UNDERGRADUATE THESIS WRITING GUIDEBOOK

FOOD SCIENCE AND TECHNOLOGY STUDY PROGRAMME FACULTY OF AGRICULTURE
UNIVERSITAS SEBELAS MARET
SURAKARTA
2021

PREFACE

Alhamdulillahi Robbil'alamin, we pray to the presence of Allah the Almighty for all the abundance of favours and gifts so that the team for preparing guidelines for writing *Skripsi* has completed "SKRIPSI WRITING GUIDEBOOK " for students of Food Science and Technology Study Programme (FST SP), Faculty of Agriculture, Universitas Sebelas Maret (UNS). This guidebook is prepared as a reference for the preparation of scientific work for FST SP students which include research proposals, summaries and posters for the purposes of seminars on research results, and *skripsi* writing so that it is expected to provide uniformity in writing scientific papers.

This Guidebook was prepared by referring to the Final Project Writing Guidebook, Faculty of Agriculture, Universitas Sebelas Maret and by considering the guidelines for preparing *skripsi* of similar study programmes of other universities as well as by following skripsi writing development and adhering to the rules and principles of scientific writing methods.

The team would like to thank those who have participated in observing and providing inputs and suggestions in the preparation of this guidebook. If there are errors or additional inputs, they will be considered for improvement and betterment of next edition.

Surakarta, January 2021

Head of Food Science and Technology
Study Programme

Danar Praseptiangga, S.T.P., M.Sc., Ph.D.
Employment ID No.198109092005011002

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RESEARCH

OUTLINE

RESEARCH OUTLINE

The research outline of *skripsi* consists of an initial section and a main section.

A. Initial Section

The initial section of the research proposal includes a title page and an approval page.

1. Title Page

The title page contains: research title, UNS logo, full name of student and student registration number, advisor's name, name of the respective study programme, name of the faculty, name of the university, the place and the year of submission.

a. The title of the research indicates the problem to be studied and/or describes the aims and objectives of the research. The title is kept short, effective, a maximum of 22 words unless it is unavoidable. The research title is written in capital letters with a proportional size to the size of the paper and standard font (Times New Roman 12) with single spacing.

b. The purpose of the research outline is the research outline for *skripsi* in Food Science and Technology Study Programme, Faculty of Agriculture, Universitas Sebelas Maret, Surakarta.
c. UNS logo, in a diameter of 5 cm in light blue or black.
d. Student's name, written in full name and below the name is the student registration number.
e. Name of supervising lecturer, which is written with academic title (minimum 1 supervisor)
f. The institution is Food Science and Technology Study Programme, Faculty of Agriculture, Universitas Universitas Sebelas Maret, Surakarta.
g. The place and the time of submission, including the place (Surakarta) and underneath it is the month and year of submission of the research outline.
h. The color of the research outline cover is white.

Example of a research outline title (including research proposals and *skripsi*) is shown in **Appendix 1**. Example of a research outline title page and a research proposal is shown in **Appendix 2**.

2. Approval Page

The approval page contains the title of the research outline and the approval of the Supervisor and/or Co-supervisor, complete with the signature and the date of approval. Example of a research outline approval page is shown in **Appendix 3.**

B. Main section

The main section of the research outline includes: background of the study, problem formulation, objectives, research design, and reference.

a. The background of study contains a description of the importance of research and to answer why the problem needs to be studied. The significance of the research is strengthened by facts and in-depth supporting literature review. The rationale for solving the problem supported by the literature needs to be stated.
b. The problem formulation is a brief and clear description of the core problem to be studied, approaches, and concepts in answering the problem. The problem formulation is generally in the form of a question.
c. The research objective states the objectives to be achieved in the research.
d. Research design. In general, the research design describes the stages of the research, the observation of variables, the experimental design and the schedule of activities. The stages of the research contain detailed descriptions of the sequence of stages to be carried out in the research. Observation of variables contains detailed descriptions of the types of variables along with data collection methods including sampling methods, methods of analysis (using certain methods) either chemically, physically, sensory or biological tests, and the procedures used in data collection. The experimental design describes the experimental design, factors, and levels used in the research plan, accompanied by analytical

methods the data to be used for example analysis of variance or F test, covariance, correlation, regression and so on.

e. Reference. The reference describes all the references used in the text. Citations/references in the text use a name and year system by mentioning the author's last name followed by the year. If it consists of one author, the citation is written by the last name of the author without an abbreviation followed by the year, for example: Remus (2001) or (Remus, 2001); if there are two authors, write the names of both authors, for example, Garcia and Mack (2000) or (Garcia and Mack, 2000); if there are three or more authors, write the last name of the first author followed by et al., or et al., (choose one, and use it consistently), for example Hassan et al. (2005) or (Hassan et al., 2005). If there are 2 or more articles from the same author in the same year, after the year an alphabetical notation is added in the order in which they appear in the text, for example: Honarbakhsh et al. (2007a); Honarbakhsh et al. (2007b); Honarbakhsh et al. (2007c).

   Reference is written in alphabetical order, spaced 1 with a distance between libraries of 6 pt. The digital object identifier (DOI) is listed if the article has a DOI (it is possible that articles published before 2005 do not have a DOI). If the year of publication is not listed in a library, then a question mark (?) is put behind the author.

   Example of writing a reference is shown in **Appendix 4.**

RESEARCH

PROPOSAL

RESEARCH PROPOSAL

The research proposal for *skripsi* consists of an initial section, a main section, and a final section.

A. Initial section

The initial section of the research proposal includes a title page and an approval page.

1. Title Page

The title page of the *skripsi* research proposal contains the same thing as the title page of the research outline. The rules and systematics of writing the title of the research proposal are the same as those of the research outline. The names of the supervisors included in the research proposal are the Supervisor and Co-supervisor.

Example of a research proposal title (including papers and *skripsi*) is shown in **Appendix 1**. Example of a research proposal title page is shown in **Appendix 2**.

2. Approval Page

The approval page contains the title of the research proposal and the approval of the Supervisorr, Co-supervisor, and known to the the Commission of Bachelor's Degree Programme in Food Science and Technology, complete with the signature and the date of approval. Example of a research proposal approval page is shown in **Appendix 3**.

B. Main section

The main section of the research proposal includes: introduction, literature review, research methods, and reference.

1. Introduction

The introduction consists of background, problem formulation, research objective, and research benefits.

a. The background of the research proposal contains the same thing as the background of the research outline, providing an explanation of the significance of the research, the reasons and basis for selecting research variables, and the novelty of the research. The description is based on

information related to facts and data that is precise and accurate through an in-depth literature review. The rationale for solving the problem supported by the relevant literature needs to be stated.

b. The formulation of the problems and research objectives in the research proposal include the same thing as that of the problems and research objectives in the research outline.

c. The benefits of research mention the benefits obtained from research if the research objectives are achieved.

2. Literature Review

The literature review contains a systematic description of the theory and/or results of previous research which is the basis for developing a framework for leading to a hypothesis. Theories from the literature included in the literature review must refer to three things: dependability, validity and up-to-date. Dependability means that the theory and research results used are related to the problem to be studied. The reference source must also be valid and quoted from literature that meets scientific standards. Reference sources that meet these three requirements include scientific journals, proceedings and other research results (eg theses, theses and dissertations), and text books.

The hypothesis contains a brief statement derived from the synthesis of the problem with the literature review so that it is a temporary answer/conclusion. The hypothesis can be verified or cannot be verified after being tested through the research that will be carried out.

