Výskyt vzácného Ag-Hg sulfidu - imiteritu - v materiálu z haldy dolu Lill (černojamské ložisko), březohorský rudní revír, Česká republika

The occurrence of rare Ag-Hg sulfide - imiterite - in dump material of the Lill mine (černojamské deposit), the Březové Hory base metal ore district, Příbram (Czech Republic)

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Plášil J., Sejkora J., Litochleb J., Škácha P. (2009): Výskyt vzácného Ag-Hg sulfidu - imiteritu - v materiálu z haldy dolu Lill (černojamské ložisko), březohorský rudní revír, Česká republika. - *Bull. mineral.-petrolog. Odd. Nár. Muz. (Praha)* **17/2**, 62-68. ISSN: 1211-0329.

Abstract

A rare Ag-Hg sulfide, imiterite, was found at mine dump of the mine Lill, the Černojamské ore deposit, Příbram, central Bohemia (Czech Republic). Imiterite forms crystals up to 0.5 mm in length with metallic luster forming aggregates in small cavity of gangue represented by dominant quartz/dolomite-ankerite with minor calcite and siderite. In reflected light it is greyish white with bireflectance (bluish - greish pink) and anisotropic with rotation tints in shades greish blue to reddish brown. It has a mean VHN (20 g load) of 126 (115-133) kp.mm^{-2} with K_{VH} 1.16. Imiterite is monoclinic, space group $P2_1/c$, the unit-cell parameters refined from the X-ray powder data are: a 4.038(1), b 8.006(1), c 6.582(1) Å, β 107.09(2)° and V 203.4(3) Å^3. Its chemical composition (mean of 7 points), Ag 45.34, Hg 41.63, Bi 0.05, As 0.18, S 12.85, total 100.05 wt. % corresponds to empirical formula $Ag_{2.04}Hg_{1.01}As_{0.01}S_{1.94}$ on the basis of 5 *apfu*. The ore minerals, arsenopyrite, Hg-rich galena, pyrargyrite, sphalerite and stephanite were determined in close association and data for their chemical composition are given. The studied imiterite probably represents one of the youngest results of crystallization in low-temperature conditions (T < 100 °C).

***Key words**: imiterite, Ag-Hg mineralization, chemical composition, powder X-ray diffraction, Vickers microhardness, mineralogy, Lill mine, Příbram, Central Bohemia, Czech Republic*