In Carius method of estimation of halogen, 0.15 g of an organic compound gave 0.12 g of AgBr. Find out the percentage of bromine in the compound.

Solution

Molar mass of AgBr = 108 + 80
$$= 188 \text{ g mol}^{-1}$$

188 g AgBr contains 80 g bromine

0.12 g AgBr contains $\dfrac{80 \times 0.12}{188}$ g bromine

Percentage of bromine = $\dfrac{80 \times 0.12 \times 100}{188 \times 0.15}$

$$= 34.04\%$$