3. Research Methods

In general, the research method describes the place and the time of research, materials and research tools, research stages, observation of variables, experimental design and schedule of activities.

a. Time and place of research: description of time and place of research to be conducted.

b. Materials and research tools: elaboration of the materials and tools used during the research both for samples and analysis.

c. Research Stages: detailed description of the sequence of stages to be carried out in the research.

d. Observation of variables: detailed descriptions of the types of variables along with data collection methods including sampling methods, how to analyze (using certain methods) either chemically, physically, sensory or biological tests, and the procedures used in data collection.

e. Experimental design: description of the experimental design, factors and levels used in the research plan, accompanied by data analysis methods to be used for example analysis of variance or F test, covariance, correlation, regression, etc.

f. Schedule of Activities: containing the details of the estimated time required for research preparation, research implementation, data analysis, seminar time estimates, *skripsi* writing and *skripsi* examinations. The schedule of research activities is presented in the matrix form.

4. Reference

The technique of writing citations in the text and reference of the research proposal is the same as that described in the research outline.

Example of writing a reference is shown in **Appendix 4.**

C. Final Section

The final section of the research proposal contains attachments (if any) to clarify the contents of the research proposal, for example the design of the equipment used, details of the research design, etc.

SUMMARY AND POSTER OF SEMINAR ON RESEARCH RESULTS

A. RESEARCH SUMMARY OF SEMINAR ON RESEARCH RESULTS

1. The summary is written with 1 space using A4 paper format with left, top, right and bottom margins of 4, 4, 3, and 3 cm respectively.
2. The summary contains a brief and complete background, research methods, results and conclusions. The maximum number of pages is 3 pages.
3. The font used is Times New Roman with a size of 12 pt.
   Example of a summary is attached in **Appendix 5**.

B. RESEARCH POSTER OF SEMINAR ON RESEARCH RESULTS

1. The Poster is made in X-banner size (60cm x 160cm or 80cm x 180cm).
   The Poster is made in printed or e-poster form.
2. Posters in printed form must be legible from a distance of about 2 meters.
3. Sub-headings are written in a larger size than the text and in bold;
4. The content of the poster includes: title, author's name and affiliation, UNS logo, abstract, introduction, methods, research results, conclusions and a minimum of 5 main references. Example of a poster is attached in **Appendix 6.**

SKRIPSI

SKRIPSI

The contents of *skripsi* are grouped into three main sections: initial section, main section, and final section.

A. Initial section

The initial section of *skripsi* includes the front cover page, title page, approval page, validation page, statement of *skripsi* authenticity, preface, contents, list of tables, list of figures, list of appendices, and abstract.

1. **Cover Page**

   The cover page contains the research title, UNS logo, student's name and student registration number, name of the respective study programme, name of the faculty, name of the university, place, month and year of approval.

   a. The title of the research indicates the problem being studied and/or describes the aims and objectives of the research. The title is kept short, effective, a maximum of 22 words unless it is unavoidable. Research title, written in capital letters with size proportional to paper size and standard font (Times New Roman 12) with single spacing.

b. The purpose of the research proposal, namely the research proposal for a *skripsi* in the Food Science and Technology Study Programme, Faculty of Agriculture, Universitas Sebelas Maret, Surakarta.
c. UNS logo, made in a diameter of 5 cm in light blue or black.
d. Student's name, written in full name and below the name is the student regiatration number.
e. The institution is Food Science and Technology Study Programme, Faculty of Agriculture, Universitas Sebelas Maret, Surakarta.
f. Place and time of submission, including the place (Surakarta) and the month and year of the thesis approval underneath it.
g. The color of the research proposal cover is "salted egg" light blue.

Example of a *skripsi* cover page/title page is shown in **Appendix 7**.

2. Title Page

The content on the title page is the same as that of the front cover page, and it is printed on white paper. UNS logo is made in a diameter of 5 cm in light blue or black.

3. Approval Page

The approval page contains the research title, student identity (full name and student registration number), date of approval, approval of the Supervisor and Co-supervisor under the approval of Head of the respective Study Programme.

Example of *skripsi* approval page is shown in **Appendix 8.**

4. Validation Page

The validation page contains the research title, student's identity (full name and student registration number), date of examination, validation from the Board of Examiners and Dean. Example of *skripsi* validation page is shown in **Appendix 9**.

5. Declaration of Originality

The declaration of originality of *skripsi* contains the student's name and the student registration number, title of the *skripsi*, and a statement that the student does not commit various forms of fraud and violations of scientific ethics in writing the *skripsi*. Example of a declaration of originality of *skripsi* is presented in **Appendix 10**.

6. Preface

The preface contains a brief description of the purpose of writing the *skripsi*, other necessary explanations, and gratitution to those who have made a significant contribution to the *skripsi* writing process.

7. Contents

The contents page provides an overall picture of the contents of the *skrispsi*. Example of the page of contents is shown in **Appendix 11**.

8. List of Tables

a. The list of tables contains table number, table title, and page number where the table is located.

b. The table list is not necessary if the *skripsi* contains only one table.

Example of a list of tables is given in **Appendix 12**.

9. List of Figures

a. The list of figures contains the serial number, the title of the figures, and the page number where it is located.
b. If the *Skripsi* only has one figure, no figure list is created.

Example of a list of figures is presented in **Appendix 13.**

10. List of Appendices

a. The list of appendices has the serial number, the name of the appendix, and the page number where the appendix is located.
b. A list of appendices is not made if the thesis contains only one appendix.

Example of a list of appendices is presented in **Appendix 14**.

11. Abstract (Indonesian Version)

The abstract is written in one paragraph and contains the research title, student name, student registration number, and a brief description of the research objectives, research methods, research results, and conclusions. The title of the research and the student's name are written separately above the text and placed in the center. The research title is written in capital letters. Abstract is written in Indonesian, is single-spaced, and has a maximum of 250 words. The abstract contains 3–5 keywords or phrases. The example is presented in **Appendix 15**.

12. *Abstract (English Version)*

The abstract is also written in English. Example of an abstract in English is presented in **Appendix 16**.

B. Main Section

The main section of the *Skripsi* consists of an introduction, literature review, research methods, results and discussions, conclusions and suggestions, and reference

.

1. Introduction

The introduction consists of background, problem formulation, research objectives, and research benefits.

a. The background contains a description of the importance of research and explains why the problem needs to be studied. The significance of the research is strengthened by facts and an in-depth supporting literature. The rationale for solving the problem, supported by the literature, needs to be stated.
b. The problem formulation is a concise and clear representation of the core problem being studied, as well as the approaches and concepts to answer the problem. The formulation of the problem is presented in the form of questions.
c. The research objectives state the objectives to be achieved in the research.
d. The benefits of research mention the benefits obtained from research if the research objectives are achieved.

2. Literature review

The literature review provides a systematic description of the theory and/or results of previous research, which serves as the foundation for the development of a framework that leads to a hypothesis. Theories from the literature included in the review must address three criteria: reliability, validity, and relevance. Reliability indicates that the theories and research results used are relevant to the subject in the research. The reference source must also be credible and cited from scientifically valid literature. Reference sources that meet these three requirements include scientific journals, proceedings, other research results (e.g., *Skripsi*, theses, and dissertations), and text books.

The hypothesis includes a brief statement derived from the problem's synthesis with a literature review, which makes it a temporary answer/conclusion. The hypothesis can be accepted or rejected based on the results of the research that has been conducted.

