

Fornacite**Pb₂Cu(AsO₄)(CrO₄)(OH)**

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Crystal Data: Monoclinic. *Point Group:* 2/m. Crystals typically steep pyramidal, rounded, to 6 mm; generally in aggregates.

Physical Properties: *Fracture:* Conchoidal. Hardness = 3 D(meas.) = 6.27(2)
D(calc.) = 6.30

Optical Properties: Transparent to translucent. *Color:* Deep olive-green, greenish yellow; golden yellow in transmitted light. *Streak:* Saffron-yellow. *Luster:* Vitreous.

Optical Class: Biaxial (+). *Dispersion:* Strong. $\alpha = 2.14(2)$ $\beta = \text{n.d.}$ $\gamma = 2.24(2)$
2V(meas.) = Large.

Cell Data: *Space Group:* P2₁/c. $a = 8.101(7)$ $b = 5.893(11)$ $c = 17.547(9)$
 $\beta = 110^{\circ}00(2)'$ Z = 4

X-ray Powder Pattern: Renéville, Congo Republic and Sebarz, Iran.
3.31 (10), 2.98 (10), 2.88 (10), 2.80 (10), 4.80 (9), 2.71 (9), 8.22 (5)

Chemistry:

	(1)	(2)	(3)
CrO ₃	15.3	11.78	13.34
P ₂ O ₅	0.4	0.66	
As ₂ O ₅	13.4	15.03	15.32
Fe ₂ O ₃	0.2	0.40	
CuO	10.2	10.91	10.61
PbO	57.7	57.16	59.53
H ₂ O	2.4	3.73	1.20
Total	99.6	99.67	100.00

(1) Djoué, Congo Republic. (2) Renéville, Congo Republic. (3) Pb₂Cu(AsO₄)(CrO₄)(OH).

Occurrence: A rare mineral in the oxidized zones of some hydrothermal base-metal deposits.

Association: Diopside, wulfenite, hemihedrite, phoenicochroite, duftite, mimetite, shattuckite, chrysocolla, hemimorphite, willemite, fluorite.

Distribution: From Djoué and Renéville, Congo Republic. In South Africa, at the Argent Pb–Zn mines, about 100 km east of Johannesburg, Transvaal. From the Seh Changi mine, near Neybaud, Khorassan, and at Sebarz, Iran. In the USA, in Arizona, from the Mammoth-St. Anthony mine, Tiger, Pinal Co., at the Tonopah-Belmont mine, Osborne district, Maricopa Co., from the Lone Star mine, near Copperopolis, Yavapai Co., at the 79 mine, Gila Co., from the Shattuck mine, Bisbee, Warren district, Cochise Co., from the Eagle Eye mine, New Water Mountains, La Paz Co., and at several other localities; from the Blue Bell mine, near Baker, San Bernardino Co., California; at Socorro Peak, Socorro Co., New Mexico; from the Killie mine, Spruce Mountain district, Elko Co., and in the Silver Coin mine, near Valmy, Iron Point district, Humboldt Co., Nevada. At the Union mine, Taltal, Antofagasta, Chile. In the Teutonic Bore deposit, 300 km north of Kalgoorlie, and at Whim Creek, east of Roeburne, Western Australia.

Name: In honor of Lucien Louis Forneau (1867–1930), Colonial Governor of the French Congo.

Type Material: n.d.

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