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Faujasit-Na a doprovodná zeolitová mineralizace z lokality Klučky u Polevska v Lužických horách (Česká republika)

Faujasit-Na and accompanying zeolite mineralization from the locality Klučky near Polevsko in the Lužické hory Mts. (Czech Republic)

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Abstract

Four new zeolite occurrences have been discovered in a forested, 3 km long ridge Klučky, composed of basaltic rocks and culminating in the 642 m high elevation of the same name NW of the Nový Bor town in the Lužické hory Mts. At the Wachstein locality, the first occurrence of the rare zeolite faujasite-Na in the Czech Republic was verified. It forms octahedral crystals up to 0.3 mm in size with common twins according to spinel law. The unit-cell parameter of faujasite-Na refined from the powder X-ray data is *a* 24.6775(9) Å and *V* 15028.1(9) Å^3. Its chemical analyses correspond to the empirical formula $(Na_{1.43}Ca_{1.20}K_{0.44}Mg_{0.16})_{\Sigma 3.23}(Al_{3.33}Si_{8.36})O_{24}\cdot 15\ H_2O$. Besides to phillipsite and chabazite, frequent offretite, characterised by its extraordinary morphological variety, is present in all described localities. The unit-cell parameters of offretite refined from the powder X-ray data are: *a* 13.311(6), *c* 7.5934(6) Å and *V* 1165.2(5) Å^3 (Wachstein) and *a* 13.310(5), *c* 7.5886(5) Å and *V* 1164.3(4) Å^3 (Klučky - Stráň). Chemical analyses of offretite correspond to the empirical formula $K_{2.02}Ca_{1.31}Mg_{0.32}Sr_{0.09}(Al_{5.42}Si_{12.56})O_{36}\cdot 16\ H_2O$ (Wachstein) and $Ca_{1.48}K_{1.02}Mg_{0.59}Na_{0.10}Sr_{0.09}(Al_{5.56}Si_{12.52})O_{36}\cdot 16\ H_2O$ (Klučky - Stráň).

Key words: *faujasite-Na, offretite, phillipsite-K, phillipsite-Ca, chabazite-K, powder X-ray diffraction data, unit-cell parameters, chemical composition, Klučky, Polevsko, Lužické hory Mts., Czech Republic*

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