3. Research Methods

In general, the research method describes the place and time of the research, the research materials and instruments, the research stages, the observation of the variable, and the activity schedules.

a. Time and place of research: a description of the time and place of the research that has been conducted.
b. Materials and instrument: This section describes the materials and instrument used during the research, both for samples and analysis.
c. Research stages: comprehensive explanations of the sequence of stages carried out in the research.
d. Variable observation: detailed descriptions of the types of variables, including data collection methods, such as sampling methods and data analysis (using particular methods), whether chemically, physically, organoleptically, or biologically tested, along with detailed description of the procedures used in data collection.
e. Experimental design: a description of the type of research design being carried out (e.g., completely randomized design, factorial randomized design, simple randomized design, complete block design, etc.) along with the factors and scope of the research, completed by the method of data analysis that is applied (e.g., analysis of variance or F test, covariance, correlation, regression, and so on).

4. Results and Discussion

Research results are presented in the form of illustrated tables or figures (graphs, photos, schemes, charts) so that they can provide a better level of clarity than descriptions in words. Tables and figures in the appendix are numbered in order which must be used in the text. Title, along with table and figure descriptions, are arranged as a whole (concise) in such a way as to make it easier for the reader to fully understand the contents of the illustration. Table titles are written with a single space from the left border and not ended with full stop. The image title is in the center with a single space and ends with a full stop. Table description (if any) is typed under the table with a single space. Captions for figures (if any) are typed in the blank space below or above the title of the figure, separated by a single space. Captions for figures (if any) are typed in the blank space on top of or below the image, above the image title, with a single space. Tables, figures, and their titles go after the paragraph that talks about them, and you can't cut them off. Other supporting information is put in the appendix, and the text must refer to

it. Tables, figures, and their titles go after the paragraph that talks about them, and you cannot cut them off. Other supporting information is put in the appendix, and the text must refer to it. Other supporting information is put in the appendix, and the text must refer to it.

The discussion is presented as a unit with a description of the research results. The discussion presents a clear and critical description of the interpretation of research results, as well as their relationship to previous research results or theories from the literature. Examples of presented illustrations in the form of tables and figures are shown in **Appendix 17** and **Appendix 18**.

5. Conclusion and Recommendation

The conclusion is the essence of the research results expressed in clear, firm, and straightforward sentences. Magnitude numbers can be presented in the conclusion. The authors must also consider the connection among the title, objectives, research results, and conclusions.

Recommendations (if any) are the implications of the conclusions, thus what is being suggested should not be beyond the content of the conclusions.

6. Reference

The citations and the reference in the *Skripsi* should be written as the research proposal. Examples of references are presented in **Appendix 4.**

C. Final Section

The appendices contain the results of data analysis, research documentation, or other information that functions to complete the description or data presented in the main part of the *Skripsi*. Similar tables and figures are grouped together in one appendix. As a result, one appendix can contain two or more tables or figures. If an appendix has more than one page "(continued)" is written after the appendix number, for example: Appendix 1 (continued).

The example of appendix is shown in **Appendix 19**. The example of acknowledgement is presented in **Appendix 20**.

SPECIFIC GUIDELINES FOR WRITING RESEARCH OUTLINE, RESEARCH PROPOSAL, SUMMARY, AND *SKRIPSI*

SPECIFIC GUIDELINES FOR WRITING OUTLINE,
RESEARCH PROPOSAL, SUMMARY AND *SKRIPSI*

A. Material

Writing materials for research proposal and *Skripsi* include cover paper and manuscript.

1. The *Skripsi* has a hard cover laminated in light blue "salted egg." The *Skripsi* title, the year, the UNS logo, the student's full name, and the word "Skripsi" are all written on the back.
2. The outline and research proposal manuscript are printed on 70 g white HVS paper, while the *Skripsi* is printed on 80 g white HVS paper in A4 size.

B. Typing

1. The font used is Times New Roman with a size of 12 pt. The same font must be used for all texts. In tables and table captions, font sizes might be smaller than 12 points.
2. The left, top, right, and bottom edges are 4, 3, and 3 cm, respectively.
3. Except for the Abstract (both Indonesian and English version), the *Skripsi* is written with 1.5 spacing.
4. The manuscript is written evenly on the left and right margins (justify). However, when the spacing between words is too wide, word fragmentation can be done according to standard Indonesian grammatical norms.
5. Page number is written at the middle bottom of each page. Page numbers on the front cover (title page, etc.) using the alphabetical letters (i, ii, iii,..). Page numbers for the main and final sections use Arabic numerals (1, 2, 3, …).

C. Writing chapter titles, subtitles, and sub-section of subtitles.

1. The chapter titles are written in Roman numerals with a capital letter in the centre. Titles of chapters begin on new pages and do not end with full stop.
2. Subtitles are numbered with capital letters (A, B, C, …), placed on the margins, and not followed by a full stop. All first letters in the subtitles are

capitalized except for conjunctions (and, or, as well as, nor) or prepositions (in, to, from, on, in, with, instead of).

3. Subc-section of subtitles are numbered using Arabic numerals (1, 2, 3,...) and typed starting from the left margin and the first letter.

The writing of chapter titles and sub-chapter titles, can be seen in **Appendix 21**.

D. Writing Formulas, Tables, Images, and Scientific Names

The writing of formulas and special signs (symbols) for statistics is written in italics.

1. Titles and descriptions of tables, titles and descriptions of figures or graphics, and bibliography are typed in single spacing with an additional 0.5 space before and after the title (+6 points before and after the title). Hence, the distance between text and figures or tables is 1.5 spaces with an additional 0.5 spaces before the title (6 pt.). In contrast to the spacing between the table and the title, which is one space plus 0.5 spaces, figures with captions use one space plus 0.5 spaces before and after the caption text. Text in tables and figures is single-spaced.
2. Table numbers, figures, and appendices. The table number is written in Arabic numerals, followed by a period and the table's title, which is placed directly above the table. Image number (chart, graph, or photo), followed by a full stop, the image title, and description (if any), are placed below the figures. The title of the table or figure and the description must be on the same page. Tables and figures (charts, graphs, and photos) that are too wide can be loaded in an extended position and then folded.
3. The rules for writing numbers in sentences (not tables) are as follows: Numerals fewer than ten, written with letters or spelled out, unless they are part of number series. The number in front of an abbreviated unit, for example, km, m, cm, kg, and g, is still written in Arabic numerals. Stand-alone fractions are still typed with letters, but when joined by an integer or placed in front of an abbreviated unit, it is written in Arabic numerals.

4. Units of length, mass, area, volume, and others are written using conventional abbreviations without periods, such as km, cm, m, kg, g, mL, and mg/L.
5. The scientific name of organisms is italicized in the text. The authors and descriptive abbreviations such as subsp., sp., spp., f., f.sp., var., cv., etc. proceed to be written upright to the text.
6. The first scientific name is mentioned fully, followed by the author's abbreviated name, for example, Glycine max Merr. The author's name appears only once in the document, thus if the same scientific name appears more than once, it is written with an abbreviated genus and without an author, such as G. Maximus. The complete scientific name (e.g., Glycine max) without authors is written once only in each new chapter, and then the genus will be abbreviated (e.g., G. max).

