

IGCSE Chemistry Keyword Glossaries

Crude Oil and Hydrocarbons

Keyword	Definition
Crude Oil	A naturally occurring, unrefined petroleum product composed of hydrocarbon deposits and other organic materials.
Hydrocarbon	An organic compound consisting entirely of hydrogen and carbon.
Alkane	A hydrocarbon with single bonds only.
Alkene	A hydrocarbon that contains a carbon-carbon double bond.
Fractional Distillation	The separation of a mixture into its component parts, or fractions, such as in separating chemical compounds by their boiling point.
Combustion	A chemical process in which a substance reacts rapidly with oxygen and gives off heat.
Saturated Hydrocarbon	A hydrocarbon in which all the bonds between carbon atoms are single bonds.
Unsaturated Hydrocarbon	A hydrocarbon that contains one or more double or triple bonds between carbon atoms.
Isomer	Compounds with the same formula but different structures.
Petrochemical	A chemical obtained from petroleum and natural gas.

Acids, Bases & Salts

Keyword	Definition
Acid	A substance that donates hydrogen ions and therefore lowers pH.
Base	A substance that accepts hydrogen ions and therefore raises pH.
Salt	An ionic compound that results from the neutralization reaction of an acid and a base.
pH	A measure of the hydrogen ion concentration of a solution.
Neutralization	A chemical reaction in which an acid and a base react quantitatively with each other.
Indicator	A substance that changes color to indicate the presence of an acid or a base.

Titration	A technique where a solution of known concentration is used to determine the concentration of an unknown solution.
Strong Acid	An acid that completely ionizes in solution.
Weak Acid	An acid that only partially ionizes in solution.

Quantitative Analysis

Keyword	Definition
Mole	The amount of substance that contains as many entities as there are atoms in 12 g of carbon-12.
Molar Mass	The mass of one mole of a substance.
Avogadro's Number	The number of atoms, ions, or molecules in one mole of a substance.
Concentration	The amount of a substance per defined space.
Titration	A technique where a solution of known concentration is used to determine the concentration of an unknown solution.
Standard Solution	A solution of known concentration used in titrations.
Gravimetric Analysis	A method of quantitative chemical analysis in which the substance being analyzed is converted into an insoluble precipitate.
Volumetric Analysis	A method of quantitative chemical analysis in which the volume of a solution of known concentration is used to determine the concentration of an analyte.
Limiting Reactant	The substance that is totally consumed when the chemical reaction is complete.
Theoretical Yield	The amount of product that could be formed from a given amount of reactants.

Chemical Testing

Keyword	Definition
Litmus Test	A test for acidity or alkalinity using litmus paper.
Flame Test	A test for the presence of certain metal ions based on the color of the flame produced.
Precipitation Reaction	A reaction that occurs when two solutions containing soluble salts are combined and an insoluble salt is produced.
Redox Reaction	A chemical reaction involving the transfer of electrons between two species.

Titration	A technique where a solution of known concentration is used to determine the concentration of an unknown solution.
Indicator	A substance that changes color to indicate the presence of an acid or a base.
Qualitative Analysis	The determination of the chemical composition of a sample.
Quantitative Analysis	The determination of the amount or concentration of a substance in a sample.
Chromatography	A technique for separating mixtures into their components based on their movement through a stationary phase.
Spectroscopy	The study of the interaction between matter and electromagnetic radiation.

Gases in the Atmosphere

Keyword	Definition
Nitrogen	A colorless, odorless gas that makes up about 78% of the Earth's atmosphere.
Oxygen	A colorless, odorless gas that makes up about 21% of the Earth's atmosphere.
Carbon Dioxide	A colorless, odorless gas produced by burning carbon and organic compounds and by respiration.
Argon	A colorless, odorless gas that makes up about 0.93% of the Earth's atmosphere.
Greenhouse Gas	A gas that contributes to the greenhouse effect by absorbing infrared radiation.

Rates of Reaction

Keyword	Definition
Rate of Reaction	The speed at which a chemical reaction proceeds.
Catalyst	A substance that increases the rate of a chemical reaction without itself undergoing any permanent chemical change.
Activation Energy	The minimum quantity of energy that the reacting species must possess in order to undergo a specified reaction.
Concentration	The amount of a substance per defined space.
Temperature	A measure of the warmth or coldness of an environment or substance.
Surface Area	The measure of how much exposed area a solid object has.
Pressure	The force exerted per unit area.

Collision Theory	A theory that states that chemical reactions can occur when atoms, ions, and molecules collide.
Enzyme	A substance produced by a living organism that acts as a catalyst to bring about a specific biochemical reaction.