

Crystal Data: Orthorhombic. *Point Group:* 2/m 2/m 2/m. As blades, intergrown tablets, and scales, to 0.5 mm; {001} dominant, bounded by {100} and {010}.

Physical Properties: *Cleavage:* Perfect {100}, good on {010} and {001}. *Fracture:* Irregular. *Tenacity:* Blades flexible. *Hardness* = 2 *D(meas.)* = 3.28(5) *D(calc.)* = 3.303

Optical Properties: Transparent. *Color:* Bright blue. *Streak:* Pale blue. *Luster:* Vitreous. *Optical Class:* Biaxial (-). $\alpha = 1.627(2)$ $\beta = 1.699(2)$ $\gamma = 1.769(2)$ $2V(\text{calc.}) = 86^\circ$
Dispersion: None. *Orientation:* $X = a$; $Y = c$; $Z = b$. *Pleochroism:* Pronounced, $X = \text{deep blue}$; $Y = \text{medium blue}$; $Z = \text{pale blue}$.

Cell Data: *Space Group:* Pnma. $a = 9.455(2)$ $b = 5.866(2)$ $c = 8.668(2)$ $Z = 4$

X-ray Powder Pattern: Tachgagalt mine, Morocco.

4.734 (100), 3.941 (90), 2.489 (50), 1.922 (50), 2.545 (45), 3.192 (40), 1.838 (40)

Chemistry:	(1)	(2)
CuO	72.68	66.6
CaO	0.11	
SiO ₂	1.00	
B ₂ O ₃	14.57	14.6
H ₂ O	18.85	18.8
Total	107.21	100.0

(1) Tachgagalt mine, Morocco; average of 8 electron microprobe analyses, B₂O₃ and H₂O calculated from structure analysis, Ca and Si considered impurities and disregarded; corresponding to Cu_{3.02}Zn_{0.96}(OH)_{5.91}H_{0.03}Cl_{2.08}. (2) Cu₂[BO(OH)₂](OH)₃.

Occurrence: Probably formed as a secondary, low-temperature product of hydrothermal reworking of boron-bearing manganese-oxide ore (gaudefroyite).

Association: Henritermierite, gaudefroyite, calcite.

Distribution: From Vein #2, Tachgagalt mine, near Ouarzazate, Anti-Atlas Mountains, Morocco.

Name: Honors French geologist Jacques Emile Dietrich (b. 1926), who collected the first specimens.

Type Material: Natural History Museum of Los Angeles County, California, USA; 52461.

References: (1) Kampf, A.R. and G. Favreau (2004) Jacquesdietrichite, Cu₂[BO(OH)₂](OH)₃, a new mineral from the Tachgagalt mine, Morocco: Description and crystal structure. *Eur. J. Mineral.*, 16, 361-366. (2) (2005) *Amer. Mineral.*, 90, 519 (abs. ref. 1).