Teineite

Crystal Data: Orthorhombic. Point Group: 222. Crystals are prismatic along [001], may be flattened on {010}, may be rough due to alteration; exhibiting forms {010}, {110}, {011}, rare {073}, to 2 cm; commonly as crusts and aggregates.

Physical Properties: Cleavage: On {010}, good; on {001} and {100}, poor. Tenacity: Brittle. Hardness = 2.5 D(meas.) = 3.80 D(calc.) = 3.86


X-ray Powder Pattern: Teine mine, Japan. 3.45 (10), 5.45 (9b), 3.06 (8), 2.94 (7), 2.880 (7), 2.392 (7), 5.87 (6)

Chemistry:

<table>
<thead>
<tr>
<th>Element</th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SO₃</td>
<td>6.96</td>
<td></td>
</tr>
<tr>
<td>TeO₃</td>
<td>50.63</td>
<td>58.00</td>
</tr>
<tr>
<td>CuO</td>
<td>29.54</td>
<td>28.91</td>
</tr>
<tr>
<td>H₂O</td>
<td>12.87</td>
<td>13.09</td>
</tr>
<tr>
<td>Total</td>
<td>[100.00]</td>
<td>100.00</td>
</tr>
</tbody>
</table>

(1) Teine mine, Japan; recalculated to 100% from an original total of 100.9% after deducting insoluble 6.1%. (2) CuTeO₃ • 2H₂O.


Association: Tellurite, tellurium, pyrite, tetrahedrite, sphalerite, azurite, malachite, quartz, barite (Teine mine, Japan); hessite, galena, bornite, cerussite, azurite, chlorargyrite, quetzalcoatlite, quartz, barite, clay (Moctezuma mine, Mexico); cuprite, malachite, graemite (Cole shaft, Arizona, USA).

Distribution: In Japan, from the Teine mine, Sapporo, Hokkaido, and in the Kawazu mine, three km north of Shimoda, Shizuoka Prefecture. At the Moctezuma (Bambolla) mine, 12 km south of Moctezuma, Sonora, Mexico. In the USA, in Arizona, large crystals from the Cole shaft and in the Shattuck mine, Bisbee, Warren district, Cochise Co., and in the Dome Rock Mountains, La Paz Co.; from the Lone Pine mine, Wilcox district, Catron Co., New Mexico. At Salmchâteau, near Ottré, Belgium. From Åmotsdal, Norway. At the Aginsk gold telluride deposit, Kamchatka, Far Eastern Region, Russia.

Name: For the Teine mine, Japan, in which specimens were first found.

Type Material: University of Hokkaido, Sapporo, Japan; Harvard University, Cambridge, Massachusetts, USA, 94749.


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