

Chromschiefelinite**Pb₁₀Te₆O₂₀(OH)₁₄(CrO₄)(H₂O)₅**

Crystal Data: Orthorhombic. *Point Group:* 222. Crystals blocky to tabular on {010} with striations parallel to [001], to 0.2 mm. Forms {010}, {210}, {120}, {150}, {180}, {212}, and {101} observed.

Physical Properties: *Cleavage:* Perfect on {010}. *Fracture:* Irregular. *Tenacity:* Brittle. Hardness = 2 D(meas.) = n.d. D(calc.) = 5.892

Optical Properties: Transparent to translucent. *Color:* Pale yellow. *Streak:* Pale yellow. *Luster:* Adamantine.

Optical Class: Biaxial (-). $\alpha = 1.930(5)$ $\beta = 1.960(5)$ $\gamma = 1.975(5)$ 2V(meas.) = 68(2)° 2V(calc.) = 69.6° *Orientation:* $X = b$, $Y = c$, $Z = a$. *Dispersion:* Strong, $r < v$.

Cell Data: *Space Group:* C222₁. $a = 9.6646(3)$ $b = 19.4962(8)$ $c = 10.5101(7)$ $Z = 2$

X-ray Powder Pattern: Bird Nest drift, Otto Mountain, near Baker, California, USA. 9.814 (100), 2.9455 (55), 3.262 (53), 3.052 (45), 3.347 (44), 3.575 (41), 2.0396 (33)

Chemistry:	(1)	(2)
PbO	59.42	61.97
TeO ₃	29.08	29.25
CrO ₃	1.86	2.78
H ₂ O	[6.63]	6.00
Total	96.99	100.00

(1) Bird Nest drift, Otto Mountain, near Baker, California, USA; average of 4 electron microprobe analyses, H₂O calculated, low analytical total ascribed to beam damage; corresponding to Pb_{9.65}Te₆O_{19.96}(OH)_{14.04}(CrO₄)_{0.67}(H₂O)_{6.32}. (2) Pb₁₀Te₆O₂₀(OH)₁₄(CrO₄)(H₂O)₅.

Occurrence: A secondary mineral in the oxidized zone of a telluride and galena deposit.

Association: Chalcopyrite, chrysocolla, galena, goethite, hematite, khinite, pyrite, wulfenite.

Distribution: From the Bird Nest drift, southwest flank of Otto Mountain, 0.4 miles northwest of the Aga mine, near Baker, California, USA.

Name: As the chromate analog of *schieffelinite*.

Type Material: Natural History Museum of Los Angeles County, Los Angeles, California, USA (63511).

References: (1) Kampf, A.R., S.J. Mills, R.M. Housley, M.S. Rumsey, and J. Spratt (2012) Lead-tellurium oxysalts from Otto Mountain near Baker, California: VII. Chromschiefelinite, Pb₁₀Te₆O₂₀(OH)₁₄(CrO₄)(H₂O)₅, the chromate analog of schiefelinite. *Amer. Mineral.*, 97, 212-219.