$\bigcirc 2001\text{-}2005$ Mineral Data Publishing, version 1

Crystal Data: Monoclinic. Point Group: 2/m. Prismatic crystals, elongated along [001], showing {100}, {010}, {011}, {110}, {111} to 0.5 mm, typically in nearly parallel aggregates; massive in veins.

Physical Properties: Cleavage: On $\{001\}$, perfect. Hardness = 2–3 D(meas.) = 2.21(2) D(calc.) = 2.23

Optical Properties: Semitransparent. *Color:* Colorless to white. *Streak:* White. *Luster:* Silky to pearly.

Optical Class: Biaxial (+). Orientation: Y = b; $Z \land a = 14^{\circ}$. $\alpha = 1.532(2)$ $\beta = 1.544(2)$ $\gamma = 1.561(2)$ 2V(meas.) = 80.9°

Cell Data: Space Group: $P2_1/c$. a = 6.506(1) b = 13.280(3) c = 11.462(3) $\beta = 92.97(2)^{\circ}$ Z = 4

X-ray Powder Pattern: Tuzla mine, Bosnia-Herzegovina. 8.638 (100), 6.617 (30), 2.868 (29), 4.179 (17), 2.586 (15), 2.845 (14), 2.065 (14)

Chemistry:

| | (1) | (2) |
|----------------------|-------|--------|
| B_2O_3 | 52.19 | 52.24 |
| Al_2O_3 | 0.26 | |
| CaO | 14.64 | 16.83 |
| SrO | 0.21 | |
| Na_2O | 10.25 | 9.30 |
| H_2O | 21.66 | 21.63 |
| Total | 99.21 | 100.00 |

(1) Tuzla mine, Bosnia-Herzegovina; average of six analyses, by flamephotometry, TGA, and crystal-structure analysis; corresponds to $Na_{1.00}(Ca_{0.87}Na_{0.10}Sr_{0.01})_{\Sigma=0.98}B_{4.98}Al_{0.02}$ $O_{7.92}(OH)_2 \cdot 3H_2O.$ (2) $NaCaB_5O_8(OH)_2 \cdot 3H_2O.$

Occurrence: In a saline evaporite deposit, as veins in dolomitic marl between salt layers.

Association: Halite.

Distribution: From the Tuzla salt mine, Bosnia-Herzegovina.

Name: For Tuzla, Bosnia-Herzegovina, the town near the salt mine in which the species was found.

Type Material: Croatian Museum of Natural History, Zagreb, Croatia, HPM 8888; Natural History Museum, Bern, Switzerland, B 8361; Royal Ontario Museum, Toronto, Canada, M45848a.

References: (1) Bermanec, V., T. Armbruster, D. Tibljaš, D. Sturman, and G. Kniewald (1994) Tuzlaite, $NaCa[B_5O_8(OH)_2] \cdot 3H_2O$, a new mineral with a pentaborate sheet structure from the Tuzla salt mine, Bosnia and Hercegovina [*sic*]. Amer. Mineral., 79, 562–569.