

## Office of Environmental Health & Safety

### Chemical/Biological Safety Section

# Laboratory Safety Program

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Virginia Commonwealth University under the direction of the Office of Environmental Health and Safety (OEHS), has established a Laboratory Safety Program to meet requirements of the Occupational Safety and Health Administration (OSHA) Standard, [CFR 1910.1450 - Occupational Exposures to Hazardous Chemicals in Laboratories](#), a.k.a. the Laboratory Safety Standard. The purpose of the Standard is to protect employees from health hazards associated with hazardous chemicals in the laboratory and to keep exposures below the permissible exposure limits. Laboratory workers have a "right-to-know" what hazards they may come in contact with on their job. This standard attempts to facilitate this right.

The Laboratory Safety Standard apparently supersedes many of the requirements of the Hazard Communication Standard for laboratories. Laboratories already in compliance with [Hazard Communication](#) will already be in compliance to most of the requirements of the Laboratory Safety Standard. The program requires compiling of a hazardous chemicals list, attaining appropriate Material Safety Data Sheets (MSDS), ensuring that containers are labeled, and providing training to employees. This program applies to all laboratory operations within the University where workers may be exposed to hazardous substances. Due to the enormous variation in types and numbers of laboratories at VCU, it is necessary to implement the program within distinct laboratory units of the university. These laboratory units must be delineated by either the dean, department head, director or laboratory manager. An individual(s) from each laboratory unit must be made responsible for implementing the CHP. This individual is referred to by [OSHA](#) as the Chemical Hygiene Officer.

### **I. [Chemical Hygiene Plan \(CHP\)](#)**

Under the Standard, employers that use hazardous chemicals in the laboratory must develop and carry out the provisions of a written chemical hygiene plan (CHP). The CHP must include

the necessary work practices, procedures, and policies to ensure that employees of VCU/MCV are protected from all potentially hazardous chemicals in their laboratory. Elements of a CHP include:

- A. standard operating procedures (SOPs) relevant to safety and health considerations to be followed when laboratory work involves the use of hazardous chemicals
- B. the procedures used to determine control measures (i.e. exhaust ventilation, personal protective devices)
- C. steps to ensure that these controls are operating properly
- D. employee training methods and information
- E. circumstances where an employee must request permission to conduct a particularly hazardous procedure
- F. provisions for medical consultation and examinations
- G. designation of a Chemical Hygiene Officer
- H. provision for additional employee protection for work with particularly hazardous substances including:
  - 1. establishment of a designated area
  - 2. use of fume hoods or glove boxes
  - 3. procedures for waste removal
  - 4. decontamination procedures

All laboratory managers will be provided with a model chemical hygiene plan by OEHS. The model CHP provides the chemical hygiene officer with the necessary foundation to complete the requirements of the standard. Specific training on the laboratory safety program and generic lab safety topics are provided by OEHS.

## **II. Hazardous Chemical Inventory List**

Each department in the VCU University and Health System must compile a list of hazardous chemical substances used in their area. This [list](#) must be maintained in an area that is readily available to all departmental employees. As new substances are purchased or old ones are disposed, the inventory should be updated to reflect these changes.

### III. Material Safety Data Sheets (MSDS)

MSDS will be received and maintained by each laboratory and available for review by any employee or student working within the laboratory. Although supervisors are responsible for providing health hazard information, they should encourage their employees to further review MSDS for any chemical substance which they seek additional information. Personnel from the Office of Environmental Health & Safety will be available to assist employees with the information contained in MSDS. A brochure is available from OEHS which provides additional information to help.

### IV. Labels and Other Forms of Warning

Each laboratory must ensure that hazardous chemicals are delivered with the manufacturer's original label. When chemicals are transferred from the manufacturer's containers to secondary containers, the containers must be labeled with the identity of the chemical(s) and appropriate hazard warnings.

### V. Program Review

Each unit must review each of the above components of the Laboratory Safety Program annually and update them as necessary. Assistance in training, interpretation, and implementation of this program can be obtained from OEHS.

 [Laboratory Inspection Checklist](#) (require [Adobe Acrobat Reader](#))

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