

Chemistry 222  
**Chapter 19 - Solubility Equilibria, et al**  
Petrucci/8th Ed.

THINGS TO KNOW - THINGS TO DO

We will cover only that part of the chapter dealing with solubility equilibria, sections 19.1 to 19.5, pages 741-775.

The first two paragraphs of the SUMMARY on page 773 covers the needed material for solubility equilibria. The KEY TERMS list on page 774 is responsible for the associated terms in the KEY TERMS list on page 774.

You should know how to use the following equations:

For a slightly soluble salt,  $M_xA_y(s) \rightleftharpoons x M^+_{(aq)} + y A^-_{(aq)}$

$K_{sp} = [M^+]^x[A^-]^y$        $M^+$  and  $A^-$ , the cation and anion, will have the appropriate charge dictated by the formula of the salt.

Comparison of  $K_{sp}$ , the solubility product, with  $Q$ , the reaction quotient can predict whether precipitation will occur.

If  $Q > K_{sp}$ , the precipitation occurs.

If  $Q < K_{sp}$ , precipitation will not occur.

If  $Q = K_{sp}$ , the dissolved solute is in equilibrium with undissolved solid.

The questions and problems posed throughout the sections of the chapter we cover should be done as well as questions 1 through 14 in the Review Questions on pages 774-775.