COURSE DETAIL

FOOD CHEMISTRY
Country Netherlands
Host Institution Wageningen University and Research Center
Program(s) Wageningen University
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Chemistry Agricultural Sciences
UCEAP Course Number 105
UCEAP Course Suffix
UCEAP Official Title FOOD CHEMISTRY
UCEAP Transcript Title FOOD CHEMISTRY
UCEAP Quarter Units 5.00
UCEAP Semester Units 3.30

Course Description

This course is an introduction to the chemistry of foods, specifically the chemistry of groups of compounds present in food: carbohydrates, lipids, proteins, phenolic compounds, and enzymes. Students learn about the chemical changes that take place during storage and processing of agricultural crops and food. In addition, during the laboratory classes, students learn about the design of experiments and the analysis of the composition of food products. Food technologists should be able to estimate the relevance of various chemical and enzymatic processes by making calculations. To gain experience with this part of food chemistry, students practice the quantification of specific reactions in calculation cases. After successful completion of this course, students are able to recognize the molecular structures of the most common food components and their reaction products; recognize and understand the generic functional and chemical properties of the most common food components; understand the chemical reactions occurring during food processing; understand how reactive groups of food components play an important role in chemical reactions; describe the influence of processing conditions on chemical reaction and on the properties of food components; describe the effect of chemical reactions on the characteristics of food in a qualitative sense; apply generic mathematical concepts on experimental data to make quantitative judgments of the effect of reactions on the quality of food; choose between the most common analytical methods and techniques to analyze specific food compounds; and conduct experiments to analyze the effect of processing on food compounds and be able to interpret and report on the results of these experiments.

Language(s) of Instruction

English

Host Institution Course Number

FCH-20806

Host Institution Course Title

FOOD CHEMISTRY

Host Institution Course Details

Host Institution Campus Food Technology
Host Institution Faculty
Host Institution Degree
Host Institution Department Food Chemistry
Course Last Reviewed

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