohexane	ND U	10	0.60	1	06/06/24 16:25	
Dibromochloromethane	ND U	1.0	0.20	1	06/06/24 16:25	
Dibromomethane	ND U	1.0	0.20	1	06/06/24 16:25	
Dichlorodifluoromethane (CFC 12)	ND U	1.0	0.21	1	06/06/24 16:25	
Dichlorofluoromethane (CFC 21)	ND U	1.0	0.20	1	06/06/24 16:25	

Analytical Report

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	05/28/24
Sample Matrix:	Water	**Date Received:**	05/31/24 07:15
Sample Name:	2405281431C 400-HV-147	**Units:**	ug/L
Lab Code:	R2404650-013	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Dichloromethane	ND U	1.0	0.65	1	06/06/24 16:25	
Ethyl Methacrylate	ND U	2.0	0.20	1	06/06/24 16:25	
Ethylbenzene	ND U	1.0	0.20	1	06/06/24 16:25	
Iodomethane	ND U	5.0	4.3	1	06/06/24 16:25	
Methacrylonitrile	ND U	5.0	0.52	1	06/06/24 16:25	
Methyl Methacrylate	ND U	2.0	0.51	1	06/06/24 16:25	
Methyl tert-Butyl Ether	ND U	10	0.20	1	06/06/24 16:25	
Methylcyclohexane	ND U	10	0.20	1	06/06/24 16:25	
Propionitrile	ND U	5.0	3.0	1	06/06/24 16:25	
Styrene	ND U	1.0	0.20	1	06/06/24 16:25	
Tetrachloroethene (PCE)	ND U	1.0	0.21	1	06/06/24 16:25	
Tetrahydrofuran (THF)	ND U	5.0	1.7	1	06/06/24 16:25	
Toluene	ND U	1.0	0.20	1	06/06/24 16:25	
Trichloroethene (TCE)	ND U	1.0	0.20	1	06/06/24 16:25	
Trichlorofluoromethane (CFC 11)	ND U	1.0	0.24	1	06/06/24 16:25	
Vinyl Acetate	ND U	5.0	1.1	1	06/06/24 16:25	
Vinyl Chloride	ND U	1.0	0.20	1	06/06/24 16:25	
cis-1,2-Dichloroethene	ND U	1.0	0.23	1	06/06/24 16:25	
cis-1,3-Dichloropropene	ND U	1.0	0.20	1	06/06/24 16:25	
m,p-Xylenes	ND U	2.0	0.20	1	06/06/24 16:25	
o-Xylene	ND U	1.0	0.20	1	06/06/24 16:25	
trans-1,2-Dichloroethene	ND U	1.0	0.20	1	06/06/24 16:25	
trans-1,3-Dichloropropene	ND U	1.0	0.23	1	06/06/24 16:25	
trans-1,4-Dichloro-2-butene	ND U	1.0	0.78	1	06/06/24 16:25	
1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	ND U	1.0	0.20	1	06/06/24 16:25	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	85 - 122	06/06/24 16:25	
Dibromofluoromethane	97	80 - 116	06/06/24 16:25	
Toluene-d8	101	87 - 121	06/06/24 16:25	

Tentatively Identified Compounds

CAS#	Compound Identification	RT	Result ug/L	Q
	unknown	0.97	9.7	J

Analytical Report

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	05/29/24
Sample Matrix:	Water	**Date Received:**	05/31/24 07:15
Sample Name:	2405290700A PL-12-570	**Units:**	ug/L
Lab Code:	R2404650-014	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND U	1.0	0.20	1	06/06/24 12:58	
1,1,1-Trichloroethane (TCA)	ND U	1.0	0.20	1	06/06/24 12:58	
1,1,2,2-Tetrachloroethane	ND U	1.0	0.20	1	06/06/24 12:58	
1,1,2-Trichloroethane	ND U	1.0	0.20	1	06/06/24 12:58	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND U	1.0	0.20	1	06/06/24 12:58	
1,1-Dichloroethane (1,1-DCA)	ND U	1.0	0.20	1	06/06/24 12:58	
1,1-Dichloroethene (1,1-DCE)	ND U	1.0	0.20	1	06/06/24 12:58	
1,2,3-Trichloropropane	ND U	1.0	0.26	1	06/06/24 12:58	
1,2-Dibromo-3-chloropropane (DBCP)	ND U	2.0	0.45	1	06/06/24 12:58	
1,2-Dibromoethane	ND U	1.0	0.20	1	06/06/24 12:58	
1,2-Dichloroethane	ND U	1.0	0.20	1	06/06/24 12:58	
1,2-Dichloropropane	ND U	1.0	0.20	1	06/06/24 12:58	
1,4-Dioxane	ND U	100	13	1	06/06/24 12:58	
2,2-Dichloro-1,1,1-trifluoroethane (CFC 123)	ND U	1.0	0.20	1	06/06/24 12:58	
2-Butanone (MEK)	ND U	5.0	0.78	1	06/06/24 12:58	
2-Chloro-1,3-butadiene	ND U	1.0	0.20	1	06/06/24 12:58	
2-Hexanone	ND U	5.0	0.20	1	06/06/24 12:58	
Isobutyl Alcohol	ND U	100	33	1	06/06/24 12:58	
2-Propanol	ND U	50	22	1	06/06/24 12:58	
Allyl Chloride	ND U	2.0	0.36	1	06/06/24 12:58	
4-Methyl-2-pentanone	ND U	5.0	0.20	1	06/06/24 12:58	
Acetone	ND U	10	5.0	1	06/06/24 12:58	
Acetonitrile	ND U	25	5.2	1	06/06/24 12:58	
Acrolein	ND U	10	0.90	1	06/06/24 12:58	
Acrylonitrile	ND U	5.0	0.90	1	06/06/24 12:58	
Benzene	ND U	1.0	0.20	1	06/06/24 12:58	
Bromodichloromethane	ND U	1.0	0.20	1	06/06/24 12:58	
Bromoform	ND U	1.0	0.25	1	06/06/24 12:58	
Bromomethane	ND U	2.0	0.70	1	06/06/24 12:58	
Carbon Disulfide	ND U	1.0	0.42	1	06/06/24 12:58	
Carbon Tetrachloride	ND U	1.0	0.34	1	06/06/24 12:58	
Chlorobenzene	ND U	1.0	0.20	1	06/06/24 12:58	
Chloroethane	ND U	2.0	0.23	1	06/06/24 12:58	
Chloroform	ND U	1.0	0.51	1	06/06/24 12:58	
Chloromethane	ND U	2.0	0.80	1	06/06/24 12:58	
Cyclohexane	ND U	10	0.60	1	06/06/24 12:58	
Dibromochloromethane	ND U	1.0	0.20	1	06/06/24 12:58	
Dibromomethane	ND U	1.0	0.20	1	06/06/24 12:58	
Dichlorodifluoromethane (CFC 12)	ND U	1.0	0.21	1	06/06/24 12:58	
Dichlorofluoromethane (CFC 21)	ND U	1.0	0.20	1	06/06/24 12:58	

Analytical Report

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	05/29/24
Sample Matrix:	Water	**Date Received:**	05/31/24 07:15
Sample Name:	2405290700A PL-12-570	**Units:**	ug/L
Lab Code:	R2404650-014	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Dichloromethane	ND U	1.0	0.65	1	06/06/24 12:58	
Ethyl Methacrylate	ND U	2.0	0.20	1	06/06/24 12:58	
Ethylbenzene	ND U	1.0	0.20	1	06/06/24 12:58	
Iodomethane	ND U	5.0	4.3	1	06/06/24 12:58	
Methacrylonitrile	ND U	5.0	0.52	1	06/06/24 12:58	
Methyl Methacrylate	ND U	2.0	0.51	1	06/06/24 12:58	
Methyl tert-Butyl Ether	ND U	10	0.20	1	06/06/24 12:58	
Methylcyclohexane	ND U	10	0.20	1	06/06/24 12:58	
Propionitrile	ND U	5.0	3.0	1	06/06/24 12:58	
Styrene	ND U	1.0	0.20	1	06/06/24 12:58	
Tetrachloroethene (PCE)	ND U	1.0	0.21	1	06/06/24 12:58	
Tetrahydrofuran (THF)	ND U	5.0	1.7	1	06/06/24 12:58	
Toluene	ND U	1.0	0.20	1	06/06/24 12:58	
Trichloroethene (TCE)	ND U	1.0	0.20	1	06/06/24 12:58	
Trichlorofluoromethane (CFC 11)	ND U	1.0	0.24	1	06/06/24 12:58	
Vinyl Acetate	ND U	5.0	1.1	1	06/06/24 12:58	
Vinyl Chloride	ND U	1.0	0.20	1	06/06/24 12:58	
cis-1,2-Dichloroethene	ND U	1.0	0.23	1	06/06/24 12:58	
cis-1,3-Dichloropropene	ND U	1.0	0.20	1	06/06/24 12:58	
m,p-Xylenes	ND U	2.0	0.20	1	06/06/24 12:58	
o-Xylene	ND U	1.0	0.20	1	06/06/24 12:58	
trans-1,2-Dichloroethene	ND U	1.0	0.20	1	06/06/24 12:58	
trans-1,3-Dichloropropene	ND U	1.0	0.23	1	06/06/24 12:58	
trans-1,4-Dichloro-2-butene	ND U	1.0	0.78	1	06/06/24 12:58	
1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	ND U	1.0	0.20	1	06/06/24 12:58	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	85 - 122	06/06/24 12:58	
Dibromofluoromethane	98	80 - 116	06/06/24 12:58	
Toluene-d8	101	87 - 121	06/06/24 12:58	

Tentatively Identified Compounds

CAS#	Compound Identification	RT	Result ug/L	Q
	unknown	0.97	9.4	J

Analytical Report

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	05/29/24
Sample Matrix:	Water	**Date Received:**	05/31/24 07:15
Sample Name:	2405290932A PL-12-570	**Units:**	ug/L
Lab Code:	R2404650-015	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND U	1.0	0.20	1	06/06/24 13:21	
1,1,1-Trichloroethane (TCA)	ND U	1.0	0.20	1	06/06/24 13:21	
1,1,2,2-Tetrachloroethane	ND U	1.0	0.20	1	06/06/24 13:21	
1,1,2-Trichloroethane	ND U	1.0	0.20	1	06/06/24 13:21	
1,1,2-Trichloro-1,2,2-trifluoroethane	**3.7**	1.0	0.20	1	06/06/24 13:21	
1,1-Dichloroethane (1,1-DCA)	ND U	1.0	0.20	1	06/06/24 13:21	
1,1-Dichloroethene (1,1-DCE)	ND U	1.0	0.20	1	06/06/24 13:21	
1,2,3-Trichloropropane	ND U	1.0	0.26	1	06/06/24 13:21	
1,2-Dibromo-3-chloropropane (DBCP)	ND U	2.0	0.45	1	06/06/24 13:21	
1,2-Dibromoethane	ND U	1.0	0.20	1	06/06/24 13:21	
1,2-Dichloroethane	ND U	1.0	0.20	1	06/06/24 13:21	
1,2-Dichloropropane	ND U	1.0	0.20	1	06/06/24 13:21	
1,4-Dioxane	ND U	100	13	1	06/06/24 13:21	
2,2-Dichloro-1,1,1-trifluoroethane (CFC 123)	ND U	1.0	0.20	1	06/06/24 13:21	
2-Butanone (MEK)	ND U	5.0	0.78	1	06/06/24 13:21	
2-Chloro-1,3-butadiene	ND U	1.0	0.20	1	06/06/24 13:21	
2-Hexanone	ND U	5.0	0.20	1	06/06/24 13:21	
Isobutyl Alcohol	ND U	100	33	1	06/06/24 13:21	
2-Propanol	ND U	50	22	1	06/06/24 13:21	
Allyl Chloride	ND U	2.0	0.36	1	06/06/24 13:21	
4-Methyl-2-pentanone	ND U	5.0	0.20	1	06/06/24 13:21	
Acetone	ND U	10	5.0	1	06/06/24 13:21	
Acetonitrile	ND U	25	5.2	1	06/06/24 13:21	
Acrolein	ND U	10	0.90	1	06/06/24 13:21	
Acrylonitrile	ND U	5.0	0.90	1	06/06/24 13:21	
Benzene	ND U	1.0	0.20	1	06/06/24 13:21	
Bromodichloromethane	ND U	1.0	0.20	1	06/06/24 13:21	
Bromoform	ND U	1.0	0.25	1	06/06/24 13:21	
Bromomethane	ND U	2.0	0.70	1	06/06/24 13:21	
Carbon Disulfide	ND U	1.0	0.42	1	06/06/24 13:21	
Carbon Tetrachloride	ND U	1.0	0.34	1	06/06/24 13:21	
Chlorobenzene	ND U	1.0	0.20	1	06/06/24 13:21	
Chloroethane	ND U	2.0	0.23	1	06/06/24 13:21	
Chloroform	ND U	1.0	0.51	1	06/06/24 13:21	
Chloromethane	ND U	2.0	0.80	1	06/06/24 13:21	
Cyclohexane	ND U	10	0.60	1	06/06/24 13:21	
Dibromochloromethane	ND U	1.0	0.20	1	06/06/24 13:21	
Dibromomethane	ND U	1.0	0.20	1	06/06/24 13:21	
Dichlorodifluoromethane (CFC 12)	ND U	1.0	0.21	1	06/06/24 13:21	
Dichlorofluoromethane (CFC 21)	ND U	1.0	0.20	1	06/06/24 13:21	

Analytical Report

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	05/29/24
Sample Matrix:	Water	**Date Received:**	05/31/24 07:15
Sample Name:	2405290932A PL-12-570	**Units:**	ug/L
Lab Code:	R2404650-015	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Dichloromethane	ND U	1.0	0.65	1	06/06/24 13:21	
Ethyl Methacrylate	ND U	2.0	0.20	1	06/06/24 13:21	
Ethylbenzene	ND U	1.0	0.20	1	06/06/24 13:21	
Iodomethane	ND U	5.0	4.3	1	06/06/24 13:21	
Methacrylonitrile	ND U	5.0	0.52	1	06/06/24 13:21	
Methyl Methacrylate	ND U	2.0	0.51	1	06/06/24 13:21	
Methyl tert-Butyl Ether	ND U	10	0.20	1	06/06/24 13:21	
Methylcyclohexane	ND U	10	0.20	1	06/06/24 13:21	
Propionitrile	ND U	5.0	3.0	1	06/06/24 13:21	
Styrene	ND U	1.0	0.20	1	06/06/24 13:21	
Tetrachloroethene (PCE)	ND U	1.0	0.21	1	06/06/24 13:21	
Tetrahydrofuran (THF)	ND U	5.0	1.7	1	06/06/24 13:21	
Toluene	ND U	1.0	0.20	1	06/06/24 13:21	
Trichloroethene (TCE)	**7.1**	1.0	0.20	1	06/06/24 13:21	
Trichlorofluoromethane (CFC 11)	**6.6**	1.0	0.24	1	06/06/24 13:21	
Vinyl Acetate	ND U	5.0	1.1	1	06/06/24 13:21	
Vinyl Chloride	ND U	1.0	0.20	1	06/06/24 13:21	
cis-1,2-Dichloroethene	ND U	1.0	0.23	1	06/06/24 13:21	
cis-1,3-Dichloropropene	ND U	1.0	0.20	1	06/06/24 13:21	
m,p-Xylenes	ND U	2.0	0.20	1	06/06/24 13:21	
o-Xylene	ND U	1.0	0.20	1	06/06/24 13:21	
trans-1,2-Dichloroethene	ND U	1.0	0.20	1	06/06/24 13:21	
trans-1,3-Dichloropropene	ND U	1.0	0.23	1	06/06/24 13:21	
trans-1,4-Dichloro-2-butene	ND U	1.0	0.78	1	06/06/24 13:21	
1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	ND U	1.0	0.20	1	06/06/24 13:21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	85 - 122	06/06/24 13:21	
Dibromofluoromethane	97	80 - 116	06/06/24 13:21	
Toluene-d8	100	87 - 121	06/06/24 13:21	

Tentatively Identified Compounds

CAS#	Compound Identification	RT	Result ug/L	Q
	unknown	0.97	28	J

Analytical Report

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	05/29/24
Sample Matrix:	Water	**Date Received:**	05/31/24 07:15
Sample Name:	2405290933A PL-12-570	**Units:**	ug/L
Lab Code:	R2404650-016	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND U	1.0	0.20	1	06/06/24 13:44	
1,1,1-Trichloroethane (TCA)	ND U	1.0	0.20	1	06/06/24 13:44	
1,1,2,2-Tetrachloroethane	ND U	1.0	0.20	1	06/06/24 13:44	
1,1,2-Trichloroethane	ND U	1.0	0.20	1	06/06/24 13:44	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND U	1.0	0.20	1	06/06/24 13:44	
1,1-Dichloroethane (1,1-DCA)	ND U	1.0	0.20	1	06/06/24 13:44	
1,1-Dichloroethene (1,1-DCE)	ND U	1.0	0.20	1	06/06/24 13:44	
1,2,3-Trichloropropane	ND U	1.0	0.26	1	06/06/24 13:44	
1,2-Dibromo-3-chloropropane (DBCP)	ND U	2.0	0.45	1	06/06/24 13:44	
1,2-Dibromoethane	ND U	1.0	0.20	1	06/06/24 13:44	
1,2-Dichloroethane	ND U	1.0	0.20	1	06/06/24 13:44	
1,2-Dichloropropane	ND U	1.0	0.20	1	06/06/24 13:44	
1,4-Dioxane	ND U	100	13	1	06/06/24 13:44	
2,2-Dichloro-1,1,1-trifluoroethane (CFC 123)	ND U	1.0	0.20	1	06/06/24 13:44	
2-Butanone (MEK)	ND U	5.0	0.78	1	06/06/24 13:44	
2-Chloro-1,3-butadiene	ND U	1.0	0.20	1	06/06/24 13:44	
2-Hexanone	ND U	5.0	0.20	1	06/06/24 13:44	
Isobutyl Alcohol	ND U	100	33	1	06/06/24 13:44	
2-Propanol	ND U	50	22	1	06/06/24 13:44	
Allyl Chloride	ND U	2.0	0.36	1	06/06/24 13:44	
4-Methyl-2-pentanone	ND U	5.0	0.20	1	06/06/24 13:44	
Acetone	ND U	10	5.0	1	06/06/24 13:44	
Acetonitrile	ND U	25	5.2	1	06/06/24 13:44	
Acrolein	ND U	10	0.90	1	06/06/24 13:44	
Acrylonitrile	ND U	5.0	0.90	1	06/06/24 13:44	
Benzene	ND U	1.0	0.20	1	06/06/24 13:44	
Bromodichloromethane	ND U	1.0	0.20	1	06/06/24 13:44	
Bromoform	ND U	1.0	0.25	1	06/06/24 13:44	
Bromomethane	ND U	2.0	0.70	1	06/06/24 13:44	
Carbon Disulfide	ND U	1.0	0.42	1	06/06/24 13:44	
Carbon Tetrachloride	ND U	1.0	0.34	1	06/06/24 13:44	
Chlorobenzene	ND U	1.0	0.20	1	06/06/24 13:44	
Chloroethane	ND U	2.0	0.23	1	06/06/24 13:44	
Chloroform	ND U	1.0	0.51	1	06/06/24 13:44	
Chloromethane	ND U	2.0	0.80	1	06/06/24 13:44	
Cyclohexane	ND U	10	0.60	1	06/06/24 13:44	
Dibromochloromethane	ND U	1.0	0.20	1	06/06/24 13:44	
Dibromomethane	ND U	1.0	0.20	1	06/06/24 13:44	
Dichlorodifluoromethane (CFC 12)	ND U	1.0	0.21	1	06/06/24 13:44	
Dichlorofluoromethane (CFC 21)	ND U	1.0	0.20	1	06/06/24 13:44	

Analytical Report

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	05/29/24
Sample Matrix:	Water	**Date Received:**	05/31/24 07:15
Sample Name:	2405290933A PL-12-570	**Units:**	ug/L
Lab Code:	R2404650-016	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Dichloromethane	ND U	1.0	0.65	1	06/06/24 13:44	
Ethyl Methacrylate	ND U	2.0	0.20	1	06/06/24 13:44	
Ethylbenzene	ND U	1.0	0.20	1	06/06/24 13:44	
Iodomethane	ND U	5.0	4.3	1	06/06/24 13:44	
Methacrylonitrile	ND U	5.0	0.52	1	06/06/24 13:44	
Methyl Methacrylate	ND U	2.0	0.51	1	06/06/24 13:44	
Methyl tert-Butyl Ether	ND U	10	0.20	1	06/06/24 13:44	
Methylcyclohexane	ND U	10	0.20	1	06/06/24 13:44	
Propionitrile	ND U	5.0	3.0	1	06/06/24 13:44	
Styrene	ND U	1.0	0.20	1	06/06/24 13:44	
Tetrachloroethene (PCE)	ND U	1.0	0.21	1	06/06/24 13:44	
Tetrahydrofuran (THF)	ND U	5.0	1.7	1	06/06/24 13:44	
Toluene	ND U	1.0	0.20	1	06/06/24 13:44	
Trichloroethene (TCE)	ND U	1.0	0.20	1	06/06/24 13:44	
Trichlorofluoromethane (CFC 11)	ND U	1.0	0.24	1	06/06/24 13:44	
Vinyl Acetate	ND U	5.0	1.1	1	06/06/24 13:44	
Vinyl Chloride	ND U	1.0	0.20	1	06/06/24 13:44	
cis-1,2-Dichloroethene	ND U	1.0	0.23	1	06/06/24 13:44	
cis-1,3-Dichloropropene	ND U	1.0	0.20	1	06/06/24 13:44	
m,p-Xylenes	ND U	2.0	0.20	1	06/06/24 13:44	
o-Xylene	ND U	1.0	0.20	1	06/06/24 13:44	
trans-1,2-Dichloroethene	ND U	1.0	0.20	1	06/06/24 13:44	
trans-1,3-Dichloropropene	ND U	1.0	0.23	1	06/06/24 13:44	
trans-1,4-Dichloro-2-butene	ND U	1.0	0.78	1	06/06/24 13:44	
1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	ND U	1.0	0.20	1	06/06/24 13:44	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	100	85 - 122	06/06/24 13:44	
Dibromofluoromethane	100	80 - 116	06/06/24 13:44	
Toluene-d8	103	87 - 121	06/06/24 13:44	

Tentatively Identified Compounds

CAS#	Compound Identification	RT	Result ug/L	Q
	unknown	0.97	10	J

Analytical Report

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	05/29/24
Sample Matrix:	Water	**Date Received:**	05/31/24 07:15
Sample Name:	2405291410A PL-12-800	**Units:**	ug/L
Lab Code:	R2404650-017	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND U	1.0	0.20	1	06/06/24 14:07	
1,1,1-Trichloroethane (TCA)	ND U	1.0	0.20	1	06/06/24 14:07	
1,1,2,2-Tetrachloroethane	ND U	1.0	0.20	1	06/06/24 14:07	
1,1,2-Trichloroethane	ND U	1.0	0.20	1	06/06/24 14:07	
1,1,2-Trichloro-1,2,2-trifluoroethane	**3.2**	1.0	0.20	1	06/06/24 14:07	
1,1-Dichloroethane (1,1-DCA)	ND U	1.0	0.20	1	06/06/24 14:07	
1,1-Dichloroethene (1,1-DCE)	ND U	1.0	0.20	1	06/06/24 14:07	
1,2,3-Trichloropropane	ND U	1.0	0.26	1	06/06/24 14:07	
1,2-Dibromo-3-chloropropane (DBCP)	ND U	2.0	0.45	1	06/06/24 14:07	
1,2-Dibromoethane	ND U	1.0	0.20	1	06/06/24 14:07	
1,2-Dichloroethane	ND U	1.0	0.20	1	06/06/24 14:07	
1,2-Dichloropropane	ND U	1.0	0.20	1	06/06/24 14:07	
1,4-Dioxane	ND U	100	13	1	06/06/24 14:07	
2,2-Dichloro-1,1,1-trifluoroethane (CFC 123)	ND U	1.0	0.20	1	06/06/24 14:07	
2-Butanone (MEK)	ND U	5.0	0.78	1	06/06/24 14:07	
2-Chloro-1,3-butadiene	ND U	1.0	0.20	1	06/06/24 14:07	
2-Hexanone	ND U	5.0	0.20	1	06/06/24 14:07	
Isobutyl Alcohol	ND U	100	33	1	06/06/24 14:07	
2-Propanol	ND U	50	22	1	06/06/24 14:07	
Allyl Chloride	ND U	2.0	0.36	1	06/06/24 14:07	
4-Methyl-2-pentanone	ND U	5.0	0.20	1	06/06/24 14:07	
Acetone	ND U	10	5.0	1	06/06/24 14:07	
Acetonitrile	ND U	25	5.2	1	06/06/24 14:07	
Acrolein	ND U	10	0.90	1	06/06/24 14:07	
Acrylonitrile	ND U	5.0	0.90	1	06/06/24 14:07	
Benzene	ND U	1.0	0.20	1	06/06/24 14:07	
Bromodichloromethane	ND U	1.0	0.20	1	06/06/24 14:07	
Bromoform	ND U	1.0	0.25	1	06/06/24 14:07	
Bromomethane	ND U	2.0	0.70	1	06/06/24 14:07	
Carbon Disulfide	ND U	1.0	0.42	1	06/06/24 14:07	
Carbon Tetrachloride	ND U	1.0	0.34	1	06/06/24 14:07	
Chlorobenzene	ND U	1.0	0.20	1	06/06/24 14:07	
Chloroethane	ND U	2.0	0.23	1	06/06/24 14:07	
Chloroform	ND U	1.0	0.51	1	06/06/24 14:07	
Chloromethane	ND U	2.0	0.80	1	06/06/24 14:07	
Cyclohexane	ND U	10	0.60	1	06/06/24 14:07	
Dibromochloromethane	ND U	1.0	0.20	1	06/06/24 14:07	
Dibromomethane	ND U	1.0	0.20	1	06/06/24 14:07	
Dichlorodifluoromethane (CFC 12)	ND U	1.0	0.21	1	06/06/24 14:07	
Dichlorofluoromethane (CFC 21)	ND U	1.0	0.20	1	06/06/24 14:07	

Analytical Report

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	05/29/24
Sample Matrix:	Water	**Date Received:**	05/31/24 07:15
Sample Name:	2405291410A PL-12-800	**Units:**	ug/L
Lab Code:	R2404650-017	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Dichloromethane	ND U	1.0	0.65	1	06/06/24 14:07	
Ethyl Methacrylate	ND U	2.0	0.20	1	06/06/24 14:07	
Ethylbenzene	ND U	1.0	0.20	1	06/06/24 14:07	
Iodomethane	ND U	5.0	4.3	1	06/06/24 14:07	
Methacrylonitrile	ND U	5.0	0.52	1	06/06/24 14:07	
Methyl Methacrylate	ND U	2.0	0.51	1	06/06/24 14:07	
Methyl tert-Butyl Ether	ND U	10	0.20	1	06/06/24 14:07	
Methylcyclohexane	ND U	10	0.20	1	06/06/24 14:07	
Propionitrile	ND U	5.0	3.0	1	06/06/24 14:07	
Styrene	ND U	1.0	0.20	1	06/06/24 14:07	
Tetrachloroethene (PCE)	ND U	1.0	0.21	1	06/06/24 14:07	
Tetrahydrofuran (THF)	ND U	5.0	1.7	1	06/06/24 14:07	
Toluene	ND U	1.0	0.20	1	06/06/24 14:07	
Trichloroethene (TCE)	**6.2**	1.0	0.20	1	06/06/24 14:07	
Trichlorofluoromethane (CFC 11)	**5.8**	1.0	0.24	1	06/06/24 14:07	
Vinyl Acetate	ND U	5.0	1.1	1	06/06/24 14:07	
Vinyl Chloride	ND U	1.0	0.20	1	06/06/24 14:07	
cis-1,2-Dichloroethene	ND U	1.0	0.23	1	06/06/24 14:07	
cis-1,3-Dichloropropene	ND U	1.0	0.20	1	06/06/24 14:07	
m,p-Xylenes	ND U	2.0	0.20	1	06/06/24 14:07	
o-Xylene	ND U	1.0	0.20	1	06/06/24 14:07	
trans-1,2-Dichloroethene	ND U	1.0	0.20	1	06/06/24 14:07	
trans-1,3-Dichloropropene	ND U	1.0	0.23	1	06/06/24 14:07	
trans-1,4-Dichloro-2-butene	ND U	1.0	0.78	1	06/06/24 14:07	
1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	ND U	1.0	0.20	1	06/06/24 14:07	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	85 - 122	06/06/24 14:07	
Dibromofluoromethane	98	80 - 116	06/06/24 14:07	
Toluene-d8	102	87 - 121	06/06/24 14:07	

Tentatively Identified Compounds

CAS#	Compound Identification	RT	Result ug/L	Q
	unknown	0.97	28	J

Analytical Report

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	05/29/24
Sample Matrix:	Water	**Date Received:**	05/31/24 07:15
Sample Name:	2405291411A PL-12-800	**Units:**	ug/L
Lab Code:	R2404650-018	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND U	1.0	0.20	1	06/06/24 14:30	
1,1,1-Trichloroethane (TCA)	ND U	1.0	0.20	1	06/06/24 14:30	
1,1,2,2-Tetrachloroethane	ND U	1.0	0.20	1	06/06/24 14:30	
1,1,2-Trichloroethane	ND U	1.0	0.20	1	06/06/24 14:30	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND U	1.0	0.20	1	06/06/24 14:30	
1,1-Dichloroethane (1,1-DCA)	ND U	1.0	0.20	1	06/06/24 14:30	
1,1-Dichloroethene (1,1-DCE)	ND U	1.0	0.20	1	06/06/24 14:30	
1,2,3-Trichloropropane	ND U	1.0	0.26	1	06/06/24 14:30	
1,2-Dibromo-3-chloropropane (DBCP)	ND U	2.0	0.45	1	06/06/24 14:30	
1,2-Dibromoethane	ND U	1.0	0.20	1	06/06/24 14:30	
1,2-Dichloroethane	ND U	1.0	0.20	1	06/06/24 14:30	
1,2-Dichloropropane	ND U	1.0	0.20	1	06/06/24 14:30	
1,4-Dioxane	ND U	100	13	1	06/06/24 14:30	
2,2-Dichloro-1,1,1-trifluoroethane (CFC 123)	ND U	1.0	0.20	1	06/06/24 14:30	
2-Butanone (MEK)	ND U	5.0	0.78	1	06/06/24 14:30	
2-Chloro-1,3-butadiene	ND U	1.0	0.20	1	06/06/24 14:30	
2-Hexanone	ND U	5.0	0.20	1	06/06/24 14:30	
Isobutyl Alcohol	ND U	100	33	1	06/06/24 14:30	
2-Propanol	ND U	50	22	1	06/06/24 14:30	
Allyl Chloride	ND U	2.0	0.36	1	06/06/24 14:30	
4-Methyl-2-pentanone	ND U	5.0	0.20	1	06/06/24 14:30	
Acetone	ND U	10	5.0	1	06/06/24 14:30	
Acetonitrile	ND U	25	5.2	1	06/06/24 14:30	
Acrolein	ND U	10	0.90	1	06/06/24 14:30	
Acrylonitrile	ND U	5.0	0.90	1	06/06/24 14:30	
Benzene	ND U	1.0	0.20	1	06/06/24 14:30	
Bromodichloromethane	ND U	1.0	0.20	1	06/06/24 14:30	
Bromoform	ND U	1.0	0.25	1	06/06/24 14:30	
Bromomethane	ND U	2.0	0.70	1	06/06/24 14:30	
Carbon Disulfide	ND U	1.0	0.42	1	06/06/24 14:30	
Carbon Tetrachloride	ND U	1.0	0.34	1	06/06/24 14:30	
Chlorobenzene	ND U	1.0	0.20	1	06/06/24 14:30	
Chloroethane	ND U	2.0	0.23	1	06/06/24 14:30	
Chloroform	ND U	1.0	0.51	1	06/06/24 14:30	
Chloromethane	ND U	2.0	0.80	1	06/06/24 14:30	
Cyclohexane	ND U	10	0.60	1	06/06/24 14:30	
Dibromochloromethane	ND U	1.0	0.20	1	06/06/24 14:30	
Dibromomethane	ND U	1.0	0.20	1	06/06/24 14:30	
Dichlorodifluoromethane (CFC 12)	ND U	1.0	0.21	1	06/06/24 14:30	
Dichlorofluoromethane (CFC 21)	ND U	1.0	0.20	1	06/06/24 14:30	

Analytical Report

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	05/29/24
Sample Matrix:	Water	**Date Received:**	05/31/24 07:15
Sample Name:	2405291411A PL-12-800	**Units:**	ug/L
Lab Code:	R2404650-018	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Dichloromethane	ND U	1.0	0.65	1	06/06/24 14:30	
Ethyl Methacrylate	ND U	2.0	0.20	1	06/06/24 14:30	
Ethylbenzene	ND U	1.0	0.20	1	06/06/24 14:30	
Iodomethane	ND U	5.0	4.3	1	06/06/24 14:30	
Methacrylonitrile	ND U	5.0	0.52	1	06/06/24 14:30	
Methyl Methacrylate	ND U	2.0	0.51	1	06/06/24 14:30	
Methyl tert-Butyl Ether	ND U	10	0.20	1	06/06/24 14:30	
Methylcyclohexane	ND U	10	0.20	1	06/06/24 14:30	
Propionitrile	ND U	5.0	3.0	1	06/06/24 14:30	
Styrene	ND U	1.0	0.20	1	06/06/24 14:30	
Tetrachloroethene (PCE)	ND U	1.0	0.21	1	06/06/24 14:30	
Tetrahydrofuran (THF)	ND U	5.0	1.7	1	06/06/24 14:30	
Toluene	ND U	1.0	0.20	1	06/06/24 14:30	
Trichloroethene (TCE)	ND U	1.0	0.20	1	06/06/24 14:30	
Trichlorofluoromethane (CFC 11)	ND U	1.0	0.24	1	06/06/24 14:30	
Vinyl Acetate	ND U	5.0	1.1	1	06/06/24 14:30	
Vinyl Chloride	ND U	1.0	0.20	1	06/06/24 14:30	
cis-1,2-Dichloroethene	ND U	1.0	0.23	1	06/06/24 14:30	
cis-1,3-Dichloropropene	ND U	1.0	0.20	1	06/06/24 14:30	
m,p-Xylenes	ND U	2.0	0.20	1	06/06/24 14:30	
o-Xylene	ND U	1.0	0.20	1	06/06/24 14:30	
trans-1,2-Dichloroethene	ND U	1.0	0.20	1	06/06/24 14:30	
trans-1,3-Dichloropropene	ND U	1.0	0.23	1	06/06/24 14:30	
trans-1,4-Dichloro-2-butene	ND U	1.0	0.78	1	06/06/24 14:30	
1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	ND U	1.0	0.20	1	06/06/24 14:30	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	85 - 122	06/06/24 14:30	
Dibromofluoromethane	97	80 - 116	06/06/24 14:30	
Toluene-d8	100	87 - 121	06/06/24 14:30	

Tentatively Identified Compounds

CAS#	Compound Identification	RT	Result ug/L	Q
	unknown	0.97	11	J

QC Summary Forms

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
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Volatile Organic Compounds by GC/MS

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client: NASA/WSTF/Navarro **Service Request:** R2404650
Project: White Sands Test Facility/23EC002B
Sample Matrix: Water

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Extraction Method: EPA 5030C

Sample Name	Lab Code	4-Bromofluorobenzene 85 - 122	Dibromofluoromethane 80 - 116	Toluene-d8 87 - 121
2405280840C 400-GV-125	R2404650-001	104	100	104
2405280841C 400-GV-125	R2404650-002	98	98	101
2405280842C 400-GV-125	R2404650-003	90	94	97
2405280700A 400-FV-131	R2404650-004	101	99	102
2405280852A 400-FV-131	R2404650-005	95	98	100
2405280853A 400-FV-131	R2404650-006	98	97	99
2405280854A 400-FV-131	R2404650-007	101	101	104
2405281002A 400-EV-131	R2404650-008	103	100	103
2405281003A 400-EV-131	R2404650-009	99	97	99
2405281010C 400-JV-150	R2404650-010	100	99	101
2405281011C 400-JV-150	R2404650-011	101	98	102
2405281430C 400-HV-147	R2404650-012	96	100	102
2405281431C 400-HV-147	R2404650-013	99	97	101
2405290700A PL-12-570	R2404650-014	99	98	101
2405290932A PL-12-570	R2404650-015	98	97	100
2405290933A PL-12-570	R2404650-016	100	100	103
2405291410A PL-12-800	R2404650-017	101	98	102
2405291411A PL-12-800	R2404650-018	98	97	100
Lab Control Sample	RQ2406398-03	103	102	103
Method Blank	RQ2406398-04	99	100	102
2405291410A PL-12-800 MS	RQ2406398-05	103	100	101
2405291410A PL-12-800 DMS	RQ2406398-06	102	101	101
Lab Control Sample	RQ2406493-03	102	100	100
Duplicate Lab Control Sample	RQ2406493-04	101	99	100
Method Blank	RQ2406493-05	101	97	99

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	05/29/24
Sample Matrix:	Water	**Date Received:**	05/31/24
		Date Analyzed:	06/6/24
		Date Extracted:	NA

Duplicate Matrix Spike Summary
Volatile Organic Compounds by GC/MS

Sample Name:	2405291410A PL-12-800	**Units:**	ug/L
Lab Code:	R2404650-017	**Basis:**	NA
Analysis Method:	8260C		
Prep Method:	EPA 5030C		

		Matrix Spike			Duplicate Matrix Spike					
		RQ2406398-05			RQ2406398-06					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,1,1,2-Tetrachloroethane	ND U	47.4	50.0	95	51.1	50.0	102	68-146	7	30
1,1,1-Trichloroethane (TCA)	ND U	49.5	50.0	99	52.7	50.0	105	70-130	6	25
1,1,2,2-Tetrachloroethane	ND U	44.1	50.0	88	48.1	50.0	96	72-122	9	30
1,1,2-Trichloroethane	ND U	48.1	50.0	96	51.3	50.0	103	82-121	6	30
1,1,2-Trichloro-1,2,2-trifluoroethane	3.2	51.5	50.0	97	53.9	50.0	101	70-130	4	25
1,1-Dichloroethane (1,1-DCA)	ND U	45.5	50.0	91	49.9	50.0	100	74-132	9	30
1,1-Dichloroethene (1,1-DCE)	ND U	47.6	50.0	95	49.1	50.0	98	70-130	3	25
1,2,3-Trichloropropane	ND U	43.6	50.0	87	48.0	50.0	96	75-122	10	30
1,2-Dibromo-3-chloropropane (DBCP)	ND U	46.0	50.0	92	50.7	50.0	101	37-150	10	30
1,2-Dibromoethane	ND U	47.3	50.0	95	50.8	50.0	102	67-127	7	30
1,2-Dichloroethane	ND U	46.0	50.0	92	49.1	50.0	98	68-130	6	30
1,2-Dichloropropane	ND U	46.2	50.0	92	48.0	50.0	96	79-124	4	30
1,4-Dioxane	ND U	939	1000	94	955	1000	96	44-154	2	30
2,2-Dichloro-1,1,1-trifluoroethane (CFC 123)	ND U	55.9	50.0	112	56.9	50.0	114	70-130	2	25
2-Butanone (MEK)	ND U	47.7	50.0	95	48.8	50.0	98	61-137	2	30
2-Chloro-1,3-butadiene	ND U	44.7	50.0	89	46.5	50.0	93	68-139	4	30
2-Hexanone	ND U	46.6	50.0	93	49.1	50.0	98	56-132	5	30
Isobutyl Alcohol	ND U	881	1000	88	946	1000	95	51-143	7	30
2-Propanol	ND U	859	1000	86	917	1000	92	52-136	7	30
Allyl Chloride	ND U	49.9	50.0	100	54.8	50.0	110	49-156	9	30
4-Methyl-2-pentanone	ND U	47.8	50.0	96	49.4	50.0	99	60-141	3	30
Acetone	ND U	44.7	50.0	89	48.1	50.0	96	35-183	7	30
Acetonitrile	ND U	227	250	91	250	250	100	46-154	10	30
Acrolein	ND U	150	100	150	156	100	156	13-165	3	30
Acrylonitrile	ND U	218	250	87	233	250	93	69-131	7	30
Benzene	ND U	49.4	50.0	99	52.2	50.0	104	76-129	6	30
Bromodichloromethane	ND U	48.1	50.0	96	51.5	50.0	103	78-133	7	30
Bromoform	ND U	53.5	50.0	107	58.4	50.0	117	58-133	9	30
Bromomethane	ND U	41.6	50.0	83	45.1	50.0	90	10-184	8	30
Carbon Disulfide	ND U	44.4	50.0	89	45.2	50.0	90	59-140	2	30
Carbon Tetrachloride	ND U	46.4	50.0	93	49.3	50.0	99	65-135	6	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	05/29/24
Sample Matrix:	Water	**Date Received:**	05/31/24
		Date Analyzed:	06/6/24
		Date Extracted:	NA

Duplicate Matrix Spike Summary
Volatile Organic Compounds by GC/MS

Sample Name:	2405291410A PL-12-800	**Units:**	ug/L
Lab Code:	R2404650-017	**Basis:**	NA
Analysis Method:	8260C		
Prep Method:	EPA 5030C		

		Matrix Spike RQ2406398-05			Duplicate Matrix Spike RQ2406398-06					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Chlorobenzene	ND U	47.2	50.0	94	50.6	50.0	101	76-125	7	30
Chloroethane	ND U	36.8	50.0	74	38.2	50.0	76	58-146	4	30
Chloroform	ND U	47.5	50.0	95	50.6	50.0	101	70-130	6	25
Chloromethane	ND U	38.7	50.0	77	41.0	50.0	82	55-160	6	30
Cyclohexane	ND U	47.0	50.0	94	48.1	50.0	96	52-145	2	30
Dibromochloromethane	ND U	48.7	50.0	97	52.6	50.0	105	72-128	8	30
Dibromomethane	ND U	48.2	50.0	96	51.6	50.0	103	77-119	7	30
Dichlorodifluoromethane (CFC 12)	ND U	53.2	50.0	106	55.6	50.0	111	49-154	4	30
Dichlorofluoromethane (CFC 21)	ND U	42.4	50.0	85	43.5	50.0	87	70-130	3	25
Dichloromethane	ND U	46.6	50.0	93	49.3	50.0	99	73-122	6	30
Ethyl Methacrylate	ND U	48.4	50.0	97	51.6	50.0	103	63-138	6	30
Ethylbenzene	ND U	48.4	50.0	97	51.6	50.0	103	72-134	6	30
Iodomethane	ND U	43.3	50.0	87	53.1	50.0	106	18-160	20	30
Methacrylonitrile	ND U	44.1	50.0	88	47.9	50.0	96	67-131	8	30
Methyl Methacrylate	ND U	49.1	50.0	98	52.9	50.0	106	64-129	7	30
Methyl tert-Butyl Ether	ND U	45.1	50.0	90	48.1	50.0	96	75-119	6	30
Methylcyclohexane	ND U	47.0	50.0	94	48.3	50.0	97	45-146	3	30
Propionitrile	ND U	225	250	90	237	250	95	66-129	5	30
Styrene	ND U	48.3	50.0	97	52.8	50.0	106	74-136	9	30
Tetrachloroethene (PCE)	ND U	49.7	50.0	99	53.5	50.0	107	70-130	7	25
Tetrahydrofuran (THF)	ND U	44.0	50.0	88	46.8	50.0	94	48-141	6	30
Toluene	ND U	49.5	50.0	99	52.2	50.0	104	79-119	5	30
Trichloroethene (TCE)	6.2	55.4	50.0	99	58.6	50.0	105	70-130	6	25
Trichlorofluoromethane (CFC 11)	5.8	54.8	50.0	98	57.6	50.0	104	70-130	5	25
Vinyl Acetate	ND U	72.3	50.0	145	74.2	50.0	148	48-172	3	30
Vinyl Chloride	ND U	44.3	50.0	89	46.6	50.0	93	74-159	5	30
cis-1,2-Dichloroethene	ND U	48.0	50.0	96	50.6	50.0	101	77-127	5	30
cis-1,3-Dichloropropene	ND U	49.2	50.0	98	53.0	50.0	106	52-134	7	30
m,p-Xylenes	ND U	98.8	100	99	106	100	106	80-126	7	30
o-Xylene	ND U	48.5	50.0	97	52.5	50.0	105	79-123	8	30
trans-1,2-Dichloroethene	ND U	47.1	50.0	94	49.8	50.0	100	73-118	6	30
trans-1,3-Dichloropropene	ND U	48.6	50.0	97	53.3	50.0	107	71-133	9	30
trans-1,4-Dichloro-2-butene	ND U	38.2	50.0	76	42.5	50.0	85	27-155	11	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	05/29/24
Sample Matrix:	Water	**Date Received:**	05/31/24
		Date Analyzed:	06/6/24
		Date Extracted:	NA

Duplicate Matrix Spike Summary
Volatile Organic Compounds by GC/MS

Sample Name:	2405291410A PL-12-800	**Units:**	ug/L
Lab Code:	R2404650-017	**Basis:**	NA
Analysis Method:	8260C		
Prep Method:	EPA 5030C		

		Matrix Spike RQ2406398-05			Duplicate Matrix Spike RQ2406398-06					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	ND U	46.8	50.0	94	45.5	50.0	91	70-130	3	25

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Analyzed:**	06/06/24 12:27
Sample Matrix:	Water	**Date Extracted:**	

Method Blank Summary
Volatile Organic Compounds by GC/MS

Sample Name: Method Blank **Instrument ID:** R-MS-17
Lab Code: RQ2406398-04 **File ID:** I:\ACQUDATA\MSVOA17\Data\060624\K2595.D\

Analysis Method: 8260C **Analysis Lot:** 843243
Prep Method: EPA 5030C

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Lab Control Sample	RQ2406398-03	I:\ACQUDATA\MSVOA17\Data\060624 \K2592.D\	06/06/24 11:00
2405290700A PL-12-570	R2404650-014	I:\ACQUDATA\MSVOA17\Data\060624 \K2596.D\	06/06/24 12:58
2405290932A PL-12-570	R2404650-015	I:\ACQUDATA\MSVOA17\Data\060624 \K2597.D\	06/06/24 13:21
2405290933A PL-12-570	R2404650-016	I:\ACQUDATA\MSVOA17\Data\060624 \K2598.D\	06/06/24 13:44
2405291410A PL-12-800	R2404650-017	I:\ACQUDATA\MSVOA17\Data\060624 \K2599.D\	06/06/24 14:07
2405291411A PL-12-800	R2404650-018	I:\ACQUDATA\MSVOA17\Data\060624 \K2600.D\	06/06/24 14:30
2405281002A 400-EV-131	R2404650-008	I:\ACQUDATA\MSVOA17\Data\060624 \K2601.D\	06/06/24 14:53
2405280854A 400-FV-131	R2404650-007	I:\ACQUDATA\MSVOA17\Data\060624 \K2603.D\	06/06/24 15:39
2405281011C 400-JV-150	R2404650-011	I:\ACQUDATA\MSVOA17\Data\060624 \K2604.D\	06/06/24 16:02
2405281431C 400-HV-147	R2404650-013	I:\ACQUDATA\MSVOA17\Data\060624 \K2605.D\	06/06/24 16:25
2405280842C 400-GV-125	R2404650-003	I:\ACQUDATA\MSVOA17\Data\060624 \K2606.D\	06/06/24 16:48
2405280700A 400-FV-131	R2404650-004	I:\ACQUDATA\MSVOA17\Data\060624 \K2607.D\	06/06/24 17:11
2405280852A 400-FV-131	R2404650-005	I:\ACQUDATA\MSVOA17\Data\060624 \K2608.D\	06/06/24 17:34
2405280853A 400-FV-131	R2404650-006	I:\ACQUDATA\MSVOA17\Data\060624 \K2609.D\	06/06/24 17:57
2405281010C 400-JV-150	R2404650-010	I:\ACQUDATA\MSVOA17\Data\060624 \K2610.D\	06/06/24 18:20
2405281430C 400-HV-147	R2404650-012	I:\ACQUDATA\MSVOA17\Data\060624\K2611.D	06/06/24 18:43
2405280840C 400-GV-125	R2404650-001	I:\ACQUDATA\MSVOA17\Data\060624 \K2612.D\	06/06/24 19:05
2405280841C 400-GV-125	R2404650-002	I:\ACQUDATA\MSVOA17\Data\060624 \K2613.D\	06/06/24 19:28
2405291410A PL-12-800MS	RQ2406398-05	I:\ACQUDATA\MSVOA17\Data\060624 \K2617.D\	06/06/24 21:00
2405291410A PL-12-800DMS	RQ2406398-06	I:\ACQUDATA\MSVOA17\Data\060624 \K2618.D\	06/06/24 21:23

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Analyzed:**	06/08/24 00:57
Sample Matrix:	Water	**Date Extracted:**	

Method Blank Summary
Volatile Organic Compounds by GC/MS

Sample Name: Method Blank
Lab Code: RQ2406493-05
Instrument ID: R-MS-17
File ID: I:\ACQUDATA\MSVOA17\Data\060724\K2688.D\

Analysis Method: 8260C
Prep Method: EPA 5030C
Analysis Lot: 843440

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Lab Control Sample	RQ2406493-03	I:\ACQUDATA\MSVOA17\Data\060724 \K2684.D\	06/07/24 23:25
Duplicate Lab Control Sample	RQ2406493-04	I:\ACQUDATA\MSVOA17\Data\060724 \K2685.D\	06/07/24 23:48
2405281003A 400-EV-131	R2404650-009	I:\ACQUDATA\MSVOA17\Data\060724 \K2693.D\	06/08/24 02:52
2405280840C 400-GV-125	R2404650-001	I:\ACQUDATA\MSVOA17\Data\060724 \K2694.D\	06/08/24 03:15
2405280841C 400-GV-125	R2404650-002	I:\ACQUDATA\MSVOA17\Data\060724 \K2695.D\	06/08/24 03:38
2405281002A 400-EV-131	R2404650-008	I:\ACQUDATA\MSVOA17\Data\060724 \K2696.D\	06/08/24 04:01
2405281010C 400-JV-150	R2404650-010	I:\ACQUDATA\MSVOA17\Data\060724 \K2697.D\	06/08/24 04:24

Analytical Report

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	RQ2406398-04	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND U	1.0	0.20	1	06/06/24 12:27	
1,1,1-Trichloroethane (TCA)	ND U	1.0	0.20	1	06/06/24 12:27	
1,1,2,2-Tetrachloroethane	ND U	1.0	0.20	1	06/06/24 12:27	
1,1,2-Trichloroethane	ND U	1.0	0.20	1	06/06/24 12:27	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND U	1.0	0.20	1	06/06/24 12:27	
1,1-Dichloroethane (1,1-DCA)	ND U	1.0	0.20	1	06/06/24 12:27	
1,1-Dichloroethene (1,1-DCE)	ND U	1.0	0.20	1	06/06/24 12:27	
1,2,3-Trichloropropane	ND U	1.0	0.26	1	06/06/24 12:27	
1,2-Dibromo-3-chloropropane (DBCP)	ND U	2.0	0.45	1	06/06/24 12:27	
1,2-Dibromoethane	ND U	1.0	0.20	1	06/06/24 12:27	
1,2-Dichloroethane	ND U	1.0	0.20	1	06/06/24 12:27	
1,2-Dichloropropane	ND U	1.0	0.20	1	06/06/24 12:27	
1,4-Dioxane	ND U	100	13	1	06/06/24 12:27	
2,2-Dichloro-1,1,1-trifluoroethane (CFC 123)	ND U	1.0	0.20	1	06/06/24 12:27	
2-Butanone (MEK)	ND U	5.0	0.78	1	06/06/24 12:27	
2-Chloro-1,3-butadiene	ND U	1.0	0.20	1	06/06/24 12:27	
2-Hexanone	ND U	5.0	0.20	1	06/06/24 12:27	
Isobutyl Alcohol	ND U	100	33	1	06/06/24 12:27	
2-Propanol	ND U	50	22	1	06/06/24 12:27	
Allyl Chloride	ND U	2.0	0.36	1	06/06/24 12:27	
4-Methyl-2-pentanone	ND U	5.0	0.20	1	06/06/24 12:27	
Acetone	ND U	10	5.0	1	06/06/24 12:27	
Acetonitrile	ND U	25	5.2	1	06/06/24 12:27	
Acrolein	ND U	10	0.90	1	06/06/24 12:27	
Acrylonitrile	ND U	5.0	0.90	1	06/06/24 12:27	
Benzene	ND U	1.0	0.20	1	06/06/24 12:27	
Bromodichloromethane	ND U	1.0	0.20	1	06/06/24 12:27	
Bromoform	ND U	1.0	0.25	1	06/06/24 12:27	
Bromomethane	ND U	2.0	0.70	1	06/06/24 12:27	
Carbon Disulfide	ND U	1.0	0.42	1	06/06/24 12:27	
Carbon Tetrachloride	ND U	1.0	0.34	1	06/06/24 12:27	
Chlorobenzene	ND U	1.0	0.20	1	06/06/24 12:27	
Chloroethane	ND U	2.0	0.23	1	06/06/24 12:27	
Chloroform	ND U	1.0	0.51	1	06/06/24 12:27	
Chloromethane	ND U	2.0	0.80	1	06/06/24 12:27	
Cyclohexane	ND U	10	0.60	1	06/06/24 12:27	
Dibromochloromethane	ND U	1.0	0.20	1	06/06/24 12:27	
Dibromomethane	ND U	1.0	0.20	1	06/06/24 12:27	
Dichlorodifluoromethane (CFC 12)	ND U	1.0	0.21	1	06/06/24 12:27	
Dichlorofluoromethane (CFC 21)	ND U	1.0	0.20	1	06/06/24 12:27	

Analytical Report

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	RQ2406398-04	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Dichloromethane	ND U	1.0	0.65	1	06/06/24 12:27	
Ethyl Methacrylate	ND U	2.0	0.20	1	06/06/24 12:27	
Ethylbenzene	ND U	1.0	0.20	1	06/06/24 12:27	
Iodomethane	ND U	5.0	4.3	1	06/06/24 12:27	
Methacrylonitrile	ND U	5.0	0.52	1	06/06/24 12:27	
Methyl Methacrylate	ND U	2.0	0.51	1	06/06/24 12:27	
Methyl tert-Butyl Ether	ND U	10	0.20	1	06/06/24 12:27	
Methylcyclohexane	ND U	10	0.20	1	06/06/24 12:27	
Propionitrile	ND U	5.0	3.0	1	06/06/24 12:27	
Styrene	ND U	1.0	0.20	1	06/06/24 12:27	
Tetrachloroethene (PCE)	ND U	1.0	0.21	1	06/06/24 12:27	
Tetrahydrofuran (THF)	ND U	5.0	1.7	1	06/06/24 12:27	
Toluene	ND U	1.0	0.20	1	06/06/24 12:27	
Trichloroethene (TCE)	ND U	1.0	0.20	1	06/06/24 12:27	
Trichlorofluoromethane (CFC 11)	ND U	1.0	0.24	1	06/06/24 12:27	
Vinyl Acetate	ND U	5.0	1.1	1	06/06/24 12:27	
Vinyl Chloride	ND U	1.0	0.20	1	06/06/24 12:27	
cis-1,2-Dichloroethene	ND U	1.0	0.23	1	06/06/24 12:27	
cis-1,3-Dichloropropene	ND U	1.0	0.20	1	06/06/24 12:27	
m,p-Xylenes	ND U	2.0	0.20	1	06/06/24 12:27	
o-Xylene	ND U	1.0	0.20	1	06/06/24 12:27	
trans-1,2-Dichloroethene	ND U	1.0	0.20	1	06/06/24 12:27	
trans-1,3-Dichloropropene	ND U	1.0	0.23	1	06/06/24 12:27	
trans-1,4-Dichloro-2-butene	ND U	1.0	0.78	1	06/06/24 12:27	
1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	ND U	1.0	0.20	1	06/06/24 12:27	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	85 - 122	06/06/24 12:27	
Dibromofluoromethane	100	80 - 116	06/06/24 12:27	
Toluene-d8	102	87 - 121	06/06/24 12:27	

Tentatively Identified Compounds

CAS#	Compound Identification	RT	Result ug/L	Q
	unknown	0.97	9.0	J

Analytical Report

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	RQ2406493-05	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND U	1.0	0.20	1	06/08/24 00:57	
1,1,1-Trichloroethane (TCA)	ND U	1.0	0.20	1	06/08/24 00:57	
1,1,2,2-Tetrachloroethane	ND U	1.0	0.20	1	06/08/24 00:57	
1,1,2-Trichloroethane	ND U	1.0	0.20	1	06/08/24 00:57	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND U	1.0	0.20	1	06/08/24 00:57	
1,1-Dichloroethane (1,1-DCA)	ND U	1.0	0.20	1	06/08/24 00:57	
1,1-Dichloroethene (1,1-DCE)	ND U	1.0	0.20	1	06/08/24 00:57	
1,2,3-Trichloropropane	ND U	1.0	0.26	1	06/08/24 00:57	
1,2-Dibromo-3-chloropropane (DBCP)	ND U	2.0	0.45	1	06/08/24 00:57	
1,2-Dibromoethane	ND U	1.0	0.20	1	06/08/24 00:57	
1,2-Dichloroethane	ND U	1.0	0.20	1	06/08/24 00:57	
1,2-Dichloropropane	ND U	1.0	0.20	1	06/08/24 00:57	
1,4-Dioxane	ND U	100	13	1	06/08/24 00:57	
2,2-Dichloro-1,1,1-trifluoroethane (CFC 123)	ND U	1.0	0.20	1	06/08/24 00:57	
2-Butanone (MEK)	ND U	5.0	0.78	1	06/08/24 00:57	
2-Chloro-1,3-butadiene	ND U	1.0	0.20	1	06/08/24 00:57	
2-Hexanone	ND U	5.0	0.20	1	06/08/24 00:57	
Isobutyl Alcohol	ND U	100	33	1	06/08/24 00:57	
2-Propanol	ND U	50	22	1	06/08/24 00:57	
Allyl Chloride	ND U	2.0	0.36	1	06/08/24 00:57	
4-Methyl-2-pentanone	ND U	5.0	0.20	1	06/08/24 00:57	
Acetone	ND U	10	5.0	1	06/08/24 00:57	
Acetonitrile	ND U	25	5.2	1	06/08/24 00:57	
Acrolein	ND U	10	0.90	1	06/08/24 00:57	
Acrylonitrile	ND U	5.0	0.90	1	06/08/24 00:57	
Benzene	ND U	1.0	0.20	1	06/08/24 00:57	
Bromodichloromethane	ND U	1.0	0.20	1	06/08/24 00:57	
Bromoform	ND U	1.0	0.25	1	06/08/24 00:57	
Bromomethane	ND U	2.0	0.70	1	06/08/24 00:57	
Carbon Disulfide	ND U	1.0	0.42	1	06/08/24 00:57	
Carbon Tetrachloride	ND U	1.0	0.34	1	06/08/24 00:57	
Chlorobenzene	ND U	1.0	0.20	1	06/08/24 00:57	
Chloroethane	ND U	2.0	0.23	1	06/08/24 00:57	
Chloroform	ND U	1.0	0.51	1	06/08/24 00:57	
Chloromethane	ND U	2.0	0.80	1	06/08/24 00:57	
Cyclohexane	ND U	10	0.60	1	06/08/24 00:57	
Dibromochloromethane	ND U	1.0	0.20	1	06/08/24 00:57	
Dibromomethane	ND U	1.0	0.20	1	06/08/24 00:57	
Dichlorodifluoromethane (CFC 12)	ND U	1.0	0.21	1	06/08/24 00:57	
Dichlorofluoromethane (CFC 21)	ND U	1.0	0.20	1	06/08/24 00:57	

Analytical Report

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	RQ2406493-05	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Dichloromethane	ND U	1.0	0.65	1	06/08/24 00:57	
Ethyl Methacrylate	ND U	2.0	0.20	1	06/08/24 00:57	
Ethylbenzene	ND U	1.0	0.20	1	06/08/24 00:57	
Iodomethane	ND U	5.0	4.3	1	06/08/24 00:57	
Methacrylonitrile	ND U	5.0	0.52	1	06/08/24 00:57	
Methyl Methacrylate	ND U	2.0	0.51	1	06/08/24 00:57	
Methyl tert-Butyl Ether	ND U	10	0.20	1	06/08/24 00:57	
Methylcyclohexane	ND U	10	0.20	1	06/08/24 00:57	
Propionitrile	ND U	5.0	3.0	1	06/08/24 00:57	
Styrene	ND U	1.0	0.20	1	06/08/24 00:57	
Tetrachloroethene (PCE)	ND U	1.0	0.21	1	06/08/24 00:57	
Tetrahydrofuran (THF)	ND U	5.0	1.7	1	06/08/24 00:57	
Toluene	ND U	1.0	0.20	1	06/08/24 00:57	
Trichloroethene (TCE)	ND U	1.0	0.20	1	06/08/24 00:57	
Trichlorofluoromethane (CFC 11)	ND U	1.0	0.24	1	06/08/24 00:57	
Vinyl Acetate	ND U	5.0	1.1	1	06/08/24 00:57	
Vinyl Chloride	ND U	1.0	0.20	1	06/08/24 00:57	
cis-1,2-Dichloroethene	ND U	1.0	0.23	1	06/08/24 00:57	
cis-1,3-Dichloropropene	ND U	1.0	0.20	1	06/08/24 00:57	
m,p-Xylenes	ND U	2.0	0.20	1	06/08/24 00:57	
o-Xylene	ND U	1.0	0.20	1	06/08/24 00:57	
trans-1,2-Dichloroethene	ND U	1.0	0.20	1	06/08/24 00:57	
trans-1,3-Dichloropropene	ND U	1.0	0.23	1	06/08/24 00:57	
trans-1,4-Dichloro-2-butene	ND U	1.0	0.78	1	06/08/24 00:57	
1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	ND U	1.0	0.20	1	06/08/24 00:57	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	85 - 122	06/08/24 00:57	
Dibromofluoromethane	97	80 - 116	06/08/24 00:57	
Toluene-d8	99	87 - 121	06/08/24 00:57	

Tentatively Identified Compounds

CAS#	Compound Identification	RT	Result ug/L	Q
	unknown	0.97	8.5	J

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Analyzed:**	06/06/24 11:00
Sample Matrix:	Water	**Date Extracted:**	

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Sample Name: Lab Control Sample **Instrument ID:** R-MS-17
Lab Code: RQ2406398-03 **File ID:** I:\ACQUDATA\MSVOA17\Data\060624\K2592.D\

Analysis Method: 8260C **Analysis Lot:** 843243
Prep Method: EPA 5030C

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Method Blank	RQ2406398-04	I:\ACQUDATA\MSVOA17\Data\060624 \K2595.D\	06/06/24 12:27
2405290700A PL-12-570	R2404650-014	I:\ACQUDATA\MSVOA17\Data\060624 \K2596.D\	06/06/24 12:58
2405290932A PL-12-570	R2404650-015	I:\ACQUDATA\MSVOA17\Data\060624 \K2597.D\	06/06/24 13:21
2405290933A PL-12-570	R2404650-016	I:\ACQUDATA\MSVOA17\Data\060624 \K2598.D\	06/06/24 13:44
2405291410A PL-12-800	R2404650-017	I:\ACQUDATA\MSVOA17\Data\060624 \K2599.D\	06/06/24 14:07
2405291411A PL-12-800	R2404650-018	I:\ACQUDATA\MSVOA17\Data\060624 \K2600.D\	06/06/24 14:30
2405281002A 400-EV-131	R2404650-008	I:\ACQUDATA\MSVOA17\Data\060624 \K2601.D\	06/06/24 14:53
2405280854A 400-FV-131	R2404650-007	I:\ACQUDATA\MSVOA17\Data\060624 \K2603.D\	06/06/24 15:39
2405281011C 400-JV-150	R2404650-011	I:\ACQUDATA\MSVOA17\Data\060624 \K2604.D\	06/06/24 16:02
2405281431C 400-HV-147	R2404650-013	I:\ACQUDATA\MSVOA17\Data\060624 \K2605.D\	06/06/24 16:25
2405280842C 400-GV-125	R2404650-003	I:\ACQUDATA\MSVOA17\Data\060624 \K2606.D\	06/06/24 16:48
2405280700A 400-FV-131	R2404650-004	I:\ACQUDATA\MSVOA17\Data\060624 \K2607.D\	06/06/24 17:11
2405280852A 400-FV-131	R2404650-005	I:\ACQUDATA\MSVOA17\Data\060624 \K2608.D\	06/06/24 17:34
2405280853A 400-FV-131	R2404650-006	I:\ACQUDATA\MSVOA17\Data\060624 \K2609.D\	06/06/24 17:57
2405281010C 400-JV-150	R2404650-010	I:\ACQUDATA\MSVOA17\Data\060624 \K2610.D\	06/06/24 18:20
2405281430C 400-HV-147	R2404650-012	I:\ACQUDATA\MSVOA17\Data\060624\K2611.D	06/06/24 18:43
2405280840C 400-GV-125	R2404650-001	I:\ACQUDATA\MSVOA17\Data\060624 \K2612.D\	06/06/24 19:05
2405280841C 400-GV-125	R2404650-002	I:\ACQUDATA\MSVOA17\Data\060624 \K2613.D\	06/06/24 19:28
2405291410A PL-12-800MS	RQ2406398-05	I:\ACQUDATA\MSVOA17\Data\060624 \K2617.D\	06/06/24 21:00
2405291410A PL-12-800DMS	RQ2406398-06	I:\ACQUDATA\MSVOA17\Data\060624 \K2618.D\	06/06/24 21:23

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Analyzed:**	06/07/24 23:25
Sample Matrix:	Water	**Date Extracted:**	

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Sample Name: Lab Control Sample
Lab Code: RQ2406493-03
Instrument ID: R-MS-17
File ID: I:\ACQUDATA\MSVOA17\Data\060724\K2684.D\

Analysis Method: 8260C
Prep Method: EPA 5030C
Analysis Lot: 843440

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Duplicate Lab Control Sample	RQ2406493-04	I:\ACQUDATA\MSVOA17\Data\060724\K2685.D\	06/07/24 23:48
Method Blank	RQ2406493-05	I:\ACQUDATA\MSVOA17\Data\060724\K2688.D\	06/08/24 00:57
2405281003A 400-EV-131	R2404650-009	I:\ACQUDATA\MSVOA17\Data\060724\K2693.D\	06/08/24 02:52
2405280840C 400-GV-125	R2404650-001	I:\ACQUDATA\MSVOA17\Data\060724\K2694.D\	06/08/24 03:15
2405280841C 400-GV-125	R2404650-002	I:\ACQUDATA\MSVOA17\Data\060724\K2695.D\	06/08/24 03:38
2405281002A 400-EV-131	R2404650-008	I:\ACQUDATA\MSVOA17\Data\060724\K2696.D\	06/08/24 04:01
2405281010C 400-JV-150	R2404650-010	I:\ACQUDATA\MSVOA17\Data\060724\K2697.D\	06/08/24 04:24

QA/QC Report

Client: NASA/WSTF/Navarro
Project: White Sands Test Facility/23EC002B
Sample Matrix: Water

Service Request: R2404650
Date Analyzed: 06/06/24

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/L
Basis:NA

Lab Control Sample
RQ2406398-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
1,1,1,2-Tetrachloroethane	8260C	18.1	20.0	90	76-129
1,1,1-Trichloroethane (TCA)	8260C	19.6	20.0	98	70-130
1,1,2,2-Tetrachloroethane	8260C	17.6	20.0	88	78-126
1,1,2-Trichloroethane	8260C	19.1	20.0	96	82-121
1,1,2-Trichloro-1,2,2-trifluoroethane	8260C	19.4	20.0	97	70-130
1,1-Dichloroethane (1,1-DCA)	8260C	19.0	20.0	95	80-124
1,1-Dichloroethene (1,1-DCE)	8260C	18.7	20.0	93	70-130
1,2,3-Trichloropropane	8260C	17.7	20.0	88	75-118
1,2-Dibromo-3-chloropropane (DBCP)	8260C	16.9	20.0	85	55-136
1,2-Dibromoethane	8260C	18.5	20.0	93	82-127
1,2-Dichloroethane	8260C	19.1	20.0	95	71-127
1,2-Dichloropropane	8260C	19.0	20.0	95	80-119
1,4-Dioxane	8260C	359	400	90	44-154
2,2-Dichloro-1,1,1-trifluoroethane (CFC 123)	8260C	20.1	20.0	101	70-130
2-Butanone (MEK)	8260C	18.6	20.0	93	61-137
2-Chloro-1,3-butadiene	8260C	17.8	20.0	89	68-139
2-Hexanone	8260C	19.1	20.0	95	63-124
Isobutyl Alcohol	8260C	340	400	85	51-143
2-Propanol	8260C	343	400	86	52-136
Allyl Chloride	8260C	21.2	20.0	106	61-143
4-Methyl-2-pentanone	8260C	19.1	20.0	95	66-124
Acetone	8260C	19.1	20.0	96	40-161
Acetonitrile	8260C	101	100	101	46-154
Acrolein	8260C	68.0	40.0	170 *	13-165
Acrylonitrile	8260C	91.6	100	92	71-130
Benzene	8260C	19.7	20.0	99	79-119
Bromodichloromethane	8260C	19.2	20.0	96	81-123
Bromoform	8260C	19.7	20.0	99	65-146
Bromomethane	8260C	17.8	20.0	89	42-166
Carbon Disulfide	8260C	17.2	20.0	86	66-128
Carbon Tetrachloride	8260C	18.2	20.0	91	70-127
Chlorobenzene	8260C	18.7	20.0	93	81-120
Chloroethane	8260C	14.7	20.0	74	62-131

Client: NASA/WSTF/Navarro
Project: White Sands Test Facility/23EC002B
Sample Matrix: Water

Service Request: R2404650
Date Analyzed: 06/06/24

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/L
Basis:NA

Lab Control Sample
RQ2406398-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Chloroform	8260C	19.5	20.0	97	70-130
Chloromethane	8260C	16.8	20.0	84	65-135
Cyclohexane	8260C	17.6	20.0	88	69-120
Dibromochloromethane	8260C	18.5	20.0	93	72-128
Dibromomethane	8260C	19.2	20.0	96	80-118
Dichlorodifluoromethane (CFC 12)	8260C	21.8	20.0	109	59-155
Dichlorofluoromethane (CFC 21)	8260C	15.7	20.0	78	70-130
Dichloromethane	8260C	18.8	20.0	94	73-122
Ethyl Methacrylate	8260C	18.9	20.0	95	68-132
Ethylbenzene	8260C	19.3	20.0	97	76-120
Iodomethane	8260C	10.9	20.0	54	18-160
Methacrylonitrile	8260C	18.5	20.0	93	68-123
Methyl Methacrylate	8260C	19.5	20.0	98	68-129
Methyl tert-Butyl Ether	8260C	18.8	20.0	94	75-118
Methylcyclohexane	8260C	17.6	20.0	88	51-129
Propionitrile	8260C	93.1	100	93	69-126
Styrene	8260C	19.2	20.0	96	80-124
Tetrachloroethene (PCE)	8260C	19.1	20.0	95	70-130
Tetrahydrofuran (THF)	8260C	17.9	20.0	89	48-141
Toluene	8260C	19.7	20.0	99	79-119
Trichloroethene (TCE)	8260C	20.1	20.0	101	70-130
Trichlorofluoromethane (CFC 11)	8260C	20.2	20.0	101	70-130
Vinyl Acetate	8260C	28.5	20.0	143	52-174
Vinyl Chloride	8260C	18.3	20.0	92	74-159
cis-1,2-Dichloroethene	8260C	19.3	20.0	97	80-121
cis-1,3-Dichloropropene	8260C	20.1	20.0	100	77-122
m,p-Xylenes	8260C	38.9	40.0	97	80-126
o-Xylene	8260C	18.9	20.0	95	79-123
trans-1,2-Dichloroethene	8260C	19.1	20.0	96	73-118
trans-1,3-Dichloropropene	8260C	19.6	20.0	98	71-133
trans-1,4-Dichloro-2-butene	8260C	15.9	20.0	79	39-137
1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	8260C	17.7	20.0	88	70-130

QA/QC Report

Client: NASA/WSTF/Navarro
Project: White Sands Test Facility/23EC002B
Sample Matrix: Water

Service Request: R2404650
Date Analyzed: 06/07/24

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/L
Basis:NA

		Lab Control Sample			Duplicate Lab Control Sample					
		RQ2406493-03			RQ2406493-04					
Analyte Name	**Analytical Method**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,1,1,2-Tetrachloroethane	8260C	17.8	20.0	89	19.7	20.0	98	76-129	10	30
1,1,1-Trichloroethane (TCA)	8260C	19.0	20.0	95	21.8	20.0	109	70-130	14	25
1,1,2,2-Tetrachloroethane	8260C	20.1	20.0	100	21.4	20.0	107	78-126	7	30
1,1,2-Trichloroethane	8260C	19.5	20.0	98	20.8	20.0	104	82-121	6	30
1,1,2-Trichloro-1,2,2-trifluoroethane	8260C	17.6	20.0	88	20.8	20.0	104	70-130	17	25
1,1-Dichloroethane (1,1-DCA)	8260C	18.5	20.0	93	20.6	20.0	103	80-124	10	30
1,1-Dichloroethene (1,1-DCE)	8260C	18.2	20.0	91	20.6	20.0	103	70-130	13	25
1,2,3-Trichloropropane	8260C	19.9	20.0	100	20.8	20.0	104	75-118	4	30
1,2-Dibromo-3-chloropropane (DBCP)	8260C	19.3	20.0	96	22.2	20.0	111	55-136	14	30
1,2-Dibromoethane	8260C	19.3	20.0	97	20.5	20.0	103	82-127	6	30
1,2-Dichloroethane	8260C	19.1	20.0	95	20.3	20.0	102	71-127	6	30
1,2-Dichloropropane	8260C	18.4	20.0	92	19.4	20.0	97	80-119	5	30
1,4-Dioxane	8260C	393	400	98	414	400	103	44-154	5	30
2,2-Dichloro-1,1,1-trifluoroethane (CFC 123)	8260C	23.4	20.0	117	22.8	20.0	114	70-130	3	25
2-Butanone (MEK)	8260C	21.9	20.0	109	21.8	20.0	109	61-137	<1	30
2-Chloro-1,3-butadiene	8260C	19.7	20.0	99	19.2	20.0	96	68-139	3	30
2-Hexanone	8260C	21.4	20.0	107	20.8	20.0	104	63-124	3	30
Isobutyl Alcohol	8260C	375	400	94	415	400	104	51-143	10	30
2-Propanol	8260C	419	400	105	411	400	103	52-136	2	30
Allyl Chloride	8260C	19.7	20.0	98	21.7	20.0	109	61-143	10	30
4-Methyl-2-pentanone	8260C	21.2	20.0	106	20.9	20.0	105	66-124	1	30
Acetone	8260C	22.6	20.0	113	22.5	20.0	113	40-161	<1	30
Acetonitrile	8260C	101	100	101	108	100	108	46-154	7	30
Acrolein	8260C	68.8	40.0	172 *	65.6	40.0	164	13-165	5	30
Acrylonitrile	8260C	102	100	102	105	100	105	71-130	3	30
Benzene	8260C	18.7	20.0	94	21.4	20.0	107	79-119	14	30
Bromodichloromethane	8260C	18.7	20.0	94	20.8	20.0	104	81-123	11	30
Bromoform	8260C	20.6	20.0	103	21.9	20.0	109	65-146	6	30
Bromomethane	8260C	18.5	20.0	92	19.5	20.0	98	42-166	6	30
Carbon Disulfide	8260C	18.7	20.0	93	18.3	20.0	92	66-128	2	30
Carbon Tetrachloride	8260C	16.7	20.0	84	19.1	20.0	95	70-127	13	30

Client: NASA/WSTF/Navarro
Project: White Sands Test Facility/23EC002B
Sample Matrix: Water

Service Request: R2404650
Date Analyzed: 06/07/24

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/L
Basis:NA

		Lab Control Sample			Duplicate Lab Control Sample					
		RQ2406493-03			RQ2406493-04					
Analyte Name	**Analytical Method**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Chlorobenzene	8260C	18.1	20.0	90	20.2	20.0	101	81-120	11	30
Chloroethane	8260C	14.3	20.0	71	15.8	20.0	79	62-131	10	30
Chloroform	8260C	18.8	20.0	94	21.5	20.0	107	70-130	13	25
Chloromethane	8260C	16.0	20.0	80	18.0	20.0	90	65-135	12	30
Cyclohexane	8260C	19.5	20.0	98	19.2	20.0	96	69-120	2	30
Dibromochloromethane	8260C	18.9	20.0	95	20.3	20.0	101	72-128	7	30
Dibromomethane	8260C	19.8	20.0	99	21.1	20.0	105	80-118	6	30
Dichlorodifluoromethane (CFC 12)	8260C	20.2	20.0	101	23.4	20.0	117	59-155	15	30
Dichlorofluoromethane (CFC 21)	8260C	17.9	20.0	90	17.8	20.0	89	70-130	<1	25
Dichloromethane	8260C	18.9	20.0	94	21.2	20.0	106	73-122	12	30
Ethyl Methacrylate	8260C	20.1	20.0	101	21.2	20.0	106	68-132	5	30
Ethylbenzene	8260C	18.1	20.0	90	20.4	20.0	102	76-120	12	30
Iodomethane	8260C	20.9	20.0	104	23.0	20.0	115	18-160	10	30
Methacrylonitrile	8260C	20.5	20.0	102	21.5	20.0	108	68-123	5	30
Methyl Methacrylate	8260C	21.0	20.0	105	21.8	20.0	109	68-129	4	30
Methyl tert-Butyl Ether	8260C	19.8	20.0	99	21.0	20.0	105	75-118	6	30
Methylcyclohexane	8260C	19.1	20.0	96	19.3	20.0	96	51-129	<1	30
Propionitrile	8260C	104	100	104	108	100	108	69-126	4	30
Styrene	8260C	19.0	20.0	95	20.8	20.0	104	80-124	9	30
Tetrachloroethene (PCE)	8260C	17.2	20.0	86	20.1	20.0	100	70-130	15	25
Tetrahydrofuran (THF)	8260C	20.1	20.0	101	21.4	20.0	107	48-141	6	30
Toluene	8260C	18.6	20.0	93	21.1	20.0	106	79-119	13	30
Trichloroethene (TCE)	8260C	18.1	20.0	90	20.6	20.0	103	70-130	13	25
Trichlorofluoromethane (CFC 11)	8260C	18.9	20.0	94	22.1	20.0	110	70-130	16	25
Vinyl Acetate	8260C	30.2	20.0	151	27.4	20.0	137	52-174	10	30
Vinyl Chloride	8260C	17.2	20.0	86	19.6	20.0	98	74-159	13	30
cis-1,2-Dichloroethene	8260C	19.2	20.0	96	21.3	20.0	107	80-121	11	30
cis-1,3-Dichloropropene	8260C	18.6	20.0	93	20.6	20.0	103	77-122	10	30
m,p-Xylenes	8260C	36.5	40.0	91	42.1	40.0	105	80-126	14	30
o-Xylene	8260C	18.2	20.0	91	20.4	20.0	102	79-123	12	30
trans-1,2-Dichloroethene	8260C	18.3	20.0	91	20.8	20.0	104	73-118	13	30
trans-1,3-Dichloropropene	8260C	19.1	20.0	96	20.0	20.0	100	71-133	4	30
trans-1,4-Dichloro-2-butene	8260C	16.7	20.0	84	17.3	20.0	86	39-137	3	30

Client: NASA/WSTF/Navarro
Project: White Sands Test Facility/23EC002B
Sample Matrix: Water

Service Request: R2404650
Date Analyzed: 06/07/24

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/L
Basis:NA

		Lab Control Sample			Duplicate Lab Control Sample					
		RQ2406493-03			RQ2406493-04					
Analyte Name	**Analytical Method**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	8260C	19.6	20.0	98	20.2	20.0	101	70-130	3	25

Client: NASA/WSTF/Navarro **Service Request:**R2404650
Project: White Sands Test Facility/23EC002B **Date Analyzed:**06/06/24 09:51

Tune Summary
Volatile Organic Compounds by GC/MS

File ID: I:\ACQUDATA\MSVOA17\Data\060624\K2590.D\ **Analytical Method:** 8260C
Instrument ID: R-MS-17 **Analysis Lot:** 843243

Target Mass	Relative to Mass	Lower Limit %	Upper Limit %	Relative Abundance %	Raw Abundance	Result Pass/Fail
50	95	15	40	18.7	32197	Pass
75	95	30	60	49.1	84696	Pass
95	95	100	100	100.0	172459	Pass
96	95	5	9	6.6	11410	Pass
173	174	0	2	0.8	1207	Pass
174	95	50	120	83.1	143275	Pass
175	174	5	9	7.4	10551	Pass
176	174	95	101	95.9	137357	Pass
177	176	5	9	6.6	9097	Pass

Sample Name	Lab Code	File ID:	Date Analyzed:	Q
Continuing Calibration Verification	RQ2406398-02	I:\ACQUDATA\MSVOA17\Data\060624\K2591.D\	06/06/24 10:24	
Lab Control Sample	RQ2406398-03	I:\ACQUDATA\MSVOA17\Data\060624\K2592.D\	06/06/24 11:00	
Method Blank	RQ2406398-04	I:\ACQUDATA\MSVOA17\Data\060624\K2595.D\	06/06/24 12:27	
2405290700A PL-12-570	R2404650-014	I:\ACQUDATA\MSVOA17\Data\060624\K2596.D\	06/06/24 12:58	
2405290932A PL-12-570	R2404650-015	I:\ACQUDATA\MSVOA17\Data\060624\K2597.D\	06/06/24 13:21	
2405290933A PL-12-570	R2404650-016	I:\ACQUDATA\MSVOA17\Data\060624\K2598.D\	06/06/24 13:44	
2405291410A PL-12-800	R2404650-017	I:\ACQUDATA\MSVOA17\Data\060624\K2599.D\	06/06/24 14:07	
2405291411A PL-12-800	R2404650-018	I:\ACQUDATA\MSVOA17\Data\060624\K2600.D\	06/06/24 14:30	
2405281002A 400-EV-131	R2404650-008	I:\ACQUDATA\MSVOA17\Data\060624\K2601.D\	06/06/24 14:53	
2405280854A 400-FV-131	R2404650-007	I:\ACQUDATA\MSVOA17\Data\060624\K2603.D\	06/06/24 15:39	
2405281011C 400-JV-150	R2404650-011	I:\ACQUDATA\MSVOA17\Data\060624\K2604.D\	06/06/24 16:02	
2405281431C 400-HV-147	R2404650-013	I:\ACQUDATA\MSVOA17\Data\060624\K2605.D\	06/06/24 16:25	
2405280842C 400-GV-125	R2404650-003	I:\ACQUDATA\MSVOA17\Data\060624\K2606.D\	06/06/24 16:48	
2405280700A 400-FV-131	R2404650-004	I:\ACQUDATA\MSVOA17\Data\060624\K2607.D\	06/06/24 17:11	
2405280852A 400-FV-131	R2404650-005	I:\ACQUDATA\MSVOA17\Data\060624\K2608.D\	06/06/24 17:34	
2405280853A 400-FV-131	R2404650-006	I:\ACQUDATA\MSVOA17\Data\060624\K2609.D\	06/06/24 17:57	
2405281010C 400-JV-150	R2404650-010	I:\ACQUDATA\MSVOA17\Data\060624\K2610.D\	06/06/24 18:20	
2405281430C 400-HV-147	R2404650-012	I:\ACQUDATA\MSVOA17\Data\060624\K2611.D\	06/06/24 18:43	
2405280840C 400-GV-125	R2404650-001	I:\ACQUDATA\MSVOA17\Data\060624\K2612.D\	06/06/24 19:05	
2405280841C 400-GV-125	R2404650-002	I:\ACQUDATA\MSVOA17\Data\060624\K2613.D\	06/06/24 19:28	
2405291410A PL-12-800	RQ2406398-05	I:\ACQUDATA\MSVOA17\Data\060624\K2617.D\	06/06/24 21:00	
2405291410A PL-12-800	RQ2406398-06	I:\ACQUDATA\MSVOA17\Data\060624\K2618.D\	06/06/24 21:23	

Client: NASA/WSTF/Navarro **Service Request:**R2404650
Project: White Sands Test Facility/23EC002B **Date Analyzed:**06/07/24 22:39

Tune Summary
Volatile Organic Compounds by GC/MS

File ID: I:\ACQUDATA\MSVOA17\Data\060724\K2682.D\ **Analytical Method:** 8260C
Instrument ID: R-MS-17 **Analysis Lot:** 843440

Target Mass	Relative to Mass	Lower Limit %	Upper Limit %	Relative Abundance %	Raw Abundance	Result Pass/Fail
50	95	15	40	19.1	40006	Pass
75	95	30	60	50.8	106467	Pass
95	95	100	100	100.0	209688	Pass
96	95	5	9	6.8	14303	Pass
173	174	0	2	0.9	1403	Pass
174	95	50	120	77.8	163093	Pass
175	174	5	9	7.3	11957	Pass
176	174	95	101	96.2	156885	Pass
177	176	5	9	6.4	10083	Pass

Sample Name	Lab Code	File ID:	Date Analyzed:	Q
Continuing Calibration Verification	RQ2406493-02	I:\ACQUDATA\MSVOA17\Data\060724\K2683.D\	06/07/24 23:02	
Lab Control Sample	RQ2406493-03	I:\ACQUDATA\MSVOA17\Data\060724\K2684.D\	06/07/24 23:25	
Duplicate Lab Control Sample	RQ2406493-04	I:\ACQUDATA\MSVOA17\Data\060724\K2685.D\	06/07/24 23:48	
Method Blank	RQ2406493-05	I:\ACQUDATA\MSVOA17\Data\060724\K2688.D\	06/08/24 00:57	
2405281003A 400-EV-131	R2404650-009	I:\ACQUDATA\MSVOA17\Data\060724\K2693.D\	06/08/24 02:52	
2405280840C 400-GV-125	R2404650-001	I:\ACQUDATA\MSVOA17\Data\060724\K2694.D\	06/08/24 03:15	
2405280841C 400-GV-125	R2404650-002	I:\ACQUDATA\MSVOA17\Data\060724\K2695.D\	06/08/24 03:38	
2405281002A 400-EV-131	R2404650-008	I:\ACQUDATA\MSVOA17\Data\060724\K2696.D\	06/08/24 04:01	
2405281010C 400-JV-150	R2404650-010	I:\ACQUDATA\MSVOA17\Data\060724\K2697.D\	06/08/24 04:24	

Client: NASA/WSTF/Navarro **Service Request:**R2404650
Project: White Sands Test Facility/23EC002B **Date Analyzed:**06/06/24 10:24

Internal Standard Area and RT SUMMARY
Volatile Organic Compounds by GC/MS

File ID: I:\ACQUDATA\MSVOA17\Data\060624\K2591.D\ **Lab Code:**RQ2406398-02
Instrument ID: R-MS-17 **Analysis Lot:**843243
Analysis Method: 8260C **Signal ID:**1

		1,4-Dichlorobenzene-d4		1,4-Difluorobenzene		Chlorobenzene-d5	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Result ==>	252,672	11.65	565,823	6.17	494,220	9.57
	Upper Limit ==>	505,344	11.82	1,131,646	6.34	988,440	9.74
	Lower Limit ==>	126,336	11.48	282,912	6.00	247,110	9.40
Associated Analyses							
Lab Control Sample	RQ2406398-03	270342	11.65	582811	6.17	531324	9.57
Method Blank	RQ2406398-04	256957	11.64	584154	6.18	516076	9.57
2405290700A PL-12-570	R2404650-014	262364	11.64	598435	6.17	531506	9.57
2405290932A PL-12-570	R2404650-015	254412	11.65	600924	6.17	532229	9.57
2405290933A PL-12-570	R2404650-016	245399	11.64	582714	6.18	509848	9.57
2405291410A PL-12-800	R2404650-017	262778	11.64	594999	6.17	530701	9.57
2405291411A PL-12-800	R2404650-018	254523	11.64	593941	6.17	525652	9.57
2405281002A 400-EV-131	R2404650-008	262916	11.65	585598	6.17	527798	9.57
2405280854A 400-FV-131	R2404650-007	247695	11.64	573644	6.18	507334	9.57
2405281011C 400-JV-150	R2404650-011	252579	11.65	582970	6.17	517195	9.57
2405281431C 400-HV-147	R2404650-013	255113	11.65	594285	6.18	522507	9.57
2405280842C 400-GV-125	R2404650-003	267148	11.65	616706	6.17	542849	9.57
2405280700A 400-FV-131	R2404650-004	257246	11.65	589083	6.18	525203	9.57
2405280852A 400-FV-131	R2404650-005	240355	11.64	577250	6.17	507382	9.57
2405280853A 400-FV-131	R2404650-006	253551	11.64	591156	6.17	526857	9.57
2405281010C 400-JV-150	R2404650-010	251813	11.64	581348	6.17	516971	9.57
2405281430C 400-HV-147	R2404650-012	247471	11.65	567152	6.17	501915	9.57
2405280840C 400-GV-125	R2404650-001	247759	11.64	562852	6.18	506875	9.57
2405280841C 400-GV-125	R2404650-002	244299	11.64	560419	6.17	506914	9.57
2405291410A PL-12-800MS	RQ2406398-05	247564	11.65	522733	6.17	472078	9.57
2405291410A PL-12-800DMS	RQ2406398-06	236121	11.64	510279	6.17	457249	9.57

QA/QC Report

Client: NASA/WSTF/Navarro **Service Request:**R2404650
Project: White Sands Test Facility/23EC002B **Date Analyzed:**06/06/24 10:24

Internal Standard Area and RT SUMMARY
Volatile Organic Compounds by GC/MS

File ID: I:\ACQUDATA\MSVOA17\Data\060624\K2591.D\ **Lab Code:**RQ2406398-02
Instrument ID: R-MS-17 **Analysis Lot:**843243
Analysis Method: 8260C **Signal ID:**1

		Pentafluorobenzene	
		Area	**RT**
	Result ==>	377,433	4.99
	Upper Limit ==>	754,866	5.16
	Lower Limit ==>	188,717	4.82
Associated Analyses			
Lab Control Sample	RQ2406398-03	389797	4.99
Method Blank	RQ2406398-04	383591	4.99
2405290700A PL-12-570	R2404650-014	387091	4.99
2405290932A PL-12-570	R2404650-015	389298	4.99
2405290933A PL-12-570	R2404650-016	386918	4.99
2405291410A PL-12-800	R2404650-017	392247	4.99
2405291411A PL-12-800	R2404650-018	387682	4.99
2405281002A 400-EV-131	R2404650-008	381944	4.99
2405280854A 400-FV-131	R2404650-007	375683	4.99
2405281011C 400-JV-150	R2404650-011	378368	4.99
2405281431C 400-HV-147	R2404650-013	388813	4.99
2405280842C 400-GV-125	R2404650-003	400982	4.99
2405280700A 400-FV-131	R2404650-004	383789	4.99
2405280852A 400-FV-131	R2404650-005	377578	5.00
2405280853A 400-FV-131	R2404650-006	386724	5.00
2405281010C 400-JV-150	R2404650-010	379336	4.99
2405281430C 400-HV-147	R2404650-012	370642	4.99
2405280840C 400-GV-125	R2404650-001	370990	5.00
2405280841C 400-GV-125	R2404650-002	369720	4.99
2405291410A PL-12-800MS	RQ2406398-05	350849	4.99
2405291410A PL-12-800DMS	RQ2406398-06	340762	4.99

Client: NASA/WSTF/Navarro **Service Request:**R2404650
Project: White Sands Test Facility/23EC002B **Date Analyzed:**06/07/24 23:02

Internal Standard Area and RT SUMMARY
Volatile Organic Compounds by GC/MS

File ID: I:\ACQUDATA\MSVOA17\Data\060724\K2683.D\ **Lab Code:**RQ2406493-02
Instrument ID: R-MS-17 **Analysis Lot:**843440
Analysis Method: 8260C **Signal ID:**1

		1,4-Dichlorobenzene-d4		1,4-Difluorobenzene		Chlorobenzene-d5	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Result ==>	305,195	11.65	681,205	6.17	612,315	9.57
	Upper Limit ==>	610,390	11.82	1,362,410	6.34	1,224,630	9.74
	Lower Limit ==>	152,598	11.48	340,603	6.00	306,158	9.40
Associated Analyses							
Lab Control Sample	RQ2406493-03	294343	11.64	678785	6.17	608883	9.57
Duplicate Lab Control Sample	RQ2406493-04	293782	11.65	682578	6.17	609373	9.57

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QA/QC Report

Client: NASA/WSTF/Navarro **Service Request:**R2404650
Project: White Sands Test Facility/23EC002B **Date Analyzed:**06/07/24 23:02

Internal Standard Area and RT SUMMARY
Volatile Organic Compounds by GC/MS

File ID: I:\ACQUDATA\MSVOA17\Data\060724\K2683.D\ **Lab Code:**RQ2406493-02
Instrument ID: R-MS-17 **Analysis Lot:**843440
Analysis Method: 8260C **Signal ID:**1

		Pentafluorobenzene	
		Area	**RT**
	Result ==>	439,868	4.99
	Upper Limit ==>	879,736	5.16
	Lower Limit ==>	219,934	4.82
Associated Analyses			
Lab Control Sample	RQ2406493-03	438686	4.99
Duplicate Lab Control Sample	RQ2406493-04	440847	4.99

Client: NASA/WSTF/Navarro **Service Request:**R2404650
Project: White Sands Test Facility/23EC002B **Date Analyzed:**06/07/24 23:02

Internal Standard Area and RT SUMMARY
Volatile Organic Compounds by GC/MS

File ID: I:\ACQUDATA\MSVOA17\Data\060724\K2683.D\ **Lab Code:**RQ2406493-02
Instrument ID: R-MS-17 **Analysis Lot:**843440
Analysis Method: 8260C **Signal ID:**

		1,4-Dichlorobenzene-d4		1,4-Difluorobenzene		Chlorobenzene-d5	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Result ==>	305,195	11.65	681,205	6.17	612,315	9.57
	Upper Limit ==>	610,390	11.82	1,362,410	6.34	1,224,630	9.74
	Lower Limit ==>	152,598	11.48	340,603	6.00	306,158	9.40
Associated Analyses							
Method Blank	RQ2406493-05	289386	11.64	691871	6.17	611904	9.57
2405281003A 400-EV-131	R2404650-009	300552	11.64	714515	6.17	633952	9.57
2405280840C 400-GV-125	R2404650-001	294774	11.64	716747	6.17	634878	9.57
2405280841C 400-GV-125	R2404650-002	294461	11.64	714552	6.17	628655	9.57
2405281002A 400-EV-131	R2404650-008	296294	11.65	705480	6.18	627408	9.57
2405281010C 400-JV-150	R2404650-010	301064	11.65	716659	6.17	640527	9.57

ALS Group USA, Corp.
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QA/QC Report

Client: NASA/WSTF/Navarro **Service Request:**R2404650
Project: White Sands Test Facility/23EC002B **Date Analyzed:**06/07/24 23:02

Internal Standard Area and RT SUMMARY
Volatile Organic Compounds by GC/MS

File ID: I:\ACQUDATA\MSVOA17\Data\060724\K2683.D\ **Lab Code:**RQ2406493-02
Instrument ID: R-MS-17 **Analysis Lot:**843440
Analysis Method: 8260C **Signal ID:**

		Pentafluorobenzene	
		Area	**RT**
	Result ==>	439,868	4.99
	Upper Limit ==>	879,736	5.16
	Lower Limit ==>	219,934	4.82
Associated Analyses			
Method Blank	RQ2406493-05	436492	4.99
2405281003A 400-EV-131	R2404650-009	452151	4.99
2405280840C 400-GV-125	R2404650-001	453757	4.99
2405280841C 400-GV-125	R2404650-002	451845	4.99
2405281002A 400-EV-131	R2404650-008	452162	4.99
2405281010C 400-JV-150	R2404650-010	460280	4.99

Raw Data

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Volatile Organic Compounds by GC/MS

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Client: NASA/WSTF/Navarro
Project: White Sands Test Facility/23EC002B
Service Request: R2404650
Date Analyzed: 06/06/24 10:24

Continuing Calibration Verification (CCV) Summary
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
File ID: I:\ACQUDATA\MSVOA17\Data\060624\K2591.D\
Signal ID: 1
Calibration Date: 6/4/2024
Calibration ID: RC2400107
Analysis Lot: 843243
Units: ug/L

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
1,1,1,2-Tetrachloroethane	50.0	51.2	0.3566	0.3653	2.4	NA	±20	Average RF
1,1,1-Trichloroethane (TCA)	50.0	51.1	0.7002	0.7149	2.1	NA	±20	Average RF
1,1,2,2-Tetrachloroethane	50.0	51.0	0.7903	0.8064	2.0	NA	±20	Average RF
1,1,2-Trichloroethane	50.0	50.8	0.2659	0.27	1.5	NA	±20	Average RF
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	51.2	0.3969	0.4064	2.4	NA	±20	Average RF
1,1-Dichloroethane (1,1-DCA)	50.0	50.1	0.7499	0.7517	0.2	NA	±20	Average RF
1,1-Dichloroethene (1,1-DCE)	50.0	50.3	0.3819	0.3839	0.5	NA	±20	Average RF
1,2,3-Trichloropropane	50.0	51.1	0.2905	0.2972	2.3	NA	±20	Average RF
1,2-Dibromo-3-chloropropane (DBCP)	50.0	55.2	0.1979	0.2187	10.5	NA	±20	Average RF
1,2-Dibromoethane	50.0	52.6	0.2988	0.3145	5.3	NA	±20	Average RF
1,2-Dichloroethane	50.0	50.5	0.4457	0.4501	1.0	NA	±20	Average RF
1,2-Dichloropropane	50.0	50.0	0.276	0.2763	0.1	NA	±20	Average RF
1,4-Dioxane	1000	1060	0.0043	0.0045	5.9	NA	±20	Average RF
2,2-Dichloro-1,1,1-trifluoroethane (CFC 123)	50.0	49.7	0.5411	0.5373	-0.7	NA	±20	Average RF
2-Butanone (MEK)	50.0	54.2	0.1865	0.2023	8.5	NA	±20	Average RF
2-Chloro-1,3-butadiene	50.0	50.7	0.6447	0.6539	1.4	NA	±20	Average RF
2-Hexanone	50.0	52.7	0.2103	0.2215	5.3	NA	±20	Average RF
Isobutyl Alcohol	1000	1080	0.0118	0.0127	7.9	NA	±20	Average RF
2-Propanol	1000	1070	0.0287	0.0308	7.3	NA	±20	Average RF
Allyl Chloride	50.0	52.7	0.1966	0.207	5.3	NA	±20	Average RF
4-Methyl-2-pentanone	50.0	51.4	0.2615	0.2688	2.8	NA	±20	Average RF
Acetone	50.0	57.0	0.1425	0.1477	NA	14.1	±20	Quadratic
Acetonitrile	250	282	0.0761	0.0859	12.9	NA	±20	Average RF
Acrolein	250	219	0.0522	0.0458	-12.3	NA	±20	Average RF
Acrylonitrile	250	263	0.1755	0.1845	5.1	NA	±20	Average RF
Benzene	50.0	51.0	0.9666	0.9866	2.1	NA	±20	Average RF
Bromodichloromethane	50.0	50.7	0.3808	0.3858	1.3	NA	±20	Average RF
Bromoform	50.0	55.8	0.2225	0.2482	11.5	NA	±20	Average RF
Bromomethane	50.0	39.8	0.3071	0.2095	NA	-20.4	±20	Quadratic
Carbon Disulfide	50.0	48.3	1.0576	1.0211	-3.5	NA	±20	Average RF
Carbon Tetrachloride	50.0	46.4	0.4696	0.4355	-7.3	NA	±20	Average RF
Chlorobenzene	50.0	50.3	0.891	0.896	0.6	NA	±20	Average RF
Chloroethane	50.0	51.1	0.3226	0.3297	2.2	NA	±20	Average RF
Chloroform	50.0	50.1	0.7372	0.7392	0.3	NA	±20	Average RF
Chloromethane	50.0	43.8	0.56	0.454	NA	-12.4	±20	Quadratic
Cyclohexane	50.0	50.6	0.2098	0.2124	1.2	NA	±20	Average RF
Dibromochloromethane	50.0	53.7	0.3736	0.4012	7.4	NA	±20	Average RF
Dibromomethane	50.0	50.1	0.1888	0.1893	0.3	NA	±20	Average RF

Client: NASA/WSTF/Navarro **Service Request:** R2404650
Project: White Sands Test Facility/23EC002B **Date Analyzed:** 06/06/24 10:24

Continuing Calibration Verification (CCV) Summary
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C **Calibration Date:** 6/4/2024
File ID: I:\ACQUDATA\MSVOA17\Data\060624\K2591.D\ **Calibration ID:** RC2400107
Signal ID: 1 **Analysis Lot:** 843243
Units: ug/L

Dichlorodifluoromethane (CFC 12)	50.0	53.2	0.5921	0.6294	6.3	NA	±20	Average RF
Dichlorofluoromethane (CFC 21)	50.0	51.3	0.7125	0.7313	2.6	NA	±20	Average RF
Dichloromethane	50.0	49.7	0.4069	0.4041	-0.7	NA	±20	Average RF
Ethyl Methacrylate	50.0	52.8	0.3612	0.3815	5.6	NA	±20	Average RF
Ethylbenzene	50.0	50.8	0.4675	0.4748	1.6	NA	±20	Average RF
Iodomethane	50.0	36.2	0.3067	0.2218	-27.7*	NA	±20	Average RF
Methacrylonitrile	50.0	52.3	0.1918	0.2007	4.6	NA	±20	Average RF
Methyl Methacrylate	50.0	54.4	0.1891	0.2057	8.8	NA	±20	Average RF
Methyl tert-Butyl Ether	50.0	50.3	1.271	1.2774	0.5	NA	±20	Average RF
Methylcyclohexane	50.0	49.3	0.3543	0.349	-1.5	NA	±20	Average RF
Propionitrile	250	269	0.0724	0.078	7.8	NA	±20	Average RF
Styrene	50.0	52.7	0.9263	0.9757	5.3	NA	±20	Average RF
Tetrachloroethene (PCE)	50.0	51.4	0.2743	0.2822	2.9	NA	±20	Average RF
Tetrahydrofuran (THF)	50.0	53.7	0.1229	0.1321	7.5	NA	±20	Average RF
Toluene	50.0	50.4	1.1103	1.1196	0.8	NA	±20	Average RF
Trichloroethene (TCE)	50.0	51.9	0.314	0.3258	3.7	NA	±20	Average RF
Trichlorofluoromethane (CFC 11)	50.0	51.1	0.6844	0.699	2.1	NA	±20	Average RF
Vinyl Acetate	50.0	58.8	0.0499	0.0586	17.5	NA	±20	Average RF
Vinyl Chloride	50.0	52.4	0.5011	0.5253	4.8	NA	±20	Average RF
cis-1,2-Dichloroethene	50.0	50.3	0.4589	0.4619	0.6	NA	±20	Average RF
cis-1,3-Dichloropropene	50.0	53.4	0.401	0.4285	6.9	NA	±20	Average RF
m,p-Xylenes	100	104	0.5656	0.5874	3.9	NA	±20	Average RF
o-Xylene	50.0	51.5	0.5625	0.5798	3.1	NA	±20	Average RF
trans-1,2-Dichloroethene	50.0	51.2	0.4032	0.4128	2.4	NA	±20	Average RF
trans-1,3-Dichloropropene	50.0	52.9	0.375	0.3968	5.8	NA	±20	Average RF
trans-1,4-Dichloro-2-butene	50.0	52.7	0.1171	0.1233	5.4	NA	±20	Average RF
1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	50.0	49.9	0.4184	0.4174	-0.2	NA	±20	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
4-Bromofluorobenzene	50.0	50.8	0.4388	0.446	1.6	NA	±20	Average RF
Dibromofluoromethane	50.0	51.7	0.3369	0.3484	3.4	NA	±20	Average RF
Toluene-d8	50.0	51.3	1.1674	1.198	2.6	NA	±20	Average RF

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Analyzed:**	06/07/24 23:02

Continuing Calibration Verification (CCV) Summary
Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	**Calibration Date:**	6/4/2024
File ID:	I:\ACQUDATA\MSVOA17\Data\060724\K2683.D\	**Calibration ID:**	RC2400107
Signal ID:	1	**Analysis Lot:**	843440
		Units:	ug/L

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
1,1,1,2-Tetrachloroethane	50.0	48.8	0.3566	0.3479	-2.5	NA	±20	Average RF
1,1,1-Trichloroethane (TCA)	50.0	50.7	0.7002	0.7093	1.3	NA	±20	Average RF
1,1,2,2-Tetrachloroethane	50.0	51.2	0.7903	0.8098	2.5	NA	±20	Average RF
1,1,2-Trichloroethane	50.0	50.4	0.2659	0.2681	0.8	NA	±20	Average RF
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	48.5	0.3969	0.3847	-3.1	NA	±20	Average RF
1,1-Dichloroethane (1,1-DCA)	50.0	49.1	0.7499	0.7366	-1.8	NA	±20	Average RF
1,1-Dichloroethene (1,1-DCE)	50.0	49.3	0.3819	0.3768	-1.3	NA	±20	Average RF
1,2,3-Trichloropropane	50.0	49.7	0.2905	0.2887	-0.6	NA	±20	Average RF
1,2-Dibromo-3-chloropropane (DBCP)	50.0	51.8	0.1979	0.2052	3.7	NA	±20	Average RF
1,2-Dibromoethane	50.0	50.8	0.2988	0.3032	1.5	NA	±20	Average RF
1,2-Dichloroethane	50.0	49.2	0.4457	0.4385	-1.6	NA	±20	Average RF
1,2-Dichloropropane	50.0	47.6	0.276	0.263	-4.7	NA	±20	Average RF
1,4-Dioxane	1000	1020	0.0043	0.0044	2.5	NA	±20	Average RF
2,2-Dichloro-1,1,1-trifluoroethane (CFC 123)	50.0	50.2	0.5411	0.5435	0.4	NA	±20	Average RF
2-Butanone (MEK)	50.0	53.1	0.1865	0.1981	6.2	NA	±20	Average RF
2-Chloro-1,3-butadiene	50.0	51.7	0.6447	0.6661	3.3	NA	±20	Average RF
2-Hexanone	50.0	51.6	0.2103	0.2169	3.1	NA	±20	Average RF
Isobutyl Alcohol	1000	1050	0.0118	0.0124	5.1	NA	±20	Average RF
2-Propanol	1000	1090	0.0287	0.0313	9.0	NA	±20	Average RF
Allyl Chloride	50.0	49.9	0.1966	0.1962	-0.2	NA	±20	Average RF
4-Methyl-2-pentanone	50.0	52.2	0.2615	0.273	4.4	NA	±20	Average RF
Acetone	50.0	56.8	0.1425	0.1472	NA	13.6	±20	Quadratic
Acetonitrile	250	257	0.0761	0.0784	3.0	NA	±20	Average RF
Acrolein	250	236	0.0522	0.0492	-5.7	NA	±20	Average RF
Acrylonitrile	250	266	0.1755	0.1865	6.2	NA	±20	Average RF
Benzene	50.0	49.1	0.9666	0.9487	-1.9	NA	±20	Average RF
Bromodichloromethane	50.0	50.3	0.3808	0.3829	0.5	NA	±20	Average RF
Bromoform	50.0	51.4	0.2225	0.2289	2.9	NA	±20	Average RF
Bromomethane	50.0	49.4	0.3071	0.2442	NA	-1.2	±20	Quadratic
Carbon Disulfide	50.0	47.9	1.0576	1.0138	-4.1	NA	±20	Average RF
Carbon Tetrachloride	50.0	43.8	0.4696	0.4114	-12.4	NA	±20	Average RF
Chlorobenzene	50.0	46.3	0.891	0.8249	-7.4	NA	±20	Average RF
Chloroethane	50.0	49.0	0.3226	0.3163	-1.9	NA	±20	Average RF
Chloroform	50.0	49.9	0.7372	0.7363	-0.1	NA	±20	Average RF
Chloromethane	50.0	41.6	0.56	0.4313	NA	-16.9	±20	Quadratic
Cyclohexane	50.0	49.0	0.2098	0.2054	-2.1	NA	±20	Average RF
Dibromochloromethane	50.0	50.8	0.3736	0.3794	1.6	NA	±20	Average RF
Dibromomethane	50.0	49.6	0.1888	0.1874	-0.7	NA	±20	Average RF

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404650
Project:	White Sands Test Facility/23EC002B	**Date Analyzed:**	06/07/24 23:02

Continuing Calibration Verification (CCV) Summary
Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	**Calibration Date:**	6/4/2024
File ID:	I:\ACQUDATA\MSVOA17\Data\060724\K2683.D\	**Calibration ID:**	RC2400107
Signal ID:	1	**Analysis Lot:**	843440
		Units:	ug/L

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Dichlorodifluoromethane (CFC 12)	50.0	50.9	0.5921	0.603	1.8	NA	±20	Average RF
Dichlorofluoromethane (CFC 21)	50.0	50.7	0.7125	0.7229	1.5	NA	±20	Average RF
Dichloromethane	50.0	48.4	0.4069	0.3943	-3.1	NA	±20	Average RF
Ethyl Methacrylate	50.0	53.7	0.3612	0.3879	7.4	NA	±20	Average RF
Ethylbenzene	50.0	47.1	0.4675	0.4401	-5.9	NA	±20	Average RF
Iodomethane	50.0	73.5	0.3067	0.451	47.0*	NA	±20	Average RF
Methacrylonitrile	50.0	53.3	0.1918	0.2046	6.7	NA	±20	Average RF
Methyl Methacrylate	50.0	55.1	0.1891	0.2084	10.2	NA	±20	Average RF
Methyl tert-Butyl Ether	50.0	50.7	1.271	1.2884	1.4	NA	±20	Average RF
Methylcyclohexane	50.0	47.6	0.3543	0.3374	-4.8	NA	±20	Average RF
Propionitrile	250	272	0.0724	0.0787	8.7	NA	±20	Average RF
Styrene	50.0	49.4	0.9263	0.9143	-1.3	NA	±20	Average RF
Tetrachloroethene (PCE)	50.0	44.7	0.2743	0.2453	-10.5	NA	±20	Average RF
Tetrahydrofuran (THF)	50.0	51.9	0.1229	0.1275	3.7	NA	±20	Average RF
Toluene	50.0	48.3	1.1103	1.0721	-3.4	NA	±20	Average RF
Trichloroethene (TCE)	50.0	48.4	0.314	0.3037	-3.3	NA	±20	Average RF
Trichlorofluoromethane (CFC 11)	50.0	50.8	0.6844	0.6951	1.6	NA	±20	Average RF
Vinyl Acetate	50.0	60.7	0.0499	0.0606	21.5*	NA	±20	Average RF
Vinyl Chloride	50.0	50.0	0.5011	0.5011	0.0	NA	±20	Average RF
cis-1,2-Dichloroethene	50.0	49.8	0.4589	0.4568	-0.5	NA	±20	Average RF
cis-1,3-Dichloropropene	50.0	49.8	0.401	0.3996	-0.4	NA	±20	Average RF
m,p-Xylenes	100	93.8	0.5656	0.5305	-6.2	NA	±20	Average RF
o-Xylene	50.0	47.5	0.5625	0.5339	-5.1	NA	±20	Average RF
trans-1,2-Dichloroethene	50.0	50.0	0.4032	0.403	0.0	NA	±20	Average RF
trans-1,3-Dichloropropene	50.0	50.8	0.375	0.3809	1.6	NA	±20	Average RF
trans-1,4-Dichloro-2-butene	50.0	50.4	0.1171	0.1181	0.9	NA	±20	Average RF
1,2-Dichloro-1,1,2-trifluoroethane (CFC 123a)	50.0	49.3	0.4184	0.4124	-1.4	NA	±20	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
4-Bromofluorobenzene	50.0	52.3	0.4388	0.4593	4.7	NA	±20	Average RF
Dibromofluoromethane	50.0	50.1	0.3369	0.3378	0.3	NA	±20	Average RF
Toluene-d8	50.0	50.2	1.1674	1.1708	0.3	NA	±20	Average RF

Client: NASA/WSTF/Navarro **Service Request:**R2404650
Project: White Sands Test Facility/23EC002B

Analysis Run Log
Volatile Organic Compounds by GC/MS

Analysis Method: **Analysis Lot:**843243
Instrument ID:R-MS-17

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
I:\ACQUDATA\MSVOA17\Data\060624\K2590.D\	ZZZZZZZ	ZZZZZZZ	6/6/2024	09:51:00	
I:\ACQUDATA\MSVOA17\Data\060624\K2591.D\	Continuing Calibration Verification	RQ2406398-02	6/6/2024	10:24:00	
I:\ACQUDATA\MSVOA17\Data\060624\K2592.D\	Lab Control Sample	RQ2406398-03	6/6/2024	11:00:00	
I:\ACQUDATA\MSVOA17\Data\060624\K2595.D\	Method Blank	RQ2406398-04	6/6/2024	12:27:00	
I:\ACQUDATA\MSVOA17\Data\060624\K2596.D\	2405290700A PL-12-570	R2404650-014	6/6/2024	12:58:00	
I:\ACQUDATA\MSVOA17\Data\060624\K2597.D\	2405290932A PL-12-570	R2404650-015	6/6/2024	13:21:00	
I:\ACQUDATA\MSVOA17\Data\060624\K2598.D\	2405290933A PL-12-570	R2404650-016	6/6/2024	13:44:00	
I:\ACQUDATA\MSVOA17\Data\060624\K2599.D\	2405291410A PL-12-800	R2404650-017	6/6/2024	14:07:00	
I:\ACQUDATA\MSVOA17\Data\060624\K2600.D\	2405291411A PL-12-800	R2404650-018	6/6/2024	14:30:00	
I:\ACQUDATA\MSVOA17\Data\060624\K2601.D\	2405281002A 400-EV-131	R2404650-008	6/6/2024	14:53:00	
I:\ACQUDATA\MSVOA17\Data\060624\K2603.D\	2405280854A 400-FV-131	R2404650-007	6/6/2024	15:39:00	
I:\ACQUDATA\MSVOA17\Data\060624\K2604.D\	2405281011C 400-JV-150	R2404650-011	6/6/2024	16:02:00	
I:\ACQUDATA\MSVOA17\Data\060624\K2605.D\	2405281431C 400-HV-147	R2404650-013	6/6/2024	16:25:00	
I:\ACQUDATA\MSVOA17\Data\060624\K2606.D\	2405280842C 400-GV-125	R2404650-003	6/6/2024	16:48:00	
I:\ACQUDATA\MSVOA17\Data\060624\K2607.D\	2405280700A 400-FV-131	R2404650-004	6/6/2024	17:11:00	
I:\ACQUDATA\MSVOA17\Data\060624\K2608.D\	2405280852A 400-FV-131	R2404650-005	6/6/2024	17:34:00	
I:\ACQUDATA\MSVOA17\Data\060624\K2609.D\	2405280853A 400-FV-131	R2404650-006	6/6/2024	17:57:00	
I:\ACQUDATA\MSVOA17\Data\060624\K2610.D\	2405281010C 400-JV-150	R2404650-010	6/6/2024	18:20:00	
I:\ACQUDATA\MSVOA17\Data\060624\K2611.D\	2405281430C 400-HV-147	R2404650-012	6/6/2024	18:43:00	
I:\ACQUDATA\MSVOA17\Data\060624\K2612.D\	2405280840C 400-GV-125	R2404650-001	6/6/2024	19:05:00	
I:\ACQUDATA\MSVOA17\Data\060624\K2613.D\	2405280841C 400-GV-125	R2404650-002	6/6/2024	19:28:00	
I:\ACQUDATA\MSVOA17\Data\060624\K2615.D\	ZZZZZZZ	ZZZZZZZ	6/6/2024	20:14:00	
I:\ACQUDATA\MSVOA17\Data\060624\K2616.D\	ZZZZZZZ	ZZZZZZZ	6/6/2024	20:37:00	

Client: NASA/WSTF/Navarro **Service Request:**R2404650
Project: White Sands Test Facility/23EC002B

Analysis Run Log
Volatile Organic Compounds by GC/MS

Analysis Method:

Analysis Lot:843243
Instrument ID:R-MS-17

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
I:\ACQUDATA\MSVOA17\Data\060624\K2617.D\	2405291410A PL-12-800 MS	RQ2406398-05	6/6/2024	21:00:00	
I:\ACQUDATA\MSVOA17\Data\060624\K2618.D\	2405291410A PL-12-800 DMS	RQ2406398-06	6/6/2024	21:23:00	

Client: NASA/WSTF/Navarro **Service Request:**R2404650
Project: White Sands Test Facility/23EC002B

Analysis Run Log
Volatile Organic Compounds by GC/MS

Analysis Method: **Analysis Lot:**843440
Instrument ID:R-MS-17

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
I:\ACQUDATA\MSVOA17\Data\060724\K2682.D\	ZZZZZZZ	ZZZZZZZ	6/7/2024	22:39:00	
I:\ACQUDATA\MSVOA17\Data\060724\K2683.D\	Continuing Calibration Verification	RQ2406493-02	6/7/2024	23:02:00	
I:\ACQUDATA\MSVOA17\Data\060724\K2684.D\	Lab Control Sample	RQ2406493-03	6/7/2024	23:25:00	
I:\ACQUDATA\MSVOA17\Data\060724\K2685.D\	Duplicate Lab Control Sample	RQ2406493-04	6/7/2024	23:48:00	
I:\ACQUDATA\MSVOA17\Data\060724\K2688.D\	Method Blank	RQ2406493-05	6/8/2024	00:57:00	
I:\ACQUDATA\MSVOA17\Data\060724\K2689.D\	ZZZZZZZ	ZZZZZZZ	6/8/2024	01:20:00	
I:\ACQUDATA\MSVOA17\Data\060724\K2690.D\	ZZZZZZZ	ZZZZZZZ	6/8/2024	01:43:00	
I:\ACQUDATA\MSVOA17\Data\060724\K2691.D\	ZZZZZZZ	ZZZZZZZ	6/8/2024	02:06:00	
I:\ACQUDATA\MSVOA17\Data\060724\K2692.D\	ZZZZZZZ	ZZZZZZZ	6/8/2024	02:29:00	
I:\ACQUDATA\MSVOA17\Data\060724\K2693.D\	2405281003A 400-EV-131	R2404650-009	6/8/2024	02:52:00	
I:\ACQUDATA\MSVOA17\Data\060724\K2694.D\	2405280840C 400-GV-125	R2404650-001	6/8/2024	03:15:00	
I:\ACQUDATA\MSVOA17\Data\060724\K2695.D\	2405280841C 400-GV-125	R2404650-002	6/8/2024	03:38:00	
I:\ACQUDATA\MSVOA17\Data\060724\K2696.D\	2405281002A 400-EV-131	R2404650-008	6/8/2024	04:01:00	
I:\ACQUDATA\MSVOA17\Data\060724\K2697.D\	2405281010C 400-JV-150	R2404650-010	6/8/2024	04:24:00	
I:\ACQUDATA\MSVOA17\Data\060724\K2698.D\	ZZZZZZZ	ZZZZZZZ	6/8/2024	04:47:00	
I:\ACQUDATA\MSVOA17\Data\060724\K2699.D\	ZZZZZZZ	ZZZZZZZ	6/8/2024	05:10:00	
I:\ACQUDATA\MSVOA17\Data\060724\K2700.D\	ZZZZZZZ	ZZZZZZZ	6/8/2024	05:33:00	
I:\ACQUDATA\MSVOA17\Data\060724\K2701.D\	ZZZZZZZ	ZZZZZZZ	6/8/2024	05:56:00	
I:\ACQUDATA\MSVOA17\Data\060724\K2702.D\	ZZZZZZZ	ZZZZZZZ	6/8/2024	06:19:00	
I:\ACQUDATA\MSVOA17\Data\060724\K2703.D\	ZZZZZZZ	ZZZZZZZ	6/8/2024	06:42:00	
I:\ACQUDATA\MSVOA17\Data\060724\K2704.D\	ZZZZZZZ	ZZZZZZZ	6/8/2024	07:05:00	
I:\ACQUDATA\MSVOA17\Data\060724\K2705.D\	ZZZZZZZ	ZZZZZZZ	6/8/2024	07:28:00	
I:\ACQUDATA\MSVOA17\Data\060724\K2706.D\	ZZZZZZZ	ZZZZZZZ	6/8/2024	07:51:00	

Client: NASA/WSTF/Navarro **Service Request:**R2404650
Project: White Sands Test Facility/23EC002B

Analysis Run Log
Volatile Organic Compounds by GC/MS

Analysis Method: **Analysis Lot:**843440
Instrument ID:R-MS-17

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
I:\ACQUDATA\MSVOA17\Data\060724\K2707.D\	ZZZZZZZ	ZZZZZZZ	6/8/2024	08:14:00	
I:\ACQUDATA\MSVOA17\Data\060724\K2708.D\	ZZZZZZZ	ZZZZZZZ	6/8/2024	08:37:00	

Analysis: 8260 waters | Analyst: KDuest | pH strips: 2258022 | Tune Method: WO600424

Date: 6/6/24 | Balance ID: N/A | ResCl strips: N/A | Run Method: ↓

Instr. 17 | 50 mL Class A used for dilution FV | Syringes: 231174 | LIMS Run#: 8433743

Data Path: j:\acqudata\msvoa(InstID)\(Date)

Pos.	Sample	Diln.	Diln. Prep./	RL	Vial	HS	Cl	pH	File#	OK?	Comments
1	DWE		R2406398.01						K2590	Y	(auto) 9:57
1	CW		02						K2591	YC	
1	LCS·FP		03						K2592	YD	
1	BLK		—						K2593	(Y)	
2	MBLK·UMP		—						K2594	YB	
3	MBLK·FP		04						K2595	YB	
1	R2404650·014	1.0	(this)	66656	1	N	N/A	12	K2596	Y	
2	015	1.0			1			12	K2597	Y	
3	016	1.0			1			12	K2598	Y	
4	017	1.0			1			12	K2599	Y	
5	018	1.0			1			12	K2600	X	
6	008	1.0			1			12	K2601	(Y)	ndt 5.0 TCFM
7	009	1.0			1			12	K2602	(Y)	ndt 1.0
8	007	1.0			1			12	K2603	Y	
9	011	1.0			1			12	K2604	Y	
10	013	1.0			1			12	K2605	Y	
11	003	1.0			1			12	K2606	Y	
12	004	1.0			1			12	K2607	Y	
13	005	1.0			1			12	K2608	Y	
14	006	1.0			1			12	K2609	Y	
15	010	1.0			1			12	K2610	(Y)	ndt 5.0 · TCFM
16	012	1.0			1			12	K2611	X	
17	001	1.0			1			12	K2612	(Y)	ndt 2.5 · TCFM
18	↓ 002	1.0		↓	1	↓	↓	12	K2613	(Y)	↓ ↓
19	BLK								K2614	—	
20	R2404695·005	2.0	25/50 mls	67665	2	N	N/A	12	K2615	Y	
21	R2404578·001	5.0	10/50 mls	14733	2			12	K2616	Y	
22	R2404650·017	1.0	MS	66656	2	↓	↓	12	K2617	YQ	RunQC
23	↓ 017	1.0	MSD	↓	3			12	K2618	YQ	↓ 21:23 ✓
24	BLK								K2619	—	

All samples = 5 mL + 5 uL combined IS/ 5 mL purged

Combined IS/Surr :

500 Primary QC : 235592 | 200 Secondary Fr : 235446 .5mL | Surrogate 50 : 235583

Primary Fr : 235448 | 500 Secondary QC : 235640 | Internal Std 50 : 235584

Primary Tb : 235543 5mL→50mls | Secondary Tb : 235548 2mL | 50mls =LCS / 11.3mL Reagents:

Primary HxL : 235449 =CW | Secondary HxL : 235447

Primary 336 : 234897 TCT | Secondary 336 : 234915 TM

-10.8mL

113mL vial = mls/D

Analysis: 8260D Water | Analyst: K. Duerst | pH strips: 238022 | Tune Method: LW0604Z4

Date: 6/7/24 Run#2 | Balance ID: NA | ResCl strips: NA | Run Method: L

Instr. 17 | 50 mL Class A used for dilution FV | Syringes: 231174 | LIMS Run#: 8234440

Data Path: j:\acqudata\msvoa(InstID)\(Date)

Pos.	Sample	Diln.	Diln. Prep./	RL	Vial	HS	Cl	pH	File#	OK?	Comments
29	DUP		R2406493.01						K3682	YT	22:39 (auto)
30	CCV		02						K3683	YC	
31	LCS·FP		03						K3684	YQ	
32	LCSD·FP		04						K3685	YQ	
33	BLK		—						K3686	Q	
34	MBLK·UMP		—						K3687	YB	
35	MBLK·FP		(L2) 0605						K3688	YB	
36	R2406485.001	1.0		9443	1	N	NA	12	K3689	Y	
37	R2406487.001	1.0		↓	1			12	K3690	Y	
38	R2406489.001	1.0		25002	1			12	K3691	Y	
39	R2406491.001	1.0		9434	1			12	K3692	Y	
40	R2406450.009	1.0	(this)	10656	1			12	K3693	Y	
41	001	2.5	20/50 mls		2			12	K3694	(Y)	(DD) TCFM
42	002	2.5	↓		2			12	K3695	(Y)	
43	008	5.0	10/50 mls		2			12	K3696	(Y)	
44	010	5.0	↓		2			12	K3697	(Y)	
45	R2406463.001	5.0	10/50 mls	26485	1			12	K3698	Y	Foamy
46	002	5.0			1			12	K3699	Y	
47	003	5.0			1			12	K3700	Y	
48	004	5.0			1			12	K3701	(Y)	not SD - chloroform
49	005	5.0			1			12	K3702	Y	
50	006	1.0			1			12	K3703	Y	
51	007	5.0	10/50 mls		1			12	K3704	Y	foamy
52	008	5.0			1			12	K3705	Y	
53	009	1.0			1			12	K3706	Y	
54	010	5.0	10/50 mls		1			12	K3707	Y	foamy
55	011	1.0			1			12	K3708	Y	
56	BLK								K3709	—	
											FTD 6/6/24

All samples = 5 mL + 5 uL combined IS/ 5 mL purged

Combined IS/Surr :

Surrogate SD : 235584

Internal Std SD : 235583

Reagents:

SD Primary QLC : 235592
Primary fr : 235548 → 5mL → 50mls = CCV
Primary TG : 235543
Primary HSL : 235549
Primary :

SD Secondary fr : 235546.5mL
SD Secondary QLC : 235540
Secondary TG : 235538 → 5mL → 50mls = LCS/D
Secondary HSL : 235547
Secondary :

June 17, 2024 Service Request No:R2404651

Stephanie Portillo
NASA/WSTF/Navarro
P.O. Box 20
Las Cruces, NM 88004

Laboratory Results for: White Sands Test Facility

Dear Stephanie,

Enclosed are the results of the sample(s) submitted to our laboratory May 31, 2024
For your reference, these analyses have been assigned our service request number **R2404651.**

All testing was performed according to our laboratory's quality assurance program and met the requirements of the TNI standards except as noted in the case narrative report. Any testing not included in the lab's accreditation is identified on a Non-Certified Analytes report. All results are intended to be considered in their entirety. ALS Environmental is not responsible for use of less than the complete report. Results apply only to the individual samples submitted to the lab for analysis, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s), and represented by Laboratory Control Sample control limits. Any events, such as QC failures or Holding Time exceedances, which may add to the uncertainty are explained in the report narrative or are flagged with qualifiers. The flags are explained in the Report Qualifiers and Definitions page of this report.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Janice Jaeger
Project Manager

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dba ALS Environmental

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Narrative Documents

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client: NASA/WSTF/Navarro
Project: White Sands Test Facility
Sample Matrix: Water

Service Request: R2404651
Date Received: 05/31/2024

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level IV requested by the client.
Manual Integrations may have been used in the quantitation of the results in this report. Manual Integrations are readily identified in the raw data on the Quantitation Reports (Organics) by the automatic placement of an “m” next to the sample result. For Ion Chromatography, the manual integrations are identified by the automatic placement of “manipulated” or "manually integrated" in the upper left corner of the chromatogram (Hexavalent Chromium) or “M” by the result in the “Type” column (anions). The reason for the manual integration is noted on the “after” chromatogram, which is found with the original chromatogram and quantitation report. All integrations follow the lab SOP ADM-INT “Manual Integration.”

Sample Receipt:

Seven water samples were received for analysis at ALS Environmental on 05/31/2024. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

No significant anomalies were noted with this analysis.

Approved by _____ Date 06/17/2024

Sample Receipt Information

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client: NASA/WSTF/Navarro **Service Request:**R2404651
Project: White Sands Test Facility/23EC002B

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
R2404651-001	1405280845C 400-GV-125	5/28/2024	
R2404651-002	1405280846C 400-GV-125	5/28/2024	
R2404651-003	1405280857A 400-FV-131	5/28/2024	
R2404651-004	1405280858A 400-FV-131	5/28/2024	
R2404651-005	1405281005A 400-EV-131	5/28/2024	
R2404651-006	1405281013C 400-JV-150	5/28/2024	
R2404651-007	1405281450C 400-HV-147	5/28/2024	

Date 5-30-24

WSTF CHAIN OF CUSTODY RECORD

Laboratory: ALS PO# 23EC002B

Address shipping questions to:
- [x] Lori Minnick, 575-524-5119
- [ ] Other _____, 575-524-_____

Send sample receipt confirmation and analytical reports to:
- [x] Stephanie Portillo stephanie.portillo@nasa.gov
- [ ] Other
- [ ] Other

Analytical Requirements: Analytes / Method: 1,4-DIOX 8270M

Special Instructions

Return coolers and reusable packaging materials within 14 days as required in statement of work to:

Return Address:

NASA WSTF Environmental Department
12600 NASA Road; Bldg. 120
Las Cruces, NM 88012
Attn: Lori Minnick

Sample Number	Sample Location	# of Containers	Sample Matrix*	Analytical Requirements	Charge Number (WSTF Use Only)	Comments
2405280845C	400-GV-125	2	A	X	HWMU	
2405280846C	"	2	A	X	"	
2405280857A	400-FV-131	2	A	X	"	
2405280858A	"	2	A	X	"	
2405281005A	400-EV-131	2	A	X	"	
2405281013C	400-JV-150	2	A	X	"	
2405281450C	400-HV-147	2	A	X	"	

Relinquished By:	Date/Time:	Accepted By:	Date/Time:
Jon W Junck	5-30-24 1100HRS		5/31/24 07:15

* Sample Matrix: A – Aqueous; G – Gaseous; S – Solid

R2404651 5
NASA/WSTF/Navarro
White Sands Test Facility

R2404651 5
NASA/WSTF/Navarro
White Sands Test Facility

Cooler Receipt and Preservation Check Form

Project/Client NASA Folder Number

Cooler received on 5/31/24 by: ME COURIER: ALS UPS (FEDEX) VELOCITY CLIENT

1	Were **Custody seals** on outside of cooler?	(Y) N	5a	Did **VOA** vials have sig* **bubbles?**		(Y) N NA	*
2	**Custody papers** properly completed (ink, signed)?	(Y) N	5b	Sig* bubbles: **Alk?**	Y N (NA)	**Sulfide?**	Y N (NA)
3	Did all bottles arrive in good **condition** (unbroken)?	(Y) N	6	Where did the bottles originate?		ALS/ROC	(CLIENT)
4	Circle: (**Wet Ice**) **Dry Ice Gel packs** present?	(Y) N	7	Soil VOA received as:	Bulk Encore 5035set		(NA)

8. Temperature Readings Date: 5/31/24 Time: 0805 ID: IR#12 (IR#11) From: Temp Blank (Sample Bottle)

Temp (°C)	1.5						
Within 0-6°C?	(Y) N	Y N	Y N	Y N	Y N	Y N	Y N
If <0°C, were samples frozen?	Y N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed (described below) Same Day Rule

&Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: SMO by ME on 5/31/24 at 0819
5035 samples placed in storage location: _____ by _____ on _____ at _____ within 48 hours of sampling? Y N

Cooler Breakdown/Preservation Check**: Date: 5/31/24 Time: 1131 by: MM

9. Were all bottle labels complete (*i.e.* analysis, preservation, etc.)? (YES) NO
10. Did all bottle labels and tags agree with custody papers? (YES) NO
11. Were correct containers used for the tests indicated? (YES) NO
12. Were 5035 vials acceptable (no extra labels, not leaking)? YES NO (N/A)
13. Were dissolved metals filtered in the field? YES NO (N/A)
14. Air Samples: Cassettes / Tubes Intact Y / N with MS Y / N Canisters Pressurized Tedlar® Bags Inflated (N/A)

pH	Lot of test paper	Reagent	Preserved? Yes	Preserved? No	Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
≥12		NaOH								
≤2	221523	HNO_3	X		Client Labels					
≤2		H_2SO_4								
<4		$NaHSO_4$								
5-9		For 608pest			No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, 522			If +, contact PM to add $Na_2S_2O_3$ (625, 608, CN), ascorbic (phenol).					
		$Na_2S_2O_3$								
		ZnAcetate	-	-						
		HCl	**	**						

**VOAs and 1664 Not to be tested before analysis. Otherwise, all bottles of all samples with chemical preservatives are checked (not just representatives).

Bottle lot numbers: Client Labels
Explain all Discrepancies/ Other Comments:

*Noted on COC

HPROD	BULK
HTR	FLDT
SUB	HGFB
ALS	LL3541

Labels secondary reviewed by: MM *significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

Miscellaneous Forms

ALS Environmental—Rochester Laboratory
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REPORT QUALIFIERS AND DEFINITIONS

U	Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.
J	Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).
B	Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.
E	Inorganics- Concentration is estimated due to the serial dilution was outside control limits.
E	Organics- Concentration has exceeded the calibration range for that specific analysis.
D	Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.
*	Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.
H	Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.
#	Spike was diluted out.
+	Correlation coefficient for MSA is <0.995.
N	Inorganics- Matrix spike recovery was outside laboratory limits.
N	Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
S	Concentration has been determined using Method of Standard Additions (MSA).
W	Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
P	Concentration >40% difference between the two GC columns.
C	Confirmed by GC/MS
Q	DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).
X	See Case Narrative for discussion.
MRL LOQ	Method Reporting Limit. Also known as: Limit of Quantitation (LOQ) The lowest concentration at which the method analyte may be reliably quantified under the method conditions.
MDL	Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).
LOD	Limit of Detection. A value at or above the MDL which has been verified to be detectable.
ND	Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

Rochester Lab ID # for State Accreditations[1]

NELAP States
Florida ID # E87674
New Hampshire ID # 2941
New York ID # 10145
Pennsylvania ID# 68-786
Virginia #460167

Non-NELAP States
Connecticut ID #PH0556
Delaware Approved
Maine ID #NY01587
North Carolina #36701
North Carolina #676
Rhode Island LAO00333

[1] Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory. To verify NH accredited analytes, go to https://www4.des.state.nh.us/CertifiedLabs/Certified-Method.aspx.

ALS Laboratory Group

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

INORGANIC

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C or 6010D	3005A/3010A
6020A or 6020B	ILM05.3
9034 Sulfide Acid Soluble	9030B
SM 4500-CN-N-2016 Amenable and Residual Cyanide	SM 4500-CN-G and SM 4500-CN-B,C-2016
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C or 6010D	3050B
6020A or 6020B	3050B
6010C or 6010D TCLP (1311) extract	3005A/3010A
6010C or 6010D SPLP (1312) extract	3005A/3010A
7199	3060A
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction
For analytical methods not listed, the preparation method is the same as the analytical method reference.	

ORGANIC

Preparation Methods for Organic methods are listed in the header of the Results pages.

Regarding "Bulk/5035A":
For soil/solid samples submitted in soil jars for Volatiles analysis, the prep method is listed as "Bulk/5035A". The lab follows the closed-system EPA 5035A protocols once the sample is transferred to a sealed vial, but collection in bulk in soil jars does not follow the collection protocols listed in EPA 5035A. In accordance with the NYSDOH technical notice of October 2012, all results or reporting limits <200 ug/kg are to be considered estimated due to potential low bias.

Sample Results

ALS Environmental—Rochester Laboratory
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www.alsglobal.com

Metals

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Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404651
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	5/28/24
Sample Matrix:	Water	**Date Received:**	5/31/24
Sample Name:	1405280845C 400-GV-125		
Lab Code:	R2404651-001	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Aluminum, Total	6010C	**0.13**		mg/L	0.10	0.03	1	6/ 3/24	6/4/24 22:29	
Antimony, Total	6020A	**0.0003**	J	mg/L	0.0010	0.0002	1	6/ 4/24	6/5/24 13:46	
Arsenic, Total	6020A	**0.0012**		mg/L	0.0010	0.0004	1	6/ 4/24	6/6/24 16:43	
Barium, Total	6010C	**0.042**		mg/L	0.020	0.003	1	6/ 3/24	6/4/24 22:29	
Beryllium, Total	6010C	ND	U	mg/L	0.0030	0.0002	1	6/ 3/24	6/4/24 22:29	
Boron, Total	6010C	**0.32**		mg/L	0.20	0.02	1	6/ 3/24	6/4/24 22:29	
Cadmium, Total	6010C	ND	U	mg/L	0.0050	0.0004	1	6/ 3/24	6/4/24 22:29	
Calcium, Total	6010C	**121**		mg/L	1.0	0.3	1	6/ 3/24	6/4/24 22:29	
Chromium, Total	6010C	**0.003**	J	mg/L	0.010	0.002	1	6/ 3/24	6/4/24 22:29	
Cobalt, Total	6010C	ND	U	mg/L	0.050	0.0009	1	6/ 3/24	6/4/24 22:29	
Copper, Total	6010C	ND	U	mg/L	0.020	0.004	1	6/ 3/24	6/4/24 22:29	
Iron, Total	6010C	**0.10**		mg/L	0.10	0.07	1	6/ 3/24	6/4/24 22:29	
Lead, Total	6010C	ND	U	mg/L	0.050	0.004	1	6/ 3/24	6/4/24 22:29	
Magnesium, Total	6010C	**89.4**		mg/L	1.0	0.03	1	6/ 3/24	6/4/24 22:29	
Manganese, Total	6010C	**0.011**		mg/L	0.010	0.004	1	6/ 3/24	6/4/24 22:29	
Mercury, Total	7470A	ND	U	mg/L	0.00020	0.00008	1	6/ 5/24	6/6/24 11:18	
Molybdenum, Total	6010C	**0.009**	J	mg/L	0.025	0.003	1	6/ 3/24	6/4/24 22:29	
Nickel, Total	6010C	ND	U	mg/L	0.040	0.003	1	6/ 3/24	6/4/24 22:29	
Potassium, Total	6010C	**3.9**		mg/L	2.0	0.4	1	6/ 3/24	6/4/24 22:29	
Selenium, Total	6010C	**0.008**	J	mg/L	0.010	0.007	1	6/ 3/24	6/4/24 22:29	
Silver, Total	6010C	ND	U	mg/L	0.010	0.0006	1	6/ 3/24	6/4/24 22:29	
Sodium, Total	6010C	**89.5**		mg/L	1.0	0.3	1	6/ 3/24	6/4/24 22:29	
Strontium, Total	6010C	**3.39**		mg/L	0.10	0.002	1	6/ 3/24	6/4/24 22:29	
Thallium, Total	6020A	**0.0002**	J	mg/L	0.0010	0.00004	1	6/ 4/24	6/5/24 13:46	
Tin, Total	6010C	ND	U	mg/L	0.50	0.008	1	6/ 3/24	6/4/24 22:29	
Vanadium, Total	6010C	**0.001**	J	mg/L	0.050	0.0007	1	6/ 3/24	6/4/24 22:29	
Zinc, Total	6010C	**0.005**	J	mg/L	0.020	0.003	1	6/ 3/24	6/4/24 22:29	

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404651
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	5/28/24
Sample Matrix:	Water	**Date Received:**	5/31/24
Sample Name:	1405280846C 400-GV-125		
Lab Code:	R2404651-002	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Aluminum, Total	6010C	**0.11**		mg/L	0.10	0.03	1	6/ 3/24	6/4/24 22:39	
Antimony, Total	6020A	ND	U	mg/L	0.0010	0.0002	1	6/ 4/24	6/5/24 13:47	
Arsenic, Total	6020A	**0.0009**	J	mg/L	0.0010	0.0004	1	6/ 4/24	6/5/24 13:47	
Barium, Total	6010C	**0.042**		mg/L	0.020	0.003	1	6/ 3/24	6/4/24 22:39	
Beryllium, Total	6010C	ND	U	mg/L	0.0030	0.0002	1	6/ 3/24	6/4/24 22:39	
Boron, Total	6010C	**0.31**		mg/L	0.20	0.02	1	6/ 3/24	6/4/24 22:39	
Cadmium, Total	6010C	ND	U	mg/L	0.0050	0.0004	1	6/ 3/24	6/4/24 22:39	
Calcium, Total	6010C	**118**		mg/L	1.0	0.3	1	6/ 3/24	6/4/24 22:39	
Chromium, Total	6010C	**0.003**	J	mg/L	0.010	0.002	1	6/ 3/24	6/4/24 22:39	
Cobalt, Total	6010C	ND	U	mg/L	0.050	0.0009	1	6/ 3/24	6/4/24 22:39	
Copper, Total	6010C	ND	U	mg/L	0.020	0.004	1	6/ 3/24	6/4/24 22:39	
Iron, Total	6010C	**0.09**	J	mg/L	0.10	0.07	1	6/ 3/24	6/4/24 22:39	
Lead, Total	6010C	ND	U	mg/L	0.050	0.004	1	6/ 3/24	6/4/24 22:39	
Magnesium, Total	6010C	**87.5**		mg/L	1.0	0.03	1	6/ 3/24	6/4/24 22:39	
Manganese, Total	6010C	**0.009**	J	mg/L	0.010	0.004	1	6/ 3/24	6/4/24 22:39	
Mercury, Total	7470A	ND	U	mg/L	0.00020	0.00008	1	6/ 5/24	6/6/24 11:21	
Molybdenum, Total	6010C	**0.01**	J	mg/L	0.025	0.003	1	6/ 3/24	6/4/24 22:39	
Nickel, Total	6010C	ND	U	mg/L	0.040	0.003	1	6/ 3/24	6/4/24 22:39	
Potassium, Total	6010C	**3.7**		mg/L	2.0	0.4	1	6/ 3/24	6/4/24 22:39	
Selenium, Total	6010C	ND	U	mg/L	0.010	0.007	1	6/ 3/24	6/4/24 22:39	
Silver, Total	6010C	ND	U	mg/L	0.010	0.0006	1	6/ 3/24	6/4/24 22:39	
Sodium, Total	6010C	**86.8**		mg/L	1.0	0.3	1	6/ 3/24	6/4/24 22:39	
Strontium, Total	6010C	**3.32**		mg/L	0.10	0.002	1	6/ 3/24	6/4/24 22:39	
Thallium, Total	6020A	**0.0002**	J	mg/L	0.0010	0.00004	1	6/ 4/24	6/5/24 13:47	
Tin, Total	6010C	ND	U	mg/L	0.50	0.008	1	6/ 3/24	6/4/24 22:39	
Vanadium, Total	6010C	**0.001**	J	mg/L	0.050	0.0007	1	6/ 3/24	6/4/24 22:39	
Zinc, Total	6010C	**0.006**	J	mg/L	0.020	0.003	1	6/ 3/24	6/4/24 22:39	

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404651
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	5/28/24
Sample Matrix:	Water	**Date Received:**	5/31/24
Sample Name:	1405280857A 400-FV-131		
Lab Code:	R2404651-003	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Aluminum, Total	6010C	ND	U	mg/L	0.10	0.03	1	6/ 3/24	6/4/24 22:42	
Antimony, Total	6020A	ND	U	mg/L	0.0010	0.0002	1	6/ 4/24	6/5/24 13:49	
Arsenic, Total	6020A	**0.0014**		mg/L	0.0010	0.0004	1	6/ 4/24	6/5/24 13:49	
Barium, Total	6010C	**0.039**		mg/L	0.020	0.003	1	6/ 3/24	6/4/24 22:42	
Beryllium, Total	6010C	ND	U	mg/L	0.0030	0.0002	1	6/ 3/24	6/4/24 22:42	
Boron, Total	6010C	**0.26**		mg/L	0.20	0.02	1	6/ 3/24	6/4/24 22:42	
Cadmium, Total	6010C	ND	U	mg/L	0.0050	0.0004	1	6/ 3/24	6/4/24 22:42	
Calcium, Total	6010C	**103**		mg/L	1.0	0.3	1	6/ 3/24	6/4/24 22:42	
Chromium, Total	6010C	**0.002**	J	mg/L	0.010	0.002	1	6/ 3/24	6/4/24 22:42	
Cobalt, Total	6010C	ND	U	mg/L	0.050	0.0009	1	6/ 3/24	6/4/24 22:42	
Copper, Total	6010C	ND	U	mg/L	0.020	0.004	1	6/ 3/24	6/4/24 22:42	
Iron, Total	6010C	ND	U	mg/L	0.10	0.07	1	6/ 3/24	6/4/24 22:42	
Lead, Total	6010C	ND	U	mg/L	0.050	0.004	1	6/ 3/24	6/4/24 22:42	
Magnesium, Total	6010C	**80.5**		mg/L	1.0	0.03	1	6/ 3/24	6/4/24 22:42	
Manganese, Total	6010C	**0.011**		mg/L	0.010	0.004	1	6/ 3/24	6/4/24 22:42	
Mercury, Total	7470A	ND	U	mg/L	0.00020	0.00008	1	6/ 5/24	6/6/24 11:23	
Molybdenum, Total	6010C	**0.008**	J	mg/L	0.025	0.003	1	6/ 3/24	6/4/24 22:42	
Nickel, Total	6010C	ND	U	mg/L	0.040	0.003	1	6/ 3/24	6/4/24 22:42	
Potassium, Total	6010C	**2.7**		mg/L	2.0	0.4	1	6/ 3/24	6/4/24 22:42	
Selenium, Total	6010C	ND	U	mg/L	0.010	0.007	1	6/ 3/24	6/4/24 22:42	
Silver, Total	6010C	ND	U	mg/L	0.010	0.0006	1	6/ 3/24	6/4/24 22:42	
Sodium, Total	6010C	**105**		mg/L	1.0	0.3	1	6/ 3/24	6/4/24 22:42	
Strontium, Total	6010C	**2.25**		mg/L	0.10	0.002	1	6/ 3/24	6/4/24 22:42	
Thallium, Total	6020A	**0.00009**	J	mg/L	0.0010	0.00004	1	6/ 4/24	6/5/24 13:49	
Tin, Total	6010C	ND	U	mg/L	0.50	0.008	1	6/ 3/24	6/4/24 22:42	
Vanadium, Total	6010C	ND	U	mg/L	0.050	0.0007	1	6/ 3/24	6/4/24 22:42	
Zinc, Total	6010C	**0.004**	J	mg/L	0.020	0.003	1	6/ 3/24	6/4/24 22:42	

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404651
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	5/28/24
Sample Matrix:	Water	**Date Received:**	5/31/24
Sample Name:	1405280858A 400-FV-131		
Lab Code:	R2404651-004	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Aluminum, Total	6010C	ND	U	mg/L	0.10	0.03	1	6/ 3/24	6/4/24 22:46	
Antimony, Total	6020A	ND	U	mg/L	0.0010	0.0002	1	6/ 4/24	6/5/24 13:51	
Arsenic, Total	6020A	**0.0014**		mg/L	0.0010	0.0004	1	6/ 4/24	6/5/24 13:51	
Barium, Total	6010C	**0.039**		mg/L	0.020	0.003	1	6/ 3/24	6/4/24 22:46	
Beryllium, Total	6010C	ND	U	mg/L	0.0030	0.0002	1	6/ 3/24	6/4/24 22:46	
Boron, Total	6010C	**0.26**		mg/L	0.20	0.02	1	6/ 3/24	6/4/24 22:46	
Cadmium, Total	6010C	ND	U	mg/L	0.0050	0.0004	1	6/ 3/24	6/4/24 22:46	
Calcium, Total	6010C	**102**		mg/L	1.0	0.3	1	6/ 3/24	6/4/24 22:46	
Chromium, Total	6010C	**0.002**	J	mg/L	0.010	0.002	1	6/ 3/24	6/4/24 22:46	
Cobalt, Total	6010C	ND	U	mg/L	0.050	0.0009	1	6/ 3/24	6/4/24 22:46	
Copper, Total	6010C	ND	U	mg/L	0.020	0.004	1	6/ 3/24	6/4/24 22:46	
Iron, Total	6010C	ND	U	mg/L	0.10	0.07	1	6/ 3/24	6/4/24 22:46	
Lead, Total	6010C	ND	U	mg/L	0.050	0.004	1	6/ 3/24	6/4/24 22:46	
Magnesium, Total	6010C	**79.7**		mg/L	1.0	0.03	1	6/ 3/24	6/4/24 22:46	
Manganese, Total	6010C	**0.010**		mg/L	0.010	0.004	1	6/ 3/24	6/4/24 22:46	
Mercury, Total	7470A	ND	U	mg/L	0.00020	0.00008	1	6/ 5/24	6/6/24 11:26	
Molybdenum, Total	6010C	**0.008**	J	mg/L	0.025	0.003	1	6/ 3/24	6/4/24 22:46	
Nickel, Total	6010C	ND	U	mg/L	0.040	0.003	1	6/ 3/24	6/4/24 22:46	
Potassium, Total	6010C	**2.7**		mg/L	2.0	0.4	1	6/ 3/24	6/4/24 22:46	
Selenium, Total	6010C	ND	U	mg/L	0.010	0.007	1	6/ 3/24	6/4/24 22:46	
Silver, Total	6010C	ND	U	mg/L	0.010	0.0006	1	6/ 3/24	6/4/24 22:46	
Sodium, Total	6010C	**103**		mg/L	1.0	0.3	1	6/ 3/24	6/4/24 22:46	
Strontium, Total	6010C	**2.23**		mg/L	0.10	0.002	1	6/ 3/24	6/4/24 22:46	
Thallium, Total	6020A	**0.00008**	J	mg/L	0.0010	0.00004	1	6/ 4/24	6/5/24 13:51	
Tin, Total	6010C	ND	U	mg/L	0.50	0.008	1	6/ 3/24	6/4/24 22:46	
Vanadium, Total	6010C	ND	U	mg/L	0.050	0.0007	1	6/ 3/24	6/4/24 22:46	
Zinc, Total	6010C	**0.005**	J	mg/L	0.020	0.003	1	6/ 3/24	6/4/24 22:46	

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404651
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	5/28/24
Sample Matrix:	Water	**Date Received:**	5/31/24
Sample Name:	1405281005A 400-EV-131		
Lab Code:	R2404651-005	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Aluminum, Total	6010C	ND	U	mg/L	0.10	0.03	1	6/ 3/24	6/4/24 22:49	
Antimony, Total	6020A	ND	U	mg/L	0.0010	0.0002	1	6/ 4/24	6/5/24 13:53	
Arsenic, Total	6020A	**0.0009**	J	mg/L	0.0010	0.0004	1	6/ 4/24	6/5/24 13:53	
Barium, Total	6010C	**0.029**		mg/L	0.020	0.003	1	6/ 3/24	6/4/24 22:49	
Beryllium, Total	6010C	ND	U	mg/L	0.0030	0.0002	1	6/ 3/24	6/4/24 22:49	
Boron, Total	6010C	**0.23**		mg/L	0.20	0.02	1	6/ 3/24	6/4/24 22:49	
Cadmium, Total	6010C	ND	U	mg/L	0.0050	0.0004	1	6/ 3/24	6/4/24 22:49	
Calcium, Total	6010C	**106**		mg/L	1.0	0.3	1	6/ 3/24	6/4/24 22:49	
Chromium, Total	6010C	**0.002**	J	mg/L	0.010	0.002	1	6/ 3/24	6/4/24 22:49	
Cobalt, Total	6010C	**0.002**	J	mg/L	0.050	0.0009	1	6/ 3/24	6/4/24 22:49	
Copper, Total	6010C	ND	U	mg/L	0.020	0.004	1	6/ 3/24	6/4/24 22:49	
Iron, Total	6010C	ND	U	mg/L	0.10	0.07	1	6/ 3/24	6/4/24 22:49	
Lead, Total	6010C	ND	U	mg/L	0.050	0.004	1	6/ 3/24	6/4/24 22:49	
Magnesium, Total	6010C	**77.0**		mg/L	1.0	0.03	1	6/ 3/24	6/4/24 22:49	
Manganese, Total	6010C	**0.016**		mg/L	0.010	0.004	1	6/ 3/24	6/4/24 22:49	
Mercury, Total	7470A	ND	U	mg/L	0.00020	0.00008	1	6/ 5/24	6/6/24 11:28	
Molybdenum, Total	6010C	**0.009**	J	mg/L	0.025	0.003	1	6/ 3/24	6/4/24 22:49	
Nickel, Total	6010C	**0.289**		mg/L	0.040	0.003	1	6/ 3/24	6/4/24 22:49	
Potassium, Total	6010C	**4.0**		mg/L	2.0	0.4	1	6/ 3/24	6/4/24 22:49	
Selenium, Total	6010C	ND	U	mg/L	0.010	0.007	1	6/ 3/24	6/4/24 22:49	
Silver, Total	6010C	ND	U	mg/L	0.010	0.0006	1	6/ 3/24	6/4/24 22:49	
Sodium, Total	6010C	**91.0**		mg/L	1.0	0.3	1	6/ 3/24	6/4/24 22:49	
Strontium, Total	6010C	**3.94**		mg/L	0.10	0.002	1	6/ 3/24	6/4/24 22:49	
Thallium, Total	6020A	**0.00004**	J	mg/L	0.0010	0.00004	1	6/ 4/24	6/5/24 13:53	
Tin, Total	6010C	ND	U	mg/L	0.50	0.008	1	6/ 3/24	6/4/24 22:49	
Vanadium, Total	6010C	**0.001**	J	mg/L	0.050	0.0007	1	6/ 3/24	6/4/24 22:49	
Zinc, Total	6010C	**0.006**	J	mg/L	0.020	0.003	1	6/ 3/24	6/4/24 22:49	

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404651
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	5/28/24
Sample Matrix:	Water	**Date Received:**	5/31/24
Sample Name:	1405281013C 400-JV-150		
Lab Code:	R2404651-006	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Aluminum, Total	6010C	**0.08**	J	mg/L	0.10	0.03	1	6/ 3/24	6/4/24 22:52	
Antimony, Total	6020A	ND	U	mg/L	0.0010	0.0002	1	6/ 4/24	6/5/24 13:55	
Arsenic, Total	6020A	**0.0009**	J	mg/L	0.0010	0.0004	1	6/ 4/24	6/5/24 13:55	
Barium, Total	6010C	**0.038**		mg/L	0.020	0.003	1	6/ 3/24	6/4/24 22:52	
Beryllium, Total	6010C	ND	U	mg/L	0.0030	0.0002	1	6/ 3/24	6/4/24 22:52	
Boron, Total	6010C	**1.13**		mg/L	0.20	0.02	1	6/ 3/24	6/4/24 22:52	
Cadmium, Total	6010C	ND	U	mg/L	0.0050	0.0004	1	6/ 3/24	6/4/24 22:52	
Calcium, Total	6010C	**150**		mg/L	1.0	0.3	1	6/ 3/24	6/4/24 22:52	
Chromium, Total	6010C	**0.003**	J	mg/L	0.010	0.002	1	6/ 3/24	6/4/24 22:52	
Cobalt, Total	6010C	ND	U	mg/L	0.050	0.0009	1	6/ 3/24	6/4/24 22:52	
Copper, Total	6010C	ND	U	mg/L	0.020	0.004	1	6/ 3/24	6/4/24 22:52	
Iron, Total	6010C	**0.12**		mg/L	0.10	0.07	1	6/ 3/24	6/4/24 22:52	
Lead, Total	6010C	ND	U	mg/L	0.050	0.004	1	6/ 3/24	6/4/24 22:52	
Magnesium, Total	6010C	**112**		mg/L	1.0	0.03	1	6/ 3/24	6/4/24 22:52	
Manganese, Total	6010C	**0.014**		mg/L	0.010	0.004	1	6/ 3/24	6/4/24 22:52	
Mercury, Total	7470A	ND	U	mg/L	0.00020	0.00008	1	6/ 5/24	6/6/24 11:31	
Molybdenum, Total	6010C	**0.007**	J	mg/L	0.025	0.003	1	6/ 3/24	6/4/24 22:52	
Nickel, Total	6010C	ND	U	mg/L	0.040	0.003	1	6/ 3/24	6/4/24 22:52	
Potassium, Total	6010C	**4.9**		mg/L	2.0	0.4	1	6/ 3/24	6/4/24 22:52	
Selenium, Total	6010C	**0.010**		mg/L	0.010	0.007	1	6/ 3/24	6/4/24 22:52	
Silver, Total	6010C	ND	U	mg/L	0.010	0.0006	1	6/ 3/24	6/4/24 22:52	
Sodium, Total	6010C	**221**		mg/L	10	3	10	6/ 3/24	6/10/24 18:04	
Strontium, Total	6010C	**4.24**		mg/L	0.10	0.002	1	6/ 3/24	6/4/24 22:52	
Thallium, Total	6020A	ND	U	mg/L	0.0010	0.00004	1	6/ 4/24	6/5/24 13:55	
Tin, Total	6010C	ND	U	mg/L	0.50	0.008	1	6/ 3/24	6/4/24 22:52	
Vanadium, Total	6010C	ND	U	mg/L	0.050	0.0007	1	6/ 3/24	6/4/24 22:52	
Zinc, Total	6010C	**0.004**	J	mg/L	0.020	0.003	1	6/ 3/24	6/4/24 22:52	

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404651
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	5/28/24
Sample Matrix:	Water	**Date Received:**	5/31/24
Sample Name:	1405281450C 400-HV-147		
Lab Code:	R2404651-007	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Aluminum, Total	6010C	ND	U	mg/L	0.10	0.03	1	6/ 3/24	6/4/24 22:55	
Antimony, Total	6020A	**0.0039**		mg/L	0.0010	0.0002	1	6/ 4/24	6/5/24 13:57	
Arsenic, Total	6020A	**0.0016**		mg/L	0.0010	0.0004	1	6/ 4/24	6/5/24 13:57	
Barium, Total	6010C	**0.076**		mg/L	0.020	0.003	1	6/ 3/24	6/4/24 22:55	
Beryllium, Total	6010C	ND	U	mg/L	0.0030	0.0002	1	6/ 3/24	6/4/24 22:55	
Boron, Total	6010C	**0.86**		mg/L	0.20	0.02	1	6/ 3/24	6/4/24 22:55	
Cadmium, Total	6010C	ND	U	mg/L	0.0050	0.0004	1	6/ 3/24	6/4/24 22:55	
Calcium, Total	6010C	**153**		mg/L	1.0	0.3	1	6/ 3/24	6/4/24 22:55	
Chromium, Total	6010C	**0.006**	J	mg/L	0.010	0.002	1	6/ 3/24	6/4/24 22:55	
Cobalt, Total	6010C	**0.002**	J	mg/L	0.050	0.0009	1	6/ 3/24	6/4/24 22:55	
Copper, Total	6010C	ND	U	mg/L	0.020	0.004	1	6/ 3/24	6/4/24 22:55	
Iron, Total	6010C	ND	U	mg/L	0.10	0.07	1	6/ 3/24	6/4/24 22:55	
Lead, Total	6010C	ND	U	mg/L	0.050	0.004	1	6/ 3/24	6/4/24 22:55	
Magnesium, Total	6010C	**116**		mg/L	1.0	0.03	1	6/ 3/24	6/4/24 22:55	
Manganese, Total	6010C	ND	U	mg/L	0.010	0.004	1	6/ 3/24	6/4/24 22:55	
Mercury, Total	7470A	ND	U	mg/L	0.00020	0.00008	1	6/ 5/24	6/6/24 11:33	
Molybdenum, Total	6010C	**0.007**	J	mg/L	0.025	0.003	1	6/ 3/24	6/4/24 22:55	
Nickel, Total	6010C	ND	U	mg/L	0.040	0.003	1	6/ 3/24	6/4/24 22:55	
Potassium, Total	6010C	**4.4**		mg/L	2.0	0.4	1	6/ 3/24	6/4/24 22:55	
Selenium, Total	6010C	ND	U	mg/L	0.010	0.007	1	6/ 3/24	6/4/24 22:55	
Silver, Total	6010C	ND	U	mg/L	0.010	0.0006	1	6/ 3/24	6/4/24 22:55	
Sodium, Total	6010C	**146**		mg/L	1.0	0.3	1	6/ 3/24	6/4/24 22:55	
Strontium, Total	6010C	**5.88**		mg/L	0.10	0.002	1	6/ 3/24	6/4/24 22:55	
Thallium, Total	6020A	**0.00005**	J	mg/L	0.0010	0.00004	1	6/ 4/24	6/5/24 13:57	
Tin, Total	6010C	ND	U	mg/L	0.50	0.008	1	6/ 3/24	6/4/24 22:55	
Vanadium, Total	6010C	**0.003**	J	mg/L	0.050	0.0007	1	6/ 3/24	6/4/24 22:55	
Zinc, Total	6010C	**0.004**	J	mg/L	0.020	0.003	1	6/ 3/24	6/4/24 22:55	

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404651
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R2404651-MB	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Aluminum, Total	6010C	ND	U	mg/L	0.10	0.03	1	6/ 3/24	6/4/24 22:00	
Antimony, Total	6020A	ND	U	mg/L	0.0010	0.0002	1	6/ 4/24	6/5/24 13:22	
Arsenic, Total	6020A	ND	U	mg/L	0.0010	0.0004	1	6/ 4/24	6/5/24 13:22	
Barium, Total	6010C	ND	U	mg/L	0.020	0.003	1	6/ 3/24	6/4/24 22:00	
Beryllium, Total	6010C	ND	U	mg/L	0.0030	0.0002	1	6/ 3/24	6/4/24 22:00	
Boron, Total	6010C	ND	U	mg/L	0.20	0.02	1	6/ 3/24	6/4/24 22:00	
Cadmium, Total	6010C	ND	U	mg/L	0.0050	0.0004	1	6/ 3/24	6/4/24 22:00	
Calcium, Total	6010C	ND	U	mg/L	1.0	0.3	1	6/ 3/24	6/4/24 22:00	
Chromium, Total	6010C	ND	U	mg/L	0.010	0.002	1	6/ 3/24	6/4/24 22:00	
Cobalt, Total	6010C	ND	U	mg/L	0.050	0.0009	1	6/ 3/24	6/4/24 22:00	
Copper, Total	6010C	ND	U	mg/L	0.020	0.004	1	6/ 3/24	6/4/24 22:00	
Iron, Total	6010C	ND	U	mg/L	0.10	0.07	1	6/ 3/24	6/4/24 22:00	
Lead, Total	6010C	ND	U	mg/L	0.050	0.004	1	6/ 3/24	6/4/24 22:00	
Magnesium, Total	6010C	ND	U	mg/L	1.0	0.03	1	6/ 3/24	6/4/24 22:00	
Manganese, Total	6010C	ND	U	mg/L	0.010	0.004	1	6/ 3/24	6/4/24 22:00	
Mercury, Total	7470A	ND	U	mg/L	0.00020	0.00008	1	6/ 5/24	6/6/24 10:50	
Molybdenum, Total	6010C	ND	U	mg/L	0.025	0.003	1	6/ 3/24	6/4/24 22:00	
Nickel, Total	6010C	ND	U	mg/L	0.040	0.003	1	6/ 3/24	6/4/24 22:00	
Potassium, Total	6010C	ND	U	mg/L	2.0	0.4	1	6/ 3/24	6/4/24 22:00	
Selenium, Total	6010C	ND	U	mg/L	0.010	0.007	1	6/ 3/24	6/4/24 22:00	
Silver, Total	6010C	ND	U	mg/L	0.010	0.0006	1	6/ 3/24	6/4/24 22:00	
Sodium, Total	6010C	ND	U	mg/L	1.0	0.3	1	6/ 3/24	6/4/24 22:00	
Strontium, Total	6010C	ND	U	mg/L	0.10	0.002	1	6/ 3/24	6/4/24 22:00	
Thallium, Total	6020A	ND	U	mg/L	0.0010	0.00004	1	6/ 4/24	6/5/24 13:22	
Tin, Total	6010C	ND	U	mg/L	0.50	0.008	1	6/ 3/24	6/4/24 22:00	
Vanadium, Total	6010C	ND	U	mg/L	0.050	0.0007	1	6/ 3/24	6/4/24 22:00	
Zinc, Total	6010C	ND	U	mg/L	0.020	0.003	1	6/ 3/24	6/4/24 22:00	

QC Summary Forms

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Metals

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Form 2

Calibration Verifications

Mercury by EPA 7470A,Metals by EPA 6010C,Metals by EPA 6020A

Workorder

R2404651

Client

NASA/WSTF/Navarro

Project

White Sands Test Facility

06/14/2024

ALS Environmental–Rochester Laboratory
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Form 2 - Calibration Verifications

Client	NASA/WSTF/Navarro	Workorder	
Project	White Sands Test Facility	**R2404651**	

Mercury by EPA 7470A

R-CVAA-03_843235		ICV			CCV			LLCCV			CCV			CCV			LLCCV		
Units mg/L	**Run Date**	06/06/24			06/06/24			06/06/24			06/06/24			06/06/24			06/06/24		
	Run Time	09:29			10:22			10:43			10:45			11:13			11:41		
Analyte		Found	%R	Q	Found	%R	Q	Found	%R	Q	Found	%R	Q	Found	%R	Q	Found	%R	Q
Mercury		3.05	**102**		3.06	**102**		0.187	**94**		3.06	**102**		3.05	**102**		0.161	**81**	

R-CVAA-03_843235		CCV		
Units ug/L	**Run Date**	06/06/24		
	Run Time	11:44		
Analyte		Found	%R	Q
Mercury		3.06	**102**	

Q - %Recovery Flag * - %Recovery (%R) Outside Limits

QC ID	%R Limits	
CCV	80 - 120	**3.0** - Hg
ICV	90 - 110	**3.0** - Hg
LLCCV	70 - 130	**0.2** - Hg

Form 2 - Calibration Verifications

Client NASA/WSTF/Navarro

Project White Sands Test Facility

Workorder **R2404651**

Metals by EPA 6010C (P)

R-ICP-AES-07_843042	ICV			CCV			LLCCV			CCV			CCV			CCV		
Units mg/L **Run Date**	06/04/24			06/04/24			06/04/24			06/04/24			06/04/24			06/04/24		
Run Time	17:00			21:38			21:44			21:54			22:33			23:11		
Analyte	Found	%R	Q	Found	%R	Q	Found	%R	Q	Found	%R	Q	Found	%R	Q	Found	%R	Q
Aluminum	9.89	**99**		9.70	**97**		0.194	**97**		9.81	**98**		9.92	**99**		9.75	**98**	
Barium	10.10	**101**		9.88	**99**		0.200	**100**		9.97	**100**		9.94	**99**		9.93	**99**	
Beryllium	0.241	**96**		0.237	**95**		0.00480	**96**		0.239	**96**		0.238	**95**		0.237	**95**	
Boron	2.52	**101**		2.47	**99**		0.194	**97**		2.49	**100**		2.48	**99**		2.48	**99**	
Cadmium	0.490	**98**		0.483	**97**		0.0102	**102**		0.487	**97**		0.483	**97**		0.485	**97**	
Calcium	25.80	**103**		25.40	**102**		1.04	**104**		25.70	**103**		25.50	**102**		25.50	**102**	
Chromium	0.498	**100**		0.487	**97**		0.00920	**92**		0.492	**98**		0.491	**98**		0.490	**98**	
Cobalt	2.48	**99**		2.43	**97**		0.0501	**100**		2.46	**98**		2.45	**98**		2.46	**98**	
Copper	1.23	**98**		1.21	**97**		0.0249	**100**		1.22	**98**		1.22	**98**		1.21	**97**	
Iron	4.97	**99**		4.88	**98**		0.104	**104**		4.95	**99**		4.91	**98**		4.90	**98**	
Lead	0.509	**102**		0.499	**100**		0.0112	**112**		0.504	**101**		0.503	**101**		0.502	**100**	
Magnesium	25.30	**101**		24.80	**99**		0.996	**100**		25.10	**100**		24.90	**99**		24.90	**100**	
Manganese	0.735	**98**		0.723	**96**		0.0137	**91**		0.728	**97**		0.728	**97**		0.725	**97**	
Molybdenum	2.60	**104**		2.53	**101**		0.0254	**102**		2.55	**102**		2.56	**102**		2.54	**102**	
Nickel	2.04	**102**		2.00	**100**		0.0355	**89**		2.02	**101**		2.02	**101**		2.01	**100**	
Potassium	24.40	**98**		24.00	**96**		0.955	**96**		24.30	**97**		24.60	**98**		24.10	**96**	
Selenium	0.488	**98**		0.480	**96**		0.0108	**108**		0.485	**97**		0.488	**98**		0.479	**96**	
Silver	0.502	**100**		0.493	**99**		0.00890	**89**		0.498	**100**		0.496	**99**		0.493	**99**	
Sodium	25.40	**102**		25.00	**100**		1.00	**100**		25.30	**101**		25.70	**103**		25.10	**100**	
Strontium	2.46	**99**		2.42	**97**		0.0974	**97**		2.44	**98**		2.43	**97**		2.44	**97**	
Tin	4.94	**99**		4.85	**97**		0.490	**98**		4.90	**98**		4.87	**97**		4.87	**97**	
Vanadium	2.52	**101**		2.47	**99**		0.0492	**98**		2.50	**100**		2.49	**100**		2.48	**99**	
Zinc	0.979	**98**		0.959	**96**		0.0174	**87**		0.966	**97**		0.963	**96**		0.963	**96**	

Form 2 - Calibration Verifications

Client NASA/WSTF/Navarro

Project White Sands Test Facility

Workorder **R2404651**

Metals by EPA 6010C (P)

R-ICP-AES-07_843042		CCV			CCV			CCV			LLCCV			CCV		
Units ppm	**Run Date**	06/04/24			06/05/24			06/05/24			06/05/24			06/05/24		
	Run Time	23:50			00:03			01:59			02:06			02:15		
Analyte		Found	%R	Q	Found	%R	Q	Found	%R	Q	Found	%R	Q	Found	%R	Q
Aluminum		9.71	**97**		9.71	**97**		9.74	**97**		0.195	**97**		9.74	**97**	
Barium		9.85	**99**		9.81	**98**		9.79	**98**		0.197	**99**		9.78	**98**	
Beryllium		0.236	**94**		0.235	**94**		0.234	**93**		0.00470	**94**		0.233	**93**	
Boron		2.47	**99**		2.46	**98**		2.44	**98**		0.190	**95**		2.43	**97**	
Cadmium		0.483	**97**		0.481	**96**		0.476	**95**		0.0100	**100**		0.475	**95**	
Calcium		25.30	**101**		25.20	**101**		25.10	**100**		1.02	**102**		25.00	**100**	
Chromium		0.485	**97**		0.484	**97**		0.480	**96**		0.00880	**88**		0.479	**96**	
Cobalt		2.43	**97**		2.42	**97**		2.41	**96**		0.0491	**98**		2.41	**96**	
Copper		1.21	**97**		1.21	**96**		1.20	**96**		0.0244	**98**		1.20	**96**	
Iron		4.87	**97**		4.85	**97**		4.83	**97**		0.102	**102**		4.84	**97**	
Lead		0.498	**100**		0.497	**99**		0.493	**99**		0.0102	**102**		0.493	**99**	
Magnesium		24.70	**99**		24.60	**98**		24.40	**97**		0.971	**97**		24.30	**97**	
Manganese		0.721	**96**		0.718	**96**		0.716	**95**		0.0135	**90**		0.714	**95**	
Molybdenum		2.52	**101**		2.51	**101**		2.50	**100**		0.0248	**99**		2.50	**100**	
Nickel		2.00	**100**		1.99	**99**		1.98	**99**		0.0347	**87**		1.97	**99**	
Potassium		24.10	**97**		24.20	**97**		24.20	**97**		0.947	**95**		24.10	**96**	
Selenium		0.483	**97**		0.483	**97**		0.479	**96**		0.0128	**128**		0.473	**95**	
Silver		0.492	**98**		0.490	**98**		0.486	**97**		0.00880	**88**		0.485	**97**	
Sodium		25.20	**101**		25.10	**101**		25.20	**101**		1.11	**111**		25.00	**100**	
Strontium		2.41	**96**		2.39	**96**		2.39	**96**		0.0953	**95**		2.38	**95**	
Tin		4.84	**97**		4.82	**96**		4.77	**95**		0.476	**95**		4.77	**95**	
Vanadium		2.46	**99**		2.45	**98**		2.44	**98**		0.0485	**97**		2.44	**97**	
Zinc		0.953	**95**		0.948	**95**		0.943	**94**		0.0170	**85**		0.941	**94**	

Q - %Recovery Flag * - %Recovery (%R) Outside Limits

QC ID	%R Limits	
CCV	90 - 110	**10.0** - Al, Ba; **0.250** - Be; **2.50** - B, Co, Mo, Sr, V; **0.5** - Cd, Cr, Pb, Se, Ag; **25.0** - Ca, Mg, K, Na; **1.25** - Cu; **5.0** - Fe, Sn; **0.750** - Mn; **2.0** - Ni; **1.0** - Zn
ICV	90 - 110	**10.0** - Al, Ba; **0.250** - Be; **2.50** - B, Co, Mo, Sr, V; **0.5** - Cd, Cr, Pb, Se, Ag; **25.0** - Ca, Mg, K, Na; **1.25** - Cu; **5.0** - Fe, Sn; **0.750** - Mn; **2.0** - Ni; **1.0** - Zn
LLCCV	70 - 130	**0.2** - Al, Ba, B; **0.005** - Be; **0.01** - Cd, Cr, Pb, Se, Ag; **1.0** - Ca, Mg, K, Na; **0.05** - Co, V; **0.0250** - Cu, Mo; **0.1** - Fe, Sr; **0.0150** - Mn; **0.04** - Ni; **0.5** - Sn; **0.02** - Zn

Form 2 - Calibration Verifications

Client NASA/WSTF/Navarro

Project White Sands Test Facility

Workorder **R2404651**

Metals by EPA 6010C (P)

R-ICP-AES-07_843644		ICV			LLCCV			CCV			CCV			CCV			CCV		
Units mg/L	**Run Date**	06/10/24			06/10/24			06/10/24			06/10/24			06/10/24			06/10/24		
	Run Time	15:39			15:46			15:56			16:36			17:15			17:54		
Analyte		Found	%R	Q	Found	%R	Q	Found	%R	Q	Found	%R	Q	Found	%R	Q	Found	%R	Q
Sodium		25.30	**101**		1.01	**101**		25.50	**102**		25.60	**102**		25.50	**102**		25.30	**101**	

R-ICP-AES-07_843644		CCV			CCV			LLCCV			CCV			
Units ppm	**Run Date**	06/10/24			06/10/24			06/10/24			06/10/24			
	Run Time	18:33			18:46			18:52			19:12			
Analyte		Found	%R	Q	Found	%R	Q	Found	%R	Q	Found	%R	Q	
Sodium		25.20	**101**		25.30	**101**		1.03	**103**		25.30	**101**		

Q - %Recovery Flag * - %Recovery (%R) Outside Limits

QC ID	%R Limits	
CCV	90 - 110	**25.0** - Na
ICV	90 - 110	**25.0** - Na
LLCCV	70 - 130	**1.0** - Na

Form 2 - Calibration Verifications

Client NASA/WSTF/Navarro | Workorder **R2404651**

Project White Sands Test Facility

Metals by EPA 6020A (MS)

R-ICP-MS-02_843209		ICV			CCV			LLCCV			CCV			CCV			CCV		
Units mg/L	**Run Date**	06/05/24			06/05/24			06/05/24			06/05/24			06/05/24			06/05/24		
	Run Time	11:31			13:10			13:14			13:19			13:42			14:05		
	Data File	035_ICV			086_CCV			088LICV			091_CCV			103_CCV			115_CCV		
Analyte		Found	%R	Q	Found	%R	Q	Found	%R	Q	Found	%R	Q	Found	%R	Q	Found	%R	Q
Antimony		49.70	**99**		0.0492	**98**		0.000982	**98**		0.0507	**101**		0.0500	**100**		0.0460	**92**	
Arsenic		48.40	**97**		0.0484	**97**		0.000945	**95**		0.0486	**97**		0.0497	**99**		0.0459	**92**	
Thallium		50.50	**101**		0.0541	**108**		0.00101	**101**		0.0547	**109**		0.0534	**107**		0.0477	**95**	

R-ICP-MS-02_843209		CCV			LLCCV			CCV		
Units ppm	**Run Date**	06/05/24			06/05/24			06/05/24		
	Run Time	14:18			14:22			14:24		
	Data File	122_CCV			124LICV			125_CCV		
Analyte		Found	%R	Q	Found	%R	Q	Found	%R	Q
Antimony		0.0492	**98**		0.00103	**103**		0.0488	**98**	
Arsenic		0.0485	**97**		0.000766	**77**		0.0476	**95**	
Thallium		0.0521	**104**		0.00101	**101**		0.0519	**104**	

Q - %Recovery Flag * - %Recovery (%R) Outside Limits

QC ID	%R Limits	
CCV	90 - 110	**0.05** - Sb, As, Tl
ICV	90 - 110	**50.0** - Sb, As, Tl
LLCCV	70 - 130	**0.001** - Sb, As, Tl

Form 2 - Calibration Verifications

Client NASA/WSTF/Navarro

Project White Sands Test Facility

Workorder **R2404651**

Metals by EPA 6020A (MS)

R-ICP-MS-02_843344		ICV			LLCCV			CCV			CCV			CCV			LLCCV		
Units ppb	**Run Date**	06/06/24			06/06/24			06/06/24			06/06/24			06/06/24			06/06/24		
	Run Time	16:06			16:09			16:17			16:40			16:57			17:00		
	Data File	015_ICV			017LICV			021_CCV			033_CCV			042_CCV			044LICV		
Analyte		Found	%R	Q	Found	%R	Q	Found	%R	Q	Found	%R	Q	Found	%R	Q	Found	%R	Q
Arsenic		49100	**98**		0.000928	**93**		0.0472	**94**		0.0487	**97**		0.0481	**96**		0.00101	**101**	

R-ICP-MS-02_843344		CCV		
Units ppm	**Run Date**	06/06/24		
	Run Time	17:05		
	Data File	047_CCV		
Analyte		Found	%R	Q
Arsenic		0.0507	**101**	

Q - %Recovery Flag * - %Recovery (%R) Outside Limits

QC ID	%R Limits	
CCV	90 - 110	**0.05** - As
ICV	90 - 110	**50000** - As
LLCCV	70 - 130	**0.001** - As

Client: NASA/WSTF/Navarro
Project: White Sands Test Facility/23EC002B
Sample Matrix: Water

Service Request: R2404651
Date Analyzed: 6/ 4/24 - 6/ 6/24

Lab Control Sample Summary
Inorganic Parameters

Units: mg/L
Basis: NA

Lab Control Sample
R2404651-LCS

Analyte Name	Method	Result	Spike Amount	% Rec	% Rec Limits
Aluminum, Total	6010C	1.96	2.00	98	80 - 120
Antimony, Total	6020A	0.0216	0.0200	108	80 - 120
Arsenic, Total	6020A	0.0205	0.0200	102	80 - 120
Barium, Total	6010C	1.97	2.00	98	80 - 120
Beryllium, Total	6010C	0.0475	0.0500	95	80 - 120
Boron, Total	6010C	0.983	1.00	98	80 - 120
Cadmium, Total	6010C	0.0492	0.0500	98	80 - 120
Calcium, Total	6010C	2.01	2.0	100	80 - 120
Chromium, Total	6010C	0.192	0.200	96	80 - 120
Cobalt, Total	6010C	0.489	0.500	98	80 - 120
Copper, Total	6010C	0.246	0.250	98	80 - 120
Iron, Total	6010C	0.988	1.00	99	80 - 120
Lead, Total	6010C	0.510	0.500	102	80 - 120
Magnesium, Total	6010C	1.93	2.0	96	80 - 120
Manganese, Total	6010C	0.476	0.500	95	80 - 120
Mercury, Total	7470A	0.00102	0.00100	102	80 - 120
Molybdenum, Total	6010C	0.480	0.500	96	80 - 120
Nickel, Total	6010C	0.501	0.500	100	80 - 120
Potassium, Total	6010C	18.9	20.0	95	80 - 120
Selenium, Total	6010C	0.983	1.01	97	80 - 120
Silver, Total	6010C	0.0490	0.050	98	80 - 120
Sodium, Total	6010C	19.7	20.0	98	80 - 120
Strontium, Total	6010C	1.92	2.00	96	80 - 120
Thallium, Total	6020A	0.0226	0.0200	113	80 - 120
Tin, Total	6010C	4.77	5.00	95	80 - 120
Vanadium, Total	6010C	0.483	0.500	97	80 - 120
Zinc, Total	6010C	0.488	0.500	98	80 - 120

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Raw Data

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Client:	NASA/WSTF/Navarro	**Service Request:**	R2404651
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	5/28/24
Sample Matrix:	Water	**Date Received:**	5/31/24
Sample Name:	1405280845C 400-GV-125		
Lab Code:	R2404651-001	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Aluminum, Total	6010C	**0.13**		mg/L	0.10	0.03	1	6/ 3/24	6/4/24 22:29	
Antimony, Total	6020A	**0.0003**	J	mg/L	0.0010	0.0002	1	6/ 4/24	6/5/24 13:46	
Arsenic, Total	6020A	**0.0012**		mg/L	0.0010	0.0004	1	6/ 4/24	6/6/24 16:43	
Barium, Total	6010C	**0.042**		mg/L	0.020	0.003	1	6/ 3/24	6/4/24 22:29	
Beryllium, Total	6010C	ND	U	mg/L	0.0030	0.0002	1	6/ 3/24	6/4/24 22:29	
Boron, Total	6010C	**0.32**		mg/L	0.20	0.02	1	6/ 3/24	6/4/24 22:29	
Cadmium, Total	6010C	ND	U	mg/L	0.0050	0.0004	1	6/ 3/24	6/4/24 22:29	
Calcium, Total	6010C	**121**		mg/L	1.0	0.3	1	6/ 3/24	6/4/24 22:29	
Chromium, Total	6010C	**0.003**	J	mg/L	0.010	0.002	1	6/ 3/24	6/4/24 22:29	
Cobalt, Total	6010C	ND	U	mg/L	0.050	0.0009	1	6/ 3/24	6/4/24 22:29	
Copper, Total	6010C	ND	U	mg/L	0.020	0.004	1	6/ 3/24	6/4/24 22:29	
Iron, Total	6010C	**0.10**		mg/L	0.10	0.07	1	6/ 3/24	6/4/24 22:29	
Lead, Total	6010C	ND	U	mg/L	0.050	0.004	1	6/ 3/24	6/4/24 22:29	
Magnesium, Total	6010C	**89.4**		mg/L	1.0	0.03	1	6/ 3/24	6/4/24 22:29	
Manganese, Total	6010C	**0.011**		mg/L	0.010	0.004	1	6/ 3/24	6/4/24 22:29	
Mercury, Total	7470A	ND	U	mg/L	0.00020	0.00008	1	6/ 5/24	6/6/24 11:18	
Molybdenum, Total	6010C	**0.009**	J	mg/L	0.025	0.003	1	6/ 3/24	6/4/24 22:29	
Nickel, Total	6010C	ND	U	mg/L	0.040	0.003	1	6/ 3/24	6/4/24 22:29	
Potassium, Total	6010C	**3.9**		mg/L	2.0	0.4	1	6/ 3/24	6/4/24 22:29	
Selenium, Total	6010C	**0.008**	J	mg/L	0.010	0.007	1	6/ 3/24	6/4/24 22:29	
Silver, Total	6010C	ND	U	mg/L	0.010	0.0006	1	6/ 3/24	6/4/24 22:29	
Sodium, Total	6010C	**89.5**		mg/L	1.0	0.3	1	6/ 3/24	6/4/24 22:29	
Strontium, Total	6010C	**3.39**		mg/L	0.10	0.002	1	6/ 3/24	6/4/24 22:29	
Thallium, Total	6020A	**0.0002**	J	mg/L	0.0010	0.00004	1	6/ 4/24	6/5/24 13:46	
Tin, Total	6010C	ND	U	mg/L	0.50	0.008	1	6/ 3/24	6/4/24 22:29	
Vanadium, Total	6010C	**0.001**	J	mg/L	0.050	0.0007	1	6/ 3/24	6/4/24 22:29	
Zinc, Total	6010C	**0.005**	J	mg/L	0.020	0.003	1	6/ 3/24	6/4/24 22:29	

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404651
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	5/28/24
Sample Matrix:	Water	**Date Received:**	5/31/24
Sample Name:	1405280846C 400-GV-125		
Lab Code:	R2404651-002	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Aluminum, Total	6010C	**0.11**		mg/L	0.10	0.03	1	6/ 3/24	6/4/24 22:39	
Antimony, Total	6020A	ND	U	mg/L	0.0010	0.0002	1	6/ 4/24	6/5/24 13:47	
Arsenic, Total	6020A	**0.0009**	J	mg/L	0.0010	0.0004	1	6/ 4/24	6/5/24 13:47	
Barium, Total	6010C	**0.042**		mg/L	0.020	0.003	1	6/ 3/24	6/4/24 22:39	
Beryllium, Total	6010C	ND	U	mg/L	0.0030	0.0002	1	6/ 3/24	6/4/24 22:39	
Boron, Total	6010C	**0.31**		mg/L	0.20	0.02	1	6/ 3/24	6/4/24 22:39	
Cadmium, Total	6010C	ND	U	mg/L	0.0050	0.0004	1	6/ 3/24	6/4/24 22:39	
Calcium, Total	6010C	**118**		mg/L	1.0	0.3	1	6/ 3/24	6/4/24 22:39	
Chromium, Total	6010C	**0.003**	J	mg/L	0.010	0.002	1	6/ 3/24	6/4/24 22:39	
Cobalt, Total	6010C	ND	U	mg/L	0.050	0.0009	1	6/ 3/24	6/4/24 22:39	
Copper, Total	6010C	ND	U	mg/L	0.020	0.004	1	6/ 3/24	6/4/24 22:39	
Iron, Total	6010C	**0.09**	J	mg/L	0.10	0.07	1	6/ 3/24	6/4/24 22:39	
Lead, Total	6010C	ND	U	mg/L	0.050	0.004	1	6/ 3/24	6/4/24 22:39	
Magnesium, Total	6010C	**87.5**		mg/L	1.0	0.03	1	6/ 3/24	6/4/24 22:39	
Manganese, Total	6010C	**0.009**	J	mg/L	0.010	0.004	1	6/ 3/24	6/4/24 22:39	
Mercury, Total	7470A	ND	U	mg/L	0.00020	0.00008	1	6/ 5/24	6/6/24 11:21	
Molybdenum, Total	6010C	**0.01**	J	mg/L	0.025	0.003	1	6/ 3/24	6/4/24 22:39	
Nickel, Total	6010C	ND	U	mg/L	0.040	0.003	1	6/ 3/24	6/4/24 22:39	
Potassium, Total	6010C	**3.7**		mg/L	2.0	0.4	1	6/ 3/24	6/4/24 22:39	
Selenium, Total	6010C	ND	U	mg/L	0.010	0.007	1	6/ 3/24	6/4/24 22:39	
Silver, Total	6010C	ND	U	mg/L	0.010	0.0006	1	6/ 3/24	6/4/24 22:39	
Sodium, Total	6010C	**86.8**		mg/L	1.0	0.3	1	6/ 3/24	6/4/24 22:39	
Strontium, Total	6010C	**3.32**		mg/L	0.10	0.002	1	6/ 3/24	6/4/24 22:39	
Thallium, Total	6020A	**0.0002**	J	mg/L	0.0010	0.00004	1	6/ 4/24	6/5/24 13:47	
Tin, Total	6010C	ND	U	mg/L	0.50	0.008	1	6/ 3/24	6/4/24 22:39	
Vanadium, Total	6010C	**0.001**	J	mg/L	0.050	0.0007	1	6/ 3/24	6/4/24 22:39	
Zinc, Total	6010C	**0.006**	J	mg/L	0.020	0.003	1	6/ 3/24	6/4/24 22:39	

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404651
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	5/28/24
Sample Matrix:	Water	**Date Received:**	5/31/24
Sample Name:	1405280857A 400-FV-131		
Lab Code:	R2404651-003	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Aluminum, Total	6010C	ND	U	mg/L	0.10	0.03	1	6/ 3/24	6/4/24 22:42	
Antimony, Total	6020A	ND	U	mg/L	0.0010	0.0002	1	6/ 4/24	6/5/24 13:49	
Arsenic, Total	6020A	**0.0014**		mg/L	0.0010	0.0004	1	6/ 4/24	6/5/24 13:49	
Barium, Total	6010C	**0.039**		mg/L	0.020	0.003	1	6/ 3/24	6/4/24 22:42	
Beryllium, Total	6010C	ND	U	mg/L	0.0030	0.0002	1	6/ 3/24	6/4/24 22:42	
Boron, Total	6010C	**0.26**		mg/L	0.20	0.02	1	6/ 3/24	6/4/24 22:42	
Cadmium, Total	6010C	ND	U	mg/L	0.0050	0.0004	1	6/ 3/24	6/4/24 22:42	
Calcium, Total	6010C	**103**		mg/L	1.0	0.3	1	6/ 3/24	6/4/24 22:42	
Chromium, Total	6010C	**0.002**	J	mg/L	0.010	0.002	1	6/ 3/24	6/4/24 22:42	
Cobalt, Total	6010C	ND	U	mg/L	0.050	0.0009	1	6/ 3/24	6/4/24 22:42	
Copper, Total	6010C	ND	U	mg/L	0.020	0.004	1	6/ 3/24	6/4/24 22:42	
Iron, Total	6010C	ND	U	mg/L	0.10	0.07	1	6/ 3/24	6/4/24 22:42	
Lead, Total	6010C	ND	U	mg/L	0.050	0.004	1	6/ 3/24	6/4/24 22:42	
Magnesium, Total	6010C	**80.5**		mg/L	1.0	0.03	1	6/ 3/24	6/4/24 22:42	
Manganese, Total	6010C	**0.011**		mg/L	0.010	0.004	1	6/ 3/24	6/4/24 22:42	
Mercury, Total	7470A	ND	U	mg/L	0.00020	0.00008	1	6/ 5/24	6/6/24 11:23	
Molybdenum, Total	6010C	**0.008**	J	mg/L	0.025	0.003	1	6/ 3/24	6/4/24 22:42	
Nickel, Total	6010C	ND	U	mg/L	0.040	0.003	1	6/ 3/24	6/4/24 22:42	
Potassium, Total	6010C	**2.7**		mg/L	2.0	0.4	1	6/ 3/24	6/4/24 22:42	
Selenium, Total	6010C	ND	U	mg/L	0.010	0.007	1	6/ 3/24	6/4/24 22:42	
Silver, Total	6010C	ND	U	mg/L	0.010	0.0006	1	6/ 3/24	6/4/24 22:42	
Sodium, Total	6010C	**105**		mg/L	1.0	0.3	1	6/ 3/24	6/4/24 22:42	
Strontium, Total	6010C	**2.25**		mg/L	0.10	0.002	1	6/ 3/24	6/4/24 22:42	
Thallium, Total	6020A	**0.00009**	J	mg/L	0.0010	0.00004	1	6/ 4/24	6/5/24 13:49	
Tin, Total	6010C	ND	U	mg/L	0.50	0.008	1	6/ 3/24	6/4/24 22:42	
Vanadium, Total	6010C	ND	U	mg/L	0.050	0.0007	1	6/ 3/24	6/4/24 22:42	
Zinc, Total	6010C	**0.004**	J	mg/L	0.020	0.003	1	6/ 3/24	6/4/24 22:42	

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404651
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	5/28/24
Sample Matrix:	Water	**Date Received:**	5/31/24
Sample Name:	1405280858A 400-FV-131		
Lab Code:	R2404651-004	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Aluminum, Total	6010C	ND	U	mg/L	0.10	0.03	1	6/ 3/24	6/4/24 22:46	
Antimony, Total	6020A	ND	U	mg/L	0.0010	0.0002	1	6/ 4/24	6/5/24 13:51	
Arsenic, Total	6020A	**0.0014**		mg/L	0.0010	0.0004	1	6/ 4/24	6/5/24 13:51	
Barium, Total	6010C	**0.039**		mg/L	0.020	0.003	1	6/ 3/24	6/4/24 22:46	
Beryllium, Total	6010C	ND	U	mg/L	0.0030	0.0002	1	6/ 3/24	6/4/24 22:46	
Boron, Total	6010C	**0.26**		mg/L	0.20	0.02	1	6/ 3/24	6/4/24 22:46	
Cadmium, Total	6010C	ND	U	mg/L	0.0050	0.0004	1	6/ 3/24	6/4/24 22:46	
Calcium, Total	6010C	**102**		mg/L	1.0	0.3	1	6/ 3/24	6/4/24 22:46	
Chromium, Total	6010C	**0.002**	J	mg/L	0.010	0.002	1	6/ 3/24	6/4/24 22:46	
Cobalt, Total	6010C	ND	U	mg/L	0.050	0.0009	1	6/ 3/24	6/4/24 22:46	
Copper, Total	6010C	ND	U	mg/L	0.020	0.004	1	6/ 3/24	6/4/24 22:46	
Iron, Total	6010C	ND	U	mg/L	0.10	0.07	1	6/ 3/24	6/4/24 22:46	
Lead, Total	6010C	ND	U	mg/L	0.050	0.004	1	6/ 3/24	6/4/24 22:46	
Magnesium, Total	6010C	**79.7**		mg/L	1.0	0.03	1	6/ 3/24	6/4/24 22:46	
Manganese, Total	6010C	**0.010**		mg/L	0.010	0.004	1	6/ 3/24	6/4/24 22:46	
Mercury, Total	7470A	ND	U	mg/L	0.00020	0.00008	1	6/ 5/24	6/6/24 11:26	
Molybdenum, Total	6010C	**0.008**	J	mg/L	0.025	0.003	1	6/ 3/24	6/4/24 22:46	
Nickel, Total	6010C	ND	U	mg/L	0.040	0.003	1	6/ 3/24	6/4/24 22:46	
Potassium, Total	6010C	**2.7**		mg/L	2.0	0.4	1	6/ 3/24	6/4/24 22:46	
Selenium, Total	6010C	ND	U	mg/L	0.010	0.007	1	6/ 3/24	6/4/24 22:46	
Silver, Total	6010C	ND	U	mg/L	0.010	0.0006	1	6/ 3/24	6/4/24 22:46	
Sodium, Total	6010C	**103**		mg/L	1.0	0.3	1	6/ 3/24	6/4/24 22:46	
Strontium, Total	6010C	**2.23**		mg/L	0.10	0.002	1	6/ 3/24	6/4/24 22:46	
Thallium, Total	6020A	**0.00008**	J	mg/L	0.0010	0.00004	1	6/ 4/24	6/5/24 13:51	
Tin, Total	6010C	ND	U	mg/L	0.50	0.008	1	6/ 3/24	6/4/24 22:46	
Vanadium, Total	6010C	ND	U	mg/L	0.050	0.0007	1	6/ 3/24	6/4/24 22:46	
Zinc, Total	6010C	**0.005**	J	mg/L	0.020	0.003	1	6/ 3/24	6/4/24 22:46	

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404651
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	5/28/24
Sample Matrix:	Water	**Date Received:**	5/31/24
Sample Name:	1405281005A 400-EV-131		
Lab Code:	R2404651-005	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Aluminum, Total	6010C	ND	U	mg/L	0.10	0.03	1	6/ 3/24	6/4/24 22:49	
Antimony, Total	6020A	ND	U	mg/L	0.0010	0.0002	1	6/ 4/24	6/5/24 13:53	
Arsenic, Total	6020A	**0.0009**	J	mg/L	0.0010	0.0004	1	6/ 4/24	6/5/24 13:53	
Barium, Total	6010C	**0.029**		mg/L	0.020	0.003	1	6/ 3/24	6/4/24 22:49	
Beryllium, Total	6010C	ND	U	mg/L	0.0030	0.0002	1	6/ 3/24	6/4/24 22:49	
Boron, Total	6010C	**0.23**		mg/L	0.20	0.02	1	6/ 3/24	6/4/24 22:49	
Cadmium, Total	6010C	ND	U	mg/L	0.0050	0.0004	1	6/ 3/24	6/4/24 22:49	
Calcium, Total	6010C	**106**		mg/L	1.0	0.3	1	6/ 3/24	6/4/24 22:49	
Chromium, Total	6010C	**0.002**	J	mg/L	0.010	0.002	1	6/ 3/24	6/4/24 22:49	
Cobalt, Total	6010C	**0.002**	J	mg/L	0.050	0.0009	1	6/ 3/24	6/4/24 22:49	
Copper, Total	6010C	ND	U	mg/L	0.020	0.004	1	6/ 3/24	6/4/24 22:49	
Iron, Total	6010C	ND	U	mg/L	0.10	0.07	1	6/ 3/24	6/4/24 22:49	
Lead, Total	6010C	ND	U	mg/L	0.050	0.004	1	6/ 3/24	6/4/24 22:49	
Magnesium, Total	6010C	**77.0**		mg/L	1.0	0.03	1	6/ 3/24	6/4/24 22:49	
Manganese, Total	6010C	**0.016**		mg/L	0.010	0.004	1	6/ 3/24	6/4/24 22:49	
Mercury, Total	7470A	ND	U	mg/L	0.00020	0.00008	1	6/ 5/24	6/6/24 11:28	
Molybdenum, Total	6010C	**0.009**	J	mg/L	0.025	0.003	1	6/ 3/24	6/4/24 22:49	
Nickel, Total	6010C	**0.289**		mg/L	0.040	0.003	1	6/ 3/24	6/4/24 22:49	
Potassium, Total	6010C	**4.0**		mg/L	2.0	0.4	1	6/ 3/24	6/4/24 22:49	
Selenium, Total	6010C	ND	U	mg/L	0.010	0.007	1	6/ 3/24	6/4/24 22:49	
Silver, Total	6010C	ND	U	mg/L	0.010	0.0006	1	6/ 3/24	6/4/24 22:49	
Sodium, Total	6010C	**91.0**		mg/L	1.0	0.3	1	6/ 3/24	6/4/24 22:49	
Strontium, Total	6010C	**3.94**		mg/L	0.10	0.002	1	6/ 3/24	6/4/24 22:49	
Thallium, Total	6020A	**0.00004**	J	mg/L	0.0010	0.00004	1	6/ 4/24	6/5/24 13:53	
Tin, Total	6010C	ND	U	mg/L	0.50	0.008	1	6/ 3/24	6/4/24 22:49	
Vanadium, Total	6010C	**0.001**	J	mg/L	0.050	0.0007	1	6/ 3/24	6/4/24 22:49	
Zinc, Total	6010C	**0.006**	J	mg/L	0.020	0.003	1	6/ 3/24	6/4/24 22:49	

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404651
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	5/28/24
Sample Matrix:	Water	**Date Received:**	5/31/24
Sample Name:	1405281013C 400-JV-150		
Lab Code:	R2404651-006	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Aluminum, Total	6010C	**0.08**	J	mg/L	0.10	0.03	1	6/ 3/24	6/4/24 22:52	
Antimony, Total	6020A	ND	U	mg/L	0.0010	0.0002	1	6/ 4/24	6/5/24 13:55	
Arsenic, Total	6020A	**0.0009**	J	mg/L	0.0010	0.0004	1	6/ 4/24	6/5/24 13:55	
Barium, Total	6010C	**0.038**		mg/L	0.020	0.003	1	6/ 3/24	6/4/24 22:52	
Beryllium, Total	6010C	ND	U	mg/L	0.0030	0.0002	1	6/ 3/24	6/4/24 22:52	
Boron, Total	6010C	**1.13**		mg/L	0.20	0.02	1	6/ 3/24	6/4/24 22:52	
Cadmium, Total	6010C	ND	U	mg/L	0.0050	0.0004	1	6/ 3/24	6/4/24 22:52	
Calcium, Total	6010C	**150**		mg/L	1.0	0.3	1	6/ 3/24	6/4/24 22:52	
Chromium, Total	6010C	**0.003**	J	mg/L	0.010	0.002	1	6/ 3/24	6/4/24 22:52	
Cobalt, Total	6010C	ND	U	mg/L	0.050	0.0009	1	6/ 3/24	6/4/24 22:52	
Copper, Total	6010C	ND	U	mg/L	0.020	0.004	1	6/ 3/24	6/4/24 22:52	
Iron, Total	6010C	**0.12**		mg/L	0.10	0.07	1	6/ 3/24	6/4/24 22:52	
Lead, Total	6010C	ND	U	mg/L	0.050	0.004	1	6/ 3/24	6/4/24 22:52	
Magnesium, Total	6010C	**112**		mg/L	1.0	0.03	1	6/ 3/24	6/4/24 22:52	
Manganese, Total	6010C	**0.014**		mg/L	0.010	0.004	1	6/ 3/24	6/4/24 22:52	
Mercury, Total	7470A	ND	U	mg/L	0.00020	0.00008	1	6/ 5/24	6/6/24 11:31	
Molybdenum, Total	6010C	**0.007**	J	mg/L	0.025	0.003	1	6/ 3/24	6/4/24 22:52	
Nickel, Total	6010C	ND	U	mg/L	0.040	0.003	1	6/ 3/24	6/4/24 22:52	
Potassium, Total	6010C	**4.9**		mg/L	2.0	0.4	1	6/ 3/24	6/4/24 22:52	
Selenium, Total	6010C	**0.010**		mg/L	0.010	0.007	1	6/ 3/24	6/4/24 22:52	
Silver, Total	6010C	ND	U	mg/L	0.010	0.0006	1	6/ 3/24	6/4/24 22:52	
Sodium, Total	6010C	**221**		mg/L	10	3	10	6/ 3/24	6/10/24 18:04	
Strontium, Total	6010C	**4.24**		mg/L	0.10	0.002	1	6/ 3/24	6/4/24 22:52	
Thallium, Total	6020A	ND	U	mg/L	0.0010	0.00004	1	6/ 4/24	6/5/24 13:55	
Tin, Total	6010C	ND	U	mg/L	0.50	0.008	1	6/ 3/24	6/4/24 22:52	
Vanadium, Total	6010C	ND	U	mg/L	0.050	0.0007	1	6/ 3/24	6/4/24 22:52	
Zinc, Total	6010C	**0.004**	J	mg/L	0.020	0.003	1	6/ 3/24	6/4/24 22:52	

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404651
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	5/28/24
Sample Matrix:	Water	**Date Received:**	5/31/24
Sample Name:	1405281450C 400-HV-147		
Lab Code:	R2404651-007	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Aluminum, Total	6010C	ND	U	mg/L	0.10	0.03	1	6/ 3/24	6/4/24 22:55	
Antimony, Total	6020A	**0.0039**		mg/L	0.0010	0.0002	1	6/ 4/24	6/5/24 13:57	
Arsenic, Total	6020A	**0.0016**		mg/L	0.0010	0.0004	1	6/ 4/24	6/5/24 13:57	
Barium, Total	6010C	**0.076**		mg/L	0.020	0.003	1	6/ 3/24	6/4/24 22:55	
Beryllium, Total	6010C	ND	U	mg/L	0.0030	0.0002	1	6/ 3/24	6/4/24 22:55	
Boron, Total	6010C	**0.86**		mg/L	0.20	0.02	1	6/ 3/24	6/4/24 22:55	
Cadmium, Total	6010C	ND	U	mg/L	0.0050	0.0004	1	6/ 3/24	6/4/24 22:55	
Calcium, Total	6010C	**153**		mg/L	1.0	0.3	1	6/ 3/24	6/4/24 22:55	
Chromium, Total	6010C	**0.006**	J	mg/L	0.010	0.002	1	6/ 3/24	6/4/24 22:55	
Cobalt, Total	6010C	**0.002**	J	mg/L	0.050	0.0009	1	6/ 3/24	6/4/24 22:55	
Copper, Total	6010C	ND	U	mg/L	0.020	0.004	1	6/ 3/24	6/4/24 22:55	
Iron, Total	6010C	ND	U	mg/L	0.10	0.07	1	6/ 3/24	6/4/24 22:55	
Lead, Total	6010C	ND	U	mg/L	0.050	0.004	1	6/ 3/24	6/4/24 22:55	
Magnesium, Total	6010C	**116**		mg/L	1.0	0.03	1	6/ 3/24	6/4/24 22:55	
Manganese, Total	6010C	ND	U	mg/L	0.010	0.004	1	6/ 3/24	6/4/24 22:55	
Mercury, Total	7470A	ND	U	mg/L	0.00020	0.00008	1	6/ 5/24	6/6/24 11:33	
Molybdenum, Total	6010C	**0.007**	J	mg/L	0.025	0.003	1	6/ 3/24	6/4/24 22:55	
Nickel, Total	6010C	ND	U	mg/L	0.040	0.003	1	6/ 3/24	6/4/24 22:55	
Potassium, Total	6010C	**4.4**		mg/L	2.0	0.4	1	6/ 3/24	6/4/24 22:55	
Selenium, Total	6010C	ND	U	mg/L	0.010	0.007	1	6/ 3/24	6/4/24 22:55	
Silver, Total	6010C	ND	U	mg/L	0.010	0.0006	1	6/ 3/24	6/4/24 22:55	
Sodium, Total	6010C	**146**		mg/L	1.0	0.3	1	6/ 3/24	6/4/24 22:55	
Strontium, Total	6010C	**5.88**		mg/L	0.10	0.002	1	6/ 3/24	6/4/24 22:55	
Thallium, Total	6020A	**0.00005**	J	mg/L	0.0010	0.00004	1	6/ 4/24	6/5/24 13:57	
Tin, Total	6010C	ND	U	mg/L	0.50	0.008	1	6/ 3/24	6/4/24 22:55	
Vanadium, Total	6010C	**0.003**	J	mg/L	0.050	0.0007	1	6/ 3/24	6/4/24 22:55	
Zinc, Total	6010C	**0.004**	J	mg/L	0.020	0.003	1	6/ 3/24	6/4/24 22:55	

Client:	NASA/WSTF/Navarro	**Service Request:**	R2404651
Project:	White Sands Test Facility/23EC002B	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R2404651-MB	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Aluminum, Total	6010C	ND	U	mg/L	0.10	0.03	1	6/ 3/24	6/4/24 22:00	
Antimony, Total	6020A	ND	U	mg/L	0.0010	0.0002	1	6/ 4/24	6/5/24 13:22	
Arsenic, Total	6020A	ND	U	mg/L	0.0010	0.0004	1	6/ 4/24	6/5/24 13:22	
Barium, Total	6010C	ND	U	mg/L	0.020	0.003	1	6/ 3/24	6/4/24 22:00	
Beryllium, Total	6010C	ND	U	mg/L	0.0030	0.0002	1	6/ 3/24	6/4/24 22:00	
Boron, Total	6010C	ND	U	mg/L	0.20	0.02	1	6/ 3/24	6/4/24 22:00	
Cadmium, Total	6010C	ND	U	mg/L	0.0050	0.0004	1	6/ 3/24	6/4/24 22:00	
Calcium, Total	6010C	ND	U	mg/L	1.0	0.3	1	6/ 3/24	6/4/24 22:00	
Chromium, Total	6010C	ND	U	mg/L	0.010	0.002	1	6/ 3/24	6/4/24 22:00	
Cobalt, Total	6010C	ND	U	mg/L	0.050	0.0009	1	6/ 3/24	6/4/24 22:00	
Copper, Total	6010C	ND	U	mg/L	0.020	0.004	1	6/ 3/24	6/4/24 22:00	
Iron, Total	6010C	ND	U	mg/L	0.10	0.07	1	6/ 3/24	6/4/24 22:00	
Lead, Total	6010C	ND	U	mg/L	0.050	0.004	1	6/ 3/24	6/4/24 22:00	
Magnesium, Total	6010C	ND	U	mg/L	1.0	0.03	1	6/ 3/24	6/4/24 22:00	
Manganese, Total	6010C	ND	U	mg/L	0.010	0.004	1	6/ 3/24	6/4/24 22:00	
Mercury, Total	7470A	ND	U	mg/L	0.00020	0.00008	1	6/ 5/24	6/6/24 10:50	
Molybdenum, Total	6010C	ND	U	mg/L	0.025	0.003	1	6/ 3/24	6/4/24 22:00	
Nickel, Total	6010C	ND	U	mg/L	0.040	0.003	1	6/ 3/24	6/4/24 22:00	
Potassium, Total	6010C	ND	U	mg/L	2.0	0.4	1	6/ 3/24	6/4/24 22:00	
Selenium, Total	6010C	ND	U	mg/L	0.010	0.007	1	6/ 3/24	6/4/24 22:00	
Silver, Total	6010C	ND	U	mg/L	0.010	0.0006	1	6/ 3/24	6/4/24 22:00	
Sodium, Total	6010C	ND	U	mg/L	1.0	0.3	1	6/ 3/24	6/4/24 22:00	
Strontium, Total	6010C	ND	U	mg/L	0.10	0.002	1	6/ 3/24	6/4/24 22:00	
Thallium, Total	6020A	ND	U	mg/L	0.0010	0.00004	1	6/ 4/24	6/5/24 13:22	
Tin, Total	6010C	ND	U	mg/L	0.50	0.008	1	6/ 3/24	6/4/24 22:00	
Vanadium, Total	6010C	ND	U	mg/L	0.050	0.0007	1	6/ 3/24	6/4/24 22:00	
Zinc, Total	6010C	ND	U	mg/L	0.020	0.003	1	6/ 3/24	6/4/24 22:00	

Metals Data Cover Sheet

Run Date: 6/4/2024

Data File: 060424A-ICP7

Primary Reviewer: N. Mansen

Secondary Reviewer: M. McMahon

LIMS Runs:	LIMS Preps:	
843039	439313	T2
843040	439397	T2
843041	439399	T2
843042	439398	CCV7
843043	439400	T2

Comments:
N/A

ICP-7 Run Log

Serial number: MY2309CQ22

Analyst: NM Date: 6/4/24 Data File: 060424A-ICP7

	Prep Date	Lot #			Prep Date	Lot #
MRL	5/16/24	M8440120C		Cal Std 1	3/27/24	M87500021A
ICSA	4/19/24	M8440133B		Cal Std 2	1/100 cal6, 3 1/50 cal6, 4 1/10 cal6, 5 1/5 cal6	
ICSAB	5/16/24	M8440143C		Cal Std 3/HLCCV1	5/13/24	M87500013A
Int. Std	5/28/24	M87500056J		HLCCV2 6	4/23/24	M8440078B
ICV/CCV	6/4/24	M87500069H		HLCCV3	5/16/24	M8440098B

~~(Cal Std 4 is a 1/5 and Cal Std 3 is a 1/100 dilution of Cal Std 5)~~ NM 6/4/24

Blank Prep - Daily	NHO3	HCl		Pipet Used	DOD Pipet Verification		IEC Date
Lot	233477	233283		M37,M40	-		-

1:1	PBW-439313	S1:6	Continuing Calibration Verification	2:1	PBW-439398	2:33	PBW-439400
1:2	LCSW-439313	S1:7	Continuing Calibration Blank	2:2	LCSW-439398	2:34	FBLK-439400
1:3	R2404634-002 10X	S1:3	Contract Required Detection Limit	2:3	R2404632-001	2:35	LCSW-439400
1:4	R2404634-006 10X	S1:4	Interference Check Solution A	2:4	R2404643-001	2:36	DLCSW-439400
1:5	R2404634-006S 10X	S1:5	Interference Check Solution AB	2:5	R2404643-002	2:37	R2404656-001
1:6	R2404634-006SD 10X	S1:21	HLCCV2	2:6	R2404643-002S	2:38	R2404656-002
1:7	R2404634-006A 10X	S1:22	HLCCV3	2:7	R2404643-002SD	2:39	R2404656-003
1:8	R2404634-006L 50X	S1:19	HLCCV1	2:8	R2404643-002A	2:40	R2404656-004
1:9	PBW-439397	S1:6	Continuing Calibration Verification	2:9	R2404643-002L 5X	2:41	R2404656-005
1:10	LCSW-439397	S1:7	Continuing Calibration Blank	2:10	R2404651-001	2:42	R2404656-006
S1:6	Continuing Calibration Verification	1:36	PBW-439399	S1:8	Continuing Calibration Verification1	S1:8	Continuing Calibration Verification1
S1:7	Continuing Calibration Blank	1:37	LCSW-439399	S1:9	Continuing Calibration Blank1	S1:9	Continuing Calibration Blank1
1:11	DLCSW-439397	1:38	DLCSW-439399	2:11	R2404651-002	2:43	R2404656-007
1:12	R2404637-001	1:39	R2404655-001	2:12	R2404651-003	2:44	R2404656-008
1:13	R2404637-002	1:40	R2404655-002	2:13	R2404651-004	2:45	R2404656-009
1:14	R2404637-003	1:41	R2404655-003	2:14	R2404651-005	2:46	R2404656-010
1:15	R2404637-004	1:42	R2404655-004	2:15	R2404651-006	2:47	R2404656-011
1:16	R2404637-005	1:43	R2404655-005	2:16	R2404651-007	2:48	R2404656-012
1:17	R2404638-001	1:44	R2404655-006	2:17	R2404693-001	2:49	R2404656-013
1:18	R2404638-002	1:45	R2404655-007	2:18	R2404693-002	2:50	R2404656-014
1:19	R2404639-001	S1:6	Continuing Calibration Verification	2:19	R2404693-003	2:51	R2404656-015
1:20	R2404639-002	S1:7	Continuing Calibration Blank	2:20	R2404693-004	2:52	R2404658-001
S1:6	Continuing Calibration Verification	1:46	R2404655-008	S1:8	Continuing Calibration Verification1	S1:8	Continuing Calibration Verification1
S1:7	Continuing Calibration Blank	1:47	R2404655-009	S1:9	Continuing Calibration Blank1	S1:9	Continuing Calibration Blank1
1:21	R2404639-003	1:48	R2404655-010	2:21	R2404693-005	2:53	R2404658-002
1:22	R2404639-004	1:49	R2404655-011	2:22	R2404693-006	2:54	R2404658-003
1:23	R2404639-005	1:50	R2404655-012	2:23	R2404693-007	2:55	R2404658-004
1:24	R2404639-006	1:51	R2404655-013	2:24	R2404693-008	2:56	R2404693-011
1:25	R2404647-002	1:52	R2404655-014	2:25	R2404693-009	2:57	R2404693-011L 5X
1:26	R2404647-003	1:53	R2404655-015	2:26	R2404693-010	S1:8	Continuing Calibration Verification1
1:27	R2404647-004	1:54	R2404655-016	2:27	R2404643-001 20X	S1:9	Continuing Calibration Blank1
1:28	R2404647-005	1:55	R2404655-017	2:28	R2404643-002 20X	S1:3	Contract Required Detection Limit
1:29	R2404647-005L 5X	S1:6	Continuing Calibration Verification	2:29	R2404643-002S 20X	S1:4	Interference Check Solution A
1:30	R2404677-001 10X	S1:7	Continuing Calibration Blank	2:30	R2404643-002SD 20X	S1:5	Interference Check Solution AB
S1:6	Continuing Calibration Verification	1:56	R2404655-018	S1:8	Continuing Calibration Verification1	S1:8	Continuing Calibration Verification1
S1:7	Continuing Calibration Blank	1:57	R2404655-019	S1:9	Continuing Calibration Blank1	S1:9	Continuing Calibration Blank1
1:31	R2404647-002 20X	1:58	R2404655-020	2:31	R2404643-002A 20X		
1:32	R2404647-003 20X	1:59	R2404655-020L 5X	2:32	R2404643-002L 100X		
1:33	R2404647-004 20X	S1:6	Continuing Calibration Verification	S1:8	Continuing Calibration Verification1		
1:34	R2404647-005 20X	S1:7	Continuing Calibration Blank	S1:9	Continuing Calibration Blank1		
1:35	R2404677-001 100X	S1:3	Contract Required Detection Limit	S1:3	Contract Required Detection Limit		
		S1:4	Interference Check Solution A	S1:4	Interference Check Solution A		
		S1:5	Interference Check Solution AB	S1:4	Interference Check Solution AB		
		S1:8	Continuing Calibration Verification1	S1:8	Continuing Calibration Verification1		
		S1:9	Continuing Calibration Blank1	S1:9	Continuing Calibration Blank1		

NM 6/4/24

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Created Date/Time	6/4/2024 14:16:29	Software Version	7.6.1.12212
Instrument Name	MY2309CQ22	Firmware Version	5590
File Path	C:\Agilent\ICP Expert\My Results\2024\060424A-ICP7.esws		
Notes	NM 6/4/24		

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
6/4/2024 16:36:54	Blank	Ag (328.068 nm)	0.0000	N/A	-246.8401
	Blank	Al (237.312 nm)	0.0000	N/A	36.2234
	Blank	As (188.980 nm)	0.0000	N/A	-9.0483
	Blank	B (249.772 nm)	0.0000	N/A	45.4702
	Blank	Ba (230.424 nm)	0.0000	N/A	-27.0672
	Blank	Be (313.107 nm)	0.0000	N/A	153.9091
	Blank	Ca (317.933 nm)	0.0000	N/A	2783.5347
	Blank	Cd (214.439 nm)	0.0000	N/A	3.7956
	Blank	Co (230.786 nm)	0.0000	N/A	-38.9873
	Blank	Cr (267.716 nm)	0.0000	N/A	112.1520
	Blank	Cu (327.395 nm)	0.0000	N/A	37.3026
	Blank	Fe (234.350 nm)	0.0000	N/A	28.7937
	Blank	K (766.491 nm)	0.0000	N/A	-276.7985
	Blank	Mg (279.078 nm)	0.0000	N/A	-56.0592
	Blank	Mn (257.610 nm)	0.0000	N/A	22.0058
	Blank	Mo (202.032 nm)	0.0000	N/A	-21.2706
	Blank	Na (588.995 nm)	0.0000	N/A	-6764.0663
	Blank	Ni (230.299 nm)	0.0000	N/A	57.4139
	Blank	Pb (220.353 nm)	0.0000	N/A	4.4868
	Blank	Sb (217.582 nm)	0.0000	N/A	5.7380
	Blank	Se (196.026 nm)	0.0000	N/A	2.6858
	Blank	Si (252.851 nm)	0.0000	N/A	-7.3047
	Blank	Sn (189.925 nm)	0.0000	N/A	7.3711
	Blank	Sr (216.596 nm)	0.0000	N/A	-30.3806
	Blank	Ti (336.122 nm)	0.0000	N/A	87.0428
	Blank	Tl (190.794 nm)	0.0000	N/A	-2.2262
	Blank	V (292.401 nm)	0.0000	N/A	-24.9195
	Blank	Y (360.074 nm)	1.00	0.00	542513.57
	Blank	Y_R (360.074 nm)	1.00	0.00	541249.81
	Blank	Zn (213.857 nm)	0.0000	N/A	-24.8216
6/4/2024 16:40:10	Standard 1	Ag (328.068 nm)		N/A	-250.2685
	Standard 1	Al (237.312 nm)	0.1000	N/A	246.3566
	Standard 1	As (188.980 nm)	0.0100	N/A	3.5237
	Standard 1	B (249.772 nm)		N/A	47.8336
	Standard 1	Ba (230.424 nm)	0.0200	N/A	771.8653
	Standard 1	Be (313.107 nm)	0.0030	N/A	3015.1019
	Standard 1	Ca (317.933 nm)		N/A	2866.2545
	Standard 1	Cd (214.439 nm)	0.0050	N/A	279.1624
	Standard 1	Co (230.786 nm)		N/A	-39.7427
	Standard 1	Cr (267.716 nm)		N/A	201.7309
	Standard 1	Cu (327.395 nm)	0.0100	N/A	436.9318
	Standard 1	Fe (234.350 nm)		N/A	198.7831
	Standard 1	K (766.491 nm)		N/A	-276.8235
	Standard 1	Mg (279.078 nm)		N/A	-58.3446
	Standard 1	Mn (257.610 nm)	0.0100	N/A	3128.0481
	Standard 1	Mo (202.032 nm)	0.0250	N/A	100.2629
	Standard 1	Na (588.995 nm)		N/A	-6736.3153
	Standard 1	Ni (230.299 nm)		N/A	58.2563
	Standard 1	Pb (220.353 nm)	0.0050	N/A	33.5051
	Standard 1	Sb (217.582 nm)	0.0600	N/A	115.6595
	Standard 1	Se (196.026 nm)		N/A	2.6039
	Standard 1	Si (252.851 nm)		N/A	54.3399

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Standard 1	Sn (189.925 nm)		N/A	9.0242
	Standard 1	Sr (216.596 nm)		N/A	-34.8824
	Standard 1	Ti (336.122 nm)		N/A	21.1556
	Standard 1	Tl (190.794 nm)	0.0100	N/A	6.2859
	Standard 1	V (292.401 nm)		N/A	-33.3658
	Standard 1	Y (360.074 nm)	0.99	1.24	536822.31
	Standard 1	Y_R (360.074 nm)	0.99	1.24	535470.67
	Standard 1	Zn (213.857 nm)		N/A	-42.2544
6/4/2024 16:43:25	Standard 2	Ag (328.068 nm)	0.0100	N/A	261.6643
	Standard 2	Al (237.312 nm)	0.2000	N/A	463.0274
	Standard 2	As (188.980 nm)	0.0200	N/A	18.5361
	Standard 2	B (249.772 nm)	0.1000	N/A	2889.8155
	Standard 2	Ba (230.424 nm)	0.2000	N/A	8161.8170
	Standard 2	Be (313.107 nm)	0.0050	N/A	5232.4186
	Standard 2	Ca (317.933 nm)	0.5000	N/A	21046.0591
	Standard 2	Cd (214.439 nm)	0.0100	N/A	536.0912
	Standard 2	Co (230.786 nm)	0.0500	N/A	706.0083
	Standard 2	Cr (267.716 nm)	0.0100	N/A	533.5277
	Standard 2	Cu (327.395 nm)	0.0250	N/A	1017.2939
	Standard 2	Fe (234.350 nm)	0.1000	N/A	1859.4728
	Standard 2	K (766.491 nm)	0.5000	N/A	202.2630
	Standard 2	Mg (279.078 nm)	0.5000	N/A	1443.0558
	Standard 2	Mn (257.610 nm)	0.0150	N/A	4729.6304
	Standard 2	Mo (202.032 nm)	0.0500	N/A	220.9055
	Standard 2	Na (588.995 nm)	0.5000	N/A	-2430.2004
	Standard 2	Ni (230.299 nm)	0.0400	N/A	493.7530
	Standard 2	Pb (220.353 nm)	0.0100	N/A	57.8222
	Standard 2	Sb (217.582 nm)	0.1000	N/A	185.1134
	Standard 2	Se (196.026 nm)	0.0100	N/A	9.4468
	Standard 2	Si (252.851 nm)	0.5000	N/A	1583.3858
	Standard 2	Sn (189.925 nm)	0.1000	N/A	243.5161
	Standard 2	Sr (216.596 nm)	0.0500	N/A	814.6845
	Standard 2	Ti (336.122 nm)	0.0500	N/A	6553.6955
	Standard 2	Tl (190.794 nm)	0.0200	N/A	13.5272
	Standard 2	V (292.401 nm)	0.0500	N/A	1792.4926
	Standard 2	Y (360.074 nm)	1.00	0.21	540575.65
	Standard 2	Y_R (360.074 nm)	1.00	0.21	539210.59
	Standard 2	Zn (213.857 nm)	0.0200	N/A	1068.1255
6/4/2024 16:46:40	Standard 3	Ag (328.068 nm)	0.0200	N/A	796.8193
	Standard 3	Al (237.312 nm)	0.4000	N/A	895.7463
	Standard 3	As (188.980 nm)	0.0400	N/A	42.5845
	Standard 3	B (249.772 nm)	0.2000	N/A	5820.6653
	Standard 3	Ba (230.424 nm)	0.4000	N/A	16579.3496
	Standard 3	Be (313.107 nm)	0.0100	N/A	10494.6216
	Standard 3	Ca (317.933 nm)	1.0000	N/A	39089.3486
	Standard 3	Cd (214.439 nm)	0.0200	N/A	1064.8738
	Standard 3	Co (230.786 nm)	0.1000	N/A	1461.0999
	Standard 3	Cr (267.716 nm)	0.0200	N/A	952.0234
	Standard 3	Cu (327.395 nm)	0.0500	N/A	2000.3226
	Standard 3	Fe (234.350 nm)	0.2000	N/A	3714.8886
	Standard 3	K (766.491 nm)	1.0000	N/A	727.4531
	Standard 3	Mg (279.078 nm)	1.0000	N/A	2954.1545
	Standard 3	Mn (257.610 nm)	0.0300	N/A	9541.9085
	Standard 3	Mo (202.032 nm)	0.1000	N/A	472.1490
	Standard 3	Na (588.995 nm)	1.0000	N/A	1965.9120
	Standard 3	Ni (230.299 nm)	0.0800	N/A	949.8691
	Standard 3	Pb (220.353 nm)	0.0200	N/A	105.8962

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Standard 3	Sb (217.582 nm)	0.2000	N/A	367.7120
	Standard 3	Se (196.026 nm)	0.0200	N/A	13.2337
	Standard 3	Si (252.851 nm)	1.0000	N/A	3195.7720
	Standard 3	Sn (189.925 nm)	0.2000	N/A	488.8708
	Standard 3	Sr (216.596 nm)	0.1000	N/A	1674.9413
	Standard 3	Ti (336.122 nm)	0.1000	N/A	13225.4833
	Standard 3	Tl (190.794 nm)	0.0400	N/A	30.8613
	Standard 3	V (292.401 nm)	0.1000	N/A	3669.9131
	Standard 3	Y (360.074 nm)	1.00	0.32	540320.67
	Standard 3	Y_R (360.074 nm)	1.00	0.32	538952.65
	Standard 3	Zn (213.857 nm)	0.0400	N/A	2190.5136
6/4/2024 16:49:55	Standard 4	Ag (328.068 nm)	0.1000	N/A	4848.5649
	Standard 4	Al (237.312 nm)	2.0000	N/A	4222.7330
	Standard 4	As (188.980 nm)	0.2000	N/A	263.7208
	Standard 4	B (249.772 nm)	1.0000	N/A	28760.5419
	Standard 4	Ba (230.424 nm)	2.0000	N/A	80333.5831
	Standard 4	Be (313.107 nm)	0.0500	N/A	50824.3743
	Standard 4	Ca (317.933 nm)	5.0000	N/A	180865.3213
	Standard 4	Cd (214.439 nm)	0.1000	N/A	5110.5876
	Standard 4	Co (230.786 nm)	0.5000	N/A	7217.2220
	Standard 4	Cr (267.716 nm)	0.1000	N/A	4134.8522
	Standard 4	Cu (327.395 nm)	0.2500	N/A	9655.9209
	Standard 4	Fe (234.350 nm)	1.0000	N/A	18043.4152
	Standard 4	K (766.491 nm)	5.0000	N/A	4766.6335
	Standard 4	Mg (279.078 nm)	5.0000	N/A	14700.5104
	Standard 4	Mn (257.610 nm)	0.1500	N/A	46107.7252
	Standard 4	Mo (202.032 nm)	0.5000	N/A	2424.4638
	Standard 4	Na (588.995 nm)	5.0000	N/A	37075.2560
	Standard 4	Ni (230.299 nm)	0.4000	N/A	4384.7923
	Standard 4	Pb (220.353 nm)	0.1000	N/A	494.2636
	Standard 4	Sb (217.582 nm)	1.0000	N/A	1790.8790
	Standard 4	Se (196.026 nm)	0.1000	N/A	65.8690
	Standard 4	Si (252.851 nm)	5.0000	N/A	15819.5214
	Standard 4	Sn (189.925 nm)	1.0000	N/A	2365.3941
	Standard 4	Sr (216.596 nm)	0.5000	N/A	8270.3735
	Standard 4	Ti (336.122 nm)	0.5000	N/A	64638.4834
	Standard 4	Tl (190.794 nm)	0.2000	N/A	161.5519
	Standard 4	V (292.401 nm)	0.5000	N/A	18153.4522
	Standard 4	Y (360.074 nm)	0.99	0.48	537690.72
	Standard 4	Y_R (360.074 nm)	0.99	0.49	536358.58
	Standard 4	Zn (213.857 nm)	0.2000	N/A	10933.1344
6/4/2024 16:53:10	Standard 5	Ag (328.068 nm)	0.2000	N/A	10119.2794
	Standard 5	Al (237.312 nm)	4.0000	N/A	8538.8370
	Standard 5	As (188.980 nm)	0.4000	N/A	542.9843
	Standard 5	B (249.772 nm)	2.0000	N/A	58406.4074
	Standard 5	Ba (230.424 nm)	4.0000	N/A	163079.6419
	Standard 5	Be (313.107 nm)	0.1000	N/A	103348.9206
	Standard 5	Ca (317.933 nm)	10.0000	N/A	364013.8772
	Standard 5	Cd (214.439 nm)	0.2000	N/A	10345.5116
	Standard 5	Co (230.786 nm)	1.0000	N/A	14582.0445
	Standard 5	Cr (267.716 nm)	0.2000	N/A	8258.4515
	Standard 5	Cu (327.395 nm)	0.5000	N/A	19621.0200
	Standard 5	Fe (234.350 nm)	2.0000	N/A	36292.6275
	Standard 5	K (766.491 nm)	10.0000	N/A	10028.2967
	Standard 5	Mg (279.078 nm)	10.0000	N/A	29692.6918
	Standard 5	Mn (257.610 nm)	0.3000	N/A	92973.3614
	Standard 5	Mo (202.032 nm)	1.0000	N/A	4947.8687

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Standard 5	Na (588.995 nm)	10.0000	N/A	83467.3578
	Standard 5	Ni (230.299 nm)	0.8000	N/A	8773.6750
	Standard 5	Pb (220.353 nm)	0.2000	N/A	997.5207
	Standard 5	Sb (217.582 nm)	2.0000	N/A	3648.0794
	Standard 5	Se (196.026 nm)	0.2000	N/A	133.6507
	Standard 5	Si (252.851 nm)	10.0000	N/A	31959.0200
	Standard 5	Sn (189.925 nm)	2.0000	N/A	4745.8797
	Standard 5	Sr (216.596 nm)	1.0000	N/A	16743.6787
	Standard 5	Ti (336.122 nm)	1.0000	N/A	131717.3706
	Standard 5	Tl (190.794 nm)	0.4000	N/A	329.0102
	Standard 5	V (292.401 nm)	1.0000	N/A	36721.6996
	Standard 5	Y (360.074 nm)	0.99	0.39	534411.54
	Standard 5	Y_R (360.074 nm)	0.98	0.38	533036.90
	Standard 5	Zn (213.857 nm)	0.4000	N/A	22261.1372
6/4/2024 16:56:25	Standard 6	Ag (328.068 nm)	1.0000	N/A	50797.5734
	Standard 6	Al (237.312 nm)	20.0000	N/A	41929.0337
	Standard 6	As (188.980 nm)	2.0000	N/A	2732.4595
	Standard 6	B (249.772 nm)	10.0000	N/A	292129.5950
	Standard 6	Ba (230.424 nm)	20.0000	N/A	762830.6453
	Standard 6	Be (313.107 nm)	0.5000	N/A	504162.3341
	Standard 6	Ca (317.933 nm)	50.0000	N/A	1730091.5060
	Standard 6	Cd (214.439 nm)	1.0000	N/A	49586.4187
	Standard 6	Co (230.786 nm)	5.0000	N/A	69383.7827
	Standard 6	Cr (267.716 nm)	1.0000	N/A	39369.2674
	Standard 6	Cu (327.395 nm)	2.5000	N/A	96889.3519
	Standard 6	Fe (234.350 nm)	10.0000	N/A	173942.8480
	Standard 6	K (766.491 nm)	50.0000	N/A	52194.6260
	Standard 6	Mg (279.078 nm)	50.0000	N/A	145286.0144
	Standard 6	Mn (257.610 nm)	1.5000	N/A	445754.9882
	Standard 6	Mo (202.032 nm)	5.0000	N/A	24338.2332
	Standard 6	Na (588.995 nm)	50.0000	N/A	443045.7473
	Standard 6	Ni (230.299 nm)	4.0000	N/A	41644.4988
	Standard 6	Pb (220.353 nm)	1.0000	N/A	4751.9889
	Standard 6	Sb (217.582 nm)	10.0000	N/A	17931.2445
	Standard 6	Se (196.026 nm)	1.0000	N/A	648.7697
	Standard 6	Si (252.851 nm)	50.0000	N/A	158525.3953
	Standard 6	Sn (189.925 nm)	10.0000	N/A	22656.9748
	Standard 6	Sr (216.596 nm)	5.0000	N/A	80318.3171
	Standard 6	Ti (336.122 nm)	5.0000	N/A	641510.9408
	Standard 6	Tl (190.794 nm)	2.0000	N/A	1562.0415
	Standard 6	V (292.401 nm)	5.0000	N/A	179996.5535
	Standard 6	Y (360.074 nm)	0.95	0.41	514848.99
	Standard 6	Y_R (360.074 nm)	0.95	0.41	513609.52
	Standard 6	Zn (213.857 nm)	2.0000	N/A	109464.1433
6/4/2024 17:00:09	Initial Calibration Verification	Ag (328.068 nm)	0.5016	0.11	25687.9977
	Initial Calibration Verification	Al (237.312 nm)	9.8890	0.13	20949.4599
	Initial Calibration Verification	As (188.980 nm)	0.9854	0.36	1344.1771
	Initial Calibration Verification	B (249.772 nm)	2.5156	0.12	73139.8305
	Initial Calibration Verification	Ba (230.424 nm)	10.0826	0.22	395098.5032
	Initial Calibration Verification	Be (313.107 nm)	0.2407	0.12	245665.2504
	Initial Calibration Verification	Ca (317.933 nm)	25.8459	0.12	899060.8409
	Initial Calibration Verification	Cd (214.439 nm)	0.4897	0.04	25106.1611
	Initial Calibration Verification	Co (230.786 nm)	2.4845	0.35	35561.0778
	Initial Calibration Verification	Cr (267.716 nm)	0.4982	0.07	20396.5757
	Initial Calibration Verification	Cu (327.395 nm)	1.2287	0.29	47896.4701
	Initial Calibration Verification	Fe (234.350 nm)	4.9733	0.09	88138.8777
	Initial Calibration Verification	K (766.491 nm)	24.4408	0.38	25126.0599

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Initial Calibration Verification	Mg (279.078 nm)	25.2755	0.09	74200.2674
	Initial Calibration Verification	Mn (257.610 nm)	0.7345	0.11	222199.5316
	Initial Calibration Verification	Mo (202.032 nm)	2.5950	0.29	12665.5569
	Initial Calibration Verification	Na (588.995 nm)	25.4424	0.38	219892.1156
	Initial Calibration Verification	Ni (230.299 nm)	2.0390	0.11	21824.7921
	Initial Calibration Verification	Pb (220.353 nm)	0.5094	0.14	2437.2074
	Initial Calibration Verification	Sb (217.582 nm)	4.9801	0.21	8971.0486
	Initial Calibration Verification	Se (196.026 nm)	0.4877	1.65	316.6858
	Initial Calibration Verification	Si (252.851 nm)	10.1298	0.21	32336.3169
	Initial Calibration Verification	Sn (189.925 nm)	4.9356	0.15	11657.8190
	Initial Calibration Verification	Sr (216.596 nm)	2.4626	0.39	40567.7650
	Initial Calibration Verification	Ti (336.122 nm)	2.5427	0.09	329802.2564
	Initial Calibration Verification	Tl (190.794 nm)	0.9898	0.44	796.0735
	Initial Calibration Verification	V (292.401 nm)	2.5202	0.13	91149.9424
	Initial Calibration Verification	Y (360.074 nm)	0.97	0.58	526889.12
	Initial Calibration Verification	Y_R (360.074 nm)	0.97	0.58	525659.68
	Initial Calibration Verification	Zn (213.857 nm)	0.9786	0.28	54300.2384
6/4/2024 17:03:23	Initial Calibration Blank	Ag (328.068 nm)	-0.0001 u	> 100.00	-253.7981
	Initial Calibration Blank	Al (237.312 nm)	0.0024	37.59	41.3328
	Initial Calibration Blank	As (188.980 nm)	-0.0012 u	20.60	-10.6893
	Initial Calibration Blank	B (249.772 nm)	0.0025	8.24	117.8350
	Initial Calibration Blank	Ba (230.424 nm)	0.0004	22.78	-9.6313
	Initial Calibration Blank	Be (313.107 nm)	0.0000	28.87	174.7148
	Initial Calibration Blank	Ca (317.933 nm)	0.0009	3.47	2813.2516
	Initial Calibration Blank	Cd (214.439 nm)	0.0001	69.68	7.3478
	Initial Calibration Blank	Co (230.786 nm)	0.0003	92.99	-34.2694
	Initial Calibration Blank	Cr (267.716 nm)	0.0003	29.25	124.5173
	Initial Calibration Blank	Cu (327.395 nm)	0.0003	56.02	50.7397
	Initial Calibration Blank	Fe (234.350 nm)	0.0014	48.26	53.0809
	Initial Calibration Blank	K (766.491 nm)	0.1094	9.00	-163.0920
	Initial Calibration Blank	Mg (279.078 nm)	-0.0003 u	> 100.00	-57.0312
	Initial Calibration Blank	Mn (257.610 nm)	0.0000	76.80	31.7343
	Initial Calibration Blank	Mo (202.032 nm)	0.0057	19.62	6.3893
	Initial Calibration Blank	Na (588.995 nm)	0.0039 u	> 100.00	-6729.3386
	Initial Calibration Blank	Ni (230.299 nm)	0.0006	28.64	63.9027
	Initial Calibration Blank	Pb (220.353 nm)	0.0004 u	> 100.00	6.5260
	Initial Calibration Blank	Sb (217.582 nm)	0.0045	25.79	13.7634
	Initial Calibration Blank	Se (196.026 nm)	0.0015 u	> 100.00	3.6742
	Initial Calibration Blank	Si (252.851 nm)	0.0035	32.45	3.9025
	Initial Calibration Blank	Sn (189.925 nm)	0.0011	31.46	10.0300
	Initial Calibration Blank	Sr (216.596 nm)	0.0000 u	> 100.00	-29.5725
	Initial Calibration Blank	Ti (336.122 nm)	0.0027	48.89	434.4374
	Initial Calibration Blank	Tl (190.794 nm)	0.0005 u	> 100.00	-1.8525
	Initial Calibration Blank	V (292.401 nm)	0.0001	81.12	-20.4101
	Initial Calibration Blank	Y (360.074 nm)	1.00	0.36	540023.02
	Initial Calibration Blank	Y_R (360.074 nm)	1.00	0.36	538640.77
	Initial Calibration Blank	Zn (213.857 nm)	0.0001	65.98	-20.1865
6/4/2024 17:06:36	Contract Required Detection Limit	Ag (328.068 nm)	0.0090	4.93	218.7737
	Contract Required Detection Limit	Al (237.312 nm)	0.2082	7.44	476.4585
	Contract Required Detection Limit	As (188.980 nm)	0.0197	11.91	18.0402
	Contract Required Detection Limit	B (249.772 nm)	0.2069	6.31	6057.3105
	Contract Required Detection Limit	Ba (230.424 nm)	0.2124	6.09	8298.0102
	Contract Required Detection Limit	Be (313.107 nm)	0.0051	6.34	5384.1846
	Contract Required Detection Limit	Ca (317.933 nm)	1.1064	6.49	41152.5316
	Contract Required Detection Limit	Cd (214.439 nm)	0.0108	5.69	559.0654
	Contract Required Detection Limit	Co (230.786 nm)	0.0528	6.09	717.7143
	Contract Required Detection Limit	Cr (267.716 nm)	0.0099	6.45	513.9188

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Contract Required Detection Limit	Cu (327.395 nm)	0.0263	6.07	1063.2380
	Contract Required Detection Limit	Fe (234.350 nm)	0.1101	6.22	1979.8096
	Contract Required Detection Limit	K (766.491 nm)	1.0233	5.83	786.8083
	Contract Required Detection Limit	Mg (279.078 nm)	1.0536	6.01	3039.2918
	Contract Required Detection Limit	Mn (257.610 nm)	0.0145	5.83	4413.0847
	Contract Required Detection Limit	Mo (202.032 nm)	0.0268	7.28	109.5851
	Contract Required Detection Limit	Na (588.995 nm)	0.9980	2.00	2127.0122
	Contract Required Detection Limit	Ni (230.299 nm)	0.0388	6.00	471.5019
	Contract Required Detection Limit	Pb (220.353 nm)	0.0108	7.97	56.2400
	Contract Required Detection Limit	Sb (217.582 nm)	0.0647	7.55	122.2546
	Contract Required Detection Limit	Se (196.026 nm)	0.0088	55.59	8.3356
	Contract Required Detection Limit	Si (252.851 nm)	0.0581	3.04	178.1541
	Contract Required Detection Limit	Sn (189.925 nm)	0.5190	6.01	1232.5123
	Contract Required Detection Limit	Sr (216.596 nm)	0.1030	5.75	1668.2353
	Contract Required Detection Limit	Ti (336.122 nm)	0.0522	5.23	6858.3897
	Contract Required Detection Limit	Tl (190.794 nm)	0.0227	15.89	16.0537
	Contract Required Detection Limit	V (292.401 nm)	0.0522	5.97	1863.5977
	Contract Required Detection Limit	Y (360.074 nm)	0.96	6.13	519996.38
	Contract Required Detection Limit	Y_R (360.074 nm)	0.96	6.13	518660.16
	Contract Required Detection Limit	Zn (213.857 nm)	0.0184	6.45	997.6048
6/4/2024 17:09:50	Interference Check Solution A	Ag (328.068 nm)	-0.0005 u	28.16	-271.0955
	Interference Check Solution A	Al (237.312 nm)	253.5390 o	0.04	536218.1409
	Interference Check Solution A	As (188.980 nm)	-0.0021 u	> 100.00	-11.9546
	Interference Check Solution A	B (249.772 nm)	0.1084	0.22	3194.1918
	Interference Check Solution A	Ba (230.424 nm)	0.0001	9.47	-22.7437
	Interference Check Solution A	Be (313.107 nm)	0.0002	3.29	354.3153
	Interference Check Solution A	Ca (317.933 nm)	239.4803 o	0.26	8307428.8891
	Interference Check Solution A	Cd (214.439 nm)	-0.0006 u	5.46	-25.5640
	Interference Check Solution A	Co (230.786 nm)	-0.0003 u	33.68	-43.6619
	Interference Check Solution A	Cr (267.716 nm)	0.0042	4.02	283.5444
	Interference Check Solution A	Cu (327.395 nm)	0.0090	2.84	386.9652
	Interference Check Solution A	Fe (234.350 nm)	93.1675 o	0.17	1650634.8579
	Interference Check Solution A	K (766.491 nm)	0.0101 u	> 100.00	-266.3013
	Interference Check Solution A	Mg (279.078 nm)	262.1256 o	0.10	770035.5433
	Interference Check Solution A	Mn (257.610 nm)	0.0011	1.84	347.6529
	Interference Check Solution A	Mo (202.032 nm)	-0.0049 u	7.31	-45.3320
	Interference Check Solution A	Na (588.995 nm)	-0.0314 u	8.85	-7043.4992
	Interference Check Solution A	Ni (230.299 nm)	0.0045	3.57	105.5335
	Interference Check Solution A	Pb (220.353 nm)	0.0017	96.95	12.6192
	Interference Check Solution A	Sb (217.582 nm)	-0.0076 u	51.76	-7.9495
	Interference Check Solution A	Se (196.026 nm)	-0.0072 u	> 100.00	-1.9817
	Interference Check Solution A	Si (252.851 nm)	0.0470	4.83	142.7951
	Interference Check Solution A	Sn (189.925 nm)	0.0025	38.55	13.2012
	Interference Check Solution A	Sr (216.596 nm)	0.0099	0.67	133.2391
	Interference Check Solution A	Ti (336.122 nm)	0.0021	19.21	358.5937
	Interference Check Solution A	Tl (190.794 nm)	0.0028 u	> 100.00	0.0396
	Interference Check Solution A	V (292.401 nm)	0.0022	7.12	53.2859
	Interference Check Solution A	Y (360.074 nm)	0.89	0.40	482901.55
	Interference Check Solution A	Y_R (360.074 nm)	0.89	0.40	481851.14
	Interference Check Solution A	Zn (213.857 nm)	0.0122 K	0.55	652.2886 K
6/4/2024 17:13:04	Interference Check Solution AB	Ag (328.068 nm)	0.1990	0.07	10040.4016
	Interference Check Solution AB	Al (237.312 nm)	254.7603 o	0.11	538800.9605
	Interference Check Solution AB	As (188.980 nm)	0.0970	0.90	124.1103
	Interference Check Solution AB	B (249.772 nm)	0.1060	0.23	3125.3352
	Interference Check Solution AB	Ba (230.424 nm)	0.5209	0.26	20384.8534
	Interference Check Solution AB	Be (313.107 nm)	0.5012	0.19	511376.5436
	Interference Check Solution AB	Ca (317.933 nm)	240.5332 o	0.23	8343940.7167

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Interference Check Solution AB	Cd (214.439 nm)	0.9599	0.22	49211.8061
	Interference Check Solution AB	Co (230.786 nm)	0.4865	0.22	6931.4422
	Interference Check Solution AB	Cr (267.716 nm)	0.5056	0.18	20698.9685
	Interference Check Solution AB	Cu (327.395 nm)	0.5463	0.13	21317.1153
	Interference Check Solution AB	Fe (234.350 nm)	93.6798 o	0.18	1659710.7179
	Interference Check Solution AB	K (766.491 nm)	-0.0426 u	91.55	-321.0656
	Interference Check Solution AB	Mg (279.078 nm)	263.3901 o	0.18	773750.6225
	Interference Check Solution AB	Mn (257.610 nm)	0.4941	0.14	149481.3034
	Interference Check Solution AB	Mo (202.032 nm)	-0.0054 u	6.48	-47.7546
	Interference Check Solution AB	Na (588.995 nm)	-0.0460 u	10.73	-7173.9899
	Interference Check Solution AB	Ni (230.299 nm)	0.9902	0.11	10628.3823
	Interference Check Solution AB	Pb (220.353 nm)	0.0489	0.83	238.1520
	Interference Check Solution AB	Sb (217.582 nm)	0.6344	0.59	1147.7749
	Interference Check Solution AB	Se (196.026 nm)	0.0448	10.44	31.4980
	Interference Check Solution AB	Si (252.851 nm)	0.0761	1.79	235.7637
	Interference Check Solution AB	Sn (189.925 nm)	0.0056	14.16	20.5918
	Interference Check Solution AB	Sr (216.596 nm)	0.0097	1.14	128.9534
	Interference Check Solution AB	Ti (336.122 nm)	0.0018	18.13	319.8539
	Interference Check Solution AB	Tl (190.794 nm)	0.1018	3.50	79.9133
	Interference Check Solution AB	V (292.401 nm)	0.5237	0.18	18919.7905
	Interference Check Solution AB	Y (360.074 nm)	0.89	0.36	483173.01
	Interference Check Solution AB	Y_R (360.074 nm)	0.89	0.36	482109.82
	Interference Check Solution AB	Zn (213.857 nm)	1.0237	0.07	56805.4935
6/4/2024 17:16:18	Continuing Calibration Verification	Ag (328.068 nm)	0.5049	0.08	25859.7230
	Continuing Calibration Verification	Al (237.312 nm)	9.9667	0.23	21113.6099
	Continuing Calibration Verification	As (188.980 nm)	0.9935	0.67	1355.3238
	Continuing Calibration Verification	B (249.772 nm)	2.5286	0.12	73517.3364
	Continuing Calibration Verification	Ba (230.424 nm)	10.1323	0.10	397046.8753
	Continuing Calibration Verification	Be (313.107 nm)	0.2425	0.03	247493.7437
	Continuing Calibration Verification	Ca (317.933 nm)	26.0804	0.03	907192.6436
	Continuing Calibration Verification	Cd (214.439 nm)	0.4942	0.13	25338.1935
	Continuing Calibration Verification	Co (230.786 nm)	2.4952	0.20	35714.8317
	Continuing Calibration Verification	Cr (267.716 nm)	0.5012	0.03	20517.2715
	Continuing Calibration Verification	Cu (327.395 nm)	1.2371	0.70	48226.8347
	Continuing Calibration Verification	Fe (234.350 nm)	5.0315	0.06	89169.6815
	Continuing Calibration Verification	K (766.491 nm)	24.5339	0.15	25222.8335
	Continuing Calibration Verification	Mg (279.078 nm)	25.5073	0.13	74881.2454
	Continuing Calibration Verification	Mn (257.610 nm)	0.7389	0.03	223545.1761
	Continuing Calibration Verification	Mo (202.032 nm)	2.6053	0.13	12716.1493
	Continuing Calibration Verification	Na (588.995 nm)	25.5871	0.54	221181.2473
	Continuing Calibration Verification	Ni (230.299 nm)	2.0536	0.12	21980.9713
	Continuing Calibration Verification	Pb (220.353 nm)	0.5127	0.36	2453.3116
	Continuing Calibration Verification	Sb (217.582 nm)	5.0130	0.07	9030.2115
	Continuing Calibration Verification	Se (196.026 nm)	0.4934	0.78	320.3479
	Continuing Calibration Verification	Si (252.851 nm)	10.0800	0.40	32177.3473
	Continuing Calibration Verification	Sn (189.925 nm)	4.9785	0.09	11759.0938
	Continuing Calibration Verification	Sr (216.596 nm)	2.4782	0.12	40825.9572
	Continuing Calibration Verification	Ti (336.122 nm)	2.5520	0.13	331003.9436
	Continuing Calibration Verification	Tl (190.794 nm)	0.9948	0.16	800.0527
	Continuing Calibration Verification	V (292.401 nm)	2.5357	0.05	91711.2542
	Continuing Calibration Verification	Y (360.074 nm)	0.97	0.46	524672.76
	Continuing Calibration Verification	Y_R (360.074 nm)	0.97	0.45	523361.35
	Continuing Calibration Verification	Zn (213.857 nm)	0.9814	0.29	54455.5020
6/4/2024 17:19:32	Continuing Calibration Blank	Ag (328.068 nm)	0.0000 u	> 100.00	-244.7959
	Continuing Calibration Blank	Al (237.312 nm)	0.0013 u	> 100.00	39.0016
	Continuing Calibration Blank	As (188.980 nm)	0.0008 u	> 100.00	-7.9074
	Continuing Calibration Blank	B (249.772 nm)	0.0010	24.53	73.3418

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Blank	Ba (230.424 nm)	0.0001	77.23	-21.6686
	Continuing Calibration Blank	Be (313.107 nm)	0.0000 u	> 100.00	154.9756
	Continuing Calibration Blank	Ca (317.933 nm)	-0.0006 u	8.24	2761.7206
	Continuing Calibration Blank	Cd (214.439 nm)	0.0001 u	> 100.00	6.7069
	Continuing Calibration Blank	Co (230.786 nm)	0.0000 u	> 100.00	-38.3873
	Continuing Calibration Blank	Cr (267.716 nm)	0.0002	60.81	120.5273
	Continuing Calibration Blank	Cu (327.395 nm)	0.0001 u	> 100.00	42.6789
	Continuing Calibration Blank	Fe (234.350 nm)	0.0016	73.77	56.4232
	Continuing Calibration Blank	K (766.491 nm)	0.0094 u	96.12	-267.0311
	Continuing Calibration Blank	Mg (279.078 nm)	-0.0004 u	> 100.00	-57.1981
	Continuing Calibration Blank	Mn (257.610 nm)	0.0000 u	92.69	25.9667
	Continuing Calibration Blank	Mo (202.032 nm)	0.0045	21.73	0.7410
	Continuing Calibration Blank	Na (588.995 nm)	-0.0016 u	> 100.00	-6778.2477
	Continuing Calibration Blank	Ni (230.299 nm)	0.0003 u	> 100.00	60.5987
	Continuing Calibration Blank	Pb (220.353 nm)	0.0007	45.19	7.6895
	Continuing Calibration Blank	Sb (217.582 nm)	0.0054	42.00	15.3934
	Continuing Calibration Blank	Se (196.026 nm)	-0.0004 u	> 100.00	2.4041
	Continuing Calibration Blank	Si (252.851 nm)	0.0016 u	> 100.00	-2.0979
	Continuing Calibration Blank	Sn (189.925 nm)	0.0011	27.63	9.9554
	Continuing Calibration Blank	Sr (216.596 nm)	-0.0003 u	79.86	-35.9645
	Continuing Calibration Blank	Ti (336.122 nm)	0.0019	58.86	332.5785
	Continuing Calibration Blank	Tl (190.794 nm)	-0.0010 u	11.36	-3.0555
	Continuing Calibration Blank	V (292.401 nm)	0.0000 u	> 100.00	-25.4553
	Continuing Calibration Blank	Y (360.074 nm)	0.99	0.41	539174.84
	Continuing Calibration Blank	Y_R (360.074 nm)	0.99	0.41	537741.69
	Continuing Calibration Blank	Zn (213.857 nm)	-0.0001 u	> 100.00	-29.8801
6/4/2024 17:22:46	PBW-439313	Ag (328.068 nm)	0.0001	> 100.00	-242.6310
	PBW-439313	Al (237.312 nm)	0.0182	1.31	74.7078
	PBW-439313	As (188.980 nm)	-0.0004 u	> 100.00	-9.5589
	PBW-439313	B (249.772 nm)	0.0001	> 100.00	48.3151
	PBW-439313	Ba (230.424 nm)	0.0015	14.71	30.5492
	PBW-439313	Be (313.107 nm)	0.0000	34.01	200.5112
	PBW-439313	Ca (317.933 nm)	0.0183	9.24	3416.5647
	PBW-439313	Cd (214.439 nm)	0.0001	36.11	11.4782
	PBW-439313	Co (230.786 nm)	0.0007	74.04	-29.2753
	PBW-439313	Cr (267.716 nm)	0.0001	> 100.00	116.5738
	PBW-439313	Cu (327.395 nm)	0.0003	86.89	49.2131
	PBW-439313	Fe (234.350 nm)	0.0049	5.38	116.3676
	PBW-439313	K (766.491 nm)	0.0027 u	> 100.00	-273.9443
	PBW-439313	Mg (279.078 nm)	0.0206	11.04	4.5897
	PBW-439313	Mn (257.610 nm)	0.0001	33.80	54.1487
	PBW-439313	Mo (202.032 nm)	0.0012	24.59	-15.3749
	PBW-439313	Na (588.995 nm)	-0.0214 u	1.42	-6954.8203
	PBW-439313	Ni (230.299 nm)	0.0007	84.07	64.4129
	PBW-439313	Pb (220.353 nm)	0.0004 u	> 100.00	6.5398
	PBW-439313	Sb (217.582 nm)	0.0038	18.83	12.6093
	PBW-439313	Se (196.026 nm)	0.0007 u	> 100.00	3.1553
	PBW-439313	Si (252.851 nm)	0.0228	5.98	65.3499
	PBW-439313	Sn (189.925 nm)	0.0012	50.15	10.1188
	PBW-439313	Sr (216.596 nm)	0.0004	37.80	-23.2960
	PBW-439313	Ti (336.122 nm)	0.0005	65.38	149.4920
	PBW-439313	Tl (190.794 nm)	0.0006 u	> 100.00	-1.7777
	PBW-439313	V (292.401 nm)	0.0004	75.16	-11.7698
	PBW-439313	Y (360.074 nm)	1.01	0.46	548678.32
	PBW-439313	Y_R (360.074 nm)	1.01	0.46	547168.77
	PBW-439313	Zn (213.857 nm)	0.0004	34.62	-3.8666
6/4/2024 17:26:00	LCSW-439313	Ag (328.068 nm)	0.0526	3.56	2474.9633

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	LCSW-439313	Al (237.312 nm)	2.1064	3.21	4490.8664
	LCSW-439313	As (188.980 nm)	0.0406	5.69	46.7129
	LCSW-439313	B (249.772 nm)	1.0769	3.11	31338.0774
	LCSW-439313	Ba (230.424 nm)	2.0876	3.15	81785.0726
	LCSW-439313	Be (313.107 nm)	0.0506	3.14	51752.5700
	LCSW-439313	Ca (317.933 nm)	2.1371	3.03	76892.5761
	LCSW-439313	Cd (214.439 nm)	0.0529	3.16	2714.7678
	LCSW-439313	Co (230.786 nm)	0.5196	3.12	7406.0290
	LCSW-439313	Cr (267.716 nm)	0.2036	3.26	8401.1723
	LCSW-439313	Cu (327.395 nm)	0.2596	3.36	10149.3656
	LCSW-439313	Fe (234.350 nm)	1.0437	3.37	18520.4116
	LCSW-439313	K (766.491 nm)	20.0930	3.04	20607.1368
	LCSW-439313	Mg (279.078 nm)	2.0746	2.98	6038.8920
	LCSW-439313	Mn (257.610 nm)	0.5043	3.10	152562.6498
	LCSW-439313	Mo (202.032 nm)	0.5085	2.17	2464.7040
	LCSW-439313	Na (588.995 nm)	20.7542	3.12	178127.1337
	LCSW-439313	Ni (230.299 nm)	0.5371	3.17	5791.5572
	LCSW-439313	Pb (220.353 nm)	0.5481	3.29	2622.2566
	LCSW-439313	Sb (217.582 nm)	0.5303	4.10	960.3235
	LCSW-439313	Se (196.026 nm)	1.1433 o	3.46	738.8001
	LCSW-439313	Si (252.851 nm)	-0.0193 u	5.56	-68.9642
	LCSW-439313	Sn (189.925 nm)	4.9821	3.51	11767.6077
	LCSW-439313	Sr (216.596 nm)	2.0463	3.00	33705.4233
	LCSW-439313	Ti (336.122 nm)	0.5092	3.22	66114.5878
	LCSW-439313	Tl (190.794 nm)	2.0687	2.88	1666.2157
	LCSW-439313	V (292.401 nm)	0.5104	3.18	18442.1278
	LCSW-439313	Y (360.074 nm)	1.00	2.59	544864.01
	LCSW-439313	Y_R (360.074 nm)	1.00	2.59	543509.61
	LCSW-439313	Zn (213.857 nm)	0.5417	3.20	30047.1755
6/4/2024 17:29:14	R2404634-002 10X	Ag (328.068 nm)	-0.0001 u	> 100.00	-249.8423
	R2404634-002 10X	Al (237.312 nm)	0.0082	23.62	53.5750
	R2404634-002 10X	As (188.980 nm)	-0.0016 u	> 100.00	-11.2583
	R2404634-002 10X	B (249.772 nm)	0.0058	1.62	214.2238
	R2404634-002 10X	Ba (230.424 nm)	0.0275	0.27	1050.1693
	R2404634-002 10X	Be (313.107 nm)	0.0000 u	> 100.00	154.5680
	R2404634-002 10X	Ca (317.933 nm)	10.8321	0.18	378415.4154
	R2404634-002 10X	Cd (214.439 nm)	0.0001	11.56	11.2258
	R2404634-002 10X	Co (230.786 nm)	-0.0001 u	> 100.00	-39.9045
	R2404634-002 10X	Cr (267.716 nm)	0.0004	71.13	129.5369
	R2404634-002 10X	Cu (327.395 nm)	0.0024	9.14	131.5063
	R2404634-002 10X	Fe (234.350 nm)	0.0027	22.59	76.5951
	R2404634-002 10X	K (766.491 nm)	0.2287	15.11	-39.0494
	R2404634-002 10X	Mg (279.078 nm)	3.8604	0.28	11285.3133
	R2404634-002 10X	Mn (257.610 nm)	0.0000	73.93	32.2857
	R2404634-002 10X	Mo (202.032 nm)	0.0043	29.59	-0.3073
	R2404634-002 10X	Na (588.995 nm)	31.7778	0.41	276331.9971
	R2404634-002 10X	Ni (230.299 nm)	0.0009	23.19	67.5182
	R2404634-002 10X	Pb (220.353 nm)	0.0007 u	> 100.00	7.6241
	R2404634-002 10X	Sb (217.582 nm)	0.0040	62.13	13.0243
	R2404634-002 10X	Se (196.026 nm)	0.0065	73.63	6.8838
	R2404634-002 10X	Si (252.851 nm)	0.5390	0.36	1713.5304
	R2404634-002 10X	Sn (189.925 nm)	0.0276	42.76	72.4365
	R2404634-002 10X	Sr (216.596 nm)	0.0251	0.64	383.9979
	R2404634-002 10X	Ti (336.122 nm)	0.0011	53.11	229.7372
	R2404634-002 10X	Tl (190.794 nm)	0.0025	92.60	-0.2203
	R2404634-002 10X	V (292.401 nm)	0.0001	79.93	-20.8738
	R2404634-002 10X	Y (360.074 nm)	0.98	0.47	531305.60

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404634-002 10X	Y_R (360.074 nm)	0.98	0.47	530000.90
	R2404634-002 10X	Zn (213.857 nm)	0.0045	1.60	226.1537
6/4/2024 17:32:28	R2404634-006 10X	Ag (328.068 nm)	0.0001	> 100.00	-243.3909
	R2404634-006 10X	Al (237.312 nm)	0.0044	38.86	45.5476
	R2404634-006 10X	As (188.980 nm)	0.0042	58.08	-3.2427
	R2404634-006 10X	B (249.772 nm)	0.0258	1.37	795.1720
	R2404634-006 10X	Ba (230.424 nm)	0.2489	0.24	9726.5935
	R2404634-006 10X	Be (313.107 nm)	0.0000 u	> 100.00	150.3984
	R2404634-006 10X	Ca (317.933 nm)	14.5617	0.24	507752.3322
	R2404634-006 10X	Cd (214.439 nm)	0.0001	90.13	8.5562
	R2404634-006 10X	Co (230.786 nm)	-0.0004 u	62.78	-44.2505
	R2404634-006 10X	Cr (267.716 nm)	0.0004	60.12	126.5333
	R2404634-006 10X	Cu (327.395 nm)	0.0218	0.99	886.9074
	R2404634-006 10X	Fe (234.350 nm)	0.1163	0.21	2090.1065
	R2404634-006 10X	K (766.491 nm)	1.3102	2.57	1084.9378
	R2404634-006 10X	Mg (279.078 nm)	4.0900	0.27	11959.9097
	R2404634-006 10X	Mn (257.610 nm)	0.0097	0.36	2963.7750
	R2404634-006 10X	Mo (202.032 nm)	0.0008	51.45	-17.5926
	R2404634-006 10X	Na (588.995 nm)	37.4736	1.06	327074.1684
	R2404634-006 10X	Ni (230.299 nm)	-0.0001 u	> 100.00	56.8259
	R2404634-006 10X	Pb (220.353 nm)	-0.0002 u	> 100.00	3.3865
	R2404634-006 10X	Sb (217.582 nm)	0.0032	71.86	11.5617
	R2404634-006 10X	Se (196.026 nm)	0.0015 u	> 100.00	3.6699
	R2404634-006 10X	Si (252.851 nm)	0.5701	0.34	1812.9627
	R2404634-006 10X	Sn (189.925 nm)	0.0081	43.63	26.3925
	R2404634-006 10X	Sr (216.596 nm)	1.5124	0.40	24902.3570
	R2404634-006 10X	Ti (336.122 nm)	0.0003 u	> 100.00	122.0929
	R2404634-006 10X	Tl (190.794 nm)	-0.0004 u	> 100.00	-2.5276
	R2404634-006 10X	V (292.401 nm)	-0.0001 u	> 100.00	-28.1278
	R2404634-006 10X	Y (360.074 nm)	0.98	0.39	530841.39
	R2404634-006 10X	Y_R (360.074 nm)	0.98	0.39	529434.95
	R2404634-006 10X	Zn (213.857 nm)	0.0013	5.87	45.6546
6/4/2024 17:35:42	R2404634-006S 10X	Ag (328.068 nm)	0.0051	1.17	16.1251
	R2404634-006S 10X	Al (237.312 nm)	0.2072	1.50	474.4420
	R2404634-006S 10X	As (188.980 nm)	0.0084	22.90	2.5336
	R2404634-006S 10X	B (249.772 nm)	0.1291	0.48	3796.5624
	R2404634-006S 10X	Ba (230.424 nm)	0.4424	0.33	17311.9313
	R2404634-006S 10X	Be (313.107 nm)	0.0050	0.32	5286.3511
	R2404634-006S 10X	Ca (317.933 nm)	14.2545	0.16	497097.1635
	R2404634-006S 10X	Cd (214.439 nm)	0.0052	0.74	269.8724
	R2404634-006S 10X	Co (230.786 nm)	0.0504	0.68	683.6945
	R2404634-006S 10X	Cr (267.716 nm)	0.0202	0.58	934.8354
	R2404634-006S 10X	Cu (327.395 nm)	0.0445	0.69	1771.3700
	R2404634-006S 10X	Fe (234.350 nm)	0.2129	0.36	3800.2902
	R2404634-006S 10X	K (766.491 nm)	3.2636	2.31	3115.2383
	R2404634-006S 10X	Mg (279.078 nm)	4.1534	0.17	12146.1605
	R2404634-006S 10X	Mn (257.610 nm)	0.0588	0.21	17802.9521
	R2404634-006S 10X	Mo (202.032 nm)	0.0497	1.16	221.5546
	R2404634-006S 10X	Na (588.995 nm)	37.9011	0.47	330882.6287
	R2404634-006S 10X	Ni (230.299 nm)	0.0522	0.37	614.2862
	R2404634-006S 10X	Pb (220.353 nm)	0.0523	0.49	254.4881
	R2404634-006S 10X	Sb (217.582 nm)	0.0527	4.52	100.6803
	R2404634-006S 10X	Se (196.026 nm)	0.1074	2.03	71.8359
	R2404634-006S 10X	Si (252.851 nm)	0.5574	0.43	1772.3557
	R2404634-006S 10X	Sn (189.925 nm)	0.5082	0.36	1206.9655
	R2404634-006S 10X	Sr (216.596 nm)	1.6569	0.22	27285.0702
	R2404634-006S 10X	Ti (336.122 nm)	0.0498	0.35	6545.9022

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404634-006S 10X	Tl (190.794 nm)	0.2005	0.81	159.4487
	R2404634-006S 10X	V (292.401 nm)	0.0496	0.71	1769.3946
	R2404634-006S 10X	Y (360.074 nm)	0.98	0.49	531710.73
	R2404634-006S 10X	Y_R (360.074 nm)	0.98	0.49	530411.79
	R2404634-006S 10X	Zn (213.857 nm)	0.0537	0.21	2954.7842
6/4/2024 17:38:56	R2404634-006SD 10X	Ag (328.068 nm)	0.0051	1.56	14.8042
	R2404634-006SD 10X	Al (237.312 nm)	0.2058	1.29	471.4415
	R2404634-006SD 10X	As (188.980 nm)	0.0063	51.56	-0.4115
	R2404634-006SD 10X	B (249.772 nm)	0.1264	0.36	3717.2513
	R2404634-006SD 10X	Ba (230.424 nm)	0.4325	0.08	16922.6074
	R2404634-006SD 10X	Be (313.107 nm)	0.0049	0.24	5162.9915
	R2404634-006SD 10X	Ca (317.933 nm)	13.9175	0.11	485411.5303
	R2404634-006SD 10X	Cd (214.439 nm)	0.0050	1.33	261.8519
	R2404634-006SD 10X	Co (230.786 nm)	0.0491	0.69	665.0292
	R2404634-006SD 10X	Cr (267.716 nm)	0.0196	0.58	911.9085
	R2404634-006SD 10X	Cu (327.395 nm)	0.0442	0.21	1758.8759
	R2404634-006SD 10X	Fe (234.350 nm)	0.2084	0.27	3721.7961
	R2404634-006SD 10X	K (766.491 nm)	3.1616	0.56	3009.2137
	R2404634-006SD 10X	Mg (279.078 nm)	4.0545	0.11	11855.4429
	R2404634-006SD 10X	Mn (257.610 nm)	0.0575	0.10	17427.1227
	R2404634-006SD 10X	Mo (202.032 nm)	0.0485	0.57	215.6455
	R2404634-006SD 10X	Na (588.995 nm)	37.4726	0.62	327065.0796
	R2404634-006SD 10X	Ni (230.299 nm)	0.0505	0.31	596.6839
	R2404634-006SD 10X	Pb (220.353 nm)	0.0512	1.88	248.8299
	R2404634-006SD 10X	Sb (217.582 nm)	0.0524	2.27	99.9851
	R2404634-006SD 10X	Se (196.026 nm)	0.1081	4.41	72.2727
	R2404634-006SD 10X	Si (252.851 nm)	0.5465	0.24	1737.5494
	R2404634-006SD 10X	Sn (189.925 nm)	0.4964	0.12	1179.2035
	R2404634-006SD 10X	Sr (216.596 nm)	1.6192	0.09	26664.4472
	R2404634-006SD 10X	Ti (336.122 nm)	0.0488	0.14	6417.2565
	R2404634-006SD 10X	Tl (190.794 nm)	0.1980	1.23	157.4770
	R2404634-006SD 10X	V (292.401 nm)	0.0486	0.14	1732.4669
	R2404634-006SD 10X	Y (360.074 nm)	0.98	0.45	532047.56
	R2404634-006SD 10X	Y_R (360.074 nm)	0.98	0.45	530724.94
	R2404634-006SD 10X	Zn (213.857 nm)	0.0524	0.08	2885.6866
6/4/2024 17:42:10	R2404634-006A 10X	Ag (328.068 nm)	0.0504	0.12	2359.4192
	R2404634-006A 10X	Al (237.312 nm)	2.0274	0.30	4323.6931
	R2404634-006A 10X	As (188.980 nm)	0.0435	2.29	50.6960
	R2404634-006A 10X	B (249.772 nm)	1.0773	0.24	31349.0436
	R2404634-006A 10X	Ba (230.424 nm)	2.2115	0.23	86637.4382
	R2404634-006A 10X	Be (313.107 nm)	0.0494	0.34	50569.7386
	R2404634-006A 10X	Ca (317.933 nm)	16.1630	0.22	563279.5496
	R2404634-006A 10X	Cd (214.439 nm)	0.0503	0.28	2581.3438
	R2404634-006A 10X	Co (230.786 nm)	0.4922	0.51	7013.8907
	R2404634-006A 10X	Cr (267.716 nm)	0.1947	0.25	8038.4947
	R2404634-006A 10X	Cu (327.395 nm)	0.2704	0.29	10569.5842
	R2404634-006A 10X	Fe (234.350 nm)	1.1127	0.31	19741.1217
	R2404634-006A 10X	K (766.491 nm)	20.9637	0.33	21512.0579
	R2404634-006A 10X	Mg (279.078 nm)	5.9361	0.27	17383.3275
	R2404634-006A 10X	Mn (257.610 nm)	0.4907	0.25	148452.4607
	R2404634-006A 10X	Mo (202.032 nm)	0.4934	0.34	2390.8209
	R2404634-006A 10X	Na (588.995 nm)	56.1036 o	0.59	493041.4874
	R2404634-006A 10X	Ni (230.299 nm)	0.5091	0.15	5492.6004
	R2404634-006A 10X	Pb (220.353 nm)	0.5180	0.32	2478.5532
	R2404634-006A 10X	Sb (217.582 nm)	0.5179	0.38	938.0943
	R2404634-006A 10X	Se (196.026 nm)	1.1222 o	0.48	725.2072
	R2404634-006A 10X	Si (252.851 nm)	0.5438	0.19	1729.1166

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404634-006A 10X	Sn (189.925 nm)	4.8558	0.32	11469.5072
	R2404634-006A 10X	Sr (216.596 nm)	3.3809	0.03	55706.9518
	R2404634-006A 10X	Ti (336.122 nm)	0.4916	0.46	63833.5097
	R2404634-006A 10X	Tl (190.794 nm)	1.9729	0.53	1588.9227
	R2404634-006A 10X	V (292.401 nm)	0.4916	0.22	17759.8498
	R2404634-006A 10X	Y (360.074 nm)	0.97	0.60	526457.14
	R2404634-006A 10X	Y_R (360.074 nm)	0.97	0.60	525151.54
	R2404634-006A 10X	Zn (213.857 nm)	0.5194	0.29	28806.0505
6/4/2024 17:45:24	R2404634-006L 50X	Ag (328.068 nm)	0.0000 u	> 100.00	-244.5534
	R2404634-006L 50X	Al (237.312 nm)	0.0018 u	> 100.00	40.0800
	R2404634-006L 50X	As (188.980 nm)	0.0001 u	> 100.00	-8.9646
	R2404634-006L 50X	B (249.772 nm)	0.0048	6.11	184.5562
	R2404634-006L 50X	Ba (230.424 nm)	0.0490	0.47	1894.6628
	R2404634-006L 50X	Be (313.107 nm)	0.0000 u	33.17	145.6405
	R2404634-006L 50X	Ca (317.933 nm)	2.8283	0.24	100861.5261
	R2404634-006L 50X	Cd (214.439 nm)	0.0000 u	> 100.00	4.6277
	R2404634-006L 50X	Co (230.786 nm)	-0.0002 u	52.21	-41.6398
	R2404634-006L 50X	Cr (267.716 nm)	0.0002	55.34	122.0784
	R2404634-006L 50X	Cu (327.395 nm)	0.0043	1.76	205.4833
	R2404634-006L 50X	Fe (234.350 nm)	0.0240	1.80	453.2961
	R2404634-006L 50X	K (766.491 nm)	0.2807	17.71	14.9806
	R2404634-006L 50X	Mg (279.078 nm)	0.7953	0.20	2280.5570
	R2404634-006L 50X	Mn (257.610 nm)	0.0019	0.04	609.0368
	R2404634-006L 50X	Mo (202.032 nm)	0.0026	22.62	-8.7869
	R2404634-006L 50X	Na (588.995 nm)	7.2463	0.52	57790.4252
	R2404634-006L 50X	Ni (230.299 nm)	-0.0001 u	> 100.00	55.8912
	R2404634-006L 50X	Pb (220.353 nm)	0.0008 u	> 100.00	8.3997
	R2404634-006L 50X	Sb (217.582 nm)	0.0021	72.90	9.5264
	R2404634-006L 50X	Se (196.026 nm)	0.0011 u	> 100.00	3.3893
	R2404634-006L 50X	Si (252.851 nm)	0.1289	0.82	404.3568
	R2404634-006L 50X	Sn (189.925 nm)	0.0042	25.40	17.1720
	R2404634-006L 50X	Sr (216.596 nm)	0.2947	0.29	4828.6863
	R2404634-006L 50X	Ti (336.122 nm)	0.0004 u	> 100.00	139.8613
	R2404634-006L 50X	Tl (190.794 nm)	0.0006 u	> 100.00	-1.7160
	R2404634-006L 50X	V (292.401 nm)	0.0000 u	> 100.00	-25.4448
	R2404634-006L 50X	Y (360.074 nm)	0.99	0.49	539398.87
	R2404634-006L 50X	Y_R (360.074 nm)	0.99	0.49	538037.78
	R2404634-006L 50X	Zn (213.857 nm)	0.0002	4.20	-12.1100
6/4/2024 17:48:38	PBW-439397	Ag (328.068 nm)	0.0001	19.90	-240.8385
	PBW-439397	Al (237.312 nm)	0.0028	26.51	42.1541
	PBW-439397	As (188.980 nm)	-0.0011 u	62.75	-10.5227
	PBW-439397	B (249.772 nm)	0.0002	54.70	52.6096
	PBW-439397	Ba (230.424 nm)	-0.0001 u	> 100.00	-29.7956
	PBW-439397	Be (313.107 nm)	0.0000 u	52.32	140.6996
	PBW-439397	Ca (317.933 nm)	0.0132	1.83	3242.1622
	PBW-439397	Cd (214.439 nm)	0.0002	11.81	15.5794
	PBW-439397	Co (230.786 nm)	0.0002	63.50	-35.4292
	PBW-439397	Cr (267.716 nm)	0.0003	23.86	124.7186
	PBW-439397	Cu (327.395 nm)	0.0005	8.01	57.7745
	PBW-439397	Fe (234.350 nm)	0.0032	15.50	85.2798
	PBW-439397	K (766.491 nm)	-0.0240 u	64.67	-301.7007
	PBW-439397	Mg (279.078 nm)	0.0010	91.96	-53.1999
	PBW-439397	Mn (257.610 nm)	0.0002	4.87	80.9490
	PBW-439397	Mo (202.032 nm)	0.0006	74.80	-18.3699
	PBW-439397	Na (588.995 nm)	0.0487	9.71	-6330.2274
	PBW-439397	Ni (230.299 nm)	-0.0005 u	51.49	52.6014
	PBW-439397	Pb (220.353 nm)	-0.0006 u	57.32	1.7109

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	PBW-439397	Sb (217.582 nm)	0.0056	4.60	15.7918
	PBW-439397	Se (196.026 nm)	-0.0019 u	> 100.00	1.4349
	PBW-439397	Si (252.851 nm)	0.0161	7.35	44.0741
	PBW-439397	Sn (189.925 nm)	0.0027	49.46	13.8243
	PBW-439397	Sr (216.596 nm)	0.0001 u	> 100.00	-29.4343
	PBW-439397	Ti (336.122 nm)	-0.0003 u	77.11	42.2147
	PBW-439397	Tl (190.794 nm)	0.0017	98.05	-0.8257
	PBW-439397	V (292.401 nm)	0.0000 u	78.07	-26.5441
	PBW-439397	Y (360.074 nm)	1.01	0.50	546332.44
	PBW-439397	Y_R (360.074 nm)	1.01	0.50	544969.89
	PBW-439397	Zn (213.857 nm)	0.0006	11.73	5.7453
6/4/2024 17:51:52	LCSW-439397	Ag (328.068 nm)	0.0500	0.62	2339.4171
	LCSW-439397	Al (237.312 nm)	2.0227	0.22	4313.7233
	LCSW-439397	As (188.980 nm)	0.0387	3.57	44.1220
	LCSW-439397	B (249.772 nm)	1.0080	0.19	29335.7132
	LCSW-439397	Ba (230.424 nm)	2.0160	0.22	78976.3032
	LCSW-439397	Be (313.107 nm)	0.0485	0.14	49646.8949
	LCSW-439397	Ca (317.933 nm)	2.0476	0.09	73791.2493
	LCSW-439397	Cd (214.439 nm)	0.0500	0.23	2569.2771
	LCSW-439397	Co (230.786 nm)	0.4999	0.03	7123.6092
	LCSW-439397	Cr (267.716 nm)	0.1965	0.06	8110.5139
	LCSW-439397	Cu (327.395 nm)	0.2530	0.14	9892.8091
	LCSW-439397	Fe (234.350 nm)	1.0099	0.08	17920.8130
	LCSW-439397	K (766.491 nm)	19.4176	0.22	19905.1664
	LCSW-439397	Mg (279.078 nm)	1.9624	0.04	5709.1403
	LCSW-439397	Mn (257.610 nm)	0.4872	0.07	147404.9579
	LCSW-439397	Mo (202.032 nm)	0.4967	0.12	2406.8594
	LCSW-439397	Na (588.995 nm)	20.2377	0.40	173526.2511
	LCSW-439397	Ni (230.299 nm)	0.5140	0.14	5545.1008
	LCSW-439397	Pb (220.353 nm)	0.5226	0.04	2500.4340
	LCSW-439397	Sb (217.582 nm)	0.5070	0.78	918.4058
	LCSW-439397	Se (196.026 nm)	1.0177	0.81	657.8898
	LCSW-439397	Si (252.851 nm)	-0.0308 u	2.88	-105.4924
	LCSW-439397	Sn (189.925 nm)	4.8693	0.08	11501.3290
	LCSW-439397	Sr (216.596 nm)	1.9630	0.14	32332.4668
	LCSW-439397	Ti (336.122 nm)	0.4978	0.13	64631.7103
	LCSW-439397	Tl (190.794 nm)	1.9747	0.19	1590.3707
	LCSW-439397	V (292.401 nm)	0.4942	0.06	17852.9824
	LCSW-439397	Y (360.074 nm)	0.99	0.46	537798.36
	LCSW-439397	Y_R (360.074 nm)	0.99	0.46	536596.23
	LCSW-439397	Zn (213.857 nm)	0.5008	0.13	27776.0219
6/4/2024 17:55:06	Continuing Calibration Verification	Ag (328.068 nm)	0.5027	0.15	25746.7345
	Continuing Calibration Verification	Al (237.312 nm)	10.0556	0.20	21301.7067
	Continuing Calibration Verification	As (188.980 nm)	0.9843	0.11	1342.7662
	Continuing Calibration Verification	B (249.772 nm)	2.5113	0.08	73016.5245
	Continuing Calibration Verification	Ba (230.424 nm)	10.0522	0.11	393906.9265
	Continuing Calibration Verification	Be (313.107 nm)	0.2403	0.03	245257.2065
	Continuing Calibration Verification	Ca (317.933 nm)	25.7636	0.13	896207.4569
	Continuing Calibration Verification	Cd (214.439 nm)	0.4874	0.18	24991.7513
	Continuing Calibration Verification	Co (230.786 nm)	2.4805	0.28	35504.3911
	Continuing Calibration Verification	Cr (267.716 nm)	0.4971	0.13	20350.8595
	Continuing Calibration Verification	Cu (327.395 nm)	1.2319	0.28	48022.0033
	Continuing Calibration Verification	Fe (234.350 nm)	4.9731	0.03	88135.2347
	Continuing Calibration Verification	K (766.491 nm)	24.8019	0.55	25501.3606
	Continuing Calibration Verification	Mg (279.078 nm)	25.1673	0.13	73882.3771
	Continuing Calibration Verification	Mn (257.610 nm)	0.7362	0.07	222731.4979
	Continuing Calibration Verification	Mo (202.032 nm)	2.5993	0.14	12686.6684

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Verification	Na (588.995 nm)	25.8553	0.66	223570.5068
	Continuing Calibration Verification	Ni (230.299 nm)	2.0440	0.02	21879.0592
	Continuing Calibration Verification	Pb (220.353 nm)	0.5094	0.54	2437.3175
	Continuing Calibration Verification	Sb (217.582 nm)	5.0192	0.29	9041.4624
	Continuing Calibration Verification	Se (196.026 nm)	0.5009	0.73	325.1917
	Continuing Calibration Verification	Si (252.851 nm)	10.0240	0.33	31998.7217
	Continuing Calibration Verification	Sn (189.925 nm)	4.9373	0.05	11662.0081
	Continuing Calibration Verification	Sr (216.596 nm)	2.4565	0.39	40468.2321
	Continuing Calibration Verification	Ti (336.122 nm)	2.5460	0.11	330232.6228
	Continuing Calibration Verification	Tl (190.794 nm)	0.9865	0.13	793.4303
	Continuing Calibration Verification	V (292.401 nm)	2.5201	0.03	91147.4139
	Continuing Calibration Verification	Y (360.074 nm)	0.98	0.56	529173.23
	Continuing Calibration Verification	Y_R (360.074 nm)	0.98	0.56	528092.80
	Continuing Calibration Verification	Zn (213.857 nm)	0.9772	0.20	54222.5760
6/4/2024 17:58:20	Continuing Calibration Blank	Ag (328.068 nm)	0.0001	> 100.00	-242.9362
	Continuing Calibration Blank	Al (237.312 nm)	0.0001 u	> 100.00	36.5339
	Continuing Calibration Blank	As (188.980 nm)	0.0018 u	> 100.00	-6.5639
	Continuing Calibration Blank	B (249.772 nm)	0.0009	34.27	70.5014
	Continuing Calibration Blank	Ba (230.424 nm)	0.0003	18.47	-15.7540
	Continuing Calibration Blank	Be (313.107 nm)	0.0000 u	> 100.00	149.5366
	Continuing Calibration Blank	Ca (317.933 nm)	0.0001 u	94.52	2786.1139
	Continuing Calibration Blank	Cd (214.439 nm)	0.0000 u	> 100.00	6.3370
	Continuing Calibration Blank	Co (230.786 nm)	0.0002 u	> 100.00	-36.1526
	Continuing Calibration Blank	Cr (267.716 nm)	0.0000 u	> 100.00	113.5911
	Continuing Calibration Blank	Cu (327.395 nm)	0.0000 u	> 100.00	37.0926
	Continuing Calibration Blank	Fe (234.350 nm)	0.0008	74.90	43.0864
	Continuing Calibration Blank	K (766.491 nm)	0.0544 u	94.12	-220.2114
	Continuing Calibration Blank	Mg (279.078 nm)	-0.0002 u	> 100.00	-56.6448
	Continuing Calibration Blank	Mn (257.610 nm)	0.0000 u	64.10	20.0914
	Continuing Calibration Blank	Mo (202.032 nm)	0.0049	23.01	2.4790
	Continuing Calibration Blank	Na (588.995 nm)	0.0319	21.16	-6479.6233
	Continuing Calibration Blank	Ni (230.299 nm)	0.0002	> 100.00	59.7492
	Continuing Calibration Blank	Pb (220.353 nm)	0.0002 u	> 100.00	5.5920
	Continuing Calibration Blank	Sb (217.582 nm)	0.0066	24.14	17.6765
	Continuing Calibration Blank	Se (196.026 nm)	0.0012 u	> 100.00	3.4639
	Continuing Calibration Blank	Si (252.851 nm)	0.0036	22.68	4.2232
	Continuing Calibration Blank	Sn (189.925 nm)	0.0009	63.00	9.5872
	Continuing Calibration Blank	Sr (216.596 nm)	0.0001 u	> 100.00	-28.8489
	Continuing Calibration Blank	Ti (336.122 nm)	0.0018	57.13	322.1863
	Continuing Calibration Blank	Tl (190.794 nm)	0.0017	55.14	-0.8601
	Continuing Calibration Blank	V (292.401 nm)	0.0001	34.95	-19.4983
	Continuing Calibration Blank	Y (360.074 nm)	1.00	0.63	544687.38
	Continuing Calibration Blank	Y_R (360.074 nm)	1.00	0.63	543546.94
	Continuing Calibration Blank	Zn (213.857 nm)	0.0000 u	> 100.00	-23.6002
6/4/2024 18:01:34	DLCSW-439397	Ag (328.068 nm)	0.0495	0.35	2314.5290
	DLCSW-439397	Al (237.312 nm)	2.0124	0.51	4292.1028
	DLCSW-439397	As (188.980 nm)	0.0406	5.74	46.7050
	DLCSW-439397	B (249.772 nm)	1.0000	0.26	29101.9562
	DLCSW-439397	Ba (230.424 nm)	2.0041	0.34	78509.6056
	DLCSW-439397	Be (313.107 nm)	0.0482	0.12	49280.3549
	DLCSW-439397	Ca (317.933 nm)	2.0376	0.18	73442.9785
	DLCSW-439397	Cd (214.439 nm)	0.0497	0.36	2550.4438
	DLCSW-439397	Co (230.786 nm)	0.4977	0.05	7091.8509
	DLCSW-439397	Cr (267.716 nm)	0.1952	0.11	8061.1695
	DLCSW-439397	Cu (327.395 nm)	0.2505	0.27	9793.8422
	DLCSW-439397	Fe (234.350 nm)	1.0059	0.12	17849.8449
	DLCSW-439397	K (766.491 nm)	19.2476	0.45	19728.3901

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	DLCSW-439397	Mg (279.078 nm)	1.9500	0.34	5672.9040
	DLCSW-439397	Mn (257.610 nm)	0.4838	0.11	146375.8885
	DLCSW-439397	Mo (202.032 nm)	0.4927	0.24	2387.5815
	DLCSW-439397	Na (588.995 nm)	20.0091	0.52	171489.7191
	DLCSW-439397	Ni (230.299 nm)	0.5118	0.39	5520.9474
	DLCSW-439397	Pb (220.353 nm)	0.5201	0.28	2488.4660
	DLCSW-439397	Sb (217.582 nm)	0.5086	0.66	921.3855
	DLCSW-439397	Se (196.026 nm)	1.0037	0.94	648.9068
	DLCSW-439397	Si (252.851 nm)	-0.0306 u	5.41	-104.9496
	DLCSW-439397	Sn (189.925 nm)	4.8352	0.14	11420.8570
	DLCSW-439397	Sr (216.596 nm)	1.9512	0.14	32137.8425
	DLCSW-439397	Ti (336.122 nm)	0.4931	0.19	64033.7042
	DLCSW-439397	Tl (190.794 nm)	1.9563	0.32	1575.5724
	DLCSW-439397	V (292.401 nm)	0.4908	0.24	17732.6816
	DLCSW-439397	Y (360.074 nm)	0.99	0.51	539275.38
	DLCSW-439397	Y_R (360.074 nm)	0.99	0.51	538126.90
	DLCSW-439397	Zn (213.857 nm)	0.4975	0.16	27591.2823
6/4/2024 18:04:49	R2404637-001	Ag (328.068 nm)	0.0000 u	> 100.00	-244.5297
	R2404637-001	Al (237.312 nm)	0.0050	44.00	46.8240
	R2404637-001	As (188.980 nm)	0.0056	38.45	-1.3607
	R2404637-001	B (249.772 nm)	0.4515	1.87	13163.3994
	R2404637-001	Ba (230.424 nm)	0.0342	1.99	1311.7202
	R2404637-001	Be (313.107 nm)	0.0001	8.14	238.0648
	R2404637-001	Ca (317.933 nm)	529.1131 o LR	1.58	18351250.8750
	R2404637-001	Cd (214.439 nm)	0.0004	25.28	24.9543
	R2404637-001	Co (230.786 nm)	0.0005	27.70	-31.9071
	R2404637-001	Cr (267.716 nm)	0.0014	13.80	169.0114
	R2404637-001	Cu (327.395 nm)	0.0008	23.35	67.9915
	R2404637-001	Fe (234.350 nm)	10.9575 o	1.73	194157.9282
	R2404637-001	K (766.491 nm)	8.6887	1.86	8753.8631
	R2404637-001	Mg (279.078 nm)	106.2967 o	1.74	312230.0700
	R2404637-001	Mn (257.610 nm)	0.1839	1.78	55644.7949
	R2404637-001	Mo (202.032 nm)	0.0046	22.74	1.2231
	R2404637-001	Na (588.995 nm)	60.2942 o	2.06	530373.5256
	R2404637-001	Ni (230.299 nm)	0.0101	1.89	165.7007
	R2404637-001	Pb (220.353 nm)	0.0002 u	> 100.00	5.3919
	R2404637-001	Sb (217.582 nm)	0.0031	98.12	11.2566
	R2404637-001	Se (196.026 nm)	0.0037	78.95	5.0887
	R2404637-001	Si (252.851 nm)	9.7289	1.89	31056.3602
	R2404637-001	Sn (189.925 nm)	0.0031	27.37	14.5817
	R2404637-001	Sr (216.596 nm)	10.7068 o	1.60	176483.1749
	R2404637-001	Ti (336.122 nm)	0.0057	6.42	825.7881
	R2404637-001	Tl (190.794 nm)	0.0029	84.01	0.1266
	R2404637-001	V (292.401 nm)	0.0000	> 100.00	-24.4217
	R2404637-001	Y (360.074 nm)	0.90	1.86	488273.20
	R2404637-001	Y_R (360.074 nm)	0.90	1.86	487351.07
	R2404637-001	Zn (213.857 nm)	0.0032	2.12	154.3310
6/4/2024 18:08:03	R2404637-002	Ag (328.068 nm)	0.0000 u	> 100.00	-248.0984
	R2404637-002	Al (237.312 nm)	0.0452	4.03	131.7639
	R2404637-002	As (188.980 nm)	0.0002 u	> 100.00	-8.7786
	R2404637-002	B (249.772 nm)	0.2794	0.16	8164.3089
	R2404637-002	Ba (230.424 nm)	0.0118	2.02	434.4749
	R2404637-002	Be (313.107 nm)	0.0001	13.44	217.0820
	R2404637-002	Ca (317.933 nm)	366.7949 o LR	0.12	12722415.5581
	R2404637-002	Cd (214.439 nm)	0.0003	8.87	17.2213
	R2404637-002	Co (230.786 nm)	-0.0004 u	> 100.00	-44.5364
	R2404637-002	Cr (267.716 nm)	0.0010	16.93	152.0391

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404637-002	Cu (327.395 nm)	0.0010	9.82	74.7142
	R2404637-002	Fe (234.350 nm)	2.1534	0.07	38180.0897
	R2404637-002	K (766.491 nm)	28.8051	0.16	29662.1080
	R2404637-002	Mg (279.078 nm)	42.2781	0.12	124151.5090
	R2404637-002	Mn (257.610 nm)	0.0813	0.14	24612.9820
	R2404637-002	Mo (202.032 nm)	0.0060	10.54	7.8691
	R2404637-002	Na (588.995 nm)	358.1155 o LR	0.43	3183549.7499
	R2404637-002	Ni (230.299 nm)	0.0025	18.93	84.5807
	R2404637-002	Pb (220.353 nm)	0.0001 u	> 100.00	4.8714
	R2404637-002	Sb (217.582 nm)	0.0015	82.82	8.5173
	R2404637-002	Se (196.026 nm)	-0.0002 u	> 100.00	2.5355
	R2404637-002	Si (252.851 nm)	4.5943	0.20	14661.8389
	R2404637-002	Sn (189.925 nm)	0.0021	16.85	12.2126
	R2404637-002	Sr (216.596 nm)	7.3612 o	0.08	121327.1936
	R2404637-002	Ti (336.122 nm)	0.0041	13.70	615.3874
	R2404637-002	Tl (190.794 nm)	0.0028	81.47	-0.0051
	R2404637-002	V (292.401 nm)	-0.0001 u	67.60	-29.7587
	R2404637-002	Y (360.074 nm)	0.90	0.51	488348.99
	R2404637-002	Y_R (360.074 nm)	0.90	0.51	487455.99
	R2404637-002	Zn (213.857 nm)	0.0126	0.86	675.9884
6/4/2024 18:11:17	R2404637-003	Ag (328.068 nm)	0.0000 u	> 100.00	-247.8810
	R2404637-003	Al (237.312 nm)	0.0058	22.07	48.5436
	R2404637-003	As (188.980 nm)	-0.0001 u	> 100.00	-9.1727
	R2404637-003	B (249.772 nm)	0.1543	0.07	4528.0754
	R2404637-003	Ba (230.424 nm)	0.0188	0.77	707.7916
	R2404637-003	Be (313.107 nm)	0.0000	12.65	203.4431
	R2404637-003	Ca (317.933 nm)	306.0812 o LR	0.10	10616999.3588
	R2404637-003	Cd (214.439 nm)	0.0002	21.73	15.0422
	R2404637-003	Co (230.786 nm)	-0.0004 u	69.35	-44.8690
	R2404637-003	Cr (267.716 nm)	0.0012	19.25	160.4356
	R2404637-003	Cu (327.395 nm)	0.0008	14.01	67.3612
	R2404637-003	Fe (234.350 nm)	0.4862	0.08	8642.3583
	R2404637-003	K (766.491 nm)	3.6323	0.54	3498.5025
	R2404637-003	Mg (279.078 nm)	43.1233	0.10	126634.6277
	R2404637-003	Mn (257.610 nm)	0.5047	0.10	152682.8664
	R2404637-003	Mo (202.032 nm)	0.0018	27.55	-12.4511
	R2404637-003	Na (588.995 nm)	71.9845 o	0.28	634518.7112
	R2404637-003	Ni (230.299 nm)	0.0013	47.02	71.6645
	R2404637-003	Pb (220.353 nm)	0.0005	96.48	7.0974
	R2404637-003	Sb (217.582 nm)	0.0017	80.06	8.7487
	R2404637-003	Se (196.026 nm)	-0.0019 u	46.81	1.4655
	R2404637-003	Si (252.851 nm)	4.5735	0.20	14595.5796
	R2404637-003	Sn (189.925 nm)	0.0017	65.07	11.2885
	R2404637-003	Sr (216.596 nm)	2.0572	0.10	33884.6527
	R2404637-003	Ti (336.122 nm)	0.0023	4.45	390.5833
	R2404637-003	Tl (190.794 nm)	0.0011 u	> 100.00	-1.3006
	R2404637-003	V (292.401 nm)	0.0000 u	> 100.00	-25.5446
	R2404637-003	Y (360.074 nm)	0.93	0.53	505887.21
	R2404637-003	Y_R (360.074 nm)	0.93	0.54	504938.52
	R2404637-003	Zn (213.857 nm)	0.0020	2.89	83.9944
6/4/2024 18:14:30	R2404637-004	Ag (328.068 nm)	-0.0002 u	99.16	-258.5581
	R2404637-004	Al (237.312 nm)	0.2021	1.60	463.6607
	R2404637-004	As (188.980 nm)	0.0000 u	> 100.00	-9.0299
	R2404637-004	B (249.772 nm)	0.2046	0.21	5991.2549
	R2404637-004	Ba (230.424 nm)	0.0125	0.21	463.5351
	R2404637-004	Be (313.107 nm)	0.0001	1.47	206.8738
	R2404637-004	Ca (317.933 nm)	347.5367 o LR	0.23	12054583.1881

