

Crystal Data: Orthorhombic. *Point Group:* $2/m\ 2/m\ 2/m$. Crystals acicular, elongated along [001], or lathlike, flattened on {100}, commonly striated || [001], to 2 cm. In tufts to spherical radiating groups; powdery, massive.

Physical Properties: *Cleavage:* {100}, perfect. *Tenacity:* Flexible. Hardness = 2
D(meas.) = 5.90(2) D(calc.) = [5.75] Very slightly soluble in H₂O.

Optical Properties: Transparent. *Color:* White, yellowish white, straw-yellow, honey-yellow; nearly colorless in transmitted light. *Luster:* Subadamantine.

Optical Class: Biaxial (+). *Orientation:* $X = b$; $Y = a$; $Z = c$. *Dispersion:* $r < v$, moderate.
 $\alpha = 2.00(5)$ $\beta = 2.18(2)$ $\gamma = 2.35(2)$ $2V(\text{meas.}) = \sim 90^\circ$

Cell Data: *Space Group:* $Pbca$. $a = 12.035(6)$ $b = 5.464(3)$ $c = 5.607(3)$ $Z = 8$

X-ray Powder Pattern: "Cananea" [Moctezuma mine], Mexico.

3.280 (100), 3.723 (95), 3.008 (50), 2.730 (45), 2.800 (25), 2.298 (25), 1.930 (25)

Chemistry:	(1)	(2)
Te	78.68	79.95
Bi	trace	
Fe ₂ O ₃	0.70	
O	19.58	20.05
insol.	1.04	
Total	100.00	100.00

(1) Good Hope mine, Colorado, USA. (2) TeO₂.

Polymorphism & Series: Dimorphous with paratellurite.

Occurrence: An alteration product of tellurium and tellurides in the oxide zone of some hydrothermal mineral deposits.

Association: Tellurium, tetradymite, nagyagite, many secondary tellurates.

Distribution: In Romania, in Transylvania, from Fața Băii (Faczebaja), Zalatna, and Săcăřîmb (Nagyág). In Kazakhstan, from the Zavodinskii mine, near Ziryanovskii, Altai Mountains. In Japan, from the Teine mine, northwest of Sapporo, Hokkaido, and the Kawazu and Susaki mines, Shizuoka Prefecture. In the USA, in Colorado, from Cripple Creek, Teller Co., in the Good Hope mine, Gunnison Co., and the Keystone, Smuggler, and John Jay mines, Central district, Boulder Co.; from the Goldfield-Belmont, Clermont, and Mohawk mines, Goldfield district, Esmeralda Co., Nevada. Large crystals from the Moctezuma (Bambolla) mine, 12 km south of Moctezuma, Sonora, Mexico.

Name: For its composition as a TELLURium dioxide.

References: (1) Palache, C., H. Berman, and C. Frondel (1944) Dana's system of mineralogy, (7th edition), v. I, 593–595. (2) Beyer, H. (1967) Verfeinerung der Kristallstruktur von Tellurit, dem rhombischen TeO₂. Zeits. Krist., 124, 228–238 (in German with English abs.). (3) (1960) NBS Circ. 539, 9, 57–58.