

Laboratory Chemical Hygiene Plan – Research Lab

A chemical hygiene plan is a written program developed to establish procedures, protective equipment requirements and standard work practices that promote a safe work environment for employees handling hazardous chemicals in a laboratory. At Baylor University, laboratory personnel are responsible for the preparation of their own Lab Specific Chemical Hygiene Plan. The plan may cover one or more rooms / laboratories associated with a work group or laboratory course and should consider all health and safety issues when work involves the use of hazardous chemicals.

The Chemical Hygiene Plan provided is a template that can be used by any Baylor University laboratory. This plan was developed to meet the guidelines of 29 CFR 1910.1450, *Occupational Exposure to Hazardous Chemicals in Laboratories*, a standard issued by the Occupational Safety and Health Administration (OSHA). Filling in this template for your laboratory will complete the plan.

The Principal Investigator of the research lab acts as the Lab Safety Coordinator to implement the plan, unless he or she delegates that responsibility to a member of his or her research group.

The plan must then be reviewed by all researchers working in the lab and made readily available to lab personnel. The plan must be reviewed, at a minimum, annually by the Principal Investigator and/or Lab Safety Coordinator.

This template should be completed by the Principal Investigator and/or Laboratory Safety Coordinator, by filling in the sections highlighted in gray and adding additional information as appropriate for the lab. It is a convenient way to compile all required documentation into a single manual or location.

Introduction

Principal Investigator

The Principal Investigator has ultimate responsibility for chemical hygiene within the laboratory and must, with other administrators, provide continuing support for laboratory chemical hygiene.

Laboratory Safety coordinator

The Laboratory Safety Coordinator has the responsibility for chemical hygiene in the laboratory. This may or may not be the same person as the Principal Investigator.

Researchers (Post-docs, Graduate Students, and Undergraduate Students)

The Researchers are responsible for planning each operation in accordance with the chemical hygiene procedures set forth for the lab and for following safety rules and procedures.

All persons in the lab have the responsibility for safety in the laboratory and for addressing any concerns and/or reporting them to the Principal Investigator, Department, or EH&S personnel.

It is the responsibility of the Principal Investigator and/or Laboratory Safety Coordinator to compile, review, and update this information. The Environmental Health and Safety Office will verify the completeness of this document during annual laboratory audits.

Laboratory Unit:

Principal Investigator:

Office Location:

Work Phone Number:

Alternate Phone Number:

Laboratory Safety Coordinator (LSC):

Office Location:

Work Phone Number:

Alternate Phone Number:

Responsibilities

The Principal Investigator shall:

- Be familiar with the universal requirements of this program, such as hazardous waste disposal and departmental emergency planning.
- Compile all information listed under “Checklist” and include in a Laboratory Safety Manual or on the lab’s profile on BioRAFT.
 - The chemical inventory and written SOPs are the responsibility of the Principal Investigator unless these responsibilities have been delegated to another researcher.
 - The inserted information must be reviewed and updated annually; this review will be documented by completing the annual inspection requirement in BioRAFT. Physically signing this document is no longer necessary.
- Train Researchers when their work begins and when new information or increased hazard is introduced, or when the researchers move to a new project. Document training using the appropriate signature page provided with this document. Training must be documented for all researchers in the laboratory.
- Coordinate interaction with the Laboratory Safety Manager and Environmental Health and Safety Office, as needed for laboratory audits, incident/accident investigation, medical examinations, exposure monitoring, and emergency response.

Researchers shall:

- Read this Chemical Hygiene Plan.
- Sign the appropriate signature page associated with this plan.
- Not begin any new procedure or project without the approval of the Principal Investigator.
- Report significant chemical spills and injuries, illnesses, possible over-exposures, unsafe conditions, and any other concerns to their supervisor.

