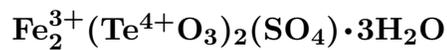


## Poughite



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**Crystal Data:** Orthorhombic. *Point Group:*  $mm2$ . Crystals are diamond-shaped, flattened parallel to {010}, showing {010}, {101}, {011}, {120}, {100}; in small botryoidal rosettes of crystals, typically in drusy crusts.

**Physical Properties:** *Cleavage:* On {010}, perfect; on {101}, good. Hardness =  $\sim 2.5$   
D(meas.) = 3.758 D(calc.) = 3.775

**Optical Properties:** Semitransparent. *Color:* Dark yellow, honey-yellow, lemon-yellow, brownish yellow, greenish yellow.  
*Optical Class:* Biaxial (-). *Pleochroism:* Strong; X = colorless; Y = pale greenish yellow; Z = pale yellow. *Orientation:* X = b; Y = a; Z = c. *Dispersion:*  $r > v$ , strong. *Absorption:* X < Y < Z.  $\alpha = 1.72(1)$   $\beta = 1.985(1)$   $\gamma = 1.990(1)$   $2V(\text{meas.}) = 15^\circ\text{--}20^\circ$

**Cell Data:** *Space Group:*  $P2_1nb$ .  $a = 9.66(2)$   $b = 14.20(2)$   $c = 7.86(2)$   $Z = 4$

**X-ray Powder Pattern:** Moctezuma mine, Mexico.  
7.10 (10), 5.74 (10), 3.239 (7), 3.564 (6), 3.336 (6), 3.053 (6), 2.940 (5)

**Chemistry:** (1) The natural mineral was determined to be identical to the synthetic compound by correspondence of X-ray powder patterns.

**Occurrence:** An alteration product of pyrite in the oxidized zone of a hydrothermal Au-Te deposit (Moctezuma mine, Mexico).

**Association:** Pyrite, emmonsite, jarosite, "limonite", quartz (Moctezuma mine, Mexico); mandarinoite (El Plomo mine, Honduras).

**Distribution:** From the El Plomo mine, Ojojona district, Tegucigalpa, Honduras. At the Moctezuma (Bambolla) mine, 12 km south of Moctezuma, Sonora, Mexico. In the USA, from the Lone Pine mine, Wilcox district, Catron Co., New Mexico; in the Klondike mine, Bonanza district, Saguache Co., Colorado. From the Tambo mine, El Indio-Tambo district, east of La Serena, Coquimbo, Chile. At the Kobetsuzawa gold mine, Sapporo, Hokkaido Prefecture, Japan.

**Name:** To honor Dr. Frederick Harvey Pough (1906– ), Reno, Nevada, USA, American mineralogist and gemmologist, for his numerous contributions to these sciences.

**Type Material:** Natural History Museum, Paris, France, 175.77; American Museum of Natural History, New York City, New York, 16832; Harvard University, Cambridge, Massachusetts, 109696; National Museum of Natural History, Washington, D.C., USA, 128388, 164338–164340.

**References:** (1) Gaines, R.V. (1968) Poughite, a new tellurite mineral from Mexico and Honduras. *Amer. Mineral.*, 53, 1075–1080. (2) Pertlik, F. (1971) Die Kristallstruktur von Poughit,  $\text{Fe}_2[\text{TeO}_3]_2[\text{SO}_4]\cdot 3\text{H}_2\text{O}$ . *Tschermaks Mineral. Petrog. Mitt.*, 15, 279–290 (in German with English abs.).