

Crystal Data: Monoclinic. *Point Group:* 2/m. As tabular crystals to 0.1 mm.

Physical Properties: *Cleavage:* One unspecified direction. *Fracture:* n.d. *Tenacity:* n.d.
Hardness = 6 VHN = 838 (50 g load). D(meas.) = 3.09(5) D(calc.) = 3.170

Optical Properties: Transparent. *Color:* Colorless. *Streak:* n.d. *Luster:* Vitreous.
Optical Class: Biaxial (-). $\alpha = 1.585(2)$ $\beta = 1.598(2)$ $\gamma = 1.603(2)$ 2V(calc.) = -63°
Dispersion: Medium, $v > r$.

Cell Data: Space Group: C2/c. $a = 26.3511(8)$ $b = 7.5464(3)$ $c = 22.9769(8)$
 $\beta = 107.237(1)^\circ$ $Z = 4$

X-ray Powder Pattern: Darai-Pioz glacial moraine, Tajikistan.
3.35 (100), 3.14 (90), 2.62 (70), 6.32 (50), 3.65 (50), 2.82 (50), 3.25 (40)

Chemistry:	(1)
SiO ₂	52.20
TiO ₂	0.43
ZrO ₂	16.41
SnO ₂	0.46
Fe ₂ O ₃	0.21
Na ₂ O	3.06
K ₂ O	0.09
Cs ₂ O	26.58
H ₂ O	[1.74]
Total	101.18

(1) Darai-Pioz glacial moraine, Tajikistan; average of 6 electron microprobe analyses supplemented by IR spectroscopy, H₂O calculated from structure analysis; corresponds to
(Cs_{3.80}Na_{0.18}K_{0.02}) $\Sigma=4.00$ Na_{2.00}(Zr_{2.73}Ti_{0.19}Fe³⁺_{0.04}Sn_{0.04}) $\Sigma=3.00$ (Si₁₈O₄₅)(H₂O)₂.

Occurrence: A pegmatite mineral in a quartz rock fragment in glacial sediment derived from an alkaline massif.

Association: Intergrowth with pectolite; quartz, aegirine, pectolite, polyolithionite, reedmergnerite, pectolite, fluorite, stillwellite-(Ce), leucosphenite, neptunite, calcite, pyrochlore, baratovite.

Distribution: From the moraine of the Darai-Pioz glacier at the junction of the Zeravshan, Turkestan and Alay Ranges, Tajikistan.

Name: For the locality, *Zeravshan Range*, that produced the first specimens.

Type Material: A.E. Fersman Mineralogical Museum, Russian Academy of Sciences, Moscow, Russia.

References: (1) Pautov, L.A. A.A. Agakhanov, Y.A. Uvarova, E.V. Sokolova, and F.C. Hawthorne (2004) Zeravshanite, Cs₄Na₂Zr₃(Si₁₈O₄₅)(H₂O)₂, new cesium mineral from Dara-i-Pioz massif (Tajikistan). *New Data on Minerals* (Moscow), 39, 21-25. (2) Uvarova, Y.A., E. Sokolova, F.C. Hawthorne, L.A. Pautov, and A.A. Agakhanov (2004) A novel [Si₁₈O₄₅]¹⁸⁻ sheet in the crystal structure of zeravshanite, Cs₄Na₂Zr₃[Si₁₈O₄₅](H₂O)₂. *Can. Mineral.*, 42, 125-134. (3) (2006) *Amer. Mineral.*, 91, 220 (abs. refs. 1& 2).