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404637-004	Cd (214.439 nm)	0.0002	60.89	14.3935
	R2404637-004	Co (230.786 nm)	-0.0007 u	82.42	-48.3378
	R2404637-004	Cr (267.716 nm)	0.0011	7.59	156.9291
	R2404637-004	Cu (327.395 nm)	0.0008	61.22	67.2645
	R2404637-004	Fe (234.350 nm)	0.1826	0.03	3263.4106
	R2404637-004	K (766.491 nm)	4.0574	1.12	3940.3269
	R2404637-004	Mg (279.078 nm)	46.4665	0.23	136456.5210
	R2404637-004	Mn (257.610 nm)	0.1976	0.21	59804.4005
	R2404637-004	Mo (202.032 nm)	0.0016	48.77	-13.4745
	R2404637-004	Na (588.995 nm)	26.1871	0.17	226526.9538
	R2404637-004	Ni (230.299 nm)	0.0011	49.97	69.3387
	R2404637-004	Pb (220.353 nm)	0.0007 u	> 100.00	7.6612
	R2404637-004	Sb (217.582 nm)	0.0028	54.73	10.8377
	R2404637-004	Se (196.026 nm)	-0.0006 u	> 100.00	2.3314
	R2404637-004	Si (252.851 nm)	4.2782	0.24	13652.6117
	R2404637-004	Sn (189.925 nm)	0.0001 u	> 100.00	7.5106
	R2404637-004	Sr (216.596 nm)	2.9601	0.24	48770.8274
	R2404637-004	Ti (336.122 nm)	0.0048	3.90	703.2998
	R2404637-004	Tl (190.794 nm)	0.0027	32.37	-0.0768
	R2404637-004	V (292.401 nm)	0.0002 u	> 100.00	-18.0793
	R2404637-004	Y (360.074 nm)	0.94	0.69	511516.59
	R2404637-004	Y_R (360.074 nm)	0.94	0.69	510563.60
	R2404637-004	Zn (213.857 nm)	0.0060	1.01	310.8753
6/4/2024 18:17:44	R2404637-005	Ag (328.068 nm)	0.0000 u	> 100.00	-244.8576
	R2404637-005	Al (237.312 nm)	0.0926	1.50	232.0290
	R2404637-005	As (188.980 nm)	0.0139	17.88	10.0711
	R2404637-005	B (249.772 nm)	0.1197	0.26	3524.5502
	R2404637-005	Ba (230.424 nm)	0.0810	0.09	3148.1448
	R2404637-005	Be (313.107 nm)	0.0000	39.65	190.2569
	R2404637-005	Ca (317.933 nm)	190.0858 o	0.19	6594535.0938
	R2404637-005	Cd (214.439 nm)	0.0004	13.20	23.0626
	R2404637-005	Co (230.786 nm)	-0.0006 u	57.31	-47.1007
	R2404637-005	Cr (267.716 nm)	0.0010	11.35	154.4572
	R2404637-005	Cu (327.395 nm)	0.0008	47.47	66.8988
	R2404637-005	Fe (234.350 nm)	0.7502	0.10	13319.8813
	R2404637-005	K (766.491 nm)	2.8899	1.19	2726.8870
	R2404637-005	Mg (279.078 nm)	79.3604 o	0.09	233094.7939
	R2404637-005	Mn (257.610 nm)	0.0646	0.06	19575.1294
	R2404637-005	Mo (202.032 nm)	0.0071	5.35	13.2642
	R2404637-005	Na (588.995 nm)	10.3963	0.21	85852.5628
	R2404637-005	Ni (230.299 nm)	0.0004 u	> 100.00	61.6476
	R2404637-005	Pb (220.353 nm)	0.0009 u	> 100.00	8.9257
	R2404637-005	Sb (217.582 nm)	0.0039	71.15	12.6945
	R2404637-005	Se (196.026 nm)	-0.0039 u	> 100.00	0.1702
	R2404637-005	Si (252.851 nm)	6.8121	0.09	21743.0965
	R2404637-005	Sn (189.925 nm)	0.0024	65.49	13.1104
	R2404637-005	Sr (216.596 nm)	37.8463 o	0.01	623907.5328
	R2404637-005	Ti (336.122 nm)	0.0024	1.67	391.9067
	R2404637-005	Tl (190.794 nm)	0.0015 u	> 100.00	-1.0124
	R2404637-005	V (292.401 nm)	0.0001 u	> 100.00	-20.6943
	R2404637-005	Y (360.074 nm)	0.95	0.70	515302.86
	R2404637-005	Y_R (360.074 nm)	0.95	0.70	514270.00
	R2404637-005	Zn (213.857 nm)	0.0055	1.76	279.5843
6/4/2024 18:20:58	R2404638-001	Ag (328.068 nm)	0.0001	93.07	-243.6248
	R2404638-001	Al (237.312 nm)	0.2539	0.50	573.0689
	R2404638-001	As (188.980 nm)	-0.0013 u	57.03	-10.8515
	R2404638-001	B (249.772 nm)	0.0078	3.82	270.7235

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404638-001	Ba (230.424 nm)	0.0260	0.22	990.8488
	R2404638-001	Be (313.107 nm)	0.0000	56.36	156.8181
	R2404638-001	Ca (317.933 nm)	9.7795	0.05	341915.5416
	R2404638-001	Cd (214.439 nm)	0.0002	39.34	13.0463
	R2404638-001	Co (230.786 nm)	0.0003	12.62	-34.6367
	R2404638-001	Cr (267.716 nm)	0.0010	8.30	151.1311
	R2404638-001	Cu (327.395 nm)	0.0013	9.11	87.1162
	R2404638-001	Fe (234.350 nm)	0.3604	0.26	6414.2402
	R2404638-001	K (766.491 nm)	0.9988	4.35	761.3450
	R2404638-001	Mg (279.078 nm)	2.1550	0.15	6275.1501
	R2404638-001	Mn (257.610 nm)	0.0769	0.04	23279.3688
	R2404638-001	Mo (202.032 nm)	-0.0001 u	> 100.00	-21.9344
	R2404638-001	Na (588.995 nm)	10.1100	0.48	83302.1632
	R2404638-001	Ni (230.299 nm)	0.0000 u	> 100.00	57.9286
	R2404638-001	Pb (220.353 nm)	0.0007	67.39	7.6426
	R2404638-001	Sb (217.582 nm)	0.0027	46.73	10.6868
	R2404638-001	Se (196.026 nm)	0.0007 u	> 100.00	3.1265
	R2404638-001	Si (252.851 nm)	1.9772	0.35	6305.6217
	R2404638-001	Sn (189.925 nm)	0.0008	53.01	9.2153
	R2404638-001	Sr (216.596 nm)	0.0279	0.54	429.9850
	R2404638-001	Ti (336.122 nm)	0.0043	7.89	642.5045
	R2404638-001	Tl (190.794 nm)	0.0002 u	> 100.00	-2.0980
	R2404638-001	V (292.401 nm)	0.0006	26.11	-3.3600
	R2404638-001	Y (360.074 nm)	1.00	0.44	543055.89
	R2404638-001	Y_R (360.074 nm)	1.00	0.44	541820.09
	R2404638-001	Zn (213.857 nm)	0.0034	0.92	166.5298
6/4/2024 18:24:12	R2404638-002	Ag (328.068 nm)	0.0001	> 100.00	-243.0246
	R2404638-002	Al (237.312 nm)	0.2480	0.96	560.7427
	R2404638-002	As (188.980 nm)	0.0012 u	> 100.00	-7.4243
	R2404638-002	B (249.772 nm)	0.0084	2.37	289.6938
	R2404638-002	Ba (230.424 nm)	0.0260	0.38	991.0840
	R2404638-002	Be (313.107 nm)	0.0000 u	> 100.00	158.1813
	R2404638-002	Ca (317.933 nm)	9.6423	0.05	337156.3371
	R2404638-002	Cd (214.439 nm)	0.0002	14.43	16.2856
	R2404638-002	Co (230.786 nm)	0.0001	80.42	-37.2168
	R2404638-002	Cr (267.716 nm)	0.0008	1.52	146.4950
	R2404638-002	Cu (327.395 nm)	0.0013	25.64	88.7034
	R2404638-002	Fe (234.350 nm)	0.3234	0.04	5758.3064
	R2404638-002	K (766.491 nm)	0.9582	6.92	719.0785
	R2404638-002	Mg (279.078 nm)	2.1415	0.18	6235.3690
	R2404638-002	Mn (257.610 nm)	0.0653	0.06	19783.6826
	R2404638-002	Mo (202.032 nm)	0.0002	64.53	-20.0710
	R2404638-002	Na (588.995 nm)	9.8833	0.41	81282.7654
	R2404638-002	Ni (230.299 nm)	0.0001 u	> 100.00	58.6549
	R2404638-002	Pb (220.353 nm)	0.0008 u	> 100.00	8.3707
	R2404638-002	Sb (217.582 nm)	0.0031	15.76	11.2681
	R2404638-002	Se (196.026 nm)	0.0004 u	> 100.00	2.9677
	R2404638-002	Si (252.851 nm)	1.9486	0.40	6214.2873
	R2404638-002	Sn (189.925 nm)	0.0012	38.29	10.1663
	R2404638-002	Sr (216.596 nm)	0.0270	0.48	414.6952
	R2404638-002	Ti (336.122 nm)	0.0049	8.89	724.4774
	R2404638-002	Tl (190.794 nm)	0.0008 u	> 100.00	-1.5735
	R2404638-002	V (292.401 nm)	0.0005	19.15	-7.7848
	R2404638-002	Y (360.074 nm)	1.00	0.35	542149.70
	R2404638-002	Y_R (360.074 nm)	1.00	0.35	540947.19
	R2404638-002	Zn (213.857 nm)	0.0031	2.38	147.2832
6/4/2024 18:27:26	R2404639-001	Ag (328.068 nm)	0.0001	52.04	-241.8757

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404639-001	Al (237.312 nm)	0.0502	3.29	142.4423
	R2404639-001	As (188.980 nm)	0.0013	60.92	-7.3297
	R2404639-001	B (249.772 nm)	0.0154	2.25	492.6651
	R2404639-001	Ba (230.424 nm)	0.1712	0.32	6682.5488
	R2404639-001	Be (313.107 nm)	0.0000	11.16	161.7851
	R2404639-001	Ca (317.933 nm)	39.8481	0.21	1384627.8934
	R2404639-001	Cd (214.439 nm)	0.0002	14.83	13.7672
	R2404639-001	Co (230.786 nm)	0.0003	50.81	-35.2526
	R2404639-001	Cr (267.716 nm)	0.0010	25.25	152.1592
	R2404639-001	Cu (327.395 nm)	0.0008	32.02	66.9547
	R2404639-001	Fe (234.350 nm)	0.5307	0.16	9430.8447
	R2404639-001	K (766.491 nm)	1.2847	1.51	1058.4443
	R2404639-001	Mg (279.078 nm)	8.9065	0.20	26110.1605
	R2404639-001	Mn (257.610 nm)	0.1429	0.11	43249.5487
	R2404639-001	Mo (202.032 nm)	0.0004	45.38	-19.4234
	R2404639-001	Na (588.995 nm)	13.6087	0.40	114470.8252
	R2404639-001	Ni (230.299 nm)	-0.0007 u	54.27	50.3570
	R2404639-001	Pb (220.353 nm)	0.0014	86.39	11.1445
	R2404639-001	Sb (217.582 nm)	0.0015	65.21	8.4985
	R2404639-001	Se (196.026 nm)	-0.0021 u	> 100.00	1.3210
	R2404639-001	Si (252.851 nm)	3.8082	0.14	12152.1424
	R2404639-001	Sn (189.925 nm)	0.0005	22.55	8.5223
	R2404639-001	Sr (216.596 nm)	0.1654	0.35	2696.6080
	R2404639-001	Ti (336.122 nm)	0.0011	13.50	230.3949
	R2404639-001	Tl (190.794 nm)	0.0002 u	> 100.00	-2.0500
	R2404639-001	V (292.401 nm)	0.0006	24.05	-4.2277
	R2404639-001	Y (360.074 nm)	0.99	0.19	538793.79
	R2404639-001	Y_R (360.074 nm)	0.99	0.19	537611.07
	R2404639-001	Zn (213.857 nm)	0.0024	1.82	110.4900
6/4/2024 18:30:40	R2404639-002	Ag (328.068 nm)	0.0002	43.20	-237.1798
	R2404639-002	Al (237.312 nm)	0.1857	2.40	428.9123
	R2404639-002	As (188.980 nm)	0.0002 u	> 100.00	-8.8298
	R2404639-002	B (249.772 nm)	0.0116	1.00	381.5956
	R2404639-002	Ba (230.424 nm)	0.1563	0.16	6099.8640
	R2404639-002	Be (313.107 nm)	0.0000 u	> 100.00	156.6163
	R2404639-002	Ca (317.933 nm)	33.5487	0.19	1166176.4295
	R2404639-002	Cd (214.439 nm)	0.0002	31.81	14.7336
	R2404639-002	Co (230.786 nm)	0.0000 u	> 100.00	-39.6378
	R2404639-002	Cr (267.716 nm)	0.0008	23.80	143.6049
	R2404639-002	Cu (327.395 nm)	0.0009	39.60	74.2529
	R2404639-002	Fe (234.350 nm)	0.4036	0.23	7178.4739
	R2404639-002	K (766.491 nm)	0.8390	2.31	595.2458
	R2404639-002	Mg (279.078 nm)	8.5129	0.21	24953.6974
	R2404639-002	Mn (257.610 nm)	0.0762	0.21	23084.6140
	R2404639-002	Mo (202.032 nm)	0.0005 u	> 100.00	-19.0210
	R2404639-002	Na (588.995 nm)	11.8968	0.26	99219.6501
	R2404639-002	Ni (230.299 nm)	-0.0010 u	59.33	46.7891
	R2404639-002	Pb (220.353 nm)	0.0007	> 100.00	7.8096
	R2404639-002	Sb (217.582 nm)	0.0023	77.23	9.8186
	R2404639-002	Se (196.026 nm)	0.0012 u	> 100.00	3.4389
	R2404639-002	Si (252.851 nm)	3.7124	0.17	11846.0979
	R2404639-002	Sn (189.925 nm)	0.0004	60.67	8.2985
	R2404639-002	Sr (216.596 nm)	0.1590	0.18	2590.7651
	R2404639-002	Ti (336.122 nm)	0.0047	3.80	693.8874
	R2404639-002	Tl (190.794 nm)	0.0008	54.79	-1.5524
	R2404639-002	V (292.401 nm)	0.0005	10.39	-7.5507
	R2404639-002	Y (360.074 nm)	0.99	0.41	538881.67

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404639-002	Y_R (360.074 nm)	0.99	0.41	537672.72
	R2404639-002	Zn (213.857 nm)	0.0036	1.35	176.9028
6/4/2024 18:33:54	Continuing Calibration Verification	Ag (328.068 nm)	0.5025	0.15	25732.0324
	Continuing Calibration Verification	Al (237.312 nm)	9.9918	0.29	21166.8257
	Continuing Calibration Verification	As (188.980 nm)	0.9805	0.32	1337.4423
	Continuing Calibration Verification	B (249.772 nm)	2.5127	0.11	73055.6676
	Continuing Calibration Verification	Ba (230.424 nm)	10.0884	0.12	395324.3946
	Continuing Calibration Verification	Be (313.107 nm)	0.2410	0.03	245928.2231
	Continuing Calibration Verification	Ca (317.933 nm)	25.9105	0.03	901301.3063
	Continuing Calibration Verification	Cd (214.439 nm)	0.4902	0.04	25133.9706
	Continuing Calibration Verification	Co (230.786 nm)	2.4888	0.06	35623.5150
	Continuing Calibration Verification	Cr (267.716 nm)	0.4989	0.07	20422.5549
	Continuing Calibration Verification	Cu (327.395 nm)	1.2305	0.26	47966.9751
	Continuing Calibration Verification	Fe (234.350 nm)	4.9883	0.02	88404.3330
	Continuing Calibration Verification	K (766.491 nm)	24.5645	0.43	25254.6500
	Continuing Calibration Verification	Mg (279.078 nm)	25.2864	0.05	74232.0783
	Continuing Calibration Verification	Mn (257.610 nm)	0.7369	0.03	222931.5359
	Continuing Calibration Verification	Mo (202.032 nm)	2.5981	0.11	12680.9010
	Continuing Calibration Verification	Na (588.995 nm)	25.5992	0.60	221289.8277
	Continuing Calibration Verification	Ni (230.299 nm)	2.0463	0.10	21902.8795
	Continuing Calibration Verification	Pb (220.353 nm)	0.5118	0.13	2449.0227
	Continuing Calibration Verification	Sb (217.582 nm)	5.0114	0.25	9027.3455
	Continuing Calibration Verification	Se (196.026 nm)	0.4918	1.66	319.3090
	Continuing Calibration Verification	Si (252.851 nm)	9.9939	0.34	31902.4447
	Continuing Calibration Verification	Sn (189.925 nm)	4.9486	0.11	11688.5028
	Continuing Calibration Verification	Sr (216.596 nm)	2.4728	0.03	40737.1236
	Continuing Calibration Verification	Ti (336.122 nm)	2.5454	0.15	330151.2911
	Continuing Calibration Verification	Tl (190.794 nm)	0.9819	0.51	789.6754
	Continuing Calibration Verification	V (292.401 nm)	2.5248	0.05	91317.2641
	Continuing Calibration Verification	Y (360.074 nm)	0.98	0.52	530547.80
	Continuing Calibration Verification	Y_R (360.074 nm)	0.98	0.52	529383.33
	Continuing Calibration Verification	Zn (213.857 nm)	0.9783	0.18	54281.3916
6/4/2024 18:37:08	Continuing Calibration Blank	Ag (328.068 nm)	-0.0001 u	> 100.00	-250.5942
	Continuing Calibration Blank	Al (237.312 nm)	0.0034	42.58	43.4617
	Continuing Calibration Blank	As (188.980 nm)	0.0014 u	> 100.00	-7.0929
	Continuing Calibration Blank	B (249.772 nm)	0.0006	49.89	62.9693
	Continuing Calibration Blank	Ba (230.424 nm)	0.0010	28.35	12.1546
	Continuing Calibration Blank	Be (313.107 nm)	0.0000	43.65	164.0620
	Continuing Calibration Blank	Ca (317.933 nm)	0.0022	17.33	2859.4969
	Continuing Calibration Blank	Cd (214.439 nm)	0.0001	47.14	9.8148
	Continuing Calibration Blank	Co (230.786 nm)	0.0002 u	> 100.00	-35.4089
	Continuing Calibration Blank	Cr (267.716 nm)	0.0002	10.65	120.3542
	Continuing Calibration Blank	Cu (327.395 nm)	0.0003	27.33	49.9974
	Continuing Calibration Blank	Fe (234.350 nm)	0.0013	60.78	52.2923
	Continuing Calibration Blank	K (766.491 nm)	0.0017 u	> 100.00	-275.0133
	Continuing Calibration Blank	Mg (279.078 nm)	0.0012	16.37	-52.5679
	Continuing Calibration Blank	Mn (257.610 nm)	0.0000	60.29	36.8009
	Continuing Calibration Blank	Mo (202.032 nm)	0.0047	19.09	1.5670
	Continuing Calibration Blank	Na (588.995 nm)	0.0265	10.34	-6528.1605
	Continuing Calibration Blank	Ni (230.299 nm)	0.0001 u	> 100.00	58.8937
	Continuing Calibration Blank	Pb (220.353 nm)	0.0003 u	> 100.00	5.7200
	Continuing Calibration Blank	Sb (217.582 nm)	0.0089	18.08	21.7394
	Continuing Calibration Blank	Se (196.026 nm)	-0.0007 u	> 100.00	2.2378
	Continuing Calibration Blank	Si (252.851 nm)	0.0031	62.44	2.5781
	Continuing Calibration Blank	Sn (189.925 nm)	0.0010	> 100.00	9.7490
	Continuing Calibration Blank	Sr (216.596 nm)	0.0003	24.28	-26.1595
	Continuing Calibration Blank	Ti (336.122 nm)	0.0021	52.59	353.3366

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Blank	Tl (190.794 nm)	0.0019 u	> 100.00	-0.6830
	Continuing Calibration Blank	V (292.401 nm)	0.0002	7.59	-17.6301
	Continuing Calibration Blank	Y (360.074 nm)	1.01	0.52	545930.02
	Continuing Calibration Blank	Y_R (360.074 nm)	1.01	0.52	544641.75
	Continuing Calibration Blank	Zn (213.857 nm)	0.0001	> 100.00	-21.9073
6/4/2024 18:40:22	R2404639-003	Ag (328.068 nm)	0.0001	66.72	-240.8256
	R2404639-003	Al (237.312 nm)	0.1423	1.06	337.1290
	R2404639-003	As (188.980 nm)	0.0015 u	> 100.00	-7.0528
	R2404639-003	B (249.772 nm)	0.0197	1.05	616.6555
	R2404639-003	Ba (230.424 nm)	0.1188	0.26	4626.9292
	R2404639-003	Be (313.107 nm)	0.0000	13.40	196.7997
	R2404639-003	Ca (317.933 nm)	48.9781	0.05	1701235.0855
	R2404639-003	Cd (214.439 nm)	0.0003	7.33	18.5245
	R2404639-003	Co (230.786 nm)	0.0002 u	> 100.00	-35.7722
	R2404639-003	Cr (267.716 nm)	0.0009	11.41	150.3140
	R2404639-003	Cu (327.395 nm)	0.0034	5.27	169.5644
	R2404639-003	Fe (234.350 nm)	0.4286	0.05	7622.4634
	R2404639-003	K (766.491 nm)	2.1345	2.98	1941.7412
	R2404639-003	Mg (279.078 nm)	12.3650	0.18	36270.6518
	R2404639-003	Mn (257.610 nm)	0.2434	0.10	73651.1978
	R2404639-003	Mo (202.032 nm)	0.0019	46.92	-12.1254
	R2404639-003	Na (588.995 nm)	27.7509	0.35	240457.8380
	R2404639-003	Ni (230.299 nm)	0.0039	8.77	99.2351
	R2404639-003	Pb (220.353 nm)	0.0013	24.82	10.6871
	R2404639-003	Sb (217.582 nm)	0.0095	19.28	22.8670
	R2404639-003	Se (196.026 nm)	-0.0017 u	> 100.00	1.6228
	R2404639-003	Si (252.851 nm)	2.2338	0.12	7124.9098
	R2404639-003	Sn (189.925 nm)	0.0018	28.37	11.7250
	R2404639-003	Sr (216.596 nm)	0.2979	0.10	4880.3401
	R2404639-003	Ti (336.122 nm)	0.0041	9.15	614.1043
	R2404639-003	Tl (190.794 nm)	0.0005 u	> 100.00	-1.7983
	R2404639-003	V (292.401 nm)	0.0010	9.50	10.9276
	R2404639-003	Y (360.074 nm)	0.99	0.53	536760.74
	R2404639-003	Y_R (360.074 nm)	0.99	0.53	535559.20
	R2404639-003	Zn (213.857 nm)	0.0078	0.46	406.8821
6/4/2024 18:43:36	R2404639-004	Ag (328.068 nm)	0.0002	37.06	-236.8613
	R2404639-004	Al (237.312 nm)	0.4377	0.33	961.8965
	R2404639-004	As (188.980 nm)	-0.0001 u	> 100.00	-9.1411
	R2404639-004	B (249.772 nm)	0.0132	1.62	427.6545
	R2404639-004	Ba (230.424 nm)	0.1166	0.27	4543.5276
	R2404639-004	Be (313.107 nm)	0.0000	38.33	184.7700
	R2404639-004	Ca (317.933 nm)	56.6229 o	0.20	1966338.3190
	R2404639-004	Cd (214.439 nm)	0.0002	21.38	16.3188
	R2404639-004	Co (230.786 nm)	0.0003	45.44	-34.3342
	R2404639-004	Cr (267.716 nm)	0.0012	8.95	162.0498
	R2404639-004	Cu (327.395 nm)	0.0016	22.35	100.3652
	R2404639-004	Fe (234.350 nm)	0.8396	0.26	14903.2865
	R2404639-004	K (766.491 nm)	1.3969	2.26	1175.1115
	R2404639-004	Mg (279.078 nm)	12.6982	0.19	37249.7861
	R2404639-004	Mn (257.610 nm)	0.2410	0.21	72922.1334
	R2404639-004	Mo (202.032 nm)	0.0010	46.92	-16.2023
	R2404639-004	Na (588.995 nm)	7.9026	0.34	63637.4222
	R2404639-004	Ni (230.299 nm)	0.0000 u	> 100.00	57.4379
	R2404639-004	Pb (220.353 nm)	0.0012	54.61	10.3980
	R2404639-004	Sb (217.582 nm)	0.0057	2.74	15.9916
	R2404639-004	Se (196.026 nm)	0.0019	> 100.00	3.8963
	R2404639-004	Si (252.851 nm)	3.3207	0.20	10595.5042

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404639-004	Sn (189.925 nm)	0.0006	37.47	8.8162
	R2404639-004	Sr (216.596 nm)	0.1975	0.36	3225.9361
	R2404639-004	Ti (336.122 nm)	0.0112	1.53	1535.1924
	R2404639-004	Tl (190.794 nm)	0.0004	> 100.00	-1.8973
	R2404639-004	V (292.401 nm)	0.0010	13.67	12.9656
	R2404639-004	Y (360.074 nm)	0.99	0.23	538346.45
	R2404639-004	Y_R (360.074 nm)	0.99	0.22	537145.67
	R2404639-004	Zn (213.857 nm)	0.0068	0.79	352.7605
6/4/2024 18:46:50	R2404639-005	Ag (328.068 nm)	0.0000 u	> 100.00	-247.0728
	R2404639-005	Al (237.312 nm)	6.5287	2.67	13843.1605
	R2404639-005	As (188.980 nm)	0.0019	> 100.00	-6.4404
	R2404639-005	B (249.772 nm)	1.0943	2.75	31842.0624
	R2404639-005	Ba (230.424 nm)	0.3913	2.68	15306.8463
	R2404639-005	Be (313.107 nm)	0.0002	2.01	365.4250
	R2404639-005	Ca (317.933 nm)	118.3288 o	2.72	4106162.9518
	R2404639-005	Cd (214.439 nm)	0.0005	13.83	28.1551
	R2404639-005	Co (230.786 nm)	0.0022	21.54	-8.0755
	R2404639-005	Cr (267.716 nm)	0.0078	2.11	430.6327
	R2404639-005	Cu (327.395 nm)	0.0143	0.76	595.8734
	R2404639-005	Fe (234.350 nm)	5.5181	2.68	97790.8094
	R2404639-005	K (766.491 nm)	43.2383	2.78	44663.4980
	R2404639-005	Mg (279.078 nm)	33.4434	2.71	98196.3690
	R2404639-005	Mn (257.610 nm)	0.4518	2.75	136700.1115
	R2404639-005	Mo (202.032 nm)	0.0026	24.23	-8.7524
	R2404639-005	Na (588.995 nm)	162.9526 o	2.94	1444917.9402
	R2404639-005	Ni (230.299 nm)	0.0090	6.68	153.5555
	R2404639-005	Pb (220.353 nm)	0.0021	79.11	14.2785
	R2404639-005	Sb (217.582 nm)	0.0047	46.44	14.1373
	R2404639-005	Se (196.026 nm)	-0.0012 u	> 100.00	1.9316
	R2404639-005	Si (252.851 nm)	16.6487	2.54	53150.6054
	R2404639-005	Sn (189.925 nm)	0.0021	41.13	12.3131
	R2404639-005	Sr (216.596 nm)	1.8084	2.68	29783.6375
	R2404639-005	Ti (336.122 nm)	0.2544	2.78	33071.2280
	R2404639-005	Tl (190.794 nm)	0.0024	44.64	-0.3147
	R2404639-005	V (292.401 nm)	0.0100	2.54	336.2993
	R2404639-005	Y (360.074 nm)	0.93	2.84	504495.34
	R2404639-005	Y_R (360.074 nm)	0.93	2.83	503401.88
	R2404639-005	Zn (213.857 nm)	0.0202	2.37	1093.7711
6/4/2024 18:50:05	R2404639-006	Ag (328.068 nm)	0.0001	44.42	-241.6716
	R2404639-006	Al (237.312 nm)	0.0528	2.75	147.8967
	R2404639-006	As (188.980 nm)	-0.0004 u	> 100.00	-9.5597
	R2404639-006	B (249.772 nm)	0.0134	0.55	433.5505
	R2404639-006	Ba (230.424 nm)	1.0841	0.85	42457.8388
	R2404639-006	Be (313.107 nm)	0.0000	31.59	184.3142
	R2404639-006	Ca (317.933 nm)	134.5638 o	0.68	4669157.5011
	R2404639-006	Cd (214.439 nm)	0.0003	15.27	19.2385
	R2404639-006	Co (230.786 nm)	0.0001	45.58	-36.9253
	R2404639-006	Cr (267.716 nm)	0.0009	12.65	148.4686
	R2404639-006	Cu (327.395 nm)	0.0037	5.79	180.4366
	R2404639-006	Fe (234.350 nm)	0.3532	0.61	6286.5414
	R2404639-006	K (766.491 nm)	1.4158	2.25	1194.7344
	R2404639-006	Mg (279.078 nm)	38.4732	0.70	112973.1965
	R2404639-006	Mn (257.610 nm)	1.7499 o	0.65	529383.0703
	R2404639-006	Mo (202.032 nm)	0.0007	49.77	-18.0284
	R2404639-006	Na (588.995 nm)	48.6882	1.02	426980.6052
	R2404639-006	Ni (230.299 nm)	-0.0006 u	> 100.00	51.4481
	R2404639-006	Pb (220.353 nm)	0.0013	66.53	10.8389

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404639-006	Sb (217.582 nm)	0.0023 u	> 100.00	9.8386
	R2404639-006	Se (196.026 nm)	0.0012 u	> 100.00	3.4533
	R2404639-006	Si (252.851 nm)	8.3450	0.90	26637.7919
	R2404639-006	Sn (189.925 nm)	0.0016	36.93	11.2350
	R2404639-006	Sr (216.596 nm)	0.3970	0.71	6514.9121
	R2404639-006	Ti (336.122 nm)	0.0058	3.26	844.3174
	R2404639-006	Tl (190.794 nm)	0.0017	72.62	-0.8927
	R2404639-006	V (292.401 nm)	0.0005	33.93	-5.8402
	R2404639-006	Y (360.074 nm)	0.96	0.56	521242.04
	R2404639-006	Y_R (360.074 nm)	0.96	0.56	520057.30
	R2404639-006	Zn (213.857 nm)	0.0055	1.02	279.4715
6/4/2024 18:53:19	R2404647-002	Ag (328.068 nm)	0.0002	22.96	-238.4471
	R2404647-002	Al (237.312 nm)	0.1198	0.44	289.5305
	R2404647-002	As (188.980 nm)	0.0275	10.19	28.7075
	R2404647-002	B (249.772 nm)	1.0587	0.22	30807.9272
	R2404647-002	Ba (230.424 nm)	0.1994	0.23	7787.6290
	R2404647-002	Be (313.107 nm)	0.0000	63.74	185.7288
	R2404647-002	Ca (317.933 nm)	136.3615 o	0.12	4731496.1462
	R2404647-002	Cd (214.439 nm)	0.0005	19.78	31.0612
	R2404647-002	Co (230.786 nm)	0.0050	4.68	32.8824
	R2404647-002	Cr (267.716 nm)	0.0164	0.95	779.0156
	R2404647-002	Cu (327.395 nm)	0.7895	0.43	30789.7447
	R2404647-002	Fe (234.350 nm)	14.3595 o	0.12	254430.1741
	R2404647-002	K (766.491 nm)	49.2276	0.27	50888.5017
	R2404647-002	Mg (279.078 nm)	22.3033	0.15	65468.1576
	R2404647-002	Mn (257.610 nm)	10.7044 o LR	0.11	3238133.1645
	R2404647-002	Mo (202.032 nm)	0.0007	74.35	-17.7018
	R2404647-002	Na (588.995 nm)	192.4097 o	0.52	1707340.0166
	R2404647-002	Ni (230.299 nm)	0.0243	2.71	317.1461
	R2404647-002	Pb (220.353 nm)	0.0700	2.12	338.7276
	R2404647-002	Sb (217.582 nm)	0.0036	28.48	12.2763
	R2404647-002	Se (196.026 nm)	0.0088	8.49	8.3346
	R2404647-002	Si (252.851 nm)	5.6266	0.12	17958.0897
	R2404647-002	Sn (189.925 nm)	0.0282	1.51	73.9789
	R2404647-002	Sr (216.596 nm)	0.3684	0.13	6043.1461
	R2404647-002	Ti (336.122 nm)	0.0068	1.74	962.5192
	R2404647-002	Tl (190.794 nm)	0.0034	68.62	0.4861
	R2404647-002	V (292.401 nm)	0.0069	3.38	226.1552
	R2404647-002	Y (360.074 nm)	0.94	0.51	510223.14
	R2404647-002	Y_R (360.074 nm)	0.94	0.51	509113.68
	R2404647-002	Zn (213.857 nm)	0.4447	0.15	24664.0691
6/4/2024 18:56:33	R2404647-003	Ag (328.068 nm)	0.0003	34.75	-229.3293
	R2404647-003	Al (237.312 nm)	1.6240	0.33	3470.5602
	R2404647-003	As (188.980 nm)	0.0630	2.96	77.5064
	R2404647-003	B (249.772 nm)	4.8841	0.10	141962.8351
	R2404647-003	Ba (230.424 nm)	0.4725	0.15	18488.2688
	R2404647-003	Be (313.107 nm)	0.0001	8.88	265.9653
	R2404647-003	Ca (317.933 nm)	211.3111 o	0.20	7330582.7762
	R2404647-003	Cd (214.439 nm)	0.0012	3.76	66.7281
	R2404647-003	Co (230.786 nm)	0.0095	2.52	96.6790
	R2404647-003	Cr (267.716 nm)	0.0948	0.38	3972.5840
	R2404647-003	Cu (327.395 nm)	0.4722	0.16	18429.8369
	R2404647-003	Fe (234.350 nm)	40.1378 o	0.15	711131.8933
	R2404647-003	K (766.491 nm)	261.9652 o LR	0.25	272000.0827
	R2404647-003	Mg (279.078 nm)	60.8258 o	0.18	178642.3889
	R2404647-003	Mn (257.610 nm)	3.5291 o	0.10	1067588.6551
	R2404647-003	Mo (202.032 nm)	0.0036	13.36	-3.4909

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404647-003	Na (588.995 nm)	603.2410 o LR	0.46	5367278.7858
	R2404647-003	Ni (230.299 nm)	0.1022	1.35	1147.9394
	R2404647-003	Pb (220.353 nm)	0.0481	1.32	234.0474
	R2404647-003	Sb (217.582 nm)	0.0085	8.00	21.0826
	R2404647-003	Se (196.026 nm)	0.0033	78.67	4.7921
	R2404647-003	Si (252.851 nm)	11.3215	0.21	36141.4145
	R2404647-003	Sn (189.925 nm)	0.0175	3.95	48.6468
	R2404647-003	Sr (216.596 nm)	0.8640	0.12	14213.3094
	R2404647-003	Ti (336.122 nm)	0.0463	4.57	6090.2865
	R2404647-003	Tl (190.794 nm)	0.0032 u	> 100.00	0.3916
	R2404647-003	V (292.401 nm)	0.0230	1.52	807.9086
	R2404647-003	Y (360.074 nm)	0.88	0.35	477683.75
	R2404647-003	Y_R (360.074 nm)	0.88	0.35	476672.58
	R2404647-003	Zn (213.857 nm)	0.2269	0.27	12571.4571
6/4/2024 18:59:47	R2404647-004	Ag (328.068 nm)	0.0001 u	> 100.00	-242.6869
	R2404647-004	Al (237.312 nm)	0.2884	0.79	646.2125
	R2404647-004	As (188.980 nm)	0.0161	17.22	13.0551
	R2404647-004	B (249.772 nm)	4.3025	0.10	125062.8362
	R2404647-004	Ba (230.424 nm)	0.2957	0.06	11560.2021
	R2404647-004	Be (313.107 nm)	0.0001	18.54	214.0046
	R2404647-004	Ca (317.933 nm)	184.9653 o	0.11	6416970.1854
	R2404647-004	Cd (214.439 nm)	0.0006	6.10	32.6947
	R2404647-004	Co (230.786 nm)	0.0070	3.19	61.1893
	R2404647-004	Cr (267.716 nm)	0.0502	0.60	2157.2822
	R2404647-004	Cu (327.395 nm)	0.0375	0.70	1498.6732
	R2404647-004	Fe (234.350 nm)	4.4056	0.07	78080.7263
	R2404647-004	K (766.491 nm)	197.9709 o LR	0.27	205486.7873
	R2404647-004	Mg (279.078 nm)	58.1719 o	0.06	170845.6646
	R2404647-004	Mn (257.610 nm)	2.9282 o	0.07	885800.5098
	R2404647-004	Mo (202.032 nm)	0.0026	11.33	-8.3808
	R2404647-004	Na (588.995 nm)	490.9160 o LR	0.37	4366618.3485
	R2404647-004	Ni (230.299 nm)	0.0720	0.82	826.1365
	R2404647-004	Pb (220.353 nm)	0.0059	19.09	32.7917
	R2404647-004	Sb (217.582 nm)	0.0051	37.91	14.8618
	R2404647-004	Se (196.026 nm)	0.0033	67.78	4.8105
	R2404647-004	Si (252.851 nm)	9.0333	0.16	28835.4498
	R2404647-004	Sn (189.925 nm)	0.0077	11.00	25.5056
	R2404647-004	Sr (216.596 nm)	0.9792	0.01	16112.3255
	R2404647-004	Ti (336.122 nm)	0.0136	3.00	1845.3019
	R2404647-004	Tl (190.794 nm)	0.0026	12.84	-0.1265
	R2404647-004	V (292.401 nm)	0.0078	2.25	257.1752
	R2404647-004	Y (360.074 nm)	0.90	0.43	485799.85
	R2404647-004	Y_R (360.074 nm)	0.90	0.43	484710.36
	R2404647-004	Zn (213.857 nm)	0.0847	0.21	4679.7130
6/4/2024 19:03:01	R2404647-005	Ag (328.068 nm)	0.0000 u	> 100.00	-246.0424
	R2404647-005	Al (237.312 nm)	3.5612	0.87	7567.5171
	R2404647-005	As (188.980 nm)	0.0040	23.64	-3.4986
	R2404647-005	B (249.772 nm)	0.0246	1.77	759.7715
	R2404647-005	Ba (230.424 nm)	0.0406	0.29	1565.1308
	R2404647-005	Be (313.107 nm)	0.0001	5.17	258.1978
	R2404647-005	Ca (317.933 nm)	33.5117	0.06	1164896.4538
	R2404647-005	Cd (214.439 nm)	0.0003	25.42	16.7449
	R2404647-005	Co (230.786 nm)	0.0013	3.24	-19.8959
	R2404647-005	Cr (267.716 nm)	0.0057	1.89	343.0576
	R2404647-005	Cu (327.395 nm)	0.0277	0.30	1115.9534
	R2404647-005	Fe (234.350 nm)	2.9629	0.04	52520.7531
	R2404647-005	K (766.491 nm)	3.9543	2.07	3833.1750

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404647-005	Mg (279.078 nm)	2.7894	0.08	8138.7131
	R2404647-005	Mn (257.610 nm)	0.1480	0.06	44778.1315
	R2404647-005	Mo (202.032 nm)	0.0005	83.64	-18.7174
	R2404647-005	Na (588.995 nm)	1.5980	1.58	7471.8048
	R2404647-005	Ni (230.299 nm)	0.0047	8.05	107.7827
	R2404647-005	Pb (220.353 nm)	0.0042	12.83	24.4098
	R2404647-005	Sb (217.582 nm)	0.0003 u	> 100.00	6.2412
	R2404647-005	Se (196.026 nm)	-0.0007 u	> 100.00	2.2343
	R2404647-005	Si (252.851 nm)	6.9028	1.12	22032.7365
	R2404647-005	Sn (189.925 nm)	0.0007	81.56	9.0233
	R2404647-005	Sr (216.596 nm)	0.0564	0.15	899.3263
	R2404647-005	Ti (336.122 nm)	0.1179	4.43	15370.6927
	R2404647-005	Tl (190.794 nm)	0.0004 u	> 100.00	-1.8901
	R2404647-005	V (292.401 nm)	0.0061	3.30	196.6586
	R2404647-005	Y (360.074 nm)	1.00	0.33	542777.46
	R2404647-005	Y_R (360.074 nm)	1.00	0.34	541432.71
	R2404647-005	Zn (213.857 nm)	0.0421	0.38	2312.0815
6/4/2024 19:06:15	R2404647-005L 5X	Ag (328.068 nm)	0.0000 u	> 100.00	-246.0399
	R2404647-005L 5X	Al (237.312 nm)	0.7191	2.33	1557.0090
	R2404647-005L 5X	As (188.980 nm)	-0.0007 u	> 100.00	-10.0304
	R2404647-005L 5X	B (249.772 nm)	0.0048	9.04	186.0092
	R2404647-005L 5X	Ba (230.424 nm)	0.0082	1.98	293.1266
	R2404647-005L 5X	Be (313.107 nm)	0.0000	21.00	175.2059
	R2404647-005L 5X	Ca (317.933 nm)	6.9851	2.12	245012.8650
	R2404647-005L 5X	Cd (214.439 nm)	0.0001	48.23	11.4340
	R2404647-005L 5X	Co (230.786 nm)	0.0002	81.84	-36.1015
	R2404647-005L 5X	Cr (267.716 nm)	0.0014	11.69	168.8213
	R2404647-005L 5X	Cu (327.395 nm)	0.0060	6.65	270.1844
	R2404647-005L 5X	Fe (234.350 nm)	0.6145	2.03	10916.0451
	R2404647-005L 5X	K (766.491 nm)	0.8478	3.89	604.4228
	R2404647-005L 5X	Mg (279.078 nm)	0.5808	2.33	1650.3739
	R2404647-005L 5X	Mn (257.610 nm)	0.0308	2.13	9343.0793
	R2404647-005L 5X	Mo (202.032 nm)	-0.0004 u	66.64	-23.1857
	R2404647-005L 5X	Na (588.995 nm)	0.3972	3.55	-3225.9151
	R2404647-005L 5X	Ni (230.299 nm)	0.0017	19.50	75.3742
	R2404647-005L 5X	Pb (220.353 nm)	0.0013	74.05	10.4598
	R2404647-005L 5X	Sb (217.582 nm)	0.0014 u	> 100.00	8.2894
	R2404647-005L 5X	Se (196.026 nm)	-0.0008 u	> 100.00	2.1877
	R2404647-005L 5X	Si (252.851 nm)	1.3873	1.88	4422.1510
	R2404647-005L 5X	Sn (189.925 nm)	0.0012	77.77	10.2422
	R2404647-005L 5X	Sr (216.596 nm)	0.0114	1.09	158.1541
	R2404647-005L 5X	Ti (336.122 nm)	0.0217	7.17	2903.6566
	R2404647-005L 5X	Tl (190.794 nm)	-0.0003 u	> 100.00	-2.4991
	R2404647-005L 5X	V (292.401 nm)	0.0012	14.66	16.9353
	R2404647-005L 5X	Y (360.074 nm)	0.99	2.00	537749.00
	R2404647-005L 5X	Y_R (360.074 nm)	0.99	2.00	536377.91
	R2404647-005L 5X	Zn (213.857 nm)	0.0088	2.90	466.2267
6/4/2024 19:09:29	R2404677-001 10X	Ag (328.068 nm)	-0.0003 u	16.35	-259.9231
	R2404677-001 10X	Al (237.312 nm)	0.0308	4.00	101.3042
	R2404677-001 10X	As (188.980 nm)	0.0455	4.41	53.4680
	R2404677-001 10X	B (249.772 nm)	2.8379	1.85	82506.7722
	R2404677-001 10X	Ba (230.424 nm)	0.1791	1.72	6992.9163
	R2404677-001 10X	Be (313.107 nm)	0.0000	36.55	169.2061
	R2404677-001 10X	Ca (317.933 nm)	22.0506	1.72	767447.6202
	R2404677-001 10X	Cd (214.439 nm)	0.0000 u	> 100.00	5.1950
	R2404677-001 10X	Co (230.786 nm)	0.0044	3.66	24.7088
	R2404677-001 10X	Cr (267.716 nm)	0.0241	2.01	1092.7080

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404677-001 10X	Cu (327.395 nm)	0.0001 u	> 100.00	40.1872
	R2404677-001 10X	Fe (234.350 nm)	0.1356	1.25	2431.0513
	R2404677-001 10X	K (766.491 nm)	232.0457 o LR	1.77	240902.8165
	R2404677-001 10X	Mg (279.078 nm)	26.1757	1.74	76844.8712
	R2404677-001 10X	Mn (257.610 nm)	0.0087	1.69	2641.8087
	R2404677-001 10X	Mo (202.032 nm)	0.0333	2.54	141.6645
	R2404677-001 10X	Na (588.995 nm)	812.7681 o LR	1.62	7233876.0639
	R2404677-001 10X	Ni (230.299 nm)	0.0269	2.77	344.3913
	R2404677-001 10X	Pb (220.353 nm)	-0.0004 u	> 100.00	2.4326
	R2404677-001 10X	Sb (217.582 nm)	0.0031	35.78	11.2568
	R2404677-001 10X	Se (196.026 nm)	0.0009 u	> 100.00	3.2675
	R2404677-001 10X	Si (252.851 nm)	1.9380	2.73	6180.7192
	R2404677-001 10X	Sn (189.925 nm)	0.0024	30.64	13.1101
	R2404677-001 10X	Sr (216.596 nm)	0.3668	1.65	6017.4086
	R2404677-001 10X	Ti (336.122 nm)	0.0134	2.38	1818.6187
	R2404677-001 10X	Tl (190.794 nm)	0.0009	90.57	-1.4755
	R2404677-001 10X	V (292.401 nm)	0.0139	0.98	478.9290
	R2404677-001 10X	Y (360.074 nm)	0.88	0.42	475564.46
	R2404677-001 10X	Y_R (360.074 nm)	0.88	0.42	474488.63
	R2404677-001 10X	Zn (213.857 nm)	0.0106	1.87	562.5056
6/4/2024 19:12:43	Continuing Calibration Verification	Ag (328.068 nm)	0.4989	0.05	25547.3430
	Continuing Calibration Verification	Al (237.312 nm)	9.8500	0.06	20866.8461
	Continuing Calibration Verification	As (188.980 nm)	0.9781	0.34	1334.2015
	Continuing Calibration Verification	B (249.772 nm)	2.5039	0.06	72801.7179
	Continuing Calibration Verification	Ba (230.424 nm)	10.0511	0.16	393864.0363
	Continuing Calibration Verification	Be (313.107 nm)	0.2396	0.16	244512.0003
	Continuing Calibration Verification	Ca (317.933 nm)	25.7684	0.15	896373.7008
	Continuing Calibration Verification	Cd (214.439 nm)	0.4891	0.15	25077.3887
	Continuing Calibration Verification	Co (230.786 nm)	2.4750	0.34	35424.6250
	Continuing Calibration Verification	Cr (267.716 nm)	0.4949	0.20	20260.6064
	Continuing Calibration Verification	Cu (327.395 nm)	1.2269	0.37	47827.4619
	Continuing Calibration Verification	Fe (234.350 nm)	4.9530	0.14	87778.1129
	Continuing Calibration Verification	K (766.491 nm)	24.6696	0.50	25363.8789
	Continuing Calibration Verification	Mg (279.078 nm)	25.1861	0.10	73937.6457
	Continuing Calibration Verification	Mn (257.610 nm)	0.7320	0.13	221462.8457
	Continuing Calibration Verification	Mo (202.032 nm)	2.5754	0.22	12570.0160
	Continuing Calibration Verification	Na (588.995 nm)	25.5301	0.34	220673.8278
	Continuing Calibration Verification	Ni (230.299 nm)	2.0296	0.11	21725.3476
	Continuing Calibration Verification	Pb (220.353 nm)	0.5068	0.22	2425.0060
	Continuing Calibration Verification	Sb (217.582 nm)	4.9707	0.08	8954.1739
	Continuing Calibration Verification	Se (196.026 nm)	0.4915	0.46	319.1183
	Continuing Calibration Verification	Si (252.851 nm)	10.0782	0.44	32171.7131
	Continuing Calibration Verification	Sn (189.925 nm)	4.9260	0.09	11635.2741
	Continuing Calibration Verification	Sr (216.596 nm)	2.4576	0.22	40485.2672
	Continuing Calibration Verification	Ti (336.122 nm)	2.5245	0.10	327439.8788
	Continuing Calibration Verification	Tl (190.794 nm)	0.9868	0.18	793.6337
	Continuing Calibration Verification	V (292.401 nm)	2.5053	0.12	90613.5632
	Continuing Calibration Verification	Y (360.074 nm)	0.97	0.67	527349.00
	Continuing Calibration Verification	Y_R (360.074 nm)	0.97	0.67	526002.31
	Continuing Calibration Verification	Zn (213.857 nm)	0.9739	0.23	54038.2299
6/4/2024 19:15:57	Continuing Calibration Blank	Ag (328.068 nm)	0.0001 u	> 100.00	-240.0690
	Continuing Calibration Blank	Al (237.312 nm)	0.0049	32.90	46.5704
	Continuing Calibration Blank	As (188.980 nm)	0.0000 u	> 100.00	-9.0428
	Continuing Calibration Blank	B (249.772 nm)	0.0013	34.54	83.6484
	Continuing Calibration Blank	Ba (230.424 nm)	0.0006	15.45	-5.0881
	Continuing Calibration Blank	Be (313.107 nm)	0.0000	84.23	169.5071
	Continuing Calibration Blank	Ca (317.933 nm)	0.0010	17.87	2818.4326

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Blank	Cd (214.439 nm)	0.0001	68.12	8.1552
	Continuing Calibration Blank	Co (230.786 nm)	0.0000 u	> 100.00	-38.5619
	Continuing Calibration Blank	Cr (267.716 nm)	0.0001 u	> 100.00	117.9151
	Continuing Calibration Blank	Cu (327.395 nm)	0.0002 u	> 100.00	44.7389
	Continuing Calibration Blank	Fe (234.350 nm)	0.0012	53.49	49.9634
	Continuing Calibration Blank	K (766.491 nm)	0.1797	19.73	-90.0004
	Continuing Calibration Blank	Mg (279.078 nm)	0.0010	71.74	-53.0433
	Continuing Calibration Blank	Mn (257.610 nm)	0.0001	3.70	37.2551
	Continuing Calibration Blank	Mo (202.032 nm)	0.0045	43.91	0.5798
	Continuing Calibration Blank	Na (588.995 nm)	0.1336	6.72	-5574.1993
	Continuing Calibration Blank	Ni (230.299 nm)	0.0003	> 100.00	60.8956
	Continuing Calibration Blank	Pb (220.353 nm)	-0.0009 u	10.79	0.1874
	Continuing Calibration Blank	Sb (217.582 nm)	0.0075	12.50	19.2049
	Continuing Calibration Blank	Se (196.026 nm)	0.0004 u	> 100.00	2.9464
	Continuing Calibration Blank	Si (252.851 nm)	0.0220	11.52	62.8685
	Continuing Calibration Blank	Sn (189.925 nm)	0.0011	34.62	10.0415
	Continuing Calibration Blank	Sr (216.596 nm)	-0.0001 u	> 100.00	-32.7695
	Continuing Calibration Blank	Ti (336.122 nm)	0.0020	50.99	348.7791
	Continuing Calibration Blank	Tl (190.794 nm)	0.0002 u	> 100.00	-2.0317
	Continuing Calibration Blank	V (292.401 nm)	0.0003	43.05	-13.5939
	Continuing Calibration Blank	Y (360.074 nm)	1.00	0.56	542201.82
	Continuing Calibration Blank	Y_R (360.074 nm)	1.00	0.56	540780.48
	Continuing Calibration Blank	Zn (213.857 nm)	0.0000 u	> 100.00	-24.2476
6/4/2024 19:19:11	R2404647-002 20X	Ag (328.068 nm)	0.0001	68.53	-239.3210
	R2404647-002 20X	Al (237.312 nm)	0.0078	8.63	52.6810
	R2404647-002 20X	As (188.980 nm)	-0.0001 u	> 100.00	-9.1200
	R2404647-002 20X	B (249.772 nm)	0.0525	0.07	1572.2717
	R2404647-002 20X	Ba (230.424 nm)	0.0103	0.53	375.2378
	R2404647-002 20X	Be (313.107 nm)	0.0000 u	> 100.00	153.5198
	R2404647-002 20X	Ca (317.933 nm)	7.2062	0.29	252677.3410
	R2404647-002 20X	Cd (214.439 nm)	0.0001 u	> 100.00	6.8004
	R2404647-002 20X	Co (230.786 nm)	0.0002 u	> 100.00	-35.8776
	R2404647-002 20X	Cr (267.716 nm)	0.0011	0.29	156.3542
	R2404647-002 20X	Cu (327.395 nm)	0.0389	0.42	1553.2676
	R2404647-002 20X	Fe (234.350 nm)	0.7421	0.34	13175.6403
	R2404647-002 20X	K (766.491 nm)	2.3295	0.72	2144.4433
	R2404647-002 20X	Mg (279.078 nm)	1.1610	0.22	3354.9497
	R2404647-002 20X	Mn (257.610 nm)	0.5725	0.29	173198.9889
	R2404647-002 20X	Mo (202.032 nm)	0.0005 u	> 100.00	-18.6374
	R2404647-002 20X	Na (588.995 nm)	9.7096	0.51	79734.9226
	R2404647-002 20X	Ni (230.299 nm)	0.0017	28.35	75.4406
	R2404647-002 20X	Pb (220.353 nm)	0.0032	46.18	19.7203
	R2404647-002 20X	Sb (217.582 nm)	0.0023	49.25	9.9564
	R2404647-002 20X	Se (196.026 nm)	0.0003 u	> 100.00	2.8692
	R2404647-002 20X	Si (252.851 nm)	0.3089	0.28	979.0759
	R2404647-002 20X	Sn (189.925 nm)	0.0014	24.47	10.6455
	R2404647-002 20X	Sr (216.596 nm)	0.0192	0.59	285.9861
	R2404647-002 20X	Ti (336.122 nm)	0.0006	54.54	166.3748
	R2404647-002 20X	Tl (190.794 nm)	0.0037	6.07	0.7838
	R2404647-002 20X	V (292.401 nm)	0.0003	77.85	-12.5219
	R2404647-002 20X	Y (360.074 nm)	1.00	0.49	540061.98
	R2404647-002 20X	Y_R (360.074 nm)	1.00	0.49	538601.43
	R2404647-002 20X	Zn (213.857 nm)	0.0228	0.61	1242.1204
6/4/2024 19:22:24	R2404647-003 20X	Ag (328.068 nm)	0.0002 u	> 100.00	-238.2341
	R2404647-003 20X	Al (237.312 nm)	0.0774	4.39	199.8543
	R2404647-003 20X	As (188.980 nm)	0.0038	5.01	-3.7682
	R2404647-003 20X	B (249.772 nm)	0.2268	2.58	6636.8766

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404647-003 20X	Ba (230.424 nm)	0.0235	2.41	893.2227
	R2404647-003 20X	Be (313.107 nm)	0.0000 u	> 100.00	150.8347
	R2404647-003 20X	Ca (317.933 nm)	11.0528	2.62	386069.6517
	R2404647-003 20X	Cd (214.439 nm)	0.0002	61.72	12.6613
	R2404647-003 20X	Co (230.786 nm)	0.0006	27.65	-30.0426
	R2404647-003 20X	Cr (267.716 nm)	0.0049	5.75	312.1978
	R2404647-003 20X	Cu (327.395 nm)	0.0220	2.81	894.9735
	R2404647-003 20X	Fe (234.350 nm)	2.0258	2.74	35918.9719
	R2404647-003 20X	K (766.491 nm)	11.3113	2.52	11479.7297
	R2404647-003 20X	Mg (279.078 nm)	3.0455	2.69	8891.1060
	R2404647-003 20X	Mn (257.610 nm)	0.1767	2.74	53485.0637
	R2404647-003 20X	Mo (202.032 nm)	0.0003 u	> 100.00	-19.7145
	R2404647-003 20X	Na (588.995 nm)	32.1847	2.60	279956.6954
	R2404647-003 20X	Ni (230.299 nm)	0.0054	10.29	115.1818
	R2404647-003 20X	Pb (220.353 nm)	0.0026	17.24	16.8948
	R2404647-003 20X	Sb (217.582 nm)	0.0027	52.43	10.6086
	R2404647-003 20X	Se (196.026 nm)	-0.0002 u	> 100.00	2.5361
	R2404647-003 20X	Si (252.851 nm)	0.5497	2.42	1747.7268
	R2404647-003 20X	Sn (189.925 nm)	0.0020	25.81	11.9749
	R2404647-003 20X	Sr (216.596 nm)	0.0437	2.03	690.1330
	R2404647-003 20X	Ti (336.122 nm)	0.0023	21.85	382.2770
	R2404647-003 20X	Tl (190.794 nm)	0.0008 u	> 100.00	-1.6060
	R2404647-003 20X	V (292.401 nm)	0.0008	5.16	5.6994
	R2404647-003 20X	Y (360.074 nm)	1.00	2.46	540980.85
	R2404647-003 20X	Y_R (360.074 nm)	1.00	2.47	539558.30
	R2404647-003 20X	Zn (213.857 nm)	0.0111	2.36	589.1418
6/4/2024 19:25:39	R2404647-004 20X	Ag (328.068 nm)	0.0001 u	> 100.00	-240.5328
	R2404647-004 20X	Al (237.312 nm)	0.0165	4.04	71.1022
	R2404647-004 20X	As (188.980 nm)	0.0008 u	> 100.00	-8.0126
	R2404647-004 20X	B (249.772 nm)	0.2003	0.02	5865.7261
	R2404647-004 20X	Ba (230.424 nm)	0.0148	0.35	551.5377
	R2404647-004 20X	Be (313.107 nm)	0.0000 u	> 100.00	161.1770
	R2404647-004 20X	Ca (317.933 nm)	9.6222	0.23	336461.2973
	R2404647-004 20X	Cd (214.439 nm)	0.0001 u	> 100.00	6.6350
	R2404647-004 20X	Co (230.786 nm)	0.0008	20.25	-27.9586
	R2404647-004 20X	Cr (267.716 nm)	0.0028	3.06	226.6149
	R2404647-004 20X	Cu (327.395 nm)	0.0020	8.01	116.6767
	R2404647-004 20X	Fe (234.350 nm)	0.2218	0.13	3958.9716
	R2404647-004 20X	K (766.491 nm)	8.5804	0.76	8641.3473
	R2404647-004 20X	Mg (279.078 nm)	2.9106	0.19	8494.8462
	R2404647-004 20X	Mn (257.610 nm)	0.1474	0.21	44620.4608
	R2404647-004 20X	Mo (202.032 nm)	-0.0001 u	> 100.00	-21.8549
	R2404647-004 20X	Na (588.995 nm)	25.5926	0.44	221230.4076
	R2404647-004 20X	Ni (230.299 nm)	0.0049	8.73	109.3836
	R2404647-004 20X	Pb (220.353 nm)	0.0005	42.49	6.8728
	R2404647-004 20X	Sb (217.582 nm)	0.0007 u	> 100.00	7.0865
	R2404647-004 20X	Se (196.026 nm)	-0.0018 u	> 100.00	1.5308
	R2404647-004 20X	Si (252.851 nm)	0.4455	0.26	1415.0859
	R2404647-004 20X	Sn (189.925 nm)	0.0002 u	> 100.00	7.8311
	R2404647-004 20X	Sr (216.596 nm)	0.0496	0.81	787.4650
	R2404647-004 20X	Ti (336.122 nm)	0.0005	40.89	152.6203
	R2404647-004 20X	Tl (190.794 nm)	0.0011	68.40	-1.3414
	R2404647-004 20X	V (292.401 nm)	0.0002 u	> 100.00	-16.0371
	R2404647-004 20X	Y (360.074 nm)	0.99	0.41	535554.29
	R2404647-004 20X	Y_R (360.074 nm)	0.99	0.41	534140.19
	R2404647-004 20X	Zn (213.857 nm)	0.0042	1.18	207.6989
6/4/2024 19:28:53	R2404647-005 20X	Ag (328.068 nm)	0.0001 u	> 100.00	-243.7714

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404647-005 20X	Al (237.312 nm)	0.1857	1.96	428.9252
	R2404647-005 20X	As (188.980 nm)	-0.0006 u	> 100.00	-9.8729
	R2404647-005 20X	B (249.772 nm)	0.0006	52.34	61.8180
	R2404647-005 20X	Ba (230.424 nm)	0.0021	4.51	53.3759
	R2404647-005 20X	Be (313.107 nm)	0.0000 u	> 100.00	155.1312
	R2404647-005 20X	Ca (317.933 nm)	1.7464	0.28	63343.5066
	R2404647-005 20X	Cd (214.439 nm)	0.0001	13.23	10.4762
	R2404647-005 20X	Co (230.786 nm)	0.0000 u	> 100.00	-38.4239
	R2404647-005 20X	Cr (267.716 nm)	0.0005	32.95	133.6140
	R2404647-005 20X	Cu (327.395 nm)	0.0014	21.06	92.7575
	R2404647-005 20X	Fe (234.350 nm)	0.1534	0.17	2745.9492
	R2404647-005 20X	K (766.491 nm)	0.2536	13.10	-13.1924
	R2404647-005 20X	Mg (279.078 nm)	0.1451	0.85	370.1577
	R2404647-005 20X	Mn (257.610 nm)	0.0077	0.49	2338.1819
	R2404647-005 20X	Mo (202.032 nm)	-0.0003 u	89.90	-22.7308
	R2404647-005 20X	Na (588.995 nm)	0.1430	2.06	-5490.2939
	R2404647-005 20X	Ni (230.299 nm)	0.0006 u	> 100.00	63.9151
	R2404647-005 20X	Pb (220.353 nm)	0.0005 u	> 100.00	6.8695
	R2404647-005 20X	Sb (217.582 nm)	0.0033	3.77	11.7061
	R2404647-005 20X	Se (196.026 nm)	-0.0017 u	> 100.00	1.5800
	R2404647-005 20X	Si (252.851 nm)	0.3795	0.84	1204.4322
	R2404647-005 20X	Sn (189.925 nm)	0.0005	61.65	8.6554
	R2404647-005 20X	Sr (216.596 nm)	0.0027	6.02	14.0323
	R2404647-005 20X	Ti (336.122 nm)	0.0058	8.45	845.5810
	R2404647-005 20X	Tl (190.794 nm)	-0.0002 u	> 100.00	-2.3631
	R2404647-005 20X	V (292.401 nm)	0.0004	41.89	-9.9464
	R2404647-005 20X	Y (360.074 nm)	1.00	0.60	541995.96
	R2404647-005 20X	Y_R (360.074 nm)	1.00	0.60	540495.59
	R2404647-005 20X	Zn (213.857 nm)	0.0022	1.92	96.5997
6/4/2024 19:32:07	R2404677-001 100X	Ag (328.068 nm)	0.0001 u	> 100.00	-241.9707
	R2404677-001 100X	Al (237.312 nm)	0.0059	58.48	48.6611
	R2404677-001 100X	As (188.980 nm)	0.0032	24.59	-4.5922
	R2404677-001 100X	B (249.772 nm)	0.2521	0.29	7371.9172
	R2404677-001 100X	Ba (230.424 nm)	0.0169	1.08	633.8095
	R2404677-001 100X	Be (313.107 nm)	0.0000 u	> 100.00	146.5416
	R2404677-001 100X	Ca (317.933 nm)	2.1018	0.24	75670.1085
	R2404677-001 100X	Cd (214.439 nm)	0.0001	72.54	7.3079
	R2404677-001 100X	Co (230.786 nm)	0.0005	28.85	-32.0632
	R2404677-001 100X	Cr (267.716 nm)	0.0025	3.67	215.3040
	R2404677-001 100X	Cu (327.395 nm)	0.0003	40.59	50.8531
	R2404677-001 100X	Fe (234.350 nm)	0.0135	1.46	268.7380
	R2404677-001 100X	K (766.491 nm)	19.3490	0.17	19833.8499
	R2404677-001 100X	Mg (279.078 nm)	2.5028	0.27	7296.7161
	R2404677-001 100X	Mn (257.610 nm)	0.0008	1.26	270.6585
	R2404677-001 100X	Mo (202.032 nm)	0.0026	14.26	-8.3889
	R2404677-001 100X	Na (588.995 nm)	88.8290 o	0.50	784579.5945
	R2404677-001 100X	Ni (230.299 nm)	0.0032	10.84	91.4440
	R2404677-001 100X	Pb (220.353 nm)	-0.0003 u	87.51	3.0708
	R2404677-001 100X	Sb (217.582 nm)	0.0010 u	> 100.00	7.5840
	R2404677-001 100X	Se (196.026 nm)	-0.0006 u	> 100.00	2.2828
	R2404677-001 100X	Si (252.851 nm)	0.2095	2.63	661.5026
	R2404677-001 100X	Sn (189.925 nm)	0.0009	78.01	9.4411
	R2404677-001 100X	Sr (216.596 nm)	0.0347	0.68	541.2509
	R2404677-001 100X	Ti (336.122 nm)	0.0010	11.62	221.1255
	R2404677-001 100X	Tl (190.794 nm)	0.0002 u	> 100.00	-2.0950
	R2404677-001 100X	V (292.401 nm)	0.0013	14.65	21.3099
	R2404677-001 100X	Y (360.074 nm)	0.97	0.50	527574.19

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404677-001 100X	Y_R (360.074 nm)	0.97	0.50	526147.05
	R2404677-001 100X	Zn (213.857 nm)	0.0009	3.00	25.6294
6/4/2024 19:35:21	Continuing Calibration Verification	Ag (328.068 nm)	0.4993	0.27	25568.4897
	Continuing Calibration Verification	Al (237.312 nm)	9.8286	0.30	20821.6347
	Continuing Calibration Verification	As (188.980 nm)	0.9796	0.46	1336.1990
	Continuing Calibration Verification	B (249.772 nm)	2.5007	0.14	72707.0460
	Continuing Calibration Verification	Ba (230.424 nm)	9.9991	0.09	391827.6225
	Continuing Calibration Verification	Be (313.107 nm)	0.2393	0.02	244226.7433
	Continuing Calibration Verification	Ca (317.933 nm)	25.6708	0.01	892989.5394
	Continuing Calibration Verification	Cd (214.439 nm)	0.4886	0.08	25049.8501
	Continuing Calibration Verification	Co (230.786 nm)	2.4620	0.35	35238.4436
	Continuing Calibration Verification	Cr (267.716 nm)	0.4937	0.08	20214.5734
	Continuing Calibration Verification	Cu (327.395 nm)	1.2268	0.11	47824.4573
	Continuing Calibration Verification	Fe (234.350 nm)	4.9366	0.09	87488.8286
	Continuing Calibration Verification	K (766.491 nm)	24.4005	0.67	25084.1759
	Continuing Calibration Verification	Mg (279.078 nm)	25.1098	0.11	73713.2723
	Continuing Calibration Verification	Mn (257.610 nm)	0.7304	0.05	220970.0843
	Continuing Calibration Verification	Mo (202.032 nm)	2.5636	0.17	12511.9695
	Continuing Calibration Verification	Na (588.995 nm)	25.4477	0.71	219940.0839
	Continuing Calibration Verification	Ni (230.299 nm)	2.0258	0.07	21684.7449
	Continuing Calibration Verification	Pb (220.353 nm)	0.5046	0.26	2414.4795
	Continuing Calibration Verification	Sb (217.582 nm)	4.9475	0.13	8912.2310
	Continuing Calibration Verification	Se (196.026 nm)	0.4865	1.20	315.8883
	Continuing Calibration Verification	Si (252.851 nm)	9.9533	0.23	31772.9302
	Continuing Calibration Verification	Sn (189.925 nm)	4.9092	0.18	11595.5065
	Continuing Calibration Verification	Sr (216.596 nm)	2.4440	0.07	40261.4024
	Continuing Calibration Verification	Ti (336.122 nm)	2.5199	0.16	326842.0432
	Continuing Calibration Verification	Tl (190.794 nm)	0.9814	0.64	789.2695
	Continuing Calibration Verification	V (292.401 nm)	2.5004	0.07	90434.6453
	Continuing Calibration Verification	Y (360.074 nm)	0.97	0.52	528601.49
	Continuing Calibration Verification	Y_R (360.074 nm)	0.97	0.52	527142.89
	Continuing Calibration Verification	Zn (213.857 nm)	0.9705	0.09	53851.0726
6/4/2024 19:38:35	Continuing Calibration Blank	Ag (328.068 nm)	0.0001 u	> 100.00	-239.8538
	Continuing Calibration Blank	Al (237.312 nm)	0.0008	95.63	37.9661
	Continuing Calibration Blank	As (188.980 nm)	-0.0005 u	> 100.00	-9.7179
	Continuing Calibration Blank	B (249.772 nm)	0.0006	46.24	63.3930
	Continuing Calibration Blank	Ba (230.424 nm)	0.0006	16.05	-2.4254
	Continuing Calibration Blank	Be (313.107 nm)	0.0000	20.29	174.4251
	Continuing Calibration Blank	Ca (317.933 nm)	0.0007	53.52	2807.4202
	Continuing Calibration Blank	Cd (214.439 nm)	0.0001 u	90.63	7.8040
	Continuing Calibration Blank	Co (230.786 nm)	0.0000 u	> 100.00	-39.6588
	Continuing Calibration Blank	Cr (267.716 nm)	0.0002	28.62	120.5964
	Continuing Calibration Blank	Cu (327.395 nm)	0.0001 u	> 100.00	40.5640
	Continuing Calibration Blank	Fe (234.350 nm)	0.0014	49.95	54.1850
	Continuing Calibration Blank	K (766.491 nm)	0.0398 u	> 100.00	-235.4076
	Continuing Calibration Blank	Mg (279.078 nm)	0.0005 u	> 100.00	-54.5544
	Continuing Calibration Blank	Mn (257.610 nm)	0.0000	48.87	35.4507
	Continuing Calibration Blank	Mo (202.032 nm)	0.0053	31.87	4.7405
	Continuing Calibration Blank	Na (588.995 nm)	0.0446	10.80	-6366.8943
	Continuing Calibration Blank	Ni (230.299 nm)	0.0003	79.42	60.4560
	Continuing Calibration Blank	Pb (220.353 nm)	-0.0001 u	> 100.00	3.8942
	Continuing Calibration Blank	Sb (217.582 nm)	0.0052	16.65	15.0119
	Continuing Calibration Blank	Se (196.026 nm)	0.0013 u	> 100.00	3.4956
	Continuing Calibration Blank	Si (252.851 nm)	0.0056	4.41	10.6242
	Continuing Calibration Blank	Sn (189.925 nm)	0.0012 u	98.18	10.2199
	Continuing Calibration Blank	Sr (216.596 nm)	-0.0001 u	> 100.00	-31.7121
	Continuing Calibration Blank	Ti (336.122 nm)	0.0022	47.80	368.0188

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Blank	Tl (190.794 nm)	0.0014 u	> 100.00	-1.1363
	Continuing Calibration Blank	V (292.401 nm)	0.0002	18.06	-17.2913
	Continuing Calibration Blank	Y (360.074 nm)	1.00	0.39	542682.92
	Continuing Calibration Blank	Y_R (360.074 nm)	1.00	0.39	541167.49
	Continuing Calibration Blank	Zn (213.857 nm)	0.0000 u	> 100.00	-23.4446
6/4/2024 19:41:49	Contract Required Detection Limit	Ag (328.068 nm)	0.0090	1.83	217.2658
	Contract Required Detection Limit	Al (237.312 nm)	0.1981	0.87	455.1329
	Contract Required Detection Limit	As (188.980 nm)	0.0178	12.29	15.3325
	Contract Required Detection Limit	B (249.772 nm)	0.1975	1.07	5785.6250
	Contract Required Detection Limit	Ba (230.424 nm)	0.2046	1.01	7989.3944
	Contract Required Detection Limit	Be (313.107 nm)	0.0050	1.12	5204.5133
	Contract Required Detection Limit	Ca (317.933 nm)	1.0620	1.01	39612.5348
	Contract Required Detection Limit	Cd (214.439 nm)	0.0106	1.39	544.8739
	Contract Required Detection Limit	Co (230.786 nm)	0.0510	0.54	691.6761
	Contract Required Detection Limit	Cr (267.716 nm)	0.0093	2.54	489.8098
	Contract Required Detection Limit	Cu (327.395 nm)	0.0251	1.10	1015.9473
	Contract Required Detection Limit	Fe (234.350 nm)	0.1062	0.64	1910.9740
	Contract Required Detection Limit	K (766.491 nm)	0.9860	3.66	748.0546
	Contract Required Detection Limit	Mg (279.078 nm)	1.0150	0.99	2925.8204
	Contract Required Detection Limit	Mn (257.610 nm)	0.0140	1.33	4259.5533
	Contract Required Detection Limit	Mo (202.032 nm)	0.0255	2.87	103.4971
	Contract Required Detection Limit	Na (588.995 nm)	1.0266	0.74	2381.7222
	Contract Required Detection Limit	Ni (230.299 nm)	0.0361	2.35	443.3026
	Contract Required Detection Limit	Pb (220.353 nm)	0.0109	5.49	56.6684
	Contract Required Detection Limit	Sb (217.582 nm)	0.0625	3.23	118.3275
	Contract Required Detection Limit	Se (196.026 nm)	0.0122 R 122%	14.96	10.5330 R
	Contract Required Detection Limit	Si (252.851 nm)	0.0558	3.81	170.8458
	Contract Required Detection Limit	Sn (189.925 nm)	0.5005	1.00	1188.7423
	Contract Required Detection Limit	Sr (216.596 nm)	0.0992	0.80	1604.2342
	Contract Required Detection Limit	Ti (336.122 nm)	0.0500	0.17	6565.0265
	Contract Required Detection Limit	Tl (190.794 nm)	0.0221	9.54	15.5931
	Contract Required Detection Limit	V (292.401 nm)	0.0502	1.47	1789.8706
	Contract Required Detection Limit	Y (360.074 nm)	0.99	1.26	537668.28
	Contract Required Detection Limit	Y_R (360.074 nm)	0.99	1.26	536079.71
	Contract Required Detection Limit	Zn (213.857 nm)	0.0178	1.26	961.8548
6/4/2024 19:45:03	Interference Check Solution A	Ag (328.068 nm)	0.0001	> 100.00	-239.5258
	Interference Check Solution A	Al (237.312 nm)	250.3331 o	0.15	529438.3123
	Interference Check Solution A	As (188.980 nm)	-0.0041 u	55.23	-14.7309
	Interference Check Solution A	B (249.772 nm)	0.1049	0.13	3094.2522
	Interference Check Solution A	Ba (230.424 nm)	0.0002	25.16	-20.8693
	Interference Check Solution A	Be (313.107 nm)	0.0002	0.78	339.3859
	Interference Check Solution A	Ca (317.933 nm)	236.5635 o	0.23	8206280.7086
	Interference Check Solution A	Cd (214.439 nm)	-0.0005 u	11.05	-23.9940
	Interference Check Solution A	Co (230.786 nm)	-0.0005 u	44.51	-46.2249
	Interference Check Solution A	Cr (267.716 nm)	0.0044	2.66	291.8965
	Interference Check Solution A	Cu (327.395 nm)	0.0085	2.20	368.1019
	Interference Check Solution A	Fe (234.350 nm)	92.0302 o	0.24	1630486.9400
	Interference Check Solution A	K (766.491 nm)	0.0197 u	> 100.00	-256.3647
	Interference Check Solution A	Mg (279.078 nm)	258.7395 o	0.21	760087.8741
	Interference Check Solution A	Mn (257.610 nm)	0.0011	1.38	349.8003
	Interference Check Solution A	Mo (202.032 nm)	-0.0057 u	8.59	-49.1289
	Interference Check Solution A	Na (588.995 nm)	0.0132	9.29	-6646.1889
	Interference Check Solution A	Ni (230.299 nm)	0.0043	18.23	103.4876
	Interference Check Solution A	Pb (220.353 nm)	0.0018	41.67	13.2647
	Interference Check Solution A	Sb (217.582 nm)	-0.0016 u	75.54	2.7955
	Interference Check Solution A	Se (196.026 nm)	-0.0030 u	84.41	0.7674
	Interference Check Solution A	Si (252.851 nm)	0.0469	2.84	142.4174

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Interference Check Solution A	Sn (189.925 nm)	0.0035	24.00	15.6634
	Interference Check Solution A	Sr (216.596 nm)	0.0097	2.50	130.1445
	Interference Check Solution A	Ti (336.122 nm)	0.0018	17.63	318.4968
	Interference Check Solution A	Tl (190.794 nm)	0.0030 u	88.90	0.1886
	Interference Check Solution A	V (292.401 nm)	0.0019	11.81	43.5751
	Interference Check Solution A	Y (360.074 nm)	0.90	0.48	487402.33
	Interference Check Solution A	Y_R (360.074 nm)	0.90	0.48	486087.57
	Interference Check Solution A	Zn (213.857 nm)	0.0120 K	0.38	638.7236 K
6/4/2024 19:48:16	Interference Check Solution AB	Ag (328.068 nm)	0.1963	0.14	9904.6363
	Interference Check Solution AB	Al (237.312 nm)	251.9712 o	0.06	532902.5342
	Interference Check Solution AB	As (188.980 nm)	0.0975	1.13	124.8483
	Interference Check Solution AB	B (249.772 nm)	0.1027	0.19	3030.4922
	Interference Check Solution AB	Ba (230.424 nm)	0.5144	0.08	20130.4861
	Interference Check Solution AB	Be (313.107 nm)	0.4956	0.07	505690.9027
	Interference Check Solution AB	Ca (317.933 nm)	237.5134 o	0.12	8239221.3166
	Interference Check Solution AB	Cd (214.439 nm)	0.9517	0.05	48794.7088
	Interference Check Solution AB	Co (230.786 nm)	0.4795	0.25	6831.3310
	Interference Check Solution AB	Cr (267.716 nm)	0.4987	0.05	20415.3737
	Interference Check Solution AB	Cu (327.395 nm)	0.5414	0.04	21126.1137
	Interference Check Solution AB	Fe (234.350 nm)	92.4976 o	0.10	1638767.7793
	Interference Check Solution AB	K (766.491 nm)	-0.0209 u	> 100.00	-298.4794
	Interference Check Solution AB	Mg (279.078 nm)	259.6551 o	0.10	762777.5932
	Interference Check Solution AB	Mn (257.610 nm)	0.4889	0.05	147905.7310
	Interference Check Solution AB	Mo (202.032 nm)	-0.0067 u	20.71	-54.2109
	Interference Check Solution AB	Na (588.995 nm)	0.0078 u	> 100.00	-6694.1441
	Interference Check Solution AB	Ni (230.299 nm)	0.9771	0.13	10488.3230
	Interference Check Solution AB	Pb (220.353 nm)	0.0494	0.59	240.1907
	Interference Check Solution AB	Sb (217.582 nm)	0.6262	0.31	1133.0956
	Interference Check Solution AB	Se (196.026 nm)	0.0463	8.07	32.5204
	Interference Check Solution AB	Si (252.851 nm)	0.0792	2.62	245.4893
	Interference Check Solution AB	Sn (189.925 nm)	0.0039	6.65	16.6867
	Interference Check Solution AB	Sr (216.596 nm)	0.0099	2.44	132.9167
	Interference Check Solution AB	Ti (336.122 nm)	0.0018	9.87	319.0981
	Interference Check Solution AB	Tl (190.794 nm)	0.1003	3.12	78.6759
	Interference Check Solution AB	V (292.401 nm)	0.5165	0.10	18661.2851
	Interference Check Solution AB	Y (360.074 nm)	0.90	0.65	488559.60
	Interference Check Solution AB	Y_R (360.074 nm)	0.90	0.65	487296.72
	Interference Check Solution AB	Zn (213.857 nm)	1.0101	0.03	56045.6908
6/4/2024 19:51:31	HLCCV2	Ag (328.068 nm)	2.1030 o	0.04	108483.2166
	HLCCV2	Al (237.312 nm)	508.1888 o	0.06	1074749.1924
	HLCCV2	As (188.980 nm)	4.0902 o	0.15	5608.0585
	HLCCV2	B (249.772 nm)	10.6175	0.06	308557.4212
	HLCCV2	Ba (230.424 nm)	37.5916 o	0.16	1473145.2969
	HLCCV2	Be (313.107 nm)	0.9896 o	0.14	1009530.5091
	HLCCV2	Ca (317.933 nm)	233.4938 o	0.21	8099828.4277
	HLCCV2	Cd (214.439 nm)	1.8350 o	0.12	94073.8891
	HLCCV2	Co (230.786 nm)	9.1420 o	0.12	130956.7697
	HLCCV2	Cr (267.716 nm)	9.5476 o	0.16	388835.4233
	HLCCV2	Cu (327.395 nm)	5.3088 o	0.03	206829.2758
	HLCCV2	Fe (234.350 nm)	46.4992 o	0.10	823833.6809
	HLCCV2	K (766.491 nm)	166.2243 Qo	0.16	172490.5033 Q
	HLCCV2	Mg (279.078 nm)	507.1264 o	0.16	1489816.8956
	HLCCV2	Mn (257.610 nm)	9.3435 o	0.21	2826455.5363
	HLCCV2	Mo (202.032 nm)	9.7468 o	0.28	47630.8320
	HLCCV2	Na (588.995 nm)	213.6476 o	0.29	1896540.3970
	HLCCV2	Ni (230.299 nm)	7.2790 o	0.17	77765.6437
	HLCCV2	Pb (220.353 nm)	9.5547 o	0.13	45636.7664

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	HLCCV2	Sb (217.582 nm)	0.0370	12.15	72.3873
	HLCCV2	Se (196.026 nm)	2.0559 o	0.49	1326.3264
	HLCCV2	Si (252.851 nm)	-3.4310 Qu	0.06	-10962.3735 Q
	HLCCV2	Sn (189.925 nm)	-0.0053 u	11.96	-5.1066
	HLCCV2	Sr (216.596 nm)	9.5228 o	0.16	156963.3322
	HLCCV2	Ti (336.122 nm)	9.9650 o	0.04	1292256.8672
	HLCCV2	Tl (190.794 nm)	3.6066 o	0.02	2906.5236
	HLCCV2	V (292.401 nm)	9.8977 o	0.14	358054.8035
	HLCCV2	Y (360.074 nm)	0.86	0.50	464582.67
	HLCCV2	Y_R (360.074 nm)	0.86	0.49	463457.33
	HLCCV2	Zn (213.857 nm)	4.0134 o	0.05	222768.6234
6/4/2024 19:54:46	HLCCV3	Ag (328.068 nm)	0.0001 u	> 100.00	-240.3135
	HLCCV3	Al (237.312 nm)	0.0303	9.35	100.3388
	HLCCV3	As (188.980 nm)	0.0053	36.28	-1.7306
	HLCCV3	B (249.772 nm)	0.0468	2.57	1405.0514
	HLCCV3	Ba (230.424 nm)	0.0010	6.78	12.4016
	HLCCV3	Be (313.107 nm)	0.0001	10.20	225.9754
	HLCCV3	Ca (317.933 nm)	187.5802 o	2.82	6507648.4936
	HLCCV3	Cd (214.439 nm)	0.0009	1.62	51.4702
	HLCCV3	Co (230.786 nm)	-0.0005 u	69.46	-45.9060
	HLCCV3	Cr (267.716 nm)	0.0019	4.24	189.9958
	HLCCV3	Cu (327.395 nm)	4.1040 o	3.08	159896.0116
	HLCCV3	Fe (234.350 nm)	37.4470 o	2.83	663460.5400
	HLCCV3	K (766.491 nm)	107.0444 o	2.90	110981.1084
	HLCCV3	Mg (279.078 nm)	407.7169 o	2.81	1197764.2954
	HLCCV3	Mn (257.610 nm)	0.0113	2.52	3435.9026
	HLCCV3	Mo (202.032 nm)	0.0173	11.06	63.2630
	HLCCV3	Na (588.995 nm)	156.0363 o	2.84	1383303.6238
	HLCCV3	Ni (230.299 nm)	-0.0176 u	2.93	-130.5060
	HLCCV3	Pb (220.353 nm)	0.0027	35.70	17.2647
	HLCCV3	Sb (217.582 nm)	-0.0013 u	> 100.00	3.4273
	HLCCV3	Se (196.026 nm)	0.0015 u	> 100.00	3.6793
	HLCCV3	Si (252.851 nm)	0.0068 S	29.44	14.4946 S
	HLCCV3	Sn (189.925 nm)	0.0010	38.48	9.7950
	HLCCV3	Sr (216.596 nm)	0.0076	0.67	94.9062
	HLCCV3	Ti (336.122 nm)	0.0181	13.34	2437.2874
	HLCCV3	Tl (190.794 nm)	2.7603 o	3.02	2223.9844
	HLCCV3	V (292.401 nm)	0.0008	28.19	4.5019
	HLCCV3	Y (360.074 nm)	0.88	2.28	479168.14
	HLCCV3	Y_R (360.074 nm)	0.88	2.28	477953.54
	HLCCV3	Zn (213.857 nm)	0.0074	2.59	383.4884
6/4/2024 19:58:01	HLCCV1	Ag (328.068 nm)	0.9625	0.40	49518.2967
	HLCCV1	Al (237.312 nm)	19.4363	0.43	41139.9144
	HLCCV1	As (188.980 nm)	1.9553	0.43	2676.1905
	HLCCV1	B (249.772 nm)	9.8323	0.27	285741.0998
	HLCCV1	Ba (230.424 nm)	19.0687	0.20	747253.3183
	HLCCV1	Be (313.107 nm)	0.4833	0.15	493114.4727
	HLCCV1	Ca (317.933 nm)	48.7519	0.16	1693392.4996
	HLCCV1	Cd (214.439 nm)	0.9483	0.13	48618.4023
	HLCCV1	Co (230.786 nm)	4.7397	0.15	67875.7593
	HLCCV1	Cr (267.716 nm)	0.9392	0.20	38352.3080
	HLCCV1	Cu (327.395 nm)	2.4323	0.48	94782.7219
	HLCCV1	Fe (234.350 nm)	9.6214	0.15	170486.9184
	HLCCV1	K (766.491 nm)	49.7539	0.62	51435.5273
	HLCCV1	Mg (279.078 nm)	48.3656	0.17	142035.9529
	HLCCV1	Mn (257.610 nm)	1.4431	0.14	436563.8128
	HLCCV1	Mo (202.032 nm)	4.8581	0.07	23729.7958

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	HLCCV1	Na (588.995 nm)	49.4138	0.79	433444.1523
	HLCCV1	Ni (230.299 nm)	3.8012	0.19	40637.4400
	HLCCV1	Pb (220.353 nm)	0.9699	0.23	4636.6775
	HLCCV1	Sb (217.582 nm)	9.7181	0.38	17500.4056
	HLCCV1	Se (196.026 nm)	0.9815	1.07	634.6134
	HLCCV1	Si (252.851 nm)	48.2550	0.33	154067.2148
	HLCCV1	Sn (189.925 nm)	9.3809	0.26	22151.1896
	HLCCV1	Sr (216.596 nm)	4.7558	0.05	78374.0764
	HLCCV1	Ti (336.122 nm)	4.8368	0.26	627278.7622
	HLCCV1	Tl (190.794 nm)	1.9013	0.22	1531.1982
	HLCCV1	V (292.401 nm)	4.8503	0.18	175450.5592
	HLCCV1	Y (360.074 nm)	0.96	0.32	520409.41
	HLCCV1	Y_R (360.074 nm)	0.96	0.32	518981.61
	HLCCV1	Zn (213.857 nm)	1.9251	0.25	106843.7132
6/4/2024 20:01:15	Continuing Calibration Verification	Ag (328.068 nm)	0.4964	0.36	25418.2519
	Continuing Calibration Verification	Al (237.312 nm)	9.8435	0.25	20853.0935
	Continuing Calibration Verification	As (188.980 nm)	0.9741	0.11	1328.6878
	Continuing Calibration Verification	B (249.772 nm)	2.4981	0.14	72630.8322
	Continuing Calibration Verification	Ba (230.424 nm)	9.9748	0.06	390874.5747
	Continuing Calibration Verification	Be (313.107 nm)	0.2386	0.11	243563.2954
	Continuing Calibration Verification	Ca (317.933 nm)	25.5871	0.16	890088.8196
	Continuing Calibration Verification	Cd (214.439 nm)	0.4869	0.10	24963.1505
	Continuing Calibration Verification	Co (230.786 nm)	2.4559	0.05	35152.1719
	Continuing Calibration Verification	Cr (267.716 nm)	0.4912	0.09	20112.7842
	Continuing Calibration Verification	Cu (327.395 nm)	1.2181	0.23	47484.4901
	Continuing Calibration Verification	Fe (234.350 nm)	4.9328	0.12	87421.4894
	Continuing Calibration Verification	K (766.491 nm)	24.4337	0.53	25118.6681
	Continuing Calibration Verification	Mg (279.078 nm)	25.0166	0.24	73439.5286
	Continuing Calibration Verification	Mn (257.610 nm)	0.7294	0.09	220678.5961
	Continuing Calibration Verification	Mo (202.032 nm)	2.5646	0.18	12517.0260
	Continuing Calibration Verification	Na (588.995 nm)	25.3189	0.54	218792.2498
	Continuing Calibration Verification	Ni (230.299 nm)	2.0202	0.14	21624.8298
	Continuing Calibration Verification	Pb (220.353 nm)	0.5029	0.31	2406.1540
	Continuing Calibration Verification	Sb (217.582 nm)	4.9435	0.28	8905.1870
	Continuing Calibration Verification	Se (196.026 nm)	0.4842	1.14	314.4377
	Continuing Calibration Verification	Si (252.851 nm)	10.0123	0.04	31961.1024
	Continuing Calibration Verification	Sn (189.925 nm)	4.9025	0.24	11579.7815
	Continuing Calibration Verification	Sr (216.596 nm)	2.4359	0.19	40127.4050
	Continuing Calibration Verification	Ti (336.122 nm)	2.5189	0.17	326714.4157
	Continuing Calibration Verification	Tl (190.794 nm)	0.9822	0.46	789.9458
	Continuing Calibration Verification	V (292.401 nm)	2.4904	0.20	90071.4058
	Continuing Calibration Verification	Y (360.074 nm)	0.98	0.66	531136.71
	Continuing Calibration Verification	Y_R (360.074 nm)	0.98	0.66	529668.89
	Continuing Calibration Verification	Zn (213.857 nm)	0.9658	0.19	53588.6113
6/4/2024 20:04:29	Continuing Calibration Blank	Ag (328.068 nm)	0.0001 u	> 100.00	-242.3151
	Continuing Calibration Blank	Al (237.312 nm)	0.0014	> 100.00	39.1611
	Continuing Calibration Blank	As (188.980 nm)	0.0006 u	> 100.00	-8.2927
	Continuing Calibration Blank	B (249.772 nm)	0.0030	11.35	133.4747
	Continuing Calibration Blank	Ba (230.424 nm)	0.0009	10.47	7.7338
	Continuing Calibration Blank	Be (313.107 nm)	0.0000	29.94	175.8691
	Continuing Calibration Blank	Ca (317.933 nm)	0.0021	25.39	2856.8359
	Continuing Calibration Blank	Cd (214.439 nm)	0.0001	14.17	9.2328
	Continuing Calibration Blank	Co (230.786 nm)	0.0004	22.32	-32.6956
	Continuing Calibration Blank	Cr (267.716 nm)	0.0002	21.09	118.2689
	Continuing Calibration Blank	Cu (327.395 nm)	0.0002	85.21	44.6211
	Continuing Calibration Blank	Fe (234.350 nm)	0.0022	33.95	68.6537
	Continuing Calibration Blank	K (766.491 nm)	0.1313	31.39	-140.2820

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Blank	Mg (279.078 nm)	0.0021	76.68	-49.8303
	Continuing Calibration Blank	Mn (257.610 nm)	0.0001	26.45	40.0687
	Continuing Calibration Blank	Mo (202.032 nm)	0.0055	22.81	5.4435
	Continuing Calibration Blank	Na (588.995 nm)	0.0589	13.61	-6239.3309
	Continuing Calibration Blank	Ni (230.299 nm)	0.0006	65.37	64.0536
	Continuing Calibration Blank	Pb (220.353 nm)	0.0006	31.88	7.5105
	Continuing Calibration Blank	Sb (217.582 nm)	0.0071	12.87	18.4318
	Continuing Calibration Blank	Se (196.026 nm)	0.0035	32.84	4.9251
	Continuing Calibration Blank	Si (252.851 nm)	0.0045	18.00	6.9052
	Continuing Calibration Blank	Sn (189.925 nm)	0.0011	14.30	9.9232
	Continuing Calibration Blank	Sr (216.596 nm)	0.0001 u	> 100.00	-28.1239
	Continuing Calibration Blank	Ti (336.122 nm)	0.0027	53.84	438.1177
	Continuing Calibration Blank	Tl (190.794 nm)	0.0008 u	> 100.00	-1.5445
	Continuing Calibration Blank	V (292.401 nm)	0.0001	90.36	-21.2847
	Continuing Calibration Blank	Y (360.074 nm)	1.01	0.69	545447.13
	Continuing Calibration Blank	Y_R (360.074 nm)	1.00	0.69	543941.86
	Continuing Calibration Blank	Zn (213.857 nm)	0.0001	5.99	-18.2832
6/4/2024 20:07:43	PBW-439399	Ag (328.068 nm)	0.0001 u	> 100.00	-243.9890
	PBW-439399	Al (237.312 nm)	0.0173	6.79	72.7413
	PBW-439399	As (188.980 nm)	0.0006 u	> 100.00	-8.2212
	PBW-439399	B (249.772 nm)	0.0023	13.29	113.4946
	PBW-439399	Ba (230.424 nm)	0.0004	26.28	-12.7376
	PBW-439399	Be (313.107 nm)	0.0000 u	> 100.00	146.1137
	PBW-439399	Ca (317.933 nm)	0.0139	3.65	3263.8839
	PBW-439399	Cd (214.439 nm)	0.0002	40.27	12.5857
	PBW-439399	Co (230.786 nm)	0.0001 u	> 100.00	-37.2514
	PBW-439399	Cr (267.716 nm)	0.0003	68.34	122.6906
	PBW-439399	Cu (327.395 nm)	0.0010	19.99	76.3264
	PBW-439399	Fe (234.350 nm)	0.0080	9.61	169.6976
	PBW-439399	K (766.491 nm)	0.0413	32.05	-233.8564
	PBW-439399	Mg (279.078 nm)	0.0041	40.28	-44.0440
	PBW-439399	Mn (257.610 nm)	0.0001	15.22	55.6072
	PBW-439399	Mo (202.032 nm)	0.0013	58.83	-15.0875
	PBW-439399	Na (588.995 nm)	0.0712	3.58	-6130.1845
	PBW-439399	Ni (230.299 nm)	-0.0006 u	31.93	50.9365
	PBW-439399	Pb (220.353 nm)	0.0010	35.58	9.3833
	PBW-439399	Sb (217.582 nm)	0.0116	7.48	26.6642
	PBW-439399	Se (196.026 nm)	0.0016 u	> 100.00	3.6915
	PBW-439399	Si (252.851 nm)	0.0361	4.90	107.9152
	PBW-439399	Sn (189.925 nm)	0.0006	32.78	8.7446
	PBW-439399	Sr (216.596 nm)	0.0000 u	> 100.00	-30.7006
	PBW-439399	Ti (336.122 nm)	0.0006 u	> 100.00	162.0920
	PBW-439399	Tl (190.794 nm)	0.0010 u	> 100.00	-1.4304
	PBW-439399	V (292.401 nm)	0.0001 u	97.67	-19.9491
	PBW-439399	Y (360.074 nm)	1.01	0.59	550240.17
	PBW-439399	Y_R (360.074 nm)	1.01	0.59	548743.88
	PBW-439399	Zn (213.857 nm)	0.0020	2.67	85.7643
6/4/2024 20:10:57	LCSW-439399	Ag (328.068 nm)	0.0488	0.11	2277.2047
	LCSW-439399	Al (237.312 nm)	1.9647	0.05	4191.0935
	LCSW-439399	As (188.980 nm)	0.0364	4.63	40.8882
	LCSW-439399	B (249.772 nm)	0.9841	0.19	28639.3939
	LCSW-439399	Ba (230.424 nm)	1.9645	0.20	76961.4364
	LCSW-439399	Be (313.107 nm)	0.0474	0.22	48478.1092
	LCSW-439399	Ca (317.933 nm)	2.0024	0.28	72223.1770
	LCSW-439399	Cd (214.439 nm)	0.0490	0.40	2517.5336
	LCSW-439399	Co (230.786 nm)	0.4879	0.38	6952.2717
	LCSW-439399	Cr (267.716 nm)	0.1915	0.36	7908.2400

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	LCSW-439399	Cu (327.395 nm)	0.2456	0.07	9604.1957
	LCSW-439399	Fe (234.350 nm)	0.9895	0.27	17559.5324
	LCSW-439399	K (766.491 nm)	18.9615	0.05	19431.0485
	LCSW-439399	Mg (279.078 nm)	1.9183	0.14	5579.6713
	LCSW-439399	Mn (257.610 nm)	0.4757	0.22	143911.5007
	LCSW-439399	Mo (202.032 nm)	0.4833	0.18	2341.4187
	LCSW-439399	Na (588.995 nm)	19.6324	0.32	168133.9114
	LCSW-439399	Ni (230.299 nm)	0.5025	0.13	5421.5724
	LCSW-439399	Pb (220.353 nm)	0.5088	0.56	2434.6660
	LCSW-439399	Sb (217.582 nm)	0.4955	0.13	897.6756
	LCSW-439399	Se (196.026 nm)	0.9860	0.68	637.4972
	LCSW-439399	Si (252.851 nm)	-0.0292 u	3.57	-100.4490
	LCSW-439399	Sn (189.925 nm)	4.7590	0.11	11241.0725
	LCSW-439399	Sr (216.596 nm)	1.9192	0.29	31609.2206
	LCSW-439399	Ti (336.122 nm)	0.4852	0.11	63002.8984
	LCSW-439399	Tl (190.794 nm)	1.9206	0.54	1546.7266
	LCSW-439399	V (292.401 nm)	0.4814	0.18	17390.4965
	LCSW-439399	Y (360.074 nm)	1.00	0.27	540446.04
	LCSW-439399	Y_R (360.074 nm)	1.00	0.27	539112.85
	LCSW-439399	Zn (213.857 nm)	0.4882	0.23	27074.3837
6/4/2024 20:14:11	DLCSW-439399	Ag (328.068 nm)	0.0489	0.29	2283.3974
	DLCSW-439399	Al (237.312 nm)	1.9744	0.49	4211.7673
	DLCSW-439399	As (188.980 nm)	0.0392	5.98	44.7334
	DLCSW-439399	B (249.772 nm)	0.9877	0.17	28743.5835
	DLCSW-439399	Ba (230.424 nm)	1.9732	0.03	77301.4997
	DLCSW-439399	Be (313.107 nm)	0.0476	0.13	48679.9710
	DLCSW-439399	Ca (317.933 nm)	2.0102	0.12	72493.6022
	DLCSW-439399	Cd (214.439 nm)	0.0493	0.31	2531.7772
	DLCSW-439399	Co (230.786 nm)	0.4911	0.23	6998.6811
	DLCSW-439399	Cr (267.716 nm)	0.1925	0.17	7948.7850
	DLCSW-439399	Cu (327.395 nm)	0.2470	0.28	9657.3586
	DLCSW-439399	Fe (234.350 nm)	0.9910	0.06	17586.4242
	DLCSW-439399	K (766.491 nm)	19.0117	0.27	19483.2131
	DLCSW-439399	Mg (279.078 nm)	1.9283	0.14	5609.0346
	DLCSW-439399	Mn (257.610 nm)	0.4781	0.11	144651.3119
	DLCSW-439399	Mo (202.032 nm)	0.4879	0.27	2364.0958
	DLCSW-439399	Na (588.995 nm)	19.6927	0.41	168670.3509
	DLCSW-439399	Ni (230.299 nm)	0.5039	0.20	5437.1385
	DLCSW-439399	Pb (220.353 nm)	0.5125	0.46	2452.0859
	DLCSW-439399	Sb (217.582 nm)	0.4980	0.39	902.2762
	DLCSW-439399	Se (196.026 nm)	0.9970	0.19	644.6163
	DLCSW-439399	Si (252.851 nm)	-0.0315 u	5.22	-108.0334
	DLCSW-439399	Sn (189.925 nm)	4.8130	0.04	11368.5383
	DLCSW-439399	Sr (216.596 nm)	1.9391	0.15	31937.3034
	DLCSW-439399	Ti (336.122 nm)	0.4875	0.09	63306.3106
	DLCSW-439399	Tl (190.794 nm)	1.9313	0.09	1555.4061
	DLCSW-439399	V (292.401 nm)	0.4838	0.08	17476.6878
	DLCSW-439399	Y (360.074 nm)	1.00	0.37	540651.22
	DLCSW-439399	Y_R (360.074 nm)	1.00	0.37	539341.32
	DLCSW-439399	Zn (213.857 nm)	0.4903	0.13	27190.9703
6/4/2024 20:17:25	R2404655-001	Ag (328.068 nm)	0.0001	21.60	-241.1291
	R2404655-001	Al (237.312 nm)	0.1610	1.43	376.6464
	R2404655-001	As (188.980 nm)	0.0023	35.16	-5.8784
	R2404655-001	B (249.772 nm)	0.0458	0.87	1376.8326
	R2404655-001	Ba (230.424 nm)	0.0618	0.12	2395.5577
	R2404655-001	Be (313.107 nm)	0.0000	39.82	184.1994
	R2404655-001	Ca (317.933 nm)	66.5841 o	0.09	2311770.9406

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404655-001	Cd (214.439 nm)	0.0003	45.04	17.2779
	R2404655-001	Co (230.786 nm)	0.0003	48.02	-34.4214
	R2404655-001	Cr (267.716 nm)	0.0011	8.47	155.5746
	R2404655-001	Cu (327.395 nm)	0.0050	1.66	232.4386
	R2404655-001	Fe (234.350 nm)	4.2265	0.14	74907.9214
	R2404655-001	K (766.491 nm)	0.7724	5.77	525.9785
	R2404655-001	Mg (279.078 nm)	8.7450	0.16	25635.5277
	R2404655-001	Mn (257.610 nm)	0.8919	0.12	269826.1386
	R2404655-001	Mo (202.032 nm)	0.0036	37.20	-3.5699
	R2404655-001	Na (588.995 nm)	83.7894 o	0.50	739683.4126
	R2404655-001	Ni (230.299 nm)	0.0002 u	> 100.00	59.9289
	R2404655-001	Pb (220.353 nm)	0.0023	31.62	15.6690
	R2404655-001	Sb (217.582 nm)	0.0034	41.10	11.8160
	R2404655-001	Se (196.026 nm)	0.0024	30.86	4.2070
	R2404655-001	Si (252.851 nm)	5.7201	0.22	18256.4512
	R2404655-001	Sn (189.925 nm)	0.0014	36.45	10.5988
	R2404655-001	Sr (216.596 nm)	0.6398	0.07	10517.6843
	R2404655-001	Ti (336.122 nm)	0.0029	19.01	462.5607
	R2404655-001	Tl (190.794 nm)	0.0009	97.20	-1.5101
	R2404655-001	V (292.401 nm)	0.0005	32.40	-5.7837
	R2404655-001	Y (360.074 nm)	0.98	0.39	529771.77
	R2404655-001	Y_R (360.074 nm)	0.98	0.39	528624.40
	R2404655-001	Zn (213.857 nm)	0.0026	2.33	120.5711
6/4/2024 20:20:39	R2404655-002	Ag (328.068 nm)	0.0003	38.79	-232.2520
	R2404655-002	Al (237.312 nm)	0.0012 u	> 100.00	38.8661
	R2404655-002	As (188.980 nm)	0.0002 u	> 100.00	-8.7915
	R2404655-002	B (249.772 nm)	0.0009	47.54	72.8330
	R2404655-002	Ba (230.424 nm)	0.0001	97.29	-21.2816
	R2404655-002	Be (313.107 nm)	0.0000 u	41.17	144.5842
	R2404655-002	Ca (317.933 nm)	0.0255	0.88	3669.2826
	R2404655-002	Cd (214.439 nm)	0.0002	29.84	14.6402
	R2404655-002	Co (230.786 nm)	0.0001 u	> 100.00	-36.8995
	R2404655-002	Cr (267.716 nm)	0.0005	11.63	131.2374
	R2404655-002	Cu (327.395 nm)	0.0003 u	99.22	49.8681
	R2404655-002	Fe (234.350 nm)	0.0065	16.71	143.2329
	R2404655-002	K (766.491 nm)	0.0468	62.29	-228.1553
	R2404655-002	Mg (279.078 nm)	0.0065	28.31	-37.0620
	R2404655-002	Mn (257.610 nm)	0.0001	11.30	47.9580
	R2404655-002	Mo (202.032 nm)	0.0001 u	> 100.00	-20.6722
	R2404655-002	Na (588.995 nm)	0.0806	5.66	-6046.4606
	R2404655-002	Ni (230.299 nm)	0.0001 u	> 100.00	58.1183
	R2404655-002	Pb (220.353 nm)	-0.0002 u	> 100.00	3.2993
	R2404655-002	Sb (217.582 nm)	0.0041	53.15	13.2033
	R2404655-002	Se (196.026 nm)	0.0000 u	> 100.00	2.6831
	R2404655-002	Si (252.851 nm)	0.0100	23.46	24.5528
	R2404655-002	Sn (189.925 nm)	0.0016	28.16	11.1110
	R2404655-002	Sr (216.596 nm)	0.0002	26.44	-27.0232
	R2404655-002	Ti (336.122 nm)	0.0000 u	> 100.00	80.5991
	R2404655-002	Tl (190.794 nm)	0.0017 u	> 100.00	-0.8642
	R2404655-002	V (292.401 nm)	0.0001 u	> 100.00	-22.3489
	R2404655-002	Y (360.074 nm)	1.02	0.58	553849.40
	R2404655-002	Y_R (360.074 nm)	1.02	0.58	552564.88
	R2404655-002	Zn (213.857 nm)	0.0011	1.91	38.6663
6/4/2024 20:23:53	R2404655-003	Ag (328.068 nm)	0.0002	53.35	-238.6866
	R2404655-003	Al (237.312 nm)	0.0262	6.52	91.6361
	R2404655-003	As (188.980 nm)	0.0010 u	> 100.00	-7.6769
	R2404655-003	B (249.772 nm)	0.0106	2.13	353.4341

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404655-003	Ba (230.424 nm)	0.0189	2.58	715.3038
	R2404655-003	Be (313.107 nm)	0.0000	17.52	190.0803
	R2404655-003	Ca (317.933 nm)	9.3172	2.10	325884.7508
	R2404655-003	Cd (214.439 nm)	0.0002	32.63	14.0533
	R2404655-003	Co (230.786 nm)	0.0001 u	> 100.00	-37.0503
	R2404655-003	Cr (267.716 nm)	0.0004	42.61	128.1721
	R2404655-003	Cu (327.395 nm)	0.0006	17.54	62.2860
	R2404655-003	Fe (234.350 nm)	0.0174	2.61	336.8534
	R2404655-003	K (766.491 nm)	0.4414	3.27	182.0117
	R2404655-003	Mg (279.078 nm)	2.6361	2.00	7688.3592
	R2404655-003	Mn (257.610 nm)	0.0243	2.16	7370.4789
	R2404655-003	Mo (202.032 nm)	0.0007	73.36	-17.7757
	R2404655-003	Na (588.995 nm)	10.0665	1.90	82914.7064
	R2404655-003	Ni (230.299 nm)	0.0003 u	> 100.00	60.6199
	R2404655-003	Pb (220.353 nm)	0.0002 u	> 100.00	5.3661
	R2404655-003	Sb (217.582 nm)	0.0040	26.15	12.9824
	R2404655-003	Se (196.026 nm)	-0.0007 u	> 100.00	2.2039
	R2404655-003	Si (252.851 nm)	5.4066	1.97	17255.5882
	R2404655-003	Sn (189.925 nm)	0.0007	27.04	9.0768
	R2404655-003	Sr (216.596 nm)	0.0437	1.72	689.9355
	R2404655-003	Ti (336.122 nm)	-0.0002 u	> 100.00	63.4333
	R2404655-003	Tl (190.794 nm)	0.0008	> 100.00	-1.6204
	R2404655-003	V (292.401 nm)	0.0000 u	> 100.00	-25.0616
	R2404655-003	Y (360.074 nm)	1.00	1.73	540348.81
	R2404655-003	Y_R (360.074 nm)	1.00	1.73	539096.60
	R2404655-003	Zn (213.857 nm)	0.0031	4.24	149.8327
6/4/2024 20:27:06	R2404655-004	Ag (328.068 nm)	-0.0001 u	> 100.00	-249.5800
	R2404655-004	Al (237.312 nm)	0.0899	0.34	226.2896
	R2404655-004	As (188.980 nm)	-0.0017 u	> 100.00	-11.3312
	R2404655-004	B (249.772 nm)	0.0150	2.80	480.7244
	R2404655-004	Ba (230.424 nm)	0.0600	0.55	2322.6534
	R2404655-004	Be (313.107 nm)	0.0000	38.84	173.8759
	R2404655-004	Ca (317.933 nm)	89.3089 o	0.20	3099818.4930
	R2404655-004	Cd (214.439 nm)	0.0002	24.14	11.9271
	R2404655-004	Co (230.786 nm)	-0.0002 u	> 100.00	-41.8859
	R2404655-004	Cr (267.716 nm)	0.0009	10.25	146.8891
	R2404655-004	Cu (327.395 nm)	0.0005	56.11	56.7501
	R2404655-004	Fe (234.350 nm)	0.0124	2.35	248.0162
	R2404655-004	K (766.491 nm)	2.3473	1.37	2162.8561
	R2404655-004	Mg (279.078 nm)	16.7057	0.19	49023.1226
	R2404655-004	Mn (257.610 nm)	0.0047	0.18	1432.3214
	R2404655-004	Mo (202.032 nm)	0.0007	46.48	-18.0718
	R2404655-004	Na (588.995 nm)	210.8349 o	0.39	1871483.3088
	R2404655-004	Ni (230.299 nm)	0.0003	20.19	60.9645
	R2404655-004	Pb (220.353 nm)	0.0000 u	> 100.00	4.5529
	R2404655-004	Sb (217.582 nm)	0.0001 u	> 100.00	6.0059
	R2404655-004	Se (196.026 nm)	-0.0009 u	> 100.00	2.1170
	R2404655-004	Si (252.851 nm)	4.4741	0.22	14278.0223
	R2404655-004	Sn (189.925 nm)	0.0006	81.48	8.8001
	R2404655-004	Sr (216.596 nm)	0.3213	0.11	5267.1428
	R2404655-004	Ti (336.122 nm)	0.0005	27.31	153.2697
	R2404655-004	Tl (190.794 nm)	-0.0005 u	> 100.00	-2.6613
	R2404655-004	V (292.401 nm)	-0.0001 u	> 100.00	-30.0021
	R2404655-004	Y (360.074 nm)	0.95	0.43	513686.20
	R2404655-004	Y_R (360.074 nm)	0.95	0.43	512617.46
	R2404655-004	Zn (213.857 nm)	0.0012	7.42	44.1719
6/4/2024 20:30:20	R2404655-005	Ag (328.068 nm)	0.0000 u	> 100.00	-245.8909

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404655-005	Al (237.312 nm)	0.0349	4.35	110.0342
	R2404655-005	As (188.980 nm)	0.0017 u	> 100.00	-6.7330
	R2404655-005	B (249.772 nm)	0.0250	0.97	771.9260
	R2404655-005	Ba (230.424 nm)	0.0397	0.36	1527.3004
	R2404655-005	Be (313.107 nm)	0.0000 u	> 100.00	160.4880
	R2404655-005	Ca (317.933 nm)	74.7038 o	0.19	2593345.0976
	R2404655-005	Cd (214.439 nm)	0.0002	27.40	14.0233
	R2404655-005	Co (230.786 nm)	-0.0005 u	36.01	-46.8309
	R2404655-005	Cr (267.716 nm)	0.0015	2.95	174.3672
	R2404655-005	Cu (327.395 nm)	0.0023	12.83	126.8983
	R2404655-005	Fe (234.350 nm)	0.0582	0.54	1059.5722
	R2404655-005	K (766.491 nm)	1.8449	2.16	1640.6973
	R2404655-005	Mg (279.078 nm)	13.1829	0.13	38673.7285
	R2404655-005	Mn (257.610 nm)	0.0025	0.26	791.7234
	R2404655-005	Mo (202.032 nm)	0.0004	59.24	-19.1870
	R2404655-005	Na (588.995 nm)	112.3126 o	0.44	993785.6764
	R2404655-005	Ni (230.299 nm)	0.0008	37.39	66.2211
	R2404655-005	Pb (220.353 nm)	0.0009	74.71	8.9654
	R2404655-005	Sb (217.582 nm)	0.0014 u	> 100.00	8.1810
	R2404655-005	Se (196.026 nm)	-0.0014 u	> 100.00	1.7908
	R2404655-005	Si (252.851 nm)	5.2890	0.23	16880.1544
	R2404655-005	Sn (189.925 nm)	0.0015	18.80	10.8139
	R2404655-005	Sr (216.596 nm)	0.2744	0.10	4492.6502
	R2404655-005	Ti (336.122 nm)	0.0006	21.56	161.0022
	R2404655-005	Tl (190.794 nm)	0.0007 u	> 100.00	-1.6420
	R2404655-005	V (292.401 nm)	0.0001 u	> 100.00	-22.1594
	R2404655-005	Y (360.074 nm)	0.97	0.46	524955.66
	R2404655-005	Y_R (360.074 nm)	0.97	0.46	523841.31
	R2404655-005	Zn (213.857 nm)	0.0069	0.74	355.8756
6/4/2024 20:33:34	R2404655-006	Ag (328.068 nm)	-0.0001 u	> 100.00	-251.2144
	R2404655-006	Al (237.312 nm)	0.0923	1.35	231.3853
	R2404655-006	As (188.980 nm)	0.0017 u	> 100.00	-6.6813
	R2404655-006	B (249.772 nm)	0.0151	1.21	483.6945
	R2404655-006	Ba (230.424 nm)	0.1183	0.27	4608.9690
	R2404655-006	Be (313.107 nm)	0.0000 u	> 100.00	162.5666
	R2404655-006	Ca (317.933 nm)	105.8890 o	0.19	3674779.3536
	R2404655-006	Cd (214.439 nm)	0.0002	5.69	16.0020
	R2404655-006	Co (230.786 nm)	0.0001 u	> 100.00	-37.3678
	R2404655-006	Cr (267.716 nm)	0.0007	13.68	139.9160
	R2404655-006	Cu (327.395 nm)	0.0008	39.14	68.2258
	R2404655-006	Fe (234.350 nm)	0.0216	0.46	410.9359
	R2404655-006	K (766.491 nm)	1.3943	1.43	1172.3436
	R2404655-006	Mg (279.078 nm)	13.8068	0.13	40506.4296
	R2404655-006	Mn (257.610 nm)	0.2345	0.15	70966.2032
	R2404655-006	Mo (202.032 nm)	0.0007	51.14	-17.7663
	R2404655-006	Na (588.995 nm)	42.2702	0.44	369804.8894
	R2404655-006	Ni (230.299 nm)	-0.0009 u	31.18	47.4647
	R2404655-006	Pb (220.353 nm)	0.0010	63.83	9.1399
	R2404655-006	Sb (217.582 nm)	0.0017	60.42	8.8048
	R2404655-006	Se (196.026 nm)	0.0007 u	> 100.00	3.1610
	R2404655-006	Si (252.851 nm)	6.5281	0.14	20836.5066
	R2404655-006	Sn (189.925 nm)	0.0002 u	> 100.00	7.9093
	R2404655-006	Sr (216.596 nm)	0.3525	0.17	5781.5715
	R2404655-006	Ti (336.122 nm)	0.0006	19.60	162.3041
	R2404655-006	Tl (190.794 nm)	0.0014 u	> 100.00	-1.0973
	R2404655-006	V (292.401 nm)	-0.0002 u	> 100.00	-33.1660
	R2404655-006	Y (360.074 nm)	0.98	0.33	530322.80

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404655-006	Y_R (360.074 nm)	0.98	0.32	529166.05
	R2404655-006	Zn (213.857 nm)	0.0012	2.37	41.9258
6/4/2024 20:36:48	R2404655-007	Ag (328.068 nm)	0.0000 u	> 100.00	-246.5416
	R2404655-007	Al (237.312 nm)	0.0035	18.03	43.6060
	R2404655-007	As (188.980 nm)	-0.0005 u	> 100.00	-9.7742
	R2404655-007	B (249.772 nm)	0.0160	0.86	511.5765
	R2404655-007	Ba (230.424 nm)	0.0150	1.38	561.6822
	R2404655-007	Be (313.107 nm)	0.0000	44.94	167.4330
	R2404655-007	Ca (317.933 nm)	82.5738 o	0.09	2866258.6112
	R2404655-007	Cd (214.439 nm)	0.0004	32.39	22.0303
	R2404655-007	Co (230.786 nm)	0.0001 u	> 100.00	-38.1411
	R2404655-007	Cr (267.716 nm)	0.0007	4.61	140.6005
	R2404655-007	Cu (327.395 nm)	0.0009	24.42	71.2254
	R2404655-007	Fe (234.350 nm)	0.0117	2.73	235.6091
	R2404655-007	K (766.491 nm)	1.5582	0.82	1342.7156
	R2404655-007	Mg (279.078 nm)	13.0172	0.08	38186.8759
	R2404655-007	Mn (257.610 nm)	0.0903	0.03	27328.2039
	R2404655-007	Mo (202.032 nm)	0.0009	27.61	-16.6784
	R2404655-007	Na (588.995 nm)	54.2004	0.39	476086.5568
	R2404655-007	Ni (230.299 nm)	0.0009	37.02	66.5031
	R2404655-007	Pb (220.353 nm)	0.0008	78.16	8.2989
	R2404655-007	Sb (217.582 nm)	0.0003 u	> 100.00	6.3051
	R2404655-007	Se (196.026 nm)	-0.0030 u	65.88	0.7508
	R2404655-007	Si (252.851 nm)	4.5319	0.16	14462.8456
	R2404655-007	Sn (189.925 nm)	0.0005	18.29	8.6595
	R2404655-007	Sr (216.596 nm)	0.3597	0.10	5899.1573
	R2404655-007	Ti (336.122 nm)	0.0002	33.13	112.7574
	R2404655-007	Tl (190.794 nm)	0.0021	82.87	-0.5298
	R2404655-007	V (292.401 nm)	0.0000 u	> 100.00	-26.2498
	R2404655-007	Y (360.074 nm)	0.98	0.40	531099.64
	R2404655-007	Y_R (360.074 nm)	0.98	0.41	529956.70
	R2404655-007	Zn (213.857 nm)	0.0014	4.17	54.4821
6/4/2024 20:40:03	Continuing Calibration Verification	Ag (328.068 nm)	0.4943	0.20	25309.1304
	Continuing Calibration Verification	Al (237.312 nm)	9.8293	0.24	20823.1376
	Continuing Calibration Verification	As (188.980 nm)	0.9700	0.26	1323.1113
	Continuing Calibration Verification	B (249.772 nm)	2.4765	0.06	72005.7171
	Continuing Calibration Verification	Ba (230.424 nm)	9.9340	0.31	389274.9394
	Continuing Calibration Verification	Be (313.107 nm)	0.2371	0.09	242047.3198
	Continuing Calibration Verification	Ca (317.933 nm)	25.4969	0.08	886958.9311
	Continuing Calibration Verification	Cd (214.439 nm)	0.4824	0.04	24733.6091
	Continuing Calibration Verification	Co (230.786 nm)	2.4546	0.09	35132.7905
	Continuing Calibration Verification	Cr (267.716 nm)	0.4896	0.11	20045.5757
	Continuing Calibration Verification	Cu (327.395 nm)	1.2155	0.29	47384.7539
	Continuing Calibration Verification	Fe (234.350 nm)	4.8980	0.09	86803.9746
	Continuing Calibration Verification	K (766.491 nm)	24.3020	0.39	24981.8137
	Continuing Calibration Verification	Mg (279.078 nm)	24.8460	0.11	72938.4446
	Continuing Calibration Verification	Mn (257.610 nm)	0.7255	0.07	219498.0610
	Continuing Calibration Verification	Mo (202.032 nm)	2.5514	0.09	12452.3658
	Continuing Calibration Verification	Na (588.995 nm)	25.3097	0.52	218710.4086
	Continuing Calibration Verification	Ni (230.299 nm)	2.0088	0.14	21502.3202
	Continuing Calibration Verification	Pb (220.353 nm)	0.5014	0.36	2398.9185
	Continuing Calibration Verification	Sb (217.582 nm)	4.9354	0.26	8890.5434
	Continuing Calibration Verification	Se (196.026 nm)	0.4833	1.39	313.8295
	Continuing Calibration Verification	Si (252.851 nm)	9.8704	0.30	31508.0384
	Continuing Calibration Verification	Sn (189.925 nm)	4.8616	0.19	11483.3379
	Continuing Calibration Verification	Sr (216.596 nm)	2.4317	0.28	40059.5836
	Continuing Calibration Verification	Ti (336.122 nm)	2.5034	0.17	324707.9722

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Verification	Tl (190.794 nm)	0.9698	0.07	779.9326
	Continuing Calibration Verification	V (292.401 nm)	2.4817	0.07	89758.4245
	Continuing Calibration Verification	Y (360.074 nm)	0.99	0.66	535314.94
	Continuing Calibration Verification	Y_R (360.074 nm)	0.99	0.66	534122.59
	Continuing Calibration Verification	Zn (213.857 nm)	0.9632	0.28	53446.7946
6/4/2024 20:43:16	Continuing Calibration Blank	Ag (328.068 nm)	0.0001	> 100.00	-240.6323
	Continuing Calibration Blank	Al (237.312 nm)	0.0039	14.05	44.4355
	Continuing Calibration Blank	As (188.980 nm)	0.0003 u	> 100.00	-8.6936
	Continuing Calibration Blank	B (249.772 nm)	0.0005	72.20	59.8049
	Continuing Calibration Blank	Ba (230.424 nm)	0.0008	8.87	4.4988
	Continuing Calibration Blank	Be (313.107 nm)	0.0000	26.07	188.7216
	Continuing Calibration Blank	Ca (317.933 nm)	0.0028	13.88	2878.8986
	Continuing Calibration Blank	Cd (214.439 nm)	0.0001	75.45	9.4085
	Continuing Calibration Blank	Co (230.786 nm)	0.0002	97.02	-36.1007
	Continuing Calibration Blank	Cr (267.716 nm)	0.0003	45.39	122.8383
	Continuing Calibration Blank	Cu (327.395 nm)	0.0003 u	> 100.00	47.0537
	Continuing Calibration Blank	Fe (234.350 nm)	0.0017	33.79	58.5868
	Continuing Calibration Blank	K (766.491 nm)	0.0220	> 100.00	-253.9075
	Continuing Calibration Blank	Mg (279.078 nm)	0.0014	50.07	-52.0592
	Continuing Calibration Blank	Mn (257.610 nm)	0.0001	51.46	38.1112
	Continuing Calibration Blank	Mo (202.032 nm)	0.0050	24.67	3.1159
	Continuing Calibration Blank	Na (588.995 nm)	0.0466	35.81	-6348.8235
	Continuing Calibration Blank	Ni (230.299 nm)	0.0004	> 100.00	61.8489
	Continuing Calibration Blank	Pb (220.353 nm)	-0.0002 u	> 100.00	3.7553
	Continuing Calibration Blank	Sb (217.582 nm)	0.0072	36.81	18.6637
	Continuing Calibration Blank	Se (196.026 nm)	0.0014	16.44	3.6186
	Continuing Calibration Blank	Si (252.851 nm)	0.0029	62.97	1.9780
	Continuing Calibration Blank	Sn (189.925 nm)	0.0013	82.29	10.4902
	Continuing Calibration Blank	Sr (216.596 nm)	0.0000 u	> 100.00	-29.7674
	Continuing Calibration Blank	Ti (336.122 nm)	0.0023	47.49	388.1656
	Continuing Calibration Blank	Tl (190.794 nm)	0.0016	77.23	-0.9495
	Continuing Calibration Blank	V (292.401 nm)	0.0002	77.14	-18.0761
	Continuing Calibration Blank	Y (360.074 nm)	0.99	2.17	539209.01
	Continuing Calibration Blank	Y_R (360.074 nm)	0.99	2.17	537991.38
	Continuing Calibration Blank	Zn (213.857 nm)	0.0001	> 100.00	-20.9295
6/4/2024 20:46:30	R2404655-008	Ag (328.068 nm)	0.0001 u	> 100.00	-242.7629
	R2404655-008	Al (237.312 nm)	0.0660	2.96	175.8535
	R2404655-008	As (188.980 nm)	-0.0011 u	89.94	-10.5681
	R2404655-008	B (249.772 nm)	0.0195	0.24	611.6637
	R2404655-008	Ba (230.424 nm)	0.0209	0.78	792.7331
	R2404655-008	Be (313.107 nm)	0.0000	20.38	177.7467
	R2404655-008	Ca (317.933 nm)	88.1247 o	0.16	3058752.4848
	R2404655-008	Cd (214.439 nm)	0.0004	16.30	26.3671
	R2404655-008	Co (230.786 nm)	0.0001 u	> 100.00	-37.7110
	R2404655-008	Cr (267.716 nm)	0.0010	0.99	154.5675
	R2404655-008	Cu (327.395 nm)	0.0018	12.44	106.6895
	R2404655-008	Fe (234.350 nm)	0.1191	0.33	2139.0697
	R2404655-008	K (766.491 nm)	1.6701	1.44	1459.0538
	R2404655-008	Mg (279.078 nm)	14.0054	0.17	41089.8804
	R2404655-008	Mn (257.610 nm)	0.2776	0.15	83994.4747
	R2404655-008	Mo (202.032 nm)	0.0019	12.48	-12.2090
	R2404655-008	Na (588.995 nm)	60.4825 o	0.49	532051.6351
	R2404655-008	Ni (230.299 nm)	0.0014	49.23	72.6065
	R2404655-008	Pb (220.353 nm)	0.0010	72.06	9.2393
	R2404655-008	Sb (217.582 nm)	0.0069	13.76	18.1578
	R2404655-008	Se (196.026 nm)	-0.0034 u	20.38	0.5196
	R2404655-008	Si (252.851 nm)	4.6648	0.21	14886.9827

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404655-008	Sn (189.925 nm)	0.0015	34.98	10.8060
	R2404655-008	Sr (216.596 nm)	0.4184	0.21	6867.5248
	R2404655-008	Ti (336.122 nm)	0.0017	25.10	313.4307
	R2404655-008	Tl (190.794 nm)	0.0007	72.71	-1.6822
	R2404655-008	V (292.401 nm)	0.0000 u	> 100.00	-24.1372
	R2404655-008	Y (360.074 nm)	0.97	0.37	528195.96
	R2404655-008	Y_R (360.074 nm)	0.97	0.37	527043.96
	R2404655-008	Zn (213.857 nm)	0.0077	1.29	404.0018
6/4/2024 20:49:44	R2404655-009	Ag (328.068 nm)	-0.0005 u	26.35	-273.7266
	R2404655-009	Al (237.312 nm)	0.0099	11.83	57.0919
	R2404655-009	As (188.980 nm)	0.0013 u	> 100.00	-7.2181
	R2404655-009	B (249.772 nm)	0.2368	0.19	6925.7779
	R2404655-009	Ba (230.424 nm)	0.0097	1.65	353.9757
	R2404655-009	Be (313.107 nm)	0.0001	4.39	239.9583
	R2404655-009	Ca (317.933 nm)	422.6576 o	0.22	14659611.1985
	R2404655-009	Cd (214.439 nm)	0.0008	16.44	42.3637
	R2404655-009	Co (230.786 nm)	0.0460	1.38	619.5277
	R2404655-009	Cr (267.716 nm)	0.0017	3.26	181.6908
	R2404655-009	Cu (327.395 nm)	0.0008	15.10	70.3196
	R2404655-009	Fe (234.350 nm)	6.5063	0.15	115297.6129
	R2404655-009	K (766.491 nm)	4.1104	0.52	3995.3772
	R2404655-009	Mg (279.078 nm)	100.7982 o	0.14	296076.1974
	R2404655-009	Mn (257.610 nm)	16.1859 o	0.25	4896312.6486
	R2404655-009	Mo (202.032 nm)	0.0019	20.01	-12.1855
	R2404655-009	Na (588.995 nm)	369.7495 o	0.13	3287192.2721
	R2404655-009	Ni (230.299 nm)	0.0491	1.74	581.7480
	R2404655-009	Pb (220.353 nm)	0.0022	27.72	15.0081
	R2404655-009	Sb (217.582 nm)	0.0032	18.04	11.5431
	R2404655-009	Se (196.026 nm)	0.0076	24.08	7.5841
	R2404655-009	Si (252.851 nm)	9.9138	1.15	31646.6677
	R2404655-009	Sn (189.925 nm)	0.0020	54.88	12.0274
	R2404655-009	Sr (216.596 nm)	1.3117	0.18	21593.8045
	R2404655-009	Ti (336.122 nm)	0.0042	7.27	631.8149
	R2404655-009	Tl (190.794 nm)	0.0061	66.16	2.6662
	R2404655-009	V (292.401 nm)	-0.0001 u	> 100.00	-30.0135
	R2404655-009	Y (360.074 nm)	0.89	0.21	483918.58
	R2404655-009	Y_R (360.074 nm)	0.89	0.22	482944.80
	R2404655-009	Zn (213.857 nm)	0.0145	0.31	782.0823
6/4/2024 20:52:59	R2404655-010	Ag (328.068 nm)	0.0000 u	> 100.00	-249.2490
	R2404655-010	Al (237.312 nm)	1.6586	0.11	3543.8809
	R2404655-010	As (188.980 nm)	-0.0003 u	> 100.00	-9.4253
	R2404655-010	B (249.772 nm)	0.2512	0.34	7345.4537
	R2404655-010	Ba (230.424 nm)	0.0371	0.43	1428.2509
	R2404655-010	Be (313.107 nm)	0.0001	4.01	265.2617
	R2404655-010	Ca (317.933 nm)	367.8620 o	0.12	12759420.5252
	R2404655-010	Cd (214.439 nm)	0.0006	6.28	34.3598
	R2404655-010	Co (230.786 nm)	0.0018	9.93	-13.0060
	R2404655-010	Cr (267.716 nm)	0.0031	4.69	237.4642
	R2404655-010	Cu (327.395 nm)	0.0029	5.20	149.3097
	R2404655-010	Fe (234.350 nm)	1.0208	0.11	18113.4335
	R2404655-010	K (766.491 nm)	3.3722	1.27	3228.1007
	R2404655-010	Mg (279.078 nm)	61.7393 o	0.24	181326.2047
	R2404655-010	Mn (257.610 nm)	0.5991	0.16	181245.0897
	R2404655-010	Mo (202.032 nm)	0.0012	22.16	-15.2486
	R2404655-010	Na (588.995 nm)	222.6160 o	0.38	1976436.4341
	R2404655-010	Ni (230.299 nm)	0.0053	12.46	113.6126
	R2404655-010	Pb (220.353 nm)	0.0021	50.74	14.6153

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404655-010	Sb (217.582 nm)	0.0009 u	> 100.00	7.3147
	R2404655-010	Se (196.026 nm)	-0.0003 u	> 100.00	2.5118
	R2404655-010	Si (252.851 nm)	14.1211	0.46	45080.4056
	R2404655-010	Sn (189.925 nm)	0.0008	6.22	9.3608
	R2404655-010	Sr (216.596 nm)	2.6215	0.15	43188.1521
	R2404655-010	Ti (336.122 nm)	0.0340	1.65	4501.5710
	R2404655-010	Tl (190.794 nm)	0.0018 u	> 100.00	-0.7905
	R2404655-010	V (292.401 nm)	0.0019	9.51	45.1584
	R2404655-010	Y (360.074 nm)	0.92	0.58	499509.96
	R2404655-010	Y_R (360.074 nm)	0.92	0.58	498516.88
	R2404655-010	Zn (213.857 nm)	0.0101	0.12	534.0448
6/4/2024 20:56:13	R2404655-011	Ag (328.068 nm)	-0.0002 u	> 100.00	-254.6753
	R2404655-011	Al (237.312 nm)	0.1385	1.22	329.1934
	R2404655-011	As (188.980 nm)	-0.0002 u	> 100.00	-9.3639
	R2404655-011	B (249.772 nm)	0.2354	0.09	6884.5356
	R2404655-011	Ba (230.424 nm)	0.0085	1.50	305.8986
	R2404655-011	Be (313.107 nm)	0.0001	6.80	251.2358
	R2404655-011	Ca (317.933 nm)	272.5887 o	0.19	9455552.6817
	R2404655-011	Cd (214.439 nm)	0.0045	1.69	234.2614
	R2404655-011	Co (230.786 nm)	0.0065	5.66	54.0961
	R2404655-011	Cr (267.716 nm)	0.0013	8.53	163.8881
	R2404655-011	Cu (327.395 nm)	0.0065	3.38	292.0076
	R2404655-011	Fe (234.350 nm)	0.0956	0.49	1723.0572
	R2404655-011	K (766.491 nm)	4.2510	0.37	4141.4811
	R2404655-011	Mg (279.078 nm)	36.4929	0.13	107155.4725
	R2404655-011	Mn (257.610 nm)	6.8312 o	0.16	2066484.7352
	R2404655-011	Mo (202.032 nm)	0.0014	52.60	-14.3200
	R2404655-011	Na (588.995 nm)	378.0943 o	0.31	3361533.0170
	R2404655-011	Ni (230.299 nm)	0.0140	2.14	206.9455
	R2404655-011	Pb (220.353 nm)	0.0013	19.86	10.4764
	R2404655-011	Sb (217.582 nm)	0.0038	77.33	12.6665
	R2404655-011	Se (196.026 nm)	0.0058 u	> 100.00	6.3895
	R2404655-011	Si (252.851 nm)	8.3745	0.07	26731.7786
	R2404655-011	Sn (189.925 nm)	0.0019	36.21	11.8950
	R2404655-011	Sr (216.596 nm)	0.7920	0.22	13026.3573
	R2404655-011	Ti (336.122 nm)	0.0021	8.42	364.1431
	R2404655-011	Tl (190.794 nm)	0.0033	25.44	0.4358
	R2404655-011	V (292.401 nm)	-0.0002 u	71.17	-33.4369
	R2404655-011	Y (360.074 nm)	0.91	0.17	494367.05
	R2404655-011	Y_R (360.074 nm)	0.91	0.17	493367.93
	R2404655-011	Zn (213.857 nm)	0.0177	0.23	957.9231
6/4/2024 20:59:27	R2404655-012	Ag (328.068 nm)	-0.0001 u	> 100.00	-249.7024
	R2404655-012	Al (237.312 nm)	0.2692	0.39	605.5976
	R2404655-012	As (188.980 nm)	0.0016	34.27	-6.8771
	R2404655-012	B (249.772 nm)	0.1214	0.06	3572.9995
	R2404655-012	Ba (230.424 nm)	0.0385	0.37	1482.2390
	R2404655-012	Be (313.107 nm)	0.0001	16.52	210.0834
	R2404655-012	Ca (317.933 nm)	116.8258 o	0.10	4054044.0881
	R2404655-012	Cd (214.439 nm)	0.0015	4.07	80.0608
	R2404655-012	Co (230.786 nm)	-0.0001 u	> 100.00	-40.9014
	R2404655-012	Cr (267.716 nm)	0.0012	12.46	160.1511
	R2404655-012	Cu (327.395 nm)	0.0014	21.53	90.6235
	R2404655-012	Fe (234.350 nm)	0.1451	0.24	2599.9389
	R2404655-012	K (766.491 nm)	5.1968	0.41	5124.6053
	R2404655-012	Mg (279.078 nm)	24.9534	0.14	73253.9693
	R2404655-012	Mn (257.610 nm)	0.8816	0.10	266703.1151
	R2404655-012	Mo (202.032 nm)	0.0008	80.85	-17.5432

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404655-012	Na (588.995 nm)	205.3335 o	0.50	1822473.4123
	R2404655-012	Ni (230.299 nm)	0.0034	8.09	93.7442
	R2404655-012	Pb (220.353 nm)	0.0014	13.82	11.2475
	R2404655-012	Sb (217.582 nm)	0.0023	> 100.00	9.7925
	R2404655-012	Se (196.026 nm)	0.0028	> 100.00	4.4740
	R2404655-012	Si (252.851 nm)	3.1841	0.15	10159.1354
	R2404655-012	Sn (189.925 nm)	0.0011 u	> 100.00	10.0745
	R2404655-012	Sr (216.596 nm)	0.4142	0.07	6798.6047
	R2404655-012	Ti (336.122 nm)	0.0030	3.43	472.8654
	R2404655-012	Tl (190.794 nm)	0.0025	42.77	-0.2453
	R2404655-012	V (292.401 nm)	0.0000 u	> 100.00	-23.7280
	R2404655-012	Y (360.074 nm)	0.95	0.36	513595.56
	R2404655-012	Y_R (360.074 nm)	0.95	0.36	512505.78
	R2404655-012	Zn (213.857 nm)	0.0025	3.65	115.2120
6/4/2024 21:02:41	R2404655-013	Ag (328.068 nm)	0.0000 u	> 100.00	-245.1559
	R2404655-013	Al (237.312 nm)	0.0271	4.29	93.5143
	R2404655-013	As (188.980 nm)	0.0005 u	> 100.00	-8.3123
	R2404655-013	B (249.772 nm)	0.1185	0.26	3487.8349
	R2404655-013	Ba (230.424 nm)	0.0316	0.43	1212.1851
	R2404655-013	Be (313.107 nm)	0.0000	24.61	184.5528
	R2404655-013	Ca (317.933 nm)	93.7702 o	0.13	3254524.7707
	R2404655-013	Cd (214.439 nm)	0.0004	13.36	24.6345
	R2404655-013	Co (230.786 nm)	0.0009	41.48	-25.5444
	R2404655-013	Cr (267.716 nm)	0.0009	11.80	149.4525
	R2404655-013	Cu (327.395 nm)	0.0019	9.73	111.1855
	R2404655-013	Fe (234.350 nm)	0.0811	0.31	1465.8639
	R2404655-013	K (766.491 nm)	3.9306	0.06	3808.5052
	R2404655-013	Mg (279.078 nm)	18.6383	0.14	54700.9748
	R2404655-013	Mn (257.610 nm)	1.3045	0.12	394642.3046
	R2404655-013	Mo (202.032 nm)	0.0008 u	> 100.00	-17.5572
	R2404655-013	Na (588.995 nm)	141.5111 o	0.31	1253903.8003
	R2404655-013	Ni (230.299 nm)	0.0052	8.52	112.4290
	R2404655-013	Pb (220.353 nm)	0.0002 u	> 100.00	5.6327
	R2404655-013	Sb (217.582 nm)	0.0012	95.81	7.9745
	R2404655-013	Se (196.026 nm)	0.0022 u	> 100.00	4.1139
	R2404655-013	Si (252.851 nm)	3.5812	0.06	11427.2839
	R2404655-013	Sn (189.925 nm)	0.0007 u	> 100.00	8.9630
	R2404655-013	Sr (216.596 nm)	0.3727	0.29	6114.4994
	R2404655-013	Ti (336.122 nm)	0.0007	27.49	172.4502
	R2404655-013	Tl (190.794 nm)	0.0012 u	> 100.00	-1.2842
	R2404655-013	V (292.401 nm)	0.0002 u	> 100.00	-17.6397
	R2404655-013	Y (360.074 nm)	0.96	0.43	522077.46
	R2404655-013	Y_R (360.074 nm)	0.96	0.43	520866.64
	R2404655-013	Zn (213.857 nm)	0.0020	1.45	85.7013
6/4/2024 21:05:54	R2404655-014	Ag (328.068 nm)	0.0003 u	98.07	-228.8968
	R2404655-014	Al (237.312 nm)	0.2130	0.32	486.6596
	R2404655-014	As (188.980 nm)	0.0001 u	> 100.00	-8.9251
	R2404655-014	B (249.772 nm)	0.1253	0.23	3685.5630
	R2404655-014	Ba (230.424 nm)	0.0652	0.28	2529.4264
	R2404655-014	Be (313.107 nm)	0.0001	10.33	212.3095
	R2404655-014	Ca (317.933 nm)	196.1398 o	0.04	6804475.8122
	R2404655-014	Cd (214.439 nm)	0.0002	17.49	14.4345
	R2404655-014	Co (230.786 nm)	-0.0001 u	> 100.00	-40.8716
	R2404655-014	Cr (267.716 nm)	0.0049	3.62	311.6616
	R2404655-014	Cu (327.395 nm)	0.0021	11.66	118.1257
	R2404655-014	Fe (234.350 nm)	0.9630	0.19	17089.0708
	R2404655-014	K (766.491 nm)	2.2981	1.22	2111.8000

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404655-014	Mg (279.078 nm)	41.5883	0.13	122125.1400
	R2404655-014	Mn (257.610 nm)	0.9318	0.10	281883.4332
	R2404655-014	Mo (202.032 nm)	0.0012	55.93	-15.2102
	R2404655-014	Na (588.995 nm)	107.1930 o	0.42	948176.9565
	R2404655-014	Ni (230.299 nm)	0.0341	1.08	421.0548
	R2404655-014	Pb (220.353 nm)	0.0055	15.21	30.7397
	R2404655-014	Sb (217.582 nm)	0.0003 u	> 100.00	6.2695
	R2404655-014	Se (196.026 nm)	0.0016 u	> 100.00	3.7369
	R2404655-014	Si (252.851 nm)	6.4893	0.13	20712.4289
	R2404655-014	Sn (189.925 nm)	0.0010	27.75	9.7518
	R2404655-014	Sr (216.596 nm)	2.6150	0.10	43080.9836
	R2404655-014	Ti (336.122 nm)	0.0041	2.10	619.8636
	R2404655-014	Tl (190.794 nm)	0.0013	> 100.00	-1.1956
	R2404655-014	V (292.401 nm)	0.0003	51.91	-13.1170
	R2404655-014	Y (360.074 nm)	0.95	0.42	515114.99
	R2404655-014	Y_R (360.074 nm)	0.95	0.42	513955.06
	R2404655-014	Zn (213.857 nm)	0.0052	1.35	263.6306
6/4/2024 21:09:08	R2404655-015	Ag (328.068 nm)	0.0000 u	> 100.00	-245.9882
	R2404655-015	Al (237.312 nm)	0.0580	2.32	158.8756
	R2404655-015	As (188.980 nm)	0.0006 u	> 100.00	-8.2574
	R2404655-015	B (249.772 nm)	0.1379	0.30	4052.8127
	R2404655-015	Ba (230.424 nm)	0.0506	0.11	1955.1782
	R2404655-015	Be (313.107 nm)	0.0000	48.24	174.4969
	R2404655-015	Ca (317.933 nm)	93.3895 o	0.09	3241324.5211
	R2404655-015	Cd (214.439 nm)	0.0003	29.34	17.2155
	R2404655-015	Co (230.786 nm)	0.0015	15.67	-16.8328
	R2404655-015	Cr (267.716 nm)	0.0014	7.03	169.8117
	R2404655-015	Cu (327.395 nm)	0.0011	28.30	81.6573
	R2404655-015	Fe (234.350 nm)	1.7671	0.16	31334.9124
	R2404655-015	K (766.491 nm)	15.0658	0.38	15382.0451
	R2404655-015	Mg (279.078 nm)	18.6301	0.13	54676.7159
	R2404655-015	Mn (257.610 nm)	3.2568 o	0.14	985206.1618
	R2404655-015	Mo (202.032 nm)	0.0008	19.19	-17.2803
	R2404655-015	Na (588.995 nm)	58.4355 o	0.27	513815.4430
	R2404655-015	Ni (230.299 nm)	0.0022	38.29	80.6532
	R2404655-015	Pb (220.353 nm)	0.0042	15.69	24.4401
	R2404655-015	Sb (217.582 nm)	-0.0001 u	> 100.00	5.6199
	R2404655-015	Se (196.026 nm)	0.0035 u	> 100.00	4.9324
	R2404655-015	Si (252.851 nm)	4.9397	0.02	15764.8315
	R2404655-015	Sn (189.925 nm)	0.0003 u	> 100.00	7.9821
	R2404655-015	Sr (216.596 nm)	0.3001	0.11	4917.1225
	R2404655-015	Ti (336.122 nm)	0.0012	15.09	241.8088
	R2404655-015	Tl (190.794 nm)	0.0010 u	> 100.00	-1.4282
	R2404655-015	V (292.401 nm)	0.0002	59.74	-18.5487
	R2404655-015	Y (360.074 nm)	0.98	0.45	529935.81
	R2404655-015	Y_R (360.074 nm)	0.98	0.45	528751.96
	R2404655-015	Zn (213.857 nm)	0.0018	5.06	77.4400
6/4/2024 21:12:22	R2404655-016	Ag (328.068 nm)	0.0000 u	> 100.00	-247.0341
	R2404655-016	Al (237.312 nm)	0.0550	1.79	152.5726
	R2404655-016	As (188.980 nm)	0.0016 u	> 100.00	-6.9123
	R2404655-016	B (249.772 nm)	0.1410	0.20	4142.6102
	R2404655-016	Ba (230.424 nm)	0.0516	0.22	1995.7214
	R2404655-016	Be (313.107 nm)	0.0000	28.13	180.0028
	R2404655-016	Ca (317.933 nm)	94.8338 o	0.08	3291410.5179
	R2404655-016	Cd (214.439 nm)	0.0003	4.50	19.9346
	R2404655-016	Co (230.786 nm)	0.0017	10.55	-13.9938
	R2404655-016	Cr (267.716 nm)	0.0012	10.29	160.6499

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404655-016	Cu (327.395 nm)	0.0007	37.04	63.2896
	R2404655-016	Fe (234.350 nm)	1.7930	0.08	31795.3780
	R2404655-016	K (766.491 nm)	15.3019	0.42	15627.4605
	R2404655-016	Mg (279.078 nm)	18.9160	0.12	55516.8433
	R2404655-016	Mn (257.610 nm)	3.3068 o	0.08	1000357.7365
	R2404655-016	Mo (202.032 nm)	0.0011	34.07	-15.9244
	R2404655-016	Na (588.995 nm)	59.2194 o	0.42	520799.2207
	R2404655-016	Ni (230.299 nm)	0.0018	23.16	76.2810
	R2404655-016	Pb (220.353 nm)	0.0031	24.49	19.1163
	R2404655-016	Sb (217.582 nm)	0.0000 u	> 100.00	5.6573
	R2404655-016	Se (196.026 nm)	0.0019 u	> 100.00	3.9187
	R2404655-016	Si (252.851 nm)	5.0001	0.20	15957.5319
	R2404655-016	Sn (189.925 nm)	0.0008	99.48	9.2057
	R2404655-016	Sr (216.596 nm)	0.3038	0.13	4977.2959
	R2404655-016	Ti (336.122 nm)	0.0009	11.83	208.4494
	R2404655-016	Tl (190.794 nm)	0.0028 u	99.68	0.0309
	R2404655-016	V (292.401 nm)	0.0002 u	> 100.00	-18.0997
	R2404655-016	Y (360.074 nm)	0.97	0.45	527836.03
	R2404655-016	Y_R (360.074 nm)	0.97	0.45	526627.60
	R2404655-016	Zn (213.857 nm)	0.0022	1.03	99.6692
6/4/2024 21:15:36	R2404655-017	Ag (328.068 nm)	0.0001 u	> 100.00	-241.9661
	R2404655-017	Al (237.312 nm)	0.0083	29.97	53.7716
	R2404655-017	As (188.980 nm)	0.0020	78.30	-6.3511
	R2404655-017	B (249.772 nm)	0.0657	1.09	1955.2120
	R2404655-017	Ba (230.424 nm)	0.0380	0.13	1461.0523
	R2404655-017	Be (313.107 nm)	0.0000	27.38	170.3180
	R2404655-017	Ca (317.933 nm)	94.8228 o	0.35	3291028.8386
	R2404655-017	Cd (214.439 nm)	0.0002	34.51	14.9432
	R2404655-017	Co (230.786 nm)	-0.0004 u	73.23	-44.8286
	R2404655-017	Cr (267.716 nm)	0.0011	12.67	156.8012
	R2404655-017	Cu (327.395 nm)	0.0007	40.80	62.7376
	R2404655-017	Fe (234.350 nm)	0.0267	3.27	502.4828
	R2404655-017	K (766.491 nm)	1.6243	0.23	1411.4436
	R2404655-017	Mg (279.078 nm)	24.1715	0.32	70956.6425
	R2404655-017	Mn (257.610 nm)	0.0058	0.15	1782.2290
	R2404655-017	Mo (202.032 nm)	0.0017	30.69	-13.1224
	R2404655-017	Na (588.995 nm)	13.2948	0.43	111674.1478
	R2404655-017	Ni (230.299 nm)	-0.0007 u	28.69	49.9777
	R2404655-017	Pb (220.353 nm)	0.0021	52.37	14.4771
	R2404655-017	Sb (217.582 nm)	-0.0011 u	> 100.00	3.8022
	R2404655-017	Se (196.026 nm)	0.0017 u	> 100.00	3.7719
	R2404655-017	Si (252.851 nm)	6.8887	0.33	21987.7063
	R2404655-017	Sn (189.925 nm)	0.0004 u	> 100.00	8.4301
	R2404655-017	Sr (216.596 nm)	2.5526	0.42	42051.3111
	R2404655-017	Ti (336.122 nm)	0.0002	42.47	107.4190
	R2404655-017	Tl (190.794 nm)	0.0011	87.60	-1.3184
	R2404655-017	V (292.401 nm)	0.0002	> 100.00	-16.1957
	R2404655-017	Y (360.074 nm)	0.98	0.56	533526.25
	R2404655-017	Y_R (360.074 nm)	0.98	0.56	532181.01
	R2404655-017	Zn (213.857 nm)	0.0015	2.87	56.8786
6/4/2024 21:18:49	Continuing Calibration Verification	Ag (328.068 nm)	0.4917	0.07	25177.7107
	Continuing Calibration Verification	Al (237.312 nm)	9.7103	0.10	20571.4471
	Continuing Calibration Verification	As (188.980 nm)	0.9657	0.44	1317.1544
	Continuing Calibration Verification	B (249.772 nm)	2.4644	0.13	71652.4144
	Continuing Calibration Verification	Ba (230.424 nm)	9.9073	0.50	388228.2061
	Continuing Calibration Verification	Be (313.107 nm)	0.2362	0.18	241101.8217
	Continuing Calibration Verification	Ca (317.933 nm)	25.4245	0.20	884447.0283

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Verification	Cd (214.439 nm)	0.4824	0.14	24735.0912
	Continuing Calibration Verification	Co (230.786 nm)	2.4519	0.37	35094.8141
	Continuing Calibration Verification	Cr (267.716 nm)	0.4873	0.10	19953.4254
	Continuing Calibration Verification	Cu (327.395 nm)	1.2111	0.70	47210.7777
	Continuing Calibration Verification	Fe (234.350 nm)	4.8774	0.24	86439.5250
	Continuing Calibration Verification	K (766.491 nm)	24.0432	0.42	24712.7576
	Continuing Calibration Verification	Mg (279.078 nm)	24.7952	0.14	72789.1263
	Continuing Calibration Verification	Mn (257.610 nm)	0.7228	0.17	218680.2468
	Continuing Calibration Verification	Mo (202.032 nm)	2.5320	0.43	12357.5846
	Continuing Calibration Verification	Na (588.995 nm)	25.0492	0.39	216389.7756
	Continuing Calibration Verification	Ni (230.299 nm)	2.0004	0.14	21412.6448
	Continuing Calibration Verification	Pb (220.353 nm)	0.4992	0.10	2388.4716
	Continuing Calibration Verification	Sb (217.582 nm)	4.8976	0.14	8822.5266
	Continuing Calibration Verification	Se (196.026 nm)	0.4802	0.97	311.8509
	Continuing Calibration Verification	Si (252.851 nm)	9.8251	0.61	31363.5896
	Continuing Calibration Verification	Sn (189.925 nm)	4.8471	0.12	11449.1106
	Continuing Calibration Verification	Sr (216.596 nm)	2.4233	0.61	39919.5511
	Continuing Calibration Verification	Ti (336.122 nm)	2.4871	0.12	322586.0196
	Continuing Calibration Verification	Tl (190.794 nm)	0.9699	0.46	780.0029
	Continuing Calibration Verification	V (292.401 nm)	2.4688	0.17	89293.0010
	Continuing Calibration Verification	Y (360.074 nm)	0.98	0.41	534272.66
	Continuing Calibration Verification	Y_R (360.074 nm)	0.98	0.41	532955.13
	Continuing Calibration Verification	Zn (213.857 nm)	0.9581	0.50	53162.4575
6/4/2024 21:22:03	Continuing Calibration Blank	Ag (328.068 nm)	0.0002 u	> 100.00	-237.2532
	Continuing Calibration Blank	Al (237.312 nm)	0.0014 u	91.83	39.1942
	Continuing Calibration Blank	As (188.980 nm)	0.0017	> 100.00	-6.7401
	Continuing Calibration Blank	B (249.772 nm)	0.0003	> 100.00	54.0796
	Continuing Calibration Blank	Ba (230.424 nm)	0.0009	1.01	8.6054
	Continuing Calibration Blank	Be (313.107 nm)	0.0000	18.69	182.4898
	Continuing Calibration Blank	Ca (317.933 nm)	0.0036	11.73	2908.8037
	Continuing Calibration Blank	Cd (214.439 nm)	0.0001	29.99	10.2724
	Continuing Calibration Blank	Co (230.786 nm)	0.0004	72.01	-33.3039
	Continuing Calibration Blank	Cr (267.716 nm)	0.0002	74.50	120.9156
	Continuing Calibration Blank	Cu (327.395 nm)	0.0001 u	> 100.00	42.7423
	Continuing Calibration Blank	Fe (234.350 nm)	0.0016	26.93	56.8177
	Continuing Calibration Blank	K (766.491 nm)	0.0325 u	> 100.00	-243.0574
	Continuing Calibration Blank	Mg (279.078 nm)	0.0023	5.85	-49.2375
	Continuing Calibration Blank	Mn (257.610 nm)	0.0001	14.96	51.1433
	Continuing Calibration Blank	Mo (202.032 nm)	0.0053	27.13	4.7656
	Continuing Calibration Blank	Na (588.995 nm)	0.0544	8.86	-6279.2017
	Continuing Calibration Blank	Ni (230.299 nm)	0.0004	32.07	61.5153
	Continuing Calibration Blank	Pb (220.353 nm)	0.0001 u	> 100.00	5.1396
	Continuing Calibration Blank	Sb (217.582 nm)	0.0067	15.21	17.7340
	Continuing Calibration Blank	Se (196.026 nm)	0.0003 u	> 100.00	2.8893
	Continuing Calibration Blank	Si (252.851 nm)	0.0047	21.38	7.5583
	Continuing Calibration Blank	Sn (189.925 nm)	0.0012	33.88	10.3001
	Continuing Calibration Blank	Sr (216.596 nm)	0.0004	48.89	-23.2678
	Continuing Calibration Blank	Ti (336.122 nm)	0.0022	48.43	375.6392
	Continuing Calibration Blank	Tl (190.794 nm)	0.0013 u	> 100.00	-1.1832
	Continuing Calibration Blank	V (292.401 nm)	0.0005	20.93	-8.6018
	Continuing Calibration Blank	Y (360.074 nm)	1.01	0.38	545919.96
	Continuing Calibration Blank	Y_R (360.074 nm)	1.01	0.38	544530.89
	Continuing Calibration Blank	Zn (213.857 nm)	0.0000 u	> 100.00	-22.5975
6/4/2024 21:25:17	R2404655-018	Ag (328.068 nm)	0.0000 u	> 100.00	-248.2763
	R2404655-018	Al (237.312 nm)	0.9324	0.20	2008.0132
	R2404655-018	As (188.980 nm)	0.0019 u	> 100.00	-6.4508
	R2404655-018	B (249.772 nm)	0.0244	1.81	754.0114

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404655-018	Ba (230.424 nm)	0.0457	0.66	1762.5413
	R2404655-018	Be (313.107 nm)	0.0001	13.50	210.5396
	R2404655-018	Ca (317.933 nm)	88.4064 o	0.45	3068522.1149
	R2404655-018	Cd (214.439 nm)	0.0003	17.74	20.6982
	R2404655-018	Co (230.786 nm)	0.0023	9.48	-6.3882
	R2404655-018	Cr (267.716 nm)	0.0049	3.42	311.5414
	R2404655-018	Cu (327.395 nm)	0.0026	9.11	138.1041
	R2404655-018	Fe (234.350 nm)	1.1018	0.39	19548.9869
	R2404655-018	K (766.491 nm)	2.8916	0.71	2728.6129
	R2404655-018	Mg (279.078 nm)	13.5937	0.31	39880.5079
	R2404655-018	Mn (257.610 nm)	0.3842	0.37	116241.3688
	R2404655-018	Mo (202.032 nm)	0.0021	22.32	-11.1834
	R2404655-018	Na (588.995 nm)	6.0538	0.12	47166.7354
	R2404655-018	Ni (230.299 nm)	0.0031	13.22	90.2943
	R2404655-018	Pb (220.353 nm)	0.0018	8.48	12.8956
	R2404655-018	Sb (217.582 nm)	0.0056	8.61	15.8039
	R2404655-018	Se (196.026 nm)	-0.0018 u	> 100.00	1.5583
	R2404655-018	Si (252.851 nm)	4.6832	0.15	14945.9582
	R2404655-018	Sn (189.925 nm)	0.0003 u	> 100.00	8.1405
	R2404655-018	Sr (216.596 nm)	0.3498	0.38	5736.1389
	R2404655-018	Ti (336.122 nm)	0.0164	2.02	2219.3468
	R2404655-018	Tl (190.794 nm)	0.0004 u	> 100.00	-1.8939
	R2404655-018	V (292.401 nm)	0.0019	6.89	45.0624
	R2404655-018	Y (360.074 nm)	0.99	0.09	534948.48
	R2404655-018	Y_R (360.074 nm)	0.99	0.09	533565.58
	R2404655-018	Zn (213.857 nm)	0.0049	1.28	245.8403
6/4/2024 21:28:31	R2404655-019	Ag (328.068 nm)	0.0001 u	> 100.00	-243.8058
	R2404655-019	Al (237.312 nm)	0.3072	0.81	685.8443
	R2404655-019	As (188.980 nm)	0.0011	> 100.00	-7.5150
	R2404655-019	B (249.772 nm)	0.0151	0.92	484.4364
	R2404655-019	Ba (230.424 nm)	0.0169	1.39	633.7369
	R2404655-019	Be (313.107 nm)	0.0000	40.42	171.1563
	R2404655-019	Ca (317.933 nm)	46.2882	0.25	1607956.9560
	R2404655-019	Cd (214.439 nm)	0.0002	22.06	11.7143
	R2404655-019	Co (230.786 nm)	0.0003	87.31	-34.8649
	R2404655-019	Cr (267.716 nm)	0.0016	7.19	177.1581
	R2404655-019	Cu (327.395 nm)	0.0009	32.17	73.0780
	R2404655-019	Fe (234.350 nm)	0.2976	0.37	5301.0789
	R2404655-019	K (766.491 nm)	1.1962	0.30	966.5166
	R2404655-019	Mg (279.078 nm)	11.2573	0.19	33016.3128
	R2404655-019	Mn (257.610 nm)	0.0528	0.19	15982.9217
	R2404655-019	Mo (202.032 nm)	0.0012	19.89	-15.6453
	R2404655-019	Na (588.995 nm)	6.1123	0.19	47688.3418
	R2404655-019	Ni (230.299 nm)	0.0011	37.15	68.7726
	R2404655-019	Pb (220.353 nm)	0.0003 u	> 100.00	5.9124
	R2404655-019	Sb (217.582 nm)	0.0046	13.56	14.0786
	R2404655-019	Se (196.026 nm)	-0.0020 u	> 100.00	1.4229
	R2404655-019	Si (252.851 nm)	4.3068	0.18	13743.9155
	R2404655-019	Sn (189.925 nm)	0.0007	> 100.00	8.9686
	R2404655-019	Sr (216.596 nm)	0.1938	0.43	3164.0836
	R2404655-019	Ti (336.122 nm)	0.0045	4.03	675.3902
	R2404655-019	Tl (190.794 nm)	-0.0003 u	> 100.00	-2.4869
	R2404655-019	V (292.401 nm)	0.0006	15.74	-3.0520
	R2404655-019	Y (360.074 nm)	1.00	0.27	540106.56
	R2404655-019	Y_R (360.074 nm)	1.00	0.27	538676.32
	R2404655-019	Zn (213.857 nm)	0.0038	0.93	184.0844
6/4/2024 21:31:45	R2404655-020	Ag (328.068 nm)	0.0000 u	> 100.00	-246.1881

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404655-020	Al (237.312 nm)	0.1392	3.63	330.7007
	R2404655-020	As (188.980 nm)	0.0008 u	> 100.00	-7.9964
	R2404655-020	B (249.772 nm)	0.0222	4.21	690.0845
	R2404655-020	Ba (230.424 nm)	0.0981	3.27	3819.0554
	R2404655-020	Be (313.107 nm)	0.0000	23.01	178.8910
	R2404655-020	Ca (317.933 nm)	118.3590 o	3.32	4107210.0141
	R2404655-020	Cd (214.439 nm)	0.0003	22.07	18.2618
	R2404655-020	Co (230.786 nm)	0.0001 u	> 100.00	-38.2094
	R2404655-020	Cr (267.716 nm)	0.0012	13.82	159.9232
	R2404655-020	Cu (327.395 nm)	0.0008	64.27	67.3961
	R2404655-020	Fe (234.350 nm)	0.1191	3.53	2139.1508
	R2404655-020	K (766.491 nm)	1.2580	2.55	1030.7084
	R2404655-020	Mg (279.078 nm)	22.2691	3.42	65367.7399
	R2404655-020	Mn (257.610 nm)	0.0438	3.40	13271.0786
	R2404655-020	Mo (202.032 nm)	0.0013	67.88	-15.0206
	R2404655-020	Na (588.995 nm)	14.0187	3.66	118123.3422
	R2404655-020	Ni (230.299 nm)	-0.0006 u	56.84	50.7220
	R2404655-020	Pb (220.353 nm)	0.0010	82.00	9.3576
	R2404655-020	Sb (217.582 nm)	0.0017	97.35	8.7350
	R2404655-020	Se (196.026 nm)	-0.0010 u	> 100.00	2.0677
	R2404655-020	Si (252.851 nm)	8.2241	3.95	26251.4896
	R2404655-020	Sn (189.925 nm)	0.0007 u	> 100.00	9.0199
	R2404655-020	Sr (216.596 nm)	0.8951	3.38	14725.8266
	R2404655-020	Ti (336.122 nm)	0.0032	5.60	498.4653
	R2404655-020	Tl (190.794 nm)	0.0013	90.12	-1.1934
	R2404655-020	V (292.401 nm)	0.0002	62.10	-18.6872
	R2404655-020	Y (360.074 nm)	0.96	3.63	521414.24
	R2404655-020	Y_R (360.074 nm)	0.96	3.63	520051.53
	R2404655-020	Zn (213.857 nm)	0.0028	2.46	130.3229
6/4/2024 21:34:59	R2404655-020L 5X	Ag (328.068 nm)	0.0000 u	84.07	-247.2337
	R2404655-020L 5X	Al (237.312 nm)	0.0292	5.27	97.9544
	R2404655-020L 5X	As (188.980 nm)	-0.0011 u	> 100.00	-10.5138
	R2404655-020L 5X	B (249.772 nm)	0.0036	4.04	149.5547
	R2404655-020L 5X	Ba (230.424 nm)	0.0198	0.79	749.0491
	R2404655-020L 5X	Be (313.107 nm)	0.0000 u	> 100.00	159.8020
	R2404655-020L 5X	Ca (317.933 nm)	24.3370	0.42	846737.9700
	R2404655-020L 5X	Cd (214.439 nm)	0.0001	21.27	10.6263
	R2404655-020L 5X	Co (230.786 nm)	0.0001 u	> 100.00	-37.8911
	R2404655-020L 5X	Cr (267.716 nm)	0.0003	75.12	126.2479
	R2404655-020L 5X	Cu (327.395 nm)	0.0003	67.98	48.5961
	R2404655-020L 5X	Fe (234.350 nm)	0.0245	0.98	463.3127
	R2404655-020L 5X	K (766.491 nm)	0.2307	4.40	-36.9891
	R2404655-020L 5X	Mg (279.078 nm)	4.5432	0.49	13291.2789
	R2404655-020L 5X	Mn (257.610 nm)	0.0089	0.49	2721.1295
	R2404655-020L 5X	Mo (202.032 nm)	0.0000 u	> 100.00	-21.4323
	R2404655-020L 5X	Na (588.995 nm)	2.7007	0.43	17295.6528
	R2404655-020L 5X	Ni (230.299 nm)	0.0006	47.49	63.3590
	R2404655-020L 5X	Pb (220.353 nm)	0.0006 u	> 100.00	7.4087
	R2404655-020L 5X	Sb (217.582 nm)	-0.0001 u	> 100.00	5.6077
	R2404655-020L 5X	Se (196.026 nm)	-0.0013 u	> 100.00	1.8195
	R2404655-020L 5X	Si (252.851 nm)	1.6625	0.42	5300.9198
	R2404655-020L 5X	Sn (189.925 nm)	0.0010	12.48	9.8380
	R2404655-020L 5X	Sr (216.596 nm)	0.1832	0.23	2990.2629
	R2404655-020L 5X	Ti (336.122 nm)	0.0004	19.33	139.1592
	R2404655-020L 5X	Tl (190.794 nm)	0.0005 u	> 100.00	-1.8408
	R2404655-020L 5X	V (292.401 nm)	0.0001 u	> 100.00	-21.3555
	R2404655-020L 5X	Y (360.074 nm)	1.00	0.68	540733.83

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404655-020L 5X	Y_R (360.074 nm)	1.00	0.68	539254.89
	R2404655-020L 5X	Zn (213.857 nm)	0.0005	11.79	5.3016
6/4/2024 21:38:13	Continuing Calibration Verification	Ag (328.068 nm)	0.4932	0.51	25253.3633
	Continuing Calibration Verification	Al (237.312 nm)	9.6952	0.41	20539.5179
	Continuing Calibration Verification	As (188.980 nm)	0.9656	0.45	1317.0836
	Continuing Calibration Verification	B (249.772 nm)	2.4689	0.35	71784.1702
	Continuing Calibration Verification	Ba (230.424 nm)	9.8826	0.24	387261.3850
	Continuing Calibration Verification	Be (313.107 nm)	0.2366	0.31	241457.3800
	Continuing Calibration Verification	Ca (317.933 nm)	25.4248	0.31	884458.1228
	Continuing Calibration Verification	Cd (214.439 nm)	0.4833	0.28	24778.6836
	Continuing Calibration Verification	Co (230.786 nm)	2.4331	0.34	34825.5989
	Continuing Calibration Verification	Cr (267.716 nm)	0.4873	0.37	19952.6565
	Continuing Calibration Verification	Cu (327.395 nm)	1.2079	0.29	47089.3331
	Continuing Calibration Verification	Fe (234.350 nm)	4.8765	0.33	86423.5929
	Continuing Calibration Verification	K (766.491 nm)	24.0156	0.63	24684.0908
	Continuing Calibration Verification	Mg (279.078 nm)	24.8329	0.33	72899.8935
	Continuing Calibration Verification	Mn (257.610 nm)	0.7225	0.30	218592.5961
	Continuing Calibration Verification	Mo (202.032 nm)	2.5257	0.16	12326.7200
	Continuing Calibration Verification	Na (588.995 nm)	25.0491	0.70	216388.6567
	Continuing Calibration Verification	Ni (230.299 nm)	2.0008	0.45	21416.9737
	Continuing Calibration Verification	Pb (220.353 nm)	0.4994	0.45	2389.4110
	Continuing Calibration Verification	Sb (217.582 nm)	4.8979	0.53	8822.9395
	Continuing Calibration Verification	Se (196.026 nm)	0.4798	0.51	311.5679
	Continuing Calibration Verification	Si (252.851 nm)	9.8277	0.23	31371.8204
	Continuing Calibration Verification	Sn (189.925 nm)	4.8524	0.29	11461.5690
	Continuing Calibration Verification	Sr (216.596 nm)	2.4174	0.14	39823.2533
	Continuing Calibration Verification	Ti (336.122 nm)	2.4909	0.42	323080.0444
	Continuing Calibration Verification	Tl (190.794 nm)	0.9701	0.95	780.1747
	Continuing Calibration Verification	V (292.401 nm)	2.4709	0.34	89368.0046
	Continuing Calibration Verification	Y (360.074 nm)	0.98	1.02	531148.78
	Continuing Calibration Verification	Y_R (360.074 nm)	0.98	1.01	529706.03
	Continuing Calibration Verification	Zn (213.857 nm)	0.9590	0.47	53213.8678
6/4/2024 21:41:27	Continuing Calibration Blank	Ag (328.068 nm)	0.0002	40.68	-238.3140
	Continuing Calibration Blank	Al (237.312 nm)	0.0014 u	> 100.00	39.2588
	Continuing Calibration Blank	As (188.980 nm)	-0.0004 u	92.19	-9.5931
	Continuing Calibration Blank	B (249.772 nm)	0.0005	63.54	59.0699
	Continuing Calibration Blank	Ba (230.424 nm)	0.0009	18.54	7.0773
	Continuing Calibration Blank	Be (313.107 nm)	0.0000	48.58	175.3295
	Continuing Calibration Blank	Ca (317.933 nm)	0.0021	5.59	2857.3812
	Continuing Calibration Blank	Cd (214.439 nm)	0.0001	95.59	10.0055
	Continuing Calibration Blank	Co (230.786 nm)	0.0004	16.71	-32.9296
	Continuing Calibration Blank	Cr (267.716 nm)	0.0003	34.19	123.8056
	Continuing Calibration Blank	Cu (327.395 nm)	0.0001 u	> 100.00	40.7017
	Continuing Calibration Blank	Fe (234.350 nm)	0.0017	43.07	58.7854
	Continuing Calibration Blank	K (766.491 nm)	0.0616	49.65	-212.7225
	Continuing Calibration Blank	Mg (279.078 nm)	0.0008 u	> 100.00	-53.6557
	Continuing Calibration Blank	Mn (257.610 nm)	0.0001	42.69	41.3176
	Continuing Calibration Blank	Mo (202.032 nm)	0.0049	22.66	2.7829
	Continuing Calibration Blank	Na (588.995 nm)	0.0241	8.20	-6549.7452
	Continuing Calibration Blank	Ni (230.299 nm)	0.0005 u	> 100.00	62.4855
	Continuing Calibration Blank	Pb (220.353 nm)	0.0000 u	> 100.00	4.6398
	Continuing Calibration Blank	Sb (217.582 nm)	0.0075	5.14	19.2501
	Continuing Calibration Blank	Se (196.026 nm)	-0.0013 u	> 100.00	1.8678
	Continuing Calibration Blank	Si (252.851 nm)	0.0042	41.21	6.0399
	Continuing Calibration Blank	Sn (189.925 nm)	0.0010	4.34	9.6287
	Continuing Calibration Blank	Sr (216.596 nm)	0.0002 u	> 100.00	-27.8492
	Continuing Calibration Blank	Ti (336.122 nm)	0.0023	46.57	385.0913

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Blank	Tl (190.794 nm)	0.0008 u	> 100.00	-1.5415
	Continuing Calibration Blank	V (292.401 nm)	0.0001	70.31	-19.5967
	Continuing Calibration Blank	Y (360.074 nm)	1.01	0.43	545807.23
	Continuing Calibration Blank	Y_R (360.074 nm)	1.01	0.44	544297.19
	Continuing Calibration Blank	Zn (213.857 nm)	0.0001	25.26	-21.5287
6/4/2024 21:44:41	Contract Required Detection Limit	Ag (328.068 nm)	0.0089	3.51	210.9353
	Contract Required Detection Limit	Al (237.312 nm)	0.1942	0.88	446.9651
	Contract Required Detection Limit	As (188.980 nm)	0.0201	6.12	18.5000
	Contract Required Detection Limit	B (249.772 nm)	0.1935	0.11	5669.0418
	Contract Required Detection Limit	Ba (230.424 nm)	0.2003	0.15	7823.8806
	Contract Required Detection Limit	Be (313.107 nm)	0.0048	0.10	5099.7714
	Contract Required Detection Limit	Ca (317.933 nm)	1.0444	0.19	39002.2993
	Contract Required Detection Limit	Cd (214.439 nm)	0.0102	0.63	528.9331
	Contract Required Detection Limit	Co (230.786 nm)	0.0501	1.11	679.1774
	Contract Required Detection Limit	Cr (267.716 nm)	0.0092	1.46	486.8062
	Contract Required Detection Limit	Cu (327.395 nm)	0.0249	0.85	1005.9699
	Contract Required Detection Limit	Fe (234.350 nm)	0.1039	0.43	1869.9435
	Contract Required Detection Limit	K (766.491 nm)	0.9553	2.18	716.1059
	Contract Required Detection Limit	Mg (279.078 nm)	0.9955	0.13	2868.5511
	Contract Required Detection Limit	Mn (257.610 nm)	0.0137	0.11	4179.4013
	Contract Required Detection Limit	Mo (202.032 nm)	0.0254	4.47	103.1261
	Contract Required Detection Limit	Na (588.995 nm)	1.0047	0.13	2186.0368
	Contract Required Detection Limit	Ni (230.299 nm)	0.0355	1.14	436.1320
	Contract Required Detection Limit	Pb (220.353 nm)	0.0112	5.66	57.8280
	Contract Required Detection Limit	Sb (217.582 nm)	0.0598	1.96	113.3986
	Contract Required Detection Limit	Se (196.026 nm)	0.0108	44.10	9.6260
	Contract Required Detection Limit	Si (252.851 nm)	0.0549	4.10	167.9224
	Contract Required Detection Limit	Sn (189.925 nm)	0.4895	0.45	1162.9451
	Contract Required Detection Limit	Sr (216.596 nm)	0.0974	0.60	1575.8440
	Contract Required Detection Limit	Ti (336.122 nm)	0.0490	1.08	6447.2712
	Contract Required Detection Limit	Tl (190.794 nm)	0.0209	2.84	14.6363
	Contract Required Detection Limit	V (292.401 nm)	0.0492	0.30	1753.5660
	Contract Required Detection Limit	Y (360.074 nm)	1.01	0.59	547355.34
	Contract Required Detection Limit	Y_R (360.074 nm)	1.01	0.59	545833.81
	Contract Required Detection Limit	Zn (213.857 nm)	0.0174	0.59	941.9744
6/4/2024 21:47:55	Interference Check Solution A	Ag (328.068 nm)	-0.0001 u	> 100.00	-252.0652
	Interference Check Solution A	Al (237.312 nm)	249.9496 o	1.80	528627.3569
	Interference Check Solution A	As (188.980 nm)	-0.0054 Ku	7.90	-16.5030 K
	Interference Check Solution A	B (249.772 nm)	0.1054	1.56	3109.2434
	Interference Check Solution A	Ba (230.424 nm)	0.0002	73.40	-20.3469
	Interference Check Solution A	Be (313.107 nm)	0.0002	2.97	346.6306
	Interference Check Solution A	Ca (317.933 nm)	236.9466 o	1.72	8219566.7516
	Interference Check Solution A	Cd (214.439 nm)	-0.0007 u	15.42	-33.7438
	Interference Check Solution A	Co (230.786 nm)	-0.0006 u	97.47	-47.1273
	Interference Check Solution A	Cr (267.716 nm)	0.0043	0.30	288.3716
	Interference Check Solution A	Cu (327.395 nm)	0.0086	3.68	372.8659
	Interference Check Solution A	Fe (234.350 nm)	91.9657 o	1.73	1629343.0651
	Interference Check Solution A	K (766.491 nm)	-0.0532 u	24.03	-332.1260
	Interference Check Solution A	Mg (279.078 nm)	258.9166 o	1.80	760607.9633
	Interference Check Solution A	Mn (257.610 nm)	0.0011	2.53	352.0095
	Interference Check Solution A	Mo (202.032 nm)	-0.0056 u	11.44	-48.7604
	Interference Check Solution A	Na (588.995 nm)	-0.0095 u	> 100.00	-6848.2556
	Interference Check Solution A	Ni (230.299 nm)	0.0045	5.89	104.9231
	Interference Check Solution A	Pb (220.353 nm)	0.0013	80.90	10.8217
	Interference Check Solution A	Sb (217.582 nm)	-0.0026 u	47.41	1.0448
	Interference Check Solution A	Se (196.026 nm)	-0.0060 u	68.20	-1.1564
	Interference Check Solution A	Si (252.851 nm)	0.0481	4.44	146.2089

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Interference Check Solution A	Sn (189.925 nm)	0.0031	34.58	14.6244
	Interference Check Solution A	Sr (216.596 nm)	0.0098	3.31	131.8929
	Interference Check Solution A	Ti (336.122 nm)	0.0018	19.59	323.1091
	Interference Check Solution A	Tl (190.794 nm)	0.0017 u	> 100.00	-0.8796
	Interference Check Solution A	V (292.401 nm)	0.0019	21.59	44.5910
	Interference Check Solution A	Y (360.074 nm)	0.90	2.16	486970.82
	Interference Check Solution A	Y_R (360.074 nm)	0.90	2.16	485777.06
	Interference Check Solution A	Zn (213.857 nm)	0.0120 K	1.48	639.2469 K
6/4/2024 21:51:09	Interference Check Solution AB	Ag (328.068 nm)	0.1944	0.07	9803.2491
	Interference Check Solution AB	Al (237.312 nm)	248.5551 o	0.16	525678.2545
	Interference Check Solution AB	As (188.980 nm)	0.0965	1.31	123.4253
	Interference Check Solution AB	B (249.772 nm)	0.1015	0.25	2994.5886
	Interference Check Solution AB	Ba (230.424 nm)	0.5080	0.30	19880.7807
	Interference Check Solution AB	Be (313.107 nm)	0.4897	0.27	499655.1512
	Interference Check Solution AB	Ca (317.933 nm)	234.9968 o	0.38	8151950.8111
	Interference Check Solution AB	Cd (214.439 nm)	0.9394	0.31	48162.7556
	Interference Check Solution AB	Co (230.786 nm)	0.4747	0.22	6763.1068
	Interference Check Solution AB	Cr (267.716 nm)	0.4925	0.26	20162.3602
	Interference Check Solution AB	Cu (327.395 nm)	0.5348	0.09	20870.5714
	Interference Check Solution AB	Fe (234.350 nm)	91.3416 o	0.28	1618287.4631
	Interference Check Solution AB	K (766.491 nm)	-0.0314 u	> 100.00	-309.4453
	Interference Check Solution AB	Mg (279.078 nm)	256.7298 o	0.29	754183.4359
	Interference Check Solution AB	Mn (257.610 nm)	0.4830	0.22	146122.5511
	Interference Check Solution AB	Mo (202.032 nm)	-0.0063 u	6.72	-52.0720
	Interference Check Solution AB	Na (588.995 nm)	-0.0096 u	19.46	-6849.9561
	Interference Check Solution AB	Ni (230.299 nm)	0.9642	0.35	10351.0139
	Interference Check Solution AB	Pb (220.353 nm)	0.0472	3.59	229.7656
	Interference Check Solution AB	Sb (217.582 nm)	0.6186	0.19	1119.2960
	Interference Check Solution AB	Se (196.026 nm)	0.0469	5.51	32.8914
	Interference Check Solution AB	Si (252.851 nm)	0.0779	2.77	241.3810
	Interference Check Solution AB	Sn (189.925 nm)	0.0034	0.43	15.4471
	Interference Check Solution AB	Sr (216.596 nm)	0.0095	1.63	126.8580
	Interference Check Solution AB	Ti (336.122 nm)	0.0017	12.15	310.8646
	Interference Check Solution AB	Tl (190.794 nm)	0.0975	1.53	76.3977
	Interference Check Solution AB	V (292.401 nm)	0.5106	0.25	18448.8764
	Interference Check Solution AB	Y (360.074 nm)	0.91	0.29	492438.64
	Interference Check Solution AB	Y_R (360.074 nm)	0.91	0.29	491212.91
	Interference Check Solution AB	Zn (213.857 nm)	0.9968	0.15	55310.7479
6/4/2024 21:54:23	Continuing Calibration Verification1	Ag (328.068 nm)	0.4976	0.19	25480.5927
	Continuing Calibration Verification1	Al (237.312 nm)	9.8109	0.18	20784.2258
	Continuing Calibration Verification1	As (188.980 nm)	0.9736	0.21	1328.0621
	Continuing Calibration Verification1	B (249.772 nm)	2.4898	0.13	72390.4017
	Continuing Calibration Verification1	Ba (230.424 nm)	9.9659	0.33	390524.3341
	Continuing Calibration Verification1	Be (313.107 nm)	0.2390	0.20	243965.3691
	Continuing Calibration Verification1	Ca (317.933 nm)	25.6805	0.24	893325.7912
	Continuing Calibration Verification1	Cd (214.439 nm)	0.4872	0.21	24981.8179
	Continuing Calibration Verification1	Co (230.786 nm)	2.4584	0.26	35187.0294
	Continuing Calibration Verification1	Cr (267.716 nm)	0.4916	0.23	20127.9009
	Continuing Calibration Verification1	Cu (327.395 nm)	1.2199	0.27	47556.5967
	Continuing Calibration Verification1	Fe (234.350 nm)	4.9457	0.21	87649.9103
	Continuing Calibration Verification1	K (766.491 nm)	24.2839	0.24	24962.9698
	Continuing Calibration Verification1	Mg (279.078 nm)	25.0843	0.16	73638.5561
	Continuing Calibration Verification1	Mn (257.610 nm)	0.7284	0.20	220353.1248
	Continuing Calibration Verification1	Mo (202.032 nm)	2.5528	0.26	12459.1861
	Continuing Calibration Verification1	Na (588.995 nm)	25.3010	0.42	218633.1065
	Continuing Calibration Verification1	Ni (230.299 nm)	2.0188	0.22	21609.4097
	Continuing Calibration Verification1	Pb (220.353 nm)	0.5036	0.27	2409.7224

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Verification1	Sb (217.582 nm)	4.9302	0.27	8881.0869
	Continuing Calibration Verification1	Se (196.026 nm)	0.4846	0.23	314.6905
	Continuing Calibration Verification1	Si (252.851 nm)	9.9110	0.59	31637.6971
	Continuing Calibration Verification1	Sn (189.925 nm)	4.9020	0.26	11578.6759
	Continuing Calibration Verification1	Sr (216.596 nm)	2.4401	0.15	40196.7658
	Continuing Calibration Verification1	Ti (336.122 nm)	2.5158	0.22	326314.6890
	Continuing Calibration Verification1	Tl (190.794 nm)	0.9792	0.59	787.5232
	Continuing Calibration Verification1	V (292.401 nm)	2.4954	0.22	90254.3947
	Continuing Calibration Verification1	Y (360.074 nm)	0.98	0.28	533186.28
	Continuing Calibration Verification1	Y_R (360.074 nm)	0.98	0.28	531742.40
	Continuing Calibration Verification1	Zn (213.857 nm)	0.9656	0.04	53580.6850
6/4/2024 21:57:36	Continuing Calibration Blank1	Ag (328.068 nm)	0.0002	16.38	-235.0551
	Continuing Calibration Blank1	Al (237.312 nm)	0.0010	31.11	38.3681
	Continuing Calibration Blank1	As (188.980 nm)	0.0001 u	> 100.00	-8.8602
	Continuing Calibration Blank1	B (249.772 nm)	0.0003	82.63	53.8425
	Continuing Calibration Blank1	Ba (230.424 nm)	0.0001 u	> 100.00	-21.3808
	Continuing Calibration Blank1	Be (313.107 nm)	0.0000 u	> 100.00	152.5013
	Continuing Calibration Blank1	Ca (317.933 nm)	-0.0007 u	40.99	2759.9331
	Continuing Calibration Blank1	Cd (214.439 nm)	0.0000 u	> 100.00	4.7977
	Continuing Calibration Blank1	Co (230.786 nm)	-0.0001 u	> 100.00	-40.3497
	Continuing Calibration Blank1	Cr (267.716 nm)	0.0001 u	> 100.00	114.3805
	Continuing Calibration Blank1	Cu (327.395 nm)	0.0004	64.68	50.9878
	Continuing Calibration Blank1	Fe (234.350 nm)	0.0019	56.89	63.2665
	Continuing Calibration Blank1	K (766.491 nm)	0.0317	> 100.00	-243.9017
	Continuing Calibration Blank1	Mg (279.078 nm)	-0.0007 u	> 100.00	-58.0641
	Continuing Calibration Blank1	Mn (257.610 nm)	0.0000 u	22.14	17.5879
	Continuing Calibration Blank1	Mo (202.032 nm)	0.0045	27.37	0.6249
	Continuing Calibration Blank1	Na (588.995 nm)	0.0246	11.87	-6544.5765
	Continuing Calibration Blank1	Ni (230.299 nm)	0.0000 u	> 100.00	57.0918
	Continuing Calibration Blank1	Pb (220.353 nm)	0.0005	29.91	6.8576
	Continuing Calibration Blank1	Sb (217.582 nm)	0.0077	13.64	19.5127
	Continuing Calibration Blank1	Se (196.026 nm)	-0.0019 u	50.79	1.4828
	Continuing Calibration Blank1	Si (252.851 nm)	0.0038	24.34	4.7704
	Continuing Calibration Blank1	Sn (189.925 nm)	0.0011	29.91	10.0789
	Continuing Calibration Blank1	Sr (216.596 nm)	0.0001 u	> 100.00	-29.3697
	Continuing Calibration Blank1	Ti (336.122 nm)	0.0019	55.04	327.7422
	Continuing Calibration Blank1	Tl (190.794 nm)	-0.0003 u	> 100.00	-2.5051
	Continuing Calibration Blank1	V (292.401 nm)	0.0000 u	> 100.00	-25.9361
	Continuing Calibration Blank1	Y (360.074 nm)	1.01	0.44	548289.90
	Continuing Calibration Blank1	Y_R (360.074 nm)	1.01	0.44	546748.10
	Continuing Calibration Blank1	Zn (213.857 nm)	0.0001	21.97	-20.2634
6/4/2024 22:00:50	PBW-439398	Ag (328.068 nm)	0.0003	43.32	-233.0036
	PBW-439398	Al (237.312 nm)	0.0095	6.66	56.4177
	PBW-439398	As (188.980 nm)	0.0028	55.55	-5.1633
	PBW-439398	B (249.772 nm)	0.0007	10.56	67.2414
	PBW-439398	Ba (230.424 nm)	0.0007	25.85	1.4115
	PBW-439398	Be (313.107 nm)	0.0000	55.60	166.8382
	PBW-439398	Ca (317.933 nm)	0.0097	7.10	3120.6603
	PBW-439398	Cd (214.439 nm)	0.0002	22.20	15.8570
	PBW-439398	Co (230.786 nm)	0.0002	73.21	-35.5170
	PBW-439398	Cr (267.716 nm)	0.0001 u	> 100.00	117.1795
	PBW-439398	Cu (327.395 nm)	0.0003	> 100.00	47.5170
	PBW-439398	Fe (234.350 nm)	0.0037	25.30	95.0077
	PBW-439398	K (766.491 nm)	0.0331	54.33	-242.4034
	PBW-439398	Mg (279.078 nm)	0.0044	20.53	-43.0009
	PBW-439398	Mn (257.610 nm)	0.0001	31.64	48.8172
	PBW-439398	Mo (202.032 nm)	0.0010	78.05	-16.1393

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	PBW-439398	Na (588.995 nm)	0.0491	6.77	-6326.6256
	PBW-439398	Ni (230.299 nm)	-0.0002 u	> 100.00	55.0686
	PBW-439398	Pb (220.353 nm)	0.0005 u	> 100.00	6.8988
	PBW-439398	Sb (217.582 nm)	0.0116	4.91	26.6828
	PBW-439398	Se (196.026 nm)	-0.0003 u	> 100.00	2.4806
	PBW-439398	Si (252.851 nm)	0.0211	6.65	60.2091
	PBW-439398	Sn (189.925 nm)	0.0010	13.72	9.7355
	PBW-439398	Sr (216.596 nm)	0.0002	69.36	-27.5973
	PBW-439398	Ti (336.122 nm)	0.0003 u	> 100.00	131.6789
	PBW-439398	Tl (190.794 nm)	0.0010	47.61	-1.4192
	PBW-439398	V (292.401 nm)	0.0002	38.14	-16.6587
	PBW-439398	Y (360.074 nm)	1.02	0.38	555166.32
	PBW-439398	Y_R (360.074 nm)	1.02	0.39	553647.99
	PBW-439398	Zn (213.857 nm)	0.0008	9.79	18.0329
6/4/2024 22:04:04	LCSW-439398	Ag (328.068 nm)	0.0490	0.46	2284.8957
	LCSW-439398	Al (237.312 nm)	1.9573	0.21	4175.4173
	LCSW-439398	As (188.980 nm)	0.0378	4.35	42.9020
	LCSW-439398	B (249.772 nm)	0.9833	0.23	28615.9524
	LCSW-439398	Ba (230.424 nm)	1.9662	0.27	77025.9473
	LCSW-439398	Be (313.107 nm)	0.0475	0.19	48599.8707
	LCSW-439398	Ca (317.933 nm)	2.0086	0.12	72436.8932
	LCSW-439398	Cd (214.439 nm)	0.0492	0.23	2524.0788
	LCSW-439398	Co (230.786 nm)	0.4885	0.24	6960.4403
	LCSW-439398	Cr (267.716 nm)	0.1919	0.14	7925.3389
	LCSW-439398	Cu (327.395 nm)	0.2462	0.19	9629.0657
	LCSW-439398	Fe (234.350 nm)	0.9881	0.17	17534.8643
	LCSW-439398	K (766.491 nm)	18.9004	0.26	19367.5992
	LCSW-439398	Mg (279.078 nm)	1.9264	0.24	5603.3961
	LCSW-439398	Mn (257.610 nm)	0.4758	0.13	143964.7439
	LCSW-439398	Mo (202.032 nm)	0.4804	0.08	2327.6070
	LCSW-439398	Na (588.995 nm)	19.6642	0.42	168416.8809
	LCSW-439398	Ni (230.299 nm)	0.5011	0.11	5407.1707
	LCSW-439398	Pb (220.353 nm)	0.5095	0.04	2438.0462
	LCSW-439398	Sb (217.582 nm)	0.4949	0.80	896.6869
	LCSW-439398	Se (196.026 nm)	0.9826	0.99	635.3129
	LCSW-439398	Si (252.851 nm)	-0.0284 u	8.97	-98.0629
	LCSW-439398	Sn (189.925 nm)	4.7715	0.18	11270.6409
	LCSW-439398	Sr (216.596 nm)	1.9187	0.12	31601.0313
	LCSW-439398	Ti (336.122 nm)	0.4837	0.24	62813.2513
	LCSW-439398	Tl (190.794 nm)	1.9199	0.24	1546.1683
	LCSW-439398	V (292.401 nm)	0.4829	0.23	17446.6099
	LCSW-439398	Y (360.074 nm)	1.00	0.59	544837.21
	LCSW-439398	Y_R (360.074 nm)	1.00	0.59	543483.37
	LCSW-439398	Zn (213.857 nm)	0.4881	0.18	27073.1363
6/4/2024 22:07:18	R2404632-001	Ag (328.068 nm)	0.0000 u	> 100.00	-247.2718
	R2404632-001	Al (237.312 nm)	-0.0001 u	> 100.00	35.9627
	R2404632-001	As (188.980 nm)	0.0001 u	> 100.00	-8.8888
	R2404632-001	B (249.772 nm)	2.5428	0.08	73931.0842
	R2404632-001	Ba (230.424 nm)	0.1624	0.12	6337.7140
	R2404632-001	Be (313.107 nm)	0.0001	10.41	226.8368
	R2404632-001	Ca (317.933 nm)	328.1269 o LR	0.14	11381494.8247
	R2404632-001	Cd (214.439 nm)	0.0004	14.24	24.8918
	R2404632-001	Co (230.786 nm)	0.0014	21.77	-18.8733
	R2404632-001	Cr (267.716 nm)	0.0027	8.65	220.1391
	R2404632-001	Cu (327.395 nm)	0.0205	0.57	835.1759
	R2404632-001	Fe (234.350 nm)	0.2688	0.14	4790.7330
	R2404632-001	K (766.491 nm)	137.3537 o LR	0.04	142483.5375

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404632-001	Mg (279.078 nm)	112.6400 o	0.07	330865.8299
	R2404632-001	Mn (257.610 nm)	5.1529 o	0.10	1558789.3794
	R2404632-001	Mo (202.032 nm)	0.0052	12.16	4.1731
	R2404632-001	Na (588.995 nm)	602.3433 o LR	0.44	5359281.4944
	R2404632-001	Ni (230.299 nm)	0.0193	1.31	263.7534
	R2404632-001	Pb (220.353 nm)	0.0016	23.67	12.0671
	R2404632-001	Sb (217.582 nm)	0.0063	29.48	17.1034
	R2404632-001	Se (196.026 nm)	0.0004 u	> 100.00	2.9117
	R2404632-001	Si (252.851 nm)	6.7397	0.12	21511.9882
	R2404632-001	Sn (189.925 nm)	0.0027	23.18	13.6536
	R2404632-001	Sr (216.596 nm)	1.6678	0.13	27465.7150
	R2404632-001	Ti (336.122 nm)	0.0036	13.54	550.1314
	R2404632-001	Tl (190.794 nm)	0.0039	24.86	0.9407
	R2404632-001	V (292.401 nm)	-0.0001 u	> 100.00	-29.3726
	R2404632-001	Y (360.074 nm)	0.88	0.43	476094.73
	R2404632-001	Y_R (360.074 nm)	0.88	0.44	475047.87
	R2404632-001	Zn (213.857 nm)	0.0153	0.21	824.8045
6/4/2024 22:10:31	R2404643-001	Ag (328.068 nm)	0.0002	61.55	-238.8910
	R2404643-001	Al (237.312 nm)	0.0421	0.71	125.3442
	R2404643-001	As (188.980 nm)	0.0015	38.90	-7.0209
	R2404643-001	B (249.772 nm)	0.0471	0.58	1413.9033
	R2404643-001	Ba (230.424 nm)	0.0515	0.52	1992.5869
	R2404643-001	Be (313.107 nm)	0.0000	9.10	204.6480
	R2404643-001	Ca (317.933 nm)	267.0627 o LR	0.14	9263923.3832
	R2404643-001	Cd (214.439 nm)	0.0003	3.07	17.8889
	R2404643-001	Co (230.786 nm)	0.0000 u	> 100.00	-39.6064
	R2404643-001	Cr (267.716 nm)	0.0034	0.71	248.9810
	R2404643-001	Cu (327.395 nm)	0.0026	6.76	137.3113
	R2404643-001	Fe (234.350 nm)	0.0509	1.12	930.2711
	R2404643-001	K (766.491 nm)	7.3136	0.93	7324.6963
	R2404643-001	Mg (279.078 nm)	34.5953	0.11	101580.5044
	R2404643-001	Mn (257.610 nm)	0.1989	0.11	60183.6730
	R2404643-001	Mo (202.032 nm)	0.0025	25.23	-9.2272
	R2404643-001	Na (588.995 nm)	189.5195 o	0.32	1681592.4518
	R2404643-001	Ni (230.299 nm)	0.0027	27.59	86.0540
	R2404643-001	Pb (220.353 nm)	0.0014	61.73	11.3674
	R2404643-001	Sb (217.582 nm)	0.0029	47.07	10.9431
	R2404643-001	Se (196.026 nm)	0.0032	92.87	4.7585
	R2404643-001	Si (252.851 nm)	6.0608	0.09	19344.3484
	R2404643-001	Sn (189.925 nm)	0.0017	56.45	11.4514
	R2404643-001	Sr (216.596 nm)	2.3746	0.21	39118.0435
	R2404643-001	Ti (336.122 nm)	0.0032	7.63	499.9981
	R2404643-001	Tl (190.794 nm)	0.0027	76.83	-0.0391
	R2404643-001	V (292.401 nm)	0.0002	82.01	-19.0923
	R2404643-001	Y (360.074 nm)	0.93	0.27	505012.08
	R2404643-001	Y_R (360.074 nm)	0.93	0.27	503877.65
	R2404643-001	Zn (213.857 nm)	0.0337	0.21	1844.1031
6/4/2024 22:13:45	R2404643-002	Ag (328.068 nm)	0.0001	36.27	-244.1136
	R2404643-002	Al (237.312 nm)	0.0612	1.33	165.6611
	R2404643-002	As (188.980 nm)	0.0019 u	> 100.00	-6.3923
	R2404643-002	B (249.772 nm)	0.0904	0.64	2671.0044
	R2404643-002	Ba (230.424 nm)	0.0415	0.15	1600.4428
	R2404643-002	Be (313.107 nm)	0.0001	9.11	218.5308
	R2404643-002	Ca (317.933 nm)	476.1005 o LR	0.14	16512890.1681
	R2404643-002	Cd (214.439 nm)	0.0005	11.57	28.8477
	R2404643-002	Co (230.786 nm)	0.0007	15.49	-28.8511
	R2404643-002	Cr (267.716 nm)	0.0029	6.26	230.1771

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404643-002	Cu (327.395 nm)	0.0013	14.82	89.1117
	R2404643-002	Fe (234.350 nm)	1.8508	0.11	32819.3345
	R2404643-002	K (766.491 nm)	15.3013	0.23	15626.7658
	R2404643-002	Mg (279.078 nm)	71.4644 o	0.08	209897.4020
	R2404643-002	Mn (257.610 nm)	0.5158	0.10	156042.9871
	R2404643-002	Mo (202.032 nm)	0.0044	11.18	0.1595
	R2404643-002	Na (588.995 nm)	366.5084 o LR	0.31	3258319.1322
	R2404643-002	Ni (230.299 nm)	0.0026	22.58	84.6785
	R2404643-002	Pb (220.353 nm)	0.0005 u	> 100.00	6.8187
	R2404643-002	Sb (217.582 nm)	0.0026	58.85	10.3795
	R2404643-002	Se (196.026 nm)	-0.0004 u	> 100.00	2.4355
	R2404643-002	Si (252.851 nm)	6.9844	0.15	22293.3269
	R2404643-002	Sn (189.925 nm)	0.0007	93.68	9.1151
	R2404643-002	Sr (216.596 nm)	3.5477	0.33	58456.7019
	R2404643-002	Ti (336.122 nm)	0.0053	4.98	775.7327
	R2404643-002	Tl (190.794 nm)	0.0047	46.76	1.5325
	R2404643-002	V (292.401 nm)	-0.0003 u	85.15	-34.7940
	R2404643-002	Y (360.074 nm)	0.90	0.43	485604.61
	R2404643-002	Y_R (360.074 nm)	0.90	0.43	484581.27
	R2404643-002	Zn (213.857 nm)	0.0048	0.73	240.2164
6/4/2024 22:16:59	R2404643-002S	Ag (328.068 nm)	0.0521	0.06	2445.6055
	R2404643-002S	Al (237.312 nm)	2.1632	0.23	4610.9897
	R2404643-002S	As (188.980 nm)	0.0435	3.33	50.6859
	R2404643-002S	B (249.772 nm)	1.1475	0.21	33387.4415
	R2404643-002S	Ba (230.424 nm)	1.9452	0.10	76204.6875
	R2404643-002S	Be (313.107 nm)	0.0474	0.12	48523.5628
	R2404643-002S	Ca (317.933 nm)	473.9570 o	0.17	16438559.5420
	R2404643-002S	Cd (214.439 nm)	0.0464	0.40	2383.2738
	R2404643-002S	Co (230.786 nm)	0.4604	0.19	6558.2853
	R2404643-002S	Cr (267.716 nm)	0.1901	0.08	7851.0906
	R2404643-002S	Cu (327.395 nm)	0.2596	0.22	10150.0127
	R2404643-002S	Fe (234.350 nm)	2.7918	0.16	49490.2253
	R2404643-002S	K (766.491 nm)	38.1250	0.22	39348.9486
	R2404643-002S	Mg (279.078 nm)	72.8730 o	0.15	214035.6655
	R2404643-002S	Mn (257.610 nm)	0.9835	0.13	297527.0551
	R2404643-002S	Mo (202.032 nm)	0.4843	0.37	2346.5509
	R2404643-002S	Na (588.995 nm)	382.2431 o	0.29	3398493.5851
	R2404643-002S	Ni (230.299 nm)	0.4977	0.13	5371.2356
	R2404643-002S	Pb (220.353 nm)	0.4814	0.07	2303.4558
	R2404643-002S	Sb (217.582 nm)	0.5165	0.93	935.4656
	R2404643-002S	Se (196.026 nm)	1.0423	0.56	673.7437
	R2404643-002S	Si (252.851 nm)	7.0007	0.08	22345.3517
	R2404643-002S	Sn (189.925 nm)	4.6643	0.18	11017.5431
	R2404643-002S	Sr (216.596 nm)	5.3358	0.26	87936.6918
	R2404643-002S	Ti (336.122 nm)	0.4966	0.03	64477.6280
	R2404643-002S	Tl (190.794 nm)	1.7775	0.63	1431.3403
	R2404643-002S	V (292.401 nm)	0.4885	0.07	17648.8185
	R2404643-002S	Y (360.074 nm)	0.89	0.32	484992.43
	R2404643-002S	Y_R (360.074 nm)	0.89	0.32	484016.41
	R2404643-002S	Zn (213.857 nm)	0.5037	0.09	27938.8078
6/4/2024 22:20:12	R2404643-002SD	Ag (328.068 nm)	0.0517	0.24	2426.9973
	R2404643-002SD	Al (237.312 nm)	2.1541	0.22	4591.6906
	R2404643-002SD	As (188.980 nm)	0.0425	5.88	49.3049
	R2404643-002SD	B (249.772 nm)	1.1439	0.18	33282.5476
	R2404643-002SD	Ba (230.424 nm)	1.9371	0.38	75884.2619
	R2404643-002SD	Be (313.107 nm)	0.0472	0.14	48313.1443
	R2404643-002SD	Ca (317.933 nm)	473.9042 o	0.06	16436727.7997

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404643-002SD	Cd (214.439 nm)	0.0461	0.53	2367.9571
	R2404643-002SD	Co (230.786 nm)	0.4582	0.17	6526.1860
	R2404643-002SD	Cr (267.716 nm)	0.1893	0.19	7821.3347
	R2404643-002SD	Cu (327.395 nm)	0.2629	0.06	10279.0306
	R2404643-002SD	Fe (234.350 nm)	2.7850	0.10	49369.1556
	R2404643-002SD	K (766.491 nm)	38.1717	0.02	39397.3949
	R2404643-002SD	Mg (279.078 nm)	72.8625 o	0.11	214004.5858
	R2404643-002SD	Mn (257.610 nm)	0.9817	0.10	296999.9721
	R2404643-002SD	Mo (202.032 nm)	0.4878	0.18	2363.3674
	R2404643-002SD	Na (588.995 nm)	383.5263 o	0.34	3409925.0272
	R2404643-002SD	Ni (230.299 nm)	0.4761	0.43	5139.9509
	R2404643-002SD	Pb (220.353 nm)	0.4801	0.33	2297.4060
	R2404643-002SD	Sb (217.582 nm)	0.5156	0.15	934.0015
	R2404643-002SD	Se (196.026 nm)	1.0473	0.71	676.9925
	R2404643-002SD	Si (252.851 nm)	7.0072	0.21	22366.0150
	R2404643-002SD	Sn (189.925 nm)	4.6722	0.14	11036.0560
	R2404643-002SD	Sr (216.596 nm)	5.3417	0.20	88033.5544
	R2404643-002SD	Ti (336.122 nm)	0.4982	0.21	64686.1656
	R2404643-002SD	Tl (190.794 nm)	1.7751	0.25	1429.3813
	R2404643-002SD	V (292.401 nm)	0.4870	0.11	17592.1692
	R2404643-002SD	Y (360.074 nm)	0.90	0.59	485855.97
	R2404643-002SD	Y_R (360.074 nm)	0.90	0.59	484886.21
	R2404643-002SD	Zn (213.857 nm)	0.5044	0.14	27973.5598
6/4/2024 22:23:26	R2404643-002A	Ag (328.068 nm)	0.0515	0.27	2414.2614
	R2404643-002A	Al (237.312 nm)	2.1450	0.23	4572.5406
	R2404643-002A	As (188.980 nm)	0.0426	4.51	49.4675
	R2404643-002A	B (249.772 nm)	1.1395	0.14	33154.7684
	R2404643-002A	Ba (230.424 nm)	1.9293	0.42	75578.4998
	R2404643-002A	Be (313.107 nm)	0.0470	0.15	48057.7856
	R2404643-002A	Ca (317.933 nm)	463.2821 o	0.09	16068378.8863
	R2404643-002A	Cd (214.439 nm)	0.0459	0.13	2355.4060
	R2404643-002A	Co (230.786 nm)	0.4566	0.25	6503.2785
	R2404643-002A	Cr (267.716 nm)	0.1883	0.15	7777.9266
	R2404643-002A	Cu (327.395 nm)	0.2549	0.25	9965.3548
	R2404643-002A	Fe (234.350 nm)	2.7312	0.10	48415.7048
	R2404643-002A	K (766.491 nm)	37.6875	0.12	38894.1914
	R2404643-002A	Mg (279.078 nm)	70.9829 o	0.07	208482.8035
	R2404643-002A	Mn (257.610 nm)	0.9664	0.07	292359.4964
	R2404643-002A	Mo (202.032 nm)	0.4891	0.26	2369.7323
	R2404643-002A	Na (588.995 nm)	375.1177 o	0.29	3335016.0131
	R2404643-002A	Ni (230.299 nm)	0.4731	0.12	5108.0663
	R2404643-002A	Pb (220.353 nm)	0.4788	0.30	2291.0374
	R2404643-002A	Sb (217.582 nm)	0.5174	0.17	937.1232
	R2404643-002A	Se (196.026 nm)	1.0314	0.73	666.7660
	R2404643-002A	Si (252.851 nm)	6.8260	0.19	21787.7152
	R2404643-002A	Sn (189.925 nm)	4.6399	0.04	10959.8907
	R2404643-002A	Sr (216.596 nm)	5.2397	0.39	86351.1797
	R2404643-002A	Ti (336.122 nm)	0.4964	0.12	64461.7539
	R2404643-002A	Tl (190.794 nm)	1.7619	0.22	1418.7587
	R2404643-002A	V (292.401 nm)	0.4847	0.08	17509.1747
	R2404643-002A	Y (360.074 nm)	0.90	0.51	487484.57
	R2404643-002A	Y_R (360.074 nm)	0.90	0.51	486524.39
	R2404643-002A	Zn (213.857 nm)	0.4998	0.11	27721.6920
6/4/2024 22:26:40	R2404643-002L 5X	Ag (328.068 nm)	0.0001	64.00	-239.2117
	R2404643-002L 5X	Al (237.312 nm)	0.0130	21.52	63.6555
	R2404643-002L 5X	As (188.980 nm)	0.0016 u	> 100.00	-6.9135
	R2404643-002L 5X	B (249.772 nm)	0.0177	1.30	559.5330

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404643-002L 5X	Ba (230.424 nm)	0.0085	0.70	304.7900
	R2404643-002L 5X	Be (313.107 nm)	0.0000	87.34	167.5710
	R2404643-002L 5X	Ca (317.933 nm)	108.4773 o	0.30	3764534.8540
	R2404643-002L 5X	Cd (214.439 nm)	0.0001	72.76	10.6946
	R2404643-002L 5X	Co (230.786 nm)	0.0000 u	> 100.00	-38.2779
	R2404643-002L 5X	Cr (267.716 nm)	0.0008	20.90	143.3588
	R2404643-002L 5X	Cu (327.395 nm)	0.0005	8.92	55.3956
	R2404643-002L 5X	Fe (234.350 nm)	0.3785	0.23	6734.6660
	R2404643-002L 5X	K (766.491 nm)	2.7886	2.21	2621.5953
	R2404643-002L 5X	Mg (279.078 nm)	14.4360	0.37	42354.9926
	R2404643-002L 5X	Mn (257.610 nm)	0.1054	0.40	31919.8880
	R2404643-002L 5X	Mo (202.032 nm)	0.0034	27.84	-4.8887
	R2404643-002L 5X	Na (588.995 nm)	74.5283 o	0.61	657179.6705
	R2404643-002L 5X	Ni (230.299 nm)	0.0009 u	90.14	67.4417
	R2404643-002L 5X	Pb (220.353 nm)	0.0003 u	> 100.00	6.1330
	R2404643-002L 5X	Sb (217.582 nm)	0.0017 u	> 100.00	8.7528
	R2404643-002L 5X	Se (196.026 nm)	0.0011 u	> 100.00	3.4029
	R2404643-002L 5X	Si (252.851 nm)	1.3774	0.37	4390.7508
	R2404643-002L 5X	Sn (189.925 nm)	0.0012 u	> 100.00	10.2728
	R2404643-002L 5X	Sr (216.596 nm)	0.7333	0.23	12058.5930
	R2404643-002L 5X	Ti (336.122 nm)	0.0013	30.61	257.8418
	R2404643-002L 5X	Tl (190.794 nm)	0.0048	35.14	1.6718
	R2404643-002L 5X	V (292.401 nm)	-0.0001 u	> 100.00	-27.5622
	R2404643-002L 5X	Y (360.074 nm)	0.98	0.62	531611.71
	R2404643-002L 5X	Y_R (360.074 nm)	0.98	0.62	530497.63
	R2404643-002L 5X	Zn (213.857 nm)	0.0009	7.36	25.8415
6/4/2024 22:29:54	R2404651-001	Ag (328.068 nm)	0.0000 u	> 100.00	-249.3319
	R2404651-001	Al (237.312 nm)	0.1273	2.52	305.4710
	R2404651-001	As (188.980 nm)	0.0016 u	> 100.00	-6.8519
	R2404651-001	B (249.772 nm)	0.3197	2.17	9333.4830
	R2404651-001	Ba (230.424 nm)	0.0422	1.96	1624.8446
	R2404651-001	Be (313.107 nm)	0.0000	24.33	182.2739
	R2404651-001	Ca (317.933 nm)	120.5326 o	2.08	4182587.5301
	R2404651-001	Cd (214.439 nm)	0.0002	58.61	13.6519
	R2404651-001	Co (230.786 nm)	-0.0001 u	90.05	-41.1122
	R2404651-001	Cr (267.716 nm)	0.0033	9.06	245.8188
	R2404651-001	Cu (327.395 nm)	0.0010	16.63	78.1020
	R2404651-001	Fe (234.350 nm)	0.1011	1.96	1820.0883
	R2404651-001	K (766.491 nm)	3.8657	2.03	3741.0614
	R2404651-001	Mg (279.078 nm)	89.3579 o	2.13	262466.0758
	R2404651-001	Mn (257.610 nm)	0.0107	2.08	3251.9884
	R2404651-001	Mo (202.032 nm)	0.0093	4.58	24.2543
	R2404651-001	Na (588.995 nm)	89.4682 o	2.32	790273.7115
	R2404651-001	Ni (230.299 nm)	-0.0003 u	> 100.00	54.4845
	R2404651-001	Pb (220.353 nm)	0.0011	53.41	9.8450
	R2404651-001	Sb (217.582 nm)	0.0012	73.26	7.9581
	R2404651-001	Se (196.026 nm)	0.0077	53.85	7.6649
	R2404651-001	Si (252.851 nm)	11.6975	2.16	37342.0846
	R2404651-001	Sn (189.925 nm)	0.0014	17.98	10.7043
	R2404651-001	Sr (216.596 nm)	3.3942	2.20	55926.2410
	R2404651-001	Ti (336.122 nm)	0.0024	5.49	397.3062
	R2404651-001	Tl (190.794 nm)	0.0021	> 100.00	-0.5112
	R2404651-001	V (292.401 nm)	0.0013	9.65	21.9727
	R2404651-001	Y (360.074 nm)	0.95	2.00	514104.38
	R2404651-001	Y_R (360.074 nm)	0.95	2.00	513069.39
	R2404651-001	Zn (213.857 nm)	0.0045	2.48	222.9519
6/4/2024 22:33:08	Continuing Calibration Verification1	Ag (328.068 nm)	0.4960	0.05	25395.6063

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Verification1	Al (237.312 nm)	9.9153	0.10	21004.9116
	Continuing Calibration Verification1	As (188.980 nm)	0.9758	0.36	1331.0114
	Continuing Calibration Verification1	B (249.772 nm)	2.4806	0.22	72124.1084
	Continuing Calibration Verification1	Ba (230.424 nm)	9.9389	0.36	389468.4327
	Continuing Calibration Verification1	Be (313.107 nm)	0.2376	0.27	242557.1155
	Continuing Calibration Verification1	Ca (317.933 nm)	25.5423	0.26	888534.7832
	Continuing Calibration Verification1	Cd (214.439 nm)	0.4826	0.31	24746.1280
	Continuing Calibration Verification1	Co (230.786 nm)	2.4544	0.59	35130.7725
	Continuing Calibration Verification1	Cr (267.716 nm)	0.4908	0.24	20096.5840
	Continuing Calibration Verification1	Cu (327.395 nm)	1.2201	0.40	47564.5841
	Continuing Calibration Verification1	Fe (234.350 nm)	4.9116	0.25	87044.8325
	Continuing Calibration Verification1	K (766.491 nm)	24.6107	0.39	25302.6714
	Continuing Calibration Verification1	Mg (279.078 nm)	24.8675	0.20	73001.3544
	Continuing Calibration Verification1	Mn (257.610 nm)	0.7278	0.25	220195.5378
	Continuing Calibration Verification1	Mo (202.032 nm)	2.5578	0.34	12483.9577
	Continuing Calibration Verification1	Na (588.995 nm)	25.6558	0.54	221793.6919
	Continuing Calibration Verification1	Ni (230.299 nm)	2.0156	0.25	21575.3388
	Continuing Calibration Verification1	Pb (220.353 nm)	0.5025	0.40	2404.4942
	Continuing Calibration Verification1	Sb (217.582 nm)	4.9618	0.23	8938.0396
	Continuing Calibration Verification1	Se (196.026 nm)	0.4878	1.48	316.7461
	Continuing Calibration Verification1	Si (252.851 nm)	9.9018	0.63	31608.5055
	Continuing Calibration Verification1	Sn (189.925 nm)	4.8741	0.19	11512.6659
	Continuing Calibration Verification1	Sr (216.596 nm)	2.4331	0.26	40082.3148
	Continuing Calibration Verification1	Ti (336.122 nm)	2.5134	0.13	326000.2073
	Continuing Calibration Verification1	Tl (190.794 nm)	0.9711	0.49	780.9734
	Continuing Calibration Verification1	V (292.401 nm)	2.4899	0.24	90055.2504
	Continuing Calibration Verification1	Y (360.074 nm)	0.99	0.21	536935.61
	Continuing Calibration Verification1	Y_R (360.074 nm)	0.99	0.21	535783.60
	Continuing Calibration Verification1	Zn (213.857 nm)	0.9627	0.28	53419.1665
6/4/2024 22:36:22	Continuing Calibration Blank1	Ag (328.068 nm)	0.0000 u	> 100.00	-245.8243
	Continuing Calibration Blank1	Al (237.312 nm)	0.0017	60.13	39.7672
	Continuing Calibration Blank1	As (188.980 nm)	-0.0003 u	> 100.00	-9.4829
	Continuing Calibration Blank1	B (249.772 nm)	0.0007	49.31	64.4324
	Continuing Calibration Blank1	Ba (230.424 nm)	0.0003	42.25	-16.1144
	Continuing Calibration Blank1	Be (313.107 nm)	0.0000 u	> 100.00	153.3985
	Continuing Calibration Blank1	Ca (317.933 nm)	0.0007	20.81	2808.0191
	Continuing Calibration Blank1	Cd (214.439 nm)	0.0000	55.16	6.2538
	Continuing Calibration Blank1	Co (230.786 nm)	0.0002 u	> 100.00	-36.5802
	Continuing Calibration Blank1	Cr (267.716 nm)	0.0002	52.13	118.4988
	Continuing Calibration Blank1	Cu (327.395 nm)	0.0000 u	> 100.00	38.4646
	Continuing Calibration Blank1	Fe (234.350 nm)	0.0012	59.26	50.0299
	Continuing Calibration Blank1	K (766.491 nm)	0.0641	75.42	-210.2248
	Continuing Calibration Blank1	Mg (279.078 nm)	-0.0012 u	54.61	-59.7288
	Continuing Calibration Blank1	Mn (257.610 nm)	0.0000 u	> 100.00	21.2171
	Continuing Calibration Blank1	Mo (202.032 nm)	0.0043	26.31	-0.0612
	Continuing Calibration Blank1	Na (588.995 nm)	0.1144	5.91	-5745.1310
	Continuing Calibration Blank1	Ni (230.299 nm)	0.0001 u	> 100.00	58.0695
	Continuing Calibration Blank1	Pb (220.353 nm)	0.0002 u	> 100.00	5.2155
	Continuing Calibration Blank1	Sb (217.582 nm)	0.0068	23.87	17.9001
	Continuing Calibration Blank1	Se (196.026 nm)	-0.0019 u	98.60	1.4856
	Continuing Calibration Blank1	Si (252.851 nm)	0.0029	31.44	1.8858
	Continuing Calibration Blank1	Sn (189.925 nm)	0.0005 u	> 100.00	8.5060
	Continuing Calibration Blank1	Sr (216.596 nm)	0.0000 u	> 100.00	-29.6351
	Continuing Calibration Blank1	Ti (336.122 nm)	0.0018	58.66	324.4126
	Continuing Calibration Blank1	Tl (190.794 nm)	0.0018	80.35	-0.7664
	Continuing Calibration Blank1	V (292.401 nm)	0.0000 u	> 100.00	-23.3341
	Continuing Calibration Blank1	Y (360.074 nm)	1.02	0.62	553571.19

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Blank1	Y_R (360.074 nm)	1.02	0.62	552329.70
	Continuing Calibration Blank1	Zn (213.857 nm)	0.0001	71.65	-19.8295
6/4/2024 22:39:36	R2404651-002	Ag (328.068 nm)	0.0000 u	> 100.00	-246.5714
	R2404651-002	Al (237.312 nm)	0.1118	2.57	272.7131
	R2404651-002	As (188.980 nm)	0.0020	61.19	-6.2406
	R2404651-002	B (249.772 nm)	0.3135	0.23	9153.4700
	R2404651-002	Ba (230.424 nm)	0.0418	0.42	1609.7940
	R2404651-002	Be (313.107 nm)	0.0000	25.36	204.3191
	R2404651-002	Ca (317.933 nm)	117.9537 o	0.06	4093154.5020
	R2404651-002	Cd (214.439 nm)	0.0003	39.63	19.7201
	R2404651-002	Co (230.786 nm)	0.0002	62.70	-36.4206
	R2404651-002	Cr (267.716 nm)	0.0033	2.97	246.9937
	R2404651-002	Cu (327.395 nm)	0.0010	3.40	74.3263
	R2404651-002	Fe (234.350 nm)	0.0936	0.22	1687.6762
	R2404651-002	K (766.491 nm)	3.7223	0.65	3592.0628
	R2404651-002	Mg (279.078 nm)	87.4552 o	0.03	256876.1955
	R2404651-002	Mn (257.610 nm)	0.0091	0.08	2780.5018
	R2404651-002	Mo (202.032 nm)	0.0097	5.67	26.1689
	R2404651-002	Na (588.995 nm)	86.8218 o	0.50	766697.9009
	R2404651-002	Ni (230.299 nm)	0.0001 u	> 100.00	58.3863
	R2404651-002	Pb (220.353 nm)	0.0004	27.15	6.4531
	R2404651-002	Sb (217.582 nm)	0.0046	29.79	14.0942
	R2404651-002	Se (196.026 nm)	0.0013 u	> 100.00	3.5355
	R2404651-002	Si (252.851 nm)	11.4034	0.26	36402.7948
	R2404651-002	Sn (189.925 nm)	0.0018	57.15	11.5926
	R2404651-002	Sr (216.596 nm)	3.3246	0.23	54779.3480
	R2404651-002	Ti (336.122 nm)	0.0030	13.60	472.1853
	R2404651-002	Tl (190.794 nm)	0.0025	48.15	-0.2372
	R2404651-002	V (292.401 nm)	0.0014	9.26	25.0814
	R2404651-002	Y (360.074 nm)	0.96	0.49	522006.82
	R2404651-002	Y_R (360.074 nm)	0.96	0.49	520935.97
	R2404651-002	Zn (213.857 nm)	0.0058	0.62	299.0759
6/4/2024 22:42:50	R2404651-003	Ag (328.068 nm)	0.0001 u	> 100.00	-243.8262
	R2404651-003	Al (237.312 nm)	0.0059	18.45	48.6879
	R2404651-003	As (188.980 nm)	0.0022	67.47	-6.0250
	R2404651-003	B (249.772 nm)	0.2642	0.05	7721.2045
	R2404651-003	Ba (230.424 nm)	0.0392	0.60	1508.9495
	R2404651-003	Be (313.107 nm)	0.0000	10.72	177.6583
	R2404651-003	Ca (317.933 nm)	102.5742 o	0.05	3559828.7980
	R2404651-003	Cd (214.439 nm)	0.0002	19.01	15.1791
	R2404651-003	Co (230.786 nm)	-0.0003 u	73.30	-42.8754
	R2404651-003	Cr (267.716 nm)	0.0022	5.29	200.7996
	R2404651-003	Cu (327.395 nm)	0.0006	65.07	61.0280
	R2404651-003	Fe (234.350 nm)	0.0083	3.95	175.5093
	R2404651-003	K (766.491 nm)	2.6994	0.45	2528.8405
	R2404651-003	Mg (279.078 nm)	80.4934 o	0.10	236423.4260
	R2404651-003	Mn (257.610 nm)	0.0114	0.18	3472.6335
	R2404651-003	Mo (202.032 nm)	0.0083	2.02	19.1009
	R2404651-003	Na (588.995 nm)	104.6753 o	0.48	925747.6842
	R2404651-003	Ni (230.299 nm)	0.0000 u	> 100.00	56.9961
	R2404651-003	Pb (220.353 nm)	0.0010 u	> 100.00	9.1089
	R2404651-003	Sb (217.582 nm)	0.0030	13.69	11.1801
	R2404651-003	Se (196.026 nm)	0.0035	77.52	4.9561
	R2404651-003	Si (252.851 nm)	11.0350	0.23	35226.5199
	R2404651-003	Sn (189.925 nm)	0.0013	58.70	10.4922
	R2404651-003	Sr (216.596 nm)	2.2527	0.10	37107.3157
	R2404651-003	Ti (336.122 nm)	0.0007	38.85	177.8420

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404651-003	Tl (190.794 nm)	0.0028	81.96	-0.0068
	R2404651-003	V (292.401 nm)	0.0004	64.14	-9.7813
	R2404651-003	Y (360.074 nm)	0.97	0.49	523900.17
	R2404651-003	Y_R (360.074 nm)	0.97	0.49	522807.39
	R2404651-003	Zn (213.857 nm)	0.0039	1.98	190.2747
6/4/2024 22:46:04	R2404651-004	Ag (328.068 nm)	0.0002	90.03	-236.0986
	R2404651-004	Al (237.312 nm)	0.0186	10.99	75.5739
	R2404651-004	As (188.980 nm)	0.0027	45.01	-5.4009
	R2404651-004	B (249.772 nm)	0.2612	1.44	7634.5975
	R2404651-004	Ba (230.424 nm)	0.0390	1.13	1500.0370
	R2404651-004	Be (313.107 nm)	0.0000	5.42	177.6459
	R2404651-004	Ca (317.933 nm)	101.5552 o	1.11	3524490.4943
	R2404651-004	Cd (214.439 nm)	0.0002	59.69	13.9542
	R2404651-004	Co (230.786 nm)	-0.0002 u	> 100.00	-41.4885
	R2404651-004	Cr (267.716 nm)	0.0021	3.63	199.1194
	R2404651-004	Cu (327.395 nm)	0.0012	2.01	82.5224
	R2404651-004	Fe (234.350 nm)	0.0324	0.66	602.8701
	R2404651-004	K (766.491 nm)	2.6707	1.92	2498.9945
	R2404651-004	Mg (279.078 nm)	79.6691 o	1.15	234001.7628
	R2404651-004	Mn (257.610 nm)	0.0100	1.03	3037.1591
	R2404651-004	Mo (202.032 nm)	0.0081	5.95	18.2509
	R2404651-004	Na (588.995 nm)	103.4542 o	1.61	914870.1539
	R2404651-004	Ni (230.299 nm)	0.0002	> 100.00	59.0696
	R2404651-004	Pb (220.353 nm)	0.0003 u	> 100.00	5.8083
	R2404651-004	Sb (217.582 nm)	0.0021	46.36	9.5405
	R2404651-004	Se (196.026 nm)	0.0002 u	> 100.00	2.8104
	R2404651-004	Si (252.851 nm)	10.9119	1.45	34833.5479
	R2404651-004	Sn (189.925 nm)	0.0002 u	> 100.00	7.8418
	R2404651-004	Sr (216.596 nm)	2.2264	1.20	36674.1981
	R2404651-004	Ti (336.122 nm)	0.0006	37.31	169.7563
	R2404651-004	Tl (190.794 nm)	0.0023 u	> 100.00	-0.3927
	R2404651-004	V (292.401 nm)	0.0004	41.87	-10.7208
	R2404651-004	Y (360.074 nm)	0.97	0.64	524441.81
	R2404651-004	Y_R (360.074 nm)	0.97	0.64	523334.58
	R2404651-004	Zn (213.857 nm)	0.0049	0.51	246.3366
6/4/2024 22:49:17	R2404651-005	Ag (328.068 nm)	-0.0001 u	> 100.00	-251.2129
	R2404651-005	Al (237.312 nm)	0.0061	11.55	49.1058
	R2404651-005	As (188.980 nm)	0.0002 u	> 100.00	-8.7293
	R2404651-005	B (249.772 nm)	0.2261	2.80	6614.8570
	R2404651-005	Ba (230.424 nm)	0.0286	2.00	1092.2926
	R2404651-005	Be (313.107 nm)	0.0000	29.01	186.2888
	R2404651-005	Ca (317.933 nm)	105.7156 o	2.52	3668764.2508
	R2404651-005	Cd (214.439 nm)	0.0003	15.65	19.5911
	R2404651-005	Co (230.786 nm)	0.0015	17.56	-18.0163
	R2404651-005	Cr (267.716 nm)	0.0023	4.63	207.5373
	R2404651-005	Cu (327.395 nm)	0.0007	6.67	64.5514
	R2404651-005	Fe (234.350 nm)	0.0079	6.54	169.1811
	R2404651-005	K (766.491 nm)	3.9839	2.52	3863.9498
	R2404651-005	Mg (279.078 nm)	76.9753 o	2.62	226087.6818
	R2404651-005	Mn (257.610 nm)	0.0161	2.70	4879.2992
	R2404651-005	Mo (202.032 nm)	0.0086	0.64	20.6562
	R2404651-005	Na (588.995 nm)	90.9901 o	2.95	803831.9642
	R2404651-005	Ni (230.299 nm)	0.2886	2.61	3138.3178
	R2404651-005	Pb (220.353 nm)	0.0007 u	> 100.00	7.6603
	R2404651-005	Sb (217.582 nm)	0.0004 u	> 100.00	6.4795
	R2404651-005	Se (196.026 nm)	0.0026 u	> 100.00	4.3556
	R2404651-005	Si (252.851 nm)	9.9802	2.76	31858.6093

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404651-005	Sn (189.925 nm)	0.0009	79.63	9.5056
	R2404651-005	Sr (216.596 nm)	3.9446	2.48	65001.0880
	R2404651-005	Ti (336.122 nm)	0.0005	34.51	151.0746
	R2404651-005	Tl (190.794 nm)	0.0040	25.74	1.0260
	R2404651-005	V (292.401 nm)	0.0012	15.68	19.7757
	R2404651-005	Y (360.074 nm)	0.96	1.94	519143.83
	R2404651-005	Y_R (360.074 nm)	0.96	1.94	518072.48
	R2404651-005	Zn (213.857 nm)	0.0056	0.99	288.1179
6/4/2024 22:52:31	R2404651-006	Ag (328.068 nm)	0.0000 u	> 100.00	-249.0737
	R2404651-006	Al (237.312 nm)	0.0754	1.15	195.7739
	R2404651-006	As (188.980 nm)	0.0008 u	> 100.00	-7.9381
	R2404651-006	B (249.772 nm)	1.1335	0.60	32980.3753
	R2404651-006	Ba (230.424 nm)	0.0375	0.44	1442.0172
	R2404651-006	Be (313.107 nm)	0.0000	46.67	202.4655
	R2404651-006	Ca (317.933 nm)	150.0514 o	0.57	5206234.0058
	R2404651-006	Cd (214.439 nm)	0.0003	11.22	18.5219
	R2404651-006	Co (230.786 nm)	-0.0003 u	60.82	-43.6750
	R2404651-006	Cr (267.716 nm)	0.0028	4.45	227.2275
	R2404651-006	Cu (327.395 nm)	0.0014	4.86	92.6180
	R2404651-006	Fe (234.350 nm)	0.1163	0.72	2088.7697
	R2404651-006	K (766.491 nm)	4.8822	0.21	4797.5862
	R2404651-006	Mg (279.078 nm)	111.5168 o	0.61	327566.1631
	R2404651-006	Mn (257.610 nm)	0.0143	0.49	4359.6316
	R2404651-006	Mo (202.032 nm)	0.0068	3.40	11.9503
	R2404651-006	Na (588.995 nm)	211.3566 o LR	1.05	1876131.2442
	R2404651-006	Ni (230.299 nm)	0.0001 u	> 100.00	58.8676
	R2404651-006	Pb (220.353 nm)	0.0005 u	> 100.00	6.8352
	R2404651-006	Sb (217.582 nm)	0.0025 u	92.04	10.3144
	R2404651-006	Se (196.026 nm)	0.0104	56.37	9.4002
	R2404651-006	Si (252.851 nm)	11.1898	0.78	35720.9441
	R2404651-006	Sn (189.925 nm)	0.0018	14.89	11.5428
	R2404651-006	Sr (216.596 nm)	4.2424	0.53	69910.2333
	R2404651-006	Ti (336.122 nm)	0.0012	13.21	240.2989
	R2404651-006	Tl (190.794 nm)	0.0004 u	> 100.00	-1.8651
	R2404651-006	V (292.401 nm)	0.0006	27.99	-4.6460
	R2404651-006	Y (360.074 nm)	0.94	0.61	509547.06
	R2404651-006	Y_R (360.074 nm)	0.94	0.60	508460.93
	R2404651-006	Zn (213.857 nm)	0.0043	0.91	211.8653
6/4/2024 22:55:44	R2404651-007	Ag (328.068 nm)	0.0000 u	> 100.00	-246.2989
	R2404651-007	Al (237.312 nm)	0.0068	22.47	50.6868
	R2404651-007	As (188.980 nm)	0.0009 u	> 100.00	-7.8686
	R2404651-007	B (249.772 nm)	0.8638	0.52	25144.3753
	R2404651-007	Ba (230.424 nm)	0.0759	0.56	2947.1175
	R2404651-007	Be (313.107 nm)	0.0000	32.93	201.7558
	R2404651-007	Ca (317.933 nm)	152.5459 o	0.50	5292736.7966
	R2404651-007	Cd (214.439 nm)	0.0003	11.75	17.6532
	R2404651-007	Co (230.786 nm)	0.0017	10.34	-14.7552
	R2404651-007	Cr (267.716 nm)	0.0058	0.55	346.7686
	R2404651-007	Cu (327.395 nm)	0.0028	10.76	144.5250
	R2404651-007	Fe (234.350 nm)	0.0071	2.57	154.8818
	R2404651-007	K (766.491 nm)	4.4103	0.38	4307.0948
	R2404651-007	Mg (279.078 nm)	116.1561 o	0.55	341195.9182
	R2404651-007	Mn (257.610 nm)	0.0002	9.28	73.2905
	R2404651-007	Mo (202.032 nm)	0.0067	8.24	11.3529
	R2404651-007	Na (588.995 nm)	146.4621 o	0.84	1298010.3940
	R2404651-007	Ni (230.299 nm)	0.0005	35.88	62.4787
	R2404651-007	Pb (220.353 nm)	0.0003 u	> 100.00	5.8182

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404651-007	Sb (217.582 nm)	0.0053	56.97	15.2249
	R2404651-007	Se (196.026 nm)	0.0053	57.96	6.0768
	R2404651-007	Si (252.851 nm)	14.7228	0.64	47001.6006
	R2404651-007	Sn (189.925 nm)	0.0006	69.48	8.9035
	R2404651-007	Sr (216.596 nm)	5.8771 o	0.47	96860.0753
	R2404651-007	Ti (336.122 nm)	0.0008	4.06	197.0159
	R2404651-007	Tl (190.794 nm)	0.0035	71.22	0.5659
	R2404651-007	V (292.401 nm)	0.0034	2.94	96.3871
	R2404651-007	Y (360.074 nm)	0.94	0.62	511917.91
	R2404651-007	Y_R (360.074 nm)	0.94	0.62	510726.06
	R2404651-007	Zn (213.857 nm)	0.0043	0.92	213.5395
6/4/2024 22:58:58	R2404693-001	Ag (328.068 nm)	0.0001	93.58	-242.2468
	R2404693-001	Al (237.312 nm)	0.0120	15.97	61.5291
	R2404693-001	As (188.980 nm)	0.0004 u	> 100.00	-8.5203
	R2404693-001	B (249.772 nm)	2.0104	0.64	58462.3374
	R2404693-001	Ba (230.424 nm)	0.0497	0.38	1922.5336
	R2404693-001	Be (313.107 nm)	0.0000	34.31	169.1382
	R2404693-001	Ca (317.933 nm)	60.9355 o	0.51	2115890.9677
	R2404693-001	Cd (214.439 nm)	0.0002	8.77	14.7647
	R2404693-001	Co (230.786 nm)	0.0005	10.61	-31.6189
	R2404693-001	Cr (267.716 nm)	0.0012	8.96	162.9446
	R2404693-001	Cu (327.395 nm)	0.0024	6.53	130.5125
	R2404693-001	Fe (234.350 nm)	0.3715	0.53	6611.1371
	R2404693-001	K (766.491 nm)	53.4235	0.75	55249.6084
	R2404693-001	Mg (279.078 nm)	70.9199 o	0.58	208297.6642
	R2404693-001	Mn (257.610 nm)	0.0798	0.47	24166.6374
	R2404693-001	Mo (202.032 nm)	0.0025	8.88	-9.0665
	R2404693-001	Na (588.995 nm)	71.1135 o	0.85	626758.7521
	R2404693-001	Ni (230.299 nm)	0.0055	7.57	116.6167
	R2404693-001	Pb (220.353 nm)	0.0001	> 100.00	5.0638
	R2404693-001	Sb (217.582 nm)	0.0015 u	> 100.00	8.3646
	R2404693-001	Se (196.026 nm)	-0.0013 u	> 100.00	1.8242
	R2404693-001	Si (252.851 nm)	3.0230	0.53	9644.9203
	R2404693-001	Sn (189.925 nm)	0.0008	58.49	9.1886
	R2404693-001	Sr (216.596 nm)	0.5708	0.71	9379.6676
	R2404693-001	Ti (336.122 nm)	0.0003	15.58	119.8219
	R2404693-001	Tl (190.794 nm)	0.0022 u	> 100.00	-0.4677
	R2404693-001	V (292.401 nm)	0.0002	20.20	-16.3665
	R2404693-001	Y (360.074 nm)	0.97	0.52	528375.34
	R2404693-001	Y_R (360.074 nm)	0.97	0.52	527117.17
	R2404693-001	Zn (213.857 nm)	0.0071	0.11	371.1510
6/4/2024 23:02:11	R2404693-002	Ag (328.068 nm)	0.0000 u	> 100.00	-248.1773
	R2404693-002	Al (237.312 nm)	0.0078	28.36	52.6871
	R2404693-002	As (188.980 nm)	-0.0020 u	62.02	-11.8552
	R2404693-002	B (249.772 nm)	1.0942	0.28	31840.0102
	R2404693-002	Ba (230.424 nm)	0.0169	0.04	635.9029
	R2404693-002	Be (313.107 nm)	0.0001	6.37	261.5981
	R2404693-002	Ca (317.933 nm)	667.4931 o LR	0.18	23149960.5607
	R2404693-002	Cd (214.439 nm)	0.0002	37.83	16.0091
	R2404693-002	Co (230.786 nm)	-0.0005 u	21.11	-46.7776
	R2404693-002	Cr (267.716 nm)	0.0013	4.49	164.7370
	R2404693-002	Cu (327.395 nm)	0.0005	67.58	55.2454
	R2404693-002	Fe (234.350 nm)	0.1090	0.26	1959.4415
	R2404693-002	K (766.491 nm)	28.7895	0.47	29645.9559
	R2404693-002	Mg (279.078 nm)	119.5698 o	0.26	351224.9718
	R2404693-002	Mn (257.610 nm)	0.2868	0.28	86770.0259
	R2404693-002	Mo (202.032 nm)	0.0019	14.10	-11.9016

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404693-002	Na (588.995 nm)	490.4336 o LR	0.55	4362321.4251
	R2404693-002	Ni (230.299 nm)	0.0014	22.81	72.7706
	R2404693-002	Pb (220.353 nm)	0.0000 u	> 100.00	4.3368
	R2404693-002	Sb (217.582 nm)	-0.0015 u	72.92	3.0042
	R2404693-002	Se (196.026 nm)	-0.0049 u	73.62	-0.4537
	R2404693-002	Si (252.851 nm)	5.9773	0.36	19077.7389
	R2404693-002	Sn (189.925 nm)	0.0015	58.90	10.8508
	R2404693-002	Sr (216.596 nm)	11.6319 o	0.21	191734.2431
	R2404693-002	Ti (336.122 nm)	0.0065	2.00	930.4480
	R2404693-002	Tl (190.794 nm)	0.0033	31.73	0.4684
	R2404693-002	V (292.401 nm)	-0.0003 u	49.63	-36.8118
	R2404693-002	Y (360.074 nm)	0.87	0.33	473785.13
	R2404693-002	Y_R (360.074 nm)	0.87	0.33	472724.43
	R2404693-002	Zn (213.857 nm)	0.0031	2.99	148.6845
6/4/2024 23:05:25	R2404693-003	Ag (328.068 nm)	0.0000 u	> 100.00	-245.6347
	R2404693-003	Al (237.312 nm)	0.0114	20.13	60.2524
	R2404693-003	As (188.980 nm)	0.0402	10.68	46.1986
	R2404693-003	B (249.772 nm)	9.5047	3.34	276222.5890
	R2404693-003	Ba (230.424 nm)	0.3997	3.37	15637.6480
	R2404693-003	Be (313.107 nm)	0.0000	30.20	198.6635
	R2404693-003	Ca (317.933 nm)	121.0569 o	3.43	4200766.4894
	R2404693-003	Cd (214.439 nm)	0.0006	3.74	32.8507
	R2404693-003	Co (230.786 nm)	-0.0006 u	20.70	-46.9444
	R2404693-003	Cr (267.716 nm)	0.0027	1.44	222.6168
	R2404693-003	Cu (327.395 nm)	0.0006	36.31	60.6486
	R2404693-003	Fe (234.350 nm)	12.9608 o	3.41	229649.1597
	R2404693-003	K (766.491 nm)	5.7062	3.56	5654.0225
	R2404693-003	Mg (279.078 nm)	239.5577 o	3.40	703733.9231
	R2404693-003	Mn (257.610 nm)	0.0520	3.27	15750.3324
	R2404693-003	Mo (202.032 nm)	0.0077	7.01	16.4880
	R2404693-003	Na (588.995 nm)	282.0782 o LR	3.23	2506162.3300
	R2404693-003	Ni (230.299 nm)	0.0259	5.96	334.1803
	R2404693-003	Pb (220.353 nm)	0.0013	60.09	10.7767
	R2404693-003	Sb (217.582 nm)	-0.0013 u	> 100.00	3.4617
	R2404693-003	Se (196.026 nm)	-0.0011 u	> 100.00	1.9591
	R2404693-003	Si (252.851 nm)	9.7128	3.24	31004.7862
	R2404693-003	Sn (189.925 nm)	0.0012 u	> 100.00	10.0907
	R2404693-003	Sr (216.596 nm)	2.4161	3.40	39801.5479
	R2404693-003	Ti (336.122 nm)	0.0010	18.34	219.0672
	R2404693-003	Tl (190.794 nm)	0.0004 u	> 100.00	-1.9175
	R2404693-003	V (292.401 nm)	0.0009	10.25	6.8254
	R2404693-003	Y (360.074 nm)	0.91	3.08	495987.63
	R2404693-003	Y_R (360.074 nm)	0.91	3.09	494775.89
	R2404693-003	Zn (213.857 nm)	0.0074	2.52	383.9801
6/4/2024 23:08:39	R2404693-004	Ag (328.068 nm)	0.0000 u	> 100.00	-245.6614
	R2404693-004	Al (237.312 nm)	0.3055	1.29	682.3134
	R2404693-004	As (188.980 nm)	0.0021	61.05	-6.1630
	R2404693-004	B (249.772 nm)	0.1075	1.33	3167.7298
	R2404693-004	Ba (230.424 nm)	0.1396	0.34	5442.7369
	R2404693-004	Be (313.107 nm)	0.0000	26.65	182.4454
	R2404693-004	Ca (317.933 nm)	68.9410 o	0.08	2393505.7586
	R2404693-004	Cd (214.439 nm)	0.0003	21.13	17.7068
	R2404693-004	Co (230.786 nm)	0.0009	24.43	-25.4202
	R2404693-004	Cr (267.716 nm)	0.0013	1.45	167.1018
	R2404693-004	Cu (327.395 nm)	0.0007	27.33	63.5795
	R2404693-004	Fe (234.350 nm)	0.2720	0.56	4847.6621
	R2404693-004	K (766.491 nm)	1.7997	1.15	1593.7288

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404693-004	Mg (279.078 nm)	49.3378	0.15	144892.1342
	R2404693-004	Mn (257.610 nm)	0.0077	0.09	2342.8968
	R2404693-004	Mo (202.032 nm)	0.0065	2.70	10.4185
	R2404693-004	Na (588.995 nm)	22.0813	0.40	189950.1953
	R2404693-004	Ni (230.299 nm)	0.0014	20.10	72.0696
	R2404693-004	Pb (220.353 nm)	0.0012	46.68	10.2303
	R2404693-004	Sb (217.582 nm)	0.0022	70.47	9.6657
	R2404693-004	Se (196.026 nm)	-0.0020 u	> 100.00	1.3945
	R2404693-004	Si (252.851 nm)	7.7537	0.14	24749.5713
	R2404693-004	Sn (189.925 nm)	0.0014	22.37	10.6696
	R2404693-004	Sr (216.596 nm)	44.8659 o	0.30	739632.0926
	R2404693-004	Ti (336.122 nm)	0.0063	11.71	905.2637
	R2404693-004	Tl (190.794 nm)	0.0019 u	> 100.00	-0.6985
	R2404693-004	V (292.401 nm)	0.0044	0.85	135.3740
	R2404693-004	Y (360.074 nm)	0.98	0.52	531397.54
	R2404693-004	Y_R (360.074 nm)	0.98	0.53	530069.89
	R2404693-004	Zn (213.857 nm)	0.0059	1.25	302.5028
6/4/2024 23:11:52	Continuing Calibration Verification1	Ag (328.068 nm)	0.4930	0.56	25245.2167
	Continuing Calibration Verification1	Al (237.312 nm)	9.7510	0.50	20657.4973
	Continuing Calibration Verification1	As (188.980 nm)	0.9639	0.56	1314.6407
	Continuing Calibration Verification1	B (249.772 nm)	2.4775	0.51	72033.8860
	Continuing Calibration Verification1	Ba (230.424 nm)	9.9332	0.27	389243.0509
	Continuing Calibration Verification1	Be (313.107 nm)	0.2372	0.47	242132.2247
	Continuing Calibration Verification1	Ca (317.933 nm)	25.5436	0.45	888577.6019
	Continuing Calibration Verification1	Cd (214.439 nm)	0.4846	0.30	24848.4541
	Continuing Calibration Verification1	Co (230.786 nm)	2.4550	0.42	35138.4093
	Continuing Calibration Verification1	Cr (267.716 nm)	0.4901	0.49	20065.3596
	Continuing Calibration Verification1	Cu (327.395 nm)	1.2094	0.49	47147.9340
	Continuing Calibration Verification1	Fe (234.350 nm)	4.9024	0.50	86883.2788
	Continuing Calibration Verification1	K (766.491 nm)	24.0595	0.64	24729.7378
	Continuing Calibration Verification1	Mg (279.078 nm)	24.8946	0.42	73081.2585
	Continuing Calibration Verification1	Mn (257.610 nm)	0.7253	0.49	219440.5491
	Continuing Calibration Verification1	Mo (202.032 nm)	2.5436	0.48	12414.5099
	Continuing Calibration Verification1	Na (588.995 nm)	25.1011	0.78	216852.0527
	Continuing Calibration Verification1	Ni (230.299 nm)	2.0099	0.51	21514.9827
	Continuing Calibration Verification1	Pb (220.353 nm)	0.5022	0.59	2402.8697
	Continuing Calibration Verification1	Sb (217.582 nm)	4.9183	0.45	8859.7551
	Continuing Calibration Verification1	Se (196.026 nm)	0.4794	0.73	311.3388
	Continuing Calibration Verification1	Si (252.851 nm)	9.8687	0.84	31502.7933
	Continuing Calibration Verification1	Sn (189.925 nm)	4.8683	0.48	11499.1018
	Continuing Calibration Verification1	Sr (216.596 nm)	2.4351	0.25	40114.5432
	Continuing Calibration Verification1	Ti (336.122 nm)	2.4991	0.54	324153.5258
	Continuing Calibration Verification1	Tl (190.794 nm)	0.9690	0.25	779.2680
	Continuing Calibration Verification1	V (292.401 nm)	2.4793	0.51	89670.0394
	Continuing Calibration Verification1	Y (360.074 nm)	0.98	0.62	533304.48
	Continuing Calibration Verification1	Y_R (360.074 nm)	0.98	0.61	531937.40
	Continuing Calibration Verification1	Zn (213.857 nm)	0.9627	0.25	53414.2011
6/4/2024 23:15:06	Continuing Calibration Blank1	Ag (328.068 nm)	0.0001 u	> 100.00	-242.7843
	Continuing Calibration Blank1	Al (237.312 nm)	0.0012	50.45	38.8006
	Continuing Calibration Blank1	As (188.980 nm)	-0.0017 u	99.26	-11.4352
	Continuing Calibration Blank1	B (249.772 nm)	0.0017	32.78	94.5465
	Continuing Calibration Blank1	Ba (230.424 nm)	0.0004	28.83	-11.3550
	Continuing Calibration Blank1	Be (313.107 nm)	0.0000 u	> 100.00	162.7573
	Continuing Calibration Blank1	Ca (317.933 nm)	0.0009	17.99	2815.4794
	Continuing Calibration Blank1	Cd (214.439 nm)	0.0000 u	> 100.00	4.4390
	Continuing Calibration Blank1	Co (230.786 nm)	0.0003 u	91.40	-34.1799
	Continuing Calibration Blank1	Cr (267.716 nm)	0.0003	56.19	122.3964

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Blank1	Cu (327.395 nm)	0.0001	88.83	42.8733
	Continuing Calibration Blank1	Fe (234.350 nm)	0.0016	40.87	56.8347
	Continuing Calibration Blank1	K (766.491 nm)	0.0238	> 100.00	-252.0406
	Continuing Calibration Blank1	Mg (279.078 nm)	0.0006	90.45	-54.3852
	Continuing Calibration Blank1	Mn (257.610 nm)	0.0000	64.55	24.7934
	Continuing Calibration Blank1	Mo (202.032 nm)	0.0042	22.90	-0.5821
	Continuing Calibration Blank1	Na (588.995 nm)	0.0889	5.10	-5972.3299
	Continuing Calibration Blank1	Ni (230.299 nm)	0.0002 u	> 100.00	59.2010
	Continuing Calibration Blank1	Pb (220.353 nm)	-0.0003 u	> 100.00	2.8951
	Continuing Calibration Blank1	Sb (217.582 nm)	0.0057	11.01	16.0577
	Continuing Calibration Blank1	Se (196.026 nm)	-0.0003 u	> 100.00	2.4749
	Continuing Calibration Blank1	Si (252.851 nm)	0.0053	31.04	9.7481
	Continuing Calibration Blank1	Sn (189.925 nm)	0.0015	28.08	10.8609
	Continuing Calibration Blank1	Sr (216.596 nm)	0.0000 u	> 100.00	-29.8703
	Continuing Calibration Blank1	Ti (336.122 nm)	0.0020	50.71	345.5669
	Continuing Calibration Blank1	Tl (190.794 nm)	0.0011 u	> 100.00	-1.3208
	Continuing Calibration Blank1	V (292.401 nm)	0.0002	68.00	-18.6766
	Continuing Calibration Blank1	Y (360.074 nm)	1.01	0.39	549770.11
	Continuing Calibration Blank1	Y_R (360.074 nm)	1.01	0.38	548200.11
	Continuing Calibration Blank1	Zn (213.857 nm)	0.0001	37.86	-20.7245
6/4/2024 23:18:20	R2404693-005	Ag (328.068 nm)	-0.0001 u	89.16	-249.7844
	R2404693-005	Al (237.312 nm)	0.0100	14.21	57.4385
	R2404693-005	As (188.980 nm)	0.0003 u	> 100.00	-8.6454
	R2404693-005	B (249.772 nm)	0.5060	0.11	14749.3708
	R2404693-005	Ba (230.424 nm)	1.2000	0.23	47000.1592
	R2404693-005	Be (313.107 nm)	0.0000	13.80	194.4821
	R2404693-005	Ca (317.933 nm)	187.2421 o	0.10	6495923.4241
	R2404693-005	Cd (214.439 nm)	0.0003	15.49	17.0101
	R2404693-005	Co (230.786 nm)	-0.0010 u	58.72	-52.7761
	R2404693-005	Cr (267.716 nm)	0.0011	8.88	157.3511
	R2404693-005	Cu (327.395 nm)	0.0005	20.32	55.4525
	R2404693-005	Fe (234.350 nm)	1.2363	0.03	21930.8887
	R2404693-005	K (766.491 nm)	17.8117	0.56	18236.0053
	R2404693-005	Mg (279.078 nm)	77.0103 o	0.07	226190.3871
	R2404693-005	Mn (257.610 nm)	0.0476	0.18	14413.3696
	R2404693-005	Mo (202.032 nm)	0.0020	16.77	-11.6538
	R2404693-005	Na (588.995 nm)	139.1969 o	0.32	1233287.5142
	R2404693-005	Ni (230.299 nm)	0.0167	1.84	235.5095
	R2404693-005	Pb (220.353 nm)	0.0005 u	> 100.00	6.7303
	R2404693-005	Sb (217.582 nm)	0.0026	56.57	10.5018
	R2404693-005	Se (196.026 nm)	0.0003 u	> 100.00	2.8821
	R2404693-005	Si (252.851 nm)	7.0528	0.13	22511.7630
	R2404693-005	Sn (189.925 nm)	0.0002 u	> 100.00	7.7326
	R2404693-005	Sr (216.596 nm)	3.0381	0.21	50056.5878
	R2404693-005	Ti (336.122 nm)	0.0020	18.61	352.5936
	R2404693-005	Tl (190.794 nm)	0.0019	26.26	-0.6702
	R2404693-005	V (292.401 nm)	-0.0001 u	> 100.00	-27.1865
	R2404693-005	Y (360.074 nm)	0.94	0.40	512083.96
	R2404693-005	Y_R (360.074 nm)	0.94	0.40	510738.36
	R2404693-005	Zn (213.857 nm)	0.0060	1.22	308.8973
6/4/2024 23:21:34	R2404693-006	Ag (328.068 nm)	-0.0001 u	> 100.00	-251.8825
	R2404693-006	Al (237.312 nm)	0.0105	11.96	58.5106
	R2404693-006	As (188.980 nm)	0.0010 u	> 100.00	-7.7224
	R2404693-006	B (249.772 nm)	1.9287	0.71	56086.9609
	R2404693-006	Ba (230.424 nm)	0.0112	1.56	409.9887
	R2404693-006	Be (313.107 nm)	0.0001	8.08	235.2818
	R2404693-006	Ca (317.933 nm)	543.4867 o LR	0.40	18849693.4765

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404693-006	Cd (214.439 nm)	0.0003	35.22	18.6832
	R2404693-006	Co (230.786 nm)	0.0020	16.06	-10.7178
	R2404693-006	Cr (267.716 nm)	0.0015	6.38	172.3658
	R2404693-006	Cu (327.395 nm)	0.0141	0.49	585.5392
	R2404693-006	Fe (234.350 nm)	0.1682	0.34	3008.8558
	R2404693-006	K (766.491 nm)	19.7435	0.41	20243.8559
	R2404693-006	Mg (279.078 nm)	77.1322 o	0.53	226548.4171
	R2404693-006	Mn (257.610 nm)	0.1904	0.57	57626.5254
	R2404693-006	Mo (202.032 nm)	0.0022	14.12	-10.2789
	R2404693-006	Na (588.995 nm)	63.5684 o	1.01	559542.5608
	R2404693-006	Ni (230.299 nm)	0.0935	1.20	1055.6382
	R2404693-006	Pb (220.353 nm)	0.0016	11.98	11.9766
	R2404693-006	Sb (217.582 nm)	0.0020	43.22	9.3993
	R2404693-006	Se (196.026 nm)	-0.0016 u	> 100.00	1.6792
	R2404693-006	Si (252.851 nm)	5.1999	0.66	16595.4298
	R2404693-006	Sn (189.925 nm)	0.0010	34.00	9.6192
	R2404693-006	Sr (216.596 nm)	10.4095 o	0.64	171581.5261
	R2404693-006	Ti (336.122 nm)	0.0052	5.91	760.8148
	R2404693-006	Tl (190.794 nm)	0.0024	28.61	-0.2988
	R2404693-006	V (292.401 nm)	-0.0004 u	51.01	-39.4701
	R2404693-006	Y (360.074 nm)	0.91	0.60	491161.69
	R2404693-006	Y_R (360.074 nm)	0.91	0.60	489871.90
	R2404693-006	Zn (213.857 nm)	0.0138	0.76	739.2208
6/4/2024 23:24:48	R2404693-007	Ag (328.068 nm)	0.0000 u	> 100.00	-245.8385
	R2404693-007	Al (237.312 nm)	0.3232	0.97	719.7692
	R2404693-007	As (188.980 nm)	0.0001 u	> 100.00	-8.9529
	R2404693-007	B (249.772 nm)	0.0453	0.67	1361.2259
	R2404693-007	Ba (230.424 nm)	0.0333	0.41	1279.6370
	R2404693-007	Be (313.107 nm)	0.0000	17.23	194.1134
	R2404693-007	Ca (317.933 nm)	102.8259 o	0.14	3568556.7699
	R2404693-007	Cd (214.439 nm)	0.0002	50.36	12.7373
	R2404693-007	Co (230.786 nm)	0.0014	30.93	-19.0879
	R2404693-007	Cr (267.716 nm)	0.0013	3.50	166.4679
	R2404693-007	Cu (327.395 nm)	0.0006	8.87	62.1835
	R2404693-007	Fe (234.350 nm)	0.5233	0.08	9300.5257
	R2404693-007	K (766.491 nm)	3.1429	1.38	2989.8565
	R2404693-007	Mg (279.078 nm)	89.2348 o	0.13	262104.3554
	R2404693-007	Mn (257.610 nm)	0.0806	0.12	24400.1757
	R2404693-007	Mo (202.032 nm)	0.0028	2.52	-7.4727
	R2404693-007	Na (588.995 nm)	6.2286	0.50	48724.4993
	R2404693-007	Ni (230.299 nm)	0.0004	60.77	61.8517
	R2404693-007	Pb (220.353 nm)	0.0008	46.45	8.5404
	R2404693-007	Sb (217.582 nm)	0.0028	92.34	10.7841
	R2404693-007	Se (196.026 nm)	-0.0007 u	83.58	2.2500
	R2404693-007	Si (252.851 nm)	6.7050	0.32	21401.3360
	R2404693-007	Sn (189.925 nm)	0.0003 u	> 100.00	8.0778
	R2404693-007	Sr (216.596 nm)	9.3074 o	0.02	153411.8933
	R2404693-007	Ti (336.122 nm)	0.0073	4.08	1040.0190
	R2404693-007	Tl (190.794 nm)	0.0023	48.21	-0.3682
	R2404693-007	V (292.401 nm)	0.0004	3.44	-11.7589
	R2404693-007	Y (360.074 nm)	0.97	0.31	526395.49
	R2404693-007	Y_R (360.074 nm)	0.97	0.31	524953.09
	R2404693-007	Zn (213.857 nm)	0.0044	0.66	216.8592
6/4/2024 23:28:02	R2404693-008	Ag (328.068 nm)	0.0001 u	> 100.00	-242.4334
	R2404693-008	Al (237.312 nm)	0.0687	2.85	181.6124
	R2404693-008	As (188.980 nm)	-0.0004 u	> 100.00	-9.5596
	R2404693-008	B (249.772 nm)	0.2802	0.22	8186.6340

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404693-008	Ba (230.424 nm)	0.0157	0.54	589.8105
	R2404693-008	Be (313.107 nm)	0.0002	2.44	315.1269
	R2404693-008	Ca (317.933 nm)	594.4121 o LR	0.18	20615674.2899
	R2404693-008	Cd (214.439 nm)	0.0005	3.77	30.1895
	R2404693-008	Co (230.786 nm)	-0.0008 u	43.88	-50.6201
	R2404693-008	Cr (267.716 nm)	0.0022	9.78	202.3790
	R2404693-008	Cu (327.395 nm)	0.0049	4.33	228.4188
	R2404693-008	Fe (234.350 nm)	5.4429	0.19	96457.7067
	R2404693-008	K (766.491 nm)	12.4166	0.44	12628.5906
	R2404693-008	Mg (279.078 nm)	129.7467 o	0.23	381123.1555
	R2404693-008	Mn (257.610 nm)	0.0811	0.25	24556.8318
	R2404693-008	Mo (202.032 nm)	0.0015	44.51	-13.7257
	R2404693-008	Na (588.995 nm)	110.3345 o	0.58	976163.5280
	R2404693-008	Ni (230.299 nm)	0.0162	0.83	229.8781
	R2404693-008	Pb (220.353 nm)	0.0015	63.40	11.4601
	R2404693-008	Sb (217.582 nm)	0.0017	> 100.00	8.8180
	R2404693-008	Se (196.026 nm)	0.0036 u	> 100.00	5.0170
	R2404693-008	Si (252.851 nm)	5.8342	0.32	18620.8668
	R2404693-008	Sn (189.925 nm)	0.0026	56.43	13.5609
	R2404693-008	Sr (216.596 nm)	11.8050 o	0.19	194587.0749
	R2404693-008	Ti (336.122 nm)	0.0068	0.89	963.8147
	R2404693-008	Tl (190.794 nm)	0.0024	29.43	-0.3307
	R2404693-008	V (292.401 nm)	-0.0001 u	> 100.00	-28.4062
	R2404693-008	Y (360.074 nm)	0.90	0.37	490956.89
	R2404693-008	Y_R (360.074 nm)	0.90	0.37	489668.87
	R2404693-008	Zn (213.857 nm)	0.0179	0.29	968.0928
6/4/2024 23:31:16	R2404693-009	Ag (328.068 nm)	-0.0001 u	37.54	-252.6107
	R2404693-009	Al (237.312 nm)	0.1713	1.99	398.3958
	R2404693-009	As (188.980 nm)	0.0022	71.33	-6.0023
	R2404693-009	B (249.772 nm)	5.3611	0.32	155822.2784
	R2404693-009	Ba (230.424 nm)	0.0101	0.94	370.6182
	R2404693-009	Be (313.107 nm)	0.0001	5.11	227.2108
	R2404693-009	Ca (317.933 nm)	475.5749 o LR	0.01	16494663.9715
	R2404693-009	Cd (214.439 nm)	0.0004	35.09	22.0210
	R2404693-009	Co (230.786 nm)	-0.0005 u	1.18	-45.5838
	R2404693-009	Cr (267.716 nm)	0.0018	6.18	184.8775
	R2404693-009	Cu (327.395 nm)	0.0014	14.46	92.1236
	R2404693-009	Fe (234.350 nm)	0.6044	0.25	10736.8192
	R2404693-009	K (766.491 nm)	30.1090	0.82	31017.3558
	R2404693-009	Mg (279.078 nm)	84.3956 o	0.10	247887.4382
	R2404693-009	Mn (257.610 nm)	0.1402	0.29	42422.4516
	R2404693-009	Mo (202.032 nm)	0.0017	12.71	-13.0700
	R2404693-009	Na (588.995 nm)	138.4619 o	0.93	1226739.7826
	R2404693-009	Ni (230.299 nm)	0.0020	10.81	78.9271
	R2404693-009	Pb (220.353 nm)	0.0004 u	> 100.00	6.3709
	R2404693-009	Sb (217.582 nm)	0.0006 u	> 100.00	6.8016
	R2404693-009	Se (196.026 nm)	-0.0050 u	41.50	-0.5276
	R2404693-009	Si (252.851 nm)	4.4560	0.45	14220.4237
	R2404693-009	Sn (189.925 nm)	0.0016	8.15	11.1663
	R2404693-009	Sr (216.596 nm)	9.7855 o	0.02	161293.4976
	R2404693-009	Ti (336.122 nm)	0.0074	2.91	1051.2069
	R2404693-009	Tl (190.794 nm)	0.0027	47.58	-0.0152
	R2404693-009	V (292.401 nm)	0.0000 u	> 100.00	-23.8700
	R2404693-009	Y (360.074 nm)	0.92	0.27	501547.75
	R2404693-009	Y_R (360.074 nm)	0.92	0.27	500177.48
	R2404693-009	Zn (213.857 nm)	0.0077	0.51	402.5566
6/4/2024 23:34:30	R2404693-010	Ag (328.068 nm)	0.0001 u	> 100.00	-239.6022

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404693-010	Al (237.312 nm)	0.2991	0.88	668.8206
	R2404693-010	As (188.980 nm)	0.0018 u	> 100.00	-6.5165
	R2404693-010	B (249.772 nm)	0.2269	0.14	6637.5574
	R2404693-010	Ba (230.424 nm)	0.0436	0.47	1680.4930
	R2404693-010	Be (313.107 nm)	0.0000	49.97	187.9209
	R2404693-010	Ca (317.933 nm)	89.2499 o	0.14	3097771.8836
	R2404693-010	Cd (214.439 nm)	0.0005	6.23	30.5759
	R2404693-010	Co (230.786 nm)	-0.0003 u	74.11	-43.0949
	R2404693-010	Cr (267.716 nm)	0.0011	9.73	157.7753
	R2404693-010	Cu (327.395 nm)	0.0022	4.84	124.5202
	R2404693-010	Fe (234.350 nm)	0.4224	0.13	7511.5817
	R2404693-010	K (766.491 nm)	3.0303	2.50	2872.8103
	R2404693-010	Mg (279.078 nm)	40.5865	0.11	119181.9621
	R2404693-010	Mn (257.610 nm)	0.0213	0.08	6478.6448
	R2404693-010	Mo (202.032 nm)	0.0083	1.52	19.3393
	R2404693-010	Na (588.995 nm)	26.8828	0.25	232724.3178
	R2404693-010	Ni (230.299 nm)	0.0010	27.56	68.1833
	R2404693-010	Pb (220.353 nm)	0.0007	23.88	7.9584
	R2404693-010	Sb (217.582 nm)	-0.0002 u	> 100.00	5.4314
	R2404693-010	Se (196.026 nm)	-0.0037 u	14.99	0.3090
	R2404693-010	Si (252.851 nm)	7.0424	0.06	22478.7114
	R2404693-010	Sn (189.925 nm)	0.0007 u	> 100.00	9.0570
	R2404693-010	Sr (216.596 nm)	45.3766 o	0.19	748051.2083
	R2404693-010	Ti (336.122 nm)	0.0052	6.46	765.5917
	R2404693-010	Tl (190.794 nm)	0.0025	49.26	-0.2249
	R2404693-010	V (292.401 nm)	0.0015	2.44	29.7880
	R2404693-010	Y (360.074 nm)	0.97	0.41	527006.89
	R2404693-010	Y_R (360.074 nm)	0.97	0.41	525460.68
	R2404693-010	Zn (213.857 nm)	0.0412	0.23	2260.1201
6/4/2024 23:37:43	R2404643-001 20X	Ag (328.068 nm)	-0.0001 u	> 100.00	-252.3324
	R2404643-001 20X	Al (237.312 nm)	0.0032	28.18	42.9341
	R2404643-001 20X	As (188.980 nm)	0.0018	35.12	-6.6069
	R2404643-001 20X	B (249.772 nm)	0.0027	5.49	122.5639
	R2404643-001 20X	Ba (230.424 nm)	0.0026	6.50	74.5115
	R2404643-001 20X	Be (313.107 nm)	0.0000 u	> 100.00	155.3995
	R2404643-001 20X	Ca (317.933 nm)	14.7530	0.22	514385.8348
	R2404643-001 20X	Cd (214.439 nm)	0.0001	55.13	7.6460
	R2404643-001 20X	Co (230.786 nm)	-0.0001 u	> 100.00	-40.6905
	R2404643-001 20X	Cr (267.716 nm)	0.0005	19.04	131.8700
	R2404643-001 20X	Cu (327.395 nm)	0.0002 u	> 100.00	44.9801
	R2404643-001 20X	Fe (234.350 nm)	0.0033	8.01	86.5597
	R2404643-001 20X	K (766.491 nm)	0.3085	12.81	43.8819
	R2404643-001 20X	Mg (279.078 nm)	1.8162	0.30	5279.6564
	R2404643-001 20X	Mn (257.610 nm)	0.0104	0.52	3164.3589
	R2404643-001 20X	Mo (202.032 nm)	0.0000 u	> 100.00	-21.3048
	R2404643-001 20X	Na (588.995 nm)	9.3602	0.48	76622.6403
	R2404643-001 20X	Ni (230.299 nm)	0.0010	90.03	67.8128
	R2404643-001 20X	Pb (220.353 nm)	-0.0001 u	> 100.00	4.1503
	R2404643-001 20X	Sb (217.582 nm)	0.0002	48.16	6.1261
	R2404643-001 20X	Se (196.026 nm)	0.0004 u	> 100.00	2.9478
	R2404643-001 20X	Si (252.851 nm)	0.3231	0.51	1024.3920
	R2404643-001 20X	Sn (189.925 nm)	0.0003 u	> 100.00	8.1646
	R2404643-001 20X	Sr (216.596 nm)	0.1264	0.38	2054.1390
	R2404643-001 20X	Ti (336.122 nm)	-0.0002 u	57.58	60.9318
	R2404643-001 20X	Tl (190.794 nm)	0.0008 u	> 100.00	-1.5643
	R2404643-001 20X	V (292.401 nm)	-0.0001 u	> 100.00	-27.4084
	R2404643-001 20X	Y (360.074 nm)	1.00	0.72	543857.61

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404643-001 20X	Y_R (360.074 nm)	1.00	0.71	542182.07
	R2404643-001 20X	Zn (213.857 nm)	0.0016	4.57	66.5750
6/4/2024 23:40:57	R2404643-002 20X	Ag (328.068 nm)	0.0001	> 100.00	-243.8466
	R2404643-002 20X	Al (237.312 nm)	0.0045	20.19	45.7418
	R2404643-002 20X	As (188.980 nm)	0.0013 u	> 100.00	-7.2187
	R2404643-002 20X	B (249.772 nm)	0.0041	5.43	164.2913
	R2404643-002 20X	Ba (230.424 nm)	0.0021	4.99	54.9210
	R2404643-002 20X	Be (313.107 nm)	0.0000	79.84	157.5505
	R2404643-002 20X	Ca (317.933 nm)	27.9041	0.35	970436.3916
	R2404643-002 20X	Cd (214.439 nm)	0.0000 u	> 100.00	4.9892
	R2404643-002 20X	Co (230.786 nm)	0.0001	24.79	-38.1438
	R2404643-002 20X	Cr (267.716 nm)	0.0005	13.88	133.4745
	R2404643-002 20X	Cu (327.395 nm)	0.0001 u	> 100.00	40.2531
	R2404643-002 20X	Fe (234.350 nm)	0.0970	0.57	1746.8518
	R2404643-002 20X	K (766.491 nm)	0.6146	0.29	362.0000
	R2404643-002 20X	Mg (279.078 nm)	3.6987	0.47	10810.2520
	R2404643-002 20X	Mn (257.610 nm)	0.0268	0.54	8121.5678
	R2404643-002 20X	Mo (202.032 nm)	0.0000 u	> 100.00	-21.0755
	R2404643-002 20X	Na (588.995 nm)	18.3362	0.68	156585.8550
	R2404643-002 20X	Ni (230.299 nm)	0.0007 u	98.11	64.9873
	R2404643-002 20X	Pb (220.353 nm)	0.0008	59.38	8.2070
	R2404643-002 20X	Sb (217.582 nm)	0.0011 u	> 100.00	7.7554
	R2404643-002 20X	Se (196.026 nm)	-0.0009 u	> 100.00	2.1008
	R2404643-002 20X	Si (252.851 nm)	0.3534	0.43	1120.9518
	R2404643-002 20X	Sn (189.925 nm)	0.0002 u	> 100.00	7.8170
	R2404643-002 20X	Sr (216.596 nm)	0.1892	0.32	3088.3316
	R2404643-002 20X	Ti (336.122 nm)	-0.0001 u	69.10	71.1700
	R2404643-002 20X	Tl (190.794 nm)	0.0010 u	> 100.00	-1.3867
	R2404643-002 20X	V (292.401 nm)	0.0000 u	> 100.00	-26.7057
	R2404643-002 20X	Y (360.074 nm)	1.00	0.49	540297.97
	R2404643-002 20X	Y_R (360.074 nm)	1.00	0.49	538630.30
	R2404643-002 20X	Zn (213.857 nm)	0.0002	27.97	-13.0875
6/4/2024 23:44:10	R2404643-002S 20X	Ag (328.068 nm)	0.0026	3.68	-112.6902
	R2404643-002S 20X	Al (237.312 nm)	0.1056	0.94	259.4908
	R2404643-002S 20X	As (188.980 nm)	0.0022	17.42	-6.0155
	R2404643-002S 20X	B (249.772 nm)	0.0560	1.89	1673.7818
	R2404643-002S 20X	Ba (230.424 nm)	0.1024	1.81	3984.9640
	R2404643-002S 20X	Be (313.107 nm)	0.0025	1.57	2686.0531
	R2404643-002S 20X	Ca (317.933 nm)	28.1853	1.89	980187.0545
	R2404643-002S 20X	Cd (214.439 nm)	0.0026	2.96	138.4045
	R2404643-002S 20X	Co (230.786 nm)	0.0250	3.46	319.6418
	R2404643-002S 20X	Cr (267.716 nm)	0.0101	1.99	523.7339
	R2404643-002S 20X	Cu (327.395 nm)	0.0128	3.01	537.4819
	R2404643-002S 20X	Fe (234.350 nm)	0.1479	1.80	2649.2268
	R2404643-002S 20X	K (766.491 nm)	1.6183	0.62	1405.2353
	R2404643-002S 20X	Mg (279.078 nm)	3.8335	1.96	11206.3842
	R2404643-002S 20X	Mn (257.610 nm)	0.0518	1.89	15697.3910
	R2404643-002S 20X	Mo (202.032 nm)	0.0236	3.91	93.9646
	R2404643-002S 20X	Na (588.995 nm)	19.4962	1.74	166919.7248
	R2404643-002S 20X	Ni (230.299 nm)	0.0270	2.16	345.9675
	R2404643-002S 20X	Pb (220.353 nm)	0.0259	3.87	128.1176
	R2404643-002S 20X	Sb (217.582 nm)	0.0266	7.41	53.6508
	R2404643-002S 20X	Se (196.026 nm)	0.0539	3.08	37.4102
	R2404643-002S 20X	Si (252.851 nm)	0.3619	2.09	1148.1086
	R2404643-002S 20X	Sn (189.925 nm)	0.2493	1.90	595.9600
	R2404643-002S 20X	Sr (216.596 nm)	0.2864	2.18	4690.6506
	R2404643-002S 20X	Ti (336.122 nm)	0.0245	1.90	3266.6760

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404643-002S 20X	Tl (190.794 nm)	0.1009	1.54	79.1561
	R2404643-002S 20X	V (292.401 nm)	0.0248	1.86	871.2595
	R2404643-002S 20X	Y (360.074 nm)	0.98	1.48	534164.16
	R2404643-002S 20X	Y_R (360.074 nm)	0.98	1.47	532492.73
	R2404643-002S 20X	Zn (213.857 nm)	0.0259	1.91	1412.4982
6/4/2024 23:47:24	R2404643-002SD 20X	Ag (328.068 nm)	0.0027	2.48	-107.6792
	R2404643-002SD 20X	Al (237.312 nm)	0.1043	1.89	256.8430
	R2404643-002SD 20X	As (188.980 nm)	0.0004 u	> 100.00	-8.4890
	R2404643-002SD 20X	B (249.772 nm)	0.0549	0.44	1640.9015
	R2404643-002SD 20X	Ba (230.424 nm)	0.1008	0.55	3921.2351
	R2404643-002SD 20X	Be (313.107 nm)	0.0024	0.10	2644.1470
	R2404643-002SD 20X	Ca (317.933 nm)	27.8756	0.31	969446.2483
	R2404643-002SD 20X	Cd (214.439 nm)	0.0026	2.74	135.5715
	R2404643-002SD 20X	Co (230.786 nm)	0.0247	0.95	314.4628
	R2404643-002SD 20X	Cr (267.716 nm)	0.0101	1.08	523.3435
	R2404643-002SD 20X	Cu (327.395 nm)	0.0127	2.29	531.3588
	R2404643-002SD 20X	Fe (234.350 nm)	0.1461	0.38	2616.5857
	R2404643-002SD 20X	K (766.491 nm)	1.5880	2.43	1373.6757
	R2404643-002SD 20X	Mg (279.078 nm)	3.7852	0.21	11064.3183
	R2404643-002SD 20X	Mn (257.610 nm)	0.0511	0.24	15471.2622
	R2404643-002SD 20X	Mo (202.032 nm)	0.0234	3.51	93.2760
	R2404643-002SD 20X	Na (588.995 nm)	19.2719	0.41	164921.9697
	R2404643-002SD 20X	Ni (230.299 nm)	0.0261	3.03	335.5801
	R2404643-002SD 20X	Pb (220.353 nm)	0.0263	3.62	129.8715
	R2404643-002SD 20X	Sb (217.582 nm)	0.0247	6.45	50.1410
	R2404643-002SD 20X	Se (196.026 nm)	0.0539	11.05	37.4145
	R2404643-002SD 20X	Si (252.851 nm)	0.3565	0.23	1131.1169
	R2404643-002SD 20X	Sn (189.925 nm)	0.2468	0.54	590.0477
	R2404643-002SD 20X	Sr (216.596 nm)	0.2828	0.43	4631.5225
	R2404643-002SD 20X	Ti (336.122 nm)	0.0244	0.57	3245.8078
	R2404643-002SD 20X	Tl (190.794 nm)	0.0999	1.16	78.3191
	R2404643-002SD 20X	V (292.401 nm)	0.0242	0.86	851.0853
	R2404643-002SD 20X	Y (360.074 nm)	0.99	0.59	537691.41
	R2404643-002SD 20X	Y_R (360.074 nm)	0.99	0.59	536077.35
	R2404643-002SD 20X	Zn (213.857 nm)	0.0256	0.08	1395.4793
6/4/2024 23:50:37	Continuing Calibration Verification1	Ag (328.068 nm)	0.4919	0.27	25186.1028
	Continuing Calibration Verification1	Al (237.312 nm)	9.7090	0.18	20568.7998
	Continuing Calibration Verification1	As (188.980 nm)	0.9639	0.66	1314.6993
	Continuing Calibration Verification1	B (249.772 nm)	2.4683	0.31	71765.5152
	Continuing Calibration Verification1	Ba (230.424 nm)	9.8531	0.28	386103.9955
	Continuing Calibration Verification1	Be (313.107 nm)	0.2362	0.36	241082.6728
	Continuing Calibration Verification1	Ca (317.933 nm)	25.3314	0.40	881219.3820
	Continuing Calibration Verification1	Cd (214.439 nm)	0.4834	0.39	24787.4732
	Continuing Calibration Verification1	Co (230.786 nm)	2.4346	0.05	34846.6613
	Continuing Calibration Verification1	Cr (267.716 nm)	0.4851	0.36	19863.9524
	Continuing Calibration Verification1	Cu (327.395 nm)	1.2081	0.35	47095.3098
	Continuing Calibration Verification1	Fe (234.350 nm)	4.8673	0.40	86260.5839
	Continuing Calibration Verification1	K (766.491 nm)	24.1423	0.26	24815.8181
	Continuing Calibration Verification1	Mg (279.078 nm)	24.7466	0.35	72646.2039
	Continuing Calibration Verification1	Mn (257.610 nm)	0.7206	0.42	218004.0875
	Continuing Calibration Verification1	Mo (202.032 nm)	2.5213	0.77	12305.4821
	Continuing Calibration Verification1	Na (588.995 nm)	25.1550	0.20	217331.9577
	Continuing Calibration Verification1	Ni (230.299 nm)	1.9987	0.37	21394.7901
	Continuing Calibration Verification1	Pb (220.353 nm)	0.4980	0.24	2383.0330
	Continuing Calibration Verification1	Sb (217.582 nm)	4.8905	0.18	8809.7005
	Continuing Calibration Verification1	Se (196.026 nm)	0.4833	0.32	313.8767
	Continuing Calibration Verification1	Si (252.851 nm)	9.7952	0.89	31268.1263

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Verification1	Sn (189.925 nm)	4.8443	0.40	11442.5005
	Continuing Calibration Verification1	Sr (216.596 nm)	2.4074	0.34	39658.7033
	Continuing Calibration Verification1	Ti (336.122 nm)	2.4853	0.30	322359.3490
	Continuing Calibration Verification1	Tl (190.794 nm)	0.9715	0.15	781.2917
	Continuing Calibration Verification1	V (292.401 nm)	2.4626	0.34	89065.9395
	Continuing Calibration Verification1	Y (360.074 nm)	0.98	0.34	534025.60
	Continuing Calibration Verification1	Y_R (360.074 nm)	0.98	0.34	532420.65
	Continuing Calibration Verification1	Zn (213.857 nm)	0.9525	0.37	52849.7367
6/4/2024 23:53:51	Continuing Calibration Blank1	Ag (328.068 nm)	0.0001 u	> 100.00	-241.8244
	Continuing Calibration Blank1	Al (237.312 nm)	0.0023	84.10	40.9818
	Continuing Calibration Blank1	As (188.980 nm)	-0.0001 u	> 100.00	-9.1919
	Continuing Calibration Blank1	B (249.772 nm)	0.0008	16.37	67.5864
	Continuing Calibration Blank1	Ba (230.424 nm)	0.0005	22.25	-7.9422
	Continuing Calibration Blank1	Be (313.107 nm)	0.0000 u	> 100.00	165.8137
	Continuing Calibration Blank1	Ca (317.933 nm)	0.0001 u	> 100.00	2785.3461
	Continuing Calibration Blank1	Cd (214.439 nm)	0.0001	67.35	7.4134
	Continuing Calibration Blank1	Co (230.786 nm)	0.0004	85.47	-33.8362
	Continuing Calibration Blank1	Cr (267.716 nm)	0.0001	86.03	117.5833
	Continuing Calibration Blank1	Cu (327.395 nm)	0.0002	38.56	46.7786
	Continuing Calibration Blank1	Fe (234.350 nm)	0.0014	44.85	52.8534
	Continuing Calibration Blank1	K (766.491 nm)	0.0087 u	> 100.00	-267.7120
	Continuing Calibration Blank1	Mg (279.078 nm)	0.0004 u	> 100.00	-54.8036
	Continuing Calibration Blank1	Mn (257.610 nm)	0.0000	22.21	29.9363
	Continuing Calibration Blank1	Mo (202.032 nm)	0.0042	12.50	-0.8587
	Continuing Calibration Blank1	Na (588.995 nm)	0.0482	3.65	-6334.5698
	Continuing Calibration Blank1	Ni (230.299 nm)	0.0003	88.78	60.6275
	Continuing Calibration Blank1	Pb (220.353 nm)	0.0007 u	> 100.00	7.8203
	Continuing Calibration Blank1	Sb (217.582 nm)	0.0055	7.56	15.7185
	Continuing Calibration Blank1	Se (196.026 nm)	-0.0012 u	> 100.00	1.9018
	Continuing Calibration Blank1	Si (252.851 nm)	0.0031	32.46	2.6466
	Continuing Calibration Blank1	Sn (189.925 nm)	0.0006 u	> 100.00	8.8429
	Continuing Calibration Blank1	Sr (216.596 nm)	0.0001	89.64	-29.3211
	Continuing Calibration Blank1	Ti (336.122 nm)	0.0021	54.07	360.1457
	Continuing Calibration Blank1	Tl (190.794 nm)	-0.0008 u	69.32	-2.8354
	Continuing Calibration Blank1	V (292.401 nm)	0.0003	82.22	-15.1357
	Continuing Calibration Blank1	Y (360.074 nm)	1.01	0.49	550209.86
	Continuing Calibration Blank1	Y_R (360.074 nm)	1.01	0.49	548478.77
	Continuing Calibration Blank1	Zn (213.857 nm)	0.0001	58.24	-17.5002
6/4/2024 23:57:05	R2404643-002A 20X	Ag (328.068 nm)	0.0484	0.18	2257.0312
	R2404643-002A 20X	Al (237.312 nm)	1.9520	0.12	4164.3913
	R2404643-002A 20X	As (188.980 nm)	0.0395	6.37	45.2531
	R2404643-002A 20X	B (249.772 nm)	1.0129	0.23	29478.5547
	R2404643-002A 20X	Ba (230.424 nm)	1.9080	0.08	74744.9534
	R2404643-002A 20X	Be (313.107 nm)	0.0477	0.15	48780.5386
	R2404643-002A 20X	Ca (317.933 nm)	28.9589	0.23	1007015.0062
	R2404643-002A 20X	Cd (214.439 nm)	0.0484	0.03	2486.1774
	R2404643-002A 20X	Co (230.786 nm)	0.4757	0.26	6776.8407
	R2404643-002A 20X	Cr (267.716 nm)	0.1878	0.29	7759.6617
	R2404643-002A 20X	Cu (327.395 nm)	0.2398	0.10	9379.0350
	R2404643-002A 20X	Fe (234.350 nm)	1.0607	0.15	18820.0757
	R2404643-002A 20X	K (766.491 nm)	19.5312	0.18	20023.1515
	R2404643-002A 20X	Mg (279.078 nm)	5.4823	0.10	16050.2948
	R2404643-002A 20X	Mn (257.610 nm)	0.4940	0.16	149447.2169
	R2404643-002A 20X	Mo (202.032 nm)	0.4756	0.59	2304.0517
	R2404643-002A 20X	Na (588.995 nm)	37.2430	0.35	325019.4232
	R2404643-002A 20X	Ni (230.299 nm)	0.4918	0.14	5307.6226
	R2404643-002A 20X	Pb (220.353 nm)	0.4958	0.22	2372.3826

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404643-002A 20X	Sb (217.582 nm)	0.5003	0.59	906.4491
	R2404643-002A 20X	Se (196.026 nm)	1.0707	0.27	692.0548
	R2404643-002A 20X	Si (252.851 nm)	0.3263	0.83	1034.6436
	R2404643-002A 20X	Sn (189.925 nm)	4.6755	0.19	11044.0012
	R2404643-002A 20X	Sr (216.596 nm)	2.0443	0.19	33671.9662
	R2404643-002A 20X	Ti (336.122 nm)	0.4750	0.09	61676.3822
	R2404643-002A 20X	Tl (190.794 nm)	1.9004	0.16	1530.4685
	R2404643-002A 20X	V (292.401 nm)	0.4732	0.24	17094.4688
	R2404643-002A 20X	Y (360.074 nm)	0.99	0.31	537043.21
	R2404643-002A 20X	Y_R (360.074 nm)	0.99	0.31	535543.76
	R2404643-002A 20X	Zn (213.857 nm)	0.4939	0.14	27392.3514
6/5/2024 00:00:19	R2404643-002L 100X	Ag (328.068 nm)	0.0000 u	> 100.00	-245.5242
	R2404643-002L 100X	Al (237.312 nm)	0.0027	94.35	41.8418
	R2404643-002L 100X	As (188.980 nm)	0.0010 u	> 100.00	-7.6200
	R2404643-002L 100X	B (249.772 nm)	0.0010	33.37	74.8662
	R2404643-002L 100X	Ba (230.424 nm)	0.0005	16.30	-6.9872
	R2404643-002L 100X	Be (313.107 nm)	0.0000	> 100.00	170.0508
	R2404643-002L 100X	Ca (317.933 nm)	5.7388	9.07	201791.2913
	R2404643-002L 100X	Cd (214.439 nm)	0.0000 u	> 100.00	5.2420
	R2404643-002L 100X	Co (230.786 nm)	0.0003	> 100.00	-34.7649
	R2404643-002L 100X	Cr (267.716 nm)	0.0004	75.19	126.5234
	R2404643-002L 100X	Cu (327.395 nm)	0.0001	36.76	42.0488
	R2404643-002L 100X	Fe (234.350 nm)	0.0212	7.14	404.2991
	R2404643-002L 100X	K (766.491 nm)	0.0833	39.72	-190.1760
	R2404643-002L 100X	Mg (279.078 nm)	0.7557	9.11	2164.2000
	R2404643-002L 100X	Mn (257.610 nm)	0.0056	9.18	1710.5689
	R2404643-002L 100X	Mo (202.032 nm)	0.0025	57.00	-8.8726
	R2404643-002L 100X	Na (588.995 nm)	3.6563	7.38	25808.2453
	R2404643-002L 100X	Ni (230.299 nm)	0.0003 u	> 100.00	60.8251
	R2404643-002L 100X	Pb (220.353 nm)	0.0008 u	> 100.00	8.4289
	R2404643-002L 100X	Sb (217.582 nm)	0.0034	22.03	11.8189
	R2404643-002L 100X	Se (196.026 nm)	0.0021	32.28	4.0393
	R2404643-002L 100X	Si (252.851 nm)	0.0910	7.67	283.1502
	R2404643-002L 100X	Sn (189.925 nm)	0.0019	15.64	11.8239
	R2404643-002L 100X	Sr (216.596 nm)	0.0385	8.35	604.5279
	R2404643-002L 100X	Ti (336.122 nm)	0.0007	60.88	180.8115
	R2404643-002L 100X	Tl (190.794 nm)	0.0007 u	> 100.00	-1.6680
	R2404643-002L 100X	V (292.401 nm)	-0.0001 u	70.63	-29.3118
	R2404643-002L 100X	Y (360.074 nm)	0.97	8.09	524839.19
	R2404643-002L 100X	Y_R (360.074 nm)	0.97	8.08	523296.66
	R2404643-002L 100X	Zn (213.857 nm)	0.0000 u	> 100.00	-25.3575
6/5/2024 00:03:32	Continuing Calibration Verification1	Ag (328.068 nm)	0.4897	0.23	25070.9324
	Continuing Calibration Verification1	Al (237.312 nm)	9.7064	0.16	20563.3301
	Continuing Calibration Verification1	As (188.980 nm)	0.9594	0.37	1308.5109
	Continuing Calibration Verification1	B (249.772 nm)	2.4583	0.26	71476.8219
	Continuing Calibration Verification1	Ba (230.424 nm)	9.8129	0.27	384530.3099
	Continuing Calibration Verification1	Be (313.107 nm)	0.2353	0.40	240122.9219
	Continuing Calibration Verification1	Ca (317.933 nm)	25.2102	0.44	877018.8775
	Continuing Calibration Verification1	Cd (214.439 nm)	0.4806	0.36	24640.7232
	Continuing Calibration Verification1	Co (230.786 nm)	2.4203	0.25	34641.2379
	Continuing Calibration Verification1	Cr (267.716 nm)	0.4837	0.41	19804.0299
	Continuing Calibration Verification1	Cu (327.395 nm)	1.2056	0.25	46998.3550
	Continuing Calibration Verification1	Fe (234.350 nm)	4.8502	0.33	85956.8730
	Continuing Calibration Verification1	K (766.491 nm)	24.1586	0.46	24832.7546
	Continuing Calibration Verification1	Mg (279.078 nm)	24.6168	0.35	72264.8477
	Continuing Calibration Verification1	Mn (257.610 nm)	0.7180	0.34	217215.6724
	Continuing Calibration Verification1	Mo (202.032 nm)	2.5144	0.57	12271.6521

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Verification1	Na (588.995 nm)	25.1298	0.44	217107.9085
	Continuing Calibration Verification1	Ni (230.299 nm)	1.9891	0.40	21292.2664
	Continuing Calibration Verification1	Pb (220.353 nm)	0.4972	0.19	2379.2270
	Continuing Calibration Verification1	Sb (217.582 nm)	4.8814	0.31	8793.3135
	Continuing Calibration Verification1	Se (196.026 nm)	0.4829	0.63	313.6075
	Continuing Calibration Verification1	Si (252.851 nm)	9.7699	0.64	31187.0987
	Continuing Calibration Verification1	Sn (189.925 nm)	4.8248	0.39	11396.3266
	Continuing Calibration Verification1	Sr (216.596 nm)	2.3941	0.37	39438.8400
	Continuing Calibration Verification1	Ti (336.122 nm)	2.4790	0.33	321536.4197
	Continuing Calibration Verification1	Tl (190.794 nm)	0.9667	0.39	777.4161
	Continuing Calibration Verification1	V (292.401 nm)	2.4532	0.35	88727.4893
	Continuing Calibration Verification1	Y (360.074 nm)	0.99	0.56	535733.24
	Continuing Calibration Verification1	Y_R (360.074 nm)	0.99	0.56	534165.31
	Continuing Calibration Verification1	Zn (213.857 nm)	0.9475	0.51	52574.3957
6/5/2024 00:06:46	Continuing Calibration Blank1	Ag (328.068 nm)	0.0001	22.71	-239.3081
	Continuing Calibration Blank1	Al (237.312 nm)	0.0024	51.97	41.2628
	Continuing Calibration Blank1	As (188.980 nm)	0.0001 u	> 100.00	-8.9431
	Continuing Calibration Blank1	B (249.772 nm)	0.0010	19.12	74.1016
	Continuing Calibration Blank1	Ba (230.424 nm)	0.0005	28.42	-7.3543
	Continuing Calibration Blank1	Be (313.107 nm)	0.0000 u	> 100.00	159.3389
	Continuing Calibration Blank1	Ca (317.933 nm)	0.0002	86.89	2791.2830
	Continuing Calibration Blank1	Cd (214.439 nm)	0.0001	45.70	7.2709
	Continuing Calibration Blank1	Co (230.786 nm)	0.0003	66.46	-34.5583
	Continuing Calibration Blank1	Cr (267.716 nm)	0.0001	18.60	117.8646
	Continuing Calibration Blank1	Cu (327.395 nm)	0.0002 u	> 100.00	44.6114
	Continuing Calibration Blank1	Fe (234.350 nm)	0.0014	53.18	53.1107
	Continuing Calibration Blank1	K (766.491 nm)	0.0018 u	> 100.00	-274.9437
	Continuing Calibration Blank1	Mg (279.078 nm)	0.0002 u	> 100.00	-55.5533
	Continuing Calibration Blank1	Mn (257.610 nm)	0.0000	50.20	31.9160
	Continuing Calibration Blank1	Mo (202.032 nm)	0.0044	31.12	0.3822
	Continuing Calibration Blank1	Na (588.995 nm)	0.0514	4.85	-6305.8329
	Continuing Calibration Blank1	Ni (230.299 nm)	0.0003	88.87	60.9916
	Continuing Calibration Blank1	Pb (220.353 nm)	0.0006 u	> 100.00	7.1739
	Continuing Calibration Blank1	Sb (217.582 nm)	0.0056	19.60	15.9091
	Continuing Calibration Blank1	Se (196.026 nm)	-0.0003 u	> 100.00	2.5041
	Continuing Calibration Blank1	Si (252.851 nm)	0.0037	26.32	4.6395
	Continuing Calibration Blank1	Sn (189.925 nm)	0.0008	79.95	9.1951
	Continuing Calibration Blank1	Sr (216.596 nm)	0.0002	47.99	-26.5081
	Continuing Calibration Blank1	Ti (336.122 nm)	0.0021	55.07	357.7003
	Continuing Calibration Blank1	Tl (190.794 nm)	0.0006 u	> 100.00	-1.7564
	Continuing Calibration Blank1	V (292.401 nm)	0.0001	76.55	-21.8560
	Continuing Calibration Blank1	Y (360.074 nm)	1.02	0.56	551669.58
	Continuing Calibration Blank1	Y_R (360.074 nm)	1.02	0.55	550099.20
	Continuing Calibration Blank1	Zn (213.857 nm)	0.0002	19.63	-15.1476
6/5/2024 00:10:00	Contract Required Detection Limit	Ag (328.068 nm)	0.0089	1.81	210.7930
	Contract Required Detection Limit	Al (237.312 nm)	0.1955	1.47	449.7266
	Contract Required Detection Limit	As (188.980 nm)	0.0200	6.65	18.3583
	Contract Required Detection Limit	B (249.772 nm)	0.1942	2.12	5687.0527
	Contract Required Detection Limit	Ba (230.424 nm)	0.2006	2.07	7833.9380
	Contract Required Detection Limit	Be (313.107 nm)	0.0048	1.66	5090.9271
	Contract Required Detection Limit	Ca (317.933 nm)	1.0406	1.91	38868.1484
	Contract Required Detection Limit	Cd (214.439 nm)	0.0103	2.83	529.8969
	Contract Required Detection Limit	Co (230.786 nm)	0.0501	1.67	679.3635
	Contract Required Detection Limit	Cr (267.716 nm)	0.0093	0.56	490.8853
	Contract Required Detection Limit	Cu (327.395 nm)	0.0246	1.43	997.2866
	Contract Required Detection Limit	Fe (234.350 nm)	0.1045	2.07	1880.4789
	Contract Required Detection Limit	K (766.491 nm)	0.9687	3.07	730.0661

