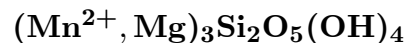


Caryopilite



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Crystal Data: Monoclinic (?). *Point Group:* n.d. As tabular pseudo-hexagonal crystals, commonly in rosettes, to 4 mm. Stalactitic, reniform with concentrically radiating fibrous internal structure, or massive.

Physical Properties: *Cleavage:* Perfect on {001}. *Hardness* = 3–3.5 *D*(meas.) = 2.83–2.94 *D*(calc.) = 2.788

Optical Properties: Semitransparent. *Color:* Reddish brown, tan; light brown to yellow in thin section.

Optical Class: Biaxial (-). *Orientation:* $X = c$. $\alpha = 1.602\text{--}1.624$ $\beta = 1.632\text{--}1.650$
 $\gamma = 1.632\text{--}1.650$ $2V(\text{meas.}) = \sim 0^\circ$

Cell Data: *Space Group:* n.d. $a = 5.668$ $b = 9.811$ $c = 7.527$ $\beta = 104.52^\circ$ $Z = 2$

X-ray Powder Pattern: Långban, Sweden.

2.49 (100), 7.24 (90), 3.64 (80), 2.78 (70), 2.08 (50), 1.954 (30), 1.617 (20)

Chemistry:	(1)	(2)		(1)	(2)
SiO ₂	32.1	36.35	MgO	1.9	8.01
Al ₂ O ₃		0.21	CaO		0.03
As ₂ O ₃	6.5		F		< 0.05
FeO	1.7	1.09	Cl		0.14
MnO	48.8	42.39	H ₂ O	[8.1]	[9.22]
ZnO	0.9	< 0.03	-O = (F, Cl) ₂		[0.08]
			Total	[100.0]	[97.44]

(1) Sterling Hill, New Jersey, USA; by electron microprobe, H₂O by difference. (2) Bald Knob, North Carolina, USA; by electron microprobe, H₂O calculated from stoichiometry.

Occurrence: A product of the metamorphism of manganese-bearing minerals.

Association: Gonyerite (Långban, Sweden); calcite, rhodonite, lead, sarkinite, brandtite (Pajsberg, Sweden); manganoan calcite, tirodite, rhodonite, jacobsite (Bald Knob, North Carolina, USA).

Distribution: From the Harstigen mine, near Persberg, and at Långban, Värmland, Sweden. In the Molinello and Gambatesa manganese mines, near Chiavari, Val Graveglia, Liguria, Italy. At the Falotta mine, Oberhalbstein, Graubünden, Switzerland. In the Ködnitz Valley, Tirol, Austria. In the USA, at Franklin and Sterling Hill, Ogdensburg, Sussex Co., New Jersey; at Bald Knob, near Sparta, Alleghany Co., North Carolina; in the Hurricane mine, on the Olympic Peninsula, Washington. From the Ichinomata mine, Kumamoto Prefecture, Japan. At Watson's Beach, southeastern Otago, New Zealand. In the N'Chwaning and Wessels mines, near Kuruman, Cape Province, South Africa.

Name: From the Greek for *walnut* and *felt*, in allusion to its color and habit.

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