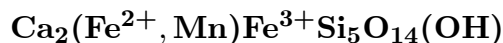


Babingtonite



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Crystal Data: Triclinic. *Point Group:* $\bar{1}$. Stubby, prismatic, striated crystals, to 3 cm; also platy and as subparallel aggregates.

Physical Properties: *Cleavage:* Perfect on {001}, good on {010} and {100}.
Fracture: Uneven. *Tenacity:* Brittle. *Hardness* = 5.5–6 *D*(meas.) = 3.34–3.37
D(calc.) = 3.26

Optical Properties: Opaque to faintly translucent. *Color:* Dark greenish black.
Luster: Vitreous.

Optical Class: Biaxial (–). *Pleochroism:* *X* = deep green; *Y* = lilac-brown; *Z* = pale to deep brown. *Dispersion:* $r > v$, strong. $\alpha = 1.700(3)$ $\beta = 1.710(3)$ $\gamma = 1.725(3)$
 $2V(\text{meas.}) = 50(2)^\circ$

Cell Data: *Space Group:* $P\bar{1}$. $a = 7.50(1)$ $b = 12.18(1)$ $c = 6.68(1)$ $\alpha = 86^\circ 3(5)'$
 $\beta = 93^\circ 59(5)'$ $\gamma = 112^\circ 19(5)'$ $Z = 2$

X-ray Powder Pattern: Baveno, Italy.

2.75 (100), 2.87 (80), 3.12 (70), 2.17 (60), 2.95 (60b), 2.47 (50), 6.69 (40)

Chemistry:

	(1)	(2)	(3)
SiO ₂	52.80	52.44	52.41
TiO ₂	0.29	0.00	
Al ₂ O ₃	2.41	0.23	
Fe ₂ O ₃	13.17	14.43	13.93
FeO	7.68	10.12	12.53
MnO	1.89	1.03	
MgO	0.92	0.65	
CaO	19.19	19.67	19.56
Na ₂ O	0.48	0.08	
H ₂ O	0.91	1.27	1.57
Total	99.74	[99.92]	100.00

(1) Arendal, Norway. (2) Holyoke, Hampden Co., Massachusetts, USA; original total given as 99.82%. (3) $\text{Ca}_2\text{Fe}^{2+}\text{Fe}^{3+}\text{Si}_5\text{O}_{14}(\text{OH})$.

Polymorphism & Series: Forms a series with manganbabingtonite.

Occurrence: In veins cutting granite pegmatite and diorite; in cavities and vugs in mafic volcanic rocks and gneisses; in skarns.

Association: Prehnite, calcite, epidote, albite, orthoclase, garnet, quartz, “hornblende,” zeolites.

Distribution: Known from a number of localities, most minor; some providing good crystals are: in Norway, at the Brastad mine, Oyestad, near Arendal. From Gronsjöberg, Dalarma, Sweden. In Germany, at Herbornseelbach, Hesse. From Baveno, Piedmont, Italy. In the Khandivali quarry, near Bombay, Maharashtra, India. At Mitani, Kochi Prefecture, Japan. From Noril'sk, western Siberia, Russia. In the USA, in Massachusetts, exceptional crystals from Lane's quarry, Westfield, Hampden Co.; in the Cheapside and Deerfield quarries, East Deerfield, Franklin Co.; also at Winchester Highlands, Uxbridge, Norfolk Co. At Paterson, Passaic Co., and Mine Hill, Morris Co., New Jersey; from the Goose Creek quarry, Leesburg, Loudoun Co., Virginia; and at Lenoir, Caldwell Co., North Carolina.

Name: For Dr. William Babington (1756–1833), Irish physician and mineralogist.

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