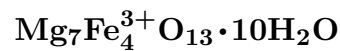


Muskoxite



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Crystal Data: Hexagonal. *Point Group:* $\bar{3} 2/m$ (probable). As hexagonal crystals, to 0.25 mm, very thin on {0001}, in reticular to divergent aggregates, some intergrown to simulate larger trigonal crystals. In cross-fiber veinlets, anhedral grains; fine-grained powdery.

Physical Properties: *Cleavage:* Perfect on {0001}, micaceous. *Tenacity:* Brittle, flexible. Hardness = ~ 3 D(meas.) = 3.10–3.20 D(calc.) = n.d.

Optical Properties: Translucent. *Color:* Dark reddish brown; amber-orange to deep red in transmitted light. *Streak:* Pale orange-brown. *Luster:* Vitreous. *Optical Class:* Biaxial (-). $n = 1.80\text{--}1.81$ $2V(\text{meas.}) = 10^\circ\text{--}40^\circ$

Cell Data: *Space Group:* $R\bar{3}m$ pseudocell. $a = 3.07$ $c = 4.6$ $Z = \text{n.d.}$

X-ray Powder Pattern: Muskox intrusion, Canada; preferred orientation evident. 2.308 (10), 4.61 (8), 1.746 (6), 1.543 (4), 4.12 (3), 2.660 (3), 4.44 (2)

Chemistry:

	(1)	(2)
Fe ₂ O ₃	41.1	40.86
FeO	0.0	
MgO	35.4	36.09
H ₂ O	23.8	23.05
CO ₂	< 1.	
Total	100.3	100.00

(1) Muskox intrusion, Canada; corresponds to Mg_{6.82}Fe_{4.00}³⁺O_{12.82}•10.2H₂O.

(2) Mg₇Fe₄³⁺O₁₃•10H₂O.

Occurrence: In thin veinlets in serpentinite from a layered ultramafic complex.

Association: Lizardite, coalingite, Mg–Fe–Mn oxides.

Distribution: In the Muskox intrusion, Coppermine River area, Northwest Territories, Canada.

Name: For its occurrence in the Muskox intrusion, Canada.

Type Material: Canadian Geological Survey, Ottawa, 12123; Royal Ontario Museum, Toronto, Canada, M36526.

References: (1) Jambor, J.L. (1969) Muskoxite, a new hydrous magnesium-ferric iron oxide from the Muskox intrusion, Northwest Territories, Canada. *Amer. Mineral.*, 54, 684–696.