

Biochemistry Laboratory
Chemistry 472
Fall 2005

The purpose of the biochemistry laboratory is to give you experience doing experiments commonly done in a research laboratory in the field of biochemistry. In addition, this laboratory is designed to be one project done over the course of the semester which is more similar to how research is done in a laboratory. You will gain experience purifying and partially characterizing a protein from a biological source. You will also gain experience designing and planning one experiment in the project to be conducted at the end of the semester. Because laboratory experiments may not always fit into a nice three-hour time block, there may be occasions where you will need to stay longer than three hours or come back later at night. We will need to work this out in a way that is amenable to all involved.

You will be required to write two lab reports this semester. The information for the report is in your laboratory manual. You will also be required to keep a laboratory notebook. The information for this is also in the laboratory manual. The following is a tentative schedule for the semester.

<u>Date</u>	<u>Experiment</u>
9/12, 9/15	Check-In
9/19, 9/22	Making Solutions
9/26, 9/29	Extraction of Carbonic Anhydrase/ Pour affinity column
10/3, 10/6	Purification of Carbonic Anhydrase
10/10, 10/13	Analysis of column fractions for carbonic anhydrase
10/17, 10/20	Specific Activity
10/24*, 10/27	Polyacrylamide Gel Electrophoresis
10/31, 11/3	Analysis of polyacrylamide gel Report 1 due
11/7, 11/10	Kinetics of carbonic anhydrase
11/14, 11/17	Kinetics of carbonic anhydrase
11/21, 11/24	Thanksgiving - No lab

11/28, 12/1	Special Project
12/5, 12/8	Special Project/Check-Out
12/16	Final report due at 4:00 PM

Grading

Report 1	15%
Report 2	45%
Lab Notebook	20%
Effort in Lab	20%

* Making and pouring a gel will require us to commit extra time beyond the laboratory period. We will need to discuss how to accomplish this.