

**Cancrisilite****Na<sub>7</sub>Al<sub>5</sub>Si<sub>7</sub>O<sub>24</sub>(CO<sub>3</sub>)•3H<sub>2</sub>O**

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**Crystal Data:** Hexagonal. *Point Group:* 6mm. Anhydral, granular, to 3 mm.**Physical Properties:** *Fracture:* Conchoidal. *Tenacity:* Brittle. Hardness = 5  
D(meas.) = 2.40(2) D(calc.) = 2.39 Fluoresces yellow under UV.**Optical Properties:** Transparent to translucent. *Color:* Lilac; colorless in thin section.*Streak:* White. *Luster:* Vitreous.*Optical Class:* Uniaxial (-).  $\omega = 1.509(2)$   $\epsilon = 1.490(2)$ **Cell Data:** *Space Group:* P6<sub>3</sub>mc.  $a = 12.575(3)$   $c = 5.105(2)$   $Z = 1$ **X-ray Powder Pattern:** Lovozero massif, Russia; resembles cancrinite.

3.22 (100), 3.65 (90), 6.30 (70), 4.61 (50), 2.722 (50), 2.597 (20), 2.402 (20)

**Chemistry:**

	(1)
SiO <sub>2</sub>	43.11
Al <sub>2</sub> O <sub>3</sub>	24.42
Fe <sub>2</sub> O <sub>3</sub>	0.33
MnO	0.11
CaO	0.68
Na <sub>2</sub> O	21.30
K <sub>2</sub> O	0.10
H <sub>2</sub> O	5.01
CO <sub>2</sub>	4.82
SO <sub>3</sub>	0.36
<u>Total</u>	<u>100.24</u>

(1) Lovozero massif, Russia, corresponding to (Na<sub>6.89</sub>Ca<sub>0.12</sub>Fe<sup>3+</sup><sub>0.04</sub>Mg<sub>0.03</sub>K<sub>0.02</sub>)<sub>Σ=7.10</sub>(Si<sub>7.20</sub>Al<sub>4.80</sub>)<sub>Σ=12.00</sub>O<sub>24.10</sub>(CO<sub>3</sub>)<sub>1.10</sub>(SO<sub>4</sub>)<sub>0.04</sub>•2.79H<sub>2</sub>O.**Mineral Group:** Cancrinite group.**Occurrence:** In ultra-agpaitic pegmatites in a differentiated alkalic massif.**Association:** Potassic feldspar, nepheline, sodalite, arfvedsonite, aegirine, manaksite, eudialyte, lamprophyllite, additional minor minerals.**Distribution:** From Mts. Alluaiv and Karnasurt, and in the Chinglusuai River valley, Lovozero massif, Kola Peninsula, Russia.**Name:** For the relatively high ratio of silicon to aluminum, and its relation to *cancrinite*.**Type Material:** Vernadsky Geological Museum, Moscow; A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia, p503/1.**References:** (1) Khomyakov, A.P., E.I. Semenov, E.A. Pobedimskaya, T.N. Nadezhina, and R.K. Rastsvetaeva (1991) Cancrisilite Na<sub>7</sub>[Al<sub>5</sub>Si<sub>7</sub>O<sub>24</sub>]CO<sub>3</sub>•3H<sub>2</sub>O – a new mineral of the cancrinite group. Zap. Vses. Mineral. Obshch., 120(6), 80–84 (in Russian). (2) (1993) Amer. Mineral., 78, 1314 (abs. ref. 1). (3) Pekov, I.V. (1998) Minerals first discovered on the territory of the former Soviet Union. Ocean Pictures, Moscow, 55–56.