APPENDICE

S

Appendix 1. Example of research proposal, papers and *Skripsi* Titles

1. Gluten Free Biscuits Based on Banana Flour (Musa paradisiaca) and Soybean Flour (Glycine max)
2. The Effect of distance between the heat source and the duration of smoking on the characteristics and sensory properties of smoked catfish (Clarias sp.p.)
3. The Estimation of the Shelf Life of Smoked Catfish (Clarias sp.) using the Accelerated Shelf-life Testing (ASLT)-Arrhenius Model with Variations of Vacuum and Non-Vacuum Packaging
4. Textural and Sensory Characteristics of Surimi Tuna Meatballs (Euthynos affinis) with Bran Flour (Oryza Sativa) substitution using STPP and Carrageenan
5. Physical, Chemical, and Sensory Characteristics of Wet Noodles with Substitution of Composite Flour from Canna Flour (Canna edulis), Jack Bean Flour (Canavalia ensiformis), and Wheat Flour at Various Binder Properties
6. The Effect of Palm Sugar on the Physical, Chemical, and Sensory Characteristics of Composite Flour Snack Bars (Purple Yam, Corn, and Cowpea) as a Low-Calorie Snack
7. The Effect of Green Grass Jelly (Cyclea barbata Miers) Leaf Concentration and Storage Time on the Physical Quality of Grass Jelly
8. Wet Noodles' Physical, Chemical, and Sensory Characteristics: Substitution of Composite Flour Based on Yam Flour (Dioscorea alata), Jack Bean Flour (Canavalia ensiformis), and Wheat Flour with Variations in Binder Proportion
9. The Effect of Combining Cellulase, Polygalacturonase, and Amylase Enzymes on the Clarification of Super Red Dragon Fruit Juice (Flylocereus costancensis)
10. Physical, Chemical, and Sensory Properties of Composite Flour Substitution Cookies Made with Yam Flour (Dioscorea alata), Jack Bean Flour (Canavalia ensiformis), and Wheat Flour.

Appendix 2. Example of research outline and proposal title page

ANTIDIABETIC POTENTIAL OF NA-ALGINATE ELICITED PIGEON PEA (*CAJANUS CAJAN L.*) SPROUTS FLOUR IN TERMS OF ALPHA-AMYLASE INHIBITORY ACTIVITY, TOTAL FLAVONOID COMPOUND, ANTIOXIDANT ACTIVITY, AND RESISTANT STARCH

A Research Outline for *Skripsi*

By:
LAILATUL NUR KHUSAFA'AH
H0916049

Supervised by:
1. Dr. Setyaningrum Ariviani, S.T.P., M.Sc.
2. Gusti Fauza, ST., MT., Ph.D

FOOD TECHNOLOGY STUDYPROGRAMME
FACULTY OF AGRICULTURE, UNIVERSITAS SEBELAS MARET

SURAKARTA, AUGUST 2020

ANTIDIABETIC POTENTIAL OF NA-ALGINATE ELICITED PIGEON PEA (*CAJANUS CAJAN L.*) SPROUTS FLOUR IN TERMS OF ALPHA-AMYLASE INHIBITORY ACTIVITY, TOTAL FLAVONOID COMPOUND, ANTIOXIDANT ACTIVITY, AND RESISTANT STARCH

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FOOD TECHNOLOGY STUDY PROGRAMME, FACULTY OF AGRICULTURE

UNIVERSITAS SEBELAS MARET SURAKARTA

OCTOBER 2021

Appendix 3. Example of research outline and proposal approval pages

Antidiabetic Potential of Na-Alginate Elicited Pigeon Pea (*Cajanus Cajan L.*) Sprouts Flour in Terms of Alpha-Amylase Inhibitory Activity, Total Flavonoid Compound, Antioxidant Activity, and Resistant Starch

A Research Outline for *Skripsi*

Proposed by:
LAILATUL NUR KHUSAFA'AH
H0916049

Approved by:

Surakarta, ……

Supervisor I	Supervisor II
Dr. Setyaningrum Ariviani, S.T.P., M.Sc. Employment ID No.: 197604292002122002	Gusti Fauza, S.T., M.T., Ph.D. Employment ID No.: 197608222008012009

Antidiabetic Potential of Na-Alginate Elicited Pigeon Pea (*Cajanus Cajan L.*) Sprouts Flour in Terms of Alpha-Amylase Inhibitory Activity, Total Flavonoid Compound, Antioxidant Activity, and Resistant Starch

A Research Proposal for *Skripsi*

Proposed by:
LAILATUL NUR KHUSAFA'AH
H0916049

Approved by:

Surakarta, ……

Supervisor I	Supervisor II
Dr. Setyaningrum Ariviani, S.T.P., M.Sc. Employment ID No.: 197604292002122002	Gusti Fauza, S.T., M.T., Ph.D. Employment ID No.: 197608222008012009

Attested by:
Chairman of the Commission of
Bachelor's Degree Programme in Food
Science and Technology

Dr. Setyaningrum Ariviani, S.T.P., M.Sc.
Employment ID No.:
197604292002122002

Appendix 4. How to write references

Reference type	Format
Journal article	Writer's name. Year. Article title. Journal name, Vol (issue), pages. DOI.
Book	Author or editor name. Year. Book title, page. Publisher, place of publication.
Chapter in a book	Author's name of the Chapter. Year. Chapter Title in: Name of the book's author or editor. Book title, page. Publisher, place of publication.
Skripsi, thesis, dissertation	Writer's name. Year. Title of *Skirpsi*/Thesis/Dissertation. Name of University. Place of publication/University.
Article in a seminar proceeding	Writer's name. Year. Article title. Seminar name (seminar year). Seminar venue.
Article on a website	Writer's name. Year. Title. Website address. [downloading date and year]

Example on how to write references of

Journal Articles:

Xu M., Jin Z., Simsek S., Hall C., Rao J., dan Chen B. 2019. Effect of Germination on The Chemical Composition, Thermal, Pasting, and Moisture Sorption Properties of Flflours From Chickpea, Lentil, and Yellow Pea. *Food Chem*istry, 295:579–587. DOI:org/10.1016/j.foodchem.2019.05.167.

Lin P. Y., dan Lai H. M. 2016. Bioactive compounds in legumes and their germinated products. *Journal Agriculture and Food Chemistry 54*(11), 3807-3814.

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Appendix 5. Example of Summary

MORFOLOGI, KADAR FLAVONOID TOTAL, DAN AKTIVITAS ANTIOKSIDAN KECAMBAH KACANG GUDE (*Cajanus cajan L.*) TERELISITASI NaCl DENGAN VARIASI KONSENTRASI ELISITOR, WAKTU ELISITASI, DAN WAKTU PERKECAMBAHAN

LINDA SARI KRISTIANI
H 0914053

RINGKASAN

Stres oksidatif dapat memicu berbagai penyakit degeneratif. Asupan antioksidan diperlukan untuk menetralkan ROS sehingga mencegah stres oksidatif. Kacang gude merupakan leguminosa yang selain sebagai sumber antioksidan juga mampu meningkatkan kesuburan tanah dan toleran terhadap kekeringan. Perkecambahan dan elisitasi diketahuhi sebagai teknik yang mampu meningkatkan kapasitas antioksidan leguminosa. NaCl sebagai elisitor abiotik berpotensi meningkatkan kapasitas antioksidan kecambah leguminosa namun menurunkan daya perkecambahannya. Tujuan dari penelitian ini adalah untuk mengetahui pengaruh elisitasi NaCl terhadap morfologi, kadar flavonoid total dan aktivitas antioksidan, serta menentukan potensi NaCl dalam meningkatkan kapasitas antioksidan kecambah kacang gude terelisitasi.

