Ordóñezite $ZnSb_2^{5+}O_6$

Crystal Data: Tetragonal. *Point Group:* $4/m\ 2/m\ 2/m$. Tetragonal pyramidal crystals, to 2 mm, showing {001}, {110}, and {011}, universally twinned, in drusy or stalactitic masses. *Twinning:* Common on {013}, repeated.

Physical Properties: *Fracture:* Conchoidal. Hardness = 6.5 D(meas.) = 6.635 D(calc.) = 6.657

Optical Properties: Semitransparent. *Color:* Very light to very dark brown, colorless to pearl-gray, light yellowish olive to dark olive. *Luster:* Adamantine.
Optical Class: Uniaxial (+). $\omega = > 2.0$ $\epsilon = > 2.0$

Cell Data: *Space Group:* $P4/mnm$. $a = 4.67(1)$ $c = 9.24(1)$ $Z = 2$

X-ray Powder Pattern: Santín mine, Mexico.
1.72 (100), 3.26 (90), 2.55 (80), 1.38 (60), 1.19 (60), 1.64 (50), 1.47 (50)

Chemistry:

	(1)
Sb_2O_5	80.49
SiO_2	0.00
Al_2O_3	0.00
ZnO	20.07
Total	100.56

(1) Santín mine, Mexico; corresponds to $Zn_{1.00}Sb_{2.02}O_6$.

Mineral Group: Ferrotapiolite group.

Occurrence: Deposited at a late stage with pneumatolytic tin ore in fractures in rhyolite (Santín mine, Mexico).

Association: Cassiterite, hematite, quartz, cristobalite, "hyalite", montmorillonite (Santín mine, Mexico); byströmite, chenevixite, malachite (El Antimonio, Mexico).

Distribution: At the Santín mine, about eight km from Santa Caterina, Guanajuato, and from El Antimonio, 27 km southwest of Agua Prieta, Sonora, Mexico.

Name: For Ezequiel Ordóñez (1867–1950), noted Mexican geologist, formerly Director of the Geological Institute of Mexico.

Type Material: The Natural History Museum, London, England, 1965,208; Harvard University, Cambridge, Massachusetts, 110282; National Museum of Natural History, Washington, D.C., USA, R9127.

References: (1) Switzer, G. and W.F. Foshag (1955) Ordoñezite, zinc antimonate, a new mineral from Guanajuato, Mexico. Amer. Mineral., 40, 64–69.