Bromargyrite

Crystal Data: Cubic. Point Group: 4/m 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.


Cell Data: Space Group: \( Fm\overline{3}m \). \( a = 5.7745 \) (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:

\[
\begin{array}{ccc}
\text{Ag} & 57.56 & 65.16 \\
\text{Cl} & 10.71 & 10.71 \\
\text{Br} & 42.44 & 24.13 \\
\hline
\text{Total} & 100.00 & 100.00
\end{array}
\]

(1) Rancho de San Onofre, Charcas, Mexico. (2) Ag(\text{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 Schône 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 Potosí; 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.