

Question 40 (Answer: **D**)

- The paper must be taken out before the solvent runs off the top.
- Mark the solvent front straight away, while it is still visible.
- Only then can the distances – and so the R_f values – be measured.

Question 40 (Answer: **D**)

- Apply the sample to the baseline, which must sit above the solvent level so the spot is not washed off.
- Stand the paper in the solvent and let the front travel up.
- Take the paper out before the solvent reaches the top, mark the front, then use a locating agent for colourless spots.

Question 40 (Answer: **D**)

- A locating agent is what makes colourless spots visible, so its absence would give *no* spots.
- Four substances should give four spots unless two travelled exactly the same distance.
- Two amino acids with the same R_f overlap into a single spot.

Question 40 (Answer: **D**)

- R_f compares the distance the spot moved with the distance the solvent moved.
- So it is distance travelled by the substance divided by distance travelled by the solvent.
- The locating agent only makes the spots visible; it plays no part in the calculation.

Question 40 (Answer: **B**)

- R_f compares how far the spot moved with how far the solvent moved.
- So it is the distance travelled by the substance divided by the distance travelled by the solvent.
- That makes R_f always less than 1.