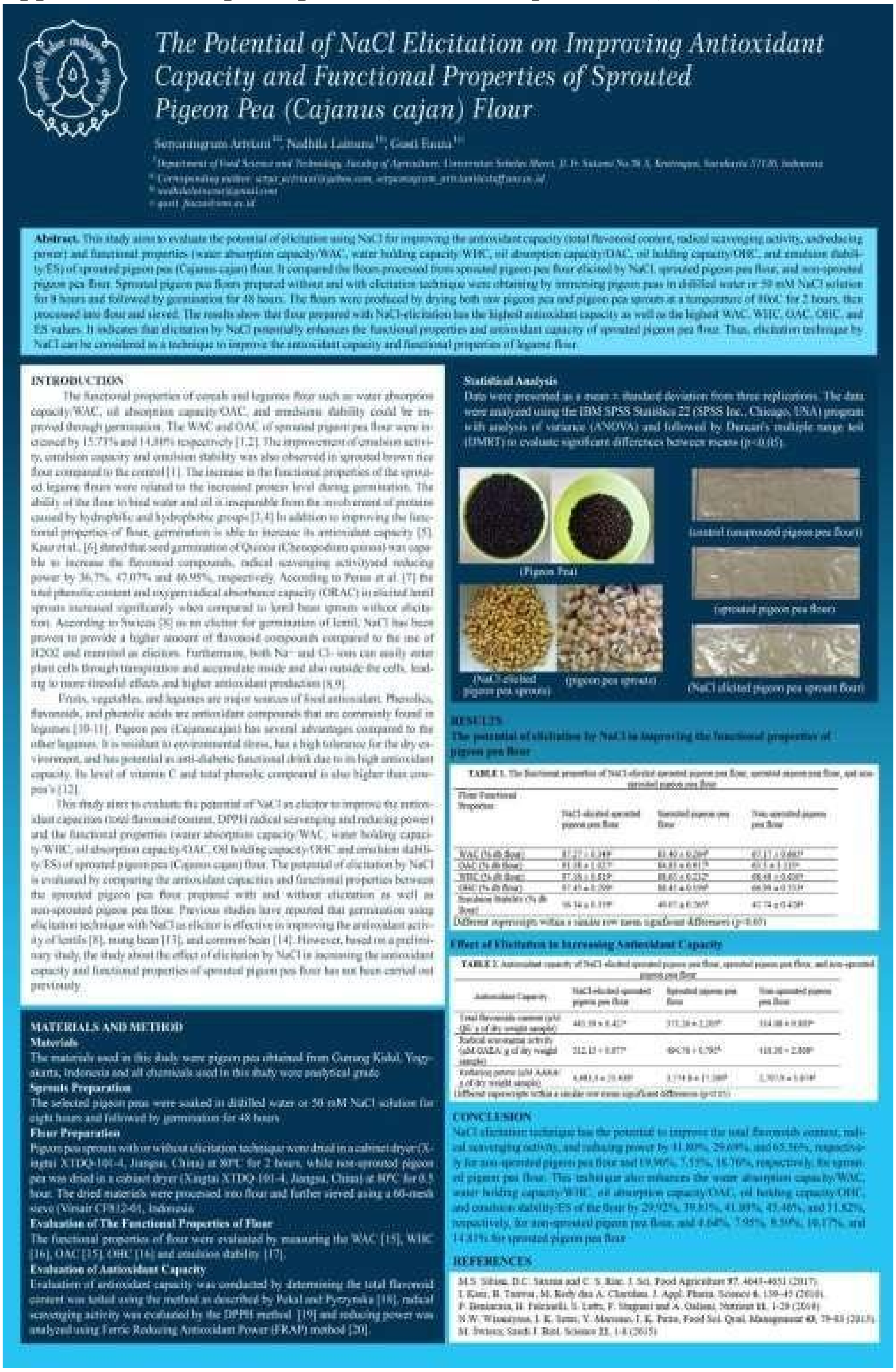
Penelitian ini terdiri dari enam tahapan utama : 1) Proses perkecambahan kacang gude dengan variasi konsentrasi elisitor, waktu elisitasi, dan waktu perkecambahan 2) Analisis morfologi (panjang kecambah, daya perkecambahan, dan rendemen) kecambah kacang gude, 3) Analisis flavonoid total, DPPH *radical scavenging*, dan *reducing power* kecambah kacang gude, 4) Korelasi antara flavonoid total dengan aktivitas antioksidan (DPPH *radical scavenging*, dan *reducing power*), 5) Penentuan teknik perkecambahan terbaik berdasarkan flavonoid total kecambah kacang gude terelisitasi NaCl, 6) Analisis potensi teknik perkecambahan dengan elisitasi NaCl dalam meningkatkan kapasitas antioksidan. Rancangan percobaan penelitian ini menggunakan Rancangan Acak Lengkap Faktorial (RALF) dengan tiga faktor perlakuan: konsentrasi elisitor NaCl (50, 100, 150 mM), waktu elisitasi (8, 12, 16 jam), dan waktu perkecambahan (24, 36, 48 jam). Data dianalisis menggunakan metode *General Linier Model (Univariate Analysis of Variance)*, *Bivariate Pearson Correlation*, dan *One Way ANOVA* pada $p < 0,05$.

Hasil penelitian menunjukkan bahwa konsentrasi elisitor NaCl, waktu elisitasi, dan waktu perkecambahan berpengaruh signifikan ($p<0,05$) terhadap panjang kecambah, daya perkecambahan, rendemen, flavonoid total, DPPH *radical scavenging*, dan *reducing power* kecambah kacang gude terelisitasi. Semakin tinggi konsentrasi elisitor NaCl dan semakin lama waktu elisitasi menyebabkan panjang kecambah, daya perkecambahan, dan rendemen kecambah semakin kecil. Semakin lama waktu perkecambahan maka panjang kecambah, daya perkecambahan, dan rendemen kecambah semakin besar. Interaksi terbaik panjang kecambah, daya perkecambahan, dan rendemen kecambah diperoleh pada konsentrasi 50 mM, waktu elisitasi 8 jam, waktu perkecambahan 48 jam.Semakin tinggi konsentrasi

elisitor NaCl, semakin lama waktu elisitasi dan waktu perkecambahan menyebabkan kadar flavonoid total dan aktivitas antioksidan (*DPPH radical scavenging* dan *reducing power*) semakin besar. Interaksi terbaik *reducing power* pada konsentrasi 150 mM, waktu elisitasi 12 dan16 jam, waktu perkecambahan 48 jam. Kadar flavonoid total memiliki korelasi lebih tinggi terhadap *DPPH radical scavenging* ($r=0,876$; $p<0,01$) dibandingkan *reducing power* ($r=0,855$; $p<0,01$). Teknik perkecambahan terbaik adalah 50 mM, 8 jam, 48 jam dan terbukti mampu meningkatkan kapasitas antioksidan kecambah kacang gude terelisitasi.

Kata kunci : elisitasi, NaCl, kacang gude, morfologi, kapasitas antioksid

Appendix 6. Example of poster (with an adaptable size)



Appendix 7. Example of *Skripsi* title page/cover

Antidiabetic Potential of Na-Alginate Elicited Pigeon Pea (*Cajanus Cajan L.*) Sprouts Flour in Terms of Alpha-Amylase Inhibitory Activity, Total Flavonoid Compound, Antioxidant Activity, and Resistant Starch

A
SKRIPSI
Submitted to fullfil one of the requirements for obtaining a Bachelor's Degree in Food Science and Technology at Faculty of Agriculture, Universitas Sebelas Maret

By
:
LAILATUL NUR KHUSAFA'AH
H0916 049

FOOD SCIENCE AND TECHNOLOGY STUDY PROGRAMME
FACULTY OF AGRICULTURE, UNIVERSITAS SEBELAS MARET
SURAKARTA 2021

Appendix 8. Example of *skripsi* approval page

APPROVAL PAGE

This *Skripsi* entitled

Antidiabetic Potential of Na-Alginate Elicited Pigeon Pea (*Cajanus Cajan L.*) Sprouts Flour in Terms of Alpha-Amylase Inhibitory Activity, Total Flavonoid Compound, Antioxidant Activity, and Resistant Starch

by:
Lailatul Nur
Khusafa'ah
H0916049

was approved by:

Supervisor:

Dr. Setyaningrum Ariviani, S.T.P., M.Sc.
Employment ID No**..**
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(Signature)
on:

Co-supervisor:

Gusti Fauza, S.T., M.T., Ph.D.
Employment ID No**.:**
197608222008012009

(Signature)
on:

Surakarta,
.....

