

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:* $Y = b, X \wedge c = 4^\circ$ (β 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)

Chemistry:	(1)
ZnO	4.48
MnO	34.32
MgO	12.76
Fe ₂ O ₃	6.76
Al ₂ O ₃	2.25
As ₂ O ₃	6.56
As ₂ O ₅	15.84
<u>H₂O</u>	<u>[13.74]</u>
Total	96.71

(1) Långban, Värmland, Sweden; average of 13 electron microprobe analyses supplemented by IR spectroscopy, H₂O, As₂O₅ and As₂O₃ 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.