

# Ascorbic Acid

Human Nutrition

  
The Chemical Company

## Chemical names

L-ascorbic acid, L-(+)-ascorbic acid, vitamin C, 3-oxo-L-gulofuranolactone

## EU name

L-ascorbic acid E 300

<b>CAS No.</b>	50-81-7
<b>EINECS No.</b>	200-066-2

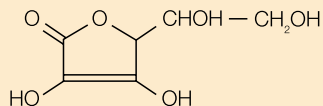
## Product number

10500170 Crystalline, origin: China

## Specification

Assay:	99.0-100.5%
Oxalic acid:	max. 0.2%
Specific rotation (10% in water):	+20.5° to +21.5°
pH value (2% in water):	2.4-2.8
Sulphated ash:	max. 0.1%
Heavy metals:	max. 10 mg/kg
Color (5% in solution):	not darker than BY 7
Loss on drying (JP):	max. 0.2%
Copper:	max. 5 mg/kg
Iron:	max. 2 mg/kg
Arsenic:	max. 3 mg/kg
Lead (FCC):	max. 2 mg/kg
Mercury:	max. 1 mg/kg
Organic volatile impurities (USP):	conforms

Unless otherwise stated, the methods of analysis can be found in the Ph.Eur.



$C_6H_8O_6$  Molar mass 176.1 g/mol

## Description

White to very slightly yellowish crystals or powder.

## Solubility

Readily soluble in water, soluble in ethanol, insoluble in oils, fats, ether, petroleum ether, toluene and chloroform.

## Monographs

The product meets the requirements stipulated in the current "Ascorbic Acid" Ph.Eur., the "Ascorbic Acid" USP and the "Ascorbic Acid" FCC monographs as well as the "E 300" EU directives for food additives. A grade that meets the requirements stipulated in the current "Ascorbic Acid" Ph.Jap. monograph may be supplied upon request.

## Particle-size distribution

The following are typical values determined in an air-jet sieve:

- *Ascorbic Acid Crystalline*:  
min. 20% smaller than 150  $\mu\text{m}$  (100 mesh USP)  
min. 95% smaller than 600  $\mu\text{m}$  (30 mesh USP)

**Stabilization/Stability**

Ascorbic Acid Crystalline is stable for 36 months. Ascorbic Acid is a strong reducing agent and is gradually decomposed in the presence of water/moisture. The oxidation process is catalyzed by light and some metal ions, e.g. iron and copper. Oxidizing agents and alkaline substances cause rapid decomposition. Aqueous solutions are most stable at pH 4-6.

**Standard packaging**

25 kg.

Please see appendix I for further information.

**Storage**

The product should be stored and transported in the tightly sealed packaging at temperatures below 25°C, protected from light and moisture. Contact with metals should be avoided.

**Applications***Dietary supplements:*

Ascorbic acid can be used both on their own and in multivitamin and mineral formulations for the manufacture of tablets, sugar-coated tablets, capsules, ampoules, drops, syrups, drink granules, juices etc.

The particle-size distribution should be taken into account particularly with solid dosage forms.

*Food products:*

Ascorbic acid is used for the fortification of a wide range of food products such as dietetic products for weight reduction, food products for babies and small children, food products for athletes, beverages, instant drink powders, fruit juices, multivitamin juices, lemonades, breakfast cereal, confectionery, dairy products etc. as well as vitamin mixtures for the ingredients industry.

It is used as an antioxidant to stabilize lemonades, fruit juices, fruit nectars, fruit juice beverages, vegetable juices, beer, wine and champagne and to stabilize the color of preserved fruit, vegetables, potatoes, mushrooms, sauerkraut and frozen products. It is further used as an additive for curing meat and meat products and added to flour to improve the baking properties and the quality of the products baked with it.

The following concentrations are recommended:

Application	Recommended concentration
Stabilization of refreshment beverages	100-300 mg/kg
Stabilization of fruit and vegetable juices	200-500 mg/kg
Stabilization of beer	1-6 mg/100 l
Stabilization of wine and champagne	50-75 mg/l
Stabilization of the color of frozen vegetables (e.g. french fries)	treatment with 0.5-3% ascorbic acid solution
Maintenance of the color of preserves (fruit and vegetables)	250-500 mg/kg
Curing additive for meat products	300-500 mg/kg
Frozen fish and seafood (prawns, shrimp etc.)	500-1,500 mg/kg
Milk and dairy products	50-100 mg/kg
For addition to flour to improve its baking properties and the quality of the products baked with it	20-80 mg/kg

Any legal restrictions on the use of ascorbic acid as an antioxidant must be observed.

Cosmetic products:

The product is used in cosmetic emulsions and other preparations.

**Note**

Ascorbic acid must be handled in accordance with the Safety Data Sheet.

The data contained in this publication are based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, these data do not relieve processors from carrying out their own investigations and tests; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product. It is the responsibility of the recipient of our products to ensure that any proprietary rights and existing laws and legislation are observed.

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