Juangodoyite

$\text{Na}_2\text{Cu(CO}_3\text{)}_2$

**Crystal Data**: Monoclinic.  Point Group: $2/m$.  As pseudomorphs after chalconatronite to 5 µm.


$D(\text{meas.}) = $ n.d.  $D(\text{calc.}) = $ 2.984

Strong effervescence in HCl.  Hydrates to chalconatronite within hours.


**Optical Class**: n.d.  $n(\text{calc.}) = $ 1.571

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

$Z = 2$

**X-ray Powder Pattern**: Santa Rosa mine, near Iquique, Atacama desert, Chile.

2.666 (100), 4.258 (75), 5.056 (66), 2.619 (65), 4.575 (57), 4.298 (37), 2.450 (33)

**Chemistry**: (1)

<table>
<thead>
<tr>
<th>Element</th>
<th>Formula</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Na$_2$O</td>
<td>28.27</td>
<td></td>
</tr>
<tr>
<td>CuO</td>
<td>33.77</td>
<td></td>
</tr>
<tr>
<td>CO$_3$</td>
<td>38.45</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>100.49</td>
<td></td>
</tr>
</tbody>
</table>

(1) Santa Rosa mine, near Iquique, Atacama desert, Chile; average of 16 electron microprobe analyses; corresponds to Na$_{2.08}$Cu$_{0.98}$(C$_{1.99}$O$_6$).

**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, Atacama 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).