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PŮVODNÍ PRÁCE/ORIGINAL PAPER

# Charakteristika mineralizace skarnového výskytu Mýtinka - Vysoká, Krušné hory, Česká republika

Mineral assemblage of a skarn occurrence Mýtinka - Vysoká, Krušné hory Mts., Czech Republic

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## Abstract

Two types of skarns and associated mineral veins were sampled at the Mýtinka - Vysoká skarn site near the Měděnec village (Krušné hory/Erzgebirge Mts., Czech Republic) and studied by means of BSE imaging and electron microprobe analyses. The Type I skarns composed mainly of garnet, epidote, and amphibole clearly prevail at the study site. In contrast, Type II skarn formed by garnet, biotite, and ca. 30 vol. % of magnetite is scarce. The mineral veins cutting skarn are composed of epidote, amphibole, albite, biotite, *phengitic* muscovite, chlorite, quartz, calcite, and K-felspar. The minerals from skarns and veins show the same chemical composition suggesting their coeval origin. In terms of mineral classification, garnets are represented exclusively by grossular (even in case of magnetite-rich skarn), amphiboles by magnesiohornblende, edenite, magnesiohastingsite and actinolite (often potassic and fluorian varieties are present), biotite by phlogopite, chlorites by *ripidolite*, clinocllore and *pennine*, epidote-group minerals by epidote, clinozoisite and allanite-(Ce). A predominance of Mg-endmembers of minerals suggests for a Mg-rich protolith of skarns, which was likely dolomite marble or crystalline dolomite. Both these carbonate rocks are tightly spatially associated with skarns at the study site. The newly found skarn-hosted gahnite probably represents a relic mineral originating from metacarbonate protolith; a Zn-rich spinel was formerly described from calcite dolomite at the study site. Accessory titanite hosted by skarn contains in places a high proportion of CaAlSiO<sub>4</sub>F component (up to 33 mol. %), which is the highest content reported from skarns of the Krušné hory Mts., and small contents of Sn (up to 0.007 *apfu*). The input of K, Sn, F, and Fe could indicate a source of skarnization fluids in the granitoid rocks.

**Key words:** Mýtinka, Krušné Hory Crystalline Complex, Bohemian Massif, skarn, epidote, amphibole

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