

# Chromatography

## Chromatography:

It is a method used to separate and identify the components of a mixture of soluble substances.

### ► Uses of Chromatography:

I. We can also use it to carry out purity tests.

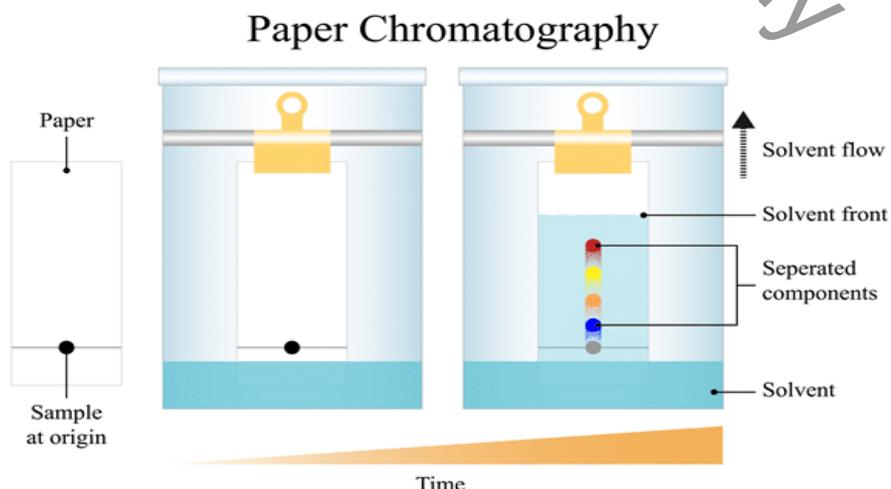
II. One of the most well-known uses of chromatography is in the separation of different pigments in ink, such as colorings or plant pigments like chlorophyll.

## Paper Chromatography

► A specific type of chromatography is paper chromatography. The process of chromatography involves two phases: the mobile phase and the stationary phase.

- The **stationary phase** is the non-moving phase, which doesn't move through the chromatography paper when the solvent carries the sample.
- The **mobile phase** is the solvent in which the sample can move. Solvent (which is usually a liquid) moves along the chromatography paper, and the size of the molecules determines the rate at which they move.

► The mobile phase moves through the stationary phase, picking up compounds. Meanwhile, the stationary phase remains fixed in place.



## C2: Atomic Structure And Periodic Table

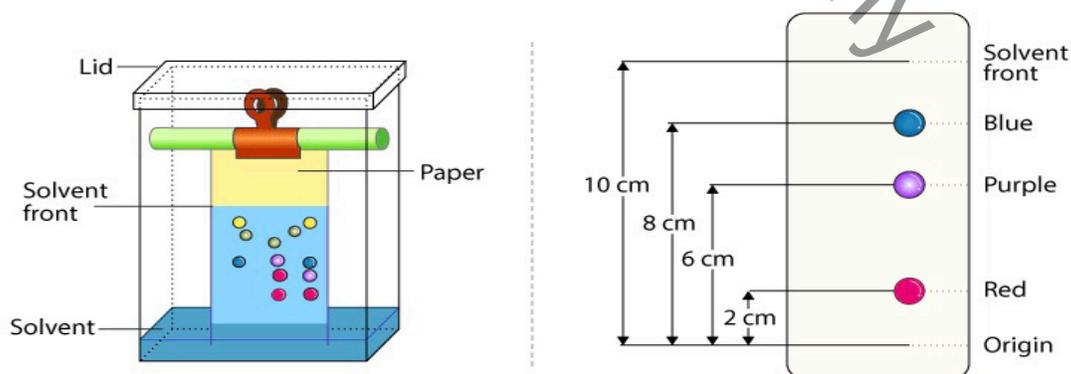
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### Procedure:

To perform paper chromatography, follow these steps:

1. Start by drawing a baseline on the chromatography paper using a pencil. The baseline is insoluble, so it won't move with the solvent.
2. Place a small spot of the sample mixture on the baseline.
3. Pour the solvent into a beaker. Place a glass rod over the beaker, and tape or clip the paper to it, ensuring that the paper's base just touches the solvent without being submerged.
  - It's important to note that the solvent does not have to be water. For example, it could be ethanol.
4. Allow the solvent to slowly travel upwards through the paper, taking with it a few soluble pigments from the sample mixture. This will create different spots along the paper.
5. Remove the paper from the beaker before the solvent reaches the top. You now have a chromatogram.
6. Analyze the chromatogram to identify the different components of the sample mixture. Each spot on the chromatogram represents a different component of the mixture.
7. Finally, mark the distance travelled by the solvent.
8. The end result is a pattern of spots called Chromatogram.

### Result of chromatography



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