

Redox Reactions

★ Based on the ancient concept

Oxidation = Addition of oxygen / Electronegative element
OR
Removal of hydrogen / Electropositive element

Reduction = Addition of hydrogen / Electropositive element
OR
Removal of oxygen / Electronegative element

Redox Reaction = Oxidation + Reduction

★ Based on new concepts

Oxidation = Electron ejection

Reduction = Gain of electrons

★ Normality Relation

$$N_1 V_1 = N_2 V_2$$

★ Molarity Relation

$$\frac{M_1 V_1}{n_2} = \frac{M_2 V_2}{n_1}$$

N_1 = Normality of Solution 1, N_2 = Normality of Solution 2
 V_1 = Volume of solution 1, V_2 = Volume of solution 2

M_1 = Molarity of Reducing solution

V_1 = Volume of Reducing solution

M_2 = Molarity of oxidized solution

V_2 = Volume of oxidized solution

Some Chemical compounds names & Molecular Formulas

Compound Name	Molecular Formula	Compound Name	Molecular Formula
Acetic acid	CH_3COOH	Potassium Nitrate	KNO_3
Hydrochloric acid	HCl	Ammonium chloride	NH_4Cl
Sulfuric acid	H_2SO_4	Ammonium hydroxide	NH_4OH
Acetate	CH_3COO^-	Calcium nitrate	$\text{Ca}(\text{NO}_3)_2$
Ammonia	NH_3	Hydrogen Peroxide	H_2O_2
Nitric acid	HNO_3	Silver chloride	AgCl
Phosphoric acid	H_3PO_4	Barium Sulphate	BaSO_4
Sodium Phosphate	Na_3PO_4	Magnesium Sulphate	MgSO_4
Calcium carbonate	CaCO_3	Sodium Sulphite	Na_2SO_3
Sodium Bicarbonate	NaHCO_3	Oxalic acid	$\text{H}_2\text{C}_2\text{O}_4$
Sodium Hydroxide	NaOH	Potassium dichromate	$\text{K}_2\text{Cr}_2\text{O}_7$
Calcium Hydroxide	$\text{Ca}(\text{OH})_2$	Zinc chloride	ZnCl_2
Ethanol	$\text{C}_2\text{H}_5\text{OH}$	Zinc hydroxide	$\text{Zn}(\text{OH})_2$
Nitrous Acid	HNO_2	Zinc Sulphate	ZnSO_4
Potassium Hydroxide	KOH	Phosphorus Pentachloride	PCl_5
Silver nitrate	AgNO_3	Sodium nitrite	NaNO_2
Sodium carbonate	Na_2CO_3	Potassium Permanganate	KMnO_4
Magnesium Hydroxide	$\text{Mg}(\text{OH})_2$	Boric acid	H_3BO_3
Methane	CH_4	Potassium nitrite	KNO_2
Sodium chloride	NaCl	Tartaric acid	$\text{C}_4\text{H}_6\text{O}_6$
Carbon tetrachloride	CCl_4	Aluminium Hydroxide	$\text{Al}(\text{OH})_3$
Sodium Sulphate	Na_2SO_4	Iron oxide	Fe_2O_3