

78555 – 6.64 grams
78556 – 9.5 grams
78557 – 7.19 grams
78558 – 3.78 grams
78559 – 3.05 grams
78565 - 3.05 grams
78566 – 0.77 grams
 Friable Regolith Breccia



Figure 1: Photo of 78555. Scale in mm. S73-33438.

Introduction

Rake samples 78555 – 78566 are friable regolith breccias that were collected together and look alike. Only 78555 has been studied.

Petrography

Jerde et al. (1987) reported the maturity index for 78555 as $I_s/FeO = 61$. These fragments are “instant rock” made by compaction of local soil.

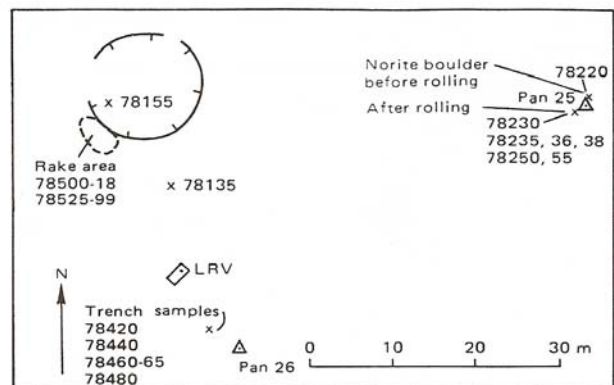


Figure 2: Map of station 8, Apollo 17.



