

Crystal Data: Monoclinic. *Point Group:* 2/m. Prismatic crystals, with pyramidal double terminations, to 1.2 mm. *Twinning:* Common on {100}.

Physical Properties: *Cleavage:* On {100}, perfect; on {011}, good. *Tenacity:* Brittle. Hardness = 3 D(meas.) = 2.09(1) D(calc.) = 2.10 Slightly soluble in hot H₂O.

Optical Properties: Transparent. *Color:* Colorless. *Luster:* Vitreous. *Optical Class:* Biaxial (-). *Orientation:* Y = b; Z ∧ c = 10°. α = 1.428(1) β = 1.567(1) γ = 1.574(1) 2V(meas.) = ~25°

Cell Data: *Space Group:* C2/c (by analogy with synthetic). a = 8.361(1) b = 4.976(2) c = 6.193(3) β = 114.69(3)° Z = 4

X-ray Powder Pattern: Zabuye Salt Lake, Tibet, China. 2.811 (10), 4.15 (8), 2.92 (8), 2.481 (4b), 2.42 (4), 2.62 (3), 2.11 (3)

Chemistry:	(1)	(2)	(1)	(2)	
SO ₃	0.57		Na ₂ O	2.49	
NO ₃	0.44		K ₂ O	0.75	
CO ₂	52.70	59.56	Li ₂ O	34.20	40.44
B ₂ O ₃	0.10		Cl	1.09	
Fe ₂ O ₃	0.88		H ₂ O ⁺	1.88	
MnO	0.02		-O = Cl ₂	[0.25]	
MgO	1.81		insol.	1.89	
CaO	1.24		Total	[99.81]	100.00

(1) Zabuye Salt Lake, Tibet, China; after deduction of “gaylussite 5.84%, northupite 4.51%, lithium-rich magnesite 2.59%, sylvite 0.94%, apthitalite 1.18%, borax 0.25%, aragonite 0.23%, nitratine 0.64%, and silicate, etc. 2.79%” then stated to correspond to Li_{2.18}C_{1.18}O₃. (2) Li₂CO₃.

Occurrence: Imbedded in halite in rock salt, and precipitated on the margins of a lithium-rich salt lake (Zabuye Salt Lake, Tibet, China); as solid inclusions in fluid inclusions in spodumene.

Association: Halite, gaylussite, northupite (Zabuye Salt Lake, Tibet, China).

Distribution: From the Zabuye Salt Lake, Nagri, Tibet, China. At Bikita and Kamativi, Zimbabwe. From Kings Mountain, Cleveland Co., North Carolina, USA. In the Tanco pegmatite, Bernic Lake, Manitoba, Canada.

Name: For its initially-noted occurrence at the Zabuye Salt Lake, Tibet, China.

Type Material: Geology Museum, Beijing, China.

References: (1) Zheng Mianping and Liu Wengao (1987) Zabuyelite, a new Li mineral. Acta Mineralogica Sinica, 7, 221–226 (in Chinese with English abs.). (2) (1990) Amer. Mineral., 75, 243–244 (abs. ref. 1). (3) Lin Yueling, Zhang Hanqing, and Zheng Mianping (1990) The crystal structure of zabuyelite. Kexue Tongbao, 35(6), 489–492 (in English).