

**FDSC 3373
Food Chemistry Lab
Fall 2007**

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Grading
700 points Lab Reports
200 points Special Project: How does it Work?
100 points Final: Application Tables

GENERAL INFORMATION

ATTENDANCE

- Lab starts at 10:30 and it is expected that all students are present at that time
- Attending lab is MANDATORY!!!
- You will receive a grade of zero for an unexcused absence. If you know that you will be gone for an excused reason, you must let us know ***prior*** to the absence.

LAB NOTEBOOK AND IT'S PREPARATION

- For laboratory you must purchase a permanently bound laboratory notebook with perforated duplicate pages that can be easily removed and turned in.
- You must get instructor approval to purchase a different type of notebook.
- Read instructions on Writing in the Laboratory Notebook D2L link.

- Organize your notebook according to instructions provided by Writing in the Laboratory Notebook in the section titled: *Organizing your notebook*.
 - Purpose of the Lab Notebook, Owner Details.
 - Table of contents.
 - Table of Abbreviations.
 - All the pages should be numbered.

LAB REPORTS (700 pts total)

- Lab experiments are done in groups, but we expect everyone in the group to share the work evenly. Each person in the group must turn in his/her own lab report. (i.e. All lab reports should be in your own words not your group members!!!)
- Lab reports that are identical will receive a grade of **Zero** on the specific report for the first offense and a grade of **Zero** for the entire lab portion of the course for any offense thereafter.
- You will be expected to turn in the **Discussion and Conclusion Section** from the previous lab and **Objective and Experimental Plan Section** for the current lab at the beginning of class. These have to be turned in when requested in lab. Reports turned in late will be deducted 50% of its worth and will not be accepted after lab.
- **Observations and Data Section** will be turned in at the end of class.

LAB REPORT REQUIREMENTS

- Each Lab report must contain:
 - **Date and Name** – on each sheet
 - **Title**
 - **Objective** - Objective of the lab should clearly state the purpose of the lab.
 - **Experimental Plan** – A detailed step by step procedure of each lab should be submitted. This procedure must specify what you intend to do in the experiment. (It should be in your own words and not verbatim to the workbook).
 - **Data and observation** – The data and observations must be noted only in the lab notebook. They should not be collected on other pieces of paper

and compiled in the lab note book. Also, any other thoughts pertaining to the experiment must be noted in the lab notebook.

- **Discussion and Conclusion** – This is a section where you can analyze the results obtained and compile it in a systematic format. It is verbal explanation and may include tables and flowcharts. The discussion should detail the scientific reasoning of the results obtained. It should explain any discrepancies if any during the conduction of the experiment. You cannot attribute your findings to human error alone. There should be a scientific explanation for the same.
 - Assignments
 - References used
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- *The objective and the experimental plan must be submitted when requested in lab. Those turned in late will be docked 50% of its worth and will not be accepted after lab.*
 - *The data and observation collected must be turned in at the end of the lab. Late submissions are not accepted.*
 - *The discussion and conclusion section of a lab report must be submitted at the start of the following lab.*
 - *Therefore, for each lab you will turn in discussion and conclusion of the previous lab, objective and experimental plan of the current lab.*

GRADING POLICY FOR LAB REPORTS (50 pts each)

Excluding Water Activity (150 pts), the grading policy for the rest of the labs is:

Objective – 5 points

Experimental plan – 15 points

Data and observation – 15 points

Discussion and Conclusion – 15 points.

SPECIAL PROJECT (200 pts total)

- For details regarding the Special Project see “Information” posted under Special Topics in the Content Section on D2L.
- The project will be assigned.
- Each of you will have to explain a process for making a food product and describe the functionality of the ingredients and chemistry behind the various ingredients.
- You will present the results about your investigation of the process using a poster.

FINAL EXAM: APPLICATION TABLES (100 pts total/10 pts each)

- In lieu of a Final Exam for the Laboratory portion of Food Chemistry, you will be submitting Application Tables for those chapters in your workbook that we do not cover in the Lab. Application Tables will be collected three times during the year (see below). You must submit them using the Dropbox in D2L. Dropboxes have already been created and technically you can submit them at any time. The due dates for the Application Tables are hard (see italics below).
- At the end of each workbook chapter, there is an Application Table. You will need to create the Application Table in Word. You will then fill-out the Table linking the Chemistry principles learned (usually at least 6) with their specific role in the production procedure. Each Application Table in the book provides an example of one principle for the process. This example should be excluded. Information regarding Food Chemical principles can be obtained from the Food Chemistry textbook. Be sure to cite the chapter and page number from your Food Chemistry textbook where you found this information.
- Application tables are due on the given dates by **10:30 am** for the chapters listed below.
 1. Oct 2: Ch 2, 5 and 8.
 2. Oct 30: Ch 11, 14, 16 and 17.
 3. Nov 20: Ch 18, 19 and 20.
- *If an application table is not submitted on time you will obtain a grade of ‘0’.*

ADDITIONAL INFORMATION

MAKE-UP LABS

- For excused absences, you will have a separate assignment that will be conducted outside of laboratory.
- Make-ups will cover a topic concerning the missed lab. A 5 page typed, double spaced written report is to be submitted. You will select 5 refereed journal papers concerning the topic and summarize them. The references must be in the JFS style.

INSTRUCTIONS REGARDING ANY SEPARATE WRITTEN REPORTS

- Must be typed
- Must be 12 point font
- Must be Times New Roman
- Must be Referenced in the style of Journal of Food Science (JFS)
 - This information is posted on D2L
- Must be double spaced
- Must be 1 inch margins
- No EXCEPTIONS!

BONUS (10 pts)

- The information for obtaining bonus points is available under Lab 1. Introduction in the Contents section of D2L.

LABORATORY SCHEDULE

Date	Lab Period	Topic	Pts
Aug 21	1	Intro	
Aug 28	2	Notebook and Objective/Plan for Aw Lab due Assign Special Project	50
Sep 4	3	Water Activity	150
Sep 11	4	Ch 3 Corn Flakes	50
Sept 18	5	Ch 1 Muffins	50
Sept 25	6	Ch 6 Tomato	50
Oct 2	7	Ch 4 Fruit Puree <i>Turn in Application Tables Ch 2, 5 and 8.</i>	50 30
Oct 9	8	Fall Break	
Oct 16	9	Ch 7 Cheese	50
Oct 23	10	Ch 10 Extrusion	50
Oct 30	11	Ch 15 Jams & Jellies <i>Turn in Application Tables Ch 11, 14, 16 and 17.</i>	50 40
Nov 6	12	Ch 13 Mayonnaise, Ketchup, Mustard	50
Nov 13	13	Ch 12 Potato chips	50
Nov 20	14	Ch 9 Pasta and Rice <i>Turn in Application tables Ch 18, 19 and 20.</i>	50 30
Nov 27	15	Open	
Dec 4	16	Special Project Poster Due.	200