

Crystal Data: Monoclinic. *Point Group:* n.d. As domains intergrown with baumhauerite.

Physical Properties: *Cleavage:* One perfect, probably {100}. *Fracture:* Conchoidal.
Tenacity: Brittle. Hardness = 3 VHN = 156–165, average 159. D(meas.) = n.d.
 D(calc.) = 5.31–5.37

Optical Properties: Opaque. *Color:* Steel-gray. *Streak:* Dark reddish brown.
Luster: Metallic.

Optical Class: Biaxial. *Anisotropism:* Moderate; brownish gray, greenish gray, very pale bluish gray, pale greenish gray.

R₁–R₂: (400) 38.9–41.9, (420) 38.4–41.6, (440) 37.8–41.3, (460) 37.3–40.9, (480) 36.8–40.5, (500) 36.2–40.2, (520) 35.6–39.6, (540) 34.9–39.0, (560) 34.2–38.1, (580) 33.5–37.3, (600) 32.8–36.4, (620) 32.1–35.6, (640) 31.4–34.7, (660) 30.6–34.0, (680) 30.1–33.3, (700) 29.6–32.6

Cell Data: *Space Group:* n.d. *a* = 44.74(4) *b* = 8.477(4) *c* = 7.910(6) β = 93.37(5)°
Z = n.d. ????

X-ray Powder Pattern: Binntal, Switzerland (close to baumhauerite).
 3.01 (100), 2.75 (90), 2.28 (90), 4.22 (80), 2.95 (70), 2.73 (70), 3.68 (60)

Chemistry:	(1)	(2)
Pb	46.3	44.35
Ag	1.4	0.25
Hg		0.3
Tl		1.85
As	26.9	20.15
Sb	0.5	5.45
S	24.3	24.55
Total	99.4	96.90

(1) Binntal, Switzerland; by electron microprobe, corresponding to Pb_{10.62}Ag_{0.62}
 (As_{17.06}Sb_{0.20})_{Σ=17.26}S_{36.00}. (2) Quiruvilca, Peru; by electron microprobe, corresponding to
 Pb_{10.06}Ag_{0.12}Hg_{0.07}(As_{12.65}Sb_{2.10}Tl_{0.43})_{Σ=15.18}S_{36.00}.

Occurrence: In sugary dolomite (Binntal, Switzerland).

Association: Baumhauerite, other lead sulfarsenides, realgar, pyrite, dolomite (Binntal, Switzerland).

Distribution: In the Lengenbach quarry, Binntal, Valais, Switzerland [TL]. From the La Libertad mine, Quiruvilca, ??, Peru.

Name: For its similarity to baumhauerite.

Type Material: Museum of Victoria, Melbourne, M30980, South Australian Museum, Adelaide, Australia, G15547; The Natural History Museum, London, England, 1926,1654; Natural History Museum, Basel, Switzerland, L7228.

References: (1) Pring, A., W.D. Birch, D. Sewell, S. Greaser, A. Edenharter, and A. Criddle (1990) Baumhauerite-2a: a silver-bearing mineral with a baumhauerite-like supercell from Lengenbach, Switzerland. *Amer. Mineral.*, 75, 915–922. (2) Robinson, G. and D. Harris (1987) A baumhauerite-like mineral from Quiruvilca, Peru. *Mineral. Record*, 18, 199–201. [must??]