

Crystal Data: Cubic. *Point Group:* 23. As irregular to short prismatic grains, to 0.10 mm, typically imbedded in sulfide minerals.

Physical Properties: *Cleavage:* Imperfect in two directions. *Tenacity:* Brittle. Hardness = 3.5–4 VHN = 165–267 (10 g load). D(meas.) = n.d. D(calc.) = 8.991

Optical Properties: Opaque. *Color:* Bright steel-gray with pale brown tint; in polished section, bright white with faint blue tint. *Luster:* Metallic, commonly tarnished yellow-brown. R: (400) —, (420) —, (440) —, (460) —, (480) 54.4, (500) 54.2, (520) 54.0, (540) 53.9, (560) 54.0, (580) 54.9, (600) 54.0, (620) 54.0, (640) 54.0, (660) 54.7, (680) —, (700) —

Cell Data: *Space Group:* $P2_13$. $a = 6.572(3)$. $Z = 4$

X-ray Powder Pattern: Locality “Y”, China. 2.940 (10), 1.983 (9), 2.680 (8), 1.755 (7), 1.066 (7), 1.267 (6), 1.162 (6)

Chemistry:	(1)	(2)	(3)
Pd	25	26	26.6
Pt			0.5
Ag			0.2
Ni	1		0.1
Sb	20	21	19.8
Bi	19	17	18.1
Te	35	36	34.4
Total	100	100	99.7

(1) Locality “Y”, China; by electron microprobe, corresponding to $(\text{Pd}_{0.89}\text{Ni}_{0.06})_{\Sigma=0.95}(\text{Sb}_{0.63}\text{Bi}_{0.34})_{\Sigma=0.97}\text{Te}_{1.03}$. (2) Do.; by electron microprobe, corresponding to $\text{Pd}_{0.91}(\text{Sb}_{0.65}\text{Bi}_{0.30})_{\Sigma=0.95}\text{Te}_{1.05}$. (3) Kambalda, Western Australia; by electron microprobe, corresponding to $(\text{Pd}_{0.97}\text{Pt}_{0.01}\text{Ni}_{0.01}\text{Ag}_{0.01})_{\Sigma=1.00}(\text{Sb}_{0.63}\text{Bi}_{0.33})_{\Sigma=0.96}\text{Te}_{1.04}$.

Mineral Group: Pyrite group.

Occurrence: In a Cu–Ni sulfide deposit in a serpentine body intruded into a Permian formation of metamorphic rocks (Locality “Y”, China); in Cu–Ni sulfide deposits in clinopyroxenite intruding sandy shales and volcanics (Locality “W”, China).

Association: Michenerite, gersdorffite, cobaltite, pyrrhotite, chalcopyrite, pentlandite (Locality “Y”, China); pyrrhotite, pentlandite, chalcopyrite, violarite, cubanite, bornite, sphalerite, galena, linnæite, magnetite, sudburyite, sperrylite, omeiite, gold (Danba, China).

Distribution: From Locality “Y” (a code name), in southwestern China [TL]; also at the “W” deposit, in northeastern China [TL]. From Danba, Sichuan Province, China. At Kambalda, 56 km south of Kalgoorlie, Western Australia. From the Nausahi complex, Orissa, India. In the Uitkomst complex, Eastern Transvaal, South Africa. From the Wellgreen Cu–Ni–Pt–Pd deposit, Yukon Territory, Canada.

Name: For Tellurium, antimony (STIBium), and PALLADIUM in the composition.

Type Material: n.d.

References: (1) Platinum Metal Mineral Research Group, Microprobe Analysis Laboratory, X-ray Powder Laboratory, and Mineral Dressing Laboratory, Kweiyang Institute of Geochemistry, Academia Sinica (1974) Tellurostibnide of palladium and nickel and other new minerals and varieties of platinum metals. *Geochimica*, 3, 169–181 (in Chinese with English abs.). (2) (1976) *Amer. Mineral.*, 61, 182 (abs. ref. 1). (3) Kim, W.-S. and G.Y. Chao (1991) Phase relations in the system Pd–Sb–Te. *Can. Mineral.*, 29, 401–409. (4) Cabri, L.J., Ed. (1981) Platinum group elements: mineralogy, geology, recovery. *Can. Inst. Min. & Met.*, 143–144.

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