

SC8a Acids, alkalis and indicators

Word	Pronunciation	Meaning
acid	<i>ass-id</i>	A solution with a pH of less than 7 and that contains an excess of hydrogen (H^+) ions. Acids turn litmus red.
acidic		Containing or having the properties of an acid. (adjective)
acidity		The amount of acid in a solution.
alkali	<i>alk-al-lie</i>	A solution with a pH of more than 7 and that contains an excess of hydroxide (OH^-) ions. Alkalis turn litmus blue.
alkaline		Having a pH of more than 7.
alkalinity		The amount of alkali in a solution.
aqueous solution	<i>a-kwee-us</i>	A solution with water as the solvent.
concentration	<i>con-sen-tray-shun</i>	A measure of how much solute is dissolved in a solvent such as water. (Units $g\ dm^{-3}$ or $mol\ dm^{-3}$)
indicator		A substance that changes colour depending on the pH of a solution.
neutral	<i>new-tral</i>	A substance that is neither an acid nor an alkali. Neutral solutions have a pH of 7 and the same concentrations of hydrogen (H^+) and (OH^-) ions.
pH scale		A numerical scale up to 14 that measures the acidity or alkalinity of a solution based on the concentrations of hydrogen (H^+) and (OH^-) ions.
universal indicator		An indicator, containing a mixture of different pH indicators, designed to produce a range of colours depending on the pH.

SC8b Looking at acids

Word	Pronunciation	Meaning
concentrated	<i>con-sen-tray-ted</i>	Containing a large amount of solute dissolved in a small volume of solvent.
dilute	<i>dYe-loot</i>	Containing a small amount of solute dissolved in a large volume of solvent.
dissociate	<i>dih-sOh-shee-ayt</i> <i>OR dih-sOh-see-ayt</i>	To split up or separate into different parts. For example, acid molecules dissociate into H^+ ions and negative ions when they dissolve in water.
pH meter		Electronic device used to measure the pH of a solution.
strong acid		An acidic solute that dissociates completely into ions when it dissolves.
weak acid		An acidic solute that does not dissociate completely into ions when it dissolves.

SC8c Bases and salts

Word	Pronunciation	Meaning
base		Any substance, soluble or insoluble, that neutralises an acid, forming a salt and water only.
crystallisation	<i>cris-tal-l-zay-shun</i>	The process of forming crystals.
filter (verb)		To remove or separate a solid from a liquid by passing the mixture through a porous material.
neutralise (verb)	<i>new-trall-eyes</i>	To make a solution neither acidic nor alkaline. During neutralisation a base reacts with an acid, forming a salt and water.
salt		An ionic compound produced by a neutralisation reaction.
state symbols		Standard set of symbols written after chemical formulae to indicate the state of a substance. These are: solid (s), liquid (l), gas (g) and dissolved in water (aq)

SC8d Alkalis and balancing equations

Word	Pronunciation	Meaning
alkali	<i>alk-al-lie</i>	A solution with a pH of more than 7 and that contains an excess of hydroxide (OH ⁻) ions. Alkalis turn litmus blue. A soluble base.
balanced equation	<i>eck-way-shun</i>	A way of writing out what happens in a chemical reaction using symbols to represent the substances involved.

SC8e Alkalis and neutralisation

Word	Pronunciation	Meaning
burette	<i>b'your-ett</i>	Apparatus used to accurately measure the volume of solution that has been added during a titration.
end-point		In a titration, when just enough solution has been added from the burette to react with all the solution in the flask.
pipette	<i>pip-ett</i>	Apparatus used to accurately measure a set volume of a solution, which can be used in a titration.
titration	<i>tie-tray-shun</i>	Method used to mix acids and alkalis in the correct proportions to produce a solution containing only salt and water. It can be used to find the concentration of an acid or an alkali.

SC8f Reactions of acids with metals and carbonates

Word	Pronunciation	Meaning
effervescence	<i>eff-er-ves-ens</i>	Fizzing or a stream of bubbles produced during a reaction.
half equation		A balanced equation, including electrons, that shows what happens to one substance during a redox reaction.
ionic equation		A balanced equation that only shows the ions that react together. The spectator ions are not included in the equation.
oxidation	<i>ox-id-ay-shun</i>	A reaction in which a substance gains oxygen or in which an atom or ion loses electrons.
reactivity series		A list of metals in order of reactivity with the most reactive at the top.
reduction	<i>re-duk-shun</i>	A reaction in which a substance loses oxygen or in which an atom or ion gains electrons.
spectator ions		These are ions that do not change during a reaction.

SC8g Solubility

Word	Pronunciation	Meaning
precipitate	<i>pre-sip-et-tate</i>	An insoluble product formed when solutions of two soluble reactants are mixed.
precipitation	<i>pre-sip-et-tay-shun</i>	A reaction in which an insoluble product is formed from two soluble reactants in solution.