PŮVODNÍ PRÁCE/ORIGINAL PAPER

Příspěvek k chemickému složení tetraedritu z Cu ložiska Piesky, rudní revír Špania Dolina, střední Slovensko

Contribution to chemical composition of tetrahedrite from the Piesky copper deposit, the Špania Dolina ore district, central Slovakia

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Abstract

The minerals of the tetrahedrite isotypic series are the main ore phases at the Piesky deposit and in the past they were the most important source of copper and silver at the whole Špania Dolina ore district (central Slovakia, Slovak Republic). They occur as veinlets, impregnations or massive aggregates up to 10 cm in size, which are associated together with chalcopyrite in quartz-carbonate veins or in mineralized rocks and are often altered to the yellowish-green aggregates of amorphous Cu-Sb-Fe phases or diverse supergene minerals. The chemical composition of minerals of the tetrahedrite isotypic series from the various parts of the Piesky deposit is rather uniform. In the trigonal site Cu is dominant element and only low content of Ag (up to 0.04 *apfu*) was detected. The overall content of divalent metals like Fe, Zn as well as slight amount of Pb in the tetrahedral site is up to 1.3 - 1.7 *apfu*, which together with elevated content of Cu (higher than theoretical value of 10 *apfu*) suggest the presence of at least some Cu^{2+} in this possition. In the *X* possition Sb is the prevalent element, so As-rich tetrahedrite is the absolutely dominant species at the Piesky deposit. Only in one case, Sb-rich tennantite as an irregular zones up to 50 μm in size was observed in the As-rich tetrahedrite. Characteristic feature of tetrahedrite-tennantite minerals from the Piesky deposit is regular content of Bi (up to 0.14 *apfu*).

Key words: *tetrahedrite, chemical composition, Piesky deposit, Špania Dolina, central Slovakia, Slovak Republic*

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