

Crystal Data: Monoclinic. *Point Group:* $2/m, m,$ or 2 . As micaceous crystals ($< 1 \mu\text{m}$) with either round or hexagonal outlines, to 0.5 mm, as spherulites and rosettes to 1 mm.

Physical Properties: *Cleavage:* Perfect on $\{010\}$. *Fracture:* n.d. *Tenacity:* Flexible. Hardness = 2.5-3 D(meas.) = 3.76(2) D(calc.) = 3.826

Optical Properties: Transparent. *Color:* Deep blue-green or turquoise. *Streak:* Light turquoise. *Luster:* Pearly flakes, silky aggregates. *Optical Class:* Biaxial (-). $\alpha = 1.69(1)$ $\beta = \gamma = 1.775(5)$ $2V(\text{meas.}) = 10(5)^\circ$ $2V(\text{calc.}) = \text{n.d.}$ *Pleochorism:* Strong, $Y = Z = \text{deep blue-green}$, $X = \text{light turquoise}$. *Absorption:* $Y = Z > X$. *Orientation:* $X = b$.

Cell Data: *Space Group:* $P2_1/m, P2,$ or Pm . $a = 8.28(3)$ $b = 18.97(2)$ $c = 7.38(2)$ $\beta = 121.3(6)^\circ$ $Z = 1$

X-ray Powder Pattern: Centennial Eureka mine, Tintic district, Juab Co., Utah, USA. 18.92 (100), 2.524 (41), 3.777 (24), 1.558 (22), 9.45 (19), 2.692 (15), 4.111 (13)

Chemistry:	(1)
FeO	0.04
CuO	36.07
ZnO	20.92
TeO ₂	14.02
As ₂ O ₅	14.97
Cl	1.45
H ₂ O	13.1
$-\text{O} = \text{Cl}_2$	0.33
Total	100.24

(1) Centennial Eureka mine, Tintic district, Utah, USA; average of 14 electron microprobe analyses, H₂O by Alimarin method, IR spectroscopy confirms TeO₃, AsO₄ and OH; corresponding to $(\text{Cu}_{10.32}\text{Zn}_{5.85}\text{Fe}_{0.01})_{\Sigma=16.18}(\text{TeO}_3)_2(\text{AsO}_4)_{2.97}[\text{Cl}_{0.93}(\text{OH})_{0.07}](\text{OH})_{18.45} \cdot 7.29\text{H}_2\text{O}$.

Occurrence: In the oxidation zone of quartz-sulfide ores containing tellurides (mostly hessite) in small cavities and in fractures in quartz.

Association: Mcalpineite, malachite, Zn-bearing olivenite, goethite, unspecified Mn oxides.

Distribution: From old dumps of the Centennial Eureka mine, Tintic district, Juab Co., Utah, USA.

Name: Reflects the fact that the first samples were found on the *dumps* of the Centennial Eureka mine. The mineral name is also related to the Greek word *eureka* -“I have found it” – in a *dump*—an allusion to the important role old mine dumps have played in the discovery of new minerals.

Type Material: A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia (3962/1), at the National Museum of Natural History, Washington, D.C. (174877), and the American Museum of Natural History, New York, New York (112206), USA.

References: (1) Pekov, I.V., N.V. Chukanov, A.E. Zadov, A.C. Roberts, M.C. Jensen, N.V. Zubkova, and A.J. Nikischer (2010) Eurekadumpite $(\text{Cu,Zn})_{16}(\text{TeO}_3)_2(\text{AsO}_4)_3\text{Cl}(\text{OH})_{18} \cdot 7\text{H}_2\text{O}$ - a new supergene mineral species. *Zap. Ross. Mineral. Obshch.*, 139(4), 26-35 (in Russian with English abstract). *Geol. Ore Deposits*, 53(7), 575-582 (in English). (2) (2012) *Amer. Mineral.*, 97, 1261-1262 (abs. ref. 1).