

CHM1025
Review Topics Module 5

1. Classification of Matter:
 - a. solid, liquid and gas-know the names of the changes in physical state, e.g. melting, freezing, etc..
 - b. characteristics of solids, liquids and gases.
 - c. substance (single formula, element or compound), and mixtures
 - d. mixtures (homogeneous or solutions and heterogeneous). Know how to distinguish them. If liquid the solutions are clear. Alloys (mixtures of metals) and mixtures of gases are homogeneous.
2. The atom: nucleus, protons, neutrons and electrons. Know how to determine atomic numbers and mass numbers. Know the charges and masses of each particle.
3. Isotopes-Determination of number of p^+ , n^0 and e^- from the isotope symbol and the atomic number and mass numbers.
4. Know the names and symbols of elements atomic # 1-36, group IA-VIIIA, IB, IIB, Ni, Pd, Pt, U, Pu.
5. Periodic Table: Groups and Periods. Groups are families and have similar chemical properties arranged in order of increasing atomic number.
6. Know the names of groups and sections in the periodic table.
7. Metals, nonmetals and metalloids. Metals are to the left of staircase, nonmetals to the right. Metalloids are along staircase. Know their properties.
8. Know the monoatomic, diatomic and polyatomic elements and the elements that are solids, liquids and gases at room temperature.
9. Calculation of the weighted average atomic mass of elements based on masses and % abundances of isotopes of the element.
10. Physical and Chemical Properties
11. Physical and Chemical Changes