

**78577****High-Ti Mare Basalt****8.84 g, 3.0 x 1.7 x 1.1 cm****INTRODUCTION**

Sample 78577 was collected as part of the large rake sample at Station 8 (Keil et al., 1974). This sample is a coarse-grained, vuggy, ilmenite-rich mare basalt (Fig. 1).

**PETROGRAPHY**

The texture of mare basalt 78577 was controlled by coprecipitation of

pyroxene and plagioclase which surrounded the ilmenite and olivine phenocrysts (Fig. 2).

**MINERAL CHEMISTRY**

The compositions of minerals in 78577 have not been determined.

**WHOLE-ROCK CHEMISTRY**

Ma et al. (1979) have reported the chemical composition of 78577 (Table 1 and Fig. 3). This REE pattern is typical of Apollo 17 high-Ti basalts.

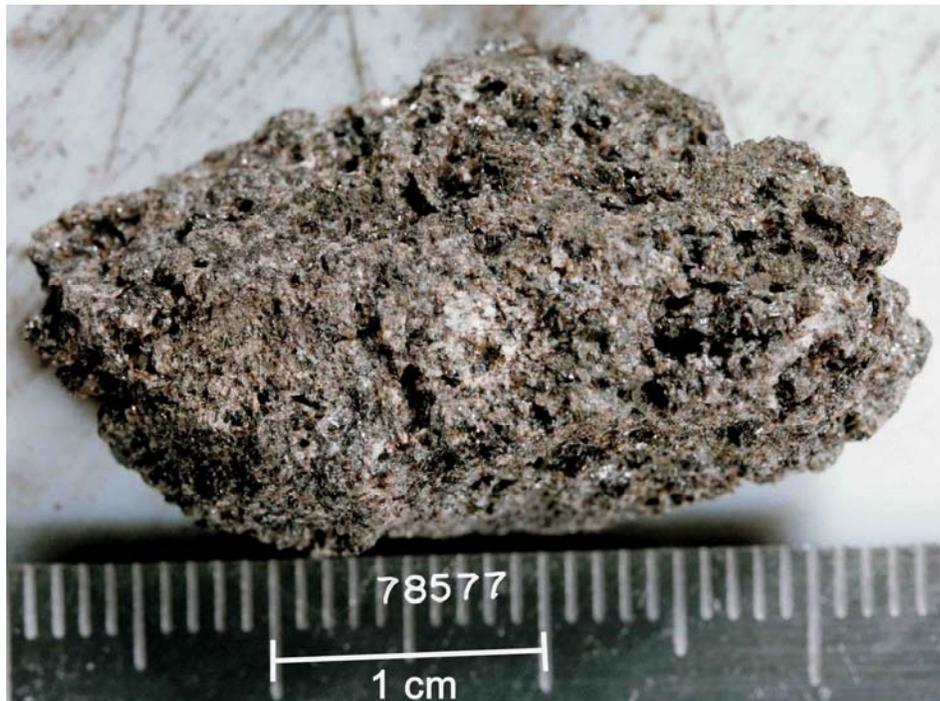


Figure 1: Photograph of 78577. Scale is 1 cm. S73-21034.

