

MICROBIAL SYSTEMATICS MIBO 3470 LAB EXAM OUTLINE

MARKS WILL BE SUBTRACTED FROM YOUR LAB MARK IF YOU DO NOT CLEAN YOUR OLD CULTURES OUT OF THE LAB (cupboards, incubators, and cold box) - LAST DAY FOR CLEANUP IS MARCH 14, 2007.

Date: Wednesday, March 28, 2007
Time: 2:30 pm - one time for both sections.
Duration: 2 h
Location: 207 Buller

Policy:

The lab exam is part of the final course exam. In compliance with the Department of Microbiology regulations students may not view their final lab exam unless officially appealed.

QUESTION TYPE and FORMAT:

- Answer questions **in pen** - NO PENCIL.
- Answer all questions on exam paper supplied.
- Answer in point form or table form (must, if requested).
- Similar format and questions to example exam found at back of lab manual.

Unknown identification

- Required identification tables similar to your lab manual are supplied during the exam. You can write on identification tables but must be handed in with your exam.
- Either tests results are given or you need to determine test results from experiment results (media color, etc.). Use this data and tables provided to identify the **bacteria name**. Assume all test results are as expected. All that is required for the answer is the bacteria name. How you derive the name is up to you - data tables are not marked.

INFORMATION RESPONSIBLE FOR:

- You are responsible for all information in lab manual (introduction, procedures, and appendix) with some exceptions. You are responsible for information required to answer lab report questions.
- **Introduction** At start of each experiment there is a short introduction. You are responsible for this information.
- You should know the screening tests results for each group of bacteria we studied as they are the same for all bacteria in that group. As tables are supplied for identification you do not need to memorize test results for each bacterial species with the exception of Micrococcaceae.
- **Procedures** Must be able to outline all procedures, for example, API, antimicrobial susceptibility test, Staphytest Plus diagnostic test. If asked to outline a procedure, do not include details.
- Must understand why you did the test. Must be able to explain the function of all components used.
- **SELECTIVE DIFFERENTIAL MEDIA**
 - I would never ask you to list all media components with quantities added but must know important ingredients that make the media a selective differential media and how they function.
 - Must be able to interpret results of plates with respect to bacteria used in the lab.
 - May give you plate results and ask you what is the most likely bacteria genus (same selection as lab).
 - May give you bacteria and ask for plate results and principle involved.

- **API IDENTIFICATION**
 - Must know how to read tests, ingredients added to tests and chemical principle of all tests on API strip (many overlap with appendix identification tests).
 - Must know what the abbreviations mean.
 - Must know how to read test results on record sheet, how to use and interpretation of API analytical profile index. I may give you an API number result from the profile index and have you interpret the results obtained and what all information presented means or vice versa.
- **ANTIMICROBIAL SUSCEPTIBILITY TEST:** You do not need to know the names of the antibiotics, abbreviation of names, and concentrations.
- **Appendix**
 - Must know the theory of **pure culture methods**.
 - **pH indicator chart** is for you own information. May help you better understand the function of pH indicators used in your lab (indicators plates and some biochemical identification tests).
 - **Microscope** basic operation to use phase contrast and bright field microscope. Purpose of each.
 - **Identification Tests** Must know principle, important components, how to perform and how to read (interpretation) all identification tests performed in the lab.
 - **Reagents and media composition** You do not need to know the composition in detail but you must know the important components as related to principle.
- **Assignment Information**
 - Responsible for only information that overlaps with your MBIO 3470 lab.