

Koritnigite

Zn(AsO₃OH)•H₂O

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Crystal Data: Triclinic, pseudomonoclinic. *Point Group:* $\bar{1}$. As imperfect platy crystals, to 5 mm, in aggregates.

Physical Properties: *Cleavage:* {010}, perfect; cleavage traces $\parallel$ [001] and $\parallel$ [100], visible on {010}. *Tenacity:* Flexible. *Hardness* = 2 *D*(meas.) = 3.54 *D*(calc.) = 3.56

Optical Properties: Transparent. *Color:* Colorless, white, rose. *Luster:* Pearly on {010}. *Optical Class:* Biaxial (+). *Orientation:* $X = b$; $Y \wedge a \simeq 28^\circ$; $Z \wedge c \simeq 22^\circ$. $\alpha = 1.632(5)$
 $\beta = 1.652(3)$ $\gamma = 1.693(3)$ $2V(\text{meas.}) = 70(5)^\circ$

Cell Data: *Space Group:* $P\bar{1}$. $a = 7.948(2)$ $b = 15.829(5)$ $c = 6.668(2)$ $\alpha = 90.86(2)^\circ$
 $\beta = 96.56(2)^\circ$ $\gamma = 90.05(2)^\circ$ $Z = 8$

X-ray Powder Pattern: Tsumeb, Namibia; very close to cobaltkoritnigite.
7.90 (10), 3.16 (9), 3.83 (7), 2.461 (6), 2.186 (5), 3.95 (4), 2.926 (4)

Chemistry:

	(1)	(2)	(3)
As ₂ O ₅	51.75	54.67	51.46
FeO + Fe ₂ O ₃	trace	0.05	
CoO		4.54	
NiO		2.44	
ZnO	35.97	25.83	36.44
MgO	trace		
H ₂ O	[12.3]	[12.47]	12.10
Total	[100.0]	[100.00]	100.00

- (1) Tsumeb, Namibia; by electron microprobe, (AsO₃OH)²⁻ confirmed by IR, H₂O by difference.
(2) Jáchymov, Czech Republic; H₂O by difference. (3) Zn(AsO₃OH)•H₂O.

Occurrence: A secondary mineral of the lower oxidation zone in a dolostone-hosted polymetallic hydrothermal ore deposit (Tsumeb, Namibia).

Association: Tennantite, cuprian adamite, stranskiite, lavendulan, köttigite, tsumcorite, prosperite, o'danielite (Tsumeb, Namibia); erythrite, arsenolite, sphalerite (Jáchymov, Czech Republic).

Distribution: Found at Tsumeb, Namibia. From Jáchymov (Joachimsthal), Czech Republic. At Richelsdorf, Hesse, Germany.

Name: Honors Professor Sigmund Koritnig (1912–1984), petrologist, University of Göttingen, Göttingen, Germany.

Type Material: University of Stuttgart, Stuttgart, NM02; University of Göttingen, Göttingen, Germany; Harvard University, Cambridge, Massachusetts, 125338; National Museum of Natural History, Washington, D.C., USA, 143369.

References: (1) Keller, P., H. Hess, P. Süssé, G. Schnorrer, and P.J. Dunn (1979) Koritnigite, Zn[H₂O|HOAsO₃], ein neues Mineral aus Tsumeb, Südwestafrika. *Tschermaks Mineral. Petrog. Mitt.*, 26, 51–58 (in German with English abs.). (2) (1980) *Amer. Mineral.*, 65, 206 (abs. ref. 1). (3) Schmetzer, K., W. Horn, and W. Bartelke (1980) Kobalt- und Nickel-haltiger Koritnigite aus Jáchymov (Joachimsthal), ČSSR – ein zweiter Fundpunkt. *Neues Jahrb. Mineral., Monatsh.*, 237–240 (in German with English abs.). (4) Keller, P., H. Hess, and H. Riffel (1980) Die Kristallstruktur von Koritnigite, Zn[H₂O|HOAsO₃]. *Neues Jahrb. Mineral., Abh.*, 138, 316–332 (in German with English abs.).