Stibiconite $Sb^{3+}Sb_2^{5+}O_6(OH)$

Crystal Data: Cubic. *Point Group:* $4/m\ \overline{3}\ 2/m$. Massive, botryoidal, as incrustations, may be concentrically zoned, to several cm thick; typically powdery, compact.

Physical Properties: Hardness = 5.5–7, when compact. D(meas.) = 3.3–5.5
D(calc.) = n.d.

Optical Properties: Transparent to translucent. *Color:* Pale yellow to yellowish white, reddish white, orange; gray, brown, black when impure. *Luster:* Pearly, opaline, glassy to earthy.
Optical Class: Isotropic. n = 1.621–2.047, often in admixtures.

Cell Data: *Space Group: Fd3m.* a = 10.255–10.282 Z = 8

X-ray Powder Pattern: Locality not stated.
2.96 (100), 5.93 (90), 1.81 (80), 3.09 (70), 1.55 (60), 2.57 (40), 1.18 (40)

Chemistry:

	(1)	(2)
SiO_2	1.03	
Al_2O_3	0.05	
Fe_2O_3	0.10	
Sb	73.4	76.37
MgO	0.05	
CaO	1.79	
O	21.3	21.75
H_2O^+	1.98	1.88
H_2O^-	0.61	
Total	100.3	100.00

(1) Yucunani mine, Tejocotes, Oaxaca, Mexico; Sb^{3+}:Sb^{5+} calculated from stoichiometry; corresponds to $(Sb^{3+}_{0.52}Ca_{0.16})_{\Sigma=0.68}Sb^{5+}_{2.19}O_6(OH)_{0.83}$. (2) $Sb^{3+}Sb^{5+}_2O_6(OH)$.

Mineral Group: Stibiconite group.

Occurrence: A secondary mineral in hydrothermal mineral deposits, formed by the oxidation of other antimony-bearing minerals, commonly stibnite, which it may entirely replace.

Association: Cervantite, valentinite, kermesite, antimony, stibnite.

Distribution: Probably very common, but modern confirmation is required for many earlier localities. From Losacio, Zamora Province, Spain. At Ramsbeck, North Rhein-Westphalia, and in the Clara Mine, near Oberwolfach, Black Forest, Germany. At Szalonack, Hungary. An important ore from Catorce and Tierras Prietas, San Luis Potosi, and at El Antimonio, Sonora, Mexico. In Canada, in the Lac Nicolet mine, South Ham Township, Wolfe Co., Quebec. In the USA, at the Black Warrior mine, near Unionville, Pershing Co., Nevada; from Antimony, Garfield Co., Utah; in the Stanley stibnite mine, Shoshone Co., Idaho; along Erskine Creek, Kern Co., California. In Kyrgyzstan, in the Kadamdzhai antimony deposit.

Name: From the Latin for antimony, STIBIum, and the Greek for *powder* or *dust*, a common habit.

Type Material: Neither an analysis nor a type locality was given on introduction of the name by Beudant in 1832.

References: (1) Palache, C., H. Berman, and C. Frondel (1944) Dana's system of mineralogy, (7th edition), v. I, 597–598. (2) Vitaliano, C.J. and B. Mason (1952) Stibiconite and cervantite. Amer. Mineral., 37, 982–999.