

Crystal Data: Hexagonal. *Point Group:* 6/m. As hexagonal prisms with pyramidal terminations displaying {100} and {101} to 0.5 mm, commonly doubly terminated. Often in sub-parallel intergrowths and irregular clusters.

Physical Properties: *Cleavage:* None. *Fracture:* Subconchoidal. *Tenacity:* Brittle. *Hardness* = ~4 D(meas.) = n.d. D(calc.) = 5.445 Decomposes quickly in dilute HCl.

Optical Properties: Transparent. *Color:* Colorless. *Streak:* White. *Luster:* Subadamantine. *Optical Class:* Uniaxial(-). $\omega = 1.836(5)$ $\varepsilon = 1.824(5)$ Nonpleochroic.

Cell Data: *Space Group:* P6₃/m. $a = 9.6402(12)$ $c = 7.0121(8)$ $Z = 2$

X-ray Powder Pattern: Blue Bell claims, San Bernardino County, California, USA. 2.880 (100), 3.978 (26), 1.879 (26), 3.509 (23), 8.384 (20), 2.0891 (20), 2.3485 (17)

Chemistry:	(1)	(2)
CaO	13.43	11.15
PbO	61.69	66.58
P ₂ O ₅	22.88	21.17
F	2.19	1.89
- O = F	0.92	0.80
Total	99.27	100.00

(1) Blue Bell claims, San Bernardino County, California, USA; electron microprobe analyses supplemented by IR spectroscopy; corresponding to Ca₂(Pb_{2.57}Ca_{0.23})_{Σ=2.80}(P₃O_{11.76})F_{1.07}. SEM-EDS analyses and IR spectroscopy yielded O = 21.28, F = 1.59, P = 10.33, Ca = 9.66, Pb = 60.08, Total = 102.95; corresponding to Ca_{2.00}(Pb_{2.61}Ca_{0.17})_{Σ=2.78}(P₃O_{11.91})F_{0.75}.
 (2) Ca₂Pb₃(PO₄)₃F.

Mineral Group: Apatite supergroup.

Occurrence: In the oxidation zone of a Pb-Cu-Zn-Ag deposit.

Association: Cerussite, chrysocolla, fluorite, fluorapatite, goethite, gypsum, mimetite, opal, phosphohedyphane, plumbogummite, plumbophyllite, plumbotsumite, pyromorphite, quartz, wulfenite.

Distribution: From the C adit, Blue Bell claims, Joe Dandy Hill, Soda Mountains, ~11 km west of Baker, San Bernardino County, California, USA.

Name: The prefix, *fluor*, designates the F-analog of *phosphohedyphane*.

Type Material: Natural History Museum of Los Angeles County, Los Angeles, California, USA (60550, 60551, 60552, 60553, 60554, and 60555).

References: (1) Kampf, A.R. and R.M. Housley (2011) Fluorophosphohedyphane, Ca₂Pb₃(PO₄)₃F, the first apatite supergroup mineral with essential Pb and F. *Amer. Mineral.*, 96, 423-429.