

Chapter 2: Atoms, Molecules & Ions

Concepts:

Rutherford Experiment

atomic number, mass number

nuclide symbol for atom + ions

Isotope

basics of periodic table: groups periods

metals non metals metalloids

names of groups - alkali metal, etc.

ionic vs. covalent compounds

formula unit vs molecule

formation of anions and cations

nomenclature

formula weight

empirical formula

Calculations:

atomic weight using % abundance

weighted average of isotopic masses

units of atomic weight: amu/atom or g/mol

Avogadro's number

atoms \leftrightarrow moles of atoms \leftrightarrow grams

\uparrow molecules \leftrightarrow moles of molecules \leftrightarrow grams

formula weight

% composition by mass & empirical formula