

SC25a Flame tests and photometry

Word	Pronunciation	Meaning
calibration curve	<i>kal-ib-ray-shun</i>	A graph used to determine the concentration of a substance in a sample.
cation	<i>kat-I-on</i>	A positively charged ion (usually a metal ion) formed by losing electrons.
emission spectrum	<i>em-mish-un spek-trum</i>	The spectrum of light emitted by an atom, ion or molecule.
flame photometer	<i>flaym fo-tom-et-er</i>	A machine used to identify metal ions in solution and to determine their concentration.
spectrum		Individual components of light arranged in order of wavelength or frequency.
standard solution		A solution containing a known concentration of a substance.

SC25b Tests for positive ions

Word	Pronunciation	Meaning
confirmatory test		A chemical test carried out to check the conclusion from the results of another test.
precipitate	<i>pre-sip-et-tayt</i>	An insoluble product formed when solutions of two soluble reactants are mixed.
precipitation reaction	<i>pre-sip-et-tay-shun</i>	A reaction in which an insoluble product is formed from two soluble reactants.

SC25c Tests for negative ions

Word	Pronunciation	Meaning
anion		A negatively charged ion (usually a non-metal ion) formed by gaining electrons.
halide	<i>hay-lie'd</i>	A compound consisting of a group 7 element and another element, usually hydrogen or a metal.
halide ion	<i>hay-lie'd I-on</i>	A negatively charged ion formed from one of the group 7 elements.

SC26a Choosing materials

Word	Pronunciation	Meaning
alloy	<i>al-oi</i>	A metal with one or more other elements (usually metals) added to improve its properties.
ceramics	<i>ser-am-icks</i>	A range of hard, durable, non-metallic materials, which are generally unaffected by heat, e.g. china and glass.
clay ceramics		Hard, durable materials, including brick, porcelain and china.
glass		A solid produced by cooling a molten substance. The atoms are joined to form a giant structure without crystals.
malleable	<i>mal-ee-uh-buhl</i>	A substance that can be hammered or rolled into shape without shattering.
monomer		A small molecule that can join with other molecules like itself to form a polymer.
opaque	<i>O-payk</i>	A material that does not let light through. It is not possible to see through an opaque substance.
plasticiser	<i>plas-tis-eyes-er</i>	Substance added to a polymer during its manufacture to make the polymer softer and more flexible.
polymer		A substance made up of very long molecules containing repeating groups of atoms, formed by joining monomer molecules together.
transparent		A coloured or colourless material that light can travel through without scattering.

SC26b Composite materials

Word	Pronunciation	Meaning
composite material		A mixture of two or more materials with contrasting properties, combined to produce a material with properties of both.
compressive strength		A measure of how well a substance resists squashing.
matrix	<i>may-trix</i>	In a composite material, the substance that binds the reinforcement material together.
reinforcement		In a composite material, the substance that is bound together by the matrix material.
tensile strength	<i>tens-l'll</i>	A measure of how well a substance resists stretching.

SC26c Nanoparticles

Word	Pronunciation	Meaning
bulk		A substance in the form of lumps or powders is described as being in bulk.
nanoparticle		Piece of a material consisting of a few hundred atoms, and between 1 nm and 100 nm in size.
nanoparticulate		A material that consists of nanoparticles.
surface area to volume ratio (SA : V)		The total surface area of an object divided by its volume.