



Chromatography - Page 2



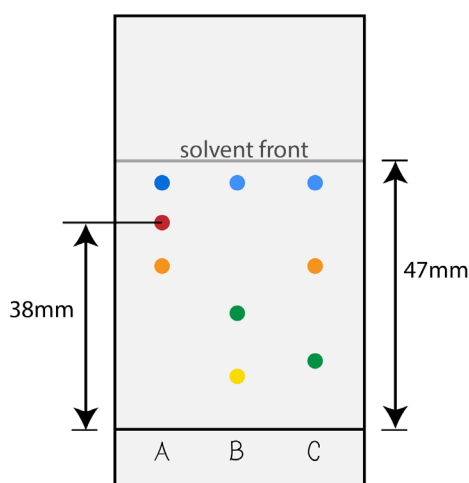
Exam Style Questions

1. What **two** factors affect the distance that component will travel up a piece of chromatography paper relative to the distance travelled by the solvent?

.....solubility in the mobile phase / solvent (1 mark)

interaction/attraction to the paper / stationary phase (1 mark).....

2. A student completes a chromatography experiment comparing 3 different black inks. There results are shown here. Answer the following 3 questions.



2a: How many components are present in ink A:

.....3..... (1 mark)

2b: Which component seems to be present in all of the inks?

.....the top one/ the blue one..... (1 mark)

2c: Find the Retention Factor (R_f value) of the RED component in ink A, give your answer to 2 decimal places.

One mark for correct arrangement of 38/47

One mark for correct answer of 0.80851064.....

1 mark for correct rounding to 0.81, -1 mark is ANY units are given.

R_f value =0.81.. (3 marks)

3. A student uses water as the solvent in their chromatography experiment but finds that some dyes in the ink don't move from the baseline.

Explain why this happens and how the student could improve their experiment.

.....the ink/components are NOT SOLUBLE in WATER.....(1 mark)

.....repeat with a different solvent (or accept any suitable suggested solvent.....(1 mark)



Do this later...

Give your brain a break and come back to these questions later. Cover the rest of the sheet while you have a go. By doing this 24-48 hours after watching the video you will boost your chances of remembering the key points in an exam. If you struggle with these questions, re-watch the video and then try again.

- Draw a fully labelled diagram of the equipment required to carry out chromatography in a school laboratory. (see page 1)
- A sample of yellow food colouring moves 22 mm up a piece of chromatography paper while the solvent travels 44 mm. Find the Retention Factor (R_f value) of this component. (0.5)
- After completing a chromatography experiment your teacher suggests you repeat it with a different mobile phase. Should you change the solvent that you used or the type of chromatography paper?
The solvent