

College of Forestry 300: Laboratory Safety

Safety Policy & Procedure Manual

Section 300: Laboratory Safety

Effective: 01 January 2007

Revised: January 2020

Purpose

The purpose of this section is to provide information to help protect employees and students from the health hazards presented by laboratory chemicals and activities conducted in laboratories.

Background Information

A laboratory is defined as a room or group of rooms under the control of a lab supervisor or principal investigator (PI) where relatively small quantities of hazardous chemicals are used on a non-production basis. Rooms such as computer labs, electronic labs, or reading labs are not considered "laboratories" for the purpose of this manual.

Workers performing in laboratory conditions are regulated under Oregon Administrative Rules Oregon Occupational Safety and Health Division, Division 2.

General

- Laboratory safety is the highest priority during all laboratory activities
- Laboratory Safety is an attitude
- Most accidents are the result of complacency and quite often happen to experienced workers
- Safety is a team effort as well as an individual effort

College of Forestry 310: General Laboratory Safety and Chemical Hygiene Responsibilities Safety Policy & Procedure Manual

Section 300:
Laboratory Safety
Effective: 01 January 2007
Revised: January 2020

Purpose

The purpose of this section is to help provide information on general laboratory safety for employees and students and to establish the duties and responsibilities of the laboratory Chemical Hygiene Officers.

Background Information

A laboratory is defined as a room or group of rooms under the control of a lab supervisor or principal investigator (PI) where relatively small quantities of hazardous chemicals are used on a non-production basis. Rooms such as computer labs, electronic labs, or reading labs are not considered "laboratories" for the purpose of this manual.

NOTE: This chapter of the College of Forestry Safety Manual serves as the College's Chemical Hygiene Plan.

These rules apply to all people working in laboratories in the College of Forestry. This includes graduate and undergraduate students and volunteers. Visitors must comply with all rules.

Applicability

All academic, research, students, and visitors in the College of Forestry.

Policy

It is the policy of the College of Forestry that all faculty, staff, students, and visitors who perform any job-related activities in laboratory conditions are required to follow all rules and regulations with regard to all laboratory activities. In addition, Chemical Safety Officers will be designated as instructed under this section.

Procedure

General Laboratory Safety

1. Safety takes precedence over all other considerations.
2. Every worker must know the location of fire extinguishers, eye wash stations, emergency showers and fire pulls.
3. Every worker must know the meaning of all alarms and the evacuation route.
4. Each laboratory must have a basic first-aid kit and a more comprehensive kit should be in a central location such as the departmental office.
5. Do not work alone while performing dangerous procedures. Be sure there is someone in the immediate vicinity you can reach in case of emergency.
6. Know the location of and how to use eyewash fountains, deluge showers, and fire blankets.
7. Be sure you understand the hazards involved in a procedure and take all necessary safety precautions before beginning.
8. Food products (lunches, snacks, juices, condiments, etc.) are not to be stored in laboratory refrigerators. Consumption of food and beverages or smoking is not permitted in laboratory operation areas. Laboratory glassware will not be used for food preparation or consumption.
9. Heavy items must not be stored on high shelves.
10. Unsafe facilities, equipment, or behavior should be reported to your supervisor.
11. Unattended equipment and reactions are major causes of fire, floods, and explosions. Be sure all utility connections are secure. Anticipate hazards that would result from failure of electrical, water, or gas supply. Use hose clamps on water lines. Be aware that liquid spilled on your floor may be dripping on your downstairs neighbor within minutes.
12. Each laboratory will designate one person as chemical hygiene officer and report the name to the College Safety Committee.

13. Each laboratory will have a paper copy of this manual in an accessible location. Safety rules and instructions specific to work in the lab will be added and the resulting document will be the Laboratory Chemical Hygiene Plan.
14. Each OSU employee working in a laboratory must develop work habits consistent with this Chemical Hygiene Plan to minimize exposure to the chemicals. Laboratory Safety Rules should be understood and followed ([Reference 25](#)).
15. Emergency numbers will be posted near each phone.
16. Plan operations, equipment, and protective measures based on knowledge of the chemicals in use.
17. Use engineering controls (e.g., hoods, centrifuge rotor hoods) appropriately to minimize chemical exposure.
18. Wear appropriate protective equipment as procedures dictate and when necessary to avoid exposure.
19. Each laboratory worker is responsible for maintaining a reasonably clean and uncluttered work space.
20. Lab workers are jointly responsible for common areas of the laboratory.

