



U-5100

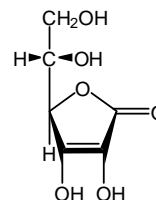
Analysis of L-Ascorbic Acid in Drink

INTRODUCTION

L-ascorbic acid (Vitamin C) is a vitamin added to various food products as a nutrient or antioxidant. This time, L-ascorbic acid in a drink was assayed by U-5100 spectrophotometer. When analyzed in the range of 2 - 6 mg/L by using a color reagent kit, a good calibration curve with a correlation coefficient of $R^2 = 0.9999$ was obtained and it was found that L-ascorbic acid was contained at 1.1 mg/L (the original solution was diluted to 100 times) in the drink. When an addition recovery test was conducted, a good recovery rate of $97.7 \pm 0.1\%$ was obtained. This reagent kit allows the simple spectrophotometric assay.

METHOD

Analyte : L-Ascorbic acid $C_6H_8O_6$ mol.wt. 176.13
 Measurement method : Assay using L-Ascorbic acid
 Reagent : R-Biopharm AG L-Ascorbic acid (10 409 677 035)
 Measurement solvent : Metaphosphoric acid

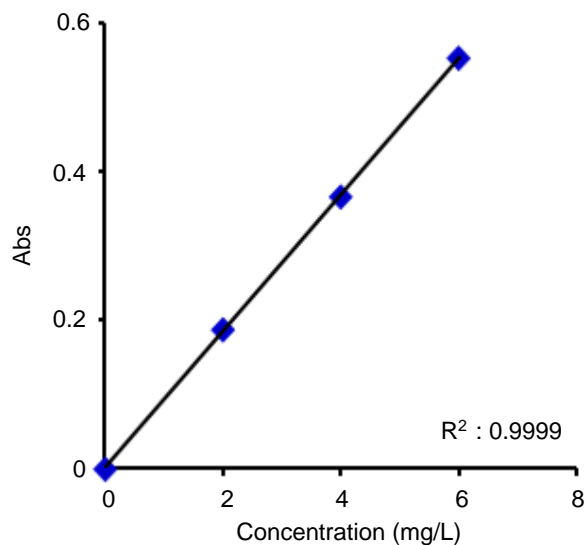


INSTRUMENT CONDITIONS

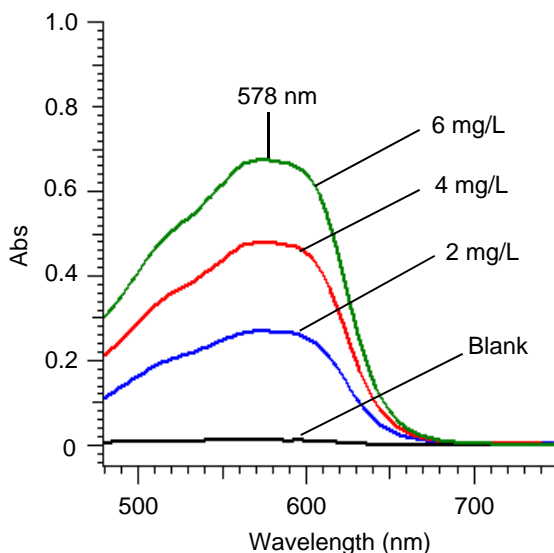
Instrument : U-5100 Slit : 5 nm
 Scan speed : 400 nm/min Measurement wavelength : 578 nm

PREPARATION

Refer to the next page (Sheet No.UV100023-02)



Calibration Curve of L-Ascorbic Acid



Absorption Spectrum of L-Ascorbic Acid

Addition Recovery Test for Drink

Drink (*1)	Drink (*1) + 2 mg/L	Recovery rate
1.1 ± 0.04 mg/L	3.05 ± 0.01 mg/L	97.6 ± 0.1 %

(*1) Drink diluted to 100 times was used, n=3

KEY WORDS

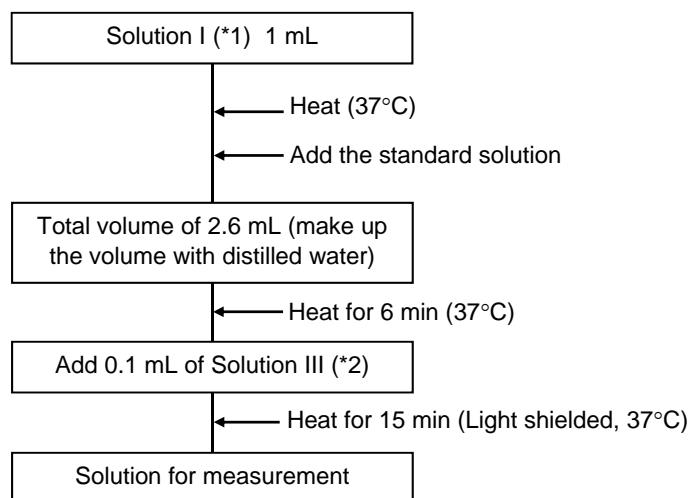
Bio/Medical Science/Food/Pharmaceutical Related, Food, Food Chemistry, Food Component, L-Ascorbic Acid, Vitamin C, Drink, Calibration Curve, UV, U-5100, U-1900, U-2900, U-2910, U-3010, U-3310, U-1800, U-2800

Spectrophotometer (UV)

Sheet No. UV100023-01

Pretreatment for Analysis of L-Ascorbic Acid

[Preparation Method]



*1, *2 : J.K. International Inc. F-kit L-Ascorbic Acid

- For the detailed operating methods in *1 and *2, refer to the instruction for each reagent and instrument.
- Contact J.K. International Inc. for the information including the effects of the interfering substances and the details of the reagents.

KEY WORDS

Bio/Medical Science/Food/Pharmaceutical Related, Food, Food Chemistry, Food Component, L-Ascorbic Acid, Vitamin C, Drink, Calibration Curve, UV, U-5100, U-1900, U-2900, U-2910, U-3010, U-3310, U-1800, U-2800

Spectrophotometer (UV)

Sheet No. UV100023-02