

**Separation techniques in chemistry**

Read the following text on separation techniques and answer the questions below. Check the list to understand the text better.

Separation techniques in chemistry are essential for isolating components from mixtures. Common methods include filtration, which removes solid particles from liquids or gases; distillation, used to separate liquids with different boiling points; and chromatography, which separates components based on their movement through a medium. Centrifugation relies on centrifugal force to separate substances with different densities. Evaporation is used to separate dissolved solids from liquids, and sublimation is used when a substance transitions directly from solid to gas. These methods are crucial for purifying substances, analyzing compounds, and preparing samples in laboratories and industrial processes.



Words from the text	Different explanation
essential	important
to separate	to break up
through	across
density	mass per unit volume
dissolved	mixed
crucial	important
to purify	to make something purer

Questions:

1. What is the purpose of separation techniques in chemistry?
2. How does distillation work to separate liquids?
3. What is the principle behind centrifugation?

- | | |
|--|--|
| | 4. Which separation technique involves a substance transitioning directly from solid to gas? |
|--|--|

Answer key

1. **What is the purpose of separation techniques in chemistry?**
to isolate individual components from mixtures
2. **How does distillation work to separate liquids?**
separates liquids based on their different boiling points
3. **What is the principle behind centrifugation?**
applying centrifugal force to a mixture, causing components with different densities to separate
4. **Which separation technique involves a substance transitioning directly from solid to gas?**
direct transition from a solid state to a gas without passing through the liquid phase