

Crystal Data: Cubic. *Point Group:* $4/m\bar{3}2/m$. Commonly as tiny octahedra, sometimes modified by the dodecahedron, in aggregates or crusts; botryoidal, stalactitic, earthy to pulverulent.

Physical Properties: *Cleavage:* {111}. *Fracture:* Conchoidal. Hardness = 1.5
D(meas.) = 3.87(1) D(calc.) = 3.88 Taste astringent, sweetish; a very toxic substance.

Optical Properties: Transparent. *Color:* White, pale blue, pink to pale yellow if impure with realgar or orpiment; colorless in transmitted light. *Streak:* White to pale yellowish white.

Luster: Vitreous to silky.

Optical Class: Isotropic; may be anomalously anisotropic. $n = 1.755$

Cell Data: *Space Group:* $Fd\bar{3}m$ (synthetic). $a = 11.074$ $Z = 16$

X-ray Powder Pattern: Synthetic.

3.195 (100), 6.39 (63), 2.541 (38), 2.7687 (28), 1.957 (27), 1.551 (22), 1.670 (21)

Chemistry: There are no analyses of natural material.

Occurrence: An oxidation product of other arsenic-bearing sulfides in hydrothermal veins; may be formed in mine fires or in burning coal seams.

Association: Claudetite, realgar, orpiment, erythrite.

Distribution: In Germany, from Wittichen, Black Forest; at Lauta, near Marienberg, Johanngeorgenstadt, and Annaberg, Saxony. In the Czech Republic, at Jáchymov (Joachimsthal) and Kuttenberg. At Saint-Etienne, Loire, and elsewhere in France. From the Dolcoath mine, Cambourne, the Phoenix United mines, Linkinhorne, and elsewhere in Cornwall, England. In the Plaka mine, Laurium, Greece. In Italy, at Sondalo, Sondrio, and Borgofranco, Torino. In the USA, from Manhattan, Nye Co., in the Ophir mine, Comstock Lode, Storey Co., at the Getchell mine, Humboldt Co., and from Simon, Mineral Co., Nevada; in the United Verde mine, Jerome, Yavapai Co., Arizona; and at the Armagosa mine, San Bernardino Co., California. In Canada, at Lake Wanapitei, Sudbury, Ontario, and on Watson Creek, British Columbia.

Name: For ARSENIc in the composition.

References: (1) Palache, C., H. Berman, and C. Frondel (1944) Dana's system of mineralogy, (7th edition), v. I, 543–544. (2) Pertlik, F. (1978) Structure refinement of cubic As₂O₃ (arsenolite) with single crystal data. Czech. J. Phys., B28(2), 170–176. (3) (1978) Chem. Abs., 88, 573 (abs. ref. 2). (4) Treacy, D.J. and P.C. Taylor (1981) Nuclear quadripole resonance in two crystalline forms of As₂O₃, arsenolite and claudetite I. Solid State Communications, 40(2), 135–138. (5) (1953) NBS Circ. 539, 1, 51.