

Crystal Data: Monoclinic, pseudo-orthorhombic. *Point Group:* $2/m$. Tabular on {010} to short prismatic \parallel [010]; crystals may have many forms, especially \parallel [100] and [010]; some faces typically etched to dullness, to 25 cm; also in spherical aggregates, fibrous, massive. *Twinning:* On {101}, contact and penetration twins; on {110} and {100} polysynthetic and pseudo-hexagonal stellate twins.

Physical Properties: *Cleavage:* {010}, perfect; {100}, good, interrupted; {101}, indistinct; {001}, in traces. *Fracture:* Conchoidal. *Tenacity:* Brittle. Hardness = 5.5–6 D(meas.) = 2.77–2.84 D(calc.) = 2.805

Optical Properties: Transparent to translucent. *Color:* Colorless, white to pale yellow; in transmitted light, colorless. *Luster:* Vitreous to adamantine, may be pearly on {010}. *Optical Class:* Biaxial (-). *Orientation:* $X = b$; $Y = a$; $Z = c$. *Dispersion:* $r < v$, weak. $\alpha = 1.552$ $\beta = 1.558$ $\gamma = 1.561$ $2V(\text{meas.}) = 67^\circ 56'$

Cell Data: *Space Group:* $P2_1/n$. $a = 8.178(3)$ $b = 7.818(2)$ $c = 14.114(6)$
 $\beta = 90.00(2)^\circ$ $Z = 12$

X-ray Powder Pattern: Stoneham, Maine, USA.
2.84 (10), 3.65 (9), 2.28 (7), 3.92 (6), 2.37 (6), 4.44 (4), 1.965 (4)

Chemistry:	(1)	(2)
P ₂ O ₅	55.86	55.89
BeO	19.84	19.70
Na ₂ O	23.64	24.41
LOI	0.08	
Total	99.42	100.00

(1) Stoneham, Maine, USA; composite average of six partial analyses. (2) NaBePO₄.

Occurrence: As a rare secondary mineral in granitic and alkalic pegmatites.

Association: Herderite, triplite, beryl, apatite, cassiterite, columbite, eosphorite, morinite, väyrynenite, lithiophilite, elbaite, pollucite, petalite, lepidolite, albite, orthoclase, quartz.

Distribution: In the USA, in Maine, found on Sugarloaf Mountain, near Stoneham, at the Dunton quarry and the Bell Pit, Newry, Oxford Co., and other minor occurrences. In Canada, occurs at Mont Saint-Hilaire, Quebec. Found at the Viitaniemi pegmatite, Eräjärvi, Finland. From the Norrö pegmatite, on Rånö Island, Sweden. In England, in the Meldon aplite, Okehampton, Devonshire. Large crystals from Paprock, Laghman Province, Afghanistan. Occurs in the Énio pegmatite mine, northeast of Galiléia; at the Lavra da Ilha pegmatite, in the Jequitinhonha River, three km north of Taquaral; and from the Almerindo mine, Linópolis, Minas Gerais, Brazil.

Name: For one of the major constituents in the composition, BERYLLium.

Type Material: Yale University, New Haven, Connecticut, USA, 3.1946.

References: (1) Palache, C., H. Berman, and C. Frondel (1951) Dana's system of mineralogy, (7th edition), v. II, 677–679. (2) Giuseppetti, G. and C. Tadini (1973) Refinement of the crystal structure of beryllonite, NaBePO₄. *Tschermaks Mineral. Petrog. Mitt.*, 20, 1–12. (3) Mrose, M. (1952) Hurlbutite, CaBe₂(PO₄)₂, a new mineral. *Amer. Mineral.*, 37, 931–940. (4) King, V.T. and E.E. Foord (1994) *Mineralogy of Maine*, 57–59.