

Solubility test for Organic Compounds

The study of the solubility of an unknown compound in some solvents, given below, provides valuable information as to the presence or absence of certain classes of organic compounds. The solubility test should be applied intelligently.

Procedure:

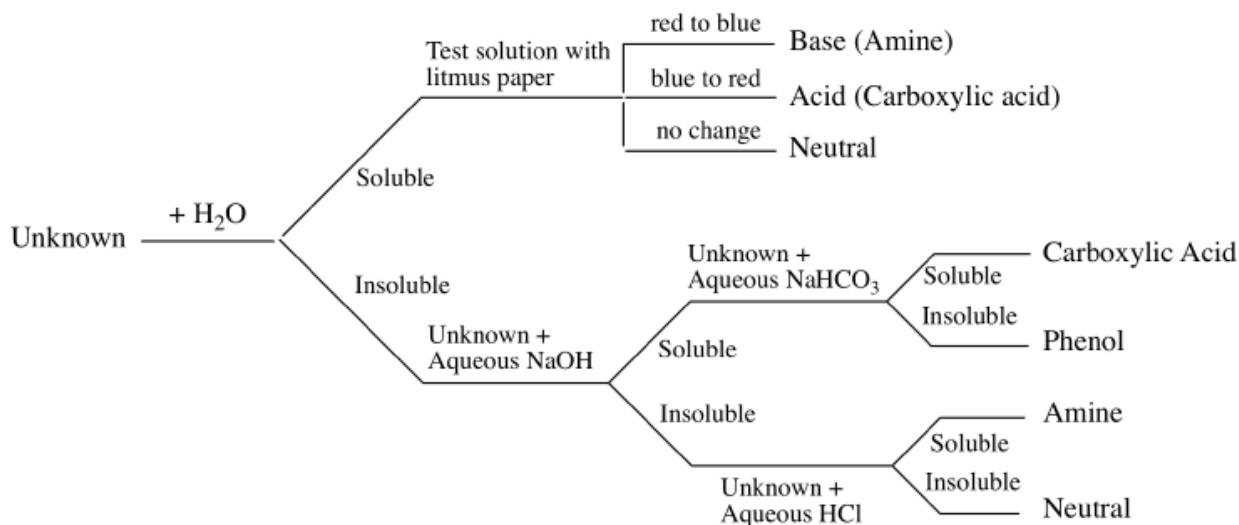
1. Place 0.1g of unknown solid compound (if liquid 0.2 ml.) in a small test tube and add, in portion, with shaking 3 ml. of water.
2. If the compound dissolves then repeat the test with ether as the solvent.

Using other solvent:

If the compound proves to be insoluble in water, test its solubility in 5% NaOH, and in 5% NaHCO₃ solution.

If the compound is insoluble in 5% NaOH, then test for solubility in 5% HCl. An organic compound which remains insoluble-in water, NaOH or HCl and contains no nitrogen, its solubility is tested in conc.H₂SO₄. the following chart gives the solubility classes of various organic compounds.

Scheme 1



Solubility chart of Organic compounds