

Crystal Data: Triclinic. *Point Group:* $\bar{1}$. As irregular grains, to 4 mm, or granular aggregates. *Twinning:* Very fine polysynthetic twinning seen under the microscope.

Physical Properties: *Cleavage:* Two poor, intersecting $\sim 90^\circ$. *Fracture:* Irregular. *Tenacity:* Very brittle. Hardness = 3.8–4.3 VHN = 157–231 D(meas.) = 3.22–3.30 D(calc.) = 3.26

Optical Properties: Translucent, transparent in thin fragments. *Color:* White; colorless in thin section. *Luster:* Vitreous to greasy.

Optical Class: Biaxial (–). $\alpha = 1.670$ $\beta = \text{n.d.}$ $\gamma = 1.710$ $2V(\text{meas.}) = 78^\circ$

Cell Data: *Space Group:* $P\bar{1}$. $a = 9.0(1)$ $b = 5.34(2)$ $c = 6.96(3)$ $\alpha = 92(1)^\circ$ $\beta = 116(1)^\circ$ $\gamma = 88(1)^\circ$ $Z = 2$

X-ray Powder Pattern: Lovozero massif, Russia.

3.97 (10), 4.11 (7), 1.542 (7), 1.097 (6), 1.013 (6), 2.95 (5), 2.66 (5)

Chemistry:

	(1)	(2)
SiO ₂	39.39	39.69
TiO ₂	0.60	0.32
ZrO ₂	40.35	39.53
Fe ₂ O ₃ + FeO	0.31	0.26
CaO		1.37
Na ₂ O	16.03	18.35
K ₂ O	0.94	trace
H ₂ O ⁺	0.95	
H ₂ O [–]	0.35	
Total	98.92	99.52

(1) Lovozero massif, Russia; average of three partial analyses. (2) Do.; corresponds to

(Na_{1.79}Ca_{0.07})_{Σ=1.86}(Zr_{0.97}Ti_{0.01}Fe_{0.01})_{Σ=0.99}Si₂O_{6.94}.

Occurrence: A primary mineral in foyaites composed of partly albitized microcline, nepheline, sodalite, aegirine, and alkali amphibole, in a differentiated alkalic massif (Lovozero massif, Russia).

Association: Eudialyte, lorenzenite (Lovozero massif, Russia).

Distribution: In the vicinity of the Tavaiok and Angoundasiok Rivers and on Mt. Alluaiv, Lovozero massif, and at Tachtarvumchorr, Khibiny massif, Kola Peninsula, Russia. From Lågendalen, near Larvik, Norway.

Name: For Russian mathematician Mstislav Vsevolodovich Keldysh (1911–1978), President of the Academy of Sciences, Russia.

Type Material: A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia, 64710, 64711.

References: (1) Gerasimovskii, V.I. (1962) Keldyshite, a new mineral. Doklady Acad. Nauk SSSR, 142, 916–918 (in Russian). (2) (1962) Amer. Mineral., 47, 1216 (abs. ref. 1). (3) Khomyakov, A.P., M.E. Kazakova, and A.A. Voronkov (1969) New data on keldyshite. Doklady Acad. Nauk SSSR, 189, 166–168 (in Russian). (4) (1970) Amer. Mineral., 55, 1072–1073 (abs. ref. 3). (5) (1972) Amer. Mineral., 57, 1317 (corr. ref. 4). (6) Khalikov, A.D., A.P. Khomyakov, and S.A. Makhmudov (1978) Crystal structure of keldyshite. Doklady Acad. Nauk SSSR, 238, 573–575 (in Russian). (7) Vlasov, K.A., Ed. (1966) Mineralogy of rare elements, v. II, 390–391.

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