Fakulta rybářství
a ochrany vod
Faculty of Fisheries
and Protection
of Waters

Jihočeská univerzita
v Českých Budějovicích
University of South Bohemia
in České Budějovice
Czech Republic

Confidential

Supervisor´s Review of USB RIFCH PhD Thesis

Surname of the PhD student: Golovko	Name of supervisor: **Grabic**
Title of PhD thesis: Pharmaceuticals and other human used chemicals in water environment – stability and fate	

OVERALL COMMENTARY ON THE PhD THESIS

The thesis is based on five articles dealing with different aspect of PPCPs issues in water environment. Four of them are already published or in press and one is presented as manuscript. Oksana Golovko is the first author of two works and the manuscript.

The introduction part is compiled with clear outline, which is connecting all paper in inherent and logic theme flow. This part is properly long as deeper and detailed theory is given in corresponding articles. Oksana has learnt to use reference management software (EndNote) so there are no formal o typing errors in references citation and formatting. This is valid for all text in the thesis.

As it was mentioned the thesis are presented to reader in the logic which correspond to the workflow done during Oksana´s study. The discussion is written in the same order. The importance of proper storage of the samples is discussed first of all as the most following experiments were based on analysis of huge number of the samples which had to be stored. The results of one year monitoring at WWTP in České Budějovice are shown in two articles describing seasonal changes both in PPCPs concentration and removal efficiency. The prevailing factor affecting present of this compounds in effluent are discussed in the corresponding part. The photolysis is assumed as main degradation pathway when discharged effluent reaches the recipient. So basic research in the field of the photostability is presented as the manuscript followed with more applied work focused on photocatalytic destruction study of verapamil.

In my opinion the thesis are well written, based on the work bringing a new knowledge in the field which important both for basic research and more engineering sciences. This can be well documented with journals which accepted Oksana´s articles for publishing – Chemosphere and Environmental Science and Pollution Research.

From my point of view Oksana Golovkova fulfilled all criterions required for PhD thesis.

FINAL RECOMMENDATION

- ☒ **can be recommended for defence of PhD Thesis**
- ☐ **can be recommended with reservations for defence of PhD Thesis**
- ☐ **can not be recommended for defence of PhD Thesis**

12.5.2014 Vodňany .....
Date and place

Grabic .....
surname and signature