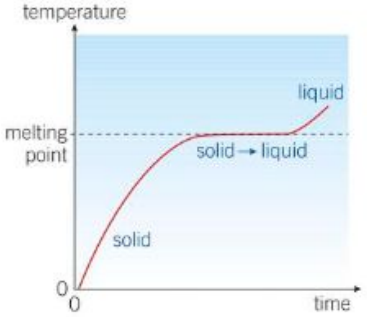
Y9 Springboard - Purity and Mixtures

Lesson 1 - 2 - Pure and Impure

Keywords:

Pure: A substance containing only one compound or atom, has a constant physical properties.

Alloy: A mixture of a metal and at least one other substance, these strengthen the metal and give it special properties.



Minimum Knowledge

The melting point of a pure substance is at a constant temperature, this can be used to see if the substance is pure.

Practical Skills

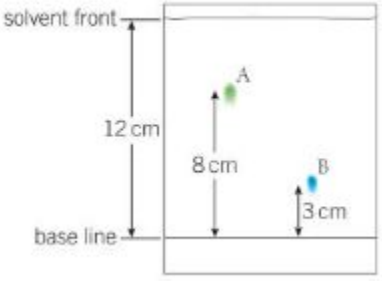
Testing the melting point should be done by: Heating the substance slowly, using only a small

Lesson 5 - 6 - Chromatography

Keywords:

Stationary Phase: The part of the chromatography set up that doesn't move the paper in paper chromatography or the layer in TLC.

Mobile Phase: A solvent that pulls the compound along separating out the parts of the mixture.



Equations:

R_f = Solute distance / Solvant Distance

Never larger than 1

Minimum Knowledge

Chromatography can be used to separate out the substances in ink or the parts of a liquid mixture.

Practical Skills

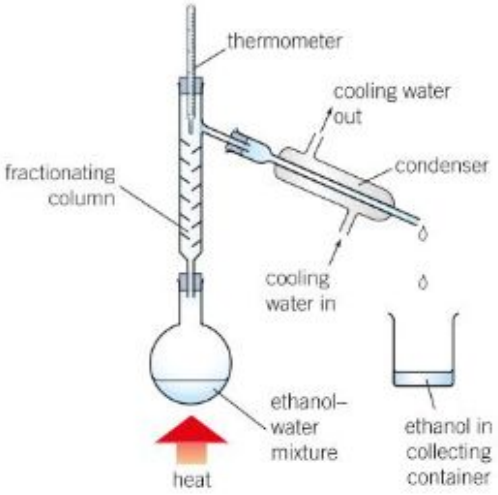
Make sure that the lines and markings are in pencil so that they don't mix with the solvent. The solvent should be below the first line.

Lesson 3 - 4

Keywords:

Simple Distillation - Separating a mixture of liquids by heating them until the liquid with the lowest boiling point evaporates.

Fractional Distillation - Separating a mixture of liquids, a fractionating column is added to get a better separation of temperatures.



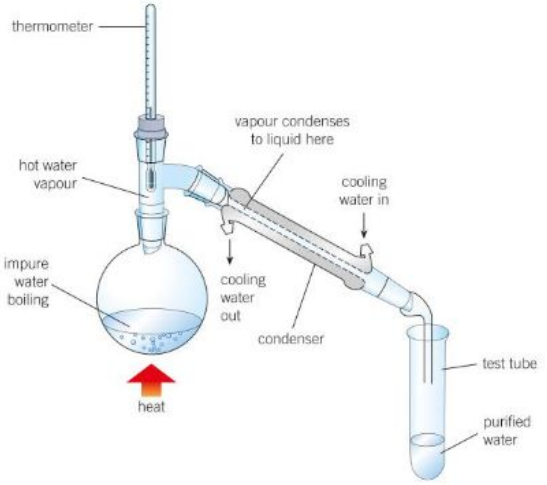


Table 1 *Different separation methods.*

Mixture contains	Separation method
insoluble and soluble substances	dissolving followed by filtration
a solute dissolved in a solvent (a solution)	crystallisation to obtain the solute, simple distillation to obtain the solvent
two or more substances in the liquid state	fractional distillation
coloured soluble substances	paper chromatography or thin-layer chromatography