

Lovozerite**Na₂Ca(Zr, Ti)Si₆(O, OH)₁₈**

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Crystal Data: Monoclinic, pseudohexagonal. *Point Group:* 2. As pseudododecahedral crystals, to 3 mm, and spherical aggregates. In irregular but optically continuous grains, to 3 cm. *Twinning:* Polysynthetic and penetration, common.

Physical Properties: *Cleavage:* Two directions, imperfect. *Fracture:* Uneven to conchoidal. *Tenacity:* Brittle. Hardness = 5 D(meas.) = 2.38–2.71 D(calc.) = 2.69

Optical Properties: Transparent to opaque. *Color:* Red-brown, dark brown, black; in thin section, yellowish pink, with altered regions dark brown. *Streak:* Brown. *Luster:* Vitreous, resinous to dull.

Optical Class: Uniaxial (–) to biaxial (–). *Pleochroism:* Weak, yellowish to pinkish. $\omega = 1.561$ $\epsilon = 1.549$ $\alpha = 1.545$ $\beta = 1.560$ $\gamma = 1.561$ $2V(\text{meas.}) = \text{Small}$.

Cell Data: *Space Group:* C2. $a = 10.48$ $b = 10.20$ $c = 7.33$ $\beta = 92^\circ 30'$ $Z = 2$

X-ray Powder Pattern: Khibiny massif, Russia. 3.21 (100), 5.37 (80), 3.64 (70), 3.32 (70), 7.33 (50), 2.969 (50), 2.635 (50)

Chemistry:	(1)		(1)	
	SiO ₂	52.12	MgO	0.76
	TiO ₂	1.02	CaO	3.34
	ZrO ₂	16.54	SrO	0.06
	Al ₂ O ₃	0.40	Na ₂ O	3.74
	Fe ₂ O ₃	0.72	K ₂ O	1.90
	Th ₂ O ₃	0.56	H ₂ O ⁺	8.62
	MnO	3.46	H ₂ O [–]	6.41
			<u>Total</u>	99.65

(1) Lovozero massif, Russia; corresponds to (Na_{0.87}Ca_{0.41}Mn_{0.33}K_{0.28}Mg_{0.13}Fe_{0.06})_{Σ=2.08} (Zr_{0.92}Ti_{0.09})_{Σ=1.01}(Si_{5.95}Al_{0.05})_{Σ=6.00}(O, OH)_{21.28}.

Mineral Group: Lovozerite group.

Occurrence: In nepheline syenites and associated pegmatites.

Association: Potassic feldspar, nepheline, aegirine, lamprophyllite, eudialyte, murmanite (Kola Peninsula, Russia).

Distribution: In the Lovozero and Khibiny massifs, Kola Peninsula, Russia. From the Ilímaussaq southern intrusion, Greenland. At Mont Saint-Hilaire, Quebec, Canada.

Name: For the occurrence in the Lovozero massif, Kola Peninsula, Russia.

Type Material: A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia, 42701.

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