Sinnerite

Crystal Data: Triclinic, pseudocubic. Point Group: 1. Flattened to columnar crystals, typically corroded, to about 1.2 cm. Twinning: Crystals are twinned complexly; principal laws are twin planes {010} and {110}.


Cell Data: Space Group: P1. a = 9.064(8) b = 9.830(8) c = 9.078(8) α = 90°00(20)' β = 109°30(20)' γ = 107°48(20)' Z = 2

X-ray Powder Pattern: Binntal, Switzerland.
3.02 (100), 1.852 (80), 1.581 (70), 1.205 (30), 3.34 (20), 1.556 (20), 1.312 (20)

Chemistry:

<table>
<thead>
<tr>
<th></th>
<th>(1) Cu₆₆As₄S₉</th>
<th>(2) Cu₆₆As₄S₉</th>
<th>(3) Cu₆₆As₄S₉</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cu</td>
<td>41.3</td>
<td>39.1</td>
<td>39.32</td>
</tr>
<tr>
<td>As</td>
<td>29.2</td>
<td>29.7</td>
<td>30.91</td>
</tr>
<tr>
<td>S</td>
<td>29.8</td>
<td>28.7</td>
<td>29.77</td>
</tr>
</tbody>
</table>

Total 100.3 97.5 100.00

(1) Binntal, Switzerland; by electron microprobe, corresponding to Cu₆₆As₄S₉. (2) Do.; by electron microprobe, corresponding to Cu₆₆As₄S₉. (3) Cu₆₆As₄S₉.

Occurrence: On sulfides in crystalline dolostone.

Association: Tennantite, galena, sphalerite.

Distribution: From the Lengenbach quarry, Binntal, Valais, Switzerland [TL].

Name: Honors Rudolph von Sinner (1890–1960), President of the Commission of the Natural History Museum, Bern, Switzerland.

Type Material: Mineralogical-Petrographical Institute, University of Bern, Bern, Switzerland, L2120-62; University of Copenhagen, Copenhagen, Denmark.