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PŮVODNÍ PRÁCE/ORIGINAL PAPER

New data on minerals of the hidalgoite-philipsbornite series from the Guatomo mine near Tham Thalu, Yala Province (Thailand)

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Abstract

The chemical composition of three samples of minerals of the hidalgoite-philipsbornite series from the central part of the Guatomo mine pit was studied in detail by EMPA-WDS. They form yellowish-green, light green to pale blue microcrystalline crusts or hollow pseudomorphs after prismatic hexagonal crystals of mimetite in fractures of strongly altered granite or quartz. All studied samples show relatively strong, irregular to oscillatory chemical zoning in BSE, caused by S versus As substitution on T-site. Most of the zones are corresponding to hidalgoite, with only minor, outer zones represented by S-rich philipsbornite. Besides of dominant contents of Pb, Al, As and S also minor amounts of K (up to 0.11 *apfu*), Na (up to 0.05 *apfu*), Cu (up to 0.22 *apfu*), Fe (up to 0.09 *apfu*) and P (up to 0.04 *apfu*) were detected in studied samples.

Key words: hidalgoite, philipsbornite, alunite supergroup, supergene minerals, chemical composition, Guatomo mine, Tham Thalu, Thailand

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