

**Crystal Data:** Hexagonal, pseudomonoclinic. *Point Group:*  $\bar{3} 2/m$ . Rimming crystals of simpsonite, in turn rimmed by alumotantite; intergrown with microlite.

**Physical Properties:** *Fracture:* Uneven. Hardness = n.d. VHN = 1270 (40 g load). D(meas.) = n.d. D(calc.) = n.d. Strong yellow-green cathodoluminescence.

**Optical Properties:** Transparent. *Color:* Colorless, with slight yellowish tint. *Luster:* Adamantine.

*Optical Class:* Uniaxial. *Anisotropism:* Strong.

R<sub>1</sub>–R<sub>2</sub>: (486) 15.0–13.6, (589) 12.4–11.8, (656) 12.0–12.0

**Cell Data:** *Space Group:*  $R\bar{3}c$ .  $a = 6.2092(1)$   $c = 36.619(1)$   $Z = 6$

**X-ray Powder Pattern:** Kola Peninsula, Russia.

3.02 (10b), 2.778 (9b), 1.556 (8), 1.548 (8), 3.06 (7), 2.474 (6b), 1.799 (6b)

Chemistry:	(1)	(2)	(3)
Nb <sub>2</sub> O <sub>5</sub>	2.71	1.0	
Ta <sub>2</sub> O <sub>5</sub>	91.26	94.3	93.45
PbO	0.87	0.6	
CaO	0.08	0.3	
Na <sub>2</sub> O	4.69	3.1	6.55
K <sub>2</sub> O		0.06	
Total	99.61	99.4	100.00

(1) Kola Peninsula, Russia; by electron microprobe, corresponding to (Na<sub>1.40</sub>Pb<sub>0.04</sub>Ca<sub>0.01</sub>)<sub>Σ=1.45</sub> (Ta<sub>3.81</sub>Nb<sub>0.19</sub>)<sub>Σ=4.00</sub>O<sub>10.75</sub>. (2) Alto do Giz pegmatite, Brazil; by electron microprobe, corresponding to (Na<sub>0.93</sub>Ca<sub>0.04</sub>Pb<sub>0.03</sub>K<sub>0.01</sub>)<sub>Σ=1.01</sub> (Ta<sub>3.93</sub>Nb<sub>0.07</sub>)<sub>Σ=4.00</sub>O<sub>10.54</sub>. (3) Na<sub>2</sub>Ta<sub>4</sub>O<sub>11</sub>.

**Occurrence:** In albite units of granite pegmatites.

**Association:** Simpsonite, alumotantite, microlite, sosedkoite.

**Distribution:** From Mt. Vasin-Myl'k, Voroni massif, Kola Peninsula, Russia. At the Alto do Giz pegmatite, near Parelhas, Rio Grande do Norte, Brazil.

**Name:** For sodium, NATrium, and TANTalum in the composition.

**Type Material:** Geology Museum, Kola Branch, Academy of Sciences, Apatity, Russia, 5518.

**References:** (1) Voloshin, A.V., Y.P. Men'shikov, and Y.A. Pakhomovskii (1981) Alumotantite and natrotantite, new tantalum minerals in granitic pegmatites. Zap. Vses. Mineral. Obshch., 110, 338–345 (in Russian). (2) (1982) Amer. Mineral., 67, 413 (abs. ref. 1). (3) Ercit, T.S., F.C. Hawthorne, and P. Černý (1985) The crystal structure of synthetic natrotantite. Bull. Minéral., 108, 541–549.