



Dear Science Students,

We join with our Biology and Environmental Science faculty in welcoming you to the study of science. As part of our university system's commitment to promote and protect the health and safety of our students, our employees and the environment, the science department has developed rules and policies for laboratory safety.

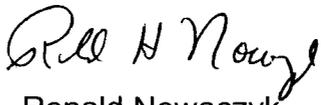
We expect that you will read these rules and policies carefully and ask questions about those that are unclear. Signing the agreement means that you have read, understand, and agree to follow the rules at all times.

Safety in the laboratory depends on following recognized good practices. If the rules are not followed, there may be serious consequences, which can include loss of the privilege of participation in lab class for the remainder of the term.

As your school's senior administrators, we want to make it clear to you that we fully endorse and support both the laboratory safety rules and our disciplinary code. We appreciate your cooperation and look forward to your having a positive, safe, and healthy learning experience.

Sincerely,

  
Thomas Macchi  
Chair Health & Safety Committee

  
Ronald Nowaczyk  
Dean of the College of Arts and Sciences



## LABORATORY SAFETY RULES, PRACTICES AND AGREEMENT For Teaching Assistants, Research Assistants, Graduate Students and Students Working on Research Projects

*Read the following laboratory rules, safety precautions, and regulations carefully. After you have read the information, please sign the last page and return it to your Lab Manager.*

### **General Requirements:**

1. Always set a good example of lab safety for students.
2. Be alert to unsafe conditions and students and call attention to them so that corrections can be made as soon as possible.
3. There will be no smoking, drinking, chewing gum or eating in the laboratory. Do not store food or drink in lab refrigerators. Do not touch your face, handle contact lenses, apply cosmetics or put your fingers in your mouth.
4. Always wash your hands after handling viable material, removing gloves and before leaving the laboratory. You are required to wash your hands upon exiting the lab whether you were performing lab work or not.
5. Horseplay will not be tolerated. Avoid distracting others that are working.
6. Gloves are to be removed prior to leaving the laboratory and may not be worn in non-laboratory areas (offices, computer lab, etc.).
7. At the end of each lab session, make sure the lab benches have been cleaned, put away all equipment and materials and check that the lab is secure. Ensure that everything that should be turned off is off, all waste containers are closed, and doors are locked.

### **Personal Protective Equipment (PPE):**

1. Observe all laboratory signs and chemical labels for required protective equipment.
2. ANSI approved safety glasses with side shields or chemical splash goggles will be worn at all times when performing laboratory work.
3. Wearing contact lenses is discouraged. If they are used, notify instructor so that special precautions can be taken.
4. Always wear gloves when handling any chemicals or microorganisms. Never reuse gloves, get a new pair each time. Inspect your gloves for any tears or holes before using.
5. Your arms and legs should be covered. You are required to wear laboratory coats while working to prevent contaminating your clothes. Wearing short skirts or shorts is not good laboratory practice since your legs will be at risk for a chemical spill.
6. Face shields should be used when working with larger quantities of liquid chemicals. (Acid wash baths, pouring formaldehyde waste into storage drum, etc.)
7. Wear shoes that cover the entire foot; NO sandals or open shoes.
8. Tie back long hair and confine loose clothing to keep away from flames and chemicals.

### **Hazardous Material Safety:**

1. Unauthorized experiments are prohibited, and only those chemicals required for the experiment to be performed are to be used.

2. Know where the **MSDS** (Material Safety Data Sheets) are in your lab for your chemicals. Know how to read them and get the necessary information from them. MSDS contain information that you will need in case there is an emergency.
3. Never taste or smell a chemical. Check odors only if instructed to do so, by gently wafting some of the vapor towards your nose with your hand.
4. Be sure your work area is adequately ventilated for your experiment. Be sure to use a chemical fume hood as necessary or as directed by your instructor. **DO NOT** use a Bio Safety Cabinet as a chemical fume hood. Ask your instructor if you aren't sure.
5. When working with chemical fume hoods, work with the sash at the lowest possible position, work within the hood at least eight inches back from the front opening, and close the fume hood sash when you're done working.
6. Read the chemical labels very carefully. Read them 3 times: when you pick it up, just before you use it, and after you are finished. Many mistakes – some dangerous - result from mixing the wrong chemicals. Always consult your instructor and review the MSDS if you are unsure.
7. Never return unused chemicals/reagents to the original bottle, it will lead to contamination. Be careful to take only what you actually need.
8. Know your chemical basics, for example: combine reagents in appropriate order, avoid adding solids to hot liquids, never add water to acid, do not use an open flame near or to heat a flammable liquid.
9. All secondary containers shall be labeled with the chemical composition name (no formulas, spell out the whole name), name of the lab course/instructor, name of the individual who prepared the solution or mixture, and the date of preparation.

