

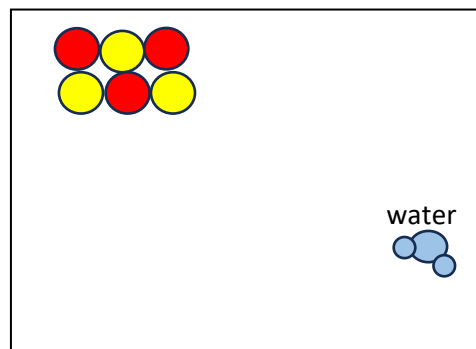
Separation of mixtures -worksheet 1

1. Acetone is used to separate oil from chips.
 - i. What separation technique is shown on the right separating the oil from the chips?

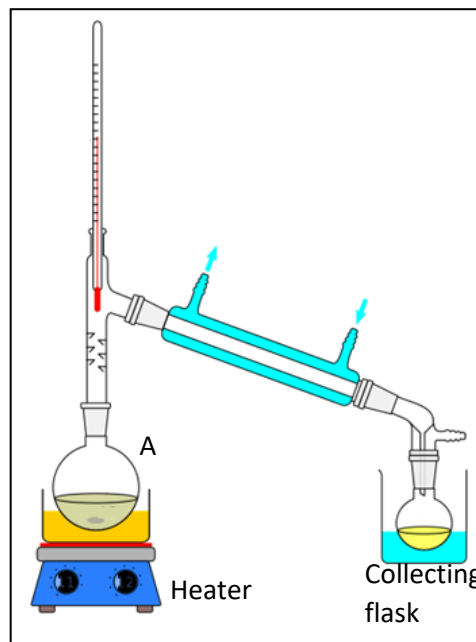


- ii. Circle the correct response.
In this experiment the acetone is the **solvent / solute**, whereas the oil is the **solvent / solute**.

2. The particles of a salt crystal are shown on the right. Draw a picture of the dissolved salt crystal in water. A water particle is also shown in the diagram.



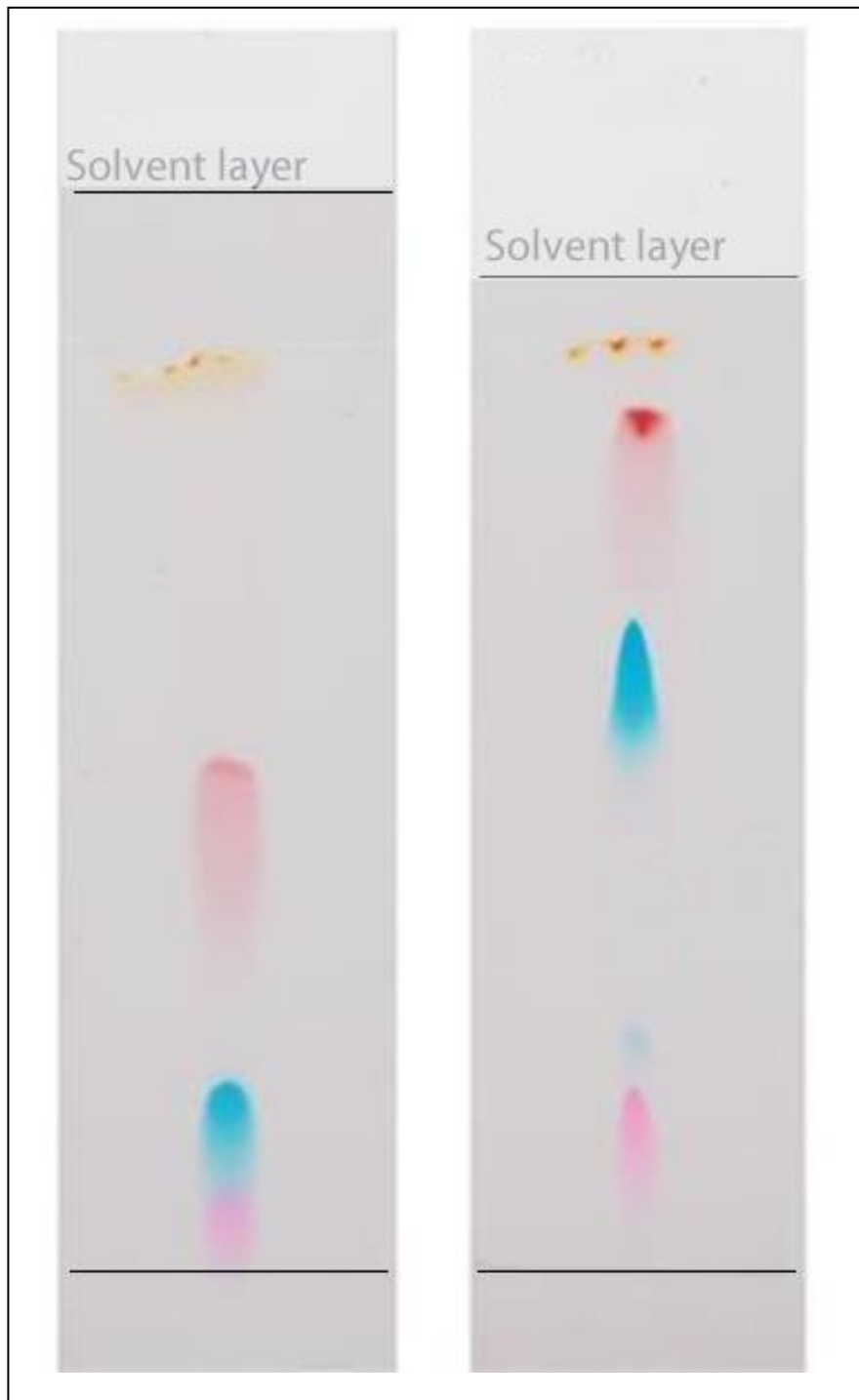
3. The apparatus shown on the right is used to separate a mixture of three liquids.
 - Liquid "A" boils at 50°C
 - Liquid "B" boils at 80°C
 - Liquid "C" boils at 100°C
 - a. The operator keeps the heater at 90°C.
 - i. What will be present in the collecting flask at the end?



