

**Crystal Data:** Cubic. *Point Group:*  $4/m\bar{3}2/m$ . Crystals cubic, with {111} and {011}, to 1 cm; in parallel or subparallel groups; commonly as crusts and coatings, massive. *Twinning:* {111}, rare.

**Physical Properties:** *Fracture:* Uneven to subconchoidal. *Tenacity:* Sectile, ductile, very plastic. Hardness = 2.5 D(meas.) = 6.474 D(calc.) = 6.477 May give off a strong "medicinal" odor when exposed to air.

**Optical Properties:** Transparent to translucent. *Color:* Pale yellow, greenish brown, bright green. *Streak:* White to yellowish white. *Luster:* Resinous to adamantine, waxy. *Optical Class:* Isotropic.  $n = 2.253$

**Cell Data:** *Space Group:*  $Fm\bar{3}m$ .  $a = 5.7745$  (synthetic).  $Z = 4$

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

2.886 (100), 2.041 (55), 1.667 (16), 1.291 (14), 1.1787 (10), 3.33 (8), 1.444 (8)

Chemistry:	(1)	(2)
Ag	57.56	65.16
Cl		10.71
Br	42.44	24.13
Total	100.00	100.00

(1) Rancho de San Onofre, Charcas, Mexico. (2) Ag(Br, Cl) with Br:Cl = 1:1.

**Polymorphism & Series:** Dimorphous with chlorargyrite.

**Occurrence:** A rare secondary mineral in the oxidation zones of silver deposits, notably in arid regions.

**Association:** Silver, iodargyrite, smithsonite, Fe–Mn oxides.

**Distribution:** While a rare mineral, nevertheless known from a number of localities. From Huelgoet, Finistère, France. At the Schöne Aussicht mine, near Dernbach, and at Bad Ems, Rhineland-Palatinate, Germany. In the USA, at Bisbee, Tombstone, and the Commonwealth mine, Pearce, Cochise Co., Arizona; from the Silver City district, Grant Co., and elsewhere in New Mexico; at Silver Cliff, Custer Co., and on Horse Mountain, 13 km south of Eagle, Eagle Co., Colorado. From Charcas, San Luis Potosi; Plateros, Zacatecas; and many other localities in Mexico. At Chañarcillo, south of Copiapó, Atacama, Chile. From Broken Hill, New South Wales, Australia.

**Name:** For BROMine and the Greek for silver, *argyros*, in its composition.

**References:** (1) Palache, C., H. Berman, and C. Frondel (1951) Dana's system of mineralogy, (7th edition), v. II, 11–15 [bromyrite]. (2) Barclay, C.J. and J.B. Jones (1971) The Broken Hill silver halides. J. Geol. Soc. Australia, 18, 149–157. (3) (1955) NBS Circ. 539, 4, 46–47.