

WET TESTS OF BASIC RADICALS:

These tests are carried out using the salt sample in solution form. For this an **Original Solution (O.S)** of the salt or the mixture of salts is prepared. The **Original Solution** is made by dissolving the given salt in the following solvents strictly in the order given below:

- (i) Cold water
- (ii) Hot water
- (iii) dil. HCl
- (iv) Conc. HCl

Salt or Mixture + Solvent \longrightarrow Original Solution

The order of solvent must be followed as it helps in understanding the solubility pattern of the salt. Now the original solution obtained above is used for analysis of basic radicals except in the case of ammonium ions (NH_4^+). In the analysis of ammonium ions, the solid salt is used instead of solution of the salt.

The basic radicals are classified into six different groups based on the reagent used. The reagent, with which the particular basic radicals form precipitate, is called its group reagent and the radicals are termed as group radicals. Since, one does not know which group radical to test for therefore, while analyzing a salt the solution is checked for the presence of the radicals of all groups. The schematic diagram of the classification is as under:

