

Simulant Name: LHS-1 Lunar Highlands Simulant
Simulant Type: General purpose
Reference Material: Average lunar highlands
Uncompressed Bulk Density: 1.30 g/cm³
Mean Particle Size: 60 μm
Median Particle Size: 50 μm
Particle Size Range: <0.04 μm – 400 μm



Mineralogy

As mixed.

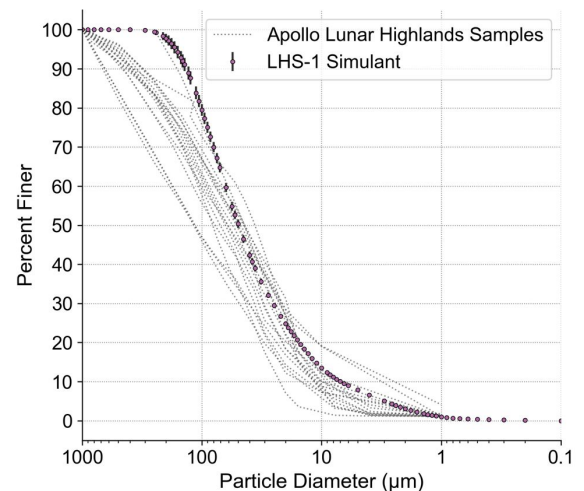
Component	Wt.%
Anorthosite	74.4
Glass-rich basalt	24.7
Ilmenite	0.4
Olivine	0.3
Pyroxene	0.2

Bulk Chemistry

Measured by XRF.

Oxide	Wt.%
SiO ₂	48.1
Al ₂ O ₃	25.8
CaO	18.4
Fe ₂ O ₃	3.7
K ₂ O	0.7
MgO	0.3
MnO	0.1
P ₂ O ₅	1.0
TiO ₂	1.1
SO ₃	0.3
Cl	0.4
SrO	0.1
Total	99.9

Particle Size Distribution



Safety

See SDS for details. Primary hazard is dust inhalation; wear a respirator in dusty conditions.

FTIR Spectrum

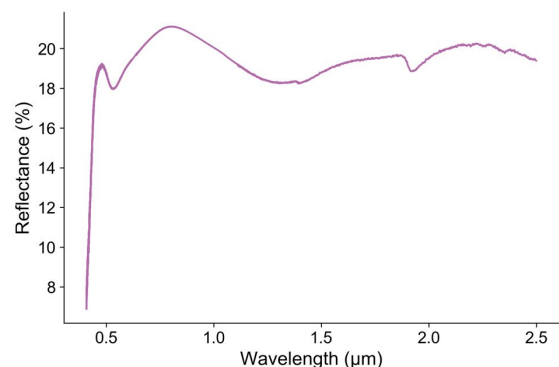


Photo credit Matthew Villegas. FTIR spectrum courtesy of Katerina Slavicinska, Bennett Lab, UCF. Apollo particle size data adapted from the Lunar Soils Grain Size Catalog, Graf, 1993.