



# MIXTURES AND SOLUTIONS

## MIXTURES

| Mixture            | Homogeneous | Heterogeneous |
|--------------------|-------------|---------------|
| air we breathe     | ✓           |               |
| vinegar            | ✓           |               |
| milk               |             | ✓             |
| water and ink      | ✓           |               |
| water and oil      |             | ✓             |
| cinnamon and sugar |             | ✓             |

- The soluble substance that dissolves in a solvent.
- The result of mixing two or more substances while a chemical reaction does not happen.
- A homogeneous mixture of a solvent and one or more solutes.
- The component with the largest amount in a solution in which a solute can be dissolved.
- The components of mixtures keep all of their original properties.
- The component that is in the largest quantity in the mixture is called the solvent.
- We can see the components of heterogeneous mixtures.
- To find the total mass of a solution we need to know the mass of the solvent and the mass of the solute.
- During dissolving, the mass of the solute is conserved.
- $\text{Mass of water} = \text{mass of the solution} - \text{mass of the powdered sugar}$
- $\text{Mass of the solution} = \text{mass of the water} + \text{mass of powdered}$
- $\text{Mass of water} = \text{mass of the new} - \text{mass of the solution}$

## SOLUTIONS

- After dissolving sugar in water, the sugar still exists in the water.
- When a solution has a small quantity of solute dissolved in it. It is called dilute.
- When a solution has a very large quantity of solute dissolved. It is called concentrated.
- Water is not the only known solvent.
- Water is sometimes called “the universal solvent” because many substances dissolve in it.

