

Identification test of calcium gluconate

BACKGROUND-

Calcium gluconate is the calcium salt of gluconic acid having a variety of uses such as calcium replenisher in calcium deficient patients or in hypocalcaemic tetany. Glucose can be a starting material for its preparation which is to be oxidised to gluconic acid. As it is a mineral supplement so can be provided by injection into a vein to treat low blood calcium level, magnesium toxicity and high blood potassium.

The identification tests are prescribed by pharmacopoeias to check the quality of the drugs, pharmaceutical aids or any reagents required for the test. The principle of these tests is 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 calcium gluconate.

REQUIREMENTS-

Sample: Calcium gluconate

Chemicals: Dilute HCl,

Dilute NaOH solution,

Distilled water

Ammonium carbonate

Apparatus: Test tube,

Test tube holder,

Spatula.

PROCEDURE-

Accurately weighed 20mg of substance was made to dissolve in minimum quantity of dilute HCl and then neutralised with dil. NaOH solution or some 5ml of 10% w/v solution of sample was mixed in water then 5ml of ammonium carbonate solution was added and the solution was boiled and cooled for observation.

CONCLUSION-

From the above experiment we can conclude that calcium ion is present in the substance and results in the formation of white amorphous precipitate and it imparts yellow colour when treated with ferric chloride solution.

REFERENCES-

1. Chatwal GR. Pharmaceutical inorganic chemistry (vol- 1); 2016
2. Indian pharmacopoeia; 2016

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