https://doi.org/10.46861/bmp.32.019 PŮVODNÍ PRÁCE/ORIGINAL PAPER

Ferrarisit z uranového ložiska Zálesí u Javorníka v Rychlebských horách (Česká republika)

Ferrarisite from the uranium deposit Zálesí in Rychlebské hory Mountains (Czech Republic)

Bohuslav Bureš

Plevenská 3111, 143 00 Praha 4; e-mail: bohuslav.bures@seznam.cz

Bureš B (2024) Ferrarisit z uranového ložiska Zálesí u Javorníka v Rychlebských horách (Česká republika). Bull Mineral Petrolog 32(1): 19-22 ISSN 2570-7337

Abstract

Very rare hydrated calcium arsenate, mineral ferrarisite, was found at the adit K4-2/1-3C (4th vein, level of the Gallery No. 2) of the abandoned uranium deposit Zálesí, Rychlebské hory Mountains, Silesia, Czech Republic. Ferrarisite occurs as colorless to white crystalline aggregates up to 9 × 6 mm with pearly lustre, formed by elongated tabular crystals resting on supergene altered carbonate gangue with nickelskutterudite and rammelsbergite. Associated minerals are arsenolite, annabergite, picropharmacolite, pharmacolite and guérinite. Ferrarisite is triclinic, space group *P*-1, the unit-cell parameters refined from X-ray powder diffraction data are: *a* 18.2918(16), *b* 6.7217(13), *c* 11.190(2) Å, α 106.206(14)°, β 92.923(16)°, γ 99.166(15)° and *V* 588.2(2) Å^3. Chemical analyses of ferrarisite correspond to the empirical formula $(Ca_{5.00}Ni_{0.01})_{\Sigma 5.01}(AsO_3OH)_{1.99}(AsO_4)_{2.01}\cdot 9H_2O$ on the basis of As 4 *apfu*. The origin of ferraristie is interpreted as product of (sub)recent supergene alteration of primary arsenides in calcite gangue in environment of abandoned mine adits.

Key words: *ferrarisite, arsenates, supergene mineralization, X-ray powder data, unit-cell parameters, chemical composition, Zálesí deposit, Czech Republic*

Obdrženo 20. 4. 2024; přijato 3. 6. 2024