Zakharovite $Na_4Mn_5^{2+}Si_{10}O_{24}(OH)_6 \cdot 6H_2O$

Crystal Data: Hexagonal. *Point Group:* $3m$. As platy aggregates in small nestlike deposits, to 1 cm.

Physical Properties: *Cleavage:* {0001}, perfect. *Fracture:* Conchoidal. Hardness = ∼2 D(meas.) = 2.58–2.64 D(calc.) = [2.67] Strongly electromagnetic.

Optical Properties: Translucent to opaque. *Color:* Yellowish to bright yellow, orange, grenish yellow. *Luster:* Pearly, vitreous to dull waxy.
Optical Class: Uniaxial (–). $\omega = 1.565(2)$ $\epsilon = 1.535(2)$

Cell Data: *Space Group:* $P31m$ or $P3m1$. $a = 14.58$ $c = 37.71$ Z = 9

X-ray Powder Pattern: Kola Peninsula, Russia.
12.57 (100), 3.160 (40), 3.427 (15), 3.064 (15), 2.820 (15), 2.631 (15), 3.986 (10)

Chemistry:

	(1)
SiO_2	48.74
Fe_2O_3	2.70
MnO	25.63
MgO	0.05
CaO	2.11
SrO	0.09
Na_2O	7.95
K_2O	0.41
H_2O	12.25
Total	99.93

(1) Kola Peninsula, Russia; corresponds to $(Na_{3.16}Ca_{0.46}K_{0.11}Sr_{0.01})_{\Sigma=3.74}(Mn^{2+}_{4.45}Fe^{3+}_{0.42}Mg_{0.02})_{\Sigma=4.89}Si_{10}O_{24}[(OH)_{5.60}O_{0.40}]_{\Sigma=6.00} \cdot 5.59H_2O$.

Occurrence: In ussingite veinlets cutting foyaite in differentiated alkalic massifs (Kola Peninsula, Russia).

Association: Ussingite (Kola Peninsula, Russia); terskite, lovozerite, ussingite, natrolite, microcline, yofortierite, analcime, natrolite, polylithionite (Mont Saint-Hilaire, Canada); eudialyte, varennesite, catapleiite, labuntsovite (Saint-Amable, Canada).

Distribution: At Mt. Karnasurt, Lovozero massif, and on Mts. Yukspor and Koashva, Khibiny massif, Kola Peninsula, Russia. From the Saint-Amable sill, near Varennes, and at Mont Saint-Hilaire, Quebec, Canada.

Name: For Professor Evgeii Evgen'evich Zakharov (1902–1980), Director of the Moscow Geological Exploration Institute, Moscow, Russia.

Type Material: Geology Museum, Kola Branch, Academy of Sciences, Apatity, 5713/6; Mining Institute, St.Petersburg, 1199; A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia, 81688; The Natural History Museum, London, England, 1994,38.

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