

Science Knowledge Organiser



Y7 Reactions: Acids and bases



Examples of pH Conditions:

pH 2



gastric juices

pH 4



tomato juice

pH 5



human urine

pH 7



pure water

pH 7.4



human blood

pH 10



hand soap

pH 12



household bleach

Acids and alkalis can be corrosive or irritant and require safe handling.

Hydrochloric (HCl), sulfuric (H₂SO₄) and nitric acid (HNO₃) are strong acids.

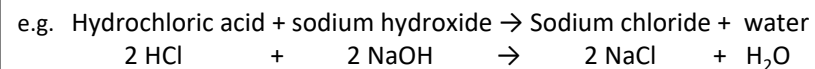
Acetic and citric acid are weak acids.

Key words

Acid	Substance that contains hydrogen ion particles (H ⁺)
Alkali	Base that dissolve in water. Contain hydroxide ion particles (OH ⁻)
Base	A substance that neutralises an acid.
Concentration	A measure of the number of ion particles in a given volume.
Indicators	Substances used to identify whether unknown solutions are acidic or alkaline.
pH	Scale of acidity and alkalinity from 0 to 14
Universal indicator	Used to indicate pH

Neutralisation reactions

Acid + alkali → salt + water



Naming the salt:

There are two parts to every salt name:

- i) The first part is the name of the metal found in the starting alkali*
- ii) The second part comes from the type of acid used*

Starting Acid in neutralisation reaction	Name of salt formed
Hydrochloric acid	Metal Chloride (- Cl)
Sulfuric acid	Metal Sulfate (- SO ₄)
Nitric acid	Metal Nitrate (- NO ₃)