CHEMISTRY CHAPTER 2 NOTETAKING GUIDE

2.1 CLASSIFYING MATTER

Pure Substances

1. Elements
2. Compounds

Mixtures

1. Heterogeneous Mixtures
2. Homogeneous Mixtures

Solutions, Suspensions, and Colloids

1. Solutions
2. Suspensions
3. Colloid

2.1 PHYSICAL PROPERTIES

Examples of Physical Properties

1. Viscosity
2. Conductivity
3. Malleability
4. Hardness
5. Melting and Boiling Point
6. Density

EXAMPLES

1. What is the density of a rock with a mass of 25.2 g and a volume of 6.25 cm3?
2. Calculate the volume in mL occupied by a certain object having a density of 8.00 g/mL and a mass of 25.0 g.
3. Calculate the mass in grams of benzene having a density of 0.880 g/mL and a volume of 125 mL.

1. What is the density of an object with a mass of 15.6 g and a volume of 35.0 mL?
2. The density of Aluminum is 2.70 g/cm3. What is the mass of a piece of aluminum that occupies a volume of 60.0 cm3?
3. Calculate the volume in mL of 360. g of liquid whose density is 1.20 g/mL.

Using Physical Properties

1. Using Properties to Identify Materials
2. Using Properties to Choose Materials

Using Properties to Separate Mixtures

1. Filtration
2. Distillation

Recognizing Physical Changes

2.3 Chemical Properties

Observing Chemical Properties

1. Flammability
2. Reactivity

Recognizing Chemical Changes

1. Change in Color
2. Production of a Gas
3. Formation of a Precipitate
4. Energy absorbed/Released

Is a Change Chemical or Physical?

Identify the following as chemical or physical properties

a. The boiling point of a certain alcohol is 78oC

b. Diamond is very hard

c. Sugar ferments to form alcohol

d. a metal wire conducts and electric current

Identify the following as a physical or chemical change

a. Iron metal is melted

b. Iron combines with oxygen to form rust

c. Wood burns in air

d. A rock is broken into small pieces