Crystal Data: Orthorhombic. Point Group: $2/m 2/m 2/m$. Rarely as thick tabular {001} crystals; typically disseminated granular. Twinning: As pseudohexagonal trillings on {011}.

Physical Properties: Cleavage: On {010} and {100}, distinct. Hardness = n.d. 
D(meas.) = 2.74 (synthetic). D(calc.) = 2.735  Soluble in H$_2$O.

Optical Class: Biaxial (−). Orientation: X = c; Y = a; Z = b. Dispersion: $r > v$, weak. 
\[\alpha = 1.687 \quad \beta = 1.722 \quad \gamma = 1.731 \quad 2V(\text{meas.}) = 52^\circ\]

\[a = 7.662(1) \quad b = 10.391(1) \quad c = 5.919(1) \quad Z = 4\]

X-ray Powder Pattern: Synthetic. 
3.078 (100), 2.988 (75), 2.960 (40), 2.479 (25), 2.286 (25), 2.599 (22), 2.570 (21)

Chemistry: (1) Analyses of natural material are lacking; identification depends on coincidence of optical and X-ray data with synthetic material.

Occurrence: A minor accessory mineral in nitrate deposits.

Association: Lopezite, dietzeite.

Distribution: In Chile, in nitrate caliche deposits throughout the Atacama Desert, as at the Oficina Maria Elena, near Tocopilla, Antofagasta, and Zapiga, Tarapacá.

Name: For its first noted occurrence in the Tocopilla Pampa, 170 km north of Antofagasta, Tarapacá, Chile.