

# Polykras-(Y), uranopolykras a Ti-Nb-Ta-Fe minerál v kremenných žilách a exokontaktných zónach granitov gemerika, Slovenské rudohorie

Polycrase-(Y), uranopolycrase and Ti,Nb,Ta,Fe-mineral in quartz veins and exocontact zones of the Gemic granites, the Slovak Ore Mountains

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UHER P., MALACHOVSKÝ P., BAČÍK P., CHUDÍK P., ŠTEVKO M. (2009): Polykras-(Y), uranopolykras a Ti-Nb-Ta-Fe minerál v kremenných žilách a exokontaktných zónach granitov gemerika, Slovenské rudohorie. - *Bull. mineral.-petrolog. Odd. Nár. Muz. (Praha)* 17/1, 14-24. ISSN: 1211-0329.

## Abstract

Accessory polycrase-(Y), uranopolycrase and rutile-like Ti,Nb,Ta,Fe-mineral have been identified in quartz and quartz albite veins, and silicified phyllites in exocontact zones of tin-bearing granites of the Spiš-Gemer region, Slovak Ore Mountains, eastern Slovakia. Polycrase-(Y) is partly replaced by uranopolycrase and locally also by the Ti,Nb,Ta,Fe-phase. XRD investigation indicates partly metamict state of the polycrase-(Y) to uranopolycrase. EMPA compositions show wide variations in Y+REE, U+Th, Ca, Ti and Nb+Ta contents and a possible presence of  $\text{Ca}(\text{U,Th})(\text{Y,REE})_{-2}$ ,  $(\text{U,Th})\text{Ti}(\text{Y,REE})_{-1}(\text{Nb,Ta})_{-1}$ ,  $\text{Ca}(\text{Nb,Ta})(\text{Y,REE})_{-1}\text{Ti}_{-1}$ , and  $\text{Ca}(\text{Nb,Ta})_2(\text{U,Th})_{-1}\text{Ti}_{-2}$  substitution mechanisms. The minerals originated probably during post-magmatic to hydrothermal stage of the granite evolution in F-rich fluid regime.

**Key words:** Y-REE-U-Ti-Nb-Ta minerals, polycrase-(Y), uranopolycrase, Ti-Nb-Ta-Fe phase, granite exocontact, electron microprobe, XRD, Gemic Unit, Slovakia