

SULPHO-HALIDES OF Ag-Hg FROM RUDABÁNYA, HUNGARY

SZAKÁLL, S. (Department of Mineralogy, Herman Ottó Museum, Miskolc, Hungary)

SARP, H. (Department of Mineralogy, Natural History Museum, Geneva, Switzerland)

E-mail: homin@matavnet.hu

Hg-bearing tennantite and Ag-bearing galena had been formed, accompanying other sulphides and barite during the hydrothermal ore formation stage of the Rudabánya iron ore deposit. Weathering of these minerals and activation of halogen-bearing solutions resulted in the formation of some Ag-halides (chlorargyrite, bromargyrite, iodargyrite) (SZAKÁLL & KOVÁCS, 1995) and some Ag-Hg sulpho-halides (perroudite, capgaronnite, iltisite?) in the zone of oxidation of the Adolf mine. This paragenesis that occurs in the silicified limonite is accompanied by copper- and lead-carbonates, -sulphates and -arsenates.

The identifications of sulpho-halides of Ag-Hg made by X-ray diffraction (Geneva), optical examination, EDS analysis and SEM method (Miskolc).

Perroudite (SARP et al., 1987): transparent bright red micro-crystals, and crystals are elongated along [001]. Size of the crystals are to 0.06 mm. Some crystals are fluted with hollow terminations. Rarely were observed penetrated twins as well. It has adamantine lustre and reddish-orange streak. Pleochroism marked from brownish-red to yellow to brownish yellow.

Capgaronnite (MASON et al., 1992): crystals are prismatic, elongated along [001] and flattened on (010). Translucent to opaque, grey to black with subadamantine-submetallic luster. Size of the crystals are to 0.3 mm.

Iltisite (SARP et al., 1997): hexagonal tabular crystals up to 2–20 µm in diameter. Sometimes were identified zigzag aggregates, which were built up from intergrowth crystals. It has bright red to brownish red colour and adamantine lustre. It is not verified by X-ray diffraction yet (only EDS and SEM).

Sulpho-halides of Ag-Hg occur in a strongly siliceous limonite in the Adolf mine, Rudabánya. The siliceous limonite is reddish from hematite and cinnabar, and in the cavities are found the sulpho-halides of Ag-Hg as minute crystals or micro-crystals. Accompanied minerals are: cinnabar, tennantite, hematite, malachite, cerussite, barite, chlorargyrite, bromargyrite (common); iodargyrite, mimetite, beudantite, acanthite, mercury, moschellandsbergite (rare).

They have crystallized following decomposition of Hg-bearing tennantite and Ag-bearing galena by halide-bearing solutions, probably of marine origin.

References

- MASON, B., MUMME, W.G. & SARP, H. (1992). *Amer. Mineral.*, 77: 197–200.
SARP, H., BIRCH, W.D., HLAVA, P.F., PRING, A., SEWELL, D.K. & NICKEL, E.H. (1987). *Amer. Mineral.*, 72: 1251–1256.
SARP, H., SANZ-GYSLER, J. & PERROUD, P. (1997). *Archives de Science Geneve*, 50(1): 1–5.
SZAKÁLL, S. & KOVÁCS, Á. (1995). *Acta Mineral.-Petrogr.*, 36: 5–15.