

**Question #48056, Chemistry, Physical Chemistry**

The  $K_{sp}$  for silver carbonate is  $8.4 \times 10^{-12}$ . The concentration of carbonate ions in a saturated solution is  $1.28 \times 10^{-4}$  M. What is the concentration of silver ions?

**Answer:**



$$K = \frac{[\text{Ag}^+]^2[\text{CO}_3^{2-}]}{[\text{Ag}_2\text{CO}_3]}$$

This is Slightly soluble salt

$$[\text{Ag}^+] = \sqrt{\frac{K}{[\text{CO}_3^{2-}]}}$$

$$[\text{Ag}^+] = 2.5 \times 10^{-4} \text{ mol}$$