Cesplumtantite $(Cs,Na)_2(Pb,Sb^{3+})_3Ta_8O_{24}$

Crystal Data: Tetragonal. *Point Group:* n.d. As veinlets and elongated aggregates, to 0.3 mm. *Twinning:* Polysynthetic, complex, observed microscopically.

Physical Properties: Hardness = n.d. VHN = 1240 (40 g load). D(meas.) = n.d. D(calc.) = 6.87(5)

Optical Properties: Transparent. *Color:* Colorless; light gray in reflected light. *Streak:* White. *Luster:* Adamantine.
Optical Class: Uniaxial. *Anisotropism:* Strong. *Bireflectance:* Weak.
R_1–R_2: (476) 18.2–17.1, (553) 17.3–16.5, (589) 17.1–16.5, (656) 15.6–15.3

Cell Data: *Space Group:* n.d. $a = 13.552(8)$ $c = 6.445(5)$ $Z = 2$

X-ray Powder Pattern: Manono pegmatite, Congo.
3.054 (10), 1.869 (7), 1.593 (7), 6.11 (5), 3.19 (5), 2.037 (5b), 1.181 (5)

Chemistry:

	(1)
Nb_2O_5	3.24
Ta_2O_5	63.85
SnO_2	[1.60]
Sb_2O_3	2.88
SnO	1.49
PbO	20.24
CaO	0.83
Na_2O	0.71
Cs_2O	5.37
Total	[100.21]

(1) Manono pegmatite, Congo; by electron microprobe, average of three analyses; corresponding to $(Cs_{0.94}Na_{0.57}Ca_{0.37})_{\Sigma=1.88}(Pb_{2.24}Sb^{3+}_{0.49}Sn^{2+}_{0.27})_{\Sigma=3.00}(Ta_{7.15}Nb_{0.60}Sn^{4+}_{0.26})_{\Sigma=8.01}O_{24}$.

Occurrence: In veinlets in a museum specimen from a granite pegmatite.

Association: Lithiotantite, cassiterite, calciotantite, microlite, thoreaulite.

Distribution: From the Manono pegmatite, Katanga Province, Congo (Shaba Province, Zaire).

Name: For CESium, lead (PLUMbum), and TANTalum in the composition.

Type Material: Mining Museum, State University, St. Petersburg, Russia, 1547/2.

References: (1) Voloshin, A.V., Y.A. Pakhomovskii, A.Y. Bakhchisaraytsev, and N.N. Devnina (1986) Cesplumtantite – a new cesium-lead tantalate from granitic pegmatites. Mineral. Zhurnal, 8(5), 92–98 (in Russian with English abs.). (2) (1989) Amer. Mineral., 74, 501 (abs. ref. 1).