Head of Food Science and Technology Study Programme

Danar Praseptiangga, S.T.P., M.Sc., Ph.D.

Employment ID No.**:**
198109092005011002

Appendix 9. Example of *skripsi* validation page

VALIDATION PAGE

Antidiabetic Potential of Na-Alginate Elicited Pigeon Pea (*Cajanus Cajan L.*) Sprouts Flour in Terms of Alpha-Amylase Inhibitory Activity, Total Flavonoid Compound, Antioxidant Activity, and Resistant Starch

by

Lailatul Nur Khusafa'ah

H0916049

was defended by the author

and was declared to have met the requirement by

the Board of Examiners:

Chairman:
Dr. Setyaningrum Ariviani, S.T.P., M.Sc.
Employment ID No.**: 197604292002122002**
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Gusti Fauza, S.T., M.T., Ph.D.
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Dimas Rahadian Aji Muhammad, S.T.P., M.Sc., Ph.D.
Employment ID No.**: 198602112010121007**
(Signature)

Surakarta,
.....
Dean of
Faculty of
Agriculture
Universitas Sebelas
Maret

Prof. Dr. Ir. Samanhudi, S.P., M.Si., IPM, ASEAN
Eng.
Employment ID No.:
196806101995031003

Appendix 10. Example of *skripsi* originality declaration

DECLARATION OF ORIGINALITY

I, the undersigned,

Name: Lailatul Nur Khusafa'ah Student Number: H0916049

Study Programme: Food Science and Technology

state that in my *skrpsi* entitled "Antidiabetic Potential of Na-Alginate Elicited Pigeon Pea (*Cajanus Cajan L.*) Sprouts Flour in Terms of Alpha-Amylase Inhibitory Activity, Total Flavonoid Compound, Antioxidant Activity, and Resistant Starch" no work has ever been submitted to obtain an academic degree and to the best of the author's knowledge there is no element of plagiarism, falsification of work or data, except for those referred to in this *skripsi* and mentioned in the bibliography.

I make this statement truthfully and if in the future it is proven that there is a deviation from the statement, I am willing to accept sanctions according to the applicable provisions.

Surakarta,
sincerely
yours,

Signature
Lailatul Nur Khusafa'ah
Student Reg. No.: H0916049

Appendix 11. Example of contents

CONTENTS

Appendix 12. Example of list of tables

LIST OF TABLES

Appendix 13. Example of list of figures

LIST OF FIGURES

Appendix 14. Example of list of appendices

LIST OF APPENDICES

Appendix 15. Example of Indonesian abstract
(Source: *Skripsi* of Lailatul Nur Khusafa'ah H 0916049)

Potensi antidiabetik tepung kecambah kacang gude (*Cajanus cajan* L.) terelisitasi Na-alginat ditinjau dari aktivitas penghambatan enzim alfa amilase, kadar flavonoid total, aktivitas antioksidan, dan kadar pati resisten

Lailatul Nur Khusafa'ah
H 0916049

ABSTRAK

Jumlah penderita diabetes mellitus di dunia meningkat setiap tahunnya. Diabetes mellitus dapat diatasi menggunakan terapi diet bahan alami untuk pengontrolan glukosa darah karena minim efek samping. Kacang gude (*Cajanus cajan* L.) merupakan leguminosa yang berpotensi antidiabetik ditinjau dari aktivitas penghambatan enzim alfa amilase, kadar flavonoid total, aktivitas antioksidan (*radical scavenging activity*, RSA), dan kadar pati resisten (RS). Elisitasi terbukti mampu meningkatkan kadar flavonoid total, aktivitas antioksidan (RSA), dan kadar RS pada kecambah legum. Penelitian ini bertujuan untuk menentukan potensi antidiabetik tepung kecambah kacang gude terelisitasi 250 ppm Na-alginat ditinjau dari aktivitas penghambatan enzim alfa amilase, kadar flavonoid total, aktivitas antioksidan (RSA), dan kadar RSnya. Penelitian ini juga akan mengkaji korelasi aktivitas penghambatan enzim alfa amilase dengan kadar flavonoid total, aktivitas antioksidan (RSA), dan kadar RSnya. Penelitian dilakukan dengan Rancangan Acak Lengkap (RAL) satu faktor. Data potensi antidiabetik dianalisis menggunakan *ANOVA* ($p< 0,05$) dilanjutkan uji DMRT ($p<0,05$) jika terdapat pengaruh perlakuan. Analisis korelasi dilakukan dengan *Correlation Pearson* pada taraf signifikansi $p<0,05$. Hasil penelitian menunjukkan bahwa potensi antidiabetik tepung kecambah kacang gude terelisitasi Na-alginat secara signifikan lebih tinggi dibanding tepung kacang gude maupun tepung kecambah kacang gude tanpa elisitasi. Aktivitas penghambatan enzim alfa amilase mencapai 6,38% AIA/mg(db) sebanding dengan 11,39% aktivitas acarbose (wb). Kadar flavonoid total, aktivitas antioksidan (RSA) dan kadar RS berturut-turut mencapai 46,19 mM QE/100g(db); 15724,37 mM TEAC/100g(db); dan 4,84% (db). Aktivitas penghambatan enzim berkorelasi positif dengan kadar flavonoid total ($r= 0,93$; $p= 0,00$), dan aktivitas antioksidan (RSA) ($r= 0,79$; $p= 0,01$) tetapi tidak berkorelasi dengan kadar RS ($r= 0,49$; $p= 0,18$).

Kata kunci: Potensi antidiabetik, elisitasi, tepung, kacang gude, korelasi

Appendix 16. Example of English abstract
(Source: *Skripsi* of Lailatul Nur Khusafa'ah H 0916049)

Antidiabetic potential of Na-alginate elicited pigeon pea (*Cajanus cajan* L.) sprouts flour in terms of alpha-amylase inhibitory activity, total flavonoid compound, antioxidant activity, and resistant starch

Lailatul Nur Khusafa'ah
H 0916049

ABSTRACT

The number of diabetes mellitus patient continues to increase. Diabetes mellitus can be prevented by consuming natural diets for keeping blood glucose due to their minimal side effects. Pigeon pea (*Cajanus cajan* L.) is a legume that has antidiabetic potential in terms of alpha-amylase inhibitory activity, total flavonoid compound, antioxidant activity (radical scavenging activity, RSA), and resistant starch (RS). Elicitation was able to improve its total flavonoid compound, antioxidant activity (RSA), and RS of legume sprouts. This study aims to determine the antidiabetic potential of 250 ppm Na-alginate elicited pigeon pea sprouts flour in terms of alpha-amylase inhibitory activity, total flavonoid compound, antioxidant activity (RSA), and RS. It also determines the correlation of alpha-amylase inhibitory activity with total flavonoid compound, antioxidant activity (RSA), and RS. The research was conducted by Completely Randomized Design (CRD) with one factor. The data were analyzed using SPSS One Way ANOVA ($p<0,05$) followed by DMRT test ($p<0,05$) if there is a significant difference. Correlation analysis was performed with *Correlation Pearson* at significance level $p<0,05$. The result showed that antidiabetic potential of Na-alginate elicited pigeon pea sprouts flour was higher than pigeon pea flour and pigeon pea sprouts flour. Alpha-amylase inhibitory activity reached 6,38% AIA/mg(db) which was equivalent to 11,39% acarbose activity (wb). Total flavonoid compound, antioxidant activity (RSA), and RS reached 46,19 mM QE/100g(db); 15724,37 mM TEAC/100g(db); and 4,84% (db) respectively. Alpha-amylase inhibitory activity correlated positively with total flavonoid compound ($r= 0,93$; $p= 0,00$) and antioxidant activity (RSA) ($r= 0,79$; $p= 0,01$), but not correlated with RS ($r= 0,49$; $p= 0,18$).

