Minerálne inklúzie v beryle, živcoch a kremeni z granitového pegmatitu Moravany nad Váhom - Striebornica (Považský Inovec, západné Slovensko): chemické zloženie a genetické aspekty

Mineral inclusions in beryl, feldspars and quartz from the Moravany nad Váhom, Striebornica granitic pegmatite (Považský Inovec Mts., western Slovakia): composition and genetic aspects

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Abstract

Numerous microscopic inclusions of cassiterite, ferrotapiolite (?), „hydroxycalciomicrolite“, gahnite, magnetite, fluorapatite, barite, pyrite, sphalerite, galena, muscovite, and bertrandite or phenakite occur in coarse-grained beryl, microcline, albite and quartz from the core zone of the Moravany nad Váhom, Striebornica granitic pegmatite (western Slovakia). Anhedral cassiterite inclusions reveal near end-member composition (0.2 - 0.3 wt. % Nb_2O_5, ≤0.06 wt. % Ta_2O_5). Widespread gahnite inclusions in beryl contain high iron concentrations (14 to 18 wt. % FeO, 37 to 47 mol. % of hercynite), unusual for pegmatite environment. Uranoan „hydroxycalciomicrolite“ (7 - 9 wt. % UO_2) forms zonal crystals in quartz-microlite veinlets in beryl. Fluorapatite inclusions locally contain thin zones enriched in strontium (~2.3 wt. % SrO), whereas barite is usually Sr-rich (~3 to 6 wt. % SrO). The mineral inclusions originated from primary magmatic crystallization (gahnite, magnetite, fluorapatite, ferrotapiolite?, possibly barite and sulphide minerals) to hydrothermal stage of the pegmatite origin (cassiterite, bertrandite or phenakite, „hydroxylcalciomicrolite“, possibly barite and sulphide minerals).

Key words: *inclusions, cassiterite, gahnite, „hydroxycalciomicrolite“, barite, fluorapatite, beryl, granitic pegmatite, Moravany nad Váhom, Slovakia*