

**Simulant Name:** LHS-2 Lunar Highlands Simulant

**Simulant Type:** General purpose

**Reference Material:** Average lunar highlands

**Uncompressed Bulk Density:** 1.4g/cm<sup>3</sup>

**Median Particle Size:** 100 μm

**Particle Size Range:** <0.04 μm – 2000 μm



## Geotechnical Properties

**Angle of Repose (10g):** 45.8°

**Angle of Repose (250g):** 43.1°

**Cohesion:** 0.365 kPa

**Angle of Internal Friction:** 30.5°

## Mineralogy

As mixed.

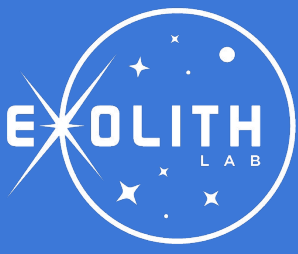
Component	Wt.%
<b>Anorthosite</b>	74.4
<b>*Glass-rich Basalt</b>	24.7
<b>Ilmenite</b>	0.4
<b>Bronzite</b>	0.3
<b>Olivine</b>	0.2
<b>Total</b>	100

\*Glass-rich basalt sourced from Merriam Crater. This is the same source as JSC-1 lunar simulant.

## Bulk Chemistry

Relative abundances. Measured by XRF.

Oxide	Wt.%
<b>SiO<sub>2</sub></b>	49.12
<b>TiO<sub>2</sub></b>	0.63
<b>Al<sub>2</sub>O<sub>3</sub></b>	26.29
<b>Fe<sub>2</sub>O<sub>3</sub></b>	3.20
<b>MnO</b>	0.06
<b>MgO</b>	2.86
<b>CaO</b>	13.52
<b>Na<sub>2</sub>O</b>	2.55
<b>K<sub>2</sub>O</b>	0.34
<b>P<sub>2</sub>O<sub>5</sub></b>	0.17
<b>LOI</b>	0.41
<b>Total</b>	99.15



## Particle Size Distribution

Using a combination of laser and sieve analysis

