

GENERAL CHEMISTRY

STANDARD 1.13

1.13: Differentiate between physical and chemical properties and changes

PHYSICAL VS CHEMICAL PROPERTIES

- Physical Properties
 - Characteristics of matter
 - Measured or observed without changing composition of matter
 - Used to describe and organize matter

- Chemical Properties
 - Characteristics of matter
 - Only become evident during or after a chemical reaction
 - Only observed when changing a chemical's identity
 - Used to describe and organize matter

PHYSICAL VS CHEMICAL PROPERTIES

- Physical Properties
 - Characteristics of matter
 - Measured or observed without changing composition of matter
 - Used to describe and organize matter
 - Examples include color, odor, shape, volume, phase of matter

- Chemical Properties
 - Characteristics of matter
 - Only become evident during or after a chemical reaction
 - Only observed when changing a chemical's identity
 - Used to describe and organize matter
 - Examples include reactivity with oxygen, heat of combustion, pH

PHYSICAL VS CHEMICAL CHANGES

- Physical Changes
 - Changes affecting chemical form, but not chemical composition
 - Can be undone with other physical changes
 - Examples include cutting, phase changes, and mixing
- Chemical Changes
 - Changes of chemical composition
 - Can not be undone, but can get original chemical back with another chemical change
 - Examples include cooking (most cases), rusting, oxidizing