

## MICROBIOLOGY FOR ALLIED HEALTH STUDENTS LABORATORY SAFETY CONTRACT

Microbiology is a hands-on laboratory class. You will be doing many laboratory activities which require the use of potentially hazardous bacteria and chemicals. Safety in the microbiology laboratory is #1 priority of the instructor and the student. To ensure a safe microbiology laboratory, a list of rules has been developed and provided to you in this student safety contract. These rules must be followed at all times.

### General Guidelines

1. Conduct yourself in a responsible manner at all times in the laboratory.
2. Never work alone. No student may work in the laboratory without an instructor present.
3. Open cuts and wounds **MUST** be bandaged before you enter the lab.
4. **NEVER** bring food or beverages into the laboratory. (YOU WILL BE ASKED TO LEAVE FOR THAT LAB). Do not eat food, drink beverages, or chew gum or tobacco in the laboratory. Do not use laboratory glassware as containers for food or beverages. **Please be aware that the laboratory areas are under constant surveillance.**
5. Follow all written and verbal instructions carefully. If you do not understand a direction or part of a procedure, ask the instructor before proceeding.
6. Perform only those experiments authorized by the instructor. Never do anything in the laboratory that is not called for in the laboratory procedure or by your instructor. Carefully follow all instructions, both written and oral. Unauthorized experiments are prohibited.
7. Be prepared for your work in the laboratory. Read all procedures thoroughly before entering the laboratory.
8. Never fool around in the laboratory. Horseplay, practical jokes and pranks are dangerous and are prohibited.
9. Observe good housekeeping practices. Work areas should be kept clean and tidy at all times. Allow adequate workspace. Keep the aisles clear. Keep lab tables clear of clutter.
10. Know the location and operating procedures of all safety equipment including the first aid kit, fire extinguisher, fire blanket and eye wash station. Know where the fire alarms and exits are located.
11. Always work in a well-ventilated area. Use the fume hood when working with volatile substances or poisons.
12. Be alert and proceed with caution at all times in the laboratory. Notify the instructor immediately of any unsafe conditions you observe.
13. Dispose of all biological waste properly. Sinks are to be used only for water and those solutions designated by the instructor. Matches, filter papers and all other insoluble material are to be disposed of in proper waste containers, not in the sink.
14. Labels and equipment instructions must be read carefully before use.
15. Keep hands away from face, eyes, mouth and body while working in microbiology laboratory. Wash your hands with soap and water before and after performing all experiments. Clean with disinfectant, and wipe dry all work surfaces and apparatus at the end of the experiment. Return all equipment clean and in working order to the proper storage area.

16. **ALWAYS** disinfect your bench top **BEFORE AND AFTER** each laboratory session.
17. **ALWAYS** wash your hands before beginning your work **AND** at the end of each laboratory session before leaving the room.
18. Never leave an experiment or lab activity unattended. Extinguish burners when you are away from your work area. Experiments must be personally monitored at all times. Do not wander around the building or campus while laboratory experiments are being performed.

### **Clothing**

19. Any time microorganisms, chemicals, heat or glassware are used, students will wear laboratory goggles. **There will be no exceptions to this rule!**
20. Contact lenses should not be worn in the laboratory unless you have permission from your instructor.
21. Wear proper attire at all times in the laboratory:
  - a. Avoid loose or baggy clothing, dangling jewelry, etc.
  - b. Shorts and miniskirts should not be worn.
  - c. Shoes must completely cover the foot. No sandals are allowed.
  - d. Long hair must be tied back.
  - e. You need to wear protective covering such as a lab coat to safeguard your body/clothing. If so, do not take your lab coat home with you; keep it in your drawer. If you want to take it home to wash it, bring a plastic bag in which to carry it home.
22. Lab aprons have been provided for your use and should be worn during laboratory activities.

