

Crystal Data: Orthorhombic. *Point Group:* $2/m\ 2/m\ 2/m$. Pyramidally-terminated prismatic crystals, to 1 cm, tabular on {100} and elongated along [010]. May be striated along {100} $\parallel$ {0 $\bar{2}$ 1}, forming chevrons; 15 forms recorded.

Physical Properties: *Cleavage:* {101}, distinct. *Tenacity:* Flexible. Hardness = 3–3.5 D(meas.) = 6.241 D(calc.) = 6.212 Slightly soluble in cold H₂O, more so in hot H₂O.

Optical Properties: Transparent. *Color:* Colorless, white. *Luster:* Adamantine, pearly on {100}.

Optical Class: Biaxial (–). *Orientation:* $X = c$; $Y = a$; $Z = b$. $\alpha = 2.08$ $\beta = 2.12$ $\gamma = 2.16$ 2V(meas.) = Large.

Cell Data: *Space Group:* $Pcmn$. $a = 9.6987$ $b = 4.0203$ $c = 7.1110$ $Z = 4$

X-ray Powder Pattern: Synthetic. (ICDD 31-680).

4.01 (100), 3.30 (55), 2.30 (50), 3.56 (40), 3.33 (30), 5.7 (25), 2.87 (25)

Chemistry:	(1)	(2)
Pb	79.38	79.80
O	3.17	3.08
Cl	13.77	13.65
H ₂ O	3.68	3.47
Total	100.00	100.00

(1) Laurium, Greece. (2) PbCl(OH).

Polymorphism & Series: Dimorphous with paralaurionite.

Occurrence: Produced by the action of saline water on lead-bearing slag. In the oxidized zone of lead-bearing mineral deposits.

Association: Paralaurionite, penfieldite, fiedlerite, phosgenite, cerussite, anglesite.

Distribution: Probably more widespread than the known localities indicate. An alteration product of slag from: Laurium, Greece. Along Baratti Beach, Tuscany, Italy. From Juliushütte, Aistfeld, Harz Mountains, Germany. From the Argent Pb–Zn mines, about 100 km east of Johannesburg, Transvaal, South Africa. In mineral deposits at: Wheal Rose, near Sithney, Cornwall, and the Wesley mine, near Higher Pitts, Somerset, England. From the Nant-y-Cagl (Eaglebrook) mine, Ceulanymaesmawr, Dyfed, Wales. In the Kara Elchi mercury deposit, Turkmenistan. Found at the Anticline prospect, 11 km west-southwest of Ashburton Downs homestead, Capricorn Range, Western Australia, and in the Elura deposit, 43 km northeast of Cobar, New South Wales, Australia. From the Minnamax Cu–Ni sulfide deposit, Duluth Gabbro complex, near Hibbing, St. Louis Co., Minnesota, USA.

Name: For the occurrence at Laurium, Greece.

References: (1) Palache, C., H. Berman, and C. Frondel (1951) Dana's system of mineralogy, (7th edition), v. II, 62–64. (2) Venetopoulos, C.C. and P.J. Rentzeperis (1975) The crystal structure of laurionite, Pb(OH)Cl. *Zeits. Krist.*, 141, 246–259. (3) Merlino, S., M. Pasero, and N. Perchiazzi (1993) Crystal structure of paralaurionite and its OD relationships with laurionite. *Mineral. Mag.*, 57, 323–328.