

## Ferrarisit z dolu Barbora v jáchymovském rudním revíru (Česká republika)

Ferrarisite from the Barbora mine in the Jáchymov ore district (Czech Republic)

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### Abstract

Very rare hydrated calcium arsenate, mineral ferrarisite, was found in the area of corridor 30-32 (vein No. 32, III. level of the shaft Barbora) of the Jáchymov ore district, Krušné hory Mountains, Czech Republic. Ferrarisite occurs as colourless to greyish white crystalline aggregates up to 5 mm in size or crystalline aggregates formed by parallel arranged acicular crystals up to 1 mm in length. Associated minerals are annabergite, micropharmacolite, pharmacolite, rauenthalite and guérinite. Ferrarisite is triclinic, space group  $P-1$ , the unit-cell parameters refined from X-ray powder diffraction data are:  $a$  8.3000(10),  $b$  6.7309(8),  $c$  11.2129(12) Å,  $\alpha$  106.198(8)°,  $\beta$  92.857(10)°,  $\gamma$  99.183(9)° and  $V$  590.90(12) Å<sup>3</sup>. Chemical analyses of ferrarisite correspond to the empirical formula  $\text{Ca}_{4.99}(\text{AsO}_4)_{1.93}(\text{PO}_4)_{0.06}(\text{AsO}_3\text{OH})_{2.01} \cdot 9\text{H}_2\text{O}$  on the basis of As+P = 4 *apfu*. The origin of ferrarisite is interpreted as product of (sub)recent supergene alteration of primary arsenides in calcite gangue in environment of abandoned mine corridors.

**Key words:** ferrarisite, arsenates, supergene mineralization, X-ray powder data, unit-cell parameters, chemical composition, Barbora mine, Jáchymov ore district, Czech Republic

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