

**Crystal Data:** Orthorhombic. *Point Group:*  $2/m\ 2/m\ 2/m$ . Crystals thick tabular on {100}, with {100}, {010}, {110}, {210}, {011}; usually composite, nearly parallel, warped, barrel-shaped, sheaflike, to 2 mm.

**Physical Properties:** *Cleavage:* On {101}, fair. Hardness = < 4 D(meas.) = 3.67 D(calc.) = [3.75]

**Optical Properties:** Semitransparent. *Color:* Bright green, apple-green to pale green, pale yellow. *Streak:* White.

*Optical Class:* Biaxial (+). *Pleochroism:* X = Z = green; Y = yellow. *Orientation:* X = a; Y = c; Z = b. *Dispersion:*  $r < v$ , medium.  $\alpha = 1.700(5)$   $\beta = 1.715(5)$   $\gamma = 1.732(10)$   $2V(\text{meas.}) = 65(5)^\circ$

**Cell Data:** *Space Group:*  $Pn\bar{m}$ .  $a = 8.57(1)$   $b = 8.77(1)$   $c = 6.27(1)$   $Z = 4$

**X-ray Powder Pattern:** Långban, Sweden.

4.39 (10), 3.058 (9), 5.09 (8), 6.10 (7), 2.528 (6), 2.797 (5), 3.14 (4)

**Chemistry:**

	(1)	(2)	(3)
As <sub>2</sub> O <sub>5</sub>	43.1	42.89	43.24
FeO		0.01	
MnO	48.8	50.29	53.37
CuO		0.01	
ZnO		0.01	
MgO		1.14	
CaO	1.3	0.50	
H <sub>2</sub> O	n.d.	[3.36]	3.39
Total		[98.21]	100.00

(1) Långban, Sweden; by electron microprobe, total Mn as MnO, total As as As<sub>2</sub>O<sub>5</sub>. (2) Do.; by electron microprobe, average of two analyses, total Mn as MnO, total As as As<sub>2</sub>O<sub>5</sub>; corresponds to  $(\text{Mn}_{1.90}\text{Mg}_{0.08}\text{Ca}_{0.02})_{\Sigma=2.00}(\text{AsO}_4)_{1.00}(\text{OH})$ . (3)  $\text{Mn}_2(\text{AsO}_4)(\text{OH})$ .

**Polymorphism & Series:** Dimorphous with sarkinite.

**Occurrence:** Very rare, in fissures in a metamorphosed Fe–Mn orebody (Långban, Sweden); in a metamorphosed stratiform zinc orebody (Sterling Hill, New Jersey, USA).

**Association:** Akrochordite, manganoan hörnesite, hausmannite, carbonates, Fe–Mn oxides (Långban, Sweden); willemite, sarkinite (Sterling Hill, New Jersey, USA).

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

**Name:** Named for the biblical *Eve*, in contrast to adamite, with which it is isostructural.

**Type Material:** Swedish Museum of Natural History, Stockholm, Sweden, 390274; The Natural History Museum, London, England; Harvard University, Cambridge, Massachusetts, 108971; National Museum of Natural History, Washington, D.C., USA, 120062, 162614A.

**References:** (1) Moore, P.B. (1968) Eveite,  $\text{Mn}_2(\text{OH})(\text{AsO}_4)$ , a new mineral from Långban. *Arkiv Mineral. Geol.*, 4(26), 473–476. (2) (1970) *Amer. Mineral.*, 55, 319–320 (abs. ref. 1). (3) Moore, P.B. and J.R. Smyth (1968) Crystal chemistry of the basic manganese arsenates: III. The crystal structure of eveite,  $\text{Mn}_2(\text{OH})(\text{AsO}_4)$ . *Amer. Mineral.*, 53, 1841–1845. (4) Hålenius, U. and E. Westlund (1998) Manganese valency and the color of the  $\text{Mn}_2\text{AsO}_4(\text{OH})$  polymorphs eveite and sarkinite. *Mineral. Mag.*, 62, 113–119.

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