ODOR TESTING



George Aldrich Performs an Odor Test at White Sands Test Facility



Olfactory Qualification Test with Sergio Rojas and Sioux-Lhyn Shutt



Foam for Space Boots Test Material

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http://www.nasa.gov/centers/wstf/home/index.html

Odor Assessment



NASA
White Sands Test Facility
Molecular Desorption and Analysis Laboratory

Odor Testing

WSTF conducts odor testing for NASA in accordance with NASA-STD-6001 (Test 6). Odor Assessment is the human evaluation of odors released from materials or components destined for use in the habitable areas of spacecraft. Odor assessment is only performed after the determination of offgassed products has been previously performed and all offgassed products are known to be below a specified toxic rating.

Odor Test Panel

An Odor Test Panel is maintained for odor testing. An "Odor Mission" is conducted by five certified odor panel members under the direction of an Odor Panel Test Conductor. These five odor panel members are selected randomly out of a pool of all odor panel members and their sense of smell tested to ensure sensitivity.

Four trained and certified analytical chemists lead the laboratory equipped with test chambers and support equipment to perform odor testing.

Experience

WSTF has over 30 years experience performing odor testing for NASA, military agencies, and numerous commercial customers.

Capabilities

- Simulated-use testing conducted in two airtight gloveboxes.
- Handling of electrostatic discharge (ESD) components. Class 1 ESD protective workstation available.

WSTF Odor Panel



From left to right. Top Row: John Caruso, Karen Wilson, Shelly Meloy, Kathy Stevens, Sandy Craig, Stacie Wingfield, Rob Harris, Darrell Shoup, Harry Johnson, David Huskey, Raphael Delgado, Tom Reeves, Andrew Randall, Susana Harper, Brooks Wolle,
From left to rightBottom Row: Jim Williams, Burk Handley, Salomon Garcia, Carlos Martinez, Josh Buchanan, Patrick O'Donnell, Tommy Yoder, George Aldrich

- Test both small and very large materials and components. Offgassing chambers from 2 L through 8000 L are maintained for testing. The largest offgas chamber is the CVI® self-heating cylindrical chamber. This chamber is 1.83 m (6 ft) in diameter and 2.74 m (9 ft) long and can achieve vacuums as low as 1.33 Pa (1 × 10-2 torr), with a temperature range from ambient ~ 21 to 93 °C (70 to 200 °F).
- Thermal conditioning capabilities range from ~21 to 316 °C (~70 to 600 °F). Five thermal conditioning ovens (incorporating multiple temperature measurement systems) are connected to an automatic alarm system to notify personnel of power outages and/or temperature nonconformities. Ovens can handle the entire size range of sample chambers.
- On site state-of-the-art test article or material preparation and analytical laboratories are maintained with full sample preparation, measurement, thermal conditioning, and chemical analysis capabilities.
- A secure, limited-access storage area for spaceflight items and other high-cost important items is utilized.
- Direct test data is entered and stored in a secure laboratory information and tracking system that automatically generates reports for review and transmittal. Validated software programs for performing data reduction (utilizing electronic data transfer to eliminate transcription errors) can be operated.
- Chamber is equipped to test bulky and heavy articles up to the "rack" size in the 3 m (10 ft) by 1.8 m (6 ft) chamber, and up to 909 Kg (2000 lb), and even heavier with prior notification.