

Crystal Data: Triclinic. *Point Group:* $\bar{1}$. As irregular grains, some with square or rectangular cross sections to 150 μm ; in aggregates to 0.5 mm.

Physical Properties: *Cleavage:* None. *Fracture:* Uneven. *Tenacity:* Brittle. Hardness = 5-5.5 VHN = 620 (50 g load). $D(\text{meas.}) = 3.96(2)$ $D(\text{calc.}) = 3.968$

Optical Properties: Transparent. *Color:* Colorless to white. *Streak:* White. *Luster:* Vitreous. *Optical Class:* Biaxial (+). $\alpha = 1.659(3)$ $\beta(\text{calc.}) = 1.671(2)$ $\gamma = 1.676(3)$ $2V(\text{meas.}) = 64(3)^\circ$ $2V(\text{calc.}) = \text{n.d.}$ *Dispersion:* Medium, $r < v$.

Cell Data: *Space Group:* $I\bar{1}$. $a = 11.354(2)$ $b = 10.960(2)$ $c = 10.271(2)$ $\alpha = 90.32(3)^\circ$ $\beta = 90.00(3)^\circ$ $\gamma = 90.00(3)^\circ$ $Z = 2$

X-ray Powder Pattern: Darai-Pioz massif, upper reaches of the Darai-Pioz River, Tajikistan. 7.86 (100), 7.65 (90), 7.55 (90), 3.81 (90), 3.55 (90), 2.934 (90), 5.15 (80)

Chemistry:	(1)
SiO ₂	36.98
B ₂ O ₃	6.01
Y ₂ O ₃	0.26
PbO	40.08
BaO	6.18
SrO	0.43
CaO	6.77
K ₂ O	1.72
Na ₂ O	0.41
F	0.88
- O = F ₂	0.37
Total	99.35

(1) Darai-Pioz massif, upper reaches of the Darai-Pioz River, Tajikistan; average of 10 electron microprobe analyses, supplemented by Raman spectroscopy; corresponding to $(\text{Pb}_{2.76}^{2+}\text{Ba}_{0.62}\text{K}_{0.56}\text{Na}_{0.16})_{\Sigma=4.10}(\text{Ca}_{1.86}\text{Sr}_{0.06}\text{Y}_{0.04}\text{Na}_{0.04})_{\Sigma=2}[\text{Si}_8\text{B}_2(\text{Si}_{1.46}\text{B}_{0.65})_{\Sigma=2.11}\text{O}_{28}](\text{F}_{0.71}\text{O}_{0.29})$.

Mineral Group: Hyalotekite group.

Occurrence: In the moraine of the Darai-Pioz glacier which erodes a multiphase, boron-enriched, alkaline intrusive complex.

Association: Pectolite, quartz, Sr-rich fluorite, aegirine, polyolithionite, turkestanite, baratovite, calcite, pyrochlore-group minerals, reedmergnerite, stillwellite-(Ce), pekovite, zeravshanite, senkevichite, sokolovaite, mendelevite-(Ce), alamosite, orlovite, leucosphenite.

Distribution: From the Darai-Pioz alkaline massif in the upper reaches of the Darai-Pioz river, Alaisky mountain ridge, Tien-Shan Mountains, Tajikistan.

Name: Honors Pavel Vitalyevich Khvorov (b. 1965), a Russian mineralogist for his contributions to the mineralogy of the Darai-Pioz massif.

Type Material: A.E. Fersman Mineralogical Museum, Russian Academy of Sciences, Moscow, Russia (4573/1).

References: (1) Pautov, L.A., A.A. Agakhanov, E.V. Sokolova, F.C. Hawthorne, V.Yu. Karpenko, O.I. Siidra, V.K. Garanin and Y.A. Abdu (2015) Khvorovite, $\text{Pb}_4^{2+}\text{Ca}_2[\text{Si}_8\text{B}_2(\text{SiB})\text{O}_{28}]\text{F}$, a new hyalotekite-group mineral from the Darai-Pioz alkaline massif, Tajikistan: Description and crystal structure. *Mineral. Mag.*, 79(4), 949-963. (2) (2016) *Amer. Mineral.*, 101, 2126 (abs. ref. 1).