

CALCIUM ASCORBATE

Prepared at the 25th JECFA (1981), published in FNP 19 (1981) and in FNP 52 (1992). Metals and arsenic specifications revised at the 61st JECFA (2003). A group ADI 'not specified' was established for ascorbic acid and its Ca, K and Na salts at the 25th JECFA (1981).

SYNONYMS

INS No. 302

DEFINITION

Chemical names

Calcium ascorbate dihydrate, calcium salt of 2,3-didehydro-L-threo-hexono-1,4-lactone dehydrate

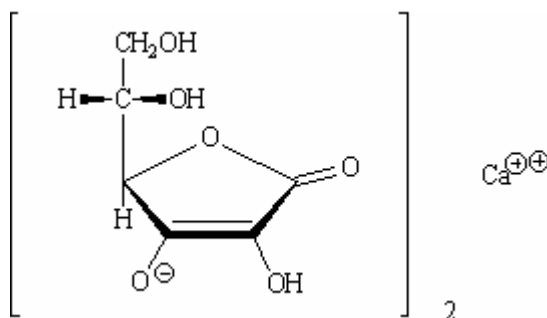
C.A.S. number

5743-27-1

Chemical formula

$C_{12}H_{14}O_{12}Ca \cdot 2H_2O$

Structural formula



Formula weight

426.35

Assay

Not less than 98% of $C_{12}H_{14}O_{12}Ca \cdot 2H_2O$

DESCRIPTION

White to slightly yellow odourless crystalline powder

FUNCTIONAL USES

Antioxidant

CHARACTERISTICS

IDENTIFICATION

Solubility (Vol. 4)

Soluble in water; slightly soluble in ethanol and insoluble in ether

Test for calcium (Vol. 4)

Passes test

Specific rotation (Vol. 4)

$[\alpha]_{25, D}$: Between +95 and +97° (5% (w/w) soln)

PURITY

<u>pH</u> (Vol. 4)	6.0 - 7.5 (1 in 10 soln)
<u>Fluoride</u> (Vol. 4)	Not more than 10 mg/kg (Method I)
<u>Lead</u> (Vol. 4)	Not more than 2 mg/kg Determine using an atomic absorption technique appropriate to the specified level. The selection of sample size and method of sample preparation may be based on the principles of the method described in Volume 4, "Instrumental Methods."

METHOD OF ASSAY

Weigh accurately about 0.4 g of the sample into a 250 ml flask and add 50 ml of carbone dioxide free water. Immediately titrate with 0.1 N iodine, adding a few drops of starch TS as indicator as the end point is approached. Each ml of 0.1 N iodine is equivalent to 10.66 mg of $C_{12}H_{14}O_{12}Ca \cdot 2H_2O$.