

**Crystal Data:** Monoclinic. *Point Group:*  $m$ . As micaceous plates, in aggregates to several mm.

**Physical Properties:** Megascopically indistinguishable from either hematolite or dixenite.  
*Cleavage:* Perfect on {001}. *Tenacity:* Brittle. *Fracture:* Uneven to subconchoidal.  
 Hardness = 3-4 D(meas.) = n.d. D(calc.) = 3.41

**Optical Properties:** Opaque to translucent. *Color:* Red-brown to orange-brown.

*Streak:* Pale brown. *Luster:* Resinous to submetallic.

*Optical Class:* Biaxial (-).  $\alpha = 1.723(4)$   $\beta = 1.744(2)$   $\gamma = 1.750(2)$   $2V(\text{meas.}) = 40(10)^\circ$   
 $2V(\text{calc.}) = 56^\circ$  *Orientation:*  $Y = b, X \wedge c = 4^\circ$  ( $\beta$  obtuse). *Dispersion:* Medium,  $r > v$ .

**Cell Data:** *Space Group:*  $Cc$ .  $a = 14.236(2)$   $b = 8.206(1)$   $c = 24.225(4)$   $\beta = 93.52(1)^\circ$   $Z = 4$

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

12.07 (100), 6.046 (100), 4.040 (90), 3.030 (70), 1.552 (70), 1.552 (70), 2.411 (40)

<b>Chemistry:</b>	(1)
ZnO	4.48
MnO	34.32
MgO	12.76
Fe <sub>2</sub> O <sub>3</sub>	6.76
Al <sub>2</sub> O <sub>3</sub>	2.25
As <sub>2</sub> O <sub>3</sub>	6.56
As <sub>2</sub> O <sub>5</sub>	15.84
<u>H<sub>2</sub>O</u>	<u>[13.74]</u>
Total	96.71

(1) Långban, Värmland, Sweden; average of 13 electron microprobe analyses supplemented by IR spectroscopy, H<sub>2</sub>O, As<sub>2</sub>O<sub>5</sub> and As<sub>2</sub>O<sub>3</sub> calculated from structure; corresponds to  $(\text{Zn}_{0.83}\text{Mn}^{2+}_{0.17})_{\Sigma=1.00}(\text{Mn}^{2+}_{7.12}\text{Mg}_{4.77})_{\Sigma=11.89}(\text{Fe}^{3+}_{1.28}\text{Al}_{0.67})_{\Sigma=1.95}(\text{As}^{3+}\text{O}_3)(\text{As}^{5+}\text{O}_4)_{2.08}(\text{OH})_{22.29}$ .

**Occurrence:** From a museum specimen described as representing “ore-bearing matrix”.

**Association:** Calcite, magnussonite, specular hematite.

**Distribution:** From Långban, Värmland, Sweden.

**Name:** Honors Dr. Takaharu Araki (1929-2004), Department of Geophysical Sciences, University of Chicago, Illinois, USA, for his numerous crystal-structure determinations.

**Type Material:** Mineralogical Museum, Harvard University, Cambridge, Massachusetts, USA (134608) and the Natural History Museum, London, England (BM1921, 310).

**References:** (1) Roberts, A.C., J.D. Grice, M.A. Cooper, F.C. Hawthorne, and M.N. Feinglos (2000) Arakiite; a new Zn-bearing hematolite-like mineral from Långban, Värmland, Sweden. Mineral. Record, 31(3), 253-256.