

Identification test of ferrous sulphate

BACKGROUND-

Ferrous sulphate (FeSO_4) also known as green vitriol or as copperas having a min. of 98% and a max of 103.3N of $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$. This ferrous sulphate can be prepared by dissolving iron in excess amount of $\text{dil.H}_2\text{SO}_4$.

The identification tests are prescribed by pharmacopoeias to check the quality of the drugs, pharmaceutical aids or any reagents required for the test. The principles of these tests are based upon the reactions of ions or radicals with a specific inorganic or organic reagent. Single compound or a mixture of compounds can undergo these tests.

Aim: Aim of the experiment is to do the identification test of ferrous sulphate.

REQUIREMENTS-

Sample: Magnesium Sulphate (15g)

Chemicals: Distilled water,
Dilute ammonia solution,
Ammonium chloride (2M),
Disodium hydrogen phosphate (0.25M)

Apparatus: Test tube,
Test tube holder,
Spatula

PROCEDURE-

1ml of required substance containing a min. of 1mg of iron was to be dissolved in 2ml of water, to which 1ml of potassium ferricyanide solution was added which gave a dark blue precipitate that would be insoluble in dil. HCl and can be decomposed by sodium hydroxide solution.

CONCLUSION-

From the above experiment it can be concluded that ferrous ion is present in the substance and results in formation of intense red colour which proves for the presence of ferrous ion.

REFERENCES-

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3. Kasture , Wadodkar. Practical Pharmaceutical Chemistry- 1; Nirali publication.