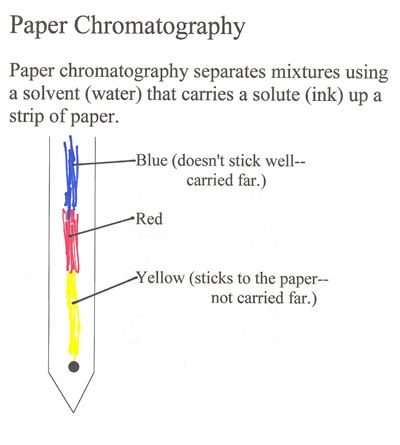
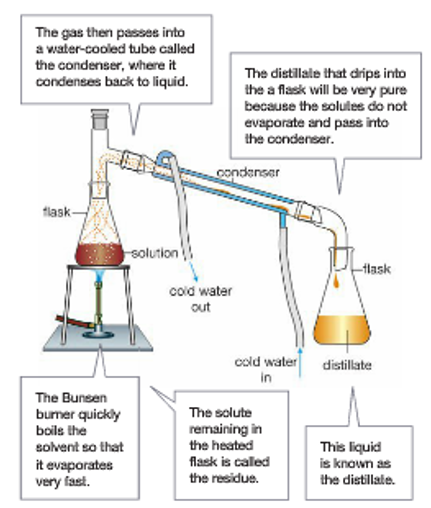
Methods for separating soluble substances from a mixture include:

* **Chromatography**

Chromatography is a process that can separate a mixture by making it move   
through another substance like a paper strip (Refer to the diagrams)   
 **How Paper Chromatography Works:**All of the chemicals in the Paper chromatography separates mixtures  
mixture are attracted to the using a solvent (water) that carries a solute  
paper by different amounts. (ink) up a strip of paper.  
Substances that are strongly  
attracted to the paper are  
harder for the solvent to move  
than substances that are weakly  
attracted.  
  
Chromatography is used to   
identify the components of  
mixtures such as oil and gas.

Paper chromatography   
separates mixtures

* **Evaporation**

****Evaporation is the process in which heat causes a liquid to change into a gas. Evaporation is also used in the laboratory to separate a solute from its solvent. The solute is left behind as a solid, and the solvent is lost to the atmosphere. This means that you can only collect the solute. The solute forms crystals in a process called **crystallisation.**  
Liquids do not have to boil to evaporate. Evaporation  
occurs at all temperatures above their freezing point.

* **Distillation**

Distillation uses both evaporation and condensation  
to separate substances.

**Evaporation** - a liquid turns into a gas

**Condensation** - a gas cools to form a liquid

In distillation, the gas is condensed back into a liquid  
so that it can be collected. The apparatus that converts  
the gas back to a liquid is called a **condenser**.  
(The diagram shows the laboratory apparatus)

Distillation is able to separate several liquids  
if they have different boiling points.

* **Adsorption**

Adsorption uses substances such as carbon to separate  
substances from water and air. The chemicals being  
removed stick to the outside surface of another substance. **Distillation using a Liebig condenser**

If the substance has a huge surface area, a large amount of material can be adsorbed.