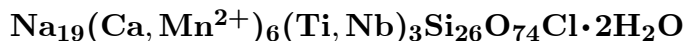


Alluaivite

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Crystal Data: Hexagonal. *Point Group:* $\bar{3} 2/m$. Irregular accumulations, to 1 mm.**Physical Properties:** *Fracture:* Conchoidal. *Tenacity:* Brittle. Hardness = 5–6
D(meas.) = 2.76(5) D(calc.) = 2.78 Vivid orange-red fluorescence in UV.**Optical Properties:** Transparent. *Color:* Colorless to weak brownish pink. *Luster:* Vitreous.
Optical Class: Uniaxial (+). $\omega = 1.618(2)$ $\epsilon = 1.626(2)$ **Cell Data:** *Space Group:* $R\bar{3}m$. $a = 14.046(2)$ $c = 60.60(2)$ $Z = 6$ **X-ray Powder Pattern:** Mt. Alluaiv, Russia; could be mistaken for eudialyte.
2.960 (10), 2.825 (10), 7.14 (8), 1.762 (8), 4.30 (7), 2.148 (7), 3.36 (5)**Chemistry:**

	(1)		(1)
SiO ₂	53.3	SrO	1.0
TiO ₂	6.0	BaO	0.6
ZrO ₂	0.2	Na ₂ O	18.6
La ₂ O ₃	0.2	K ₂ O	0.2
Ce ₂ O ₃	0.8	Cl	0.8
Nb ₂ O ₅	3.9	H ₂ O	1.7
MnO	3.6	<u>–O = Cl₂</u>	<u>0.2</u>
CaO	8.6	Total	99.3

(1) Mt. Alluaiv, Russia; by electron microprobe, average of three grains, H₂O by coulometry; corresponding to (Na_{17.47}Sr_{0.28}Ce_{0.14}K_{0.12}Ba_{0.11}La_{0.03})_{Σ=18.15}(Ca_{4.46}Mn_{1.47})_{Σ=5.93}(Ti_{2.18}Nb_{0.85}Zr_{0.05})_{Σ=3.08}Si_{25.82}O_{73.26}Cl_{0.66} • 2.75H₂O.**Occurrence:** In ultra-agpaitic pegmatites in a differentiated alkalic massif.**Association:** Eudialyte, nepheline, sodalite, potassic feldspar, arfvedsonite, aegirine.**Distribution:** On Mt. Alluaiv, in the Lovozero massif, Kola Peninsula, Russia.**Name:** For its occurrence on Mt. Alluaiv, Kola Peninsula, Russia.**Type Material:** Mining Museum, St. Petersburg Mining Institute, 1993/1–2; A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia; The Natural History Museum, London, England, 1994,1.**References:** (1) Khomyakov, A.P., G.N. Netschelyustov, and R.K. Rastsvetaeva (1990) Alluaivite Na₁₉(Ca, Mn)₆(Ti, Nb)₃Si₂₆O₇₄Cl • 2H₂O – a new titanosilicate of eudialyte-like structure. Zap. Vses. Mineral. Obshch., 119(1), 117–120 (in Russian). (2) (1991) Amer. Mineral., 76, 1728 (abs. ref. 1).