

## SPECIFICATION

**Product name** Calcium ascorbate (BP/USP/EP/FCC/E302)  
**Product code** SPCG01  
**Production unit** Heilongjiang NHU Biotechnology co., Ltd.  
**Trade name** Calcium ascorbate E302 (EP/USP)

### Description

**Ingredients** Calcium ascorbate dihydrate  
**Synonym** Calcium diascorbate, Calcium di[R]-2-[(S)-1,2-dihydroxyethyl]-4-hydroxy-5-oxo-2H-furan-3-olate dihydrate  
**Formula**  $C_{12}H_{14}CaO_{12} \cdot 2 H_2O$   
**Molecular weight** 426,34 g/mol  
**CAS No.** 5743-28-2

### Properties

**Shelf life** 24 months in unopened original container  
**Aspect** White or slightly yellowish, crystalline powder  
**Assay ( $C_{12}H_{14}CaO_{12}$ ) (EP)** 99 – 100,5 %  
**Assay (USP) Titration** 98 – 101 %  
**Solubility** freely soluble in water, practically insoluble in ethanol  
**Clarity of solution** clear  
**Colour of solution** <  $Y_6$   
**Specific Optical rotation** + 95° and + 97° (5 % w/v aqueous solution)  
**Loss on drying (EP/USP)** max. 0,1 %  
**pH value** 6,8 to 7,4 (10 % aqueous solution)  
**Fluoride** max. 10 mg/kg

### Identification

**EP**  
A: Specific optical rotation  
B: Infrared absorption spectrophotometry  
E: Substance gives reaction of calcium

**USP**  
A: Solution meets requirements  
B: 100 mg/ml solution decolorizes a 100 mg/mL solution of dichlorophenol–indophenol  
C: Infrared absorption spectrophotometry

### Heavy metals

Copper (Cu)	max. 5 mg/kg
Iron (Fe)	max. 2 mg/kg
Arsenic (As)	max. 1 mg/kg
Lead (Pb)	max. 0,5 mg/kg
Mercury (Hg)	max. 0,1 mg/kg
Cadmium (Cd)	max. 0,5 mg/kg

### Microbiological specs

Total plate count	< 1000 CFU/g
Mould and Yeast	< 100 CFU/g
E. coli	negative in 10 g
Salmonella	negative in 25 g
Staph. aureus	negative in 25 g

Residual solvents max. 200 mg/kg (Methanol)

### Handling

Usage	for food and cosmetic industry
Storage	in tight, light resistant original containers
Transport instructions	please see our latest MSDS.

## NHU EUROPE GmbH