

BOOK OF ABSTRACTS

10th International Symposium on **RECENT ADVANCES IN FOOD ANALYSIS**

**September 6-9, 2022
Prague, Czech Republic**

Jana Pulkrabová, Monika Tomaniová, Stefan van Leeuwen,
Michel Nielen and Jana Hajšlová
Editors



BOOK OF ABSTRACTS

10th International Symposium on **RECENT ADVANCES IN FOOD ANALYSIS**

September 6–9, 2022
Prague, Czech Republic

Jana Pulkrabová, Monika Tomaniová, Stefan van Leeuwen,
Michel Nielen and Jana Hajšlová
Editors

Published by the University of Chemistry and Technology, Prague
Technická 5
166 28 Praha 6
Czech Republic



Edited by Jana Pulkrabová, Monika Tomaniová, Stefan van Leeuwen, Michel Nielen and
Jana Hajšlová

The publication has not undergone language or professional editing. The authors are
responsible for the content of the contributions.

© 2022 by Jana Hajšlová, Stefan van Leeuwen and Michel Nielen

ISBN 978-80-7592-138-3

10th International Symposium on

RECENT ADVANCES IN FOOD ANALYSIS

September 6-9, 2022
Prague • Czech Republic

Don Giovanni Hotel Prague

Organized by

Department of Food Analysis and Nutrition,
University of Chemistry and Technology, Prague (UCT Prague), Czech
Republic

&

Wageningen Food Safety Research (WFSR), part of Wageningen
University & Research, The Netherlands



*RAFA 2022 is held under auspices of the Minister of
Agriculture of the Czech Republic, Zdeněk Nekula, and
the Capital City of Prague.*

RAFA 2022 Symposium chairs:

Prof. Jana Hajslova	University of Chemistry and Technology Prague, Prague, Czech Republic
Prof. Michel Nielen	Wageningen Food Safety Research (WFSR), part of Wageningen University & Research, The Netherlands
Dr. Stefan van Leeuwen	Wageningen Food Safety Research (WFSR), part of Wageningen University & Research, The Netherlands

Scientific Committee:

Prof. Jana Hajslova	University of Chemistry and Technology Prague, Prague, Czech Republic
Prof. Michel Nielen	Wageningen Food Safety Research (WFSR), part of Wageningen University & Research, The Netherlands
Prof. Chiara Dall'Asta	University of Parma, Parma, Italy
Prof. Christopher Elliott	Queen's University Belfast, Belfast, United Kingdom
Dr. Carsten Fauhl-Hassek	Federal Institute for Risk Assessment, Berlin, Germany
Prof. Hans-Gerd Janssen	Unilever Research and Development, Vlaardingen, The Netherlands
Prof. Henryk Jelen	Poznan University of Life Sciences, Poznan, Poland
Dr. Christian Klampfl	Johannes Kepler University Linz, Linz, Austria
Prof. Rudolf Krska	University of Natural Resources and Life Sciences, Vienna, IFA-Tulln, Austria
Prof. Bruno Le Bizec	LABERCA - ONIRIS, Nantes, France
Dr. Katerina Mastovska	Eurofins Food Integrity & Innovation, USA
Prof. Jana Pulkrabova	University of Chemistry and Technology Prague, Prague, Czech Republic
Prof. Michael Rychlik	Technical University of Munich, Munich, Germany
Prof. Jens Sloth	National Food Institute, Technical University of Denmark, Lyngby, Denmark
Assoc. Prof. Milena Stranska	University of Chemistry and Technology Prague, Prague, Czech Republic
Prof. Michele Suman	Barilla Food Research Labs, Parma, Italy
Dr. Stefan van Leeuwen	Wageningen Food Safety Research (WFSR), part of Wageningen University & Research, The Netherlands
Dr. Frans Verstraete	European Commission, DG Health and Consumers (DG SANTE), Brussels, Belgium
Prof. Yongning Wu	China National Center for Food Safety Risk Assessment, Beijing, China

