

Yushkinite

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Crystal Data: Hexagonal. *Point Group:* $3m$ (?). Fine flaky, scaly aggregates, up to 8 mm, and in veinlets, to 12 mm.

Physical Properties: *Tenacity:* Plastic. Hardness = < 1 VHN = n.d. D(meas.) = 2.94 D(calc.) = 3.00

Optical Properties: Opaque. *Color:* Pinkish violet. *Anisotropism:* Strong, orange-red with weak lilac tint in isotropic sections, red-lilac to pinkish dark gray in anisotropic sections.

R: (400) —, (420) —, (440) 26.0, (460) 22.4, (480) 19.0, (500) 17.6, (520) 17.8, (540) 18.7, (560) 20.7, (580) 23.3, (600) 26.4, (620) 29.6, (640) 32.8, (660) 35.7, (680) 38.2, (700) 40.1

Cell Data: *Space Group:* $P3m1$ (?). $a = 3.21$ $c = 11.3$ $Z = \text{n.d.}$

X-ray Powder Pattern: Pay-Khoy Mountains, Russia.

5.68 (10), 2.76 (6), 1.575 (6), 1.596 (4), 11.4 (3), 1.534 (3), 1.386 (3)

Chemistry:

	(1)
V	32.48
S	32.93
Mg	10.17
Al	5.66
O	19.89
H	1.26
Total	102.39

(1) Pay-Khoy Mountains, Russia; by electron microprobe, O and H calculated, average of three analyses, corresponding to $\text{V}_{1-x}\text{S}\cdot n(\text{Mg, Al})(\text{OH})_2$, $n = 0.612$, assigned by analogy to valleriite.

Occurrence: In quartz-carbonate veins in carbonate rocks.

Association: Cadmian sphalerite, sulvanite, fluorite.

Distribution: From near the Dolgozhdanny [Long-awaited] Waterfall, middle Silova-Yakha River, Pay-Khoy Mountains, far Northern Ural Mountains, Yugorskii Peninsula, Russia.

Name: For Academician Nikolai Pavlovich Yushkin (1936–), Russian mineralogist, Director of the Institute of Geology, Syktyvkar, Russia.

Type Material: Komi Branch of Academy of Sciences, Syktyvkar; Mining Institute, St. Petersburg, 1501/1; Institute of Geology of Ore Deposits, Petrography, Mineralogy and Geochemistry, Moscow; A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia, 84284.

References: (1) Makeev, A.B., T.L. Evstigneeva, N.V. Troneva, L.N. Vyal'sov, A.I. Gorshkov, and N.V. Trubkin (1984) Yushkinite, $\text{V}_{1-x}\text{S}\cdot n(\text{Mg, Al})(\text{OH})_2$ – a new mineral. *Mineral. Zhurnal*, 6(5), 91–97 (in Russian). (2) (1986) *Amer. Mineral.*, 71, 846 (abs. ref. 1).