

EXPERIMENT NO -19

OBJECT: To perform limit test of iron in given sample.

REFERENCE:-

Singh H.R., Kapoor V.K. "Practical Pharmaceutical chemistry", Vallabh Prakashan, Ed Ist, 2008, pp 58.

REQUIREMENTS

Chemical required: Thioglycolic acid, citric acid, Ammonia solution, ferric ammonium sulphate.

Apparatus required: Measuring cylinder, glass rod, pipette and Nessler's cylinder.

THEORY

Limit test are quantitative or semi-quantitative test designed to identify and control small quantity of impurities which are likely to be present in the substance.

The limit test of iron is based on the reaction between iron and thioglycolic acid in the presence of citric acid in a ammonical solution. Citric acid prevents precipitation of iron with Ammonia. A deep reddish purple colour is formed.

Ferrous thioglycolate is colourless in acidic medium but in alkaline medium it gives purple colour.



PROCEDURE

STANDARD

Take standard 1.5 ml of Iron solution. Add 1.5 ml of iron free citric acid to this solution and 1.5 ml of thioglycolic acid and make the solution alkaline. Volume make up to 50 ml. Stare the solution allow to stand for 5 minutes.

TEST

Dissolve specific quantity of substances being examined dissolved in water. Add 1.5 ml of iron free citric acid to this solution and 1.5 ml of thioglycolic acid and make the solution alkaline. Volume make up to 50 ml. Stare the solution allow to stand for 5 minutes

RESULT

Limit test for Iron was performed.