Case Western Reserve University

Chemical Hygiene Plan

The Chemical Hygiene Plan applies to your laboratory only if you meet ALL of the following criteria:

(i) **Chemical manipulations are carried out on a "laboratory scale";**
(ii) **Multiple chemical procedures or chemicals are used;**
(iii) **The procedures involved are not part of a production process; and**
(iii) **"Protective laboratory practices and equipment" are available and in common use to minimize the potential for employee exposure to hazardous chemical.**

The OSHA Bloodborne Pathogen Standard applies to those labs that meet the following criteria:

All laboratories at CWRU that handle biohazardous materials including bloodborne pathogens and other potentially infectious materials including but not limited to; material of human or non-human primate origin, human cell lines, viral vectors, transgenic animals or biological toxins, as defined by OSHA CFR 29, 1900. 1030, must complete a Laboratory Specific Exposure Control Plan (ECP).

If your lab only works with metal sharps (razor/scalpel blades or syringes) they shall be disposed of in puncture resistant, rigid plastic sharps containers. No additional plan is necessary (formerly known as sharps specific ECP).

Do Not dispose of sharps in the regular trash or in cardboard glass disposal boxes

IF YOUR LABORATORY DOES NOT MEET ALL OF THE ABOVE CRITERIA, CONTACT EHS (368-2907) FOR CONSULTATION.

OSHA Definitions:
Laboratory: a facility where the "laboratory use of hazardous chemicals" occurs. It is a workplace where relatively small quantities of hazardous chemicals are used on a non-production basis.

Laboratory scale: work with substances in which the containers used for reactions, transfers, and other handling of substances are designed to be easily and safely manipulated by one person. Excludes those workplaces whose function is to produce commercial quantities of materials.

Chemical Hygiene Plan

The Chemical Hygiene Plan (CHP) is a laboratory specific document that details the safety procedures in use in a specific laboratory. The Hazard Communication Plan (HCP) is a document that details the safety procedures for certain laboratory employees and all non-laboratory employees who may be exposed to hazardous chemicals in the course of their work, both in normal conditions and emergencies. The HCP applies to laboratories that are using only commercial products or a small amount of chemicals in a non-laboratory use. The HCP also applies to consumer products when not used in the same frequency and volume as the consumer. The goal of the CHP is to provide the necessary guidance to the laboratory staff or employee required to maintain a safe work environment while dealing with hazardous materials or physical/ health hazards.

The Primary Investigator (PI) of a laboratory or the supervisor of non-laboratory employee is responsible for maintaining a safe work environment for the laboratory staff/ employee. As such, the PI is given the title of Chemical Hygiene Officer (CHO). The CHO is required by federal law to provide a CHP to the laboratory staff/ employee that is specific to the laboratory. Further, the CHO is responsible for providing training in the CHP sufficient to allow the laboratory staff/ employee to implement the CHP. This training is required initially upon employment, and when there is a change in the plan or annually, whichever is the shorter time interval.

Upon employment at CWRU, all employees dealing with or possibly having exposure to hazardous materials are given an overview OSHA Laboratory Standard class at the EHS office. This training is NOT substitute training for the laboratory specific training to be given by the CHO. EHS publishes a Laboratory Safety Manual and Physical Safety Manual to be used as a reference in producing a CHP. These manuals are available on the EHS website (https://www.case.edu/ehs/).

Date: _____

Primary Investigator's (CHO) Name: _____

Please Print

Primary Investigator's Email: _____

Primary Investigator's Department: _____

Primary Investigator's Phone: _____ Fax: _____

Primary Investigator's (CHO) Signature: _____

Laboratory Location: Building: _____ Room: _____

Laboratory Location: Building: _____ Room: _____

Laboratory Location: Building: _____ Room: _____

Complete and send/deliver a copy to:

EHS
Service Building, First Floor
Location Code: 7227
Attention: Safety Services

OR email to cwruehs@case.edu

Review Date

Review the CHP/ HCP annually and/or whenever there are any changes in procedure. Submit a copy of the title page, this sheet, and any changes to the EHS office.

Review Date: _____ Changes: _____

Review Date: _____ Changes: _____

Review Date: _____ Changes: _____

Review Date: _____ Changes: _____

Review Date: _____ Changes: _____

Review Date: _____ Changes: _____

Review Date: _____ Changes: _____

Review Date: _____ Changes: _____

Review Date: _____ Changes: _____

Review Date: _____ Changes: _____

The CHP must include the following items:

Training Outline

Use the information on the next pages to help outline the laboratory-specific training to be given to the laboratory staff by the CHO.

