

# Experiments in Food Science

Syllabus Number

5E232

Basic Major Subjects

Elective Requisites 2  
credit

ENOMOTO, Hirofumi

## 1. Course Description

- 1.Preparation and analysis of lipids contained in food (DP2, DP3).
- 2.Analysis and enzymatic conversion of functional food ingredients (DP2, DP3).

## 2. Course Objectives

The aims of the experiment are acquirement of technique to give new processing and functional properties by enzyme treatment of food ingredients.

## 3. Grading Policy

Grading is determined with the report (100 %). Feedback on experiments will be conducted at the final lecture.

## 4. Textbook and Reference

Textbook

The lecture will be conducted using experimental text previously handed out.

## 5. Requirements(Assignments)

Before the lecture, please read and understand experimental text previously handed out (1 hour). Lecture will be conducted according to the experimental text. After the lecture, please consider your experimental results and describe your idea on the report (5 hours).

## 6. Note

## 7. Schedule

Extraction of lipids from egg yolk

Measurement of lipids from egg yolk by thin layer chromatography

Measurement of lipids from egg yolk by mass spectrometry

Analysis and discussion of the data of mass spectrometry analysis

Extraction of polyphenols and glucosylceramides from foods

Quantitative analysis of polyphenols and glucosylceramides by high performance liquid chromatography

Conversion of glucosylceramides to ceramides by the enzyme

Quantitative analysis of ceramides by high performance liquid chromatography and discussion