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Contract Required Detection Limit	Mg (279.078 nm)	0.9928	1.89	2860.5495
	Contract Required Detection Limit	Mn (257.610 nm)	0.0137	2.03	4175.2823
	Contract Required Detection Limit	Mo (202.032 nm)	0.0253	2.80	102.3745
	Contract Required Detection Limit	Na (588.995 nm)	1.0161	0.76	2287.6003
	Contract Required Detection Limit	Ni (230.299 nm)	0.0360	2.96	441.2861
	Contract Required Detection Limit	Pb (220.353 nm)	0.0098	5.97	51.1426
	Contract Required Detection Limit	Sb (217.582 nm)	0.0615	4.75	116.4830
	Contract Required Detection Limit	Se (196.026 nm)	0.0085	38.17	8.1850
	Contract Required Detection Limit	Si (252.851 nm)	0.0544	3.37	166.3100
	Contract Required Detection Limit	Sn (189.925 nm)	0.4901	2.23	1164.1907
	Contract Required Detection Limit	Sr (216.596 nm)	0.0973	1.89	1574.3708
	Contract Required Detection Limit	Ti (336.122 nm)	0.0491	2.45	6452.0583
	Contract Required Detection Limit	Tl (190.794 nm)	0.0219	8.89	15.3999
	Contract Required Detection Limit	V (292.401 nm)	0.0489	2.04	1745.0220
	Contract Required Detection Limit	Y (360.074 nm)	1.01	1.50	546351.89
	Contract Required Detection Limit	Y_R (360.074 nm)	1.01	1.50	544715.88
	Contract Required Detection Limit	Zn (213.857 nm)	0.0174	2.32	943.8304
6/5/2024 00:13:14	Interference Check Solution A	Ag (328.068 nm)	-0.0001 u	> 100.00	-249.5875
	Interference Check Solution A	Al (237.312 nm)	246.1681 o	0.27	520630.2571
	Interference Check Solution A	As (188.980 nm)	-0.0033 u	> 100.00	-13.5350
	Interference Check Solution A	B (249.772 nm)	0.1030	0.58	3039.7240
	Interference Check Solution A	Ba (230.424 nm)	0.0003	32.43	-15.5895
	Interference Check Solution A	Be (313.107 nm)	0.0002	1.00	327.3133
	Interference Check Solution A	Ca (317.933 nm)	230.6323 o	0.45	8000598.8133
	Interference Check Solution A	Cd (214.439 nm)	-0.0006 u	12.53	-27.7021
	Interference Check Solution A	Co (230.786 nm)	-0.0006 u	47.36	-47.2881
	Interference Check Solution A	Cr (267.716 nm)	0.0042	4.44	281.2798
	Interference Check Solution A	Cu (327.395 nm)	0.0083	3.24	359.1725
	Interference Check Solution A	Fe (234.350 nm)	89.8533 o	0.43	1591918.8790
	Interference Check Solution A	K (766.491 nm)	-0.0284 u	> 100.00	-306.3352
	Interference Check Solution A	Mg (279.078 nm)	251.8204 o	0.36	739760.2518
	Interference Check Solution A	Mn (257.610 nm)	0.0010	1.17	338.8773
	Interference Check Solution A	Mo (202.032 nm)	-0.0060 u	4.80	-50.6897
	Interference Check Solution A	Na (588.995 nm)	0.0198	5.58	-6587.7485
	Interference Check Solution A	Ni (230.299 nm)	0.0042	4.37	102.7629
	Interference Check Solution A	Pb (220.353 nm)	0.0015	64.32	11.5773
	Interference Check Solution A	Sb (217.582 nm)	-0.0016 u	> 100.00	2.7782
	Interference Check Solution A	Se (196.026 nm)	-0.0041 u	74.98	0.0255
	Interference Check Solution A	Si (252.851 nm)	0.0447	2.08	135.2678
	Interference Check Solution A	Sn (189.925 nm)	0.0019	49.16	11.7778
	Interference Check Solution A	Sr (216.596 nm)	0.0094	3.56	125.0410
	Interference Check Solution A	Ti (336.122 nm)	0.0018	15.08	320.8428
	Interference Check Solution A	Tl (190.794 nm)	0.0007 u	> 100.00	-1.6578
	Interference Check Solution A	V (292.401 nm)	0.0020	6.85	47.2576
	Interference Check Solution A	Y (360.074 nm)	0.92	0.34	497451.75
	Interference Check Solution A	Y_R (360.074 nm)	0.92	0.34	496144.81
	Interference Check Solution A	Zn (213.857 nm)	0.0117 K	1.00	626.9106 K
6/5/2024 00:16:28	Interference Check Solution AB	Ag (328.068 nm)	0.0001 G	37.96	-239.1941 G
Wrong cup	Interference Check Solution AB	Al (237.312 nm)	245.6127 o	0.13	519455.7728
	Interference Check Solution AB	As (188.980 nm)	-0.0021 Gu	93.34	-11.9108 G
	Interference Check Solution AB	B (249.772 nm)	0.1016	0.18	2998.5883
	Interference Check Solution AB	Ba (230.424 nm)	0.0001 Gu	> 100.00	-22.0163 G
	Interference Check Solution AB	Be (313.107 nm)	0.0002 G	3.03	339.8608 G
	Interference Check Solution AB	Ca (317.933 nm)	230.0102 o	0.14	7979025.4809
	Interference Check Solution AB	Cd (214.439 nm)	-0.0006 Gu	12.58	-27.4504 G
	Interference Check Solution AB	Co (230.786 nm)	-0.0005 Gu	60.82	-46.1261 G
	Interference Check Solution AB	Cr (267.716 nm)	0.0041 G	5.81	279.4622 G

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Interference Check Solution AB	Cu (327.395 nm)	0.0082 G	2.17	354.7909 G
	Interference Check Solution AB	Fe (234.350 nm)	89.5802 o	0.15	1587080.3648
	Interference Check Solution AB	K (766.491 nm)	-0.0106 u	> 100.00	-287.7747
	Interference Check Solution AB	Mg (279.078 nm)	250.9314 o	0.12	737148.5411
	Interference Check Solution AB	Mn (257.610 nm)	0.0010 G	1.02	333.9307 G
	Interference Check Solution AB	Mo (202.032 nm)	-0.0058 u	12.94	-49.4579
	Interference Check Solution AB	Na (588.995 nm)	0.0225	3.78	-6563.4605
	Interference Check Solution AB	Ni (230.299 nm)	0.0039 G	4.49	99.5719 G
	Interference Check Solution AB	Pb (220.353 nm)	0.0001 Gu	> 100.00	4.9629 G
	Interference Check Solution AB	Sb (217.582 nm)	-0.0057 Gu	28.31	-4.4477 G
	Interference Check Solution AB	Se (196.026 nm)	-0.0046 Gu	20.23	-0.2702 G
	Interference Check Solution AB	Si (252.851 nm)	0.0451	6.14	136.5601
	Interference Check Solution AB	Sn (189.925 nm)	0.0023	9.91	12.7571
	Interference Check Solution AB	Sr (216.596 nm)	0.0095	2.65	126.8847
	Interference Check Solution AB	Ti (336.122 nm)	0.0016	14.42	294.2262
	Interference Check Solution AB	Tl (190.794 nm)	0.0036 G	> 100.00	0.6707 G
	Interference Check Solution AB	V (292.401 nm)	0.0020 G	5.09	46.5593 G
	Interference Check Solution AB	Y (360.074 nm)	0.92	0.59	499780.40
	Interference Check Solution AB	Y_R (360.074 nm)	0.92	0.59	498504.03
	Interference Check Solution AB	Zn (213.857 nm)	0.0116 G	0.38	618.8791 G
6/5/2024 00:19:41	Continuing Calibration Verification1	Ag (328.068 nm)	0.4874	0.29	24951.8608
	Continuing Calibration Verification1	Al (237.312 nm)	9.7143	0.36	20579.9429
	Continuing Calibration Verification1	As (188.980 nm)	0.9549	0.57	1302.3196
	Continuing Calibration Verification1	B (249.772 nm)	2.4473	0.38	71155.6763
	Continuing Calibration Verification1	Ba (230.424 nm)	9.8091	0.53	384379.4489
	Continuing Calibration Verification1	Be (313.107 nm)	0.2345	0.48	239375.7254
	Continuing Calibration Verification1	Ca (317.933 nm)	25.1749	0.46	875794.0974
	Continuing Calibration Verification1	Cd (214.439 nm)	0.4789	0.50	24554.2400
	Continuing Calibration Verification1	Co (230.786 nm)	2.4251	0.63	34710.6053
	Continuing Calibration Verification1	Cr (267.716 nm)	0.4822	0.46	19746.1778
	Continuing Calibration Verification1	Cu (327.395 nm)	1.1986	0.39	46725.1209
	Continuing Calibration Verification1	Fe (234.350 nm)	4.8638	0.47	86198.4528
	Continuing Calibration Verification1	K (766.491 nm)	23.9538	0.29	24619.8648
	Continuing Calibration Verification1	Mg (279.078 nm)	24.5665	0.45	72117.2695
	Continuing Calibration Verification1	Mn (257.610 nm)	0.7158	0.46	216551.2953
	Continuing Calibration Verification1	Mo (202.032 nm)	2.5099	0.65	12249.7564
	Continuing Calibration Verification1	Na (588.995 nm)	24.9350	0.14	215372.4680
	Continuing Calibration Verification1	Ni (230.299 nm)	1.9844	0.54	21242.4735
	Continuing Calibration Verification1	Pb (220.353 nm)	0.4949	0.41	2368.2028
	Continuing Calibration Verification1	Sb (217.582 nm)	4.8530	0.42	8742.1205
	Continuing Calibration Verification1	Se (196.026 nm)	0.4814	0.63	312.6226
	Continuing Calibration Verification1	Si (252.851 nm)	9.7071	0.88	30986.8983
	Continuing Calibration Verification1	Sn (189.925 nm)	4.8060	0.37	11351.8939
	Continuing Calibration Verification1	Sr (216.596 nm)	2.4019	0.45	39567.1868
	Continuing Calibration Verification1	Ti (336.122 nm)	2.4707	0.35	320463.3193
	Continuing Calibration Verification1	Tl (190.794 nm)	0.9622	0.27	773.8048
	Continuing Calibration Verification1	V (292.401 nm)	2.4458	0.43	88458.9726
	Continuing Calibration Verification1	Y (360.074 nm)	0.99	0.09	538997.92
	Continuing Calibration Verification1	Y_R (360.074 nm)	0.99	0.09	537530.91
	Continuing Calibration Verification1	Zn (213.857 nm)	0.9494	0.29	52680.9550
6/5/2024 00:22:55	Continuing Calibration Blank1	Ag (328.068 nm)	0.0003	28.02	-232.1704
	Continuing Calibration Blank1	Al (237.312 nm)	0.0004 u	> 100.00	37.1429
	Continuing Calibration Blank1	As (188.980 nm)	0.0020	> 100.00	-6.2940
	Continuing Calibration Blank1	B (249.772 nm)	0.0010	30.72	74.2627
	Continuing Calibration Blank1	Ba (230.424 nm)	0.0006	11.92	-3.5245
	Continuing Calibration Blank1	Be (313.107 nm)	0.0000	36.35	174.5394
	Continuing Calibration Blank1	Ca (317.933 nm)	0.0017	17.48	2840.8260

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Blank1	Cd (214.439 nm)	0.0001	> 100.00	6.7149
	Continuing Calibration Blank1	Co (230.786 nm)	0.0001 u	> 100.00	-37.8115
	Continuing Calibration Blank1	Cr (267.716 nm)	0.0003	27.20	122.6010
	Continuing Calibration Blank1	Cu (327.395 nm)	0.0001 u	> 100.00	40.0675
	Continuing Calibration Blank1	Fe (234.350 nm)	0.0024	37.41	72.1320
	Continuing Calibration Blank1	K (766.491 nm)	0.0400	79.84	-235.2666
	Continuing Calibration Blank1	Mg (279.078 nm)	0.0016	68.13	-51.2259
	Continuing Calibration Blank1	Mn (257.610 nm)	0.0000	49.50	36.0566
	Continuing Calibration Blank1	Mo (202.032 nm)	0.0042	10.76	-0.5519
	Continuing Calibration Blank1	Na (588.995 nm)	0.0516	12.38	-6304.3303
	Continuing Calibration Blank1	Ni (230.299 nm)	0.0005	45.88	63.2254
	Continuing Calibration Blank1	Pb (220.353 nm)	0.0000 u	> 100.00	4.5643
	Continuing Calibration Blank1	Sb (217.582 nm)	0.0053	24.90	15.2996
	Continuing Calibration Blank1	Se (196.026 nm)	-0.0002 u	> 100.00	2.5650
	Continuing Calibration Blank1	Si (252.851 nm)	0.0016 u	> 100.00	-2.1142
	Continuing Calibration Blank1	Sn (189.925 nm)	0.0010	29.51	9.7917
	Continuing Calibration Blank1	Sr (216.596 nm)	0.0002 u	> 100.00	-27.8525
	Continuing Calibration Blank1	Ti (336.122 nm)	0.0020	52.91	349.9321
	Continuing Calibration Blank1	Tl (190.794 nm)	-0.0001 u	> 100.00	-2.3149
	Continuing Calibration Blank1	V (292.401 nm)	0.0001 u	> 100.00	-22.6188
	Continuing Calibration Blank1	Y (360.074 nm)	1.02	0.41	555323.62
	Continuing Calibration Blank1	Y_R (360.074 nm)	1.02	0.41	553779.80
	Continuing Calibration Blank1	Zn (213.857 nm)	0.0001	27.50	-17.0155
6/5/2024 00:26:09	PBW-439400	Ag (328.068 nm)	0.0002	18.27	-238.6769
	PBW-439400	Al (237.312 nm)	0.0032	23.29	42.8960
	PBW-439400	As (188.980 nm)	0.0005	31.15	-8.3018
	PBW-439400	B (249.772 nm)	0.0018	3.70	99.1977
	PBW-439400	Ba (230.424 nm)	0.0001	44.92	-23.1029
	PBW-439400	Be (313.107 nm)	0.0000 u	67.95	142.9619
	PBW-439400	Ca (317.933 nm)	0.0049	2.22	2953.1901
	PBW-439400	Cd (214.439 nm)	0.0002	9.22	13.1901
	PBW-439400	Co (230.786 nm)	0.0003	67.01	-34.9063
	PBW-439400	Cr (267.716 nm)	0.0003	5.59	122.8776
	PBW-439400	Cu (327.395 nm)	0.0001 u	> 100.00	40.7396
	PBW-439400	Fe (234.350 nm)	0.0035	22.01	91.4011
	PBW-439400	K (766.491 nm)	-0.0041 u	> 100.00	-281.0410
	PBW-439400	Mg (279.078 nm)	0.0035	19.75	-45.6489
	PBW-439400	Mn (257.610 nm)	0.0000	86.05	31.1337
	PBW-439400	Mo (202.032 nm)	0.0011	36.79	-15.9572
	PBW-439400	Na (588.995 nm)	0.0614	3.06	-6216.8895
	PBW-439400	Ni (230.299 nm)	-0.0002 u	> 100.00	55.0037
	PBW-439400	Pb (220.353 nm)	0.0000 u	> 100.00	4.7030
	PBW-439400	Sb (217.582 nm)	0.0108	8.67	25.1153
	PBW-439400	Se (196.026 nm)	0.0003 u	> 100.00	2.8493
	PBW-439400	Si (252.851 nm)	0.0128	15.18	33.6401
	PBW-439400	Sn (189.925 nm)	0.0011	38.51	10.0719
	PBW-439400	Sr (216.596 nm)	0.0000 u	> 100.00	-29.8898
	PBW-439400	Ti (336.122 nm)	0.0001 u	> 100.00	102.7060
	PBW-439400	Tl (190.794 nm)	-0.0004 u	> 100.00	-2.5455
	PBW-439400	V (292.401 nm)	0.0001 u	> 100.00	-21.4986
	PBW-439400	Y (360.074 nm)	1.03	0.54	559649.57
	PBW-439400	Y_R (360.074 nm)	1.03	0.54	558087.39
	PBW-439400	Zn (213.857 nm)	-0.0001 u	94.49	-30.4137
6/5/2024 00:29:23	FBLK-439400	Ag (328.068 nm)	0.0002 u	96.64	-234.4734
	FBLK-439400	Al (237.312 nm)	0.0014 u	> 100.00	39.1228
	FBLK-439400	As (188.980 nm)	0.0007 u	> 100.00	-8.0847
	FBLK-439400	B (249.772 nm)	0.0015	13.23	89.3814

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	FBLK-439400	Ba (230.424 nm)	-0.0001 u	> 100.00	-29.6878
	FBLK-439400	Be (313.107 nm)	0.0000 u	58.83	139.0668
	FBLK-439400	Ca (317.933 nm)	0.0070	2.24	3026.5032
	FBLK-439400	Cd (214.439 nm)	0.0002	58.46	15.3552
	FBLK-439400	Co (230.786 nm)	0.0001	79.51	-37.7644
	FBLK-439400	Cr (267.716 nm)	0.0004	8.28	128.9886
	FBLK-439400	Cu (327.395 nm)	0.0008	45.69	70.2639
	FBLK-439400	Fe (234.350 nm)	0.0056	8.21	128.5786
	FBLK-439400	K (766.491 nm)	0.0193 u	> 100.00	-256.7141
	FBLK-439400	Mg (279.078 nm)	0.0020	> 100.00	-50.2724
	FBLK-439400	Mn (257.610 nm)	0.0001	5.62	54.9504
	FBLK-439400	Mo (202.032 nm)	0.0005	91.37	-18.9006
	FBLK-439400	Na (588.995 nm)	0.0841	4.09	-6014.9812
	FBLK-439400	Ni (230.299 nm)	-0.0002 u	> 100.00	55.0358
	FBLK-439400	Pb (220.353 nm)	0.0010	53.93	9.3153
	FBLK-439400	Sb (217.582 nm)	0.0083	13.12	20.7233
	FBLK-439400	Se (196.026 nm)	0.0012 u	> 100.00	3.4764
	FBLK-439400	Si (252.851 nm)	0.0097	22.61	23.5125
	FBLK-439400	Sn (189.925 nm)	0.0014	17.14	10.6622
	FBLK-439400	Sr (216.596 nm)	0.0000 u	> 100.00	-30.3814
	FBLK-439400	Ti (336.122 nm)	-0.0003 u	96.43	47.0955
	FBLK-439400	Tl (190.794 nm)	0.0001 u	> 100.00	-2.1156
	FBLK-439400	V (292.401 nm)	0.0001 u	> 100.00	-23.0983
	FBLK-439400	Y (360.074 nm)	1.03	0.53	560589.10
	FBLK-439400	Y_R (360.074 nm)	1.03	0.53	559014.51
	FBLK-439400	Zn (213.857 nm)	0.0001	51.63	-16.6852
6/5/2024 00:32:37	LCSW-439400	Ag (328.068 nm)	0.0469	0.18	2179.8538
	LCSW-439400	Al (237.312 nm)	1.8834	0.05	4019.1727
	LCSW-439400	As (188.980 nm)	0.0363	4.14	40.7526
	LCSW-439400	B (249.772 nm)	0.9437	0.14	27466.6445
	LCSW-439400	Ba (230.424 nm)	1.8871	0.27	73928.1217
	LCSW-439400	Be (313.107 nm)	0.0455	0.14	46533.5217
	LCSW-439400	Ca (317.933 nm)	1.9193	0.16	69341.4315
	LCSW-439400	Cd (214.439 nm)	0.0471	0.28	2419.8434
	LCSW-439400	Co (230.786 nm)	0.4685	0.13	6674.6225
	LCSW-439400	Cr (267.716 nm)	0.1837	0.25	7592.3058
	LCSW-439400	Cu (327.395 nm)	0.2356	0.09	9215.1380
	LCSW-439400	Fe (234.350 nm)	0.9510	0.13	16877.6052
	LCSW-439400	K (766.491 nm)	18.1115	0.22	18547.6618
	LCSW-439400	Mg (279.078 nm)	1.8407	0.23	5351.6955
	LCSW-439400	Mn (257.610 nm)	0.4563	0.16	138065.0150
	LCSW-439400	Mo (202.032 nm)	0.4637	0.48	2245.7716
	LCSW-439400	Na (588.995 nm)	18.7922	0.23	160648.0963
	LCSW-439400	Ni (230.299 nm)	0.4811	0.22	5193.9866
	LCSW-439400	Pb (220.353 nm)	0.4898	0.25	2343.6469
	LCSW-439400	Sb (217.582 nm)	0.4742	0.60	859.4914
	LCSW-439400	Se (196.026 nm)	0.9437	0.41	610.2492
	LCSW-439400	Si (252.851 nm)	-0.0289 u	2.52	-99.6680
	LCSW-439400	Sn (189.925 nm)	4.5606	0.17	10772.7883
	LCSW-439400	Sr (216.596 nm)	1.8388	0.19	30284.7419
	LCSW-439400	Ti (336.122 nm)	0.4665	0.06	60583.0008
	LCSW-439400	Tl (190.794 nm)	1.8460	0.31	1486.5538
	LCSW-439400	V (292.401 nm)	0.4614	0.12	16667.2654
	LCSW-439400	Y (360.074 nm)	1.01	0.41	550429.83
	LCSW-439400	Y_R (360.074 nm)	1.01	0.42	548958.34
	LCSW-439400	Zn (213.857 nm)	0.4672	0.21	25910.3569
6/5/2024 00:35:51	DLCSW-439400	Ag (328.068 nm)	0.0482	0.08	2242.8979

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	DLCSW-439400	Al (237.312 nm)	1.9453	0.15	4150.1308
	DLCSW-439400	As (188.980 nm)	0.0349	1.84	38.8402
	DLCSW-439400	B (249.772 nm)	0.9741	0.04	28348.4506
	DLCSW-439400	Ba (230.424 nm)	1.9390	0.16	75960.5475
	DLCSW-439400	Be (313.107 nm)	0.0469	0.11	48013.6136
	DLCSW-439400	Ca (317.933 nm)	1.9811	0.14	71483.2142
	DLCSW-439400	Cd (214.439 nm)	0.0486	0.20	2497.1061
	DLCSW-439400	Co (230.786 nm)	0.4830	0.04	6881.8816
	DLCSW-439400	Cr (267.716 nm)	0.1893	0.08	7820.9026
	DLCSW-439400	Cu (327.395 nm)	0.2433	0.07	9515.0636
	DLCSW-439400	Fe (234.350 nm)	0.9775	0.11	17346.4275
	DLCSW-439400	K (766.491 nm)	18.7158	0.20	19175.7475
	DLCSW-439400	Mg (279.078 nm)	1.8960	0.13	5514.2078
	DLCSW-439400	Mn (257.610 nm)	0.4707	0.13	142423.3531
	DLCSW-439400	Mo (202.032 nm)	0.4778	0.28	2314.6084
	DLCSW-439400	Na (588.995 nm)	19.4061	0.24	166117.3850
	DLCSW-439400	Ni (230.299 nm)	0.4970	0.14	5363.2923
	DLCSW-439400	Pb (220.353 nm)	0.5050	0.01	2416.4170
	DLCSW-439400	Sb (217.582 nm)	0.4893	0.20	886.5838
	DLCSW-439400	Se (196.026 nm)	0.9683	0.22	626.1369
	DLCSW-439400	Si (252.851 nm)	-0.0318 u	4.26	-108.8129
	DLCSW-439400	Sn (189.925 nm)	4.6685	0.07	11027.3657
	DLCSW-439400	Sr (216.596 nm)	1.8847	0.11	31040.2545
	DLCSW-439400	Ti (336.122 nm)	0.4793	0.03	62234.9183
	DLCSW-439400	Tl (190.794 nm)	1.9041	0.37	1533.4468
	DLCSW-439400	V (292.401 nm)	0.4764	0.12	17210.4821
	DLCSW-439400	Y (360.074 nm)	1.02	0.50	551029.17
	DLCSW-439400	Y_R (360.074 nm)	1.02	0.50	549554.60
	DLCSW-439400	Zn (213.857 nm)	0.4818	0.10	26720.7968
6/5/2024 00:39:05	R2404656-001	Ag (328.068 nm)	0.0000 u	> 100.00	-246.9524
	R2404656-001	Al (237.312 nm)	0.1956	0.72	449.8184
	R2404656-001	As (188.980 nm)	0.0003 u	> 100.00	-8.6898
	R2404656-001	B (249.772 nm)	0.0254	0.90	782.2690
	R2404656-001	Ba (230.424 nm)	0.0263	0.41	1003.8270
	R2404656-001	Be (313.107 nm)	0.0000	12.87	171.6974
	R2404656-001	Ca (317.933 nm)	48.4557	0.11	1683120.9486
	R2404656-001	Cd (214.439 nm)	0.0002	36.78	16.1292
	R2404656-001	Co (230.786 nm)	0.0002 u	91.47	-36.2451
	R2404656-001	Cr (267.716 nm)	0.0016	4.79	177.0751
	R2404656-001	Cu (327.395 nm)	0.0011	22.63	80.9563
	R2404656-001	Fe (234.350 nm)	0.2093	0.22	3736.8244
	R2404656-001	K (766.491 nm)	4.5454	0.94	4447.5579
	R2404656-001	Mg (279.078 nm)	10.1795	0.08	29850.1657
	R2404656-001	Mn (257.610 nm)	0.0798	0.05	24171.8245
	R2404656-001	Mo (202.032 nm)	0.0040	16.62	-1.6734
	R2404656-001	Na (588.995 nm)	3.2996	0.46	22630.6148
	R2404656-001	Ni (230.299 nm)	0.0003 u	> 100.00	60.4441
	R2404656-001	Pb (220.353 nm)	0.0009 u	92.00	8.9510
	R2404656-001	Sb (217.582 nm)	0.0033	64.35	11.6543
	R2404656-001	Se (196.026 nm)	0.0023	54.11	4.1452
	R2404656-001	Si (252.851 nm)	5.4687	0.18	17453.7587
	R2404656-001	Sn (189.925 nm)	0.0021	27.75	12.2402
	R2404656-001	Sr (216.596 nm)	0.1714	0.38	2794.8464
	R2404656-001	Ti (336.122 nm)	0.0032	18.55	497.0810
	R2404656-001	Tl (190.794 nm)	0.0011 u	> 100.00	-1.3645
	R2404656-001	V (292.401 nm)	0.0004	29.18	-10.0656
	R2404656-001	Y (360.074 nm)	1.01	0.43	547528.22

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404656-001	Y_R (360.074 nm)	1.01	0.43	546090.33
	R2404656-001	Zn (213.857 nm)	0.0029	2.29	133.8519
6/5/2024 00:42:19	R2404656-002	Ag (328.068 nm)	0.0002	88.64	-239.0545
	R2404656-002	Al (237.312 nm)	0.0927	2.32	232.3109
	R2404656-002	As (188.980 nm)	0.0008	43.48	-7.9841
	R2404656-002	B (249.772 nm)	0.0174	0.55	552.2833
	R2404656-002	Ba (230.424 nm)	0.0334	0.36	1282.1178
	R2404656-002	Be (313.107 nm)	0.0000	28.94	169.1640
	R2404656-002	Ca (317.933 nm)	69.1352 o	0.31	2400240.1835
	R2404656-002	Cd (214.439 nm)	0.0002	46.38	16.2561
	R2404656-002	Co (230.786 nm)	0.0003 u	> 100.00	-34.9305
	R2404656-002	Cr (267.716 nm)	0.0009	9.21	147.7569
	R2404656-002	Cu (327.395 nm)	0.0014	15.92	91.9377
	R2404656-002	Fe (234.350 nm)	0.1263	0.28	2265.9584
	R2404656-002	K (766.491 nm)	0.9684	0.53	729.6843
	R2404656-002	Mg (279.078 nm)	10.9315	0.24	32059.1837
	R2404656-002	Mn (257.610 nm)	0.0125	0.47	3800.9039
	R2404656-002	Mo (202.032 nm)	0.0014	27.37	-14.5943
	R2404656-002	Na (588.995 nm)	11.0609	0.26	91773.0821
	R2404656-002	Ni (230.299 nm)	-0.0002 u	> 100.00	54.8985
	R2404656-002	Pb (220.353 nm)	0.0010	84.79	9.4601
	R2404656-002	Sb (217.582 nm)	0.0020	70.76	9.4100
	R2404656-002	Se (196.026 nm)	0.0002 u	> 100.00	2.7895
	R2404656-002	Si (252.851 nm)	4.9633	0.17	15840.0268
	R2404656-002	Sn (189.925 nm)	0.0004 u	> 100.00	8.3008
	R2404656-002	Sr (216.596 nm)	0.5822	0.24	9568.6390
	R2404656-002	Ti (336.122 nm)	0.0014	20.99	271.0224
	R2404656-002	Tl (190.794 nm)	0.0015	24.07	-0.9921
	R2404656-002	V (292.401 nm)	0.0002	46.37	-19.0278
	R2404656-002	Y (360.074 nm)	1.00	0.20	545121.09
	R2404656-002	Y_R (360.074 nm)	1.00	0.21	543688.88
	R2404656-002	Zn (213.857 nm)	0.0047	0.83	238.7212
6/5/2024 00:45:32	R2404656-003	Ag (328.068 nm)	0.0003	45.85	-233.2364
	R2404656-003	Al (237.312 nm)	0.2923	0.45	654.2982
	R2404656-003	As (188.980 nm)	0.0004 u	> 100.00	-8.5277
	R2404656-003	B (249.772 nm)	0.0164	0.88	522.1761
	R2404656-003	Ba (230.424 nm)	0.1588	0.10	6195.9699
	R2404656-003	Be (313.107 nm)	0.0000	27.13	177.1052
	R2404656-003	Ca (317.933 nm)	77.6119 o	0.26	2694193.2787
	R2404656-003	Cd (214.439 nm)	0.0002	30.11	11.5806
	R2404656-003	Co (230.786 nm)	0.0002	67.04	-36.7916
	R2404656-003	Cr (267.716 nm)	0.0009	8.67	147.8785
	R2404656-003	Cu (327.395 nm)	0.0012	18.13	82.1325
	R2404656-003	Fe (234.350 nm)	0.2801	0.14	4991.9771
	R2404656-003	K (766.491 nm)	0.8799	1.33	637.7150
	R2404656-003	Mg (279.078 nm)	18.6695	0.19	54792.5992
	R2404656-003	Mn (257.610 nm)	0.1420	0.17	42977.2520
	R2404656-003	Mo (202.032 nm)	0.0013	55.55	-14.8485
	R2404656-003	Na (588.995 nm)	7.6024	0.33	60962.8934
	R2404656-003	Ni (230.299 nm)	-0.0013 u	17.18	43.3621
	R2404656-003	Pb (220.353 nm)	0.0001 u	> 100.00	5.0005
	R2404656-003	Sb (217.582 nm)	0.0029	65.54	10.9553
	R2404656-003	Se (196.026 nm)	-0.0012 u	> 100.00	1.9388
	R2404656-003	Si (252.851 nm)	8.5742	0.05	27369.6226
	R2404656-003	Sn (189.925 nm)	0.0003 u	> 100.00	8.0263
	R2404656-003	Sr (216.596 nm)	1.0263	0.26	16888.5348
	R2404656-003	Ti (336.122 nm)	0.0049	5.92	723.2506

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404656-003	Tl (190.794 nm)	-0.0004 u	> 100.00	-2.5411
	R2404656-003	V (292.401 nm)	0.0006	36.86	-4.5601
	R2404656-003	Y (360.074 nm)	1.00	0.22	543123.40
	R2404656-003	Y_R (360.074 nm)	1.00	0.22	541728.92
	R2404656-003	Zn (213.857 nm)	0.0024	4.12	106.1701
6/5/2024 00:48:45	R2404656-004	Ag (328.068 nm)	0.0001	60.05	-240.5165
	R2404656-004	Al (237.312 nm)	0.0695	2.52	183.2974
	R2404656-004	As (188.980 nm)	0.0008 u	> 100.00	-7.9147
	R2404656-004	B (249.772 nm)	0.0126	2.21	412.0587
	R2404656-004	Ba (230.424 nm)	0.0142	1.21	529.4344
	R2404656-004	Be (313.107 nm)	0.0000 u	> 100.00	156.7285
	R2404656-004	Ca (317.933 nm)	46.7345	0.97	1623431.3309
	R2404656-004	Cd (214.439 nm)	0.0002	55.52	13.6354
	R2404656-004	Co (230.786 nm)	0.0011	45.39	-23.8424
	R2404656-004	Cr (267.716 nm)	0.0012	6.31	161.0680
	R2404656-004	Cu (327.395 nm)	0.0010	19.56	74.8071
	R2404656-004	Fe (234.350 nm)	0.1850	0.95	3307.1471
	R2404656-004	K (766.491 nm)	1.4047	3.26	1183.1981
	R2404656-004	Mg (279.078 nm)	7.8632	0.97	23045.1625
	R2404656-004	Mn (257.610 nm)	0.0832	0.95	25198.4036
	R2404656-004	Mo (202.032 nm)	0.0012	26.82	-15.5583
	R2404656-004	Na (588.995 nm)	10.2968	0.89	84966.1905
	R2404656-004	Ni (230.299 nm)	-0.0002 u	> 100.00	55.0333
	R2404656-004	Pb (220.353 nm)	0.0003 u	> 100.00	6.0129
	R2404656-004	Sb (217.582 nm)	0.0026	88.21	10.3880
	R2404656-004	Se (196.026 nm)	-0.0017 u	84.18	1.6157
	R2404656-004	Si (252.851 nm)	3.9813	0.86	12704.6079
	R2404656-004	Sn (189.925 nm)	0.0014	49.48	10.5695
	R2404656-004	Sr (216.596 nm)	0.1972	0.96	3221.0756
	R2404656-004	Ti (336.122 nm)	0.0003	13.67	130.0183
	R2404656-004	Tl (190.794 nm)	-0.0007 u	> 100.00	-2.8048
	R2404656-004	V (292.401 nm)	0.0002 u	> 100.00	-17.0774
	R2404656-004	Y (360.074 nm)	1.00	0.71	543582.50
	R2404656-004	Y_R (360.074 nm)	1.00	0.71	542184.53
	R2404656-004	Zn (213.857 nm)	0.0018	4.26	75.9337
6/5/2024 00:51:59	R2404656-005	Ag (328.068 nm)	0.0002	36.93	-238.0663
	R2404656-005	Al (237.312 nm)	0.0049	50.61	46.6890
	R2404656-005	As (188.980 nm)	0.0010 u	> 100.00	-7.6246
	R2404656-005	B (249.772 nm)	0.0223	0.93	694.6230
	R2404656-005	Ba (230.424 nm)	0.1312	0.09	5115.1082
	R2404656-005	Be (313.107 nm)	0.0000	24.09	174.5233
	R2404656-005	Ca (317.933 nm)	126.6804 o	0.25	4395777.4732
	R2404656-005	Cd (214.439 nm)	0.0002	50.40	14.5791
	R2404656-005	Co (230.786 nm)	-0.0004 u	43.86	-45.0787
	R2404656-005	Cr (267.716 nm)	0.0008	12.80	145.6245
	R2404656-005	Cu (327.395 nm)	0.0003	36.94	50.7041
	R2404656-005	Fe (234.350 nm)	0.0465	1.27	851.7678
	R2404656-005	K (766.491 nm)	0.8400	5.09	596.3159
	R2404656-005	Mg (279.078 nm)	27.9357	0.21	82015.3721
	R2404656-005	Mn (257.610 nm)	0.1384	0.23	41899.9957
	R2404656-005	Mo (202.032 nm)	0.0015	34.84	-14.0813
	R2404656-005	Na (588.995 nm)	23.5025	0.28	202610.3162
	R2404656-005	Ni (230.299 nm)	-0.0017 u	46.16	39.5922
	R2404656-005	Pb (220.353 nm)	0.0010	92.17	9.2712
	R2404656-005	Sb (217.582 nm)	0.0009 u	> 100.00	7.3638
	R2404656-005	Se (196.026 nm)	0.0044	78.51	5.5124
	R2404656-005	Si (252.851 nm)	6.5866	0.06	21023.2273

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404656-005	Sn (189.925 nm)	0.0010	19.09	9.7295
	R2404656-005	Sr (216.596 nm)	2.4240	0.32	39932.6211
	R2404656-005	Ti (336.122 nm)	0.0006	16.00	165.0068
	R2404656-005	Tl (190.794 nm)	0.0026	85.23	-0.1204
	R2404656-005	V (292.401 nm)	-0.0001 u	96.09	-29.8436
	R2404656-005	Y (360.074 nm)	0.99	0.11	535113.32
	R2404656-005	Y_R (360.074 nm)	0.99	0.11	533743.76
	R2404656-005	Zn (213.857 nm)	0.0007	5.17	11.5606
6/5/2024 00:55:12	R2404656-006	Ag (328.068 nm)	0.0000 u	> 100.00	-247.1394
	R2404656-006	Al (237.312 nm)	0.0072	37.27	51.4266
	R2404656-006	As (188.980 nm)	0.0025	82.02	-5.6085
	R2404656-006	B (249.772 nm)	0.0604	0.61	1800.4879
	R2404656-006	Ba (230.424 nm)	0.0179	0.97	674.2339
	R2404656-006	Be (313.107 nm)	0.0000 u	> 100.00	148.0002
	R2404656-006	Ca (317.933 nm)	45.3479	0.15	1575348.3577
	R2404656-006	Cd (214.439 nm)	0.0007	3.71	40.1325
	R2404656-006	Co (230.786 nm)	0.0002	58.43	-36.2200
	R2404656-006	Cr (267.716 nm)	0.0006	25.07	134.5768
	R2404656-006	Cu (327.395 nm)	0.0010	29.83	74.8301
	R2404656-006	Fe (234.350 nm)	0.0421	0.93	773.9648
	R2404656-006	K (766.491 nm)	4.9603	0.56	4878.8006
	R2404656-006	Mg (279.078 nm)	5.4498	0.11	15954.6865
	R2404656-006	Mn (257.610 nm)	0.4836	0.10	146324.2062
	R2404656-006	Mo (202.032 nm)	0.0019	5.43	-12.1472
	R2404656-006	Na (588.995 nm)	43.5488	0.37	381195.6604
	R2404656-006	Ni (230.299 nm)	0.0000 u	> 100.00	57.6475
	R2404656-006	Pb (220.353 nm)	0.0027	30.99	17.3933
	R2404656-006	Sb (217.582 nm)	0.0716	1.75	134.7211
	R2404656-006	Se (196.026 nm)	0.0021	45.62	4.0157
	R2404656-006	Si (252.851 nm)	3.6474	0.11	11638.6610
	R2404656-006	Sn (189.925 nm)	0.0004 u	91.21	8.3686
	R2404656-006	Sr (216.596 nm)	0.1604	0.11	2614.0625
	R2404656-006	Ti (336.122 nm)	-0.0001 u	> 100.00	78.9572
	R2404656-006	Tl (190.794 nm)	0.0007 u	> 100.00	-1.6942
	R2404656-006	V (292.401 nm)	0.0001 u	> 100.00	-21.4881
	R2404656-006	Y (360.074 nm)	1.00	0.44	540448.67
	R2404656-006	Y_R (360.074 nm)	1.00	0.44	539054.16
	R2404656-006	Zn (213.857 nm)	0.0010	10.45	31.1055
6/5/2024 00:58:26	Continuing Calibration Verification1	Ag (328.068 nm)	0.4855	0.29	24857.4307
	Continuing Calibration Verification1	Al (237.312 nm)	9.6992	0.33	20548.0293
	Continuing Calibration Verification1	As (188.980 nm)	0.9537	0.30	1300.6992
	Continuing Calibration Verification1	B (249.772 nm)	2.4374	0.31	70869.8426
	Continuing Calibration Verification1	Ba (230.424 nm)	9.7727	0.46	382954.7713
	Continuing Calibration Verification1	Be (313.107 nm)	0.2334	0.40	238191.2889
	Continuing Calibration Verification1	Ca (317.933 nm)	25.0525	0.47	871548.9931
	Continuing Calibration Verification1	Cd (214.439 nm)	0.4758	0.37	24398.2838
	Continuing Calibration Verification1	Co (230.786 nm)	2.4145	0.26	34558.8558
	Continuing Calibration Verification1	Cr (267.716 nm)	0.4802	0.42	19664.4422
	Continuing Calibration Verification1	Cu (327.395 nm)	1.1910	0.40	46430.1895
	Continuing Calibration Verification1	Fe (234.350 nm)	4.8226	0.40	85468.0141
	Continuing Calibration Verification1	K (766.491 nm)	23.9577	0.13	24623.9581
	Continuing Calibration Verification1	Mg (279.078 nm)	24.3787	0.33	71565.3830
	Continuing Calibration Verification1	Mn (257.610 nm)	0.7142	0.41	216074.9606
	Continuing Calibration Verification1	Mo (202.032 nm)	2.5025	0.51	12213.4582
	Continuing Calibration Verification1	Na (588.995 nm)	24.8820	0.21	214899.6983
	Continuing Calibration Verification1	Ni (230.299 nm)	1.9777	0.36	21170.5128
	Continuing Calibration Verification1	Pb (220.353 nm)	0.4939	0.50	2363.2536

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Verification1	Sb (217.582 nm)	4.8539	0.29	8743.8564
	Continuing Calibration Verification1	Se (196.026 nm)	0.4732	0.92	307.3319
	Continuing Calibration Verification1	Si (252.851 nm)	9.6778	0.79	30893.1824
	Continuing Calibration Verification1	Sn (189.925 nm)	4.7803	0.33	11291.3320
	Continuing Calibration Verification1	Sr (216.596 nm)	2.3909	0.54	39385.6606
	Continuing Calibration Verification1	Ti (336.122 nm)	2.4623	0.30	319380.6212
	Continuing Calibration Verification1	Tl (190.794 nm)	0.9559	0.22	768.6804
	Continuing Calibration Verification1	V (292.401 nm)	2.4377	0.36	88166.3167
	Continuing Calibration Verification1	Y (360.074 nm)	1.00	0.20	540882.44
	Continuing Calibration Verification1	Y_R (360.074 nm)	1.00	0.20	539483.99
	Continuing Calibration Verification1	Zn (213.857 nm)	0.9436	0.35	52354.1530
6/5/2024 01:01:40	Continuing Calibration Blank1	Ag (328.068 nm)	-0.0001 u	> 100.00	-249.8577
	Continuing Calibration Blank1	Al (237.312 nm)	0.0041	66.98	44.9729
	Continuing Calibration Blank1	As (188.980 nm)	-0.0013 u	36.59	-10.7697
	Continuing Calibration Blank1	B (249.772 nm)	0.0009	59.71	71.0558
	Continuing Calibration Blank1	Ba (230.424 nm)	0.0007	16.09	0.0415
	Continuing Calibration Blank1	Be (313.107 nm)	0.0000	93.94	175.8870
	Continuing Calibration Blank1	Ca (317.933 nm)	0.0027	> 100.00	2876.7289
	Continuing Calibration Blank1	Cd (214.439 nm)	0.0001	> 100.00	8.1625
	Continuing Calibration Blank1	Co (230.786 nm)	0.0002 u	> 100.00	-36.4355
	Continuing Calibration Blank1	Cr (267.716 nm)	0.0002 u	> 100.00	120.7196
	Continuing Calibration Blank1	Cu (327.395 nm)	0.0002 u	> 100.00	43.2029
	Continuing Calibration Blank1	Fe (234.350 nm)	0.0017	19.47	59.3177
	Continuing Calibration Blank1	K (766.491 nm)	0.0141 u	> 100.00	-262.1612
	Continuing Calibration Blank1	Mg (279.078 nm)	0.0004 u	> 100.00	-54.7704
	Continuing Calibration Blank1	Mn (257.610 nm)	0.0000	53.81	36.1044
	Continuing Calibration Blank1	Mo (202.032 nm)	0.0044	29.68	0.2323
	Continuing Calibration Blank1	Na (588.995 nm)	0.0139 u	> 100.00	-6640.3776
	Continuing Calibration Blank1	Ni (230.299 nm)	0.0008	10.15	66.2999
	Continuing Calibration Blank1	Pb (220.353 nm)	0.0001 u	> 100.00	4.7701
	Continuing Calibration Blank1	Sb (217.582 nm)	0.0060	49.09	16.5013
	Continuing Calibration Blank1	Se (196.026 nm)	0.0000 u	> 100.00	2.6738
	Continuing Calibration Blank1	Si (252.851 nm)	0.0037	41.14	4.4035
	Continuing Calibration Blank1	Sn (189.925 nm)	0.0008 u	> 100.00	9.3165
	Continuing Calibration Blank1	Sr (216.596 nm)	-0.0001 u	> 100.00	-31.7272
	Continuing Calibration Blank1	Ti (336.122 nm)	0.0022	47.38	370.0415
	Continuing Calibration Blank1	Tl (190.794 nm)	-0.0005 u	> 100.00	-2.6227
	Continuing Calibration Blank1	V (292.401 nm)	0.0002 u	> 100.00	-19.1493
	Continuing Calibration Blank1	Y (360.074 nm)	0.98	8.66	531891.18
	Continuing Calibration Blank1	Y_R (360.074 nm)	0.98	8.65	530434.24
	Continuing Calibration Blank1	Zn (213.857 nm)	0.0001	49.02	-19.2975
6/5/2024 01:04:53	R2404656-007	Ag (328.068 nm)	0.0000 u	> 100.00	-244.3049
	R2404656-007	Al (237.312 nm)	0.0022 u	> 100.00	40.9140
	R2404656-007	As (188.980 nm)	0.0028 u	> 100.00	-5.2059
	R2404656-007	B (249.772 nm)	0.7082	0.37	20624.1859
	R2404656-007	Ba (230.424 nm)	0.0161	0.69	602.0715
	R2404656-007	Be (313.107 nm)	0.0001	7.09	248.7475
	R2404656-007	Ca (317.933 nm)	454.0618 o	0.31	15748636.6066
	R2404656-007	Cd (214.439 nm)	0.0014	4.09	73.6284
	R2404656-007	Co (230.786 nm)	0.0043	1.43	23.1137
	R2404656-007	Cr (267.716 nm)	0.0012	25.58	159.0905
	R2404656-007	Cu (327.395 nm)	0.0006	4.96	59.0360
	R2404656-007	Fe (234.350 nm)	2.1504	0.36	38126.7545
	R2404656-007	K (766.491 nm)	77.1411 o	0.41	79900.7737
	R2404656-007	Mg (279.078 nm)	62.5765 o	0.26	183785.6452
	R2404656-007	Mn (257.610 nm)	4.6603 o	0.27	1409794.5767
	R2404656-007	Mo (202.032 nm)	0.0031	38.45	-6.2380

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404656-007	Na (588.995 nm)	787.7938 o	0.76	7011389.1548
	R2404656-007	Ni (230.299 nm)	0.0067	7.97	128.7291
	R2404656-007	Pb (220.353 nm)	0.0018	53.94	13.1678
	R2404656-007	Sb (217.582 nm)	0.0051	23.28	14.9501
	R2404656-007	Se (196.026 nm)	0.0041	18.59	5.3478
	R2404656-007	Si (252.851 nm)	1.5184	0.35	4840.8620
	R2404656-007	Sn (189.925 nm)	0.0019	53.05	11.8034
	R2404656-007	Sr (216.596 nm)	1.8453	0.31	30391.9402
	R2404656-007	Ti (336.122 nm)	0.0049	12.03	716.9946
	R2404656-007	Tl (190.794 nm)	0.0047	24.93	1.5705
	R2404656-007	V (292.401 nm)	-0.0003 u	27.48	-36.4617
	R2404656-007	Y (360.074 nm)	0.88	0.91	476938.19
	R2404656-007	Y_R (360.074 nm)	0.88	0.91	475833.38
	R2404656-007	Zn (213.857 nm)	0.0135	0.48	722.5050
6/5/2024 01:08:07	R2404656-008	Ag (328.068 nm)	0.0001	80.73	-240.5633
	R2404656-008	Al (237.312 nm)	0.0006 u	> 100.00	37.5284
	R2404656-008	As (188.980 nm)	0.0104	10.70	5.1794
	R2404656-008	B (249.772 nm)	0.1381	0.02	4059.0185
	R2404656-008	Ba (230.424 nm)	0.0801	0.25	3112.4665
	R2404656-008	Be (313.107 nm)	0.0000	26.50	177.0381
	R2404656-008	Ca (317.933 nm)	148.1855 o	0.17	5141528.8718
	R2404656-008	Cd (214.439 nm)	0.0006	14.44	32.9042
	R2404656-008	Co (230.786 nm)	0.0001	53.95	-37.1862
	R2404656-008	Cr (267.716 nm)	0.0010	14.57	150.9964
	R2404656-008	Cu (327.395 nm)	0.0004	13.84	52.9914
	R2404656-008	Fe (234.350 nm)	0.1085	0.32	1950.3699
	R2404656-008	K (766.491 nm)	23.3964	0.26	24040.5117
	R2404656-008	Mg (279.078 nm)	18.6452	0.16	54721.1914
	R2404656-008	Mn (257.610 nm)	1.3533	0.09	409389.2797
	R2404656-008	Mo (202.032 nm)	0.0107	2.80	31.0196
	R2404656-008	Na (588.995 nm)	394.0974 o	0.31	3504099.0133
	R2404656-008	Ni (230.299 nm)	-0.0023 u	21.54	32.8631
	R2404656-008	Pb (220.353 nm)	0.0060	5.41	33.0120
	R2404656-008	Sb (217.582 nm)	0.0047	15.29	14.1652
	R2404656-008	Se (196.026 nm)	-0.0011 u	> 100.00	1.9769
	R2404656-008	Si (252.851 nm)	12.7963	1.31	40850.4417
	R2404656-008	Sn (189.925 nm)	0.0002 u	> 100.00	7.8604
	R2404656-008	Sr (216.596 nm)	0.8920	0.16	14675.9013
	R2404656-008	Ti (336.122 nm)	0.0011	27.33	226.4608
	R2404656-008	Tl (190.794 nm)	0.0005 u	95.63	-1.7989
	R2404656-008	V (292.401 nm)	0.0000 u	> 100.00	-23.1202
	R2404656-008	Y (360.074 nm)	0.94	0.38	507657.52
	R2404656-008	Y_R (360.074 nm)	0.94	0.38	506430.92
	R2404656-008	Zn (213.857 nm)	0.0253	0.14	1379.7342
6/5/2024 01:11:21	R2404656-009	Ag (328.068 nm)	-0.0006 u	43.31	-276.2393
	R2404656-009	Al (237.312 nm)	-0.0307 u	8.90	-28.6254
	R2404656-009	As (188.980 nm)	-0.0013 u	> 100.00	-10.8358
	R2404656-009	B (249.772 nm)	0.6176	0.16	17990.8580
	R2404656-009	Ba (230.424 nm)	0.0107	1.40	393.8679
	R2404656-009	Be (313.107 nm)	0.0001	14.80	243.9678
	R2404656-009	Ca (317.933 nm)	350.5084 o	0.17	12157635.6217
	R2404656-009	Cd (214.439 nm)	0.0574	0.19	2948.9935
	R2404656-009	Co (230.786 nm)	0.0228	2.28	288.1757
	R2404656-009	Cr (267.716 nm)	0.0019	3.91	189.7098
	R2404656-009	Cu (327.395 nm)	0.0020	17.20	114.8424
	R2404656-009	Fe (234.350 nm)	0.0619	0.70	1124.9665
	R2404656-009	K (766.491 nm)	26.6695	0.07	27442.4745

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404656-009	Mg (279.078 nm)	142.6831 o	0.13	419128.6784
	R2404656-009	Mn (257.610 nm)	22.3224 o	0.14	6752654.5761
	R2404656-009	Mo (202.032 nm)	0.0022	24.25	-10.6457
	R2404656-009	Na (588.995 nm)	1811.5484 o	0.58	16131626.6031
	R2404656-009	Ni (230.299 nm)	0.0755	1.06	863.1912
	R2404656-009	Pb (220.353 nm)	0.0085	14.40	44.9250
	R2404656-009	Sb (217.582 nm)	0.0031	48.12	11.2566
	R2404656-009	Se (196.026 nm)	0.0210	28.84	16.2014
	R2404656-009	Si (252.851 nm)	4.8987	0.11	15633.7722
	R2404656-009	Sn (189.925 nm)	0.0018	56.33	11.6393
	R2404656-009	Sr (216.596 nm)	1.6285	0.14	26816.5700
	R2404656-009	Ti (336.122 nm)	0.0035	6.46	545.3015
	R2404656-009	Tl (190.794 nm)	0.0090	9.70	5.0228
	R2404656-009	V (292.401 nm)	-0.0003 u	45.91	-34.5018
	R2404656-009	Y (360.074 nm)	0.79	0.50	429620.63
	R2404656-009	Y_R (360.074 nm)	0.79	0.50	428662.92
	R2404656-009	Zn (213.857 nm)	0.0432	0.36	2375.5244
6/5/2024 01:14:35	R2404656-010	Ag (328.068 nm)	-0.0006 u	24.91	-277.3858
	R2404656-010	Al (237.312 nm)	-0.0343 u	7.02	-36.2791
	R2404656-010	As (188.980 nm)	0.0021	98.63	-6.1049
	R2404656-010	B (249.772 nm)	0.6093	0.14	17750.9262
	R2404656-010	Ba (230.424 nm)	0.0100	0.89	363.2112
	R2404656-010	Be (313.107 nm)	0.0001	20.96	237.2267
	R2404656-010	Ca (317.933 nm)	345.6550 o	0.12	11989329.7240
	R2404656-010	Cd (214.439 nm)	0.0563	0.10	2890.6970
	R2404656-010	Co (230.786 nm)	0.0209	0.45	260.9645
	R2404656-010	Cr (267.716 nm)	0.0020	4.31	194.5708
	R2404656-010	Cu (327.395 nm)	0.0017	12.53	104.9843
	R2404656-010	Fe (234.350 nm)	0.0314	1.75	584.9423
	R2404656-010	K (766.491 nm)	26.1737	0.43	26927.1271
	R2404656-010	Mg (279.078 nm)	140.6031 o	0.16	413017.9881
	R2404656-010	Mn (257.610 nm)	21.9013 o	0.11	6625267.4763
	R2404656-010	Mo (202.032 nm)	0.0016	52.99	-13.5071
	R2404656-010	Na (588.995 nm)	1788.5932 o	0.36	15927127.8622
	R2404656-010	Ni (230.299 nm)	0.0735	0.34	841.6772
	R2404656-010	Pb (220.353 nm)	0.0058	12.08	32.2447
	R2404656-010	Sb (217.582 nm)	0.0020	99.86	9.3518
	R2404656-010	Se (196.026 nm)	0.0165	9.08	13.3285
	R2404656-010	Si (252.851 nm)	4.8148	0.03	15365.8541
	R2404656-010	Sn (189.925 nm)	0.0013	> 100.00	10.4140
	R2404656-010	Sr (216.596 nm)	1.6071	0.16	26463.8758
	R2404656-010	Ti (336.122 nm)	0.0031	4.82	494.9124
	R2404656-010	Tl (190.794 nm)	0.0089	12.05	4.9165
	R2404656-010	V (292.401 nm)	-0.0003 u	97.51	-36.4999
	R2404656-010	Y (360.074 nm)	0.80	0.30	433736.75
	R2404656-010	Y_R (360.074 nm)	0.80	0.30	432789.93
	R2404656-010	Zn (213.857 nm)	0.0410	0.13	2250.2942
6/5/2024 01:17:49	R2404656-011	Ag (328.068 nm)	0.0000 u	> 100.00	-248.6477
	R2404656-011	Al (237.312 nm)	0.1120	1.49	273.1512
	R2404656-011	As (188.980 nm)	0.0004 u	> 100.00	-8.4890
	R2404656-011	B (249.772 nm)	0.1195	0.50	3518.7405
	R2404656-011	Ba (230.424 nm)	0.0517	0.05	2000.8600
	R2404656-011	Be (313.107 nm)	0.0000	27.34	182.1763
	R2404656-011	Ca (317.933 nm)	134.0158 o	0.09	4650154.5074
	R2404656-011	Cd (214.439 nm)	0.0003	15.52	18.0393
	R2404656-011	Co (230.786 nm)	0.0005	70.00	-32.1362
	R2404656-011	Cr (267.716 nm)	0.0014	6.43	170.6347

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404656-011	Cu (327.395 nm)	0.0023	5.04	126.9251
	R2404656-011	Fe (234.350 nm)	0.7416	0.06	13167.2870
	R2404656-011	K (766.491 nm)	11.6388	0.40	11820.1369
	R2404656-011	Mg (279.078 nm)	24.5330	0.02	72018.8030
	R2404656-011	Mn (257.610 nm)	0.1269	0.03	38414.1390
	R2404656-011	Mo (202.032 nm)	0.0015	52.34	-13.7480
	R2404656-011	Na (588.995 nm)	128.4921 o	0.26	1137922.6547
	R2404656-011	Ni (230.299 nm)	0.0014	20.30	72.1644
	R2404656-011	Pb (220.353 nm)	0.0013	24.78	10.6838
	R2404656-011	Sb (217.582 nm)	-0.0004 u	> 100.00	5.0996
	R2404656-011	Se (196.026 nm)	-0.0014 u	> 100.00	1.7925
	R2404656-011	Si (252.851 nm)	3.7115	0.06	11843.3643
	R2404656-011	Sn (189.925 nm)	0.0006 u	> 100.00	8.7849
	R2404656-011	Sr (216.596 nm)	0.4669	0.20	7667.7446
	R2404656-011	Ti (336.122 nm)	0.0022	0.53	373.7776
	R2404656-011	Tl (190.794 nm)	0.0017	> 100.00	-0.8435
	R2404656-011	V (292.401 nm)	0.0000 u	> 100.00	-23.2936
	R2404656-011	Y (360.074 nm)	0.97	0.42	526489.91
	R2404656-011	Y_R (360.074 nm)	0.97	0.42	525082.46
	R2404656-011	Zn (213.857 nm)	0.0029	0.96	137.2829
6/5/2024 01:21:03	R2404656-012	Ag (328.068 nm)	0.0000	49.63	-245.9419
	R2404656-012	Al (237.312 nm)	0.1123	1.61	273.6492
	R2404656-012	As (188.980 nm)	0.0014 u	> 100.00	-7.1172
	R2404656-012	B (249.772 nm)	0.1254	0.20	3687.7487
	R2404656-012	Ba (230.424 nm)	0.0406	0.22	1565.1324
	R2404656-012	Be (313.107 nm)	0.0001	16.01	220.0204
	R2404656-012	Ca (317.933 nm)	264.3748 o	0.05	9170714.6828
	R2404656-012	Cd (214.439 nm)	0.0017	0.95	92.3029
	R2404656-012	Co (230.786 nm)	0.0058	2.84	44.3627
	R2404656-012	Cr (267.716 nm)	0.0014	1.55	168.0953
	R2404656-012	Cu (327.395 nm)	0.0055	3.83	250.4151
	R2404656-012	Fe (234.350 nm)	4.1984	0.06	74410.6948
	R2404656-012	K (766.491 nm)	6.9349	0.52	6931.0955
	R2404656-012	Mg (279.078 nm)	54.3166	0.10	159519.3380
	R2404656-012	Mn (257.610 nm)	7.7354 o	0.13	2340011.8202
	R2404656-012	Mo (202.032 nm)	0.0015	33.44	-13.7252
	R2404656-012	Na (588.995 nm)	450.5869 o	0.25	4007342.4977
	R2404656-012	Ni (230.299 nm)	0.0072	6.97	134.7639
	R2404656-012	Pb (220.353 nm)	0.0068	14.05	36.9300
	R2404656-012	Sb (217.582 nm)	-0.0019 u	39.12	2.2665
	R2404656-012	Se (196.026 nm)	0.0066	58.53	6.9660
	R2404656-012	Si (252.851 nm)	8.1819	0.23	26116.7499
	R2404656-012	Sn (189.925 nm)	0.0017	22.67	11.3999
	R2404656-012	Sr (216.596 nm)	1.0487	0.11	17258.7920
	R2404656-012	Ti (336.122 nm)	0.0028	3.44	451.6800
	R2404656-012	Tl (190.794 nm)	0.0051	4.83	1.8918
	R2404656-012	V (292.401 nm)	0.0000 u	87.27	-25.4498
	R2404656-012	Y (360.074 nm)	0.92	0.62	498928.29
	R2404656-012	Y_R (360.074 nm)	0.92	0.62	497702.16
	R2404656-012	Zn (213.857 nm)	0.0094	0.95	494.7930
6/5/2024 01:24:16	R2404656-013	Ag (328.068 nm)	0.0001 u	> 100.00	-242.6126
	R2404656-013	Al (237.312 nm)	0.0120	18.57	61.6566
	R2404656-013	As (188.980 nm)	0.0059	26.99	-0.9219
	R2404656-013	B (249.772 nm)	0.0674	0.27	2005.1394
	R2404656-013	Ba (230.424 nm)	0.0005	24.40	-6.0024
	R2404656-013	Be (313.107 nm)	0.0000 u	55.28	141.5095
	R2404656-013	Ca (317.933 nm)	0.2652	0.12	11978.4955

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404656-013	Cd (214.439 nm)	0.0001	61.52	9.0407
	R2404656-013	Co (230.786 nm)	0.0001 u	> 100.00	-38.2129
	R2404656-013	Cr (267.716 nm)	0.0020	6.76	195.4297
	R2404656-013	Cu (327.395 nm)	0.0049	5.91	227.2448
	R2404656-013	Fe (234.350 nm)	0.0098	14.43	201.9276
	R2404656-013	K (766.491 nm)	2.7328	0.92	2563.5965
	R2404656-013	Mg (279.078 nm)	0.2392	0.35	646.6836
	R2404656-013	Mn (257.610 nm)	0.0007	1.60	238.1965
	R2404656-013	Mo (202.032 nm)	0.0014	45.49	-14.5668
	R2404656-013	Na (588.995 nm)	930.7907 o	0.55	8285293.7817
	R2404656-013	Ni (230.299 nm)	0.0001 u	> 100.00	58.9217
	R2404656-013	Pb (220.353 nm)	0.2289	0.45	1097.4799
	R2404656-013	Sb (217.582 nm)	0.0098	2.61	23.4178
	R2404656-013	Se (196.026 nm)	-0.0025 u	78.30	1.0716
	R2404656-013	Si (252.851 nm)	0.8664	0.11	2758.9881
	R2404656-013	Sn (189.925 nm)	0.0008	75.86	9.2186
	R2404656-013	Sr (216.596 nm)	0.0018	14.48	-0.8725
	R2404656-013	Ti (336.122 nm)	0.0015	1.12	283.9068
	R2404656-013	Tl (190.794 nm)	-0.0005 u	39.75	-2.6589
	R2404656-013	V (292.401 nm)	0.0011	8.31	15.9966
	R2404656-013	Y (360.074 nm)	0.90	0.62	487230.05
	R2404656-013	Y_R (360.074 nm)	0.90	0.62	486128.43
	R2404656-013	Zn (213.857 nm)	0.0007	8.34	11.3208
6/5/2024 01:27:30	R2404656-014	Ag (328.068 nm)	0.0002	> 100.00	-238.2652
	R2404656-014	Al (237.312 nm)	0.0503	2.91	142.6370
	R2404656-014	As (188.980 nm)	0.0004 u	> 100.00	-8.5061
	R2404656-014	B (249.772 nm)	0.0592	1.27	1766.8558
	R2404656-014	Ba (230.424 nm)	0.2098	0.59	8193.3679
	R2404656-014	Be (313.107 nm)	0.0000	49.89	170.3958
	R2404656-014	Ca (317.933 nm)	196.4571 o	0.43	6815477.5939
	R2404656-014	Cd (214.439 nm)	0.0003	5.99	18.9749
	R2404656-014	Co (230.786 nm)	-0.0003 u	> 100.00	-43.0348
	R2404656-014	Cr (267.716 nm)	0.0014	14.53	168.1113
	R2404656-014	Cu (327.395 nm)	0.0017	7.27	102.2702
	R2404656-014	Fe (234.350 nm)	0.0680	0.25	1234.2266
	R2404656-014	K (766.491 nm)	1.5658	2.35	1350.6094
	R2404656-014	Mg (279.078 nm)	62.9179 o	0.57	184788.6599
	R2404656-014	Mn (257.610 nm)	0.0029	1.19	891.5811
	R2404656-014	Mo (202.032 nm)	0.0052	5.86	4.2258
	R2404656-014	Na (588.995 nm)	38.4012	0.84	335337.8744
	R2404656-014	Ni (230.299 nm)	-0.0005 u	16.59	52.2448
	R2404656-014	Pb (220.353 nm)	0.0017	72.91	12.4349
	R2404656-014	Sb (217.582 nm)	-0.0019 u	46.98	2.2395
	R2404656-014	Se (196.026 nm)	0.0027	> 100.00	4.4363
	R2404656-014	Si (252.851 nm)	6.0247	0.70	19229.1230
	R2404656-014	Sn (189.925 nm)	0.0010	93.18	9.6660
	R2404656-014	Sr (216.596 nm)	5.3909	0.41	88844.0392
	R2404656-014	Ti (336.122 nm)	0.0025	3.28	410.3250
	R2404656-014	Tl (190.794 nm)	0.0029	47.59	0.0988
	R2404656-014	V (292.401 nm)	0.0002	60.63	-17.7507
	R2404656-014	Y (360.074 nm)	0.97	0.89	527160.75
	R2404656-014	Y_R (360.074 nm)	0.97	0.89	525824.90
	R2404656-014	Zn (213.857 nm)	0.0053	0.84	267.5289
6/5/2024 01:30:43	R2404656-015	Ag (328.068 nm)	0.0000 u	> 100.00	-248.4454
	R2404656-015	Al (237.312 nm)	-0.0032 u	49.81	29.3980
	R2404656-015	As (188.980 nm)	0.0013 u	> 100.00	-7.2960
	R2404656-015	B (249.772 nm)	0.3778	0.27	11022.2348

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404656-015	Ba (230.424 nm)	0.0119	0.85	438.6091
	R2404656-015	Be (313.107 nm)	0.0000	27.18	186.1434
	R2404656-015	Ca (317.933 nm)	184.8410 o	0.12	6412660.1153
	R2404656-015	Cd (214.439 nm)	0.0210	0.43	1078.7373
	R2404656-015	Co (230.786 nm)	0.0044	5.32	23.6330
	R2404656-015	Cr (267.716 nm)	0.0008	22.97	144.4783
	R2404656-015	Cu (327.395 nm)	0.0023	11.29	125.5131
	R2404656-015	Fe (234.350 nm)	0.1342	0.30	2407.1294
	R2404656-015	K (766.491 nm)	27.4508	0.30	28254.4944
	R2404656-015	Mg (279.078 nm)	45.2054	0.18	132751.7811
	R2404656-015	Mn (257.610 nm)	4.8667 o	0.10	1472228.8965
	R2404656-015	Mo (202.032 nm)	0.0018	23.10	-12.5232
	R2404656-015	Na (588.995 nm)	578.5674 o	0.21	5147471.2847
	R2404656-015	Ni (230.299 nm)	0.0140	0.91	206.4946
	R2404656-015	Pb (220.353 nm)	0.0018	52.68	12.9361
	R2404656-015	Sb (217.582 nm)	0.0004	57.62	6.4600
	R2404656-015	Se (196.026 nm)	0.0055	42.86	6.2075
	R2404656-015	Si (252.851 nm)	3.1724	0.19	10121.8040
	R2404656-015	Sn (189.925 nm)	0.0004 u	> 100.00	8.2092
	R2404656-015	Sr (216.596 nm)	0.6982	0.16	11480.1444
	R2404656-015	Ti (336.122 nm)	0.0011	9.13	231.1864
	R2404656-015	Tl (190.794 nm)	0.0037	14.57	0.7871
	R2404656-015	V (292.401 nm)	0.0000 u	> 100.00	-23.1842
	R2404656-015	Y (360.074 nm)	0.92	0.77	499574.16
	R2404656-015	Y_R (360.074 nm)	0.92	0.77	498407.42
	R2404656-015	Zn (213.857 nm)	0.0064	0.41	331.5097
6/5/2024 01:33:56	R2404658-001	Ag (328.068 nm)	0.0001	75.35	-239.6067
	R2404658-001	Al (237.312 nm)	0.0013 u	> 100.00	38.9769
	R2404658-001	As (188.980 nm)	0.0018	88.79	-6.5978
	R2404658-001	B (249.772 nm)	0.0625	0.55	1862.2253
	R2404658-001	Ba (230.424 nm)	0.0629	0.34	2437.2386
	R2404658-001	Be (313.107 nm)	0.0000 u	> 100.00	149.7545
	R2404658-001	Ca (317.933 nm)	64.1821 o	0.12	2228476.7188
	R2404658-001	Cd (214.439 nm)	0.0002	38.39	14.7759
	R2404658-001	Co (230.786 nm)	0.0001 u	> 100.00	-37.6827
	R2404658-001	Cr (267.716 nm)	0.0007	14.62	141.2124
	R2404658-001	Cu (327.395 nm)	0.0006	18.46	58.8952
	R2404658-001	Fe (234.350 nm)	0.8230	0.14	14609.1289
	R2404658-001	K (766.491 nm)	1.3241	1.29	1099.4328
	R2404658-001	Mg (279.078 nm)	30.3745	0.11	89180.4645
	R2404658-001	Mn (257.610 nm)	0.3754	0.09	113577.8557
	R2404658-001	Mo (202.032 nm)	0.0016	11.08	-13.2087
	R2404658-001	Na (588.995 nm)	23.9253	0.39	206376.9757
	R2404658-001	Ni (230.299 nm)	0.0163	3.19	231.6750
	R2404658-001	Pb (220.353 nm)	0.0004	86.22	6.3318
	R2404658-001	Sb (217.582 nm)	0.0010	55.96	7.5728
	R2404658-001	Se (196.026 nm)	0.0003 u	> 100.00	2.8780
	R2404658-001	Si (252.851 nm)	5.3741	0.09	17151.9291
	R2404658-001	Sn (189.925 nm)	0.0012	97.10	10.1421
	R2404658-001	Sr (216.596 nm)	0.3756	0.23	6161.2822
	R2404658-001	Ti (336.122 nm)	0.0000 u	> 100.00	82.2629
	R2404658-001	Tl (190.794 nm)	0.0001 u	> 100.00	-2.1463
	R2404658-001	V (292.401 nm)	0.0002	61.41	-15.9413
	R2404658-001	Y (360.074 nm)	1.00	0.35	545172.93
	R2404658-001	Y_R (360.074 nm)	1.00	0.35	543771.06
	R2404658-001	Zn (213.857 nm)	0.0016	2.35	66.4727
6/5/2024 01:37:10	Continuing Calibration Verification1	Ag (328.068 nm)	0.4872	0.04	24942.8547

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Verification1	Al (237.312 nm)	9.7853	0.05	20730.1223
	Continuing Calibration Verification1	As (188.980 nm)	0.9527	0.32	1299.2731
	Continuing Calibration Verification1	B (249.772 nm)	2.4474	0.01	71159.9128
	Continuing Calibration Verification1	Ba (230.424 nm)	9.8400	0.07	385590.0171
	Continuing Calibration Verification1	Be (313.107 nm)	0.2341	0.18	238905.9899
	Continuing Calibration Verification1	Ca (317.933 nm)	25.0811	0.16	872540.8639
	Continuing Calibration Verification1	Cd (214.439 nm)	0.4763	0.17	24419.5971
	Continuing Calibration Verification1	Co (230.786 nm)	2.4276	0.12	34746.6180
	Continuing Calibration Verification1	Cr (267.716 nm)	0.4816	0.02	19720.6799
	Continuing Calibration Verification1	Cu (327.395 nm)	1.2138	0.30	47318.8823
	Continuing Calibration Verification1	Fe (234.350 nm)	4.8383	0.09	85746.0568
	Continuing Calibration Verification1	K (766.491 nm)	24.3042	0.34	24984.0288
	Continuing Calibration Verification1	Mg (279.078 nm)	24.3881	0.05	71593.2169
	Continuing Calibration Verification1	Mn (257.610 nm)	0.7180	0.11	217208.2125
	Continuing Calibration Verification1	Mo (202.032 nm)	2.5134	0.33	12266.6097
	Continuing Calibration Verification1	Na (588.995 nm)	25.4002	0.35	219516.9992
	Continuing Calibration Verification1	Ni (230.299 nm)	1.9810	0.16	21206.3843
	Continuing Calibration Verification1	Pb (220.353 nm)	0.4931	0.24	2359.5335
	Continuing Calibration Verification1	Sb (217.582 nm)	4.8759	0.07	8783.5116
	Continuing Calibration Verification1	Se (196.026 nm)	0.4791	1.61	311.1514
	Continuing Calibration Verification1	Si (252.851 nm)	9.7457	0.71	31109.9983
	Continuing Calibration Verification1	Sn (189.925 nm)	4.7866	0.04	11306.2535
	Continuing Calibration Verification1	Sr (216.596 nm)	2.3926	0.18	39413.8114
	Continuing Calibration Verification1	Ti (336.122 nm)	2.4769	0.09	321266.1068
	Continuing Calibration Verification1	Tl (190.794 nm)	0.9596	0.21	771.6693
	Continuing Calibration Verification1	V (292.401 nm)	2.4480	0.14	88538.6875
	Continuing Calibration Verification1	Y (360.074 nm)	1.00	0.59	543934.67
	Continuing Calibration Verification1	Y_R (360.074 nm)	1.00	0.59	542495.09
	Continuing Calibration Verification1	Zn (213.857 nm)	0.9472	0.04	52558.4158
6/5/2024 01:40:24	Continuing Calibration Blank1	Ag (328.068 nm)	0.0003	69.42	-232.9904
	Continuing Calibration Blank1	Al (237.312 nm)	0.0000 u	> 100.00	36.1288
	Continuing Calibration Blank1	As (188.980 nm)	0.0011	47.52	-7.5509
	Continuing Calibration Blank1	B (249.772 nm)	0.0004	64.61	57.8243
	Continuing Calibration Blank1	Ba (230.424 nm)	0.0008	16.09	5.0860
	Continuing Calibration Blank1	Be (313.107 nm)	0.0000 u	> 100.00	152.8802
	Continuing Calibration Blank1	Ca (317.933 nm)	0.0027	11.18	2876.4526
	Continuing Calibration Blank1	Cd (214.439 nm)	0.0002	42.53	13.5444
	Continuing Calibration Blank1	Co (230.786 nm)	0.0007	2.39	-29.3336
	Continuing Calibration Blank1	Cr (267.716 nm)	0.0003	39.71	123.3633
	Continuing Calibration Blank1	Cu (327.395 nm)	0.0002	16.02	45.2519
	Continuing Calibration Blank1	Fe (234.350 nm)	0.0018	50.56	61.1371
	Continuing Calibration Blank1	K (766.491 nm)	0.0298	46.62	-245.8688
	Continuing Calibration Blank1	Mg (279.078 nm)	0.0033	41.97	-46.4356
	Continuing Calibration Blank1	Mn (257.610 nm)	0.0001	17.51	45.7431
	Continuing Calibration Blank1	Mo (202.032 nm)	0.0046	31.10	1.3478
	Continuing Calibration Blank1	Na (588.995 nm)	0.2310	9.67	-4706.2727
	Continuing Calibration Blank1	Ni (230.299 nm)	0.0004	34.67	61.3971
	Continuing Calibration Blank1	Pb (220.353 nm)	-0.0008 u	38.43	0.4842
	Continuing Calibration Blank1	Sb (217.582 nm)	0.0059	21.02	16.3288
	Continuing Calibration Blank1	Se (196.026 nm)	0.0005 u	> 100.00	2.9998
	Continuing Calibration Blank1	Si (252.851 nm)	0.0050	28.84	8.5491
	Continuing Calibration Blank1	Sn (189.925 nm)	0.0013	7.82	10.5403
	Continuing Calibration Blank1	Sr (216.596 nm)	0.0002	61.43	-26.8535
	Continuing Calibration Blank1	Ti (336.122 nm)	0.0022	48.03	374.8191
	Continuing Calibration Blank1	Tl (190.794 nm)	0.0010 u	> 100.00	-1.4111
	Continuing Calibration Blank1	V (292.401 nm)	0.0003	24.61	-13.4679
	Continuing Calibration Blank1	Y (360.074 nm)	1.03	2.62	557556.53

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Blank1	Y_R (360.074 nm)	1.03	2.62	556059.41
	Continuing Calibration Blank1	Zn (213.857 nm)	0.0002	43.19	-13.2266
6/5/2024 01:43:37	R2404658-002	Ag (328.068 nm)	0.0002	50.41	-235.4343
	R2404658-002	Al (237.312 nm)	0.0020	4.34	40.5287
	R2404658-002	As (188.980 nm)	0.0027	> 100.00	-5.3281
	R2404658-002	B (249.772 nm)	0.0628	0.25	1871.6557
	R2404658-002	Ba (230.424 nm)	0.0613	0.23	2376.3410
	R2404658-002	Be (313.107 nm)	0.0000	42.79	157.9928
	R2404658-002	Ca (317.933 nm)	64.2192 o	0.12	2229762.6314
	R2404658-002	Cd (214.439 nm)	0.0002	31.11	11.6490
	R2404658-002	Co (230.786 nm)	0.0001 u	> 100.00	-38.2515
	R2404658-002	Cr (267.716 nm)	0.0004	31.63	127.9303
	R2404658-002	Cu (327.395 nm)	0.0002 u	> 100.00	45.5325
	R2404658-002	Fe (234.350 nm)	0.1224	0.54	2196.4282
	R2404658-002	K (766.491 nm)	1.2926	2.14	1066.6998
	R2404658-002	Mg (279.078 nm)	30.3881	0.11	89220.3682
	R2404658-002	Mn (257.610 nm)	0.3431	0.17	103802.6277
	R2404658-002	Mo (202.032 nm)	0.0026	15.80	-8.6093
	R2404658-002	Na (588.995 nm)	23.8178	0.32	205419.1708
	R2404658-002	Ni (230.299 nm)	0.0171	2.42	240.3328
	R2404658-002	Pb (220.353 nm)	0.0004 u	> 100.00	6.3594
	R2404658-002	Sb (217.582 nm)	0.0040	72.50	13.0161
	R2404658-002	Se (196.026 nm)	0.0027	39.04	4.4082
	R2404658-002	Si (252.851 nm)	5.3574	0.15	17098.4043
	R2404658-002	Sn (189.925 nm)	0.0012	33.05	10.3061
	R2404658-002	Sr (216.596 nm)	0.3753	0.37	6156.3236
	R2404658-002	Ti (336.122 nm)	0.0007	66.57	175.0750
	R2404658-002	Tl (190.794 nm)	0.0005 u	> 100.00	-1.8555
	R2404658-002	V (292.401 nm)	0.0002	27.18	-17.9255
	R2404658-002	Y (360.074 nm)	1.00	0.46	544030.61
	R2404658-002	Y_R (360.074 nm)	1.00	0.46	542666.13
	R2404658-002	Zn (213.857 nm)	0.0004	16.73	-2.5246
6/5/2024 01:46:51	R2404658-003	Ag (328.068 nm)	0.0000 u	> 100.00	-245.5863
	R2404658-003	Al (237.312 nm)	0.0011	50.81	38.6540
	R2404658-003	As (188.980 nm)	0.0014 u	> 100.00	-7.1032
	R2404658-003	B (249.772 nm)	0.0601	0.26	1791.2743
	R2404658-003	Ba (230.424 nm)	0.0565	0.08	2186.1408
	R2404658-003	Be (313.107 nm)	0.0000 u	> 100.00	154.3195
	R2404658-003	Ca (317.933 nm)	62.6929 o	0.12	2176835.6354
	R2404658-003	Cd (214.439 nm)	0.0002	15.24	14.2299
	R2404658-003	Co (230.786 nm)	0.0005	81.51	-31.2139
	R2404658-003	Cr (267.716 nm)	0.0006	7.85	136.1722
	R2404658-003	Cu (327.395 nm)	0.0004	46.17	53.0688
	R2404658-003	Fe (234.350 nm)	0.0701	0.19	1270.8065
	R2404658-003	K (766.491 nm)	1.1808	2.47	950.4372
	R2404658-003	Mg (279.078 nm)	30.1305	0.07	88463.5078
	R2404658-003	Mn (257.610 nm)	0.1331	0.12	40291.4473
	R2404658-003	Mo (202.032 nm)	0.0016	32.95	-13.6739
	R2404658-003	Na (588.995 nm)	23.5004	0.42	202592.2073
	R2404658-003	Ni (230.299 nm)	0.0163	3.31	231.2647
	R2404658-003	Pb (220.353 nm)	0.0003 u	> 100.00	6.0437
	R2404658-003	Sb (217.582 nm)	0.0027	33.34	10.6552
	R2404658-003	Se (196.026 nm)	0.0002 u	> 100.00	2.8249
	R2404658-003	Si (252.851 nm)	5.2146	0.13	16642.5900
	R2404658-003	Sn (189.925 nm)	0.0000 u	> 100.00	7.4209
	R2404658-003	Sr (216.596 nm)	0.3734	0.22	6124.7004
	R2404658-003	Ti (336.122 nm)	0.0005	55.27	148.2841

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404658-003	Tl (190.794 nm)	0.0006	91.05	-1.7805
	R2404658-003	V (292.401 nm)	0.0003	88.04	-15.1665
	R2404658-003	Y (360.074 nm)	1.00	0.43	544747.27
	R2404658-003	Y_R (360.074 nm)	1.00	0.43	543304.10
	R2404658-003	Zn (213.857 nm)	0.0026	1.27	118.9446
6/5/2024 01:50:04	R2404658-004	Ag (328.068 nm)	0.0003	23.45	-228.8983
	R2404658-004	Al (237.312 nm)	0.0012 u	> 100.00	38.7357
	R2404658-004	As (188.980 nm)	0.0009 u	> 100.00	-7.7838
	R2404658-004	B (249.772 nm)	0.0614	0.39	1830.0653
	R2404658-004	Ba (230.424 nm)	0.0572	0.09	2212.8747
	R2404658-004	Be (313.107 nm)	0.0000	85.90	161.9025
	R2404658-004	Ca (317.933 nm)	63.5713 o	0.02	2207293.7434
	R2404658-004	Cd (214.439 nm)	0.0001	36.14	9.6544
	R2404658-004	Co (230.786 nm)	0.0006	25.20	-30.2993
	R2404658-004	Cr (267.716 nm)	0.0004	28.76	130.1633
	R2404658-004	Cu (327.395 nm)	0.0006	50.65	62.4715
	R2404658-004	Fe (234.350 nm)	0.0077	4.42	164.5986
	R2404658-004	K (766.491 nm)	1.2011	3.87	971.5630
	R2404658-004	Mg (279.078 nm)	30.5639	0.04	89736.7507
	R2404658-004	Mn (257.610 nm)	0.1324	0.10	40084.3722
	R2404658-004	Mo (202.032 nm)	0.0027	18.41	-8.0374
	R2404658-004	Na (588.995 nm)	23.8255	0.19	205487.9598
	R2404658-004	Ni (230.299 nm)	0.0170	6.52	238.4745
	R2404658-004	Pb (220.353 nm)	0.0005	48.51	6.8305
	R2404658-004	Sb (217.582 nm)	0.0016	64.85	8.6274
	R2404658-004	Se (196.026 nm)	-0.0028 u	45.57	0.9015
	R2404658-004	Si (252.851 nm)	5.2864	0.02	16871.6828
	R2404658-004	Sn (189.925 nm)	0.0006 u	> 100.00	8.7525
	R2404658-004	Sr (216.596 nm)	0.3781	0.22	6203.5298
	R2404658-004	Ti (336.122 nm)	0.0001 u	> 100.00	102.2101
	R2404658-004	Tl (190.794 nm)	0.0011 u	> 100.00	-1.3577
	R2404658-004	V (292.401 nm)	0.0003	60.33	-15.6436
	R2404658-004	Y (360.074 nm)	1.01	0.55	545282.92
	R2404658-004	Y_R (360.074 nm)	1.00	0.55	543814.72
	R2404658-004	Zn (213.857 nm)	0.0006	8.64	6.1684
6/5/2024 01:53:18	R2404693-011	Ag (328.068 nm)	0.0001	80.81	-242.7371
	R2404693-011	Al (237.312 nm)	0.0466	1.63	134.7697
	R2404693-011	As (188.980 nm)	0.0013 u	> 100.00	-7.3092
	R2404693-011	B (249.772 nm)	0.6216	0.15	18106.1561
	R2404693-011	Ba (230.424 nm)	0.0826	0.16	3210.2351
	R2404693-011	Be (313.107 nm)	0.0000	7.54	191.6970
	R2404693-011	Ca (317.933 nm)	231.0898 o	0.09	8016464.6653
	R2404693-011	Cd (214.439 nm)	0.0003	32.47	18.1057
	R2404693-011	Co (230.786 nm)	-0.0004 u	38.72	-44.6366
	R2404693-011	Cr (267.716 nm)	0.0014	7.27	170.2994
	R2404693-011	Cu (327.395 nm)	0.0009	13.02	72.4609
	R2404693-011	Fe (234.350 nm)	4.8381	0.08	85743.8033
	R2404693-011	K (766.491 nm)	43.4210	0.15	44853.3184
	R2404693-011	Mg (279.078 nm)	139.6577 o	0.04	410240.5663
	R2404693-011	Mn (257.610 nm)	0.0261	0.07	7910.6720
	R2404693-011	Mo (202.032 nm)	0.0015	26.45	-13.7962
	R2404693-011	Na (588.995 nm)	262.6839 o LR	0.18	2333386.5981
	R2404693-011	Ni (230.299 nm)	0.0466	1.07	554.5663
	R2404693-011	Pb (220.353 nm)	0.0008	25.03	8.2857
	R2404693-011	Sb (217.582 nm)	-0.0008 u	> 100.00	4.2665
	R2404693-011	Se (196.026 nm)	0.0001 u	> 100.00	2.7432
	R2404693-011	Si (252.851 nm)	6.6266	0.03	21150.8920

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404693-011	Sn (189.925 nm)	0.0008 u	> 100.00	9.3580
	R2404693-011	Sr (216.596 nm)	7.7054 o	0.09	127002.1479
	R2404693-011	Ti (336.122 nm)	0.0025	6.22	411.9789
	R2404693-011	Tl (190.794 nm)	0.0024	60.06	-0.2887
	R2404693-011	V (292.401 nm)	0.0002	58.24	-18.1617
	R2404693-011	Y (360.074 nm)	0.94	0.54	509631.43
	R2404693-011	Y_R (360.074 nm)	0.94	0.55	508385.79
	R2404693-011	Zn (213.857 nm)	0.0032	1.25	154.9420
6/5/2024 01:56:32	R2404693-011L 5X	Ag (328.068 nm)	0.0006	40.62	-216.7331
	R2404693-011L 5X	Al (237.312 nm)	-0.0058 u	27.69	23.9434
	R2404693-011L 5X	As (188.980 nm)	0.0036	8.06	-4.1643
	R2404693-011L 5X	B (249.772 nm)	-0.0012 u	7.29	11.4148
	R2404693-011L 5X	Ba (230.424 nm)	0.0002	32.19	-18.4681
	R2404693-011L 5X	Be (313.107 nm)	0.0000 u	> 100.00	143.6623
	R2404693-011L 5X	Ca (317.933 nm)	0.0041 u	> 100.00	2926.1875
	R2404693-011L 5X	Cd (214.439 nm)	0.0001	51.52	9.1886
	R2404693-011L 5X	Co (230.786 nm)	0.0013	6.80	-19.8466
	R2404693-011L 5X	Cr (267.716 nm)	-0.0005 u	20.22	89.9973
	R2404693-011L 5X	Cu (327.395 nm)	-0.0001 u	94.97	34.9195
	R2404693-011L 5X	Fe (234.350 nm)	-0.0006 u	> 100.00	17.6574
	R2404693-011L 5X	K (766.491 nm)	0.1257	5.06	-146.1044
	R2404693-011L 5X	Mg (279.078 nm)	0.0124	17.28	-19.7329
	R2404693-011L 5X	Mn (257.610 nm)	0.0000 u	> 100.00	21.6746
	R2404693-011L 5X	Mo (202.032 nm)	0.0015	17.93	-13.7089
	R2404693-011L 5X	Na (588.995 nm)	0.3362	5.86	-3768.8764
	R2404693-011L 5X	Ni (230.299 nm)	-0.0018 u	19.95	38.0372
	R2404693-011L 5X	Pb (220.353 nm)	0.0006	43.36	7.1430
	R2404693-011L 5X	Sb (217.582 nm)	-0.0014 u	82.11	3.2441
	R2404693-011L 5X	Se (196.026 nm)	-0.0041 u	33.38	0.0771
	R2404693-011L 5X	Si (252.851 nm)	0.0170	63.38	46.9348
	R2404693-011L 5X	Sn (189.925 nm)	-0.0016 u	1.64	3.7054
	R2404693-011L 5X	Sr (216.596 nm)	0.0010	10.23	-13.5578
	R2404693-011L 5X	Ti (336.122 nm)	-0.0009 u	6.22	-23.9925
	R2404693-011L 5X	Tl (190.794 nm)	0.0018	63.54	-0.7822
	R2404693-011L 5X	V (292.401 nm)	0.0004	47.93	-12.2362
	R2404693-011L 5X	Y (360.074 nm)	1.92	5.79	1042417.16
	R2404693-011L 5X	Y_R (360.074 nm)	1.92	5.78	1039161.14
	R2404693-011L 5X	Zn (213.857 nm)	-0.0002 u	24.94	-33.6966
6/5/2024 01:59:46	Continuing Calibration Verification1	Ag (328.068 nm)	0.4859	0.23	24877.9883
	Continuing Calibration Verification1	Al (237.312 nm)	9.7405	0.29	20635.4157
	Continuing Calibration Verification1	As (188.980 nm)	0.9532	0.60	1299.9904
	Continuing Calibration Verification1	B (249.772 nm)	2.4412	0.24	70979.4382
	Continuing Calibration Verification1	Ba (230.424 nm)	9.7875	0.47	383533.5461
	Continuing Calibration Verification1	Be (313.107 nm)	0.2336	0.31	238475.0169
	Continuing Calibration Verification1	Ca (317.933 nm)	25.0542	0.36	871606.1902
	Continuing Calibration Verification1	Cd (214.439 nm)	0.4761	0.29	24409.3734
	Continuing Calibration Verification1	Co (230.786 nm)	2.4120	0.55	34522.6972
	Continuing Calibration Verification1	Cr (267.716 nm)	0.4804	0.30	19670.6574
	Continuing Calibration Verification1	Cu (327.395 nm)	1.1977	0.12	46691.5847
	Continuing Calibration Verification1	Fe (234.350 nm)	4.8293	0.36	85588.0683
	Continuing Calibration Verification1	K (766.491 nm)	24.1584	0.21	24832.5017
	Continuing Calibration Verification1	Mg (279.078 nm)	24.3736	0.23	71550.5029
	Continuing Calibration Verification1	Mn (257.610 nm)	0.7158	0.32	216559.3872
	Continuing Calibration Verification1	Mo (202.032 nm)	2.5045	0.37	12223.3587
	Continuing Calibration Verification1	Na (588.995 nm)	25.1871	0.17	217618.2688
	Continuing Calibration Verification1	Ni (230.299 nm)	1.9789	0.35	21183.8736
	Continuing Calibration Verification1	Pb (220.353 nm)	0.4928	0.09	2358.1344

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Verification1	Sb (217.582 nm)	4.8644	0.24	8762.7133
	Continuing Calibration Verification1	Se (196.026 nm)	0.4788	1.02	310.9846
	Continuing Calibration Verification1	Si (252.851 nm)	9.7288	0.90	31056.0496
	Continuing Calibration Verification1	Sn (189.925 nm)	4.7739	0.26	11276.2777
	Continuing Calibration Verification1	Sr (216.596 nm)	2.3920	0.52	39404.6982
	Continuing Calibration Verification1	Ti (336.122 nm)	2.4723	0.20	320674.0993
	Continuing Calibration Verification1	Tl (190.794 nm)	0.9578	0.46	770.2842
	Continuing Calibration Verification1	V (292.401 nm)	2.4417	0.28	88310.3497
	Continuing Calibration Verification1	Y (360.074 nm)	1.00	0.47	544238.92
	Continuing Calibration Verification1	Y_R (360.074 nm)	1.00	0.47	542756.28
	Continuing Calibration Verification1	Zn (213.857 nm)	0.9432	0.61	52334.3674
6/5/2024 02:02:59	Continuing Calibration Blank1	Ag (328.068 nm)	0.0004	35.16	-228.4586
	Continuing Calibration Blank1	Al (237.312 nm)	0.0021	5.62	40.7543
	Continuing Calibration Blank1	As (188.980 nm)	0.0011	45.36	-7.5000
	Continuing Calibration Blank1	B (249.772 nm)	0.0008	49.49	69.8463
	Continuing Calibration Blank1	Ba (230.424 nm)	0.0010	3.87	13.3966
	Continuing Calibration Blank1	Be (313.107 nm)	0.0000	46.26	169.2295
	Continuing Calibration Blank1	Ca (317.933 nm)	0.0016	16.15	2839.4709
	Continuing Calibration Blank1	Cd (214.439 nm)	0.0001 u	> 100.00	6.4456
	Continuing Calibration Blank1	Co (230.786 nm)	0.0004	47.10	-32.8167
	Continuing Calibration Blank1	Cr (267.716 nm)	0.0002	70.79	120.7752
	Continuing Calibration Blank1	Cu (327.395 nm)	-0.0001 u	> 100.00	32.5886
	Continuing Calibration Blank1	Fe (234.350 nm)	0.0016	28.96	57.9209
	Continuing Calibration Blank1	K (766.491 nm)	0.0752	25.25	-198.6149
	Continuing Calibration Blank1	Mg (279.078 nm)	0.0041	25.02	-44.1236
	Continuing Calibration Blank1	Mn (257.610 nm)	0.0001	43.46	40.6636
	Continuing Calibration Blank1	Mo (202.032 nm)	0.0041	42.61	-1.0746
	Continuing Calibration Blank1	Na (588.995 nm)	0.1580	3.20	-5356.4370
	Continuing Calibration Blank1	Ni (230.299 nm)	0.0002 u	> 100.00	59.6390
	Continuing Calibration Blank1	Pb (220.353 nm)	0.0006 u	> 100.00	7.3336
	Continuing Calibration Blank1	Sb (217.582 nm)	0.0066	10.96	17.5456
	Continuing Calibration Blank1	Se (196.026 nm)	0.0008 u	> 100.00	3.1807
	Continuing Calibration Blank1	Si (252.851 nm)	0.0065	40.54	13.4062
	Continuing Calibration Blank1	Sn (189.925 nm)	0.0011	66.44	9.9588
	Continuing Calibration Blank1	Sr (216.596 nm)	0.0002	> 100.00	-26.8640
	Continuing Calibration Blank1	Ti (336.122 nm)	0.0022	48.22	374.1216
	Continuing Calibration Blank1	Tl (190.794 nm)	0.0005 u	> 100.00	-1.7833
	Continuing Calibration Blank1	V (292.401 nm)	0.0003	7.00	-14.9509
	Continuing Calibration Blank1	Y (360.074 nm)	1.05	0.43	567087.72
	Continuing Calibration Blank1	Y_R (360.074 nm)	1.04	0.43	565490.77
	Continuing Calibration Blank1	Zn (213.857 nm)	0.0002	13.20	-12.6210
6/5/2024 02:06:13	Contract Required Detection Limit	Ag (328.068 nm)	0.0088	0.77	205.9386
	Contract Required Detection Limit	Al (237.312 nm)	0.1949	0.47	448.4587
	Contract Required Detection Limit	As (188.980 nm)	0.0192	6.96	17.3855
	Contract Required Detection Limit	B (249.772 nm)	0.1901	0.16	5568.8522
	Contract Required Detection Limit	Ba (230.424 nm)	0.1971	0.28	7698.1832
	Contract Required Detection Limit	Be (313.107 nm)	0.0047	0.47	4968.7970
	Contract Required Detection Limit	Ca (317.933 nm)	1.0177	0.26	38075.0582
	Contract Required Detection Limit	Cd (214.439 nm)	0.0100	0.96	514.8220
	Contract Required Detection Limit	Co (230.786 nm)	0.0491	0.89	664.9801
	Contract Required Detection Limit	Cr (267.716 nm)	0.0088	0.62	470.6694
	Contract Required Detection Limit	Cu (327.395 nm)	0.0244	0.90	987.6179
	Contract Required Detection Limit	Fe (234.350 nm)	0.1023	1.02	1841.7109
	Contract Required Detection Limit	K (766.491 nm)	0.9466	1.76	707.0536
	Contract Required Detection Limit	Mg (279.078 nm)	0.9713	0.24	2797.4376
	Contract Required Detection Limit	Mn (257.610 nm)	0.0135	0.34	4099.3649
	Contract Required Detection Limit	Mo (202.032 nm)	0.0248	6.17	100.1184

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Contract Required Detection Limit	Na (588.995 nm)	1.1058	0.36	3087.0359
	Contract Required Detection Limit	Ni (230.299 nm)	0.0347	1.12	427.4476
	Contract Required Detection Limit	Pb (220.353 nm)	0.0102	1.67	53.1786
	Contract Required Detection Limit	Sb (217.582 nm)	0.0607	2.16	114.9452
	Contract Required Detection Limit	Se (196.026 nm)	0.0128 R	5.19	10.9267 R
	Contract Required Detection Limit	Si (252.851 nm)	0.0555	2.37	169.9526
	Contract Required Detection Limit	Sn (189.925 nm)	0.4760	0.48	1130.8812
	Contract Required Detection Limit	Sr (216.596 nm)	0.0953	0.25	1540.5801
	Contract Required Detection Limit	Ti (336.122 nm)	0.0482	1.15	6340.0432
	Contract Required Detection Limit	Tl (190.794 nm)	0.0202	4.62	14.0498
	Contract Required Detection Limit	V (292.401 nm)	0.0485	0.18	1728.5223
	Contract Required Detection Limit	Y (360.074 nm)	1.04	0.58	564491.35
	Contract Required Detection Limit	Y_R (360.074 nm)	1.04	0.58	562893.27
	Contract Required Detection Limit	Zn (213.857 nm)	0.0170	0.17	920.0776
6/5/2024 02:09:27	Interference Check Solution A	Ag (328.068 nm)	0.0001 u	> 100.00	-240.1617
	Interference Check Solution A	Al (237.312 nm)	246.2116 o	0.12	520722.1347
	Interference Check Solution A	As (188.980 nm)	-0.0031 u	44.17	-13.3331
	Interference Check Solution A	B (249.772 nm)	0.1015	0.10	2993.9161
	Interference Check Solution A	Ba (230.424 nm)	0.0002	69.66	-17.3427
	Interference Check Solution A	Be (313.107 nm)	0.0002	3.70	332.7909
	Interference Check Solution A	Ca (317.933 nm)	227.8980 o	0.29	7905779.3374
	Interference Check Solution A	Cd (214.439 nm)	-0.0006 u	4.97	-27.6566
	Interference Check Solution A	Co (230.786 nm)	-0.0006 u	66.25	-47.2225
	Interference Check Solution A	Cr (267.716 nm)	0.0039	3.64	271.6053
	Interference Check Solution A	Cu (327.395 nm)	0.0084	4.12	365.0098
	Interference Check Solution A	Fe (234.350 nm)	88.9072 o	0.32	1575158.0394
	Interference Check Solution A	K (766.491 nm)	-0.0061 u	> 100.00	-283.1746
	Interference Check Solution A	Mg (279.078 nm)	248.1563 o	0.21	728995.6898
	Interference Check Solution A	Mn (257.610 nm)	0.0010	1.91	331.4863
	Interference Check Solution A	Mo (202.032 nm)	-0.0058 u	4.43	-49.8102
	Interference Check Solution A	Na (588.995 nm)	0.1305	5.04	-5601.8605
	Interference Check Solution A	Ni (230.299 nm)	0.0043	9.87	103.1947
	Interference Check Solution A	Pb (220.353 nm)	0.0003 u	> 100.00	6.1377
	Interference Check Solution A	Sb (217.582 nm)	-0.0077 u	29.80	-8.0874
	Interference Check Solution A	Se (196.026 nm)	-0.0044 u	> 100.00	-0.1505
	Interference Check Solution A	Si (252.851 nm)	0.0469	7.14	142.5990
	Interference Check Solution A	Sn (189.925 nm)	0.0025	28.08	13.3403
	Interference Check Solution A	Sr (216.596 nm)	0.0094	1.25	125.0364
	Interference Check Solution A	Ti (336.122 nm)	0.0019	15.74	331.4305
	Interference Check Solution A	Tl (190.794 nm)	0.0015	> 100.00	-0.9767
	Interference Check Solution A	V (292.401 nm)	0.0020	9.53	48.1665
	Interference Check Solution A	Y (360.074 nm)	0.93	0.45	507249.58
	Interference Check Solution A	Y_R (360.074 nm)	0.93	0.45	505988.12
	Interference Check Solution A	Zn (213.857 nm)	0.0116 K	0.49	616.6083 K
6/5/2024 02:12:41	Interference Check Solution AB	Ag (328.068 nm)	0.1904	0.31	9597.5128
	Interference Check Solution AB	Al (237.312 nm)	247.7883 o	0.02	524056.5168
	Interference Check Solution AB	As (188.980 nm)	0.0959	1.54	122.6914
	Interference Check Solution AB	B (249.772 nm)	0.0990	0.17	2920.7202
	Interference Check Solution AB	Ba (230.424 nm)	0.5001	0.04	19572.5123
	Interference Check Solution AB	Be (313.107 nm)	0.4799	0.20	489665.1612
	Interference Check Solution AB	Ca (317.933 nm)	229.3524 o	0.22	7956213.4592
	Interference Check Solution AB	Cd (214.439 nm)	0.9182	0.22	47075.0582
	Interference Check Solution AB	Co (230.786 nm)	0.4653	0.17	6627.9070
	Interference Check Solution AB	Cr (267.716 nm)	0.4814	0.08	19712.3592
	Interference Check Solution AB	Cu (327.395 nm)	0.5263	0.02	20539.6892
	Interference Check Solution AB	Fe (234.350 nm)	89.6188 o	0.16	1587764.8074
	Interference Check Solution AB	K (766.491 nm)	-0.0157 u	> 100.00	-293.1292

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Interference Check Solution AB	Mg (279.078 nm)	249.8131 o	0.15	733863.1549
	Interference Check Solution AB	Mn (257.610 nm)	0.4749	0.13	143689.5522
	Interference Check Solution AB	Mo (202.032 nm)	-0.0063 u	16.47	-51.9432
	Interference Check Solution AB	Na (588.995 nm)	0.1155	1.68	-5735.3069
	Interference Check Solution AB	Ni (230.299 nm)	0.9447	0.07	10143.0134
	Interference Check Solution AB	Pb (220.353 nm)	0.0458	1.71	223.3394
	Interference Check Solution AB	Sb (217.582 nm)	0.6101	0.63	1104.0937
	Interference Check Solution AB	Se (196.026 nm)	0.0472	4.15	33.0571
	Interference Check Solution AB	Si (252.851 nm)	0.0786	1.11	243.7462
	Interference Check Solution AB	Sn (189.925 nm)	0.0031	63.37	14.5724
	Interference Check Solution AB	Sr (216.596 nm)	0.0097	2.28	129.3187
	Interference Check Solution AB	Ti (336.122 nm)	0.0017	11.76	305.3860
	Interference Check Solution AB	Tl (190.794 nm)	0.0986	2.62	77.2971
	Interference Check Solution AB	V (292.401 nm)	0.5011	0.20	18103.4784
	Interference Check Solution AB	Y (360.074 nm)	0.93	0.38	506444.96
	Interference Check Solution AB	Y_R (360.074 nm)	0.93	0.38	505143.30
	Interference Check Solution AB	Zn (213.857 nm)	0.9737	0.11	54025.3873
6/5/2024 02:15:55	Continuing Calibration Verification1	Ag (328.068 nm)	0.4846	0.14	24810.9985
	Continuing Calibration Verification1	Al (237.312 nm)	9.7365	0.04	20626.8263
	Continuing Calibration Verification1	As (188.980 nm)	0.9502	0.35	1295.8430
	Continuing Calibration Verification1	B (249.772 nm)	2.4329	0.05	70737.6437
	Continuing Calibration Verification1	Ba (230.424 nm)	9.7767	0.15	383110.4771
	Continuing Calibration Verification1	Be (313.107 nm)	0.2334	0.20	238189.9265
	Continuing Calibration Verification1	Ca (317.933 nm)	25.0107	0.24	870097.4757
	Continuing Calibration Verification1	Cd (214.439 nm)	0.4752	0.22	24362.8869
	Continuing Calibration Verification1	Co (230.786 nm)	2.4073	0.26	34455.2934
	Continuing Calibration Verification1	Cr (267.716 nm)	0.4794	0.26	19628.6861
	Continuing Calibration Verification1	Cu (327.395 nm)	1.1952	0.30	46594.8415
	Continuing Calibration Verification1	Fe (234.350 nm)	4.8422	0.23	85815.8140
	Continuing Calibration Verification1	K (766.491 nm)	24.0670	0.29	24737.5585
	Continuing Calibration Verification1	Mg (279.078 nm)	24.3208	0.17	71395.5035
	Continuing Calibration Verification1	Mn (257.610 nm)	0.7138	0.15	215938.7049
	Continuing Calibration Verification1	Mo (202.032 nm)	2.4974	0.28	12188.5427
	Continuing Calibration Verification1	Na (588.995 nm)	25.0411	0.22	216317.8759
	Continuing Calibration Verification1	Ni (230.299 nm)	1.9711	0.20	21100.8316
	Continuing Calibration Verification1	Pb (220.353 nm)	0.4929	0.49	2358.6065
	Continuing Calibration Verification1	Sb (217.582 nm)	4.8458	0.24	8729.1679
	Continuing Calibration Verification1	Se (196.026 nm)	0.4726	1.03	306.9632
	Continuing Calibration Verification1	Si (252.851 nm)	9.6625	0.76	30844.4298
	Continuing Calibration Verification1	Sn (189.925 nm)	4.7655	0.20	11256.3047
	Continuing Calibration Verification1	Sr (216.596 nm)	2.3798	0.08	39203.6790
	Continuing Calibration Verification1	Ti (336.122 nm)	2.4666	0.06	319929.2875
	Continuing Calibration Verification1	Tl (190.794 nm)	0.9604	0.36	772.3465
	Continuing Calibration Verification1	V (292.401 nm)	2.4373	0.16	88151.2770
	Continuing Calibration Verification1	Y (360.074 nm)	1.01	0.46	545971.88
	Continuing Calibration Verification1	Y_R (360.074 nm)	1.01	0.46	544481.01
	Continuing Calibration Verification1	Zn (213.857 nm)	0.9409	0.09	52204.9596
6/5/2024 02:19:08	Continuing Calibration Blank1	Ag (328.068 nm)	0.0003	24.33	-230.8595
	Continuing Calibration Blank1	Al (237.312 nm)	0.0024	76.11	41.2513
	Continuing Calibration Blank1	As (188.980 nm)	0.0032	23.28	-4.6488
	Continuing Calibration Blank1	B (249.772 nm)	0.0008	48.24	67.9021
	Continuing Calibration Blank1	Ba (230.424 nm)	0.0010	9.51	11.3532
	Continuing Calibration Blank1	Be (313.107 nm)	0.0000	22.57	164.7010
	Continuing Calibration Blank1	Ca (317.933 nm)	0.0027	12.94	2878.1824
	Continuing Calibration Blank1	Cd (214.439 nm)	0.0001	38.72	9.8996
	Continuing Calibration Blank1	Co (230.786 nm)	0.0005	40.15	-31.9913
	Continuing Calibration Blank1	Cr (267.716 nm)	0.0001	35.07	118.0535

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Blank1	Cu (327.395 nm)	0.0001	> 100.00	40.7071
	Continuing Calibration Blank1	Fe (234.350 nm)	0.0029	29.04	79.7198
	Continuing Calibration Blank1	K (766.491 nm)	0.0269	86.46	-248.8778
	Continuing Calibration Blank1	Mg (279.078 nm)	0.0054	27.87	-40.1897
	Continuing Calibration Blank1	Mn (257.610 nm)	0.0001	16.47	42.4977
	Continuing Calibration Blank1	Mo (202.032 nm)	0.0045	24.05	0.7302
	Continuing Calibration Blank1	Na (588.995 nm)	0.1209	2.92	-5687.3705
	Continuing Calibration Blank1	Ni (230.299 nm)	0.0003	41.20	60.9620
	Continuing Calibration Blank1	Pb (220.353 nm)	0.0004	> 100.00	6.2419
	Continuing Calibration Blank1	Sb (217.582 nm)	0.0056	49.53	15.8195
	Continuing Calibration Blank1	Se (196.026 nm)	-0.0024 u	> 100.00	1.1722
	Continuing Calibration Blank1	Si (252.851 nm)	0.0039	59.14	5.2785
	Continuing Calibration Blank1	Sn (189.925 nm)	0.0004 u	> 100.00	8.2787
	Continuing Calibration Blank1	Sr (216.596 nm)	0.0003	25.81	-25.9631
	Continuing Calibration Blank1	Ti (336.122 nm)	0.0022	49.51	368.2570
	Continuing Calibration Blank1	Tl (190.794 nm)	0.0013	47.76	-1.1966
	Continuing Calibration Blank1	V (292.401 nm)	0.0003	73.57	-15.6260
	Continuing Calibration Blank1	Y (360.074 nm)	1.05	0.53	568733.44
	Continuing Calibration Blank1	Y_R (360.074 nm)	1.05	0.53	567149.23
	Continuing Calibration Blank1	Zn (213.857 nm)	0.0002	10.62	-11.7517

Summary Calibration Results

Element and wavelength	Type	Units	Equation	Correlation Coefficient	%RSE
Ag (328.068 nm)	Analyte	ppm	51703.03760558 * Concentration - 246.84008103	0.99999	1.56663698
Al (237.312 nm)	Analyte	ppm	2114.79069245 * Concentration + 36.22341318	1.00000	1.22758187
As (188.980 nm)	Analyte	ppm	1373.30705455 * Concentration - 9.04834743	1.00000	5.20784371
B (249.772 nm)	Analyte	ppm	29056.80402759 * Concentration + 45.47017346	1.00000	1.49215760
Ba (230.424 nm)	Analyte	ppm	39188.90276776 * Concentration - 27.06716957	0.99990	4.71721541
Be (313.107 nm)	Analyte	ppm	1020008.71323112 * Concentration + 153.90909533	0.99999	3.44497217
Ca (317.933 nm)	Analyte	ppm	34677.77794027 * Concentration + 2783.53467236	0.99996	5.00853556
Cd (214.439 nm)	Analyte	ppm	51265.61832677 * Concentration + 3.79564389	0.99996	4.83951734
Co (230.786 nm)	Analyte	ppm	14329.01085770 * Concentration - 38.98731649	0.99994	4.21394617
Cr (267.716 nm)	Analyte	ppm	40714.06765032 * Concentration + 112.15199652	0.99997	3.48039042
Cu (327.395 nm)	Analyte	ppm	38952.36417167 * Concentration + 37.30262703	1.00000	1.57034967
Fe (234.350 nm)	Analyte	ppm	17716.54774948 * Concentration + 28.79366172	0.99996	3.60711128
K (766.491 nm)	Analyte	ppm	1039.36267320 * Concentration - 276.79849438	0.99999	5.25613342
Mg (279.078 nm)	Analyte	ppm	2937.87298749 * Concentration - 56.05922947	0.99999	2.09723785
Mn (257.610 nm)	Analyte	ppm	302504.18564957 * Concentration + 22.00582342	0.99996	3.76462307
Mo (202.032 nm)	Analyte	ppm	4888.99235304 * Concentration - 21.27057920	0.99999	1.10136618
Na (588.995 nm)	Analyte	ppm	8908.61701932 * Concentration - 6764.06634174	1.00000	2.34149073
Ni (230.299 nm)	Analyte	ppm	10675.72259117 * Concentration + 57.41388167	0.99995	3.55023567
Pb (220.353 nm)	Analyte	ppm	4775.92141355 * Concentration + 4.48675166	0.99996	12.845389 81
Sb (217.582 nm)	Analyte	ppm	1800.21869784 * Concentration + 5.73801625	0.99999	1.20159830
Se (196.026 nm)	Analyte	ppm	643.83791011 * Concentration + 2.68579533	0.99998	10.934740 43
Si (252.851 nm)	Analyte	ppm	3192.92551666 * Concentration - 7.30465404	1.00000	0.70163811
Sn (189.925 nm)	Analyte	ppm	2360.51459783 * Concentration + 7.37111914	0.99996	2.61393650
Sr (216.596 nm)	Analyte	ppm	16486.08341324 * Concentration - 30.38061795	0.99996	3.06032471
Ti (336.122 nm)	Analyte	ppm	129671.26647821 * Concentration + 87.04279725	0.99999	1.34552551
Tl (190.794 nm)	Analyte	ppm	806.50877124 * Concentration - 2.22616269	0.99993	3.91772774
V (292.401 nm)	Analyte	ppm	36178.01869192 * Concentration - 24.91949436	0.99999	1.60205345
Zn (213.857 nm)	Analyte	ppm	55512.38509766 * Concentration - 24.82156460	0.99999	1.44028282

Detailed Calibration Results

Ag (328.068 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	-246.8401	0.0000	0.0000	N/A
Standard 2	261.6643	0.0100	0.0098	1.6490
Standard 3	796.8193	0.0200	0.0202	0.9282
Standard 4	4848.5649	0.1000	0.0986	1.4486
Standard 5	10119.2794	0.2000	0.2005	0.2467
Standard 6	50797.5734	1.0000	0.9873	1.2739

Al (237.312 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	36.2234	0.0000	0.0000	N/A
Standard 1	246.3566	0.1000	0.0994	0.6364
Standard 2	463.0274	0.2000	0.2018	0.9093
Standard 3	895.7463	0.4000	0.4064	1.6085
Standard 4	4222.7330	2.0000	1.9796	1.0183
Standard 5	8538.8370	4.0000	4.0205	0.5137
Standard 6	41929.0337	20.0000	19.8094	0.9528

As (188.980 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	-9.0483	0.0000	0.0000	N/A
Standard 1	3.5237	0.0100	0.0092	8.4542
Standard 2	18.5361	0.0200	0.0201	0.4309
Standard 3	42.5845	0.0400	0.0376	6.0063
Standard 4	263.7208	0.2000	0.1986	0.6889
Standard 5	542.9843	0.4000	0.4020	0.4933
Standard 6	2732.4595	2.0000	1.9963	0.1859

B (249.772 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	45.4702	0.0000	0.0000	N/A
Standard 2	2889.8155	0.1000	0.0979	2.1109
Standard 3	5820.6653	0.2000	0.1988	0.6223
Standard 4	28760.5419	1.0000	0.9882	1.1761
Standard 5	58406.4074	2.0000	2.0085	0.4256
Standard 6	292129.5950	10.0000	10.0522	0.5218

Ba (230.424 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	-27.0672	0.0000	0.0000	N/A
Standard 1	771.8653	0.0200	0.0204	1.9335
Standard 2	8161.8170	0.2000	0.2090	4.4796
Standard 3	16579.3496	0.4000	0.4238	5.9383
Standard 4	80333.5831	2.0000	2.0506	2.5299
Standard 5	163079.6419	4.0000	4.1621	4.0516
Standard 6	762830.6453	20.0000	19.4662	2.6692

Be (313.107 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	153.9091	0.0000	0.0000	N/A
Standard 1	3015.1019	0.0030	0.0028	6.4978
Standard 2	5232.4186	0.0050	0.0050	0.4222
Standard 3	10494.6216	0.0100	0.0101	1.3787
Standard 4	50824.3743	0.0500	0.0497	0.6470
Standard 5	103348.9206	0.1000	0.1012	1.1707
Standard 6	504162.3341	0.5000	0.4941	1.1757

Ca (317.933 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	2783.5347	0.0000	0.0000	N/A
Standard 2	21046.0591	0.5000	0.5266	5.3270
Standard 3	39089.3486	1.0000	1.0469	4.6948
Standard 4	180865.3213	5.0000	5.1353	2.7066
Standard 5	364013.8772	10.0000	10.4168	4.1677
Standard 6	1730091.5060	50.0000	49.8102	0.3795

Cd (214.439 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	3.7956	0.0000	0.0000	N/A
Standard 1	279.1624	0.0050	0.0054	7.4275
Standard 2	536.0912	0.0100	0.0104	3.8309
Standard 3	1064.8738	0.0200	0.0207	3.4883

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Standard 4	5110.5876	0.1000	0.0996	0.3856
Standard 5	10345.5116	0.2000	0.2017	0.8641
Standard 6	49586.4187	1.0000	0.9672	3.2829

Co (230.786 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	-38.9873	0.0000	0.0000	N/A
Standard 2	706.0083	0.0500	0.0520	3.9842
Standard 3	1461.0999	0.1000	0.1047	4.6888
Standard 4	7217.2220	0.5000	0.5064	1.2800
Standard 5	14582.0445	1.0000	1.0204	2.0380
Standard 6	69383.7827	5.0000	4.8449	3.1018

Cr (267.716 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	112.1520	0.0000	0.0000	N/A
Standard 2	533.5277	0.0100	0.0103	3.4964
Standard 3	952.0234	0.0200	0.0206	3.1426
Standard 4	4134.8522	0.1000	0.0988	1.1963
Standard 5	8258.4515	0.2000	0.2001	0.0428
Standard 6	39369.2674	1.0000	0.9642	3.5785

Cu (327.395 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	37.3026	0.0000	0.0000	N/A
Standard 1	436.9318	0.0100	0.0103	2.5943
Standard 2	1017.2939	0.0250	0.0252	0.6348
Standard 3	2000.3226	0.0500	0.0504	0.7908
Standard 4	9655.9209	0.2500	0.2469	1.2269
Standard 5	19621.0200	0.5000	0.5028	0.5521
Standard 6	96889.3519	2.5000	2.4864	0.5431

Fe (234.350 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	28.7937	0.0000	0.0000	N/A
Standard 2	1859.4728	0.1000	0.1033	3.3316
Standard 3	3714.8886	0.2000	0.2081	4.0297
Standard 4	18043.4152	1.0000	1.0168	1.6825
Standard 5	36292.6275	2.0000	2.0469	2.3445
Standard 6	173942.8480	10.0000	9.8165	1.8352

K (766.491 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	-276.7985	0.0000	0.0000	N/A
Standard 2	202.2630	0.5000	0.4609	7.8163
Standard 3	727.4531	1.0000	0.9662	3.3781
Standard 4	4766.6335	5.0000	4.8524	2.9514
Standard 5	10028.2967	10.0000	9.9148	0.8518
Standard 6	52194.6260	50.0000	50.4842	0.9685

Mg (279.078 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	-56.0592	0.0000	0.0000	N/A
Standard 2	1443.0558	0.5000	0.5103	2.0544
Standard 3	2954.1545	1.0000	1.0246	2.4624
Standard 4	14700.5104	5.0000	5.0229	0.4575
Standard 5	29692.6918	10.0000	10.1259	1.2595
Standard 6	145286.0144	50.0000	49.4719	1.0563

Mn (257.610 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	22.0058	0.0000	0.0000	N/A
Standard 1	3128.0481	0.0100	0.0103	2.6777
Standard 2	4729.6304	0.0150	0.0156	3.7479
Standard 3	9541.9085	0.0300	0.0315	4.9011
Standard 4	46107.7252	0.1500	0.1523	1.5649
Standard 5	92973.3614	0.3000	0.3073	2.4243
Standard 6	445754.9882	1.5000	1.4735	1.7682

Mo (202.032 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	-21.2706	0.0000	0.0000	N/A
Standard 1	100.2629	0.0250	0.0249	0.5656
Standard 2	220.9055	0.0500	0.0495	0.9301
Standard 3	472.1490	0.1000	0.1009	0.9246
Standard 4	2424.4638	0.5000	0.5003	0.0507
Standard 5	4947.8687	1.0000	1.0164	1.6393
Standard 6	24338.2332	5.0000	4.9825	0.3496

Na (588.995 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	-6764.0663	0.0000	0.0000	N/A
Standard 2	-2430.2004	0.5000	0.4865	2.7040
Standard 3	1965.9120	1.0000	0.9799	2.0052
Standard 4	37075.2560	5.0000	4.9210	1.5800
Standard 5	83467.3578	10.0000	10.1286	1.2856
Standard 6	443045.7473	50.0000	50.4915	0.9831

Ni (230.299 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	57.4139	0.0000	0.0000	N/A
Standard 2	493.7530	0.0400	0.0409	2.1802
Standard 3	949.8691	0.0800	0.0836	4.4959
Standard 4	4384.7923	0.4000	0.4053	1.3369
Standard 5	8773.6750	0.8000	0.8165	2.0570
Standard 6	41644.4988	4.0000	3.8955	2.6130

Pb (220.353 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	4.4868	0.0000	0.0000	N/A
Standard 1	33.5051	0.0050	0.0061	21.5195
Standard 2	57.8222	0.0100	0.0112	11.6758
Standard 3	105.8962	0.0200	0.0212	6.1674
Standard 4	494.2636	0.1000	0.1026	2.5513

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Standard 5	997.5207	0.2000	0.2079	3.9626
Standard 6	4751.9889	1.0000	0.9940	0.5951

Sb (217.582 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	5.7380	0.0000	0.0000	N/A
Standard 1	115.6595	0.0600	0.0611	1.7668
Standard 2	185.1134	0.1000	0.0996	0.3591
Standard 3	367.7120	0.2000	0.2011	0.5361
Standard 4	1790.8790	1.0000	0.9916	0.8375
Standard 5	3648.0794	2.0000	2.0233	1.1639
Standard 6	17931.2445	10.0000	9.9574	0.4260

Se (196.026 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	2.6858	0.0000	0.0000	N/A
Standard 2	9.4468	0.0100	0.0105	5.0107
Standard 3	13.2337	0.0200	0.0164	18.0856
Standard 4	65.8690	0.1000	0.0981	1.8647
Standard 5	133.6507	0.2000	0.2034	1.7064
Standard 6	648.7697	1.0000	1.0035	0.3488

Si (252.851 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	-7.3047	0.0000	0.0000	N/A
Standard 2	1583.3858	0.5000	0.4982	0.3616
Standard 3	3195.7720	1.0000	1.0032	0.3179
Standard 4	15819.5214	5.0000	4.9568	0.8632
Standard 5	31959.0200	10.0000	10.0116	0.1161
Standard 6	158525.3953	50.0000	49.6512	0.6975

Sn (189.925 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	7.3711	0.0000	0.0000	N/A
Standard 2	243.5161	0.1000	0.1000	0.0396
Standard 3	488.8708	0.2000	0.2040	1.9904
Standard 4	2365.3941	1.0000	0.9989	0.1056
Standard 5	4745.8797	2.0000	2.0074	0.3702
Standard 6	22656.9748	10.0000	9.5952	4.0480

Sr (216.596 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	-30.3806	0.0000	0.0000	N/A
Standard 2	814.6845	0.0500	0.0513	2.5186
Standard 3	1674.9413	0.1000	0.1034	3.4401
Standard 4	8270.3735	0.5000	0.5035	0.7001
Standard 5	16743.6787	1.0000	1.0175	1.7468
Standard 6	80318.3171	5.0000	4.8737	2.5254

Ti (336.122 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	87.0428	0.0000	0.0000	N/A
Standard 2	6553.6955	0.0500	0.0499	0.2608

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Standard 3	13225.4833	0.1000	0.1013	1.3211
Standard 4	64638.4834	0.5000	0.4978	0.4383
Standard 5	131717.3706	1.0000	1.0151	1.5108
Standard 6	641510.9408	5.0000	4.9465	1.0692

Tl (190.794 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	-2.2262	0.0000	0.0000	N/A
Standard 1	6.2859	0.0100	0.0106	5.5418
Standard 2	13.5272	0.0200	0.0195	2.3364
Standard 3	30.8613	0.0400	0.0410	2.5637
Standard 4	161.5519	0.2000	0.2031	1.5352
Standard 5	329.0102	0.4000	0.4107	2.6760
Standard 6	1562.0415	2.0000	1.9396	3.0223

V (292.401 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	-24.9195	0.0000	0.0000	N/A
Standard 2	1792.4926	0.0500	0.0502	0.4705
Standard 3	3669.9131	0.1000	0.1021	2.1292
Standard 4	18153.4522	0.5000	0.5025	0.4940
Standard 5	36721.6996	1.0000	1.0157	1.5717
Standard 6	179996.5535	5.0000	4.9760	0.4802

Zn (213.857 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	-24.8216	0.0000	0.0000	N/A
Standard 2	1068.1255	0.0200	0.0197	1.5583
Standard 3	2190.5136	0.0400	0.0399	0.2324
Standard 4	10933.1344	0.2000	0.1974	1.3017
Standard 5	22261.1372	0.4000	0.4015	0.3648
Standard 6	109464.1433	2.0000	1.9723	1.3833

Preparation Information Benchsheet

Prep Run#: 439313
Team: Metals/CDISTEFANO

Prep WorkFlow: MetDigAqICP
Prep Method: EPA 200.2

Status: Prepped
Prep Date/Time: 5/31/24 09:14

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ2406088-01	MB		10mL	200.7/Al T, As T, B T, Ba T, Ca T, Cd T, Co T, Cr T, Fe T, Mg T, Mn T, Na T, Ni T, Sb T, V T, Zn T	<2			10.00mL	Colorless-Clear		
2	RQ2406088-02	LCS		10mL	200.7/Al T, As T, B T, Ba T, Ca T, Cd T, Co T, Cr T, Fe T, Mg T, Mn T, Na T, Ni T, Sb T, V T, Zn T	<2			10.00mL	Colorless-Clear	0.1000 mL/233429; 0.1000 mL/234839; 0.1000 mL/235403	On HB:12:39 Off HB:14:39 Pipet/Repipettor:M33,M39
3	R2404597-001	Hiram Hollow TS Leachate	.06	10mL	200.7/Al T, As T, B T, Ba T, Ca T, Co T, Cr T, Fe T, Mg T, Mn T, Na T, Ni T, Sb T, V T, Zn T	<2			10.00mL	Grey-Cloudy/Colorless-Cloudy		
4	R2404605-001	7670-02	.01	10mL	200.7/Na T	<2			10.00mL	Colorless-Clear		
5	R2404633-001	RW2	.03	10mL	200.7/Ba T, Ca T, Cd T, Cr T, Fe T, Mg T, Mn T, Na T	<2			10.00mL	Colorless-Clear		
6	R2404633-002	RW10	.12	10mL	200.7/Ba T, Ca T, Cd T, Cr T, Fe T, Mg T, Mn T, Na T	<2			10.00mL	Colorless-Clear		
7	R2404634-001	#7	.13	10mL	200.7/Ba T, Ca T, Cd T, Cr T, Fe T, Mg T, Mn T, Na T	<2			10.00mL	Colorless-Clear		
8	R2404634-002	#11	.13	10mL	200.7/Ba T, Ca T, Cd T, Cr T, Fe T, Mg T, Mn T, Na T	<2			10.00mL	Colorless-Clear		
9	R2404634-003	#13	.13	10mL	200.7/Ba T, Ca T, Cd T, Cr T, Fe T, Mg T, Mn T, Na T	<2			10.00mL	Colorless-Clear		
10	R2404634-004	#17	.13	10mL	200.7/Ba T, Ca T, Cd T, Cr T, Fe T, Mg T, Mn T, Na T	<2			10.00mL	Colorless-Clear		
11	R2404634-005	#19	.13	10mL	200.7/Ba T, Ca T, Cd T, Cr T, Fe T, Mg T, Mn T, Na T	<2			10.00mL	Colorless-Clear		
12	R2404634-006	#28	.13	10mL	200.7/Ba T, Ca T, Cd T, Cr T, Fe T, Mg T, Mn T, Na T	<2			10.00mL	Colorless-Cloudy/Colorless-Clear		
13	RQ2406088-03	R2404634-006 MS	.13	10mL	200.7/Ba T, Ca T, Cd T, Cr T, Fe T, Mg T, Mn T, Na T	<2			10.00mL	Colorless-Cloudy/Colorless-Clear	0.1000 mL/235403; 0.1000 mL/233429; 0.1000 mL/234839	
14	RQ2406088-04	R2404634-006 DMS	.13	10mL	200.7/Ba T, Ca T, Cd T, Cr T, Fe T, Mg T, Mn T, Na T	<2			10.00mL	Colorless-Cloudy/Colorless-Clear	0.1000 mL/234839; 0.1000 mL/233429; 0.1000 mL/235403	

Spiking Solutions

Name:	Custom LCS STD A Metals	Inventory ID	233429	Logbook Ref:	233429	Expires On:	07/31/2025 Lot #: 2400837-5
Name:	Custom LCS STD B Metals	Inventory ID	234839	Logbook Ref:	234839	Expires On:	11/02/2024
Name:	C Spike	Inventory ID	235403	Logbook Ref:	235403	Expires On:	11/18/2024

Preparation Materials

1:1 HCl Metals Grade	1:1 223283 (233826)	:1 Nitric Acid Metals Grade	1:1 233477 (234026)	Hot Block Cups	10mL Lot J596944-5447 (234905)
Thermometer	401 (182586)				

Preparation Information Benchsheet

Prep Run#: 439313
Team: Metals/CDISTEFANO

Prep WorkFlow: MetDigAqICP
Prep Method:

Status: Prepped
Prep Date/Time: 5/31/24 09:14

Preparation Steps

Step: Digestion
Started: 5/31/24 09:14
Finished: 5/31/24 15:13
By: CDISTEFANO
Comments

4597 6/10
4605 6/10
4634 6/10
4633 6/10 (NA)
ICP

Comments:

Reviewed By: Nicole Mansen Date: 6/3/24

Chain of Custody

Relinquished By: CS Date: 5/31/24
Received By: R-A01 Date: 5/31/24

Extracts Examined
Yes No

Preparation Information Benchsheet

Prep Run#: 439397
Team: Metals/CDISTEFANO

Prep WorkFlow: MetDigAqICP
Prep Method: EPA 3005A/3010A

Status: Prepped
Prep Date/Time: 6/3/24 11:52

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ2406200-01	MB		50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Sr T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear		HB:1 Well:B1 Temp:91.8C
2	RQ2406200-02	LCS		50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Sr T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear	0.5000 mL/235516; 0.5000 mL/233429; 0.5000 mL/235403	On HB:18:02 HB Shutoff:4:02 Pipet/Repipettor:M340,MA100,M23
3	RQ2406200-03	DLCS		50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Sr T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear	0.5000 mL/235516; 0.5000 mL/233429; 0.5000 mL/235403	
4	R2404637-001	BI-1	.06	50mL	6010C/Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Clear		
5	R2404637-002	BI-2	.06	50mL	6010C/Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Clear		
6	R2404637-003	BI-4	.06	50mL	6010C/Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Clear		
7	R2404637-004	BI-7	.06	50mL	6010C/Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Clear		
8	R2404637-005	BI-10	.06	50mL	6010C/Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Clear		
9	R2404638-001	River Upstream	.14	50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear		
10	R2404638-002	River Downstream	.14	50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear		
11	R2404639-001	OW-27	.01	50mL	6010C/Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Cloudy/Colorless-Clear		
12	R2404639-002	OW-15	.01	50mL	6010C/Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Cloudy/Colorless-Clear		
13	R2404639-003	OW-4	.01	50mL	6010C/Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Clear		
14	R2404639-004	SW-4	.01	50mL	6010C/Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Cloudy/Colorless-Clear		
15	R2404639-005	SW-5	.01	50mL	6010C/Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Tan-Cloudy/Colorless-Cloudy		
16	R2404639-006	MW-10A	.01	50mL	6010C/Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Cloudy/Colorless-Cloudy		

Preparation Information Benchsheet

Prep Run#: 439397
Team: Metals/CDISTEFANO

Prep WorkFlow: MetDigAqICP
Prep Method: EPA 3005A/3010A

Status: Prepped
Prep Date/Time: 6/3/24 11:52

17	R2404647-002	Secondary leachate Cell 6	.09	50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Ti T, V T, Zn T	<2			50.00mL	Orange-Cloudy/Colorless-Cloudy		
18	R2404647-003	Primary Leachate Cell 6	.09	50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Ti T, V T, Zn T	<2			50.00mL	Orange-Cloudy/Colorless-Cloudy		
19	R2404647-004	Total Leachate	.09	50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Ti T, V T, Zn T	<2			50.00mL	Orange-Cloudy/Colorless-Clear		
20	R2404647-005	Gas Condensate	.12	50mL	6010C/Al T, As T, Ca T, Cd T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T	<2			50.00mL	Colorless-Cloudy/Colorless-Clear		
21	R2404677-001	Weekly Concentrate	.02	50mL	6010C/Al T, B T, Ba T, Ca T, Fe T, K T, Mg T, Mn T, Na T, Sr T	<2			50.00mL	Orange-Cloudy/Colorless-Cloudy		

Spiking Solutions

Name:	Custom LCS STD A Metals	Inventory ID	233429	Logbook Ref:	233429	Expires On:	07/31/2025	Lot #: 2400837-5
Name:	C Spike	Inventory ID	235403	Logbook Ref:	235403	Expires On:	11/18/2024	
Name:	Custom LCS STD B Metals	Inventory ID	235516	Logbook Ref:	235516	Expires On:	11/02/2024	

Preparation Materials

1:1 HCl Metals Grade	1:1 223283 (233826)	Hot Block Cups	50mL Lot 2211204 (234023)	Nitric Acid Metals Grade HNO3 233477 (233477)
Thermometer	460 (230830)			

Preparation Steps

Step: Digestion
Started: 6/3/24 11:52
Finished: 6/4/24 12:29
By: CDISTEFANO
Comments

Comments: _____

Reviewed By: Nicole Mansen Date: 6/4/24

Preparation Information Benchsheet

Prep Run#: 439397
Team: Metals/CDISTEFANO

Prep WorkFlow: MetDigAqICP
Prep Method: EPA 3005A/3010A

Status: Prepped
Prep Date/Time: 6/3/24 11:52

4637 6/10
4638 6/10
4639 6/10
4647 6/10
4677 6/7 * RUSH

Chain of Custody

Relinquished By:		Date:	6/4/24	Extracts Examined
Received By:		Date:	6/4/24	Yes No

Preparation Information Benchsheet

Prep Run#: 439399
Team: Metals/CDISTEFANO

Prep WorkFlow: MetDigAqICP
Prep Method: EPA 3005A/3010A

Status: Prepped
Prep Date/Time: 6/3/24 11:52

#	Lab Code	Client ID		B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ2406179-01	MB			50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		HB:11 Well:B1 Temp:93.9C
2	RQ2406179-02	LCS			50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear	0.5000 mL/235516; 0.5000 mL/233429; 0.5000 mL/235403	On HB:18:02 HB Shutoff:4:02 Pipet/Repipettor:M340,MA100,M23
3	RQ2406179-03	DLCS			50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear	0.5000 mL/235403; 0.5000 mL/235516; 0.5000 mL/233429	
4	R2404655-001	MW-07S		.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		
5	R2404655-002	EB-01		.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		
6	R2404655-003	MW-18S		.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		
7	R2404655-004	MW-08SR		.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		
8	R2404655-005	MW-14D		.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		
9	R2404655-006	MW-14S		.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		
10	R2404655-007	MW-27S		.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		
11	R2404655-008	MW-27D		.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		
12	R2404655-009	MW-13S		.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		
13	R2404655-010	MW-13D		.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Cloudy/Colorless-Cloudy		
14	R2404655-011	MW-24S		.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		
15	R2404655-012	MW-16S		.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		
16	R2404655-013	MW-15S		.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		
17	R2404655-014	MW-15D		.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		
18	R2404655-015	MW-17S		.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		
19	R2404655-016	DUP-01		.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		
20	R2404655-017	MW-32D		.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		
21	R2404655-018	MW-32S		.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		
22	R2404655-019	MW-31S		.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		
23	R2404655-020	MW-31D		.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		

Preparation Information Benchsheet

Prep Run#: 439399
Team: Metals/CDISTEFANO

Prep WorkFlow: MetDigAqICP
Prep Method: EPA 3005A/3010A

Status: Prepped
Prep Date/Time: 6/3/24 11:52

Spiking Solutions

Name:	Custom LCS STD A Metals	Inventory ID	233429	Logbook Ref:	233429	Expires On:	07/31/2025	Lot #: 2400837-5
Name:	C Spike	Inventory ID	235403	Logbook Ref:	235403	Expires On:	11/18/2024	
Name:	Custom LCS STD B Metals	Inventory ID	235516	Logbook Ref:	235516	Expires On:	11/02/2024	

Preparation Materials

1:1 HCl Metals Grade	1:1 223283 (233826)	Hot Block Cups	50mL Lot L223102601 (235558)	Nitric Acid Metals Grade HNO3	233477 (233477)
Thermometer	461 (230831)				

Preparation Steps

Step: Digestion
Started: 6/3/24 11:52
Finished: 6/4/24 12:41
By: CDISTEFANO
Comments

41655 6/11

Comments:

Reviewed By: Nicole Maasen Date: 6/4/24

Chain of Custody

Relinquished By: Date: 6/4/24

Received By: R-Aoi Date: 6/4/24

Extracts Examined
Yes No

Preparation Information Benchsheet

Prep Run#: 439398
Team: Metals/CDISTEFANO

Prep WorkFlow: MetDigAqICP
Prep Method: EPA 3005A/3010A

Status: Prepped
Prep Date/Time: 6/3/24 11:52

#	Lab Code	Client ID		B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ2406181-01	MB			50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Mo T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Sr T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear		HB:1 Well:B1 Temp:91.8C
2	RQ2406181-02	LCS			50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Mo T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Sr T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear	0.5000 mL/235516; 0.5000 mL/233429; 0.5000 mL/235403	On HB:18:02 HB Shutoff:4:02 Pipet/Repipettor:M340,MA100,M23
3	R2404632-001	MH4		.06	50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear		Tier IV
4	R2404643-001	SCA-PAR0038-01		.05	50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear		Tier IV
5	R2404643-002	SCA-PAR0038-02		.05	50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear		
6	RQ2406181-03	R2404643-002	MS	.05	50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear	0.5000 mL/235403; 0.5000 mL/235516; 0.5000 mL/233429	
7	RQ2406181-04	R2404643-002	DMS	.05	50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear	0.5000 mL/233429; 0.5000 mL/235403; 0.5000 mL/235516	
8	R2404651-001	1405280845C400-GV-125		.02	50mL	6010C/Ag T, Al T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Mo T, Na T, Ni T, Pb T, Se T, Sn T, Sr T, V T, Zn T	<2			50.00mL	Colorless-Clear		
9	R2404651-002	1405280846C400-GV-125		.02	50mL	6010C/Ag T, Al T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Mo T, Na T, Ni T, Pb T, Se T, Sn T, Sr T, V T, Zn T	<2			50.00mL	Colorless-Clear		
10	R2404651-003	1405280857A400-FV-131		.02	50mL	6010C/Ag T, Al T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Mo T, Na T, Ni T, Pb T, Se T, Sn T, Sr T, V T, Zn T	<2			50.00mL	Colorless-Clear		

Preparation Information Benchsheet

Prep Run#: 439398
Team: Metals/CDISTEFANO

Prep WorkFlow: MetDigAqICP
Prep Method: EPA 3005A/3010A

Status: Prepped
Prep Date/Time: 6/3/24 11:52

11	R2404651-004	1405280858A 400-FV-131		.02	50mL	6010C/Ag T, Al T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Mo T, Na T, Ni T, Pb T, Se T, Sn T, Sr T, V T, Zn T	<2			50.00mL	Colorless-Clear		
12	R2404651-005	1405281005A 400-EV-131		.02	50mL	6010C/Ag T, Al T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Mo T, Na T, Ni T, Pb T, Se T, Sn T, Sr T, V T, Zn T	<2			50.00mL	Colorless-Clear		
13	R2404651-006	1405281013C	400-JV-150	.02	50mL	6010C/Ag T, Al T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Mo T, Na T, Ni T, Pb T, Se T, Sn T, Sr T, V T, Zn T	<2			50.00mL	Colorless-Clear		
14	R2404651-007	1405281450C 400-HV-147		.02	50mL	6010C/Ag T, Al T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Mo T, Na T, Ni T, Pb T, Se T, Sn T, Sr T, V T, Zn T	<2			50.00mL	Colorless-Clear		
15	R2404693-001	CF-2B		.06	50mL	6010C/Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Cloudy/Colorless-Clear		
16	R2404693-002	CF-2A		.06	50mL	6010C/Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Clear		
17	R2404693-003	CF-1C		.06	50mL	6010C/Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Cloudy/Colorless-Cloudy		
18	R2404693-004	CF-1B		.06	50mL	6010C/Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Clear		
19	R2404693-005	CF-1A		.06	50mL	6010C/Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Clear		
20	R2404693-006	CF-4A		.06	50mL	6010C/Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Clear		
21	R2404693-007	CF-3B		.06	50mL	6010C/Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Cloudy/Colorless-Clear		
22	R2404693-008	CF-3A		.06	50mL	6010C/Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Cloudy/Colorless-Clear		
23	R2404693-009	CF-6A		.06	50mL	6010C/Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Clear		
24	R2404693-010	CF-6B		.06	50mL	6010C/Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Clear		

Spiking Solutions

Name:	Custom LCS STD A Metals	Inventory ID	233429	Logbook Ref:	233429	Expires On: 07/31/2025	Lot #: 2400837-5
Name:	C Spike	Inventory ID	235403	Logbook Ref:	235403	Expires On: 11/18/2024	
Name:	Custom LCS STD B Metals	Inventory ID	235516	Logbook Ref:	235516	Expires On: 11/02/2024	

Preparation Materials

1:1 HCl Metals Grade	1:1 223283 (233826)	Hot Block Cups	50mL Lot 2211204 (234023)	Nitric Acid Metals Grade HNO3 233477 (233477)
Thermometer	460 (230830)			

Preparation Information Benchsheet

Prep Run#: 439398
Team: Metals/CDISTEFANO

Prep WorkFlow: MetDigAqICP
Prep Method: EPA 3005A/3010A

Status: Prepped
Prep Date/Time: 6/3/24 11:52

Preparation Steps

Step:	Digestion
Started:	6/3/24 11:52
Finished:	6/4/24 12:35
By:	CDISTEFANO
Comments	

4632 (IV) 6/10
4643 (IV) 6/10
4651 6/11
4693 (1-10) 6/11

Comments:

Reviewed By: Nicole Mansen Date: 6/4/24

Chain of Custody

Relinquished By: Date: 6/4/24

Received By: R-A01 Date: 6/4/24

Extracts Examined
Yes No

Preparation Information Benchsheet

Prep Run#: 439400
Team: Metals/CDISTEFANO

Prep WorkFlow: MetDigAqICP
Prep Method: EPA 3005A/3010A

Status: Prepped
Prep Date/Time: 6/3/24 11:52

#	Lab Code	Client ID		B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ2406180-01	MB			50mL	6010C/Al D, As T, Ca T, Cd T, Cr T, Fe T, K T, Mg T, Mn T, Na T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		HB:11 Well:B1 Temp:93.9C
2	RQ2406180-04	MB			50mL	6010C/Al D	<2			50.00mL	Colorless-Clear		Filter Blank R2404658 6/3/2024
3	RQ2406180-02	LCS			50mL	6010C/Al D, As T, Ca T, Cd T, Cr T, Fe T, K T, Mg T, Mn T, Na T, Pb T, Sb T	<2			50.00mL	Colorless-Clear	0.5000 mL/235516; 0.5000 mL/233429; 0.5000 mL/235403	On HB:18:02 HB Shutoff:4:02 Pipet/Repipettor:M340,MA100,M23
4	RQ2406180-03	DLCS			50mL	6010C/Al D, As T, Ca T, Cd T, Cr T, Fe T, K T, Mg T, Mn T, Na T, Pb T, Sb T	<2			50.00mL	Colorless-Clear	0.5000 mL/235516; 0.5000 mL/233429; 0.5000 mL/235403	
5	R2404656-001	MW-30S		.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		
6	R2404656-002	MW-30D		.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		
7	R2404656-003	MW-29D		.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		
8	R2404656-004	MW-28S		.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Cloudy/Colorless-Clear		
9	R2404656-005	MW-28D		.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		
10	R2404656-006	MW-19S		.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		
11	R2404656-007	MW-20S		.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		
12	R2404656-008	MW-21D		.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		
13	R2404656-009	MW-23DR		.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		
14	R2404656-010	DUP-02		.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		
15	R2404656-011	MW-26SR		.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		
16	R2404656-012	PZ-13		.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		
17	R2404656-013	MW-09S		.01	5mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	6			50.00mL	Colorless-Cloudy/Colorless-Clear		Diluted 10x
18	R2404656-014	MW-18D		.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		
19	R2404656-015	MW-23SR		.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		
20	R2404658-001	Pump Station		.02	50mL	6010C/Fe T, Na T, Pb T	<2			50.00mL	Colorless-Clear		
21	R2404658-002	Pump Station Diss		.01	50mL	6010C/Al D	<2			50.00mL	Colorless-Clear		
22	R2404658-003	TSD		.02	50mL	6010C/Fe T, Na T, Pb T	<2			50.00mL	Colorless-Clear		
23	R2404658-004	TSD Diss		.01	50mL	6010C/Al D	<2			50.00mL	Colorless-Clear		
24	R2404693-011	CF-7		.06	50mL	6010C/Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Clear		

Preparation Information Benchsheet

Prep Run#: 439400
Team: Metals/CDISTEFANO

Prep WorkFlow: MetDigAqICP
Prep Method: EPA 3005A/3010A

Status: Prepped
Prep Date/Time: 6/3/24 11:52

Spiking Solutions

Name:	Custom LCS STD A Metals	Inventory ID	233429	Logbook Ref:	233429	Expires On:	07/31/2025	Lot #:	2400837-5
Name:	C Spike	Inventory ID	235403	Logbook Ref:	235403	Expires On:	11/18/2024		
Name:	Custom LCS STD B Metals	Inventory ID	235516	Logbook Ref:	235516	Expires On:	11/02/2024		

Preparation Materials

1:1 HCl Metals Grade	1:1 223283 (233826)	Hot Block Cups	50mL Lot L223102601 (235558)	Nitric Acid Metals Grade HNO3	233477 (233477)
Thermometer	461 (230831)				

Preparation Steps

Step: Digestion
Started: 6/3/24 11:52
Finished: 6/4/24 12:43
By: CDISTEFANO
Comments

4656 6/11
4658 6/11
4693(#11) 6/11

Comments:

Reviewed By: Nicole Manson Date: 6/4/24

Chain of Custody

Relinquished By: CD Date: 6/4/24

Received By: [illegible] Date: 6/4/24

Extracts Examined
Yes No

ICP ICV/CCV Standard

Standard is prepared daily

	Metal	ALS Lot #	Conc. (ppm)	Vol. (mls)	Final Vol. (mls)	Final Conc. (ppm)
Cal Std 1	Ca	233888	5000	1.00	200	25.00
	Mg		5000			25.00
	K		5000			25.00
	Na		5000			25.00
Cal Std 2	Ag	233889	100	1.00		0.50
	Cr		100			0.50
	Mn		150			0.75
	Ni		400			2.00
	Zn		200			1.00
Cal Std 3	Al	233056	2000	1.00		10.00
	Ba		2000			10.00
	Be		50			0.25
	Co		500			2.50
	Cu		250			1.25
	Fe		1000			5.00
	V		500			2.50
Cal Std 4	As	232796	100	2.00		1.00
	Cd		50			0.50
	Pb		50			0.50
	Se		50			0.50
	Tl		100			1.00
	Sb	232797	1000	1.00		5.00
	Sn	232726	1000	1.00		5.00
	B	231910	1000	0.50		2.50
	Mo	230303	1000	0.50		2.50
	Ti	233840	1000	0.50		2.50
	Sr	230304	1000	0.50		2.50
	Si	234060	1000	2.00		10.00

Matrix	Analyst/ Date	Letter ID	HNO3 Lot #	HCl Lot #	Expiration Date	Pipet ID
10% HNO3 5% HCl	MFM 5/23/24	A	233477	233283	5/24/24	M36
2% HNO3 5% HCl	NM 5/24/24	B	233477	233283	5/25/24	M40
10% HNO3 5% HCl	NM 5/28/24	C	233477	233283	5/29/24	M40
10% HNO3 5% HCl	NM 5/29/24	D	233477	233283	5/30/24	M40
2% HNO3 5% HCl	NM 5/30/24	E	233477	233283	5/31/24	M36
10% HNO3 5% HCl	NM 5/31/24	F	233477	233283	6/1/24	M40
10% HNO3 5% HCl	NM 6/3/24	G	233477	233283	6/4/24	M40
10% HNO3 5% HCl	NM 6/4/24	H	233477	233283	6/5/24	M40
		I				
		J				
		K				
		L				
		M				
		N				
		O				
		P				
		Q				
		R				
		S				
		T				
		U				
		V				
		W				
		X				
		Y				
		Z				
		AA				
		BB				
		CC				
		DD				

ICP Calibration Standard #1

Standard is prepared every 6 months or as necessary

Metal	ALS Lot #	Conc. (ppm)	Vol (mls)	Final Vol (mls)	Final Conc. (ppm)
Al	221983	10000 ~~0.01~~	1000	0.100	
As	230302	1000	0.01	0.10mL MFM 3/28/24	0.010
Ba	233717	1000	0.02		0.020
Be	230311 (1/10)	100	0.03		0.003
Cd	227603 (1/10)	100	0.05		0.005
Cu	230454	1000	0.01		0.010
Mn	233718	1000	0.01		0.010
Mo	233720	1000	0.025		0.025
Pb	227185 (1/10)	100	0.05		0.050
Sb	230313	1000	0.06		0.060
Tl	233695	1000	0.01		0.010

Matrix	Analyst/ Date	Letter ID	HNO3 Lot #	HCl Lot #	Expiration Date	Pipet ID
10% HNO3 5% HCl	MFM 3/27/24	A	233477	233283	7/31/24	M37
		B				
		C				
		D				
		E				
		F				
		G				
		H				
		I				
		J				
		K				
		L				
		M				
		N				
		O				
		P				
		Q				
		R				
		S				
		T				
		U				
		V				
		W				
		X				
		Y				
		Z				

ICP Calibration Standard 6

Standard is prepared every 6 months or as necessary

	Metal	ALS Lot #	Conc. (ppm)	Vol. (mls)	Final Vol. (mls)	Final Conc. (ppm)
Cal Std 2	Ag	230301	100	5.00	500	1.00
	Cr		100			1.00
	Mn		150			1.50
	Ni		400			4.00
	Zn		200			2.00
Cal Std 3	Al	233055	2000	5.00		20.00
	Ba		2000			20.00
	Be		50			0.50
	Co		500			5.00
	Cu		250			2.50
	Fe		1000			10.00
	V		500			5.00
Cal Std 4	As	231798	100	10.00		2.00
	Cd		50			1.00
	Pb		50			1.00
	Se		50			1.00
	Tl		100			2.00
	Ca	230305	10000	2.50		50.00
	Mg	230307	10000	2.50		50.00
	K	229196	10000	2.50		50.00
	Na	230308	10000	2.50		50.00
	Sb	230313	1000	5.00		10.00
	Sn	231915	1000	5.00		10.00
	B	233693	1000	5.00		10.00
	Mo	226706	1000	2.50		5.00
	Ti	230316	1000	2.50		5.00
	Sr	230310	1000	2.50		5.00
	Si	231909	1000	25.00		50.00

Matrix	Analyst/ Date	Letter ID	HNO3 Lot #	HCl Lot #	Expiration Date	Pipet ID
2% HNO3 5% HCl	NM 3/14/24	A	~~233799~~	233283	~~7/13/24~~	M38
10% HNO3 5% HCl	MFM 3/27/24	B	~~233799~~	233283	6/30/24	M38
		C				
		D				
		E				
		F				
		G				
		H				
		I				
		J				
		K				
		L				
		M				
		N				
		O				
		P				
		Q				
		R				
		S				
		T				
		U				
		V				
		W				
		X				
		Y				
		Z				

6/30/24

233477 ↓ MFM 3/27/24

ICP HLCCV2 (Standard is prepared every 6 months or as necessary)

	Metal	ALS Lot #	Conc. (ppm)	Vol. (mls)	Final Vol. (mls)	Final Conc. (ppm)
Cal Std 2	AG	230301	100	~~2.00~~	~~100~~	2.00
	CR		100	4.00	200	Below
	MN		150			Below
	NI		400			8.00
	ZN		200			4.00
Cal Std 3	AL	233055	2000	~~2.00~~		Below
	BA		2000	4.00		40.0
	BE		50			1.00
	CO, V		500			10.0
	CU		250			5.00
	FE		1000			Below
Cal Std 4	AS, TL	231798	100	~~4.00~~		4.00
	CD, SE		50	8.00		2.00
	PB		50			Below
Single Metals	B	233693	1000	~~1.00~~	2.00	10.0
	MO	233~~00~~20	1000	~~1.00~~	2.00	10.0
	TI	230316	1000	~~1.00~~	2.00	10.0
	SR	230310	1000	~~1.00~~	2.00	10.0
	CA	230305	10000	~~2.50~~	5.00	250
	MG	230307	10000	~~5.00~~	10.00	500
	NA	230308	10000	~~2.00~~	4.00	~~150~~ 200
	CR	230312	1000	~~0.800~~	1.60	10.0
	FE	230306	10000	~~0.300~~	0.600	50
	AL	233887	10000	~~4.60~~	9.20	500
	MN	233718	1000	~~0.700~~	1.40	10.00
	PB	233694	1000	~~0.800~~	1.60	10.0
	K	233452	10000	~~1.50~~	3.00	150

Analyst/ Date	Letter ID	Nitric Acid Lot # / Concentration	Hydrochloric Acid Lot # / Concentration	Expiration Date	Pipet ID
MFM 4/23/24	A	233277 2%	233283 5%	5/23/24	M36 /M38
MFM 4/23/24	B	233477 10%	233283 5%	5/23/24	M36 /M38
	C				
	D				
	E				
	F				
	G				
	H				
	I				
	J				
	K				
	L				
	M				
	N				
	O				
	P				
	Q				
	R				
	S				
	T				
	U				
	V				
	W				
	X				
	Y				
	Z				
	AA				

ICP HLCCV3 (Standard is prepared every 6 months or as necessary)

Metal	ALS Lot #	Conc. (ppm)	Vol. (mls)	Final Vol. (mls)	Final Conc. (ppm)	Matrix	Analyst / Date	Letter ID	Nitric Acid Lot #	HCL Lot #	Expiration Date	Pipet ID
CA	230305	10,000	~~2.000~~ 4.000	~~100~~ 200	200.00	2% HNO_3 5% HNO_3	MFM 4/24/24	A	233477	233283	10/24/24	M36 M38
CU	230454	1000	~~0.400~~ 0.800		4.00	10% HNO_3 5% HCl	NM 5/16/24	B	233477	233283	11/2/24	M40 M38
FE	230306	10,000	~~0.400~~ 0.800		40.00			C				
K	233452	10,000	~~1.000~~ 2.000		100.00			D				
TL	233695	1000	~~0.300~~ 0.600		3.00			E				
NA	230308	10,000	~~1.500~~ 3.000		150.00			F				
MG	230307	10,000	~~4.000~~ 8.000		400.00			G				
								H				
								I				
								J				
								K				
								L				
								M				
								N				
								O				
								P				
								Q				
								R				
								S				
								T				
								U				

ICP MRL (Standard is prepared every 6 months or as needed)

	Metal	ALS Lot #	Conc. (ppm)	Vol. (mls)	Final Vol. (mls)	Final Conc. (ppm)
Cal Std 1	CA	233425	5000	0.200	1000	1.00
	MG		5000			1.00
	K		5000			1.00
	NA		5000			1.00
Cal Std 2	AG	230301	100	0.100		0.0100
	CR		100			0.0100
	MN		150			0.0150
	NI		400			0.0400
	ZN		200			0.0200
Cal Std 3	AL	233055	2000	0.100		0.200
	BA		2000			0.200
	BE		50			0.0050
	CO		500			0.0500
	CU		250			0.0250
	FE		1000			0.100
	V		500			0.0500
Cal Std 4	AS	231798	100	0.200		0.0200
	CD		50			0.0100
	PB		50			0.0100
	SE		50			0.0100
	TL		100			0.0200
Single Metals	B	233693	1000	0.200		0.200
	MO	233720	1000	0.025		0.0250
	SN	231915	1000	0.500		0.500
	TI	230316	1000	0.050		0.0500
	SB	230313	1000	0.060		0.0600
	SR	230310	1000	0.100		0.100
	P	—	1000	0.100		0.100

Analyst/ Date	Letter ID	Nitric Acid Lot# / Concentration	Hydrochloric Acid Lot # / Concentration	Expiration Date	Pipet ID
MFM 3/27/24	A	233477 10%	233283 5%	9/27/24	M36 M37
MFM 3/27/24	B	233477 2%	233283 5%	9/27/24	M37 M40
NM 5/16/24	C	233477 10%	233283 5%	11/2/24	M37 M40
	D				
	E				
	F				
	G				
	H				
	I				
	J				
	K				
	L				
	M				
	N				
	O				
	P				
	Q				
	R				
	S				
	T				
	U				
	V				
	W				
	X				
	Y				
	Z				
	AA				
	BB				

ICP ICSA STANDARD (Standard is prepared every 6 months or as necessary)

Element	ALS Lot #	Conc. (ppm)	Vol. (mls)	Final Vol. (mls)	Final Conc. (ppm)
Int. A Sol'n	233727	Multi	50	1000	Multi
AL		5000			250
CA		5000			250
FE		2000			100
MG		5000			250

Analyst/ Date	ID Letter	Nitric Acid Lot # / Concentration	Hydrochloric Acid Lot # / Concentration	Expiration Date	Pipet ID
MFM 3/8/24	A	233283 ↔	~~244~~ 233477	9/8/24	dispo
MFM 4/19/24	B	233477 10%	233283 5%	10/19/24	dispo
	C				
	D				
	E				
	F				
	G				
	H				
	I				
	J				
	K				
	L				
	M				
	N				
	O				
	P				
	Q				
	R				
	S				
	T				
	U				
	V				

ICP ICSAB STANDARD (Standard is prepared every 6 months or as necessary)

Element	ALS Lot #	Conc. (ppm)	Vol. (mls)	Final Vol. (mls)	Final Conc. (ppm)
Int. A Sol'n	233727	Multi	~~25~~ 50	~~500~~ 1000	Multi
AL		5000			250
CA		5000			250
FE		2000			100
MG		5000			250
Int. B Sol'n	233912	Multi	~~5~~ 10		Multi
AG		20			0.200
BA		50			0.500
BE		50			0.500
CD		100			1.00
CO		50			0.500
CR		50			0.500
CU		50			0.500
MN		50			0.500
NI		100			1.00
PB		5			0.0500
V		50			0.500
ZN		100			1.00
AS		10			0.100
SB		60			0.600
SE		5			0.0500
TL		10			0.100

Analyst/ Date	ID Letter	Nitric Acid Lot # / Concentration	Hydrochloric Acid Lot # / Concentration	Expiration Date	Pipet ID
MFM 3/1/24	A	233477 10%	233283 5%	8/30/24	dispo
MFM 3/8/24	B	233477 2%	233283 5%	9/8/24	dispo
NM 5/6/24	C	233477 10%	233283 5%	11/6/24	dispo
	D				
	E				
	F				
	G				
	H				
	I				
	J				
	K				
	L				
	M				
	N				
	O				
	P				
	Q				
	R				
	S				
	T				
	U				
	V				

ICP Internal Standard Solution

Standard is prepared every 6 months or as necessary

(Added In-line)

Metal	ALS Lot #	Conc. (ppm)	Vol (mls)	Final Vol (mls)	Final Conc. (ppm)
Y	226709	10000	2.00	2000	10.0
Cs	226847	10000	2		10.0

Matrix	Analyst/ Date	Letter ID	HNO3 Lot #	HCl Lot #	Expiration Date	Pipet ID
2% HNO3/ 5% HCl	MFM 3/27/24	**A**	233477	233283	6/30/24	M36
	MFM 3/27/24	**B**	233477	233283	6/30/24	M36
	MFM 4/15/24	**C**	233477	233283	6/30/24	M36
	MFM 4/15/24	**D**	233477	233283	6/30/24	M36
	MFM 4/26/24	**E**	233477	233283	6/30/24	M40
	MFM 4/26/24	**F**	233477	233283	6/30/24	M40
	MFM 5/8/24	**G**	233477	233283	6/30/24	M40
	MFM 5/8/24	**H**	233477	233283	6/30/24	M40
	NM 5/28/24	**I**	233477	233283	6/30/24	M40
	NM 5/28/24	**J**	233477	233283	6/30/24	M40
		K				
		L				
		M				
		N				
		O				
		P				
		Q				
		R				
		S				
		T				
		U				
		V				
		W				
		X				
		Y				
		Z				

Sample Dilutions 6010C/6010D/200.7

Final Volume: 6-8mL

Analyst: NM
strument: ICP7

Date 6/4/24
Analysis 6010C

Common Dilutions

Dilution	Matrix of Diluent	1st Dilution			2nd Dilution			3rd Dilution			4th Dilution			5th Dilution		
		mLs of Sample	mLs of Diluent	Dilution Factor	mLs of Sample	mLs of Diluent	Dilution Factor	mLs of Sample	mLs of Diluent	Dilution Factor	mLs of Sample	mLs of Diluent	Dilution Factor	mLs of Sample	mLs of Diluent	Dilution Factor
1/2	2%HNO3/ 5%HCL	3	3	**1/2**												
1/3	2%HNO3/ 5%HCL	2	4	**1/3**												
1/4	2%HNO3/ 5%HCL	2	6	**1/4**												
1/5	2%HNO3/ 5%HCL	1.2	4.8	**1/5**												
1/10	2%HNO3/ 5%HCL	0.6	5.4	**1/10**												
1/10	2%HNO3/ 5%HCL	0.8	7.2	**1/10**												
1/20	2%HNO3/ 5%HCL	0.3	5.7	**1/20**												
1/20	2%HNO3/ 5%HCL	0.4	7.6	**1/20**												
1/50	2%HNO3/ 5%HCL	1	4	**1/5**	0.6	5.4	**1/50**									
1/100	2%HNO3/ 5%HCL	0.6	5.4	**1/10**	0.6	5.4	**1/100**									
1/200	2%HNO3/ 5%HCL	1	1	**1/2**	0.6	5.4	**1/20**	0.6	5.4	**1/200**						
1/500	2%HNO3/ 5%HCL	1	4	**1/5**	0.6	5.4	**1/50**	0.6	5.4	**1/500**						
1/1000	2%HNO3/ 5%HCL	0.6	5.4	**1/10**	0.6	5.4	**1/100**	0.6	5.4	**1/1000**						
1/2000	2%HNO3/ 5%HCL	1	1	**1/2**	0.6	5.4	**1/20**	0.6	5.4	**1/200**	0.6	5.4	**1/2000**			
1/5000	2%HNO3/ 5%HCL	1	4	**1/5**	0.6	5.4	**1/50**	0.6	5.4	**1/500**	0.6	5.4	**1/5000**			
1/10000	2%HNO3/ 5%HCL	0.6	5.4	**1/10**	0.6	5.4	**1/100**	0.6	5.4	**1/1000**	0.6	5.4	**1/10000**			
1/20000	2%HNO3/ 5%HCL	1	1	**1/2**	0.6	5.4	**1/20**	0.6	5.4	**1/200**	0.6	5.4	**1/2000**	0.6	5.4	**1/20000**

Special Dilutions

Dilution	Matrix of Diluent	1st Dilution			2nd Dilution			3rd Dilution			4th Dilution			5th Dilution		
		mLs of Sample	mLs of Diluent	Dilution Factor	mLs of Sample	mLs of Diluent	Dilution Factor	mLs of Sample	mLs of Diluent	Dilution Factor	mLs of Sample	mLs of Diluent	Dilution Factor	mLs of Sample	mLs of Diluent	Dilution Factor

Metals Data Cover Sheet

Run Date: 6/5/2024

Data File: 060524-MS7900

Primary Reviewer: M. McMahon

Secondary Reviewer: C.Kutzer

LIMS Runs:	LIMS Preps:	
843208	439337, 439339	ccv6only
843209	439458	ccv6

Comments:
N/A

Agilent 7900 (R-ICP-MS-2) Run Log

Serial Number: JP16491642

Analyst: MFM Date: 6/5/24

Data File: 060524-MS7900 Method: 6020A / 200.8

	Prep Date	Lot #			Prep Date	Lot #
Instrument Tune Solution	5/1/23	M845012?A		Cal Srt 1 / CRDL	5/29/24	M8740006?C
Mass Tune Solution	↓	↓		Cal Std 2	5/13/24	M8740012B
Internal Standard	6/5/24	M8740111B		Cal Std 3	6/4/24	M8740022D
ICSA	5/29/24	M845009?H		Cal Std 4 ~~/ HLCCV1~~	5/13/24	M8740032B
ICSAB	↓	M845010?F		ICV / CCV	6/5/24	M8740007?Z
HNO3	NA	233477		HCL	NA	233283
HLCCV2	5/30/24	M8740051C		HLCCV3	5/30/24	M8740061C
				cal std 5/HLCCV1	5/30/24	M8740042C

Pipet Used	DOD Pipet Verification
M37, M40	

3401	PBW-439337	3101	PBW-439458
3402	LCSW-439337	3102	LCSW-439458
3403	R2404302-001	3103	R2404644-002
3404	R2404302-002	3104	R2404644-004
3405	R2404302-003	3105	R2404644-006
3406	R2404633-001	3106	R2404644-008
3407	R2404634-006	3107	R2404644-008S
3408	R2404634-006S	3108	R2404644-008SD
3409	R2404634-006SD	3109	R2404644-008A
3410	R2404634-006A	3110	R2404644-008L 5X
3411	R2404634-006L 5X	3111	R2404651-001
3412	PBW-439339	3112	R2404651-002
3501	LCSW-439339	3201	R2404651-003
3502	R2404396-001	3202	R2404651-004
3503	R2404396-006	3203	R2404651-005
3504	R2404396-011	3204	R2404651-006
3505	R2404396-012	3205	R2404651-007
3506	R2404396-013	3206	R2404671-001
3507	R2404396-014	3207	R2404671-001S
3508	R2404396-035	3208	R2404671-001SD
3509	R2404396-036	3209	R2404671-001A
3510	R2404396-041	3210	R2404671-001L 5X
3511	R2404396-046	3211	R2404672-001 10X
3512	R2404396-046S	3212	R2404680-001
4101	R2404396-046SD	3301	R2404689-001
4102	R2404396-046A		
4103	R2404396-046L 5X		
4104	R2404396-051		
4105	R2404465-001		
4106	R2404465-002		
4107	R2404465-007		
4108	R2404465-008		
4109	R2404465-008S		
4110	R2404465-008SD		
4111	R2404465-008A		
4112	R2404465-008L 5X		

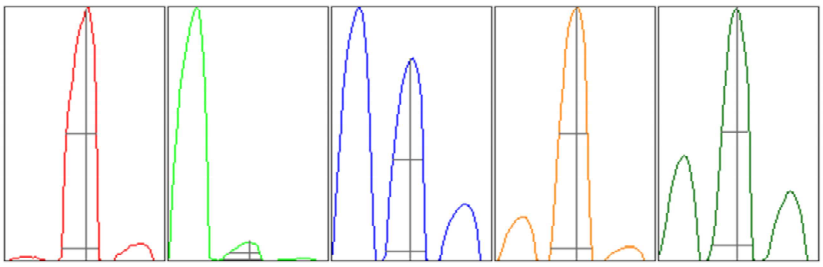
MFM 6/5/24

US EPA Tune Check Report

Operator Name	ALRCE Metals05
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq. Date-Time	06/05/24 08:29:20
Report Comment	---
Instrument Name	G8403A JP16491642

[No Gas]

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	388.05	9.05	8.90 - 9.10	
24	20148.86	24.05	23.90 - 24.10	
59	5714.69	59.00	58.90 - 59.10	
115	12304.69	115.05	114.90 - 115.10	
208	4356.69	208.00	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.58	0.692	0.900	
24	0.55	0.736	0.900	
59	0.58	0.741	0.900	
115	0.54	0.763	0.900	
208	0.52	0.754	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	157.399999999999
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	General Purpose	Nebulizer Gas	1.06 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.80 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	10.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	9.4 V	Deflect	16.2 V
Extract 2	-250.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-90 V	Cell Exit	-50 V		

Cell Parameters

US EPA Tune Check Report

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	128	Axis Gain	0.9993	QP Bias	-3.0 V
Mass Offset	125	Axis Offset	0.00		

Hardware Settings

Torch

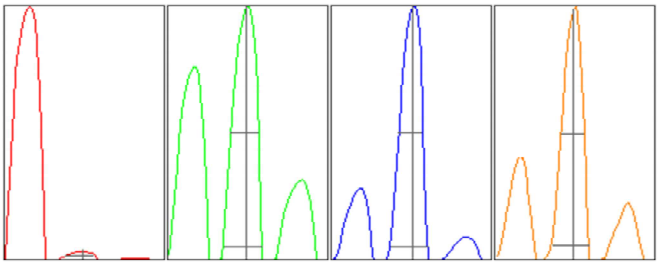
Torch H	0.4 mm	Torch V	-0.1 mm		

EM

Discriminator	4.7 mV	Analog HV	2113 V	Pulse HV	1385 V

[He]

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
24	389.15	24.00	23.90 - 24.10	
59	1630.59	59.00	58.90 - 59.10	
115	2782.38	115.05	114.90 - 115.10	
208	2859.72	208.00	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
24	0.55	0.736	0.900	
59	0.53	0.730	0.900	
115	0.46	0.714	0.900	
208	0.44	0.705	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	125.92
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	General Purpose	Nebulizer Gas	1.06 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.80 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	10.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	9.4 V	Deflect	2.4 V

US EPA Tune Check Report

Extract 2	-250.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-90 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	4.3 mL/min	OctP Bias	-18.0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	128	Axis Gain	0.9993	QP Bias	-13.0 V
Mass Offset	125	Axis Offset	0.00		

Hardware Settings

Torch

Torch H	0.4 mm	Torch V	-0.1 mm		

EM

Discriminator	4.7 mV	Analog HV	2113 V	Pulse HV	1385 V

7900 ICP-MS 200.8/6020A
Calibration Blank Report

Sample Name	Blank
File Name	029CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 11:18:31
Sample Type	CalBlk
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d
Operator	6/5/24

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Be	9	45	No Gas	53.33	37.5
Al	27	72	No Gas	8426.90	1.5
V	51	72	He	1764.56	4.5
Cr	52	72	No Gas	52126.86	1.0
Mn	55	72	No Gas	8018.93	1.4
Co	59	72	He	81.11	22.6
Ni	60	72	No Gas	8056.74	2.0
Cu	63	72	No Gas	7856.62	0.8
Zn	66	72	No Gas	1617.87	3.7
As	75	72	No Gas	3129.49	78.9
Se	78	72	He	70.33	17.9
Se	82	72	No Gas	302.91	5.9
Mo	98	89	No Gas	315.78	16.0
Ag	107	89	No Gas	225.56	8.1
Cd	111	89	No Gas	4375.20	2.0
Sb	123	89	No Gas	1003.37	3.6
Ba	137	115	No Gas	253.34	9.5
Tl	203	115	No Gas	78.89	20.8
Pb	208	115	No Gas	545.56	6.6
Th	232	115	No Gas	768.91	3.2
U	238	115	No Gas	44.44	18.9

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD
Sc	45	No Gas	8788220.21	1.1
Sc	45	He	486695.24	1.1
Ge	72	No Gas	6275745.58	0.8
Ge	72	He	948175.90	0.6
Y	89	No Gas	8859608.54	3.9
Y	89	He	1479625.71	2.1
Rh	103	No Gas	7242596.94	3.1
Rh	103	He	3947548.31	3.8
In	115	No Gas	7988838.01	0.8
Lu	175	No Gas	52826.41	1.5

7900 ICP-MS 200.8/6020A
Calibration Standard Report

Sample Name	1
File Name	030CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 11:21:01
Sample Type	CalStd
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD	Conc.
Be	9	45	No Gas	4085.02	3.5	0.987
Al	27	72	No Gas	213825.93	1.4	5.435
V	51	72	He	11008.69	2.3	1.015
Cr	52	72	No Gas	106254.72	1.3	1.073
Mn	55	72	No Gas	82855.99	0.5	1.069
Co	59	72	He	19661.33	1.4	1.026
Ni	60	72	No Gas	22423.22	1.0	1.047
Cu	63	72	No Gas	41796.86	0.8	1.011
Zn	66	72	No Gas	49494.01	1.7	5.391
As	75	72	No Gas	12690.59	3.3	0.984
Se	78	72	He	178.00	8.3	0.964
Se	82	72	No Gas	957.50	4.2	1.079
Mo	98	89	No Gas	27133.88	1.5	1.022
Ag	107	89	No Gas	42199.88	1.2	1.020
Cd	111	89	No Gas	12877.30	1.2	1.003
Sb	123	89	No Gas	28396.15	0.7	1.030
Ba	137	115	No Gas	14059.52	1.8	1.027
Tl	203	115	No Gas	22364.77	1.1	1.026
Pb	208	115	No Gas	72070.79	1.0	1.042
Th	232	115	No Gas	64620.51	1.3	1.000
U	238	115	No Gas	63113.62	1.7	1.034

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8832661.59	0.2	8788220.21	100.51	60	125	
Sc	45	He	482514.67	1.1	486695.24	99.14	60	125	
Ge	72	No Gas	6144787.12	0.6	6275745.58	97.91	60	125	
Ge	72	He	940761.25	0.2	948175.9	99.22	60	125	
Y	89	No Gas	8690628.82	0.5	8859608.54	98.09	60	125	
Y	89	He	1435793.00	1.2	1479625.71	97.04	60	125	
Rh	103	No Gas	7217867.49	0.8	7242596.94	99.66	60	125	
Rh	103	He	3864893.18	1.6	3947548.31	97.91	60	125	
In	115	No Gas	7782918.30	0.9	7988838.01	97.42	60	125	
Lu	175	No Gas	52948.07	0.5	52826.41	100.23	60	125	

7900 ICP-MS 200.8/6020A
Calibration Standard Report

Sample Name	10
File Name	031CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 11:23:12
Sample Type	CalStd
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD	Conc.
Be	9	45	No Gas	40536.79	2.4	10.259
Al	27	72	No Gas	428939.64	0.7	11.252
V	51	72	He	97005.68	0.6	10.364
Cr	52	72	No Gas	603789.82	1.1	10.875
Mn	55	72	No Gas	756615.59	1.0	10.797
Co	59	72	He	194538.95	1.2	10.116
Ni	60	72	No Gas	151246.65	1.1	10.456
Cu	63	72	No Gas	365044.15	0.6	10.718
Zn	66	72	No Gas	92587.44	0.4	10.361
As	75	72	No Gas	103803.66	1.8	10.414
Se	78	72	He	1180.38	1.7	9.816
Se	82	72	No Gas	6671.15	1.1	10.533
Mo	98	89	No Gas	268449.00	0.9	9.985
Ag	107	89	No Gas	435072.91	0.9	10.332
Cd	111	89	No Gas	92293.90	0.4	10.045
Sb	123	89	No Gas	272956.93	0.6	9.991
Ba	137	115	No Gas	140961.33	0.3	10.381
Tl	203	115	No Gas	229620.70	1.3	10.484
Pb	208	115	No Gas	723987.06	0.1	10.453
Th	232	115	No Gas	668465.61	1.1	10.367
U	238	115	No Gas	647355.46	1.0	10.522

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8547425.49	6.0	8788220.21	97.26	60	125	
Sc	45	He	483694.09	0.6	486695.24	99.38	60	125	
Ge	72	No Gas	6075436.98	1.4	6275745.58	96.81	60	125	
Ge	72	He	947676.98	0.8	948175.9	99.95	60	125	
Y	89	No Gas	8888229.37	0.3	8859608.54	100.32	60	125	
Y	89	He	1471846.16	3.3	1479625.71	99.47	60	125	
Rh	103	No Gas	7227697.49	1.5	7242596.94	99.79	60	125	
Rh	103	He	3931074.15	1.6	3947548.31	99.58	60	125	
In	115	No Gas	7845547.75	0.5	7988838.01	98.21	60	125	
Lu	175	No Gas	52695.41	1.6	52826.41	99.75	60	125	

7900 ICP-MS 200.8/6020A
Calibration Standard Report

Sample Name	20
File Name	032CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 11:25:24
Sample Type	CalStd
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD	Conc.
Be	9	45	No Gas	80400.59	1.1	19.688
Al	27	72	No Gas	813961.53	0.7	21.387
V	51	72	He	189486.98	0.7	20.404
Cr	52	72	No Gas	1149119.26	0.1	21.406
Mn	55	72	No Gas	1531939.42	2.1	21.762
Co	59	72	He	389116.12	0.8	20.213
Ni	60	72	No Gas	294063.48	0.3	20.697
Cu	63	72	No Gas	707080.74	0.3	20.800
Zn	66	72	No Gas	186877.17	0.6	20.907
As	75	72	No Gas	205195.70	1.1	20.709
Se	78	72	He	2307.86	2.0	19.781
Se	82	72	No Gas	12958.85	1.8	20.735
Mo	98	89	No Gas	545553.32	0.7	20.407
Ag	107	89	No Gas	865526.46	0.9	20.661
Cd	111	89	No Gas	180154.26	0.3	20.194
Sb	123	89	No Gas	557122.72	0.5	20.538
Ba	137	115	No Gas	279828.19	0.9	20.365
Tl	203	115	No Gas	459447.48	0.7	20.713
Pb	208	115	No Gas	1447356.90	1.5	20.643
Th	232	115	No Gas	1350259.11	1.5	20.688
U	238	115	No Gas	1294772.14	0.9	20.787

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8831302.15	1.2	8788220.21	100.49	60	125	
Sc	45	He	487783.04	1.3	486695.24	100.22	60	125	
Ge	72	No Gas	6125183.23	1.8	6275745.58	97.6	60	125	
Ge	72	He	948653.64	0.9	948175.9	100.05	60	125	
Y	89	No Gas	8848777.70	3.2	8859608.54	99.88	60	125	
Y	89	He	1457575.84	0.8	1479625.71	98.51	60	125	
Rh	103	No Gas	7195104.44	2.1	7242596.94	99.34	60	125	
Rh	103	He	3952166.09	1.4	3947548.31	100.12	60	125	
In	115	No Gas	7945734.13	0.7	7988838.01	99.46	60	125	
Lu	175	No Gas	53010.54	1.1	52826.41	100.35	60	125	

7900 ICP-MS 200.8/6020A
Calibration Standard Report

Sample Name	50
File Name	033CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 11:27:34
Sample Type	CalStd
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD	Conc.
Be	9	45	No Gas	203346.00	0.9	50.223
Al	27	72	No Gas	1907617.50	1.8	50.642
V	51	72	He	470023.30	2.5	50.642
Cr	52	72	No Gas	2728174.89	2.7	51.803
Mn	55	72	No Gas	3691281.24	0.5	52.276
Co	59	72	He	963624.79	1.6	49.958
Ni	60	72	No Gas	731271.97	0.5	51.889
Cu	63	72	No Gas	1788222.01	1.1	52.566
Zn	66	72	No Gas	460518.28	0.9	51.370
As	75	72	No Gas	510672.10	0.7	51.597
Se	78	72	He	5763.52	2.1	50.134
Se	82	72	No Gas	31878.03	1.1	51.241
Mo	98	89	No Gas	1365495.51	1.0	51.399
Ag	107	89	No Gas	2141707.48	2.3	51.680
Cd	111	89	No Gas	444441.46	0.6	50.754
Sb	123	89	No Gas	1401357.58	0.4	51.930
Ba	137	115	No Gas	694698.06	0.2	50.796
Tl	203	115	No Gas	1146496.86	0.8	51.880
Pb	208	115	No Gas	3634206.10	0.5	52.089
Th	232	115	No Gas	3407176.33	2.1	52.567
U	238	115	No Gas	3264373.14	2.1	52.417

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8773328.54	2.8	8788220.21	99.83	60	125	
Sc	45	He	485945.54	1.7	486695.24	99.85	60	125	
Ge	72	No Gas	6131976.00	1.2	6275745.58	97.71	60	125	
Ge	72	He	953489.48	1.4	948175.9	100.56	60	125	
Y	89	No Gas	8830938.82	2.9	8859608.54	99.68	60	125	
Y	89	He	1467763.55	2.3	1479625.71	99.2	60	125	
Rh	103	No Gas	7385490.26	2.3	7242596.94	101.97	60	125	
Rh	103	He	3907180.68	0.6	3947548.31	98.98	60	125	
In	115	No Gas	7864149.41	1.6	7988838.01	98.44	60	125	
Lu	175	No Gas	53276.10	2.0	52826.41	100.85	60	125	

7900 ICP-MS 200.8/6020A
Calibration Standard Report

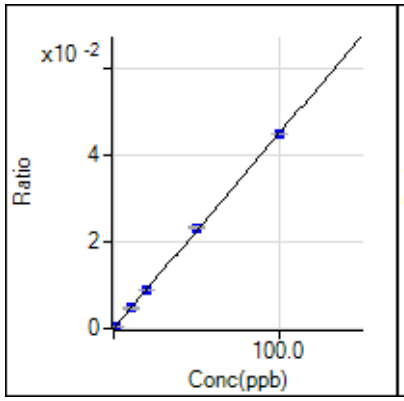
Sample Name	100
File Name	034CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 11:29:33
Sample Type	CalStd
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

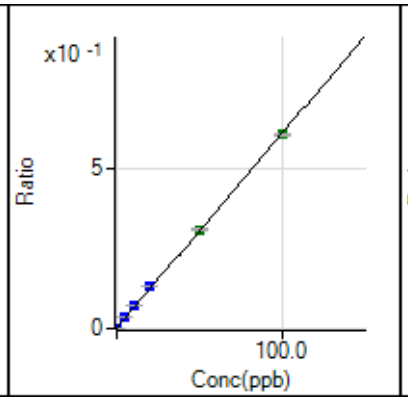
Name	Mass	ISTD	Tune	CPS	RSD	Conc.
Be	9	45	No Gas	408133.47	0.6	99.236
Al	27	72	No Gas	3814151.79	2.8	99.260
V	51	72	He	928265.62	0.8	99.583
Cr	52	72	No Gas	5347820.07	3.5	99.154
Mn	55	72	No Gas	7229999.71	3.0	98.941
Co	59	72	He	1983790.69	2.7	100.482
Ni	60	72	No Gas	1440140.85	1.1	99.315
Cu	63	72	No Gas	3506377.85	2.8	99.164
Zn	66	72	No Gas	912102.57	1.1	99.291
As	75	72	No Gas	1015291.68	0.4	99.466
Se	78	72	He	11540.05	1.1	100.090
Se	82	72	No Gas	63227.17	0.8	99.413
Mo	98	89	No Gas	2687237.94	2.3	99.431
Ag	107	89	No Gas	4326565.38	2.2	99.987
Cd	111	89	No Gas	889337.47	0.2	99.915
Sb	123	89	No Gas	2746232.53	3.5	99.357
Ba	137	115	No Gas	1397015.29	0.9	99.279
Tl	203	115	No Gas	2271661.44	2.3	98.957
Pb	208	115	No Gas	7182513.29	0.4	98.919
Th	232	115	No Gas	6685141.68	0.7	98.780
U	238	115	No Gas	6356274.61	2.7	98.571

QC ISTD Table

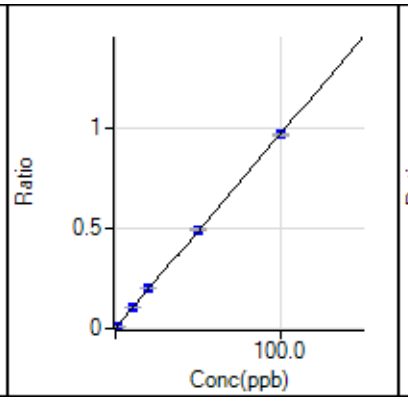
Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9111546.03	0.5	8788220.21	103.68	60	125	
Sc	45	He	498281.56	0.8	486695.24	102.38	60	125	
Ge	72	No Gas	6260387.25	2.6	6275745.58	99.76	60	125	
Ge	72	He	958795.87	0.4	948175.9	101.12	60	125	
Y	89	No Gas	8913149.65	1.1	8859608.54	100.6	60	125	
Y	89	He	1505841.16	2.2	1479625.71	101.77	60	125	
Rh	103	No Gas	7362804.71	1.0	7242596.94	101.66	60	125	
Rh	103	He	3988382.76	0.7	3947548.31	101.03	60	125	
In	115	No Gas	8158942.17	2.7	7988838.01	102.13	60	125	
Lu	175	No Gas	54513.15	0.6	52826.41	103.19	60	125	



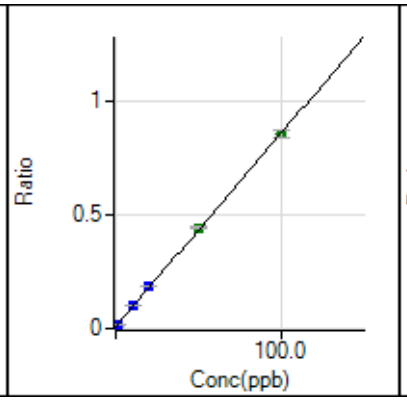
9 Be [No Gas] / ISTD: 45 Sc
y = 4.513E-4 x + 6.059E-6
R 0.9998
DL 0.01479
BEC 0.01342



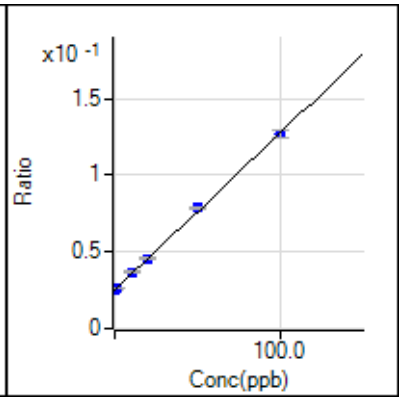
27 Al [No Gas] / ISTD: 72 Ge
y = 6.124E-3 x + 1.343E-3
R 0.9998
DL 0.004765
BEC 0.2193



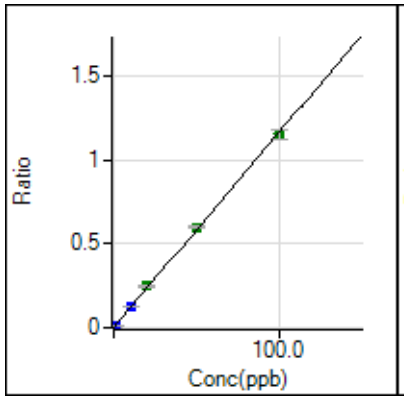
51 V [He] / ISTD: 72 Ge
y = 9.703E-3 x + 1.861E-3
R 1.0000
DL 0.02497
BEC 0.1918



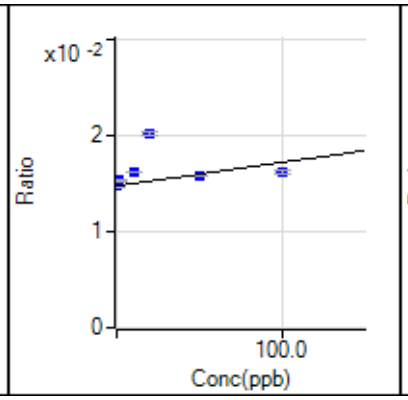
52 Cr [No Gas] / ISTD: 72 Ge
y = 8.535E-3 x + 8.307E-3
R 0.9998
DL 0.04875
BEC 0.9733



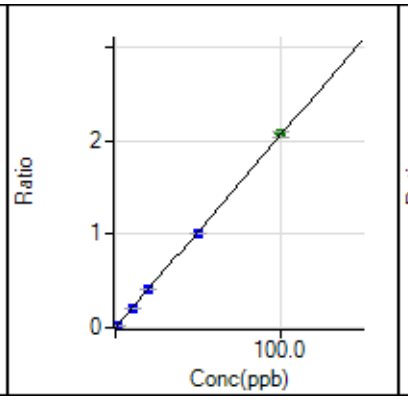
53 (Cr) [No Gas] / ISTD: 72 Ge
y = 1.027E-3 x + 2.506E-2
R 0.9996
DL 1.47
BEC 24.4



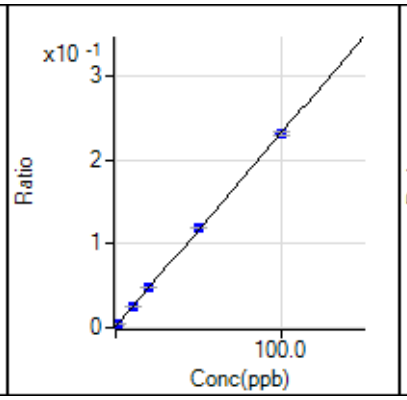
55 Mn [No Gas] / ISTD: 72 Ge
y = 1.167E-2 x + 1.278E-3
R 0.9997
DL 0.00647
BEC 0.1095



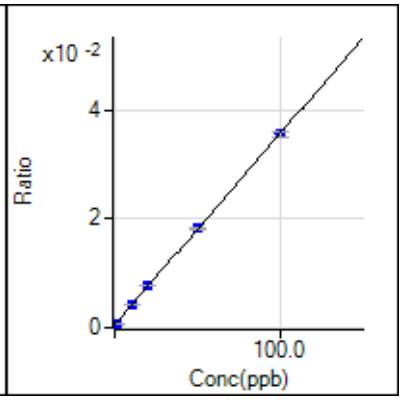
56 Fe [He] / ISTD: 72 Ge
y = 2.446E-5 x + 1.474E-2
R 0.0567
DL 31.23
BEC 602.6



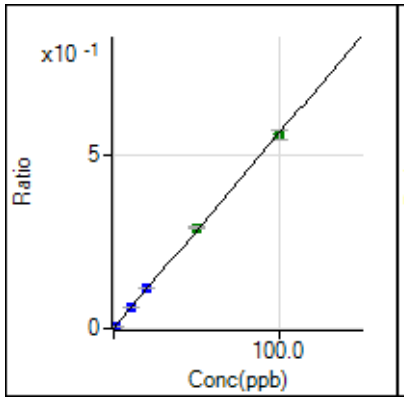
59 Co [He] / ISTD: 72 Ge
y = 2.059E-2 x + 8.561E-5
R 0.9999
DL 0.002891
BEC 0.004158



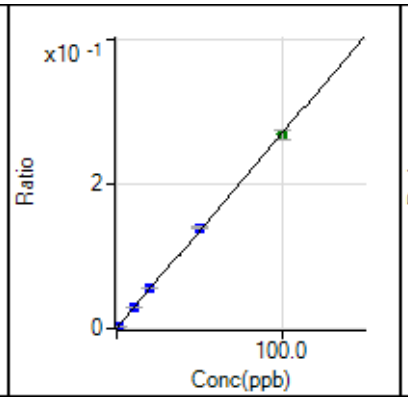
60 Ni [No Gas] / ISTD: 72 Ge
y = 2.304E-3 x + 1.284E-3
R 0.9999
DL 0.03503
BEC 0.5572



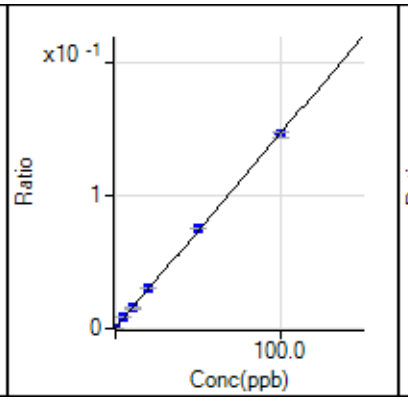
62 (Ni) [No Gas] / ISTD: 72 Ge
y = 3.514E-4 x + 5.325E-4
R 0.9999
DL 0.1138
BEC 1.516



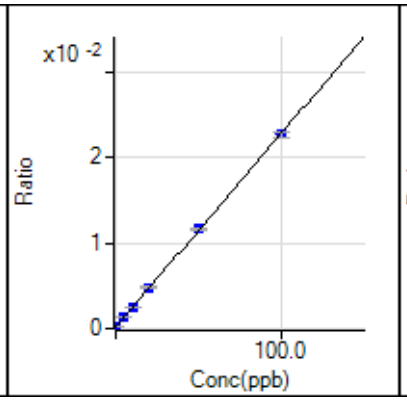
63 Cu [No Gas] / ISTD: 72 Ge
y = 5.641E-3 x + 1.252E-3
R 0.9998
DL 0.00092
BEC 0.2219



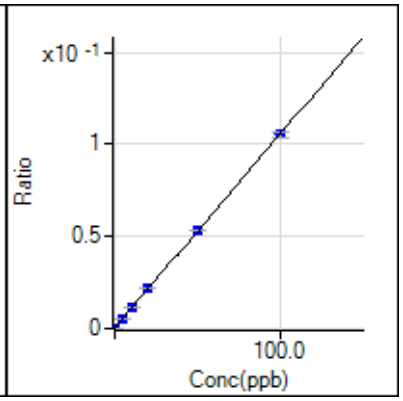
65 (Cu) [No Gas] / ISTD: 72 Ge
y = 2.695E-3 x + 5.498E-4
R 0.9999
DL 0.02093
BEC 0.204



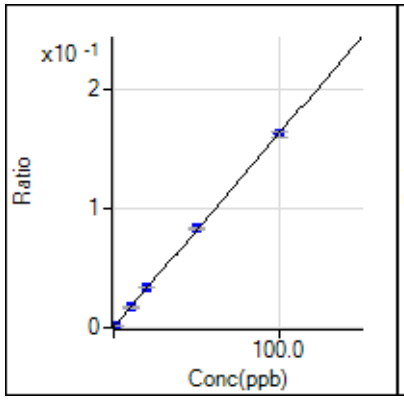
66 Zn [No Gas] / ISTD: 72 Ge
y = 1.465E-3 x + 2.578E-4
R 0.9999
DL 0.01697
BEC 0.1759



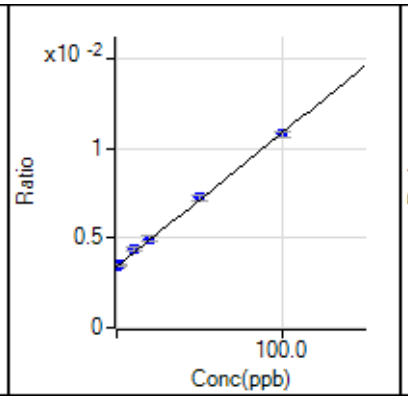
67 (Zn) [No Gas] / ISTD: 72 Ge
y = 2.266E-4 x + 1.572E-4
R 0.9999
DL 0.1417
BEC 0.694



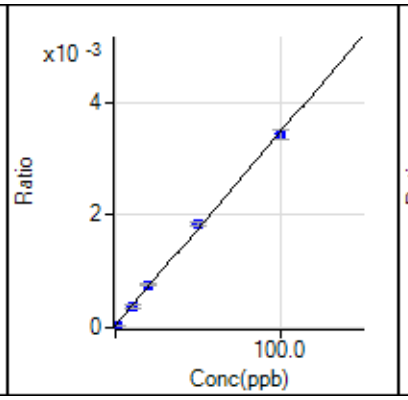
68 (Zn) [No Gas] / ISTD: 72 Ge
y = 1.056E-3 x + 2.230E-4
R 1.0000
DL 0.05158
BEC 0.2113



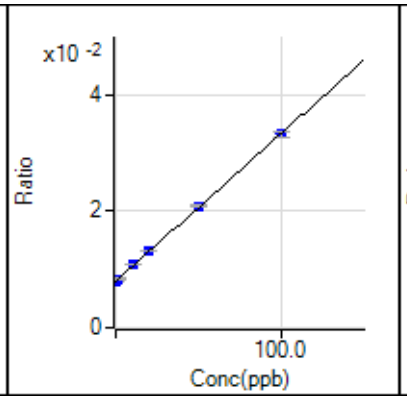
75 As [No Gas] / ISTD: 72 Ge
y = 1.626E-3 x + 4.975E-4
R 0.9999
DL 0.7218
BEC 0.3059



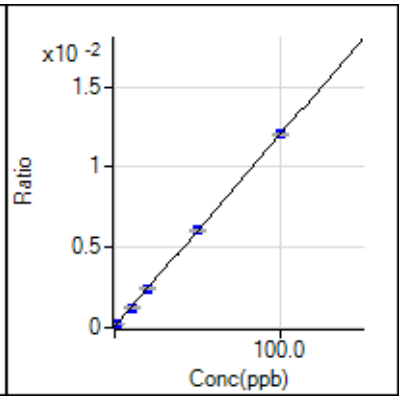
77 (Se) [No Gas] / ISTD: 72 Ge
y = 7.475E-5 x + 3.403E-3
R 0.9994
DL 6.591
BEC 45.52



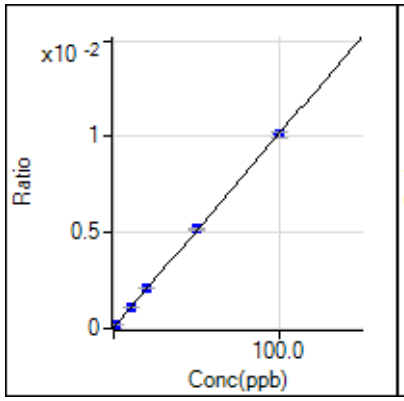
77 (Se) [He] / ISTD: 72 Ge
y = 3.435E-5 x + 4.215E-5
R 0.9994
DL 0.9051
BEC 1.227



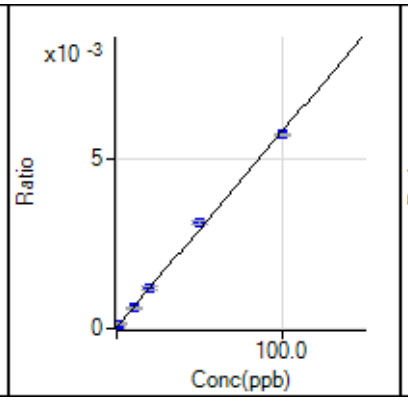
78 (Se) [No Gas] / ISTD: 72 Ge
y = 2.544E-4 x + 7.977E-3
R 0.9999
DL 4.043
BEC 31.36



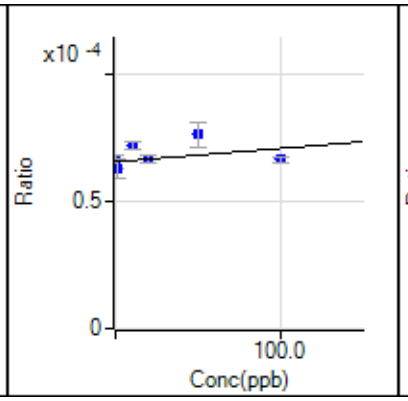
78 Se [He] / ISTD: 72 Ge
y = 1.195E-4 x + 7.413E-5
R 1.0000
DL 0.3243
BEC 0.6203



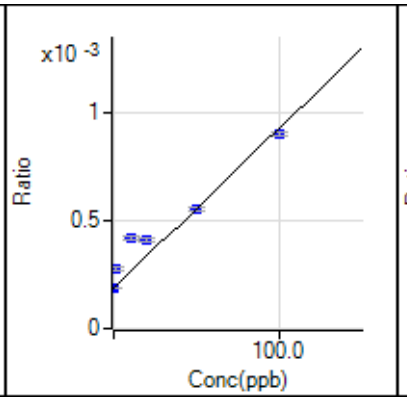
82 Se [No Gas] / ISTD: 72 Ge
y = 1.012E-4 x + 4.828E-5
R 0.9999
DL 0.09299
BEC 0.4772



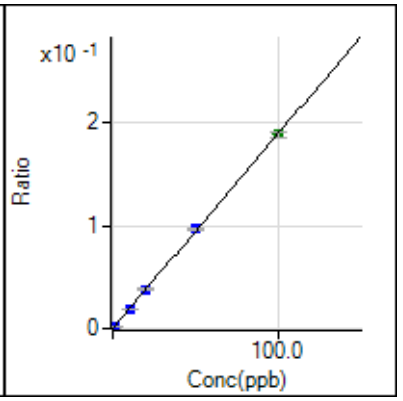
82 (Se) [He] / ISTD: 72 Ge
y = 5.756E-5 x + 3.865E-5
R 0.9990
DL 1.139
BEC 0.6715



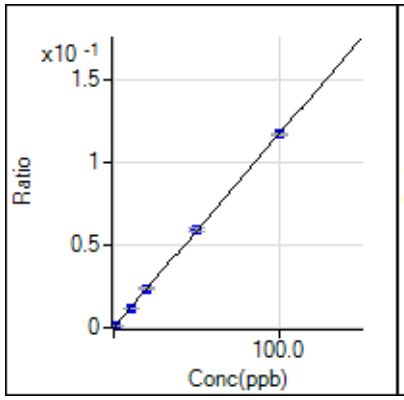
83 [As] [No Gas] / ISTD: 72 Ge
y = 5.288E-8 x + 6.567E-5
R 0.2167
DL 268.8
BEC 1242



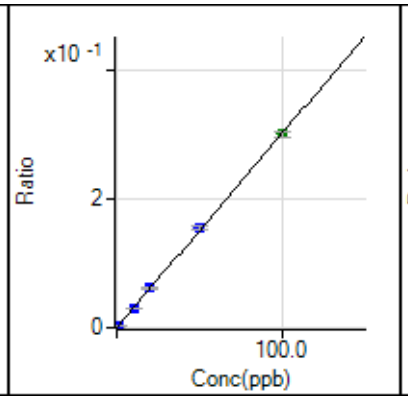
88 Sr [No Gas] / ISTD: 89 Y
y = 7.433E-6 x + 1.874E-4
R 0.9757
DL 2.384
BEC 25.21



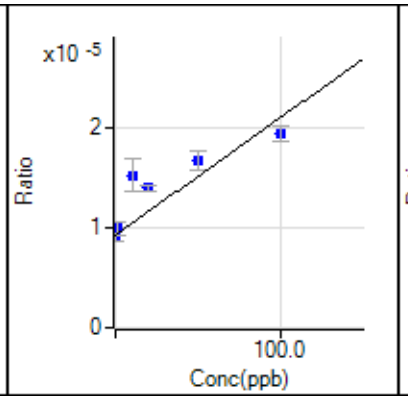
95 (Mo) [No Gas] / ISTD: 89 Y
y = 1.892E-3 x + 2.527E-5
R 0.9999
DL 0.004388
BEC 0.01335



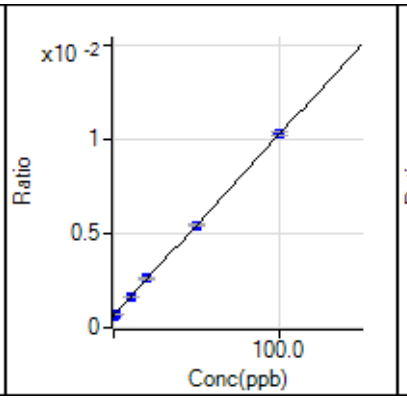
97 (Mo) [No Gas] / ISTD: 89 Y
y = 1.171E-3 x + 1.819E-5
R 1.0000
DL 0.001239
BEC 0.01554



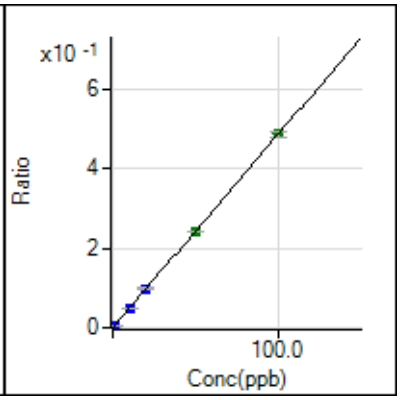
98 Mo [No Gas] / ISTD: 89 Y
y = 3.032E-3 x + 3.559E-5
R 0.9999
DL 0.004885
BEC 0.01174



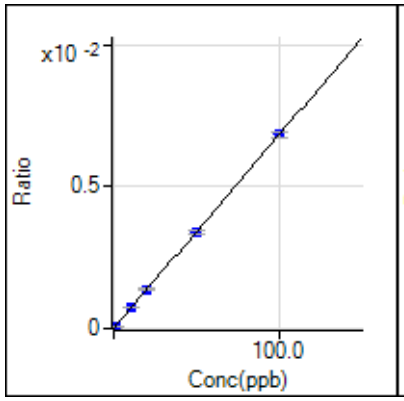
99 [Mo] [No Gas] / ISTD: 89 Y
y = 1.175E-7 x + 9.268E-6
R 0.8749
DL 36.74
BEC 78.88



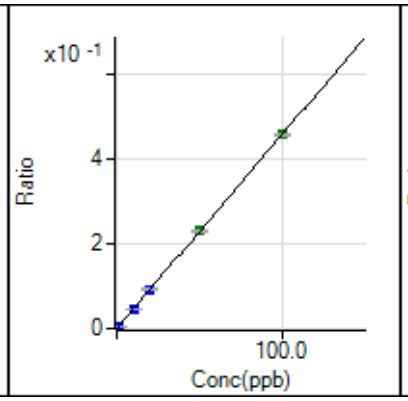
106 (Cd) [No Gas] / ISTD: 89 Y
y = 9.610E-5 x + 6.568E-4
R 1.0000
DL 0.4916
BEC 6.835



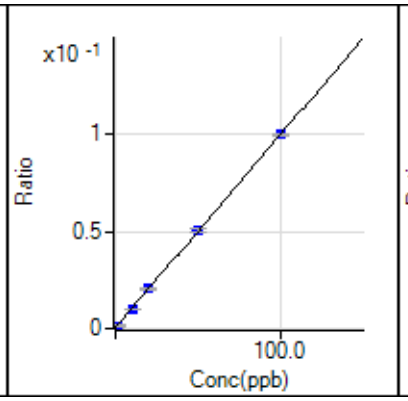
107 Ag [No Gas] / ISTD: 89 Y
y = 4.856E-3 x + 2.544E-5
R 1.0000
DL 0.0007332
BEC 0.005238



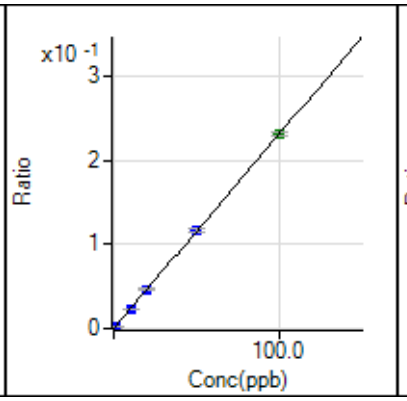
108 (Cd) [No Gas] / ISTD: 89 Y
y = 6.818E-5 x + 8.911E-6
R 0.9999
DL 0.05522
BEC 0.1307



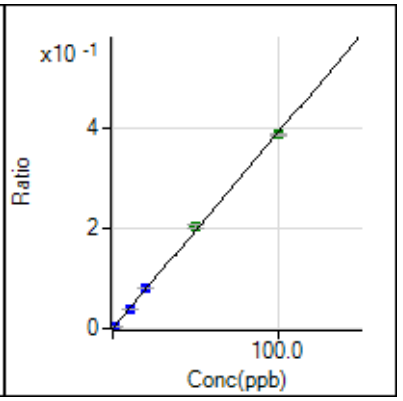
109 (Ag) [No Gas] / ISTD: 89 Y
y = 4.575E-3 x + 1.656E-5
R 1.0000
DL 0.0006246
BEC 0.00362



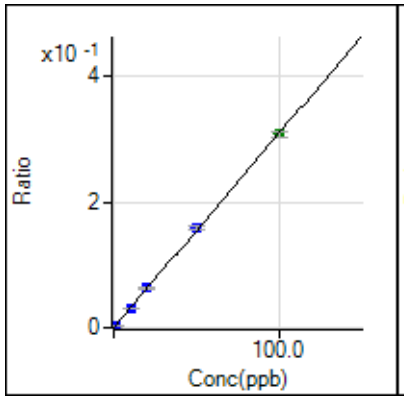
111 Cd [No Gas] / ISTD: 89 Y
y = 9.938E-4 x + 4.941E-4
R 1.0000
DL 0.03461
BEC 0.4972



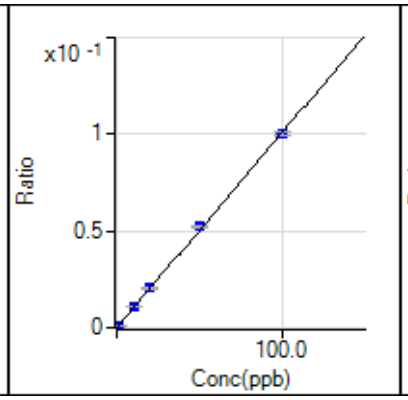
114 (Cd) [No Gas] / ISTD: 89 Y
y = 2.313E-3 x + 1.143E-5
R 1.0000
DL 0.002969
BEC 0.004939



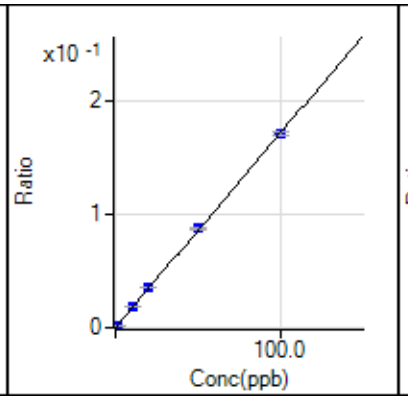
121 (Sb) [No Gas] / ISTD: 89 Y
y = 3.901E-3 x + 1.146E-4
R 0.9997
DL 0.003049
BEC 0.02938



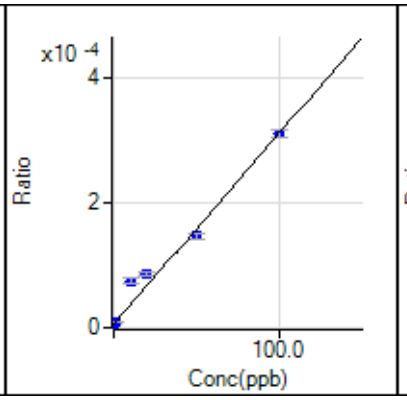
123 Sb [No Gas] / ISTD: 89 Y
y = 3.099E-3 x + 1.133E-4
R 0.9999
DL 0.004056
BEC 0.03656



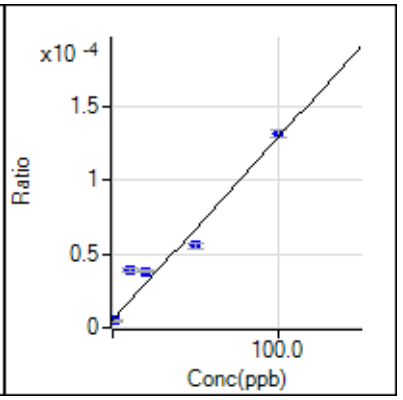
135 (Ba) [No Gas] / ISTD: 115 In
y = 1.009E-3 x + 1.794E-5
R 0.9998
DL 0.002581
BEC 0.01778



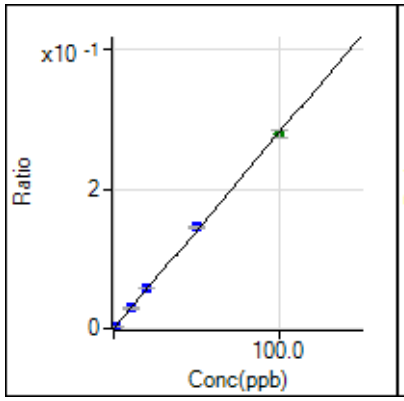
137 Ba [No Gas] / ISTD: 115 In
y = 1.725E-3 x + 3.171E-5
R 0.9999
DL 0.005225
BEC 0.01838



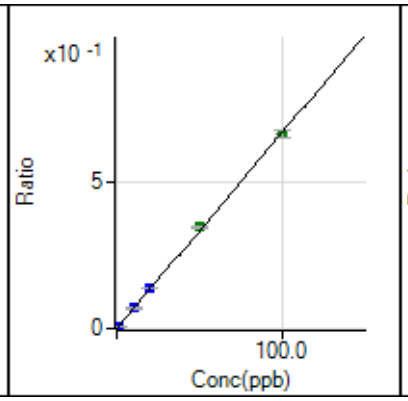
184 W [No Gas] / ISTD: 115 In
y = 3.069E-6 x + 5.567E-6
R 0.9886
DL 1.668
BEC 1.814



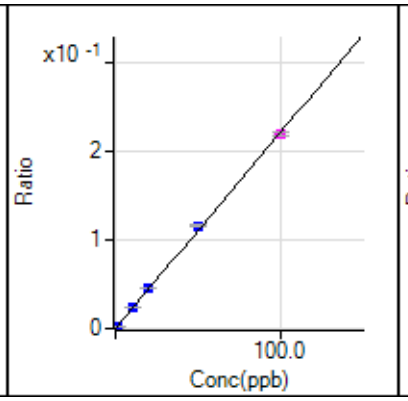
195 Pt [No Gas] / ISTD: 115 In
y = 1.239E-6 x + 5.287E-6
R 0.9733
DL 1.234
BEC 4.266



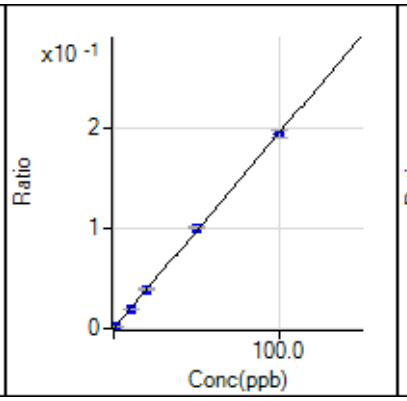
203 Tl [No Gas] / ISTD: 115 In
y = 2.815E-3 x + 9.872E-6
R 0.9997
DL 0.002177
BEC 0.003507



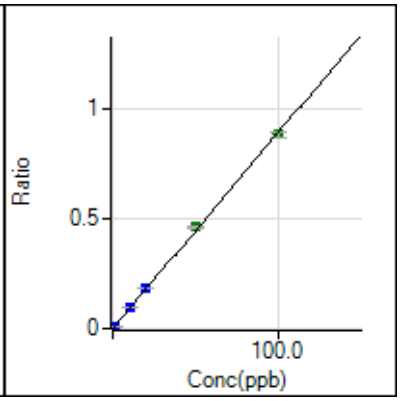
205 (Tl) [No Gas] / ISTD: 115 In
y = 6.707E-3 x + 2.434E-5
R 0.9997
DL 0.0004708
BEC 0.00363



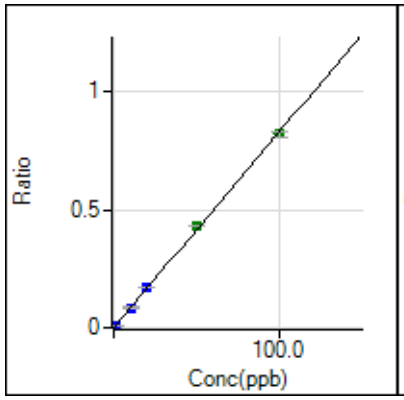
206 (Pb) [No Gas] / ISTD: 115 In
y = 2.218E-3 x + 1.837E-5
R 0.9997
DL 0.003705
BEC 0.008283



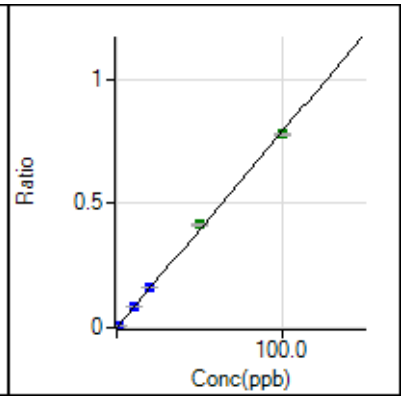
207 (Pb) [No Gas] / ISTD: 115 In
y = 1.953E-3 x + 1.682E-5
R 0.9998
DL 0.00288
BEC 0.008612



208 Pb [No Gas] / ISTD: 115 In
y = 8.903E-3 x + 6.830E-5
R 0.9997
DL 0.001616
BEC 0.007672



232 Th [No Gas] / ISTD: 115 In
y = 8.298E-3 x + 9.624E-5
R 0.9996
DL 0.0008359
BEC 0.0116



238 U [No Gas] / ISTD: 115 In
y = 7.904E-3 x + 5.568E-6
R 0.9995
DL 0.0004127
BEC 0.0007045

Relative Error for ICP-MS Calibration

Date: 6/5/24 Data File: 060524-MS7900

Be	TV	Conc	%RE	%RD
	1	1.011	0.011	1.011
	10	10.512	0.0512	1.0512
	20	20.159	0.00795	1.00795
	50	51.361	0.02722	1.02722
	100	99.236	-0.00764	0.99236
Al				
	5	5.463	0.0926	1.0926
	10	11.31	0.131	1.131
	20	21.484	0.0742	1.0742
	50	50.578	0.01156	1.01156
	100	99.26	-0.0074	0.9926
V				
	1	1.014	0.014	1.014
	10	10.357	0.0357	1.0357
	20	20.395	0.01975	1.01975
	50	50.605	0.0121	1.0121
	100	99.583	-0.00417	0.99583
Cr				
	1	1.053	0.053	1.053
	10	10.673	0.0673	1.0673
	20	21.012	0.0506	1.0506
	50	51.152	0.02304	1.02304
	100	99.154	-0.00846	0.99154
Mn				
	1	1.046	0.046	1.046
	10	10.563	0.0563	1.0563
	20	21.327	0.06635	1.06635
	50	51.474	0.02948	1.02948
	100	98.941	-0.01059	0.98941
Co				
	1	1.011	0.011	1.011
	10	9.965	-0.0035	0.9965
	20	19.917	-0.00415	0.99585
	50	49.076	-0.01848	0.98152
	100	100.482	0.00482	1.00482
Ni				
	1	1.027	0.027	1.027
	10	10.249	0.0249	1.0249
	20	20.283	0.01415	1.01415
	50	51.206	0.02412	1.02412
	100	99.315	-0.00685	0.99315
Cu				
	1	0.984	-0.016	0.984
	10	10.432	0.0432	1.0432
	20	20.248	0.0124	1.0124
	50	51.487	0.02974	1.02974
	100	99.164	-0.00836	0.99164
Zn				
	5	5.321	0.0642	1.0642
	10	10.226	0.0226	1.0226
	20	20.651	0.03255	1.03255
	50	51.081	0.02162	1.02162
	100	99.291	-0.00709	0.99291
Pb				
	1	1.033	0.033	1.033
	10	10.358	0.0358	1.0358
	20	20.455	0.02275	1.02275
	50	51.909	0.03818	1.03818
	100	98.919	-0.01081	0.98919
U				
	1	1.025	0.025	1.025
	10	10.439	0.0439	1.0439
	20	20.618	0.0309	1.0309
	50	52.523	0.05046	1.05046
	100	98.571	-0.01429	0.98571

As	TV	Conc	%RE	%RD
	1	0.964	-0.036	0.964
	10	10.203	0.0203	1.0203
	20	20.299	0.01495	1.01495
	50	50.908	0.01816	1.01816
	100	99.466	-0.00534	0.99466
Se78				
	1	0.963	-0.037	0.963
	10	9.803	-0.0197	0.9803
	20	19.738	-0.0131	0.9869
	50	49.964	-0.00072	0.99928
	100	100.09	0.0009	1.0009
Se82				
	1	1.063	0.063	1.063
	10	10.379	0.0379	1.0379
	20	20.444	0.0222	1.0222
	50	50.92	0.0184	1.0184
	100	99.413	-0.00587	0.99413
Mo				
	1	1.018	0.018	1.018
	10	9.949	-0.0051	0.9949
	20	20.332	0.0166	1.0166
	50	51.016	0.02032	1.02032
	100	99.431	-0.00569	0.99431
Ag				
	1	0.995	-0.005	0.995
	10	10.076	0.0076	1.0076
	20	20.156	0.0078	1.0078
	50	49.948	-0.00104	0.99896
	100	99.987	-0.00013	0.99987
Cd				
	1	0.994	-0.006	0.994
	10	9.952	-0.0048	0.9952
	20	20.004	0.0002	1.0002
	50	50.179	0.00358	1.00358
	100	99.915	-0.00085	0.99915
Sb				
	1	1.018	0.018	1.018
	10	9.872	-0.0128	0.9872
	20	20.291	0.01455	1.01455
	50	51.195	0.0239	1.0239
	100	99.357	-0.00643	0.99357
Ba				
	1	1.029	0.029	1.029
	10	10.398	0.0398	1.0398
	20	20.4	0.02	1.02
	50	51.203	0.02406	1.02406
	100	99.279	-0.00721	0.99279
Tl				
	1	1.017	0.017	1.017
	10	10.393	0.0393	1.0393
	20	20.535	0.02675	1.02675
	50	51.794	0.03588	1.03588
	100	98.957	-0.01043	0.98957
Th				
	1	0.989	-0.011	0.989
	10	10.257	0.0257	1.0257
	20	20.47	0.0235	1.0235
	50	52.2	0.044	1.044
	100	98.78	-0.0122	0.9878

7900 ICP-MS 200.8/6020A
Initial Calibration Verification (ICV) Report

Sample Name	ICV
File Name	035_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 11:31:24
Sample Type	ICV
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	% Rec	QC Flag
Be	9	45	No Gas	49.125	ppb	8.6	196336.59	98.25	
Al	27	72	No Gas	48.363	ppb	7.9	1872656.66	96.73	
V	51	72	He	50.255	ppb	0.9	472693.56	100.51	
Cr	52	72	No Gas	48.717	ppb	14.4	2668788.02	97.43	
Mn	55	72	No Gas	49.019	ppb	9.5	3608900.20	98.04	
Co	59	72	He	49.527	ppb	0.8	984937.77	99.05	
Ni	60	72	No Gas	47.465	ppb	9.6	696297.54	94.93	
Cu	63	72	No Gas	48.922	ppb	12.3	1743622.46	97.84	
Zn	66	72	No Gas	48.068	ppb	7.3	444860.14	96.14	
As	75	72	No Gas	48.426	ppb	9.8	498740.40	96.85	
Se	78	72	He	51.028	ppb	2.1	5959.60	102.06	
Se	82	72	No Gas	49.232	ppb	8.5	31651.50	98.46	
Mo	98	89	No Gas	50.594	ppb	10.2	1342011.92	101.19	
Ag	107	89	No Gas	49.277	ppb	11.0	2092701.38	98.55	
Cd	111	89	No Gas	49.649	ppb	8.0	435933.58	99.3	
Sb	123	89	No Gas	49.661	ppb	9.9	1347187.41	99.32	
Ba	137	115	No Gas	49.328	ppb	6.1	679048.86	98.66	
Tl	203	115	No Gas	50.528	ppb	5.6	1134856.66	101.06	
Pb	208	115	No Gas	49.939	ppb	5.6	3547134.37	99.88	
Th	232	115	No Gas	49.880	ppb	6.8	3302732.23	99.76	
U	238	115	No Gas	51.382	ppb	6.3	3239924.45	102.76	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8850293.81	3.1	8788220.21	100.71	60	125	
Sc	45	He	497582.55	1.7	486695.24	102.24	60	125	
Ge	72	No Gas	6294475.45	1.6	6275745.58	100.3	60	125	
Ge	72	He	965755.94	1.9	948175.9	101.85	60	125	
Y	89	No Gas	8754094.37	1.4	8859608.54	98.81	60	125	
Y	89	He	1506896.99	4.2	1479625.71	101.84	60	125	
Rh	103	No Gas	7556398.59	0.9	7242596.94	104.33	60	125	
Rh	103	He	3991807.34	2.4	3947548.31	101.12	60	125	
In	115	No Gas	7973581.63	1.2	7988838.01	99.81	60	125	
Lu	175	No Gas	53755.74	2.1	52826.41	101.76	60	125	

7900 ICP-MS 200.8/6020A
Initial Calibration Blank (ICB) Report

Sample Name	ICB
File Name	036_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 11:33:12
Sample Type	ICB
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.035	ppb	14.6	193.33	
Al	27	72	No Gas	0.044	ppb	122.5	10282.19	
V	51	72	He	0.010	ppb	73.7	1870.13	
Cr	52	72	No Gas	-0.025	ppb	N/A	51148.36	
Mn	55	72	No Gas	0.018	ppb	4.0	9438.71	
Co	59	72	He	0.004	ppb	15.9	156.67	
Ni	60	72	No Gas	-0.035	ppb	N/A	7616.49	
Cu	63	72	No Gas	-0.068	ppb	N/A	5503.31	
Zn	66	72	No Gas	0.038	ppb	74.0	1994.60	
As	75	72	No Gas	-0.117	ppb	N/A	1955.21	
Se	78	72	He	0.047	ppb	322.3	76.00	
Se	82	72	No Gas	-0.032	ppb	N/A	284.26	
Mo	98	89	No Gas	0.038	ppb	20.8	1322.49	
Ag	107	89	No Gas	0.014	ppb	21.6	813.36	
Cd	111	89	No Gas	0.023	ppb	113.0	4578.22	
Sb	123	89	No Gas	0.071	ppb	18.5	2955.89	
Ba	137	115	No Gas	0.008	ppb	22.5	364.45	
Tl	203	115	No Gas	0.021	ppb	24.0	548.90	
Pb	208	115	No Gas	0.023	ppb	29.4	2176.76	
Th	232	115	No Gas	0.085	ppb	23.8	6478.42	
U	238	115	No Gas	0.008	ppb	47.5	584.47	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8925750.76	1.8	8788220.21	101.56	60	125	
Sc	45	He	491916.78	1.4	486695.24	101.07	60	125	
Ge	72	No Gas	6339576.55	4.5	6275745.58	101.02	60	125	
Ge	72	He	953131.28	1.2	948175.9	100.52	60	125	
Y	89	No Gas	8848483.82	3.0	8859608.54	99.87	60	125	
Y	89	He	1474691.50	1.4	1479625.71	99.67	60	125	
Rh	103	No Gas	7510560.81	2.5	7242596.94	103.7	60	125	
Rh	103	He	3945420.95	2.1	3947548.31	99.95	60	125	
In	115	No Gas	8003632.18	4.7	7988838.01	100.19	60	125	
Lu	175	No Gas	54069.65	3.2	52826.41	102.35	60	125	

7900 ICP-MS 200.8/6020A
Contract Required Detection Limit (CRDL) Report

Sample Name	CRDL
File Name	037LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 11:35:07
Sample Type	LLICV
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	%Rec	QC Flag
Be	9	45	No Gas	1.005	ppb	10.7	4049.47	100.5	
Al	27	72	No Gas	5.014	ppb	7.1	205156.69	100.28	
V	51	72	He	1.011	ppb	2.5	11087.63	101.1	
Cr	52	72	No Gas	0.916	ppb	16.6	103233.53	91.6	
Mn	55	72	No Gas	0.950	ppb	8.3	79152.56	95	
Co	59	72	He	0.991	ppb	1.5	19486.67	99.1	
Ni	60	72	No Gas	0.856	ppb	7.7	20839.86	85.6	
Cu	63	72	No Gas	0.848	ppb	10.6	38616.88	84.8	
Zn	66	72	No Gas	4.843	ppb	7.3	47071.64	96.86	
As	75	72	No Gas	0.793	ppb	12.1	11441.70	79.3	
Se	78	72	He	1.063	ppb	23.3	191.67	106.3	
Se	82	72	No Gas	0.825	ppb	7.0	843.06	82.5	
Mo	98	89	No Gas	0.968	ppb	7.9	26603.66	96.8	
Ag	107	89	No Gas	0.955	ppb	5.6	41752.02	95.5	
Cd	111	89	No Gas	0.925	ppb	3.2	12660.21	92.5	
Sb	123	89	No Gas	0.976	ppb	8.0	28110.47	97.6	
Ba	137	115	No Gas	0.948	ppb	7.8	13469.04	94.8	
Tl	203	115	No Gas	0.967	ppb	7.7	22060.12	96.7	
Pb	208	115	No Gas	0.973	ppb	6.4	70512.09	97.3	
Th	232	115	No Gas	0.971	ppb	5.0	65854.30	97.1	
U	238	115	No Gas	0.956	ppb	7.7	61091.32	95.6	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8822507.15	4.0	8788220.21	100.39	60	125	
Sc	45	He	488347.60	2.2	486695.24	100.34	60	125	
Ge	72	No Gas	6399736.69	0.5	6275745.58	101.98	60	125	
Ge	72	He	950638.54	2.1	948175.9	100.26	60	125	
Y	89	No Gas	8955737.70	1.1	8859608.54	101.09	60	125	
Y	89	He	1503429.25	3.0	1479625.71	101.61	60	125	
Rh	103	No Gas	7499954.98	3.9	7242596.94	103.55	60	125	
Rh	103	He	4007658.59	2.2	3947548.31	101.52	60	125	
In	115	No Gas	8075997.73	0.4	7988838.01	101.09	60	125	
Lu	175	No Gas	52829.85	3.1	52826.41	100.01	60	125	

7900 ICP-MS 200.8/6020A
High-Level Continuing Calibration Verification (HLCCV) Report

Sample Name	HLCCV1
File Name	038_QCS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 11:37:25
Sample Type	QCS
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	%Rec	QC Flag
Be	9	45	No Gas	100.192	ppb	5.7	392479.01	100.19	
Al	27	72	No Gas	101.051	ppb	4.5	3778119.29	101.05	
V	51	72	He	100.850	ppb	0.9	950964.27	100.85	
Cr	52	72	No Gas	96.340	ppb	9.0	5059061.60	96.34	
Mn	55	72	No Gas	96.680	ppb	8.9	6877883.48	96.68	
Co	59	72	He	97.884	ppb	4.3	1953775.96	97.88	
Ni	60	72	No Gas	97.270	ppb	8.6	1372865.50	97.27	
Cu	63	72	No Gas	98.320	ppb	7.5	3385072.57	98.32	
Zn	66	72	No Gas	98.768	ppb	7.4	883077.33	98.77	
As	75	72	No Gas	97.793	ppb	8.2	971569.18	97.79	
Se	78	72	He	101.001	ppb	1.2	11780.59	101	
Se	82	72	No Gas	98.232	ppb	8.0	60813.14	98.23	
Mo	98	89	No Gas	95.843	ppb	1.2	2634498.64	95.84	
Ag	107	89	No Gas	92.216	ppb	6.2	4059238.73	92.22	
Cd	111	89	No Gas	94.013	ppb	5.7	851373.87	94.01	
Sb	123	89	No Gas	92.516	ppb	7.5	2600901.01	92.52	
Ba	137	115	No Gas	97.191	ppb	4.0	1332600.54	97.19	
Tl	203	115	No Gas	97.858	ppb	3.0	2189406.37	97.86	
Pb	208	115	No Gas	99.543	ppb	4.1	7043650.69	99.54	
Th	232	115	No Gas	99.241	ppb	3.1	6545029.60	99.24	
U	238	115	No Gas	101.147	ppb	4.1	6354293.36	101.15	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8678264.10	2.5	8788220.21	98.75	60	125	
Sc	45	He	496217.29	1.5	486695.24	101.96	60	125	
Ge	72	No Gas	6093592.40	1.7	6275745.58	97.1	60	125	
Ge	72	He	969924.75	2.1	948175.9	102.29	60	125	
Y	89	No Gas	9064927.14	2.3	8859608.54	102.32	60	125	
Y	89	He	1491717.68	2.3	1479625.71	100.82	60	125	
Rh	103	No Gas	7315647.76	1.7	7242596.94	101.01	60	125	
Rh	103	He	3959170.81	1.9	3947548.31	100.29	60	125	
In	115	No Gas	7944483.02	2.4	7988838.01	99.44	60	125	
Lu	175	No Gas	52133.81	2.3	52826.41	98.69	60	125	

7900 ICP-MS 200.8/6020A
Interference Check Solution A (ICSA) Report

Sample Name	ICSA
File Name	039ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 11:39:06
Sample Type	ICSA
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.016	ppb	107.4	196.67	
Al	27	72	No Gas	7047.289	ppb	163.3	275413103.50	
V	51	72	He	0.092	ppb	14.7	2574.68	
Cr	52	72	No Gas	-0.381	ppb	N/A	39040.29	
Mn	55	72	No Gas	0.148	ppb	139.9	28488.58	
Co	59	72	He	0.107	ppb	3.9	2147.94	
Ni	60	72	No Gas	-0.270	ppb	N/A	5640.22	
Cu	63	72	No Gas	0.116	ppb	403.4	13918.15	
Zn	66	72	No Gas	0.242	ppb	180.2	5254.49	
As	75	72	No Gas	-0.235	ppb	N/A	852.62	
Se	78	72	He	1.234	ppb	7.2	207.33	
Se	82	72	No Gas	0.259	ppb	466.6	470.07	
Mo	98	89	No Gas	145.901	ppb	161.8	4036520.71	
Ag	107	89	No Gas	0.018	ppb	83.0	1624.55	
Cd	111	89	No Gas	-0.155	ppb	N/A	5201.44	
Sb	123	89	No Gas	0.053	ppb	154.8	3553.84	
Ba	137	115	No Gas	0.184	ppb	149.9	3138.37	
Tl	203	115	No Gas	0.030	ppb	56.0	1230.06	
Pb	208	115	No Gas	0.033	ppb	75.9	4553.67	
Th	232	115	No Gas	0.360	ppb	36.6	47115.09	
U	238	115	No Gas	0.015	ppb	14.6	1951.31	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	18491972.04	50.2	8788220.21	210.42	60	125	ISTD Failed
Sc	45	He	482723.12	1.0	486695.24	99.18	60	125	
Ge	72	No Gas	12610726.86	48.9	6275745.58	200.94	60	125	ISTD Failed
Ge	72	He	935932.60	0.7	948175.9	98.71	60	125	
Y	89	No Gas	17851807.34	47.8	8859608.54	201.5	60	125	ISTD Failed
Y	89	He	1464067.20	1.1	1479625.71	98.95	60	125	
Rh	103	No Gas	14290851.38	49.7	7242596.94	197.32	60	125	ISTD Failed
Rh	103	He	3689179.57	1.3	3947548.31	93.45	60	125	
In	115	No Gas	15635075.21	49.2	7988838.01	195.71	60	125	ISTD Failed
Lu	175	No Gas	50324.51	5.2	52826.41	95.26	60	125	

7900 ICP-MS 200.8/6020A
Interference Check Solution AB (ICSAB) Report

Sample Name	ICSAB
File Name	040ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 11:41:00
Sample Type	ICSB
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	20.612	ppb	9.5	79516.71	
Al	27	72	No Gas	18311.331	ppb	9.1	688671759.30	
V	51	72	He	21.466	ppb	1.3	195117.29	
Cr	52	72	No Gas	19.036	ppb	8.7	1048657.60	
Mn	55	72	No Gas	19.144	ppb	7.4	1379179.70	
Co	59	72	He	19.639	ppb	0.8	375557.49	
Ni	60	72	No Gas	18.574	ppb	7.5	270593.13	
Cu	63	72	No Gas	19.076	ppb	8.0	668287.51	
Zn	66	72	No Gas	19.117	ppb	6.9	173548.61	
As	75	72	No Gas	19.224	ppb	8.1	194990.86	
Se	78	72	He	21.721	ppb	0.6	2479.22	
Se	82	72	No Gas	21.661	ppb	6.7	13747.34	
Mo	98	89	No Gas	380.203	ppb	7.0	10115643.69	
Ag	107	89	No Gas	18.222	ppb	6.2	776506.93	
Cd	111	89	No Gas	18.562	ppb	5.5	166165.28	
Sb	123	89	No Gas	19.733	ppb	5.9	537590.86	
Ba	137	115	No Gas	20.789	ppb	9.1	274672.94	
Tl	203	115	No Gas	20.062	ppb	8.6	432371.14	
Pb	208	115	No Gas	20.313	ppb	8.8	1384593.61	
Th	232	115	No Gas	0.071	ppb	21.2	5256.69	> +/- 10%
U	238	115	No Gas	21.223	ppb	8.3	1283856.09	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8547637.72	1.2	8788220.21	97.26	60	125	
Sc	45	He	487188.45	0.2	486695.24	100.1	60	125	
Ge	72	No Gas	6135447.26	1.7	6275745.58	97.76	60	125	
Ge	72	He	928574.51	1.6	948175.9	97.93	60	125	
Y	89	No Gas	8769041.87	1.3	8859608.54	98.98	60	125	
Y	89	He	1442035.85	1.0	1479625.71	97.46	60	125	
Rh	103	No Gas	7095177.22	1.7	7242596.94	97.96	60	125	
Rh	103	He	3755698.18	3.3	3947548.31	95.14	60	125	
In	115	No Gas	7658637.20	1.4	7988838.01	95.87	60	125	
Lu	175	No Gas	51630.76	0.8	52826.41	97.74	60	125	

7900 ICP-MS 200.8/6020A
Interference Check Solution A (ICSA) Report

Sample Name	ICSA
File Name	041ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 11:44:03
Sample Type	ICSA
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.018	ppb	16.1	126.67	
Al	27	72	No Gas	17914.934	ppb	8.9	679126693.02	
V	51	72	He	0.090	ppb	16.9	2511.34	
Cr	52	72	No Gas	0.391	ppb	26.1	72046.86	
Mn	55	72	No Gas	0.339	ppb	7.5	32408.35	
Co	59	72	He	0.112	ppb	3.4	2207.96	
Ni	60	72	No Gas	0.152	ppb	22.9	10110.29	
Cu	63	72	No Gas	0.614	ppb	14.6	29184.02	
Zn	66	72	No Gas	1.407	ppb	6.4	14346.26	
As	75	72	No Gas	0.027	ppb	683.1	3358.94	
Se	78	72	He	1.235	ppb	14.0	204.00	
Se	82	72	No Gas	1.680	ppb	12.4	1350.55	
Mo	98	89	No Gas	373.874	ppb	6.9	9814456.49	
Ag	107	89	No Gas	0.025	ppb	7.5	1253.40	
Cd	111	89	No Gas	0.008	ppb	401.3	4338.09	
Sb	123	89	No Gas	0.045	ppb	19.9	2183.52	
Ba	137	115	No Gas	0.450	ppb	8.1	6101.40	
Tl	203	115	No Gas	0.014	ppb	31.3	368.90	
Pb	208	115	No Gas	0.049	ppb	3.9	3835.79	
Th	232	115	No Gas	0.033	ppb	27.0	2812.55	
U	238	115	No Gas	0.007	ppb	11.4	458.90	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8972890.20	1.9	8788220.21	102.1	60	125	
Sc	45	He	480507.12	0.5	486695.24	98.73	60	125	
Ge	72	No Gas	6186566.83	2.1	6275745.58	98.58	60	125	
Ge	72	He	919854.09	0.7	948175.9	97.01	60	125	
Y	89	No Gas	8645860.21	2.9	8859608.54	97.59	60	125	
Y	89	He	1455807.20	4.2	1479625.71	98.39	60	125	
Rh	103	No Gas	6879957.64	2.0	7242596.94	94.99	60	125	
Rh	103	He	3714059.16	3.0	3947548.31	94.09	60	125	
In	115	No Gas	7546050.26	0.6	7988838.01	94.46	60	125	
Lu	175	No Gas	51727.81	1.2	52826.41	97.92	60	125	

7900 ICP-MS 200.8/6020A
Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	042_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 11:45:56
Sample Type	CCV
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	% Rec	QC Flag
Be	9	45	No Gas	48.845	ppb	5.3	195413.26	97.69	
Al	27	72	No Gas	51.184	ppb	5.8	1976547.07	102.37	
V	51	72	He	50.706	ppb	1.4	469521.77	101.41	
Cr	52	72	No Gas	48.913	ppb	11.3	2675196.14	97.83	
Mn	55	72	No Gas	49.546	ppb	7.0	3638398.74	99.09	
Co	59	72	He	49.833	ppb	0.7	975702.67	99.67	
Ni	60	72	No Gas	47.167	ppb	7.7	690551.34	94.33	
Cu	63	72	No Gas	47.884	ppb	7.3	1704027.43	95.77	
Zn	66	72	No Gas	48.016	ppb	6.7	443429.37	96.03	
As	75	72	No Gas	48.550	ppb	6.3	498887.12	97.1	
Se	78	72	He	51.097	ppb	0.6	5876.23	102.19	
Se	82	72	No Gas	48.974	ppb	7.3	31415.71	97.95	
Mo	98	89	No Gas	48.444	ppb	11.0	1349010.00	96.89	
Ag	107	89	No Gas	48.217	ppb	10.0	2150858.74	96.43	
Cd	111	89	No Gas	47.192	ppb	10.7	435239.16	94.38	
Sb	123	89	No Gas	47.105	ppb	10.4	1342081.93	94.21	
Ba	137	115	No Gas	48.823	ppb	6.1	675027.08	97.65	
Tl	203	115	No Gas	50.890	ppb	6.7	1148172.25	101.78	
Pb	208	115	No Gas	50.428	ppb	5.4	3597619.06	100.86	
Th	232	115	No Gas	50.230	ppb	9.5	3339566.67	100.46	
U	238	115	No Gas	51.248	ppb	5.3	3245541.89	102.5	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8852333.26	3.7	8788220.21	100.73	60	125	
Sc	45	He	489418.80	1.4	486695.24	100.56	60	125	
Ge	72	No Gas	6274072.53	1.9	6275745.58	99.97	60	125	
Ge	72	He	950752.63	1.1	948175.9	100.27	60	125	
Y	89	No Gas	9207148.52	4.0	8859608.54	103.92	60	125	
Y	89	He	1464755.29	1.2	1479625.71	98.99	60	125	
Rh	103	No Gas	7492039.70	2.4	7242596.94	103.44	60	125	
Rh	103	He	3892444.71	2.4	3947548.31	98.6	60	125	
In	115	No Gas	8011437.18	1.5	7988838.01	100.28	60	125	
Lu	175	No Gas	52409.55	1.1	52826.41	99.21	60	125	

7900 ICP-MS 200.8/6020A
Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	043_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 11:47:43
Sample Type	CCB
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.025	ppb	19.0	155.56	
Al	27	72	No Gas	0.543	ppb	26.2	29204.38	
V	51	72	He	-0.010	ppb	N/A	1678.99	
Cr	52	72	No Gas	-0.094	ppb	N/A	46769.68	
Mn	55	72	No Gas	0.008	ppb	33.7	8585.93	
Co	59	72	He	0.004	ppb	39.0	161.11	
Ni	60	72	No Gas	-0.116	ppb	N/A	6330.31	
Cu	63	72	No Gas	-0.055	ppb	N/A	5870.12	
Zn	66	72	No Gas	0.020	ppb	26.2	1787.90	
As	75	72	No Gas	-0.165	ppb	N/A	1451.56	
Se	78	72	He	0.011	ppb	196.0	71.67	
Se	82	72	No Gas	-0.033	ppb	N/A	279.42	
Mo	98	89	No Gas	0.066	ppb	17.4	2139.58	
Ag	107	89	No Gas	0.008	ppb	14.5	575.57	
Cd	111	89	No Gas	-0.016	ppb	N/A	4348.47	
Sb	123	89	No Gas	0.055	ppb	20.1	2569.14	
Ba	137	115	No Gas	0.007	ppb	62.3	342.23	
Tl	203	115	No Gas	0.014	ppb	11.0	393.34	
Pb	208	115	No Gas	0.013	ppb	26.6	1465.59	
Th	232	115	No Gas	0.038	ppb	10.4	3263.76	
U	238	115	No Gas	0.007	ppb	19.7	453.34	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8937795.76	2.3	8788220.21	101.7	60	125	
Sc	45	He	487679.36	2.0	486695.24	100.2	60	125	
Ge	72	No Gas	6237686.70	3.6	6275745.58	99.39	60	125	
Ge	72	He	949086.84	1.4	948175.9	100.1	60	125	
Y	89	No Gas	9085608.81	2.6	8859608.54	102.55	60	125	
Y	89	He	1483158.79	0.8	1479625.71	100.24	60	125	
Rh	103	No Gas	7492531.09	1.6	7242596.94	103.45	60	125	
Rh	103	He	3957380.68	0.9	3947548.31	100.25	60	125	
In	115	No Gas	7911740.24	1.7	7988838.01	99.03	60	125	
Lu	175	No Gas	52818.76	1.2	52826.41	99.99	60	125	

7900 ICP-MS 200.8/6020A
Prep Blank (PB) Report

Sample Name	PBW-439337
File Name	044_PB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 11:49:40
Sample Type	PB
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.013	ppb	33.9	107.78	
Al	27	72	No Gas	1.828	ppb	5.4	78889.58	
V	51	72	He	-0.006	ppb	N/A	1708.99	
Cr	52	72	No Gas	-0.032	ppb	N/A	50569.43	
Mn	55	72	No Gas	0.027	ppb	8.6	10015.75	
Co	59	72	He	0.002	ppb	69.8	111.11	
Ni	60	72	No Gas	-0.107	ppb	N/A	6529.29	
Cu	63	72	No Gas	-0.055	ppb	N/A	5935.70	
Zn	66	72	No Gas	0.525	ppb	1.4	6460.37	
As	75	72	No Gas	-0.208	ppb	N/A	1012.91	
Se	78	72	He	-0.001	ppb	N/A	70.33	
Se	82	72	No Gas	0.026	ppb	440.7	320.58	
Mo	98	89	No Gas	0.025	ppb	19.8	1021.18	
Ag	107	89	No Gas	0.003	ppb	18.7	373.34	
Cd	111	89	No Gas	-0.035	ppb	N/A	4162.96	
Sb	123	89	No Gas	0.018	ppb	17.6	1548.98	
Ba	137	115	No Gas	0.020	ppb	17.2	522.24	
Tl	203	115	No Gas	0.004	ppb	7.7	175.56	
Pb	208	115	No Gas	0.020	ppb	9.4	1897.83	
Th	232	115	No Gas	0.013	ppb	7.4	1609.00	
U	238	115	No Gas	0.001	ppb	12.9	111.11	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8955215.48	1.4	8788220.21	101.9	60	125	
Sc	45	He	490296.30	1.2	486695.24	100.74	60	125	
Ge	72	No Gas	6293551.42	0.5	6275745.58	100.28	60	125	
Ge	72	He	950785.62	1.9	948175.9	100.28	60	125	
Y	89	No Gas	9079776.86	2.8	8859608.54	102.49	60	125	
Y	89	He	1477077.93	4.3	1479625.71	99.83	60	125	
Rh	103	No Gas	7464283.87	0.5	7242596.94	103.06	60	125	
Rh	103	He	3985580.95	2.8	3947548.31	100.96	60	125	
In	115	No Gas	7824227.19	1.5	7988838.01	97.94	60	125	
Lu	175	No Gas	51571.66	0.3	52826.41	97.62	60	125	

7900 ICP-MS 200.8/6020A
Laboratory Control Sample (LCS) Report

Sample Name	LCSW-439337
File Name	045_LCS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 11:51:37
Sample Type	LCS
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	% Rec	QC Flag
Be	9	45	No Gas	21.024	ppb	8.2	83532.22	105.12	
Al	27	72	No Gas	40.764	ppb	4.8	1585240.18	101.91	
V	51	72	He	21.140	ppb	2.3	199222.03	105.7	
Cr	52	72	No Gas	20.703	ppb	4.3	1168280.65	103.52	
Mn	55	72	No Gas	20.426	ppb	3.1	1513502.13	102.13	
Co	59	72	He	20.809	ppb	0.2	412426.77	104.05	
Ni	60	72	No Gas	19.783	ppb	5.5	295978.74	98.92	
Cu	63	72	No Gas	20.744	ppb	5.1	746950.13	103.72	
Zn	66	72	No Gas	21.016	ppb	5.2	196134.25	105.08	
As	75	72	No Gas	20.267	ppb	4.2	211311.60	101.34	
Se	78	72	He	22.587	ppb	2.2	2669.26	112.94	
Se	82	72	No Gas	20.621	ppb	4.4	13478.66	103.1	
Mo	98	89	No Gas	21.450	ppb	4.2	572063.93	107.25	
Ag	107	89	No Gas	20.925	ppb	3.7	893425.47	104.63	
Cd	111	89	No Gas	21.001	ppb	3.5	187788.50	105.01	
Sb	123	89	No Gas	21.174	ppb	4.3	577867.29	105.87	
Ba	137	115	No Gas	21.154	ppb	5.9	286447.60	105.77	
Tl	203	115	No Gas	21.576	ppb	5.2	476508.49	107.88	
Pb	208	115	No Gas	21.546	ppb	5.0	1504954.18	107.73	
Th	232	115	No Gas	21.479	ppb	5.1	1398616.64	107.4	
U	238	115	No Gas	22.279	ppb	4.3	1381154.46	111.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8807573.26	2.2	8788220.21	100.22	60	125	
Sc	45	He	495324.89	1.1	486695.24	101.77	60	125	
Ge	72	No Gas	6314204.05	1.7	6275745.58	100.61	60	125	
Ge	72	He	962348.09	0.8	948175.9	101.49	60	125	
Y	89	No Gas	8788032.15	2.0	8859608.54	99.19	60	125	
Y	89	He	1495648.72	1.4	1479625.71	101.08	60	125	
Rh	103	No Gas	7467413.31	0.8	7242596.94	103.1	60	125	
Rh	103	He	4045795.26	1.5	3947548.31	102.49	60	125	
In	115	No Gas	7843426.63	0.2	7988838.01	98.18	60	125	
Lu	175	No Gas	52324.55	1.2	52826.41	99.05	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404302-001
File Name	046SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 11:53:34
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.021	ppb	22.2	131.11	
Al	27	72	No Gas	52.109	ppb	2.1	1888281.18	
V	51	72	He	26.478	ppb	0.8	236251.57	
Cr	52	72	No Gas	5.850	ppb	3.9	343185.33	
Mn	55	72	No Gas	0.202	ppb	2.3	21429.46	
Co	59	72	He	0.032	ppb	3.7	677.80	
Ni	60	72	No Gas	0.537	ppb	6.0	14858.90	
Cu	63	72	No Gas	7.066	ppb	3.5	242231.52	
Zn	66	72	No Gas	3.296	ppb	4.8	29986.32	
As	75	72	No Gas	2.274	ppb	1.5	24718.88	
Se	78	72	He	0.489	ppb	29.2	121.00	
Se	82	72	No Gas	4.567	ppb	6.2	3007.85	
Mo	98	89	No Gas	31.808	ppb	3.8	804544.41	
Ag	107	89	No Gas	0.008	ppb	36.2	548.90	
Cd	111	89	No Gas	-0.010	ppb	N/A	4039.02	
Sb	123	89	No Gas	1.620	ppb	4.6	42808.46	
Ba	137	115	No Gas	15.861	ppb	5.9	199914.75	
Tl	203	115	No Gas	0.012	ppb	24.4	320.00	
Pb	208	115	No Gas	0.022	ppb	2.0	1917.84	
Th	232	115	No Gas	0.130	ppb	14.5	8603.00	
U	238	115	No Gas	0.008	ppb	12.0	530.02	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8445732.72	3.2	8788220.21	96.1	60	125	
Sc	45	He	474183.39	2.1	486695.24	97.43	60	125	
Ge	72	No Gas	5891036.16	1.7	6275745.58	93.87	60	125	
Ge	72	He	913010.07	2.4	948175.9	96.29	60	125	
Y	89	No Gas	8339707.73	1.8	8859608.54	94.13	60	125	
Y	89	He	1414713.10	2.0	1479625.71	95.61	60	125	
Rh	103	No Gas	6441474.19	0.5	7242596.94	88.94	60	125	
Rh	103	He	3550876.24	1.3	3947548.31	89.95	60	125	
In	115	No Gas	7304640.82	2.3	7988838.01	91.44	60	125	
Lu	175	No Gas	47508.51	0.7	52826.41	89.93	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404302-002
File Name	047SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 11:55:30
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.017	ppb	26.1	125.56	
Al	27	72	No Gas	1.916	ppb	1.7	79884.34	
V	51	72	He	1.040	ppb	3.3	11082.08	
Cr	52	72	No Gas	0.359	ppb	13.8	69512.27	
Mn	55	72	No Gas	757.523	ppb	4.3	54037930.08	>LDR
Co	59	72	He	0.455	ppb	1.6	8769.39	
Ni	60	72	No Gas	18.410	ppb	3.5	267095.21	
Cu	63	72	No Gas	4.204	ppb	3.6	152562.86	
Zn	66	72	No Gas	21.270	ppb	4.5	192056.56	
As	75	72	No Gas	0.490	ppb	23.7	7927.55	
Se	78	72	He	0.167	ppb	49.1	87.33	
Se	82	72	No Gas	1.363	ppb	8.7	1138.34	
Mo	98	89	No Gas	9.398	ppb	4.0	247214.94	
Ag	107	89	No Gas	0.008	ppb	35.2	550.01	
Cd	111	89	No Gas	0.011	ppb	212.6	4369.23	
Sb	123	89	No Gas	0.056	ppb	13.5	2475.79	
Ba	137	115	No Gas	109.704	ppb	1.4	1395142.34	>LDR
Tl	203	115	No Gas	0.007	ppb	11.2	226.67	
Pb	208	115	No Gas	0.021	ppb	6.3	1875.61	
Th	232	115	No Gas	0.030	ppb	11.7	2528.04	
U	238	115	No Gas	6.360	ppb	3.4	370588.11	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8994813.53	3.5	8788220.21	102.35	60	125	
Sc	45	He	483431.02	1.5	486695.24	99.33	60	125	
Ge	72	No Gas	6109550.17	2.5	6275745.58	97.35	60	125	
Ge	72	He	927252.26	1.6	948175.9	97.79	60	125	
Y	89	No Gas	8660464.66	3.3	8859608.54	97.75	60	125	
Y	89	He	1424177.96	1.9	1479625.71	96.25	60	125	
Rh	103	No Gas	6586824.74	3.0	7242596.94	90.95	60	125	
Rh	103	He	3540317.36	0.4	3947548.31	89.68	60	125	
In	115	No Gas	7371431.37	2.8	7988838.01	92.27	60	125	
Lu	175	No Gas	50895.50	0.7	52826.41	96.34	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404302-003
File Name	048SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 11:57:26
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.010	ppb	47.4	97.78	
Al	27	72	No Gas	3.692	ppb	4.7	143811.24	
V	51	72	He	2.067	ppb	4.0	20261.02	
Cr	52	72	No Gas	1.499	ppb	6.4	126728.54	
Mn	55	72	No Gas	0.285	ppb	16.4	27645.01	
Co	59	72	He	0.104	ppb	1.1	2060.16	
Ni	60	72	No Gas	157.558	ppb	4.6	2188025.95	>LDR
Cu	63	72	No Gas	1.399	ppb	6.9	54933.67	
Zn	66	72	No Gas	10.183	ppb	4.2	91144.27	
As	75	72	No Gas	0.933	ppb	14.6	12076.70	
Se	78	72	He	1.942	ppb	1.9	283.33	
Se	82	72	No Gas	3.161	ppb	9.0	2211.51	
Mo	98	89	No Gas	7.868	ppb	2.6	205845.29	
Ag	107	89	No Gas	0.012	ppb	13.7	723.35	
Cd	111	89	No Gas	-0.007	ppb	N/A	4185.60	
Sb	123	89	No Gas	0.078	ppb	3.5	3050.36	
Ba	137	115	No Gas	36.635	ppb	4.8	470795.85	
Tl	203	115	No Gas	0.043	ppb	4.8	977.82	
Pb	208	115	No Gas	0.024	ppb	1.8	2088.97	
Th	232	115	No Gas	0.020	ppb	21.0	1959.05	
U	238	115	No Gas	9.238	ppb	4.5	543738.33	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9087817.14	1.5	8788220.21	103.41	60	125	
Sc	45	He	488283.44	3.2	486695.24	100.33	60	125	
Ge	72	No Gas	6007036.01	3.4	6275745.58	95.72	60	125	
Ge	72	He	925148.05	3.0	948175.9	97.57	60	125	
Y	89	No Gas	8616308.55	3.8	8859608.54	97.25	60	125	
Y	89	He	1434982.06	6.1	1479625.71	96.98	60	125	
Rh	103	No Gas	6613054.74	2.8	7242596.94	91.31	60	125	
Rh	103	He	3577960.90	3.1	3947548.31	90.64	60	125	
In	115	No Gas	7446489.43	0.5	7988838.01	93.21	60	125	
Lu	175	No Gas	50636.15	1.9	52826.41	95.85	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404633-001
File Name	049SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 11:59:23
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.011	ppb	24.8	100.00	
Al	27	72	No Gas	1.965	ppb	4.7	82736.19	
V	51	72	He	0.163	ppb	4.9	3238.15	
Cr	52	72	No Gas	0.415	ppb	28.5	73242.23	
Mn	55	72	No Gas	4.548	ppb	9.0	335969.21	
Co	59	72	He	0.034	ppb	13.7	736.69	
Ni	60	72	No Gas	0.670	ppb	14.6	17485.23	
Cu	63	72	No Gas	18.017	ppb	8.4	636003.95	
Zn	66	72	No Gas	21.696	ppb	8.2	198120.72	
As	75	72	No Gas	1.995	ppb	18.8	23093.11	
Se	78	72	He	0.042	ppb	62.1	74.33	
Se	82	72	No Gas	0.064	ppb	88.9	338.35	
Mo	98	89	No Gas	0.564	ppb	7.1	15398.69	
Ag	107	89	No Gas	0.003	ppb	27.2	336.67	
Cd	111	89	No Gas	-0.008	ppb	N/A	4289.66	
Sb	123	89	No Gas	0.058	ppb	11.5	2590.25	
Ba	137	115	No Gas	274.274	ppb	6.5	3677644.02	>LDR
Tl	203	115	No Gas	0.003	ppb	35.2	143.33	
Pb	208	115	No Gas	0.221	ppb	4.8	15822.73	
Th	232	115	No Gas	0.001	ppb	8.2	814.47	
U	238	115	No Gas	0.815	ppb	8.1	50099.97	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9047921.86	1.0	8788220.21	102.96	60	125	
Sc	45	He	488999.23	0.7	486695.24	100.47	60	125	
Ge	72	No Gas	6191311.84	3.2	6275745.58	98.65	60	125	
Ge	72	He	939776.52	0.8	948175.9	99.11	60	125	
Y	89	No Gas	8826405.20	1.1	8859608.54	99.63	60	125	
Y	89	He	1428265.57	1.0	1479625.71	96.53	60	125	
Rh	103	No Gas	7234785.27	3.9	7242596.94	99.89	60	125	
Rh	103	He	3689490.97	2.0	3947548.31	93.46	60	125	
In	115	No Gas	7777587.74	2.4	7988838.01	97.36	60	125	
Lu	175	No Gas	53152.30	2.5	52826.41	100.62	60	125	

7900 ICP-MS 200.8/6020A
Reference Sample Report

Sample Name	R2404634-006
File Name	050_ARF.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 12:01:18
Sample Type	AllRef
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS
Be	9	45	No Gas	0.012	ppb	29.8	96.67
Al	27	72	No Gas	6.582	ppb	11.2	238933.29
Cr	52	72	No Gas	0.468	ppb	28.2	70605.71
Mn	55	72	No Gas	88.052	ppb	14.0	5896479.07
Ni	60	72	No Gas	1.961	ppb	14.0	33278.59
Cu	63	72	No Gas	175.770	ppb	12.0	5692248.38
Zn	66	72	No Gas	11.587	ppb	12.2	98837.81
As	75	72	No Gas	35.161	ppb	12.1	330732.15
Se	82	72	No Gas	27.360	ppb	13.8	16140.48
Mo	98	89	No Gas	1.213	ppb	12.6	30739.46
Ag	107	89	No Gas	0.023	ppb	20.5	1151.17
Cd	111	89	No Gas	0.032	ppb	19.1	4366.75
Sb	123	89	No Gas	0.128	ppb	23.5	4226.25
Ba	137	115	No Gas	2290.977	ppb	13.0	27920865.56
Tl	203	115	No Gas	0.003	ppb	58.6	121.11
Pb	208	115	No Gas	0.677	ppb	12.1	43062.75
Th	232	115	No Gas	0.012	ppb	15.0	1357.85
U	238	115	No Gas	0.264	ppb	13.3	14806.52
V	51	72	He	0.089	ppb	7.7	2390.21
Co	59	72	He	0.113	ppb	4.7	2116.83
Se	78	72	He	0.118	ppb	37.7	77.33

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High
Sc	45	No Gas	8544408.82	1.2	8788220.21	97.23	60	125
Sc	45	He	471088.87	0.7	486695.24	96.79	60	125
Ge	72	No Gas	5751986.30	4.0	6275745.58	91.65	60	125
Ge	72	He	877298.23	1.1	948175.9	92.52	60	125
Y	89	No Gas	8302510.50	3.9	8859608.54	93.71	60	125
Y	89	He	1392739.56	1.5	1479625.71	94.13	60	125
Rh	103	No Gas	6341599.06	4.3	7242596.94	87.56	60	125
Rh	103	He	3485291.67	0.7	3947548.31	88.29	60	125
In	115	No Gas	7097061.94	5.2	7988838.01	88.84	60	125
Lu	175	No Gas	50686.20	4.1	52826.41	95.95	60	125

7900 ICP-MS 200.8-6020A
Matrix Spike (MS) Sample Report

Sample Name	R2404634-006S
File Name	051_Spk.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 12:03:09
Sample Type	Spike
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d
QC Ref File Name	050_ ARF. d

QC Analyte Table

Name	Mass	Tune	Conc.	Units	RSD	CPS	RefConc	%Rec	Flag
Be	9	No Gas	20.381	ppb	6.9	76959.40	0.012	101.84	
Al	27	No Gas	49.172	ppb	4.1	1740097.74	6.582	105.56	
V	51	He	22.121	ppb	0.7	190535.52	0.089	110.11	
Cr	52	No Gas	20.765	ppb	7.4	1067393.29	0.468	101.45	
Mn	55	No Gas	111.202	ppb	4.8	7475449.15	88.052	102.91	
Co	59	He	19.972	ppb	1.4	361998.88	0.113	99.3	
Ni	60	No Gas	20.592	ppb	6.3	280355.83	1.961	93.77	
Cu	63	No Gas	225.257	ppb	6.9	7315302.35	175.77	115.06	
Zn	66	No Gas	30.344	ppb	6.2	257289.78	11.587	96.07	
As	75	No Gas	56.994	ppb	6.8	536132.12	35.161	103.32	
Se	78	He	21.351	ppb	1.2	2310.86	0.118	106.13	
Se	82	No Gas	48.306	ppb	6.5	28393.28	27.36	102	
Mo	98	No Gas	21.512	ppb	3.9	551660.23	1.213	101.41	
Ag	107	No Gas	17.843	ppb	4.8	732597.05	0.023	89.11	
Cd	111	No Gas	18.124	ppb	4.4	156430.63	0.032	90.48	
Sb	123	No Gas	19.779	ppb	3.9	519159.60	0.128	98.27	
Ba	137	No Gas	2332.353	ppb	1.3	29052538.85	2290.977	100.93	
Tl	203	No Gas	19.894	ppb	2.1	404564.22	0.003	99.46	
Pb	208	No Gas	20.051	ppb	2.8	1289689.58	0.677	96.97	
Th	232	No Gas	20.940	ppb	4.1	1255447.66	0.012	104.64	
U	238	No Gas	21.691	ppb	2.7	1238149.33	0.264	107.04	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8369851.06	2.2	8788220.21	95.24	60	125	
Sc	45	He	470382.55	1.3	486695.24	96.65	60	125	
Ge	72	No Gas	5755732.41	2.3	6275745.58	91.71	60	125	
Ge	72	He	880052.29	0.4	948175.9	92.82	60	125	
Y	89	No Gas	8451715.22	0.7	8859608.54	95.4	60	125	
Y	89	He	1392210.36	0.9	1479625.71	94.09	60	125	
Rh	103	No Gas	6274653.36	1.6	7242596.94	86.64	60	125	
Rh	103	He	3456468.75	1.6	3947548.31	87.56	60	125	
In	115	No Gas	7221152.49	2.3	7988838.01	90.39	60	125	
Lu	175	No Gas	50955.72	0.6	52826.41	96.46	60	125	

7900 ICP-MS 200.8/6020A
Matrix Spike Duplicate (MSD) Sample Report

Sample Name	R2404634-006SD
File Name	052_SpD.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 12:05:00
Sample Type	SpkDup
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d
QC Ref File Name	051_ Spk.d

QC Analyte Table

Name	Mass	Tune	Conc.	Units	RSD	CPS	RefConc	RPD	Flag
Be	9	No Gas	22.593	ppb	17.2	78081.15	20.381	10.3	
Al	27	No Gas	57.366	ppb	15.8	1760032.40	49.172	15.38	
V	51	He	26.535	ppb	22.7	190584.68	22.121	18.15	
Cr	52	No Gas	24.046	ppb	19.5	1062383.85	20.765	14.64	
Mn	55	No Gas	126.033	ppb	21.1	7303532.49	111.202	12.5	
Co	59	He	24.142	ppb	23.6	364851.21	19.972	18.91	
Ni	60	No Gas	23.724	ppb	20.7	277806.27	20.592	14.13	
Cu	63	No Gas	261.912	ppb	21.0	7337434.71	225.257	15.05	
Zn	66	No Gas	35.752	ppb	19.8	261614.43	30.344	16.36	
As	75	No Gas	65.256	ppb	20.1	529650.08	56.994	13.52	
Se	78	He	26.304	ppb	25.8	2356.20	21.351	20.79	RPD > 20%
Se	82	No Gas	55.064	ppb	20.3	27906.18	48.306	13.07	
Mo	98	No Gas	25.095	ppb	22.2	557777.39	21.512	15.38	
Ag	107	No Gas	20.718	ppb	21.3	737880.82	17.843	14.91	
Cd	111	No Gas	21.002	ppb	19.8	157065.61	18.124	14.71	
Sb	123	No Gas	23.114	ppb	21.5	526170.69	19.779	15.55	
Ba	137	No Gas	2600.580	ppb	18.5	28183129.99	2332.353	10.87	
Tl	203	No Gas	22.800	ppb	18.8	403113.59	19.894	13.61	
Pb	208	No Gas	22.917	ppb	17.5	1283362.63	20.051	13.34	
Th	232	No Gas	23.903	ppb	17.6	1247709.78	20.94	13.22	
U	238	No Gas	24.874	ppb	17.5	1236288.84	21.691	13.67	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	7765197.47	13.8	8788220.21	88.36	60	125	
Sc	45	He	385031.78	23.8	486695.24	79.11	60	125	
Ge	72	No Gas	5074942.85	16.3	6275745.58	80.87	60	125	
Ge	72	He	757011.91	19.5	948175.9	79.84	60	125	
Y	89	No Gas	7511816.09	17.0	8859608.54	84.79	60	125	
Y	89	He	1161588.84	21.3	1479625.71	78.51	60	125	
Rh	103	No Gas	5791315.19	15.8	7242596.94	79.96	60	125	
Rh	103	He	2862198.36	20.9	3947548.31	72.51	60	125	
In	115	No Gas	6392957.80	14.4	7988838.01	80.02	60	125	
Lu	175	No Gas	44947.75	19.2	52826.41	85.09	60	125	

7900 ICP-MS 200.8-6020A
Matrix Spike (MS) Sample Report

Sample Name	R2404634-006A
File Name	053_Spk.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 12:06:50
Sample Type	Spike
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d
QC Ref File Name	050_ ARF. d

QC Analyte Table

Name	Mass	Tune	Conc.	Units	RSD	CPS	RefConc	%Rec	Flag
Be	9	No Gas	20.994	ppb	6.7	78069.87	0.012	104.91	
Al	27	No Gas	51.291	ppb	8.9	1778694.93	6.582	110.11	
V	51	He	22.903	ppb	1.1	193702.88	0.089	114.01	
Cr	52	No Gas	21.605	ppb	8.9	1086510.20	0.468	105.55	
Mn	55	No Gas	110.483	ppb	7.8	7277408.46	88.052	102.25	
Co	59	He	20.581	ppb	1.7	366360.80	0.113	102.33	
Ni	60	No Gas	20.963	ppb	8.0	279566.77	1.961	95.46	
Cu	63	No Gas	217.003	ppb	6.7	6908670.00	175.77	110.85	
Zn	66	No Gas	31.355	ppb	7.4	260499.41	11.587	99.27	
As	75	No Gas	58.475	ppb	7.3	539003.96	35.161	106.01	
Se	78	He	21.965	ppb	3.4	2332.53	0.118	109.18	
Se	82	No Gas	49.326	ppb	6.0	28409.10	27.36	104.15	
Mo	98	No Gas	23.028	ppb	8.5	558764.72	1.213	108.56	
Ag	107	No Gas	17.100	ppb	8.7	664308.07	0.023	85.4	
Cd	111	No Gas	19.341	ppb	8.2	157684.21	0.032	96.55	
Sb	123	No Gas	20.675	ppb	8.8	513413.19	0.128	102.72	
Ba	137	No Gas	2353.853	ppb	8.7	28191259.44	2290.977	101.86	
Tl	203	No Gas	20.645	ppb	6.5	403766.82	0.003	103.21	
Pb	208	No Gas	21.067	ppb	7.5	1303012.09	0.677	101.89	
Th	232	No Gas	22.299	ppb	7.9	1285721.75	0.012	111.43	
U	238	No Gas	22.861	ppb	8.0	1254863.91	0.264	112.81	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8238693.56	1.3	8788220.21	93.75	60	125	
Sc	45	He	463266.14	1.7	486695.24	95.19	60	125	
Ge	72	No Gas	5640681.58	1.0	6275745.58	89.88	60	125	
Ge	72	He	864448.25	1.5	948175.9	91.17	60	125	
Y	89	No Gas	8011452.18	3.6	8859608.54	90.43	60	125	
Y	89	He	1372034.11	1.2	1479625.71	92.73	60	125	
Rh	103	No Gas	6215752.53	0.7	7242596.94	85.82	60	125	
Rh	103	He	3415089.31	0.7	3947548.31	86.51	60	125	
In	115	No Gas	6953853.20	2.8	7988838.01	87.04	60	125	
Lu	175	No Gas	48596.89	1.9	52826.41	91.99	60	125	

7900 ICP-MS 200.8/6020A
Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	054_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 12:08:40
Sample Type	CCV
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	% Rec	QC Flag
Be	9	45	No Gas	50.549	ppb	16.5	200128.41	101.1	
Al	27	72	No Gas	49.206	ppb	9.8	1868277.42	98.41	
V	51	72	He	51.706	ppb	1.9	475324.56	103.41	
Cr	52	72	No Gas	48.420	ppb	14.8	2601296.22	96.84	
Mn	55	72	No Gas	49.056	ppb	14.7	3541160.00	98.11	
Co	59	72	He	50.443	ppb	0.6	980416.14	100.89	
Ni	60	72	No Gas	47.544	ppb	14.1	683928.20	95.09	
Cu	63	72	No Gas	49.304	ppb	14.2	1724090.59	98.61	
Zn	66	72	No Gas	47.653	ppb	13.3	432516.63	95.31	
As	75	72	No Gas	48.074	ppb	13.8	485570.31	96.15	
Se	78	72	He	52.637	ppb	2.2	6008.28	105.27	
Se	82	72	No Gas	49.195	ppb	12.1	31013.52	98.39	
Mo	98	89	No Gas	49.011	ppb	13.9	1309342.01	98.02	
Ag	107	89	No Gas	48.087	ppb	11.9	2057798.81	96.17	
Cd	111	89	No Gas	47.499	ppb	13.6	420183.51	95	
Sb	123	89	No Gas	47.623	ppb	13.8	1301216.96	95.25	
Ba	137	115	No Gas	47.981	ppb	13.9	656547.11	95.96	
Tl	203	115	No Gas	49.230	ppb	14.3	1099029.23	98.46	
Pb	208	115	No Gas	47.883	ppb	13.5	3381381.48	95.77	
Th	232	115	No Gas	49.230	ppb	14.1	3240008.00	98.46	
U	238	115	No Gas	49.235	ppb	12.6	3086836.41	98.47	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8814052.70	4.8	8788220.21	100.29	60	125	
Sc	45	He	492770.31	2.5	486695.24	101.25	60	125	
Ge	72	No Gas	6175753.64	0.9	6275745.58	98.41	60	125	
Ge	72	He	943890.49	1.4	948175.9	99.55	60	125	
Y	89	No Gas	8833609.65	3.1	8859608.54	99.71	60	125	
Y	89	He	1467517.23	3.9	1479625.71	99.18	60	125	
Rh	103	No Gas	7301575.54	1.0	7242596.94	100.81	60	125	
Rh	103	He	3897841.10	1.9	3947548.31	98.74	60	125	
In	115	No Gas	7956421.91	3.6	7988838.01	99.59	60	125	
Lu	175	No Gas	52758.57	1.3	52826.41	99.87	60	125	

7900 ICP-MS 200.8/6020A
Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	055_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 12:10:27
Sample Type	CCB
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.023	ppb	44.5	141.11	
Al	27	72	No Gas	0.070	ppb	76.3	10658.77	
V	51	72	He	0.042	ppb	9.1	2096.83	
Cr	52	72	No Gas	0.086	ppb	81.2	54289.77	
Mn	55	72	No Gas	0.024	ppb	5.4	9349.75	
Co	59	72	He	0.003	ppb	36.1	140.00	
Ni	60	72	No Gas	-0.112	ppb	N/A	6159.12	
Cu	63	72	No Gas	0.095	ppb	30.3	10728.52	
Zn	66	72	No Gas	0.038	ppb	60.4	1882.35	
As	75	72	No Gas	-0.169	ppb	N/A	1322.93	
Se	78	72	He	-0.054	ppb	N/A	62.67	
Se	82	72	No Gas	0.070	ppb	124.9	332.59	
Mo	98	89	No Gas	0.029	ppb	26.1	1073.27	
Ag	107	89	No Gas	0.008	ppb	8.7	548.90	
Cd	111	89	No Gas	-0.008	ppb	N/A	4228.11	
Sb	123	89	No Gas	0.071	ppb	6.4	2911.43	
Ba	137	115	No Gas	0.100	ppb	9.6	1586.76	
Tl	203	115	No Gas	0.013	ppb	18.7	365.56	
Pb	208	115	No Gas	0.010	ppb	28.8	1217.80	
Th	232	115	No Gas	0.057	ppb	11.1	4415.22	
U	238	115	No Gas	0.007	ppb	4.3	477.79	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8657381.88	1.3	8788220.21	98.51	60	125	
Sc	45	He	479176.86	1.6	486695.24	98.46	60	125	
Ge	72	No Gas	6009907.82	1.3	6275745.58	95.76	60	125	
Ge	72	He	926270.83	0.2	948175.9	97.69	60	125	
Y	89	No Gas	8701655.77	2.4	8859608.54	98.22	60	125	
Y	89	He	1436242.55	2.1	1479625.71	97.07	60	125	
Rh	103	No Gas	7226196.93	2.7	7242596.94	99.77	60	125	
Rh	103	He	3837652.62	4.0	3947548.31	97.22	60	125	
In	115	No Gas	7769728.30	0.7	7988838.01	97.26	60	125	
Lu	175	No Gas	51018.33	1.0	52826.41	96.58	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404634-006L 5X
File Name	056SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 12:12:25
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.020	ppb	18.4	131.11	
Al	27	72	No Gas	1.952	ppb	5.9	78106.32	
V	51	72	He	0.062	ppb	19.2	2211.29	
Cr	52	72	No Gas	0.198	ppb	31.6	58689.47	
Mn	55	72	No Gas	18.850	ppb	6.2	1299453.91	
Co	59	72	He	0.027	ppb	2.6	572.23	
Ni	60	72	No Gas	0.325	ppb	12.6	11940.61	
Cu	63	72	No Gas	38.511	ppb	6.1	1283077.83	
Zn	66	72	No Gas	2.588	ppb	4.7	23781.22	
As	75	72	No Gas	7.301	ppb	8.2	72656.20	
Se	78	72	He	0.069	ppb	98.7	74.00	
Se	82	72	No Gas	5.717	ppb	4.8	3679.73	
Mo	98	89	No Gas	0.266	ppb	3.9	7283.24	
Ag	107	89	No Gas	0.008	ppb	7.2	574.46	
Cd	111	89	No Gas	0.008	ppb	245.5	4338.92	
Sb	123	89	No Gas	0.055	ppb	17.0	2442.45	
Ba	137	115	No Gas	490.638	ppb	5.3	6260149.89	>LDR
Tl	203	115	No Gas	0.010	ppb	40.5	288.89	
Pb	208	115	No Gas	0.151	ppb	3.2	10459.45	
Th	232	115	No Gas	0.031	ppb	8.0	2624.72	
U	238	115	No Gas	0.061	ppb	2.6	3609.41	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8660312.99	2.1	8788220.21	98.54	60	125	
Sc	45	He	468418.89	1.0	486695.24	96.24	60	125	
Ge	72	No Gas	5871682.27	0.6	6275745.58	93.56	60	125	
Ge	72	He	898723.99	1.6	948175.9	94.78	60	125	
Y	89	No Gas	8635592.99	1.7	8859608.54	97.47	60	125	
Y	89	He	1384670.47	2.2	1479625.71	93.58	60	125	
Rh	103	No Gas	6852563.76	1.5	7242596.94	94.61	60	125	
Rh	103	He	3547010.69	2.4	3947548.31	89.85	60	125	
In	115	No Gas	7393948.87	2.3	7988838.01	92.55	60	125	
Lu	175	No Gas	50233.09	1.6	52826.41	95.09	60	125	

7900 ICP-MS 200.8/6020A
Prep Blank (PB) Report

Sample Name	PBW-439339
File Name	057_PB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 12:14:19
Sample Type	PB
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.011	ppb	32.1	98.89	
Al	27	72	No Gas	1.171	ppb	1.5	51169.79	
V	51	72	He	0.054	ppb	10.5	2199.06	
Cr	52	72	No Gas	0.169	ppb	40.1	58604.71	
Mn	55	72	No Gas	0.037	ppb	5.6	10244.79	
Co	59	72	He	0.001	ppb	84.0	106.67	
Ni	60	72	No Gas	-0.150	ppb	N/A	5640.02	
Cu	63	72	No Gas	0.048	ppb	55.5	9155.23	
Zn	66	72	No Gas	0.582	ppb	4.8	6677.14	
As	75	72	No Gas	0.040	ppb	91.4	3377.90	
Se	78	72	He	0.101	ppb	52.1	79.67	
Se	82	72	No Gas	0.151	ppb	69.8	382.64	
Mo	98	89	No Gas	0.006	ppb	51.1	446.66	
Ag	107	89	No Gas	0.001	ppb	13.2	261.11	
Cd	111	89	No Gas	0.001	ppb	1110.8	4195.98	
Sb	123	89	No Gas	0.021	ppb	19.2	1514.53	
Ba	137	115	No Gas	0.081	ppb	2.9	1347.85	
Tl	203	115	No Gas	0.001	ppb	23.2	106.67	
Pb	208	115	No Gas	0.004	ppb	23.5	827.79	
Th	232	115	No Gas	0.009	ppb	7.9	1372.30	
U	238	115	No Gas	0.001	ppb	63.7	85.56	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8808571.60	0.9	8788220.21	100.23	60	125	
Sc	45	He	483029.79	0.5	486695.24	99.25	60	125	
Ge	72	No Gas	6009782.95	1.3	6275745.58	95.76	60	125	
Ge	72	He	923715.31	1.4	948175.9	97.42	60	125	
Y	89	No Gas	8478326.61	1.5	8859608.54	95.7	60	125	
Y	89	He	1437651.85	3.4	1479625.71	97.16	60	125	
Rh	103	No Gas	7126425.27	1.1	7242596.94	98.4	60	125	
Rh	103	He	3867669.15	0.5	3947548.31	97.98	60	125	
In	115	No Gas	7860586.63	3.9	7988838.01	98.39	60	125	
Lu	175	No Gas	51473.37	2.0	52826.41	97.44	60	125	

7900 ICP-MS 200.8/6020A
Laboratory Control Sample (LCS) Report

Sample Name	LCSW-439339
File Name	058_LCS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 12:16:17
Sample Type	LCS
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	% Rec	QC Flag
Be	9	45	No Gas	22.733	ppb	1.3	88224.99	113.66	
Al	27	72	No Gas	44.092	ppb	2.8	1659458.16	110.23	
V	51	72	He	21.384	ppb	0.6	196933.78	106.92	
Cr	52	72	No Gas	21.543	ppb	3.6	1175786.93	107.72	
Mn	55	72	No Gas	21.676	ppb	3.1	1555605.36	108.38	
Co	59	72	He	21.013	ppb	0.5	407079.75	105.07	
Ni	60	72	No Gas	20.172	ppb	3.3	292230.43	100.86	
Cu	63	72	No Gas	21.454	ppb	2.8	748032.71	107.27	
Zn	66	72	No Gas	21.210	ppb	2.2	191694.00	106.05	
As	75	72	No Gas	20.940	ppb	2.4	211351.51	104.7	
Se	78	72	He	21.774	ppb	1.6	2517.23	108.87	
Se	82	72	No Gas	21.147	ppb	2.6	13382.38	105.74	
Mo	98	89	No Gas	21.289	ppb	2.0	563742.36	106.44	
Ag	107	89	No Gas	21.126	ppb	1.9	895524.53	105.63	
Cd	111	89	No Gas	20.902	ppb	1.4	185600.59	104.51	
Sb	123	89	No Gas	21.292	ppb	1.2	576918.26	106.46	
Ba	137	115	No Gas	21.292	ppb	4.4	288323.14	106.46	
Tl	203	115	No Gas	21.693	ppb	3.4	479219.03	108.47	
Pb	208	115	No Gas	21.485	ppb	4.4	1500945.66	107.42	
Th	232	115	No Gas	21.586	ppb	4.2	1405832.65	107.93	
U	238	115	No Gas	22.083	ppb	3.9	1369237.03	110.42	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8592249.38	3.6	8788220.21	97.77	60	125	
Sc	45	He	488655.24	1.4	486695.24	100.4	60	125	
Ge	72	No Gas	6115818.37	2.6	6275745.58	97.45	60	125	
Ge	72	He	940694.20	1.6	948175.9	99.21	60	125	
Y	89	No Gas	8726208.54	1.9	8859608.54	98.49	60	125	
Y	89	He	1455557.58	2.9	1479625.71	98.37	60	125	
Rh	103	No Gas	7263446.52	4.4	7242596.94	100.29	60	125	
Rh	103	He	3909826.65	1.7	3947548.31	99.04	60	125	
In	115	No Gas	7848811.35	3.5	7988838.01	98.25	60	125	
Lu	175	No Gas	52731.76	2.8	52826.41	99.82	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404396-001
File Name	059SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 12:18:13
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.037	ppb	29.0	193.34	
Al	27	72	No Gas	9.542	ppb	6.4	353086.70	
V	51	72	He	1.315	ppb	2.4	12990.35	
Cr	52	72	No Gas	1.735	ppb	13.9	136449.01	
Mn	55	72	No Gas	42.602	ppb	10.4	2941392.80	
Co	59	72	He	0.435	ppb	2.5	8028.94	
Ni	60	72	No Gas	3.712	ppb	11.3	58049.49	
Cu	63	72	No Gas	1.567	ppb	12.6	59546.38	
Zn	66	72	No Gas	4.003	ppb	8.9	36147.50	
As	75	72	No Gas	0.702	ppb	28.0	9673.33	
Se	78	72	He	2.571	ppb	3.1	339.00	
Se	82	72	No Gas	4.234	ppb	13.0	2811.30	
Mo	98	89	No Gas	8.008	ppb	6.9	205296.81	
Ag	107	89	No Gas	0.011	ppb	5.1	681.13	
Cd	111	89	No Gas	0.000	ppb	24085.5	4172.58	
Sb	123	89	No Gas	1.176	ppb	5.7	31721.53	
Ba	137	115	No Gas	37.187	ppb	5.1	464462.83	
Tl	203	115	No Gas	0.116	ppb	3.1	2439.13	
Pb	208	115	No Gas	0.048	ppb	3.8	3565.76	
Th	232	115	No Gas	0.150	ppb	16.3	9738.30	
U	238	115	No Gas	7.324	ppb	7.0	418897.97	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8556262.72	3.4	8788220.21	97.36	60	125	
Sc	45	He	462866.11	2.4	486695.24	95.1	60	125	
Ge	72	No Gas	5915784.49	3.8	6275745.58	94.26	60	125	
Ge	72	He	888572.12	1.5	948175.9	93.71	60	125	
Y	89	No Gas	8445589.11	1.9	8859608.54	95.33	60	125	
Y	89	He	1361954.32	1.3	1479625.71	92.05	60	125	
Rh	103	No Gas	6570321.26	0.8	7242596.94	90.72	60	125	
Rh	103	He	3419162.37	2.3	3947548.31	86.61	60	125	
In	115	No Gas	7241548.60	1.8	7988838.01	90.65	60	125	
Lu	175	No Gas	50494.23	4.3	52826.41	95.59	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404396-006
File Name	060SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 12:20:09
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.033	ppb	28.3	176.67	
Al	27	72	No Gas	2.588	ppb	4.1	99196.01	
V	51	72	He	1.264	ppb	0.3	12066.20	
Cr	52	72	No Gas	0.800	ppb	13.4	87333.12	
Mn	55	72	No Gas	0.142	ppb	10.2	16903.37	
Co	59	72	He	0.121	ppb	5.1	2193.51	
Ni	60	72	No Gas	1.878	ppb	8.1	32379.45	
Cu	63	72	No Gas	1.497	ppb	9.0	55939.09	
Zn	66	72	No Gas	3.022	ppb	4.9	27039.33	
As	75	72	No Gas	0.571	ppb	51.5	8230.48	
Se	78	72	He	2.875	ppb	4.7	357.00	
Se	82	72	No Gas	4.080	ppb	8.2	2659.50	
Mo	98	89	No Gas	7.716	ppb	8.8	194554.15	
Ag	107	89	No Gas	0.005	ppb	27.2	397.79	
Cd	111	89	No Gas	-0.033	ppb	N/A	3842.15	
Sb	123	89	No Gas	0.071	ppb	10.4	2770.29	
Ba	137	115	No Gas	27.019	ppb	9.8	339388.56	
Tl	203	115	No Gas	0.047	ppb	11.2	1038.93	
Pb	208	115	No Gas	0.015	ppb	6.7	1483.38	
Th	232	115	No Gas	0.043	ppb	13.8	3302.66	
U	238	115	No Gas	7.177	ppb	10.5	412703.50	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8478256.33	3.6	8788220.21	96.47	60	125	
Sc	45	He	448202.90	0.6	486695.24	92.09	60	125	
Ge	72	No Gas	5772064.77	1.2	6275745.58	91.97	60	125	
Ge	72	He	854411.63	1.3	948175.9	90.11	60	125	
Y	89	No Gas	8319050.50	3.6	8859608.54	93.9	60	125	
Y	89	He	1317141.96	1.0	1479625.71	89.02	60	125	
Rh	103	No Gas	6433067.25	4.9	7242596.94	88.82	60	125	
Rh	103	He	3322575.77	1.9	3947548.31	84.17	60	125	
In	115	No Gas	7307360.13	6.4	7988838.01	91.47	60	125	
Lu	175	No Gas	47699.32	3.2	52826.41	90.29	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404396-011
File Name	061SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 12:22:07
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.001	ppb	108.0	57.78	
Al	27	72	No Gas	2.036	ppb	1.6	79535.65	
V	51	72	He	4.953	ppb	0.4	44258.24	
Cr	52	72	No Gas	0.469	ppb	12.9	70885.29	
Mn	55	72	No Gas	5.749	ppb	4.9	393701.19	
Co	59	72	He	0.449	ppb	2.8	8274.64	
Ni	60	72	No Gas	178.340	ppb	5.2	2373370.46	>LDR
Cu	63	72	No Gas	1.801	ppb	8.4	65696.32	
Zn	66	72	No Gas	5.566	ppb	5.5	48443.13	
As	75	72	No Gas	2.168	ppb	14.6	23151.85	
Se	78	72	He	1.844	ppb	3.9	261.00	
Se	82	72	No Gas	2.588	ppb	7.4	1785.51	
Mo	98	89	No Gas	10.416	ppb	4.3	262361.66	
Ag	107	89	No Gas	0.005	ppb	11.5	411.12	
Cd	111	89	No Gas	-0.012	ppb	N/A	3992.94	
Sb	123	89	No Gas	0.081	ppb	5.2	3020.34	
Ba	137	115	No Gas	33.364	ppb	3.9	411528.18	
Tl	203	115	No Gas	0.003	ppb	38.1	133.33	
Pb	208	115	No Gas	0.012	ppb	6.9	1246.69	
Th	232	115	No Gas	0.011	ppb	10.5	1350.07	
U	238	115	No Gas	21.844	ppb	3.6	1233862.10	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8791895.21	2.6	8788220.21	100.04	60	125	
Sc	45	He	467633.19	2.0	486695.24	96.08	60	125	
Ge	72	No Gas	5759403.38	0.9	6275745.58	91.77	60	125	
Ge	72	He	886498.47	1.9	948175.9	93.5	60	125	
Y	89	No Gas	8299790.78	3.6	8859608.54	93.68	60	125	
Y	89	He	1355085.57	1.0	1479625.71	91.58	60	125	
Rh	103	No Gas	6362163.78	1.6	7242596.94	87.84	60	125	
Rh	103	He	3408707.30	1.2	3947548.31	86.35	60	125	
In	115	No Gas	7145985.55	0.4	7988838.01	89.45	60	125	
Lu	175	No Gas	46217.44	1.6	52826.41	87.49	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404396-012
File Name	062SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 12:24:03
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	-0.006	ppb	N/A	21.11	
Al	27	72	No Gas	4.317	ppb	4.2	122124.98	
V	51	72	He	0.670	ppb	3.5	5853.43	
Cr	52	72	No Gas	11.491	ppb	6.1	467833.46	
Mn	55	72	No Gas	80.526	ppb	3.0	4138334.00	
Co	59	72	He	1.656	ppb	4.1	23908.96	
Ni	60	72	No Gas	286.760	ppb	4.4	2911284.19	>LDR
Cu	63	72	No Gas	23.374	ppb	5.4	585297.14	
Zn	66	72	No Gas	27.397	ppb	4.2	177623.60	
As	75	72	No Gas	1.784	ppb	30.8	14981.22	
Se	78	72	He	6.517	ppb	3.2	596.68	
Se	82	72	No Gas	13.973	ppb	5.2	6427.47	
Mo	98	89	No Gas	14.731	ppb	3.2	304852.90	
Ag	107	89	No Gas	2.038	ppb	1.3	67639.32	
Cd	111	89	No Gas	0.175	ppb	9.5	4552.57	
Sb	123	89	No Gas	1.106	ppb	21.2	24195.71	
Ba	137	115	No Gas	405.034	ppb	1.2	3892381.24	>LDR
Tl	203	115	No Gas	0.033	ppb	58.3	572.24	
Pb	208	115	No Gas	0.031	ppb	5.3	1920.06	
Th	232	115	No Gas	0.032	ppb	12.4	2011.28	
U	238	115	No Gas	3.357	ppb	2.1	147858.25	

