

FOOD CHEMISTRY LABORATORY

FST 4534

FALL 2009

INSTRUCTOR:

Bill Eigel
Office: FST Room 115
Phone: 231-6877
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OFFICE HOURS:

Available anytime, you should feel free to call or email prior to visiting to make sure that I am in my office and available.

TEXTBOOK:

Successful Lab Reports by Christopher S. Lobban & Maria Schefter. Cambridge University Press, 1992.
Hardbound Laboratory Notebook (with tear-out carbon pages) or laptop
Software for Word Processing and Spreadsheet
(for example: Microsoft Word and Excel)
Three Ring Binder

HOMEPAGE:

Scholar Entry Page
<https://scholar.vt.edu/portal>
Announcements, Grades, Laboratory Guidelines, Laboratory Reports,
Laboratory Notebooks, Laboratory Schedule, Laboratory Instructions (SOP's),
Reading Assignment List, Grading Sheets, Class Phone & Email List,
Supplemental Readings, Calendar, Undergraduate Honor System Link, Element
K Link and Drop Box)

HONOR CODE:

I do support and abide by the Virginia Tech Honor Code that is described in the Undergraduate Catalogue (<http://www.honorsystem.vt.edu/>). I expect all students to work independently and abide by all policies of the Virginia Tech Honor Code.

In this laboratory you will work with a group of fellow students to complete Each week's assignment. In many cases, you may also share data among groups of individual students. However, each assigned laboratory report is graded and each student is expected to work independently in performing calculations, making observations and in preparing the final written report. Finally, protect yourself and do not allow fellow students to borrow discs containing your lab reports.

LABORATORY GUIDELINES:

1. By the end of each lab period, a handout describing the experiment that will be conducted during the next week's lab session will be posted on Scholar. Prior to the next week's lab, download, read and study the lab directions so that you understand how to complete the experiment in a timely manner. Be sure to bring a hard copy of the lab handout with you the next week (earns credit on your lab notebook grade). I would strongly encourage you to keep your lab handouts in a Three Ring Binder and bring to lab with you.
2. Proper preparation for each lab means that you have read and understood the lab handout prior to coming to class. Prior preparation will allow you to spend considerably less time in the lab actually performing the experiment. Your choice!!!!!!!!!!!!!!
3. Prior to beginning work on an experiment, gather together all equipment and materials you will need to carry the lab exercise through to completion. The lack of equipment or reagents at a critical time may lead to poor results or failure of the experiment. Practice good lab management skills.
4. All students are encouraged to wear lab coats or smocks to protect clothing as well as protective eyeglasses. Arrangements can be made to store your eyeglasses in the laboratory, if you wish. Please contact your lab instructor. Appropriate shoes (low heels and closed toes) must be worn in the lab. No smoking, eating or drinking is allowed in the lab at any time.
5. At the conclusion of your experiment, please rinse all dirty glassware and place in the appropriate place; make sure your lab bench is left clean and in order.

GRADES:

Laboratory Reports	1400
Laboratory Notebook	500
Online Presentation (To Be Determined)	200
Lab Practical (Tuesday, December 1) (Correlation Coefficient X 200)	200
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TOTAL POINTS	2300

LABORATORY REPORTS:

1. All assigned lab reports will be submitted electronically using the Hot Button provided at bottom of Assignment Description on Scholar. All deadlines will be midnight (11:59 PM) on Monday. **Lab reports not submitted promptly at midnight will be considered late.** Ten percent (10%) of the total possible grade will be deducted for each class day (24 hrs) that the report is late to a maximum of 30%.
2. The entire report (including all text and tables) must be prepared using word-processing software (for example, Microsoft Word). All graphs must be generated using computer spreadsheet programs (for example, Microsoft Excel) and incorporated into the word-processing file. Please incorporate the entire report into a single file; do not send portions of the report in separate files. Reports, which do not look professional, will be returned; a late penalty will be imposed until a satisfactory lab report is submitted. Element K (<http://www.elementk.vt.edu/>) provides self-paced software training to all Virginia Tech students. Please access Element K if you need assistance with word-processing or spreadsheet software.

LABORATORY NOTEBOOKS:

1. The purpose of a laboratory notebook is to accurately and legibly record experimental data and observations. Laboratory results are only as valuable as their written record. You should start now to develop good techniques in recording in your lab notebook. All data obtained during lab must be recorded in a hardbound notebook or in a file on a laptop computer. Copying from pieces of paper must be avoided because of possible copying errors, wasted time, and the danger of losing papers containing data. A carbon copy or electronic file of all your experimental data must be submitted at the conclusion of each lab period.

2. The grade for your lab notebook will be based upon the following criteria:

Prior to coming to class, be sure to pass the online quiz concerning the lab instructions.

You arrived prepared for the lab session and brought a hard copy of the lab instructions that you downloaded from the course Homepage.

All entries must be made in your notebook using an ink pen; no pencil entries allowed. The first page should contain your name, the names of your lab partners, a title for the experiment and the date on which it was performed.

Tables for recording your data should be prepared in advance of the laboratory session. Allow space for descriptive terms and remarks. Reference all tables and observations to the specific step in the experimental procedures described in your lab handout.

Any step in the procedure that involves weighing or measuring reagents, products or samples should be referenced to the step in the experimental procedures described in your lab handout. Be sure to indicate amounts or volumes of samples or reagents used in conducting your experiment. Be sure to also record any deviations from the experimental protocol described in your handout.

Be sure to record any changes in sensory characteristics of a product that occur while conducting your lab experiment. Again, be sure to reference all observations to steps in the laboratory procedures.

LABORATORY SCHEDULE:

<u>DATE</u>	<u>EXPERIMENT</u>
August 25	Laboratory Orientation
September 1	Major Food Components in Milk
September 8	Protein Characterization / Properties
September 15	Protein Functionality
September 22	Flour Protein/Dough Formation
September 29	Non-Enzymatic Browning
October 6	Carbohydrate Crystallization
October 13	No Meeting
October 20	Starch/Gelatinization & Gelation
October 27	Pectin
November 3	Lipid Absorption
November 10	Lipid Shortening Ability
November 17	Enzyme Characterization
December 1	Lab Practical
December 8	No Meeting