Safety Procedures for Students

The experiments you do in this course are intended to be fun and safe. You will be handling living microbial organisms, flames, chemicals, sharp objects, and breakable materials. If improperly handled, these items can pose a health risk. However, by following instructions and paying attention to what you are doing, risks will be minimized. Below we list a series of safety procedures that, although not all-inclusive, inform you of potential risks, describe the importance of good safety practice, provide proper handling procedures, provide corrective measures should an accident occur, and serve as an aid to minimize risk.

General Rules

1. Do not eat or drink in the room where you conduct experiments. This is just good practice when you are working with substances or organisms that you are better off not ingesting.

2. Wash your hands when you leave the lab. The microorganisms you will work with are not pathogenic to people, but it is still a good idea not to eat them. Gloves are available to anyone who would like to wear them.

3. Wipe down your bench with disinfectant before each and every lab as well as after each and every lab.

4. Tie long-hair back and avoid wearing loose sleeves or scarves. Your hair and clothing should not enter into your experiments.

5. Lab coats are not required, but keep in mind that you will be working with stains that stain clothes as well as microbes.

6. Do NOT dispose of any material contaminated with bacteria or fungi in the regular trash at any time for any reason. Detailed guidelines for disposal of materials are provided later.

7. No open-toed shoes, especially flip-flops, are allowed in the lab. You may be refused access to the lab if you come to class wearing them.

8. Report all personal injury accidents or spilled cultures to the instructor immediately. Accidents do not indicate poor technique unless they persist. Take precautions to avoid them.

Considerations about Working with Microbes

- Some people have allergies to mold spores. If you find you have allergic reactions to molds or any of the materials you work with, let your instructor know.

- Although none of the organisms you will use are pathogenic to healthy people with normal immune responses, many microorganisms can cause health problems if they are inhaled or ingested by people who are immunosuppressed, If you know that you have a weakened immune system, please let your instructor know and be careful not to inhale or ingest the microbes.

Bunsen Burners

1. You will work with flames to sterilize equipment in the lab. Use appropriate care around flames and be careful to keep flammable liquids, such as alcohol, far from the flame.

2. Keep long hair pulled back. Burning hair smells awful.

3. Secure loose clothing. The most common fire incident involves igniting long sleeves.

4. Burners should be off when not in use.

5. While burners should be off when they are not in use, do not assume that a burner is off. Don't reach across or lean over a burner at any time.

Microbial Spills

1. Do not touch the spill.

2. Alert the TA or instructors, they will help you properly dispose of the material.

3. Flood spill area with disinfectant. If material was spilled on clothing, apply disinfectant to contaminated areas of clothing as well.

Broken Glass

1. Alert the TA or instructors, they will properly dispose of the material.

2. If broken glass is contaminated flood the glass in disinfectant for before handling and disposing of broken glass.

3. All broken glass should be put in a "sharps container".

Fire procedures:

1. If you detect a fire, go to the nearest fire alarm pull station and activate the building

alarm system.

2. When the fire alarm sounds, evacuate the building immediately.

3. Once you have left the building, do not re-enter until the area is declared safe by either Fire, Police, or Environmental Health and Safety personnel.

4. Do not try to put out a fire with a fire extinguisher if there is any doubt that it can be done safely. Your safety is more important. Attempts to extinguish as fire should not be made until the alarm has been activated.

Waste Disposal Procedures

1. All paper towels used to dry hands or blot stained slides should be disposed of in the regular trash and not in the orange autoclave bags.

2. Used glass test tubes should be placed in the wire baskets on the waste disposal carts after your labels have been removed.

3. Used plastic petri dishes should be placed in autoclave bags in marked circular trash cans. Do not put petri dishes in the bags in the rectangular containers on the bench tops.

4. The autoclave bags in rectangular trash cans on the tops of benches are for used plastic pipettes, NOT plates.

5. Never put any object contaminated with live bacteria or fungi in the regular trash. That includes used plastic pipettes, used plastic petri dishes, used swabs, used test tubes, etc. This causes endless trouble when spotted by the janitorial staff.

Since scientific research is usually a cooperative effort involving many types of collaboration and cooperation, scientists must learn to work together. An important part of working in a group of scientists is being respectful of other people's time and space. In many laboratories, scientists share space, equipment, and supplies. It is therefore essential for all members of a group to learn basic rules of cleanliness and consideration in the laboratory for the scientific group to be successful.