

**Overview of the PhD student activities in the Chemistry program in the field of Environmental Chemistry:
2015/16**

Student (given name and surname)	Jakub Urík
Supervisor (given name and surname)	Branislav Vrana
Consultant (given name and surname)	Foppe Smedes, Jana Klánová
Beginning of the study (month/year)	09/2014
Form of study (delete where appropriate)	Present (internal)

Summary of yearly research results (15 lines maximum)

Based on the results of the first year of study, namely the hydrogel diffusion studies and modified o-DGT uptake study, a new passive sampler for polar organics in water has been designed. This two-sided gel-gel sampler consists of outer hydrogel layers strengthened by nylon mesh netting and inner layers of hydrogel with dispersed sorbent, all enclosed between two stainless steel rings. This sampler has been successfully tested in the field: It can persevere in the river water for up to 4 weeks, which is enough to obtain environmental concentration levels of ng/l. In one of the field studies in Rajhrad, the sampler has been deployed alongside POCIS, empore discs and active composite water sampling. Comparison of performances is yet to be done.

Internship abroad (place, start date, duration)

UFZ Helmholtz Centre for Environmental Research Leipzig (planned for October – November 2016)

Publication activities during Ph.D. studies

Number of peer-reviewed articles in impacted journals	0
Number of conference (oral/poster) presentations	2
Number of other publishing activities (books, book chapters, patents etc.)	0
Public lecture in English (delete where appropriate)	no

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

1	Proposed passive sampler has sufficient sampling area, capacity and robustness to be used for sampling of great spectrum of compounds in the surface waters.
2	The sampler has been successfully deployed in several sites around the rivers Moravia and Svratika.
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