

GROUP IV.

Precipitate with silver nitrate is insoluble in dilute nitric acid and

Black.	Yellowish.	Brownish Yellow.	White.
Soluble salts give purple colour with sodium nitroprusside, black precipitate with lead, evolve bad smelling gas when treated with acids; the gas blackens lead paper. Compounds insoluble in water, when heated with nitric acid, evolve red fumes, and the solution obtained contains sulphuric acid. Hydrosulphuric acid or sulphur.	Insoluble in ammonia. Salts heated with sulphuric acid give off violet fumes. Solutions treated with chlorine water become yellow; the solution turns starch paste blue; shaken with carbon disulphide communicates to it a pink or dark colour. Hydriodic or iodine. Soluble in warm ammonia. Salts heated with sulphuric acid give off yellow, bad-smelling fumes. Solutions treated with chlorine water and shaken with ether, communicate to it a yellow colour. Hydrobromic or bromine.	Hydroferricyanic. See Group I.	Salts heated with manganese dioxide and sulphuric acid evolve chlorine, recognisable by its odour and its bleaching properties. Salts heated with sulphuric acid alone, evolve the pungent fumes of hydrochloric acid, which form dense clouds with ammonia. Hydrochloric Salts heated with sulphuric acid evolve vapours of hydrocyanic acid recognisable by odour, and by being absorbed by a few drops of ammonium sulphide held over them on a watch glass; on evaporating to dryness the residue gives a blood red colour with ferric chloride. Solutions mixed with ferrous and ferric chlorides, then potassium hydrate and then hydrochloric acid, give a blue colour. Hydrocyanic Salts give a precipitate only in rather concentrated solutions. Heated with alcohol and sulphuric acid evolve sweet smelling vapours of acetic ether. Solutions give with ferric chloride a red colour, destroyed by boiling but not by mercuric chloride. Acetic. Meconic acid gives a similar red colour with ferric chloride not destroyed either by boiling or mercuric chloride. Sulphocyanic acid, see Group I. Hydrofluoric acid, see Group III.