Assigning your staff to read the CHP/ HCP does NOT constitute a training class.

Laboratory Personnel

List the work positions and names of people in the laboratory/ work area.
Examples:

Laboratory	Work Area
4 Research Assistants (names)	4 plumbers (names)
1 Primary Investigator (name)	1 electrician (name)
1 Dishwasher (name)	1 supervisor (name)

Chemical Inventory

Produce a chemical inventory of all chemicals in the laboratory (include name and quantity). In addition, when the HCP applies, attach Safety Data Sheets (SDS) for each chemical.

Laboratory Procedures

Provide a general description of procedures and tasks performed in the specific laboratory (attach protocols if needed).

Safety Precautions

Integrate safety precautions into written lab procedures and protocols or for physical and health hazards present in the work area.

CHP Example:
A. Engineering controls available (i.e. fume hoods, biosafety cabinets, etc.)
B. Protective equipment worn (i.e. type of gloves, goggles/glasses, lab coats, etc.)
C. Lab-specific practices (i.e. chemicals in liquid vs. powder forms, designate areas for chemicals, etc.)

HCP Example:
A. When cleaning microscope slides with acetone, a buttoned laboratory coat, safety glasses, and the appropriate chemically-resistant gloves must be worn.

Laboratory- Site Specific Training Log

By signing this document, you acknowledge that you have received training that was outlined in the Chemical Hygiene Plan and understand that it is your responsibility to know the hazards associated with the materials you use, and to protect yourself and others from those hazards. In addition, you will strive to maintain awareness of peripheral or adjacent hazards, whether from others in the laboratory or from other laboratory groups. You acknowledge that safety is an inherent responsibility to which each member of the laboratory must commit. You also recognize that unsafe practices in the laboratory will not be tolerated.

Trainee	Signature	Trainer	Trainer Initials	Initial : Date	Annual: Date

Regulated Chemical Inventory

The Environmental Health and Safety is required to collect information regarding the use of OSHA Regulated Chemicals.

Please check boxes below for each regulated chemical you use in your laboratory and fill out the USE QUESTIONNAIRE below for each regulated chemical you use. The information will be used to determine if there is a hazardous exposure probability and if air monitoring is required.

PLEASE CHECK BOXES BELOW FOR EACH REGULATED CHEMICAL USED IN YOUR LABORATORY. IF YOUR LAB DOES NOT UTILIZE ANY OF THESE CHEMICALS, CHECK "OUR LAB DOES NOT USE" BOX.

	4-Nitrobiphenyl		4-Dimethylaminoazo-Benzene
	Alpha-Naphthylamine		N-Nitrosodimethylamine
	Methyl Chloromethyl Ether		Vinyl Chloride
	3,3'-Dichlorobenzidine (and its salts)		Inorganic arsenic
	Bis-Chloromethyl Ether		Lead
	Beta-Naphthylamine		Cadmium
	Benzidine		Benzene
	4-Aminodiphenyl		1,2-dibromo-3-chloropropane
	Ethyleneimine		Acrylonitrile
	Beta-Propiolactone		Ethylene oxide
	2-Acetylaminofluorene		Formaldehyde Family
	Methylenedianiline		1,3-Butadiene
	Methylene Chloride		Chromium (VI)

☐ OUR LAB DOES NOT USE REGULATED CHEMICALS

REGULATED CHEMICALS USE QUESTIONNAIRE

(Please fill out one form for each regulated chemical used in your lab)

Lab Location: Building: _____

Department: _____

Room: _____

Regulated Chemical in Use:

_____

1. Please estimate frequency of use of the regulated chemical listed above in any quantity (circle one):

Frequently	Occasionally	Rarely
(Daily to weekly)	(Monthly)	(Less than 12 times/year)

2. What concentration of this regulated chemical is used in your lab?

   _____

3. How often do you use chemical fume hood when you use this regulated chemical (circle one):

   Always Sometimes Never

4. If you answered "Never" or "Sometimes" to question #3, please describe briefly the circumstances which prevent you from use of chemical fume hood while working with this regulated chemical at all times:

   _____

   _____

   _____

   _____

5. Estimate the amount of the regulated chemical used in your lab per week, in ml (circle one):

   0 – 10 ml 11 – 100 ml over 100 ml