

## SPECIFICATION

### Vitamin C 99 % (Ascorbic acid E300)

#### Production unit

Heilongjiang NHU Biotechnologies

#### Description

|                  |   |
|------------------|---|
| Ingredients      | Ascorbic acid   |
| Synonym          | Vitamin C; L-Ascorbic acid, 3-Oxo-L-gulofuranolactone |
| Formula          | C <sub>6</sub> H <sub>8</sub> O <sub>6</sub>          |
| Molecular weight | 176.13  |
| Product code     | SPVC05  |
| CAS No           | 50-81-7   |

#### Properties

|                         |  |
|-------------------------|--|
| Shelf life              | 36 months  |
| Aspect                  | White or almost white crystals or crystalline powder |
| Assay (GC)              | 99,0 – 100,5 %                                       |
| Melting point           | 190 – 192 °C   |
| Loss on drying          | ≤ 0,4 %  |
| pH (5 % water solution) | 2,1 – 2,6  |
| pH (2 % water solution) | 2,4 – 2,8  |
| Colour of solution      | ≤ BY <sub>7</sub>                                    |
| Clarity of solution     | clear  |
| Optical rotation        | +20,5 - +21,5 °                                      |
| Sulphated ash           | ≤ 0,1 %  |

#### Particle size

≤ 20 % ≥ 40 mesh  
≥ 50 % between 40 to 80 mesh

#### Identification

##### EP

First identification: B, C  
Second identification: A, C, D  
A: Ultraviolet and visible absorption spectrophotometry  
B: Infrared absorption spectrophotometry  
C: pH meets the requirements  
D: A grey precipitate is formed

##### USP

A: Infrared absorption  
B: 20 mg/ml reduces alk. cupric tartrate test solution

|                     |             |
|---------------------|-------------|
| <b>Heavy metals</b> | ≤ 10 mg/kg  |
| Iron                | ≤ 2,0 mg/kg |
| Copper              | ≤ 5,0 mg/kg |
| Arsenic (As)        | ≤ 1,0 mg/kg |
| Lead (Pb)           | ≤ 0,5 mg/kg |
| Mercury (Hg)        | ≤ 0,1 mg/kg |
| Cadmium (Cd)        | ≤ 0,5 mg/kg |

#### Impurities

|                                   |             |
|-----------------------------------|-------------|
| Impurity E (Oxalic acid)          | ≤ 0,2 %     |
| Impurity C, D                     | ≤ 0,15 %    |
| Unspecified impurities (each)     | ≤ 0,1 %     |
| Sum of impurities other than C, D | ≤ 0,2 %     |
| Residual solvents (as Methanol)   | ≤ 200 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 |
| Staphylococcus aureus | negative in 25 g |

#### Handling

Usage for cosmetic and food industry  
product can also be used as feed additive (3a300), dosage  
in feed: as per latest version of European feedstuff law

Storage in unopened tight, light-resistant containers

Product complies to EP9.8/USP42/FCC11.

## NHU EUROPE GmbH

*Ascorbic acid/SPVC05/üa u fgg:180722/av*

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