Chapter 17: Additional Aqueous equilibria

1. Write a balanced chemical equation for the equilibrium when these slightly soluble salts are added to water, and then write the K­­­sp expression.
   1. BaCrO4
   2. Mn(OH)­2
   3. Ag2SO4
   4. AuCl3
2. A saturated solution of silver arsenate (Ag3AsO4) contains 8.5 x 10-6 g Ag3AsO4 per mL. Calculate the Ksp of silver arsenate. Assume no other reactions other than Ksp reaction.
3. The solubility of lead (II) chloride in water is 1.62 x 10-2 M. Calculate the Ksp, assuming no other reaction.
4. What is the molarity of Zn2+ ion in a saturated solution of ZnCO3 that contains 0.25 M Na2CO3? Ksp ZnCO3=1.5 x 10-11.

1. Calculate the solubility of ZnCO3 in water, 0.050 M Zn(NO3)2, and 0.025 M K2CO3.
2. Will AgCl precipitate from a solution containing 1.0 x 10-5 M Ag+ and 1.0 x 10-5 M Cl-?

Ksp AgCl = 1.8 x 10-10.