

Crystal Data: Triclinic. *Point Group:* $\bar{1}$. Triangular tabular crystals, to 2 mm, exhibit $\{11\bar{1}\}$, $\{\bar{1}11\}$, $\{100\}$, and $\{\bar{1}11\}$. *Twinning:* Pseudo-merohedral twinning.

Physical Properties: *Cleavage:* Good on $\{11\bar{1}\}$. *Fracture:* Conchoidal. *Tenacity:* Brittle. Hardness = 4-4.5 VHN = 350 (50 g load). D(meas.) = n.d. D(calc.) = 3.725

Optical Properties: Transparent. *Color:* Emerald-green. *Streak:* Pale green. *Luster:* Vitreous. *Optical Class:* Biaxial. $n = 1.80$ (calculated) *Pleochroism:* None.

Cell Data: *Space Group:* $P\bar{1}$. $a = 9.1646(9)$ $b = 9.2029(8)$ $c = 9.2102(8)$ $\alpha = 95.858(6)^\circ$ $\beta = 96.290(7)^\circ$ $\gamma = 96.507(2)^\circ$ $Z = 8$

X-ray Powder Pattern: La Vendida mine, Sierra Gorda mining district, near Antofagasta, Chile. 5.432 (100), 2.747 (94), 2.257 (56), 2.889 (31), 1.702 (29), 1.812 (21)

Chemistry:	(1)	(2)
CuO	74.24	74.49
ZnO	0.02	
NiO	0.99	
Cl	16.98	16.65
H ₂ O	[12.74]	12.62
-O=Cl	3.84	3.76
Total	101.13	100.00

(1) La Vendida mine, Sierra Gorda mining district, near Antofagasta, Chile; electron microprobe analysis, H₂O calculated from stoichiometry; corresponding to Cu_{1.97}Ni_{0.03}(OH)_{2.99}Cl.

(2) Cu₂(OH)₃Cl.

Polymorphism & Series: Polymorphous with atacamite, botallackite and clinoatacamite.

Occurrence: In the oxidation zone of a polymetallic sulfide deposit

Association: Atacamite, belloite, as well as alunite, clinoatacamite, chalcantite, coquimbite, eriochalcite, jarosite, kröhnkite, magnesioaubertite, tamarugite, voltaite.

Distribution: La Vendida mine (an abandoned open pit copper mine), Sierra Gorda mining district, northeast of Antofagasta, Chile.

Name: For its triclinic symmetry and polymorphism with *atacamite*.

Type Material: Mineralogical Museum, University of Hamburg, Germany (MD 199).

References: (1) Malcherek, T. and J. Schlüter (2010) Anatacamite from La Vendida mine, Sierra Gorda, Atacama desert, Chile: a triclinic polymorph of Cu₂(OH)₃Cl. Neues Jahrbuch für Mineralogie Abhandlungen, 187, 307-312. (2) (2014) Amer. Mineral., 99, 551 (abs. ref. 1).