FERRIMOLYBDITE IN DIVINO DE UBÁ PEGMATITE, MINAS GERAIS, BRAZIL

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Introduction

Ferrimolybdite is a hydrated ferric molybdate, with an uncertain water content, probably $Fe_2(MoO_4)_3 \cdot 8H_2O$ (PALACHE *et al.,* 1957). It is a secondary mineral, commonly formed by the alteration of molybdenite (PALACHE *et al.,* 1957). Ferrimolybdite was found as a greenish yellow coating on well-developed crystals of samarskite and euxenite in Divino de Ubá pegmatite, in southeast of Minas Gerais State, Brazil. The samples were obtained from the collection of the Geology Department, of the School of Mines, Federal University of Ouro Preto.

Experimental

In order to perform elemental analysis, a sample of greenish yellow material found in Divino de Ubá pegmatite was investigated using a JEOL-JSM840A scanning electron microscope (SEM). The SEM analysis in the EDS (electron dispersive spectrometer) mode was obtained with variable operating conditions of current and voltage. Fragments of crystals were prepared on carbon tape in a copper stub.

Results

SEM analysis of the sample, combined with EDS confirmed that it contains iron and molybdenum (Fig. 1). Such result could be interpreted as ferrimolybdite, but more accurate chemical composition and diffraction data would lead to better description of this extremely rare mineral species.

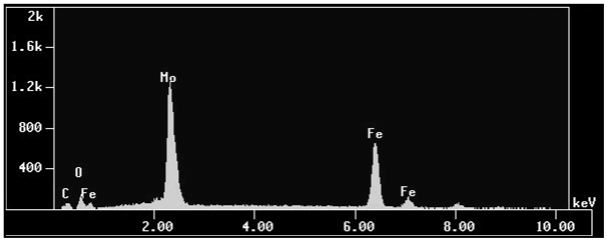

Fig. 1. *EDS spectrum of ferrimolybdite.*

Discussion and conclusion

Ferrimolybdite is usually found in the oxidized portions of hydrothermal vein and porphyry-type molybdenum-bearing deposits (ANTHONY *et al.,* 2003). Such a yellow coating is frequently found on sulphide ores of molybdenum (KERR *et al.,* 1963). Although molybdenite is a common mineral in Brazilian emerald deposits (GIULIANI *et al.,* 1994), but molybdenum rich mineral species are uncommon in granitic pegmatites. This is the first report of ferrimolybdite from Brazilian pegmatites.

References

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