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PŮVODNÍ PRÁCE/ORIGINAL PAPER

## Axinit a doprovodné minerály z lokality Jezuitský rybník východně od Golčova Jeníkova (moldanubikum, Česká republika)

Axinite and associated minerals from the locality Jezuitský rybník E from Golčův Jeníkov (Moldanubicum, Czech Republic)

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### Abstract

A new occurrence of axinite at the locality Jezuitský rybník near Sirákovice (ENE from Golčův Jeníkov), situated in rocks of the Variegated (Drosendorf) Series (Moldanubian Zone of the Bohemian Massif), is a nice example of contaminated pegmatite in a Ca-skarn with intense superimposed hydrothermal overprint. Axinite [axinite-(Fe) to axinite-(Mg)] forms young hydrothermal infill of pocket/fissure in pegmatite cutting a brecciated Ca-skarn. The hydrothermal assemblage includes amphibole II (actinolite to ferro-actinolite), albite, K-feldspar II, chlorite, epidote (locally containing 0.20 - 0.30 *apfu* REE), muscovite and Al,F-enriched titanite (with up to 2 % SnO<sub>2</sub>) passing exceptionally to unnamed CaAlF-SiO<sub>4</sub>. Quartz, plagioclase (andesine), K-feldspar I and amphibole I (mostly K-rich or even potassian ferro-pargasite to ferro-tschermakite) originated in magmatic stage associated with intrusion of externally derived pegmatite melt. Sporadic garnet (grossular-rich almandine) represents relics of mineral assemblage of the host skarn. Dominance of Nd among REE in the REE-rich epidote is explained in terms of chemical fractionation of REE, probably caused by the presence of strong REE-complexing ligands (F<sup>-</sup>, OH<sup>-</sup> and/or CO<sub>3</sub><sup>2-</sup>) in aqueous fluids enriched in MREE/HREE due to alteration of garnet. With regard to the presence of B, Cr and elevated X<sub>Mg</sub> in some hydrothermal phases compared to the older Fe-Mg minerals, we suggest circulation of fluids affecting host rocks as well as additional rock types.

**Key words:** axinite, Ca-skarn, pegmatite, Sn-enriched titanite, Al,F-rich titanite, CaAlFSiO<sub>4</sub>, REE-rich epidote, hydrothermal alteration

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