

78598**High-Ti Mare Basalt****224.1 g, 8.6 x 4.5 x 4.5 cm****INTRODUCTION**

Sample 78598 is a dark grey, aphanitic mare basalt from the large rake sample at Station 8 (Fig. 1).

PETROGRAPHY

Thin sections of 78598 reveal a dendritic network of evenly spaced,

fine ilmenite crystals separated by feathery pyroxene crystals and glassy mesostasis (Figs. 2 and 3).

MINERAL CHEMISTRY

Warner et al. (1978f) have determined the chemical compositions of the minerals in 78598 (Fig. 4).

WHOLE-ROCK CHEMISTRY

Laul et al. (1975b) and Warner et al. (1975b) have reported the chemical composition of 78598 (Table 1 and Fig. 5).

The high Hf content indicates that 78598 is a Type A Apollo 17 basalt (see appendix).



Figure 1: Photograph of 78598. Scale is 1 cm. S73-21770.

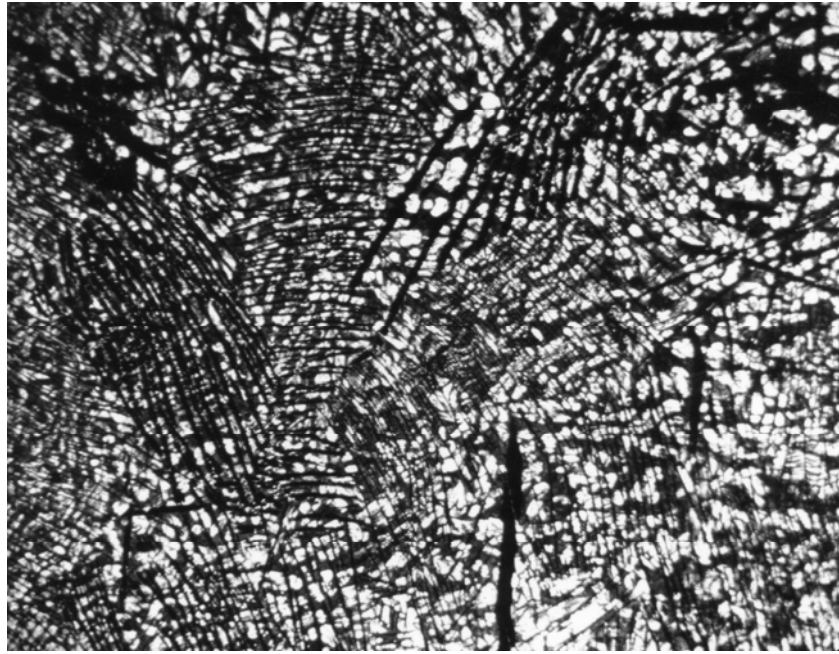


Figure 2: Photomicrograph of thin section 78598,5. Field of view is 3 x 4 mm.

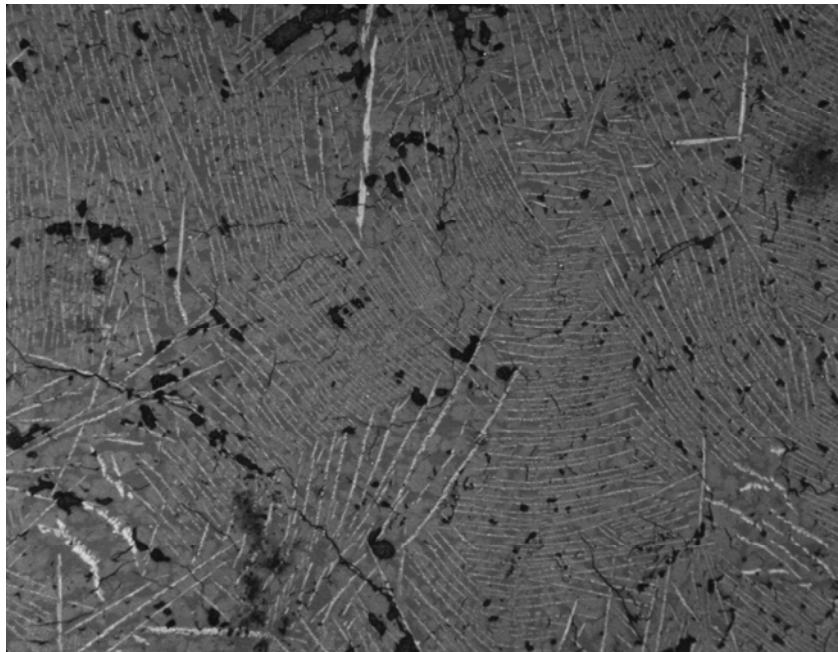


Figure 3: Photomicrograph in reflected light of same area as Fig. 2.

