

CHM 152
Quiz 6

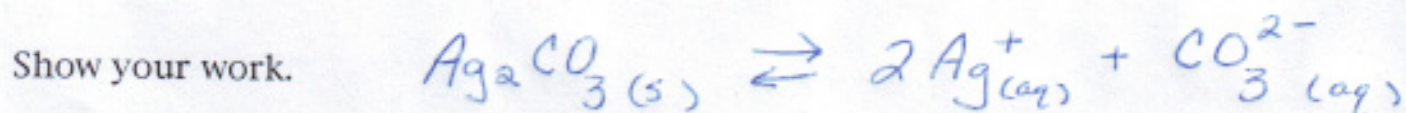
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Name Key

1. Calculate the maximum solubility of Ag_2CO_3 in water.

$$K_{sp}(\text{Ag}_2\text{CO}_3) = 8.1 \times 10^{-12}$$

Show your work.



if solubility = x , $[\text{Ag}^+] = 2x$, $[\text{CO}_3^{2-}] = x$

$$K_{sp} = [\text{Ag}^+]^2[\text{CO}_3^{2-}] = (2x)^2 x = 4x^3 = 8.1 \times 10^{-12}$$

$$x = \sqrt[3]{\frac{8.1 \times 10^{-12}}{4}} = \boxed{1.27 \times 10^{-4} \text{ M}}$$

BONUS (2) Identify the oxidation number for each element in SCl_4 .

$$S = +4$$

$$\text{Cl} = -1$$