Figure 3: Photo of 78556. Cm scale on left side. S73-33442

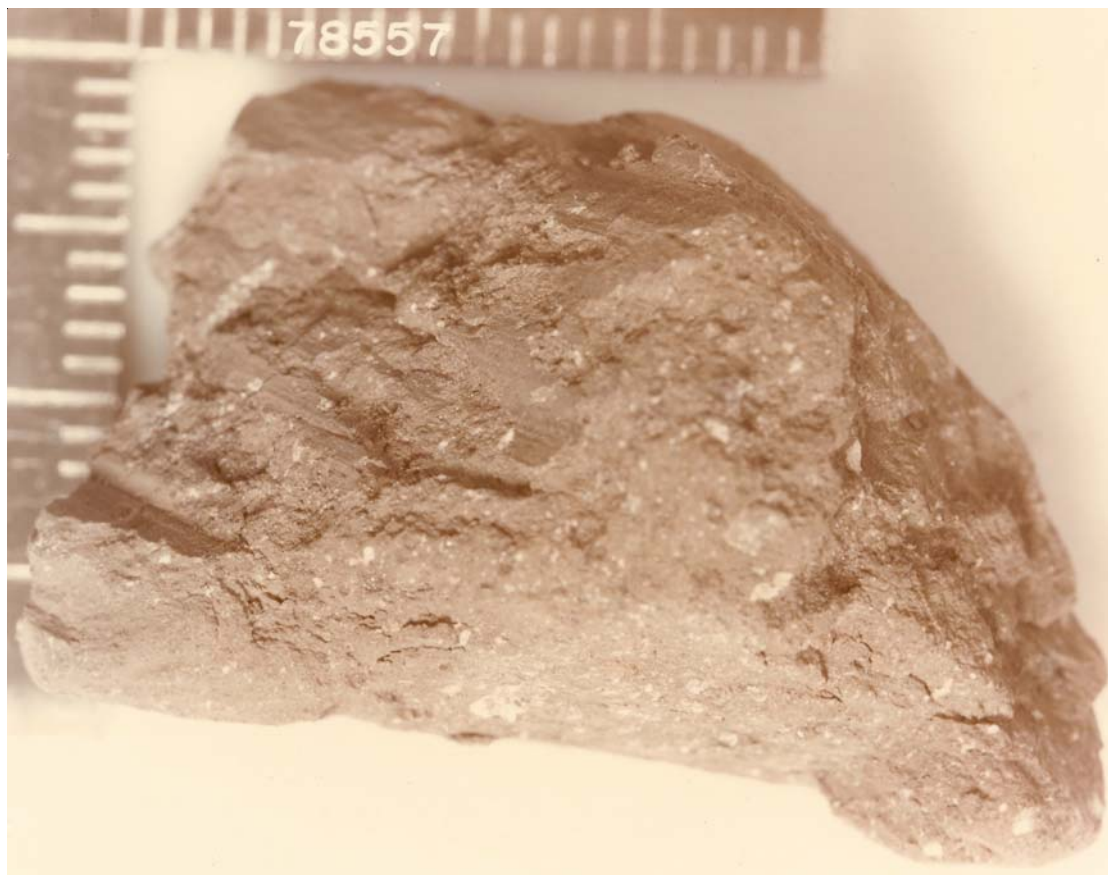


Figure 4: Photo of 78557. Scale is in mm and cm. S73-33401

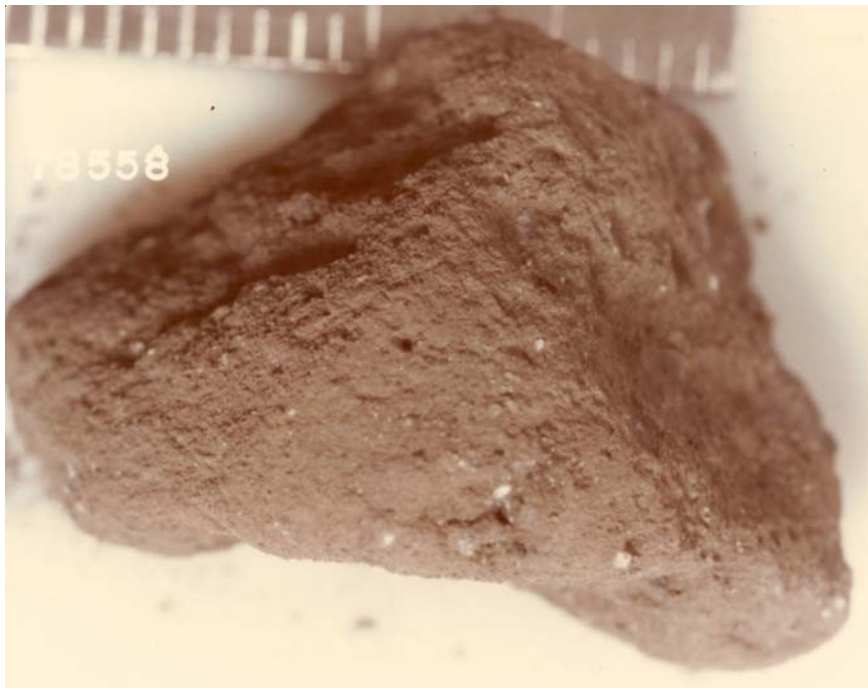


Figure 5: Photo of 78568. Scale in mm. S73-33463



Figure 6: Photo of 78559. Scale in mm. S73-33415



Figure 7: Photo of 78565. Scale in mm. S73-21014



Figure 8: Photo of 78566. Scale in mm. S73-33408

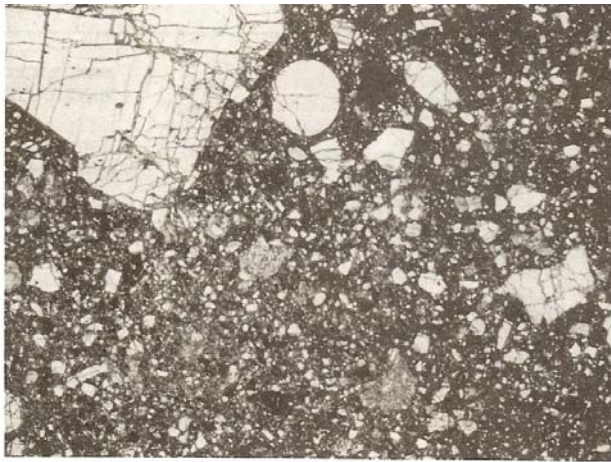


Figure 9: Photomicrograph of thin section 78555,4. Field of view is 3 x 4 mm.



Figure 10: Another view of a thin section of 78555 - from Warner et al. 1978.

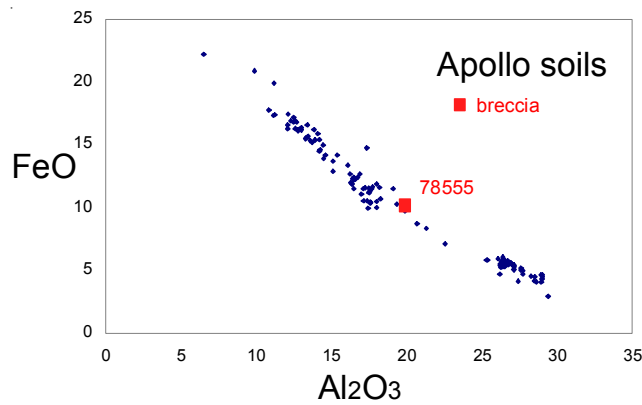


Figure 11: Composition of 78555 compared with Apollo soil samples.