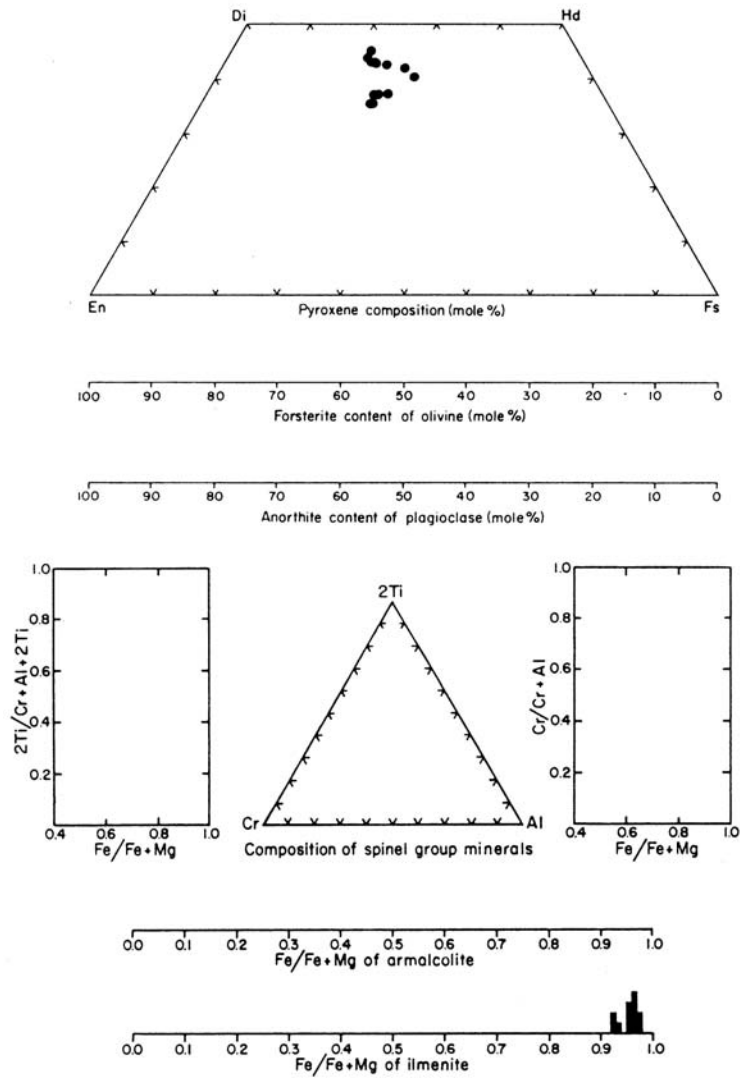


Figure 4: Mineral compositions for 78598. From Warner et al. (1978f).

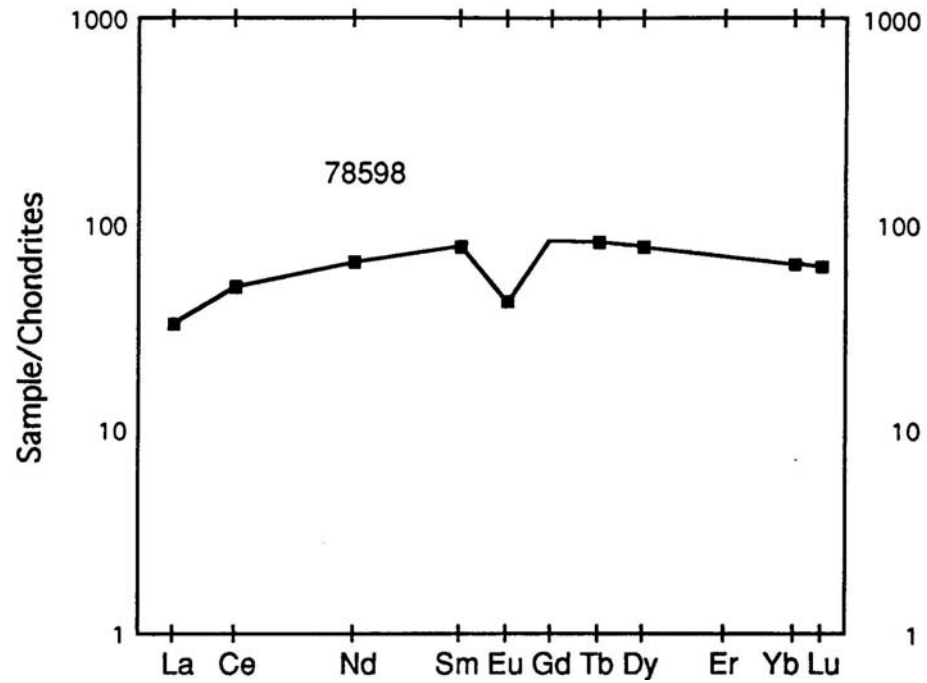


Figure 5: Normalized rare earth element diagram of 78598. Data from Warner et al. (1975b).

Table 1: Whole-rock chemistry of 78598.
From Warner et al. (1975b).

Split Technique	3 INAA
SiO ₂ (wt%)	–
TiO ₂	8.9
Al ₂ O ₃	10
Cr ₂ O ₃	0.2
FeO	18.5
MnO	0.246
MgO	5.2
CaO	11.5
Na ₂ O	0.44
K ₂ O	0.075
Nb (ppm)	
Hf	9.7
Ta	1.8
Co	15
Sc	72
La	7.8
Ce	30
Nd	30
Sm	11.6
Eu	2.4
Gd	
Tb	3
Dy	19
Er	
Yb	10.3
Lu	1.5
Ge (ppb)	
Ir	
Au	