2nd analysis

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	6768559.04	1.8	8788220.21	77.02	60	125	
Sc	45	He	399328.11	0.3	486695.24	82.05	60	125	
Ge	72	No Gas	4397324.82	2.2	6275745.58	70.07	60	125	
Ge	72	He	699594.50	0.9	948175.9	73.78	60	125	
Y	89	No Gas	6817398.06	2.0	8859608.54	76.95	60	125	
Y	89	He	1169329.85	1.3	1479625.71	79.03	60	125	
Rh	103	No Gas	5080263.27	0.8	7242596.94	70.14	60	125	
Rh	103	He	2802725.24	2.0	3947548.31	71	60	125	
In	115	No Gas	5570256.72	2.0	7988838.01	69.73	60	125	
Lu	175	No Gas	40520.16	2.4	52826.41	76.7	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404396-013
File Name	063SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 12:25:58
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	-0.008	ppb	N/A	17.78	
Al	27	72	No Gas	3.596	ppb	1.2	106387.14	
V	51	72	He	0.658	ppb	2.6	5741.16	
Cr	52	72	No Gas	8.538	ppb	4.8	369707.40	
Mn	55	72	No Gas	71.240	ppb	0.9	3791899.71	
Co	59	72	He	1.579	ppb	4.2	22686.96	
Ni	60	72	No Gas	267.253	ppb	5.3	2809700.58	>LDR
Cu	63	72	No Gas	15.718	ppb	4.1	409459.90	
Zn	66	72	No Gas	26.494	ppb	2.5	177954.74	
As	75	72	No Gas	1.309	ppb	31.8	11983.10	
Se	78	72	He	6.420	ppb	1.2	586.01	
Se	82	72	No Gas	13.446	ppb	4.4	6415.35	
Mo	98	89	No Gas	14.004	ppb	2.8	295224.57	
Ag	107	89	No Gas	1.988	ppb	3.0	67226.19	
Cd	111	89	No Gas	0.191	ppb	11.4	4753.65	
Sb	123	89	No Gas	1.237	ppb	18.7	27412.84	
Ba	137	115	No Gas	405.142	ppb	4.8	3932023.74	>LDR
Tl	203	115	No Gas	0.012	ppb	54.1	244.45	
Pb	208	115	No Gas	0.017	ppb	10.7	1226.69	
Th	232	115	No Gas	0.022	ppb	12.0	1562.32	
U	238	115	No Gas	3.255	ppb	5.1	144744.02	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	6791756.95	0.7	8788220.21	77.28	60	125	
Sc	45	He	398343.38	1.4	486695.24	81.85	60	125	
Ge	72	No Gas	4553281.34	2.2	6275745.58	72.55	60	125	
Ge	72	He	696490.13	1.7	948175.9	73.46	60	125	
Y	89	No Gas	6946631.95	1.0	8859608.54	78.41	60	125	
Y	89	He	1165156.44	2.3	1479625.71	78.75	60	125	
Rh	103	No Gas	5165885.49	1.7	7242596.94	71.33	60	125	
Rh	103	He	2790402.18	1.9	3947548.31	70.69	60	125	
In	115	No Gas	5629731.86	2.3	7988838.01	70.47	60	125	
Lu	175	No Gas	42661.99	0.5	52826.41	80.76	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404396-014
File Name	064SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 12:27:52
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	-0.009	ppb	N/A	16.66	
Al	27	72	No Gas	1.839	ppb	4.0	77273.88	
V	51	72	He	0.069	ppb	14.8	2315.75	
Cr	52	72	No Gas	0.511	ppb	12.3	77702.13	
Mn	55	72	No Gas	0.141	ppb	4.9	17902.37	
Co	59	72	He	0.005	ppb	55.8	164.45	
Ni	60	72	No Gas	-0.254	ppb	N/A	4282.88	
Cu	63	72	No Gas	0.172	ppb	10.5	13639.93	
Zn	66	72	No Gas	2.465	ppb	3.7	23737.74	
As	75	72	No Gas	0.059	ppb	505.9	3683.88	
Se	78	72	He	0.057	ppb	74.9	74.00	
Se	82	72	No Gas	0.192	ppb	8.8	415.13	
Mo	98	89	No Gas	0.010	ppb	21.0	590.23	
Ag	107	89	No Gas	0.001	ppb	139.3	245.56	
Cd	111	89	No Gas	0.020	ppb	152.9	4515.57	
Sb	123	89	No Gas	0.027	ppb	1.4	1732.34	
Ba	137	115	No Gas	0.122	ppb	9.3	1887.91	
Tl	203	115	No Gas	0.001	ppb	54.5	102.22	
Pb	208	115	No Gas	0.007	ppb	15.8	1033.35	
Th	232	115	No Gas	-0.001	ppb	N/A	697.80	
U	238	115	No Gas	0.001	ppb	21.6	97.78	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8961333.53	0.9	8788220.21	101.97	60	125	
Sc	45	He	480043.77	0.9	486695.24	98.63	60	125	
Ge	72	No Gas	6132100.73	2.5	6275745.58	97.71	60	125	
Ge	72	He	914207.78	1.0	948175.9	96.42	60	125	
Y	89	No Gas	8796412.71	3.3	8859608.54	99.29	60	125	
Y	89	He	1403782.55	1.0	1479625.71	94.87	60	125	
Rh	103	No Gas	7159018.88	0.6	7242596.94	98.85	60	125	
Rh	103	He	3755879.71	2.2	3947548.31	95.14	60	125	
In	115	No Gas	7792381.91	3.6	7988838.01	97.54	60	125	
Lu	175	No Gas	55423.65	0.1	52826.41	104.92	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404396-035
File Name	065SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 12:29:50
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	-0.009	ppb	N/A	16.66	
Al	27	72	No Gas	3.535	ppb	4.5	133076.62	
V	51	72	He	3.422	ppb	0.8	30757.41	
Cr	52	72	No Gas	90.329	ppb	5.4	4510128.16	
Mn	55	72	No Gas	8.065	ppb	5.9	552154.41	
Co	59	72	He	0.635	ppb	0.7	11540.23	
Ni	60	72	No Gas	54.902	ppb	6.5	739527.95	
Cu	63	72	No Gas	3.388	ppb	7.4	117846.83	
Zn	66	72	No Gas	2.690	ppb	6.7	24306.65	
As	75	72	No Gas	1.204	ppb	27.6	14205.99	
Se	78	72	He	8.079	ppb	3.5	911.70	
Se	82	72	No Gas	11.684	ppb	6.0	7121.32	
Mo	98	89	No Gas	17.943	ppb	2.9	449588.17	
Ag	107	89	No Gas	0.017	ppb	4.9	898.92	
Cd	111	89	No Gas	0.001	ppb	1381.2	4089.27	
Sb	123	89	No Gas	0.069	ppb	17.8	2710.28	
Ba	137	115	No Gas	44.447	ppb	4.7	547537.46	
Tl	203	115	No Gas	0.003	ppb	27.5	137.78	
Pb	208	115	No Gas	0.045	ppb	2.8	3317.95	
Th	232	115	No Gas	0.017	ppb	22.1	1712.35	
U	238	115	No Gas	3.036	ppb	3.8	171310.59	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8488793.27	1.8	8788220.21	96.59	60	125	
Sc	45	He	467492.58	0.1	486695.24	96.05	60	125	
Ge	72	No Gas	5790195.05	2.0	6275745.58	92.26	60	125	
Ge	72	He	877094.95	1.3	948175.9	92.5	60	125	
Y	89	No Gas	8256737.17	1.8	8859608.54	93.2	60	125	
Y	89	He	1342298.17	0.6	1479625.71	90.72	60	125	
Rh	103	No Gas	6367854.61	1.7	7242596.94	87.92	60	125	
Rh	103	He	3421341.67	1.3	3947548.31	86.67	60	125	
In	115	No Gas	7139866.66	1.0	7988838.01	89.37	60	125	
Lu	175	No Gas	50058.50	0.5	52826.41	94.76	60	125	

7900 ICP-MS 200.8/6020A
Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	066_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 12:31:44
Sample Type	CCV
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	% Rec	QC Flag
Be	9	45	No Gas	48.325	ppb	12.7	202548.04	96.65	
Al	27	72	No Gas	46.993	ppb	9.0	1886318.57	93.99	
V	51	72	He	51.995	ppb	0.7	470078.64	103.99	
Cr	52	72	No Gas	47.229	ppb	11.0	2683830.03	94.46	
Mn	55	72	No Gas	46.470	ppb	11.0	3546281.45	92.94	
Co	59	72	He	50.600	ppb	1.2	966975.13	101.2	
Ni	60	72	No Gas	45.305	ppb	10.5	689324.19	90.61	
Cu	63	72	No Gas	47.322	ppb	11.1	1749442.91	94.64	
Zn	66	72	No Gas	46.012	ppb	9.7	441538.33	92.02	
As	75	72	No Gas	46.245	ppb	10.1	493904.53	92.49	
Se	78	72	He	51.089	ppb	2.3	5734.50	102.18	
Se	82	72	No Gas	46.823	ppb	10.0	31217.15	93.65	
Mo	98	89	No Gas	48.153	ppb	9.8	1348104.18	96.31	
Ag	107	89	No Gas	46.909	ppb	7.2	2104457.69	93.82	
Cd	111	89	No Gas	46.641	ppb	9.2	432484.68	93.28	
Sb	123	89	No Gas	47.101	ppb	9.2	1348879.74	94.2	
Ba	137	115	No Gas	47.722	ppb	8.4	683967.75	95.44	
Tl	203	115	No Gas	48.867	ppb	10.3	1142446.55	97.73	
Pb	208	115	No Gas	48.751	ppb	8.1	3605156.47	97.5	
Th	232	115	No Gas	48.866	ppb	4.6	3369151.40	97.73	
U	238	115	No Gas	49.249	ppb	6.8	3232811.75	98.5	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9309450.74	3.7	8788220.21	105.93	60	125	
Sc	45	He	481776.89	0.6	486695.24	98.99	60	125	
Ge	72	No Gas	6528172.93	1.2	6275745.58	104.02	60	125	
Ge	72	He	928193.64	2.4	948175.9	97.89	60	125	
Y	89	No Gas	9245301.02	4.5	8859608.54	104.35	60	125	
Y	89	He	1406684.14	0.8	1479625.71	95.07	60	125	
Rh	103	No Gas	7773195.80	5.2	7242596.94	107.33	60	125	
Rh	103	He	3747318.32	0.6	3947548.31	94.93	60	125	
In	115	No Gas	8309439.11	1.7	7988838.01	104.01	60	125	
Lu	175	No Gas	59415.15	2.4	52826.41	112.47	60	125	

7900 ICP-MS 200.8/6020A
Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	067_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 12:33:32
Sample Type	CCB
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.005	ppb	83.6	73.33	
Al	27	72	No Gas	0.048	ppb	84.4	10330.70	
V	51	72	He	0.118	ppb	10.9	2781.39	
Cr	52	72	No Gas	0.255	ppb	33.4	66063.72	
Mn	55	72	No Gas	0.012	ppb	22.6	8950.59	
Co	59	72	He	0.002	ppb	16.8	114.45	
Ni	60	72	No Gas	-0.456	ppb	N/A	1475.64	
Cu	63	72	No Gas	0.121	ppb	27.9	12197.56	
Zn	66	72	No Gas	0.024	ppb	44.0	1847.91	
As	75	72	No Gas	0.044	ppb	249.1	3589.16	
Se	78	72	He	0.021	ppb	283.8	71.00	
Se	82	72	No Gas	0.008	ppb	1168.8	309.35	
Mo	98	89	No Gas	0.024	ppb	27.1	970.28	
Ag	107	89	No Gas	0.005	ppb	14.2	434.45	
Cd	111	89	No Gas	-0.006	ppb	N/A	4389.31	
Sb	123	89	No Gas	0.062	ppb	8.2	2735.84	
Ba	137	115	No Gas	0.010	ppb	19.2	393.34	
Tl	203	115	No Gas	0.012	ppb	10.4	354.45	
Pb	208	115	No Gas	0.005	ppb	14.8	908.91	
Th	232	115	No Gas	0.053	ppb	16.1	4248.51	
U	238	115	No Gas	0.006	ppb	14.9	393.34	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8888638.54	3.5	8788220.21	101.14	60	125	
Sc	45	He	484292.01	2.2	486695.24	99.51	60	125	
Ge	72	No Gas	6305588.36	0.7	6275745.58	100.48	60	125	
Ge	72	He	925105.62	1.2	948175.9	97.57	60	125	
Y	89	No Gas	8995924.09	1.8	8859608.54	101.54	60	125	
Y	89	He	1423838.90	3.7	1479625.71	96.23	60	125	
Rh	103	No Gas	7353337.21	2.6	7242596.94	101.53	60	125	
Rh	103	He	3877086.37	3.3	3947548.31	98.22	60	125	
In	115	No Gas	7969801.90	1.2	7988838.01	99.76	60	125	
Lu	175	No Gas	57954.59	0.1	52826.41	109.71	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404396-036
File Name	068SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 12:35:29
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	-0.001	ppb	N/A	53.33	
Al	27	72	No Gas	3.265	ppb	2.7	132591.81	
V	51	72	He	0.144	ppb	10.8	3025.88	
Cr	52	72	No Gas	0.574	ppb	14.3	82063.30	
Mn	55	72	No Gas	0.186	ppb	3.8	21418.34	
Co	59	72	He	0.005	ppb	12.0	166.67	
Ni	60	72	No Gas	-0.311	ppb	N/A	3524.89	
Cu	63	72	No Gas	0.197	ppb	17.8	14703.28	
Zn	66	72	No Gas	3.010	ppb	4.8	29013.20	
As	75	72	No Gas	-0.116	ppb	N/A	1909.83	
Se	78	72	He	-0.012	ppb	N/A	67.67	
Se	82	72	No Gas	0.062	ppb	112.2	338.83	
Mo	98	89	No Gas	0.011	ppb	7.7	611.37	
Ag	107	89	No Gas	0.003	ppb	82.6	362.23	
Cd	111	89	No Gas	0.029	ppb	37.4	4628.82	
Sb	123	89	No Gas	0.033	ppb	0.8	1922.37	
Ba	137	115	No Gas	0.110	ppb	7.5	1791.23	
Tl	203	115	No Gas	0.004	ppb	66.4	170.00	
Pb	208	115	No Gas	0.015	ppb	11.4	1606.71	
Th	232	115	No Gas	0.024	ppb	8.0	2378.00	
U	238	115	No Gas	0.002	ppb	42.6	201.11	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9133639.36	2.9	8788220.21	103.93	60	125	
Sc	45	He	492561.65	2.1	486695.24	101.21	60	125	
Ge	72	No Gas	6212938.51	0.8	6275745.58	99	60	125	
Ge	72	He	930172.64	2.1	948175.9	98.1	60	125	
Y	89	No Gas	8861470.76	3.1	8859608.54	100.02	60	125	
Y	89	He	1422587.20	1.3	1479625.71	96.15	60	125	
Rh	103	No Gas	7299299.16	1.5	7242596.94	100.78	60	125	
Rh	103	He	3901550.82	1.8	3947548.31	98.83	60	125	
In	115	No Gas	8071728.57	3.0	7988838.01	101.04	60	125	
Lu	175	No Gas	59163.43	3.8	52826.41	112	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404396-041
File Name	069SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 12:37:26
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.023	ppb	6.2	146.67	
Al	27	72	No Gas	1.592	ppb	4.7	68043.58	
V	51	72	He	6.239	ppb	1.1	53334.58	
Cr	52	72	No Gas	3.163	ppb	10.3	216431.59	
Mn	55	72	No Gas	0.723	ppb	8.9	59555.50	
Co	59	72	He	0.074	ppb	8.5	1377.85	
Ni	60	72	No Gas	1.216	ppb	8.7	25053.57	
Cu	63	72	No Gas	1.600	ppb	10.1	62972.79	
Zn	66	72	No Gas	3.495	ppb	7.0	32984.39	
As	75	72	No Gas	1.715	ppb	14.2	20128.95	
Se	78	72	He	1.870	ppb	10.7	254.33	
Se	82	72	No Gas	2.945	ppb	16.9	2119.29	
Mo	98	89	No Gas	9.261	ppb	6.6	252660.54	
Ag	107	89	No Gas	0.004	ppb	20.9	402.23	
Cd	111	89	No Gas	-0.011	ppb	N/A	4343.57	
Sb	123	89	No Gas	0.067	ppb	10.4	2876.98	
Ba	137	115	No Gas	47.580	ppb	5.7	606072.69	
Tl	203	115	No Gas	0.007	ppb	25.6	223.34	
Pb	208	115	No Gas	0.012	ppb	8.5	1313.36	
Th	232	115	No Gas	0.045	ppb	6.8	3444.92	
U	238	115	No Gas	15.729	ppb	5.8	917740.66	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8931019.09	0.7	8788220.21	101.62	60	125	
Sc	45	He	457875.14	0.9	486695.24	94.08	60	125	
Ge	72	No Gas	6140666.56	3.2	6275745.58	97.85	60	125	
Ge	72	He	854680.91	1.3	948175.9	90.14	60	125	
Y	89	No Gas	8992640.48	1.6	8859608.54	101.5	60	125	
Y	89	He	1301854.60	2.0	1479625.71	87.99	60	125	
Rh	103	No Gas	6728554.18	3.7	7242596.94	92.9	60	125	
Rh	103	He	3336377.58	3.6	3947548.31	84.52	60	125	
In	115	No Gas	7389352.76	2.7	7988838.01	92.5	60	125	
Lu	175	No Gas	54744.43	0.5	52826.41	103.63	60	125	

7900 ICP-MS 200.8/6020A
Reference Sample Report

Sample Name	R2404396-046
File Name	070_ARF.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 12:39:24
Sample Type	AllRef
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS
Be	9	45	No Gas	0.029	ppb	20.2	165.56
Al	27	72	No Gas	1.916	ppb	3.8	77771.81
Cr	52	72	No Gas	0.717	ppb	13.8	85820.56
Mn	55	72	No Gas	0.088	ppb	5.6	13738.84
Ni	60	72	No Gas	1.889	ppb	7.7	33535.52
Cu	63	72	No Gas	1.402	ppb	9.9	54492.21
Zn	66	72	No Gas	5.780	ppb	4.1	51909.89
As	75	72	No Gas	0.701	ppb	10.8	9749.50
Se	82	72	No Gas	4.367	ppb	2.9	2915.42
Mo	98	89	No Gas	7.961	ppb	4.4	201640.59
Ag	107	89	No Gas	0.003	ppb	26.1	330.00
Cd	111	89	No Gas	0.000	ppb	5926.3	4124.78
Sb	123	89	No Gas	0.068	ppb	12.6	2713.61
Ba	137	115	No Gas	30.653	ppb	7.4	377523.38
Tl	203	115	No Gas	0.028	ppb	16.0	623.35
Pb	208	115	No Gas	0.006	ppb	11.6	886.68
Th	232	115	No Gas	0.029	ppb	13.5	2374.67
U	238	115	No Gas	7.739	ppb	6.3	436556.07
V	51	72	He	1.153	ppb	2.1	10976.44
Co	59	72	He	0.129	ppb	7.9	2310.19
Se	78	72	He	2.887	ppb	8.6	352.34

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High
Sc	45	No Gas	8557601.05	1.0	8788220.21	97.38	60	125
Sc	45	He	450786.51	1.5	486695.24	92.62	60	125
Ge	72	No Gas	5949448.10	1.4	6275745.58	94.8	60	125
Ge	72	He	841434.74	2.0	948175.9	88.74	60	125
Y	89	No Gas	8342403.00	0.4	8859608.54	94.16	60	125
Y	89	He	1285255.09	1.4	1479625.71	86.86	60	125
Rh	103	No Gas	6463694.60	1.1	7242596.94	89.25	60	125
Rh	103	He	3294531.12	0.6	3947548.31	83.46	60	125
In	115	No Gas	7143320.27	2.4	7988838.01	89.42	60	125
Lu	175	No Gas	50398.43	1.1	52826.41	95.4	60	125

7900 ICP-MS 200.8-6020A
Matrix Spike (MS) Sample Report

Sample Name	R2404396-046S
File Name	071_Spk.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 12:41:21
Sample Type	Spike
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d
QC Ref File Name	070_ ARF. d

QC Analyte Table

Name	Mass	Tune	Conc.	Units	RSD	CPS	RefConc	%Rec	Flag
Be	9	No Gas	21.241	ppb	5.9	81094.46	0.029	106.05	
Al	27	No Gas	43.853	ppb	1.4	1541603.55	1.916	104.62	
V	51	He	23.816	ppb	0.7	200579.22	1.153	112.59	
Cr	52	No Gas	22.017	ppb	6.1	1120585.65	0.717	106.27	
Mn	55	No Gas	21.113	ppb	4.7	1414182.34	0.088	105.1	
Co	59	He	20.445	ppb	1.8	362507.55	0.129	101.57	
Ni	60	No Gas	21.054	ppb	6.3	284271.90	1.889	96.18	
Cu	63	No Gas	21.277	ppb	7.2	692312.49	1.402	99.41	
Zn	66	No Gas	24.940	ppb	6.7	210103.69	5.78	96.74	
As	75	No Gas	22.234	ppb	7.1	209278.20	0.701	107.4	
Se	78	He	25.311	ppb	1.0	2668.25	2.887	110.59	
Se	82	No Gas	26.526	ppb	6.1	15594.53	4.367	108.86	
Mo	98	No Gas	30.742	ppb	3.2	761298.98	7.961	109.95	
Ag	107	No Gas	19.866	ppb	3.1	787681.53	0.003	99.32	
Cd	111	No Gas	19.990	ppb	3.8	166210.58	0	99.95	
Sb	123	No Gas	21.894	ppb	4.2	554949.56	0.068	109.1	
Ba	137	No Gas	52.538	ppb	4.4	648096.40	30.653	103.72	
Tl	203	No Gas	22.070	ppb	5.2	444238.94	0.028	110.2	
Pb	208	No Gas	21.605	ppb	5.1	1375403.41	0.006	107.99	
Th	232	No Gas	23.073	ppb	5.6	1369306.78	0.029	115.2	
U	238	No Gas	31.634	ppb	5.2	1787399.30	7.739	114.04	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8456014.66	1.9	8788220.21	96.22	60	125	
Sc	45	He	457966.74	1.5	486695.24	94.1	60	125	
Ge	72	No Gas	5712229.36	2.5	6275745.58	91.02	60	125	
Ge	72	He	861047.88	1.2	948175.9	90.81	60	125	
Y	89	No Gas	8161637.18	1.5	8859608.54	92.12	60	125	
Y	89	He	1305008.46	0.6	1479625.71	88.2	60	125	
Rh	103	No Gas	6358981.97	1.1	7242596.94	87.8	60	125	
Rh	103	He	3284828.41	1.8	3947548.31	83.21	60	125	
In	115	No Gas	7150200.55	1.0	7988838.01	89.5	60	125	
Lu	175	No Gas	50161.63	0.3	52826.41	94.96	60	125	

7900 ICP-MS 200.8/6020A
Matrix Spike Duplicate (MSD) Sample Report

Sample Name	R2404396-046SD
File Name	072_SpD.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 12:43:17
Sample Type	SpkDup
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d
QC Ref File Name	071_ Spk.d

QC Analyte Table

Name	Mass	Tune	Conc.	Units	RSD	CPS	RefConc	RPD	Flag
Be	9	No Gas	20.773	ppb	3.6	82028.94	21.241	2.23	
Al	27	No Gas	42.935	ppb	2.2	1544428.27	43.853	2.12	
V	51	He	23.767	ppb	1.0	199459.87	23.816	0.21	
Cr	52	No Gas	21.939	ppb	2.3	1142673.46	22.017	0.35	
Mn	55	No Gas	21.760	ppb	3.6	1491637.41	21.113	3.02	
Co	59	He	20.293	ppb	0.6	358554.05	20.445	0.75	
Ni	60	No Gas	21.019	ppb	3.9	290508.27	21.054	0.16	
Cu	63	No Gas	21.088	ppb	4.1	702388.22	21.277	0.89	
Zn	66	No Gas	25.027	ppb	3.8	215782.24	24.94	0.35	
As	75	No Gas	22.461	ppb	4.0	216362.67	22.234	1.01	
Se	78	He	25.046	ppb	0.5	2631.58	25.311	1.05	
Se	82	No Gas	26.329	ppb	3.5	15845.30	26.526	0.75	
Mo	98	No Gas	29.824	ppb	0.8	759494.32	30.742	3.03	
Ag	107	No Gas	19.923	ppb	1.5	812455.18	19.866	0.29	
Cd	111	No Gas	19.802	ppb	1.0	169365.61	19.99	0.94	
Sb	123	No Gas	21.480	ppb	1.2	559916.90	21.894	1.91	
Ba	137	No Gas	52.902	ppb	4.0	660541.83	52.538	0.69	
Tl	203	No Gas	22.148	ppb	4.1	451275.34	22.07	0.35	
Pb	208	No Gas	21.549	ppb	3.5	1388860.54	21.605	0.26	
Th	232	No Gas	23.306	ppb	4.4	1399943.17	23.073	1	
U	238	No Gas	31.389	ppb	4.2	1794902.85	31.634	0.78	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8744309.93	1.0	8788220.21	99.5	60	125	
Sc	45	He	461624.93	1.0	486695.24	94.85	60	125	
Ge	72	No Gas	5842888.24	1.7	6275745.58	93.1	60	125	
Ge	72	He	857874.18	1.9	948175.9	90.48	60	125	
Y	89	No Gas	8394449.39	2.5	8859608.54	94.75	60	125	
Y	89	He	1309435.22	1.3	1479625.71	88.5	60	125	
Rh	103	No Gas	6516852.66	1.8	7242596.94	89.98	60	125	
Rh	103	He	3256861.54	1.9	3947548.31	82.5	60	125	
In	115	No Gas	7239862.49	2.9	7988838.01	90.62	60	125	
Lu	175	No Gas	51270.31	2.3	52826.41	97.05	60	125	

7900 ICP-MS 200.8-6020A
Matrix Spike (MS) Sample Report

Sample Name	R2404396-046A
File Name	073_Spk.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 12:45:13
Sample Type	Spike
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d
QC Ref File Name	070_ ARF. d

QC Analyte Table

Name	Mass	Tune	Conc.	Units	RSD	CPS	RefConc	%Rec	Flag
Be	9	No Gas	21.288	ppb	2.1	84889.96	0.029	106.28	
Al	27	No Gas	46.207	ppb	3.6	1655616.05	1.916	110.24	
V	51	He	23.812	ppb	1.1	201717.86	1.153	112.57	
Cr	52	No Gas	22.536	ppb	4.1	1168500.37	0.717	108.78	
Mn	55	No Gas	21.773	ppb	3.8	1487102.03	0.088	108.38	
Co	59	He	20.565	ppb	0.5	366768.18	0.129	102.17	
Ni	60	No Gas	21.865	ppb	3.9	300843.17	1.889	99.89	
Cu	63	No Gas	21.553	ppb	5.0	715314.54	1.402	100.7	
Zn	66	No Gas	25.411	ppb	3.3	218333.13	5.78	98.57	
As	75	No Gas	22.842	ppb	4.4	219208.37	0.701	110.34	
Se	78	He	24.818	ppb	1.1	2632.58	2.887	108.44	
Se	82	No Gas	27.033	ppb	3.7	16205.73	4.367	110.94	
Mo	98	No Gas	30.243	ppb	2.2	782609.26	7.961	108.16	
Ag	107	No Gas	18.320	ppb	3.2	759109.12	0.003	91.59	
Cd	111	No Gas	19.815	ppb	2.8	172213.03	0	99.07	
Sb	123	No Gas	21.195	ppb	2.9	561362.32	0.068	105.61	
Ba	137	No Gas	52.422	ppb	1.8	670509.82	30.653	103.49	
Tl	203	No Gas	22.174	ppb	2.5	462812.13	0.028	110.72	
Pb	208	No Gas	21.528	ppb	1.8	1420948.86	0.006	107.61	
Th	232	No Gas	23.103	ppb	2.0	1421399.53	0.029	115.35	
U	238	No Gas	30.929	ppb	2.1	1812200.76	7.739	111.5	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8828837.98	2.0	8788220.21	100.46	60	125	
Sc	45	He	468450.64	0.9	486695.24	96.25	60	125	
Ge	72	No Gas	5822160.60	1.0	6275745.58	92.77	60	125	
Ge	72	He	865993.49	1.4	948175.9	91.33	60	125	
Y	89	No Gas	8529564.39	1.9	8859608.54	96.27	60	125	
Y	89	He	1314644.36	2.2	1479625.71	88.85	60	125	
Rh	103	No Gas	6690605.98	2.3	7242596.94	92.38	60	125	
Rh	103	He	3339283.20	2.1	3947548.31	84.59	60	125	
In	115	No Gas	7410999.99	3.0	7988838.01	92.77	60	125	
Lu	175	No Gas	52351.17	1.1	52826.41	99.1	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404396-046L 5X
File Name	074SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 12:47:09
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.010	ppb	79.2	96.67	
Al	27	72	No Gas	0.748	ppb	1.3	35918.73	
V	51	72	He	0.314	ppb	2.1	4281.76	
Cr	52	72	No Gas	0.347	ppb	21.7	68377.88	
Mn	55	72	No Gas	0.043	ppb	4.2	10794.10	
Co	59	72	He	0.024	ppb	9.8	511.12	
Ni	60	72	No Gas	0.046	ppb	24.4	8435.88	
Cu	63	72	No Gas	0.349	ppb	12.7	19541.40	
Zn	66	72	No Gas	1.301	ppb	2.5	13129.46	
As	75	72	No Gas	0.341	ppb	40.4	6389.15	
Se	78	72	He	0.540	ppb	20.1	121.00	
Se	82	72	No Gas	0.921	ppb	12.7	857.78	
Mo	98	89	No Gas	1.680	ppb	2.3	42860.98	
Ag	107	89	No Gas	0.003	ppb	19.5	346.67	
Cd	111	89	No Gas	-0.015	ppb	N/A	3995.62	
Sb	123	89	No Gas	0.059	ppb	5.9	2475.79	
Ba	137	115	No Gas	6.134	ppb	1.2	79968.17	
Tl	203	115	No Gas	0.011	ppb	19.5	317.78	
Pb	208	115	No Gas	0.003	ppb	42.1	718.89	
Th	232	115	No Gas	0.043	ppb	10.2	3422.69	
U	238	115	No Gas	1.533	ppb	1.1	91344.81	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9014718.53	5.6	8788220.21	102.58	60	125	
Sc	45	He	458346.25	0.7	486695.24	94.18	60	125	
Ge	72	No Gas	6066921.15	0.6	6275745.58	96.67	60	125	
Ge	72	He	871704.62	1.1	948175.9	91.93	60	125	
Y	89	No Gas	8359408.83	4.2	8859608.54	94.35	60	125	
Y	89	He	1321417.10	1.3	1479625.71	89.31	60	125	
Rh	103	No Gas	6874603.20	4.5	7242596.94	94.92	60	125	
Rh	103	He	3489001.53	1.7	3947548.31	88.38	60	125	
In	115	No Gas	7534873.31	1.7	7988838.01	94.32	60	125	
Lu	175	No Gas	51586.13	2.6	52826.41	97.65	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404396-051
File Name	075SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 12:49:08
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.007	ppb	35.7	77.78	
Al	27	72	No Gas	4.341	ppb	3.9	159544.86	
V	51	72	He	8.530	ppb	1.1	71568.00	
Cr	52	72	No Gas	10.113	ppb	4.8	540665.31	
Mn	55	72	No Gas	0.249	ppb	5.2	23863.29	
Co	59	72	He	0.097	ppb	4.9	1754.56	
Ni	60	72	No Gas	3.168	ppb	5.6	49031.53	
Cu	63	72	No Gas	4.953	ppb	5.3	166850.19	
Zn	66	72	No Gas	15.352	ppb	4.5	129963.87	
As	75	72	No Gas	1.164	ppb	15.9	13698.72	
Se	78	72	He	2.705	ppb	5.0	336.00	
Se	82	72	No Gas	3.794	ppb	4.0	2470.52	
Mo	98	89	No Gas	35.078	ppb	3.3	880658.83	
Ag	107	89	No Gas	0.083	ppb	3.9	3528.24	
Cd	111	89	No Gas	-0.002	ppb	N/A	4073.25	
Sb	123	89	No Gas	0.224	ppb	2.6	6669.43	
Ba	137	115	No Gas	12.985	ppb	7.0	160244.97	
Tl	203	115	No Gas	0.005	ppb	3.6	164.45	
Pb	208	115	No Gas	0.029	ppb	6.4	2346.76	
Th	232	115	No Gas	0.081	ppb	7.6	5479.02	
U	238	115	No Gas	10.395	ppb	6.5	586930.98	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8529262.16	2.1	8788220.21	97.05	60	125	
Sc	45	He	453837.12	0.3	486695.24	93.25	60	125	
Ge	72	No Gas	5714302.14	3.7	6275745.58	91.05	60	125	
Ge	72	He	845674.57	1.3	948175.9	89.19	60	125	
Y	89	No Gas	8275213.28	2.4	8859608.54	93.4	60	125	
Y	89	He	1276265.05	1.2	1479625.71	86.26	60	125	
Rh	103	No Gas	6334640.44	0.8	7242596.94	87.46	60	125	
Rh	103	He	3256264.80	3.6	3947548.31	82.49	60	125	
In	115	No Gas	7153600.13	3.6	7988838.01	89.54	60	125	
Lu	175	No Gas	50430.00	1.8	52826.41	95.46	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404465-001
File Name	076SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 12:51:05
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.001	ppb	352.9	56.67	
Al	27	72	No Gas	2.554	ppb	3.7	102561.21	
V	51	72	He	1.361	ppb	3.7	13932.35	
Cr	52	72	No Gas	0.705	ppb	8.2	86518.02	
Mn	55	72	No Gas	0.171	ppb	3.5	19777.06	
Co	59	72	He	0.006	ppb	20.7	197.78	
Ni	60	72	No Gas	-0.003	ppb	N/A	7707.67	
Cu	63	72	No Gas	0.351	ppb	11.5	19531.31	
Zn	66	72	No Gas	5.549	ppb	3.3	50659.74	
As	75	72	No Gas	0.215	ppb	48.4	5115.91	
Se	78	72	He	0.018	ppb	614.6	70.67	
Se	82	72	No Gas	0.113	ppb	78.4	360.60	
Mo	98	89	No Gas	0.081	ppb	3.0	2407.03	
Ag	107	89	No Gas	0.001	ppb	56.1	260.00	
Cd	111	89	No Gas	0.002	ppb	413.0	4231.13	
Sb	123	89	No Gas	0.022	ppb	11.2	1543.42	
Ba	137	115	No Gas	0.145	ppb	6.6	2179.07	
Tl	203	115	No Gas	0.002	ppb	13.2	117.78	
Pb	208	115	No Gas	0.029	ppb	6.2	2549.00	
Th	232	115	No Gas	0.004	ppb	15.3	1010.04	
U	238	115	No Gas	0.006	ppb	40.1	434.46	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8846639.93	2.8	8788220.21	100.66	60	125	
Sc	45	He	500191.40	2.9	486695.24	102.77	60	125	
Ge	72	No Gas	6038227.12	0.6	6275745.58	96.22	60	125	
Ge	72	He	925264.69	3.1	948175.9	97.58	60	125	
Y	89	No Gas	8529098.83	1.6	8859608.54	96.27	60	125	
Y	89	He	1433622.06	4.1	1479625.71	96.89	60	125	
Rh	103	No Gas	6997009.03	5.1	7242596.94	96.61	60	125	
Rh	103	He	3851765.82	1.6	3947548.31	97.57	60	125	
In	115	No Gas	7757300.53	4.3	7988838.01	97.1	60	125	
Lu	175	No Gas	54382.11	5.2	52826.41	102.94	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404465-002
File Name	077SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 12:53:02
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.031	ppb	9.2	165.56	
Al	27	72	No Gas	2.364	ppb	3.6	90446.10	
V	51	72	He	0.461	ppb	8.4	5196.51	
Cr	52	72	No Gas	0.747	ppb	8.9	83944.70	
Mn	55	72	No Gas	85.382	ppb	7.6	5703944.64	
Co	59	72	He	0.108	ppb	6.0	1894.58	
Ni	60	72	No Gas	3.524	ppb	5.0	53763.74	
Cu	63	72	No Gas	1.445	ppb	7.5	53752.68	
Zn	66	72	No Gas	5.598	ppb	4.2	48376.34	
As	75	72	No Gas	0.218	ppb	69.8	4868.89	
Se	78	72	He	0.055	ppb	111.0	66.33	
Se	82	72	No Gas	1.270	ppb	8.8	1010.27	
Mo	98	89	No Gas	0.431	ppb	5.0	11013.21	
Ag	107	89	No Gas	0.005	ppb	14.0	394.45	
Cd	111	89	No Gas	-0.009	ppb	N/A	3979.98	
Sb	123	89	No Gas	0.057	ppb	14.4	2386.89	
Ba	137	115	No Gas	27.183	ppb	4.6	331623.89	
Tl	203	115	No Gas	0.001	ppb	120.7	83.33	
Pb	208	115	No Gas	0.037	ppb	8.3	2829.01	
Th	232	115	No Gas	0.024	ppb	8.8	2084.62	
U	238	115	No Gas	6.171	ppb	6.0	344659.54	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8281159.39	2.4	8788220.21	94.23	60	125	
Sc	45	He	438497.33	4.0	486695.24	90.1	60	125	
Ge	72	No Gas	5718772.27	0.8	6275745.58	91.12	60	125	
Ge	72	He	820952.83	3.2	948175.9	86.58	60	125	
Y	89	No Gas	8208782.73	1.2	8859608.54	92.65	60	125	
Y	89	He	1251483.63	3.7	1479625.71	84.58	60	125	
Rh	103	No Gas	6440646.41	2.0	7242596.94	88.93	60	125	
Rh	103	He	3241866.33	5.9	3947548.31	82.12	60	125	
In	115	No Gas	7073837.22	3.5	7988838.01	88.55	60	125	
Lu	175	No Gas	49307.63	2.0	52826.41	93.34	60	125	

7900 ICP-MS 200.8/6020A
Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	078_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 12:54:57
Sample Type	CCV
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	% Rec	QC Flag
Be	9	45	No Gas	50.796	ppb	9.4	197816.27	101.59	
Al	27	72	No Gas	50.622	ppb	7.2	1873236.11	101.24	
V	51	72	He	50.975	ppb	1.4	449891.44	101.95	
Cr	52	72	No Gas	48.717	ppb	4.7	2550475.18	97.43	
Mn	55	72	No Gas	49.098	ppb	7.9	3455491.04	98.2	
Co	59	72	He	49.471	ppb	1.2	923151.39	98.94	
Ni	60	72	No Gas	47.444	ppb	7.5	665423.55	94.89	
Cu	63	72	No Gas	49.429	ppb	5.4	1684478.44	98.86	
Zn	66	72	No Gas	48.367	ppb	7.4	427963.11	96.73	
As	75	72	No Gas	48.539	ppb	6.8	477880.76	97.08	
Se	78	72	He	49.110	ppb	1.7	5385.37	98.22	
Se	82	72	No Gas	48.717	ppb	5.9	29934.79	97.43	
Mo	98	89	No Gas	50.737	ppb	6.5	1317110.85	101.47	
Ag	107	89	No Gas	49.746	ppb	5.3	2067628.53	99.49	
Cd	111	89	No Gas	48.549	ppb	5.9	417169.56	97.1	
Sb	123	89	No Gas	49.202	ppb	4.4	1305750.02	98.4	
Ba	137	115	No Gas	49.343	ppb	3.9	661749.47	98.69	
Tl	203	115	No Gas	51.616	ppb	3.9	1129511.69	103.23	
Pb	208	115	No Gas	50.577	ppb	2.4	3498629.31	101.15	
Th	232	115	No Gas	50.746	ppb	4.3	3272675.36	101.49	
U	238	115	No Gas	52.177	ppb	2.3	3203702.09	104.35	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8627131.05	2.4	8788220.21	98.17	60	125	
Sc	45	He	479434.89	1.5	486695.24	98.51	60	125	
Ge	72	No Gas	6009183.65	2.5	6275745.58	95.75	60	125	
Ge	72	He	906275.69	1.5	948175.9	95.58	60	125	
Y	89	No Gas	8547991.33	3.7	8859608.54	96.48	60	125	
Y	89	He	1387756.51	1.7	1479625.71	93.79	60	125	
Rh	103	No Gas	7244718.46	4.5	7242596.94	100.03	60	125	
Rh	103	He	3839805.96	1.6	3947548.31	97.27	60	125	
In	115	No Gas	7764017.47	4.1	7988838.01	97.19	60	125	
Lu	175	No Gas	52422.91	6.0	52826.41	99.24	60	125	

7900 ICP-MS 200.8/6020A
Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	079_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 12:56:45
Sample Type	CCB
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.012	ppb	44.7	95.56	
Al	27	72	No Gas	0.059	ppb	86.9	9919.31	
V	51	72	He	0.104	ppb	8.4	2483.55	
Cr	52	72	No Gas	0.259	ppb	22.2	61512.46	
Mn	55	72	No Gas	0.039	ppb	12.4	10152.50	
Co	59	72	He	0.003	ppb	50.2	123.33	
Ni	60	72	No Gas	-0.464	ppb	N/A	1256.73	
Cu	63	72	No Gas	0.030	ppb	55.9	8325.81	
Zn	66	72	No Gas	0.032	ppb	91.9	1772.35	
As	75	72	No Gas	-0.183	ppb	N/A	1161.90	
Se	78	72	He	-0.005	ppb	N/A	63.67	
Se	82	72	No Gas	-0.106	ppb	N/A	218.95	
Mo	98	89	No Gas	0.023	ppb	27.9	869.55	
Ag	107	89	No Gas	0.005	ppb	33.8	422.23	
Cd	111	89	No Gas	-0.007	ppb	N/A	4058.70	
Sb	123	89	No Gas	0.066	ppb	6.0	2650.27	
Ba	137	115	No Gas	0.009	ppb	11.6	355.56	
Tl	203	115	No Gas	0.012	ppb	9.1	322.23	
Pb	208	115	No Gas	0.007	ppb	18.2	954.47	
Th	232	115	No Gas	0.060	ppb	20.7	4427.46	
U	238	115	No Gas	0.006	ppb	23.5	388.89	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8358868.28	1.4	8788220.21	95.11	60	125	
Sc	45	He	450939.41	1.4	486695.24	92.65	60	125	
Ge	72	No Gas	5845585.32	3.2	6275745.58	93.15	60	125	
Ge	72	He	865652.24	1.4	948175.9	91.3	60	125	
Y	89	No Gas	8325152.17	1.9	8859608.54	93.97	60	125	
Y	89	He	1312015.05	1.0	1479625.71	88.67	60	125	
Rh	103	No Gas	6991318.33	1.1	7242596.94	96.53	60	125	
Rh	103	He	3578609.51	3.1	3947548.31	90.65	60	125	
In	115	No Gas	7434088.59	2.9	7988838.01	93.06	60	125	
Lu	175	No Gas	50857.83	0.6	52826.41	96.27	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404465-007
File Name	080SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 12:58:43
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.036	ppb	29.0	195.56	
Al	27	72	No Gas	2.439	ppb	6.1	95453.55	
V	51	72	He	1.914	ppb	3.1	16728.68	
Cr	52	72	No Gas	1.092	ppb	12.7	103348.49	
Mn	55	72	No Gas	0.165	ppb	7.5	18817.98	
Co	59	72	He	0.083	ppb	5.2	1460.08	
Ni	60	72	No Gas	1.221	ppb	12.4	24022.90	
Cu	63	72	No Gas	1.754	ppb	10.4	65342.56	
Zn	66	72	No Gas	4.450	ppb	6.6	39755.36	
As	75	72	No Gas	1.810	ppb	13.8	20210.62	
Se	78	72	He	4.995	ppb	2.8	549.01	
Se	82	72	No Gas	7.020	ppb	9.8	4445.82	
Mo	98	89	No Gas	8.931	ppb	7.6	217533.21	
Ag	107	89	No Gas	0.007	ppb	35.9	473.34	
Cd	111	89	No Gas	-0.018	ppb	N/A	3825.51	
Sb	123	89	No Gas	0.103	ppb	12.0	3466.01	
Ba	137	115	No Gas	12.882	ppb	11.5	160792.07	
Tl	203	115	No Gas	0.006	ppb	15.2	201.11	
Pb	208	115	No Gas	0.018	ppb	9.7	1682.27	
Th	232	115	No Gas	0.070	ppb	2.9	4924.31	
U	238	115	No Gas	5.720	ppb	9.6	326948.18	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8783419.37	5.4	8788220.21	99.95	60	125	
Sc	45	He	437510.51	1.5	486695.24	89.89	60	125	
Ge	72	No Gas	5870907.96	3.3	6275745.58	93.55	60	125	
Ge	72	He	818254.81	1.9	948175.9	86.3	60	125	
Y	89	No Gas	8034069.41	3.7	8859608.54	90.68	60	125	
Y	89	He	1223126.34	2.1	1479625.71	82.66	60	125	
Rh	103	No Gas	6275610.45	5.3	7242596.94	86.65	60	125	
Rh	103	He	3176619.11	3.1	3947548.31	80.47	60	125	
In	115	No Gas	7262678.74	6.8	7988838.01	90.91	60	125	
Lu	175	No Gas	47034.38	6.6	52826.41	89.04	60	125	

7900 ICP-MS 200.8/6020A
Reference Sample Report

Sample Name	R2404465-008
File Name	081_ARF.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 13:00:40
Sample Type	AllRef
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS
Be	9	45	No Gas	0.029	ppb	11.5	167.78
Al	27	72	No Gas	7.862	ppb	5.1	278057.11
Cr	52	72	No Gas	0.778	ppb	11.9	83993.07
Mn	55	72	No Gas	0.418	ppb	5.2	34581.23
Ni	60	72	No Gas	1.180	ppb	8.3	22487.18
Cu	63	72	No Gas	1.589	ppb	8.1	57380.69
Zn	66	72	No Gas	2.687	ppb	9.1	23569.96
As	75	72	No Gas	1.585	ppb	10.7	17271.12
Se	82	72	No Gas	7.101	ppb	6.8	4307.31
Mo	98	89	No Gas	8.562	ppb	1.5	208945.18
Ag	107	89	No Gas	0.003	ppb	44.8	333.34
Cd	111	89	No Gas	-0.050	ppb	N/A	3564.92
Sb	123	89	No Gas	0.088	ppb	8.9	3100.36
Ba	137	115	No Gas	12.763	ppb	3.2	153723.52
Tl	203	115	No Gas	0.003	ppb	21.5	134.44
Pb	208	115	No Gas	0.023	ppb	6.7	1890.06
Th	232	115	No Gas	0.026	ppb	20.8	2203.53
U	238	115	No Gas	5.622	ppb	3.4	309789.48
V	51	72	He	1.804	ppb	3.7	16150.23
Co	59	72	He	0.080	ppb	4.0	1451.19
Se	78	72	He	4.844	ppb	3.3	544.68

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High
Sc	45	No Gas	8832980.48	5.4	8788220.21	100.51	60	125
Sc	45	He	455346.93	1.2	486695.24	93.56	60	125
Ge	72	No Gas	5618180.89	2.0	6275745.58	89.52	60	125
Ge	72	He	834367.54	1.8	948175.9	88	60	125
Y	89	No Gas	8034510.51	3.3	8859608.54	90.69	60	125
Y	89	He	1276851.58	2.1	1479625.71	86.3	60	125
Rh	103	No Gas	6155480.73	3.6	7242596.94	84.99	60	125
Rh	103	He	3309785.77	0.3	3947548.31	83.84	60	125
In	115	No Gas	6970387.78	2.5	7988838.01	87.25	60	125
Lu	175	No Gas	46378.42	5.9	52826.41	87.79	60	125

7900 ICP-MS 200.8-6020A
Matrix Spike (MS) Sample Report

Sample Name	R2404465-008S
File Name	082_Spk.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 13:02:37
Sample Type	Spike
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d
QC Ref File Name	081_ ARF. d

QC Analyte Table

Name	Mass	Tune	Conc.	Units	RSD	CPS	RefConc	%Rec	Flag
Be	9	No Gas	20.216	ppb	6.3	78504.11	0.029	100.93	
Al	27	No Gas	49.126	ppb	3.6	1689433.68	7.862	102.64	
V	51	He	24.292	ppb	0.7	195746.99	1.804	111.41	
Cr	52	No Gas	21.632	ppb	4.8	1078649.47	0.778	104.11	
Mn	55	No Gas	21.781	ppb	4.9	1428311.09	0.418	106.67	
Co	59	He	20.362	ppb	1.2	345537.63	0.08	101.4	
Ni	60	No Gas	20.220	ppb	3.3	267625.88	1.18	95.47	
Cu	63	No Gas	21.092	ppb	4.2	672116.86	1.589	97.7	
Zn	66	No Gas	21.740	ppb	3.7	179526.79	2.687	95.83	
As	75	No Gas	23.116	ppb	3.2	212950.46	1.585	107.1	
Se	78	He	26.412	ppb	2.5	2661.92	4.844	106.31	
Se	82	No Gas	28.475	ppb	2.8	16373.80	7.101	105.07	
Mo	98	No Gas	30.297	ppb	3.1	740852.30	8.562	106.07	
Ag	107	No Gas	19.662	ppb	3.6	769846.93	0.003	98.29	
Cd	111	No Gas	19.609	ppb	4.4	161082.60	-0.05	98.29	
Sb	123	No Gas	21.274	ppb	2.9	532443.31	0.088	105.9	
Ba	137	No Gas	35.426	ppb	3.1	420210.64	12.763	108.13	
Tl	203	No Gas	22.242	ppb	2.7	430433.17	0.003	111.19	
Pb	208	No Gas	21.739	ppb	2.8	1330568.93	0.023	108.57	
Th	232	No Gas	23.453	ppb	3.6	1338224.74	0.026	117.11	
U	238	No Gas	29.191	ppb	1.8	1585666.47	5.622	113.93	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8605908.82	2.2	8788220.21	97.93	60	125	
Sc	45	He	445548.44	1.0	486695.24	91.55	60	125	
Ge	72	No Gas	5589511.86	1.1	6275745.58	89.07	60	125	
Ge	72	He	823918.65	0.9	948175.9	86.9	60	125	
Y	89	No Gas	8060337.74	0.8	8859608.54	90.98	60	125	
Y	89	He	1254236.06	2.4	1479625.71	84.77	60	125	
Rh	103	No Gas	6169992.39	2.8	7242596.94	85.19	60	125	
Rh	103	He	3136458.97	3.0	3947548.31	79.45	60	125	
In	115	No Gas	6871697.23	1.1	7988838.01	86.02	60	125	
Lu	175	No Gas	46583.02	0.8	52826.41	88.18	60	125	

7900 ICP-MS 200.8/6020A
Matrix Spike Duplicate (MSD) Sample Report

Sample Name	R2404465-008SD
File Name	083_SpD.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 13:04:33
Sample Type	SpkDup
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d
QC Ref File Name	082_ Spk.d

QC Analyte Table

Name	Mass	Tune	Conc.	Units	RSD	CPS	RefConc	RPD	Flag
Be	9	No Gas	19.364	ppb	7.2	75216.38	20.216	4.3	
Al	27	No Gas	46.833	ppb	9.2	1610892.51	49.126	4.78	
V	51	He	24.312	ppb	2.3	189348.26	24.292	0.08	
Cr	52	No Gas	20.666	ppb	7.5	1032683.95	21.632	4.57	
Mn	55	No Gas	20.201	ppb	5.9	1325938.77	21.781	7.53	
Co	59	He	20.563	ppb	2.9	337235.08	20.362	0.98	
Ni	60	No Gas	19.362	ppb	6.1	256675.04	20.22	4.34	
Cu	63	No Gas	20.708	ppb	7.1	660259.37	21.092	1.83	
Zn	66	No Gas	21.270	ppb	7.0	175729.74	21.74	2.18	
As	75	No Gas	22.419	ppb	6.4	206690.38	23.116	3.06	
Se	78	He	26.211	ppb	4.6	2552.90	26.412	0.76	
Se	82	No Gas	26.796	ppb	5.9	15428.12	28.475	6.07	
Mo	98	No Gas	28.639	ppb	7.9	721703.36	30.297	5.63	
Ag	107	No Gas	18.286	ppb	8.4	737440.60	19.662	7.25	
Cd	111	No Gas	18.265	ppb	7.6	154887.43	19.609	7.09	
Sb	123	No Gas	19.945	ppb	8.1	514256.23	21.274	6.45	
Ba	137	No Gas	33.195	ppb	9.0	405769.03	35.426	6.5	
Tl	203	No Gas	20.954	ppb	7.2	418018.79	22.242	5.97	
Pb	208	No Gas	20.286	ppb	7.7	1279568.77	21.739	6.91	
Th	232	No Gas	21.638	ppb	8.5	1271810.26	23.453	8.05	
U	238	No Gas	27.293	ppb	8.1	1527799.14	29.191	6.72	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8605313.82	1.6	8788220.21	97.92	60	125	
Sc	45	He	421543.71	2.6	486695.24	86.61	60	125	
Ge	72	No Gas	5596604.36	4.5	6275745.58	89.18	60	125	
Ge	72	He	796593.47	2.0	948175.9	84.01	60	125	
Y	89	No Gas	8325103.28	6.0	8859608.54	93.97	60	125	
Y	89	He	1194399.50	2.7	1479625.71	80.72	60	125	
Rh	103	No Gas	6214691.97	5.3	7242596.94	85.81	60	125	
Rh	103	He	3011334.81	3.2	3947548.31	76.28	60	125	
In	115	No Gas	7097279.30	4.9	7988838.01	88.84	60	125	
Lu	175	No Gas	46129.81	4.5	52826.41	87.32	60	125	

7900 ICP-MS 200.8-6020A
Matrix Spike (MS) Sample Report

Sample Name	R2404465-008A
File Name	084_Spk.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 13:06:30
Sample Type	Spike
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d
QC Ref File Name	081_ ARF. d

QC Analyte Table

Name	Mass	Tune	Conc.	Units	RSD	CPS	RefConc	%Rec	Flag
Be	9	No Gas	20.111	ppb	3.2	76443.43	0.029	100.41	
Al	27	No Gas	51.063	ppb	5.3	1708681.74	7.862	106.69	
V	51	He	24.640	ppb	1.3	191341.28	1.804	113.01	
Cr	52	No Gas	21.878	ppb	1.7	1060262.77	0.778	105.29	
Mn	55	No Gas	21.777	ppb	2.8	1389074.01	0.418	106.66	
Co	59	He	20.777	ppb	0.5	339839.10	0.08	103.47	
Ni	60	No Gas	20.575	ppb	3.1	264778.02	1.18	97.14	
Cu	63	No Gas	21.737	ppb	2.6	673494.73	1.589	100.69	
Zn	66	No Gas	22.191	ppb	2.2	178166.04	2.687	97.82	
As	75	No Gas	23.263	ppb	2.9	208447.48	1.585	107.78	
Se	78	He	26.906	ppb	4.6	2610.91	4.844	108.3	
Se	82	No Gas	28.590	ppb	3.2	15988.08	7.101	105.49	
Mo	98	No Gas	31.188	ppb	1.7	737756.31	8.562	109.19	
Ag	107	No Gas	18.492	ppb	2.0	700459.05	0.003	92.44	
Cd	111	No Gas	20.047	ppb	2.0	159207.77	-0.05	100.49	
Sb	123	No Gas	21.372	ppb	1.4	517355.92	0.088	106.39	
Ba	137	No Gas	36.977	ppb	3.2	416509.20	12.763	112.86	
Tl	203	No Gas	23.247	ppb	2.9	427189.16	0.003	116.21	
Pb	208	No Gas	22.806	ppb	2.4	1325433.33	0.023	113.9	
Th	232	No Gas	24.559	ppb	2.1	1330362.24	0.026	122.63	
U	238	No Gas	30.688	ppb	2.6	1582923.34	5.622	119.77	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8411955.50	3.0	8788220.21	95.72	60	125	
Sc	45	He	428226.61	2.3	486695.24	87.99	60	125	
Ge	72	No Gas	5434579.37	3.7	6275745.58	86.6	60	125	
Ge	72	He	794133.39	2.2	948175.9	83.75	60	125	
Y	89	No Gas	7796307.47	2.9	8859608.54	88	60	125	
Y	89	He	1226574.81	2.4	1479625.71	82.9	60	125	
Rh	103	No Gas	5999576.01	4.3	7242596.94	82.84	60	125	
Rh	103	He	3081978.28	1.8	3947548.31	78.07	60	125	
In	115	No Gas	6525206.68	1.5	7988838.01	81.68	60	125	
Lu	175	No Gas	44351.28	4.5	52826.41	83.96	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404465-008L 5X
File Name	085SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 13:08:26
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.020	ppb	17.0	116.67	
Al	27	72	No Gas	2.166	ppb	0.2	77614.03	
V	51	72	He	0.449	ppb	1.7	4986.43	
Cr	52	72	No Gas	0.287	ppb	9.0	57154.26	
Mn	55	72	No Gas	0.132	ppb	8.8	14975.63	
Co	59	72	He	0.018	ppb	13.7	373.34	
Ni	60	72	No Gas	-0.162	ppb	N/A	4839.73	
Cu	63	72	No Gas	0.373	ppb	7.2	17856.98	
Zn	66	72	No Gas	0.626	ppb	4.9	6240.28	
As	75	72	No Gas	0.194	ppb	115.2	4333.19	
Se	78	72	He	1.053	ppb	18.6	160.33	
Se	82	72	No Gas	1.464	ppb	16.5	1046.57	
Mo	98	89	No Gas	1.740	ppb	0.7	39762.88	
Ag	107	89	No Gas	0.005	ppb	83.2	352.23	
Cd	111	89	No Gas	-0.059	ppb	N/A	3252.16	
Sb	123	89	No Gas	0.065	ppb	6.4	2353.54	
Ba	137	115	No Gas	2.606	ppb	1.7	29736.54	
Tl	203	115	No Gas	0.010	ppb	37.0	244.45	
Pb	208	115	No Gas	0.010	ppb	21.0	1043.35	
Th	232	115	No Gas	0.049	ppb	17.0	3300.44	
U	238	115	No Gas	1.159	ppb	1.5	60232.92	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	7672278.58	2.8	8788220.21	87.3	60	125	
Sc	45	He	414320.20	1.9	486695.24	85.13	60	125	
Ge	72	No Gas	5313809.79	4.5	6275745.58	84.67	60	125	
Ge	72	He	802086.05	2.4	948175.9	84.59	60	125	
Y	89	No Gas	7486381.09	5.8	8859608.54	84.5	60	125	
Y	89	He	1209964.85	2.6	1479625.71	81.78	60	125	
Rh	103	No Gas	6094277.82	3.4	7242596.94	84.14	60	125	
Rh	103	He	3159418.76	0.5	3947548.31	80.03	60	125	
In	115	No Gas	6572444.46	4.8	7988838.01	82.27	60	125	
Lu	175	No Gas	40073.11	3.4	52826.41	75.86	60	125	

7900 ICP-MS 200.8/6020A
Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	086_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 13:10:21
Sample Type	CCV
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	% Rec	QC Flag
Be	9	45	No Gas	51.273	ppb	7.8	180803.42	102.55	
Al	27	72	No Gas	49.648	ppb	5.6	1671882.68	99.3	
V	51	72	He	51.848	ppb	1.4	417076.21	103.7	
Cr	52	72	No Gas	49.741	ppb	3.0	2367993.31	99.48	
Mn	55	72	No Gas	48.892	ppb	5.4	3130660.01	97.78	
Co	59	72	He	49.629	ppb	1.4	844139.05	99.26	
Ni	60	72	No Gas	47.458	ppb	4.4	605473.19	94.92	
Cu	63	72	No Gas	48.629	ppb	6.2	1508795.18	97.26	
Zn	66	72	No Gas	48.316	ppb	3.4	388785.15	96.63	
As	75	72	No Gas	48.427	ppb	4.0	433709.93	96.85	
Se	78	72	He	48.788	ppb	1.0	4877.18	97.58	
Se	82	72	No Gas	47.914	ppb	3.7	26787.21	95.83	
Mo	98	89	No Gas	50.309	ppb	5.9	1200339.93	100.62	
Ag	107	89	No Gas	48.839	ppb	7.0	1864887.60	97.68	
Cd	111	89	No Gas	47.834	ppb	5.9	377893.91	95.67	
Sb	123	89	No Gas	49.156	ppb	6.2	1199348.56	98.31	
Ba	137	115	No Gas	51.814	ppb	6.5	612229.28	103.63	
Tl	203	115	No Gas	54.059	ppb	6.9	1042414.47	108.12	
Pb	208	115	No Gas	53.086	ppb	6.1	3237086.95	106.17	
Th	232	115	No Gas	53.134	ppb	4.8	3019629.53	106.27	
U	238	115	No Gas	54.195	ppb	5.0	2933488.57	108.39	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	7808343.02	1.3	8788220.21	88.85	60	125	
Sc	45	He	433988.52	1.2	486695.24	89.17	60	125	
Ge	72	No Gas	5466944.37	3.8	6275745.58	87.11	60	125	
Ge	72	He	825987.62	0.8	948175.9	87.11	60	125	
Y	89	No Gas	7866536.08	4.0	8859608.54	88.79	60	125	
Y	89	He	1262973.53	1.7	1479625.71	85.36	60	125	
Rh	103	No Gas	6513929.60	4.7	7242596.94	89.94	60	125	
Rh	103	He	3339646.39	2.7	3947548.31	84.6	60	125	
In	115	No Gas	6848445.84	1.6	7988838.01	85.73	60	125	
Lu	175	No Gas	44007.62	3.5	52826.41	83.31	60	125	

7900 ICP-MS 200.8/6020A
Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	087_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 13:12:10
Sample Type	CCB
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.019	ppb	19.0	115.55	
Al	27	72	No Gas	0.065	ppb	67.0	9339.96	
V	51	72	He	0.086	ppb	15.8	2190.17	
Cr	52	72	No Gas	0.152	ppb	41.0	51451.36	
Mn	55	72	No Gas	0.060	ppb	3.6	10622.85	
Co	59	72	He	0.002	ppb	39.1	106.67	
Ni	60	72	No Gas	-0.457	ppb	N/A	1238.95	
Cu	63	72	No Gas	-0.008	ppb	N/A	6455.93	
Zn	66	72	No Gas	0.040	ppb	59.3	1699.00	
As	75	72	No Gas	0.032	ppb	207.7	2947.85	
Se	78	72	He	-0.017	ppb	N/A	58.67	
Se	82	72	No Gas	-0.044	ppb	N/A	235.07	
Mo	98	89	No Gas	0.028	ppb	12.7	947.82	
Ag	107	89	No Gas	0.009	ppb	45.3	554.46	
Cd	111	89	No Gas	-0.048	ppb	N/A	3498.85	
Sb	123	89	No Gas	0.068	ppb	8.3	2533.57	
Ba	137	115	No Gas	0.011	ppb	49.2	343.34	
Tl	203	115	No Gas	0.017	ppb	35.4	398.90	
Pb	208	115	No Gas	0.010	ppb	41.8	1060.02	
Th	232	115	No Gas	0.070	ppb	12.9	4625.29	
U	238	115	No Gas	0.009	ppb	11.4	501.12	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	7907082.74	1.3	8788220.21	89.97	60	125	
Sc	45	He	424747.01	1.8	486695.24	87.27	60	125	
Ge	72	No Gas	5359660.20	1.2	6275745.58	85.4	60	125	
Ge	72	He	813148.91	0.9	948175.9	85.76	60	125	
Y	89	No Gas	7835979.41	1.8	8859608.54	88.45	60	125	
Y	89	He	1239793.14	1.7	1479625.71	83.79	60	125	
Rh	103	No Gas	6337175.58	1.5	7242596.94	87.5	60	125	
Rh	103	He	3373969.31	0.5	3947548.31	85.47	60	125	
In	115	No Gas	6861689.59	0.6	7988838.01	85.89	60	125	
Lu	175	No Gas	43358.86	2.7	52826.41	82.08	60	125	

7900 ICP-MS 200.8/6020A
Contract Required Detection Limit (CRDL) Report

Sample Name	CRDL
File Name	088LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 13:14:07
Sample Type	LLICV
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	%Rec	QC Flag
Be	9	45	No Gas	1.011	ppb	10.2	3652.70	101.1	
Al	27	72	No Gas	5.247	ppb	7.4	183567.82	104.94	
V	51	72	He	1.132	ppb	2.1	10335.96	113.2	
Cr	52	72	No Gas	1.134	ppb	12.9	98640.74	113.4	
Mn	55	72	No Gas	1.029	ppb	7.5	72840.83	102.9	
Co	59	72	He	1.031	ppb	1.0	17159.23	103.1	
Ni	60	72	No Gas	0.502	ppb	18.5	13377.61	50.2	> +/- 50%
Cu	63	72	No Gas	0.954	ppb	9.1	36371.09	95.4	
Zn	66	72	No Gas	4.987	ppb	8.6	41478.91	99.74	
As	75	72	No Gas	0.945	ppb	26.2	11152.41	94.5	
Se	78	72	He	0.963	ppb	5.7	152.33	96.3	
Se	82	72	No Gas	0.836	ppb	18.0	728.27	83.6	
Mo	98	89	No Gas	0.970	ppb	8.5	23551.95	97	
Ag	107	89	No Gas	0.940	ppb	7.1	36285.82	94	
Cd	111	89	No Gas	0.892	ppb	5.7	10916.50	89.2	
Sb	123	89	No Gas	0.982	ppb	8.0	24960.05	98.2	
Ba	137	115	No Gas	0.990	ppb	9.2	12370.25	99	
Tl	203	115	No Gas	1.007	ppb	7.2	20243.93	100.7	
Pb	208	115	No Gas	1.005	ppb	6.9	64152.05	100.5	
Th	232	115	No Gas	0.969	ppb	7.7	57898.77	96.9	
U	238	115	No Gas	1.013	ppb	8.0	56991.88	101.3	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	7907316.35	1.0	8788220.21	89.98	60	125	
Sc	45	He	418784.53	2.1	486695.24	86.05	60	125	
Ge	72	No Gas	5482752.28	0.5	6275745.58	87.36	60	125	
Ge	72	He	804916.88	0.9	948175.9	84.89	60	125	
Y	89	No Gas	7906918.30	0.7	8859608.54	89.25	60	125	
Y	89	He	1230537.14	1.5	1479625.71	83.17	60	125	
Rh	103	No Gas	6494813.35	1.8	7242596.94	89.68	60	125	
Rh	103	He	3363695.77	0.7	3947548.31	85.21	60	125	
In	115	No Gas	7122924.16	2.1	7988838.01	89.16	60	125	
Lu	175	No Gas	44711.09	0.9	52826.41	84.64	60	125	

7900 ICP-MS 200.8/6020A
High-Level Continuing Calibration Verification (HLCCV) Report

Sample Name	HLCCV2
File Name	089HCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 13:16:03
Sample Type	HLCCV2
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	%Rec	QC Flag
Be	9	45	No Gas	208.387	ppb	5.2	738237.71	104.19	
Al	27	72	No Gas	200.552	ppb	6.0	6639997.10	100.28	
V	51	72	He	209.826	ppb	2.7	1677346.88	104.91	
Cr	52	72	No Gas	194.505	ppb	4.9	9008417.14	97.25	
Mn	55	72	No Gas	193.496	ppb	6.9	12203933.13	96.75	
Co	59	72	He	201.649	ppb	1.8	3417592.64	100.82	
Ni	60	72	No Gas	194.870	ppb	4.7	2431067.06	97.44	
Cu	63	72	No Gas	194.668	ppb	6.1	5937141.15	97.33	
Zn	66	72	No Gas	193.783	ppb	6.1	1534655.18	96.89	
As	75	72	No Gas	193.794	ppb	7.2	1705212.91	96.9	
Se	78	72	He	191.809	ppb	0.7	18929.03	95.9	
Se	82	72	No Gas	189.860	ppb	6.2	103974.28	94.93	
Mo	98	89	No Gas	198.427	ppb	4.6	4532774.78	99.21	
Ag	107	89	No Gas	152.501	ppb	7.4	5580824.08	76.25	HLCCV2 Main CR1 Failed
Cd	111	89	No Gas	200.433	ppb	3.4	1503658.77	100.22	
Sb	123	89	No Gas	196.752	ppb	2.5	4591645.93	98.38	
Ba	137	115	No Gas	204.968	ppb	2.0	2437948.79	102.48	
Tl	203	115	No Gas	202.762	ppb	1.4	3934749.98	101.38	
Pb	208	115	No Gas	209.435	ppb	2.6	12859589.35	104.72	
Th	232	115	No Gas	210.367	ppb	3.3	12039682.02	105.18	
U	238	115	No Gas	209.138	ppb	1.8	11394269.82	104.57	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	7838636.08	5.1	8788220.21	89.19	60	125	
Sc	45	He	427531.50	2.6	486695.24	87.84	60	125	
Ge	72	No Gas	5393798.40	3.6	6275745.58	85.95	60	125	
Ge	72	He	823087.55	1.9	948175.9	86.81	60	125	
Y	89	No Gas	7522279.42	4.8	8859608.54	84.91	60	125	
Y	89	He	1247814.95	2.3	1479625.71	84.33	60	125	
Rh	103	No Gas	6348738.36	6.9	7242596.94	87.66	60	125	
Rh	103	He	3440695.35	2.2	3947548.31	87.16	60	125	
In	115	No Gas	6889836.39	5.9	7988838.01	86.24	60	125	
Lu	175	No Gas	43279.34	7.6	52826.41	81.93	60	125	

7900 ICP-MS 200.8/6020A
High-Level Continuing Calibration Verification (HLCCV) Report

Sample Name	HLCCV3
File Name	090_QC1.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 13:17:36
Sample Type	QC1
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	%Rec	QC Flag
Be	9	45	No Gas	414.232	ppb	26.8	1439104.77	103.56	
Al	27	72	No Gas	387.630	ppb	25.0	12842244.49	96.91	
V	51	72	He	425.515	ppb	1.0	3365823.69	106.38	
Cr	52	72	No Gas	374.525	ppb	24.4	17336625.43	93.63	
Mn	55	72	No Gas	372.233	ppb	21.5	23552398.51	93.06	
Co	59	72	He	403.230	ppb	1.8	6765569.32	100.81	
Ni	60	72	No Gas	382.271	ppb	21.4	4780707.17	95.57	
Cu	63	72	No Gas	376.232	ppb	21.8	11505616.21	94.06	
Zn	66	72	No Gas	377.622	ppb	23.1	2997045.37	94.41	
As	75	72	No Gas	376.777	ppb	22.9	3320349.01	94.19	
Se	78	72	He	387.837	ppb	1.0	37827.31	96.96	
Se	82	72	No Gas	370.936	ppb	21.3	203657.18	92.73	
Mo	98	89	No Gas	382.285	ppb	25.9	9070418.48	95.57	
Ag	107	89	No Gas	141.626	ppb	23.3	5395711.87	35.41	QC1 Main CR1 Failed
Cd	111	89	No Gas	370.411	ppb	24.0	2889570.51	92.6	
Sb	123	89	No Gas	371.733	ppb	24.9	9025392.97	92.93	
Ba	137	115	No Gas	390.642	ppb	25.3	4678574.53	97.66	
Tl	203	115	No Gas	404.599	ppb	25.4	7907996.77	101.15	
Pb	208	115	No Gas	404.485	ppb	25.8	24988238.32	101.12	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	7875854.69	12.7	8788220.21	89.62	60	125	
Sc	45	He	428725.23	1.3	486695.24	88.09	60	125	
Ge	72	No Gas	5498035.75	10.0	6275745.58	87.61	60	125	
Ge	72	He	814899.43	1.6	948175.9	85.94	60	125	
Y	89	No Gas	8020249.13	14.1	8859608.54	90.53	60	125	
Y	89	He	1256032.21	1.2	1479625.71	84.89	60	125	
Rh	103	No Gas	6457356.97	15.7	7242596.94	89.16	60	125	
Rh	103	He	3357443.48	2.5	3947548.31	85.05	60	125	
In	115	No Gas	7127411.38	15.3	7988838.01	89.22	60	125	
Lu	175	No Gas	44691.19	12.3	52826.41	84.6	60	125	

7900 ICP-MS 200.8/6020A
Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	091_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 13:19:04
Sample Type	CCV
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	% Rec	QC Flag
Be	9	45	No Gas	53.979	ppb	4.8	187944.85	107.96	
Al	27	72	No Gas	49.953	ppb	5.6	1690866.18	99.91	
V	51	72	He	52.421	ppb	1.3	415808.37	104.84	
Cr	52	72	No Gas	49.475	ppb	5.7	2368815.11	98.95	
Mn	55	72	No Gas	49.932	ppb	5.9	3214637.58	99.86	
Co	59	72	He	50.400	ppb	0.6	845434.17	100.8	
Ni	60	72	No Gas	47.508	ppb	6.4	609540.03	95.02	
Cu	63	72	No Gas	50.019	ppb	2.5	1558550.74	100.04	
Zn	66	72	No Gas	48.638	ppb	5.4	393538.02	97.28	
As	75	72	No Gas	48.569	ppb	5.1	437314.67	97.14	
Se	78	72	He	50.415	ppb	0.2	4968.21	100.83	
Se	82	72	No Gas	48.299	ppb	5.8	27143.28	96.6	
Mo	98	89	No Gas	51.159	ppb	3.1	1198306.39	102.32	
Ag	107	89	No Gas	49.227	ppb	2.4	1844145.69	98.45	
Cd	111	89	No Gas	49.408	ppb	2.9	383020.10	98.82	
Sb	123	89	No Gas	50.745	ppb	2.6	1214853.67	101.49	
Ba	137	115	No Gas	52.603	ppb	4.8	613295.84	105.21	
Tl	203	115	No Gas	54.711	ppb	4.1	1040735.65	109.42	
Pb	208	115	No Gas	54.396	ppb	3.9	3272282.49	108.79	
Th	232	115	No Gas	56.207	ppb	4.1	3151822.93	112.41	> +/- 10%
U	238	115	No Gas	55.063	ppb	2.9	2939798.56	110.13	> +/- 10%

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	7705120.80	3.4	8788220.21	87.68	60	125	
Sc	45	He	426078.12	1.6	486695.24	87.55	60	125	
Ge	72	No Gas	5498760.06	3.6	6275745.58	87.62	60	125	
Ge	72	He	814602.62	1.9	948175.9	85.91	60	125	
Y	89	No Gas	7719144.41	6.1	8859608.54	87.13	60	125	
Y	89	He	1240587.66	1.8	1479625.71	83.84	60	125	
Rh	103	No Gas	6375433.91	5.0	7242596.94	88.03	60	125	
Rh	103	He	3381830.14	2.8	3947548.31	85.67	60	125	
In	115	No Gas	6752501.96	2.4	7988838.01	84.52	60	125	
Lu	175	No Gas	43343.59	5.4	52826.41	82.05	60	125	

7900 ICP-MS 200.8/6020A
Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	092_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 13:20:53
Sample Type	CCB
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.091	ppb	8.8	367.78	
Al	27	72	No Gas	0.063	ppb	81.6	9403.35	
V	51	72	He	0.070	ppb	11.5	2045.71	
Cr	52	72	No Gas	0.117	ppb	31.2	50651.98	
Mn	55	72	No Gas	0.071	ppb	12.6	11462.39	
Co	59	72	He	0.008	ppb	20.1	203.33	
Ni	60	72	No Gas	-0.455	ppb	N/A	1278.95	
Cu	63	72	No Gas	0.000	ppb	N/A	6808.32	
Zn	66	72	No Gas	0.031	ppb	105.6	1646.77	
As	75	72	No Gas	-0.075	ppb	N/A	2056.51	
Se	78	72	He	0.062	ppb	32.6	65.67	
Se	82	72	No Gas	-0.131	ppb	N/A	191.46	
Mo	98	89	No Gas	0.067	ppb	6.4	1823.35	
Ag	107	89	No Gas	0.012	ppb	40.8	643.35	
Cd	111	89	No Gas	-0.026	ppb	N/A	3559.66	
Sb	123	89	No Gas	0.156	ppb	12.1	4545.23	
Ba	137	115	No Gas	0.018	ppb	18.1	425.56	
Tl	203	115	No Gas	0.030	ppb	18.1	637.80	
Pb	208	115	No Gas	0.021	ppb	26.5	1717.83	
Th	232	115	No Gas	0.129	ppb	7.7	7962.51	
U	238	115	No Gas	0.016	ppb	16.5	905.59	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	7797551.35	1.8	8788220.21	88.73	60	125	
Sc	45	He	420508.32	2.4	486695.24	86.4	60	125	
Ge	72	No Gas	5442345.89	3.1	6275745.58	86.72	60	125	
Ge	72	He	805267.59	1.7	948175.9	84.93	60	125	
Y	89	No Gas	7597163.31	2.6	8859608.54	85.75	60	125	
Y	89	He	1227296.48	1.5	1479625.71	82.95	60	125	
Rh	103	No Gas	6431256.41	3.8	7242596.94	88.8	60	125	
Rh	103	He	3350724.17	2.2	3947548.31	84.88	60	125	
In	115	No Gas	6827940.84	0.5	7988838.01	85.47	60	125	
Lu	175	No Gas	43723.55	2.5	52826.41	82.77	60	125	

7900 ICP-MS 200.8/6020A
Prep Blank (PB) Report

Sample Name	PBW-439458
File Name	093_PB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 13:22:51
Sample Type	PB
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.052	ppb	5.9	233.34	
Al	27	72	No Gas	1.017	ppb	4.3	41962.61	
V	51	72	He	0.058	ppb	12.5	1964.58	
Cr	52	72	No Gas	0.140	ppb	40.0	52674.74	
Mn	55	72	No Gas	0.065	ppb	9.7	11313.37	
Co	59	72	He	0.004	ppb	45.9	131.11	
Ni	60	72	No Gas	-0.467	ppb	N/A	1152.27	
Cu	63	72	No Gas	-0.019	ppb	N/A	6351.45	
Zn	66	72	No Gas	0.167	ppb	10.7	2782.50	
As	75	72	No Gas	0.019	ppb	1915.1	2985.17	
Se	78	72	He	0.034	ppb	401.0	63.33	
Se	82	72	No Gas	-0.064	ppb	N/A	233.01	
Mo	98	89	No Gas	0.023	ppb	9.7	807.68	
Ag	107	89	No Gas	0.002	ppb	81.8	271.11	
Cd	111	89	No Gas	-0.027	ppb	N/A	3619.55	
Sb	123	89	No Gas	0.071	ppb	17.9	2593.59	
Ba	137	115	No Gas	0.009	ppb	6.0	330.00	
Tl	203	115	No Gas	0.008	ppb	16.2	214.45	
Pb	208	115	No Gas	0.005	ppb	29.3	796.67	
Th	232	115	No Gas	0.044	ppb	9.1	3203.75	
U	238	115	No Gas	0.004	ppb	24.7	266.67	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	7909823.29	2.3	8788220.21	90	60	125	
Sc	45	He	422731.62	1.5	486695.24	86.86	60	125	
Ge	72	No Gas	5546283.67	3.3	6275745.58	88.38	60	125	
Ge	72	He	810061.48	1.0	948175.9	85.43	60	125	
Y	89	No Gas	7747961.08	3.8	8859608.54	87.45	60	125	
Y	89	He	1242070.40	2.1	1479625.71	83.94	60	125	
Rh	103	No Gas	6452338.63	3.4	7242596.94	89.09	60	125	
Rh	103	He	3391273.48	1.4	3947548.31	85.91	60	125	
In	115	No Gas	6887334.45	3.3	7988838.01	86.21	60	125	
Lu	175	No Gas	43273.95	5.7	52826.41	81.92	60	125	

7900 ICP-MS 200.8/6020A
Laboratory Control Sample (LCS) Report

Sample Name	LCSW-439458
File Name	094_LCS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 13:24:49
Sample Type	LCS
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	% Rec	QC Flag
Be	9	45	No Gas	22.522	ppb	3.0	78689.77	112.61	
Al	27	72	No Gas	42.885	ppb	7.0	1464699.52	107.21	
V	51	72	He	21.742	ppb	0.0	174138.04	108.71	
Cr	52	72	No Gas	20.954	ppb	4.0	1038358.40	104.77	
Mn	55	72	No Gas	20.620	ppb	3.6	1341819.46	103.1	
Co	59	72	He	21.083	ppb	0.6	355249.14	105.42	
Ni	60	72	No Gas	19.376	ppb	4.0	254821.52	96.88	
Cu	63	72	No Gas	20.822	ppb	3.7	658669.52	104.11	
Zn	66	72	No Gas	20.446	ppb	3.1	167642.67	102.23	
As	75	72	No Gas	20.476	ppb	3.9	187489.83	102.38	
Se	78	72	He	20.352	ppb	2.0	2050.48	101.76	
Se	82	72	No Gas	20.124	ppb	2.2	11559.91	100.62	
Mo	98	89	No Gas	21.617	ppb	1.8	504708.96	108.08	
Ag	107	89	No Gas	20.937	ppb	1.1	782283.37	104.68	
Cd	111	89	No Gas	20.693	ppb	1.8	162057.52	103.46	
Sb	123	89	No Gas	21.554	ppb	1.6	514763.85	107.77	
Ba	137	115	No Gas	21.732	ppb	3.2	258163.60	108.66	
Tl	203	115	No Gas	22.614	ppb	3.3	438191.73	113.07	
Pb	208	115	No Gas	22.385	ppb	2.9	1371653.73	111.93	
Th	232	115	No Gas	22.610	ppb	3.2	1291584.50	113.05	
U	238	115	No Gas	22.802	ppb	3.4	1239891.48	114.01	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	7735371.63	5.0	8788220.21	88.02	60	125	
Sc	45	He	425849.31	2.6	486695.24	87.5	60	125	
Ge	72	No Gas	5546258.67	2.8	6275745.58	88.38	60	125	
Ge	72	He	818191.63	1.4	948175.9	86.29	60	125	
Y	89	No Gas	7692949.70	3.4	8859608.54	86.83	60	125	
Y	89	He	1249690.57	1.8	1479625.71	84.46	60	125	
Rh	103	No Gas	6597947.93	2.8	7242596.94	91.1	60	125	
Rh	103	He	3429202.36	1.7	3947548.31	86.87	60	125	
In	115	No Gas	6885104.59	4.4	7988838.01	86.18	60	125	
Lu	175	No Gas	43674.51	4.4	52826.41	82.68	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404644-002
File Name	095SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 13:26:45
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.044	ppb	25.2	206.67	
Al	27	72	No Gas	2.592	ppb	6.8	94300.24	
V	51	72	He	0.064	ppb	18.4	2007.92	
Cr	52	72	No Gas	0.373	ppb	15.9	62929.50	
Mn	55	72	No Gas	1.260	ppb	5.4	87515.81	
Co	59	72	He	0.006	ppb	20.5	168.89	
Ni	60	72	No Gas	-0.399	ppb	N/A	1992.37	
Cu	63	72	No Gas	0.128	ppb	27.0	10811.95	
Zn	66	72	No Gas	2.903	ppb	4.2	24705.55	
As	75	72	No Gas	-0.100	ppb	N/A	1833.63	
Se	78	72	He	0.062	ppb	193.3	66.00	
Se	82	72	No Gas	0.020	ppb	502.0	275.59	
Mo	98	89	No Gas	0.023	ppb	30.5	823.53	
Ag	107	89	No Gas	0.005	ppb	45.5	385.56	
Cd	111	89	No Gas	-0.029	ppb	N/A	3631.62	
Sb	123	89	No Gas	0.077	ppb	14.0	2735.84	
Ba	137	115	No Gas	3.568	ppb	1.2	43248.75	
Tl	203	115	No Gas	0.010	ppb	20.3	265.56	
Pb	208	115	No Gas	0.012	ppb	19.0	1248.92	
Th	232	115	No Gas	0.080	ppb	4.0	5328.90	
U	238	115	No Gas	0.004	ppb	37.3	281.11	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	7932893.85	1.1	8788220.21	90.27	60	125	
Sc	45	He	422260.30	1.2	486695.24	86.76	60	125	
Ge	72	No Gas	5476533.95	0.8	6275745.58	87.27	60	125	
Ge	72	He	808784.59	0.8	948175.9	85.3	60	125	
Y	89	No Gas	7799860.53	3.1	8859608.54	88.04	60	125	
Y	89	He	1231114.05	1.6	1479625.71	83.2	60	125	
Rh	103	No Gas	6604544.18	1.1	7242596.94	91.19	60	125	
Rh	103	He	3361438.75	1.9	3947548.31	85.15	60	125	
In	115	No Gas	6990348.89	1.2	7988838.01	87.5	60	125	
Lu	175	No Gas	44629.66	2.2	52826.41	84.48	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404644-004
File Name	096SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 13:28:43
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.038	ppb	20.3	176.67	
Al	27	72	No Gas	1.902	ppb	3.1	70121.93	
V	51	72	He	0.071	ppb	18.3	2061.26	
Cr	52	72	No Gas	0.385	ppb	15.8	62600.56	
Mn	55	72	No Gas	0.960	ppb	3.9	67387.36	
Co	59	72	He	0.005	ppb	26.2	144.44	
Ni	60	72	No Gas	-0.383	ppb	N/A	2165.73	
Cu	63	72	No Gas	0.275	ppb	6.4	15154.87	
Zn	66	72	No Gas	1.175	ppb	3.5	10684.07	
As	75	72	No Gas	-0.116	ppb	N/A	1671.74	
Se	78	72	He	0.105	ppb	74.3	70.00	
Se	82	72	No Gas	-0.021	ppb	N/A	249.40	
Mo	98	89	No Gas	0.009	ppb	20.7	491.11	
Ag	107	89	No Gas	0.001	ppb	90.8	223.34	
Cd	111	89	No Gas	-0.040	ppb	N/A	3513.35	
Sb	123	89	No Gas	0.065	ppb	15.3	2444.68	
Ba	137	115	No Gas	1.630	ppb	3.1	19745.74	
Tl	203	115	No Gas	0.003	ppb	23.5	122.22	
Pb	208	115	No Gas	0.009	ppb	5.8	1012.24	
Th	232	115	No Gas	0.028	ppb	13.3	2297.99	
U	238	115	No Gas	0.001	ppb	24.7	98.89	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	7580931.37	2.0	8788220.21	86.26	60	125	
Sc	45	He	421724.36	0.9	486695.24	86.65	60	125	
Ge	72	No Gas	5398742.98	2.3	6275745.58	86.03	60	125	
Ge	72	He	807890.02	1.2	948175.9	85.2	60	125	
Y	89	No Gas	7744579.69	4.4	8859608.54	87.41	60	125	
Y	89	He	1231025.05	1.0	1479625.71	83.2	60	125	
Rh	103	No Gas	6382728.50	4.7	7242596.94	88.13	60	125	
Rh	103	He	3394672.02	1.3	3947548.31	85.99	60	125	
In	115	No Gas	6944090.28	5.0	7988838.01	86.92	60	125	
Lu	175	No Gas	44020.29	6.2	52826.41	83.33	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404644-006
File Name	097SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 13:30:40
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.031	ppb	11.0	155.56	
Al	27	72	No Gas	12.303	ppb	6.3	413444.14	
V	51	72	He	0.110	ppb	19.0	2410.21	
Cr	52	72	No Gas	0.523	ppb	10.4	68832.49	
Mn	55	72	No Gas	555.028	ppb	4.0	34922045.28	>LDR
Co	59	72	He	0.273	ppb	0.9	4704.12	
Ni	60	72	No Gas	-0.041	ppb	N/A	6407.02	
Cu	63	72	No Gas	3.404	ppb	5.0	110264.03	
Zn	66	72	No Gas	5.150	ppb	4.3	42067.37	
As	75	72	No Gas	0.336	ppb	103.1	5629.47	
Se	78	72	He	0.081	ppb	149.4	69.00	
Se	82	72	No Gas	0.111	ppb	69.3	321.20	
Mo	98	89	No Gas	0.016	ppb	19.2	669.78	
Ag	107	89	No Gas	0.001	ppb	121.8	225.56	
Cd	111	89	No Gas	-0.044	ppb	N/A	3602.60	
Sb	123	89	No Gas	0.083	ppb	15.4	2959.22	
Ba	137	115	No Gas	44.726	ppb	3.5	535896.82	
Tl	203	115	No Gas	0.005	ppb	19.5	162.22	
Pb	208	115	No Gas	0.099	ppb	2.6	6589.57	
Th	232	115	No Gas	0.035	ppb	5.1	2669.17	
U	238	115	No Gas	0.004	ppb	15.4	283.34	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	7791114.41	1.4	8788220.21	88.65	60	125	
Sc	45	He	429585.92	1.2	486695.24	88.27	60	125	
Ge	72	No Gas	5386731.04	2.5	6275745.58	85.83	60	125	
Ge	72	He	823769.34	1.3	948175.9	86.88	60	125	
Y	89	No Gas	7995843.02	2.4	8859608.54	90.25	60	125	
Y	89	He	1253402.73	1.5	1479625.71	84.71	60	125	
Rh	103	No Gas	6525906.55	1.7	7242596.94	90.1	60	125	
Rh	103	He	3369066.04	2.9	3947548.31	85.35	60	125	
In	115	No Gas	6940310.14	2.1	7988838.01	86.88	60	125	
Lu	175	No Gas	45736.74	0.9	52826.41	86.58	60	125	

7900 ICP-MS 200.8/6020A
Reference Sample Report

Sample Name	R2404644-008
File Name	098_ARF.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 13:32:36
Sample Type	AllRef
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS
Be	9	45	No Gas	0.030	ppb	27.8	150.00
Al	27	72	No Gas	7.066	ppb	2.1	242699.00
Cr	52	72	No Gas	0.410	ppb	7.2	64174.02
Mn	55	72	No Gas	9.668	ppb	0.9	620459.56
Ni	60	72	No Gas	-0.160	ppb	N/A	4987.57
Cu	63	72	No Gas	0.673	ppb	1.2	27476.98
Zn	66	72	No Gas	2.866	ppb	42.8	23844.57
As	75	72	No Gas	0.321	ppb	56.6	5587.46
Se	82	72	No Gas	0.091	ppb	127.6	310.24
Mo	98	89	No Gas	0.018	ppb	11.7	694.98
Ag	107	89	No Gas	0.000	ppb	34.2	203.34
Cd	111	89	No Gas	-0.047	ppb	N/A	3428.93
Sb	123	89	No Gas	0.084	ppb	10.4	2869.20
Ba	137	115	No Gas	19.247	ppb	3.7	221430.98
Tl	203	115	No Gas	0.002	ppb	36.5	112.22
Pb	208	115	No Gas	0.023	ppb	5.0	1801.16
Th	232	115	No Gas	0.018	ppb	10.3	1669.00
U	238	115	No Gas	0.005	ppb	6.4	296.67
V	51	72	He	0.085	ppb	93.9	2141.28
Co	59	72	He	0.017	ppb	45.9	343.34
Se	78	72	He	0.124	ppb	84.7	73.00

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High
Sc	45	No Gas	7658533.58	6.4	8788220.21	87.15	60	125
Sc	45	He	432956.61	35.5	486695.24	88.96	60	125
Ge	72	No Gas	5439673.81	6.2	6275745.58	86.68	60	125
Ge	72	He	845621.61	31.0	948175.9	89.18	60	125
Y	89	No Gas	7668543.59	4.0	8859608.54	86.56	60	125
Y	89	He	1282265.71	36.7	1479625.71	86.66	60	125
Rh	103	No Gas	6256545.86	5.7	7242596.94	86.39	60	125
Rh	103	He	3443004.24	34.0	3947548.31	87.22	60	125
In	115	No Gas	6673609.46	6.5	7988838.01	83.54	60	125
Lu	175	No Gas	41931.75	6.5	52826.41	79.38	60	125

7900 ICP-MS 200.8-6020A
Matrix Spike (MS) Sample Report

Sample Name	R2404644-008S
File Name	099_Spk.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 13:34:33
Sample Type	Spike
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d
QC Ref File Name	098_ ARF. d

QC Analyte Table

Name	Mass	Tune	Conc.	Units	RSD	CPS	RefConc	%Rec	Flag
Be	9	No Gas	22.755	ppb	2.0	77774.60	0.03	113.61	
Al	27	No Gas	48.449	ppb	2.8	1618897.58	7.066	102.94	
V	51	He	21.855	ppb	29.6	173601.51	0.085	108.81	
Cr	52	No Gas	21.209	ppb	2.6	1028913.29	0.41	103.91	
Mn	55	No Gas	30.398	ppb	1.8	1934003.19	9.668	102.46	
Co	59	He	20.813	ppb	28.8	348269.94	0.017	103.98	
Ni	60	No Gas	19.553	ppb	2.8	251808.58	-0.16	98.55	
Cu	63	No Gas	21.339	ppb	2.3	660756.23	0.673	103.22	
Zn	66	No Gas	22.422	ppb	1.5	179892.03	2.866	98.06	
As	75	No Gas	20.550	ppb	2.5	184303.15	0.321	101.12	
Se	78	He	20.610	ppb	27.4	2069.15	0.124	102.42	
Se	82	No Gas	20.170	ppb	1.4	11345.22	0.091	100.39	
Mo	98	No Gas	21.933	ppb	2.9	497369.53	0.018	109.57	
Ag	107	No Gas	20.838	ppb	2.4	756281.43	0	104.19	
Cd	111	No Gas	20.867	ppb	2.3	158671.22	-0.047	104.58	
Sb	123	No Gas	22.007	ppb	2.9	510559.13	0.084	109.57	
Ba	137	No Gas	41.398	ppb	3.2	474332.60	19.247	105.48	
Tl	203	No Gas	22.860	ppb	2.9	427308.42	0.002	114.28	
Pb	208	No Gas	22.697	ppb	2.7	1341857.25	0.023	113.35	
Th	232	No Gas	22.211	ppb	2.3	1224112.42	0.018	110.95	
U	238	No Gas	23.470	ppb	3.0	1231525.02	0.005	117.32	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	7564892.48	5.6	8788220.21	86.08	60	125	
Sc	45	He	448821.16	31.5	486695.24	92.22	60	125	
Ge	72	No Gas	5430433.81	4.9	6275745.58	86.53	60	125	
Ge	72	He	858248.68	28.2	948175.9	90.52	60	125	
Y	89	No Gas	7472879.42	4.4	8859608.54	84.35	60	125	
Y	89	He	1320580.09	34.3	1479625.71	89.25	60	125	
Rh	103	No Gas	6184142.25	5.5	7242596.94	85.39	60	125	
Rh	103	He	3463655.07	30.6	3947548.31	87.74	60	125	
In	115	No Gas	6637412.93	2.2	7988838.01	83.08	60	125	
Lu	175	No Gas	43426.24	6.9	52826.41	82.21	60	125	

7900 ICP-MS 200.8/6020A
Matrix Spike Duplicate (MSD) Sample Report

Sample Name	R2404644-008SD
File Name	100_SpD.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 13:36:29
Sample Type	SpkDup
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d
QC Ref File Name	099_ Spk.d

QC Analyte Table

Name	Mass	Tune	Conc.	Units	RSD	CPS	RefConc	RPD	Flag
Be	9	No Gas	22.354	ppb	8.2	78839.94	22.755	1.78	
Al	27	No Gas	48.247	ppb	6.9	1623986.78	48.449	0.42	
V	51	He	22.458	ppb	30.8	175883.07	21.855	2.72	
Cr	52	No Gas	21.198	ppb	7.6	1035473.57	21.209	0.05	
Mn	55	No Gas	30.757	ppb	3.3	1971175.82	30.398	1.17	
Co	59	He	21.544	ppb	30.7	355019.22	20.813	3.45	
Ni	60	No Gas	19.664	ppb	4.5	254957.90	19.553	0.57	
Cu	63	No Gas	21.390	ppb	7.6	667113.60	21.339	0.24	
Zn	66	No Gas	22.568	ppb	6.3	182369.92	22.422	0.65	
As	75	No Gas	20.584	ppb	8.6	185900.87	20.55	0.16	
Se	78	He	21.102	ppb	27.7	2091.49	20.61	2.36	
Se	82	No Gas	20.116	ppb	6.4	11399.72	20.17	0.27	
Mo	98	No Gas	21.768	ppb	5.2	507595.40	21.933	0.76	
Ag	107	No Gas	20.651	ppb	6.8	770823.23	20.838	0.9	
Cd	111	No Gas	20.663	ppb	5.9	161623.87	20.867	0.98	
Sb	123	No Gas	21.675	ppb	6.5	517214.63	22.007	1.52	
Ba	137	No Gas	39.311	ppb	4.4	478047.50	41.398	5.17	
Tl	203	No Gas	21.752	ppb	4.3	431595.86	22.86	4.97	
Pb	208	No Gas	21.586	ppb	4.1	1354604.16	22.697	5.02	
Th	232	No Gas	21.145	ppb	3.7	1236976.58	22.211	4.91	
U	238	No Gas	22.383	ppb	3.7	1246609.57	23.47	4.74	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	7816564.13	1.6	8788220.21	88.94	60	125	
Sc	45	He	448561.86	32.8	486695.24	92.16	60	125	
Ge	72	No Gas	5472313.67	1.1	6275745.58	87.2	60	125	
Ge	72	He	847900.40	27.8	948175.9	89.42	60	125	
Y	89	No Gas	7688563.30	2.2	8859608.54	86.78	60	125	
Y	89	He	1302312.66	32.2	1479625.71	88.02	60	125	
Rh	103	No Gas	6328251.14	1.1	7242596.94	87.38	60	125	
Rh	103	He	3480077.15	34.9	3947548.31	88.16	60	125	
In	115	No Gas	7045065.14	0.8	7988838.01	88.19	60	125	
Lu	175	No Gas	44609.90	2.0	52826.41	84.45	60	125	

7900 ICP-MS 200.8-6020A
Matrix Spike (MS) Sample Report

Sample Name	R2404644-008A
File Name	101_Spk.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 13:38:25
Sample Type	Spike
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d
QC Ref File Name	098_ ARF. d

QC Analyte Table

Name	Mass	Tune	Conc.	Units	RSD	CPS	RefConc	%Rec	Flag
Be	9	No Gas	21.890	ppb	4.1	78504.84	0.03	109.28	
Al	27	No Gas	48.545	ppb	6.0	1657606.67	7.066	103.14	
V	51	He	22.037	ppb	0.7	176553.46	0.085	109.71	
Cr	52	No Gas	20.888	ppb	7.3	1035585.51	0.41	102.34	
Mn	55	No Gas	30.175	ppb	7.7	1961770.20	9.668	101.71	
Co	59	He	20.996	ppb	0.7	353932.43	0.017	104.89	
Ni	60	No Gas	19.463	ppb	6.9	256025.62	-0.16	98.1	
Cu	63	No Gas	21.054	ppb	7.0	666099.78	0.673	101.84	
Zn	66	No Gas	22.125	ppb	7.6	181366.78	2.866	96.76	
As	75	No Gas	20.345	ppb	7.4	186401.13	0.321	100.12	
Se	78	He	20.855	ppb	2.3	2100.82	0.124	103.64	
Se	82	No Gas	20.103	ppb	6.7	11555.79	0.091	100.06	
Mo	98	No Gas	21.554	ppb	5.2	508044.24	0.018	107.67	
Ag	107	No Gas	19.228	ppb	4.3	725687.30	0	96.14	
Cd	111	No Gas	20.379	ppb	4.7	161189.73	-0.047	102.14	
Sb	123	No Gas	21.000	ppb	5.2	506735.08	0.084	104.56	
Ba	137	No Gas	38.995	ppb	4.0	477330.49	19.247	99.36	
Tl	203	No Gas	21.803	ppb	4.8	435470.87	0.002	109	
Pb	208	No Gas	21.463	ppb	4.4	1355738.59	0.023	107.19	
Th	232	No Gas	21.443	ppb	4.9	1262743.32	0.018	107.12	
U	238	No Gas	22.148	ppb	5.0	1241755.02	0.005	110.72	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	7936929.96	2.2	8788220.21	90.31	60	125	
Sc	45	He	427146.10	2.7	486695.24	87.76	60	125	
Ge	72	No Gas	5551802.70	0.7	6275745.58	88.46	60	125	
Ge	72	He	818521.50	1.5	948175.9	86.33	60	125	
Y	89	No Gas	7769500.25	2.7	8859608.54	87.7	60	125	
Y	89	He	1243536.34	1.3	1479625.71	84.04	60	125	
Rh	103	No Gas	6309367.81	1.4	7242596.94	87.11	60	125	
Rh	103	He	3356665.14	1.6	3947548.31	85.03	60	125	
In	115	No Gas	7091704.44	0.9	7988838.01	88.77	60	125	
Lu	175	No Gas	43987.62	2.0	52826.41	83.27	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404644-008L 5X
File Name	102SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 13:40:21
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.025	ppb	17.7	137.78	
Al	27	72	No Gas	1.682	ppb	7.8	63991.54	
V	51	72	He	0.048	ppb	124.0	1930.13	
Cr	52	72	No Gas	0.147	ppb	66.9	52560.08	
Mn	55	72	No Gas	1.943	ppb	10.7	131595.12	
Co	59	72	He	0.005	ppb	44.9	150.00	
Ni	60	72	No Gas	-0.378	ppb	N/A	2266.85	
Cu	63	72	No Gas	0.092	ppb	33.3	9740.06	
Zn	66	72	No Gas	0.484	ppb	11.4	5313.24	
As	75	72	No Gas	0.004	ppb	3262.2	2753.96	
Se	78	72	He	-0.048	ppb	N/A	57.00	
Se	82	72	No Gas	0.042	ppb	77.4	288.74	
Mo	98	89	No Gas	0.015	ppb	9.7	636.25	
Ag	107	89	No Gas	0.004	ppb	63.1	358.89	
Cd	111	89	No Gas	-0.043	ppb	N/A	3514.60	
Sb	123	89	No Gas	0.088	ppb	5.5	3018.12	
Ba	137	115	No Gas	3.689	ppb	5.9	45182.34	
Tl	203	115	No Gas	0.008	ppb	14.0	223.34	
Pb	208	115	No Gas	0.009	ppb	12.8	1071.13	
Th	232	115	No Gas	0.055	ppb	7.7	3879.51	
U	238	115	No Gas	0.005	ppb	15.4	328.89	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	7872306.91	2.2	8788220.21	89.58	60	125	
Sc	45	He	454352.54	29.2	486695.24	93.35	60	125	
Ge	72	No Gas	5503654.64	2.8	6275745.58	87.7	60	125	
Ge	72	He	862423.66	22.6	948175.9	90.96	60	125	
Y	89	No Gas	7794102.19	1.0	8859608.54	87.97	60	125	
Y	89	He	1339493.18	28.7	1479625.71	90.53	60	125	
Rh	103	No Gas	6491010.85	3.7	7242596.94	89.62	60	125	
Rh	103	He	3552914.51	26.7	3947548.31	90	60	125	
In	115	No Gas	7068833.61	1.3	7988838.01	88.48	60	125	
Lu	175	No Gas	43887.70	1.5	52826.41	83.08	60	125	

7900 ICP-MS 200.8/6020A
Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	103_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 13:42:16
Sample Type	CCV
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	% Rec	QC Flag
Be	9	45	No Gas	52.323	ppb	2.9	182661.95	104.65	
Al	27	72	No Gas	51.660	ppb	6.3	1688786.84	103.32	
V	51	72	He	45.685	ppb	22.8	402296.26	91.37	
Cr	52	72	No Gas	50.730	ppb	4.4	2343428.24	101.46	
Mn	55	72	No Gas	50.406	ppb	3.9	3129611.96	100.81	
Co	59	72	He	44.394	ppb	23.1	825582.45	88.79	> +/- 10%
Ni	60	72	No Gas	48.332	ppb	4.3	598286.77	96.66	
Cu	63	72	No Gas	50.544	ppb	3.2	1520568.24	101.09	
Zn	66	72	No Gas	49.261	ppb	3.8	384656.21	98.52	
As	75	72	No Gas	49.742	ppb	4.3	432212.34	99.48	
Se	78	72	He	44.240	ppb	22.0	4852.84	88.48	> +/- 10%
Se	82	72	No Gas	49.192	ppb	3.4	26679.79	98.38	
Mo	98	89	No Gas	51.215	ppb	1.9	1187411.50	102.43	
Ag	107	89	No Gas	50.430	ppb	0.7	1870775.55	100.86	
Cd	111	89	No Gas	48.818	ppb	2.1	374620.75	97.64	
Sb	123	89	No Gas	49.976	ppb	0.8	1184404.01	99.95	
Ba	137	115	No Gas	51.727	ppb	4.6	604426.70	103.45	
Tl	203	115	No Gas	53.415	ppb	4.7	1018453.95	106.83	
Pb	208	115	No Gas	53.372	ppb	5.1	3218363.17	106.74	
Th	232	115	No Gas	53.807	ppb	4.7	3023562.66	107.61	
U	238	115	No Gas	54.679	ppb	6.1	2927230.51	109.36	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	7724579.97	5.8	8788220.21	87.9	60	125	
Sc	45	He	503928.91	28.5	486695.24	103.54	60	125	
Ge	72	No Gas	5304295.07	5.3	6275745.58	84.52	60	125	
Ge	72	He	937207.27	23.6	948175.9	98.84	60	125	
Y	89	No Gas	7638207.75	6.4	8859608.54	86.21	60	125	
Y	89	He	1480663.31	28.8	1479625.71	100.07	60	125	
Rh	103	No Gas	6313765.31	6.6	7242596.94	87.18	60	125	
Rh	103	He	4012250.68	27.3	3947548.31	101.64	60	125	
In	115	No Gas	6767241.54	2.3	7988838.01	84.71	60	125	
Lu	175	No Gas	42702.55	5.3	52826.41	80.84	60	125	

7900 ICP-MS 200.8/6020A
Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	104_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 13:44:05
Sample Type	CCB
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.030	ppb	21.9	156.67	
Al	27	72	No Gas	0.073	ppb	72.2	9846.01	
V	51	72	He	0.078	ppb	37.7	2006.81	
Cr	52	72	No Gas	0.083	ppb	85.0	49523.51	
Mn	55	72	No Gas	0.068	ppb	4.8	11381.21	
Co	59	72	He	0.003	ppb	73.2	115.56	
Ni	60	72	No Gas	-0.434	ppb	N/A	1557.87	
Cu	63	72	No Gas	-0.068	ppb	N/A	4768.59	
Zn	66	72	No Gas	0.027	ppb	124.1	1641.22	
As	75	72	No Gas	0.100	ppb	99.7	3625.57	
Se	78	72	He	0.095	ppb	107.6	66.00	
Se	82	72	No Gas	-0.121	ppb	N/A	197.57	
Mo	98	89	No Gas	0.026	ppb	32.5	871.82	
Ag	107	89	No Gas	0.008	ppb	41.2	510.01	
Cd	111	89	No Gas	-0.027	ppb	N/A	3602.35	
Sb	123	89	No Gas	0.091	ppb	9.7	3051.46	
Ba	137	115	No Gas	0.012	ppb	33.2	353.34	
Tl	203	115	No Gas	0.016	ppb	19.7	370.01	
Pb	208	115	No Gas	0.011	ppb	49.1	1118.91	
Th	232	115	No Gas	0.079	ppb	19.6	5111.06	
U	238	115	No Gas	0.008	ppb	37.3	444.45	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	7935528.02	2.9	8788220.21	90.3	60	125	
Sc	45	He	393372.94	8.0	486695.24	80.83	60	125	
Ge	72	No Gas	5499409.22	1.6	6275745.58	87.63	60	125	
Ge	72	He	770292.97	4.6	948175.9	81.24	60	125	
Y	89	No Gas	7713238.86	1.0	8859608.54	87.06	60	125	
Y	89	He	1149882.73	7.8	1479625.71	77.71	60	125	
Rh	103	No Gas	6467315.99	2.8	7242596.94	89.3	60	125	
Rh	103	He	3161805.57	7.0	3947548.31	80.1	60	125	
In	115	No Gas	6847494.03	4.1	7988838.01	85.71	60	125	
Lu	175	No Gas	42942.12	2.8	52826.41	81.29	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404651-001
File Name	105SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 13:46:02
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.052	ppb	7.1	224.45	
Al	27	72	No Gas	47.981	ppb	5.2	1542418.93	
V	51	72	He	1.572	ppb	19.8	14377.24	
Cr	52	72	No Gas	2.171	ppb	9.5	140198.96	
Mn	55	72	No Gas	10.790	ppb	6.3	664629.28	
Co	59	72	He	0.372	ppb	16.0	6525.96	
Ni	60	72	No Gas	2.113	ppb	5.6	32140.76	
Cu	63	72	No Gas	3.083	ppb	8.2	97415.83	
Zn	66	72	No Gas	5.700	ppb	5.3	44980.26	
As	75	72	No Gas	1.010	ppb	20.7	11193.28	
Se	78	72	He	3.903	ppb	21.1	454.01	
Se	82	72	No Gas	6.130	ppb	8.2	3493.18	
Mo	98	89	No Gas	7.764	ppb	3.5	179062.02	
Ag	107	89	No Gas	0.010	ppb	17.8	561.12	
Cd	111	89	No Gas	-0.019	ppb	N/A	3601.53	
Sb	123	89	No Gas	0.253	ppb	6.5	6813.97	
Ba	137	115	No Gas	44.287	ppb	2.0	497183.63	
Tl	203	115	No Gas	0.185	ppb	4.9	3453.81	
Pb	208	115	No Gas	0.258	ppb	4.3	15394.77	
Th	232	115	No Gas	0.213	ppb	6.2	12135.91	
U	238	115	No Gas	9.663	ppb	2.8	496770.24	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	7637460.25	2.0	8788220.21	86.91	60	125	
Sc	45	He	468622.58	20.0	486695.24	96.29	60	125	
Ge	72	No Gas	5223307.43	1.5	6275745.58	83.23	60	125	
Ge	72	He	855296.11	15.0	948175.9	90.2	60	125	
Y	89	No Gas	7595864.70	4.4	8859608.54	85.74	60	125	
Y	89	He	1345199.77	19.2	1479625.71	90.91	60	125	
Rh	103	No Gas	5728378.94	4.1	7242596.94	79.09	60	125	
Rh	103	He	3351943.55	18.7	3947548.31	84.91	60	125	
In	115	No Gas	6503369.19	3.1	7988838.01	81.41	60	125	
Lu	175	No Gas	40786.86	3.7	52826.41	77.21	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404651-002
File Name	106SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 13:47:58
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.026	ppb	13.0	131.11	
Al	27	72	No Gas	56.678	ppb	2.4	1766088.30	
V	51	72	He	1.661	ppb	1.8	13923.44	
Cr	52	72	No Gas	2.096	ppb	1.0	132803.13	
Mn	55	72	No Gas	9.242	ppb	1.9	553463.92	
Co	59	72	He	0.371	ppb	4.1	5986.83	
Ni	60	72	No Gas	1.917	ppb	4.8	28919.03	
Cu	63	72	No Gas	2.966	ppb	2.6	91197.37	
Zn	66	72	No Gas	6.991	ppb	2.3	53261.79	
As	75	72	No Gas	0.948	ppb	28.6	10414.22	
Se	78	72	He	4.178	ppb	6.7	444.01	
Se	82	72	No Gas	5.855	ppb	4.5	3251.12	
Mo	98	89	No Gas	7.861	ppb	1.9	174995.56	
Ag	107	89	No Gas	0.006	ppb	30.1	401.12	
Cd	111	89	No Gas	-0.062	ppb	N/A	3176.28	
Sb	123	89	No Gas	0.175	ppb	1.0	4807.53	
Ba	137	115	No Gas	45.457	ppb	3.5	485264.01	
Tl	203	115	No Gas	0.167	ppb	5.0	2973.68	
Pb	208	115	No Gas	0.229	ppb	3.7	13018.16	
Th	232	115	No Gas	0.108	ppb	4.5	6180.44	
U	238	115	No Gas	9.936	ppb	4.2	485700.17	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	7389952.34	6.3	8788220.21	84.09	60	125	
Sc	45	He	411901.17	1.6	486695.24	84.63	60	125	
Ge	72	No Gas	5070647.58	5.8	6275745.58	80.8	60	125	
Ge	72	He	774618.21	1.4	948175.9	81.7	60	125	
Y	89	No Gas	7331197.49	5.2	8859608.54	82.75	60	125	
Y	89	He	1183813.01	1.4	1479625.71	80.01	60	125	
Rh	103	No Gas	5542700.61	9.9	7242596.94	76.53	60	125	
Rh	103	He	2962717.10	0.9	3947548.31	75.05	60	125	
In	115	No Gas	6196719.06	7.3	7988838.01	77.57	60	125	
Lu	175	No Gas	39450.93	5.0	52826.41	74.68	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404651-003
File Name	107SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 13:49:55
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.014	ppb	35.2	96.67	
Al	27	72	No Gas	2.644	ppb	3.3	93668.74	
V	51	72	He	0.651	ppb	2.9	6376.98	
Cr	52	72	No Gas	1.757	ppb	8.1	124472.93	
Mn	55	72	No Gas	10.123	ppb	7.3	637982.39	
Co	59	72	He	0.140	ppb	3.3	2307.97	
Ni	60	72	No Gas	2.059	ppb	7.8	32203.06	
Cu	63	72	No Gas	3.114	ppb	7.5	100517.50	
Zn	66	72	No Gas	4.073	ppb	7.2	33259.80	
As	75	72	No Gas	1.368	ppb	10.4	14558.96	
Se	78	72	He	3.002	ppb	2.1	337.67	
Se	82	72	No Gas	4.091	ppb	8.0	2469.31	
Mo	98	89	No Gas	7.764	ppb	6.4	178162.53	
Ag	107	89	No Gas	0.002	ppb	35.5	274.45	
Cd	111	89	No Gas	-0.045	ppb	N/A	3390.03	
Sb	123	89	No Gas	0.173	ppb	7.9	4896.46	
Ba	137	115	No Gas	42.386	ppb	3.5	469769.74	
Tl	203	115	No Gas	0.093	ppb	3.6	1737.90	
Pb	208	115	No Gas	0.018	ppb	10.4	1482.26	
Th	232	115	No Gas	0.040	ppb	10.1	2738.08	
U	238	115	No Gas	13.429	ppb	2.3	681599.23	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	7687297.47	0.6	8788220.21	87.47	60	125	
Sc	45	He	411258.89	1.5	486695.24	84.5	60	125	
Ge	72	No Gas	5342079.23	1.6	6275745.58	85.12	60	125	
Ge	72	He	779894.52	0.9	948175.9	82.25	60	125	
Y	89	No Gas	7559696.92	4.4	8859608.54	85.33	60	125	
Y	89	He	1189124.26	1.6	1479625.71	80.37	60	125	
Rh	103	No Gas	5637039.91	0.6	7242596.94	77.83	60	125	
Rh	103	He	2981266.62	2.2	3947548.31	75.52	60	125	
In	115	No Gas	6419445.58	2.0	7988838.01	80.36	60	125	
Lu	175	No Gas	41268.18	1.6	52826.41	78.12	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404651-004
File Name	108SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 13:51:53
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.013	ppb	37.3	90.00	
Al	27	72	No Gas	2.957	ppb	8.9	100935.26	
V	51	72	He	0.569	ppb	15.3	6320.29	
Cr	52	72	No Gas	1.870	ppb	3.5	125817.52	
Mn	55	72	No Gas	12.262	ppb	3.9	748778.91	
Co	59	72	He	0.117	ppb	11.1	2143.50	
Ni	60	72	No Gas	2.117	ppb	3.0	31951.82	
Cu	63	72	No Gas	3.230	ppb	6.5	101003.80	
Zn	66	72	No Gas	4.068	ppb	4.3	32244.68	
As	75	72	No Gas	1.412	ppb	6.2	14472.46	
Se	78	72	He	2.649	ppb	14.9	334.67	
Se	82	72	No Gas	4.310	ppb	8.0	2512.44	
Mo	98	89	No Gas	8.131	ppb	5.2	179379.79	
Ag	107	89	No Gas	0.003	ppb	15.0	282.22	
Cd	111	89	No Gas	-0.036	ppb	N/A	3325.42	
Sb	123	89	No Gas	0.180	ppb	8.0	4884.23	
Ba	137	115	No Gas	42.969	ppb	1.6	472715.35	
Tl	203	115	No Gas	0.083	ppb	4.2	1554.54	
Pb	208	115	No Gas	0.017	ppb	5.9	1376.70	
Th	232	115	No Gas	0.029	ppb	1.9	2146.86	
U	238	115	No Gas	13.561	ppb	0.9	683188.74	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	7495107.76	4.2	8788220.21	85.29	60	125	
Sc	45	He	464868.65	12.5	486695.24	95.52	60	125	
Ge	72	No Gas	5183100.91	2.2	6275745.58	82.59	60	125	
Ge	72	He	863326.41	10.9	948175.9	91.05	60	125	
Y	89	No Gas	7274960.96	6.8	8859608.54	82.11	60	125	
Y	89	He	1334254.81	11.6	1479625.71	90.18	60	125	
Rh	103	No Gas	5745115.33	5.7	7242596.94	79.32	60	125	
Rh	103	He	3345120.42	12.2	3947548.31	84.74	60	125	
In	115	No Gas	6372208.08	4.1	7988838.01	79.76	60	125	
Lu	175	No Gas	41750.46	4.5	52826.41	79.03	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404651-005
File Name	109SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 13:53:50
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.014	ppb	42.6	93.34	
Al	27	72	No Gas	2.900	ppb	5.9	99889.05	
V	51	72	He	1.342	ppb	19.6	12301.97	
Cr	52	72	No Gas	1.930	ppb	5.8	129569.05	
Mn	55	72	No Gas	16.709	ppb	3.6	1026269.47	
Co	59	72	He	2.217	ppb	18.6	37742.10	
Ni	60	72	No Gas	279.792	ppb	3.5	3377408.20	>LDR
Cu	63	72	No Gas	2.785	ppb	6.2	88731.91	
Zn	66	72	No Gas	3.466	ppb	3.9	27904.55	
As	75	72	No Gas	0.927	ppb	15.9	10476.84	
Se	78	72	He	4.699	ppb	22.8	523.68	
Se	82	72	No Gas	6.791	ppb	6.2	3844.40	
Mo	98	89	No Gas	8.008	ppb	2.4	181251.26	
Ag	107	89	No Gas	0.010	ppb	67.2	538.93	
Cd	111	89	No Gas	-0.059	ppb	N/A	3247.79	
Sb	123	89	No Gas	0.111	ppb	1.2	3418.22	
Ba	137	115	No Gas	31.554	ppb	0.7	348834.51	
Tl	203	115	No Gas	0.042	ppb	5.6	814.47	
Pb	208	115	No Gas	0.011	ppb	15.8	1077.80	
Th	232	115	No Gas	0.027	ppb	19.5	2034.62	
U	238	115	No Gas	8.343	ppb	1.3	422270.85	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	7570415.81	5.6	8788220.21	86.14	60	125	
Sc	45	He	451440.42	20.8	486695.24	92.76	60	125	
Ge	72	No Gas	5226229.38	3.0	6275745.58	83.28	60	125	
Ge	72	He	842948.75	17.0	948175.9	88.9	60	125	
Y	89	No Gas	7454991.65	5.0	8859608.54	84.15	60	125	
Y	89	He	1318221.09	21.3	1479625.71	89.09	60	125	
Rh	103	No Gas	5657061.86	2.7	7242596.94	78.11	60	125	
Rh	103	He	3354408.06	20.8	3947548.31	84.97	60	125	
In	115	No Gas	6404107.67	3.4	7988838.01	80.16	60	125	
Lu	175	No Gas	40907.74	4.7	52826.41	77.44	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404651-006
File Name	110SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 13:55:46
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.025	ppb	38.0	131.11	
Al	27	72	No Gas	12.769	ppb	7.1	431405.56	
V	51	72	He	0.818	ppb	18.7	8535.88	
Cr	52	72	No Gas	2.155	ppb	8.7	145010.68	
Mn	55	72	No Gas	14.893	ppb	4.5	950717.43	
Co	59	72	He	0.225	ppb	15.6	4106.16	
Ni	60	72	No Gas	2.990	ppb	7.7	44429.84	
Cu	63	72	No Gas	6.833	ppb	6.3	216246.90	
Zn	66	72	No Gas	4.949	ppb	6.8	40823.25	
As	75	72	No Gas	0.896	ppb	18.1	10642.20	
Se	78	72	He	8.006	ppb	19.7	895.03	
Se	82	72	No Gas	12.588	ppb	4.9	7182.18	
Mo	98	89	No Gas	6.560	ppb	2.1	150974.83	
Ag	107	89	No Gas	0.010	ppb	6.1	544.46	
Cd	111	89	No Gas	-0.027	ppb	N/A	3545.60	
Sb	123	89	No Gas	0.160	ppb	3.4	4619.70	
Ba	137	115	No Gas	41.375	ppb	1.3	472490.91	
Tl	203	115	No Gas	0.037	ppb	1.1	747.80	
Pb	208	115	No Gas	0.096	ppb	2.5	6113.92	
Th	232	115	No Gas	0.031	ppb	7.2	2356.89	
U	238	115	No Gas	18.643	ppb	1.2	974301.21	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	7677270.81	5.2	8788220.21	87.36	60	125	
Sc	45	He	482643.37	19.8	486695.24	99.17	60	125	
Ge	72	No Gas	5426363.26	5.7	6275745.58	86.47	60	125	
Ge	72	He	885155.43	15.7	948175.9	93.35	60	125	
Y	89	No Gas	7584764.56	8.7	8859608.54	85.61	60	125	
Y	89	He	1412612.97	21.6	1479625.71	95.47	60	125	
Rh	103	No Gas	5822666.85	8.5	7242596.94	80.39	60	125	
Rh	103	He	3487574.79	19.8	3947548.31	88.35	60	125	
In	115	No Gas	6615956.26	7.3	7988838.01	82.82	60	125	
Lu	175	No Gas	43228.83	8.8	52826.41	81.83	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404651-007
File Name	111SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 13:57:43
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.021	ppb	13.0	116.67	
Al	27	72	No Gas	3.138	ppb	4.2	105100.48	
V	51	72	He	4.155	ppb	28.8	31375.42	
Cr	52	72	No Gas	5.269	ppb	7.3	272365.16	
Mn	55	72	No Gas	0.243	ppb	4.8	21042.22	
Co	59	72	He	2.435	ppb	27.4	37370.02	
Ni	60	72	No Gas	4.528	ppb	5.0	59901.81	
Cu	63	72	No Gas	6.248	ppb	7.6	186570.53	
Zn	66	72	No Gas	5.841	ppb	5.4	45080.53	
As	75	72	No Gas	1.576	ppb	13.8	15618.32	
Se	78	72	He	2.292	ppb	38.4	257.67	
Se	82	72	No Gas	4.808	ppb	12.1	2733.77	
Mo	98	89	No Gas	6.009	ppb	1.3	132342.50	
Ag	107	89	No Gas	0.009	ppb	17.0	504.46	
Cd	111	89	No Gas	-0.036	ppb	N/A	3321.08	
Sb	123	89	No Gas	3.861	ppb	0.6	87563.25	
Ba	137	115	No Gas	83.118	ppb	1.4	895260.94	
Tl	203	115	No Gas	0.050	ppb	7.8	948.93	
Pb	208	115	No Gas	0.017	ppb	5.4	1398.92	
Th	232	115	No Gas	0.015	ppb	15.8	1375.63	
U	238	115	No Gas	20.196	ppb	2.6	996568.92	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	7507258.87	2.3	8788220.21	85.42	60	125	
Sc	45	He	417849.15	30.7	486695.24	85.85	60	125	
Ge	72	No Gas	5116048.55	3.1	6275745.58	81.52	60	125	
Ge	72	He	781857.43	26.6	948175.9	82.46	60	125	
Y	89	No Gas	7248104.43	3.0	8859608.54	81.81	60	125	
Y	89	He	1231813.58	33.2	1479625.71	83.25	60	125	
Rh	103	No Gas	5697337.69	2.1	7242596.94	78.66	60	125	
Rh	103	He	3061100.64	30.7	3947548.31	77.54	60	125	
In	115	No Gas	6242651.28	0.4	7988838.01	78.14	60	125	
Lu	175	No Gas	39625.52	1.4	52826.41	75.01	60	125	

7900 ICP-MS 200.8/6020A
Reference Sample Report

Sample Name	R2404671-001
File Name	112_ARF.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 13:59:40
Sample Type	AllRef
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS
Be	9	45	No Gas	0.002	ppb	170.5	51.11
Al	27	72	No Gas	11.081	ppb	5.7	361008.65
Cr	52	72	No Gas	0.709	ppb	13.2	74878.69
Mn	55	72	No Gas	16.200	ppb	5.9	992972.18
Ni	60	72	No Gas	3.544	ppb	5.3	49312.57
Cu	63	72	No Gas	12.820	ppb	6.4	384025.19
Zn	66	72	No Gas	4.420	ppb	5.9	35138.61
As	75	72	No Gas	0.613	ppb	68.4	7849.33
Se	82	72	No Gas	0.966	ppb	9.5	762.94
Mo	98	89	No Gas	1.559	ppb	6.2	35399.00
Ag	107	89	No Gas	0.003	ppb	36.7	313.34
Cd	111	89	No Gas	-0.066	ppb	N/A	3186.44
Sb	123	89	No Gas	0.281	ppb	5.0	7305.32
Ba	137	115	No Gas	13.929	ppb	7.0	152103.30
Tl	203	115	No Gas	0.002	ppb	63.6	90.00
Pb	208	115	No Gas	0.091	ppb	11.0	5529.37
Th	232	115	No Gas	0.102	ppb	5.9	5945.86
U	238	115	No Gas	0.041	ppb	5.4	2095.73
V	51	72	He	0.426	ppb	1.1	4479.60
Co	59	72	He	0.490	ppb	4.1	7597.59
Se	78	72	He	0.440	ppb	30.1	94.67

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High
Sc	45	No Gas	7564000.53	3.2	8788220.21	86.07	60	125
Sc	45	He	390838.07	1.9	486695.24	80.3	60	125
Ge	72	No Gas	5216115.21	4.6	6275745.58	83.12	60	125
Ge	72	He	746827.18	0.4	948175.9	78.76	60	125
Y	89	No Gas	7445263.31	7.2	8859608.54	84.04	60	125
Y	89	He	1134610.48	1.3	1479625.71	76.68	60	125
Rh	103	No Gas	5644076.16	4.0	7242596.94	77.93	60	125
Rh	103	He	2891113.85	3.0	3947548.31	73.24	60	125
In	115	No Gas	6333020.17	6.6	7988838.01	79.27	60	125
Lu	175	No Gas	40284.66	7.0	52826.41	76.26	60	125

7900 ICP-MS 200.8-6020A
Matrix Spike (MS) Sample Report

Sample Name	R2404671-001S
File Name	113_Spk.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 14:01:36
Sample Type	Spike
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d
QC Ref File Name	112_ ARF. d

QC Analyte Table

Name	Mass	Tune	Conc.	Units	RSD	CPS	RefConc	%Rec	Flag
Be	9	No Gas	19.825	ppb	8.2	68554.42	0.002	99.12	
Al	27	No Gas	50.903	ppb	13.5	1665935.11	11.081	99.65	
V	51	He	21.088	ppb	8.0	176370.86	0.426	103.24	
Cr	52	No Gas	20.402	ppb	14.0	970702.41	0.709	98.52	
Mn	55	No Gas	36.550	ppb	14.2	2276306.71	16.2	100.97	
Co	59	He	19.471	ppb	7.3	342603.42	0.49	95.03	
Ni	60	No Gas	21.663	ppb	13.9	272404.56	3.544	92.01	
Cu	63	No Gas	31.605	ppb	14.7	955148.70	12.82	96.3	
Zn	66	No Gas	24.838	ppb	14.3	195007.96	4.42	101.71	
As	75	No Gas	20.759	ppb	15.6	182255.43	0.613	100.71	
Se	78	He	20.995	ppb	7.7	2206.84	0.44	102.71	
Se	82	No Gas	20.933	ppb	16.0	11522.58	0.966	99.84	
Mo	98	No Gas	22.780	ppb	11.4	517679.31	1.559	105.67	
Ag	107	No Gas	17.902	ppb	11.3	651205.27	0.003	89.5	
Cd	111	No Gas	18.479	ppb	11.3	141271.96	-0.066	92.7	
Sb	123	No Gas	20.443	ppb	10.5	475446.61	0.281	100.8	
Ba	137	No Gas	34.715	ppb	10.4	390541.23	13.929	102.32	
Tl	203	No Gas	20.129	ppb	11.2	369445.10	0.002	100.64	
Pb	208	No Gas	20.118	ppb	10.3	1167869.52	0.091	100.14	
Th	232	No Gas	17.305	ppb	7.6	936626.16	0.102	86.09	
U	238	No Gas	21.735	ppb	9.7	1119835.93	0.041	108.45	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	7640243.31	4.0	8788220.21	86.94	60	125	
Sc	45	He	460582.19	12.3	486695.24	94.63	60	125	
Ge	72	No Gas	5325172.43	0.9	6275745.58	84.85	60	125	
Ge	72	He	856577.87	5.3	948175.9	90.34	60	125	
Y	89	No Gas	7489223.59	2.7	8859608.54	84.53	60	125	
Y	89	He	1352923.42	10.0	1479625.71	91.44	60	125	
Rh	103	No Gas	5715471.02	1.5	7242596.94	78.91	60	125	
Rh	103	He	3377004.59	11.0	3947548.31	85.55	60	125	
In	115	No Gas	6520746.83	0.7	7988838.01	81.62	60	125	
Lu	175	No Gas	42043.51	6.9	52826.41	79.59	60	125	

7900 ICP-MS 200.8/6020A
Matrix Spike Duplicate (MSD) Sample Report

Sample Name	R2404671-001SD
File Name	114_SpD.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 14:03:30
Sample Type	SpkDup
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d
QC Ref File Name	113_ Spk.d

QC Analyte Table

Name	Mass	Tune	Conc.	Units	RSD	CPS	RefConc	RPD	Flag
Be	9	No Gas	19.348	ppb	14.3	70319.90	19.825	2.44	
Al	27	No Gas	49.771	ppb	17.4	1692160.21	50.903	2.25	
V	51	He	22.303	ppb	33.3	177632.08	21.088	5.6	
Cr	52	No Gas	20.051	ppb	17.3	992062.48	20.402	1.73	
Mn	55	No Gas	35.412	ppb	16.8	2291636.50	36.55	3.16	
Co	59	He	20.513	ppb	33.3	343617.78	19.471	5.21	
Ni	60	No Gas	21.396	ppb	17.7	279548.86	21.663	1.24	
Cu	63	No Gas	31.088	ppb	17.3	976122.31	31.605	1.65	
Zn	66	No Gas	22.863	ppb	15.9	186695.37	24.838	8.28	
As	75	No Gas	20.625	ppb	17.0	188170.06	20.759	0.65	
Se	78	He	22.435	ppb	34.4	2241.85	20.995	6.64	
Se	82	No Gas	21.186	ppb	16.9	12115.26	20.933	1.2	
Mo	98	No Gas	21.613	ppb	17.6	525108.96	22.78	5.26	
Ag	107	No Gas	17.390	ppb	18.0	676313.10	17.902	2.91	
Cd	111	No Gas	17.710	ppb	16.8	145006.67	18.479	4.25	
Sb	123	No Gas	19.734	ppb	16.4	491058.16	20.443	3.53	
Ba	137	No Gas	33.585	ppb	13.4	399292.67	34.715	3.31	
Tl	203	No Gas	19.622	ppb	13.3	380659.20	20.129	2.55	
Pb	208	No Gas	19.707	ppb	13.1	1209176.92	20.118	2.06	
Th	232	No Gas	15.981	ppb	11.6	914892.12	17.305	7.95	
U	238	No Gas	21.160	ppb	13.7	1152029.33	21.735	2.68	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8087121.07	5.1	8788220.21	92.02	60	125	
Sc	45	He	463868.17	36.8	486695.24	95.31	60	125	
Ge	72	No Gas	5564463.95	5.9	6275745.58	88.67	60	125	
Ge	72	He	872738.37	30.9	948175.9	92.04	60	125	
Y	89	No Gas	8083053.01	7.9	8859608.54	91.23	60	125	
Y	89	He	1349406.75	35.7	1479625.71	91.2	60	125	
Rh	103	No Gas	6229100.31	6.2	7242596.94	86.01	60	125	
Rh	103	He	3407929.03	36.3	3947548.31	86.33	60	125	
In	115	No Gas	6917194.59	4.7	7988838.01	86.59	60	125	
Lu	175	No Gas	48367.14	4.5	52826.41	91.56	60	125	

7900 ICP-MS 200.8/6020A
Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	115_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 14:05:23
Sample Type	CCV
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	% Rec	QC Flag
Be	9	45	No Gas	47.247	ppb	14.6	184293.04	94.49	
Al	27	72	No Gas	47.785	ppb	11.2	1767584.27	95.57	
V	51	72	He	55.354	ppb	7.6	449380.75	110.71	> +/- 10%
Cr	52	72	No Gas	46.782	ppb	12.1	2450717.68	93.56	
Mn	55	72	No Gas	46.468	ppb	14.0	3269058.62	92.94	
Co	59	72	He	53.624	ppb	6.8	920923.20	107.25	
Ni	60	72	No Gas	44.011	ppb	14.6	617525.81	88.02	> +/- 10%
Cu	63	72	No Gas	47.194	ppb	17.2	1608386.32	94.39	
Zn	66	72	No Gas	45.726	ppb	13.4	404450.91	91.45	
As	75	72	No Gas	45.885	ppb	13.6	451687.49	91.77	
Se	78	72	He	53.126	ppb	9.0	5353.02	106.25	
Se	82	72	No Gas	46.027	ppb	12.3	28287.86	92.05	
Mo	98	89	No Gas	47.460	ppb	12.9	1230107.13	94.92	
Ag	107	89	No Gas	46.378	ppb	13.8	1924109.02	92.76	
Cd	111	89	No Gas	45.369	ppb	12.7	389327.95	90.74	
Sb	123	89	No Gas	46.046	ppb	12.8	1219652.38	92.09	
Ba	137	115	No Gas	45.973	ppb	12.5	618652.34	91.95	
Tl	203	115	No Gas	47.745	ppb	12.1	1048541.49	95.49	
Pb	208	115	No Gas	47.104	ppb	11.5	3269760.55	94.21	
Th	232	115	No Gas	47.175	ppb	12.4	3050845.78	94.35	
U	238	115	No Gas	48.104	ppb	9.8	2964962.17	96.21	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8649819.10	6.1	8788220.21	98.43	60	125	
Sc	45	He	427461.38	8.4	486695.24	87.83	60	125	
Ge	72	No Gas	6008833.93	1.0	6275745.58	95.75	60	125	
Ge	72	He	835962.13	5.3	948175.9	88.17	60	125	
Y	89	No Gas	8549486.05	6.8	8859608.54	96.5	60	125	
Y	89	He	1227756.79	7.9	1479625.71	82.98	60	125	
Rh	103	No Gas	7363787.49	5.6	7242596.94	101.67	60	125	
Rh	103	He	3355108.62	8.2	3947548.31	84.99	60	125	
In	115	No Gas	7797793.86	4.3	7988838.01	97.61	60	125	
Lu	175	No Gas	51775.94	6.9	52826.41	98.01	60	125	

7900 ICP-MS 200.8/6020A
Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	116_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 14:07:11
Sample Type	CCB
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.024	ppb	21.9	141.11	
Al	27	72	No Gas	0.061	ppb	101.8	10016.44	
V	51	72	He	0.059	ppb	82.2	2092.38	
Cr	52	72	No Gas	0.200	ppb	25.8	58477.63	
Mn	55	72	No Gas	0.064	ppb	10.1	11838.25	
Co	59	72	He	0.002	ppb	29.9	115.56	
Ni	60	72	No Gas	-0.449	ppb	N/A	1455.63	
Cu	63	72	No Gas	0.129	ppb	26.2	11582.61	
Zn	66	72	No Gas	0.062	ppb	50.1	2029.06	
As	75	72	No Gas	-0.099	ppb	N/A	1974.78	
Se	78	72	He	0.026	ppb	596.5	66.00	
Se	82	72	No Gas	-0.008	ppb	N/A	276.84	
Mo	98	89	No Gas	0.023	ppb	13.5	878.16	
Ag	107	89	No Gas	0.005	ppb	36.2	426.68	
Cd	111	89	No Gas	-0.008	ppb	N/A	4020.53	
Sb	123	89	No Gas	0.079	ppb	10.2	2980.34	
Ba	137	115	No Gas	0.008	ppb	16.4	332.23	
Tl	203	115	No Gas	0.013	ppb	14.6	338.89	
Pb	208	115	No Gas	0.006	ppb	8.6	907.80	
Th	232	115	No Gas	0.073	ppb	7.5	5199.97	
U	238	115	No Gas	0.006	ppb	16.4	390.01	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8285068.28	3.7	8788220.21	94.27	60	125	
Sc	45	He	473259.81	32.2	486695.24	97.24	60	125	
Ge	72	No Gas	5837993.52	1.4	6275745.58	93.02	60	125	
Ge	72	He	885950.24	24.1	948175.9	93.44	60	125	
Y	89	No Gas	8276241.89	3.9	8859608.54	93.42	60	125	
Y	89	He	1359865.19	32.3	1479625.71	91.91	60	125	
Rh	103	No Gas	6915784.59	4.5	7242596.94	95.49	60	125	
Rh	103	He	3770459.71	30.8	3947548.31	95.51	60	125	
In	115	No Gas	7409939.43	3.6	7988838.01	92.75	60	125	
Lu	175	No Gas	50177.41	4.4	52826.41	94.99	60	125	

7900 ICP-MS 200.8-6020A
Matrix Spike (MS) Sample Report

Sample Name	R2404671-001A
File Name	117_Spk.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 14:09:08
Sample Type	Spike
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d
QC Ref File Name	112_ ARF. d

QC Analyte Table

Name	Mass	Tune	Conc.	Units	RSD	CPS	RefConc	%Rec	Flag
Be	9	No Gas	19.711	ppb	11.8	71738.25	0.002	98.55	
Al	27	No Gas	49.351	ppb	9.7	1687215.84	11.081	96.61	
V	51	He	26.291	ppb	17.7	179861.13	0.426	128.71	> +/- 25%
Cr	52	No Gas	20.341	ppb	13.4	1010179.40	0.709	98.22	
Mn	55	No Gas	35.696	ppb	13.9	2319792.96	16.2	98.61	
Co	59	He	24.150	ppb	15.4	348792.77	0.49	117.86	
Ni	60	No Gas	21.940	ppb	12.9	287850.10	3.544	93.18	
Cu	63	No Gas	31.693	ppb	12.7	999678.02	12.82	96.57	
Zn	66	No Gas	23.487	ppb	12.1	192580.09	4.42	96.18	
As	75	No Gas	21.388	ppb	11.7	195968.91	0.613	103.76	
Se	78	He	26.933	ppb	17.9	2304.86	0.44	131.77	> +/- 25%
Se	82	No Gas	21.607	ppb	12.7	12407.33	0.966	103.06	
Mo	98	No Gas	22.802	ppb	15.5	538661.91	1.559	105.77	
Ag	107	No Gas	16.508	ppb	14.6	624690.15	0.003	82.53	
Cd	111	No Gas	18.852	ppb	14.5	149845.63	-0.066	94.57	
Sb	123	No Gas	20.675	ppb	14.4	500167.71	0.281	101.94	
Ba	137	No Gas	34.430	ppb	10.9	403376.15	13.929	101.48	
Tl	203	No Gas	20.486	ppb	11.2	391549.97	0.002	102.42	
Pb	208	No Gas	20.488	ppb	10.0	1238929.69	0.091	101.98	
Th	232	No Gas	20.898	ppb	10.2	1177944.95	0.102	103.96	
U	238	No Gas	21.958	ppb	9.6	1178558.88	0.041	109.56	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8081364.40	3.6	8788220.21	91.96	60	125	
Sc	45	He	363434.91	14.5	486695.24	74.67	60	125	
Ge	72	No Gas	5572929.78	4.2	6275745.58	88.8	60	125	
Ge	72	He	710987.54	13.3	948175.9	74.98	60	125	
Y	89	No Gas	7848427.46	7.6	8859608.54	88.59	60	125	
Y	89	He	1050319.20	15.6	1479625.71	70.99	60	125	
Rh	103	No Gas	6201835.59	5.5	7242596.94	85.63	60	125	
Rh	103	He	2687589.13	16.3	3947548.31	68.08	60	125	
In	115	No Gas	6808441.81	4.1	7988838.01	85.22	60	125	
Lu	175	No Gas	46922.97	5.9	52826.41	88.82	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404671-001L 5X
File Name	118SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 14:11:02
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.019	ppb	5.1	121.11	
Al	27	72	No Gas	2.618	ppb	8.8	100535.03	
V	51	72	He	0.133	ppb	27.1	2542.45	
Cr	52	72	No Gas	0.244	ppb	32.0	60134.50	
Mn	55	72	No Gas	3.521	ppb	12.1	245046.96	
Co	59	72	He	0.107	ppb	8.9	1846.79	
Ni	60	72	No Gas	0.436	ppb	21.9	13231.99	
Cu	63	72	No Gas	2.734	ppb	17.0	96381.57	
Zn	66	72	No Gas	1.060	ppb	10.6	10478.39	
As	75	72	No Gas	0.143	ppb	51.1	4222.91	
Se	78	72	He	0.124	ppb	161.2	71.67	
Se	82	72	No Gas	0.166	ppb	66.8	376.24	
Mo	98	89	No Gas	0.341	ppb	14.3	8897.47	
Ag	107	89	No Gas	0.004	ppb	10.8	367.78	
Cd	111	89	No Gas	-0.046	ppb	N/A	3734.10	
Sb	123	89	No Gas	0.109	ppb	6.9	3751.65	
Ba	137	115	No Gas	2.907	ppb	13.6	35991.83	
Tl	203	115	No Gas	0.004	ppb	21.1	146.67	
Pb	208	115	No Gas	0.022	ppb	5.7	1922.28	
Th	232	115	No Gas	0.074	ppb	14.7	5089.92	
U	238	115	No Gas	0.011	ppb	10.4	678.91	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8176067.73	3.1	8788220.21	93.03	60	125	
Sc	45	He	430355.82	13.1	486695.24	88.42	60	125	
Ge	72	No Gas	5789895.47	1.6	6275745.58	92.26	60	125	
Ge	72	He	813105.39	11.6	948175.9	85.75	60	125	
Y	89	No Gas	8331547.72	3.1	8859608.54	94.04	60	125	
Y	89	He	1221316.48	17.1	1479625.71	82.54	60	125	
Rh	103	No Gas	6546729.88	3.1	7242596.94	90.39	60	125	
Rh	103	He	3226767.37	13.6	3947548.31	81.74	60	125	
In	115	No Gas	7166844.02	5.5	7988838.01	89.71	60	125	
Lu	175	No Gas	48038.48	2.4	52826.41	90.94	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404672-001 10X
File Name	119SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 14:12:59
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.006	ppb	22.0	72.22	
Al	27	72	No Gas	0.906	ppb	2.6	40817.34	
V	51	72	He	0.072	ppb	106.7	2147.94	
Cr	52	72	No Gas	0.623	ppb	15.3	80691.40	
Mn	55	72	No Gas	1.368	ppb	7.6	102115.34	
Co	59	72	He	0.012	ppb	38.8	276.67	
Ni	60	72	No Gas	-0.317	ppb	N/A	3274.83	
Cu	63	72	No Gas	1.806	ppb	10.6	67771.92	
Zn	66	72	No Gas	41.051	ppb	7.3	357817.99	
As	75	72	No Gas	-0.103	ppb	N/A	1985.86	
Se	78	72	He	0.025	ppb	486.7	66.00	
Se	82	72	No Gas	0.122	ppb	97.6	360.49	
Mo	98	89	No Gas	0.396	ppb	4.3	10348.28	
Ag	107	89	No Gas	0.003	ppb	42.8	336.67	
Cd	111	89	No Gas	-0.040	ppb	N/A	3798.71	
Sb	123	89	No Gas	0.044	ppb	8.8	2089.05	
Ba	137	115	No Gas	2.368	ppb	6.0	30689.87	
Tl	203	115	No Gas	0.018	ppb	15.1	458.90	
Pb	208	115	No Gas	0.006	ppb	4.3	900.02	
Th	232	115	No Gas	0.025	ppb	16.4	2236.87	
U	238	115	No Gas	0.001	ppb	50.2	95.56	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8414037.44	4.8	8788220.21	95.74	60	125	
Sc	45	He	461400.04	26.8	486695.24	94.8	60	125	
Ge	72	No Gas	5926622.82	2.9	6275745.58	94.44	60	125	
Ge	72	He	882742.36	25.0	948175.9	93.1	60	125	
Y	89	No Gas	8365240.78	2.3	8859608.54	94.42	60	125	
Y	89	He	1320040.09	28.5	1479625.71	89.21	60	125	
Rh	103	No Gas	6663703.76	4.2	7242596.94	92.01	60	125	
Rh	103	He	3501635.97	27.7	3947548.31	88.7	60	125	
In	115	No Gas	7457340.26	1.0	7988838.01	93.35	60	125	
Lu	175	No Gas	49638.98	3.0	52826.41	93.97	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404680-001
File Name	120SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 14:14:55
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.010	ppb	38.4	93.33	
Al	27	72	No Gas	137.745	ppb	5.3	5211843.68	>LDR
V	51	72	He	0.924	ppb	27.1	7658.72	
Cr	52	72	No Gas	0.902	ppb	26.2	98518.49	
Mn	55	72	No Gas	48.553	ppb	13.5	3496183.75	
Co	59	72	He	0.416	ppb	25.6	6097.98	
Ni	60	72	No Gas	4.805	ppb	14.0	76063.00	
Cu	63	72	No Gas	2.439	ppb	14.7	92374.00	
Zn	66	72	No Gas	2.555	ppb	10.9	24650.61	
As	75	72	No Gas	1.106	ppb	35.1	14086.29	
Se	78	72	He	0.577	ppb	64.2	100.00	
Se	82	72	No Gas	1.113	ppb	14.6	991.20	
Mo	98	89	No Gas	27.239	ppb	12.7	730225.63	
Ag	107	89	No Gas	0.108	ppb	9.6	4851.99	
Cd	111	89	No Gas	0.112	ppb	25.9	5370.46	
Sb	123	89	No Gas	0.504	ppb	14.6	14794.81	
Ba	137	115	No Gas	70.738	ppb	13.9	933204.84	
Tl	203	115	No Gas	0.008	ppb	27.2	257.78	
Pb	208	115	No Gas	0.169	ppb	12.5	12026.67	
Th	232	115	No Gas	0.054	ppb	20.7	4172.95	
U	238	115	No Gas	7.268	ppb	13.5	439330.13	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8792107.71	4.8	8788220.21	100.04	60	125	
Sc	45	He	380223.77	25.4	486695.24	78.12	60	125	
Ge	72	No Gas	6176952.39	3.9	6275745.58	98.43	60	125	
Ge	72	He	733073.58	23.3	948175.9	77.31	60	125	
Y	89	No Gas	8880853.26	5.8	8859608.54	100.24	60	125	
Y	89	He	1079270.38	26.7	1479625.71	72.94	60	125	
Rh	103	No Gas	7025308.33	3.6	7242596.94	97	60	125	
Rh	103	He	2793307.87	25.3	3947548.31	70.76	60	125	
In	115	No Gas	7699021.36	7.5	7988838.01	96.37	60	125	
Lu	175	No Gas	54849.48	5.1	52826.41	103.83	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404689-001
File Name	121SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 14:16:50
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.005	ppb	80.7	72.22	
Al	27	72	No Gas	2.066	ppb	13.6	85445.05	
V	51	72	He	0.153	ppb	55.9	2779.17	
Cr	52	72	No Gas	0.523	ppb	39.0	77899.86	
Mn	55	72	No Gas	0.360	ppb	16.1	33410.70	
Co	59	72	He	0.057	ppb	30.5	1036.71	
Ni	60	72	No Gas	0.480	ppb	35.4	14571.12	
Cu	63	72	No Gas	1245.002	ppb	16.4	42810898.30	>LDR
Zn	66	72	No Gas	6.743	ppb	15.8	61817.23	
As	75	72	No Gas	0.099	ppb	63.8	4015.72	
Se	78	72	He	0.092	ppb	322.6	69.00	
Se	82	72	No Gas	0.106	ppb	141.6	359.56	
Mo	98	89	No Gas	0.083	ppb	15.0	2538.12	
Ag	107	89	No Gas	0.019	ppb	9.0	1038.93	
Cd	111	89	No Gas	-0.019	ppb	N/A	4212.43	
Sb	123	89	No Gas	0.061	ppb	25.5	2662.50	
Ba	137	115	No Gas	23.560	ppb	13.7	313084.94	
Tl	203	115	No Gas	0.002	ppb	61.2	114.44	
Pb	208	115	No Gas	0.321	ppb	13.4	22503.55	
Th	232	115	No Gas	0.016	ppb	84.8	1773.50	
U	238	115	No Gas	0.084	ppb	15.9	5157.75	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8892865.76	4.5	8788220.21	101.19	60	125	
Sc	45	He	470464.65	35.5	486695.24	96.67	60	125	
Ge	72	No Gas	6128904.20	5.1	6275745.58	97.66	60	125	
Ge	72	He	873127.17	29.8	948175.9	92.08	60	125	
Y	89	No Gas	8864092.70	5.4	8859608.54	100.05	60	125	
Y	89	He	1360121.72	38.8	1479625.71	91.92	60	125	
Rh	103	No Gas	6940953.75	5.5	7242596.94	95.84	60	125	
Rh	103	He	3586703.82	38.2	3947548.31	90.86	60	125	
In	115	No Gas	7718466.08	3.0	7988838.01	96.62	60	125	
Lu	175	No Gas	53301.42	4.1	52826.41	100.9	60	125	

7900 ICP-MS 200.8/6020A
Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	122_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 14:18:43
Sample Type	CCV
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	% Rec	QC Flag
Be	9	45	No Gas	49.516	ppb	9.2	193803.73	99.03	
Al	27	72	No Gas	48.496	ppb	7.5	1794408.33	96.99	
V	51	72	He	52.759	ppb	0.8	451031.44	105.52	
Cr	52	72	No Gas	50.208	ppb	5.6	2627135.10	100.42	
Mn	55	72	No Gas	49.061	ppb	8.2	3451178.20	98.12	
Co	59	72	He	51.326	ppb	0.5	927812.50	102.65	
Ni	60	72	No Gas	46.410	ppb	8.0	650874.91	92.82	
Cu	63	72	No Gas	50.030	ppb	7.3	1704740.18	100.06	
Zn	66	72	No Gas	48.345	ppb	9.0	427614.26	96.69	
As	75	72	No Gas	48.490	ppb	8.0	477285.70	96.98	
Se	78	72	He	50.564	ppb	1.4	5368.69	101.13	
Se	82	72	No Gas	48.669	ppb	8.3	29901.49	97.34	
Mo	98	89	No Gas	50.340	ppb	9.2	1302484.65	100.68	
Ag	107	89	No Gas	49.871	ppb	10.4	2066548.18	99.74	
Cd	111	89	No Gas	48.683	ppb	8.9	416954.32	97.37	
Sb	123	89	No Gas	49.208	ppb	8.5	1302156.30	98.42	
Ba	137	115	No Gas	49.996	ppb	7.6	660226.55	99.99	
Tl	203	115	No Gas	52.080	ppb	7.3	1122102.94	104.16	
Pb	208	115	No Gas	51.799	ppb	7.8	3529483.42	103.6	
Th	232	115	No Gas	50.957	ppb	8.9	3236340.50	101.91	
U	238	115	No Gas	52.279	ppb	7.3	3161999.46	104.56	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8672422.15	0.7	8788220.21	98.68	60	125	
Sc	45	He	461565.28	3.1	486695.24	94.84	60	125	
Ge	72	No Gas	6014028.37	0.6	6275745.58	95.83	60	125	
Ge	72	He	877874.50	2.5	948175.9	92.59	60	125	
Y	89	No Gas	8536009.10	1.5	8859608.54	96.35	60	125	
Y	89	He	1328209.18	1.8	1479625.71	89.77	60	125	
Rh	103	No Gas	7111266.94	1.4	7242596.94	98.19	60	125	
Rh	103	He	3622998.33	1.6	3947548.31	91.78	60	125	
In	115	No Gas	7653959.42	0.8	7988838.01	95.81	60	125	
Lu	175	No Gas	52611.23	0.6	52826.41	99.59	60	125	

7900 ICP-MS 200.8/6020A
Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	123_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 14:20:31
Sample Type	CCB
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.018	ppb	24.7	125.56	
Al	27	72	No Gas	0.063	ppb	95.3	10465.77	
V	51	72	He	0.078	ppb	13.3	2257.96	
Cr	52	72	No Gas	0.128	ppb	67.4	56613.28	
Mn	55	72	No Gas	0.047	ppb	9.4	10977.57	
Co	59	72	He	0.002	ppb	31.1	105.56	
Ni	60	72	No Gas	-0.456	ppb	N/A	1407.85	
Cu	63	72	No Gas	0.092	ppb	15.2	10658.48	
Zn	66	72	No Gas	0.048	ppb	68.5	1977.94	
As	75	72	No Gas	-0.028	ppb	N/A	2693.42	
Se	78	72	He	-0.004	ppb	N/A	63.67	
Se	82	72	No Gas	0.019	ppb	998.0	300.97	
Mo	98	89	No Gas	0.026	ppb	12.3	1004.70	
Ag	107	89	No Gas	0.005	ppb	32.9	425.56	
Cd	111	89	No Gas	-0.020	ppb	N/A	4133.96	
Sb	123	89	No Gas	0.067	ppb	8.3	2800.30	
Ba	137	115	No Gas	0.007	ppb	21.2	341.12	
Tl	203	115	No Gas	0.011	ppb	11.1	316.67	
Pb	208	115	No Gas	0.006	ppb	40.8	914.46	
Th	232	115	No Gas	0.072	ppb	7.9	5372.33	
U	238	115	No Gas	0.006	ppb	30.0	393.34	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8796717.71	0.8	8788220.21	100.1	60	125	
Sc	45	He	452765.71	2.0	486695.24	93.03	60	125	
Ge	72	No Gas	6027388.93	2.1	6275745.58	96.04	60	125	
Ge	72	He	863258.46	1.5	948175.9	91.04	60	125	
Y	89	No Gas	8718539.10	3.5	8859608.54	98.41	60	125	
Y	89	He	1306031.44	2.4	1479625.71	88.27	60	125	
Rh	103	No Gas	7152293.19	3.3	7242596.94	98.75	60	125	
Rh	103	He	3607899.44	1.7	3947548.31	91.4	60	125	
In	115	No Gas	7711340.80	5.0	7988838.01	96.53	60	125	
Lu	175	No Gas	52991.17	2.3	52826.41	100.31	60	125	

7900 ICP-MS 200.8/6020A
Contract Required Detection Limit (CRDL) Report

Sample Name	CRDL
File Name	124LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 14:22:28
Sample Type	LLICV
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	%Rec	QC Flag
Be	9	45	No Gas	0.967	ppb	11.5	3724.94	96.7	
Al	27	72	No Gas	5.110	ppb	7.7	193441.39	102.2	
V	51	72	He	1.126	ppb	1.5	11251.10	112.6	
Cr	52	72	No Gas	1.139	ppb	10.4	106851.85	113.9	
Mn	55	72	No Gas	1.030	ppb	7.4	78843.41	103	
Co	59	72	He	1.040	ppb	2.1	18912.54	104	
Ni	60	72	No Gas	0.473	ppb	16.7	14070.52	47.3	> +/- 50%
Cu	63	72	No Gas	0.996	ppb	9.4	40712.10	99.6	
Zn	66	72	No Gas	5.013	ppb	7.9	45057.01	100.26	
As	75	72	No Gas	0.766	ppb	41.2	10326.75	76.6	
Se	78	72	He	0.958	ppb	7.7	166.00	95.8	
Se	82	72	No Gas	0.916	ppb	15.6	834.74	91.6	
Mo	98	89	No Gas	1.003	ppb	9.8	25344.44	100.3	
Ag	107	89	No Gas	0.979	ppb	11.1	39388.97	97.9	
Cd	111	89	No Gas	0.972	ppb	12.6	12039.30	97.2	
Sb	123	89	No Gas	1.028	ppb	8.6	27198.86	102.8	
Ba	137	115	No Gas	0.975	ppb	8.4	13155.44	97.5	
Tl	203	115	No Gas	1.010	ppb	8.6	21902.23	101	
Pb	208	115	No Gas	1.011	ppb	8.7	69606.94	101.1	
Th	232	115	No Gas	0.952	ppb	6.7	61343.06	95.2	
U	238	115	No Gas	1.002	ppb	9.0	60849.34	100.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8421281.61	1.0	8788220.21	95.82	60	125	
Sc	45	He	459420.04	1.2	486695.24	94.4	60	125	
Ge	72	No Gas	5925224.35	0.9	6275745.58	94.41	60	125	
Ge	72	He	879677.43	1.4	948175.9	92.78	60	125	
Y	89	No Gas	8247915.78	2.5	8859608.54	93.1	60	125	
Y	89	He	1330499.50	2.0	1479625.71	89.92	60	125	
Rh	103	No Gas	7190240.82	1.6	7242596.94	99.28	60	125	
Rh	103	He	3630729.44	2.6	3947548.31	91.97	60	125	
In	115	No Gas	7683194.14	2.2	7988838.01	96.17	60	125	
Lu	175	No Gas	52230.94	1.3	52826.41	98.87	60	125	

7900 ICP-MS 200.8/6020A
Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	125_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 14:24:24
Sample Type	CCV
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	% Rec	QC Flag
Be	9	45	No Gas	48.840	ppb	11.6	191867.55	97.68	
Al	27	72	No Gas	47.658	ppb	7.0	1777249.20	95.32	
V	51	72	He	48.017	ppb	17.0	444040.57	96.03	
Cr	52	72	No Gas	48.657	ppb	10.5	2567919.76	97.31	
Mn	55	72	No Gas	48.101	ppb	10.8	3410799.31	96.2	
Co	59	72	He	47.150	ppb	17.5	921079.96	94.3	
Ni	60	72	No Gas	46.291	ppb	10.3	654316.64	92.58	
Cu	63	72	No Gas	47.923	ppb	12.2	1646480.77	95.85	
Zn	66	72	No Gas	47.284	ppb	10.7	421561.17	94.57	
As	75	72	No Gas	47.645	ppb	10.5	472705.30	95.29	
Se	78	72	He	46.445	ppb	15.2	5349.68	92.89	
Se	82	72	No Gas	47.863	ppb	9.7	29644.36	95.73	
Mo	98	89	No Gas	49.899	ppb	8.3	1296086.12	99.8	
Ag	107	89	No Gas	49.660	ppb	10.0	2065405.96	99.32	
Cd	111	89	No Gas	48.003	ppb	7.9	412783.64	96.01	
Sb	123	89	No Gas	48.802	ppb	8.6	1296412.87	97.6	
Ba	137	115	No Gas	49.749	ppb	12.1	656590.23	99.5	
Tl	203	115	No Gas	51.908	ppb	10.4	1118302.35	103.82	
Pb	208	115	No Gas	51.794	ppb	12.2	3527273.79	103.59	
Th	232	115	No Gas	51.953	ppb	11.3	3298311.67	103.91	
U	238	115	No Gas	52.094	ppb	11.0	3150747.65	104.19	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8709449.37	1.6	8788220.21	99.1	60	125	
Sc	45	He	514878.97	17.8	486695.24	105.79	60	125	
Ge	72	No Gas	6063200.32	1.1	6275745.58	96.61	60	125	
Ge	72	He	966275.05	15.7	948175.9	101.91	60	125	
Y	89	No Gas	8564580.49	0.5	8859608.54	96.67	60	125	
Y	89	He	1483878.21	17.9	1479625.71	100.29	60	125	
Rh	103	No Gas	7277311.66	3.1	7242596.94	100.48	60	125	
Rh	103	He	4054252.90	17.4	3947548.31	102.7	60	125	
In	115	No Gas	7671554.69	4.0	7988838.01	96.03	60	125	
Lu	175	No Gas	53958.76	2.2	52826.41	102.14	60	125	

7900 ICP-MS 200.8/6020A
Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	126_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060524-MS7900.b
Acq Time	06/05/24 14:26:12
Sample Type	CCB
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	029CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.027	ppb	16.9	153.33	
Al	27	72	No Gas	0.060	ppb	98.7	10010.82	
V	51	72	He	0.083	ppb	102.1	2225.73	
Cr	52	72	No Gas	0.183	ppb	31.0	57859.33	
Mn	55	72	No Gas	0.053	ppb	7.2	11080.98	
Co	59	72	He	0.006	ppb	17.2	184.45	
Ni	60	72	No Gas	-0.449	ppb	N/A	1456.74	
Cu	63	72	No Gas	0.015	ppb	107.8	7854.43	
Zn	66	72	No Gas	0.030	ppb	92.1	1766.79	
As	75	72	No Gas	-0.049	ppb	N/A	2447.47	
Se	78	72	He	-0.036	ppb	N/A	58.33	
Se	82	72	No Gas	-0.050	ppb	N/A	252.62	
Mo	98	89	No Gas	0.025	ppb	6.2	938.98	
Ag	107	89	No Gas	0.008	ppb	14.1	537.79	
Cd	111	89	No Gas	-0.004	ppb	N/A	4072.50	
Sb	123	89	No Gas	0.062	ppb	12.6	2532.47	
Ba	137	115	No Gas	0.012	ppb	17.7	388.89	
Tl	203	115	No Gas	0.015	ppb	14.9	390.01	
Pb	208	115	No Gas	0.008	ppb	16.5	1043.35	
Th	232	115	No Gas	0.077	ppb	14.0	5430.07	
U	238	115	No Gas	0.009	ppb	2.3	542.24	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8399401.05	0.0	8788220.21	95.58	60	125	
Sc	45	He	470902.27	37.4	486695.24	96.76	60	125	
Ge	72	No Gas	5861093.52	1.5	6275745.58	93.39	60	125	
Ge	72	He	896168.85	32.7	948175.9	94.52	60	125	
Y	89	No Gas	8319124.39	0.8	8859608.54	93.9	60	125	
Y	89	He	1382313.94	40.1	1479625.71	93.42	60	125	
Rh	103	No Gas	7091400.27	1.2	7242596.94	97.91	60	125	
Rh	103	He	3803744.92	36.6	3947548.31	96.36	60	125	
In	115	No Gas	7422394.71	0.6	7988838.01	92.91	60	125	
Lu	175	No Gas	52486.80	1.1	52826.41	99.36	60	125	

Preparation Information Benchsheet

Prep Run#: 439337
Team: Metals/CDISTEFANO

Prep WorkFlow: MetDigAqMS
Prep Method: EPA 200.2

Status: Prepped
Prep Date/Time: 5/31/24 09:13

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ2406075-01	MB		10mL	200.8/Ag T, Al T, As T, Cu T, Zn T, 6020A/As T, Sb T, Tl T	<2			10.00mL	Colorless-Clear		HB:10 Well:B3 Temp:93.1C/93.1C
2	RQ2406075-02	LCS		10mL	200.8/Ag T, Al T, As T, Cu T, Zn T, 6020A/As T, Sb T, Tl T	<2			10.00mL	Colorless-Clear	0.0200 mL/234787; 0.0200 mL/233423; 0.0200 mL/228122	On HB:12:39 Off HB:14:39 Pipet/Repipettor:M33,M39
3	R2404237-005	24S0084-24S0087	.03	10mL	200.8/Ag T, As T	<2			10.00mL	Colorless-Cloudy/Colorless-Cloudy		Tier IV
4	RQ2406075-03	R2404237-005 MS	.03	10mL	200.8/Ag T, As T	<2			10.00mL	Colorless-Clear	0.0200 mL/233423; 0.0200 mL/234787; 0.0200 mL/228122	
5	RQ2406075-04	R2404237-005 DMS	.03	10mL	200.8/Ag T, As T	<2			10.00mL	Colorless-Clear	0.0200 mL/234787; 0.0200 mL/233423; 0.0200 mL/228122	
6	R2404237-007	24S0086	.03	10mL	200.8/Ag T, As T	<2			10.00mL	Colorless-Clear		
7	R2404243-006	PS-240515-INF	.02	10mL	200.8/Al T, Cu T, Zn T	<2			10.00mL	Tan-Cloudy/Colorless-Cloudy		
8	R2404295-001	M34438-1 Ontario Effluent	.01	10mL	200.8/Cu T, Zn T	<2			10.00mL	Colorless-Clear		
9	R2404302-001	2405160909C BLM-24-565	.02	10mL	6020A/As T, Sb T, Tl T	<2			10.00mL	Colorless-Clear		
10	R2404302-002	2405161301Y BLM-38-620	.02	10mL	6020A/As T, Sb T, Tl T	<2			10.00mL	Colorless-Clear		
11	R2404302-003	2405161356C BLM-26-404	.02	10mL	6020A/As T, Sb T, Tl T	<2			10.00mL	Colorless-Clear		
12	R2404633-001	RW2	.03	10mL	200.8/As T	<2			10.00mL	Colorless-Clear		
13	R2404633-002	RW10	.12	10mL	200.8/As T	<2			10.00mL	Colorless-Clear		
14	R2404634-001	#7	.13	10mL	200.8/As T	<2			10.00mL	Colorless-Clear		
15	R2404634-002	#11	.13	10mL	200.8/As T	<2			10.00mL	Colorless-Clear		
16	R2404634-003	#13	.13	10mL	200.8/As T	<2			10.00mL	Colorless-Clear		
17	R2404634-004	#17	.13	10mL	200.8/As T	<2			10.00mL	Colorless-Clear		
18	R2404634-005	#19	.13	10mL	200.8/As T	<2			10.00mL	Colorless-Clear		
19	R2404634-006	#28	.13	10mL	200.8/As T	<2			10.00mL	Colorless-Cloudy/Colorless-Clear		
20	RQ2406075-05	R2404634-006 MS	.13	10mL	200.8/As T	<2			10.00mL	Colorless-Cloudy/Colorless-Clear	0.0200 mL/228122; 0.0200 mL/233423; 0.0200 mL/234787	
21	RQ2406075-06	R2404634-006 DMS	.13	10mL	200.8/As T	<2			10.00mL	Colorless-Cloudy/Colorless-Clear	0.0200 mL/228122; 0.0200 mL/233423; 0.0200 mL/234787	

Spiking Solutions

Name:	ICPMS Calibration Standard 1 (10 ug/mL	Inventory ID	228122	Logbook Ref:	228122	Expires On:	02/23/2025	Lot #: 222015048
Name:	ICPMS Calibration Standard 2 (10 ug/mL	Inventory ID	233423	Logbook Ref:	233423	Expires On:	03/10/2025	Lot #: 221015154
Name:	ICPMS Calibration Standard 3 (10 ug/mL	Inventory ID	234787	Logbook Ref:	234787	Expires On:	04/24/2025	

Preparation Information Benchsheet

Prep Run#: 439337
Team: Metals/CDISTEFANO

Prep WorkFlow: MetDigAqMS
Prep Method:

Status: Prepped
Prep Date/Time: 5/31/24 09:13

Preparation Materials

1:1 HCl Metals Grade	1:1 223283 (233826)	1:1 Nitric Acid Metals Grade	1:1 233477 (234026)	Hot Block Cups	10mL Lot J596944-5447 (234905)
Thermometer	402 (182588)				

Preparation Steps

Step: Digestion
Started: 5/31/24 09:13
Finished: 5/31/24 15:10
By: CDISTEFANO
Comments

~~Redigests #105~~

4237 (11) Redigests
4243
4295
4302
46634 6/10 46633 6/10

Comments: _____

Reviewed By: Molly Mellado Date: 6/3/24

Chain of Custody

Relinquished By: CO Date: 5/31/24

Received By: Q-402 Date: 5/31/24

Extracts Examined
Yes No

Preparation Information Benchsheet

Prep Run#: 439339
Team: Metals/CDISTEFANO

Prep WorkFlow: MetDigAqMS
Prep Method: EPA CLP-METALS ILM05.3

Status: Prepped
Prep Date/Time: 5/31/24 09:53

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ2406085-01	MB		10mL	200.8/Cu T, Zn T, 6020A/As T, Sb T, Tl T	<2			10.00mL	Colorless-Clear		HB:10 Well:B3 Temp:93.1C/93.1C
2	RQ2406085-02	LCS		10mL	200.8/Cu T, Zn T, 6020A/As T, Sb T, Tl T	<2			10.00mL	Colorless-Clear	0.0200 mL/234787; 0.0200 mL/228122; 0.0200 mL/233423	On HB:12:39 Off HB:14:39 Pipet/Repipettor:M33,M39
3	R2404396-001	2405201258 MPE-9	.02	10mL	6020A/As T, Sb T, Tl T	<2			10.00mL	Colorless-Cloudy/Colorless-Clear		
4	R2404396-006	2405201317 MPE-10	.02	10mL	6020A/As T, Sb T, Tl T	<2			10.00mL	Colorless-Clear		
5	R2404396-011	2405201041Y BLM-38-480	.02	10mL	6020A/As T, Sb T, Tl T	<2			10.00mL	Colorless-Clear		
6	R2404396-012	2405201024C 600-C-173	.02	10mL	6020A/As T, Sb T, Tl T	<2			10.00mL	Colorless-Clear		
7	R2404396-013	2405201025C 600-C-173	.02	10mL	6020A/As T, Sb T, Tl T	<2			10.00mL	Colorless-Clear		
8	R2404396-014	2405201026C 600-C-173	.02	10mL	6020A/As T, Sb T, Tl T	<2			10.00mL	Colorless-Clear		
9	R2404396-035	2405211021C NASA 4	.02	10mL	6020A/As T, Sb T, Tl T	<2			10.00mL	Colorless-Clear		
10	R2404396-036	2405211022C NASA 4	.02	10mL	6020A/As T, Sb T, Tl T	<2			10.00mL	Colorless-Clear		
11	R2404396-041	2405210913 MPE-11	.02	10mL	6020A/As T, Sb T, Tl T	<2			10.00mL	Colorless-Clear		
12	R2404396-046	2405210938 MPE-1	.02	10mL	6020A/As T, Sb T, Tl T	<2			10.00mL	Colorless-Clear		
13	RQ2406085-03	R2404396-046 MS	.02	10mL	6020A/As T, Sb T, Tl T	<2			10.00mL	Colorless-Clear	0.0200 mL/234787; 0.0200 mL/233423; 0.0200 mL/228122	
14	RQ2406085-04	R2404396-046 DMS	.02	10mL	6020A/As T, Sb T, Tl T	<2			10.00mL	Colorless-Clear	0.0200 mL/233423; 0.0200 mL/228122; 0.0200 mL/234787	
15	R2404396-051	2405211344C BW-5-295	.02	10mL	6020A/As T, Sb T, Tl T	<2			10.00mL	Colorless-Clear		
16	R2404399-006	PS-240522-INF	.02	10mL	200.8/Cu T, Zn T	<2			10.00mL	Tan-Cloudy/Yellow-Cloudy		
17	R2404465-001	2405220931X WB-1-200	.02	10mL	6020A/As T, Sb T, Tl T	<2			10.00mL	Colorless-Clear		
18	R2404465-002	2405221330X WB-1-200	.02	10mL	6020A/As T, Sb T, Tl T	<2			10.00mL	Colorless-Clear		
19	R2404465-007	2405221456C BLM-22-570	.02	10mL	6020A/As T, Sb T, Tl T	<2			10.00mL	Colorless-Clear		
20	R2404465-008	2405221457C BLM-22-570	.02	10mL	6020A/As T, Sb T, Tl T	<2			10.00mL	Colorless-Clear		
21	RQ2406085-05	R2404465-008 MS	.02	10mL	6020A/As T, Sb T, Tl T	<2			10.00mL	Colorless-Clear	0.0200 mL/233423; 0.0200 mL/228122; 0.0200 mL/234787	
22	RQ2406085-06	R2404465-008 DMS	.02	10mL	6020A/As T, Sb T, Tl T	<2			10.00mL	Colorless-Clear	0.0200 mL/228122; 0.0200 mL/233423; 0.0200 mL/234787	

Spiking Solutions

Name:	ICPMS Calibration Standard 1 (10 ug/mL	Inventory ID	228122	Logbook Ref:	228122	Expires On: 02/23/2025	Lot #: 222015048
Name:	ICPMS Calibration Standard 2 (10 ug/mL	Inventory ID	233423	Logbook Ref:	233423	Expires On: 03/10/2025	Lot #: 221015154
Name:	ICPMS Calibration Standard 3 (10 ug/mL	Inventory ID	234787	Logbook Ref:	234787	Expires On: 04/24/2025	

Preparation Information Benchsheet

Prep Run#: 439339
Team: Metals/CDISTEFANO

Prep WorkFlow: MetDigAqMS
Prep Method: EPA CLP-METALS ILM05.3

Status: Prepped
Prep Date/Time: 5/31/24 09:53

Preparation Materials

1:1 HCl Metals Grade	1:1 223283 (233826)	1:1 Nitric Acid Metals Grade	1:1 233477 (234026)	Hot Block Cups	10mL Lot J596944-5447 (234905)
Thermometer	402 (182588)				

Preparation Steps

Step: Digestion
Started: 5/31/24 09:53
Finished: 5/31/24 15:08
By: CDISTEFANO
Comments

Rediges t
4396 613
4399 614
4465 614

Comments:

Reviewed By: Molly Millader Date: 6/3/24

Chain of Custody

Relinquished By: [signature] Date: 5/31/24

Received By: R-401 Date: 5/31/24

Extracts Examined
Yes No

Preparation Information Benchsheet

Prep Run#: 439458
Team: Metals/CDISTEFANO

Prep WorkFlow: MetDigAqMS
Prep Method: EPA 200.2

Status: Prepped
Prep Date/Time: 6/4/24 08:52

#	Lab Code	Client ID		B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ2406243-01	MB			10mL	200.8/Ag T, Al D, Al T, As D, As T, Ba T, Be T, Cd T, Cr T, Cu D, Cu T, Ni D, Ni T, Pb T, Sb T, Se T, Tl T, Zn D, Zn T, 6020A/As T, Sb T, Tl T	<2			10.00mL	Colorless-Clear		HB:10 Well:F7 Temp:93.1C/93.0C
2	RQ2406243-02	LCS			10mL	200.8/Ag T, Al D, Al T, As D, As T, Ba T, Be T, Cd T, Cr T, Cu D, Cu T, Ni D, Ni T, Pb T, Sb T, Se T, Tl T, Zn D, Zn T, 6020A/As T, Sb T, Tl T	<2			10.00mL	Colorless-Clear	0.0200 mL/228122; 0.0200 mL/233423; 0.0200 mL/234787	On HB:11:20 Off HB:13:20 Pipet/Repipettor:M33,M39
3	R2404644-002	24I0001 Diss		.02	10mL	200.8/Al D, As D, Cu D, Ni D, Zn D	<2			10.00mL	Colorless-Clear		Tier IV
4	R2404644-004	24I0002 Diss		.02	10mL	200.8/Al D, As D, Cu D, Ni D, Zn D	<2			10.00mL	Colorless-Clear		
5	R2404644-006	24I0003 Diss		.02	10mL	200.8/Al D, As D, Cu D, Ni D, Zn D	<2			10.00mL	Colorless-Clear		
6	R2404644-008	24I0004 Diss		.02	10mL	200.8/Al D, As D, Cu D, Ni D, Zn D	<2			10.00mL	Colorless-Clear		
7	RQ2406243-03	R2404644-008	MS	.02	10mL	200.8/Al D, As D, Cu D, Ni D, Zn D	<2			10.00mL	Colorless-Clear	0.0200 mL/228122; 0.0200 mL/234787; 0.0200 mL/233423	
8	RQ2406243-04	R2404644-008	DMS	.02	10mL	200.8/Al D, As D, Cu D, Ni D, Zn D	<2			10.00mL	Colorless-Clear	0.0200 mL/228122; 0.0200 mL/233423; 0.0200 mL/234787	
9	R2404651-001	1405280845C 400-GV-125		.02	10mL	6020A/As T, Sb T, Tl T	<2			10.00mL	Colorless-Clear		
10	R2404651-002	1405280846C 400-GV-125		.02	10mL	6020A/As T, Sb T, Tl T	<2			10.00mL	Colorless-Clear		
11	R2404651-003	1405280857A 400-FV-131		.02	10mL	6020A/As T, Sb T, Tl T	<2			10.00mL	Colorless-Clear		
12	R2404651-004	1405280858A 400-FV-131		.02	10mL	6020A/As T, Sb T, Tl T	<2			10.00mL	Colorless-Clear		
13	R2404651-005	1405281005A 400-EV-131		.02	10mL	6020A/As T, Sb T, Tl T	<2			10.00mL	Colorless-Clear		
14	R2404651-006	1405281013C	400-JV-150	.02	10mL	6020A/As T, Sb T, Tl T	<2			10.00mL	Colorless-Clear		
15	R2404651-007	1405281450C 400-HV-147		.02	10mL	6020A/As T, Sb T, Tl T	<2			10.00mL	Colorless-Clear		
16	R2404671-001	3361452001		.01	10mL	200.8/Ag T, Al T, As T, Be T, Cd T, Cr T, Cu T, Ni T, Pb T, Sb T, Se T, Tl T, Zn T	<2			10.00mL	Colorless-Clear		
17	RQ2406243-05	R2404671-001	MS	.01	10mL	200.8/Ag T, Al T, As T, Be T, Cd T, Cr T, Cu T, Ni T, Pb T, Sb T, Se T, Tl T, Zn T	<2			10.00mL	Colorless-Clear	0.0200 mL/233423; 0.0200 mL/234787; 0.0200 mL/228122	
18	RQ2406243-06	R2404671-001	DMS	.01	10mL	200.8/Ag T, Al T, As T, Be T, Cd T, Cr T, Cu T, Ni T, Pb T, Sb T, Se T, Tl T, Zn T	<2			10.00mL	Colorless-Clear	0.0200 mL/234787; 0.0200 mL/233423; 0.0200 mL/228122	
19	R2404672-001	OF002 - Internal - Effluent		.04	10mL	200.8/Cr T, Zn T	<2			10.00mL	Colorless-Clear		
20	R2404680-001	S-1		.13	10mL	200.8/Cd T, Cu T	<2			10.00mL	Colorless-Cloudy/Colorless-Cloudy		
21	R2404689-001	Jones		.01	10mL	200.8/As T, Ba T, Cr T, Cu T, Pb T	<2			10.00mL	Colorless-Clear		

Preparation Information Benchsheet

Prep Run#: 439458
Team: Metals/CDISTEFANO

Prep WorkFlow: MetDigAqMS
Prep Method: EPA 200.2

Status: Prepped
Prep Date/Time: 6/4/24 08:52

Spiking Solutions

Name:	ICPMS Calibration Standard 1 (10 ug/mL	Inventory ID	228122	Logbook Ref:	228122	Expires On:	02/23/2025	Lot #:	222015048
Name:	ICPMS Calibration Standard 2 (10 ug/mL	Inventory ID	233423	Logbook Ref:	233423	Expires On:	03/10/2025	Lot #:	221015154
Name:	ICPMS Calibration Standard 3 (10 ug/mL	Inventory ID	234787	Logbook Ref:	234787	Expires On:	04/24/2025		

Preparation Materials

1:1 HCl Metals Grade	1:1 223283 (233826)	1:1 Nitric Acid Metals Grade	1:1 233477 (234026)	Hot Block Cups	10mL Lot J596944-5447 (234905)
Thermometer	402 (182588)				

Preparation Steps

Step: Digestion
Started: 6/4/24 08:52
Finished: 6/4/24 14:17
By: CDISTEFANO
Comments

46644 (IV) 6/10 12 BS D.
46651 6/11
46671 6/11
46672 6/16
46680 6/17 *
46689 6/11 MS

Comments: _____

Reviewed By: Molly Mehan Date: 6/5/24

Chain of Custody

Relinquished By: CD Date: 6/4/24
Received By: R-401 Date: 6/4/24

Extracts Examined
Yes No

ICP-MS ICV/CCV Standard

Standard prepared daily

	Metal	ALS Lot #	Conc. (ppb)	Vol. (mls)	Final Vol (mls)	Final Conc. (ppb)	Matrix	Analyst/ Date	Letter ID	HNO3 Lot #	HCl Lot #	Expiration Date	Pipet ID
Cal Std 1	Al	232728	10000	0.50	100	50.00	1% HNO3/	MFM 4/10/24	A	233477	233283	4/11/24	M36
	As		10000			50.00	0.5% HCl	MFM 4/12/24	B	233477	233283	4/13/24	M40
	Be		10000			50.00		MFM 4/17/24	C	233477	233283	4/18/24	M36
	Cd		10000			50.00		MFM 4/22/24	D	233477	233283	4/23/24	M40
	Cr		10000			50.00		MFM 4/24/24	E	233477	233283	4/25/24	M40
	Co		10000			50.00		MFM 4/29/24	F	233477	233283	4/30/24	M36
	Cu		10000			50.00		MFM 5/1/24	G	233477	233283	5/2/24	M36
	Pb		10000			50.00		MFM 5/2/24	H	233477	233283	5/3/24	M36
	Mn		10000			50.00		MFM 5/6/24	I	233477	233283	5/7/24	M36
	Mo		10000			50.00		MFM 5/8/24	J	233477	233283	5/9/24	M40
	Ni		10000			50.00		MFM 5/9/24	K	233477	233283	5/10/24	M40
	Sb		10000			50.00		MFM 5/13/24	L	233477	233283	5/14/24	M40
	Se		10000			50.00		MFM 5/14/24	M	233477	233283	5/15/24	~~M40~~ M36
	Th		10000			50.00		MFM 5/15/24	N	233477	233283	5/16/24	M36
	Tl		10000			50.00		MFM 5/16/24	O	233477	233283	5/17/24	M36
	U		10000			50.00		MFM 5/17/24	P	233477	233283	5/18/24	M40
	V		10000			50.00		~~MFM 5/20/24~~	~~Q~~	~~233477~~	~~233283~~	~~5/21/24~~	MFM 5/20/24
	Zn		10000			50.00		MFM 5/21/24	R	233477	233283	5/22/24	M36
Cal Std 2	Ag	233423	10000	0.50		50.00		MFM 5/22/24	S	233477	233283	5/23/24	M40
	Ba	-	10000			50.00		MFM 5/24/24	T	233477	233283	5/25/24	M36
Odd Cal Std	Sr	—	10000	0.50		50.00		MFM 5/28/24	U	233477	233283	5/29/24	M36
	W		10000			50.00		MFM 5/29/24	V	233477	233283	5/30/24	M36
	Pt		10000			50.00		MFM 5/30/24	W	233477	233283	5/31/24	M40
	Pd		10000			50.00		MFM 5/31/24	X	233477	233283	6/1/24	M40
	Ta		10000			50.00		MFM 6/4/24	Y	233477	233283	6/5/24	~~M40~~ M36
	Li		10000			50.00		MFM 6/5/24	Z	233477	233283	6/6/24	M40
									AA				
									BB				
									CC				
									DD				

ICP-MS Calibration Standard #1

Standard is prepared monthly or as necessary

	Metal	ALS Lot #	Conc. (ppb)	Vol. (mls)	Final Vol (mls)	Final Conc. (ppb)	Matrix	Analyst/ Date	Letter ID	HNO3 Lot #	HCl Lot #	Expiration Date	Pipet ID
Cal Std 1	Sb	231912	20000	0.025	500	1.00	1% HNO3/	MFM 4/12/24	A	233477	233283	5/12/24	~~M40~~ M37
	Mo	-	20000			1.00	0.5% HCl	MFM 5/13/24	B	233477	233283	6/9/24	M37, M40
Cal Std 2	Al	231913	20000	0.025		Below		MFM 5/29/24	C	233477	233283	6/9/24	~~M36~~, M37
	Zn		20000			Below			D				
	As		20000			1.00			E				
	Ba		20000			1.00			F				
	Be		20000			1.00			G				
	Cd		20000			1.00			H				
	Co		20000			1.00			I				
	Cu		20000			1.00			J				
	Pb		20000			1.00			K				
	Mn		20000			1.00			L				
	Ni		20000			1.00			M				
	Th		20000			1.00			N				
	Ag		20000			1.00			O				
	Tl		20000			1.00			P				
	Cr		20000			1.00			Q				
	V		20000			1.00			R				
	Se		20000			1.00			S				
	U		20000			1.00			T				
Int. Stds	Al	M845011 7B	10000	0.20		5.00			U				
	Zn	M845011 7 J	10000	0.20		5.00			V				
Odd Cal Std	Sr	—	20000	0.025		1.00			W				
	W		20000			1.00			X				
	Pt		20000			1.00			Y				
	Pd		20000			1.00			Z				
	Ta		20000			1.00							
	Li		20000			1.00							

M37, M40
MFM 4/12/24

ICP-MS Calibration Standard #2

Standard is prepared monthly or as necessary

	Metal	ALS Lot #	Conc. (ppb)	Vol. (mls)	Final Vol (mls)	Final Conc. (ppb)	Matrix	Analyst/ Date	Letter ID	HNO3 Lot #	HCl Lot #	Expiration Date	Pipet ID
Cal Std 1	Sb	231912	20000	0.25	500	10.00	1% HNO3/	MFM 4/12/24	A	233477	233283	5/12/24	M40
	Mo	-	20000			10.00	0.5% HCl	MFM 5/13/24	B	233477	233283	6/3/24	M40
Cal Std 2	Al	231913	20000	0.25		10.00			C				
	Zn		20000			10.00			D				
	As		20000			10.00			E				
	Ba		20000			10.00			F				
	Be		20000			10.00			G				
	Cd		20000			10.00			H				
	Co		20000			10.00			I				
	Cu		20000			10.00			J				
	Pb		20000			10.00			K				
	Mn		20000			10.00			L				
	Ni		20000			10.00			M				
	Th		20000			10.00			N				
	Ag		20000			10.00			O				
	Tl		20000			10.00			P				
	Cr		20000			10.00			Q				
	V		20000			10.00			R				
	Se		20000			10.00			S				
	U		20000			10.00			T				
Odd Cal Std	Sr	—	20000	0.25		10.00			U				
	W		20000			10.00			V				
	Pt		20000			10.00			W				
	Pd		20000			10.00			X				
	Ta		20000			10.00			Y				
	Li		20000			10.00			Z				

ICP-MS Calibration Standard #3

Standard is prepared monthly or as necessary

	Metal	ALS Lot #	Conc. (ppb)	Vol. (mls)	Final Vol (mls)	Final Conc. (ppb)	Matrix	Analyst/ Date	Letter ID	HNO3 Lot #	HCl Lot #	Expiration Date	Pipet ID
Cal Std 1	Sb	2319I2	20000	0.5	500	20.00	1% HNO3/	MFM 4/2/24	A	233477	233283	5/2/24	M36
	Mo	-	20000			20.00	0.5% HCl	MFM 5/3/24	B	233477	233283	6/3/24	M36
Cal Std 2	Al	~~24~~ 2319I3	20000	0.5		20.00			C				
	Zn		20000			20.00			D				
	As		20000			20.00			E				
	Ba		20000			20.00			F				
	Be		20000			20.00			G				
	Cd		20000			20.00			H				
	Co		20000			20.00			I				
	Cu		20000			20.00			J				
	Pb		20000			20.00			K				
	Mn		20000			20.00			L				
	Ni		20000			20.00			M				
	Th		20000			20.00			N				
	Ag		20000			20.00			O				
	Tl		20000			20.00			P				
	Cr		20000			20.00			Q				
	V		20000			20.00			R				
	Se		20000			20.00			S				
	U		20000			20.00			T				
Odd Cal Std	Sr	—	20000	0.5		20.00			U				
	W		20000			20.00			V				
	Pt		20000			20.00			W				
	Pd		20000			20.00			X				
	Ta		20000			20.00			Y				
	Li		20000			20.00			Z				

ICP-MS Calibration Standard #4

Standard is prepared monthly or as necessary

	Metal	ALS Lot #	Conc. (ppb)	Vol. (mls)	Final Vol (mls)	Final Conc. (ppb)	Matrix	Analyst/ Date	Letter ID	HNO3 Lot #	HCl Lot #	Expiration Date	Pipet ID
Cal Std 1	Sb	231912	20000	1.25	500	50.00	1% HNO3/	MFM 4/12/24	A	233477	233283	5/12/24	M40
	Mo	-	20000			50.00	0.5% HCl	MFM 5/13/24	B	233477	233283	6/13/24	M40
Cal Std 2	Al	231913	20000	1.25		50.00			C				
	Zn		20000			50.00			D				
	As		20000			50.00			E				
	Ba		20000			50.00			F				
	Be		20000			50.00			G				
	Cd		20000			50.00			H				
	Co		20000			50.00			I				
	Cu		20000			50.00			J				
	Pb		20000			50.00			K				
	Mn		20000			50.00			L				
	Ni		20000			50.00			M				
	Th		20000			50.00			N				
	Ag		20000			50.00			O				
	Tl		20000			50.00			P				
	Cr		20000			50.00			Q				
	V		20000			50.00			R				
	Se		20000			50.00			S				
	U		20000			50.00			T				
Odd Cal Std	Sr	—	20000	1.25		50.00			U				
	W		20000			50.00			V				
	Pt		20000			50.00			W				
	Pd		20000			50.00			X				
	Ta		20000			50.00			Y				
	Li		20000			50.00			Z				

ICP-MS Calibration Standard #5

Standard is prepared monthly or as necessary

	Metal	ALS Lot #	Conc. (ppb)	Vol. (mls)	Final Vol (mls)	Final Conc. (ppb)	Matrix	Analyst/ Date	Letter ID	HNO3 Lot #	HCl Lot #	Expiration Date	Pipet ID
Cal Std 1	Sb	231912	20000	2.5	500	100.00	1% HNO3/	MFM 4/12/24	A	233477	233283	5/12/24	M40
	Mo	-	20000			100.00	0.5% HCl	MFM 5/13/24	B	233477	233283	6/13/24	M40
Cal Std 2	Al	231913	20000	2.5		100.00		NM 5/30/24	C	233477	233283	6/30/24	M36
	Zn		20000			100.00			D				
	As		20000			100.00			E				
	Ba		20000			100.00			F				
	Be		20000			100.00			G				
	Cd		20000			100.00			H				
	Co		20000			100.00			I				
	Cu		20000			100.00			J				
	Pb		20000			100.00			K				
	Mn		20000			100.00			L				
	Ni		20000			100.00			M				
	Th		20000			100.00			N				
	Ag		20000			100.00			O				
	Tl		20000			100.00			P				
	Cr		20000			100.00			Q				
	V		20000			100.00			R				
	Se		20000			100.00			S				
	U		20000			100.00			T				
Odd Cal Std	Sr	-	20000	2.5		100.00			U				
	W		20000			100.00			V				
	Pt		20000			100.00			W				
	Pd		20000			100.00			X				
	Ta		20000			100.00			Y				
	Li		20000			100.00			Z				

ICP-MS ICSA SOLUTION
(PREPARED WEEKLY OR AS NECESSARY)

	Metal	CAS Lot #	Conc. (ppm)	Vol. (mls)	Final Vol. (mls)	Final Conc. (ppb)	Matrix	Analyst / Date	Letter ID	Nitric Acid Lot #	HCL Lot #	Expiration Date	Pipet ID
ICSA	CL-	2341160	10000	2.00	100	200000	1% HNO_3 0.5% HCl	MFM 3/20/24	A	233477	233283	3/27/24	M40
	AL		1000			20000	1% HNO_3 0.5% HCl	MFM 3/29/24	B	233477	233283	4/5/24	M40
	CA						1% HNO_3 0.5% HCl	MFM 4/10/24	C	233477	233283	4/17/24	M36
	FE						1% HNO_3 0.5% HCl	MFM 4/22/24	D	233477	233283	4/29/24	M40
	MG						1% HNO_3 0.5% HCl	MFM 5/6/24	E	233477	233283	5/13/24	M36
	P						1% HNO_3 0.5% HCl	MFM 5/20/24	F	233477	233283	5/27/24	M40
	K						1% HNO_3 0.5% HCl	MFM 5/28/24	G	233477	233283	6/4/24	M40
	NA						1% HNO_3 0.5% HCl	MFM 5/29/24	H	233477	233283	6/5/24	M36
	S								I				
	C		2000			40000			J				
	MO		20			400			K				
	TI		20			400			L				
									M				
									N				
									O				
									P				
									Q				
									R				
									S				
									T				

ICP-MS ICSAB SOLUTION
(PREPARED WEEKLY OR AS NECESSARY)

	Metal	CAS Lot #	Conc. (ppm)	Vol. (mls)	Final Vol. (mls)	Final Conc. (ppb)	Matrix	Analyst / Date	Letter ID	Nitric Acid Lot #	HCL Lot #	Expiration Date	Pipet ID
ICSA	CL-	234160	10000	2.00	100	200000	1% HNO_3 0.5% HCl	MFM 4/10/24	A	233477	233283	4/17/24	M36
	AL,CA		1000			20000	1% HNO_3 0.5% HCl	MFM 4/22/24	B	233477	233283	4/29/24	M40
	FE,MG						1% HNO_3 0.5% HCl	MFM 5/6/24	C	233477	233283	5/13/24	M36
	P,K						1% HNO_3 0.5% HCl	MFM 5/20/24	D	233477	233283	5/27/24	M40
	NA,S						1% HNO_3 0.5% HCl	MFM 5/28/24	E	233477	233283	6/4/24	M40
	C		2000			40000	1% HNO_3 0.5% HCl	NM 5/29/24	F	233477	233283	6/5/24	M40
	MO,TI	M8450109A	20			400			G				
AB Int.	Be, V	~~M845109~~	2	1.00		20			H				
	Se, Sb		2			20			I				
	Ba, Tl		2			20			J				
	Sr, W		2			20			K				
	Pt, Pb		2			20			L				
	U		2			20			M				
ICSAB	NI	230958	2	1.00		20.0			N				
	MN		2						O				
	CR		2						P				
	AS		2						Q				
	CO,CU		2						R				
	AG,CD		2						S				
	ZN		2						T				

ICP-MS HLCCV2 Standard

Standard is prepared monthly or as necessary

	Metal	ALS Lot #	Conc. (ppb)	Vol. (mls)	Final Vol (mls)	Final Conc. (ppb)	Matrix	Analyst/ Date	Letter ID	HNO3 Lot #	HCl Lot #	Expiration Date	Pipet ID
Cal Std 1	Sb	~~232913~~ 231913	20000	0.50	50	200.00	1% HNO3/	MFM 4/22/24	A	233477	233283	5/22/24	M40
	Mo	-	20000			200.00	0.5% HCl	MFM 5/15/24	B	233477	233283	6/15/24	M36
Cal Std 2	Al	231912	20000	0.50		200.00		NM 5/30/24	C	233477	233283	6/30/24	M36
	Zn		20000			200.00			D				
	As		20000			200.00			E				
	Ba		20000			200.00			F				
	Be		20000			200.00			G				
	Cd		20000			200.00			H				
	Co		20000			200.00			I				
	Cu		20000			200.00			J				
	Pb		20000			200.00			K				
	Mn		20000			200.00			L				
	Ni		20000			200.00			M				
	Th		20000			200.00			N				
	Ag		20000			200.00			O				
	Tl		20000			200.00			P				
	Cr		20000			200.00			Q				
	V		20000			200.00			R				
	Se		20000			200.00			S				
	U		20000			200.00			T				
Odd Cal Std	Sr	—	20000	0.50		200.00			U				
	W		20000			200.00			V				
	Pt		20000			200.00			W				
	Pd		20000			200.00			X				
	Ta		20000			200.00			Y				
	Li		20000			200.00			Z				

ICP-MS HLCCV3 Standard

Standard is prepared monthly or as necessar

	Metal	ALS Lot #	Conc. (ppb)	Vol. (mls)	Final Vol (mls)	Final Conc. (ppb)	Matrix	Analyst/ Date	Letter ID	HNO3 Lot #	HCl Lot #	Expiration Date	Pipet ID
Cal Std 1	Sb	231913	20000	1.00	50	400.00	1% HNO3/	MFM 4/22/24	A	233477	233283	5/22/24	M40
	Mo	-	20000			400.00	0.5% HCl	MFM 5/15/24	B	233477	233283	6/15/24	M36
Cal Std 2	Al	231912	20000	1.00		400.00		NM 5/30/24	C	233477	233283	6/30/24	M36
	Zn		20000			400.00			D				
	As		20000			400.00			E				
	Ba		20000			400.00			F				
	Be		20000			400.00			G				
	Cd		20000			400.00			H				
	Co		20000			400.00			I				
	Cu		20000			400.00			J				
	Pb		20000			400.00			K				
	Mn		20000			400.00			L				
	Ni		20000			400.00			M				
	Th		20000			400.00			N				
	Ag		20000			400.00			O				
	Tl		20000			400.00			P				
	Cr		20000			400.00			Q				
	V		20000			400.00			R				
	Se		20000			400.00			S				
	U		20000			400.00			T				
Odd Cal Std	Sr	—	20000	1.00		400.00			U				
	W		20000			400.00			V				
	Pt		20000			400.00			W				
	Pd		20000			400.00			X				
	Ta		20000			400.00			Y				
	Li		20000			400.00			Z				

ICP-MS Internal Standard Solution

Standard prepared every 6 months or as necessary

(Added in-line)

	Metal	ALS Lot #	Conc. (ppb)	Vol. (mls)	Final Vol. (mls)	Final Conc. (ppb)	Matrix
Internal Standard	Bi	231911	10000	~~50.00~~	~~500~~	1000	1% HNO3
	Ho		10000	20.0	200	1000	
	In		10000			1000	
	Li +6		10000			1000	
	Rh		10000			1000	
	Sc		10000			Below	
	Tb		10000			1000	
	Y		10000			1000	
	Sc	235153	1000000	~~0.5~~	0.2	2000	
	Ge	234006	1000000	~~2.5~~	1.0	5000	

Analyst/ Date	Letter ID	HNO3 Lot #	HCl Lot #	Expiration Date	Pipet ID
MFM 5/15/24	A	233477	233283	11/15/24	dispo/1136
MFM 6/5/24	B	233477	233283	~~12/5/24~~	dispo/1140 11/5/24
	C				
	D				
	E				
	F				
	G				
	H				
	I				
	J				
	K				
	L				
	M				
	N				
	O				
	P				
	Q				
	R				
	S				
	T				
	U				
	V				
	W				
	X				
	Y				
	Z				

MISCELLANEOUS STANDARDS

Type of Standard	Metal	CAS Lot #	Conc. (ppm)	Vol. (mls)	Final Vol. (mls)	Final Conc. (ppb)	Matrix	Analyst / Date	Letter ID	Nitric Acid Lot #	HCL Lot #	Expiration Date	Pipet ID
MS Mass Cal	BaBeCeCo InMgPb RbU	228201	0.01	1000	1000	10	1% HNO3	NM 5/1/23	A	—	—	8/30/24	M37
	Cd	227603	1000	0.01	↓	10			B				
	Cu	222428	1000	0.01		10			C				
	Li	223753	1000	0.01		10			D				
	Tl	226708	1000	0.01		10			E				
	Y	226709	1000	0.01		10			F				
									G				
SIC	Cl	233254	21215	1	10	21215	1% HNO3 0.5% HCl	NM 1/16/24	H	231748	232049	4/23/24	M40
	Ca		3000			300	1% HNO3 0.5% HCl	NM 1/24/24	I	231748	232049	1/31/24	M40
	Fe Na		2500			250	1% HNO3 0.5% HCl	NM 1/25/24	J	231748	232049	2/1/24	M40
	C		2000			200	1% HNO3 0.5% HCl	NM 1/29/24	K	231748	232049	2/5/24	M40
	Al K Mg P S		1000			100	1% HNO3 0.5% HCl	NM 2/1/24	L	231748	232049	2/8/24	M40
	Mo Ti		20			2			M				
									N				
Single	Ag	226100	1000	0.100 ~~0.01~~	10	1000	1% HNO3 0.5% HCl	NM 1/17/24	O				
Single	Ba	227183	1000	0.100 ~~0.01~~	10	1000	1% HNO3 0.5% HCl	NM 1/17/24	P	231748	232049		
									Q				
	Ag	M8450127O	100ppb	0.05	100	50			R				
	Ba	M8450127P	100ppb	0.05		50			S				
	AlSbAs BeCdCr	232728	10ppb	0.500		50			T				
	CoCuPbMn MoNiSeTl ThUV Zn	↓							U				

Metals Data Cover Sheet

Run Date: 6/6/2024

Data File: 060624-MS7900

Primary Reviewer: M. McMahon

Secondary Reviewer: N. Mansen

LIMS Runs:	LIMS Preps:	
843344	439458	cc4
843345	439459	ccv6
843346	439460	ccv6

Comments:
N/A

Agilent 7900 (R-ICP-MS-2) Run Log

Serial Number: JP16491642

Analyst: MFM Date: 6/6/24

Data File: 060624-MS7900 Method: 6020A / 200.8

	Prep Date	Lot #
Instrument Tune Solution	5/1/24	M845012274
Mass Tune Solution	↓	↓
Internal Standard	6/5/24	M8740111B
ICSA	6/6/24	M845009II
ICSAB	↓	M845010367
HNO3	NA	233477
HLCCV2	5/30/24	M8740031C

	Prep Date	Lot #
Cal Srt 1 / CRDL	5/29/24	M8740002C
Cal Std 2	5/13/24	M8740012B
Cal Std 3	6/4/24	M8740022D
Cal Std 4 ~~/ HLCCV1~~	5/13/24	M8740032B
ICV / CCV	6/6/24	M8740072AA
HCL	NA	233283
HLCCV3	5/30/24	M8740061C
cal stds / HLCCV1	5/30/24	M8740042C

Pipet Used	DOD Pipet Verification
M37, M45	-

3101	PBW-439458	3202	PBW-439459	4101	PBW-439460
3102	LCSW-439458	3203	LCSW-439459	4102	LCSW-439460
3103	R2404644-002	3204	R2404644-001	4103	R2404645-002
3104	R2404644-004	3205	R2404644-003	4104	R2404645-004
3105	R2404644-006	3206	R2404644-005	4105	R2404645-006
3106	R2404644-008	3207	R2404644-007	4106	R2404645-008
3107	R2404644-008S	3208	R2404644-007S	4107	R2404645-010
3108	R2404644-008SD	3209	R2404644-007SD	4108	R2404645-012
3109	R2404644-008A	3210	R2404644-007A	4109	R2404645-012S
3110	R2404644-008L 5X	3211	R2404644-007L 5X	4110	R2404645-012SD
3111	R2404651-001	3212	R2404645-001	4111	R2404645-012A
3112	R2404671-001	3301	R2404645-003	4112	R2404645-012L 5X
3201	R2404689-001 20X	3302	R2404645-005	4201	R2404659-002
		3303	R2404645-007	4202	R2404659-004
		3304	R2404645-009	4203	R2404659-006
		3305	R2404645-011	4204	R2404659-008
		3306	R2404645-011S	4205	R2404659-010
		3307	R2404645-011SD	4206	R2404659-010S
		3308	R2404645-011A	4207	R2404659-010SD
		3309	R2404645-011L 5X	4208	R2404659-010A
		3310	R2404659-001	4209	R2404659-010L 5X
		3311	R2404659-003	4210	R2404675-002
		3312	R2404659-005	4211	R2404675-004
		3401	R2404659-007	4212	R2404675-006
		3402	R2404659-009	4301	R2404675-008
				4302	R2404675-010
				4303	R2404675-012
				4304	R2404675-014
				4305	R2404675-016

R2404671-001L 5x
R2404671-001S
R2404671-001SD
R2404671-001A

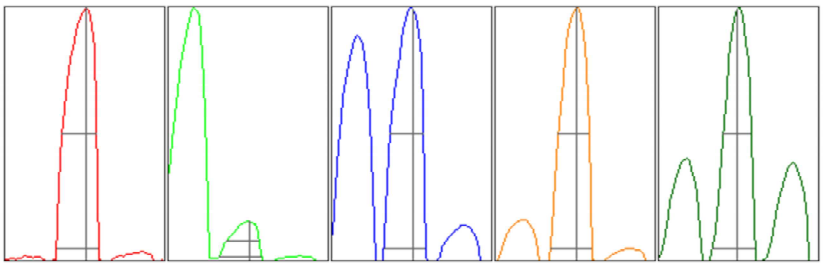
MFM 6/6/24

US EPA Tune Check Report

Operator Name	ALRCE Metals05
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq. Date-Time	06/06/24 10:05:09
Report Comment	---
Instrument Name	G8403A JP16491642

[No Gas]

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	339.94	9.05	8.90 - 9.10	
24	15370.60	24.05	23.90 - 24.10	
59	4872.06	59.05	58.90 - 59.10	
115	11067.37	115.05	114.90 - 115.10	
208	3629.39	208.00	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.65	0.788	0.900	
24	0.61	0.788	0.900	
59	0.63	0.784	0.900	
115	0.59	0.777	0.900	
208	0.54	0.796	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	157.399999999999
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	General Purpose	Nebulizer Gas	1.05 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.80 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	10.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	9.4 V	Deflect	16.0 V
Extract 2	-250.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-90 V	Cell Exit	-50 V		

Cell Parameters

US EPA Tune Check Report

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	129	Axis Gain	0.9996	QP Bias	-3.0 V
Mass Offset	123	Axis Offset	-0.01		

Hardware Settings

Torch

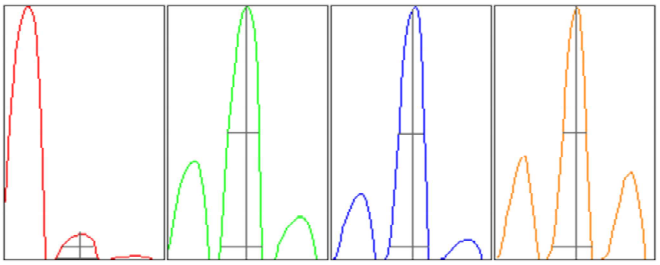
Torch H	0.3 mm	Torch V	-0.2 mm		

EM

Discriminator	4.8 mV	Analog HV	2111 V	Pulse HV	1392 V

[He]

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
24	430.57	23.95	23.90 - 24.10	
59	1322.82	59.00	58.90 - 59.10	
115	2528.19	115.05	114.90 - 115.10	
208	2442.11	208.05	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
24	0.61	0.782	0.900	
59	0.58	0.776	0.900	
115	0.50	0.731	0.900	
208	0.44	0.735	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	125.92
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	General Purpose	Nebulizer Gas	1.05 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.80 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	10.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	9.4 V	Deflect	2.4 V

US EPA Tune Check Report

Extract 2	-250.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-90 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	4.3 mL/min	OctP Bias	-18.0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	129	Axis Gain	0.9996	QP Bias	-13.0 V
Mass Offset	123	Axis Offset	-0.01		

Hardware Settings

Torch

Torch H	0.3 mm	Torch V	-0.2 mm		

EM

Discriminator	4.8 mV	Analog HV	2111 V	Pulse HV	1392 V

7900 ICP-MS 200.8/6020A
Calibration Blank Report

Sample Name	Blank
File Name	009CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 15:53:15
Sample Type	CalBlk
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d
Operator	6/6/24

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD
Be	9	45	No Gas	16.67	69.3
Al	27	72	No Gas	13809.25	46.9
V	51	72	He	1144.49	4.7
Cr	52	72	No Gas	50133.20	2.7
Mn	55	72	No Gas	7363.04	3.6
Co	59	72	He	122.22	41.8
Ni	60	72	No Gas	806.69	11.8
Cu	63	72	No Gas	2202.40	9.2
Zn	66	72	No Gas	1831.24	2.9
Se	78	72	He	103.67	8.4
Se	82	72	No Gas	249.20	16.0
Mo	98	89	No Gas	300.79	15.5
Ag	107	89	No Gas	285.57	34.8
Cd	111	89	No Gas	3659.79	0.9
Sb	123	89	No Gas	822.25	8.3
Ba	137	115	No Gas	376.67	12.0
Tl	203	115	No Gas	137.78	43.4
Pb	208	115	No Gas	723.34	19.9
Th	232	115	No Gas	1552.32	4.7
U	238	115	No Gas	95.56	91.1

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD
Sc	45	No Gas	9572576.56	1.2
Sc	45	He	537132.74	1.8
Ge	72	No Gas	7221407.63	4.3
Ge	72	He	1075133.33	1.6
Y	89	No Gas	10505771.25	1.3
Y	89	He	1785434.86	1.9
Rh	103	No Gas	9029665.75	3.9
Rh	103	He	4662246.34	3.2
In	115	No Gas	9909318.50	0.8
Lu	175	No Gas	53023.13	2.5

7900 ICP-MS 200.8/6020A
Calibration Standard Report

Sample Name	1
File Name	010CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 15:55:59
Sample Type	CalStd
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD	Conc.
Be	9	45	No Gas	3779.38	3.8	0.966
Al	27	72	No Gas	231161.57	1.5	4.904
V	51	72	He	12671.19	0.5	1.019
Cr	52	72	No Gas	115521.72	1.8	1.039
Mn	55	72	No Gas	96066.67	0.1	0.987
Co	59	72	He	24227.31	1.2	1.010
Ni	60	72	No Gas	19431.06	3.3	0.966
Cu	63	72	No Gas	47580.85	1.1	0.969
Zn	66	72	No Gas	59946.73	1.8	5.039
As	75	72	No Gas	11662.69	7.6	1.025
Se	78	72	He	252.67	10.2	0.940
Se	82	72	No Gas	1088.37	3.0	0.951
Mo	98	89	No Gas	36478.48	1.1	0.957
Ag	107	89	No Gas	57094.77	2.3	0.920
Cd	111	89	No Gas	16103.98	3.4	0.937
Sb	123	89	No Gas	37787.80	0.9	0.940
Ba	137	115	No Gas	20469.97	1.3	0.928
Tl	203	115	No Gas	30074.83	0.8	0.907
Pb	208	115	No Gas	97490.67	0.9	0.922
Th	232	115	No Gas	88073.30	0.6	0.967
U	238	115	No Gas	88057.74	1.9	0.963

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9922340.44	2.0	9572576.56	103.65	60	125	
Sc	45	He	538235.00	0.9	537132.74	100.21	60	125	
Ge	72	No Gas	6970767.09	2.0	7221407.63	96.53	60	125	
Ge	72	He	1076518.12	0.4	1075133.33	100.13	60	125	
Y	89	No Gas	10630635.41	1.5	10505771.25	101.19	60	125	
Y	89	He	1790290.69	2.3	1785434.86	100.27	60	125	
Rh	103	No Gas	8882676.31	1.7	9029665.75	98.37	60	125	
Rh	103	He	4695941.48	2.1	4662246.34	100.72	60	125	
In	115	No Gas	9784693.22	3.7	9909318.5	98.74	60	125	
Lu	175	No Gas	52832.20	2.0	53023.13	99.64	60	125	

7900 ICP-MS 200.8/6020A
Calibration Standard Report

Sample Name	10
File Name	011CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 15:58:10
Sample Type	CalStd
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD	Conc.
Be	9	45	No Gas	37934.36	0.3	9.949
Al	27	72	No Gas	461028.97	0.6	9.639
V	51	72	He	115913.57	0.9	10.138
Cr	52	72	No Gas	713814.90	1.5	9.843
Mn	55	72	No Gas	932420.66	1.2	9.821
Co	59	72	He	248091.27	1.9	10.333
Ni	60	72	No Gas	195577.74	1.6	9.662
Cu	63	72	No Gas	469662.38	1.4	9.532
Zn	66	72	No Gas	117691.70	1.2	9.598
As	75	72	No Gas	130122.78	1.2	9.590
Se	78	72	He	1709.11	2.1	10.050
Se	82	72	No Gas	9023.59	3.4	9.452
Mo	98	89	No Gas	358246.98	1.2	9.444
Ag	107	89	No Gas	588487.14	1.1	9.518
Cd	111	89	No Gas	130528.42	2.5	9.592
Sb	123	89	No Gas	365462.63	0.9	9.280
Ba	137	115	No Gas	204040.90	2.8	9.372
Tl	203	115	No Gas	317166.77	1.5	9.567
Pb	208	115	No Gas	1002212.45	1.3	9.485
Th	232	115	No Gas	940046.94	1.4	10.435
U	238	115	No Gas	908038.12	0.2	9.879

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9664772.39	2.1	9572576.56	100.96	60	125	
Sc	45	He	551444.98	1.7	537132.74	102.66	60	125	
Ge	72	No Gas	7404122.76	3.1	7221407.63	102.53	60	125	
Ge	72	He	1080757.84	1.5	1075133.33	100.52	60	125	
Y	89	No Gas	10721457.07	2.2	10505771.25	102.05	60	125	
Y	89	He	1882205.48	3.2	1785434.86	105.42	60	125	
Rh	103	No Gas	9286727.96	6.2	9029665.75	102.85	60	125	
Rh	103	He	4707861.48	1.3	4662246.34	100.98	60	125	
In	115	No Gas	10117219.04	4.2	9909318.5	102.1	60	125	
Lu	175	No Gas	54788.11	0.6	53023.13	103.33	60	125	

7900 ICP-MS 200.8/6020A
Calibration Standard Report

Sample Name	20
File Name	012CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 16:00:21
Sample Type	CalStd
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD	Conc.
Be	9	45	No Gas	76140.91	1.1	20.003
Al	27	72	No Gas	885772.50	0.5	19.850
V	51	72	He	233375.86	2.1	19.987
Cr	52	72	No Gas	1329415.89	1.5	19.852
Mn	55	72	No Gas	1877880.13	2.7	20.047
Co	59	72	He	497693.70	1.4	19.956
Ni	60	72	No Gas	383234.85	1.3	19.927
Cu	63	72	No Gas	921074.79	2.0	19.932
Zn	66	72	No Gas	228063.09	0.5	19.826
As	75	72	No Gas	260805.74	0.9	19.979
Se	78	72	He	3383.41	1.9	20.028
Se	82	72	No Gas	17784.96	0.6	19.998
Mo	98	89	No Gas	724163.83	1.1	20.132
Ag	107	89	No Gas	1177255.41	0.4	20.091
Cd	111	89	No Gas	257437.40	1.6	20.094
Sb	123	89	No Gas	758772.07	1.6	20.239
Ba	137	115	No Gas	405168.85	1.4	20.009
Tl	203	115	No Gas	621201.84	1.2	19.951
Pb	208	115	No Gas	1984874.76	0.5	19.995
Th	232	115	No Gas	1889724.23	1.4	20.059
U	238	115	No Gas	1804454.86	2.6	20.005

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9696606.01	1.5	9572576.56	101.3	60	125	
Sc	45	He	551122.86	2.1	537132.74	102.6	60	125	
Ge	72	No Gas	7400591.65	4.0	7221407.63	102.48	60	125	
Ge	72	He	1096628.05	0.7	1075133.33	102	60	125	
Y	89	No Gas	10495800.69	3.4	10505771.25	99.91	60	125	
Y	89	He	1864290.21	0.5	1785434.86	104.42	60	125	
Rh	103	No Gas	9193819.35	5.6	9029665.75	101.82	60	125	
Rh	103	He	4747045.92	0.2	4662246.34	101.82	60	125	
In	115	No Gas	10030627.93	3.3	9909318.5	101.22	60	125	
Lu	175	No Gas	54231.39	2.8	53023.13	102.28	60	125	

7900 ICP-MS 200.8/6020A
Calibration Standard Report

Sample Name	50
File Name	013CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 16:02:29
Sample Type	CalStd
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	CPS	RSD	Conc.
Be	9	45	No Gas	189419.35	1.0	50.028
Al	27	72	No Gas	2061551.31	0.3	49.451
V	51	72	He	595349.34	0.9	50.172
Cr	52	72	No Gas	3217232.23	0.8	49.929
Mn	55	72	No Gas	4448618.99	3.2	49.651
Co	59	72	He	1254161.72	0.7	50.034
Ni	60	72	No Gas	956969.68	0.4	50.035
Cu	63	72	No Gas	2369041.02	2.8	50.283
Zn	66	72	No Gas	569912.44	1.0	50.032
As	75	72	No Gas	648128.65	0.9	49.966
Se	78	72	He	8384.50	2.2	50.081
Se	82	72	No Gas	43726.61	0.8	49.996
Mo	98	89	No Gas	1867114.04	3.3	50.005
Ag	107	89	No Gas	3008274.40	1.8	49.902
Cd	111	89	No Gas	633982.26	1.9	49.664
Sb	123	89	No Gas	1922734.37	1.7	49.904
Ba	137	115	No Gas	1018541.59	1.5	49.791
Tl	203	115	No Gas	1594410.67	0.3	49.942
Pb	208	115	No Gas	4908972.09	2.1	49.647
Th	232	115	No Gas	4480593.29	1.0	49.311
U	238	115	No Gas	4367852.47	2.0	49.468

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9624180.45	2.8	9572576.56	100.54	60	125	
Sc	45	He	559918.15	3.1	537132.74	104.24	60	125	
Ge	72	No Gas	7338820.82	2.4	7221407.63	101.63	60	125	
Ge	72	He	1098672.98	1.6	1075133.33	102.19	60	125	
Y	89	No Gas	10902407.62	4.2	10505771.25	103.78	60	125	
Y	89	He	1782930.21	3.3	1785434.86	99.86	60	125	
Rh	103	No Gas	9168047.97	2.0	9029665.75	101.53	60	125	
Rh	103	He	4803587.72	1.4	4662246.34	103.03	60	125	
In	115	No Gas	10341450.98	1.6	9909318.5	104.36	60	125	
Lu	175	No Gas	54402.19	1.0	53023.13	102.6	60	125	

7900 ICP-MS 200.8/6020A
Calibration Standard Report

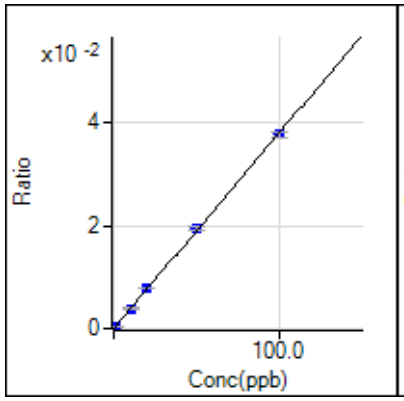
Sample Name	100
File Name	014CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 16:04:25
Sample Type	CalStd
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

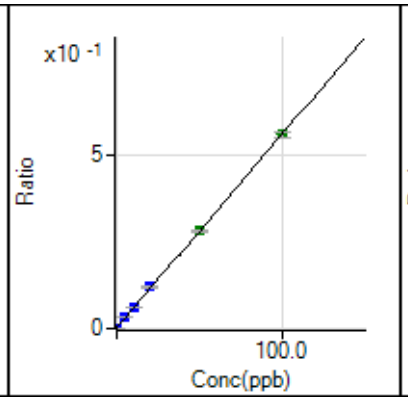
Name	Mass	ISTD	Tune	CPS	RSD	Conc.
Be	9	45	No Gas	379458.22	1.2	99.051
Al	27	72	No Gas	4064130.12	2.4	99.637
V	51	72	He	1163036.90	1.5	99.199
Cr	52	72	No Gas	6384532.52	3.0	100.117
Mn	55	72	No Gas	9031526.86	1.5	100.336
Co	59	72	He	2505605.11	4.2	99.629
Ni	60	72	No Gas	1896262.22	4.5	99.960
Cu	63	72	No Gas	4511353.71	0.8	99.154
Zn	66	72	No Gas	1134332.18	1.4	100.087
As	75	72	No Gas	1296091.51	2.1	100.094
Se	78	72	He	16282.42	2.3	99.130
Se	82	72	No Gas	86298.88	1.7	99.905
Mo	98	89	No Gas	3572909.25	3.7	98.961
Ag	107	89	No Gas	5663323.25	0.3	98.560
Cd	111	89	No Gas	1234845.55	1.1	99.300
Sb	123	89	No Gas	3631032.91	1.7	98.619
Ba	137	115	No Gas	2030473.04	3.5	100.789
Tl	203	115	No Gas	3039193.84	0.9	99.861
Pb	208	115	No Gas	9660980.38	0.4	100.451
Th	232	115	No Gas	9015855.20	0.8	100.804
U	238	115	No Gas	8664086.60	1.6	100.558

QC ISTD Table

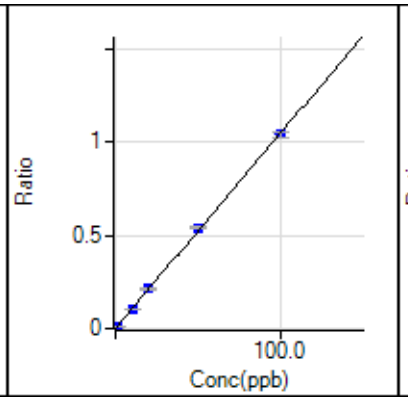
Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	10042270.16	1.8	9572576.56	104.91	60	125	
Sc	45	He	554680.48	1.7	537132.74	103.27	60	125	
Ge	72	No Gas	7290745.54	1.4	7221407.63	100.96	60	125	
Ge	72	He	1115932.80	2.1	1075133.33	103.79	60	125	
Y	89	No Gas	10884470.68	1.0	10505771.25	103.6	60	125	
Y	89	He	1832310.41	0.6	1785434.86	102.63	60	125	
Rh	103	No Gas	8851697.98	1.8	9029665.75	98.03	60	125	
Rh	103	He	4868912.45	1.4	4662246.34	104.43	60	125	
In	115	No Gas	9927294.05	5.6	9909318.5	100.18	60	125	
Lu	175	No Gas	54262.79	0.1	53023.13	102.34	60	125	



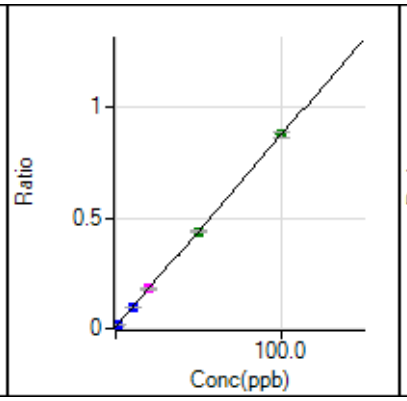
9 Be [No Gas] / ISTD: 45 Sc
y = 3.816E-4 x + 1.734E-6
R 0.9998
DL 0.009311
BEC 0.004544



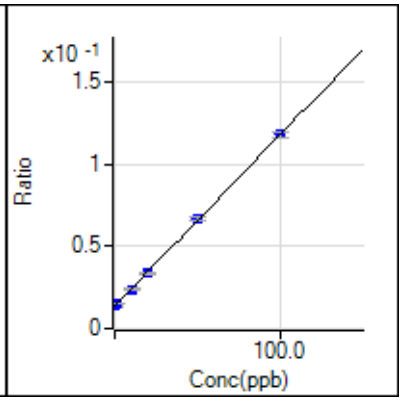
27 Al [No Gas] / ISTD: 72 Ge
y = 5.577E-3 x + 1.915E-3
R 0.9999
DL 0.4843
BEC 0.3434



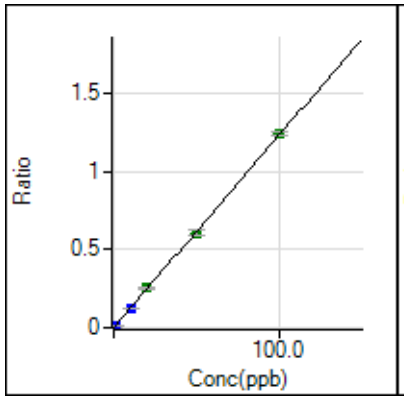
51 V [He] / ISTD: 72 Ge
y = 1.050E-2 x + 1.064E-3
R 0.9998
DL 0.01017
BEC 0.1014



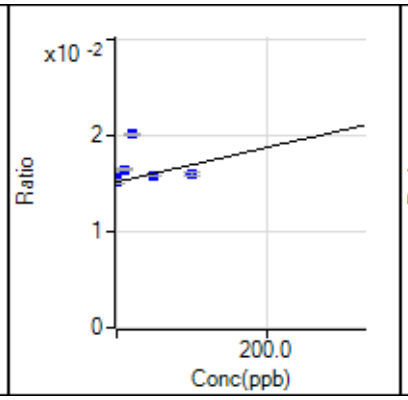
52 Cr [No Gas] / ISTD: 72 Ge
y = 8.679E-3 x + 6.948E-3
R 1.0000
DL 0.08463
BEC 0.8005



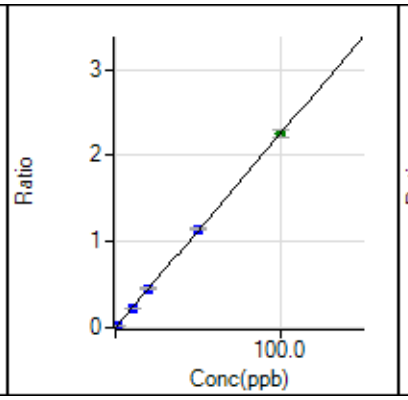
53 (Cr) [No Gas] / ISTD: 72 Ge
y = 1.045E-3 x + 1.376E-2
R 0.9999
DL 2.182
BEC 13.17



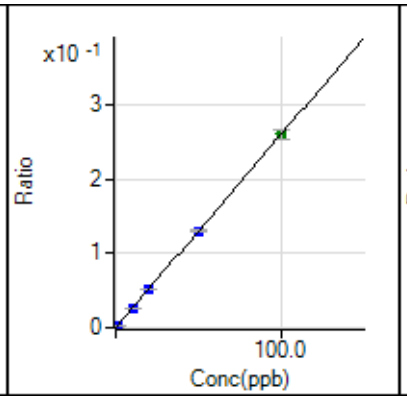
55 Mn [No Gas] / ISTD: 72 Ge
y = 1.234E-2 x + 1.021E-3
R 0.9999
DL 0.01346
BEC 0.08274



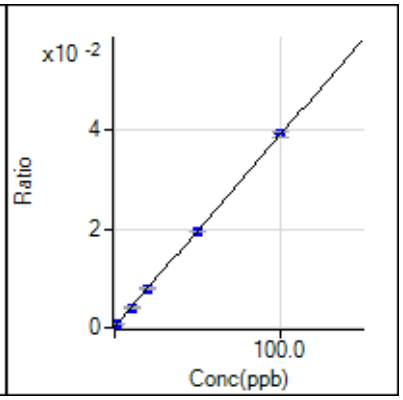
56 Fe [He] / ISTD: 72 Ge
y = 1.790E-5 x + 1.515E-2
R -0.1047
DL 72.83
BEC 846



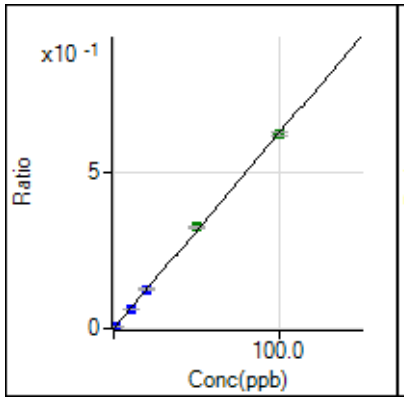
59 Co [He] / ISTD: 72 Ge
y = 2.254E-2 x + 1.138E-4
R 1.0000
DL 0.006419
BEC 0.00505



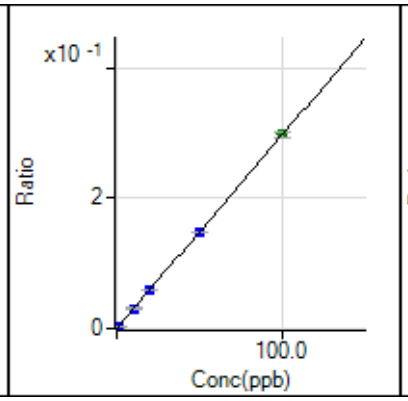
60 Ni [No Gas] / ISTD: 72 Ge
y = 2.601E-3 x + 1.118E-4
R 1.0000
DL 0.01601
BEC 0.04299



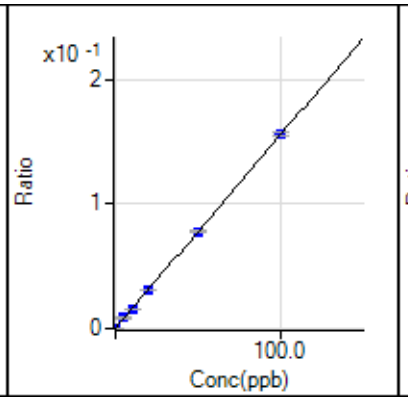
62 (Ni) [No Gas] / ISTD: 72 Ge
y = 3.886E-4 x + 2.229E-4
R 1.0000
DL 0.05951
BEC 0.5736



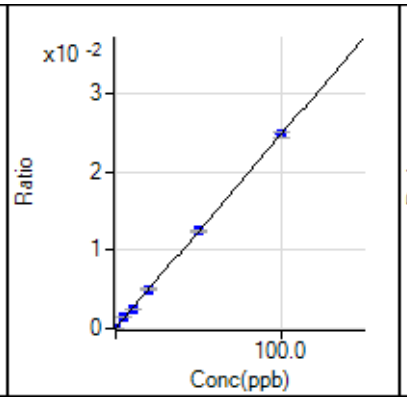
63 Cu [No Gas] / ISTD: 72 Ge
y = 6.239E-3 x + 3.058E-4
R 0.9998
DL 0.01742
BEC 0.04902



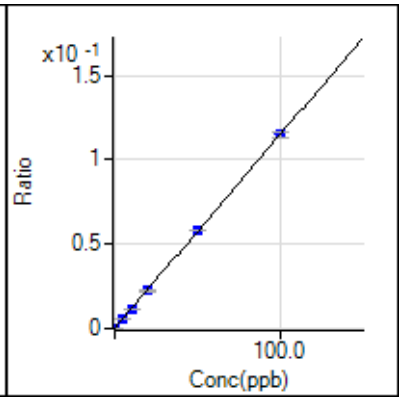
65 (Cu) [No Gas] / ISTD: 72 Ge
y = 2.975E-3 x + 1.427E-4
R 1.0000
DL 0.01119
BEC 0.04796



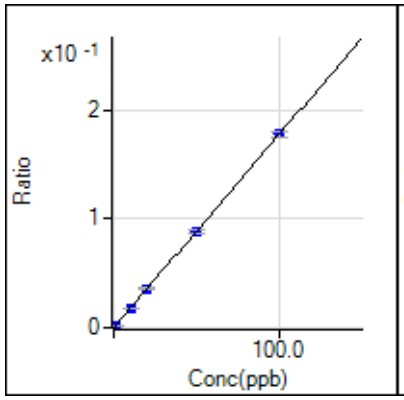
66 Zn [No Gas] / ISTD: 72 Ge
y = 1.552E-3 x + 2.540E-4
R 1.0000
DL 0.02984
BEC 0.1636



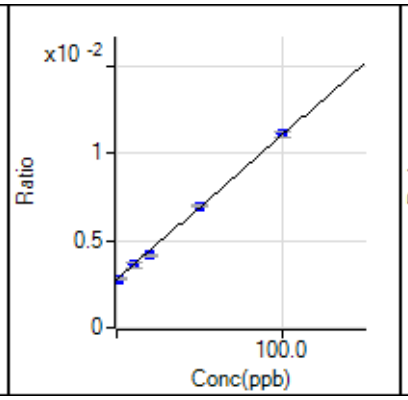
67 (Zn) [No Gas] / ISTD: 72 Ge
y = 2.482E-4 x + 7.002E-5
R 1.0000
DL 0.07254
BEC 0.2821



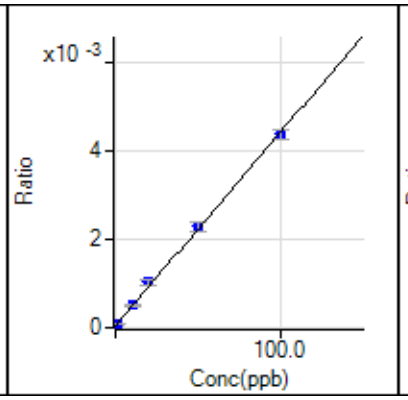
68 (Zn) [No Gas] / ISTD: 72 Ge
y = 1.149E-3 x + 2.186E-4
R 1.0000
DL 0.01085
BEC 0.1902



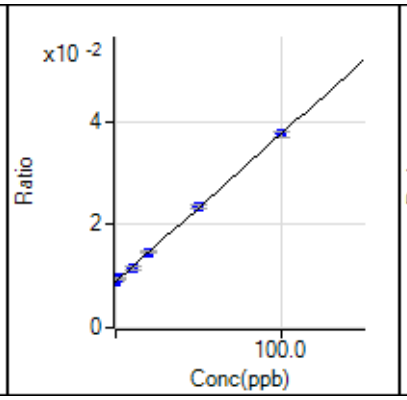
75 As [No Gas] / ISTD: 72 Ge
y = 1.779E-3 x - 2.725E-4
R 1.0000
DL 0.3305
BEC -0.1531



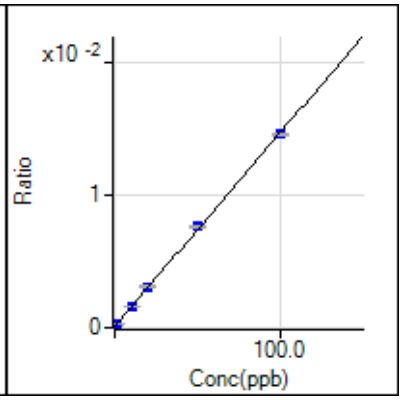
77 (Se) [No Gas] / ISTD: 72 Ge
y = 8.276E-5 x + 2.761E-3
R 0.9994
DL 2.319
BEC 33.36



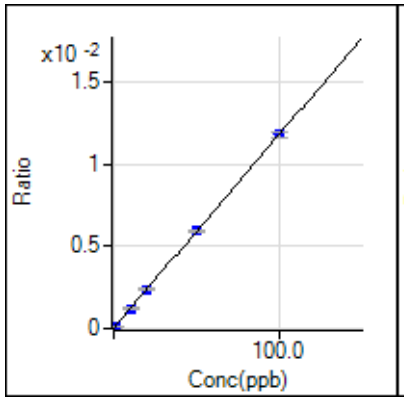
77 (Se) [He] / ISTD: 72 Ge
y = 4.394E-5 x + 4.339E-5
R 0.9996
DL 0.3516
BEC 0.9874



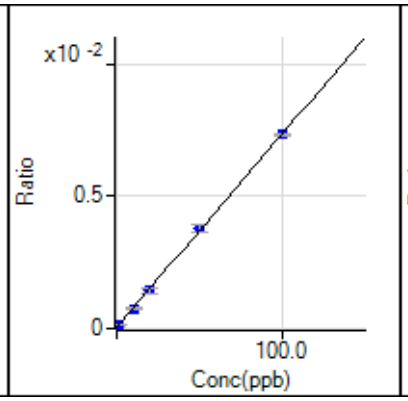
78 (Se) [No Gas] / ISTD: 72 Ge
y = 2.880E-4 x + 8.952E-3
R 0.9998
DL 2.523
BEC 31.08



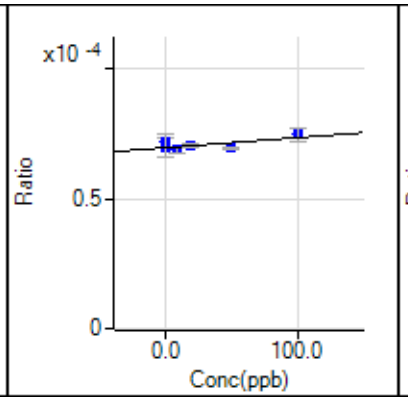
78 Se [He] / ISTD: 72 Ge
y = 1.462E-4 x + 9.638E-5
R 0.9998
DL 0.148
BEC 0.6591



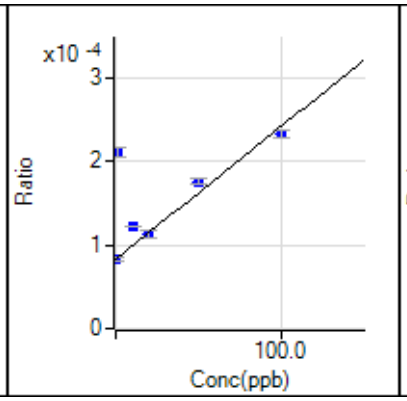
82 Se [No Gas] / ISTD: 72 Ge
y = 1.182E-4 x + 3.439E-5
R 1.0000
DL 0.1049
BEC 0.2911



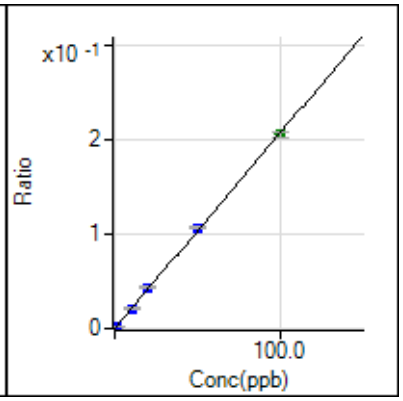
82 (Se) [He] / ISTD: 72 Ge
y = 7.321E-5 x + 5.295E-5
R 0.9998
DL 0.9865
BEC 0.7233



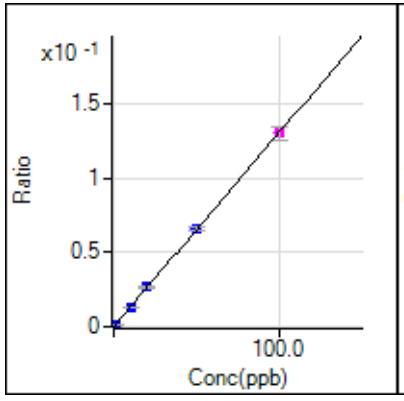
83 [As] [No Gas] / ISTD: 72 Ge
y = 3.862E-8 x + 6.975E-5
R 0.6427
DL 587.4
BEC 1806



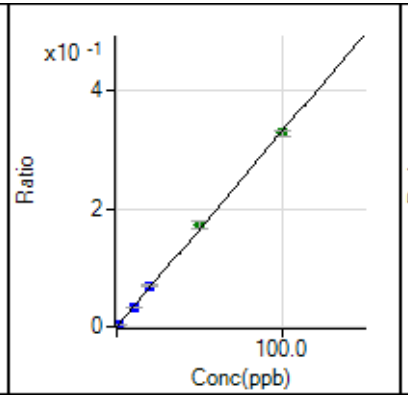
88 Sr [No Gas] / ISTD: 89 Y
y = 1.593E-6 x + 8.323E-5
R 0.6447
DL 8.363
BEC 52.24



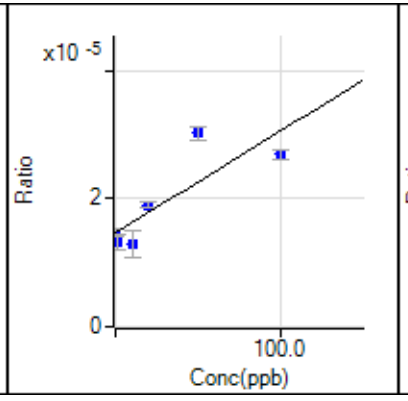
95 (Mo) [No Gas] / ISTD: 89 Y
y = 2.073E-3 x + 1.959E-5
R 0.9998
DL 0.008696
BEC 0.00945



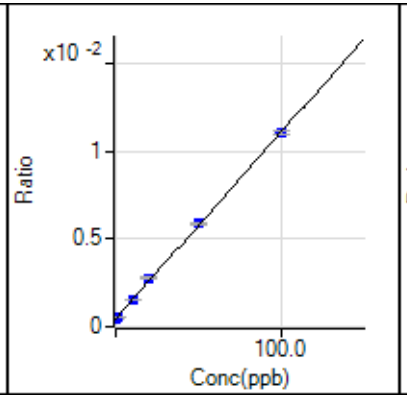
97 (Mo) [No Gas] / ISTD: 89 Y
y = 1.310E-3 x + 1.745E-5
R 0.9999
DL 0.01794
BEC 0.01333



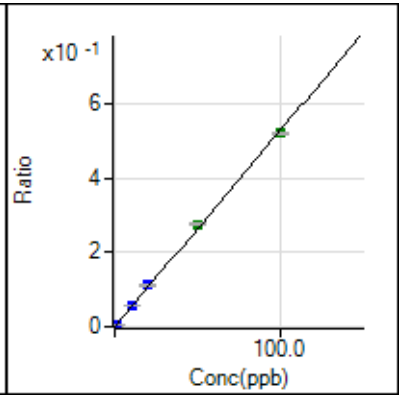
98 Mo [No Gas] / ISTD: 89 Y
y = 3.316E-3 x + 2.864E-5
R 0.9997
DL 0.004133
BEC 0.008637



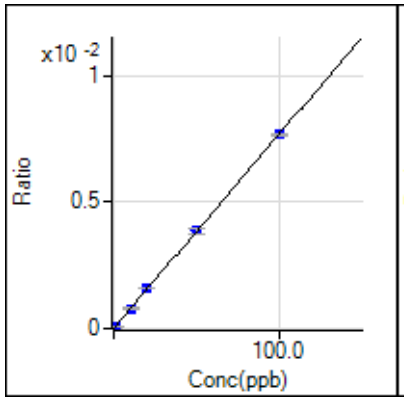
99 [Mo] [No Gas] / ISTD: 89 Y
y = 1.591E-7 x + 1.470E-5
R 0.8308
DL 20.78
BEC 92.4



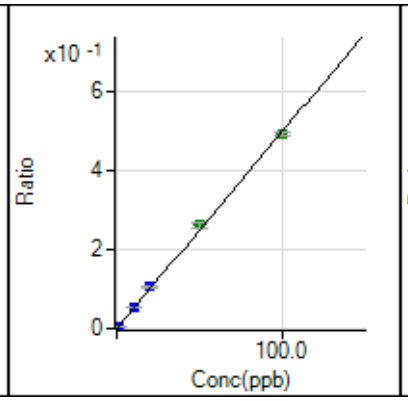
106 (Cd) [No Gas] / ISTD: 89 Y
y = 1.066E-4 x + 4.596E-4
R 0.9998
DL 0.03583
BEC 4.313



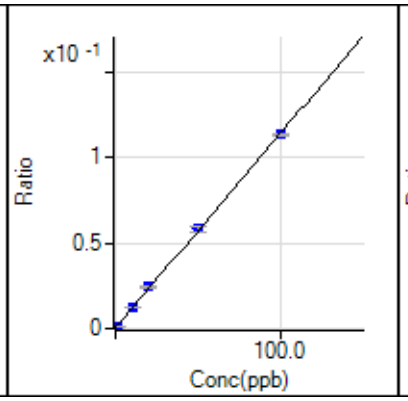
107 Ag [No Gas] / ISTD: 89 Y
y = 5.279E-3 x + 2.722E-5
R 0.9995
DL 0.005482
BEC 0.005156



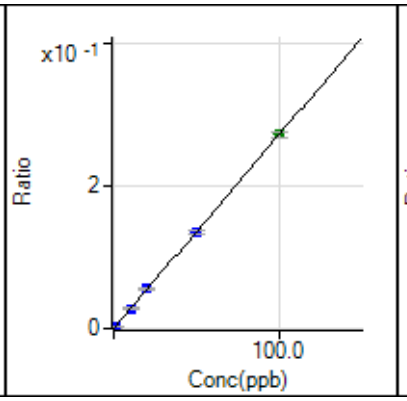
108 (Cd) [No Gas] / ISTD: 89 Y
y = 7.677E-5 x + 6.017E-6
R 1.0000
DL 0.05369
BEC 0.07838



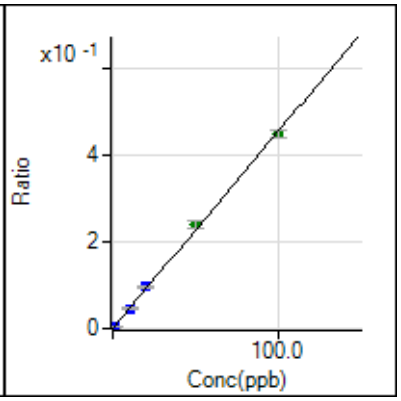
109 (Ag) [No Gas] / ISTD: 89 Y
y = 4.973E-3 x + 1.927E-5
R 0.9995
DL 0.002459
BEC 0.003874



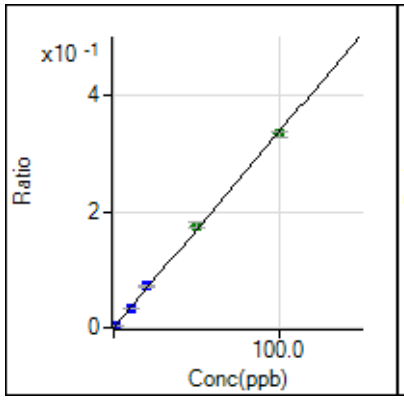
111 Cd [No Gas] / ISTD: 89 Y
y = 1.139E-3 x + 3.484E-4
R 0.9999
DL 0.004898
BEC 0.3058



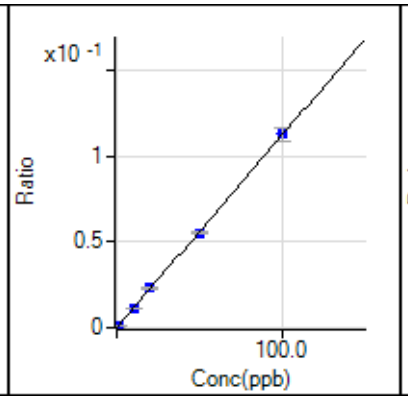
114 (Cd) [No Gas] / ISTD: 89 Y
y = 2.719E-3 x + 1.408E-5
R 1.0000
DL 0.001935
BEC 0.005178



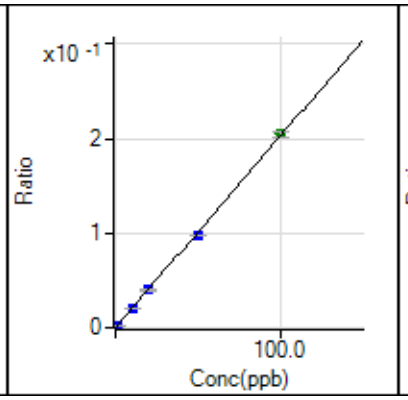
121 (Sb) [No Gas] / ISTD: 89 Y
y = 4.543E-3 x + 1.079E-4
R 0.9993
DL 0.005919
BEC 0.02375



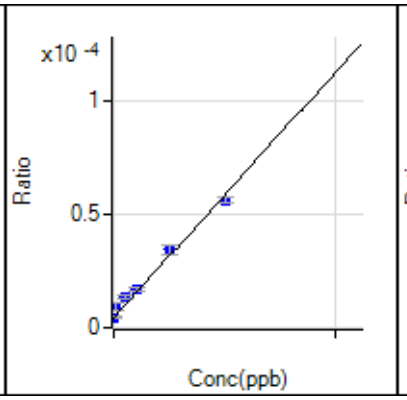
123 Sb [No Gas] / ISTD: 89 Y
y = 3.382E-3 x + 7.828E-5
R 0.9995
DL 0.00595
BEC 0.02314



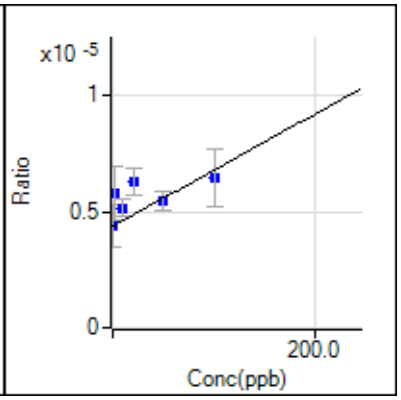
135 (Ba) [No Gas] / ISTD: 115 In
y = 1.124E-3 x + 2.266E-5
R 0.9999
DL 0.004242
BEC 0.02015



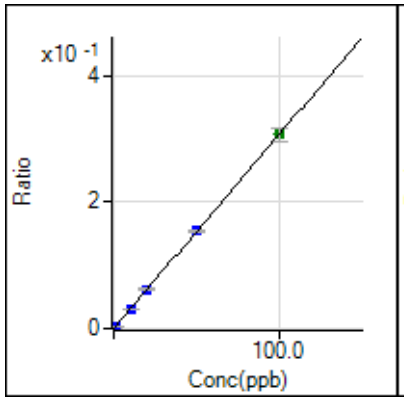
137 Ba [No Gas] / ISTD: 115 In
y = 2.031E-3 x + 3.799E-5
R 0.9998
DL 0.006255
BEC 0.01871



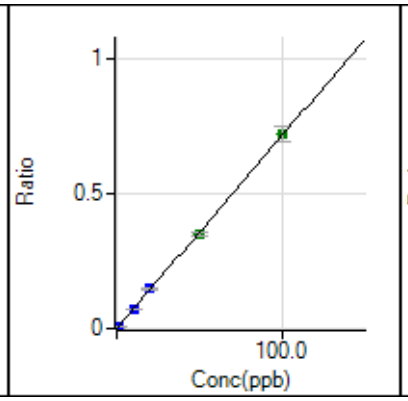
184 W [No Gas] / ISTD: 115 In
y = 5.390E-7 x + 4.369E-6
R 0.9958
DL 4.822
BEC 8.106



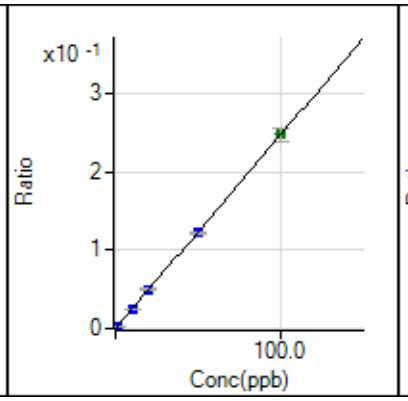
195 Pt [No Gas] / ISTD: 115 In
y = 2.422E-8 x + 4.375E-6
R 0.6048
DL 220.8
BEC 180.6



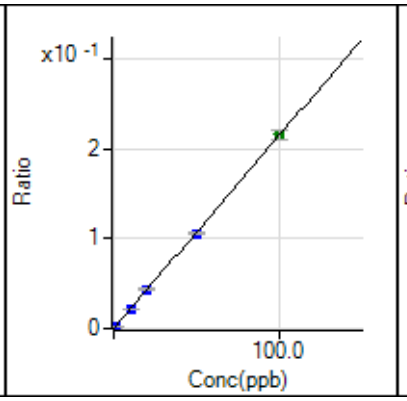
203 Tl [No Gas] / ISTD: 115 In
y = 3.073E-3 x + 1.387E-5
R 1.0000
DL 0.005764
BEC 0.004515



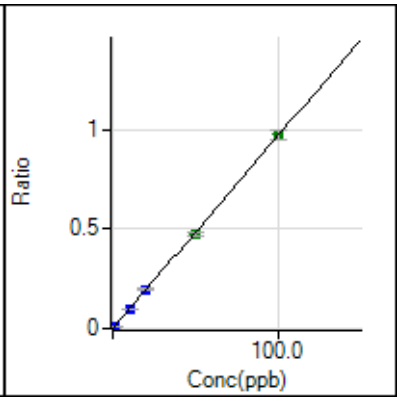
205 (Tl) [No Gas] / ISTD: 115 In
y = 7.180E-3 x + 2.620E-5
R 0.9999
DL 0.003072
BEC 0.003649



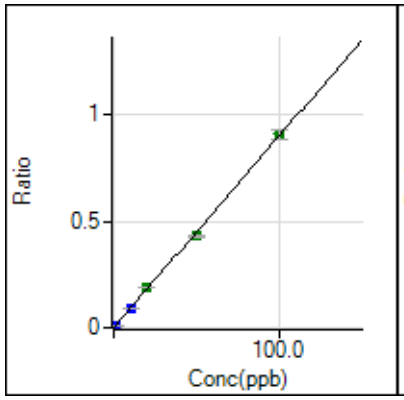
206 (Pb) [No Gas] / ISTD: 115 In
y = 2.470E-3 x + 1.804E-5
R 1.0000
DL 0.004199
BEC 0.007303



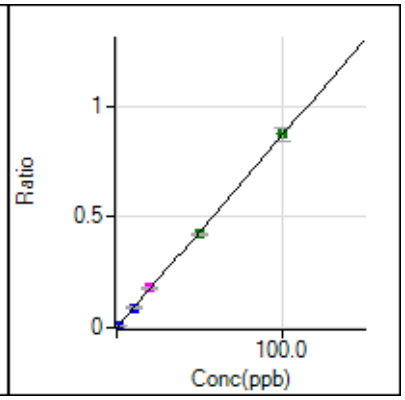
207 (Pb) [No Gas] / ISTD: 115 In
y = 2.149E-3 x + 1.847E-5
R 0.9999
DL 0.009133
BEC 0.008596



208 Pb [No Gas] / ISTD: 115 In
y = 9.707E-3 x + 7.292E-5
R 0.9999
DL 0.00429
BEC 0.007512



232 Th [No Gas] / ISTD: 115 In
y = 9.026E-3 x + 1.566E-4
R 0.9996
DL 0.002117
BEC 0.01735



238 U [No Gas] / ISTD: 115 In
y = 8.703E-3 x + 9.609E-6
R 0.9998
DL 0.002993
BEC 0.001104

Relative Error for ICP-MS Calibration

Date: 6/6/24 Data File: 060624-MS7900

Be	TV	Conc	%RE	%RD
	1	0.994	-0.006	0.994
	10	10.285	0.0285	1.0285
	20	20.577	0.02885	1.02885
	50	51.61	0.0322	1.0322
	100	99.051	-0.00949	0.99051
Al				
	5	5.604	0.1208	1.1208
	10	10.829	0.0829	1.0829
	20	21.137	0.05685	1.05685
	50	50.044	0.00088	1.00088
	100	99.637	-0.00363	0.99637
V				
	1	1.02	0.02	1.02
	10	10.115	0.0115	1.0115
	20	20.169	0.00845	1.00845
	50	51.512	0.03024	1.03024
	100	99.199	-0.00801	0.99199
Cr				
	1	1.109	0.109	1.109
	10	10.318	0.0318	1.0318
	20	19.915	-0.00425	0.99575
	50	49.735	-0.0053	0.9947
	100	100.117	0.00117	1.00117
Mn				
	1	1.035	0.035	1.035
	10	10.134	0.0134	1.0134
	20	20.513	0.02565	1.02565
	50	49.096	-0.01808	0.98192
	100	100.336	0.00336	1.00336
Co				
	1	0.994	-0.006	0.994
	10	10.18	0.018	1.018
	20	20.133	0.00665	1.00665
	50	50.654	0.01308	1.01308
	100	99.629	-0.00371	0.99629
Ni				
	1	1.029	0.029	1.029
	10	10.121	0.0121	1.0121
	20	19.885	-0.00575	0.99425
	50	50.102	0.00204	1.00204
	100	99.96	-0.0004	0.9996
Cu				
	1	1.045	0.045	1.045
	10	10.123	0.0123	1.0123
	20	19.914	-0.0043	0.9957
	50	51.7	0.034	1.034
	100	99.154	-0.00846	0.99154
Zn				
	5	5.378	0.0756	1.0756
	10	10.082	0.0082	1.0082
	20	19.709	-0.01455	0.98545
	50	49.888	-0.00224	0.99776
	100	100.087	0.00087	1.00087
Pb				
	1	1.02	0.02	1.02
	10	10.207	0.0207	1.0207
	20	20.39	0.0195	1.0195
	50	48.9	-0.022	0.978
	100	100.451	0.00451	1.00451
U				
	1	1.034	0.034	1.034
	10	10.324	0.0324	1.0324
	20	20.676	0.0338	1.0338
	50	48.549	-0.02902	0.97098
	100	100.558	0.00558	1.00558

As	TV	Conc	%RE	%RD
	1	1.093	0.093	1.093
	10	10.036	0.0036	1.0036
	20	19.984	-0.0008	0.9992
	50	49.809	-0.00382	0.99618
	100	100.094	0.00094	1.00094
Se78				
	1	0.946	-0.054	0.946
	10	10.156	0.0156	1.0156
	20	20.443	0.02215	1.02215
	50	51.533	0.03066	1.03066
	100	99.13	-0.0087	0.9913
Se82				
	1	1.03	0.03	1.03
	10	10.036	0.0036	1.0036
	20	20.069	0.00345	1.00345
	50	50.155	0.0031	1.0031
	100	99.905	-0.00095	0.99905
Mo				
	1	1.026	0.026	1.026
	10	10.069	0.0069	1.0069
	20	20.818	0.0409	1.0409
	50	51.737	0.03474	1.03474
	100	98.961	-0.01039	0.98961
Ag				
	1	1.012	0.012	1.012
	10	10.395	0.0395	1.0395
	20	21.26	0.063	1.063
	50	52.297	0.04594	1.04594
	100	98.56	-0.0144	0.9856
Cd				
	1	1.024	0.024	1.024
	10	10.382	0.0382	1.0382
	20	21.253	0.06265	1.06265
	50	50.822	0.01644	1.01644
	100	99.3	-0.007	0.993
Sb				
	1	1.028	0.028	1.028
	10	10.059	0.0059	1.0059
	20	21.374	0.0687	1.0687
	50	52.201	0.04402	1.04402
	100	98.619	-0.01381	0.98619
Ba				
	1	1.013	0.013	1.013
	10	9.921	-0.0079	0.9921
	20	19.888	-0.0056	0.9944
	50	48.481	-0.03038	0.96962
	100	100.789	0.00789	1.00789
Tl				
	1	0.997	-0.003	0.997
	10	10.204	0.0204	1.0204
	20	20.159	0.00795	1.00795
	50	50.175	0.0035	1.0035
	100	99.861	-0.00139	0.99861
Th				
	1	0.981	-0.019	0.981
	10	10.284	0.0284	1.0284
	20	20.863	0.04315	1.04315
	50	47.991	-0.04018	0.95982
	100	100.804	0.00804	1.00804

7900 ICP-MS 200.8/6020A
Initial Calibration Verification (ICV) Report

Sample Name	ICV
File Name	015_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 16:06:10
Sample Type	ICV
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	% Rec	QC Flag
Be	9	45	No Gas	48.437	ppb	5.5	180680.91	96.87	
Al	27	72	No Gas	47.373	ppb	9.3	1950673.46	94.75	
V	51	72	He	49.665	ppb	1.6	584235.64	99.33	
Cr	52	72	No Gas	48.039	ppb	13.2	3105611.33	96.08	
Mn	55	72	No Gas	47.456	ppb	9.9	4298611.36	94.91	
Co	59	72	He	49.655	ppb	1.4	1251196.37	99.31	
Ni	60	72	No Gas	47.061	ppb	10.5	898048.75	94.12	
Cu	63	72	No Gas	50.934	ppb	9.5	2331936.09	101.87	
Zn	66	72	No Gas	48.283	ppb	12.3	550955.19	96.57	
As	75	72	No Gas	49.060	ppb	10.9	637701.64	98.12	
Se	78	72	He	51.317	ppb	2.1	8495.90	102.63	
Se	82	72	No Gas	49.524	ppb	11.6	43135.33	99.05	
Mo	98	89	No Gas	52.679	ppb	6.6	1880393.64	105.36	
Ag	107	89	No Gas	51.822	ppb	7.3	2943463.50	103.64	
Cd	111	89	No Gas	50.230	ppb	6.2	619479.08	100.46	
Sb	123	89	No Gas	50.145	ppb	7.0	1826572.01	100.29	
Ba	137	115	No Gas	47.737	ppb	6.0	981876.42	95.47	
Tl	203	115	No Gas	50.087	ppb	6.1	1558263.13	100.17	
Pb	208	115	No Gas	49.198	ppb	7.1	4835868.07	98.4	
Th	232	115	No Gas	49.551	ppb	9.9	4528766.21	99.1	
U	238	115	No Gas	48.741	ppb	7.5	4293820.94	97.48	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9765747.67	3.7	9572576.56	102.02	60	125	
Sc	45	He	560064.96	0.6	537132.74	104.27	60	125	
Ge	72	No Gas	7341090.82	2.5	7221407.63	101.66	60	125	
Ge	72	He	1118126.76	1.9	1075133.33	104	60	125	
Y	89	No Gas	10764826.79	2.6	10505771.25	102.47	60	125	
Y	89	He	1815337.15	2.7	1785434.86	101.67	60	125	
Rh	103	No Gas	9116713.53	1.3	9029665.75	100.96	60	125	
Rh	103	He	4681407.31	3.3	4662246.34	100.41	60	125	
In	115	No Gas	10124836.54	0.8	9909318.5	102.17	60	125	
Lu	175	No Gas	54125.60	2.2	53023.13	102.08	60	125	

7900 ICP-MS 200.8/6020A
Initial Calibration Blank (ICB) Report

Sample Name	ICB
File Name	016_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 16:07:56
Sample Type	ICB
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.003	ppb	63.0	28.89	
Al	27	72	No Gas	-0.068	ppb	N/A	10896.76	
V	51	72	He	0.013	ppb	304.0	1310.09	
Cr	52	72	No Gas	0.003	ppb	2180.7	49130.02	
Mn	55	72	No Gas	0.004	ppb	145.4	7564.24	
Co	59	72	He	0.026	ppb	149.6	753.43	
Ni	60	72	No Gas	0.006	ppb	61.6	892.25	
Cu	63	72	No Gas	0.005	ppb	50.1	2382.43	
Zn	66	72	No Gas	0.021	ppb	83.2	2025.71	
As	75	72	No Gas	0.088	ppb	21.3	-814.78	
Se	78	72	He	0.024	ppb	41.7	108.67	
Se	82	72	No Gas	0.013	ppb	912.7	250.63	
Mo	98	89	No Gas	0.038	ppb	13.4	1669.69	
Ag	107	89	No Gas	0.009	ppb	27.7	832.25	
Cd	111	89	No Gas	0.042	ppb	50.6	4261.57	
Sb	123	89	No Gas	0.078	ppb	13.8	3660.51	
Ba	137	115	No Gas	0.003	ppb	28.5	446.68	
Tl	203	115	No Gas	0.016	ppb	18.4	652.24	
Pb	208	115	No Gas	0.016	ppb	19.9	2312.31	
Th	232	115	No Gas	0.123	ppb	15.5	12854.36	
U	238	115	No Gas	0.008	ppb	12.6	771.14	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9862257.94	1.9	9572576.56	103.03	60	125	
Sc	45	He	549889.84	0.9	537132.74	102.38	60	125	
Ge	72	No Gas	7061065.55	4.5	7221407.63	97.78	60	125	
Ge	72	He	1087670.76	0.8	1075133.33	101.17	60	125	
Y	89	No Gas	10750452.35	3.0	10505771.25	102.33	60	125	
Y	89	He	1808468.40	2.4	1785434.86	101.29	60	125	
Rh	103	No Gas	9394785.46	5.2	9029665.75	104.04	60	125	
Rh	103	He	4757711.20	1.7	4662246.34	102.05	60	125	
In	115	No Gas	10132262.65	4.2	9909318.5	102.25	60	125	
Lu	175	No Gas	55135.08	2.9	53023.13	103.98	60	125	

7900 ICP-MS 200.8/6020A
Contract Required Detection Limit (CRDL) Report

Sample Name	CRDL
File Name	017LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 16:09:51
Sample Type	LLICV
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	%Rec	QC Flag
Be	9	45	No Gas	0.938	ppb	6.6	3485.99	93.8	
Al	27	72	No Gas	5.043	ppb	9.6	215751.92	100.86	
V	51	72	He	1.010	ppb	5.5	12809.10	101	
Cr	52	72	No Gas	0.984	ppb	13.5	111266.34	98.4	
Mn	55	72	No Gas	0.975	ppb	11.6	93728.51	97.5	
Co	59	72	He	1.000	ppb	2.1	24860.61	100	
Ni	60	72	No Gas	0.980	ppb	12.2	19098.67	98	
Cu	63	72	No Gas	0.979	ppb	11.5	46045.91	97.9	
Zn	66	72	No Gas	5.061	ppb	11.1	58223.96	101.22	
As	75	72	No Gas	0.928	ppb	12.2	9888.95	92.8	
Se	78	72	He	0.992	ppb	7.7	265.00	99.2	
Se	82	72	No Gas	0.980	ppb	22.4	1076.80	98	
Mo	98	89	No Gas	0.982	ppb	7.1	35041.80	98.2	
Ag	107	89	No Gas	0.989	ppb	4.7	55942.08	98.9	
Cd	111	89	No Gas	0.992	ppb	4.2	15753.03	99.2	
Sb	123	89	No Gas	1.024	ppb	5.2	37766.39	102.4	
Ba	137	115	No Gas	0.915	ppb	8.5	19578.90	91.5	
Tl	203	115	No Gas	0.928	ppb	9.3	29581.95	92.8	
Pb	208	115	No Gas	0.945	ppb	8.5	95475.46	94.5	
Th	232	115	No Gas	0.960	ppb	7.0	91174.29	96	
U	238	115	No Gas	0.944	ppb	9.0	84919.74	94.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9703174.61	3.2	9572576.56	101.36	60	125	
Sc	45	He	549209.56	1.4	537132.74	102.25	60	125	
Ge	72	No Gas	7193763.32	2.8	7221407.63	99.62	60	125	
Ge	72	He	1097851.42	0.4	1075133.33	102.11	60	125	
Y	89	No Gas	10656340.41	1.2	10505771.25	101.43	60	125	
Y	89	He	1841970.41	2.2	1785434.86	103.17	60	125	
Rh	103	No Gas	9244498.80	2.0	9029665.75	102.38	60	125	
Rh	103	He	4791746.06	2.4	4662246.34	102.78	60	125	
In	115	No Gas	10345232.64	3.8	9909318.5	104.4	60	125	
Lu	175	No Gas	54494.45	0.7	53023.13	102.77	60	125	

7900 ICP-MS 200.8/6020A
High-Level Continuing Calibration Verification (HLCCV) Report

Sample Name	HLCCV1
File Name	018_QCS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 16:11:47
Sample Type	QCS
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	%Rec	QC Flag
Be	9	45	No Gas	94.900	ppb	8.5	361461.43	94.9	
Al	27	72	No Gas	96.639	ppb	4.6	3947669.84	96.64	
V	51	72	He	99.343	ppb	4.1	1162112.03	99.34	
Cr	52	72	No Gas	96.353	ppb	5.1	6153103.50	96.35	
Mn	55	72	No Gas	92.258	ppb	8.4	8321454.12	92.26	
Co	59	72	He	99.073	ppb	2.2	2485786.64	99.07	
Ni	60	72	No Gas	98.204	ppb	6.1	1865128.16	98.2	
Cu	63	72	No Gas	94.777	ppb	2.9	4317365.94	94.78	
Zn	66	72	No Gas	94.981	ppb	6.1	1078261.94	94.98	
As	75	72	No Gas	95.399	ppb	5.5	1237491.18	95.4	
Se	78	72	He	99.948	ppb	2.6	16376.53	99.95	
Se	82	72	No Gas	95.633	ppb	5.2	82768.51	95.63	
Mo	98	89	No Gas	97.088	ppb	11.8	3507681.32	97.09	
Ag	107	89	No Gas	94.440	ppb	8.0	5434636.45	94.44	
Cd	111	89	No Gas	96.480	ppb	7.9	1201806.60	96.48	
Sb	123	89	No Gas	96.758	ppb	10.2	3566898.75	96.76	
Ba	137	115	No Gas	92.958	ppb	9.7	1939838.19	92.96	
Tl	203	115	No Gas	94.305	ppb	10.5	2977334.26	94.3	
Pb	208	115	No Gas	96.040	ppb	10.6	9576506.98	96.04	
Th	232	115	No Gas	95.950	ppb	10.1	8898314.92	95.95	
U	238	115	No Gas	93.805	ppb	8.8	8389008.83	93.8	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9996848.49	3.5	9572576.56	104.43	60	125	
Sc	45	He	558355.57	1.4	537132.74	103.95	60	125	
Ge	72	No Gas	7295008.32	3.3	7221407.63	101.02	60	125	
Ge	72	He	1113533.53	1.9	1075133.33	103.57	60	125	
Y	89	No Gas	10918488.73	3.2	10505771.25	103.93	60	125	
Y	89	He	1865790.27	3.8	1785434.86	104.5	60	125	
Rh	103	No Gas	8966558.26	2.9	9029665.75	99.3	60	125	
Rh	103	He	4802934.11	2.3	4662246.34	103.02	60	125	
In	115	No Gas	10301800.15	4.3	9909318.5	103.96	60	125	
Lu	175	No Gas	54626.40	4.3	53023.13	103.02	60	125	

7900 ICP-MS 200.8/6020A
Interference Check Solution A (ICSA) Report

Sample Name	ICSA
File Name	019ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 16:13:25
Sample Type	ICSA
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.011	ppb	109.5	58.89	
Al	27	72	No Gas	17558.080	ppb	12.5	716538193.75	
V	51	72	He	0.054	ppb	10.1	1790.12	
Cr	52	72	No Gas	0.323	ppb	24.7	71448.88	
Mn	55	72	No Gas	0.323	ppb	11.6	36639.91	
Co	59	72	He	0.105	ppb	8.7	2730.27	
Ni	60	72	No Gas	0.249	ppb	11.4	5566.67	
Cu	63	72	No Gas	0.971	ppb	13.3	46572.05	
Zn	66	72	No Gas	0.744	ppb	11.2	10318.23	
As	75	72	No Gas	0.102	ppb	165.1	-619.01	
Se	78	72	He	1.246	ppb	11.9	306.67	
Se	82	72	No Gas	1.573	ppb	20.4	1609.79	
Mo	98	89	No Gas	370.828	ppb	12.9	13401438.60	
Ag	107	89	No Gas	0.045	ppb	14.4	2893.65	
Cd	111	89	No Gas	0.040	ppb	71.9	4300.03	
Sb	123	89	No Gas	0.117	ppb	11.1	5185.45	
Ba	137	115	No Gas	0.442	ppb	11.4	9159.83	
Tl	203	115	No Gas	0.030	ppb	43.4	1064.50	
Pb	208	115	No Gas	0.056	ppb	9.6	6058.38	
Th	232	115	No Gas	0.305	ppb	5.1	28615.69	
U	238	115	No Gas	0.018	ppb	48.0	1670.17	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9721313.22	2.9	9572576.56	101.55	60	125	
Sc	45	He	561938.57	3.5	537132.74	104.62	60	125	
Ge	72	No Gas	7339476.65	4.0	7221407.63	101.63	60	125	
Ge	72	He	1098806.55	4.1	1075133.33	102.2	60	125	
Y	89	No Gas	10911833.73	2.3	10505771.25	103.87	60	125	
Y	89	He	1856549.23	2.0	1785434.86	103.98	60	125	
Rh	103	No Gas	8727104.65	0.9	9029665.75	96.65	60	125	
Rh	103	He	4545973.99	1.1	4662246.34	97.51	60	125	
In	115	No Gas	9814671.00	4.2	9909318.5	99.04	60	125	
Lu	175	No Gas	53788.40	2.9	53023.13	101.44	60	125	

7900 ICP-MS 200.8/6020A
Interference Check Solution AB (ICSAB) Report

Sample Name	ICSAB
File Name	020ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 16:15:17
Sample Type	ICSB
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	19.958	ppb	8.7	73145.10	
Al	27	72	No Gas	18862.632	ppb	5.3	731848930.92	
V	51	72	He	20.833	ppb	0.2	238558.65	
Cr	52	72	No Gas	19.750	ppb	9.9	1241064.40	
Mn	55	72	No Gas	19.550	ppb	7.5	1685275.00	
Co	59	72	He	19.443	ppb	0.7	475727.22	
Ni	60	72	No Gas	18.930	ppb	8.6	343379.02	
Cu	63	72	No Gas	19.908	ppb	10.1	866369.88	
Zn	66	72	No Gas	19.583	ppb	9.4	213261.93	
As	75	72	No Gas	19.860	ppb	9.1	243955.71	
Se	78	72	He	22.373	ppb	0.3	3655.14	
Se	82	72	No Gas	22.209	ppb	9.1	18498.66	
Mo	98	89	No Gas	380.100	ppb	6.9	13493921.39	
Ag	107	89	No Gas	18.412	ppb	8.9	1040665.17	
Cd	111	89	No Gas	18.664	ppb	7.9	231322.26	
Sb	123	89	No Gas	19.913	ppb	7.9	721745.87	
Ba	137	115	No Gas	19.964	ppb	9.2	398599.07	
Tl	203	115	No Gas	19.407	ppb	7.3	586203.07	
Pb	208	115	No Gas	19.530	ppb	8.1	1863471.76	
Th	232	115	No Gas	0.116	ppb	28.1	11759.40	> +/- 10%
U	238	115	No Gas	19.884	ppb	7.2	1700173.33	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9607415.73	0.9	9572576.56	100.36	60	125	
Sc	45	He	548439.86	2.8	537132.74	102.11	60	125	
Ge	72	No Gas	6955482.08	0.8	7221407.63	96.32	60	125	
Ge	72	He	1085328.67	0.7	1075133.33	100.95	60	125	
Y	89	No Gas	10707033.46	1.0	10505771.25	101.92	60	125	
Y	89	He	1854061.59	3.3	1785434.86	103.84	60	125	
Rh	103	No Gas	8486682.99	3.0	9029665.75	93.99	60	125	
Rh	103	He	4482452.74	0.3	4662246.34	96.14	60	125	
In	115	No Gas	9833057.94	2.3	9909318.5	99.23	60	125	
Lu	175	No Gas	51756.99	1.6	53023.13	97.61	60	125	

7900 ICP-MS 200.8/6020A
Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	021_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 16:17:07
Sample Type	CCV
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	% Rec	QC Flag
Be	9	45	No Gas	47.663	ppb	17.0	176681.37	95.33	
Al	27	72	No Gas	49.519	ppb	16.7	2018113.60	99.04	
V	51	72	He	48.845	ppb	1.7	566900.34	97.69	
Cr	52	72	No Gas	46.150	ppb	27.2	2943344.75	92.3	
Mn	55	72	No Gas	46.533	ppb	18.6	4169778.03	93.07	
Co	59	72	He	49.097	ppb	1.3	1220727.87	98.19	
Ni	60	72	No Gas	45.793	ppb	18.7	864472.47	91.59	
Cu	63	72	No Gas	46.938	ppb	17.9	2126107.63	93.88	
Zn	66	72	No Gas	46.745	ppb	20.0	527602.38	93.49	
As	75	72	No Gas	47.186	ppb	20.9	606174.99	94.37	
Se	78	72	He	52.214	ppb	0.6	8528.25	104.43	
Se	82	72	No Gas	47.467	ppb	20.1	40891.40	94.93	
Mo	98	89	No Gas	49.515	ppb	15.4	1707496.32	99.03	
Ag	107	89	No Gas	49.710	ppb	17.9	2726146.28	99.42	
Cd	111	89	No Gas	49.094	ppb	17.7	584386.73	98.19	
Sb	123	89	No Gas	48.398	ppb	20.1	1699366.22	96.8	
Ba	137	115	No Gas	45.892	ppb	17.0	935984.53	91.78	
Tl	203	115	No Gas	47.489	ppb	15.1	1466604.00	94.98	
Pb	208	115	No Gas	48.350	ppb	16.1	4714668.25	96.7	
Th	232	115	No Gas	49.452	ppb	16.7	4486127.88	98.9	
U	238	115	No Gas	47.689	ppb	19.1	4163327.75	95.38	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9752953.78	3.5	9572576.56	101.88	60	125	
Sc	45	He	544890.17	1.6	537132.74	101.44	60	125	
Ge	72	No Gas	7312891.52	6.9	7221407.63	101.27	60	125	
Ge	72	He	1103042.66	0.7	1075133.33	102.6	60	125	
Y	89	No Gas	10464652.92	6.4	10505771.25	99.61	60	125	
Y	89	He	1873434.30	3.1	1785434.86	104.93	60	125	
Rh	103	No Gas	9460064.90	5.3	9029665.75	104.77	60	125	
Rh	103	He	4706397.59	1.1	4662246.34	100.95	60	125	
In	115	No Gas	10103243.77	5.8	9909318.5	101.96	60	125	
Lu	175	No Gas	51347.33	4.4	53023.13	96.84	60	125	

7900 ICP-MS 200.8/6020A
Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	022_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 16:18:53
Sample Type	CCB
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.001	ppb	100.8	21.11	
Al	27	72	No Gas	0.532	ppb	34.9	33823.54	
V	51	72	He	-0.020	ppb	N/A	908.92	
Cr	52	72	No Gas	-0.100	ppb	N/A	41921.40	
Mn	55	72	No Gas	0.008	ppb	33.1	7753.24	
Co	59	72	He	0.000	ppb	444.5	125.56	
Ni	60	72	No Gas	0.005	ppb	43.0	868.92	
Cu	63	72	No Gas	0.007	ppb	18.8	2407.99	
Zn	66	72	No Gas	0.010	ppb	295.0	1865.69	
As	75	72	No Gas	0.047	ppb	73.0	-1298.08	
Se	78	72	He	-0.025	ppb	N/A	98.67	
Se	82	72	No Gas	-0.061	ppb	N/A	186.05	
Mo	98	89	No Gas	0.075	ppb	18.0	2830.40	
Ag	107	89	No Gas	0.006	ppb	21.1	607.79	
Cd	111	89	No Gas	0.014	ppb	60.1	3748.67	
Sb	123	89	No Gas	0.073	ppb	11.1	3323.75	
Ba	137	115	No Gas	0.001	ppb	128.4	387.78	
Tl	203	115	No Gas	0.012	ppb	29.8	473.34	
Pb	208	115	No Gas	0.011	ppb	38.4	1684.49	
Th	232	115	No Gas	0.055	ppb	22.2	6310.49	
U	238	115	No Gas	0.004	ppb	29.1	408.90	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9506676.57	3.6	9572576.56	99.31	60	125	
Sc	45	He	527612.44	3.3	537132.74	98.23	60	125	
Ge	72	No Gas	6904859.59	2.6	7221407.63	95.62	60	125	
Ge	72	He	1063760.79	3.0	1075133.33	98.94	60	125	
Y	89	No Gas	10283603.20	2.5	10505771.25	97.89	60	125	
Y	89	He	1843565.35	1.6	1785434.86	103.26	60	125	
Rh	103	No Gas	8702301.04	4.8	9029665.75	96.37	60	125	
Rh	103	He	4681198.15	3.9	4662246.34	100.41	60	125	
In	115	No Gas	9694868.78	6.5	9909318.5	97.84	60	125	
Lu	175	No Gas	49184.90	1.0	53023.13	92.76	60	125	

7900 ICP-MS 200.8/6020A
Prep Blank (PB) Report

Sample Name	PBW-439458
File Name	023_PB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 16:20:50
Sample Type	PB
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.000	ppb	N/A	14.45	
Al	27	72	No Gas	1.260	ppb	5.7	60093.90	
V	51	72	He	-0.019	ppb	N/A	923.37	
Cr	52	72	No Gas	-0.019	ppb	N/A	45577.14	
Mn	55	72	No Gas	0.022	ppb	24.4	8718.23	
Co	59	72	He	0.000	ppb	535.6	126.67	
Ni	60	72	No Gas	0.004	ppb	140.1	822.25	
Cu	63	72	No Gas	0.014	ppb	41.4	2646.92	
Zn	66	72	No Gas	0.221	ppb	16.4	4001.69	
As	75	72	No Gas	0.168	ppb	28.5	200.69	
Se	78	72	He	-0.017	ppb	N/A	100.00	
Se	82	72	No Gas	0.009	ppb	1126.9	241.35	
Mo	98	89	No Gas	0.032	ppb	11.9	1357.76	
Ag	107	89	No Gas	0.002	ppb	34.8	401.12	
Cd	111	89	No Gas	0.021	ppb	43.9	3733.31	
Sb	123	89	No Gas	0.032	ppb	12.3	1853.47	
Ba	137	115	No Gas	0.002	ppb	129.2	410.01	
Tl	203	115	No Gas	0.002	ppb	37.4	196.67	
Pb	208	115	No Gas	0.006	ppb	38.6	1251.14	
Th	232	115	No Gas	0.017	ppb	11.1	2913.67	
U	238	115	No Gas	0.001	ppb	61.8	142.22	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9189497.41	4.6	9572576.56	96	60	125	
Sc	45	He	529496.30	1.4	537132.74	98.58	60	125	
Ge	72	No Gas	6729055.57	5.2	7221407.63	93.18	60	125	
Ge	72	He	1066005.62	1.4	1075133.33	99.15	60	125	
Y	89	No Gas	10019203.77	0.7	10505771.25	95.37	60	125	
Y	89	He	1852081.18	1.2	1785434.86	103.73	60	125	
Rh	103	No Gas	8330875.78	4.9	9029665.75	92.26	60	125	
Rh	103	He	4588922.60	1.0	4662246.34	98.43	60	125	
In	115	No Gas	9520864.90	2.0	9909318.5	96.08	60	125	
Lu	175	No Gas	48608.55	2.2	53023.13	91.67	60	125	

7900 ICP-MS 200.8/6020A
Laboratory Control Sample (LCS) Report

Sample Name	LCSW-439458
File Name	024_LCS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 16:22:47
Sample Type	LCS
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	% Rec	QC Flag
Be	9	45	No Gas	19.857	ppb	5.0	70593.56	99.28	
Al	27	72	No Gas	40.417	ppb	4.2	1531011.01	101.04	
V	51	72	He	19.783	ppb	1.8	225705.42	98.92	
Cr	52	72	No Gas	20.845	ppb	4.1	1265265.96	104.22	
Mn	55	72	No Gas	20.465	ppb	7.6	1707464.93	102.32	
Co	59	72	He	19.493	ppb	0.9	474956.04	97.46	
Ni	60	72	No Gas	20.086	ppb	7.6	352673.67	100.43	
Cu	63	72	No Gas	21.030	ppb	5.9	885868.25	105.15	
Zn	66	72	No Gas	20.548	ppb	6.0	216545.80	102.74	
As	75	72	No Gas	21.109	ppb	5.1	251148.38	105.54	
Se	78	72	He	20.839	ppb	3.9	3398.08	104.2	
Se	82	72	No Gas	20.843	ppb	3.7	16819.51	104.21	
Mo	98	89	No Gas	20.836	ppb	10.1	694084.67	104.18	
Ag	107	89	No Gas	20.936	ppb	8.0	1110391.45	104.68	
Cd	111	89	No Gas	20.823	ppb	6.4	241823.47	104.12	
Sb	123	89	No Gas	21.263	ppb	8.0	722977.66	106.32	
Ba	137	115	No Gas	20.166	ppb	5.1	379388.88	100.83	
Tl	203	115	No Gas	20.679	ppb	5.0	588241.21	103.4	
Pb	208	115	No Gas	21.014	ppb	3.2	1888368.98	105.07	
Th	232	115	No Gas	21.115	ppb	5.5	1765649.37	105.58	
U	238	115	No Gas	21.259	ppb	3.0	1712184.00	106.3	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9313269.35	1.5	9572576.56	97.29	60	125	
Sc	45	He	527449.11	2.9	537132.74	98.2	60	125	
Ge	72	No Gas	6733318.48	1.1	7221407.63	93.24	60	125	
Ge	72	He	1080886.42	1.8	1075133.33	100.54	60	125	
Y	89	No Gas	10055299.60	2.6	10505771.25	95.71	60	125	
Y	89	He	1820302.67	5.4	1785434.86	101.95	60	125	
Rh	103	No Gas	8755806.60	8.3	9029665.75	96.97	60	125	
Rh	103	He	4658142.31	1.2	4662246.34	99.91	60	125	
In	115	No Gas	9252378.24	1.5	9909318.5	93.37	60	125	
Lu	175	No Gas	49122.49	2.7	53023.13	92.64	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404644-002
File Name	025SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 16:24:42
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	-0.001	ppb	N/A	14.45	
Al	27	72	No Gas	2.441	ppb	1.1	102455.05	
V	51	72	He	-0.015	ppb	N/A	964.48	
Cr	52	72	No Gas	0.194	ppb	8.1	56935.50	
Mn	55	72	No Gas	1.225	ppb	3.6	106529.49	
Co	59	72	He	0.002	ppb	58.7	172.22	
Ni	60	72	No Gas	0.073	ppb	2.3	1990.14	
Cu	63	72	No Gas	0.167	ppb	6.4	8916.17	
Zn	66	72	No Gas	2.812	ppb	4.3	30488.64	
As	75	72	No Gas	0.090	ppb	60.5	-744.71	
Se	78	72	He	0.024	ppb	345.7	106.00	
Se	82	72	No Gas	-0.053	ppb	N/A	185.57	
Mo	98	89	No Gas	0.029	ppb	12.8	1295.37	
Ag	107	89	No Gas	0.004	ppb	11.3	487.79	
Cd	111	89	No Gas	0.010	ppb	30.9	3727.79	
Sb	123	89	No Gas	0.039	ppb	10.7	2180.18	
Ba	137	115	No Gas	3.190	ppb	5.8	62678.46	
Tl	203	115	No Gas	0.008	ppb	22.8	372.23	
Pb	208	115	No Gas	0.013	ppb	21.9	1930.06	
Th	232	115	No Gas	0.067	ppb	20.1	7363.29	
U	238	115	No Gas	0.003	ppb	41.2	324.45	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9539841.29	3.0	9572576.56	99.66	60	125	
Sc	45	He	525943.03	1.5	537132.74	97.92	60	125	
Ge	72	No Gas	6597997.24	3.0	7221407.63	91.37	60	125	
Ge	72	He	1061584.68	2.6	1075133.33	98.74	60	125	
Y	89	No Gas	10353890.70	4.0	10505771.25	98.55	60	125	
Y	89	He	1798982.99	5.6	1785434.86	100.76	60	125	
Rh	103	No Gas	8796622.43	6.6	9029665.75	97.42	60	125	
Rh	103	He	4577760.51	2.3	4662246.34	98.19	60	125	
In	115	No Gas	9629816.01	2.8	9909318.5	97.18	60	125	
Lu	175	No Gas	48506.96	1.3	53023.13	91.48	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404644-004
File Name	026SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 16:26:39
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	-0.001	ppb	N/A	12.22	
Al	27	72	No Gas	1.814	ppb	6.8	79923.24	
V	51	72	He	-0.021	ppb	N/A	881.14	
Cr	52	72	No Gas	0.181	ppb	36.3	56568.94	
Mn	55	72	No Gas	0.867	ppb	9.1	77793.31	
Co	59	72	He	0.003	ppb	8.9	187.78	
Ni	60	72	No Gas	0.072	ppb	9.1	1983.47	
Cu	63	72	No Gas	0.308	ppb	10.7	14795.61	
Zn	66	72	No Gas	1.179	ppb	9.7	13830.17	
As	75	72	No Gas	0.076	ppb	119.0	-920.86	
Se	78	72	He	0.004	ppb	1411.8	101.33	
Se	82	72	No Gas	-0.100	ppb	N/A	150.04	
Mo	98	89	No Gas	0.015	ppb	19.0	764.13	
Ag	107	89	No Gas	0.001	ppb	48.2	332.23	
Cd	111	89	No Gas	0.006	ppb	203.3	3445.11	
Sb	123	89	No Gas	0.035	ppb	5.7	1906.82	
Ba	137	115	No Gas	1.417	ppb	5.9	28022.73	
Tl	203	115	No Gas	0.003	ppb	82.7	210.01	
Pb	208	115	No Gas	0.009	ppb	23.6	1536.71	
Th	232	115	No Gas	0.022	ppb	30.5	3443.82	
U	238	115	No Gas	0.001	ppb	134.7	201.12	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9099834.91	2.0	9572576.56	95.06	60	125	
Sc	45	He	518003.66	1.3	537132.74	96.44	60	125	
Ge	72	No Gas	6647560.29	2.5	7221407.63	92.05	60	125	
Ge	72	He	1045625.65	1.2	1075133.33	97.26	60	125	
Y	89	No Gas	9679271.84	2.9	10505771.25	92.13	60	125	
Y	89	He	1725718.54	2.2	1785434.86	96.66	60	125	
Rh	103	No Gas	8520539.11	3.2	9029665.75	94.36	60	125	
Rh	103	He	4655293.15	3.7	4662246.34	99.85	60	125	
In	115	No Gas	9617347.95	3.2	9909318.5	97.05	60	125	
Lu	175	No Gas	47311.92	3.6	53023.13	89.23	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404644-006
File Name	027SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 16:28:35
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.002	ppb	116.6	23.33	
Al	27	72	No Gas	11.654	ppb	9.5	437164.84	
V	51	72	He	0.028	ppb	31.6	1427.85	
Cr	52	72	No Gas	0.341	ppb	26.3	64798.18	
Mn	55	72	No Gas	547.017	ppb	12.1	44081112.69	>LDR
Co	59	72	He	0.263	ppb	3.5	6354.77	
Ni	60	72	No Gas	0.417	ppb	10.4	7814.41	
Cu	63	72	No Gas	3.529	ppb	8.3	145988.79	
Zn	66	72	No Gas	5.199	ppb	10.4	54376.37	
As	75	72	No Gas	0.345	ppb	12.8	2248.26	
Se	78	72	He	0.078	ppb	26.9	113.33	
Se	82	72	No Gas	0.130	ppb	95.9	323.82	
Mo	98	89	No Gas	0.035	ppb	68.1	1478.41	
Ag	107	89	No Gas	0.005	ppb	125.4	550.09	
Cd	111	89	No Gas	0.010	ppb	42.9	3647.84	
Sb	123	89	No Gas	0.053	ppb	17.0	2598.04	
Ba	137	115	No Gas	40.894	ppb	8.3	787132.21	
Tl	203	115	No Gas	0.003	ppb	81.7	233.34	
Pb	208	115	No Gas	0.090	ppb	9.2	8960.13	
Th	232	115	No Gas	0.020	ppb	11.7	3238.24	
U	238	115	No Gas	0.005	ppb	46.6	490.04	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9158866.03	1.3	9572576.56	95.68	60	125	
Sc	45	He	533617.72	1.7	537132.74	99.35	60	125	
Ge	72	No Gas	6556101.82	5.8	7221407.63	90.79	60	125	
Ge	72	He	1050994.40	0.7	1075133.33	97.75	60	125	
Y	89	No Gas	10142137.93	2.2	10505771.25	96.54	60	125	
Y	89	He	1773067.32	2.9	1785434.86	99.31	60	125	
Rh	103	No Gas	8443773.83	4.2	9029665.75	93.51	60	125	
Rh	103	He	4569317.18	2.5	4662246.34	98.01	60	125	
In	115	No Gas	9491297.96	3.5	9909318.5	95.78	60	125	
Lu	175	No Gas	47261.45	1.3	53023.13	89.13	60	125	

7900 ICP-MS 200.8/6020A
Reference Sample Report

Sample Name	R2404644-008
File Name	028_ARF.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 16:30:31
Sample Type	AllRef
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS
Be	9	45	No Gas	-0.001	ppb	N/A	13.33
Al	27	72	No Gas	7.018	ppb	3.0	266121.04
Cr	52	72	No Gas	0.252	ppb	11.9	59210.53
Mn	55	72	No Gas	9.744	ppb	5.6	786175.75
Ni	60	72	No Gas	0.299	ppb	7.0	5762.30
Cu	63	72	No Gas	0.736	ppb	8.2	31752.55
Zn	66	72	No Gas	2.278	ppb	5.6	24570.35
As	75	72	No Gas	0.320	ppb	22.8	1930.96
Se	82	72	No Gas	0.055	ppb	161.3	265.11
Mo	98	89	No Gas	0.024	ppb	18.1	1023.47
Ag	107	89	No Gas	0.001	ppb	58.0	324.45
Cd	111	89	No Gas	0.019	ppb	47.6	3500.33
Sb	123	89	No Gas	0.056	ppb	13.8	2519.13
Ba	137	115	No Gas	17.375	ppb	3.2	323240.23
Tl	203	115	No Gas	0.002	ppb	63.9	181.11
Pb	208	115	No Gas	0.020	ppb	10.7	2464.54
Th	232	115	No Gas	0.011	ppb	15.5	2372.45
U	238	115	No Gas	0.004	ppb	7.1	387.78
V	51	72	He	0.008	ppb	44.9	1185.61
Co	59	72	He	0.014	ppb	5.3	438.89
Se	78	72	He	0.030	ppb	321.0	104.33

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High
Sc	45	No Gas	9177326.30	1.0	9572576.56	95.87	60	125
Sc	45	He	511042.25	2.3	537132.74	95.14	60	125
Ge	72	No Gas	6484090.30	2.5	7221407.63	89.79	60	125
Ge	72	He	1033979.99	1.0	1075133.33	96.17	60	125
Y	89	No Gas	9456213.23	1.2	10505771.25	90.01	60	125
Y	89	He	1699815.00	2.0	1785434.86	95.2	60	125
Rh	103	No Gas	7912590.80	3.1	9029665.75	87.63	60	125
Rh	103	He	4461200.52	2.3	4662246.34	95.69	60	125
In	115	No Gas	9148359.36	2.5	9909318.5	92.32	60	125
Lu	175	No Gas	46121.89	2.7	53023.13	86.98	60	125

7900 ICP-MS 200.8-6020A
Matrix Spike (MS) Sample Report

Sample Name	R2404644-008S
File Name	029_Spk.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 16:32:27
Sample Type	Spike
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d
QC Ref File Name	028_ ARF. d

QC Analyte Table

Name	Mass	Tune	Conc.	Units	RSD	CPS	RefConc	%Rec	Flag
Be	9	No Gas	18.085	ppb	7.1	62613.53	-0.001	90.43	
Al	27	No Gas	46.761	ppb	9.2	1682069.94	7.018	99.45	
V	51	He	20.303	ppb	1.3	219555.42	0.008	101.48	
Cr	52	No Gas	20.879	ppb	8.3	1204743.56	0.252	103.1	
Mn	55	No Gas	30.792	ppb	10.3	2438569.49	9.744	103.52	
Co	59	He	19.939	ppb	1.7	460576.42	0.014	99.63	
Ni	60	No Gas	19.786	ppb	8.0	330298.88	0.299	97.47	
Cu	63	No Gas	21.066	ppb	9.8	843441.15	0.736	101.59	
Zn	66	No Gas	22.164	ppb	7.4	221911.12	2.278	99.49	
As	75	No Gas	21.142	ppb	7.6	239151.47	0.32	104.05	
Se	78	He	20.445	ppb	4.7	3161.69	0.03	102.07	
Se	82	No Gas	20.704	ppb	8.3	15885.95	0.055	103.23	
Mo	98	No Gas	19.991	ppb	8.8	649986.85	0.024	99.83	
Ag	107	No Gas	19.889	ppb	7.1	1029574.51	0.001	99.44	
Cd	111	No Gas	19.757	ppb	6.2	223960.08	0.019	98.69	
Sb	123	No Gas	20.352	ppb	6.9	675299.38	0.056	101.48	
Ba	137	No Gas	36.238	ppb	7.7	668173.97	17.375	96.96	
Tl	203	No Gas	20.096	ppb	7.1	560347.22	0.002	100.47	
Pb	208	No Gas	19.742	ppb	7.8	1738972.27	0.02	98.61	
Th	232	No Gas	19.372	ppb	7.2	1587888.48	0.011	96.8	
U	238	No Gas	20.185	ppb	9.0	1592889.42	0.004	100.91	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9076780.47	1.8	9572576.56	94.82	60	125	
Sc	45	He	508036.91	2.2	537132.74	94.58	60	125	
Ge	72	No Gas	6406479.47	1.1	7221407.63	88.72	60	125	
Ge	72	He	1024730.83	1.0	1075133.33	95.31	60	125	
Y	89	No Gas	9807847.11	3.6	10505771.25	93.36	60	125	
Y	89	He	1716735.62	2.9	1785434.86	96.15	60	125	
Rh	103	No Gas	8131218.01	2.7	9029665.75	90.05	60	125	
Rh	103	He	4355384.27	1.4	4662246.34	93.42	60	125	
In	115	No Gas	9087444.36	3.9	9909318.5	91.71	60	125	
Lu	175	No Gas	45505.18	0.9	53023.13	85.82	60	125	

7900 ICP-MS 200.8/6020A
Matrix Spike Duplicate (MSD) Sample Report

Sample Name	R2404644-008SD
File Name	030_SpD.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 16:34:23
Sample Type	SpkDup
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d
QC Ref File Name	029_ Spk.d

