



Università degli Studi di Torino

Dipartimento di Chimica

Via P. Giuria, 7 10125 Torino Italy



Avviso di Seminario

Martedì 19 Novembre alle ore 14:30
presso l'Aula D1 del Dipartimento di Chimica
(via P. Giuria 9, 5° piano)
la

D.ssa Tina Kosjek

*Josef Stefan Institute
(Lubiana, Slovenia)*

terrà un seminario dal titolo:

TOWARDS ANALYTICAL (UN)SELECTIVITY IN ENVIRONMENT AND HEALTH STUDIES

Il responsabile scientifico
Prof. Davide Vione

Il Direttore del Dipartimento
Prof. Marco Vincenti

TOWARDS ANALYTICAL (UN)SELECTIVITY IN ENVIRONMENT AND HEALTH STUDIES

Tina Kosjek

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Conventionally, trace-level analysis of micro-contaminants in the environment, or exposure biomarkers in biomonitoring studies, deals with quantitative determination of target analytes that were pre-selected during analytical method development. Yet, such approach, known as "targeted analysis", nowadays appears to be insufficient in the assessment of exposure. To better understand the risk posed to the environment and health, it is essential to consider the occurrence of parent micro-contaminants, their metabolites, and their transformation products. In contrast with the first two groups, the identity of the transformation products, their origin, fate and consequently the effects on human and other living organisms are mostly unknown. In parallel, the ever-increasing number of chemicals including transformation products, which are being introduced into human environment, food, consumer products, etc., has forced an immense progress of non-targeted screening tools, in terms of both technology development and application.

This lecture will give an insight into the methodologies and workflows developed at the Department of environmental sciences (JSI), which are applied for detection, identification and quantification of transformation products. Essentially, these methodologies join the principles of targeted, non-targeted analyses and suspect screening, and employ different degrees of analytical selectivity. Examples of identification of bio- and photo-transformation products of cytostatics, antidepressants and tranquilizers will be presented.

TINA KOSJEK is a senior researcher at the Department of Environmental Sciences, "Jožef Stefan" Institute, in the group of organic analytical chemistry. She obtained a PhD in Ecotechnologies in 2009. Her research interests include mass spectrometry, liquid and gas chromatography, analytical method development, sample preparation, molecularly imprinted polymers, transformation products, pharmaceutical residues in the environment, bio- and phototransformation, human biomonitoring, and water treatment. She is the author of more than 50 peer-reviewed papers and has a h-index of 26 with about 2000 citations.

