Itoite

\[ \text{Pb}_3\text{Ge}^{4+}\text{O}_2(\text{SO}_4)_2(\text{OH})_2(?) \]

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Crystal Data: Orthorhombic (by analogy to anglesite). Point Group: n.d. As a very fine-grained incrustation or alteration of fleischerite.


Optical Properties: Transparent to translucent. Color: White; colorless in transmitted light. Luster: Silky. Optical Class: [Biaxial.] \( n = 1.84-1.85 \) \( \alpha = \text{n.d.} \) \( \beta = \text{n.d.} \) \( \gamma = \text{n.d.} \) \( 2V(\text{meas.}) = \text{n.d.} \)

Cell Data: Space Group: [Pnma] (by analogy to anglesite). \( a = 8.47 \) \( b = 5.38 \) \( c = 6.94 \) \( Z = 4 \)

X-ray Powder Pattern: Tsumeb, Namibia; close to anglesite. 2.065 (10), 3.326 (9), 3.003 (9), 4.240 (8), 3.209 (7), 3.794 (6), 3.604 (6)

Chemistry: (1) Tsumeb, Namibia; presence of essential Pb, Ge, (SO\(_4\))\(^{2-}\) confirmed by qualitative analysis; the composition proposed is that of anglesite with replacement of 1/3 (SO\(_4\))\(^{2-}\) by [GeO\(_2\)(OH)]\(^2-\).

Occurrence: Very rare, in an oxidized zone of a polymetallic germanium-bearing sulfide deposit, as an alteration product of fleischerite, perhaps produced by grinding for X-ray analysis.

Association: Fleischerite, mimetite, cerussite, anglesite, plumbojarosite, tennantite, dolomite.

Distribution: From Tsumeb, Namibia.

Name: Honors Professor Tei-ichi Ito (1898–1980), Japanese mineralogist and crystallographer, University of Tokyo, Tokyo, Japan.

Type Material: Technical University, Berlin, Germany, 57/1405; Harvard University, Cambridge, Massachusetts; National Museum of Natural History, Washington, D.C., USA, 162597.