

Crystal Data: Orthorhombic. *Point Group:* 222 or $mm2$. Sharp needlelike crystals, to 2 mm, elongated along [010], and bounded by {010}, {101}, {111}, $\{1\bar{1}1\}$.

Physical Properties: *Cleavage:* Good on {101}; fair on {010}. *Tenacity:* Very brittle. Hardness = 3–3.5 D(meas.) = n.d. D(calc.) = 6.55 Pyroelectric.

Optical Properties: Transparent to translucent. *Color:* Colorless. *Streak:* White. *Luster:* Vitreous, dull if coated.

Optical Class: Biaxial (-). *Orientation:* $X = a$; $Y = c$; $Z = b$. $\alpha = 1.935(2)$ $\beta = 1.966(2)$ $\gamma = 1.983(2)$ $2V(\text{meas.}) = 80^\circ$ $2V(\text{calc.}) = 84^\circ$

Cell Data: *Space Group:* $P22_12$, $P222$, or $Pmm2$. $a = 8.42(1)$ $b = 10.96(1)$ $c = 7.00(1)$ $Z = 4$

X-ray Powder Pattern: Pacajake mine, Bolivia.

3.338 (100), 3.234 (100), 3.015 (100), 2.086 (70), 2.786 (60), 3.845 (50), 4.316 (40)

Chemistry:	(1)	(2)
SO ₃	14.2	12.25
SeO ₃	16.2	19.43
PbO	71.2	68.32
Total	101.6	100.00

(1) Pacajake mine, Bolivia; by electron microprobe, corresponding to $\text{Pb}_{2.00}(\text{SeO}_4)_{0.80}(\text{SO}_4)_{1.12}$.
(2) $\text{Pb}_2(\text{SeO}_4)(\text{SO}_4)$.

Occurrence: A rare secondary mineral in the oxidized zone of selenium-bearing hydrothermal mineral deposits.

Association: Penroseite (Pacajake mine, Bolivia); chalcocite, ahlfeldite, lepidocrocite, goethite (El Dragón mine, Bolivia).

Distribution: From the Pacajake mine, Hiaco, 24 km east-northeast of Colquechaca, and in the El Dragón mine, 30 km southwest of Cerro Rico de Potosí, Potosí, Bolivia. At Cerro de Cacheuta, Mendoza Province, Argentina. From the Baccu Locci mine, near Villaputzu, Sarrabus district, Sardinia, Italy.

Name: To honor Juan Augusto Olsacher (1903–1964), Professor of Mineralogy, Córdoba University, Córdoba, Argentina, who studied Argentinian selenium-bearing minerals.

Type Material: Harvard University, Cambridge, Massachusetts, USA, 110966.

References: (1) Hurlbut, C.S., Jr. and L.F. Aristarain (1969) Olsacherite, $\text{Pb}_2(\text{SO}_4)(\text{SeO}_4)$, a new mineral from Bolivia. *Amer. Mineral.*, 54, 1519–1527.