

A hand is pouring a yellow liquid from a test tube into a flask that already contains a brown liquid. The background is a soft, warm gradient.

# Types of Mixtures

# Solutions

A background image showing a hand pouring a yellow liquid from a graduated cylinder into a beaker. The scene is set in a laboratory or classroom environment with a white surface.

- Definition – homogeneous mixture
- Composed of two or more substances and have variable composition BUT
- The particles are distributed evenly throughout each other SO
  - the composition is uniform
  - the solution appears to be one substance

# Parts of Solutions

A background image showing a person's hands pouring a yellow liquid from a graduated cylinder into a beaker. The scene is set against a warm, orange-toned background.

- A solution consists of a ***solute*** dissolved in a ***solvent***.
- Solute - substance that IS dissolved by another
- Solvent
  - substance that dissolves another
  - continuous phase - salt dissolved in water appears to be a liquid

# Mechanical Mixtures

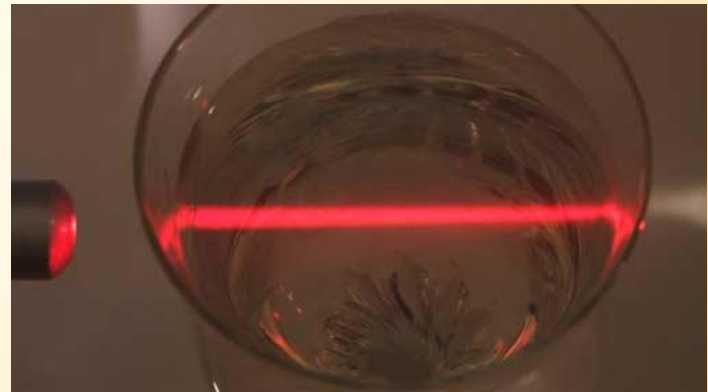
A background image showing a person's hands in a lab setting. One hand holds a graduated cylinder, pouring a dark liquid into a flask held by the other hand. The scene is dimly lit, focusing on the glassware.

- Heterogeneous - not uniform throughout
  - consist of two or more visible parts or phases
  - the phases often separate over time
- Types
  - Suspensions
  - Colloidal dispersions

# Suspensions

**Definition - mixture in which particles of a liquid or solid are dispersed throughout a liquid**

- Appear cloudy
- Particles are small enough to be "held" or suspended by the liquid for a while
- Particles are large enough that they eventually settle and the phases separate
- Particles are large enough to be filtered
- Particles reflect light making a beam of light visible (Tyndall Effect)
  - examples: calamine lotion, silver polish, liquid shoe polish



# Colloidal Dispersions

A person is shown pouring a dark, opaque liquid from a beaker into a flask. The liquid has a slightly cloudy or heterogeneous appearance, characteristic of a colloidal dispersion. The background is a soft, warm-toned gradient.

- Appears slightly cloudy; may appear heterogeneous
- Particles are small enough to stay suspended and not settle on standing
- Particles are large enough to show Tyndall effect
- Examples
  - Jello; Fog; Mayonnaise; Whipped cream