

CHAPTER 16 LEARNING OBJECTIVES

Learning Objectives

You should be able to:

1. Describe the characteristics that define saturated, unsaturated and supersaturated solutions.
2. Define the meaning of the terms: soluble, slightly soluble and insoluble as used in your text.
3. Write the solubility-product constant (K_{sp}) expression for dissolving of any solid salt in water.
4. Calculate K_{sp} from solubility data and solubility from the value of K_{sp} .
5. Describe and calculate the effect of an added common ion on the solubility of a slightly soluble salt.
6. Compare the value of the reaction quotient Q_{sp} to given K_{sp} data in order to predict whether or not precipitation will occur upon mixing of two salt solutions.
7. Explain how changing the pH of a solution may alter the solubility properties of salts dissolved in it. Calculate the solubility of a metal hydroxide salt in buffered acidic or basic solution.