

79115**Medium Gray Soil Breccia
346.3 g, 5 x 7.5 x 9.5 cm****INTRODUCTION**

79 115 was described as a lumpy, generally fine-grained, friable basalt, with intense platy fracturing, particularly on the west face (Apollo 17 Lunar Sample Information Catalog, 1973). The fracturing has imparted a foliated appearance to this sample (Figs. 1 and 2). All surfaces on the original sample were irregular and all are relatively fresh with only minor soil adherence on T. A few zap pits were present on T and B.

**PETROGRAPHY AND
MINERAL CHEMISTRY**

No petrography or mineral chemistry has been reported for 79115.

WHOLE-ROCK CHEMISTRY

The whole-rock chemistry was determined by Jerde et al. (1987). These authors reported a MG# of 58.5 and a TiO₂ content of 5.03 wt%. The REE profile is flat at approximately 25-30 x

chondrites for the LREE and 20-25 x chondrites for the HREE (Fig. 3). A negative Eu anomaly is present ($(Eu/Eu^*)_N = 0.68$). In addition to the major and trace elements, Jerde et al. (1987) also reported the I_S/FeO value of 56 for 79115 and a Fe^o concentration of 0.97 ewp (Table 1). The I_S/FeO value was also reported by McKay et al. (1988). Jovanovic and Reed (1980) reported the Cl and P₂O₅ concentrations in 79115 (Table 1).



Figure 1: Hand specimen photograph of 79115,0.



Figure 2: Hand specimen photograph of 79115,0.

PROCESSING

Of the original 346.38 of 79115,0, approximately 182g remains. The next largest subsample is, 15 (~1088) and, 1 (~22g). Three thin sections are available: 79115,18-,20.

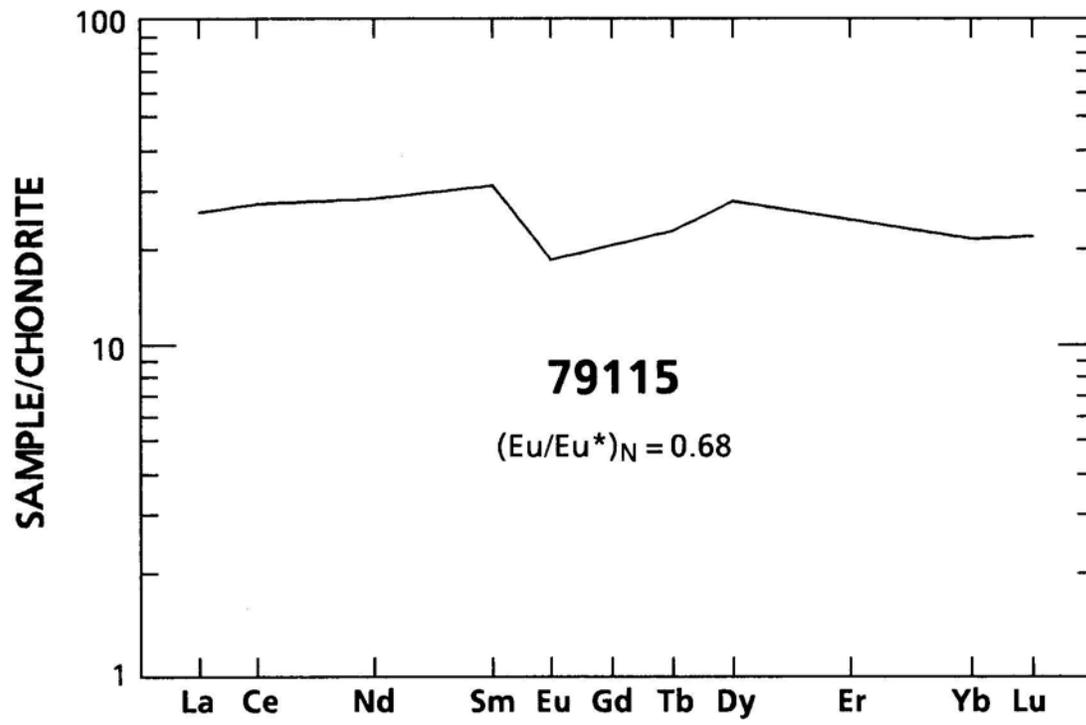


Figure 3: Chondrite-normalized rare earth element profiles of 79115.

Table 1: Whole-rock chemistry of 79115.

	Sample ,37 Method N Reference 1	Sample ,25 Reference 2	Sample ,32 Method A Reference 3
SiO ₂	42.37		
TiO ₂	5.03		
Al ₂ O ₃	14.97		
Cr ₂ O ₃	0.352		
FeO	13.16		
MnO	0.195		
MgO	10.41		
CaO	10.96		
Na ₂ O	0.466		
K ₂ O	0.098		
P ₂ O ₅			0.02
S			
Nb (ppm)			
Zr	200		
Hf	4.5		
Ta	0.66		
U	0.43		
Th	1.25		
W			
Y			
Sr	170		
Rb	<9.2		
Li			
Ba	113		
Cs	<0.55		
Be			
Zn			
Pb			
Cu			
Ni	190		
Co	36.3		
V			
Sc	37.2		
Cr	2410		
La	8.8		
Ce	24		
Nd	18		

Table 1: (Concluded).

	Sample ,37 Method N Reference 1	Sample ,25 Reference 2	Sample ,32 Method A Reference 3
Sm	6.3		
Eu	1.41		
Gd			
Tb	1.35		
Dy	9.8		
Er			
Yb	4.9		
Lu	0.76		
Ga	7.0		
F			
Cl			2
C			
N			
H			
He			
Ge (ppb)			
Ir	6.7		
Au	1.6		
I _g /FeO	56	56	
DH (Gauss)	880		
Fe ^o (ewp)	0.97		

Analysis by: N = INAA, A = atomic absorption

1 = Jerde et al. (1987); 2 = McKay et al. (1988); 3 = Jovanovic and Reed (1980).