

# Chromatography

Chemistry - Key Stage 3

Particles - Lesson 12

Miss Mason



# Recap

1. What is the separation technique of distillation used for?

**To separate *l*\_\_\_\_\_ *that have different b*\_\_\_\_\_ *p*\_\_\_\_\_.**

2. Name 4 pieces of equipment necessary for the process of distillation.

***C*\_\_\_\_\_ *f*\_\_\_\_\_, *h*\_\_\_\_\_, *c*\_\_\_\_\_ *t*\_\_\_\_\_ (or *L*\_\_\_\_\_ *c*\_\_\_\_\_), *t*\_\_\_\_\_.**

3. What is a solute?

***A substance that is able to d*\_\_\_\_\_.**

4. Describe what happens to the arrangement and movement of particles during 'condensing'.

***Condensing is the change of state that occurs when a* \_\_\_\_\_ *turns into a* \_\_\_\_\_. *In a gas, the particles have a* \_\_\_\_\_ *arrangement, they very rarely t*\_\_\_\_\_ *and they can move at all different* \_\_\_\_\_ *in different* \_\_\_\_\_. *As the g*\_\_\_\_ *is c*\_\_\_\_\_ *and turns into a l*\_\_\_\_\_, *the particles' store of k*\_\_\_\_\_ *energy decreases and they move* \_\_\_\_\_ *together. The forces of a* \_\_\_\_\_ *that were once between the particles are able to r*\_\_\_\_\_. *The particles still have a* \_\_\_\_\_ *arrangement but they are now all t*\_\_\_\_\_ *and are able to* \_\_\_\_\_ *around each other.***



## Place the following steps in the correct order

The solvent will travel up the filter paper, taking the soluble particles from the ink with it.

Place a lid on the beaker.

Draw a straight line using a pencil a few cm up from the bottom of the filter paper.

Submerge the filter paper into the water so that the pencil line is just above the water level.

Add the substance (e.g. ink) you want to test as a small dot on top of the pencil line.

The diffusion distance of each of the individual solutes depends on their solubility.

Add some solvent (water) to a beaker.



# Copy and complete...

The baseline must be drawn in pencil because...

A lid must be placed on top of the beaker because...

**Keywords:** solute, solvent, soluble, insoluble, diffuse.



**Chromatography is carried out on 3 pens to see which colours they contain.**

- 1. Which pen number matches up to substance Z?**
- 2. Which colour can be found in all 4 substances?**

