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Retgersite from mine dump of the Lill shaft, Březové Hory ore district, Příbram (Czech Republic)

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Abstract

Rare sulphate of nickel, retgersite, was identified on the one specimen collected on the dump of the Lill shaft, Březové Hory ore district, Příbram (Czech Republic) in 1990s. The specimen consists of quartz gangue with dominant millerite and sphalerite. Retgersite forms light blue to blue-green curved fibrous microcrystalline aggregates up to 2 mm in size with vitreous lustre, growing on the surface and in small outer vugs of the supergene altered gangue. Retgersite was identified by PXRD and its refined unit-cell parameters (for the tetragonal space group $P4_12_12$) are: *a* 6.7838(2) Å, *c* 18.2951(8) Å and *V* 841.94(4) Å^3. Results of semiquantitative chemical analysis (EDS) as well as vibrational spectra (Raman, infrared) including their tentative assignments are also given. The studied retgersite was formed by (sub) recent weathering of primary nickel mineralisation (mostly millerite) in the mine dump conditions.

Key words: *retgersite, sulphate, supergene mineralization, vibrational spectroscopy, Březové Hory base-metal district, Příbram ore area Czech Republic*

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