

Rabbittite**Ca₃Mg₃(UO₂)₂(CO₃)₆(OH)₄•18H₂O**

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Crystal Data: Monoclinic. *Point Group:* n.d. Crystals are acicular, elongated along [001], in bundles and as an efflorescence.

Physical Properties: *Cleavage:* {001}, probable, and two prismatic. Hardness = 2.5
D(meas.) = 2.57 D(calc.) = [2.69] Radioactive; slowly soluble in H₂O; fluoresces pale cream-yellow under SW UV.

Optical Properties: Semitransparent. *Color:* Pale green, greenish yellow. *Luster:* Silky.
Optical Class: Biaxial (+). *Orientation:* Y = b; Z ∧ c ≈ 15°. α = 1.502(5) β = 1.508(2)
γ = 1.525(5) 2V(meas.) = Large.

Cell Data: *Space Group:* n.d. a = 32.6(1) b = 23.8(1) c = 9.45(5) β = ~ 90° Z = 8

X-ray Powder Pattern: Lucky Strike No. 2 mine, Utah, USA.
8.24 (10), 7.79 (8), 4.37 (8), 4.71 (7), 5.83 (5b), 4.81 (5), 1.28 (5)

| Chemistry: | (1) | (2) |
|-------------------|-------|--------|
| UO ₃ | 37.4 | 38.51 |
| CO ₂ | 17.8 | 17.77 |
| MgO | 9.2 | 8.14 |
| CaO | 10.6 | 11.33 |
| H ₂ O | 24.5 | 24.25 |
| insol. | 0.5 | |
| Total | 100.0 | 100.00 |

(1) Lucky Strike No. 2 mine, Utah, USA; H₂O by loss on ignition less CO₂.

(2) Ca₃Mg₃(UO₂)₂(CO₃)₆(OH)₄•18H₂O.

Occurrence: A rare secondary mineral, which may be of post-mine origin.

Association: Sodium-zippeite, magnesium-zippeite, fourmarierite, gypsum, bieberite, cobaltocalcite.

Distribution: From the Lucky Strike No. 2 mine, Emery Co., Utah, USA. At Jáchymov (Joachimsthal), Czech Republic.

Name: To honor John Charles Rabbitt (1907–1957), Chief, Trace Elements Section, U.S. Geological Survey.

Type Material: Harvard University, Cambridge, Massachusetts, 105099; National Museum of Natural History, Washington, D.C., USA, 112741, 162619.

References: (1) Thompson, M.E., A.D. Weeks, and A.M. Sherwood (1955) Rabbittite, a new uranyl carbonate from Utah. *Amer. Mineral.*, 40, 201–206.