

67947

Granulitic Breccia

2.43 grams

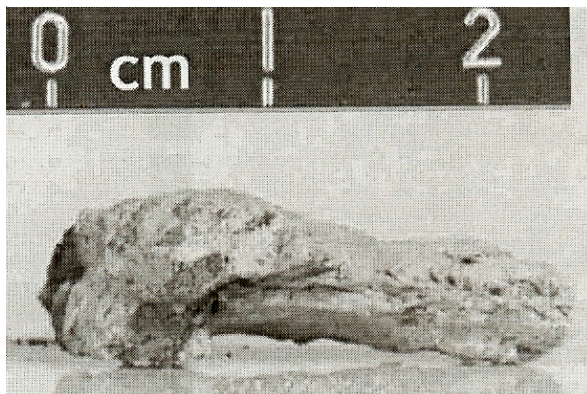


Figure 1: Photo of 67947. S72-38977.

Introduction

Sample 67947 is a “walnut” from soil 67941. Stoffler et al. (1985) classified 67947 as a granulitic breccia, after looking at a thin section and measuring its REE content (figure 2). There is only one thin section.

References for 67947

Butler P. (1972a) Lunar Sample Information Catalog Apollo 16. Lunar Receiving Laboratory. MSC 03210 Curator’s Catalog. pp. 370.

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.

Ryder G. and Norman M.D. (1980) Catalog of Apollo 16 rocks (3 vol.). Curator’s Office pub. #52, JSC #16904

Stöffler D., Bischoff A., Borchardt R., Burghele A., Deutsch A., Jessberger E.K., Ostertag R., Palme H., Spettel B., Reimold W.U., Wacker K. and Wanke H. (1985) Composition and evolution of the lunar crust in the Descartes highlands. *Proc. 15th Lunar Planet. Sci. Conf.* in *J. Geophys. Res.* **90**, C449-C506.

Sutton R.L. (1981) Documentation of Apollo 16 samples. In *Geology of the Apollo 16 area, central lunar highlands.* (Ulrich et al.) U.S.G.S. Prof. Paper 1048.

Mineralogical Mode 67947

Stoffler et al. 1985

Plagioclase	87%
Pyroxene	11
Olivine	1.3
Opakes	0.7

Table 1. Chemical composition 67947

reference	Stoffler85	
weight		
SiO ₂ %	42.93	(a)
TiO ₂	0.41	(a)
Al ₂ O ₃	31.97	(a)
FeO	2.54	(a)
MnO		
MgO	1.8	(a)
CaO	17.58	(a)
Na ₂ O	0.57	(a)
K ₂ O	0.07	(a)
P ₂ O ₅	0.03	(a)
S %		
sum		
Sc ppm	6.74	(b)
Co	7.15	(b)
Ni	40	(b)
Ba	65	(b)
Sm	1.81	(b)
Yb	1.41	(b)
technique	(a) DBA, (b) INAA	

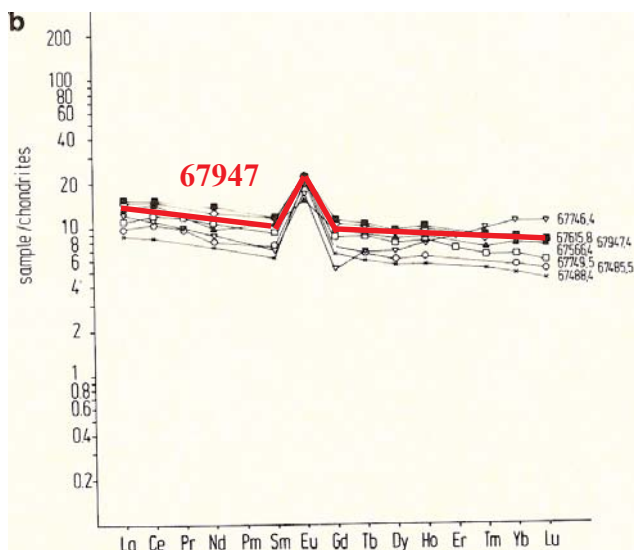


Figure 2: Normalized REE diagrams for granulitic breccias (Stoffler et al. 1985).



Figure 3: Photomicrograph of thin section 67947,3. 2 mm across