

RARE EARTH MINERALS IN THE WESTERN CARPATHIANS, SLOVAKIA

HVOŽĎARA, P., HOLOCSY, A. (Department of Mineralogy and Petrology PrFUK,
Bratislava, Slovak Republic)
E-mail: holocsy@fns.uniba.sk

The REE minerals (mainly allanite, monazite and xenotime) in the Western Carpathians were studied by numerous authors. The distribution of these minerals were studied mainly in magmatic (various types of granites) and metamorphic rocks. The REE minerals are distributed in the form of accessory minerals in these rocks (MIŠÍK, 1955; HOVORKA & HVOŽĎARA, 1965; BROSKA & UHER, 1991; BROSKA & SIMAN, 1998).

The regional mineralogical and geochemical research works oriented on exploration of ore minerals showed that REE minerals (mainly monazite and xenotime) are associated with the distribution of ore minerals (HVOŽĎARA, 1980; HOLOCSY *et al.*, 1999; TRÉGER, 1973; DONÁT, 1998).

The contrast aureoles with high contents of monazite and xenotime are connected with ore structures. Gold, scheelite, maghemite, cinnabar, cassiterite, wolframite, xenotime, tourmaline and sulphides are associated with monazite.

The crystals of monazite have typical forms in these localities, the crystal grains are of the size 1–5 mm. The most frequent morphological types are isometric and isometric–tabular crystals (60–90 %). Isometric–prismatic (0.5–10 %) and tabular (1–5.5 %) morphological types are less abundant; tabular–prismatic (1–3 %) and prismatic ones (0.5–2 %) are rare. Typical colour varieties are yellowish brown, brown, grey. This type of the monazite is frequent with gold in the Veporic unit (localities: Podrečany, Lovinobaňa, České Brezovo, Čierny Balog).

Monazite is also associated with cassiterite, wolframite, scheelite mineralization near the locality of Kociha in the south part of the Veporic unit, where xenotime is frequent as well.

Xenotime is a typical mineral in some hydrothermal (siderite, Mg-Fe carbonates) veins, as well as in hydrothermal apatite veins with U and REE near Čučma in the Gemeric unit.

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