REE-bohatý zálesíit z Bělovsi u Náchoda (Česká republika)

REE-rich zálesíite from Běloves near Náchod (Czech Republic)

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Abstract

A rare Cu-Ca arsenate - mineral zálesíite, was found in the material from the abandoned quarry at Běloves near Náchod, eastern Bohemia, Czech Republic. It occurs there as light green crystalline aggregates up to 1.5 mm in size formed by tiny acicular crystals up to 0.3 mm in length. It is hexagonal, space group $P6_3/m$, the unit-cell parameters refined from X-ray powder diffraction data are: a 13.598(2), c 5.895(2) Å, and V 944.0(3) Å^3. Chemical analyses of zálesíite correspond to the empirical formula $Ca_{0.59}(Y_{0.18}Nd_{0.08}La_{0.04}Sm_{0.03}Gd_{0.03}Dy_{0.03}Pr_{0.02}Ce_{0.01}Eu_{0.01}Tb_{0.01}Er_{0.01}Yb_{0.01})_{\Sigma 0.43}Bi_{0.15}Cu_{5.75}[(AsO_4)_{2.26}(AsO_3OH)_{0.65}(SiO_4)_{0.07}(PO_4)_{0.02}]_{\Sigma 3.00}(OH)_{6.00} \cdot 3H_2O$ on the basis of As+Si+P = 3 *apfu*. The Raman spectrum of studied zálesíite and its tentative interpretation are given.