QC Analyte Table

Name	Mass	Tune	Conc.	Units	RSD	CPS	RefConc	RPD	Flag
Be	9	No Gas	17.788	ppb	2.5	61094.37	18.085	1.66	
Al	27	No Gas	45.543	ppb	9.1	1681449.51	46.761	2.64	
V	51	He	20.329	ppb	1.7	217360.56	20.303	0.13	
Cr	52	No Gas	20.247	ppb	6.1	1200378.53	20.879	3.08	
Mn	55	No Gas	28.806	ppb	8.6	2342135.39	30.792	6.66	
Co	59	He	20.117	ppb	2.5	459437.10	19.939	0.89	
Ni	60	No Gas	18.803	ppb	7.8	322124.05	19.786	5.1	
Cu	63	No Gas	20.517	ppb	7.2	843060.69	21.066	2.64	
Zn	66	No Gas	21.765	ppb	6.3	223614.26	22.164	1.82	
As	75	No Gas	20.349	ppb	7.2	236127.76	21.142	3.83	
Se	78	He	20.723	ppb	1.3	3168.69	20.445	1.35	
Se	82	No Gas	19.807	ppb	4.6	15605.01	20.704	4.43	
Mo	98	No Gas	20.715	ppb	3.9	644594.74	19.991	3.56	
Ag	107	No Gas	20.399	ppb	5.1	1010398.47	19.889	2.53	
Cd	111	No Gas	20.307	ppb	3.0	220231.70	19.757	2.74	
Sb	123	No Gas	20.954	ppb	5.2	665543.57	20.352	2.91	
Ba	137	No Gas	35.362	ppb	6.2	662845.03	36.238	2.45	
Tl	203	No Gas	19.372	ppb	5.5	549230.38	20.096	3.67	
Pb	208	No Gas	19.129	ppb	4.9	1713424.76	19.742	3.15	
Th	232	No Gas	18.854	ppb	5.5	1570795.39	19.372	2.71	
U	238	No Gas	19.897	ppb	3.5	1597942.99	20.185	1.44	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9001650.20	3.6	9572576.56	94.04	60	125	
Sc	45	He	510443.87	0.7	537132.74	95.03	60	125	
Ge	72	No Gas	6571412.24	1.1	7221407.63	91	60	125	
Ge	72	He	1013602.28	3.1	1075133.33	94.28	60	125	
Y	89	No Gas	9378058.52	2.6	10505771.25	89.27	60	125	
Y	89	He	1751809.17	2.2	1785434.86	98.12	60	125	
Rh	103	No Gas	7824601.08	2.7	9029665.75	86.65	60	125	
Rh	103	He	4288883.03	1.2	4662246.34	91.99	60	125	
In	115	No Gas	9229990.75	4.5	9909318.5	93.14	60	125	
Lu	175	No Gas	45385.03	4.3	53023.13	85.59	60	125	

7900 ICP-MS 200.8-6020A
Matrix Spike (MS) Sample Report

Sample Name	R2404644-008A
File Name	031_Spk.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 16:36:18
Sample Type	Spike
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d
QC Ref File Name	028_ ARF. d

QC Analyte Table

Name	Mass	Tune	Conc.	Units	RSD	CPS	RefConc	%Rec	Flag
Be	9	No Gas	18.069	ppb	11.1	62297.41	-0.001	90.35	
Al	27	No Gas	49.551	ppb	8.2	1796706.32	7.018	105.39	
V	51	He	21.596	ppb	0.8	231492.06	0.008	107.94	
Cr	52	No Gas	21.129	ppb	7.3	1228935.16	0.252	104.33	
Mn	55	No Gas	30.610	ppb	10.8	2445249.63	9.744	102.91	
Co	59	He	21.079	ppb	1.0	482849.22	0.014	105.32	
Ni	60	No Gas	20.167	ppb	9.7	339443.76	0.299	99.35	
Cu	63	No Gas	21.326	ppb	10.6	860835.21	0.736	102.84	
Zn	66	No Gas	22.176	ppb	7.9	223870.50	2.278	99.54	
As	75	No Gas	21.365	ppb	8.9	243663.84	0.32	105.14	
Se	78	He	22.007	ppb	1.0	3367.74	0.03	109.87	
Se	82	No Gas	21.068	ppb	8.8	16296.97	0.055	105.05	
Mo	98	No Gas	21.014	ppb	12.1	672046.76	0.024	104.94	
Ag	107	No Gas	19.093	ppb	11.1	972025.69	0.001	95.46	
Cd	111	No Gas	20.326	ppb	8.3	226794.23	0.019	101.53	
Sb	123	No Gas	20.855	ppb	10.3	681216.83	0.056	103.99	
Ba	137	No Gas	37.706	ppb	10.4	677723.86	17.375	100.89	
Tl	203	No Gas	20.666	ppb	11.7	561913.24	0.002	103.32	
Pb	208	No Gas	20.600	ppb	7.5	1771358.62	0.02	102.9	
Th	232	No Gas	20.915	ppb	10.0	1671889.21	0.011	104.52	
U	238	No Gas	21.017	ppb	9.5	1618827.58	0.004	105.07	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9063836.58	4.7	9572576.56	94.69	60	125	
Sc	45	He	510015.41	2.1	537132.74	94.95	60	125	
Ge	72	No Gas	6459901.69	1.3	7221407.63	89.45	60	125	
Ge	72	He	1016175.79	1.0	1075133.33	94.52	60	125	
Y	89	No Gas	9667619.06	3.9	10505771.25	92.02	60	125	
Y	89	He	1735392.50	2.7	1785434.86	97.2	60	125	
Rh	103	No Gas	7979544.68	5.5	9029665.75	88.37	60	125	
Rh	103	He	4359880.38	0.6	4662246.34	93.51	60	125	
In	115	No Gas	8864993.54	3.2	9909318.5	89.46	60	125	
Lu	175	No Gas	46610.64	4.6	53023.13	87.91	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404644-008L 5X
File Name	032SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 16:38:13
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	-0.001	ppb	N/A	12.22	
Al	27	72	No Gas	1.572	ppb	3.6	69023.99	
V	51	72	He	-0.011	ppb	N/A	948.92	
Cr	52	72	No Gas	0.041	ppb	78.3	47175.68	
Mn	55	72	No Gas	1.912	ppb	7.2	159037.05	
Co	59	72	He	0.003	ppb	49.8	184.44	
Ni	60	72	No Gas	0.058	ppb	5.9	1695.66	
Cu	63	72	No Gas	0.161	ppb	7.5	8468.12	
Zn	66	72	No Gas	0.485	ppb	1.9	6505.95	
As	75	72	No Gas	0.065	ppb	136.8	-1015.48	
Se	78	72	He	-0.040	ppb	N/A	90.67	
Se	82	72	No Gas	0.004	ppb	762.6	225.31	
Mo	98	89	No Gas	0.021	ppb	6.0	923.16	
Ag	107	89	No Gas	0.005	ppb	26.5	506.68	
Cd	111	89	No Gas	-0.001	ppb	N/A	3220.55	
Sb	123	89	No Gas	0.065	ppb	0.9	2773.63	
Ba	137	115	No Gas	3.443	ppb	7.5	64098.45	
Tl	203	115	No Gas	0.007	ppb	20.5	326.67	
Pb	208	115	No Gas	0.010	ppb	21.0	1531.15	
Th	232	115	No Gas	0.067	ppb	20.6	6986.44	
U	238	115	No Gas	0.004	ppb	40.5	416.68	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8879466.59	1.4	9572576.56	92.76	60	125	
Sc	45	He	494130.93	2.1	537132.74	91.99	60	125	
Ge	72	No Gas	6459901.69	0.6	7221407.63	89.45	60	125	
Ge	72	He	1001119.20	1.9	1075133.33	93.12	60	125	
Y	89	No Gas	9275361.85	3.3	10505771.25	88.29	60	125	
Y	89	He	1741883.47	3.7	1785434.86	97.56	60	125	
Rh	103	No Gas	8095608.57	1.4	9029665.75	89.66	60	125	
Rh	103	He	4249829.14	2.5	4662246.34	91.15	60	125	
In	115	No Gas	9133370.47	3.3	9909318.5	92.17	60	125	
Lu	175	No Gas	43456.16	2.1	53023.13	81.96	60	125	

7900 ICP-MS 200.8/6020A
Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	033_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 16:40:08
Sample Type	CCV
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	% Rec	QC Flag
Be	9	45	No Gas	42.648	ppb	9.4	144488.78	85.3	> +/- 10%
Al	27	72	No Gas	48.984	ppb	14.2	1764585.07	97.97	
V	51	72	He	50.649	ppb	1.5	528543.81	101.3	
Cr	52	72	No Gas	50.651	ppb	15.5	2863991.00	101.3	
Mn	55	72	No Gas	49.441	ppb	14.0	3921201.23	98.88	
Co	59	72	He	50.493	ppb	0.7	1129012.28	100.99	
Ni	60	72	No Gas	47.198	ppb	13.4	788421.58	94.4	
Cu	63	72	No Gas	50.063	ppb	13.7	2005449.23	100.13	
Zn	66	72	No Gas	48.512	ppb	10.5	485037.43	97.02	
As	75	72	No Gas	48.749	ppb	12.2	554896.56	97.5	
Se	78	72	He	51.426	ppb	2.1	7554.03	102.85	
Se	82	72	No Gas	49.227	ppb	12.3	37546.44	98.45	
Mo	98	89	No Gas	54.229	ppb	8.1	1627085.43	108.46	
Ag	107	89	No Gas	53.658	ppb	8.5	2563500.80	107.32	
Cd	111	89	No Gas	50.963	ppb	7.9	528527.50	101.93	
Sb	123	89	No Gas	51.926	ppb	8.5	1590139.76	103.85	
Ba	137	115	No Gas	48.924	ppb	4.2	854090.07	97.85	
Tl	203	115	No Gas	49.766	ppb	4.0	1314442.24	99.53	
Pb	208	115	No Gas	49.999	ppb	4.1	4171780.26	100	
Th	232	115	No Gas	52.079	ppb	5.0	4042737.48	104.16	
U	238	115	No Gas	51.806	ppb	4.6	3875819.43	103.61	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8892925.48	2.8	9572576.56	92.9	60	125	
Sc	45	He	493481.78	1.8	537132.74	91.87	60	125	
Ge	72	No Gas	6439748.36	4.5	7221407.63	89.18	60	125	
Ge	72	He	992018.71	1.4	1075133.33	92.27	60	125	
Y	89	No Gas	9052971.03	2.3	10505771.25	86.17	60	125	
Y	89	He	1702518.65	2.7	1785434.86	95.36	60	125	
Rh	103	No Gas	7674916.36	1.1	9029665.75	85	60	125	
Rh	103	He	4412945.38	2.3	4662246.34	94.65	60	125	
In	115	No Gas	8589107.99	2.8	9909318.5	86.68	60	125	
Lu	175	No Gas	44628.99	1.6	53023.13	84.17	60	125	

7900 ICP-MS 200.8/6020A
Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	034_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 16:41:54
Sample Type	CCB
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	-0.001	ppb	N/A	11.11	
Al	27	72	No Gas	-0.047	ppb	N/A	10231.83	
V	51	72	He	-0.017	ppb	N/A	876.70	
Cr	52	72	No Gas	0.000	ppb	37224.9	42955.57	
Mn	55	72	No Gas	0.010	ppb	50.0	7045.09	
Co	59	72	He	0.001	ppb	78.5	124.44	
Ni	60	72	No Gas	0.007	ppb	61.1	801.13	
Cu	63	72	No Gas	0.003	ppb	209.1	2010.15	
Zn	66	72	No Gas	0.018	ppb	135.6	1747.90	
As	75	72	No Gas	0.095	ppb	69.4	-648.37	
Se	78	72	He	0.040	ppb	156.2	101.33	
Se	82	72	No Gas	-0.049	ppb	N/A	177.30	
Mo	98	89	No Gas	0.027	ppb	3.3	1115.84	
Ag	107	89	No Gas	0.007	ppb	30.2	603.35	
Cd	111	89	No Gas	0.011	ppb	124.3	3409.91	
Sb	123	89	No Gas	0.077	ppb	5.8	3184.83	
Ba	137	115	No Gas	0.005	ppb	27.9	420.01	
Tl	203	115	No Gas	0.012	ppb	27.5	443.34	
Pb	208	115	No Gas	0.010	ppb	29.1	1490.04	
Th	232	115	No Gas	0.108	ppb	18.1	9776.08	
U	238	115	No Gas	0.006	ppb	25.2	566.68	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8700076.88	4.0	9572576.56	90.89	60	125	
Sc	45	He	498093.84	0.9	537132.74	92.73	60	125	
Ge	72	No Gas	6186232.39	2.7	7221407.63	85.67	60	125	
Ge	72	He	990921.10	1.1	1075133.33	92.17	60	125	
Y	89	No Gas	9445327.40	2.1	10505771.25	89.91	60	125	
Y	89	He	1703793.40	2.4	1785434.86	95.43	60	125	
Rh	103	No Gas	7976300.51	3.2	9029665.75	88.33	60	125	
Rh	103	He	4428786.35	3.8	4662246.34	94.99	60	125	
In	115	No Gas	8611495.77	1.7	9909318.5	86.9	60	125	
Lu	175	No Gas	43483.92	1.9	53023.13	82.01	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404651-001
File Name	035SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 16:43:50
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.006	ppb	77.0	35.56	
Al	27	72	No Gas	42.150	ppb	6.2	1547964.00	
V	51	72	He	1.708	ppb	0.5	19079.42	
Cr	52	72	No Gas	2.001	ppb	3.9	158647.26	
Mn	55	72	No Gas	10.341	ppb	5.2	839984.51	
Co	59	72	He	0.396	ppb	1.1	9070.69	
Ni	60	72	No Gas	1.908	ppb	6.5	33162.04	
Cu	63	72	No Gas	4.490	ppb	3.7	184806.32	
Zn	66	72	No Gas	6.078	ppb	9.3	63370.24	
As	75	72	No Gas	1.208	ppb	9.7	12191.54	
Se	78	72	He	4.446	ppb	6.3	749.69	
Se	82	72	No Gas	5.786	ppb	8.2	4694.10	
Mo	98	89	No Gas	7.491	ppb	8.6	236398.65	
Ag	107	89	No Gas	0.013	ppb	24.1	928.92	
Cd	111	89	No Gas	0.017	ppb	49.7	3493.73	
Sb	123	89	No Gas	0.237	ppb	12.5	8363.74	
Ba	137	115	No Gas	40.284	ppb	9.1	714613.25	
Tl	203	115	No Gas	0.156	ppb	10.8	4317.41	
Pb	208	115	No Gas	0.227	ppb	8.6	19851.58	
Th	232	115	No Gas	0.218	ppb	11.0	18584.20	
U	238	115	No Gas	8.958	ppb	10.2	680565.37	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8994931.31	3.6	9572576.56	93.97	60	125	
Sc	45	He	518794.23	1.3	537132.74	96.59	60	125	
Ge	72	No Gas	6519856.54	6.0	7221407.63	90.29	60	125	
Ge	72	He	1004252.84	0.9	1075133.33	93.41	60	125	
Y	89	No Gas	9509751.29	2.0	10505771.25	90.52	60	125	
Y	89	He	1688496.11	2.7	1785434.86	94.57	60	125	
Rh	103	No Gas	7541008.87	2.7	9029665.75	83.51	60	125	
Rh	103	He	4164637.75	2.1	4662246.34	89.33	60	125	
In	115	No Gas	8738970.76	2.7	9909318.5	88.19	60	125	
Lu	175	No Gas	46015.88	2.8	53023.13	86.78	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404671-001
File Name	036SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 16:45:46
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	-0.001	ppb	N/A	13.33	
Al	27	72	No Gas	11.828	ppb	6.3	416619.81	
V	51	72	He	0.381	ppb	5.3	4815.27	
Cr	52	72	No Gas	0.651	ppb	7.1	77352.43	
Mn	55	72	No Gas	16.650	ppb	5.4	1267020.40	
Co	59	72	He	0.459	ppb	3.0	9959.06	
Ni	60	72	No Gas	3.917	ppb	7.8	63205.90	
Cu	63	72	No Gas	21.021	ppb	9.0	806444.38	
Zn	66	72	No Gas	4.695	ppb	8.1	46279.68	
As	75	72	No Gas	0.694	ppb	21.3	5886.17	
Se	78	72	He	0.256	ppb	56.3	127.33	
Se	82	72	No Gas	0.790	ppb	28.7	783.68	
Mo	98	89	No Gas	1.622	ppb	10.0	49623.07	
Ag	107	89	No Gas	0.009	ppb	13.1	693.35	
Cd	111	89	No Gas	0.021	ppb	65.5	3425.03	
Sb	123	89	No Gas	0.285	ppb	8.1	9552.28	
Ba	137	115	No Gas	12.895	ppb	4.6	220368.27	
Tl	203	115	No Gas	0.002	ppb	30.3	160.00	
Pb	208	115	No Gas	0.089	ppb	3.7	7857.62	
Th	232	115	No Gas	0.132	ppb	5.8	11336.22	
U	238	115	No Gas	0.039	ppb	2.2	2905.90	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8857249.65	2.3	9572576.56	92.53	60	125	
Sc	45	He	483657.36	1.6	537132.74	90.04	60	125	
Ge	72	No Gas	6142697.67	2.6	7221407.63	85.06	60	125	
Ge	72	He	951499.72	0.9	1075133.33	88.5	60	125	
Y	89	No Gas	9193322.97	3.2	10505771.25	87.51	60	125	
Y	89	He	1662275.77	3.1	1785434.86	93.1	60	125	
Rh	103	No Gas	7224501.94	1.9	9029665.75	80.01	60	125	
Rh	103	He	3914787.62	3.6	4662246.34	83.97	60	125	
In	115	No Gas	8410500.50	4.3	9909318.5	84.87	60	125	
Lu	175	No Gas	43977.89	1.7	53023.13	82.94	60	125	

7900 ICP-MS 200.8-6020A
Matrix Spike (MS) Sample Report

Sample Name R2404671-001S R2404671-001L 5X

File Name 037_Spk.d

Data Path Name C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b

Acq Time 06/06/24 16:47:42

Sample Type Spike

Total Dilution 1.0000

Comment —

ISTD Ref FileName 009CALB.d

QC Ref File Name 028_ARF.d

QC Analyte Table

Name	Mass	Tune	Conc.	Units	RSD	CPS	RefConc	%Rec	Flag
Be	9	No Gas	-0.003	ppb	N/A	5.56	-0.001	-0.01	> +/- 25%
Al	27	No Gas	2.665	ppb	5.6	102291.52	7.018	5.67	> +/- 25%
V	51	He	0.094	ppb	5.3	2074.60	0.008	0.47	> +/- 25%
Cr	52	No Gas	0.273	ppb	17.4	56789.41	0.252	1.35	> +/- 25%
Mn	55	No Gas	3.470	ppb	6.5	267189.09	9.744	11.67	> +/- 25%
Co	59	He	0.089	ppb	4.7	2134.61	0.014	0.44	> +/- 25%
Ni	60	No Gas	0.830	ppb	8.5	13833.48	0.299	4.09	> +/- 25%
Cu	63	No Gas	4.440	ppb	6.6	170721.22	0.736	21.41	> +/- 25%
Zn	66	No Gas	1.087	ppb	5.7	11833.87	2.278	4.88	> +/- 25%
As	75	No Gas	0.243	ppb	101.1	989.95	0.32	1.19	> +/- 25%
Se	78	He	-0.018	ppb	N/A	94.67	0.03	-0.09	> +/- 25%
Se	82	No Gas	0.038	ppb	297.4	238.28	0.055	0.19	> +/- 25%
Mo	98	No Gas	0.339	ppb	3.3	10306.68	0.024	1.7	> +/- 25%
Ag	107	No Gas	0.004	ppb	32.1	437.79	0.001	0.02	> +/- 25%
Cd	111	No Gas	0.023	ppb	90.6	3339.03	0.019	0.11	> +/- 25%
Sb	123	No Gas	0.072	ppb	4.6	2883.65	0.056	0.36	> +/- 25%
Ba	137	No Gas	2.666	ppb	11.6	44743.24	17.375	7.13	> +/- 25%
Tl	203	No Gas	0.000	ppb	N/A	111.11	0.002	0	> +/- 25%
Pb	208	No Gas	0.019	ppb	17.9	2104.51	0.02	0.09	> +/- 25%
Th	232	No Gas	0.023	ppb	11.7	2990.36	0.011	0.11	> +/- 25%
U	238	No Gas	0.008	ppb	17.2	666.69	0.004	0.04	> +/- 25%

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8769690.21	3.9	9572576.56	91.61	60	125	
Sc	45	He	519731.66	2.8	537132.74	96.76	60	125	
Ge	72	No Gas	6101256.29	3.4	7221407.63	84.49	60	125	
Ge	72	He	1011689.37	3.3	1075133.33	94.1	60	125	
Y	89	No Gas	8924296.59	1.8	10505771.25	84.95	60	125	
Y	89	He	1722650.49	4.1	1785434.86	96.48	60	125	
Rh	103	No Gas	7352078.04	5.9	9029665.75	81.42	60	125	
Rh	103	He	4366206.35	6.8	4662246.34	93.65	60	125	
In	115	No Gas	8245429.67	6.4	9909318.5	83.21	60	125	
Lu	175	No Gas	42580.97	1.9	53023.13	80.31	60	125	

7900 ICP-MS 200.8/6020A
Matrix Spike Duplicate (MSD) Sample Report

Sample Name	R2404671-001SD R2404671-001S
File Name	038_SpD.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 16:49:38
Sample Type	SpkDup
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d
QC Ref File Name	037_ Spk.d

QC Analyte Table

Name	Mass	Tune	Conc.	Units	RSD	CPS	RefConc	RPD	Flag
Be	9	No Gas	19.038	ppb	6.1	61561.56	-0.003	200.06	RPD > 20%
Al	27	No Gas	52.047	ppb	5.7	1724828.23	2.665	180.52	RPD > 20%
V	51	He	21.159	ppb	1.6	209143.29	0.094	198.23	RPD > 20%
Cr	52	No Gas	20.873	ppb	7.2	1110169.82	0.273	194.84	RPD > 20%
Mn	55	No Gas	36.844	ppb	6.6	2689179.62	3.47	165.57	RPD > 20%
Co	59	He	19.882	ppb	0.4	419945.84	0.089	198.22	RPD > 20%
Ni	60	No Gas	22.223	ppb	7.9	341796.16	0.83	185.6	RPD > 20%
Cu	63	No Gas	42.259	ppb	3.3	1558913.24	4.44	161.97	RPD > 20%
Zn	66	No Gas	25.883	ppb	8.1	238574.11	1.087	183.87	RPD > 20%
As	75	No Gas	21.739	ppb	8.0	226650.77	0.243	195.58	RPD > 20%
Se	78	He	22.220	ppb	0.8	3134.68	-0.018	200.33	RPD > 20%
Se	82	No Gas	22.001	ppb	6.9	15548.37	0.038	199.31	RPD > 20%
Mo	98	No Gas	22.930	ppb	6.9	639169.31	0.339	194.16	RPD > 20%
Ag	107	No Gas	18.830	ppb	5.9	835382.78	0.004	199.91	RPD > 20%
Cd	111	No Gas	19.664	ppb	5.5	191133.43	0.023	199.54	RPD > 20%
Sb	123	No Gas	21.479	ppb	6.6	611019.16	0.072	198.66	RPD > 20%
Ba	137	No Gas	32.760	ppb	5.7	525333.57	2.666	169.9	RPD > 20%
Tl	203	No Gas	19.149	ppb	4.9	464559.15	0	200	RPD > 20%
Pb	208	No Gas	19.340	ppb	4.1	1482483.35	0.019	199.61	RPD > 20%
Th	232	No Gas	15.480	ppb	3.7	1104235.51	0.023	199.41	RPD > 20%
U	238	No Gas	20.907	ppb	7.2	1435744.39	0.008	199.84	RPD > 20%

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8477540.49	1.4	9572576.56	88.56	60	125	
Sc	45	He	479417.98	0.8	537132.74	89.26	60	125	
Ge	72	No Gas	5908073.65	2.2	7221407.63	81.81	60	125	
Ge	72	He	936984.82	1.7	1075133.33	87.15	60	125	
Y	89	No Gas	8409500.50	2.5	10505771.25	80.05	60	125	
Y	89	He	1556407.68	2.5	1785434.86	87.17	60	125	
Rh	103	No Gas	6983007.64	0.2	9029665.75	77.33	60	125	
Rh	103	He	3657853.47	2.3	4662246.34	78.46	60	125	
In	115	No Gas	7897586.36	1.9	9909318.5	79.7	60	125	
Lu	175	No Gas	41648.14	2.7	53023.13	78.55	60	125	

7900 ICP-MS 200.8-6020A
Matrix Spike (MS) Sample Report

Sample Name R2404671-001A R2404671-001SD

File Name 039_Spk.d

Data Path Name C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b

Acq Time 06/06/24 16:51:32

Sample Type Spike

Total Dilution 1.0000

Comment —

ISTD Ref FileName 009CALB.d

QC Ref File Name 028_ARF.d

QC Analyte Table

Name	Mass	Tune	Conc.	Units	RSD	CPS	RefConc	%Rec	Flag
Be	9	No Gas	19.979	ppb	3.6	63087.96	-0.001	99.9	
Al	27	No Gas	54.492	ppb	4.7	1766322.15	7.018	115.9	
V	51	He	22.451	ppb	1.6	218209.65	0.008	112.21	
Cr	52	No Gas	22.115	ppb	4.4	1148520.72	0.252	109.2	
Mn	55	No Gas	37.479	ppb	1.0	2676691.98	9.744	126	> +/- 25%
Co	59	He	20.507	ppb	0.7	425963.39	0.014	102.46	
Ni	60	No Gas	23.540	ppb	4.8	354463.44	0.299	115.97	
Cu	63	No Gas	44.404	ppb	3.5	1602256.36	0.736	214.13	> +/- 25%
Zn	66	No Gas	24.805	ppb	3.7	223790.35	2.278	111.34	
As	75	No Gas	22.555	ppb	4.2	230265.07	0.32	111	
Se	78	He	22.824	ppb	2.8	3164.36	0.03	113.95	
Se	82	No Gas	23.006	ppb	4.3	15900.72	0.055	114.72	
Mo	98	No Gas	23.328	ppb	6.8	659375.88	0.024	116.5	
Ag	107	No Gas	18.579	ppb	5.6	835971.84	0.001	92.89	
Cd	111	No Gas	19.894	ppb	3.6	196066.37	0.019	99.38	
Sb	123	No Gas	21.773	ppb	4.4	628100.93	0.056	108.56	
Ba	137	No Gas	35.190	ppb	7.3	537771.75	17.375	94.16	
Tl	203	No Gas	20.664	ppb	6.8	477586.42	0.002	103.31	
Pb	208	No Gas	20.968	ppb	6.8	1531038.48	0.02	104.73	
Th	232	No Gas	16.923	ppb	4.0	1150947.17	0.011	84.57	
U	238	No Gas	22.551	ppb	8.5	1475091.40	0.004	112.73	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8272048.01	2.5	9572576.56	86.41	60	125	
Sc	45	He	485941.72	3.9	537132.74	90.47	60	125	
Ge	72	No Gas	5775905.46	2.3	7221407.63	79.98	60	125	
Ge	72	He	921467.92	0.6	1075133.33	85.71	60	125	
Y	89	No Gas	8521797.16	2.1	10505771.25	81.12	60	125	
Y	89	He	1564913.51	1.1	1785434.86	87.65	60	125	
Rh	103	No Gas	6484529.74	1.7	9029665.75	71.81	60	125	
Rh	103	He	3716747.91	1.9	4662246.34	79.72	60	125	
In	115	No Gas	7533027.76	4.0	9909318.5	76.02	60	125	
Lu	175	No Gas	40514.66	0.2	53023.13	76.41	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404671-001L 5X R2404671-001A
File Name	040SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 16:53:26
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	18.607	ppb	15.0	62329.47	
Al	27	72	No Gas	54.258	ppb	15.6	1833354.65	
V	51	72	He	22.629	ppb	1.7	220873.29	
Cr	52	72	No Gas	21.193	ppb	16.5	1148835.34	
Mn	55	72	No Gas	36.091	ppb	20.0	2681561.84	
Co	59	72	He	21.058	ppb	2.2	439230.73	
Ni	60	72	No Gas	22.454	ppb	16.4	352360.24	
Cu	63	72	No Gas	42.403	ppb	16.2	1595523.62	
Zn	66	72	No Gas	23.311	ppb	14.8	219462.40	
As	75	72	No Gas	21.601	ppb	16.7	229628.92	
Se	78	72	He	23.528	ppb	1.8	3272.72	
Se	82	72	No Gas	22.185	ppb	15.9	15988.94	
Mo	98	89	No Gas	22.582	ppb	15.0	662098.75	
Ag	107	89	No Gas	16.540	ppb	15.3	771784.83	
Cd	111	89	No Gas	18.935	ppb	16.0	193625.97	
Sb	123	89	No Gas	20.130	ppb	13.9	602721.36	
Ba	137	115	No Gas	31.587	ppb	15.7	520381.89	
Tl	203	115	No Gas	19.114	ppb	16.5	476075.35	
Pb	208	115	No Gas	19.088	ppb	14.2	1503953.28	
Th	232	115	No Gas	19.561	ppb	14.1	1434070.99	
U	238	115	No Gas	20.832	ppb	15.2	1470141.26	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	8829086.32	5.9	9572576.56	92.23	60	125	
Sc	45	He	488247.33	1.8	537132.74	90.9	60	125	
Ge	72	No Gas	6060596.98	6.7	7221407.63	83.93	60	125	
Ge	72	He	925578.05	2.3	1075133.33	86.09	60	125	
Y	89	No Gas	8900818.26	7.1	10505771.25	84.72	60	125	
Y	89	He	1548058.76	2.3	1785434.86	86.7	60	125	
Rh	103	No Gas	7036382.22	9.1	9029665.75	77.93	60	125	
Rh	103	He	3739124.16	0.9	4662246.34	80.2	60	125	
In	115	No Gas	8172896.06	7.8	9909318.5	82.48	60	125	
Lu	175	No Gas	40082.73	5.7	53023.13	75.59	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404689-001 20X
File Name	041SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 16:55:19
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.000	ppb	N/A	14.44	
Al	27	72	No Gas	0.292	ppb	7.9	23309.88	
V	51	72	He	0.036	ppb	16.3	1431.19	
Cr	52	72	No Gas	0.143	ppb	57.2	53802.47	
Mn	55	72	No Gas	0.043	ppb	16.1	10235.91	
Co	59	72	He	0.003	ppb	112.6	182.22	
Ni	60	72	No Gas	0.055	ppb	17.3	1672.33	
Cu	63	72	No Gas	68.964	ppb	12.6	2826039.33	
Zn	66	72	No Gas	0.452	ppb	2.4	6293.63	
As	75	72	No Gas	0.132	ppb	200.3	-312.97	
Se	78	72	He	-0.004	ppb	N/A	95.33	
Se	82	72	No Gas	-0.036	ppb	N/A	198.14	
Mo	98	89	No Gas	0.019	ppb	10.3	838.74	
Ag	107	89	No Gas	0.008	ppb	28.0	653.35	
Cd	111	89	No Gas	0.052	ppb	69.8	3734.51	
Sb	123	89	No Gas	0.053	ppb	8.6	2369.10	
Ba	137	115	No Gas	1.232	ppb	14.7	22358.68	
Tl	203	115	No Gas	0.002	ppb	52.6	177.78	
Pb	208	115	No Gas	0.018	ppb	20.2	2212.30	
Th	232	115	No Gas	0.033	ppb	7.7	4081.78	
U	238	115	No Gas	0.007	ppb	8.8	617.79	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9087491.86	2.6	9572576.56	94.93	60	125	
Sc	45	He	522584.06	1.0	537132.74	97.29	60	125	
Ge	72	No Gas	6583998.49	4.3	7221407.63	91.17	60	125	
Ge	72	He	995183.68	0.7	1075133.33	92.56	60	125	
Y	89	No Gas	9176895.47	3.3	10505771.25	87.35	60	125	
Y	89	He	1702612.12	1.4	1785434.86	95.36	60	125	
Rh	103	No Gas	7934359.13	2.8	9029665.75	87.87	60	125	
Rh	103	He	4364977.74	3.4	4662246.34	93.62	60	125	
In	115	No Gas	8897191.03	10.6	9909318.5	89.79	60	125	
Lu	175	No Gas	44849.83	3.6	53023.13	84.59	60	125	

7900 ICP-MS 200.8/6020A
Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	042_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 16:57:14
Sample Type	CCV
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	% Rec	QC Flag
Be	9	45	No Gas	46.105	ppb	17.1	163679.42	92.21	
Al	27	72	No Gas	50.533	ppb	14.1	1859430.76	101.07	
V	51	72	He	50.828	ppb	1.7	544653.22	101.66	
Cr	52	72	No Gas	48.916	ppb	16.0	2826921.55	97.83	
Mn	55	72	No Gas	49.477	ppb	13.1	4010234.42	98.95	
Co	59	72	He	50.416	ppb	0.9	1157462.87	100.83	
Ni	60	72	No Gas	45.959	ppb	14.7	784214.39	91.92	
Cu	63	72	No Gas	48.939	ppb	15.2	2003230.58	97.88	
Zn	66	72	No Gas	46.843	ppb	13.5	478289.39	93.69	
As	75	72	No Gas	48.056	ppb	12.7	558725.99	96.11	
Se	78	72	He	51.356	ppb	1.3	7747.13	102.71	
Se	82	72	No Gas	47.868	ppb	12.8	37292.33	95.74	
Mo	98	89	No Gas	48.310	ppb	13.7	1577319.75	96.62	
Ag	107	89	No Gas	48.244	ppb	13.7	2508815.73	96.49	
Cd	111	89	No Gas	47.066	ppb	12.2	531544.74	94.13	
Sb	123	89	No Gas	46.512	ppb	10.5	1550817.85	93.02	
Ba	137	115	No Gas	46.134	ppb	17.5	838154.95	92.27	
Tl	203	115	No Gas	48.429	ppb	17.5	1330873.45	96.86	
Pb	208	115	No Gas	46.516	ppb	18.1	4036641.16	93.03	
Th	232	115	No Gas	47.391	ppb	20.9	3821181.03	94.78	
U	238	115	No Gas	46.977	ppb	21.4	3648835.90	93.95	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9352165.19	4.6	9572576.56	97.7	60	125	
Sc	45	He	520475.74	0.8	537132.74	96.9	60	125	
Ge	72	No Gas	6560818.63	2.4	7221407.63	90.85	60	125	
Ge	72	He	1018702.43	2.2	1075133.33	94.75	60	125	
Y	89	No Gas	9853765.16	2.6	10505771.25	93.79	60	125	
Y	89	He	1681786.50	3.3	1785434.86	94.19	60	125	
Rh	103	No Gas	8319180.78	1.8	9029665.75	92.13	60	125	
Rh	103	He	4338523.71	2.5	4662246.34	93.06	60	125	
In	115	No Gas	9028201.03	8.3	9909318.5	91.11	60	125	
Lu	175	No Gas	46525.65	2.4	53023.13	87.75	60	125	

7900 ICP-MS 200.8/6020A
Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	043_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 16:59:00
Sample Type	CCB
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.003	ppb	54.6	27.78	
Al	27	72	No Gas	-0.058	ppb	N/A	10575.47	
V	51	72	He	0.031	ppb	5.5	1415.63	
Cr	52	72	No Gas	0.105	ppb	42.1	52059.05	
Mn	55	72	No Gas	0.028	ppb	10.9	9030.65	
Co	59	72	He	0.002	ppb	15.7	160.00	
Ni	60	72	No Gas	0.021	ppb	28.9	1098.94	
Cu	63	72	No Gas	0.073	ppb	14.5	5027.57	
Zn	66	72	No Gas	0.036	ppb	85.9	2060.16	
As	75	72	No Gas	0.084	ppb	137.5	-801.39	
Se	78	72	He	-0.086	ppb	N/A	85.33	
Se	82	72	No Gas	-0.065	ppb	N/A	175.27	
Mo	98	89	No Gas	0.031	ppb	13.1	1233.51	
Ag	107	89	No Gas	0.008	ppb	23.0	661.13	
Cd	111	89	No Gas	0.047	ppb	38.7	3808.55	
Sb	123	89	No Gas	0.076	ppb	4.2	3162.61	
Ba	137	115	No Gas	0.005	ppb	101.3	440.01	
Tl	203	115	No Gas	0.011	ppb	40.8	428.90	
Pb	208	115	No Gas	0.008	ppb	64.5	1337.81	
Th	232	115	No Gas	0.101	ppb	15.1	9578.12	
U	238	115	No Gas	0.006	ppb	40.7	567.80	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9332374.07	2.8	9572576.56	97.49	60	125	
Sc	45	He	519067.77	1.2	537132.74	96.64	60	125	
Ge	72	No Gas	6629500.71	3.9	7221407.63	91.8	60	125	
Ge	72	He	1019442.32	1.2	1075133.33	94.82	60	125	
Y	89	No Gas	9479815.73	3.8	10505771.25	90.23	60	125	
Y	89	He	1717463.54	1.1	1785434.86	96.19	60	125	
Rh	103	No Gas	8302278.56	2.9	9029665.75	91.94	60	125	
Rh	103	He	4421493.30	2.7	4662246.34	94.84	60	125	
In	115	No Gas	8963641.31	1.7	9909318.5	90.46	60	125	
Lu	175	No Gas	47108.71	3.4	53023.13	88.85	60	125	

7900 ICP-MS 200.8/6020A
Contract Required Detection Limit (CRDL) Report

Sample Name	CRDL
File Name	044LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 17:00:55
Sample Type	LLICV
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	%Rec	QC Flag
Be	9	45	No Gas	0.906	ppb	18.4	3332.62	90.6	
Al	27	72	No Gas	5.091	ppb	9.7	203697.82	101.82	
V	51	72	He	1.056	ppb	3.5	12428.75	105.6	
Cr	52	72	No Gas	1.103	ppb	12.2	111056.90	110.3	
Mn	55	72	No Gas	0.989	ppb	12.1	88878.30	98.9	
Co	59	72	He	0.997	ppb	1.9	23105.44	99.7	
Ni	60	72	No Gas	0.949	ppb	10.8	17337.58	94.9	
Cu	63	72	No Gas	1.018	ppb	9.8	44751.23	101.8	
Zn	66	72	No Gas	4.885	ppb	9.3	52663.72	97.7	
As	75	72	No Gas	1.012	ppb	16.2	10267.74	101.2	
Se	78	72	He	0.989	ppb	5.7	246.67	98.9	
Se	82	72	No Gas	0.906	ppb	2.9	951.04	90.6	
Mo	98	89	No Gas	0.973	ppb	16.0	31937.66	97.3	
Ag	107	89	No Gas	0.956	ppb	14.6	49819.35	95.6	
Cd	111	89	No Gas	1.008	ppb	17.4	14699.30	100.8	
Sb	123	89	No Gas	0.988	ppb	17.4	33538.98	98.8	
Ba	137	115	No Gas	0.915	ppb	10.0	17496.07	91.5	
Tl	203	115	No Gas	0.932	ppb	14.3	26542.29	93.2	
Pb	208	115	No Gas	0.935	ppb	12.4	84398.50	93.5	
Th	232	115	No Gas	0.915	ppb	10.7	77707.60	91.5	
U	238	115	No Gas	0.953	ppb	9.6	76658.80	95.3	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9663505.73	7.0	9572576.56	100.95	60	125	
Sc	45	He	525236.56	0.2	537132.74	97.79	60	125	
Ge	72	No Gas	6722194.87	1.2	7221407.63	93.09	60	125	
Ge	72	He	1023094.13	1.6	1075133.33	95.16	60	125	
Y	89	No Gas	9885927.66	7.5	10505771.25	94.1	60	125	
Y	89	He	1780390.14	0.9	1785434.86	99.72	60	125	
Rh	103	No Gas	8434119.11	1.8	9029665.75	93.4	60	125	
Rh	103	He	4589863.71	4.3	4662246.34	98.45	60	125	
In	115	No Gas	9262681.58	5.2	9909318.5	93.47	60	125	
Lu	175	No Gas	47881.69	4.5	53023.13	90.3	60	125	

7900 ICP-MS 200.8/6020A
High-Level Continuing Calibration Verification (HLCCV) Report

Sample Name	HLCCV2
File Name	045HCCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 17:02:50
Sample Type	HLCCV2
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	%Rec	QC Flag
Be	9	45	No Gas	189.192	ppb	15.6	675036.05	94.6	
Al	27	72	No Gas	191.523	ppb	16.6	7246479.85	95.76	
V	51	72	He	199.654	ppb	5.2	2187587.00	99.83	
Cr	52	72	No Gas	195.869	ppb	17.8	11558039.54	97.93	
Mn	55	72	No Gas	184.836	ppb	13.8	15462793.27	92.42	
Co	59	72	He	204.844	ppb	1.4	4815632.45	102.42	
Ni	60	72	No Gas	190.629	ppb	14.7	3360694.10	95.31	
Cu	63	72	No Gas	189.399	ppb	16.0	8004934.68	94.7	
Zn	66	72	No Gas	194.862	ppb	18.3	2049678.53	97.43	
As	75	72	No Gas	189.044	ppb	17.3	2275552.89	94.52	
Se	78	72	He	198.791	ppb	2.5	30417.49	99.4	
Se	82	72	No Gas	188.450	ppb	15.9	151069.42	94.22	
Mo	98	89	No Gas	185.823	ppb	17.4	6147882.11	92.91	
Ag	107	89	No Gas	148.467	ppb	16.9	7818324.41	74.23	HLCCV2 Main CR1 Failed
Cd	111	89	No Gas	194.730	ppb	15.5	2217610.77	97.36	
Sb	123	89	No Gas	185.283	ppb	13.9	6257956.42	92.64	
Ba	137	115	No Gas	179.322	ppb	17.6	3518629.79	89.66	HLCCV2 Main CR1 Failed
Tl	203	115	No Gas	179.438	ppb	15.6	5331896.73	89.72	HLCCV2 Main CR1 Failed
Pb	208	115	No Gas	181.886	ppb	15.0	17076791.96	90.94	
Th	232	115	No Gas	179.309	ppb	16.3	15645367.99	89.65	HLCCV2 Main CR1 Failed
U	238	115	No Gas	180.131	ppb	15.9	15158046.62	90.07	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9379963.52	3.1	9572576.56	97.99	60	125	
Sc	45	He	528792.88	2.0	537132.74	98.45	60	125	
Ge	72	No Gas	6805859.59	4.5	7221407.63	94.25	60	125	
Ge	72	He	1043038.05	0.5	1075133.33	97.01	60	125	
Y	89	No Gas	10024893.77	4.7	10505771.25	95.42	60	125	
Y	89	He	1756270.80	3.3	1785434.86	98.37	60	125	
Rh	103	No Gas	8622029.66	5.7	9029665.75	95.49	60	125	
Rh	103	He	4634485.23	1.3	4662246.34	99.4	60	125	
In	115	No Gas	9736246.28	6.7	9909318.5	98.25	60	125	
Lu	175	No Gas	50648.62	3.2	53023.13	95.52	60	125	

7900 ICP-MS 200.8/6020A
High-Level Continuing Calibration Verification (HLCCV) Report

Sample Name	HLCCV3
File Name	046_QC1.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 17:04:19
Sample Type	QC1
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	%Rec	QC Flag
Be	9	45	No Gas	362.664	ppb	14.9	1342499.46	90.67	
Al	27	72	No Gas	380.122	ppb	18.2	14726922.47	95.03	
V	51	72	He	404.346	ppb	3.5	4528961.07	101.09	
Cr	52	72	No Gas	363.084	ppb	14.4	21927978.57	90.77	
Mn	55	72	No Gas	371.814	ppb	15.4	31851851.51	92.95	
Co	59	72	He	393.293	ppb	2.4	9454876.85	98.32	
Ni	60	72	No Gas	363.686	ppb	15.9	6571272.24	90.92	
Cu	63	72	No Gas	358.795	ppb	14.6	15547733.27	89.7	QC1 Main CR1 Failed
Zn	66	72	No Gas	366.702	ppb	14.6	3954160.95	91.68	
As	75	72	No Gas	364.161	ppb	16.7	4498427.84	91.04	
Se	78	72	He	396.231	ppb	2.2	61920.18	99.06	
Se	82	72	No Gas	369.491	ppb	13.2	303460.55	92.37	
Mo	98	89	No Gas	363.182	ppb	18.0	12648451.35	90.8	
Ag	107	89	No Gas	138.786	ppb	13.9	7699933.86	34.7	QC1 Main CR1 Failed
Cd	111	89	No Gas	367.239	ppb	19.5	4390787.45	91.81	
Sb	123	89	No Gas	358.501	ppb	16.6	12727308.38	89.63	QC1 Main CR1 Failed
Ba	137	115	No Gas	348.168	ppb	18.3	7047835.00	87.04	QC1 Main CR1 Failed
Tl	203	115	No Gas	346.891	ppb	16.5	10625898.47	86.72	QC1 Main CR1 Failed
Pb	208	115	No Gas	359.032	ppb	17.9	34726169.18	89.76	QC1 Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9700384.06	3.5	9572576.56	101.34	60	125	
Sc	45	He	542581.42	2.1	537132.74	101.01	60	125	
Ge	72	No Gas	6945140.69	1.1	7221407.63	96.17	60	125	
Ge	72	He	1067087.70	2.4	1075133.33	99.25	60	125	
Y	89	No Gas	10538873.47	4.0	10505771.25	100.32	60	125	
Y	89	He	1794473.12	0.3	1785434.86	100.51	60	125	
Rh	103	No Gas	8876606.04	1.4	9029665.75	98.3	60	125	
Rh	103	He	4692961.34	2.6	4662246.34	100.66	60	125	
In	115	No Gas	10002047.38	3.8	9909318.5	100.94	60	125	
Lu	175	No Gas	51139.68	2.4	53023.13	96.45	60	125	

7900 ICP-MS 200.8/6020A
Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	047_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 17:05:46
Sample Type	CCV
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	% Rec	QC Flag
Be	9	45	No Gas	49.643	ppb	5.1	176327.36	99.29	
Al	27	72	No Gas	50.197	ppb	15.2	1899055.17	100.39	
V	51	72	He	51.287	ppb	1.8	566244.27	102.57	
Cr	52	72	No Gas	49.428	ppb	11.9	2938186.20	98.86	
Mn	55	72	No Gas	50.604	ppb	7.8	4217885.39	101.21	
Co	59	72	He	49.918	ppb	2.7	1180696.37	99.84	
Ni	60	72	No Gas	48.461	ppb	13.4	850168.42	96.92	
Cu	63	72	No Gas	51.155	ppb	10.0	2153796.86	102.31	
Zn	66	72	No Gas	49.493	ppb	12.3	519505.03	98.99	
As	75	72	No Gas	50.679	ppb	11.9	605914.00	101.36	
Se	78	72	He	51.394	ppb	2.7	7989.60	102.79	
Se	82	72	No Gas	50.577	ppb	10.9	40522.51	101.15	
Mo	98	89	No Gas	51.237	ppb	12.8	1723692.93	102.47	
Ag	107	89	No Gas	51.620	ppb	11.8	2765259.13	103.24	
Cd	111	89	No Gas	49.274	ppb	10.5	573055.18	98.55	
Sb	123	89	No Gas	50.496	ppb	9.3	1734498.61	100.99	
Ba	137	115	No Gas	46.161	ppb	11.6	914613.96	92.32	
Tl	203	115	No Gas	48.756	ppb	12.2	1461098.97	97.51	
Pb	208	115	No Gas	47.847	ppb	12.2	4529694.51	95.69	
Th	232	115	No Gas	50.124	ppb	12.2	4413216.77	100.25	
U	238	115	No Gas	48.578	ppb	9.7	4126488.03	97.16	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9297169.91	5.2	9572576.56	97.12	60	125	
Sc	45	He	532798.31	1.6	537132.74	99.19	60	125	
Ge	72	No Gas	6754883.90	2.8	7221407.63	93.54	60	125	
Ge	72	He	1049610.52	1.5	1075133.33	97.63	60	125	
Y	89	No Gas	10168387.65	3.2	10505771.25	96.79	60	125	
Y	89	He	1731317.15	2.5	1785434.86	96.97	60	125	
Rh	103	No Gas	8764309.93	5.0	9029665.75	97.06	60	125	
Rh	103	He	4679473.01	2.3	4662246.34	100.37	60	125	
In	115	No Gas	9790995.44	5.1	9909318.5	98.81	60	125	
Lu	175	No Gas	49869.15	2.3	53023.13	94.05	60	125	

7900 ICP-MS 200.8/6020A
Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	048_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 17:07:32
Sample Type	CCB
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.039	ppb	124.6	155.57	
Al	27	72	No Gas	-0.029	ppb	N/A	11843.50	
V	51	72	He	0.012	ppb	53.1	1240.06	
Cr	52	72	No Gas	0.080	ppb	99.9	51805.55	
Mn	55	72	No Gas	0.062	ppb	81.3	12109.28	
Co	59	72	He	0.005	ppb	34.9	244.45	
Ni	60	72	No Gas	0.047	ppb	107.0	1573.74	
Cu	63	72	No Gas	0.083	ppb	53.0	5586.13	
Zn	66	72	No Gas	0.050	ppb	86.1	2241.36	
As	75	72	No Gas	0.156	ppb	5.3	40.68	
Se	78	72	He	0.080	ppb	27.1	112.33	
Se	82	72	No Gas	0.042	ppb	112.4	267.21	
Mo	98	89	No Gas	0.081	ppb	26.9	3038.49	
Ag	107	89	No Gas	0.019	ppb	56.0	1289.11	
Cd	111	89	No Gas	0.055	ppb	24.3	4183.88	
Sb	123	89	No Gas	0.186	ppb	40.4	7238.24	
Ba	137	115	No Gas	0.065	ppb	149.2	1539.40	
Tl	203	115	No Gas	0.078	ppb	105.0	2300.85	
Pb	208	115	No Gas	0.062	ppb	114.5	6120.76	
Th	232	115	No Gas	0.235	ppb	21.0	20807.93	
U	238	115	No Gas	0.048	ppb	118.8	3860.19	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9430579.90	3.9	9572576.56	98.52	60	125	
Sc	45	He	529589.63	1.4	537132.74	98.6	60	125	
Ge	72	No Gas	6791961.68	5.7	7221407.63	94.05	60	125	
Ge	72	He	1039132.42	1.8	1075133.33	96.65	60	125	
Y	89	No Gas	10157402.93	3.5	10505771.25	96.68	60	125	
Y	89	He	1749516.60	2.6	1785434.86	97.99	60	125	
Rh	103	No Gas	8891336.59	2.1	9029665.75	98.47	60	125	
Rh	103	He	4447842.74	2.8	4662246.34	95.4	60	125	
In	115	No Gas	9139672.69	3.8	9909318.5	92.23	60	125	
Lu	175	No Gas	49865.59	0.9	53023.13	94.04	60	125	

7900 ICP-MS 200.8/6020A
Prep Blank (PB) Report

Sample Name	PBW-439459
File Name	049_PB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 17:09:29
Sample Type	PB
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.001	ppb	260.7	22.22	
Al	27	72	No Gas	1.137	ppb	10.3	57167.15	
V	51	72	He	0.021	ppb	16.4	1326.73	
Cr	52	72	No Gas	0.120	ppb	61.7	55342.66	
Mn	55	72	No Gas	0.045	ppb	8.8	10972.04	
Co	59	72	He	0.002	ppb	35.9	166.67	
Ni	60	72	No Gas	0.027	ppb	9.8	1271.17	
Cu	63	72	No Gas	0.070	ppb	13.9	5170.96	
Zn	66	72	No Gas	0.319	ppb	4.7	5195.41	
As	75	72	No Gas	0.123	ppb	67.8	-373.22	
Se	78	72	He	0.035	ppb	245.5	104.67	
Se	82	72	No Gas	0.070	ppb	176.9	294.14	
Mo	98	89	No Gas	0.029	ppb	11.7	1329.01	
Ag	107	89	No Gas	0.006	ppb	24.0	600.02	
Cd	111	89	No Gas	0.030	ppb	61.6	4034.74	
Sb	123	89	No Gas	0.088	ppb	15.0	3968.38	
Ba	137	115	No Gas	0.015	ppb	24.1	694.47	
Tl	203	115	No Gas	0.008	ppb	13.0	393.34	
Pb	208	115	No Gas	0.009	ppb	28.1	1607.83	
Th	232	115	No Gas	0.140	ppb	70.2	14643.98	
U	238	115	No Gas	0.005	ppb	29.8	503.35	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9787449.33	3.9	9572576.56	102.24	60	125	
Sc	45	He	526583.14	0.7	537132.74	98.04	60	125	
Ge	72	No Gas	6936312.64	3.4	7221407.63	96.05	60	125	
Ge	72	He	1032555.93	1.9	1075133.33	96.04	60	125	
Y	89	No Gas	10539714.86	2.7	10505771.25	100.32	60	125	
Y	89	He	1742188.92	1.4	1785434.86	97.58	60	125	
Rh	103	No Gas	8906407.14	2.6	9029665.75	98.63	60	125	
Rh	103	He	4554809.40	1.3	4662246.34	97.7	60	125	
In	115	No Gas	10049754.60	6.5	9909318.5	101.42	60	125	
Lu	175	No Gas	51629.28	3.3	53023.13	97.37	60	125	

7900 ICP-MS 200.8/6020A
Laboratory Control Sample (LCS) Report

Sample Name	LCSW-439459
File Name	050_LCS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 17:11:26
Sample Type	LCS
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	% Rec	QC Flag
Be	9	45	No Gas	20.158	ppb	5.3	74293.95	100.79	
Al	27	72	No Gas	43.205	ppb	2.3	1638712.19	108.01	
V	51	72	He	20.358	ppb	3.0	229924.53	101.79	
Cr	52	72	No Gas	21.265	ppb	2.3	1292367.73	106.32	
Mn	55	72	No Gas	21.544	ppb	6.7	1799790.31	107.72	
Co	59	72	He	20.183	ppb	0.9	486988.52	100.92	
Ni	60	72	No Gas	20.279	ppb	4.0	356671.09	101.4	
Cu	63	72	No Gas	21.151	ppb	1.4	892469.06	105.76	
Zn	66	72	No Gas	20.656	ppb	2.0	218051.28	103.28	
As	75	72	No Gas	21.049	ppb	3.8	250841.54	105.24	
Se	78	72	He	21.112	ppb	2.1	3407.42	105.56	
Se	82	72	No Gas	20.862	ppb	3.6	16865.06	104.31	
Mo	98	89	No Gas	21.062	ppb	5.9	714165.91	105.31	
Ag	107	89	No Gas	20.483	ppb	4.8	1105441.03	102.42	
Cd	111	89	No Gas	20.447	ppb	4.7	241623.66	102.23	
Sb	123	89	No Gas	20.718	ppb	3.5	717006.38	103.59	
Ba	137	115	No Gas	20.442	ppb	1.9	381894.08	102.21	
Tl	203	115	No Gas	21.579	ppb	2.2	609347.36	107.9	
Pb	208	115	No Gas	20.998	ppb	2.2	1874268.33	104.99	
Th	232	115	No Gas	21.767	ppb	3.1	1808265.24	108.84	
U	238	115	No Gas	21.723	ppb	0.4	1737268.89	108.62	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9656014.34	3.0	9572576.56	100.87	60	125	
Sc	45	He	539912.17	2.4	537132.74	100.52	60	125	
Ge	72	No Gas	6746207.23	5.2	7221407.63	93.42	60	125	
Ge	72	He	1070313.57	0.2	1075133.33	99.55	60	125	
Y	89	No Gas	10217126.26	1.7	10505771.25	97.25	60	125	
Y	89	He	1787382.57	2.5	1785434.86	100.11	60	125	
Rh	103	No Gas	8571035.77	2.8	9029665.75	94.92	60	125	
Rh	103	He	4616265.51	2.4	4662246.34	99.01	60	125	
In	115	No Gas	9188339.36	4.0	9909318.5	92.72	60	125	
Lu	175	No Gas	51439.08	2.1	53023.13	97.01	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404644-001
File Name	051SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 17:13:20
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.001	ppb	214.1	18.89	
Al	27	72	No Gas	1.366	ppb	7.1	66964.32	
V	51	72	He	0.013	ppb	73.9	1274.50	
Cr	52	72	No Gas	0.213	ppb	15.7	61789.06	
Mn	55	72	No Gas	1.029	ppb	8.2	96316.87	
Co	59	72	He	0.003	ppb	25.5	193.33	
Ni	60	72	No Gas	0.056	ppb	9.7	1815.68	
Cu	63	72	No Gas	0.298	ppb	3.6	15199.35	
Zn	66	72	No Gas	0.928	ppb	2.1	11905.04	
As	75	72	No Gas	0.106	ppb	248.0	-606.69	
Se	78	72	He	0.080	ppb	151.0	114.67	
Se	82	72	No Gas	-0.003	ppb	N/A	239.24	
Mo	98	89	No Gas	0.022	ppb	7.2	1051.36	
Ag	107	89	No Gas	0.005	ppb	32.1	544.46	
Cd	111	89	No Gas	0.032	ppb	76.0	3985.37	
Sb	123	89	No Gas	0.062	ppb	14.1	3003.68	
Ba	137	115	No Gas	0.110	ppb	9.4	2571.37	
Tl	203	115	No Gas	0.008	ppb	37.0	392.23	
Pb	208	115	No Gas	0.013	ppb	15.5	1993.40	
Th	232	115	No Gas	0.102	ppb	7.5	10684.53	
U	238	115	No Gas	0.003	ppb	17.9	381.12	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9528486.01	4.3	9572576.56	99.54	60	125	
Sc	45	He	537831.77	0.8	537132.74	100.13	60	125	
Ge	72	No Gas	7025047.08	1.5	7221407.63	97.28	60	125	
Ge	72	He	1059949.57	1.3	1075133.33	98.59	60	125	
Y	89	No Gas	10373014.59	3.5	10505771.25	98.74	60	125	
Y	89	He	1786522.12	4.1	1785434.86	100.06	60	125	
Rh	103	No Gas	8940001.59	2.3	9029665.75	99.01	60	125	
Rh	103	He	4595771.34	1.7	4662246.34	98.57	60	125	
In	115	No Gas	9888355.44	3.4	9909318.5	99.79	60	125	
Lu	175	No Gas	51580.21	0.9	53023.13	97.28	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404644-003
File Name	052SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 17:15:17
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.000	ppb	N/A	16.67	
Al	27	72	No Gas	1.945	ppb	4.2	90007.30	
V	51	72	He	0.004	ppb	29.1	1166.72	
Cr	52	72	No Gas	0.234	ppb	18.0	63330.40	
Mn	55	72	No Gas	0.508	ppb	4.5	51413.08	
Co	59	72	He	0.003	ppb	25.0	193.34	
Ni	60	72	No Gas	0.082	ppb	9.0	2294.64	
Cu	63	72	No Gas	0.328	ppb	4.2	16580.88	
Zn	66	72	No Gas	0.834	ppb	4.4	10923.15	
As	75	72	No Gas	0.019	ppb	796.3	-1677.97	
Se	78	72	He	-0.074	ppb	N/A	90.00	
Se	82	72	No Gas	0.033	ppb	96.7	270.02	
Mo	98	89	No Gas	0.011	ppb	29.3	684.83	
Ag	107	89	No Gas	0.002	ppb	28.8	397.79	
Cd	111	89	No Gas	0.034	ppb	16.4	3987.10	
Sb	123	89	No Gas	0.054	ppb	17.3	2673.61	
Ba	137	115	No Gas	0.126	ppb	8.0	2805.85	
Tl	203	115	No Gas	0.003	ppb	38.5	228.89	
Pb	208	115	No Gas	0.010	ppb	4.0	1630.05	
Th	232	115	No Gas	0.046	ppb	4.9	5522.32	
U	238	115	No Gas	0.001	ppb	22.8	197.78	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9636737.95	2.3	9572576.56	100.67	60	125	
Sc	45	He	521851.59	0.8	537132.74	97.16	60	125	
Ge	72	No Gas	7052035.55	1.5	7221407.63	97.65	60	125	
Ge	72	He	1052236.66	2.6	1075133.33	97.87	60	125	
Y	89	No Gas	10298571.26	2.9	10505771.25	98.03	60	125	
Y	89	He	1755471.46	2.7	1785434.86	98.32	60	125	
Rh	103	No Gas	8835292.98	2.1	9029665.75	97.85	60	125	
Rh	103	He	4708018.29	1.5	4662246.34	100.98	60	125	
In	115	No Gas	9588877.40	3.2	9909318.5	96.77	60	125	
Lu	175	No Gas	50344.20	3.5	53023.13	94.95	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404644-005
File Name	053SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 17:17:14
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.006	ppb	52.0	38.89	
Al	27	72	No Gas	23.384	ppb	6.5	906886.37	
V	51	72	He	0.143	ppb	9.3	2764.72	
Cr	52	72	No Gas	0.372	ppb	5.9	69718.51	
Mn	55	72	No Gas	592.714	ppb	9.3	50124069.12	>LDR
Co	59	72	He	0.284	ppb	4.4	7021.75	
Ni	60	72	No Gas	0.380	ppb	7.7	7538.70	
Cu	63	72	No Gas	4.171	ppb	6.5	180405.42	
Zn	66	72	No Gas	4.495	ppb	5.5	49553.17	
As	75	72	No Gas	0.555	ppb	21.1	4907.30	
Se	78	72	He	0.023	ppb	276.3	107.33	
Se	82	72	No Gas	0.038	ppb	235.0	267.05	
Mo	98	89	No Gas	0.024	ppb	14.7	1102.29	
Ag	107	89	No Gas	0.004	ppb	30.9	517.79	
Cd	111	89	No Gas	0.048	ppb	31.8	4157.65	
Sb	123	89	No Gas	0.073	ppb	16.5	3350.43	
Ba	137	115	No Gas	45.877	ppb	7.4	905511.96	
Tl	203	115	No Gas	0.003	ppb	22.9	213.34	
Pb	208	115	No Gas	0.249	ppb	6.7	24164.37	
Th	232	115	No Gas	0.043	ppb	6.1	5317.78	
U	238	115	No Gas	0.007	ppb	9.4	716.69	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9613662.39	3.6	9572576.56	100.43	60	125	
Sc	45	He	541297.67	1.1	537132.74	100.78	60	125	
Ge	72	No Gas	6851538.48	1.2	7221407.63	94.88	60	125	
Ge	72	He	1078872.00	3.5	1075133.33	100.35	60	125	
Y	89	No Gas	10305547.65	1.3	10505771.25	98.09	60	125	
Y	89	He	1786266.22	6.1	1785434.86	100.05	60	125	
Rh	103	No Gas	8825795.48	5.7	9029665.75	97.74	60	125	
Rh	103	He	4576375.24	1.1	4662246.34	98.16	60	125	
In	115	No Gas	9726162.39	2.9	9909318.5	98.15	60	125	
Lu	175	No Gas	50970.58	3.5	53023.13	96.13	60	125	

7900 ICP-MS 200.8/6020A
Reference Sample Report

Sample Name	R2404644-007
File Name	054_ARF.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 17:19:09
Sample Type	AllRef
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS
Be	9	45	No Gas	0.002	ppb	74.5	24.44
Al	27	72	No Gas	17.120	ppb	9.0	687280.27
Cr	52	72	No Gas	0.322	ppb	26.9	68746.82
Mn	55	72	No Gas	30.208	ppb	7.7	2638881.84
Ni	60	72	No Gas	0.307	ppb	9.1	6413.70
Cu	63	72	No Gas	0.703	ppb	6.1	33111.33
Zn	66	72	No Gas	1.772	ppb	7.5	21211.59
As	75	72	No Gas	0.256	ppb	77.2	1262.16
Se	82	72	No Gas	0.111	ppb	85.0	333.82
Mo	98	89	No Gas	0.015	ppb	17.2	838.66
Ag	107	89	No Gas	0.002	ppb	30.4	412.23
Cd	111	89	No Gas	0.027	ppb	52.0	4015.75
Sb	123	89	No Gas	0.063	ppb	16.5	3077.03
Ba	137	115	No Gas	15.784	ppb	12.3	316802.78
Tl	203	115	No Gas	0.001	ppb	58.8	174.45
Pb	208	115	No Gas	0.121	ppb	11.4	12298.99
Th	232	115	No Gas	0.031	ppb	5.0	4337.41
U	238	115	No Gas	0.005	ppb	16.2	493.35
V	51	72	He	0.050	ppb	6.0	1692.33
Co	59	72	He	0.032	ppb	7.5	897.81
Se	78	72	He	0.036	ppb	343.2	108.33

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High
Sc	45	No Gas	9540656.84	4.0	9572576.56	99.67	60	125
Sc	45	He	531446.28	1.3	537132.74	98.94	60	125
Ge	72	No Gas	7063663.19	2.9	7221407.63	97.82	60	125
Ge	72	He	1066795.27	0.6	1075133.33	99.22	60	125
Y	89	No Gas	10593697.91	4.2	10505771.25	100.84	60	125
Y	89	He	1793775.62	2.2	1785434.86	100.47	60	125
Rh	103	No Gas	8916427.70	2.5	9029665.75	98.75	60	125
Rh	103	He	4600398.29	2.8	4662246.34	98.67	60	125
In	115	No Gas	9918224.05	6.4	9909318.5	100.09	60	125
Lu	175	No Gas	51934.48	2.7	53023.13	97.95	60	125

7900 ICP-MS 200.8-6020A
Matrix Spike (MS) Sample Report

Sample Name	R2404644-007S
File Name	055_Spk.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 17:21:05
Sample Type	Spike
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d
QC Ref File Name	054_ ARF. d

QC Analyte Table

Name	Mass	Tune	Conc.	Units	RSD	CPS	RefConc	%Rec	Flag
Be	9	No Gas	19.471	ppb	13.6	71718.78	0.002	97.35	
Al	27	No Gas	54.534	ppb	9.7	2219466.09	17.12	95.47	
V	51	He	21.067	ppb	2.2	235379.87	0.05	105.07	
Cr	52	No Gas	19.827	ppb	17.6	1297193.04	0.322	97.57	
Mn	55	No Gas	46.951	ppb	18.4	4201450.88	30.208	93.51	
Co	59	He	20.615	ppb	2.0	491987.72	0.032	102.91	
Ni	60	No Gas	18.612	ppb	13.8	351486.57	0.307	91.66	
Cu	63	No Gas	20.022	ppb	13.9	906678.99	0.703	96.71	
Zn	66	No Gas	20.229	ppb	11.3	229313.61	1.772	92.91	
As	75	No Gas	19.705	ppb	12.9	251938.15	0.256	97.28	
Se	78	He	21.623	ppb	3.3	3450.76	0.036	107.92	
Se	82	No Gas	19.694	ppb	13.2	17102.61	0.111	97.93	
Mo	98	No Gas	20.389	ppb	12.1	714825.42	0.015	101.87	
Ag	107	No Gas	19.827	ppb	12.8	1105102.84	0.002	99.12	
Cd	111	No Gas	19.443	ppb	12.2	237509.93	0.027	97.09	
Sb	123	No Gas	19.783	ppb	12.2	707320.09	0.063	98.61	
Ba	137	No Gas	33.764	ppb	14.8	686811.48	15.784	94.35	
Tl	203	No Gas	19.328	ppb	13.3	595216.54	0.001	96.63	
Pb	208	No Gas	19.373	ppb	15.1	1883305.00	0.121	96.28	
Th	232	No Gas	18.547	ppb	16.4	1676462.43	0.031	92.59	
U	238	No Gas	19.730	ppb	13.4	1720228.16	0.005	98.63	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9675505.45	2.8	9572576.56	101.08	60	125	
Sc	45	He	539115.60	2.8	537132.74	100.37	60	125	
Ge	72	No Gas	7261764.44	4.4	7221407.63	100.56	60	125	
Ge	72	He	1058830.90	1.2	1075133.33	98.48	60	125	
Y	89	No Gas	10589789.30	4.9	10505771.25	100.8	60	125	
Y	89	He	1800968.96	1.3	1785434.86	100.87	60	125	
Rh	103	No Gas	8799579.37	8.0	9029665.75	97.45	60	125	
Rh	103	He	4548666.35	2.7	4662246.34	97.56	60	125	
In	115	No Gas	10078253.21	6.7	9909318.5	101.7	60	125	
Lu	175	No Gas	52238.22	4.1	53023.13	98.52	60	125	

7900 ICP-MS 200.8/6020A
Matrix Spike Duplicate (MSD) Sample Report

Sample Name	R2404644-007SD
File Name	056_SpD.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 17:22:59
Sample Type	SpkDup
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d
QC Ref File Name	055_ Spk.d

QC Analyte Table

Name	Mass	Tune	Conc.	Units	RSD	CPS	RefConc	RPD	Flag
Be	9	No Gas	20.646	ppb	7.4	74767.02	19.471	5.85	
Al	27	No Gas	58.982	ppb	7.4	2234825.61	54.534	7.84	
V	51	He	21.260	ppb	2.0	242722.25	21.067	0.91	
Cr	52	No Gas	22.430	ppb	5.9	1361857.27	19.827	12.32	
Mn	55	No Gas	51.436	ppb	3.2	4287719.69	46.951	9.12	
Co	59	He	20.767	ppb	1.9	506595.31	20.615	0.73	
Ni	60	No Gas	20.947	ppb	3.9	368657.07	18.612	11.8	
Cu	63	No Gas	22.727	ppb	6.6	959571.46	20.022	12.65	
Zn	66	No Gas	22.763	ppb	5.9	240347.85	20.229	11.79	
As	75	No Gas	21.819	ppb	4.9	260336.67	19.705	10.18	
Se	78	He	21.166	ppb	0.6	3454.09	21.623	2.14	
Se	82	No Gas	21.714	ppb	5.9	17558.05	19.694	9.76	
Mo	98	No Gas	21.683	ppb	6.5	725345.55	20.389	6.15	
Ag	107	No Gas	21.163	ppb	5.2	1126684.92	19.827	6.52	
Cd	111	No Gas	21.302	ppb	4.7	248147.97	19.443	9.13	
Sb	123	No Gas	21.929	ppb	3.9	748571.31	19.783	10.29	
Ba	137	No Gas	35.464	ppb	6.4	703760.15	33.764	4.91	
Tl	203	No Gas	20.587	ppb	5.1	618140.82	19.328	6.31	
Pb	208	No Gas	20.562	ppb	5.4	1950361.04	19.373	5.95	
Th	232	No Gas	19.459	ppb	5.5	1716810.94	18.547	4.8	
U	238	No Gas	20.583	ppb	2.3	1749281.49	19.73	4.23	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9490491.29	2.0	9572576.56	99.14	60	125	
Sc	45	He	551136.45	1.6	537132.74	102.61	60	125	
Ge	72	No Gas	6749612.37	2.6	7221407.63	93.47	60	125	
Ge	72	He	1082430.03	2.5	1075133.33	100.68	60	125	
Y	89	No Gas	10080039.88	0.7	10505771.25	95.95	60	125	
Y	89	He	1753604.86	3.6	1785434.86	98.22	60	125	
Rh	103	No Gas	8474752.17	1.9	9029665.75	93.85	60	125	
Rh	103	He	4561501.35	1.8	4662246.34	97.84	60	125	
In	115	No Gas	9765100.72	1.6	9909318.5	98.54	60	125	
Lu	175	No Gas	52223.28	0.6	53023.13	98.49	60	125	

7900 ICP-MS 200.8-6020A
Matrix Spike (MS) Sample Report

Sample Name	R2404644-007A
File Name	057_Spk.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 17:24:52
Sample Type	Spike
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d
QC Ref File Name	054_ ARF. d

QC Analyte Table

Name	Mass	Tune	Conc.	Units	RSD	CPS	RefConc	%Rec	Flag
Be	9	No Gas	20.218	ppb	12.6	75242.74	0.002	101.08	
Al	27	No Gas	60.956	ppb	15.4	2405106.36	17.12	106.72	
V	51	He	21.630	ppb	3.6	242999.66	0.05	107.88	
Cr	52	No Gas	21.026	ppb	11.2	1334368.90	0.322	103.47	
Mn	55	No Gas	49.483	ppb	13.9	4303176.77	30.208	98.56	
Co	59	He	21.184	ppb	1.2	508762.60	0.032	105.75	
Ni	60	No Gas	20.916	ppb	11.1	383958.68	0.307	103	
Cu	63	No Gas	21.539	ppb	14.2	947707.88	0.703	104.04	
Zn	66	No Gas	23.159	ppb	13.8	254749.61	1.772	106.37	
As	75	No Gas	21.221	ppb	13.8	263777.67	0.256	104.76	
Se	78	He	21.928	ppb	0.3	3518.44	0.036	109.44	
Se	82	No Gas	20.918	ppb	14.9	17633.20	0.111	104.02	
Mo	98	No Gas	21.650	ppb	14.5	735090.54	0.015	108.17	
Ag	107	No Gas	19.476	ppb	14.9	1052416.42	0.002	97.37	
Cd	111	No Gas	21.052	ppb	14.2	249029.43	0.027	105.12	
Sb	123	No Gas	21.566	ppb	15.3	747136.79	0.063	107.49	
Ba	137	No Gas	35.523	ppb	12.0	707970.18	15.784	99.27	
Tl	203	No Gas	20.404	ppb	12.2	615137.39	0.001	102.01	
Pb	208	No Gas	20.585	ppb	10.7	1961448.72	0.121	102.31	
Th	232	No Gas	20.306	ppb	11.3	1799738.05	0.031	101.37	
U	238	No Gas	21.162	ppb	10.1	1807430.59	0.005	105.79	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9774934.89	3.7	9572576.56	102.11	60	125	
Sc	45	He	541557.48	2.7	537132.74	100.82	60	125	
Ge	72	No Gas	7064924.58	4.3	7221407.63	97.83	60	125	
Ge	72	He	1065288.74	1.3	1075133.33	99.08	60	125	
Y	89	No Gas	10290777.65	5.7	10505771.25	97.95	60	125	
Y	89	He	1805507.85	3.2	1785434.86	101.12	60	125	
Rh	103	No Gas	9111873.53	3.9	9029665.75	100.91	60	125	
Rh	103	He	4655057.73	3.1	4662246.34	99.85	60	125	
In	115	No Gas	9837606.83	3.7	9909318.5	99.28	60	125	
Lu	175	No Gas	52705.84	1.5	53023.13	99.4	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404644-007L 5X
File Name	058SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 17:26:46
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.018	ppb	155.2	84.45	
Al	27	72	No Gas	3.803	ppb	13.7	161963.51	
V	51	72	He	0.005	ppb	132.3	1174.49	
Cr	52	72	No Gas	0.103	ppb	88.1	54979.49	
Mn	55	72	No Gas	6.180	ppb	12.3	541089.21	
Co	59	72	He	0.007	ppb	17.2	290.00	
Ni	60	72	No Gas	0.092	ppb	42.2	2451.44	
Cu	63	72	No Gas	0.189	ppb	21.8	10395.46	
Zn	66	72	No Gas	0.424	ppb	16.6	6384.83	
As	75	72	No Gas	0.080	ppb	46.5	-904.70	
Se	78	72	He	-0.031	ppb	N/A	96.33	
Se	82	72	No Gas	0.021	ppb	306.1	257.61	
Mo	98	89	No Gas	0.030	ppb	67.0	1290.83	
Ag	107	89	No Gas	0.014	ppb	102.9	997.93	
Cd	111	89	No Gas	0.043	ppb	65.3	4026.10	
Sb	123	89	No Gas	0.082	ppb	18.7	3607.19	
Ba	137	115	No Gas	3.220	ppb	14.4	64422.13	
Tl	203	115	No Gas	0.012	ppb	73.9	501.14	
Pb	208	115	No Gas	0.045	ppb	57.6	4982.30	
Th	232	115	No Gas	0.095	ppb	29.5	9907.77	
U	238	115	No Gas	0.020	ppb	145.0	1724.51	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9622076.84	2.8	9572576.56	100.52	60	125	
Sc	45	He	532423.47	1.1	537132.74	99.12	60	125	
Ge	72	No Gas	7023382.36	3.7	7221407.63	97.26	60	125	
Ge	72	He	1048910.79	2.5	1075133.33	97.56	60	125	
Y	89	No Gas	10149584.88	4.7	10505771.25	96.61	60	125	
Y	89	He	1793891.18	2.0	1785434.86	100.47	60	125	
Rh	103	No Gas	8621715.77	4.0	9029665.75	95.48	60	125	
Rh	103	He	4740144.95	2.0	4662246.34	101.67	60	125	
In	115	No Gas	9851472.11	6.0	9909318.5	99.42	60	125	
Lu	175	No Gas	49957.96	2.8	53023.13	94.22	60	125	

7900 ICP-MS 200.8/6020A
Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	059_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 17:28:41
Sample Type	CCV
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	% Rec	QC Flag
Be	9	45	No Gas	47.428	ppb	12.0	172856.10	94.86	
Al	27	72	No Gas	48.253	ppb	10.7	1922202.18	96.51	
V	51	72	He	50.943	ppb	0.8	565498.14	101.89	
Cr	52	72	No Gas	48.446	ppb	7.0	3031159.88	96.89	
Mn	55	72	No Gas	50.469	ppb	13.8	4426099.55	100.94	
Co	59	72	He	50.191	ppb	1.4	1193362.04	100.38	
Ni	60	72	No Gas	47.009	ppb	11.3	868280.73	94.02	
Cu	63	72	No Gas	47.781	ppb	8.4	2115526.79	95.56	
Zn	66	72	No Gas	46.564	ppb	9.6	514417.08	93.13	
As	75	72	No Gas	47.483	ppb	9.5	597313.27	94.97	
Se	78	72	He	51.779	ppb	1.3	8088.66	103.56	
Se	82	72	No Gas	47.771	ppb	9.6	40280.88	95.54	
Mo	98	89	No Gas	51.307	ppb	12.0	1715035.17	102.61	
Ag	107	89	No Gas	50.656	ppb	12.9	2695386.56	101.31	
Cd	111	89	No Gas	49.789	ppb	11.6	574897.32	99.58	
Sb	123	89	No Gas	49.646	ppb	12.0	1692059.93	99.29	
Ba	137	115	No Gas	47.676	ppb	11.2	916903.12	95.35	
Tl	203	115	No Gas	49.635	ppb	9.4	1444380.95	99.27	
Pb	208	115	No Gas	50.775	ppb	8.0	4667769.12	101.55	
Th	232	115	No Gas	49.808	ppb	10.6	4257975.94	99.62	
U	238	115	No Gas	50.007	ppb	11.4	4119734.42	100.01	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9574701.56	3.2	9572576.56	100.02	60	125	
Sc	45	He	537660.46	0.5	537132.74	100.1	60	125	
Ge	72	No Gas	7089214.44	1.5	7221407.63	98.17	60	125	
Ge	72	He	1055027.81	1.8	1075133.33	98.13	60	125	
Y	89	No Gas	10096442.65	4.0	10505771.25	96.1	60	125	
Y	89	He	1796026.91	4.6	1785434.86	100.59	60	125	
Rh	103	No Gas	8808605.48	4.9	9029665.75	97.55	60	125	
Rh	103	He	4476048.30	2.0	4662246.34	96.01	60	125	
In	115	No Gas	9473596.29	1.1	9909318.5	95.6	60	125	
Lu	175	No Gas	50828.15	2.4	53023.13	95.86	60	125	

7900 ICP-MS 200.8/6020A
Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	060_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 17:30:26
Sample Type	CCB
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.014	ppb	116.3	70.00	
Al	27	72	No Gas	-0.054	ppb	N/A	11579.88	
V	51	72	He	-0.006	ppb	N/A	1053.37	
Cr	52	72	No Gas	-0.006	ppb	N/A	49109.38	
Mn	55	72	No Gas	0.030	ppb	41.1	9916.63	
Co	59	72	He	0.001	ppb	134.4	141.11	
Ni	60	72	No Gas	0.014	ppb	52.6	1050.06	
Cu	63	72	No Gas	0.027	ppb	9.5	3379.41	
Zn	66	72	No Gas	0.026	ppb	69.7	2109.07	
As	75	72	No Gas	0.053	ppb	131.2	-1248.16	
Se	78	72	He	0.004	ppb	709.7	102.33	
Se	82	72	No Gas	-0.074	ppb	N/A	183.78	
Mo	98	89	No Gas	0.029	ppb	10.8	1314.30	
Ag	107	89	No Gas	0.011	ppb	21.5	915.61	
Cd	111	89	No Gas	0.034	ppb	22.7	4073.99	
Sb	123	89	No Gas	0.083	ppb	8.7	3769.43	
Ba	137	115	No Gas	0.006	ppb	46.4	473.34	
Tl	203	115	No Gas	0.015	ppb	27.8	578.91	
Pb	208	115	No Gas	0.021	ppb	67.2	2648.43	
Th	232	115	No Gas	0.126	ppb	15.6	12429.06	
U	238	115	No Gas	0.020	ppb	88.1	1685.96	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9783521.28	1.1	9572576.56	102.2	60	125	
Sc	45	He	531783.66	0.4	537132.74	99	60	125	
Ge	72	No Gas	7141677.91	4.8	7221407.63	98.9	60	125	
Ge	72	He	1054571.97	2.5	1075133.33	98.09	60	125	
Y	89	No Gas	10529422.64	3.7	10505771.25	100.23	60	125	
Y	89	He	1767245.69	1.8	1785434.86	98.98	60	125	
Rh	103	No Gas	8798375.76	5.6	9029665.75	97.44	60	125	
Rh	103	He	4509403.43	2.9	4662246.34	96.72	60	125	
In	115	No Gas	9575258.23	6.7	9909318.5	96.63	60	125	
Lu	175	No Gas	49317.88	2.0	53023.13	93.01	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404645-001
File Name	061SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 17:32:23
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.005	ppb	47.6	36.67	
Al	27	72	No Gas	141.368	ppb	8.4	5429104.51	>LDR
V	51	72	He	0.528	ppb	2.0	6975.05	
Cr	52	72	No Gas	0.496	ppb	24.2	77283.60	
Mn	55	72	No Gas	52.754	ppb	9.3	4475689.82	
Co	59	72	He	0.255	ppb	2.3	6191.36	
Ni	60	72	No Gas	1.120	ppb	11.7	20768.80	
Cu	63	72	No Gas	1.278	ppb	11.5	56824.30	
Zn	66	72	No Gas	3.957	ppb	9.1	43920.11	
As	75	72	No Gas	0.901	ppb	8.2	9141.83	
Se	78	72	He	0.138	ppb	48.1	123.00	
Se	82	72	No Gas	0.438	ppb	11.5	592.13	
Mo	98	89	No Gas	0.286	ppb	7.8	9830.65	
Ag	107	89	No Gas	0.006	ppb	19.3	611.12	
Cd	111	89	No Gas	0.048	ppb	22.3	4043.45	
Sb	123	89	No Gas	0.089	ppb	14.2	3821.67	
Ba	137	115	No Gas	44.258	ppb	10.5	865507.88	
Tl	203	115	No Gas	0.008	ppb	9.8	356.67	
Pb	208	115	No Gas	0.375	ppb	7.4	35778.25	
Th	232	115	No Gas	0.081	ppb	0.4	8560.83	
U	238	115	No Gas	0.256	ppb	11.7	21536.27	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9688706.56	2.1	9572576.56	101.21	60	125	
Sc	45	He	543303.31	1.9	537132.74	101.15	60	125	
Ge	72	No Gas	6879056.67	3.1	7221407.63	95.26	60	125	
Ge	72	He	1056150.34	2.0	1075133.33	98.23	60	125	
Y	89	No Gas	10046121.27	4.4	10505771.25	95.62	60	125	
Y	89	He	1853937.29	3.4	1785434.86	103.84	60	125	
Rh	103	No Gas	8619491.88	1.9	9029665.75	95.46	60	125	
Rh	103	He	4431871.07	3.7	4662246.34	95.06	60	125	
In	115	No Gas	9645873.78	3.0	9909318.5	97.34	60	125	
Lu	175	No Gas	52051.69	2.9	53023.13	98.17	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404645-003
File Name	062SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 17:34:17
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.015	ppb	16.2	72.22	
Al	27	72	No Gas	235.815	ppb	12.3	9109176.58	>LDR
V	51	72	He	0.678	ppb	2.7	8760.47	
Cr	52	72	No Gas	0.571	ppb	9.9	82442.17	
Mn	55	72	No Gas	56.255	ppb	8.0	4809926.61	
Co	59	72	He	0.352	ppb	3.3	8618.18	
Ni	60	72	No Gas	1.458	ppb	9.4	27010.54	
Cu	63	72	No Gas	1.766	ppb	6.3	78383.19	
Zn	66	72	No Gas	3.402	ppb	6.5	38306.48	
As	75	72	No Gas	0.799	ppb	24.9	7930.95	
Se	78	72	He	0.147	ppb	29.8	126.33	
Se	82	72	No Gas	0.457	ppb	14.6	611.55	
Mo	98	89	No Gas	0.502	ppb	7.2	17058.73	
Ag	107	89	No Gas	0.009	ppb	81.4	781.25	
Cd	111	89	No Gas	0.062	ppb	7.2	4225.01	
Sb	123	89	No Gas	0.097	ppb	2.7	4103.99	
Ba	137	115	No Gas	47.599	ppb	6.9	928226.70	
Tl	203	115	No Gas	0.012	ppb	29.3	492.24	
Pb	208	115	No Gas	0.335	ppb	5.7	31914.40	
Th	232	115	No Gas	0.057	ppb	7.3	6420.56	
U	238	115	No Gas	0.332	ppb	5.5	27837.34	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9796830.17	2.3	9572576.56	102.34	60	125	
Sc	45	He	553470.88	2.1	537132.74	103.04	60	125	
Ge	72	No Gas	6927535.00	2.1	7221407.63	95.93	60	125	
Ge	72	He	1071095.75	1.1	1075133.33	99.62	60	125	
Y	89	No Gas	10074399.32	2.2	10505771.25	95.89	60	125	
Y	89	He	1857259.93	2.9	1785434.86	104.02	60	125	
Rh	103	No Gas	8381372.44	3.9	9029665.75	92.82	60	125	
Rh	103	He	4467892.46	3.2	4662246.34	95.83	60	125	
In	115	No Gas	9607017.40	2.1	9909318.5	96.95	60	125	
Lu	175	No Gas	51884.48	2.4	53023.13	97.85	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404645-005
File Name	063SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 17:36:11
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.001	ppb	429.4	21.11	
Al	27	72	No Gas	48.480	ppb	6.9	1952199.44	
V	51	72	He	0.231	ppb	2.5	3790.51	
Cr	52	72	No Gas	0.322	ppb	12.1	69858.23	
Mn	55	72	No Gas	37.285	ppb	6.8	3305173.34	
Co	59	72	He	0.146	ppb	3.2	3683.82	
Ni	60	72	No Gas	0.915	ppb	6.7	17870.29	
Cu	63	72	No Gas	0.751	ppb	5.4	35784.37	
Zn	66	72	No Gas	2.849	ppb	6.0	33526.79	
As	75	72	No Gas	0.532	ppb	14.3	4835.44	
Se	78	72	He	0.044	ppb	140.3	111.67	
Se	82	72	No Gas	0.341	ppb	18.2	535.45	
Mo	98	89	No Gas	0.241	ppb	10.5	8768.48	
Ag	107	89	No Gas	0.002	ppb	54.8	408.90	
Cd	111	89	No Gas	0.037	ppb	17.1	4144.32	
Sb	123	89	No Gas	0.067	ppb	6.4	3252.62	
Ba	137	115	No Gas	34.556	ppb	9.1	706299.33	
Tl	203	115	No Gas	0.004	ppb	39.2	251.11	
Pb	208	115	No Gas	0.136	ppb	11.1	14010.81	
Th	232	115	No Gas	0.030	ppb	19.5	4308.61	
U	238	115	No Gas	0.247	ppb	8.6	21756.49	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	10063435.43	3.9	9572576.56	105.13	60	125	
Sc	45	He	549823.73	1.7	537132.74	102.36	60	125	
Ge	72	No Gas	7169776.66	0.4	7221407.63	99.29	60	125	
Ge	72	He	1084819.89	2.1	1075133.33	100.9	60	125	
Y	89	No Gas	10620516.80	3.2	10505771.25	101.09	60	125	
Y	89	He	1853654.37	5.8	1785434.86	103.82	60	125	
Rh	103	No Gas	8623966.04	2.0	9029665.75	95.51	60	125	
Rh	103	He	4391850.10	4.1	4662246.34	94.2	60	125	
In	115	No Gas	10088967.10	4.9	9909318.5	101.81	60	125	
Lu	175	No Gas	52444.56	2.8	53023.13	98.91	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404645-007
File Name	064SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 17:38:05
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	-0.003	ppb	N/A	5.55	
Al	27	72	No Gas	8.504	ppb	7.5	349037.76	
V	51	72	He	0.130	ppb	3.8	2656.92	
Cr	52	72	No Gas	0.337	ppb	19.3	69850.53	
Mn	55	72	No Gas	6.540	ppb	9.2	577925.98	
Co	59	72	He	0.061	ppb	8.3	1626.76	
Ni	60	72	No Gas	0.691	ppb	8.7	13508.71	
Cu	63	72	No Gas	1.094	ppb	6.1	50431.60	
Zn	66	72	No Gas	2.098	ppb	7.8	24833.06	
As	75	72	No Gas	0.490	ppb	25.3	4247.00	
Se	78	72	He	-0.028	ppb	N/A	101.33	
Se	82	72	No Gas	0.267	ppb	33.4	466.74	
Mo	98	89	No Gas	0.296	ppb	8.9	10510.73	
Ag	107	89	No Gas	0.002	ppb	3.3	380.01	
Cd	111	89	No Gas	0.038	ppb	20.0	4072.10	
Sb	123	89	No Gas	0.080	ppb	5.9	3628.27	
Ba	137	115	No Gas	26.071	ppb	3.5	523972.10	
Tl	203	115	No Gas	0.001	ppb	17.5	171.11	
Pb	208	115	No Gas	0.101	ppb	4.7	10410.54	
Th	232	115	No Gas	0.015	ppb	15.7	2875.88	
U	238	115	No Gas	0.205	ppb	6.1	17751.37	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9515176.84	0.9	9572576.56	99.4	60	125	
Sc	45	He	556684.34	2.8	537132.74	103.64	60	125	
Ge	72	No Gas	7078822.50	1.5	7221407.63	98.03	60	125	
Ge	72	He	1096060.75	3.9	1075133.33	101.95	60	125	
Y	89	No Gas	10397631.25	0.7	10505771.25	98.97	60	125	
Y	89	He	1817223.50	4.5	1785434.86	101.78	60	125	
Rh	103	No Gas	8245005.51	1.9	9029665.75	91.31	60	125	
Rh	103	He	4400633.16	2.6	4662246.34	94.39	60	125	
In	115	No Gas	9889972.38	0.6	9909318.5	99.8	60	125	
Lu	175	No Gas	52946.41	1.5	53023.13	99.86	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404645-009
File Name	065SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 17:40:01
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	-0.002	ppb	N/A	11.11	
Al	27	72	No Gas	2.062	ppb	9.5	99251.68	
V	51	72	He	0.023	ppb	17.1	1416.74	
Cr	52	72	No Gas	0.378	ppb	28.2	75653.58	
Mn	55	72	No Gas	0.139	ppb	19.4	20293.27	
Co	59	72	He	0.002	ppb	57.9	175.56	
Ni	60	72	No Gas	0.157	ppb	13.9	3848.31	
Cu	63	72	No Gas	0.098	ppb	6.5	6809.44	
Zn	66	72	No Gas	1.832	ppb	8.9	22898.73	
As	75	72	No Gas	0.048	ppb	224.8	-1418.23	
Se	78	72	He	-0.006	ppb	N/A	103.33	
Se	82	72	No Gas	-0.098	ppb	N/A	169.39	
Mo	98	89	No Gas	0.008	ppb	34.9	585.80	
Ag	107	89	No Gas	0.001	ppb	69.8	357.79	
Cd	111	89	No Gas	0.048	ppb	54.8	4363.93	
Sb	123	89	No Gas	0.028	ppb	17.7	1871.25	
Ba	137	115	No Gas	0.048	ppb	9.4	1341.20	
Tl	203	115	No Gas	0.001	ppb	425.9	158.89	
Pb	208	115	No Gas	0.010	ppb	22.0	1652.27	
Th	232	115	No Gas	0.013	ppb	42.5	2731.45	
U	238	115	No Gas	0.002	ppb	210.6	244.50	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9933846.55	4.4	9572576.56	103.77	60	125	
Sc	45	He	555643.01	1.3	537132.74	103.45	60	125	
Ge	72	No Gas	7405636.37	3.8	7221407.63	102.55	60	125	
Ge	72	He	1083701.03	1.6	1075133.33	100.8	60	125	
Y	89	No Gas	10819725.41	2.8	10505771.25	102.99	60	125	
Y	89	He	1816265.90	1.6	1785434.86	101.73	60	125	
Rh	103	No Gas	9159466.02	3.0	9029665.75	101.44	60	125	
Rh	103	He	4702136.76	1.0	4662246.34	100.86	60	125	
In	115	No Gas	9873723.22	4.8	9909318.5	99.64	60	125	
Lu	175	No Gas	54258.99	4.4	53023.13	102.33	60	125	

7900 ICP-MS 200.8/6020A
Reference Sample Report

Sample Name	R2404645-011
File Name	066_ARF.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 17:41:58
Sample Type	AllRef
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS
Be	9	45	No Gas	0.004	ppb	52.3	32.22
Al	27	72	No Gas	44.889	ppb	9.2	1801007.43
Cr	52	72	No Gas	0.333	ppb	17.7	70245.95
Mn	55	72	No Gas	4.388	ppb	9.0	393619.98
Ni	60	72	No Gas	0.575	ppb	7.1	11478.03
Cu	63	72	No Gas	3.591	ppb	9.3	162076.51
Zn	66	72	No Gas	2.750	ppb	8.7	32273.80
As	75	72	No Gas	0.489	ppb	35.1	4244.73
Se	82	72	No Gas	0.227	ppb	12.5	436.88
Mo	98	89	No Gas	0.098	ppb	8.9	3801.35
Ag	107	89	No Gas	0.000	ppb	136.1	315.56
Cd	111	89	No Gas	0.036	ppb	54.1	4209.81
Sb	123	89	No Gas	0.073	ppb	9.5	3509.36
Ba	137	115	No Gas	6.419	ppb	5.9	128469.86
Tl	203	115	No Gas	0.001	ppb	218.1	157.78
Pb	208	115	No Gas	0.082	ppb	9.9	8522.22
Th	232	115	No Gas	0.013	ppb	10.1	2669.18
U	238	115	No Gas	0.081	ppb	9.4	7018.63
V	51	72	He	0.148	ppb	4.4	2862.52
Co	59	72	He	0.089	ppb	0.5	2316.86
Se	78	72	He	0.004	ppb	1013.9	106.00

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High
Sc	45	No Gas	10271782.65	3.7	9572576.56	107.3	60	125
Sc	45	He	567288.94	0.6	537132.74	105.61	60	125
Ge	72	No Gas	7145537.22	2.2	7221407.63	98.95	60	125
Ge	72	He	1092345.13	0.6	1075133.33	101.6	60	125
Y	89	No Gas	10801788.74	1.4	10505771.25	102.82	60	125
Y	89	He	1909054.37	2.4	1785434.86	106.92	60	125
Rh	103	No Gas	8720301.87	2.9	9029665.75	96.57	60	125
Rh	103	He	4599823.15	0.9	4662246.34	98.66	60	125
In	115	No Gas	9834318.50	2.4	9909318.5	99.24	60	125
Lu	175	No Gas	53601.60	3.5	53023.13	101.09	60	125

7900 ICP-MS 200.8-6020A
Matrix Spike (MS) Sample Report

Sample Name	R2404645-011S
File Name	067_Spk.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 17:43:53
Sample Type	Spike
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d
QC Ref File Name	066_ ARF. d

QC Analyte Table

Name	Mass	Tune	Conc.	Units	RSD	CPS	RefConc	%Rec	Flag
Be	9	No Gas	19.183	ppb	12.6	76426.02	0.004	95.9	
Al	27	No Gas	76.016	ppb	10.9	3180919.73	44.889	89.55	
V	51	He	21.024	ppb	1.2	245248.18	0.148	104.35	
Cr	52	No Gas	20.176	ppb	16.7	1353603.31	0.333	99.23	
Mn	55	No Gas	23.655	ppb	7.5	2183348.80	4.388	96.99	
Co	59	He	19.833	ppb	0.5	494366.18	0.089	98.73	
Ni	60	No Gas	19.056	ppb	12.7	369914.73	0.575	92.62	
Cu	63	No Gas	22.335	ppb	13.9	1039415.41	3.591	94.67	
Zn	66	No Gas	21.328	ppb	14.0	248202.20	2.75	93.75	
As	75	No Gas	20.040	ppb	12.2	263479.23	0.489	97.81	
Se	78	He	21.594	ppb	4.2	3597.46	0.004	107.95	
Se	82	No Gas	19.875	ppb	13.3	17738.48	0.227	98.26	
Mo	98	No Gas	19.429	ppb	11.3	737628.77	0.098	96.67	
Ag	107	No Gas	18.359	ppb	12.1	1109572.98	0	91.79	
Cd	111	No Gas	18.448	ppb	10.5	244500.08	0.036	92.07	
Sb	123	No Gas	19.298	ppb	10.4	748037.02	0.073	96.14	
Ba	137	No Gas	24.983	ppb	12.6	516154.77	6.419	94.56	
Tl	203	No Gas	19.735	ppb	14.0	616447.84	0.001	98.67	
Pb	208	No Gas	19.559	ppb	13.4	1930279.58	0.082	97.4	
Th	232	No Gas	18.398	ppb	11.3	1691259.17	0.013	91.93	
U	238	No Gas	20.215	ppb	13.2	1788544.76	0.081	100.67	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	10467293.75	3.8	9572576.56	109.35	60	125	
Sc	45	He	563620.64	1.4	537132.74	104.93	60	125	
Ge	72	No Gas	7472956.37	5.2	7221407.63	103.48	60	125	
Ge	72	He	1105715.20	0.6	1075133.33	102.84	60	125	
Y	89	No Gas	11469158.43	3.6	10505771.25	109.17	60	125	
Y	89	He	1829206.38	2.5	1785434.86	102.45	60	125	
Rh	103	No Gas	9141909.91	2.1	9029665.75	101.24	60	125	
Rh	103	He	4717977.87	2.9	4662246.34	101.2	60	125	
In	115	No Gas	10219538.76	6.7	9909318.5	103.13	60	125	
Lu	175	No Gas	55847.45	4.0	53023.13	105.33	60	125	

7900 ICP-MS 200.8/6020A
Matrix Spike Duplicate (MSD) Sample Report

Sample Name	R2404645-011SD
File Name	068_SpD.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 17:45:47
Sample Type	SpkDup
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d
QC Ref File Name	067_ Spk.d

QC Analyte Table

Name	Mass	Tune	Conc.	Units	RSD	CPS	RefConc	RPD	Flag
Be	9	No Gas	20.843	ppb	9.2	77227.87	19.183	8.29	
Al	27	No Gas	70.189	ppb	7.1	2848980.86	76.016	7.97	
V	51	He	20.359	ppb	1.4	242079.54	21.024	3.21	
Cr	52	No Gas	20.317	ppb	7.3	1327745.54	20.176	0.7	
Mn	55	No Gas	24.037	ppb	8.0	2152435.26	23.655	1.6	
Co	59	He	19.654	ppb	1.1	499267.74	19.833	0.91	
Ni	60	No Gas	19.624	ppb	5.4	370241.84	19.056	2.94	
Cu	63	No Gas	20.763	ppb	7.6	939924.15	22.335	7.3	
Zn	66	No Gas	22.792	ppb	6.6	257945.96	21.328	6.64	
As	75	No Gas	20.889	ppb	8.2	266994.29	20.04	4.15	
Se	78	He	20.670	ppb	4.0	3512.78	21.594	4.38	
Se	82	No Gas	20.761	ppb	6.4	18004.78	19.875	4.36	
Mo	98	No Gas	21.417	ppb	7.9	745279.17	19.429	9.73	
Ag	107	No Gas	20.464	ppb	9.5	1133359.92	18.359	10.84	
Cd	111	No Gas	20.267	ppb	8.1	245867.49	18.448	9.4	
Sb	123	No Gas	21.155	ppb	8.3	751251.65	19.298	9.18	
Ba	137	No Gas	24.973	ppb	8.1	527134.94	24.983	0.04	
Tl	203	No Gas	19.792	ppb	6.0	631963.08	19.735	0.29	
Pb	208	No Gas	19.357	ppb	6.5	1952853.65	19.559	1.04	
Th	232	No Gas	18.901	ppb	5.6	1773523.78	18.398	2.69	
U	238	No Gas	19.898	ppb	8.7	1797692.64	20.215	1.58	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9727216.28	3.9	9572576.56	101.62	60	125	
Sc	45	He	570757.98	0.7	537132.74	106.26	60	125	
Ge	72	No Gas	7241207.77	2.7	7221407.63	100.27	60	125	
Ge	72	He	1127088.29	2.6	1075133.33	104.83	60	125	
Y	89	No Gas	10503989.86	3.1	10505771.25	99.98	60	125	
Y	89	He	1902802.56	2.5	1785434.86	106.57	60	125	
Rh	103	No Gas	8839924.09	4.8	9029665.75	97.9	60	125	
Rh	103	He	4727858.84	1.8	4662246.34	101.41	60	125	
In	115	No Gas	10398557.09	3.4	9909318.5	104.94	60	125	
Lu	175	No Gas	55853.84	3.0	53023.13	105.34	60	125	

7900 ICP-MS 200.8-6020A
Matrix Spike (MS) Sample Report

Sample Name	R2404645-011A
File Name	069_Spk.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 17:47:40
Sample Type	Spike
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d
QC Ref File Name	066_ ARF. d

QC Analyte Table

Name	Mass	Tune	Conc.	Units	RSD	CPS	RefConc	%Rec	Flag
Be	9	No Gas	20.617	ppb	14.2	77801.19	0.004	103.06	
Al	27	No Gas	74.201	ppb	13.2	3085779.32	44.889	87.41	
V	51	He	21.373	ppb	0.8	251763.33	0.148	106.08	
Cr	52	No Gas	19.829	ppb	14.5	1328350.02	0.333	97.52	
Mn	55	No Gas	24.323	ppb	14.3	2233854.57	4.388	99.73	
Co	59	He	20.331	ppb	0.3	511765.60	0.089	101.2	
Ni	60	No Gas	19.426	ppb	14.4	375716.74	0.575	94.41	
Cu	63	No Gas	20.738	ppb	14.2	962104.14	3.591	87.9	
Zn	66	No Gas	22.056	ppb	14.4	255864.20	2.75	96.95	
As	75	No Gas	20.575	ppb	14.9	269509.52	0.489	100.42	
Se	78	He	20.970	ppb	2.1	3531.78	0.004	104.83	
Se	82	No Gas	20.508	ppb	14.9	18231.63	0.227	101.39	
Mo	98	No Gas	21.034	ppb	13.2	756798.25	0.098	104.66	
Ag	107	No Gas	18.657	ppb	14.4	1068143.12	0	93.28	
Cd	111	No Gas	20.212	ppb	11.2	253600.09	0.036	100.87	
Sb	123	No Gas	20.272	ppb	12.2	744652.18	0.073	100.99	
Ba	137	No Gas	25.476	ppb	12.2	531158.05	6.419	96.43	
Tl	203	No Gas	20.265	ppb	14.0	638887.18	0.001	101.32	
Pb	208	No Gas	19.705	ppb	11.0	1963735.85	0.082	98.13	
Th	232	No Gas	20.093	ppb	12.9	1862100.03	0.013	100.4	
U	238	No Gas	20.593	ppb	13.5	1838527.01	0.081	102.55	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9932708.77	5.3	9572576.56	103.76	60	125	
Sc	45	He	570717.53	1.9	537132.74	106.25	60	125	
Ge	72	No Gas	7450356.37	4.5	7221407.63	103.17	60	125	
Ge	72	He	1116601.24	1.6	1075133.33	103.86	60	125	
Y	89	No Gas	10880116.51	3.7	10505771.25	103.56	60	125	
Y	89	He	1828823.61	2.1	1785434.86	102.43	60	125	
Rh	103	No Gas	9209439.08	5.2	9029665.75	101.99	60	125	
Rh	103	He	4629178.84	0.9	4662246.34	99.29	60	125	
In	115	No Gas	10287934.59	3.5	9909318.5	103.82	60	125	
Lu	175	No Gas	55896.73	1.6	53023.13	105.42	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404645-011L 5X
File Name	070SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 17:49:33
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.006	ppb	115.9	38.89	
Al	27	72	No Gas	9.414	ppb	2.7	392442.36	
V	51	72	He	0.028	ppb	21.0	1520.09	
Cr	52	72	No Gas	0.066	ppb	20.7	54234.89	
Mn	55	72	No Gas	0.919	ppb	4.4	89086.75	
Co	59	72	He	0.018	ppb	20.2	567.79	
Ni	60	72	No Gas	0.127	ppb	9.6	3192.60	
Cu	63	72	No Gas	0.783	ppb	6.9	37428.80	
Zn	66	72	No Gas	0.616	ppb	4.1	8730.49	
As	75	72	No Gas	0.236	ppb	34.8	1058.37	
Se	78	72	He	-0.046	ppb	N/A	100.33	
Se	82	72	No Gas	0.042	ppb	181.0	283.95	
Mo	98	89	No Gas	0.044	ppb	39.1	1857.00	
Ag	107	89	No Gas	0.018	ppb	106.7	1328.62	
Cd	111	89	No Gas	0.060	ppb	60.3	4414.88	
Sb	123	89	No Gas	0.079	ppb	12.2	3678.44	
Ba	137	115	No Gas	1.287	ppb	6.4	26886.82	
Tl	203	115	No Gas	0.015	ppb	86.1	588.99	
Pb	208	115	No Gas	0.028	ppb	37.5	3464.81	
Th	232	115	No Gas	0.072	ppb	15.2	8191.79	
U	238	115	No Gas	0.025	ppb	37.5	2258.26	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9968835.71	2.9	9572576.56	104.14	60	125	
Sc	45	He	571937.03	2.9	537132.74	106.48	60	125	
Ge	72	No Gas	7212630.27	0.7	7221407.63	99.88	60	125	
Ge	72	He	1118517.35	1.8	1075133.33	104.04	60	125	
Y	89	No Gas	10614331.52	5.8	10505771.25	101.03	60	125	
Y	89	He	1852128.61	2.3	1785434.86	103.74	60	125	
Rh	103	No Gas	9037122.97	2.5	9029665.75	100.08	60	125	
Rh	103	He	4725061.76	3.0	4662246.34	101.35	60	125	
In	115	No Gas	10150594.87	2.3	9909318.5	102.43	60	125	
Lu	175	No Gas	52857.01	2.9	53023.13	99.69	60	125	

7900 ICP-MS 200.8/6020A
Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	071_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 17:51:28
Sample Type	CCV
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	% Rec	QC Flag
Be	9	45	No Gas	48.302	ppb	12.0	186650.77	96.6	
Al	27	72	No Gas	48.201	ppb	9.4	1994340.68	96.4	
V	51	72	He	50.230	ppb	1.4	576855.67	100.46	
Cr	52	72	No Gas	49.024	ppb	9.5	3185493.55	98.05	
Mn	55	72	No Gas	47.936	ppb	9.5	4364553.44	95.87	
Co	59	72	He	50.130	ppb	0.5	1233281.34	100.26	
Ni	60	72	No Gas	46.625	ppb	8.8	894345.61	93.25	
Cu	63	72	No Gas	49.681	ppb	9.5	2285573.03	99.36	
Zn	66	72	No Gas	47.148	ppb	9.0	541024.79	94.3	
As	75	72	No Gas	47.919	ppb	8.5	626098.49	95.84	
Se	78	72	He	51.991	ppb	0.5	8403.17	103.98	
Se	82	72	No Gas	48.724	ppb	7.5	42666.76	97.45	
Mo	98	89	No Gas	51.128	ppb	12.6	1765742.61	102.26	
Ag	107	89	No Gas	52.003	ppb	8.7	2857425.37	104.01	
Cd	111	89	No Gas	50.832	ppb	9.7	606409.37	101.66	
Sb	123	89	No Gas	50.478	ppb	6.6	1778448.09	100.96	
Ba	137	115	No Gas	48.634	ppb	12.2	962312.08	97.27	
Tl	203	115	No Gas	51.178	ppb	12.2	1532006.33	102.36	
Pb	208	115	No Gas	50.452	ppb	12.0	4770946.48	100.9	
Th	232	115	No Gas	50.441	ppb	10.6	4439044.83	100.88	
U	238	115	No Gas	50.778	ppb	12.7	4304868.44	101.56	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	10143331.54	2.2	9572576.56	105.96	60	125	
Sc	45	He	557370.98	1.7	537132.74	103.77	60	125	
Ge	72	No Gas	7364270.54	0.8	7221407.63	101.98	60	125	
Ge	72	He	1091454.16	1.1	1075133.33	101.52	60	125	
Y	89	No Gas	10412500.14	1.5	10505771.25	99.11	60	125	
Y	89	He	1861497.77	2.4	1785434.86	104.26	60	125	
Rh	103	No Gas	9405172.68	3.2	9029665.75	104.16	60	125	
Rh	103	He	4734028.01	2.1	4662246.34	101.54	60	125	
In	115	No Gas	9785926.00	5.9	9909318.5	98.75	60	125	
Lu	175	No Gas	54229.24	1.7	53023.13	102.27	60	125	

7900 ICP-MS 200.8/6020A
Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	072_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 17:53:14
Sample Type	CCB
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.006	ppb	106.0	40.00	
Al	27	72	No Gas	-0.058	ppb	N/A	11739.80	
V	51	72	He	-0.004	ppb	N/A	1112.27	
Cr	52	72	No Gas	-0.020	ppb	N/A	49649.43	
Mn	55	72	No Gas	0.021	ppb	8.1	9420.97	
Co	59	72	He	0.000	ppb	67.5	134.44	
Ni	60	72	No Gas	0.002	ppb	150.9	865.58	
Cu	63	72	No Gas	0.015	ppb	35.9	2932.54	
Zn	66	72	No Gas	0.018	ppb	97.2	2070.17	
As	75	72	No Gas	0.090	ppb	46.9	-810.52	
Se	78	72	He	0.000	ppb	263389.3	105.00	
Se	82	72	No Gas	-0.082	ppb	N/A	180.34	
Mo	98	89	No Gas	0.027	ppb	17.8	1294.77	
Ag	107	89	No Gas	0.008	ppb	14.3	747.81	
Cd	111	89	No Gas	0.035	ppb	18.5	4324.78	
Sb	123	89	No Gas	0.079	ppb	11.2	3833.89	
Ba	137	115	No Gas	0.006	ppb	26.3	500.01	
Tl	203	115	No Gas	0.014	ppb	38.1	576.70	
Pb	208	115	No Gas	0.012	ppb	38.8	1954.56	
Th	232	115	No Gas	0.113	ppb	15.7	11876.99	
U	238	115	No Gas	0.007	ppb	68.2	744.56	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	10138136.82	4.6	9572576.56	105.91	60	125	
Sc	45	He	546140.26	0.2	537132.74	101.68	60	125	
Ge	72	No Gas	7340409.71	4.1	7221407.63	101.65	60	125	
Ge	72	He	1089273.67	0.9	1075133.33	101.32	60	125	
Y	89	No Gas	11151220.95	5.1	10505771.25	106.14	60	125	
Y	89	He	1864143.12	1.8	1785434.86	104.41	60	125	
Rh	103	No Gas	9123281.03	1.8	9029665.75	101.04	60	125	
Rh	103	He	4769735.78	2.0	4662246.34	102.31	60	125	
In	115	No Gas	10073347.66	3.5	9909318.5	101.66	60	125	
Lu	175	No Gas	54261.94	2.8	53023.13	102.34	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404659-001
File Name	073SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 17:55:10
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.010	ppb	73.7	55.56	
Al	27	72	No Gas	118.494	ppb	5.1	5058349.52	>LDR
V	51	72	He	0.462	ppb	10.7	6581.58	
Cr	52	72	No Gas	0.645	ppb	8.6	95728.61	
Mn	55	72	No Gas	1181.100	ppb	4.7	111215357.80	>LDR
Co	59	72	He	0.351	ppb	13.3	8938.64	
Ni	60	72	No Gas	0.928	ppb	5.8	19271.02	
Cu	63	72	No Gas	1.948	ppb	9.2	95093.39	
Zn	66	72	No Gas	3.151	ppb	5.4	39260.57	
As	75	72	No Gas	1.848	ppb	11.4	23030.19	
Se	78	72	He	0.215	ppb	12.6	142.33	
Se	82	72	No Gas	0.326	ppb	16.1	556.72	
Mo	98	89	No Gas	0.246	ppb	9.7	9385.67	
Ag	107	89	No Gas	0.004	ppb	12.6	526.68	
Cd	111	89	No Gas	0.044	ppb	15.2	4432.66	
Sb	123	89	No Gas	0.089	ppb	12.4	4212.89	
Ba	137	115	No Gas	113.239	ppb	8.4	2266512.41	>LDR
Tl	203	115	No Gas	0.004	ppb	35.0	248.89	
Pb	208	115	No Gas	0.515	ppb	5.8	50019.40	
Th	232	115	No Gas	0.083	ppb	4.0	8950.94	
U	238	115	No Gas	0.162	ppb	7.0	14027.84	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9918347.94	2.2	9572576.56	103.61	60	125	
Sc	45	He	581783.08	2.4	537132.74	108.31	60	125	
Ge	72	No Gas	7629994.70	0.8	7221407.63	105.66	60	125	
Ge	72	He	1113023.71	0.2	1075133.33	103.52	60	125	
Y	89	No Gas	11109434.56	2.5	10505771.25	105.75	60	125	
Y	89	He	1843044.58	3.2	1785434.86	103.23	60	125	
Rh	103	No Gas	8677994.65	5.7	9029665.75	96.11	60	125	
Rh	103	He	4576532.04	5.2	4662246.34	98.16	60	125	
In	115	No Gas	9857309.05	1.7	9909318.5	99.48	60	125	
Lu	175	No Gas	54865.48	4.1	53023.13	103.47	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404659-003
File Name	074SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 17:57:03
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.037	ppb	31.1	165.56	
Al	27	72	No Gas	237.727	ppb	14.9	10225163.76	>LDR
V	51	72	He	0.850	ppb	1.0	11169.93	
Cr	52	72	No Gas	0.468	ppb	24.7	84900.71	
Mn	55	72	No Gas	2441.590	ppb	13.5	232049719.67	>LDR
Co	59	72	He	0.551	ppb	3.2	14019.15	
Ni	60	72	No Gas	0.953	ppb	12.4	19954.39	
Cu	63	72	No Gas	2.147	ppb	11.4	105579.72	
Zn	66	72	No Gas	3.776	ppb	9.6	47129.72	
As	75	72	No Gas	2.994	ppb	10.5	38955.88	
Se	78	72	He	0.122	ppb	62.0	127.67	
Se	82	72	No Gas	0.307	ppb	26.3	544.28	
Mo	98	89	No Gas	0.286	ppb	13.0	10718.43	
Ag	107	89	No Gas	0.007	ppb	95.4	680.05	
Cd	111	89	No Gas	0.067	ppb	27.2	4673.95	
Sb	123	89	No Gas	0.098	ppb	18.4	4504.15	
Ba	137	115	No Gas	162.975	ppb	11.2	3314787.86	>LDR
Tl	203	115	No Gas	0.019	ppb	140.8	712.57	
Pb	208	115	No Gas	0.841	ppb	9.9	82458.07	
Th	232	115	No Gas	0.078	ppb	31.2	8640.35	
U	238	115	No Gas	0.179	ppb	16.3	15724.35	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	10327679.87	3.8	9572576.56	107.89	60	125	
Sc	45	He	573172.27	0.1	537132.74	106.71	60	125	
Ge	72	No Gas	7718148.58	2.2	7221407.63	106.88	60	125	
Ge	72	He	1118536.17	1.1	1075133.33	104.04	60	125	
Y	89	No Gas	11000527.62	1.7	10505771.25	104.71	60	125	
Y	89	He	1846617.36	2.0	1785434.86	103.43	60	125	
Rh	103	No Gas	8925427.98	2.2	9029665.75	98.85	60	125	
Rh	103	He	4756168.98	1.9	4662246.34	102.01	60	125	
In	115	No Gas	10030134.60	2.4	9909318.5	101.22	60	125	
Lu	175	No Gas	56595.88	1.1	53023.13	106.74	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404659-005
File Name	075SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 17:58:55
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.017	ppb	13.3	82.22	
Al	27	72	No Gas	121.459	ppb	9.5	5016099.80	>LDR
V	51	72	He	0.418	ppb	2.9	5920.12	
Cr	52	72	No Gas	0.241	ppb	32.8	66778.78	
Mn	55	72	No Gas	1120.310	ppb	15.5	101925460.39	>LDR
Co	59	72	He	0.309	ppb	0.9	7680.97	
Ni	60	72	No Gas	0.747	ppb	18.3	15143.99	
Cu	63	72	No Gas	2.583	ppb	15.3	121111.89	
Zn	66	72	No Gas	4.256	ppb	13.3	50611.41	
As	75	72	No Gas	1.859	ppb	15.9	22377.76	
Se	78	72	He	0.075	ppb	152.2	116.67	
Se	82	72	No Gas	0.224	ppb	65.2	447.39	
Mo	98	89	No Gas	0.263	ppb	15.9	9878.31	
Ag	107	89	No Gas	0.002	ppb	14.5	437.79	
Cd	111	89	No Gas	0.035	ppb	84.5	4268.08	
Sb	123	89	No Gas	0.077	ppb	17.8	3717.20	
Ba	137	115	No Gas	99.484	ppb	22.1	2105963.04	
Tl	203	115	No Gas	0.001	ppb	127.8	187.78	
Pb	208	115	No Gas	0.372	ppb	18.8	38478.44	
Th	232	115	No Gas	0.063	ppb	41.8	7888.47	
U	238	115	No Gas	0.145	ppb	18.0	13276.03	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	10116606.27	5.2	9572576.56	105.68	60	125	
Sc	45	He	564783.99	0.8	537132.74	105.15	60	125	
Ge	72	No Gas	7396757.48	3.0	7221407.63	102.43	60	125	
Ge	72	He	1085761.69	1.3	1075133.33	100.99	60	125	
Y	89	No Gas	10985732.90	3.2	10505771.25	104.57	60	125	
Y	89	He	1841005.55	2.8	1785434.86	103.11	60	125	
Rh	103	No Gas	9376627.68	6.5	9029665.75	103.84	60	125	
Rh	103	He	4544902.04	2.6	4662246.34	97.48	60	125	
In	115	No Gas	10579987.08	10.1	9909318.5	106.77	60	125	
Lu	175	No Gas	54560.65	6.6	53023.13	102.9	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404659-007
File Name	076SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 18:00:48
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.027	ppb	49.5	115.56	
Al	27	72	No Gas	261.706	ppb	13.7	10718647.63	>LDR
V	51	72	He	0.911	ppb	2.1	11754.85	
Cr	52	72	No Gas	0.557	ppb	22.0	86485.26	
Mn	55	72	No Gas	2666.828	ppb	10.0	241510221.51	>LDR
Co	59	72	He	0.582	ppb	2.6	14633.09	
Ni	60	72	No Gas	1.062	ppb	10.0	21084.93	
Cu	63	72	No Gas	2.363	ppb	11.5	110400.68	
Zn	66	72	No Gas	4.408	ppb	11.7	52065.20	
As	75	72	No Gas	3.296	ppb	11.6	41029.43	
Se	78	72	He	0.155	ppb	71.2	131.67	
Se	82	72	No Gas	0.330	ppb	53.1	539.28	
Mo	98	89	No Gas	0.292	ppb	11.7	10826.92	
Ag	107	89	No Gas	0.003	ppb	16.2	483.34	
Cd	111	89	No Gas	0.050	ppb	10.9	4416.28	
Sb	123	89	No Gas	0.083	ppb	10.7	3917.25	
Ba	137	115	No Gas	166.558	ppb	14.6	3326922.23	>LDR
Tl	203	115	No Gas	0.002	ppb	50.0	211.12	
Pb	208	115	No Gas	0.906	ppb	12.8	87268.61	
Th	232	115	No Gas	0.045	ppb	7.6	5597.90	
U	238	115	No Gas	0.173	ppb	12.5	14904.42	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9685207.67	2.1	9572576.56	101.18	60	125	
Sc	45	He	568884.53	1.3	537132.74	105.91	60	125	
Ge	72	No Gas	7348708.04	2.3	7221407.63	101.76	60	125	
Ge	72	He	1106079.92	1.7	1075133.33	102.88	60	125	
Y	89	No Gas	10909557.62	4.5	10505771.25	103.84	60	125	
Y	89	He	1862889.09	2.8	1785434.86	104.34	60	125	
Rh	103	No Gas	8857506.31	2.0	9029665.75	98.09	60	125	
Rh	103	He	4611324.96	1.8	4662246.34	98.91	60	125	
In	115	No Gas	9895535.16	6.9	9909318.5	99.86	60	125	
Lu	175	No Gas	55417.94	3.4	53023.13	104.52	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404659-009
File Name	077SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 18:02:41
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	-0.002	ppb	N/A	17.78	
Al	27	72	No Gas	0.660	ppb	185.4	35303.69	
V	51	72	He	-0.092	ppb	N/A	90.00	
Cr	52	72	No Gas	-0.556	ppb	N/A	18518.04	
Mn	55	72	No Gas	0.727	ppb	59.5	97503.06	
Co	59	72	He	0.000	ppb	N/A	106.67	
Ni	60	72	No Gas	-0.008	ppb	N/A	1138.99	
Cu	63	72	No Gas	-0.005	ppb	N/A	3415.29	
Zn	66	72	No Gas	0.009	ppb	904.7	3251.87	
As	75	72	No Gas	0.115	ppb	47.5	-147.15	
Se	78	72	He	0.067	ppb	370.6	92.33	
Se	82	72	No Gas	-0.435	ppb	N/A	-25.47	
Mo	98	89	No Gas	-0.003	ppb	N/A	468.80	
Ag	107	89	No Gas	-0.002	ppb	N/A	330.01	
Cd	111	89	No Gas	-0.131	ppb	N/A	4756.36	
Sb	123	89	No Gas	-0.005	ppb	N/A	1108.96	
Ba	137	115	No Gas	0.042	ppb	65.2	1855.76	
Tl	203	115	No Gas	-0.001	ppb	N/A	182.22	
Pb	208	115	No Gas	0.000	ppb	903.9	1242.27	
Th	232	115	No Gas	0.300	ppb	95.7	54682.60	
U	238	115	No Gas	0.001	ppb	163.7	203.33	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	22877865.20	103.7	9572576.56	238.99	60	125	ISTD Failed
Sc	45	He	457215.33	25.6	537132.74	85.12	60	125	
Ge	72	No Gas	15663330.21	105.9	7221407.63	216.9	60	125	ISTD Failed
Ge	72	He	927646.73	28.3	1075133.33	86.28	60	125	
Y	89	No Gas	25751114.26	109.4	10505771.25	245.11	60	125	ISTD Failed
Y	89	He	1578410.18	28.4	1785434.86	88.4	60	125	
Rh	103	No Gas	21067989.58	107.4	9029665.75	233.32	60	125	ISTD Failed
Rh	103	He	3884069.01	27.5	4662246.34	83.31	60	125	
In	115	No Gas	21739420.52	102.9	9909318.5	219.38	60	125	ISTD Failed
Lu	175	No Gas	47465.84	103.5	53023.13	89.52	60	125	

7900 ICP-MS 200.8/6020A
Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	078_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 18:04:37
Sample Type	CCV
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	% Rec	QC Flag
Be	9	45	No Gas	47.860	ppb	12.9	182638.15	95.72	
Al	27	72	No Gas	48.873	ppb	13.3	1916957.94	97.75	
V	51	72	He	49.793	ppb	0.5	584421.94	99.59	
Cr	52	72	No Gas	49.241	ppb	16.9	3032084.12	98.48	
Mn	55	72	No Gas	48.540	ppb	19.4	4185198.10	97.08	
Co	59	72	He	48.329	ppb	0.5	1215214.05	96.66	
Ni	60	72	No Gas	47.898	ppb	15.3	870741.09	95.8	
Cu	63	72	No Gas	47.653	ppb	12.3	2078223.32	95.31	
Zn	66	72	No Gas	48.137	ppb	14.2	523467.96	96.27	
As	75	72	No Gas	49.554	ppb	13.5	613849.71	99.11	
Se	78	72	He	51.447	ppb	2.3	8500.57	102.89	
Se	82	72	No Gas	50.203	ppb	12.9	41672.50	100.41	
Mo	98	89	No Gas	50.698	ppb	10.9	1788083.27	101.4	
Ag	107	89	No Gas	50.276	ppb	11.8	2822222.87	100.55	
Cd	111	89	No Gas	48.737	ppb	11.4	593963.11	97.47	
Sb	123	89	No Gas	49.933	ppb	11.3	1796908.37	99.87	
Ba	137	115	No Gas	47.512	ppb	15.6	965506.68	95.02	
Tl	203	115	No Gas	48.524	ppb	15.2	1491773.17	97.05	
Pb	208	115	No Gas	48.468	ppb	14.0	4708385.16	96.94	
Th	232	115	No Gas	48.076	ppb	16.3	4341811.08	96.15	
U	238	115	No Gas	48.527	ppb	14.8	4225043.86	97.05	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	10005392.10	1.5	9572576.56	104.52	60	125	
Sc	45	He	561673.55	2.2	537132.74	104.57	60	125	
Ge	72	No Gas	6996292.92	2.4	7221407.63	96.88	60	125	
Ge	72	He	1115529.68	1.2	1075133.33	103.76	60	125	
Y	89	No Gas	10627345.13	1.0	10505771.25	101.16	60	125	
Y	89	He	1856168.81	4.9	1785434.86	103.96	60	125	
Rh	103	No Gas	9369511.02	4.6	9029665.75	103.76	60	125	
Rh	103	He	4789341.06	3.4	4662246.34	102.73	60	125	
In	115	No Gas	10036382.38	3.3	9909318.5	101.28	60	125	
Lu	175	No Gas	54394.62	3.0	53023.13	102.59	60	125	

7900 ICP-MS 200.8/6020A
Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	079_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 18:06:22
Sample Type	CCB
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.017	ppb	182.8	78.89	
Al	27	72	No Gas	-0.005	ppb	N/A	13724.41	
V	51	72	He	-0.024	ppb	N/A	878.92	
Cr	52	72	No Gas	-0.044	ppb	N/A	47541.98	
Mn	55	72	No Gas	0.503	ppb	147.2	52869.38	
Co	59	72	He	-0.001	ppb	N/A	108.89	
Ni	60	72	No Gas	0.011	ppb	192.9	1013.40	
Cu	63	72	No Gas	0.024	ppb	109.1	3294.08	
Zn	66	72	No Gas	0.019	ppb	191.9	2052.40	
As	75	72	No Gas	0.077	ppb	162.1	-1027.79	
Se	78	72	He	0.011	ppb	356.9	106.67	
Se	82	72	No Gas	-0.048	ppb	N/A	207.87	
Mo	98	89	No Gas	0.034	ppb	50.9	1465.21	
Ag	107	89	No Gas	0.015	ppb	116.1	1106.86	
Cd	111	89	No Gas	0.056	ppb	43.0	4267.32	
Sb	123	89	No Gas	0.081	ppb	9.6	3653.85	
Ba	137	115	No Gas	0.027	ppb	150.0	941.27	
Tl	203	115	No Gas	0.027	ppb	115.2	1009.35	
Pb	208	115	No Gas	0.025	ppb	120.1	3259.43	
Th	232	115	No Gas	0.092	ppb	33.8	9871.58	
U	238	115	No Gas	0.020	ppb	139.6	1899.46	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9615529.89	0.9	9572576.56	100.45	60	125	
Sc	45	He	556190.83	2.2	537132.74	103.55	60	125	
Ge	72	No Gas	7242368.18	4.0	7221407.63	100.29	60	125	
Ge	72	He	1087042.88	1.7	1075133.33	101.11	60	125	
Y	89	No Gas	10356017.92	0.5	10505771.25	98.57	60	125	
Y	89	He	1821672.92	3.3	1785434.86	102.03	60	125	
Rh	103	No Gas	8922497.98	1.4	9029665.75	98.81	60	125	
Rh	103	He	4706685.09	3.0	4662246.34	100.95	60	125	
In	115	No Gas	9877175.44	6.0	9909318.5	99.68	60	125	
Lu	175	No Gas	52214.54	2.2	53023.13	98.48	60	125	

7900 ICP-MS 200.8/6020A
Contract Required Detection Limit (CRDL) Report

Sample Name	CRDL
File Name	080LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 18:08:18
Sample Type	LLICV
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	%Rec	QC Flag
Be	9	45	No Gas	0.953	ppb	18.3	3500.44	95.3	
Al	27	72	No Gas	5.125	ppb	9.6	211627.99	102.5	
V	51	72	He	1.041	ppb	2.6	12838.01	104.1	
Cr	52	72	No Gas	1.007	ppb	14.0	108845.07	100.7	
Mn	55	72	No Gas	1.034	ppb	10.7	95567.15	103.4	
Co	59	72	He	1.002	ppb	0.9	24297.44	100.2	
Ni	60	72	No Gas	0.988	ppb	10.8	18604.70	98.8	
Cu	63	72	No Gas	0.976	ppb	9.5	44375.67	97.6	
Zn	66	72	No Gas	5.048	ppb	9.5	56130.26	100.96	
As	75	72	No Gas	1.120	ppb	2.0	11938.33	112	
Se	78	72	He	1.096	ppb	6.8	274.67	109.6	
Se	82	72	No Gas	0.879	ppb	12.0	959.32	87.9	
Mo	98	89	No Gas	0.967	ppb	12.4	33363.45	96.7	
Ag	107	89	No Gas	0.978	ppb	12.5	53502.75	97.8	
Cd	111	89	No Gas	1.022	ppb	9.7	15602.52	102.2	
Sb	123	89	No Gas	1.026	ppb	9.4	36593.46	102.6	
Ba	137	115	No Gas	0.937	ppb	6.8	18722.08	93.7	
Tl	203	115	No Gas	0.964	ppb	6.2	28737.85	96.4	
Pb	208	115	No Gas	0.981	ppb	6.0	92585.98	98.1	
Th	232	115	No Gas	0.924	ppb	4.4	81976.06	92.4	
U	238	115	No Gas	0.968	ppb	5.7	81423.92	96.8	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9594257.12	1.9	9572576.56	100.23	60	125	
Sc	45	He	546927.65	2.0	537132.74	101.82	60	125	
Ge	72	No Gas	6943526.25	1.0	7221407.63	96.15	60	125	
Ge	72	He	1069984.85	2.0	1075133.33	99.52	60	125	
Y	89	No Gas	10329990.98	2.8	10505771.25	98.33	60	125	
Y	89	He	1827377.36	0.7	1785434.86	102.35	60	125	
Rh	103	No Gas	8987620.20	2.5	9029665.75	99.53	60	125	
Rh	103	He	4664416.06	1.9	4662246.34	100.05	60	125	
In	115	No Gas	9646641.28	1.1	9909318.5	97.35	60	125	
Lu	175	No Gas	51521.05	4.2	53023.13	97.17	60	125	

7900 ICP-MS 200.8/6020A
Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	081_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 18:10:13
Sample Type	CCV
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	% Rec	QC Flag
Be	9	45	No Gas	47.257	ppb	18.1	171469.10	94.51	
Al	27	72	No Gas	44.551	ppb	18.2	1809933.75	89.1	> +/- 10%
V	51	72	He	51.039	ppb	0.1	586249.92	102.08	
Cr	52	72	No Gas	44.943	ppb	21.4	2864087.11	89.89	> +/- 10%
Mn	55	72	No Gas	45.948	ppb	17.4	4104837.48	91.9	
Co	59	72	He	49.400	ppb	0.2	1215658.04	98.8	
Ni	60	72	No Gas	44.494	ppb	19.1	836615.21	88.99	> +/- 10%
Cu	63	72	No Gas	47.050	ppb	18.1	2124205.13	94.1	
Zn	66	72	No Gas	46.554	ppb	20.1	523472.77	93.11	
As	75	72	No Gas	47.084	ppb	20.4	602772.18	94.17	
Se	78	72	He	51.917	ppb	1.3	8393.84	103.83	
Se	82	72	No Gas	46.761	ppb	19.7	40150.25	93.52	
Mo	98	89	No Gas	47.054	ppb	17.2	1671402.54	94.11	
Ag	107	89	No Gas	47.673	ppb	17.8	2695343.43	95.35	
Cd	111	89	No Gas	46.781	ppb	17.6	574424.21	93.56	
Sb	123	89	No Gas	48.223	ppb	19.6	1745627.64	96.45	
Ba	137	115	No Gas	45.618	ppb	15.0	918183.33	91.24	
Tl	203	115	No Gas	47.793	ppb	15.8	1455007.55	95.59	
Pb	208	115	No Gas	47.841	ppb	13.7	4602813.06	95.68	
Th	232	115	No Gas	47.025	ppb	13.1	4208268.58	94.05	
U	238	115	No Gas	46.903	ppb	13.6	4045003.17	93.81	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9561135.45	4.8	9572576.56	99.88	60	125	
Sc	45	He	555666.30	1.9	537132.74	103.45	60	125	
Ge	72	No Gas	7295992.21	8.1	7221407.63	101.03	60	125	
Ge	72	He	1091785.96	0.8	1075133.33	101.55	60	125	
Y	89	No Gas	10771581.24	5.5	10505771.25	102.53	60	125	
Y	89	He	1819681.11	0.4	1785434.86	101.92	60	125	
Rh	103	No Gas	9144473.81	5.8	9029665.75	101.27	60	125	
Rh	103	He	4719023.56	5.3	4662246.34	101.22	60	125	
In	115	No Gas	9936007.94	2.9	9909318.5	100.27	60	125	
Lu	175	No Gas	52227.45	4.4	53023.13	98.5	60	125	

7900 ICP-MS 200.8/6020A
Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	082_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 18:11:58
Sample Type	CCB
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.009	ppb	182.5	50.00	
Al	27	72	No Gas	-0.047	ppb	N/A	11865.95	
V	51	72	He	-0.010	ppb	N/A	1025.60	
Cr	52	72	No Gas	-0.026	ppb	N/A	47847.02	
Mn	55	72	No Gas	0.091	ppb	74.9	15301.80	
Co	59	72	He	-0.001	ppb	N/A	104.44	
Ni	60	72	No Gas	0.011	ppb	116.8	1000.05	
Cu	63	72	No Gas	0.013	ppb	63.3	2759.27	
Zn	66	72	No Gas	0.023	ppb	94.8	2077.95	
As	75	72	No Gas	0.201	ppb	54.5	571.93	
Se	78	72	He	-0.064	ppb	N/A	93.00	
Se	82	72	No Gas	-0.092	ppb	N/A	167.99	
Mo	98	89	No Gas	0.029	ppb	24.7	1340.67	
Ag	107	89	No Gas	0.009	ppb	32.4	781.17	
Cd	111	89	No Gas	0.037	ppb	83.7	4178.88	
Sb	123	89	No Gas	0.080	ppb	23.2	3725.09	
Ba	137	115	No Gas	0.020	ppb	145.5	775.74	
Tl	203	115	No Gas	0.021	ppb	87.0	785.73	
Pb	208	115	No Gas	0.020	ppb	81.6	2667.32	
Th	232	115	No Gas	0.100	ppb	29.7	10710.41	
U	238	115	No Gas	0.014	ppb	117.2	1288.88	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9653524.06	1.8	9572576.56	100.85	60	125	
Sc	45	He	539076.26	2.1	537132.74	100.36	60	125	
Ge	72	No Gas	7135549.02	4.4	7221407.63	98.81	60	125	
Ge	72	He	1067160.41	1.5	1075133.33	99.26	60	125	
Y	89	No Gas	10748052.91	8.1	10505771.25	102.31	60	125	
Y	89	He	1815880.90	5.6	1785434.86	101.71	60	125	
Rh	103	No Gas	9089189.36	3.2	9029665.75	100.66	60	125	
Rh	103	He	4661749.82	2.9	4662246.34	99.99	60	125	
In	115	No Gas	10132098.21	4.8	9909318.5	102.25	60	125	
Lu	175	No Gas	53002.91	4.4	53023.13	99.96	60	125	

7900 ICP-MS 200.8/6020A
Prep Blank (PB) Report

Sample Name	PBW-439460
File Name	083_PB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 18:13:56
Sample Type	PB
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	-0.001	ppb	N/A	12.22	
Al	27	72	No Gas	1.174	ppb	9.0	59848.48	
V	51	72	He	0.028	ppb	204.5	1486.80	
Cr	52	72	No Gas	0.017	ppb	315.7	50175.83	
Mn	55	72	No Gas	0.059	ppb	17.7	12359.81	
Co	59	72	He	0.040	ppb	168.6	1125.95	
Ni	60	72	No Gas	0.005	ppb	63.3	893.37	
Cu	63	72	No Gas	0.012	ppb	47.0	2698.04	
Zn	66	72	No Gas	0.155	ppb	13.3	3504.89	
As	75	72	No Gas	0.185	ppb	67.4	378.91	
Se	78	72	He	0.008	ppb	753.7	106.33	
Se	82	72	No Gas	-0.019	ppb	N/A	228.21	
Mo	98	89	No Gas	0.010	ppb	8.9	629.28	
Ag	107	89	No Gas	0.002	ppb	49.8	368.89	
Cd	111	89	No Gas	0.048	ppb	25.5	4061.36	
Sb	123	89	No Gas	0.037	ppb	18.2	2064.61	
Ba	137	115	No Gas	-0.002	ppb	N/A	335.56	
Tl	203	115	No Gas	0.001	ppb	67.7	180.00	
Pb	208	115	No Gas	0.004	ppb	14.1	1127.80	
Th	232	115	No Gas	0.029	ppb	6.1	4126.23	
U	238	115	No Gas	0.001	ppb	18.3	141.11	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9515499.06	2.1	9572576.56	99.4	60	125	
Sc	45	He	554813.80	0.9	537132.74	103.29	60	125	
Ge	72	No Gas	7084497.64	4.6	7221407.63	98.1	60	125	
Ge	72	He	1089474.99	1.1	1075133.33	101.33	60	125	
Y	89	No Gas	10072840.43	2.5	10505771.25	95.88	60	125	
Y	89	He	1827131.25	2.2	1785434.86	102.34	60	125	
Rh	103	No Gas	8989582.42	3.3	9029665.75	99.56	60	125	
Rh	103	He	4683733.84	2.6	4662246.34	100.46	60	125	
In	115	No Gas	9966643.77	2.5	9909318.5	100.58	60	125	
Lu	175	No Gas	51875.11	2.0	53023.13	97.83	60	125	

7900 ICP-MS 200.8/6020A
Laboratory Control Sample (LCS) Report

Sample Name	LCSW-439460
File Name	084_LCS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 18:15:53
Sample Type	LCS
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	% Rec	QC Flag
Be	9	45	No Gas	19.941	ppb	9.6	74093.82	99.7	
Al	27	72	No Gas	41.690	ppb	9.9	1645506.22	104.22	
V	51	72	He	20.865	ppb	2.4	239121.15	104.32	
Cr	52	72	No Gas	20.880	ppb	9.5	1320434.15	104.4	
Mn	55	72	No Gas	20.944	ppb	12.5	1820127.81	104.72	
Co	59	72	He	20.943	ppb	2.4	512788.59	104.72	
Ni	60	72	No Gas	20.022	ppb	9.9	366317.67	100.11	
Cu	63	72	No Gas	20.724	ppb	9.5	909601.23	103.62	
Zn	66	72	No Gas	20.518	ppb	11.2	225270.72	102.59	
As	75	72	No Gas	20.566	ppb	8.9	254910.90	102.83	
Se	78	72	He	21.234	ppb	1.9	3477.43	106.17	
Se	82	72	No Gas	20.400	ppb	9.3	17160.23	102	
Mo	98	89	No Gas	20.519	ppb	13.6	715173.51	102.6	
Ag	107	89	No Gas	20.526	ppb	13.2	1138798.05	102.63	
Cd	111	89	No Gas	20.163	ppb	12.7	245037.66	100.82	
Sb	123	89	No Gas	20.725	ppb	13.1	737406.41	103.63	
Ba	137	115	No Gas	19.747	ppb	9.5	392288.75	98.74	
Tl	203	115	No Gas	20.854	ppb	12.4	625926.05	104.27	
Pb	208	115	No Gas	20.380	ppb	10.3	1933687.65	101.9	
Th	232	115	No Gas	20.230	ppb	9.1	1786216.98	101.15	
U	238	115	No Gas	20.724	ppb	9.2	1762738.65	103.62	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9750399.34	3.8	9572576.56	101.86	60	125	
Sc	45	He	554848.26	3.3	537132.74	103.3	60	125	
Ge	72	No Gas	7021415.00	1.3	7221407.63	97.23	60	125	
Ge	72	He	1086591.73	2.5	1075133.33	101.07	60	125	
Y	89	No Gas	10566137.36	6.4	10505771.25	100.57	60	125	
Y	89	He	1827199.09	1.7	1785434.86	102.34	60	125	
Rh	103	No Gas	9177074.08	5.9	9029665.75	101.63	60	125	
Rh	103	He	4687236.76	1.6	4662246.34	100.54	60	125	
In	115	No Gas	9796421.28	3.9	9909318.5	98.86	60	125	
Lu	175	No Gas	53758.23	1.5	53023.13	101.39	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404645-002
File Name	085SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 18:17:47
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	-0.002	ppb	N/A	10.00	
Al	27	72	No Gas	4.785	ppb	10.6	192202.10	
V	51	72	He	0.221	ppb	2.6	3653.81	
Cr	52	72	No Gas	0.296	ppb	24.3	63995.59	
Mn	55	72	No Gas	35.549	ppb	9.2	2954240.65	
Co	59	72	He	0.142	ppb	3.0	3577.12	
Ni	60	72	No Gas	0.913	ppb	9.3	16716.67	
Cu	63	72	No Gas	1.027	ppb	10.0	45119.80	
Zn	66	72	No Gas	42.248	ppb	10.7	442366.89	
As	75	72	No Gas	0.698	ppb	28.9	6489.85	
Se	78	72	He	0.057	ppb	105.9	113.00	
Se	82	72	No Gas	0.361	ppb	17.2	518.02	
Mo	98	89	No Gas	0.301	ppb	14.3	10460.47	
Ag	107	89	No Gas	0.003	ppb	34.6	464.45	
Cd	111	89	No Gas	0.052	ppb	28.6	4164.56	
Sb	123	89	No Gas	0.086	ppb	18.4	3769.42	
Ba	137	115	No Gas	88.939	ppb	10.7	1718017.71	
Tl	203	115	No Gas	0.009	ppb	11.1	407.79	
Pb	208	115	No Gas	0.113	ppb	7.7	11105.22	
Th	232	115	No Gas	0.092	ppb	12.5	9480.27	
U	238	115	No Gas	0.255	ppb	8.4	21245.68	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9646912.67	1.2	9572576.56	100.78	60	125	
Sc	45	He	542169.63	1.7	537132.74	100.94	60	125	
Ge	72	No Gas	6729761.96	2.4	7221407.63	93.19	60	125	
Ge	72	He	1079032.46	2.0	1075133.33	100.36	60	125	
Y	89	No Gas	10233380.43	6.1	10505771.25	97.41	60	125	
Y	89	He	1814757.22	1.0	1785434.86	101.64	60	125	
Rh	103	No Gas	8241578.00	1.0	9029665.75	91.27	60	125	
Rh	103	He	4417885.80	3.4	4662246.34	94.76	60	125	
In	115	No Gas	9538155.73	4.2	9909318.5	96.25	60	125	
Lu	175	No Gas	52892.87	2.6	53023.13	99.75	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404645-004
File Name	086SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 18:19:42
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.000	ppb	N/A	15.55	
Al	27	72	No Gas	5.816	ppb	3.7	229633.78	
V	51	72	He	0.241	ppb	1.5	3783.84	
Cr	52	72	No Gas	0.416	ppb	8.0	70569.31	
Mn	55	72	No Gas	44.025	ppb	8.6	3639811.11	
Co	59	72	He	0.150	ppb	2.4	3670.48	
Ni	60	72	No Gas	1.056	ppb	7.3	19113.04	
Cu	63	72	No Gas	1.352	ppb	5.3	58447.77	
Zn	66	72	No Gas	31.618	ppb	6.4	329832.12	
As	75	72	No Gas	0.619	ppb	10.0	5549.29	
Se	78	72	He	0.119	ppb	78.5	119.67	
Se	82	72	No Gas	0.356	ppb	35.5	511.74	
Mo	98	89	No Gas	0.492	ppb	3.8	17253.15	
Ag	107	89	No Gas	0.001	ppb	67.5	326.67	
Cd	111	89	No Gas	0.030	ppb	29.9	3973.84	
Sb	123	89	No Gas	0.084	ppb	5.4	3774.98	
Ba	137	115	No Gas	94.320	ppb	7.4	1742667.95	
Tl	203	115	No Gas	0.005	ppb	28.9	274.45	
Pb	208	115	No Gas	0.072	ppb	6.5	7027.43	
Th	232	115	No Gas	0.033	ppb	10.2	4114.01	
U	238	115	No Gas	0.338	ppb	4.5	26886.36	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9561221.01	1.8	9572576.56	99.88	60	125	
Sc	45	He	544789.87	2.8	537132.74	101.43	60	125	
Ge	72	No Gas	6685092.09	1.0	7221407.63	92.57	60	125	
Ge	72	He	1052153.15	0.7	1075133.33	97.86	60	125	
Y	89	No Gas	10399189.87	0.8	10505771.25	98.99	60	125	
Y	89	He	1804944.30	2.2	1785434.86	101.09	60	125	
Rh	103	No Gas	8190218.01	2.5	9029665.75	90.7	60	125	
Rh	103	He	4392582.05	3.1	4662246.34	94.22	60	125	
In	115	No Gas	9101227.69	2.8	9909318.5	91.85	60	125	
Lu	175	No Gas	51432.71	3.7	53023.13	97	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404645-006
File Name	087SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 18:21:36
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	-0.002	ppb	N/A	8.89	
Al	27	72	No Gas	2.392	ppb	4.6	105253.18	
V	51	72	He	0.133	ppb	5.4	2629.13	
Cr	52	72	No Gas	0.311	ppb	12.7	66558.45	
Mn	55	72	No Gas	11.960	ppb	8.3	1025664.47	
Co	59	72	He	0.091	ppb	8.5	2309.08	
Ni	60	72	No Gas	1.037	ppb	5.8	19393.43	
Cu	63	72	No Gas	0.611	ppb	6.4	28402.28	
Zn	66	72	No Gas	42.156	ppb	6.4	453350.67	
As	75	72	No Gas	0.444	ppb	22.3	3577.28	
Se	78	72	He	0.019	ppb	183.0	106.00	
Se	82	72	No Gas	0.378	ppb	9.2	545.05	
Mo	98	89	No Gas	0.246	ppb	5.5	8814.95	
Ag	107	89	No Gas	0.000	ppb	53.7	297.78	
Cd	111	89	No Gas	0.033	ppb	52.3	4017.01	
Sb	123	89	No Gas	0.071	ppb	5.5	3321.53	
Ba	137	115	No Gas	68.952	ppb	12.4	1319515.26	
Tl	203	115	No Gas	0.002	ppb	17.8	200.00	
Pb	208	115	No Gas	0.027	ppb	11.8	3142.38	
Th	232	115	No Gas	0.020	ppb	8.7	3154.84	
U	238	115	No Gas	0.257	ppb	11.4	21152.24	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9676686.01	5.5	9572576.56	101.09	60	125	
Sc	45	He	543052.84	1.5	537132.74	101.1	60	125	
Ge	72	No Gas	6897418.89	1.7	7221407.63	95.51	60	125	
Ge	72	He	1069319.12	1.6	1075133.33	99.46	60	125	
Y	89	No Gas	10416705.97	2.0	10505771.25	99.15	60	125	
Y	89	He	1832020.21	2.7	1785434.86	102.61	60	125	
Rh	103	No Gas	8551177.16	3.7	9029665.75	94.7	60	125	
Rh	103	He	4360037.05	0.9	4662246.34	93.52	60	125	
In	115	No Gas	9471759.90	6.6	9909318.5	95.58	60	125	
Lu	175	No Gas	51470.66	2.2	53023.13	97.07	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404645-008
File Name	088SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 18:23:33
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	-0.003	ppb	N/A	6.67	
Al	27	72	No Gas	2.288	ppb	11.4	101479.30	
V	51	72	He	0.123	ppb	1.2	2521.34	
Cr	52	72	No Gas	0.505	ppb	25.8	78327.27	
Mn	55	72	No Gas	5.668	ppb	13.1	490194.39	
Co	59	72	He	0.062	ppb	11.2	1604.54	
Ni	60	72	No Gas	0.677	ppb	13.6	12948.25	
Cu	63	72	No Gas	1.060	ppb	11.9	47833.98	
Zn	66	72	No Gas	3.119	ppb	10.5	35225.24	
As	75	72	No Gas	0.475	ppb	10.6	3960.56	
Se	78	72	He	0.091	ppb	28.4	117.33	
Se	82	72	No Gas	0.240	ppb	41.1	434.17	
Mo	98	89	No Gas	0.276	ppb	13.5	9952.11	
Ag	107	89	No Gas	0.000	ppb	N/A	277.78	
Cd	111	89	No Gas	0.027	ppb	57.6	4014.13	
Sb	123	89	No Gas	0.103	ppb	14.4	4501.87	
Ba	137	115	No Gas	24.550	ppb	9.7	480916.79	
Tl	203	115	No Gas	0.001	ppb	82.7	167.78	
Pb	208	115	No Gas	0.026	ppb	9.6	3150.15	
Th	232	115	No Gas	0.008	ppb	9.3	2220.20	
U	238	115	No Gas	0.200	ppb	7.7	16873.51	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9703732.95	3.0	9572576.56	101.37	60	125	
Sc	45	He	549248.80	1.9	537132.74	102.26	60	125	
Ge	72	No Gas	6933361.67	4.2	7221407.63	96.01	60	125	
Ge	72	He	1069919.92	2.6	1075133.33	99.52	60	125	
Y	89	No Gas	10614949.86	6.9	10505771.25	101.04	60	125	
Y	89	He	1836668.96	3.8	1785434.86	102.87	60	125	
Rh	103	No Gas	8462010.22	1.7	9029665.75	93.71	60	125	
Rh	103	He	4560769.40	2.6	4662246.34	97.82	60	125	
In	115	No Gas	9658834.89	3.2	9909318.5	97.47	60	125	
Lu	175	No Gas	50804.66	0.8	53023.13	95.82	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404645-010
File Name	089SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 18:25:29
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	-0.004	ppb	N/A	2.22	
Al	27	72	No Gas	2.398	ppb	6.4	104885.22	
V	51	72	He	0.003	ppb	76.1	1181.16	
Cr	52	72	No Gas	0.205	ppb	29.3	59843.20	
Mn	55	72	No Gas	0.369	ppb	7.7	38247.24	
Co	59	72	He	0.008	ppb	16.0	310.00	
Ni	60	72	No Gas	0.074	ppb	2.2	2095.72	
Cu	63	72	No Gas	0.106	ppb	6.0	6619.34	
Zn	66	72	No Gas	4.485	ppb	7.0	49489.74	
As	75	72	No Gas	0.079	ppb	85.3	-912.56	
Se	78	72	He	-0.056	ppb	N/A	94.67	
Se	82	72	No Gas	-0.032	ppb	N/A	210.31	
Mo	98	89	No Gas	0.003	ppb	32.2	391.84	
Ag	107	89	No Gas	0.000	ppb	N/A	248.89	
Cd	111	89	No Gas	0.054	ppb	3.4	4133.05	
Sb	123	89	No Gas	0.062	ppb	7.4	2890.32	
Ba	137	115	No Gas	0.139	ppb	7.7	3159.27	
Tl	203	115	No Gas	-0.001	ppb	N/A	106.67	
Pb	208	115	No Gas	0.004	ppb	16.4	1137.80	
Th	232	115	No Gas	0.003	ppb	29.2	1776.79	
U	238	115	No Gas	0.000	ppb	266.6	108.89	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9645109.34	2.5	9572576.56	100.76	60	125	
Sc	45	He	558136.73	1.5	537132.74	103.91	60	125	
Ge	72	No Gas	6863191.39	1.6	7221407.63	95.04	60	125	
Ge	72	He	1075429.75	1.7	1075133.33	100.03	60	125	
Y	89	No Gas	10095824.04	1.3	10505771.25	96.1	60	125	
Y	89	He	1812020.21	0.8	1785434.86	101.49	60	125	
Rh	103	No Gas	9014804.64	3.4	9029665.75	99.84	60	125	
Rh	103	He	4646588.42	0.8	4662246.34	99.66	60	125	
In	115	No Gas	9858898.22	3.6	9909318.5	99.49	60	125	
Lu	175	No Gas	52329.31	1.9	53023.13	98.69	60	125	

7900 ICP-MS 200.8/6020A
Reference Sample Report

Sample Name	R2404645-012
File Name	090_ARF.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 18:27:25
Sample Type	AllRef
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS
Be	9	45	No Gas	-0.002	ppb	N/A	7.78
Al	27	72	No Gas	8.380	ppb	8.7	341431.61
Cr	52	72	No Gas	0.264	ppb	28.9	64848.15
Mn	55	72	No Gas	0.768	ppb	8.4	73695.15
Ni	60	72	No Gas	0.474	ppb	6.4	9448.74
Cu	63	72	No Gas	0.864	ppb	8.5	39966.95
Zn	66	72	No Gas	3.136	ppb	8.7	35938.35
As	75	72	No Gas	0.345	ppb	50.6	2426.49
Se	82	72	No Gas	0.189	ppb	47.3	397.92
Mo	98	89	No Gas	0.104	ppb	6.6	3826.57
Ag	107	89	No Gas	0.000	ppb	101.5	301.11
Cd	111	89	No Gas	0.052	ppb	12.8	4162.01
Sb	123	89	No Gas	0.090	ppb	10.3	3920.58
Ba	137	115	No Gas	5.891	ppb	7.6	112589.97
Tl	203	115	No Gas	0.000	ppb	N/A	120.00
Pb	208	115	No Gas	0.016	ppb	9.2	2116.74
Th	232	115	No Gas	0.006	ppb	19.0	1982.38
U	238	115	No Gas	0.076	ppb	6.6	6274.91
V	51	72	He	0.076	ppb	15.3	2001.26
Co	59	72	He	0.060	ppb	6.5	1578.98
Se	78	72	He	0.031	ppb	71.4	108.67

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High
Sc	45	No Gas	9696155.17	1.9	9572576.56	101.29	60	125
Sc	45	He	553479.42	1.6	537132.74	103.04	60	125
Ge	72	No Gas	7025753.33	2.1	7221407.63	97.29	60	125
Ge	72	He	1077067.70	1.5	1075133.33	100.18	60	125
Y	89	No Gas	10208986.54	2.4	10505771.25	97.18	60	125
Y	89	He	1810412.08	3.7	1785434.86	101.4	60	125
Rh	103	No Gas	8575065.49	0.8	9029665.75	94.97	60	125
Rh	103	He	4531021.62	0.8	4662246.34	97.19	60	125
In	115	No Gas	9388896.02	3.9	9909318.5	94.75	60	125
Lu	175	No Gas	51286.66	2.7	53023.13	96.73	60	125

7900 ICP-MS 200.8-6020A
Matrix Spike (MS) Sample Report

Sample Name	R2404645-012S
File Name	091_Spk.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 18:29:22
Sample Type	Spike
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d
QC Ref File Name	090_ ARF. d

QC Analyte Table

Name	Mass	Tune	Conc.	Units	RSD	CPS	RefConc	%Rec	Flag
Be	9	No Gas	20.399	ppb	12.6	74442.97	-0.002	102.01	
Al	27	No Gas	47.588	ppb	13.1	1875818.12	8.38	98.36	
V	51	He	21.217	ppb	0.6	239285.00	0.076	105.68	
Cr	52	No Gas	20.315	ppb	14.5	1285521.13	0.264	100.25	
Mn	55	No Gas	20.579	ppb	14.2	1788097.81	0.768	99.09	
Co	59	He	20.486	ppb	0.8	493667.18	0.06	102.12	
Ni	60	No Gas	19.282	ppb	15.4	352549.21	0.474	94.17	
Cu	63	No Gas	20.562	ppb	15.3	901759.56	0.864	98.55	
Zn	66	No Gas	21.957	ppb	12.7	240996.27	3.136	94.9	
As	75	No Gas	20.452	ppb	13.4	253448.77	0.345	100.52	
Se	78	He	21.211	ppb	2.7	3418.42	0.031	105.89	
Se	82	No Gas	20.366	ppb	13.5	17128.23	0.189	100.88	
Mo	98	No Gas	19.845	ppb	8.1	701083.52	0.104	98.71	
Ag	107	No Gas	19.052	ppb	9.7	1071009.54	0	95.26	
Cd	111	No Gas	19.465	ppb	9.4	239784.32	0.052	97.07	
Sb	123	No Gas	20.072	ppb	9.4	723640.53	0.09	99.91	
Ba	137	No Gas	24.938	ppb	13.3	489030.55	5.891	96.32	
Tl	203	No Gas	20.052	ppb	13.1	594848.90	0	100.26	
Pb	208	No Gas	19.651	ppb	12.9	1841694.18	0.016	98.18	
Th	232	No Gas	20.067	ppb	13.4	1749360.94	0.006	100.31	
U	238	No Gas	20.263	ppb	11.4	1702940.14	0.076	100.93	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9584254.06	3.0	9572576.56	100.12	60	125	
Sc	45	He	554034.53	3.8	537132.74	103.15	60	125	
Ge	72	No Gas	7044821.80	4.6	7221407.63	97.55	60	125	
Ge	72	He	1069013.85	0.8	1075133.33	99.43	60	125	
Y	89	No Gas	10653421.24	1.7	10505771.25	101.41	60	125	
Y	89	He	1810463.68	3.0	1785434.86	101.4	60	125	
Rh	103	No Gas	8469205.50	3.8	9029665.75	93.79	60	125	
Rh	103	He	4537661.21	1.1	4662246.34	97.33	60	125	
In	115	No Gas	9693854.89	5.2	9909318.5	97.83	60	125	
Lu	175	No Gas	51383.90	2.1	53023.13	96.91	60	125	

7900 ICP-MS 200.8/6020A
Matrix Spike Duplicate (MSD) Sample Report

Sample Name	R2404645-012SD
File Name	092_SpD.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 18:31:16
Sample Type	SpkDup
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d
QC Ref File Name	091_ Spk.d

QC Analyte Table

Name	Mass	Tune	Conc.	Units	RSD	CPS	RefConc	RPD	Flag
Be	9	No Gas	20.438	ppb	8.1	75010.16	20.399	0.19	
Al	27	No Gas	47.618	ppb	9.9	1901390.34	47.588	0.06	
V	51	He	20.840	ppb	1.1	238118.95	21.217	1.79	
Cr	52	No Gas	20.167	ppb	11.1	1294147.52	20.315	0.73	
Mn	55	No Gas	21.262	ppb	10.3	1871978.88	20.579	3.26	
Co	59	He	19.930	ppb	0.5	486582.92	20.486	2.75	
Ni	60	No Gas	19.074	ppb	10.2	353779.69	19.282	1.08	
Cu	63	No Gas	20.327	ppb	10.0	904030.00	20.562	1.15	
Zn	66	No Gas	21.570	ppb	6.1	240016.74	21.957	1.78	
As	75	No Gas	20.572	ppb	10.6	258430.11	20.452	0.59	
Se	78	He	21.171	ppb	0.7	3457.09	21.211	0.19	
Se	82	No Gas	19.945	ppb	9.4	17010.85	20.366	2.09	
Mo	98	No Gas	20.992	ppb	7.8	713334.61	19.845	5.62	
Ag	107	No Gas	19.976	ppb	7.0	1080377.77	19.052	4.74	
Cd	111	No Gas	19.970	ppb	7.8	236514.14	19.465	2.56	
Sb	123	No Gas	20.744	ppb	8.5	719296.01	20.072	3.29	
Ba	137	No Gas	24.227	ppb	7.6	485179.20	24.938	2.89	
Tl	203	No Gas	19.567	ppb	7.4	592752.30	20.052	2.45	
Pb	208	No Gas	19.366	ppb	6.6	1853143.59	19.651	1.46	
Th	232	No Gas	20.039	ppb	2.5	1783271.91	20.067	0.14	
U	238	No Gas	20.259	ppb	4.0	1737235.59	20.263	0.02	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9625554.06	2.6	9572576.56	100.55	60	125	
Sc	45	He	558808.71	1.5	537132.74	104.04	60	125	
Ge	72	No Gas	7118725.00	3.1	7221407.63	98.58	60	125	
Ge	72	He	1082979.78	1.6	1075133.33	100.73	60	125	
Y	89	No Gas	10241396.26	1.2	10505771.25	97.48	60	125	
Y	89	He	1816909.30	2.4	1785434.86	101.76	60	125	
Rh	103	No Gas	8807506.87	1.0	9029665.75	97.54	60	125	
Rh	103	He	4575015.79	3.1	4662246.34	98.13	60	125	
In	115	No Gas	9850567.94	1.5	9909318.5	99.41	60	125	
Lu	175	No Gas	53417.32	1.6	53023.13	100.74	60	125	

7900 ICP-MS 200.8/6020A
Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	093_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 18:33:08
Sample Type	CCV
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	% Rec	QC Flag
Be	9	45	No Gas	49.292	ppb	14.8	174606.23	98.58	
Al	27	72	No Gas	49.688	ppb	11.2	1915596.07	99.38	
V	51	72	He	50.987	ppb	1.9	568316.30	101.97	
Cr	52	72	No Gas	47.919	ppb	12.7	2902545.02	95.84	
Mn	55	72	No Gas	48.836	ppb	11.6	4143379.28	97.67	
Co	59	72	He	50.849	ppb	1.2	1214415.47	101.7	
Ni	60	72	No Gas	46.822	ppb	12.8	836855.47	93.64	
Cu	63	72	No Gas	49.125	ppb	12.1	2106029.92	98.25	
Zn	66	72	No Gas	47.312	ppb	12.5	505879.61	94.62	
As	75	72	No Gas	48.505	ppb	12.1	590624.57	97.01	
Se	78	72	He	52.149	ppb	2.5	8183.38	104.3	
Se	82	72	No Gas	48.476	ppb	12.8	39560.91	96.95	
Mo	98	89	No Gas	50.081	ppb	18.6	1689535.39	100.16	
Ag	107	89	No Gas	51.477	ppb	19.3	2763367.88	102.95	
Cd	111	89	No Gas	48.265	ppb	16.0	563277.46	96.53	
Sb	123	89	No Gas	48.264	ppb	15.8	1663095.70	96.53	
Ba	137	115	No Gas	44.386	ppb	12.6	898744.37	88.77	> +/- 10%
Tl	203	115	No Gas	46.687	ppb	13.2	1429793.48	93.37	
Pb	208	115	No Gas	46.820	ppb	12.3	4530253.62	93.64	
Th	232	115	No Gas	47.213	ppb	12.0	4248455.39	94.43	
U	238	115	No Gas	46.890	ppb	14.4	4065648.73	93.78	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9315308.80	4.6	9572576.56	97.31	60	125	
Sc	45	He	546421.30	2.9	537132.74	101.73	60	125	
Ge	72	No Gas	6865940.70	0.4	7221407.63	95.08	60	125	
Ge	72	He	1059759.75	2.3	1075133.33	98.57	60	125	
Y	89	No Gas	10248075.98	6.1	10505771.25	97.55	60	125	
Y	89	He	1788220.83	1.9	1785434.86	100.16	60	125	
Rh	103	No Gas	8782677.43	2.4	9029665.75	97.26	60	125	
Rh	103	He	4575800.10	1.7	4662246.34	98.15	60	125	
In	115	No Gas	9987798.21	3.0	9909318.5	100.79	60	125	
Lu	175	No Gas	52126.45	0.9	53023.13	98.31	60	125	

7900 ICP-MS 200.8/6020A
Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	094_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 18:34:54
Sample Type	CCB
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.002	ppb	188.3	22.22	
Al	27	72	No Gas	-0.055	ppb	N/A	11357.65	
V	51	72	He	-0.004	ppb	N/A	1071.15	
Cr	52	72	No Gas	-0.038	ppb	N/A	46186.84	
Mn	55	72	No Gas	0.029	ppb	12.1	9624.39	
Co	59	72	He	0.000	ppb	N/A	112.22	
Ni	60	72	No Gas	0.001	ppb	239.2	813.36	
Cu	63	72	No Gas	0.003	ppb	95.5	2299.09	
Zn	66	72	No Gas	0.025	ppb	118.2	2066.84	
As	75	72	No Gas	0.042	ppb	131.2	-1352.82	
Se	78	72	He	-0.057	ppb	N/A	92.00	
Se	82	72	No Gas	-0.031	ppb	N/A	213.64	
Mo	98	89	No Gas	0.026	ppb	10.8	1188.42	
Ag	107	89	No Gas	0.006	ppb	19.4	630.02	
Cd	111	89	No Gas	0.047	ppb	59.2	4224.94	
Sb	123	89	No Gas	0.078	ppb	15.6	3597.16	
Ba	137	115	No Gas	0.001	ppb	669.5	394.45	
Tl	203	115	No Gas	0.010	ppb	24.7	447.79	
Pb	208	115	No Gas	0.009	ppb	28.4	1625.60	
Th	232	115	No Gas	0.112	ppb	47.2	11944.91	
U	238	115	No Gas	0.005	ppb	39.8	505.57	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9357124.07	5.0	9572576.56	97.75	60	125	
Sc	45	He	533502.88	1.8	537132.74	99.32	60	125	
Ge	72	No Gas	7005726.11	6.9	7221407.63	97.01	60	125	
Ge	72	He	1045527.32	0.8	1075133.33	97.25	60	125	
Y	89	No Gas	10505696.80	3.4	10505771.25	100	60	125	
Y	89	He	1802905.83	1.2	1785434.86	100.98	60	125	
Rh	103	No Gas	9064202.69	5.1	9029665.75	100.38	60	125	
Rh	103	He	4566363.43	4.1	4662246.34	97.94	60	125	
In	115	No Gas	10017967.93	7.3	9909318.5	101.1	60	125	
Lu	175	No Gas	51715.10	3.8	53023.13	97.53	60	125	

7900 ICP-MS 200.8-6020A
Matrix Spike (MS) Sample Report

Sample Name	R2404645-012A
File Name	095_Spk.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 18:36:50
Sample Type	Spike
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d
QC Ref File Name	090_ ARF. d

QC Analyte Table

Name	Mass	Tune	Conc.	Units	RSD	CPS	RefConc	%Rec	Flag
Be	9	No Gas	21.754	ppb	8.0	76313.89	-0.002	108.79	
Al	27	No Gas	51.178	ppb	8.6	1971219.50	8.38	105.78	
V	51	He	21.785	ppb	0.8	247409.01	0.076	108.52	
Cr	52	No Gas	21.141	ppb	6.9	1306675.22	0.264	104.33	
Mn	55	No Gas	22.088	ppb	14.0	1874100.48	0.768	106.35	
Co	59	He	20.811	ppb	0.7	505071.85	0.06	103.74	
Ni	60	No Gas	20.479	ppb	10.5	366020.77	0.474	100.02	
Cu	63	No Gas	21.497	ppb	9.3	921824.55	0.864	103.04	
Zn	66	No Gas	23.057	ppb	9.9	247171.80	3.136	99.66	
As	75	No Gas	21.742	ppb	9.1	263462.89	0.345	106.87	
Se	78	He	21.320	ppb	1.4	3460.09	0.031	106.43	
Se	82	No Gas	21.462	ppb	10.1	17628.06	0.189	106.3	
Mo	98	No Gas	21.615	ppb	9.7	721378.39	0.104	107.51	
Ag	107	No Gas	19.706	ppb	7.9	1046717.22	0	98.53	
Cd	111	No Gas	21.102	ppb	8.6	245322.51	0.052	105.24	
Sb	123	No Gas	21.252	ppb	7.5	724061.97	0.09	105.78	
Ba	137	No Gas	26.410	ppb	8.5	525084.39	5.891	102.01	
Tl	203	No Gas	20.345	ppb	7.0	611846.40	0	101.72	
Pb	208	No Gas	20.130	ppb	6.2	1912648.18	0.016	100.57	
Th	232	No Gas	21.836	ppb	2.5	1930570.20	0.006	109.15	
U	238	No Gas	21.787	ppb	5.8	1855301.59	0.076	108.52	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9206756.02	3.6	9572576.56	96.18	60	125	
Sc	45	He	546951.16	1.1	537132.74	101.83	60	125	
Ge	72	No Gas	6869572.65	2.8	7221407.63	95.13	60	125	
Ge	72	He	1076607.77	0.2	1075133.33	100.14	60	125	
Y	89	No Gas	10071232.38	2.8	10505771.25	95.86	60	125	
Y	89	He	1805981.67	2.8	1785434.86	101.15	60	125	
Rh	103	No Gas	8635007.16	2.6	9029665.75	95.63	60	125	
Rh	103	He	4369813.72	0.9	4662246.34	93.73	60	125	
In	115	No Gas	9788200.72	1.1	9909318.5	98.78	60	125	
Lu	175	No Gas	52712.09	1.3	53023.13	99.41	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404645-012L 5X
File Name	096SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 18:38:43
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.000	ppb	1680.2	16.67	
Al	27	72	No Gas	1.931	ppb	6.2	86106.26	
V	51	72	He	0.010	ppb	54.5	1225.61	
Cr	52	72	No Gas	0.042	ppb	77.6	49636.11	
Mn	55	72	No Gas	0.182	ppb	8.5	22197.40	
Co	59	72	He	0.013	ppb	22.1	413.34	
Ni	60	72	No Gas	0.100	ppb	14.2	2529.12	
Cu	63	72	No Gas	0.195	ppb	4.8	10349.36	
Zn	66	72	No Gas	0.692	ppb	1.9	9019.56	
As	75	72	No Gas	0.285	ppb	47.3	1589.59	
Se	78	72	He	-0.017	ppb	N/A	98.00	
Se	82	72	No Gas	0.007	ppb	483.7	239.12	
Mo	98	89	No Gas	0.034	ppb	4.3	1439.83	
Ag	107	89	No Gas	0.005	ppb	21.8	563.35	
Cd	111	89	No Gas	0.055	ppb	21.7	4177.83	
Sb	123	89	No Gas	0.076	ppb	2.7	3399.32	
Ba	137	115	No Gas	1.174	ppb	10.2	22991.95	
Tl	203	115	No Gas	0.006	ppb	22.6	322.23	
Pb	208	115	No Gas	0.008	ppb	21.4	1473.37	
Th	232	115	No Gas	0.065	ppb	5.2	7103.12	
U	238	115	No Gas	0.017	ppb	5.2	1537.87	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9219871.86	4.0	9572576.56	96.32	60	125	
Sc	45	He	541196.92	0.6	537132.74	100.76	60	125	
Ge	72	No Gas	6792516.81	3.2	7221407.63	94.06	60	125	
Ge	72	He	1043946.31	0.8	1075133.33	97.1	60	125	
Y	89	No Gas	10162598.49	1.2	10505771.25	96.73	60	125	
Y	89	He	1758435.80	1.3	1785434.86	98.49	60	125	
Rh	103	No Gas	8401597.44	2.9	9029665.75	93.04	60	125	
Rh	103	He	4570911.90	0.3	4662246.34	98.04	60	125	
In	115	No Gas	9528318.51	5.6	9909318.5	96.16	60	125	
Lu	175	No Gas	50992.99	2.5	53023.13	96.17	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404659-002
File Name	097SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 18:40:41
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.002	ppb	197.6	23.33	
Al	27	72	No Gas	4.309	ppb	2.9	171037.60	
V	51	72	He	0.096	ppb	4.6	2192.39	
Cr	52	72	No Gas	0.414	ppb	10.9	69463.21	
Mn	55	72	No Gas	436.129	ppb	8.0	35498979.70	>LDR
Co	59	72	He	0.103	ppb	1.6	2590.24	
Ni	60	72	No Gas	0.709	ppb	4.0	12894.87	
Cu	63	72	No Gas	1.889	ppb	6.0	79741.09	
Zn	66	72	No Gas	2.293	ppb	5.7	25143.65	
As	75	72	No Gas	1.329	ppb	4.5	13795.25	
Se	78	72	He	0.138	ppb	91.9	123.33	
Se	82	72	No Gas	0.252	ppb	39.5	423.19	
Mo	98	89	No Gas	0.289	ppb	11.7	10318.94	
Ag	107	89	No Gas	0.001	ppb	57.4	365.56	
Cd	111	89	No Gas	0.028	ppb	24.2	3984.36	
Sb	123	89	No Gas	0.086	ppb	14.5	3856.11	
Ba	137	115	No Gas	78.038	ppb	10.5	1513061.61	
Tl	203	115	No Gas	0.001	ppb	72.2	172.22	
Pb	208	115	No Gas	0.029	ppb	8.5	3394.63	
Th	232	115	No Gas	0.044	ppb	9.4	5277.77	
U	238	115	No Gas	0.142	ppb	6.6	11852.26	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9201582.97	3.4	9572576.56	96.12	60	125	
Sc	45	He	551974.87	2.7	537132.74	102.76	60	125	
Ge	72	No Gas	6591590.57	1.9	7221407.63	91.28	60	125	
Ge	72	He	1059582.01	1.9	1075133.33	98.55	60	125	
Y	89	No Gas	10495379.86	6.8	10505771.25	99.9	60	125	
Y	89	He	1784104.16	1.5	1785434.86	99.93	60	125	
Rh	103	No Gas	8438122.44	2.8	9029665.75	93.45	60	125	
Rh	103	He	4408030.93	2.5	4662246.34	94.55	60	125	
In	115	No Gas	9560077.40	3.2	9909318.5	96.48	60	125	
Lu	175	No Gas	52325.88	2.5	53023.13	98.69	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404659-004
File Name	098SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 18:42:37
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.001	ppb	34.2	21.11	
Al	27	72	No Gas	3.477	ppb	4.6	144260.40	
V	51	72	He	0.089	ppb	8.8	2125.72	
Cr	52	72	No Gas	0.225	ppb	20.2	60285.97	
Mn	55	72	No Gas	429.921	ppb	7.6	35941333.02	>LDR
Co	59	72	He	0.112	ppb	2.3	2801.39	
Ni	60	72	No Gas	0.581	ppb	7.5	11000.98	
Cu	63	72	No Gas	1.673	ppb	6.1	72762.80	
Zn	66	72	No Gas	1.678	ppb	6.8	19358.86	
As	75	72	No Gas	1.215	ppb	10.7	12784.21	
Se	78	72	He	0.025	ppb	135.4	106.67	
Se	82	72	No Gas	0.220	ppb	10.7	409.05	
Mo	98	89	No Gas	0.295	ppb	7.2	10132.71	
Ag	107	89	No Gas	0.001	ppb	208.1	313.34	
Cd	111	89	No Gas	0.042	ppb	35.2	3987.44	
Sb	123	89	No Gas	0.084	ppb	11.5	3653.84	
Ba	137	115	No Gas	78.933	ppb	3.4	1541917.41	
Tl	203	115	No Gas	0.001	ppb	5.9	165.56	
Pb	208	115	No Gas	0.024	ppb	2.7	2907.91	
Th	232	115	No Gas	0.022	ppb	6.8	3421.58	
U	238	115	No Gas	0.142	ppb	2.1	11996.84	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9641632.12	3.0	9572576.56	100.72	60	125	
Sc	45	He	553444.53	1.9	537132.74	103.04	60	125	
Ge	72	No Gas	6773574.17	2.1	7221407.63	93.8	60	125	
Ge	72	He	1066065.03	2.0	1075133.33	99.16	60	125	
Y	89	No Gas	10081722.38	3.0	10505771.25	95.96	60	125	
Y	89	He	1743984.45	4.2	1785434.86	97.68	60	125	
Rh	103	No Gas	8560099.38	1.4	9029665.75	94.8	60	125	
Rh	103	He	4331596.36	2.1	4662246.34	92.91	60	125	
In	115	No Gas	9608771.01	4.2	9909318.5	96.97	60	125	
Lu	175	No Gas	52235.38	1.1	53023.13	98.51	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404659-006
File Name	099SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 18:44:32
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	-0.001	ppb	N/A	13.33	
Al	27	72	No Gas	3.318	ppb	4.4	140326.52	
V	51	72	He	0.094	ppb	8.0	2165.73	
Cr	52	72	No Gas	0.236	ppb	9.2	61809.25	
Mn	55	72	No Gas	407.576	ppb	6.9	34581817.52	>LDR
Co	59	72	He	0.106	ppb	5.1	2652.48	
Ni	60	72	No Gas	0.604	ppb	6.2	11562.57	
Cu	63	72	No Gas	1.650	ppb	6.3	72876.55	
Zn	66	72	No Gas	2.869	ppb	2.9	32350.47	
As	75	72	No Gas	1.182	ppb	4.0	12582.54	
Se	78	72	He	0.055	ppb	196.2	110.67	
Se	82	72	No Gas	0.245	ppb	12.7	435.13	
Mo	98	89	No Gas	0.293	ppb	5.1	10328.89	
Ag	107	89	No Gas	0.000	ppb	718.8	284.45	
Cd	111	89	No Gas	0.021	ppb	61.5	3835.55	
Sb	123	89	No Gas	0.092	ppb	12.8	4019.50	
Ba	137	115	No Gas	83.704	ppb	8.0	1595256.26	
Tl	203	115	No Gas	0.000	ppb	277.9	138.89	
Pb	208	115	No Gas	0.023	ppb	12.1	2749.01	
Th	232	115	No Gas	0.014	ppb	7.5	2634.72	
U	238	115	No Gas	0.144	ppb	9.0	11882.29	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9407246.85	3.3	9572576.56	98.27	60	125	
Sc	45	He	545924.79	0.7	537132.74	101.64	60	125	
Ge	72	No Gas	6869043.06	2.3	7221407.63	95.12	60	125	
Ge	72	He	1058264.23	2.2	1075133.33	98.43	60	125	
Y	89	No Gas	10324845.15	4.5	10505771.25	98.28	60	125	
Y	89	He	1753758.82	0.4	1785434.86	98.23	60	125	
Rh	103	No Gas	8146000.51	1.7	9029665.75	90.21	60	125	
Rh	103	He	4404005.38	1.0	4662246.34	94.46	60	125	
In	115	No Gas	9402843.79	4.2	9909318.5	94.89	60	125	
Lu	175	No Gas	50852.26	0.7	53023.13	95.91	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404659-008
File Name	100SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 18:46:27
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.000	ppb	N/A	15.56	
Al	27	72	No Gas	3.102	ppb	11.3	136203.68	
V	51	72	He	0.078	ppb	8.3	2029.04	
Cr	52	72	No Gas	0.204	ppb	34.1	61831.94	
Mn	55	72	No Gas	364.988	ppb	14.2	31902956.51	>LDR
Co	59	72	He	0.104	ppb	3.2	2644.70	
Ni	60	72	No Gas	0.538	ppb	13.9	10708.60	
Cu	63	72	No Gas	1.587	ppb	11.7	72330.41	
Zn	66	72	No Gas	1.705	ppb	13.3	20548.53	
As	75	72	No Gas	1.207	ppb	12.6	13325.23	
Se	78	72	He	-0.008	ppb	N/A	102.33	
Se	82	72	No Gas	0.243	ppb	11.5	447.92	
Mo	98	89	No Gas	0.282	ppb	9.3	10125.48	
Ag	107	89	No Gas	0.000	ppb	N/A	260.00	
Cd	111	89	No Gas	0.040	ppb	69.2	4137.29	
Sb	123	89	No Gas	0.076	ppb	7.3	3522.70	
Ba	137	115	No Gas	77.174	ppb	14.7	1504893.10	
Tl	203	115	No Gas	0.000	ppb	N/A	128.89	
Pb	208	115	No Gas	0.021	ppb	8.3	2691.23	
Th	232	115	No Gas	0.021	ppb	73.6	3379.45	
U	238	115	No Gas	0.144	ppb	12.3	12128.10	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9530503.79	6.2	9572576.56	99.56	60	125	
Sc	45	He	546241.05	1.4	537132.74	101.7	60	125	
Ge	72	No Gas	7100438.47	2.8	7221407.63	98.32	60	125	
Ge	72	He	1074937.59	2.2	1075133.33	99.98	60	125	
Y	89	No Gas	10504435.14	1.1	10505771.25	99.99	60	125	
Y	89	He	1805567.57	2.6	1785434.86	101.13	60	125	
Rh	103	No Gas	8523757.71	2.1	9029665.75	94.4	60	125	
Rh	103	He	4354547.74	2.0	4662246.34	93.4	60	125	
In	115	No Gas	9645873.78	4.9	9909318.5	97.34	60	125	
Lu	175	No Gas	53302.52	4.3	53023.13	100.53	60	125	

7900 ICP-MS 200.8/6020A
Reference Sample Report

Sample Name	R2404659-010
File Name	101_ARF.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 18:48:22
Sample Type	AllRef
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS
Be	9	45	No Gas	-0.001	ppb	N/A	12.22
Al	27	72	No Gas	3.168	ppb	11.5	136495.40
Cr	52	72	No Gas	0.234	ppb	41.1	62621.31
Mn	55	72	No Gas	372.486	ppb	16.7	31989019.84
Ni	60	72	No Gas	0.567	ppb	16.4	11053.35
Cu	63	72	No Gas	1.602	ppb	15.5	71724.20
Zn	66	72	No Gas	0.659	ppb	11.9	8907.27
As	75	72	No Gas	1.069	ppb	21.5	11327.57
Se	82	72	No Gas	0.235	ppb	51.7	432.15
Mo	98	89	No Gas	0.294	ppb	15.1	10495.78
Ag	107	89	No Gas	0.000	ppb	N/A	278.89
Cd	111	89	No Gas	0.042	ppb	33.2	4150.85
Sb	123	89	No Gas	0.079	ppb	17.8	3598.27
Ba	137	115	No Gas	75.358	ppb	15.1	1502813.31
Tl	203	115	No Gas	-0.001	ppb	N/A	107.78
Pb	208	115	No Gas	0.021	ppb	12.9	2693.45
Th	232	115	No Gas	0.017	ppb	76.9	3096.01
U	238	115	No Gas	0.138	ppb	12.1	11885.71
V	51	72	He	0.078	ppb	11.9	2039.04
Co	59	72	He	0.110	ppb	1.8	2804.73
Se	78	72	He	-0.028	ppb	N/A	100.33

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High
Sc	45	No Gas	9491457.12	4.4	9572576.56	99.15	60	125
Sc	45	He	550379.70	0.9	537132.74	102.47	60	125
Ge	72	No Gas	6987742.08	3.6	7221407.63	96.76	60	125
Ge	72	He	1085174.44	2.1	1075133.33	100.93	60	125
Y	89	No Gas	10480337.92	4.3	10505771.25	99.76	60	125
Y	89	He	1775935.00	1.8	1785434.86	99.47	60	125
Rh	103	No Gas	8621532.71	1.5	9029665.75	95.48	60	125
Rh	103	He	4357318.58	2.8	4662246.34	93.46	60	125
In	115	No Gas	9864954.33	5.3	9909318.5	99.55	60	125
Lu	175	No Gas	52546.45	4.0	53023.13	99.1	60	125

7900 ICP-MS 200.8-6020A
Matrix Spike (MS) Sample Report

Sample Name	R2404659-010S
File Name	102_Spk.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 18:50:17
Sample Type	Spike
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d
QC Ref File Name	101_ ARF. d

QC Analyte Table

Name	Mass	Tune	Conc.	Units	RSD	CPS	RefConc	%Rec	Flag
Be	9	No Gas	20.929	ppb	12.1	74958.68	-0.001	104.65	
Al	27	No Gas	42.982	ppb	12.0	1712709.34	3.168	99.57	
V	51	He	21.064	ppb	1.2	239632.14	0.078	104.92	
Cr	52	No Gas	19.649	ppb	10.7	1259052.45	0.234	97.11	
Mn	55	No Gas	375.492	ppb	12.3	32843773.14	372.486	95.67	
Co	59	He	19.932	ppb	0.9	484505.00	0.11	99.11	
Ni	60	No Gas	19.308	ppb	11.9	356895.33	0.567	93.87	
Cu	63	No Gas	20.284	ppb	9.4	900354.01	1.602	93.9	
Zn	66	No Gas	19.948	ppb	9.3	221511.90	0.659	96.56	
As	75	No Gas	21.258	ppb	9.0	266427.11	1.069	100.9	
Se	78	He	20.666	ppb	1.8	3362.40	-0.028	103.47	
Se	82	No Gas	20.164	ppb	10.2	17145.78	0.235	99.65	
Mo	98	No Gas	21.403	ppb	11.3	720212.26	0.294	105.46	
Ag	107	No Gas	19.341	ppb	10.3	1036403.43	0	96.7	
Cd	111	No Gas	19.620	ppb	9.6	230261.10	0.042	97.89	
Sb	123	No Gas	20.962	ppb	10.4	720132.03	0.079	104.4	
Ba	137	No Gas	93.936	ppb	12.6	1871131.21	75.358	98.51	
Tl	203	No Gas	19.242	ppb	12.8	579965.08	-0.001	96.22	
Pb	208	No Gas	19.099	ppb	11.8	1819407.07	0.021	95.4	
Th	232	No Gas	19.267	ppb	11.5	1707752.19	0.017	96.25	
U	238	No Gas	20.816	ppb	12.5	1776849.45	0.138	103.37	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9409801.02	3.5	9572576.56	98.3	60	125	
Sc	45	He	559524.93	1.3	537132.74	104.17	60	125	
Ge	72	No Gas	7105886.80	3.8	7221407.63	98.4	60	125	
Ge	72	He	1078297.08	0.4	1075133.33	100.29	60	125	
Y	89	No Gas	10169451.26	4.0	10505771.25	96.8	60	125	
Y	89	He	1831175.55	2.9	1785434.86	102.56	60	125	
Rh	103	No Gas	8413266.61	4.5	9029665.75	93.17	60	125	
Rh	103	He	4412893.02	1.5	4662246.34	94.65	60	125	
In	115	No Gas	9855829.33	6.0	9909318.5	99.46	60	125	
Lu	175	No Gas	53224.18	1.5	53023.13	100.38	60	125	

7900 ICP-MS 200.8/6020A
Matrix Spike Duplicate (MSD) Sample Report

Sample Name	R2404659-010SD
File Name	103_SpD.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 18:52:10
Sample Type	SpkDup
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d
QC Ref File Name	102_ Spk.d

QC Analyte Table

Name	Mass	Tune	Conc.	Units	RSD	CPS	RefConc	RPD	Flag
Be	9	No Gas	21.569	ppb	9.4	76914.04	20.929	3.01	
Al	27	No Gas	42.026	ppb	7.5	1709982.40	42.982	2.25	
V	51	He	21.292	ppb	2.0	243575.49	21.064	1.08	
Cr	52	No Gas	20.191	ppb	9.6	1316890.29	19.649	2.72	
Mn	55	No Gas	384.460	ppb	2.9	34275231.97	375.492	2.36	
Co	59	He	20.073	ppb	1.8	490661.77	19.932	0.71	
Ni	60	No Gas	19.046	ppb	4.6	359086.46	19.308	1.36	
Cu	63	No Gas	20.864	ppb	6.1	943435.99	20.284	2.82	
Zn	66	No Gas	19.700	ppb	5.6	222905.56	19.948	1.25	
As	75	No Gas	21.367	ppb	5.5	272987.39	21.258	0.51	
Se	78	He	21.091	ppb	1.5	3448.42	20.666	2.03	
Se	82	No Gas	20.368	ppb	7.2	17659.96	20.164	1.01	
Mo	98	No Gas	22.014	ppb	5.8	740115.43	21.403	2.82	
Ag	107	No Gas	20.442	ppb	4.4	1093663.50	19.341	5.54	
Cd	111	No Gas	20.665	ppb	4.7	242035.54	19.62	5.19	
Sb	123	No Gas	21.730	ppb	4.8	745522.52	20.962	3.6	
Ba	137	No Gas	93.750	ppb	4.9	1899553.33	93.936	0.2	
Tl	203	No Gas	19.592	ppb	4.1	601011.38	19.242	1.8	
Pb	208	No Gas	19.245	ppb	3.8	1864890.94	19.099	0.76	
Th	232	No Gas	20.103	ppb	4.6	1812828.44	19.267	4.25	
U	238	No Gas	20.813	ppb	3.7	1807179.72	20.816	0.01	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9351371.29	2.6	9572576.56	97.69	60	125	
Sc	45	He	556916.78	0.4	537132.74	103.68	60	125	
Ge	72	No Gas	7228243.05	2.6	7221407.63	100.09	60	125	
Ge	72	He	1084334.96	0.6	1075133.33	100.86	60	125	
Y	89	No Gas	10129198.76	1.3	10505771.25	96.42	60	125	
Y	89	He	1756992.15	2.2	1785434.86	98.41	60	125	
Rh	103	No Gas	8284722.73	1.7	9029665.75	91.75	60	125	
Rh	103	He	4448679.41	1.3	4662246.34	95.42	60	125	
In	115	No Gas	9974316.55	2.8	9909318.5	100.66	60	125	
Lu	175	No Gas	53026.88	2.0	53023.13	100.01	60	125	

7900 ICP-MS 200.8-6020A
Matrix Spike (MS) Sample Report

Sample Name	R2404659-010A
File Name	104_Spk.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 18:54:03
Sample Type	Spike
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d
QC Ref File Name	101_ ARF. d

QC Analyte Table

Name	Mass	Tune	Conc.	Units	RSD	CPS	RefConc	%Rec	Flag
Be	9	No Gas	20.286	ppb	22.5	76146.63	-0.001	101.44	
Al	27	No Gas	41.763	ppb	19.4	1726451.28	3.168	96.75	
V	51	He	21.732	ppb	1.0	248310.70	0.078	108.24	
Cr	52	No Gas	19.915	ppb	20.8	1321266.79	0.234	98.42	
Mn	55	No Gas	362.046	ppb	21.7	32799331.47	372.486	92.24	
Co	59	He	20.253	ppb	2.6	494406.89	0.11	100.72	
Ni	60	No Gas	18.637	ppb	21.3	356850.20	0.567	90.62	
Cu	63	No Gas	20.315	ppb	20.2	933638.31	1.602	94.04	
Zn	66	No Gas	19.300	ppb	21.3	221862.60	0.659	93.42	
As	75	No Gas	20.645	ppb	20.4	267864.76	1.069	97.99	
Se	78	He	21.626	ppb	0.9	3530.11	-0.028	108.28	
Se	82	No Gas	19.693	ppb	21.8	17340.43	0.235	97.32	
Mo	98	No Gas	20.556	ppb	19.3	730809.37	0.294	101.29	
Ag	107	No Gas	17.590	ppb	16.0	996457.88	0	87.95	
Cd	111	No Gas	19.111	ppb	16.3	237268.90	0.042	95.36	
Sb	123	No Gas	19.519	ppb	15.8	709153.32	0.079	97.21	
Ba	137	No Gas	86.637	ppb	15.4	1822713.61	75.358	90.85	
Tl	203	No Gas	18.405	ppb	17.7	585226.59	-0.001	92.03	
Pb	208	No Gas	18.535	ppb	17.4	1861708.59	0.021	92.58	
Th	232	No Gas	19.888	ppb	19.4	1855551.28	0.017	99.35	
U	238	No Gas	20.299	ppb	18.4	1825880.48	0.138	100.8	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9960056.27	8.4	9572576.56	104.05	60	125	
Sc	45	He	563571.45	1.0	537132.74	104.92	60	125	
Ge	72	No Gas	7426394.71	7.9	7221407.63	102.84	60	125	
Ge	72	He	1083202.32	1.8	1075133.33	100.75	60	125	
Y	89	No Gas	10792758.46	5.7	10505771.25	102.73	60	125	
Y	89	He	1820035.97	2.3	1785434.86	101.94	60	125	
Rh	103	No Gas	8848741.32	5.4	9029665.75	98	60	125	
Rh	103	He	4430302.60	3.1	4662246.34	95.03	60	125	
In	115	No Gas	10430316.25	8.0	9909318.5	105.26	60	125	
Lu	175	No Gas	54957.76	8.2	53023.13	103.65	60	125	

7900 ICP-MS 200.8/6020A
Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	105_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 18:55:54
Sample Type	CCV
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	% Rec	QC Flag
Be	9	45	No Gas	50.147	ppb	7.7	181793.64	100.29	
Al	27	72	No Gas	47.890	ppb	11.9	1900675.86	95.78	
V	51	72	He	51.216	ppb	1.7	572943.81	102.43	
Cr	52	72	No Gas	48.526	ppb	9.8	3025490.30	97.05	
Mn	55	72	No Gas	48.430	ppb	7.6	4230077.33	96.86	
Co	59	72	He	50.210	ppb	1.1	1203562.80	100.42	
Ni	60	72	No Gas	46.946	ppb	10.7	863758.44	93.89	
Cu	63	72	No Gas	48.415	ppb	10.3	2137013.04	96.83	
Zn	66	72	No Gas	48.522	ppb	9.8	534021.77	97.04	
As	75	72	No Gas	49.074	ppb	10.0	615136.65	98.15	
Se	78	72	He	52.314	ppb	1.7	8236.41	104.63	
Se	82	72	No Gas	48.923	ppb	9.5	41096.82	97.85	
Mo	98	89	No Gas	51.821	ppb	11.9	1731033.27	103.64	
Ag	107	89	No Gas	53.154	ppb	11.2	2827266.83	106.31	
Cd	111	89	No Gas	51.225	ppb	10.6	591291.83	102.45	
Sb	123	89	No Gas	50.681	ppb	10.0	1727831.29	101.36	
Ba	137	115	No Gas	49.545	ppb	8.6	950075.76	99.09	
Tl	203	115	No Gas	52.173	ppb	7.4	1513551.57	104.35	
Pb	208	115	No Gas	52.098	ppb	6.8	4774927.62	104.2	
Th	232	115	No Gas	53.005	ppb	5.6	4518564.54	106.01	
U	238	115	No Gas	51.914	ppb	5.1	4266388.86	103.83	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9492230.18	1.6	9572576.56	99.16	60	125	
Sc	45	He	544472.98	1.6	537132.74	101.37	60	125	
Ge	72	No Gas	7071533.19	1.2	7221407.63	97.92	60	125	
Ge	72	He	1063548.50	2.0	1075133.33	98.92	60	125	
Y	89	No Gas	10094686.27	3.1	10505771.25	96.09	60	125	
Y	89	He	1739115.21	4.1	1785434.86	97.41	60	125	
Rh	103	No Gas	9017211.86	0.9	9029665.75	99.86	60	125	
Rh	103	He	4451685.38	3.1	4662246.34	95.48	60	125	
In	115	No Gas	9446906.29	1.8	9909318.5	95.33	60	125	
Lu	175	No Gas	53129.71	2.3	53023.13	100.2	60	125	

7900 ICP-MS 200.8/6020A
Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	106_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 18:57:39
Sample Type	CCB
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.006	ppb	156.1	40.00	
Al	27	72	No Gas	-0.064	ppb	N/A	11092.52	
V	51	72	He	0.009	ppb	101.0	1235.61	
Cr	52	72	No Gas	-0.019	ppb	N/A	48593.62	
Mn	55	72	No Gas	0.069	ppb	76.5	13351.43	
Co	59	72	He	0.006	ppb	128.0	268.89	
Ni	60	72	No Gas	0.007	ppb	161.7	923.37	
Cu	63	72	No Gas	0.007	ppb	156.3	2514.70	
Zn	66	72	No Gas	0.022	ppb	172.0	2055.72	
As	75	72	No Gas	0.061	ppb	22.6	-1164.91	
Se	78	72	He	-0.017	ppb	N/A	100.33	
Se	82	72	No Gas	-0.009	ppb	N/A	238.80	
Mo	98	89	No Gas	0.031	ppb	8.8	1347.84	
Ag	107	89	No Gas	0.011	ppb	56.5	860.04	
Cd	111	89	No Gas	0.053	ppb	66.6	4233.79	
Sb	123	89	No Gas	0.096	ppb	8.6	4185.22	
Ba	137	115	No Gas	0.022	ppb	133.2	785.70	
Tl	203	115	No Gas	0.018	ppb	82.9	656.75	
Pb	208	115	No Gas	0.017	ppb	88.9	2285.84	
Th	232	115	No Gas	0.111	ppb	24.0	11184.32	
U	238	115	No Gas	0.011	ppb	99.1	1019.24	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9536771.57	4.6	9572576.56	99.63	60	125	
Sc	45	He	537126.68	0.8	537132.74	100	60	125	
Ge	72	No Gas	7173458.74	4.9	7221407.63	99.34	60	125	
Ge	72	He	1067463.88	1.1	1075133.33	99.29	60	125	
Y	89	No Gas	10373113.48	3.2	10505771.25	98.74	60	125	
Y	89	He	1777726.25	4.1	1785434.86	99.57	60	125	
Rh	103	No Gas	8915119.65	1.9	9029665.75	98.73	60	125	
Rh	103	He	4642327.45	1.8	4662246.34	99.57	60	125	
In	115	No Gas	9686209.62	2.3	9909318.5	97.75	60	125	
Lu	175	No Gas	52860.27	2.0	53023.13	99.69	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404659-010L 5X
File Name	107SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 18:59:36
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	-0.001	ppb	N/A	12.22	
Al	27	72	No Gas	0.752	ppb	4.4	43002.43	
V	51	72	He	0.011	ppb	91.5	1264.51	
Cr	52	72	No Gas	0.038	ppb	94.8	51211.51	
Mn	55	72	No Gas	76.803	ppb	5.4	6678649.46	
Co	59	72	He	0.023	ppb	7.7	678.91	
Ni	60	72	No Gas	0.127	ppb	9.8	3112.58	
Cu	63	72	No Gas	0.340	ppb	8.3	17078.19	
Zn	66	72	No Gas	0.251	ppb	8.9	4526.29	
As	75	72	No Gas	0.394	ppb	3.1	3014.85	
Se	78	72	He	-0.063	ppb	N/A	93.67	
Se	82	72	No Gas	0.086	ppb	100.9	312.66	
Mo	98	89	No Gas	0.068	ppb	16.0	2659.97	
Ag	107	89	No Gas	0.002	ppb	14.6	401.12	
Cd	111	89	No Gas	0.040	ppb	12.6	4123.46	
Sb	123	89	No Gas	0.045	ppb	18.5	2412.44	
Ba	137	115	No Gas	15.090	ppb	6.2	306798.27	
Tl	203	115	No Gas	0.002	ppb	27.6	200.00	
Pb	208	115	No Gas	0.007	ppb	18.3	1450.04	
Th	232	115	No Gas	0.038	ppb	9.4	5009.89	
U	238	115	No Gas	0.030	ppb	1.7	2665.84	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9501245.73	2.0	9572576.56	99.25	60	125	
Sc	45	He	541077.77	1.5	537132.74	100.73	60	125	
Ge	72	No Gas	7042904.86	3.0	7221407.63	97.53	60	125	
Ge	72	He	1075302.60	2.1	1075133.33	100.02	60	125	
Y	89	No Gas	10460595.42	5.6	10505771.25	99.57	60	125	
Y	89	He	1795820.21	0.4	1785434.86	100.58	60	125	
Rh	103	No Gas	8718025.49	2.9	9029665.75	96.55	60	125	
Rh	103	He	4617938.57	1.8	4662246.34	99.05	60	125	
In	115	No Gas	9994100.71	1.9	9909318.5	100.86	60	125	
Lu	175	No Gas	53442.38	1.2	53023.13	100.79	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404675-002
File Name	108SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 19:01:31
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.000	ppb	N/A	14.44	
Al	27	72	No Gas	3.730	ppb	5.3	162710.46	
V	51	72	He	0.087	ppb	10.2	2104.61	
Cr	52	72	No Gas	0.618	ppb	15.4	88131.28	
Mn	55	72	No Gas	498.084	ppb	6.9	44001291.59	>LDR
Co	59	72	He	0.117	ppb	7.4	2936.98	
Ni	60	72	No Gas	0.678	ppb	7.0	13437.55	
Cu	63	72	No Gas	2.040	ppb	6.4	93360.25	
Zn	66	72	No Gas	3.269	ppb	7.6	38149.46	
As	75	72	No Gas	1.245	ppb	11.2	13967.60	
Se	78	72	He	0.075	ppb	95.8	114.33	
Se	82	72	No Gas	0.239	ppb	28.8	448.75	
Mo	98	89	No Gas	0.292	ppb	4.1	10236.10	
Ag	107	89	No Gas	0.001	ppb	51.7	355.56	
Cd	111	89	No Gas	0.038	ppb	27.5	4019.98	
Sb	123	89	No Gas	0.077	ppb	10.1	3492.69	
Ba	137	115	No Gas	89.038	ppb	10.8	1728468.40	
Tl	203	115	No Gas	0.002	ppb	33.1	180.00	
Pb	208	115	No Gas	0.027	ppb	11.6	3209.05	
Th	232	115	No Gas	0.034	ppb	14.4	4394.10	
U	238	115	No Gas	0.145	ppb	7.4	12199.24	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9328080.74	0.9	9572576.56	97.45	60	125	
Sc	45	He	553706.94	0.9	537132.74	103.09	60	125	
Ge	72	No Gas	7169423.19	4.3	7221407.63	99.28	60	125	
Ge	72	He	1064581.69	0.8	1075133.33	99.02	60	125	
Y	89	No Gas	10258046.54	1.7	10505771.25	97.64	60	125	
Y	89	He	1848473.54	2.7	1785434.86	103.53	60	125	
Rh	103	No Gas	8460048.00	2.5	9029665.75	93.69	60	125	
Rh	103	He	4371303.72	2.1	4662246.34	93.76	60	125	
In	115	No Gas	9584465.45	4.3	9909318.5	96.72	60	125	
Lu	175	No Gas	52886.19	1.5	53023.13	99.74	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404675-004
File Name	109SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 19:03:25
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.001	ppb	168.8	22.22	
Al	27	72	No Gas	3.790	ppb	13.1	161630.10	
V	51	72	He	0.087	ppb	11.5	2122.38	
Cr	52	72	No Gas	0.346	ppb	31.2	69808.78	
Mn	55	72	No Gas	567.083	ppb	15.7	49020015.83	>LDR
Co	59	72	He	0.124	ppb	1.8	3114.79	
Ni	60	72	No Gas	0.613	ppb	14.0	11960.70	
Cu	63	72	No Gas	1.688	ppb	14.5	75931.14	
Zn	66	72	No Gas	2.599	ppb	13.3	30064.56	
As	75	72	No Gas	1.309	ppb	19.9	14373.36	
Se	78	72	He	0.035	ppb	84.9	108.67	
Se	82	72	No Gas	0.277	ppb	27.8	472.15	
Mo	98	89	No Gas	0.288	ppb	9.4	10399.05	
Ag	107	89	No Gas	0.000	ppb	N/A	276.67	
Cd	111	89	No Gas	0.040	ppb	13.9	4159.80	
Sb	123	89	No Gas	0.072	ppb	14.0	3411.55	
Ba	137	115	No Gas	86.213	ppb	10.7	1731066.60	
Tl	203	115	No Gas	0.000	ppb	N/A	131.11	
Pb	208	115	No Gas	0.034	ppb	9.0	4006.92	
Th	232	115	No Gas	0.019	ppb	16.5	3282.65	
U	238	115	No Gas	0.140	ppb	9.1	12104.74	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	10017133.77	2.1	9572576.56	104.64	60	125	
Sc	45	He	565127.27	2.3	537132.74	105.21	60	125	
Ge	72	No Gas	7037355.83	4.8	7221407.63	97.45	60	125	
Ge	72	He	1070316.17	0.9	1075133.33	99.55	60	125	
Y	89	No Gas	10573361.53	2.9	10505771.25	100.64	60	125	
Y	89	He	1800089.51	4.1	1785434.86	100.82	60	125	
Rh	103	No Gas	8412534.11	2.6	9029665.75	93.17	60	125	
Rh	103	He	4532537.74	2.6	4662246.34	97.22	60	125	
In	115	No Gas	9893151.00	2.4	9909318.5	99.84	60	125	
Lu	175	No Gas	54175.88	2.6	53023.13	102.17	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404675-006
File Name	110SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 19:05:19
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.001	ppb	217.4	20.00	
Al	27	72	No Gas	4.723	ppb	18.2	200683.68	
V	51	72	He	0.095	ppb	9.8	2219.07	
Cr	52	72	No Gas	1.092	ppb	23.8	116812.67	
Mn	55	72	No Gas	554.143	ppb	14.8	48599851.40	>LDR
Co	59	72	He	0.120	ppb	4.3	3041.44	
Ni	60	72	No Gas	0.605	ppb	17.2	11973.02	
Cu	63	72	No Gas	2.275	ppb	17.8	102948.75	
Zn	66	72	No Gas	4.704	ppb	13.5	53730.41	
As	75	72	No Gas	1.238	ppb	27.2	13655.86	
Se	78	72	He	0.135	ppb	43.9	125.00	
Se	82	72	No Gas	0.222	ppb	29.2	431.70	
Mo	98	89	No Gas	0.282	ppb	15.3	10042.86	
Ag	107	89	No Gas	0.000	ppb	33.1	300.00	
Cd	111	89	No Gas	0.050	ppb	34.9	4250.79	
Sb	123	89	No Gas	0.075	ppb	16.8	3452.68	
Ba	137	115	No Gas	85.432	ppb	14.1	1699869.14	
Tl	203	115	No Gas	0.000	ppb	N/A	122.22	
Pb	208	115	No Gas	0.028	ppb	10.5	3360.19	
Th	232	115	No Gas	0.041	ppb	86.0	5246.02	
U	238	115	No Gas	0.140	ppb	13.8	12030.27	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	10099498.21	4.7	9572576.56	105.5	60	125	
Sc	45	He	565665.50	3.2	537132.74	105.31	60	125	
Ge	72	No Gas	7141400.55	4.8	7221407.63	98.89	60	125	
Ge	72	He	1077106.87	1.8	1075133.33	100.18	60	125	
Y	89	No Gas	10478185.69	4.7	10505771.25	99.74	60	125	
Y	89	He	1828191.18	1.3	1785434.86	102.39	60	125	
Rh	103	No Gas	8933879.37	7.2	9029665.75	98.94	60	125	
Rh	103	He	4596398.71	2.2	4662246.34	98.59	60	125	
In	115	No Gas	9839744.05	4.8	9909318.5	99.3	60	125	
Lu	175	No Gas	55221.11	3.8	53023.13	104.15	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404675-008
File Name	111SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 19:07:13
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.000	ppb	1004.0	17.78	
Al	27	72	No Gas	3.407	ppb	6.3	148190.24	
V	51	72	He	0.068	ppb	1.3	1911.24	
Cr	52	72	No Gas	0.374	ppb	16.7	72205.64	
Mn	55	72	No Gas	763.768	ppb	2.5	66776732.90	>LDR
Co	59	72	He	0.124	ppb	2.9	3121.46	
Ni	60	72	No Gas	0.617	ppb	5.2	12153.02	
Cu	63	72	No Gas	1.788	ppb	5.2	81177.12	
Zn	66	72	No Gas	2.922	ppb	5.6	33929.76	
As	75	72	No Gas	1.254	ppb	10.1	13876.86	
Se	78	72	He	0.062	ppb	45.6	113.67	
Se	82	72	No Gas	0.267	ppb	56.7	467.34	
Mo	98	89	No Gas	0.263	ppb	6.2	9814.27	
Ag	107	89	No Gas	0.000	ppb	N/A	292.22	
Cd	111	89	No Gas	0.025	ppb	61.9	4100.97	
Sb	123	89	No Gas	0.069	ppb	7.1	3387.10	
Ba	137	115	No Gas	90.181	ppb	6.9	1795540.41	
Tl	203	115	No Gas	0.000	ppb	N/A	133.33	
Pb	208	115	No Gas	0.020	ppb	5.6	2586.77	
Th	232	115	No Gas	0.007	ppb	25.4	2192.42	
U	238	115	No Gas	0.143	ppb	4.2	12293.74	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9642941.56	1.1	9572576.56	100.74	60	125	
Sc	45	He	560505.32	1.6	537132.74	104.35	60	125	
Ge	72	No Gas	7085733.61	1.1	7221407.63	98.12	60	125	
Ge	72	He	1077373.88	1.1	1075133.33	100.21	60	125	
Y	89	No Gas	10875020.40	0.8	10505771.25	103.51	60	125	
Y	89	He	1845640.97	1.9	1785434.86	103.37	60	125	
Rh	103	No Gas	8607482.44	0.5	9029665.75	95.32	60	125	
Rh	103	He	4450953.57	1.4	4662246.34	95.47	60	125	
In	115	No Gas	9808094.61	3.3	9909318.5	98.98	60	125	
Lu	175	No Gas	53294.33	0.2	53023.13	100.51	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404675-010
File Name	112SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 19:09:08
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.000	ppb	959.6	17.78	
Al	27	72	No Gas	4.156	ppb	3.9	184334.04	
V	51	72	He	0.087	ppb	5.8	2176.83	
Cr	52	72	No Gas	0.858	ppb	6.6	105742.49	
Mn	55	72	No Gas	532.834	ppb	1.0	48313876.97	>LDR
Co	59	72	He	0.118	ppb	4.2	3044.78	
Ni	60	72	No Gas	0.616	ppb	5.1	12604.55	
Cu	63	72	No Gas	1.814	ppb	4.6	85375.05	
Zn	66	72	No Gas	3.400	ppb	2.8	40630.82	
As	75	72	No Gas	1.158	ppb	15.4	13164.32	
Se	78	72	He	0.098	ppb	72.2	121.67	
Se	82	72	No Gas	0.232	ppb	30.8	455.64	
Mo	98	89	No Gas	0.297	ppb	7.2	11085.74	
Ag	107	89	No Gas	-0.001	ppb	N/A	263.34	
Cd	111	89	No Gas	0.036	ppb	14.7	4262.93	
Sb	123	89	No Gas	0.069	ppb	11.9	3403.77	
Ba	137	115	No Gas	87.338	ppb	7.4	1785572.92	
Tl	203	115	No Gas	-0.001	ppb	N/A	110.00	
Pb	208	115	No Gas	0.032	ppb	9.4	3814.67	
Th	232	115	No Gas	0.005	ppb	8.5	2053.50	
U	238	115	No Gas	0.136	ppb	8.4	12012.40	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9945115.99	2.1	9572576.56	103.89	60	125	
Sc	45	He	574584.33	1.7	537132.74	106.97	60	125	
Ge	72	No Gas	7347270.26	4.5	7221407.63	101.74	60	125	
Ge	72	He	1098641.86	0.8	1075133.33	102.19	60	125	
Y	89	No Gas	10941051.79	2.0	10505771.25	104.14	60	125	
Y	89	He	1797907.15	3.3	1785434.86	100.7	60	125	
Rh	103	No Gas	8818443.54	3.9	9029665.75	97.66	60	125	
Rh	103	He	4556822.18	3.4	4662246.34	97.74	60	125	
In	115	No Gas	10067894.88	2.0	9909318.5	101.6	60	125	
Lu	175	No Gas	54538.35	2.3	53023.13	102.86	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404675-012
File Name	113SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 19:11:03
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.001	ppb	166.1	23.33	
Al	27	72	No Gas	3.622	ppb	6.2	159997.73	
V	51	72	He	0.106	ppb	8.0	2377.98	
Cr	52	72	No Gas	4.080	ppb	7.6	306419.32	
Mn	55	72	No Gas	461.549	ppb	8.0	41202661.70	>LDR
Co	59	72	He	0.113	ppb	5.3	2900.30	
Ni	60	72	No Gas	0.636	ppb	10.6	12781.40	
Cu	63	72	No Gas	2.749	ppb	6.5	126281.15	
Zn	66	72	No Gas	4.470	ppb	5.0	52027.48	
As	75	72	No Gas	1.224	ppb	3.9	13791.84	
Se	78	72	He	0.025	ppb	147.9	109.33	
Se	82	72	No Gas	0.249	ppb	55.7	461.74	
Mo	98	89	No Gas	0.284	ppb	5.2	10550.12	
Ag	107	89	No Gas	-0.001	ppb	N/A	237.78	
Cd	111	89	No Gas	0.039	ppb	19.5	4283.40	
Sb	123	89	No Gas	0.074	ppb	10.2	3558.26	
Ba	137	115	No Gas	83.530	ppb	6.7	1706683.41	
Tl	203	115	No Gas	-0.001	ppb	N/A	116.67	
Pb	208	115	No Gas	0.021	ppb	9.1	2824.57	
Th	232	115	No Gas	0.004	ppb	21.3	1922.37	
U	238	115	No Gas	0.137	ppb	5.7	12101.37	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	10282623.20	5.0	9572576.56	107.42	60	125	
Sc	45	He	574865.65	1.4	537132.74	107.02	60	125	
Ge	72	No Gas	7235103.88	0.9	7221407.63	100.19	60	125	
Ge	72	He	1092029.75	1.6	1075133.33	101.57	60	125	
Y	89	No Gas	10894416.51	3.5	10505771.25	103.7	60	125	
Y	89	He	1849128.12	3.0	1785434.86	103.57	60	125	
Rh	103	No Gas	8937804.09	0.4	9029665.75	98.98	60	125	
Rh	103	He	4522212.32	2.0	4662246.34	97	60	125	
In	115	No Gas	10057591.82	1.2	9909318.5	101.5	60	125	
Lu	175	No Gas	54409.79	2.7	53023.13	102.62	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404675-014
File Name	114SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 19:12:58
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	-0.001	ppb	N/A	13.33	
Al	27	72	No Gas	3.383	ppb	2.6	151971.30	
V	51	72	He	0.084	ppb	11.1	2170.17	
Cr	52	72	No Gas	0.366	ppb	3.0	74010.01	
Mn	55	72	No Gas	547.454	ppb	2.9	49403843.59	>LDR
Co	59	72	He	0.120	ppb	1.8	3145.91	
Ni	60	72	No Gas	0.619	ppb	3.6	12593.39	
Cu	63	72	No Gas	1.718	ppb	3.7	80606.10	
Zn	66	72	No Gas	2.821	ppb	3.9	33881.92	
As	75	72	No Gas	1.337	ppb	13.4	15423.06	
Se	78	72	He	0.059	ppb	269.8	117.00	
Se	82	72	No Gas	0.286	ppb	23.4	498.99	
Mo	98	89	No Gas	0.280	ppb	9.7	10376.42	
Ag	107	89	No Gas	0.000	ppb	1319.7	300.00	
Cd	111	89	No Gas	0.033	ppb	30.0	4191.85	
Sb	123	89	No Gas	0.069	ppb	12.4	3359.32	
Ba	137	115	No Gas	86.489	ppb	5.6	1777735.17	
Tl	203	115	No Gas	-0.001	ppb	N/A	124.44	
Pb	208	115	No Gas	0.025	ppb	16.5	3144.60	
Th	232	115	No Gas	0.002	ppb	59.8	1786.80	
U	238	115	No Gas	0.138	ppb	4.7	12253.73	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9974030.16	5.4	9572576.56	104.19	60	125	
Sc	45	He	574458.41	1.7	537132.74	106.95	60	125	
Ge	72	No Gas	7311151.10	1.8	7221407.63	101.24	60	125	
Ge	72	He	1113122.21	2.6	1075133.33	103.53	60	125	
Y	89	No Gas	10851838.18	3.5	10505771.25	103.29	60	125	
Y	89	He	1846427.29	1.9	1785434.86	103.42	60	125	
Rh	103	No Gas	8823832.98	3.7	9029665.75	97.72	60	125	
Rh	103	He	4523859.26	0.3	4662246.34	97.03	60	125	
In	115	No Gas	10131769.32	4.0	9909318.5	102.24	60	125	
Lu	175	No Gas	55126.29	0.5	53023.13	103.97	60	125	

7900 ICP-MS 200.8/6020A
Sample Report

Sample Name	R2404675-016
File Name	115SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 19:14:52
Sample Type	Sample
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.001	ppb	128.8	22.22	
Al	27	72	No Gas	3.719	ppb	7.2	168070.84	
V	51	72	He	0.101	ppb	7.3	2317.97	
Cr	52	72	No Gas	2.211	ppb	11.0	193866.29	
Mn	55	72	No Gas	493.229	ppb	14.2	45127660.43	>LDR
Co	59	72	He	0.116	ppb	3.4	2962.54	
Ni	60	72	No Gas	0.723	ppb	8.7	14771.19	
Cu	63	72	No Gas	2.112	ppb	7.1	99992.25	
Zn	66	72	No Gas	3.983	ppb	6.8	47731.43	
As	75	72	No Gas	1.297	ppb	10.3	15078.81	
Se	78	72	He	0.067	ppb	127.0	115.67	
Se	82	72	No Gas	0.213	ppb	18.7	442.11	
Mo	98	89	No Gas	0.296	ppb	11.6	11011.85	
Ag	107	89	No Gas	-0.001	ppb	N/A	231.11	
Cd	111	89	No Gas	0.041	ppb	17.3	4307.24	
Sb	123	89	No Gas	0.068	ppb	18.2	3342.65	
Ba	137	115	No Gas	83.765	ppb	13.2	1765552.05	
Tl	203	115	No Gas	-0.001	ppb	N/A	106.66	
Pb	208	115	No Gas	0.031	ppb	7.9	3885.79	
Th	232	115	No Gas	0.000	ppb	275.5	1655.66	
U	238	115	No Gas	0.132	ppb	9.8	12064.68	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9769203.50	2.9	9572576.56	102.05	60	125	
Sc	45	He	572040.74	1.4	537132.74	106.5	60	125	
Ge	72	No Gas	7418701.65	2.2	7221407.63	102.73	60	125	
Ge	72	He	1089749.82	1.1	1075133.33	101.36	60	125	
Y	89	No Gas	10920319.57	3.9	10505771.25	103.95	60	125	
Y	89	He	1796179.30	1.4	1785434.86	100.6	60	125	
Rh	103	No Gas	8813524.65	3.5	9029665.75	97.61	60	125	
Rh	103	He	4406802.33	3.1	4662246.34	94.52	60	125	
In	115	No Gas	10412175.97	3.9	9909318.5	105.07	60	125	
Lu	175	No Gas	55901.08	0.2	53023.13	105.43	60	125	

7900 ICP-MS 200.8/6020A
Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	116_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 19:16:44
Sample Type	CCV
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	% Rec	QC Flag
Be	9	45	No Gas	48.581	ppb	10.4	187082.47	97.16	
Al	27	72	No Gas	46.866	ppb	13.1	1925342.18	93.73	
V	51	72	He	51.974	ppb	0.1	597764.63	103.95	
Cr	52	72	No Gas	50.053	ppb	18.8	3221446.33	100.11	
Mn	55	72	No Gas	47.690	ppb	15.7	4306871.91	95.38	
Co	59	72	He	50.092	ppb	1.5	1234261.52	100.18	
Ni	60	72	No Gas	47.378	ppb	16.2	901037.10	94.76	
Cu	63	72	No Gas	49.910	ppb	15.5	2277507.41	99.82	
Zn	66	72	No Gas	47.879	ppb	16.8	544623.14	95.76	
As	75	72	No Gas	48.591	ppb	16.1	629519.57	97.18	
Se	78	72	He	51.005	ppb	1.1	8258.76	102.01	
Se	82	72	No Gas	48.754	ppb	15.3	42349.71	97.51	
Mo	98	89	No Gas	51.069	ppb	15.0	1862054.17	102.14	
Ag	107	89	No Gas	51.006	ppb	15.0	2960088.63	102.01	
Cd	111	89	No Gas	47.738	ppb	14.6	601622.65	95.48	
Sb	123	89	No Gas	48.641	ppb	14.8	1809364.41	97.28	
Ba	137	115	No Gas	45.688	ppb	14.0	960156.97	91.38	
Tl	203	115	No Gas	48.506	ppb	14.0	1542326.43	97.01	
Pb	208	115	No Gas	48.448	ppb	14.9	4863593.97	96.9	
Th	232	115	No Gas	48.528	ppb	13.2	4534875.10	97.06	
U	238	115	No Gas	49.224	ppb	15.0	4429692.88	98.45	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	10104199.32	1.8	9572576.56	105.55	60	125	
Sc	45	He	565915.43	1.3	537132.74	105.36	60	125	
Ge	72	No Gas	7346412.76	5.4	7221407.63	101.73	60	125	
Ge	72	He	1093242.25	0.6	1075133.33	101.68	60	125	
Y	89	No Gas	11043353.17	4.7	10505771.25	105.12	60	125	
Y	89	He	1860893.33	3.4	1785434.86	104.23	60	125	
Rh	103	No Gas	9226812.13	1.1	9029665.75	102.18	60	125	
Rh	103	He	4809416.89	1.8	4662246.34	103.16	60	125	
In	115	No Gas	10397022.36	6.1	9909318.5	104.92	60	125	
Lu	175	No Gas	57547.96	1.9	53023.13	108.53	60	125	

7900 ICP-MS 200.8/6020A
Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	117_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 19:18:30
Sample Type	CCB
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	0.000	ppb	N/A	16.67	
Al	27	72	No Gas	-0.068	ppb	N/A	11403.94	
V	51	72	He	-0.008	ppb	N/A	1071.15	
Cr	52	72	No Gas	-0.022	ppb	N/A	50017.51	
Mn	55	72	No Gas	0.058	ppb	9.0	12855.85	
Co	59	72	He	0.001	ppb	221.2	138.89	
Ni	60	72	No Gas	0.003	ppb	33.6	884.47	
Cu	63	72	No Gas	0.002	ppb	82.9	2354.65	
Zn	66	72	No Gas	0.012	ppb	265.9	2023.50	
As	75	72	No Gas	0.073	ppb	69.4	-1069.19	
Se	78	72	He	-0.021	ppb	N/A	103.00	
Se	82	72	No Gas	0.023	ppb	38.2	274.65	
Mo	98	89	No Gas	0.023	ppb	3.1	1171.08	
Ag	107	89	No Gas	0.005	ppb	23.4	606.68	
Cd	111	89	No Gas	0.050	ppb	6.8	4529.29	
Sb	123	89	No Gas	0.070	ppb	9.6	3526.03	
Ba	137	115	No Gas	0.006	ppb	33.2	521.12	
Tl	203	115	No Gas	0.008	ppb	21.2	412.23	
Pb	208	115	No Gas	0.008	ppb	24.0	1545.59	
Th	232	115	No Gas	0.092	ppb	22.1	10168.77	
U	238	115	No Gas	0.004	ppb	21.9	451.12	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	10046047.94	4.0	9572576.56	104.95	60	125	
Sc	45	He	592661.00	19.3	537132.74	110.34	60	125	
Ge	72	No Gas	7412648.04	3.0	7221407.63	102.65	60	125	
Ge	72	He	1109888.15	18.1	1075133.33	103.23	60	125	
Y	89	No Gas	11181131.78	4.6	10505771.25	106.43	60	125	
Y	89	He	1902844.72	23.4	1785434.86	106.58	60	125	
Rh	103	No Gas	9307554.35	2.7	9029665.75	103.08	60	125	
Rh	103	He	4985341.88	26.3	4662246.34	106.93	60	125	
In	115	No Gas	10291634.04	4.4	9909318.5	103.86	60	125	
Lu	175	No Gas	56071.61	2.4	53023.13	105.75	60	125	

7900 ICP-MS 200.8/6020A
Contract Required Detection Limit (CRDL) Report

Sample Name	CRDL
File Name	118LICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 19:20:25
Sample Type	LLICV
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	%Rec	QC Flag
Be	9	45	No Gas	0.984	ppb	9.0	3727.15	98.4	
Al	27	72	No Gas	4.997	ppb	8.3	219770.72	99.94	
V	51	72	He	1.018	ppb	0.6	12883.61	101.8	
Cr	52	72	No Gas	0.969	ppb	12.9	113335.42	96.9	
Mn	55	72	No Gas	1.170	ppb	29.2	113935.39	117	
Co	59	72	He	0.986	ppb	0.9	24465.47	98.6	
Ni	60	72	No Gas	0.948	ppb	10.1	19023.05	94.8	
Cu	63	72	No Gas	0.965	ppb	9.4	46661.59	96.5	
Zn	66	72	No Gas	4.919	ppb	9.4	58200.17	98.38	
As	75	72	No Gas	1.062	ppb	19.1	11910.78	106.2	
Se	78	72	He	1.074	ppb	7.8	277.67	107.4	
Se	82	72	No Gas	0.866	ppb	17.7	1008.69	86.6	
Mo	98	89	No Gas	0.978	ppb	11.1	35149.11	97.8	
Ag	107	89	No Gas	0.962	ppb	8.1	54858.65	96.2	
Cd	111	89	No Gas	0.993	ppb	5.6	15905.34	99.3	
Sb	123	89	No Gas	1.009	ppb	8.6	37495.33	100.9	
Ba	137	115	No Gas	0.921	ppb	7.7	19347.39	92.1	
Tl	203	115	No Gas	0.969	ppb	7.7	30328.08	96.9	
Pb	208	115	No Gas	0.988	ppb	5.7	97940.04	98.8	
Th	232	115	No Gas	0.923	ppb	4.6	86017.09	92.3	
U	238	115	No Gas	0.963	ppb	4.9	85083.48	96.3	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9870522.39	1.1	9572576.56	103.11	60	125	
Sc	45	He	565752.51	1.2	537132.74	105.33	60	125	
Ge	72	No Gas	7384373.32	1.5	7221407.63	102.26	60	125	
Ge	72	He	1095820.17	0.9	1075133.33	101.92	60	125	
Y	89	No Gas	10758147.07	2.4	10505771.25	102.4	60	125	
Y	89	He	1783967.46	4.4	1785434.86	99.92	60	125	
Rh	103	No Gas	9202191.86	6.2	9029665.75	101.91	60	125	
Rh	103	He	4718239.12	2.1	4662246.34	101.2	60	125	
In	115	No Gas	10135633.21	0.8	9909318.5	102.28	60	125	
Lu	175	No Gas	55167.49	1.4	53023.13	104.04	60	125	

7900 ICP-MS 200.8/6020A
Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	119_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 19:22:21
Sample Type	CCV
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	% Rec	QC Flag
Be	9	45	No Gas	49.513	ppb	7.0	192673.09	99.03	
Al	27	72	No Gas	52.594	ppb	14.1	2118543.94	105.19	
V	51	72	He	52.123	ppb	1.9	599235.95	104.25	
Cr	52	72	No Gas	49.803	ppb	14.9	3151010.92	99.61	
Mn	55	72	No Gas	50.393	ppb	14.3	4468225.10	100.79	
Co	59	72	He	50.306	ppb	0.9	1239134.50	100.61	
Ni	60	72	No Gas	48.574	ppb	12.8	907807.88	97.15	
Cu	63	72	No Gas	51.068	ppb	14.8	2287913.10	102.14	
Zn	66	72	No Gas	49.380	ppb	14.2	551772.44	98.76	
As	75	72	No Gas	50.175	ppb	12.4	638945.56	100.35	
Se	78	72	He	51.467	ppb	1.0	8329.80	102.93	
Se	82	72	No Gas	50.537	ppb	12.8	43112.70	101.07	
Mo	98	89	No Gas	50.792	ppb	12.1	1850979.52	101.58	
Ag	107	89	No Gas	48.821	ppb	12.0	2831428.43	97.64	
Cd	111	89	No Gas	47.597	ppb	9.6	599593.94	95.19	
Sb	123	89	No Gas	49.492	ppb	10.8	1840026.56	98.98	
Ba	137	115	No Gas	47.697	ppb	8.1	975821.91	95.39	
Tl	203	115	No Gas	50.503	ppb	9.4	1563282.96	101.01	
Pb	208	115	No Gas	51.032	ppb	8.2	4990401.78	102.06	
Th	232	115	No Gas	50.848	ppb	9.3	4622220.79	101.7	
U	238	115	No Gas	49.899	ppb	10.4	4377636.36	99.8	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	10192123.48	1.1	9572576.56	106.47	60	125	
Sc	45	He	582119.14	0.5	537132.74	108.38	60	125	
Ge	72	No Gas	7200548.33	3.7	7221407.63	99.71	60	125	
Ge	72	He	1092849.71	0.3	1075133.33	101.65	60	125	
Y	89	No Gas	11003818.18	2.2	10505771.25	104.74	60	125	
Y	89	He	1804657.78	0.4	1785434.86	101.08	60	125	
Rh	103	No Gas	9214436.58	1.4	9029665.75	102.05	60	125	
Rh	103	He	4765291.89	1.5	4662246.34	102.21	60	125	
In	115	No Gas	10082829.04	4.0	9909318.5	101.75	60	125	
Lu	175	No Gas	57057.63	1.3	53023.13	107.61	60	125	

7900 ICP-MS 200.8/6020A
Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	120_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\BatchTemplate\060624-MS7900.b
Acq Time	06/06/24 19:24:06
Sample Type	CCB
Total Dilution	1.0000
Comment	—
ISTD Ref FileName	009CALB.d

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	QC Flag
Be	9	45	No Gas	-0.001	ppb	N/A	14.44	
Al	27	72	No Gas	-0.074	ppb	N/A	11370.50	
V	51	72	He	-0.001	ppb	N/A	1132.27	
Cr	52	72	No Gas	-0.032	ppb	N/A	50343.98	
Mn	55	72	No Gas	0.036	ppb	25.0	11065.41	
Co	59	72	He	0.001	ppb	294.6	138.89	
Ni	60	72	No Gas	-0.003	ppb	N/A	786.69	
Cu	63	72	No Gas	-0.001	ppb	N/A	2282.41	
Zn	66	72	No Gas	0.011	ppb	281.9	2041.27	
As	75	72	No Gas	0.147	ppb	51.1	-58.80	
Se	78	72	He	-0.023	ppb	N/A	100.33	
Se	82	72	No Gas	0.036	ppb	150.1	291.37	
Mo	98	89	No Gas	0.026	ppb	15.2	1234.53	
Ag	107	89	No Gas	0.007	ppb	14.4	660.02	
Cd	111	89	No Gas	0.049	ppb	27.7	4301.34	
Sb	123	89	No Gas	0.073	ppb	7.1	3449.34	
Ba	137	115	No Gas	0.003	ppb	40.0	445.56	
Tl	203	115	No Gas	0.010	ppb	13.2	466.68	
Pb	208	115	No Gas	0.010	ppb	31.4	1726.71	
Th	232	115	No Gas	0.096	ppb	16.4	10359.86	
U	238	115	No Gas	0.004	ppb	27.4	492.23	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Sc	45	No Gas	9997364.04	1.2	9572576.56	104.44	60	125	
Sc	45	He	574139.49	1.2	537132.74	106.89	60	125	
Ge	72	No Gas	7560026.09	5.4	7221407.63	104.69	60	125	
Ge	72	He	1078372.04	0.1	1075133.33	100.3	60	125	
Y	89	No Gas	10649289.58	1.2	10505771.25	101.37	60	125	
Y	89	He	1802916.80	3.9	1785434.86	100.98	60	125	
Rh	103	No Gas	9235917.13	2.5	9029665.75	102.28	60	125	
Rh	103	He	4703025.51	1.5	4662246.34	100.87	60	125	
In	115	No Gas	10174352.65	2.9	9909318.5	102.67	60	125	
Lu	175	No Gas	56296.67	1.7	53023.13	106.17	60	125	

Preparation Information Benchsheet

Prep Run#: 439458
Team: Metals/CDISTEFANO

Prep WorkFlow: MetDigAqMS
Prep Method: EPA 200.2

Status: Prepped
Prep Date/Time: 6/4/24 08:52

#	Lab Code	Client ID		B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ2406243-01	MB			10mL	200.8/Ag T, Al D, Al T, As D, As T, Ba T, Be T, Cd T, Cr T, Cu D, Cu T, Ni D, Ni T, Pb T, Sb T, Se T, Tl T, Zn D, Zn T, 6020A/As T, Sb T, Tl T	<2			10.00mL	Colorless-Clear		HB:10 Well:F7 Temp:93.1C/93.0C
2	RQ2406243-02	LCS			10mL	200.8/Ag T, Al D, Al T, As D, As T, Ba T, Be T, Cd T, Cr T, Cu D, Cu T, Ni D, Ni T, Pb T, Sb T, Se T, Tl T, Zn D, Zn T, 6020A/As T, Sb T, Tl T	<2			10.00mL	Colorless-Clear	0.0200 mL/228122; 0.0200 mL/233423; 0.0200 mL/234787	On HB:11:20 Off HB:13:20 Pipet/Repipettor:M33,M39
3	R2404644-002	24l0001 Diss		.02	10mL	200.8/Al D, As D, Cu D, Ni D, Zn D	<2			10.00mL	Colorless-Clear		Tier IV
4	R2404644-004	24l0002 Diss		.02	10mL	200.8/Al D, As D, Cu D, Ni D, Zn D	<2			10.00mL	Colorless-Clear		
5	R2404644-006	24l0003 Diss		.02	10mL	200.8/Al D, As D, Cu D, Ni D, Zn D	<2			10.00mL	Colorless-Clear		
6	R2404644-008	24l0004 Diss		.02	10mL	200.8/Al D, As D, Cu D, Ni D, Zn D	<2			10.00mL	Colorless-Clear		
7	RQ2406243-03	R2404644-008	MS	.02	10mL	200.8/Al D, As D, Cu D, Ni D, Zn D	<2			10.00mL	Colorless-Clear	0.0200 mL/228122; 0.0200 mL/234787; 0.0200 mL/233423	
8	RQ2406243-04	R2404644-008	DMS	.02	10mL	200.8/Al D, As D, Cu D, Ni D, Zn D	<2			10.00mL	Colorless-Clear	0.0200 mL/228122; 0.0200 mL/233423; 0.0200 mL/234787	
9	R2404651-001	1405280845C 400-GV-125		.02	10mL	6020A/As T, Sb T, Tl T	<2			10.00mL	Colorless-Clear		
10	R2404651-002	1405280846C 400-GV-125		.02	10mL	6020A/As T, Sb T, Tl T	<2			10.00mL	Colorless-Clear		
11	R2404651-003	1405280857A 400-FV-131		.02	10mL	6020A/As T, Sb T, Tl T	<2			10.00mL	Colorless-Clear		
12	R2404651-004	1405280858A 400-FV-131		.02	10mL	6020A/As T, Sb T, Tl T	<2			10.00mL	Colorless-Clear		
13	R2404651-005	1405281005A 400-EV-131		.02	10mL	6020A/As T, Sb T, Tl T	<2			10.00mL	Colorless-Clear		
14	R2404651-006	1405281013C	400-JV-150	.02	10mL	6020A/As T, Sb T, Tl T	<2			10.00mL	Colorless-Clear		
15	R2404651-007	1405281450C 400-HV-147		.02	10mL	6020A/As T, Sb T, Tl T	<2			10.00mL	Colorless-Clear		
16	R2404671-001	3361452001		.01	10mL	200.8/Ag T, Al T, As T, Be T, Cd T, Cr T, Cu T, Ni T, Pb T, Sb T, Se T, Tl T, Zn T	<2			10.00mL	Colorless-Clear		
17	RQ2406243-05	R2404671-001	MS	.01	10mL	200.8/Ag T, Al T, As T, Be T, Cd T, Cr T, Cu T, Ni T, Pb T, Sb T, Se T, Tl T, Zn T	<2			10.00mL	Colorless-Clear	0.0200 mL/233423; 0.0200 mL/234787; 0.0200 mL/228122	
18	RQ2406243-06	R2404671-001	DMS	.01	10mL	200.8/Ag T, Al T, As T, Be T, Cd T, Cr T, Cu T, Ni T, Pb T, Sb T, Se T, Tl T, Zn T	<2			10.00mL	Colorless-Clear	0.0200 mL/234787; 0.0200 mL/233423; 0.0200 mL/228122	
19	R2404672-001	OF002 - Internal	- Effluent	.04	10mL	200.8/Cr T, Zn T	<2			10.00mL	Colorless-Clear		
20	R2404680-001	S-1		.13	10mL	200.8/Cd T, Cu T	<2			10.00mL	Colorless-Cloudy/Colorless-Cloudy		
21	R2404689-001	Jones		.01	10mL	200.8/As T, Ba T, Cr T, Cu T, Pb T	<2			10.00mL	Colorless-Clear		

Preparation Information Benchsheet

Prep Run#: 439458
Team: Metals/CDISTEFANO

Prep WorkFlow: MetDigAqMS
Prep Method: EPA 200.2

Status: Prepped
Prep Date/Time: 6/4/24 08:52

Spiking Solutions

Name:	ICPMS Calibration Standard 1 (10 ug/mL	Inventory ID	228122	Logbook Ref:	228122	Expires On:	02/23/2025	Lot #: 222015048
Name:	ICPMS Calibration Standard 2 (10 ug/mL	Inventory ID	233423	Logbook Ref:	233423	Expires On:	03/10/2025	Lot #: 221015154
Name:	ICPMS Calibration Standard 3 (10 ug/mL	Inventory ID	234787	Logbook Ref:	234787	Expires On:	04/24/2025	

Preparation Materials

1:1 HCl Metals Grade	1:1 223283 (233826)	1:1 Nitric Acid Metals Grade	1:1 233477 (234026)	Hot Block Cups	10mL Lot J596944-5447 (234905)
Thermometer	402 (182588)				

Preparation Steps

Step: Digestion
Started: 6/4/24 08:52
Finished: 6/4/24 14:17
By: CDISTEFANO
Comments

4644 (V) 6/10 RIBS D.
4651 6/11
4671 6/11
4672 6/16
4680 6/7 *
4689 6/11 MS

Comments: _____

Reviewed By: Molly McHale Date: 6/5/24

Chain of Custody

Relinquished By: CD Date: 6/4/24

Received By: R-401 Date: 6/4/24

Extracts Examined
Yes No

Preparation Information Benchsheet

Prep Run#: 439459
Team: Metals/CDISTEFANO

Prep WorkFlow: MetDigAqMS
Prep Method: EPA 200.2

Status: Prepped
Prep Date/Time: 6/4/24 08:52

#	Lab Code	Client ID		B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ2406244-01	MB			10mL	200.8/Ag T, As T, Cu T, Ni T	<2			10.00mL	Colorless-Clear		HB:10 Well:F7 Temp:93.1C/93.0C
2	RQ2406244-02	LCS			10mL	200.8/Ag T, As T, Cu T, Ni T	<2			10.00mL	Colorless-Clear	0.0200 mL/234787; 0.0200 mL/233423; 0.0200 mL/228122	On HB:11:20 Off HB:13:20 Pipet/Repipettor:M33,M39
3	R2404644-001	24I0001		.01	10mL	200.8/As T, Cu T, Ni T	<2			10.00mL	Colorless-Clear		Tier IV
4	R2404644-003	24I0002		.04	10mL	200.8/As T, Cu T, Ni T	<2			10.00mL	Colorless-Clear		
5	R2404644-005	24I0003		.01	10mL	200.8/As T, Cu T, Ni T	<2			10.00mL	Colorless-Clear		
6	R2404644-007	24I0004		.04	10mL	200.8/As T, Cu T, Ni T	<2			10.00mL	Colorless-Clear		
7	RQ2406244-03	R2404644-007	MS	.04	10mL	200.8/As T, Cu T, Ni T	<2			10.00mL	Colorless-Clear	0.0200 mL/234787; 0.0200 mL/233423; 0.0200 mL/228122	
8	RQ2406244-04	R2404644-007	DMS	.04	10mL	200.8/As T, Cu T, Ni T	<2			10.00mL	Colorless-Clear	0.0200 mL/228122; 0.0200 mL/233423; 0.0200 mL/234787	
9	R2404645-001	24S0091		.03	10mL	200.8/Ag T, As T	<2			10.00mL	Colorless-Clear		Tier IV
10	R2404645-003	24S0092		.03	10mL	200.8/Ag T, As T	<2			10.00mL	Colorless-Clear		
11	R2404645-005	24S0093		.03	10mL	200.8/Ag T, As T	<2			10.00mL	Colorless-Clear		
12	R2404645-007	24S0096		.03	10mL	200.8/Ag T, As T	<2			10.00mL	Colorless-Clear		
13	R2404645-009	24S0097		.03	10mL	200.8/Ag T, As T	<2			10.00mL	Colorless-Clear		
14	R2404645-011	24S0098-24S0094		.03	10mL	200.8/Ag T, As T	<2			10.00mL	Colorless-Clear		
15	RQ2406244-05	R2404645-011	MS	.03	10mL	200.8/Ag T, As T	<2			10.00mL	Colorless-Clear	0.0200 mL/234787; 0.0200 mL/233423; 0.0200 mL/228122	
16	RQ2406244-06	R2404645-011	DMS	.03	10mL	200.8/Ag T, As T	<2			10.00mL	Colorless-Clear	0.0200 mL/228122; 0.0200 mL/234787; 0.0200 mL/233423	
17	R2404659-001	24S0090		.03	10mL	200.8/Ag T, As T	<2			10.00mL	Colorless-Cloudy/Colorless-Cloudy		Tier IV
18	R2404659-003	24S00K1		.03	10mL	200.8/Ag T, As T	<2			10.00mL	Colorless-Cloudy/Colorless-Cloudy		
19	R2404659-005	24S0095		.03	10mL	200.8/Ag T, As T	<2			10.00mL	Colorless-Cloudy/Colorless-Cloudy		
20	R2404659-007	24S0089		.03	10mL	200.8/Ag T, As T	<2			10.00mL	Colorless-Cloudy/Colorless-Cloudy		
21	R2404659-009	24S0088		.03	10mL	200.8/Ag T, As T	<2			10.00mL	Colorless-Cloudy/Colorless-Cloudy		

Spiking Solutions

Name:	ICPMS Calibration Standard 1 (10 ug/mL	Inventory ID	228122	Logbook Ref:	228122	Expires On:	02/23/2025	Lot #:	222015048
Name:	ICPMS Calibration Standard 2 (10 ug/mL	Inventory ID	233423	Logbook Ref:	233423	Expires On:	03/10/2025	Lot #:	221015154
Name:	ICPMS Calibration Standard 3 (10 ug/mL	Inventory ID	234787	Logbook Ref:	234787	Expires On:	04/24/2025		

Preparation Materials

1:1 HCl Metals Grade	1:1 223283 (233826)	1:1 Nitric Acid Metals Grade	1:1 233477 (234026)	Hot Block Cups	10mL Lot J596944-5447 (234905)
Thermometer	402 (182588)				

Preparation Information Benchsheet

Prep Run#: 439459
Team: Metals/CDISTEFANO

Prep WorkFlow: MetDigAqMS
Prep Method: EPA 200.2

Status: Prepped
Prep Date/Time: 6/4/24 08:52

Preparation Steps

Step: Digestion
Started: 6/4/24 08:52
Finished: 6/4/24 14:18
By: CDISTEFANO
Comments

4644 (N) 6/10
4645 (N) 6/10
4659 (N) 6/17

T. Ribs MS

Comments:

Reviewed By: [signature] Date: 6/5/24

Chain of Custody

Relinquished By: [signature] Date: 6/4/24

Received By: [signature] Date: 6/4/24

Extracts Examined
Yes No

Preparation Information Benchsheet

Prep Run#: 439460
Team: Metals/CDISTEFANO

Prep WorkFlow: MetDigAqMS
Prep Method: EPA 200.2

Status: Prepped
Prep Date/Time: 6/4/24 08:52

#	Lab Code	Client ID		B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ2406246-01	MB			10mL	200.8/Al D, As D, Cd D, Cu D, Ni D, Pb D, Zn D	<2			10.00mL	Colorless-Clear		HB:10 Well:F7 Temp:93.1C/93.0C
2	RQ2406246-02	LCS			10mL	200.8/Al D, As D, Cd D, Cu D, Ni D, Pb D, Zn D	<2			10.00mL	Colorless-Clear	0.0200 mL/234787; 0.0200 mL/228122; 0.0200 mL/233423	On HB:11:20 Off HB:13:20 Pipet/Repipettor:M33,M39
3	R2404645-002	24S0091 Diss		.02	10mL	200.8/Al D, Cd D, Cu D, Ni D, Pb D, Zn D	<2			10.00mL	Colorless-Clear		Tier IV
4	R2404645-004	24S0092 Diss		.02	10mL	200.8/Al D, Cd D, Cu D, Ni D, Pb D, Zn D	<2			10.00mL	Colorless-Clear		
5	R2404645-006	24S0093 Diss		.02	10mL	200.8/Al D, Cd D, Cu D, Ni D, Pb D, Zn D	<2			10.00mL	Colorless-Clear		
6	R2404645-008	24S0096 Diss		.02	10mL	200.8/Al D, Cd D, Cu D, Ni D, Pb D, Zn D	<2			10.00mL	Colorless-Clear		
7	R2404645-010	24S0097 Diss		.02	10mL	200.8/Al D, Cd D, Cu D, Ni D, Pb D, Zn D	<2			10.00mL	Colorless-Clear		
8	R2404645-012	24S0098-24S0094 Diss		.02	10mL	200.8/Al D, Cd D, Cu D, Ni D, Pb D, Zn D	<2			10.00mL	Colorless-Clear		
9	RQ2406246-03	R2404645-012	MS	.02	10mL	200.8/Al D, Cd D, Cu D, Ni D, Pb D, Zn D	<2			10.00mL	Colorless-Clear	0.0200 mL/228122; 0.0200 mL/233423; 0.0200 mL/234787	
10	RQ2406246-04	R2404645-012	DMS	.02	10mL	200.8/Al D, Cd D, Cu D, Ni D, Pb D, Zn D	<2			10.00mL	Colorless-Clear	0.0200 mL/233423; 0.0200 mL/234787; 0.0200 mL/228122	
11	R2404659-002	24S0090 Diss		.02	10mL	200.8/Al D, Cd D, Cu D, Ni D, Pb D, Zn D	<2			10.00mL	Colorless-Clear		Tier IV
12	R2404659-004	24S00K1 Diss		.02	10mL	200.8/Al D, Cd D, Cu D, Ni D, Pb D, Zn D	<2			10.00mL	Colorless-Clear		
13	R2404659-006	24S0095 Diss		.02	10mL	200.8/Al D, Cd D, Cu D, Ni D, Pb D, Zn D	<2			10.00mL	Colorless-Clear		
14	R2404659-008	24S0089 Diss		.02	10mL	200.8/Al D, Cd D, Cu D, Ni D, Pb D, Zn D	<2			10.00mL	Colorless-Clear		
15	R2404659-010	24S0088 Diss		.02	10mL	200.8/Al D, Cd D, Cu D, Ni D, Pb D, Zn D	<2			10.00mL	Colorless-Clear		
16	RQ2406246-05	R2404659-010	MS	.02	10mL	200.8/Al D, Cd D, Cu D, Ni D, Pb D, Zn D	<2			10.00mL	Colorless-Clear	0.0200 mL/228122; 0.0200 mL/233423; 0.0200 mL/234787	
17	RQ2406246-06	R2404659-010	DMS	.02	10mL	200.8/Al D, Cd D, Cu D, Ni D, Pb D, Zn D	<2			10.00mL	Colorless-Clear	0.0200 mL/233423; 0.0200 mL/234787; 0.0200 mL/228122	
18	R2404675-002	24L0238 Diss		.02	10mL	200.8/Al D, As D, Cu D, Ni D, Zn D	<2			10.00mL	Colorless-Clear		Tier IV
19	R2404675-004	24L0239 Diss		.02	10mL	200.8/Al D, As D, Cu D, Ni D, Zn D	<2			10.00mL	Colorless-Clear		
20	R2404675-006	24L0240 Diss		.02	10mL	200.8/Al D, As D, Cu D, Ni D, Zn D	<2			10.00mL	Colorless-Clear		
21	R2404675-008	24L0241 Diss		.02	10mL	200.8/Al D, As D, Cu D, Ni D, Zn D	<2			10.00mL	Colorless-Clear		
22	R2404675-010	24L0235 Diss		.02	10mL	200.8/Al D, As D, Cu D, Ni D, Zn D	<2			10.00mL	Colorless-Clear		

Preparation Information Benchsheet

Prep Run#: 439460
Team: Metals/CDISTEFANO

Prep WorkFlow: MetDigAqMS
Prep Method: EPA 200.2

Status: Prepped
Prep Date/Time: 6/4/24 08:52

23	R2404675-012	24L0236 Diss		.02	10mL	200.8/Al D, As D, Cu D, Ni D, Zn D	<2			10.00mL	Colorless-Clear		
24	R2404675-014	24L0237 Diss		.02	10mL	200.8/Al D, As D, Cu D, Ni D, Zn D	<2			10.00mL	Colorless-Clear		
25	R2404675-016	24L0234 Diss		.02	10mL	200.8/Al D, As D, Cu D, Ni D, Zn D	<2			10.00mL	Colorless-Clear		

Spiking Solutions

Name:	ICPMS Calibration Standard 1 (10 ug/mL	Inventory ID	228122	Logbook Ref:	228122	Expires On:	02/23/2025	Lot #: 222015048
Name:	ICPMS Calibration Standard 2 (10 ug/mL	Inventory ID	233423	Logbook Ref:	233423	Expires On:	03/10/2025	Lot #: 221015154
Name:	ICPMS Calibration Standard 3 (10 ug/mL	Inventory ID	234787	Logbook Ref:	234787	Expires On:	04/24/2025	

Preparation Materials

1:1 HCl Metals Grade	1:1 223283 (233826)	1:1 Nitric Acid Metals Grade	1:1 233477 (234026)	Hot Block Cups	10mL Lot J596944-5447 (234905)
Thermometer	402 (182588)				

Preparation Steps

Step: Digestion
Started: 6/4/24 08:52
Finished: 6/4/24 14:18
By: CDISTEFANO
Comments

4645 (IV) 6/10
4659 (IV) 6/17
4675 (IV) 6/17

D. Ribs MS

Comments:

Reviewed By: Molly Miller Date: 6/5/24

Chain of Custody

Relinquished By: CS Date: 6/4/24

Received By: A-Aoi Date: 6/4/24

Extracts Examined
Yes No

ICP-MS ICV/CCV Standard

Standard prepared daily

	Metal	ALS Lot #	Conc. (ppb)	Vol. (mls)	Final Vol (mls)	Final Conc. (ppb)	Matrix
Cal Std 1	Al	232728	10000	0.50	100	50.00	1% HNO3/
	As		10000			50.00	0.5% HCl
	Be		10000			50.00	
	Cd		10000			50.00	
	Cr		10000			50.00	
	Co		10000			50.00	
	Cu		10000			50.00	
	Pb		10000			50.00	
	Mn		10000			50.00	
	Mo		10000			50.00	
	Ni		10000			50.00	
	Sb		10000			50.00	
	Se		10000			50.00	
	Th		10000			50.00	
	Tl		10000			50.00	
	U		10000			50.00	
	V		10000			50.00	
	Zn		10000			50.00	
Cal Std 2	Ag	233423	10000	0.50		50.00	
	Ba	-	10000			50.00	
Odd Cal Std	Sr	—	10000	0.50		50.00	
	W		10000			50.00	
	Pt		10000			50.00	
	Pd		10000			50.00	
	Ta		10000			50.00	
	Li		10000			50.00	

Analyst/ Date	Letter ID	HNO3 Lot #	HCl Lot #	Expiration Date	Pipet ID
MFM 4/10/24	A	233477	233283	4/11/24	M36
MFM 4/12/24	B	233477	233283	4/13/24	M40
MFM 4/17/24	C	233477	233283	4/18/24	M36
MFM 4/22/24	D	233477	233283	4/23/24	M40
MFM 4/24/24	E	233477	233283	4/25/24	M40
MFM 4/29/24	F	233477	233283	4/30/24	M36
MFM 5/1/24	G	233477	233283	5/2/24	M36
MFM 5/2/24	H	233477	233283	5/3/24	M36
MFM 5/6/24	I	233477	233283	5/7/24	M36
MFM 5/8/24	J	233477	233283	5/9/24	M40
MFM 5/9/24	K	233477	233283	5/10/24	M40
MFM 5/13/24	L	233477	233283	5/14/24	M40
MFM 5/14/24	M	233477	233283	5/15/24	~~M40~~ M36
MFM 5/15/24	N	233477	233283	5/16/24	M36
MFM 5/16/24	O	233477	233283	5/17/24	M36
MFM 5/17/24	P	233477	233283	5/18/24	M40
~~MFM 5/20/24~~	~~Q~~	~~233477~~	~~233283~~	~~5/21/24~~	MFM 5/20/24
MFM 5/21/24	R	233477	233283	5/22/24	M36
MFM 5/22/24	S	233477	233283	5/23/24	M40
MFM 5/24/24	T	233477	233283	5/25/24	M36
MFM 5/28/24	U	233477	233283	5/29/24	M36
MFM 5/29/24	V	233477	233283	5/30/24	M36
MFM 5/30/24	W	233477	233283	5/31/24	M40
MFM 5/31/24	X	233477	233283	6/1/24	M40
MFM 6/4/24	Y	233477	233283	6/5/24	~~M40~~ M36
MFM 6/5/24	Z	233477	233283	6/6/24	M40
MFM 6/6/24	AA	233477	233283	6/7/24	M36
	BB				
	CC				
	DD				

ICP-MS Calibration Standard #1

Standard is prepared monthly or as necessary

	Metal	ALS Lot #	Conc. (ppb)	Vol. (mls)	Final Vol (mls)	Final Conc. (ppb)	Matrix	Analyst/ Date	Letter ID	HNO3 Lot #	HCl Lot #	Expiration Date	Pipet ID
Cal Std 1	Sb	231912	20000	0.025	500	1.00	1% HNO3/	MFM 4/12/24	A	233477	233283	5/12/24	~~M40~~ M37
	Mo	-	20000			1.00	0.5% HCl	MFM 5/13/24	B	233477	233283	6/9/24	M37, M40
Cal Std 2	Al	231913	20000	0.025		Below		MFM 5/29/24	C	233477	233283	6/9/24	~~M36~~ M37
	Zn		20000			Below			D				
	As		20000			1.00			E				
	Ba		20000			1.00			F				
	Be		20000			1.00			G				
	Cd		20000			1.00			H				
	Co		20000			1.00			I				
	Cu		20000			1.00			J				
	Pb		20000			1.00			K				
	Mn		20000			1.00			L				
	Ni		20000			1.00			M				
	Th		20000			1.00			N				
	Ag		20000			1.00			O				
	Tl		20000			1.00			P				
	Cr		20000			1.00			Q				
	V		20000			1.00			R				
	Se		20000			1.00			S				
	U		20000			1.00			T				
Int. Stds	Al	M845011 7B	10000	0.20		5.00			U				
	Zn	M845011 7 J	10000	0.20		5.00			V				
Odd Cal Std	Sr	—	20000	0.025		1.00			W				
	W		20000			1.00			X				
	Pt		20000			1.00			Y				
	Pd		20000			1.00			Z				
	Ta		20000			1.00							
	Li		20000			1.00							

M37, M40
MFM 4/12/24

ICP-MS Calibration Standard #2

Standard is prepared monthly or as necessary

	Metal	ALS Lot #	Conc. (ppb)	Vol. (mls)	Final Vol (mls)	Final Conc. (ppb)	Matrix	Analyst/ Date	Letter ID	HNO3 Lot #	HCl Lot #	Expiration Date	Pipet ID
Cal Std 1	Sb	231912	20000	0.25	500	10.00	1% HNO3/	MFM 4/12/24	A	233477	233283	5/12/24	M40
	Mo	-	20000			10.00	0.5% HCl	MFM 5/13/24	B	233477	233283	6/3/24	M40
Cal Std 2	Al	231913	20000	0.25		10.00			C				
	Zn		20000			10.00			D				
	As		20000			10.00			E				
	Ba		20000			10.00			F				
	Be		20000			10.00			G				
	Cd		20000			10.00			H				
	Co		20000			10.00			I				
	Cu		20000			10.00			J				
	Pb		20000			10.00			K				
	Mn		20000			10.00			L				
	Ni		20000			10.00			M				
	Th		20000			10.00			N				
	Ag		20000			10.00			O				
	Tl		20000			10.00			P				
	Cr		20000			10.00			Q				
	V		20000			10.00			R				
	Se		20000			10.00			S				
	U		20000			10.00			T				
Odd Cal Std	Sr	—	20000	0.25		10.00			U				
	W		20000			10.00			V				
	Pt		20000			10.00			W				
	Pd		20000			10.00			X				
	Ta		20000			10.00			Y				
	Li		20000			10.00			Z				

ICP-MS Calibration Standard #3

Standard is prepared monthly or as necessary

	Metal	ALS Lot #	Conc. (ppb)	Vol. (mls)	Final Vol (mls)	Final Conc. (ppb)	Matrix	Analyst/ Date	Letter ID	HNO3 Lot #	HCl Lot #	Expiration Date	Pipet ID
Cal Std 1	Sb	231912	20000	0.5	500	20.00	1% HNO3/	MFM 4/2/24	A	233477	233283	5/2/24	M36
	Mo	-	20000			20.00	0.5% HCl	MFM 5/3/24	B	233477	233283	6/3/24	M36
Cal Std 2	Al	~~24~~ 231913	20000	0.5		20.00			C				
	Zn		20000			20.00			D				
	As		20000			20.00			E				
	Ba		20000			20.00			F				
	Be		20000			20.00			G				
	Cd		20000			20.00			H				
	Co		20000			20.00			I				
	Cu		20000			20.00			J				
	Pb		20000			20.00			K				
	Mn		20000			20.00			L				
	Ni		20000			20.00			M				
	Th		20000			20.00			N				
	Ag		20000			20.00			O				
	Tl		20000			20.00			P				
	Cr		20000			20.00			Q				
	V		20000			20.00			R				
	Se		20000			20.00			S				
	U		20000			20.00			T				
Odd Cal Std	Sr	—	20000	0.5		20.00			U				
	W		20000			20.00			V				
	Pt		20000			20.00			W				
	Pd		20000			20.00			X				
	Ta		20000			20.00			Y				
	Li		20000			20.00			Z				

ICP-MS Calibration Standard #4

Standard is prepared monthly or as necessary

	Metal	ALS Lot #	Conc. (ppb)	Vol. (mls)	Final Vol (mls)	Final Conc. (ppb)	Matrix	Analyst/ Date	Letter ID	HNO3 Lot #	HCl Lot #	Expiration Date	Pipet ID
Cal Std 1	Sb	231912	20000	1.25	500	50.00	1% HNO3/	MFM 4/12/24	A	233477	233283	5/12/24	M40
	Mo	-	20000			50.00	0.5% HCl	MFM 5/13/24	B	233477	233283	6/13/24	M40
Cal Std 2	Al	231913	20000	1.25		50.00			C				
	Zn		20000			50.00			D				
	As		20000			50.00			E				
	Ba		20000			50.00			F				
	Be		20000			50.00			G				
	Cd		20000			50.00			H				
	Co		20000			50.00			I				
	Cu		20000			50.00			J				
	Pb		20000			50.00			K				
	Mn		20000			50.00			L				
	Ni		20000			50.00			M				
	Th		20000			50.00			N				
	Ag		20000			50.00			O				
	Tl		20000			50.00			P				
	Cr		20000			50.00			Q				
	V		20000			50.00			R				
	Se		20000			50.00			S				
	U		20000			50.00			T				
Odd Cal Std	Sr	—	20000	1.25		50.00			U				
	W		20000			50.00			V				
	Pt		20000			50.00			W				
	Pd		20000			50.00			X				
	Ta		20000			50.00			Y				
	Li		20000			50.00			Z				

ICP-MS Calibration Standard #5

Standard is prepared monthly or as necessary

	Metal	ALS Lot #	Conc. (ppb)	Vol. (mls)	Final Vol (mls)	Final Conc. (ppb)	Matrix	Analyst/ Date	Letter ID	HNO3 Lot #	HCl Lot #	Expiration Date	Pipet ID
Cal Std 1	Sb	231912	20000	2.5	500	100.00	1% HNO3/	MFM 4/12/24	A	233477	233283	5/12/24	M40
	Mo	-	20000			100.00	0.5% HCl	MFM 5/13/24	B	233477	233283	6/13/24	M40
Cal Std 2	Al	231913	20000	2.5		100.00		NM 5/30/24	C	233477	233283	6/30/24	M36
	Zn		20000			100.00			D				
	As		20000			100.00			E				
	Ba		20000			100.00			F				
	Be		20000			100.00			G				
	Cd		20000			100.00			H				
	Co		20000			100.00			I				
	Cu		20000			100.00			J				
	Pb		20000			100.00			K				
	Mn		20000			100.00			L				
	Ni		20000			100.00			M				
	Th		20000			100.00			N				
	Ag		20000			100.00			O				
	Tl		20000			100.00			P				
	Cr		20000			100.00			Q				
	V		20000			100.00			R				
	Se		20000			100.00			S				
	U		20000			100.00			T				
Odd Cal Std	Sr	-	20000	2.5		100.00			U				
	W		20000			100.00			V				
	Pt		20000			100.00			W				
	Pd		20000			100.00			X				
	Ta		20000			100.00			Y				
	Li		20000			100.00			Z				

ICP-MS ICSA SOLUTION
(PREPARED WEEKLY OR AS NECESSARY)

	Metal	CAS Lot #	Conc. (ppm)	Vol. (mls)	Final Vol. (mls)	Final Conc. (ppb)	Matrix	Analyst / Date
ICSA	CL-	234160	10000	2.00	100	200000	1% HNO_3, 0.5% HCl	MFM 3/20/24
	AL		1000			20000	1% HNO_3 0.5% HCl	MFM 3/29/24
	CA						1% HNO_3 0.5% HCl	MFM 4/10/24
	FE						1% HNO_3 0.5% HCl	MFM 4/22/24
	MG						1% HNO_3 0.5% HCl	MFM 5/6/24
	P						1% HNO_3 0.5% HCl	MFM 5/20/24
	K						1% HNO_3 0.5% HCl	MFM 5/28/24
	NA						1% HNO_3 0.5% HCl	MFM 5/29/24
	S						1% HNO_3 0.3% HCl	MFM 6/6/24
	C		2000			40000		
	MO		20			400		
	TI		20			400		

Letter ID	Nitric Acid Lot #	HCL Lot #	Expiration Date	Pipet ID
A	233477	233283	3/27/24	M40
B	233477	233283	4/5/24	M40
C	233477	233283	4/17/24	M36
D	233477	233283	4/29/24	M40
E	233477	233283	5/13/24	M36
F	233477	233283	5/27/24	M40
G	233477	233283	6/4/24	M40
H	233477	233283	6/5/24	M36
I	233477	233283	6/13/24	M36
J				
K				
L				
M				
N				
O				
P				
Q				
R				
S				
T				

ICP-MS HLCCV2 Standard

Standard is prepared monthly or as necessary

	Metal	ALS Lot #	Conc. (ppb)	Vol. (mls)	Final Vol (mls)	Final Conc. (ppb)	Matrix	Analyst/ Date	Letter ID	HNO3 Lot #	HCl Lot #	Expiration Date	Pipet ID
Cal Std 1	Sb	~~232913~~ 231913	20000	0.50	50	200.00	1% HNO3/	MFM 4/22/24	A	233477	233283	5/22/24	M40
	Mo	-	20000			200.00	0.5% HCl	MFM 5/15/24	B	233477	233283	6/15/24	M36
Cal Std 2	Al	231912	20000	0.50		200.00		NM 5/30/24	C	233477	233283	6/30/24	M36
	Zn		20000			200.00			D				
	As		20000			200.00			E				
	Ba		20000			200.00			F				
	Be		20000			200.00			G				
	Cd		20000			200.00			H				
	Co		20000			200.00			I				
	Cu		20000			200.00			J				
	Pb		20000			200.00			K				
	Mn		20000			200.00			L				
	Ni		20000			200.00			M				
	Th		20000			200.00			N				
	Ag		20000			200.00			O				
	Tl		20000			200.00			P				
	Cr		20000			200.00			Q				
	V		20000			200.00			R				
	Se		20000			200.00			S				
	U		20000			200.00			T				
Odd Cal Std	Sr	—	20000	0.50		200.00			U				
	W		20000			200.00			V				
	Pt		20000			200.00			W				
	Pd		20000			200.00			X				
	Ta		20000			200.00			Y				
	Li		20000			200.00			Z				

ICP-MS HLCCV3 Standard

Standard is prepared monthly or as necessar

	Metal	ALS Lot #	Conc. (ppb)	Vol. (mls)	Final Vol (mls)	Final Conc. (ppb)	Matrix	Analyst/ Date	Letter ID	HNO3 Lot #	HCl Lot #	Expiration Date	Pipet ID
Cal Std 1	Sb	231913	20000	1.00	50	400.00	1% HNO3/	MFM 4/22/24	A	233477	233283	5/22/24	M40
	Mo	-	20000			400.00	0.5% HCl	MFM 5/15/24	B	233477	233283	6/15/24	M36
Cal Std 2	Al	231912	20000	1.00		400.00		NM 5/30/24	C	233477	233283	6/30/24	M36
	Zn		20000			400.00			D				
	As		20000			400.00			E				
	Ba		20000			400.00			F				
	Be		20000			400.00			G				
	Cd		20000			400.00			H				
	Co		20000			400.00			I				
	Cu		20000			400.00			J				
	Pb		20000			400.00			K				
	Mn		20000			400.00			L				
	Ni		20000			400.00			M				
	Th		20000			400.00			N				
	Ag		20000			400.00			O				
	Tl		20000			400.00			P				
	Cr		20000			400.00			Q				
	V		20000			400.00			R				
	Se		20000			400.00			S				
	U		20000			400.00			T				
Odd Cal Std	Sr	—	20000	1.00		400.00			U				
	W		20000			400.00			V				
	Pt		20000			400.00			W				
	Pd		20000			400.00			X				
	Ta		20000			400.00			Y				
	Li		20000			400.00			Z				

ICP-MS Internal Standard Solution

Standard prepared every 6 months or as necessary

(Added in-line)

	Metal	ALS Lot #	Conc. (ppb)	Vol. (mls)	Final Vol. (mls)	Final Conc. (ppb)	Matrix	Analyst/ Date	Letter ID	HNO3 Lot #	HCl Lot #	Expiration Date	Pipet ID
Internal Standard	**Bi**	231911	10000	~~50.00~~	~~500~~	1000	1% HNO3	MFM 5/15/24	**A**	233477	233283	11/15/24	dispo/1136
	Ho		10000	20.0	200	1000		MFM 6/5/24	**B**	233477	233283	~~12/5/24~~	dispo/1140 11/5/24
	In		10000			1000			**C**				
	Li +6		10000			1000			**D**				
	Rh		10000			1000			**E**				
	Sc		10000			Below			**F**				
	Tb		10000			1000			**G**				
	Y		10000			1000			**H**				
	Sc	235153	1000000	~~0.5~~	0.2	2000			**I**				
	Ge	234006	1000000	~~2.5~~	1.0	5000			**J**				
									K				
									L				
									M				
									N				
									O				
									P				
									Q				
									R				
									S				
									T				
									U				
									V				
									W				
									X				
									Y				
									Z				

MISCELLANEOUS STANDARDS

Type of Standard	Metal	CAS Lot #	Conc. (ppm)	Vol. (mls)	Final Vol. (mls)	Final Conc. (ppb)	Matrix	Analyst / Date	Letter ID	Nitric Acid Lot #	HCL Lot #	Expiration Date	Pipet ID
MS Mass Cal	BaBeCeCo InMgPb RbU	228201	0.01	1000	1000	10	1% HNO3	NM 5/1/23	A	—	—	8/30/24	M37
	Cd	227603	1000	0.01	↓	10			B				
	Cu	222428	1000	0.01		10			C				
	Li	223753	1000	0.01		10			D				
	Tl	226708	1000	0.01		10			E				
	Y	226709	1000	0.01		10			F				
									G				
SIC	Cl	233254	21215	1	10	21215	1% HNO3 0.5% HCl	NM 1/16/24	H	231748	232049	1/23/24	M40
	Ca		3000			300	1% HNO3 0.5% HCl	NM 1/24/24	I	231748	232049	1/31/24	M40
	Fe Na		2500			250	1% HNO3 0.5% HCl	NM 1/25/24	J	231748	232049	2/1/24	M40
	C		2000			200	1% HNO3 0.5% HCl	NM 1/29/24	K	231748	232049	2/5/24	M40
	Al K Mg P S O		1000			100	1% HNO3 0.5% HCl	NM 2/1/24	L	231748	232049	2/8/24	M40
	Mo Ti		20			2			M				
									N				
Single	Ag	226100	1000	0.100 ~~0.01~~	10	1000	1% HNO3 0.5% HCl	NM 1/17/24	O				
Single	Ba	227183	1000	0.100 ~~0.01~~	10	1000	1% HNO3 0.5% HCl	NM 1/17/24	P	231748	232049		
									Q				
	Ag	M8450127O	100ppb	0.05	100	50			R				
	Ba	M8450127P	100ppb	0.05		50			S				
	AlSbAs BeCdCr	232728	10ppb	0.500		50			T				
	CoCuPbMn MoNiSeTl ThVZn	↓							U				

Sample Dilutions 6010C/6010D/200.7

Final Volume: 6-8mL

Analyst: MFM
Instrument: MS7900

Date: 6/7/24
Analysis: 200.8/6020a

Common Dilutions

Dilution	Matrix of Diluent	1st Dilution			2nd Dilution			3rd Dilution			4th Dilution			5th Dilution		
		mLs of Sample	mLs of Diluent	Dilution Factor	mLs of Sample	mLs of Diluent	Dilution Factor	mLs of Sample	mLs of Diluent	Dilution Factor	mLs of Sample	mLs of Diluent	Dilution Factor	mLs of Sample	mLs of Diluent	Dilution Factor
1/2	2%HNO3/ 5%HCL	3	3	**1/2**												
1/3	2%HNO3/ 5%HCL	2	4	**1/3**												
1/4	2%HNO3/ 5%HCL	2	6	**1/4**												
1/5	2%HNO3/ 5%HCL	1.2	4.8	**1/5**												
1/10	2%HNO3/ 5%HCL	0.6	5.4	**1/10**												
1/10	2%HNO3/ 5%HCL	0.8	7.2	**1/10**												
1/20	2%HNO3/ 5%HCL	0.3	5.7	**1/20**												
1/20	2%HNO3/ 5%HCL	0.4	7.6	**1/20**												
1/50	2%HNO3/ 5%HCL	1	4	**1/5**	0.6	5.4	**1/50**									
1/100	2%HNO3/ 5%HCL	0.6	5.4	**1/10**	0.6	5.4	**1/100**									
1/200	2%HNO3/ 5%HCL	1	1	**1/2**	0.6	5.4	**1/20**	0.6	5.4	**1/200**						
1/500	2%HNO3/ 5%HCL	1	4	**1/5**	0.6	5.4	**1/50**	0.6	5.4	**1/500**						
1/1000	2%HNO3/ 5%HCL	0.6	5.4	**1/10**	0.6	5.4	**1/100**	0.6	5.4	**1/1000**						
1/2000	2%HNO3/ 5%HCL	1	1	**1/2**	0.6	5.4	**1/20**	0.6	5.4	**1/200**	0.6	5.4	**1/2000**			
1/5000	2%HNO3/ 5%HCL	1	4	**1/5**	0.6	5.4	**1/50**	0.6	5.4	**1/500**	0.6	5.4	**1/5000**			
1/10000	2%HNO3/ 5%HCL	0.6	5.4	**1/10**	0.6	5.4	**1/100**	0.6	5.4	**1/1000**	0.6	5.4	**1/10000**			
1/20000	2%HNO3/ 5%HCL	1	1	**1/2**	0.6	5.4	**1/20**	0.6	5.4	**1/200**	0.6	5.4	**1/2000**	0.6	5.4	**1/20000**

Special Dilutions

Dilution	Matrix of Diluent	1st Dilution			2nd Dilution			3rd Dilution			4th Dilution			5th Dilution		
		mLs of Sample	mLs of Diluent	Dilution Factor	mLs of Sample	mLs of Diluent	Dilution Factor	mLs of Sample	mLs of Diluent	Dilution Factor	mLs of Sample	mLs of Diluent	Dilution Factor	mLs of Sample	mLs of Diluent	Dilution Factor

Metals Data Cover Sheet

Run Date: 6/6/2024

Data File: 060624-M7600

Primary Reviewer: EC

Secondary Reviewer: CK

LIMS Runs:	LIMS Preps:
843234	439528
843235	439529

Comments:
N/A

Quicktrace M7600 Run Log (R-CVAA-03)

Serial number: US23110001

Analyst: EC

Data File: 060624-M7600

Date Prepped: 6/5/24

Date Analyzed: 6/6/24

Calibration/CRDL Source Standard: 231916

ICV/CCV/LCS/MS Source Standard: 230321

Cal/ CRDL 10ppm stock: M8600087A

ICV/CCV/LCS/MS 10ppm stock: M8600038A

Cal/ CRDL 0.1ppm stock: M8600087B

ICV/CCV/LCS/MS 0.1 ppm stock: M8600038B

Digested Calibration: M8600087I

Stannous Chloride (prep/exp daily): 100g SnCL2 lot 234748 + 70 mLHCl lot 233886 diluted to 1000 mL

Pipet ID: -

DOD Pipet Verification: -

S:1	Calibration Blank	1:21	PBW-439529
S:2	Standard #1 (0.2 ug/L)	1:22	LCSW-439529
S:3	Standard #2 (0.5 ug/L)	1:23	R2404638-001
S:4	Standard #3 (1 ug/L)	1:24	R2404638-001S
S:5	Standard #4 (2 ug/L)	1:25	R2404638-001SD
S:6	Standard #5 (5 ug/L)	1:26	R2404638-002
S:7	Standard #6 (10 ug/L)	1:27	R2404647-002
S:8	ICV	1:28	R2404647-003
S:9	ICB	1:29	R2404647-004
S:2	CRDL	S:8	CCV
S:8	CCV	S:9	CCB
S:9	CCB	1:30	R2404651-001
1:1	PBW-439528	1:31	R2404651-002
1:2	LCSW-439528	1:32	R2404651-003
1:3	R2404528-001	1:33	R2404651-004
1:4	R2404528-001S	1:34	R2404651-005
1:5	R2404528-001SD	1:35	R2404651-006
1:6	R2404528-002	1:36	R2404651-007
1:7	R2404528-003	1:37	R2404731-003
S:8	CCV	1:38	R2404765-002
S:9	CCB	S:2	CRDL
1:8	R2404528-004	S:8	CCV
1:9	R2404528-009	S:9	CCB
1:10	R2404616-001		
1:11	R2404617-001		
1:12	R2404617-002		
1:13	R2404617-003		
1:14	R2404617-004		
S:8	CCV		
S:9	CCB		
1:15	R2404632-001		
1:16	R2404680-001		
1:17	R2404702-001		
1:18	R2404702-001S		
1:19	R2404702-001SD		
1:20	R2404769-001		
S:2	CRDL		
S:8	CCV		
S:9	CCB		

EC
6/6/24

ALS Environmental - Mercury 245.1/7470A/7471B

Report Generated By Teledyne Leeman QuickTrace

Analyst: alrce.nouser

Worksheet file: C:\Users\Public\Documents\Teledyne CETAC\QuickTrace\Worksheets\060624-M7600.wszf

Creation Date: 6/6/2024 08:40:30

Comment:

EC 6/6/24

Results

Sample Name					Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Residual	DF	% Recovery
Calibration Blank					STD	06/06/24 09:11:29 am	0.000	675	3.82		1.0000	N/A
Replicates	683.7	706.3	666.5	645.5								
Standard #1 (0.2 ug/L)					STD	06/06/24 09:14:01 am	0.200	3843	0.80	-6.21%	1.0000	N/A
Replicates	3845.6	3860.0	3866.5	3798.4								
Standard #2 (0.5 ug/L)					STD	06/06/24 09:16:34 am	0.500	8775	0.75	-1.50%	1.0000	N/A
Replicates	8823.5	8817.5	8778.9	8680.4								
Standard #3 (1 ug/L)					STD	06/06/24 09:19:06 am	1.000	16879	0.53	-0.65%	1.0000	N/A
Replicates	16886.0	16964.7	16911.2	16754.0								
Standard #4 (2 ug/L)					STD	06/06/24 09:21:39 am	2.000	33277	0.64	0.36%	1.0000	N/A
Replicates	33393.2	33431.3	33316.5	32966.0								
Standard #5 (5 ug/L)					STD	06/06/24 09:24:12 am	5.000	82575	0.57	1.10%	1.0000	N/A
Replicates	82605.8	82880.3	82914.8	81899.3								
Standard #6 (10 ug/L)					STD	06/06/24 09:26:46 am	10.000	162113	0.47	-0.28%	1.0000	N/A
Replicates	162014.7	162492.3	162855.7	161091.0								

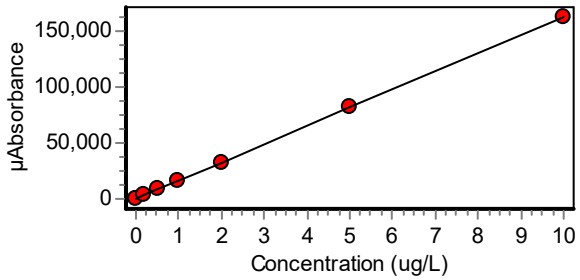
Calibration

Equation: Abs = 16175.296x + 808.474

R2: 0.99995 RSE: 3.27%

SEE: 467.0282

Flags:



ICV					ICV	06/06/24 09:29:20 am	3.054	50200	0.61		1.0000	101.78
Replicates	50357.2	50385.0	50309.3	49749.3								
ICB					ICB	06/06/24 09:31:53 am	-0.031	300	3.86		1.0000	N/A
Replicates	291.4	324.5	278.7	304.9								
CRDL					CRDL	06/06/24 09:34:25 am	0.189	3866	0.78		1.0000	94.52
Replicates	3889.0	3868.8	3874.0	3832.6								
CCV					CCV	06/06/24 09:36:59 am	3.096	50894	0.63		1.0000	103.21
Replicates	51027.2	51130.4	50991.9	50425.8								
CCB					CCB	06/06/24 09:39:33 am	-0.027	366	4.29		1.0000	N/A
Replicates	369.4	390.1	361.9	344.2								

Sample Name					Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Residual	DF	% Recovery
PBW-439528					UNK	06/06/24 09:42:04 am	-0.004	745	34.55		1.0000	N/A
	Replicates	742.6	719.2	746.6	772.6							
LCSW-439528					UNK	06/06/24 09:44:36 am	1.035	17550	0.67		1.0000	N/A
	Replicates	17588.2	17641.1	17585.1	17384.9							
R2404528-001					UNK	06/06/24 09:47:07 am	0.016	1074	6.16		1.0000	N/A
	Replicates	1094.5	1078.2	1065.5	1056.8							
R2404528-001S					UNK	06/06/24 09:49:39 am	1.049	17775	1.95		1.0000	N/A
	Replicates	18025.6	18017.9	17734.7	17322.9							
R2404528-001SD					UNK	06/06/24 09:52:11 am	1.046	17735	0.98		1.0000	N/A
	Replicates	17818.1	17856.8	17774.1	17492.6							
R2404528-002					UNK	06/06/24 09:54:43 am	0.010	974	10.84		1.0000	N/A
	Replicates	993.5	984.5	963.2	955.0							
R2404528-003					UNK	06/06/24 09:57:15 am	0.002	845	29.64		1.0000	N/A
	Replicates	856.9	847.7	842.7	831.2							
CCV					CCV	06/06/24 09:59:49 am	3.106	51044	0.62		1.0000	103.52
	Replicates	51158.4	51244.6	51190.9	50580.8							
CCB					CCB	06/06/24 10:02:23 am	-0.029	339	2.28		1.0000	N/A
	Replicates	338.2	354.8	332.1	332.1							
R2404528-004					UNK	06/06/24 10:04:55 am	-0.002	781	39.83		1.0000	N/A
	Replicates	776.8	770.5	779.4	796.4							
R2404528-009					UNK	06/06/24 10:07:28 am	0.002	834	42.66		1.0000	N/A
	Replicates	844.9	841.0	827.3	822.2							
R2404616-001					UNK	06/06/24 10:10:01 am	0.003	859	33.35		1.0000	N/A
	Replicates	881.3	862.5	849.1	843.3							
R2404617-001					UNK	06/06/24 10:12:33 am	0.013	1017	6.24		1.0000	N/A
	Replicates	1022.4	1032.5	1012.4	1002.2							
R2404617-002					UNK	06/06/24 10:15:06 am	0.004	871	29.15		1.0000	N/A
	Replicates	880.0	873.5	886.2	844.9							
R2404617-003					UNK	06/06/24 10:17:37 am	0.006	903	15.38		1.0000	N/A
	Replicates	910.7	919.3	897.4	886.1							
R2404617-004					UNK	06/06/24 10:20:09 am	0.020	1138	2.74		1.0000	N/A
	Replicates	1138.5	1144.0	1143.2	1124.5							
CCV					CCV	06/06/24 10:22:43 am	3.061	50325	0.70		1.0000	102.04
	Replicates	50502.7	50566.5	50417.7	49812.2							
CCB					CCB	06/06/24 10:25:17 am	-0.028	356	3.38		1.0000	N/A
	Replicates	361.9	375.3	346.8	341.5							
R2404632-001					UNK	06/06/24 10:27:48 am	0.014	1038	7.46		1.0000	N/A
	Replicates	1049.2	1046.5	1042.7	1012.4							

Sample Name				Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Residual	DF	% Recovery
R2404680-001				UNK	06/06/24 10:30:20 am	0.108	2559	4.54		1.0000	N/A
Replicates	2626.0	2609.1	2552.0	2449.8							
R2404702-001				UNK	06/06/24 10:32:52 am	-0.006	718	14.34		1.0000	N/A
Replicates	732.2	724.8	710.8	703.6							
R2404702-001S				UNK	06/06/24 10:35:24 am	0.984	16719	0.73		1.0000	N/A
Replicates	16777.0	16798.0	16756.3	16545.8							
R2404702-001SD				UNK	06/06/24 10:37:56 am	0.922	15723	0.93		1.0000	N/A
Replicates	15798.6	15817.6	15756.6	15518.1							
R2404769-001				UNK	06/06/24 10:40:28 am	-0.010	652	2.10		1.0000	N/A
Replicates	647.3	653.7	651.2	654.7							
CRDL				CRDL	06/06/24 10:43:00 am	0.187	3828	1.23		1.0000	93.34
Replicates	3854.4	3853.7	3828.7	3775.4							
CCV				CCV	06/06/24 10:45:34 am	3.059	50287	0.71		1.0000	101.96
Replicates	50444.9	50529.8	50406.2	49765.3							
CCB				CCB	06/06/24 10:48:08 am	-0.028	361	1.76		1.0000	N/A
Replicates	365.0	364.2	365.5	349.2							
PBW-439529				UNK	06/06/24 10:50:40 am	-0.007	701	14.79		1.0000	N/A
Replicates	689.0	723.3	700.8	690.2							
LCSW-439529				UNK	06/06/24 10:53:13 am	1.017	17264	0.85		1.0000	N/A
Replicates	17335.1	17355.5	17309.7	17055.7							
R2404638-001				UNK	06/06/24 10:55:46 am	-0.005	734	14.08		1.0000	N/A
Replicates	738.3	744.8	731.8	720.1							
R2404638-001S				UNK	06/06/24 10:58:19 am	1.025	17391	0.89		1.0000	N/A
Replicates	17454.7	17519.3	17406.7	17181.3							
R2404638-001SD				UNK	06/06/24 11:00:50 am	1.015	17229	0.65		1.0000	N/A
Replicates	17243.8	17310.4	17288.8	17074.3							
R2404638-002				UNK	06/06/24 11:03:22 am	-0.014	589	5.61		1.0000	N/A
Replicates	589.5	606.4	579.3	581.6							
R2404647-002				UNK	06/06/24 11:05:53 am	-0.010	641	9.57		1.0000	N/A
Replicates	617.5	643.4	647.0	654.4							
R2404647-003				UNK	06/06/24 11:08:25 am	-0.013	602	6.01		1.0000	N/A
Replicates	613.5	606.9	584.4	601.3							
R2404647-004				UNK	06/06/24 11:10:57 am	-0.012	608	6.76		1.0000	N/A
Replicates	615.9	622.3	596.6	595.4							
CCV				CCV	06/06/24 11:13:31 am	3.052	50171	0.75		1.0000	101.72
Replicates	50345.3	50414.0	50303.7	49620.5							
CCB				CCB	06/06/24 11:16:05 am	-0.028	360	1.76		1.0000	N/A
Replicates	357.2	351.3	370.2	361.2							

Sample Name				Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Residual	DF	% Recovery
R2404651-001				UNK	06/06/24 11:18:37 am	-0.020	489	3.09		1.0000	N/A
	Replicates	485.2	490.4	502.6	479.4						
R2404651-002				UNK	06/06/24 11:21:09 am	-0.012	614	3.33		1.0000	N/A
	Replicates	619.5	606.0	618.5	610.5						
R2404651-003				UNK	06/06/24 11:23:41 am	-0.020	483	1.56		1.0000	N/A
	Replicates	478.9	484.8	477.8	488.6						
R2404651-004				UNK	06/06/24 11:26:14 am	-0.010	642	11.74		1.0000	N/A
	Replicates	666.4	631.7	621.7	647.9						
R2404651-005				UNK	06/06/24 11:28:46 am	-0.017	537	1.60		1.0000	N/A
	Replicates	532.4	542.0	538.8	534.1						
R2404651-006				UNK	06/06/24 11:31:19 am	-0.005	728	22.92		1.0000	N/A
	Replicates	729.0	735.0	745.8	702.5						
R2404651-007				UNK	06/06/24 11:33:52 am	-0.020	480	1.82		1.0000	N/A
	Replicates	478.2	487.9	480.4	473.6						
R2404731-003				UNK	06/06/24 11:36:24 am	-0.018	515	3.04		1.0000	N/A
	Replicates	525.7	513.5	516.0	504.0						
R2404765-002				UNK	06/06/24 11:38:55 am	-0.002	778	21.22		1.0000	N/A
	Replicates	783.3	768.9	778.4	781.7						
CRDL				CRDL	06/06/24 11:41:27 am	0.161	3409	0.49		1.0000	80.38
	Replicates	3395.4	3422.2	3417.0	3400.7						
CCV				CCV	06/06/24 11:44:01 am	3.062	50330	0.86		1.0000	102.05
	Replicates	50609.2	50602.5	50404.0	49704.0						
CCB				CCB	06/06/24 11:46:35 am	-0.023	441	4.02		1.0000	N/A
	Replicates	446.8	459.8	427.8	431.4						

M-7600 245.1/7470A/7471B Calibration

Date	6/6/2024	Analyst	EC
Data File	060624-M7600		

Abs= 16175.296x + 808.474

Standard	Conc ug/L	uAbs	CF_x	Meas. conc	%Rec
System Blk	0	675			
STD-1	0.2	3843	4044	0.19	95.04
STD-2	0.5	8775	7743	0.57	113.33
STD-3	1	16879	16984	0.99	99.38
STD-4	2	33277	33159	2.01	100.36
STD-5	5	82575	81685	5.05	101.09
STD-6	10	162113	162561	9.97	99.72

16175.296
808.474

Preparation Information Benchsheet

Prep Run#: 439528
Team: Metals/ECASTROVINCI

Prep WorkFlow: HgDigAq
Prep Method: Method

Status: Prepped
Prep Date/Time: 6/5/24 09:47

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ2406317-01	MB		25mL	245.1/Hg T, 7470A/Hg T	<2			25.00mL			HB: 7 WELL: D3 TEMP: 95C
2	RQ2406317-02	LCS		25mL	245.1/Hg T, 7470A/Hg T	<2			25.00mL		0.2500 mL/235614	ON HB: 12:12 OFF HB: 14:12 Pipets/Repipettors used: M39, M36, M208, M106, M270, M370, M320
3	R2404528-001	2405231005X WB-1-330	.01	25mL	7470A/Hg T	<2			25.00mL			
4	RQ2406317-03	R2404528-001 MS	.01	25mL	7470A/Hg T	<2			25.00mL		0.2500 mL/235614	
5	RQ2406317-04	R2404528-001 DMS	.01	25mL	7470A/Hg T	<2			25.00mL		0.2500 mL/235614	
6	R2404528-002	2405231038C ST-1-630	.01	25mL	7470A/Hg T	<2			25.00mL			
7	R2404528-003	2405231112C ST-1-630	.01	25mL	7470A/Hg T	<2			25.00mL			
8	R2404528-004	2405240905X WB-1-255	.01	25mL	7470A/Hg T	<2			25.00mL			
9	R2404528-009	2405241004C ST-1-473	.01	25mL	7470A/Hg T	<2			25.00mL			
10	R2404616-001	UD-3	.03	25mL	7470A/Hg T	<2			25.00mL			
11	R2404617-001	PS-1	.21	25mL	7470A/Hg T	<2			25.00mL			
12	R2404617-002	PS-2	.21	25mL	7470A/Hg T	<2			25.00mL			
13	R2404617-003	PS-3	.21	25mL	7470A/Hg T	<2			25.00mL			
14	R2404617-004	PS-4	.21	25mL	7470A/Hg T	<2			25.00mL			
15	R2404632-001	MH4	.03	25mL	7470A/Hg T	<2			25.00mL			
16	R2404680-001	S-1	.01	25mL	245.1/Hg T	<2			25.00mL			
17	R2404702-001	Sump Effluent	.02	25mL	245.1/Hg T	<2			25.00mL			
18	RQ2406317-05	R2404702-001 MS	.02	25mL	245.1/Hg T	<2			25.00mL		0.2500 mL/235614	
19	RQ2406317-06	R2404702-001 DMS	.02	25mL	245.1/Hg T	<2			25.00mL		0.2500 mL/235614	
20	R2404769-001	Permeate at Plant	.18	25mL	245.1/Hg T	<2			25.00mL			

Spiking Solutions

Name: Mercury LCSW Metals Hg Inventory ID 235614 Logbook Ref: 235614 Expires On: 06/06/2024

Preparation Materials

Hot Block Cups	50mL Lot 2211204 (234023)	Sulfuric Acid, Instra-Analyzed	230116 (230116)	Nitric Acid Metals Grade HNO3	233477 (233477)
Hydroxylamine HCL Solution	233083 (233083)	Potassium Permanganate RG KMnO4	233691 (233691)	Potassium Persulfate RG K2S2O8	222084 (222084)
Thermometer	458 (230828)				

Preparation Information Benchsheet

Prep Run#: 439528
Team: Metals/ECASTROVINCI

Prep WorkFlow: HgDigAq
Prep Method: Method

Status: Prepped
Prep Date/Time: 6/5/24 09:47

Preparation Steps

Step: Digestion
Started: 6/5/24 09:47
Finished: 6/6/24 07:25
By: ECASTROVINCI
Comments

Comments:

Reviewed By: *Christine Kutzer* Date: *6/7/24*

Chain of Custody

Relinquished By:	[signature]	Date:	6/6/24	Extracts Examined
Received By:	RAOI	Date:	6/6/24	Yes No

Preparation Information Benchsheet

Prep Run#: 439529
Team: Metals/ECASTROVINCI

Prep WorkFlow: HgDigAq
Prep Method: Method

Status: Prepped
Prep Date/Time: 6/5/24 09:47

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ2406318-01	MB		25mL	7470A/Hg T	<2			25.00mL			HB: 7 WELL: D3 TEMP: 95C
2	RQ2406318-02	LCS		25mL	7470A/Hg T	<2			25.00mL		0.2500 mL/235614	ON HB: 12:12 OFF HB: 14:12 Pipets/Repipettors used: M39, M36, M208, M106, M270, M370, M320
3	R2404638-001	River Upstream	.07	25mL	7470A/Hg T	<2			25.00mL			
4	RQ2406318-03	R2404638-001 MS	.07	25mL	7470A/Hg T	<2			25.00mL		0.2500 mL/235614	
5	RQ2406318-04	R2404638-001 DMS	.07	25mL	7470A/Hg T	<2			25.00mL		0.2500 mL/235614	
6	R2404638-002	River Downstream	.07	25mL	7470A/Hg T	<2			25.00mL			
7	R2404647-002	Secondary leachate Cell 6	.07	25mL	7470A/Hg T	<2			25.00mL			
8	R2404647-003	Primary Leachate Cell 6	.07	5mL	7470A/Hg T	<2			25.00mL			Diluted 5X due to matrix interference with KMnO4.
9	R2404647-004	Total Leachate	.07	5mL	7470A/Hg T	<2			25.00mL			Diluted 5X due to matrix interference with KMnO4.
10	R2404651-001	1405280845C 400-GV-125	.01	25mL	7470A/Hg T	<2			25.00mL			
11	R2404651-002	1405280846C 400-GV-125	.01	25mL	7470A/Hg T	<2			25.00mL			
12	R2404651-003	1405280857A 400-FV-131	.01	25mL	7470A/Hg T	<2			25.00mL			
13	R2404651-004	1405280858A 400-FV-131	.01	25mL	7470A/Hg T	<2			25.00mL			
14	R2404651-005	1405281005A 400-EV-131	.01	25mL	7470A/Hg T	<2			25.00mL			
15	R2404651-006	1405281013C 400-JV-150	.01	25mL	7470A/Hg T	<2			25.00mL			
16	R2404651-007	1405281450C 400-HV-147	.01	25mL	7470A/Hg T	<2			25.00mL			
17	R2404731-003	4413-060324-1200	.02	25mL	7470A/Hg T	<2			25.00mL			
18	R2404765-002	Hauler Sludge	.03	5mL	7470A/Hg T	<2			25.00mL			Diluted 5X due to matrix interference with KMnO4.

