

**Crystal Data:** Orthorhombic. *Point Group:*  $2/m\ 2/m\ 2/m$ . Crystals pyramidal {111}, tabular [001], or prismatic [010], with large {111}, {101}, {201}, {001}, many other modifying forms, to 5 cm. Commonly as crystalline crusts; may be porous, sinterlike, earthy, massive.

**Physical Properties:** *Cleavage:* {201}, imperfect; {001}, {100}, in traces.  
*Fracture:* Subconchoidal. Hardness = 3.5–4 D(meas.) = 3.27 D(calc.) = 3.276

**Optical Properties:** Semitransparent. *Color:* Pale leek-green, grayish green, liver-brown, pale blue, violet, yellow, pale grayish, colorless; may be blue-green in daylight but bluish purple to grayish blue in incandescent light; in transmitted light, colorless to pale shades of green or brown. *Luster:* Vitreous to subadamantine, subresinous.

*Optical Class:* Biaxial (+). *Pleochroism:* Typically faint; blue-violet to blue-green. *Orientation:*  $X = a$ ;  $Y = c$ ;  $Z = b$ . *Dispersion:*  $r > v$ , strong. *Absorption:*  $Z > X = Y$ .  $\alpha = 1.741$ – $1.784$   $\beta = 1.744$ – $1.805$   $\gamma = 1.768$ – $1.820$   $2V(\text{meas.}) = 40^\circ$ – $\sim 75^\circ$

**Cell Data:** *Space Group:*  $Pcab$ .  $a = 8.937$ – $8.953$   $b = 10.278$ – $10.325$   $c = 9.996$ – $10.038$   
 $Z = 8$

**X-ray Powder Pattern:** Bhilivara [Bhilwara] district, Rajasthan, India.  
4.50 (100), 5.65(80), 3.20 (80), 3.07 (60), 3.01 (60), 2.601 (60), 5.05 (40)

Chemistry:	(1)	(2)
As <sub>2</sub> O <sub>5</sub>	49.79	49.79
Fe <sub>2</sub> O <sub>3</sub>	34.60	34.60
H <sub>2</sub> O	15.61	15.61
Total	100.00	100.00

(1) Kiura mine, Japan. (2) FeAsO<sub>4</sub>·2H<sub>2</sub>O.

**Polymorphism & Series:** Dimorphous with parascorodite; forms a series with mansfieldite.

**Mineral Group:** Variscite group.

**Occurrence:** A secondary mineral formed by oxidation of As-bearing sulfides.

**Association:** Pharmacosiderite, beudantite, carminite, dussertite, arseniosiderite, adamite, austinite, vivianite, iron oxides.

**Distribution:** Numerous occurrences, typically in small amounts; some localities for well-crystallized material are: in Germany, from Schwarzenberg, Saxony, and in the Clara mine, near Oberwolfach, Black Forest. At Horní Slavkov (Schlaggenwald), Czech Republic. From Lölling, Carinthia, Austria. Found at a number of places in Gwennap, Calstock, and elsewhere in Cornwall, England. Occurs at Djebel Debar, Qacentina (Constantine), Algeria. Very large crystals from Tsumeb, Namibia. Large crystals from Antonio Pereira, Minas Gerais, Brazil. In Mexico, large crystals from the El Cobre mine, Aranzazú, Concepción del Oro, Zacatecas, and in the Ojuela mine, Mapimí, Durango. In the USA, in Utah, an ore mineral at Gold Hill, Tooele Co., and in the Tintic district, Juab Co.; and from the Majuba Hill mine, Antelope district, Pershing Co., Nevada. At the Kiura mine, Oita Prefecture, Japan, large crystals. From Broken Hill, New South Wales, Australia.

**Name:** From the Greek for *garlic*, in allusion to its odor when heated.

**Type Material:** Mining Academy, Freiberg, Germany, 21245.

**References:** (1) Palache, C., H. Berman, and C. Frondel (1951) Dana's system of mineralogy, (7th edition), v. II, 763–767. (2) Kitahama, K., R. Kiriya, and Y. Baba (1975) Refinement of the crystal structure of scorodite. *Acta Cryst.*, 31, 322–324. (3) Hawthorne, F.C. (1976) The hydrogen positions in scorodite. *Acta Cryst.*, 32, 2891–2892. (4) Dasgupta, D.R., A.K. Datta, and N.R. Sen Gupta (1966) Occurrence of scorodite in a pegmatite in Bhilwara district, Rajasthan, India. *Mineral. Mag.*, 35, 776–777.

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