

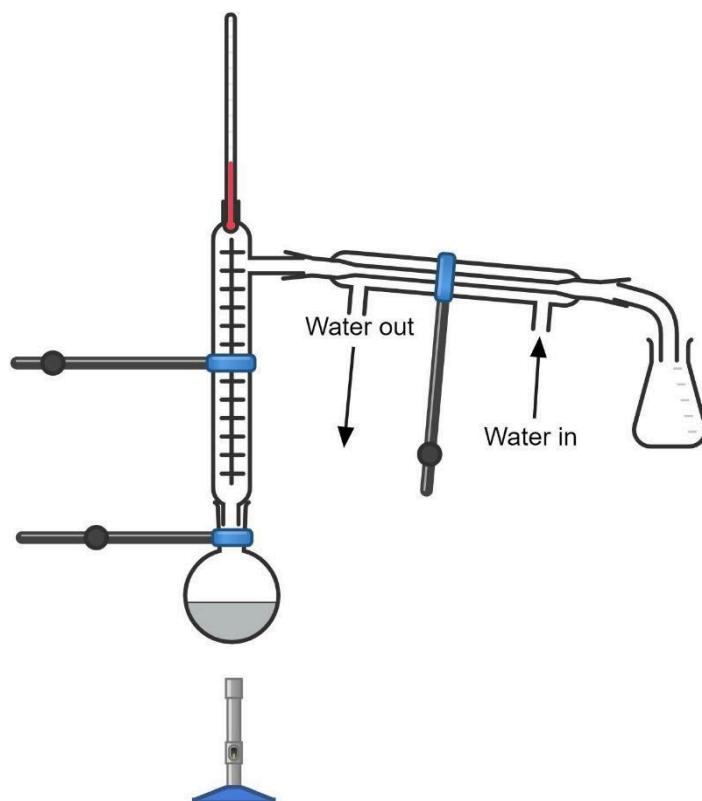
## **D-7 Fractional distillation**

### Equipment and chemicals

- Pear-shaped flask (50ml)
- Fractionating column
- Still head
- Thermometer (0 - 100°C) and holder
- Liebig condenser
- Delivery tube (Quickfit at both ends)
- Keck clips, as necessary
- Conical flask (with Quickfit neck)
- Bunsen burner
- Stand, boss and clamp x 2
- Anti-bumping granules
- Ethanol (30% v/v with water)

### Procedure

1. Half-fill the pear-shaped flask with 30% ethanol.  
Add a few anti-bumping granules.
2. Set up the apparatus as shown in the diagram.
3. When heating take care to make sure that the mixture does not bump.
4. You can show the difference between the starting material and the distillate: the distillate will burn and the starting material does not.



## Clean-up

The set-up can be re-used.

## Hazards

Ethanol (30% v/v in water): currently not classified as hazardous at this concentration

Ethanol (distillation product): highly flammable liquid and vapour. Harmful if swallowed. May cause damage to organs.

