Natrosilite $Na_2Si_2O_5$

Crystal Data: Monoclinic. *Point Group:* $2/m$. Thick tabular pseudohexagonal crystals, to 6 cm; granular.

Physical Properties: *Cleavage:* {100}, perfect micaceous; {001}, distinct; {011}, poor. Hardness = n.d. D(meas.) = 2.48 D(calc.) = 2.51 Soluble in water.

Optical Properties: Transparent. *Color:* Colorless; anomalous blue interference colors in thin section. *Luster:* Pearly.
Optical Class: Biaxial (–). *Orientation:* $Y \wedge c = -12°$ to 2°. *Dispersion:* $r < v$. $\alpha = 1.507$. $\beta = 1.517$ $\gamma = 1.521$ 2V(meas.) = 49°–64°

Cell Data: *Space Group:* $P2_1/a$. a = 12.30(2) $b = 4.88(1)$ $c = 8.27(3)$ $\beta = 104°14'$ Z = 4

X-ray Powder Pattern: Lovozero massif, Russia.
6.06 (10), 2.98 (9), 3.97 (8), 2.435 (8), 3.64 (7), 4.17 (6), 4.28 (5)

Chemistry:

	(1)	(2)
SiO_2	66.03	65.97
Na_2O	33.96	34.03
K_2O	0.01	
H_2O^-	0.06	
Total	100.06	100.00

(1) Lovozero massif, Russia; by electron microprobe and wet chemical analysis; organic matter 0.4%. (2) $Na_2Si_2O_5$.

Occurrence: In pegmatites in nepheline syenites in differentiated alkalic massifs (Kola Peninsula, Russia); in sodalite xenoliths associated with an intrusive alkalic gabbro-syenite complex (Mont Saint-Hilaire, Canada).

Association: Microcline, analcime, natrolite, lomonosovite, ussingite, vuonnemite (Lovozero massif, Russia); aenigmatite, aegirine, sodalite, cancrinite, eudialyte (Khibiny massif, Russia); revdite (Mont Saint-Hilaire, Canada).

Distribution: On Mt. Karnasurt, Lovozero massif, and in the Khibiny massif, Kola Peninsula, Russia. At Mont Saint-Hilaire, Quebec, Canada.

Name: For sodium, NATRium, and SILicon in the composition.

Type Material: Geology Museum, Kola Branch, Academy of Sciences, Apatity, 3394; Mining Institute, St. Petersburg, 1087/1; A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia, vis5123, vis5147.

References: (1) Timoshenkov, I.M., Y.P. Men'shikov, L.F. Gannibal, and I.V. Bussen (1975) A natural sodium silicate, natrosilite, from the Lovozero massif. Zap. Vses. Mineral. Obshch., 104, 317–321 (in Russian). (2) (1976) Amer. Mineral., 61, 339–340 (abs. ref. 1). (3) Khomyakov, A.P. (1982) First discovery of Lovozero natrosilite in the Khibina massif and Khibina zirsinalite and rasvumite in the Lovozero massif. Nov. Dannye Miner., 30, 168–173 (in Russian). (4) (1983) Chem. Abs., 53, 219073 (abs. ref. 3).