Rhodostannite

Crystal Data: Tetragonal. Point Group: 4/m. Very fine-grained massive, slightly porous.

Physical Properties: Hardness = n.d. VHN = 243–266 (100 g load). D(meas.) = n.d. D(calc.) = 4.79


Cell Data: Space Group: I41/a (synthetic). a = 7.305(2) c = 10.330(5) Z = 2

X-ray Powder Pattern: Vila Apacheta, Bolivia.
3.12 (100), 5.93 (60), 2.58 (50), 6.09 (40), 1.819 (30), 1.837 (20), 3.64 (16)

Chemistry:

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cu</td>
<td>16.0</td>
<td>15.9</td>
<td>15.97</td>
</tr>
<tr>
<td>Fe</td>
<td>6.8</td>
<td>6.5</td>
<td>7.02</td>
</tr>
<tr>
<td>Sn</td>
<td>45.5</td>
<td>45.4</td>
<td>44.76</td>
</tr>
<tr>
<td>S</td>
<td>31.3</td>
<td>32.8</td>
<td>32.25</td>
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<tr>
<td>Total</td>
<td>99.6</td>
<td>100.6</td>
<td>100.00</td>
</tr>
</tbody>
</table>

(1) Vila Apacheta, Bolivia; by electron microprobe, corresponding to Cu$_{2.03}$Fe$_{0.93}$Sn$_{3.10}$S$_{7.89}$.
(2) Do.; by electron microprobe, corresponding to Cu$_{1.98}$Fe$_{0.92}$Sn$_{3.02}$S$_{8.08}$.
(3) Cu$_2$FeSn$_3$S$_8$.

Occurrence: An alteration product of stannite (Vila Apacheta, Bolivia).

Association: Stannite, pyrite (Vila Apacheta, Bolivia).

Distribution: At Vila Apacheta, Bolivia [TL]. From the Pirquitas deposit, Rinconada Department, Jujuy Province, Argentina. In the Dean mine, southeast of Battle Mountain, Lander Co., Nevada, and in the Campbell mine, Bisbee, Cochise Co., Arizona, USA.

Name: From the Greek for rose, in allusion to its color, and for its affinity to stannite.

Type Material: n.d.