

60525 – 12.8 grams
Impact Melt Breccia

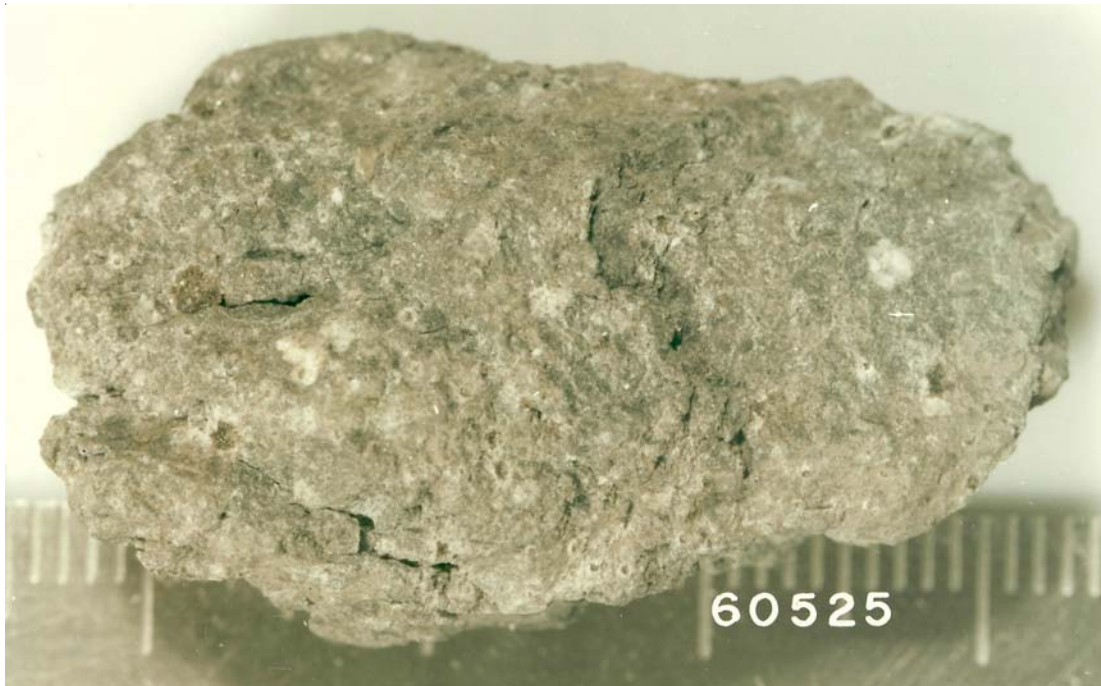


Figure 1: This little potato is about 4 cm long. S73-20495

Introduction

60525 was collected as a rake sample – see section on 60501.

Petrography

Warner et al. (1976) described 60525 as heterogeneous, with half of matrix with poikilitic texture and half with subophitic texture. There are numerous inclusions of plagioclase and lithic fragments (figure 2). Minor minerals include metallic iron (9% Ni), zircon, spinel and a K-rich phase. Pyroxenes are not equilibrated (figure 3).

Chemistry

Warner et al. (1976), McKinley et al. (1983) and possibly Korotev (1994) determined the chemical composition of 60525 (table).

Processing

There is only one thin section of 60525.

References for 60525

- Butler P. (1972a) Lunar Sample Information Catalog Apollo 16. Lunar Receiving Laboratory. MSC 03210 Curator's Catalog. pp. 370.
- Hunter R.H. and Taylor L.A. (1981b) Rust and schreibersite in Apollo 16 highland rocks: Manifestations of volatile-element mobility. *Proc. 12th Lunar Planet. Sci. Conf.* 253-259.
- LSPET (1973b) The Apollo 16 lunar samples: Petrographic and chemical description. *Science* **179**, 23-34.
- LSPET (1972c) Preliminary examination of lunar samples. *In* Apollo 16 Preliminary Science Report. NASA SP-315, 7-1—7-58.
- McKinley J.P., Taylor G.J., Keil K., Ma M.-S. and Schmitt R.A. (1984) Apollo 16: Impact sheets, contrasting nature of the Cayley Plains and Descartes Mountains, and geologic history. *Proc. 14th Lunar Planet. Sci. Conf.* in *J. Geophys. Res.* **89**, B513-B524.
- Ryder G. and Norman M.D. (1980) Catalog of Apollo 16 rocks (3 vol.). Curator's Office pub. #52, JSC #16904