Keywords: Antidiabetic potential, elicitation, pigeon pea sprouts flour, correlation

Appendix 17. Example of illustration presentation in the form of tables

Tabel 1. Efektivitas mikroemulsi β-karoten dalam menghambat kerusakan fotooksidatif vitamin C sari buah jeruk

Sample Sari Buah Jeruk pada Berbagai Perlakuan Penambahan β-Karoten	Laju Kerusakan Vitamin C (mg. L^{-1}. Jam^{-1})	
	Terang (A)	Gelap (B)
Kontrol	-7.8 ± 0.22^{c}	-2.4 ± 0.88^{a}
Mikroemulsi β karoten 6 ppm	-4.8 ± 0.16^{a}	-2.8 ± 0.35^{a}
Mikroemulsi (*empty microemulsions*)	-7.4 ± 0.43^{b}	-3.5 ± 0.41^{a}
β karoten (*free β-carotene*) 6 ppm	-7.3 ± 0.32^{b}	-2.9 ± 0.59^{a}

Keterangan: **Huruf** yang sama dalam **kolom** yang sama menunjukkan tidak berbeda nyata pada tingkat α 0.05

Tabel 2. Efektivitas mikroemulsi β-karoten dalam menghambat kerusakan fotooksidatif vitamin C sari buah jeruk yang difortifikasi dengan 450 mg/l vitamin C

Sampel Sari Buah Jeruk (+) 450 mg/l vit C pada Berbagai Perlakuan Penambahan β-Karoten	Laju Kerusakan Vitamin C (mg. L^{-1}. Jam^{-1})	
	Terang (A)	Gelap (B)
Kontrol	-8.6 ± 0.80^{b}	-5.7 ± 0.73^{a}
Mikroemulsi β karoten 6 ppm	-6.5 ± 0.83^{a}	-6.0 ± 0.27^{a}
Mikroemulsi saja (*empty microemulsions*)	-8.1 ± 0.58^{b}	-5.0 ± 0.55^{a}
β karoten langsung (*free β-carotene*) 6 ppm	-8.2 ± 1.04^{b}	-5.6 ± 0.62^{a}

Keterangan: Huruf yang sama dalam **kolom** yang sama menunjukkan tidak berbeda nyata pada tingkat α 0.05

Table 3. Sensory quality of orange juice with various methods of β-carotene addition

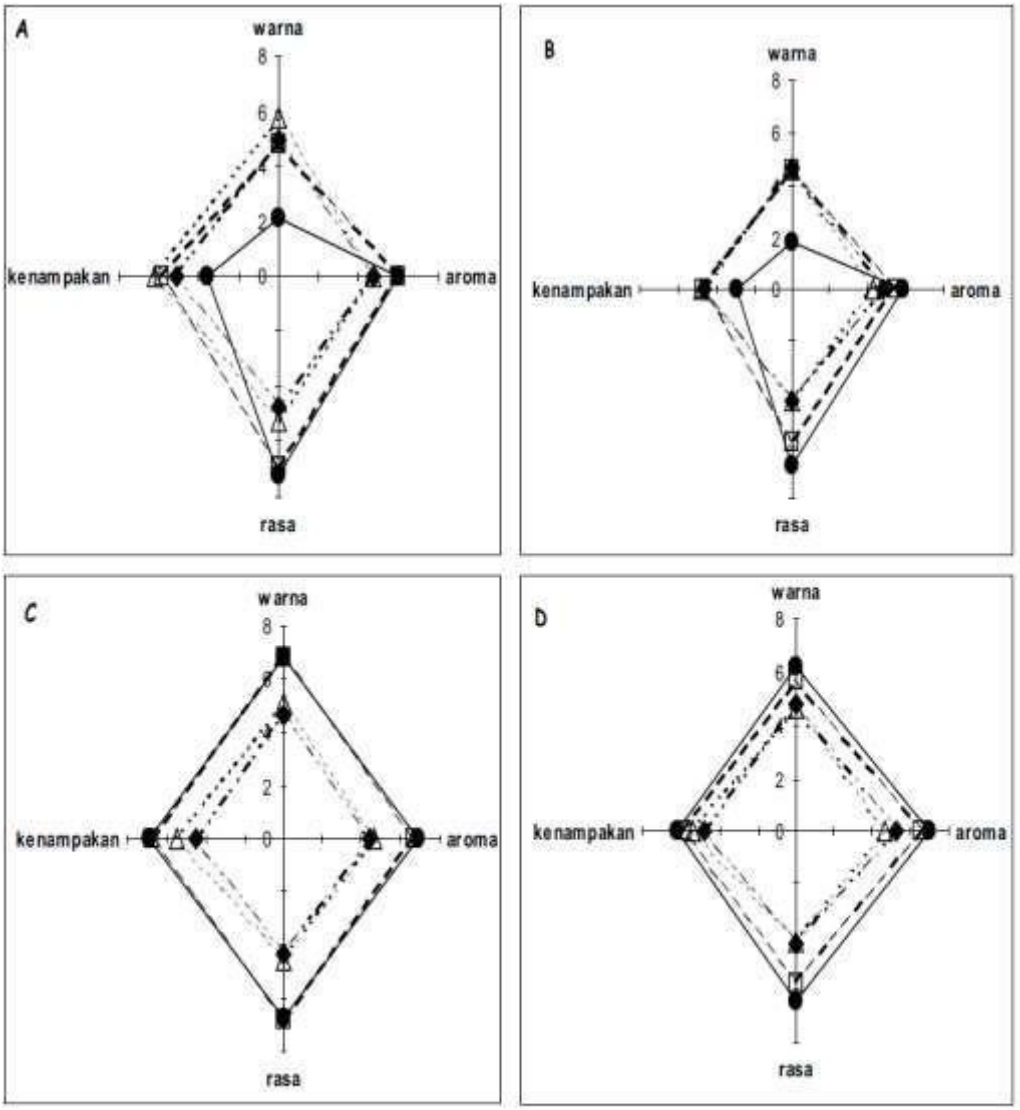
Sampel tanpa pengaturan pH (4.3) maupun pemanasan				
Penambahan Beta karoten	**Warna**	**Aroma**	**Rasa**	**Kenampakan**
Kontrol (tanpa penambahan beta karoten)	4.94±0.66^{b}	4.71±1.31^{a}	4.76±1.35^{a}	5.06±0.75^{b}
Mikroemulsi saja (*empty microemulsions*)	4.82±0.95^{b}	5.94±1.89^{b}	6.88±1.83^{b}	5.82±1.19^{b}
Mikroemulsi beta karoten 6 ppm	2.06±1.09^{a}	5.94±2.75^{a}	7.18±2.35^{b}	3.53±2.70^{a}
Beta karoten langsung 6 ppm	5.76±1.09^{c}	4.71±1.21^{a}	5.24±1.56^{a}	6.18±1.33^{b}
Sampel dengan pengaturan pH (3.5) , tanpa pemanasan				
Penambahan Beta karoten	**Warna**	**Aroma**	**Rasa**	**Kenampakan**
Kontrol (tanpa penambahan beta karoten)	4.65±0.70^{b}	4.82±1.07^{ab}	4.29±1.76^{a}	4.65±0.70^{b}
Mikroemulsi saja (*empty microemulsions*)	4.59±1.18^{b}	5.41±1.58^{ab}	5.82±1.74^{b}	4.71±1.10^{b}
Mikroemulsi beta karoten 6 ppm	1.82±0.95^{a}	5.82±2.40^{b}	6.71±2.23^{b}	2.88±2.45^{a}
Beta karoten langsung 6 ppm	4.59±1.42^{b}	4.29±1.45^{a}	4.29±1.49^{a}	4.82±1.67^{b}
Sampel tanpa pengaturan pH (4.3) , dengan pemanasan (70^{0}C, 15 menit)				
Penambahan Beta karoten	**Warna**	**Aroma**	**Rasa**	**Kenampakan**
Kontrol (tanpa penambahan beta karoten)	4.65±1.11^{a}	4.41±1.06^{a}	4.35±1.57^{a}	4.47±1.07^{a}
Mikroemulsi saja (*empty microemulsions*)	6.82±1.74^{b}	6.65±1.37^{b}	6.82±1.94^{b}	6.71±1.96^{b}
Mikroemulsi beta karoten 6 ppm	6.82±1.67^{b}	6.88±1.65^{b}	6.71±2.08^{b}	6.88±1.83^{b}
Beta karoten langsung 6 ppm	5.06±1.43^{a}	4.65±1.41^{a}	4.53±1.84^{a}	5.47±1.46^{a}
Sampel dengan pengaturan pH (3.5) dan pemanasan (70^{0}C, 15 menit)				
Penambahan Beta karoten	**Warna**	**Aroma**	**Rasa**	**Kenampakan**
Kontrol (tanpa penambahan beta karoten)	4.82±0.53^{ab}	5.24±1.25^{a}	4.29±0.92^{a}	4.76±0.56^{a}
Mikroemulsi saja (*empty microemulsions*)	5.71±2.76^{ab}	6.53±1.37^{b}	5.76±2.19^{b}	5.82±2.48^{ab}
Mikroemulsi beta karoten 6 ppm	6.24±2.59^{b}	6.94±1.60^{b}	6.41±1.99^{b}	6.24±2.49^{b}
Beta karoten langsung 6 ppm	4.65±1.11^{a}	4.65±1.37^{a}	4.18±0.95^{a}	5.35±1.06^{ab}

