

Crystal Data: Tetragonal. *Point Group:* $\bar{4} 2m$. As globules of leaf-like crystals, to 0.06 mm.

Physical Properties: *Cleavage:* n.d. *Fracture:* n.d. *Tenacity:* n.d. *Hardness* = n.d.
D(meas.) = n.d. D(calc.) = 3.96

Optical Properties: Translucent. *Color:* Vivid blue. *Streak:* Pale blue.

Luster: Vitreous.

Optical Class: n.d. $n = 1.75$ (calculated from reflectance data).

Cell Data: *Space Group:* $I\bar{4} 2d$. $a = 11.517(8)$ $c = 5.632(6)$ $Z = 12$

X-ray Powder Pattern: Santa Rosa mine, Northern Chile.

3.797 (100), 3.638 (47), 2.775 (35), 2.572 (26), 2.501 (26), 1.822 (21), 1.793 (20)

Chemistry:

	(1)	(2)
CuO	43.24	53.33
PbO	4.48	
CaO	0.97	
B ₂ O ₃	45.44	46.67
Total	94.13	100.00

(1) Santa Rosa mine, Northern Chile; average of 17 electron microprobe and EELS analyses, BO₄ and absence of other anionic groups confirmed by IR and Raman spectroscopy, corresponding to (Cu_{0.86}Pb_{0.03}Ca_{0.03})B_{2.06}O₄. (2) CuB₂O₄.

Occurrence: In the oxidation zone of a hydrothermal polymetallic vein deposit.

Association: Atacamite, malachite, wulfenite, anhydrite.

Distribution: Santa Rosa mine, 15 km SE of Iquique, Atacama desert, Northern Chile.

Name: Named for the mine that produced the first specimens.

Type Material: Mineralogical Museum, University of Hamburg, Germany.

References: (1) Schlüter, J., D. Pohl, and U. Golla-Schindler (2008) Santarosaite, CuB₂O₄, a new mineral with disordered structure from the Santa Rosa mine, Atacama desert, Chile. *Neues Jahrb. Mineral. Abh.*, 185, 27–32. (2) (2009) *Amer. Mineral.*, 94, 402–403 (abs. ref. 1).