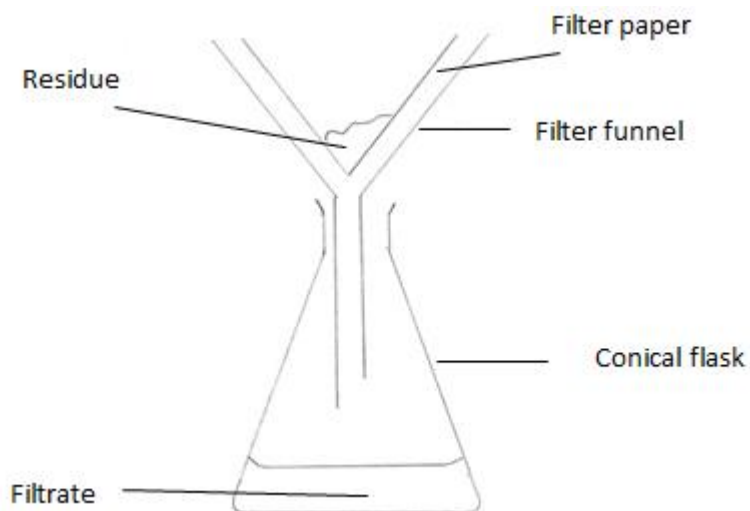
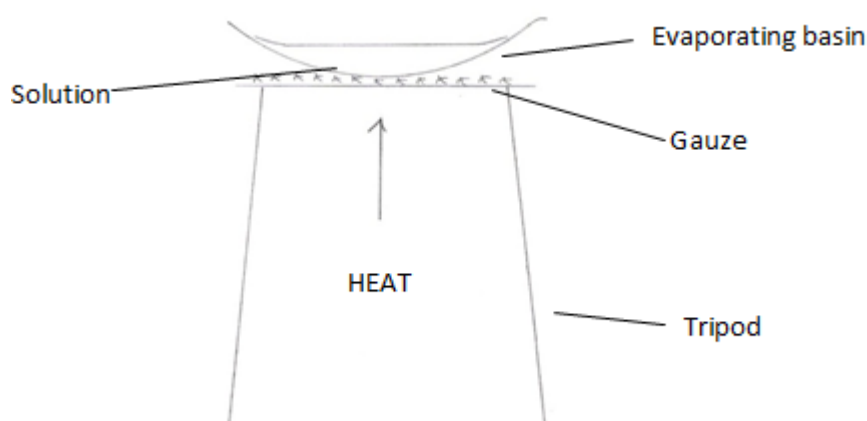


# 1 Methods of separating and purifying substances

1. A pure substance contains only one substance e.g. pure water, pure sodium chloride.
2. A mixture contains two or more substances not chemically bonded [that can be separated by physics means].
3. A pure substance will have a sharp melting point.
4. Filtration is used to separate an insoluble solid from a liquid



5. Crystallisation is used to obtain the solute from a solution.



6. Distillation – works by evaporation followed by condensation
7. Fractional distillation separates a mixture of liquids with different boiling points.
8. In paper chromatography, the mobile phase is the solvent
9. In paper chromatography, the stationary phase is water attached to the paper
10. In paper chromatography, the  $R_f$  value =  $\frac{\text{distance travelled by spot}}{\text{distance travelled by solvent}}$
11. Potable water is water that is fit to be drunk.
12. The main stages of water purification are sedimentation, filtration and chlorination.
13. Chlorine is added to drinking water to kill microbes that cause disease.
14. Water for analysis must not contain dissolved salts that would interfere with the test result.