Freibergit a jamesonit z historického ložiska stříbra Šebestěnice u Čáslavi (Česká republika)

Freibergite and jamesonite from the historical silver deposit Šebestěnice near Čáslav, Czech Republic

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Abstract

Small Ag-bearing base metals ore deposit Šebestěnice (SSW near Čáslav, central Bohemia, Czech Republic) was last mined in 16th - 18th century and its mineralogy is not known in detail. The ore mineralization close to the Kutná Hora type is represented by quartz of two generations (± dolomitic carbonate) with disseminated aggregates of ore minerals: pyrite, sphalerite, galena, chalcopyrite (aggregates 0.X - 3 mm) and rare freibergite and jamesonite (up to 1 mm in size). The variable Ag contents are chararacteristic of Fe-dominant freibergite, its chemical composition on the basis 29 *apfu* can be expressed as $(Ag_{5.94}Cu_{0.06})_{\Sigma 6.00}[Cu_{4.22}(Fe_{1.81}Zn_{0.22}Cd_{0.02})_{\Sigma 2.05}]_{\Sigma 6.27}(Sb_{4.17}As_{0.07}Bi_{0.01})_{\Sigma 4.25}(S_{12.45}Cl_{0.03})_{\Sigma 12.48}$ (Ag-rich) and $(Ag_{3.46}Cu_{2.54})_{\Sigma 6.00}[Cu_{3.86}(Fe_{1.66}Zn_{0.37}Cd_{0.01})_{\Sigma 2.04}]_{\Sigma 5.90}(Sb_{4.14}Bi_{0.02})_{\Sigma 4.16}(S_{2.93}Cl_{0.02})_{\Sigma 2.95.}$ (Ag-poor). Acicular jamesonite crystals are homogenous and its empirical formula on the basis 25 *apfu* $(Pb_{3.78}Ag_{0.01})_{\Sigma 3.79}Fe_{0.95}(Sb_{6.09}As_{0.01})_{\Sigma 6.10}S_{14.15}$ is close to ideal composition of this mineral species.

Key words: *silver-bearing base metals ore mineralization, freibergite, jamesonite, mineralogy, chemical composition, Šebestěnice near Čáslav, Czech Republic*