

CHE 101 – Chapter 7 – Study Guide

Terms: Avogadro's number, empirical formula, molecular formula, mole, molar mass, percent composition, atom, molecule.

Avogadro's number (Mole): Understand the definition of a mole (1 mole = 6.02×10^{23} items).

Ex: 1 mole of apples = 6.02×10^{23} apples

1 mole of atoms = 6.02×10^{23} atoms

1 mole of molecules = 6.02×10^{23} molecules

Molar mass: the atomic mass of an element in grams contains Avogadro's number of atoms. You should be able to calculate the molar mass of any element or compound using this definition and the atomic mass information found in the periodic table on the inside front cover of your book.

Conversions: You should know how to convert:

grams \leftrightarrow moles

grams \leftrightarrow atoms

moles \leftrightarrow atoms

atoms \leftrightarrow molecules