**Pararaisaite**  
\[\text{Cu}^{2+}\text{Mg}[\text{Te}^{6+}\text{O}_4(\text{OH})_2]\cdot6\text{H}_2\text{O}\]

**Crystal Data:** Monoclinoic.  
**Point Group:** 2/m.  
As striated, prismatic crystals to 0.4 mm elongated along [010] and displaying {100}, {001}, {102}, {102}, and {114}.

**Physical Properties:**  
**Cleavage:** Perfect on {001}, good on {100}.  
**Fracture:** Splintery.  
**Tenacity:** Brittle.  
**Hardness:** 2.5.  
**D(meas.):** 2.85(2)  
**D(calc.):** 2.851

**Optical Properties:**  
**Transparent.**  
**Color:** Blue.  
**Streak:** White.  
**Luster:** Vitreous.  
**Optical Class:** Biaxial (+).  
**α = 1.600(2) \(\beta = 1.616(2) \gamma = 1.713(3)\)**  
**2V(meas.):** 47(1)°  
**Orientation:** Z = b, X ≈ a, Y ≈ c.  
**Pleochroism:** X = very pale purple, Y = purple, Z = blue-green.  
**Absorption:** X << Y < Z.  
**Dispersion:** r > ν, weak.

**Cell Data:**  
Space Group: \(P2_1/c\).  
\[a = 9.6838(5) \quad b = 5.75175(19) \quad c = 17.6339(12)\]  
\(\beta = 90.553(6)° \quad Z = 4\)

**X-ray Powder Pattern:** North Star mine, Mammoth, Tintic district, Juab County, Utah, USA.  
8.77 (100), 4.248 (85), 4.824 (71), 2.419 (50), 1.8929 (48), 4.392 (43), 2.733 (39)

**Chemistry:**

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MgO</td>
<td>11.14</td>
<td>9.56</td>
</tr>
<tr>
<td>CuO</td>
<td>18.59</td>
<td>18.87</td>
</tr>
<tr>
<td>SbO_3</td>
<td>0.26</td>
<td></td>
</tr>
<tr>
<td>TeO_3</td>
<td>42.55</td>
<td>41.65</td>
</tr>
<tr>
<td>H_2O</td>
<td>[31.97]</td>
<td>29.91</td>
</tr>
<tr>
<td>Total</td>
<td>104.51</td>
<td>100.00</td>
</tr>
</tbody>
</table>

(1) North Star mine, Mammoth, Tintic district, Juab County, Utah, USA; average of 4 electron microprobe analyses supplemented by Raman spectroscopy, H_2O calculated from structure; corresponds to \((\text{Mg}_{1.01}\text{Cu}^{2+}_{0.93}\text{Te}^{6+}_{0.06}\text{Sb}^{5+}_{0.01})_2\cdot3.06\text{O}_2\cdot14\text{H}_2\text{O}\).  
(2) Cu^{2+}\text{Mg}[\text{Te}^{6+}\cdot\text{O}_4(\text{OH})_2]\cdot6\text{H}_2\text{O}.

**Polymorphism & Series:** Dimorph of raisaite.

**Occurrence:** An oxidation-zone mineral in a hydrothermal polymetallic Au-Ag-Cu-Pb vein deposit in contact-metamorphosed dolomite.

**Association:** Barite, goldfieldite, malachite, quartz.

**Distribution:** From the North Star mine, Mammoth, Tintic district, Juab County, Utah, USA.

**Name:** The Greek “pararaisaite” for “near” and the relation to its \(C2/c\) dimorph raisaite.

**Type Material:** National History Museum of Los Angeles County, Los Angeles, California, USA (67272).

**References:**  