



Přírodovědecká
fakulta
Faculty
of Science

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

STATEMENT OF THE BACHELOR THESIS REVIEWER

Name of the student: Daniela Hiemetsberger

Thesis title: Human exposure to allergens from household dust

Supervisor: Prof. Ing. Jan Tříska, CSc.

Reviewer: doc. Ing. Roman Kubec, Ph.D.

Reviewer's affiliation: Department of Applied Chemistry, Faculty of Agriculture, USB

	Point scale ¹	Points
(1) FORMAL REQUIREMENTS		
Extent of the thesis (for bachelor theses min. 18 pages, for masters theses min. 25 pages), balanced length of the thesis parts (recommended length of the theoretical part is max. 1/3 of the total length), logical structure of the thesis	0-3	3
Quality of the theoretical part (review) (number and relevancy of the references, recency of the references)	0-3	3
Accuracy in citing of the references (presence of uncited sources, uniform style of the references, use of correct journal titles and abbreviations)	0-3	1
Graphic layout of the text and of the figures/tables	0-3	1
Quality of the annotation	0-3	3
Language and stylistics, complying with the valid terminology	0-3	3
Accuracy and completeness of figures/tables legends (clarity without reading the rest of the text, explanation of the symbols and labeling, indication of the units)	0-3	2
Formal requirements – points in total		16
(2) PRACTICAL REQUIREMENTS		
Clarity and fulfillment of the aims	0-3	3
Ability to understand the results, their interpretation, and clarity of the results, discussion, and conclusions	0-3	3
Discussion quality – interpretation of results and their discussion with the literature (absence of discussion with the literature is not acceptable)	0-3	2
Logic in the course of the experimental work	0-3	3
Completeness of the description of the used techniques	0-3	2
Experimental difficulty of the thesis, independence in experimental work	0-3	3
Quality of experimental data presentation	0-3	2
The use of up-to-date techniques	0-3	3
Contribution of the thesis to the knowledge in the field and possibility to publish the results (after supplementary experiments)	0-3	2
Practical requirements – points in total		23

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

Suggestions and questions which the student has to answer during the defense:

The thesis is well organized and written by very good English. The subject is interesting and highly topical as various allergens represent a serious hazard for human health. Thus, increased attention is paid to analytical techniques that allow to determine the extent of exposure to allergens. The quantification of guanine is apparently a difficult task. Although the thesis should be considered as an initial study, promising results have already been achieved. It has been proven that HPLC may be a suitable method for guanine quantification. In my opinion, however, the method requires much more thorough validation. In particular, matrix effects and guanine recovery should be determined more precisely in future experiments.

- Did you determine the LOD and LOQ values of the GC and LC methods for analysis of guanine and ergosterole?
- Why UV detection was used for guanine quantification rather than the MS detector?

Mistakes which the students should avoid in the future:

- Abbreviations used in the thesis (e.g., TMCS, BSTFA, ISTD) should have been summarized in a separate section.
- The vacuum cleaner used for sample collection should have been described (e.g., type, suction power). The samples origin and dates of their collection are rather unclear. To allow data comparison, it should have been clearly stated what type of household the samples were obtained from (house/apartment, city/village, dust from whole house/certain rooms only).
- The style of chemical formulas is not uniform (e.g., Figs. 6–9).
- The references do not follow a uniform style and are formatted rather carelessly (e.g., journal names are sometimes abbreviated sometimes not, in some cases issue numbers are given, etc.).
- The layout of graphs and tables is not uniform (e.g., table headings are sometimes capitalized/bold, in some cases not).
- Affixes (e.g., *E*, β) should be written in italics.
- Ammonium acetate should be abbreviated as NH₄OAc instead of NH₄Ac (page 17).
- Representative GC/LC chromatograms should have been given in Results and Discussion.
- Given the fact that the developed analytical methods have not been properly validated, it is not appropriate to express the results in Tables 5–9 with such “accuracy”. Furthermore, standard deviation values are missing in some tables (e.g., Tables 5 and 6).

Conclusion:

In conclusion,

I r e c o m m e n d

the thesis for the defense and I suggest the grade **excellent**.

In České Budějovice date 10. 6. 2014



signature