

74247**High-Ti Basalt****7.76 g, 2.7 x 1.5 x 1 cm****INTRODUCTION**

74247 has been described as a dark grayish black, fine-grained to aphanitic basalt (Apollo 17 Lunar Sample Information Catalog, 1973) (Fig. 1). The two broad surfaces have 35% to 60% vugs lined with euhedral needles and plates of ilmenite. The thin edges have ~10% similar cavities. The surface is generally smooth, except for vuggy areas; it is partially coated with dust. The rock texture is homogeneous and the vugs are distributed in layers. 74247 has an angular, wedge shape with one or two penetrative fractures. This sample was collected from Station 4.

PETROGRAPHY AND MINERAL CHEMISTRY

Ma et al. (1979) tentatively classified 74247 as a olivine-microporphyrific ilmenite basalt. Warner et al. (1979) only described 74247 in general terms under their Type C basalts, combining mineral analyses of both 74245 and 74247 into histograms. No thin section of 74247 was available during the preparation of this catalog.

WHOLE-ROCK CHEMISTRY

Ma et al. (1979) and Warner et al. (1979) reported the same

whole-rock analysis for 74247 (Table 1), with Warner et al. defining 74247 as a Type C Apollo 17 high-Ti basalt. These authors reported a TiO_2 content of 74247 as 12.3 wt% with a MG# of 45.3. The REE profile is LREE depleted with a maximum at Sm (Fig. 2). Tb to Lu are approximately constant at 40 times chondritic values. A negative Eu anomaly is present $[(\text{Eu}/\text{Eu}^*)\text{N} = 0.57]$.

PROCESSING

Of the original 7.76g of 74247, 0, a total of 7.11 g remains. 74247, 1 was used for INAA, and thin section, 5 was taken from this irradiated sample.

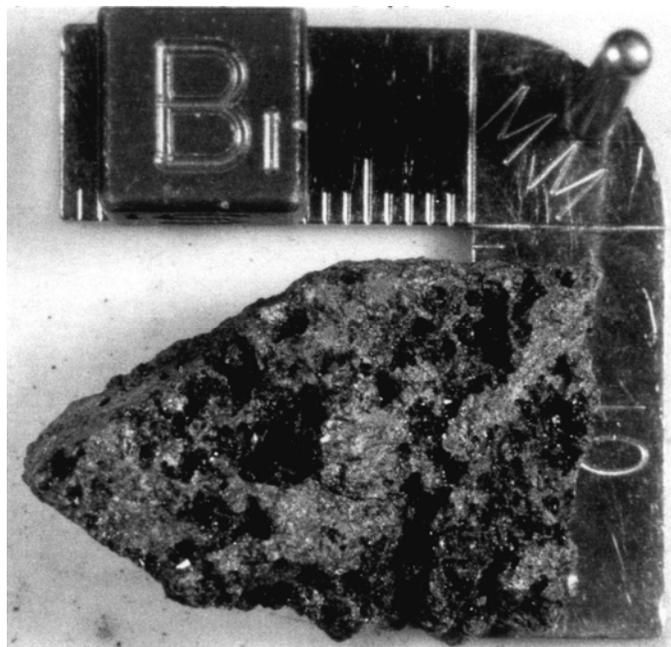


Figure 1: Hand specimen photograph of 74247.

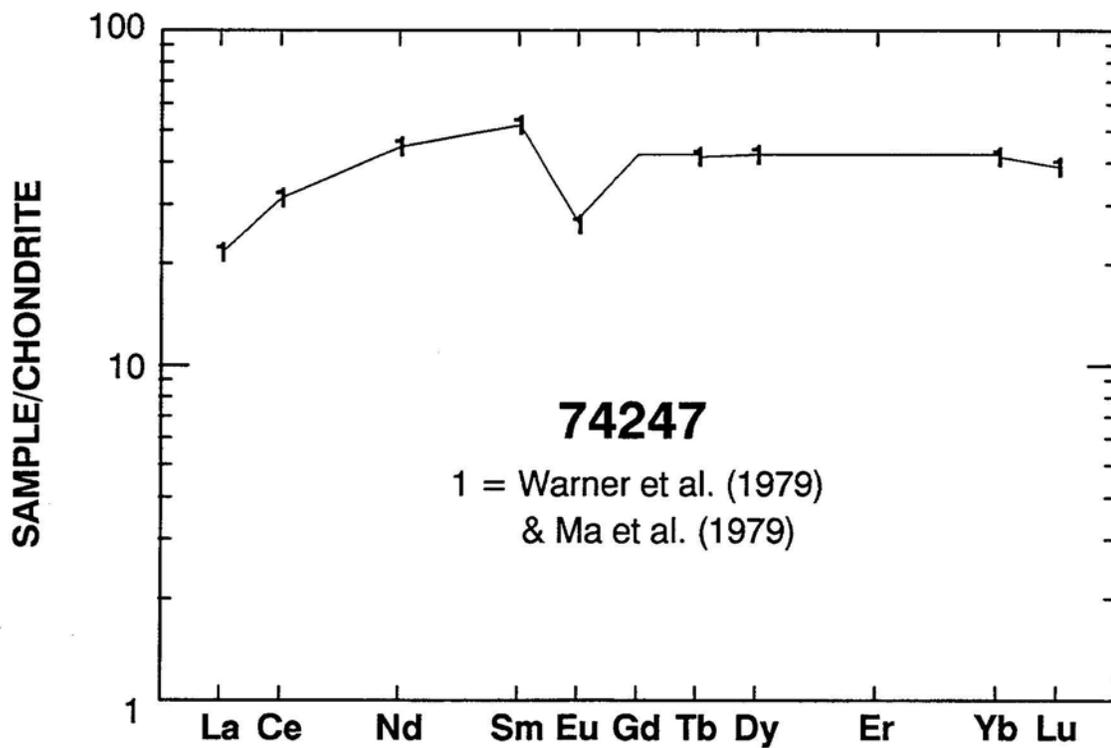


Figure 2: Chondrite-normalized rare-earth-element profile of 74247.

Table 1: Whole-rock chemistry of 74247.
 Data from Ma et al. (1979) and Warner et al. (1979) (same analysis).

Sample 74247,1 Method N		Sample 74247,1 Method N	
SiO ₂		Cu	
TiO ₂	12.3	Ni	
Al ₂ O ₃	8.6	Co	22
Cr ₂ O ₃	0.643	V	140
FeO	19.4	Sc	77
MnO	0.238	La	7.1
MgO	9	Ce	27
CaO	9.5	Nd	28
Na ₂ O	0.381	Sm	10.5
K ₂ O	0.083	Eu	2.01
P ₂ O ₅		Gd	
S		Tb	2.4
Nb (ppm)		Dy	16
Zr		Er	
Hf	9.0	Yb	9.1
Ta	2.0	Lu	1.31
U		Ga	
Th		F	
W		Cl	
Y		C	
Sr		N	
Rb		H	
Li		He	
Ba		Ge (ppb)	
Analysis by: N = INAA.		Ir	
Cs Analysis by: N = INAA.		Au	
Be		Ru	
Zn		Os	
Pb			

Analysis by: N = INAA.