Spiking Solutions

Name: Mercury LCSW Metals Hg Inventory ID 235614 Logbook Ref: 235614 Expires On: 06/06/2024

Preparation Materials

Hot Block Cups	50mL Lot 2211204 (234023)	Sulfuric Acid, Instra-Analyzed	230116 (230116)	Nitric Acid Metals Grade HNO3	233477 (233477)
Hydroxylamine HCL Solution	233083 (233083)	Potassium Permanganate RG KMnO4	233691 (233691)	Potassium Persulfate RG K2S2O8	222084 (222084)
Thermometer	458 (230828)				

Preparation Information Benchsheet

Prep Run#: 439529
Team: Metals/ECASTROVINCI

Prep WorkFlow: HgDigAq
Prep Method: Method

Status: Prepped
Prep Date/Time: 6/5/24 09:47

Preparation Steps

Step: Digestion
Started: 6/5/24 09:47
Finished: 6/6/24 07:25
By: ECASTROVINCI
Comments

Comments: _____

Reviewed By: *Christine Kutzer* Date: *6/7/24*

Chain of Custody

Relinquished By:	E	Date:	6/6/24	Extracts Examined
Received By:	RAO1	Date:	6/6/24	Yes No

MERCURY CCV / LCSW / MS STANDARDS

Standard	ALS Lot #	Conc. (ppm)	Vol. (mls)	Final Vol. (mls)	Final Conc. (ppm)	Matrix	Analyst/ Date	Letter ID	Nitric Acid Lot #	Expiration Date	Pipet ID
Hg CCV Stk A	230321	1000	1.00	100	10	0.5%HNO3	EC 6/5/24	A	233477	6/12/24	M36

(PREPARED DAILY)

Standard	ALS Lot #	Conc. (ppm)	Vol. (mls)	Final Vol. (mls)	Final Conc. (ppm)	Matrix	Analyst/ Date	Letter ID	Nitric Acid Lot #	Pipet ID
Hg CCV StkB	Hg CCV Stk A	10.0	1.00	100	0.100	0.5%HNO3	EC 6/9/24	B	233477	M36
								C		
								D		
								E		
								F		
								G		
								H		

(PREPARED AND DIGESTED DAILY WITH SAMPLE PREP RUNS)

CCV Standard (ppb)	ALS Lot #	Conc. (ppm)	Vol. (mL) Soil	Vol. (mL) Water	Final Vol. (mls)	Final Conc. (ppb)	Water/ Soil	Analyst/ Date	Letter ID	Pipet ID
CCV	Hg CCV Stk B	0.100	3.00	0.75	Soils- Final vol. 100mL after digest. Water – Final Vol of 25 mL before digest.	3.00	W	EC 6/9/24	I	M36
LCS / MS			1.00	0.25		1.00			J	
									K	
									L	
									M	
									N	
									O	

MERCURY CALIBRATION / CRDL STANDARDS

Standard	ALS Lot #	Conc. (ppm)	Vol. (mls)	Final Vol. (mls)	Final Conc. (ppm)	Matrix	Analyst/ Date	Letter ID	Nitric Acid Lot #	Expiration Date	Pipet ID
Hg Cal Stk A	231916	1000	1.00	100	10	0.5%HNO3	EC 6/5/24	A	233477	6/12/24	M36

(PREPARED DAILY)

Standard	ALS Lot #	Conc. (ppm)	Vol. (mls)	Final Vol. (mls)	Final Conc. (ppm)	Matrix	Analyst/ Date	Letter ID	Nitric Acid Lot #	Pipet ID
Hg Cal StkB	Hg Cal Stk A	10.0	1.00	100	0.100	0.5%HNO3	EC 6/5/24	B	233477	M36
								C		
								D		
								E		
								F		
								G		
								H		

(PREPARED AND DIGESTED DAILY WITH SAMPLE PREP RUNS)

CAL Standard (ppb)	ALS Lot #	Conc. (ppm)	Vol. (mL) Soil	Vol. (mL) Water	Final Vol. (mls)	Final Conc. (ppb)	Water/ Soil	Analyst/ Date	Letter ID	Pipet ID
0.200	Hg Cal Stk B	0.100	0.200	0.05	Soils- Dilute to 10mL w/ DI. Final vol. 100mL after digest. Water – dilute to Final Vol of 25 mL with DI before digest.	0.200	W	EC 6/5/24	I	M36, M39
0.500			0.500	0.125		0.500			J	
1.00			1.00	0.25		1.00			K	
2.00			2.00	0.5		2.00			L	
5.00			5.00	1.25		5.00			M	
10.0			10.0	2.5		10.0			N	
CRA			0.200	0.05		0.200			O	

Metals Data Cover Sheet

Run Date: 6/10/2024

Data File: 061024-ICP7

Primary Reviewer: N. Mansen

Secondary Reviewer: M. McMahon

LIMS Runs:	LIMS Preps:	
843643	439549	CCV7
843644	439397,439398,439400	DOD CCV7
843645	439599	CCV7
843646	439480	T2
843647	439600	CCV6
843648	439601	CCV6
843649	439481	CCV5
843650	439635	T2

Comments:
N/A

ICP-7 Run Log

Serial number: MY2309CQ22

Analyst: NM Date: 6/10/24 Data File: 061024-ICP7

	Prep Date	Lot #
MRL	5/16/24	M844012OC
ICSA	4/19/24	M8440133B
ICSAB	5/6/24	M8440143C
Int. Std	5/28/24	M8750056J
ICV/CCV	6/10/24	M8750069L

	Prep Date	Lot #
Cal Std 1	3/27/24	M8750002A
Cal Std 2 1/100 calb, 3 1/50 calb, 4 1/10 calb, 5 1/5 calb		M8750013A
Cal Std 3 HLCCV1	5/13/24	M8440078B
HLCCV2 6	4/23/24	M8440098B
HLCCV3	5/16/24	NM 6/10/24

~~(Cal Std 4 is a 1/5 and Cal Std 3 is a 1/100 dilution of Cal Std 5)~~

Blank Prep - Daily	NHO3	HCl	Pipet Used	DOD Pipet Verification	IEC Date
Lot	235024	233283	M37, M40	M8390040	—

1:1	LOD CHECK	1:41	R2404693-011 10X	2:13	R2404780-002 10X	2:41	PBW-439600
1:2	PBW-439549	1:42	R2404693-011 50X	2:14	R2404780-003 10X	2:42	LCSW-439600
1:3	LCSW-439549	S1:6	Continuing Calibration Verification	S1:8	Continuing Calibration Verification1	2:43	R2404674-001
1:4	R2404536-001 20X	S1:7	Continuing Calibration Blank	S1:9	Continuing Calibration Blank1	2:44	R2404674-002
1:5	R2404536-001S 20X	S1:3	Contract Required Detection Limit	S1:3	Contract Required Detection Limit	2:45	R2404674-004
1:6	R2404536-001SD 20X	S1:4	Interference Check Solution A	S1:4	Interference Check Solution A	2:46	R2404674-005
1:7	R2404536-001A 20X	S1:5	Interference Check Solution AB	S1:5	Interference Check Solution AB	2:47	R2404674-006
1:8	R2404536-001L 100X	S1:21	HLCCV2	S1:8	Continuing Calibration Verification1	2:48	R2404674-007
1:9	R2404536-002 20X	S1:22	HLCCV3	S1:9	Continuing Calibration Blank1	2:49	R2404674-008
1:10	R2404536-002S 20X	S1:19	HLCCV1	2:15	PBS-439480	2:50	R2404674-009
S1:6	Continuing Calibration Verification	S1:6	Continuing Calibration Verification	2:16	LCSS-439480	S1:8	Continuing Calibration Verification
S1:7	Continuing Calibration Blank	S1:7	Continuing Calibration Blank	2:17	R2404648-001	S1:9	Continuing Calibration Blank1
1:11	R2404536-002SD 20X	1:43	PBW-439599	2:18	R2404648-001S	2:51	R2404674-010
1:12	R2404536-002A 20X	1:44	LCSW-439599	2:19	R2404648-001SD	2:52	R2404674-011
1:13	R2404536-002L 100X	1:45	DLCSW-439599	2:20	R2404648-001A	2:53	R2404674-011S
1:14	R2404536-003 20X	1:46	R2404631-005 50X	2:21	R2404648-001L 5X	2:54	R2404674-011SD
1:15	R2404536-004 20X	1:47	R2404631-006 10X	2:22	R2404648-002	2:55	R2404674-011A
1:16	R2404536-005 20X	1:48	R2404631-007 20X	2:23	R2404648-003	2:56	R2404674-011L 5X
1:17	R2404536-006 20X	1:49	R2404631-008 50X	2:24	R2404648-004	2:57	R2404674-012
1:18	R2404536-007 20X	1:50	R2404631-009 10X	S1:8	Continuing Calibration Verification1	2:58	R2404674-013
1:19	R2404536-008 20X	1:51	R2404631-010 50X	S1:9	Continuing Calibration Blank1	2:59	R2404674-014
1:20	PBW-439397	1:52	R2404631-011 10X	2:25	R2404648-005	2:60	R2404671-016 R2404674-016
S1:6	Continuing Calibration Verification	S1:6	Continuing Calibration Verification	2:26	R2404648-006	S1:8	Continuing Calibration Verificatio
S1:7	Continuing Calibration Blank	S1:7	Continuing Calibration Blank	2:27	R2404648-007	S1:9	Continuing Calibration Blank1
1:21	LCSW-439397	1:53	R2404730-001	2:28	R2404648-008	3:1	R2404694-001
1:22	DLCSW-439397	1:54	R2404730-002	2:29	R2404648-009	3:2	R2404694-002
1:23	R2404637-001 20X	1:55	R2404730-003	2:30	R2404648-010	3:3	R2404694-003
1:24	R2404637-002 10X	1:56	R2404730-004	2:31	R2404648-011	3:4	R2404694-004
1:25	R2404637-003 10X	1:57	R2404730-006	2:32	R2404648-012	3:5	R2404694-004L 5X
1:26	R2404637-004 10X	1:58	R2404730-006L 5X	2:33	R2404648-013	3:6	R2404694-001 20X
1:27	R2404367-004L 50X	1:59	R2404731-003	2:34	R2404648-014	3:7	R2404694-002 20X
1:28	PBW-439398	1:60	R2404758-001 10X	S1:8	Continuing Calibration Verification1	3:8	R2404694-003 20X
1:29	LCSW-439398	2:1	R2404765-002	S1:9	Continuing Calibration Blank1	3:9	R2404694-004 20X
1:30	R2404632-001 10X	2:2	R2404780-001	2:35	R2404648-015	S1:8	Continuing Calibration Verificati
S1:6	Continuing Calibration Verification	S1:6	Continuing Calibration Verification	2:36	R2404648-016	S1:9	Continuing Calibration Blank1
S1:7	Continuing Calibration Blank	S1:7	Continuing Calibration Blank	2:37	R2404648-017	S1:3	Contract Required Detection Li
1:31	R2404632-001L 50X	2:3	R2404780-002	2:38	R2404648-018	S1:4	Interference Check Solution A
1:32	R2404651-006 10X	2:4	R2404780-003	2:39	R2404648-019	S1:5	Interference Check Solution AB
1:33	R2404693-002 20X	2:5	R2404730-001 20X	2:40	R2404648-020	S1:8	Continuing Calibration Verificat
1:34	R2404693-003 10X	2:6	R2404730-002 20X	S1:8	Continuing Calibration Verification1	S1:9	Continuing Calibration Blank1
1:35	R2404693-006 20X	2:7	R2404730-003 20X	S1:9	Continuing Calibration Blank1		
1:36	R2404693-008 20X	2:8	R2404730-004 20X	S1:3	Contract Required Detection Limit		
1:37	R2404693-009 20X	2:9	R2404730-006 20X	S1:4	Interference Check Solution A		
1:38	PBW-439400	2:10	R2404758-001 100X	S1:5	Interference Check Solution AB		
1:39	LCSW-439400	2:11	R2404765-002 10X	S1:8	Continuing Calibration Verification1		
1:40	DLCSW-439400	2:12	R2404780-001 20X	S1:9	Continuing Calibration Blank1		
S1:6	Continuing Calibration Verification	S1:6	Continuing Calibration Verification				
	Continuing Calibration Blank	S1:7	Continuing Calibration Blank				

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ICP-7 Run Log

Serial number: MY2309CQ22

Analyst: NM Date: 6/10/24 Data File: 061024-ICP7

	Prep Date	Lot #		Prep Date	Lot #
MRL			Cal Std 1		
ICSA	NM 6/10/24		Cal Std 2		
ICSAB			Cal Std 5/ HLCCV1		
Int. Std			HLCCV2		
ICV/CCV			HLCCV3		

(Cal Std 4 is a 1/5 and Cal Std 3 is a 1/100 dilution of Cal Std 5)

Blank Prep - Daily	NHO3	HCl	Pipet Used	DOD Pipet Verification	IEC Date
Lot					

3:10	PBW-439601	3:40	PBS-439481
3:11	LCSW-439601	3:41	LCSS-439481
3:12	R2404782-001	3:42	R2404703-001
3:13	R2404782-002	3:43	R2404704-001
3:14	R2404782-002S	3:44	R2404731-001
3:15	R2404782-002SD	3:45	R2404731-001S
3:16	R2404782-002A	3:46	R2404731-001SD
3:17	R2404782-002L 5X	3:47	R2404731-001A
3:18	R2404782-003	3:48	R2404731-001L 5X
3:19	R2404782-004	3:49	R2404731-002
S1:10	Continuing Calibration Verification2	S1:10	Continuing Calibration Verification2
S1:11	Continuing Calibration Blank2	S1:11	Continuing Calibration Blank2
3:20	R2404782-005	3:50	R2404750-001
3:21	R2404782-006	3:51	R2404750-002
3:22	R2404782-007	3:52	R2404765-001
3:23	R2404782-008	3:53	R2404731-001 10X
3:24	R2404782-009	3:54	R2404731-001S 10X
3:25	R2404782-010	3:55	R2404731-001SD 10X
3:26	R2404782-011	3:56	R2404731-001A 10X
3:27	R2404782-012	3:57	R2404731-001L 50X
3:28	R2404782-013	3:58	R2404731-002 10X
3:29	R2404782-014	S1:10	Continuing Calibration Verification2
S1:10	Continuing Calibration Verification2	S1:11	Continuing Calibration Blank2
S1:11	Continuing Calibration Blank2	S1:3	Contract Required Detection Limit
3:30	R2404782-015	S1:4	Interference Check Solution A
3:31	R2404850-001	S1:5	Interference Check Solution AB
3:32	R2404850-002	S1:10	Continuing Calibration Verification2
3:33	R2404850-005	S1:11	Continuing Calibration Blank2
3:34	R2404850-006	4:1	PBT-439635
3:35	R2404850-006L 5X	4:2	LCST-439635
3:36	R2404850-001 20X	4:3	RQ2406375-01
3:37	R2404850-002 20X	4:4	R2404768-001
3:38	R2404850-005 20X	4:5	R2404768-001S
3:39	R2404850-006 20X	4:6	R2404768-001SD
S1:10	Continuing Calibration Verification2	4:7	R2404768-001A
S1:11	Continuing Calibration Blank2	4:8	R2404768-001L 5X
S1:3	Contract Required Detection Limit	S1:10	Continuing Calibration Verification2
S1:4	Interference Check Solution A	S1:11	Continuing Calibration Blank2
S1:5	Interference Check Solution AB	S1:3	Contract Required Detection Limit
S1:10	Continuing Calibration Verification2	S1:4	Interference Check Solution A
S1:11	Continuing Calibration Blank2	S1:5	Interference Check Solution AB
		S1:10	Continuing Calibration Verification2
		S1:11	Continuing Calibration Blank2

NM 6/10/24 Page 2/2

Created Date/Time	6/10/2024 13:13:59	Software Version	7.6.1.12212
Instrument Name	MY2309CQ22	Firmware Version	5590
File Path	C:\Agilent\ICP Expert\My Results\2024\061024-ICP7.esws		
Notes	NM 6/10/24		

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
6/10/2024 15:16:42	Blank	Ag (328.068 nm)	0.0000	N/A	-214.7014
	Blank	Al (237.312 nm)	0.0000	N/A	12.2794
	Blank	As (188.980 nm)	0.0000	N/A	-2.0240
	Blank	B (249.772 nm)	0.0000	N/A	5.5065
	Blank	Ba (230.424 nm)	0.0000	N/A	11.4535
	Blank	Be (313.107 nm)	0.0000	N/A	20.8240
	Blank	Ca (317.933 nm)	0.0000	N/A	2743.0282
	Blank	Cd (214.439 nm)	0.0000	N/A	1.9847
	Blank	Co (230.786 nm)	0.0000	N/A	-9.6825
	Blank	Cr (267.716 nm)	0.0000	N/A	5.9171
	Blank	Cu (327.395 nm)	0.0000	N/A	-27.6361
	Blank	Fe (234.350 nm)	0.0000	N/A	-0.4235
	Blank	K (766.491 nm)	0.0000	N/A	-192.0358
	Blank	Mg (279.078 nm)	0.0000	N/A	-29.7747
	Blank	Mn (257.610 nm)	0.0000	N/A	18.6543
	Blank	Mo (202.032 nm)	0.0000	N/A	11.9998
	Blank	Na (588.995 nm)	0.0000	N/A	-13622.7796
	Blank	Ni (230.299 nm)	0.0000	N/A	25.2517
	Blank	Pb (220.353 nm)	0.0000	N/A	7.9217
	Blank	Sb (217.582 nm)	0.0000	N/A	6.5891
	Blank	Se (196.026 nm)	0.0000	N/A	4.7785
	Blank	Si (252.851 nm)	0.0000	N/A	32.6584
	Blank	Sn (189.925 nm)	0.0000	N/A	3.0192
	Blank	Sr (216.596 nm)	0.0000	N/A	-0.6629
	Blank	Ti (336.122 nm)	0.0000	N/A	155.3946
	Blank	Tl (190.794 nm)	0.0000	N/A	-1.2039
	Blank	V (292.401 nm)	0.0000	N/A	-40.5746
	Blank	Y (360.074 nm)	1.00	0.00	488583.76
	Blank	Y_R (360.074 nm)	1.00	0.00	487780.22
	Blank	Zn (213.857 nm)	0.0000	N/A	0.5281
6/10/2024 15:19:57	Standard 1	Ag (328.068 nm)		N/A	-217.1260
	Standard 1	Al (237.312 nm)	0.1000	N/A	254.4576
	Standard 1	As (188.980 nm)	0.0100	N/A	13.9115
	Standard 1	B (249.772 nm)		N/A	9.6515
	Standard 1	Ba (230.424 nm)	0.0200	N/A	1083.8975
	Standard 1	Be (313.107 nm)	0.0030	N/A	3142.4650
	Standard 1	Ca (317.933 nm)		N/A	2896.0227
	Standard 1	Cd (214.439 nm)	0.0050	N/A	309.5041
	Standard 1	Co (230.786 nm)		N/A	-12.9955
	Standard 1	Cr (267.716 nm)		N/A	122.2357
	Standard 1	Cu (327.395 nm)	0.0100	N/A	408.4990
	Standard 1	Fe (234.350 nm)		N/A	161.2598
	Standard 1	K (766.491 nm)		N/A	-192.2188
	Standard 1	Mg (279.078 nm)		N/A	-25.0312
	Standard 1	Mn (257.610 nm)	0.0100	N/A	3452.0060
	Standard 1	Mo (202.032 nm)	0.0250	N/A	266.3161
	Standard 1	Na (588.995 nm)		N/A	-13405.6034
	Standard 1	Ni (230.299 nm)		N/A	24.3909
	Standard 1	Pb (220.353 nm)	0.0050	N/A	41.9762
	Standard 1	Sb (217.582 nm)	0.0600	N/A	116.2691
	Standard 1	Se (196.026 nm)		N/A	6.9211
	Standard 1	Si (252.851 nm)		N/A	109.7178

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Standard 1	Sn (189.925 nm)		N/A	2.1904
	Standard 1	Sr (216.596 nm)		N/A	1.9522
	Standard 1	Ti (336.122 nm)		N/A	124.7778
	Standard 1	Tl (190.794 nm)	0.0100	N/A	10.0508
	Standard 1	V (292.401 nm)		N/A	-47.4119
	Standard 1	Y (360.074 nm)	1.00	0.64	487090.69
	Standard 1	Y_R (360.074 nm)	1.00	0.64	486300.14
	Standard 1	Zn (213.857 nm)		N/A	-29.1631
6/10/2024 15:23:12	Standard 2	Ag (328.068 nm)	0.0100	N/A	346.9291
	Standard 2	Al (237.312 nm)	0.2000	N/A	501.5798
	Standard 2	As (188.980 nm)	0.0200	N/A	30.5775
	Standard 2	B (249.772 nm)	0.1000	N/A	3109.4761
	Standard 2	Ba (230.424 nm)	0.2000	N/A	10855.9553
	Standard 2	Be (313.107 nm)	0.0050	N/A	5482.8841
	Standard 2	Ca (317.933 nm)	0.5000	N/A	20813.4819
	Standard 2	Cd (214.439 nm)	0.0100	N/A	590.3930
	Standard 2	Co (230.786 nm)	0.0500	N/A	911.5483
	Standard 2	Cr (267.716 nm)	0.0100	N/A	553.1885
	Standard 2	Cu (327.395 nm)	0.0250	N/A	1052.5640
	Standard 2	Fe (234.350 nm)	0.1000	N/A	1844.7748
	Standard 2	K (766.491 nm)	0.5000	N/A	336.4366
	Standard 2	Mg (279.078 nm)	0.5000	N/A	1603.9931
	Standard 2	Mn (257.610 nm)	0.0150	N/A	5183.8872
	Standard 2	Mo (202.032 nm)	0.0500	N/A	523.3276
	Standard 2	Na (588.995 nm)	0.5000	N/A	-6868.1971
	Standard 2	Ni (230.299 nm)	0.0400	N/A	503.4971
	Standard 2	Pb (220.353 nm)	0.0100	N/A	60.2148
	Standard 2	Sb (217.582 nm)	0.1000	N/A	188.8470
	Standard 2	Se (196.026 nm)	0.0100	N/A	13.3105
	Standard 2	Si (252.851 nm)	0.5000	N/A	1909.0856
	Standard 2	Sn (189.925 nm)	0.1000	N/A	254.2375
	Standard 2	Sr (216.596 nm)	0.0500	N/A	876.9743
	Standard 2	Ti (336.122 nm)	0.0500	N/A	7277.0359
	Standard 2	Tl (190.794 nm)	0.0200	N/A	16.7524
	Standard 2	V (292.401 nm)	0.0500	N/A	1828.3923
	Standard 2	Y (360.074 nm)	1.00	0.64	488893.36
	Standard 2	Y_R (360.074 nm)	1.00	0.64	488090.95
	Standard 2	Zn (213.857 nm)	0.0200	N/A	1235.3343
6/10/2024 15:26:28	Standard 3	Ag (328.068 nm)	0.0200	N/A	917.8872
	Standard 3	Al (237.312 nm)	0.4000	N/A	1016.0961
	Standard 3	As (188.980 nm)	0.0400	N/A	64.9800
	Standard 3	B (249.772 nm)	0.2000	N/A	6359.5393
	Standard 3	Ba (230.424 nm)	0.4000	N/A	22227.6444
	Standard 3	Be (313.107 nm)	0.0100	N/A	11192.8829
	Standard 3	Ca (317.933 nm)	1.0000	N/A	39492.7013
	Standard 3	Cd (214.439 nm)	0.0200	N/A	1197.2108
	Standard 3	Co (230.786 nm)	0.1000	N/A	1880.3493
	Standard 3	Cr (267.716 nm)	0.0200	N/A	1105.5040
	Standard 3	Cu (327.395 nm)	0.0500	N/A	2162.2834
	Standard 3	Fe (234.350 nm)	0.2000	N/A	3791.5751
	Standard 3	K (766.491 nm)	1.0000	N/A	848.3260
	Standard 3	Mg (279.078 nm)	1.0000	N/A	3301.5600
	Standard 3	Mn (257.610 nm)	0.0300	N/A	10549.1301
	Standard 3	Mo (202.032 nm)	0.1000	N/A	1059.7969
	Standard 3	Na (588.995 nm)	1.0000	N/A	-12.8641
	Standard 3	Ni (230.299 nm)	0.0800	N/A	1005.5434
	Standard 3	Pb (220.353 nm)	0.0200	N/A	115.3159

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Standard 3	Sb (217.582 nm)	0.2000	N/A	378.0865
	Standard 3	Se (196.026 nm)	0.0200	N/A	18.7854
	Standard 3	Si (252.851 nm)	1.0000	N/A	3870.5921
	Standard 3	Sn (189.925 nm)	0.2000	N/A	516.3385
	Standard 3	Sr (216.596 nm)	0.1000	N/A	1801.0972
	Standard 3	Ti (336.122 nm)	0.1000	N/A	14771.0498
	Standard 3	Tl (190.794 nm)	0.0400	N/A	37.8517
	Standard 3	V (292.401 nm)	0.1000	N/A	3778.4425
	Standard 3	Y (360.074 nm)	1.00	0.52	488204.22
	Standard 3	Y_R (360.074 nm)	1.00	0.52	487392.19
	Standard 3	Zn (213.857 nm)	0.0400	N/A	2555.8540
6/10/2024 15:29:43	Standard 4	Ag (328.068 nm)	0.1000	N/A	5435.1964
	Standard 4	Al (237.312 nm)	2.0000	N/A	4934.7881
	Standard 4	As (188.980 nm)	0.2000	N/A	336.9284
	Standard 4	B (249.772 nm)	1.0000	N/A	31900.1710
	Standard 4	Ba (230.424 nm)	2.0000	N/A	109006.0515
	Standard 4	Be (313.107 nm)	0.0500	N/A	55454.0766
	Standard 4	Ca (317.933 nm)	5.0000	N/A	184833.0666
	Standard 4	Cd (214.439 nm)	0.1000	N/A	5823.0367
	Standard 4	Co (230.786 nm)	0.5000	N/A	9251.0174
	Standard 4	Cr (267.716 nm)	0.1000	N/A	5301.0326
	Standard 4	Cu (327.395 nm)	0.2500	N/A	10850.7026
	Standard 4	Fe (234.350 nm)	1.0000	N/A	18708.4501
	Standard 4	K (766.491 nm)	5.0000	N/A	5071.5453
	Standard 4	Mg (279.078 nm)	5.0000	N/A	16438.8834
	Standard 4	Mn (257.610 nm)	0.1500	N/A	51423.7190
	Standard 4	Mo (202.032 nm)	0.5000	N/A	5220.3115
	Standard 4	Na (588.995 nm)	5.0000	N/A	54269.4007
	Standard 4	Ni (230.299 nm)	0.4000	N/A	4844.6162
	Standard 4	Pb (220.353 nm)	0.1000	N/A	539.7134
	Standard 4	Sb (217.582 nm)	1.0000	N/A	1858.0694
	Standard 4	Se (196.026 nm)	0.1000	N/A	77.4196
	Standard 4	Si (252.851 nm)	5.0000	N/A	19140.2821
	Standard 4	Sn (189.925 nm)	1.0000	N/A	2551.6638
	Standard 4	Sr (216.596 nm)	0.5000	N/A	8857.7057
	Standard 4	Ti (336.122 nm)	0.5000	N/A	72410.6800
	Standard 4	Tl (190.794 nm)	0.2000	N/A	197.1151
	Standard 4	V (292.401 nm)	0.5000	N/A	18918.3881
	Standard 4	Y (360.074 nm)	0.99	0.49	483752.28
	Standard 4	Y_R (360.074 nm)	0.99	0.49	482947.31
	Standard 4	Zn (213.857 nm)	0.2000	N/A	12781.8649
6/10/2024 15:32:58	Standard 5	Ag (328.068 nm)	0.2000	N/A	11441.8520
	Standard 5	Al (237.312 nm)	4.0000	N/A	10162.4234
	Standard 5	As (188.980 nm)	0.4000	N/A	692.8380
	Standard 5	B (249.772 nm)	2.0000	N/A	65836.2932
	Standard 5	Ba (230.424 nm)	4.0000	N/A	223893.7217
	Standard 5	Be (313.107 nm)	0.1000	N/A	114723.2121
	Standard 5	Ca (317.933 nm)	10.0000	N/A	378276.7065
	Standard 5	Cd (214.439 nm)	0.2000	N/A	11991.6943
	Standard 5	Co (230.786 nm)	1.0000	N/A	18947.8682
	Standard 5	Cr (267.716 nm)	0.2000	N/A	10902.6041
	Standard 5	Cu (327.395 nm)	0.5000	N/A	22409.3776
	Standard 5	Fe (234.350 nm)	2.0000	N/A	38292.0122
	Standard 5	K (766.491 nm)	10.0000	N/A	10828.2569
	Standard 5	Mg (279.078 nm)	10.0000	N/A	33723.4500
	Standard 5	Mn (257.610 nm)	0.3000	N/A	105310.4430
	Standard 5	Mo (202.032 nm)	1.0000	N/A	10837.2990

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Standard 5	Na (588.995 nm)	10.0000	N/A	127378.3799
	Standard 5	Ni (230.299 nm)	0.8000	N/A	9895.7808
	Standard 5	Pb (220.353 nm)	0.2000	N/A	1106.1551
	Standard 5	Sb (217.582 nm)	2.0000	N/A	3830.2635
	Standard 5	Se (196.026 nm)	0.2000	N/A	153.2895
	Standard 5	Si (252.851 nm)	10.0000	N/A	39203.3911
	Standard 5	Sn (189.925 nm)	2.0000	N/A	5192.0545
	Standard 5	Sr (216.596 nm)	1.0000	N/A	18196.8975
	Standard 5	Ti (336.122 nm)	1.0000	N/A	149770.7431
	Standard 5	Tl (190.794 nm)	0.4000	N/A	406.2716
	Standard 5	V (292.401 nm)	1.0000	N/A	38928.9684
	Standard 5	Y (360.074 nm)	0.98	0.42	478330.13
	Standard 5	Y_R (360.074 nm)	0.98	0.42	477526.80
	Standard 5	Zn (213.857 nm)	0.4000	N/A	26499.5851
6/10/2024 15:36:13	Standard 6	Ag (328.068 nm)	1.0000	N/A	56634.3506
	Standard 6	Al (237.312 nm)	20.0000	N/A	49386.8261
	Standard 6	As (188.980 nm)	2.0000	N/A	3406.1319
	Standard 6	B (249.772 nm)	10.0000	N/A	326223.5965
	Standard 6	Ba (230.424 nm)	20.0000	N/A	1039801.0293
	Standard 6	Be (313.107 nm)	0.5000	N/A	551142.0898
	Standard 6	Ca (317.933 nm)	50.0000	N/A	1780201.3964
	Standard 6	Cd (214.439 nm)	1.0000	N/A	56961.2564
	Standard 6	Co (230.786 nm)	5.0000	N/A	89300.7563
	Standard 6	Cr (267.716 nm)	1.0000	N/A	51905.0207
	Standard 6	Cu (327.395 nm)	2.5000	N/A	110109.5742
	Standard 6	Fe (234.350 nm)	10.0000	N/A	181956.4471
	Standard 6	K (766.491 nm)	50.0000	N/A	55161.7922
	Standard 6	Mg (279.078 nm)	50.0000	N/A	163146.1556
	Standard 6	Mn (257.610 nm)	1.5000	N/A	500894.1205
	Standard 6	Mo (202.032 nm)	5.0000	N/A	52232.1617
	Standard 6	Na (588.995 nm)	50.0000	N/A	671422.2847
	Standard 6	Ni (230.299 nm)	4.0000	N/A	46660.8459
	Standard 6	Pb (220.353 nm)	1.0000	N/A	5226.9264
	Standard 6	Sb (217.582 nm)	10.0000	N/A	18679.1493
	Standard 6	Se (196.026 nm)	1.0000	N/A	733.6765
	Standard 6	Si (252.851 nm)	50.0000	N/A	193073.5037
	Standard 6	Sn (189.925 nm)	10.0000	N/A	24514.9302
	Standard 6	Sr (216.596 nm)	5.0000	N/A	86180.6194
	Standard 6	Ti (336.122 nm)	5.0000	N/A	721038.4170
	Standard 6	Tl (190.794 nm)	2.0000	N/A	1914.8961
	Standard 6	V (292.401 nm)	5.0000	N/A	189062.3567
	Standard 6	Y (360.074 nm)	0.94	0.46	459623.66
	Standard 6	Y_R (360.074 nm)	0.94	0.46	458835.08
	Standard 6	Zn (213.857 nm)	2.0000	N/A	129078.3414
6/10/2024 15:39:57	Initial Calibration Verification	Ag (328.068 nm)	0.5082	0.11	28577.3681
	Initial Calibration Verification	Al (237.312 nm)	9.9313	0.15	24562.0034
	Initial Calibration Verification	As (188.980 nm)	0.9904	0.54	1677.5694
	Initial Calibration Verification	B (249.772 nm)	2.4891	0.08	80829.8926
	Initial Calibration Verification	Ba (230.424 nm)	9.8341	0.12	535446.5221
	Initial Calibration Verification	Be (313.107 nm)	0.2459	0.16	269918.7436
	Initial Calibration Verification	Ca (317.933 nm)	25.7906	0.23	921414.2659
	Initial Calibration Verification	Cd (214.439 nm)	0.5056	0.23	28803.7971
	Initial Calibration Verification	Co (230.786 nm)	2.5113	0.19	45528.2886
	Initial Calibration Verification	Cr (267.716 nm)	0.5160	0.25	26827.0188
	Initial Calibration Verification	Cu (327.395 nm)	1.2342	0.45	54151.8667
	Initial Calibration Verification	Fe (234.350 nm)	5.0533	0.20	92010.1021
	Initial Calibration Verification	K (766.491 nm)	24.1925	0.41	26356.8003

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Initial Calibration Verification	Mg (279.078 nm)	25.4246	0.17	83055.6064
	Initial Calibration Verification	Mn (257.610 nm)	0.7452	0.15	248867.5724
	Initial Calibration Verification	Mo (202.032 nm)	2.5765	0.26	26907.2044
	Initial Calibration Verification	Na (588.995 nm)	25.2545	0.45	330302.8375
	Initial Calibration Verification	Ni (230.299 nm)	2.0759	0.21	24402.0665
	Initial Calibration Verification	Pb (220.353 nm)	0.5107	0.40	2673.9062
	Initial Calibration Verification	Sb (217.582 nm)	4.9927	0.18	9280.9165
	Initial Calibration Verification	Se (196.026 nm)	0.4814	0.92	355.7126
	Initial Calibration Verification	Si (252.851 nm)	10.3773	0.04	39573.9474
	Initial Calibration Verification	Sn (189.925 nm)	5.0916	0.15	12540.5558
	Initial Calibration Verification	Sr (216.596 nm)	2.4566	0.26	43234.2690
	Initial Calibration Verification	Ti (336.122 nm)	2.5519	0.11	368842.5870
	Initial Calibration Verification	Tl (190.794 nm)	0.9874	0.63	963.6169
	Initial Calibration Verification	V (292.401 nm)	2.5176	0.16	95405.6917
	Initial Calibration Verification	Y (360.074 nm)	0.96	0.38	470443.27
	Initial Calibration Verification	Y_R (360.074 nm)	0.96	0.38	469643.91
	Initial Calibration Verification	Zn (213.857 nm)	0.9950	0.03	63688.4716
6/10/2024 15:43:11	Initial Calibration Blank	Ag (328.068 nm)	-0.0001 u	> 100.00	-222.4049
	Initial Calibration Blank	Al (237.312 nm)	0.0034	48.37	20.6912
	Initial Calibration Blank	As (188.980 nm)	-0.0006 u	> 100.00	-3.0349
	Initial Calibration Blank	B (249.772 nm)	0.0042	8.32	140.8277
	Initial Calibration Blank	Ba (230.424 nm)	0.0004	10.67	31.0825
	Initial Calibration Blank	Be (313.107 nm)	0.0000 u	95.03	38.3764
	Initial Calibration Blank	Ca (317.933 nm)	0.0023	13.80	2824.8534
	Initial Calibration Blank	Cd (214.439 nm)	0.0000 u	> 100.00	4.1309
	Initial Calibration Blank	Co (230.786 nm)	0.0001 u	> 100.00	-8.3005
	Initial Calibration Blank	Cr (267.716 nm)	0.0001	59.42	11.2998
	Initial Calibration Blank	Cu (327.395 nm)	0.0000 u	> 100.00	-26.3696
	Initial Calibration Blank	Fe (234.350 nm)	0.0014	57.10	25.1894
	Initial Calibration Blank	K (766.491 nm)	0.0566	53.25	-129.9097
	Initial Calibration Blank	Mg (279.078 nm)	0.0010	98.82	-26.4177
	Initial Calibration Blank	Mn (257.610 nm)	0.0001	11.75	35.6413
	Initial Calibration Blank	Mo (202.032 nm)	0.0033	40.76	46.8304
	Initial Calibration Blank	Na (588.995 nm)	0.0156	38.22	-13410.3869
	Initial Calibration Blank	Ni (230.299 nm)	0.0001 u	> 100.00	26.7530
	Initial Calibration Blank	Pb (220.353 nm)	-0.0003 u	> 100.00	6.5825
	Initial Calibration Blank	Sb (217.582 nm)	0.0052	27.39	16.1566
	Initial Calibration Blank	Se (196.026 nm)	-0.0016 u	> 100.00	3.6250
	Initial Calibration Blank	Si (252.851 nm)	0.0030	13.31	44.1384
	Initial Calibration Blank	Sn (189.925 nm)	0.0004	4.44	4.0572
	Initial Calibration Blank	Sr (216.596 nm)	0.0003	95.24	4.4164
	Initial Calibration Blank	Ti (336.122 nm)	0.0029	44.37	578.5876
	Initial Calibration Blank	Tl (190.794 nm)	0.0019	58.81	0.6887
	Initial Calibration Blank	V (292.401 nm)	0.0001	49.70	-38.1265
	Initial Calibration Blank	Y (360.074 nm)	1.00	0.11	488735.25
	Initial Calibration Blank	Y_R (360.074 nm)	1.00	0.11	487895.08
	Initial Calibration Blank	Zn (213.857 nm)	0.0002	44.08	11.1156
6/10/2024 15:46:24	Contract Required Detection Limit	Ag (328.068 nm)	0.0089	1.21	289.5814
	Contract Required Detection Limit	Al (237.312 nm)	0.2010	1.47	509.1403
	Contract Required Detection Limit	As (188.980 nm)	0.0195	5.09	31.0003
	Contract Required Detection Limit	B (249.772 nm)	0.1992	0.14	6475.0167
	Contract Required Detection Limit	Ba (230.424 nm)	0.1992	0.25	10855.5016
	Contract Required Detection Limit	Be (313.107 nm)	0.0050	0.24	5521.4309
	Contract Required Detection Limit	Ca (317.933 nm)	1.0528	0.21	40243.1164
	Contract Required Detection Limit	Cd (214.439 nm)	0.0107	1.06	613.4079
	Contract Required Detection Limit	Co (230.786 nm)	0.0512	0.77	918.4559
	Contract Required Detection Limit	Cr (267.716 nm)	0.0097	1.74	508.5882

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Contract Required Detection Limit	Cu (327.395 nm)	0.0250	1.40	1070.8932
	Contract Required Detection Limit	Fe (234.350 nm)	0.1077	1.07	1960.0898
	Contract Required Detection Limit	K (766.491 nm)	0.9819	4.19	885.4610
	Contract Required Detection Limit	Mg (279.078 nm)	1.0218	0.24	3309.2288
	Contract Required Detection Limit	Mn (257.610 nm)	0.0141	0.19	4743.3273
	Contract Required Detection Limit	Mo (202.032 nm)	0.0258	0.55	281.0644
	Contract Required Detection Limit	Na (588.995 nm)	1.0141	0.19	188.0214
	Contract Required Detection Limit	Ni (230.299 nm)	0.0368	1.61	457.7869
	Contract Required Detection Limit	Pb (220.353 nm)	0.0110	3.85	65.3501
	Contract Required Detection Limit	Sb (217.582 nm)	0.0618	3.26	121.3637
	Contract Required Detection Limit	Se (196.026 nm)	0.0082	44.05	10.7759
	Contract Required Detection Limit	Si (252.851 nm)	0.0574	2.03	251.4752
	Contract Required Detection Limit	Sn (189.925 nm)	0.5139	0.55	1268.3573
	Contract Required Detection Limit	Sr (216.596 nm)	0.0994	0.77	1748.4905
	Contract Required Detection Limit	Ti (336.122 nm)	0.0510	1.45	7530.5188
	Contract Required Detection Limit	Tl (190.794 nm)	0.0212	5.73	19.5319
	Contract Required Detection Limit	V (292.401 nm)	0.0499	0.26	1849.5376
	Contract Required Detection Limit	Y (360.074 nm)	1.00	0.62	486677.87
	Contract Required Detection Limit	Y_R (360.074 nm)	1.00	0.62	485841.04
	Contract Required Detection Limit	Zn (213.857 nm)	0.0176	0.85	1126.3762
6/10/2024 15:49:38	Interference Check Solution A	Ag (328.068 nm)	-0.0002 u	14.80	-225.1312
	Interference Check Solution A	Al (237.312 nm)	256.6840 o	0.07	634525.0607
	Interference Check Solution A	As (188.980 nm)	-0.0012 u	> 100.00	-4.0686
	Interference Check Solution A	B (249.772 nm)	0.0943	0.10	3068.7182
	Interference Check Solution A	Ba (230.424 nm)	-0.0006 u	10.37	-20.7669
	Interference Check Solution A	Be (313.107 nm)	0.0002	8.90	219.4966
	Interference Check Solution A	Ca (317.933 nm)	240.7894 o	0.33	8579765.1733
	Interference Check Solution A	Cd (214.439 nm)	-0.0008 u	13.38	-42.0702
	Interference Check Solution A	Co (230.786 nm)	-0.0002 u	28.40	-13.3053
	Interference Check Solution A	Cr (267.716 nm)	0.0037	3.85	199.0674
	Interference Check Solution A	Cu (327.395 nm)	0.0084	5.01	343.0037
	Interference Check Solution A	Fe (234.350 nm)	95.3740 o	0.27	1736575.5389
	Interference Check Solution A	K (766.491 nm)	0.0517	14.95	-135.2506
	Interference Check Solution A	Mg (279.078 nm)	265.9931 o	0.25	869212.6144
	Interference Check Solution A	Mn (257.610 nm)	0.0012	3.22	411.1906
	Interference Check Solution A	Mo (202.032 nm)	0.0013	14.87	25.5323
	Interference Check Solution A	Na (588.995 nm)	-0.0637 u	5.92	-14490.3393
	Interference Check Solution A	Ni (230.299 nm)	0.0031	13.22	62.1051
	Interference Check Solution A	Pb (220.353 nm)	0.0018	43.50	17.5798
	Interference Check Solution A	Sb (217.582 nm)	0.0013	94.15	8.9406
	Interference Check Solution A	Se (196.026 nm)	-0.0084 u	89.40	-1.3425
	Interference Check Solution A	Si (252.851 nm)	0.0507	1.09	225.7524
	Interference Check Solution A	Sn (189.925 nm)	0.0007 u	> 100.00	4.6472
	Interference Check Solution A	Sr (216.596 nm)	0.0116	0.59	203.4618
	Interference Check Solution A	Ti (336.122 nm)	0.0029	14.63	573.9031
	Interference Check Solution A	Tl (190.794 nm)	0.0022	20.84	0.9470
	Interference Check Solution A	V (292.401 nm)	0.0020	8.43	36.2185
	Interference Check Solution A	Y (360.074 nm)	0.88	0.42	429358.49
	Interference Check Solution A	Y_R (360.074 nm)	0.88	0.42	428590.20
	Interference Check Solution A	Zn (213.857 nm)	0.0133 K	0.86	850.6720 K
6/10/2024 15:52:52	Interference Check Solution AB	Ag (328.068 nm)	0.2030	0.12	11286.4454
	Interference Check Solution AB	Al (237.312 nm)	257.7548 o	0.03	637172.1072
	Interference Check Solution AB	As (188.980 nm)	0.1034	1.58	173.2823
	Interference Check Solution AB	B (249.772 nm)	0.0914	0.60	2972.1717
	Interference Check Solution AB	Ba (230.424 nm)	0.5123	0.21	27904.2322
	Interference Check Solution AB	Be (313.107 nm)	0.5153	0.21	565637.4075
	Interference Check Solution AB	Ca (317.933 nm)	241.8973 o	0.27	8619230.3422

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Interference Check Solution AB	Cd (214.439 nm)	0.9992	0.32	56923.7691
	Interference Check Solution AB	Co (230.786 nm)	0.4970	0.31	9002.5296
	Interference Check Solution AB	Cr (267.716 nm)	0.5274	0.20	27419.3843
	Interference Check Solution AB	Cu (327.395 nm)	0.5544	0.11	24309.6211
	Interference Check Solution AB	Fe (234.350 nm)	95.8727 o	0.19	1745655.1623
	Interference Check Solution AB	K (766.491 nm)	0.0228 u	> 100.00	-166.9668
	Interference Check Solution AB	Mg (279.078 nm)	267.2360 o	0.25	873274.1665
	Interference Check Solution AB	Mn (257.610 nm)	0.5062	0.17	169076.5938
	Interference Check Solution AB	Mo (202.032 nm)	0.0011	36.09	23.5604
	Interference Check Solution AB	Na (588.995 nm)	-0.0760 u	2.32	-14657.4046
	Interference Check Solution AB	Ni (230.299 nm)	1.0115	0.21	11903.4035
	Interference Check Solution AB	Pb (220.353 nm)	0.0524	2.93	281.2349
	Interference Check Solution AB	Sb (217.582 nm)	0.6372	0.71	1190.2046
	Interference Check Solution AB	Se (196.026 nm)	0.0479	13.26	39.7110
	Interference Check Solution AB	Si (252.851 nm)	0.1032	1.39	425.8055
	Interference Check Solution AB	Sn (189.925 nm)	0.0009	79.65	5.2140
	Interference Check Solution AB	Sr (216.596 nm)	0.0116	1.51	203.3972
	Interference Check Solution AB	Ti (336.122 nm)	0.0027	11.83	540.6934
	Interference Check Solution AB	Tl (190.794 nm)	0.1074	1.70	103.7661
	Interference Check Solution AB	V (292.401 nm)	0.5271	0.15	19941.2891
	Interference Check Solution AB	Y (360.074 nm)	0.88	0.36	429785.79
	Interference Check Solution AB	Y_R (360.074 nm)	0.88	0.36	429009.91
	Interference Check Solution AB	Zn (213.857 nm)	1.0518	0.12	67323.0957
6/10/2024 15:56:06	Continuing Calibration Verification	Ag (328.068 nm)	0.5103	0.05	28695.4415
	Continuing Calibration Verification	Al (237.312 nm)	10.0276	0.12	24800.1178
	Continuing Calibration Verification	As (188.980 nm)	0.9887	0.29	1674.7209
	Continuing Calibration Verification	B (249.772 nm)	2.4862	0.07	80736.6535
	Continuing Calibration Verification	Ba (230.424 nm)	9.8261	0.14	535008.9462
	Continuing Calibration Verification	Be (313.107 nm)	0.2466	0.17	270671.8527
	Continuing Calibration Verification	Ca (317.933 nm)	25.9130	0.24	925774.8858
	Continuing Calibration Verification	Cd (214.439 nm)	0.5072	0.30	28896.6990
	Continuing Calibration Verification	Co (230.786 nm)	2.5150	0.19	45596.0432
	Continuing Calibration Verification	Cr (267.716 nm)	0.5177	0.27	26914.8224
	Continuing Calibration Verification	Cu (327.395 nm)	1.2360	0.33	54231.0835
	Continuing Calibration Verification	Fe (234.350 nm)	5.0906	0.22	92689.1131
	Continuing Calibration Verification	K (766.491 nm)	24.3371	0.30	26515.4536
	Continuing Calibration Verification	Mg (279.078 nm)	25.5384	0.19	83427.3720
	Continuing Calibration Verification	Mn (257.610 nm)	0.7474	0.18	249606.5506
	Continuing Calibration Verification	Mo (202.032 nm)	2.5913	0.16	27061.5761
	Continuing Calibration Verification	Na (588.995 nm)	25.4771	0.53	333334.1530
	Continuing Calibration Verification	Ni (230.299 nm)	2.0831	0.21	24487.1964
	Continuing Calibration Verification	Pb (220.353 nm)	0.5131	0.27	2686.5942
	Continuing Calibration Verification	Sb (217.582 nm)	4.9975	0.09	9289.7838
	Continuing Calibration Verification	Se (196.026 nm)	0.4880	1.02	360.4740
	Continuing Calibration Verification	Si (252.851 nm)	10.2718	0.33	39171.7555
	Continuing Calibration Verification	Sn (189.925 nm)	5.1006	0.13	12562.7298
	Continuing Calibration Verification	Sr (216.596 nm)	2.4610	0.32	43311.0511
	Continuing Calibration Verification	Ti (336.122 nm)	2.5552	0.03	369323.4262
	Continuing Calibration Verification	Tl (190.794 nm)	0.9918	0.21	967.9484
	Continuing Calibration Verification	V (292.401 nm)	2.5264	0.19	95740.1863
	Continuing Calibration Verification	Y (360.074 nm)	0.96	0.38	469448.88
	Continuing Calibration Verification	Y_R (360.074 nm)	0.96	0.38	468624.26
	Continuing Calibration Verification	Zn (213.857 nm)	0.9964	0.10	63778.6008
6/10/2024 15:59:20	Continuing Calibration Blank	Ag (328.068 nm)	-0.0002 u	79.95	-224.5166
	Continuing Calibration Blank	Al (237.312 nm)	0.0037	22.76	21.5124
	Continuing Calibration Blank	As (188.980 nm)	-0.0001 u	> 100.00	-2.2047
	Continuing Calibration Blank	B (249.772 nm)	0.0023	19.85	79.6264

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Blank	Ba (230.424 nm)	0.0004	11.16	34.1947
	Continuing Calibration Blank	Be (313.107 nm)	0.0000	50.34	34.6174
	Continuing Calibration Blank	Ca (317.933 nm)	0.0065	0.85	2975.7485
	Continuing Calibration Blank	Cd (214.439 nm)	0.0000 u	> 100.00	3.2638
	Continuing Calibration Blank	Co (230.786 nm)	0.0001 u	> 100.00	-8.7408
	Continuing Calibration Blank	Cr (267.716 nm)	0.0000 u	> 100.00	6.7100
	Continuing Calibration Blank	Cu (327.395 nm)	0.0001 u	> 100.00	-22.3285
	Continuing Calibration Blank	Fe (234.350 nm)	0.0027	37.59	48.1345
	Continuing Calibration Blank	K (766.491 nm)	0.0316 u	> 100.00	-157.4037
	Continuing Calibration Blank	Mg (279.078 nm)	0.0027	9.74	-20.9112
	Continuing Calibration Blank	Mn (257.610 nm)	0.0001	5.72	36.1504
	Continuing Calibration Blank	Mo (202.032 nm)	0.0030	42.12	42.9075
	Continuing Calibration Blank	Na (588.995 nm)	0.0086	36.17	-13505.5519
	Continuing Calibration Blank	Ni (230.299 nm)	0.0001 u	> 100.00	26.4103
	Continuing Calibration Blank	Pb (220.353 nm)	-0.0001 u	> 100.00	7.5553
	Continuing Calibration Blank	Sb (217.582 nm)	0.0046	56.53	15.1945
	Continuing Calibration Blank	Se (196.026 nm)	-0.0010 u	> 100.00	4.0824
	Continuing Calibration Blank	Si (252.851 nm)	0.0028	36.57	43.1451
	Continuing Calibration Blank	Sn (189.925 nm)	0.0003 u	> 100.00	3.6929
	Continuing Calibration Blank	Sr (216.596 nm)	0.0003	44.77	4.1721
	Continuing Calibration Blank	Ti (336.122 nm)	0.0024	40.24	503.2821
	Continuing Calibration Blank	Tl (190.794 nm)	0.0015	29.32	0.2667
	Continuing Calibration Blank	V (292.401 nm)	0.0000 u	> 100.00	-39.3589
	Continuing Calibration Blank	Y (360.074 nm)	1.00	0.24	488125.47
	Continuing Calibration Blank	Y_R (360.074 nm)	1.00	0.24	487260.55
	Continuing Calibration Blank	Zn (213.857 nm)	0.0010	3.26	62.5000
6/10/2024 16:02:33	LOD CHECK	Ag (328.068 nm)	0.0054	4.39	90.1854
	LOD CHECK	Al (237.312 nm)	0.1218	4.39	313.4030
	LOD CHECK	As (188.980 nm)	0.0044	18.48	5.3783
	LOD CHECK	B (249.772 nm)	0.1015	0.02	3299.9236
	LOD CHECK	Ba (230.424 nm)	0.0123	1.98	683.6593
	LOD CHECK	Be (313.107 nm)	0.0016	0.60	1755.5138
	LOD CHECK	Ca (317.933 nm)	0.6006	0.94	24137.9440
	LOD CHECK	Cd (214.439 nm)	0.0031	1.76	177.8305
	LOD CHECK	Co (230.786 nm)	0.0020	8.27	26.0672
	LOD CHECK	Cr (267.716 nm)	0.0060	2.03	316.7705
	LOD CHECK	Cu (327.395 nm)	0.0057	3.41	222.4298
	LOD CHECK	Fe (234.350 nm)	0.0871	3.04	1585.6034
	LOD CHECK	K (766.491 nm)	0.9999 100%	2.08	905.2637
	LOD CHECK	Mg (279.078 nm)	0.5887	0.67	1893.9246
	LOD CHECK	Mn (257.610 nm)	0.0057	0.43	1937.4876
	LOD CHECK	Mo (202.032 nm)	0.0138	1.19	156.5707
	LOD CHECK	Na (588.995 nm)	0.5297	0.20	-6409.2979
	LOD CHECK	Ni (230.299 nm)	0.0212	2.84	274.0797
	LOD CHECK	Pb (220.353 nm)	0.0036	8.23	26.9115
	LOD CHECK	Sb (217.582 nm)	0.0556	4.07	109.8267
	LOD CHECK	Se (196.026 nm)	0.0058	53.85	9.0239
	LOD CHECK	Si (252.851 nm)	0.0283	2.50	140.5544
	LOD CHECK	Sn (189.925 nm)	0.2585	0.37	639.4825
	LOD CHECK	Sr (216.596 nm)	0.0502	0.46	882.1518
	LOD CHECK	Ti (336.122 nm)	0.0263	1.58	3948.0255
	LOD CHECK	Tl (190.794 nm)	0.0058	41.10	4.4877
	LOD CHECK	V (292.401 nm)	0.0260	0.72	943.7755
	LOD CHECK	Y (360.074 nm)	1.01	0.54	492812.98
	LOD CHECK	Y_R (360.074 nm)	1.01	0.54	491951.29
	LOD CHECK	Zn (213.857 nm)	0.0108	0.18	691.4532
6/10/2024 16:05:48	PBW-439549	Ag (328.068 nm)	-0.0001 u	69.06	-220.0515

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	PBW-439549	Al (237.312 nm)	0.0195	15.75	60.5470
	PBW-439549	As (188.980 nm)	-0.0009 u	> 100.00	-3.5145
	PBW-439549	B (249.772 nm)	0.0024	10.62	84.5358
	PBW-439549	Ba (230.424 nm)	0.0005	26.53	40.3261
	PBW-439549	Be (313.107 nm)	0.0000	15.86	62.8852
	PBW-439549	Ca (317.933 nm)	0.0206	9.84	3478.1759
	PBW-439549	Cd (214.439 nm)	0.0003	2.88	17.9977
	PBW-439549	Co (230.786 nm)	0.0003	94.27	-4.8921
	PBW-439549	Cr (267.716 nm)	0.0002	42.21	18.5908
	PBW-439549	Cu (327.395 nm)	0.0001 u	> 100.00	-24.7001
	PBW-439549	Fe (234.350 nm)	0.0075	12.58	136.7041
	PBW-439549	K (766.491 nm)	0.0091 u	> 100.00	-182.0831
	PBW-439549	Mg (279.078 nm)	0.0202	13.62	36.0760
	PBW-439549	Mn (257.610 nm)	0.0001	18.09	55.9296
	PBW-439549	Mo (202.032 nm)	0.0004	89.13	16.5026
	PBW-439549	Na (588.995 nm)	0.0083 u	89.21	-13509.7877
	PBW-439549	Ni (230.299 nm)	0.0000 u	> 100.00	25.8013
	PBW-439549	Pb (220.353 nm)	0.0004	52.35	9.8671
	PBW-439549	Sb (217.582 nm)	0.0133	7.09	31.3546
	PBW-439549	Se (196.026 nm)	-0.0004 u	> 100.00	4.5218
	PBW-439549	Si (252.851 nm)	0.0106	6.42	73.0012
	PBW-439549	Sn (189.925 nm)	0.0000 u	> 100.00	3.0427
	PBW-439549	Sr (216.596 nm)	0.0005	5.03	7.5235
	PBW-439549	Ti (336.122 nm)	0.0004	61.62	211.6500
	PBW-439549	Tl (190.794 nm)	0.0004 u	> 100.00	-0.7697
	PBW-439549	V (292.401 nm)	0.0004	22.54	-25.2712
	PBW-439549	Y (360.074 nm)	1.00	1.44	490795.95
	PBW-439549	Y_R (360.074 nm)	1.00	1.44	489944.21
	PBW-439549	Zn (213.857 nm)	-0.0002 u	48.79	-10.8077
6/10/2024 16:09:02	LCSW-439549	Ag (328.068 nm)	0.0510	0.06	2673.5287
	LCSW-439549	Al (237.312 nm)	2.0401	0.19	5055.2171
	LCSW-439549	As (188.980 nm)	0.0374	1.07	61.3582
	LCSW-439549	B (249.772 nm)	1.0094	0.19	32783.3967
	LCSW-439549	Ba (230.424 nm)	1.9805	0.25	107841.2104
	LCSW-439549	Be (313.107 nm)	0.0501	0.23	55051.9782
	LCSW-439549	Ca (317.933 nm)	2.0837	0.34	76964.6761
	LCSW-439549	Cd (214.439 nm)	0.0524	0.20	2987.9774
	LCSW-439549	Co (230.786 nm)	0.5111	0.10	9259.2063
	LCSW-439549	Cr (267.716 nm)	0.2065	0.20	10741.8104
	LCSW-439549	Cu (327.395 nm)	0.2558	0.13	11203.0783
	LCSW-439549	Fe (234.350 nm)	1.0459	0.28	19044.0238
	LCSW-439549	K (766.491 nm)	19.3246	0.18	21014.7015
	LCSW-439549	Mg (279.078 nm)	2.0177	0.32	6563.8642
	LCSW-439549	Mn (257.610 nm)	0.4991	0.20	166700.8794
	LCSW-439549	Mo (202.032 nm)	0.5031	0.56	5263.2973
	LCSW-439549	Na (588.995 nm)	20.2338	0.33	261929.2093
	LCSW-439549	Ni (230.299 nm)	0.5290	0.40	6236.8830
	LCSW-439549	Pb (220.353 nm)	0.5309	0.34	2779.7312
	LCSW-439549	Sb (217.582 nm)	0.5136	0.24	960.5547
	LCSW-439549	Se (196.026 nm)	1.0168	0.27	745.9558
	LCSW-439549	Si (252.851 nm)	-0.0031 u	71.89	20.8091
	LCSW-439549	Sn (189.925 nm)	5.0980	0.21	12556.3272
	LCSW-439549	Sr (216.596 nm)	1.9999	0.32	35196.2253
	LCSW-439549	Ti (336.122 nm)	0.5043	0.17	73013.6357
	LCSW-439549	Tl (190.794 nm)	1.9980	0.07	1951.1626
	LCSW-439549	V (292.401 nm)	0.5001	0.33	18921.1355
	LCSW-439549	Y (360.074 nm)	0.98	0.20	481004.73

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	LCSW-439549	Y_R (360.074 nm)	0.98	0.20	480133.07
	LCSW-439549	Zn (213.857 nm)	0.5177	0.18	33140.6619
6/10/2024 16:12:16	R2404536-001 20X	Ag (328.068 nm)	-0.0002 u	11.87	-226.7076
	R2404536-001 20X	Al (237.312 nm)	0.0173	7.53	55.1213
	R2404536-001 20X	As (188.980 nm)	-0.0001 u	> 100.00	-2.1320
	R2404536-001 20X	B (249.772 nm)	0.1927	0.34	6261.4571
	R2404536-001 20X	Ba (230.424 nm)	0.0005	21.01	38.7431
	R2404536-001 20X	Be (313.107 nm)	0.0000	50.80	29.1618
	R2404536-001 20X	Ca (317.933 nm)	15.5456	0.35	556484.8895
	R2404536-001 20X	Cd (214.439 nm)	0.0001	32.69	6.9059
	R2404536-001 20X	Co (230.786 nm)	-0.0001 u	> 100.00	-11.7290
	R2404536-001 20X	Cr (267.716 nm)	0.0000 u	> 100.00	5.9428
	R2404536-001 20X	Cu (327.395 nm)	0.0004	92.30	-11.8474
	R2404536-001 20X	Fe (234.350 nm)	0.0069	7.94	124.4963
	R2404536-001 20X	K (766.491 nm)	16.3051	0.25	17701.1874
	R2404536-001 20X	Mg (279.078 nm)	48.8048	0.38	159460.1260
	R2404536-001 20X	Mn (257.610 nm)	0.0013	0.80	468.9990
	R2404536-001 20X	Mo (202.032 nm)	0.0022	22.58	35.0957
	R2404536-001 20X	Na (588.995 nm)	364.4753 o	0.71	4949942.7321
	R2404536-001 20X	Ni (230.299 nm)	0.0004	81.47	30.4169
	R2404536-001 20X	Pb (220.353 nm)	0.0008 u	> 100.00	12.2478
	R2404536-001 20X	Sb (217.582 nm)	0.0028 u	> 100.00	11.7081
	R2404536-001 20X	Se (196.026 nm)	0.0023	46.03	6.4878
	R2404536-001 20X	Si (252.851 nm)	0.1312	1.05	532.7207
	R2404536-001 20X	Sn (189.925 nm)	0.0007	99.85	4.7700
	R2404536-001 20X	Sr (216.596 nm)	0.2753	0.31	4844.3416
	R2404536-001 20X	Ti (336.122 nm)	0.0010	35.16	306.4941
	R2404536-001 20X	Tl (190.794 nm)	0.0018	92.18	0.5064
	R2404536-001 20X	V (292.401 nm)	0.0001 u	> 100.00	-38.0344
	R2404536-001 20X	Y (360.074 nm)	0.91	0.26	442658.55
	R2404536-001 20X	Y_R (360.074 nm)	0.91	0.26	441830.77
	R2404536-001 20X	Zn (213.857 nm)	0.0045	2.62	290.5078
6/10/2024 16:15:29	R2404536-001S 20X	Ag (328.068 nm)	0.0025	4.46	-74.7645
	R2404536-001S 20X	Al (237.312 nm)	0.1206	1.54	310.4536
	R2404536-001S 20X	As (188.980 nm)	0.0034 u	90.10	3.7941
	R2404536-001S 20X	B (249.772 nm)	0.2392	0.24	7774.1999
	R2404536-001S 20X	Ba (230.424 nm)	0.1012	0.39	5524.1923
	R2404536-001S 20X	Be (313.107 nm)	0.0027	0.15	2939.4139
	R2404536-001S 20X	Ca (317.933 nm)	15.8477	0.26	567246.3219
	R2404536-001S 20X	Cd (214.439 nm)	0.0028	2.82	160.4308
	R2404536-001S 20X	Co (230.786 nm)	0.0258	0.94	458.8909
	R2404536-001S 20X	Cr (267.716 nm)	0.0104	0.81	547.4886
	R2404536-001S 20X	Cu (327.395 nm)	0.0137	1.86	575.7084
	R2404536-001S 20X	Fe (234.350 nm)	0.0592	0.31	1077.9693
	R2404536-001S 20X	K (766.491 nm)	17.8265	0.54	19370.6866
	R2404536-001S 20X	Mg (279.078 nm)	49.7886	0.30	162675.1952
	R2404536-001S 20X	Mn (257.610 nm)	0.0270	0.29	9034.1263
	R2404536-001S 20X	Mo (202.032 nm)	0.0266	2.04	289.5847
	R2404536-001S 20X	Na (588.995 nm)	372.6330 o	0.92	5061037.3685
	R2404536-001S 20X	Ni (230.299 nm)	0.0275	1.76	348.2175
	R2404536-001S 20X	Pb (220.353 nm)	0.0267	5.86	147.4709
	R2404536-001S 20X	Sb (217.582 nm)	0.0270	6.48	56.7398
	R2404536-001S 20X	Se (196.026 nm)	0.0574	7.96	46.6398
	R2404536-001S 20X	Si (252.851 nm)	0.0407	1.48	187.6259
	R2404536-001S 20X	Sn (189.925 nm)	0.2604	0.78	644.3363
	R2404536-001S 20X	Sr (216.596 nm)	0.3809	0.30	6702.4095
	R2404536-001S 20X	Ti (336.122 nm)	0.0266	0.28	4005.0930

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404536-001S 20X	Tl (190.794 nm)	0.1009	2.13	97.3680
	R2404536-001S 20X	V (292.401 nm)	0.0262	0.66	953.1303
	R2404536-001S 20X	Y (360.074 nm)	0.90	0.18	438708.66
	R2404536-001S 20X	Y_R (360.074 nm)	0.90	0.18	437890.64
	R2404536-001S 20X	Zn (213.857 nm)	0.0322	0.68	2058.7211
6/10/2024 16:18:44	R2404536-001SD 20X	Ag (328.068 nm)	0.0023	5.30	-84.1247
	R2404536-001SD 20X	Al (237.312 nm)	0.1173	0.48	302.3089
	R2404536-001SD 20X	As (188.980 nm)	0.0006 u	> 100.00	-1.0398
	R2404536-001SD 20X	B (249.772 nm)	0.2354	0.30	7648.2250
	R2404536-001SD 20X	Ba (230.424 nm)	0.0999	0.22	5450.5375
	R2404536-001SD 20X	Be (313.107 nm)	0.0026	0.36	2914.1406
	R2404536-001SD 20X	Ca (317.933 nm)	15.6159	0.32	558986.6847
	R2404536-001SD 20X	Cd (214.439 nm)	0.0028	1.18	160.7667
	R2404536-001SD 20X	Co (230.786 nm)	0.0254	0.99	450.1216
	R2404536-001SD 20X	Cr (267.716 nm)	0.0104	0.57	545.9360
	R2404536-001SD 20X	Cu (327.395 nm)	0.0136	2.00	567.2862
	R2404536-001SD 20X	Fe (234.350 nm)	0.0583	0.64	1060.7654
	R2404536-001SD 20X	K (766.491 nm)	17.6081	0.27	19131.0929
	R2404536-001SD 20X	Mg (279.078 nm)	49.0198	0.30	160162.6253
	R2404536-001SD 20X	Mn (257.610 nm)	0.0266	0.15	8914.6962
	R2404536-001SD 20X	Mo (202.032 nm)	0.0263	1.45	286.2379
	R2404536-001SD 20X	Na (588.995 nm)	367.0431 o	0.42	4984911.3852
	R2404536-001SD 20X	Ni (230.299 nm)	0.0268	0.89	339.6068
	R2404536-001SD 20X	Pb (220.353 nm)	0.0259	0.63	142.9191
	R2404536-001SD 20X	Sb (217.582 nm)	0.0274	7.90	57.5563
	R2404536-001SD 20X	Se (196.026 nm)	0.0569	10.23	46.2658
	R2404536-001SD 20X	Si (252.851 nm)	0.0429	3.19	196.0669
	R2404536-001SD 20X	Sn (189.925 nm)	0.2582	0.29	638.8411
	R2404536-001SD 20X	Sr (216.596 nm)	0.3747	0.33	6594.2691
	R2404536-001SD 20X	Ti (336.122 nm)	0.0262	0.63	3938.9963
	R2404536-001SD 20X	Tl (190.794 nm)	0.0997	2.62	96.2092
	R2404536-001SD 20X	V (292.401 nm)	0.0258	1.21	938.2924
	R2404536-001SD 20X	Y (360.074 nm)	0.90	0.40	441452.06
	R2404536-001SD 20X	Y_R (360.074 nm)	0.90	0.40	440632.02
	R2404536-001SD 20X	Zn (213.857 nm)	0.0317	0.33	2027.5952
6/10/2024 16:24:02	R2404536-001A 20X	Ag (328.068 nm)	0.0505	0.14	2644.5039
	R2404536-001A 20X	Al (237.312 nm)	2.0110	0.25	4983.4451
	R2404536-001A 20X	As (188.980 nm)	0.0388	2.14	63.8322
	R2404536-001A 20X	B (249.772 nm)	1.2111	0.18	39332.6721
	R2404536-001A 20X	Ba (230.424 nm)	1.8711	0.24	101885.5821
	R2404536-001A 20X	Be (313.107 nm)	0.0491	0.13	53912.4451
	R2404536-001A 20X	Ca (317.933 nm)	17.1972	0.14	615316.3940
	R2404536-001A 20X	Cd (214.439 nm)	0.0497	0.38	2831.4746
	R2404536-001A 20X	Co (230.786 nm)	0.4827	0.18	8742.7917
	R2404536-001A 20X	Cr (267.716 nm)	0.1949	0.15	10139.0891
	R2404536-001A 20X	Cu (327.395 nm)	0.2487	0.18	10887.9588
	R2404536-001A 20X	Fe (234.350 nm)	0.9929	0.16	18078.5206
	R2404536-001A 20X	K (766.491 nm)	36.7827	0.23	40173.1856
	R2404536-001A 20X	Mg (279.078 nm)	49.4395	0.21	161534.2140
	R2404536-001A 20X	Mn (257.610 nm)	0.4783	0.16	159740.1144
	R2404536-001A 20X	Mo (202.032 nm)	0.4920	0.34	5148.1890
	R2404536-001A 20X	Na (588.995 nm)	371.2645 o	0.15	5042400.4571
	R2404536-001A 20X	Ni (230.299 nm)	0.5018	0.12	5917.3128
	R2404536-001A 20X	Pb (220.353 nm)	0.4941	0.13	2587.6638
	R2404536-001A 20X	Sb (217.582 nm)	0.5159	0.45	964.9120
	R2404536-001A 20X	Se (196.026 nm)	1.1003 o	0.27	806.8329
	R2404536-001A 20X	Si (252.851 nm)	0.0554	1.79	243.8759

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404536-001A 20X	Sn (189.925 nm)	4.9256	0.09	12131.8129
	R2404536-001A 20X	Sr (216.596 nm)	2.1771	0.19	38315.5028
	R2404536-001A 20X	Ti (336.122 nm)	0.4872	0.11	70545.3259
	R2404536-001A 20X	Tl (190.794 nm)	1.8517	0.37	1808.1665
	R2404536-001A 20X	V (292.401 nm)	0.4822	0.07	18239.5350
	R2404536-001A 20X	Y (360.074 nm)	0.91	0.21	443544.26
	R2404536-001A 20X	Y_R (360.074 nm)	0.91	0.21	442706.29
	R2404536-001A 20X	Zn (213.857 nm)	0.5207	0.16	33326.8616
6/10/2024 16:27:16	R2404536-001L 100X	Ag (328.068 nm)	-0.0003 u	33.12	-229.0031
	R2404536-001L 100X	Al (237.312 nm)	0.0078	12.32	31.4888
	R2404536-001L 100X	As (188.980 nm)	-0.0010 u	> 100.00	-3.7135
	R2404536-001L 100X	B (249.772 nm)	0.0383	1.29	1247.5407
	R2404536-001L 100X	Ba (230.424 nm)	0.0001	47.97	15.3859
	R2404536-001L 100X	Be (313.107 nm)	0.0000 u	84.25	13.4973
	R2404536-001L 100X	Ca (317.933 nm)	3.2397	0.19	118140.8344
	R2404536-001L 100X	Cd (214.439 nm)	0.0000 u	> 100.00	3.1445
	R2404536-001L 100X	Co (230.786 nm)	0.0001 u	> 100.00	-8.7456
	R2404536-001L 100X	Cr (267.716 nm)	0.0001	81.51	9.9249
	R2404536-001L 100X	Cu (327.395 nm)	-0.0001 u	32.55	-31.2399
	R2404536-001L 100X	Fe (234.350 nm)	0.0026	23.11	46.8483
	R2404536-001L 100X	K (766.491 nm)	3.0346	0.41	3138.1108
	R2404536-001L 100X	Mg (279.078 nm)	9.5383	0.16	31140.4047
	R2404536-001L 100X	Mn (257.610 nm)	0.0004	4.86	138.7841
	R2404536-001L 100X	Mo (202.032 nm)	0.0022	45.78	34.9387
	R2404536-001L 100X	Na (588.995 nm)	76.4601 o	0.15	1027640.4194
	R2404536-001L 100X	Ni (230.299 nm)	0.0002 u	> 100.00	27.4960
	R2404536-001L 100X	Pb (220.353 nm)	0.0002 u	> 100.00	9.0024
	R2404536-001L 100X	Sb (217.582 nm)	-0.0004 u	> 100.00	5.8014
	R2404536-001L 100X	Se (196.026 nm)	0.0015	51.47	5.9024
	R2404536-001L 100X	Si (252.851 nm)	0.0459	3.81	207.5668
	R2404536-001L 100X	Sn (189.925 nm)	0.0018	75.48	7.5584
	R2404536-001L 100X	Sr (216.596 nm)	0.0550	0.21	968.1850
	R2404536-001L 100X	Ti (336.122 nm)	0.0010	46.89	292.8976
	R2404536-001L 100X	Tl (190.794 nm)	0.0011	> 100.00	-0.0863
	R2404536-001L 100X	V (292.401 nm)	0.0000 u	> 100.00	-40.2265
	R2404536-001L 100X	Y (360.074 nm)	0.97	0.39	473925.60
	R2404536-001L 100X	Y_R (360.074 nm)	0.97	0.39	473041.03
	R2404536-001L 100X	Zn (213.857 nm)	0.0013	3.77	81.9447
6/10/2024 16:30:30	R2404536-002 20X	Ag (328.068 nm)	-0.0003 u	45.40	-233.0328
	R2404536-002 20X	Al (237.312 nm)	0.0043	15.79	22.8420
	R2404536-002 20X	As (188.980 nm)	-0.0014 u	46.66	-4.4688
	R2404536-002 20X	B (249.772 nm)	0.1800	0.23	5851.0254
	R2404536-002 20X	Ba (230.424 nm)	0.0003	10.30	28.2658
	R2404536-002 20X	Be (313.107 nm)	0.0000 u	> 100.00	26.2489
	R2404536-002 20X	Ca (317.933 nm)	15.5020	0.06	554931.0017
	R2404536-002 20X	Cd (214.439 nm)	0.0001	> 100.00	5.6929
	R2404536-002 20X	Co (230.786 nm)	-0.0002 u	72.45	-13.6742
	R2404536-002 20X	Cr (267.716 nm)	0.0001 u	> 100.00	12.8366
	R2404536-002 20X	Cu (327.395 nm)	0.0002	79.90	-17.0338
	R2404536-002 20X	Fe (234.350 nm)	0.0058	13.25	104.5339
	R2404536-002 20X	K (766.491 nm)	16.3757	0.32	17778.6432
	R2404536-002 20X	Mg (279.078 nm)	48.9387	0.18	159897.8033
	R2404536-002 20X	Mn (257.610 nm)	0.0013	0.31	449.3476
	R2404536-002 20X	Mo (202.032 nm)	0.0010	17.98	22.2783
	R2404536-002 20X	Na (588.995 nm)	365.9352 o	0.15	4969824.1985
	R2404536-002 20X	Ni (230.299 nm)	0.0006	62.80	31.9334
	R2404536-002 20X	Pb (220.353 nm)	-0.0003 u	88.83	6.2006

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404536-002 20X	Sb (217.582 nm)	-0.0009 u	92.15	4.9150
	R2404536-002 20X	Se (196.026 nm)	-0.0010 u	> 100.00	4.0712
	R2404536-002 20X	Si (252.851 nm)	0.0289	3.39	142.8554
	R2404536-002 20X	Sn (189.925 nm)	0.0007 u	> 100.00	4.7137
	R2404536-002 20X	Sr (216.596 nm)	0.2752	0.47	4842.9896
	R2404536-002 20X	Ti (336.122 nm)	0.0005	29.78	230.7625
	R2404536-002 20X	Tl (190.794 nm)	0.0021	76.09	0.8178
	R2404536-002 20X	V (292.401 nm)	0.0001 u	> 100.00	-35.7746
	R2404536-002 20X	Y (360.074 nm)	0.90	0.50	441963.65
	R2404536-002 20X	Y_R (360.074 nm)	0.90	0.50	441114.31
	R2404536-002 20X	Zn (213.857 nm)	0.0034	2.94	216.1633
6/10/2024 16:33:45	R2404536-002S 20X	Ag (328.068 nm)	0.0024	4.23	-81.3660
	R2404536-002S 20X	Al (237.312 nm)	0.1126	1.28	290.5641
	R2404536-002S 20X	As (188.980 nm)	0.0018	89.91	1.0524
	R2404536-002S 20X	B (249.772 nm)	0.2356	0.09	7655.5468
	R2404536-002S 20X	Ba (230.424 nm)	0.0999	0.23	5448.7558
	R2404536-002S 20X	Be (313.107 nm)	0.0026	0.59	2908.3123
	R2404536-002S 20X	Ca (317.933 nm)	15.6260	0.15	559346.6361
	R2404536-002S 20X	Cd (214.439 nm)	0.0027	1.44	156.3773
	R2404536-002S 20X	Co (230.786 nm)	0.0256	1.93	454.7957
	R2404536-002S 20X	Cr (267.716 nm)	0.0103	1.04	539.6642
	R2404536-002S 20X	Cu (327.395 nm)	0.0136	1.42	569.4405
	R2404536-002S 20X	Fe (234.350 nm)	0.0536	0.33	976.1784
	R2404536-002S 20X	K (766.491 nm)	17.5853	0.34	19106.0915
	R2404536-002S 20X	Mg (279.078 nm)	49.2656	0.16	160965.8371
	R2404536-002S 20X	Mn (257.610 nm)	0.0265	0.09	8872.6597
	R2404536-002S 20X	Mo (202.032 nm)	0.0260	0.90	283.7790
	R2404536-002S 20X	Na (588.995 nm)	367.4659 o	0.36	4990670.2161
	R2404536-002S 20X	Ni (230.299 nm)	0.0274	1.61	346.5190
	R2404536-002S 20X	Pb (220.353 nm)	0.0263	0.87	145.3306
	R2404536-002S 20X	Sb (217.582 nm)	0.0272	8.39	57.0606
	R2404536-002S 20X	Se (196.026 nm)	0.0544	8.40	44.3988
	R2404536-002S 20X	Si (252.851 nm)	0.0352	1.68	166.6809
	R2404536-002S 20X	Sn (189.925 nm)	0.2591	0.91	641.0174
	R2404536-002S 20X	Sr (216.596 nm)	0.3765	0.09	6625.9508
	R2404536-002S 20X	Ti (336.122 nm)	0.0260	0.47	3918.0172
	R2404536-002S 20X	Tl (190.794 nm)	0.0989	1.57	95.4629
	R2404536-002S 20X	V (292.401 nm)	0.0259	0.84	941.1271
	R2404536-002S 20X	Y (360.074 nm)	0.90	0.37	441509.99
	R2404536-002S 20X	Y_R (360.074 nm)	0.90	0.37	440657.17
	R2404536-002S 20X	Zn (213.857 nm)	0.0309	0.46	1978.2708
6/10/2024 16:36:59	Continuing Calibration Verification	Ag (328.068 nm)	0.5078	0.13	28551.3969
	Continuing Calibration Verification	Al (237.312 nm)	9.9201	0.10	24534.3006
	Continuing Calibration Verification	As (188.980 nm)	0.9817	0.20	1662.8386
	Continuing Calibration Verification	B (249.772 nm)	2.4637	0.08	80006.0671
	Continuing Calibration Verification	Ba (230.424 nm)	9.7498	0.25	530858.3636
	Continuing Calibration Verification	Be (313.107 nm)	0.2443	0.24	268162.7473
	Continuing Calibration Verification	Ca (317.933 nm)	25.6759	0.24	917328.4048
	Continuing Calibration Verification	Cd (214.439 nm)	0.5022	0.33	28612.5227
	Continuing Calibration Verification	Co (230.786 nm)	2.4990	0.15	45306.1734
	Continuing Calibration Verification	Cr (267.716 nm)	0.5145	0.17	26749.5952
	Continuing Calibration Verification	Cu (327.395 nm)	1.2322	0.64	54064.4280
	Continuing Calibration Verification	Fe (234.350 nm)	5.0277	0.18	91544.8791
	Continuing Calibration Verification	K (766.491 nm)	24.3498	0.51	26529.3766
	Continuing Calibration Verification	Mg (279.078 nm)	25.3249	0.17	82729.7167
	Continuing Calibration Verification	Mn (257.610 nm)	0.7421	0.18	247840.2244
	Continuing Calibration Verification	Mo (202.032 nm)	2.5891	0.34	27038.4911

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Verification	Na (588.995 nm)	25.5752	0.67	334670.0491
	Continuing Calibration Verification	Ni (230.299 nm)	2.0626	0.15	24245.5832
	Continuing Calibration Verification	Pb (220.353 nm)	0.5093	0.21	2666.9089
	Continuing Calibration Verification	Sb (217.582 nm)	4.9249	0.09	9154.9324
	Continuing Calibration Verification	Se (196.026 nm)	0.4794	0.54	354.2274
	Continuing Calibration Verification	Si (252.851 nm)	10.1398	0.18	38669.0775
	Continuing Calibration Verification	Sn (189.925 nm)	5.0409	0.16	12415.6726
	Continuing Calibration Verification	Sr (216.596 nm)	2.4472	0.28	43068.4003
	Continuing Calibration Verification	Ti (336.122 nm)	2.5373	0.06	366743.2086
	Continuing Calibration Verification	Tl (190.794 nm)	0.9835	0.17	959.7916
	Continuing Calibration Verification	V (292.401 nm)	2.5138	0.17	95262.8675
	Continuing Calibration Verification	Y (360.074 nm)	0.97	0.46	473206.87
	Continuing Calibration Verification	Y_R (360.074 nm)	0.97	0.46	472319.65
	Continuing Calibration Verification	Zn (213.857 nm)	0.9899	0.20	63363.5732
6/10/2024 16:40:13	Continuing Calibration Blank	Ag (328.068 nm)	0.0000 u	31.33	-217.2513
	Continuing Calibration Blank	Al (237.312 nm)	0.0014	16.59	15.8120
	Continuing Calibration Blank	As (188.980 nm)	0.0004 u	> 100.00	-1.2770
	Continuing Calibration Blank	B (249.772 nm)	0.0019	19.48	65.7118
	Continuing Calibration Blank	Ba (230.424 nm)	0.0004	53.31	32.2119
	Continuing Calibration Blank	Be (313.107 nm)	0.0000	58.51	39.3375
	Continuing Calibration Blank	Ca (317.933 nm)	0.0063	9.01	2968.1212
	Continuing Calibration Blank	Cd (214.439 nm)	0.0001 u	> 100.00	5.1651
	Continuing Calibration Blank	Co (230.786 nm)	0.0000 u	> 100.00	-9.9333
	Continuing Calibration Blank	Cr (267.716 nm)	0.0000 u	> 100.00	4.7097
	Continuing Calibration Blank	Cu (327.395 nm)	0.0001 u	> 100.00	-23.8021
	Continuing Calibration Blank	Fe (234.350 nm)	0.0020	39.91	35.1715
	Continuing Calibration Blank	K (766.491 nm)	0.1216	11.03	-58.5434
	Continuing Calibration Blank	Mg (279.078 nm)	0.0023	45.38	-22.1161
	Continuing Calibration Blank	Mn (257.610 nm)	0.0001	13.23	42.7502
	Continuing Calibration Blank	Mo (202.032 nm)	0.0033	34.94	46.6997
	Continuing Calibration Blank	Na (588.995 nm)	0.1226	4.72	-11952.5282
	Continuing Calibration Blank	Ni (230.299 nm)	0.0001 u	> 100.00	25.9435
	Continuing Calibration Blank	Pb (220.353 nm)	0.0003	45.66	9.5085
	Continuing Calibration Blank	Sb (217.582 nm)	0.0017	77.69	9.7001
	Continuing Calibration Blank	Se (196.026 nm)	0.0020 u	> 100.00	6.2200
	Continuing Calibration Blank	Si (252.851 nm)	0.0023	35.24	41.2536
	Continuing Calibration Blank	Sn (189.925 nm)	0.0003 u	> 100.00	3.7510
	Continuing Calibration Blank	Sr (216.596 nm)	0.0004	46.71	6.6870
	Continuing Calibration Blank	Ti (336.122 nm)	0.0025	47.47	509.7053
	Continuing Calibration Blank	Tl (190.794 nm)	0.0028	55.40	1.5656
	Continuing Calibration Blank	V (292.401 nm)	0.0002	81.11	-33.9584
	Continuing Calibration Blank	Y (360.074 nm)	1.00	0.24	490233.70
	Continuing Calibration Blank	Y_R (360.074 nm)	1.00	0.24	489324.35
	Continuing Calibration Blank	Zn (213.857 nm)	0.0009	6.67	60.2444
6/10/2024 16:43:27	R2404536-002SD 20X	Ag (328.068 nm)	0.0025	1.42	-71.6845
	R2404536-002SD 20X	Al (237.312 nm)	0.1121	1.49	289.3803
	R2404536-002SD 20X	As (188.980 nm)	0.0024	31.22	2.0661
	R2404536-002SD 20X	B (249.772 nm)	0.2374	0.11	7713.8683
	R2404536-002SD 20X	Ba (230.424 nm)	0.1005	0.08	5484.4077
	R2404536-002SD 20X	Be (313.107 nm)	0.0026	0.31	2925.4962
	R2404536-002SD 20X	Ca (317.933 nm)	15.6614	0.09	560609.7411
	R2404536-002SD 20X	Cd (214.439 nm)	0.0028	1.40	163.0965
	R2404536-002SD 20X	Co (230.786 nm)	0.0257	0.94	456.9800
	R2404536-002SD 20X	Cr (267.716 nm)	0.0104	1.79	544.9554
	R2404536-002SD 20X	Cu (327.395 nm)	0.0134	1.81	560.8274
	R2404536-002SD 20X	Fe (234.350 nm)	0.0539	0.29	981.8169
	R2404536-002SD 20X	K (766.491 nm)	17.7122	0.13	19245.3198

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404536-002SD 20X	Mg (279.078 nm)	49.5079	0.07	161757.6791
	R2404536-002SD 20X	Mn (257.610 nm)	0.0266	0.13	8917.0147
	R2404536-002SD 20X	Mo (202.032 nm)	0.0269	1.67	292.3299
	R2404536-002SD 20X	Na (588.995 nm)	371.5460 o	0.17	5046234.4229
	R2404536-002SD 20X	Ni (230.299 nm)	0.0269	2.66	341.4726
	R2404536-002SD 20X	Pb (220.353 nm)	0.0259	2.57	143.1052
	R2404536-002SD 20X	Sb (217.582 nm)	0.0315	5.36	65.0300
	R2404536-002SD 20X	Se (196.026 nm)	0.0578	4.27	46.9072
	R2404536-002SD 20X	Si (252.851 nm)	0.0370	2.38	173.5281
	R2404536-002SD 20X	Sn (189.925 nm)	0.2600	0.46	643.3374
	R2404536-002SD 20X	Sr (216.596 nm)	0.3790	0.15	6669.9415
	R2404536-002SD 20X	Ti (336.122 nm)	0.0269	1.16	4044.5876
	R2404536-002SD 20X	Tl (190.794 nm)	0.0997	4.58	96.1939
	R2404536-002SD 20X	V (292.401 nm)	0.0263	0.94	956.0156
	R2404536-002SD 20X	Y (360.074 nm)	0.91	0.19	442948.66
	R2404536-002SD 20X	Y_R (360.074 nm)	0.91	0.19	442067.06
	R2404536-002SD 20X	Zn (213.857 nm)	0.0309	0.15	1978.6100
6/10/2024 16:46:42	R2404536-002A 20X	Ag (328.068 nm)	0.0499	0.25	2613.0529
	R2404536-002A 20X	Al (237.312 nm)	1.9833	0.15	4914.9969
	R2404536-002A 20X	As (188.980 nm)	0.0399	1.26	65.5633
	R2404536-002A 20X	B (249.772 nm)	1.1895	0.26	38628.7265
	R2404536-002A 20X	Ba (230.424 nm)	1.8448	0.20	100453.6529
	R2404536-002A 20X	Be (313.107 nm)	0.0483	0.22	53087.7291
	R2404536-002A 20X	Ca (317.933 nm)	16.8905	0.24	604391.5867
	R2404536-002A 20X	Cd (214.439 nm)	0.0488	0.62	2783.7519
	R2404536-002A 20X	Co (230.786 nm)	0.4750	0.35	8604.0754
	R2404536-002A 20X	Cr (267.716 nm)	0.1920	0.25	9987.2022
	R2404536-002A 20X	Cu (327.395 nm)	0.2455	0.18	10748.1228
	R2404536-002A 20X	Fe (234.350 nm)	0.9744	0.35	17741.2328
	R2404536-002A 20X	K (766.491 nm)	36.4314	0.18	39787.7031
	R2404536-002A 20X	Mg (279.078 nm)	48.5678	0.30	158685.5850
	R2404536-002A 20X	Mn (257.610 nm)	0.4716	0.24	157511.0214
	R2404536-002A 20X	Mo (202.032 nm)	0.4864	0.51	5089.3150
	R2404536-002A 20X	Na (588.995 nm)	367.0483 o	0.43	4984982.6055
	R2404536-002A 20X	Ni (230.299 nm)	0.4946	0.32	5833.7296
	R2404536-002A 20X	Pb (220.353 nm)	0.4873	0.20	2551.7918
	R2404536-002A 20X	Sb (217.582 nm)	0.5089	0.12	951.8945
	R2404536-002A 20X	Se (196.026 nm)	1.0793	0.50	791.4696
	R2404536-002A 20X	Si (252.851 nm)	0.0339	6.98	161.8714
	R2404536-002A 20X	Sn (189.925 nm)	4.8335	0.28	11905.0170
	R2404536-002A 20X	Sr (216.596 nm)	2.1381	0.29	37628.2927
	R2404536-002A 20X	Ti (336.122 nm)	0.4803	0.26	69549.9561
	R2404536-002A 20X	Tl (190.794 nm)	1.8277	0.17	1784.7122
	R2404536-002A 20X	V (292.401 nm)	0.4764	0.28	18021.4230
	R2404536-002A 20X	Y (360.074 nm)	0.91	0.34	445424.13
	R2404536-002A 20X	Y_R (360.074 nm)	0.91	0.34	444524.03
	R2404536-002A 20X	Zn (213.857 nm)	0.5136	0.28	32873.9859
6/10/2024 16:49:56	R2404536-002L 100X	Ag (328.068 nm)	-0.0003 u	24.50	-229.2915
	R2404536-002L 100X	Al (237.312 nm)	0.0028	43.05	19.2508
	R2404536-002L 100X	As (188.980 nm)	-0.0007 u	> 100.00	-3.2921
	R2404536-002L 100X	B (249.772 nm)	0.0359	0.28	1170.7723
	R2404536-002L 100X	Ba (230.424 nm)	0.0002	18.80	22.5197
	R2404536-002L 100X	Be (313.107 nm)	0.0000	67.65	31.0444
	R2404536-002L 100X	Ca (317.933 nm)	3.1761	0.28	115877.7867
	R2404536-002L 100X	Cd (214.439 nm)	0.0000 u	> 100.00	2.9931
	R2404536-002L 100X	Co (230.786 nm)	-0.0003 u	56.71	-14.7917
	R2404536-002L 100X	Cr (267.716 nm)	0.0001	66.59	13.2297

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404536-002L 100X	Cu (327.395 nm)	0.0001 u	> 100.00	-24.4048
	R2404536-002L 100X	Fe (234.350 nm)	0.0015	23.58	27.7680
	R2404536-002L 100X	K (766.491 nm)	3.1059	1.04	3216.3472
	R2404536-002L 100X	Mg (279.078 nm)	9.6445	0.28	31487.7338
	R2404536-002L 100X	Mn (257.610 nm)	0.0003	5.64	121.9106
	R2404536-002L 100X	Mo (202.032 nm)	0.0022	41.64	35.4140
	R2404536-002L 100X	Na (588.995 nm)	77.1749 o	0.14	1037374.7538
	R2404536-002L 100X	Ni (230.299 nm)	0.0002 u	> 100.00	27.8708
	R2404536-002L 100X	Pb (220.353 nm)	0.0002 u	> 100.00	8.7680
	R2404536-002L 100X	Sb (217.582 nm)	0.0011 u	> 100.00	8.5635
	R2404536-002L 100X	Se (196.026 nm)	0.0007 u	> 100.00	5.3231
	R2404536-002L 100X	Si (252.851 nm)	0.0254	7.58	129.5333
	R2404536-002L 100X	Sn (189.925 nm)	0.0011	66.36	5.8387
	R2404536-002L 100X	Sr (216.596 nm)	0.0557	0.72	979.3246
	R2404536-002L 100X	Ti (336.122 nm)	0.0012	40.92	323.3595
	R2404536-002L 100X	Tl (190.794 nm)	0.0014 u	> 100.00	0.2124
	R2404536-002L 100X	V (292.401 nm)	-0.0001 u	> 100.00	-42.8598
	R2404536-002L 100X	Y (360.074 nm)	0.97	0.23	473151.52
	R2404536-002L 100X	Y_R (360.074 nm)	0.97	0.23	472220.98
	R2404536-002L 100X	Zn (213.857 nm)	0.0008	4.71	50.2086
6/10/2024 16:53:10	R2404536-003 20X	Ag (328.068 nm)	-0.0004 u	33.22	-236.0325
	R2404536-003 20X	Al (237.312 nm)	0.0082	10.58	32.6654
	R2404536-003 20X	As (188.980 nm)	0.0004 u	> 100.00	-1.3797
	R2404536-003 20X	B (249.772 nm)	0.1823	2.05	5925.6049
	R2404536-003 20X	Ba (230.424 nm)	0.0004	19.20	31.4847
	R2404536-003 20X	Be (313.107 nm)	0.0000	34.43	29.4568
	R2404536-003 20X	Ca (317.933 nm)	15.5704	2.00	557368.9836
	R2404536-003 20X	Cd (214.439 nm)	0.0001	59.40	8.2279
	R2404536-003 20X	Co (230.786 nm)	0.0000 u	> 100.00	-9.9274
	R2404536-003 20X	Cr (267.716 nm)	0.0001	60.23	12.8200
	R2404536-003 20X	Cu (327.395 nm)	0.0004	69.44	-10.3108
	R2404536-003 20X	Fe (234.350 nm)	0.0049	6.30	89.1340
	R2404536-003 20X	K (766.491 nm)	16.5443	1.81	17963.6113
	R2404536-003 20X	Mg (279.078 nm)	49.4538	2.05	161580.9994
	R2404536-003 20X	Mn (257.610 nm)	0.0011	1.45	379.3059
	R2404536-003 20X	Mo (202.032 nm)	0.0008	47.02	20.5634
	R2404536-003 20X	Na (588.995 nm)	369.6745 o	2.47	5020747.0752
	R2404536-003 20X	Ni (230.299 nm)	0.0001 u	> 100.00	26.1930
	R2404536-003 20X	Pb (220.353 nm)	0.0002 u	> 100.00	8.9691
	R2404536-003 20X	Sb (217.582 nm)	0.0019	77.57	10.0390
	R2404536-003 20X	Se (196.026 nm)	-0.0017 u	72.55	3.5175
	R2404536-003 20X	Si (252.851 nm)	0.0418	2.34	192.0788
	R2404536-003 20X	Sn (189.925 nm)	0.0013	26.91	6.2571
	R2404536-003 20X	Sr (216.596 nm)	0.2788	1.99	4906.6518
	R2404536-003 20X	Ti (336.122 nm)	0.0006	23.73	247.3242
	R2404536-003 20X	Tl (190.794 nm)	0.0022	29.04	0.9623
	R2404536-003 20X	V (292.401 nm)	0.0001 u	> 100.00	-38.2195
	R2404536-003 20X	Y (360.074 nm)	0.91	1.92	443793.58
	R2404536-003 20X	Y_R (360.074 nm)	0.91	1.92	442910.65
	R2404536-003 20X	Zn (213.857 nm)	0.0036	1.90	229.8093
6/10/2024 16:56:24	R2404536-004 20X	Ag (328.068 nm)	-0.0004 u	30.86	-236.9923
	R2404536-004 20X	Al (237.312 nm)	0.0039	61.90	21.9085
	R2404536-004 20X	As (188.980 nm)	-0.0004 u	> 100.00	-2.7545
	R2404536-004 20X	B (249.772 nm)	0.1836	0.13	5967.0211
	R2404536-004 20X	Ba (230.424 nm)	0.0002	67.72	24.3324
	R2404536-004 20X	Be (313.107 nm)	0.0000 u	> 100.00	24.0392
	R2404536-004 20X	Ca (317.933 nm)	15.6811	0.07	561309.6606

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404536-004 20X	Cd (214.439 nm)	0.0000 u	> 100.00	3.9629
	R2404536-004 20X	Co (230.786 nm)	-0.0001 u	64.52	-12.3183
	R2404536-004 20X	Cr (267.716 nm)	0.0001	62.20	13.6503
	R2404536-004 20X	Cu (327.395 nm)	0.0000 u	> 100.00	-27.4487
	R2404536-004 20X	Fe (234.350 nm)	0.0009	27.77	16.4111
	R2404536-004 20X	K (766.491 nm)	16.7878	0.17	18230.9169
	R2404536-004 20X	Mg (279.078 nm)	49.8834	0.05	162984.8238
	R2404536-004 20X	Mn (257.610 nm)	0.0009	1.39	308.6171
	R2404536-004 20X	Mo (202.032 nm)	0.0007	28.67	18.8587
	R2404536-004 20X	Na (588.995 nm)	373.0793 o	0.32	5067115.5258
	R2404536-004 20X	Ni (230.299 nm)	0.0003	55.00	29.3336
	R2404536-004 20X	Pb (220.353 nm)	0.0004	37.71	10.0300
	R2404536-004 20X	Sb (217.582 nm)	0.0028	21.42	11.8172
	R2404536-004 20X	Se (196.026 nm)	0.0006 u	> 100.00	5.2208
	R2404536-004 20X	Si (252.851 nm)	0.0307	2.64	149.4623
	R2404536-004 20X	Sn (189.925 nm)	-0.0005 u	89.52	1.8151
	R2404536-004 20X	Sr (216.596 nm)	0.2808	0.12	4941.0563
	R2404536-004 20X	Ti (336.122 nm)	0.0004	38.94	218.7540
	R2404536-004 20X	Tl (190.794 nm)	0.0023	12.89	1.0730
	R2404536-004 20X	V (292.401 nm)	0.0001 u	> 100.00	-38.0468
	R2404536-004 20X	Y (360.074 nm)	0.91	0.26	443735.74
	R2404536-004 20X	Y_R (360.074 nm)	0.91	0.26	442839.80
	R2404536-004 20X	Zn (213.857 nm)	0.0030	1.27	190.9692
6/10/2024 16:59:37	R2404536-005 20X	Ag (328.068 nm)	-0.0003 u	28.60	-230.9297
	R2404536-005 20X	Al (237.312 nm)	0.0076	31.82	30.9552
	R2404536-005 20X	As (188.980 nm)	-0.0007 u	> 100.00	-3.2253
	R2404536-005 20X	B (249.772 nm)	0.1876	0.23	6096.3210
	R2404536-005 20X	Ba (230.424 nm)	0.0003	22.76	28.3140
	R2404536-005 20X	Be (313.107 nm)	0.0000	74.12	33.8872
	R2404536-005 20X	Ca (317.933 nm)	16.0916	0.49	575932.5093
	R2404536-005 20X	Cd (214.439 nm)	0.0001 u	> 100.00	4.9833
	R2404536-005 20X	Co (230.786 nm)	0.0000 u	> 100.00	-10.0676
	R2404536-005 20X	Cr (267.716 nm)	-0.0001 u	> 100.00	-1.4282
	R2404536-005 20X	Cu (327.395 nm)	0.0004	41.10	-9.4208
	R2404536-005 20X	Fe (234.350 nm)	0.0061	9.63	111.5204
	R2404536-005 20X	K (766.491 nm)	17.2999	0.26	18792.8515
	R2404536-005 20X	Mg (279.078 nm)	51.2676	0.47	167508.3680
	R2404536-005 20X	Mn (257.610 nm)	0.0011	1.95	381.0021
	R2404536-005 20X	Mo (202.032 nm)	0.0004	50.20	15.7216
	R2404536-005 20X	Na (588.995 nm)	383.0256 o	0.14	5202568.1740
	R2404536-005 20X	Ni (230.299 nm)	0.0006	18.61	32.0801
	R2404536-005 20X	Pb (220.353 nm)	0.0008	72.97	11.8898
	R2404536-005 20X	Sb (217.582 nm)	0.0004 u	> 100.00	7.2649
	R2404536-005 20X	Se (196.026 nm)	-0.0002 u	> 100.00	4.5966
	R2404536-005 20X	Si (252.851 nm)	0.0413	4.65	190.1548
	R2404536-005 20X	Sn (189.925 nm)	0.0004	26.69	4.0099
	R2404536-005 20X	Sr (216.596 nm)	0.2893	0.56	5091.1522
	R2404536-005 20X	Ti (336.122 nm)	0.0004	34.31	219.5163
	R2404536-005 20X	Tl (190.794 nm)	0.0011	72.33	-0.0811
	R2404536-005 20X	V (292.401 nm)	-0.0002 u	69.69	-46.6075
	R2404536-005 20X	Y (360.074 nm)	0.91	0.31	444516.59
	R2404536-005 20X	Y_R (360.074 nm)	0.91	0.31	443530.61
	R2404536-005 20X	Zn (213.857 nm)	0.0051	2.60	323.8723
6/10/2024 17:02:51	R2404536-006 20X	Ag (328.068 nm)	-0.0003 u	7.63	-231.8398
	R2404536-006 20X	Al (237.312 nm)	0.0032	48.22	20.1762
	R2404536-006 20X	As (188.980 nm)	-0.0001 u	> 100.00	-2.2186
	R2404536-006 20X	B (249.772 nm)	0.1813	0.48	5894.1465

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404536-006 20X	Ba (230.424 nm)	0.0003	51.14	29.1360
	R2404536-006 20X	Be (313.107 nm)	0.0000 u	> 100.00	23.7844
	R2404536-006 20X	Ca (317.933 nm)	15.6001	0.29	558424.9248
	R2404536-006 20X	Cd (214.439 nm)	0.0001	> 100.00	8.4940
	R2404536-006 20X	Co (230.786 nm)	-0.0002 u	51.04	-12.6125
	R2404536-006 20X	Cr (267.716 nm)	0.0000 u	> 100.00	5.7448
	R2404536-006 20X	Cu (327.395 nm)	0.0003	13.58	-15.7866
	R2404536-006 20X	Fe (234.350 nm)	0.0009	27.31	15.9762
	R2404536-006 20X	K (766.491 nm)	16.8016	0.31	18246.0161
	R2404536-006 20X	Mg (279.078 nm)	49.6337	0.32	162168.9942
	R2404536-006 20X	Mn (257.610 nm)	0.0009	1.14	310.5752
	R2404536-006 20X	Mo (202.032 nm)	0.0004	23.97	16.0539
	R2404536-006 20X	Na (588.995 nm)	373.9494 o	0.31	5078964.8761
	R2404536-006 20X	Ni (230.299 nm)	0.0004	91.00	29.8285
	R2404536-006 20X	Pb (220.353 nm)	0.0005	86.18	10.4928
	R2404536-006 20X	Sb (217.582 nm)	-0.0016 u	> 100.00	3.6291
	R2404536-006 20X	Se (196.026 nm)	-0.0010 u	> 100.00	4.0705
	R2404536-006 20X	Si (252.851 nm)	0.0300	1.34	146.9283
	R2404536-006 20X	Sn (189.925 nm)	-0.0001 u	> 100.00	2.7621
	R2404536-006 20X	Sr (216.596 nm)	0.2811	0.29	4946.2385
	R2404536-006 20X	Ti (336.122 nm)	0.0003	54.58	195.2977
	R2404536-006 20X	Tl (190.794 nm)	0.0017	87.79	0.4411
	R2404536-006 20X	V (292.401 nm)	0.0000 u	> 100.00	-39.3285
	R2404536-006 20X	Y (360.074 nm)	0.91	0.30	445570.48
	R2404536-006 20X	Y_R (360.074 nm)	0.91	0.30	444540.01
	R2404536-006 20X	Zn (213.857 nm)	0.0046	0.85	296.9765
6/10/2024 17:06:05	R2404536-007 20X	Ag (328.068 nm)	-0.0005 u	3.40	-242.9615
	R2404536-007 20X	Al (237.312 nm)	0.0070	18.45	29.4596
	R2404536-007 20X	As (188.980 nm)	0.0000 u	> 100.00	-1.9749
	R2404536-007 20X	B (249.772 nm)	0.1823	0.24	5924.0194
	R2404536-007 20X	Ba (230.424 nm)	0.0004	12.15	31.6700
	R2404536-007 20X	Be (313.107 nm)	0.0000	68.74	30.3471
	R2404536-007 20X	Ca (317.933 nm)	15.5813	0.32	557754.8770
	R2404536-007 20X	Cd (214.439 nm)	0.0001	43.87	10.3022
	R2404536-007 20X	Co (230.786 nm)	0.0000 u	> 100.00	-9.8368
	R2404536-007 20X	Cr (267.716 nm)	0.0000 u	> 100.00	4.6729
	R2404536-007 20X	Cu (327.395 nm)	0.0005	25.18	-4.7134
	R2404536-007 20X	Fe (234.350 nm)	0.0044	7.59	79.5641
	R2404536-007 20X	K (766.491 nm)	16.7518	0.32	18191.3846
	R2404536-007 20X	Mg (279.078 nm)	49.5895	0.26	162024.3392
	R2404536-007 20X	Mn (257.610 nm)	0.0010	2.48	354.7701
	R2404536-007 20X	Mo (202.032 nm)	0.0000 u	> 100.00	12.2464
	R2404536-007 20X	Na (588.995 nm)	373.1347 o	0.12	5067869.1430
	R2404536-007 20X	Ni (230.299 nm)	0.0003 u	> 100.00	28.8810
	R2404536-007 20X	Pb (220.353 nm)	0.0007	92.51	11.3802
	R2404536-007 20X	Sb (217.582 nm)	0.0000 u	> 100.00	6.5512
	R2404536-007 20X	Se (196.026 nm)	-0.0006 u	> 100.00	4.3054
	R2404536-007 20X	Si (252.851 nm)	0.0404	2.41	186.7710
	R2404536-007 20X	Sn (189.925 nm)	-0.0011 u	95.91	0.3373
	R2404536-007 20X	Sr (216.596 nm)	0.2808	0.31	4940.4451
	R2404536-007 20X	Ti (336.122 nm)	0.0004	19.64	216.8422
	R2404536-007 20X	Tl (190.794 nm)	0.0009 u	> 100.00	-0.3525
	R2404536-007 20X	V (292.401 nm)	-0.0001 u	> 100.00	-42.6504
	R2404536-007 20X	Y (360.074 nm)	0.91	0.29	444733.63
	R2404536-007 20X	Y_R (360.074 nm)	0.91	0.29	443757.92
	R2404536-007 20X	Zn (213.857 nm)	0.0034	1.65	216.5930
6/10/2024 17:09:19	R2404536-008 20X	Ag (328.068 nm)	-0.0004 u	63.36	-234.8784

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404536-008 20X	Al (237.312 nm)	0.0049	23.57	24.4544
	R2404536-008 20X	As (188.980 nm)	-0.0005 u	> 100.00	-2.8151
	R2404536-008 20X	B (249.772 nm)	0.1836	0.28	5967.2163
	R2404536-008 20X	Ba (230.424 nm)	0.0003	19.77	27.7215
	R2404536-008 20X	Be (313.107 nm)	0.0000 u	> 100.00	24.8007
	R2404536-008 20X	Ca (317.933 nm)	15.7002	0.26	561992.1876
	R2404536-008 20X	Cd (214.439 nm)	0.0001	60.50	8.6731
	R2404536-008 20X	Co (230.786 nm)	-0.0004 u	56.42	-16.4728
	R2404536-008 20X	Cr (267.716 nm)	-0.0001 u	> 100.00	3.2407
	R2404536-008 20X	Cu (327.395 nm)	0.0002 u	> 100.00	-21.0367
	R2404536-008 20X	Fe (234.350 nm)	0.0007	32.31	12.8068
	R2404536-008 20X	K (766.491 nm)	16.7751	0.41	18216.9384
	R2404536-008 20X	Mg (279.078 nm)	50.0163	0.22	163419.0007
	R2404536-008 20X	Mn (257.610 nm)	0.0009	1.16	308.6721
	R2404536-008 20X	Mo (202.032 nm)	0.0005	21.71	16.8612
	R2404536-008 20X	Na (588.995 nm)	372.8774 o	0.39	5064365.1447
	R2404536-008 20X	Ni (230.299 nm)	0.0003	29.98	29.2434
	R2404536-008 20X	Pb (220.353 nm)	0.0010	36.93	12.8938
	R2404536-008 20X	Sb (217.582 nm)	-0.0015 u	> 100.00	3.7543
	R2404536-008 20X	Se (196.026 nm)	-0.0001 u	> 100.00	4.6873
	R2404536-008 20X	Si (252.851 nm)	0.0315	3.22	152.7179
	R2404536-008 20X	Sn (189.925 nm)	-0.0004 u	37.99	2.0232
	R2404536-008 20X	Sr (216.596 nm)	0.2815	0.15	4952.9388
	R2404536-008 20X	Ti (336.122 nm)	0.0003	30.88	198.9101
	R2404536-008 20X	Tl (190.794 nm)	0.0013 u	> 100.00	0.0953
	R2404536-008 20X	V (292.401 nm)	0.0002 u	> 100.00	-34.6903
	R2404536-008 20X	Y (360.074 nm)	0.91	0.34	443697.36
	R2404536-008 20X	Y_R (360.074 nm)	0.91	0.34	442826.02
	R2404536-008 20X	Zn (213.857 nm)	0.0029	1.16	187.6745
6/10/2024 17:12:33	PBW-439397	Ag (328.068 nm)	-0.0001 u	70.50	-222.4662
	PBW-439397	Al (237.312 nm)	0.0020	53.07	17.1115
	PBW-439397	As (188.980 nm)	-0.0007 u	> 100.00	-3.1789
	PBW-439397	B (249.772 nm)	0.0011	19.03	40.8097
	PBW-439397	Ba (230.424 nm)	0.0000 u	> 100.00	9.9181
	PBW-439397	Be (313.107 nm)	0.0000	86.70	32.5460
	PBW-439397	Ca (317.933 nm)	0.0075	1.38	3009.6521
	PBW-439397	Cd (214.439 nm)	0.0001	46.19	8.6522
	PBW-439397	Co (230.786 nm)	0.0000 u	> 100.00	-10.3259
	PBW-439397	Cr (267.716 nm)	0.0005	3.41	30.6898
	PBW-439397	Cu (327.395 nm)	0.0001	55.05	-23.7389
	PBW-439397	Fe (234.350 nm)	0.0032	9.25	57.7088
	PBW-439397	K (766.491 nm)	0.1276	26.68	-51.9867
	PBW-439397	Mg (279.078 nm)	0.0036	9.68	-17.8517
	PBW-439397	Mn (257.610 nm)	0.0001	4.50	45.1346
	PBW-439397	Mo (202.032 nm)	0.0002 u	> 100.00	13.6821
	PBW-439397	Na (588.995 nm)	0.3101	7.34	-9399.7088
	PBW-439397	Ni (230.299 nm)	-0.0005 u	96.85	19.3050
	PBW-439397	Pb (220.353 nm)	0.0006 u	> 100.00	10.8198
	PBW-439397	Sb (217.582 nm)	0.0049	51.67	15.7554
	PBW-439397	Se (196.026 nm)	0.0017	84.75	5.9976
	PBW-439397	Si (252.851 nm)	0.0138	10.77	85.3729
	PBW-439397	Sn (189.925 nm)	0.0000 u	> 100.00	2.9124
	PBW-439397	Sr (216.596 nm)	0.0002	87.35	2.8245
	PBW-439397	Ti (336.122 nm)	-0.0001 u	66.73	136.6938
	PBW-439397	Tl (190.794 nm)	-0.0002 u	> 100.00	-1.4396
	PBW-439397	V (292.401 nm)	0.0000 u	> 100.00	-39.6655
	PBW-439397	Y (360.074 nm)	1.02	0.40	499060.50

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	PBW-439397	Y_R (360.074 nm)	1.02	0.40	498135.32
	PBW-439397	Zn (213.857 nm)	0.0000	66.49	2.7793
6/10/2024 17:15:47	Continuing Calibration Verification	Ag (328.068 nm)	0.5066	0.13	28484.6279
	Continuing Calibration Verification	Al (237.312 nm)	9.9028	0.08	24491.5819
	Continuing Calibration Verification	As (188.980 nm)	0.9790	0.20	1658.2251
	Continuing Calibration Verification	B (249.772 nm)	2.4523	0.15	79633.0608
	Continuing Calibration Verification	Ba (230.424 nm)	9.6769	0.56	526885.7777
	Continuing Calibration Verification	Be (313.107 nm)	0.2437	0.22	267487.1003
	Continuing Calibration Verification	Ca (317.933 nm)	25.6156	0.24	915182.1337
	Continuing Calibration Verification	Cd (214.439 nm)	0.5008	0.21	28535.3285
	Continuing Calibration Verification	Co (230.786 nm)	2.4882	0.55	45109.4913
	Continuing Calibration Verification	Cr (267.716 nm)	0.5137	0.21	26709.3292
	Continuing Calibration Verification	Cu (327.395 nm)	1.2273	0.66	53847.4647
	Continuing Calibration Verification	Fe (234.350 nm)	5.0111	0.23	91242.0022
	Continuing Calibration Verification	K (766.491 nm)	24.2072	0.14	26372.8502
	Continuing Calibration Verification	Mg (279.078 nm)	25.2424	0.11	82460.2709
	Continuing Calibration Verification	Mn (257.610 nm)	0.7409	0.21	247433.2231
	Continuing Calibration Verification	Mo (202.032 nm)	2.5975	0.34	27126.8395
	Continuing Calibration Verification	Na (588.995 nm)	25.4984	0.34	333624.3305
	Continuing Calibration Verification	Ni (230.299 nm)	2.0598	0.19	24213.4587
	Continuing Calibration Verification	Pb (220.353 nm)	0.5086	0.17	2663.2201
	Continuing Calibration Verification	Sb (217.582 nm)	4.8857	0.13	9082.1981
	Continuing Calibration Verification	Se (196.026 nm)	0.4778	0.19	353.0793
	Continuing Calibration Verification	Si (252.851 nm)	10.0853	0.38	38461.2580
	Continuing Calibration Verification	Sn (189.925 nm)	5.0137	0.10	12348.7638
	Continuing Calibration Verification	Sr (216.596 nm)	2.4459	0.51	43046.6223
	Continuing Calibration Verification	Ti (336.122 nm)	2.5298	0.09	365659.1892
	Continuing Calibration Verification	Tl (190.794 nm)	0.9760	0.85	952.4836
	Continuing Calibration Verification	V (292.401 nm)	2.5071	0.15	95010.6133
	Continuing Calibration Verification	Y (360.074 nm)	0.97	0.36	474033.61
	Continuing Calibration Verification	Y_R (360.074 nm)	0.97	0.36	473110.93
	Continuing Calibration Verification	Zn (213.857 nm)	0.9880	0.44	63241.7296
6/10/2024 17:19:01	Continuing Calibration Blank	Ag (328.068 nm)	-0.0003 u	32.95	-229.3020
	Continuing Calibration Blank	Al (237.312 nm)	0.0014	62.89	15.7887
	Continuing Calibration Blank	As (188.980 nm)	0.0000 u	> 100.00	-2.1069
	Continuing Calibration Blank	B (249.772 nm)	0.0017	16.06	62.1422
	Continuing Calibration Blank	Ba (230.424 nm)	0.0006	22.84	43.0214
	Continuing Calibration Blank	Be (313.107 nm)	0.0000	21.03	34.4434
	Continuing Calibration Blank	Ca (317.933 nm)	0.0072	3.68	2998.1629
	Continuing Calibration Blank	Cd (214.439 nm)	0.0001	54.00	6.7869
	Continuing Calibration Blank	Co (230.786 nm)	0.0001	> 100.00	-7.4746
	Continuing Calibration Blank	Cr (267.716 nm)	0.0001	90.43	8.7715
	Continuing Calibration Blank	Cu (327.395 nm)	0.0002 u	> 100.00	-17.5010
	Continuing Calibration Blank	Fe (234.350 nm)	0.0022	29.75	39.4235
	Continuing Calibration Blank	K (766.491 nm)	0.0783	9.28	-106.0897
	Continuing Calibration Blank	Mg (279.078 nm)	0.0031	24.05	-19.7740
	Continuing Calibration Blank	Mn (257.610 nm)	0.0001	23.76	43.4467
	Continuing Calibration Blank	Mo (202.032 nm)	0.0033	33.34	46.7223
	Continuing Calibration Blank	Na (588.995 nm)	0.1598	2.58	-11446.9544
	Continuing Calibration Blank	Ni (230.299 nm)	0.0000 u	> 100.00	25.0048
	Continuing Calibration Blank	Pb (220.353 nm)	0.0003 u	> 100.00	9.5378
	Continuing Calibration Blank	Sb (217.582 nm)	0.0048	30.69	15.4651
	Continuing Calibration Blank	Se (196.026 nm)	-0.0011 u	> 100.00	3.9766
	Continuing Calibration Blank	Si (252.851 nm)	0.0005 u	> 100.00	34.4322
	Continuing Calibration Blank	Sn (189.925 nm)	0.0006	85.38	4.5934
	Continuing Calibration Blank	Sr (216.596 nm)	0.0004	25.51	6.2916
	Continuing Calibration Blank	Ti (336.122 nm)	0.0026	45.17	524.8820

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Blank	Tl (190.794 nm)	-0.0005 u	> 100.00	-1.7224
	Continuing Calibration Blank	V (292.401 nm)	0.0000 u	> 100.00	-40.2074
	Continuing Calibration Blank	Y (360.074 nm)	1.01	0.19	491893.48
	Continuing Calibration Blank	Y_R (360.074 nm)	1.01	0.19	490947.78
	Continuing Calibration Blank	Zn (213.857 nm)	0.0009	2.44	59.6901
6/10/2024 17:22:15	LCSW-439397	Ag (328.068 nm)	0.0496	0.45	2593.9789
	LCSW-439397	Al (237.312 nm)	1.9738	0.04	4891.4952
	LCSW-439397	As (188.980 nm)	0.0361	2.44	59.1203
	LCSW-439397	B (249.772 nm)	0.9801	0.16	31830.3298
	LCSW-439397	Ba (230.424 nm)	1.9150	0.15	104274.6226
	LCSW-439397	Be (313.107 nm)	0.0485	0.26	53288.0347
	LCSW-439397	Ca (317.933 nm)	2.0118	0.27	74402.6678
	LCSW-439397	Cd (214.439 nm)	0.0506	0.33	2885.5815
	LCSW-439397	Co (230.786 nm)	0.4939	0.38	8945.9729
	LCSW-439397	Cr (267.716 nm)	0.2003	0.32	10417.4505
	LCSW-439397	Cu (327.395 nm)	0.2486	0.13	10885.2049
	LCSW-439397	Fe (234.350 nm)	1.0045	0.31	18289.4469
	LCSW-439397	K (766.491 nm)	18.8870	0.50	20534.4910
	LCSW-439397	Mg (279.078 nm)	1.9464	0.31	6331.0343
	LCSW-439397	Mn (257.610 nm)	0.4841	0.23	161701.6411
	LCSW-439397	Mo (202.032 nm)	0.4961	0.33	5190.1068
	LCSW-439397	Na (588.995 nm)	19.8987	0.27	257366.0843
	LCSW-439397	Ni (230.299 nm)	0.5112	0.33	6028.3193
	LCSW-439397	Pb (220.353 nm)	0.5156	0.38	2699.9627
	LCSW-439397	Sb (217.582 nm)	0.4973	0.68	930.4025
	LCSW-439397	Se (196.026 nm)	0.9753	0.56	715.6629
	LCSW-439397	Si (252.851 nm)	-0.0047 u	5.40	14.6235
	LCSW-439397	Sn (189.925 nm)	4.8967	0.32	12060.4599
	LCSW-439397	Sr (216.596 nm)	1.9335	0.30	34027.4544
	LCSW-439397	Ti (336.122 nm)	0.4913	0.22	71143.5454
	LCSW-439397	Tl (190.794 nm)	1.9332	0.33	1887.8856
	LCSW-439397	V (292.401 nm)	0.4851	0.23	18351.4755
	LCSW-439397	Y (360.074 nm)	1.00	0.38	488447.46
	LCSW-439397	Y_R (360.074 nm)	1.00	0.38	487507.89
	LCSW-439397	Zn (213.857 nm)	0.4994	0.28	31968.2785
6/10/2024 17:25:29	DLCSW-439397	Ag (328.068 nm)	0.0491	0.38	2569.5131
	DLCSW-439397	Al (237.312 nm)	1.9612	0.27	4860.2527
	DLCSW-439397	As (188.980 nm)	0.0371	0.59	60.9097
	DLCSW-439397	B (249.772 nm)	0.9756	0.19	31683.6250
	DLCSW-439397	Ba (230.424 nm)	1.9071	0.05	103847.1869
	DLCSW-439397	Be (313.107 nm)	0.0483	0.19	53001.3586
	DLCSW-439397	Ca (317.933 nm)	2.0041	0.24	74131.3850
	DLCSW-439397	Cd (214.439 nm)	0.0503	0.26	2869.1801
	DLCSW-439397	Co (230.786 nm)	0.4914	0.40	8901.1826
	DLCSW-439397	Cr (267.716 nm)	0.1993	0.21	10364.4680
	DLCSW-439397	Cu (327.395 nm)	0.2472	0.11	10825.4383
	DLCSW-439397	Fe (234.350 nm)	1.0022	0.28	18246.9308
	DLCSW-439397	K (766.491 nm)	18.7490	0.16	20383.0848
	DLCSW-439397	Mg (279.078 nm)	1.9374	0.26	6301.5889
	DLCSW-439397	Mn (257.610 nm)	0.4817	0.23	160888.9267
	DLCSW-439397	Mo (202.032 nm)	0.4927	0.38	5155.2516
	DLCSW-439397	Na (588.995 nm)	19.7041	0.25	254715.1553
	DLCSW-439397	Ni (230.299 nm)	0.5092	0.31	6004.5781
	DLCSW-439397	Pb (220.353 nm)	0.5132	0.48	2686.9759
	DLCSW-439397	Sb (217.582 nm)	0.4908	0.48	918.3161
	DLCSW-439397	Se (196.026 nm)	0.9734	0.20	714.3287
	DLCSW-439397	Si (252.851 nm)	-0.0093 u	7.78	-2.5923

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	DLCSW-439397	Sn (189.925 nm)	4.8748	0.24	12006.7236
	DLCSW-439397	Sr (216.596 nm)	1.9268	0.32	33909.7432
	DLCSW-439397	Ti (336.122 nm)	0.4872	0.21	70537.9642
	DLCSW-439397	Tl (190.794 nm)	1.9293	0.29	1884.0759
	DLCSW-439397	V (292.401 nm)	0.4833	0.29	18281.5015
	DLCSW-439397	Y (360.074 nm)	1.00	0.39	489981.26
	DLCSW-439397	Y_R (360.074 nm)	1.00	0.39	489054.77
	DLCSW-439397	Zn (213.857 nm)	0.4976	0.20	31849.7715
6/10/2024 17:28:44	R2404637-001 20X	Ag (328.068 nm)	0.0000 u	> 100.00	-217.0269
	R2404637-001 20X	Al (237.312 nm)	0.0042	49.46	22.6453
	R2404637-001 20X	As (188.980 nm)	-0.0006 u	> 100.00	-3.0029
	R2404637-001 20X	B (249.772 nm)	0.0231	1.39	754.0908
	R2404637-001 20X	Ba (230.424 nm)	0.0019	3.62	113.8526
	R2404637-001 20X	Be (313.107 nm)	0.0000	36.81	34.2426
	R2404637-001 20X	Ca (317.933 nm)	31.6750	0.24	1131020.8936
	R2404637-001 20X	Cd (214.439 nm)	0.0001	44.12	6.2482
	R2404637-001 20X	Co (230.786 nm)	0.0000 u	> 100.00	-10.5355
	R2404637-001 20X	Cr (267.716 nm)	0.0001	35.38	11.5832
	R2404637-001 20X	Cu (327.395 nm)	0.0000 u	> 100.00	-26.8175
	R2404637-001 20X	Fe (234.350 nm)	0.5834	0.26	10621.5815
	R2404637-001 20X	K (766.491 nm)	0.4623	9.47	315.2746
	R2404637-001 20X	Mg (279.078 nm)	5.5034	0.15	17954.7726
	R2404637-001 20X	Mn (257.610 nm)	0.0098	0.34	3306.6516
	R2404637-001 20X	Mo (202.032 nm)	0.0019	51.94	32.0935
	R2404637-001 20X	Na (588.995 nm)	2.9248	0.42	26208.2741
	R2404637-001 20X	Ni (230.299 nm)	0.0009	17.61	35.4756
	R2404637-001 20X	Pb (220.353 nm)	0.0011	41.72	13.9183
	R2404637-001 20X	Sb (217.582 nm)	0.0021 u	> 100.00	10.5242
	R2404637-001 20X	Se (196.026 nm)	-0.0009 u	> 100.00	4.0969
	R2404637-001 20X	Si (252.851 nm)	0.4976	0.50	1928.5164
	R2404637-001 20X	Sn (189.925 nm)	0.0009 u	> 100.00	5.1186
	R2404637-001 20X	Sr (216.596 nm)	0.5681	0.12	9997.0854
	R2404637-001 20X	Ti (336.122 nm)	0.0012	36.67	325.4472
	R2404637-001 20X	Tl (190.794 nm)	0.0016	45.69	0.3816
	R2404637-001 20X	V (292.401 nm)	0.0000 u	> 100.00	-41.2744
	R2404637-001 20X	Y (360.074 nm)	1.00	0.01	488073.20
	R2404637-001 20X	Y_R (360.074 nm)	1.00	0.01	487133.72
	R2404637-001 20X	Zn (213.857 nm)	0.0001	10.47	3.9430
6/10/2024 17:31:58	R2404637-002 10X	Ag (328.068 nm)	-0.0002 u	54.58	-226.1801
	R2404637-002 10X	Al (237.312 nm)	0.0058	23.18	26.5010
	R2404637-002 10X	As (188.980 nm)	0.0004 u	> 100.00	-1.2642
	R2404637-002 10X	B (249.772 nm)	0.0277	0.42	904.0282
	R2404637-002 10X	Ba (230.424 nm)	0.0012	1.99	76.8619
	R2404637-002 10X	Be (313.107 nm)	0.0000	57.71	33.2256
	R2404637-002 10X	Ca (317.933 nm)	40.3075	0.38	1438512.6857
	R2404637-002 10X	Cd (214.439 nm)	0.0001	50.86	8.0517
	R2404637-002 10X	Co (230.786 nm)	0.0000 u	> 100.00	-8.9218
	R2404637-002 10X	Cr (267.716 nm)	0.0001 u	> 100.00	8.6509
	R2404637-002 10X	Cu (327.395 nm)	0.0003	54.79	-13.2185
	R2404637-002 10X	Fe (234.350 nm)	0.2225	0.64	4051.4400
	R2404637-002 10X	K (766.491 nm)	2.4883	0.93	2538.6515
	R2404637-002 10X	Mg (279.078 nm)	4.3424	0.43	14160.7415
	R2404637-002 10X	Mn (257.610 nm)	0.0083	0.70	2799.8244
	R2404637-002 10X	Mo (202.032 nm)	0.0013	23.34	25.1971
	R2404637-002 10X	Na (588.995 nm)	35.5348	0.72	470303.4611
	R2404637-002 10X	Ni (230.299 nm)	0.0008	30.79	34.3921
	R2404637-002 10X	Pb (220.353 nm)	0.0014	54.67	15.1676

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404637-002 10X	Sb (217.582 nm)	0.0011 u	> 100.00	8.6614
	R2404637-002 10X	Se (196.026 nm)	-0.0010 u	> 100.00	4.0856
	R2404637-002 10X	Si (252.851 nm)	0.4574	0.66	1775.3731
	R2404637-002 10X	Sn (189.925 nm)	0.0000 u	> 100.00	3.0978
	R2404637-002 10X	Sr (216.596 nm)	0.7566	0.42	13314.5706
	R2404637-002 10X	Ti (336.122 nm)	0.0008	27.69	264.1486
	R2404637-002 10X	Tl (190.794 nm)	0.0017	65.96	0.4488
	R2404637-002 10X	V (292.401 nm)	0.0000 u	> 100.00	-39.9569
	R2404637-002 10X	Y (360.074 nm)	0.98	0.36	479819.58
	R2404637-002 10X	Y_R (360.074 nm)	0.98	0.36	478875.29
	R2404637-002 10X	Zn (213.857 nm)	0.0012	3.13	74.2009
6/10/2024 17:35:13	R2404637-003 10X	Ag (328.068 nm)	-0.0002 u	37.96	-224.1434
	R2404637-003 10X	Al (237.312 nm)	0.0023	85.54	17.9056
	R2404637-003 10X	As (188.980 nm)	-0.0015 u	> 100.00	-4.6467
	R2404637-003 10X	B (249.772 nm)	0.0155	0.54	507.8430
	R2404637-003 10X	Ba (230.424 nm)	0.0019	5.14	116.1588
	R2404637-003 10X	Be (313.107 nm)	0.0000	52.08	36.7789
	R2404637-003 10X	Ca (317.933 nm)	32.9814	0.82	1177553.6727
	R2404637-003 10X	Cd (214.439 nm)	0.0000 u	> 100.00	3.0657
	R2404637-003 10X	Co (230.786 nm)	-0.0001 u	85.82	-12.3985
	R2404637-003 10X	Cr (267.716 nm)	0.0002	67.11	14.5540
	R2404637-003 10X	Cu (327.395 nm)	0.0002 u	> 100.00	-19.9648
	R2404637-003 10X	Fe (234.350 nm)	0.0512	1.04	932.3685
	R2404637-003 10X	K (766.491 nm)	0.3666	3.42	210.3131
	R2404637-003 10X	Mg (279.078 nm)	4.4016	0.78	14354.2151
	R2404637-003 10X	Mn (257.610 nm)	0.0520	0.70	17396.5435
	R2404637-003 10X	Mo (202.032 nm)	0.0004	41.16	16.3091
	R2404637-003 10X	Na (588.995 nm)	6.9746	0.64	81360.3228
	R2404637-003 10X	Ni (230.299 nm)	0.0004	68.63	30.4333
	R2404637-003 10X	Pb (220.353 nm)	0.0002 u	> 100.00	9.2246
	R2404637-003 10X	Sb (217.582 nm)	-0.0020 u	56.32	2.7840
	R2404637-003 10X	Se (196.026 nm)	-0.0001 u	> 100.00	4.6811
	R2404637-003 10X	Si (252.851 nm)	0.4618	0.83	1792.3302
	R2404637-003 10X	Sn (189.925 nm)	-0.0003 u	> 100.00	2.1970
	R2404637-003 10X	Sr (216.596 nm)	0.2093	0.93	3682.8500
	R2404637-003 10X	Ti (336.122 nm)	0.0006	29.49	235.9795
	R2404637-003 10X	Tl (190.794 nm)	0.0015 u	88.01	0.2294
	R2404637-003 10X	V (292.401 nm)	0.0000 u	> 100.00	-40.9933
	R2404637-003 10X	Y (360.074 nm)	1.00	0.45	487508.35
	R2404637-003 10X	Y_R (360.074 nm)	1.00	0.45	486481.13
	R2404637-003 10X	Zn (213.857 nm)	0.0001	27.67	9.4820
6/10/2024 17:38:27	R2404637-004 10X	Ag (328.068 nm)	-0.0002 u	64.28	-225.0309
	R2404637-004 10X	Al (237.312 nm)	0.0204	5.52	62.6736
	R2404637-004 10X	As (188.980 nm)	-0.0009 u	> 100.00	-3.5381
	R2404637-004 10X	B (249.772 nm)	0.0202	0.93	659.8990
	R2404637-004 10X	Ba (230.424 nm)	0.0013	3.46	80.4998
	R2404637-004 10X	Be (313.107 nm)	0.0000 u	99.11	27.3478
	R2404637-004 10X	Ca (317.933 nm)	37.4133	0.79	1335419.6491
	R2404637-004 10X	Cd (214.439 nm)	0.0001	50.50	10.1436
	R2404637-004 10X	Co (230.786 nm)	-0.0001 u	> 100.00	-11.8968
	R2404637-004 10X	Cr (267.716 nm)	0.0000 u	> 100.00	5.8107
	R2404637-004 10X	Cu (327.395 nm)	0.0003	84.04	-15.0276
	R2404637-004 10X	Fe (234.350 nm)	0.0194	0.70	352.8674
	R2404637-004 10X	K (766.491 nm)	0.4002	7.25	247.1472
	R2404637-004 10X	Mg (279.078 nm)	4.6551	0.90	15182.6573
	R2404637-004 10X	Mn (257.610 nm)	0.0201	0.86	6727.6077
	R2404637-004 10X	Mo (202.032 nm)	0.0004	23.29	15.8225

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404637-004 10X	Na (588.995 nm)	2.4356	1.32	19545.5581
	R2404637-004 10X	Ni (230.299 nm)	0.0007	62.48	32.9990
	R2404637-004 10X	Pb (220.353 nm)	0.0002 u	> 100.00	8.8327
	R2404637-004 10X	Sb (217.582 nm)	-0.0001 u	> 100.00	6.4445
	R2404637-004 10X	Se (196.026 nm)	0.0023 u	> 100.00	6.4199
	R2404637-004 10X	Si (252.851 nm)	0.4217	0.95	1639.4090
	R2404637-004 10X	Sn (189.925 nm)	-0.0001 u	> 100.00	2.8602
	R2404637-004 10X	Sr (216.596 nm)	0.2984	0.92	5251.0743
	R2404637-004 10X	Ti (336.122 nm)	0.0005	20.51	233.6035
	R2404637-004 10X	Tl (190.794 nm)	0.0008	> 100.00	-0.4036
	R2404637-004 10X	V (292.401 nm)	-0.0001 u	86.35	-44.1977
	R2404637-004 10X	Y (360.074 nm)	1.00	0.19	487976.23
	R2404637-004 10X	Y_R (360.074 nm)	1.00	0.19	486989.73
	R2404637-004 10X	Zn (213.857 nm)	0.0005	15.06	33.0611
6/10/2024 17:41:40	R2404367-004L 50X	Ag (328.068 nm)	-0.0001 u	> 100.00	-220.9022
	R2404367-004L 50X	Al (237.312 nm)	0.0057	12.92	26.3891
	R2404367-004L 50X	As (188.980 nm)	-0.0011 u	36.71	-3.9516
	R2404367-004L 50X	B (249.772 nm)	0.0042	5.37	142.4847
	R2404367-004L 50X	Ba (230.424 nm)	0.0002	43.04	20.7540
	R2404367-004L 50X	Be (313.107 nm)	0.0000	82.92	35.3206
	R2404367-004L 50X	Ca (317.933 nm)	7.4278	0.24	267323.9823
	R2404367-004L 50X	Cd (214.439 nm)	0.0001	92.89	6.2842
	R2404367-004L 50X	Co (230.786 nm)	0.0000 u	> 100.00	-8.9035
	R2404367-004L 50X	Cr (267.716 nm)	0.0001 u	> 100.00	8.8067
	R2404367-004L 50X	Cu (327.395 nm)	0.0000 u	> 100.00	-27.4009
	R2404367-004L 50X	Fe (234.350 nm)	0.0053	2.57	96.4170
	R2404367-004L 50X	K (766.491 nm)	0.0723	29.95	-112.7174
	R2404367-004L 50X	Mg (279.078 nm)	0.9128	0.05	2953.2142
	R2404367-004L 50X	Mn (257.610 nm)	0.0040	0.33	1368.5409
	R2404367-004L 50X	Mo (202.032 nm)	0.0000 u	> 100.00	12.4354
	R2404367-004L 50X	Na (588.995 nm)	0.5409	0.26	-6256.9270
	R2404367-004L 50X	Ni (230.299 nm)	-0.0001 u	> 100.00	23.5014
	R2404367-004L 50X	Pb (220.353 nm)	0.0009	42.83	12.6101
	R2404367-004L 50X	Sb (217.582 nm)	0.0007 u	> 100.00	7.8977
	R2404367-004L 50X	Se (196.026 nm)	-0.0032 u	55.37	2.4376
	R2404367-004L 50X	Si (252.851 nm)	0.0997	0.57	412.6326
	R2404367-004L 50X	Sn (189.925 nm)	-0.0006 u	> 100.00	1.6291
	R2404367-004L 50X	Sr (216.596 nm)	0.0593	0.44	1042.6489
	R2404367-004L 50X	Ti (336.122 nm)	0.0002	48.67	184.6388
	R2404367-004L 50X	Tl (190.794 nm)	0.0022 u	91.27	0.8973
	R2404367-004L 50X	V (292.401 nm)	0.0000 u	> 100.00	-42.4054
	R2404367-004L 50X	Y (360.074 nm)	1.01	0.28	494020.44
	R2404367-004L 50X	Y_R (360.074 nm)	1.01	0.28	493095.65
	R2404367-004L 50X	Zn (213.857 nm)	0.0001	99.07	5.6475
6/10/2024 17:44:54	PBW-439398	Ag (328.068 nm)	-0.0001 u	68.31	-220.7940
	PBW-439398	Al (237.312 nm)	0.0058	34.37	26.4938
	PBW-439398	As (188.980 nm)	-0.0001 u	> 100.00	-2.1358
	PBW-439398	B (249.772 nm)	0.0009	13.62	33.1358
	PBW-439398	Ba (230.424 nm)	-0.0001 u	> 100.00	7.9901
	PBW-439398	Be (313.107 nm)	0.0000 u	> 100.00	19.0963
	PBW-439398	Ca (317.933 nm)	0.0056	6.10	2942.3770
	PBW-439398	Cd (214.439 nm)	0.0001	28.64	10.2441
	PBW-439398	Co (230.786 nm)	-0.0001 u	> 100.00	-10.6013
	PBW-439398	Cr (267.716 nm)	0.0003	65.75	20.0573
	PBW-439398	Cu (327.395 nm)	0.0002	23.06	-17.4713
	PBW-439398	Fe (234.350 nm)	0.0011	27.49	19.9340
	PBW-439398	K (766.491 nm)	0.0174 u	> 100.00	-172.9401

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	PBW-439398	Mg (279.078 nm)	0.0017	22.48	-24.3458
	PBW-439398	Mn (257.610 nm)	0.0001	22.47	39.7300
	PBW-439398	Mo (202.032 nm)	0.0000 u	> 100.00	11.6320
	PBW-439398	Na (588.995 nm)	0.0982	4.63	-12286.0936
	PBW-439398	Ni (230.299 nm)	-0.0010 u	10.20	14.0927
	PBW-439398	Pb (220.353 nm)	0.0004 u	> 100.00	9.8511
	PBW-439398	Sb (217.582 nm)	0.0052	24.20	16.1726
	PBW-439398	Se (196.026 nm)	-0.0006 u	> 100.00	4.3749
	PBW-439398	Si (252.851 nm)	0.0149	1.68	89.4272
	PBW-439398	Sn (189.925 nm)	-0.0006 u	80.26	1.6587
	PBW-439398	Sr (216.596 nm)	0.0002	46.48	3.2494
	PBW-439398	Ti (336.122 nm)	-0.0001 u	91.13	141.5899
	PBW-439398	Tl (190.794 nm)	-0.0006 u	> 100.00	-1.7877
	PBW-439398	V (292.401 nm)	0.0001	94.82	-36.1725
	PBW-439398	Y (360.074 nm)	1.03	0.27	501604.19
	PBW-439398	Y_R (360.074 nm)	1.03	0.27	500638.16
	PBW-439398	Zn (213.857 nm)	0.0006	3.73	38.5579
6/10/2024 17:48:08	LCSW-439398	Ag (328.068 nm)	0.0488	0.85	2551.7294
	LCSW-439398	Al (237.312 nm)	1.9479	0.77	4827.5321
	LCSW-439398	As (188.980 nm)	0.0375	4.75	61.5465
	LCSW-439398	B (249.772 nm)	0.9670	0.71	31404.0434
	LCSW-439398	Ba (230.424 nm)	1.8964	0.34	103266.6416
	LCSW-439398	Be (313.107 nm)	0.0480	0.55	52679.8175
	LCSW-439398	Ca (317.933 nm)	1.9939	0.51	73767.6766
	LCSW-439398	Cd (214.439 nm)	0.0501	0.61	2857.2474
	LCSW-439398	Co (230.786 nm)	0.4886	0.49	8851.2007
	LCSW-439398	Cr (267.716 nm)	0.1985	0.46	10321.6299
	LCSW-439398	Cu (327.395 nm)	0.2455	0.46	10747.8360
	LCSW-439398	Fe (234.350 nm)	0.9939	0.62	18097.0370
	LCSW-439398	K (766.491 nm)	18.5517	1.13	20166.5455
	LCSW-439398	Mg (279.078 nm)	1.9266	0.69	6266.2535
	LCSW-439398	Mn (257.610 nm)	0.4789	0.54	159958.1798
	LCSW-439398	Mo (202.032 nm)	0.4890	0.75	5116.3894
	LCSW-439398	Na (588.995 nm)	19.5546	1.05	252679.6385
	LCSW-439398	Ni (230.299 nm)	0.5057	0.50	5963.8984
	LCSW-439398	Pb (220.353 nm)	0.5105	0.64	2672.9619
	LCSW-439398	Sb (217.582 nm)	0.4849	1.23	907.3354
	LCSW-439398	Se (196.026 nm)	0.9610	0.69	705.2706
	LCSW-439398	Si (252.851 nm)	-0.0100 u	19.27	-5.4360
	LCSW-439398	Sn (189.925 nm)	4.8512	0.66	11948.5902
	LCSW-439398	Sr (216.596 nm)	1.9190	0.51	33773.6430
	LCSW-439398	Ti (336.122 nm)	0.4829	0.71	69928.6127
	LCSW-439398	Tl (190.794 nm)	1.9162	0.89	1871.2552
	LCSW-439398	V (292.401 nm)	0.4801	0.65	18159.8151
	LCSW-439398	Y (360.074 nm)	1.00	0.52	490803.00
	LCSW-439398	Y_R (360.074 nm)	1.00	0.52	489835.03
	LCSW-439398	Zn (213.857 nm)	0.4941	0.65	31626.6763
6/10/2024 17:51:22	R2404632-001 10X	Ag (328.068 nm)	-0.0003 u	13.45	-229.4038
	R2404632-001 10X	Al (237.312 nm)	0.0025	54.25	18.3924
	R2404632-001 10X	As (188.980 nm)	0.0003 u	> 100.00	-1.5333
	R2404632-001 10X	B (249.772 nm)	0.2446	0.64	7947.2028
	R2404632-001 10X	Ba (230.424 nm)	0.0163	0.43	900.1729
	R2404632-001 10X	Be (313.107 nm)	0.0000	75.96	39.6536
	R2404632-001 10X	Ca (317.933 nm)	36.1616	0.47	1290833.9637
	R2404632-001 10X	Cd (214.439 nm)	0.0001	82.17	7.4566
	R2404632-001 10X	Co (230.786 nm)	0.0001 u	> 100.00	-8.6116
	R2404632-001 10X	Cr (267.716 nm)	0.0001 u	> 100.00	12.6267

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404632-001 10X	Cu (327.395 nm)	0.0021	16.40	63.7527
	R2404632-001 10X	Fe (234.350 nm)	0.0352	0.71	641.4046
	R2404632-001 10X	K (766.491 nm)	11.8975	0.93	12864.2359
	R2404632-001 10X	Mg (279.078 nm)	11.4110	0.49	37260.2796
	R2404632-001 10X	Mn (257.610 nm)	0.5415	0.53	180852.5985
	R2404632-001 10X	Mo (202.032 nm)	0.0019	53.71	31.9349
	R2404632-001 10X	Na (588.995 nm)	64.3675 o	0.98	862958.0400
	R2404632-001 10X	Ni (230.299 nm)	0.0025	33.64	54.8734
	R2404632-001 10X	Pb (220.353 nm)	0.0007	94.55	11.6723
	R2404632-001 10X	Sb (217.582 nm)	0.0010 u	> 100.00	8.4378
	R2404632-001 10X	Se (196.026 nm)	0.0000 u	> 100.00	4.7510
	R2404632-001 10X	Si (252.851 nm)	0.6548	0.55	2527.8328
	R2404632-001 10X	Sn (189.925 nm)	0.0005 u	> 100.00	4.1728
	R2404632-001 10X	Sr (216.596 nm)	0.1745	0.57	3070.1448
	R2404632-001 10X	Ti (336.122 nm)	0.0010	32.01	300.0854
	R2404632-001 10X	Tl (190.794 nm)	0.0024	24.48	1.1218
	R2404632-001 10X	V (292.401 nm)	0.0000 u	> 100.00	-40.3138
	R2404632-001 10X	Y (360.074 nm)	0.97	0.00	475028.72
	R2404632-001 10X	Y_R (360.074 nm)	0.97	0.00	474091.14
	R2404632-001 10X	Zn (213.857 nm)	0.0015	2.93	96.0655
6/10/2024 17:54:36	Continuing Calibration Verification	Ag (328.068 nm)	0.5033	0.15	28297.0214
	Continuing Calibration Verification	Al (237.312 nm)	9.8341	0.04	24321.8731
	Continuing Calibration Verification	As (188.980 nm)	0.9727	0.46	1647.5319
	Continuing Calibration Verification	B (249.772 nm)	2.4367	0.16	79129.4889
	Continuing Calibration Verification	Ba (230.424 nm)	9.6377	0.14	524754.9475
	Continuing Calibration Verification	Be (313.107 nm)	0.2420	0.24	265640.6446
	Continuing Calibration Verification	Ca (317.933 nm)	25.4842	0.24	910499.5946
	Continuing Calibration Verification	Cd (214.439 nm)	0.4972	0.29	28326.2428
	Continuing Calibration Verification	Co (230.786 nm)	2.4761	0.19	44891.2133
	Continuing Calibration Verification	Cr (267.716 nm)	0.5110	0.27	26568.3940
	Continuing Calibration Verification	Cu (327.395 nm)	1.2225	0.04	53636.3612
	Continuing Calibration Verification	Fe (234.350 nm)	4.9820	0.21	90711.3397
	Continuing Calibration Verification	K (766.491 nm)	24.1265	0.15	26284.3419
	Continuing Calibration Verification	Mg (279.078 nm)	25.0803	0.18	81930.3203
	Continuing Calibration Verification	Mn (257.610 nm)	0.7364	0.21	245941.1185
	Continuing Calibration Verification	Mo (202.032 nm)	2.5926	0.33	27075.1938
	Continuing Calibration Verification	Na (588.995 nm)	25.3357	0.37	331407.9484
	Continuing Calibration Verification	Ni (230.299 nm)	2.0472	0.22	24065.2875
	Continuing Calibration Verification	Pb (220.353 nm)	0.5077	0.24	2658.6822
	Continuing Calibration Verification	Sb (217.582 nm)	4.8362	0.12	8990.1619
	Continuing Calibration Verification	Se (196.026 nm)	0.4741	0.72	350.3687
	Continuing Calibration Verification	Si (252.851 nm)	9.9908	0.34	38100.9786
	Continuing Calibration Verification	Sn (189.925 nm)	4.9781	0.13	12260.9268
	Continuing Calibration Verification	Sr (216.596 nm)	2.4276	0.28	42724.7722
	Continuing Calibration Verification	Ti (336.122 nm)	2.5157	0.20	363609.5736
	Continuing Calibration Verification	Tl (190.794 nm)	0.9725	0.27	949.1316
	Continuing Calibration Verification	V (292.401 nm)	2.4929	0.29	94472.4644
	Continuing Calibration Verification	Y (360.074 nm)	0.97	0.64	475418.04
	Continuing Calibration Verification	Y_R (360.074 nm)	0.97	0.64	474488.23
	Continuing Calibration Verification	Zn (213.857 nm)	0.9813	0.34	62808.8078
6/10/2024 17:57:50	Continuing Calibration Blank	Ag (328.068 nm)	-0.0002 u	27.01	-228.2004
	Continuing Calibration Blank	Al (237.312 nm)	0.0025	55.67	18.5343
	Continuing Calibration Blank	As (188.980 nm)	0.0023 u	88.80	1.8757
	Continuing Calibration Blank	B (249.772 nm)	0.0018	13.59	63.5638
	Continuing Calibration Blank	Ba (230.424 nm)	0.0005	3.85	39.5354
	Continuing Calibration Blank	Be (313.107 nm)	0.0000	33.63	38.9682
	Continuing Calibration Blank	Ca (317.933 nm)	0.0072	1.04	2999.0037

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Blank	Cd (214.439 nm)	0.0001 u	> 100.00	5.8549
	Continuing Calibration Blank	Co (230.786 nm)	0.0001 u	> 100.00	-7.1015
	Continuing Calibration Blank	Cr (267.716 nm)	0.0000 u	> 100.00	8.4717
	Continuing Calibration Blank	Cu (327.395 nm)	0.0003	> 100.00	-16.5758
	Continuing Calibration Blank	Fe (234.350 nm)	0.0021	27.85	37.1821
	Continuing Calibration Blank	K (766.491 nm)	0.0455	10.48	-142.0782
	Continuing Calibration Blank	Mg (279.078 nm)	0.0030	39.32	-19.8154
	Continuing Calibration Blank	Mn (257.610 nm)	0.0001	4.90	42.0506
	Continuing Calibration Blank	Mo (202.032 nm)	0.0034	36.28	47.2296
	Continuing Calibration Blank	Na (588.995 nm)	0.0669	4.83	-12711.8347
	Continuing Calibration Blank	Ni (230.299 nm)	-0.0002 u	> 100.00	23.0033
	Continuing Calibration Blank	Pb (220.353 nm)	0.0004	48.18	10.0927
	Continuing Calibration Blank	Sb (217.582 nm)	0.0035	41.51	13.1473
	Continuing Calibration Blank	Se (196.026 nm)	0.0007 u	> 100.00	5.2805
	Continuing Calibration Blank	Si (252.851 nm)	0.0010	77.85	36.4889
	Continuing Calibration Blank	Sn (189.925 nm)	0.0001 u	> 100.00	3.3184
	Continuing Calibration Blank	Sr (216.596 nm)	0.0003	51.57	4.7619
	Continuing Calibration Blank	Ti (336.122 nm)	0.0025	39.96	515.0756
	Continuing Calibration Blank	Tl (190.794 nm)	0.0009 u	> 100.00	-0.3666
	Continuing Calibration Blank	V (292.401 nm)	0.0002	28.85	-33.9928
	Continuing Calibration Blank	Y (360.074 nm)	1.01	0.28	494416.90
	Continuing Calibration Blank	Y_R (360.074 nm)	1.01	0.27	493466.83
	Continuing Calibration Blank	Zn (213.857 nm)	0.0010	4.45	66.3285
6/10/2024 18:01:03	R2404632-001L 50X	Ag (328.068 nm)	-0.0003 u	19.97	-230.8335
	R2404632-001L 50X	Al (237.312 nm)	0.0027	23.79	18.9541
	R2404632-001L 50X	As (188.980 nm)	-0.0008 u	> 100.00	-3.3098
	R2404632-001L 50X	B (249.772 nm)	0.0501	0.60	1633.6981
	R2404632-001L 50X	Ba (230.424 nm)	0.0034	1.31	195.5167
	R2404632-001L 50X	Be (313.107 nm)	0.0000 u	> 100.00	25.4778
	R2404632-001L 50X	Ca (317.933 nm)	7.5565	0.41	271908.8483
	R2404632-001L 50X	Cd (214.439 nm)	0.0000	87.59	4.0513
	R2404632-001L 50X	Co (230.786 nm)	-0.0001 u	> 100.00	-11.4952
	R2404632-001L 50X	Cr (267.716 nm)	-0.0001 u	> 100.00	2.5323
	R2404632-001L 50X	Cu (327.395 nm)	0.0005	32.24	-3.5463
	R2404632-001L 50X	Fe (234.350 nm)	0.0070	8.25	127.7548
	R2404632-001L 50X	K (766.491 nm)	2.3913	0.78	2432.1525
	R2404632-001L 50X	Mg (279.078 nm)	2.3784	0.41	7742.6533
	R2404632-001L 50X	Mn (257.610 nm)	0.1133	0.43	37857.7513
	R2404632-001L 50X	Mo (202.032 nm)	0.0009	40.60	21.7429
	R2404632-001L 50X	Na (588.995 nm)	13.4688	0.13	169801.1145
	R2404632-001L 50X	Ni (230.299 nm)	0.0006 u	98.46	32.6814
	R2404632-001L 50X	Pb (220.353 nm)	0.0001 u	> 100.00	8.5759
	R2404632-001L 50X	Sb (217.582 nm)	0.0005 u	> 100.00	7.5314
	R2404632-001L 50X	Se (196.026 nm)	0.0016 u	> 100.00	5.9431
	R2404632-001L 50X	Si (252.851 nm)	0.1526	0.77	614.2365
	R2404632-001L 50X	Sn (189.925 nm)	0.0000 u	> 100.00	3.0095
	R2404632-001L 50X	Sr (216.596 nm)	0.0367	0.35	646.0778
	R2404632-001L 50X	Ti (336.122 nm)	0.0008	50.49	273.5422
	R2404632-001L 50X	Tl (190.794 nm)	-0.0001 u	> 100.00	-1.2587
	R2404632-001L 50X	V (292.401 nm)	-0.0001 u	> 100.00	-42.6214
	R2404632-001L 50X	Y (360.074 nm)	1.00	0.13	490403.06
	R2404632-001L 50X	Y_R (360.074 nm)	1.00	0.13	489434.19
	R2404632-001L 50X	Zn (213.857 nm)	0.0002	16.68	14.4146
6/10/2024 18:04:17	R2404651-006 10X	Ag (328.068 nm)	-0.0003 u	20.14	-229.6057
	R2404651-006 10X	Al (237.312 nm)	0.0092	11.11	35.0462
	R2404651-006 10X	As (188.980 nm)	-0.0001 u	> 100.00	-2.2486
	R2404651-006 10X	B (249.772 nm)	0.1144	0.13	3720.3111

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404651-006 10X	Ba (230.424 nm)	0.0038	1.39	219.8372
	R2404651-006 10X	Be (313.107 nm)	0.0000	> 100.00	24.3172
	R2404651-006 10X	Ca (317.933 nm)	16.2580	0.25	581860.2291
	R2404651-006 10X	Cd (214.439 nm)	0.0001 u	> 100.00	5.3773
	R2404651-006 10X	Co (230.786 nm)	0.0001	64.76	-8.0963
	R2404651-006 10X	Cr (267.716 nm)	0.0003	60.82	19.3990
	R2404651-006 10X	Cu (327.395 nm)	0.0004	71.69	-9.7733
	R2404651-006 10X	Fe (234.350 nm)	0.0133	3.09	241.8778
	R2404651-006 10X	K (766.491 nm)	0.4428	5.78	293.8925
	R2404651-006 10X	Mg (279.078 nm)	11.5069	0.17	37573.8492
	R2404651-006 10X	Mn (257.610 nm)	0.0016	0.80	546.1598
	R2404651-006 10X	Mo (202.032 nm)	0.0009	15.08	21.1563
	R2404651-006 10X	Na (588.995 nm)	22.1237	0.12	287666.8282
	R2404651-006 10X	Ni (230.299 nm)	0.0003	> 100.00	28.6540
	R2404651-006 10X	Pb (220.353 nm)	0.0007	63.30	11.3880
	R2404651-006 10X	Sb (217.582 nm)	0.0015	53.85	9.3748
	R2404651-006 10X	Se (196.026 nm)	-0.0012 u	67.58	3.8769
	R2404651-006 10X	Si (252.851 nm)	1.1583	0.17	4446.2454
	R2404651-006 10X	Sn (189.925 nm)	0.0003 u	> 100.00	3.8675
	R2404651-006 10X	Sr (216.596 nm)	0.4539	0.37	7987.1910
	R2404651-006 10X	Ti (336.122 nm)	0.0006	32.99	246.9928
	R2404651-006 10X	Tl (190.794 nm)	0.0021	97.63	0.8381
	R2404651-006 10X	V (292.401 nm)	0.0000 u	> 100.00	-39.3942
	R2404651-006 10X	Y (360.074 nm)	0.99	0.27	485641.55
	R2404651-006 10X	Y_R (360.074 nm)	0.99	0.27	484684.82
	R2404651-006 10X	Zn (213.857 nm)	0.0003	35.25	22.1453
6/10/2024 18:07:31	R2404693-002 20X	Ag (328.068 nm)	-0.0002 u	16.37	-228.5871
	R2404693-002 20X	Al (237.312 nm)	0.0022	49.88	17.7868
	R2404693-002 20X	As (188.980 nm)	-0.0008 u	81.15	-3.4592
	R2404693-002 20X	B (249.772 nm)	0.0537	0.44	1749.4598
	R2404693-002 20X	Ba (230.424 nm)	0.0008	7.94	56.5563
	R2404693-002 20X	Be (313.107 nm)	0.0000	17.45	44.4272
	R2404693-002 20X	Ca (317.933 nm)	42.5080	0.10	1516894.7020
	R2404693-002 20X	Cd (214.439 nm)	0.0001 u	> 100.00	4.9488
	R2404693-002 20X	Co (230.786 nm)	-0.0003 u	47.12	-15.1390
	R2404693-002 20X	Cr (267.716 nm)	-0.0001 u	> 100.00	1.0434
	R2404693-002 20X	Cu (327.395 nm)	0.0000 u	> 100.00	-26.9947
	R2404693-002 20X	Fe (234.350 nm)	0.0063	6.70	114.2800
	R2404693-002 20X	K (766.491 nm)	1.1805	1.21	1103.3925
	R2404693-002 20X	Mg (279.078 nm)	6.2798	0.07	20491.9496
	R2404693-002 20X	Mn (257.610 nm)	0.0153	0.11	5144.2250
	R2404693-002 20X	Mo (202.032 nm)	0.0002 u	> 100.00	13.6395
	R2404693-002 20X	Na (588.995 nm)	26.3472	0.36	345183.9377
	R2404693-002 20X	Ni (230.299 nm)	-0.0005 u	85.63	18.8716
	R2404693-002 20X	Pb (220.353 nm)	0.0005	> 100.00	10.7042
	R2404693-002 20X	Sb (217.582 nm)	-0.0009 u	> 100.00	4.8333
	R2404693-002 20X	Se (196.026 nm)	-0.0001 u	> 100.00	4.7168
	R2404693-002 20X	Si (252.851 nm)	0.3126	0.27	1223.9091
	R2404693-002 20X	Sn (189.925 nm)	-0.0009 u	68.86	0.8683
	R2404693-002 20X	Sr (216.596 nm)	0.6303	0.17	11093.0165
	R2404693-002 20X	Ti (336.122 nm)	0.0005	35.94	228.6043
	R2404693-002 20X	Tl (190.794 nm)	0.0021	52.99	0.8673
	R2404693-002 20X	V (292.401 nm)	-0.0001 u	> 100.00	-45.4054
	R2404693-002 20X	Y (360.074 nm)	0.99	0.11	481356.68
	R2404693-002 20X	Y_R (360.074 nm)	0.98	0.11	480408.43
	R2404693-002 20X	Zn (213.857 nm)	0.0001	52.32	5.5462
6/10/2024 18:10:45	R2404693-003 10X	Ag (328.068 nm)	-0.0002 u	37.76	-223.2711

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404693-003 10X	Al (237.312 nm)	0.0032	15.51	20.1029
	R2404693-003 10X	As (188.980 nm)	0.0054	48.57	7.1537
	R2404693-003 10X	B (249.772 nm)	0.9673	0.23	31416.4549
	R2404693-003 10X	Ba (230.424 nm)	0.0409	0.40	2237.0570
	R2404693-003 10X	Be (313.107 nm)	0.0000 u	> 100.00	26.4601
	R2404693-003 10X	Ca (317.933 nm)	13.0236	0.20	466649.7154
	R2404693-003 10X	Cd (214.439 nm)	0.0001	34.30	8.4919
	R2404693-003 10X	Co (230.786 nm)	-0.0002 u	> 100.00	-12.5476
	R2404693-003 10X	Cr (267.716 nm)	0.0002	44.45	16.6048
	R2404693-003 10X	Cu (327.395 nm)	0.0002 u	> 100.00	-16.8569
	R2404693-003 10X	Fe (234.350 nm)	1.3924	0.15	25353.1086
	R2404693-003 10X	K (766.491 nm)	0.4624	4.43	315.4292
	R2404693-003 10X	Mg (279.078 nm)	24.5576	0.20	80222.1713
	R2404693-003 10X	Mn (257.610 nm)	0.0056	0.09	1888.1679
	R2404693-003 10X	Mo (202.032 nm)	0.0006	39.16	18.1832
	R2404693-003 10X	Na (588.995 nm)	29.4928	0.07	388021.5619
	R2404693-003 10X	Ni (230.299 nm)	0.0032	7.69	63.1900
	R2404693-003 10X	Pb (220.353 nm)	0.0007	26.57	11.5478
	R2404693-003 10X	Sb (217.582 nm)	0.0004 u	> 100.00	7.3889
	R2404693-003 10X	Se (196.026 nm)	-0.0014 u	> 100.00	3.7898
	R2404693-003 10X	Si (252.851 nm)	1.0576	0.22	4062.3062
	R2404693-003 10X	Sn (189.925 nm)	0.0003 u	> 100.00	3.6515
	R2404693-003 10X	Sr (216.596 nm)	0.2560	0.13	4505.5708
	R2404693-003 10X	Ti (336.122 nm)	0.0003	60.47	192.4378
	R2404693-003 10X	Tl (190.794 nm)	0.0021	79.07	0.8451
	R2404693-003 10X	V (292.401 nm)	0.0001 u	> 100.00	-38.3206
	R2404693-003 10X	Y (360.074 nm)	0.99	0.29	483472.32
	R2404693-003 10X	Y_R (360.074 nm)	0.99	0.29	482520.23
	R2404693-003 10X	Zn (213.857 nm)	0.0007	4.06	44.7725
6/10/2024 18:14:00	R2404693-006 20X	Ag (328.068 nm)	-0.0003 u	49.55	-231.6299
	R2404693-006 20X	Al (237.312 nm)	0.0015	58.07	16.0859
	R2404693-006 20X	As (188.980 nm)	-0.0004 u	> 100.00	-2.7291
	R2404693-006 20X	B (249.772 nm)	0.0972	0.12	3162.3077
	R2404693-006 20X	Ba (230.424 nm)	0.0005	7.84	38.4568
	R2404693-006 20X	Be (313.107 nm)	0.0000	60.75	29.2617
	R2404693-006 20X	Ca (317.933 nm)	33.2169	0.27	1185942.4943
	R2404693-006 20X	Cd (214.439 nm)	0.0001	67.89	5.4079
	R2404693-006 20X	Co (230.786 nm)	-0.0001 u	> 100.00	-11.5169
	R2404693-006 20X	Cr (267.716 nm)	0.0000 u	> 100.00	3.4339
	R2404693-006 20X	Cu (327.395 nm)	0.0009	32.52	10.1327
	R2404693-006 20X	Fe (234.350 nm)	0.0109	4.08	198.8869
	R2404693-006 20X	K (766.491 nm)	0.8854	3.66	779.5613
	R2404693-006 20X	Mg (279.078 nm)	4.0843	0.14	13317.3149
	R2404693-006 20X	Mn (257.610 nm)	0.0104	0.45	3481.4586
	R2404693-006 20X	Mo (202.032 nm)	0.0004	24.64	16.2578
	R2404693-006 20X	Na (588.995 nm)	3.1734	0.16	29593.8022
	R2404693-006 20X	Ni (230.299 nm)	0.0050	5.06	84.2428
	R2404693-006 20X	Pb (220.353 nm)	0.0005	66.72	10.7271
	R2404693-006 20X	Sb (217.582 nm)	-0.0022 u	78.60	2.5473
	R2404693-006 20X	Se (196.026 nm)	0.0002 u	> 100.00	4.9519
	R2404693-006 20X	Si (252.851 nm)	0.2818	0.47	1106.3118
	R2404693-006 20X	Sn (189.925 nm)	-0.0004 u	> 100.00	2.0517
	R2404693-006 20X	Sr (216.596 nm)	0.5630	0.26	9907.6113
	R2404693-006 20X	Ti (336.122 nm)	0.0003	46.28	203.9050
	R2404693-006 20X	Tl (190.794 nm)	0.0015	45.11	0.2977
	R2404693-006 20X	V (292.401 nm)	-0.0001 u	> 100.00	-44.2115
	R2404693-006 20X	Y (360.074 nm)	1.00	0.24	488674.79

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404693-006 20X	Y_R (360.074 nm)	1.00	0.24	487705.91
	R2404693-006 20X	Zn (213.857 nm)	0.0006	1.85	39.9676
6/10/2024 18:17:14	R2404693-008 20X	Ag (328.068 nm)	-0.0002 u	58.67	-224.2292
	R2404693-008 20X	Al (237.312 nm)	0.0050	19.50	24.5614
	R2404693-008 20X	As (188.980 nm)	-0.0005 u	> 100.00	-2.7986
	R2404693-008 20X	B (249.772 nm)	0.0145	1.41	475.2335
	R2404693-008 20X	Ba (230.424 nm)	0.0008	17.24	52.8324
	R2404693-008 20X	Be (313.107 nm)	0.0000	61.41	29.5121
	R2404693-008 20X	Ca (317.933 nm)	37.6695	0.48	1344548.2670
	R2404693-008 20X	Cd (214.439 nm)	0.0001	76.23	5.4655
	R2404693-008 20X	Co (230.786 nm)	-0.0002 u	44.07	-12.7915
	R2404693-008 20X	Cr (267.716 nm)	0.0001	20.14	10.9553
	R2404693-008 20X	Cu (327.395 nm)	0.0002	49.20	-18.9664
	R2404693-008 20X	Fe (234.350 nm)	0.3006	0.22	5473.7465
	R2404693-008 20X	K (766.491 nm)	0.5440	3.25	404.9093
	R2404693-008 20X	Mg (279.078 nm)	6.8916	0.43	22491.2961
	R2404693-008 20X	Mn (257.610 nm)	0.0045	0.98	1523.0228
	R2404693-008 20X	Mo (202.032 nm)	-0.0003 u	53.85	8.6193
	R2404693-008 20X	Na (588.995 nm)	5.5137	0.20	61465.0302
	R2404693-008 20X	Ni (230.299 nm)	0.0015	8.21	43.0169
	R2404693-008 20X	Pb (220.353 nm)	0.0006	> 100.00	10.8199
	R2404693-008 20X	Sb (217.582 nm)	0.0015	80.69	9.4494
	R2404693-008 20X	Se (196.026 nm)	-0.0011 u	> 100.00	3.9419
	R2404693-008 20X	Si (252.851 nm)	0.3142	0.34	1229.9918
	R2404693-008 20X	Sn (189.925 nm)	-0.0003 u	> 100.00	2.3520
	R2404693-008 20X	Sr (216.596 nm)	0.6504	0.59	11445.4306
	R2404693-008 20X	Ti (336.122 nm)	0.0005	27.65	225.5180
	R2404693-008 20X	Tl (190.794 nm)	0.0017 u	> 100.00	0.4423
	R2404693-008 20X	V (292.401 nm)	0.0000 u	> 100.00	-39.3535
	R2404693-008 20X	Y (360.074 nm)	1.00	0.11	486573.71
	R2404693-008 20X	Y_R (360.074 nm)	1.00	0.11	485594.39
	R2404693-008 20X	Zn (213.857 nm)	0.0009	6.52	60.1716
6/10/2024 18:20:29	R2404693-009 20X	Ag (328.068 nm)	-0.0002 u	43.75	-227.9258
	R2404693-009 20X	Al (237.312 nm)	0.0120	5.01	42.0000
	R2404693-009 20X	As (188.980 nm)	-0.0007 u	> 100.00	-3.2340
	R2404693-009 20X	B (249.772 nm)	0.2700	0.25	8772.9922
	R2404693-009 20X	Ba (230.424 nm)	0.0005	9.62	36.6693
	R2404693-009 20X	Be (313.107 nm)	0.0000	27.03	48.2690
	R2404693-009 20X	Ca (317.933 nm)	28.8714	0.38	1031154.9165
	R2404693-009 20X	Cd (214.439 nm)	0.0001	27.47	5.7139
	R2404693-009 20X	Co (230.786 nm)	0.0000 u	> 100.00	-10.0619
	R2404693-009 20X	Cr (267.716 nm)	0.0000 u	> 100.00	7.2629
	R2404693-009 20X	Cu (327.395 nm)	0.0001 u	> 100.00	-23.4083
	R2404693-009 20X	Fe (234.350 nm)	0.0340	1.71	618.7322
	R2404693-009 20X	K (766.491 nm)	1.3732	4.16	1314.9221
	R2404693-009 20X	Mg (279.078 nm)	4.4983	0.44	14670.3085
	R2404693-009 20X	Mn (257.610 nm)	0.0077	0.17	2593.7373
	R2404693-009 20X	Mo (202.032 nm)	0.0000 u	> 100.00	11.7745
	R2404693-009 20X	Na (588.995 nm)	6.9800	0.25	81434.0471
	R2404693-009 20X	Ni (230.299 nm)	0.0001 u	> 100.00	26.3108
	R2404693-009 20X	Pb (220.353 nm)	0.0005	80.02	10.4399
	R2404693-009 20X	Sb (217.582 nm)	0.0003 u	> 100.00	7.2187
	R2404693-009 20X	Se (196.026 nm)	-0.0010 u	> 100.00	4.0853
	R2404693-009 20X	Si (252.851 nm)	0.2503	0.19	986.5798
	R2404693-009 20X	Sn (189.925 nm)	0.0004 u	> 100.00	3.9999
	R2404693-009 20X	Sr (216.596 nm)	0.5357	0.39	9427.1840
	R2404693-009 20X	Ti (336.122 nm)	0.0006	1.31	238.9413

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404693-009 20X	Tl (190.794 nm)	0.0010 u	> 100.00	-0.2470
	R2404693-009 20X	V (292.401 nm)	-0.0001 u	> 100.00	-42.7126
	R2404693-009 20X	Y (360.074 nm)	1.00	0.11	487922.46
	R2404693-009 20X	Y_R (360.074 nm)	1.00	0.11	486953.31
	R2404693-009 20X	Zn (213.857 nm)	0.0003	19.18	18.9567
6/10/2024 18:23:42	PBW-439400	Ag (328.068 nm)	-0.0003 u	47.40	-228.9973
	PBW-439400	Al (237.312 nm)	0.0038	80.22	21.6956
	PBW-439400	As (188.980 nm)	0.0000 u	> 100.00	-2.0491
	PBW-439400	B (249.772 nm)	0.0022	3.97	76.4692
	PBW-439400	Ba (230.424 nm)	-0.0001 u	32.17	3.8714
	PBW-439400	Be (313.107 nm)	0.0000	81.06	26.1500
	PBW-439400	Ca (317.933 nm)	0.0044	6.33	2901.2828
	PBW-439400	Cd (214.439 nm)	0.0002	24.45	11.3249
	PBW-439400	Co (230.786 nm)	-0.0002 u	> 100.00	-13.5440
	PBW-439400	Cr (267.716 nm)	0.0003	68.60	20.9027
	PBW-439400	Cu (327.395 nm)	0.0002	62.81	-17.2534
	PBW-439400	Fe (234.350 nm)	0.0019	3.53	34.6602
	PBW-439400	K (766.491 nm)	-0.0167 u	> 100.00	-210.3927
	PBW-439400	Mg (279.078 nm)	0.0008 u	> 100.00	-27.1721
	PBW-439400	Mn (257.610 nm)	0.0000	22.88	30.7420
	PBW-439400	Mo (202.032 nm)	0.0002	85.21	13.7872
	PBW-439400	Na (588.995 nm)	0.0612	7.61	-12788.8365
	PBW-439400	Ni (230.299 nm)	-0.0005 u	52.60	19.1048
	PBW-439400	Pb (220.353 nm)	0.0004 u	> 100.00	10.0661
	PBW-439400	Sb (217.582 nm)	0.0048	41.01	15.5254
	PBW-439400	Se (196.026 nm)	0.0007 u	> 100.00	5.3118
	PBW-439400	Si (252.851 nm)	0.0068	26.22	58.6031
	PBW-439400	Sn (189.925 nm)	-0.0002 u	> 100.00	2.6062
	PBW-439400	Sr (216.596 nm)	0.0002	22.07	2.9316
	PBW-439400	Ti (336.122 nm)	-0.0001 u	> 100.00	135.9163
	PBW-439400	Tl (190.794 nm)	-0.0008 u	> 100.00	-2.0060
	PBW-439400	V (292.401 nm)	0.0000 u	> 100.00	-42.1710
	PBW-439400	Y (360.074 nm)	1.02	0.36	500277.12
	PBW-439400	Y_R (360.074 nm)	1.02	0.36	499310.62
	PBW-439400	Zn (213.857 nm)	-0.0002 u	9.93	-11.9348
6/10/2024 18:26:56	LCSW-439400	Ag (328.068 nm)	0.0495	0.15	2586.8511
	LCSW-439400	Al (237.312 nm)	1.9666	0.15	4873.6423
	LCSW-439400	As (188.980 nm)	0.0392	1.23	64.5297
	LCSW-439400	B (249.772 nm)	0.9773	0.13	31740.4733
	LCSW-439400	Ba (230.424 nm)	1.9178	0.35	104429.1937
	LCSW-439400	Be (313.107 nm)	0.0485	0.22	53221.3499
	LCSW-439400	Ca (317.933 nm)	2.0163	0.26	74563.1334
	LCSW-439400	Cd (214.439 nm)	0.0506	0.11	2886.7157
	LCSW-439400	Co (230.786 nm)	0.4939	0.25	8946.6485
	LCSW-439400	Cr (267.716 nm)	0.2008	0.47	10445.7170
	LCSW-439400	Cu (327.395 nm)	0.2486	0.10	10886.8614
	LCSW-439400	Fe (234.350 nm)	1.0107	0.25	18403.1763
	LCSW-439400	K (766.491 nm)	18.8047	0.33	20444.2187
	LCSW-439400	Mg (279.078 nm)	1.9471	0.28	6333.1410
	LCSW-439400	Mn (257.610 nm)	0.4843	0.23	161764.8789
	LCSW-439400	Mo (202.032 nm)	0.5006	0.27	5237.3928
	LCSW-439400	Na (588.995 nm)	19.7976	0.25	255988.5643
	LCSW-439400	Ni (230.299 nm)	0.5125	0.28	6043.7099
	LCSW-439400	Pb (220.353 nm)	0.5164	0.16	2703.7629
	LCSW-439400	Sb (217.582 nm)	0.4859	0.62	909.2174
	LCSW-439400	Se (196.026 nm)	0.9706	0.47	712.2639
	LCSW-439400	Si (252.851 nm)	-0.0118 u	8.24	-12.2501

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	LCSW-439400	Sn (189.925 nm)	4.8939	0.17	12053.6415
	LCSW-439400	Sr (216.596 nm)	1.9377	0.26	34101.2953
	LCSW-439400	Ti (336.122 nm)	0.4924	0.08	71288.7535
	LCSW-439400	Tl (190.794 nm)	1.9390	0.24	1893.5319
	LCSW-439400	V (292.401 nm)	0.4857	0.21	18374.4286
	LCSW-439400	Y (360.074 nm)	1.00	0.38	489975.56
	LCSW-439400	Y_R (360.074 nm)	1.00	0.38	489010.44
	LCSW-439400	Zn (213.857 nm)	0.5001	0.15	32009.4829
6/10/2024 18:30:10	DLCSW-439400	Ag (328.068 nm)	0.0499	0.24	2614.5038
	DLCSW-439400	Al (237.312 nm)	1.9780	0.16	4901.6973
	DLCSW-439400	As (188.980 nm)	0.0367	2.96	60.2473
	DLCSW-439400	B (249.772 nm)	0.9869	0.12	32051.2226
	DLCSW-439400	Ba (230.424 nm)	1.9303	0.42	105112.2062
	DLCSW-439400	Be (313.107 nm)	0.0489	0.23	53638.8926
	DLCSW-439400	Ca (317.933 nm)	2.0296	0.27	75036.6066
	DLCSW-439400	Cd (214.439 nm)	0.0510	0.32	2904.8407
	DLCSW-439400	Co (230.786 nm)	0.4974	0.18	9009.3178
	DLCSW-439400	Cr (267.716 nm)	0.2023	0.19	10519.8431
	DLCSW-439400	Cu (327.395 nm)	0.2503	0.20	10961.2341
	DLCSW-439400	Fe (234.350 nm)	1.0117	0.24	18421.1607
	DLCSW-439400	K (766.491 nm)	18.9581	0.25	20612.5511
	DLCSW-439400	Mg (279.078 nm)	1.9592	0.17	6372.8676
	DLCSW-439400	Mn (257.610 nm)	0.4880	0.25	162983.3917
	DLCSW-439400	Mo (202.032 nm)	0.5033	0.38	5265.8736
	DLCSW-439400	Na (588.995 nm)	19.8971	0.30	257343.8523
	DLCSW-439400	Ni (230.299 nm)	0.5150	0.28	6073.2807
	DLCSW-439400	Pb (220.353 nm)	0.5210	0.27	2727.8383
	DLCSW-439400	Sb (217.582 nm)	0.4882	0.22	913.4898
	DLCSW-439400	Se (196.026 nm)	0.9797	0.44	718.8980
	DLCSW-439400	Si (252.851 nm)	-0.0125 u	12.56	-15.0305
	DLCSW-439400	Sn (189.925 nm)	4.8964	0.28	12059.7121
	DLCSW-439400	Sr (216.596 nm)	1.9397	0.30	34136.7060
	DLCSW-439400	Ti (336.122 nm)	0.4935	0.06	71447.5460
	DLCSW-439400	Tl (190.794 nm)	1.9521	0.37	1906.3195
	DLCSW-439400	V (292.401 nm)	0.4893	0.23	18509.4985
	DLCSW-439400	Y (360.074 nm)	1.00	0.33	489087.11
	DLCSW-439400	Y_R (360.074 nm)	1.00	0.33	488124.67
	DLCSW-439400	Zn (213.857 nm)	0.5035	0.13	32228.3692
6/10/2024 18:33:24	Continuing Calibration Verification	Ag (328.068 nm)	0.5037	0.07	28322.0367
	Continuing Calibration Verification	Al (237.312 nm)	9.8131	0.10	24269.7782
	Continuing Calibration Verification	As (188.980 nm)	0.9735	0.29	1648.9220
	Continuing Calibration Verification	B (249.772 nm)	2.4376	0.20	79158.6049
	Continuing Calibration Verification	Ba (230.424 nm)	9.6526	0.50	525566.1247
	Continuing Calibration Verification	Be (313.107 nm)	0.2425	0.24	266134.7492
	Continuing Calibration Verification	Ca (317.933 nm)	25.5542	0.24	912995.7300
	Continuing Calibration Verification	Cd (214.439 nm)	0.4995	0.36	28456.3494
	Continuing Calibration Verification	Co (230.786 nm)	2.4869	0.34	45087.2014
	Continuing Calibration Verification	Cr (267.716 nm)	0.5120	0.32	26619.2067
	Continuing Calibration Verification	Cu (327.395 nm)	1.2267	0.28	53822.9298
	Continuing Calibration Verification	Fe (234.350 nm)	4.9942	0.21	90934.7297
	Continuing Calibration Verification	K (766.491 nm)	24.0262	0.19	26174.2462
	Continuing Calibration Verification	Mg (279.078 nm)	25.1482	0.25	82152.5026
	Continuing Calibration Verification	Mn (257.610 nm)	0.7376	0.23	246350.2428
	Continuing Calibration Verification	Mo (202.032 nm)	2.6129	0.32	27287.6904
	Continuing Calibration Verification	Na (588.995 nm)	25.2196	0.38	329827.9403
	Continuing Calibration Verification	Ni (230.299 nm)	2.0501	0.24	24099.1071
	Continuing Calibration Verification	Pb (220.353 nm)	0.5087	0.52	2663.5619

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Verification	Sb (217.582 nm)	4.7997	0.19	8922.3994
	Continuing Calibration Verification	Se (196.026 nm)	0.4776	0.58	352.9323
	Continuing Calibration Verification	Si (252.851 nm)	9.9818	0.37	38066.8859
	Continuing Calibration Verification	Sn (189.925 nm)	4.9764	0.10	12256.8601
	Continuing Calibration Verification	Sr (216.596 nm)	2.4380	0.40	42907.4204
	Continuing Calibration Verification	Ti (336.122 nm)	2.5196	0.10	364174.4339
	Continuing Calibration Verification	Tl (190.794 nm)	0.9779	0.41	954.3971
	Continuing Calibration Verification	V (292.401 nm)	2.4991	0.19	94706.8411
	Continuing Calibration Verification	Y (360.074 nm)	0.97	0.34	475768.25
	Continuing Calibration Verification	Y_R (360.074 nm)	0.97	0.34	474830.46
	Continuing Calibration Verification	Zn (213.857 nm)	0.9828	0.22	62910.2750
6/10/2024 18:36:38	Continuing Calibration Blank	Ag (328.068 nm)	-0.0001 u	43.88	-221.9603
	Continuing Calibration Blank	Al (237.312 nm)	0.0028	10.86	19.2199
	Continuing Calibration Blank	As (188.980 nm)	-0.0003 u	> 100.00	-2.5135
	Continuing Calibration Blank	B (249.772 nm)	0.0020	17.82	69.7265
	Continuing Calibration Blank	Ba (230.424 nm)	0.0007	11.20	49.1371
	Continuing Calibration Blank	Be (313.107 nm)	0.0000	38.06	41.2670
	Continuing Calibration Blank	Ca (317.933 nm)	0.0078	4.98	3019.7737
	Continuing Calibration Blank	Cd (214.439 nm)	0.0001	30.08	9.0008
	Continuing Calibration Blank	Co (230.786 nm)	0.0001 u	> 100.00	-7.7143
	Continuing Calibration Blank	Cr (267.716 nm)	0.0001	> 100.00	11.8256
	Continuing Calibration Blank	Cu (327.395 nm)	0.0004	91.45	-8.8053
	Continuing Calibration Blank	Fe (234.350 nm)	0.0024	30.31	42.5970
	Continuing Calibration Blank	K (766.491 nm)	0.0305	24.21	-158.5539
	Continuing Calibration Blank	Mg (279.078 nm)	0.0027	38.53	-21.0331
	Continuing Calibration Blank	Mn (257.610 nm)	0.0001	3.47	47.6450
	Continuing Calibration Blank	Mo (202.032 nm)	0.0035	31.48	48.8744
	Continuing Calibration Blank	Na (588.995 nm)	0.0462	9.46	-12994.2603
	Continuing Calibration Blank	Ni (230.299 nm)	0.0004 u	> 100.00	29.5761
	Continuing Calibration Blank	Pb (220.353 nm)	0.0002 u	> 100.00	8.9449
	Continuing Calibration Blank	Sb (217.582 nm)	0.0047	7.86	15.2520
	Continuing Calibration Blank	Se (196.026 nm)	-0.0006 u	> 100.00	4.3324
	Continuing Calibration Blank	Si (252.851 nm)	0.0009 u	> 100.00	36.0300
	Continuing Calibration Blank	Sn (189.925 nm)	0.0011	21.12	5.7344
	Continuing Calibration Blank	Sr (216.596 nm)	0.0003	74.31	5.2352
	Continuing Calibration Blank	Ti (336.122 nm)	0.0026	41.62	535.7307
	Continuing Calibration Blank	Tl (190.794 nm)	0.0007	55.34	-0.4858
	Continuing Calibration Blank	V (292.401 nm)	-0.0001 u	> 100.00	-43.2231
	Continuing Calibration Blank	Y (360.074 nm)	1.01	0.29	495448.73
	Continuing Calibration Blank	Y_R (360.074 nm)	1.01	0.29	494479.98
	Continuing Calibration Blank	Zn (213.857 nm)	0.0010	2.05	64.7724
6/10/2024 18:39:52	R2404693-011 10X	Ag (328.068 nm)	-0.0001 u	39.84	-222.2059
	R2404693-011 10X	Al (237.312 nm)	0.0062	45.58	27.6807
	R2404693-011 10X	As (188.980 nm)	0.0002 u	> 100.00	-1.7177
	R2404693-011 10X	B (249.772 nm)	0.0641	0.41	2088.1296
	R2404693-011 10X	Ba (230.424 nm)	0.0087	1.15	486.0927
	R2404693-011 10X	Be (313.107 nm)	0.0000	86.15	30.6602
	R2404693-011 10X	Ca (317.933 nm)	26.1765	0.06	935162.9840
	R2404693-011 10X	Cd (214.439 nm)	0.0001	17.48	7.1523
	R2404693-011 10X	Co (230.786 nm)	-0.0001 u	> 100.00	-11.7705
	R2404693-011 10X	Cr (267.716 nm)	0.0000 u	> 100.00	6.7563
	R2404693-011 10X	Cu (327.395 nm)	0.0003	85.49	-13.9408
	R2404693-011 10X	Fe (234.350 nm)	0.5293	0.04	9636.5866
	R2404693-011 10X	K (766.491 nm)	3.9655	0.81	4159.7136
	R2404693-011 10X	Mg (279.078 nm)	14.7715	0.05	48242.1963
	R2404693-011 10X	Mn (257.610 nm)	0.0029	1.52	973.2607
	R2404693-011 10X	Mo (202.032 nm)	0.0008	14.89	20.2957

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404693-011 10X	Na (588.995 nm)	27.3875	0.30	359350.1086
	R2404693-011 10X	Ni (230.299 nm)	0.0055	2.27	89.5096
	R2404693-011 10X	Pb (220.353 nm)	0.0010	> 100.00	12.9864
	R2404693-011 10X	Sb (217.582 nm)	0.0003 u	> 100.00	7.2020
	R2404693-011 10X	Se (196.026 nm)	0.0003 u	> 100.00	5.0134
	R2404693-011 10X	Si (252.851 nm)	0.6908	0.00	2664.9195
	R2404693-011 10X	Sn (189.925 nm)	-0.0001 u	> 100.00	2.7960
	R2404693-011 10X	Sr (216.596 nm)	0.8456	0.07	14882.0562
	R2404693-011 10X	Ti (336.122 nm)	0.0011	37.37	317.5331
	R2404693-011 10X	Tl (190.794 nm)	0.0016 u	> 100.00	0.3730
	R2404693-011 10X	V (292.401 nm)	0.0000 u	> 100.00	-39.8507
	R2404693-011 10X	Y (360.074 nm)	0.99	0.21	482498.94
	R2404693-011 10X	Y_R (360.074 nm)	0.99	0.21	481536.72
	R2404693-011 10X	Zn (213.857 nm)	0.0003	26.50	18.6321
6/10/2024 18:43:06	R2404693-011 50X	Ag (328.068 nm)	-0.0001 u	95.52	-221.4014
	R2404693-011 50X	Al (237.312 nm)	0.0037	24.43	21.3725
	R2404693-011 50X	As (188.980 nm)	-0.0011 u	53.30	-3.9128
	R2404693-011 50X	B (249.772 nm)	0.0131	0.83	430.2695
	R2404693-011 50X	Ba (230.424 nm)	0.0016	4.50	100.7925
	R2404693-011 50X	Be (313.107 nm)	0.0000	88.35	27.4677
	R2404693-011 50X	Ca (317.933 nm)	5.2586	0.28	190057.3983
	R2404693-011 50X	Cd (214.439 nm)	0.0001	71.15	5.3784
	R2404693-011 50X	Co (230.786 nm)	0.0001 u	> 100.00	-8.3725
	R2404693-011 50X	Cr (267.716 nm)	0.0000 u	> 100.00	4.1970
	R2404693-011 50X	Cu (327.395 nm)	0.0001 u	> 100.00	-22.6230
	R2404693-011 50X	Fe (234.350 nm)	0.1066	0.08	1940.8183
	R2404693-011 50X	K (766.491 nm)	0.7585	1.62	640.3689
	R2404693-011 50X	Mg (279.078 nm)	2.9540	0.27	9623.7791
	R2404693-011 50X	Mn (257.610 nm)	0.0006	0.44	215.2242
	R2404693-011 50X	Mo (202.032 nm)	0.0004	11.19	16.2759
	R2404693-011 50X	Na (588.995 nm)	5.3972	0.15	59878.6913
	R2404693-011 50X	Ni (230.299 nm)	0.0006 u	> 100.00	32.2136
	R2404693-011 50X	Pb (220.353 nm)	0.0003 u	> 100.00	9.6841
	R2404693-011 50X	Sb (217.582 nm)	0.0003 u	> 100.00	7.1320
	R2404693-011 50X	Se (196.026 nm)	0.0011 u	> 100.00	5.5738
	R2404693-011 50X	Si (252.851 nm)	0.1529	1.41	615.2549
	R2404693-011 50X	Sn (189.925 nm)	-0.0002 u	> 100.00	2.4043
	R2404693-011 50X	Sr (216.596 nm)	0.1704	0.26	2998.4505
	R2404693-011 50X	Ti (336.122 nm)	0.0003	75.59	203.5622
	R2404693-011 50X	Tl (190.794 nm)	0.0009 u	> 100.00	-0.3584
	R2404693-011 50X	V (292.401 nm)	-0.0001 u	> 100.00	-44.1105
	R2404693-011 50X	Y (360.074 nm)	1.01	0.33	493497.91
	R2404693-011 50X	Y_R (360.074 nm)	1.01	0.33	492501.70
	R2404693-011 50X	Zn (213.857 nm)	0.0000 u	> 100.00	-0.1435
6/10/2024 18:46:20	Continuing Calibration Verification	Ag (328.068 nm)	0.5042	0.15	28349.3391
	Continuing Calibration Verification	Al (237.312 nm)	9.8041	0.07	24247.5743
	Continuing Calibration Verification	As (188.980 nm)	0.9705	0.23	1643.7857
	Continuing Calibration Verification	B (249.772 nm)	2.4338	0.18	79033.8417
	Continuing Calibration Verification	Ba (230.424 nm)	9.6445	0.06	525121.2493
	Continuing Calibration Verification	Be (313.107 nm)	0.2422	0.33	265865.9245
	Continuing Calibration Verification	Ca (317.933 nm)	25.5493	0.36	912820.0215
	Continuing Calibration Verification	Cd (214.439 nm)	0.4984	0.42	28395.9216
	Continuing Calibration Verification	Co (230.786 nm)	2.4746	0.24	44862.8050
	Continuing Calibration Verification	Cr (267.716 nm)	0.5124	0.27	26639.7331
	Continuing Calibration Verification	Cu (327.395 nm)	1.2241	0.25	53705.5099
	Continuing Calibration Verification	Fe (234.350 nm)	4.9897	0.29	90852.8431
	Continuing Calibration Verification	K (766.491 nm)	24.0460	0.33	26195.9821

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Verification	Mg (279.078 nm)	25.1427	0.34	82134.4833
	Continuing Calibration Verification	Mn (257.610 nm)	0.7371	0.30	246191.0603
	Continuing Calibration Verification	Mo (202.032 nm)	2.6118	0.39	27276.1931
	Continuing Calibration Verification	Na (588.995 nm)	25.2992	0.41	330911.9041
	Continuing Calibration Verification	Ni (230.299 nm)	2.0487	0.25	24082.3553
	Continuing Calibration Verification	Pb (220.353 nm)	0.5088	0.23	2664.3440
	Continuing Calibration Verification	Sb (217.582 nm)	4.7940	0.19	8911.7725
	Continuing Calibration Verification	Se (196.026 nm)	0.4775	0.55	352.8030
	Continuing Calibration Verification	Si (252.851 nm)	9.9930	0.37	38109.5800
	Continuing Calibration Verification	Sn (189.925 nm)	4.9745	0.27	12252.1082
	Continuing Calibration Verification	Sr (216.596 nm)	2.4330	0.34	42819.2999
	Continuing Calibration Verification	Ti (336.122 nm)	2.5179	0.16	363933.5421
	Continuing Calibration Verification	Tl (190.794 nm)	0.9749	0.06	951.4211
	Continuing Calibration Verification	V (292.401 nm)	2.4992	0.30	94710.5784
	Continuing Calibration Verification	Y (360.074 nm)	0.97	0.43	475221.11
	Continuing Calibration Verification	Y_R (360.074 nm)	0.97	0.43	474258.23
	Continuing Calibration Verification	Zn (213.857 nm)	0.9821	0.26	62861.7373
6/10/2024 18:49:34	Continuing Calibration Blank	Ag (328.068 nm)	-0.0002 u	36.87	-224.9371
	Continuing Calibration Blank	Al (237.312 nm)	0.0041	40.59	22.4691
	Continuing Calibration Blank	As (188.980 nm)	-0.0003 u	> 100.00	-2.5849
	Continuing Calibration Blank	B (249.772 nm)	0.0018	19.96	63.6873
	Continuing Calibration Blank	Ba (230.424 nm)	0.0006	6.78	45.1084
	Continuing Calibration Blank	Be (313.107 nm)	0.0000	34.99	53.0137
	Continuing Calibration Blank	Ca (317.933 nm)	0.0079	1.14	3025.4698
	Continuing Calibration Blank	Cd (214.439 nm)	0.0001	42.72	9.2115
	Continuing Calibration Blank	Co (230.786 nm)	0.0000 u	> 100.00	-9.9258
	Continuing Calibration Blank	Cr (267.716 nm)	0.0002	> 100.00	13.8996
	Continuing Calibration Blank	Cu (327.395 nm)	0.0002	45.90	-16.9273
	Continuing Calibration Blank	Fe (234.350 nm)	0.0023	29.69	41.0475
	Continuing Calibration Blank	K (766.491 nm)	0.0557	7.24	-130.9054
	Continuing Calibration Blank	Mg (279.078 nm)	0.0035	16.13	-18.4905
	Continuing Calibration Blank	Mn (257.610 nm)	0.0001	31.54	43.7649
	Continuing Calibration Blank	Mo (202.032 nm)	0.0035	37.53	48.6117
	Continuing Calibration Blank	Na (588.995 nm)	0.0390	11.32	-13091.4258
	Continuing Calibration Blank	Ni (230.299 nm)	-0.0001 u	> 100.00	24.0495
	Continuing Calibration Blank	Pb (220.353 nm)	0.0002	79.06	8.8100
	Continuing Calibration Blank	Sb (217.582 nm)	0.0035	54.27	13.0802
	Continuing Calibration Blank	Se (196.026 nm)	0.0006 u	> 100.00	5.2244
	Continuing Calibration Blank	Si (252.851 nm)	0.0002 u	> 100.00	33.5842
	Continuing Calibration Blank	Sn (189.925 nm)	0.0011	60.87	5.6579
	Continuing Calibration Blank	Sr (216.596 nm)	0.0003	39.46	5.2887
	Continuing Calibration Blank	Ti (336.122 nm)	0.0026	42.90	530.9828
	Continuing Calibration Blank	Tl (190.794 nm)	0.0009 u	> 100.00	-0.3650
	Continuing Calibration Blank	V (292.401 nm)	0.0002	87.30	-33.6917
	Continuing Calibration Blank	Y (360.074 nm)	1.01	0.18	495047.07
	Continuing Calibration Blank	Y_R (360.074 nm)	1.01	0.18	494071.89
	Continuing Calibration Blank	Zn (213.857 nm)	0.0010	5.21	65.5935
6/10/2024 18:52:47	Contract Required Detection Limit	Ag (328.068 nm)	0.0086	1.52	272.9109
	Contract Required Detection Limit	Al (237.312 nm)	0.1963	0.59	497.4598
	Contract Required Detection Limit	As (188.980 nm)	0.0179	2.92	28.3853
	Contract Required Detection Limit	B (249.772 nm)	0.1919	0.15	6236.9924
	Contract Required Detection Limit	Ba (230.424 nm)	0.1947	0.26	10611.5255
	Contract Required Detection Limit	Be (313.107 nm)	0.0049	0.39	5421.4102
	Contract Required Detection Limit	Ca (317.933 nm)	1.0417	0.27	39849.5218
	Contract Required Detection Limit	Cd (214.439 nm)	0.0105	0.95	600.8929
	Contract Required Detection Limit	Co (230.786 nm)	0.0500	0.54	897.1176
	Contract Required Detection Limit	Cr (267.716 nm)	0.0096	1.18	505.1797

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Contract Required Detection Limit	Cu (327.395 nm)	0.0245	0.75	1048.5992
	Contract Required Detection Limit	Fe (234.350 nm)	0.1060	0.92	1928.9703
	Contract Required Detection Limit	K (766.491 nm)	0.9624	5.56	864.1420
	Contract Required Detection Limit	Mg (279.078 nm)	1.0073	0.23	3261.9116
	Contract Required Detection Limit	Mn (257.610 nm)	0.0140	0.41	4678.7197
	Contract Required Detection Limit	Mo (202.032 nm)	0.0261	0.92	284.0450
	Contract Required Detection Limit	Na (588.995 nm)	1.0335	0.57	451.6424
	Contract Required Detection Limit	Ni (230.299 nm)	0.0361	1.38	449.7351
	Contract Required Detection Limit	Pb (220.353 nm)	0.0111	10.04	65.7872
	Contract Required Detection Limit	Sb (217.582 nm)	0.0608	1.93	119.6021
	Contract Required Detection Limit	Se (196.026 nm)	0.0094	21.04	11.6443
	Contract Required Detection Limit	Si (252.851 nm)	0.0544	1.32	239.8808
	Contract Required Detection Limit	Sn (189.925 nm)	0.5001	0.29	1234.5200
	Contract Required Detection Limit	Sr (216.596 nm)	0.0985	0.39	1732.2655
	Contract Required Detection Limit	Ti (336.122 nm)	0.0499	1.11	7362.2643
	Contract Required Detection Limit	Tl (190.794 nm)	0.0221	8.77	20.3547
	Contract Required Detection Limit	V (292.401 nm)	0.0494	0.62	1831.2096
	Contract Required Detection Limit	Y (360.074 nm)	1.01	0.51	493723.62
	Contract Required Detection Limit	Y_R (360.074 nm)	1.01	0.51	492637.06
	Contract Required Detection Limit	Zn (213.857 nm)	0.0174	0.52	1114.4796
6/10/2024 18:56:01	Interference Check Solution A	Ag (328.068 nm)	-0.0003 u	26.62	-231.4626
	Interference Check Solution A	Al (237.312 nm)	251.4539 o	0.16	621596.4842
	Interference Check Solution A	As (188.980 nm)	0.0015 u	> 100.00	0.4893
	Interference Check Solution A	B (249.772 nm)	0.0935	0.22	3042.6702
	Interference Check Solution A	Ba (230.424 nm)	-0.0005 u	26.53	-16.6486
	Interference Check Solution A	Be (313.107 nm)	0.0002	1.48	237.3497
	Interference Check Solution A	Ca (317.933 nm)	237.7505 o	0.37	8471519.4695
	Interference Check Solution A	Cd (214.439 nm)	-0.0008 u	13.35	-41.8141
	Interference Check Solution A	Co (230.786 nm)	-0.0004 u	54.23	-16.7571
	Interference Check Solution A	Cr (267.716 nm)	0.0036	4.54	194.0206
	Interference Check Solution A	Cu (327.395 nm)	0.0086	2.02	349.7686
	Interference Check Solution A	Fe (234.350 nm)	93.8609 o	0.35	1709024.8100
	Interference Check Solution A	K (766.491 nm)	0.0126	> 100.00	-178.2437
	Interference Check Solution A	Mg (279.078 nm)	262.0895 o	0.34	856456.0798
	Interference Check Solution A	Mn (257.610 nm)	0.0011	1.70	399.0437
	Interference Check Solution A	Mo (202.032 nm)	0.0012	33.45	24.4377
	Interference Check Solution A	Na (588.995 nm)	-0.0392 u	9.66	-14156.1347
	Interference Check Solution A	Ni (230.299 nm)	0.0032	8.15	63.2319
	Interference Check Solution A	Pb (220.353 nm)	0.0035	17.60	26.1075
	Interference Check Solution A	Sb (217.582 nm)	-0.0005 u	> 100.00	5.6970
	Interference Check Solution A	Se (196.026 nm)	-0.0025 u	> 100.00	2.9236
	Interference Check Solution A	Si (252.851 nm)	0.0454	3.72	205.7032
	Interference Check Solution A	Sn (189.925 nm)	0.0018	50.95	7.5015
	Interference Check Solution A	Sr (216.596 nm)	0.0114	2.47	200.6220
	Interference Check Solution A	Ti (336.122 nm)	0.0026	12.89	537.4264
	Interference Check Solution A	Tl (190.794 nm)	0.0021	12.17	0.8028
	Interference Check Solution A	V (292.401 nm)	0.0016	11.75	19.7521
	Interference Check Solution A	Y (360.074 nm)	0.89	0.47	435183.47
	Interference Check Solution A	Y_R (360.074 nm)	0.89	0.48	434212.53
	Interference Check Solution A	Zn (213.857 nm)	0.0134 K	0.44	861.0878 K
6/10/2024 18:59:15	Interference Check Solution AB	Ag (328.068 nm)	0.2005	0.09	11145.6167
	Interference Check Solution AB	Al (237.312 nm)	253.1771 o	0.15	625856.1909
	Interference Check Solution AB	As (188.980 nm)	0.0991	3.60	166.0573
	Interference Check Solution AB	B (249.772 nm)	0.0898	0.20	2921.7580
	Interference Check Solution AB	Ba (230.424 nm)	0.5038	0.14	27439.2817
	Interference Check Solution AB	Be (313.107 nm)	0.5072	0.30	556694.8978
	Interference Check Solution AB	Ca (317.933 nm)	238.9601 o	0.38	8514606.0133

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Interference Check Solution AB	Cd (214.439 nm)	0.9860	0.33	56175.5292
	Interference Check Solution AB	Co (230.786 nm)	0.4891	0.30	8859.1078
	Interference Check Solution AB	Cr (267.716 nm)	0.5219	0.30	27132.9711
	Interference Check Solution AB	Cu (327.395 nm)	0.5469	0.12	23981.0422
	Interference Check Solution AB	Fe (234.350 nm)	94.5566 o	0.30	1721691.8895
	Interference Check Solution AB	K (766.491 nm)	-0.0523 u	32.53	-249.4275
	Interference Check Solution AB	Mg (279.078 nm)	263.7808 o	0.34	861982.8592
	Interference Check Solution AB	Mn (257.610 nm)	0.4998	0.26	166915.8688
	Interference Check Solution AB	Mo (202.032 nm)	0.0009	26.48	21.3979
	Interference Check Solution AB	Na (588.995 nm)	-0.0485 u	9.15	-14283.1933
	Interference Check Solution AB	Ni (230.299 nm)	0.9959	0.13	11719.8665
	Interference Check Solution AB	Pb (220.353 nm)	0.0515	2.31	276.8776
	Interference Check Solution AB	Sb (217.582 nm)	0.6087	0.94	1137.3313
	Interference Check Solution AB	Se (196.026 nm)	0.0435	9.43	36.5130
	Interference Check Solution AB	Si (252.851 nm)	0.0957	1.80	397.3868
	Interference Check Solution AB	Sn (189.925 nm)	0.0020	22.92	7.8236
	Interference Check Solution AB	Sr (216.596 nm)	0.0113	0.16	198.5867
	Interference Check Solution AB	Ti (336.122 nm)	0.0025	10.96	522.3898
	Interference Check Solution AB	Tl (190.794 nm)	0.0984	1.55	94.9478
	Interference Check Solution AB	V (292.401 nm)	0.5224	0.18	19763.2504
	Interference Check Solution AB	Y (360.074 nm)	0.89	0.32	435840.75
	Interference Check Solution AB	Y_R (360.074 nm)	0.89	0.32	434977.32
	Interference Check Solution AB	Zn (213.857 nm)	1.0376	0.21	66414.4006
6/10/2024 19:02:29	HLCCV2	Ag (328.068 nm)	2.1606 o	0.09	122185.6129
	HLCCV2	Al (237.312 nm)	512.0047 o	0.19	1265667.9748
	HLCCV2	As (188.980 nm)	4.1462 o	0.12	7029.5070
	HLCCV2	B (249.772 nm)	10.5892	0.16	343851.3092
	HLCCV2	Ba (230.424 nm)	36.8119 o	0.31	2004300.6744
	HLCCV2	Be (313.107 nm)	1.0183 o	0.25	1117682.6045
	HLCCV2	Ca (317.933 nm)	236.1833 o	0.33	8415692.4356
	HLCCV2	Cd (214.439 nm)	1.9084 o	0.34	108726.0250
	HLCCV2	Co (230.786 nm)	9.3587 o	0.23	169696.7914
	HLCCV2	Cr (267.716 nm)	10.0511 o	0.33	522472.8422
	HLCCV2	Cu (327.395 nm)	5.3917 o	0.09	236655.5274
	HLCCV2	Fe (234.350 nm)	47.7280 o	0.31	869033.8658
	HLCCV2	K (766.491 nm)	169.0364 Qo	0.22	185308.1332 Q
	HLCCV2	Mg (279.078 nm)	517.2142 o	0.32	1690181.4227
	HLCCV2	Mn (257.610 nm)	9.5856 o	0.38	3201156.3039
	HLCCV2	Mo (202.032 nm)	10.2680 o	0.30	107196.4646
	HLCCV2	Na (588.995 nm)	214.3181 o	0.24	2905043.9939
	HLCCV2	Ni (230.299 nm)	7.4546 o	0.22	87563.4679
	HLCCV2	Pb (220.353 nm)	9.7642 o	0.35	50984.4605
	HLCCV2	Sb (217.582 nm)	0.0165	5.09	37.1466
	HLCCV2	Se (196.026 nm)	2.0475 o	0.70	1497.2196
	HLCCV2	Si (252.851 nm)	-3.0464 Qu	0.44	-11575.3345 Q
	HLCCV2	Sn (189.925 nm)	-0.0089 u	12.46	-18.9895
	HLCCV2	Sr (216.596 nm)	9.6931 o	0.36	170592.8171
	HLCCV2	Ti (336.122 nm)	10.1187 o	0.18	1462071.0040
	HLCCV2	Tl (190.794 nm)	3.6749 o	0.21	3589.8014
	HLCCV2	V (292.401 nm)	10.0634 o	0.27	381485.6246
	HLCCV2	Y (360.074 nm)	0.85	0.35	412888.19
	HLCCV2	Y_R (360.074 nm)	0.84	0.35	412030.73
	HLCCV2	Zn (213.857 nm)	4.1471 o	0.22	265448.1897
6/10/2024 19:05:44	HLCCV3	Ag (328.068 nm)	-0.0003 u	36.61	-232.1449
	HLCCV3	Al (237.312 nm)	0.0235	5.18	70.4120
	HLCCV3	As (188.980 nm)	0.0030	67.32	2.9978
	HLCCV3	B (249.772 nm)	0.0429	2.70	1399.5712

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	HLCCV3	Ba (230.424 nm)	0.0008	15.19	57.4693
	HLCCV3	Be (313.107 nm)	0.0001	20.50	75.9991
	HLCCV3	Ca (317.933 nm)	187.7671 o	0.23	6691089.3582
	HLCCV3	Cd (214.439 nm)	0.0007	12.18	44.3321
	HLCCV3	Co (230.786 nm)	-0.0007 u	34.79	-21.5271
	HLCCV3	Cr (267.716 nm)	0.0007	9.56	42.4639
	HLCCV3	Cu (327.395 nm)	4.1124 o	0.14	180498.3274
	HLCCV3	Fe (234.350 nm)	38.0967 o	0.22	693666.5644
	HLCCV3	K (766.491 nm)	107.6593 o	0.18	117953.0741
	HLCCV3	Mg (279.078 nm)	412.1434 o	0.23	1346819.0161
	HLCCV3	Mn (257.610 nm)	0.0114	0.24	3819.1152
	HLCCV3	Mo (202.032 nm)	0.0082	33.07	97.7831
	HLCCV3	Na (588.995 nm)	155.4270 o	0.37	2103041.5819
	HLCCV3	Ni (230.299 nm)	-0.0209 u	1.80	-220.4438
	HLCCV3	Pb (220.353 nm)	0.0032	0.36	24.6097
	HLCCV3	Sb (217.582 nm)	-0.0011 u	95.16	4.4704
	HLCCV3	Se (196.026 nm)	-0.0021 u	> 100.00	3.2574
	HLCCV3	Si (252.851 nm)	0.0039 S	10.62	47.5613 S
	HLCCV3	Sn (189.925 nm)	0.0010	36.36	5.5775
	HLCCV3	Sr (216.596 nm)	0.0078	5.68	136.6736
	HLCCV3	Ti (336.122 nm)	0.0184	11.16	2814.3857
	HLCCV3	Tl (190.794 nm)	2.7856 o	0.14	2720.7648
	HLCCV3	V (292.401 nm)	0.0008	26.79	-9.5142
	HLCCV3	Y (360.074 nm)	0.88	0.34	431823.40
	HLCCV3	Y_R (360.074 nm)	0.88	0.34	430898.23
	HLCCV3	Zn (213.857 nm)	0.0070	0.81	446.2876
6/10/2024 19:08:59	HLCCV1	Ag (328.068 nm)	0.9906	0.13	55902.5320
	HLCCV1	Al (237.312 nm)	19.6418	0.06	48565.9543
	HLCCV1	As (188.980 nm)	1.9690	0.18	3337.2604
	HLCCV1	B (249.772 nm)	9.8093	0.20	318524.8921
	HLCCV1	Ba (230.424 nm)	18.7514	0.31	1020966.1548
	HLCCV1	Be (313.107 nm)	0.4937	0.23	541941.6921
	HLCCV1	Ca (317.933 nm)	49.5386	0.28	1767330.9917
	HLCCV1	Cd (214.439 nm)	0.9855	0.32	56144.7696
	HLCCV1	Co (230.786 nm)	4.8379	0.21	87718.1042
	HLCCV1	Cr (267.716 nm)	0.9913	0.23	51535.3078
	HLCCV1	Cu (327.395 nm)	2.4710	0.04	108443.7451
	HLCCV1	Fe (234.350 nm)	9.8949	0.20	180166.5587
	HLCCV1	K (766.491 nm)	50.2627	0.30	54966.1867
	HLCCV1	Mg (279.078 nm)	49.4745	0.19	161648.6765
	HLCCV1	Mn (257.610 nm)	1.4839	0.23	495578.6089
	HLCCV1	Mo (202.032 nm)	5.0827	0.32	53068.6793
	HLCCV1	Na (588.995 nm)	49.9388	0.35	666462.7824
	HLCCV1	Ni (230.299 nm)	3.9131	0.21	45975.5705
	HLCCV1	Pb (220.353 nm)	0.9951	0.18	5203.2473
	HLCCV1	Sb (217.582 nm)	9.5904	0.10	17821.4742
	HLCCV1	Se (196.026 nm)	0.9747	0.76	715.2696
	HLCCV1	Si (252.851 nm)	49.0149	0.76	186796.9703
	HLCCV1	Sn (189.925 nm)	9.6892	0.17	23861.6254
	HLCCV1	Sr (216.596 nm)	4.8595	0.41	85524.1600
	HLCCV1	Ti (336.122 nm)	4.9209	0.08	711117.7656
	HLCCV1	Tl (190.794 nm)	1.9300	0.16	1884.7504
	HLCCV1	V (292.401 nm)	4.9436	0.25	187381.9482
	HLCCV1	Y (360.074 nm)	0.96	0.40	468026.01
	HLCCV1	Y_R (360.074 nm)	0.96	0.41	467049.76
	HLCCV1	Zn (213.857 nm)	1.9895	0.16	127345.4639
6/10/2024 19:12:14	Continuing Calibration Verification	Ag (328.068 nm)	0.5032	0.11	28294.8889

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Verification	Al (237.312 nm)	9.8198	0.10	24286.5222
	Continuing Calibration Verification	As (188.980 nm)	0.9686	0.47	1640.6366
	Continuing Calibration Verification	B (249.772 nm)	2.4380	0.05	79168.7835
	Continuing Calibration Verification	Ba (230.424 nm)	9.5986	0.28	522624.6722
	Continuing Calibration Verification	Be (313.107 nm)	0.2421	0.28	265713.5531
	Continuing Calibration Verification	Ca (317.933 nm)	25.5596	0.30	913185.9321
	Continuing Calibration Verification	Cd (214.439 nm)	0.4986	0.35	28408.0452
	Continuing Calibration Verification	Co (230.786 nm)	2.4784	0.26	44931.7359
	Continuing Calibration Verification	Cr (267.716 nm)	0.5120	0.26	26617.8636
	Continuing Calibration Verification	Cu (327.395 nm)	1.2165	0.21	53375.4670
	Continuing Calibration Verification	Fe (234.350 nm)	5.0011	0.24	91059.9987
	Continuing Calibration Verification	K (766.491 nm)	24.2148	0.55	26381.2880
	Continuing Calibration Verification	Mg (279.078 nm)	25.1749	0.22	82239.5465
	Continuing Calibration Verification	Mn (257.610 nm)	0.7376	0.20	246350.0593
	Continuing Calibration Verification	Mo (202.032 nm)	2.6197	0.26	27357.8602
	Continuing Calibration Verification	Na (588.995 nm)	25.2800	0.33	330649.6898
	Continuing Calibration Verification	Ni (230.299 nm)	2.0475	0.20	24068.1014
	Continuing Calibration Verification	Pb (220.353 nm)	0.5086	0.05	2663.1152
	Continuing Calibration Verification	Sb (217.582 nm)	4.7846	0.25	8894.4353
	Continuing Calibration Verification	Se (196.026 nm)	0.4736	1.04	350.0135
	Continuing Calibration Verification	Si (252.851 nm)	10.0854	0.16	38461.6350
	Continuing Calibration Verification	Sn (189.925 nm)	4.9619	0.22	12221.0666
	Continuing Calibration Verification	Sr (216.596 nm)	2.4325	0.19	42810.1921
	Continuing Calibration Verification	Ti (336.122 nm)	2.5210	0.17	364388.6722
	Continuing Calibration Verification	Tl (190.794 nm)	0.9756	0.23	952.0843
	Continuing Calibration Verification	V (292.401 nm)	2.4980	0.14	94662.5773
	Continuing Calibration Verification	Y (360.074 nm)	0.98	0.34	477778.13
	Continuing Calibration Verification	Y_R (360.074 nm)	0.98	0.34	476802.74
	Continuing Calibration Verification	Zn (213.857 nm)	0.9808	0.17	62781.3032
6/10/2024 19:15:27	Continuing Calibration Blank	Ag (328.068 nm)	-0.0001 u	> 100.00	-220.6622
	Continuing Calibration Blank	Al (237.312 nm)	0.0032	70.24	20.2081
	Continuing Calibration Blank	As (188.980 nm)	0.0010	57.03	-0.3938
	Continuing Calibration Blank	B (249.772 nm)	0.0044	10.62	147.7343
	Continuing Calibration Blank	Ba (230.424 nm)	0.0009	5.21	58.0659
	Continuing Calibration Blank	Be (313.107 nm)	0.0000	9.64	64.5402
	Continuing Calibration Blank	Ca (317.933 nm)	0.0090	2.61	3062.0737
	Continuing Calibration Blank	Cd (214.439 nm)	0.0001	91.46	8.5306
	Continuing Calibration Blank	Co (230.786 nm)	0.0001	42.50	-7.6779
	Continuing Calibration Blank	Cr (267.716 nm)	0.0001	37.83	10.8611
	Continuing Calibration Blank	Cu (327.395 nm)	0.0004	29.06	-12.2127
	Continuing Calibration Blank	Fe (234.350 nm)	0.0029	27.85	51.7577
	Continuing Calibration Blank	K (766.491 nm)	0.1291	30.80	-50.3537
	Continuing Calibration Blank	Mg (279.078 nm)	0.0049	15.56	-13.9018
	Continuing Calibration Blank	Mn (257.610 nm)	0.0001	8.27	52.8535
	Continuing Calibration Blank	Mo (202.032 nm)	0.0040	33.46	53.6149
	Continuing Calibration Blank	Na (588.995 nm)	0.0675	7.11	-12703.8396
	Continuing Calibration Blank	Ni (230.299 nm)	0.0004	88.72	29.8198
	Continuing Calibration Blank	Pb (220.353 nm)	0.0006	58.04	10.8610
	Continuing Calibration Blank	Sb (217.582 nm)	0.0041	42.15	14.1366
	Continuing Calibration Blank	Se (196.026 nm)	0.0006 u	> 100.00	5.2377
	Continuing Calibration Blank	Si (252.851 nm)	0.0005 u	> 100.00	34.6853
	Continuing Calibration Blank	Sn (189.925 nm)	0.0005 u	> 100.00	4.1985
	Continuing Calibration Blank	Sr (216.596 nm)	0.0004	86.19	6.0702
	Continuing Calibration Blank	Ti (336.122 nm)	0.0031	43.71	600.9972
	Continuing Calibration Blank	Tl (190.794 nm)	0.0017	81.78	0.4789
	Continuing Calibration Blank	V (292.401 nm)	0.0003	79.16	-30.8041
	Continuing Calibration Blank	Y (360.074 nm)	1.02	0.08	496317.53

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Blank	Y_R (360.074 nm)	1.02	0.08	495299.19
	Continuing Calibration Blank	Zn (213.857 nm)	0.0010	5.79	66.2143
6/10/2024 19:18:41	PBW-439599	Ag (328.068 nm)	-0.0003 u	10.33	-229.0735
	PBW-439599	Al (237.312 nm)	0.0022	73.60	17.8008
	PBW-439599	As (188.980 nm)	-0.0010 u	87.37	-3.7291
	PBW-439599	B (249.772 nm)	0.0040	3.41	135.1502
	PBW-439599	Ba (230.424 nm)	0.0001	27.61	17.9370
	PBW-439599	Be (313.107 nm)	0.0000	27.71	33.2402
	PBW-439599	Ca (317.933 nm)	0.0056	4.33	2943.2778
	PBW-439599	Cd (214.439 nm)	0.0002	52.38	11.5519
	PBW-439599	Co (230.786 nm)	0.0001	92.14	-7.2309
	PBW-439599	Cr (267.716 nm)	0.0003	16.20	20.3374
	PBW-439599	Cu (327.395 nm)	0.0002	43.30	-20.9882
	PBW-439599	Fe (234.350 nm)	0.0021	32.83	37.2952
	PBW-439599	K (766.491 nm)	0.0704	32.74	-114.7461
	PBW-439599	Mg (279.078 nm)	0.0020	45.66	-23.1587
	PBW-439599	Mn (257.610 nm)	0.0001	11.83	45.4312
	PBW-439599	Mo (202.032 nm)	0.0009	44.19	21.1212
	PBW-439599	Na (588.995 nm)	0.0620	2.91	-12778.1218
	PBW-439599	Ni (230.299 nm)	-0.0003 u	26.13	21.6203
	PBW-439599	Pb (220.353 nm)	0.0011	29.05	13.4891
	PBW-439599	Sb (217.582 nm)	0.0104	18.21	25.8186
	PBW-439599	Se (196.026 nm)	-0.0005 u	> 100.00	4.4263
	PBW-439599	Si (252.851 nm)	0.0111	16.24	74.8818
	PBW-439599	Sn (189.925 nm)	-0.0003 u	> 100.00	2.3523
	PBW-439599	Sr (216.596 nm)	0.0003	86.68	4.0322
	PBW-439599	Ti (336.122 nm)	0.0010	64.07	292.9304
	PBW-439599	Tl (190.794 nm)	0.0006 u	> 100.00	-0.6497
	PBW-439599	V (292.401 nm)	0.0002	64.34	-32.7800
	PBW-439599	Y (360.074 nm)	1.02	0.19	500171.32
	PBW-439599	Y_R (360.074 nm)	1.02	0.19	499150.09
	PBW-439599	Zn (213.857 nm)	-0.0003 u	17.61	-20.1487
6/10/2024 19:21:55	LCSW-439599	Ag (328.068 nm)	0.0494	0.16	2584.3129
	LCSW-439599	Al (237.312 nm)	1.9675	0.18	4875.7637
	LCSW-439599	As (188.980 nm)	0.0360	1.46	58.9808
	LCSW-439599	B (249.772 nm)	0.9771	0.26	31731.6487
	LCSW-439599	Ba (230.424 nm)	1.9213	0.47	104621.3208
	LCSW-439599	Be (313.107 nm)	0.0485	0.34	53246.3393
	LCSW-439599	Ca (317.933 nm)	2.0236	0.37	74826.0900
	LCSW-439599	Cd (214.439 nm)	0.0507	0.55	2889.4813
	LCSW-439599	Co (230.786 nm)	0.4940	0.33	8949.0964
	LCSW-439599	Cr (267.716 nm)	0.2013	0.31	10472.0277
	LCSW-439599	Cu (327.395 nm)	0.2482	0.14	10865.7518
	LCSW-439599	Fe (234.350 nm)	1.0081	0.34	18354.3336
	LCSW-439599	K (766.491 nm)	18.8207	0.06	20461.7425
	LCSW-439599	Mg (279.078 nm)	1.9531	0.34	6352.9414
	LCSW-439599	Mn (257.610 nm)	0.4854	0.33	162109.8288
	LCSW-439599	Mo (202.032 nm)	0.5041	0.55	5274.6328
	LCSW-439599	Na (588.995 nm)	19.7930	0.16	255925.3994
	LCSW-439599	Ni (230.299 nm)	0.5123	0.38	6041.5614
	LCSW-439599	Pb (220.353 nm)	0.5188	0.43	2716.2695
	LCSW-439599	Sb (217.582 nm)	0.4839	0.31	905.5541
	LCSW-439599	Se (196.026 nm)	0.9874	0.25	724.5063
	LCSW-439599	Si (252.851 nm)	-0.0115 u	4.86	-11.1866
	LCSW-439599	Sn (189.925 nm)	4.9340	0.24	12152.4586
	LCSW-439599	Sr (216.596 nm)	1.9631	0.43	34549.3222
	LCSW-439599	Ti (336.122 nm)	0.4923	0.13	71284.4195

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	LCSW-439599	Tl (190.794 nm)	1.9337	0.37	1888.3417
	LCSW-439599	V (292.401 nm)	0.4874	0.27	18439.5574
	LCSW-439599	Y (360.074 nm)	1.00	0.16	489494.09
	LCSW-439599	Y_R (360.074 nm)	1.00	0.16	488468.98
	LCSW-439599	Zn (213.857 nm)	0.5007	0.26	32047.9325
6/10/2024 19:25:09	DLCSW-439599	Ag (328.068 nm)	0.0492	0.42	2571.3428
	DLCSW-439599	Al (237.312 nm)	1.9507	0.03	4834.4465
	DLCSW-439599	As (188.980 nm)	0.0363	2.24	59.5006
	DLCSW-439599	B (249.772 nm)	0.9703	0.12	31512.9459
	DLCSW-439599	Ba (230.424 nm)	1.9006	0.08	103493.7461
	DLCSW-439599	Be (313.107 nm)	0.0481	0.25	52794.8428
	DLCSW-439599	Ca (317.933 nm)	2.0026	0.33	74075.6204
	DLCSW-439599	Cd (214.439 nm)	0.0502	0.13	2863.1917
	DLCSW-439599	Co (230.786 nm)	0.4896	0.41	8868.2763
	DLCSW-439599	Cr (267.716 nm)	0.1994	0.31	10373.0488
	DLCSW-439599	Cu (327.395 nm)	0.2465	0.12	10794.8401
	DLCSW-439599	Fe (234.350 nm)	0.9980	0.24	18171.1370
	DLCSW-439599	K (766.491 nm)	18.7436	0.18	20377.1655
	DLCSW-439599	Mg (279.078 nm)	1.9368	0.18	6299.5790
	DLCSW-439599	Mn (257.610 nm)	0.4811	0.33	160676.7711
	DLCSW-439599	Mo (202.032 nm)	0.5015	0.42	5247.2306
	DLCSW-439599	Na (588.995 nm)	19.6855	0.19	254461.3884
	DLCSW-439599	Ni (230.299 nm)	0.5073	0.42	5982.4371
	DLCSW-439599	Pb (220.353 nm)	0.5148	0.40	2695.6442
	DLCSW-439599	Sb (217.582 nm)	0.4767	0.31	892.1671
	DLCSW-439599	Se (196.026 nm)	0.9799	0.52	719.0444
	DLCSW-439599	Si (252.851 nm)	-0.0135 u	8.29	-18.8049
	DLCSW-439599	Sn (189.925 nm)	4.8984	0.34	12064.6363
	DLCSW-439599	Sr (216.596 nm)	1.9466	0.40	34258.7961
	DLCSW-439599	Ti (336.122 nm)	0.4882	0.20	70683.2867
	DLCSW-439599	Tl (190.794 nm)	1.9150	0.49	1870.0412
	DLCSW-439599	V (292.401 nm)	0.4831	0.26	18274.9940
	DLCSW-439599	Y (360.074 nm)	1.00	0.17	490485.22
	DLCSW-439599	Y_R (360.074 nm)	1.00	0.17	489457.51
	DLCSW-439599	Zn (213.857 nm)	0.4965	0.26	31778.7140
6/10/2024 19:28:23	R2404631-005 50X	Ag (328.068 nm)	-0.0003 u	27.72	-230.5591
	R2404631-005 50X	Al (237.312 nm)	0.0039	43.85	21.9173
	R2404631-005 50X	As (188.980 nm)	-0.0008 u	> 100.00	-3.3200
	R2404631-005 50X	B (249.772 nm)	0.0036	4.79	122.3843
	R2404631-005 50X	Ba (230.424 nm)	0.0008	8.81	54.9142
	R2404631-005 50X	Be (313.107 nm)	0.0000	69.94	35.6312
	R2404631-005 50X	Ca (317.933 nm)	0.0810	0.71	5629.2150
	R2404631-005 50X	Cd (214.439 nm)	0.0001	65.34	6.6926
	R2404631-005 50X	Co (230.786 nm)	0.0007	22.25	3.7679
	R2404631-005 50X	Cr (267.716 nm)	0.0000 u	> 100.00	5.2443
	R2404631-005 50X	Cu (327.395 nm)	0.0001	> 100.00	-24.0769
	R2404631-005 50X	Fe (234.350 nm)	0.0325	1.38	591.1602
	R2404631-005 50X	K (766.491 nm)	0.1131	14.84	-67.8828
	R2404631-005 50X	Mg (279.078 nm)	0.0167	2.87	24.7969
	R2404631-005 50X	Mn (257.610 nm)	0.0053	0.61	1803.3703
	R2404631-005 50X	Mo (202.032 nm)	0.0022	34.68	34.6078
	R2404631-005 50X	Na (588.995 nm)	18.6427	0.19	240260.9904
	R2404631-005 50X	Ni (230.299 nm)	0.0131	4.89	179.1911
	R2404631-005 50X	Pb (220.353 nm)	0.0007	39.11	11.6366
	R2404631-005 50X	Sb (217.582 nm)	0.0007 u	> 100.00	7.9793
	R2404631-005 50X	Se (196.026 nm)	0.0015 u	> 100.00	5.8947
	R2404631-005 50X	Si (252.851 nm)	0.1053	1.25	433.9270

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404631-005 50X	Sn (189.925 nm)	0.0009 u	> 100.00	5.1826
	R2404631-005 50X	Sr (216.596 nm)	0.0007	23.27	11.3002
	R2404631-005 50X	Ti (336.122 nm)	0.0009	51.17	289.7528
	R2404631-005 50X	Tl (190.794 nm)	0.0013	68.99	0.0932
	R2404631-005 50X	V (292.401 nm)	-0.0001 u	> 100.00	-43.6834
	R2404631-005 50X	Y (360.074 nm)	1.01	0.16	492528.97
	R2404631-005 50X	Y_R (360.074 nm)	1.01	0.16	491520.97
	R2404631-005 50X	Zn (213.857 nm)	0.0002	27.49	13.6699
6/10/2024 19:31:38	R2404631-006 10X	Ag (328.068 nm)	-0.0003 u	58.26	-230.9958
	R2404631-006 10X	Al (237.312 nm)	0.0519	4.58	140.4806
	R2404631-006 10X	As (188.980 nm)	-0.0019 u	75.65	-5.3013
	R2404631-006 10X	B (249.772 nm)	0.0424	0.58	1383.6002
	R2404631-006 10X	Ba (230.424 nm)	0.0022	4.03	132.7743
	R2404631-006 10X	Be (313.107 nm)	0.0001	11.03	94.3317
	R2404631-006 10X	Ca (317.933 nm)	4.0063	0.25	145448.4766
	R2404631-006 10X	Cd (214.439 nm)	0.0002	15.31	14.1582
	R2404631-006 10X	Co (230.786 nm)	0.0001 u	99.44	-8.1689
	R2404631-006 10X	Cr (267.716 nm)	0.0001	84.82	10.9980
	R2404631-006 10X	Cu (327.395 nm)	0.0004	81.34	-12.2047
	R2404631-006 10X	Fe (234.350 nm)	0.0028	15.94	50.4596
	R2404631-006 10X	K (766.491 nm)	0.1397	14.08	-38.7557
	R2404631-006 10X	Mg (279.078 nm)	0.2138	0.19	668.9293
	R2404631-006 10X	Mn (257.610 nm)	0.1059	0.27	35399.6332
	R2404631-006 10X	Mo (202.032 nm)	0.0008	67.68	19.9607
	R2404631-006 10X	Na (588.995 nm)	9.1126	0.08	110476.3880
	R2404631-006 10X	Ni (230.299 nm)	0.0018	12.81	46.7196
	R2404631-006 10X	Pb (220.353 nm)	0.0008	47.45	12.1736
	R2404631-006 10X	Sb (217.582 nm)	0.0002 u	> 100.00	6.9758
	R2404631-006 10X	Se (196.026 nm)	0.0032 u	> 100.00	7.1005
	R2404631-006 10X	Si (252.851 nm)	0.4290	0.07	1667.1315
	R2404631-006 10X	Sn (189.925 nm)	0.0003 u	> 100.00	3.6869
	R2404631-006 10X	Sr (216.596 nm)	0.0091	3.60	159.7685
	R2404631-006 10X	Ti (336.122 nm)	0.0004	60.95	216.8562
	R2404631-006 10X	Tl (190.794 nm)	0.0022	60.75	0.9694
	R2404631-006 10X	V (292.401 nm)	0.0001 u	> 100.00	-38.0635
	R2404631-006 10X	Y (360.074 nm)	1.02	0.30	496293.16
	R2404631-006 10X	Y_R (360.074 nm)	1.02	0.30	495273.95
	R2404631-006 10X	Zn (213.857 nm)	0.0015	3.96	98.3445
6/10/2024 19:34:52	R2404631-007 20X	Ag (328.068 nm)	-0.0001 u	23.29	-222.8361
	R2404631-007 20X	Al (237.312 nm)	0.0037	81.69	21.4322
	R2404631-007 20X	As (188.980 nm)	0.0002 u	> 100.00	-1.6468
	R2404631-007 20X	B (249.772 nm)	0.0012	5.46	45.1648
	R2404631-007 20X	Ba (230.424 nm)	0.0012	5.02	78.4242
	R2404631-007 20X	Be (313.107 nm)	0.0000 u	> 100.00	22.7576
	R2404631-007 20X	Ca (317.933 nm)	0.1677	0.26	8716.0004
	R2404631-007 20X	Cd (214.439 nm)	0.0001 u	> 100.00	6.4206
	R2404631-007 20X	Co (230.786 nm)	0.0014	5.13	16.1160
	R2404631-007 20X	Cr (267.716 nm)	0.0001	83.67	10.8871
	R2404631-007 20X	Cu (327.395 nm)	0.0005	31.37	-7.8543
	R2404631-007 20X	Fe (234.350 nm)	0.0090	0.73	163.4605
	R2404631-007 20X	K (766.491 nm)	0.1089	13.27	-72.5659
	R2404631-007 20X	Mg (279.078 nm)	0.0434	3.51	112.1080
	R2404631-007 20X	Mn (257.610 nm)	0.0040	0.45	1363.7971
	R2404631-007 20X	Mo (202.032 nm)	0.0004	50.18	16.1261
	R2404631-007 20X	Na (588.995 nm)	33.8384	0.29	447202.2820
	R2404631-007 20X	Ni (230.299 nm)	0.0160	1.73	212.7288
	R2404631-007 20X	Pb (220.353 nm)	0.0005 u	> 100.00	10.4061

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404631-007 20X	Sb (217.582 nm)	-0.0002 u	> 100.00	6.2615
	R2404631-007 20X	Se (196.026 nm)	0.0007 u	> 100.00	5.2589
	R2404631-007 20X	Si (252.851 nm)	0.1599	1.07	641.7721
	R2404631-007 20X	Sn (189.925 nm)	0.0003 u	> 100.00	3.7721
	R2404631-007 20X	Sr (216.596 nm)	0.0011	16.47	19.1343
	R2404631-007 20X	Ti (336.122 nm)	0.0003 u	96.36	192.4271
	R2404631-007 20X	Tl (190.794 nm)	0.0001 u	> 100.00	-1.1010
	R2404631-007 20X	V (292.401 nm)	-0.0002 u	66.58	-46.3313
	R2404631-007 20X	Y (360.074 nm)	1.00	0.19	488510.15
	R2404631-007 20X	Y_R (360.074 nm)	1.00	0.19	487478.89
	R2404631-007 20X	Zn (213.857 nm)	0.0005	10.15	34.1258
6/10/2024 19:38:06	R2404631-008 50X	Ag (328.068 nm)	-0.0003 u	30.02	-232.0161
	R2404631-008 50X	Al (237.312 nm)	0.0021	95.30	17.4809
	R2404631-008 50X	As (188.980 nm)	-0.0007 u	1.88	-3.1535
	R2404631-008 50X	B (249.772 nm)	0.0065	3.96	217.6692
	R2404631-008 50X	Ba (230.424 nm)	0.0008	15.30	53.9808
	R2404631-008 50X	Be (313.107 nm)	0.0000	92.98	30.3668
	R2404631-008 50X	Ca (317.933 nm)	0.5861	0.32	23618.4024
	R2404631-008 50X	Cd (214.439 nm)	0.0001	66.52	8.4026
	R2404631-008 50X	Co (230.786 nm)	0.0002	49.67	-5.3515
	R2404631-008 50X	Cr (267.716 nm)	0.0001	> 100.00	11.1650
	R2404631-008 50X	Cu (327.395 nm)	0.0001 u	> 100.00	-25.0713
	R2404631-008 50X	Fe (234.350 nm)	0.0830	0.15	1510.8515
	R2404631-008 50X	K (766.491 nm)	0.0539	57.21	-132.8875
	R2404631-008 50X	Mg (279.078 nm)	0.1321	0.16	402.0691
	R2404631-008 50X	Mn (257.610 nm)	0.0175	0.42	5849.7495
	R2404631-008 50X	Mo (202.032 nm)	0.0002 u	> 100.00	14.5042
	R2404631-008 50X	Na (588.995 nm)	21.3035	0.08	276497.1134
	R2404631-008 50X	Ni (230.299 nm)	0.0087	1.98	127.1768
	R2404631-008 50X	Pb (220.353 nm)	0.0006	40.23	11.0818
	R2404631-008 50X	Sb (217.582 nm)	-0.0016 u	53.29	3.6611
	R2404631-008 50X	Se (196.026 nm)	0.0029 u	> 100.00	6.8982
	R2404631-008 50X	Si (252.851 nm)	0.1340	0.40	543.2500
	R2404631-008 50X	Sn (189.925 nm)	-0.0001 u	> 100.00	2.8262
	R2404631-008 50X	Sr (216.596 nm)	0.0077	3.60	134.0672
	R2404631-008 50X	Ti (336.122 nm)	0.0002	56.66	181.4615
	R2404631-008 50X	Tl (190.794 nm)	0.0016	70.08	0.3135
	R2404631-008 50X	V (292.401 nm)	-0.0001 u	> 100.00	-42.8710
	R2404631-008 50X	Y (360.074 nm)	1.00	0.18	489891.39
	R2404631-008 50X	Y_R (360.074 nm)	1.00	0.18	488868.41
	R2404631-008 50X	Zn (213.857 nm)	0.0001	47.44	6.4803
6/10/2024 19:41:20	R2404631-009 10X	Ag (328.068 nm)	-0.0004 u	9.21	-235.9254
	R2404631-009 10X	Al (237.312 nm)	0.0174	8.24	55.3279
	R2404631-009 10X	As (188.980 nm)	-0.0012 u	81.15	-3.9878
	R2404631-009 10X	B (249.772 nm)	0.0862	0.47	2804.8327
	R2404631-009 10X	Ba (230.424 nm)	0.0055	1.62	312.0345
	R2404631-009 10X	Be (313.107 nm)	0.0000	15.72	52.8299
	R2404631-009 10X	Ca (317.933 nm)	3.3469	0.37	121961.1324
	R2404631-009 10X	Cd (214.439 nm)	0.0001	52.96	8.1319
	R2404631-009 10X	Co (230.786 nm)	0.0004	34.63	-2.5502
	R2404631-009 10X	Cr (267.716 nm)	0.0000 u	> 100.00	6.6818
	R2404631-009 10X	Cu (327.395 nm)	0.0002	72.10	-17.6736
	R2404631-009 10X	Fe (234.350 nm)	0.0066	2.43	119.8922
	R2404631-009 10X	K (766.491 nm)	0.2254	3.77	55.3277
	R2404631-009 10X	Mg (279.078 nm)	0.4722	0.25	1513.4880
	R2404631-009 10X	Mn (257.610 nm)	0.0287	0.35	9616.9135
	R2404631-009 10X	Mo (202.032 nm)	0.0002	61.45	14.4941

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404631-009 10X	Na (588.995 nm)	20.6220	0.06	267215.4822
	R2404631-009 10X	Ni (230.299 nm)	0.0009	68.95	35.4459
	R2404631-009 10X	Pb (220.353 nm)	0.0008	39.07	12.2301
	R2404631-009 10X	Sb (217.582 nm)	-0.0015 u	44.54	3.7782
	R2404631-009 10X	Se (196.026 nm)	-0.0029 u	9.50	2.6950
	R2404631-009 10X	Si (252.851 nm)	0.1717	0.78	686.8646
	R2404631-009 10X	Sn (189.925 nm)	0.0000 u	> 100.00	3.0349
	R2404631-009 10X	Sr (216.596 nm)	0.0092	2.20	162.0216
	R2404631-009 10X	Ti (336.122 nm)	0.0002	> 100.00	181.7407
	R2404631-009 10X	Tl (190.794 nm)	0.0009	> 100.00	-0.3060
	R2404631-009 10X	V (292.401 nm)	-0.0002 u	> 100.00	-48.6808
	R2404631-009 10X	Y (360.074 nm)	1.00	0.19	490953.15
	R2404631-009 10X	Y_R (360.074 nm)	1.00	0.19	489922.89
	R2404631-009 10X	Zn (213.857 nm)	0.0003	26.78	16.8139
6/10/2024 19:44:34	R2404631-010 50X	Ag (328.068 nm)	-0.0004 u	40.58	-235.5325
	R2404631-010 50X	Al (237.312 nm)	0.0037	25.62	21.3684
	R2404631-010 50X	As (188.980 nm)	0.0002 u	> 100.00	-1.6801
	R2404631-010 50X	B (249.772 nm)	0.0151	0.79	496.6056
	R2404631-010 50X	Ba (230.424 nm)	0.0014	1.25	88.3554
	R2404631-010 50X	Be (313.107 nm)	0.0000 u	> 100.00	25.3239
	R2404631-010 50X	Ca (317.933 nm)	0.2616	0.37	12061.5580
	R2404631-010 50X	Cd (214.439 nm)	0.0001	31.98	5.8793
	R2404631-010 50X	Co (230.786 nm)	0.0004	6.62	-2.7086
	R2404631-010 50X	Cr (267.716 nm)	0.0000 u	> 100.00	7.9536
	R2404631-010 50X	Cu (327.395 nm)	0.0004	9.59	-8.2919
	R2404631-010 50X	Fe (234.350 nm)	0.3201	0.26	5828.0391
	R2404631-010 50X	K (766.491 nm)	0.0689	40.01	-116.4307
	R2404631-010 50X	Mg (279.078 nm)	0.1394	0.84	425.7059
	R2404631-010 50X	Mn (257.610 nm)	0.0264	0.35	8838.8454
	R2404631-010 50X	Mo (202.032 nm)	-0.0001 u	> 100.00	11.0748
	R2404631-010 50X	Na (588.995 nm)	21.8171	0.11	283490.3968
	R2404631-010 50X	Ni (230.299 nm)	0.0066	2.55	103.3044
	R2404631-010 50X	Pb (220.353 nm)	0.0002 u	> 100.00	8.7470
	R2404631-010 50X	Sb (217.582 nm)	-0.0015 u	> 100.00	3.8570
	R2404631-010 50X	Se (196.026 nm)	-0.0017 u	60.21	3.5038
	R2404631-010 50X	Si (252.851 nm)	0.1346	0.54	545.6058
	R2404631-010 50X	Sn (189.925 nm)	0.0001 u	> 100.00	3.2068
	R2404631-010 50X	Sr (216.596 nm)	0.0016	25.94	28.0097
	R2404631-010 50X	Ti (336.122 nm)	0.0001	36.40	172.4184
	R2404631-010 50X	Tl (190.794 nm)	0.0010 u	> 100.00	-0.2556
	R2404631-010 50X	V (292.401 nm)	0.0000	57.98	-39.2182
	R2404631-010 50X	Y (360.074 nm)	1.00	0.08	489405.56
	R2404631-010 50X	Y_R (360.074 nm)	1.00	0.08	488394.02
	R2404631-010 50X	Zn (213.857 nm)	0.0001	29.64	9.7119
6/10/2024 19:47:47	R2404631-011 10X	Ag (328.068 nm)	-0.0002 u	50.24	-228.5106
	R2404631-011 10X	Al (237.312 nm)	0.0035	59.28	20.8320
	R2404631-011 10X	As (188.980 nm)	-0.0008 u	> 100.00	-3.4219
	R2404631-011 10X	B (249.772 nm)	0.1263	0.40	4107.2162
	R2404631-011 10X	Ba (230.424 nm)	0.0070	0.64	392.5688
	R2404631-011 10X	Be (313.107 nm)	0.0000	53.85	29.4732
	R2404631-011 10X	Ca (317.933 nm)	0.2307	0.31	10961.2983
	R2404631-011 10X	Cd (214.439 nm)	0.0001	20.13	8.5354
	R2404631-011 10X	Co (230.786 nm)	0.0003	10.29	-4.3143
	R2404631-011 10X	Cr (267.716 nm)	-0.0001 u	> 100.00	-0.8809
	R2404631-011 10X	Cu (327.395 nm)	0.0001 u	> 100.00	-25.2171
	R2404631-011 10X	Fe (234.350 nm)	0.1254	0.57	2283.1847
	R2404631-011 10X	K (766.491 nm)	0.1346	5.83	-44.3780

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404631-011 10X	Mg (279.078 nm)	0.1151	1.49	346.4090
	R2404631-011 10X	Mn (257.610 nm)	0.3383	0.26	112986.0773
	R2404631-011 10X	Mo (202.032 nm)	0.0002	42.76	13.9046
	R2404631-011 10X	Na (588.995 nm)	16.1246	0.07	205968.8537
	R2404631-011 10X	Ni (230.299 nm)	0.0009	42.95	35.6202
	R2404631-011 10X	Pb (220.353 nm)	0.0005	34.47	10.4692
	R2404631-011 10X	Sb (217.582 nm)	-0.0013 u	> 100.00	4.0926
	R2404631-011 10X	Se (196.026 nm)	0.0005 u	> 100.00	5.1099
	R2404631-011 10X	Si (252.851 nm)	0.2504	0.68	986.6284
	R2404631-011 10X	Sn (189.925 nm)	-0.0007 u	> 100.00	1.4004
	R2404631-011 10X	Sr (216.596 nm)	0.0019	2.76	32.3127
	R2404631-011 10X	Ti (336.122 nm)	0.0001 u	> 100.00	164.0446
	R2404631-011 10X	Tl (190.794 nm)	0.0019 u	> 100.00	0.6460
	R2404631-011 10X	V (292.401 nm)	0.0000 u	> 100.00	-39.4997
	R2404631-011 10X	Y (360.074 nm)	1.01	0.26	493386.74
	R2404631-011 10X	Y_R (360.074 nm)	1.01	0.25	492333.99
	R2404631-011 10X	Zn (213.857 nm)	0.0002	12.26	12.5348
6/10/2024 19:51:01	Continuing Calibration Verification	Ag (328.068 nm)	0.5024	0.17	28249.4170
	Continuing Calibration Verification	Al (237.312 nm)	9.7657	0.02	24152.6051
	Continuing Calibration Verification	As (188.980 nm)	0.9646	0.31	1633.8496
	Continuing Calibration Verification	B (249.772 nm)	2.4127	0.31	78349.9634
	Continuing Calibration Verification	Ba (230.424 nm)	9.5766	0.09	521424.6800
	Continuing Calibration Verification	Be (313.107 nm)	0.2407	0.34	264240.5473
	Continuing Calibration Verification	Ca (317.933 nm)	25.4468	0.38	909167.4479
	Continuing Calibration Verification	Cd (214.439 nm)	0.4963	0.48	28276.3136
	Continuing Calibration Verification	Co (230.786 nm)	2.4629	0.13	44651.9050
	Continuing Calibration Verification	Cr (267.716 nm)	0.5114	0.37	26587.4140
	Continuing Calibration Verification	Cu (327.395 nm)	1.2176	0.47	53423.3247
	Continuing Calibration Verification	Fe (234.350 nm)	4.9700	0.33	90493.6038
	Continuing Calibration Verification	K (766.491 nm)	24.0063	0.23	26152.3926
	Continuing Calibration Verification	Mg (279.078 nm)	25.0406	0.28	81800.7385
	Continuing Calibration Verification	Mn (257.610 nm)	0.7351	0.31	245508.0551
	Continuing Calibration Verification	Mo (202.032 nm)	2.6154	0.45	27313.2016
	Continuing Calibration Verification	Na (588.995 nm)	25.2794	0.51	330642.1073
	Continuing Calibration Verification	Ni (230.299 nm)	2.0403	0.37	23984.1458
	Continuing Calibration Verification	Pb (220.353 nm)	0.5081	0.12	2660.7685
	Continuing Calibration Verification	Sb (217.582 nm)	4.7509	0.23	8831.7372
	Continuing Calibration Verification	Se (196.026 nm)	0.4742	1.02	350.4338
	Continuing Calibration Verification	Si (252.851 nm)	9.9234	0.48	37844.3169
	Continuing Calibration Verification	Sn (189.925 nm)	4.9404	0.24	12168.2785
	Continuing Calibration Verification	Sr (216.596 nm)	2.4332	0.27	42823.2894
	Continuing Calibration Verification	Ti (336.122 nm)	2.5042	0.21	361948.0193
	Continuing Calibration Verification	Tl (190.794 nm)	0.9674	0.28	944.1250
	Continuing Calibration Verification	V (292.401 nm)	2.4934	0.24	94490.2061
	Continuing Calibration Verification	Y (360.074 nm)	0.98	0.37	476895.73
	Continuing Calibration Verification	Y_R (360.074 nm)	0.98	0.38	475833.05
	Continuing Calibration Verification	Zn (213.857 nm)	0.9801	0.13	62735.8421
6/10/2024 19:54:15	Continuing Calibration Blank	Ag (328.068 nm)	-0.0001 u	> 100.00	-220.6136
	Continuing Calibration Blank	Al (237.312 nm)	0.0036	69.46	21.0569
	Continuing Calibration Blank	As (188.980 nm)	-0.0009 u	> 100.00	-3.6271
	Continuing Calibration Blank	B (249.772 nm)	0.0017	25.74	60.4360
	Continuing Calibration Blank	Ba (230.424 nm)	0.0009	6.73	58.3291
	Continuing Calibration Blank	Be (313.107 nm)	0.0000	27.91	49.0142
	Continuing Calibration Blank	Ca (317.933 nm)	0.0085	2.11	3046.0842
	Continuing Calibration Blank	Cd (214.439 nm)	0.0001	50.93	8.9940
	Continuing Calibration Blank	Co (230.786 nm)	0.0002	21.34	-6.1108
	Continuing Calibration Blank	Cr (267.716 nm)	0.0000 u	> 100.00	8.3231

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Blank	Cu (327.395 nm)	0.0002	46.25	-18.8558
	Continuing Calibration Blank	Fe (234.350 nm)	0.0025	18.57	45.4194
	Continuing Calibration Blank	K (766.491 nm)	0.0121 u	> 100.00	-178.7422
	Continuing Calibration Blank	Mg (279.078 nm)	0.0030	17.59	-19.9621
	Continuing Calibration Blank	Mn (257.610 nm)	0.0001	7.81	52.7965
	Continuing Calibration Blank	Mo (202.032 nm)	0.0036	29.23	49.9981
	Continuing Calibration Blank	Na (588.995 nm)	0.0419	3.68	-13052.5219
	Continuing Calibration Blank	Ni (230.299 nm)	0.0006	28.36	32.1227
	Continuing Calibration Blank	Pb (220.353 nm)	0.0005 u	> 100.00	10.5798
	Continuing Calibration Blank	Sb (217.582 nm)	0.0034	34.85	12.9520
	Continuing Calibration Blank	Se (196.026 nm)	0.0006 u	> 100.00	5.1862
	Continuing Calibration Blank	Si (252.851 nm)	-0.0013 u	77.14	27.6832
	Continuing Calibration Blank	Sn (189.925 nm)	0.0006	76.14	4.5702
	Continuing Calibration Blank	Sr (216.596 nm)	0.0003	70.45	5.4696
	Continuing Calibration Blank	Ti (336.122 nm)	0.0027	36.94	551.9452
	Continuing Calibration Blank	Tl (190.794 nm)	0.0008 u	> 100.00	-0.4428
	Continuing Calibration Blank	V (292.401 nm)	0.0002	36.23	-34.2482
	Continuing Calibration Blank	Y (360.074 nm)	1.02	0.19	497458.87
	Continuing Calibration Blank	Y_R (360.074 nm)	1.02	0.19	496452.48
	Continuing Calibration Blank	Zn (213.857 nm)	0.0010	3.53	63.6704
6/10/2024 19:57:29	R2404730-001	Ag (328.068 nm)	-0.0002 u	46.97	-225.1305
	R2404730-001	Al (237.312 nm)	0.1418	1.67	362.8220
	R2404730-001	As (188.980 nm)	0.0004 u	> 100.00	-1.4043
	R2404730-001	B (249.772 nm)	0.0790	0.39	2570.3995
	R2404730-001	Ba (230.424 nm)	0.0511	0.46	2791.3617
	R2404730-001	Be (313.107 nm)	0.0000	14.66	74.2551
	R2404730-001	Ca (317.933 nm)	209.4823 o	0.29	7464593.4626
	R2404730-001	Cd (214.439 nm)	0.0002	56.37	16.1815
	R2404730-001	Co (230.786 nm)	0.0005	95.44	-0.4706
	R2404730-001	Cr (267.716 nm)	0.0007	5.44	40.5153
	R2404730-001	Cu (327.395 nm)	0.0010	10.29	18.2180
	R2404730-001	Fe (234.350 nm)	0.6177	0.11	11247.5506
	R2404730-001	K (766.491 nm)	13.7584	0.33	14906.3741
	R2404730-001	Mg (279.078 nm)	30.6956	0.15	100280.8044
	R2404730-001	Mn (257.610 nm)	0.4183	0.17	139720.5862
	R2404730-001	Mo (202.032 nm)	0.0018	25.73	31.2741
	R2404730-001	Na (588.995 nm)	115.0058 o	0.27	1552570.5753
	R2404730-001	Ni (230.299 nm)	0.0019	24.23	47.6414
	R2404730-001	Pb (220.353 nm)	0.0011	62.09	13.4703
	R2404730-001	Sb (217.582 nm)	0.0038	37.23	13.6689
	R2404730-001	Se (196.026 nm)	-0.0003 u	> 100.00	4.5274
	R2404730-001	Si (252.851 nm)	5.7578	0.07	21971.7636
	R2404730-001	Sn (189.925 nm)	0.0002 u	> 100.00	3.5589
	R2404730-001	Sr (216.596 nm)	1.4358	0.22	25269.0459
	R2404730-001	Ti (336.122 nm)	0.0044	12.60	796.2218
	R2404730-001	Tl (190.794 nm)	0.0013 u	> 100.00	0.0400
	R2404730-001	V (292.401 nm)	0.0002	> 100.00	-32.6072
	R2404730-001	Y (360.074 nm)	0.94	0.45	457974.42
	R2404730-001	Y_R (360.074 nm)	0.94	0.45	456990.75
	R2404730-001	Zn (213.857 nm)	0.0027	2.37	172.8594
6/10/2024 20:00:43	R2404730-002	Ag (328.068 nm)	-0.0006 u	25.73	-248.0295
	R2404730-002	Al (237.312 nm)	0.0614	1.89	164.0485
	R2404730-002	As (188.980 nm)	0.0019 u	> 100.00	1.1379
	R2404730-002	B (249.772 nm)	0.1466	0.20	4764.3345
	R2404730-002	Ba (230.424 nm)	0.4218	0.34	22976.2906
	R2404730-002	Be (313.107 nm)	0.0001	19.19	87.9408
	R2404730-002	Ca (317.933 nm)	621.2441 o LR	0.47	22131724.4175

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404730-002	Cd (214.439 nm)	0.0003	2.78	17.4784
	R2404730-002	Co (230.786 nm)	-0.0005 u	22.21	-19.6388
	R2404730-002	Cr (267.716 nm)	0.0006	28.64	38.3359
	R2404730-002	Cu (327.395 nm)	0.0009	21.00	12.4238
	R2404730-002	Fe (234.350 nm)	0.4353	0.36	7924.9156
	R2404730-002	K (766.491 nm)	55.1920 o	0.15	60375.5988
	R2404730-002	Mg (279.078 nm)	127.4134 o	0.44	416346.2874
	R2404730-002	Mn (257.610 nm)	0.0558	0.27	18660.1775
	R2404730-002	Mo (202.032 nm)	0.0030	18.27	43.4925
	R2404730-002	Na (588.995 nm)	518.4720 o LR	0.15	7047129.1468
	R2404730-002	Ni (230.299 nm)	0.0022	12.16	51.5187
	R2404730-002	Pb (220.353 nm)	0.0009	64.46	12.8310
	R2404730-002	Sb (217.582 nm)	0.0024	79.82	11.0355
	R2404730-002	Se (196.026 nm)	0.0005 u	> 100.00	5.1129
	R2404730-002	Si (252.851 nm)	5.5722	0.25	21264.8757
	R2404730-002	Sn (189.925 nm)	0.0006 u	> 100.00	4.4876
	R2404730-002	Sr (216.596 nm)	4.8661	0.71	85641.3113
	R2404730-002	Ti (336.122 nm)	0.0075	5.20	1241.9635
	R2404730-002	Tl (190.794 nm)	0.0015 u	> 100.00	0.2511
	R2404730-002	V (292.401 nm)	-0.0001 u	> 100.00	-46.0756
	R2404730-002	Y (360.074 nm)	0.85	0.11	416577.65
	R2404730-002	Y_R (360.074 nm)	0.85	0.11	415665.28
	R2404730-002	Zn (213.857 nm)	0.0062	0.88	395.7720
6/10/2024 20:03:56	R2404730-003	Ag (328.068 nm)	-0.0006 u	35.57	-246.9046
	R2404730-003	Al (237.312 nm)	0.1335	1.16	342.3956
	R2404730-003	As (188.980 nm)	0.0019 u	> 100.00	1.1256
	R2404730-003	B (249.772 nm)	0.1302	0.43	4233.1679
	R2404730-003	Ba (230.424 nm)	0.7754	0.44	42229.8204
	R2404730-003	Be (313.107 nm)	0.0001	2.98	102.9868
	R2404730-003	Ca (317.933 nm)	773.8270 o LR	0.26	27566794.0217
	R2404730-003	Cd (214.439 nm)	0.0002	11.55	13.7133
	R2404730-003	Co (230.786 nm)	0.0001 u	> 100.00	-7.8117
	R2404730-003	Cr (267.716 nm)	0.0006	34.17	34.6844
	R2404730-003	Cu (327.395 nm)	0.0013	21.48	31.5550
	R2404730-003	Fe (234.350 nm)	0.3969	0.29	7226.7041
	R2404730-003	K (766.491 nm)	62.1100 o	0.16	67967.3595
	R2404730-003	Mg (279.078 nm)	120.5625 o	0.26	393957.8525
	R2404730-003	Mn (257.610 nm)	0.2568	0.22	85784.9692
	R2404730-003	Mo (202.032 nm)	0.0012	20.40	24.4419
	R2404730-003	Na (588.995 nm)	602.0156 o LR	0.26	8184858.7567
	R2404730-003	Ni (230.299 nm)	0.0046	6.52	78.7635
	R2404730-003	Pb (220.353 nm)	0.0018	28.12	17.4655
	R2404730-003	Sb (217.582 nm)	0.0000 u	> 100.00	6.6394
	R2404730-003	Se (196.026 nm)	0.0011 u	> 100.00	5.5474
	R2404730-003	Si (252.851 nm)	6.9111	0.18	26366.4102
	R2404730-003	Sn (189.925 nm)	0.0003 u	> 100.00	3.7019
	R2404730-003	Sr (216.596 nm)	5.9485 o	0.36	104690.5699
	R2404730-003	Ti (336.122 nm)	0.0103	0.48	1640.7269
	R2404730-003	Tl (190.794 nm)	0.0011 u	88.97	-0.1400
	R2404730-003	V (292.401 nm)	-0.0001 u	> 100.00	-43.2880
	R2404730-003	Y (360.074 nm)	0.84	0.47	410003.85
	R2404730-003	Y_R (360.074 nm)	0.84	0.47	409083.24
	R2404730-003	Zn (213.857 nm)	0.0024	1.61	153.2322
6/10/2024 20:07:10	R2404730-004	Ag (328.068 nm)	-0.0001 u	> 100.00	-220.3396
	R2404730-004	Al (237.312 nm)	0.2222	1.03	561.5379
	R2404730-004	As (188.980 nm)	-0.0016 u	83.51	-4.7721
	R2404730-004	B (249.772 nm)	0.0605	0.16	1969.8587

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404730-004	Ba (230.424 nm)	0.1779	0.33	9700.1452
	R2404730-004	Be (313.107 nm)	0.0000	15.52	64.8861
	R2404730-004	Ca (317.933 nm)	212.1943 o	0.26	7561195.6407
	R2404730-004	Cd (214.439 nm)	0.0002	29.74	14.0861
	R2404730-004	Co (230.786 nm)	0.0008	30.36	5.4032
	R2404730-004	Cr (267.716 nm)	0.0005	24.24	29.7595
	R2404730-004	Cu (327.395 nm)	0.0020	7.06	59.5486
	R2404730-004	Fe (234.350 nm)	0.3570	0.23	6499.0983
	R2404730-004	K (766.491 nm)	16.0734	0.32	17446.8954
	R2404730-004	Mg (279.078 nm)	30.4954	0.22	99626.6868
	R2404730-004	Mn (257.610 nm)	0.3999	0.24	133580.3262
	R2404730-004	Mo (202.032 nm)	0.0049	3.16	62.7153
	R2404730-004	Na (588.995 nm)	111.6000 o	0.19	1506189.6230
	R2404730-004	Ni (230.299 nm)	0.0034	5.96	65.2798
	R2404730-004	Pb (220.353 nm)	0.0005	> 100.00	10.6716
	R2404730-004	Sb (217.582 nm)	0.0021	31.91	10.4304
	R2404730-004	Se (196.026 nm)	-0.0048 u	42.96	1.2706
	R2404730-004	Si (252.851 nm)	6.1331	0.18	23402.0591
	R2404730-004	Sn (189.925 nm)	0.0005	55.87	4.3395
	R2404730-004	Sr (216.596 nm)	1.6023	0.24	28198.4556
	R2404730-004	Ti (336.122 nm)	0.0058	4.09	998.0634
	R2404730-004	Tl (190.794 nm)	0.0027	23.56	1.4491
	R2404730-004	V (292.401 nm)	0.0001	79.37	-36.4058
	R2404730-004	Y (360.074 nm)	0.94	0.27	457924.30
	R2404730-004	Y_R (360.074 nm)	0.94	0.27	456940.59
	R2404730-004	Zn (213.857 nm)	0.0023	0.51	145.4843
6/10/2024 20:10:24	R2404730-006	Ag (328.068 nm)	-0.0004 u	8.52	-236.6252
	R2404730-006	Al (237.312 nm)	0.1830	1.44	464.7434
	R2404730-006	As (188.980 nm)	0.0002 u	> 100.00	-1.7581
	R2404730-006	B (249.772 nm)	0.0415	0.66	1354.1409
	R2404730-006	Ba (230.424 nm)	0.0763	0.36	4166.1325
	R2404730-006	Be (313.107 nm)	0.0000	32.08	63.2137
	R2404730-006	Ca (317.933 nm)	158.1793 o	0.19	5637156.1964
	R2404730-006	Cd (214.439 nm)	0.0003	9.65	17.5863
	R2404730-006	Co (230.786 nm)	0.0003	32.56	-4.1381
	R2404730-006	Cr (267.716 nm)	0.0009	10.73	53.9631
	R2404730-006	Cu (327.395 nm)	0.0016	11.23	43.7540
	R2404730-006	Fe (234.350 nm)	0.2267	0.08	4128.2256
	R2404730-006	K (766.491 nm)	8.8201	0.25	9487.1736
	R2404730-006	Mg (279.078 nm)	26.6796	0.14	87156.7251
	R2404730-006	Mn (257.610 nm)	0.2008	0.16	67086.9044
	R2404730-006	Mo (202.032 nm)	0.0044	2.97	57.9278
	R2404730-006	Na (588.995 nm)	84.5312 o	0.06	1137555.6414
	R2404730-006	Ni (230.299 nm)	0.0017	16.00	45.2745
	R2404730-006	Pb (220.353 nm)	0.0014	45.31	15.4912
	R2404730-006	Sb (217.582 nm)	0.0010 u	> 100.00	8.4285
	R2404730-006	Se (196.026 nm)	-0.0009 u	> 100.00	4.1157
	R2404730-006	Si (252.851 nm)	4.7264	0.04	18042.0609
	R2404730-006	Sn (189.925 nm)	0.0002 u	> 100.00	3.4212
	R2404730-006	Sr (216.596 nm)	1.4266	0.14	25107.6554
	R2404730-006	Ti (336.122 nm)	0.0050	15.70	877.6837
	R2404730-006	Tl (190.794 nm)	0.0008 u	> 100.00	-0.4251
	R2404730-006	V (292.401 nm)	0.0002	88.19	-33.6826
	R2404730-006	Y (360.074 nm)	0.95	0.52	464747.50
	R2404730-006	Y_R (360.074 nm)	0.95	0.51	463741.05
	R2404730-006	Zn (213.857 nm)	0.0029	1.33	187.3471
6/10/2024 20:13:38	R2404730-006L 5X	Ag (328.068 nm)	-0.0004 u	24.10	-236.7641

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404730-006L 5X	Al (237.312 nm)	0.0376	5.32	105.2347
	R2404730-006L 5X	As (188.980 nm)	-0.0008 u	> 100.00	-3.3016
	R2404730-006L 5X	B (249.772 nm)	0.0084	3.85	277.7291
	R2404730-006L 5X	Ba (230.424 nm)	0.0155	0.76	856.0279
	R2404730-006L 5X	Be (313.107 nm)	0.0000	25.04	42.9067
	R2404730-006L 5X	Ca (317.933 nm)	33.1282	0.46	1182782.5072
	R2404730-006L 5X	Cd (214.439 nm)	0.0001	23.14	8.1642
	R2404730-006L 5X	Co (230.786 nm)	0.0000 u	> 100.00	-9.5349
	R2404730-006L 5X	Cr (267.716 nm)	0.0002	48.10	18.0822
	R2404730-006L 5X	Cu (327.395 nm)	0.0006	47.92	-3.1192
	R2404730-006L 5X	Fe (234.350 nm)	0.0471	0.48	856.7141
	R2404730-006L 5X	K (766.491 nm)	1.7104	2.89	1684.9801
	R2404730-006L 5X	Mg (279.078 nm)	5.4711	0.39	17849.1698
	R2404730-006L 5X	Mn (257.610 nm)	0.0412	0.41	13780.9030
	R2404730-006L 5X	Mo (202.032 nm)	0.0008	18.16	20.8241
	R2404730-006L 5X	Na (588.995 nm)	17.1211	0.01	219538.5885
	R2404730-006L 5X	Ni (230.299 nm)	0.0008	68.69	35.0123
	R2404730-006L 5X	Pb (220.353 nm)	0.0007 u	> 100.00	11.3218
	R2404730-006L 5X	Sb (217.582 nm)	-0.0014 u	37.02	3.9658
	R2404730-006L 5X	Se (196.026 nm)	0.0024 u	> 100.00	6.5463
	R2404730-006L 5X	Si (252.851 nm)	0.9493	0.76	3649.8602
	R2404730-006L 5X	Sn (189.925 nm)	-0.0006 u	> 100.00	1.5893
	R2404730-006L 5X	Sr (216.596 nm)	0.2909	0.48	5118.6660
	R2404730-006L 5X	Ti (336.122 nm)	0.0009	13.60	288.8268
	R2404730-006L 5X	Tl (190.794 nm)	0.0009 u	> 100.00	-0.3459
	R2404730-006L 5X	V (292.401 nm)	0.0001 u	> 100.00	-36.3512
	R2404730-006L 5X	Y (360.074 nm)	1.00	0.10	487380.76
	R2404730-006L 5X	Y_R (360.074 nm)	1.00	0.10	486321.61
	R2404730-006L 5X	Zn (213.857 nm)	0.0006	13.99	36.7455
6/10/2024 20:16:52	R2404731-003	Ag (328.068 nm)	-0.0004 u	29.18	-236.8515
	R2404731-003	Al (237.312 nm)	0.0100	31.49	37.0510
	R2404731-003	As (188.980 nm)	-0.0031 u	22.54	-7.2450
	R2404731-003	B (249.772 nm)	0.0014	7.51	50.3654
	R2404731-003	Ba (230.424 nm)	0.0002	34.05	19.8672
	R2404731-003	Be (313.107 nm)	0.0000	42.48	32.1889
	R2404731-003	Ca (317.933 nm)	0.0841	0.18	5737.0043
	R2404731-003	Cd (214.439 nm)	0.0002	45.69	13.6675
	R2404731-003	Co (230.786 nm)	-0.0002 u	49.63	-13.1458
	R2404731-003	Cr (267.716 nm)	0.0004	26.17	25.3768
	R2404731-003	Cu (327.395 nm)	0.0004	65.24	-8.8692
	R2404731-003	Fe (234.350 nm)	0.0060	5.91	109.7168
	R2404731-003	K (766.491 nm)	0.0614	62.12	-124.6655
	R2404731-003	Mg (279.078 nm)	0.0180	2.85	28.8866
	R2404731-003	Mn (257.610 nm)	0.0002	1.97	86.0009
	R2404731-003	Mo (202.032 nm)	0.0002	> 100.00	13.7654
	R2404731-003	Na (588.995 nm)	0.3100	1.82	-9400.8132
	R2404731-003	Ni (230.299 nm)	-0.0006 u	> 100.00	18.4006
	R2404731-003	Pb (220.353 nm)	0.0007	55.59	11.5937
	R2404731-003	Sb (217.582 nm)	0.0050	29.69	15.8482
	R2404731-003	Se (196.026 nm)	0.0004 u	> 100.00	5.0803
	R2404731-003	Si (252.851 nm)	0.3108	0.68	1216.7632
	R2404731-003	Sn (189.925 nm)	0.0015	24.47	6.6730
	R2404731-003	Sr (216.596 nm)	0.0004	15.30	6.2358
	R2404731-003	Ti (336.122 nm)	-0.0001 u	76.04	140.2087
	R2404731-003	Tl (190.794 nm)	0.0001 u	> 100.00	-1.0625
	R2404731-003	V (292.401 nm)	0.0000 u	> 100.00	-41.6239
	R2404731-003	Y (360.074 nm)	1.02	0.13	499973.53

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404731-003	Y_R (360.074 nm)	1.02	0.13	498906.53
	R2404731-003	Zn (213.857 nm)	-0.0001 u	13.00	-9.0681
6/10/2024 20:20:07	R2404758-001 10X	Ag (328.068 nm)	-0.0004 u	32.80	-236.7881
	R2404758-001 10X	Al (237.312 nm)	0.0251	5.98	74.3747
	R2404758-001 10X	As (188.980 nm)	0.0395	5.88	65.0425
	R2404758-001 10X	B (249.772 nm)	2.5954	1.60	84281.0198
	R2404758-001 10X	Ba (230.424 nm)	0.1571	1.33	8567.3072
	R2404758-001 10X	Be (313.107 nm)	0.0000	57.74	35.2865
	R2404758-001 10X	Ca (317.933 nm)	20.6966	1.34	739963.5484
	R2404758-001 10X	Cd (214.439 nm)	0.0001 u	98.03	8.6447
	R2404758-001 10X	Co (230.786 nm)	0.0043	3.34	68.0249
	R2404758-001 10X	Cr (267.716 nm)	0.0229	1.14	1194.6796
	R2404758-001 10X	Cu (327.395 nm)	0.0002	52.03	-18.6039
	R2404758-001 10X	Fe (234.350 nm)	0.1264	1.32	2301.8568
	R2404758-001 10X	K (766.491 nm)	219.2924 o LR	1.79	240459.0540
	R2404758-001 10X	Mg (279.078 nm)	24.6989	1.34	80683.9564
	R2404758-001 10X	Mn (257.610 nm)	0.0178	1.42	5953.8951
	R2404758-001 10X	Mo (202.032 nm)	0.0298	3.23	323.2395
	R2404758-001 10X	Na (588.995 nm)	741.9425 o LR	1.74	10090437.2138
	R2404758-001 10X	Ni (230.299 nm)	0.0255	2.66	324.8296
	R2404758-001 10X	Pb (220.353 nm)	0.0005	48.69	10.6777
	R2404758-001 10X	Sb (217.582 nm)	0.0019	73.30	10.1325
	R2404758-001 10X	Se (196.026 nm)	-0.0015 u	> 100.00	3.6653
	R2404758-001 10X	Si (252.851 nm)	2.5828	1.59	9873.9769
	R2404758-001 10X	Sn (189.925 nm)	0.0019	59.20	7.7105
	R2404758-001 10X	Sr (216.596 nm)	0.3456	1.19	6081.0183
	R2404758-001 10X	Ti (336.122 nm)	0.0128	1.31	2002.7514
	R2404758-001 10X	Tl (190.794 nm)	0.0016	> 100.00	0.3937
	R2404758-001 10X	V (292.401 nm)	0.0125	1.40	434.9872
	R2404758-001 10X	Y (360.074 nm)	0.88	0.27	427692.72
	R2404758-001 10X	Y_R (360.074 nm)	0.87	0.27	426719.02
	R2404758-001 10X	Zn (213.857 nm)	0.0098	0.94	629.3793
6/10/2024 20:23:21	R2404765-002	Ag (328.068 nm)	0.0006	30.54	-180.1154
	R2404765-002	Al (237.312 nm)	1.6972	0.03	4207.7040
	R2404765-002	As (188.980 nm)	0.1501	1.42	252.4946
	R2404765-002	B (249.772 nm)	9.6250	0.22	312539.6839
	R2404765-002	Ba (230.424 nm)	0.2841	0.31	15481.3715
	R2404765-002	Be (313.107 nm)	0.0001	13.84	92.9728
	R2404765-002	Ca (317.933 nm)	122.1734 o	0.41	4354610.4227
	R2404765-002	Cd (214.439 nm)	0.0007	7.57	40.3017
	R2404765-002	Co (230.786 nm)	0.0227	0.75	402.4462
	R2404765-002	Cr (267.716 nm)	0.1699	0.22	8837.4314
	R2404765-002	Cu (327.395 nm)	0.4859	0.07	21301.5213
	R2404765-002	Fe (234.350 nm)	5.8557	0.30	106619.7516
	R2404765-002	K (766.491 nm)	485.7107 o LR	0.21	532825.9818
	R2404765-002	Mg (279.078 nm)	64.3744 o	0.43	210340.1968
	R2404765-002	Mn (257.610 nm)	0.6346	0.26	211934.2159
	R2404765-002	Mo (202.032 nm)	0.0091	3.92	107.3378
	R2404765-002	Na (588.995 nm)	1183.3228 o	0.34	16101324.8928
	R2404765-002	Ni (230.299 nm)	0.1138	0.81	1361.9115
	R2404765-002	Pb (220.353 nm)	0.0171	5.86	97.1886
	R2404765-002	Sb (217.582 nm)	0.0189	15.55	41.6097
	R2404765-002	Se (196.026 nm)	0.0000 u	> 100.00	4.7710
	R2404765-002	Si (252.851 nm)	14.0479	0.43	53560.0679
	R2404765-002	Sn (189.925 nm)	0.0436	1.44	110.4616
	R2404765-002	Sr (216.596 nm)	1.2516	0.41	22027.2963
	R2404765-002	Ti (336.122 nm)	0.1052	0.18	15351.1697

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404765-002	Tl (190.794 nm)	0.0029	51.37	1.5949
	R2404765-002	V (292.401 nm)	0.0138	1.39	484.4973
	R2404765-002	Y (360.074 nm)	0.81	0.13	394229.39
	R2404765-002	Y_R (360.074 nm)	0.81	0.13	393318.29
	R2404765-002	Zn (213.857 nm)	0.6086	0.21	38956.9785
6/10/2024 20:26:35	R2404780-001	Ag (328.068 nm)	-0.0003 u	38.35	-232.1446
	R2404780-001	Al (237.312 nm)	0.2444	0.28	616.5295
	R2404780-001	As (188.980 nm)	-0.0003 u	> 100.00	-2.6015
	R2404780-001	B (249.772 nm)	0.0295	4.03	962.6683
	R2404780-001	Ba (230.424 nm)	0.0520	0.31	2843.8506
	R2404780-001	Be (313.107 nm)	0.0000	37.34	62.9859
	R2404780-001	Ca (317.933 nm)	88.0979 o	0.27	3140826.7167
	R2404780-001	Cd (214.439 nm)	0.0002	47.03	14.9272
	R2404780-001	Co (230.786 nm)	0.0001 u	> 100.00	-8.7619
	R2404780-001	Cr (267.716 nm)	0.0008	8.64	46.6007
	R2404780-001	Cu (327.395 nm)	0.0014	8.05	35.2345
	R2404780-001	Fe (234.350 nm)	0.2116	0.79	3851.6180
	R2404780-001	K (766.491 nm)	4.2699	3.35	4493.7690
	R2404780-001	Mg (279.078 nm)	19.6704	0.15	64251.4374
	R2404780-001	Mn (257.610 nm)	0.0060	0.33	2009.2654
	R2404780-001	Mo (202.032 nm)	0.0013	19.53	25.2154
	R2404780-001	Na (588.995 nm)	31.7823	0.29	419201.3042
	R2404780-001	Ni (230.299 nm)	0.0000 u	> 100.00	25.3689
	R2404780-001	Pb (220.353 nm)	0.0009	59.50	12.7783
	R2404780-001	Sb (217.582 nm)	0.0034	31.82	12.9170
	R2404780-001	Se (196.026 nm)	0.0004 u	> 100.00	5.0521
	R2404780-001	Si (252.851 nm)	2.6573	0.26	10157.9148
	R2404780-001	Sn (189.925 nm)	0.0000 u	> 100.00	2.9512
	R2404780-001	Sr (216.596 nm)	0.8792	0.09	15473.1883
	R2404780-001	Ti (336.122 nm)	0.0041	2.88	749.9174
	R2404780-001	Tl (190.794 nm)	0.0003 u	> 100.00	-0.9473
	R2404780-001	V (292.401 nm)	0.0003	30.91	-30.3777
	R2404780-001	Y (360.074 nm)	0.98	0.31	479074.96
	R2404780-001	Y_R (360.074 nm)	0.98	0.31	478036.83
	R2404780-001	Zn (213.857 nm)	0.0027	1.65	172.0385
6/10/2024 20:29:49	Continuing Calibration Verification	Ag (328.068 nm)	0.5016	0.11	28200.2008
	Continuing Calibration Verification	Al (237.312 nm)	9.7245	0.09	24050.8446
	Continuing Calibration Verification	As (188.980 nm)	0.9650	0.07	1634.4661
	Continuing Calibration Verification	B (249.772 nm)	2.4100	0.08	78260.7792
	Continuing Calibration Verification	Ba (230.424 nm)	9.5525	0.17	520113.6124
	Continuing Calibration Verification	Be (313.107 nm)	0.2406	0.24	264135.0660
	Continuing Calibration Verification	Ca (317.933 nm)	25.5229	0.29	911878.3771
	Continuing Calibration Verification	Cd (214.439 nm)	0.4964	0.33	28282.7523
	Continuing Calibration Verification	Co (230.786 nm)	2.4537	0.13	44484.7836
	Continuing Calibration Verification	Cr (267.716 nm)	0.5108	0.31	26558.7000
	Continuing Calibration Verification	Cu (327.395 nm)	1.2082	0.33	53007.6363
	Continuing Calibration Verification	Fe (234.350 nm)	4.9666	0.18	90431.5906
	Continuing Calibration Verification	K (766.491 nm)	24.2459	0.25	26415.3302
	Continuing Calibration Verification	Mg (279.078 nm)	25.0975	0.23	81986.8228
	Continuing Calibration Verification	Mn (257.610 nm)	0.7336	0.21	245004.1437
	Continuing Calibration Verification	Mo (202.032 nm)	2.6224	0.26	27386.0092
	Continuing Calibration Verification	Na (588.995 nm)	25.4836	0.40	333422.9620
	Continuing Calibration Verification	Ni (230.299 nm)	2.0403	0.20	23984.1800
	Continuing Calibration Verification	Pb (220.353 nm)	0.5086	0.37	2663.2267
	Continuing Calibration Verification	Sb (217.582 nm)	4.7340	0.22	8800.2996
	Continuing Calibration Verification	Se (196.026 nm)	0.4688	0.67	346.5273
	Continuing Calibration Verification	Si (252.851 nm)	10.3668	0.66	39533.7517

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Verification	Sn (189.925 nm)	4.9329	0.21	12149.7736
	Continuing Calibration Verification	Sr (216.596 nm)	2.4299	0.46	42765.0338
	Continuing Calibration Verification	Ti (336.122 nm)	2.4998	0.10	361319.7647
	Continuing Calibration Verification	Tl (190.794 nm)	0.9644	0.24	941.1792
	Continuing Calibration Verification	V (292.401 nm)	2.4899	0.23	94356.5784
	Continuing Calibration Verification	Y (360.074 nm)	0.98	0.27	479012.27
	Continuing Calibration Verification	Y_R (360.074 nm)	0.98	0.27	477956.21
	Continuing Calibration Verification	Zn (213.857 nm)	0.9759	0.10	62468.3507
6/10/2024 20:33:03	Continuing Calibration Blank	Ag (328.068 nm)	-0.0003 u	28.34	-230.9855
	Continuing Calibration Blank	Al (237.312 nm)	0.0022 u	98.37	17.6814
	Continuing Calibration Blank	As (188.980 nm)	-0.0009 u	> 100.00	-3.5659
	Continuing Calibration Blank	B (249.772 nm)	0.0028	15.83	96.9432
	Continuing Calibration Blank	Ba (230.424 nm)	0.0009	4.79	58.6449
	Continuing Calibration Blank	Be (313.107 nm)	0.0000	5.17	63.0396
	Continuing Calibration Blank	Ca (317.933 nm)	0.0098	3.00	3091.0008
	Continuing Calibration Blank	Cd (214.439 nm)	0.0001 u	> 100.00	7.8782
	Continuing Calibration Blank	Co (230.786 nm)	0.0001 u	> 100.00	-8.0037
	Continuing Calibration Blank	Cr (267.716 nm)	0.0001	41.35	13.0931
	Continuing Calibration Blank	Cu (327.395 nm)	0.0005	42.83	-6.0136
	Continuing Calibration Blank	Fe (234.350 nm)	0.0026	24.74	46.7643
	Continuing Calibration Blank	K (766.491 nm)	0.2309	12.50	61.3259
	Continuing Calibration Blank	Mg (279.078 nm)	0.0032	65.85	-19.3643
	Continuing Calibration Blank	Mn (257.610 nm)	0.0001	11.73	56.1181
	Continuing Calibration Blank	Mo (202.032 nm)	0.0035	28.02	48.9956
	Continuing Calibration Blank	Na (588.995 nm)	0.2406	4.04	-10345.7007
	Continuing Calibration Blank	Ni (230.299 nm)	0.0000 u	> 100.00	25.6372
	Continuing Calibration Blank	Pb (220.353 nm)	0.0008 u	> 100.00	11.9435
	Continuing Calibration Blank	Sb (217.582 nm)	0.0036	27.29	13.3616
	Continuing Calibration Blank	Se (196.026 nm)	-0.0011 u	> 100.00	3.9457
	Continuing Calibration Blank	Si (252.851 nm)	0.0646	16.40	278.7496
	Continuing Calibration Blank	Sn (189.925 nm)	0.0010	57.59	5.5547
	Continuing Calibration Blank	Sr (216.596 nm)	0.0005	25.92	9.0139
	Continuing Calibration Blank	Ti (336.122 nm)	0.0028	40.90	564.3348
	Continuing Calibration Blank	Tl (190.794 nm)	0.0017	82.94	0.5005
	Continuing Calibration Blank	V (292.401 nm)	0.0001	> 100.00	-35.8414
	Continuing Calibration Blank	Y (360.074 nm)	1.02	0.07	497781.52
	Continuing Calibration Blank	Y_R (360.074 nm)	1.02	0.07	496691.56
	Continuing Calibration Blank	Zn (213.857 nm)	0.0010	1.37	63.6997
6/10/2024 20:36:16	R2404780-002	Ag (328.068 nm)	-0.0005 u	31.77	-244.3371
	R2404780-002	Al (237.312 nm)	0.3420	0.58	857.7239
	R2404780-002	As (188.980 nm)	0.0033	65.52	3.5054
	R2404780-002	B (249.772 nm)	0.0490	0.49	1597.3495
	R2404780-002	Ba (230.424 nm)	0.0866	0.30	4725.0905
	R2404780-002	Be (313.107 nm)	0.0001	23.59	100.8364
	R2404780-002	Ca (317.933 nm)	421.8201 o LR	0.50	15028157.4133
	R2404780-002	Cd (214.439 nm)	0.0003	13.32	17.7069
	R2404780-002	Co (230.786 nm)	0.0012	11.01	12.8956
	R2404780-002	Cr (267.716 nm)	0.0011	3.30	64.8124
	R2404780-002	Cu (327.395 nm)	0.0010	23.88	17.5441
	R2404780-002	Fe (234.350 nm)	0.8426	0.26	15341.6763
	R2404780-002	K (766.491 nm)	24.5151	0.12	26710.7646
	R2404780-002	Mg (279.078 nm)	37.4676	0.37	122411.0750
	R2404780-002	Mn (257.610 nm)	0.5066	0.35	169214.3004
	R2404780-002	Mo (202.032 nm)	0.0022	11.70	34.5207
	R2404780-002	Na (588.995 nm)	263.2601 o LR	0.32	3571555.2220
	R2404780-002	Ni (230.299 nm)	0.0038	8.44	69.9183
	R2404780-002	Pb (220.353 nm)	0.0016	21.60	16.2745

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404780-002	Sb (217.582 nm)	0.0004 u	> 100.00	7.3719
	R2404780-002	Se (196.026 nm)	0.0005 u	> 100.00	5.1510
	R2404780-002	Si (252.851 nm)	5.7485	0.06	21936.6290
	R2404780-002	Sn (189.925 nm)	-0.0002 u	> 100.00	2.5017
	R2404780-002	Sr (216.596 nm)	3.2963	0.53	58012.4303
	R2404780-002	Ti (336.122 nm)	0.0126	9.40	1970.1886
	R2404780-002	Tl (190.794 nm)	0.0024	35.13	1.0993
	R2404780-002	V (292.401 nm)	0.0002	16.65	-32.3512
	R2404780-002	Y (360.074 nm)	0.90	0.12	438972.24
	R2404780-002	Y_R (360.074 nm)	0.90	0.11	437994.54
	R2404780-002	Zn (213.857 nm)	0.0035	0.64	222.2789
6/10/2024 20:39:30	R2404780-003	Ag (328.068 nm)	-0.0005 u	30.20	-240.2729
	R2404780-003	Al (237.312 nm)	0.2193	1.36	554.4612
	R2404780-003	As (188.980 nm)	0.0001 u	> 100.00	-1.7972
	R2404780-003	B (249.772 nm)	0.0557	0.59	1815.2234
	R2404780-003	Ba (230.424 nm)	0.0501	0.55	2739.8201
	R2404780-003	Be (313.107 nm)	0.0001	13.11	88.6891
	R2404780-003	Ca (317.933 nm)	432.8085 o LR	0.44	15419568.1468
	R2404780-003	Cd (214.439 nm)	0.0003	29.93	17.9256
	R2404780-003	Co (230.786 nm)	0.0024	12.42	33.7791
	R2404780-003	Cr (267.716 nm)	0.0003	49.10	24.0148
	R2404780-003	Cu (327.395 nm)	0.0015	4.47	39.1478
	R2404780-003	Fe (234.350 nm)	0.2799	0.38	5096.0271
	R2404780-003	K (766.491 nm)	23.0767	0.16	25132.2619
	R2404780-003	Mg (279.078 nm)	43.7978	0.38	143097.5794
	R2404780-003	Mn (257.610 nm)	0.7101	0.34	237168.1945
	R2404780-003	Mo (202.032 nm)	0.0010	24.24	22.3100
	R2404780-003	Na (588.995 nm)	289.1159 o LR	0.17	3923669.7800
	R2404780-003	Ni (230.299 nm)	0.0040	10.26	72.0372
	R2404780-003	Pb (220.353 nm)	0.0015	25.98	15.6538
	R2404780-003	Sb (217.582 nm)	0.0011 u	> 100.00	8.6570
	R2404780-003	Se (196.026 nm)	-0.0028 u	78.52	2.7343
	R2404780-003	Si (252.851 nm)	5.3765	0.12	20518.8776
	R2404780-003	Sn (189.925 nm)	-0.0001 u	> 100.00	2.7000
	R2404780-003	Sr (216.596 nm)	3.2734	0.55	57609.6153
	R2404780-003	Ti (336.122 nm)	0.0101	3.02	1607.6200
	R2404780-003	Tl (190.794 nm)	0.0017	64.16	0.4796
	R2404780-003	V (292.401 nm)	-0.0001 u	> 100.00	-45.1479
	R2404780-003	Y (360.074 nm)	0.89	0.14	437088.97
	R2404780-003	Y_R (360.074 nm)	0.89	0.14	436104.50
	R2404780-003	Zn (213.857 nm)	0.0030	0.99	189.4540
6/10/2024 20:42:44	R2404730-001 20X	Ag (328.068 nm)	-0.0003 u	54.16	-233.2165
	R2404730-001 20X	Al (237.312 nm)	0.0090	13.22	34.6174
	R2404730-001 20X	As (188.980 nm)	-0.0005 u	> 100.00	-2.9482
	R2404730-001 20X	B (249.772 nm)	0.0046	3.41	153.7258
	R2404730-001 20X	Ba (230.424 nm)	0.0025	2.96	149.2361
	R2404730-001 20X	Be (313.107 nm)	0.0000	37.82	42.1338
	R2404730-001 20X	Ca (317.933 nm)	11.2187	0.34	402358.4408
	R2404730-001 20X	Cd (214.439 nm)	0.0001	84.86	7.5235
	R2404730-001 20X	Co (230.786 nm)	0.0001 u	> 100.00	-8.3570
	R2404730-001 20X	Cr (267.716 nm)	0.0000 u	> 100.00	3.7996
	R2404730-001 20X	Cu (327.395 nm)	0.0005	85.02	-3.5506
	R2404730-001 20X	Fe (234.350 nm)	0.0331	1.29	603.0074
	R2404730-001 20X	K (766.491 nm)	0.7435	2.90	623.8380
	R2404730-001 20X	Mg (279.078 nm)	1.5720	0.12	5107.3272
	R2404730-001 20X	Mn (257.610 nm)	0.0215	0.15	7182.0000
	R2404730-001 20X	Mo (202.032 nm)	0.0003	67.08	14.7652

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404730-001 20X	Na (588.995 nm)	5.8791	0.32	66440.6832
	R2404730-001 20X	Ni (230.299 nm)	0.0001 u	> 100.00	25.9874
	R2404730-001 20X	Pb (220.353 nm)	0.0005 u	> 100.00	10.7337
	R2404730-001 20X	Sb (217.582 nm)	-0.0006 u	94.22	5.4118
	R2404730-001 20X	Se (196.026 nm)	0.0005 u	> 100.00	5.1106
	R2404730-001 20X	Si (252.851 nm)	0.3034	0.48	1188.7977
	R2404730-001 20X	Sn (189.925 nm)	0.0005	> 100.00	4.3246
	R2404730-001 20X	Sr (216.596 nm)	0.0739	0.89	1299.5000
	R2404730-001 20X	Ti (336.122 nm)	0.0004	40.06	218.4931
	R2404730-001 20X	Tl (190.794 nm)	0.0008	56.70	-0.4117
	R2404730-001 20X	V (292.401 nm)	-0.0003 u	> 100.00	-50.1878
	R2404730-001 20X	Y (360.074 nm)	1.01	0.10	491484.52
	R2404730-001 20X	Y_R (360.074 nm)	1.01	0.10	490403.22
	R2404730-001 20X	Zn (213.857 nm)	0.0001	57.29	5.9690
6/10/2024 20:45:57	R2404730-002 20X	Ag (328.068 nm)	-0.0004 u	17.38	-234.7422
	R2404730-002 20X	Al (237.312 nm)	0.0045	14.25	23.5161
	R2404730-002 20X	As (188.980 nm)	-0.0016 u	73.66	-4.8132
	R2404730-002 20X	B (249.772 nm)	0.0075	2.87	250.4431
	R2404730-002 20X	Ba (230.424 nm)	0.0218	0.24	1198.9336
	R2404730-002 20X	Be (313.107 nm)	0.0000	35.97	44.9302
	R2404730-002 20X	Ca (317.933 nm)	38.1536	0.17	1361789.1653
	R2404730-002 20X	Cd (214.439 nm)	0.0001 u	> 100.00	5.6842
	R2404730-002 20X	Co (230.786 nm)	-0.0001 u	53.89	-12.2327
	R2404730-002 20X	Cr (267.716 nm)	0.0000 u	> 100.00	8.1244
	R2404730-002 20X	Cu (327.395 nm)	0.0002	37.09	-17.0198
	R2404730-002 20X	Fe (234.350 nm)	0.0234	0.36	425.4885
	R2404730-002 20X	K (766.491 nm)	2.3545	1.45	2391.8318
	R2404730-002 20X	Mg (279.078 nm)	6.4806	0.26	21148.2243
	R2404730-002 20X	Mn (257.610 nm)	0.0029	0.53	992.8387
	R2404730-002 20X	Mo (202.032 nm)	0.0001 u	> 100.00	12.9257
	R2404730-002 20X	Na (588.995 nm)	27.8742	0.42	365978.4462
	R2404730-002 20X	Ni (230.299 nm)	0.0002	41.79	28.1814
	R2404730-002 20X	Pb (220.353 nm)	0.0004 u	> 100.00	9.7913
	R2404730-002 20X	Sb (217.582 nm)	-0.0025 u	34.32	2.0022
	R2404730-002 20X	Se (196.026 nm)	-0.0025 u	83.49	2.9324
	R2404730-002 20X	Si (252.851 nm)	0.2844	0.47	1116.2353
	R2404730-002 20X	Sn (189.925 nm)	0.0000 u	> 100.00	3.0622
	R2404730-002 20X	Sr (216.596 nm)	0.2567	0.27	4517.7912
	R2404730-002 20X	Ti (336.122 nm)	0.0005	22.19	229.2618
	R2404730-002 20X	Tl (190.794 nm)	0.0016	67.40	0.3158
	R2404730-002 20X	V (292.401 nm)	-0.0001 u	> 100.00	-44.0687
	R2404730-002 20X	Y (360.074 nm)	0.99	0.41	483880.01
	R2404730-002 20X	Y_R (360.074 nm)	0.99	0.42	482804.22
	R2404730-002 20X	Zn (213.857 nm)	0.0002	13.05	15.8461
6/10/2024 20:49:11	R2404730-003 20X	Ag (328.068 nm)	-0.0003 u	37.69	-231.1198
	R2404730-003 20X	Al (237.312 nm)	0.0090	17.94	34.4123
	R2404730-003 20X	As (188.980 nm)	-0.0002 u	> 100.00	-2.4186
	R2404730-003 20X	B (249.772 nm)	0.0064	2.09	214.8867
	R2404730-003 20X	Ba (230.424 nm)	0.0407	0.63	2226.1686
	R2404730-003 20X	Be (313.107 nm)	0.0000	25.90	52.9772
	R2404730-003 20X	Ca (317.933 nm)	50.5712	0.46	1804112.3635
	R2404730-003 20X	Cd (214.439 nm)	0.0001	67.03	6.7605
	R2404730-003 20X	Co (230.786 nm)	0.0000 u	> 100.00	-9.0695
	R2404730-003 20X	Cr (267.716 nm)	0.0001	71.17	11.3749
	R2404730-003 20X	Cu (327.395 nm)	0.0003	13.54	-15.2720
	R2404730-003 20X	Fe (234.350 nm)	0.0216	0.86	393.2718
	R2404730-003 20X	K (766.491 nm)	2.5612	1.43	2618.6434

