

Sosedkoite**(K, Na)₅Al₂(Ta, Nb)₂₂O₆₀**

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Crystal Data: Orthorhombic. *Point Group:* n.d. As acicular, slightly elongated crystals, to 0.1 mm, included in microlite and cesstibtantite.

Physical Properties: Hardness = n.d. VHN = 800–860 (20 g load). D(meas.) = n.d. D(calc.) = 6.90 Faint blue cathodoluminescence.

Optical Properties: Transparent. *Color:* Colorless. *Luster:* Adamantine. *Optical Class:* Biaxial; strong birefringence. α = n.d. β = n.d. γ = n.d. $2V$ (meas.) = n.d. *Anisotropism:* Strong.

R₁–R₂: (486) 13.5–12.8, (551) 12.8–12.0, (589) 13.3–12.3, (656) 11.3–11.3

Cell Data: *Space Group:* n.d. $a = 17.25(3)$ $b = 17.73(3)$ $c = 3.95(2)$ $Z = 1$

X-ray Powder Pattern: Mt. Vasin-Myl'k, Russia. 3.95 (10), 3.03 (9), 1.974 (6), 6.1 (5), 3.47 (5), 2.79 (5), 2.376 (5)

Chemistry:	(1)
Nb ₂ O ₅	2.71
Ta ₂ O ₅	91.25
Sb ₂ O ₅	0.47
Al ₂ O ₃	1.96
CaO	0.10
Na ₂ O	1.15
K ₂ O	2.79
Li ₂ O	< 0.1
Total	100.43

(1) Mt. Vasin-Myl'k, Russia; by electron microprobe, Li estimated by AA; corresponds to (K_{3.06}Na_{1.85}Ca_{0.09})_{Σ=5.00}Al_{1.92}(Ta_{20.65}Nb_{1.03}Sb_{0.14})_{Σ=21.82}O₆₀.

Occurrence: In a granite pegmatite.

Association: Microlite, simpsonite, cesstibtantite, stibiotantalite, alumotantite, natrotantite.

Distribution: From Mt. Vasin-Myl'k, Voron'i massif, Kola Peninsula, Russia.

Name: Honors Aleksandr Federovich Sosedko (1901–1957), Russian mineralogist, Institute of Geological Sciences, Academy of Sciences, Moscow, Russia.

Type Material: Geology Museum, Kola Branch, Academy of Sciences, Apatity, 5518; Mining Museum, St. Petersburg, 2099/1; A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia.

References: (1) Voloshin, A.V., Y.P. Men'shikov, and Y.A. Pakhomovskii (1982) Sosedkoite, (K, Na)₅Al₂(Ta, Nb, Sb)₂₂O₆₀ – a new mineral from granite pegmatite. Doklady Acad. Nauk SSSR, 264, 442–445 (in Russian). (2) (1983) Amer. Mineral., 68, 644 (abs. ref. 1).