**Commonwealth of Massachusetts**

**Department of Labor Standards**

**OSHA Consultation Program**

[**mass.gov/dols/consult**](http://www.mass.gov/dols/consult)

**Sample Written Chemical Hygiene Plan**

(29 CFR 1910.1450)

(Revised March 2024)

**Note: The following model written program is provided as a guideline only.**

**Employers must develop written programs that are specific to their companies’ needs.**

**General Information**

In order to comply with *OSHA 1910.1450, Occupational Exposure to Hazardous Chemicals* in Laboratories, the following written *Chemical Hygiene Plan (CHP)* has been established for
  *(company name)* .

The written program will be available at  *(location)*  for review by any interested employee or employee representative.

 *(Insert Company Name)’s*  laboratory uses hazardous chemicals with the potential for employee exposure and falls under *1910.1450*. To be covered by *1910.1450*, a laboratory must meet OSHA’s definition of “laboratory use of hazardous chemicals”. This means that the laboratory work must involve the handling or use of such chemicals in which all the following conditions are met:

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

 *(Insert Company Name)*  will take all steps necessary to ensure that its employees’ exposures to hazardous chemicals do not exceed the Permissible Exposure Limits (PEL) specified in *29 CFR 1910 subpart Z*.

If there is a reason to believe that exposure levels for any substance regulated by an OSHA standard routinely exceeds the relevant action level (AL) or PEL, *(Insert Company Name)*  will conduct initial monitoring, periodic monitoring if required, and will notify its’ employees of all monitoring results within 15 working days after the receipt of any monitoring results.

 *(Insert Company Name)*  is developing this *Chemical Hygiene Plan (CHP)* to protect employees from health hazards associated with hazardous chemicals and to keep all exposures below their relevant PEL or AL.

A **CHP** is a written program developed and implemented by the employer which sets forth procedures, laboratory equipment, personal protective equipment, and work practices that can protect employees from the health hazards presented by hazardous chemicals used in the workplace.

 *(Insert Company Name)* will assign  *(insert employee name)*  as the Chemical Hygiene Officer (CHO).

A **CHO** is an employee who is designated by the employer and who is qualified by training or experience, to provide technical guidance in the development and implementation of the provisions of the CHP. The CHO is responsible for chemical hygiene include, but are not limited to the following:

* Establishes, maintains, and revises the CHP
* Creates and revises safety rules and regulations
* Monitors, procurement, use, storage, and disposal of chemicals
* Conducts regular inspections of the laboratories, preparations rooms, and chemical storage rooms, and submits detailed laboratory inspection reports to administration
* Maintains inspection, personnel training, and inventory records
* Assists laboratory supervisors in developing and maintaining adequate facilities
* Seeks ways to improve the CHP

This CHP is developed to protect the following employees that work in the *(Insert Company Name)’s* laboratory:

 *Employee Name, Job Title, and Work Area*\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

This CHP will include the following elements and specific measures to ensure laboratory employee protection:

* *Standard Operating Procedures (SOPs)* to follow when hazardous chemicals are used
* Measures to reduce employee exposure to hazardous chemicals (i.e., engineering controls, personal protective equipment, work practices)
* Specific measures to assure that fume hoods and other protective equipment are properly functioning
* Provisions for employee information and training
* Specify which laboratory procedures, activities or operations require prior approval before implementation
* Provisions for medical consultation and examinations
* Designation of the personnel responsible for the implementation of the plan including the assignment of a Chemical Hygiene Officer and, if appropriate, establishment of a Chemical Hygiene Committee
* Provisions for additional employee protection when working with select carcinogens reproductive toxins and acutely toxic substances (i.e., establishment of designated areas, use of containment boxes such as fume hoods or glove boxes, contaminated waste procedures, decontamination procedures)

Chemical Management

* Separate chemicals and store them in accordance with their hazard category and compatibility
* Obtain all *Safety Data Sheets (SDSs)* and correct label information
* Maintain existing labels on incoming containers of chemicals and other materials
* Follow the *Globally Harmonized System (GHS) of Labeling* for all chemicals and other primary materials
* Properly label all secondary chemicals and other materials
* Ensure that chemical shipments are dated upon receipt and stock is rotated
* Date peroxide formers upon receipt and opening, and storing them away from heat and light with tight-fitting nonmetal lids
* Ensure that open shelves used to store chemicals are secured to the wall and contain
¾-inch lips.
* Consult SDSs and keeping incompatible materials separated during transport, storage, use and disposal
* Store oxidizers, reducing agents, and fuels separately to prevent contact in the event of an accident
* Not storing chemicals in chemical hoods, on the floor, in areas of egress, on the benchtop, or in areas near heat or direct sunlight
* Use laboratory-grade, flammable-rated refrigerators, and freezers to store sealed chemical containers of flammable liquids that require cool storage
* Prohibit the storage of food or beverages in laboratory refrigerators
* Store highly hazardous chemicals in a well-ventilated and secure area designated for that purpose
* Keep flammable chemicals in a spark-free environment and in approved flammable-liquid containers and storage cabinets.
* Ground and bond flammable chemicals when dispensing to prevent static charge buildup
* Assign chemical storage and handling areas as controlled-access areas with proper ventilation, appropriate signage, diked floors, and fire suppression systems.
* Keep an accurate inventory of the chemicals stored in the laboratory
* Using adequate ventilation (such as a fume hood) when transferring even a small amount of a particularly hazardous substance (PHS)

