

72135
Olivine Basalt Breccia
337 grams



Figure 1: Photo of 72135. S73-16201



Figure 2: Location of 72135. AS17-135-20625

Table 1. Chemical composition of 72135

reference	Green75	
<i>weight</i>		
SiO ₂ %	38.9	(a)
TiO ₂	12.3	(a)
Al ₂ O ₃	9.12	(a)
FeO	20.1	(a)
MnO	0.24	(a)
MgO	7.51	(a)
CaO	11.09	(a)
Na ₂ O	0.3	(a)
K ₂ O	0.08	(a)
P ₂ O ₅		
S %		
<i>sum</i>		
Sc ppm		
V		
Cr	2531	(a)
Co		
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		
Ce		
Pr		
Nd		
Sm		
Eu		
Gd		
Tb		
Dy		
Ho		
Er		
Tm		
Yb		
Lu		
Hf		
Ta		
W ppb		
Re ppb		
Os ppb		
Ir ppb		
Pt ppb		
Au ppb		
Th ppm		
U ppm		

technique: (a) average of glass analyses by e probe

Introduction

Wolfe et al. (1981) termed 72135 an olivine basalt cataclasite, while Neal and Taylor (1993) called it a microbreccia. It was collected from the mare surface along the traverse to the South Massif (figure 2). Green (1975) inferred that 72135 was a welded tuff or volcanic breccia perhaps due to lava fountaining.

Petrography

Green et al. (1975) described 72135 as a monomict basaltic breccia in which individual fragments range from fine-grained, quenched basalt to spheres and irregular shards of orange glass. The texture is variolitic with a groundmass of quenched pyroxene, ilmenite and plagioclase. Patches up to 3.5 mm containing coarser pyroxene are scattered though the rock. Ilmenite and skeletal olivine form microphenocrysts.

Chemistry

Green et al. (1975) reported an analysis of 72135 by electron probe of 18 glass fragments from 72135 (table 1).

Moore and Lewis (1976) reported 12 ppm carbon and 49 ppm nitrogen.

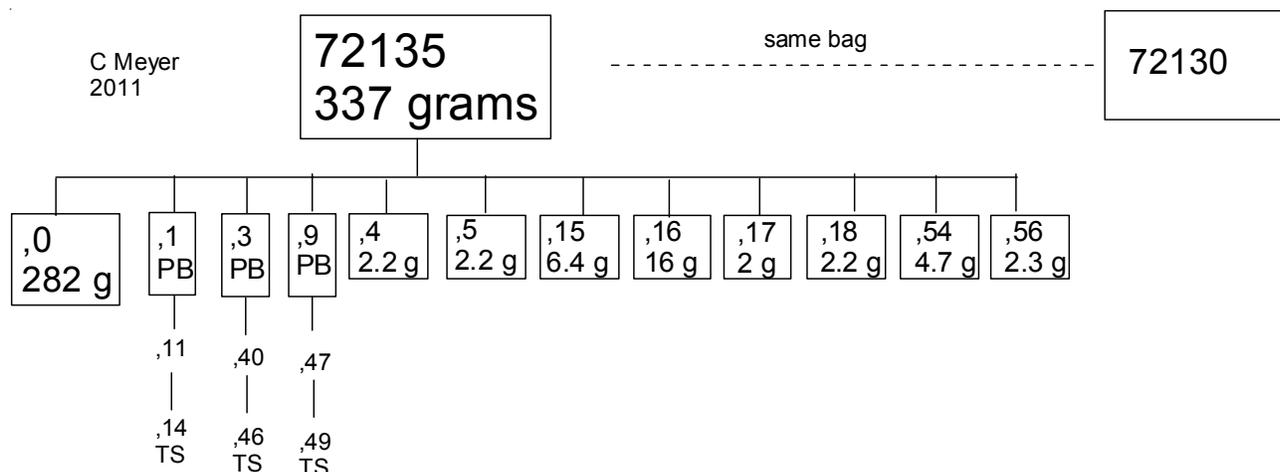
Other Studies

Numerous experimental studies were based on the composition of this rock (Green et al. 1975; O'Hara and Humphries 1975; Longhi et al. 1978).

Processing

72135 was collected along with a large soil sample (72130-72134) and returned in the same bag (26E).

There are 13 thin sections of this ugly rock.



References for 72135

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