Natrobistantite $(Na, Cs)Bi(Ta, Nb, Sb)_4O_{12}$

Crystal Data: Cubic. *Point Group:* $4/m\ \overline{3}\ 2/m$. As aggregates of octahedral crystals, to 5 mm.

Physical Properties: Hardness = n.d. VHN = 750 (40 g load). D(meas.) = 6.1–6.2 D(calc.) = 6.32 Colorless material fluoresces strong red-orange under UV.

Optical Properties: Transparent. *Color:* Yellow-green, blue-green; colorless in thin grains. *Luster:* Adamantine.
Optical Class: Isotropic. n = n.d.
R: (486) 16.7, (553) 16.5, (589) 17.0, (656) 15.7

Cell Data: *Space Group: Fd3m.* a = 10.502(3) Z = 4

X-ray Powder Pattern: Koktokay, China.
3.03 (10), 1.858 (9), 1.584 (9), 2.628 (8), 6.07 (6), 3.17 (5), 1.205 (5)

Chemistry:

	(1)
Nb_2O_5	11.21
Ta_2O_5	56.46
Sb_2O_5	2.24
TiO_2	0.09
Bi_2O_3	23.16
CaO	0.10
Na_2O	2.04
Cs_2O	4.10
Total	99.40

(1) Koktokay, China; by electron microprobe, corresponds to $(Na_{0.73}Cs_{0.32}Ca_{0.02})_{\Sigma=1.07}$ $Bi_{1.09}(Ta_{2.83}Nb_{0.93}Sb_{0.15}Ti_{0.02})_{\Sigma=3.93}O_{12}$.

Mineral Group: Pyrochlore group.

Occurrence: Replacing bismutotantalite in museum samples from a granite pegmatite.

Association: Bismutotantalite, microlite, pucherite, clinobisvanite, bismuth oxides.

Distribution: From near Koktokay, Sinkiang-Uighur Autonomous Province [Kyokfogoi, Xinjiang Uygur Autonomous Region], China.

Name: For sodium, NATRium, BISmuth, and TANTalum in the composition [deviant from IMA pyrochlore nomenclature].

Type Material: A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia.

References: (1) Voloshin, A.V., Y.A. Pakhomovskii, V.I. Stepanov, and F.N. Tyusheva (1983) Natrobistantite, $(Na, Cs)Bi(Ta, Nb, Sb)_4O_{12}$ – a new mineral from granitic pegmatite. Mineral. Zhurnal, 5(2), 82–86 (in Russian with English abs.). (2) (1984) Amer. Mineral., 69, 407–408 (abs. ref. 1).