Experiments in Food Science

Syllabus Number 5E232
Basic Major Subjects
Elective Requisites 2 credit

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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 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