



**LEHIGH UNIVERSITY - DEPARTMENT OF CHEMISTRY  
UNDERGRADUATE LABORATORY SAFETY GUIDELINES**

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*Safe practice is an attitude and a knowledgeable awareness of potential hazards.  
**SAFETY** is a mutual responsibility and requires the full cooperation of everyone  
in the laboratory.*

**PERSONAL SAFETY**

1. **Chemical safety goggles must be worn in the laboratory at all times**, even when not performing an experiment. Anyone not wearing eye protection in the lab may be subject to disciplinary action by the faculty member or teaching assistant in charge of the course. Faculty, staff members, and teaching assistants in the Department of Chemistry may dismiss students from a lab section for working in an unsafe manner.
2. Appropriate clothing must be worn in the lab. In particular, long pants and a T-shirt with short sleeves (or something equivalent) should be worn. The shirt or blouse must cover the midriff area such that no skin is visible, and the shoulders must be covered. Long sleeves are acceptable provided they do not represent a hazard by being too loose. No sandals or open toed shoes are allowed. Gym shoes make a good choice. Any loose clothing must be restrained in a suitable manner. A student will be dismissed from lab if she/he is not dressed appropriately.
3. Eating, drinking, and smoking are not allowed in any laboratory. Smoking is not allowed anywhere in the building.
4. Contact lenses are not allowed to be worn in the chemistry laboratory classes.
5. Familiarize yourself with the location of safety equipment (including fire extinguishers, safety showers, eye washes, and first-aid kits), evacuation routes, and other safety practices.
6. Some operations must be carried out in a fume hood to minimize exposure to chemical vapors. Some reactions may require additional precautions.
7. Wash your hands often when performing lab work, and wash them thoroughly upon leaving the lab.
8. In the case of an injury:
  - a. Notify your direct supervisor (faculty member or teaching assistant) immediately. All injuries, no matter how small, must be reported. A written accident report must be filed within 24 hours. If your direct supervisor is not immediately available, notify a substitute responsible authority within the Department of Chemistry.
  - b. Your supervisor will notify the proper personnel, the injured person will be transported to the health center or emergency room, and the injury will be examined and properly treated.

- c. If you get a burning sensation on your skin or in your eyes after lab hours, report to the health center or a physician, and explain your symptoms as well as its possible connection to your lab work.
- d. Burning of the eyes should be treated by flushing with copious amounts of water for at least 15 minutes. It is necessary to hold open the eyelid during the flushing process.
- e. Burning of the skin should be treated by extensive washing with soap and water.
- f. All chemical spills, glassware breakage, and fires must be reported to your supervisor.
- g. If there is an extensive chemical spill on a person, use the safety shower. Remove all contaminated clothing. There is no room for embarrassment in emergency situations. It could be the difference between life and death.
- h. If your clothes are on fire, roll on the floor. **Do not run** to the fire blanket (located near the exit of each lab) or the shower.

### **PREVENTION OF CHEMICAL INJURIES AND ACCIDENTS**

1. Be prepared before entering the laboratory. Read and reread all lab procedures to identify possible hazards. If you are not certain about how to perform an operation safely, ask your supervisor.
2. Be aware of what your neighbor is doing. If his/her actions indicate confusion or ignorance, inform your supervisor.
3. Never leave glassware set up or a reaction unattended. Exceptions must have the approval of the lab supervisor.
4. Read the reagent bottle - **TWICE!** Make sure you have selected the correct chemical. Never pipet directly from a reagent bottle. Never put unused reagent back in the bottle – dispose of it properly.
5. All broken or cracked glass should be disposed of in marked containers in the lab. Never put broken glass in the waste paper can.
6. Dispose of chemical waste as directed by your lab supervisor. Clean up your work area completely when finished. Any chemical spills need to be dealt with immediately.
7. If you are assigned specific laboratory space, keep it neat enough to work effectively. All drawers under lab benches should be kept closed when working in the lab and they should be locked (if so equipped) when not in use. Equipment signed out to individuals is the responsibility of that person -- the department is not responsible for any missing or broken equipment during the course of the year.

**Student Chemical Safety and Responsibility Statement**  
**Department of Chemistry**  
**Lehigh University**

Each student in a laboratory course is required to agree to the following statement before any work may be performed in the chemical laboratory. A copy of this form will be provided by the laboratory instructor for the student to sign at the first laboratory meeting. The information given in the Undergraduate Laboratory Safety Guidelines has been taken from the Department of Chemistry Laboratory Safety Manual which is available in the Department of Chemistry Office (Mudd building room 393).

1. I have read the Department of Chemistry Undergraduate Laboratory Safety Guidelines and agree to abide by the regulations stated therein.
2. I have received oral instructions regarding an emergency evacuation from the lab and the proper use of the safety shower and eye wash.
3. I understand the need for everyone in the laboratory to maintain an appropriate awareness regarding personal safety and the safety of those working in the same laboratory.
4. If I have been assigned a drawer full of equipment to use in this laboratory, I will notify the lab instructor and pay for replacement of any broken or damaged equipment. **NOTE:** this statement may not apply to every chemistry laboratory course.
5. I will notify the instructor immediately of any dangerous situation, chemical spill, or accident resulting in injury.
6. I will act responsibly during all laboratory sessions, and will be prepared to carry out all operations efficiently and safely.

Printed name: \_\_\_\_\_ ID#: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Course: \_\_\_\_\_ Lab Locker #: \_\_\_\_\_  
(if assigned)

TA and/or instructor: \_\_\_\_\_