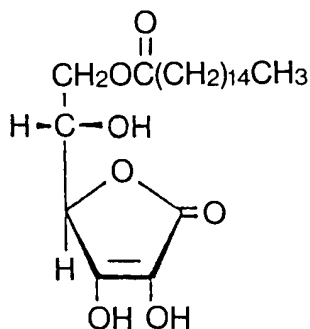


D. MONOGRAPHS

L-Ascorbyl Palmitate

Vitamin C Palmitate



$C_{22}H_{38}O_7$

Mol. Wt. 414.54

2,3-didehydro-L-threo-hexono-1,4-lactone ester of palmitic acid [137-66-6]

Content L-Ascorbyl Palmitate contains not less than 95.0% of L-ascorbyl palmitate ($C_{22}H_{38}O_7$).

Description L-Ascorbyl Palmitate occurs as a white or yellowish white powder.

Identification (1) To 0.1 g of L-Ascorbyl Palmitate, add 100 ml of sodium lauryl sulfate-propylene glycol TS, and dissolve by warming. Cool, and add dropwise iodine TS to 5 ml of this solution until a slight yellow color develops. Add each 1 drop of cupric sulfate solution (1 : 1,000) and pyrrole, and warm at 50 - 60 °C for 5 minutes. A blue to blue-green color develops.

(2) To 10 ml of a solution of L-Ascorbyl Palmitate in ethanol (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 $[\alpha]_D^{20}$: +21 - +24° (10 g, methanol, 100 ml).

(2) Melting point 107 - 117 °C.

(3) Heavy metals Not more than 10 µg/g as Pb (2.0 g, Method 2, Control solution Lead Standard Solution 2.0 ml).

(4) Arsenic Not more than 4.0 µg/g as As_2O_3 (0.50 g, Method 3, Apparatus B).

Residue on Ignition Not more than 0.10% (2 g).

Assay Weigh accurately about 0.2 g of L-Ascorbyl Palmitate, add 30 ml of ethanol, dissolve by warming if necessary. Add 15 ml of metaphosphoric acid solution (1 : 5) and 10 ml of diluted sulfuric acid (1 : 2). Add 10 ml of potassium iodate TS, exactly measured, shake well, and allow to stand for 10 minutes in a dark place. Add 10 ml of potassium iodide TS and 100 ml of water, and allow to stand for 5 minutes in a dark place. Titrate the liberated iodine with 0.1 mol/l sodium thiosulfate (indicator: 10 ml of starch TS). Perform a blank test in the same manner.

D. MONOGRAPHS

1 ml of 0.1 mol/l sodium thiosulfate = 20.727 mg of $C_{22}H_{38}O_7$