

Crystal Data: Hexagonal. *Point Group:* 6/m 2/m 2/m. As hexagonal tablets with beveled edges, exhibiting {10*0}, {10*1} and {00*1} to ~300 μm . In random aggregates.

Physical Properties: *Cleavage:* Perfect on {00*1}. *Tenacity:* Sectile and easily flexible, but not elastic. *Fracture:* Curved, irregular, and stepped. Hardness = ~1 D(meas.) = n.d. D(calc.) = 3.977 Nonfluorescent.

Optical Properties: Transparent. *Color:* Colorless. *Streak:* White. *Luster:* Pearly to adamantine.

Optical Class: Uniaxial (-). $\omega(\text{calc.}) = 2.07$ $\varepsilon = 1.770(5)$ Non-pleochroic.

Cell Data: *Space Group:* P6/mmm. $a = 5.289(2)$ $c = 9.317(2)$ $Z = 1$

X-ray Powder Pattern: Torrecillas mine, Salar Grande, Iquique Province, Tarapacá Region, Chile. 3.269 (100), 2.644 (71), 2.554 (42), 1.524 (36), 9.35 (29), 1.623 (27), 1.846 (20)

Chemistry:	(1)	(2)
(NH_4) ₂ O	4.43	4.82
K ₂ O	0.29	
As ₂ O ₃	71.83	73.19
I	21.27	23.47
Cl	0.22	
-O = (I + Cl)	1.39	1.48
Total	96.65	100.00

(1) Torrecillas mine, Salar Grande, Iquique Province, Tarapacá Region, Chile; average electron microprobe and Raman spectroscopic analyses; corresponds to $(\text{NH}_4)_{0.94}\text{K}_{0.03}(\text{As}_2\text{O}_3)_2\text{I}_{0.92}\text{Cl}_{0.03}$.

(2) $\text{NH}_4(\text{As}_2\text{O}_3)_2\text{I}$.

Occurrence: A secondary alteration phase formed by 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. The frequent dense coastal camanchaca fogs probably also played a role in the alteration of the veins and the formation of the secondary minerals.

Association: Calcite, cuatrocapaite-(NH_4), lavendulan, magnesiokoritnigite, torrecillasite, on matrix of native arsenic, arsenolite, pyrite.

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

Name: Honors *Maurizio Dini* of La Serena, Chile (b. 1968), an Italian amateur mineralogist who has lived in Chile since 1998 and is a Professor of Sociology at both Universidad Pedro de Valdivia and Universidad Central de Chile. He recognized the studied material as a potentially new mineral and provided the holotype specimen.

Type Material: Natural History Museum of Los Angeles County, Los Angeles, California, USA (67365).

References: (1) Kampf, A.R., B.P. Nash, and A.A. Molina Donoso (2020) Mauriziodiniite, $\text{NH}_4(\text{As}_2\text{O}_3)_2\text{I}$, the ammonium and iodine analogue of lucabindiite from the Torrecillas mine, Iquique Province, Chile. *Mineral. Mag.*, 84, 267-273.