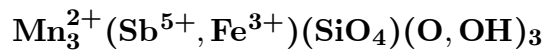


Örebroite

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Crystal Data: Hexagonal. *Point Group:* 3. As fine-grained, polycrystalline intergrowths and massive.

Physical Properties: *Fracture:* Irregular. Hardness = ~4 D(meas.) = n.d. D(calc.) = 4.77 Weakly magnetic, probably due to inclusions of magnetite.

Optical Properties: Nearly opaque. *Color:* Dark brown. *Streak:* Reddish brown.

Luster: Vitreous.

Optical Class: Uniaxial (+). $\omega = 1.857(3)$ $\epsilon = 1.875(3)$

Cell Data: *Space Group:* *P3* (probable). $a = 8.183(7)$ $c = 4.756(9)$ $Z = 2$

X-ray Powder Pattern: Sjö mine, Sweden.

3.096 (100), 1.778 (90), 2.334 (70), 2.838 (50), 1.550 (50), 2.680 (40), 4.08 (30)

Chemistry:

	(1)
SiO ₂	15.2
WO ₃	0.0
Al ₂ O ₃	0.3
Fe ₂ O ₃	9.2
Sb ₂ O ₅	15.8
As ₂ O ₅	1.6
V ₂ O ₅	0.0
MnO	54.6
MgO	0.8
H ₂ O	[2.8]
Total	[100.3]

(1) Sjö mine, Sweden; by electron microprobe, H₂O by analogy to welinite; corresponds to $\text{Mn}_{3.04}(\text{Fe}_{0.46}^{3+}\text{Sb}_{0.38}\text{Mg}_{0.08}\text{As}_{0.06}\text{Al}_{0.02})_{\Sigma=1.00}\text{Si}_{1.00}[\text{O}, (\text{OH})]_{\Sigma=\sim 7}$.

Occurrence: A fine-grained aggregate with antimonates.

Association: Calcite, hausmannite, magnetite, dolomite.

Distribution: At the Sjö mine, near Grythyttan, Örebro, Sweden.

Name: For the town of Örebro, Sweden, about 60 km southeast of the Sjö mine.

Type Material: Swedish Museum of Natural History, Stockholm, Sweden, RM 93:0255; National Museum of Natural History, Washington, D.C., USA, 163008.

References: (1) Dunn, P.J., D.R. Peacor, R.C. Erd, and R.A. Ramik (1986) Franciscanite and örebroite, two new minerals from California and Sweden, related to redefined welinite. *Amer. Mineral.*, 71, 1522–1526.