

Crystal Data: Orthorhombic. *Point Group:* 2/m 2/m 2/m. As rectangular crystals to 6 mm, platy to tabular on {001} and in aggregates. Most individuals are bent or split.

Physical Properties: *Cleavage:* Perfect on {001}. *Tenacity:* Flexible, nonelastic. *Fracture:* Laminated. Hardness = 2.5 VHN = 111-122, 116 average (10 g load). D(meas.) = 2.75(10) D(calc.) = 2.84 Weakly ferromagnetic.

Optical Properties: Opaque. *Color:* Dark lead-gray on fresh surfaces, rapidly turns iron-black in moist air; bluish gray in reflected light, no internal reflections. *Streak:* Black. *Luster:* Metallic. *Optical Class:* n.d. Weakly anisotropic. *Birefractance:* Weak, bluish gray to gray with bluish tints. R₁-R₂: (400) 14.95-17.45, (470) 13.70-16.35, (546) 11.35-14.00, (589) 10.00-12.55, (650) 8.65-11.00, (700) 8.00-9.80

Cell Data: *Space Group:* Pmmm. a = 5.147(2) b = 7.289(2) c = 5.889 Z = 1

X-Ray Diffraction Pattern: Mt. Koashva, Khibiny massif, Kola Peninsula, Russia. 3.104 (100), 1.897 (70), 2.727 (50), 2.292 (50), 1.828 (50), 5.12 (40), 4.21 (40)

Chemistry:	(1)	(2)
Na	0.12	
K	0.27	
Tl	0.44	
Cu	48.52	50.34
Fe	15.20	14.75
S	25.20	25.40
H ₂ O ⁺	9.28	9.51
H ₂ O ⁻	1.43	
Total	100.46	100.00

(1) Mt. Koashva, Khibiny massif, Kola Peninsula, Russia; average electron microprobe analysis supplemented by IR spectroscopy, H₂O by TGA; corresponds to Cu_{2.91}Fe_{1.04}S_{3.00}(K_{0.03}Na_{0.02}Tl_{0.01})_{Σ=0.06}·1.97H₂O. (2) Cu₃FeS₃·2H₂O.

Occurrence: A late hydrothermal phase in the core of an ultra-alkalic pegmatite dominated by aegirine, microcline, sodalite, natrolite, pectolite, villaumite, ± natrite, thermonatrite, lomonosovite.

Association: Villaumite, pectolite, rasvumite, lamprophyllite, lomonosovite, chkalovite, sphalerite, vitusite-(Ce).

Distribution: From the Koashva Quarry, Mt. Koashva, Khibiny massif, Kola Peninsula, Russia.

Name: Honors Finnish geologist *Wilhelm Ramsay* (1865-1928), who did the first detailed study of the Khibiny-Lovozero alkaline complexes.

Type Material: A.E. Fersman Mineralogical Museum, RAS, Moscow, Russia (3218/1).

References: (1) Pekov, I.V., N.V. Chukanov, M.M. Boldyreva, and V.T. Dubinchuk (2006) Wilhelmsramsayite, Cu₃FeS₃·2H₂O, a new mineral from Khibiny massif, Kola Peninsula. Zap. Ross. Mineral. Obsch., 135(1), 38-48 (in Russian, English abstract). (2) (2009) Amer. Mineral., 94, 407-408.