Nordite-(Ce) $Na_3SrCeZnSi_6O_{17}$

Crystal Data: Orthorhombic. *Point Group*: 2/*m* 2/*m* 2/*m*. As tabular crystals to 1 cm; lamellar aggregates to 2 cm.

Physical Properties: *Cleavage*: Distinct on {010}. *Tenacity*: Brittle. *Fracture*: n.d.
Hardness = 5 D(meas.) = 3.43-3.49 D(calc.) = 3.643 Metamict.

Optical Properties: Translucent. *Color:* Colorless to white, brown. *Streak*: Light brown.
Luster: Vitreous to greasy.
Optical Class: Biaxial (-). α = 1.619-1.621 β = 1.63-1.64 γ = 1.642-1.655 2V(meas.) = <30º
2V(calc.) = 82º-90º *Dispersion*: Strong, $r < v$.

Cell Data: *Space Group*: *Pcca*. a = 14.3891(2) b = 5.17986(2) c = 19.7554(2) Z = 4

X-ray Powder Pattern: n.d.

Chemistry:

	(1)
Na_2O	11.9
CaO	1.4
SrO	9.7
BaO	1.0
MgO	0.10
MnO	0.09
FeO	0.2
ZnO	9.6
La_2O_3	8.3
Ce_2O_3	10.4
Pr_2O_3	0.7
Nd_2O_3	1.3
SiO_2	45.2
Total	99.89

(1) Illutalik, South Greenland; average electron microprobe analysis supplemented by LA-ICPMS; corresponding to $Na_{3.06}(Sr_{0.75}Ca_{0.20}Ba_{0.05})_{\Sigma=1.00}(Ce_{0.50}La_{0.41}Nd_{0.06}Pr_{0.03})_{\Sigma=1.00}(Zn_{0.94}Fe_{0.02}Mg_{0.02}Mn_{0.01})_{\Sigma=0.99}Si_{5.97}O_{17}$.

Mineral Group: Nordite supergroup, nordite group (Sr dominant in the X site).

Occurrence: In the ussingite core of hyperagpaitic pegmatite.

Association: Aegirine, epistolite, steenstrupine-(Ce), serandite, belovite-(Ce), sphalerite.

Distribution: At Mount Sengischorr, Lovozero alkaline massif, Kola Peninsula, Russia.
From Igdlutalik [now spelled Illutalik], Gardar Province, South Greenland; at Mont Saint-Hilaire, Québec, Canada; and in the Dara-i-Pioz massif, Tajikistan.

Name: A member of the *nordite* group with Zn dominant in the Z structural site and with a suffix for the dominant rare earth element.

Type Material: A.E. Fersman Mineralogical Museum, Moscow, Russia (59393).

References: (1) Semenov, E.I. (1961) New data on nordite. Trudy, Mineralogicheskiy Muzeya Akademiya Nauk SSSR, 11, 199-201. (2) Bo, F.D., E.H. Gulbransen, and H. Friis (2021) New data on nordite-(Ce) and the establishment of the nordite supergroup. Mineral. Mag., 85(3), 431-437.