

Crystal Data: Monoclinic. *Point Group:* 2/m. As acicular to flattened prismatic crystals, to 50 mm, displaying {110}, {100} and {010}; in random, radial or subparallel aggregates.

Physical Properties: *Cleavage:* Perfect on {110}, intersecting at ~56°; less-perfect on {001}. *Fracture:* Splintery. *Tenacity:* Brittle. *Hardness* = ~ 6 D(meas.) = 3.13(1)-3.16(1) D(calc.) = 3.138

Optical Properties: Transparent. *Color:* Dark gray-blue to violet-blue. *Streak:* Pale gray. *Luster:* Vitreous.

Optical Class: Biaxial (-). $\alpha = 1.614(3)$ $\beta = 1.638(3)$ $\gamma = 1.653(3)$ 2V(meas.) = 75(5)° 2V(calc.) = 76° *Orientation:* $Y = b$; $Z \wedge c = 3-4^\circ$, $X \wedge a \approx 16^\circ$. *Dispersion:* Weak, $r < v$. *Pleochroism:* Weak, X = colorless, $Y = Z$ = pale lilac-gray. *Absorption:* $X < Y \approx Z$.

Cell Data: *Space Group:* C2/m. $a = 9.3716(4)$ $b = 17.649(1)$ $c = 5.2800(6)$ $\beta = 102.22(1)^\circ$ $Z = 2$

X-ray Powder Pattern: Sutlug pegmatite, Tyva Republic, Eastern Siberia, Russia. 3.009 (100), 8.147 (52), 2.6865 (29), 2.7102 (28), 4.420 (22), 2.6236 (21), 2.4824 (19)

Chemistry:	(1)		(1)
Li ₂ O	4.67	Fe ₂ O ₃	[4.60]
Na ₂ O	2.54	Al ₂ O ₃	13.13
K ₂ O	0.13	SiO ₂	57.59
CaO	0.29	F	1.15
MgO	4.48	H ₂ O	1.50
MnO	0.59	$\frac{-O = F_2}{-}$	0.48
FeO	[9.06]	Total	99.25

(1) Sutlug pegmatite, Tyva Republic, Eastern Siberia, Russia; average of 5 electron microprobe analyses, Fe²⁺/Fe³⁺ from Mössbauer spectroscopy, Li by ICP-MS, H₂O by gas chromatography; corresponds to (Na_{0.60}K_{0.02}) $\Sigma=0.62$ (Li_{1.89}Na_{0.07}Ca_{0.04}) $\Sigma=2.00$ (Fe²⁺_{1.03}Mg_{0.90}Mn²⁺_{0.07}Al_{1.88}Fe³⁺_{0.47}Li_{0.65}) $\Sigma=5.00$ [(Si_{7.79}Al_{0.21}) $\Sigma=8.00$ O₂₂][(OH)_{1.36}F_{0.49}O_{0.15}] $\Sigma=2.00$.

Mineral Group: Amphibole supergroup, lithium amphibole group.

Occurrence: In veinlets associated with the metasomatism of spodumene-microcline pegmatite hosted by marble.

Association: Quartz, albite, microcline, spodumene, cassiterite, beryl, columbite-(Mn), fluorapatite, fergusonite- β -(Y), schorl, trillithionite, fluorite.

Distribution: From the Sutlug pegmatite, Targi River Basin, Tyva Republic, Eastern Siberia, Russia.

Name: As the Fe²⁺-dominant analogue of *pedrizite*.

Type Material: Mineralogical Museum, Tomsk State University, Russia (19116).

References: (1) Konovalenko, S.I., S.A. Ananyev, N.V. Chukanov, S.M. Aksenov, R.K. Rastsvetaeva, A.I. Bakhtin, A.G. Nikolaev, R.R. Gainov, F.G. Vagizov, A.N. Sapozhnikov, D.I. Belakovskiy, Y.V. Bychkova, G. Klingelhöfer, and M. Blumers (2015) Ferro-pedrizite, NaLi₂(Fe²⁺₂Al₂Li)Si₈O₂₂(OH)₂, a new amphibole-supergroup mineral from the Sutlug pegmatite, Tyva Republic, Russia. *Eur. J. Mineral.*, 27, 417-426. (2) (2016) *Amer. Mineral.*, 101, 1712-1713 (abs. ref. 1).