

CHAPTER : 1 CHEMICAL REACTIONS & EQUATIONS

A process in which the original substances lose their nature & Identity and form new chemical substances with different properties are called chemical changes. The process involving a chemical change is called a chemical Reaction.

The symbolic representation of chemical reaction by using the symbols and formulae is known as Chemical Equation.

@anjit

Reactants

The Chemical substances taken originally

Products

new chemical substances formed

MIND MAPS
ANJIT ACADEMY

Rancidity
when fats or oil in slowly oxidised

OR hydrated ferric oxide

It is mainly hydrated iron (III) oxide, $\text{Fe}_2\text{O}_3 \cdot x\text{H}_2\text{O}$. It weakens the structure of the body

Rust

Prevent

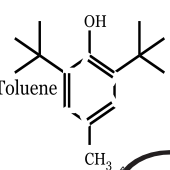
- by adding antioxidants
- use air tight containers

Anti-oxidants

Natural

Vita. 'C' - Ascorbic Acid
Vita. 'E' - Tocopherol

Synthetic

BHT Butylated hydroxy Toluene


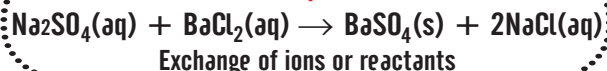
Corrosion

When reactive metal surface is attacked by air, water, etc. then under redox reaction, metal gets oxidized to metal oxide and oxygen gets reduced to oxide ion.

Chemical Reactions & Equations

Types of chemical reactions

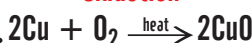
Double displacement



Oxidation Reduction

- Addition of H_2 Removal of O_2
- Addition of O_2 Removal of H_2

Oxidation

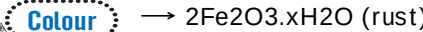


Reduction



Reactions

change in

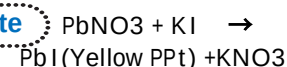


Colour

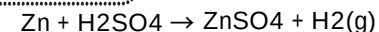
state

Ice = Water

Precipitate



Evaluation of Gas



Simplest way to write word equation

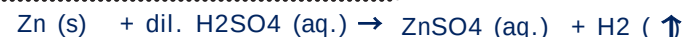
e.g. Magnesium + Oxygen $\rightarrow$ Magnesium oxide



form-equation

Balanced equation (Skeleton equation)

i.e. L.H.S = R.H.S



Unbalanced Equation

i.e. L.H.S $\neq$ R.H.S

Follows law of conservation of mass

No. of atoms remains same

Elements with maximum atoms balanced first

Reactants & products both balanced

Physical state of elements written as gas (g), liquid (l) and solid (s)

Thermochemical changes

1. **Energy absorbed: endothermic**

photosynthesis &

Most of the decomposition reactions are endothermic.

2. **Energy released: exothermic**

Combinations reactions are generally exothermic in nature

