Application on X-ray diffractometry on the skarn mineralization, in the upper basin of Mraconia Valley, Romania

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The paper aims to provide new X-ray powder data on skarn with mineralization in the upper basin of Mraconia Valley, Almaj Mountains. The skarn is mainly andraditic, but, beside andradite can occur in significant proportion scheelite, molydenite, pyrite, chalcopyrite, sphalerite, galena. Andradite is generally isotropic, but optically anomalous garnet can occur; both sectorial and lamellar "twinning" was described by Marincea (1992) [1]. The X-ray powder data recorded for six representative samples were used for the least-squares refinement of the unit-cell parameters. The obtained values [a = 12.006(4) Å – 12.066(3) Å] compare well with the values reported by Marincea (1992) *i.e.* a = 11.984(3) Å – 12.041(3) Å, being indicative for andradite. Scheelite is the mean exponent of the high-temperature hydrothermal phase. As observed by Marincea (1992) the UV response colour is characteristic for two different generations of scheelite, as follows: (1) a first generation, with yellow fluorescence, characteristic for a Mo-bearing scheelite, associates only with andradite, and (2) a second generation, that fluoresces in blue-violet tints, contains minor powellite and associates with sulphides, pistacite, quartz and calcite. The cell parameters obtained as mean of those obtained the scheelite samples, as refined by least-squares analysis of the X-ray powder data, are: a = 5.242(3) Å, c = 11.370(7) Å and V = 312.5(4) Å^3. Molybdenite is widespread in the association from Mraconia. The mineral occurs both on fissures affecting the granodiorite mass, near the contact, where it associates with quartz, pyrite and chalcopyrite.

[1]Marincea, Ş. (1992): Metasomatite occurrences in the upper basin of the Mraconia Valley (Almăj Mts.) and th superposed mineralization. *Rom. J. Mineral Deposits*, **75**, 45-53.