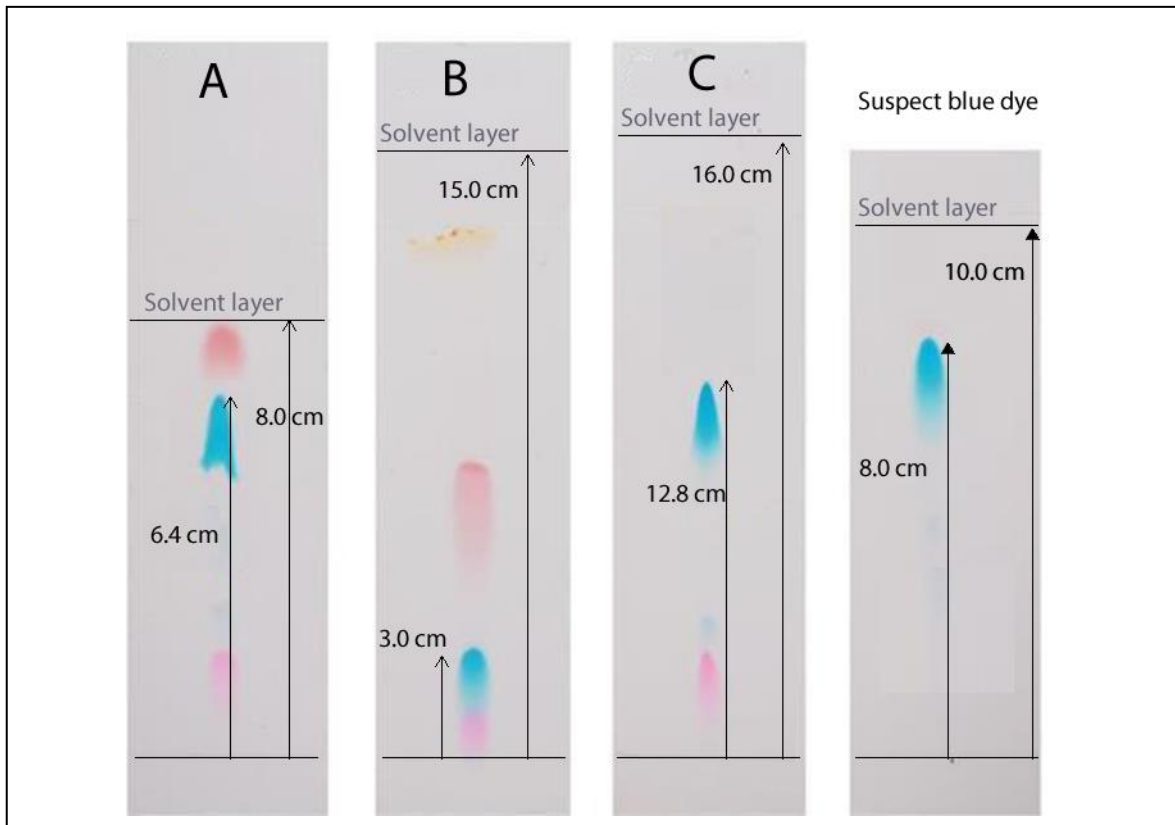
- ii. What will be present in flask A at the end?

- b. Describe how the operator can obtain pure samples of liquids A, B and C.

4. Use a ruler and calculator to measure the R_f value of each dye on the two samples below.



5. A certain blue food dye found in lollies is suspected of causing food poisoning in young children. Police forensic detectives confiscated three batches of imported lollies and tested each batch for the suspect blue dye using the separating technique known as chromatography. The results are shown below.



Using a ruler and your knowledge of chromatography, determine which lolly samples have the suspect, blue dye. Show all working out below.