

Pilsenit z Poruby pod Vihorlatom, Vihorlatské vrchy (Slovenská republika)

Pilsenite from Poruba pod Vihorlatom, Vihorlat Mts. (Slovak Republic)

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Abstract

Pilsenite, ideally Bi_4Te_3 , was found in the body of hydrothermal metasomatites, which is located near Poruba pod Vihorlatom, Vihorlat Mts., Slovak Republic. It forms lead-grey, subhedral grains up to 7 mm in size with typical perfect cleavage. Pilsenite grains are often grouped into the aggregates and clusters up to 3×2 cm, which are embedded in brownish metasomatite. Its refined unit-cell parameters from the powder X-ray diffraction data (for the trigonal space group $R\bar{3}m$) are $a = 4.430(4)$, $c = 41.834(3)$ Å with $V = 710.971(1)$ Å³. The chemical composition of pilsenite is close to the end member and apart from Bi and Te only minor contents of Pb (up to 0.06 *apfu*), Se (up to 0.03 *apfu*) and S (up to 0.03 *apfu*) were detected. Its average empirical formula is $(\text{Bi}_{3.95}\text{Pb}_{0.05})_{\Sigma 4.00}(\text{Te}_{2.96}\text{Se}_{0.02}\text{S}_{0.02})_{\Sigma 3.00}$ on the basis of 7 *apfu*.

Key words: pilsenite, bismuth tellurides, chemical composition, Poruba pod Vihorlatom, Vihorlat Mts., Slovak Republic

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