

Crystal Data: Cubic. *Point Group:* $2/m\bar{3}$. As isolated crystals, typically cubo-octahedra exhibiting {100} and {111}, to 6 μm , embedded in massive native tungsten.

Physical Properties: *Cleavage:* Good on {111} [Synthetic]. Hardness = 5.5 [Synthetic] VHN = 653.91 [Synthetic]. *Fracture:* n.d. D(meas.) = n.d. D(calc.) = 5.073

Optical Properties: Transparent to translucent (massive). *Color:* Colorless to white. *Streak:* White. *Luster:* Adamantine to earthy (massive).

Optical Class: Isotropic. $n = 1.931$ [Synthetic]

Cell Data: *Space Group:* $Ia\bar{3}$. $a = 10.6018(7)$ $Z = 16$

X-ray Powder Pattern: Synthetic Y₂O₃ (synchrotron radiation). 3.0646 (100), 1.8746 (55), 1.5984 (38), 2.6537 (26), 4.3356 (14), 1.2158 (13), 2.0803 (11)

Chemistry:	(1)
Y ₂ O ₃	98.27
Tb ₂ O ₃	0.20
Dy ₂ O ₃	0.47
Ho ₂ O ₃	0.29
Er ₂ O ₃	0.05
Tm ₂ O ₃	0.09
Yb ₂ O ₃	0.64
Total	100.01

(1) Bol'shaya Pol'ya River, Subpolar Urals, Russia; average of 4 electron microprobe analyses supplemented by Raman spectroscopy; corresponds to Y_{1.98}Dy_{0.01}Yb_{0.01}O₃.

Mineral Group: Bixbyite group.

Occurrence: In fluvial placer sediment derived from older inter-layered sandstones, alevrites and pebbly sands.

Association: Copper, zircon, osmium, gold, pyrite, native tungsten with inclusions of quartz and "phengite".

Distribution: From the Bol'shaya Pol'ya River, Subpolar Urals, Russia.

Name: Based on the common name for the equivalent chemical compound, *yttria*.

Type Material: Mineral Sciences Department, Natural History Museum of Los Angeles County, Los Angeles, California, USA (63272), and the A.E. Fersman Mineralogical Museum, Russian Academy of Sciences, Moscow, Russia (4147/1).

References: (1) Mills, S.J., P.M. Kartashov, C. Ma, G.R. Rossman, M.I. Novgorodova, A.R. Kampf, and M. Raudsepp (2011) Yttriaite-(Y): The natural occurrence of Y₂O₃ from the Bol'shaya Pol'ya River, Subpolar Urals, Russia. *Amer. Mineral.*, 96, 1166-1170.