



Research Laboratory Safety Philosophy and Policies

Philosophy

PCSP's intention and ongoing effort is to make laboratory-based learning both safe and applicable. To accomplish this objective, suggestions for a safer laboratory environment are welcomed from all laboratory users at any time. The safety of students, staff, and faculty in laboratory environments is considered by the PCSP to be

- of paramount importance as part of laboratory instruction and learning.
- a shared responsibility among all users.

Safety Practice Rules

GENERAL

1. For all emergencies **call 911** (you do not need to dial a 9 to get an outside line-JUST 911). This is the number to call for all emergencies (fire, explosion, chemical exposure, ambulance service, *etc.*).
2. All safety instructions will be reviewed in a safety orientation initiated by the research sponsor before lab work begins. During the orientation, time will be allotted for questions and project-specific directions concerning research laboratory safety. At the end of the orientation, the research sponsor will insure that each student receives a copy of the PCSP Research Laboratory Safety Policy. A signed copy of the Student Statement of Understanding will be kept on file in the department until that student is no longer associated with the PCSP. A follow-up safety discussion can occur on demand by the research sponsor or the research student at any time during an ongoing research initiative.
3. Students must follow safety directives of sponsor/faculty at all times. Sponsor/faculty may remove a student from lab for failure to follow such directive or these policies
4. Only authorized experiments (supervised by a PCSP faculty member) are allowed.
5. "Horse play" (irresponsible or unsafe behavior) is forbidden.
6. Laboratory work is not to be performed by a student without the presence of a PCSP faculty member or other responsible student in the laboratory. In addition, laboratory work may not be performed unless a PCSP faculty member is aware of the work and is present in the Pharmacy building. A research student is expected to check in and checkout of a research work period with the student's research sponsor or that sponsor's designee.
7. All accidents, injuries, unsafe or irresponsible behaviors, and unusual or suspect situations are to be reported to the research sponsor or PCSP faculty member immediately.

8. Familiarity with the nearest location and use of all safety equipment (including eyewash station, safety shower, and fire extinguisher) is expected of all users. The research sponsor is responsible for supplying this information in the project safety orientation. Below is the location of safety equipment in the faculty research lab (Lab 240)

Eyewash stations	— (1) in sink next to door at front of room — (2) with safety shower outside of Lab 244
Safety shower	— outside of Lab 244
Fire extinguisher	— (1) outside of Lab 241 — (2) in Lab 244
First aid kit	— near door at front of Lab 240
Broken glass container	— near door at front of room
MSDS	— hardcopies can be found in Labs 240 and 247
Evacuation routes map	— near door at front of room

9. Use common sense and professional conduct consistently during labs.
10. Doubt about any procedure or technique should be raised and resolved **BEFORE** the procedure or technique is initiated.

FOOD, DRINK, AND COSMETICS

1. Food and drink for ingestion are prohibited in the laboratory.
2. Eating, drinking, and chewing gum in the laboratory are forbidden.
3. Application of cosmetics in the laboratory is forbidden.

ATTIRE

1. Proper professional attire is expected of all laboratory users. Students must wear a lab coat when in the laboratory at all times. Loose clothing, shorts, sandals, sunglasses, open-toed shoes and hats are considered improper lab attire.
2. Safety glasses are to be worn in the laboratory at all times unless otherwise directed by the faculty sponsor.
3. Wearing contact lens in a laboratory environment is risky behavior. It is recommended that contact lens be removed before engaging in lab work.
4. Protective gloves must be worn when directed by the research sponsor.

HOUSEKEEPING

1. Each student is responsible for keeping his or her work area neat and orderly.
2. All students share responsibility for keeping hoods, ovens, sinks and other equipment neat and orderly.
3. All spills should be reported to the research sponsor and appropriately removed and treated immediately.
4. If students are unsure of how to deal with a spill or dispose of a chemical substance or pharmaceutical, the research sponsor is to be consulted for direction.

HANDLING LABORATORY EQUIPMENT

1. Broken or chipped glassware must not be used (inspect before using)
2. Glassware is to be immediately cleaned and dried after use.

3. Attempting to catch falling glassware is considered risky behavior.
4. Broken glassware should not be retrieved and collected using hands.
5. Broken glassware is to be disposed only in a designated container (see item 7 on page 2).
6. Spatulas are not to be used for opening containers.
7. When not being used, hot plates should be switched off and disconnected from their electrical supply (in that order).
8. Equipment is to be unplugged and stored properly at the end of lab work and before leaving for the day.

GAS CYLINDER SAFETY

1. Cylinders of compressed gas must be secured at all times so that they cannot fall. Cylinders should never be dropped or permitted to strike each other violently.
2. Valve safety covers should be in place until pressure regulators or needle valves are ready to be attached.
3. Cylinders must be moved on hand trucks, carts, or dollies. They must not be rolled or dragged.
4. Students must not attempt to repair cylinders or cylinder valves or to force stuck or frozen cylinder valves.
5. A small amount of gas must be left in the cylinders and the cylinder valves must be closed to prevent contamination of the inside of the cylinders.

HANDLING CHEMICALS

Proper handling of chemicals is extremely important in the laboratory setting. The following list of guidelines is to be followed when handling chemicals.

1. Every container of a chemical solution must contain the following information on a clearly readable label:
 - a. Name of reagent and concentration.
 - b. Date of preparation.
 - c. Name of preparer.
2. It is the student's responsibility, before working with a chemical, to read that chemical's material safety data sheet (location of MSDS listed on page 2, item 7).
3. Use gloves when handling corrosive materials.
4. Use heat resistant gloves when handling dry ice or chemicals that produce heat upon reaction with other substances.
5. Use eye protection when working with corrosive or flammable chemicals.
6. Wear protective clothing such as aprons or laboratory coats. Use a funnel designed to prevent air blocking when pouring chemicals.
7. Always add acid to water, not water to acid.
8. Use a fume hood when working with flammables or poisonous chemicals.
9. Keep flammables away from open flames or sparks.
10. Keep bottle stoppers on volatiles or flammable containers when not being used.
11. Corrosives should be stored separately according to their classification (ie, liquid, gas, and solid) in appropriate containers. Store as near the floor as possible to minimize danger of bottles falling from shelves, but not on the floor.

STUDENT STATEMENT OF UNDERSTANDING

As a Student Researcher at the Presbyterian College School of Pharmacy, I

1. attest that I have received a printed copy of the PCSP Laboratory Safety Philosophy and Rules.
2. commit to abide by these rules at all times when working in the PCSP laboratories, and to a continual effort to promote safe conduct.
3. understand that I may discuss safety issues at any time with my faculty sponsor.
4. commit myself to a shared responsibility for the safety of myself and others who share with me a laboratory environment.

PRINTED NAME

STUDENT SIGNATURE

DATE

PRINTED NAME

RESEARCH SPONSOR

DATE

Please list specific safety information pertaining to the research project that was discussed with student researcher in this section.

Research Sponsor please check off and Return to Departmental Office

Student has completed moodle safety training

Student has completed moodle blood borne pathogen training

Student has completed moodle HIPAA training

Faculty sponsor has met with student and discussed specific laboratory safety associated with project