

Syllabus

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Titul dl curs	Advanced sample preparation techniques and analysis of food contaminants
Codesc dl curs	44747
Titul suplementar	
SSD	CHEM-07/B
Lingaz	Inglese
Curs de laurea	Corso di laurea magistrale in Scienze degli alimenti per l'innovazione e l'autenticità
D'autri cursc de laurea (cursc deberieda)	
Dozenc	prof. - ass. Sabrina Moret, Sabrina.Moret@unibz.it https://www.unibz.it/en/faculties/agricultural-environmental-food-sciences/academic-staff/person/43386
Assistent didatich	
Semester	Primo semestre
Ann/Agn de stude	2
Credic universitars	6
Ores de insegnament	50
Ores de laboratore	10
Ores de stude individual	90
Ores de riceviment prevedudes	18
Ressumè di contegnus	-
Argomenc dl curs	The course gives a general overview of scientific contents, but is also designed for acquiring professional skills and knowledge on the following educational objectives: · Principle, parameter optimization and basic applications of innovative sample preparation techniques: supercritical fluid extraction (SFE), pressurized liquid extraction (PLE), microwave

	assisted extraction (MAE), membrane-based extraction, solid phase extraction (SPE), solid phase micro extraction (SPME), stir bar sorptive extraction (SBSE), headspace sorptive extraction (HSSE), headspace techniques, purge and trap. · Principle, advantages and application of hyphenated, multidimensional chromatographic techniques: coupled LC-LC and LC-LC-GC, LC-GC and GCxGC. · Chemical properties, origin, toxicity, distribution and analytical determination of the main organic contaminants in foods: PAHs, PCBs, dioxins, mineral oils, mycotoxins and residues of pesticides, antibiotics, anabolizing substances, and hormones.
Paroles clef	
Prerequisic aconsiés	
Cursc propedeutics	
Modalité de enseignament	
Oblianza de frecuencia	No
Obietifs formatifs y competenzes da arjonje	· Knowledge and understanding of principles and basic applications of advanced sample preparation techniques and coupled chromatographic techniques for the analysis of trace contaminants in food. · Knowledge and understanding of main classes of organic contaminants in food (focusing on toxicity aspects, European legislation, and analytical techniques for their determination). · Acquire the skills to select and apply proper sample preparation methods and to understand and communicate health risks due to the presence of food contaminants · Acquire appropriate terminology and learning skills
Obietifs formatifs y competenzes da arjonje (informazioni supplementares)	
Sort de ejam	Written examination to ascertain the achievement of the expected learning outcomes
Criters de valutazion	Clarity of answers, mastery of language (also with respect to teaching language), ability to establish relationships between topics

Bibliografia obligatoria	Lecture notes
Bibliografia aconsieda	- Moret, G. Purcaro, L.S. Conte, Il campione per l'analisi chimica, Springer-Verlag Italia, Milano (2014) - Dean J.R., Extraction techniques in analytical science; Wiley (2009). - Mondello, Lewis and Bartle, Multidimensional Chromatography, Wiley and Sons, New York (2002). - Food Chemical safety Vol. 1: Contaminants, edited by David Watson, Published by Woodhead Publishing (2001)
Deplù informazions	
OSS	