



**Simulant Name:** JEZ-1 Jezero Delta Simulant

**Simulant Type:** General Purpose

**Reference Material:** Jezero crater deltas

**Publication:** Cannon et al. 2019

Icarus 317, 470-478

**Bulk Density:** 1.54 g/cm<sup>3</sup>

**Particle Size Range:** 0-1 mm

**Mean Particle Size:** 38 microns



## Mineralogy

Weight percent, as mixed.

Olivine	32.0
Plagioclase	16.0
Basaltic glass	13.5
Pyroxene	12.0
Mg-carbonate	11.0
Smectite clay	6.0
Mg-sulfate	2.4
Ferrihydrite	2.1
Hydrated Silica	1.8
Magnetite	1.1
Anhydrite	1.0
Fe-carbonate	0.8
Hematite	0.3

## Bulk Chemistry

Weight percent, as measured by XRF.

SiO <sub>2</sub>	44.2
TiO <sub>2</sub>	0.2
Al <sub>2</sub> O <sub>3</sub>	11.3
Cr <sub>2</sub> O <sub>3</sub>	0.3
FeO <sub>T</sub>	9.5
MnO	0.1
MgO	25.9
CaO	3.5
Na <sub>2</sub> O	1.9
K <sub>2</sub> O	0.3
P <sub>2</sub> O <sub>5</sub>	0.6
SO <sub>3</sub>	2.1
Total	100.0

## Reflectance Spectrum

Data coming soon

## Safety Information

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

## Volatile Release Pattern

As measured on a SAM-analog TG/EGA instrument at JSC. Total evolved water at 200° C is 1.4 wt.%. Large drop is CO<sub>2</sub>

