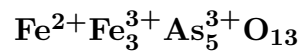


Schneiderhöhnite



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Crystal Data: Triclinic. *Point Group:* $\bar{1}$. As flattened curved crystals, to 3 cm; also spindle-shaped, in aggregates.

Physical Properties: *Cleavage:* {100}, perfect; two others observed. *Hardness* = ~ 3
D(meas.) = 4.3 D(calc.) = 4.40

Optical Properties: Opaque, transparent in thin flakes. *Color:* Dark brown, nearly black; yellow-brown to yellow-orange; in reflected light, red-brown with brownish red internal reflections. *Streak:* Coffee-brown. *Luster:* Metallic to adamantine. *Optical Class:* Biaxial (+). *Pleochroism:* Red-brown to pale yellow. *Absorption:* $X > Y < Z$. $\alpha = > 2.11$ $\beta = \text{n.d.}$ $\gamma = < 2.13$ $2V(\text{meas.}) = \text{n.d.}$ *Anisotropism:* Weak; greenish to brownish.

Cell Data: *Space Group:* $P\bar{1}$. $a = 8.924(2)$ $b = 10.016(3)$ $c = 9.103(3)$ $\alpha = 59.91(2)^\circ$
 $\beta = 112.41(2)^\circ$ $\gamma = 81.69(2)^\circ$ $Z = 2$

X-ray Powder Pattern: Tsumeb, Namibia.

7.25 (10), 3.583 (10), 2.891 (10), 2.598 (10), 2.399 (9), 3.320 (8), 2.255 (8)

Chemistry:

	(1)	(2)
As	47.03	46.48
Fe	27.90	27.72
Zn	0.93	
Ge	0.37	
O	[23.77]	25.80
Total	[100.00]	100.00

(1) Tsumeb, Namibia; by electron microprobe, average of three analyses, O by difference.

(2) $\text{Fe}^{2+}\text{Fe}_3^{3+}\text{As}_5\text{O}_{13}$.

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

Association: Zincian stottite, chalcocite, tennantite, leiteite (Tsumeb, Namibia); löllingite, karibibite, eosphorite, arseniosiderite, scorodite, quartz (Bou Azzer, Morocco).

Distribution: From Tsumeb, Namibia. At Bou Azzer, Morocco. From the Córrego do Urucum pegmatite, near Galiléia, Minas Gerais, Brazil. At the Veta Negra mine, Pampa Larga district, Tierra Amarilla, southeast of Copiapó, Chile. In the Tip Top mine, 8.5 km southwest of Custer, Custer Co., South Dakota, USA. At the Belaj-Gora pegmatite in Kazakhstan.

Name: To honor Hans Schneiderhöhn (1887–1962), Professor of Mineralogy, University of Freiburg, Freiburg im Breisgau, Germany.

Type Material: Royal Ontario Museum, Toronto, Canada, M33238; Harvard University, Cambridge, Massachusetts, USA, 111932.

References: (1) Ottemann, J., B. Nuber, and B.H. Geier (1973) Schneiderhöhinit, ein natürliches Eisen-Arsen-Oxid aus der tiefen Oxidationszone von Tsumeb. *Neues Jahrb. Mineral., Monatsh.*, 517–523. (2) (1974) *Amer. Mineral.*, 59, 1139 (abs. ref. 1). (3) Hawthorne, F.C. (1985) Schneiderhöhnite, $\text{Fe}^{2+}\text{Fe}_3^{3+}\text{As}_5^{3+}\text{O}_{13}$, a densely packed arsenite structure. *Can. Mineral.*, 23, 675–679.