

CHAPTER OVERVIEW

7: Solutions and Colligative Properties

Thus far we have studied energy from work and heat and used that knowledge to understand chemical reactions. We can even calculate a reaction yield without actually going into the lab to measure it! However, all of these have been applied solely to the gas phase, which is attractive because we don't have to worry about the energetics of intramolecular interactions (ideal gases don't interact). Here we move on, as many important chemical phenomena occur in liquids and solids such as the synthesis of DNA in your living cells and the geological creation of oil from ancient carbon. How do the thermodynamic principles we have studied thus far change for liquids and solids? To answer, we will start with the liquid phase analogy of a gas expanding, which is the mixing of salt in water.

[7.1: Partial Vapor Pressure](#)

[7.2: Partial Pressure Measurements and Raoult's Law](#)

[7.3: Excess Functions and Ideal Solutions](#)

[7.4: Henry's Law, Activity, and Ideal-Dilute Solutions](#)

[7.5: Colligative Properties](#)

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