Calcjarlite $Na(Ca,Sr)_3Al_3(F,OH)_{16}$

Crystal Data: [Monoclinic] (by analogy to jarlite). *Point Group:* n.d. As elongated tabular crystals in radial aggregates, to 2 mm.

Physical Properties: *Fracture:* Uneven. Hardness = ∼4 D(meas.) = 3.51 D(calc.) = n.d.

Optical Properties: Transparent. *Color:* Colorless to white; colorless in thin section.
Luster: Vitreous.
Optical Class: Biaxial (+); rarely (−). *Orientation:* $Z \wedge c = 15°$. $\alpha = 1.425(1)$ $\beta = 1.428(1)$ $\gamma = 1.432(1)$ 2V(meas.) = 72°

Cell Data: *Space Group:* n.d. Z = n.d.

X-ray Powder Pattern: Pravaya Noiba River, Russia.
2.96 (10), 3.04 (7), 3.16 (6), 3.51 (5), 2.23 (4), 2.15 (4), 3.44 (3)

Chemistry:

	(1)
Al_2O_3	26.46
MgO	4.21
CaO	17.40
SrO	11.33
BaO	4.46
Na_2O	4.78
K_2O	0.97
F	47.50
H_2O^+	3.10
H_2O^-	0.00
$-O = F_2$	19.95
Total	100.26

(1) Pravaya Noiba River, Russia; corresponds to $(Na_{0.87}K_{0.11})_{\Sigma=0.98}(Ca_{1.75}Sr_{0.61}Mg_{0.58}Ba_{0.16})_{\Sigma=3.10}Al_{2.94}[F_{14.06}(OH)_{1.94}]_{\Sigma=16.00}$.

Occurrence: In a fluorite vein in quartz-mica schists.

Association: Fluorite, thorite, usovite, chamosite, phillipsite, erionite, micas, halloysite.

Distribution: Near the mouth of the second tributary to the Pravaya Noyba River, tributary to the Teya River, Yenisei Ridge, Siberia, Russia.

Name: As a CALCium analog of *jarlite*.

Type Material: Mineralogical Museum, Tomsk Polytechnical Institute, Tomsk; Institute of Geology and Geophysics, Siberian Division, Academy of Sciences, Novosibirsk, Russia.

References: (1) Nozhkin, A.D., V.A. Moleva, and T.P. Chubkova (1970) First find of jarlite in the USSR. Zap. Vses. Mineral. Obshch., 99, 458–462 (in Russian). (2) Povarennykh, A.S. (1973) The new mineral species calcjarlite. Konst. Svoistva Mineral., 7, 131–135 (in Russian). (3) (1972) Mineral. Abs., 23, 316 (abs. ref. 1). (4) (1974) Amer. Mineral., 59, 873 (abs. refs. 1 and 2).