B4 Making Chemical Products Keywords

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| **Keyword** | **Definition** |
| **Bulk chemicals** | Chemicals manufactured on a large scale like ammonia or sulphuric acid or sodium hydroxide where millions of tons are made each year |
| **Fine chemicals** | Chemicals manufacted on a smaller scsle such as drugs and pesticides |
| **Pharmaceuticals** | A medicine used to treat or prevent disease |
| **Formulation** | A aprticular mixture designed to make a product suitable for use (like a recipe) |
| **Standard procedure** | Precise instructions written so scienctists know exactly what to do |
| **Emulsifying agent** | A chemical added to an emulsion to prevent it separating |
| **emulsion** | A mixture when two liquids are mixed together like oil and water |
| **explosive** | A material containing a large amount of stored chemical energy that can suddenly deteriorate |
| **Harmful** | A chemical that can cause damage to the body through contact with the eyes, skin or inhalation |
| **Irritant** | Not corrosive but may cause inflammation or lesions on the skin or eyes on contact |
| **Toxic** | A poisonous chemical that can damage the body through skin contact, inhalation or swallowing |
| **Corrosive** | A corrosive substance may destroy living tissues on contact |
| **Oxidising** | A chemical that can supply oxygen, allowing another chemical to burn more vigorously, even in a vacuum |
| **Flammable** | A material that catches fire easily often by producing flammable vapour at room temperature |
| **Hazchem** | Warning labels found on chemical containers that indicate the potential hazard that they present |
| **Acids** | A compound that dissolves in water to give a solution with a pH less than 7. |
| **Indicator** | A solution that gives a distinct colour at a specific pH |
| **neutralise** | To cancel out the acidity or alkalinity of a solution until it reaches pH7 |
| **alkalis** | Compounds that dissolve in water to give a solution higher than 7. |
| **Concentration** | A quantity of a che4mical dissolved in a stated volume of solution |
| **pH scale** | A 14 point scale that shows the acidity or alkalinity of a substance in water |
| **Word equation** | A summery in words of a chemical reaction |
| **Salt** | A chemical formed when an acid reacts with a metal, metal oxide or metal carbonate |
| **Carbonates** | A chemical with a CO3 group |
| **Oxides** | A compound of an element with oxygen |
| **Hydroxides** | A chemical with an OH group |
| **Soluble** | Describes a chemical that dissolves in water or another named solvent |
| **Insoluble** | A chemical that does not dissolve in a certain liquid |
| **Filtration** | A process of passing material through a filter |
| **Filtrate** | Liquid and dissolved substances that pass through a filter |
| **Crystallisation** | Producing crystals from a solution by evaporation or cooling |
| **Solution** | Liquid containing dissolved chemicals |
| **Precipitation** | The process of forming a precipitate |
| **Precipitate** | A solid product that comes out of a solution in a chemical reaction |
| **Relative atomic mass** | The mass of an atom of an element compared with the mass of an atom of carbon. |
| **Relative formula mass** | The combined relative atomic masses of all the atoms in a molecule |
| **Yield** | The amount of product obtained from a chemical reaction. It may be measured as the actual yield or the percentage yield |
| **Theoretical yield** | The amount of product that would be obtained in a reaction if all of the reactants were converted to products as described by the balanced chemical equation |
| **Technical grade** | The cheapest and least pure variety of a chemical |
| **Laboratory grade** | A chemical that is pure enough for general laboratory work |
| **Analytical grade** | The most pure version of a chemical available |
| **Rate of reaction** | A measure of how quickly a reaction is happening. It may be found by measuring the rate of disappearance of a reactant or the rate of appearance of a product. In most chemical reactions the rate changes with time. |
| **Catalyst** | A chemical that speeds up a chemical reaction without being used up in the reaction |
| **Scaling up** | To find a way of producing a chemical on a large scale by adapting the reaction that produced it during research and development |
| **Batch process** | A process that produces a certain quantity of a chemical in one operation |
| **Continuous process** | A process for manufacting chemicals on a lerge scale in industry 24 hrs a day |
| **Residue** | Solid substance that collects on the filter paper after filtration or is left in the flask after distillation |
| **Elements** | A chemical that cannot be broken down into a simpler one. Contains only one type of atom. |
| **Chemical formula** | A way of describing a chemical using symbols for atoms. |
| **Compound** | A chemical made of 2 or more elements bonded together |
| **Word equations** | A summary of words of a chemical reaction |
| **Balanced symbol equations** | An equation representing a chemical reaction using symbols and formulae. |
| **Products** | Chemicals formed following a reaction |
| **State symbols** | Letters showing the form that a reactant or product takes e.g. s – solid; l-liquid, aq- aqueous solution and g – gas |
| **Solute** | Substance usually a solid dissolved by a solvent to form a solution |
| **Dilution** | The addition of solvent to make a weaker solution |
| **Litre** | 1000cm3 or 1000ml |
| **suspension** | A mixture of an insoluble solid with a liquid. The solid particles are dispersed through the liquid. You cannot see through a suspension. |