



U-5100

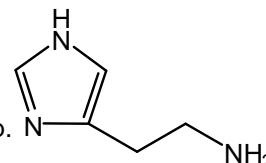
Analysis of Histamine in Fish Sauce

INTRODUCTION

Histamine is found in fermented food products such as aged cheese, wine, and soy sauce and it can cause food poisoning if the daily intake by an adult reaches 22 – 320 mg. In Standard Methods of Analysis for Hygienic Chemists, the high-speed liquid chromatographic analysis method for the analysis of histamine. However, by using a color reagent kit, the simple analysis by spectrophotometer is possible. This time, histamine in fish sauce was analyzed. To eliminate the effects of interfering substances, the standard addition method was used for the analysis. When analyzed for the range of 0.625 – 1.25 mg/L, the calibration with a good correlation coefficient (R^2) of 1.000 was obtained.

METHOD

Analyte : Histamine $C_5H_9N_3$ mol.wt 111.14
 Measurement method : Assay by Histamine Assay Kit, Check Color Histamine
 Reagent : Histamine Assay Kit, Check Color Histamine, Kikkoman Corp.
 Measurement solvent : Distilled water

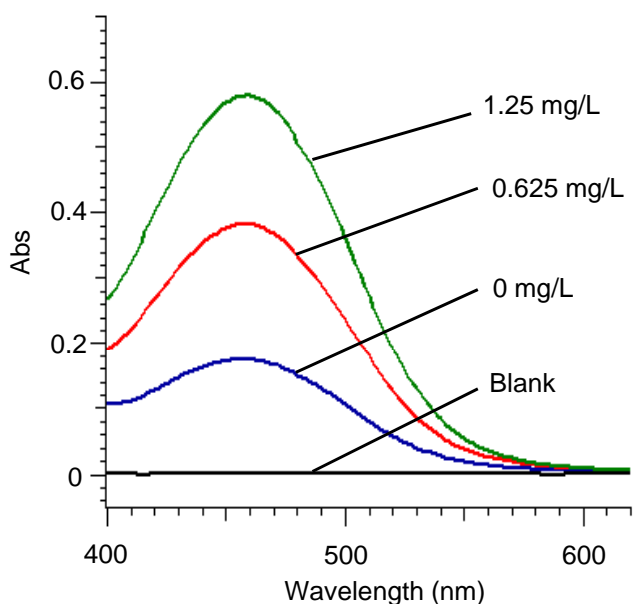


INSTRUMENT CONDITIONS

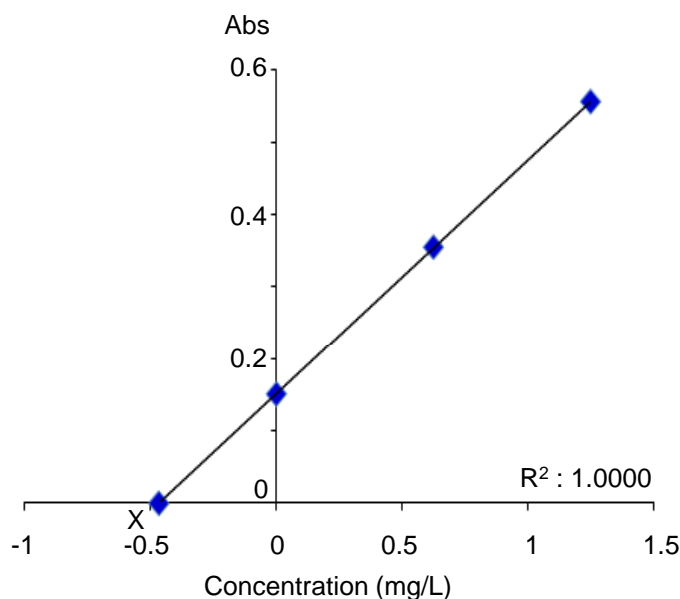
Instrument : U-5100 Slit : 5 nm
 Scan speed : 300 nm/min Measurement wavelength : 470 nm

PREPARATION

Refer to the next page
 (Sheet No. UV100018-02).



Absorbance Spectrum of Histamine



Calibration Curve of Histamine

* The overlaid spectra were prepared by processing the data obtained by the instrument.

[Assay Result] Sample: Histamine in Fish Sauce

Measured value X (mg/L)	Conversion for sample
0.47	596.22

* The stock solution diluted to 200 times was used for the measurement.

KEY WORDS

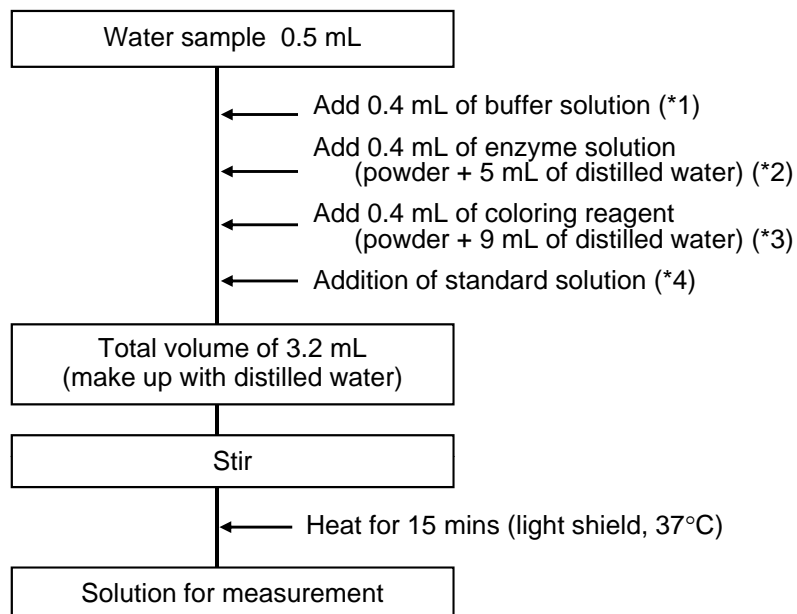
Bio/Medical Science/Food/Pharmaceutical Related, Food, Food Chemistry, Food Component, Histamine, Fish Sauce, Nampla, Calibration Curve, UV, U-5100, U-1900, U-2900, U-2910, U-3010, U-3310, U-1800, U-2800

Spectrophotometer (UV)

Sheet No. UV100018-01

Pretreatment for Analysis of Histamine

[Preparation Method]



*1,*2,*3,*4 : Histamine Assay Kit, Check Color Histamine, Kikkoman Corp.

- Refer to the instruction manual of each reagent and instrument for the detailed operating method in *1 to *4.
- Contact Kikkoman Corp. for the detailed information on the effects of the interfering substances etc. when using this reagent and on the reagents.

KEY WORDS

Bio/Medical Science/Food/Pharmaceutical Related, Food, Food Chemistry, Food Component, Histamine, Fish Sauce, Nampla, Calibration Curve, UV, U-5100, U-1900, U-2900, U-2910, U-3010, U-3310, U-1800, U-2800

Spectrophotometer (UV)

Sheet No. UV100018-02