Solubility Equilibrium

Key concepts:

* Many ionic compounds are only slightly soluble in water and equations are written to represent the equilibrium between the compound and the ions present in a ***saturated*** aqueous solution.
* The **solubility product** constant (*K*sp) is related to the solubility of an ionic solute, but *K*sp and **Molar Solubility** are not the same thing.
* The common ion effect affects solubility equilibria.
* The solubility of a slightly soluble ionic compound is lowered when a second solute that contains a common ion interacts with the solution. (Predicted by Le Chatlier)
* When mixing two solutions a precipitate may occur if the concentrations of the ions is high enough.
* *Qs*p is the trial ion product and is based on initial concentration of the ions in of the reaction (after mixing!).
* To predict if a precipitation occurs:

 - Precipitation *should* occur if *Q*sp > *K*sp.

 - Precipitation *cannot* occur if *Q*sp < *K*sp.

 - A solution is *just saturated* if *Q*sp = *K*sp.

Try These:

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