

Crystal Data: Monoclinic. *Point Group:* 2/m. As thin plates with hexagonal outlines to 100 μm.

Physical Properties: *Cleavage:* None. *Tenacity:* Flexible. *Fracture:* Irregular. Hardness = ~ 2
D(meas.) = n.d. D(calc.) = 6.00 Soluble in dilute HCl.

Optical Properties: Transparent to translucent. *Color:* Greenish gray. *Streak:* White.
Luster: Pearly.

Optical Class: Biaxial. $n(\text{calc.}) = 1.99$ $2V = \text{Small}$. *Orientation:* $Z \approx a$.

Cell Data: *Space Group:* C2/c. $a = 14.87(2)$ $b = 8.88(2)$ $c = 10.37(2)$ $\beta = 93.33(2)^\circ$ $Z = 12$

X-ray Powder Pattern: Gold Chain mine, Tintic district, Juab County, Utah, USA.
2.539 (100), 2.744 (68), 1.6568 (48), 3.029 (44), 4.311 (30), 3.085 (22), 2.445 (18)

Chemistry:	(1)	(2)
CaO	0.70	
CuO	6.22	
MnO	0.42	
ZnO	42.78	58.16
SiO ₂	0.23	
As ₂ O ₅	0.85	
TeO ₃	39.15	41.84
Total	90.35	100.00

(1) Gold Chain mine, Tintic district, Juab County, Utah, USA; average of 6 electron microprobe analyses supplemented by Raman spectroscopy; corresponds to $(\text{Zn}_{2.39}\text{Cu}_{0.36}\text{Ca}_{0.06}\text{Mn}_{0.03}\text{As}_{0.03}\text{Si}_{0.02})_{\Sigma=2.89}\text{Te}_{1.02}\text{O}_6$. Low analytical total ascribed to thin plates. CaO, MnO, SiO₂, and As₂O₅ probably from surrounding phases. (2) Zn₃Te⁶⁺O₆.

Occurrence: A late-stage secondary phase formed by the oxidative alteration of earlier Te- and Zn-bearing minerals, probably hessite and sphalerite in a polymetallic vein deposit.

Association: Cinnabar, dugganite, eurekadumpite, gold, quartz, dolomite.

Distribution: From the 300-foot level of the Ophonga stope, Gold Chain mine, Tintic district, Juab County, Utah, USA.

Name: Honors John Dagenais (b. 1945), of Vancouver, British Columbia, Canada. Mr. Dagenais has been an active mineral field collector for nearly 50 years. He has collected and provided three new mineral species for scientific research.

Type Material: Natural History Museum of Los Angeles County, Los Angeles, California, USA (66561, 66562, 66563, and 66564.).

References: (1) Kampf, A.R., R.M. Housley, and J. Marty (2017) Dagenaisite, a new zinc tellurate from the Gold Chain mine, Tintic, Utah, U.S.A. *Can. Mineral.*, 55(5), 867-873. (2) (2018) *Amer. Mineral.*, 103, 659 (abs. ref. 1).