

Crystal Data: Orthorhombic. *Point Group:* $2/m\ 2/m\ 2/m$. Bladed crystals, to 16 cm, flattened || {010}; massive, disseminated and intergrown with other sulfides and sulfosalts. *Twinning:* Twin and composition planes {104}.

Physical Properties: *Cleavage:* Perfect on {010}; less so on {001} and {100}. *Fracture:* Subconchoidal. *Tenacity:* Brittle. Hardness = 3–4 VHN = 226–279 (010). D(meas.) = 4.95 D(calc.) = 5.011

Optical Properties: Opaque. *Color:* Lead-gray to iron-gray, rarely with a blue or green tarnish. *Luster:* Metallic. *Pleochroism:* Feeble in air, somewhat stronger in oil. *Anisotropism:* Observed.

R₁–R₂: (400) 39.2–44.2, (420) 39.3–45.3, (440) 39.4–46.2, (460) 39.4–47.0, (480) 39.5–47.4, (500) 39.5–47.0, (520) 39.1–46.2, (540) 38.2–44.4, (560) 37.0–42.2, (580) 36.1–40.7, (600) 35.3–39.7, (620) 34.7–38.9, (640) 34.4–38.3, (660) 34.2–38.0, (680) 33.8–37.9, (700) 33.4–37.9

Cell Data: *Space Group:* $Pnam$. $a = 6.02$ $b = 14.49$ $c = 3.79$ $Z = 4$

X-ray Powder Pattern: Chocoya la Vieja mine, Potosí, Bolivia. 3.13 (10), 3.00 (9), 1.762 (5), 2.31 (4), 1.831 (4), 2.12 (3), 1.895 (3)

Chemistry:	(1)	(2)
Cu	24.72	25.48
Sb	48.45	48.81
S	26.20	25.71
Total	99.37	100.00

(1) Pulacayo mine, Bolivia. (2) CuSbS₂.

Occurrence: Associated with other sulfosalts and sulfides in hydrothermal veins.

Association: Jamesonite, chalcopyrite, pyrite, tetrahedrite, stibnite, andorite, stannite, dadsonite, siderite, barite, quartz.

Distribution: From Wolfsberg, in the Harz Mountains, Germany [TL]. At Capileira, Sierra Nevada, Granada Province, Spain. Fine large crystals from Saint-Pons, Alpes-de-Haute-Provence, France. In Austria, at Saint Geraudi, near Brixlegg, Tirol. From Baia Mare (Nagybánya) and Baia Sprie (Felsőbánya), Romania. At Tereksai, Kyrgyzstan. As large crystals from Rar el Anz, Wadi of Cherrat, east of Casablanca, Morocco. In Bolivia, at the Pulacayo mine, Huanchaca; Tapi near Tupiza; Torapaka, Cacachaca, Challapata, Colquechaca, Uncia, and Oruro. From Macayan, Philippines. In the Mt. Washington copper mine, Vancouver Island, British Columbia; and the Porter property, Carbon Hill, Wheaton district, Yukon Territory, Canada. From the Moctezuma (Bambolla) mine, 12 km south of Moctezuma, Sonora, Mexico. Known in small amounts from numerous other localities.

Name: From the Greek *chalkos*, *copper* and *stibium*, *antimony*.

References: (1) Palache, C., H. Berman, and C. Frondel (1944) Dana's system of mineralogy, (7th edition), v. I, 433–435. (2) Cerville, B.D., F.P. Cesbron, M.-C. Sichère, and J. Dietrich (1979) La chalcostibite et la dadsonite de Saint-Pons, Alpes de Haute Provence, France. *Can. Mineral.*, 17, 601–605 (in French with English abs.??ck). (3) Hoffman, W. (1933) Strukturelle und morphologische Zusammenhänge bei Erzen vom Formeltyp ABC₂. I. Die Struktur von Wolfsbergit [=chalcostibite] CuSbS₂ und Emplektit CuBiS₂ und deren Beziehungen zu der Struktur von Antimonit Sb₂S₃. *Zeits. Krist.*, 84, 177–203 (in German). (4) Berry, L.G. and R.M. Thompson (1962) X-ray powder data for the ore minerals. *Geol. Soc. Amer. Mem.* 85, 144 (5) Ramdohr, P. (1969) The ore minerals and their intergrowths, (3rd edition), 705–707.

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