List Hazardous Chemicals used at  *(Insert Company Name)*  :

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

List the SOPs for each hazardous chemical and the ways to control potential exposures and required personal protective equipment (PPE):

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Specify which, if any, laboratory procedures, activities or operations require prior approval before implementation:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

List the specific measures that will be taken to assure that fume hoods and other protective equipment (safety shower and eyewash stations, ventilation equipment for storage cabinets, biological safety cabinets) are properly functioning. The measures should indicate how often they are inspected, by whom, what is measured, and where the inspection records and checklists are filed.

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 *(Insert Company Name)*  with the CHO will develop special employee protection for employees that work with:

* Carcinogens
* Reproductive Toxins
* Acute Toxins

These provisions will include:

* Designated area of use
* Use of fume hood or other containment devices
* Procedures for safe removal of contaminated waste
* Decontamination procedures

List the carcinogenic hazardous materials used at  *(Insert Company Name)*  and the relevant SOPs and precautions taken when working with them:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

List the reproductive hazardous materials used at  *(Insert Company Name)*  and the relevant the SOPs and precautions taken when working with them:

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List the acutely toxic hazardous materials used at  *(Insert Company Name)*  and the relevant SOPs and precautions taken when working with them:

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**Employee Training**

 *(Insert Company Name)* will provide all necessary information and training for employees regarding the hazards of the chemicals that they work with. This training will be provided prior to an employee’s initial assignment and/or initial use of each hazardous chemical.

Employee training shall include:

* The contents of the standard, *29 CFR 1910.1450*
* The location and details of the CHP
* PEL, or Recommended Exposure Limit (REL) if no PEL for each substance that employees work with
* Employee signs and symptoms associated with exposure to hazardous materials orchemicals used in the laboratory
* Location and availability of known reference materials covering the hazards, safe handling, storage, and disposal of each of the hazardous chemicals used in the laboratory
* Methods and observations used to detect the presence or release of each hazardous material and chemical (such as monitoring, continuous monitoring devices, visual appearances, or odor of the hazardous chemical being handled)
* Physical and health hazards of each hazardous chemical that employees work with
* How employees can protect themselves from the hazards of the chemicals such as:
	+ Appropriate work practices
	+ Emergency procedures
	+ PPE

**Medical Consultations and Exams**

 *(Insert Company Name)*  will provide all employees that work with hazardous chemicals an opportunity to receive medical attention, including any follow-up examination that the examining physician determines to be necessary, under the following circumstances:

* Whenever an employee develops signs or symptoms associated with a hazardous chemical to which the employee may have been exposed to in the laboratory
* Where exposure monitoring reveals an exposure level routinely above the AL or PEL for an OSHA regulated substance
* Whenever there is an event in the workplace such as a spill, leak, explosion, or other occurrence resulting in the likelihood of a hazardous exposure

All medical examinations and consultations shall be performed by or under the direct supervision of a licensed physician and at no cost to the employee, without loss of pay, and at a reasonable time and place.

**Hazard Identification**

 *(Insert Company Name)*  will ensure that labels on incoming containers of hazardous chemicals are not removed or defaced.

 *(Insert Company Name)*  will maintain any *Safety Data Sheet’s (SDS’s)* that are received with incoming shipments of hazardous chemicals and ensure that they are readily accessible to laboratory employees.

If the composition of the chemical substance that is produced exclusively for the laboratory’s use is known  *(Insert Company Name)*  will determine if it is hazardous and then provide appropriate training as required.

If the chemical produced is a by-product whose composition is not known  *(Insert Company Name)* will assume that the substance is hazardous.

If the chemical substance is produced for another user outside the laboratory  *(Insert Company Name)*  shall comply with the *Hazard Communication Standard (29 CFR 1910.1200)* including the requirements for preparing a *SDS* and proper primary label.

**Respirators**

If employees need to use respirators to maintain exposure below the PEL,  *(Insert Company Name)*  will provide, at no cost to the employee, the proper respiratory equipment, medical evaluations, annual fit testing, and annual training in accordance with the requirements of *29 CFR 1910.134*.

**Recordkeeping**

 *(Insert Company Name)*  will establish and maintain for each employee an accurate record of any measurements taken to monitor employees’ exposures and shall keep those records for at least 30 years.  *(Insert Company Name)*  needs to maintain employee medical records for the duration of their employment plus an additional 30 years. All records are to be kept, transferred, and made available to employees in accordance with *CFR 29 1910.1020*.

**CHP Effectiveness**

 *(Insert Company Name)*  with the  *(insert CHO)*  will review and evaluate the effectiveness of this CHP, at least annually.

*(Signature of Company Representative)*\_\_

  *(Date)*\_\_\_