

78596**High-Ti Mare Basalt****7.55 g, 2.0 x 1.5 x 1.5 cm****INTRODUCTION**

Sample 78596 is a dark grey, fine-grained mare basalt from the large rake sample at Station 8 (Fig. 1).

PETROGRAPHY

Sample 78596 has slightly resorbed euganite olivine phenocrysts. The fine-grained groundmass has a variolitic texture (Fig. 2).

MINERAL CHEMISTRY

Warner et al. (1978f) have determined the chemical compositions of the minerals in 78596 (Fig. 3).

WHOLE-ROCK CHEMISTRY

Murali et al. (1977b) have reported the chemical composition of 78596 (Table 1 and Fig. 4). This analysis may need to be repeated because the Ce seems too high.

Sample 78596 is a Type A Apollo 17 basalt (see appendix).



Figure 1: Photograph of 78596. Scale is 1 cm. S73-21037.

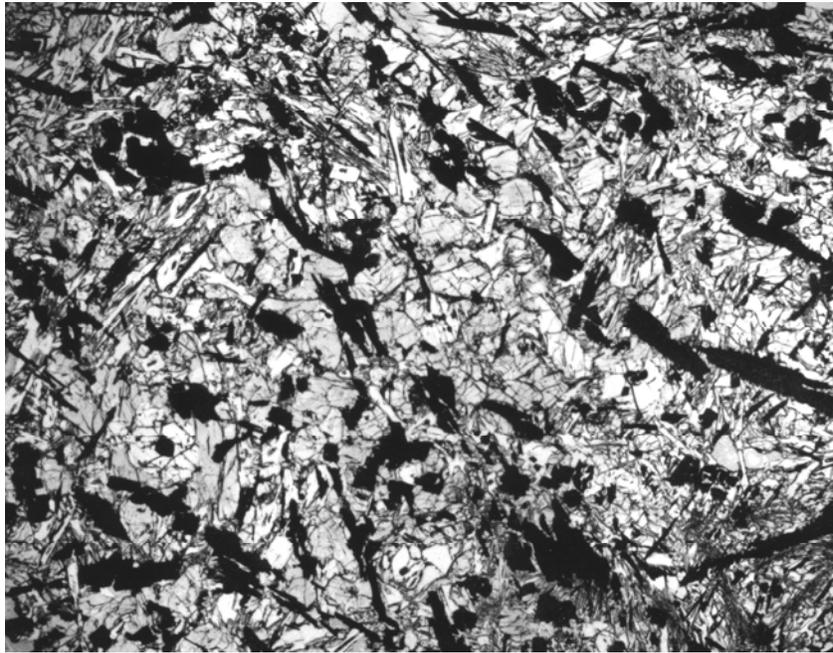


Figure 2: Photomicrograph of thin section 78596,6. Field of view is 3 x 4 mm.

