### Components:

1. Cesium tellurite; Cs₂TeO₃; [15899-92-0]
2. Water; H₂O; [7732-18-5]

### Original Measurements:

Lavut, E.A.


### Variables:

One temperature: 291 K

### Prepared By:

Mary R. Masson

### Experimental Values:

<table>
<thead>
<tr>
<th>wt. taken, g</th>
<th>Te, %</th>
<th>Cs, %</th>
<th>Cs/Te</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.2931</td>
<td>19.63</td>
<td>41.63</td>
<td>2.04</td>
</tr>
<tr>
<td>0.3397</td>
<td>19.49</td>
<td>41.48</td>
<td>2.04</td>
</tr>
</tbody>
</table>

The solubility of cesium tellurite, calculated for the anhydrous salt, is 67.65% at 18°C. (Molality = 1.550 mol/kg).

Prolonged treatment of cesium tellurite pentahydrate with absolute ethanol resulted in decomposition of the salt. Prolonged treatment with water results in some hydrolysis of the tellurite ion. Cesium tetratellurite pentahydrate was found to be insoluble in water, and to decompose in boiling water to CsOH and TeO₂.

### Auxiliary Information

**Method Apparatus/Procedure:**

Not stated.

**Source and Purity of Materials:**

A weighed specimen of freshly precipitated tellurium dioxide was dissolved with heating in an approx. 20% aqueous solution of cesium hydroxide. The solution was concentrated by evaporation, and the residue was treated with absolute ethanol. The alcohol solution was separated from the residue by filtration, and the residue was dried over H₂SO₄ and KOH. The product was shown to be cesium tellurite pentahydrate.

**Estimated Error:**

No estimates possible.

**References:**