



Corso di Laurea Magistrale in Chimica e Tecnologia Farmaceutiche

Corso di Chimica degli Alimenti [STF0007]
Food Safety and Security - 2 CFU 16 hours
Visiting Professor Program

Academic Year 2020-2021 –First Semester

Web Moodle: <https://elearning.unito.it/dstf/enrol/index.php?id=48>



Visiting Professor
Prof. Marco Beccaria
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Marco Beccaria is Senior Scientist at Organic and Biological Analytical Chemistry Group, University of Liège (Belgium).
https://www.obiachem.uliege.be/cms/c_5722319/en/obiachem

His specialization is in Separation Science, with particular emphasis on the hyphenated mono- and multidimensional chromatographic techniques coupled with mass spectrometry. His main areas of research are the application of advanced analytical tools in the fields of -omics sciences such as foodomics and metabolomics. Currently, he is working, in collaboration with TOTAL, on developing analytical solutions in the context of biomass analysis.

Course Summary:

The course is presenting innovative analytical approaches adopted to characterize, at the molecular level, food functional and nutritional properties. Analytical platforms including chromatography and mass spectrometry (high and low resolution mass spectrometry) are introduced and their features discussed by practical examples focused on: aroma compounds in food (sensomic approach), vegetal food (herbal teas, nuts etc..) and beverages. Sample preparation is also mentioned to highlight the role of automation and integration of this fundamental step to the entire analytical process.

Learning objectives:

Understand the most informative analytical approaches (conventional and innovative) nowadays adopted in research, quality and safety control activities. Understand the role of different analytical dimensions (separation, detection, sampling) for accurate and in-depth chemical characterization of complex food fractions. Understand the fundamental role of Mass Spectrometry in food safety control and quality assessment

Course Schedule:

Webex live streaming

- 1) Introduction and Course presentation - October the 8th 2020, 11-13:
<https://unito.webex.com/unito/j.php?MTID=m3a113a44f85b65acae488035efe56767>
- 2) First Recap, Questions & Answers - November the 23rd 2020, 9-11:
<https://unito.webex.com/unito/j.php?MTID=m792d583a4fb646ebec9f5826c8687399>
- 3) Conclusions, examination and evaluation modalities - Erasmus possibilities for tranship and thesis - January the 15th 2020, 9-11:
<https://unito.webex.com/unito/j.php?MTID=m811c76b9fb8cead64eca5ab28f8c6dc3>

