**Chemistry 3.6 AS 91392** Demonstrate understanding of equilibrium principles in aqueous systems



Writing Excellence answers to **Solubility of sparingly soluble salts** questions

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| **Solubility of sparingly soluble salts QUESTION** |
| **Question:**  Silver carbonate, Ag2CO3, is a sparingly soluble salt. *K*s(Ag2CO3) = 8.10 × 10–12 at 25ºC *M*(Ag2CO3) = 276 g mol–1(a) Write the solubility product expression, *K*s, for silver carbonate (Ag2CO3). (b) Calculate the mass of Ag2CO3 that will dissolve in 50 mL of water to make a saturated solution at 25ºC.  |
| **ANSWER** |
| 1. write the equation for the dissociation of salt  |  |
| 2. Write the solubility product expression, *K*s, for the salt |  |
| 3. calculate the solubility, s2:1 salt Let s = solubility*Ks* = 4*s*3 *3sgf and units* |  |
| 4. calculate number of moles*n* = *c* × *v* *3sgf and units* |  |
| 5. calculate mass of salt*m* = *n* × *M* *3sgf and units*  |  |

NOTE: The white column is how your answer would appear on your test paper so make sure you **write out complete sentences**. The grey area is just to help you structure your answer and would not appear in the question.