Chemical Hygiene Responsibilities

A. OSU President

The President of Oregon State University has the ultimate responsibility for chemical hygiene throughout University laboratories, and, with assistance of other program administrators, provides ongoing support for safe use of chemicals at OSU.

B. OSU Chemical Hygiene Officer

The Senior Industrial Hygienist (Environmental Health and Safety) shall serve as the OSU Chemical Hygiene Officer. This individual, or the members of their staff, shall have the responsibility and authority to:

- Work with administrators and other employees to develop and implement appropriate chemical hygiene policies and practices.
- Inspect any OSU facility and investigate any accident involving OSU employees, students, or equipment.
- Temporarily suspend the operations in any OSU laboratory in which the practices represent an imminent health hazard.
- Monitor procurement of chemicals.

- Oversee the performance of regular, formal chemical hygiene inspections and inspections of emergency equipment in all OSU laboratories.
- Assist Lab Supervisors/PIs and Laboratory Chemical Hygiene Officers with developing safety precautions and adequate facilities.
- Maintain current knowledge concerning the legal requirements of regulated substances in the laboratory.
- Review the OSU Chemical Hygiene Plan annually.
- Monitor chemical hygiene training for compliance with code-mandated items.
- Coordinate the chemical waste disposal program.

C. Department Chair or Site Superintendent

1. The Department Chair or Site Superintendent will determine the number of Laboratory Chemical Hygiene Officers needed for their unit and designate those Officers. *At least one Officer will be required for each unit that has a laboratory operation involving chemicals.*
2. The names of the individuals assigned as Laboratory Chemical Hygiene Officers for their department will be sent to Environmental Health & Safety (EH&S). EH&S should also be notified of any change in these assignments.

D. Laboratory Chemical Hygiene Officer

1. The Laboratory Chemical Hygiene Officer will be knowledgeable of the operations in the laboratory or laboratories)for which they are responsible.
2. The Laboratory Chemical Hygiene Officer will perform the following:
 - Assist the responsible Lab Supervisor/Principal Investigator in the development of a Laboratory Chemical Hygiene Plan for individual laboratories, if needed.
 - Inspect stored chemicals at least annually; inspect laboratory safety
 - Equipment and labeling periodically.
 - Evaluate procedures in each lab and determine those that are hazardous.
 - Determine adequacy of ventilation systems for new chemicals/procedures.
 - Provide information on proper handling of highly toxic chemicals to ordering labs.
 - Provide information on chemical hygiene, as needed.
 - Assist in or conduct chemical hygiene inspections in labs.

E. Lab Supervisor/PI

1. The Laboratory Supervisor or Principal Investigator is the individual who has the primary responsibility for safety in the laboratories under their control.
2. This individual, or delegated members of their staff, shall have the responsibility to:
3. Develop a Laboratory Chemical Hygiene Plan for their laboratory.

4. Inspect their laboratories for unsafe conditions and practices and take appropriate corrective action.
5. Provide the required safety training to the employees and students that work in their laboratories. Document the training provided.
6. Investigate injuries to lab employees or over-exposure events.
7. Evaluate the need for protective equipment or chemical exposure monitoring.
8. Request appropriate monitoring from EH&S if necessary.

F. University Chemical Safety Committee

1. The University Chemical Safety Committee members are appointed by the Vice Provost for Research. The Committee is responsible for reviewing and approving any changes to the OSU Chemical Hygiene Plan.
2. The Chemical Safety Committee may also investigate and discuss reported unsafe practices conducted in any OSU laboratory. Their recommendations for correction, including disciplinary action, are to be sent to the Vice Provost for Research.

Laboratory-Specific Chemical Hygiene Plan (LCHP) Template

Purpose

In accordance with *Oregon Administrative Rule (OAR) 437-002-0360 Toxic and Hazardous Substances* and the OSU CHP, the purpose of this Laboratory-Specific Chemical Hygiene Plan (LCHP) is to provide guidance and protocols for the protection of employees and visitors at Oregon State University (OSU) from the potential health hazards associated with chemicals used in the laboratory.

The College of Forestry uses the [EH&S Chemical Hygiene Template](#), please refer and download it here.