

Crystal Data: Triclinic. *Point Group:* $\bar{1}$. As equant, short prismatic or tabular crystals to 0.3 mm, generally arranged in subparallel aggregates. Crystals display {100}, {010}, {001}, {212}, $\{0\bar{1}1\}$, and $\{0\bar{1}2\}$.

Physical Properties: *Cleavage:* Perfect on {001}. *Fracture:* Uneven. *Tenacity:* Brittle. Hardness ≈ 3 D(meas.) = n.d. D(calc.) = 4.44

Optical Properties: Translucent. *Color:* Bluish green. *Streak:* Pale green. *Luster:* Vitreous. *Optical Class:* Biaxial (-). $\alpha = 1.798(4)$ $\beta = 1.814(4)$ $\gamma = 1.817(4)$ $2V(\text{calc.}) = 46^\circ$ *Pleochroism:* Very weak, X = pale greenish yellow, Y = greenish blue, Z = greenish blue. *Absorption:* $X < Y = Z$.

Cell Data: *Space Group:* $P\bar{1}$. $a = 5.378(11)$ $b = 8.962(18)$ $c = 9.841(2)$ $\alpha = 75.25(3)^\circ$ $\beta = 83.56(3)^\circ$ $\gamma = 79.97(3)^\circ$ $Z = 2$

X-ray Powder Pattern: Dome Rock Mine, South Australia.

3.073 (100), 3.119 (60), 2.464 (50), 2.856 (40), 2.443 (40), 4.716 (30), 3.605 (30)

Chemistry:	(1)	(2)
CuO	52.04	52.85
ZnO	0.78	
BaO	0.11	
As ₂ O ₅	37.67	38.17
P ₂ O ₅	0.32	
SiO ₂	0.24	
H ₂ O	[8.84]	8.98
Total	100.00	100.00

(1) Dome Rock Mine, South Australia; average of 14 electron microprobe analyses, H₂O by difference, AsO₄, OH, H₂O confirmed by Raman and FTIR spectroscopy; corresponding to $(\text{Cu}_{3.94}\text{Zn}_{0.06})_{\Sigma=4.00}\text{H}_{0.91}(\text{As}_{1.97}\text{P}_{0.03}\text{Si}_{0.02})_{\Sigma=2.02}\text{O}_8(\text{OH})_{3.00} \cdot \text{H}_2\text{O}$. (2) $\text{Cu}_4(\text{AsO}_4)(\text{AsO}_3\text{OH})(\text{OH})_3 \cdot \text{H}_2\text{O}$.

Occurrence: A secondary mineral in a weathered Cu As sulfide deposit.

Association: Cobaltaustinite, agardite-(Y), arseniosiderite, clinoclase, erythrite, lavendulan, metazeuneite, olivenite, scorodite, smolyaninovite.

Distribution: From the Dome Rock Mine, Bush Heritage reserve, 42 km north of Mingary railway siding and ~470 km northeast of Adelaide, South Australia.

Name: For the mine that produced the first specimens.

Type Material: Department of Mineralogy, South Australian Museum, Adelaide, South Australia (G32329).

References: (1) Elliott, P., U. Kolitsch, A.C. Willis, and E. Libowitzky (2013) Description and crystal structure of domerockite, $\text{Cu}_4(\text{AsO}_4)(\text{AsO}_3\text{OH})(\text{OH})_3 \cdot \text{H}_2\text{O}$, a new mineral from the Dome Rock Mine, South Australia. *Mineral. Mag.*, 77(4), 509-522. (2) (2015) *Amer. Mineral.*, 100, 2006-2007 (abs. ref. 1).