Organizing Committee:

Dr. Monika Tomaniova (chair)	University of Chemistry and Technology Prague, Prague, Czech Republic
Prof. Jana Hajslova	
Prof. Jana Pulkrabova	
Martina Vlckova, MSc.	
Other members of staff and PhD students	Wageningen Food Safety Research (WFSR), part of Wageningen University & Research, The Netherlands
Prof. Michel Nielen	
Dr. Stefan van Leeuwen	

CONTENT

F32	POLYMERIC SPE SORBENTS FOR PFAS EXTRACTION AND CLEAN-UP IN DIFFERENT MATRICES	
	Thomas Gersthagen ⁽¹⁾ , Suman Kharel ⁽¹⁾ , Uwe Aulwurm ⁽¹⁾ , <u>Sebastian Wierer⁽¹⁾</u>	316
F33	EVALUATION OF SELECTED PERSISTENT ORGANIC POLLUTANTS IN BIVALVES FROM THE BULGARIAN BLACK SEA COAST	
	<u>Stanislava Georgieva⁽¹⁾</u> , Mona Stancheva ⁽¹⁾ , Zlatina Peteva ⁽¹⁾ , Angelika Georgieva ⁽¹⁾	317
F34	CONSTRUCTING A ROBUST HIGH THROUGHPUT SCREENING WORKFLOW FOR ANIMAL FEED UTILISING TARGET, SUSPECT AND NON-TARGET DATA	
	<u>Sufyan Pandor⁽¹⁾</u> , Brian Quinn ⁽¹⁾	318
F35	OCCURENCE OF PERFLUOROALKYL SUSTANCES (PFAS) IN POTENTIALLY CONTAMINATED DRINKING WATER SOURCES IN THECZECH REPUBLIC	
	<u>Veronika Svobodova⁽¹⁾</u> , Darina Dvorakova ⁽¹⁾ , Martina Jurikova ⁽¹⁾ , Filip Kotal ⁽²⁾ , Frantisek Kozisek ⁽²⁾ , Jana Pulkrabova ⁽¹⁾	319
F36	DETERMINATION OF MINERAL ELEMENTS IN ETHNIC FOOD PURCHASED IN THE MARKETS OF SOUTHERN ITALY	
	<u>Vincenzo Nava⁽¹⁾</u> , Teresa Gevarsi ⁽¹⁾ , Rosaria Costa ⁽¹⁾ , Laura De Maria ⁽²⁾ , Giovanna Lo Vecchio ⁽¹⁾ , Nicola Cicero ⁽¹⁾	320
F37	MINERAL CONTENT IN WELLNESS HERBAL TEAS	
	<u>Vincenzo Nava⁽¹⁾</u> , Maria Aurora Arrigo ⁽²⁾ , Rossana Rando ⁽¹⁾ , Giovanni Bartolomeo ⁽³⁾ , Giuseppa Di Bella ⁽¹⁾	321
F38	SIMULTANEOUS DETERMINATION OF MELAMINE AND PRIMARY AROMATIC AMINES IN AÇAÍ-BASED (EUTERPE OLERACEA MART.) PRODUCTS BY UPLC-MS-MS	
	Luis Eduardo Nascimento ⁽¹⁾ , Magdalena Wrona ⁽²⁾ , <u>Wellington da Silva Oliveira⁽³⁾</u> , Cristina Nerín ⁽²⁾ , Helena Godoy ⁽¹⁾	322
F39	IDENTIFICATION OF MICROPLASTICS IN WATER AND FOOD USING PYROLYSIS GC WITH HIGH RESOLUTION ORBITRAP MASS SPECTROMETRY	
	<u>Dominic Roberts⁽¹⁾</u> , Lukasz Rajski ⁽¹⁾ , Vladimir Nikiforov ⁽²⁾ , Dorte Herzke ⁽²⁾ , Nicholas Warner ⁽¹⁾	323
	GENERAL FOOD ANALYSIS	324
G1	DEVELOPMENT OF INNOVATIVE ACTIVE ANTIOXIDANT FOOD PACKAGING SYSTEMS BASED ON NATURAL EXTRACT FROM FOOD INDUSTRY WASTE	
	<u>Giulia Barzan⁽¹⁾</u> , Andrea Mario Giovannozzi ⁽¹⁾ , Alessio Sacco ⁽¹⁾ , Luisa Mandrile ⁽¹⁾ , Chiara Portesi ⁽¹⁾ , Jesús Salafanra ⁽²⁾ , Andrea Mario Rossi ⁽¹⁾	325
G2	ASSESSMENT OF ANTIMICROBIAL RESISTANCE OF PSEUDOMONAS AEROGINUSA IN BOTTLED DRINKING WATER	
	<u>Ali ALZowehry⁽¹⁾</u> , Saad Aldawsary ⁽¹⁾ , Abdulelah Alawwam ⁽¹⁾	326
G3	MONITORING OF PRESENCE OF HISTAMIN IN FISH AND FISH PRODUCTS IMPORTED IN KOSOVO	
	Kujtim Uka ⁽¹⁾ , Dijana Blazhekovikj-Dimovska ⁽²⁾ , <u>Mentor Ismaili⁽¹⁾</u>	327
G4	BLOCKCHAIN AND IOT BASED FOOD SAFETY MONITORING FRAMEWORK FOR FOOD SUPPLY CHAINS	
	<u>Milenko Tosic⁽¹⁾</u> , Jovan Glavonjic ⁽¹⁾ , Aleksa Novkovic ⁽¹⁾ , Aleksandar Pavlovic ⁽¹⁾ , Aleksandar Tomcic ⁽¹⁾ , Nikola Radic ⁽¹⁾ , Benedikt Groß ⁽²⁾ , Mayank Gulati ⁽²⁾ , Narges Dadkhah ⁽²⁾ , Gerhard Wunder ⁽²⁾	328
G5	SUPERCRITICAL FLUID CHROMATOGRAPHY SEPARATION OF FLAVANONES' ENANTIOMERS. APPLICATION TO BEE POLLEN	
	<u>Adrián Fuente-Ballesteros⁽¹⁾</u> , Ana M ^a Ares Sacristán ⁽¹⁾ , Beatriz Martín-Gómez ⁽¹⁾ , Andréa Janvier ⁽¹⁾ , José Bernal del Nozal ⁽¹⁾ , Laura Toribio Recio ⁽¹⁾	329

