76545 – 7.7 grams
76546 – 24.3 grams
76547 – 10 grams
76548 – 2.53 grams
76549 – 9.2 grams
Regolith Breccia

Figure 1: Photo of 76545. Scale in mm. S73-19611

Introduction

76545 – 76549 are from a rake sample taken at station 6 (figure). They look alike and were grouped together in the initial exam by Phinney et al. (1974).

Petrography

Phinney et al. (1977) used the SEM to study the matrix of 76545.

Lots of small white clasts set in black glass matrix. Some particles also have shiny black glass (Meyer 1994).

Chemistry

Only 76545 has been analyzed (table 1) and it is exactly the same as the soil collected with it.

Processing

Only 76545 and 76548 have thin sections.

Figure 2: Photo of 76546. Scale in mm. S73-19621

Figure 3: Photo of 76547. Scale in mm. S73-19616

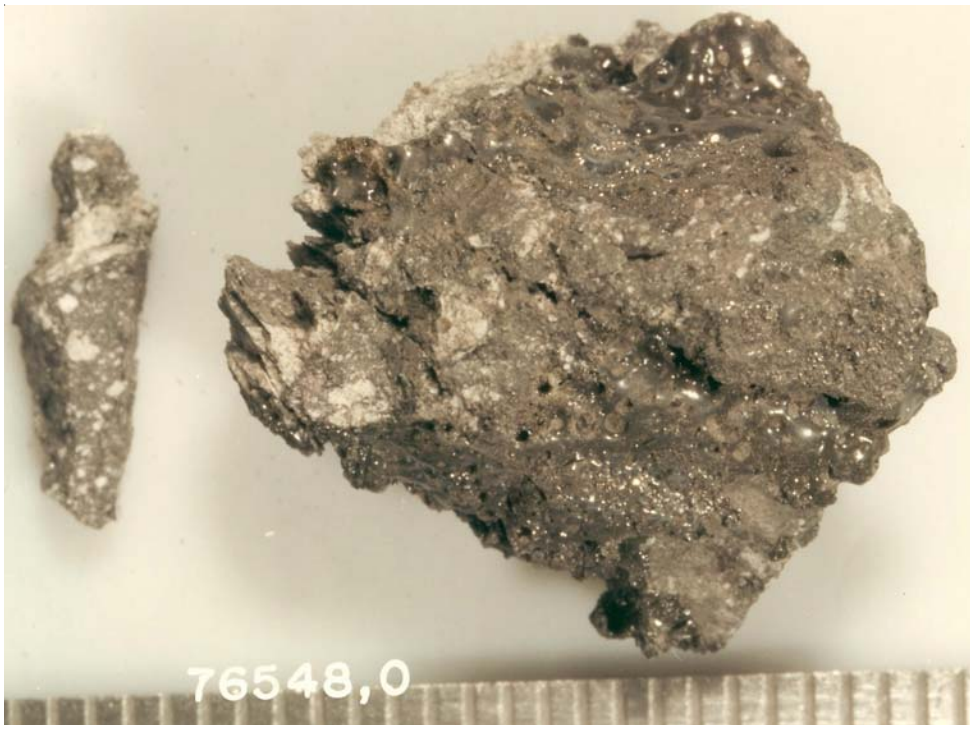

Figure 4: Photo of 76548. Scale in mm. S73-19620

Figure 5: Photo of 76549. Scale in mm. S73-19623

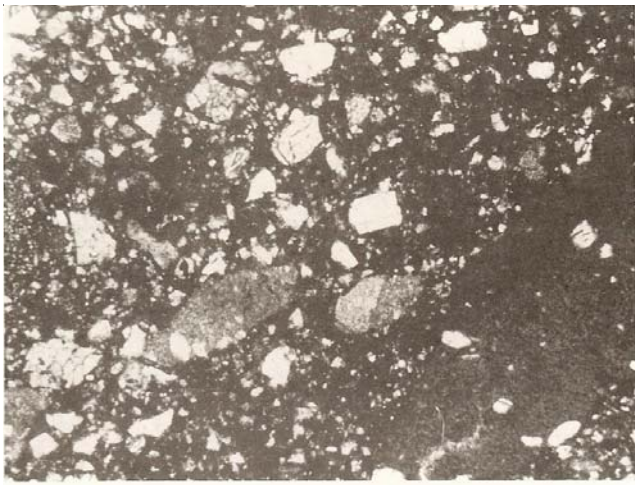

Figure 6: Thin section photomicrogaph of 76545 showing mostly matrix.

