

CHAPTER OVERVIEW

4: The Mole and Measurements in Chemistry

In the preceding chapters, you should have gained an appreciation of the scale of chemistry, with regard to the physical size and mass of individual atoms and compounds. Because a typical samples of a substance (such as a copper penny) contains so many atoms, chemistry have defined a unit by which we can easily county these large numbers; this units is called a mole. However, we will see that a mole is more than a just a large number; a mole is also directly related to the atomic weight of atoms and compounds and the mole concept will give us the tools to consider chemical reactions in a quantitative manner. This chapter serves as an introduction to the concepts and we will continues to build upon this foundation when we consider stoichiometry in the following chapters.

[4.1: Measurement and Scale - The Mole Concept](#)

[4.2: Molar Mass](#)

[4.3: Mole-Mass Conversions](#)

[4.4: Percentage Composition](#)

[4.5: Empirical and Molecular Formulas](#)

[4.S: The Mole and Measurements in Chemistry \(Summary\)](#)

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