

Arsendescloizite**PbZn(AsO₄)(OH)**

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Crystal Data: Orthorhombic. *Point Group:* 222. As roslike aggregates of tabular {001} crystals, to 0.5 mm, with forms {001}, {011}, {101}, and {111}; may be mammillary.

Physical Properties: Hardness = 4–5 D(meas.) = 5.67 D(calc.) = 6.57

Optical Properties: Transparent. *Color:* Pale yellow to pale green. *Streak:* White. *Luster:* Subadamantine.

Optical Class: Biaxial (–). *Orientation:* $X = b$; $Y = a$; $Z = c$. *Dispersion:* $r > v$. $\alpha = 1.990(5)$
 $\beta = 2.030(5)$ $\gamma = 2.035(5)$ $2V(\text{meas.}) = 30(5)^\circ$

Cell Data: *Space Group:* $P2_12_12_1$. $a = 6.075(2)$ $b = 9.358(2)$ $c = 7.634(2)$ $Z = 4$

X-ray Powder Pattern: Tsumeb, Namibia.

3.23 (10), 2.88 (10), 2.60 (8), 1.559 (8), 4.23 (6), 2.09 (6), 1.656 (6)

Chemistry:

	(1)	(2)	(3)
As ₂ O ₅	26.5	28.11	26.82
FeO	0.3		
CuO		1.76	
ZnO	18.5	19.00	18.99
PbO	52.3	43.45	52.09
CaO		5.11	
H ₂ O	2.9	2.58	2.10
Total	100.5	100.01	100.00

(1) Tsumeb, Namibia; by electron microprobe, H₂O by TGA; corresponding to Pb_{1.06}(Zn_{1.03}Fe_{0.02})_{Σ=1.05}(AsO₄)(OH)_{1.4}. (2) Gejiu mine, China. (3) PbZn(AsO₄)(OH).

Mineral Group: Adelite group.

Occurrence: A secondary mineral in oxidized hydrothermal polymetallic deposits.

Association: Tennantite, chalcocite, willemite, mimetite, quartz, goethite (Tsumeb, Namibia).

Distribution: From Tsumeb, Namibia. In the Gejiu Pb–Zn deposit, not otherwise located, China. From the Toroku mine, Miyazaki Prefecture, Japan. At the Ojuela mine, Mapimí, Durango, Mexico. From the Silver Coin mine, near Valmy, Iron Point district, Humboldt Co., Nevada, USA. At the Michael mine, Weiler, near Lahr, Black Forest, Germany.

Name: As the arsenate analog of *descloizite*.

Type Material: Institute for Mineralogy and Crystal Chemistry, University of Stuttgart, Stuttgart, Germany, NM08; National Museum of Natural History, Washington, D.C., USA, 148303.

References: (1) Keller, P. and P.J. Dunn (1982) Arsendescloizite, a new mineral from Tsumeb. Mineral. Record, 13, 155–157. (2) (1983) Amer. Mineral., 68, 280 (abs. ref. 1). (3) Zhao, B. (1985) Arsendescloizite discovered for the first time in China. Acta Mineralogica Sinica, 5, 282–284 (in Chinese).