

**THESIS TITLE - MUN thesis template using a
single bibliography**

by

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A thesis submitted to the School of Graduate Studies in partial fulfillment of the
requirements for the degree of

Master of Science

Department of Chemistry

Memorial University of Newfoundland

Month Year

St. John's

Newfoundland

Abstract

This is the abstract. ProQuest/UMI require limits of 350 words for doctoral dissertations and 150 words for master's theses. These limits aren't imposed by MUN, but it does mean that other abstracting services may truncate your abstract. In any case, keep the abstract to one page.

Acknowledgements

At a minimum you must acknowledge the funding sources for your work.

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List of Abbreviations and Symbols

If you don't have a list of abbreviations, then you don't need to include this file and you can comment out the corresponding lines in your main .tex file. For example, if this file just defined a couple of terms such as AFM, then you wouldn't necessarily need this.

If you do have abbreviations to define, then you will probably set them up in a table like this:

E energy

\vec{E} electric field

EFMS Erika

Chapter 1

Introduction (can be a more descriptive title)

1.1 A section

Your first step in using this template should be to rename the folder and main .tex file to something involving your name. That will help me to keep track of the various theses I'm reading!

1.1.1 A subsection about getting organized

Then start creating an outline for your thesis. If you already have chapters written as papers, perhaps you should be using the “MUN_Thesis_multiple_bibliographies” template.

To create the outline, create the chapters and write in all of the sections, subsections, etc. Then send that file to me so that I can look it over. This is particularly important for the introduction or background chapter. If we agree on the scope of your thesis up front, you will save yourself time later.

1.1.2 Scope

The main purpose of the first section is to provide the context for your work. What have other people done in this area, with these techniques? What background information does a somewhat general reader (*e.g.* chemist just starting a graduate program) need to know in order to appreciate and understand your work?

1.2 Another section

As you write your thesis, be sure to use labels and references for your tables, figures, equations, chapters, etc. This is another important aspect of getting organized, a topic which was discussed in Section 1.1.1. Be sure to pick unique labels. For example, “raman” or "afm" are probably not good labels, since you will probably have multiple figures, tables, equations, and sections which could carry those labels. Your whole thesis, including material in, for example, Appendix A, will have one common list of labels.

Note the pretty quotes around raman and the not-so-pretty quotes around afm. See the .tex file to know how to do this.

1.2.1 Some technical details

Pretty much all equations should be set off and numbered rather than included inline. The Tabor coefficient, μ , can be used to determine whether material deformation should be taken into account. [1]

$$\mu = \left[\frac{R(\Delta\gamma)^2}{E^*2\sigma^3} \right]^{1/3} \quad (1.1)$$

where R is the indenter tip radius, $\Delta\gamma$ is the work of adhesion, σ is the separation, and E^* is defined as

$$\frac{1}{E^*} = \frac{1 - \nu_{\text{tip}}^2}{E_{\text{tip}}} + \frac{1 - \nu_{\text{sample}}^2}{E_{\text{sample}}} \quad (1.2)$$

ν_{tip} is....

Note that the equations are part of a paragraph. Check how this is done in the .tex file, by not leaving blank lines before or after the equation. Also, note that the font used in the text for the symbols is the same as that used in the equation, and that text in the equation doesn't need to be in math mode.

Chapter 2

Methods

2.1 Substrate preparation

This is a good chapter to write continuously throughout your degree program. It will be easier to write up a procedure while it's fresh in your mind, and that way you won't be hunting down an instrument model or consumables supplier later.

If you are varying several parameters in your procedure, you may want to tabulate your different combinations. Table 2.1 summarizes ice cream texture characteristics used by McGhee et al [2].

Table 2.1: Note how this caption is at the top of the table. Also, note that the caption in the List of Tables doesn't include the reference number. [2].

Characteristic	Mean value
Icy	4.63
Crumbly	4.75
Fluffy	4.58
Gummy	4.71
Sandy	4.58
Soggy	4.29
Weak body	3.92

2.1.1 Lots of chemicals

I used K_2HPO_4 , $\text{KH}_2\text{PO}_4 \cdot 2\text{H}_2\text{O}$, and other salts containing PO_4^{3-} ions. Best of all, I didn't write out those chemical formula by hand using subscripts and superscripts. See the .tex file to find out how!

2.2 Atomic Force Microscopy

A picture is worth a thousand words! If you are creating your own schematics, consider using a program which will save images in a precise and generally readable format such as SVG. Inkscape will do that for you and is open source.

There are many public domain and other freely reproducible images available on the Wikimedia Commons. You can also easily get permission to reuse a figure from most journals through RightsLink.

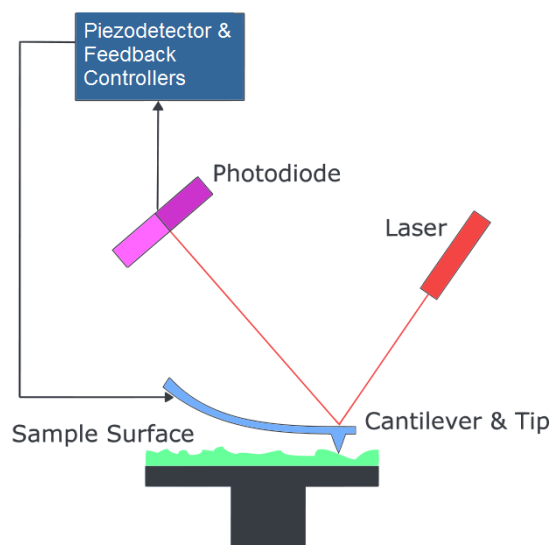


Figure 2.1: Schematic of an atomic force microscope. Note that the size of the text in the figure is comparable to the size of the main text. Reproduced under Public Domain from Wikimedia Commons

Chapter 3

Another chapter

3.1 Some results

Appendix A

Extra spectra

A.1 What should go in an appendix?

- raw data, extra images, extra spectra
- manuals or procedures you've written
- code
- detailed explanations of theory that don't fit in your methods chapter
- etc.

Bibliography

- [1] D. Maugis. Adhesion of spheres: The JKR-DMT transition using a ductile model. *Journal of Colloid and Interface Science*, 150(1):243 – 269, doi:[http://dx.doi.org/10.1016/0021-9797\(92\)90285-T](http://dx.doi.org/10.1016/0021-9797(92)90285-T).

- [2] C. E. McGhee, J. O. Jones, and Y. W. Park. Evaluation of textural and sensory characteristics of three types of low-fat goat milk ice cream. *Small Ruminant Research*, 123(2–3):293 – 300, doi:<http://dx.doi.org/10.1016/j.smallrumres.2014.12.002>.