

GENERAL CHEMISTRY

STANDARD 10.1

10.1: Differentiate between the solute and solvent in a solution and compare electrolytes to nonelectrolytes

DEFINITIONS

- **Solution:** A homogeneous mixture of two or more substances with the smallest particle size
- **Solute:** The substance being dissolved in a solution
- **Solvent:** The substance doing the dissolving in the solution
- **Suspension:** A liquid mixture where the particles are visible to the naked eye
- **Colloid:** A liquid mixture whose particles are smaller than a suspension, larger than a solution, but still scatter light
- **Electrolyte:** A solution that can conduct electricity

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EXAMPLES

- Determine the solute and solvent in the following situations:
 - A sugar cube dropped into a glass of water
 - Solute: Sugar Solvent: Water
 - Concentrated orange juice mixed with water
 - Solute: Orange Juice Solvent: Water
 - Water mixed with ground coffee to make hot coffee
 - Solute: Ground Coffee Solvent: Water
 - Carbon dioxide dissolved in water to create soda pop
 - Solute: Carbon Dioxide Solvent: Water

Water is also known as the universal solvent

TRY IT YOURSELF

- Determine the solute and solvent in the following situations:
 - Salt dissolved in water to make salt water
 - Water evaporating into the air to create humidity
 - Food coloring mixed with water to create red water

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TRY IT YOURSELF SOLUTIONS

- Determine the solute and solvent in the following situations:
 - Salt dissolved in water to make salt water
 - **Solute: Salt** **Solvent: Water**
 - Water evaporating into the air to create humidity
 - **Solute: Water** **Solvent: Air**
 - Food coloring mixed with water to create red water
 - **Solute: Food Coloring** **Solvent: Water**