04/2013 EXPERIMENT NUMBER : 5

CHROMATOGRAPHY

→ AIM:

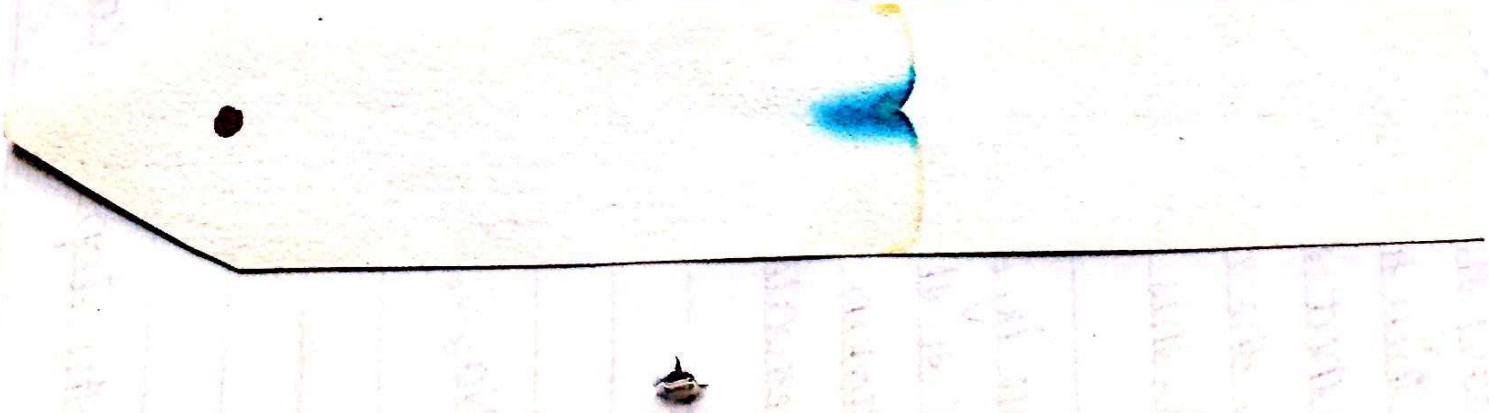
To separate the coloured components of blue and red ink by ascending paper chromatography and to find R_f value.

→ APPARATUS AND CHEMICALS:

filter paper strip, mixture of red and blue ink, clips, beaker, ethanol

→ PROCEDURE:

1. Clip a filter paper strip.
2. Draw a line from the centre of paper vertically so that the paper is divided into two equal halves.
3. Draw another horizontal line 2cm from the base.
4. Mark the point of intersection of the two lines as O.
5. Spot the mixture of inks on the point O.
6. Suspend the filter paper vertically using the stand and clip, such that the tip of the paper dips into the solvent ethanol kept



in a beaker.

7. Leave this arrangement undisturbed and note that the solvent starts rising up along with the red and blue ink.

8. When the solvent has risen completely, take the paper out and mark the level of the solvent front.

9. Measure the distance travelled by the red spot, blue spot, and the solvent from the origin O and record your observations.

→ RESULT:

Rf of red ink = 0.906

Rf of blue ink = 0.976.

→ PRECAUTIONS:

1. The ink spot should not dip in the solvent.

2. The ink spot should be small in size.

30/10/24

→ OBSERVATIONS:

SR. NO	Colour of spot (ink)	Distance travelled by ink from origin (P) (cm)	Distance travelled by solvent from origin (X) (cm)	R_f $\left(R_f = \frac{P}{X}\right)$
1.	Red	7.7	8.5	0.906
2.	Blue	8.3	8.5	0.976