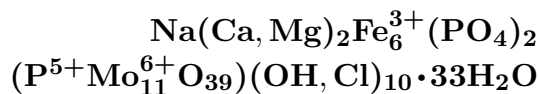


Mendozavilite

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Crystal Data: Monoclinic or triclinic. *Point Group:* n.d. As crystals, to 20 μm , in masses.**Physical Properties:** Hardness = 1.5 D(meas.) = 3.85 D(calc.) = n.d.**Optical Properties:** Semitransparent. *Color:* Empire yellow to orange. *Streak:* Bright yellow. *Luster:* Vitreous.*Optical Class:* Biaxial (+). *Pleochroism:* In pale yellows. *Dispersion:* $r > v$, very strong.*Absorption:* $Z > Y > X$. $\alpha = 1.762$ $\beta = 1.763$ $\gamma = 1.766$ $2V(\text{meas.}) = 5^\circ\text{--}15^\circ$ **Cell Data:** *Space Group:* n.d. $Z = \text{n.d.}$ **X-ray Powder Pattern:** Cumobabi deposit, Mexico.

8.77 (10), 9.46 (8), 3.676 (5), 1.820 (5), 3.118 (4), 1.552 (4), 11.56 (3)

Chemistry:

	(1)
MoO ₃	50.47
P ₂ O ₅	6.78
Al ₂ O ₃	0.76
Fe ₂ O ₃	14.31
MgO	0.35
CaO	2.48
Na ₂ O	1.25
Cl	0.26
H ₂ O	21.62
—O = Cl ₂	0.06
Total	98.22

(1) Cumobabi deposit, Mexico; with (OH)¹⁻ calculated for charge balance, corresponds to Na_{1.27}(Ca_{1.40}Mg_{0.27})_{Σ=1.67}Fe_{5.66}(PO₄)₂P_{1.02}Mo_{11.07}O₃₉[(OH)_{8.88}Cl_{0.23}]_{9.11}•33.44H₂O.**Occurrence:** In the oxidized zone of some molybdenum-bearing hydrothermal mineral deposits.**Association:** Quartz, paramendozavilite (Cumobabi deposit, Mexico); molybdenite, schorl (Rustler mine, Utah, USA).**Distribution:** From the Cumobabi molybdenum deposit, southwest of Cumpas, Sonora, Mexico. At the Rustler mine, Gold Hill, Tooele Co., Utah, USA. From Copaquiri, Antofagasta, Chile.**Name:** To honor Heriberto Mendoza Avila (1924–), Phelps Dodge exploration geologist, who found the first specimen.**Type Material:** The Natural History Museum, London, England, 1984,475.**References:** (1) Williams, S. A. (1986) Mendozavilite and paramendozavilite, two new minerals from Cumobabi, Sonora. *Boletín de Mineralogía*, 2(1), 13–19. (2) (1988) *Amer. Mineral.*, 73, 193 (abs. ref. 1).