

Akrochordite

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Crystal Data: Monoclinic. *Point Group:* $2/m$. Crystals are prismatic to lathlike, elongated along [201], generally splayed or tapered, to 2 mm; may be in radial aggregates and subparallel sheaves. Typically as wartlike or spherical aggregates of minute crystals.

Physical Properties: *Cleavage:* On {010}, perfect; a second, perpendicular to the first. Hardness = 3.5 D(meas.) = 3.19–3.35 D(calc.) = 3.26–3.29

Optical Properties: Translucent. *Color:* Yellowish red-brown, pale to dark brown, pale pink, colorless. *Luster:* Dull.

Optical Class: Biaxial (+). *Orientation:* $X = b$; $Y \wedge c = \sim 45^\circ$. *Dispersion:* $r < v$, moderately strong. $\alpha = 1.672$ $\beta = 1.676$ $\gamma = 1.683$ $2V(\text{meas.}) = \text{Medium}$.

Cell Data: *Space Group:* $P2_1/c$. $a = 5.682(2)$ $b = 17.627(5)$ $c = 6.832(1)$
 $\beta = 99.49(2)^\circ$ $Z = 2$

X-ray Powder Pattern: Långban, Sweden.

4.40 (10), 8.79 (8), 2.750 (5), 3.62 (4), 5.31 (3.5), 3.112 (3.5), 3.062 (3.5)

Chemistry:	(1)	(2)	(3)
P ₂ O ₅	0.42		
As ₂ O ₅	33.51	32.5	31.6
Mn ₂ O ₃	0.50		
FeO	0.46	1.5	0.2
MnO	38.98	39.8	49.5
ZnO		0.5	1.5
MgO	6.94	7.6	0.8
CaO	0.99	0.5	0.8
Na ₂ O	1.18		
K ₂ O	0.55		
H ₂ O	16.78	[17.6]	[15.6]
Total	100.31	[100.0]	[100.0]

(1) Långban, Sweden. (2) Do.; by electron microprobe, H₂O by difference. (3) Sterling Hill, New Jersey, USA; by electron microprobe, H₂O by difference.

Occurrence: A rare mineral in hausmannite ore from a metamorphosed Fe–Mn orebody (Långban, Sweden); in a metamorphosed stratiform zinc orebody (Sterling Hill, New Jersey, USA).

Association: Pyrochroite, barite, hausmannite, eveite, brandtite (Långban, Sweden); sarkinite, chlorophoenicite, carbonates (Sterling Hill, New Jersey, USA).

Distribution: From Långban, Värmland, Sweden. At Sterling Hill, Ogdensburg, Sussex Co., New Jersey, USA.

Name: From the Greek for *wart*, for its typical habit.

Type Material: National Museum of Natural History, Washington, D.C., USA, 162614, R5396.

References: (1) Palache, C., H. Berman, and C. Frondel (1951) Dana's system of mineralogy, (7th edition), v. II, 927. (2) Moore, P.B. (1967) Contributions to Swedish mineralogy. I. Studies on the basic arsenates of manganese: retzian, hemafibrite, synadelphite, arsenoclasite, arseniopleite, and akrochordite. Arkiv. Mineral. Geol., 4(5), 425–444. (3) Dunn, P.J. (1981) Akrochordite, a second occurrence: Sterling Hill, New Jersey. Mineral. Mag., 44, 235–236. (4) Moore, P.B., P.K. Sen Gupta, and E.O. Schlemper (1989) Akrochordite, (Mn, Mg)₅(OH)₄(H₂O)₄(AsO₄)₂: a sheet structure with amphibole walls. Amer. Mineral., 74, 256–262.

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