

Crystal Data: Orthorhombic. *Point Group:* 222. Oval grains, to 5 mm.

Physical Properties: *Fracture:* Conchoidal. *Tenacity:* Brittle. Hardness = ~4
VHN = 274–395, 310 average (40–50 g load). D(meas.) = 2.8 D(calc.) = 2.85 Easily soluble
in cold H₂O; decomposes rapidly in air.

Optical Properties: Translucent. *Color:* Colorless. *Luster:* Vitreous.
Optical Class: Biaxial (+). $\alpha = 1.510(2)$ $\beta = 1.510(2)$ $\gamma = 1.512(2)$ $2V(\text{meas.}) = 46(1)^\circ$

Cell Data: *Space Group:* P2₁2₁2₁. $a = 10.124(2)$ $b = 14.794(2)$ $c = 10.132(3)$ $Z = 8$

X-ray Powder Pattern: Mt. Rasvumchorr, Kola Peninsula, Russia.
2.582 (10), 4.18 (9), 2.531 (7), 2.433 (7), 1.472 (7), 3.58 (6), 3.70 (5)

Chemistry:	(1)	(2)
P ₂ O ₅	42.50	45.52
CO ₂	2.30	
MnO	0.50	
Li ₂ O	n.d.	4.79
Na ₂ O	54.50	49.69
Total	99.80	100.00

(1) Mt. Rasvumchorr, Kola Peninsula, Russia; MnO and CO₂ attributed to sidorenkite impurity.

(2) LiNa₅(PO₄)₂.

Occurrence: An ultra-alkalic phase in nepheline syenite pegmatites in differentiated alkalic massifs.

Association: Sidorenkite, dorfmanite, nahpoite, villiaumite, shafranovskite, aegirine (Mt. Rasvumchorr, Kola Peninsula, Russia); natrite, natrosilite (Lovozero massif, Kola Peninsula, Russia).

Distribution: On Mt. Rasvumchorr, Khibiny massif, and in the Lovozero massif, Kola Peninsula, Russia.

Name: For the 1980 Summer Olympic Games, in Moscow, USSR.

Type Material: Geology Museum, Kola Branch, Academy of Sciences, Apatity, 5533; Mining Institute, St. Petersburg, 1208/1; I.M.G.R.E., Moscow; A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia, 80180.

References: (1) Khomyakov, A.P., A.V. Bykova, and Y.A. Malinovskii (1980) Olympite Na₃PO₄ – a new mineral. Zap. Vses. Mineral. Obshch., 109, 476–479. (2) (1981) Amer. Mineral., 66, 438 (abs. ref. 1). (3) Rastsvetaeva, R.K. and A.P. Khomyakov (1994) A comparative crystal-chemical study of lithium-sodium phosphates (lithiophosphate, nalipoite, olympite, and Na₃PO₄). Crystallography Reports, 39, 35–41.