

Quiz for Video 8 – Solubility

- As Temperature increases, what happens to the solubility of ionic compounds (in general)?
 - It increases
 - It decreases
 - It stays the same
- When 1 mole of $\text{Fe}(\text{C}_2\text{H}_3\text{O}_2)_2$ completely dissociates, how many moles of ions are formed in total?
 - 1 mole
 - 2 moles
 - 3 moles
 - 4 moles
- The solubility product (K_{sp}) is used to determine how much a solid will dissolve in water. Using [Appendix J of OpenStax Chemistry 2e](#), find the value of K_{sp} for Strontium Carbonate (SrCO_3).
 - 3.0×10^{-4}
 - 3.6×10^{-5}
 - 7.0×10^{-10}
 - 4.0×10^{-7}
- Which of the following compounds has the lowest solubility based on its K_{sp} ? Use [Appendix J of OpenStax Chemistry 2e](#) to determine K_{sp} values.
 - BaF_2
 - CaF_2
 - MgF_2
 - NaF
- Without using a table, determine which compound below has the greatest solubility.
 - Na_2SO_4
 - CaSO_4
 - PbSO_4
 - CuSO_4
- What must be true to directly compare K_{sp} to molar solubility (S)?
 - The temperature of the solvent must be low
 - The stoichiometry of the compounds compared must be the same
 - The cation charge must be +2
 - The mass of the solute must be low
- Which of the answers below best describes the difference between K_{sp} (solubility product) and S (molar solubility)?
 - They are the same
 - K_{sp} is always smaller
 - S is a physical value, while K_{sp} is a mathematical constant
 - Only soluble products have a K_{sp}
- Consider the following reaction:
$$\text{AgCl(s)} \rightleftharpoons \text{Ag}^+ + \text{Cl}^-$$
What will occur if Cl^- is added to the solution?
 - Reaction will shift to the right
 - Reaction will shift to the left
 - No change
- What is the common ion effect?
 - When an ion that is part of a compound is present, solubility will be lower
 - When an ion that is part of a compound is present, solubility will be higher
 - Solubility depends on the temperature
 - All ions behave the same