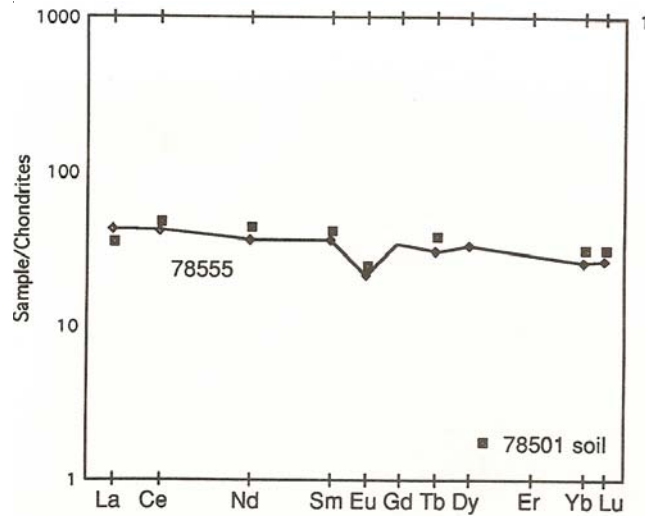


Figure 12: Composition of 78555.

Glass

Warner et al. (1979) reported analyses of galls in 78555.

Chemistry

Jerde et al. (1987) determined the chemical composition (table 1).

Processing

78555 is the only one of these friable breccias that was subdivided. There are 3 thin sections of 78555, but none for the other fragments

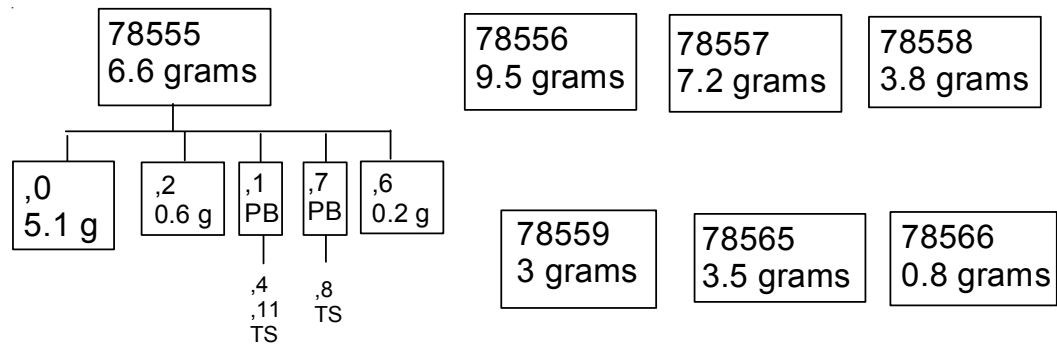


Table 1. Chemical composition of 78555.

reference	Jerde87	
weight		
SiO ₂ %	44.51	
TiO ₂	2.42	(a)
Al ₂ O ₃	19.97	(a)
FeO	9.9	(a)
MnO	0.15	(a)
MgO	11.27	(a)
CaO	11.49	(a)
Na ₂ O	0.39	(a)
K ₂ O	0.11	(a)
P ₂ O ₅		
S %		
sum		
Sc ppm		
V		
Cr	2400	(a)
Co	35.6	(a)
Ni	260	(a)
Cu		
Zn		
Ga	4.2	(a)
Ge ppb		
As		
Se		
Rb		
Sr	160	(a)
Y		
Zr	180	(a)
Nb		
Mo		
Ru		
Rh		
Pd ppb		
Ag ppb		
Cd ppb		
In ppb		
Sn ppb		
Sb ppb		
Te ppb		
Cs ppm	0.55	(a)
Ba	130	(a)
La	9.9	(a)
Ce	25	(a)
Pr		
Nd	16	(a)
Sm	5.3	(a)
Eu	1.17	(a)
Gd		
Tb	1.1	(a)
Dy	8.1	(a)
Ho		
Er		
Tm		
Yb	4.2	(a)
Lu	0.65	(a)
Hf	3.7	(a)
Ta	0.56	(a)
W ppb		
Re ppb		
Os ppb		
Ir ppb	11	(a)
Pt ppb		
Au ppb	3.3	(a)
Th ppm	1.86	(a)
U ppm	0.53	(a)
technique:	(a) INAA	

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