Mattagamite

Crystal Data: Orthorhombic. Point Group: 2/m 2/m 2/m. As equidimensional and rarer bladelike grains isolated in altaite, and as irregular rims a few µm thick on pyrrhotite and chalcopyrite in contact with altaite. Twinning: In polished section twinning commonly observed perpendicular to elongation axis of the laths.


X-ray Powder Pattern: Mattagami Lake mine, Canada. 2.805 (10), 2.703 (8), 2.066 (6), 1.843 (4), 3.31 (3), 1.583 (3), 1.514 (2)

Chemistry:

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Co</td>
<td>10.3</td>
<td>18.76</td>
</tr>
<tr>
<td>Fe</td>
<td>6.7</td>
<td></td>
</tr>
<tr>
<td>Te</td>
<td>82.4</td>
<td>81.24</td>
</tr>
<tr>
<td>Total</td>
<td>99.4</td>
<td>100.00</td>
</tr>
</tbody>
</table>

(1) Mattagami Lake mine, Canada; by electron microprobe, average of analyses of three grain sizes, corresponding to (Co₀.₅₄Fe₀.₃₇)Σ=₀.₉₁Te₂.₀₀. (2) CoTe₂.

Polymorphism & Series: Forms a series with frohbergite.

Mineral Group: Marcasite group.

Occurrence: In a small telluride zone in a massive zinc-rich stratiform deposit in Archaen volcanics (Mattagami Lake mine, Canada).

Association: Frohbergite, altaite, pyrrhotite, chalcopyrite, magnetite, talc, chlorite (Mattagami Lake mine, Canada).

Distribution: From the Mattagami Lake mine, near Matagami, Quebec, Canada [TL]. At the Zhena-Tyube deposit, Kazakhstan. From Fe–Co–Au–U deposits in the the Kuusamo schist belt, northeastern Finland.

Name: For its occurrence at Mattagami Lake, Canada.

Type Material: Canadian Geological Survey, Ottawa; Royal Ontario Museum, Toronto, Canada, M31956.