

**Crystal Data:** Triclinic. *Point Group:*  $\bar{1}$ . As thin to thick pseudomonoclinic laths, to 2 mm, elongated along [001], flattened on {010} and exhibiting {010}, {110}, {11.0}, {101}, {031} and {0 $\bar{3}$ 1}.

**Physical Properties:** *Cleavage:* Perfect on {101}. *Fracture:* Conchoidal. *Tenacity:* Brittle. Hardness = ~ 3 D(meas.) = 2.95(3) D(calc.) = 2.935

**Optical Properties:** Transparent. *Color:* Colorless to pale pink. *Streak:* White. *Luster:* Vitreous.

*Optical Class:* Biaxial (+).  $\alpha = 1.579(1)$   $\beta = 1.586(1)$   $\gamma = 1.620(1)$  2V(meas.) = 50(2)° 2V(calc.) = 50° *Dispersion:* r < v, medium. *Orientation:* Y  $\approx$  b; Z  $\wedge$  c = 36° in obtuse  $\beta$ .

**Cell Data:** *Space Group:*  $P\bar{1}$ .  $a = 7.8702(7)$   $b = 15.8081(6)$   $c = 6.6389(14)$   $\alpha = 90.814(6)^\circ$   $\beta = 96.193(6)^\circ$   $\gamma = 90.094(7)^\circ$  Z = 8

**X-ray Powder Pattern:** Torrecillas mine, Salar Grande, Iquique Province, Tarapacá Region, Chile. 7.96 (100), 3.157 (92), 3.791 (85), 3.021 (61), 3.242 (56), 4.80 (54), 1.908 (43)

Chemistry:	(1)	(2)
MgO	19.88	22.12
CuO	1.03	
CaO	0.36	
MnO	0.90	
As <sub>2</sub> O <sub>5</sub>	58.02	63.06
H <sub>2</sub> O	[15.11]	14.83
Total	95.30	100.00

(1) Torrecillas mine, Salar Grande, Iquique Province, Tarapacá Region, Chile; average of 9 electron microprobe analyses, H<sub>2</sub>O from stoichiometry and structure analysis; corresponding to (Mg<sub>0.94</sub>Cu<sub>0.03</sub>Mn<sub>0.02</sub>Ca<sub>0.01</sub>) $\Sigma=1.00$ As<sub>0.96</sub>O<sub>5</sub>H<sub>3.19</sub>. (2) Mg(AsO<sub>3</sub>OH)·H<sub>2</sub>O.

**Mineral Group:** Koritnigite group.

**Occurrence:** As a secondary mineral derived from the oxidation of native arsenic and other As-bearing primary phases, followed by later alteration by saline fluids derived from evaporating meteoric water under hyperarid conditions.

**Association:** Anhydrite, chudobaite, halite, lavendulan, quartz, scorodite.

**Distribution:** At the Torrecillas mine, Salar Grande, Iquique Province, Tarapacá Region, Chile.

**Name:** As the magnesium-analogue of *koritnigite*.

**Type Material:** Natural History Museum of Los Angeles County, Los Angeles, California, USA (64057-64059).

**References:** (1) Kampf, A.R., B.P. Nash, M. Dini, and A.A. Molina Donoso (2013) Magnesiokoritnigite, Mg(AsO<sub>3</sub>OH)·H<sub>2</sub>O, from the Torrecillas mine, Iquique Province, Chile: the Mg-analogue of koritnigite. *Mineral. Mag.*, 77(8), 3081-3092. (2) (2016) *Amer. Mineral.*, 101, 489-490 (abs. ref. 1).