

Jørgensenite**Na(Sr, Ba)₇(Na, Mg)Al₆F₃₂(OH, F)₂**

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Crystal Data: Monoclinic. *Point Group:* 2/m. Crystals are elongated along [010], to 1 cm; commonly in flat fan-shaped or columnar aggregates, intimately intergrown with jarlite or stemonite; massive.

Physical Properties: *Fracture:* Uneven. *Tenacity:* Brittle. Hardness = 3.5–4
D(meas.) = 3.89(1) D(calc.) = 3.94

Optical Properties: Semitransparent. *Color:* Colorless to white; colorless in transmitted light. *Streak:* White. *Luster:* Vitreous.

Optical Class: Biaxial (-). *Orientation:* Y = b. $\alpha = 1.436(1)$ $\beta = 1.442(1)$ $\gamma = 1.442(1)$
2V(meas.) = 0°–5(5)° (2V_z) 2V(calc.) = 0°

Cell Data: *Space Group:* C2/m. a = 16.046(1) b = 10.971(1) c = 7.281(1)
 $\beta = 101.734(6)^\circ$ Z = 2

X-ray Powder Pattern: Ivigtut, Greenland.

3.453 (10), 3.193 (10), 3.643 (9), 3.112 (9), 2.989 (9), 2.173 (9), 7.844 (8)

Chemistry:

	(1)
Na	3.25
K	0.30
Mg	0.38
Ca	0.28
Ba	8.63
Sr	32.76
Al	10.97
F	42.50
H ₂ O	[1.22]
Total	100.29

(1) Ivigtut, Greenland; by electron microprobe, average of 11 analyses, H₂O calculated from stoichiometry, (OH)¹⁻ confirmed by microbeam IR spectroscopy; corresponds to Na_{1.00}(Sr_{5.52}Ba_{0.92}Na_{0.32}K_{0.12}Ca_{0.10})_{Σ=6.98}(Na_{0.77}Mg_{0.23})_{Σ=1.00}Al₆F_{33.00}(OH)_{1.00}.

Occurrence: In vugs and as fissure fillings in a cryolite deposit with other fluorides.

Association: Jarlite, stemonite, thomsenolite, gearksutite, topaz, muscovite.

Distribution: From the Ivigtut cryolite deposit, Greenland.

Name: For Vilhelm Jørgensen (1844–1925), cofounder, in 1870, of the cryolite factory at Ivigtut, Greenland.

Type Material: University of Copenhagen, Copenhagen, Denmark, 1996.168.

References: (1) Pauly, H., F.C. Hawthorne, P.C. Burns, and G.D. Ventura (1997) Jørgensenite, Na₂(Sr, Ba)₁₄Na₂Al₁₂F₆₄(OH, F)₄, a new aluminofluoride mineral from Ivigtut, Greenland. Can. Mineral., 35, 175–179.