Solubility Product

The solubility of a substance is really an equilibrium situation, most substances will dissolve to some extent, even substances that we have called insoluble. We can define a standard equation for the solubility equilibrium. The solubility product is always defined as a solid breaking apart. The other term that we need to define is solubility. Solubility is the amount of substance that will actually dissolve.

$$AgC_2H_3O_2 <=> Ag^+ + C_2H_3O_2^- \quad K_{sp}=[Ag^+][C_2H_3O_2^-]$$

If the solubility of silver acetate is 4.4e-2 what would the K_{sp} be?

$$AgC_2H_3O_2 <=> Ag^+ + C_2H_3O_2^-$$

	0	0
-4.40E-04	+4.4E-4	+4.4E-4
	4.40E-04	4.40E-04

$$K_{sp}=[Ag^+][C_2H_3O_2^-]$$

$$K_{sp}=[4.4E\text{-}4][4.4E\text{-}4]$$

$$K_{sp}=1.9E\text{-}7$$

Ex:

Ex: