

Northwest Africa 5744

Anorthositic granulitic breccia

170 g



Figure 1: Image taken of NWA 5744 ; sample is approximately 5 cm in width.

Introduction

NWA 5744 was found near Gawa, Mali, in February 2009 (Fig. 1; Weisberg et al., 2009). It is a single light tan colored, and rounded, stone without fusion crust. Small white clasts are visible in a pale, finer grained matrix.

Petrography and chemistry

NWA 5744 is a recrystallized breccia composed mainly of plagioclase (up to 100 μm) with fine-grained (<50 μm) olivine, pigeonite, orthopyroxene, and accessory Ti-chromite and Ni-bearing troilite (Fig. 2; Weisberg et al., 2009). Plagioclase is $\text{An}_{97.9}\text{Or}_{0.1}$, olivine is $\text{Fa}_{20.7}$, with $\text{FeO}/\text{MnO} = 76.9\text{--}94.5$, and pigeonite is $\text{Fs}_{16.6}\text{Wo}_{9.7}$, with $\text{FeO}/\text{MnO} = 50$. INAA analysis on a 185 mg fragment gave FeO 5.7 wt%, Na_2O 0.25 wt%; Sc 8.3, Cr 1050, La 1.1, Sm 0.47, Eu 0.58, Yb 0.42, Th 0.15, all in ppm (Korotev et al., 2009a; Weisberg et al., 2009).



Figure 2: Slice through NWA 5744 showing its fine grained texture (photo courtesy of Ted Bunch).

Radiogenic age dating

None yet reported.

Cosmogenic isotopes and exposure ages

None yet reported.

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