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PŮVODNÍ PRÁCE/ORIGINAL PAPER

Minerály řady bavenit-bohseit z pegmatitu Schinderhübel I v Maršíkově (silezikum, Česká republika)

Minerals of the bavenite-bohseite series from the Schinderhübel I pegmatite in Maršíkov (Silesicum, Czech Republic)

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Abstract

Bavenite and bohseite were found in an archive sample from Schinderhübel I granitic pegmatite, situated ca. 50 m NE from the famous chrysoberyl-bearing pegmatite body Schinderhübel III near Maršíkov (Silesicum, Czech Republic). Minerals of the bavenite-bohseite series together with minor quartz, muscovite and albite form chalky white radial aggregates up to 3.5 cm in size within a fissure cutting the pegmatite. The electron microprobe data revealed 29.0 - 65.4 mol. % of bavenite component, 0.03 - 0.12 *apfu* Na and 0.05 - 0.20 *apfu* F. Bavenite seems to be older than bohseite in the studied aggregate. The collected data suggest significant increase of Be/Al during growth of the studied aggregate, which could be explained in two ways. First, one can assume that different primary minerals with contrasting Be/Al ratios were dissolved during different stages of alteration (i.e., chrysoberyl in the early stage giving rise to bavenite-rich compositions and beryl during late stage giving rise to bohseite-rich members). Second, chemical fractionation of Be and Al due to complexation by fluoride anions is suggested from negative correlation between Al and F in the studied members of the bavenite-bohseite series. Identical behaviour is observed also in bavenite-bohseite from Piława Górna and Maršíkov D6e pegmatites, suggesting potential importance of fluoride complexation during hydrothermal stage of evolution of granitic pegmatites.

Key words: Schinderhübel, bohseite, bavenite, granitic pegmatites, hydrothermal alteration, Silesicum, Bohemian Massif

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