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Calcium Gluconate Effervescent Tablets

[General Notices](#)

Effervescent Calcium Gluconate Tablets

DEFINITION

Calcium Gluconate Effervescent Tablets contain Calcium Gluconate in a suitable effervescent basis.

The tablets comply with the requirements stated under Tablets and with the following requirements.

Content of calcium gluconate, $C_{12}H_{22}CaO_{14} \cdot H_2O$

95.0 to 105.0% of the stated amount.

IDENTIFICATION

- A. Dissolve a quantity of the powdered tablets containing 1 g of Calcium Gluconate in 20 mL of hot [water](#), cool and filter. To 0.5 mL of the filtrate add 0.05 mL of [iron\(III\) chloride solution R1](#). An intense yellow colour is produced.
- B. To 5 mL of the filtrate obtained in test A add 0.65 mL of [glacial acetic acid](#) and 1 mL of [phenylhydrazine](#), heat on a water bath for 30 minutes, allow to cool and induce crystallisation. Filter, dissolve the residue in 10 mL of hot [water](#), add a suitable quantity of [activated charcoal](#), shake, filter, allow the filtrate to cool and induce crystallisation. A white, crystalline precipitate is produced. The [melting point](#) of the crystals, after drying, is about 201°, with decomposition, [Appendix V A](#).
- C. The powdered tablets yield reaction B characteristic of *calcium salts*, [Appendix VI](#).
- D. The tablets effervesce on the addition of [water](#).

ASSAY

Weigh and powder 20 tablets. Ignite a quantity of the powder containing 0.5 g of Calcium Gluconate, cool and dissolve the residue with gentle heat in 5 mL of [2M hydrochloric acid](#). Filter, wash the residue on the filter with [water](#) and dilute the combined filtrate and washings to 50 mL with [water](#). Neutralise with 5M [ammonia](#), using [methyl orange solution](#) as indicator, add 5 mL of 8M [sodium hydroxide](#) and titrate with 0.05M [disodium edetate VS](#) using [calconcarboxylic acid triturate](#) as indicator. Each mL of 0.05M [disodium edetate VS](#) is equivalent to 22.42 mg of $C_{12}H_{22}CaO_{14} \cdot H_2O$.