

**Crystal Data:** Cubic. *Point Group:*  $4/m\bar{3}2/m$ . As intergrown cube-octahedral and skeletal crystals, to 0.2 mm.

**Physical Properties:** *Cleavage:* n.d. *Fracture:* n.d. *Tenacity:* n.d. *Hardness* = 6-7  
D(meas.) = n.d. D(calc.) = 14.5

**Optical Properties:** Opaque. *Color:* Grayish yellow, dark brownish gray (synthetic TaC).  
*Streak:* n.d. *Luster:* Metallic.  
*Optical Class:* Isotropic (presumably).

**Cell Data:** Space Group:  $Fm\bar{3}m$ .  $a = 4.453$   $Z = 4$

**X-ray Powder Pattern:** Nizhnii Tagil, Middle Urals, Russia.  
2.56 (100), 2.22 (90), 1.572 (41), 1.342 (35), 0.857 (13), 0.995 (11), 1.285 (10)

<b>Chemistry:</b>	(1)
Ta	93.78
C	6.22
Total	100.00

(1) TaC.

**Occurrence:** In placer concentrates from a “gold-washing operation”. Suspected to be a synthetic compound mixed with natural placer concentrate. No in situ localities known.

**Association:** Native gold,  $\alpha$ -Fe, nickel, Fe-Ta-Nb, Fe-Sn alloys, and apatite, Ti-magnetite, dolomite, zircon, wüstite, serpentine, graphite - as inclusions.

**Distribution:** From Nizhnii Tagil, Middle Urals, Russia.

**Name:** For the essential chemical components, *tantalum* and *carbide*.

**Type Material:** A.E. Fersman Mineralogical Museum, Russian Academy of Sciences, Moscow, Russia (21298).

**References:** (1) Pekov, I.V. (1998) Minerals first discovered on the territory of the Former Soviet Union. 369 p. (esp. 203-205, 251). (2) Frondel, C. (1962) Non-existence of native tantalum. *Amer. Mineral.*, 47, 786-787. (3) Novgorodova, M.I., M.E. Generalov, and N.V. Trubkin. (1997), The new TaC-NbC isomorphous row and niobocarbide - a new mineral from platinum placers of the Urals. *Zap. Vses. Mineral. Obshch.*, 126(1), 76-95. (4) Palache, C., H. Berman, and C. Frondel (1944) Dana's system of mineralogy (7<sup>th</sup> edition), v. I, 126 [tantalum – shown to be tantalcarbide see ref 2].