

1. Which method is used to separate liquids with very similar boiling points?

- A. Filtration
- B. Simple distillation
- C. Fractional distillation
- D. Evaporation

2. Simple distillation is mainly used when:

- A. Boiling points are similar
- B. Boiling points are very different
- C. Liquids are insoluble
- D. Pressure is high

3. Vapour pressure of a pure liquid depends on:

- A. Concentration
- B. Temperature
- C. Volume
- D. Color

4. Raoult's law relates vapour pressure to:

- A. Density
- B. Mole fraction
- C. Volume
- D. Mass

5. A volatile substance is one that:

- A. Does not evaporate
- B. Evaporates easily
- C. Is solid
- D. Is heavy

6. Boiling occurs when:

- A. Temperature decreases
- B. Pressure decreases
- C. Vapour pressure = external pressure
- D. Liquid freezes

7. The more volatile a liquid is, the:

- A. Higher boiling point
- B. Lower vapour pressure
- C. Lower boiling point
- D. Higher density

8. In fractional distillation, the column provides:

- A. Low pressure
- B. Large surface area
- C. Cooling only
- D. No condensation

9. The vapour in distillation is richer in:

- A. Less volatile component
- B. More volatile component
- C. Equal components
- D. Non-volatile component

10. Adding a non-volatile solute causes:

- A. Decrease boiling point
- B. Increase boiling point
- C. No change
- D. Freezing

11. Mole fraction is:

- A. Has units
- B. A ratio
- C. A temperature
- D. A pressure

12. In the condenser, water should enter from:

- A. Top
- B. Bottom
- C. Middle
- D. Side

13. Boiling stones are added to:

- A. Increase heat
- B. Prevent bumping

C. Change pressure

D. Cool liquid

14. The thermometer bulb should be placed:

A. Above apparatus

B. Below side arm

C. Outside system

D. In water

15. Fractional distillation works by:

A. One-step heating

B. Repeated evaporation and condensation

C. Freezing

D. Filtering

Answer Key:

1. C

2. B

3. B

4. B

5. B

6. C

7. C

8. B

9. B

10. B

11. B

12. B

13. B

14. B

15. B