

Crystal Data: Orthorhombic. *Point Group:* 222. As prismatic crystals to 0.1 mm elongated along [010] and in radial aggregates to 1.5 mm.

Physical Properties: *Cleavage:* Perfect on {001}; imperfect on {100} and {010}. *Tenacity:* Brittle. *Fracture:* Uneven. Hardness = 2 D(meas.) = n.d. D(calc.) = 2.028

Optical Properties: Translucent. *Color:* Deep blue. *Streak:* Blue. *Luster:* Vitreous. *Optical Class:* Biaxial (-). $\alpha = 1.582(4)$ $\beta = 1.625(3)$ $\gamma = 1.625(3)$ $2V(\text{meas.}) = 5(3)^\circ$ $2V(\text{calc.}) \approx 0^\circ$ *Pleochroism:* Distinct, $Y = \text{violet}$, $X = Z = \text{greenish blue}$. *Absorption:* $Y > X \approx Z$. *Orientation:* $X = b$.

Cell Data: *Space Group:* P2₁2₁2₁. $a = 19.3575(5)$ $b = 7.15718(19)$ $c = 12.5020(4)$ $Z = 4$

X-ray Powder Pattern: Pabellón de Pica Mountain, Iquique Province, Tarapacá Region, Chile. 5.119 (100), 10.22 (97), 5.182 (59), 6.135 (40), 4.854 (19), 3.294 (18), 5.696 (17)

Chemistry:	(1)	(2)
Na	4.91	4.61
Fe	1.51	
Cu	22.06	25.48
Cl	19.80	21.33
S	1.4	
C	7.7	9.63
H	4.4	3.64
N	24.2	22.48
O	[12.83]	12.83
Total	98.81	100.00

(1) Pabellón de Pica Mountain, Iquique Province, Tarapacá Region, Chile; average of 4 EDS analyses supplemented by FTIR spectroscopy, O calculated from stoichiometry, H, N, C, and S by gas chromatography; corresponds to Na_{1.14}(Cu_{1.86}Fe_{0.14})_{Σ=2.0}N_{9.23}C_{3.43}H_{23.34}O_{4.29}(Cl_{2.99}S_{0.23})_{Σ=3.22}.

(2) NaCu₂(N₃C₂H₂)₂(NH₃)₂Cl₃·4H₂O.

Occurrence: In cavities near the contact of a guano deposit with the host rock in a desert.

Association: Dittmarite, joanneumite, chanabayaite, nitratine, natroxalate, möhnite, salammoniac, halite.

Distribution: From Pabellón de Pica Mountain, 1.5 km south of Chanabaya village, Iquique Province, Tarapacá Region, Chile.

Name: Alludes to the presence of the 1,2,4-triazolate anion.

Type Material: A.E. Fersman Mineralogical Museum, Russian Academy of Sciences, Moscow, Russia (5037/1).

References: (1) Chukanov, N.V., N.V. Zubkova, G. Möhn, I.V. Pekov, D.I. Belakovskiy, K.V. Van, S.N. Britvin, and D.Y. Pushcharovky (2018) Triazolite, NaCu₂(N₃C₂H₂)₂(NH₃)₂Cl₃·4H₂O, a new mineral species containing 1,2,4-triazolate anion, from a guano deposit at Pabellón de Pica, Iquique Province, Chile. *Mineral. Mag.*, 82(4), 1007-1014. (2) (2021) *Amer. Mineral.*, 106, 164 (abs. ref. 1).