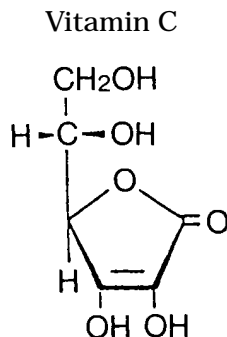


## D. MONOGRAPHS

### L-Ascorbic Acid



C<sub>6</sub>H<sub>8</sub>O<sub>6</sub>

Mol. Wt. 176.13

2,3-didehydro-L-threo-hexono-1,4-lactone

[ 50-81-7 ]

**Content** L-Ascorbic Acid, when dried, contains not less than 99.0% of L-ascorbic acid (C<sub>6</sub>H<sub>8</sub>O<sub>6</sub>).

**Description** L-Ascorbic Acid occurs as white to yellowish white crystals or crystalline powder. It is odorless and has an acid taste.

**Identification** (1) Dissolve 0.1 g of L-Ascorbic Acid in 100 ml of metaphosphoric acid solution (1 : 50), and add dropwise iodine TS to 5 ml of the solution until a slightly yellowish color develops. Add each 1 drop of cupric sulfate solution (1 : 1,000) and pyrrole, and heat in a water bath at 50 - 60 °C for 5 minutes. A blue to blue-green color develops.

(2) To 10 ml of L-Ascorbic Acid solution (1 : 100), add 1 or 2 drops of sodium 2,6-dichlorophenolindophenol TS. The color of the solution changes to blue and disappears immediately.

**Purity** (1) Specific rotation  $[\alpha]_D^{20}$ : +20.5 - +21.5° (1 g, freshly boiled and cooled water, 10 ml, on the dried basis).

(2) Melting point 187 - 192 °C.

(3) Heavy metals Not more than 20 µg/g as Pb (1.0 g, Method 1, Control solution Lead Standard Solution 2.0 ml).

(4) Arsenic Not more than 4.0 µg/g as As<sub>2</sub>O<sub>3</sub> (0.50 g, Method 1, Apparatus B).

**Loss on Drying** Not more than 0.40% (reduced pressure, 3 hours).

**Residue on Ignition** Not more than 0.10%.

**Assay** Weigh accurately about 0.2 g of L-Ascorbic Acid, previously dried, and dissolve in 50 ml of metaphosphoric acid solution (1 : 50). Titrate with 0.05 mol/l iodine (indicator: starch TS).

1 ml of 0.05 mol/l iodine = 8.806 mg of C<sub>6</sub>H<sub>8</sub>O<sub>6</sub>