

Balipholite**BaMg₂LiAl₃(Si₂O₆)₂(OH, F)₈**

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Crystal Data: Orthorhombic. *Point Group:* $2/m\ 2/m\ 2/m$. Crystals needlelike and fibrous, elongated || [001], up to 1 mm; as radiating or parallel sheaflike aggregates.

Physical Properties: *Cleavage:* Perfect on {010}, distinct on {100} and {110}.
Hardness = n.d. D(meas.) = 3.32–3.35 D(calc.) = [3.32]

Optical Properties: Transparent to translucent. *Color:* Pale yellowish white; in thin section, colorless. *Luster:* Silky.

Optical Class: Biaxial (–). *Orientation:* $X = b$; $Y = c$; $Z = a$. $\alpha = 1.5807$ – 1.5810
 $\beta = 1.5954$ – 1.5958 $\gamma = 1.5984$ – 1.6008 $2V(\text{meas.}) = 68^\circ$ – 72°

Cell Data: *Space Group:* $Ccca$. $a = 13.60$ $b = 20.24$ $c = 5.16$ $Z = [4]$

X-ray Powder Pattern: Hsianghualing area, China.
10.12 (100), 3.39 (91), 4.05 (78), 2.605 (31), 2.390 (28)

Chemistry:

	(1)		(1)
SiO ₂	33.44	CaO	0.28
TiO ₂	0.11	BaO	19.07
Al ₂ O ₃	23.43	Li ₂ O	2.00
Fe ₂ O ₃	0.32	Na ₂ O	0.26
FeO	0.58	K ₂ O	0.47
MnO	0.05	H ₂ O ⁺	10.30
BeO	0.01	P ₂ O ₅	0.03
MgO	9.68	Total	100.03

(1) Hsianghualing area, China; corresponding to (Ba_{0.88}K_{0.07}Na_{0.06}Ca_{0.03})_{Σ=1.04} (Mg_{1.69}Al_{0.17}Fe_{0.06}²⁺Fe_{0.03}³⁺)_{Σ=1.95}Li_{0.95}Al_{3.00}(Si_{3.93}Al_{0.07})_{Σ=4.00}O_{11.96}(OH)_{8.07}.

Occurrence: In a miarolitic cavity.

Association: Zinnwaldite, quartz.

Distribution: From the Hsianghualing area, Linwu, Hunan Province, China.

Name: For BArium and LIthium in the composition, and the Chinese for *fibrous*.

Type Material: n.d.

References: (1) X-ray Laboratory, Wuhan Geologic College, Geology Team 654, Hunan Geology Bureau, and Geology Laboratory, Hunan Geology Bureau (1975) A new lithium-bearing mineral in China: balipholite, BaMg₂LiAl₃[Si₂O₆]₂(OH)₈. *Scientia Geologia Sinica*, 1, 100 (in Chinese with English title). (2) (1976) *Amer. Mineral.*, 61, 338 (abs. ref. 1). (3) (1975) *Mineral. Abs.*, 26, 325 (abs. ref. 1). (4) Wuhan Geologic College; Hunan Geologic Bureau (1977) Balipholite BaMg₂LiAl₃[Si₂O₆]₂(OH, F)₈ and its crystal structure. *Ti Chih K'o Hsueh*, 65–82 (in Chinese). (5) (1977) *Chem. Abs.*, 87, 120592 (abs. ref. 4).