

**Crystal Data:** Triclinic, pseudotetragonal or pseudo-hexagonal. *Point Group:* 1 or  $\bar{1}$ . As tabular crystals to 3 cm; may be in felted masses. *Cleavage:* Perfect || (001); less perfect || (010).

**Physical Properties:** Hardness = n.d. VHN = 71.7 (50 g load); 94–115 (100 g load). D(meas.) = n.d. D(calc.) = 6.20

**Optical Properties:** Opaque. *Color:* White in reflected light. *Luster:* Metallic. *Pleochroism:* Faint, from bluish gray to yellowish gray. *Anisotropism:* Moderate, bluish gray to grayish pale yellow.

$R_1$ – $R_2$ : (400) 38.0–38.9, (420) 37.5–38.5, (440) 37.3–38.2, (460) 37.0–38.0, (480) 36.6–37.7, (500) 36.2–37.4, (520) 35.8–37.1, (540) 35.2–36.7, (560) 34.7–36.3, (580) 34.3–36.0, (600) 33.9–35.7, (620) 33.5–35.5, (640) 33.1–35.3, (660) 32.7–35.0, (680) 32.2–34.7, (700) 31.8–34.4

**Cell Data:** *Space Group:*  $P1$  or  $P\bar{1}$ , with two incommensurate cells, one pseudotetragonal with:  $a = 5.915(10)$   $b = 5.938(13)$   $c = 17.239(17)$   $\alpha = 91.63(28)^\circ$   $\beta = 91.02(25)^\circ$   $\gamma = 90.84(21)^\circ$  and the other pseudo-hexagonal with:  $a = 6.253(7)$   $b = 3.734(5)$   $c = 17.229(19)$   $\alpha = 90.80(19)^\circ$   $\beta = 91.71(16)^\circ$   $\gamma = 90.18(14)^\circ$   $Z = \text{n.d.}$

**X-ray Powder Pattern:** Andacaba deposit, Bolivia. 2.876 (100), 3.45 (90), 4.32 (30), 2.936 (10), 2.067 (10), 2.159 (9), 1.920 (8)

Chemistry:	(1)	(2)	(3)
Pb	55.23	55.3	55.78
Ag	0.21	0.3	
Sn	11.57	10.7	10.65
In		0.5	
Fe	2.32	2.4	2.51
Sb	10.58	10.6	10.92
S	19.80	20.4	20.14
Total	99.71	100.2	100.00

(1) Andacaba deposit, Bolivia; by electron microprobe, average of seven analyses; corresponding to  $(\text{Pb}_{6.00}\text{Ag}_{0.04})_{\Sigma=6.04}\text{Sn}_{2.20}\text{Fe}_{0.94}\text{Sb}_{1.96}\text{S}_{13.91}$ . (2) Herb claim, Canada; by electron microprobe, average of six analyses; corresponding to  $(\text{Pb}_{5.91}\text{Ag}_{0.07}\text{In}_{0.09})_{\Sigma=6.07}\text{Sn}_{1.99}\text{Fe}_{0.95}\text{Sb}_{1.93}\text{S}_{14.07}$ . (3)  $\text{Pb}_6\text{Sn}_2\text{FeSb}_2\text{S}_{14}$ .

**Occurrence:** On layered sulfide ore in a complex xenothermal-type hydrothermal tin deposit associated with subvolcanic granitic intrusive bodies (Andacaba deposit, Bolivia); in hydrothermal veins cutting rhyolite intrusions into highly kaolinized granite (Herb claim, Canada).

**Association:** Galena, sphalerite, semseyite, cerussite, cassiterite, quartz (Andacaba deposit, Bolivia); galena, pyrite, sphalerite, arsenopyrite, quartz (Herb claim, Canada); arsenopyrite, pyrrhotite, stannite, jamesonite, pyrite, sphalerite, kutnahorite, quartz (Hoei mine, Japan).

**Distribution:** In the Andacaba deposit, Potosí, Bolivia [TL]. From the Herb claim, Turnagain River area, Cassiar district, British Columbia, Canada. Large crystals from the the Hoei tin mine, Oita Prefecture, Japan.

**Name:** For the type locality in Potosí, Bolivia.

**Type Material:** Mining Academy, Freiberg, Germany, 67345.

**References:** (1) Wolf, M., H.-J. Hunger, and K. Bewilogua (1981) Potosiite, ein neues Mineral der Kyindrite-Franckeite-Gruppe. Freiburger Forschungshefte, 364, 113–133 (in German). (2) (1983) Amer. Mineral., 68, 1249–1250 (abs. ref. 1). (3) Kissin, S.A. and D.R. Owens (1986) The properties and modulated structure of potosiite from the Cassiar district, British Columbia. Can. Mineral., 24, 45–50. (4) Criddle, A.J. and C.J. Stanley, Eds. (1993) Quantitative data file for ore minerals, 3rd ed. Chapman & Hall, London, 450.

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