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Table 1. Chemical composition of 76545,

reference	Simonds81		Wiesmann75	
weight				
SiO2 %	43.45	(a)		
TiO2	3.69	(a)		
Al2O3	17.89	(a)		
FeO	10.94	(a)		
MnO	0.15	(a)		
MgO	10.51	(a)		
CaO	12.21	(a)		
Na2O	0.4	(a)		
K2O	0.13	(a)		
P2O5	0.09	(a)		
S %	0.07	(a)		
sum				
Sc ppm				
V				
Cr		(a)		
Co				
Ni				
Cu				
Zn				
Ga				
Ge ppb				
As				
Se				
Rb			2.43	(b)
Sr				
Y				
Zr			191	(b)
Nb				
Mo				
Ru				
Rh				
Pd ppb				
Ag ppb				
Cd ppb				
In ppb				
Sn ppb				
Sb ppb				
Te ppb				
Cs ppm				
Ba			114	(b)
La			9.36	(b)
Ce			25	(b)
Pr				(b)
Nd			17.9	(b)
Sm			5.87	(b)
Eu			1.29	(b)
Gd			7.96	(b)
Tb				
Dy			8.89	(b)
Ho				
Er			5.33	(b)
Tm				
Yb			4.88	(b)
Lu				
Hf				
Ta				
W ppb				
Re ppb				
Os ppb				
Ir ppb				
Pt ppb				
Au ppb				
Th ppm			1.56	(b)
U ppm			0.43	(b)
technique:	*(a) XRF, (b) IDMS*			

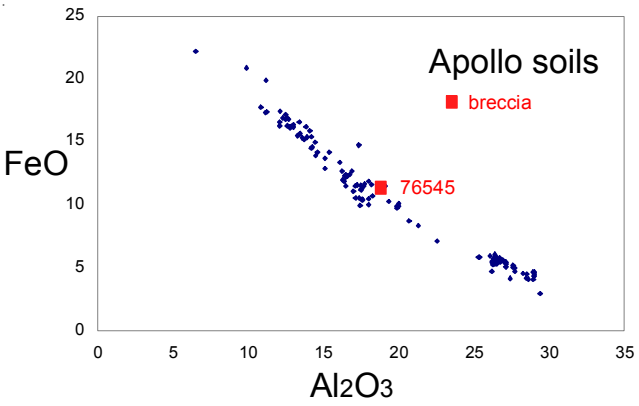

Figure 7: Composition of 76545 compared with that of Apollo soil samples.

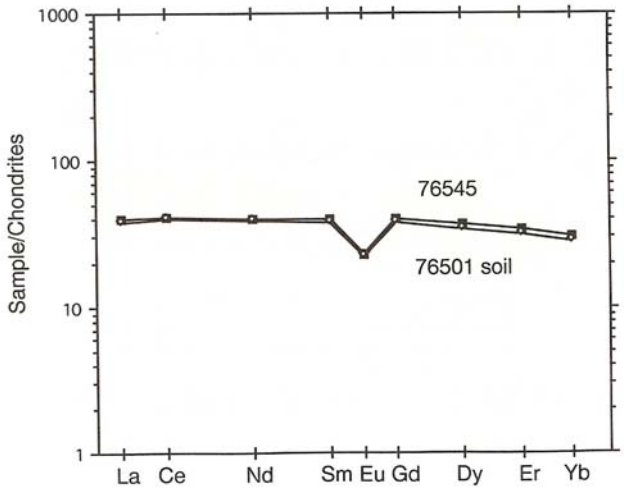

Figure 8: Normalized rare-earth-element diagram for 76545 and 76500.