

Wendwilsonite

Ca₂(Mg, Co)(AsO₄)₂•2H₂O

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Crystal Data: Monoclinic. *Point Group:* 2/*m*. Crystals are stout prismatic, elongated along [100], showing {011}, {111}, {010}, {110}, to 6 mm. *Twinning:* On {100} as twin and composition plane; lamellar structure || {010}, {011}, {111} visible optically.

Physical Properties: *Cleavage:* Perfect on {010}. *Fracture:* Uneven. Hardness = 3–4
D(meas.) = 3.52(8) D(calc.) = 3.57

Optical Properties: Transparent. *Color:* Pale to intense pink, may be red, commonly color zoned. *Streak:* Pale pink. *Luster:* Vitreous.

Optical Class: Biaxial (–). *Pleochroism:* X = violet-pink; Y = rose-pink; Z = colorless.

Orientation: Y = *b*; Z ∧ *c* = 92°. *Dispersion:* *r* < *v*. *Absorption:* X ≥ Y > Z. α = 1.694(3)
β = 1.703(3) γ = 1.713(3) 2V(meas.) = 87(2)°

Cell Data: *Space Group:* P2₁/*c*. *a* = 5.806(1) *b* = 12.912(2) *c* = 5.623(2)
β = 107°24(1)' Z = 2

X-ray Powder Pattern: Bou Azzer, Morocco; close to roselite.

2.994 (100), 2.766 (80), 3.226 (60), 5.085 (50), 3.356 (40), 2.592 (40), 3.397 (30)

Chemistry:

	(1)	(2)
As ₂ O ₅	55.8	52.76
CoO	2.6	8.60
MgO	7.7	4.63
CaO	26.4	25.74
H ₂ O	7.4	8.27
Total	99.9	100.00

(1) Bou Azzer, Morocco; by electron microprobe, H₂O by the Penfield method; corresponding to Ca_{2.03}(Mg_{0.82}Co_{0.15})_{Σ=0.97}(AsO₄)_{2.09}•1.77H₂O. (2) Ca₂(Mg, Co)(AsO₄)₂•2H₂O with Mg:Co = 1:1.

Polymorphism & Series: Forms a series with roselite.

Mineral Group: Roselite group.

Occurrence: A rare secondary mineral in cobalt-bearing hydrothermal mineral deposits.

Association: Talmessite, erythrite (Bou Azzer, Morocco).

Distribution: From Bou Azzer, Morocco. At Sterling Hill, Ogdensburg, Sussex Co., New Jersey, USA. From an unknown locality in Coahuila, Mexico.

Name: To honor Dr. Wendell Eugene Wilson, Jr. (1946–), Editor and Publisher of the Mineralogical Record, for his contributions to specimen mineralogy.

Type Material: Royal Ontario Museum, Toronto, Canada, M42119; National Museum of Natural History, Washington, D.C., USA, 136288.

References: (1) Dunn, P.J., B.D. Sturman, and J.A. Nelen (1987) Wendwilsonite, the Mg analogue of roselite, from Morocco, New Jersey, and Mexico, and new data on roselite. Amer. Mineral., 72, 217–221.