Plumboselite $Pb_3O_2(SeO_3)$

Crystal Data: Orthorhombic. *Point Group: mm*2. In subparallel to divergent clusters of fibers elongated parallel to [001] and flattened on {010}, to 0.3 mm.

Physical Properties: *Cleavage:* None observed. *Fracture:* n.d. *Tenacity:* Brittle.
Hardness = 2-3 D(meas.) = n.d. D(calc.) = 7.814

Optical Properties: Transparent. *Color:* Colorless. *Streak:* White.
Luster: Dull to adamantine.
Optical Class: Biaxial. *Orientation*: $X = c$. $n = 2.115$ [Gladstone-Dale relationship].

Cell Data: *Space Group: Cmc*2_1. $a = 10.5384(11)$ $b = 10.7452(13)$ $c = 5.7577(7)$ $Z = 4$

X-ray Powder Pattern: Tsumeb mine, Namibia.
3.155 (100), 1.956 (26), 2.886 (22), 1.713 (21), 2.691 (17), 1.2711 (17), 1.8864 (13)

Chemistry:

	(1)	(2)
CaO	0.09	-
PbO	84.92	85.78
SeO_2	14.95	14.22
Total	99.96	100.00

(1) Tsumeb mine, Namibia; average of 7 electron microprobe analyses, corresponding to $Pb_{2.92}Ca_{0.01}Se_{1.03}O_5$. (2) $Pb_3O_2(SeO_3)$.

Occurrence: A secondary mineral in the oxidized zone of a polymetallic sulfide deposit.

Association: Clausthalite, smithsonite, mimetite, vaterite.

Distribution: From the Tsumeb mine, Otjikoto Region, Namibia.

Name: For the mineral's essential chemical composition, *plumbo* (for lead) and *sel* (for selenite).

Type Material: Mineral Sciences Department, Natural History Museum of Los Angeles County, California, USA (63264).

References: (1) Kampf, A.R., S. J. Mills, and W.W. Pinch (2011) Plumboselite, $Pb_3O_2(SeO_3)$, a new oxidation-zone mineral from Tsumeb, Namibia. Mineralogy and Petrology, 101, 75–80.
(2) (2013) Amer. Mineral., 98, 281 (abs. ref. 1).