Nickelpicromerite $K_2Ni(SO_4)_2 \cdot 6H_2O$

Crystal Data: Monoclinic. *Point Group*: 2/*m*. As equant to short prismatic or tabular crystals to 0.07 mm, or as anhedral grains to 0.5 mm.

Physical Properties: *Cleavage*: Distinct on $\{10\bar{2}\}$ (by analogy to picromerite). *Fracture*: Stepped. *Tenacity*: Brittle. Hardness = 2-2.5 D(meas.) = 2.20(2) D(calc.) = 2.222 Soluble in water.

Optical Properties: Transparent. *Color*: Light greenish blue. *Streak*: White. *Luster*: Vitreous. *Optical Class*: Biaxial (+). α = 1.486(2) β = 1.489(2) γ = 1.494(2) 2V(meas.) = 75(10)° 2V(calc.) = 76°

Cell Data: *Space Group*: $P2_1/c$. a = 6.1310(7) b = 12.1863(14) c = 9.0076(10) β = 105.045(2)° Z = 2

X-ray Powder Pattern: Ufaley quartz deposit, Kyshtym District, South Urals, Russia. 4.085 (100), 3.685 (85), 4.312 (46), 3.041 (45), 5.386 (34), 2.368 (34), 4.240 (33)

Chemistry:	(1)	(2)
K_2O	20.93	21.55
MgO	0.38	
FeO	0.07	
NiO	16.76	17.09
SO_3	37.20	36.63
H_2O	[24.66]	24.73
Total	100.00	100.00

(1) Ufaley quartz deposit, Kyshtym District, South Urals, Russia; average of 5 electron microprobe analyses, supplemented by FTIR spectroscopy, H_2O by difference; corresponding to $K_{1.93}Mg_{0.04}Ni_{0.98}S_{2.02}O_{8.05}(H_2O)_{5.95}$. (2) $K_2Ni(SO_4)_2 \cdot 6H_2O$.

Mineral Group: Picromerite group.

Occurrence: A secondary mineral in the fractures of slightly weathered actinolite-talc schist containing partially vermiculitized biotite and partially altered, nickle-bearing sulfides.

Association: Gypsum, goethite.

Distribution: From vein #169, Ufaley quartz deposit, near Slyudorudnik, Kyshtym District, Chelyabinsk area, South Urals, Russia.

Name: For a member of the *picromerite* group with essential *nickel*.

Type Material: In Russia, at the Natural Scientific Museum, Ilmen State Reserve, Miass (17301) and the A.E. Fersman Mineralogical Museum, Russian Academy of Sciences, Moscow (93776).

References: (1) Belogub, E.V., S.V. Krivovichev, I.V. Pekov, A.M. Kuznetsov, V.O. Yapaskurt, V.A. Kotlyarov, N.V. Chukanov and D.I. Belakovskiy (2015) Nickelpicromerite, $K_2Ni(SO_4)_2 \cdot 6H_2O$, a new picromerite-group mineral from Slyudorudnik, South Urals, Russia. Mineralogy and Petrology, 109, 143-152. (2) (2016) Amer. Mineral., 101, 2129 (abs. ref. 1).