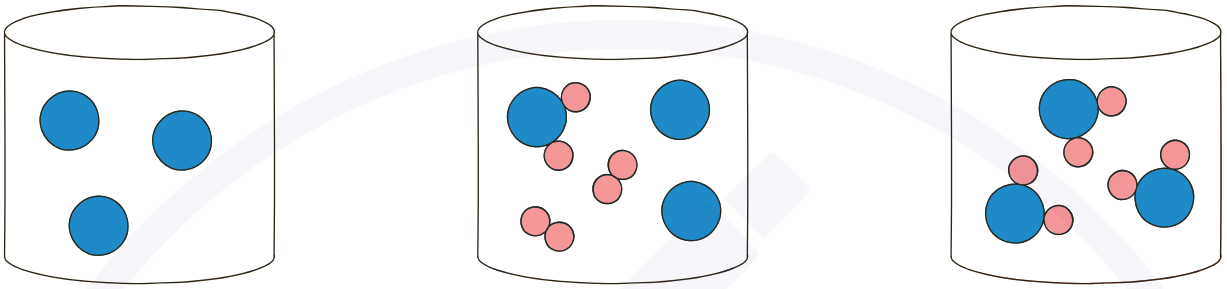
ELEMENTS, COMPOUNDS, AND MIXTURES

Key Concepts

- Elements are pure substances made of one type of atom.
- Compounds are made of two or more elements chemically combined.
- Mixtures are made of substances that are physically combined and can be separated.



ELEMENTS MIXTURE COMPOUND

Key Facts to Remember

- The periodic table lists all elements, organized by increasing atomic number, and grouped by similar chemical properties.
- Compounds are pure substances formed when two or more elements chemically combine in fixed ratios (e.g., H_2O consists of two hydrogen atoms bonded to one oxygen atom).
- Mixtures consist of two or more substances physically combined, meaning they can be separated by physical methods like filtration or evaporation.
- Compounds have properties different from their constituent elements, while mixtures retain the properties of their individual components.
- Examples: Air is a mixture of gases; water (H_2O) is a compound.

Quick Questions

1. What is the difference between a compound and a mixture?
2. Is water an element or a compound?
3. How can you separate a mixture of sand and water?
4. What property of mixtures allows them to be separated by physical methods?
5. Give an example of a mixture you use every day.
6. What happens to the properties of elements when they form a compound?
7. How can you confirm if a substance is a pure compound or a mixture?

Fun Fact

Gold is so soft that you can mold it with your hands if it's pure!