Carlinite  

Crystal Data:  Hexagonal.  Point Group:  \( \overline{3} \).  Small, to 0.5 mm, mostly anhedral grains.  A few grains show poorly defined rhombohedral and tabular forms.

Physical Properties:  Cleavage:  \{0001\}, perfect, and an imperfect prismatic cleavage.  Fracture:  Hackly.  Hardness = \( \sim 1 \)  VHN = 23.5 (50 g load).  \( D(\text{meas.}) = 8.1 \)  \( D(\text{calc.}) = 8.55 \)


Cell Data:  Space Group:  \( R\overline{3} \).  \( a = 12.12(1) \)  \( c = 18.175(5) \)  \( Z = 27 \)


Chemistry:  

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tl</td>
<td>92.93</td>
<td>92.73</td>
</tr>
<tr>
<td>S</td>
<td>7.17</td>
<td>7.27</td>
</tr>
<tr>
<td>Total</td>
<td>100.09</td>
<td>100.00</td>
</tr>
</tbody>
</table>

(1) Carlin mine, Nevada, USA; average of three samples.  (2) \( \text{Tl}_2\text{S} \).

Occurrence:  As small grains in brecciated fragments of carbonaceous limestone, a result of epithermal mineralization.

Association:  Gold, arsenic, antimony, mercury, avicennite, organic carbon, quartz.

Distribution:  In the USA, from the east pit of the Carlin mine [TL], 50 km northwest of Elko, and in the Deep Post orebody, Goldstrike mine, Lynn district, Eureka Co., Nevada.

Name:  For the Carlin gold deposit, Nevada, USA, in which it was discovered.

Type Material:  Department of Geology, Stanford University, Palo Alto, California, Epithermal Minerals Collection; National Museum of Natural History, Washington, D.C., USA, 132497.