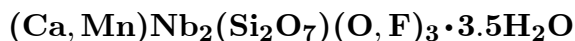


Komarovite

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Crystal Data: Orthorhombic. *Point Group:* n.d. Platy, foliated, massive.**Physical Properties:** *Cleavage:* Fair on {001}. *Hardness* = 1.5–2 *D*(meas.) = 3.0
D(calc.) = 2.96**Optical Properties:** Transparent to translucent. *Color:* Pale rose. *Streak:* White.
Luster: Dull.*Optical Class:* Biaxial (+). *Orientation:* $X = a$; $Y = c$; $Z = b$. $\alpha = 1.750(2)$ $\beta = 1.766(2)$
 $\gamma = 1.85(2)$ $2V(\text{meas.}) = 48^\circ$ **Cell Data:** *Space Group:* n.d. $a = 21.30(7)$ $b = 14.00(5)$ $c = 17.19(7)$ $Z = 18$ **X-ray Powder Pattern:** Mt. Karnasurt, Russia.

3.16 (100), 12.2 (70), 1.783 (45), 3.118 (42), 6.35 (35), 2.740 (35), 2.715 (35)

Chemistry:

	(1)
SiO ₂	23.50
TiO ₂	2.50
Al ₂ O ₃	1.00
Fe ₂ O ₃	1.50
Nb ₂ O ₅	47.00
MnO	5.00
CaO	4.70
Na ₂ O	0.85
K ₂ O	0.30
F	1.21
H ₂ O	12.00
–O = F ₂	0.51
Total	99.05

(1) Mt. Karnasurt, Russia; corresponding to $(\text{Ca}_{0.43}\text{Mn}_{0.36}\text{Na}_{0.14}\text{K}_{0.03})_{\Sigma=0.96}(\text{Nb}_{1.82}\text{Ti}_{0.16}\text{Al}_{0.10}\text{Fe}_{0.10})_{\Sigma=2.18}\text{Si}_2\text{O}_9(\text{O}_{0.88}\text{F}_{0.33})_{\Sigma=1.21} \cdot 3.5\text{H}_2\text{O}$.**Occurrence:** With late albite and redeposited fine-grained natrolite in alkalic rocks in a differentiated alkalic massif.**Association:** Natrolite, albite.**Distribution:** On Mt. Karnasurt, Lovozero massif, Kola Peninsula, Russia.**Name:** For the Russian cosmonaut, Vladimir Mikhailovich Komarov (1927–1967).**Type Material:** A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia, 73302.**References:** (1) Portnov, A.M., G.K. Krivokoneva, and T.I. Stolyarova (1971) Komarovite, a new niobosilicate of calcium and manganese. *Zap. Vses. Mineral. Obshch.*, 100, 599–602 (in Russian). (2) (1972) *Amer. Mineral.*, 57, 1315–1316 (abs. ref. 1).