EXPERIMENT NO -25

OBJECT: To perform assay of Calcium gluconate IP 1996.

REFERENCE

Parle A., "Pharmaceutical chemistry I Laboratory Mannual", CBS Publishers and distributors Pvt. Ltd, Ed Ist, 2008, pp 143-144.

STANDARDS

Calcium gluconate contains not less than 98.5% and not more than 102.0% of $C_{12}H_{22}CaO_4.H_2O$.

REQUIREMENTS

Chemical required: Calcium gluconate ,strong ammonia, magnesium sulphate,EDTA solution.

Apparatus required: conical flask, burette, pipette, beaker, etc.

THEORY

This a replacement type of complexometric titration.Addition of magnesium sulphate ensure sharp change in colour.

PROCEDURE

Weigh accurately about 0.5 g of the dried sample and dissolve in 5 ml of dilute hydrochloric acid. Add 50 ml of water, 25 ml of sodium hydroxide TS and about 0.1 g of 2-hydroxy-1-(2'-hydroxy-4'-sulfo-1'-naphthylazo)-3-naphthoic acid. Titrate with 0.05 M EDTA immediately. At the end-point, the red colour changes completely to blue. Each ml of 0.05 M EDTA is equivalent to 22.42 mg of C12H22CaO14 · H2O.

RESULT:

The percentage purity of magnesium sulphate in the given sample is % w/w.