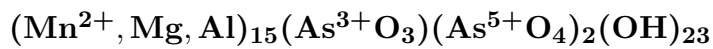


## Hematolite



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**Crystal Data:** Hexagonal. *Point Group:* 3. As thick tabular striated pseudorhomboidal trigonal pyramids  $\{01\bar{1}5\}$ , with triangular  $\{0001\}$ , typically bent, to 1 cm.

**Physical Properties:** *Cleavage:* Perfect on  $\{0001\}$ . *Fracture:* Uneven. *Tenacity:* Brittle. Hardness = 3.5 D(meas.) = 3.44–3.49 D(calc.) = 3.50

**Optical Properties:** Translucent to nearly opaque. *Color:* Blood-red, garnet-red, brownish red, brown, black; reddish orange to yellowish brown in transmitted light. *Streak:* Pale chocolate-brown to reddish brown. *Luster:* Vitreous, pearly to submetallic on cleavages. *Optical Class:* Uniaxial (-).  $\omega = 1.733(3)$   $\epsilon = 1.714(3)$

**Cell Data:** *Space Group:*  $R\bar{3}$ .  $a = 8.275(5)$   $c = 36.60(5)$   $Z = 3$

**X-ray Powder Pattern:** Moss mine, Sweden. (ICDD 33–868). 4.137 (100), 12.2 (36), 5.642 (29), 4.224 (22), 2.386 (19), 2.956 (18), 2.405 (16)

Chemistry:	(1)	(2)	(1)	(2)	
SiO <sub>2</sub>	0.20		CaO	0.32	
As <sub>2</sub> O <sub>5</sub>	15.67	15.65	Na <sub>2</sub> O	0.08	
As <sub>2</sub> O <sub>3</sub>	6.36	6.74	K <sub>2</sub> O	0.14	
Al <sub>2</sub> O <sub>3</sub>	6.26	6.94	H <sub>2</sub> O <sup>+</sup>	13.00	
Fe <sub>2</sub> O <sub>3</sub>	1.00		H <sub>2</sub> O <sup>-</sup>	0.72	
MnO	49.21	48.32	H <sub>2</sub> O	14.11	
MgO	7.10	8.24			
			Total	100.06	100.00

(1) Nordmark, Sweden. (2)  $\text{Mn}_{10}\text{Mg}_3\text{Al}_2(\text{As}^{3+}\text{O}_3)(\text{As}^{5+}\text{O}_4)_2(\text{OH})_{23}$ .

**Occurrence:** In fissures in metamorphosed limestone in metamorphosed Fe–Mn orebodies.

**Association:** Manganosite, pyrochroite, magnetite, jacobsonite, calcite, barite, fluorite.

**Distribution:** In Sweden, in the Moss mine, Nordmark, and from Långban, Värmland.

**Name:** From the Greek for *blood*, in allusion to the color.

**Type Material:** National Museum of Natural History, Washington, D.C., USA, C4228.

**References:** (1) Palache, C., H. Berman, and C. Frondel (1951) Dana's system of mineralogy, (7th edition), v. II, 777–778. (2) Wickman, F.E. (1950) From the notes of the late K. Johansson. IV–VI. Hematolite. Geol. Fören. Förhandl. Stockholm, 72, 64–68, esp. 66–67. (3) Moore, P.B. and T. Araki (1978) Hematolite: a complex dense-packed sheet structure. Amer. Mineral., 63, 150–159.