

Zeolitová mineralizace ze Svoru u Nového Boru (Česká republika)

Zeolite mineralization from Svor near Nový Bor (Czech Republic)

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Abstract

An interesting zeolite association has been found at an unnamed hill (altitude 455 m) near the Svor village, 7 km NE of Nový Bor (Czech Republic). Zeolites were found in the cavities located at the contact of basalt, vulcanite tuffs and breccia. The most abundant zeolite, offretite, occurs as acicular crystals up to 1 mm in length, rarely also forms sheaf-like and hemispheric clusters. It is monoclinic, space group $P-6m2$ with unit-cell parameters: a 13.283(9), c 7.6115(3) Å and V 1163.0(8) Å³. Chemical analyses of offretite correspond to the empirical formula $(K_{1.10}Na_{0.03}Ca_{1.01}Mg_{0.48})_{\Sigma 2.62}(Si_{12.87}Al_{5.21}Fe_{0.15})O_{36} \cdot 15 H_2O$. Heulandite-Ca, forms twins of hemispheric shapes or fan-like twins up to 2 mm across. It is monoclinic, space group $C2/m$ with unit-cell parameters: a 17.726(4), b 17.829(4), c 7.428(2) Å, β 116.32(1)° and V 2104.2(9) Å³. On the basis of chemical composition, two varieties of heulandite-Ca were determined, the Mg-rich one with empirical formula $(Ca_{1.87}Mg_{1.25}Sr_{0.05}Ba_{0.01}K_{0.84}Na_{0.20})_{\Sigma 4.22}(Si_{28.56}Al_{7.46})O_{72} \cdot 26 H_2O$ and Ba-rich one with empirical formula $(Ca_{1.99}K_{1.51}Ba_{1.35}Na_{0.31})_{\Sigma 5.16}(Si_{26.99}Al_{9.18})O_{72} \cdot 26 H_2O$. Two other zeolite species, chabazite-Ca and phillipsite-K were also found in the observed association.

Key words: offretite, heulandite-Ca, chabazite-Ca, phillipsite-K, powder X-ray diffraction data, unit-cell parameters, chemical composition, Svor near Nový Bor, Czech Republic

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