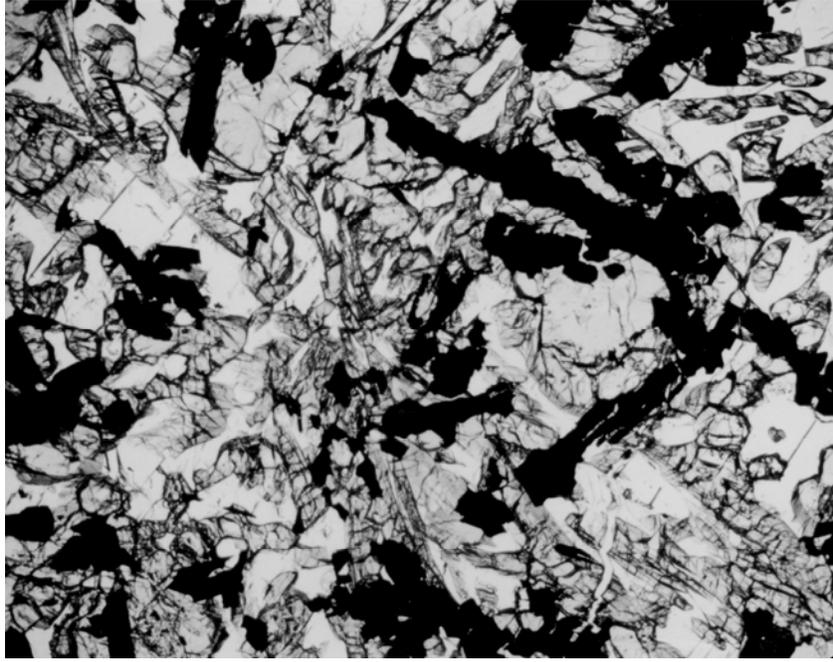


Figure 2: Photomicrograph of thin section 78577,4. Field of view is 3 x 4 mm.

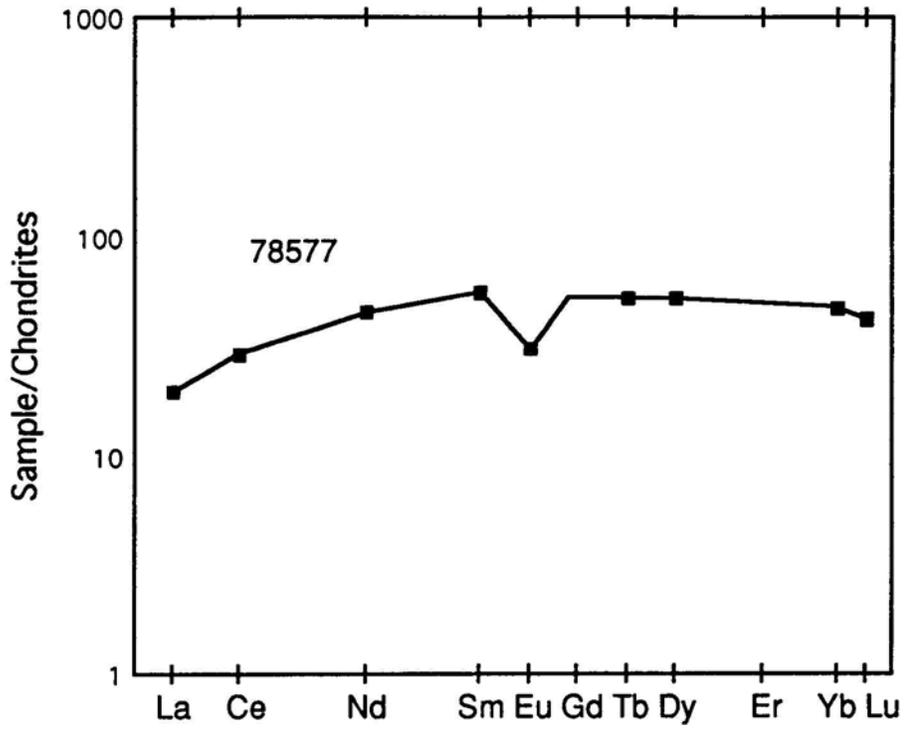


Figure 3: Normalized rare earth element diagram of 78577. Data from Ma et al. (1979).

**Table 1: Whole-rock chemistry of 78577.**  
From Ma et al. (1979).

<b>Split Technique</b>	<b>,1 INAA</b>
SiO <sub>2</sub> (wt%)	–
TiO <sub>2</sub>	12.1
Al <sub>2</sub> O <sub>3</sub>	8.8
Cr <sub>2</sub> O <sub>3</sub>	0.424
FeO	18.9
MnO	0.244
MgO	9
CaO	10.6
Na <sub>2</sub> O	0.416
K <sub>2</sub> O	0.051
Nb (ppm)	
Zr	
Hf	7.2
Ta	1.5
Co	20
Sc	82
La	4.7
Ce	18
Nd	21
Sm	8.3
Eu	1.73
Gd	
Tb	1.9
Dy	13
Er	
Yb	7.6
Lu	1.04
Ge (ppb)	
Ir	
Au	