



Simulant Name: UCF/DSI CM Simulant
Simulant Type: General Purpose
Reference Material: Murchison meteorite
Publication: Britt et al. in prep
Bulk Density: 0.89 g/cm³
Default Particle Size: 0-6.3 mm



Mineralogy

Weight percent, as mixed.

Mg-serpentine	72.5	Pyrite	2.6
Magnetite	10.4	Pyroxene	2.1
Olivine	7.8	Siderite	1.0
Coal (sub-bit.)	3.6		

Bulk Chemistry

Weight percent.

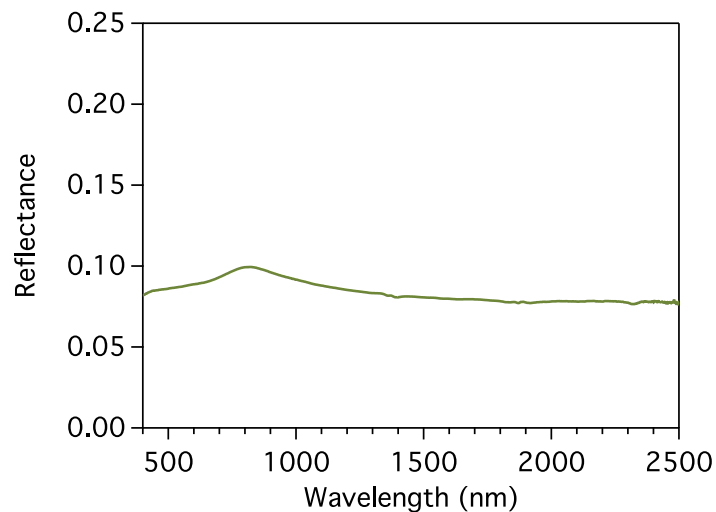
SiO ₂	32.5	CaO	3.1
TiO ₂	0.3	Na ₂ O	6.2
Al ₂ O ₃	3.1	K ₂ O	0.2
Cr ₂ O ₃	0.2	P ₂ O ₅	0.4
FeO _T	20.2	SO ₃	1.5
MgO	32.1	Total	100.0

Safety Information

The CM simulant uses verified asbestos-free serpentine, and sub-bituminous coal that is known to contain less PAHs than other coal or coal combustion products. Primary hazards are dust inhalation and skin contact: always wear a mask and gloves when handling simulants.

Reflectance Spectrum

As measured on an ASD Fieldspec at 30° incidence and 0° emergence angles.



Volatile Release Pattern

As measured at 30 mbar (He) on a TG/EGA instrument at JSC. Total volatile loss <1000° C is 11.2 wt.%.

