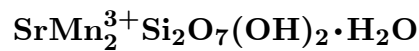


Hennomartinite



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Crystal Data: Orthorhombic. *Point Group:* $2/m\ 2/m\ 2/m$. Rarely in feltlike masses; as irregular aggregates, to 1 mm, embedded in other minerals.

Physical Properties: Hardness = ~ 4 D(meas.) = n.d. D(calc.) = 3.68

Optical Properties: Translucent. *Color:* Yellow-brown; yellow-brown in thin section. *Luster:* Vitreous.

Optical Class: Biaxial. *Pleochroism:* Strong; from yellowish brown to dark red-brown. $n = > 1.82$. $\alpha = \text{n.d.}$ $\beta = \text{n.d.}$ $\gamma = \text{n.d.}$ $2V(\text{meas.}) = 63(1)^\circ$

Cell Data: *Space Group:* $Cmcm$. $a = 6.255(1)$ $b = 9.034(2)$ $c = 13.397(2)$ $Z = 4$

X-ray Powder Pattern: Wessels mine, South Africa; intensities calculated. 2.833 (100), 2.695 (98), 4.804 (86), 2.807 (82), 2.401 (68), 3.373 (66), 2.715 (58)

Chemistry:	(1)
SiO ₂	28.22
TiO ₂	0.00
Al ₂ O ₃	0.00
Fe ₂ O ₃	0.53
Mn ₂ O ₃	37.82
CaO	0.02
SrO	24.32
BaO	0.46
H ₂ O	[8.62]
Total	[99.99]

(1) Wessels mine, South Africa; by electron microprobe, average of 13 analyses, Li and F not detected by ion microprobe, H₂O from ideal stoichiometry; corresponds to $(\text{Sr}_{0.98}\text{Ba}_{0.01})_{\Sigma=0.99}(\text{Mn}_{2.01}^{3+}\text{Fe}_{0.03}^{3+})_{\Sigma=2.04}\text{Si}_{1.97}\text{O}_7(\text{OH})_2 \cdot \text{H}_2\text{O}$.

Occurrence: From a hand specimen, in veinlets of sérandite-pectolite cutting sugilite, probably of hydrothermal origin in a bedded manganese deposit.

Association: Sérandite-pectolite, sugilite, braunite, taikanite, kornite.

Distribution: In the Wessels mine, near Kuruman, Cape Province, South Africa.

Name: For Henno Martin, German geologist, who has worked on the Precambrian geology of the general area where the mineral occurs.

Type Material: Natural History Museum, Bern, Switzerland, B5564.

References: (1) Armbruster, T., R. Oberhänsli, V. Bermanec, and R. Dixon (1993) Hennomartinite and kornite, two new Mn³⁺ rich silicates from the Wessels mine, Kalahari, South Africa. *Schweiz. Mineral. Petrog. Mitt.*, 73, 349–355. (2) (1994) *Amer. Mineral.*, 79, 763–764 (abs. ref. 1). (3) Armbruster, T., R. Oberhänsli, and V. Bermanec (1992) Crystal structure of SrMn₂[Si₂O₇](OH)₂•H₂O, a new mineral of the lawsonite type. *Eur. J. Mineral.*, 4, 17–22.