Keterangan:

Huruf yang sama dalam kolom yang sama menunjukkan tidak berbeda nyata pada tingkat α 0.05

Skor 1: amat sangat lebih baik dari R, 3: lebih baik dari R, 5: sama dengan R, 7: lebih buruk dari R dan 9: amat sangat lebih buruk dari R. R: sari buah jeruk tanpa penambahan beta karoten

Appendix 18. Example of illustration presentation in the form of figures or graphs



♦ : Kontrol; □ : mikroemulsi (empty microemulsions); ●: mikroemulsi β-karoten 6 ppm; Δ : β karoten (free β karoten) 6 ppm. A: tanpa pengtaturan pH maupun pemanasan, B: dengan pengaturan pH, C: dengan pemanasan, D: dengan pengaturan pH maupun pemanasan. Skor 1 : amat sangat lebih baik dari R, 3: lebih baik dari R, 5: sama dengan R, 7: lebih buruk dari R dan 9: amat sangat lebih buruk dari R.
R: sari buah jeruk tanpa penambahan β-karoten

Figure 4.1 Sensory quality of orange juice with various methods of β-carotene addition

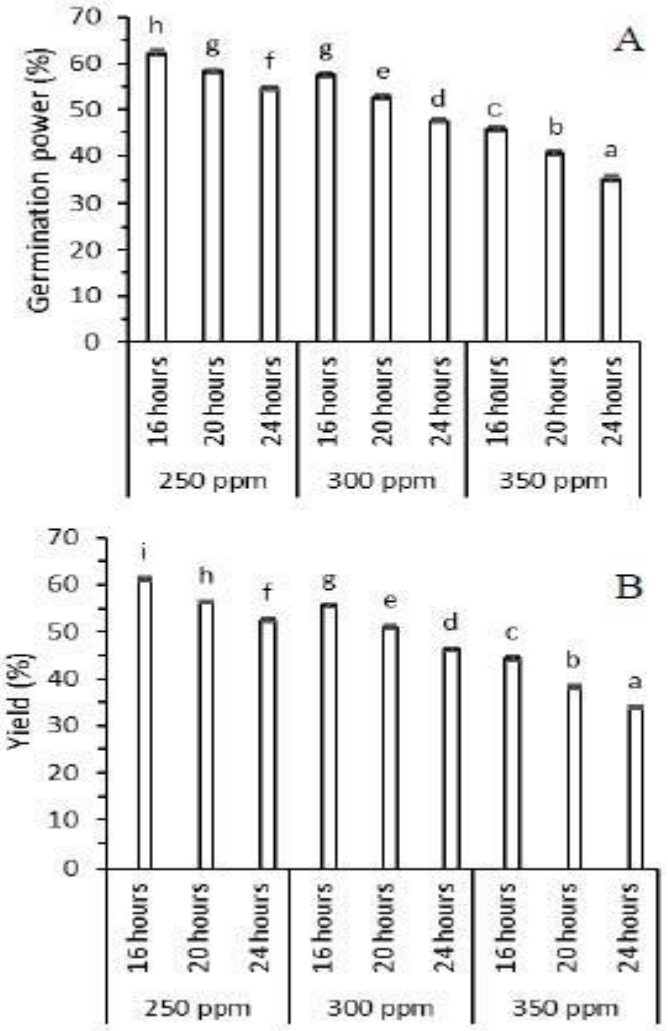


Figure 4.2. Germination power (A) and yield (B) of Na-alginate elicited pigeon pea sprouts with various elicitor concentration and time. Different letter notations show significant differences ($p<0.05$)

Appendix 19. Example of appendix presentation of statistical analysis results

Descriptives

Water content

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
0	6	64.335333	1.4403980	.5880400	62.823728	65.846938	62.4080	66.1590
1	6	65.828667	1.5871975	.6479707	64.163005	67.494328	63.0580	67.8240
2	6	67.635833	.5713134	.2332377	67.036277	68.235390	66.9210	68.3030
3	6	71.876167	1.3197194	.5387732	70.491206	73.261127	69.7770	73.0410
Total	24	67.419000	3.1278488	.6384695	66.098225	68.739775	62.4080	73.0410

Test of Homogeneity of Variances

Water content

Levene Statistic	df1	df2	Sig.
1.318	3	20	.296

ANOVA

Water content

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	191.709	3	63.903	38.369	.000
Within Groups	33.310	20	1.666		
Total	225.019	23			

Water content

Duncan[a]

sample	N	Subset for alpha = 0.05		
		1	2	3
0	6	64.335333		
1	6	65.828667		
2	6		67.635833	
3	6			71.876167
Sig.		.059	1.000	1.000

Means for groups in homogeneous subsets are displayed.

Appendix 20. Example of how to write chapter and sub-chapter titles

CHAPTER III

RESEARCH METHOD

A. Place and time of research

This research was conducted in

.....
.....

B. Research Tools and Materials

This research used 2 kinds of tool

.....
.....

C. Research Stages

1. Making Sweet Potato Flour

   This is done by

   .....
   .....

2. Making Koro Pedang Flour

   This is done by

   .....
   .....