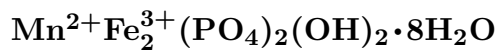


## Pseudolaueite



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**Crystal Data:** Monoclinic. *Point Group:*  $2/m$ . Prismatic to thick tabular pseudo-hexagonal crystals, with {100}, {001}, {110}, rare {011},  $\{\bar{2}01\}$ , to 2 mm.

**Physical Properties:** Hardness = 3 D(meas.) = 2.463 D(calc.) = 2.51

**Optical Properties:** Semitransparent. *Color:* Pale yellow-orange, light to dark yellow, orange-brown.

*Optical Class:* Biaxial (+). *Pleochroism:*  $X = Y =$  pale yellow;  $Z =$  yellow. *Orientation:*  $Z = b$ ;  $X \wedge c = 2^\circ$ ;  $Y \wedge a = 12^\circ$ .  $\alpha = 1.626$   $\beta = 1.650$   $\gamma = 1.686$   $2V(\text{meas.}) = \text{n.d.}$   $2V(\text{calc.}) = 80^\circ$

**Cell Data:** *Space Group:*  $P2_1/a$ .  $a = 9.647$   $b = 7.428$   $c = 10.194$   $\beta = 104.63^\circ$   $Z = 2$

**X-ray Powder Pattern:** Hagendorf, Germany.

9.926 (10), 5.869 (7), 3.472 (4), 4.678 (3), 3.908 (3), 3.186 (3), 3.069 (3)

**Chemistry:** (1) Hagendorf, Germany; analysis not given, stated to correspond to  $(\text{Mn}_{0.78}\text{Al}_{0.20}\text{Ca}_{0.02})_{\Sigma=1.00}(\text{Fe}_{1.80}^{3+}\text{Fe}_{0.10}^{2+}\text{Mg}_{0.07}\text{Mn}_{0.04})_{\Sigma=2.01}(\text{PO}_4)_2(\text{OH})_2 \cdot 8\text{H}_2\text{O}$ .

**Polymorphism & Series:** Trimorphous with laueite and stewartite.

**Occurrence:** As incrustations and replacements of stewartite crystals in a complex zoned granite pegmatite (Hagendorf, Germany).

**Association:** Stewartite, laueite, strunzite, triphylite, Fe–Mn oxides (Hagendorf, Germany).

**Distribution:** From Hagendorf, Bavaria, Germany. In Portugal, at the Mangualde pegmatite, near Mesquitela, and in the Bendada pegmatite, near Guarda. From the Palermo #1 mine, near North Groton, Grafton Co., New Hampshire; at the White Elephant mine, near Pringle, Custer Co., South Dakota, USA.

**Name:** From the Greek for *false* and its relation to *laueite*, as it is not that species.

**Type Material:** University of Chicago, Chicago, Illinois, USA, P239.

**References:** (1) Strunz, H. (1956) Pseudolaueit, ein neues Mineral. *Naturwiss.*, 43, 128 (in German). (2) (1956) *Amer. Mineral.*, 41, 815 (abs. ref. 1). (3) Baur, W.H. (1969) A comparison of the crystal structures of pseudolaueite and laueite. *Amer. Mineral.*, 54, 1312–1323. (4) Moore, P.B. (1975) Laueite, pseudolaueite, stewartite and metavauxite: a study in combinatorial polymorphism. *Neues Jahrb. Mineral., Abh.*, 123, 148–159.