### **Accidents and Injuries**

23. **Report any accident** (spill, breakage, etc.) or injury (cut, burn, etc.) **to the instructor immediately**, no matter how trivial it may appear.
24. If you spill or drop a culture, after notifying the instructor, place a paper towel over the spill and pour disinfectant on the towel. Wait for 15 minutes then clean the spill with fresh paper towels. Remember to place paper towels in waste baskets and wash your hands carefully. Dispose of any broken glass properly.

### **Handling Bacteria and Chemicals**

25. All bacteria and chemicals in the laboratory are to be considered dangerous. Do not touch, taste or smell any bacterial culture or chemical unless specifically told to do so.
26. For bacteria or chemicals ingested, see the lab instructor immediately.
27. Check the label on cultures and chemical bottles twice before removing any of the contents. Take only as much of the bacterial culture or chemical as you need.
28. Never return unused chemicals to their original containers.
29. Never use mouth suction to fill a pipet. Use a rubber bulb or pipet pump. Always keep the pipet pointed away from your body.
30. Never dispense flammable liquids such as ethanol anywhere near an open flame or source of heat.
31. Never remove bacteria, chemicals or other equipment from the laboratory.

32. Take great care when transporting cultures and chemicals from one part of laboratory to other. Hold them securely and walk carefully. All cultures should be in a test tube rack.

### **Handling Glassware and Equipment**

33. Never handle broken glass with your bare hands. Use a brush and dustpan to clean up broken glass. Place broken or waste glassware in the designated glass disposal container. If it is contaminated, it must be autoclaved first. Notify the instructor.

34. Examine glassware before each use. Never use chipped or cracked glassware. Never use dirty glassware.

35. Do not immerse hot glassware in cold water or put it directly from a hot plate to the cooler countertop; it may shatter.

36. Report damaged electrical equipment immediately. Look for things like frayed cords, exposed wires and loose connections. Do not use damaged electrical equipment.

37. If you do not understand how to use a piece of equipment, ask the instructor for help.

### **Heating Substances**

38. Exercise extreme caution when using a gas burner. Take care that hair, clothing and hands are a safe distance from the flame at all times. Never reach over an exposed flame.

39. Never leave a lit burner unattended. Never leave anything that is being heated unattended. Always turn the burner or hot plate off when not in use.

40. Heated metals and glass remain very hot for a long time. They should be set aside to cool and picked up with caution. Use tongs if necessary.

41. Determine if an object is hot by bringing the back of your hand close to it prior to grasping it.

### **Disposal**

42. Discard all cultures, petri-plates, and used glassware in the container labeled **contaminated** or **biohazard**. This container will later be autoclaved.

43. **NEVER** place contaminated pipettes on the bench top.

44. **NEVER** place contaminated inoculating loops on the bench top.

45. **NEVER** discard contaminated cultures, Petri dishes, glassware, pipettes, tubes, or slides in the trash can.

46. **NEVER** discard contaminated liquids or liquid cultures in the sink.

### **MSDS**

47. Material safety data sheets are available (in a CD) in the laboratory for all chemicals used.

**Other**

48. Inform the instructor if you are or become pregnant during the semester.

**QUESTIONS:**

1. Do you wear contact lenses?      Yes \_\_\_\_\_      No \_\_\_\_\_

2. Are you color blind?              Yes \_\_\_\_\_      No \_\_\_\_\_

3. Do you have any allergies?      Yes \_\_\_\_\_      No \_\_\_\_\_

If so, list specific allergies:

**AGREEMENT**

I, \_\_\_\_\_ (Print your name) have read and agree to follow all of the safety rules set forth in this contract. I realize that I must obey these rules to insure my own safety and that of my fellow students and instructors. I will cooperate to the fullest extent with my instructor and fellow students to maintain a safe lab environment. I will also closely follow the oral and written instructions provided by the instructor. I am aware that any violation of this safety contract that results in unsafe conduct in the laboratory may result in being removed from the laboratory and/or receiving a failing grade.

I also agree not to hold the instructor or the institution responsible for any personal injury caused by violation of the rules of this contract.

\_\_\_\_\_  
Student Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Witness