

Výskyt laumontitu v katastri obce Píla (Pohronský Inovec, stredné Slovensko)

Occurrence of laumontite at the Píla village (Pohronský Inovec Mts., Central Slovakia)

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Abstract

Laumontite was found in the altered, Miocene pyroxenic andesite at the Píla village (Žarnovica district), Pohronský Inovec Mts. It forms white, fine-crystalline fillings of cracks (up to 3 mm thick) in andesite. Laumontite crystals have prismatic or tabular shape, their average size ranges about 0.3 - 0.5 mm (sporadically occur in size of 1 - 3.5 mm). It was identified by powder XRD analysis, the main diffraction maxima with intensities are: 9.441(100), 6.836(41), 4.153(55), 3.504(35), 3.266(19), 2.875(13), 2.438(12). Unit cell parameters are: $a = 14.741(1)$ Å, $b = 13.075(1)$ Å, $c = 7.553(1)$ Å, $\beta = 111.964(4)^\circ$, $V = 1349.9(1)$ Å³. Diffraction pattern, just like the unit cell parameters, indicate partial dehydration of this laumontite (its transformation to leonhardite). Chemical composition of studied zeolite is close to the normal laumontite formula. Admixtures in mineral structure are represented by slightly increased contents of Fe, Na and K (together ~ 0.28 apfu).

Key words: zeolites, laumontite, leonhardite, X-ray diffraction data, Pohronský Inovec Mts., Píla, Slovak Republic

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