STUDENT LABORATORY REGULATIONS

Due to the fact that many of the microorganisms that you will be working with in this laboratory may be pathogenic, a number of rules and regulations must be followed to prevent the contamination and spread of these disease-producing agents. These regulations are outlined below. Please read them carefully and take heed of them throughout the semester for your own safety and the safety of your classmates.

General Safety Regulations

• Wear clean, long white lab coats while working in the lab. Nobody is allowed in the lab without wearing a lab coat.

• Wear long pants and closed-toed shoes.

• Long hair should be tied back.

• No food or drinks (including water) is permitted in the lab. Keep pens, pencils, fingers and other objects out of your mouth. For pipetting, use the pipet aids provided.

• Manipulating contact lenses or application of cosmetics is not allowed.

• Familiarize yourself with the location of fire extinguishers, safety showers and eye-wash stations and make sure you know how they work. Fire is the biggest hazard in this lab. Know what to do if you or your partner catches on fire.

• To prevent fires, keep Bunsen burners toward the center of the table. Sometimes it is hard to see the flame of the burner and care should be taken to prevent your hair from catching on fire.

• Heat the straight wire or wire loop used for inoculation to redness over a Bunsen burner flame just before and after being used. If there is any material on the wire or loop, hold it close to the flame to dry it and to prevent spattering, then flame it to redness. Never lay culture tubes or inoculating wires or loops flat on the table.

• Report any personal injury or hazardous spills to your instructor or lab coordinator immediately. If a culture is spilled, cover it with disinfectant immediately. Wear disposable gloves and wipe up with paper towel. Dispose the contaminated paper towels in biohazard cans and repeat the procedure several times till the spill is completely cleaned up.

• Before leaving the lab, wash your hands well with soap and warm water and wipe dry with towel paper.
Before Coming To the Lab

- Read the experiments before you come into the laboratory. As you read the exercise, prepare a general outline or flow diagram of the exercise. Your instructor will go through the preparation of the flow chart for your first lab exercise with you at the first lab session and would be happy to work with you on others. The outline or flow chart will simplify your work especially at times when you are conducting several experiments simultaneously and want to know at which step you are for each experiment. Date each outline step as you complete it and record identification coding you have used to label the corresponding cultures, so that you will later be able to match these cultures to the proper work. It has been our experience that without the flow chart, the student usually has not been able to finish the work in the allotted time.

When You Get To the Lab

- Be on time for the lab or you might miss some important pointers from your instructor, causing the failure of proper results from your experiments.

- Turn off your cell phone, pager etc.

- As soon as you enter the lab and just before leaving, wipe off your assigned work area with a paper towel moistened with disinfectant. This reduces dust and the chances for contamination.

- Do not start your experiment until your instructor gives the class permission to do so. For many exercises, the instructor will have to demonstrate a technique, advise the class about the equipment or cultures, or emphasize specific points about the experiment. If you start the experiment without considering the points raised by your instructor, you might fail to obtain proper results.

During the Lab Period

- Keep the general lab safety regulations in mind.

- Browsing the Internet, checking emails, contacting social media or any other computer-related work is not allowed during the lab period.

- For each exercise, the material and supplies will be placed on the center bench. Most or all of this material will be sterile. Once you remove an item from the center bench, you should never return the unused portion or even the unopened item to its place. This minimizes other students accidentally using contaminated supplies. Make sure that you take just the amount of material that you need so that your classmates will not run short.

- Understand the reasons behind each step in the procedures. Although your instructor would welcome your questions, you would learn more if you first consult the lab sheets, lecture notes, textbook or journal papers. If after such consultation, the point is not still clear to you, then ask your instructor for an explanation.
• Record your observations, results and judgments on the result sheets provided at the end of each section. Try to give logical explanations for any unusual results that you may have obtained.

At the End of Each Lab

• Make sure that all cultures are properly labeled. Label should include name, date, section, organism ID (if known), temperature of incubation and abbreviated name of the medium used.

• Do not write on test tube, bottle or flask caps.

• Place your test plates and tubes in the designated racks in the center bench. Your instructor will incubate them for you.

• If you ever need to access materials kept in any refrigerator or incubator, you must first obtain permission from your instructor. Make sure the refrigerator and incubator doors are shut tight after you are done with them.

• Discard used microbiological materials as follows:
  • Used test tubes: Separate the usual tubes according to size inside racks that fit the tubes properly. Keep the lids on the tubes. Place the racks on the center table in the space designated for discards. These tubes will be autoclaved later, the caps removed for re-use and the glass recycled.
  • Petri dishes: Place used petri dishes in the blue biohazard bins so that they can be autoclaved after the lab session. Do not place anything in the biohazard bins except contaminated towel paper and used petri dishes.
  • Disposable pipettes: Immediately after use, discard used pipettes by carefully lowering them (tips down) into the discard bucket placed at your table and labeled "Pipets Only". The pipette discard buckets should never receive any non-disposable glass, metal items, caps or trash.
  • Used flasks and bottles: Remove tape and writing from bottles and place them on the center table in the space designated for discards. Bottles will be autoclaved later, cleaned and re-used.
  • Used microscope slides: Drop discarded microscope slides in the container at your table labeled "Used Slides". These slides will be autoclaved and recycled.
  • Used swabs: Discard into pipette buckets or the biohazard bins.
  • Uncontaminated material: Discard in the regular trashcans and never in the biohazard bins.
• Store your microscope properly; your instructor will check from time to time to see if you know how to take care of this and other costly laboratory equipment.

• Never pour liquefied agarose into sink drains, as cooling in the pipes will cause it to gel and plug the drain.

• At the close of lab period, put away all general equipment, turn off the gas, water, vortexer, etc., and clean up the sink and any glassware that you or your partners have used. Decontaminate your area with disinfectant and wash your hands immediately before you leave the lab.

The Lab Grade

Your lab grade constitutes 40% of your course grade and consists of 5 parts as follows: Tests (2), 40%; Daily lab reports, 25%; Results obtained, attitude, flow charts, 10%; Unknown I.D. report, 15%; and lab notebook, 10%.

A Few Other Points

• Each student should purchase a lab notebook and bring it with them to the lab every time. Be organized, concise and take as much notes as you can. The notes you take at the lab time can be used to prepare the "Daily Log" or the "Materials and Methods" part of your reports. Lab notebooks are collected at the end of the term and graded.

• Late daily lab reports will only be accepted up to one week after the time and date it is due. There will be a 25% automatic deduction for late assignments.

• Requests for re-grading will be considered only during the week following the return date.

• Students who cheat or plagiarize will receive no credit for the assignment or exam involved and will be reported to the Judicial Inquiry Officer for further disciplinary action. Unless otherwise noted, assignments are to be done individually. Most lab reports are like essays: no two are exactly alike. If you are having difficulty with an assignment, seek out the help of your instructor.