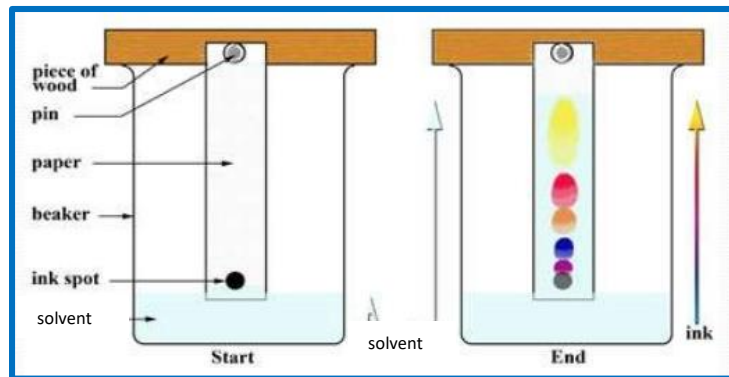


Chemistry: Materials (solutions)

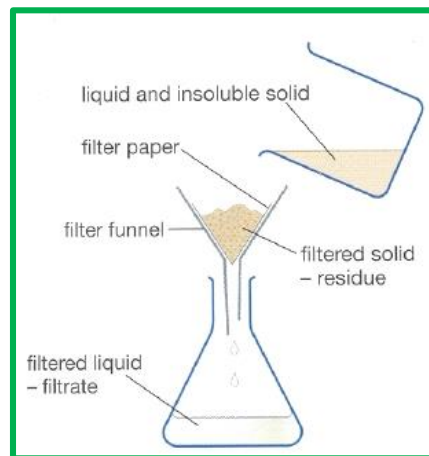
Key word	Definition
Mixtures	Made up of substances that are not chemically joined together
Pure	A substance is pure if it has no other substances mixed with it.
Impure	A substance is impure if it has different substances mixed with it.
Solute	The solid or gas that dissolves in a liquid.
Solvent	The liquid in which a solid or gas dissolves.
Solution	A mixture of a liquid with a solid or a gas.
Dissolve	The mixing of a substance with a liquid to make a solution.
Soluble	A substance that can dissolve in a certain solvent
Insoluble	A substance that cannot dissolve in a certain solvent.
Filtration	A way of separating pieces of solid that are mixed with a liquid or solution by pouring through filter paper.
Chromatography	A technique to separate mixtures of liquids that are soluble in the same solvent.
Distillation	A technique that uses evaporation and condensation to obtain a solvent from a solution.

Chromatography



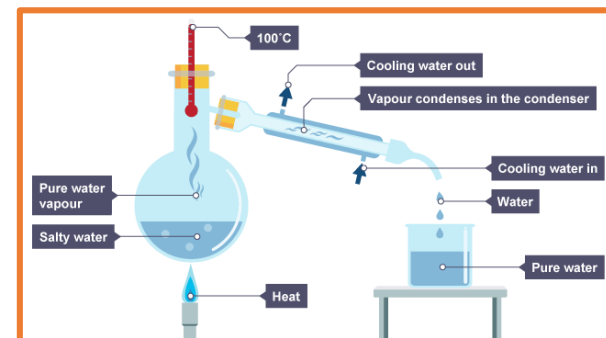
- As the **solvent** travels up the paper, the different coloured substances **separate**.
- Substances that are the **same** travel the same **height**.
- **Pure** substance appears as **one spot**.
- **Impure** (mixture) separates out into **multiple spots** on the same **vertical** line.

Filtration

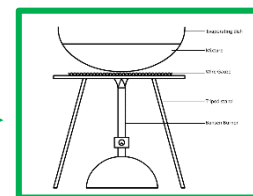


- An **insoluble** solid is **separated** from a **solution**.
- The solution is heated to **evaporate** off the **solvent** leaving the **soluble solid** behind.

Distillation



- The **solution** is **heated** and the solvent **evaporates** and the solid is left behind.
- The solvent **vapour** is then **condensed** and collected as a **pure liquid**.



Crystallisation

