Chalcostibite

Crystal Data: Orthorhombic. \( \text{Point Group: } 2/m \ 2/m \ 2/m \). 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 \( \text{VHN} = 226 \text{-} 279 \) (010). D(meas.) = 4.95 D(calc.) = 5.011


\[ \begin{align*}
R_1 - R_2: (400) \ 39.2 - 44.2, (420) \ 39.3 - 45.3, (440) \ 39.4 - 46.2, (460) \ 39.4 - 47.0, (480) \ 39.5 - 47.4, (500) \\
39.5 - 47.0, (520) \ 39.1 - 46.2, (540) \ 38.2 - 44.4, (560) \ 37.0 - 42.2, (580) \ 36.1 - 40.7, (600) \ 35.3 - 39.7, (620) \\
34.7 - 38.9, (640) \ 34.4 - 38.3, (660) \ 34.2 - 38.0, (680) \ 33.8 - 37.9, (700) \ 33.4 - 37.9
\end{align*} \]

Cell Data: Space Group: \( \text{Pnam. } a = 6.02 \ b = 14.49 \ c = 3.79 \ Z = 4 \)

X-ray Powder Pattern: 
Chocoya la Vieja mine, Potosí, Bolivia. 
3.13 (10), 3.00 (9), 1.76 (5), 2.31 (4), 1.83 (4), 2.12 (3), 1.895 (3)

Chemistry:

\[ \begin{align*}
(1) \quad & \quad Cu \quad 24.72 \quad 25.48 \\
& \quad Sb \quad 48.45 \quad 48.81 \\
& \quad S \quad 26.20 \quad 25.71 \\
\hline
Total & 99.37 & 100.00
\end{align*} \]

(1) Pulacayo mine, Bolivia. (2) CuSbS_{2}.

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 Gestraudi, near Brixlegg, Tirol. From Baia Mare (Nagybánya) and Baia Sprie (Felsőbánya), Romania. At Terekzai, 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 \textit{chalkos, copper} and \textit{stibium, antimony}.


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