

**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}.

**Physical Properties:** *Cleavage:* Perfect on { $\bar{1}$  02}, fair on {001}. *Tenacity:* Brittle.

*Fracture:* Uneven. Hardness = ~2 D(meas.) = n.d. D(calc.) = 4.187 Moderate neon-green fluorescence under 405 nm laser.

**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:*  $Y = b$ ,  $Z \wedge a = 35^\circ$  in obtuse  $\beta$ . Non-pleochroic.

**Cell Data:** *Space Group:*  $P2_1/c$ .  $a = 5.5698(2)$   $b = 15.2877(6)$   $c = 13.3724(9)$   $\beta = 94.015(7)^\circ$   $Z = 4$

**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:	(1)	(2)
UO <sub>3</sub>	79.60	79.88
C <sub>2</sub> O <sub>3</sub>	[10.02]	10.06
H <sub>2</sub> O	[10.03]	10.06
Total	99.65	100.00

(1) Burro mine, Slick Rock district, San Miguel Co., Colorado, USA; average electron microprobe, IR and Raman spectroscopic analyses, C<sub>2</sub>O<sub>3</sub> and H<sub>2</sub>O calculated from structure; corresponds to [(U<sub>1.00</sub>O<sub>2</sub>)<sub>2</sub>(C<sub>2</sub>O<sub>4</sub>)(OH)<sub>2</sub>(H<sub>2</sub>O)<sub>2</sub>]·H<sub>2</sub>O. (2) [(UO<sub>2</sub>)<sub>2</sub>(C<sub>2</sub>O<sub>4</sub>)(OH)<sub>2</sub>(H<sub>2</sub>O)<sub>2</sub>]·H<sub>2</sub>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)

**References:** (1) Kampf, A.R., J. Plášil, B.P. Nash, I. Němec, and J. Marty (2020) Uroxite and metauroxite, the first two uranyl oxalate minerals. *Mineral. Mag.*, 84, 131-141.