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404730-003 20X	Mg (279.078 nm)	6.2124	0.36	20271.8119
	R2404730-003 20X	Mn (257.610 nm)	0.0133	0.53	4465.5148
	R2404730-003 20X	Mo (202.032 nm)	0.0002	53.74	14.2499
	R2404730-003 20X	Na (588.995 nm)	32.9078	0.18	434529.0071
	R2404730-003 20X	Ni (230.299 nm)	0.0003 u	> 100.00	28.8872
	R2404730-003 20X	Pb (220.353 nm)	0.0005	61.93	10.4667
	R2404730-003 20X	Sb (217.582 nm)	-0.0011 u	> 100.00	4.5264
	R2404730-003 20X	Se (196.026 nm)	-0.0020 u	> 100.00	3.3048
	R2404730-003 20X	Si (252.851 nm)	0.3464	0.50	1352.4507
	R2404730-003 20X	Sn (189.925 nm)	-0.0002 u	> 100.00	2.5115
	R2404730-003 20X	Sr (216.596 nm)	0.3168	0.45	5575.1954
	R2404730-003 20X	Ti (336.122 nm)	0.0006	27.42	236.8283
	R2404730-003 20X	Tl (190.794 nm)	0.0009 u	> 100.00	-0.3699
	R2404730-003 20X	V (292.401 nm)	-0.0001 u	> 100.00	-43.3227
	R2404730-003 20X	Y (360.074 nm)	0.98	0.18	480045.98
	R2404730-003 20X	Y_R (360.074 nm)	0.98	0.18	478999.93
	R2404730-003 20X	Zn (213.857 nm)	0.0001	32.75	5.2542
6/10/2024 20:52:25	R2404730-004 20X	Ag (328.068 nm)	-0.0004 u	51.20	-234.6260
	R2404730-004 20X	Al (237.312 nm)	0.0129	6.37	44.1241
	R2404730-004 20X	As (188.980 nm)	-0.0004 u	> 100.00	-2.7247
	R2404730-004 20X	B (249.772 nm)	0.0031	5.18	107.1394
	R2404730-004 20X	Ba (230.424 nm)	0.0091	1.06	506.2791
	R2404730-004 20X	Be (313.107 nm)	0.0000	20.36	41.4051
	R2404730-004 20X	Ca (317.933 nm)	11.5304	0.44	413459.5111
	R2404730-004 20X	Cd (214.439 nm)	0.0001	76.80	6.0044
	R2404730-004 20X	Co (230.786 nm)	0.0002 u	> 100.00	-6.9100
	R2404730-004 20X	Cr (267.716 nm)	0.0001	> 100.00	9.8231
	R2404730-004 20X	Cu (327.395 nm)	0.0004	44.45	-10.0126
	R2404730-004 20X	Fe (234.350 nm)	0.0193	1.37	351.2672
	R2404730-004 20X	K (766.491 nm)	0.8046	3.18	690.8913
	R2404730-004 20X	Mg (279.078 nm)	1.5882	0.40	5160.2982
	R2404730-004 20X	Mn (257.610 nm)	0.0209	0.58	6984.7012
	R2404730-004 20X	Mo (202.032 nm)	0.0002	8.02	13.5882
	R2404730-004 20X	Na (588.995 nm)	5.7167	0.20	64228.9233
	R2404730-004 20X	Ni (230.299 nm)	-0.0001 u	> 100.00	23.5098
	R2404730-004 20X	Pb (220.353 nm)	0.0007	48.48	11.4086
	R2404730-004 20X	Sb (217.582 nm)	-0.0022 u	> 100.00	2.5319
	R2404730-004 20X	Se (196.026 nm)	-0.0021 u	94.13	3.2271
	R2404730-004 20X	Si (252.851 nm)	0.3209	0.37	1255.2955
	R2404730-004 20X	Sn (189.925 nm)	-0.0001 u	> 100.00	2.8806
	R2404730-004 20X	Sr (216.596 nm)	0.0837	0.68	1472.3386
	R2404730-004 20X	Ti (336.122 nm)	0.0003	31.52	198.7514
	R2404730-004 20X	Tl (190.794 nm)	0.0011 u	> 100.00	-0.0911
	R2404730-004 20X	V (292.401 nm)	0.0000 u	> 100.00	-41.0289
	R2404730-004 20X	Y (360.074 nm)	1.01	0.13	491661.78
	R2404730-004 20X	Y_R (360.074 nm)	1.01	0.13	490598.89
	R2404730-004 20X	Zn (213.857 nm)	0.0002	38.49	11.4869
6/10/2024 20:55:38	R2404730-006 20X	Ag (328.068 nm)	-0.0002 u	41.47	-226.0695
	R2404730-006 20X	Al (237.312 nm)	0.0127	3.76	43.6173
	R2404730-006 20X	As (188.980 nm)	-0.0009 u	52.39	-3.4943
	R2404730-006 20X	B (249.772 nm)	0.0024	4.11	82.2932
	R2404730-006 20X	Ba (230.424 nm)	0.0038	1.91	220.2674
	R2404730-006 20X	Be (313.107 nm)	0.0000	9.13	45.8216
	R2404730-006 20X	Ca (317.933 nm)	8.4741	0.35	304595.4122
	R2404730-006 20X	Cd (214.439 nm)	0.0001	28.05	9.2225
	R2404730-006 20X	Co (230.786 nm)	-0.0001 u	> 100.00	-12.3885
	R2404730-006 20X	Cr (267.716 nm)	0.0001 u	> 100.00	10.0541

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404730-006 20X	Cu (327.395 nm)	0.0002	> 100.00	-18.8173
	R2404730-006 20X	Fe (234.350 nm)	0.0126	0.78	228.3064
	R2404730-006 20X	K (766.491 nm)	0.4306	4.51	280.4595
	R2404730-006 20X	Mg (279.078 nm)	1.3905	0.24	4514.4061
	R2404730-006 20X	Mn (257.610 nm)	0.0105	0.41	3532.8517
	R2404730-006 20X	Mo (202.032 nm)	0.0003	74.94	15.4606
	R2404730-006 20X	Na (588.995 nm)	4.3589	0.12	45738.8139
	R2404730-006 20X	Ni (230.299 nm)	0.0000 u	> 100.00	25.4167
	R2404730-006 20X	Pb (220.353 nm)	0.0005 u	> 100.00	10.4288
	R2404730-006 20X	Sb (217.582 nm)	-0.0029 u	24.24	1.1489
	R2404730-006 20X	Se (196.026 nm)	-0.0005 u	> 100.00	4.4005
	R2404730-006 20X	Si (252.851 nm)	0.2530	0.84	996.6867
	R2404730-006 20X	Sn (189.925 nm)	-0.0006 u	> 100.00	1.4320
	R2404730-006 20X	Sr (216.596 nm)	0.0746	0.46	1312.7120
	R2404730-006 20X	Ti (336.122 nm)	0.0003	25.29	201.7606
	R2404730-006 20X	Tl (190.794 nm)	-0.0012 u	16.44	-2.4169
	R2404730-006 20X	V (292.401 nm)	-0.0001 u	> 100.00	-42.8675
	R2404730-006 20X	Y (360.074 nm)	1.01	0.22	493386.43
	R2404730-006 20X	Y_R (360.074 nm)	1.01	0.22	492318.50
	R2404730-006 20X	Zn (213.857 nm)	0.0001	19.11	6.8514
6/10/2024 20:58:52	R2404758-001 100X	Ag (328.068 nm)	-0.0005 u	27.28	-243.9172
	R2404758-001 100X	Al (237.312 nm)	0.0043	1.80	22.9517
	R2404758-001 100X	As (188.980 nm)	0.0043	8.35	5.2339
	R2404758-001 100X	B (249.772 nm)	0.2439	0.35	7926.0177
	R2404758-001 100X	Ba (230.424 nm)	0.0156	0.69	860.5123
	R2404758-001 100X	Be (313.107 nm)	0.0000	17.59	44.9647
	R2404758-001 100X	Ca (317.933 nm)	2.1093	0.40	77875.8879
	R2404758-001 100X	Cd (214.439 nm)	0.0001	98.28	4.8823
	R2404758-001 100X	Co (230.786 nm)	0.0003	31.55	-3.5447
	R2404758-001 100X	Cr (267.716 nm)	0.0025	3.81	133.4895
	R2404758-001 100X	Cu (327.395 nm)	0.0000 u	> 100.00	-26.9291
	R2404758-001 100X	Fe (234.350 nm)	0.0134	1.86	243.5568
	R2404758-001 100X	K (766.491 nm)	19.1532	0.36	20826.6936
	R2404758-001 100X	Mg (279.078 nm)	2.5075	0.43	8164.4717
	R2404758-001 100X	Mn (257.610 nm)	0.0018	1.67	624.5783
	R2404758-001 100X	Mo (202.032 nm)	0.0029	3.15	42.2221
	R2404758-001 100X	Na (588.995 nm)	86.4219 o	0.01	1163303.9987
	R2404758-001 100X	Ni (230.299 nm)	0.0024	21.58	53.2434
	R2404758-001 100X	Pb (220.353 nm)	0.0008	76.43	11.9557
	R2404758-001 100X	Sb (217.582 nm)	-0.0026 u	56.69	1.6851
	R2404758-001 100X	Se (196.026 nm)	-0.0027 u	62.47	2.7775
	R2404758-001 100X	Si (252.851 nm)	0.2729	0.41	1072.4134
	R2404758-001 100X	Sn (189.925 nm)	-0.0001 u	> 100.00	2.8577
	R2404758-001 100X	Sr (216.596 nm)	0.0350	1.46	614.7231
	R2404758-001 100X	Ti (336.122 nm)	0.0013	7.06	343.4059
	R2404758-001 100X	Tl (190.794 nm)	-0.0001 u	> 100.00	-1.2823
	R2404758-001 100X	V (292.401 nm)	0.0010	25.31	-1.4172
	R2404758-001 100X	Y (360.074 nm)	0.97	0.07	475273.98
	R2404758-001 100X	Y_R (360.074 nm)	0.97	0.07	474193.60
	R2404758-001 100X	Zn (213.857 nm)	0.0010	2.91	62.6306
6/10/2024 21:02:07	R2404765-002 10X	Ag (328.068 nm)	-0.0003 u	32.97	-229.3870
	R2404765-002 10X	Al (237.312 nm)	0.1620	1.08	412.8421
	R2404765-002 10X	As (188.980 nm)	0.0142	10.01	22.0144
	R2404765-002 10X	B (249.772 nm)	0.9196	0.19	29864.5481
	R2404765-002 10X	Ba (230.424 nm)	0.0282	0.19	1546.0988
	R2404765-002 10X	Be (313.107 nm)	0.0000	35.54	39.1155
	R2404765-002 10X	Ca (317.933 nm)	12.4007	0.43	444459.9079

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404765-002 10X	Cd (214.439 nm)	0.0002	34.43	12.8014
	R2404765-002 10X	Co (230.786 nm)	0.0023	5.50	31.1441
	R2404765-002 10X	Cr (267.716 nm)	0.0169	1.02	886.6122
	R2404765-002 10X	Cu (327.395 nm)	0.0444	0.23	1923.5589
	R2404765-002 10X	Fe (234.350 nm)	0.5866	0.30	10681.2457
	R2404765-002 10X	K (766.491 nm)	42.1531	0.06	46066.6824
	R2404765-002 10X	Mg (279.078 nm)	6.5570	0.34	21398.0083
	R2404765-002 10X	Mn (257.610 nm)	0.0629	0.32	21007.8272
	R2404765-002 10X	Mo (202.032 nm)	0.0005	16.48	17.2005
	R2404765-002 10X	Na (588.995 nm)	165.1353 o	0.19	2235253.9123
	R2404765-002 10X	Ni (230.299 nm)	0.0116	1.58	161.0905
	R2404765-002 10X	Pb (220.353 nm)	0.0015	19.11	15.5536
	R2404765-002 10X	Sb (217.582 nm)	0.0003 u	> 100.00	7.0676
	R2404765-002 10X	Se (196.026 nm)	-0.0006 u	> 100.00	4.3573
	R2404765-002 10X	Si (252.851 nm)	1.2909	0.48	4951.4249
	R2404765-002 10X	Sn (189.925 nm)	0.0047	26.68	14.5438
	R2404765-002 10X	Sr (216.596 nm)	0.1260	0.43	2217.1141
	R2404765-002 10X	Ti (336.122 nm)	0.0100	0.38	1606.7074
	R2404765-002 10X	Tl (190.794 nm)	0.0011 u	> 100.00	-0.1256
	R2404765-002 10X	V (292.401 nm)	0.0013	0.88	8.4221
	R2404765-002 10X	Y (360.074 nm)	0.96	0.09	469563.18
	R2404765-002 10X	Y_R (360.074 nm)	0.96	0.09	468482.70
	R2404765-002 10X	Zn (213.857 nm)	0.0586	0.33	3753.8668
6/10/2024 21:05:21	R2404780-001 20X	Ag (328.068 nm)	-0.0004 u	31.52	-239.6596
	R2404780-001 20X	Al (237.312 nm)	0.0145	10.68	48.2347
	R2404780-001 20X	As (188.980 nm)	-0.0001 u	> 100.00	-2.1923
	R2404780-001 20X	B (249.772 nm)	0.0019	11.32	67.4512
	R2404780-001 20X	Ba (230.424 nm)	0.0026	3.07	153.2891
	R2404780-001 20X	Be (313.107 nm)	0.0000	20.24	43.5951
	R2404780-001 20X	Ca (317.933 nm)	4.5786	0.42	165833.0677
	R2404780-001 20X	Cd (214.439 nm)	0.0001	82.78	6.4309
	R2404780-001 20X	Co (230.786 nm)	-0.0001 u	68.78	-12.3585
	R2404780-001 20X	Cr (267.716 nm)	0.0001 u	> 100.00	12.6959
	R2404780-001 20X	Cu (327.395 nm)	0.0003	55.65	-13.5797
	R2404780-001 20X	Fe (234.350 nm)	0.0121	1.76	220.6324
	R2404780-001 20X	K (766.491 nm)	0.3248	6.20	164.4440
	R2404780-001 20X	Mg (279.078 nm)	1.0169	0.46	3293.3609
	R2404780-001 20X	Mn (257.610 nm)	0.0003	4.58	133.0852
	R2404780-001 20X	Mo (202.032 nm)	0.0003	76.98	14.9110
	R2404780-001 20X	Na (588.995 nm)	1.6900	0.60	9392.6939
	R2404780-001 20X	Ni (230.299 nm)	0.0000 u	> 100.00	25.2815
	R2404780-001 20X	Pb (220.353 nm)	0.0003	38.31	9.6556
	R2404780-001 20X	Sb (217.582 nm)	-0.0022 u	> 100.00	2.4670
	R2404780-001 20X	Se (196.026 nm)	0.0003 u	> 100.00	5.0011
	R2404780-001 20X	Si (252.851 nm)	0.1517	0.38	610.6653
	R2404780-001 20X	Sn (189.925 nm)	-0.0007 u	66.02	1.1832
	R2404780-001 20X	Sr (216.596 nm)	0.0453	0.84	797.3682
	R2404780-001 20X	Ti (336.122 nm)	0.0002	34.54	182.8463
	R2404780-001 20X	Tl (190.794 nm)	-0.0008 u	> 100.00	-1.9770
	R2404780-001 20X	V (292.401 nm)	-0.0001 u	> 100.00	-42.6311
	R2404780-001 20X	Y (360.074 nm)	1.02	0.13	496034.78
	R2404780-001 20X	Y_R (360.074 nm)	1.01	0.13	494928.68
	R2404780-001 20X	Zn (213.857 nm)	0.0001	37.10	4.5085
6/10/2024 21:08:35	Continuing Calibration Verification	Ag (328.068 nm)	0.5008	0.06	28159.4432
	Continuing Calibration Verification	Al (237.312 nm)	9.7081	0.09	24010.2795
	Continuing Calibration Verification	As (188.980 nm)	0.9612	0.19	1628.0542
	Continuing Calibration Verification	B (249.772 nm)	2.4025	0.15	78016.1181

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Verification	Ba (230.424 nm)	9.5545	0.20	520225.3395
	Continuing Calibration Verification	Be (313.107 nm)	0.2398	0.23	263236.6728
	Continuing Calibration Verification	Ca (317.933 nm)	25.4356	0.24	908769.0444
	Continuing Calibration Verification	Cd (214.439 nm)	0.4954	0.28	28225.1573
	Continuing Calibration Verification	Co (230.786 nm)	2.4522	0.23	44457.1770
	Continuing Calibration Verification	Cr (267.716 nm)	0.5107	0.26	26553.0192
	Continuing Calibration Verification	Cu (327.395 nm)	1.2120	0.36	53174.3306
	Continuing Calibration Verification	Fe (234.350 nm)	4.9550	0.21	90220.5153
	Continuing Calibration Verification	K (766.491 nm)	23.9546	0.30	26095.6965
	Continuing Calibration Verification	Mg (279.078 nm)	25.0227	0.22	81742.1435
	Continuing Calibration Verification	Mn (257.610 nm)	0.7327	0.22	244718.4370
	Continuing Calibration Verification	Mo (202.032 nm)	2.6253	0.30	27416.9149
	Continuing Calibration Verification	Na (588.995 nm)	25.2390	0.44	330091.2825
	Continuing Calibration Verification	Ni (230.299 nm)	2.0352	0.32	23924.1999
	Continuing Calibration Verification	Pb (220.353 nm)	0.5075	0.29	2657.3731
	Continuing Calibration Verification	Sb (217.582 nm)	4.6857	0.07	8710.5785
	Continuing Calibration Verification	Se (196.026 nm)	0.4706	0.22	347.8325
	Continuing Calibration Verification	Si (252.851 nm)	9.8577	0.37	37593.9372
	Continuing Calibration Verification	Sn (189.925 nm)	4.9199	0.18	12117.7003
	Continuing Calibration Verification	Sr (216.596 nm)	2.4278	0.26	42728.3809
	Continuing Calibration Verification	Ti (336.122 nm)	2.4938	0.11	360448.7814
	Continuing Calibration Verification	Tl (190.794 nm)	0.9644	0.53	941.1493
	Continuing Calibration Verification	V (292.401 nm)	2.4857	0.18	94197.7813
	Continuing Calibration Verification	Y (360.074 nm)	0.98	0.41	478401.66
	Continuing Calibration Verification	Y_R (360.074 nm)	0.98	0.42	477329.65
	Continuing Calibration Verification	Zn (213.857 nm)	0.9761	0.21	62478.2383
6/10/2024 21:11:49	Continuing Calibration Blank	Ag (328.068 nm)	-0.0002 u	67.62	-226.7806
	Continuing Calibration Blank	Al (237.312 nm)	0.0034	52.81	20.7390
	Continuing Calibration Blank	As (188.980 nm)	-0.0002 u	> 100.00	-2.3255
	Continuing Calibration Blank	B (249.772 nm)	0.0017	18.00	61.3879
	Continuing Calibration Blank	Ba (230.424 nm)	0.0009	5.41	61.5698
	Continuing Calibration Blank	Be (313.107 nm)	0.0000	15.67	73.5111
	Continuing Calibration Blank	Ca (317.933 nm)	0.0096	1.04	3083.5551
	Continuing Calibration Blank	Cd (214.439 nm)	0.0001	20.96	10.3780
	Continuing Calibration Blank	Co (230.786 nm)	0.0003	40.67	-3.7683
	Continuing Calibration Blank	Cr (267.716 nm)	0.0001	61.85	12.1463
	Continuing Calibration Blank	Cu (327.395 nm)	0.0004	59.34	-10.7884
	Continuing Calibration Blank	Fe (234.350 nm)	0.0028	21.91	49.6815
	Continuing Calibration Blank	K (766.491 nm)	0.0743	23.60	-110.5225
	Continuing Calibration Blank	Mg (279.078 nm)	0.0043	18.93	-15.6360
	Continuing Calibration Blank	Mn (257.610 nm)	0.0001	26.78	53.8383
	Continuing Calibration Blank	Mo (202.032 nm)	0.0037	35.07	50.9170
	Continuing Calibration Blank	Na (588.995 nm)	0.1080	2.41	-12152.1634
	Continuing Calibration Blank	Ni (230.299 nm)	0.0000 u	> 100.00	25.0191
	Continuing Calibration Blank	Pb (220.353 nm)	0.0009	48.38	12.4360
	Continuing Calibration Blank	Sb (217.582 nm)	0.0026	72.84	11.4839
	Continuing Calibration Blank	Se (196.026 nm)	0.0003 u	> 100.00	5.0224
	Continuing Calibration Blank	Si (252.851 nm)	0.0040	43.23	47.7797
	Continuing Calibration Blank	Sn (189.925 nm)	0.0011	32.67	5.6491
	Continuing Calibration Blank	Sr (216.596 nm)	0.0005	57.50	7.5915
	Continuing Calibration Blank	Ti (336.122 nm)	0.0028	42.69	562.6506
	Continuing Calibration Blank	Tl (190.794 nm)	0.0006	63.86	-0.6626
	Continuing Calibration Blank	V (292.401 nm)	0.0001 u	> 100.00	-36.2321
	Continuing Calibration Blank	Y (360.074 nm)	1.02	0.05	497868.47
	Continuing Calibration Blank	Y_R (360.074 nm)	1.02	0.05	496758.49
	Continuing Calibration Blank	Zn (213.857 nm)	0.0010	3.31	65.9418
6/10/2024 21:15:02	R2404780-002 10X	Ag (328.068 nm)	-0.0004 u	25.93	-236.8111

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404780-002 10X	Al (237.312 nm)	0.0199	3.22	61.4998
	R2404780-002 10X	As (188.980 nm)	-0.0010 u	96.92	-3.6737
	R2404780-002 10X	B (249.772 nm)	0.0030	4.30	103.3357
	R2404780-002 10X	Ba (230.424 nm)	0.0045	0.71	257.6415
	R2404780-002 10X	Be (313.107 nm)	0.0000	31.19	45.0100
	R2404780-002 10X	Ca (317.933 nm)	24.5001	0.30	875446.9340
	R2404780-002 10X	Cd (214.439 nm)	0.0001	73.39	6.1931
	R2404780-002 10X	Co (230.786 nm)	-0.0001 u	71.46	-12.3190
	R2404780-002 10X	Cr (267.716 nm)	0.0001 u	> 100.00	12.6464
	R2404780-002 10X	Cu (327.395 nm)	0.0004	28.69	-11.8720
	R2404780-002 10X	Fe (234.350 nm)	0.0454	0.46	825.6140
	R2404780-002 10X	K (766.491 nm)	1.1235	3.84	1040.8706
	R2404780-002 10X	Mg (279.078 nm)	1.9743	0.26	6421.9211
	R2404780-002 10X	Mn (257.610 nm)	0.0266	0.30	8899.1577
	R2404780-002 10X	Mo (202.032 nm)	0.0008	36.00	20.3807
	R2404780-002 10X	Na (588.995 nm)	13.6357	0.10	172073.4352
	R2404780-002 10X	Ni (230.299 nm)	0.0002	> 100.00	27.5682
	R2404780-002 10X	Pb (220.353 nm)	0.0014	60.03	15.1354
	R2404780-002 10X	Sb (217.582 nm)	-0.0011 u	> 100.00	4.4751
	R2404780-002 10X	Se (196.026 nm)	0.0010 u	> 100.00	5.5268
	R2404780-002 10X	Si (252.851 nm)	0.3020	0.49	1183.2554
	R2404780-002 10X	Sn (189.925 nm)	-0.0001 u	> 100.00	2.8104
	R2404780-002 10X	Sr (216.596 nm)	0.1759	0.51	3094.3394
	R2404780-002 10X	Ti (336.122 nm)	0.0014	17.36	351.8613
	R2404780-002 10X	Tl (190.794 nm)	0.0031	45.47	1.7834
	R2404780-002 10X	V (292.401 nm)	-0.0001 u	> 100.00	-44.8210
	R2404780-002 10X	Y (360.074 nm)	1.00	0.23	489132.91
	R2404780-002 10X	Y_R (360.074 nm)	1.00	0.23	488023.53
	R2404780-002 10X	Zn (213.857 nm)	0.0002	30.94	13.9915
6/10/2024 21:18:16	R2404780-003 10X	Ag (328.068 nm)	-0.0002 u	62.16	-227.1969
	R2404780-003 10X	Al (237.312 nm)	0.0118	6.35	41.5512
	R2404780-003 10X	As (188.980 nm)	-0.0005 u	> 100.00	-2.8913
	R2404780-003 10X	B (249.772 nm)	0.0031	2.38	106.7148
	R2404780-003 10X	Ba (230.424 nm)	0.0025	2.11	148.0855
	R2404780-003 10X	Be (313.107 nm)	0.0000	39.85	63.8147
	R2404780-003 10X	Ca (317.933 nm)	24.8930	0.31	889444.0481
	R2404780-003 10X	Cd (214.439 nm)	0.0000 u	> 100.00	2.7365
	R2404780-003 10X	Co (230.786 nm)	0.0000 u	> 100.00	-10.3651
	R2404780-003 10X	Cr (267.716 nm)	0.0000 u	> 100.00	3.8662
	R2404780-003 10X	Cu (327.395 nm)	0.0003	34.71	-15.0623
	R2404780-003 10X	Fe (234.350 nm)	0.0160	3.75	291.4535
	R2404780-003 10X	K (766.491 nm)	0.9977	3.95	902.8050
	R2404780-003 10X	Mg (279.078 nm)	2.2727	0.19	7397.0610
	R2404780-003 10X	Mn (257.610 nm)	0.0368	0.26	12304.1670
	R2404780-003 10X	Mo (202.032 nm)	0.0002	46.39	14.5384
	R2404780-003 10X	Na (588.995 nm)	14.8076	0.03	188033.4069
	R2404780-003 10X	Ni (230.299 nm)	0.0006 u	87.28	31.8706
	R2404780-003 10X	Pb (220.353 nm)	0.0003 u	> 100.00	9.7418
	R2404780-003 10X	Sb (217.582 nm)	-0.0007 u	> 100.00	5.3773
	R2404780-003 10X	Se (196.026 nm)	0.0004 u	> 100.00	5.0611
	R2404780-003 10X	Si (252.851 nm)	0.2772	0.51	1088.7584
	R2404780-003 10X	Sn (189.925 nm)	-0.0006 u	54.42	1.5271
	R2404780-003 10X	Sr (216.596 nm)	0.1729	0.36	3042.0829
	R2404780-003 10X	Ti (336.122 nm)	0.0008	20.85	265.2852
	R2404780-003 10X	Tl (190.794 nm)	0.0020	81.93	0.7907
	R2404780-003 10X	V (292.401 nm)	-0.0003 u	91.98	-51.8184
	R2404780-003 10X	Y (360.074 nm)	1.00	0.34	488187.87

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404780-003 10X	Y_R (360.074 nm)	1.00	0.34	487079.53
	R2404780-003 10X	Zn (213.857 nm)	0.0000 u	> 100.00	1.0751
6/10/2024 21:21:29	Continuing Calibration Verification1	Ag (328.068 nm)	0.5047	0.09	28374.8756
	Continuing Calibration Verification1	Al (237.312 nm)	9.7811	0.04	24190.6872
	Continuing Calibration Verification1	As (188.980 nm)	0.9658	0.18	1635.8957
	Continuing Calibration Verification1	B (249.772 nm)	2.4186	0.15	78540.2847
	Continuing Calibration Verification1	Ba (230.424 nm)	9.5911	0.45	522216.1433
	Continuing Calibration Verification1	Be (313.107 nm)	0.2417	0.28	265328.1706
	Continuing Calibration Verification1	Ca (317.933 nm)	25.6539	0.24	916546.2040
	Continuing Calibration Verification1	Cd (214.439 nm)	0.4993	0.27	28448.4585
	Continuing Calibration Verification1	Co (230.786 nm)	2.4678	0.36	44739.5392
	Continuing Calibration Verification1	Cr (267.716 nm)	0.5166	0.25	26857.2496
	Continuing Calibration Verification1	Cu (327.395 nm)	1.2217	0.47	53602.0879
	Continuing Calibration Verification1	Fe (234.350 nm)	4.9984	0.24	91009.9411
	Continuing Calibration Verification1	K (766.491 nm)	24.1508	0.29	26310.9683
	Continuing Calibration Verification1	Mg (279.078 nm)	25.2366	0.15	82441.1107
	Continuing Calibration Verification1	Mn (257.610 nm)	0.7392	0.26	246883.6414
	Continuing Calibration Verification1	Mo (202.032 nm)	2.6509	0.39	27683.5895
	Continuing Calibration Verification1	Na (588.995 nm)	25.4494	0.32	332957.3497
	Continuing Calibration Verification1	Ni (230.299 nm)	2.0514	0.18	24114.3296
	Continuing Calibration Verification1	Pb (220.353 nm)	0.5121	0.15	2681.5312
	Continuing Calibration Verification1	Sb (217.582 nm)	4.7177	0.15	8770.0418
	Continuing Calibration Verification1	Se (196.026 nm)	0.4749	0.73	350.9507
	Continuing Calibration Verification1	Si (252.851 nm)	9.9228	0.37	37842.0585
	Continuing Calibration Verification1	Sn (189.925 nm)	4.9603	0.13	12217.0632
	Continuing Calibration Verification1	Sr (216.596 nm)	2.4536	0.32	43181.5896
	Continuing Calibration Verification1	Ti (336.122 nm)	2.5149	0.14	363505.9661
	Continuing Calibration Verification1	Tl (190.794 nm)	0.9738	0.40	950.3423
	Continuing Calibration Verification1	V (292.401 nm)	2.5082	0.24	95050.7346
	Continuing Calibration Verification1	Y (360.074 nm)	0.98	0.47	477201.07
	Continuing Calibration Verification1	Y_R (360.074 nm)	0.98	0.47	476101.43
	Continuing Calibration Verification1	Zn (213.857 nm)	0.9853	0.32	63068.5733
6/10/2024 21:24:43	Continuing Calibration Blank1	Ag (328.068 nm)	-0.0002 u	60.60	-228.6429
	Continuing Calibration Blank1	Al (237.312 nm)	0.0019 u	> 100.00	16.9098
	Continuing Calibration Blank1	As (188.980 nm)	-0.0023 u	36.28	-5.9156
	Continuing Calibration Blank1	B (249.772 nm)	0.0019	12.20	66.9948
	Continuing Calibration Blank1	Ba (230.424 nm)	0.0002	19.07	22.8035
	Continuing Calibration Blank1	Be (313.107 nm)	0.0000	15.35	52.2167
	Continuing Calibration Blank1	Ca (317.933 nm)	0.0037	6.68	2876.4347
	Continuing Calibration Blank1	Cd (214.439 nm)	0.0001	38.44	9.9357
	Continuing Calibration Blank1	Co (230.786 nm)	0.0001 u	> 100.00	-8.1784
	Continuing Calibration Blank1	Cr (267.716 nm)	0.0000 u	> 100.00	8.4832
	Continuing Calibration Blank1	Cu (327.395 nm)	0.0002	94.33	-19.9817
	Continuing Calibration Blank1	Fe (234.350 nm)	0.0019	31.88	33.6233
	Continuing Calibration Blank1	K (766.491 nm)	0.0654	45.74	-120.2629
	Continuing Calibration Blank1	Mg (279.078 nm)	0.0002 u	> 100.00	-29.0355
	Continuing Calibration Blank1	Mn (257.610 nm)	0.0000	7.52	27.2476
	Continuing Calibration Blank1	Mo (202.032 nm)	0.0029	42.69	42.3158
	Continuing Calibration Blank1	Na (588.995 nm)	0.0795	5.62	-12540.4832
	Continuing Calibration Blank1	Ni (230.299 nm)	0.0002 u	> 100.00	27.7402
	Continuing Calibration Blank1	Pb (220.353 nm)	0.0003 u	> 100.00	9.2621
	Continuing Calibration Blank1	Sb (217.582 nm)	0.0022	67.79	10.6687
	Continuing Calibration Blank1	Se (196.026 nm)	0.0010 u	> 100.00	5.5236
	Continuing Calibration Blank1	Si (252.851 nm)	-0.0029 u	23.25	21.6933
	Continuing Calibration Blank1	Sn (189.925 nm)	0.0001 u	> 100.00	3.2599
	Continuing Calibration Blank1	Sr (216.596 nm)	0.0003	56.31	4.3503
	Continuing Calibration Blank1	Ti (336.122 nm)	0.0025	45.61	516.9950

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Blank1	Tl (190.794 nm)	0.0010	60.94	-0.2227
	Continuing Calibration Blank1	V (292.401 nm)	-0.0001 u	> 100.00	-44.7527
	Continuing Calibration Blank1	Y (360.074 nm)	1.02	0.12	496187.53
	Continuing Calibration Blank1	Y_R (360.074 nm)	1.01	0.12	495057.53
	Continuing Calibration Blank1	Zn (213.857 nm)	0.0000 u	> 100.00	0.7431
6/10/2024 21:27:56	Contract Required Detection Limit	Ag (328.068 nm)	0.0085	1.14	266.5015
	Contract Required Detection Limit	Al (237.312 nm)	0.1953	1.24	495.0393
	Contract Required Detection Limit	As (188.980 nm)	0.0183	6.48	29.0280
	Contract Required Detection Limit	B (249.772 nm)	0.1901	0.18	6176.7006
	Contract Required Detection Limit	Ba (230.424 nm)	0.1938	0.35	10561.0781
	Contract Required Detection Limit	Be (313.107 nm)	0.0049	0.23	5409.9244
	Contract Required Detection Limit	Ca (317.933 nm)	1.0417	0.33	39850.1246
	Contract Required Detection Limit	Cd (214.439 nm)	0.0104	0.27	594.5083
	Contract Required Detection Limit	Co (230.786 nm)	0.0501	0.31	898.8636
	Contract Required Detection Limit	Cr (267.716 nm)	0.0096	2.54	503.5875
	Contract Required Detection Limit	Cu (327.395 nm)	0.0247	1.50	1055.0650
	Contract Required Detection Limit	Fe (234.350 nm)	0.1064	0.80	1936.3985
	Contract Required Detection Limit	K (766.491 nm)	0.9873	1.25	891.3803
	Contract Required Detection Limit	Mg (279.078 nm)	1.0055	0.21	3256.0043
	Contract Required Detection Limit	Mn (257.610 nm)	0.0139	0.20	4669.0528
	Contract Required Detection Limit	Mo (202.032 nm)	0.0265	1.37	288.8061
	Contract Required Detection Limit	Na (588.995 nm)	1.0548	0.37	742.2147
	Contract Required Detection Limit	Ni (230.299 nm)	0.0357	0.81	444.9114
	Contract Required Detection Limit	Pb (220.353 nm)	0.0105	4.27	62.5282
	Contract Required Detection Limit	Sb (217.582 nm)	0.0567	4.51	111.9131
	Contract Required Detection Limit	Se (196.026 nm)	0.0089	16.14	11.2613
	Contract Required Detection Limit	Si (252.851 nm)	0.0497	2.80	222.0521
	Contract Required Detection Limit	Sn (189.925 nm)	0.4979	0.07	1228.9473
	Contract Required Detection Limit	Sr (216.596 nm)	0.0984	0.20	1730.5385
	Contract Required Detection Limit	Ti (336.122 nm)	0.0497	1.12	7341.8627
	Contract Required Detection Limit	Tl (190.794 nm)	0.0203	8.97	18.5997
	Contract Required Detection Limit	V (292.401 nm)	0.0492	0.55	1825.0041
	Contract Required Detection Limit	Y (360.074 nm)	1.01	0.37	495063.41
	Contract Required Detection Limit	Y_R (360.074 nm)	1.01	0.37	493938.68
	Contract Required Detection Limit	Zn (213.857 nm)	0.0172	0.29	1103.9661
6/10/2024 21:31:10	Interference Check Solution A	Ag (328.068 nm)	-0.0004 u	10.46	-239.2207
	Interference Check Solution A	Al (237.312 nm)	248.9250 o	0.14	615345.2057
	Interference Check Solution A	As (188.980 nm)	0.0003 u	> 100.00	-1.4954
	Interference Check Solution A	B (249.772 nm)	0.0936	0.17	3044.7596
	Interference Check Solution A	Ba (230.424 nm)	-0.0006 u	11.60	-20.8041
	Interference Check Solution A	Be (313.107 nm)	0.0002	4.73	253.3312
	Interference Check Solution A	Ca (317.933 nm)	237.2012 o	0.33	8451950.4180
	Interference Check Solution A	Cd (214.439 nm)	-0.0006 u	39.24	-34.5027
	Interference Check Solution A	Co (230.786 nm)	-0.0003 u	86.30	-15.2453
	Interference Check Solution A	Cr (267.716 nm)	0.0036	1.39	192.4402
	Interference Check Solution A	Cu (327.395 nm)	0.0086	3.81	351.1993
	Interference Check Solution A	Fe (234.350 nm)	93.3692 o	0.30	1700072.0720
	Interference Check Solution A	K (766.491 nm)	0.0229 u	> 100.00	-166.9429
	Interference Check Solution A	Mg (279.078 nm)	261.3946 o	0.24	854185.0259
	Interference Check Solution A	Mn (257.610 nm)	0.0011	1.40	401.1990
	Interference Check Solution A	Mo (202.032 nm)	0.0012	45.17	24.0137
	Interference Check Solution A	Na (588.995 nm)	0.0086	44.05	-13505.3312
	Interference Check Solution A	Ni (230.299 nm)	0.0030	9.59	60.1324
	Interference Check Solution A	Pb (220.353 nm)	0.0034	35.74	25.5059
	Interference Check Solution A	Sb (217.582 nm)	-0.0004 u	> 100.00	5.7669
	Interference Check Solution A	Se (196.026 nm)	-0.0042 u	66.51	1.7267
	Interference Check Solution A	Si (252.851 nm)	0.0426	5.27	195.0014

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Interference Check Solution A	Sn (189.925 nm)	0.0021	65.83	8.1415
	Interference Check Solution A	Sr (216.596 nm)	0.0112	0.74	197.1102
	Interference Check Solution A	Ti (336.122 nm)	0.0027	13.92	543.5625
	Interference Check Solution A	Tl (190.794 nm)	-0.0001 u	> 100.00	-1.2770
	Interference Check Solution A	V (292.401 nm)	0.0016	11.16	18.4220
	Interference Check Solution A	Y (360.074 nm)	0.90	0.43	437836.23
	Interference Check Solution A	Y_R (360.074 nm)	0.90	0.43	436815.10
	Interference Check Solution A	Zn (213.857 nm)	0.0133 K	0.77	853.2220 K
6/10/2024 21:34:24	Interference Check Solution AB	Ag (328.068 nm)	0.1996	0.05	11091.0245
	Interference Check Solution AB	Al (237.312 nm)	250.8460 o	0.13	620093.8952
	Interference Check Solution AB	As (188.980 nm)	0.1011	2.11	169.4428
	Interference Check Solution AB	B (249.772 nm)	0.0918	0.45	2986.0660
	Interference Check Solution AB	Ba (230.424 nm)	0.4987	0.30	27162.1207
	Interference Check Solution AB	Be (313.107 nm)	0.5026	0.29	551720.1081
	Interference Check Solution AB	Ca (317.933 nm)	238.5530 o	0.34	8500102.7736
	Interference Check Solution AB	Cd (214.439 nm)	0.9791	0.22	55783.4103
	Interference Check Solution AB	Co (230.786 nm)	0.4839	0.21	8765.6214
	Interference Check Solution AB	Cr (267.716 nm)	0.5216	0.15	27119.9389
	Interference Check Solution AB	Cu (327.395 nm)	0.5419	0.17	23762.1095
	Interference Check Solution AB	Fe (234.350 nm)	93.9719 o	0.27	1711045.9157
	Interference Check Solution AB	K (766.491 nm)	0.0187 u	> 100.00	-171.5271
	Interference Check Solution AB	Mg (279.078 nm)	262.9853 o	0.27	859383.4401
	Interference Check Solution AB	Mn (257.610 nm)	0.4974	0.27	166126.8986
	Interference Check Solution AB	Mo (202.032 nm)	0.0009	58.52	21.3971
	Interference Check Solution AB	Na (588.995 nm)	-0.0032 u	96.21	-13666.2252
	Interference Check Solution AB	Ni (230.299 nm)	0.9891	0.20	11640.6254
	Interference Check Solution AB	Pb (220.353 nm)	0.0523	2.36	281.1395
	Interference Check Solution AB	Sb (217.582 nm)	0.5914	0.55	1105.1994
	Interference Check Solution AB	Se (196.026 nm)	0.0421	7.67	35.4861
	Interference Check Solution AB	Si (252.851 nm)	0.0904	1.96	377.1690
	Interference Check Solution AB	Sn (189.925 nm)	0.0010	36.69	5.5715
	Interference Check Solution AB	Sr (216.596 nm)	0.0113	0.74	197.8950
	Interference Check Solution AB	Ti (336.122 nm)	0.0026	9.01	529.0834
	Interference Check Solution AB	Tl (190.794 nm)	0.1002	1.78	96.6664
	Interference Check Solution AB	V (292.401 nm)	0.5209	0.22	19707.2190
	Interference Check Solution AB	Y (360.074 nm)	0.89	0.25	436797.73
	Interference Check Solution AB	Y_R (360.074 nm)	0.89	0.25	435776.34
	Interference Check Solution AB	Zn (213.857 nm)	1.0313	0.23	66009.8451
6/10/2024 21:37:38	Continuing Calibration Verification1	Ag (328.068 nm)	0.5041	0.16	28341.2603
	Continuing Calibration Verification1	Al (237.312 nm)	9.7842	0.01	24198.4088
	Continuing Calibration Verification1	As (188.980 nm)	0.9705	0.09	1643.8545
	Continuing Calibration Verification1	B (249.772 nm)	2.4124	0.19	78340.3129
	Continuing Calibration Verification1	Ba (230.424 nm)	9.5874	0.17	522014.3395
	Continuing Calibration Verification1	Be (313.107 nm)	0.2418	0.31	265440.8195
	Continuing Calibration Verification1	Ca (317.933 nm)	25.7331	0.29	919366.1988
	Continuing Calibration Verification1	Cd (214.439 nm)	0.4997	0.29	28471.2107
	Continuing Calibration Verification1	Co (230.786 nm)	2.4694	0.15	44770.0115
	Continuing Calibration Verification1	Cr (267.716 nm)	0.5166	0.33	26859.0658
	Continuing Calibration Verification1	Cu (327.395 nm)	1.2204	0.26	53544.0257
	Continuing Calibration Verification1	Fe (234.350 nm)	5.0263	0.31	91518.5359
	Continuing Calibration Verification1	K (766.491 nm)	24.0815	0.24	26234.9670
	Continuing Calibration Verification1	Mg (279.078 nm)	25.2778	0.24	82575.9043
	Continuing Calibration Verification1	Mn (257.610 nm)	0.7387	0.28	246719.2504
	Continuing Calibration Verification1	Mo (202.032 nm)	2.6522	0.31	27697.8811
	Continuing Calibration Verification1	Na (588.995 nm)	25.3375	0.26	331432.4811
	Continuing Calibration Verification1	Ni (230.299 nm)	2.0517	0.25	24118.2415
	Continuing Calibration Verification1	Pb (220.353 nm)	0.5129	0.22	2685.8110

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Verification1	Sb (217.582 nm)	4.6977	0.30	8732.9420
	Continuing Calibration Verification1	Se (196.026 nm)	0.4733	1.04	349.7689
	Continuing Calibration Verification1	Si (252.851 nm)	9.8748	0.45	37659.0721
	Continuing Calibration Verification1	Sn (189.925 nm)	4.9612	0.21	12219.3407
	Continuing Calibration Verification1	Sr (216.596 nm)	2.4535	0.28	43180.3269
	Continuing Calibration Verification1	Ti (336.122 nm)	2.5147	0.18	363477.7744
	Continuing Calibration Verification1	Tl (190.794 nm)	0.9710	0.33	947.5846
	Continuing Calibration Verification1	V (292.401 nm)	2.5090	0.29	95081.4687
	Continuing Calibration Verification1	Y (360.074 nm)	0.98	0.27	478024.23
	Continuing Calibration Verification1	Y_R (360.074 nm)	0.98	0.27	476916.00
	Continuing Calibration Verification1	Zn (213.857 nm)	0.9814	0.24	62820.7294
6/10/2024 21:40:51	Continuing Calibration Blank1	Ag (328.068 nm)	-0.0004 u	16.62	-236.9669
	Continuing Calibration Blank1	Al (237.312 nm)	0.0020	31.78	17.3380
	Continuing Calibration Blank1	As (188.980 nm)	-0.0001 u	> 100.00	-2.1715
	Continuing Calibration Blank1	B (249.772 nm)	0.0016	30.73	57.1129
	Continuing Calibration Blank1	Ba (230.424 nm)	0.0002	34.18	23.6831
	Continuing Calibration Blank1	Be (313.107 nm)	0.0000	25.25	67.2982
	Continuing Calibration Blank1	Ca (317.933 nm)	0.0051	4.06	2924.1770
	Continuing Calibration Blank1	Cd (214.439 nm)	0.0000 u	> 100.00	4.2084
	Continuing Calibration Blank1	Co (230.786 nm)	0.0003	65.62	-4.9037
	Continuing Calibration Blank1	Cr (267.716 nm)	0.0001 u	> 100.00	10.9485
	Continuing Calibration Blank1	Cu (327.395 nm)	0.0001	74.70	-22.0366
	Continuing Calibration Blank1	Fe (234.350 nm)	0.0029	37.41	52.7720
	Continuing Calibration Blank1	K (766.491 nm)	0.0464	41.06	-141.0680
	Continuing Calibration Blank1	Mg (279.078 nm)	0.0011	18.36	-26.3038
	Continuing Calibration Blank1	Mn (257.610 nm)	0.0001	26.11	35.4344
	Continuing Calibration Blank1	Mo (202.032 nm)	0.0030	40.68	43.5246
	Continuing Calibration Blank1	Na (588.995 nm)	0.0562	8.48	-12857.0384
	Continuing Calibration Blank1	Ni (230.299 nm)	-0.0002 u	> 100.00	23.0992
	Continuing Calibration Blank1	Pb (220.353 nm)	0.0000 u	> 100.00	8.1721
	Continuing Calibration Blank1	Sb (217.582 nm)	0.0036	13.69	13.1927
	Continuing Calibration Blank1	Se (196.026 nm)	-0.0011 u	> 100.00	3.9917
	Continuing Calibration Blank1	Si (252.851 nm)	-0.0032 u	50.55	20.5430
	Continuing Calibration Blank1	Sn (189.925 nm)	0.0006 u	> 100.00	4.5864
	Continuing Calibration Blank1	Sr (216.596 nm)	0.0002	78.97	3.6249
	Continuing Calibration Blank1	Ti (336.122 nm)	0.0023	47.39	494.4828
	Continuing Calibration Blank1	Tl (190.794 nm)	0.0004 u	> 100.00	-0.7715
	Continuing Calibration Blank1	V (292.401 nm)	0.0000 u	> 100.00	-42.0940
	Continuing Calibration Blank1	Y (360.074 nm)	1.02	0.11	496691.04
	Continuing Calibration Blank1	Y_R (360.074 nm)	1.02	0.11	495536.91
	Continuing Calibration Blank1	Zn (213.857 nm)	0.0000 u	> 100.00	-0.2042
6/10/2024 21:44:05	PBS-439480	Ag (328.068 nm)	-0.0005 u	14.25	-244.6221
	PBS-439480	Al (237.312 nm)	0.0022	62.12	17.7327
	PBS-439480	As (188.980 nm)	0.0004 u	> 100.00	-1.3038
	PBS-439480	B (249.772 nm)	0.0016	8.48	58.0027
	PBS-439480	Ba (230.424 nm)	0.0000 u	> 100.00	8.8604
	PBS-439480	Be (313.107 nm)	0.0000	37.61	51.6653
	PBS-439480	Ca (317.933 nm)	0.0100	4.54	3100.5250
	PBS-439480	Cd (214.439 nm)	0.0004	22.91	24.8215
	PBS-439480	Co (230.786 nm)	-0.0001 u	> 100.00	-10.8387
	PBS-439480	Cr (267.716 nm)	0.0007	23.96	43.2653
	PBS-439480	Cu (327.395 nm)	0.0002	85.68	-17.0663
	PBS-439480	Fe (234.350 nm)	0.0091	10.58	166.1172
	PBS-439480	K (766.491 nm)	0.0538	39.28	-132.9517
	PBS-439480	Mg (279.078 nm)	0.0016	28.91	-24.6322
	PBS-439480	Mn (257.610 nm)	0.0001	5.66	61.4934
	PBS-439480	Mo (202.032 nm)	0.0008	36.60	20.4819

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	PBS-439480	Na (588.995 nm)	0.0680	6.19	-12696.5735
	PBS-439480	Ni (230.299 nm)	-0.0009 u	24.86	14.3780
	PBS-439480	Pb (220.353 nm)	0.0012 u	> 100.00	14.3569
	PBS-439480	Sb (217.582 nm)	0.0026	65.32	11.3889
	PBS-439480	Se (196.026 nm)	-0.0016 u	> 100.00	3.6138
	PBS-439480	Si (252.851 nm)	0.0062	10.17	56.3397
	PBS-439480	Sn (189.925 nm)	0.0098	9.93	27.2649
	PBS-439480	Sr (216.596 nm)	0.0004	42.59	5.7624
	PBS-439480	Ti (336.122 nm)	0.0009	79.23	286.2852
	PBS-439480	Tl (190.794 nm)	-0.0008 u	> 100.00	-1.9925
	PBS-439480	V (292.401 nm)	0.0001 u	> 100.00	-38.2014
	PBS-439480	Y (360.074 nm)	1.02	0.44	499686.14
	PBS-439480	Y_R (360.074 nm)	1.02	0.44	498528.85
	PBS-439480	Zn (213.857 nm)	-0.0001 u	49.82	-8.5825
6/10/2024 21:47:19	LCSS-439480	Ag (328.068 nm)	0.0475	0.58	2477.6406
	LCSS-439480	Al (237.312 nm)	1.8777	0.12	4653.8275
	LCSS-439480	As (188.980 nm)	0.0360	4.80	59.0363
	LCSS-439480	B (249.772 nm)	0.9122	0.11	29627.0625
	LCSS-439480	Ba (230.424 nm)	1.8856	0.19	102677.2386
	LCSS-439480	Be (313.107 nm)	0.0468	0.28	51384.4037
	LCSS-439480	Ca (317.933 nm)	2.0026	0.32	74076.5722
	LCSS-439480	Cd (214.439 nm)	0.0495	0.44	2823.2282
	LCSS-439480	Co (230.786 nm)	0.4852	0.43	8789.2690
	LCSS-439480	Cr (267.716 nm)	0.2017	0.41	10490.8848
	LCSS-439480	Cu (327.395 nm)	0.2439	0.18	10677.3197
	LCSS-439480	Fe (234.350 nm)	1.0009	0.32	18224.7899
	LCSS-439480	K (766.491 nm)	18.3361	0.32	19929.9475
	LCSS-439480	Mg (279.078 nm)	1.8886	0.29	6142.1442
	LCSS-439480	Mn (257.610 nm)	0.4799	0.28	160267.5561
	LCSS-439480	Mo (202.032 nm)	0.5073	0.30	5307.5242
	LCSS-439480	Na (588.995 nm)	19.3226	0.34	249519.3660
	LCSS-439480	Ni (230.299 nm)	0.5012	0.31	5910.7831
	LCSS-439480	Pb (220.353 nm)	0.5078	0.39	2659.1349
	LCSS-439480	Sb (217.582 nm)	0.4546	0.44	851.0951
	LCSS-439480	Se (196.026 nm)	0.8887	0.41	652.5477
	LCSS-439480	Si (252.851 nm)	-0.0147 u	6.23	-23.5099
	LCSS-439480	Sn (189.925 nm)	4.8149	0.23	11859.1338
	LCSS-439480	Sr (216.596 nm)	1.9463	0.39	34252.7923
	LCSS-439480	Ti (336.122 nm)	0.4883	0.17	70697.7263
	LCSS-439480	Tl (190.794 nm)	1.8688	0.32	1824.8684
	LCSS-439480	V (292.401 nm)	0.4858	0.26	18378.5643
	LCSS-439480	Y (360.074 nm)	1.00	0.36	490504.46
	LCSS-439480	Y_R (360.074 nm)	1.00	0.36	489342.85
	LCSS-439480	Zn (213.857 nm)	0.4739	0.20	30331.6299
6/10/2024 21:50:32	R2404648-001	Ag (328.068 nm)	-0.0004 u	28.14	-239.7894
	R2404648-001	Al (237.312 nm)	40.2163 o	0.06	99425.3810
	R2404648-001	As (188.980 nm)	0.0179	7.16	28.3678
	R2404648-001	B (249.772 nm)	0.0347	0.73	1131.5730
	R2404648-001	Ba (230.424 nm)	0.1670	0.19	9102.6477
	R2404648-001	Be (313.107 nm)	0.0013	0.62	1492.8079
	R2404648-001	Ca (317.933 nm)	2.6964	0.27	98789.6421
	R2404648-001	Cd (214.439 nm)	0.0006	17.59	37.0333
	R2404648-001	Co (230.786 nm)	0.0047	4.60	75.6244
	R2404648-001	Cr (267.716 nm)	0.0412	0.28	2146.4526
	R2404648-001	Cu (327.395 nm)	0.0257	0.50	1099.2380
	R2404648-001	Fe (234.350 nm)	30.6590 o	0.28	558240.1951
	R2404648-001	K (766.491 nm)	1.3829	1.13	1325.5325

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404648-001	Mg (279.078 nm)	2.3602	0.18	7683.1260
	R2404648-001	Mn (257.610 nm)	0.1175	0.17	39273.5329
	R2404648-001	Mo (202.032 nm)	0.0035	14.01	48.1157
	R2404648-001	Na (588.995 nm)	0.1859	2.18	-11091.0503
	R2404648-001	Ni (230.299 nm)	0.0158	2.76	210.2419
	R2404648-001	Pb (220.353 nm)	0.0474	1.16	255.2966
	R2404648-001	Sb (217.582 nm)	-0.0015 u	81.06	3.8686
	R2404648-001	Se (196.026 nm)	0.0001 u	> 100.00	4.8748
	R2404648-001	Si (252.851 nm)	10.0687	0.14	38397.8909
	R2404648-001	Sn (189.925 nm)	0.0117	4.38	31.8549
	R2404648-001	Sr (216.596 nm)	0.0185	0.44	324.7308
	R2404648-001	Ti (336.122 nm)	0.3995	0.15	57879.2274
	R2404648-001	Tl (190.794 nm)	0.0010	83.06	-0.1916
	R2404648-001	V (292.401 nm)	0.0660	0.35	2461.5079
	R2404648-001	Y (360.074 nm)	1.03	0.33	501196.91
	R2404648-001	Y_R (360.074 nm)	1.03	0.33	500016.70
	R2404648-001	Zn (213.857 nm)	0.0519	0.14	3325.5536
6/10/2024 21:53:46	R2404648-001S	Ag (328.068 nm)	0.0467	0.28	2431.9537
	R2404648-001S	Al (237.312 nm)	54.3664 o	0.14	134403.8246
	R2404648-001S	As (188.980 nm)	0.0525	3.06	87.0384
	R2404648-001S	B (249.772 nm)	0.8923	0.15	28979.2642
	R2404648-001S	Ba (230.424 nm)	2.0636	0.41	112369.1832
	R2404648-001S	Be (313.107 nm)	0.0480	0.24	52750.2061
	R2404648-001S	Ca (317.933 nm)	4.8889	0.30	176889.2355
	R2404648-001S	Cd (214.439 nm)	0.0481	0.08	2741.4883
	R2404648-001S	Co (230.786 nm)	0.4825	0.43	8740.0204
	R2404648-001S	Cr (267.716 nm)	0.2397	0.41	12467.9669
	R2404648-001S	Cu (327.395 nm)	0.2673	0.23	11705.9716
	R2404648-001S	Fe (234.350 nm)	24.5195 o	0.31	446452.1571
	R2404648-001S	K (766.491 nm)	19.7093	0.11	21436.8630
	R2404648-001S	Mg (279.078 nm)	4.7687	0.21	15553.9413
	R2404648-001S	Mn (257.610 nm)	0.6045	0.29	201882.9108
	R2404648-001S	Mo (202.032 nm)	0.4896	0.37	5122.3845
	R2404648-001S	Na (588.995 nm)	19.6224	0.15	253602.3430
	R2404648-001S	Ni (230.299 nm)	0.5155	0.24	6078.5857
	R2404648-001S	Pb (220.353 nm)	0.5385	0.22	2819.0914
	R2404648-001S	Sb (217.582 nm)	0.3317	0.69	622.7542
	R2404648-001S	Se (196.026 nm)	0.8739	0.42	641.7842
	R2404648-001S	Si (252.851 nm)	12.2760	0.06	46808.5575
	R2404648-001S	Sn (189.925 nm)	4.7883	0.30	11793.6372
	R2404648-001S	Sr (216.596 nm)	1.9484	0.38	34290.1628
	R2404648-001S	Ti (336.122 nm)	0.8337	0.17	120610.4245
	R2404648-001S	Tl (190.794 nm)	1.8277	0.22	1784.7421
	R2404648-001S	V (292.401 nm)	0.5403	0.31	20444.9515
	R2404648-001S	Y (360.074 nm)	1.00	0.46	490553.77
	R2404648-001S	Y_R (360.074 nm)	1.00	0.46	489379.66
	R2404648-001S	Zn (213.857 nm)	0.5251	0.27	33613.6669
6/10/2024 21:56:59	R2404648-001SD	Ag (328.068 nm)	0.0470	0.25	2446.2699
	R2404648-001SD	Al (237.312 nm)	52.7106 o	0.02	130310.9214
	R2404648-001SD	As (188.980 nm)	0.0543	5.61	90.1304
	R2404648-001SD	B (249.772 nm)	0.9005	0.08	29245.0582
	R2404648-001SD	Ba (230.424 nm)	2.0745	0.16	112961.5073
	R2404648-001SD	Be (313.107 nm)	0.0486	0.24	53350.6602
	R2404648-001SD	Ca (317.933 nm)	5.5690	0.32	201111.9196
	R2404648-001SD	Cd (214.439 nm)	0.0486	0.34	2770.7645
	R2404648-001SD	Co (230.786 nm)	0.4848	0.23	8782.1107
	R2404648-001SD	Cr (267.716 nm)	0.2411	0.23	12538.6415

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404648-001SD	Cu (327.395 nm)	0.2706	0.11	11848.9984
	R2404648-001SD	Fe (234.350 nm)	24.1558 o	0.27	439829.3090
	R2404648-001SD	K (766.491 nm)	19.8698	0.32	21613.0801
	R2404648-001SD	Mg (279.078 nm)	4.7378	0.17	15452.9461
	R2404648-001SD	Mn (257.610 nm)	0.6417	0.26	214327.8171
	R2404648-001SD	Mo (202.032 nm)	0.4927	0.42	5155.1986
	R2404648-001SD	Na (588.995 nm)	19.7703	0.27	255617.2183
	R2404648-001SD	Ni (230.299 nm)	0.5177	0.21	6105.0057
	R2404648-001SD	Pb (220.353 nm)	0.5490	0.22	2874.2931
	R2404648-001SD	Sb (217.582 nm)	0.3371	0.33	632.7286
	R2404648-001SD	Se (196.026 nm)	0.8739	0.41	641.8131
	R2404648-001SD	Si (252.851 nm)	12.4124	0.01	47328.3531
	R2404648-001SD	Sn (189.925 nm)	4.7988	0.32	11819.4723
	R2404648-001SD	Sr (216.596 nm)	1.9564	0.38	34431.9043
	R2404648-001SD	Ti (336.122 nm)	0.8662	0.15	125303.1072
	R2404648-001SD	Tl (190.794 nm)	1.8379	0.13	1794.7500
	R2404648-001SD	V (292.401 nm)	0.5425	0.14	20527.4918
	R2404648-001SD	Y (360.074 nm)	1.00	0.33	490603.00
	R2404648-001SD	Y_R (360.074 nm)	1.00	0.33	489419.78
	R2404648-001SD	Zn (213.857 nm)	0.5275	0.18	33764.0351
6/10/2024 22:00:13	R2404648-001A	Ag (328.068 nm)	0.0459	0.41	2388.3455
	R2404648-001A	Al (237.312 nm)	41.1458 o	0.02	101723.0770
	R2404648-001A	As (188.980 nm)	0.0521	3.42	86.3554
	R2404648-001A	B (249.772 nm)	0.9265	0.24	30091.2309
	R2404648-001A	Ba (230.424 nm)	2.0114	0.28	109525.4817
	R2404648-001A	Be (313.107 nm)	0.0473	0.31	51958.7185
	R2404648-001A	Ca (317.933 nm)	4.7304	0.35	171241.0245
	R2404648-001A	Cd (214.439 nm)	0.0475	0.38	2710.6142
	R2404648-001A	Co (230.786 nm)	0.4742	0.42	8590.1061
	R2404648-001A	Cr (267.716 nm)	0.2351	0.32	12227.7159
	R2404648-001A	Cu (327.395 nm)	0.2602	0.10	11394.7461
	R2404648-001A	Fe (234.350 nm)	30.8024 o	0.31	560851.2309
	R2404648-001A	K (766.491 nm)	19.4640	0.14	21167.6788
	R2404648-001A	Mg (279.078 nm)	4.1606	0.32	13566.6712
	R2404648-001A	Mn (257.610 nm)	0.5857	0.30	195613.1576
	R2404648-001A	Mo (202.032 nm)	0.4953	0.25	5181.9911
	R2404648-001A	Na (588.995 nm)	19.1983	0.29	247827.0620
	R2404648-001A	Ni (230.299 nm)	0.5031	0.39	5933.0143
	R2404648-001A	Pb (220.353 nm)	0.5330	0.36	2790.3751
	R2404648-001A	Sb (217.582 nm)	0.4429	0.80	829.2982
	R2404648-001A	Se (196.026 nm)	0.8777	0.31	644.5453
	R2404648-001A	Si (252.851 nm)	9.9125	0.09	37802.8631
	R2404648-001A	Sn (189.925 nm)	4.7273	0.29	11643.3821
	R2404648-001A	Sr (216.596 nm)	1.9189	0.37	33770.7497
	R2404648-001A	Ti (336.122 nm)	0.8656	0.19	125209.1440
	R2404648-001A	Tl (190.794 nm)	1.8002	0.38	1757.9220
	R2404648-001A	V (292.401 nm)	0.5346	0.26	20227.2795
	R2404648-001A	Y (360.074 nm)	1.00	0.28	490136.00
	R2404648-001A	Y_R (360.074 nm)	1.00	0.28	488940.08
	R2404648-001A	Zn (213.857 nm)	0.5117	0.24	32754.8952
6/10/2024 22:03:27	R2404648-001L 5X	Ag (328.068 nm)	-0.0004 u	47.16	-235.4766
	R2404648-001L 5X	Al (237.312 nm)	8.5656	0.14	21186.0585
	R2404648-001L 5X	As (188.980 nm)	0.0036	32.17	4.0406
	R2404648-001L 5X	B (249.772 nm)	0.0077	3.11	255.9086
	R2404648-001L 5X	Ba (230.424 nm)	0.0346	0.57	1892.6408
	R2404648-001L 5X	Be (313.107 nm)	0.0003	0.37	362.0918
	R2404648-001L 5X	Ca (317.933 nm)	0.5718	0.36	23111.8988

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404648-001L 5X	Cd (214.439 nm)	0.0002	19.01	15.6620
	R2404648-001L 5X	Co (230.786 nm)	0.0010	32.21	8.0800
	R2404648-001L 5X	Cr (267.716 nm)	0.0085	0.62	448.5841
	R2404648-001L 5X	Cu (327.395 nm)	0.0054	1.42	210.2367
	R2404648-001L 5X	Fe (234.350 nm)	6.4383	0.33	117229.1317
	R2404648-001L 5X	K (766.491 nm)	0.3510	3.87	193.1701
	R2404648-001L 5X	Mg (279.078 nm)	0.5024	0.34	1611.9791
	R2404648-001L 5X	Mn (257.610 nm)	0.0244	0.40	8163.9773
	R2404648-001L 5X	Mo (202.032 nm)	0.0017	43.89	29.6686
	R2404648-001L 5X	Na (588.995 nm)	0.0907	3.98	-12387.7869
	R2404648-001L 5X	Ni (230.299 nm)	0.0033	15.41	64.5735
	R2404648-001L 5X	Pb (220.353 nm)	0.0106	8.42	63.3926
	R2404648-001L 5X	Sb (217.582 nm)	-0.0039 u	16.63	-0.7147
	R2404648-001L 5X	Se (196.026 nm)	-0.0006 u	64.66	4.3174
	R2404648-001L 5X	Si (252.851 nm)	2.1598	0.32	8262.1372
	R2404648-001L 5X	Sn (189.925 nm)	0.0023	32.06	8.5933
	R2404648-001L 5X	Sr (216.596 nm)	0.0040	1.85	69.2818
	R2404648-001L 5X	Ti (336.122 nm)	0.0817	0.77	11959.3814
	R2404648-001L 5X	Tl (190.794 nm)	0.0018	53.28	0.5318
	R2404648-001L 5X	V (292.401 nm)	0.0132	0.86	460.2502
	R2404648-001L 5X	Y (360.074 nm)	1.03	0.08	504068.16
	R2404648-001L 5X	Y_R (360.074 nm)	1.03	0.09	502845.75
	R2404648-001L 5X	Zn (213.857 nm)	0.0111	0.79	710.9045
6/10/2024 22:06:41	R2404648-002	Ag (328.068 nm)	-0.0005 u	7.65	-241.3216
	R2404648-002	Al (237.312 nm)	41.9280 o	0.08	103656.7326
	R2404648-002	As (188.980 nm)	0.0159	3.39	24.8590
	R2404648-002	B (249.772 nm)	0.0203	0.75	663.3925
	R2404648-002	Ba (230.424 nm)	0.1483	0.34	8083.7269
	R2404648-002	Be (313.107 nm)	0.0007	0.93	781.3068
	R2404648-002	Ca (317.933 nm)	1.5309	0.31	57275.1646
	R2404648-002	Cd (214.439 nm)	0.0004	10.75	25.0470
	R2404648-002	Co (230.786 nm)	0.0037	2.34	56.8353
	R2404648-002	Cr (267.716 nm)	0.0292	0.22	1521.2319
	R2404648-002	Cu (327.395 nm)	0.0200	1.98	850.1927
	R2404648-002	Fe (234.350 nm)	16.3994 o	0.29	298601.5646
	R2404648-002	K (766.491 nm)	1.3315	4.01	1269.1501
	R2404648-002	Mg (279.078 nm)	1.6001	0.33	5199.0966
	R2404648-002	Mn (257.610 nm)	0.1199	0.28	40050.2621
	R2404648-002	Mo (202.032 nm)	0.0019	21.60	31.4237
	R2404648-002	Na (588.995 nm)	0.1221	0.38	-11960.3065
	R2404648-002	Ni (230.299 nm)	0.0124	3.62	170.3795
	R2404648-002	Pb (220.353 nm)	0.0437	1.86	236.0362
	R2404648-002	Sb (217.582 nm)	-0.0011 u	32.78	4.6059
	R2404648-002	Se (196.026 nm)	0.0029	28.62	6.8688
	R2404648-002	Si (252.851 nm)	11.2617	0.14	42943.8424
	R2404648-002	Sn (189.925 nm)	0.0110	16.40	30.1147
	R2404648-002	Sr (216.596 nm)	0.0150	1.27	264.1343
	R2404648-002	Ti (336.122 nm)	0.4281	0.18	61999.6031
	R2404648-002	Tl (190.794 nm)	0.0019	44.16	0.6067
	R2404648-002	V (292.401 nm)	0.0449	0.23	1663.4121
	R2404648-002	Y (360.074 nm)	1.02	0.43	498411.97
	R2404648-002	Y_R (360.074 nm)	1.02	0.43	497200.46
	R2404648-002	Zn (213.857 nm)	0.0392	0.45	2507.5323
6/10/2024 22:09:55	R2404648-003	Ag (328.068 nm)	-0.0004 u	42.99	-239.4953
	R2404648-003	Al (237.312 nm)	18.9708	0.10	46907.4225
	R2404648-003	As (188.980 nm)	0.0104	19.23	15.6064
	R2404648-003	B (249.772 nm)	0.0116	2.07	381.1485

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404648-003	Ba (230.424 nm)	0.0751	0.16	4099.7977
	R2404648-003	Be (313.107 nm)	0.0003	2.52	402.7360
	R2404648-003	Ca (317.933 nm)	0.5192	0.27	21235.5645
	R2404648-003	Cd (214.439 nm)	0.0003	3.41	21.6770
	R2404648-003	Co (230.786 nm)	0.0022	3.02	30.4482
	R2404648-003	Cr (267.716 nm)	0.0166	0.27	869.8857
	R2404648-003	Cu (327.395 nm)	0.0146	1.30	611.8161
	R2404648-003	Fe (234.350 nm)	9.1151	0.33	165967.0560
	R2404648-003	K (766.491 nm)	0.8490	0.41	739.6622
	R2404648-003	Mg (279.078 nm)	0.9946	0.43	3220.3599
	R2404648-003	Mn (257.610 nm)	0.0744	0.31	24861.0766
	R2404648-003	Mo (202.032 nm)	0.0010	4.46	22.6513
	R2404648-003	Na (588.995 nm)	0.0790	5.21	-12547.1364
	R2404648-003	Ni (230.299 nm)	0.0076	1.48	114.0357
	R2404648-003	Pb (220.353 nm)	0.0258	1.86	142.4583
	R2404648-003	Sb (217.582 nm)	-0.0006 u	> 100.00	5.4526
	R2404648-003	Se (196.026 nm)	0.0013 u	> 100.00	5.6901
	R2404648-003	Si (252.851 nm)	6.3761	0.04	24327.7403
	R2404648-003	Sn (189.925 nm)	0.0109	17.37	29.8475
	R2404648-003	Sr (216.596 nm)	0.0079	2.93	138.4504
	R2404648-003	Ti (336.122 nm)	0.2650	0.43	38439.7424
	R2404648-003	Tl (190.794 nm)	0.0001 u	> 100.00	-1.1366
	R2404648-003	V (292.401 nm)	0.0231	1.35	833.8498
	R2404648-003	Y (360.074 nm)	1.02	0.31	500555.85
	R2404648-003	Y_R (360.074 nm)	1.02	0.31	499345.45
	R2404648-003	Zn (213.857 nm)	0.0215	0.09	1377.2504
6/10/2024 22:13:09	R2404648-004	Ag (328.068 nm)	-0.0007 u	17.51	-253.1388
	R2404648-004	Al (237.312 nm)	56.4585 o	0.04	139575.4170
	R2404648-004	As (188.980 nm)	0.0126	11.64	19.4127
	R2404648-004	B (249.772 nm)	0.0261	0.13	851.9756
	R2404648-004	Ba (230.424 nm)	0.1782	0.13	9715.2764
	R2404648-004	Be (313.107 nm)	0.0009	0.86	962.8482
	R2404648-004	Ca (317.933 nm)	1.8438	0.25	68418.2926
	R2404648-004	Cd (214.439 nm)	0.0003	7.23	18.7860
	R2404648-004	Co (230.786 nm)	0.0038	4.87	59.0856
	R2404648-004	Cr (267.716 nm)	0.0426	0.52	2219.3069
	R2404648-004	Cu (327.395 nm)	0.0138	0.42	579.4176
	R2404648-004	Fe (234.350 nm)	21.9887 o	0.24	400370.8020
	R2404648-004	K (766.491 nm)	2.1633	1.33	2181.9908
	R2404648-004	Mg (279.078 nm)	2.0905	0.11	6801.9431
	R2404648-004	Mn (257.610 nm)	0.0952	0.20	31826.4161
	R2404648-004	Mo (202.032 nm)	0.0017	13.00	30.2348
	R2404648-004	Na (588.995 nm)	0.1097	4.10	-12129.4930
	R2404648-004	Ni (230.299 nm)	0.0188	0.59	246.4234
	R2404648-004	Pb (220.353 nm)	0.0594	1.25	317.8719
	R2404648-004	Sb (217.582 nm)	-0.0014 u	90.94	4.0344
	R2404648-004	Se (196.026 nm)	0.0001 u	> 100.00	4.8240
	R2404648-004	Si (252.851 nm)	10.7728	0.03	41080.8302
	R2404648-004	Sn (189.925 nm)	0.0121	0.96	32.8036
	R2404648-004	Sr (216.596 nm)	0.0145	1.59	255.0691
	R2404648-004	Ti (336.122 nm)	0.3596	0.26	52108.8655
	R2404648-004	Tl (190.794 nm)	0.0009 u	> 100.00	-0.3045
	R2404648-004	V (292.401 nm)	0.0632	0.51	2356.9928
	R2404648-004	Y (360.074 nm)	1.02	0.43	498357.77
	R2404648-004	Y_R (360.074 nm)	1.02	0.43	497162.53
	R2404648-004	Zn (213.857 nm)	0.0550	0.02	3521.0573
6/10/2024 22:16:23	Continuing Calibration Verification1	Ag (328.068 nm)	0.5036	0.18	28315.0044

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Verification1	Al (237.312 nm)	9.7249	0.13	24051.8275
	Continuing Calibration Verification1	As (188.980 nm)	0.9635	0.52	1631.9220
	Continuing Calibration Verification1	B (249.772 nm)	2.4007	0.27	77959.2987
	Continuing Calibration Verification1	Ba (230.424 nm)	9.5370	0.25	519271.5824
	Continuing Calibration Verification1	Be (313.107 nm)	0.2413	0.33	264834.1220
	Continuing Calibration Verification1	Ca (317.933 nm)	25.6900	0.39	917832.8732
	Continuing Calibration Verification1	Cd (214.439 nm)	0.4996	0.38	28464.4868
	Continuing Calibration Verification1	Co (230.786 nm)	2.4603	0.22	44604.1113
	Continuing Calibration Verification1	Cr (267.716 nm)	0.5170	0.41	26881.5899
	Continuing Calibration Verification1	Cu (327.395 nm)	1.2111	0.25	53135.1897
	Continuing Calibration Verification1	Fe (234.350 nm)	5.0095	0.27	91213.2642
	Continuing Calibration Verification1	K (766.491 nm)	24.0004	0.08	26145.9239
	Continuing Calibration Verification1	Mg (279.078 nm)	25.2986	0.32	82643.8755
	Continuing Calibration Verification1	Mn (257.610 nm)	0.7382	0.31	246529.7138
	Continuing Calibration Verification1	Mo (202.032 nm)	2.6524	0.41	27699.9143
	Continuing Calibration Verification1	Na (588.995 nm)	25.2454	0.22	330179.3939
	Continuing Calibration Verification1	Ni (230.299 nm)	2.0507	0.26	24106.2670
	Continuing Calibration Verification1	Pb (220.353 nm)	0.5133	0.15	2687.8721
	Continuing Calibration Verification1	Sb (217.582 nm)	4.6809	0.31	8701.6419
	Continuing Calibration Verification1	Se (196.026 nm)	0.4715	1.49	348.4444
	Continuing Calibration Verification1	Si (252.851 nm)	9.8448	0.52	37545.0076
	Continuing Calibration Verification1	Sn (189.925 nm)	4.9569	0.21	12208.6950
	Continuing Calibration Verification1	Sr (216.596 nm)	2.4569	0.58	43238.9184
	Continuing Calibration Verification1	Ti (336.122 nm)	2.5076	0.18	362440.8300
	Continuing Calibration Verification1	Tl (190.794 nm)	0.9672	0.28	943.9483
	Continuing Calibration Verification1	V (292.401 nm)	2.5097	0.28	95105.9478
	Continuing Calibration Verification1	Y (360.074 nm)	0.98	0.18	477094.49
	Continuing Calibration Verification1	Y_R (360.074 nm)	0.98	0.18	475914.56
	Continuing Calibration Verification1	Zn (213.857 nm)	0.9825	0.33	62886.1538
6/10/2024 22:19:37	Continuing Calibration Blank1	Ag (328.068 nm)	-0.0005 u	34.46	-241.9290
	Continuing Calibration Blank1	Al (237.312 nm)	0.0028	44.33	19.0913
	Continuing Calibration Blank1	As (188.980 nm)	0.0006 u	> 100.00	-1.0035
	Continuing Calibration Blank1	B (249.772 nm)	0.0014	14.56	51.0418
	Continuing Calibration Blank1	Ba (230.424 nm)	0.0003	25.66	30.4006
	Continuing Calibration Blank1	Be (313.107 nm)	0.0001	16.35	76.8759
	Continuing Calibration Blank1	Ca (317.933 nm)	0.0053	1.83	2930.5863
	Continuing Calibration Blank1	Cd (214.439 nm)	0.0001	49.85	8.4522
	Continuing Calibration Blank1	Co (230.786 nm)	-0.0001 u	> 100.00	-11.6937
	Continuing Calibration Blank1	Cr (267.716 nm)	0.0001 u	> 100.00	8.7688
	Continuing Calibration Blank1	Cu (327.395 nm)	0.0004	70.42	-8.4233
	Continuing Calibration Blank1	Fe (234.350 nm)	0.0025	29.52	45.8892
	Continuing Calibration Blank1	K (766.491 nm)	0.0475	16.37	-139.8828
	Continuing Calibration Blank1	Mg (279.078 nm)	0.0026	34.05	-21.4384
	Continuing Calibration Blank1	Mn (257.610 nm)	0.0000	44.48	33.8925
	Continuing Calibration Blank1	Mo (202.032 nm)	0.0031	35.48	44.4890
	Continuing Calibration Blank1	Na (588.995 nm)	0.0336	19.76	-13165.8624
	Continuing Calibration Blank1	Ni (230.299 nm)	0.0001 u	> 100.00	25.9830
	Continuing Calibration Blank1	Pb (220.353 nm)	0.0008	41.24	12.3407
	Continuing Calibration Blank1	Sb (217.582 nm)	0.0035	39.77	12.9989
	Continuing Calibration Blank1	Se (196.026 nm)	0.0003 u	> 100.00	5.0327
	Continuing Calibration Blank1	Si (252.851 nm)	-0.0044 u	24.28	15.9630
	Continuing Calibration Blank1	Sn (189.925 nm)	-0.0001 u	> 100.00	2.6743
	Continuing Calibration Blank1	Sr (216.596 nm)	0.0003	48.82	4.9048
	Continuing Calibration Blank1	Ti (336.122 nm)	0.0026	44.50	528.1880
	Continuing Calibration Blank1	Tl (190.794 nm)	0.0012 u	> 100.00	0.0019
	Continuing Calibration Blank1	V (292.401 nm)	0.0000 u	> 100.00	-38.8571
	Continuing Calibration Blank1	Y (360.074 nm)	1.02	0.09	497610.18

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Blank1	Y_R (360.074 nm)	1.02	0.09	496371.22
	Continuing Calibration Blank1	Zn (213.857 nm)	0.0001	90.68	5.2096
6/10/2024 22:22:50	R2404648-005	Ag (328.068 nm)	-0.0004 u	32.22	-235.6832
	R2404648-005	Al (237.312 nm)	57.4649 o	0.11	142063.3551
	R2404648-005	As (188.980 nm)	0.0170	15.57	26.8295
	R2404648-005	B (249.772 nm)	0.0394	0.14	1284.3231
	R2404648-005	Ba (230.424 nm)	0.1364	0.25	7435.8308
	R2404648-005	Be (313.107 nm)	0.0011	0.30	1175.0600
	R2404648-005	Ca (317.933 nm)	4.3393	0.30	157311.4508
	R2404648-005	Cd (214.439 nm)	0.0004	14.62	25.0141
	R2404648-005	Co (230.786 nm)	0.0033	9.41	49.5732
	R2404648-005	Cr (267.716 nm)	0.0569	0.46	2961.3785
	R2404648-005	Cu (327.395 nm)	0.0131	2.06	549.5526
	R2404648-005	Fe (234.350 nm)	32.5379 o	0.29	592451.7963
	R2404648-005	K (766.491 nm)	2.6221	1.09	2685.4513
	R2404648-005	Mg (279.078 nm)	2.5801	0.26	8401.8544
	R2404648-005	Mn (257.610 nm)	0.0883	0.20	29511.2061
	R2404648-005	Mo (202.032 nm)	0.0024	31.97	37.1173
	R2404648-005	Na (588.995 nm)	0.1296	1.68	-11857.9660
	R2404648-005	Ni (230.299 nm)	0.0141	2.14	190.5438
	R2404648-005	Pb (220.353 nm)	0.0659	2.25	351.7125
	R2404648-005	Sb (217.582 nm)	0.0009	80.07	8.2894
	R2404648-005	Se (196.026 nm)	-0.0011 u	> 100.00	3.9559
	R2404648-005	Si (252.851 nm)	11.7756	0.16	44901.8523
	R2404648-005	Sn (189.925 nm)	0.0120	0.80	32.6110
	R2404648-005	Sr (216.596 nm)	0.0164	1.19	288.3405
	R2404648-005	Ti (336.122 nm)	0.3839	0.33	55614.1183
	R2404648-005	Tl (190.794 nm)	0.0007 u	> 100.00	-0.5078
	R2404648-005	V (292.401 nm)	0.1420	0.13	5344.7820
	R2404648-005	Y (360.074 nm)	1.02	0.48	500103.45
	R2404648-005	Y_R (360.074 nm)	1.02	0.48	498881.12
	R2404648-005	Zn (213.857 nm)	0.0503	0.07	3218.0333
6/10/2024 22:26:04	R2404648-006	Ag (328.068 nm)	-0.0005 u	33.23	-245.4660
	R2404648-006	Al (237.312 nm)	46.3920 o	0.05	114691.5814
	R2404648-006	As (188.980 nm)	0.0161	7.25	25.2983
	R2404648-006	B (249.772 nm)	0.0437	0.41	1424.7671
	R2404648-006	Ba (230.424 nm)	0.2140	0.23	11663.4638
	R2404648-006	Be (313.107 nm)	0.0011	1.40	1191.0514
	R2404648-006	Ca (317.933 nm)	1.2208	0.29	46226.7995
	R2404648-006	Cd (214.439 nm)	0.0006	0.26	33.5593
	R2404648-006	Co (230.786 nm)	0.0078	1.77	131.7104
	R2404648-006	Cr (267.716 nm)	0.0493	0.35	2567.5404
	R2404648-006	Cu (327.395 nm)	0.0191	1.15	811.3419
	R2404648-006	Fe (234.350 nm)	40.2671 o	0.34	733185.1623
	R2404648-006	K (766.491 nm)	2.0952	2.07	2107.2043
	R2404648-006	Mg (279.078 nm)	2.5292	0.23	8235.5502
	R2404648-006	Mn (257.610 nm)	0.1651	0.27	55159.1984
	R2404648-006	Mo (202.032 nm)	0.0023	12.71	36.2537
	R2404648-006	Na (588.995 nm)	0.1066	2.39	-12170.9802
	R2404648-006	Ni (230.299 nm)	0.0192	1.87	250.3871
	R2404648-006	Pb (220.353 nm)	0.0521	0.53	279.9479
	R2404648-006	Sb (217.582 nm)	0.0004 u	> 100.00	7.3946
	R2404648-006	Se (196.026 nm)	0.0002 u	> 100.00	4.9305
	R2404648-006	Si (252.851 nm)	10.8853	0.05	41509.6804
	R2404648-006	Sn (189.925 nm)	0.0125	5.54	33.6815
	R2404648-006	Sr (216.596 nm)	0.0149	1.66	262.3052
	R2404648-006	Ti (336.122 nm)	0.5643	0.23	81678.1791

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404648-006	Tl (190.794 nm)	-0.0005 u	> 100.00	-1.6757
	R2404648-006	V (292.401 nm)	0.0810	0.57	3028.7122
	R2404648-006	Y (360.074 nm)	1.04	0.45	505933.81
	R2404648-006	Y_R (360.074 nm)	1.03	0.45	504699.84
	R2404648-006	Zn (213.857 nm)	0.0558	0.17	3572.6968
6/10/2024 22:29:17	R2404648-007	Ag (328.068 nm)	-0.0005 u	9.40	-240.9153
	R2404648-007	Al (237.312 nm)	33.6103 o	0.03	83095.5643
	R2404648-007	As (188.980 nm)	0.0114	8.28	17.3407
	R2404648-007	B (249.772 nm)	0.0180	0.87	591.5111
	R2404648-007	Ba (230.424 nm)	0.1739	0.22	9477.6103
	R2404648-007	Be (313.107 nm)	0.0008	1.71	859.2096
	R2404648-007	Ca (317.933 nm)	2.6532	0.28	97250.1600
	R2404648-007	Cd (214.439 nm)	0.0006	10.77	37.4424
	R2404648-007	Co (230.786 nm)	0.0040	5.70	63.7279
	R2404648-007	Cr (267.716 nm)	0.0276	0.36	1439.0285
	R2404648-007	Cu (327.395 nm)	0.0136	1.10	568.6286
	R2404648-007	Fe (234.350 nm)	14.2234 o	0.29	258980.5647
	R2404648-007	K (766.491 nm)	1.2587	1.21	1189.3140
	R2404648-007	Mg (279.078 nm)	1.6172	0.24	5255.0407
	R2404648-007	Mn (257.610 nm)	0.1876	0.17	62683.1062
	R2404648-007	Mo (202.032 nm)	0.0015	16.76	27.6838
	R2404648-007	Na (588.995 nm)	0.1118	3.30	-12100.2214
	R2404648-007	Ni (230.299 nm)	0.0147	1.74	197.6469
	R2404648-007	Pb (220.353 nm)	0.0601	1.18	321.9196
	R2404648-007	Sb (217.582 nm)	0.0001 u	> 100.00	6.6959
	R2404648-007	Se (196.026 nm)	0.0013	87.31	5.7371
	R2404648-007	Si (252.851 nm)	8.7202	0.06	33259.6724
	R2404648-007	Sn (189.925 nm)	0.0115	7.68	31.2607
	R2404648-007	Sr (216.596 nm)	0.0203	0.76	357.1412
	R2404648-007	Ti (336.122 nm)	0.3301	0.27	47849.8693
	R2404648-007	Tl (190.794 nm)	0.0004 u	> 100.00	-0.8507
	R2404648-007	V (292.401 nm)	0.0430	0.44	1589.0794
	R2404648-007	Y (360.074 nm)	1.03	0.33	503255.45
	R2404648-007	Y_R (360.074 nm)	1.03	0.33	502013.57
	R2404648-007	Zn (213.857 nm)	0.0566	0.21	3626.1288
6/10/2024 22:32:31	R2404648-008	Ag (328.068 nm)	-0.0004 u	19.94	-239.9136
	R2404648-008	Al (237.312 nm)	66.5187 o	0.11	164443.9106
	R2404648-008	As (188.980 nm)	0.0211	4.06	33.8062
	R2404648-008	B (249.772 nm)	0.0440	0.19	1434.9720
	R2404648-008	Ba (230.424 nm)	0.3173	0.30	17286.1416
	R2404648-008	Be (313.107 nm)	0.0021	0.31	2285.3880
	R2404648-008	Ca (317.933 nm)	2.8739	0.36	105111.2710
	R2404648-008	Cd (214.439 nm)	0.0003	14.87	21.4813
	R2404648-008	Co (230.786 nm)	0.0066	3.69	109.8848
	R2404648-008	Cr (267.716 nm)	0.0607	0.28	3159.9843
	R2404648-008	Cu (327.395 nm)	0.0268	0.91	1148.2714
	R2404648-008	Fe (234.350 nm)	38.3059 o	0.39	697475.5900
	R2404648-008	K (766.491 nm)	2.8158	1.41	2898.0115
	R2404648-008	Mg (279.078 nm)	3.1317	0.32	10204.4027
	R2404648-008	Mn (257.610 nm)	0.1091	0.20	36460.1759
	R2404648-008	Mo (202.032 nm)	0.0024	6.59	37.4779
	R2404648-008	Na (588.995 nm)	0.1475	3.93	-11613.4528
	R2404648-008	Ni (230.299 nm)	0.0225	1.73	289.8784
	R2404648-008	Pb (220.353 nm)	0.0587	0.51	314.1866
	R2404648-008	Sb (217.582 nm)	-0.0015 u	56.12	3.7556
	R2404648-008	Se (196.026 nm)	-0.0041 u	84.68	1.7545
	R2404648-008	Si (252.851 nm)	10.7924	0.09	41155.6818

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404648-008	Sn (189.925 nm)	0.0116	11.43	31.5162
	R2404648-008	Sr (216.596 nm)	0.0191	0.14	335.2671
	R2404648-008	Ti (336.122 nm)	0.5384	0.16	77940.8730
	R2404648-008	Tl (190.794 nm)	-0.0003 u	> 100.00	-1.5121
	R2404648-008	V (292.401 nm)	0.1072	0.04	4023.2578
	R2404648-008	Y (360.074 nm)	1.04	0.26	509652.15
	R2404648-008	Y_R (360.074 nm)	1.04	0.26	508382.93
	R2404648-008	Zn (213.857 nm)	0.0630	0.22	4030.8580
6/10/2024 22:35:44	R2404648-009	Ag (328.068 nm)	-0.0005 u	12.32	-243.2479
	R2404648-009	Al (237.312 nm)	27.2569 o	0.06	67390.3904
	R2404648-009	As (188.980 nm)	0.0072	31.04	10.2248
	R2404648-009	B (249.772 nm)	0.0216	0.24	707.9765
	R2404648-009	Ba (230.424 nm)	0.1812	0.20	9876.0671
	R2404648-009	Be (313.107 nm)	0.0010	0.80	1099.2040
	R2404648-009	Ca (317.933 nm)	1.9067	0.26	70659.6336
	R2404648-009	Cd (214.439 nm)	0.0006	17.68	35.3898
	R2404648-009	Co (230.786 nm)	0.0045	3.20	72.5272
	R2404648-009	Cr (267.716 nm)	0.0240	0.14	1252.8814
	R2404648-009	Cu (327.395 nm)	0.0117	1.50	484.4506
	R2404648-009	Fe (234.350 nm)	19.2794 o	0.26	351039.8020
	R2404648-009	K (766.491 nm)	1.1184	1.88	1035.2993
	R2404648-009	Mg (279.078 nm)	1.9897	0.10	6472.5025
	R2404648-009	Mn (257.610 nm)	0.2515	0.25	83993.0500
	R2404648-009	Mo (202.032 nm)	0.0012	39.95	24.2332
	R2404648-009	Na (588.995 nm)	0.1019	3.05	-12235.4111
	R2404648-009	Ni (230.299 nm)	0.0137	2.88	185.7430
	R2404648-009	Pb (220.353 nm)	0.0479	0.60	257.9588
	R2404648-009	Sb (217.582 nm)	0.0003	> 100.00	7.2375
	R2404648-009	Se (196.026 nm)	0.0021 u	> 100.00	6.2864
	R2404648-009	Si (252.851 nm)	7.3797	0.05	28152.1289
	R2404648-009	Sn (189.925 nm)	0.0147	3.38	39.2943
	R2404648-009	Sr (216.596 nm)	0.0125	0.54	218.5788
	R2404648-009	Ti (336.122 nm)	0.3998	0.25	57912.5584
	R2404648-009	Tl (190.794 nm)	-0.0005 u	> 100.00	-1.6753
	R2404648-009	V (292.401 nm)	0.0408	0.05	1504.8053
	R2404648-009	Y (360.074 nm)	1.03	0.35	503786.69
	R2404648-009	Y_R (360.074 nm)	1.03	0.35	502559.12
	R2404648-009	Zn (213.857 nm)	0.0467	0.23	2989.2747
6/10/2024 22:38:58	R2404648-010	Ag (328.068 nm)	-0.0005 u	41.93	-243.6060
	R2404648-010	Al (237.312 nm)	56.5195 o	0.08	139726.3608
	R2404648-010	As (188.980 nm)	0.0211	8.42	33.8107
	R2404648-010	B (249.772 nm)	0.0392	0.44	1279.1217
	R2404648-010	Ba (230.424 nm)	0.3528	0.21	19222.4688
	R2404648-010	Be (313.107 nm)	0.0011	0.72	1260.3310
	R2404648-010	Ca (317.933 nm)	8.7723	0.32	315215.4555
	R2404648-010	Cd (214.439 nm)	0.0007	7.97	43.5452
	R2404648-010	Co (230.786 nm)	0.0097	3.04	166.3256
	R2404648-010	Cr (267.716 nm)	0.0461	0.41	2403.6025
	R2404648-010	Cu (327.395 nm)	0.1574	0.13	6880.7571
	R2404648-010	Fe (234.350 nm)	31.7806 o	0.26	578663.4127
	R2404648-010	K (766.491 nm)	2.8420	1.67	2926.8045
	R2404648-010	Mg (279.078 nm)	2.8098	0.21	9152.4277
	R2404648-010	Mn (257.610 nm)	0.3539	0.26	118190.8740
	R2404648-010	Mo (202.032 nm)	0.0033	11.61	46.3694
	R2404648-010	Na (588.995 nm)	0.1967	0.38	-10943.6700
	R2404648-010	Ni (230.299 nm)	0.0235	3.96	301.3410
	R2404648-010	Pb (220.353 nm)	0.0561	0.55	300.9677

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404648-010	Sb (217.582 nm)	-0.0006 u	> 100.00	5.4714
	R2404648-010	Se (196.026 nm)	-0.0015 u	> 100.00	3.7001
	R2404648-010	Si (252.851 nm)	10.3962	0.04	39646.0352
	R2404648-010	Sn (189.925 nm)	0.0114	6.52	31.1007
	R2404648-010	Sr (216.596 nm)	0.0347	1.01	609.8681
	R2404648-010	Ti (336.122 nm)	0.6938	0.14	100392.8758
	R2404648-010	Tl (190.794 nm)	0.0003 u	> 100.00	-0.9423
	R2404648-010	V (292.401 nm)	0.0730	0.49	2728.5485
	R2404648-010	Y (360.074 nm)	1.01	0.36	494231.22
	R2404648-010	Y_R (360.074 nm)	1.01	0.36	492995.72
	R2404648-010	Zn (213.857 nm)	0.2292	0.18	14670.6369
6/10/2024 22:42:12	R2404648-011	Ag (328.068 nm)	-0.0006 u	23.97	-250.6399
	R2404648-011	Al (237.312 nm)	43.6303 o	0.16	107864.5712
	R2404648-011	As (188.980 nm)	0.0176	8.16	27.8477
	R2404648-011	B (249.772 nm)	0.0465	0.34	1513.8007
	R2404648-011	Ba (230.424 nm)	0.2049	0.22	11167.8116
	R2404648-011	Be (313.107 nm)	0.0012	0.92	1300.0492
	R2404648-011	Ca (317.933 nm)	1.9161	0.21	70995.8406
	R2404648-011	Cd (214.439 nm)	0.0007	11.47	42.2869
	R2404648-011	Co (230.786 nm)	0.0114	2.79	197.4351
	R2404648-011	Cr (267.716 nm)	0.0465	0.23	2422.9989
	R2404648-011	Cu (327.395 nm)	0.0528	0.33	2289.6045
	R2404648-011	Fe (234.350 nm)	42.2476 o	0.21	769246.0495
	R2404648-011	K (766.491 nm)	2.2537	0.76	2281.1646
	R2404648-011	Mg (279.078 nm)	3.2732	0.20	10666.9218
	R2404648-011	Mn (257.610 nm)	0.4438	0.19	148217.1096
	R2404648-011	Mo (202.032 nm)	0.0030	6.31	43.1212
	R2404648-011	Na (588.995 nm)	0.1215	2.48	-11968.4176
	R2404648-011	Ni (230.299 nm)	0.0223	2.73	287.4844
	R2404648-011	Pb (220.353 nm)	0.0491	1.59	264.3865
	R2404648-011	Sb (217.582 nm)	-0.0022 u	90.50	2.4815
	R2404648-011	Se (196.026 nm)	-0.0007 u	> 100.00	4.2835
	R2404648-011	Si (252.851 nm)	9.5934	0.17	36586.8947
	R2404648-011	Sn (189.925 nm)	0.0110	7.48	29.9970
	R2404648-011	Sr (216.596 nm)	0.0208	0.77	365.0797
	R2404648-011	Ti (336.122 nm)	0.6575	0.20	95146.9020
	R2404648-011	Tl (190.794 nm)	-0.0008 u	> 100.00	-1.9461
	R2404648-011	V (292.401 nm)	0.0805	0.66	3012.1527
	R2404648-011	Y (360.074 nm)	1.02	0.43	497583.89
	R2404648-011	Y_R (360.074 nm)	1.02	0.43	496339.71
	R2404648-011	Zn (213.857 nm)	0.1491	0.09	9542.5362
6/10/2024 22:45:25	R2404648-012	Ag (328.068 nm)	-0.0005 u	13.04	-243.2629
	R2404648-012	Al (237.312 nm)	71.7604 o	0.11	177401.2860
	R2404648-012	As (188.980 nm)	0.0212	10.72	33.9255
	R2404648-012	B (249.772 nm)	0.0647	0.55	2106.0387
	R2404648-012	Ba (230.424 nm)	0.1935	0.42	10545.6930
	R2404648-012	Be (313.107 nm)	0.0014	0.78	1580.7215
	R2404648-012	Ca (317.933 nm)	2.3561	0.32	86667.9095
	R2404648-012	Cd (214.439 nm)	0.0007	12.61	43.3191
	R2404648-012	Co (230.786 nm)	0.0083	4.23	141.2555
	R2404648-012	Cr (267.716 nm)	0.0574	0.43	2989.0958
	R2404648-012	Cu (327.395 nm)	0.0875	0.08	3813.8168
	R2404648-012	Fe (234.350 nm)	60.1280 o	0.33	1094814.4064
	R2404648-012	K (766.491 nm)	2.6144	1.04	2676.9773
	R2404648-012	Mg (279.078 nm)	2.4644	0.25	8023.5824
	R2404648-012	Mn (257.610 nm)	0.2448	0.28	81765.7926
	R2404648-012	Mo (202.032 nm)	0.0037	8.02	50.3212

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404648-012	Na (588.995 nm)	0.1072	1.56	-12162.5276
	R2404648-012	Ni (230.299 nm)	0.0257	1.65	327.1757
	R2404648-012	Pb (220.353 nm)	0.0502	1.08	270.1326
	R2404648-012	Sb (217.582 nm)	-0.0022 u	53.27	2.5747
	R2404648-012	Se (196.026 nm)	-0.0039 u	71.87	1.9409
	R2404648-012	Si (252.851 nm)	11.5848	0.11	44174.9039
	R2404648-012	Sn (189.925 nm)	0.0122	4.06	33.0637
	R2404648-012	Sr (216.596 nm)	0.0260	0.65	457.0445
	R2404648-012	Ti (336.122 nm)	0.6992	0.19	101166.5965
	R2404648-012	Tl (190.794 nm)	0.0006 u	> 100.00	-0.6233
	R2404648-012	V (292.401 nm)	0.1056	0.09	3962.8733
	R2404648-012	Y (360.074 nm)	1.01	0.24	492884.50
	R2404648-012	Y_R (360.074 nm)	1.01	0.24	491643.42
	R2404648-012	Zn (213.857 nm)	0.1859	0.24	11902.0902
6/10/2024 22:48:39	R2404648-013	Ag (328.068 nm)	-0.0005 u	3.20	-241.6245
	R2404648-013	Al (237.312 nm)	52.2139 o	0.06	129083.0971
	R2404648-013	As (188.980 nm)	0.0188	4.50	29.7949
	R2404648-013	B (249.772 nm)	0.0419	0.57	1367.4691
	R2404648-013	Ba (230.424 nm)	0.2423	0.22	13203.4426
	R2404648-013	Be (313.107 nm)	0.0014	0.60	1564.6703
	R2404648-013	Ca (317.933 nm)	4.9895	0.24	180470.5032
	R2404648-013	Cd (214.439 nm)	0.0007	16.11	41.3333
	R2404648-013	Co (230.786 nm)	0.0069	4.12	116.1668
	R2404648-013	Cr (267.716 nm)	0.0497	0.22	2591.6352
	R2404648-013	Cu (327.395 nm)	0.1503	0.14	6568.6943
	R2404648-013	Fe (234.350 nm)	34.9199 o	0.30	635823.6943
	R2404648-013	K (766.491 nm)	3.1112	0.54	3222.1644
	R2404648-013	Mg (279.078 nm)	2.9942	0.28	9755.0560
	R2404648-013	Mn (257.610 nm)	0.3465	0.23	115728.4753
	R2404648-013	Mo (202.032 nm)	0.0030	9.64	43.3138
	R2404648-013	Na (588.995 nm)	0.2256	1.26	-10550.6367
	R2404648-013	Ni (230.299 nm)	0.0230	1.89	295.1245
	R2404648-013	Pb (220.353 nm)	0.0696	0.66	371.3078
	R2404648-013	Sb (217.582 nm)	-0.0022 u	38.35	2.5895
	R2404648-013	Se (196.026 nm)	-0.0012 u	> 100.00	3.9240
	R2404648-013	Si (252.851 nm)	9.3379	0.14	35613.5649
	R2404648-013	Sn (189.925 nm)	0.0136	3.32	36.4479
	R2404648-013	Sr (216.596 nm)	0.0375	1.30	659.0276
	R2404648-013	Ti (336.122 nm)	0.5386	0.20	77969.3878
	R2404648-013	Tl (190.794 nm)	0.0006 u	> 100.00	-0.6133
	R2404648-013	V (292.401 nm)	0.0764	0.22	2856.1312
	R2404648-013	Y (360.074 nm)	1.02	0.40	500541.75
	R2404648-013	Y_R (360.074 nm)	1.02	0.40	499281.70
	R2404648-013	Zn (213.857 nm)	0.2401	0.16	15371.3303
6/10/2024 22:51:53	R2404648-014	Ag (328.068 nm)	-0.0006 u	10.81	-247.1966
	R2404648-014	Al (237.312 nm)	35.4074 o	0.06	87537.9036
	R2404648-014	As (188.980 nm)	0.0129	13.58	19.8501
	R2404648-014	B (249.772 nm)	0.0331	0.62	1079.5545
	R2404648-014	Ba (230.424 nm)	0.1422	0.17	7752.8650
	R2404648-014	Be (313.107 nm)	0.0011	1.72	1174.9233
	R2404648-014	Ca (317.933 nm)	1.8099	0.28	67212.9569
	R2404648-014	Cd (214.439 nm)	0.0006	17.23	33.9610
	R2404648-014	Co (230.786 nm)	0.0088	3.00	150.5166
	R2404648-014	Cr (267.716 nm)	0.0380	0.36	1980.1815
	R2404648-014	Cu (327.395 nm)	0.0619	0.51	2688.6745
	R2404648-014	Fe (234.350 nm)	29.4585 o	0.28	536382.3056
	R2404648-014	K (766.491 nm)	1.9888	1.82	1990.4797

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404648-014	Mg (279.078 nm)	3.0238	0.12	9851.7587
	R2404648-014	Mn (257.610 nm)	0.2486	0.19	83054.0167
	R2404648-014	Mo (202.032 nm)	0.0019	13.01	31.7763
	R2404648-014	Na (588.995 nm)	0.1310	1.33	-11838.7797
	R2404648-014	Ni (230.299 nm)	0.0195	3.70	253.6618
	R2404648-014	Pb (220.353 nm)	0.0359	1.13	195.5981
	R2404648-014	Sb (217.582 nm)	-0.0013 u	8.59	4.1560
	R2404648-014	Se (196.026 nm)	-0.0008 u	> 100.00	4.1774
	R2404648-014	Si (252.851 nm)	8.6619	0.11	33037.6092
	R2404648-014	Sn (189.925 nm)	0.0112	6.78	30.5476
	R2404648-014	Sr (216.596 nm)	0.0198	0.50	347.6672
	R2404648-014	Ti (336.122 nm)	0.6249	0.09	90442.3961
	R2404648-014	Tl (190.794 nm)	-0.0012 u	> 100.00	-2.3457
	R2404648-014	V (292.401 nm)	0.0581	0.20	2163.9050
	R2404648-014	Y (360.074 nm)	1.03	0.28	501685.40
	R2404648-014	Y_R (360.074 nm)	1.03	0.28	500418.01
	R2404648-014	Zn (213.857 nm)	0.1213	0.18	7762.6494
6/10/2024 22:55:07	Continuing Calibration Verification1	Ag (328.068 nm)	0.5037	0.09	28320.3447
	Continuing Calibration Verification1	Al (237.312 nm)	9.7379	0.04	24084.0352
	Continuing Calibration Verification1	As (188.980 nm)	0.9661	0.33	1636.4524
	Continuing Calibration Verification1	B (249.772 nm)	2.3998	0.23	77930.8849
	Continuing Calibration Verification1	Ba (230.424 nm)	9.5642	0.07	520751.3522
	Continuing Calibration Verification1	Be (313.107 nm)	0.2412	0.25	264710.2909
	Continuing Calibration Verification1	Ca (317.933 nm)	25.7000	0.28	918188.5671
	Continuing Calibration Verification1	Cd (214.439 nm)	0.5000	0.33	28487.2078
	Continuing Calibration Verification1	Co (230.786 nm)	2.4627	0.54	44648.3291
	Continuing Calibration Verification1	Cr (267.716 nm)	0.5179	0.29	26925.9847
	Continuing Calibration Verification1	Cu (327.395 nm)	1.2128	0.55	53210.9294
	Continuing Calibration Verification1	Fe (234.350 nm)	5.0200	0.29	91403.5602
	Continuing Calibration Verification1	K (766.491 nm)	24.0044	0.16	26150.3058
	Continuing Calibration Verification1	Mg (279.078 nm)	25.2908	0.24	82618.5189
	Continuing Calibration Verification1	Mn (257.610 nm)	0.7392	0.27	246881.4823
	Continuing Calibration Verification1	Mo (202.032 nm)	2.6624	0.36	27803.7944
	Continuing Calibration Verification1	Na (588.995 nm)	25.2723	0.24	330544.6525
	Continuing Calibration Verification1	Ni (230.299 nm)	2.0513	0.22	24113.5703
	Continuing Calibration Verification1	Pb (220.353 nm)	0.5146	0.22	2694.6649
	Continuing Calibration Verification1	Sb (217.582 nm)	4.6667	0.02	8675.3061
	Continuing Calibration Verification1	Se (196.026 nm)	0.4718	0.37	348.7201
	Continuing Calibration Verification1	Si (252.851 nm)	9.8245	0.53	37467.5123
	Continuing Calibration Verification1	Sn (189.925 nm)	4.9591	0.19	12214.1246
	Continuing Calibration Verification1	Sr (216.596 nm)	2.4628	0.55	43343.8621
	Continuing Calibration Verification1	Ti (336.122 nm)	2.5099	0.16	362779.5545
	Continuing Calibration Verification1	Tl (190.794 nm)	0.9673	0.04	943.9894
	Continuing Calibration Verification1	V (292.401 nm)	2.5125	0.26	95213.4761
	Continuing Calibration Verification1	Y (360.074 nm)	0.98	0.24	477703.89
	Continuing Calibration Verification1	Y_R (360.074 nm)	0.98	0.24	476510.86
	Continuing Calibration Verification1	Zn (213.857 nm)	0.9839	0.35	62978.6061
6/10/2024 22:58:20	Continuing Calibration Blank1	Ag (328.068 nm)	-0.0005 u	37.01	-241.5654
	Continuing Calibration Blank1	Al (237.312 nm)	0.0031	18.42	20.0614
	Continuing Calibration Blank1	As (188.980 nm)	-0.0012 u	> 100.00	-4.1403
	Continuing Calibration Blank1	B (249.772 nm)	0.0013	15.51	48.7288
	Continuing Calibration Blank1	Ba (230.424 nm)	0.0005	3.94	37.0937
	Continuing Calibration Blank1	Be (313.107 nm)	0.0001	6.75	83.4694
	Continuing Calibration Blank1	Ca (317.933 nm)	0.0055	3.55	2940.3764
	Continuing Calibration Blank1	Cd (214.439 nm)	0.0001	79.94	7.1640
	Continuing Calibration Blank1	Co (230.786 nm)	0.0000 u	> 100.00	-9.1570
	Continuing Calibration Blank1	Cr (267.716 nm)	0.0001	> 100.00	9.0066

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Blank1	Cu (327.395 nm)	0.0003	85.74	-14.2609
	Continuing Calibration Blank1	Fe (234.350 nm)	0.0032	33.73	57.7629
	Continuing Calibration Blank1	K (766.491 nm)	0.0268 u	> 100.00	-162.6132
	Continuing Calibration Blank1	Mg (279.078 nm)	0.0018	45.40	-23.8632
	Continuing Calibration Blank1	Mn (257.610 nm)	0.0000	15.83	35.2181
	Continuing Calibration Blank1	Mo (202.032 nm)	0.0034	27.62	47.5722
	Continuing Calibration Blank1	Na (588.995 nm)	0.0283	3.92	-13238.0277
	Continuing Calibration Blank1	Ni (230.299 nm)	0.0002	59.83	27.1621
	Continuing Calibration Blank1	Pb (220.353 nm)	0.0004	81.89	9.9140
	Continuing Calibration Blank1	Sb (217.582 nm)	0.0034	47.79	12.8714
	Continuing Calibration Blank1	Se (196.026 nm)	-0.0008 u	> 100.00	4.1806
	Continuing Calibration Blank1	Si (252.851 nm)	-0.0021 u	38.99	24.4922
	Continuing Calibration Blank1	Sn (189.925 nm)	0.0000 u	> 100.00	3.0366
	Continuing Calibration Blank1	Sr (216.596 nm)	0.0005	20.75	7.9168
	Continuing Calibration Blank1	Ti (336.122 nm)	0.0030	43.18	582.2494
	Continuing Calibration Blank1	Tl (190.794 nm)	0.0015 u	> 100.00	0.2330
	Continuing Calibration Blank1	V (292.401 nm)	0.0000 u	> 100.00	-41.4639
	Continuing Calibration Blank1	Y (360.074 nm)	1.02	0.10	500534.19
	Continuing Calibration Blank1	Y_R (360.074 nm)	1.02	0.10	499286.44
	Continuing Calibration Blank1	Zn (213.857 nm)	0.0000 u	> 100.00	0.2015
6/10/2024 23:01:34	R2404648-015	Ag (328.068 nm)	-0.0008 u	10.77	-258.3181
	R2404648-015	Al (237.312 nm)	111.4373 o	0.04	275481.0640
	R2404648-015	As (188.980 nm)	0.0405	4.84	66.6023
	R2404648-015	B (249.772 nm)	0.1957	0.59	6358.7672
	R2404648-015	Ba (230.424 nm)	0.5702	0.23	31055.0607
	R2404648-015	Be (313.107 nm)	0.0062	0.24	6836.8056
	R2404648-015	Ca (317.933 nm)	8.9415	0.32	321243.6004
	R2404648-015	Cd (214.439 nm)	0.0016	2.85	95.4174
	R2404648-015	Co (230.786 nm)	0.0823	0.56	1481.8633
	R2404648-015	Cr (267.716 nm)	0.2403	0.24	12495.6539
	R2404648-015	Cu (327.395 nm)	0.1055	0.48	4601.7191
	R2404648-015	Fe (234.350 nm)	173.5462 o	0.13	3159940.2503
	R2404648-015	K (766.491 nm)	13.1022	0.39	14186.3423
	R2404648-015	Mg (279.078 nm)	15.9485	0.20	52088.5162
	R2404648-015	Mn (257.610 nm)	4.7157 o	0.31	1574830.9183
	R2404648-015	Mo (202.032 nm)	0.0054	5.27	68.3712
	R2404648-015	Na (588.995 nm)	0.3978	0.87	-8205.8172
	R2404648-015	Ni (230.299 nm)	0.1145	1.00	1370.0697
	R2404648-015	Pb (220.353 nm)	0.0851	0.74	452.3930
	R2404648-015	Sb (217.582 nm)	-0.0058 u	19.37	-4.1989
	R2404648-015	Se (196.026 nm)	-0.0081 u	11.99	-1.1239
	R2404648-015	Si (252.851 nm)	11.8070	0.20	45021.4029
	R2404648-015	Sn (189.925 nm)	0.0087	20.15	24.5328
	R2404648-015	Sr (216.596 nm)	0.0564	0.22	991.8732
	R2404648-015	Ti (336.122 nm)	4.1800	0.09	604069.3811
	R2404648-015	Tl (190.794 nm)	0.0018	41.49	0.5426
	R2404648-015	V (292.401 nm)	0.3847	0.18	14543.1088
	R2404648-015	Y (360.074 nm)	1.24	0.51	606105.05
	R2404648-015	Y_R (360.074 nm)	1.24	0.51	604576.41
	R2404648-015	Zn (213.857 nm)	0.3363	0.07	21527.4075
6/10/2024 23:04:48	R2404648-016	Ag (328.068 nm)	-0.0007 u	19.61	-251.6741
	R2404648-016	Al (237.312 nm)	119.1688 o	0.04	294592.8066
	R2404648-016	As (188.980 nm)	0.0401	6.48	65.9291
	R2404648-016	B (249.772 nm)	0.2971	0.44	9653.6186
	R2404648-016	Ba (230.424 nm)	0.3488	0.22	19003.6440
	R2404648-016	Be (313.107 nm)	0.0063	0.18	6909.5123
	R2404648-016	Ca (317.933 nm)	10.9827	0.28	393952.9946

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404648-016	Cd (214.439 nm)	0.0028	1.83	158.9086
	R2404648-016	Co (230.786 nm)	0.0678	0.24	1220.4549
	R2404648-016	Cr (267.716 nm)	0.2851	0.18	14823.9196
	R2404648-016	Cu (327.395 nm)	0.1165	0.27	5084.4083
	R2404648-016	Fe (234.350 nm)	257.0553 o	0.20	4680479.1446
	R2404648-016	K (766.491 nm)	5.6737	0.61	6034.2935
	R2404648-016	Mg (279.078 nm)	8.5019	0.17	27753.7621
	R2404648-016	Mn (257.610 nm)	3.5338 o	0.23	1180124.5659
	R2404648-016	Mo (202.032 nm)	0.0064	3.81	78.5972
	R2404648-016	Na (588.995 nm)	0.3811	0.80	-8432.1784
	R2404648-016	Ni (230.299 nm)	0.0715	0.20	864.9304
	R2404648-016	Pb (220.353 nm)	0.0952	0.20	505.1848
	R2404648-016	Sb (217.582 nm)	-0.0121 u	20.99	-15.9700
	R2404648-016	Se (196.026 nm)	-0.0171 u	19.76	-7.7222
	R2404648-016	Si (252.851 nm)	13.9746	0.09	53280.6900
	R2404648-016	Sn (189.925 nm)	0.0148	7.05	39.3667
	R2404648-016	Sr (216.596 nm)	0.0645	0.37	1134.1478
	R2404648-016	Ti (336.122 nm)	2.7717	0.14	400597.6397
	R2404648-016	Tl (190.794 nm)	-0.0001 u	> 100.00	-1.2902
	R2404648-016	V (292.401 nm)	0.5248	0.11	19856.8221
	R2404648-016	Y (360.074 nm)	1.17	0.40	571574.27
	R2404648-016	Y_R (360.074 nm)	1.17	0.40	570092.14
	R2404648-016	Zn (213.857 nm)	0.3159	0.10	20221.0172
6/10/2024 23:08:02	R2404648-017	Ag (328.068 nm)	-0.0008 u	20.15	-260.0341
	R2404648-017	Al (237.312 nm)	89.6077 o	0.03	221519.0199
	R2404648-017	As (188.980 nm)	0.0376	1.66	61.7828
	R2404648-017	B (249.772 nm)	0.1484	0.23	4824.1450
	R2404648-017	Ba (230.424 nm)	0.4803	0.19	26161.5768
	R2404648-017	Be (313.107 nm)	0.0056	0.27	6116.5402
	R2404648-017	Ca (317.933 nm)	9.5815	0.33	344041.6011
	R2404648-017	Cd (214.439 nm)	0.0014	9.97	79.9092
	R2404648-017	Co (230.786 nm)	0.0806	0.40	1452.1499
	R2404648-017	Cr (267.716 nm)	0.1699	0.38	8835.4402
	R2404648-017	Cu (327.395 nm)	0.0781	0.22	3399.1116
	R2404648-017	Fe (234.350 nm)	133.5050 o	0.32	2430866.3184
	R2404648-017	K (766.491 nm)	4.5634	0.36	4815.8508
	R2404648-017	Mg (279.078 nm)	7.9664	0.23	26003.5952
	R2404648-017	Mn (257.610 nm)	6.0926 o	0.31	2034663.3346
	R2404648-017	Mo (202.032 nm)	0.0046	7.39	59.9921
	R2404648-017	Na (588.995 nm)	0.4696	1.39	-7227.2135
	R2404648-017	Ni (230.299 nm)	0.0777	0.38	937.4203
	R2404648-017	Pb (220.353 nm)	0.0839	0.01	445.8480
	R2404648-017	Sb (217.582 nm)	-0.0070 u	18.67	-6.4703
	R2404648-017	Se (196.026 nm)	-0.0011 u	> 100.00	4.0033
	R2404648-017	Si (252.851 nm)	10.2035	0.05	38911.7642
	R2404648-017	Sn (189.925 nm)	0.0104	5.72	28.6550
	R2404648-017	Sr (216.596 nm)	0.0479	0.66	842.0185
	R2404648-017	Ti (336.122 nm)	2.0589	0.22	297622.2028
	R2404648-017	Tl (190.794 nm)	0.0012 u	> 100.00	-0.0649
	R2404648-017	V (292.401 nm)	0.2816	0.27	10635.7574
	R2404648-017	Y (360.074 nm)	1.27	0.34	620935.01
	R2404648-017	Y_R (360.074 nm)	1.27	0.34	619363.38
	R2404648-017	Zn (213.857 nm)	0.2541	0.22	16266.0935
6/10/2024 23:11:15	R2404648-018	Ag (328.068 nm)	-0.0007 u	19.96	-251.9804
	R2404648-018	Al (237.312 nm)	99.1764 o	0.06	245172.4841
	R2404648-018	As (188.980 nm)	0.0205	6.66	32.6918
	R2404648-018	B (249.772 nm)	0.2437	0.52	7919.5687

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404648-018	Ba (230.424 nm)	0.2099	0.14	11438.7077
	R2404648-018	Be (313.107 nm)	0.0071	0.34	7815.8332
	R2404648-018	Ca (317.933 nm)	9.6137	0.29	345188.6282
	R2404648-018	Cd (214.439 nm)	0.0023	3.04	133.2561
	R2404648-018	Co (230.786 nm)	0.1928	0.23	3487.1567
	R2404648-018	Cr (267.716 nm)	0.2766	0.31	14385.5492
	R2404648-018	Cu (327.395 nm)	0.1660	0.17	7259.8511
	R2404648-018	Fe (234.350 nm)	217.9934 o	0.22	3969237.6399
	R2404648-018	K (766.491 nm)	3.8670	1.08	4051.5954
	R2404648-018	Mg (279.078 nm)	6.5473	0.23	21366.2436
	R2404648-018	Mn (257.610 nm)	6.2899 o	0.24	2100563.5598
	R2404648-018	Mo (202.032 nm)	0.0028	7.49	40.8913
	R2404648-018	Na (588.995 nm)	0.3926	0.96	-8276.2849
	R2404648-018	Ni (230.299 nm)	0.0873	0.63	1050.3963
	R2404648-018	Pb (220.353 nm)	0.0617	1.54	329.8573
	R2404648-018	Sb (217.582 nm)	-0.0091 u	17.67	-10.3674
	R2404648-018	Se (196.026 nm)	-0.0110 u	1.30	-3.2644
	R2404648-018	Si (252.851 nm)	8.1802	0.09	31202.1443
	R2404648-018	Sn (189.925 nm)	0.0085	15.41	23.8357
	R2404648-018	Sr (216.596 nm)	0.0512	0.92	899.9331
	R2404648-018	Ti (336.122 nm)	3.5239	0.06	509281.0166
	R2404648-018	Tl (190.794 nm)	0.0014	43.58	0.1158
	R2404648-018	V (292.401 nm)	0.5031	0.15	19032.6019
	R2404648-018	Y (360.074 nm)	1.25	0.25	608382.87
	R2404648-018	Y_R (360.074 nm)	1.24	0.25	606842.10
	R2404648-018	Zn (213.857 nm)	0.3522	0.17	22543.9234
6/10/2024 23:14:29	R2404648-019	Ag (328.068 nm)	-0.0005 u	33.89	-244.4638
	R2404648-019	Al (237.312 nm)	161.6919 o	0.03	399708.4692
	R2404648-019	As (188.980 nm)	0.0211	11.00	33.7308
	R2404648-019	B (249.772 nm)	0.2805	0.22	9113.6615
	R2404648-019	Ba (230.424 nm)	0.5436	0.22	29608.5248
	R2404648-019	Be (313.107 nm)	0.0101	0.30	11085.3997
	R2404648-019	Ca (317.933 nm)	18.7889	0.30	672013.0902
	R2404648-019	Cd (214.439 nm)	0.0026	1.93	147.4009
	R2404648-019	Co (230.786 nm)	0.1254	0.29	2263.4296
	R2404648-019	Cr (267.716 nm)	0.4554	0.26	23676.4552
	R2404648-019	Cu (327.395 nm)	0.1707	0.23	7464.9075
	R2404648-019	Fe (234.350 nm)	245.2444 o	0.22	4465424.3831
	R2404648-019	K (766.491 nm)	14.7816	0.19	16029.2434
	R2404648-019	Mg (279.078 nm)	31.8694	0.24	104116.7838
	R2404648-019	Mn (257.610 nm)	6.8005 o	0.21	2271075.1307
	R2404648-019	Mo (202.032 nm)	0.0038	19.85	51.7922
	R2404648-019	Na (588.995 nm)	0.5111	1.42	-6661.9217
	R2404648-019	Ni (230.299 nm)	0.1138	0.68	1361.6979
	R2404648-019	Pb (220.353 nm)	0.0809	0.59	430.1345
	R2404648-019	Sb (217.582 nm)	-0.0094 u	12.79	-10.8301
	R2404648-019	Se (196.026 nm)	-0.0126 u	26.19	-4.4132
	R2404648-019	Si (252.851 nm)	9.4488	0.05	36035.9591
	R2404648-019	Sn (189.925 nm)	0.0088	11.81	24.5924
	R2404648-019	Sr (216.596 nm)	0.0795	0.26	1398.4400
	R2404648-019	Ti (336.122 nm)	5.4176	0.17	782869.4883
	R2404648-019	Tl (190.794 nm)	-0.0003 u	> 100.00	-1.5307
	R2404648-019	V (292.401 nm)	0.5185	0.20	19615.5782
	R2404648-019	Y (360.074 nm)	1.15	0.40	560335.49
	R2404648-019	Y_R (360.074 nm)	1.15	0.40	558881.88
	R2404648-019	Zn (213.857 nm)	0.6960	0.08	44550.4470
6/10/2024 23:17:42	R2404648-020	Ag (328.068 nm)	-0.0007 u	14.63	-252.5312

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404648-020	Al (237.312 nm)	78.2730 o	0.43	193499.9820
	R2404648-020	As (188.980 nm)	0.0270	3.41	43.7296
	R2404648-020	B (249.772 nm)	0.1286	0.53	4181.3121
	R2404648-020	Ba (230.424 nm)	0.3597	0.61	19597.5639
	R2404648-020	Be (313.107 nm)	0.0043	0.48	4712.3002
	R2404648-020	Ca (317.933 nm)	12.7883	0.44	458268.5673
	R2404648-020	Cd (214.439 nm)	0.0015	5.26	89.7615
	R2404648-020	Co (230.786 nm)	0.0580	0.51	1042.3858
	R2404648-020	Cr (267.716 nm)	0.1603	0.65	8339.9555
	R2404648-020	Cu (327.395 nm)	0.0961	0.58	4189.9138
	R2404648-020	Fe (234.350 nm)	115.8442 o	0.58	2109298.1357
	R2404648-020	K (766.491 nm)	5.0977	0.36	5402.1302
	R2404648-020	Mg (279.078 nm)	8.4892	0.59	27712.2576
	R2404648-020	Mn (257.610 nm)	3.7695 o	0.60	1258850.6449
	R2404648-020	Mo (202.032 nm)	0.0045	7.46	59.2751
	R2404648-020	Na (588.995 nm)	0.3031	1.13	-9494.5628
	R2404648-020	Ni (230.299 nm)	0.0666	0.91	807.6840
	R2404648-020	Pb (220.353 nm)	0.0770	0.55	409.6995
	R2404648-020	Sb (217.582 nm)	-0.0051 u	46.99	-2.8338
	R2404648-020	Se (196.026 nm)	-0.0064 u	35.54	0.1022
	R2404648-020	Si (252.851 nm)	12.8314	0.43	48924.9341
	R2404648-020	Sn (189.925 nm)	0.0105	7.56	28.8910
	R2404648-020	Sr (216.596 nm)	0.0530	1.06	931.8618
	R2404648-020	Ti (336.122 nm)	1.6721	0.53	241733.6458
	R2404648-020	Tl (190.794 nm)	-0.0008 u	39.78	-1.9846
	R2404648-020	V (292.401 nm)	0.2511	0.66	9480.4115
	R2404648-020	Y (360.074 nm)	1.09	0.48	532365.11
	R2404648-020	Y_R (360.074 nm)	1.09	0.48	531003.43
	R2404648-020	Zn (213.857 nm)	0.3007	0.54	19245.7278
6/10/2024 23:20:56	Continuing Calibration Verification1	Ag (328.068 nm)	0.5043	0.10	28355.3343
	Continuing Calibration Verification1	Al (237.312 nm)	9.7489	0.12	24111.0631
	Continuing Calibration Verification1	As (188.980 nm)	0.9633	0.20	1631.6983
	Continuing Calibration Verification1	B (249.772 nm)	2.3975	0.34	77854.8692
	Continuing Calibration Verification1	Ba (230.424 nm)	9.5517	0.27	520073.2914
	Continuing Calibration Verification1	Be (313.107 nm)	0.2408	0.34	264362.7112
	Continuing Calibration Verification1	Ca (317.933 nm)	25.7063	0.35	918414.0303
	Continuing Calibration Verification1	Cd (214.439 nm)	0.4993	0.36	28447.9193
	Continuing Calibration Verification1	Co (230.786 nm)	2.4637	0.58	44666.5318
	Continuing Calibration Verification1	Cr (267.716 nm)	0.5175	0.31	26904.5579
	Continuing Calibration Verification1	Cu (327.395 nm)	1.2145	0.67	53285.4527
	Continuing Calibration Verification1	Fe (234.350 nm)	5.0328	0.40	91637.9255
	Continuing Calibration Verification1	K (766.491 nm)	24.1557	0.14	26316.3911
	Continuing Calibration Verification1	Mg (279.078 nm)	25.2851	0.27	82599.6319
	Continuing Calibration Verification1	Mn (257.610 nm)	0.7409	0.33	247442.3535
	Continuing Calibration Verification1	Mo (202.032 nm)	2.6634	0.37	27813.9282
	Continuing Calibration Verification1	Na (588.995 nm)	25.3729	0.14	331915.1979
	Continuing Calibration Verification1	Ni (230.299 nm)	2.0501	0.27	24099.5068
	Continuing Calibration Verification1	Pb (220.353 nm)	0.5131	0.51	2686.8495
	Continuing Calibration Verification1	Sb (217.582 nm)	4.6555	0.19	8654.6039
	Continuing Calibration Verification1	Se (196.026 nm)	0.4730	1.09	349.5438
	Continuing Calibration Verification1	Si (252.851 nm)	9.8416	0.64	37532.7100
	Continuing Calibration Verification1	Sn (189.925 nm)	4.9468	0.38	12183.9830
	Continuing Calibration Verification1	Sr (216.596 nm)	2.4619	0.53	43327.3527
	Continuing Calibration Verification1	Ti (336.122 nm)	2.5125	0.28	363154.6782
	Continuing Calibration Verification1	Tl (190.794 nm)	0.9656	0.48	942.3076
	Continuing Calibration Verification1	V (292.401 nm)	2.5132	0.34	95238.8969
	Continuing Calibration Verification1	Y (360.074 nm)	0.98	0.27	479218.81

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Verification1	Y_R (360.074 nm)	0.98	0.27	477996.84
	Continuing Calibration Verification1	Zn (213.857 nm)	0.9836	0.53	62959.8481
6/10/2024 23:24:09	Continuing Calibration Blank1	Ag (328.068 nm)	-0.0004 u	20.15	-236.4724
	Continuing Calibration Blank1	Al (237.312 nm)	0.0031	56.56	20.0284
	Continuing Calibration Blank1	As (188.980 nm)	-0.0013 u	> 100.00	-4.2363
	Continuing Calibration Blank1	B (249.772 nm)	0.0013	10.59	47.3558
	Continuing Calibration Blank1	Ba (230.424 nm)	0.0005	24.80	40.2111
	Continuing Calibration Blank1	Be (313.107 nm)	0.0001	11.11	86.8094
	Continuing Calibration Blank1	Ca (317.933 nm)	0.0060	3.20	2956.0153
	Continuing Calibration Blank1	Cd (214.439 nm)	0.0002	47.63	10.8117
	Continuing Calibration Blank1	Co (230.786 nm)	0.0003	78.60	-5.0520
	Continuing Calibration Blank1	Cr (267.716 nm)	0.0001 u	> 100.00	10.1388
	Continuing Calibration Blank1	Cu (327.395 nm)	0.0006	19.87	-3.3554
	Continuing Calibration Blank1	Fe (234.350 nm)	0.0048	35.33	87.4875
	Continuing Calibration Blank1	K (766.491 nm)	0.0666	46.99	-118.9839
	Continuing Calibration Blank1	Mg (279.078 nm)	0.0029	38.64	-20.1575
	Continuing Calibration Blank1	Mn (257.610 nm)	0.0001	6.55	55.7252
	Continuing Calibration Blank1	Mo (202.032 nm)	0.0031	41.04	44.5333
	Continuing Calibration Blank1	Na (588.995 nm)	0.0194	32.25	-13358.9288
	Continuing Calibration Blank1	Ni (230.299 nm)	-0.0002 u	45.28	23.0541
	Continuing Calibration Blank1	Pb (220.353 nm)	0.0006 u	99.80	10.9039
	Continuing Calibration Blank1	Sb (217.582 nm)	0.0035	77.79	13.1725
	Continuing Calibration Blank1	Se (196.026 nm)	-0.0023 u	73.79	3.0664
	Continuing Calibration Blank1	Si (252.851 nm)	-0.0033 u	18.33	20.1340
	Continuing Calibration Blank1	Sn (189.925 nm)	0.0008	82.57	4.9497
	Continuing Calibration Blank1	Sr (216.596 nm)	0.0004	56.92	6.8311
	Continuing Calibration Blank1	Ti (336.122 nm)	0.0035	44.95	657.7217
	Continuing Calibration Blank1	Tl (190.794 nm)	-0.0002 u	> 100.00	-1.3614
	Continuing Calibration Blank1	V (292.401 nm)	-0.0001 u	> 100.00	-43.2478
	Continuing Calibration Blank1	Y (360.074 nm)	1.02	0.08	499499.45
	Continuing Calibration Blank1	Y_R (360.074 nm)	1.02	0.08	498248.97
	Continuing Calibration Blank1	Zn (213.857 nm)	0.0000 u	> 100.00	2.2199
6/10/2024 23:27:23	Contract Required Detection Limit	Ag (328.068 nm)	0.0084	1.78	259.7304
	Contract Required Detection Limit	Al (237.312 nm)	0.1967	0.93	498.4876
	Contract Required Detection Limit	As (188.980 nm)	0.0195	3.99	31.1159
	Contract Required Detection Limit	B (249.772 nm)	0.1884	0.13	6124.0162
	Contract Required Detection Limit	Ba (230.424 nm)	0.1926	0.21	10498.9649
	Contract Required Detection Limit	Be (313.107 nm)	0.0049	0.40	5394.8464
	Contract Required Detection Limit	Ca (317.933 nm)	1.0433	0.29	39904.4011
	Contract Required Detection Limit	Cd (214.439 nm)	0.0105	0.97	597.5536
	Contract Required Detection Limit	Co (230.786 nm)	0.0497	0.25	891.9442
	Contract Required Detection Limit	Cr (267.716 nm)	0.0095	1.12	499.6988
	Contract Required Detection Limit	Cu (327.395 nm)	0.0245	1.56	1047.7678
	Contract Required Detection Limit	Fe (234.350 nm)	0.1085	1.34	1974.3700
	Contract Required Detection Limit	K (766.491 nm)	0.9740	3.12	876.8636
	Contract Required Detection Limit	Mg (279.078 nm)	1.0053	0.25	3255.4815
	Contract Required Detection Limit	Mn (257.610 nm)	0.0139	0.25	4667.8974
	Contract Required Detection Limit	Mo (202.032 nm)	0.0266	0.88	289.9248
	Contract Required Detection Limit	Na (588.995 nm)	1.0066	0.56	85.3463
	Contract Required Detection Limit	Ni (230.299 nm)	0.0355	1.09	441.5499
	Contract Required Detection Limit	Pb (220.353 nm)	0.0118	3.71	69.2690
	Contract Required Detection Limit	Sb (217.582 nm)	0.0566	2.39	111.7663
	Contract Required Detection Limit	Se (196.026 nm)	0.0075 R 75%	17.55	10.2580 R
	Contract Required Detection Limit	Si (252.851 nm)	0.0491	1.61	219.5797
	Contract Required Detection Limit	Sn (189.925 nm)	0.4978	0.13	1228.6937
	Contract Required Detection Limit	Sr (216.596 nm)	0.0983	0.27	1730.0287
	Contract Required Detection Limit	Ti (336.122 nm)	0.0500	1.81	7378.2865

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Contract Required Detection Limit	Tl (190.794 nm)	0.0203	2.24	18.6178
	Contract Required Detection Limit	V (292.401 nm)	0.0491	0.64	1819.6728
	Contract Required Detection Limit	Y (360.074 nm)	1.02	0.38	496834.75
	Contract Required Detection Limit	Y_R (360.074 nm)	1.02	0.38	495595.57
	Contract Required Detection Limit	Zn (213.857 nm)	0.0173	0.44	1105.2936
6/10/2024 23:30:37	Interference Check Solution A	Ag (328.068 nm)	-0.0005 u	8.46	-245.1057
	Interference Check Solution A	Al (237.312 nm)	248.2829 o	0.18	613758.0300
	Interference Check Solution A	As (188.980 nm)	-0.0003 u	> 100.00	-2.5960
	Interference Check Solution A	B (249.772 nm)	0.0949	0.74	3088.2502
	Interference Check Solution A	Ba (230.424 nm)	-0.0005 u	24.68	-18.0326
	Interference Check Solution A	Be (313.107 nm)	0.0002	2.24	256.4683
	Interference Check Solution A	Ca (317.933 nm)	237.1498 o	0.53	8450122.1874
	Interference Check Solution A	Cd (214.439 nm)	-0.0006 u	15.06	-34.8896
	Interference Check Solution A	Co (230.786 nm)	-0.0002 u	> 100.00	-13.6764
	Interference Check Solution A	Cr (267.716 nm)	0.0036	2.66	191.2161
	Interference Check Solution A	Cu (327.395 nm)	0.0091	0.74	370.2179
	Interference Check Solution A	Fe (234.350 nm)	93.1809 o	0.39	1696642.6293
	Interference Check Solution A	K (766.491 nm)	0.0707	38.78	-114.4647
	Interference Check Solution A	Mg (279.078 nm)	261.4571 o	0.44	854389.4890
	Interference Check Solution A	Mn (257.610 nm)	0.0012	1.00	411.3316
	Interference Check Solution A	Mo (202.032 nm)	0.0016	18.58	29.0189
	Interference Check Solution A	Na (588.995 nm)	-0.0477 u	12.02	-14272.8226
	Interference Check Solution A	Ni (230.299 nm)	0.0035	17.71	66.3028
	Interference Check Solution A	Pb (220.353 nm)	0.0040	11.02	28.7618
	Interference Check Solution A	Sb (217.582 nm)	-0.0043 u	47.36	-1.3328
	Interference Check Solution A	Se (196.026 nm)	-0.0098 u	43.48	-2.3512
	Interference Check Solution A	Si (252.851 nm)	0.0387	3.85	180.1402
	Interference Check Solution A	Sn (189.925 nm)	0.0003 u	> 100.00	3.6588
	Interference Check Solution A	Sr (216.596 nm)	0.0113	0.88	197.9730
	Interference Check Solution A	Ti (336.122 nm)	0.0031	17.53	599.5596
	Interference Check Solution A	Tl (190.794 nm)	-0.0001 u	> 100.00	-1.3419
	Interference Check Solution A	V (292.401 nm)	0.0014	17.11	12.5556
	Interference Check Solution A	Y (360.074 nm)	0.90	0.27	439176.65
	Interference Check Solution A	Y_R (360.074 nm)	0.90	0.27	438031.22
	Interference Check Solution A	Zn (213.857 nm)	0.0133 K	0.20	854.3255 K
6/10/2024 23:33:51	Interference Check Solution AB	Ag (328.068 nm)	0.1999	0.20	11109.1728
	Interference Check Solution AB	Al (237.312 nm)	250.1329 o	0.15	618331.1103
	Interference Check Solution AB	As (188.980 nm)	0.1001	0.95	167.6877
	Interference Check Solution AB	B (249.772 nm)	0.0930	0.68	3024.1301
	Interference Check Solution AB	Ba (230.424 nm)	0.4963	0.29	27030.8678
	Interference Check Solution AB	Be (313.107 nm)	0.4998	0.20	548558.7295
	Interference Check Solution AB	Ca (317.933 nm)	238.7829 o	0.31	8508291.5854
	Interference Check Solution AB	Cd (214.439 nm)	0.9764	0.36	55627.8914
	Interference Check Solution AB	Co (230.786 nm)	0.4824	0.24	8738.4356
	Interference Check Solution AB	Cr (267.716 nm)	0.5232	0.30	27201.2883
	Interference Check Solution AB	Cu (327.395 nm)	0.5403	0.11	23692.1095
	Interference Check Solution AB	Fe (234.350 nm)	93.8949 o	0.33	1709644.0295
	Interference Check Solution AB	K (766.491 nm)	0.0083 u	> 100.00	-182.9437
	Interference Check Solution AB	Mg (279.078 nm)	263.2529 o	0.30	860257.9051
	Interference Check Solution AB	Mn (257.610 nm)	0.4981	0.29	166346.4219
	Interference Check Solution AB	Mo (202.032 nm)	0.0013	25.43	25.1786
	Interference Check Solution AB	Na (588.995 nm)	-0.0626 u	7.37	-14475.9205
	Interference Check Solution AB	Ni (230.299 nm)	0.9879	0.26	11625.8268
	Interference Check Solution AB	Pb (220.353 nm)	0.0520	1.56	279.2350
	Interference Check Solution AB	Sb (217.582 nm)	0.5889	0.53	1100.4999
	Interference Check Solution AB	Se (196.026 nm)	0.0462	0.95	38.4543
	Interference Check Solution AB	Si (252.851 nm)	0.0872	2.17	364.7598

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Interference Check Solution AB	Sn (189.925 nm)	0.0020	43.82	7.8555
	Interference Check Solution AB	Sr (216.596 nm)	0.0113	0.67	197.7808
	Interference Check Solution AB	Ti (336.122 nm)	0.0028	9.73	565.6447
	Interference Check Solution AB	Tl (190.794 nm)	0.0978	2.88	94.3324
	Interference Check Solution AB	V (292.401 nm)	0.5222	0.30	19755.5006
	Interference Check Solution AB	Y (360.074 nm)	0.89	0.22	437253.07
	Interference Check Solution AB	Y_R (360.074 nm)	0.89	0.22	436099.67
	Interference Check Solution AB	Zn (213.857 nm)	1.0313	0.21	66014.3649
6/10/2024 23:37:05	Continuing Calibration Verification1	Ag (328.068 nm)	0.5036	0.15	28313.7647
	Continuing Calibration Verification1	Al (237.312 nm)	9.7416	0.07	24093.2425
	Continuing Calibration Verification1	As (188.980 nm)	0.9622	0.24	1629.7184
	Continuing Calibration Verification1	B (249.772 nm)	2.3939	0.18	77737.8484
	Continuing Calibration Verification1	Ba (230.424 nm)	9.5156	0.15	518108.1172
	Continuing Calibration Verification1	Be (313.107 nm)	0.2405	0.27	263947.5293
	Continuing Calibration Verification1	Ca (317.933 nm)	25.7181	0.30	918831.1534
	Continuing Calibration Verification1	Cd (214.439 nm)	0.4985	0.25	28399.2861
	Continuing Calibration Verification1	Co (230.786 nm)	2.4546	0.62	44501.2938
	Continuing Calibration Verification1	Cr (267.716 nm)	0.5178	0.25	26920.5230
	Continuing Calibration Verification1	Cu (327.395 nm)	1.2082	0.10	53011.1754
	Continuing Calibration Verification1	Fe (234.350 nm)	5.0179	0.24	91366.3226
	Continuing Calibration Verification1	K (766.491 nm)	24.0926	0.05	26247.1838
	Continuing Calibration Verification1	Mg (279.078 nm)	25.2910	0.24	82618.9943
	Continuing Calibration Verification1	Mn (257.610 nm)	0.7386	0.24	246674.7281
	Continuing Calibration Verification1	Mo (202.032 nm)	2.6600	0.25	27778.5470
	Continuing Calibration Verification1	Na (588.995 nm)	25.3821	0.25	332040.9382
	Continuing Calibration Verification1	Ni (230.299 nm)	2.0462	0.22	24053.3949
	Continuing Calibration Verification1	Pb (220.353 nm)	0.5141	0.37	2692.0951
	Continuing Calibration Verification1	Sb (217.582 nm)	4.6571	0.41	8657.4678
	Continuing Calibration Verification1	Se (196.026 nm)	0.4707	1.19	347.8847
	Continuing Calibration Verification1	Si (252.851 nm)	9.8153	0.48	37432.3795
	Continuing Calibration Verification1	Sn (189.925 nm)	4.9386	0.25	12163.6413
	Continuing Calibration Verification1	Sr (216.596 nm)	2.4566	0.35	43235.1452
	Continuing Calibration Verification1	Ti (336.122 nm)	2.5046	0.16	362019.0790
	Continuing Calibration Verification1	Tl (190.794 nm)	0.9627	0.28	939.5242
	Continuing Calibration Verification1	V (292.401 nm)	2.5105	0.27	95138.6088
	Continuing Calibration Verification1	Y (360.074 nm)	0.98	0.22	478658.42
	Continuing Calibration Verification1	Y_R (360.074 nm)	0.98	0.22	477418.79
	Continuing Calibration Verification1	Zn (213.857 nm)	0.9830	0.26	62918.4162
6/10/2024 23:40:18	Continuing Calibration Blank1	Ag (328.068 nm)	-0.0004 u	33.02	-240.0424
	Continuing Calibration Blank1	Al (237.312 nm)	0.0039	55.08	21.8882
	Continuing Calibration Blank1	As (188.980 nm)	-0.0005 u	> 100.00	-2.8035
	Continuing Calibration Blank1	B (249.772 nm)	0.0015	9.63	54.5815
	Continuing Calibration Blank1	Ba (230.424 nm)	0.0006	5.08	42.6800
	Continuing Calibration Blank1	Be (313.107 nm)	0.0001	5.99	84.7449
	Continuing Calibration Blank1	Ca (317.933 nm)	0.0075	2.98	3010.2494
	Continuing Calibration Blank1	Cd (214.439 nm)	0.0001	73.48	7.5542
	Continuing Calibration Blank1	Co (230.786 nm)	0.0002	64.20	-5.2182
	Continuing Calibration Blank1	Cr (267.716 nm)	0.0001 u	> 100.00	9.2744
	Continuing Calibration Blank1	Cu (327.395 nm)	0.0005	19.93	-4.5379
	Continuing Calibration Blank1	Fe (234.350 nm)	0.0040	34.02	72.0219
	Continuing Calibration Blank1	K (766.491 nm)	0.0737	19.45	-111.1577
	Continuing Calibration Blank1	Mg (279.078 nm)	0.0024	19.24	-21.9522
	Continuing Calibration Blank1	Mn (257.610 nm)	0.0001	6.39	43.9353
	Continuing Calibration Blank1	Mo (202.032 nm)	0.0031	40.96	44.4490
	Continuing Calibration Blank1	Na (588.995 nm)	0.0242	21.51	-13292.7228
	Continuing Calibration Blank1	Ni (230.299 nm)	0.0000 u	> 100.00	25.0009
	Continuing Calibration Blank1	Pb (220.353 nm)	-0.0002 u	> 100.00	7.1145

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Blank1	Sb (217.582 nm)	0.0031	12.68	12.3478
	Continuing Calibration Blank1	Se (196.026 nm)	-0.0023 u	38.91	3.0926
	Continuing Calibration Blank1	Si (252.851 nm)	-0.0041 u	16.85	17.2123
	Continuing Calibration Blank1	Sn (189.925 nm)	0.0003 u	> 100.00	3.7197
	Continuing Calibration Blank1	Sr (216.596 nm)	0.0004	84.32	7.0694
	Continuing Calibration Blank1	Ti (336.122 nm)	0.0030	43.43	595.8074
	Continuing Calibration Blank1	Tl (190.794 nm)	0.0002 u	> 100.00	-1.0348
	Continuing Calibration Blank1	V (292.401 nm)	-0.0001 u	> 100.00	-43.9422
	Continuing Calibration Blank1	Y (360.074 nm)	1.03	0.08	501155.32
	Continuing Calibration Blank1	Y_R (360.074 nm)	1.02	0.08	499859.95
	Continuing Calibration Blank1	Zn (213.857 nm)	0.0001	> 100.00	4.8923
6/10/2024 23:43:32	PBW-439600	Ag (328.068 nm)	-0.0005 u	20.24	-241.9428
	PBW-439600	Al (237.312 nm)	0.0009	> 100.00	14.4922
	PBW-439600	As (188.980 nm)	-0.0002 u	> 100.00	-2.3893
	PBW-439600	B (249.772 nm)	0.0019	6.13	68.0892
	PBW-439600	Ba (230.424 nm)	0.0000 u	24.86	8.9633
	PBW-439600	Be (313.107 nm)	0.0000	21.06	57.6466
	PBW-439600	Ca (317.933 nm)	0.0115	1.24	3152.5721
	PBW-439600	Cd (214.439 nm)	0.0002	41.06	12.6055
	PBW-439600	Co (230.786 nm)	0.0000 u	> 100.00	-10.1597
	PBW-439600	Cr (267.716 nm)	0.0005	24.70	31.3353
	PBW-439600	Cu (327.395 nm)	0.0002	21.62	-17.5557
	PBW-439600	Fe (234.350 nm)	0.0138	9.25	249.9556
	PBW-439600	K (766.491 nm)	0.0633	51.61	-122.5765
	PBW-439600	Mg (279.078 nm)	0.0020	25.40	-23.1266
	PBW-439600	Mn (257.610 nm)	0.0003	2.07	117.5144
	PBW-439600	Mo (202.032 nm)	0.0025	7.63	38.2432
	PBW-439600	Na (588.995 nm)	0.0623	3.72	-12773.9621
	PBW-439600	Ni (230.299 nm)	-0.0003 u	68.27	21.7653
	PBW-439600	Pb (220.353 nm)	0.0006	39.14	10.9591
	PBW-439600	Sb (217.582 nm)	0.0113	24.94	27.6541
	PBW-439600	Se (196.026 nm)	-0.0014 u	84.57	3.7438
	PBW-439600	Si (252.851 nm)	0.0039	42.71	47.5042
	PBW-439600	Sn (189.925 nm)	-0.0006 u	64.54	1.5146
	PBW-439600	Sr (216.596 nm)	0.0004	40.28	5.9970
	PBW-439600	Ti (336.122 nm)	0.0010	65.42	297.3406
	PBW-439600	Tl (190.794 nm)	-0.0001 u	> 100.00	-1.2861
	PBW-439600	V (292.401 nm)	-0.0002 u	> 100.00	-48.9727
	PBW-439600	Y (360.074 nm)	1.03	0.24	503034.11
	PBW-439600	Y_R (360.074 nm)	1.03	0.24	501741.91
	PBW-439600	Zn (213.857 nm)	0.0001	31.62	9.8814
6/10/2024 23:46:45	LCSW-439600	Ag (328.068 nm)	0.0489	0.10	2557.0287
	LCSW-439600	Al (237.312 nm)	1.9326	0.19	4789.5354
	LCSW-439600	As (188.980 nm)	0.0379	5.87	62.2459
	LCSW-439600	B (249.772 nm)	0.9517	0.32	30907.6450
	LCSW-439600	Ba (230.424 nm)	1.8808	0.47	102415.0096
	LCSW-439600	Be (313.107 nm)	0.0477	0.25	52357.4223
	LCSW-439600	Ca (317.933 nm)	2.0142	0.33	74490.7084
	LCSW-439600	Cd (214.439 nm)	0.0503	0.39	2867.1402
	LCSW-439600	Co (230.786 nm)	0.4864	0.36	8810.2887
	LCSW-439600	Cr (267.716 nm)	0.2010	0.34	10452.0367
	LCSW-439600	Cu (327.395 nm)	0.2446	0.09	10708.3620
	LCSW-439600	Fe (234.350 nm)	0.9976	0.33	18163.3620
	LCSW-439600	K (766.491 nm)	18.7034	0.15	20333.0604
	LCSW-439600	Mg (279.078 nm)	1.9395	0.33	6308.3695
	LCSW-439600	Mn (257.610 nm)	0.4811	0.26	160692.9695
	LCSW-439600	Mo (202.032 nm)	0.5060	0.29	5293.9527

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	LCSW-439600	Na (588.995 nm)	19.6978	0.18	254629.8727
	LCSW-439600	Ni (230.299 nm)	0.5070	0.24	5978.7476
	LCSW-439600	Pb (220.353 nm)	0.5181	0.41	2712.8465
	LCSW-439600	Sb (217.582 nm)	0.4683	0.29	876.4023
	LCSW-439600	Se (196.026 nm)	0.9625	0.08	706.3549
	LCSW-439600	Si (252.851 nm)	-0.0202 u	14.15	-44.3142
	LCSW-439600	Sn (189.925 nm)	4.8443	0.42	11931.4206
	LCSW-439600	Sr (216.596 nm)	1.9487	0.29	34294.9865
	LCSW-439600	Ti (336.122 nm)	0.4839	0.15	70066.4598
	LCSW-439600	Tl (190.794 nm)	1.9024	0.29	1857.7377
	LCSW-439600	V (292.401 nm)	0.4839	0.30	18305.9572
	LCSW-439600	Y (360.074 nm)	1.01	0.23	492382.20
	LCSW-439600	Y_R (360.074 nm)	1.01	0.23	491108.33
	LCSW-439600	Zn (213.857 nm)	0.4958	0.24	31736.7882
6/10/2024 23:49:59	R2404674-001	Ag (328.068 nm)	-0.0003 u	52.81	-231.4822
	R2404674-001	Al (237.312 nm)	0.0026	54.49	18.6524
	R2404674-001	As (188.980 nm)	-0.0003 u	> 100.00	-2.4537
	R2404674-001	B (249.772 nm)	0.0766	0.07	2491.5499
	R2404674-001	Ba (230.424 nm)	0.0892	0.16	4870.4227
	R2404674-001	Be (313.107 nm)	0.0001	8.64	79.4564
	R2404674-001	Ca (317.933 nm)	52.7432	0.35	1881476.9078
	R2404674-001	Cd (214.439 nm)	0.0002	40.47	16.1080
	R2404674-001	Co (230.786 nm)	-0.0001 u	90.93	-12.2658
	R2404674-001	Cr (267.716 nm)	0.0005	11.43	32.0748
	R2404674-001	Cu (327.395 nm)	0.0007	26.76	5.1217
	R2404674-001	Fe (234.350 nm)	0.0050	16.82	91.4666
	R2404674-001	K (766.491 nm)	0.9431	4.33	842.9111
	R2404674-001	Mg (279.078 nm)	6.6357	0.27	21655.1421
	R2404674-001	Mn (257.610 nm)	0.0006	2.37	210.2103
	R2404674-001	Mo (202.032 nm)	0.0021	47.82	33.5233
	R2404674-001	Na (588.995 nm)	17.0680	0.13	218815.7066
	R2404674-001	Ni (230.299 nm)	0.0004	38.67	30.3940
	R2404674-001	Pb (220.353 nm)	0.0015	23.04	15.6302
	R2404674-001	Sb (217.582 nm)	0.0045	15.83	14.8727
	R2404674-001	Se (196.026 nm)	-0.0013 u	> 100.00	3.8082
	R2404674-001	Si (252.851 nm)	1.6169	0.16	6193.5707
	R2404674-001	Sn (189.925 nm)	0.0008 u	> 100.00	4.9622
	R2404674-001	Sr (216.596 nm)	0.1008	0.18	1773.8001
	R2404674-001	Ti (336.122 nm)	0.0017	38.60	400.7202
	R2404674-001	Tl (190.794 nm)	0.0017 u	> 100.00	0.4178
	R2404674-001	V (292.401 nm)	-0.0001 u	> 100.00	-44.2287
	R2404674-001	Y (360.074 nm)	1.00	0.17	488666.69
	R2404674-001	Y_R (360.074 nm)	1.00	0.17	487400.57
	R2404674-001	Zn (213.857 nm)	0.0058	0.96	371.8021
6/10/2024 23:53:12	R2404674-002	Ag (328.068 nm)	-0.0004 u	27.96	-236.9248
	R2404674-002	Al (237.312 nm)	0.0026	23.41	18.7240
	R2404674-002	As (188.980 nm)	-0.0009 u	89.87	-3.5293
	R2404674-002	B (249.772 nm)	0.0030	6.04	102.3981
	R2404674-002	Ba (230.424 nm)	0.0000 u	> 100.00	13.2848
	R2404674-002	Be (313.107 nm)	0.0000	14.80	55.9845
	R2404674-002	Ca (317.933 nm)	0.0133	2.03	3218.1893
	R2404674-002	Cd (214.439 nm)	0.0002	32.20	14.5729
	R2404674-002	Co (230.786 nm)	0.0001 u	> 100.00	-7.9761
	R2404674-002	Cr (267.716 nm)	0.0005	18.37	33.2870
	R2404674-002	Cu (327.395 nm)	0.0008	9.52	8.1027
	R2404674-002	Fe (234.350 nm)	0.0059	13.76	107.4113
	R2404674-002	K (766.491 nm)	0.0596	61.52	-126.6347

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404674-002	Mg (279.078 nm)	0.0013	21.47	-25.4666
	R2404674-002	Mn (257.610 nm)	0.0001	6.81	58.0061
	R2404674-002	Mo (202.032 nm)	0.0005	> 100.00	17.4404
	R2404674-002	Na (588.995 nm)	0.0921	3.49	-12368.6168
	R2404674-002	Ni (230.299 nm)	-0.0007 u	18.80	17.1453
	R2404674-002	Pb (220.353 nm)	0.0006 u	> 100.00	10.8768
	R2404674-002	Sb (217.582 nm)	0.0063	8.29	18.2511
	R2404674-002	Se (196.026 nm)	0.0023 u	> 100.00	6.4624
	R2404674-002	Si (252.851 nm)	0.0303	3.55	148.2610
	R2404674-002	Sn (189.925 nm)	-0.0003 u	> 100.00	2.2693
	R2404674-002	Sr (216.596 nm)	0.0002	56.50	3.0676
	R2404674-002	Ti (336.122 nm)	0.0004	74.54	215.6056
	R2404674-002	Tl (190.794 nm)	0.0000 u	> 100.00	-1.1812
	R2404674-002	V (292.401 nm)	-0.0001 u	> 100.00	-44.5426
	R2404674-002	Y (360.074 nm)	1.03	0.11	504814.13
	R2404674-002	Y_R (360.074 nm)	1.03	0.10	503493.63
	R2404674-002	Zn (213.857 nm)	0.0045	0.95	290.1254
6/10/2024 23:56:26	R2404674-004	Ag (328.068 nm)	-0.0004 u	21.12	-236.0607
	R2404674-004	Al (237.312 nm)	0.0056	34.64	26.0971
	R2404674-004	As (188.980 nm)	0.0062	20.59	8.4137
	R2404674-004	B (249.772 nm)	0.1979	0.40	6430.8806
	R2404674-004	Ba (230.424 nm)	0.2080	0.22	11334.9286
	R2404674-004	Be (313.107 nm)	0.0001	23.06	83.0338
	R2404674-004	Ca (317.933 nm)	130.4067 o	0.44	4647886.2868
	R2404674-004	Cd (214.439 nm)	0.0003	9.10	21.7554
	R2404674-004	Co (230.786 nm)	0.0009	31.95	6.0783
	R2404674-004	Cr (267.716 nm)	-0.0009 u	11.91	-39.2297
	R2404674-004	Cu (327.395 nm)	0.0010	7.01	16.9577
	R2404674-004	Fe (234.350 nm)	5.4366	0.38	98988.7526
	R2404674-004	K (766.491 nm)	1.9682	0.55	1967.8712
	R2404674-004	Mg (279.078 nm)	21.8828	0.42	71481.2501
	R2404674-004	Mn (257.610 nm)	3.4600 o	0.41	1155503.7565
	R2404674-004	Mo (202.032 nm)	0.0002	84.20	14.4719
	R2404674-004	Na (588.995 nm)	52.3501	0.10	699301.3069
	R2404674-004	Ni (230.299 nm)	0.0025	19.84	54.2049
	R2404674-004	Pb (220.353 nm)	0.0026	15.72	21.5930
	R2404674-004	Sb (217.582 nm)	0.0003 u	> 100.00	7.0744
	R2404674-004	Se (196.026 nm)	-0.0015 u	> 100.00	3.7136
	R2404674-004	Si (252.851 nm)	6.8137	0.28	25995.4429
	R2404674-004	Sn (189.925 nm)	-0.0007 u	68.60	1.3455
	R2404674-004	Sr (216.596 nm)	0.1667	0.41	2933.3735
	R2404674-004	Ti (336.122 nm)	0.0015	13.22	367.4308
	R2404674-004	Tl (190.794 nm)	0.0006 u	> 100.00	-0.6634
	R2404674-004	V (292.401 nm)	0.0003	63.44	-30.9397
	R2404674-004	Y (360.074 nm)	0.98	0.21	476853.00
	R2404674-004	Y_R (360.074 nm)	0.97	0.21	475577.56
	R2404674-004	Zn (213.857 nm)	0.0062	0.78	396.9319
6/10/2024 23:59:40	R2404674-005	Ag (328.068 nm)	-0.0005 u	16.38	-242.5742
	R2404674-005	Al (237.312 nm)	0.0078	16.37	31.4796
	R2404674-005	As (188.980 nm)	-0.0006 u	43.43	-2.9665
	R2404674-005	B (249.772 nm)	0.1136	0.30	3695.5907
	R2404674-005	Ba (230.424 nm)	0.0830	0.39	4532.3651
	R2404674-005	Be (313.107 nm)	0.0001	11.13	93.9413
	R2404674-005	Ca (317.933 nm)	33.7473	0.37	1204837.1196
	R2404674-005	Cd (214.439 nm)	0.0004	20.00	24.1711
	R2404674-005	Co (230.786 nm)	0.0021	3.24	27.9983
	R2404674-005	Cr (267.716 nm)	0.0006	14.73	35.1551

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404674-005	Cu (327.395 nm)	0.0024	10.78	79.1319
	R2404674-005	Fe (234.350 nm)	1.5590	0.36	28385.5187
	R2404674-005	K (766.491 nm)	1.6165	1.64	1581.9410
	R2404674-005	Mg (279.078 nm)	5.2046	0.38	16978.3972
	R2404674-005	Mn (257.610 nm)	0.6487	0.36	216666.7854
	R2404674-005	Mo (202.032 nm)	0.0001	41.94	13.4654
	R2404674-005	Na (588.995 nm)	7.7934	0.07	92510.7140
	R2404674-005	Ni (230.299 nm)	0.0047	7.78	80.0416
	R2404674-005	Pb (220.353 nm)	0.0015	52.11	15.5962
	R2404674-005	Sb (217.582 nm)	0.0001 u	> 100.00	6.8626
	R2404674-005	Se (196.026 nm)	0.0008 u	> 100.00	5.3451
	R2404674-005	Si (252.851 nm)	5.0430	0.33	19248.1664
	R2404674-005	Sn (189.925 nm)	0.0003 u	> 100.00	3.6399
	R2404674-005	Sr (216.596 nm)	0.1169	0.19	2056.9449
	R2404674-005	Ti (336.122 nm)	0.0005	50.64	224.4484
	R2404674-005	Tl (190.794 nm)	0.0004 u	> 100.00	-0.7829
	R2404674-005	V (292.401 nm)	-0.0001 u	> 100.00	-43.2950
	R2404674-005	Y (360.074 nm)	1.01	0.22	493671.26
	R2404674-005	Y_R (360.074 nm)	1.01	0.22	492363.98
	R2404674-005	Zn (213.857 nm)	0.0074	0.67	474.4297
6/11/2024 00:02:54	R2404674-006	Ag (328.068 nm)	-0.0006 u	14.15	-248.9219
	R2404674-006	Al (237.312 nm)	-0.0683 u	1.99	-156.4688
	R2404674-006	As (188.980 nm)	0.0593	3.78	98.6159
	R2404674-006	B (249.772 nm)	0.2293	0.34	7450.4469
	R2404674-006	Ba (230.424 nm)	0.1842	0.31	10042.1579
	R2404674-006	Be (313.107 nm)	0.0001	4.97	112.7581
	R2404674-006	Ca (317.933 nm)	207.7776 o	0.48	7403871.0980
	R2404674-006	Cd (214.439 nm)	0.0015	3.53	87.1579
	R2404674-006	Co (230.786 nm)	0.0187	0.22	329.1274
	R2404674-006	Cr (267.716 nm)	-0.0164 u	1.37	-845.9902
	R2404674-006	Cu (327.395 nm)	0.0013	13.67	29.1028
	R2404674-006	Fe (234.350 nm)	110.5069 o LR	0.49	2012116.3474
	R2404674-006	K (766.491 nm)	1.3724	2.39	1314.0836
	R2404674-006	Mg (279.078 nm)	36.6523	0.38	119746.9150
	R2404674-006	Mn (257.610 nm)	37.8364 o LR	0.44	12635570.6101
	R2404674-006	Mo (202.032 nm)	0.0006	47.16	18.3629
	R2404674-006	Na (588.995 nm)	34.1190	0.08	451023.2400
	R2404674-006	Ni (230.299 nm)	0.0109	6.67	153.3428
	R2404674-006	Pb (220.353 nm)	0.0100	10.84	60.2800
	R2404674-006	Sb (217.582 nm)	-0.0009 u	> 100.00	4.9828
	R2404674-006	Se (196.026 nm)	0.0138	18.43	14.8156
	R2404674-006	Si (252.851 nm)	8.4664	0.29	32292.5094
	R2404674-006	Sn (189.925 nm)	0.0000 u	> 100.00	2.9360
	R2404674-006	Sr (216.596 nm)	0.3425	0.53	6027.1400
	R2404674-006	Ti (336.122 nm)	0.0021	10.07	454.9668
	R2404674-006	Tl (190.794 nm)	0.0118	23.10	10.2843
	R2404674-006	V (292.401 nm)	0.0017	11.47	25.6099
	R2404674-006	Y (360.074 nm)	0.96	0.06	467491.56
	R2404674-006	Y_R (360.074 nm)	0.96	0.06	466248.83
	R2404674-006	Zn (213.857 nm)	0.0184	0.71	1176.3601
6/11/2024 00:06:08	R2404674-007	Ag (328.068 nm)	-0.0005 u	32.60	-243.6622
	R2404674-007	Al (237.312 nm)	0.0027	79.85	19.0690
	R2404674-007	As (188.980 nm)	0.0056	10.28	7.4381
	R2404674-007	B (249.772 nm)	0.1088	0.32	3536.9085
	R2404674-007	Ba (230.424 nm)	0.1889	0.32	10297.8965
	R2404674-007	Be (313.107 nm)	0.0001	13.79	91.3082
	R2404674-007	Ca (317.933 nm)	153.3909 o	0.38	5466593.6342

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404674-007	Cd (214.439 nm)	0.0003	12.62	17.9010
	R2404674-007	Co (230.786 nm)	-0.0003 u	48.91	-14.6887
	R2404674-007	Cr (267.716 nm)	0.0002	18.66	13.9884
	R2404674-007	Cu (327.395 nm)	0.0004	59.31	-9.4246
	R2404674-007	Fe (234.350 nm)	0.9860	0.71	17952.6838
	R2404674-007	K (766.491 nm)	2.0918	1.08	2103.4672
	R2404674-007	Mg (279.078 nm)	21.6693	0.36	70783.5201
	R2404674-007	Mn (257.610 nm)	1.0955	0.32	365865.3043
	R2404674-007	Mo (202.032 nm)	0.0001	95.56	13.2816
	R2404674-007	Na (588.995 nm)	36.2787	0.12	480435.2278
	R2404674-007	Ni (230.299 nm)	0.0014	25.03	41.2509
	R2404674-007	Pb (220.353 nm)	0.0018	32.24	17.2658
	R2404674-007	Sb (217.582 nm)	-0.0005 u	> 100.00	5.6039
	R2404674-007	Se (196.026 nm)	0.0002 u	> 100.00	4.9287
	R2404674-007	Si (252.851 nm)	6.0034	0.38	22907.6008
	R2404674-007	Sn (189.925 nm)	-0.0001 u	> 100.00	2.7685
	R2404674-007	Sr (216.596 nm)	0.2876	0.51	5061.0947
	R2404674-007	Ti (336.122 nm)	0.0015	11.37	365.6775
	R2404674-007	Tl (190.794 nm)	0.0009 u	> 100.00	-0.3524
	R2404674-007	V (292.401 nm)	-0.0002 u	82.63	-46.8843
	R2404674-007	Y (360.074 nm)	0.97	0.24	472939.90
	R2404674-007	Y_R (360.074 nm)	0.97	0.24	471697.82
	R2404674-007	Zn (213.857 nm)	0.0034	3.73	218.6671
6/11/2024 00:09:21	R2404674-008	Ag (328.068 nm)	-0.0005 u	21.19	-242.2463
	R2404674-008	Al (237.312 nm)	-0.0014 u	7.62	8.7559
	R2404674-008	As (188.980 nm)	0.0613	2.46	102.0099
	R2404674-008	B (249.772 nm)	0.1709	0.50	5555.5680
	R2404674-008	Ba (230.424 nm)	0.3366	0.43	18337.5859
	R2404674-008	Be (313.107 nm)	0.0001	12.69	93.6328
	R2404674-008	Ca (317.933 nm)	138.3938 o	0.49	4932390.6299
	R2404674-008	Cd (214.439 nm)	0.0007	12.46	42.6166
	R2404674-008	Co (230.786 nm)	0.0043	3.40	67.5414
	R2404674-008	Cr (267.716 nm)	-0.0012 u	10.11	-56.3596
	R2404674-008	Cu (327.395 nm)	0.0004	17.17	-9.1974
	R2404674-008	Fe (234.350 nm)	47.4959 o	0.48	864807.9815
	R2404674-008	K (766.491 nm)	2.6999	2.01	2770.8212
	R2404674-008	Mg (279.078 nm)	24.8707	0.41	81245.4611
	R2404674-008	Mn (257.610 nm)	3.6043 o	0.43	1203692.6895
	R2404674-008	Mo (202.032 nm)	0.0002 u	> 100.00	13.8224
	R2404674-008	Na (588.995 nm)	34.4623	0.08	455698.1657
	R2404674-008	Ni (230.299 nm)	0.0086	9.39	126.7444
	R2404674-008	Pb (220.353 nm)	0.0032	34.60	24.6684
	R2404674-008	Sb (217.582 nm)	-0.0042 u	29.69	-1.2369
	R2404674-008	Se (196.026 nm)	-0.0016 u	63.28	3.6144
	R2404674-008	Si (252.851 nm)	7.4343	0.27	28359.8174
	R2404674-008	Sn (189.925 nm)	0.0003 u	> 100.00	3.8139
	R2404674-008	Sr (216.596 nm)	0.2511	0.44	4418.7217
	R2404674-008	Ti (336.122 nm)	0.0015	2.61	377.4379
	R2404674-008	Tl (190.794 nm)	0.0018	61.68	0.5403
	R2404674-008	V (292.401 nm)	0.0008	16.28	-8.9103
	R2404674-008	Y (360.074 nm)	0.97	0.16	475356.05
	R2404674-008	Y_R (360.074 nm)	0.97	0.16	474081.96
	R2404674-008	Zn (213.857 nm)	0.0090	0.37	575.2395
6/11/2024 00:12:35	R2404674-009	Ag (328.068 nm)	-0.0008 u	9.94	-260.4401
	R2404674-009	Al (237.312 nm)	-0.1558 u	1.10	-372.8067
	R2404674-009	As (188.980 nm)	0.0315	2.59	51.4465
	R2404674-009	B (249.772 nm)	0.1249	0.17	4060.8700

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404674-009	Ba (230.424 nm)	0.2617	0.37	14262.5573
	R2404674-009	Be (313.107 nm)	0.0001	17.05	126.8013
	R2404674-009	Ca (317.933 nm)	61.6806 o	0.32	2199832.7971
	R2404674-009	Cd (214.439 nm)	0.0015	5.72	87.5789
	R2404674-009	Co (230.786 nm)	0.1717	0.21	3102.9634
	R2404674-009	Cr (267.716 nm)	-0.0330 u	0.41	-1707.8282
	R2404674-009	Cu (327.395 nm)	0.0016	8.90	43.5187
	R2404674-009	Fe (234.350 nm)	114.1506 o LR	0.35	2078461.5188
	R2404674-009	K (766.491 nm)	0.3694	14.89	213.3877
	R2404674-009	Mg (279.078 nm)	11.9336	0.27	38968.3538
	R2404674-009	Mn (257.610 nm)	65.1610 o LR	0.32	21760692.4028
	R2404674-009	Mo (202.032 nm)	0.0028	6.78	40.9858
	R2404674-009	Na (588.995 nm)	0.9830	0.42	-236.0140
	R2404674-009	Ni (230.299 nm)	0.0718	0.29	868.0479
	R2404674-009	Pb (220.353 nm)	0.0149	5.28	85.5566
	R2404674-009	Sb (217.582 nm)	-0.0076 u	20.55	-7.6030
	R2404674-009	Se (196.026 nm)	0.0424	8.72	35.6917
	R2404674-009	Si (252.851 nm)	4.5597	0.18	17406.7142
	R2404674-009	Sn (189.925 nm)	0.0007	50.53	4.7746
	R2404674-009	Sr (216.596 nm)	0.1385	0.28	2436.1516
	R2404674-009	Ti (336.122 nm)	0.0006	25.06	236.9935
	R2404674-009	Tl (190.794 nm)	0.0276	13.64	25.7630
	R2404674-009	V (292.401 nm)	0.0018	13.86	26.8595
	R2404674-009	Y (360.074 nm)	0.99	0.19	482772.52
	R2404674-009	Y_R (360.074 nm)	0.99	0.19	481498.78
	R2404674-009	Zn (213.857 nm)	0.0240	0.84	1539.2582
6/11/2024 00:15:48	Continuing Calibration Verification1	Ag (328.068 nm)	0.5031	0.09	28287.1138
	Continuing Calibration Verification1	Al (237.312 nm)	9.7103	0.08	24015.7288
	Continuing Calibration Verification1	As (188.980 nm)	0.9616	0.26	1628.6873
	Continuing Calibration Verification1	B (249.772 nm)	2.3907	0.17	77633.5637
	Continuing Calibration Verification1	Ba (230.424 nm)	9.5122	0.19	517921.6318
	Continuing Calibration Verification1	Be (313.107 nm)	0.2397	0.29	263075.9711
	Continuing Calibration Verification1	Ca (317.933 nm)	25.6677	0.30	917038.0910
	Continuing Calibration Verification1	Cd (214.439 nm)	0.4974	0.30	28341.2645
	Continuing Calibration Verification1	Co (230.786 nm)	2.4507	0.45	44430.5117
	Continuing Calibration Verification1	Cr (267.716 nm)	0.5170	0.28	26881.6729
	Continuing Calibration Verification1	Cu (327.395 nm)	1.2134	0.31	53235.4132
	Continuing Calibration Verification1	Fe (234.350 nm)	5.0139	0.27	91292.3609
	Continuing Calibration Verification1	K (766.491 nm)	24.0967	0.26	26251.5997
	Continuing Calibration Verification1	Mg (279.078 nm)	25.2391	0.25	82449.4095
	Continuing Calibration Verification1	Mn (257.610 nm)	0.7416	0.19	247681.0691
	Continuing Calibration Verification1	Mo (202.032 nm)	2.6613	0.32	27792.2953
	Continuing Calibration Verification1	Na (588.995 nm)	25.4208	0.31	332566.8401
	Continuing Calibration Verification1	Ni (230.299 nm)	2.0449	0.22	24038.3587
	Continuing Calibration Verification1	Pb (220.353 nm)	0.5118	0.40	2679.7766
	Continuing Calibration Verification1	Sb (217.582 nm)	4.6483	0.04	8641.1138
	Continuing Calibration Verification1	Se (196.026 nm)	0.4662	1.21	344.5891
	Continuing Calibration Verification1	Si (252.851 nm)	9.7933	0.43	37348.5208
	Continuing Calibration Verification1	Sn (189.925 nm)	4.9360	0.24	12157.2259
	Continuing Calibration Verification1	Sr (216.596 nm)	2.4533	0.43	43176.1776
	Continuing Calibration Verification1	Ti (336.122 nm)	2.4991	0.13	361213.8321
	Continuing Calibration Verification1	Tl (190.794 nm)	0.9635	0.14	940.2757
	Continuing Calibration Verification1	V (292.401 nm)	2.5070	0.23	95006.9367
	Continuing Calibration Verification1	Y (360.074 nm)	0.98	0.31	477611.32
	Continuing Calibration Verification1	Y_R (360.074 nm)	0.98	0.31	476362.50
	Continuing Calibration Verification1	Zn (213.857 nm)	0.9807	0.41	62775.1118
6/11/2024 00:19:02	Continuing Calibration Blank1	Ag (328.068 nm)	-0.0004 u	25.61	-237.7184

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Blank1	Al (237.312 nm)	0.0036	32.60	21.0902
	Continuing Calibration Blank1	As (188.980 nm)	0.0006 u	> 100.00	-1.0017
	Continuing Calibration Blank1	B (249.772 nm)	0.0016	13.85	56.4365
	Continuing Calibration Blank1	Ba (230.424 nm)	0.0007	9.03	50.2045
	Continuing Calibration Blank1	Be (313.107 nm)	0.0001	11.20	91.4859
	Continuing Calibration Blank1	Ca (317.933 nm)	0.0075	1.78	3009.9533
	Continuing Calibration Blank1	Cd (214.439 nm)	0.0001	63.33	4.9073
	Continuing Calibration Blank1	Co (230.786 nm)	0.0003	79.84	-4.1098
	Continuing Calibration Blank1	Cr (267.716 nm)	0.0001 u	> 100.00	12.4070
	Continuing Calibration Blank1	Cu (327.395 nm)	0.0004	86.62	-10.6925
	Continuing Calibration Blank1	Fe (234.350 nm)	0.0040	29.72	73.2587
	Continuing Calibration Blank1	K (766.491 nm)	0.0265	15.94	-162.9319
	Continuing Calibration Blank1	Mg (279.078 nm)	0.0031	15.41	-19.6044
	Continuing Calibration Blank1	Mn (257.610 nm)	0.0004	8.60	140.2772
	Continuing Calibration Blank1	Mo (202.032 nm)	0.0032	31.93	45.8659
	Continuing Calibration Blank1	Na (588.995 nm)	0.0238	26.11	-13299.0507
	Continuing Calibration Blank1	Ni (230.299 nm)	0.0004 u	> 100.00	30.1708
	Continuing Calibration Blank1	Pb (220.353 nm)	0.0007	5.30	11.4225
	Continuing Calibration Blank1	Sb (217.582 nm)	0.0020	27.36	10.3880
	Continuing Calibration Blank1	Se (196.026 nm)	0.0002 u	> 100.00	4.9555
	Continuing Calibration Blank1	Si (252.851 nm)	-0.0028 u	10.63	21.8297
	Continuing Calibration Blank1	Sn (189.925 nm)	0.0013	51.16	6.2846
	Continuing Calibration Blank1	Sr (216.596 nm)	0.0003	30.47	5.1331
	Continuing Calibration Blank1	Ti (336.122 nm)	0.0029	43.10	568.1683
	Continuing Calibration Blank1	Tl (190.794 nm)	0.0009	22.07	-0.2940
	Continuing Calibration Blank1	V (292.401 nm)	0.0000 u	> 100.00	-39.1190
	Continuing Calibration Blank1	Y (360.074 nm)	1.02	0.09	499300.56
	Continuing Calibration Blank1	Y_R (360.074 nm)	1.02	0.09	497995.36
	Continuing Calibration Blank1	Zn (213.857 nm)	0.0001	26.15	4.7302
6/11/2024 00:22:15	R2404674-010	Ag (328.068 nm)	-0.0005 u	35.78	-240.2095
	R2404674-010	Al (237.312 nm)	0.0062	23.14	27.7068
	R2404674-010	As (188.980 nm)	-0.0012 u	> 100.00	-4.0759
	R2404674-010	B (249.772 nm)	0.0364	0.49	1186.9208
	R2404674-010	Ba (230.424 nm)	0.0581	0.31	3172.5080
	R2404674-010	Be (313.107 nm)	0.0001	15.26	77.8430
	R2404674-010	Ca (317.933 nm)	23.7963	0.29	850377.0298
	R2404674-010	Cd (214.439 nm)	0.0002	14.67	14.8098
	R2404674-010	Co (230.786 nm)	0.0000 u	> 100.00	-8.9037
	R2404674-010	Cr (267.716 nm)	0.0012	5.22	66.0632
	R2404674-010	Cu (327.395 nm)	0.0009	38.60	12.5811
	R2404674-010	Fe (234.350 nm)	0.0110	8.36	200.1113
	R2404674-010	K (766.491 nm)	0.7560	2.57	637.6345
	R2404674-010	Mg (279.078 nm)	6.1081	0.19	19930.9736
	R2404674-010	Mn (257.610 nm)	0.0016	0.92	566.4657
	R2404674-010	Mo (202.032 nm)	0.0009	38.14	21.7954
	R2404674-010	Na (588.995 nm)	3.2112	0.16	30109.0165
	R2404674-010	Ni (230.299 nm)	0.0000 u	> 100.00	25.8149
	R2404674-010	Pb (220.353 nm)	0.0012	26.74	14.1997
	R2404674-010	Sb (217.582 nm)	0.0047	21.52	15.3366
	R2404674-010	Se (196.026 nm)	-0.0018 u	> 100.00	3.4768
	R2404674-010	Si (252.851 nm)	3.4712	0.19	13259.1096
	R2404674-010	Sn (189.925 nm)	-0.0005 u	72.86	1.7129
	R2404674-010	Sr (216.596 nm)	0.0737	0.35	1296.9947
	R2404674-010	Ti (336.122 nm)	0.0014	39.58	358.3414
	R2404674-010	Tl (190.794 nm)	0.0010	> 100.00	-0.1922
	R2404674-010	V (292.401 nm)	-0.0001 u	42.23	-46.1705
	R2404674-010	Y (360.074 nm)	1.01	0.21	494328.14

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404674-010	Y_R (360.074 nm)	1.01	0.21	493028.20
	R2404674-010	Zn (213.857 nm)	0.0070	1.56	447.1949
6/11/2024 00:25:29	R2404674-011	Ag (328.068 nm)	-0.0004 u	22.98	-240.1000
	R2404674-011	Al (237.312 nm)	0.0116	3.93	40.9502
	R2404674-011	As (188.980 nm)	0.0003 u	> 100.00	-1.5991
	R2404674-011	B (249.772 nm)	0.1406	0.28	4570.7362
	R2404674-011	Ba (230.424 nm)	0.0519	0.32	2836.2976
	R2404674-011	Be (313.107 nm)	0.0001	16.68	91.0573
	R2404674-011	Ca (317.933 nm)	40.3435	0.32	1439794.7081
	R2404674-011	Cd (214.439 nm)	0.0003	10.81	20.6518
	R2404674-011	Co (230.786 nm)	0.0012	1.42	12.6684
	R2404674-011	Cr (267.716 nm)	0.0000 u	> 100.00	8.3609
	R2404674-011	Cu (327.395 nm)	0.0009	28.03	10.3230
	R2404674-011	Fe (234.350 nm)	1.9148	0.26	34863.8550
	R2404674-011	K (766.491 nm)	1.5571	0.72	1516.6966
	R2404674-011	Mg (279.078 nm)	4.6000	0.20	15002.4629
	R2404674-011	Mn (257.610 nm)	1.3767	0.28	459766.8630
	R2404674-011	Mo (202.032 nm)	0.0004	59.27	15.8286
	R2404674-011	Na (588.995 nm)	16.1930	0.12	206899.5409
	R2404674-011	Ni (230.299 nm)	0.0024	2.38	53.3081
	R2404674-011	Pb (220.353 nm)	0.0015	35.23	15.9866
	R2404674-011	Sb (217.582 nm)	0.0026	51.88	11.3976
	R2404674-011	Se (196.026 nm)	0.0016 u	> 100.00	5.9636
	R2404674-011	Si (252.851 nm)	3.2200	0.17	12302.0423
	R2404674-011	Sn (189.925 nm)	0.0000 u	> 100.00	2.9982
	R2404674-011	Sr (216.596 nm)	0.1172	0.27	2062.1516
	R2404674-011	Ti (336.122 nm)	0.0009	44.29	281.7306
	R2404674-011	Tl (190.794 nm)	0.0000 u	> 100.00	-1.2271
	R2404674-011	V (292.401 nm)	0.0000 u	> 100.00	-39.1063
	R2404674-011	Y (360.074 nm)	1.00	0.28	489739.11
	R2404674-011	Y_R (360.074 nm)	1.00	0.28	488457.41
	R2404674-011	Zn (213.857 nm)	0.0065	0.88	418.4177
6/11/2024 00:28:42	R2404674-011S	Ag (328.068 nm)	0.0490	0.22	2562.0775
	R2404674-011S	Al (237.312 nm)	1.9530	0.07	4839.9215
	R2404674-011S	As (188.980 nm)	0.0392	6.39	64.4185
	R2404674-011S	B (249.772 nm)	1.1048	0.25	35880.1171
	R2404674-011S	Ba (230.424 nm)	1.9263	0.46	104894.7443
	R2404674-011S	Be (313.107 nm)	0.0482	0.31	52973.8424
	R2404674-011S	Ca (317.933 nm)	42.3940	0.45	1512837.3133
	R2404674-011S	Cd (214.439 nm)	0.0496	0.33	2826.4179
	R2404674-011S	Co (230.786 nm)	0.4859	0.31	8801.6396
	R2404674-011S	Cr (267.716 nm)	0.2022	0.38	10515.7714
	R2404674-011S	Cu (327.395 nm)	0.2444	0.06	10701.5168
	R2404674-011S	Fe (234.350 nm)	2.9153	0.39	53081.8762
	R2404674-011S	K (766.491 nm)	20.6727	0.14	22494.0981
	R2404674-011S	Mg (279.078 nm)	6.5408	0.29	21344.8296
	R2404674-011S	Mn (257.610 nm)	1.8415 o	0.37	614984.7462
	R2404674-011S	Mo (202.032 nm)	0.5145	0.23	5382.7472
	R2404674-011S	Na (588.995 nm)	35.5734	0.07	470829.0764
	R2404674-011S	Ni (230.299 nm)	0.5070	0.47	5978.3221
	R2404674-011S	Pb (220.353 nm)	0.5119	0.25	2680.5864
	R2404674-011S	Sb (217.582 nm)	0.4705	0.22	880.5107
	R2404674-011S	Se (196.026 nm)	0.9720	0.38	713.2659
	R2404674-011S	Si (252.851 nm)	3.2632	0.17	12466.5133
	R2404674-011S	Sn (189.925 nm)	4.8924	0.30	12050.0200
	R2404674-011S	Sr (216.596 nm)	2.0486	0.45	36054.1488
	R2404674-011S	Ti (336.122 nm)	0.4889	0.16	70785.3198

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404674-011S	Tl (190.794 nm)	1.8881	0.47	1843.8146
	R2404674-011S	V (292.401 nm)	0.4897	0.35	18525.7872
	R2404674-011S	Y (360.074 nm)	0.99	0.13	482697.99
	R2404674-011S	Y_R (360.074 nm)	0.99	0.13	481438.73
	R2404674-011S	Zn (213.857 nm)	0.4985	0.22	31908.0013
6/11/2024 00:31:56	R2404674-011SD	Ag (328.068 nm)	0.0488	0.11	2547.5475
	R2404674-011SD	Al (237.312 nm)	1.9274	0.18	4776.7416
	R2404674-011SD	As (188.980 nm)	0.0416	1.64	68.4687
	R2404674-011SD	B (249.772 nm)	1.0968	0.19	35620.6127
	R2404674-011SD	Ba (230.424 nm)	1.9010	0.26	103517.4750
	R2404674-011SD	Be (313.107 nm)	0.0477	0.20	52398.6375
	R2404674-011SD	Ca (317.933 nm)	41.8848	0.22	1494697.6299
	R2404674-011SD	Cd (214.439 nm)	0.0492	0.15	2804.0091
	R2404674-011SD	Co (230.786 nm)	0.4809	0.04	8710.1420
	R2404674-011SD	Cr (267.716 nm)	0.1993	0.11	10365.2631
	R2404674-011SD	Cu (327.395 nm)	0.2416	0.13	10578.5122
	R2404674-011SD	Fe (234.350 nm)	2.8776	0.20	52395.3392
	R2404674-011SD	K (766.491 nm)	20.5766	0.22	22388.6555
	R2404674-011SD	Mg (279.078 nm)	6.4643	0.17	21095.1251
	R2404674-011SD	Mn (257.610 nm)	1.8195 o	0.18	607641.4565
	R2404674-011SD	Mo (202.032 nm)	0.5098	0.21	5334.0097
	R2404674-011SD	Na (588.995 nm)	35.2357	0.05	466230.8992
	R2404674-011SD	Ni (230.299 nm)	0.5007	0.24	5904.5918
	R2404674-011SD	Pb (220.353 nm)	0.5074	0.30	2657.1670
	R2404674-011SD	Sb (217.582 nm)	0.4643	0.03	869.1331
	R2404674-011SD	Se (196.026 nm)	0.9668	0.76	709.5041
	R2404674-011SD	Si (252.851 nm)	3.2331	0.16	12351.9825
	R2404674-011SD	Sn (189.925 nm)	4.8408	0.17	11922.8383
	R2404674-011SD	Sr (216.596 nm)	2.0231	0.17	35605.1436
	R2404674-011SD	Ti (336.122 nm)	0.4822	0.10	69815.1728
	R2404674-011SD	Tl (190.794 nm)	1.8708	0.09	1826.8782
	R2404674-011SD	V (292.401 nm)	0.4842	0.22	18317.1737
	R2404674-011SD	Y (360.074 nm)	0.99	0.34	484709.82
	R2404674-011SD	Y_R (360.074 nm)	0.99	0.34	483437.76
	R2404674-011SD	Zn (213.857 nm)	0.4937	0.04	31603.3905
6/11/2024 00:35:09	R2404674-011A	Ag (328.068 nm)	0.0482	0.59	2513.6313
	R2404674-011A	Al (237.312 nm)	1.9180	0.12	4753.5550
	R2404674-011A	As (188.980 nm)	0.0387	3.24	63.5611
	R2404674-011A	B (249.772 nm)	1.0912	0.14	35438.9605
	R2404674-011A	Ba (230.424 nm)	1.8934	0.53	103101.7644
	R2404674-011A	Be (313.107 nm)	0.0473	0.26	51971.7499
	R2404674-011A	Ca (317.933 nm)	41.1885	0.30	1469893.5305
	R2404674-011A	Cd (214.439 nm)	0.0486	0.37	2768.4813
	R2404674-011A	Co (230.786 nm)	0.4775	0.50	8649.2224
	R2404674-011A	Cr (267.716 nm)	0.1978	0.37	10289.4649
	R2404674-011A	Cu (327.395 nm)	0.2405	0.19	10530.0505
	R2404674-011A	Fe (234.350 nm)	2.8339	0.30	51599.5367
	R2404674-011A	K (766.491 nm)	20.4058	0.22	22201.2805
	R2404674-011A	Mg (279.078 nm)	6.3632	0.30	20764.6895
	R2404674-011A	Mn (257.610 nm)	1.7902 o	0.33	597850.7558
	R2404674-011A	Mo (202.032 nm)	0.5061	0.58	5294.6106
	R2404674-011A	Na (588.995 nm)	34.9356	0.30	462143.0840
	R2404674-011A	Ni (230.299 nm)	0.4970	0.34	5861.5365
	R2404674-011A	Pb (220.353 nm)	0.5030	0.31	2634.1520
	R2404674-011A	Sb (217.582 nm)	0.4649	0.38	870.1056
	R2404674-011A	Se (196.026 nm)	0.9539	0.51	700.1242
	R2404674-011A	Si (252.851 nm)	3.1638	0.13	12087.8446

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404674-011A	Sn (189.925 nm)	4.7966	0.23	11813.9993
	R2404674-011A	Sr (216.596 nm)	2.0062	0.33	35307.1183
	R2404674-011A	Ti (336.122 nm)	0.4797	0.18	69456.5544
	R2404674-011A	Tl (190.794 nm)	1.8582	0.37	1814.5745
	R2404674-011A	V (292.401 nm)	0.4809	0.25	18192.9633
	R2404674-011A	Y (360.074 nm)	0.99	0.22	484568.71
	R2404674-011A	Y_R (360.074 nm)	0.99	0.22	483299.43
	R2404674-011A	Zn (213.857 nm)	0.4922	0.18	31505.2373
6/11/2024 00:38:23	R2404674-011L 5X	Ag (328.068 nm)	-0.0004 u	26.55	-239.1607
	R2404674-011L 5X	Al (237.312 nm)	0.0048	11.86	24.1382
	R2404674-011L 5X	As (188.980 nm)	-0.0004 u	> 100.00	-2.6199
	R2404674-011L 5X	B (249.772 nm)	0.0297	0.57	970.0855
	R2404674-011L 5X	Ba (230.424 nm)	0.0106	0.80	590.4402
	R2404674-011L 5X	Be (313.107 nm)	0.0000	14.94	66.7522
	R2404674-011L 5X	Ca (317.933 nm)	8.2752	0.31	297510.3114
	R2404674-011L 5X	Cd (214.439 nm)	0.0001	6.02	9.8492
	R2404674-011L 5X	Co (230.786 nm)	0.0004	19.59	-1.8093
	R2404674-011L 5X	Cr (267.716 nm)	0.0000 u	> 100.00	4.7376
	R2404674-011L 5X	Cu (327.395 nm)	0.0004	69.80	-9.8217
	R2404674-011L 5X	Fe (234.350 nm)	0.3931	0.40	7157.9032
	R2404674-011L 5X	K (766.491 nm)	0.3809	2.15	225.9194
	R2404674-011L 5X	Mg (279.078 nm)	0.9436	0.18	3053.7870
	R2404674-011L 5X	Mn (257.610 nm)	0.2812	0.31	93921.4241
	R2404674-011L 5X	Mo (202.032 nm)	0.0022	28.50	35.1859
	R2404674-011L 5X	Na (588.995 nm)	3.2489	0.19	30622.4351
	R2404674-011L 5X	Ni (230.299 nm)	0.0005	58.54	30.7223
	R2404674-011L 5X	Pb (220.353 nm)	0.0005	> 100.00	10.6365
	R2404674-011L 5X	Sb (217.582 nm)	-0.0011 u	> 100.00	4.6120
	R2404674-011L 5X	Se (196.026 nm)	0.0000 u	> 100.00	4.7938
	R2404674-011L 5X	Si (252.851 nm)	0.6604	0.58	2549.1101
	R2404674-011L 5X	Sn (189.925 nm)	0.0008	46.77	4.8984
	R2404674-011L 5X	Sr (216.596 nm)	0.0240	0.83	421.0688
	R2404674-011L 5X	Ti (336.122 nm)	0.0010	42.60	303.1410
	R2404674-011L 5X	Tl (190.794 nm)	0.0016	4.21	0.3428
	R2404674-011L 5X	V (292.401 nm)	0.0000 u	> 100.00	-40.5163
	R2404674-011L 5X	Y (360.074 nm)	1.02	0.17	498465.47
	R2404674-011L 5X	Y_R (360.074 nm)	1.02	0.17	497163.04
	R2404674-011L 5X	Zn (213.857 nm)	0.0012	1.36	80.3222
6/11/2024 00:41:37	R2404674-012	Ag (328.068 nm)	-0.0004 u	13.40	-237.0827
	R2404674-012	Al (237.312 nm)	0.0052	8.73	25.1585
	R2404674-012	As (188.980 nm)	-0.0002 u	> 100.00	-2.3118
	R2404674-012	B (249.772 nm)	0.0249	0.77	812.9477
	R2404674-012	Ba (230.424 nm)	0.0301	0.58	1649.8058
	R2404674-012	Be (313.107 nm)	0.0001	19.04	85.2912
	R2404674-012	Ca (317.933 nm)	65.9255 o	0.34	2351038.2381
	R2404674-012	Cd (214.439 nm)	0.0003	11.51	19.0476
	R2404674-012	Co (230.786 nm)	-0.0001 u	93.94	-11.2638
	R2404674-012	Cr (267.716 nm)	0.0008	16.26	46.6868
	R2404674-012	Cu (327.395 nm)	0.0046	5.27	175.6642
	R2404674-012	Fe (234.350 nm)	0.0096	8.18	174.6094
	R2404674-012	K (766.491 nm)	1.2452	4.09	1174.3934
	R2404674-012	Mg (279.078 nm)	11.7295	0.28	38301.3332
	R2404674-012	Mn (257.610 nm)	0.0099	0.40	3332.3584
	R2404674-012	Mo (202.032 nm)	0.0008	67.37	19.9032
	R2404674-012	Na (588.995 nm)	24.9689	0.05	326413.5483
	R2404674-012	Ni (230.299 nm)	0.0005	94.23	30.5733
	R2404674-012	Pb (220.353 nm)	0.0017	50.73	16.7115

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404674-012	Sb (217.582 nm)	-0.0002 u	> 100.00	6.1830
	R2404674-012	Se (196.026 nm)	-0.0029 u	77.39	2.6359
	R2404674-012	Si (252.851 nm)	4.2707	0.26	16305.4458
	R2404674-012	Sn (189.925 nm)	0.0007	64.34	4.7812
	R2404674-012	Sr (216.596 nm)	0.1141	0.24	2006.6134
	R2404674-012	Ti (336.122 nm)	0.0010	28.18	299.2973
	R2404674-012	Tl (190.794 nm)	0.0012	65.78	-0.0025
	R2404674-012	V (292.401 nm)	-0.0001 u	> 100.00	-46.2290
	R2404674-012	Y (360.074 nm)	0.99	0.32	483455.19
	R2404674-012	Y_R (360.074 nm)	0.99	0.32	482166.87
	R2404674-012	Zn (213.857 nm)	0.0158	1.07	1009.4851
6/11/2024 00:44:51	R2404674-013	Ag (328.068 nm)	-0.0003 u	69.88	-233.7931
	R2404674-013	Al (237.312 nm)	-0.0016 u	34.88	8.2874
	R2404674-013	As (188.980 nm)	0.0583	2.66	96.7878
	R2404674-013	B (249.772 nm)	0.1714	0.39	5570.2980
	R2404674-013	Ba (230.424 nm)	0.3342	0.33	18208.3253
	R2404674-013	Be (313.107 nm)	0.0001	3.04	90.0690
	R2404674-013	Ca (317.933 nm)	138.0389 o	0.29	4919748.4749
	R2404674-013	Cd (214.439 nm)	0.0007	9.94	44.2939
	R2404674-013	Co (230.786 nm)	0.0039	3.76	60.8890
	R2404674-013	Cr (267.716 nm)	-0.0010 u	10.34	-45.5829
	R2404674-013	Cu (327.395 nm)	0.0011	32.60	19.2122
	R2404674-013	Fe (234.350 nm)	46.8852 o	0.36	853687.6844
	R2404674-013	K (766.491 nm)	2.6827	1.11	2751.9973
	R2404674-013	Mg (279.078 nm)	24.7585	0.24	80878.9628
	R2404674-013	Mn (257.610 nm)	3.5621 o	0.35	1189583.6067
	R2404674-013	Mo (202.032 nm)	0.0002 u	> 100.00	13.8785
	R2404674-013	Na (588.995 nm)	34.7014	0.27	458954.9170
	R2404674-013	Ni (230.299 nm)	0.0092	8.21	133.2749
	R2404674-013	Pb (220.353 nm)	0.0032	8.04	24.4444
	R2404674-013	Sb (217.582 nm)	-0.0030 u	25.68	1.0031
	R2404674-013	Se (196.026 nm)	-0.0032 u	39.39	2.4293
	R2404674-013	Si (252.851 nm)	7.4387	0.15	28376.8349
	R2404674-013	Sn (189.925 nm)	0.0008	78.43	4.9404
	R2404674-013	Sr (216.596 nm)	0.2478	0.18	4360.3783
	R2404674-013	Ti (336.122 nm)	0.0017	11.17	404.2830
	R2404674-013	Tl (190.794 nm)	0.0034	14.68	2.0976
	R2404674-013	V (292.401 nm)	0.0008	33.11	-8.4527
	R2404674-013	Y (360.074 nm)	0.98	0.37	476636.26
	R2404674-013	Y_R (360.074 nm)	0.97	0.37	475357.99
	R2404674-013	Zn (213.857 nm)	0.0092	0.82	591.3738
6/11/2024 00:48:05	R2404674-014	Ag (328.068 nm)	-0.0005 u	45.80	-242.2324
	R2404674-014	Al (237.312 nm)	0.0044	21.92	23.2361
	R2404674-014	As (188.980 nm)	-0.0007 u	59.33	-3.2295
	R2404674-014	B (249.772 nm)	0.0024	0.33	83.4233
	R2404674-014	Ba (230.424 nm)	-0.0001 u	30.97	7.0712
	R2404674-014	Be (313.107 nm)	0.0000	18.74	74.1114
	R2404674-014	Ca (317.933 nm)	0.0423	1.62	4250.9089
	R2404674-014	Cd (214.439 nm)	0.0003	42.90	17.5004
	R2404674-014	Co (230.786 nm)	-0.0001 u	> 100.00	-12.2547
	R2404674-014	Cr (267.716 nm)	0.0006	18.35	38.2765
	R2404674-014	Cu (327.395 nm)	0.0012	25.90	25.2403
	R2404674-014	Fe (234.350 nm)	0.0142	24.41	258.5788
	R2404674-014	K (766.491 nm)	0.0548	49.07	-131.8675
	R2404674-014	Mg (279.078 nm)	0.0082	5.98	-2.9738
	R2404674-014	Mn (257.610 nm)	0.0002	13.00	80.2303
	R2404674-014	Mo (202.032 nm)	0.0000 u	> 100.00	12.2291

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404674-014	Na (588.995 nm)	0.0387	20.25	-13095.1449
	R2404674-014	Ni (230.299 nm)	-0.0005 u	59.44	19.8466
	R2404674-014	Pb (220.353 nm)	0.0012	99.98	14.1118
	R2404674-014	Sb (217.582 nm)	0.0000 u	> 100.00	6.5473
	R2404674-014	Se (196.026 nm)	-0.0024 u	51.40	3.0533
	R2404674-014	Si (252.851 nm)	0.0183	4.04	102.2340
	R2404674-014	Sn (189.925 nm)	0.0006 u	> 100.00	4.4337
	R2404674-014	Sr (216.596 nm)	0.0004	66.12	6.3373
	R2404674-014	Ti (336.122 nm)	0.0001 u	> 100.00	172.5115
	R2404674-014	Tl (190.794 nm)	-0.0002 u	> 100.00	-1.4317
	R2404674-014	V (292.401 nm)	-0.0003 u	38.82	-51.7675
	R2404674-014	Y (360.074 nm)	1.03	0.08	502275.21
	R2404674-014	Y_R (360.074 nm)	1.03	0.08	500939.61
	R2404674-014	Zn (213.857 nm)	0.0013	2.42	81.1050
6/11/2024 00:51:19	R2404671-016 R2404674-016	Ag (328.068 nm)	-0.0005 u	20.22	-243.9059
	R2404671-016	Al (237.312 nm)	0.0032	59.12	20.0897
	R2404671-016	As (188.980 nm)	0.0003 u	> 100.00	-1.5617
	R2404671-016	B (249.772 nm)	0.0024	7.76	82.8226
	R2404671-016	Ba (230.424 nm)	0.0001	63.72	19.1932
	R2404671-016	Be (313.107 nm)	0.0000	13.27	70.9475
	R2404671-016	Ca (317.933 nm)	0.1229	0.48	7122.2072
	R2404671-016	Cd (214.439 nm)	0.0002	31.95	15.4669
	R2404671-016	Co (230.786 nm)	-0.0001 u	> 100.00	-12.0565
	R2404671-016	Cr (267.716 nm)	0.0007	21.25	43.3725
	R2404671-016	Cu (327.395 nm)	0.0022	4.19	68.4858
	R2404671-016	Fe (234.350 nm)	0.0067	13.97	120.7856
	R2404671-016	K (766.491 nm)	0.0407	40.26	-147.3689
	R2404671-016	Mg (279.078 nm)	0.0187	1.02	31.2727
	R2404671-016	Mn (257.610 nm)	0.0008	3.26	293.2092
	R2404671-016	Mo (202.032 nm)	0.0001 u	> 100.00	13.2458
	R2404671-016	Na (588.995 nm)	0.0640	9.13	-12751.3223
	R2404671-016	Ni (230.299 nm)	-0.0004 u	59.94	20.5858
	R2404671-016	Pb (220.353 nm)	0.0013	19.44	14.6250
	R2404671-016	Sb (217.582 nm)	0.0001 u	> 100.00	6.7563
	R2404671-016	Se (196.026 nm)	-0.0025 u	32.94	2.9833
	R2404671-016	Si (252.851 nm)	0.0121	15.19	78.8227
	R2404671-016	Sn (189.925 nm)	-0.0001 u	> 100.00	2.8570
	R2404671-016	Sr (216.596 nm)	0.0005	65.16	8.3175
	R2404671-016	Ti (336.122 nm)	0.0001	22.18	174.3018
	R2404671-016	Tl (190.794 nm)	0.0009 u	> 100.00	-0.3583
	R2404671-016	V (292.401 nm)	-0.0001 u	> 100.00	-45.0920
	R2404671-016	Y (360.074 nm)	1.03	0.14	503348.70
	R2404671-016	Y_R (360.074 nm)	1.03	0.14	502036.73
	R2404671-016	Zn (213.857 nm)	0.0141	0.64	905.7165
6/11/2024 00:54:32	Continuing Calibration Verification1	Ag (328.068 nm)	0.5012	0.19	28178.1873
	Continuing Calibration Verification1	Al (237.312 nm)	9.6610	0.11	23893.8177
	Continuing Calibration Verification1	As (188.980 nm)	0.9595	0.34	1625.1982
	Continuing Calibration Verification1	B (249.772 nm)	2.3779	0.27	77217.4493
	Continuing Calibration Verification1	Ba (230.424 nm)	9.4909	0.41	516761.2749
	Continuing Calibration Verification1	Be (313.107 nm)	0.2384	0.35	261706.7679
	Continuing Calibration Verification1	Ca (317.933 nm)	25.5699	0.38	913553.6708
	Continuing Calibration Verification1	Cd (214.439 nm)	0.4956	0.48	28236.1232
	Continuing Calibration Verification1	Co (230.786 nm)	2.4471	0.24	44364.2029
	Continuing Calibration Verification1	Cr (267.716 nm)	0.5153	0.42	26789.7978
	Continuing Calibration Verification1	Cu (327.395 nm)	1.2083	0.44	53014.6774
	Continuing Calibration Verification1	Fe (234.350 nm)	4.9677	0.36	90451.8649
	Continuing Calibration Verification1	K (766.491 nm)	24.0339	0.31	26182.7725

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Verification1	Mg (279.078 nm)	25.1546	0.33	82173.1922
	Continuing Calibration Verification1	Mn (257.610 nm)	0.7356	0.33	245688.6965
	Continuing Calibration Verification1	Mo (202.032 nm)	2.6568	0.34	27745.9004
	Continuing Calibration Verification1	Na (588.995 nm)	25.3552	0.31	331674.2448
	Continuing Calibration Verification1	Ni (230.299 nm)	2.0360	0.35	23933.0702
	Continuing Calibration Verification1	Pb (220.353 nm)	0.5125	0.42	2683.4499
	Continuing Calibration Verification1	Sb (217.582 nm)	4.6271	0.20	8601.8004
	Continuing Calibration Verification1	Se (196.026 nm)	0.4727	0.91	349.3238
	Continuing Calibration Verification1	Si (252.851 nm)	9.7447	0.44	37163.4065
	Continuing Calibration Verification1	Sn (189.925 nm)	4.9132	0.34	12101.1812
	Continuing Calibration Verification1	Sr (216.596 nm)	2.4496	0.33	43111.1204
	Continuing Calibration Verification1	Ti (336.122 nm)	2.4893	0.18	359804.1376
	Continuing Calibration Verification1	Tl (190.794 nm)	0.9522	0.45	929.2745
	Continuing Calibration Verification1	V (292.401 nm)	2.4991	0.31	94706.1894
	Continuing Calibration Verification1	Y (360.074 nm)	0.98	0.28	479565.79
	Continuing Calibration Verification1	Y_R (360.074 nm)	0.98	0.28	478281.62
	Continuing Calibration Verification1	Zn (213.857 nm)	0.9796	0.11	62705.4842
6/11/2024 00:57:46	Continuing Calibration Blank1	Ag (328.068 nm)	-0.0005 u	24.39	-243.0729
	Continuing Calibration Blank1	Al (237.312 nm)	0.0040	44.72	22.1074
	Continuing Calibration Blank1	As (188.980 nm)	-0.0007 u	69.82	-3.1367
	Continuing Calibration Blank1	B (249.772 nm)	0.0016	22.35	56.1462
	Continuing Calibration Blank1	Ba (230.424 nm)	0.0008	3.90	53.2109
	Continuing Calibration Blank1	Be (313.107 nm)	0.0001	20.73	97.8290
	Continuing Calibration Blank1	Ca (317.933 nm)	0.0073	3.65	3001.9750
	Continuing Calibration Blank1	Cd (214.439 nm)	0.0001	60.71	10.2591
	Continuing Calibration Blank1	Co (230.786 nm)	0.0001 u	> 100.00	-8.4453
	Continuing Calibration Blank1	Cr (267.716 nm)	0.0002	23.01	16.7294
	Continuing Calibration Blank1	Cu (327.395 nm)	0.0004	41.85	-8.0720
	Continuing Calibration Blank1	Fe (234.350 nm)	0.0032	29.18	58.4418
	Continuing Calibration Blank1	K (766.491 nm)	0.0516	45.68	-135.4116
	Continuing Calibration Blank1	Mg (279.078 nm)	0.0024	13.53	-21.7990
	Continuing Calibration Blank1	Mn (257.610 nm)	0.0001	4.40	47.9012
	Continuing Calibration Blank1	Mo (202.032 nm)	0.0034	31.50	47.6078
	Continuing Calibration Blank1	Na (588.995 nm)	0.0194	34.16	-13358.0480
	Continuing Calibration Blank1	Ni (230.299 nm)	0.0003	70.81	28.6812
	Continuing Calibration Blank1	Pb (220.353 nm)	0.0006	> 100.00	10.8401
	Continuing Calibration Blank1	Sb (217.582 nm)	0.0028	75.33	11.8653
	Continuing Calibration Blank1	Se (196.026 nm)	-0.0012 u	> 100.00	3.9207
	Continuing Calibration Blank1	Si (252.851 nm)	-0.0037 u	4.79	18.6900
	Continuing Calibration Blank1	Sn (189.925 nm)	0.0001 u	> 100.00	3.3416
	Continuing Calibration Blank1	Sr (216.596 nm)	0.0004	26.68	6.5056
	Continuing Calibration Blank1	Ti (336.122 nm)	0.0030	44.58	581.9926
	Continuing Calibration Blank1	Tl (190.794 nm)	0.0007 u	> 100.00	-0.5250
	Continuing Calibration Blank1	V (292.401 nm)	0.0000 u	> 100.00	-40.5999
	Continuing Calibration Blank1	Y (360.074 nm)	1.02	0.12	498064.96
	Continuing Calibration Blank1	Y_R (360.074 nm)	1.02	0.12	496746.80
	Continuing Calibration Blank1	Zn (213.857 nm)	0.0001	82.69	3.8059
6/11/2024 01:01:01	R2404694-001	Ag (328.068 nm)	-0.0015 u	6.90	-301.7081
	R2404694-001	Al (237.312 nm)	0.0353	5.19	99.4283
	R2404694-001	As (188.980 nm)	0.0003 u	> 100.00	-1.4568
	R2404694-001	B (249.772 nm)	0.0333	0.33	1086.8471
	R2404694-001	Ba (230.424 nm)	0.8119	0.14	44217.7588
	R2404694-001	Be (313.107 nm)	0.0002	5.41	289.9690
	R2404694-001	Ca (317.933 nm)	#### LR	N/A	####
	R2404694-001	Cd (214.439 nm)	0.0003	17.10	21.1966
	R2404694-001	Co (230.786 nm)	0.0000 u	> 100.00	-8.8810
	R2404694-001	Cr (267.716 nm)	0.0130	2.18	680.2972

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404694-001	Cu (327.395 nm)	0.0028	7.54	97.3816
	R2404694-001	Fe (234.350 nm)	0.1339	0.33	2437.7242
	R2404694-001	K (766.491 nm)	111.0162 o LR	0.54	121636.9563
	R2404694-001	Mg (279.078 nm)	18.0303	0.38	58891.5732
	R2404694-001	Mn (257.610 nm)	0.0140	0.37	4680.5912
	R2404694-001	Mo (202.032 nm)	0.0038	14.23	51.4014
	R2404694-001	Na (588.995 nm)	1450.4789 o LR	0.44	19739559.6174
	R2404694-001	Ni (230.299 nm)	0.0149	3.02	199.9162
	R2404694-001	Pb (220.353 nm)	0.0030	8.07	23.5828
	R2404694-001	Sb (217.582 nm)	0.0012 u	> 100.00	8.7685
	R2404694-001	Se (196.026 nm)	-0.0010 u	> 100.00	4.0683
	R2404694-001	Si (252.851 nm)	5.9729	0.06	22791.4268
	R2404694-001	Sn (189.925 nm)	-0.0003 u	> 100.00	2.2530
	R2404694-001	Sr (216.596 nm)	11.9558 o	0.45	210416.7446
	R2404694-001	Ti (336.122 nm)	0.0316	2.45	4723.8515
	R2404694-001	Tl (190.794 nm)	0.0013	53.60	0.0988
	R2404694-001	V (292.401 nm)	0.0000 u	> 100.00	-40.4733
	R2404694-001	Y (360.074 nm)	0.75	0.29	367988.90
	R2404694-001	Y_R (360.074 nm)	0.75	0.29	366960.08
	R2404694-001	Zn (213.857 nm)	0.0017	5.16	108.3255
6/11/2024 01:04:16	R2404694-002	Ag (328.068 nm)	-0.0006 u	15.26	-250.7166
	R2404694-002	Al (237.312 nm)	0.2938	0.82	738.5382
	R2404694-002	As (188.980 nm)	0.0048	46.44	6.1493
	R2404694-002	B (249.772 nm)	0.0694	0.72	2258.6879
	R2404694-002	Ba (230.424 nm)	0.0352	0.41	1928.8966
	R2404694-002	Be (313.107 nm)	0.0001	9.13	159.1744
	R2404694-002	Ca (317.933 nm)	474.2264 o LR	0.41	16894891.4819
	R2404694-002	Cd (214.439 nm)	0.0004	20.26	26.7608
	R2404694-002	Co (230.786 nm)	0.0014	11.81	15.5701
	R2404694-002	Cr (267.716 nm)	0.0024	11.12	128.6629
	R2404694-002	Cu (327.395 nm)	0.0011	11.00	20.1665
	R2404694-002	Fe (234.350 nm)	2.8145	0.41	51245.7412
	R2404694-002	K (766.491 nm)	12.1547	0.62	13146.5424
	R2404694-002	Mg (279.078 nm)	66.1167 o	0.43	216033.7650
	R2404694-002	Mn (257.610 nm)	0.4709	0.41	157262.7247
	R2404694-002	Mo (202.032 nm)	0.0036	5.12	49.2663
	R2404694-002	Na (588.995 nm)	334.2578 o LR	0.13	4538428.9577
	R2404694-002	Ni (230.299 nm)	0.0055	11.91	89.5654
	R2404694-002	Pb (220.353 nm)	0.0021	18.52	19.0442
	R2404694-002	Sb (217.582 nm)	0.0005	47.36	7.5781
	R2404694-002	Se (196.026 nm)	0.0026	53.65	6.6709
	R2404694-002	Si (252.851 nm)	6.7521	0.33	25760.3829
	R2404694-002	Sn (189.925 nm)	0.0004 u	> 100.00	3.9137
	R2404694-002	Sr (216.596 nm)	3.5499	0.45	62475.4336
	R2404694-002	Ti (336.122 nm)	0.0120	4.25	1882.2452
	R2404694-002	Tl (190.794 nm)	0.0021 u	> 100.00	0.8314
	R2404694-002	V (292.401 nm)	0.0001 u	> 100.00	-38.0299
	R2404694-002	Y (360.074 nm)	0.91	0.11	444490.22
	R2404694-002	Y_R (360.074 nm)	0.91	0.11	443272.64
	R2404694-002	Zn (213.857 nm)	0.0035	1.46	224.5572
6/11/2024 01:07:32	R2404694-003	Ag (328.068 nm)	-0.0008 u	12.26	-261.6080
	R2404694-003	Al (237.312 nm)	0.1082	2.02	279.6834
	R2404694-003	As (188.980 nm)	0.0001 u	> 100.00	-1.8976
	R2404694-003	B (249.772 nm)	0.2433	0.43	7906.5503
	R2404694-003	Ba (230.424 nm)	0.1125	0.41	6138.5491
	R2404694-003	Be (313.107 nm)	0.0002	4.33	201.4955
	R2404694-003	Ca (317.933 nm)	985.4749 o LR	0.35	35105782.7184

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404694-003	Cd (214.439 nm)	0.0004	16.36	23.7938
	R2404694-003	Co (230.786 nm)	-0.0005 u	52.79	-18.6227
	R2404694-003	Cr (267.716 nm)	0.0023	5.23	126.7236
	R2404694-003	Cu (327.395 nm)	0.0015	14.93	39.8585
	R2404694-003	Fe (234.350 nm)	5.8587	0.32	106674.3327
	R2404694-003	K (766.491 nm)	71.3647 o	0.41	78123.4052
	R2404694-003	Mg (279.078 nm)	130.6035 o	0.36	426771.2356
	R2404694-003	Mn (257.610 nm)	0.1428	0.29	47708.9918
	R2404694-003	Mo (202.032 nm)	0.0019	5.28	32.2255
	R2404694-003	Na (588.995 nm)	888.7019 o LR	0.22	12089063.4767
	R2404694-003	Ni (230.299 nm)	0.0038	9.79	70.1916
	R2404694-003	Pb (220.353 nm)	0.0028	9.90	22.2954
	R2404694-003	Sb (217.582 nm)	0.0006 u	> 100.00	7.7564
	R2404694-003	Se (196.026 nm)	-0.0013 u	> 100.00	3.8406
	R2404694-003	Si (252.851 nm)	4.0627	0.16	15513.0172
	R2404694-003	Sn (189.925 nm)	-0.0001 u	> 100.00	2.7883
	R2404694-003	Sr (216.596 nm)	8.2033 o	0.42	144374.0830
	R2404694-003	Ti (336.122 nm)	0.0138	1.78	2148.2549
	R2404694-003	Tl (190.794 nm)	0.0028	91.70	1.5089
	R2404694-003	V (292.401 nm)	-0.0004 u	11.63	-57.3206
	R2404694-003	Y (360.074 nm)	0.83	0.15	404422.46
	R2404694-003	Y_R (360.074 nm)	0.83	0.15	403307.81
	R2404694-003	Zn (213.857 nm)	0.0036	2.21	230.2068
6/11/2024 01:10:47	R2404694-004	Ag (328.068 nm)	-0.0006 u	9.83	-249.0156
	R2404694-004	Al (237.312 nm)	0.0052	23.37	25.1398
	R2404694-004	As (188.980 nm)	-0.0003 u	> 100.00	-2.5296
	R2404694-004	B (249.772 nm)	0.0016	6.73	56.8734
	R2404694-004	Ba (230.424 nm)	0.0001	41.26	17.9205
	R2404694-004	Be (313.107 nm)	0.0001	5.79	89.6359
	R2404694-004	Ca (317.933 nm)	0.2447	1.68	11459.5075
	R2404694-004	Cd (214.439 nm)	0.0002	26.20	13.6520
	R2404694-004	Co (230.786 nm)	-0.0002 u	98.50	-13.0082
	R2404694-004	Cr (267.716 nm)	0.0009	4.88	54.8692
	R2404694-004	Cu (327.395 nm)	0.0020	14.43	59.9744
	R2404694-004	Fe (234.350 nm)	0.0160	9.70	290.3126
	R2404694-004	K (766.491 nm)	0.4224	9.48	271.5581
	R2404694-004	Mg (279.078 nm)	0.0283	2.99	62.5922
	R2404694-004	Mn (257.610 nm)	0.0005	3.95	185.8860
	R2404694-004	Mo (202.032 nm)	0.0004	46.27	15.8365
	R2404694-004	Na (588.995 nm)	0.7372	9.81	-3583.4063
	R2404694-004	Ni (230.299 nm)	0.0001 u	> 100.00	26.2720
	R2404694-004	Pb (220.353 nm)	0.0006	24.96	11.1905
	R2404694-004	Sb (217.582 nm)	0.0011 u	> 100.00	8.5595
	R2404694-004	Se (196.026 nm)	0.0018 u	> 100.00	6.0780
	R2404694-004	Si (252.851 nm)	0.0068	20.00	58.7553
	R2404694-004	Sn (189.925 nm)	0.0004 u	> 100.00	4.0106
	R2404694-004	Sr (216.596 nm)	0.0019	3.53	32.7251
	R2404694-004	Ti (336.122 nm)	0.0001 u	> 100.00	168.3473
	R2404694-004	Tl (190.794 nm)	0.0007 u	> 100.00	-0.5096
	R2404694-004	V (292.401 nm)	-0.0002 u	24.46	-46.4640
	R2404694-004	Y (360.074 nm)	1.05	0.23	514397.61
	R2404694-004	Y_R (360.074 nm)	1.05	0.23	513045.46
	R2404694-004	Zn (213.857 nm)	0.0096	0.40	614.3439
6/11/2024 01:14:02	R2404694-004L 5X	Ag (328.068 nm)	-0.0005 u	31.23	-243.9005
	R2404694-004L 5X	Al (237.312 nm)	0.0026	84.38	18.6840
	R2404694-004L 5X	As (188.980 nm)	-0.0016 u	13.61	-4.6553
	R2404694-004L 5X	B (249.772 nm)	0.0002	26.40	13.4881

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404694-004L 5X	Ba (230.424 nm)	0.0000 u	> 100.00	10.0216
	R2404694-004L 5X	Be (313.107 nm)	0.0001	9.94	91.8225
	R2404694-004L 5X	Ca (317.933 nm)	0.0633	1.43	4999.1279
	R2404694-004L 5X	Cd (214.439 nm)	0.0001	> 100.00	6.0198
	R2404694-004L 5X	Co (230.786 nm)	0.0000 u	> 100.00	-10.3440
	R2404694-004L 5X	Cr (267.716 nm)	0.0002	78.76	15.1356
	R2404694-004L 5X	Cu (327.395 nm)	0.0006	45.91	0.3062
	R2404694-004L 5X	Fe (234.350 nm)	0.0043	11.97	78.4679
	R2404694-004L 5X	K (766.491 nm)	0.2170	12.47	46.0961
	R2404694-004L 5X	Mg (279.078 nm)	0.0057	17.24	-11.2400
	R2404694-004L 5X	Mn (257.610 nm)	0.0001	15.22	60.9884
	R2404694-004L 5X	Mo (202.032 nm)	0.0002 u	> 100.00	13.9872
	R2404694-004L 5X	Na (588.995 nm)	0.3574	4.03	-8756.2477
	R2404694-004L 5X	Ni (230.299 nm)	-0.0005 u	> 100.00	19.6291
	R2404694-004L 5X	Pb (220.353 nm)	0.0006 u	> 100.00	10.9626
	R2404694-004L 5X	Sb (217.582 nm)	-0.0001 u	54.00	6.3338
	R2404694-004L 5X	Se (196.026 nm)	-0.0020 u	74.73	3.3425
	R2404694-004L 5X	Si (252.851 nm)	0.0143	2.09	86.9934
	R2404694-004L 5X	Sn (189.925 nm)	-0.0003 u	> 100.00	2.3957
	R2404694-004L 5X	Sr (216.596 nm)	0.0007	36.63	12.2392
	R2404694-004L 5X	Ti (336.122 nm)	0.0001 u	> 100.00	172.3488
	R2404694-004L 5X	Tl (190.794 nm)	0.0009	13.70	-0.2863
	R2404694-004L 5X	V (292.401 nm)	-0.0002 u	> 100.00	-48.5809
	R2404694-004L 5X	Y (360.074 nm)	1.05	0.11	513546.16
	R2404694-004L 5X	Y_R (360.074 nm)	1.05	0.10	512174.95
	R2404694-004L 5X	Zn (213.857 nm)	0.0020	2.49	126.1283
6/11/2024 01:17:18	R2404694-001 20X	Ag (328.068 nm)	-0.0006 u	3.84	-251.1741
	R2404694-001 20X	Al (237.312 nm)	0.0049	6.94	24.4145
	R2404694-001 20X	As (188.980 nm)	-0.0012 u	> 100.00	-4.0445
	R2404694-001 20X	B (249.772 nm)	0.0016	20.27	56.7277
	R2404694-001 20X	Ba (230.424 nm)	0.0428	0.35	2339.7150
	R2404694-001 20X	Be (313.107 nm)	0.0001	15.15	99.9669
	R2404694-001 20X	Ca (317.933 nm)	158.2806 o	0.37	5640765.9069
	R2404694-001 20X	Cd (214.439 nm)	0.0000 u	> 100.00	3.6915
	R2404694-001 20X	Co (230.786 nm)	0.0001	> 100.00	-8.5145
	R2404694-001 20X	Cr (267.716 nm)	0.0007	13.01	44.2369
	R2404694-001 20X	Cu (327.395 nm)	0.0003	69.58	-14.1954
	R2404694-001 20X	Fe (234.350 nm)	0.0080	3.42	145.9806
	R2404694-001 20X	K (766.491 nm)	4.2025	0.76	4419.7921
	R2404694-001 20X	Mg (279.078 nm)	1.0018	0.36	3243.8685
	R2404694-001 20X	Mn (257.610 nm)	0.0007	0.94	267.1687
	R2404694-001 20X	Mo (202.032 nm)	0.0003	58.93	15.1846
	R2404694-001 20X	Na (588.995 nm)	112.4672 o	0.23	1517999.5057
	R2404694-001 20X	Ni (230.299 nm)	0.0010	22.15	37.2018
	R2404694-001 20X	Pb (220.353 nm)	0.0015	42.89	15.8376
	R2404694-001 20X	Sb (217.582 nm)	-0.0022 u	> 100.00	2.4142
	R2404694-001 20X	Se (196.026 nm)	-0.0055 u	89.79	0.7905
	R2404694-001 20X	Si (252.851 nm)	0.2873	0.25	1127.3491
	R2404694-001 20X	Sn (189.925 nm)	0.0004	71.21	3.9035
	R2404694-001 20X	Sr (216.596 nm)	0.6476	0.21	11397.5508
	R2404694-001 20X	Ti (336.122 nm)	0.0016	5.29	381.4003
	R2404694-001 20X	Tl (190.794 nm)	0.0019	26.13	0.6742
	R2404694-001 20X	V (292.401 nm)	-0.0004 u	18.40	-54.5666
	R2404694-001 20X	Y (360.074 nm)	0.97	0.20	475594.28
	R2404694-001 20X	Y_R (360.074 nm)	0.97	0.20	474277.03
	R2404694-001 20X	Zn (213.857 nm)	0.0000 u	> 100.00	-1.8348
6/11/2024 01:20:33	R2404694-002 20X	Ag (328.068 nm)	-0.0006 u	22.39	-248.2992

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404694-002 20X	Al (237.312 nm)	0.0165	6.34	53.0816
	R2404694-002 20X	As (188.980 nm)	0.0008 u	> 100.00	-0.7519
	R2404694-002 20X	B (249.772 nm)	0.0033	1.57	113.6958
	R2404694-002 20X	Ba (230.424 nm)	0.0018	6.37	108.6612
	R2404694-002 20X	Be (313.107 nm)	0.0001	10.74	95.0475
	R2404694-002 20X	Ca (317.933 nm)	27.9489	0.46	998294.5809
	R2404694-002 20X	Cd (214.439 nm)	0.0001	14.81	7.3664
	R2404694-002 20X	Co (230.786 nm)	-0.0001 u	> 100.00	-11.1771
	R2404694-002 20X	Cr (267.716 nm)	0.0002	57.33	16.9950
	R2404694-002 20X	Cu (327.395 nm)	0.0003	65.91	-14.1169
	R2404694-002 20X	Fe (234.350 nm)	0.1488	0.28	2708.0923
	R2404694-002 20X	K (766.491 nm)	0.6370	7.72	507.0416
	R2404694-002 20X	Mg (279.078 nm)	3.4513	0.55	11248.7666
	R2404694-002 20X	Mn (257.610 nm)	0.0246	0.57	8247.2952
	R2404694-002 20X	Mo (202.032 nm)	0.0003 u	> 100.00	15.1744
	R2404694-002 20X	Na (588.995 nm)	17.5101	0.07	224837.1407
	R2404694-002 20X	Ni (230.299 nm)	0.0006	14.93	32.7828
	R2404694-002 20X	Pb (220.353 nm)	0.0009	18.93	12.3994
	R2404694-002 20X	Sb (217.582 nm)	-0.0039 u	52.05	-0.5819
	R2404694-002 20X	Se (196.026 nm)	-0.0012 u	> 100.00	3.9202
	R2404694-002 20X	Si (252.851 nm)	0.3445	0.83	1345.2951
	R2404694-002 20X	Sn (189.925 nm)	0.0001 u	> 100.00	3.3552
	R2404694-002 20X	Sr (216.596 nm)	0.1885	0.42	3316.8630
	R2404694-002 20X	Ti (336.122 nm)	0.0007	28.97	255.8679
	R2404694-002 20X	Tl (190.794 nm)	0.0021	54.49	0.8029
	R2404694-002 20X	V (292.401 nm)	-0.0003 u	51.50	-51.5117
	R2404694-002 20X	Y (360.074 nm)	1.02	0.17	500062.26
	R2404694-002 20X	Y_R (360.074 nm)	1.02	0.17	498712.90
	R2404694-002 20X	Zn (213.857 nm)	0.0001 u	89.07	4.6991
6/11/2024 01:23:48	R2404694-003 20X	Ag (328.068 nm)	-0.0006 u	23.73	-248.8103
	R2404694-003 20X	Al (237.312 nm)	0.0072	21.18	30.0018
	R2404694-003 20X	As (188.980 nm)	-0.0015 u	> 100.00	-4.5560
	R2404694-003 20X	B (249.772 nm)	0.0115	1.09	380.2284
	R2404694-003 20X	Ba (230.424 nm)	0.0058	2.31	326.1706
	R2404694-003 20X	Be (313.107 nm)	0.0001	13.27	112.9314
	R2404694-003 20X	Ca (317.933 nm)	69.1278 o	0.35	2465103.6478
	R2404694-003 20X	Cd (214.439 nm)	0.0001	56.46	5.0821
	R2404694-003 20X	Co (230.786 nm)	-0.0003 u	45.11	-14.9033
	R2404694-003 20X	Cr (267.716 nm)	0.0002	31.18	17.4582
	R2404694-003 20X	Cu (327.395 nm)	0.0002 u	> 100.00	-18.7373
	R2404694-003 20X	Fe (234.350 nm)	0.3078	0.25	5604.3234
	R2404694-003 20X	K (766.491 nm)	2.7886	0.89	2868.1503
	R2404694-003 20X	Mg (279.078 nm)	6.7474	0.25	22020.0482
	R2404694-003 20X	Mn (257.610 nm)	0.0074	0.45	2487.8292
	R2404694-003 20X	Mo (202.032 nm)	0.0002	> 100.00	13.9511
	R2404694-003 20X	Na (588.995 nm)	51.8672	0.12	692724.8082
	R2404694-003 20X	Ni (230.299 nm)	0.0009	38.53	35.9324
	R2404694-003 20X	Pb (220.353 nm)	0.0004	75.05	9.8350
	R2404694-003 20X	Sb (217.582 nm)	-0.0037 u	20.87	-0.2086
	R2404694-003 20X	Se (196.026 nm)	-0.0022 u	> 100.00	3.1587
	R2404694-003 20X	Si (252.851 nm)	0.2058	0.51	816.6657
	R2404694-003 20X	Sn (189.925 nm)	0.0000 u	> 100.00	3.0251
	R2404694-003 20X	Sr (216.596 nm)	0.4376	0.38	7700.3841
	R2404694-003 20X	Ti (336.122 nm)	0.0008	13.54	277.4293
	R2404694-003 20X	Tl (190.794 nm)	0.0011	66.23	-0.1292
	R2404694-003 20X	V (292.401 nm)	-0.0003 u	43.56	-51.7633
	R2404694-003 20X	Y (360.074 nm)	1.00	0.17	487156.03

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404694-003 20X	Y_R (360.074 nm)	1.00	0.17	485870.70
	R2404694-003 20X	Zn (213.857 nm)	0.0000 u	> 100.00	2.3133
6/11/2024 01:27:03	R2404694-004 20X	Ag (328.068 nm)	-0.0005 u	20.23	-242.6660
	R2404694-004 20X	Al (237.312 nm)	0.0030	28.91	19.5930
	R2404694-004 20X	As (188.980 nm)	-0.0021 u	64.65	-5.6173
	R2404694-004 20X	B (249.772 nm)	-0.0002 u	82.55	-1.3739
	R2404694-004 20X	Ba (230.424 nm)	-0.0002 u	16.38	2.1852
	R2404694-004 20X	Be (313.107 nm)	0.0001	5.35	100.4408
	R2404694-004 20X	Ca (317.933 nm)	0.0245	0.65	3615.4839
	R2404694-004 20X	Cd (214.439 nm)	0.0001	66.22	9.1613
	R2404694-004 20X	Co (230.786 nm)	0.0001	> 100.00	-7.6585
	R2404694-004 20X	Cr (267.716 nm)	0.0002	60.96	15.6030
	R2404694-004 20X	Cu (327.395 nm)	0.0002 u	> 100.00	-18.2202
	R2404694-004 20X	Fe (234.350 nm)	0.0022	19.08	39.1279
	R2404694-004 20X	K (766.491 nm)	0.1190	23.51	-61.3992
	R2404694-004 20X	Mg (279.078 nm)	0.0007 u	> 100.00	-27.5462
	R2404694-004 20X	Mn (257.610 nm)	0.0000	44.86	31.5023
	R2404694-004 20X	Mo (202.032 nm)	0.0000 u	> 100.00	12.4055
	R2404694-004 20X	Na (588.995 nm)	0.1610	4.58	-11429.8425
	R2404694-004 20X	Ni (230.299 nm)	-0.0004 u	72.52	21.1307
	R2404694-004 20X	Pb (220.353 nm)	0.0005	38.35	10.4301
	R2404694-004 20X	Sb (217.582 nm)	-0.0016 u	53.74	3.5585
	R2404694-004 20X	Se (196.026 nm)	0.0000 u	> 100.00	4.8036
	R2404694-004 20X	Si (252.851 nm)	0.0150	9.90	89.7522
	R2404694-004 20X	Sn (189.925 nm)	-0.0004 u	> 100.00	1.9875
	R2404694-004 20X	Sr (216.596 nm)	0.0002	54.42	3.6538
	R2404694-004 20X	Ti (336.122 nm)	0.0000 u	> 100.00	159.5489
	R2404694-004 20X	Tl (190.794 nm)	0.0012	99.12	-0.0021
	R2404694-004 20X	V (292.401 nm)	-0.0002 u	27.42	-49.1152
	R2404694-004 20X	Y (360.074 nm)	1.04	0.19	509406.98
	R2404694-004 20X	Y_R (360.074 nm)	1.04	0.19	508059.43
	R2404694-004 20X	Zn (213.857 nm)	0.0004	26.43	23.7804
6/11/2024 01:30:17	Continuing Calibration Verification1	Ag (328.068 nm)	0.4995	0.07	28081.0078
	Continuing Calibration Verification1	Al (237.312 nm)	9.5994	0.08	23741.6135
	Continuing Calibration Verification1	As (188.980 nm)	0.9706	0.62	1644.0961
	Continuing Calibration Verification1	B (249.772 nm)	2.3913	0.22	77652.3298
	Continuing Calibration Verification1	Ba (230.424 nm)	9.5538	0.51	520187.8755
	Continuing Calibration Verification1	Be (313.107 nm)	0.2417	0.35	265273.2882
	Continuing Calibration Verification1	Ca (317.933 nm)	26.0776	0.37	931639.0899
	Continuing Calibration Verification1	Cd (214.439 nm)	0.5111	0.53	29117.3194
	Continuing Calibration Verification1	Co (230.786 nm)	2.4842	0.46	45037.3784
	Continuing Calibration Verification1	Cr (267.716 nm)	0.5229	0.38	27188.0129
	Continuing Calibration Verification1	Cu (327.395 nm)	1.1918	0.32	52290.2114
	Continuing Calibration Verification1	Fe (234.350 nm)	5.0448	0.32	91855.7517
	Continuing Calibration Verification1	K (766.491 nm)	23.7339	0.20	25853.5539
	Continuing Calibration Verification1	Mg (279.078 nm)	25.8064	0.31	84303.4184
	Continuing Calibration Verification1	Mn (257.610 nm)	0.7423	0.34	247901.7490
	Continuing Calibration Verification1	Mo (202.032 nm)	2.6983	0.37	28178.6219
	Continuing Calibration Verification1	Na (588.995 nm)	24.9876	0.43	326667.9748
	Continuing Calibration Verification1	Ni (230.299 nm)	2.0779	0.28	24425.8333
	Continuing Calibration Verification1	Pb (220.353 nm)	0.5254	0.11	2750.8317
	Continuing Calibration Verification1	Sb (217.582 nm)	4.6426	0.22	8630.6190
	Continuing Calibration Verification1	Se (196.026 nm)	0.4754	0.61	351.3165
	Continuing Calibration Verification1	Si (252.851 nm)	9.7524	0.43	37192.8310
	Continuing Calibration Verification1	Sn (189.925 nm)	5.0301	0.42	12389.1579
	Continuing Calibration Verification1	Sr (216.596 nm)	2.5017	0.52	44028.8847
	Continuing Calibration Verification1	Ti (336.122 nm)	2.4922	0.19	360220.4082

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Verification1	Tl (190.794 nm)	0.9706	0.59	947.2468
	Continuing Calibration Verification1	V (292.401 nm)	2.5188	0.32	95451.4631
	Continuing Calibration Verification1	Y (360.074 nm)	1.00	0.37	490163.10
	Continuing Calibration Verification1	Y_R (360.074 nm)	1.00	0.37	488838.68
	Continuing Calibration Verification1	Zn (213.857 nm)	0.9885	0.10	63270.3590
6/11/2024 01:33:31	Continuing Calibration Blank1	Ag (328.068 nm)	-0.0004 u	33.94	-239.2210
	Continuing Calibration Blank1	Al (237.312 nm)	0.0029	85.92	19.3837
	Continuing Calibration Blank1	As (188.980 nm)	-0.0013 u	> 100.00	-4.2591
	Continuing Calibration Blank1	B (249.772 nm)	0.0013	29.14	48.3432
	Continuing Calibration Blank1	Ba (230.424 nm)	0.0008	15.61	55.2460
	Continuing Calibration Blank1	Be (313.107 nm)	0.0001	10.26	127.4020
	Continuing Calibration Blank1	Ca (317.933 nm)	0.0079	4.33	3025.6341
	Continuing Calibration Blank1	Cd (214.439 nm)	0.0001	57.87	10.1581
	Continuing Calibration Blank1	Co (230.786 nm)	0.0002	30.58	-6.3649
	Continuing Calibration Blank1	Cr (267.716 nm)	0.0003	10.33	20.4792
	Continuing Calibration Blank1	Cu (327.395 nm)	0.0002	65.78	-16.8279
	Continuing Calibration Blank1	Fe (234.350 nm)	0.0031	31.14	56.1473
	Continuing Calibration Blank1	K (766.491 nm)	0.1209	1.91	-59.3170
	Continuing Calibration Blank1	Mg (279.078 nm)	0.0034	24.44	-18.7744
	Continuing Calibration Blank1	Mn (257.610 nm)	0.0001	7.36	47.2874
	Continuing Calibration Blank1	Mo (202.032 nm)	0.0039	28.72	52.5214
	Continuing Calibration Blank1	Na (588.995 nm)	0.1039	3.89	-12208.3427
	Continuing Calibration Blank1	Ni (230.299 nm)	0.0005	64.17	30.8429
	Continuing Calibration Blank1	Pb (220.353 nm)	0.0007	> 100.00	11.7684
	Continuing Calibration Blank1	Sb (217.582 nm)	0.0036	19.42	13.2016
	Continuing Calibration Blank1	Se (196.026 nm)	0.0032	36.49	7.0831
	Continuing Calibration Blank1	Si (252.851 nm)	-0.0043 u	33.38	16.1951
	Continuing Calibration Blank1	Sn (189.925 nm)	0.0006	37.64	4.3841
	Continuing Calibration Blank1	Sr (216.596 nm)	0.0005	41.83	7.5846
	Continuing Calibration Blank1	Ti (336.122 nm)	0.0030	40.68	594.8629
	Continuing Calibration Blank1	Tl (190.794 nm)	0.0013 u	> 100.00	0.0672
	Continuing Calibration Blank1	V (292.401 nm)	0.0001 u	> 100.00	-37.3989
	Continuing Calibration Blank1	Y (360.074 nm)	1.04	0.14	509412.14
	Continuing Calibration Blank1	Y_R (360.074 nm)	1.04	0.14	508060.68
	Continuing Calibration Blank1	Zn (213.857 nm)	0.0001	14.02	8.0980
6/11/2024 01:36:45	Contract Required Detection Limit	Ag (328.068 nm)	0.0081	1.03	243.0386
	Contract Required Detection Limit	Al (237.312 nm)	0.1939	0.94	491.5994
	Contract Required Detection Limit	As (188.980 nm)	0.0188	3.89	29.8248
	Contract Required Detection Limit	B (249.772 nm)	0.1891	0.13	6146.4449
	Contract Required Detection Limit	Ba (230.424 nm)	0.1949	0.24	10621.2875
	Contract Required Detection Limit	Be (313.107 nm)	0.0050	0.42	5477.7437
	Contract Required Detection Limit	Ca (317.933 nm)	1.0675	0.31	40766.6994
	Contract Required Detection Limit	Cd (214.439 nm)	0.0108	0.67	617.1686
	Contract Required Detection Limit	Co (230.786 nm)	0.0504	0.54	904.0630
	Contract Required Detection Limit	Cr (267.716 nm)	0.0098	1.28	514.9884
	Contract Required Detection Limit	Cu (327.395 nm)	0.0242	0.49	1034.3233
	Contract Required Detection Limit	Fe (234.350 nm)	0.1082	0.80	1968.9482
	Contract Required Detection Limit	K (766.491 nm)	1.0285	1.25	936.5884
	Contract Required Detection Limit	Mg (279.078 nm)	1.0337	0.11	3348.2964
	Contract Required Detection Limit	Mn (257.610 nm)	0.0141	0.50	4713.3946
	Contract Required Detection Limit	Mo (202.032 nm)	0.0271	1.05	295.3233
	Contract Required Detection Limit	Na (588.995 nm)	1.0646	0.32	875.5729
	Contract Required Detection Limit	Ni (230.299 nm)	0.0363	2.98	451.8352
	Contract Required Detection Limit	Pb (220.353 nm)	0.0113	3.01	67.0792
	Contract Required Detection Limit	Sb (217.582 nm)	0.0570	0.56	112.4869
	Contract Required Detection Limit	Se (196.026 nm)	0.0094	28.77	11.6202
	Contract Required Detection Limit	Si (252.851 nm)	0.0464	3.60	209.6302

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Contract Required Detection Limit	Sn (189.925 nm)	0.5069	0.13	1251.2291
	Contract Required Detection Limit	Sr (216.596 nm)	0.1006	0.37	1770.4107
	Contract Required Detection Limit	Ti (336.122 nm)	0.0498	1.29	7343.7880
	Contract Required Detection Limit	Tl (190.794 nm)	0.0197	2.21	18.0399
	Contract Required Detection Limit	V (292.401 nm)	0.0494	0.61	1833.6437
	Contract Required Detection Limit	Y (360.074 nm)	1.04	0.42	507496.54
	Contract Required Detection Limit	Y_R (360.074 nm)	1.04	0.42	506144.97
	Contract Required Detection Limit	Zn (213.857 nm)	0.0174	0.64	1112.4263
6/11/2024 01:39:59	Interference Check Solution A	Ag (328.068 nm)	-0.0008 u	16.83	-261.4610
	Interference Check Solution A	Al (237.312 nm)	245.7063 o	0.17	607388.6743
	Interference Check Solution A	As (188.980 nm)	-0.0014 u	> 100.00	-4.3506
	Interference Check Solution A	B (249.772 nm)	0.0988	0.20	3214.7901
	Interference Check Solution A	Ba (230.424 nm)	-0.0005 u	16.81	-16.7302
	Interference Check Solution A	Be (313.107 nm)	0.0002	3.06	290.0763
	Interference Check Solution A	Ca (317.933 nm)	241.7618 o	0.39	8614403.7191
	Interference Check Solution A	Cd (214.439 nm)	-0.0006 u	18.79	-30.8285
	Interference Check Solution A	Co (230.786 nm)	-0.0002 u	> 100.00	-12.9773
	Interference Check Solution A	Cr (267.716 nm)	0.0038	2.81	202.1472
	Interference Check Solution A	Cu (327.395 nm)	0.0084	2.03	341.2343
	Interference Check Solution A	Fe (234.350 nm)	94.5624 o	0.42	1721796.8407
	Interference Check Solution A	K (766.491 nm)	0.0759	10.39	-108.7437
	Interference Check Solution A	Mg (279.078 nm)	268.0940 o	0.35	876078.2974
	Interference Check Solution A	Mn (257.610 nm)	0.0012	1.94	404.1180
	Interference Check Solution A	Mo (202.032 nm)	0.0016	27.89	28.9822
	Interference Check Solution A	Na (588.995 nm)	0.0429	16.02	-13038.7786
	Interference Check Solution A	Ni (230.299 nm)	0.0033	17.00	64.3343
	Interference Check Solution A	Pb (220.353 nm)	0.0042	15.28	29.7032
	Interference Check Solution A	Sb (217.582 nm)	-0.0046 u	55.26	-1.8948
	Interference Check Solution A	Se (196.026 nm)	-0.0015 u	> 100.00	3.6929
	Interference Check Solution A	Si (252.851 nm)	0.0375	6.05	175.4651
	Interference Check Solution A	Sn (189.925 nm)	0.0005 u	> 100.00	4.2103
	Interference Check Solution A	Sr (216.596 nm)	0.0113	3.91	198.5718
	Interference Check Solution A	Ti (336.122 nm)	0.0028	12.59	566.4417
	Interference Check Solution A	Tl (190.794 nm)	0.0011	63.01	-0.1371
	Interference Check Solution A	V (292.401 nm)	0.0014	7.36	10.9108
	Interference Check Solution A	Y (360.074 nm)	0.92	0.30	449246.26
	Interference Check Solution A	Y_R (360.074 nm)	0.92	0.30	448016.97
	Interference Check Solution A	Zn (213.857 nm)	0.0134 K	0.30	860.7389 K
6/11/2024 01:43:13	Interference Check Solution AB	Ag (328.068 nm)	0.1981	0.23	11009.0146
	Interference Check Solution AB	Al (237.312 nm)	246.8707 o	0.23	610267.1580
	Interference Check Solution AB	As (188.980 nm)	0.1005	4.80	168.3625
	Interference Check Solution AB	B (249.772 nm)	0.0966	0.21	3142.0447
	Interference Check Solution AB	Ba (230.424 nm)	0.5005	0.23	27262.0471
	Interference Check Solution AB	Be (313.107 nm)	0.5002	0.26	549045.7316
	Interference Check Solution AB	Ca (317.933 nm)	243.2407 o	0.29	8667080.5261
	Interference Check Solution AB	Cd (214.439 nm)	1.0058	0.30	57301.6790
	Interference Check Solution AB	Co (230.786 nm)	0.4888	0.23	8853.1214
	Interference Check Solution AB	Cr (267.716 nm)	0.5310	0.25	27607.1402
	Interference Check Solution AB	Cu (327.395 nm)	0.5310	0.13	23279.9711
	Interference Check Solution AB	Fe (234.350 nm)	95.1145 o	0.26	1731850.2800
	Interference Check Solution AB	K (766.491 nm)	0.0425	14.11	-145.4184
	Interference Check Solution AB	Mg (279.078 nm)	269.5516 o	0.29	880841.4772
	Interference Check Solution AB	Mn (257.610 nm)	0.5014	0.22	167471.8914
	Interference Check Solution AB	Mo (202.032 nm)	0.0009	24.24	21.2857
	Interference Check Solution AB	Na (588.995 nm)	0.0114	17.34	-13467.9432
	Interference Check Solution AB	Ni (230.299 nm)	1.0057	0.15	11835.4996
	Interference Check Solution AB	Pb (220.353 nm)	0.0541	3.24	290.6230

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Interference Check Solution AB	Sb (217.582 nm)	0.5817	0.60	1087.2202
	Interference Check Solution AB	Se (196.026 nm)	0.0500	14.85	41.2404
	Interference Check Solution AB	Si (252.851 nm)	0.0836	2.26	351.2429
	Interference Check Solution AB	Sn (189.925 nm)	0.0008 u	> 100.00	5.0780
	Interference Check Solution AB	Sr (216.596 nm)	0.0114	1.65	199.4292
	Interference Check Solution AB	Ti (336.122 nm)	0.0027	5.16	544.1283
	Interference Check Solution AB	Tl (190.794 nm)	0.1000	0.73	96.5538
	Interference Check Solution AB	V (292.401 nm)	0.5253	0.34	19876.2105
	Interference Check Solution AB	Y (360.074 nm)	0.92	0.48	449519.39
	Interference Check Solution AB	Y_R (360.074 nm)	0.92	0.48	448292.50
	Interference Check Solution AB	Zn (213.857 nm)	1.0378	0.17	66430.6807
6/11/2024 01:46:26	Continuing Calibration Verification1	Ag (328.068 nm)	0.4980	0.12	27997.0263
	Continuing Calibration Verification1	Al (237.312 nm)	9.5976	0.02	23737.2652
	Continuing Calibration Verification1	As (188.980 nm)	0.9701	0.24	1643.2278
	Continuing Calibration Verification1	B (249.772 nm)	2.3848	0.20	77441.7555
	Continuing Calibration Verification1	Ba (230.424 nm)	9.5537	0.50	520181.7854
	Continuing Calibration Verification1	Be (313.107 nm)	0.2415	0.23	265073.4511
	Continuing Calibration Verification1	Ca (317.933 nm)	26.1205	0.21	933166.7396
	Continuing Calibration Verification1	Cd (214.439 nm)	0.5109	0.22	29108.4729
	Continuing Calibration Verification1	Co (230.786 nm)	2.4772	0.21	44911.4981
	Continuing Calibration Verification1	Cr (267.716 nm)	0.5224	0.25	27163.0594
	Continuing Calibration Verification1	Cu (327.395 nm)	1.1931	0.37	52344.2633
	Continuing Calibration Verification1	Fe (234.350 nm)	5.0696	0.20	92306.5244
	Continuing Calibration Verification1	K (766.491 nm)	23.6149	0.01	25722.8796
	Continuing Calibration Verification1	Mg (279.078 nm)	25.8485	0.17	84440.8300
	Continuing Calibration Verification1	Mn (257.610 nm)	0.7416	0.21	247673.4210
	Continuing Calibration Verification1	Mo (202.032 nm)	2.6942	0.23	28136.0057
	Continuing Calibration Verification1	Na (588.995 nm)	24.8144	0.25	324309.4077
	Continuing Calibration Verification1	Ni (230.299 nm)	2.0760	0.22	24403.6494
	Continuing Calibration Verification1	Pb (220.353 nm)	0.5232	0.12	2739.5731
	Continuing Calibration Verification1	Sb (217.582 nm)	4.6196	0.13	8587.8716
	Continuing Calibration Verification1	Se (196.026 nm)	0.4737	1.23	350.0822
	Continuing Calibration Verification1	Si (252.851 nm)	9.7212	0.42	37073.7638
	Continuing Calibration Verification1	Sn (189.925 nm)	5.0234	0.06	12372.4744
	Continuing Calibration Verification1	Sr (216.596 nm)	2.4973	0.35	43950.7782
	Continuing Calibration Verification1	Ti (336.122 nm)	2.4898	0.11	359879.2619
	Continuing Calibration Verification1	Tl (190.794 nm)	0.9698	0.28	946.4235
	Continuing Calibration Verification1	V (292.401 nm)	2.5186	0.18	95444.2373
	Continuing Calibration Verification1	Y (360.074 nm)	1.01	0.22	491461.94
	Continuing Calibration Verification1	Y_R (360.074 nm)	1.00	0.22	490124.00
	Continuing Calibration Verification1	Zn (213.857 nm)	0.9881	0.24	63248.6118
6/11/2024 01:49:40	Continuing Calibration Blank1	Ag (328.068 nm)	-0.0006 u	50.39	-247.9904
	Continuing Calibration Blank1	Al (237.312 nm)	0.0046	38.43	23.7087
	Continuing Calibration Blank1	As (188.980 nm)	0.0002 u	> 100.00	-1.6583
	Continuing Calibration Blank1	B (249.772 nm)	0.0015	19.80	53.7349
	Continuing Calibration Blank1	Ba (230.424 nm)	0.0008	2.89	54.9124
	Continuing Calibration Blank1	Be (313.107 nm)	0.0001	3.40	131.2623
	Continuing Calibration Blank1	Ca (317.933 nm)	0.0092	1.57	3072.1409
	Continuing Calibration Blank1	Cd (214.439 nm)	0.0002	41.01	10.8991
	Continuing Calibration Blank1	Co (230.786 nm)	0.0004 u	> 100.00	-2.4759
	Continuing Calibration Blank1	Cr (267.716 nm)	0.0001	> 100.00	12.4020
	Continuing Calibration Blank1	Cu (327.395 nm)	0.0005	32.01	-6.3214
	Continuing Calibration Blank1	Fe (234.350 nm)	0.0042	27.93	75.2268
	Continuing Calibration Blank1	K (766.491 nm)	0.1031	27.30	-78.9413
	Continuing Calibration Blank1	Mg (279.078 nm)	0.0037	3.21	-17.6750
	Continuing Calibration Blank1	Mn (257.610 nm)	0.0001	3.83	50.0753
	Continuing Calibration Blank1	Mo (202.032 nm)	0.0037	29.08	50.5195

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Blank1	Na (588.995 nm)	0.0506	11.06	-12933.2717
	Continuing Calibration Blank1	Ni (230.299 nm)	0.0001 u	> 100.00	26.5242
	Continuing Calibration Blank1	Pb (220.353 nm)	0.0006	62.83	11.1500
	Continuing Calibration Blank1	Sb (217.582 nm)	0.0041	41.66	14.1554
	Continuing Calibration Blank1	Se (196.026 nm)	0.0005 u	> 100.00	5.1504
	Continuing Calibration Blank1	Si (252.851 nm)	-0.0047 u	17.00	14.9191
	Continuing Calibration Blank1	Sn (189.925 nm)	0.0008 u	> 100.00	4.8967
	Continuing Calibration Blank1	Sr (216.596 nm)	0.0005	26.94	8.1119
	Continuing Calibration Blank1	Ti (336.122 nm)	0.0030	41.81	585.9068
	Continuing Calibration Blank1	Tl (190.794 nm)	-0.0002 u	> 100.00	-1.3928
	Continuing Calibration Blank1	V (292.401 nm)	0.0001 u	> 100.00	-37.9625
	Continuing Calibration Blank1	Y (360.074 nm)	1.05	0.03	510688.44
	Continuing Calibration Blank1	Y_R (360.074 nm)	1.04	0.03	509323.88
	Continuing Calibration Blank1	Zn (213.857 nm)	0.0001	24.06	9.9024
6/11/2024 01:52:54	PBW-439601	Ag (328.068 nm)	-0.0006 u	18.11	-249.3382
	PBW-439601	Al (237.312 nm)	0.0026	30.48	18.7496
	PBW-439601	As (188.980 nm)	-0.0004 u	> 100.00	-2.6742
	PBW-439601	B (249.772 nm)	0.0017	13.83	62.3188
	PBW-439601	Ba (230.424 nm)	-0.0001 u	> 100.00	7.7223
	PBW-439601	Be (313.107 nm)	0.0001	23.30	95.6638
	PBW-439601	Ca (317.933 nm)	0.0100	1.22	3099.5228
	PBW-439601	Cd (214.439 nm)	0.0002	18.40	11.0950
	PBW-439601	Co (230.786 nm)	-0.0002 u	> 100.00	-12.6876
	PBW-439601	Cr (267.716 nm)	0.0002	16.50	14.7390
	PBW-439601	Cu (327.395 nm)	0.0004	40.42	-10.4768
	PBW-439601	Fe (234.350 nm)	0.0030	30.80	53.5186
	PBW-439601	K (766.491 nm)	0.0631	46.57	-122.8013
	PBW-439601	Mg (279.078 nm)	0.0016	35.12	-24.5856
	PBW-439601	Mn (257.610 nm)	0.0001	8.32	39.8264
	PBW-439601	Mo (202.032 nm)	0.0007	12.64	19.2053
	PBW-439601	Na (588.995 nm)	0.0413	8.47	-13059.7630
	PBW-439601	Ni (230.299 nm)	-0.0003 u	> 100.00	21.3323
	PBW-439601	Pb (220.353 nm)	0.0005	73.47	10.7759
	PBW-439601	Sb (217.582 nm)	0.0078	11.51	21.1516
	PBW-439601	Se (196.026 nm)	0.0011 u	> 100.00	5.6142
	PBW-439601	Si (252.851 nm)	0.0020	11.89	40.4563
	PBW-439601	Sn (189.925 nm)	0.0003	87.41	3.6874
	PBW-439601	Sr (216.596 nm)	0.0002	33.86	3.7083
	PBW-439601	Ti (336.122 nm)	0.0008	71.55	267.8042
	PBW-439601	Tl (190.794 nm)	0.0009 u	> 100.00	-0.2811
	PBW-439601	V (292.401 nm)	-0.0001 u	92.89	-45.3565
	PBW-439601	Y (360.074 nm)	1.05	0.05	513616.06
	PBW-439601	Y_R (360.074 nm)	1.05	0.05	512244.08
	PBW-439601	Zn (213.857 nm)	-0.0003 u	6.99	-20.9302
6/11/2024 01:56:09	LCSW-439601	Ag (328.068 nm)	0.0484	0.45	2530.0038
	LCSW-439601	Al (237.312 nm)	1.9145	0.07	4744.9156
	LCSW-439601	As (188.980 nm)	0.0387	5.77	63.6592
	LCSW-439601	B (249.772 nm)	0.9475	0.31	30771.6303
	LCSW-439601	Ba (230.424 nm)	1.9033	0.34	103642.1725
	LCSW-439601	Be (313.107 nm)	0.0482	0.38	52969.8576
	LCSW-439601	Ca (317.933 nm)	2.0596	0.39	76106.6648
	LCSW-439601	Cd (214.439 nm)	0.0520	0.65	2962.8325
	LCSW-439601	Co (230.786 nm)	0.4933	0.22	8935.9607
	LCSW-439601	Cr (267.716 nm)	0.2040	0.38	10607.7895
	LCSW-439601	Cu (327.395 nm)	0.2421	0.34	10600.8951
	LCSW-439601	Fe (234.350 nm)	1.0120	0.41	18425.7786
	LCSW-439601	K (766.491 nm)	18.4031	0.33	20003.4944

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	LCSW-439601	Mg (279.078 nm)	1.9949	0.29	6489.4964
	LCSW-439601	Mn (257.610 nm)	0.4859	0.40	162280.2841
	LCSW-439601	Mo (202.032 nm)	0.5173	0.28	5411.5710
	LCSW-439601	Na (588.995 nm)	19.3280	0.05	249593.3070
	LCSW-439601	Ni (230.299 nm)	0.5178	0.53	6105.9334
	LCSW-439601	Pb (220.353 nm)	0.5332	0.32	2791.5477
	LCSW-439601	Sb (217.582 nm)	0.4668	0.30	873.6395
	LCSW-439601	Se (196.026 nm)	0.9775	0.37	717.3353
	LCSW-439601	Si (252.851 nm)	-0.0225 u	6.39	-53.0573
	LCSW-439601	Sn (189.925 nm)	4.9760	0.31	12255.9139
	LCSW-439601	Sr (216.596 nm)	2.0016	0.43	35226.9996
	LCSW-439601	Ti (336.122 nm)	0.4849	0.27	70207.2372
	LCSW-439601	Tl (190.794 nm)	1.9296	0.15	1884.2918
	LCSW-439601	V (292.401 nm)	0.4885	0.32	18479.9816
	LCSW-439601	Y (360.074 nm)	1.03	0.16	504664.26
	LCSW-439601	Y_R (360.074 nm)	1.03	0.16	503309.67
	LCSW-439601	Zn (213.857 nm)	0.5009	0.30	32061.4834
6/11/2024 01:59:24	R2404782-001	Ag (328.068 nm)	-0.0005 u	26.45	-243.6894
	R2404782-001	Al (237.312 nm)	0.4133	0.62	1033.9281
	R2404782-001	As (188.980 nm)	-0.0002 u	> 100.00	-2.3463
	R2404782-001	B (249.772 nm)	0.0281	0.82	916.7539
	R2404782-001	Ba (230.424 nm)	0.0507	0.20	2773.2119
	R2404782-001	Be (313.107 nm)	0.0001	7.18	136.3212
	R2404782-001	Ca (317.933 nm)	142.9177 o	0.28	5093534.1009
	R2404782-001	Cd (214.439 nm)	0.0003	7.04	21.0161
	R2404782-001	Co (230.786 nm)	-0.0002 u	> 100.00	-13.1649
	R2404782-001	Cr (267.716 nm)	0.0014	13.84	76.2804
	R2404782-001	Cu (327.395 nm)	0.0039	1.33	142.5155
	R2404782-001	Fe (234.350 nm)	0.2643	0.43	4811.4547
	R2404782-001	K (766.491 nm)	4.1221	0.43	4331.5286
	R2404782-001	Mg (279.078 nm)	82.4985 o	0.20	269568.0422
	R2404782-001	Mn (257.610 nm)	0.0056	0.87	1875.6647
	R2404782-001	Mo (202.032 nm)	0.0060	18.69	75.0110
	R2404782-001	Na (588.995 nm)	9.4022	0.08	114419.4105
	R2404782-001	Ni (230.299 nm)	0.0026	6.30	56.2997
	R2404782-001	Pb (220.353 nm)	0.0038	16.51	27.9440
	R2404782-001	Sb (217.582 nm)	0.0008 u	> 100.00	8.1220
	R2404782-001	Se (196.026 nm)	-0.0011 u	> 100.00	3.9910
	R2404782-001	Si (252.851 nm)	7.5099	0.22	28647.9791
	R2404782-001	Sn (189.925 nm)	0.0008	> 100.00	5.1017
	R2404782-001	Sr (216.596 nm)	19.4137 o	0.42	341671.9892
	R2404782-001	Ti (336.122 nm)	0.0072	7.80	1188.5809
	R2404782-001	Tl (190.794 nm)	0.0036	22.88	2.3115
	R2404782-001	V (292.401 nm)	0.0004	14.19	-24.7284
	R2404782-001	Y (360.074 nm)	0.99	0.32	482319.40
	R2404782-001	Y_R (360.074 nm)	0.99	0.32	481002.37
	R2404782-001	Zn (213.857 nm)	0.0110	0.49	706.9638
6/11/2024 02:02:39	R2404782-002	Ag (328.068 nm)	-0.0005 u	12.36	-244.6207
	R2404782-002	Al (237.312 nm)	0.1883	0.75	477.6878
	R2404782-002	As (188.980 nm)	-0.0008 u	> 100.00	-3.3036
	R2404782-002	B (249.772 nm)	0.2054	0.12	6676.0024
	R2404782-002	Ba (230.424 nm)	0.0091	1.28	505.5652
	R2404782-002	Be (313.107 nm)	0.0001	6.75	153.3636
	R2404782-002	Ca (317.933 nm)	255.4114 o LR	0.06	9100607.3181
	R2404782-002	Cd (214.439 nm)	0.0002	22.19	13.3873
	R2404782-002	Co (230.786 nm)	-0.0004 u	18.81	-16.2216
	R2404782-002	Cr (267.716 nm)	0.0010	11.44	59.1605

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404782-002	Cu (327.395 nm)	0.0013	8.30	28.8819
	R2404782-002	Fe (234.350 nm)	0.1695	0.15	3086.1073
	R2404782-002	K (766.491 nm)	2.9509	0.34	3046.2886
	R2404782-002	Mg (279.078 nm)	109.5073 o	0.06	357830.4855
	R2404782-002	Mn (257.610 nm)	0.0124	0.16	4165.5713
	R2404782-002	Mo (202.032 nm)	0.0010	43.72	22.5772
	R2404782-002	Na (588.995 nm)	24.8158	0.09	324328.7241
	R2404782-002	Ni (230.299 nm)	0.0029	14.66	59.7432
	R2404782-002	Pb (220.353 nm)	0.0018	66.91	17.5327
	R2404782-002	Sb (217.582 nm)	-0.0019 u	> 100.00	3.0501
	R2404782-002	Se (196.026 nm)	-0.0027 u	77.93	2.7973
	R2404782-002	Si (252.851 nm)	6.7852	0.09	25886.7880
	R2404782-002	Sn (189.925 nm)	0.0013	82.67	6.1746
	R2404782-002	Sr (216.596 nm)	15.9902 o	0.18	281418.9277
	R2404782-002	Ti (336.122 nm)	0.0057	8.14	978.2534
	R2404782-002	Tl (190.794 nm)	0.0017	17.33	0.4378
	R2404782-002	V (292.401 nm)	0.0000 u	> 100.00	-39.0905
	R2404782-002	Y (360.074 nm)	0.98	0.44	478179.66
	R2404782-002	Y_R (360.074 nm)	0.98	0.44	476873.82
	R2404782-002	Zn (213.857 nm)	0.0038	1.95	243.7313
6/11/2024 02:05:55	R2404782-002S	Ag (328.068 nm)	0.0497	0.45	2601.7309
	R2404782-002S	Al (237.312 nm)	2.1762	0.21	5391.8535
	R2404782-002S	As (188.980 nm)	0.0396	5.00	65.1460
	R2404782-002S	B (249.772 nm)	1.1993	0.09	38947.2311
	R2404782-002S	Ba (230.424 nm)	1.8871	0.11	102757.1155
	R2404782-002S	Be (313.107 nm)	0.0479	0.18	52557.8912
	R2404782-002S	Ca (317.933 nm)	253.3298 o	0.19	9026459.0617
	R2404782-002S	Cd (214.439 nm)	0.0492	0.48	2802.9662
	R2404782-002S	Co (230.786 nm)	0.4728	0.18	8564.4905
	R2404782-002S	Cr (267.716 nm)	0.2021	0.17	10510.1063
	R2404782-002S	Cu (327.395 nm)	0.2469	0.16	10812.7025
	R2404782-002S	Fe (234.350 nm)	1.1614	0.22	21145.5552
	R2404782-002S	K (766.491 nm)	23.2527	0.22	25325.3896
	R2404782-002S	Mg (279.078 nm)	109.3127 o	0.25	357194.5403
	R2404782-002S	Mn (257.610 nm)	0.4972	0.16	166048.0851
	R2404782-002S	Mo (202.032 nm)	0.5204	0.40	5443.9921
	R2404782-002S	Na (588.995 nm)	44.4611	0.08	591865.0580
	R2404782-002S	Ni (230.299 nm)	0.4999	0.03	5895.8587
	R2404782-002S	Pb (220.353 nm)	0.5084	0.21	2661.9392
	R2404782-002S	Sb (217.582 nm)	0.4819	0.50	901.7467
	R2404782-002S	Se (196.026 nm)	1.0186	0.08	747.2806
	R2404782-002S	Si (252.851 nm)	6.7175	0.13	25628.7909
	R2404782-002S	Sn (189.925 nm)	4.9481	0.23	12187.1724
	R2404782-002S	Sr (216.596 nm)	17.6078 o	0.17	309887.8948
	R2404782-002S	Ti (336.122 nm)	0.4947	0.25	71625.7680
	R2404782-002S	Tl (190.794 nm)	1.8529	0.26	1809.3724
	R2404782-002S	V (292.401 nm)	0.4956	0.10	18747.9154
	R2404782-002S	Y (360.074 nm)	0.98	0.70	476545.77
	R2404782-002S	Y_R (360.074 nm)	0.97	0.70	475250.41
	R2404782-002S	Zn (213.857 nm)	0.5012	0.16	32082.0955
6/11/2024 02:09:10	R2404782-002SD	Ag (328.068 nm)	0.0499	0.12	2614.3399
	R2404782-002SD	Al (237.312 nm)	2.1595	0.11	5350.3666
	R2404782-002SD	As (188.980 nm)	0.0426	5.33	70.1844
	R2404782-002SD	B (249.772 nm)	1.2019	0.09	39031.3449
	R2404782-002SD	Ba (230.424 nm)	1.8858	0.18	102685.6088
	R2404782-002SD	Be (313.107 nm)	0.0479	0.15	52556.4822
	R2404782-002SD	Ca (317.933 nm)	254.6869 o	0.28	9074800.3050

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404782-002SD	Cd (214.439 nm)	0.0491	0.46	2799.1215
	R2404782-002SD	Co (230.786 nm)	0.4724	0.25	8555.8682
	R2404782-002SD	Cr (267.716 nm)	0.2020	0.18	10507.6259
	R2404782-002SD	Cu (327.395 nm)	0.2470	0.10	10815.2632
	R2404782-002SD	Fe (234.350 nm)	1.1647	0.13	21206.2524
	R2404782-002SD	K (766.491 nm)	23.3768	0.11	25461.6184
	R2404782-002SD	Mg (279.078 nm)	109.9615 o	0.23	359315.0199
	R2404782-002SD	Mn (257.610 nm)	0.4976	0.20	166193.0964
	R2404782-002SD	Mo (202.032 nm)	0.5218	0.32	5458.7496
	R2404782-002SD	Na (588.995 nm)	44.6949	0.27	595049.1317
	R2404782-002SD	Ni (230.299 nm)	0.5005	0.24	5902.3803
	R2404782-002SD	Pb (220.353 nm)	0.5086	0.17	2663.0903
	R2404782-002SD	Sb (217.582 nm)	0.4829	0.13	903.5475
	R2404782-002SD	Se (196.026 nm)	1.0157	0.32	745.1083
	R2404782-002SD	Si (252.851 nm)	6.7154	0.05	25620.8213
	R2404782-002SD	Sn (189.925 nm)	4.9651	0.17	12228.8707
	R2404782-002SD	Sr (216.596 nm)	17.6904 o	0.32	311341.6716
	R2404782-002SD	Ti (336.122 nm)	0.4940	0.02	71531.3976
	R2404782-002SD	Tl (190.794 nm)	1.8570	0.30	1813.3486
	R2404782-002SD	V (292.401 nm)	0.4962	0.21	18770.9585
	R2404782-002SD	Y (360.074 nm)	0.97	0.30	474253.39
	R2404782-002SD	Y_R (360.074 nm)	0.97	0.30	472954.36
	R2404782-002SD	Zn (213.857 nm)	0.5017	0.12	32111.0825
6/11/2024 02:12:26	R2404782-002A	Ag (328.068 nm)	0.0499	0.23	2613.3640
	R2404782-002A	Al (237.312 nm)	2.1647	0.19	5363.2321
	R2404782-002A	As (188.980 nm)	0.0404	2.66	66.5167
	R2404782-002A	B (249.772 nm)	1.2042	0.15	39107.8701
	R2404782-002A	Ba (230.424 nm)	1.8903	0.24	102932.4760
	R2404782-002A	Be (313.107 nm)	0.0479	0.29	52618.7660
	R2404782-002A	Ca (317.933 nm)	250.4947 o	0.34	8925473.0143
	R2404782-002A	Cd (214.439 nm)	0.0492	0.34	2803.1912
	R2404782-002A	Co (230.786 nm)	0.4730	0.26	8567.8556
	R2404782-002A	Cr (267.716 nm)	0.2021	0.19	10512.5369
	R2404782-002A	Cu (327.395 nm)	0.2474	0.03	10830.6782
	R2404782-002A	Fe (234.350 nm)	1.1695	0.28	21294.5991
	R2404782-002A	K (766.491 nm)	23.2704	0.13	25344.8210
	R2404782-002A	Mg (279.078 nm)	107.9627 o	0.29	352782.9344
	R2404782-002A	Mn (257.610 nm)	0.4977	0.25	166223.9185
	R2404782-002A	Mo (202.032 nm)	0.5226	0.48	5466.9527
	R2404782-002A	Na (588.995 nm)	44.0680	0.14	586512.9086
	R2404782-002A	Ni (230.299 nm)	0.5015	0.25	5914.6740
	R2404782-002A	Pb (220.353 nm)	0.5086	0.34	2663.1205
	R2404782-002A	Sb (217.582 nm)	0.4832	0.55	904.2582
	R2404782-002A	Se (196.026 nm)	1.0168	0.43	745.9180
	R2404782-002A	Si (252.851 nm)	6.6065	0.12	25205.5866
	R2404782-002A	Sn (189.925 nm)	4.9521	0.17	12196.9520
	R2404782-002A	Sr (216.596 nm)	17.4085 o	0.36	306380.1354
	R2404782-002A	Ti (336.122 nm)	0.4952	0.12	71696.7815
	R2404782-002A	Tl (190.794 nm)	1.8572	0.33	1813.5415
	R2404782-002A	V (292.401 nm)	0.4961	0.19	18766.9325
	R2404782-002A	Y (360.074 nm)	0.97	0.12	473547.27
	R2404782-002A	Y_R (360.074 nm)	0.97	0.12	472266.21
	R2404782-002A	Zn (213.857 nm)	0.5075	0.16	32482.6316
6/11/2024 02:15:41	R2404782-002L 5X	Ag (328.068 nm)	-0.0005 u	30.60	-244.5331
	R2404782-002L 5X	Al (237.312 nm)	0.0391	2.20	108.8535
	R2404782-002L 5X	As (188.980 nm)	-0.0011 u	> 100.00	-3.8565
	R2404782-002L 5X	B (249.772 nm)	0.0425	0.64	1384.7337

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404782-002L 5X	Ba (230.424 nm)	0.0018	3.03	107.2689
	R2404782-002L 5X	Be (313.107 nm)	0.0001	7.76	121.7189
	R2404782-002L 5X	Ca (317.933 nm)	55.3325 o	0.41	1973710.3088
	R2404782-002L 5X	Cd (214.439 nm)	0.0001	29.19	9.9049
	R2404782-002L 5X	Co (230.786 nm)	-0.0002 u	85.66	-13.6961
	R2404782-002L 5X	Cr (267.716 nm)	0.0002	54.29	17.3042
	R2404782-002L 5X	Cu (327.395 nm)	0.0006	12.58	0.1552
	R2404782-002L 5X	Fe (234.350 nm)	0.0362	1.60	659.3778
	R2404782-002L 5X	K (766.491 nm)	0.6159	2.49	483.8485
	R2404782-002L 5X	Mg (279.078 nm)	21.8517	0.36	71379.6025
	R2404782-002L 5X	Mn (257.610 nm)	0.0026	0.53	888.9124
	R2404782-002L 5X	Mo (202.032 nm)	0.0021	38.14	34.3542
	R2404782-002L 5X	Na (588.995 nm)	4.7000	0.01	50383.2518
	R2404782-002L 5X	Ni (230.299 nm)	0.0008	45.53	34.5109
	R2404782-002L 5X	Pb (220.353 nm)	0.0014	9.01	15.0331
	R2404782-002L 5X	Sb (217.582 nm)	-0.0014 u	> 100.00	3.9373
	R2404782-002L 5X	Se (196.026 nm)	-0.0013 u	> 100.00	3.8623
	R2404782-002L 5X	Si (252.851 nm)	1.3524	0.42	5185.6213
	R2404782-002L 5X	Sn (189.925 nm)	0.0006	44.00	4.5059
	R2404782-002L 5X	Sr (216.596 nm)	3.2963	0.55	58012.0517
	R2404782-002L 5X	Ti (336.122 nm)	0.0021	25.85	457.1326
	R2404782-002L 5X	Tl (190.794 nm)	0.0022	84.01	0.9394
	R2404782-002L 5X	V (292.401 nm)	-0.0004 u	47.87	-53.8463
	R2404782-002L 5X	Y (360.074 nm)	1.02	0.04	500282.76
	R2404782-002L 5X	Y_R (360.074 nm)	1.02	0.04	498922.36
	R2404782-002L 5X	Zn (213.857 nm)	0.0008	8.27	48.6199
6/11/2024 02:18:56	R2404782-003	Ag (328.068 nm)	-0.0006 u	29.09	-248.8017
	R2404782-003	Al (237.312 nm)	0.0129	8.10	44.1907
	R2404782-003	As (188.980 nm)	0.0002 u	> 100.00	-1.6540
	R2404782-003	B (249.772 nm)	0.3515	0.16	11420.7562
	R2404782-003	Ba (230.424 nm)	0.0134	0.48	740.1079
	R2404782-003	Be (313.107 nm)	0.0001	4.61	142.8430
	R2404782-003	Ca (317.933 nm)	242.0074 o	0.45	8623152.6266
	R2404782-003	Cd (214.439 nm)	0.0002	13.08	12.5919
	R2404782-003	Co (230.786 nm)	-0.0003 u	31.16	-14.6223
	R2404782-003	Cr (267.716 nm)	0.0006	19.59	37.1119
	R2404782-003	Cu (327.395 nm)	0.0009	51.67	9.8234
	R2404782-003	Fe (234.350 nm)	0.2316	0.55	4215.9699
	R2404782-003	K (766.491 nm)	2.7897	1.14	2869.3389
	R2404782-003	Mg (279.078 nm)	94.5660 o	0.32	309003.7366
	R2404782-003	Mn (257.610 nm)	0.0143	0.29	4790.7516
	R2404782-003	Mo (202.032 nm)	0.0016	25.12	28.4442
	R2404782-003	Na (588.995 nm)	8.4832	0.33	101904.8719
	R2404782-003	Ni (230.299 nm)	0.0019	3.17	47.9532
	R2404782-003	Pb (220.353 nm)	0.0015	48.54	15.9261
	R2404782-003	Sb (217.582 nm)	-0.0007 u	> 100.00	5.3450
	R2404782-003	Se (196.026 nm)	-0.0015 u	> 100.00	3.6784
	R2404782-003	Si (252.851 nm)	5.1203	0.24	19542.8980
	R2404782-003	Sn (189.925 nm)	0.0008 u	> 100.00	4.9180
	R2404782-003	Sr (216.596 nm)	13.9184 o	0.40	244957.1304
	R2404782-003	Ti (336.122 nm)	0.0029	12.85	578.4030
	R2404782-003	Tl (190.794 nm)	0.0033	66.92	1.9831
	R2404782-003	V (292.401 nm)	-0.0003 u	60.09	-52.8539
	R2404782-003	Y (360.074 nm)	0.98	0.06	479411.12
	R2404782-003	Y_R (360.074 nm)	0.98	0.06	478125.41
	R2404782-003	Zn (213.857 nm)	0.0029	1.14	185.9990
6/11/2024 02:22:11	R2404782-004	Ag (328.068 nm)	-0.0005 u	24.26	-245.4334

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404782-004	Al (237.312 nm)	0.0130	14.69	44.3811
	R2404782-004	As (188.980 nm)	-0.0005 u	> 100.00	-2.9298
	R2404782-004	B (249.772 nm)	0.3522	0.17	11441.0094
	R2404782-004	Ba (230.424 nm)	0.0135	0.71	745.4403
	R2404782-004	Be (313.107 nm)	0.0001	3.05	127.7664
	R2404782-004	Ca (317.933 nm)	242.5512 o	0.20	8642521.4561
	R2404782-004	Cd (214.439 nm)	0.0003	5.57	17.9452
	R2404782-004	Co (230.786 nm)	-0.0003 u	93.01	-15.8472
	R2404782-004	Cr (267.716 nm)	0.0004	18.21	26.6995
	R2404782-004	Cu (327.395 nm)	0.0008	35.75	8.4492
	R2404782-004	Fe (234.350 nm)	0.2348	0.28	4274.4554
	R2404782-004	K (766.491 nm)	2.7988	0.66	2879.3289
	R2404782-004	Mg (279.078 nm)	94.7199 o	0.20	309506.6018
	R2404782-004	Mn (257.610 nm)	0.0143	0.45	4777.6687
	R2404782-004	Mo (202.032 nm)	0.0014	29.70	26.6863
	R2404782-004	Na (588.995 nm)	8.5443	0.05	102736.6122
	R2404782-004	Ni (230.299 nm)	0.0021	14.99	49.5995
	R2404782-004	Pb (220.353 nm)	0.0010 u	> 100.00	12.9509
	R2404782-004	Sb (217.582 nm)	-0.0027 u	68.61	1.6559
	R2404782-004	Se (196.026 nm)	0.0002 u	> 100.00	4.9312
	R2404782-004	Si (252.851 nm)	5.1385	0.19	19612.3135
	R2404782-004	Sn (189.925 nm)	0.0001 u	> 100.00	3.3604
	R2404782-004	Sr (216.596 nm)	13.9259 o	0.25	245089.3768
	R2404782-004	Ti (336.122 nm)	0.0026	8.63	529.7753
	R2404782-004	Tl (190.794 nm)	0.0019	33.64	0.6781
	R2404782-004	V (292.401 nm)	-0.0003 u	10.61	-51.7434
	R2404782-004	Y (360.074 nm)	0.99	0.49	481465.60
	R2404782-004	Y_R (360.074 nm)	0.98	0.48	480144.85
	R2404782-004	Zn (213.857 nm)	0.0051	2.23	329.4830
6/11/2024 02:25:26	Continuing Calibration Verification2	Ag (328.068 nm)	0.5036	0.07	28314.9987
	Continuing Calibration Verification2	Al (237.312 nm)	9.6686	0.13	23912.7971
	Continuing Calibration Verification2	As (188.980 nm)	0.9797	0.21	1659.5067
	Continuing Calibration Verification2	B (249.772 nm)	2.4058	0.17	78123.2801
	Continuing Calibration Verification2	Ba (230.424 nm)	9.6162	0.47	523582.3268
	Continuing Calibration Verification2	Be (313.107 nm)	0.2428	0.38	266493.0757
	Continuing Calibration Verification2	Ca (317.933 nm)	26.2811	0.31	938886.9741
	Continuing Calibration Verification2	Cd (214.439 nm)	0.5135	0.54	29255.1163
	Continuing Calibration Verification2	Co (230.786 nm)	2.4920	0.38	45180.0218
	Continuing Calibration Verification2	Cr (267.716 nm)	0.5254	0.35	27318.2715
	Continuing Calibration Verification2	Cu (327.395 nm)	1.2024	0.34	52753.8903
	Continuing Calibration Verification2	Fe (234.350 nm)	5.0731	0.35	92370.4816
	Continuing Calibration Verification2	K (766.491 nm)	23.8841	0.09	26018.3809
	Continuing Calibration Verification2	Mg (279.078 nm)	25.9667	0.29	84827.0403
	Continuing Calibration Verification2	Mn (257.610 nm)	0.7474	0.32	249600.5929
	Continuing Calibration Verification2	Mo (202.032 nm)	2.7232	0.41	28438.1260
	Continuing Calibration Verification2	Na (588.995 nm)	25.1145	0.26	328395.8373
	Continuing Calibration Verification2	Ni (230.299 nm)	2.0906	0.30	24574.2666
	Continuing Calibration Verification2	Pb (220.353 nm)	0.5271	0.23	2759.6247
	Continuing Calibration Verification2	Sb (217.582 nm)	4.6668	0.22	8675.5402
	Continuing Calibration Verification2	Se (196.026 nm)	0.4817	0.65	355.9224
	Continuing Calibration Verification2	Si (252.851 nm)	9.8002	0.46	37374.7872
	Continuing Calibration Verification2	Sn (189.925 nm)	5.0519	0.23	12442.6148
	Continuing Calibration Verification2	Sr (216.596 nm)	2.5142	0.49	44248.1865
	Continuing Calibration Verification2	Ti (336.122 nm)	2.5140	0.24	363376.2463
	Continuing Calibration Verification2	Tl (190.794 nm)	0.9775	0.57	953.9854
	Continuing Calibration Verification2	V (292.401 nm)	2.5402	0.31	96264.7125
	Continuing Calibration Verification2	Y (360.074 nm)	1.02	0.27	496334.20

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Verification2	Y_R (360.074 nm)	1.01	0.27	494979.72
	Continuing Calibration Verification2	Zn (213.857 nm)	0.9903	0.36	63389.8230
6/11/2024 02:28:40	Continuing Calibration Blank2	Ag (328.068 nm)	-0.0007 u	7.50	-251.7835
	Continuing Calibration Blank2	Al (237.312 nm)	0.0019	53.26	17.0395
	Continuing Calibration Blank2	As (188.980 nm)	0.0012	34.51	-0.0651
	Continuing Calibration Blank2	B (249.772 nm)	0.0018	16.44	65.1092
	Continuing Calibration Blank2	Ba (230.424 nm)	0.0004	57.08	34.3451
	Continuing Calibration Blank2	Be (313.107 nm)	0.0001	9.59	106.9119
	Continuing Calibration Blank2	Ca (317.933 nm)	0.0168	4.50	3341.0442
	Continuing Calibration Blank2	Cd (214.439 nm)	0.0001	68.97	8.8720
	Continuing Calibration Blank2	Co (230.786 nm)	0.0000 u	> 100.00	-9.8484
	Continuing Calibration Blank2	Cr (267.716 nm)	0.0002	> 100.00	14.4690
	Continuing Calibration Blank2	Cu (327.395 nm)	0.0005	40.03	-3.7214
	Continuing Calibration Blank2	Fe (234.350 nm)	0.0055	15.35	98.8126
	Continuing Calibration Blank2	K (766.491 nm)	0.0837	42.46	-100.1536
	Continuing Calibration Blank2	Mg (279.078 nm)	0.0033	29.26	-18.8576
	Continuing Calibration Blank2	Mn (257.610 nm)	0.0001	2.58	58.4763
	Continuing Calibration Blank2	Mo (202.032 nm)	0.0037	38.44	50.8066
	Continuing Calibration Blank2	Na (588.995 nm)	0.0302	17.34	-13211.9753
	Continuing Calibration Blank2	Ni (230.299 nm)	0.0004	84.01	29.4125
	Continuing Calibration Blank2	Pb (220.353 nm)	0.0006 u	> 100.00	10.9481
	Continuing Calibration Blank2	Sb (217.582 nm)	0.0008	> 100.00	8.0064
	Continuing Calibration Blank2	Se (196.026 nm)	0.0008 u	> 100.00	5.3367
	Continuing Calibration Blank2	Si (252.851 nm)	-0.0040 u	16.31	17.5226
	Continuing Calibration Blank2	Sn (189.925 nm)	0.0003 u	> 100.00	3.7065
	Continuing Calibration Blank2	Sr (216.596 nm)	0.0006	22.73	9.5045
	Continuing Calibration Blank2	Ti (336.122 nm)	0.0029	45.61	573.3271
	Continuing Calibration Blank2	Tl (190.794 nm)	0.0018	62.41	0.5996
	Continuing Calibration Blank2	V (292.401 nm)	-0.0002 u	80.75	-46.4180
	Continuing Calibration Blank2	Y (360.074 nm)	1.05	0.03	513778.54
	Continuing Calibration Blank2	Y_R (360.074 nm)	1.05	0.03	512407.00
	Continuing Calibration Blank2	Zn (213.857 nm)	0.0006	13.33	37.6348
6/11/2024 02:31:54	R2404782-005	Ag (328.068 nm)	-0.0006 u	34.37	-249.9440
	R2404782-005	Al (237.312 nm)	0.2720	0.59	684.5849
	R2404782-005	As (188.980 nm)	-0.0012 u	94.32	-3.9996
	R2404782-005	B (249.772 nm)	0.2717	0.17	8827.3112
	R2404782-005	Ba (230.424 nm)	0.0129	0.69	713.5156
	R2404782-005	Be (313.107 nm)	0.0001	11.11	138.3179
	R2404782-005	Ca (317.933 nm)	184.8366 o	0.39	6586700.9296
	R2404782-005	Cd (214.439 nm)	0.0003	11.71	17.5582
	R2404782-005	Co (230.786 nm)	-0.0001 u	> 100.00	-11.2615
	R2404782-005	Cr (267.716 nm)	0.0007	13.07	44.5104
	R2404782-005	Cu (327.395 nm)	0.0009	33.31	9.8249
	R2404782-005	Fe (234.350 nm)	0.2128	0.56	3874.0449
	R2404782-005	K (766.491 nm)	2.6846	1.04	2754.0180
	R2404782-005	Mg (279.078 nm)	74.8813 o	0.26	244675.7319
	R2404782-005	Mn (257.610 nm)	0.0154	0.38	5145.7923
	R2404782-005	Mo (202.032 nm)	0.0016	30.26	28.6387
	R2404782-005	Na (588.995 nm)	6.9880	0.07	81542.1145
	R2404782-005	Ni (230.299 nm)	0.0018	14.19	46.5246
	R2404782-005	Pb (220.353 nm)	0.0013	8.57	14.9128
	R2404782-005	Sb (217.582 nm)	0.0024	25.56	11.0690
	R2404782-005	Se (196.026 nm)	-0.0011 u	> 100.00	3.9624
	R2404782-005	Si (252.851 nm)	5.5074	0.15	21017.7310
	R2404782-005	Sn (189.925 nm)	0.0006	80.83	4.5250
	R2404782-005	Sr (216.596 nm)	16.3848 o	0.37	288365.0374
	R2404782-005	Ti (336.122 nm)	0.0068	12.74	1131.2109

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404782-005	Tl (190.794 nm)	0.0021	86.33	0.8238
	R2404782-005	V (292.401 nm)	0.0001 u	> 100.00	-38.0828
	R2404782-005	Y (360.074 nm)	0.99	0.24	484371.99
	R2404782-005	Y_R (360.074 nm)	0.99	0.24	483055.77
	R2404782-005	Zn (213.857 nm)	0.0026	3.00	164.6664
6/11/2024 02:35:09	R2404782-006	Ag (328.068 nm)	-0.0007 u	7.17	-254.8917
	R2404782-006	Al (237.312 nm)	0.1947	0.95	493.6865
	R2404782-006	As (188.980 nm)	0.0005 u	> 100.00	-1.2568
	R2404782-006	B (249.772 nm)	0.4757	0.19	15453.1980
	R2404782-006	Ba (230.424 nm)	0.0075	0.53	420.4718
	R2404782-006	Be (313.107 nm)	0.0001	2.00	177.0531
	R2404782-006	Ca (317.933 nm)	472.0460 o LR	0.36	16817224.0385
	R2404782-006	Cd (214.439 nm)	0.0004	15.02	21.9359
	R2404782-006	Co (230.786 nm)	-0.0002 u	> 100.00	-13.4155
	R2404782-006	Cr (267.716 nm)	0.0006	13.56	35.8716
	R2404782-006	Cu (327.395 nm)	0.0027	4.45	90.8926
	R2404782-006	Fe (234.350 nm)	0.1681	0.56	3060.0816
	R2404782-006	K (766.491 nm)	4.5486	0.32	4799.5617
	R2404782-006	Mg (279.078 nm)	197.5851 o	0.24	645661.2080
	R2404782-006	Mn (257.610 nm)	0.0353	0.39	11800.0269
	R2404782-006	Mo (202.032 nm)	0.0014	33.68	26.8320
	R2404782-006	Na (588.995 nm)	21.0069	0.23	272457.5426
	R2404782-006	Ni (230.299 nm)	0.0024	28.56	53.3885
	R2404782-006	Pb (220.353 nm)	0.0022	35.17	19.4276
	R2404782-006	Sb (217.582 nm)	0.0029	10.41	12.0483
	R2404782-006	Se (196.026 nm)	0.0017	> 100.00	5.9984
	R2404782-006	Si (252.851 nm)	5.1967	0.17	19833.7982
	R2404782-006	Sn (189.925 nm)	0.0007	84.13	4.6396
	R2404782-006	Sr (216.596 nm)	11.0873 o	0.29	195130.0490
	R2404782-006	Ti (336.122 nm)	0.0077	4.47	1269.2049
	R2404782-006	Tl (190.794 nm)	0.0025 u	> 100.00	1.2359
	R2404782-006	V (292.401 nm)	0.0001 u	> 100.00	-37.7074
	R2404782-006	Y (360.074 nm)	0.95	0.10	465467.77
	R2404782-006	Y_R (360.074 nm)	0.95	0.10	464170.40
	R2404782-006	Zn (213.857 nm)	0.0054	0.93	348.5083
6/11/2024 02:38:24	R2404782-007	Ag (328.068 nm)	-0.0006 u	17.96	-246.4893
	R2404782-007	Al (237.312 nm)	0.1884	0.76	478.0118
	R2404782-007	As (188.980 nm)	0.0001 u	> 100.00	-1.8264
	R2404782-007	B (249.772 nm)	0.0925	0.29	3010.3003
	R2404782-007	Ba (230.424 nm)	0.0413	0.64	2262.2779
	R2404782-007	Be (313.107 nm)	0.0001	10.24	140.2808
	R2404782-007	Ca (317.933 nm)	298.6580 o LR	0.24	10641070.9141
	R2404782-007	Cd (214.439 nm)	0.0003	8.52	20.1718
	R2404782-007	Co (230.786 nm)	0.0005	36.15	-0.1546
	R2404782-007	Cr (267.716 nm)	0.0009	11.57	54.4835
	R2404782-007	Cu (327.395 nm)	0.0017	10.65	45.8515
	R2404782-007	Fe (234.350 nm)	0.6865	0.17	12498.5705
	R2404782-007	K (766.491 nm)	3.5298	0.52	3681.5463
	R2404782-007	Mg (279.078 nm)	156.6434 o	0.24	511867.1145
	R2404782-007	Mn (257.610 nm)	0.5042	0.25	168391.6565
	R2404782-007	Mo (202.032 nm)	0.0011	26.83	23.5860
	R2404782-007	Na (588.995 nm)	20.3824	0.08	263952.6955
	R2404782-007	Ni (230.299 nm)	0.0046	10.47	79.1631
	R2404782-007	Pb (220.353 nm)	0.0010	16.58	13.2051
	R2404782-007	Sb (217.582 nm)	0.0001 u	> 100.00	6.8057
	R2404782-007	Se (196.026 nm)	-0.0014 u	> 100.00	3.7464
	R2404782-007	Si (252.851 nm)	8.7889	0.16	33521.4685

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404782-007	Sn (189.925 nm)	0.0003 u	> 100.00	3.7550
	R2404782-007	Sr (216.596 nm)	7.5374 o	0.33	132654.3260
	R2404782-007	Ti (336.122 nm)	0.0061	3.31	1030.7924
	R2404782-007	Tl (190.794 nm)	0.0024	70.86	1.1303
	R2404782-007	V (292.401 nm)	0.0001	66.39	-35.7320
	R2404782-007	Y (360.074 nm)	0.98	0.20	478515.58
	R2404782-007	Y_R (360.074 nm)	0.98	0.20	477201.44
	R2404782-007	Zn (213.857 nm)	0.0037	1.95	239.3048
6/11/2024 02:41:39	R2404782-008	Ag (328.068 nm)	-0.0004 u	10.78	-240.1608
	R2404782-008	Al (237.312 nm)	3.0828	0.04	7632.9250
	R2404782-008	As (188.980 nm)	0.0004 u	> 100.00	-1.3170
	R2404782-008	B (249.772 nm)	0.0770	0.49	2505.9055
	R2404782-008	Ba (230.424 nm)	0.0734	0.50	4008.3663
	R2404782-008	Be (313.107 nm)	0.0002	3.95	243.5810
	R2404782-008	Ca (317.933 nm)	197.9814 o	0.28	7054927.2209
	R2404782-008	Cd (214.439 nm)	0.0002	12.61	14.7221
	R2404782-008	Co (230.786 nm)	0.0007	27.86	2.7642
	R2404782-008	Cr (267.716 nm)	0.0036	1.23	194.4642
	R2404782-008	Cu (327.395 nm)	0.0040	8.91	148.6130
	R2404782-008	Fe (234.350 nm)	2.5545	0.25	46512.4085
	R2404782-008	K (766.491 nm)	3.1093	1.09	3220.0889
	R2404782-008	Mg (279.078 nm)	81.4616 o	0.26	266179.5210
	R2404782-008	Mn (257.610 nm)	0.1333	0.27	44526.9920
	R2404782-008	Mo (202.032 nm)	0.0022	10.57	34.6756
	R2404782-008	Na (588.995 nm)	8.5857	0.14	103300.9465
	R2404782-008	Ni (230.299 nm)	0.0075	5.99	113.3356
	R2404782-008	Pb (220.353 nm)	0.0029	55.68	22.9161
	R2404782-008	Sb (217.582 nm)	-0.0014 u	32.69	4.0418
	R2404782-008	Se (196.026 nm)	-0.0006 u	> 100.00	4.3057
	R2404782-008	Si (252.851 nm)	9.1069	0.14	34733.1657
	R2404782-008	Sn (189.925 nm)	0.0001 u	> 100.00	3.3522
	R2404782-008	Sr (216.596 nm)	5.6944 o	0.39	100218.6722
	R2404782-008	Ti (336.122 nm)	0.0441	1.35	6519.6526
	R2404782-008	Tl (190.794 nm)	0.0016	17.50	0.3972
	R2404782-008	V (292.401 nm)	0.0049	3.01	146.5161
	R2404782-008	Y (360.074 nm)	1.00	0.28	486968.12
	R2404782-008	Y_R (360.074 nm)	1.00	0.28	485636.19
	R2404782-008	Zn (213.857 nm)	0.0198	0.58	1267.6714
6/11/2024 02:44:54	R2404782-009	Ag (328.068 nm)	-0.0005 u	30.91	-243.3014
	R2404782-009	Al (237.312 nm)	0.0565	3.19	151.8399
	R2404782-009	As (188.980 nm)	-0.0006 u	> 100.00	-3.0339
	R2404782-009	B (249.772 nm)	0.3819	0.18	12405.0519
	R2404782-009	Ba (230.424 nm)	0.0060	0.33	336.6337
	R2404782-009	Be (313.107 nm)	0.0001	6.65	137.8128
	R2404782-009	Ca (317.933 nm)	453.5967 o LR	0.16	16160053.6963
	R2404782-009	Cd (214.439 nm)	0.0002	22.89	16.1091
	R2404782-009	Co (230.786 nm)	-0.0003 u	83.39	-15.3789
	R2404782-009	Cr (267.716 nm)	0.0003	81.61	22.3978
	R2404782-009	Cu (327.395 nm)	0.0013	23.25	30.4453
	R2404782-009	Fe (234.350 nm)	0.7248	0.22	13197.1593
	R2404782-009	K (766.491 nm)	5.9301	0.11	6315.6178
	R2404782-009	Mg (279.078 nm)	170.0420 o	0.17	555652.8896
	R2404782-009	Mn (257.610 nm)	0.0338	0.09	11291.9569
	R2404782-009	Mo (202.032 nm)	0.0086	0.41	101.5521
	R2404782-009	Na (588.995 nm)	20.6623	0.22	267764.2695
	R2404782-009	Ni (230.299 nm)	0.0020	18.14	49.1169
	R2404782-009	Pb (220.353 nm)	0.0017	20.28	16.9972

