

SALT ANALYSIS

THE DETECTION OF CATIONS (BASIC RADICALS) AND ANIONS (ACIDIC RADICALS) IN A SALT OR IN A MIXTURE IS KNOWN AS QUALITATIVE ANALYSIS

Important Observations during Qualitative Analysis

1. List of different coloured salts

Salts	Copper	Nickel	Chromium	Cobalt	Manganese	Ferrous	Ferric
Colour	Bluish Green	Greenish Blue	Dark Green	Pinkish or Purple	Light Pink	Light Green	Pale Yellow

2. Gases

Residue	O_2 , CO_2 , N_2	NH_3 , SO_2 , HCl , H_2S	NO_2 (brown), Br_2 (reddish brown), I_2 (violet), Cl_2 (greenish yellow)
Colour	Colourless and odourless	Colourless and odour	Coloured gases

3. Flame Test

Li	Na	K	Li	Cs	Li
Crimson Red	Golden Yellow	Violet	Brick Red	Crimson	Apple Green

4. Solubility in water

Salts	Carbonates	Chlorides	Nitrates	Sulphates
Solubility in water	Insoluble except those of sodium, potassium and ammonium	Soluble except those of lead (II) and silver.	All are soluble	Soluble except those of lead (II) and barium

5. Action of heat (colour of residue)

Note:- (Hot - ●) (Cold - ●)

Residue	ZnO	PbO	HgO, Pb_3O_4	Fe_2O_3	$Pb(NO_3)_2$, NaCl	Ammonium salts
Colour	Yellow ● White ●	Reddish brown ● Yellow ●	Black ● Red ●	Black ● Red brown ●	Decrepi-tation	White sublimate

