

GENERAL CHEMISTRY

STANDARD 1.16

1.16: Classify mixtures as homogeneous or heterogeneous

TYPES OF MIXTURES

- Homogeneous Mixture
 - Mixture is uniform throughout
 - Every sample is the same as every other sample
 - Examples include salt water, blood plasma, vinegar, air (by layer)

- Heterogeneous Mixture
 - Mixture is not uniform throughout
 - A certain sample will have different constituents and/or different characteristics than other samples
 - Examples include a tossed salad, pepperoni pizza, oil & water, soil

TYPES OF HOMOGENEOUS MIXTURES

- Homogeneous mixtures can be further classified by particle size
 - Solution – smallest particle size
 - Particles not visible to the naked eye
 - Example: Salt Water
 - Colloid – larger particle size, roughly between two and 1000 nm
 - Colloids do not separate on standing
 - Mixture appears murky, but individual particles very difficult to discern
 - Colloids scatter light (Tyndall Effect)
 - Examples: Milk, fog
 - Suspension
 - Largest particle size
 - Particle size greater than 1000 nm
 - Particles large enough to see with naked eye
 - Particles will settle out of suspension over time
 - Examples include blood, muddy water