SULFUR AND STRONTIUM ISOTOPIC COMPOSITION OF THE BARITE ORE FROM ITAPURA, BAHIA, BRAZIL.

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The Itapura mine is one of the major barite producers of Brazil, with reserves in excess of 500,000 tons of ore. It is located in the central-north region of Bahia State, to the northeastern portion of the São Francisco craton, enclosed in a metasedimentary sequence of the Archean Mundo Novo greenstone belt. The barite ore occurs as lenses and veins hosted by biotite-chlorite schists flanked by quartzite. There are three major orebodies exposed along strike-length of about 1,200 m. The main orebody strikes N 30º E for about 500 m, and dips around 50º SE, with thickness varying from 2 to 13 m. Small lenses of tremolite-schist occur in close association with the barite.Sulfur isotope measurements were obtained in the MS lab of the University of Calgary in three samples of barite ore, which contains d34S (‰) varying between +10,1 to +10,6. The Sr isotope composition of four barite ore have been measured in MS lab of the São Paulo University, and the Sr87/Sr86 ratios showed values between 0.7052 and 0.7077. These results suggest a sedimentary exhalative origin for barite deposit from Itapura. The origin of barium could be related at least in part to some volcanic source.