

Ilímaussite-(Ce)**Ba₂Na₄CeFe³⁺Nb₂Si₈O₂₈·5H₂O**

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Crystal Data: Hexagonal. *Point Group:* $6/m\ 2/m\ 2/m, \bar{6}m2$, or $6mm$. As lamellar aggregates up to 15 mm. *Twinning:* Polysynthetic twinning may be observed.

Physical Properties: *Fracture:* Conchoidal. Hardness = ~ 4 D(meas.) = 3.6
D(calc.) = 3.7

Optical Properties: Transparent to translucent. *Color:* Brownish yellow. *Luster:* Resinous.
Optical Class: Uniaxial (+). $\omega = 1.689$ $\epsilon = 1.695$

Cell Data: *Space Group:* $P6_3/mcm, P\bar{6}c2$, or $P6_3cm$. $a = 10.80(4)$ $c = 20.31(7)$ $Z = 3$

X-ray Powder Pattern: Ilímaussaq intrusion, Greenland.
2.67 (10), 3.25 (6), 3.12 (5), 2.98 (4), 2.24 (3), 2.50 (2), 2.022 (2b)

Chemistry:

	(1)	(2)
SiO ₂	31.28	31.81
TiO ₂	1.64	
Ce ₂ O ₃		10.86
RE ₂ O ₃	10.60	
Fe ₂ O ₃	3.18	5.29
Nb ₂ O ₅	13.20	17.59
BaO	23.62	20.29
Na ₂ O	7.00	8.20
K ₂ O	3.80	
H ₂ O		5.96
LOI	6.43	
Total	100.75	100.00

(1) Ilímaussaq intrusion, Greenland; alkalis by flame photometry, RE in proportions Ce₅₅La_{23.6}Nd_{14.7}Pr_{6.7}. (2) Ba₂Na₄CeFeNb₂Si₈O₂₈·5H₂O.

Occurrence: In a hydrothermal ussingite-analcime vein cutting sodalite syenite in an alkalic massif.

Association: Chkalovite, epistolite.

Distribution: At Nákâlâq, in the Ilímaussaq intrusion, southern Greenland.

Name: For the Ilímaussaq intrusion, where it was discovered.

Type Material: n.d.

References: (1) Semenov, E.I., M.E. Kazakova, and V.J. Bukin (1968) Ilímaussite, a new rare-earth-niobium-barium silicate from Ilímaussaq, South Greenland. *Medd. Grønland*, 181(7), 3–7. (2) (1969) *Amer. Mineral.*, 54, 992–993 (abs. ref. 1).