### **Spills and Other Lab Incidents:**

1. **CAMPUS POLICE EMERGENCY NUMBER: 7070 (932-7070)**
2. Learn the locations and operation of emergency equipment. This includes eyewash, fire extinguishers, fire alarms, fire blanket, sink, first aid supplies and red emergency phone (between Rooms 304 and 305. Know where the emergency gas and electrical shut off valves/switches are in your lab.
3. Know what to do in case of an emergency. Know how to exit the building in case of an emergency.
4. In the event of an emergency where assistance is required from the firefighters, police, or medical services, have someone outside of the building to direct the personnel as to where to go.
5. Report ALL accidents, injuries, and near misses (close-calls) immediately. Be sure to fill out an accident/near miss form for your Safety Officer/Lab Manager so that we can prevent future incidents and keep the laboratories a safe place to learn.
6. Treat burns immediately by putting the burned area under cold water for at least 15 minutes. Notify professor. If the burn is mild, the student should report to Health Services for ice and further treatment. If the burn is moderate to severe, emergency services should be called to transport student for appropriate medical care. Have MSDS ready to bring to medical facility. Be sure to document any incident with the accident/near-miss form.
7. Clean up all spills immediately. This includes water. In the event that a chemical is spilled/splashed on your eyes, skin or body, **IMMEDIATELY** rinse the affected area for 15 minutes. Remove contaminated clothing immediately. Notify professor and refer to MSDS for instruction. Seek medical attention as necessary. Be sure to document any incident with the accident/near-miss form.
8. In case of accidental ingestion, notify professor immediately and call for emergency medical services. Have the MSDS ready for personnel to determine the necessary course of treatment.

### **Equipment:**

1. Avoid injuries by using proper procedures and precautions when inserting glass tubing or thermometers through rubber stoppers.
2. Turn off your Bunsen burner or other heat source whenever you are not using it. Never let it operate unattended. Keep flammable materials from flames. Always be aware of where the Bunsen burner is to avoid accidents.
3. Use equipment only for its designed purpose.
4. Do not use your mouth for pipetting or to start a siphon.
5. Be careful when handling glassware to avoid breakage. Do not use damaged glassware. Discard broken glass in designated broken glass boxes. Do not discard anything else except broken glass in these boxes. Hand protection should be used when picking up broken glass, use a brush and dustpan for small pieces.
6. Do not operate the autoclave until a professor or lab manager has trained you.

### **Hazardous Waste and Chemical Storage:**

1. Dispose of chemicals properly and consult your instructor. Appropriate containers are available for waste chemicals. Do not overfill waste containers, only fill up to the "shoulder" of the bottle. Don't let it go up into the neck of the bottle, use an additional waste container if needed.
2. Containers for wastes should be visually inspected for cracks or chips. Be sure the cap fits properly and that the container is compatible with the waste to be stored. Do not use laboratory bottles with ground glass stoppers.
3. Do not mix waste types.
4. Waste containers must always be closed during storage, except when waste is added or removed.
5. Label waste containers as such
  - a. "Hazardous Waste"
  - b. List all components of the waste including water and concentrations if known
  - c. Do not use chemical formulas or abbreviations. (Write "WATER" not "H<sub>2</sub>O")
  - d. Date the waste was produced
  - e. Name of lab course
5. Chemicals and waste should not be stored on bench tops and in fume hoods. Chemicals will be stored in laboratory stockrooms. Waste will be stored in laboratory Satellite Waste Area.
6. Waste containers, once designated as waste, can only remain in the lab for 5 days. So each Friday, lab waste must be moved to Room 308 stockroom.
7. Chemicals must be stored according to the requirements outlined in MSDS. In addition:
  - a. Each container should be labeled as to the date it was received AND opened
  - b. Container should be labeled with instructor name and course.
  - c. Chemicals that are dispensed into secondary containers should be labeled with full chemical name, date chemical was dispensed, instructor name and course, manufacturer name, catalog number and safety data (PPE and hazards).
  - d. When preparing reagents/cleansers/disinfectants, label the bottles with solution name, date prepared and the person's initials.
  - e. Once a chemical container is empty, notify instructor since it may be used as a future waste container. If it will be used as waste, the original chemical must be rinsed out and dried thoroughly, the original label must be removed and the container must be placed with the other future waste containers.

**UNIVERSITY OF NEW HAVEN  
DEPARTMENT OF BIOLOGY AND ENVIRONMENTAL SCIENCE  
LABORATORY SAFETY RULES, PRACTICES AND AGREEMENT**

**AGREEMENT**

I have read and fully understand the rules, safety practices and regulations governing my conduct in the laboratory. I will abide by these rules and regulations for my own safety and that of others. A copy of these rules and regulations is posted on the stockroom doors in every laboratory.

Print Name \_\_\_\_\_

Signature \_\_\_\_\_

Date \_\_\_\_\_

Position \_\_\_\_\_

Professor \_\_\_\_\_

Semester and Year \_\_\_\_\_

When complete, please return agreement to the Lab Manager. Please keep the Laboratory Safety Rules and Practices for your reference.