

## Biology 205 Microbiology

### Staph, Strep & Enteric Unknown Lab Reports

This assignment will be worth a total of 75 points toward your total course grade. These lab reports will *loosely* follow a journal article format as seen in scientific journals. Be sure that you do the following:

- They should be written up as three separate reports. Please staple all of the reports together.
- Lab reports should be typed, written in complete sentences/ paragraph format (unless a table or chart is requested), and follow general guidelines for college-level writing.
- Be sure to include your unknown numbers in your lab report!

The body of each report should contain information as follows:

#### The Staphylococci: Isolation and Identification

1. Introduction:
  - One to two paragraphs describing the *Staphylococcus* genus as a whole, medical relevance, and the goals of this experiment.
2. Data/ Results:
  - Results from all inoculations and tests.
  - Include a copy of the results table on page 145, which records results of all tests for your unknown.
3. Discussion
  - a. In paragraph format, discuss results of identifying your unknown:
    - a. Were your isolates confirmed as *Staphylococcus aureus*? Which data support this result?
    - b. If your isolates were not confirmed to be *S. aureus*, which of the following did you determine it to be: *S. saprophyticus* or *S. epidermidis*? Use your experimental data to support each of your findings.
    - c. If you were unable to perform tests or identify organisms, explain where the problems occurred (improper streaking, inoculation, isolation, etc.)
  - b. In paragraph format, answer the following questions:
    1. Describe the selective and differential properties of MSA for the isolation and identification of staphylococci.
    2. What are considered definitive tests for *S. aureus*?
    3. What is a nosocomial infection and why are the staphylococci a leading cause of nosocomial infections?
    4. Why are staphylococcal infections becoming increasingly difficult to treat?

#### The Streptococci: Isolation and Identification

1. Introduction
  - One to two paragraphs describing the *Streptococcus* genus, medical relevance, and the goals of this experiment.
2. Data/ Results
  - Results from all inoculations and tests.
  - Include copy of Physiological Characteristics table on page 153, which records results of all tests for your unknown.
3. Discussion
  - a. In paragraph format, discuss results of identifying your unknown:
    - a. What group/ species of streptococcal bacteria did you isolate?
    - b. What data led you to this conclusion?

- c. If you were unable to perform tests or identify organisms, explain where the problems occurred (improper streaking, inoculation, isolation, etc.)
- b. In paragraph format, answers to discussion questions 2-6 on page 154 in your lab manual.

### **Gram-Negative Intestinal Pathogens- the Enterics**

#### **1. Introduction**

- One to two paragraphs describing enteric organisms as a whole, medical relevance, and the goals of this experiment.

#### **2. Data/ Results**

- Results from all inoculations and tests.
- Include copy of the Cultural and Biochemical Characteristics tables on page 162/163 of lab manual, which records results of all tests for your two enteric unknowns.

#### **3. Discussion**

- a. Discuss results of identifying your 2 unknowns (Enteric A and B)
  - a. What genus did you identify your unknowns to be?
  - b. What data support these conclusions?
  - c. If you were unable to perform tests or identify organisms, explain where the problems occurred (improper streaking, inoculation, isolation, etc.)
- b. Answers to discussion questions 1-5 on page 163-164 of lab manual.