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404782-009	Sb (217.582 nm)	0.0000 u	> 100.00	6.5374
	R2404782-009	Se (196.026 nm)	-0.0014 u	> 100.00	3.7702
	R2404782-009	Si (252.851 nm)	5.6084	0.23	21402.5514
	R2404782-009	Sn (189.925 nm)	0.0003 u	> 100.00	3.7346
	R2404782-009	Sr (216.596 nm)	10.8737 o	0.23	191370.8819
	R2404782-009	Ti (336.122 nm)	0.0054	2.29	931.5224
	R2404782-009	Tl (190.794 nm)	0.0031	38.51	1.7892
	R2404782-009	V (292.401 nm)	-0.0005 u	40.66	-58.2417
	R2404782-009	Y (360.074 nm)	0.96	0.51	471455.44
	R2404782-009	Y_R (360.074 nm)	0.96	0.51	470172.22
	R2404782-009	Zn (213.857 nm)	0.0078	0.58	499.0455
6/11/2024 02:48:09	R2404782-010	Ag (328.068 nm)	-0.0005 u	33.78	-242.7528
	R2404782-010	Al (237.312 nm)	0.2074	0.74	524.9483
	R2404782-010	As (188.980 nm)	-0.0002 u	> 100.00	-2.4306
	R2404782-010	B (249.772 nm)	0.0649	0.33	2113.1505
	R2404782-010	Ba (230.424 nm)	0.0321	0.70	1756.7960
	R2404782-010	Be (313.107 nm)	0.0001	11.32	119.3703
	R2404782-010	Ca (317.933 nm)	126.9416 o	0.33	4524458.1192
	R2404782-010	Cd (214.439 nm)	0.0002	23.60	13.6121
	R2404782-010	Co (230.786 nm)	0.0000 u	> 100.00	-9.3238
	R2404782-010	Cr (267.716 nm)	0.0008	8.40	46.8985
	R2404782-010	Cu (327.395 nm)	0.0016	24.85	41.5236
	R2404782-010	Fe (234.350 nm)	0.2822	0.50	5137.3472
	R2404782-010	K (766.491 nm)	3.2016	0.48	3321.3620
	R2404782-010	Mg (279.078 nm)	101.9660 o	0.29	333186.1534
	R2404782-010	Mn (257.610 nm)	0.0091	0.34	3041.9637
	R2404782-010	Mo (202.032 nm)	0.0035	4.48	48.3605
	R2404782-010	Na (588.995 nm)	38.7846	0.11	514560.2268
	R2404782-010	Ni (230.299 nm)	0.0025	8.88	54.1622
	R2404782-010	Pb (220.353 nm)	0.0020	28.70	18.2751
	R2404782-010	Sb (217.582 nm)	-0.0009 u	> 100.00	4.9811
	R2404782-010	Se (196.026 nm)	0.0005 u	> 100.00	5.1741
	R2404782-010	Si (252.851 nm)	7.3833	0.42	28165.5626
	R2404782-010	Sn (189.925 nm)	0.0001 u	> 100.00	3.1456
	R2404782-010	Sr (216.596 nm)	7.5926 o	0.40	133625.3596
	R2404782-010	Ti (336.122 nm)	0.0044	4.62	797.8261
	R2404782-010	Tl (190.794 nm)	0.0012 u	> 100.00	0.0107
	R2404782-010	V (292.401 nm)	0.0003	9.40	-28.4296
	R2404782-010	Y (360.074 nm)	1.00	0.38	487571.81
	R2404782-010	Y_R (360.074 nm)	1.00	0.37	486240.04
	R2404782-010	Zn (213.857 nm)	0.0116	1.26	742.3902
6/11/2024 02:51:25	R2404782-011	Ag (328.068 nm)	-0.0005 u	4.00	-244.4959
	R2404782-011	Al (237.312 nm)	0.0533	1.77	144.0229
	R2404782-011	As (188.980 nm)	-0.0010 u	> 100.00	-3.7241
	R2404782-011	B (249.772 nm)	0.8411	0.20	27316.8640
	R2404782-011	Ba (230.424 nm)	0.0075	1.11	421.1945
	R2404782-011	Be (313.107 nm)	0.0001	3.77	148.9661
	R2404782-011	Ca (317.933 nm)	463.1951 o LR	0.32	16501952.0091
	R2404782-011	Cd (214.439 nm)	0.0003	19.34	19.2677
	R2404782-011	Co (230.786 nm)	0.0013	32.62	13.3990
	R2404782-011	Cr (267.716 nm)	0.0005	17.95	34.3004
	R2404782-011	Cu (327.395 nm)	0.0009	8.85	12.3277
	R2404782-011	Fe (234.350 nm)	0.4530	0.21	8247.9211
	R2404782-011	K (766.491 nm)	5.9821	0.64	6372.7528
	R2404782-011	Mg (279.078 nm)	215.3151 o	0.31	703601.3751
	R2404782-011	Mn (257.610 nm)	0.1027	0.23	34330.3354
	R2404782-011	Mo (202.032 nm)	0.0003 u	> 100.00	14.9965

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404782-011	Na (588.995 nm)	39.4197	0.13	523210.0345
	R2404782-011	Ni (230.299 nm)	0.0027	38.40	56.8795
	R2404782-011	Pb (220.353 nm)	0.0012	26.21	14.1269
	R2404782-011	Sb (217.582 nm)	-0.0014 u	95.75	4.0006
	R2404782-011	Se (196.026 nm)	0.0006 u	> 100.00	5.1803
	R2404782-011	Si (252.851 nm)	8.2252	0.20	31373.6825
	R2404782-011	Sn (189.925 nm)	0.0006	> 100.00	4.4960
	R2404782-011	Sr (216.596 nm)	10.8762 o	0.45	191415.2254
	R2404782-011	Ti (336.122 nm)	0.0055	1.67	952.8501
	R2404782-011	Tl (190.794 nm)	0.0015 u	> 100.00	0.2296
	R2404782-011	V (292.401 nm)	0.0006	30.59	-19.0104
	R2404782-011	Y (360.074 nm)	0.96	0.92	468437.96
	R2404782-011	Y_R (360.074 nm)	0.96	0.92	467135.76
	R2404782-011	Zn (213.857 nm)	0.0038	1.05	243.8627
6/11/2024 02:54:40	R2404782-012	Ag (328.068 nm)	-0.0007 u	18.16	-254.0278
	R2404782-012	Al (237.312 nm)	0.0074	55.16	30.5018
	R2404782-012	As (188.980 nm)	0.0006 u	> 100.00	-0.9646
	R2404782-012	B (249.772 nm)	0.4609	0.09	14971.3059
	R2404782-012	Ba (230.424 nm)	0.0060	0.52	336.1195
	R2404782-012	Be (313.107 nm)	0.0001	1.57	154.3793
	R2404782-012	Ca (317.933 nm)	459.5754 o LR	0.16	16373015.0868
	R2404782-012	Cd (214.439 nm)	0.0002	18.54	15.5607
	R2404782-012	Co (230.786 nm)	-0.0002 u	> 100.00	-13.1122
	R2404782-012	Cr (267.716 nm)	0.0006	13.82	36.1712
	R2404782-012	Cu (327.395 nm)	0.0010	26.39	14.9535
	R2404782-012	Fe (234.350 nm)	0.3059	0.09	5569.3248
	R2404782-012	K (766.491 nm)	3.7536	1.09	3927.1898
	R2404782-012	Mg (279.078 nm)	146.7581 o	0.14	479562.8769
	R2404782-012	Mn (257.610 nm)	0.0238	0.16	7974.7874
	R2404782-012	Mo (202.032 nm)	0.0022	15.34	35.0968
	R2404782-012	Na (588.995 nm)	16.4287	0.22	210110.1743
	R2404782-012	Ni (230.299 nm)	0.0018	21.74	46.9389
	R2404782-012	Pb (220.353 nm)	0.0014	18.94	15.1781
	R2404782-012	Sb (217.582 nm)	-0.0026 u	98.96	1.8367
	R2404782-012	Se (196.026 nm)	-0.0016 u	> 100.00	3.6361
	R2404782-012	Si (252.851 nm)	5.0363	0.06	19222.6612
	R2404782-012	Sn (189.925 nm)	0.0011	34.99	5.6571
	R2404782-012	Sr (216.596 nm)	10.9368 o	0.05	192481.3108
	R2404782-012	Ti (336.122 nm)	0.0046	1.20	816.5193
	R2404782-012	Tl (190.794 nm)	0.0022 u	> 100.00	0.9692
	R2404782-012	V (292.401 nm)	-0.0006 u	35.74	-63.1869
	R2404782-012	Y (360.074 nm)	0.97	0.52	473377.54
	R2404782-012	Y_R (360.074 nm)	0.97	0.52	472076.42
	R2404782-012	Zn (213.857 nm)	0.0030	0.94	193.2703
6/11/2024 02:57:56	R2404782-013	Ag (328.068 nm)	-0.0005 u	25.94	-240.7810
	R2404782-013	Al (237.312 nm)	0.0076	25.47	31.0903
	R2404782-013	As (188.980 nm)	0.0014 u	> 100.00	0.2718
	R2404782-013	B (249.772 nm)	0.3243	0.08	10535.7405
	R2404782-013	Ba (230.424 nm)	0.0062	1.96	346.8131
	R2404782-013	Be (313.107 nm)	0.0001	6.35	138.7146
	R2404782-013	Ca (317.933 nm)	449.4715 o LR	0.31	16013111.8652
	R2404782-013	Cd (214.439 nm)	0.0002	19.21	15.0916
	R2404782-013	Co (230.786 nm)	-0.0002 u	> 100.00	-13.1792
	R2404782-013	Cr (267.716 nm)	0.0004	43.03	25.5623
	R2404782-013	Cu (327.395 nm)	0.0007	50.23	4.8987
	R2404782-013	Fe (234.350 nm)	0.3877	0.37	7058.8635
	R2404782-013	K (766.491 nm)	3.0909	0.67	3199.8655

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404782-013	Mg (279.078 nm)	139.8560 o	0.30	457007.4345
	R2404782-013	Mn (257.610 nm)	0.0461	0.25	15418.9403
	R2404782-013	Mo (202.032 nm)	0.0031	10.22	44.7834
	R2404782-013	Na (588.995 nm)	12.0499	0.08	150477.8176
	R2404782-013	Ni (230.299 nm)	0.0015	11.96	43.1262
	R2404782-013	Pb (220.353 nm)	0.0011	42.82	13.4686
	R2404782-013	Sb (217.582 nm)	-0.0014 u	> 100.00	4.0790
	R2404782-013	Se (196.026 nm)	-0.0026 u	> 100.00	2.8641
	R2404782-013	Si (252.851 nm)	5.0296	0.25	19197.2491
	R2404782-013	Sn (189.925 nm)	-0.0006 u	50.72	1.5018
	R2404782-013	Sr (216.596 nm)	10.9857 o	0.34	193342.0728
	R2404782-013	Ti (336.122 nm)	0.0044	3.04	794.3974
	R2404782-013	Tl (190.794 nm)	0.0028	76.13	1.5451
	R2404782-013	V (292.401 nm)	-0.0002 u	37.62	-47.5058
	R2404782-013	Y (360.074 nm)	0.97	0.37	475873.21
	R2404782-013	Y_R (360.074 nm)	0.97	0.37	474570.13
	R2404782-013	Zn (213.857 nm)	0.0014	4.23	89.9671
6/11/2024 03:01:11	R2404782-014	Ag (328.068 nm)	-0.0006 u	18.43	-250.9917
	R2404782-014	Al (237.312 nm)	0.0735	1.04	193.9925
	R2404782-014	As (188.980 nm)	-0.0008 u	> 100.00	-3.2985
	R2404782-014	B (249.772 nm)	0.4727	0.13	15356.1091
	R2404782-014	Ba (230.424 nm)	0.0061	1.06	341.6359
	R2404782-014	Be (313.107 nm)	0.0001	4.97	138.6677
	R2404782-014	Ca (317.933 nm)	455.2960 o LR	0.18	16220581.8162
	R2404782-014	Cd (214.439 nm)	0.0003	46.73	16.5436
	R2404782-014	Co (230.786 nm)	0.0000 u	> 100.00	-9.9449
	R2404782-014	Cr (267.716 nm)	0.0005	14.34	30.5016
	R2404782-014	Cu (327.395 nm)	0.0011	20.75	22.2892
	R2404782-014	Fe (234.350 nm)	0.9495	0.23	17288.6849
	R2404782-014	K (766.491 nm)	4.0222	0.47	4221.9713
	R2404782-014	Mg (279.078 nm)	184.5385 o	0.24	603026.0261
	R2404782-014	Mn (257.610 nm)	0.0714	0.16	23864.9373
	R2404782-014	Mo (202.032 nm)	0.0007	34.61	19.4667
	R2404782-014	Na (588.995 nm)	20.8751	0.12	270662.8480
	R2404782-014	Ni (230.299 nm)	0.0027	27.95	56.6438
	R2404782-014	Pb (220.353 nm)	0.0010	57.37	13.1447
	R2404782-014	Sb (217.582 nm)	-0.0035 u	89.28	0.0447
	R2404782-014	Se (196.026 nm)	-0.0007 u	> 100.00	4.2950
	R2404782-014	Si (252.851 nm)	7.9043	0.13	30150.9487
	R2404782-014	Sn (189.925 nm)	-0.0003 u	98.19	2.2081
	R2404782-014	Sr (216.596 nm)	10.3485 o	0.22	182127.4792
	R2404782-014	Ti (336.122 nm)	0.0060	1.69	1019.6643
	R2404782-014	Tl (190.794 nm)	0.0020	75.63	0.7868
	R2404782-014	V (292.401 nm)	-0.0002 u	9.45	-48.9302
	R2404782-014	Y (360.074 nm)	0.98	0.65	477352.29
	R2404782-014	Y_R (360.074 nm)	0.98	0.65	476027.29
	R2404782-014	Zn (213.857 nm)	0.0055	0.37	354.4996
6/11/2024 03:04:26	Continuing Calibration Verification2	Ag (328.068 nm)	0.5058	0.05	28441.2388
	Continuing Calibration Verification2	Al (237.312 nm)	9.7128	0.05	24021.8747
	Continuing Calibration Verification2	As (188.980 nm)	0.9815	0.56	1662.4938
	Continuing Calibration Verification2	B (249.772 nm)	2.4135	0.10	78375.5980
	Continuing Calibration Verification2	Ba (230.424 nm)	9.6310	0.84	524388.3390
	Continuing Calibration Verification2	Be (313.107 nm)	0.2430	0.28	266723.1472
	Continuing Calibration Verification2	Ca (317.933 nm)	26.3019	0.23	939626.5683
	Continuing Calibration Verification2	Cd (214.439 nm)	0.5131	0.27	29230.6765
	Continuing Calibration Verification2	Co (230.786 nm)	2.4997	0.38	45318.5258
	Continuing Calibration Verification2	Cr (267.716 nm)	0.5268	0.27	27389.8446

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Verification2	Cu (327.395 nm)	1.2084	0.35	53019.1381
	Continuing Calibration Verification2	Fe (234.350 nm)	5.0822	0.27	92536.9652
	Continuing Calibration Verification2	K (766.491 nm)	24.0361	0.10	26185.1434
	Continuing Calibration Verification2	Mg (279.078 nm)	25.9705	0.18	84839.5116
	Continuing Calibration Verification2	Mn (257.610 nm)	0.7492	0.21	250212.5095
	Continuing Calibration Verification2	Mo (202.032 nm)	2.7344	0.27	28555.1937
	Continuing Calibration Verification2	Na (588.995 nm)	25.3043	0.33	330980.2769
	Continuing Calibration Verification2	Ni (230.299 nm)	2.0925	0.24	24597.3121
	Continuing Calibration Verification2	Pb (220.353 nm)	0.5277	0.23	2762.6686
	Continuing Calibration Verification2	Sb (217.582 nm)	4.6772	0.10	8694.8656
	Continuing Calibration Verification2	Se (196.026 nm)	0.4758	0.83	351.5834
	Continuing Calibration Verification2	Si (252.851 nm)	9.8354	0.40	37509.0900
	Continuing Calibration Verification2	Sn (189.925 nm)	5.0612	0.17	12465.7025
	Continuing Calibration Verification2	Sr (216.596 nm)	2.5146	0.43	44254.3331
	Continuing Calibration Verification2	Ti (336.122 nm)	2.5237	0.10	364765.8076
	Continuing Calibration Verification2	Tl (190.794 nm)	0.9816	0.24	958.0123
	Continuing Calibration Verification2	V (292.401 nm)	2.5479	0.23	96556.1726
	Continuing Calibration Verification2	Y (360.074 nm)	1.02	0.48	497817.70
	Continuing Calibration Verification2	Y_R (360.074 nm)	1.02	0.48	496456.33
	Continuing Calibration Verification2	Zn (213.857 nm)	0.9951	0.29	63692.2529
6/11/2024 03:07:40	Continuing Calibration Blank2	Ag (328.068 nm)	-0.0005 u	37.87	-245.5345
	Continuing Calibration Blank2	Al (237.312 nm)	0.0037	33.83	21.5003
	Continuing Calibration Blank2	As (188.980 nm)	0.0002 u	> 100.00	-1.6716
	Continuing Calibration Blank2	B (249.772 nm)	0.0016	21.41	58.7026
	Continuing Calibration Blank2	Ba (230.424 nm)	0.0004	23.30	30.9001
	Continuing Calibration Blank2	Be (313.107 nm)	0.0001	10.22	94.2400
	Continuing Calibration Blank2	Ca (317.933 nm)	0.0179	1.32	3378.9229
	Continuing Calibration Blank2	Cd (214.439 nm)	0.0001	72.68	5.6443
	Continuing Calibration Blank2	Co (230.786 nm)	-0.0001 u	> 100.00	-10.6000
	Continuing Calibration Blank2	Cr (267.716 nm)	0.0001	26.94	11.5082
	Continuing Calibration Blank2	Cu (327.395 nm)	0.0004	15.57	-11.2743
	Continuing Calibration Blank2	Fe (234.350 nm)	0.0053	10.27	95.2696
	Continuing Calibration Blank2	K (766.491 nm)	0.0770	63.47	-107.4828
	Continuing Calibration Blank2	Mg (279.078 nm)	0.0053	16.01	-12.4941
	Continuing Calibration Blank2	Mn (257.610 nm)	0.0001	13.54	54.8469
	Continuing Calibration Blank2	Mo (202.032 nm)	0.0036	32.40	49.3528
	Continuing Calibration Blank2	Na (588.995 nm)	0.0378	8.13	-13107.4379
	Continuing Calibration Blank2	Ni (230.299 nm)	0.0000 u	> 100.00	25.2089
	Continuing Calibration Blank2	Pb (220.353 nm)	0.0008	51.13	11.8694
	Continuing Calibration Blank2	Sb (217.582 nm)	0.0023	32.30	10.8781
	Continuing Calibration Blank2	Se (196.026 nm)	0.0005 u	> 100.00	5.1302
	Continuing Calibration Blank2	Si (252.851 nm)	-0.0045 u	15.31	15.5496
	Continuing Calibration Blank2	Sn (189.925 nm)	0.0005	33.19	4.2491
	Continuing Calibration Blank2	Sr (216.596 nm)	0.0004	40.61	6.6719
	Continuing Calibration Blank2	Ti (336.122 nm)	0.0028	43.86	552.9419
	Continuing Calibration Blank2	Tl (190.794 nm)	0.0003 u	> 100.00	-0.9162
	Continuing Calibration Blank2	V (292.401 nm)	0.0001	89.04	-38.0590
	Continuing Calibration Blank2	Y (360.074 nm)	1.07	0.09	522551.51
	Continuing Calibration Blank2	Y_R (360.074 nm)	1.07	0.09	521135.14
	Continuing Calibration Blank2	Zn (213.857 nm)	0.0005	6.37	34.0486
6/11/2024 03:10:55	R2404782-015	Ag (328.068 nm)	-0.0005 u	20.06	-244.4993
	R2404782-015	Al (237.312 nm)	0.1828	0.86	464.1626
	R2404782-015	As (188.980 nm)	0.0006 u	> 100.00	-0.9451
	R2404782-015	B (249.772 nm)	0.4428	0.05	14382.3042
	R2404782-015	Ba (230.424 nm)	0.0070	0.46	393.4988
	R2404782-015	Be (313.107 nm)	0.0001	5.48	157.3551
	R2404782-015	Ca (317.933 nm)	465.4357 o LR	0.28	16581764.6983

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404782-015	Cd (214.439 nm)	0.0002	30.22	14.1950
	R2404782-015	Co (230.786 nm)	-0.0002 u	63.16	-13.7635
	R2404782-015	Cr (267.716 nm)	0.0003	17.24	23.9634
	R2404782-015	Cu (327.395 nm)	0.0013	34.57	30.0803
	R2404782-015	Fe (234.350 nm)	0.3475	0.26	6327.6894
	R2404782-015	K (766.491 nm)	3.8419	0.26	4024.1109
	R2404782-015	Mg (279.078 nm)	155.6632 o	0.28	508663.9804
	R2404782-015	Mn (257.610 nm)	0.0353	0.15	11818.0061
	R2404782-015	Mo (202.032 nm)	0.0034	19.82	47.1116
	R2404782-015	Na (588.995 nm)	14.6812	0.31	186310.8247
	R2404782-015	Ni (230.299 nm)	0.0015	27.16	43.1982
	R2404782-015	Pb (220.353 nm)	0.0017	8.73	16.6474
	R2404782-015	Sb (217.582 nm)	0.0003 u	> 100.00	7.1629
	R2404782-015	Se (196.026 nm)	0.0003 u	> 100.00	5.0082
	R2404782-015	Si (252.851 nm)	5.6252	0.11	21466.7044
	R2404782-015	Sn (189.925 nm)	0.0007	62.58	4.7616
	R2404782-015	Sr (216.596 nm)	10.9333 o	0.25	192421.3168
	R2404782-015	Ti (336.122 nm)	0.0079	7.18	1289.9958
	R2404782-015	Tl (190.794 nm)	0.0011	80.62	-0.1370
	R2404782-015	V (292.401 nm)	0.0000 u	> 100.00	-39.9637
	R2404782-015	Y (360.074 nm)	0.98	0.89	477349.52
	R2404782-015	Y_R (360.074 nm)	0.98	0.89	476013.84
	R2404782-015	Zn (213.857 nm)	0.0102	0.59	653.6874
6/11/2024 03:14:10	R2404850-001	Ag (328.068 nm)	-0.0005 u	16.70	-245.7422
	R2404850-001	Al (237.312 nm)	0.0532	2.49	143.8628
	R2404850-001	As (188.980 nm)	0.0070	5.96	9.9055
	R2404850-001	B (249.772 nm)	0.0680	0.17	2213.5921
	R2404850-001	Ba (230.424 nm)	0.0306	0.46	1676.0856
	R2404850-001	Be (313.107 nm)	0.0001	12.59	138.3270
	R2404850-001	Ca (317.933 nm)	459.6725 o LR	0.37	16376476.5584
	R2404850-001	Cd (214.439 nm)	0.0004	13.31	25.2762
	R2404850-001	Co (230.786 nm)	0.0019	16.11	24.2718
	R2404850-001	Cr (267.716 nm)	0.0108	0.97	569.0732
	R2404850-001	Cu (327.395 nm)	0.0017	14.85	47.3241
	R2404850-001	Fe (234.350 nm)	2.4058	0.23	43805.0914
	R2404850-001	K (766.491 nm)	11.6480	0.33	12590.4915
	R2404850-001	Mg (279.078 nm)	63.6080 o	0.31	207835.5713
	R2404850-001	Mn (257.610 nm)	0.4535	0.30	151458.7982
	R2404850-001	Mo (202.032 nm)	0.0046	1.92	60.4656
	R2404850-001	Na (588.995 nm)	333.9633 o LR	0.11	4534418.7799
	R2404850-001	Ni (230.299 nm)	0.0127	2.45	174.0824
	R2404850-001	Pb (220.353 nm)	0.0019	39.64	18.0210
	R2404850-001	Sb (217.582 nm)	0.0009	75.70	8.2850
	R2404850-001	Se (196.026 nm)	-0.0016 u	> 100.00	3.6298
	R2404850-001	Si (252.851 nm)	6.1248	0.18	23370.4142
	R2404850-001	Sn (189.925 nm)	0.0002 u	> 100.00	3.5760
	R2404850-001	Sr (216.596 nm)	3.4556	0.34	60816.8341
	R2404850-001	Ti (336.122 nm)	0.0058	4.19	996.1954
	R2404850-001	Tl (190.794 nm)	0.0024	40.30	1.1593
	R2404850-001	V (292.401 nm)	-0.0001 u	> 100.00	-46.1993
	R2404850-001	Y (360.074 nm)	0.94	0.20	458123.45
	R2404850-001	Y_R (360.074 nm)	0.94	0.20	456839.10
	R2404850-001	Zn (213.857 nm)	0.0067	1.04	429.5972
6/11/2024 03:17:25	R2404850-002	Ag (328.068 nm)	-0.0008 u	9.54	-257.5604
	R2404850-002	Al (237.312 nm)	0.0267	2.72	78.1730
	R2404850-002	As (188.980 nm)	0.0001 u	> 100.00	-1.8892
	R2404850-002	B (249.772 nm)	0.0531	0.28	1728.4567

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404850-002	Ba (230.424 nm)	0.1091	0.25	5952.7133
	R2404850-002	Be (313.107 nm)	0.0001	2.31	150.8251
	R2404850-002	Ca (317.933 nm)	612.0543 o LR	0.43	21804382.7279
	R2404850-002	Cd (214.439 nm)	0.0003	33.39	19.0987
	R2404850-002	Co (230.786 nm)	0.0001 u	> 100.00	-7.6690
	R2404850-002	Cr (267.716 nm)	0.0027	4.35	146.3271
	R2404850-002	Cu (327.395 nm)	0.0014	16.03	35.6934
	R2404850-002	Fe (234.350 nm)	0.2459	0.53	4477.3117
	R2404850-002	K (766.491 nm)	24.3088	0.11	26484.3443
	R2404850-002	Mg (279.078 nm)	46.3175	0.37	151331.8839
	R2404850-002	Mn (257.610 nm)	0.4357	0.31	145515.3328
	R2404850-002	Mo (202.032 nm)	0.0025	11.08	37.7697
	R2404850-002	Na (588.995 nm)	408.2938 o LR	0.27	5546680.2108
	R2404850-002	Ni (230.299 nm)	0.0060	10.28	95.6937
	R2404850-002	Pb (220.353 nm)	0.0020	18.11	18.1712
	R2404850-002	Sb (217.582 nm)	-0.0012 u	> 100.00	4.3498
	R2404850-002	Se (196.026 nm)	-0.0040 u	90.06	1.8872
	R2404850-002	Si (252.851 nm)	5.6450	0.14	21542.1866
	R2404850-002	Sn (189.925 nm)	0.0004	76.95	4.0456
	R2404850-002	Sr (216.596 nm)	4.0590	0.37	71435.1525
	R2404850-002	Ti (336.122 nm)	0.0070	2.32	1171.1153
	R2404850-002	Tl (190.794 nm)	0.0035	14.05	2.2570
	R2404850-002	V (292.401 nm)	-0.0003 u	57.51	-52.4077
	R2404850-002	Y (360.074 nm)	0.92	0.19	448935.54
	R2404850-002	Y_R (360.074 nm)	0.92	0.19	447693.69
	R2404850-002	Zn (213.857 nm)	0.0055	1.48	354.8538
6/11/2024 03:20:41	R2404850-005	Ag (328.068 nm)	-0.0005 u	9.71	-245.1787
	R2404850-005	Al (237.312 nm)	0.0064	38.66	28.0586
	R2404850-005	As (188.980 nm)	-0.0010 u	54.49	-3.6663
	R2404850-005	B (249.772 nm)	0.0340	0.56	1111.1035
	R2404850-005	Ba (230.424 nm)	0.0503	0.54	2751.3677
	R2404850-005	Be (313.107 nm)	0.0001	15.32	109.0662
	R2404850-005	Ca (317.933 nm)	99.8273 o	0.23	3558633.5772
	R2404850-005	Cd (214.439 nm)	0.0002	28.27	16.0247
	R2404850-005	Co (230.786 nm)	-0.0003 u	50.95	-15.4459
	R2404850-005	Cr (267.716 nm)	0.0003	29.02	23.6428
	R2404850-005	Cu (327.395 nm)	0.0015	9.20	39.7501
	R2404850-005	Fe (234.350 nm)	0.0096	3.01	173.6343
	R2404850-005	K (766.491 nm)	4.5096	0.49	4756.8057
	R2404850-005	Mg (279.078 nm)	23.1847	0.18	75735.6666
	R2404850-005	Mn (257.610 nm)	0.0069	0.33	2335.6565
	R2404850-005	Mo (202.032 nm)	0.0015	38.16	28.0869
	R2404850-005	Na (588.995 nm)	52.3464	0.24	699250.9347
	R2404850-005	Ni (230.299 nm)	0.0013	27.49	40.6323
	R2404850-005	Pb (220.353 nm)	0.0010	96.99	13.2917
	R2404850-005	Sb (217.582 nm)	-0.0010 u	> 100.00	4.7318
	R2404850-005	Se (196.026 nm)	-0.0018 u	> 100.00	3.4952
	R2404850-005	Si (252.851 nm)	3.6009	0.05	13753.4519
	R2404850-005	Sn (189.925 nm)	-0.0006 u	> 100.00	1.6213
	R2404850-005	Sr (216.596 nm)	1.6224	0.28	28553.3060
	R2404850-005	Ti (336.122 nm)	0.0010	15.92	305.1105
	R2404850-005	Tl (190.794 nm)	0.0009	68.95	-0.3175
	R2404850-005	V (292.401 nm)	0.0001 u	> 100.00	-35.1086
	R2404850-005	Y (360.074 nm)	1.03	0.35	501250.88
	R2404850-005	Y_R (360.074 nm)	1.02	0.35	499871.76
	R2404850-005	Zn (213.857 nm)	0.0021	1.15	136.2457
6/11/2024 03:23:56	R2404850-006	Ag (328.068 nm)	-0.0007 u	8.62	-254.7146

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404850-006	Al (237.312 nm)	0.4019	0.60	1005.6484
	R2404850-006	As (188.980 nm)	-0.0016 u	80.33	-4.6942
	R2404850-006	B (249.772 nm)	0.0154	0.16	504.5695
	R2404850-006	Ba (230.424 nm)	0.1339	0.41	7302.7251
	R2404850-006	Be (313.107 nm)	0.0001	5.30	138.9786
	R2404850-006	Ca (317.933 nm)	291.7254 o LR	0.36	10394128.7528
	R2404850-006	Cd (214.439 nm)	0.0003	28.37	18.3984
	R2404850-006	Co (230.786 nm)	0.0016	18.43	19.1150
	R2404850-006	Cr (267.716 nm)	0.0004	36.16	24.7301
	R2404850-006	Cu (327.395 nm)	0.0018	8.62	52.3969
	R2404850-006	Fe (234.350 nm)	0.3734	0.14	6797.8006
	R2404850-006	K (766.491 nm)	4.5361	0.70	4785.8717
	R2404850-006	Mg (279.078 nm)	53.5812	0.33	175068.9023
	R2404850-006	Mn (257.610 nm)	2.1216 o	0.33	708537.6692
	R2404850-006	Mo (202.032 nm)	0.0000 u	> 100.00	12.0142
	R2404850-006	Na (588.995 nm)	137.7372 o	0.29	1862135.3012
	R2404850-006	Ni (230.299 nm)	0.0043	3.48	76.2344
	R2404850-006	Pb (220.353 nm)	0.0022	3.01	19.4055
	R2404850-006	Sb (217.582 nm)	-0.0013 u	> 100.00	4.2471
	R2404850-006	Se (196.026 nm)	0.0010 u	> 100.00	5.4933
	R2404850-006	Si (252.851 nm)	8.4056	0.08	32060.9218
	R2404850-006	Sn (189.925 nm)	0.0004 u	> 100.00	4.0150
	R2404850-006	Sr (216.596 nm)	1.3922	0.42	24501.3621
	R2404850-006	Ti (336.122 nm)	0.0138	2.62	2144.9670
	R2404850-006	Tl (190.794 nm)	0.0027	45.69	1.4276
	R2404850-006	V (292.401 nm)	0.0005	20.26	-22.7390
	R2404850-006	Y (360.074 nm)	0.98	0.21	478183.02
	R2404850-006	Y_R (360.074 nm)	0.98	0.21	476856.13
	R2404850-006	Zn (213.857 nm)	0.0027	1.25	170.7411
6/11/2024 03:27:11	R2404850-006L 5X	Ag (328.068 nm)	-0.0004 u	28.42	-238.7801
	R2404850-006L 5X	Al (237.312 nm)	0.0784	3.33	206.0942
	R2404850-006L 5X	As (188.980 nm)	-0.0008 u	8.61	-3.3480
	R2404850-006L 5X	B (249.772 nm)	0.0031	2.09	106.4685
	R2404850-006L 5X	Ba (230.424 nm)	0.0275	0.76	1507.5762
	R2404850-006L 5X	Be (313.107 nm)	0.0001	13.52	102.9804
	R2404850-006L 5X	Ca (317.933 nm)	64.0941 o	0.38	2285802.7900
	R2404850-006L 5X	Cd (214.439 nm)	0.0002	6.29	13.4168
	R2404850-006L 5X	Co (230.786 nm)	0.0001 u	> 100.00	-7.2085
	R2404850-006L 5X	Cr (267.716 nm)	0.0000 u	> 100.00	7.6907
	R2404850-006L 5X	Cu (327.395 nm)	0.0008	77.91	7.9037
	R2404850-006L 5X	Fe (234.350 nm)	0.0780	0.63	1419.4021
	R2404850-006L 5X	K (766.491 nm)	0.8782	3.81	771.6565
	R2404850-006L 5X	Mg (279.078 nm)	10.9489	0.38	35750.4359
	R2404850-006L 5X	Mn (257.610 nm)	0.4392	0.33	146680.3143
	R2404850-006L 5X	Mo (202.032 nm)	0.0001 u	> 100.00	13.1412
	R2404850-006L 5X	Na (588.995 nm)	27.7482	0.09	364262.9845
	R2404850-006L 5X	Ni (230.299 nm)	0.0011	48.91	37.9616
	R2404850-006L 5X	Pb (220.353 nm)	0.0011	25.24	13.8110
	R2404850-006L 5X	Sb (217.582 nm)	-0.0013 u	> 100.00	4.1542
	R2404850-006L 5X	Se (196.026 nm)	-0.0022 u	> 100.00	3.1440
	R2404850-006L 5X	Si (252.851 nm)	1.6743	0.27	6412.1780
	R2404850-006L 5X	Sn (189.925 nm)	-0.0006 u	45.23	1.5516
	R2404850-006L 5X	Sr (216.596 nm)	0.2875	0.40	5058.3410
	R2404850-006L 5X	Ti (336.122 nm)	0.0024	5.65	501.5569
	R2404850-006L 5X	Tl (190.794 nm)	0.0016	51.61	0.3906
	R2404850-006L 5X	V (292.401 nm)	-0.0001 u	63.09	-45.9265
	R2404850-006L 5X	Y (360.074 nm)	1.04	0.10	506439.82

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404850-006L 5X	Y_R (360.074 nm)	1.04	0.10	505061.52
	R2404850-006L 5X	Zn (213.857 nm)	0.0005	7.11	29.9829
6/11/2024 03:30:26	R2404850-001 20X	Ag (328.068 nm)	-0.0005 u	6.00	-243.5834
	R2404850-001 20X	Al (237.312 nm)	0.0068	0.28	29.1742
	R2404850-001 20X	As (188.980 nm)	0.0001 u	> 100.00	-1.7957
	R2404850-001 20X	B (249.772 nm)	0.0031	1.30	106.8391
	R2404850-001 20X	Ba (230.424 nm)	0.0016	5.29	99.1366
	R2404850-001 20X	Be (313.107 nm)	0.0001	8.84	96.8917
	R2404850-001 20X	Ca (317.933 nm)	27.2451	0.35	973226.3048
	R2404850-001 20X	Cd (214.439 nm)	0.0001	42.80	6.9930
	R2404850-001 20X	Co (230.786 nm)	-0.0001 u	> 100.00	-10.6190
	R2404850-001 20X	Cr (267.716 nm)	0.0005	23.43	33.7792
	R2404850-001 20X	Cu (327.395 nm)	0.0004	36.15	-10.3730
	R2404850-001 20X	Fe (234.350 nm)	0.1277	0.40	2324.0362
	R2404850-001 20X	K (766.491 nm)	0.5559	5.98	418.0119
	R2404850-001 20X	Mg (279.078 nm)	3.3276	0.26	10844.3724
	R2404850-001 20X	Mn (257.610 nm)	0.0239	0.35	7992.0403
	R2404850-001 20X	Mo (202.032 nm)	0.0004	92.12	16.0959
	R2404850-001 20X	Na (588.995 nm)	17.4819	0.14	224452.0304
	R2404850-001 20X	Ni (230.299 nm)	0.0007	94.69	33.6728
	R2404850-001 20X	Pb (220.353 nm)	0.0013	36.08	14.7603
	R2404850-001 20X	Sb (217.582 nm)	-0.0024 u	13.37	2.1803
	R2404850-001 20X	Se (196.026 nm)	-0.0028 u	74.05	2.7680
	R2404850-001 20X	Si (252.851 nm)	0.3145	0.48	1231.0894
	R2404850-001 20X	Sn (189.925 nm)	-0.0005 u	> 100.00	1.6761
	R2404850-001 20X	Sr (216.596 nm)	0.1841	0.19	3239.8048
	R2404850-001 20X	Ti (336.122 nm)	0.0003	21.56	204.7636
	R2404850-001 20X	Tl (190.794 nm)	0.0008	73.40	-0.4544
	R2404850-001 20X	V (292.401 nm)	-0.0003 u	52.33	-51.2418
	R2404850-001 20X	Y (360.074 nm)	1.05	0.20	514310.37
	R2404850-001 20X	Y_R (360.074 nm)	1.05	0.20	512894.74
	R2404850-001 20X	Zn (213.857 nm)	0.0002	26.04	15.8932
6/11/2024 03:33:41	R2404850-002 20X	Ag (328.068 nm)	-0.0005 u	23.90	-244.2774
	R2404850-002 20X	Al (237.312 nm)	0.0047	10.54	23.7950
	R2404850-002 20X	As (188.980 nm)	-0.0018 u	12.34	-5.0216
	R2404850-002 20X	B (249.772 nm)	0.0024	1.51	84.3067
	R2404850-002 20X	Ba (230.424 nm)	0.0058	1.92	324.8608
	R2404850-002 20X	Be (313.107 nm)	0.0001	11.66	93.9469
	R2404850-002 20X	Ca (317.933 nm)	38.8416	0.50	1386298.4499
	R2404850-002 20X	Cd (214.439 nm)	0.0001	33.30	7.5441
	R2404850-002 20X	Co (230.786 nm)	-0.0001 u	> 100.00	-11.0613
	R2404850-002 20X	Cr (267.716 nm)	0.0002	21.17	18.8767
	R2404850-002 20X	Cu (327.395 nm)	0.0003	18.31	-14.4617
	R2404850-002 20X	Fe (234.350 nm)	0.0145	1.30	264.5010
	R2404850-002 20X	K (766.491 nm)	1.0850	2.43	998.5866
	R2404850-002 20X	Mg (279.078 nm)	2.4882	0.39	8101.4154
	R2404850-002 20X	Mn (257.610 nm)	0.0232	0.49	7775.4234
	R2404850-002 20X	Mo (202.032 nm)	0.0001	64.10	13.0464
	R2404850-002 20X	Na (588.995 nm)	22.1617	0.11	288184.0875
	R2404850-002 20X	Ni (230.299 nm)	0.0002	67.13	27.7113
	R2404850-002 20X	Pb (220.353 nm)	0.0009	53.69	12.5708
	R2404850-002 20X	Sb (217.582 nm)	-0.0032 u	20.15	0.6277
	R2404850-002 20X	Se (196.026 nm)	0.0002 u	> 100.00	4.9457
	R2404850-002 20X	Si (252.851 nm)	0.2982	0.88	1168.7173
	R2404850-002 20X	Sn (189.925 nm)	-0.0004 u	> 100.00	2.0159
	R2404850-002 20X	Sr (216.596 nm)	0.2193	0.46	3859.2914
	R2404850-002 20X	Ti (336.122 nm)	0.0004	25.40	213.5017

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404850-002 20X	Tl (190.794 nm)	0.0014	77.81	0.1784
	R2404850-002 20X	V (292.401 nm)	-0.0002 u	90.21	-46.7636
	R2404850-002 20X	Y (360.074 nm)	1.04	0.01	508816.93
	R2404850-002 20X	Y_R (360.074 nm)	1.04	0.01	507431.06
	R2404850-002 20X	Zn (213.857 nm)	0.0002	13.42	16.1844
6/11/2024 03:36:57	R2404850-005 20X	Ag (328.068 nm)	-0.0003 u	55.72	-233.7652
	R2404850-005 20X	Al (237.312 nm)	0.0025	76.38	18.4766
	R2404850-005 20X	As (188.980 nm)	-0.0009 u	> 100.00	-3.4671
	R2404850-005 20X	B (249.772 nm)	0.0017	3.15	59.3234
	R2404850-005 20X	Ba (230.424 nm)	0.0026	1.20	154.1901
	R2404850-005 20X	Be (313.107 nm)	0.0001	13.29	101.1421
	R2404850-005 20X	Ca (317.933 nm)	5.3261	0.36	192460.3087
	R2404850-005 20X	Cd (214.439 nm)	0.0000 u	> 100.00	4.4747
	R2404850-005 20X	Co (230.786 nm)	-0.0002 u	42.10	-13.4610
	R2404850-005 20X	Cr (267.716 nm)	0.0004	11.16	25.7296
	R2404850-005 20X	Cu (327.395 nm)	0.0007	4.48	4.5133
	R2404850-005 20X	Fe (234.350 nm)	0.0095	0.71	171.9907
	R2404850-005 20X	K (766.491 nm)	0.2552	8.95	87.9990
	R2404850-005 20X	Mg (279.078 nm)	1.2271	0.55	3980.3145
	R2404850-005 20X	Mn (257.610 nm)	0.0006	2.78	216.6472
	R2404850-005 20X	Mo (202.032 nm)	0.0002	54.72	14.5138
	R2404850-005 20X	Na (588.995 nm)	2.7407	0.31	23701.5915
	R2404850-005 20X	Ni (230.299 nm)	0.0001 u	> 100.00	26.7187
	R2404850-005 20X	Pb (220.353 nm)	0.0002	91.20	9.1610
	R2404850-005 20X	Sb (217.582 nm)	-0.0025 u	44.38	1.9211
	R2404850-005 20X	Se (196.026 nm)	-0.0002 u	> 100.00	4.6360
	R2404850-005 20X	Si (252.851 nm)	0.1994	0.50	792.6210
	R2404850-005 20X	Sn (189.925 nm)	-0.0002 u	> 100.00	2.5966
	R2404850-005 20X	Sr (216.596 nm)	0.0858	0.40	1509.1154
	R2404850-005 20X	Ti (336.122 nm)	0.0001	49.99	168.4321
	R2404850-005 20X	Tl (190.794 nm)	0.0011 u	> 100.00	-0.1491
	R2404850-005 20X	V (292.401 nm)	-0.0003 u	40.25	-51.6440
	R2404850-005 20X	Y (360.074 nm)	1.07	0.21	521643.79
	R2404850-005 20X	Y_R (360.074 nm)	1.07	0.21	520233.36
	R2404850-005 20X	Zn (213.857 nm)	0.0001 u	> 100.00	4.6150
6/11/2024 03:40:12	R2404850-006 20X	Ag (328.068 nm)	-0.0004 u	26.81	-236.0877
	R2404850-006 20X	Al (237.312 nm)	0.0221	11.16	66.7970
	R2404850-006 20X	As (188.980 nm)	0.0000 u	> 100.00	-1.9787
	R2404850-006 20X	B (249.772 nm)	0.0005	20.74	23.3543
	R2404850-006 20X	Ba (230.424 nm)	0.0070	0.98	390.6775
	R2404850-006 20X	Be (313.107 nm)	0.0001	13.47	87.3504
	R2404850-006 20X	Ca (317.933 nm)	16.4364	0.39	588214.0499
	R2404850-006 20X	Cd (214.439 nm)	0.0001	99.72	6.8322
	R2404850-006 20X	Co (230.786 nm)	-0.0001 u	70.55	-11.8597
	R2404850-006 20X	Cr (267.716 nm)	0.0001 u	> 100.00	8.9236
	R2404850-006 20X	Cu (327.395 nm)	0.0004	13.06	-11.8071
	R2404850-006 20X	Fe (234.350 nm)	0.0208	1.52	377.5863
	R2404850-006 20X	K (766.491 nm)	0.2604	4.90	93.7776
	R2404850-006 20X	Mg (279.078 nm)	2.8108	0.46	9155.8207
	R2404850-006 20X	Mn (257.610 nm)	0.1130	0.37	37764.8999
	R2404850-006 20X	Mo (202.032 nm)	-0.0001 u	68.44	10.7277
	R2404850-006 20X	Na (588.995 nm)	7.0025	0.09	81739.9555
	R2404850-006 20X	Ni (230.299 nm)	0.0001 u	> 100.00	27.0086
	R2404850-006 20X	Pb (220.353 nm)	0.0013	48.03	14.8898
	R2404850-006 20X	Sb (217.582 nm)	-0.0040 u	50.78	-0.8597
	R2404850-006 20X	Se (196.026 nm)	-0.0027 u	60.33	2.8009
	R2404850-006 20X	Si (252.851 nm)	0.4323	0.31	1679.8722

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404850-006 20X	Sn (189.925 nm)	0.0000 u	> 100.00	2.9870
	R2404850-006 20X	Sr (216.596 nm)	0.0742	0.72	1305.7257
	R2404850-006 20X	Ti (336.122 nm)	0.0006	8.70	244.9582
	R2404850-006 20X	Tl (190.794 nm)	0.0014 u	> 100.00	0.1788
	R2404850-006 20X	V (292.401 nm)	0.0000 u	> 100.00	-38.7515
	R2404850-006 20X	Y (360.074 nm)	1.06	0.08	517504.93
	R2404850-006 20X	Y_R (360.074 nm)	1.06	0.08	516076.48
	R2404850-006 20X	Zn (213.857 nm)	0.0000 u	> 100.00	3.0771
6/11/2024 03:43:27	Continuing Calibration Verification2	Ag (328.068 nm)	0.5036	0.13	28312.5223
	Continuing Calibration Verification2	Al (237.312 nm)	9.6746	0.05	23927.4909
	Continuing Calibration Verification2	As (188.980 nm)	0.9735	0.14	1648.9091
	Continuing Calibration Verification2	B (249.772 nm)	2.3933	0.18	77717.9717
	Continuing Calibration Verification2	Ba (230.424 nm)	9.5781	0.47	521510.5104
	Continuing Calibration Verification2	Be (313.107 nm)	0.2405	0.35	264032.5104
	Continuing Calibration Verification2	Ca (317.933 nm)	26.0067	0.33	929112.8556
	Continuing Calibration Verification2	Cd (214.439 nm)	0.5076	0.34	28919.7789
	Continuing Calibration Verification2	Co (230.786 nm)	2.4805	0.22	44971.3545
	Continuing Calibration Verification2	Cr (267.716 nm)	0.5232	0.30	27202.6566
	Continuing Calibration Verification2	Cu (327.395 nm)	1.2085	0.34	53024.3415
	Continuing Calibration Verification2	Fe (234.350 nm)	5.0361	0.30	91696.5691
	Continuing Calibration Verification2	K (766.491 nm)	24.0737	0.26	26226.4173
	Continuing Calibration Verification2	Mg (279.078 nm)	25.6708	0.23	83860.0847
	Continuing Calibration Verification2	Mn (257.610 nm)	0.7438	0.29	248421.5222
	Continuing Calibration Verification2	Mo (202.032 nm)	2.7163	0.40	28366.6406
	Continuing Calibration Verification2	Na (588.995 nm)	25.4162	0.39	332504.3656
	Continuing Calibration Verification2	Ni (230.299 nm)	2.0737	0.26	24375.9208
	Continuing Calibration Verification2	Pb (220.353 nm)	0.5244	0.34	2745.5260
	Continuing Calibration Verification2	Sb (217.582 nm)	4.6527	0.21	8649.4268
	Continuing Calibration Verification2	Se (196.026 nm)	0.4739	0.55	350.2038
	Continuing Calibration Verification2	Si (252.851 nm)	9.7788	0.32	37293.2647
	Continuing Calibration Verification2	Sn (189.925 nm)	5.0107	0.25	12341.2058
	Continuing Calibration Verification2	Sr (216.596 nm)	2.4915	0.33	43849.2179
	Continuing Calibration Verification2	Ti (336.122 nm)	2.5082	0.17	362539.4709
	Continuing Calibration Verification2	Tl (190.794 nm)	0.9707	0.38	947.3647
	Continuing Calibration Verification2	V (292.401 nm)	2.5327	0.29	95978.3730
	Continuing Calibration Verification2	Y (360.074 nm)	1.03	0.40	503096.78
	Continuing Calibration Verification2	Y_R (360.074 nm)	1.03	0.40	501686.85
	Continuing Calibration Verification2	Zn (213.857 nm)	0.9880	0.15	63241.6605
6/11/2024 03:46:41	Continuing Calibration Blank2	Ag (328.068 nm)	-0.0005 u	18.98	-240.6588
	Continuing Calibration Blank2	Al (237.312 nm)	0.0036	35.96	21.1774
	Continuing Calibration Blank2	As (188.980 nm)	-0.0002 u	> 100.00	-2.4165
	Continuing Calibration Blank2	B (249.772 nm)	0.0013	32.93	47.7212
	Continuing Calibration Blank2	Ba (230.424 nm)	0.0005	4.17	38.2163
	Continuing Calibration Blank2	Be (313.107 nm)	0.0001	9.07	99.0595
	Continuing Calibration Blank2	Ca (317.933 nm)	0.0159	0.69	3309.7096
	Continuing Calibration Blank2	Cd (214.439 nm)	0.0001	27.69	6.4536
	Continuing Calibration Blank2	Co (230.786 nm)	0.0004	57.16	-2.1078
	Continuing Calibration Blank2	Cr (267.716 nm)	0.0001	69.43	13.3731
	Continuing Calibration Blank2	Cu (327.395 nm)	0.0005	32.23	-6.0152
	Continuing Calibration Blank2	Fe (234.350 nm)	0.0056	16.45	102.3169
	Continuing Calibration Blank2	K (766.491 nm)	0.0714	56.74	-113.7069
	Continuing Calibration Blank2	Mg (279.078 nm)	0.0031	7.54	-19.6250
	Continuing Calibration Blank2	Mn (257.610 nm)	0.0001	6.01	57.5874
	Continuing Calibration Blank2	Mo (202.032 nm)	0.0036	35.51	49.0784
	Continuing Calibration Blank2	Na (588.995 nm)	0.0661	11.15	-12722.9365
	Continuing Calibration Blank2	Ni (230.299 nm)	0.0002	87.70	27.7725
	Continuing Calibration Blank2	Pb (220.353 nm)	0.0004 u	> 100.00	10.2240

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Blank2	Sb (217.582 nm)	0.0023	34.32	10.7853
	Continuing Calibration Blank2	Se (196.026 nm)	-0.0022 u	87.39	3.1731
	Continuing Calibration Blank2	Si (252.851 nm)	-0.0050 u	15.00	13.4715
	Continuing Calibration Blank2	Sn (189.925 nm)	0.0009 u	> 100.00	5.3392
	Continuing Calibration Blank2	Sr (216.596 nm)	0.0004	31.77	6.4871
	Continuing Calibration Blank2	Ti (336.122 nm)	0.0029	41.84	568.7133
	Continuing Calibration Blank2	Tl (190.794 nm)	0.0006 u	> 100.00	-0.6078
	Continuing Calibration Blank2	V (292.401 nm)	-0.0002 u	58.27	-46.4537
	Continuing Calibration Blank2	Y (360.074 nm)	1.07	0.15	522087.60
	Continuing Calibration Blank2	Y_R (360.074 nm)	1.07	0.15	520651.63
	Continuing Calibration Blank2	Zn (213.857 nm)	0.0005	10.70	33.0512
6/11/2024 03:49:55	Contract Required Detection Limit	Ag (328.068 nm)	0.0081	1.34	246.1947
	Contract Required Detection Limit	Al (237.312 nm)	0.1916	0.72	485.9702
	Contract Required Detection Limit	As (188.980 nm)	0.0187	11.13	29.6795
	Contract Required Detection Limit	B (249.772 nm)	0.1872	0.22	6085.5481
	Contract Required Detection Limit	Ba (230.424 nm)	0.1923	0.54	10478.9267
	Contract Required Detection Limit	Be (313.107 nm)	0.0049	0.60	5388.6243
	Contract Required Detection Limit	Ca (317.933 nm)	1.0502	0.31	40150.8526
	Contract Required Detection Limit	Cd (214.439 nm)	0.0107	0.51	610.4563
	Contract Required Detection Limit	Co (230.786 nm)	0.0497	0.30	890.6806
	Contract Required Detection Limit	Cr (267.716 nm)	0.0096	1.72	503.7226
	Contract Required Detection Limit	Cu (327.395 nm)	0.0241	1.33	1030.0241
	Contract Required Detection Limit	Fe (234.350 nm)	0.1070	0.96	1947.8663
	Contract Required Detection Limit	K (766.491 nm)	0.9561	1.90	857.2101
	Contract Required Detection Limit	Mg (279.078 nm)	1.0148	0.38	3286.6624
	Contract Required Detection Limit	Mn (257.610 nm)	0.0139	0.19	4652.3788
	Contract Required Detection Limit	Mo (202.032 nm)	0.0274	1.79	297.5854
	Contract Required Detection Limit	Na (588.995 nm)	1.0411	0.99	554.7596
	Contract Required Detection Limit	Ni (230.299 nm)	0.0356	1.40	443.6845
	Contract Required Detection Limit	Pb (220.353 nm)	0.0115	4.25	68.0628
	Contract Required Detection Limit	Sb (217.582 nm)	0.0551	4.26	109.0219
	Contract Required Detection Limit	Se (196.026 nm)	0.0091	32.80	11.3876
	Contract Required Detection Limit	Si (252.851 nm)	0.0459	3.30	207.5770
	Contract Required Detection Limit	Sn (189.925 nm)	0.5000	1.01	1234.2824
	Contract Required Detection Limit	Sr (216.596 nm)	0.0988	0.22	1738.6971
	Contract Required Detection Limit	Ti (336.122 nm)	0.0493	1.27	7277.9842
	Contract Required Detection Limit	Tl (190.794 nm)	0.0206	4.15	18.8848
	Contract Required Detection Limit	V (292.401 nm)	0.0493	0.50	1829.3294
	Contract Required Detection Limit	Y (360.074 nm)	1.07	0.26	521689.68
	Contract Required Detection Limit	Y_R (360.074 nm)	1.07	0.26	520271.32
	Contract Required Detection Limit	Zn (213.857 nm)	0.0172	0.37	1101.0028
6/11/2024 03:53:09	Interference Check Solution A	Ag (328.068 nm)	-0.0005 u	18.30	-244.6067
	Interference Check Solution A	Al (237.312 nm)	243.6947 o	0.11	602416.0995
	Interference Check Solution A	As (188.980 nm)	-0.0021 u	> 100.00	-5.5305
	Interference Check Solution A	B (249.772 nm)	0.0971	0.29	3157.3061
	Interference Check Solution A	Ba (230.424 nm)	-0.0005 u	10.89	-14.7550
	Interference Check Solution A	Be (313.107 nm)	0.0002	3.69	288.8724
	Interference Check Solution A	Ca (317.933 nm)	237.1722 o	0.43	8450919.2914
	Interference Check Solution A	Cd (214.439 nm)	-0.0004 u	17.40	-22.8854
	Interference Check Solution A	Co (230.786 nm)	-0.0002 u	> 100.00	-12.6476
	Interference Check Solution A	Cr (267.716 nm)	0.0036	2.26	192.7970
	Interference Check Solution A	Cu (327.395 nm)	0.0086	0.69	350.1182
	Interference Check Solution A	Fe (234.350 nm)	92.8909 o	0.39	1691362.5824
	Interference Check Solution A	K (766.491 nm)	0.0427 u	> 100.00	-145.2075
	Interference Check Solution A	Mg (279.078 nm)	262.6389 o	0.40	858251.4604
	Interference Check Solution A	Mn (257.610 nm)	0.0012	0.11	404.0253
	Interference Check Solution A	Mo (202.032 nm)	0.0014	10.21	26.7297

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Interference Check Solution A	Na (588.995 nm)	-0.0025 u	> 100.00	-13656.2342
	Interference Check Solution A	Ni (230.299 nm)	0.0033	23.38	63.5129
	Interference Check Solution A	Pb (220.353 nm)	0.0032	13.29	24.4920
	Interference Check Solution A	Sb (217.582 nm)	-0.0057 u	3.21	-3.9250
	Interference Check Solution A	Se (196.026 nm)	-0.0065 u	36.67	0.0600
	Interference Check Solution A	Si (252.851 nm)	0.0373	4.60	174.8061
	Interference Check Solution A	Sn (189.925 nm)	0.0016	62.66	6.9199
	Interference Check Solution A	Sr (216.596 nm)	0.0111	2.92	194.8696
	Interference Check Solution A	Ti (336.122 nm)	0.0027	13.44	551.0111
	Interference Check Solution A	Tl (190.794 nm)	0.0016	77.85	0.3263
	Interference Check Solution A	V (292.401 nm)	0.0013	3.45	10.5206
	Interference Check Solution A	Y (360.074 nm)	0.95	0.26	462852.87
	Interference Check Solution A	Y_R (360.074 nm)	0.95	0.26	461562.02
	Interference Check Solution A	Zn (213.857 nm)	0.0133 K	0.37	853.9196 K
6/11/2024 03:56:23	Interference Check Solution AB	Ag (328.068 nm)	0.1966	0.20	10925.6548
	Interference Check Solution AB	Al (237.312 nm)	244.6232 o	0.17	604711.2222
	Interference Check Solution AB	As (188.980 nm)	0.0995	1.41	166.7457
	Interference Check Solution AB	B (249.772 nm)	0.0950	0.37	3089.6550
	Interference Check Solution AB	Ba (230.424 nm)	0.4927	0.32	26838.8979
	Interference Check Solution AB	Be (313.107 nm)	0.4906	0.26	538553.0213
	Interference Check Solution AB	Ca (317.933 nm)	238.5649 o	0.30	8500526.7943
	Interference Check Solution AB	Cd (214.439 nm)	0.9854	0.25	56142.3801
	Interference Check Solution AB	Co (230.786 nm)	0.4804	0.21	8701.3530
	Interference Check Solution AB	Cr (267.716 nm)	0.5240	0.30	27244.3909
	Interference Check Solution AB	Cu (327.395 nm)	0.5286	0.10	23178.5546
	Interference Check Solution AB	Fe (234.350 nm)	93.5019 o	0.27	1702488.5852
	Interference Check Solution AB	K (766.491 nm)	0.0046 u	> 100.00	-186.9810
	Interference Check Solution AB	Mg (279.078 nm)	264.5010 o	0.25	864336.5490
	Interference Check Solution AB	Mn (257.610 nm)	0.4947	0.27	165237.5031
	Interference Check Solution AB	Mo (202.032 nm)	0.0014	28.93	26.1869
	Interference Check Solution AB	Na (588.995 nm)	-0.0176 u	26.41	-13862.7310
	Interference Check Solution AB	Ni (230.299 nm)	0.9879	0.21	11625.7538
	Interference Check Solution AB	Pb (220.353 nm)	0.0531	2.73	285.2882
	Interference Check Solution AB	Sb (217.582 nm)	0.5751	0.48	1074.8380
	Interference Check Solution AB	Se (196.026 nm)	0.0440	8.99	36.8694
	Interference Check Solution AB	Si (252.851 nm)	0.0804	0.22	338.9129
	Interference Check Solution AB	Sn (189.925 nm)	0.0006 u	> 100.00	4.4942
	Interference Check Solution AB	Sr (216.596 nm)	0.0114	1.00	199.6899
	Interference Check Solution AB	Ti (336.122 nm)	0.0025	12.86	520.3482
	Interference Check Solution AB	Tl (190.794 nm)	0.0989	0.65	95.4307
	Interference Check Solution AB	V (292.401 nm)	0.5197	0.22	19662.2252
	Interference Check Solution AB	Y (360.074 nm)	0.95	0.45	463101.66
	Interference Check Solution AB	Y_R (360.074 nm)	0.95	0.45	461788.98
	Interference Check Solution AB	Zn (213.857 nm)	1.0225	0.20	65449.2381
6/11/2024 03:59:37	Continuing Calibration Verification2	Ag (328.068 nm)	0.5027	0.08	28265.9143
	Continuing Calibration Verification2	Al (237.312 nm)	9.6475	0.04	23860.6128
	Continuing Calibration Verification2	As (188.980 nm)	0.9732	0.23	1648.4969
	Continuing Calibration Verification2	B (249.772 nm)	2.3935	0.16	77724.6806
	Continuing Calibration Verification2	Ba (230.424 nm)	9.5665	0.40	520875.9275
	Continuing Calibration Verification2	Be (313.107 nm)	0.2409	0.27	264461.2634
	Continuing Calibration Verification2	Ca (317.933 nm)	26.1246	0.27	933311.7316
	Continuing Calibration Verification2	Cd (214.439 nm)	0.5096	0.35	29033.9000
	Continuing Calibration Verification2	Co (230.786 nm)	2.4840	0.44	45034.1722
	Continuing Calibration Verification2	Cr (267.716 nm)	0.5238	0.31	27232.5681
	Continuing Calibration Verification2	Cu (327.395 nm)	1.2049	0.04	52866.5729
	Continuing Calibration Verification2	Fe (234.350 nm)	5.0753	0.32	92410.5043
	Continuing Calibration Verification2	K (766.491 nm)	23.7941	0.11	25919.5528

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Verification2	Mg (279.078 nm)	25.7772	0.25	84208.0225
	Continuing Calibration Verification2	Mn (257.610 nm)	0.7438	0.27	248412.4229
	Continuing Calibration Verification2	Mo (202.032 nm)	2.7193	0.31	28397.9722
	Continuing Calibration Verification2	Na (588.995 nm)	25.1223	0.21	328502.9980
	Continuing Calibration Verification2	Ni (230.299 nm)	2.0739	0.27	24378.3151
	Continuing Calibration Verification2	Pb (220.353 nm)	0.5258	0.04	2753.0087
	Continuing Calibration Verification2	Sb (217.582 nm)	4.6236	0.22	8595.3151
	Continuing Calibration Verification2	Se (196.026 nm)	0.4729	0.43	349.4941
	Continuing Calibration Verification2	Si (252.851 nm)	9.7545	0.36	37200.6586
	Continuing Calibration Verification2	Sn (189.925 nm)	5.0162	0.25	12354.9423
	Continuing Calibration Verification2	Sr (216.596 nm)	2.4970	0.21	43944.9376
	Continuing Calibration Verification2	Ti (336.122 nm)	2.5082	0.15	362529.0555
	Continuing Calibration Verification2	Tl (190.794 nm)	0.9714	0.60	948.0521
	Continuing Calibration Verification2	V (292.401 nm)	2.5337	0.32	96018.9333
	Continuing Calibration Verification2	Y (360.074 nm)	1.03	0.40	503266.34
	Continuing Calibration Verification2	Y_R (360.074 nm)	1.03	0.40	501876.52
	Continuing Calibration Verification2	Zn (213.857 nm)	0.9876	0.24	63217.2301
6/11/2024 04:02:51	Continuing Calibration Blank2	Ag (328.068 nm)	-0.0005 u	23.28	-242.3486
	Continuing Calibration Blank2	Al (237.312 nm)	0.0053	4.95	25.2860
	Continuing Calibration Blank2	As (188.980 nm)	0.0002 u	> 100.00	-1.7574
	Continuing Calibration Blank2	B (249.772 nm)	0.0014	22.19	51.2840
	Continuing Calibration Blank2	Ba (230.424 nm)	0.0006	22.30	46.5179
	Continuing Calibration Blank2	Be (313.107 nm)	0.0001	10.76	124.8906
	Continuing Calibration Blank2	Ca (317.933 nm)	0.0176	1.38	3371.0831
	Continuing Calibration Blank2	Cd (214.439 nm)	0.0001	27.17	10.3754
	Continuing Calibration Blank2	Co (230.786 nm)	0.0003	34.25	-4.6047
	Continuing Calibration Blank2	Cr (267.716 nm)	0.0002	43.75	16.5623
	Continuing Calibration Blank2	Cu (327.395 nm)	0.0005	22.16	-4.2740
	Continuing Calibration Blank2	Fe (234.350 nm)	0.0066	18.73	120.6163
	Continuing Calibration Blank2	K (766.491 nm)	0.0535	49.81	-133.3236
	Continuing Calibration Blank2	Mg (279.078 nm)	0.0046	9.77	-14.8845
	Continuing Calibration Blank2	Mn (257.610 nm)	0.0001	13.72	67.3561
	Continuing Calibration Blank2	Mo (202.032 nm)	0.0033	32.96	46.0547
	Continuing Calibration Blank2	Na (588.995 nm)	0.0378	12.76	-13108.6428
	Continuing Calibration Blank2	Ni (230.299 nm)	0.0002	84.59	27.9868
	Continuing Calibration Blank2	Pb (220.353 nm)	0.0009	> 100.00	12.3697
	Continuing Calibration Blank2	Sb (217.582 nm)	0.0026	40.69	11.4070
	Continuing Calibration Blank2	Se (196.026 nm)	-0.0011 u	> 100.00	3.9537
	Continuing Calibration Blank2	Si (252.851 nm)	-0.0039 u	29.51	17.7965
	Continuing Calibration Blank2	Sn (189.925 nm)	0.0008 u	> 100.00	5.0382
	Continuing Calibration Blank2	Sr (216.596 nm)	0.0005	25.65	7.7594
	Continuing Calibration Blank2	Ti (336.122 nm)	0.0027	44.56	550.7602
	Continuing Calibration Blank2	Tl (190.794 nm)	0.0011 u	> 100.00	-0.0871
	Continuing Calibration Blank2	V (292.401 nm)	0.0000 u	> 100.00	-39.6395
	Continuing Calibration Blank2	Y (360.074 nm)	1.07	0.07	522325.87
	Continuing Calibration Blank2	Y_R (360.074 nm)	1.07	0.07	520898.71
	Continuing Calibration Blank2	Zn (213.857 nm)	0.0006	5.82	39.8202
6/11/2024 04:06:05	PBS-439481	Ag (328.068 nm)	-0.0005 u	50.78	-242.3665
	PBS-439481	Al (237.312 nm)	0.0022	96.94	17.6138
	PBS-439481	As (188.980 nm)	-0.0003 u	> 100.00	-2.5439
	PBS-439481	B (249.772 nm)	0.0012	11.30	43.5292
	PBS-439481	Ba (230.424 nm)	-0.0001 u	19.61	5.0982
	PBS-439481	Be (313.107 nm)	0.0001	9.78	98.5868
	PBS-439481	Ca (317.933 nm)	0.0132	1.28	3212.9806
	PBS-439481	Cd (214.439 nm)	0.0004	8.40	25.0264
	PBS-439481	Co (230.786 nm)	-0.0002 u	> 100.00	-12.6945
	PBS-439481	Cr (267.716 nm)	0.0008	16.72	45.8435

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	PBS-439481	Cu (327.395 nm)	0.0004	70.68	-12.0711
	PBS-439481	Fe (234.350 nm)	0.0083	15.87	149.9121
	PBS-439481	K (766.491 nm)	0.0348	47.16	-153.8271
	PBS-439481	Mg (279.078 nm)	0.0018	23.45	-23.9296
	PBS-439481	Mn (257.610 nm)	0.0001	14.74	58.6619
	PBS-439481	Mo (202.032 nm)	0.0008	32.69	19.9634
	PBS-439481	Na (588.995 nm)	0.0426	6.89	-13042.9479
	PBS-439481	Ni (230.299 nm)	-0.0014 u	25.30	9.1341
	PBS-439481	Pb (220.353 nm)	0.0010	19.53	13.4008
	PBS-439481	Sb (217.582 nm)	0.0013 u	> 100.00	8.9312
	PBS-439481	Se (196.026 nm)	-0.0009 u	> 100.00	4.0999
	PBS-439481	Si (252.851 nm)	0.0060	27.17	55.4658
	PBS-439481	Sn (189.925 nm)	0.0101	3.86	28.0051
	PBS-439481	Sr (216.596 nm)	0.0002	54.58	3.5675
	PBS-439481	Ti (336.122 nm)	0.0009	71.12	286.4476
	PBS-439481	Tl (190.794 nm)	-0.0008 u	> 100.00	-1.9495
	PBS-439481	V (292.401 nm)	0.0000 u	> 100.00	-41.3082
	PBS-439481	Y (360.074 nm)	1.07	0.30	523386.24
	PBS-439481	Y_R (360.074 nm)	1.07	0.30	521988.05
	PBS-439481	Zn (213.857 nm)	-0.0006 u	5.58	-37.8167
6/11/2024 04:09:21	LCSS-439481	Ag (328.068 nm)	0.0464	0.21	2415.9743
	LCSS-439481	Al (237.312 nm)	1.8162	0.18	4501.8610
	LCSS-439481	As (188.980 nm)	0.0348	4.94	56.9811
	LCSS-439481	B (249.772 nm)	0.8946	0.17	29053.0323
	LCSS-439481	Ba (230.424 nm)	1.8640	0.38	101498.3303
	LCSS-439481	Be (313.107 nm)	0.0461	0.37	50597.4507
	LCSS-439481	Ca (317.933 nm)	2.0095	0.35	74322.8393
	LCSS-439481	Cd (214.439 nm)	0.0500	0.24	2849.8924
	LCSS-439481	Co (230.786 nm)	0.4800	0.39	8694.5672
	LCSS-439481	Cr (267.716 nm)	0.2016	0.38	10483.6334
	LCSS-439481	Cu (327.395 nm)	0.2382	0.11	10428.2714
	LCSS-439481	Fe (234.350 nm)	1.0075	0.33	18343.4553
	LCSS-439481	K (766.491 nm)	17.7552	0.24	19292.4540
	LCSS-439481	Mg (279.078 nm)	1.9023	0.30	6186.6270
	LCSS-439481	Mn (257.610 nm)	0.4760	0.30	158966.2110
	LCSS-439481	Mo (202.032 nm)	0.5145	0.11	5382.9771
	LCSS-439481	Na (588.995 nm)	18.7668	0.24	241951.3401
	LCSS-439481	Ni (230.299 nm)	0.4995	0.48	5890.2466
	LCSS-439481	Pb (220.353 nm)	0.5125	0.49	2683.5827
	LCSS-439481	Sb (217.582 nm)	0.4392	0.25	822.3680
	LCSS-439481	Se (196.026 nm)	0.8779	0.47	644.7169
	LCSS-439481	Si (252.851 nm)	-0.0195 u	3.41	-41.4817
	LCSS-439481	Sn (189.925 nm)	4.8046	0.23	11833.6571
	LCSS-439481	Sr (216.596 nm)	1.9427	0.38	34189.1626
	LCSS-439481	Ti (336.122 nm)	0.4817	0.16	69751.7678
	LCSS-439481	Tl (190.794 nm)	1.8484	0.29	1805.0039
	LCSS-439481	V (292.401 nm)	0.4828	0.30	18264.8699
	LCSS-439481	Y (360.074 nm)	1.05	0.24	513521.75
	LCSS-439481	Y_R (360.074 nm)	1.05	0.24	512157.50
	LCSS-439481	Zn (213.857 nm)	0.4696	0.17	30056.0867
6/11/2024 04:12:36	R2404703-001	Ag (328.068 nm)	-0.0004 u	7.09	-237.8784
	R2404703-001	Al (237.312 nm)	0.0087	18.87	33.8368
	R2404703-001	As (188.980 nm)	0.0024	22.16	2.0263
	R2404703-001	B (249.772 nm)	0.0016	0.97	58.3963
	R2404703-001	Ba (230.424 nm)	0.0174	0.68	960.3049
	R2404703-001	Be (313.107 nm)	0.0001	10.13	97.8083
	R2404703-001	Ca (317.933 nm)	0.0569	0.40	4769.6950

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404703-001	Cd (214.439 nm)	0.0004	32.05	24.0784
	R2404703-001	Co (230.786 nm)	0.0002	18.72	-5.5175
	R2404703-001	Cr (267.716 nm)	0.0010	7.23	57.3022
	R2404703-001	Cu (327.395 nm)	0.0244	0.17	1042.5870
	R2404703-001	Fe (234.350 nm)	0.0344	2.06	625.3657
	R2404703-001	K (766.491 nm)	0.0795	35.26	-104.8051
	R2404703-001	Mg (279.078 nm)	0.0044	17.62	-15.3262
	R2404703-001	Mn (257.610 nm)	0.0006	1.50	219.1424
	R2404703-001	Mo (202.032 nm)	0.0027	17.73	40.5016
	R2404703-001	Na (588.995 nm)	0.0743	2.89	-12611.3117
	R2404703-001	Ni (230.299 nm)	0.0036	2.82	67.4530
	R2404703-001	Pb (220.353 nm)	0.0024	20.46	20.3144
	R2404703-001	Sb (217.582 nm)	0.0407	1.82	82.1335
	R2404703-001	Se (196.026 nm)	0.0003 u	> 100.00	4.9939
	R2404703-001	Si (252.851 nm)	0.1172	0.32	479.1578
	R2404703-001	Sn (189.925 nm)	0.0128	5.70	34.6428
	R2404703-001	Sr (216.596 nm)	0.0007	45.67	11.1448
	R2404703-001	Ti (336.122 nm)	0.0015	30.81	375.6526
	R2404703-001	Tl (190.794 nm)	-0.0040 u	70.04	-5.1072
	R2404703-001	V (292.401 nm)	-0.0002 u	70.15	-46.8251
	R2404703-001	Y (360.074 nm)	1.08	0.46	529052.93
	R2404703-001	Y_R (360.074 nm)	1.08	0.46	527652.12
	R2404703-001	Zn (213.857 nm)	0.0179	0.43	1148.0487
6/11/2024 04:15:51	R2404704-001	Ag (328.068 nm)	-0.0004 u	51.30	-239.2398
	R2404704-001	Al (237.312 nm)	0.0030	11.42	19.7596
	R2404704-001	As (188.980 nm)	0.0015	88.85	0.5786
	R2404704-001	B (249.772 nm)	0.0011	16.11	42.7387
	R2404704-001	Ba (230.424 nm)	0.0000	> 100.00	13.6686
	R2404704-001	Be (313.107 nm)	0.0001	11.10	91.4623
	R2404704-001	Ca (317.933 nm)	0.0156	1.63	3297.9095
	R2404704-001	Cd (214.439 nm)	0.0003	9.64	21.2550
	R2404704-001	Co (230.786 nm)	-0.0001 u	91.26	-11.0319
	R2404704-001	Cr (267.716 nm)	0.0008	9.94	48.9539
	R2404704-001	Cu (327.395 nm)	0.0308	1.63	1322.4460
	R2404704-001	Fe (234.350 nm)	0.0062	9.70	113.1533
	R2404704-001	K (766.491 nm)	0.0518	20.19	-135.1958
	R2404704-001	Mg (279.078 nm)	0.0017	24.22	-24.1121
	R2404704-001	Mn (257.610 nm)	0.0021	1.07	710.2028
	R2404704-001	Mo (202.032 nm)	0.0009	35.13	21.7064
	R2404704-001	Na (588.995 nm)	0.0676	5.17	-12701.6486
	R2404704-001	Ni (230.299 nm)	0.0086	1.62	126.4251
	R2404704-001	Pb (220.353 nm)	0.0019	32.00	17.8053
	R2404704-001	Sb (217.582 nm)	0.0315	1.63	65.0425
	R2404704-001	Se (196.026 nm)	0.0001 u	> 100.00	4.8260
	R2404704-001	Si (252.851 nm)	0.0303	3.79	148.0787
	R2404704-001	Sn (189.925 nm)	0.0145	4.24	38.8197
	R2404704-001	Sr (216.596 nm)	0.0002	> 100.00	2.8081
	R2404704-001	Ti (336.122 nm)	0.0001 u	> 100.00	175.8780
	R2404704-001	Tl (190.794 nm)	-0.0026 u	66.96	-3.7460
	R2404704-001	V (292.401 nm)	0.0000 u	> 100.00	-39.6225
	R2404704-001	Y (360.074 nm)	1.08	0.24	529429.26
	R2404704-001	Y_R (360.074 nm)	1.08	0.24	528043.34
	R2404704-001	Zn (213.857 nm)	0.0000	> 100.00	3.0729
6/11/2024 04:19:07	R2404731-001	Ag (328.068 nm)	-0.0008 u	10.69	-262.0441
	R2404731-001	Al (237.312 nm)	13.5608	0.18	33534.0573
	R2404731-001	As (188.980 nm)	0.0064	41.43	8.8336
	R2404731-001	B (249.772 nm)	0.0446	0.74	1454.0808

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404731-001	Ba (230.424 nm)	0.1561	0.13	8508.8843
	R2404731-001	Be (313.107 nm)	0.0011	1.29	1225.7946
	R2404731-001	Ca (317.933 nm)	#### LR	N/A	####
	R2404731-001	Cd (214.439 nm)	0.0010	0.57	59.0075
	R2404731-001	Co (230.786 nm)	0.0056	5.14	92.7440
	R2404731-001	Cr (267.716 nm)	0.0300	0.73	1563.1379
	R2404731-001	Cu (327.395 nm)	1.1053	0.57	48491.8555
	R2404731-001	Fe (234.350 nm)	32.3568 o	0.40	589154.0660
	R2404731-001	K (766.491 nm)	0.3769	8.42	221.6202
	R2404731-001	Mg (279.078 nm)	13.3000	0.30	43433.4316
	R2404731-001	Mn (257.610 nm)	0.6128	0.34	204652.4046
	R2404731-001	Mo (202.032 nm)	0.0019	17.97	31.6064
	R2404731-001	Na (588.995 nm)	36.2598	0.04	480177.0636
	R2404731-001	Ni (230.299 nm)	0.0308	0.43	386.7838
	R2404731-001	Pb (220.353 nm)	0.0509	1.63	273.8749
	R2404731-001	Sb (217.582 nm)	0.0020	57.68	10.2970
	R2404731-001	Se (196.026 nm)	-0.0004 u	> 100.00	4.4585
	R2404731-001	Si (252.851 nm)	7.0968	0.10	27073.8048
	R2404731-001	Sn (189.925 nm)	0.0122	7.36	33.0368
	R2404731-001	Sr (216.596 nm)	1.5729	0.44	27681.8083
	R2404731-001	Ti (336.122 nm)	0.9498	0.15	137376.9988
	R2404731-001	Tl (190.794 nm)	0.0010 u	> 100.00	-0.2275
	R2404731-001	V (292.401 nm)	0.0189	1.69	674.9713
	R2404731-001	Y (360.074 nm)	0.86	0.29	420684.44
	R2404731-001	Y_R (360.074 nm)	0.86	0.29	419540.31
	R2404731-001	Zn (213.857 nm)	0.0945	0.23	6052.0269
6/11/2024 04:22:22	R2404731-001S	Ag (328.068 nm)	0.0531	0.67	2794.7132
	R2404731-001S	Al (237.312 nm)	15.0869	0.22	37306.4427
	R2404731-001S	As (188.980 nm)	0.0480	2.90	79.4039
	R2404731-001S	B (249.772 nm)	1.0370	0.25	33679.4873
	R2404731-001S	Ba (230.424 nm)	1.9463	0.58	105978.6675
	R2404731-001S	Be (313.107 nm)	0.0465	0.25	51060.6974
	R2404731-001S	Ca (317.933 nm)	####	N/A	####
	R2404731-001S	Cd (214.439 nm)	0.0469	0.07	2676.6746
	R2404731-001S	Co (230.786 nm)	0.4492	0.33	8136.2494
	R2404731-001S	Cr (267.716 nm)	0.2204	0.21	11460.5699
	R2404731-001S	Cu (327.395 nm)	1.2503	0.38	54856.2886
	R2404731-001S	Fe (234.350 nm)	30.7531 o	0.27	559954.4118
	R2404731-001S	K (766.491 nm)	24.4358	0.12	26623.7724
	R2404731-001S	Mg (279.078 nm)	16.0101	0.25	52289.9346
	R2404731-001S	Mn (257.610 nm)	1.0762	0.31	359406.4267
	R2404731-001S	Mo (202.032 nm)	0.4994	0.23	5224.8814
	R2404731-001S	Na (588.995 nm)	56.0068 o	0.09	749099.4931
	R2404731-001S	Ni (230.299 nm)	0.4945	0.21	5831.9575
	R2404731-001S	Pb (220.353 nm)	0.5232	0.44	2739.2586
	R2404731-001S	Sb (217.582 nm)	0.4537	0.18	849.4264
	R2404731-001S	Se (196.026 nm)	0.9848	0.29	722.6501
	R2404731-001S	Si (252.851 nm)	6.8011	0.12	25947.2119
	R2404731-001S	Sn (189.925 nm)	4.6122	0.28	11360.0895
	R2404731-001S	Sr (216.596 nm)	3.3445	0.45	58860.8403
	R2404731-001S	Ti (336.122 nm)	1.4459	0.18	209060.3421
	R2404731-001S	Tl (190.794 nm)	1.6751	0.49	1635.5894
	R2404731-001S	V (292.401 nm)	0.5008	0.18	18945.9889
	R2404731-001S	Y (360.074 nm)	0.87	0.33	423422.02
	R2404731-001S	Y_R (360.074 nm)	0.87	0.33	422262.80
	R2404731-001S	Zn (213.857 nm)	0.5906	0.17	37806.2378
6/11/2024 04:25:37	R2404731-001SD	Ag (328.068 nm)	0.0536	0.29	2822.1895

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404731-001SD	Al (237.312 nm)	14.3437	0.18	35469.3067
	R2404731-001SD	As (188.980 nm)	0.0484	3.97	80.0311
	R2404731-001SD	B (249.772 nm)	1.0457	0.26	33962.2522
	R2404731-001SD	Ba (230.424 nm)	1.9483	0.43	106088.5906
	R2404731-001SD	Be (313.107 nm)	0.0467	0.28	51286.3514
	R2404731-001SD	Ca (317.933 nm)	####	N/A	####
	R2404731-001SD	Cd (214.439 nm)	0.0473	0.73	2698.3771
	R2404731-001SD	Co (230.786 nm)	0.4516	0.35	8180.0400
	R2404731-001SD	Cr (267.716 nm)	0.2231	0.36	11603.4505
	R2404731-001SD	Cu (327.395 nm)	1.3863	0.50	60826.2765
	R2404731-001SD	Fe (234.350 nm)	28.6589 o	0.37	521822.0069
	R2404731-001SD	K (766.491 nm)	24.8484	0.23	27076.5472
	R2404731-001SD	Mg (279.078 nm)	14.9451	0.28	48809.4788
	R2404731-001SD	Mn (257.610 nm)	1.0540	0.36	352018.8783
	R2404731-001SD	Mo (202.032 nm)	0.5097	0.35	5332.9858
	R2404731-001SD	Na (588.995 nm)	56.2940 o	0.02	753010.7352
	R2404731-001SD	Ni (230.299 nm)	0.4937	0.44	5822.5262
	R2404731-001SD	Pb (220.353 nm)	0.5255	0.47	2751.4946
	R2404731-001SD	Sb (217.582 nm)	0.4636	0.13	867.8100
	R2404731-001SD	Se (196.026 nm)	0.9870	0.38	724.2218
	R2404731-001SD	Si (252.851 nm)	6.7711	0.13	25832.7856
	R2404731-001SD	Sn (189.925 nm)	4.6032	0.29	11337.8949
	R2404731-001SD	Sr (216.596 nm)	3.3379	0.49	58744.7453
	R2404731-001SD	Ti (336.122 nm)	1.3410	0.24	193900.0540
	R2404731-001SD	Tl (190.794 nm)	1.6984	0.36	1658.4298
	R2404731-001SD	V (292.401 nm)	0.5032	0.27	19038.5086
	R2404731-001SD	Y (360.074 nm)	0.86	0.29	422377.55
	R2404731-001SD	Y_R (360.074 nm)	0.86	0.29	421214.17
	R2404731-001SD	Zn (213.857 nm)	0.5849	0.29	37437.1038
6/11/2024 04:28:52	R2404731-001A	Ag (328.068 nm)	0.0524	0.06	2755.8380
	R2404731-001A	Al (237.312 nm)	15.2752	0.10	37772.0670
	R2404731-001A	As (188.980 nm)	0.0447	2.05	73.8017
	R2404731-001A	B (249.772 nm)	1.0358	0.22	33638.8095
	R2404731-001A	Ba (230.424 nm)	1.9040	0.14	103679.7862
	R2404731-001A	Be (313.107 nm)	0.0456	0.20	50044.6729
	R2404731-001A	Ca (317.933 nm)	####	N/A	####
	R2404731-001A	Cd (214.439 nm)	0.0461	0.26	2627.5992
	R2404731-001A	Co (230.786 nm)	0.4422	0.31	8008.6281
	R2404731-001A	Cr (267.716 nm)	0.2175	0.28	11312.1360
	R2404731-001A	Cu (327.395 nm)	1.3183	0.16	57843.4145
	R2404731-001A	Fe (234.350 nm)	32.3992 o	0.24	589926.4360
	R2404731-001A	K (766.491 nm)	24.3470	0.17	26526.3333
	R2404731-001A	Mg (279.078 nm)	14.6650	0.22	47894.1742
	R2404731-001A	Mn (257.610 nm)	1.0527	0.26	351580.0893
	R2404731-001A	Mo (202.032 nm)	0.4990	0.12	5220.9474
	R2404731-001A	Na (588.995 nm)	57.5763 o	0.15	770473.0602
	R2404731-001A	Ni (230.299 nm)	0.4835	0.42	5703.0923
	R2404731-001A	Pb (220.353 nm)	0.5186	0.46	2715.1591
	R2404731-001A	Sb (217.582 nm)	0.4648	0.13	869.9967
	R2404731-001A	Se (196.026 nm)	0.9750	0.70	715.4443
	R2404731-001A	Si (252.851 nm)	6.9131	0.07	26373.9624
	R2404731-001A	Sn (189.925 nm)	4.5105	0.29	11109.6394
	R2404731-001A	Sr (216.596 nm)	3.2947	0.14	57985.1978
	R2404731-001A	Ti (336.122 nm)	1.3995	0.17	202351.5419
	R2404731-001A	Tl (190.794 nm)	1.6524	0.12	1613.4340
	R2404731-001A	V (292.401 nm)	0.4935	0.18	18668.7973
	R2404731-001A	Y (360.074 nm)	0.86	0.29	421515.66

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404731-001A	Y_R (360.074 nm)	0.86	0.29	420331.20
	R2404731-001A	Zn (213.857 nm)	0.5913	0.18	37848.3865
6/11/2024 04:32:07	R2404731-001L 5X	Ag (328.068 nm)	-0.0005 u	51.80	-241.6268
	R2404731-001L 5X	Al (237.312 nm)	2.6457	0.21	6552.4342
	R2404731-001L 5X	As (188.980 nm)	-0.0003 u	> 100.00	-2.5235
	R2404731-001L 5X	B (249.772 nm)	0.0102	1.53	337.8004
	R2404731-001L 5X	Ba (230.424 nm)	0.0326	0.18	1784.3245
	R2404731-001L 5X	Be (313.107 nm)	0.0003	3.18	348.3560
	R2404731-001L 5X	Ca (317.933 nm)	545.9937 o	0.41	19451272.6387
	R2404731-001L 5X	Cd (214.439 nm)	0.0004	35.05	22.1270
	R2404731-001L 5X	Co (230.786 nm)	0.0013	16.24	13.2127
	R2404731-001L 5X	Cr (267.716 nm)	0.0062	3.20	329.5854
	R2404731-001L 5X	Cu (327.395 nm)	0.2170	0.37	9497.8580
	R2404731-001L 5X	Fe (234.350 nm)	6.8749	0.40	125177.9620
	R2404731-001L 5X	K (766.491 nm)	0.1145	18.02	-66.3383
	R2404731-001L 5X	Mg (279.078 nm)	2.8901	0.44	9414.7896
	R2404731-001L 5X	Mn (257.610 nm)	0.1271	0.33	42467.2353
	R2404731-001L 5X	Mo (202.032 nm)	0.0017	42.72	30.1632
	R2404731-001L 5X	Na (588.995 nm)	6.7962	0.08	78930.9708
	R2404731-001L 5X	Ni (230.299 nm)	0.0071	3.34	108.4793
	R2404731-001L 5X	Pb (220.353 nm)	0.0115	1.44	68.2015
	R2404731-001L 5X	Sb (217.582 nm)	-0.0034 u	46.68	0.2903
	R2404731-001L 5X	Se (196.026 nm)	-0.0008 u	> 100.00	4.1754
	R2404731-001L 5X	Si (252.851 nm)	1.4039	0.39	5381.9306
	R2404731-001L 5X	Sn (189.925 nm)	0.0037	5.33	12.2237
	R2404731-001L 5X	Sr (216.596 nm)	0.3291	0.40	5791.8209
	R2404731-001L 5X	Ti (336.122 nm)	0.1942	0.55	28217.4168
	R2404731-001L 5X	Tl (190.794 nm)	0.0020	91.91	0.7101
	R2404731-001L 5X	V (292.401 nm)	0.0036	5.48	96.8055
	R2404731-001L 5X	Y (360.074 nm)	0.98	0.08	478283.84
	R2404731-001L 5X	Y_R (360.074 nm)	0.98	0.08	476960.76
	R2404731-001L 5X	Zn (213.857 nm)	0.0190	0.60	1219.8720
6/11/2024 04:35:23	R2404731-002	Ag (328.068 nm)	-0.0007 u	16.76	-255.4549
	R2404731-002	Al (237.312 nm)	11.6277	0.16	28755.4823
	R2404731-002	As (188.980 nm)	0.0048	12.28	6.1541
	R2404731-002	B (249.772 nm)	0.0377	0.63	1228.7652
	R2404731-002	Ba (230.424 nm)	0.1563	0.28	8519.7244
	R2404731-002	Be (313.107 nm)	0.0010	0.64	1065.8117
	R2404731-002	Ca (317.933 nm)	#### LR	N/A	####
	R2404731-002	Cd (214.439 nm)	0.0011	15.24	64.2504
	R2404731-002	Co (230.786 nm)	0.0056	9.75	91.1508
	R2404731-002	Cr (267.716 nm)	0.0282	0.34	1471.3157
	R2404731-002	Cu (327.395 nm)	1.0279	0.28	45093.4318
	R2404731-002	Fe (234.350 nm)	25.9733 o	0.26	472923.3992
	R2404731-002	K (766.491 nm)	0.3583	6.12	201.1254
	R2404731-002	Mg (279.078 nm)	9.8375	0.19	32118.4314
	R2404731-002	Mn (257.610 nm)	0.5888	0.27	196639.1778
	R2404731-002	Mo (202.032 nm)	0.0012	71.56	24.2856
	R2404731-002	Na (588.995 nm)	32.3747	0.13	427268.5059
	R2404731-002	Ni (230.299 nm)	0.0264	2.07	334.7696
	R2404731-002	Pb (220.353 nm)	0.0793	0.46	421.9240
	R2404731-002	Sb (217.582 nm)	-0.0051 u	33.72	-2.8475
	R2404731-002	Se (196.026 nm)	0.0001 u	> 100.00	4.8693
	R2404731-002	Si (252.851 nm)	7.4838	0.04	28548.6186
	R2404731-002	Sn (189.925 nm)	0.0125	4.59	33.7523
	R2404731-002	Sr (216.596 nm)	1.4518	0.39	25549.4858
	R2404731-002	Ti (336.122 nm)	1.0061	0.15	145510.3305

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404731-002	Tl (190.794 nm)	0.0012 u	> 100.00	-0.0614
	R2404731-002	V (292.401 nm)	0.0157	0.54	553.6441
	R2404731-002	Y (360.074 nm)	0.87	0.45	424741.23
	R2404731-002	Y_R (360.074 nm)	0.87	0.45	423537.47
	R2404731-002	Zn (213.857 nm)	0.1479	0.28	9466.5805
6/11/2024 04:38:38	Continuing Calibration Verification2	Ag (328.068 nm)	0.5023	0.18	28240.8696
	Continuing Calibration Verification2	Al (237.312 nm)	9.6467	0.04	23858.6416
	Continuing Calibration Verification2	As (188.980 nm)	0.9782	0.26	1656.9571
	Continuing Calibration Verification2	B (249.772 nm)	2.3906	0.23	77631.4581
	Continuing Calibration Verification2	Ba (230.424 nm)	9.5719	0.77	521173.3647
	Continuing Calibration Verification2	Be (313.107 nm)	0.2400	0.35	263443.6679
	Continuing Calibration Verification2	Ca (317.933 nm)	26.1179	0.35	933072.5870
	Continuing Calibration Verification2	Cd (214.439 nm)	0.5092	0.39	29011.4597
	Continuing Calibration Verification2	Co (230.786 nm)	2.4787	0.30	44937.2666
	Continuing Calibration Verification2	Cr (267.716 nm)	0.5229	0.40	27185.7786
	Continuing Calibration Verification2	Cu (327.395 nm)	1.2062	0.16	52923.5083
	Continuing Calibration Verification2	Fe (234.350 nm)	5.0573	0.31	92083.7341
	Continuing Calibration Verification2	K (766.491 nm)	24.0817	0.05	26235.2054
	Continuing Calibration Verification2	Mg (279.078 nm)	25.6612	0.33	83828.9547
	Continuing Calibration Verification2	Mn (257.610 nm)	0.7435	0.35	248323.8775
	Continuing Calibration Verification2	Mo (202.032 nm)	2.7230	0.35	28436.3460
	Continuing Calibration Verification2	Na (588.995 nm)	25.3885	0.26	332126.9604
	Continuing Calibration Verification2	Ni (230.299 nm)	2.0738	0.32	24377.1688
	Continuing Calibration Verification2	Pb (220.353 nm)	0.5253	0.37	2750.4279
	Continuing Calibration Verification2	Sb (217.582 nm)	4.6256	0.09	8599.0561
	Continuing Calibration Verification2	Se (196.026 nm)	0.4764	0.95	352.0306
	Continuing Calibration Verification2	Si (252.851 nm)	9.7479	0.47	37175.4591
	Continuing Calibration Verification2	Sn (189.925 nm)	5.0157	0.48	12353.6694
	Continuing Calibration Verification2	Sr (216.596 nm)	2.4902	0.51	43825.5549
	Continuing Calibration Verification2	Ti (336.122 nm)	2.5083	0.21	362553.4395
	Continuing Calibration Verification2	Tl (190.794 nm)	0.9709	0.35	947.4944
	Continuing Calibration Verification2	V (292.401 nm)	2.5282	0.37	95809.1942
	Continuing Calibration Verification2	Y (360.074 nm)	1.04	0.15	505780.56
	Continuing Calibration Verification2	Y_R (360.074 nm)	1.03	0.15	504380.23
	Continuing Calibration Verification2	Zn (213.857 nm)	0.9863	0.20	63131.1744
6/11/2024 04:41:52	Continuing Calibration Blank2	Ag (328.068 nm)	-0.0004 u	37.43	-240.0488
	Continuing Calibration Blank2	Al (237.312 nm)	0.0039	38.21	21.8419
	Continuing Calibration Blank2	As (188.980 nm)	0.0002 u	> 100.00	-1.6549
	Continuing Calibration Blank2	B (249.772 nm)	0.0015	13.78	54.5943
	Continuing Calibration Blank2	Ba (230.424 nm)	0.0006	18.39	45.9828
	Continuing Calibration Blank2	Be (313.107 nm)	0.0001	9.12	110.5352
	Continuing Calibration Blank2	Ca (317.933 nm)	0.0296	4.17	3797.0592
	Continuing Calibration Blank2	Cd (214.439 nm)	0.0001	25.05	9.8195
	Continuing Calibration Blank2	Co (230.786 nm)	0.0002	56.96	-6.0505
	Continuing Calibration Blank2	Cr (267.716 nm)	0.0001 u	> 100.00	12.4513
	Continuing Calibration Blank2	Cu (327.395 nm)	0.0007	20.56	2.4501
	Continuing Calibration Blank2	Fe (234.350 nm)	0.0061	15.04	110.2259
	Continuing Calibration Blank2	K (766.491 nm)	0.0781	42.38	-106.3297
	Continuing Calibration Blank2	Mg (279.078 nm)	0.0030	27.37	-19.9226
	Continuing Calibration Blank2	Mn (257.610 nm)	0.0001	16.19	65.7713
	Continuing Calibration Blank2	Mo (202.032 nm)	0.0035	39.86	48.8104
	Continuing Calibration Blank2	Na (588.995 nm)	0.0653	7.71	-12733.9407
	Continuing Calibration Blank2	Ni (230.299 nm)	0.0006	63.62	32.2178
	Continuing Calibration Blank2	Pb (220.353 nm)	0.0007	30.97	11.5132
	Continuing Calibration Blank2	Sb (217.582 nm)	0.0022	34.89	10.7181
	Continuing Calibration Blank2	Se (196.026 nm)	-0.0013 u	> 100.00	3.8191
	Continuing Calibration Blank2	Si (252.851 nm)	-0.0036 u	31.57	18.7807

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Blank2	Sn (189.925 nm)	0.0007	26.76	4.7450
	Continuing Calibration Blank2	Sr (216.596 nm)	0.0003	76.80	4.4732
	Continuing Calibration Blank2	Ti (336.122 nm)	0.0029	44.79	571.6051
	Continuing Calibration Blank2	Tl (190.794 nm)	0.0006 u	> 100.00	-0.5882
	Continuing Calibration Blank2	V (292.401 nm)	0.0001 u	> 100.00	-36.4628
	Continuing Calibration Blank2	Y (360.074 nm)	1.07	0.12	525127.75
	Continuing Calibration Blank2	Y_R (360.074 nm)	1.07	0.12	523675.96
	Continuing Calibration Blank2	Zn (213.857 nm)	0.0006	4.78	39.4805
6/11/2024 04:45:07	R2404750-001	Ag (328.068 nm)	0.0034	2.05	-19.3100
	R2404750-001	Al (237.312 nm)	8.7225	0.08	21573.8478
	R2404750-001	As (188.980 nm)	0.0096	8.67	14.2693
	R2404750-001	B (249.772 nm)	0.0937	0.33	3047.2317
	R2404750-001	Ba (230.424 nm)	1.3264	0.24	72227.3717
	R2404750-001	Be (313.107 nm)	0.0003	2.70	394.8887
	R2404750-001	Ca (317.933 nm)	68.8297 o	0.31	2454486.0220
	R2404750-001	Cd (214.439 nm)	0.0045	3.40	257.6451
	R2404750-001	Co (230.786 nm)	0.0068	3.77	113.4777
	R2404750-001	Cr (267.716 nm)	0.1006	0.34	5235.4337
	R2404750-001	Cu (327.395 nm)	1.1298	0.53	49568.7222
	R2404750-001	Fe (234.350 nm)	60.2229 o	0.28	1096542.4885
	R2404750-001	K (766.491 nm)	2.4926	0.74	2543.3221
	R2404750-001	Mg (279.078 nm)	10.4777	0.16	34210.3085
	R2404750-001	Mn (257.610 nm)	1.3804	0.22	460994.7582
	R2404750-001	Mo (202.032 nm)	0.0404	0.54	433.8902
	R2404750-001	Na (588.995 nm)	1.7689	0.29	10466.2771
	R2404750-001	Ni (230.299 nm)	0.0311	2.06	390.7660
	R2404750-001	Pb (220.353 nm)	0.0692	1.21	368.9468
	R2404750-001	Sb (217.582 nm)	0.0119	20.05	28.7403
	R2404750-001	Se (196.026 nm)	0.0109	23.48	12.7027
	R2404750-001	Si (252.851 nm)	4.2786	0.22	16335.5184
	R2404750-001	Sn (189.925 nm)	0.1126	1.45	280.2085
	R2404750-001	Sr (216.596 nm)	0.2757	0.19	4850.9926
	R2404750-001	Ti (336.122 nm)	0.1472	0.34	21415.3526
	R2404750-001	Tl (190.794 nm)	0.0003 u	> 100.00	-0.9395
	R2404750-001	V (292.401 nm)	0.0264	0.88	960.5596
	R2404750-001	Y (360.074 nm)	1.05	0.54	510983.12
	R2404750-001	Y_R (360.074 nm)	1.04	0.54	509550.91
	R2404750-001	Zn (213.857 nm)	2.6965 o	0.17	172596.7973
6/11/2024 04:48:22	R2404750-002	Ag (328.068 nm)	0.0150	1.59	637.7694
	R2404750-002	Al (237.312 nm)	21.8841	0.07	54108.9974
	R2404750-002	As (188.980 nm)	0.0620	1.41	103.0396
	R2404750-002	B (249.772 nm)	0.4623	0.20	15015.7877
	R2404750-002	Ba (230.424 nm)	3.8800	0.31	211267.3135
	R2404750-002	Be (313.107 nm)	0.0008	0.56	915.6091
	R2404750-002	Ca (317.933 nm)	188.0297 o	0.37	6700443.2608
	R2404750-002	Cd (214.439 nm)	0.0134	0.41	762.6305
	R2404750-002	Co (230.786 nm)	0.0237	1.83	420.2935
	R2404750-002	Cr (267.716 nm)	0.4031	0.32	20958.5499
	R2404750-002	Cu (327.395 nm)	3.7523 o	0.14	164687.2798
	R2404750-002	Fe (234.350 nm)	283.7361 o	0.36	5166283.7584
	R2404750-002	K (766.491 nm)	11.4158	0.11	12335.6215
	R2404750-002	Mg (279.078 nm)	23.6362	0.29	77211.3341
	R2404750-002	Mn (257.610 nm)	6.8822 o	0.30	2298354.7580
	R2404750-002	Mo (202.032 nm)	0.0732	0.33	776.2163
	R2404750-002	Na (588.995 nm)	6.9714	0.17	81316.1243
	R2404750-002	Ni (230.299 nm)	0.1215	0.64	1452.1044
	R2404750-002	Pb (220.353 nm)	0.2448	0.62	1286.0143

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404750-002	Sb (217.582 nm)	0.0080	8.98	21.4037
	R2404750-002	Se (196.026 nm)	0.0171	3.86	17.2182
	R2404750-002	Si (252.851 nm)	7.7549	0.30	29581.3992
	R2404750-002	Sn (189.925 nm)	0.3065	0.34	757.7574
	R2404750-002	Sr (216.596 nm)	0.8849	0.22	15573.3600
	R2404750-002	Ti (336.122 nm)	0.3579	0.14	51861.9178
	R2404750-002	Tl (190.794 nm)	0.0002 u	> 100.00	-0.9920
	R2404750-002	V (292.401 nm)	0.0698	0.21	2606.3516
	R2404750-002	Y (360.074 nm)	1.02	0.34	496707.04
	R2404750-002	Y_R (360.074 nm)	1.02	0.34	495286.17
	R2404750-002	Zn (213.857 nm)	8.7488 o LR	0.46	559994.7409
6/11/2024 04:51:38	R2404765-001	Ag (328.068 nm)	0.0073	0.96	198.2475
	R2404765-001	Al (237.312 nm)	12.8935	0.06	31884.5126
	R2404765-001	As (188.980 nm)	0.0180	3.26	28.5440
	R2404765-001	B (249.772 nm)	0.1933	0.27	6282.0182
	R2404765-001	Ba (230.424 nm)	1.7587	0.30	95765.3139
	R2404765-001	Be (313.107 nm)	0.0004	2.19	441.8267
	R2404765-001	Ca (317.933 nm)	92.2616 o	0.34	3289140.2162
	R2404765-001	Cd (214.439 nm)	0.0046	0.61	265.1594
	R2404765-001	Co (230.786 nm)	0.0143	0.92	249.8282
	R2404765-001	Cr (267.716 nm)	0.2104	0.14	10942.7410
	R2404765-001	Cu (327.395 nm)	1.7201	0.23	75480.2889
	R2404765-001	Fe (234.350 nm)	114.1980 o	0.25	2079324.4582
	R2404765-001	K (766.491 nm)	1.9876	1.43	1989.2011
	R2404765-001	Mg (279.078 nm)	12.3395	0.26	40294.7851
	R2404765-001	Mn (257.610 nm)	0.7424	0.22	247959.2231
	R2404765-001	Mo (202.032 nm)	0.0310	0.33	335.7834
	R2404765-001	Na (588.995 nm)	3.0693	0.18	28175.6156
	R2404765-001	Ni (230.299 nm)	0.0444	0.51	546.8466
	R2404765-001	Pb (220.353 nm)	0.0998	0.43	528.7790
	R2404765-001	Sb (217.582 nm)	0.0089	23.59	23.2112
	R2404765-001	Se (196.026 nm)	0.0081	19.53	10.6820
	R2404765-001	Si (252.851 nm)	5.9898	0.20	22855.8813
	R2404765-001	Sn (189.925 nm)	0.1485	0.42	368.6077
	R2404765-001	Sr (216.596 nm)	0.6198	0.36	10908.3166
	R2404765-001	Ti (336.122 nm)	0.1606	0.41	23360.3209
	R2404765-001	Tl (190.794 nm)	0.0003 u	> 100.00	-0.9499
	R2404765-001	V (292.401 nm)	0.0280	0.29	1020.5356
	R2404765-001	Y (360.074 nm)	1.05	0.35	510767.98
	R2404765-001	Y_R (360.074 nm)	1.04	0.35	509320.72
	R2404765-001	Zn (213.857 nm)	2.5387 o	0.16	162499.3082
6/11/2024 04:54:53	R2404705-001	Ag (328.068 nm)	-0.0005 u	10.15	-241.9001
	R2404705-001	Al (237.312 nm)	0.0026	41.35	18.8213
	R2404705-001	As (188.980 nm)	0.0033	15.38	3.5112
	R2404705-001	B (249.772 nm)	0.0014	11.62	49.6512
	R2404705-001	Ba (230.424 nm)	0.0026	2.45	150.6635
	R2404705-001	Be (313.107 nm)	0.0001	8.88	99.7827
	R2404705-001	Ca (317.933 nm)	0.0314	1.09	3860.7565
	R2404705-001	Cd (214.439 nm)	0.0004	14.22	22.2724
	R2404705-001	Co (230.786 nm)	0.0001	83.30	-7.5020
	R2404705-001	Cr (267.716 nm)	0.0006	12.26	37.2550
	R2404705-001	Cu (327.395 nm)	0.0053	5.63	204.6467
	R2404705-001	Fe (234.350 nm)	0.0398	19.50	723.4576
	R2404705-001	K (766.491 nm)	0.0773	24.13	-107.1875
	R2404705-001	Mg (279.078 nm)	0.0018	53.48	-23.8328
	R2404705-001	Mn (257.610 nm)	0.0003	3.92	125.5900
	R2404705-001	Mo (202.032 nm)	0.0007	45.52	19.3866

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404705-001	Na (588.995 nm)	0.1191	2.26	-12000.2197
	R2404705-001	Ni (230.299 nm)	-0.0007 u	60.40	17.5467
	R2404705-001	Pb (220.353 nm)	0.0015	29.64	15.8778
	R2404705-001	Sb (217.582 nm)	0.0177	9.67	39.4339
	R2404705-001	Se (196.026 nm)	-0.0028 u	62.03	2.7118
	R2404705-001	Si (252.851 nm)	0.2537	0.53	999.5257
	R2404705-001	Sn (189.925 nm)	0.0117	4.60	31.9033
	R2404705-001	Sr (216.596 nm)	0.0003	40.51	5.0715
	R2404705-001	Ti (336.122 nm)	0.0008	74.95	263.9322
	R2404705-001	Tl (190.794 nm)	-0.0048 u	12.01	-5.9417
	R2404705-001	V (292.401 nm)	0.0000 u	> 100.00	-41.2501
	R2404705-001	Y (360.074 nm)	1.09	0.17	534606.18
	R2404705-001	Y_R (360.074 nm)	1.09	0.17	533099.87
	R2404705-001	Zn (213.857 nm)	0.0022	0.43	140.5308
6/11/2024 04:58:08	R2404731-001 10X	Ag (328.068 nm)	-0.0005 u	15.09	-245.6666
	R2404731-001 10X	Al (237.312 nm)	1.3035	0.16	3234.5944
	R2404731-001 10X	As (188.980 nm)	-0.0012 u	21.60	-4.0089
	R2404731-001 10X	B (249.772 nm)	0.0048	4.79	160.3309
	R2404731-001 10X	Ba (230.424 nm)	0.0162	0.76	892.4531
	R2404731-001 10X	Be (313.107 nm)	0.0002	4.55	214.2382
	R2404731-001 10X	Ca (317.933 nm)	298.4958 o LR	0.18	10635290.4450
	R2404731-001 10X	Cd (214.439 nm)	0.0003	27.02	18.2708
	R2404731-001 10X	Co (230.786 nm)	0.0006	30.44	1.7075
	R2404731-001 10X	Cr (267.716 nm)	0.0032	3.30	171.7022
	R2404731-001 10X	Cu (327.395 nm)	0.1075	0.23	4691.6985
	R2404731-001 10X	Fe (234.350 nm)	3.4470	0.05	62763.3407
	R2404731-001 10X	K (766.491 nm)	0.0502	50.72	-136.9160
	R2404731-001 10X	Mg (279.078 nm)	1.4659	0.13	4760.6258
	R2404731-001 10X	Mn (257.610 nm)	0.0642	0.12	21447.9337
	R2404731-001 10X	Mo (202.032 nm)	0.0000 u	> 100.00	12.2892
	R2404731-001 10X	Na (588.995 nm)	3.2783	0.21	31022.1386
	R2404731-001 10X	Ni (230.299 nm)	0.0035	13.36	66.0627
	R2404731-001 10X	Pb (220.353 nm)	0.0064	4.68	41.4496
	R2404731-001 10X	Sb (217.582 nm)	-0.0016 u	> 100.00	3.6800
	R2404731-001 10X	Se (196.026 nm)	-0.0034 u	> 100.00	2.3316
	R2404731-001 10X	Si (252.851 nm)	0.7075	0.21	2728.4608
	R2404731-001 10X	Sn (189.925 nm)	0.0022	53.73	8.5217
	R2404731-001 10X	Sr (216.596 nm)	0.1674	0.26	2945.5660
	R2404731-001 10X	Ti (336.122 nm)	0.0950	0.09	13883.8562
	R2404731-001 10X	Tl (190.794 nm)	0.0017	82.34	0.5058
	R2404731-001 10X	V (292.401 nm)	0.0017	1.55	24.5747
	R2404731-001 10X	Y (360.074 nm)	1.01	0.05	495853.49
	R2404731-001 10X	Y_R (360.074 nm)	1.01	0.05	494415.12
	R2404731-001 10X	Zn (213.857 nm)	0.0094	0.71	604.0093
6/11/2024 05:01:24	R2404731-001S 10X	Ag (328.068 nm)	0.0046	4.19	43.8214
	R2404731-001S 10X	Al (237.312 nm)	1.4418	0.34	3576.3702
	R2404731-001S 10X	As (188.980 nm)	0.0035	28.74	3.9700
	R2404731-001S 10X	B (249.772 nm)	0.1016	0.54	3305.4605
	R2404731-001S 10X	Ba (230.424 nm)	0.2013	0.29	10971.7292
	R2404731-001S 10X	Be (313.107 nm)	0.0049	0.23	5352.4032
	R2404731-001S 10X	Ca (317.933 nm)	279.2668 o	0.26	9950348.3179
	R2404731-001S 10X	Cd (214.439 nm)	0.0051	1.81	293.7550
	R2404731-001S 10X	Co (230.786 nm)	0.0474	0.75	850.4869
	R2404731-001S 10X	Cr (267.716 nm)	0.0229	0.51	1198.1129
	R2404731-001S 10X	Cu (327.395 nm)	0.1205	0.11	5264.1202
	R2404731-001S 10X	Fe (234.350 nm)	3.2481	0.35	59140.4639
	R2404731-001S 10X	K (766.491 nm)	2.0764	0.96	2086.6472

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404731-001S 10X	Mg (279.078 nm)	1.7496	0.40	5687.9166
	R2404731-001S 10X	Mn (257.610 nm)	0.1117	0.16	37310.6531
	R2404731-001S 10X	Mo (202.032 nm)	0.0503	0.78	536.7148
	R2404731-001S 10X	Na (588.995 nm)	5.1402	0.27	56378.0198
	R2404731-001S 10X	Ni (230.299 nm)	0.0534	0.62	652.6482
	R2404731-001S 10X	Pb (220.353 nm)	0.0570	1.96	305.6162
	R2404731-001S 10X	Sb (217.582 nm)	0.0424	4.72	85.4254
	R2404731-001S 10X	Se (196.026 nm)	0.0992	0.57	77.0897
	R2404731-001S 10X	Si (252.851 nm)	0.6725	0.12	2594.9547
	R2404731-001S 10X	Sn (189.925 nm)	0.4919	0.25	1214.3720
	R2404731-001S 10X	Sr (216.596 nm)	0.3519	0.20	6193.3661
	R2404731-001S 10X	Ti (336.122 nm)	0.1438	0.18	20935.4052
	R2404731-001S 10X	Tl (190.794 nm)	0.1911	1.06	185.5495
	R2404731-001S 10X	V (292.401 nm)	0.0497	0.10	1843.6420
	R2404731-001S 10X	Y (360.074 nm)	1.01	0.20	495371.04
	R2404731-001S 10X	Y_R (360.074 nm)	1.01	0.20	493947.77
	R2404731-001S 10X	Zn (213.857 nm)	0.0584	0.21	3736.3030
6/11/2024 05:04:39	R2404731-001SD 10X	Ag (328.068 nm)	0.0047	3.01	54.1186
	R2404731-001SD 10X	Al (237.312 nm)	1.3820	0.16	3428.6265
	R2404731-001SD 10X	As (188.980 nm)	0.0045	42.30	5.6322
	R2404731-001SD 10X	B (249.772 nm)	0.1041	0.09	3386.6941
	R2404731-001SD 10X	Ba (230.424 nm)	0.2036	0.32	11095.7464
	R2404731-001SD 10X	Be (313.107 nm)	0.0049	0.43	5431.9950
	R2404731-001SD 10X	Ca (317.933 nm)	285.8553 o	0.37	10185032.7351
	R2404731-001SD 10X	Cd (214.439 nm)	0.0053	1.40	303.8478
	R2404731-001SD 10X	Co (230.786 nm)	0.0486	0.58	870.9279
	R2404731-001SD 10X	Cr (267.716 nm)	0.0235	0.25	1225.4261
	R2404731-001SD 10X	Cu (327.395 nm)	0.1353	0.31	5910.1643
	R2404731-001SD 10X	Fe (234.350 nm)	3.0533	0.38	55594.6794
	R2404731-001SD 10X	K (766.491 nm)	2.1378	1.98	2153.9838
	R2404731-001SD 10X	Mg (279.078 nm)	1.6535	0.31	5373.7161
	R2404731-001SD 10X	Mn (257.610 nm)	0.1106	0.34	36966.5474
	R2404731-001SD 10X	Mo (202.032 nm)	0.0521	0.54	556.1615
	R2404731-001SD 10X	Na (588.995 nm)	5.1982	0.15	57168.7732
	R2404731-001SD 10X	Ni (230.299 nm)	0.0539	1.53	658.0833
	R2404731-001SD 10X	Pb (220.353 nm)	0.0580	0.68	310.9178
	R2404731-001SD 10X	Sb (217.582 nm)	0.0429	1.37	86.3220
	R2404731-001SD 10X	Se (196.026 nm)	0.1041	5.41	80.6427
	R2404731-001SD 10X	Si (252.851 nm)	0.6730	0.17	2597.1715
	R2404731-001SD 10X	Sn (189.925 nm)	0.4951	0.35	1222.1475
	R2404731-001SD 10X	Sr (216.596 nm)	0.3556	0.48	6258.6136
	R2404731-001SD 10X	Ti (336.122 nm)	0.1349	0.22	19649.2981
	R2404731-001SD 10X	Tl (190.794 nm)	0.1928	0.97	187.1989
	R2404731-001SD 10X	V (292.401 nm)	0.0505	0.60	1873.8547
	R2404731-001SD 10X	Y (360.074 nm)	1.01	0.06	493522.94
	R2404731-001SD 10X	Y_R (360.074 nm)	1.01	0.06	492105.38
	R2404731-001SD 10X	Zn (213.857 nm)	0.0584	0.23	3735.5608
6/11/2024 05:07:54	R2404731-001 10X R2404731-001A 100x	Ag (328.068 nm)	0.0498	0.67	2606.6963
	R2404731-001 10X	Al (237.312 nm)	3.2248	0.14	7983.8281
	R2404731-001 10X	As (188.980 nm)	0.0385	2.63	63.2913
	R2404731-001 10X	B (249.772 nm)	0.9922	0.35	32223.5421
	R2404731-001 10X	Ba (230.424 nm)	1.8338	0.08	99854.3010
	R2404731-001 10X	Be (313.107 nm)	0.0469	0.36	51507.0757
	R2404731-001 10X	Ca (317.933 nm)	292.2971 o	0.40	10414492.2458
	R2404731-001 10X	Cd (214.439 nm)	0.0489	0.23	2789.6995
	R2404731-001 10X	Co (230.786 nm)	0.4673	0.27	8463.6017
	R2404731-001 10X	Cr (267.716 nm)	0.1992	0.42	10361.1872

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404731-001 10X	Cu (327.395 nm)	0.3455	0.15	15137.5012
	R2404731-001 10X	Fe (234.350 nm)	4.3136	0.35	78541.8925
	R2404731-001 10X	K (766.491 nm)	20.0317	0.15	21790.7326
	R2404731-001 10X	Mg (279.078 nm)	3.3513	0.32	10921.9210
	R2404731-001 10X	Mn (257.610 nm)	0.5349	0.36	178646.6689
	R2404731-001 10X	Mo (202.032 nm)	0.5068	0.41	5302.1133
	R2404731-001 10X	Na (588.995 nm)	24.0568	0.06	313992.6706
	R2404731-001 10X	Ni (230.299 nm)	0.4947	0.61	5834.1620
	R2404731-001 10X	Pb (220.353 nm)	0.5159	0.50	2701.1179
	R2404731-001 10X	Sb (217.582 nm)	0.4670	0.45	874.1089
	R2404731-001 10X	Se (196.026 nm)	1.0193	0.17	747.7702
	R2404731-001 10X	Si (252.851 nm)	0.6812	0.33	2628.1803
	R2404731-001 10X	Sn (189.925 nm)	4.7972	0.38	11815.4817
	R2404731-001 10X	Sr (216.596 nm)	2.0355	0.35	35824.0367
	R2404731-001 10X	Ti (336.122 nm)	0.5700	0.16	82509.9585
	R2404731-001 10X	Tl (190.794 nm)	1.8539	0.27	1810.3976
	R2404731-001 10X	V (292.401 nm)	0.4842	0.34	18315.1570
	R2404731-001 10X	Y (360.074 nm)	1.00	0.13	490215.03
	R2404731-001 10X	Y_R (360.074 nm)	1.00	0.13	488801.18
	R2404731-001 10X	Zn (213.857 nm)	0.5102	0.33	32657.6135
6/11/2024 05:11:10	R2404731-001L 50X	Ag (328.068 nm)	-0.0005 u	27.75	-244.0541
	R2404731-001L 50X	Al (237.312 nm)	0.2605	0.34	656.3382
	R2404731-001L 50X	As (188.980 nm)	-0.0005 u	> 100.00	-2.8653
	R2404731-001L 50X	B (249.772 nm)	0.0012	19.97	45.8534
	R2404731-001L 50X	Ba (230.424 nm)	0.0032	0.93	187.8014
	R2404731-001L 50X	Be (313.107 nm)	0.0001	7.35	123.7888
	R2404731-001L 50X	Ca (317.933 nm)	64.2737 o	0.43	2292199.2400
	R2404731-001L 50X	Cd (214.439 nm)	0.0001 u	98.17	7.8403
	R2404731-001L 50X	Co (230.786 nm)	0.0000 u	> 100.00	-9.0567
	R2404731-001L 50X	Cr (267.716 nm)	0.0006	28.72	39.6145
	R2404731-001L 50X	Cu (327.395 nm)	0.0216	1.25	918.5541
	R2404731-001L 50X	Fe (234.350 nm)	0.7017	0.50	12775.8431
	R2404731-001L 50X	K (766.491 nm)	0.0769	21.27	-107.6793
	R2404731-001L 50X	Mg (279.078 nm)	0.3017	0.71	956.3004
	R2404731-001L 50X	Mn (257.610 nm)	0.0130	0.23	4346.9803
	R2404731-001L 50X	Mo (202.032 nm)	0.0024	39.54	37.0189
	R2404731-001L 50X	Na (588.995 nm)	0.6456	0.56	-4830.8594
	R2404731-001L 50X	Ni (230.299 nm)	0.0008	41.82	34.8863
	R2404731-001L 50X	Pb (220.353 nm)	0.0018	16.44	17.4678
	R2404731-001L 50X	Sb (217.582 nm)	-0.0021 u	80.52	2.7452
	R2404731-001L 50X	Se (196.026 nm)	-0.0013 u	> 100.00	3.7990
	R2404731-001L 50X	Si (252.851 nm)	0.1527	0.11	614.6423
	R2404731-001L 50X	Sn (189.925 nm)	0.0022	40.16	8.4922
	R2404731-001L 50X	Sr (216.596 nm)	0.0337	0.98	591.7569
	R2404731-001L 50X	Ti (336.122 nm)	0.0200	3.15	3044.7038
	R2404731-001L 50X	Tl (190.794 nm)	0.0015 u	97.45	0.2844
	R2404731-001L 50X	V (292.401 nm)	0.0003	42.73	-28.9104
	R2404731-001L 50X	Y (360.074 nm)	1.05	0.11	513784.08
	R2404731-001L 50X	Y_R (360.074 nm)	1.05	0.11	512320.98
	R2404731-001L 50X	Zn (213.857 nm)	0.0019	0.61	120.3530
6/11/2024 05:14:25	R2404731-002 10X	Ag (328.068 nm)	-0.0003 u	42.07	-233.3804
	R2404731-002 10X	Al (237.312 nm)	1.1219	0.38	2785.4919
	R2404731-002 10X	As (188.980 nm)	0.0013 u	> 100.00	0.2585
	R2404731-002 10X	B (249.772 nm)	0.0040	2.44	133.8015
	R2404731-002 10X	Ba (230.424 nm)	0.0164	0.43	901.9568
	R2404731-002 10X	Be (313.107 nm)	0.0002	3.48	209.2308
	R2404731-002 10X	Ca (317.933 nm)	279.8432 o LR	0.63	9970879.8157

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404731-002 10X	Cd (214.439 nm)	0.0002	23.26	14.6964
	R2404731-002 10X	Co (230.786 nm)	0.0004	12.68	-2.7173
	R2404731-002 10X	Cr (267.716 nm)	0.0030	3.34	159.9447
	R2404731-002 10X	Cu (327.395 nm)	0.1008	0.46	4395.0629
	R2404731-002 10X	Fe (234.350 nm)	2.7593	0.50	50241.2634
	R2404731-002 10X	K (766.491 nm)	0.0468	67.86	-140.6294
	R2404731-002 10X	Mg (279.078 nm)	1.0929	0.32	3541.7407
	R2404731-002 10X	Mn (257.610 nm)	0.0622	0.49	20780.3699
	R2404731-002 10X	Mo (202.032 nm)	0.0009	50.38	21.0323
	R2404731-002 10X	Na (588.995 nm)	2.9109	0.10	26018.4424
	R2404731-002 10X	Ni (230.299 nm)	0.0033	2.06	64.4189
	R2404731-002 10X	Pb (220.353 nm)	0.0088	7.61	53.8542
	R2404731-002 10X	Sb (217.582 nm)	-0.0051 u	32.12	-2.9322
	R2404731-002 10X	Se (196.026 nm)	0.0001 u	> 100.00	4.8491
	R2404731-002 10X	Si (252.851 nm)	0.7474	0.50	2880.5078
	R2404731-002 10X	Sn (189.925 nm)	0.0011	65.24	5.8240
	R2404731-002 10X	Sr (216.596 nm)	0.1556	0.73	2738.2026
	R2404731-002 10X	Ti (336.122 nm)	0.1021	0.46	14905.3071
	R2404731-002 10X	Tl (190.794 nm)	-0.0003 u	> 100.00	-1.4709
	R2404731-002 10X	V (292.401 nm)	0.0014	8.60	13.9892
	R2404731-002 10X	Y (360.074 nm)	1.01	0.14	493937.54
	R2404731-002 10X	Y_R (360.074 nm)	1.01	0.14	492501.63
	R2404731-002 10X	Zn (213.857 nm)	0.0151	0.59	968.0704
6/11/2024 05:17:40	Continuing Calibration Verification2	Ag (328.068 nm)	0.5033	0.09	28297.7614
	Continuing Calibration Verification2	Al (237.312 nm)	9.6417	0.07	23846.1433
	Continuing Calibration Verification2	As (188.980 nm)	0.9749	0.32	1651.2488
	Continuing Calibration Verification2	B (249.772 nm)	2.3872	0.15	77521.2190
	Continuing Calibration Verification2	Ba (230.424 nm)	9.5220	0.61	518455.3162
	Continuing Calibration Verification2	Be (313.107 nm)	0.2390	0.30	262305.6596
	Continuing Calibration Verification2	Ca (317.933 nm)	26.0825	0.31	931811.9206
	Continuing Calibration Verification2	Cd (214.439 nm)	0.5086	0.32	28977.1776
	Continuing Calibration Verification2	Co (230.786 nm)	2.4766	0.57	44899.7424
	Continuing Calibration Verification2	Cr (267.716 nm)	0.5233	0.29	27205.9507
	Continuing Calibration Verification2	Cu (327.395 nm)	1.2076	0.38	52984.2440
	Continuing Calibration Verification2	Fe (234.350 nm)	5.0468	0.30	91892.2447
	Continuing Calibration Verification2	K (766.491 nm)	23.9727	0.16	26115.5971
	Continuing Calibration Verification2	Mg (279.078 nm)	25.6794	0.26	83888.3286
	Continuing Calibration Verification2	Mn (257.610 nm)	0.7436	0.29	248339.5386
	Continuing Calibration Verification2	Mo (202.032 nm)	2.7201	0.44	28406.3426
	Continuing Calibration Verification2	Na (588.995 nm)	25.3869	0.36	332105.7635
	Continuing Calibration Verification2	Ni (230.299 nm)	2.0736	0.24	24375.3525
	Continuing Calibration Verification2	Pb (220.353 nm)	0.5243	0.15	2744.9459
	Continuing Calibration Verification2	Sb (217.582 nm)	4.6318	0.28	8610.6026
	Continuing Calibration Verification2	Se (196.026 nm)	0.4732	0.64	349.7135
	Continuing Calibration Verification2	Si (252.851 nm)	9.7993	0.36	37371.4371
	Continuing Calibration Verification2	Sn (189.925 nm)	5.0033	0.15	12323.1084
	Continuing Calibration Verification2	Sr (216.596 nm)	2.4924	0.57	43864.1168
	Continuing Calibration Verification2	Ti (336.122 nm)	2.5034	0.15	361833.3701
	Continuing Calibration Verification2	Tl (190.794 nm)	0.9699	0.87	946.5639
	Continuing Calibration Verification2	V (292.401 nm)	2.5319	0.25	95947.9638
	Continuing Calibration Verification2	Y (360.074 nm)	1.03	0.28	505023.16
	Continuing Calibration Verification2	Y_R (360.074 nm)	1.03	0.28	503570.65
	Continuing Calibration Verification2	Zn (213.857 nm)	0.9870	0.43	63178.7696
6/11/2024 05:20:54	Continuing Calibration Blank2	Ag (328.068 nm)	-0.0003 u	11.23	-232.5836
	Continuing Calibration Blank2	Al (237.312 nm)	0.0044	45.82	23.1796
	Continuing Calibration Blank2	As (188.980 nm)	-0.0004 u	> 100.00	-2.6978
	Continuing Calibration Blank2	B (249.772 nm)	0.0014	10.13	52.0877

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Blank2	Ba (230.424 nm)	0.0008	2.78	52.9009
	Continuing Calibration Blank2	Be (313.107 nm)	0.0001	8.93	123.0649
	Continuing Calibration Blank2	Ca (317.933 nm)	0.0185	1.51	3402.3381
	Continuing Calibration Blank2	Cd (214.439 nm)	0.0002	9.10	12.0120
	Continuing Calibration Blank2	Co (230.786 nm)	0.0000 u	> 100.00	-8.8291
	Continuing Calibration Blank2	Cr (267.716 nm)	0.0001	37.53	10.3835
	Continuing Calibration Blank2	Cu (327.395 nm)	0.0007	18.27	2.5722
	Continuing Calibration Blank2	Fe (234.350 nm)	0.0070	16.45	127.3706
	Continuing Calibration Blank2	K (766.491 nm)	0.0950	23.14	-87.8222
	Continuing Calibration Blank2	Mg (279.078 nm)	0.0030	33.53	-20.0003
	Continuing Calibration Blank2	Mn (257.610 nm)	0.0001	15.77	62.7117
	Continuing Calibration Blank2	Mo (202.032 nm)	0.0040	31.30	53.6387
	Continuing Calibration Blank2	Na (588.995 nm)	0.0517	6.26	-12918.3571
	Continuing Calibration Blank2	Ni (230.299 nm)	0.0002 u	> 100.00	27.9745
	Continuing Calibration Blank2	Pb (220.353 nm)	0.0006	72.12	11.2631
	Continuing Calibration Blank2	Sb (217.582 nm)	0.0016	67.93	9.5756
	Continuing Calibration Blank2	Se (196.026 nm)	0.0015 u	> 100.00	5.9074
	Continuing Calibration Blank2	Si (252.851 nm)	0.0001 u	> 100.00	33.0103
	Continuing Calibration Blank2	Sn (189.925 nm)	0.0011	40.99	5.6839
	Continuing Calibration Blank2	Sr (216.596 nm)	0.0003	24.77	5.0235
	Continuing Calibration Blank2	Ti (336.122 nm)	0.0036	44.52	672.5864
	Continuing Calibration Blank2	Tl (190.794 nm)	0.0001 u	> 100.00	-1.0657
	Continuing Calibration Blank2	V (292.401 nm)	0.0000 u	> 100.00	-38.7257
	Continuing Calibration Blank2	Y (360.074 nm)	1.08	0.10	525628.75
	Continuing Calibration Blank2	Y_R (360.074 nm)	1.07	0.10	524151.05
	Continuing Calibration Blank2	Zn (213.857 nm)	0.0006	3.56	40.1688
6/11/2024 05:24:08	Contract Required Detection Limit	Ag (328.068 nm)	0.0082	0.45	249.9885
	Contract Required Detection Limit	Al (237.312 nm)	0.1911	0.51	484.6603
	Contract Required Detection Limit	As (188.980 nm)	0.0193	0.83	30.6504
	Contract Required Detection Limit	B (249.772 nm)	0.1860	0.14	6043.6991
	Contract Required Detection Limit	Ba (230.424 nm)	0.1912	0.25	10419.0115
	Contract Required Detection Limit	Be (313.107 nm)	0.0048	0.47	5330.5004
	Contract Required Detection Limit	Ca (317.933 nm)	1.0488	0.31	40101.8004
	Contract Required Detection Limit	Cd (214.439 nm)	0.0107	1.55	609.5167
	Contract Required Detection Limit	Co (230.786 nm)	0.0495	0.73	887.9615
	Contract Required Detection Limit	Cr (267.716 nm)	0.0097	1.32	507.8690
	Contract Required Detection Limit	Cu (327.395 nm)	0.0243	0.25	1041.1244
	Contract Required Detection Limit	Fe (234.350 nm)	0.1080	1.26	1965.7928
	Contract Required Detection Limit	K (766.491 nm)	0.9714	0.60	873.9437
	Contract Required Detection Limit	Mg (279.078 nm)	1.0095	0.38	3269.3363
	Contract Required Detection Limit	Mn (257.610 nm)	0.0139	0.43	4650.1089
	Contract Required Detection Limit	Mo (202.032 nm)	0.0273	1.59	296.6124
	Contract Required Detection Limit	Na (588.995 nm)	1.0340	0.39	458.0991
	Contract Required Detection Limit	Ni (230.299 nm)	0.0356	0.66	443.3793
	Contract Required Detection Limit	Pb (220.353 nm)	0.0108	2.13	64.4984
	Contract Required Detection Limit	Sb (217.582 nm)	0.0531	1.30	105.2543
	Contract Required Detection Limit	Se (196.026 nm)	0.0080 R 80%	15.49	10.5931 R
	Contract Required Detection Limit	Si (252.851 nm)	0.0484	2.68	216.9254
	Contract Required Detection Limit	Sn (189.925 nm)	0.4983	0.37	1230.0336
	Contract Required Detection Limit	Sr (216.596 nm)	0.0987	0.33	1736.7820
	Contract Required Detection Limit	Ti (336.122 nm)	0.0494	1.51	7286.7891
	Contract Required Detection Limit	Tl (190.794 nm)	0.0207	11.73	19.0187
	Contract Required Detection Limit	V (292.401 nm)	0.0491	0.08	1819.2080
	Contract Required Detection Limit	Y (360.074 nm)	1.07	0.51	525139.75
	Contract Required Detection Limit	Y_R (360.074 nm)	1.07	0.51	523641.59
	Contract Required Detection Limit	Zn (213.857 nm)	0.0171	0.63	1094.5160
6/11/2024 05:27:21	Interference Check Solution A	Ag (328.068 nm)	-0.0006 u	3.39	-248.5812

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Interference Check Solution A	Al (237.312 nm)	243.3756 o	0.21	601627.2300
	Interference Check Solution A	As (188.980 nm)	-0.0007 u	> 100.00	-3.2584
	Interference Check Solution A	B (249.772 nm)	0.0980	0.44	3189.0909
	Interference Check Solution A	Ba (230.424 nm)	-0.0005 u	20.22	-14.5232
	Interference Check Solution A	Be (313.107 nm)	0.0002	3.20	286.8128
	Interference Check Solution A	Ca (317.933 nm)	237.2465 o	0.36	8453566.1477
	Interference Check Solution A	Cd (214.439 nm)	-0.0006 u	11.82	-30.5885
	Interference Check Solution A	Co (230.786 nm)	-0.0001 u	> 100.00	-11.6083
	Interference Check Solution A	Cr (267.716 nm)	0.0037	1.71	195.8096
	Interference Check Solution A	Cu (327.395 nm)	0.0087	1.14	353.0731
	Interference Check Solution A	Fe (234.350 nm)	92.8119 o	0.40	1689923.7859
	Interference Check Solution A	K (766.491 nm)	0.0005 u	> 100.00	-191.4475
	Interference Check Solution A	Mg (279.078 nm)	262.5950 o	0.43	858107.8598
	Interference Check Solution A	Mn (257.610 nm)	0.0011	0.62	397.2391
	Interference Check Solution A	Mo (202.032 nm)	0.0009	21.83	21.4314
	Interference Check Solution A	Na (588.995 nm)	-0.0195 u	12.48	-13887.7350
	Interference Check Solution A	Ni (230.299 nm)	0.0031	24.94	62.1693
	Interference Check Solution A	Pb (220.353 nm)	0.0036	23.51	26.9609
	Interference Check Solution A	Sb (217.582 nm)	-0.0047 u	85.27	-2.1241
	Interference Check Solution A	Se (196.026 nm)	-0.0082 u	20.21	-1.2268
	Interference Check Solution A	Si (252.851 nm)	0.0369	3.01	173.4197
	Interference Check Solution A	Sn (189.925 nm)	0.0003	92.41	3.7049
	Interference Check Solution A	Sr (216.596 nm)	0.0111	1.90	194.5779
	Interference Check Solution A	Ti (336.122 nm)	0.0028	12.79	565.7234
	Interference Check Solution A	Tl (190.794 nm)	-0.0001 u	> 100.00	-1.3024
	Interference Check Solution A	V (292.401 nm)	0.0015	4.03	16.0618
	Interference Check Solution A	Y (360.074 nm)	0.95	0.25	464469.16
	Interference Check Solution A	Y_R (360.074 nm)	0.95	0.25	463088.16
	Interference Check Solution A	Zn (213.857 nm)	0.0134 K	0.46	858.3018 K
6/11/2024 05:30:35	Interference Check Solution AB	Ag (328.068 nm)	0.1968	0.06	10932.6642
	Interference Check Solution AB	Al (237.312 nm)	244.9112 o	0.18	605423.1785
	Interference Check Solution AB	As (188.980 nm)	0.0995	1.76	166.7763
	Interference Check Solution AB	B (249.772 nm)	0.0963	0.45	3132.0864
	Interference Check Solution AB	Ba (230.424 nm)	0.4905	0.21	26717.2763
	Interference Check Solution AB	Be (313.107 nm)	0.4864	0.26	533854.8530
	Interference Check Solution AB	Ca (317.933 nm)	238.1625 o	0.28	8486194.3068
	Interference Check Solution AB	Cd (214.439 nm)	0.9827	0.24	55988.1343
	Interference Check Solution AB	Co (230.786 nm)	0.4784	0.16	8665.5948
	Interference Check Solution AB	Cr (267.716 nm)	0.5240	0.19	27244.3973
	Interference Check Solution AB	Cu (327.395 nm)	0.5292	0.00	23203.1781
	Interference Check Solution AB	Fe (234.350 nm)	93.3097 o	0.26	1698989.2769
	Interference Check Solution AB	K (766.491 nm)	0.0073 u	> 100.00	-184.0359
	Interference Check Solution AB	Mg (279.078 nm)	263.7808 o	0.24	861983.1573
	Interference Check Solution AB	Mn (257.610 nm)	0.4944	0.24	165134.5110
	Interference Check Solution AB	Mo (202.032 nm)	0.0012	30.13	24.1284
	Interference Check Solution AB	Na (588.995 nm)	-0.0297 u	19.07	-14026.8756
	Interference Check Solution AB	Ni (230.299 nm)	0.9853	0.18	11595.2247
	Interference Check Solution AB	Pb (220.353 nm)	0.0528	0.79	283.6034
	Interference Check Solution AB	Sb (217.582 nm)	0.5737	0.14	1072.2980
	Interference Check Solution AB	Se (196.026 nm)	0.0405	11.38	34.2767
	Interference Check Solution AB	Si (252.851 nm)	0.0813	1.94	342.5712
	Interference Check Solution AB	Sn (189.925 nm)	0.0011 u	> 100.00	5.6667
	Interference Check Solution AB	Sr (216.596 nm)	0.0112	1.15	195.8143
	Interference Check Solution AB	Ti (336.122 nm)	0.0027	8.73	546.7499
	Interference Check Solution AB	Tl (190.794 nm)	0.0980	2.92	94.5365
	Interference Check Solution AB	V (292.401 nm)	0.5202	0.13	19681.4984
	Interference Check Solution AB	Y (360.074 nm)	0.95	0.37	465440.50

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Interference Check Solution AB	Y_R (360.074 nm)	0.95	0.37	464055.09
	Interference Check Solution AB	Zn (213.857 nm)	1.0213	0.13	65373.2714
6/11/2024 05:33:49	Continuing Calibration Verification2	Ag (328.068 nm)	0.5019	0.17	28218.6267
	Continuing Calibration Verification2	Al (237.312 nm)	9.6511	0.05	23869.4776
	Continuing Calibration Verification2	As (188.980 nm)	0.9668	0.50	1637.5894
	Continuing Calibration Verification2	B (249.772 nm)	2.3757	0.16	77146.2528
	Continuing Calibration Verification2	Ba (230.424 nm)	9.4621	0.69	515192.0618
	Continuing Calibration Verification2	Be (313.107 nm)	0.2382	0.34	261506.4646
	Continuing Calibration Verification2	Ca (317.933 nm)	25.9792	0.34	928131.6984
	Continuing Calibration Verification2	Cd (214.439 nm)	0.5068	0.33	28875.9754
	Continuing Calibration Verification2	Co (230.786 nm)	2.4668	0.32	44721.2990
	Continuing Calibration Verification2	Cr (267.716 nm)	0.5218	0.37	27129.9464
	Continuing Calibration Verification2	Cu (327.395 nm)	1.2059	0.26	52908.5855
	Continuing Calibration Verification2	Fe (234.350 nm)	5.0501	0.38	91952.3265
	Continuing Calibration Verification2	K (766.491 nm)	23.9852	0.04	26129.2439
	Continuing Calibration Verification2	Mg (279.078 nm)	25.6404	0.28	83760.9505
	Continuing Calibration Verification2	Mn (257.610 nm)	0.7413	0.35	247580.7406
	Continuing Calibration Verification2	Mo (202.032 nm)	2.7111	0.30	28312.6094
	Continuing Calibration Verification2	Na (588.995 nm)	25.3760	0.23	331957.4074
	Continuing Calibration Verification2	Ni (230.299 nm)	2.0659	0.28	24284.7036
	Continuing Calibration Verification2	Pb (220.353 nm)	0.5234	0.34	2740.5682
	Continuing Calibration Verification2	Sb (217.582 nm)	4.6211	0.06	8590.5648
	Continuing Calibration Verification2	Se (196.026 nm)	0.4653	0.94	343.9399
	Continuing Calibration Verification2	Si (252.851 nm)	9.7443	0.47	37161.7302
	Continuing Calibration Verification2	Sn (189.925 nm)	4.9933	0.33	12298.4420
	Continuing Calibration Verification2	Sr (216.596 nm)	2.4800	0.33	43646.3041
	Continuing Calibration Verification2	Ti (336.122 nm)	2.4965	0.18	360842.0621
	Continuing Calibration Verification2	Tl (190.794 nm)	0.9650	0.29	941.7273
	Continuing Calibration Verification2	V (292.401 nm)	2.5277	0.32	95790.0333
	Continuing Calibration Verification2	Y (360.074 nm)	1.04	0.21	507250.16
	Continuing Calibration Verification2	Y_R (360.074 nm)	1.04	0.21	505766.09
	Continuing Calibration Verification2	Zn (213.857 nm)	0.9825	0.16	62887.4860
6/11/2024 05:37:03	Continuing Calibration Blank2	Ag (328.068 nm)	-0.0005 u	10.68	-244.8931
	Continuing Calibration Blank2	Al (237.312 nm)	0.0047	49.65	23.9774
	Continuing Calibration Blank2	As (188.980 nm)	-0.0012 u	52.40	-4.1416
	Continuing Calibration Blank2	B (249.772 nm)	0.0018	15.48	62.9902
	Continuing Calibration Blank2	Ba (230.424 nm)	0.0008	9.51	53.8959
	Continuing Calibration Blank2	Be (313.107 nm)	0.0001	9.46	119.2806
	Continuing Calibration Blank2	Ca (317.933 nm)	0.0186	1.62	3403.7948
	Continuing Calibration Blank2	Cd (214.439 nm)	0.0002	56.52	12.6135
	Continuing Calibration Blank2	Co (230.786 nm)	0.0003	8.51	-4.3976
	Continuing Calibration Blank2	Cr (267.716 nm)	0.0002	14.71	17.3755
	Continuing Calibration Blank2	Cu (327.395 nm)	0.0007	18.40	0.9579
	Continuing Calibration Blank2	Fe (234.350 nm)	0.0073	17.74	132.0511
	Continuing Calibration Blank2	K (766.491 nm)	0.0760	37.27	-108.6014
	Continuing Calibration Blank2	Mg (279.078 nm)	0.0052	19.88	-12.7163
	Continuing Calibration Blank2	Mn (257.610 nm)	0.0001	5.18	66.7444
	Continuing Calibration Blank2	Mo (202.032 nm)	0.0039	23.13	52.2410
	Continuing Calibration Blank2	Na (588.995 nm)	0.0453	24.58	-13005.6256
	Continuing Calibration Blank2	Ni (230.299 nm)	0.0002 u	> 100.00	27.5261
	Continuing Calibration Blank2	Pb (220.353 nm)	0.0014	28.63	15.4661
	Continuing Calibration Blank2	Sb (217.582 nm)	0.0018 u	> 100.00	9.8595
	Continuing Calibration Blank2	Se (196.026 nm)	-0.0011 u	> 100.00	3.9850
	Continuing Calibration Blank2	Si (252.851 nm)	-0.0028 u	38.23	21.8463
	Continuing Calibration Blank2	Sn (189.925 nm)	0.0007	> 100.00	4.8392
	Continuing Calibration Blank2	Sr (216.596 nm)	0.0005	33.26	8.2359
	Continuing Calibration Blank2	Ti (336.122 nm)	0.0034	41.44	645.0775

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Blank2	Tl (190.794 nm)	0.0013	79.16	0.0820
	Continuing Calibration Blank2	V (292.401 nm)	0.0002	15.85	-32.3594
	Continuing Calibration Blank2	Y (360.074 nm)	1.08	0.15	525892.50
	Continuing Calibration Blank2	Y_R (360.074 nm)	1.08	0.15	524374.23
	Continuing Calibration Blank2	Zn (213.857 nm)	0.0006	9.61	36.2815
6/11/2024 05:40:18	PBT-439635	Ag (328.068 nm)	-0.0006 u	8.64	-247.8382
	PBT-439635	Al (237.312 nm)	0.0038	58.56	21.6269
	PBT-439635	As (188.980 nm)	-0.0011 u	82.19	-3.8181
	PBT-439635	B (249.772 nm)	0.0022	12.30	75.9239
	PBT-439635	Ba (230.424 nm)	0.0000 u	> 100.00	11.3043
	PBT-439635	Be (313.107 nm)	0.0001	0.21	106.3472
	PBT-439635	Ca (317.933 nm)	0.0241	1.43	3603.2196
	PBT-439635	Cd (214.439 nm)	0.0002	35.90	12.4549
	PBT-439635	Co (230.786 nm)	-0.0002 u	66.67	-12.8903
	PBT-439635	Cr (267.716 nm)	0.0006	11.03	37.8136
	PBT-439635	Cu (327.395 nm)	0.0005	61.81	-7.4209
	PBT-439635	Fe (234.350 nm)	0.0139	16.38	253.0595
	PBT-439635	K (766.491 nm)	0.0923	48.72	-90.7254
	PBT-439635	Mg (279.078 nm)	0.0025	45.03	-21.6958
	PBT-439635	Mn (257.610 nm)	0.0001	7.87	54.5576
	PBT-439635	Mo (202.032 nm)	0.0010	46.10	22.5250
	PBT-439635	Na (588.995 nm)	0.1523	0.90	-11548.7406
	PBT-439635	Ni (230.299 nm)	-0.0004 u	88.03	20.2850
	PBT-439635	Pb (220.353 nm)	0.0018	21.96	17.4843
	PBT-439635	Sb (217.582 nm)	0.0130	10.71	30.7266
	PBT-439635	Se (196.026 nm)	-0.0011 u	> 100.00	4.0103
	PBT-439635	Si (252.851 nm)	0.0115	6.56	76.5431
	PBT-439635	Sn (189.925 nm)	0.0001 u	> 100.00	3.3001
	PBT-439635	Sr (216.596 nm)	0.0003	73.82	4.4718
	PBT-439635	Ti (336.122 nm)	0.0015	53.50	376.8312
	PBT-439635	Tl (190.794 nm)	-0.0006 u	> 100.00	-1.8006
	PBT-439635	V (292.401 nm)	-0.0001 u	78.48	-45.5713
	PBT-439635	Y (360.074 nm)	1.07	0.43	520887.12
	PBT-439635	Y_R (360.074 nm)	1.06	0.43	519392.75
	PBT-439635	Zn (213.857 nm)	0.0000 u	> 100.00	2.6902
6/11/2024 05:43:34	LCST-439635	Ag (328.068 nm)	0.2529	0.18	14114.5754
	LCST-439635	Al (237.312 nm)	-0.0017 u	> 100.00	8.1776
	LCST-439635	As (188.980 nm)	0.9473	0.27	1604.5851
	LCST-439635	B (249.772 nm)	0.0017	3.97	61.7028
	LCST-439635	Ba (230.424 nm)	1.8803	0.39	102389.2945
	LCST-439635	Be (313.107 nm)	0.0001	3.07	97.4132
	LCST-439635	Ca (317.933 nm)	0.0248	0.99	3625.3645
	LCST-439635	Cd (214.439 nm)	0.5100	0.26	29057.5293
	LCST-439635	Co (230.786 nm)	-0.0015 u	13.97	-36.5293
	LCST-439635	Cr (267.716 nm)	0.5125	0.25	26645.1968
	LCST-439635	Cu (327.395 nm)	0.9757	0.43	42802.9870
	LCST-439635	Fe (234.350 nm)	0.0205	5.94	372.4573
	LCST-439635	K (766.491 nm)	0.0836	21.48	-100.3388
	LCST-439635	Mg (279.078 nm)	0.0020	85.06	-23.1242
	LCST-439635	Mn (257.610 nm)	0.0003	0.45	133.6896
	LCST-439635	Mo (202.032 nm)	0.0005	35.60	17.4995
	LCST-439635	Na (588.995 nm)	0.1475	4.23	-11613.5175
	LCST-439635	Ni (230.299 nm)	1.0348	0.39	12177.0178
	LCST-439635	Pb (220.353 nm)	0.5319	0.07	2784.9807
	LCST-439635	Sb (217.582 nm)	0.0090	7.01	23.3682
	LCST-439635	Se (196.026 nm)	0.9384	0.28	688.7783
	LCST-439635	Si (252.851 nm)	-0.0797 u	1.09	-271.1854

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	LCST-439635	Sn (189.925 nm)	-0.0001 u	> 100.00	2.7491
	LCST-439635	Sr (216.596 nm)	0.0003	19.29	5.0494
	LCST-439635	Ti (336.122 nm)	0.0007	61.10	257.7019
	LCST-439635	Tl (190.794 nm)	0.0005	53.20	-0.6854
	LCST-439635	V (292.401 nm)	-0.0001 u	> 100.00	-43.9524
	LCST-439635	Y (360.074 nm)	1.07	0.42	522521.69
	LCST-439635	Y_R (360.074 nm)	1.07	0.42	521020.02
	LCST-439635	Zn (213.857 nm)	0.9734	0.40	62308.0893
6/11/2024 05:46:50	RQ2406375-01	Ag (328.068 nm)	-0.0005 u	21.43	-240.3130
	RQ2406375-01	Al (237.312 nm)	0.0345	7.39	97.6109
	RQ2406375-01	As (188.980 nm)	0.0002 u	> 100.00	-1.6248
	RQ2406375-01	B (249.772 nm)	0.0200	0.33	655.1854
	RQ2406375-01	Ba (230.424 nm)	0.0006	5.18	44.8949
	RQ2406375-01	Be (313.107 nm)	0.0001	18.20	111.0917
	RQ2406375-01	Ca (317.933 nm)	0.1709	0.51	8830.3142
	RQ2406375-01	Cd (214.439 nm)	0.0003	15.22	17.1346
	RQ2406375-01	Co (230.786 nm)	-0.0002 u	> 100.00	-13.1009
	RQ2406375-01	Cr (267.716 nm)	0.0008	10.91	46.6539
	RQ2406375-01	Cu (327.395 nm)	0.0005	24.20	-4.5534
	RQ2406375-01	Fe (234.350 nm)	0.0248	3.81	451.7675
	RQ2406375-01	K (766.491 nm)	0.0864	7.21	-97.2471
	RQ2406375-01	Mg (279.078 nm)	0.0413	1.97	105.0728
	RQ2406375-01	Mn (257.610 nm)	0.0002	6.14	93.7207
	RQ2406375-01	Mo (202.032 nm)	0.0002	38.27	14.3626
	RQ2406375-01	Na (588.995 nm)	1.7171	0.08	9761.2082
	RQ2406375-01	Ni (230.299 nm)	-0.0007 u	24.68	17.2585
	RQ2406375-01	Pb (220.353 nm)	0.0008	33.74	12.3459
	RQ2406375-01	Sb (217.582 nm)	0.0076	22.95	20.7609
	RQ2406375-01	Se (196.026 nm)	0.0035 u	> 100.00	7.3030
	RQ2406375-01	Si (252.851 nm)	0.3505	0.71	1368.2172
	RQ2406375-01	Sn (189.925 nm)	0.0009	67.16	5.2956
	RQ2406375-01	Sr (216.596 nm)	0.0009	35.99	14.9121
	RQ2406375-01	Ti (336.122 nm)	0.0009	31.24	278.5015
	RQ2406375-01	Tl (190.794 nm)	0.0009 u	> 100.00	-0.3393
	RQ2406375-01	V (292.401 nm)	0.0000 u	> 100.00	-41.1463
	RQ2406375-01	Y (360.074 nm)	1.07	0.26	522009.64
	RQ2406375-01	Y_R (360.074 nm)	1.07	0.26	520513.74
	RQ2406375-01	Zn (213.857 nm)	0.0014	0.47	92.1810
6/11/2024 05:50:05	R2404768-001	Ag (328.068 nm)	-0.0006 u	16.29	-250.4734
	R2404768-001	Al (237.312 nm)	0.0115	12.26	40.8255
	R2404768-001	As (188.980 nm)	-0.0007 u	> 100.00	-3.2382
	R2404768-001	B (249.772 nm)	6.7464	0.28	219070.7471
	R2404768-001	Ba (230.424 nm)	0.0092	0.64	509.7401
	R2404768-001	Be (313.107 nm)	0.0001	18.72	102.2395
	R2404768-001	Ca (317.933 nm)	0.1743	0.35	8953.2134
	R2404768-001	Cd (214.439 nm)	0.0003	8.38	21.4057
	R2404768-001	Co (230.786 nm)	-0.0001 u	> 100.00	-11.5457
	R2404768-001	Cr (267.716 nm)	0.0006	8.80	36.5319
	R2404768-001	Cu (327.395 nm)	0.0006	13.27	-0.3056
	R2404768-001	Fe (234.350 nm)	0.0109	2.28	197.3250
	R2404768-001	K (766.491 nm)	4.8480	0.28	5128.1105
	R2404768-001	Mg (279.078 nm)	0.0405	2.45	102.5938
	R2404768-001	Mn (257.610 nm)	0.0002	6.21	92.1135
	R2404768-001	Mo (202.032 nm)	0.0001 u	> 100.00	13.5132
	R2404768-001	Na (588.995 nm)	22.4897	0.10	292650.7734
	R2404768-001	Ni (230.299 nm)	-0.0005 u	> 100.00	18.7982
	R2404768-001	Pb (220.353 nm)	0.0006	90.36	10.8779

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404768-001	Sb (217.582 nm)	0.0067	14.25	18.9662
	R2404768-001	Se (196.026 nm)	0.0027	52.51	6.7411
	R2404768-001	Si (252.851 nm)	0.1315	0.38	533.8442
	R2404768-001	Sn (189.925 nm)	0.0003 u	> 100.00	3.7983
	R2404768-001	Sr (216.596 nm)	0.0007	19.94	12.1436
	R2404768-001	Ti (336.122 nm)	0.0003	58.29	205.8030
	R2404768-001	Tl (190.794 nm)	0.0003 u	> 100.00	-0.9383
	R2404768-001	V (292.401 nm)	-0.0001 u	51.95	-45.8752
	R2404768-001	Y (360.074 nm)	1.05	0.27	514858.87
	R2404768-001	Y_R (360.074 nm)	1.05	0.26	513351.31
	R2404768-001	Zn (213.857 nm)	0.0009	7.02	56.0216
6/11/2024 05:53:21	R2404768-001S	Ag (328.068 nm)	0.2495	0.07	13919.1679
	R2404768-001S	Al (237.312 nm)	0.0064	38.19	27.9843
	R2404768-001S	As (188.980 nm)	0.9648	0.58	1634.1965
	R2404768-001S	B (249.772 nm)	6.8301	0.21	221786.1500
	R2404768-001S	Ba (230.424 nm)	1.8980	0.47	103353.0056
	R2404768-001S	Be (313.107 nm)	0.0001	4.18	94.6869
	R2404768-001S	Ca (317.933 nm)	0.1718	0.48	8864.3546
	R2404768-001S	Cd (214.439 nm)	0.5200	0.39	29626.6212
	R2404768-001S	Co (230.786 nm)	-0.0016 u	8.47	-39.1365
	R2404768-001S	Cr (267.716 nm)	0.5170	0.36	26880.2980
	R2404768-001S	Cu (327.395 nm)	0.9771	0.21	42866.3376
	R2404768-001S	Fe (234.350 nm)	0.0206	1.72	375.0763
	R2404768-001S	K (766.491 nm)	4.9514	0.40	5241.5704
	R2404768-001S	Mg (279.078 nm)	0.0408	0.29	103.7044
	R2404768-001S	Mn (257.610 nm)	0.0002	7.81	87.5784
	R2404768-001S	Mo (202.032 nm)	0.0003 u	> 100.00	14.6684
	R2404768-001S	Na (588.995 nm)	22.9305	0.28	298652.9495
	R2404768-001S	Ni (230.299 nm)	1.0414	0.22	12254.7147
	R2404768-001S	Pb (220.353 nm)	0.5323	0.19	2786.9322
	R2404768-001S	Sb (217.582 nm)	0.0028	24.58	11.8298
	R2404768-001S	Se (196.026 nm)	0.9422	0.50	691.5966
	R2404768-001S	Si (252.851 nm)	0.0266	7.12	133.8581
	R2404768-001S	Sn (189.925 nm)	0.0005	> 100.00	4.1692
	R2404768-001S	Sr (216.596 nm)	0.0008	14.48	12.7098
	R2404768-001S	Ti (336.122 nm)	0.0003	56.53	199.3532
	R2404768-001S	Tl (190.794 nm)	0.0005 u	> 100.00	-0.6748
	R2404768-001S	V (292.401 nm)	0.0000 u	> 100.00	-39.0809
	R2404768-001S	Y (360.074 nm)	1.05	0.27	515171.21
	R2404768-001S	Y_R (360.074 nm)	1.05	0.27	513636.38
	R2404768-001S	Zn (213.857 nm)	1.0063	0.34	64412.8104
6/11/2024 05:56:36	R2404768-001SD	Ag (328.068 nm)	0.2502	0.19	13960.2698
	R2404768-001SD	Al (237.312 nm)	0.0045	21.75	23.4598
	R2404768-001SD	As (188.980 nm)	0.9721	0.29	1646.4955
	R2404768-001SD	B (249.772 nm)	6.7953	0.20	220656.9361
	R2404768-001SD	Ba (230.424 nm)	1.9116	0.18	104092.8067
	R2404768-001SD	Be (313.107 nm)	0.0001	9.16	107.2607
	R2404768-001SD	Ca (317.933 nm)	0.1709	0.37	8832.1473
	R2404768-001SD	Cd (214.439 nm)	0.5220	0.32	29740.3880
	R2404768-001SD	Co (230.786 nm)	-0.0015 u	13.60	-37.1558
	R2404768-001SD	Cr (267.716 nm)	0.5190	0.27	26984.3251
	R2404768-001SD	Cu (327.395 nm)	0.9827	0.10	43110.9425
	R2404768-001SD	Fe (234.350 nm)	0.0196	0.86	356.7603
	R2404768-001SD	K (766.491 nm)	4.9311	1.18	5219.3236
	R2404768-001SD	Mg (279.078 nm)	0.0382	3.79	95.0438
	R2404768-001SD	Mn (257.610 nm)	0.0002	5.02	86.5901
	R2404768-001SD	Mo (202.032 nm)	0.0001 u	> 100.00	13.0313

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404768-001SD	Na (588.995 nm)	22.7419	0.24	296085.6973
	R2404768-001SD	Ni (230.299 nm)	1.0472	0.26	12321.7224
	R2404768-001SD	Pb (220.353 nm)	0.5362	0.03	2807.4403
	R2404768-001SD	Sb (217.582 nm)	0.0006 u	> 100.00	7.7244
	R2404768-001SD	Se (196.026 nm)	0.9517	0.17	698.5230
	R2404768-001SD	Si (252.851 nm)	0.0315	0.53	152.5217
	R2404768-001SD	Sn (189.925 nm)	0.0008 u	> 100.00	5.0226
	R2404768-001SD	Sr (216.596 nm)	0.0009	29.07	15.6781
	R2404768-001SD	Ti (336.122 nm)	0.0002	82.53	187.1009
	R2404768-001SD	Tl (190.794 nm)	-0.0002 u	> 100.00	-1.4420
	R2404768-001SD	V (292.401 nm)	0.0000 u	> 100.00	-40.0124
	R2404768-001SD	Y (360.074 nm)	1.05	0.35	514881.37
	R2404768-001SD	Y_R (360.074 nm)	1.05	0.36	513362.64
	R2404768-001SD	Zn (213.857 nm)	1.0129	0.12	64836.2729
6/11/2024 05:59:52	R2404768-001A	Ag (328.068 nm)	0.2404	0.04	13402.0046
	R2404768-001A	Al (237.312 nm)	0.0071	2.07	29.8721
	R2404768-001A	As (188.980 nm)	0.9341	0.07	1582.0989
	R2404768-001A	B (249.772 nm)	6.6162	0.21	214842.8961
	R2404768-001A	Ba (230.424 nm)	1.8328	0.29	99801.2227
	R2404768-001A	Be (313.107 nm)	0.0001	1.25	106.4758
	R2404768-001A	Ca (317.933 nm)	0.3686	0.28	15873.5125
	R2404768-001A	Cd (214.439 nm)	0.5023	0.27	28615.9175
	R2404768-001A	Co (230.786 nm)	-0.0015 u	17.26	-37.0455
	R2404768-001A	Cr (267.716 nm)	0.4978	0.31	25883.0184
	R2404768-001A	Cu (327.395 nm)	0.9424	0.19	41341.6425
	R2404768-001A	Fe (234.350 nm)	0.0202	0.82	367.2561
	R2404768-001A	K (766.491 nm)	4.7689	0.05	5041.3122
	R2404768-001A	Mg (279.078 nm)	0.0416	1.17	106.2475
	R2404768-001A	Mn (257.610 nm)	0.0003	3.04	121.9212
	R2404768-001A	Mo (202.032 nm)	0.0002 u	> 100.00	13.5741
	R2404768-001A	Na (588.995 nm)	22.0643	0.20	286857.8942
	R2404768-001A	Ni (230.299 nm)	1.0045	0.39	11821.2110
	R2404768-001A	Pb (220.353 nm)	0.5158	0.31	2700.5673
	R2404768-001A	Sb (217.582 nm)	0.0008 u	> 100.00	8.1590
	R2404768-001A	Se (196.026 nm)	0.9166	0.85	672.8796
	R2404768-001A	Si (252.851 nm)	0.0416	6.10	191.2727
	R2404768-001A	Sn (189.925 nm)	0.0007	33.14	4.7665
	R2404768-001A	Sr (216.596 nm)	0.0009	33.28	15.2764
	R2404768-001A	Ti (336.122 nm)	0.0003	68.81	193.1974
	R2404768-001A	Tl (190.794 nm)	-0.0011 u	> 100.00	-2.2754
	R2404768-001A	V (292.401 nm)	0.0002 u	> 100.00	-34.5332
	R2404768-001A	Y (360.074 nm)	1.05	0.35	515431.58
	R2404768-001A	Y_R (360.074 nm)	1.05	0.35	513906.80
	R2404768-001A	Zn (213.857 nm)	0.9747	0.28	62390.7887
6/11/2024 06:03:08	R2404768-001L 5X	Ag (328.068 nm)	-0.0006 u	16.27	-250.6247
	R2404768-001L 5X	Al (237.312 nm)	0.0040	24.45	22.1272
	R2404768-001L 5X	As (188.980 nm)	0.0008 u	> 100.00	-0.5882
	R2404768-001L 5X	B (249.772 nm)	1.3691	0.29	44463.1681
	R2404768-001L 5X	Ba (230.424 nm)	0.0018	1.98	111.6153
	R2404768-001L 5X	Be (313.107 nm)	0.0001	10.83	94.0779
	R2404768-001L 5X	Ca (317.933 nm)	0.0574	0.42	4786.4769
	R2404768-001L 5X	Cd (214.439 nm)	0.0002	21.31	13.8111
	R2404768-001L 5X	Co (230.786 nm)	0.0001 u	> 100.00	-7.1412
	R2404768-001L 5X	Cr (267.716 nm)	0.0002	34.45	18.4529
	R2404768-001L 5X	Cu (327.395 nm)	0.0004	45.23	-10.3902
	R2404768-001L 5X	Fe (234.350 nm)	0.0029	3.36	53.2269
	R2404768-001L 5X	K (766.491 nm)	1.0183	4.04	925.4473

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	R2404768-001L 5X	Mg (279.078 nm)	0.0099	15.78	2.5312
	R2404768-001L 5X	Mn (257.610 nm)	0.0001	33.16	37.2480
	R2404768-001L 5X	Mo (202.032 nm)	-0.0001 u	41.28	11.2170
	R2404768-001L 5X	Na (588.995 nm)	4.5915	0.05	48906.1942
	R2404768-001L 5X	Ni (230.299 nm)	-0.0004 u	67.95	20.8051
	R2404768-001L 5X	Pb (220.353 nm)	0.0011	25.66	13.4859
	R2404768-001L 5X	Sb (217.582 nm)	-0.0024 u	50.03	2.1428
	R2404768-001L 5X	Se (196.026 nm)	0.0045	38.22	8.0694
	R2404768-001L 5X	Si (252.851 nm)	0.0405	0.21	187.0029
	R2404768-001L 5X	Sn (189.925 nm)	0.0005 u	> 100.00	4.1348
	R2404768-001L 5X	Sr (216.596 nm)	0.0004	37.30	6.5912
	R2404768-001L 5X	Ti (336.122 nm)	0.0001 u	> 100.00	163.5237
	R2404768-001L 5X	Tl (190.794 nm)	-0.0009 u	50.86	-2.0790
	R2404768-001L 5X	V (292.401 nm)	-0.0001 u	> 100.00	-44.4301
	R2404768-001L 5X	Y (360.074 nm)	1.08	0.10	525503.97
	R2404768-001L 5X	Y_R (360.074 nm)	1.07	0.10	523963.38
	R2404768-001L 5X	Zn (213.857 nm)	0.0001	6.25	9.4961
6/11/2024 06:06:23	Continuing Calibration Verification2	Ag (328.068 nm)	0.5024	0.08	28249.2856
	Continuing Calibration Verification2	Al (237.312 nm)	9.6214	0.07	23796.0438
	Continuing Calibration Verification2	As (188.980 nm)	0.9691	0.20	1641.5093
	Continuing Calibration Verification2	B (249.772 nm)	2.3831	0.07	77386.6446
	Continuing Calibration Verification2	Ba (230.424 nm)	9.4782	0.24	516067.0945
	Continuing Calibration Verification2	Be (313.107 nm)	0.2379	0.22	261131.6855
	Continuing Calibration Verification2	Ca (317.933 nm)	25.9345	0.19	926540.5061
	Continuing Calibration Verification2	Cd (214.439 nm)	0.5068	0.27	28873.3173
	Continuing Calibration Verification2	Co (230.786 nm)	2.4656	0.13	44700.1146
	Continuing Calibration Verification2	Cr (267.716 nm)	0.5226	0.24	27173.0517
	Continuing Calibration Verification2	Cu (327.395 nm)	1.2023	0.40	52749.3067
	Continuing Calibration Verification2	Fe (234.350 nm)	5.0210	0.22	91421.5846
	Continuing Calibration Verification2	K (766.491 nm)	23.9460	0.29	26086.2380
	Continuing Calibration Verification2	Mg (279.078 nm)	25.6120	0.12	83667.8914
	Continuing Calibration Verification2	Mn (257.610 nm)	0.7412	0.22	247546.5938
	Continuing Calibration Verification2	Mo (202.032 nm)	2.7129	0.28	28330.6047
	Continuing Calibration Verification2	Na (588.995 nm)	25.4024	0.25	332316.5254
	Continuing Calibration Verification2	Ni (230.299 nm)	2.0668	0.23	24294.7467
	Continuing Calibration Verification2	Pb (220.353 nm)	0.5214	0.05	2729.8090
	Continuing Calibration Verification2	Sb (217.582 nm)	4.6249	0.11	8597.6072
	Continuing Calibration Verification2	Se (196.026 nm)	0.4741	0.43	350.3361
	Continuing Calibration Verification2	Si (252.851 nm)	9.7439	0.33	37160.4164
	Continuing Calibration Verification2	Sn (189.925 nm)	4.9901	0.08	12290.4560
	Continuing Calibration Verification2	Sr (216.596 nm)	2.4859	0.29	43749.5431
	Continuing Calibration Verification2	Ti (336.122 nm)	2.4949	0.15	360607.4083
	Continuing Calibration Verification2	Tl (190.794 nm)	0.9679	0.24	944.5720
	Continuing Calibration Verification2	V (292.401 nm)	2.5299	0.20	95875.1110
	Continuing Calibration Verification2	Y (360.074 nm)	1.04	0.48	507031.26
	Continuing Calibration Verification2	Y_R (360.074 nm)	1.04	0.48	505529.44
	Continuing Calibration Verification2	Zn (213.857 nm)	0.9831	0.26	62925.6781
6/11/2024 06:09:37	Continuing Calibration Blank2	Ag (328.068 nm)	-0.0006 u	17.57	-247.3209
	Continuing Calibration Blank2	Al (237.312 nm)	0.0041	33.48	22.4972
	Continuing Calibration Blank2	As (188.980 nm)	-0.0008 u	> 100.00	-3.3574
	Continuing Calibration Blank2	B (249.772 nm)	0.0038	8.74	127.6025
	Continuing Calibration Blank2	Ba (230.424 nm)	0.0008	7.39	56.2546
	Continuing Calibration Blank2	Be (313.107 nm)	0.0001	5.03	128.1376
	Continuing Calibration Blank2	Ca (317.933 nm)	0.0180	2.28	3384.7639
	Continuing Calibration Blank2	Cd (214.439 nm)	0.0001	13.25	8.3739
	Continuing Calibration Blank2	Co (230.786 nm)	0.0002 u	> 100.00	-5.2765
	Continuing Calibration Blank2	Cr (267.716 nm)	0.0002	11.55	15.3384

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Blank2	Cu (327.395 nm)	0.0006	17.26	-2.6450
	Continuing Calibration Blank2	Fe (234.350 nm)	0.0063	12.14	114.7448
	Continuing Calibration Blank2	K (766.491 nm)	0.0779	29.48	-106.5675
	Continuing Calibration Blank2	Mg (279.078 nm)	0.0028	19.79	-20.7063
	Continuing Calibration Blank2	Mn (257.610 nm)	0.0001	8.66	68.2807
	Continuing Calibration Blank2	Mo (202.032 nm)	0.0043	28.26	57.2020
	Continuing Calibration Blank2	Na (588.995 nm)	0.0404	13.72	-13072.4731
	Continuing Calibration Blank2	Ni (230.299 nm)	0.0003	65.38	28.3107
	Continuing Calibration Blank2	Pb (220.353 nm)	0.0008	33.95	11.9909
	Continuing Calibration Blank2	Sb (217.582 nm)	0.0035	16.14	13.1260
	Continuing Calibration Blank2	Se (196.026 nm)	0.0022	12.88	6.3740
	Continuing Calibration Blank2	Si (252.851 nm)	-0.0039 u	6.14	17.6128
	Continuing Calibration Blank2	Sn (189.925 nm)	0.0011	65.71	5.8115
	Continuing Calibration Blank2	Sr (216.596 nm)	0.0004	51.64	5.8336
	Continuing Calibration Blank2	Ti (336.122 nm)	0.0037	43.00	684.1664
	Continuing Calibration Blank2	Tl (190.794 nm)	0.0025	49.73	1.1980
	Continuing Calibration Blank2	V (292.401 nm)	-0.0001 u	> 100.00	-42.5914
	Continuing Calibration Blank2	Y (360.074 nm)	1.07	0.16	525063.79
	Continuing Calibration Blank2	Y_R (360.074 nm)	1.07	0.16	523515.48
	Continuing Calibration Blank2	Zn (213.857 nm)	0.0006	3.83	39.0833
6/11/2024 06:12:50	Contract Required Detection Limit	Ag (328.068 nm)	0.0081	0.84	246.6629
	Contract Required Detection Limit	Al (237.312 nm)	0.1902	0.76	482.5267
	Contract Required Detection Limit	As (188.980 nm)	0.0197	2.85	31.3289
	Contract Required Detection Limit	B (249.772 nm)	0.1878	0.03	6104.0109
	Contract Required Detection Limit	Ba (230.424 nm)	0.1912	0.33	10422.6363
	Contract Required Detection Limit	Be (313.107 nm)	0.0048	0.28	5336.7823
	Contract Required Detection Limit	Ca (317.933 nm)	1.0497	0.28	40132.0645
	Contract Required Detection Limit	Cd (214.439 nm)	0.0106	0.65	606.7381
	Contract Required Detection Limit	Co (230.786 nm)	0.0496	0.59	889.4575
	Contract Required Detection Limit	Cr (267.716 nm)	0.0096	1.17	503.1525
	Contract Required Detection Limit	Cu (327.395 nm)	0.0242	0.80	1035.0670
	Contract Required Detection Limit	Fe (234.350 nm)	0.1072	1.04	1951.6553
	Contract Required Detection Limit	K (766.491 nm)	0.9563	3.71	857.4178
	Contract Required Detection Limit	Mg (279.078 nm)	1.0139	0.29	3283.4244
	Contract Required Detection Limit	Mn (257.610 nm)	0.0139	0.49	4650.6993
	Contract Required Detection Limit	Mo (202.032 nm)	0.0272	1.95	296.0079
	Contract Required Detection Limit	Na (588.995 nm)	1.0214	0.49	286.5473
	Contract Required Detection Limit	Ni (230.299 nm)	0.0356	1.07	443.2681
	Contract Required Detection Limit	Pb (220.353 nm)	0.0114	6.16	67.6521
	Contract Required Detection Limit	Sb (217.582 nm)	0.0547	2.67	108.1069
	Contract Required Detection Limit	Se (196.026 nm)	0.0097	26.28	11.8137
	Contract Required Detection Limit	Si (252.851 nm)	0.0457	2.14	206.7711
	Contract Required Detection Limit	Sn (189.925 nm)	0.4975	0.66	1228.0942
	Contract Required Detection Limit	Sr (216.596 nm)	0.0989	0.34	1740.0797
	Contract Required Detection Limit	Ti (336.122 nm)	0.0494	1.54	7293.5360
	Contract Required Detection Limit	Tl (190.794 nm)	0.0205	2.79	18.8363
	Contract Required Detection Limit	V (292.401 nm)	0.0495	0.44	1837.6219
	Contract Required Detection Limit	Y (360.074 nm)	1.08	0.37	525415.63
	Contract Required Detection Limit	Y_R (360.074 nm)	1.07	0.37	523861.20
	Contract Required Detection Limit	Zn (213.857 nm)	0.0172	0.14	1098.8124
6/11/2024 06:16:04	Interference Check Solution A	Ag (328.068 nm)	-0.0006 u	33.48	-248.2542
	Interference Check Solution A	Al (237.312 nm)	243.3812 o	0.16	601641.1794
	Interference Check Solution A	As (188.980 nm)	-0.0002 u	> 100.00	-2.2855
	Interference Check Solution A	B (249.772 nm)	0.1002	0.50	3260.4559
	Interference Check Solution A	Ba (230.424 nm)	-0.0005 u	17.14	-16.1147
	Interference Check Solution A	Be (313.107 nm)	0.0002	4.47	289.3814
	Interference Check Solution A	Ca (317.933 nm)	236.6963 o	0.32	8433966.4722

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Interference Check Solution A	Cd (214.439 nm)	-0.0005 u	17.93	-27.0713
	Interference Check Solution A	Co (230.786 nm)	-0.0001 u	> 100.00	-11.2094
	Interference Check Solution A	Cr (267.716 nm)	0.0037	2.09	199.2120
	Interference Check Solution A	Cu (327.395 nm)	0.0086	2.35	348.4267
	Interference Check Solution A	Fe (234.350 nm)	92.6193 o	0.31	1686418.0185
	Interference Check Solution A	K (766.491 nm)	0.0429	85.79	-144.9816
	Interference Check Solution A	Mg (279.078 nm)	262.2506 o	0.23	856982.4042
	Interference Check Solution A	Mn (257.610 nm)	0.0011	0.32	399.9532
	Interference Check Solution A	Mo (202.032 nm)	0.0014	26.80	27.0117
	Interference Check Solution A	Na (588.995 nm)	-0.0279 u	9.49	-14002.3378
	Interference Check Solution A	Ni (230.299 nm)	0.0027	14.03	56.6302
	Interference Check Solution A	Pb (220.353 nm)	0.0034	35.83	25.8159
	Interference Check Solution A	Sb (217.582 nm)	-0.0046 u	66.13	-1.8638
	Interference Check Solution A	Se (196.026 nm)	-0.0017 u	> 100.00	3.5090
	Interference Check Solution A	Si (252.851 nm)	0.0347	2.04	164.7148
	Interference Check Solution A	Sn (189.925 nm)	0.0016	56.32	6.9985
	Interference Check Solution A	Sr (216.596 nm)	0.0113	2.09	198.0356
	Interference Check Solution A	Ti (336.122 nm)	0.0030	14.17	593.1411
	Interference Check Solution A	Tl (190.794 nm)	0.0037	9.45	2.4445
	Interference Check Solution A	V (292.401 nm)	0.0014	18.60	10.6733
	Interference Check Solution A	Y (360.074 nm)	0.95	0.41	466095.22
	Interference Check Solution A	Y_R (360.074 nm)	0.95	0.41	464694.91
	Interference Check Solution A	Zn (213.857 nm)	0.0134 K	0.78	856.4255 K
6/11/2024 06:19:18	Interference Check Solution AB	Ag (328.068 nm)	0.1966	0.17	10923.6179
	Interference Check Solution AB	Al (237.312 nm)	244.3839 o	0.13	604119.8948
	Interference Check Solution AB	As (188.980 nm)	0.0995	1.73	166.7351
	Interference Check Solution AB	B (249.772 nm)	0.0984	0.29	3200.4415
	Interference Check Solution AB	Ba (230.424 nm)	0.4905	0.26	26718.0304
	Interference Check Solution AB	Be (313.107 nm)	0.4858	0.31	533228.0569
	Interference Check Solution AB	Ca (317.933 nm)	238.4512 o	0.30	8496478.4207
	Interference Check Solution AB	Cd (214.439 nm)	0.9833	0.37	56023.2244
	Interference Check Solution AB	Co (230.786 nm)	0.4785	0.29	8667.7267
	Interference Check Solution AB	Cr (267.716 nm)	0.5247	0.30	27280.5612
	Interference Check Solution AB	Cu (327.395 nm)	0.5282	0.13	23158.3339
	Interference Check Solution AB	Fe (234.350 nm)	93.3261 o	0.28	1699286.3857
	Interference Check Solution AB	K (766.491 nm)	-0.0088 u	> 100.00	-201.6477
	Interference Check Solution AB	Mg (279.078 nm)	264.2313 o	0.28	863455.2367
	Interference Check Solution AB	Mn (257.610 nm)	0.4945	0.26	165170.3201
	Interference Check Solution AB	Mo (202.032 nm)	0.0012	35.04	24.8599
	Interference Check Solution AB	Na (588.995 nm)	-0.0498 u	9.93	-14300.3993
	Interference Check Solution AB	Ni (230.299 nm)	0.9861	0.26	11605.3002
	Interference Check Solution AB	Pb (220.353 nm)	0.0532	1.93	285.5586
	Interference Check Solution AB	Sb (217.582 nm)	0.5733	0.33	1071.4565
	Interference Check Solution AB	Se (196.026 nm)	0.0493	2.99	40.7089
	Interference Check Solution AB	Si (252.851 nm)	0.0795	1.92	335.5548
	Interference Check Solution AB	Sn (189.925 nm)	0.0008 u	> 100.00	5.0905
	Interference Check Solution AB	Sr (216.596 nm)	0.0114	0.96	199.1774
	Interference Check Solution AB	Ti (336.122 nm)	0.0026	9.16	530.4224
	Interference Check Solution AB	Tl (190.794 nm)	0.0989	2.66	95.4838
	Interference Check Solution AB	V (292.401 nm)	0.5206	0.26	19697.0068
	Interference Check Solution AB	Y (360.074 nm)	0.95	0.21	464829.09
	Interference Check Solution AB	Y_R (360.074 nm)	0.95	0.21	463409.32
	Interference Check Solution AB	Zn (213.857 nm)	1.0209	0.20	65347.4930
6/11/2024 06:22:32	Continuing Calibration Verification2	Ag (328.068 nm)	0.5021	0.16	28231.1283
	Continuing Calibration Verification2	Al (237.312 nm)	9.6220	0.07	23797.3786
	Continuing Calibration Verification2	As (188.980 nm)	0.9652	0.12	1634.8375
	Continuing Calibration Verification2	B (249.772 nm)	2.3736	0.24	77079.5708

DateTimeMeasured	SolutionLabel	Element Label (nm)	Unadjusted Conc (ppm)	%RSD	Intensity (c/s)
	Continuing Calibration Verification2	Ba (230.424 nm)	9.4584	0.61	514992.8046
	Continuing Calibration Verification2	Be (313.107 nm)	0.2376	0.23	260828.4880
	Continuing Calibration Verification2	Ca (317.933 nm)	26.0071	0.27	929128.6348
	Continuing Calibration Verification2	Cd (214.439 nm)	0.5068	0.27	28872.6215
	Continuing Calibration Verification2	Co (230.786 nm)	2.4552	0.26	44512.5928
	Continuing Calibration Verification2	Cr (267.716 nm)	0.5225	0.28	27167.7902
	Continuing Calibration Verification2	Cu (327.395 nm)	1.1952	0.62	52437.5684
	Continuing Calibration Verification2	Fe (234.350 nm)	5.0480	0.25	91914.5881
	Continuing Calibration Verification2	K (766.491 nm)	23.9809	0.21	26124.5884
	Continuing Calibration Verification2	Mg (279.078 nm)	25.6534	0.19	83803.4703
	Continuing Calibration Verification2	Mn (257.610 nm)	0.7409	0.23	247452.7390
	Continuing Calibration Verification2	Mo (202.032 nm)	2.7079	0.40	28278.6426
	Continuing Calibration Verification2	Na (588.995 nm)	25.3402	0.18	331469.7083
	Continuing Calibration Verification2	Ni (230.299 nm)	2.0622	0.22	24241.4693
	Continuing Calibration Verification2	Pb (220.353 nm)	0.5232	0.31	2739.3261
	Continuing Calibration Verification2	Sb (217.582 nm)	4.6148	0.15	8578.8753
	Continuing Calibration Verification2	Se (196.026 nm)	0.4753	1.28	351.2178
	Continuing Calibration Verification2	Si (252.851 nm)	9.7327	0.40	37117.5432
	Continuing Calibration Verification2	Sn (189.925 nm)	4.9795	0.09	12264.3578
	Continuing Calibration Verification2	Sr (216.596 nm)	2.4807	0.33	43658.2733
	Continuing Calibration Verification2	Ti (336.122 nm)	2.4946	0.15	360564.3838
	Continuing Calibration Verification2	Tl (190.794 nm)	0.9634	0.28	940.2349
	Continuing Calibration Verification2	V (292.401 nm)	2.5286	0.23	95822.5141
	Continuing Calibration Verification2	Y (360.074 nm)	1.04	0.37	507849.20
	Continuing Calibration Verification2	Y_R (360.074 nm)	1.04	0.38	506326.66
	Continuing Calibration Verification2	Zn (213.857 nm)	0.9809	0.26	62783.5733
6/11/2024 06:25:46	Continuing Calibration Blank2	Ag (328.068 nm)	-0.0005 u	23.83	-244.0419
	Continuing Calibration Blank2	Al (237.312 nm)	0.0058	34.77	26.5130
	Continuing Calibration Blank2	As (188.980 nm)	-0.0002 u	> 100.00	-2.4337
	Continuing Calibration Blank2	B (249.772 nm)	0.0022	14.98	77.4668
	Continuing Calibration Blank2	Ba (230.424 nm)	0.0009	8.40	59.0149
	Continuing Calibration Blank2	Be (313.107 nm)	0.0001	8.77	134.9287
	Continuing Calibration Blank2	Ca (317.933 nm)	0.0191	1.21	3423.8418
	Continuing Calibration Blank2	Cd (214.439 nm)	0.0002	22.04	15.1898
	Continuing Calibration Blank2	Co (230.786 nm)	0.0002	83.91	-5.9486
	Continuing Calibration Blank2	Cr (267.716 nm)	0.0002	69.93	14.0732
	Continuing Calibration Blank2	Cu (327.395 nm)	0.0006	27.94	-1.6443
	Continuing Calibration Blank2	Fe (234.350 nm)	0.0075	17.27	136.1040
	Continuing Calibration Blank2	K (766.491 nm)	0.0506	57.61	-136.5170
	Continuing Calibration Blank2	Mg (279.078 nm)	0.0058	19.64	-10.7744
	Continuing Calibration Blank2	Mn (257.610 nm)	0.0002	5.79	71.3315
	Continuing Calibration Blank2	Mo (202.032 nm)	0.0041	31.12	54.4622
	Continuing Calibration Blank2	Na (588.995 nm)	0.0334	14.14	-13168.5339
	Continuing Calibration Blank2	Ni (230.299 nm)	0.0000 u	> 100.00	25.0565
	Continuing Calibration Blank2	Pb (220.353 nm)	0.0004	36.96	10.0678
	Continuing Calibration Blank2	Sb (217.582 nm)	0.0027	63.96	11.5858
	Continuing Calibration Blank2	Se (196.026 nm)	0.0014 u	> 100.00	5.7922
	Continuing Calibration Blank2	Si (252.851 nm)	-0.0033 u	27.22	19.9206
	Continuing Calibration Blank2	Sn (189.925 nm)	0.0008 u	97.39	5.0078
	Continuing Calibration Blank2	Sr (216.596 nm)	0.0004	21.53	6.8777
	Continuing Calibration Blank2	Ti (336.122 nm)	0.0035	42.31	653.8694
	Continuing Calibration Blank2	Tl (190.794 nm)	0.0000 u	> 100.00	-1.1581
	Continuing Calibration Blank2	V (292.401 nm)	0.0002	68.17	-32.8968
	Continuing Calibration Blank2	Y (360.074 nm)	1.08	0.10	527037.87
	Continuing Calibration Blank2	Y_R (360.074 nm)	1.08	0.10	525462.87
	Continuing Calibration Blank2	Zn (213.857 nm)	0.0006	5.74	38.5783

Summary Calibration Results

Element and wavelength	Type	Units	Equation	Correlation Coefficient	%RSE
Ag (328.068 nm)	Analyte	ppm	56652.00250847 * Concentration - 214.70142271	0.99998	1.75371684
Al (237.312 nm)	Analyte	ppm	2471.96113709 * Concentration + 12.27941366	0.99998	1.91926591
As (188.980 nm)	Analyte	ppm	1695.90441401 * Concentration - 2.02398243	0.99999	3.84565191
B (249.772 nm)	Analyte	ppm	32471.21584063 * Concentration + 5.50648884	0.99999	3.12707480
Ba (230.424 nm)	Analyte	ppm	54446.83365420 * Concentration + 11.45353022	0.99988	2.94571263
Be (313.107 nm)	Analyte	ppm	1097602.16130218 * Concentration + 20.82403465	0.99996	3.60220119
Ca (317.933 nm)	Analyte	ppm	35620.43095662 * Concentration + 2743.02820860	0.99994	3.94485195
Cd (214.439 nm)	Analyte	ppm	56969.93917520 * Concentration + 1.98473831	0.99995	5.70541822
Co (230.786 nm)	Analyte	ppm	18133.56513846 * Concentration - 9.68248389	0.99992	3.99660600
Cr (267.716 nm)	Analyte	ppm	51981.26975432 * Concentration + 5.91705291	0.99995	5.41129914
Cu (327.395 nm)	Analyte	ppm	43897.45680217 * Concentration - 27.63605306	0.99999	1.48151211
Fe (234.350 nm)	Analyte	ppm	18208.06239873 * Concentration - 0.42346759	0.99994	4.20182104
K (766.491 nm)	Analyte	ppm	1097.39808503 * Concentration - 192.03580535	0.99999	4.40211295
Mg (279.078 nm)	Analyte	ppm	3267.91324421 * Concentration - 29.77469607	0.99998	2.25179905
Mn (257.610 nm)	Analyte	ppm	333952.61061635 * Concentration + 18.65433213	0.99995	4.37401915
Mo (202.032 nm)	Analyte	ppm	10438.66478208 * Concentration + 11.99976361	0.99997	2.47641151
Na (588.995 nm)	Analyte	ppm	13618.38633158 * Concentration - 13622.77964682	0.99998	2.13018795
Ni (230.299 nm)	Analyte	ppm	11742.78454579 * Concentration + 25.25165347	0.99993	4.29022343
Pb (220.353 nm)	Analyte	ppm	5220.75146946 * Concentration + 7.92174650	0.99995	15.541480 79
Sb (217.582 nm)	Analyte	ppm	1857.57697526 * Concentration + 6.58909602	0.99999	1.93626643
Se (196.026 nm)	Analyte	ppm	728.92168317 * Concentration + 4.77850331	0.99999	10.159643 07
Si (252.851 nm)	Analyte	ppm	3810.35553869 * Concentration + 32.65842386	0.99999	2.04001518
Sn (189.925 nm)	Analyte	ppm	2462.38203134 * Concentration + 3.01919274	0.99993	4.59265154
Sr (216.596 nm)	Analyte	ppm	17599.54462160 * Concentration - 0.66293976	0.99994	2.70574655
Ti (336.122 nm)	Analyte	ppm	144476.85912433 * Concentration + 155.39463137	0.99997	2.31275598
Tl (190.794 nm)	Analyte	ppm	977.16068749 * Concentration - 1.20392404	0.99992	8.94928880
V (292.401 nm)	Analyte	ppm	37912.24790684 * Concentration - 40.57458727	0.99998	1.85735266
Zn (213.857 nm)	Analyte	ppm	64008.07433771 * Concentration + 0.52809040	0.99998	2.91807718

Detailed Calibration Results

Ag (328.068 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	-214.7014	0.0000	0.0000	N/A
Standard 2	346.9291	0.0100	0.0099	0.8631
Standard 3	917.8872	0.0200	0.0200	0.0398
Standard 4	5435.1964	0.1000	0.0997	0.2701
Standard 5	11441.8520	0.2000	0.2058	2.8786
Standard 6	56634.3506	1.0000	1.0035	0.3478

Al (237.312 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	12.2794	0.0000	0.0000	N/A
Standard 1	254.4576	0.1000	0.0980	2.0299
Standard 2	501.5798	0.2000	0.1979	1.0299
Standard 3	1016.0961	0.4000	0.4061	1.5203
Standard 4	4934.7881	2.0000	1.9913	0.4331
Standard 5	10162.4234	4.0000	4.1061	2.6527
Standard 6	49386.8261	20.0000	19.9738	0.1308

As (188.980 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	-2.0240	0.0000	0.0000	N/A
Standard 1	13.9115	0.0100	0.0094	6.0357
Standard 2	30.5775	0.0200	0.0192	3.8818
Standard 3	64.9800	0.0400	0.0395	1.2268
Standard 4	336.9284	0.2000	0.1999	0.0674
Standard 5	692.8380	0.4000	0.4097	2.4324
Standard 6	3406.1319	2.0000	2.0096	0.4820

B (249.772 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	5.5065	0.0000	0.0000	N/A
Standard 2	3109.4761	0.1000	0.0956	4.4086
Standard 3	6359.5393	0.2000	0.1957	2.1590
Standard 4	31900.1710	1.0000	0.9822	1.7756
Standard 5	65836.2932	2.0000	2.0274	1.3679
Standard 6	326223.5965	10.0000	10.0464	0.4638

Ba (230.424 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	11.4535	0.0000	0.0000	N/A
Standard 1	1083.8975	0.0200	0.0197	1.5146
Standard 2	10855.9553	0.2000	0.1992	0.4120
Standard 3	22227.6444	0.4000	0.4080	2.0086
Standard 4	109006.0515	2.0000	2.0019	0.0927
Standard 5	223893.7217	4.0000	4.1119	2.7986
Standard 6	1039801.0293	20.0000	19.0973	4.5133

Be (313.107 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	20.8240	0.0000	0.0000	N/A
Standard 1	3142.4650	0.0030	0.0028	5.1982
Standard 2	5482.8841	0.0050	0.0050	0.4729
Standard 3	11192.8829	0.0100	0.0102	1.7861
Standard 4	55454.0766	0.0500	0.0505	1.0079
Standard 5	114723.2121	0.1000	0.1045	4.5027
Standard 6	551142.0898	0.5000	0.5021	0.4228

Ca (317.933 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	2743.0282	0.0000	0.0000	N/A
Standard 2	20813.4819	0.5000	0.5073	1.4612
Standard 3	39492.7013	1.0000	1.0317	3.1702
Standard 4	184833.0666	5.0000	5.1120	2.2391
Standard 5	378276.7065	10.0000	10.5426	5.4265
Standard 6	1780201.3964	50.0000	49.9000	0.2001

Cd (214.439 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	1.9847	0.0000	0.0000	N/A
Standard 1	309.5041	0.0050	0.0054	7.9585
Standard 2	590.3930	0.0100	0.0103	3.2840
Standard 3	1197.2108	0.0200	0.0210	4.8997

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Standard 4	5823.0367	0.1000	0.1022	2.1776
Standard 5	11991.6943	0.2000	0.2105	5.2284
Standard 6	56961.2564	1.0000	0.9998	0.0187

Co (230.786 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	-9.6825	0.0000	0.0000	N/A
Standard 2	911.5483	0.0500	0.0508	1.6050
Standard 3	1880.3493	0.1000	0.1042	4.2284
Standard 4	9251.0174	0.5000	0.5107	2.1388
Standard 5	18947.8682	1.0000	1.0454	4.5440
Standard 6	89300.7563	5.0000	4.9251	1.4971

Cr (267.716 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	5.9171	0.0000	0.0000	N/A
Standard 2	553.1885	0.0100	0.0105	5.2824
Standard 3	1105.5040	0.0200	0.0212	5.7676
Standard 4	5301.0326	0.1000	0.1019	1.8658
Standard 5	10902.6041	0.2000	0.2096	4.8136
Standard 6	51905.0207	1.0000	0.9984	0.1581

Cu (327.395 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	-27.6361	0.0000	0.0000	N/A
Standard 1	408.4990	0.0100	0.0099	0.6469
Standard 2	1052.5640	0.0250	0.0246	1.5706
Standard 3	2162.2834	0.0500	0.0499	0.2257
Standard 4	10850.7026	0.2500	0.2478	0.8750
Standard 5	22409.3776	0.5000	0.5111	2.2247
Standard 6	110109.5742	2.5000	2.5090	0.3586

Fe (234.350 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	-0.4235	0.0000	0.0000	N/A
Standard 2	1844.7748	0.1000	0.1013	1.3396
Standard 3	3791.5751	0.2000	0.2083	4.1297
Standard 4	18708.4501	1.0000	1.0275	2.7505
Standard 5	38292.0122	2.0000	2.1030	5.1524
Standard 6	181956.4471	10.0000	9.9932	0.0680

K (766.491 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	-192.0358	0.0000	0.0000	N/A
Standard 2	336.4366	0.5000	0.4816	3.6863
Standard 3	848.3260	1.0000	0.9480	5.1974
Standard 4	5071.5453	5.0000	4.7964	4.0716
Standard 5	10828.2569	10.0000	10.0422	0.4220
Standard 6	55161.7922	50.0000	50.4410	0.8819

Mg (279.078 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	-29.7747	0.0000	0.0000	N/A
Standard 2	1603.9931	0.5000	0.4999	0.0116
Standard 3	3301.5600	1.0000	1.0194	1.9407
Standard 4	16438.8834	5.0000	5.0395	0.7901
Standard 5	33723.4500	10.0000	10.3287	3.2868
Standard 6	163146.1556	50.0000	49.9328	0.1345

Mn (257.610 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	18.6543	0.0000	0.0000	N/A
Standard 1	3452.0060	0.0100	0.0103	2.8095
Standard 2	5183.8872	0.0150	0.0155	3.1131
Standard 3	10549.1301	0.0300	0.0315	5.1095
Standard 4	51423.7190	0.1500	0.1539	2.6195
Standard 5	105310.4430	0.3000	0.3153	5.0965
Standard 6	500894.1205	1.5000	1.4998	0.0107

Mo (202.032 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	11.9998	0.0000	0.0000	N/A
Standard 1	266.3161	0.0250	0.0244	2.5483
Standard 2	523.3276	0.0500	0.0490	2.0319
Standard 3	1059.7969	0.1000	0.1004	0.3766
Standard 4	5220.3115	0.5000	0.4989	0.2112
Standard 5	10837.2990	1.0000	1.0370	3.7039
Standard 6	52232.1617	5.0000	5.0026	0.0514

Na (588.995 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	-13622.7796	0.0000	0.0000	N/A
Standard 2	-6868.1971	0.5000	0.4960	0.8020
Standard 3	-12.8641	1.0000	0.9994	0.0622
Standard 4	54269.4007	5.0000	4.9853	0.2934
Standard 5	127378.3799	10.0000	10.3537	3.5373
Standard 6	671422.2847	50.0000	50.3030	0.6059

Ni (230.299 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	25.2517	0.0000	0.0000	N/A
Standard 2	503.4971	0.0400	0.0407	1.8169
Standard 3	1005.5434	0.0800	0.0835	4.3504
Standard 4	4844.6162	0.4000	0.4104	2.6027
Standard 5	9895.7808	0.8000	0.8406	5.0702
Standard 6	46660.8459	4.0000	3.9714	0.7144

Pb (220.353 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	7.9217	0.0000	0.0000	N/A
Standard 1	41.9762	0.0050	0.0065	30.4580
Standard 2	60.2148	0.0100	0.0100	0.1639
Standard 3	115.3159	0.0200	0.0206	2.8532
Standard 4	539.7134	0.1000	0.1019	1.8611

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Standard 5	1106.1551	0.2000	0.2104	5.1796
Standard 6	5226.9264	1.0000	0.9997	0.0335

Sb (217.582 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	6.5891	0.0000	0.0000	N/A
Standard 1	116.2691	0.0600	0.0590	1.5922
Standard 2	188.8470	0.1000	0.0981	1.8841
Standard 3	378.0865	0.2000	0.2000	0.0048
Standard 4	1858.0694	1.0000	0.9967	0.3282
Standard 5	3830.2635	2.0000	2.0584	2.9210
Standard 6	18679.1493	10.0000	10.0521	0.5211

Se (196.026 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	4.7785	0.0000	0.0000	N/A
Standard 2	13.3105	0.0100	0.0117	17.0491
Standard 3	18.7854	0.0200	0.0192	3.9201
Standard 4	77.4196	0.1000	0.0997	0.3444
Standard 5	153.2895	0.2000	0.2037	1.8704
Standard 6	733.6765	1.0000	1.0000	0.0032

Si (252.851 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	32.6584	0.0000	0.0000	N/A
Standard 2	1909.0856	0.5000	0.4925	1.5091
Standard 3	3870.5921	1.0000	1.0072	0.7238
Standard 4	19140.2821	5.0000	5.0147	0.2931
Standard 5	39203.3911	10.0000	10.2801	2.8007
Standard 6	193073.5037	50.0000	50.6622	1.3243

Sn (189.925 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	3.0192	0.0000	0.0000	N/A
Standard 2	254.2375	0.1000	0.1020	2.0225
Standard 3	516.3385	0.2000	0.2085	4.2323
Standard 4	2551.6638	1.0000	1.0350	3.5032
Standard 5	5192.0545	2.0000	2.1073	5.3662
Standard 6	24514.9302	10.0000	9.9546	0.4545

Sr (216.596 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	-0.6629	0.0000	0.0000	N/A
Standard 2	876.9743	0.0500	0.0499	0.2659
Standard 3	1801.0972	0.1000	0.1024	2.3754
Standard 4	8857.7057	0.5000	0.5033	0.6659
Standard 5	18196.8975	1.0000	1.0340	3.3979
Standard 6	86180.6194	5.0000	4.8968	2.0642

Ti (336.122 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	155.3946	0.0000	0.0000	N/A
Standard 2	7277.0359	0.0500	0.0493	1.4148

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Standard 3	14771.0498	0.1000	0.1012	1.1626
Standard 4	72410.6800	0.5000	0.5001	0.0233
Standard 5	149770.7431	1.0000	1.0356	3.5566
Standard 6	721038.4170	5.0000	4.9896	0.2078

Tl (190.794 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	-1.2039	0.0000	0.0000	N/A
Standard 1	10.0508	0.0100	0.0115	15.1773
Standard 2	16.7524	0.0200	0.0184	8.1199
Standard 3	37.8517	0.0400	0.0400	0.0787
Standard 4	197.1151	0.2000	0.2030	1.4772
Standard 5	406.2716	0.4000	0.4170	4.2499
Standard 6	1914.8961	2.0000	1.9609	1.9557

V (292.401 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	-40.5746	0.0000	0.0000	N/A
Standard 2	1828.3923	0.0500	0.0493	1.4056
Standard 3	3778.4425	0.1000	0.1007	0.7331
Standard 4	18918.3881	0.5000	0.5001	0.0150
Standard 5	38928.9684	1.0000	1.0279	2.7888
Standard 6	189062.3567	5.0000	4.9879	0.2418

Zn (213.857 nm)

Standard	Intensity	Method Concentration	Calculated Concentration	% Error
Blank	0.5281	0.0000	0.0000	N/A
Standard 2	1235.3343	0.0200	0.0193	3.5429
Standard 3	2555.8540	0.0400	0.0399	0.1952
Standard 4	12781.8649	0.2000	0.1997	0.1584
Standard 5	26499.5851	0.4000	0.4140	3.4989
Standard 6	129078.3414	2.0000	2.0166	0.8293

Preparation Information Benchsheet

Prep Run#: 439549
Team: Metals/NMANSEN

Prep WorkFlow: MetDigAqICP
Prep Method: EPA 3005A/3010A

Status: Prepped
Prep Date/Time: 6/4/24 15:20

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ2406336-01	MB		50mL	6010C/Ag D DOD, Ag T DOD, Al D DOD, Al T DOD, As D DOD, As T DOD, Ba D DOD, Ba T DOD, Be D DOD, Be T DOD, Cd D DOD, Cd T DOD, Co D DOD, Co T DOD, Cr D DOD, Cr T DOD, Cu D DOD, Cu T DOD, Fe D DOD, Fe T DOD, K D DOD, K T DOD, Mg D DOD, Mg T DOD, Mn D DOD, Mn T DOD, Na D DOD, Na T DOD, Ni D DOD, Ni T DOD, Pb D DOD, Pb T DOD, Sb D DOD, Sb T DOD, Se D DOD, Se T DOD, Tl D DOD, Tl T DOD, V D DOD, V T DOD, Zn D DOD, Zn T DOD	<2			50.00mL	Colorless-Clear		HB: 11 Well: C2 Temp: 90.8C
2	RQ2406336-02	LCS		50mL	6010C/Ag D DOD, Ag T DOD, Al D DOD, Al T DOD, As D DOD, As T DOD, Ba D DOD, Ba T DOD, Be D DOD, Be T DOD, Cd D DOD, Cd T DOD, Co D DOD, Co T DOD, Cr D DOD, Cr T DOD, Cu D DOD, Cu T DOD, Fe D DOD, Fe T DOD, K D DOD, K T DOD, Mg D DOD, Mg T DOD, Mn D DOD, Mn T DOD, Na D DOD, Na T DOD, Ni D DOD, Ni T DOD, Pb D DOD, Pb T DOD, Sb D DOD, Sb T DOD, Se D DOD, Se T DOD, Tl D DOD, Tl T DOD, V D DOD, V T DOD, Zn D DOD, Zn T DOD	<2			50.00mL	Colorless-Clear	0.5000 mL/235516; 0.5000 mL/235403; 0.5000 mL/233429	On HB: 15:52 HB Shutoff: 01:52 Pipet/Repippetors: M36,M340,MA100 DOD Pipet Check: M8390040
3	R2404536-001	WQM-10-052224	.01	50mL	6010C/Ag T DOD, Al T DOD, As T DOD, Ba T DOD, Be T DOD, Cd T DOD, Co T DOD, Cr T DOD, Cu T DOD, Fe T DOD, K T DOD, Mg T DOD, Mn T DOD, Na T DOD, Ni T DOD, Pb T DOD, Sb T DOD, Se T DOD, Tl T DOD, V T DOD, Zn T DOD	<2			50.00mL	Colorless-Clear		Tier IV
4	RQ2406336-03	R2404536-001 MS	.01	50mL	6010C/Ag T DOD, Al T DOD, As T DOD, Ba T DOD, Be T DOD, Cd T DOD, Co T DOD, Cr T DOD, Cu T DOD, Fe T DOD, K T DOD, Mg T DOD, Mn T DOD, Na T DOD, Ni T DOD, Pb T DOD, Sb T DOD, Se T DOD, Tl T DOD, V T DOD, Zn T DOD	<2			50.00mL	Colorless-Clear	0.5000 mL/233429; 0.5000 mL/235403; 0.5000 mL/235516	

Preparation Information Benchsheet

Prep Run#: 439549 **Prep WorkFlow:** MetDigAqICP **Status:** Prepped
Team: Metals/NMANSEN **Prep Method:** EPA 3005A/3010A **Prep Date/Time:** 6/4/24 15:20

5	RQ2406336-04	R2404536-001 DMS	.01	50mL	6010C/Ag T DOD, Al T DOD, As T DOD, Ba T DOD, Be T DOD, Cd T DOD, Co T DOD, Cr T DOD, Cu T DOD, Fe T DOD, K T DOD, Mg T DOD, Mn T DOD, Na T DOD, Ni T DOD, Pb T DOD, Sb T DOD, Se T DOD, Tl T DOD, V T DOD, Zn T DOD	<2			50.00mL	Colorless-Clear	0.5000 mL/235403; 0.5000 mL/235516; 0.5000 mL/233429	
6	R2404536-002	WQM-10-052224-F	.01	50mL	6010C/Ag D DOD, Al D DOD, As D DOD, Ba D DOD, Be D DOD, Cd D DOD, Co D DOD, Cr D DOD, Cu D DOD, Fe D DOD, K D DOD, Mg D DOD, Mn D DOD, Na D DOD, Ni D DOD, Pb D DOD, Sb D DOD, Se D DOD, Tl D DOD, V D DOD, Zn D DOD	<2			50.00mL	Colorless-Clear		
7	RQ2406336-05	R2404536-002 MS	.01	50mL	6010C/Ag D DOD, Al D DOD, As D DOD, Ba D DOD, Be D DOD, Cd D DOD, Co D DOD, Cr D DOD, Cu D DOD, Fe D DOD, K D DOD, Mg D DOD, Mn D DOD, Na D DOD, Ni D DOD, Pb D DOD, Sb D DOD, Se D DOD, Tl D DOD, V D DOD, Zn D DOD	<2			50.00mL	Colorless-Clear	0.5000 mL/233429; 0.5000 mL/235516; 0.5000 mL/235403	
8	RQ2406336-06	R2404536-002 DMS	.01	50mL	6010C/Ag D DOD, Al D DOD, As D DOD, Ba D DOD, Be D DOD, Cd D DOD, Co D DOD, Cr D DOD, Cu D DOD, Fe D DOD, K D DOD, Mg D DOD, Mn D DOD, Na D DOD, Ni D DOD, Pb D DOD, Sb D DOD, Se D DOD, Tl D DOD, V D DOD, Zn D DOD	<2			50.00mL	Colorless-Clear	0.5000 mL/235403; 0.5000 mL/233429; 0.5000 mL/235516	
9	R2404536-003	WQM-4N-052224	.01	50mL	6010C/Ag T DOD, Al T DOD, As T DOD, Ba T DOD, Be T DOD, Cd T DOD, Co T DOD, Cr T DOD, Cu T DOD, Fe T DOD, K T DOD, Mg T DOD, Mn T DOD, Na T DOD, Ni T DOD, Pb T DOD, Sb T DOD, Se T DOD, Tl T DOD, V T DOD, Zn T DOD	<2			50.00mL	Colorless-Clear		
10	R2404536-004	WQM-4N-052224-F	.01	50mL	6010C/Ag D DOD, Al D DOD, As D DOD, Ba D DOD, Be D DOD, Cd D DOD, Co D DOD, Cr D DOD, Cu D DOD, Fe D DOD, K D DOD, Mg D DOD, Mn D DOD, Na D DOD, Ni D DOD, Pb D DOD, Sb D DOD, Se D DOD, Tl D DOD, V D DOD, Zn D DOD	<2			50.00mL	Colorless-Clear		

Preparation Information Benchsheet

Prep Run#: 439549 **Prep WorkFlow:** MetDigAqICP **Status:** Prepped
Team: Metals/NMANSEN **Prep Method:** EPA 3005A/3010A **Prep Date/Time:** 6/4/24 15:20

11	R2404536-005	WQM-3W-052224	.01	50mL	6010C/Ag T DOD, Al T DOD, As T DOD, Ba T DOD, Be T DOD, Cd T DOD, Co T DOD, Cr T DOD, Cu T DOD, Fe T DOD, K T DOD, Mg T DOD, Mn T DOD, Na T DOD, Ni T DOD, Pb T DOD, Sb T DOD, Se T DOD, Tl T DOD, V T DOD, Zn T DOD	<2			50.00mL	Colorless-Clear		
12	R2404536-006	WQM-3W-052224-F	.01	50mL	6010C/Ag D DOD, Al D DOD, As D DOD, Ba D DOD, Be D DOD, Cd D DOD, Co D DOD, Cr D DOD, Cu D DOD, Fe D DOD, K D DOD, Mg D DOD, Mn D DOD, Na D DOD, Ni D DOD, Pb D DOD, Sb D DOD, Se D DOD, Tl D DOD, V D DOD, Zn D DOD	<2			50.00mL	Colorless-Clear		
13	R2404536-007	WQM-D-052224	.01	50mL	6010C/Ag T DOD, Al T DOD, As T DOD, Ba T DOD, Be T DOD, Cd T DOD, Co T DOD, Cr T DOD, Cu T DOD, Fe T DOD, K T DOD, Mg T DOD, Mn T DOD, Na T DOD, Ni T DOD, Pb T DOD, Sb T DOD, Se T DOD, Tl T DOD, V T DOD, Zn T DOD	<2			50.00mL	Colorless-Clear		
14	R2404536-008	WQM-D-052224-F	.01	50mL	6010C/Ag D DOD, Al D DOD, As D DOD, Ba D DOD, Be D DOD, Cd D DOD, Co D DOD, Cr D DOD, Cu D DOD, Fe D DOD, K D DOD, Mg D DOD, Mn D DOD, Na D DOD, Ni D DOD, Pb D DOD, Sb D DOD, Se D DOD, Tl D DOD, V D DOD, Zn D DOD	<2			50.00mL	Colorless-Clear		

Spiking Solutions

Name:	Custom LCS STD A Metals	Inventory ID	233429	Logbook Ref:	233429	Expires On:	07/31/2025	Lot #:	2400837-5
Name:	C Spike	Inventory ID	235403	Logbook Ref:	235403	Expires On:	11/18/2024		
Name:	Custom LCS STD B Metals	Inventory ID	235516	Logbook Ref:	235516	Expires On:	11/02/2024		

Preparation Materials

1:1 HCl Metals Grade	1:1 223283 (233826)	Hot Block Cups	50mL Lot 2304355 (232860)	Nitric Acid Metals Grade HNO3 233477 (233477)
Thermometer	461 (230831)			

Preparation Information Benchsheet

Prep Run#: 439549
Team: Metals/NMANSEN

Prep WorkFlow: MetDigAqICP
Prep Method: EPA 3005A/3010A

Status: Prepped
Prep Date/Time: 6/4/24 15:20

Preparation Steps

Step: Digestion
Started: 6/4/24 15:20
Finished: 6/5/24 06:30
By: NMANSEN
Comments

Comments: _____

Reviewed By: _____ Date: _____

Chain of Custody

Relinquished By: Nicole Mansen Date: 6/5/24
Received By: RAO1 Date: 6/5/24

Extracts Examined
Yes No

Frequency:

Pipettes: 3 trials for both bias and precision
DOD Projects - Daily before use at each volume of use, or if more than 3 volumes of use, a high, medium, and low.
Non-DOD: Quarterly at high, medium, and low.

Repeaters, Dispensers, and Repipettors: Quarterly - 3 trials for both bias and precision

Calculations:
%Recovery = Mean/Nominal Volume*100
%RSD = Stdev/Volume*100

Limits: % Rec: 98-102 for Pipettes and others for dilutions
% Recovery: 90-110 (Repeaters, Dispensers, Repipettors not for dilutions)
%RSD: ≤1 (Pipets); ≤3 (Repeaters, Dispensers, and Repipettors)

Use a balance and DI for all except Dispensers and Repipettors which contain reagents. For these, dispense into a To Contain Class A grad cylinder and document the Max Volume of the cylinder instead of the Balance ID. Record to 1/10 the graduation of the cylinder.

Date	Init.	Equipment ID	Volume (mL)	Trial #1 (g/mL)	Trial #2 (g/mL)	Trial #3 (g/mL)	Bias %Recovery	Pass/ Fail	Precision %RSD	Pass/ Fail	Recal? Y/N	Balance ID or Class A (TC)	Comments/ Corrective Action
6/4/24	MFM	M36	0.500	0.5019	0.5015	0.5006	100.26	P	0.133	P	N	R-19	DOD pipet check
↓	↓	↓	0.6000	0.6041	0.6043	0.6009	100.52	P	0.318	P	N	↓	↓
			1.000	0.9981	0.9977	0.9969	99.76	P	0.061	P	N		
		M37	0.0200	0.0199	0.0201	0.0202	100.33	P	0.764	P	N		
6/5/24	NM	M37	0.0600	0.0602	0.0603	0.0602	100.39	P	0.096	P	N	R-19	DOD Pipet Check
↓	↓	M40	0.5000	0.5006	0.5020	0.5018 0.5015 NM 6/5/24	100.29	P	0.151	P	N	↓	↓
↓	↓	↓	1.0000	0.9979	0.9978	0.9968	99.75	P	0.061	P	N		

Preparation Information Benchsheet

Prep Run#: 439397
Team: Metals/CDISTEFANO

Prep WorkFlow: MetDigAqICP
Prep Method: EPA 3005A/3010A

Status: Prepped
Prep Date/Time: 6/3/24 11:52

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ2406200-01	MB		50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Sr T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear		HB:1 Well:B1 Temp:91.8C
2	RQ2406200-02	LCS		50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Sr T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear	0.5000 mL/235516; 0.5000 mL/233429; 0.5000 mL/235403	On HB:18:02 HB Shutoff:4:02 Pipet/Repipettor:M340,MA100,M23
3	RQ2406200-03	DLCS		50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Sr T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear	0.5000 mL/235516; 0.5000 mL/233429; 0.5000 mL/235403	
4	R2404637-001	BI-1	.06	50mL	6010C/Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Clear		
5	R2404637-002	BI-2	.06	50mL	6010C/Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Clear		
6	R2404637-003	BI-4	.06	50mL	6010C/Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Clear		
7	R2404637-004	BI-7	.06	50mL	6010C/Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Clear		
8	R2404637-005	BI-10	.06	50mL	6010C/Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Clear		
9	R2404638-001	River Upstream	.14	50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear		
10	R2404638-002	River Downstream	.14	50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear		
11	R2404639-001	OW-27	.01	50mL	6010C/Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Cloudy/Colorless-Clear		
12	R2404639-002	OW-15	.01	50mL	6010C/Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Cloudy/Colorless-Clear		
13	R2404639-003	OW-4	.01	50mL	6010C/Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Clear		
14	R2404639-004	SW-4	.01	50mL	6010C/Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Cloudy/Colorless-Clear		
15	R2404639-005	SW-5	.01	50mL	6010C/Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Tan-Cloudy/Colorless-Cloudy		
16	R2404639-006	MW-10A	.01	50mL	6010C/Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Cloudy/Colorless-Cloudy		

Preparation Information Benchsheet

Prep Run#: 439397
Team: Metals/CDISTEFANO

Prep WorkFlow: MetDigAqICP
Prep Method: EPA 3005A/3010A

Status: Prepped
Prep Date/Time: 6/3/24 11:52

17	R2404647-002	Secondary leachate Cell 6	.09	50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Tl T, V T, Zn T	<2			50.00mL	Orange-Cloudy/Colorless-Cloudy		
18	R2404647-003	Primary Leachate Cell 6	.09	50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Tl T, V T, Zn T	<2			50.00mL	Orange-Cloudy/Colorless-Cloudy		
19	R2404647-004	Total Leachate	.09	50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Tl T, V T, Zn T	<2			50.00mL	Orange-Cloudy/Colorless-Clear		
20	R2404647-005	Gas Condensate	.12	50mL	6010C/Al T, As T, Ca T, Cd T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T	<2			50.00mL	Colorless-Cloudy/Colorless-Clear		
21	R2404677-001	Weekly Concentrate	.02	50mL	6010C/Al T, B T, Ba T, Ca T, Fe T, K T, Mg T, Mn T, Na T, Sr T	<2			50.00mL	Orange-Cloudy/Colorless-Cloudy		

Spiking Solutions

Name:	Custom LCS STD A Metals	Inventory ID	233429	Logbook Ref:	233429	Expires On:	07/31/2025	Lot #: 2400837-5
Name:	C Spike	Inventory ID	235403	Logbook Ref:	235403	Expires On:	11/18/2024	
Name:	Custom LCS STD B Metals	Inventory ID	235516	Logbook Ref:	235516	Expires On:	11/02/2024	

Preparation Materials

1:1 HCl Metals Grade	1:1 223283 (233826)	Hot Block Cups	50mL Lot 2211204 (234023)	Nitric Acid Metals Grade HNO3 233477 (233477)
Thermometer	460 (230830)			

Preparation Steps

Step: Digestion
Started: 6/3/24 11:52
Finished: 6/4/24 12:29
By: CDISTEFANO
Comments

Comments: _____

Reviewed By: Nicole Manson Date: 6/4/24

Preparation Information Benchsheet

Prep Run#: 439397
Team: Metals/CDISTEFANO

Prep WorkFlow: MetDigAqICP
Prep Method: EPA 3005A/3010A

Status: Prepped
Prep Date/Time: 6/3/24 11:52

4637 6/10
4638 6/10
4639 6/10
4647 6/10
4677 6/7 ~~&~~ RUSH

Chain of Custody

Relinquished By:		Date:	6/4/24	Extracts Examined
Received By:		Date:	6/4/24	Yes No

Preparation Information Benchsheet

Prep Run#: 439398
Team: Metals/CDISTEFANO

Prep WorkFlow: MetDigAqICP
Prep Method: EPA 3005A/3010A

Status: Prepped
Prep Date/Time: 6/3/24 11:52

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ2406181-01	MB		50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Mo T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Sr T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear		HB:1 Well:B1 Temp:91.8C
2	RQ2406181-02	LCS		50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Mo T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Sr T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear	0.5000 mL/235516; 0.5000 mL/233429; 0.5000 mL/235403	On HB:18:02 HB Shutoff:4:02 Pipet/Repipettor:M340,MA100,M23
3	R2404632-001	MH4	.06	50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear		Tier IV
4	R2404643-001	SCA-PAR0038-01	.05	50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear		Tier IV
5	R2404643-002	SCA-PAR0038-02	.05	50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear		
6	RQ2406181-03	R2404643-002 MS	.05	50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear	0.5000 mL/235403; 0.5000 mL/235516; 0.5000 mL/233429	
7	RQ2406181-04	R2404643-002 DMS	.05	50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear	0.5000 mL/233429; 0.5000 mL/235403; 0.5000 mL/235516	
8	R2404651-001	1405280845C 400-GV-125	.02	50mL	6010C/Ag T, Al T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Mo T, Na T, Ni T, Pb T, Se T, Sn T, Sr T, V T, Zn T	<2			50.00mL	Colorless-Clear		
9	R2404651-002	1405280846C 400-GV-125	.02	50mL	6010C/Ag T, Al T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Mo T, Na T, Ni T, Pb T, Se T, Sn T, Sr T, V T, Zn T	<2			50.00mL	Colorless-Clear		
10	R2404651-003	1405280857A 400-FV-131	.02	50mL	6010C/Ag T, Al T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Mo T, Na T, Ni T, Pb T, Se T, Sn T, Sr T, V T, Zn T	<2			50.00mL	Colorless-Clear		

Preparation Information Benchsheet

Prep Run#: 439398 **Prep WorkFlow:** MetDigAqICP **Status:** Prepped
Team: Metals/CDISTEFANO **Prep Method:** EPA 3005A/3010A **Prep Date/Time:** 6/3/24 11:52

11	R2404651-004	1405280858A 400-FV-131	.02	50mL	6010C/Ag T, Al T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Mo T, Na T, Ni T, Pb T, Se T, Sn T, Sr T, V T, Zn T	<2			50.00mL	Colorless-Clear		
12	R2404651-005	1405281005A 400-EV-131	.02	50mL	6010C/Ag T, Al T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Mo T, Na T, Ni T, Pb T, Se T, Sn T, Sr T, V T, Zn T	<2			50.00mL	Colorless-Clear		
13	R2404651-006	1405281013C 400-JV-150	.02	50mL	6010C/Ag T, Al T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Mo T, Na T, Ni T, Pb T, Se T, Sn T, Sr T, V T, Zn T	<2			50.00mL	Colorless-Clear		
14	R2404651-007	1405281450C 400-HV-147	.02	50mL	6010C/Ag T, Al T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Mo T, Na T, Ni T, Pb T, Se T, Sn T, Sr T, V T, Zn T	<2			50.00mL	Colorless-Clear		
15	R2404693-001	CF-2B	.06	50mL	6010C/Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Cloudy/Colorless-Clear		
16	R2404693-002	CF-2A	.06	50mL	6010C/Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Clear		
17	R2404693-003	CF-1C	.06	50mL	6010C/Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Cloudy/Colorless-Cloudy		
18	R2404693-004	CF-1B	.06	50mL	6010C/Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Clear		
19	R2404693-005	CF-1A	.06	50mL	6010C/Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Clear		
20	R2404693-006	CF-4A	.06	50mL	6010C/Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Clear		
21	R2404693-007	CF-3B	.06	50mL	6010C/Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Cloudy/Colorless-Clear		
22	R2404693-008	CF-3A	.06	50mL	6010C/Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Cloudy/Colorless-Clear		
23	R2404693-009	CF-6A	.06	50mL	6010C/Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Clear		
24	R2404693-010	CF-6B	.06	50mL	6010C/Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Clear		

Spiking Solutions

Name:	Custom LCS STD A Metals	Inventory ID	233429	Logbook Ref:	233429	Expires On:	07/31/2025	Lot #: 2400837-5
Name:	C Spike	Inventory ID	235403	Logbook Ref:	235403	Expires On:	11/18/2024	
Name:	Custom LCS STD B Metals	Inventory ID	235516	Logbook Ref:	235516	Expires On:	11/02/2024	

Preparation Materials

1:1 HCl Metals Grade	1:1 223283 (233826)	Hot Block Cups	50mL Lot 2211204 (234023)	Nitric Acid Metals Grade HNO3 233477 (233477)
Thermometer	460 (230830)			

Preparation Information Benchsheet

Prep Run#: 439398
Team: Metals/CDISTEFANO

Prep WorkFlow: MetDigAqICP
Prep Method: EPA 3005A/3010A

Status: Prepped
Prep Date/Time: 6/3/24 11:52

Preparation Steps

Step: Digestion
Started: 6/3/24 11:52
Finished: 6/4/24 12:35
By: CDISTEFANO
Comments

4632 (IV) 6/10
4643 (IV) 6/10
4651 6/11
4693 (1-10) 6/11

Comments:

Reviewed By: Nicole Mansen Date: 6/4/24

Chain of Custody

Relinquished By: [signature] Date: 6/4/24
Received By: [signature] Date: 6/4/24

Extracts Examined
Yes No

Preparation Information Benchsheet

Prep Run#: 439400
Team: Metals/CDISTEFANO

Prep WorkFlow: MetDigAqICP
Prep Method: EPA 3005A/3010A

Status: Prepped
Prep Date/Time: 6/3/24 11:52

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ2406180-01	MB		50mL	6010C/Al D, As T, Ca T, Cd T, Cr T, Fe T, K T, Mg T, Mn T, Na T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		HB:11 Well:B1 Temp:93.9C
2	RQ2406180-04	MB		50mL	6010C/Al D	<2			50.00mL	Colorless-Clear		Filter Blank R2404658 6/3/2024
3	RQ2406180-02	LCS		50mL	6010C/Al D, As T, Ca T, Cd T, Cr T, Fe T, K T, Mg T, Mn T, Na T, Pb T, Sb T	<2			50.00mL	Colorless-Clear	0.5000 mL/235516; 0.5000 mL/233429; 0.5000 mL/235403	On HB:18:02 HB Shutoff:4:02 Pipet/Repipettor:M340,MA100,M23
4	RQ2406180-03	DLCS		50mL	6010C/Al D, As T, Ca T, Cd T, Cr T, Fe T, K T, Mg T, Mn T, Na T, Pb T, Sb T	<2			50.00mL	Colorless-Clear	0.5000 mL/235516; 0.5000 mL/233429; 0.5000 mL/235403	
5	R2404656-001	MW-30S	.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		
6	R2404656-002	MW-30D	.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		
7	R2404656-003	MW-29D	.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		
8	R2404656-004	MW-28S	.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Cloudy/Colorless-Clear		
9	R2404656-005	MW-28D	.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		
10	R2404656-006	MW-19S	.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		
11	R2404656-007	MW-20S	.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		
12	R2404656-008	MW-21D	.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		
13	R2404656-009	MW-23DR	.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		
14	R2404656-010	DUP-02	.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		
15	R2404656-011	MW-26SR	.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		
16	R2404656-012	PZ-13	.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		
17	R2404656-013	MW-09S	.01	5mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	6			50.00mL	Colorless-Cloudy/Colorless-Clear		Diluted 10x
18	R2404656-014	MW-18D	.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		
19	R2404656-015	MW-23SR	.01	50mL	6010C/As T, Cd T, Cr T, Pb T, Sb T	<2			50.00mL	Colorless-Clear		
20	R2404658-001	Pump Station	.02	50mL	6010C/Fe T, Na T, Pb T	<2			50.00mL	Colorless-Clear		
21	R2404658-002	Pump Station Diss	.01	50mL	6010C/Al D	<2			50.00mL	Colorless-Clear		
22	R2404658-003	TSD	.02	50mL	6010C/Fe T, Na T, Pb T	<2			50.00mL	Colorless-Clear		
23	R2404658-004	TSD Diss	.01	50mL	6010C/Al D	<2			50.00mL	Colorless-Clear		
24	R2404693-011	CF-7	.06	50mL	6010C/Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Clear		

Preparation Information Benchsheet

Prep Run#: 439400
Team: Metals/CDISTEFANO

Prep WorkFlow: MetDigAqICP
Prep Method: EPA 3005A/3010A

Status: Prepped
Prep Date/Time: 6/3/24 11:52

Spiking Solutions

Name:	Custom LCS STD A Metals	Inventory ID	233429	Logbook Ref:	233429	Expires On:	07/31/2025	Lot #:	2400837-5
Name:	C Spike	Inventory ID	235403	Logbook Ref:	235403	Expires On:	11/18/2024		
Name:	Custom LCS STD B Metals	Inventory ID	235516	Logbook Ref:	235516	Expires On:	11/02/2024		

Preparation Materials

1:1 HCl Metals Grade	1:1 223283 (233826)	Hot Block Cups	50mL Lot L223102601 (235558)	Nitric Acid Metals Grade HNO3	233477 (233477)
Thermometer	461 (230831)				

Preparation Steps

Step: Digestion
Started: 6/3/24 11:52
Finished: 6/4/24 12:43
By: CDISTEFANO
Comments

46560 6/11
46658 6/11
46693(211) 6/11

Comments:

Reviewed By: Nicole Manson Date: 6/4/24

Chain of Custody

Relinquished By: CD Date: 6/4/24
Received By: R - AGI Date: 6/4/24

Extracts Examined
Yes No

Preparation Information Benchsheet

Prep Run#: 439599 **Prep WorkFlow:** MetDigAqICP **Status:** Prepped
Team: Metals/CDISTEFANO **Prep Method:** EPA 3005A/3010A **Prep Date/Time:** 6/6/24 10:26

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ2406391-01	MB		50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Mo T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Sr T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear		HB:11 Well:E4 Temp:92.4C
2	RQ2406391-02	LCS		50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Mo T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Sr T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear	0.5000 mL/233429; 0.5000 mL/235403; 0.5000 mL/235516	On HB:18:15 HB Shutoff:4:15 Pipet/Repipettor:M340,MA100,M23
3	RQ2406391-03	DLCS		50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Mo T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Sr T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear	0.5000 mL/235403; 0.5000 mL/235516; 0.5000 mL/233429	
4	R2404631-005	M13D-0624	.02	50mL	6010C/Na T	<2			50.00mL	Colorless-Clear		
5	R2404631-006	M13S-0624	.02	50mL	6010C/Na T	<2			50.00mL	Colorless-Clear		
6	R2404631-007	M11D-0624	.02	50mL	6010C/Na T	<2			50.00mL	Colorless-Clear		
7	R2404631-008	MWR6D-0624	.02	50mL	6010C/Na T	<2			50.00mL	Colorless-Clear		
8	R2404631-009	MWR9S-0624	.02	50mL	6010C/Na T	<2			50.00mL	Colorless-Clear		
9	R2404631-010	MWR9D-0624	.02	50mL	6010C/Na T	<2			50.00mL	Colorless-Clear		
10	R2404631-011	M11S-0624	.02	50mL	6010C/Na T	<2			50.00mL	Colorless-Clear		
11	R2404730-001	SCA-PAR0040-01	.05	50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear		Tier IV
12	R2404730-002	SCA-PAR0040-02	.05	50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear		
13	R2404730-003	SCA-PAR0040-03	.05	50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear		
14	R2404730-004	SCA-PAR0040-04	.05	50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear		
15	R2404730-006	SCA-PAR0040-06	.05	50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear		

Preparation Information Benchsheet

Prep Run#: 439599 **Prep WorkFlow:** MetDigAqICP **Status:** Prepped
Team: Metals/CDISTEFANO **Prep Method:** EPA 3005A/3010A **Prep Date/Time:** 6/6/24 10:26

16	R2404731-003	4413-060324-1200	.03	50mL	6010C/Ag T, Al T, As T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear		Tier IV
17	R2404758-001	Weekly Concentrate	.02	50mL	6010C/Al T, B T, Ba T, Ca T, Fe T, K T, Mg T, Mn T, Na T, Sr T	<2			50.00mL	Orange-Cloudy/Yellow-Cloudy		
18	R2404765-002	Hauler Sludge	.02	50mL	6010C/As T, Ba T, Cd T, Cr T, Cu T, K T, Mo T, Ni T, Pb T, Se T, Zn T	<2			50.00mL	Orange-Cloudy/Yellow-Cloudy		
19	R2404780-001	SCA-PAR0041-01	.05	50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear		Tier IV
20	R2404780-002	SCA-PAR0041-02	.05	50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear		
21	R2404780-003	SCA-PAR0041-03	.05	50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear		

Spiking Solutions

Name:	Custom LCS STD A Metals	Inventory ID	233429	Logbook Ref:	233429	Expires On:	07/31/2025	Lot #:	2400837-5
Name:	C Spike	Inventory ID	235403	Logbook Ref:	235403	Expires On:	11/18/2024		
Name:	Custom LCS STD B Metals	Inventory ID	235516	Logbook Ref:	235516	Expires On:	11/02/2024		

Preparation Materials

1:1 HCl Metals Grade	1:1 223283 (233826)	Hot Block Cups	50mL Lot L223102601 (235558)	Nitric Acid Metals Grade HNO3 233477 (233477)
Thermometer	461 (230831)			

Preparation Steps

Step: Digestion
Started: 6/6/24 10:26
Finished: 6/7/24 14:02
By: CDISTEFANO
Comments

4651 6/10
4730 (10) 6/21
4731 (8) 6/21
4758 6/11 * RUSH
4765 6/14
4780 (12) 6/21

Comments: _____

Reviewed By: Nicole Mansen Date: 6/10/24

Preparation Information Benchsheet

Prep Run#: 439599
Team: Metals/CDISTEFANO

Prep WorkFlow: MetDigAqICP
Prep Method: EPA 3005A/3010A

Status: Prepped
Prep Date/Time: 6/6/24 10:26

Chain of Custody

Relinquished By:		Date:	6/7/24	Extracts Examined
Received By:		Date:	6/7/24	Yes No

Preparation Information Benchsheet

Prep Run#: 439480
Team: Metals/CDISTEFANO

Prep WorkFlow: MetDigSICP
Prep Method: EPA 3050B

Status: Prepped
Prep Date/Time: 6/5/24 09:20

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ2406266-01	MB		0.5g	6010C/Ag T, As T, Ba T, Cd T, Cr T, Pb T, Se T, Si T				50.00mL	White-Coarse/Colorless-Clear		HB:12 Well:D3 Temp:91.9C/92.9C
2	RQ2406266-02	LCS		0.5g	6010C/Ag T, As T, Ba T, Cd T, Cr T, Pb T, Se T				50.00mL	White-Coarse/Colorless-Clear	0.5000 mL/235516; 0.5000 mL/233429; 0.5000 mL/235403	On HB:12:03-12:18,12:20-12:50,12:53-13:23,14:52-15:07,15:08-15:23 Pip:M340,MA100,M380,M38,M33,M23
3	R2404648-001	Taylor Rd - SB01	.02	0.5100g	6010C/Ag T, As T, Ba T, Cd T, Cr T, Pb T, Se T				50.00mL	Brown-Medium/Yellow-Clear		
4	RQ2406266-03	R2404648-001 MS	.02	0.5500g	6010C/Ag T, As T, Ba T, Cd T, Cr T, Pb T, Se T				50.00mL	Brown-Medium/Yellow-Clear	0.5000 mL/233429; 0.5000 mL/235516; 0.5000 mL/235403	
5	RQ2406266-04	R2404648-001 DMS	.02	0.5500g	6010C/Ag T, As T, Ba T, Cd T, Cr T, Pb T, Se T				50.00mL	Brown-Medium/Yellow-Clear	0.5000 mL/235403; 0.5000 mL/235516; 0.5000 mL/233429	
6	R2404648-002	Taylor Rd - SB02	.02	0.5g	6010C/Ag T, As T, Ba T, Cd T, Cr T, Pb T, Se T				50.00mL	Brown-Medium/Yellow-Clear		
7	R2404648-003	Taylor Rd - SB03	.02	0.5200g	6010C/Ag T, As T, Ba T, Cd T, Cr T, Pb T, Se T				50.00mL	Brown-Medium/Yellow-Clear		
8	R2404648-004	Waller Rd - SB01	.02	0.5500g	6010C/Ag T, As T, Ba T, Cd T, Cr T, Pb T, Se T				50.00mL	Brown-Medium/Yellow-Clear		
9	R2404648-005	Waller Rd - SB02	.02	0.5100g	6010C/Ag T, As T, Ba T, Cd T, Cr T, Pb T, Se T				50.00mL	Brown-Medium/Yellow-Clear		
10	R2404648-006	Waller Rd - SB03	.02	0.5500g	6010C/Ag T, As T, Ba T, Cd T, Cr T, Pb T, Se T				50.00mL	Brown-Medium/Yellow-Clear		
11	R2404648-007	Haneys Branch - SB01	.02	0.5500g	6010C/Ag T, As T, Ba T, Cd T, Cr T, Pb T, Se T				50.00mL	Brown-Medium/Yellow-Clear		
12	R2404648-008	Haneys Branch - SB02	.02	0.5g	6010C/Ag T, As T, Ba T, Cd T, Cr T, Pb T, Se T				50.00mL	Brown-Medium/Yellow-Clear		
13	R2404648-009	Haneys Branch - SB03	.02	0.5g	6010C/Ag T, As T, Ba T, Cd T, Cr T, Pb T, Se T				50.00mL	Brown-Medium/Yellow-Clear		
14	R2404648-010	Taylor Mill Rd - SB01	.02	0.5400g	6010C/Ag T, As T, Ba T, Cd T, Cr T, Pb T, Se T				50.00mL	Brown-Medium/Yellow-Clear		
15	R2404648-011	Taylor Mill Rd - SB02	.02	0.5500g	6010C/Ag T, As T, Ba T, Cd T, Cr T, Pb T, Se T				50.00mL	Brown-Medium/Yellow-Clear		
16	R2404648-012	Taylor Mill Rd - SB03	.02	0.5300g	6010C/Ag T, As T, Ba T, Cd T, Cr T, Pb T, Se T				50.00mL	Brown-Medium/Yellow-Clear		
17	R2404648-013	Taylor Mill Rd - SB04	.02	0.5300g	6010C/Ag T, As T, Ba T, Cd T, Cr T, Pb T, Se T				50.00mL	Brown-Medium/Yellow-Clear		
18	R2404648-014	Taylor Mill Rd - SB05	.02	0.5100g	6010C/Ag T, As T, Ba T, Cd T, Cr T, Pb T, Se T				50.00mL	Brown-Medium/Yellow-Clear		
19	R2404648-015	524 Telegraph - SB01	.02	0.5200g	6010C/Ag T, As T, Ba T, Cd T, Cr T, Pb T, Se T				50.00mL	Brown-Medium/Yellow-Clear		
20	R2404648-016	524 Telegraph - SB02	.02	0.5400g	6010C/Ag T, As T, Ba T, Cd T, Cr T, Pb T, Se T				50.00mL	Brown-Medium/Yellow-Clear		
21	R2404648-017	524 Telegraph - SB03	.02	0.5200g	6010C/Ag T, As T, Ba T, Cd T, Cr T, Pb T, Se T				50.00mL	Brown-Medium/Yellow-Clear		
22	R2404648-018	685 Telegraph - SB01	.02	0.5200g	6010C/Ag T, As T, Ba T, Cd T, Cr T, Pb T, Se T				50.00mL	Brown-Medium/Yellow-Clear		

Preparation Information Benchsheet

Prep Run#: 439480 **Prep WorkFlow:** MetDigSICP **Status:** Prepped
Team: Metals/CDISTEFANO **Prep Method:** EPA 3050B **Prep Date/Time:** 6/5/24 09:20

23	R2404648-019	685 Telegraph - SB02	.02	0.5200g	6010C/Ag T, As T, Ba T, Cd T, Cr T, Pb T, Se T				50.00mL	Brown-Medium/Yellow-Clear		
24	R2404648-020	685 Telegraph - SB03	.02	0.5200g	6010C/Ag T, As T, Ba T, Cd T, Cr T, Pb T, Se T				50.00mL	Brown-Medium/Yellow-Clear		

Spiking Solutions

Name:	Custom LCS STD A Metals	Inventory ID	233429	Logbook Ref:	233429	Expires On:	07/31/2025	Lot #: 2400837-5
Name:	C Spike	Inventory ID	235403	Logbook Ref:	235403	Expires On:	11/18/2024	
Name:	Custom LCS STD B Metals	Inventory ID	235516	Logbook Ref:	235516	Expires On:	11/02/2024	

Preparation Materials

1:1 HCl Metals Grade	1:1 223283 (233826)	1:1 Nitric Acid Metals Grade	1:1 233477 (234026)	Boiling Stones PTFE	226047 (226047)
Hot Block Cups	50mL Lot L223102601 (235558)	Hydrogen Peroxide 30% Reagent Grade H2O2	233709 (233709)	Nitric Acid Metals Grade HNO3	233477 (233477)
Thermometer	462 (230832)				

Preparation Steps

Step: Digestion
Started: 6/5/24 09:20
Finished: 6/5/24 16:32
By: CDISTEFANO
Comments

4648 1-20 6/11

50:15

Comments: _____

Reviewed By: Nicole Mansen Date: 6/10/24

Chain of Custody

Relinquished By: [signature] Date: 6/5/24

Received By: R. AOI Date: 6/5/24

Extracts Examined
Yes No

Preparation Information Benchsheet

Prep Run#: 439600 **Prep WorkFlow:** MetDigAqICP **Status:** Prepped
Team: Metals/CDISTEFANO **Prep Method:** EPA 3005A/3010A **Prep Date/Time:** 6/6/24 10:26

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ2406394-01	MB		50mL	6010C/Ag T, Al T, As D, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe D, Fe T, K T, Mg T, Mn D, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear		HB:11 Well:E4 Temp:92.4C
2	RQ2406394-02	LCS		50mL	6010C/Ag T, Al T, As D, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe D, Fe T, K T, Mg T, Mn D, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear	0.5000 mL/235403; 0.5000 mL/233429; 0.5000 mL/235516	On HB:18:15 HB Shutoff:4:15 Pipet/Repipettor:M340,MA100,M23
3	R2404674-001	OLN-RU009-F008	.08	50mL	6010C/As D, Fe D, Mn D	<2			50.00mL	Colorless-Clear		Tier IV
4	R2404674-002	OLN-FB001-B008	.08	50mL	6010C/As D, Fe D, Mn D	<2			50.00mL	Colorless-Clear		
5	R2404674-004	OLN-RU010-F008	.08	50mL	6010C/As D, Fe D, Mn D	<2			50.00mL	Colorless-Clear		
6	R2404674-005	OLN-RU015-F008	.08	50mL	6010C/As D, Fe D, Mn D	<2			50.00mL	Colorless-Clear		
7	R2404674-006	OLN-RU019-F008	.08	50mL	6010C/As D, Fe D, Mn D	<2			50.00mL	Colorless-Clear		
8	R2404674-007	OLN-RU020-F008	.08	50mL	6010C/As D, Fe D, Mn D	<2			50.00mL	Colorless-Clear		
9	R2404674-008	OLN-RU021-F008	.08	50mL	6010C/As D, Fe D, Mn D	<2			50.00mL	Colorless-Clear		
10	R2404674-009	OLN-RU027A-F008	.08	50mL	6010C/As D, Fe D, Mn D	<2			50.00mL	Colorless-Clear		
11	R2404674-010	OLN-RU028-F008	.08	50mL	6010C/As D, Fe D, Mn D	<2			50.00mL	Colorless-Clear		
12	R2404674-011	OLN-UA002-F008	.08	50mL	6010C/As D, Fe D, Mn D	<2			50.00mL	Colorless-Clear		
13	RQ2406394-03	R2404674-011 MS	.08	50mL	6010C/As D, Fe D, Mn D	<2			50.00mL	Colorless-Clear	0.5000 mL/233429; 0.5000 mL/235403; 0.5000 mL/235516	
14	RQ2406394-04	R2404674-011 DMS	.08	50mL	6010C/As D, Fe D, Mn D	<2			50.00mL	Colorless-Clear	0.5000 mL/233429; 0.5000 mL/235403; 0.5000 mL/235516	
15	R2404674-012	OLN-WW18M-F008	.08	50mL	6010C/As D, Fe D, Mn D	<2			50.00mL	Colorless-Clear		
16	R2404674-013	OLN-FD001-D008	.08	50mL	6010C/As D, Fe D, Mn D	<2			50.00mL	Colorless-Clear		
17	R2404674-014	OLN-FB002-B008	.08	50mL	6010C/As D, Fe D, Mn D	<2			50.00mL	Colorless-Clear		
18	R2404674-016	OLN-EB001-E008	.08	50mL	6010C/As D, Fe D, Mn D	<2			50.00mL	Colorless-Clear		
19	R2404694-001	SCA-PAR0039-01	.05	50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear		Tier IV
20	R2404694-002	SCA-PAR0039-02	.05	50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear		
21	R2404694-003	SCA-PAR0039-03	.05	50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear		

Preparation Information Benchsheet

Prep Run#: 439600 **Prep WorkFlow:** MetDigAqICP **Status:** Prepped
Team: Metals/CDISTEFANO **Prep Method:** EPA 3005A/3010A **Prep Date/Time:** 6/6/24 10:26

22	R2404694-004	SCA-PAR0039-04	.07	50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear		

Spiking Solutions

Name:	Custom LCS STD A Metals	Inventory ID	233429	Logbook Ref:	233429	Expires On:	07/31/2025	Lot #:	2400837-5
Name:	C Spike	Inventory ID	235403	Logbook Ref:	235403	Expires On:	11/18/2024		
Name:	Custom LCS STD B Metals	Inventory ID	235516	Logbook Ref:	235516	Expires On:	11/02/2024		

Preparation Materials

1:1 HCl Metals Grade	1:1 223283 (233826)	Hot Block Cups	50mL Lot L223102601 (235558)	Nitric Acid Metals Grade HNO3 233477 (233477)
Thermometer	461 (230831)			

Preparation Steps

Step: Digestion
Started: 6/6/24 10:26
Finished: 6/7/24 14:09
By: CDISTEFANO
Comments

4674 (N) 6/17
4694 (N) 6/17

Comments: _____

Reviewed By: Nicole Mansen Date: 6/10/24

Chain of Custody

Relinquished By: _____ Date: 6/7/24

Received By: _____ Date: 6/7/24

Extracts Examined
Yes No

Preparation Information Benchsheet

Prep Run#: 439601
Team: Metals/CDISTEFANO

Prep WorkFlow: MetDigAqICP
Prep Method: EPA 3005A/3010A

Status: Prepped
Prep Date/Time: 6/6/24 10:27

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ2406395-01	MB		50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear		HB:1 Well:E4 Temp:93.2C
2	RQ2406395-02	LCS		50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear	0.5000 mL/233429; 0.5000 mL/235516; 0.5000 mL/235403	On HB:18:15 HB Shutoff:4:15 Pipet/Repipettor:M340,MA100,M23
3	R2404782-001	MW-8A	.04	50mL	6010C/As T, Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Clear		
4	R2404782-002	MW-8C	.04	50mL	6010C/As T, Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Clear		
5	RQ2406395-03	R2404782-002 MS	.04	50mL	6010C/As T, Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Clear	0.5000 mL/233429; 0.5000 mL/235516; 0.5000 mL/235403	
6	RQ2406395-04	R2404782-002 DMS	.04	50mL	6010C/As T, Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Clear	0.5000 mL/235516; 0.5000 mL/233429; 0.5000 mL/235403	
7	R2404782-003	MW-15C	.04	50mL	6010C/As T, Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Clear		
8	R2404782-004	DUPE Y	.04	50mL	6010C/As T, Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Clear		
9	R2404782-005	MW-15AA	.04	50mL	6010C/As T, Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Clear		
10	R2404782-006	MW-9C	.04	50mL	6010C/As T, Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Clear		
11	R2404782-007	MW-9AA	.04	50mL	6010C/As T, Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Clear		
12	R2404782-008	MW-31S	.04	50mL	6010C/As T, Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Cloudy/Colorless-Clear		
13	R2404782-009	MW-31I	.04	50mL	6010C/As T, Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Cloudy/Colorless-Clear		
14	R2404782-010	MW-32S	.04	50mL	6010C/As T, Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Cloudy/Colorless-Clear		
15	R2404782-011	MW-32I	.04	50mL	6010C/As T, Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Clear		
16	R2404782-012	MW-32D	.04	50mL	6010C/As T, Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Clear		
17	R2404782-013	MW-31D	.04	50mL	6010C/As T, Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Clear		
18	R2404782-014	MW-33I	.04	50mL	6010C/As T, Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Clear		
19	R2404782-015	MW-33D	.04	50mL	6010C/As T, Ca T, Cd T, Fe T, K T, Mg T, Mn T, Na T, Pb T	<2			50.00mL	Colorless-Clear		
20	R2404850-001	SCA-PAR0042-01	.05	50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear		Tier IV

Preparation Information Benchsheet

Prep Run#: 439601 **Prep WorkFlow:** MetDigAqICP **Status:** Prepped
Team: Metals/CDISTEFANO **Prep Method:** EPA 3005A/3010A **Prep Date/Time:** 6/6/24 10:27

21	R2404850-002	SCA-PAR0042-02	.05	50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear		
22	R2404850-005	SCA-PAR0042-05	.05	50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear		
23	R2404850-006	SCA-PAR0042-06	.05	50mL	6010C/Ag T, Al T, As T, B T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Sn T, Tl T, V T, Zn T	<2			50.00mL	Colorless-Clear		

Spiking Solutions

Name:	Custom LCS STD A Metals	Inventory ID	233429	Logbook Ref:	233429	Expires On:	07/31/2025	Lot #:	2400837-5
Name:	C Spike	Inventory ID	235403	Logbook Ref:	235403	Expires On:	11/18/2024		
Name:	Custom LCS STD B Metals	Inventory ID	235516	Logbook Ref:	235516	Expires On:	11/02/2024		

Preparation Materials

1:1 HCl Metals Grade	1:1 223283 (233826)	Hot Block Cups	50mL Lot L223102601 (235558)	Nitric Acid Metals Grade HNO3 233477 (233477)
Thermometer	460 (230830)			

Preparation Steps

Step: Digestion
Started: 6/6/24 10:27
Finished: 6/7/24 14:16
By: CDISTEFANO
Comments

4782 6/21
4850 6/21

Comments: _____

Reviewed By: Nicole Mansen Date: 6/10/24

Chain of Custody

Relinquished By: CD Date: 6/7/24
Received By: R-A01 Date: 6/7/24

Extracts Examined
Yes No

Preparation Information Benchsheet

Prep Run#: 439481
Team: Metals/CDISTEFANO

Prep WorkFlow: MetDigSICP
Prep Method: EPA 3050B

Status: Prepped
Prep Date/Time: 6/5/24 09:20

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ2406268-01	MB		0.5g	6010C/Ag T, Al T, As T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Mo T, Na T, Ni T, Pb T, Sb T, Se T, Tl T, V T, Zn T				50.00mL	White-Coarse/Colorless-Clear		HB:12 Well:D3 Temp:91.9C/92.9C
2	RQ2406268-05	MB		0.5000g	6010C/Ag T, As T, Ba T, Cd T, Cr T, Cu T, Pb T, Se T				50.00mL	White-Coarse/Colorless-Clear		Non-Aq Matrix
3	RQ2406268-02	LCS		0.5g	6010C/Ag T, Al T, As T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Mo T, Na T, Ni T, Pb T, Sb T, Se T, Tl T, V T, Zn T				50.00mL	White-Coarse/Colorless-Clear	0.5000 mL/235516; 0.5000 mL/235403; 0.5000 mL/233429	On HB:12:03-12:18,12:20-12:50,12:53-13:23,14:52-15:07,15:08-15:23 Pip:M340,MA100,M380,M38,M33,M23
4	RQ2406268-06	LCS		0.5000g	6010C/Ag T, As T, Ba T, Cd T, Cr T, Cu T, Pb T, Se T				50.00mL	White-Coarse/Colorless-Clear	0.5000 mL/235403; 0.5000 mL/233429; 0.5000 mL/235516	Non-Aq Matrix
5	R2404703-001	Bulk Waste Solvents	.03	0.5300g	6010C/Cu T, Pb T				50.00mL	Red-Liquid/Colorless-Clear		
6	R2404704-001	Bulk Waste Solvents	.01	0.5200g	6010C/Ag T, As T, Ba T, Cd T, Cr T, Pb T, Se T				50.00mL	Red-Liquid/Colorless-Clear		
7	R2404705-001	PGMEA Waste	.02	0.5500g	6010C/Cu T, Pb T				50.00mL	Red-Liquid/Colorless-Clear		
8	R2404731-001	OU12115B-060324-1100	.01	0.5400g	6010C/Ag T, Al T, As T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Tl T, V T, Zn T				50.00mL	Grey-Medium/Yellow-Clear		Tier IV
9	RQ2406268-03	R2404731-001 MS	.01	0.5400g	6010C/Ag T, Al T, As T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Tl T, V T, Zn T				50.00mL	Grey-Medium/Yellow-Clear	0.5000 mL/235516; 0.5000 mL/233429; 0.5000 mL/235403	
10	RQ2406268-04	R2404731-001 DMS	.01	0.5200g	6010C/Ag T, Al T, As T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Tl T, V T, Zn T				50.00mL	Grey-Medium/Yellow-Clear	0.5000 mL/233429; 0.5000 mL/235403; 0.5000 mL/235516	
11	R2404731-002	4413-060324-0001	.01	0.5200g	6010C/Ag T, Al T, As T, Ba T, Be T, Ca T, Cd T, Co T, Cr T, Cu T, Fe T, K T, Mg T, Mn T, Na T, Ni T, Pb T, Sb T, Se T, Tl T, V T, Zn T				50.00mL	Grey-Medium/Yellow-Clear		
12	R2404750-001	End of Belt Press Sludge Composite	.02	0.5400g	6010C/As T, Cd T, Cr T, Cu T, K T, Mo T, Ni T, Pb T, Se T, Zn T				50.00mL	Brown-Medium/Yellow-Clear		
13	R2404750-002	Finished Compost Pile	.01	0.5500g	6010C/As T, Cd T, Cr T, Cu T, K T, Mo T, Ni T, Pb T, Se T, Zn T				50.00mL	Brown-Medium/Yellow-Clear		
14	R2404765-001	Filter Cake	.02	0.5400g	6010C/As T, Ba T, Cd T, Cr T, Cu T, K T, Mo T, Ni T, Pb T, Se T, Zn T				50.00mL	Brown-Medium/Yellow-Clear		

Spiking Solutions

Name: Custom LCS STD A Metals Inventory ID 233429 Logbook Ref: 233429 Expires On: 07/31/2025 Lot #: 2400837-5

Preparation Information Benchsheet

Prep Run#: 439481
Team: Metals/CDISTEFANO
Prep WorkFlow: MetDigSICP
Prep Method:
Status: Prepped
Prep Date/Time: 6/5/24 09:20

Name:	C Spike	Inventory ID	235403	Logbook Ref:	235403	Expires On:	11/18/2024
Name:	Custom LCS STD B Metals	Inventory ID	235516	Logbook Ref:	235516	Expires On:	11/02/2024

Preparation Materials

1:1 HCl Metals Grade	1:1 223283 (233826)	1:1 Nitric Acid Metals Grade	1:1 233477 (234026)	Boiling Stones PTFE	226047 (226047)
Hot Block Cups	50mL Lot L223102601 (235558)	Hydrogen Peroxide 30% Reagent Grade H2O2	233709 (233709)	Nitric Acid Metals Grade HNO3	233477 (233477)
Thermometer	462 (230832)				

Preparation Steps

Step: Digestion
Started: 6/5/24 09:20
Finished: 6/5/24 16:34
By: CDISTEFANO
Comments

4703
4704
4705
] Non-Aq 6/14

4731 (IV) 6/21
4750 6/14
4765 6/14 Soils

Comments:

Reviewed By: Nicole Maassen Date: 6/10/24

Chain of Custody

Relinquished By: CD Date: 6/5/24
Received By: R. Aoy Date: 6/5/24

Extracts Examined
Yes No

Preparation Information Benchsheet

Prep Run#: 439635
Team: Metals/CDISTEFANO

Prep WorkFlow: MetDigLP
Prep Method: EPA 3005A/3010A

Status: Prepped
Prep Date/Time: 6/6/24 13:24

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ2406375-01	MB	.02	50mL	6010C/Ag TCLP, As TCLP, Ba TCLP, Cd TCLP, Cr TCLP, Pb TCLP, Se TCLP	<2			50.00mL	Colorless-Clear		
2	RQ2406399-01	MB		50mL	6010C/Ag TCLP, As TCLP, Ba TCLP, Cd TCLP, Cr TCLP, Pb TCLP, Se TCLP	<2			50.00mL	Colorless-Clear		HB:1 Well:E4 Temp:93.2C
3	RQ2406399-02	LCS		50mL	6010C/Ag TCLP, As TCLP, Ba TCLP, Cd TCLP, Cr TCLP, Pb TCLP, Se TCLP	<2			50.00mL	Colorless-Clear	1.0000 mL/235099	On HB:18:15 HB Shutoff:4:15 Pipet/Repipettor:M340,MA100,M28
4	R2404768-001	Permeate at Plant	.12	50mL	6010C/Ag TCLP, As TCLP, Ba TCLP, Cd TCLP, Cr TCLP, Pb TCLP, Se TCLP	<2			50.00mL	Colorless-Clear		
5	RQ2406399-03	R2404768-001 MS	.12	50mL	6010C/Ag TCLP, As TCLP, Ba TCLP, Cd TCLP, Cr TCLP, Pb TCLP, Se TCLP	<2			50.00mL	Colorless-Clear	1.0000 mL/235099	
6	RQ2406399-04	R2404768-001 DMS	.12	50mL	6010C/Ag TCLP, As TCLP, Ba TCLP, Cd TCLP, Cr TCLP, Pb TCLP, Se TCLP	<2			50.00mL	Colorless-Clear	1.0000 mL/235099	

Spiking Solutions

Name: TCLP Spike Inventory ID 235099 Logbook Ref: 235099 Expires On: 01/14/2025

Preparation Materials

1:1 HCl Metals Grade	1:1 223283 (233826)	Hot Block Cups	50mL Lot L223102601 (235558)	Hydrochloric Acid (HCl) Metals Grade	233283 (233283)
Nitric Acid Metals Grade HNO3	233477 (233477)	Thermometer	460 (230830)		

Preparation Steps

Step: Digestion
Started: 6/6/24 13:24
Finished: 6/7/24 14:17
By: CDISTEFANO
Comments

Comments: _____

Reviewed By: Nicole Mansen Date: 6/10/24

Preparation Information Benchsheet

Prep Run#: 439635
Team: Metals/CDISTEFANO

Prep WorkFlow: MetDigLP
Prep Method: EPA 3005A/3010A

Status: Prepped
Prep Date/Time: 6/6/24 13:24

TCP
4768 6/14

Chain of Custody

Relinquished By:	CD	Date:	6/7/24	Extracts Examined
Received By:	R. Aoi	Date:	6/7/24	Yes No

Water

Preparation Information Benchsheet

Prep Run#: 439589
Team: Semivoa GC/KPROCOPIO

Prep WorkFlow: TCLP
Prep Method:

Status: Prepped
Prep Date/Time: 6/5/24 15:52

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ2406375-01	MB		500.00	EPA 1311/TCLP							
2	R2404768-001	Permeate at Plant	.06	500.00	EPA 1311/TCLP							

Preparation Steps

Step: Leach
Started: 6/5/24 15:52
Finished: 6/6/24 09:24
By: KPROCOPIO
Comments

Comments: _____

Reviewed By: _____ Date: _____

Chain of Custody

Relinquished By: _____ Date: _____

Received By: _____ Date: _____

Extracts Examined
Yes No

Water : 439589

SOP: MET-TCLP

Non-VOA TCLP Extraction - EPA 1311

Analyst: VP + MW

Rotator ID				
Date started	6/6/24			
Time started				
RPM (daily when full)				
Within 28-32rpm?				
Date ended				
Time ended				

Comments: _____

Room Temp Therm ID: _____ °C

Min _____

Max _____

Within Limits (21-25°C)? _____

Comments: _____

pH Meter: PH-09

Balance: _____

HNO3 preservative: _____

Fluid #1 concentrate: _____ pH 4.93±0.05

Fluid #2 concentrate: _____ pH 2.88±0.05

Filter Lot: 233256

Filter Date: 6/6/24

Diluted fluid concentrates prepared Daily

Fluid Determination Hotplate:

Thermometer ID _____

Temp °C _____

1N HCl lot (if used): _____

Order #	Extraction Vessel ID	Rotator ID	Tests Needed	Will yield Liquid under Pressure?	Part size Reduced?*	Fluid determination** A. 5g+96.5mLDI 5min g	Start	End	pH	B.IfpH >5, add 3.5mL 1N HCl 10m@48-52C Start	End	pH	Sample Amt (g)	Fluid # used	Fluid vol Used (ml)	Filtration Time	pH	If separated Filtrate Compatible?	Recombination amount filtrate	amount leachate	Comments
R0021063750			MET/SVOA													10:55	8.79				
R0021047685-001																11:04	7.94				

Metals extracts matrix spiked prior to preservation? _____

Comments:

Percent Solids Determinination, if needed

Order #					
Ws: Weight of sample					
Wc: Tare Wt of container					
Wcs: Final Wt of container					
%solids = 100 x [Ws-(Wcs-Wc)]/Ws					

*Reduce until will pass 9.5mm sieve

**If pH in A or B is <5.0 use fluid 1, if >5.0 use fluid 2

Volume of ext fluid: 20(%sol)(sample wt)/100

ICP ICV/CCV Standard

Standard is prepared daily

	Metal	ALS Lot #	Conc. (ppm)	Vol. (mls)	Final Vol. (mls)	Final Conc. (ppm)
Cal Std 1	Ca	233888	5000	1.00	200	25.00
	Mg		5000			25.00
	K		5000			25.00
	Na		5000			25.00
Cal Std 2	Ag	233889	100	1.00		0.50
	Cr		100			0.50
	Mn		150			0.75
	Ni		400			2.00
	Zn		200			1.00
Cal Std 3	Al	233056	2000	1.00		10.00
	Ba		2000			10.00
	Be		50			0.25
	Co		500			2.50
	Cu		250			1.25
	Fe		1000			5.00
	V		500			2.50
Cal Std 4	As	232796	100	2.00		1.00
	Cd		50			0.50
	Pb		50			0.50
	Se		50			0.50
	Tl		100			1.00
	Sb	232797	1000	1.00		5.00
	Sn	232726	1000	1.00		5.00
	B	231910	1000	0.50		2.50
	Mo	230303	1000	0.50		2.50
	Ti	233840	1000	0.50		2.50
	Sr	230304	1000	0.50		2.50
	Si	234060	1000	2.00		10.00

Matrix	Analyst/ Date	Letter ID	HNO3 Lot #	HCl Lot #	Expiration Date	Pipet ID
10% HNO3 5% HCl	MFM 5/23/24	A	233477	233283	5/24/24	M36
2% HNO3 5% HCl	NM 5/24/24	B	233477	233283	5/25/24	M40
10% HNO3 5% HCl	NM 5/28/24	C	233477	233283	5/29/24	M40
10% HNO3 5% HCl	NM 5/29/24	D	233477	233283	5/30/24	M40
2% HNO3 5% HCl	NM 5/30/24	E	233477	233283	5/31/24	M36
10% HNO3 5% HCl	NM 5/31/24	F	233477	233283	6/1/24	M40
10% HNO3 5% HCl	NM 6/3/24	G	233477	233283	6/4/24	M40
10% HNO3 5% HCl	NM 6/4/24	H	233477	233283	6/5/24	M40
10% HNO3 5% HCl	NM 6/5/24	I	233477	233283	6/6/24	M40
2% HNO3 5% HCl	NM 6/5/24	J	233477	233283	6/6/24	M40
2% HNO3 5% HCl	MFM 6/6/24	K	233477	233283	6/7/24	M36
10% HNO3 5% HCl	NM 6/10/24	L	235024	233283	6/11/24	M40
2% HNO3 5% HCl	NM 6/10/24	M	235024	233283	6/11/24	M40
		N				
		O				
		P				
		Q				
		R				
		S				
		T				
		U				
		V				
		W				
		X				
		Y				
		Z				
		AA				
		BB				
		CC				
		DD				

ICP Calibration Standard #1

Standard is prepared every 6 months or as necessary

Metal	ALS Lot #	Conc. (ppm)	Vol (mls)	Final Vol (mls)	Final Conc. (ppm)
Al	221983	10000 ~~0.01~~	1000	0.100	
As	230302	1000	0.01	0.10mL MFM 3/28/24	0.010
Ba	233717	1000	0.02		0.020
Be	230311 (1/10)	100	0.03		0.003
Cd	227603 (1/10)	100	0.05		0.005
Cu	230454	1000	0.01		0.010
Mn	233718	1000	0.01		0.010
Mo	233720	1000	0.025		0.025
Pb	227185 (1/10)	100	0.05		0.050
Sb	230313	1000	0.06		0.060
Tl	233695	1000	0.01		0.010

Matrix	Analyst/ Date	Letter ID	HNO3 Lot #	HCl Lot #	Expiration Date	Pipet ID
10% HNO3 5% HCl	MFM 3/27/24	A	233477	233283	7/31/24	M37
		B				
		C				
		D				
		E				
		F				
		G				
		H				
		I				
		J				
		K				
		L				
		M				
		N				
		O				
		P				
		Q				
		R				
		S				
		T				
		U				
		V				
		W				
		X				
		Y				
		Z				

ICP Calibration Standard 6

Standard is prepared every 6 months or as necessary

	Metal	ALS Lot #	Conc. (ppm)	Vol. (mls)	Final Vol. (mls)	Final Conc. (ppm)
Cal Std 2	Ag	230301	100	5.00	500	1.00
	Cr		100			1.00
	Mn		150			1.50
	Ni		400			4.00
	Zn		200			2.00
Cal Std 3	Al	233055	2000	5.00		20.00
	Ba		2000			20.00
	Be		50			0.50
	Co		500			5.00
	Cu		250			2.50
	Fe		1000			10.00
	V		500			5.00
Cal Std 4	As	231798	100	10.00		2.00
	Cd		50			1.00
	Pb		50			1.00
	Se		50			1.00
	Tl		100			2.00
	Ca	230305	10000	2.50		50.00
	Mg	230307	10000	2.50		50.00
	K	233452	10000	2.50		50.00
	Na	230308	10000	2.50		50.00
	Sb	230313	1000	5.00		10.00
	Sn	234660	1000	5.00		10.00
	B	233693	1000	5.00		10.00
	Mo	233720	1000	2.50		5.00
	Ti	230316	1000	2.50		5.00
	Sr	230310	1000	2.50		5.00
	Si	234659	~~1000~~ 10000	~~25.00~~ 2.50		50.00

Matrix	Analyst/ Date	Letter ID	HNO3 Lot #	HCl Lot #	Expiration Date	Pipet ID
16% HNO3 5% HCl	NM 5/13/24	A	233477	233283	11/2/24	M38
2% HNO3 5% HCl	NM 5/28/24	B	233477	233283	11/2/24	M38
		C				
		D				
		E				
		F				
		G				
		H				
		I				
		J				
		K				
		L				
		M				
		N				
		O				
		P				
		Q				
		R				
		S				
		T				
		U				
		V				
		W				
		X				
		Y				
		Z				

ICP HLCCV2 (Standard is prepared every 6 months or as necessary)

	Metal	ALS Lot #	Conc. (ppm)	Vol. (mls)	Final Vol. (mls)	Final Conc. (ppm)
Cal Std 2	AG	230301	100	~~2.00~~	~~100~~	2.00
	CR		100	4.00	200	Below
	MN		150			Below
	NI		400			8.00
	ZN		200			4.00
Cal Std 3	AL	233055	2000	~~2.00~~		Below
	BA		2000	4.00		40.0
	BE		50			1.00
	CO, V		500			10.0
	CU		250			5.00
	FE		1000			Below
Cal Std 4	AS, TL	231798	100	~~4.00~~		4.00
	CD, SE		50	8.00		2.00
	PB		50			Below
Single Metals	B	233693	1000	~~1.00~~	2.00	10.0
	MO	233~~00~~20	1000	~~1.00~~	2.00	10.0
	TI	230316	1000	~~1.00~~	2.00	10.0
	SR	230310	1000	~~1.00~~	2.00	10.0
	CA	230305	10000	~~2.50~~	5.00	250
	MG	230307	10000	~~5.00~~	10.00	500
	NA	230308	10000	~~2.00~~	4.00	~~150~~ 200
	CR	230312	1000	~~0.800~~	1.60	10.0
	FE	230306	10000	~~0.300~~	0.600	50
	AL	233887	10000	~~4.60~~	9.20	500
	MN	233718	1000	~~0.700~~	1.40	10.00
	PB	233694	1000	~~0.800~~	1.60	10.0
	K	233452	10000	~~1.50~~	3.00	150

Analyst/ Date	Letter ID	Nitric Acid Lot # / Concentration	Hydrochloric Acid Lot # / Concentration	Expiration Date 10/23/24	Pipet ID
MFM 4/23/24	A	2332477 2%	233283 5%	~~5/23/24~~	M36 /M38
MFM 4/23/24	B	2334477 10%	233283 5%	~~5/23/24~~	M36 /M38
	C				
	D				
	E				
	F				
	G				
	H				
	I				
	J				
	K				
	L				
	M				
	N				
	O				
	P				
	Q				
	R				
	S				
	T				
	U				
	V				
	W				
	X				
	Y				
	Z				
	AA				

ICP HLCCV3 (Standard is prepared every 6 months or as necessary)

Metal	ALS Lot #	Conc. (ppm)	Vol. (mls)	Final Vol. (mls)	Final Conc. (ppm)	Matrix	Analyst / Date	Letter ID	Nitric Acid Lot #	HCL Lot #	Expiration Date	Pipet ID
CA	230305	10,000	~~2.000~~ 4.000	~~100~~ 200	200.00	2% HNO_3 5% HNO_3	MFM 4/24/24	A	233477	233283	10/24/24	M36 M38
CU	230454	1000	~~0.400~~ 0.800		4.00	10% HNO_3 5% HCl	NM 5/16/24	B	233477	233283	11/2/24	M40 M38
FE	230306	10,000	~~0.400~~ 0.800		40.00			C				
K	233452	10,000	~~1.000~~ 2.000		100.00			D				
TL	233695	1000	~~0.300~~ 0.600		3.00			E				
NA	230308	10,000	~~1.500~~ 3.000		150.00			F				
MG	230307	10,000	~~4.000~~ 8.000		400.00			G				
								H				
								I				
								J				
								K				
								L				
								M				
								N				
								O				
								P				
								Q				
								R				
								S				
								T				
								U				

ICP MRL (Standard is prepared every 6 months or as needed)

	Metal	ALS Lot #	Conc. (ppm)	Vol. (mls)	Final Vol. (mls)	Final Conc. (ppm)
Cal Std 1	CA	233425	5000	0.200	1000	1.00
	MG		5000			1.00
	K		5000			1.00
	NA		5000			1.00
Cal Std 2	AG	230301	100	0.100		0.0100
	CR		100			0.0100
	MN		150			0.0150
	NI		400			0.0400
	ZN		200			0.0200
Cal Std 3	AL	233055	2000	0.100		0.200
	BA		2000			0.200
	BE		50			0.0050
	CO		500			0.0500
	CU		250			0.0250
	FE		1000			0.100
	V		500			0.0500
Cal Std 4	AS	231798	100	0.200		0.0200
	CD		50			0.0100
	PB		50			0.0100
	SE		50			0.0100
	TL		100			0.0200
Single Metals	B	233693	1000	0.200		0.200
	MO	233720	1000	0.025		0.0250
	SN	231915	1000	0.500		0.500
	TI	230316	1000	0.050		0.0500
	SB	230313	1000	0.060		0.0600
	SR	230310	1000	0.100		0.100
	P	—	1000	0.100		0.100

Analyst/ Date	Letter ID	Nitric Acid Lot# / Concentration	Hydrochloric Acid Lot # / Concentration	Expiration Date	Pipet ID
MFM 3/27/24	A	233477 10%	233283 5%	9/27/24	M36 M37
MFM 3/27/24	B	233477 2%	233283 5%	9/27/24	M37 M40
NM 5/16/24	C	233477 10%	233283 5%	11/2/24	M37 M40
	D				
	E				
	F				
	G				
	H				
	I				
	J				
	K				
	L				
	M				
	N				
	O				
	P				
	Q				
	R				
	S				
	T				
	U				
	V				
	W				
	X				
	Y				
	Z				
	AA				
	BB				

ICP ICSA STANDARD (Standard is prepared every 6 months or as necessary)

Element	ALS Lot #	Conc. (ppm)	Vol. (mls)	Final Vol. (mls)	Final Conc. (ppm)
Int. A Sol'n	233727	Multi	50	1000	Multi
AL		5000			250
CA		5000			250
FE		2000			100
MG		5000			250

Analyst/ Date	ID Letter	Nitric Acid Lot # / Concentration	Hydrochloric Acid Lot # / Concentration	Expiration Date	Pipet ID
MFM 3/8/24	A	233283 ↔	~~244~~ 233477	9/8/24	dispo
MFM 4/19/24	B	233477 10%	233283 5%	10/19/24	dispo
	C				
	D				
	E				
	F				
	G				
	H				
	I				
	J				
	K				
	L				
	M				
	N				
	O				
	P				
	Q				
	R				
	S				
	T				
	U				
	V				

ICP ICSAB STANDARD (Standard is prepared every 6 months or as necessary)

Element	ALS Lot #	Conc. (ppm)	Vol. (mls)	Final Vol. (mls)	Final Conc. (ppm)
Int. A Sol'n	233727	Multi	~~25~~ 50	~~500~~ 1000	Multi
AL		5000			250
CA		5000			250
FE		2000			100
MG		5000			250
Int. B Sol'n	233912	Multi	~~5~~ 10		Multi
AG		20			0.200
BA		50			0.500
BE		50			0.500
CD		100			1.00
CO		50			0.500
CR		50			0.500
CU		50			0.500
MN		50			0.500
NI		100			1.00
PB		5			0.0500
V		50			0.500
ZN		100			1.00
AS		10			0.100
SB		60			0.600
SE		5			0.0500
TL		10			0.100

Analyst/ Date	ID Letter	Nitric Acid Lot # / Concentration	Hydrochloric Acid Lot # / Concentration	Expiration Date	Pipet ID
MFM 3/1/24	A	233477 10%	233283 5%	8/30/24	dispo
MFM 3/8/24	B	233477 2%	233283 5%	9/8/24	dispo
NM 5/6/24	C	233477 10%	233283 5%	11/6/24	dispo
	D				
	E				
	F				
	G				
	H				
	I				
	J				
	K				
	L				
	M				
	N				
	O				
	P				
	Q				
	R				
	S				
	T				
	U				
	V				

ICP Internal Standard Solution

Standard is prepared every 6 months or as necessary

(Added In-line)

Metal	ALS Lot #	Conc. (ppm)	Vol (mls)	Final Vol (mls)	Final Conc. (ppm)
Y	226709	10000	2.00	2000	10.0
Cs	226847	10000	2		10.0

Matrix	Analyst/ Date	Letter ID	HNO3 Lot #	HCl Lot #	Expiration Date	Pipet ID
2% HNO3/ 5% HCl	MFM 3/27/24	**A**	233477	233283	6/30/24	M36
	MFM 3/27/24	**B**	233477	233283	6/30/24	M36
	MFM 4/15/24	**C**	233477	233283	6/30/24	M36
	MFM 4/15/24	**D**	233477	233283	6/30/24	M36
	MFM 4/26/24	**E**	233477	233283	6/30/24	M40
	MFM 4/26/24	**F**	233477	233283	6/30/24	M40
	MFM 5/8/24	**G**	233477	233283	6/30/24	M40
	MFM 5/8/24	**H**	233477	233283	6/30/24	M40
	NM 5/28/24	**I**	233477	233283	6/30/24	M40
	NM 5/28/24	**J**	233477	233283	6/30/24	M40
		K				
		L				
		M				
		N				
		O				
		P				
		Q				
		R				
		S				
		T				
		U				
		V				
		W				
		X				
		Y				
		Z				

Frequency:

Pipettes: 3 trials for both bias and precision DOD Projects - Daily before use at each volume of use, or if more than 3 volumes of use, a high, medium, and low. Non-DOD: Quarterly at high, medium, and low.	**Calculations:** %Recovery = Mean/Nominal Volume*100 %RSD = Stdev/Volume*100
Repeaters, Dispensers, and Repipettors: Quarterly - 3 trials for both bias and precision	**Limits:** % Rec: 98-102 for Pipettes and others for dilutions % Recovery: 90-110 (Repeaters, Dispensers, Repipettors not for dilutions) %RSD: ≤1 (Pipets); ≤3 (Repeaters, Dispensers, and Repipettors)

Use a balance and DI for all except Dispensers and Repipettors which contain reagents. For these, dispense into a To Contain Class A grad cylinder and document the Max Volume of the cylinder instead of the Balance ID. Record to 1/10 the graduation of the cylinder.

Date	Init.	Equipment ID	Volume (mL)	Trial #1 (g/mL)	Trial #2 (g/mL)	Trial #3 (g/mL)	Bias %Recovery	Pass/ Fail	Precision %RSD	Pass/ Fail	Recal? Y/N	Balance ID or Class A (TC)	Comments/ Corrective Action
6/4/24	MFM	M36	0.500	0.5019	0.5015	0.5006	100.26̄	P	0.133	P	N	R-19	DOD pipet check
↓	↓	↓	0.600	0.6041	0.6043	0.6009	100.52	P	0.318	P	N	↓	↓
↓	↓	↓	1.000	0.9981	0.9977	0.9969	99.76	P	0.061	P	N	↓	↓
↓	↓	M37	0.0200	0.0199	0.0201	0.0202	100.33	P	0.764	P	N	↓	↓
6/5/24	NM	M37	0.0600	0.0602	0.0603	0.0602	100.39	P	0.096	P	N	R-19	DOD Pipet Check
↓	↓	M40	0.5000	0.5006	0.5020	~~0.5018~~ NM 6/5/24	100.29	P	0.151	P	N	↓	↓
↓	↓	↓	1.0000	0.9979	0.9978	0.9968	99.75	P	0.061	P	N	↓	↓
6/8/24	MFM	M37	0.0100	0.0108	0.0103	0.0103	104.6̄	F	2.89	F	Y	R-19	recal
↓	↓	M40	0.250	0.2530	0.2523	0.2514	100.89	P	0.321	P	N	↓	DOD pipet check
↓	↓	↓	0.500	0.5028	0.5000	0.4979	100.05	P	0.492	P	N	↓	↓
↓	↓	↓	1.000	0.9953	0.9945	0.9935	99.44	P	0.090	P	N	↓	↓
↓	↓	M37 re	0.0100	0.0101	0.0100	0.0101	100.6̄	P	0.577	P	N	↓	↓
6/10/24	NM	M37	0.0600	0.0599	0.0598	0.0597	99.67	P	0.167	P	N	R-19	DOD Pipetcheck
↓	↓	M40	0.5000	0.4981	0.4988	0.4987	99.71	P	0.076	P	N	↓	↓
↓	↓	↓	1.0000	0.9957	0.9955	0.9951	99.54	P	0.031	P	N	↓	↓
6/11/24	MFM	M37	0.0500	0.0503	0.0500	0.0501	100.26̄	P	0.3	P	N	R-18	DOD pipet check
		↓	0.0200	0.0201	0.0201	0.0201	100.5	P	0	P	N	↓	↓
		M40	0.500	0.4997	0.5000	0.4987	99.89	P	0.136	P	N	↓	↓
		↓	1.000	0.9999	1.0000	0.9959	99.86	P	0.234	P	N	↓	↓

Sample Dilutions 6010C/6010D/200.7

Final Volume: 6-8mL

Analyst: NM
strument: ICP7

Date 6/10/24
Analysis 6010C

Common Dilutions

Dilution	Matrix of Diluent	1st Dilution			2nd Dilution			3rd Dilution			4th Dilution			5th Dilution		
		mLs of Sample	mLs of Diluent	Dilution Factor	mLs of Sample	mLs of Diluent	Dilution Factor	mLs of Sample	mLs of Diluent	Dilution Factor	mLs of Sample	mLs of Diluent	Dilution Factor	mLs of Sample	mLs of Diluent	Dilution Factor
1/2	2%HNO3/ 5%HCL	3	3	**1/2**												
1/3	2%HNO3/ 5%HCL	2	4	**1/3**												
1/4	2%HNO3/ 5%HCL	2	6	**1/4**												
1/5	2%HNO3/ 5%HCL	1.2	4.8	**1/5**												
1/10	2%HNO3/ 5%HCL	0.6	5.4	**1/10**												
1/10	2%HNO3/ 5%HCL	0.8	7.2	**1/10**												
1/20	2%HNO3/ 5%HCL	0.3	5.7	**1/20**												
1/20	2%HNO3/ 5%HCL	0.4	7.6	**1/20**												
1/50	2%HNO3/ 5%HCL	1	4	**1/5**	0.6	5.4	**1/50**									
1/100	2%HNO3/ 5%HCL	0.6	5.4	**1/10**	0.6	5.4	**1/100**									
1/200	2%HNO3/ 5%HCL	1	1	**1/2**	0.6	5.4	**1/20**	0.6	5.4	**1/200**						
1/500	2%HNO3/ 5%HCL	1	4	**1/5**	0.6	5.4	**1/50**	0.6	5.4	**1/500**						
1/1000	2%HNO3/ 5%HCL	0.6	5.4	**1/10**	0.6	5.4	**1/100**	0.6	5.4	**1/1000**						
1/2000	2%HNO3/ 5%HCL	1	1	**1/2**	0.6	5.4	**1/20**	0.6	5.4	**1/200**	0.6	5.4	**1/2000**			
1/5000	2%HNO3/ 5%HCL	1	4	**1/5**	0.6	5.4	**1/50**	0.6	5.4	**1/500**	0.6	5.4	**1/5000**			
1/10000	2%HNO3/ 5%HCL	0.6	5.4	**1/10**	0.6	5.4	**1/100**	0.6	5.4	**1/1000**	0.6	5.4	**1/10000**			
1/20000	2%HNO3/ 5%HCL	1	1	**1/2**	0.6	5.4	**1/20**	0.6	5.4	**1/200**	0.6	5.4	**1/2000**	0.6	5.4	**1/20000**

Special Dilutions

Dilution	Matrix of Diluent	1st Dilution			2nd Dilution			3rd Dilution			4th Dilution			5th Dilution		
		mLs of Sample	mLs of Diluent	Dilution Factor	mLs of Sample	mLs of Diluent	Dilution Factor	mLs of Sample	mLs of Diluent	Dilution Factor	mLs of Sample	mLs of Diluent	Dilution Factor	mLs of Sample	mLs of Diluent	Dilution Factor

right solutions.
right partner.

Form 2

Calibration Verifications

Mercury by EPA 7470A,Metals by EPA 6010C,Metals by EPA 6020A

Workorder

R2404651

Client

NASA/WSTF/Navarro

Project

White Sands Test Facility

06/14/2024

ALS Environmental–Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Form 2 - Calibration Verifications

Client NASA/WSTF/Navarro

Project White Sands Test Facility

Workorder **R2404651**

Mercury by EPA 7470A

R-CVAA-03_843235		ICV			CCV			LLCCV			CCV			CCV			LLCCV		
Units mg/L	**Run Date**	06/06/24			06/06/24			06/06/24			06/06/24			06/06/24			06/06/24		
	Run Time	09:29			10:22			10:43			10:45			11:13			11:41		
Analyte		Found	%R	Q	Found	%R	Q	Found	%R	Q	Found	%R	Q	Found	%R	Q	Found	%R	Q
Mercury		3.05	**102**		3.06	**102**		0.187	**94**		3.06	**102**		3.05	**102**		0.161	**81**	

R-CVAA-03_843235		CCV		
Units ug/L	**Run Date**	06/06/24		
	Run Time	11:44		
Analyte		Found	%R	Q
Mercury		3.06	**102**	

Q - %Recovery Flag * - %Recovery (%R) Outside Limits

QC ID	%R Limits	
CCV	80 - 120	**3.0** - Hg
ICV	90 - 110	**3.0** - Hg
LLCCV	70 - 130	**0.2** - Hg

Form 2 - Calibration Verifications

Client NASA/WSTF/Navarro

Project White Sands Test Facility

Workorder **R2404651**

Metals by EPA 6010C (P)

R-ICP-AES-07_843042	ICV			CCV			LLCCV			CCV			CCV			CCV		
Units mg/L **Run Date**	06/04/24			06/04/24			06/04/24			06/04/24			06/04/24			06/04/24		
Run Time	17:00			21:38			21:44			21:54			22:33			23:11		
Analyte	Found	%R	Q	Found	%R	Q	Found	%R	Q	Found	%R	Q	Found	%R	Q	Found	%R	Q
Aluminum	9.89	**99**		9.70	**97**		0.194	**97**		9.81	**98**		9.92	**99**		9.75	**98**	
Barium	10.10	**101**		9.88	**99**		0.200	**100**		9.97	**100**		9.94	**99**		9.93	**99**	
Beryllium	0.241	**96**		0.237	**95**		0.00480	**96**		0.239	**96**		0.238	**95**		0.237	**95**	
Boron	2.52	**101**		2.47	**99**		0.194	**97**		2.49	**100**		2.48	**99**		2.48	**99**	
Cadmium	0.490	**98**		0.483	**97**		0.0102	**102**		0.487	**97**		0.483	**97**		0.485	**97**	
Calcium	25.80	**103**		25.40	**102**		1.04	**104**		25.70	**103**		25.50	**102**		25.50	**102**	
Chromium	0.498	**100**		0.487	**97**		0.00920	**92**		0.492	**98**		0.491	**98**		0.490	**98**	
Cobalt	2.48	**99**		2.43	**97**		0.0501	**100**		2.46	**98**		2.45	**98**		2.46	**98**	
Copper	1.23	**98**		1.21	**97**		0.0249	**100**		1.22	**98**		1.22	**98**		1.21	**97**	
Iron	4.97	**99**		4.88	**98**		0.104	**104**		4.95	**99**		4.91	**98**		4.90	**98**	
Lead	0.509	**102**		0.499	**100**		0.0112	**112**		0.504	**101**		0.503	**101**		0.502	**100**	
Magnesium	25.30	**101**		24.80	**99**		0.996	**100**		25.10	**100**		24.90	**99**		24.90	**100**	
Manganese	0.735	**98**		0.723	**96**		0.0137	**91**		0.728	**97**		0.728	**97**		0.725	**97**	
Molybdenum	2.60	**104**		2.53	**101**		0.0254	**102**		2.55	**102**		2.56	**102**		2.54	**102**	
Nickel	2.04	**102**		2.00	**100**		0.0355	**89**		2.02	**101**		2.02	**101**		2.01	**100**	
Potassium	24.40	**98**		24.00	**96**		0.955	**96**		24.30	**97**		24.60	**98**		24.10	**96**	
Selenium	0.488	**98**		0.480	**96**		0.0108	**108**		0.485	**97**		0.488	**98**		0.479	**96**	
Silver	0.502	**100**		0.493	**99**		0.00890	**89**		0.498	**100**		0.496	**99**		0.493	**99**	
Sodium	25.40	**102**		25.00	**100**		1.00	**100**		25.30	**101**		25.70	**103**		25.10	**100**	
Strontium	2.46	**99**		2.42	**97**		0.0974	**97**		2.44	**98**		2.43	**97**		2.44	**97**	
Tin	4.94	**99**		4.85	**97**		0.490	**98**		4.90	**98**		4.87	**97**		4.87	**97**	
Vanadium	2.52	**101**		2.47	**99**		0.0492	**98**		2.50	**100**		2.49	**100**		2.48	**99**	
Zinc	0.979	**98**		0.959	**96**		0.0174	**87**		0.966	**97**		0.963	**96**		0.963	**96**	

Form 2 - Calibration Verifications

Client NASA/WSTF/Navarro

Project White Sands Test Facility

Workorder **R2404651**

Metals by EPA 6010C (P)

R-ICP-AES-07_843042	CCV			CCV			CCV			LLCCV			CCV		
Units ppm **Run Date**	06/04/24			06/05/24			06/05/24			06/05/24			06/05/24		
Run Time	23:50			00:03			01:59			02:06			02:15		
Analyte	Found	%R	Q	Found	%R	Q	Found	%R	Q	Found	%R	Q	Found	%R	Q
Aluminum	9.71	**97**		9.71	**97**		9.74	**97**		0.195	**97**		9.74	**97**	
Barium	9.85	**99**		9.81	**98**		9.79	**98**		0.197	**99**		9.78	**98**	
Beryllium	0.236	**94**		0.235	**94**		0.234	**93**		0.00470	**94**		0.233	**93**	
Boron	2.47	**99**		2.46	**98**		2.44	**98**		0.190	**95**		2.43	**97**	
Cadmium	0.483	**97**		0.481	**96**		0.476	**95**		0.0100	**100**		0.475	**95**	
Calcium	25.30	**101**		25.20	**101**		25.10	**100**		1.02	**102**		25.00	**100**	
Chromium	0.485	**97**		0.484	**97**		0.480	**96**		0.00880	**88**		0.479	**96**	
Cobalt	2.43	**97**		2.42	**97**		2.41	**96**		0.0491	**98**		2.41	**96**	
Copper	1.21	**97**		1.21	**96**		1.20	**96**		0.0244	**98**		1.20	**96**	
Iron	4.87	**97**		4.85	**97**		4.83	**97**		0.102	**102**		4.84	**97**	
Lead	0.498	**100**		0.497	**99**		0.493	**99**		0.0102	**102**		0.493	**99**	
Magnesium	24.70	**99**		24.60	**98**		24.40	**97**		0.971	**97**		24.30	**97**	
Manganese	0.721	**96**		0.718	**96**		0.716	**95**		0.0135	**90**		0.714	**95**	
Molybdenum	2.52	**101**		2.51	**101**		2.50	**100**		0.0248	**99**		2.50	**100**	
Nickel	2.00	**100**		1.99	**99**		1.98	**99**		0.0347	**87**		1.97	**99**	
Potassium	24.10	**97**		24.20	**97**		24.20	**97**		0.947	**95**		24.10	**96**	
Selenium	0.483	**97**		0.483	**97**		0.479	**96**		0.0128	**128**		0.473	**95**	
Silver	0.492	**98**		0.490	**98**		0.486	**97**		0.00880	**88**		0.485	**97**	
Sodium	25.20	**101**		25.10	**101**		25.20	**101**		1.11	**111**		25.00	**100**	
Strontium	2.41	**96**		2.39	**96**		2.39	**96**		0.0953	**95**		2.38	**95**	
Tin	4.84	**97**		4.82	**96**		4.77	**95**		0.476	**95**		4.77	**95**	
Vanadium	2.46	**99**		2.45	**98**		2.44	**98**		0.0485	**97**		2.44	**97**	
Zinc	0.953	**95**		0.948	**95**		0.943	**94**		0.0170	**85**		0.941	**94**	

Q - %Recovery Flag * - %Recovery (%R) Outside Limits

QC ID	%R Limits	
CCV	90 - 110	**10.0** - Al, Ba; **0.250** - Be; **2.50** - B, Co, Mo, Sr, V; **0.5** - Cd, Cr, Pb, Se, Ag; **25.0** - Ca, Mg, K, Na; **1.25** - Cu; **5.0** - Fe, Sn; **0.750** - Mn; **2.0** - Ni; **1.0** - Zn
ICV	90 - 110	**10.0** - Al, Ba; **0.250** - Be; **2.50** - B, Co, Mo, Sr, V; **0.5** - Cd, Cr, Pb, Se, Ag; **25.0** - Ca, Mg, K, Na; **1.25** - Cu; **5.0** - Fe, Sn; **0.750** - Mn; **2.0** - Ni; **1.0** - Zn
LLCCV	70 - 130	**0.2** - Al, Ba, B; **0.005** - Be; **0.01** - Cd, Cr, Pb, Se, Ag; **1.0** - Ca, Mg, K, Na; **0.05** - Co, V; **0.0250** - Cu, Mo; **0.1** - Fe, Sr; **0.0150** - Mn; **0.04** - Ni; **0.5** - Sn; **0.02** - Zn

Form 2 - Calibration Verifications

Client	NASA/WSTF/Navarro	Workorder	
Project	White Sands Test Facility	**R2404651**	

Metals by EPA 6010C (P)

R-ICP-AES-07_843644		ICV			LLCCV			CCV			CCV			CCV			CCV		
Units mg/L	**Run Date**	06/10/24			06/10/24			06/10/24			06/10/24			06/10/24			06/10/24		
	Run Time	15:39			15:46			15:56			16:36			17:15			17:54		
Analyte		Found	%R	Q	Found	%R	Q	Found	%R	Q	Found	%R	Q	Found	%R	Q	Found	%R	Q
Sodium		25.30	**101**		1.01	**101**		25.50	**102**		25.60	**102**		25.50	**102**		25.30	**101**	

R-ICP-AES-07_843644		CCV			CCV			LLCCV			CCV			
Units ppm	**Run Date**	06/10/24			06/10/24			06/10/24			06/10/24			
	Run Time	18:33			18:46			18:52			19:12			
Analyte		Found	%R	Q	Found	%R	Q	Found	%R	Q	Found	%R	Q	
Sodium		25.20	**101**		25.30	**101**		1.03	**103**		25.30	**101**		

Q - %Recovery Flag * - %Recovery (%R) Outside Limits

QC ID	%R Limits	
CCV	90 - 110	**25.0** - Na
ICV	90 - 110	**25.0** - Na
LLCCV	70 - 130	**1.0** - Na

Form 2 - Calibration Verifications

Client NASA/WSTF/Navarro | Workorder **R2404651**

Project White Sands Test Facility

Metals by EPA 6020A (MS)

R-ICP-MS-02_843209		ICV			CCV			LLCCV			CCV			CCV			CCV		
Units mg/L	**Run Date**	06/05/24			06/05/24			06/05/24			06/05/24			06/05/24			06/05/24		
	Run Time	11:31			13:10			13:14			13:19			13:42			14:05		
	Data File	035_ICV			086_CCV			088LICV			091_CCV			103_CCV			115_CCV		
Analyte		Found	%R	Q	Found	%R	Q	Found	%R	Q	Found	%R	Q	Found	%R	Q	Found	%R	Q
Antimony		49.70	**99**		0.0492	**98**		0.000982	**98**		0.0507	**101**		0.0500	**100**		0.0460	**92**	
Arsenic		48.40	**97**		0.0484	**97**		0.000945	**95**		0.0486	**97**		0.0497	**99**		0.0459	**92**	
Thallium		50.50	**101**		0.0541	**108**		0.00101	**101**		0.0547	**109**		0.0534	**107**		0.0477	**95**	

R-ICP-MS-02_843209		CCV			LLCCV			CCV		
Units ppm	**Run Date**	06/05/24			06/05/24			06/05/24		
	Run Time	14:18			14:22			14:24		
	Data File	122_CCV			124LICV			125_CCV		
Analyte		Found	%R	Q	Found	%R	Q	Found	%R	Q
Antimony		0.0492	**98**		0.00103	**103**		0.0488	**98**	
Arsenic		0.0485	**97**		0.000766	**77**		0.0476	**95**	
Thallium		0.0521	**104**		0.00101	**101**		0.0519	**104**	

Q - %Recovery Flag * - %Recovery (%R) Outside Limits

QC ID	%R Limits	
CCV	90 - 110	**0.05** - Sb, As, Tl
ICV	90 - 110	**50.0** - Sb, As, Tl
LLCCV	70 - 130	**0.001** - Sb, As, Tl

Form 2 - Calibration Verifications

Client NASA/WSTF/Navarro

Project White Sands Test Facility

Workorder **R2404651**

Metals by EPA 6020A (MS)

R-ICP-MS-02_843344		ICV			LLCCV			CCV			CCV			CCV			LLCCV		
Units ppb	**Run Date**	06/06/24			06/06/24			06/06/24			06/06/24			06/06/24			06/06/24		
	Run Time	16:06			16:09			16:17			16:40			16:57			17:00		
	Data File	015_ICV			017LICV			021_CCV			033_CCV			042_CCV			044LICV		
Analyte		Found	%R	Q	Found	%R	Q	Found	%R	Q	Found	%R	Q	Found	%R	Q	Found	%R	Q
Arsenic		49100	**98**		0.000928	**93**		0.0472	**94**		0.0487	**97**		0.0481	**96**		0.00101	**101**	

R-ICP-MS-02_843344		CCV		
Units ppm	**Run Date**	06/06/24		
	Run Time	17:05		
	Data File	047_CCV		
Analyte		Found	%R	Q
Arsenic		0.0507	**101**	

Q - %Recovery Flag * - %Recovery (%R) Outside Limits

QC ID	%R Limits	
CCV	90 - 110	**0.05** - As
ICV	90 - 110	**50000** - As
LLCCV	70 - 130	**0.001** - As