

Section 1- Acids and Alkalis

Acids and alkalis are two important groups of chemicals. Acids often have a sharp, sour taste. Strong acids can corrode metals but many are weak and harmless. Many strong alkalis are described as caustic, which means they can burn your skin.

The pH Scale



Section 2- Indicators

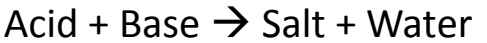
Indicators are used to determine whether a chemical is an acid or alkali. Universal indicator is used to show the pH scale in section 1. Green is pH 7. This is a neutral substance.

Litmus indicator is made from dyes in lichens.

	Test with acid	Test with alkali
Red litmus paper	No changes	Red → blue
Blue litmus paper	Blue → red	No changes

Section 3 - Neutralisation

Neutralisation reactions are when acids and alkalis are combined to create a neutral substance. A base is a substance that neutralises an acid. Some bases are soluble in water, these are called alkalis.

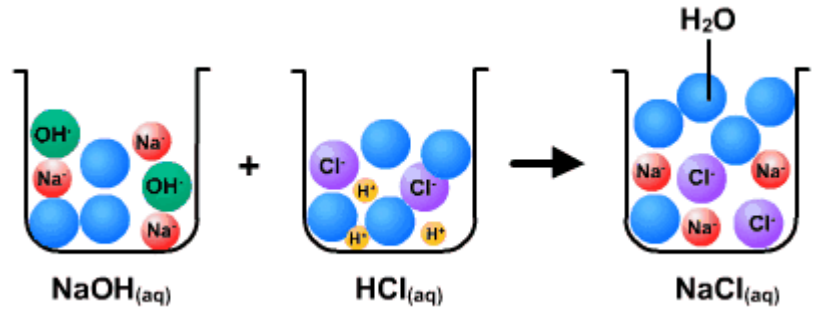


Neutralisation is used to alter the pH of soil to maximise crop growth. Neutralisation reactions are used to counter the effects of pollution; which creates acid lakes.

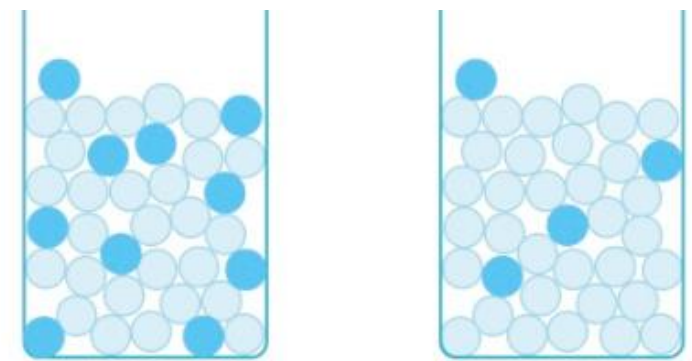
Section 4 - Salts

A salt is a compound that forms when an acid reacts with a metal element or compound.  
 Acid + Metal → Salt + Hydrogen  
 Acid + Base → Salt + Water

For example:  
 Hydrochloric acid + Sodium → Sodium chloride + Hydrogen  
 Hydrochloric acid + Sodium hydroxide → Sodium chloride + Water



Section 5 - Concentration



▲ The solution on the left is more concentrated. It has more acid particles per litre. Not to scale.