

**10067**  
Regolith Breccia  
69.3 grams



*Figure 1: Photo of 10067,3. Sample is 3.5 cm across. NASA S76-21923.*

**Introduction**

10067 is a typical Apollo 11 soil breccia.

**Petrography**

Carter and McGregger (1970) and Keil et al. (1970) briefly mentioned 10067 in their study of Apollo 11 regolith breccias.

**Chemistry**

The composition of 10067, as reported by Goles et al. (1970), seems to have more FeO than Apollo soils (figure 3).

**Processing**

Apollo 11 samples were originally described and cataloged in 1969 and “recataloged” by Kramer et al. (1977). There are 4 thin sections.

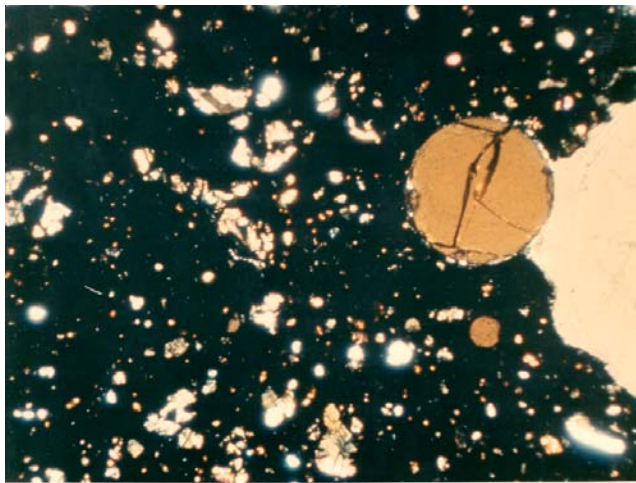


Figure 2: Photomicrograph of thin section 10067,6 showing orange glass bead in breccia matrix. NASA S70-50554. Field of view is 2.5 mm.

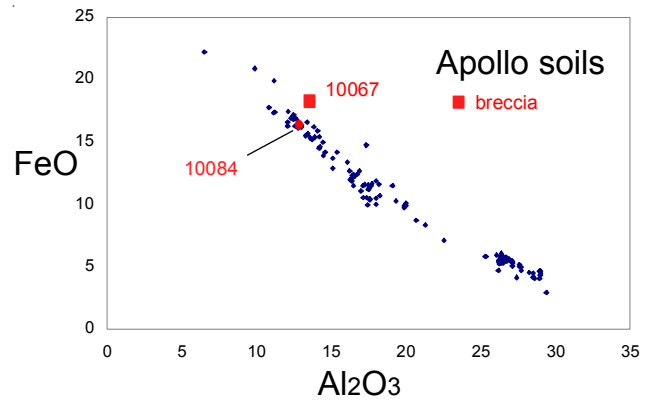


Figure 3: Composition of 10067 (Goles et al. 1970).

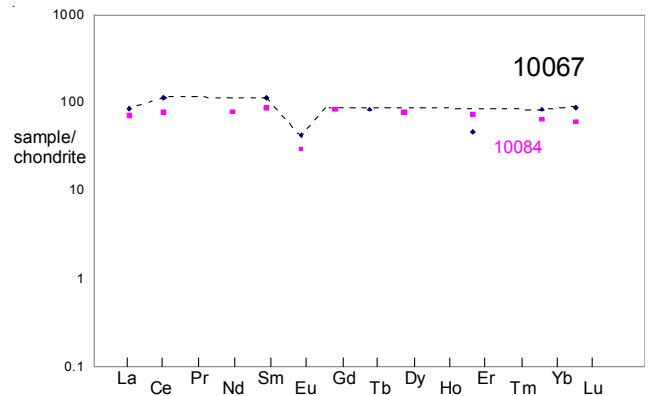
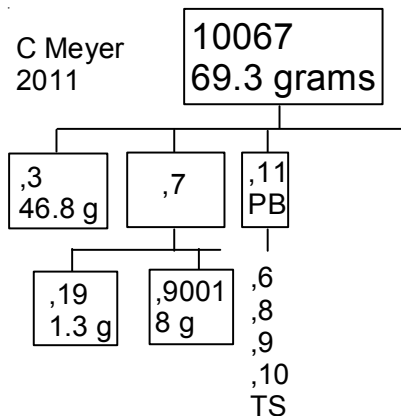


Figure 4: Normalized rare earth element diagram for breccia 10067 compared with soil 10084 (data from Goles et al. 1970).



C Meyer  
2011

### References for 10067

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**Table 1. Chemical composition of 10067.**

reference	Goles70	
weight		
SiO <sub>2</sub> %	44.1	
TiO <sub>2</sub>	8.8	
Al <sub>2</sub> O <sub>3</sub>	14	
FeO	17.9	
MnO	0.23	(a)
MgO	12	
CaO	12.2	
Na <sub>2</sub> O	0.48	(a)
K <sub>2</sub> O		
P <sub>2</sub> O <sub>5</sub>		
S %		
sum		
Sc ppm	66	(a)
V	71	(a)
Cr	2040	(a)
Co	35.9	(a)
Ni		
Cu		
Zn		
Ga		
Ge ppb		
As		
Se		
Rb		
Sr		
Y		
Zr		
Nb		
Mo		
Ru		
Rh		
Pd ppb		
Ag ppb		
Cd ppb		
In ppb		
Sn ppb		
Sb ppb		
Te ppb		
Cs ppm		
Ba		
La	20.1	(a)
Ce	68	(a)
Pr		
Nd		
Sm	16.7	(a)
Eu	2.4	(a)
Gd		
Tb	3.1	(a)
Dy		
Ho	7.5	(a)
Er		
Tm		
Yb	13.8	(a)
Lu	2.2	(a)
Hf	15.4	(a)
Ta	2.1	(a)
W ppb		
Re ppb		
Os ppb		
Ir ppb		
Pt ppb		
Au ppb		
Th ppm		
U ppm	0.54	(a)
technique:	(a) INAA	

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