Test Facility Overview

- Characteristics
  - 90.6 m^3
  - Stainless steel
  - Vacuum-capable
- Test support capabilities
  - Metabolic simulation
  - Trace contaminant injection
  - Temperature and humidity control
  - Space vacuum resource simulation
  - Gas sample acquisition and analysis
  - Major constituent monitoring
  - Total pressure and atmosphere composition control
  - Process control & data acquisition/archiving
    - LabVIEW
    - Payloads and Components Real-time Automated Test System (PACRATS)
- Analytical Instrumentation – VOC Analysis
  - Agilent 5890 GC with a flame ionization detector coupled with a Markes TT24-7 Thermal Desorption System autosampler
  - Agilent 7890 GC with flame ionization and mass selective detectors coupled with a Gerstel Thermal Desorption System
  - Gasmet DX4040 Fourier Transform Infrared Spectrometer
- Analytical Instrumentation – Major Constituent Monitoring
  - Oxigraf Model O2 analyzer – solid-state laser diode absorption
  - Sable Systems CA-2A analyzer – solid-state infrared absorption
  - Sable Systems RH-100 monitor – solid-state thin film capacitance

PARAMETER	RANGE
Total pressure	400-933 Pa gauge
Oxygen partial pressure	20.58±0.14 kPa
Carbon dioxide partial pressure	400±67 Pa
Temperature	21±2.8 °C
Relative humidity	50±5%
Contaminant injection rate	230 mg/hour*

*Percent by mass: methanol (10.7), ethanol (67.1), 2-propanol (4.8), ethanal (7.6), dimethylbenzene (2.3), dichloromethane (1.3), 2-propanone (6.2)