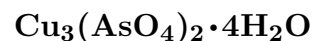


Rollandite



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Crystal Data: Monoclinic. *Point Group:* $2/m$. Microcrystalline, to $< 5 \mu\text{m}$; in thin botryoidal crusts, and replacing emplectite crystals.

Physical Properties: *Fracture:* Conchoidal to irregular. *Tenacity:* Brittle. Hardness = 4–4.5 VHN = 513 (25 g load). $D(\text{meas.}) = 6.86\text{--}7.01$ $D(\text{calc.}) = 7.21$

Optical Properties: Semitransparent. *Color:* White to pale gray, pale green, yellow. *Luster:* Adamantine. *Optical Class:* Biaxial (+). $\alpha = 2.09(4)$ $\beta = \text{n.d.}$ $\gamma = 2.27(2)$ $2V(\text{meas.}) = \text{n.d.}$

Cell Data: *Space Group:* $P2_1/n$ (synthetic). $a = 6.879(1)$ $b = 7.159(1)$ $c = 6.732(1)$
 $\beta = 104.84(1)^\circ$ $Z = 4$

X-ray Powder Pattern: Argentina.
3.15 (100), 2.97 (80), 3.33 (61), 2.98 (37), 4.82 (36), 2.70 (36), 2.50 (26)

Chemistry:	(1)	(2)	(3)
As ₂ O ₅	33.2	33.0	33.03
Bi ₂ O ₃	67.2	67.9	66.97
Total	100.4	100.9	100.00

(1) Santiaguillo, Bolivia. (2) San Francisco de los Andes, Argentina; by electron microprobe. (3) BiAsO₄.

Polymorphism & Series: Dimorphous with tetraaroseveltite.

Mineral Group: Monazite group.

Occurrence: Very rare in cassiterite veinlets in rhyolite-dacite lava flows (Santiaguillo, Bolivia); in the oxidized zone of a breccia pipe (San Francisco de los Andes, Argentina).

Association: Cassiterite (Santiaguillo, Bolivia); preisingerite, bismutite, mixite, zavaritskite, wulfenite (Moldava, Czech Republic); conichalcite, mixite (Uzbekistan).

Distribution: At Santiaguillo, west of Maragua, Potosí, Bolivia. From the San Francisco de los Andes and Cerro Negro de la Aguadita mines, San Juan Province, Argentina. In the Moldava fluorite mine, about 20 km northwest of Teplice, Krušné hory Mountains, Czech Republic. In the Ödsbach Valley, near Oberkirch, at the Clara mine, near Oberwolfach, and on the Schmiedestollen dump, Black Forest, Germany. From an undefined locality in the Chatkal Mountains, Uzbekistan.

Name: Honors Franklin Delano Roosevelt (1882–1945), 32nd President of the USA.

Type Material: Harvard University, Cambridge, Massachusetts, 101938; National Museum of Natural History, Washington, D.C., USA, 115317.

References: (1) Palache, C., H. Berman, and C. Frondel (1951) Dana's system of mineralogy, (7th edition), v. II, 697. (2) Bedlivy, D., E.J. Llambías, and J.F.H. Astarloa (1972) Rooseveltit von San Francisco de los Andes und Cerro Negro de la Aguadita, San Juan, Argentina. *Tschermaks Mineral. Petrog. Mitt.*, 17, 65–75 (in German with English abs.). (3) Bedlivy, D. and K. Mereiter (1982) Structure of $\alpha\text{-BiAsO}_4$ (rooseveltite). *Acta Cryst.*, 38, 1559–1561.