

Zeolitová mineralizace z Milířska u Těchlovic nad Labem (Česká republika)

Zeolite mineralization from Milířsko near Těchlovice nad Labem (Czech Republic)

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Abstract

The zeolite mineralization was found in the forrest area on a steep hill Pustý zámek, ca 1 km S of the settlement Milířsko, 2.5 km SE of Těchlovice village at right riverside of Labe (northern Bohemia, Czech Republic). It consists of two dyke-intrusions of camptonite type belonging to the so-called Roztoky dyke swarm. Heulandite-Ca, stilbite-Ca and scolecite are the most prominent zeolites of this locality. Heulandite-Ca forms white, pearly lustrous transparent crystals up to 1 cm in size or sheen twins sized up to 2 cm. The unit-cell parameters of heulandite-Ca refined from the powder X-ray data are: a 17.725(2), b 17.822(2), c 7.4306(9) Å, β 116.33(5)°, and V 2103.7(4) Å³. Its chemical analyses correspond to the empirical formula $K_{0.85}Na_{0.48}Ca_{2.88}Ba_{0.02}Sr_{0.83}(Al_{8.86}Si_{27.15})O_{72} \cdot 24H_2O$. Scolecite occurs in white to colourless hemispherical aggregates up to 1 cm in size and fan-like clusters in yellowish aggregates of chabazite. Its unit-cell parameters refined from the powder X-ray data are: a 18.496(8), b 18.957(6), c 6.522(3) Å, β 90.55(7)° and V 2286.7(13) Å³. Chemical analyses of this zeolite correspond to the empirical formula $Na_{0.22}Ca_{0.88}(Al_{1.93}Si_{3.06})O_{10} \cdot 3H_2O$. Stilbite-Ca occurs as slightly yellowish aggregates up to 2 cm in size. Its unit-cell parameters refined from the powder X-ray data are: a 13.640(1), b 18.240(1), c 11.2741(9) Å, β 128.01(1)° and V 2210.3(3) Å³. Chemical analyses of stilbite-Ca correspond to the empirical formula $Ca_{4.20}Na_{1.19}K_{0.25}(Si_{26.38}Al_{9.56})O_{72} \cdot 28H_2O$. Analcime, chabazite-Ca and mesolite occur as additional zeolites at this site. Crystals of K-feldspar (orthoclase), unknown yet in zeolite associations of České středohoří mountains, has been found in one of the dyke intrusion.

Key words: analcime, heulandite-Ca, chabazite-Ca, scolecite, mesolite, stilbite-Ca, orthoclase, powder X-ray diffraction data, unit-cell parameters, chemical composition, Milířsko near Těchlovice, Czech Republic

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