

## FERMENTATIONS

MBIO 4470

## LAB EXAM OUTLINE

**Date:** Monday November 29, 2010  
**Time:** 2:30 pm  
**Duration:** 1.5 h  
**Location:** 306 Buller

### Policy:

The lab exam is part of the final course examination. Department of Microbiology appeal procedures will be followed.

### FORMAT:

- Answer exam questions in pen - NO PENCIL.
- **Bring a non-programmable calculator.**
- Mostly short answer to medium length questions.
- Answers acceptable in point form.
- Sample lab exam at the back of the lab manual. Same basic format.

### INFORMATION RESPONSIBLE FOR:

All information in lab manual (principle, procedures, and appendix).

### Principle

- Must know the principle (this includes CHEMICAL EQUATIONS). Exception: for glycerol determination you do not need to know the chemical structure of chromotrophic reagents and products, just names.
- Must be able to relate principle to experimental steps performed in lab.

### Reagents

- Must know how to prepare solutions and media. I will give you the components and any information necessary for preparation (no need to memorize). If asked to outline in detail, include all procedure details. For MW and density, values given but must know units.
- Must know the function of all solutions - overlaps with principle and appendix.

### Procedures

- Must know procedure to allow you to correlate procedure steps to principle and determine concentration.

### Data analysis

- Must be able to perform all calculations for data obtained from experiments, this includes the fermentation project report.
- Standard Curve - must know how to calculate concentration of a sample using the linear regression formula. Not responsible for Excel software operation.
- Responsible for Lab 7 Calculation Quiz information and similar calculations required for your ethanol fermentation group project.
- Responsible for Solution Calculation Quiz information.

### Lab Report

- All information including fermentation balances.

### Appendix

- Responsible for information in appendix used in your lab.
- Not responsible for concentrated acids and bases - common commercial strengths

Any questions? My office is 414B Buller.