## CHEMISTRY - PAPER CHROMATOGRAPHY

It is a technique to separate the colors present in mixtures of coloured ink. Most inks are not just made up one color but contains a mixture of dyes,

## EXPERIMENT

- a) A line is drawn with a pencil on a chromatography paper.
  The line should be 1cm from the bottom of the paper.
  This line is called the baseline.
  Pens should not be used because the ink can smudge.
- b) Draw another line on the paper 1cm from the top of the paper. This line is called the solvent front.
- c) With the help of a capillary tube, put a spot of the mixture of dyes on the baseline and allow it to dry.
- d) Suspend the papers into a beaker containing the solvent.
   The bottom of the paper should be well in==enough solvent.
   The level of solvent should stay below the baseline so that the ink doesn't dissolve.
- e) Put the lid on the beaker as this will stop aporation of the solvent from the surface of the paper
- f) when the solvent moves up to the solvent front, remove the paper and let it dry

The results obtained are known as the chromatogram.

It will show all the colors present in the ink because all the colors will move at different heights on the paper.

The distance that is moved by the colors is also known as its Rf value.

## **Rf VALUE**

It can be calculated by using the following formula :

→ Rf = distance mover by the spot from the baseline / distance moved by the solvent