

Definitions and Concepts for WJEC (Wales) Chemistry GCSE

Topic 2.2 - Acids, Bases and Salts

Definitions in **bold** are for higher tier only

Definitions have been taken, or modified from the [WJEC \(Wales\) Specification for GCSE Chemistry. 3410. Version 2 March 2019](#)

Acid: Produces hydrogen ions (H⁺) in aqueous solutions with a pH range between 0 and 7. Acids will react with metals to produce a salt and hydrogen and will react with carbonates to produce a salt, water and carbon dioxide

Alkali: Produces hydroxide ions (OH⁻) in aqueous solutions with a pH range between 7 and 14. Alkalis are water soluble bases.

Neutralisation: The reaction in which an acid and a base react together to form a salt and water. **Generally, neutralisation reactions are reactions in which hydrogen ions react with hydroxide ions to form water: $H^+ + OH^- \rightarrow H_2O$**

pH scale: A measure of the acidity or alkalinity of a solution. The scale ranges from 0-14 and can be measured using universal indicator or a pH probe.

Precipitation reaction: A reaction in which solutions react to form an insoluble product.

Strong acid: An acid which is completely ionised in an aqueous solution so that nearly all the H⁺ ions are released. Examples of strong acids include hydrochloric, nitric and sulfuric acids.

Titration: A technique used where a solution of known concentration is used to determine the concentration of an unknown solution. Titrations can be used to prepare crystals of a soluble salt.

Weak acid: An acid which is only partially ionised in an aqueous solution. This means only a small number of the H⁺ ions are released. Examples of weak acids include ethanoic, citric and carbonic acids.

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