

**MICROSTRUCTURAL CHARACTERIZATION OF A PROBABLE ITUTINGA METEORITE FRAGMENT**

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The School of Mines Museum of Science and Technic of the Federal University of Ouro Preto has, in its collection, an iron meteorite fragment weighing 110,76g named Itumirim. It was found near Itutinga, a village distant 228km from Belo Horizonte in the state of Minas Gerais, where the meteorite was found Itutinga<sup>1</sup>. SEM analysis, coupled with EDS (Energy Dispersive Spectrometry) allowed to determine the structural class of the studied Itumirim fragment as being medium octahedrite, Om. The width of lamellar kamacite this meteorite about 1.0mm, consistent with the lamellae of the meteorite Itutinga<sup>2</sup>. The mineralogical phases kamacite ( $\alpha$ -FeNi) and taenite ( $\gamma$ -FeNi) were determined using EDS and Mössbauer Spectrometry (Miniaturized Mössbauer Spectrometer - MIMOS II<sup>3</sup>). These studies provided informations allowing to classify the meteorite as belonging to the IIIAB group, the same classification as the Itutinga<sup>1</sup> meteorite. So probably this fragment is part of the meteorite Itutinga.

**References:** [1] Buchwald, V. F. Handbook of Iron Meteorites, Their History, Distribution, Composition, and Structure. Berkeley: University of California Press, 3V., 1418p., 1975. [2] Grady, M. M (Editor). Catalogue of Meteorites. Cambridge: Cambridge University Press, 689 p., 2000. [3] Klingelhofer, G. et al., Athena MIMOS II Mössbauer spectrometer investigation, Journal of Geophysical Research, Vol. 108, N. E12, 8067, doi:10.1029/2003JE002138, 2003.