

**Overview of the PhD student activities in the Chemistry program in the field of Environmental Chemistry:  
2014/15**

<b>Student</b> (given name and surname)	Miroslav Brumovský
<b>Supervisor</b> (given name and surname)	Luca Nizzetto, Ph.D.
<b>Consultant</b> (given name and surname)	prof. RNDr. Ivan Holoubek, CSc., prof. RNDr. Jana Klánová, Ph.D.
<b>Beginning of the study</b> (month/year)	July 2013
<b>Form of study</b> (delete where appropriate)	Present (internal)

**Summary of yearly research results** (15 lines maximum)

The student participated in the period from 04/11/2014 to 01/12/2014 in two oceanographic cruises in the Western Mediterranean Sea where he performed integrative sampling of bulk surface water in 11 locations and deployment of a passive sampler to a mooring in the Sicily channel. Collected bulk water samples were extracted on board using solid phase extraction. Passive samplers were deployed in two locations in the Mediterranean and recovered approximately after six months. The student started analyzing the samples at Recetox laboratory. The analytical activity included also a series of tests aimed at characterizing analysis performance and quality assurance and control. 80% of the data from the Mediterranean cruises are ready.

Another activity where the student was involved was a pilot study in which ships of opportunity (e.g. line ferries and container ships) equipped with remotely controlled automatic water samplers were used for the first time to monitor marine pollutions in the North sea. The student participated in preparing the sampling campaign and extracted and analyzed the samples using solid phase extraction and concentrated prior LC-MS analysis. During this campaign data on a number of emerging contaminants were collected including current use pesticides, pharmaceuticals and personal care products and artificial sweeteners. Some of these compounds were measured for the first time in open marine water.

The writing of a first paper provisionally titled "Unmanned marine monitoring of contaminants of emerging concern using ships of opportunity" is currently on-going. The paper will be submitted to be published on a Special issue on use and development of European coastal research infrastructure.

The student has been working intensively on his project and provided an excellent added value and contribution to the development of the research.

**Internship abroad** (place, start date, duration)

The Student has visited during one week the Norwegian Institute for Water Research (NIVA) in Oslo during September 2014 in order to contribute to the preparation of the sampling campaign in the North Sea. In addition He spent several weeks on board of a Research Vessel in the Mediterranean where he was working in tight collaboration with an international and multidisciplinary team of scientists.

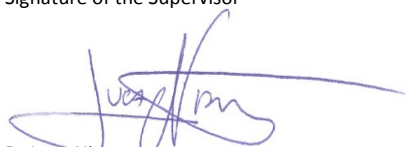
**Publication activities**

Number of peer-reviewed articles in impacted journals	0
Number of conference (oral/poster) presentations	1
Number of other publishing activities (books, book chapters, patents etc.)	0
Public lecture in English (delete where appropriate)	yes

**The most important results** (5 maximum, show the impact factor of the journal):

1	Oral presentation, JERICO Science Day, Brest, France
2	
3	
4	
5	

Signature of the Supervisor



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