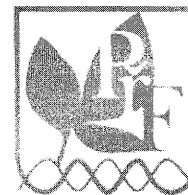




UNIVERSITY OF SOUTH BOHEMIA
IN ČESKÉ BUDĚJOVICE

Faculty of Science



STATEMENT OF THE BACHELOR/DIPLOMA* THESIS REVIEWER

Name of the student: Jacqueline Ecker
Thesis title: Assessment of Water Mutagenicity
Supervisor: prof. Ing. Jan Tříška, CSc.
Reviewer: Ing. David Kahoun, Ph.D.
Reviewer's affiliation: University of South Bohemia – Faculty of Science

	Point scale ¹	Points
(1) FORMAL REQUIREMENTS		
Extent of the thesis (for bachelor theses min. 18 pages, for masters theses min. 25 pages), balanced extents of the thesis divisions (recommended extent of the theoretical part is max. 1/3 of the total extent), logical structure of the thesis	0-3	2
Quality of the theoretical part (review) (number and relevancy of the references, recency of the references)	0-3	2
Accuracy in citing of the references (presence of uncited sources, uniform style of the references, use of correct journal titles and abbreviations)	0-3	2
Graphic layout of the text and of the figures/tables	0-3	1
Adequacy and clarity of the results and conclusions	0-3	1
Quality of the annotation	0-3	1
Language and stylistics, complying with the valid terminology	0-3	3
Accuracy and completeness of figures/tables legends (clarity even without reading the rest of the text, explanation of the symbols and labeling, indicating the units)	0-3	1
Formal requirements – points in total		13
(2) PRACTICAL REQUIREMENTS		
Clarity of the aims	0-3	2
Fulfillment of the aims	0-3	1
Discussion quality – interpretation of results and their discussion with the literature	0-3	0
Logic in the course of the experimental work	0-3	2
Completeness of the description of the used techniques	0-3	2
Experimental difficulty of the thesis	0-3	2

* Choose one

¹ Mark as: 0-unsatisfactory, 1-satisfactory, 2-average, 3-excellent.

Quality of experimental data presentation	0-3	0
The use of up-to-date techniques	0-3	3
Contribution of the thesis to the knowledge in the filed and possibility to publish the results (after eventual supplementary experiments)	0-3	1
Formal requirements – points in total		13

POINTS IN TOTAL (MAX/AWARDED)	51	26²
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Suggestions and questions, to which the student has to answer during the defense:

- 1) Page 26, Chapter 4.3.: The chapter contains sentences such as “ *Studies have shown that...*” or “*Most trustable results are achieved when...*” but a single reference is not given.
- 2) Page 34: Which analytical balance was used for weighing with such good readability 0,001 mg?
- 3) Pages 35 – 38 How did the author find out the pre-concentration conditions and LC/MS conditions? No optimization was done, no information source is given.
- 4) Page 38: “*The pre-concentration of the chosen mutagens was done using Blue Rayon thereby also testing the sorption capacity and suitability of Blue Rayon.*”. How did the author evaluate the sorption capacity and the suitability of Blue Rayon? No results and/or evaluation was found.
- 5) Page 39: “*Positive results were only found in the case of the water samples from Soběslav...*” Did the author find the compounds of interest in this sample only? Which results were obtained when analyses of standard solutions were done?
- 6) Pages 39 and 40, Figures 20 and 21: There is no information about which samples belong to these spectra.

Eventual additional comments of the supervisor on the student and the thesis:

This part does not have to be read during the bachelor's thesis defence due to time reasons. These comments are made especially for the author.

- 1) Table of Contents should include numbered chapters only (page 5).
- 2) Do not use figures and tables which are not large and/or sharp enough (e.g. pages 9, 13, 14, 21, etc.)
- 3) Insert one space between the numerical value and its unit (e.g. page 9, 23, 28, etc).
- 4) Some abbreviations (e.g. Trp-P-1 on the page 9, etc.) are not listed in the list of abbreviations.
- 5) Do not place the figure caption above the figure, but place it below the figure instead (e.g. pages 10, 11, 12, etc.)

² Enter the number of points awarded.

- 6) Do not leave a one-letter word at the end of a line (e.g. pages 10, 21, 28, etc.)
- 7) Do not leave a numerical value at the end of a line and its unit at the beginning of the following line (e.g. pages 13, 23, 28, etc.)
- 8) Do not start a sentence with an abbreviation (e.g. pages 25, 33)
- 9) Do not use various formats for unit notation (e.g. 1 mL L^{-1} and $1 \text{ ng}/\mu\text{L}$). Use exponent notation only ($1 \text{ mL}\cdot\text{L}^{-1}$) or notation using a slash only ($1 \text{ ng}/\mu\text{L}$). Exponent notation is preferred.
- 10) The symbols for units and SI prefixes have not been written in italics (e.g. do not write $1 \text{ ng}/\mu\text{L}$, but write $1 \text{ ng}/\mu\text{L}$ or $1 \text{ ng}\cdot\mu\text{L}^{-1}$).
- 11) Do not use the name “percent” but use the symbol “%” only (e.g. page 30).
- 12) Do not start a sentence with a numerical value (e.g. page 30, 35)
- 13) Do not use various formats for chapter headings at the same level (e.g. page 33)
- 14) Some paragraphs are not fully justified (e.g. pages 35, 36).
- 15) Page 35: “*For elution a mixture of ammonia:methanol (v:v = 1:50) was used. Therefore, 8 mL of 25 % ammonia were mixed with 92 mL of methanol.*”. Expression “v/v = 1:50” does not correspond with “8 mL of 25 % ammonia were mixed with 92 mL of methanol”. Methanol is not diluted in 1:50 (v/v) ratio but in 2:23 (v/v) ratio.
- 16) Page 43: The journal title in the reference “*Hayatsu, H, 1992.*” was not written in italics.

Conclusion:

The bachelor thesis “*Assessment of Water Mutagenicity*” is devoted to the literature search especially. The title of the thesis, as well as the annotation or the introduction, is presented generally but the thesis deals with polycyclic aromatic hydrocarbons and polycyclic heteroaromatics only. Pesticides, wide and significant group of mutagenic compounds, are mentioned using only one single article. Millions of tons of more than 1200 pesticides are annually sprayed into the environment, so due to this reason the theoretical part of the thesis should contain more references on this topic. The author cited 92 references but only 11 references were younger than 10 years. This ratio is rather low. Lots of current articles dealing with this topic are available at e.g. www.sciencedirect.com or <http://onlinelibrary.wiley.com/>.

Chapter “9. *Materials and methods*” was written quite well, in detail and only some minor problems were found.

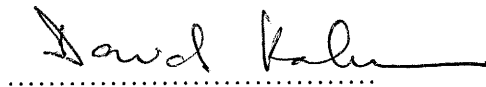
Chapter “10. *Results*” devoted to results and discussion contains only one reference and the chapter is very short (23 lines only) without adequate presentation of the results or appropriate discussion. The chapter does not contain any chromatograms. There are only 2 spectra shown but without any information about which samples they represent.

In conclusion, I

recommend / ~~do not recommend~~*

the thesis for the defense and I suggest the grade 3 .³

In České Budějovice date June 05, 2013

A handwritten signature in black ink, appearing to read "David Kalu", written over a horizontal dotted line.

Signature

³ You can suggest a grade, which can be modified during the defense based on the presentation. However, if the reviewer is not present at the defense, the grade will not be counted.