

Crystal Data: Orthorhombic. *Point Group:* $2/m\ 2/m\ 2/m$. As crystals, equant to tabular {001}, with curved faces and composite structure, may be acicular, to 4 mm; many forms, including {001}, {111}, {011}, {112}. As coatings of minute crystals, ocherous, massive.

Physical Properties: *Cleavage:* On {001}, perfect. *Fracture:* Subconchoidal. *Tenacity:* Brittle. Hardness = 4 D(meas.) = n.d. D(calc.) = 6.69

Optical Properties: Transparent to opaque. *Color:* Dark brownish red, reddish brown, yellowish brown; yellow-brown in transmitted light. *Streak:* Yellow. *Luster:* Vitreous to adamantine.

Optical Class: Biaxial (-). *Orientation:* $X = c$; $Y = a$; $Z = b$. *Dispersion:* $r < v$, extreme. $\alpha = 2.41(2)$ $\beta = 2.50(2)$ $\gamma = 2.51(2)$ $2V(\text{meas.}) = 19(5)^\circ$

Cell Data: *Space Group:* $Pnca$. $a = 5.328(2)$ $b = 5.052(2)$ $c = 12.003(3)$ $Z = 4$

X-ray Powder Pattern: Schneeberg, Germany. (ICDD 12-293). 3.499 (100), 2.702 (100), 4.644 (55), 3.982 (55), 2.992 (45), 1.992 (45b), 2.133 (40)

Chemistry:

	(1)	(2)
P ₂ O ₅	trace	
V ₂ O ₅	27.31	28.07
Bi ₂ O ₃	73.39	71.93
Total	100.70	100.00

(1) Schneeberg, Germany. (2) BiVO₄.

Polymorphism & Series: Trimorphous with clinobisvanite and dreyerite.

Occurrence: A rare alteration product of other bismuth minerals in the oxidized zone of some hydrothermal ore deposits; in zoned granite pegmatites.

Association: Bismuth, bismutite, beyerite, bismuthinite, schumacherite, clinobisvanite.

Distribution: In Germany, well-crystallized from the Pucher shaft, Wolfgang Maassen mine, and elsewhere near Schneeberg, Saxony; at Reichenbach, near Bensheim, Hesse; in the Clara Mine, near Oberwolfach, Black Forest. On Mt. Bity, at Samiresy, and Ampangabe, Madagascar. From Mutala, Mozambique. At the Golconda prospect, near Harare, Zimbabwe. In the USA, from the Harding mine, Taos Co., New Mexico; at the Stewart, Pala Chief, and other mines, Pala district, and in the Little Three mine, Ramona district, San Diego Co., California. From São José, Brejauba, and at Matto Dentro, Minas Gerais, Brazil. From near Koktokay [Kyokfogoi], Xinjiang Uygur Autonomous Region, China. In Australia, from Morass Creek, north of Benambra, Victoria; in the Londonderry quarry, southwest of Coolgardie, Western Australia.

Name: For its original occurrence at the Pucher shaft, Schneeberg, Germany.

References: (1) Palache, C., H. Berman, and C. Frondel (1951) Dana's system of mineralogy, (7th edition), v. II, 1050–1052. (2) Granzin, J. and D. Pohl (1984) Refinement of pucherite. Zeits. Krist., 169, 289–294.