

CHEMISTRY 342 - FALL 2009

LABORATORY SCHEDULE

<u>Week</u>	<u>Date</u>	<u>Experiment</u>	<u>Page</u>
1	9/1	Introduction	
2	9/8	Buffer Preparation	9
3	9/15	Assay of Lactate Dehydrogenase	11
4	9/22	Purification of Lactate Dehydrogenase: A) Preparation of Extract and Ammonium Sulfate Precipitation (LONG LAB PERIOD)	17
5	9/29	B) Affinity Chromatography	TBA
6	10/6	Determination of Protein Concentration	TBA
7	10/13	Purification Wrap-Up (protein assays)	TBA
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	10/20	MID-SEMESTER BREAK	
8	10/27	DATA ANALYSIS (attendance optional, to compensate for long lab period on 9/29; but note assignments due!)	
9	11/3	SDS-PAGE Analysis of LDH Purification and plan further enzyme characterization	TBA
10	11/10	Characterization of LDH kinetics	
11,12, 13	11/17, 11/24 12/1	Further Characterization of LDH (independent projects)	TBA
14	12/8	Presentations	

SCHEDULE OF ASSIGNMENTS

<u>Date Due</u>	<u>Assignment</u>
9/8	<u>Review Homework</u> (extra credit; posted on Blackboard 9/1) <u>Workshop</u> : Buffer Preparation (done in class) (10 pts.)
9/29	<u>Paper Draft</u> : Purification of Lactate Dehydrogenase (Introduction section; see guidelines for citing scientific literature) (20 pts.)
10/16(Fri)	<u>Lab Report</u> (data & brief discussion): Methods of Protein Determination (see p.33)(25 pts.)
10/27	<u>Paper Draft</u> : Purification of Lactate Dehydrogenase (Materials & Methods section) (20 pts.) (see guidelines) <u>Homework</u> (due at <i>end</i> of lab period): SDS-PAGE Prelab Calculations (see p.40) (5 pts.) (Note: this homework assignment – <i>not</i> the paper draft – may be prepared and submitted jointly by you and your lab partner[s])
11/3	<u>Homework</u> : Purification Table (see p.35) (10 pts.) (Note: this homework assignment may be prepared and submitted jointly by you and your lab partner[s])
11/17	<u>Paper Draft</u> : Purification of Lactate Dehydrogenase (Results section, with data tables & figures) (20 pts.) (excluding enzyme characterization; this will be included in final paper) (see guidelines)
12/8	<u>Presentation</u> : Independent Project (20 pts.) (oral group presentation plus group write-up stating goal, experimental design, data, and brief discussion)
12/10	<u>Final Paper</u> : Purification and Characterization of LDH (revisions of previously submitted drafts, plus Abstract and Discussion sections) (50 pts; see grading rubric)

In addition to these scheduled assignments, lab performance will be evaluated (20 pts. total). The lab performance grade will be based on attendance, punctuality, preparation, awareness of lab safety rules, lab skills, and proper lab notebook maintenance.

Although lab experiments will be performed by lab partners, all written assignments are expected to be individually prepared. You may work together on calculations, but be prepared to explain to me (in person, one on one) how you did them!

Reminder: All students are bound by the standards of the Academic Honor Code, found at <http://www.goucher.edu/x14191.xml>

UNLESS OTHERWISE NOTED, HOMEWORK IS DUE AT THE BEGINNING OF CLASS ON THE DUE DATE, AND WILL NOT BE ACCEPTED LATE. OTHER ASSIGNMENTS WILL BE DOWNGRADED 2% FOR EACH DAY LATE UNLESS AN EXTENSION IS GRANTED IN ADVANCE.