

**Crystal Data:** Monoclinic. *Point Group:* 2/m. Crystals, acicular to prismatic on [001], to 3 cm; in parallel to sub-parallel aggregates.

**Physical Properties:** *Cleavage:* Perfect on {110}, intersecting at 56°. *Fracture:* Splintery. *Tenacity:* Brittle. Hardness = ~ 6 D(meas.) = n.d. D(calc.) = 3.116

**Optical Properties:** Transparent. *Color:* Pale bluish-gray. *Streak:* Grayish-white. *Luster:* Vitreous. *Pleochroism:* X = pale purplish gray; Y = light gray; Z = colorless. *Orientation:* Y = b; X ^ a = 71.2°; Z ^ c = 83.4°. *Optical Class:* Biaxial (+). α = 1.642(1) β = 1.644(1) γ = 1.652(1) 2V(meas.) = 68.0(3)° 2V(calc.) = 56.4°

**Cell Data:** *Space Group:* C2/m. a = 9.3720(4) b = 17.6312(8) c = 5.2732(3) β = 102.247(4)° Z = 2

**X-ray Powder Pattern:** Sutlug River, Tuva Republic, Russia. 8.146 (100), 2.686 (90), 3.008 (80), 4.430 (70), 2.485 (60), 3.383 (40), 2.876 (30)

<b>Chemistry:</b>	(1)
SiO <sub>2</sub>	59.81
TiO <sub>2</sub>	0.09
Al <sub>2</sub> O <sub>3</sub>	12.66
FeO	10.32
MnO	0.73
ZnO	0.17
MgO	5.56
CaO	0.20
Na <sub>2</sub> O	2.81
Li <sub>2</sub> O	4.80
F	2.43
H <sub>2</sub> O	1.10
<u>-O=F</u>	<u>1.02</u>
Total	99.66

(1) Sutlug River, Tuva Republic, Russia; average of 10 electron microprobe analyses on a single grain, Li<sub>2</sub>O from structure refinement, H<sub>2</sub>O from stoichiometry, corresponding to (Na<sub>0.68</sub>)(Li<sub>1.92</sub>Na<sub>0.05</sub>Ca<sub>0.03</sub>)<sub>Σ=2.00</sub>(Fe<sup>2+</sup><sub>1.16</sub>Mg<sub>1.10</sub>Mn<sup>2+</sup><sub>0.08</sub>Zn<sub>0.02</sub>Al<sub>1.97</sub>Ti<sub>0.01</sub>Li<sub>0.66</sub>)<sub>Σ=5.00</sub>(Si<sub>7.98</sub>Al<sub>0.02</sub>)<sub>Σ=8.00</sub>O<sub>22</sub>(F<sub>1.03</sub>OH<sub>0.97</sub>)<sub>Σ=2.00</sub>.

**Mineral Group:** Amphibole group.

**Occurrence:** At the contact of a lithium pegmatite and formed by reaction of the pegmatitic melt with the country rock.

**Association:** Calcite, plagioclase.

**Distribution:** Sutlug River, Tuva Republic, Russia.

**Name:** For its composition and relationship to pedrizite.

**Type Material:** Fersman Mineralogical Museum, Russian Academy of Science, Moscow, Russia (64715).

**References:** (1) Oberti, R., M. Boiocchi, N.A. Ball, and F.C. Hawthorne (2009) Fluoro-sodic-ferropedrizite, NaLi<sub>2</sub>(Fe<sup>2+</sup><sub>2</sub>Al<sub>2</sub>Li)Si<sub>8</sub>O<sub>22</sub>F<sub>2</sub>, a new mineral of the amphibole group from the Sutlug River, Tuva Republic, Russia: description and crystal structure. *Mineral. Mag.*, 73, 487–494. (2) (2010) *Amer. Mineral.*, 95, 1359-1360 (abs. ref. 1).