

**A pure substance**

- consists of only one type of element or compound
- has a fixed melting and boiling point
- Cannot be separated
- Oxygen, carbon, carbon dioxide, sodium chloride (common salt)

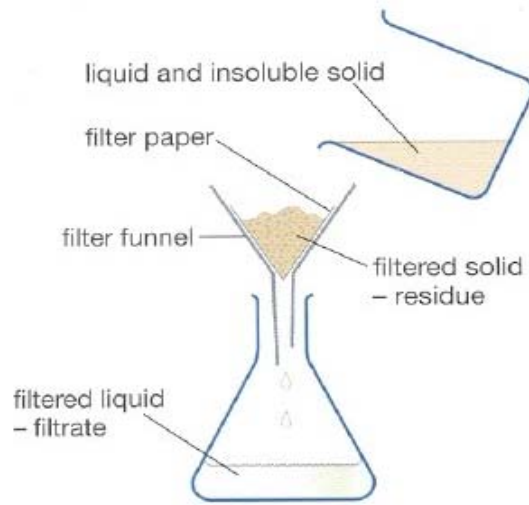
**Mixtures**

- may be separated due to differences in their physical properties
- Does not have a fixed melting or boiling point
- Air, fruit juice, sea water and milk

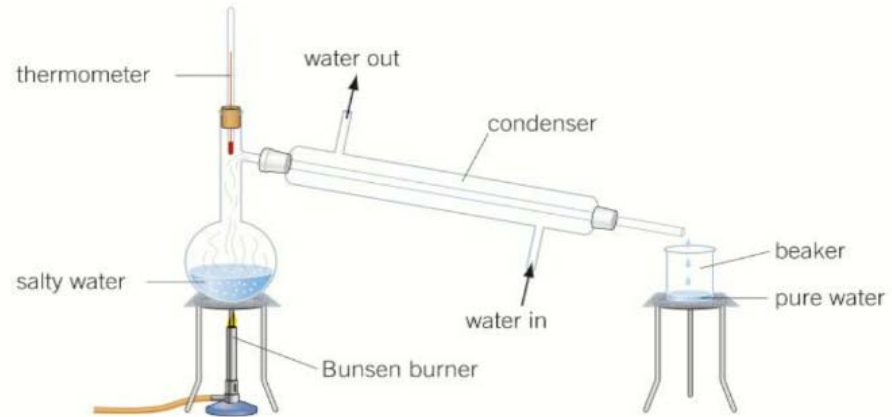
**Key Terms:**

<b>Chromatogram.</b>	An image obtained from chromatography.
<b>Chromatography.</b>	A technique used to separate mixtures of liquids that are soluble in the same solvent.
<b>Dissolving</b>	The mixing of a substance (the solute) with a liquid (the solvent) to make a solution.
<b>Distillation</b>	Separating substances by boiling and condensing liquids.
<b>Evaporate</b>	A way to separate a solid dissolved in a liquid by the liquid turning into a gas.
<b>Filtrate</b>	The liquid or solution that collects in the container after the mixture has passed through the filter paper.
<b>Filtration</b>	A way of separating pieces of solid that are mixed with a liquid or solution by pouring through filter paper.
<b>Impure</b>	A substance is impure if it has different substances mixed with it.
<b>Insoluble</b>	A substance that cannot dissolve in a certain solvent is insoluble in that solvent.
<b>Mixture</b>	Two or more pure substances mixed together, whose properties are different to the individual substances.
<b>Pure</b>	A substance is pure if it has no other substances mixed with it.
<b>Residue</b>	The solid that collects in the filter paper during filtration.
<b>Saturated</b>	A saturated solution is one which no more solute can dissolve.
<b>Soluble</b>	Property of a substance that will dissolve in a liquid.
<b>Solubility</b>	Maximum mass of solute that dissolves in a certain volume of solvent.
<b>Solution</b>	Mixture formed when a solvent dissolves a solute
<b>Solute</b>	The solid or gas that dissolves in a liquid.
<b>Solvent</b>	A substance, normally a liquid, that dissolves another substance.

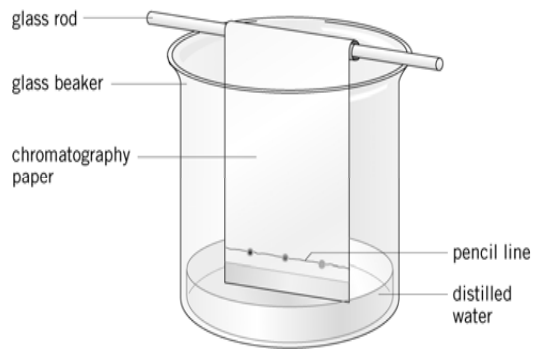
### Filtration apparatus



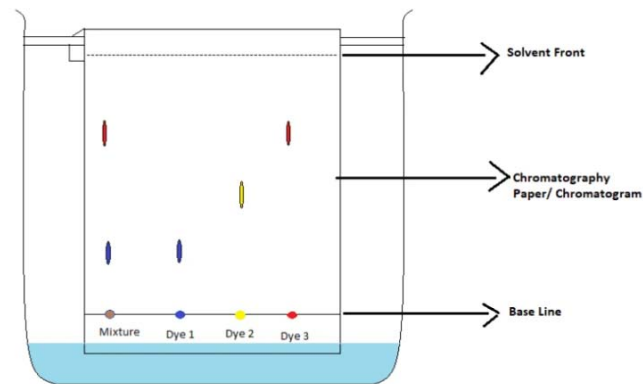
### Distillation apparatus



### Chromatography apparatus



### Chromatogram



This mixture contains dye 1 and dye 3.