Berezanskite $KTi_2Li_3Si_{12}O_{30}$

Crystal Data: Hexagonal. *Point Group*: 6/*m* 2/*m* 2/*m*. In aggregates of platy grains with individuals to 0.6 mm.

Physical Properties: *Cleavage*: Perfect on {0001}. *Tenacity*: Brittle. *Fracture*: n.d. Hardness = 2.5-3 VHN = 68.5 (20 g load). D(meas.) = 2.66(2) D(calc.) = 2.674 Bright bluish white fluorescence in SW UV.

Optical Properties: Translucent. *Color*: White. *Streak*: White. *Luster*: Vitreous to pearly. *Optical Class*: Uniaxial (-) $\omega = 1.635(2)$ $\varepsilon = 1.630(2)$

Cell Data: *Space Group*: *P*6/*mcc*. $a = 9.898(4)$ $c = 14.276(6)$ Z = 2

X-Ray Diffraction Pattern: Dara-i-Pioz glacier, Alai ridge, Tien-Shan Mountains, Tajikistan. 3.16 (100), 2.895 (95), 4.07 (85), 3.57 (80), 4.29 (50), 7.15 (40), 2.742 (30)

Chemistry:

	(1)
SiO_2	72.64
Al_2O_3	0.09
TiO_2	15.86
Nb_2O_5	0.56
FeO	0.16
BaO	0.11
K_2O	4.70
Na_2O	0.18
Li_2O	4.50
Total	99.79

(1) Dara-i-Pioz glacier, Alai ridge, Tien-Shan Mountains, Tajikistan; average electron microprobe analysis supplemented by IR spectroscopy, Li by atomic absorption spectroscopy; corresponds to $(K_{0.98}Na_{0.06}Ba_{0.01})_{\Sigma=1.05}(Li_{2.95}Al_{0.02})_{\Sigma=2.97}(Ti_{1.94}Nb_{0.04}Fe^{2+}_{0.02})_{\Sigma=2.00}Si_{11.99}O_{30}$.

Mineral Group: Milarite group.

Occurrence: In a block of alkali pegmatite in glacial moraine.

Association: Quartz, aegirine, microcline, Cs-kupletskite, hyalotekite, polylithionite, tadzhikite-(Y), dusmatovite, zektzerite, stillwellite-(Ce).

Distribution: From the moraine of Dara-i-Pioz glacier, Alai ridge, Tien-Shan Mountains, Tajikistan.

Name: Honors geologist Anatolyi Vladimirovich Berezansky (b. 1948).

Type Material: Mining Museum, St. Petersburg Mining Institute and in the Ilmen Natural Reserve Museum, Miass, Russia.

References: (1) Pautov, L.A. and A.A. Agakhanov (1997) Berezanskite $KLi_3Ti_2Si_{12}O_{30}$ - a new mineral. Zap. Ross. Mineral. Obshch., 126(4), 75-80 (in Russian, English abstract). (2) (1998) Amer. Mineral., 83, 907 (abs. ref. 1). (3) Hawthorne, F.C., E. Sokolova, L.A. Pautov, A.A. Agakhanov, and V.Y. Karpenko (2016) Refinement of the crystal structure of berezanskite, $Ti_2\square_2KLi_3(Si_{12}O_{30})$. Mineral. Mag., 80, 733-737.