



THESIS REMINDER FOR CH 189 STUDENTS

Rev. 3-26-02

The thesis write up should include the following sections:

BEGINNING PAGES

- **Title Page** Signed by Department chair and Mentor (see attached example)
- **ABSTRACT** (see attached example, this section is single-spaced)
- **Acknowledgments**
- **Table of Contents**
- **List of Figures**

BODY

1. Introduction

- 1.1 Background and motivation for research problem and Significance of the study
- 1.2 Objectives (clear, specific objectives)

2. Review of Related Literature

- 2.1 Should include related literature and relevant data or findings of others

3. Materials and Methods

- 3.1 Detailed procedures. You should include the reagents used and sources and quality of the reagents, the type, brand, and model of equipment used, and modes or parameters or conditions used in taking your data.

4. Results and Discussion (draft a preliminary results: in outline form --- discuss observations and data you gathered with your mentor)

5. Conclusions (write this when all is completed, take note that your conclusion should conform with your objectives in your Introduction)

6. Literature Cited (you should have a significant number -- more than 10 related literature at least)

7. Appendix (important raw data that you may want to include, note that you want to make a clear, succinct discussion of results; thus, this should prompt you to summarize data in a few figures in your Results and Discussion)



REMINDERS:

- Please have a proposed draft of work plan (includes sections 1-3) before the start of the thesis term. Naturally this should be after consultation with your mentor. Your draft should include the following: weekly outline of activities and design of experiments from beginning till the end of the project.
- Note that you only have two terms to finish the experiments. Preferably, the proposal should make up about the half of the thesis report, and thus, the December and January months can be spent in drafting your Results and Discussion, with finalization in early February to complete the write up. Remember that your thesis is a *culminating* activity of your B.S. Chemistry degree!
- It is advisable that every week, you should pool all your experimental data and meet with your mentor to discuss your findings. At the beginning of January, you should have already pooled all your results and discussed them with your mentor and write a draft discussion and conclusions. You should have these checked by your mentor by first week of February next year. By second week of February, you should have submitted your bound thesis. **THE DEADLINE FOR SUBMISSION OF YOUR THESIS WRITE UP IS AT END OF FINAL EXAM DAY FOR SENIORS!**
- **FOUR BOUND COPIES (ROYAL BLUE)** are needed: for you, one for the department, Rizal Library, and another for your mentor. Do not submit thesis in clip-in folder. The title and your name should be on the front cover and the edge (please see attached).
- **PLUS an ELECTRONIC COPY of all original text and figures, PDF version of the entire thesis, appendix data, and other electronic data generated for the work.** You also required to submit your original laboratory notebook to your mentor. The department has facilities for the electronic conversion of your data, manuscript, etc.
- The page format for the body of the thesis should be as follows: Margins: 1.25 TOP, 1.5 LEFT, 1 RIGHT, 1 BOTTOM. Page numbers: Centered Bottom. Times New Roman, size 11 font, double spaced. Paragraphs justified.

SOME TIPS:

- Budget your time. The draft proposal above is just that—a draft—don't waste too much time formatting it unless you are already sure that it will also be the final output.
- Figures are best printed on separate pages from text; this makes life easier—no need to format them in the body with text—and the manuscript can be ready for submission to any journal, this way. Make clear Figure captions—they should give enough information (e. g., experimental conditions for the data presented) for quick interpretation by your readers. All figures and tables should be properly cited in the text.
- Give credit where it is due—do not plagiarize. Follow the citation procedure in the attached example.
- Keep a consistent style of writing—scientific journal style.
- There should be a Table of Contents.
- Get things in order to get lots of experimental results, which should set you up for good writing.
- Please see additional materials (attached) for more info on writing a scientific paper.
- Relevant raw data but not essential in the discussion of results may be placed as Appendix.



**CONDUCTING CARBON BLACK/POLYMER COMPOSITES AS A GAS SENSING MATERIAL FOR
THE ELECTRONIC NOSE**

Richard Saicher Abendan

Thesis report submitted to the Faculty of the Department of Chemistry, Ateneo de Manila University, School of Science and Engineering in partial fulfillment of the requirements for CH 189 and the Bachelor of Science of Chemistry degree.

March 6, 1998

Accepted:

Erwin P. Enriquez, Ph.D.
Thesis Mentor

Date

Nestor S. Valera, Ph.D.
Chair

Date



Jumadla, Anne Mariae Celeste Vios. CHARACTERIZATION OF *IOTA*-CARRAGEENAN IN SALT SOLUTIONS. Thesis report, Ateneo de Manila University. March, 1998. Mentor: Dr. Erwin P. Enriquez

ABSTRACT

In this study, *i*-carrageenans of different average molecular weight (MW) in electrolyte solutions were characterized by capillary viscosity and gel permeation chromatography (GPC). The MW of this biopolymer coupled with its polyelectrolyte properties affect its physical properties, and in turn its behavior in complex mixtures such as those where it finds its major uses: food additives and stabilizers, dairy products, toothpaste formulations, chocolate chip cookies, and others.

Viscosity data for one MW of *i*-carrageenan in different electrolyte solutions (0.01M - 0.05 M NaCl at 28 °C) were measured. The data show decreasing intrinsic viscosity with increasing ionic strength of solution within the salt concentration range investigated. This behavior was explained by screening of the anionic charges on the carrageenan chains with increasing ionic strength thereby reducing the effective hydrodynamic radii of the polymer chains.

The GPC results corroborate the viscosity results. The molecular size parameter (intrinsic viscosity times the MW) was shown to decrease with salt concentration which agrees with the increasing retention time values: where a larger chain radius in solution would have the shortest retention time.