

Tripuhyite



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Crystal Data: Tetragonal. *Point Group:* $[4/m\ 2/m\ 2/m]$ (by analogy to the ferrotapiolite group). As fibrous to very fine-grained aggregates.

Physical Properties: Hardness = 6–7 $D(\text{meas.}) = 5.82$ $D(\text{calc.}) = [6.70]$

Optical Properties: Translucent. *Color:* Greenish yellow, dark brown to black; bright canary-yellow in transmitted light. *Streak:* Canary-yellow to dark brown with a greenish tinge. *Luster:* Dull.

Optical Class: Biaxial (+), anomalous. *Dispersion:* $r < v$, very strong. $\alpha = 2.19(1)$
 $\beta = 2.20(1)$ $\gamma = 2.33(1)$ $2V(\text{meas.}) = \text{Small}$.

Cell Data: *Space Group:* $[P4/mnm]$ (by analogy to the ferrotapiolite group). $a = 4.63$
 $c = 9.14$ $Z = 2$

X-ray Powder Pattern: El Antimonio, Mexico.
3.28 (10), 2.56 (9), 1.72 (9), 1.64 (5), 2.32 (4), 1.47 (4), 1.52 (3)

Chemistry:	(1)	(2)	(3)
Sb ₂ O ₅	66.68	70.3	81.83
SiO ₂	1.35		
TiO ₂	0.86	2.1	
Al ₂ O ₃	1.40	2.3	
Fe ₂ O ₃		23.6	
FeO	27.70		18.17
MgO		0.2	
CaO	0.82		
H ₂ O		1.5	
Total	98.81	[100.0]	100.00

(1) Tripuhy mine, Brazil; total Fe as FeO. (2) El Antimonio, Mexico; recalculated to 100% after deduction of quartz 36%. (3) FeSb₂O₆.

Mineral Group: Ferrotapiolite group.

Occurrence: An alteration product of stibnite and pyrite in the oxidation zone of some hydrothermal antimony deposits; a detrital mineral.

Association: Lewisite, monazite, rutile, kyanite, magnetite (Tripuhy mine, Brazil); selenium, sulfur, stibiconite, sénarmontite, roméite, mopungite (Mopung Hills, Nevada, USA).

Distribution: From the Tripuhy cinnabar mine, Ouro Prêto, Minas Gerais, Brazil. At Doncellas, Jujuy Province, Argentina. In the USA, from the Bear Mountain district, Socorro Co., New Mexico; at the McDermitt mine, Ophir district, Humboldt Co., from the Goldstrike mine, Lynn district, and the Gold Quarry mine, Maggie Creek district, Eureka Co., and at the Green prospect, Mopung Hills, Lake district, Churchill Co., and elsewhere in Nevada. At El Antimonio, Sonora, Mexico. From Djebel Nador, Qacentina (Constantine), Algeria. At Tsumeb, Namibia. In the Clara mine, near Oberwolfach, Black Forest, Germany. At the Cetine mine, 20 km southwest of Siena, Tuscany, Italy. From Steel's Creek, near Yarra Glen, Victoria, Australia. In Japan, in the Kinka mine, Gifu Prefecture. From the Dzhizhikrut and Obi-Khunda deposits, Zeravshan–Hissar district, Hissar Range, Tien Shan, Tajikistan. From several antimony deposits in the southern Tien Shan, Kyrgyzstan.

Name: For its occurrence at the Tripuhy mine, Brazil.

Type Material: The Natural History Museum, London, England, 86044.

References: (1) Palache, C., H. Berman, and C. Frondel (1951) Dana's system of mineralogy, (7th edition), v. II, 1024. (2) Mason, B. and C.J. Vitaliano (1953) The mineralogy of the antimony oxides and antimonates. *Mineral. Mag.*, 30, 100–112.

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