

**Chromschieffelinite****Pb<sub>10</sub>Te<sub>6</sub>O<sub>20</sub>(OH)<sub>14</sub>(CrO<sub>4</sub>)(H<sub>2</sub>O)<sub>5</sub>**

**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 (-).  $\alpha = 1.930(5)$   $\beta = 1.960(5)$   $\gamma = 1.975(5)$   $2V(\text{meas.}) = 68(2)^\circ$   $2V(\text{calc.}) = 69.6^\circ$  *Orientation:*  $X = b, Y = c, Z = a$ . *Dispersion:* Strong,  $r < v$ .

**Cell Data:** *Space Group:* C222<sub>1</sub>.  $a = 9.6646(3)$   $b = 19.4962(8)$   $c = 10.5101(7)$   $Z = 2$

**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 <sub>3</sub>	29.08	29.25
CrO <sub>3</sub>	1.86	2.78
H <sub>2</sub> 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, H<sub>2</sub>O calculated, low analytical total ascribed to beam damage; corresponding to Pb<sub>9.65</sub>Te<sub>6</sub>O<sub>19.96</sub>(OH)<sub>14.04</sub>(CrO<sub>4</sub>)<sub>0.67</sub>(H<sub>2</sub>O)<sub>6.32</sub>. (2) Pb<sub>10</sub>Te<sub>6</sub>O<sub>20</sub>(OH)<sub>14</sub>(CrO<sub>4</sub>)(H<sub>2</sub>O)<sub>5</sub>.

**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. Chromschieffelinite, Pb<sub>10</sub>Te<sub>6</sub>O<sub>20</sub>(OH)<sub>14</sub>(CrO<sub>4</sub>)(H<sub>2</sub>O)<sub>5</sub>, the chromate analog of *schieffelinite*. *Amer. Mineral.*, 97, 212-219.