

Flavour Science: A three day workshop

Overview

Flavour is one of the most important characteristics of any food product, strongly influencing consumer liking of products and their success in the marketplace. This comprehensive workshop will provide a broad introduction to the area of flavour science and technology, and how these factors impact upon sensory perception of flavour. The course is a unique combination of daily lectures and hands on exercises designed to help scientists and technologies gain a better appreciation of “flavour”. Participants will learn about flavouring materials and how flavourings are created. They will gain knowledge and vocabulary to better communicate needs and problems in flavour science and will be introduced to a wide variety of materials and their use in food flavours.

Key Topics

- Sensory perception of flavour.
- Basic flavour chemistry.
- Flavouring materials, methods of isolation and properties.
- Flavour technology and flavour delivery systems, e.g. emulsions, encapsulation.
- Flavour generation in foods.
- Flavour creation training.
- Instrumental methods of flavour analysis.
- Multivariate data analysis techniques for flavour science.

Course Instructors

The course will be taught by Dr Graham Eyres (Course Coordinator), Pat Silcock and Dr Biniam Kebede, from the University of Otago.

When and Where

Wednesday 7 to Friday 9 June 2017

Department of Food Science | University of Otago
Dunedin | New Zealand

Target Audience

All scientists and food technologists in the food and flavour industries.

Cost

NZD\$750 plus GST

Registration

For registration please contact:

Melanie O'Brien | Food Science Administrator
foodscience.postgrad@otago.ac.nz
otago.ac.nz/foodscience

For further information about the workshop please contact:

Dr Graham Eyres
graham.eyres@otago.ac.nz | Tel: +64 3 4797661
Department of Food Science | University of Otago
PO Box 56 | Dunedin 9054



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Workshop Programme

Date	Topic
Wednesday 7 June	
9.00 – 10.45am	Lecture 1 <i>Flavour materials and their origin Introduction to flavouring systems</i>
11.00 – 12.30pm	Lab – Flavour Materials Lunch break
1.30 – 3.00pm	Lecture 2 <i>Flavour technology and delivery systems Emulsions and encapsulation</i>
3.15 – 4.30pm	Lab – Flavour Technology
Thursday 8 June	
9.00 – 10.45am	Lecture 3 <i>Flavour analysis and extraction methods Instrumental methods of analysis, part 1</i>
11.00 – 12.30pm	Lab – Flavour creation Lunch break
1.30 – 3.00pm	Lecture 4 <i>Instrumental methods of analysis, part 2</i>
3.15–4.30pm	Lab – Flavour analysis 1
Friday 9 June	
9.00 – 10.45am	Lecture 4 <i>Multivariate data analysis approaches for Flavour Science</i>
11.00 – 12.30pm	Lab – Flavour analysis 2 Lunch break
1.30 – 2.30pm	Discussion and wrap-up

Course Instructors



Graham Eyres
*Senior Lecturer, Flavour Science
Department of Food Science
University of Otago*

Dr Graham Eyres has 13 years academic and industrial research experience in flavour science. Dr Eyres completed a PhD in Food Science at the University of Otago, focusing on the identification of odour-active

compounds in hop essential oils. His research expertise is in advanced methods of flavour analysis in complex samples, flavour generation in foods and linking chemical composition to sensory perception.

Dr Eyres worked in the Sensory and Consumer Science research group at CSIRO Food and Nutritional Sciences (Australia) from 2008-2013. At CSIRO, Graham's research focused on the release of aroma volatiles during consumption, and the impact on sensory perception of flavour. As of December 2013, Graham has been Lecturer of Flavour Science in the Department of Food Science at the University of Otago. The main focus of research at Otago is to investigate and understand the physico-chemical factors that influence the sensory perception of flavour.



Pat Silcock
*Manager, Product Development
Research Centre
Department of Food Science
University of Otago*

The Product Development Research Centre (PDRC) undertakes consultancy projects with the food industry (small to multinational companies) to enhance their products or processes, and to

assist their businesses achieve a competitive edge. Pat's professional specialities are in the area of food chemistry, product development, shelf life extension, food spoilage and general food consultancy.

His research can be largely categorised into two main themes: food quality, and microbially-induced flavour generation. He is interested in using consumers to define quality of food and also the relationship between quality, sensory characteristics, manufacturing process and food composition. The microbially induced flavour generation theme examines the role of bacteria, yeast and mould on volatile generation in fermented foods (beer, wine, coffee ...) and during food spoilage.



Biniam Kedebe
*Lecturer, food processing and multivariate
data analysis
Department of Food Science
University of Otago*

Dr Biniam Kedebe is an expert in mass spectrometry based metabolomic fingerprinting and multivariate data analysis techniques. He completed a PhD in Bioscience Engineering at KU Leuven, Belgium, focusing on investigating the impact of processing and storage on the volatile food fraction.

Dr Kedebe's research aims to understand, control and predict food quality changes from farm to fork. These include changes in flavour, colour and physical stability and their mutual interaction, which determine consumer acceptability. The research approach focuses on systematic integration advanced instrumental and sensorial aspects, combined with data analysis techniques.