Uakitite VN

Crystal Data: Cubic. *Point Group*: $4/m\,\bar{3}\,2/m$. As <5 μm rounded grains (in schreibersite) or isometric (cubic) crystals (in daubréelite).

Physical Properties: *Cleavage*: n.d. *Tenacity*: Brittle. *Fracture*: n.d. Hardness = 9-10 (synthetic) D(meas.) = n.d. D(calc.) = 6.128 Nonfluorescent.

Optical Properties: Transparent. *Color*: Yellow, light gray with a pink tint in reflected light.
Streak: White. *Luster*: Metallic.
Optical Class: n = 2.3031 (synthetic)

Cell Data: *Space Group*: $Fm\bar{3}\,m$. a = 4.1328(3) Z = 4

X-Ray Diffraction Pattern: Calculated pattern.
2.066 (100), 2.386 (71), 1.461 (61), 1.246 (29), 0.924 (21), 1.193 (19), 0.844(14)

Chemistry:

	(1)	(2)
V	71.33	78.43
Cr	5.58	
Fe	1.56	
N	21.41	21.57
Total	99.88	100.00

(1) Uakit iron meteorite; average electron microprobe analysis; corresponds to $(V_{0.91}Cr_{0.07}Fe_{0.02})_{1.00}N_{1.00}$. (2) VN.

Occurrence: An accessory phase in an iron meteorite. Formed due to high-temperature (>1000 °C) separation of Fe-Cr-rich sulfide liquid from Fe-metal melt.

Association: In troilite-daubréelite (±schreibersite) inclusions (to 100 μm) and in troilite-daubréelite nodules (to 1 cm) in Fe-Ni-metal (kamacite).

Distribution From the Uakit iron meteorite (IIAB) found in 2016 in the Baunt Evenk district, Republic of Buryatia, Russia.

Name: For the *Uakit* iron meteorite.

Type Material: Central Siberian Geological Museum, V.S. Sobolev Institute of Geology and Mineralogy, Siberian Branch of the Russian Academy of Sciences, Novosibirsk, Russia (52 - meteorite Uakit) and the Museum of the Buryatian Scientific Center, Siberian Branch of the Russian Academy of Sciences, Ulan-Ude, Russia (Uakit-MBSC435/G84).

References: (1) Sharygin, V.V., G.S. Ripp, G.A. Yakovlev, Y.V. Seryotkin, N.S. Karmanov, I.A. Izbrodin, V.I. Grokhovsky, and E.A. Khromova (2020) Uakitite, VN, a new mononitride mineral from Uakit iron meteorite (IIAB). Minerals, 10(2), 150, 1-19.