Imhofite

Crystal Data: Monoclinic. \( \text{Point Group: } 2/m \). As thin plates, which may be aggregated into radial or spherical forms, less than 1 mm.

Physical Properties: Hardness = \( \sim 2 \) \( \text{VHN} = 38 \) \( D(\text{meas.}) = \text{n.d.} \) \( D(\text{calc.}) = 4.39 \)

Optical Properties: Translucent. \( \text{Color: } \) Copper-red; in polished section, pure white, inclining to cream colored compared to galena, with strong bright red internal reflections. \( \text{Anisotropism: } \) Very strong. \( R_1 - R_2: \text{n.d.} \)

Cell Data: \( \text{Space Group: } P2_1/n \). \( a = 8.755(5) \) \( b = 24.425(15) \) \( c = 5.739(3) \) \( \beta = 108.28(5)^\circ \) \( Z = 2 \)

X-ray Powder Pattern: Binntal, Switzerland. 2.675 (100), 2.88 (90), 3.96 (70), 3.67 (65), 4.10 (40), 3.58 (40), 3.18 (40)

Chemistry: \[
\begin{array}{cc}
\text{Tl} & 33.6 & 38.22 \\
\text{Cu} & 1.67 \\
\text{As} & 30.2 & 35.80 \\
\text{S} & 33.7 & 25.98 \\
\hline
\text{Total} & 99.17 & 100.00 \\
\end{array}
\]

(1) Binntal, Switzerland; by electron microprobe. (2) \( \text{Tl}_6\text{As}_{15.33}\text{S}_{26} \) as determined by crystal structure analysis.

Occurrence: Of hydrothermal origin.

Association: Realgar, lead sulfantimonides.

Distribution: From the Lengenbach quarry, Binntal, Valais, Switzerland [TL].

Name: To honor Josef Imhof (1902–1969), professional mineral collector of Binn, Switzerland.

Type Material: Mineralogical-Petrographical Institute, University of Bern, Bern, Switzerland, L3491-64.


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