Safety Data Sheets (SDSs)

The SDS, or Safety Data Sheet, is a document produced by the chemical manufacturer that includes important chemical information, including:

- Identification;
- Manufacturer’s name and address;
- Physical and chemical characteristics;
- Physical and health hazards, including relevant exposure limits;

- Precautions for safe handling and clean-up of spills, including recommended personal protective equipment (PPE); and
- Emergency and first aid procedures.

Every lab employee and researcher should be instructed on the use and access of SDS files.

SDS for our chemicals can be found:

- In this laboratory, located
- On a personal or networked computer, located

NOTE: If using a computer as your source of SDS, it must be able to retain power in the event of a power outage. It is also recommended that SDS be downloaded to a local drive, in the event of a network outage. If this is not possible, then it is recommended that paper SDS be kept for your laboratory.

General Principles for Work with Laboratory Chemicals

Minimize All Chemical Exposures

It is prudent to minimize all chemical exposures. Skin contact with chemicals should be avoided as a cardinal rule. The best way to prevent exposure to airborne substances is to prevent their escape into the working atmosphere by use of hoods and other ventilation devices.

Control Measures

The following control measures are present in this laboratory:

- Fume Hoods
- Safety Shower
- Eyewash Station(s)

The Department of Environmental Health and Safety may be contacted at any time regarding issues with any of these control measures (710-2900). Fume hoods and safety showers will be tested at a minimum of annually by Facilities Services. Lab personnel should flush all eyewash stations for at least 10 seconds on a weekly basis (or monthly basis in the case of certain low hazard labs as designated by EH&S).

Personal Protection

- Assure that appropriate eye protection is worn by all persons, including visitors, where chemicals are stored or handled.

- Wear appropriate gloves when the potential for contact with toxic materials exists.
- Use any other protective and emergency apparel and equipment as appropriate.
- It is advisable to avoid the use of contact lenses in the laboratory; if they are used, inform supervisor.
- Remove laboratory coats immediately on significant contamination.

If there are any general lab guidelines that apply to all chemicals in this lab (i.e. anyone who enters this lab will wear protective safety glasses provided by the lab), they are listed below:

Controlling Exposures – Standard Operating Procedures (SOPs)

A Standard Operating Procedure (SOP) describes how your lab will handle a higher hazard chemical safely, including special handling procedures, engineering controls, and personal protective equipment.

Written SOPs for any hazardous procedure or use of higher hazard materials must be developed and included in your lab's safety binder or in the lab's profile on BioRAFT.

Procedures for Waste Disposal

Assure that the plan for each laboratory operation includes plans for appropriate waste disposal. Deposit chemical waste in appropriately labeled receptacles. All chemical waste will be disposed of in accordance with the Baylor University Chemical Waste Policy and the Laboratory Chemical Waste Management Practices.

Any questions about chemical waste disposal should be directed to EH&S at 710-2900.

Emergency Response

Additional information can be found on the “Lab Emergency” posters.

Evacuation – Employees should be familiar with how to get out of the building in the event of an emergency, and the location of the lab's designated Emergency Assembly Point.

Spill Cleanup Information – An Emergency Spill Kit is located in the lab. This spill kit is designed for

Signature

I affirm that this Laboratory-Specific Chemical Hygiene Documentation is accurate and that it provides information for the chemical safety of employees and students in this laboratory.

Principal Investigator

Signature	Printed Name	Date
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Safety Binder/Information Checklist

Check each line item once all of the required information has been incorporated into the appropriate section of the Laboratory Safety Binder(s) or lab's profile on BioRAFT.

- Safety Data Sheets (paper or electronic)
- Chemical Inventory for laboratory (paper or electronic)
- Chemical Hygiene Plan (this document)
- Standard Operating Procedures (SOPs)
- Description of procedures for chemical waste disposal (including Hazardous Waste Determination Forms)
- Lab Safety Orientation Document
- Training Documentation –Lab Safety Information Signature Page
- Eyewash Testing Log (paper or electronic through BioRAFT)

EH&S Contact Information

Main Phone: 254-710-2900
Office Suite: Draper 244.10
Website: www.baylor.edu/ehs