

**Crystal Data:** Hexagonal. *Point Group:*  $\bar{3} 2/m$ . Prominent  $\{01\bar{1}2\}$  yields pseudocubic crystals, to 1 cm; also rounded and hoppers; commonly massive or cleavable lamellar, also radiated; may be botryoidal or reniform with granular texture. *Twinning:* On  $\{01\bar{1}4\}$ , commonly forming complex groups, fourlings, sixlings; also polysynthetic twins.

**Physical Properties:** *Cleavage:* Perfect on  $\{0001\}$ , distinct on  $\{10\bar{1}1\}$ , imperfect on  $\{10\bar{1}4\}$ , indistinct on  $\{11\bar{2}0\}$ . *Fracture:* Uneven. *Tenacity:* Brittle. Hardness = 3–3.5 VHN = 50–69 (100 g load). D(meas.) = 6.61–6.72 D(calc.) = 6.697

**Optical Properties:** Opaque. *Color:* Tin-white. *Streak:* Gray. *Luster:* Metallic. *Pleochroism:* Very feeble. *Anisotropism:* Weak in air, lively in oil.

$R_1$ – $R_2$ : (400) 71.6–74.1, (420) 72.3–75.1, (440) 72.9–75.8, (460) 73.6–76.6, (480) 74.2–77.3, (500) 74.6–77.8, (520) 74.7–77.9, (540) 74.5–78.0, (560) 74.0–77.7, (580) 73.3–77.1, (600) 72.3–76.6, (620) 71.4–76.0, (640) 70.3–75.3, (660) 69.2–74.8, (680) 68.4–74.4, (700) 67.7–74.2

**Cell Data:** *Space Group:*  $R\bar{3}m$  (synthetic).  $a = 4.3084(2)$   $c = 11.274(0.5)$   $Z = 6$

**X-ray Powder Pattern:** Synthetic.

3.109 (100), 2.248 (70), 1.368 (70), 1.416 (60), 2.152 (60), 1.261 (40), 1.878 (40)

<b>Chemistry:</b>	(1)
	Sb 99.2
	As 0.2
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	Total 99.4

(1) Gottes Segnen mine, St. Andreasberg, Germany; by electron microprobe. [??Gottes Sergen mine in latest criddle??ck]

**Mineral Group:** Arsenic group.

**Occurrence:** In hydrothermal Sb–Ag veins.

**Association:** Silver, stibnite, allemontite, sphalerite, pyrite, galena, quartz.

**Distribution:** Numerous localities. In the USA, from South Riverside, Riverside Co.; in kg masses from Erskine Creek, Kern Co., California. From Příbram, Czech Republic. At St. Andreasberg, Harz Mountains, Germany. In France, from Allemont, Isère. At Sarrabus, Sardinia, Italy. From Sala, Västmanland, and in the Vena mines, near Askersund, Örebro, Sweden. At Kalliolampi, Nurmo, and near Seinajoki, Finland. At Broken Hill, New South Wales, Australia. From Huasco, Tarapacá, Chile. In Canada, at South Ham, Wolfe Co., Quebec. At Arechuybo, Chihuahua, Mexico.

**Name:** From the Latin *antimonium*; possibly of Arabic origin; the chemical symbol from the Latin *stibium*, *mark*.

**References:** (1) Palache, C., H. Berman, and C. Frondel (1944) Dana's system of mineralogy, (7th edition), v. I, 132–133. (2) Barrett, C.S., P. Cucka, and K. Haefner (1963) The crystal structure of antimony at 4.2, 78 and 298 °K. *Acta Cryst.*, 16, 451–453. (3) (1954) NBS Circ. 539, 3, 14. (4) Criddle, A.J. and C.J. Stanley, Eds. (1993) Quantitative data file for ore minerals, 3rd ed. Chapman & Hall, London, 14.