

Crystal Data: Orthorhombic. *Point Group:* 2/m 2/m 2/m. As aggregates of radially arranged tabular-prismatic crystals elongated along [010].

Physical Properties: *Cleavage:* Perfect on {001}, {101}, and {100}. *Fracture:* n.d.
Tenacity: Brittle. Hardness = 2.5-3 VHN = 18.2-20.6, 19.6 average (50 g load).
 D(meas.) = 5.54-5.88 D(calc.) = 5.615

Optical Properties: Opaque. *Color:* Grayish black, white in reflected light. *Streak:* Dark gray.
Luster: Metallic.

Optical Class: Anisotropism: Weak, metallic blue, mauve to brown rotation tints.

R₁-R₂: (480) 33.6-35.6 (18.5-19.9)_{oil}, (540) 31.5-33.1 (16.6-17.6)_{oil}, (580) 30.3-31.7 (15.5-16.5)_{oil},
 (660) 28.7-29.8 (14.3-14.9)_{oil}

Color values: CIE illuminant C	x	0.297	0.296	0.289	0.287
	y	0.304	0.304	0.296	0.295
	Y%	31.1	32.6	16.3	17.3
	λ _d	479	479	478	478
	P _e %	6.1	6.6	10.0	10.7

Cell Data: *Space Group:* Pnma. a = 8.8221(3) b = 3.7728(3) c = 14.0076(3) Z = 4

X-ray Powder Pattern: Pirquitas Ag-Sn deposit, Province Jujuy, northwestern Argentina.
 4.128 (100), 1.9335 (53), 2.8081 (51), 2.6692 (51), 2.7421 (41), 1.6316 (39), 3.730 (30)

Chemistry:	(1)	(2)
Pb	42.27	48.50
Ag	0.80	0.27
Fe	0.77	0.26
As	1.41	0.21
Sn	30.12	27.74
S	24.23	23.14
Total	99.60	100.11

(1) Pirquitas Ag-Sn deposit, Province Jujuy, northwestern Argentina; average electron microprobe analysis; corresponding to Pb_{0.809}Ag_{0.29}Fe_{0.055}As_{0.075}Sn_{1.007}S₃. (2) Do.; average electron microprobe analysis; corresponding to Pb_{0.973}Ag_{0.010}Fe_{0.019}As_{0.012}Sn_{0.972}S₃.

Occurrence: In a symmetrical banded, hydrothermal vein Ag-Sn deposit.

Association: Sphalerite, arsenopyrite, pyrite-marcasite, cassiterite, cylindrite, franckeite, hocartite, rhodostannite.

Distribution: From the Pirquitas Ag-Sn deposit, 135 km west of Abra Pampa, Province Jujuy, northwestern Argentina.

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Type Material: Institute of Mineralogy, University of Salzburg, Austria (14389-14391) and the Natural History Museum, London, England (BM 1998, 39-40).

References: (1) Paar, W.H., R. Miletich, D. Topa, A.J. Criddle, M.K. De Brodtkorb, G. Amthauer, and G. Tippelt (2000) Suredaite, PbSnS₃, a new mineral species, from the Pirquitas Ag-Sn deposit, NW-Argentina: mineralogy and crystal structure. *Amer. Mineral.*, 85, 1066-1075.