G3

MONITORING OF PRESENCE OF HISTAMIN IN FISH AND FISH PRODUCTS IMPORTED IN KOSOVO

Kujtim Uka⁽¹⁾, Dijana Blazhekovikj-Dimovska^{*(2)}, Mentor Ismaili⁽¹⁾

¹⁾ *Department of Food Chemistry and Technology, St. Kliment Ohridski University in Bitola, Macedonia*

²⁾ *Department of Biotechnology, University "St. Kliment Ohridski"- Bitola, Macedonia*

**Corresponding author - E-mail: dijanablazekovic@yahoo.com*

Histamine is one of the most important and toxic biogenic amine in food. It is produced during bacterial decarboxylation of the histidine present in fish muscles. The key actions to prevent production of histamine are adequate refrigeration. It is also important to respect the time and low temperature during unloading, transportation, storage, and processing of fish. Determination of histamine is important not only because of its toxicity for humans, but also as an indicator of the freshness of fish and fish products.

According to national legislation which is harmonized from EU legislation (Commission Regulation (EC) No 2073/2005 on microbiological criteria for foodstuffs), Food Safety Competent authority based on annual official control plan, collect the samples of fish and fish products from import, in order to monitor presence of histamin.

Histamine concentration in samples collected from fish and fish products did not exceed the allowable limit, indicating that they are safe for consumers.

Keywords: *smoked fish, EU Scientific Committee on Food (SCF), carcinogenic, fish products, histamin*