

CHEMISTRY

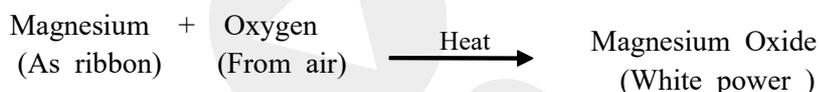
CLASS NOTES FOR CBSE

Chapter 05. Chemical Reactions and Equations

Chemical reactions are the processes in which new substances with new properties are formed. during a chemical reaction, atoms of one element do not change into those of another element. only a rearrangement of atoms takes place in a chemical reaction.

- (i) The substances which take part in a chemical reaction are called reactants.
- (ii) The new substances produced as a result of chemical reaction are called products.

When a magnesium ribbon is heated, it burns in air with a dazzling white flame to form a white powder called magnesium oxide. Actually, on heating, magnesium combines with oxygen present in air to form magnesium oxide :

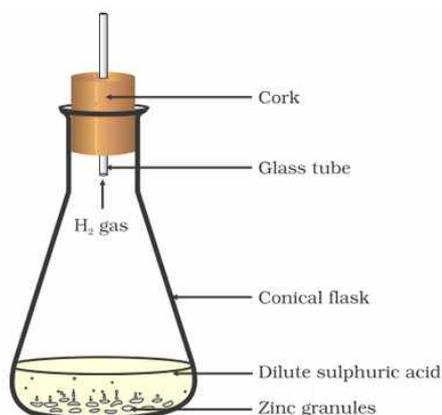


The burning of magnesium in air to form magnesium oxide is an example of a chemical reaction. Souring of milk (when left at room temperature during summer), Formation of curd from milk, Cooking of food Digestion of food in our body, Process of respiration, Fermentation of grapes, Rusting of iron (when left exposed to humid atmosphere), Burning of fuels (like wood, coal, kerosene, petrol and LPG,) burning of candle wax, and Ripening of fruits, are all chemical changes which involve chemical reactions.

01. Characteristics of Chemical Reactions

The important characteristic of chemical reactions are :

- (i) **Evolution of a Gas** : The chemical reaction between zinc and dilute sulphuric acid is characterised by the evolution of hydrogen gas.



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- (ii) **Formation of a Precipitate** : When formed the chemical reaction between potassium iodide and lead nitrate is characterised by the formation of a yellow precipitate of lead iodide.



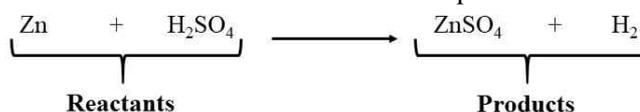
- (iii) **Change in colour** : When citric acid reacts with potassium permanganate solution, then the purple colour of potassium permanganate solution disappears (it becomes colourless). the chemical reaction between citric acid and purple coloured potassium permanganate solution is characterised by a change in colour from purple to colourless.



- (iv) **Change in Temperature** : The chemical reaction between quicklime and water form slaked lime is characterised by a change in temperature (which is rise in temperature) the reaction between quicklime and water to form slaked lime is an exothermic reaction (which means heat producing reaction).
- (v) **Change in State** : When wax is burned (in the form of a wax candle) then water and carbon dioxide are formed

02. Chemical Equations

The method of representing a chemical reaction with the help of symbols and formulae of the substances involved in it is known as a chemical equation.



Balanced and Unbalanced Chemical Equations

A balanced chemical equation has an equal number of atoms of different elements in the reactants and products.



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