Distillation

Chemistry - Key Stage 3

Particles - Lesson 11

Miss Mason

Recap

1. Identify the 3 components that make up rock salt.

S____, s____ and s_____.

2. Identify the 2 separating techniques that have to be used to purify rock salt.

F_____ and e_____.

3. What happens to gas pressure with increasing altitude? Why?

As altitude increases, gas pressure _____. This is because there are ____ particles at a higher altitude so they won't have as many c_____ (which is what causes the pressure).

4. In a chemical reaction, what must the total mass of the reactants be if one of the products has a mass of 12g and the other has a mass of 15g?

Reactant + Reactant → Product + Product

[???] [12g] [15g]

5. Identify a potential issue with the purification of rock salt.

Some of the salt might be l____ during the process or it may not be totally c_____ (pure).

Place the following steps in the correct order

Once evaporated, this gas will travel down a condensing tube (Liebig condenser) where it will be cooled and condense back into a liquid.

The liquid mixture is added to a round bottomed flask and then placed on top of a heater.

The 2 liquids from the mixture have now been separated based on their boiling points..

This liquid can then be collected in a beaker at the bottom of the condensing tube.

The mixture is heated and the liquid within the mixture with the lowest boiling point will begin to evaporate and change state to become a gas.

Create a method describing how simple distillation can be used to separate a mixture of 2 liquids

Key words: *mixture, condense, evaporate, condensing tube, Liebig condenser, round bottomed flask, heater, beaker, cooling.*

- The liquid mixture is added to a r_____ b_____ f_____ and then placed on top of a h_____.
- The mixture is h_____ and the liquid within the mixture with the lowest b_____ p_____ will begin to e_____ and change state to become a g____.
- Once e_____, this gas will travel down a c_____ t_____ (L_____ condenser) where it will be cooled and condense back into a l_____.
- This l_____ can then be collected in a b_____ at the bottom of the c_____ t_____.
- The 2 liquids from the mixture have now been separated based on their b_____ p_____.

Distillation risk assessment

Hazard	Risk	Safety precautions

Identify the hazards, potential risks and safety precautions that must be considered when carrying out distillation.

One hazard present during distillation is...
This poses a risk because it could...
The safety precautions put in place to try and prevent this include...

Another hazard present during distillation is...
This poses a risk because it could...
The safety precautions put in place to try and prevent this include...

(Repeat this process for as many hazards as you can think of).