

GCSE Required Practicals

Chemistry

How to write a method...just think of CIDER!

Control variables

Independent variable

Dependent variable

Equipment

Repeats



Chemistry Practical 6 | Chromatography

Investigate how paper chromatography can be used to separate and identify a mixture of food colourings

Choose your equipment

Chemistry Practical 6 | Chromatography

Investigate how paper chromatography can be used to separate and identify a mixture of food colourings

1. Use a ruler to draw a horizontal pencil line 2 cm from the bottom short edge of the chromatography paper. This is your origin line.
2. Mark five pencil spots at equal intervals across the origin line. Make sure you keep at least 0.5 cm away from each edge of the paper.
3. Use a glass capillary tube to put a small spot of each colouring A, B, C and D on four of the pencil spots. Use a different tube for each colouring. Use the fifth tube to put a small spot of the unknown mixture U on the fifth pencil spot. Try to make sure each spot is no more than 2-3 mm in diameter. Label each spot in pencil.
4. Use a glass capillary tube to put a small spot of each colouring A, B, C and D on four of the pencil spots. Use a different tube for each colouring. Use the fifth tube to put a small spot of the unknown mixture U on the fifth pencil spot. Try to make sure each spot is no more than 2-3 mm in diameter. Label each spot in pencil.
5. Pour water into the beaker to a depth of no more than 1 cm.
6. Clip the top short edge of the chromatography paper to the wooden spill. The top end is the end furthest from the spots.
7. Carefully rest the wooden spill on the top edge of the beaker. The bottom edge of the paper should dip into the water solvent
8. Wait for the water solvent to travel at least three quarters of the way up the paper. Do not disturb the beaker during this time.
9. Carefully remove the paper from the beaker. Draw another pencil line on the dry part of the paper as close to the wet edge as possible. This is called the solvent front line.
10. Hang the paper up to dry thoroughly.
11. Measure the distance in mm between the two pencil lines. This is the distance travelled by the water solvent.
12. For each of food colour A, B, C and D measure the distance in mm from the start line to the middle of the spot.

Can you find the CIDER?

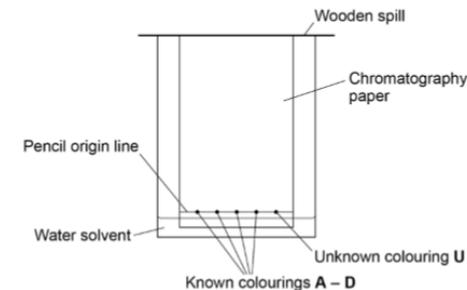
Control

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Food colouring	Distance travelled in mm		R _f value
	Solvent	Spot	
A			
B			
C			
D			

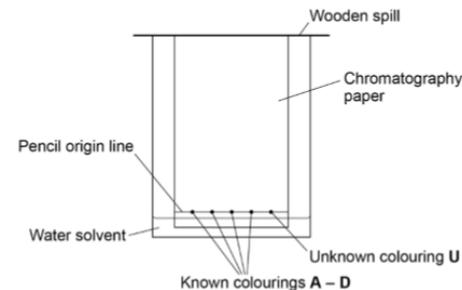
Chemistry Practical 6 | Chromatography

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8. Wait for the water solvent to travel at least three quarters of the way up the paper. Do not disturb the beaker during this time.
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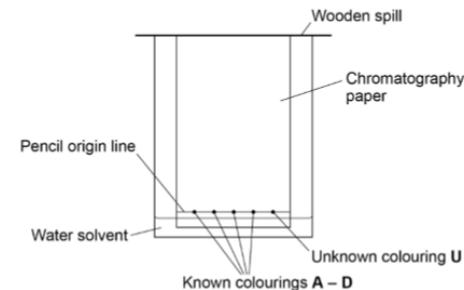
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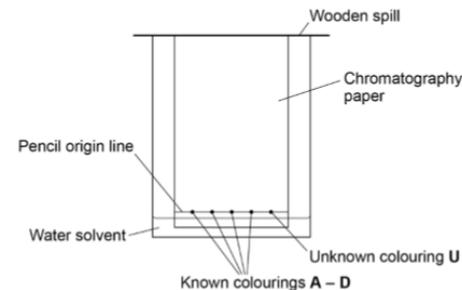
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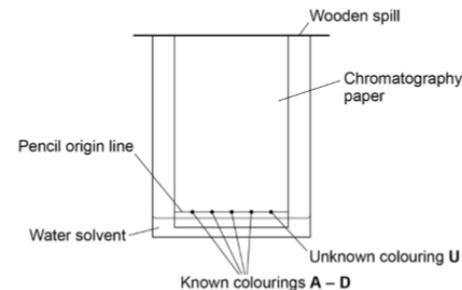
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