

**Crystal Data:** Monoclinic. *Point Group:* 2/m. As pseudomorphs after chalconatronite to 5  $\mu\text{m}$ .

**Physical Properties:** *Cleavage:* n.d. *Fracture:* n.d. *Tenacity:* n.d. *Hardness:* = n.d.  
*D(meas.)* = n.d. *D(calc.)* = 2.984  
 Strong effervescence in HCl. Hydrates to chalconatronite within hours.

**Optical Properties:** Translucent. *Color:* Bright ultramarine. *Streak:* Blue. *Luster:* Earthy.  
*Optical Class:* n.d. *n(calc.)* = 1.571

**Cell Data:** *Space Group:*  $P2_1/a$ .  $a = 6.171(4)$   $b = 8.171(5)$   $c = 5.645(4)$   $\beta = 116.23(2)^\circ$   
 $Z = 2$

**X-ray Powder Pattern:** Santa Rosa mine, near Iquique, Atamaca desert, Chile.  
 2.666 (100), 4.258 (75), 5.056 (66), 2.619 (65), 4.575 (57), 4.298 (37), 2.450 (33)

|                   |        |
|-------------------|--------|
| <b>Chemistry:</b> | (1)    |
| Na <sub>2</sub> O | 28.27  |
| CuO               | 33.77  |
| CO <sub>2</sub>   | 38.45  |
| Total             | 100.49 |

(1) Santa Rosa mine, near Iquique, Atamaca desert, Chile; average of 16 electron microprobe analyses; corresponds to Na<sub>2.08</sub>Cu<sub>0.98</sub>(C<sub>1.99</sub>O<sub>6</sub>).

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

**Association:** Chalcotronite, sanrománite, malachite, calcite, anhydrite, trona, nahcolite.

**Distribution:** From the Santa Rosa mine, near Iquique, Atamaca desert, Chile.

**Name:** Honors *Juan Godoy* (1800-1842), the Chilean prospector who discovered the outcrops in 1832 that became the Chañarcillo silver mine.

**Type Material:** Mineralogical Museum, University of Hamburg, Germany (MD 210, MD 210).

**References:** (1) Schlüter, J. and D. Pohl (2005) Juangodoyite, Na<sub>2</sub>Cu(CO<sub>3</sub>)<sub>2</sub>, a new mineral from the Santa Rosa mine, Atacama desert, Chile. *N. Jb. Miner. Abh.*, 182(1), 11-14. (2) (2006) *Amer. Mineral.*, 91, 1204 (abs. ref. 1).