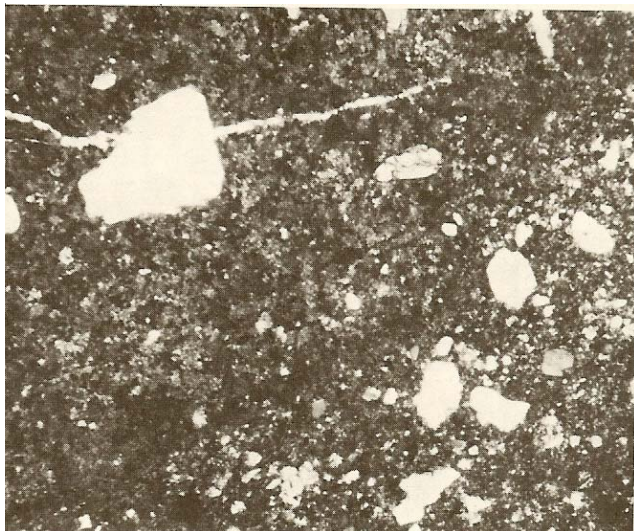


Figure 2: Photo of thin section of 60525 (Warner et al. 1976).

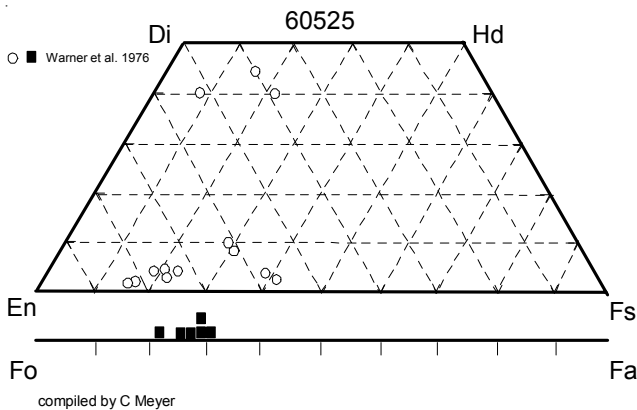
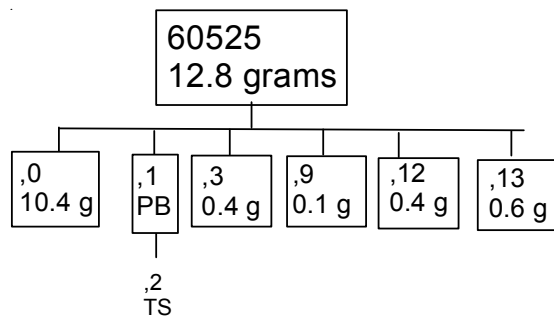


Figure 3: Composition of olivine and pyroxene in 60625 (from Warner et al. 1976).



Warner R.D., Dowty E., Prinz M., Conrad G.H., Nehru C.E. and Keil K. (1976c) Catalog of Apollo 16 rake samples from the LM area and station 5. Spec. Publ. #13, UNM Institute of Meteoritics, Albuquerque. 87 pp.

Table 1. Chemical composition of 60525

reference weight	Warner 76	Korotev94 1F	
SiO ₂ %	46.1	(a)	
TiO ₂	1.05	(a)	
Al ₂ O ₃	21.2	(a)	
FeO	7.2	(a)	8.03 (b)
MnO	0.08	(a)	
MgO	9.3	(a)	
CaO	12.9	(a)	12.7 (b)
Na ₂ O	0.64	(a)	0.53 (b)
K ₂ O	0.27	(a)	
P ₂ O ₅	0.26	(a)	
S %			
sum			
Sc ppm		14.3	(b)
V			
Cr	960	(a)	1160 (b)
Co			40 (b)
Ni			570 (b)
Cu			
Zn			
Ga			
Ge ppb			
As			
Se			
Rb		9.7	(b)
Sr		179	(b)
Y			
Zr		730	(b)
Nb			
Mo			
Ru			
Rh			
Pd ppb			
Ag ppb			
Cd ppb			
In ppb			
Sn ppb			
Sb ppb			
Te ppb			
Cs ppm		0.43	(b)
Ba		474	(b)
La		50.3	(b)
Ce		131	(b)
Pr			
Nd		78	(b)
Sm		22.9	(b)
Eu		1.86	(b)
Gd			
Tb		4.59	(b)
Dy			
Ho			
Er			
Tm			
Yb		15.5	(b)
Lu		2.09	(b)
Hf		17.3	(b)
Ta		1.86	(b)
W ppb			
Re ppb			
Os ppb			
Ir ppb		12.7	(b)
Pt ppb			
Au ppb		11.5	(b)
Th ppm		8.2	(b)
U ppm		2.09	(b)

technique: (a) broad beam e probe, (b) Randy's strange average