

CHEMISTRY - DIFFUSION

Diffusion is a process when particles spread out in liquid and gasses.

It is the movement of particles from higher concentration to lower concentration.

Diffusion can be observed by performing simple experiments

EXPERIMENTS

- a) BROMINE IN GAS JAR - two gas jars are taken, lower one containing bromine gas.

Bromine gas is chosen because it is a coloured gas and we can see the diffusion of particles easily in gas jars.

The second jar is inverted on top. The brown particles of bromine slightly move upwards in the second jar showing the process of diffusion

- b) PURPLE DYE IN WATER - when purple dye is added to the beaker containing water, it will slowly spread throughout the beaker making the water slightly purple.

This shows the movement of particles of purple dye from high to low concentration in water.

- c) AMMONIA AND HYDROGEN CHLORIDE - a long glass tube is used.

It has rubber bungs to prevent the escape of the poisonous gases.

A cotton wool soaked in ammonia solution is kept at one end of the glass tube white The cotton wool soaked in hydrochloric acid is placed at the other end.

The glass tube is slightly heated so the ammonia gas and hydrogen chloride gas particles are released from their respective solution.

After some time, a ring of white fume is formed in the glass tube.

This substance is called ammonium chloride.

The white ring is formed at the far end from ammonia and near to the hydrochloric acid.

It's because ammonia is a lighter gas compared to hydrochloric acid, allowing to move faster.

- This experiment doesn't only prove the diffusion in gases but makes it possible to compare the rate of diffusion of the two gases.