

Arsenmedaite**Mn²⁺₆As⁵⁺Si₅O₁₈(OH)**

Crystal Data: Monoclinic. *Point Group:* 2/m. As rough prismatic crystals, to 200 μm.

Physical Properties: *Cleavage:* Good on {100}, parting ⊥ to elongation.

Fracture: Irregular. *Tenacity:* Brittle. *Hardness* = n.d. *D(meas.)* = n.d. *D(calc.)* = 3.772

Optical Properties: n.d. *Color:* Orange-reddish. *Streak:* White. *Luster:* Vitreous.

Optical Class: n.d. *n(calc.)* = 1.766

Cell Data: Space Group: *P*2₁/*n*. *a* = 6.7099(3) *b* = 29.0008(13) *c* = 7.5668(3)

β = 95.469(3)° *Z* = 4

X-ray Powder Pattern: Calculated pattern.

3.266 (100), 2.612 (98), 2.963 (83), 3.094 (82), 2.953 (79), 3.159 (72), 2.788 (68)

Chemistry:	(1)	(2)
V ₂ O ₅	1.84	
As ₂ O ₅	6.81	13.52
SiO ₂	38.75	35.34
CaO	0.70	
MnO	50.28	50.08
<u>H₂O</u>	<u>1.42</u>	<u>1.06</u>
Total	99.80	100.00

(1) Molinello mine, Graveglia Valley, Ne, Genoa, Liguria, Italy; average of 10 electron microprobe analyses supplemented by Raman spectroscopy, (OH)⁻ calculated for electroneutrality; corresponds to (Mn_{5.89}Ca_{0.10})_{Σ=5.99}[(As_{0.49}V_{0.17})_{Σ=0.66}Si_{5.35}]_{Σ=6.01}O_{17.69}(OH)_{1.31}. (2) Mn²⁺₆As⁵⁺Si₅O₁₈(OH).

Mineral Group: Medaite group.

Occurrence: A late-stage hydrothermal mineral in quartz veinlets that cut braunite ore bodies hosted by metacherts, which overlay a mafic-ultramafic ophiolitic sequence.

Association: Calcian rhodochrosite, talc, braunite, quartz, calcite, As-rich medaite, ganophyllite.

Distribution: From the Molinello mine, Graveglia Valley, Ne, Genoa, Liguria, Italy.

Name: Indicates the *arsenic* analogue of *medaite*.

Type Material: Natural History Museum, University of Pisa (19901) and the Department of Earth Science, University of Genoa (MO483), Italy.

References: (1) Biagioni, C., D. Belmonte, C. Carbone, R. Cabella, F. Zaccarini, and C. Balestra (2019) Arsenmedaite, Mn²⁺₆As⁵⁺Si₅O₁₈(OH), the arsenic analogue of medaite, from the Molinello mine, Liguria, Italy: occurrence and crystal structure. *Eur. J. Mineral.*, 31(1), 117-126. (2) (2020) *Amer. Mineral.*, 105(7), 1109-1110 (abs. ref. 1).