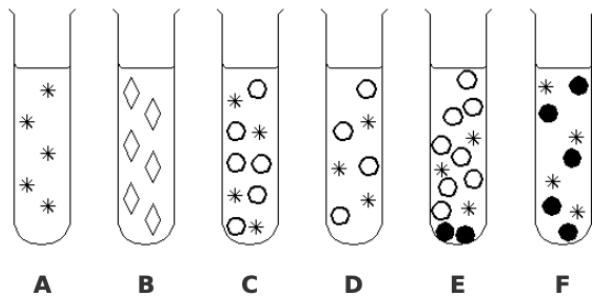


What is in the test tubes?



Key

- * water particle
- ◇ methylated spirits particle
- dissolved solid particle
- undissolved solid particle





a) Which test-tube(s) contain:

- i) pure water? _____
- ii) an undissolved solid in water? _____
- iii) mixtures? _____
- iv) the most dilute solution? _____

b) Which test-tube(s) contents could be separated by

- i) filtration? _____
- ii) evaporation? _____

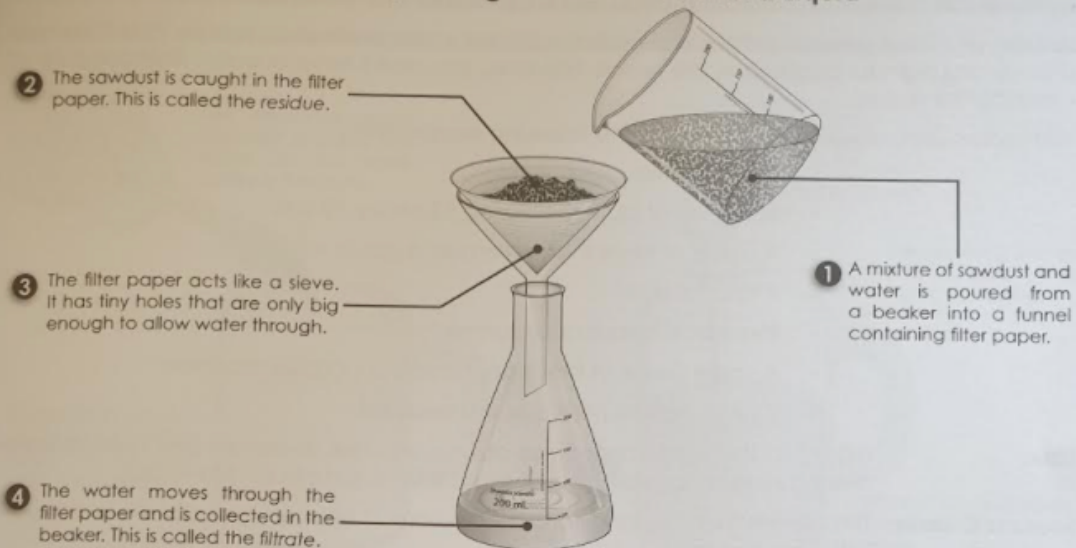
c) Using the same symbols as in the key above, complete these test-tube(s) to represent.

<p>i)</p> 	<p>ii)</p> 	<p>iii)</p> 	<p>iv)</p> 
methylated spirits and water	sand and water	sand, salt and water	copper sulfate solution

Separating Mixtures

The different substances in mixtures are usually easily separated from one another. The method you use depends upon the type of mixture you have.

Filtration - Separating a Solid Mixed with a Liquid



Separating a Mixture Using Filtration

Aim: To separate a solution from a precipitate (precipitate is the name for a solid that forms in a liquid during a chemical reaction).

Equipment: Sodium carbonate solution, copper sulfate solution, a conical flask, stirring rod, a 200 mL beaker, a funnel and filter paper.

Method: 1. Pour approximately 50 mL of copper sulfate solution into a beaker.



2. Add the same volume of sodium carbonate solution. A precipitation reaction will occur, resulting in a cloudy blue precipitate of copper carbonate.

3. Your teacher will show you how to fold the filter paper so it fits inside your funnel.



Copper compounds are poisonous

4. Place the funnel, with the filter paper inside it, into the mouth of a conical flask.

5. Stir, then carefully pour the precipitate mixture into the funnel.

Observations: Outline what you saw happen: _____

1. Decide whether the following list of mixtures could be separated using filtration:
- | | |
|------------------------------|----------|
| (a) Leaves in a pool. | Yes / No |
| (b) Sand and water. | Yes / No |
| (c) Salt and water. | Yes / No |
| (d) Algae in a fish tank. | Yes / No |
| (e) Food colouring in water. | Yes / No |

2. Define the term 'filtrate': _____

