

Chapter 13 The Properties of Mixtures: Solutions and Colloids

This chapter has many great applications and several of the concepts expected to be understood by AP students for the AP Exam including how to interpret solubility curves and how to explain the properties of a solution from the curve, such as is it saturated or unsaturated, and when crystallization will occur.

Students are expected to be able to explain why some solutions form exothermically and others endothermically. This requires an understanding of the solute-solute intermolecular forces as well as when the interaction of forces of the solvent-solute molecules are greater. Other important concepts for AP students to grasp are the solubility of both solids and gases in liquids as well as the role of temperature in these interactions.

Calculations reviewed in this chapter include how to change easily from one type of concentration unit to another such as: molarity to molality, the use of molality in colligative property problems, and how to calculate molar mass from colligative experimental data.