

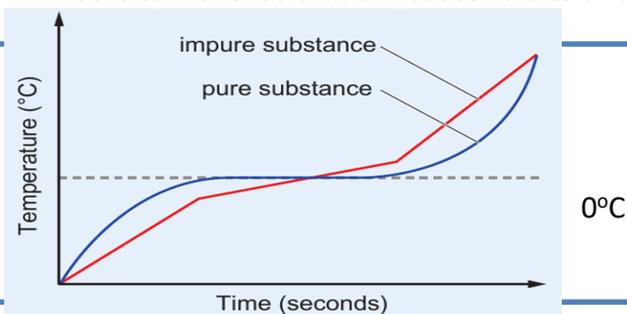
Year 11 – Paper 2 - Chemistry Knowledge Organiser -

Chemical analysis

Pure substances

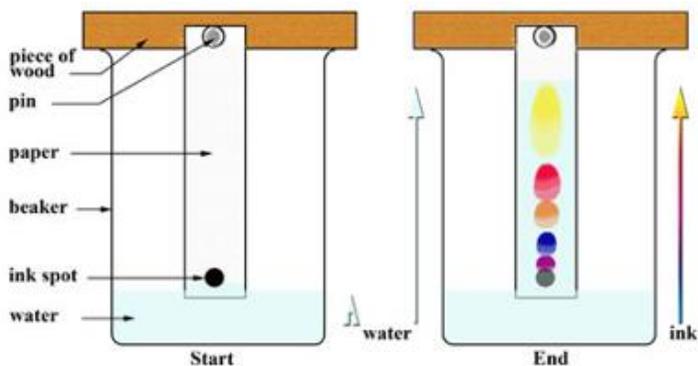
Pure substances have known boiling points and melting points, if a substance is not pure then it will not melt at this exact point.

A great example of this is that of water. We know that water melts at 0°C . When the weather is very cold the roads get gritted. Road grit has lots of salt in it. This salt lowers the freezing point of water and therefore makes it less likely that the water on the road will freeze to make ice that can cause cars to skid.



Chromatography

This is a simple way of separating a mixture into its components. It is commonly used to separate inks, dyes and food colourings. Using this simple technique it is possible to test if a substance contains 1 or more dye or colourings.



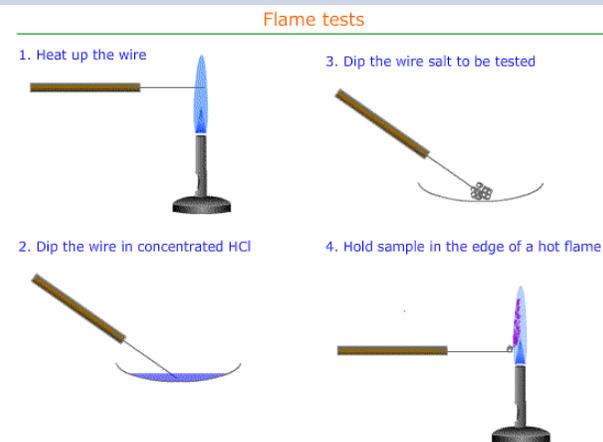
Testing gasses

There are 5 gasses that you need to know the positive tests for.

Gas	Test
Oxygen	Relights a glowing splint
Hydrogen	Squeaky pop
Carbon dioxide	Extinguishes a flaming splint
Chlorine	Turns Blue litmus paper Red
Water vapour	Turns cobalt chloride paper pink

Flame tests.

The **flame test** is used to visually determine the identity of an unknown metal or metalloid ion based on the characteristic colour the salt turns the **flame** of a Bunsen burner.



Testing for ions

Testing for halide ions. A **test** using silver nitrate. The halogens are the elements in group 7 of the periodic table, like chlorine, bromine and iodine. Their **ions** are called halide **ions**. You can **test** to see if a solution contains chloride, bromide or iodide **ions** by using silver nitrate.

The results look like this:

- Silver chloride is a white precipitate
- Silver bromide is a cream precipitate
- Silver iodide is a pale yellow precipitate