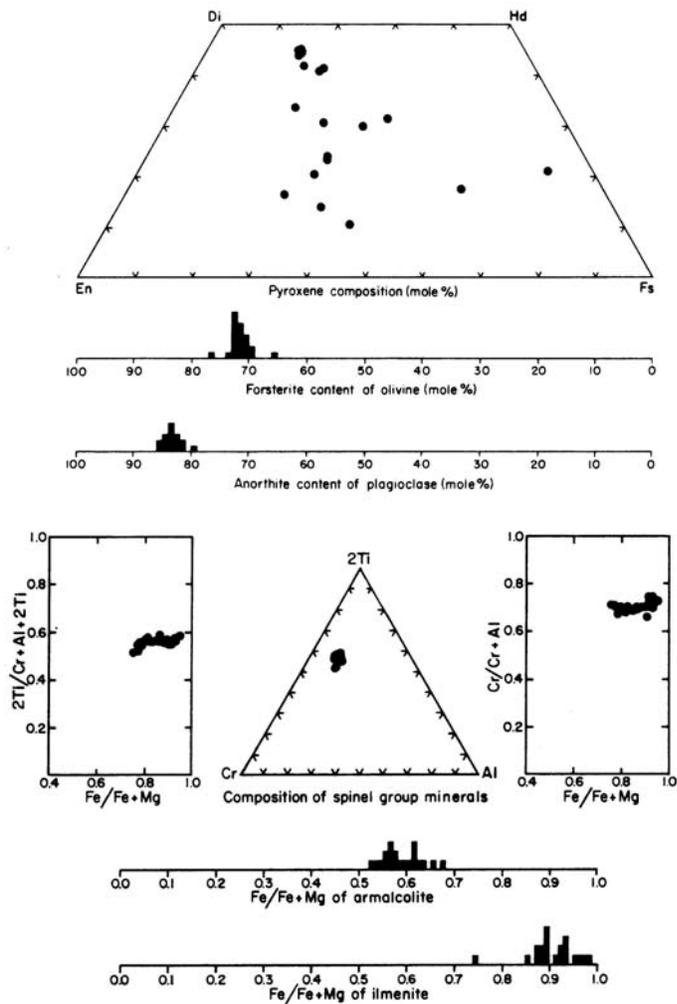


Figure 3: Mineral compositions for 78596. From Warner et al. (1978f).

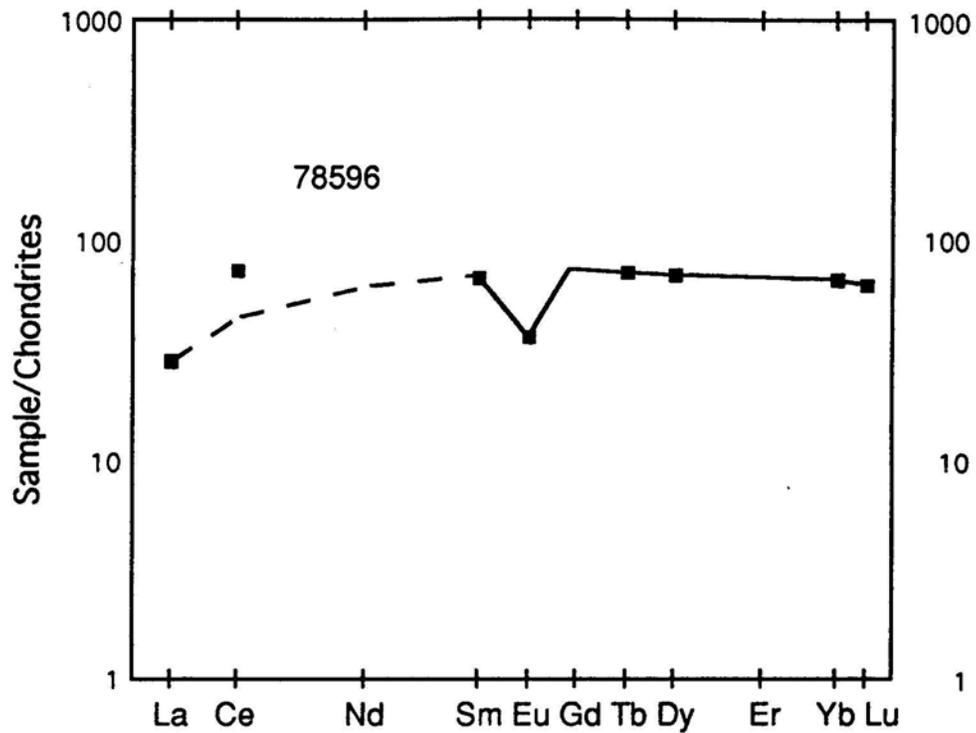


Figure 4: Normalized rare earth element diagram of 78596. Data from Murali et al. (1977b).

Table 1: Whole-rock chemistry of 78596.
From Murali et al. (1977b)

Split Technique	INAA
SiO ₂ (wt%)	–
TiO ₂	11.5
Al ₂ O ₃	8.4
Cr ₂ O ₃	0.424
FeO	19.5
MnO	0.24
MgO	8.1
CaO	10.4
Na ₂ O	0.37
K ₂ O	0.065
Nb (ppm)	
Hf	9.6
Ta	1.8
Co	18.2
Sc	79
La	6.8
Ce	45
Nd	
Sm	10.1
Eu	2.08
Gd	
Tb	2.6
Dy	17
Er	
Yb	10.6
Lu	1.51
Ge (ppb)	
Ir	
Au	