**Uroxite**

\[
\text{[(UO}_2\text{)}_2(\text{C}_2\text{O}_4)(\text{OH})_2(\text{H}_2\text{O})_2] \cdot \text{H}_2\text{O}
\]

**Crystal Data:** Monoclinic. *Point Group:* 2/m. As radiating sprays of striated prisms or blades, to ∼1 mm, elongate and striated along [100], flattened on {010}, and with steeply sloping terminations. The prism forms are {010} and {001}.


**Optical Properties:** Transparent. *Color:* Light yellow. *Streak:* Very pale yellow. *Luster:* Vitreous. *Optical Class:* Biaxial (-). \( \alpha = 1.602(2) \) \( \beta = 1.660(2) \) \( \gamma = 1.680(2) \) 2V(meas.) = 59(1)° 2V(calc.) = 59.1° *Dispersion:* Moderate \( r > v \). *Orientation:* \( Y = b, Z \wedge a = 35° \) in obtuse \( \beta \). Non-pleochroic.

**Cell Data:** *Space Group:* P2₁/c. \( a = 5.5698(2) \) \( b = 15.2877(6) \) \( c = 13.3724(9) \) \( \beta = 94.015(7)° \) Z = 4

**X-Ray Diffraction Pattern:** Burro mine, Slick Rock district, San Miguel Co., Colorado, USA. 5.00 (100), 4.43 (51), 10.05 (38), 3.567 (33), 3.341 (29), 2.623 (28), 4.75 (23)

**Chemistry:**

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UO₂</td>
<td>79.60</td>
<td>79.88</td>
</tr>
<tr>
<td>C₂O₃</td>
<td>10.02</td>
<td>10.06</td>
</tr>
<tr>
<td>H₂O</td>
<td>10.03</td>
<td>10.06</td>
</tr>
<tr>
<td>Total</td>
<td>99.65</td>
<td>100.00</td>
</tr>
</tbody>
</table>

(1) Burro mine, Slick Rock district, San Miguel Co., Colorado, USA; average electron microprobe, IR and Raman spectroscopic analyses, \( \text{C}_2\text{O}_3 \) and \( \text{H}_2\text{O} \) calculated from structure; corresponds to \( \text{[U}_{1.00}\text{O}_2\text{]}_2(\text{C}_2\text{O}_4)(\text{OH})_2(\text{H}_2\text{O})_2\cdot\text{H}_2\text{O} \). (2) \( \text{[UO}_2\text{]}_2(\text{C}_2\text{O}_4)(\text{OH})_2(\text{H}_2\text{O})_2\cdot\text{H}_2\text{O} \).

**Mineral Group:** Oxalate group.

**Occurrence:** As post-mining, secondary efflorescent crusts on asphaltum-quartz matrix of mine walls. Hosted in deposits of the Colorado Plateau type with uranium mineralization in intimate association with carbonaceous plant material.

**Association:** Feynmanite, gypsum (Burro mine); abernathyite, gypsum, tyuyamunite, uranopilite (Markey mine).

**Distribution** From the Burro mine, Slick Rock district, San Miguel Co., Colorado and the Markey mine, Red Canyon, White Canyon mining district, San Juan Co., Utah, USA.

**Name:** Identifies a mineral with essential uranyl (UR) and oxalate (OX) components.

**Type Material:** Natural History Museum of Los Angeles County, Los Angeles, California, USA (73514 and 73515 Burro mine, 73516 and 73517 Markey mine)