CHAPTER OVERVIEW

8: Quantities in Chemical Reactions

So far, we have talked about chemical reactions in terms of individual atoms and molecules. Although this works, most of the reactions occurring around us involve much larger amounts of chemicals. Even a tiny sample of a substance will contain millions, billions, or a hundred billion billions of atoms and molecules. How do we compare amounts of substances to each other, in chemical terms, when it is so difficult to count to a hundred billion billion? Actually, there are ways to do this, which we will explore in this chapter. In doing so, we will increase our understanding of stoichiometry, which is the study of the numerical relationships between the reactants and the products in a balanced chemical reaction.

8.1: Climate Change - Too Much Carbon Dioxide
8.2: Making Pancakes- Relationships Between Ingredients
8.3: Making Molecules- Mole-to-Mole Conversions
8.4: Making Molecules- Mass-to-Mass Conversions
8.5: Stoichiometry
8.6: Limiting Reactant and Theoretical Yield
8.7: Limiting Reactant, Theoretical Yield, and Percent Yield from Initial Masses of Reactants
8.8: Enthalpy Change is a Measure of the Heat Evolved or Absorbed