

Crystal Data: Monoclinic or triclinic, pseudomonoclinic. *Point Group:* 2 or 1. Crystals prismatic, elongated || [010], striations common || [100], in radiating groups, to 10 cm. Also coarse to fine granular.

Physical Properties: *Cleavage:* Perfect on {100}, good on {001}. *Fracture:* Conchoidal. Hardness = 6 D(meas.) = 2.29–2.30 D(calc.) = 2.29

Optical Properties: Transparent. *Color:* Colorless to white. *Streak:* White. *Luster:* Vitreous.

Optical Class: Biaxial (-). *Orientation:* Z = b; X ∧ c = 28°–29°. *Dispersion:* r < v. α = 1.509–1.510 β = 1.520–1.521 γ = 1.522–1.523 2V(meas.) = 45°

Cell Data: *Space Group:* P2₁. a = 8.613(4) b = 4.962(2) c = 7.600(4) β = 114.45(1)° Z = 2, or *Space Group:* P1. a = 8.606(1) b = 4.953(1) c = 7.599(1) α = 89.89(2)° β = 114.42(2)° γ = 89.96(2)° Z = 2

X-ray Powder Pattern: Bikita, Zimbabwe.

3.46 (100), 3.37 (100), 4.20 (90), 2.479 (90), 7.87 (80), 6.93 (50), 4.37 (40)

Chemistry:

	(1)	(2)	(3)
SiO ₂	55.79	58.7	58.87
Al ₂ O ₃	26.68	25.1	24.98
Fe ₂ O ₃	0.07		
MgO	0.33		
Li ₂ O	6.51	7.27	7.32
Na ₂ O	0.10		
K ₂ O	0.17		
H ₂ O	9.82	8.98	8.83
Total	99.47	100.05	100.00

(1) Bikita, Zimbabwe. (2) Do.; by electron microprobe, Li by AA, H₂O by TGA.

(3) LiAlSi₂O₆•H₂O.

Mineral Group: Zeolite group, probable.

Occurrence: As a late-formed mineral in fractures in lithium-rich pegmatites.

Association: Eucryptite, quartz, petalite, feldspar, calcite, stilbite, allophane (Bikita, Zimbabwe); albite, quartz, fairfieldite (Foote mine, North Carolina, USA).

Distribution: From Bikita, Zimbabwe. In the Foote mine, Kings Mountain, Cleveland Co., North Carolina, USA.

Name: For the locality, Bikita, Zimbabwe.

Type Material: Harvard University, Cambridge, Massachusetts, USA, 106822.

References: (1) Hurlbut, C.S., Jr. (1957) Bikitaite, LiAlSi₂O₆•H₂O; a new mineral from Southern Rhodesia. *Amer. Mineral.*, 42, 792–797. (2) Hurlbut, C.S., Jr. (1958) Additional data on bikitaite. *Amer. Mineral.*, 43, 768–770. (3) Phinney, W.C. and D.B. Stewart (1961) Some physical properties of bikitaite and its dehydration and decomposition products. *U.S. Geol. Sur. Prof. Paper* 424, D353–D357. (4) Leavens, P.B., C.S. Hurlbut, Jr., and J.A. Nelen (1968) Eucryptite and bikitaite from King's [sic] Mountain, North Carolina. *Amer. Mineral.*, 53, 1202–1207. (5) Kocman, V., R.I. Gait, and J. Rucklidge (1974) The crystal structure of bikitaite, Li[AlSi₂O₆]•H₂O. *Amer. Mineral.*, 59, 71–78. (6) Bissert, G. and F. Liebau (1986) The crystal structure of a triclinic bikitaite, Li[AlSi₂O₆]•H₂O, with ordered Al/Si distribution. *Neues Jahrb. Mineral.*, Monatsh., 241–252.

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