

**FACULTY OF CHEMISTRY** 

## **NAME and SURNAME**

# **MASTER THESIS**

## **FULL TITLE OF THESIS**

Thesis was prepared under supervision: Supervisor: Name and surname

**Tutor: Name and surname** 

in Research Group of Name of the Group

WROCŁAW 2017

#### I. Table of contents

#### II. Introduction

- II.1. Introduction to the subject of thesis justification of the significance of the research project undertaken within the thesis.
- II.2. List of abbreviation and symbols (including structural formulas)

#### III. State of the art or

or

#### III. Literature review

Preparation of literature reports covering the field of the thesis.

This part should be a review of the literature with content related to:

- a) nature, properties, application of compounds under investigation or similar compounds;
- b) a description of the methods used by the M.Sc. candidate to solve the problem;

This chapter must be strongly anchored in the literature: original works, possibly books, rarely cited in the Internet, literature as the latest (depends on the topic). The volume of this chapter in the case of experimental and theoretical (computational) work should not exceed 30% of the total work volume.

In the case of work with didactics (teaching methodology), it is permissible to introduce experiments and own observations in addition to literature data.

#### IV. Aim of the work.

Determination of the research problem. Overview of the stages of research work and research methods leading to the goal. The purpose of the work must be clearly defined, preferably in points.

In the case of work with didactics (teaching methodology) chemistry, this chapter may also include the hypothesis of research and the definition of research methodology, research techniques, the intended way of producing results.

## V. Experimental part

Description of performed experiments, characteristics of obtained compounds.

The chapter must contain a detailed description of the methods used to obtain the compounds under investigation (synthesis) as well as the spectroscopic and analytical data characterizing the substance (in standardized numerical format: NMR, IR, UV-vis, mass spectrometry, elemental analysis, melting point, refractive index). For substances not synthesized, the source of origin, degree of purity, steps taken to purify the compound should be indicated (especially solvent used). Specify how the samples should be prepared for measurements, the measurement conditions, the accuracy with which the measurements were made, and the analysis of errors. In the case of work on the analysis of material of environmental origin (monitoring), the data concerning the place, time (season) and sampling method and the document of the regulating (standardizing) specific characteristics of conducted measurements.

In the case of the work with literature, this section may include a description of the methods used to resolve the issues covered by the review. The title of the chapter should be changed to "Applied Methods" or "Methods used in ..." in such cases.

In the case of didactics (teaching methodology) of chemistry, this chapter should include a description of the study, in accordance with the accepted concept and presentation of the results.

### VI. Results and Discussion

### Or Discussion of the Results

Or separately chapter VI.1: Results and chapter VI.2.: Discussion

Interpretation of the results obtained in the frame of the master thesis in relations to the relevant data.

In this chapter the results obtained by the M.Sc. candidate should be presented together with their analysis and comparison with the results reported in the literature for similar systems/compounds/problems. Presentation of the data should be clear in tables, plots and or figures. All this should be commented. This chapter should make the essential part of the thesis. Therefore its volume should reach 50% of the total work volume.

In the case of thesis prepared as the literature reviews (based only on the literature) this chapter should include a comparative analysis of the methods, results and conclusions for the problems discussed by the various authors.

## VII. Summary and Conclusions (1-2 pages)

A short description of the most important achievements of the thesis. Conclusions should be presented in a clear way, preferably in points. It is desirable that their editorial corresponds to the issues raised in Chapter IV (purpose of the work).

## VI. Abstract (in Polish and English)

A short description of the methods used, results obtained and conclusions drawn.

#### IX. References

A list of all references cited throughout the text, for example:

- 1. J. Kowalski, K. Nowak, "Full title of the paper" Spectrochim. Acta Part A 44 (1999) 705.\*
- 2. V. Dvorak (red), Vibrational Spectroscopy of Phase Transition, Academic Press, 1984.

References should contain complete information on all authors names (initials) and surnames, the journal abbreviation, the volume number, year of publication and a number of the first page of the article. In the case of books, the authors names (initials) and surnames should be given, the title of the book, name of the publishing house and year of publication. References to Internet sources, for example to Wikipedia or other sources not published should be avoided. It is allowed to cite bachelor, master and PhD thesis with author name (initials)- and surname, place (University / faculty / institute) and year of its realization.

It is allowed to use other than presented above citation formats, however all references should be complete and consistent. It is important that all citations are complete and uniform in all bibliography.

\*Next numbers indicate volume, year of publication and first page of publication, respectively