

Matter

In science, we study matter and its properties to understand how different substances interact and change. Matter is anything that has mass and volume. It exists in three main states: solid, liquid, and gas. Each of these states has different properties, such as density, which is the amount of mass per unit of volume.

When studying matter, we can also look at substances in different material systems. These systems can be heterogeneous or homogeneous. A heterogeneous mixture is one where the components are not evenly distributed, like a salad, while a homogeneous mixture has a uniform composition throughout, like salt dissolved in water. The solvent is the substance that dissolves the solute, which is the substance being dissolved, to form a solution.

Filtration and decantation are methods used to separate substances in a mixture. Filtration uses a filter to separate solids from liquids, while decantation involves pouring off a liquid, leaving the solid behind. Sometimes, when you want to separate a solute from a solution, you can use distillation, a process that separates liquids based on their different boiling points. Crystallisation is another method where the solute in a solution forms solid crystals as the solvent evaporates.

In experiments, it's important to understand how to measure and calculate the mass, volume, and density of substances. For example, if you want to determine the concentration of a solution, you can calculate how much solute is dissolved in a certain volume of solvent.

Understanding these terms and processes helps us describe and analyse the material systems around us, whether in a laboratory or in everyday life.

Questions

What is matter?

What is density?

How do we work out the concentration of a solution?

What are the three main states of matter?

What two types of material system are there?

What methods can we use to separate substances in a mixture?

Why do we study matter and its properties?

What nouns and verbs are used in the text?

| Nouns | Verbs |
|-------|-------|
| | |