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Calcium Citrate,

$\text{Ca}_3(\text{C}_6\text{H}_5\text{O}_7)_2 \cdot 4\text{H}_2\text{O}$ 570.49 CAS RN®: 813-94-5.—A white, crystalline powder. Freely soluble in 3 N hydrochloric acid and in 2 N nitric acid; slightly soluble in water; insoluble in alcohol. To 15 mL of hot 2 N sulfuric acid add, in small portions and with stirring, about 500 mg of calcium citrate. Boil the mixture for 5 min, and filter while hot: the cooled filtrate responds to the identification test for [Identification Tests—General, Citrate \(191\)](#).

- **ASSAY:** Accurately weigh about 400 mg of the salt, previously dried at 150° to constant weight, and transfer to a 250-mL beaker. Dissolve the test specimen in 150 mL of water containing 2 mL of 3 N hydrochloric acid, add 15 mL of 1 N sodium hydroxide and 250 mg of hydroxy naphthol blue, and titrate with 0.05 M edetate disodium VS until the solution turns deep blue. Each mL of 0.05 M edetate disodium is equivalent to 8.307 mg of calcium citrate [$\text{Ca}_3(\text{C}_6\text{H}_5\text{O}_7)_2$]: between 97.5% and 101% is found.
- **CALCIUM OXIDE AND CARBONATE:** Triturate 1 g of calcium citrate with 5 mL of water for 1 min: the mixture does not turn red litmus blue. Then add 5 mL of warm 3 N hydrochloric acid: only a few isolated bubbles escape.
- **HYDROCHLORIC ACID-INSOLUBLE MATTER:** Dissolve 5 g by heating with a mixture of 10 mL of hydrochloric acid and 50 mL of water for 30 min: not more than 2.5 mg of insoluble residue remains (0.05%).
- **LOSS ON DRYING (731):** Dry it at 150° to constant weight: it loses between 12.2% and 13.3% of its weight.

Change to read:

- **▲ ARSENIC (211), Procedures, Procedure 1 ▲** (CN 1-JUN-2023) : Proceed with 0.50 g as directed for organic compounds (6 ppm of As).
- **HEAVY METALS** (reagent test): 0.002%.

Auxiliary Information - Please [check for your question in the FAQs](#) before contacting USP.

Topic/Question	Contact	Expert Committee
CALCIUM CITRATE	Margareth R.C. Marques Principal Scientific Liaison	HDQ Headquarters

Most Recently Appeared In:

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