

Sometimes the name of the compound gives information about the formula of that compound. Prefixes give the number of atoms of certain elements in each molecule.

Prefix	Number of atoms
Mono	One
Di	Two
Tri	Three
Tetra	Four
Penta	Five
hexa	Six

Example - Carbon monoxide contains one carbon atom joined to one oxygen atom, so it has the formula CO .

Mixtures

Mixtures are where 2 or more substances are present but are not chemically joined. These can be easily separated by filtration, distillation, evaporation or chromatography (separating colours).

Air is a mixture of gases (around 79% nitrogen, around 20% oxygen and about 1% other gases)

Crude oil is a mixture of different hydrocarbons

Solutions

Solute - the substance which is dissolved in the solvent

Solvent - the liquid which does the dissolving

Solution - a **solution** is made when a solid (**solute**) is dissolved in a liquid (**solvent**).

Dilute solution = lots of solvent : little solute

Concentrated solution = little solvent : lots of solute

Saturated solution = no more solute can be dissolved in the solvent.

Identifying Chemical Changes

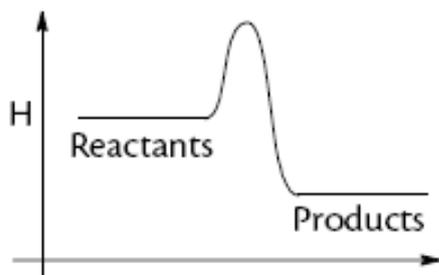
A new substance is always formed in a chemical reaction. This can be identified by:

- a change in appearance
- effervescence (a gas being given off) (Bubbles can be seen)
- a solid (precipitate) forming
- an energy (temperature) change
- light or sound being given off

Every chemical reaction involves a change in energy. During the reaction, bonds inside the substances that are reacting together must be broken and new chemical bonds must be formed in the products that are being made. There are two different types of energy change that can take place.

Energy Changes

Exothermic reaction - a reaction in which energy is given out, usually in the form of heat. The reaction gets hotter. The temperature would rise.



Endothermic reaction - a reaction in which energy is taken in. The reaction gets colder. There is a drop in temperature.

