

Crystal Data: Monoclinic. *Point Group:* 2/m. As elongate, tabular plates and grains, to 5-10 μm; in massive aggregates several meters thick. Twinning observed in some crystals with extinction under polarized light at 8°.

Physical Properties: *Cleavage:* None observed. *Fracture:* Uneven to conchoidal. *Tenacity:* Brittle. Hardness = 4-5 VHN = 343-426 (200 g load). D(meas.) = 2.45 D(calc.) = 2.46

Optical Properties: Translucent to opaque. *Color:* White, dark grey in reflected light, abundant white internal reflections. *Streak:* White. Weak pink-orange fluorescence under short- and long-wave ultraviolet radiation. *Luster:* Porcelaneous. *Optical Class:* Biaxial. *Birefractance:* Weak. $\alpha = 1.536(1)$ $\gamma = 1.563(1)$

Cell Data: *Space Group:* P2₁/n [possible]. $a = 6.818(2)$ $b = 13.794(2)$ $c = 6.756(2)$
 $\beta = 111.10(2)^\circ$ $Z = 4$

X-ray Powder Pattern: Jadar Basin, Serbia.

2.946 (100), 3.180 (82), 3.152 (74), 2.241 (74), 4.666 (62), 3.027 (40), 3.716 (39)

Chemistry:	(1)	(2)
Li ₂ O	7.3	6.81
Na ₂ O	15.0	14.12
SiO ₂	26.4	27.38
B ₂ O ₃	47.2	47.59
H ₂ O	4.3	4.11
Total	100.2	100.00

(1) Jadar Basin, Serbia; wet chemical, ICPAES and CHN analyses, IR spectroscopy confirms presence of OH, BO₃ and perhaps BO₄, corresponding to Li_{1.08}Na_{1.07}Si_{0.97}B₃O_{6.99}(OH)_{1.06}.

(2) LiNaSiB₃O₇(OH).

Occurrence: In a sequence of interbedded oil-shales, dolomicrites and pyroclastic tuffaceous deposits of lacustrine basin fill and marine origin.

Association: Calcite, dolomite, K-feldspar, rutile, albite, ilmenite, pyrite, fine-grained muscovite, searlesite.

Distribution: From drill core collected in the Jadar Basin, Serbia (44° 32' N, 19° 18' E).

Name: For the Jadar Basin in Serbia, where the first samples were collected.

Type Material: Natural History Museum, London, England, BM 2006, 16; Systematic Reference Series of the National Mineral Collection of Canada, Geological Survey of Canada, Ottawa, Canada, NMCC 068101; the Natural History Museum, Budapest, Hungary and the Belgrade Natural History Museum, Belgrade, Serbia.

References: (1) Stanley, C.J., G.C. Jones, M.S. Rumsey, C. Blake, A.C. Roberts, J.A.R. Stirling, G.J.C. Carpenter, P.S. Whitfield, J.D. Grice, and Y. LePage (2007) Jadarite, LiNaSiB₃O₇(OH), a new mineral species from the Jadar Basin, Serbia. *Eur. J. Mineral.*, 19, 575–580. (2) (2008) *Amer. Mineral.*, 93, 703 (abs. ref. 1). (3) Whitfield, P.S., Y. LePage, J.D. Grice, C.J. Stanley, G.C. Jones, M.S. Rumsey, C. Blake, A.C. Roberts, J.A.R. Stirling, and G.J.C. Carpenter (2007) LiNaSiB₃O₇(OH) - novel structure of the new borosilicate mineral jadarite, determined from laboratory powder diffraction data. *Acta Cryst. B.*, B63, 396-401.