

Eveslogite (Ca,K,Na,Sr,Ba)₄₈(Ti,Nb,Fe,Mn)₁₂(OH)₁₂Si₄₈O₁₄₄(OH,F,Cl)₁₄

Crystal Data: Monoclinic. *Point Group:* 2/m. As fibrous crystals, to 5 cm, that form plicated aggregates to 15 cm.

Physical Properties: *Cleavage:* Perfect {001}; good {010}. *Fracture:* Splintery. *Tenacity:* Brittle. Hardness = 5 D(meas.) = 2.85 D(calc.) = 2.91

Optical Properties: Translucent. *Color:* Light brown or yellow-brown. *Streak:* White. *Luster:* Vitreous to silky. *Optical Class:* Biaxial (-). $\alpha = 1.631(2)$ $\beta = 1.641(2)$ $\gamma = 1.647(2)$ $2V(\text{meas.}) = 82^\circ$ $2V(\text{calc.}) = 75^\circ$ *Orientation:* $X \approx a$, $Y \wedge c = 5^\circ$ (in obtuse β), $Z = b$. *Absorption:* $Z \approx Y > X$. *Pleochroism:* $Y = Z =$ pale yellow, $X =$ colorless.

Cell Data: *Space Group:* P2/m. $a = 14.069(3)$ $b = 24.937(5)$ $c = 44.31(2)$ $\gamma = 95.02(4)^\circ$ $Z = 4$

X-ray Powder Pattern: Mt. Eveslogchorr, Khibiny alkaline massif, Kola Peninsula, Russia. 2.835 (100), 3.127 (65), 2.990 (59), 3.110 (52), 12.33 (51), 2.940 (45), 6.199 (42)

Chemistry:	(1)		(1)
Na ₂ O	4.59	SiO ₂	41.96
K ₂ O	8.53	TiO ₂	6.52
Rb ₂ O	0.20	ZrO ₂	0.35
CaO	18.60	Nb ₂ O ₅	6.56
SrO	2.75	Ta ₂ O ₅	0.25
BaO	2.84	H ₂ O	2.85
MnO	1.00	F	2.72
FeO	0.88	Cl	0.42
Fe ₂ O ₃	0.23	- O = F, Cl	1.24
Al ₂ O ₃	0.32	Total	100.33

(1) Mt. Eveslogchorr, Khibiny alkaline massif, Kola Peninsula, Russia; wet chemical analysis supplemented by FTIR spectroscopy, Cl by electron microprobe; corresponds to (Ca_{22.60}K_{12.32}Na_{10.08}Sr_{1.80}Ba_{1.28}Rb_{0.16}) $\Sigma=48.24$ (Ti_{5.56}Nb_{3.36}Mn_{0.96}Fe²⁺_{0.84}Fe³⁺_{0.20}Zr_{0.20}Ta_{0.08}) $\Sigma=11.20$ (Si_{47.56}Al_{0.44}) $\Sigma=48$ [O_{139.36}(OH)_{20.64}F_{9.76}Cl_{0.80}] $\Sigma=170.56$.

Occurrence: In a veinlet that cuts nepheline syenite in an alkaline massif.

Association: Nepheline, K-feldspar, biotite, fluorapatite, shcherbakovite, eudialyte, astrophyllite.

Distribution: From Mt. Eveslogchorr, Khibiny alkaline massif, Kola Peninsula, Russia.

Name: Alludes to the locality, Mt. *Eveslogchorr*.

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

References: (1) Menshikov, Yu.P., A.P. Khomaykov, G. Ferraris, E. Belluso, A. Gula, and E.A. Kulchitskaya (2003) Eveslogite, (Ca,K,Na,Sr,Ba)₄₈[(Ti,Nb,Fe,Mn)₁₂(OH)₁₂Si₄₈O₁₄₄](F,OH,Cl)₁₄, a new mineral from the Khibiny alkaline massif, Kola Peninsula, Russia. Zap. Vseross. Mineral. Obsch., 132(1), 59-67 (in Russian, English abs.). (2) (2004) Amer. Mineral., 89(1), 249-250 (abs. ref. 1). (3) (2004) Can. Mineral., 42(1), 223 (abs. ref. 1 and comment).