

Crystal Data: Monoclinic. *Point Group:* $2/m$. Thick crystals, to 1 cm, tabular on {001}, with numerous well developed prisms and pinacoids; may be prismatic along [20 $\bar{1}$]; striated || [110]. Also massive, granular to compact.

Physical Properties: *Cleavage:* Very good on {112}. *Fracture:* Conchoidal to uneven. *Tenacity:* Brittle. Hardness = 2.5 VHN = 134–163 (100 g load). D(meas.) = 5.54 D(calc.) = 5.55

Optical Properties: Opaque. *Color:* Blackish lead-gray; pale white in reflected light. *Streak:* Blackish lead-gray, deep red-brown. *Luster:* Metallic. *Pleochroism:* Noticeable in some orientations. *Anisotropism:* Distinct in oil.

R₁–R₂: (400) 37.0–45.4, (420) 36.8–45.1, (440) 36.8–44.8, (460) 36.8–44.5, (480) 36.7–44.2, (500) 36.7–43.9, (520) 36.6–43.6, (540) 36.4–43.0, (560) 36.2–42.4, (580) 35.8–41.6, (600) 35.3–40.7, (620) 34.7–39.7, (640) 33.9–38.8, (660) 33.1–37.7, (680) 32.1–36.7, (700) 31.3–35.9

Cell Data: *Space Group:* $C2/c$. $a = 13.4857(8)$ $b = 11.8656(4)$ $c = 19.9834(7)$
 $\beta = 107.168(4)^\circ$ $Z = 4$

X-ray Powder Pattern: Wolfsberg, Germany.
3.21 (100), 3.26 (90), 2.911 (90), 3.87 (80), 3.77 (70), 2.622 (60), 3.61 (50)

Chemistry:	(1)	(2)	(3)
Pb	41.24	40.28	40.55
Ag		0.18	
Sb	37.35	38.30	38.12
S	21.10	21.43	21.33
Total	99.69	100.19	100.00

(1) Wolfsberg, Germany. (2) Oruro, Bolivia. (3) Pb₅Sb₈S₁₇.

Occurrence: In hydrothermal vein deposits.

Association: Cassiterite, franckeite, andorite, semseyite, zinkenite, twinnite, robinsonite, geocronite, boulangerite, galena, pyrite.

Distribution: In Germany, from Wolfsberg, in the Harz Mountains [TL], and Arnsberg, North Rhine-Westphalia. In France, at Leyraux, Cantal; Chazelles, Haute-Loire; Les Cougnasses and Riou Beyrou, Hautes-Alpes; and Bournac, Montagne Noire, Finistère. From Bound Cliff, St. Endellion, Cornwall, England. In the Bwlch mine, Deganwy, Gwynedd, Wales. At the Rujevac Sb–Zn–Pb deposit, western Serbia. From the Azatec deposit, Caucasus Mountains, Armenia. In the Bal’Kumeisk deposit, Sakha, Russia. At the Kochbulak gold deposit, Chatkal-Kuramin Mountains, eastern Uzbekistan. In Canada, from the Porter claim, Carbon Hill, Wheaton River district, Yukon Territory. From the San José mine, Oruro, Bolivia. Additional occurrences are known, either poorly located or the species not fully characterized.

Name: From the Greek for *oblique*, in reference to the crystal morphology.

References: (1) Palache, C., H. Berman, and C. Frondel (1944) Dana’s system of mineralogy, (7th edition), v. I, 464–465. (2) Nuffield, E.W. and M.A. Peacock (1945) Studies of mineral sulpho-salts: VIII — plagionite and semseyite. Univ. Toronto Studies, Geol. Ser., 49, 17–39. (3) Jambor, J.L. (1969) Sulphosalts of the plagionite group. Mineral. Mag., 37, 442–446. (4) Cho, S.-A. and B.J. Wuensch (1970) Crystal chemistry of the plagionite group. Nature, 225, 444–445. (5) Cho, S.-A. and B.J. Wuensch (1974) The crystal structure of plagionite, Pb₅Sb₈S₁₇, the second member in the homologous series Pb_{3+2n}Sb₈Sb_{15+2n}. Zeits. Krist., 139, 351–378. (6) Criddle, A.J. and C.J. Stanley, Eds. (1993) Quantitative data file for ore minerals, 3rd ed. Chapman & Hall, London, 438.

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