

Southwest Virginia Community College

Laboratory Chemical Hygiene Plan

The purpose of the Southwest Virginia College Laboratory Chemical Hygiene Plan is to provide guidance on the handling of chemicals in compliance with the Federal OSHA Occupational Exposure to Hazardous Chemicals Standard (29 CFR 1910.1450). The procedures described are those generally applicable to the safe handling of chemicals. Actual procedures shall be based on the specific hazards of the chemicals in use.

Procedures for investigation of possible over exposure to chemicals or alleged health effects resulting from chemical exposure, including methods for medical evaluation and/or consultation.

Criteria for implementation of control measures to reduce employee exposure to hazardous chemicals and special control measures to be implemented prior to handling extremely hazardous chemicals.

Methods of compliance as they apply to Material Safety Data Sheets (MSDS). Which will include the acquiring, maintenance and availability of MSDS. Employee training both initial and annual will be outlined in the plan.

I.Guidelines For Working With Laboratory Chemicals

A. Institute a Chemical Hygiene Program which is available to all persons involved in the Science programs.

B. Follow posted laboratory rules and procedures.

C. Minimize all chemical exposures by using a working fume hood whenever possible.

D. Provide adequate ventilation where fume hoods are not available.

E. Acquire and maintain appropriate chemical labeling system.

II.Laboratory Safety, Chemical Storage and Inventory

A. Safety Equipment

1. The chemistry laboratory is equipped with working fume hoods, eyewash stations, fire extinguishers, fire blanket, and first aid kit.

2. The chemistry laboratory is equipped with a telephone for emergency communication.

3. MSDS for chemicals used in the laboratory are available in the laboratory.

B. Personal Protective Equipment

1. Each program participant is responsible for obtaining federally regulated eye protection.

2. The Chemistry laboratory is equipped with appropriate gloves which are available when required.

C. Chemical Storage

1. Flammable solvents are stored in an OSHA approved cabinet with the appropriate ventilation required.

2. Various acids, caustics, solvents and chemical wastes are stored in separate areas, according to their chemical properties.

3. The laboratory is equipped with an explosion proof refrigerator and freezer.

D. Chemical Inventory and Labeling

1. The Chemistry instructors will be responsible for maintaining an annual chemical inventory for their department.

2. Instructors in the Chemistry Department will be responsible for container labeling.

III. Housekeeping and Maintenance

A. Cleaning

1. Daily upkeep of the laboratories with regard to experiments will be maintained by the instructors teaching the classes.

2. Routine cleaning of the floors removal non-chemical refuse will be done by the college housekeeping system.

B. Maintenance

1. The College maintenance staff will be responsible for periodic inspection of eye washes, showers, fire extinguishers and other safety equipment.

IV. Material Safety Data Sheets (MSDS)

A. The Chemistry instructors will be responsible for acquiring and maintaining the necessary MSDS.

B. The MSDS are filed alphabetically by common name, e.g., Acetone.

C. The MSDS are located in an area accessible to all laboratories and chemical storage areas. They are located at the front desk of the Laboratory.

V. Waste Disposal

A. It will be the responsibility of the Chemistry instructor to collect and document materials used in the lab that require special disposal methods. Disposal information will be obtained from MSDS as well as known reference material on the safe handling, storage and disposal of hazardous chemicals.

B. Hazardous waste will be collected and stored in appropriately constructed and labeled containers until a qualified hazardous waste transporter removes it for disposal. The College Maintenance Department will arrange for this Hazardous Chemical Disposal service.

C. The College Business Office will maintain Hazardous Waste Manifests for three (3) years from date of pick up.

VI. Outside Contractors

A. The Maintenance Department will communicate with the Chemistry instructors before a project is scheduled in the area of the chemical laboratory or chemical storage to ensure that the contractor is provided with hazardous chemical information pertinent to the project.

VII. Spills and Accidents

A. The evacuation route from the laboratory is listed at the door.

B. Spill control procedures for each chemical are detailed in the MSDS. Appropriate spill control materials are located in areas where acids, caustics and solvents are routinely used or stored.

C. In the event a program participant is known or suspected to have been exposed to a toxic chemical:

- 1. Personal decontamination is to be done immediately following exposure. The decontamination procedure for each chemical is described in the MSDS.***

2. Notification is to be made to the program participant that he/she has the right to a medical consultation to determine if a medical evaluation should be performed. Documentation of the incident will be filed in the Human Resources Department.

3. If a medical evaluation is conducted, the exposed individual shall be notified in writing of all findings, medical opinions and recommendations.

VIII. Basic Rules and Procedures for Working with Chemicals

A. Do: Keep only the amount of chemicals needed to do the immediate lab procedure.

1. Perform lab work in the lab, not in storage or other areas.
2. Store toxic substances in approved containers that are housed in ventilated, identified and locked storage areas.
3. Check stored chemicals regularly for deterioration and broken containers.
4. Dispose of chemicals, broken glass and other waste in approved receptacles.
5. Clean up broken glass and spills immediately.
6. Keep the lab clean and neat.
7. Learn how to dispose of materials safely and legally.
8. Know what to do in an emergency.
9. Avoid using damaged glassware.
10. Avoid storing chemicals near heat or sunlight, or near other substances with which they might react.
11. Use a cart or chemical carrier to transport chemicals between the lab and storeroom.

12. Know where chemicals should be stored; avoid permanent storage in hoods or on bench tops.
13. Store materials above the floor to avoid tripping hazards.
14. Avoid keeping chemicals that are no longer needed.
15. Avoid leaving equipment unattended when in operation.
16. Be alert to unsafe conditions and seek correction when detected.
17. Avoid behavior, which might confuse, startle or distract others working in the lab.
18. Avoid working alone in the building.

IX. Training

A. Initial Awareness and Training

1. Upon hire, Chemistry instructors on campus shall receive information regarding occupational exposure to hazardous material as well as information contained in the Chemical Hygiene Program. Students receive this information as part of their laboratory curriculum.

B. Annual Training for Chemistry instructors will include:

1. Details of the College's Chemical Hygiene Plan including an explanation of the following:

(1) Location and availability of the Chemical Hygiene Plan.

(2) Basic rules and Procedures for working with Chemicals.

(3) Labeling system.

(4) Material Safety Data Sheets

(5) Personal Protective Equipment

(6) Disposal of hazardous waste

- 2. Safety and health hazards of the chemicals encountered in the Science Lab.**
- 3. Signs and symptoms associated with exposure to hazardous chemicals used in the lab.**
- 4. Detection and management of hazardous chemical spill.**
- 5. Required procedures following an Accident/Incident in the Lab.**
- 6. Contents of the Occupational Exposure to Hazardous Chemicals in Laboratories.**

X.Records

A. Chemical Hygiene Plan

- 1. Southwest Virginia Community College's Chemical Hygiene Plan is designed to bring the chemical laboratory in compliance with current knowledge and regulations. It is the responsibility of the Chemistry instructors and the maintenance supervisor to review and update this plan annually.**

B. Accident/Incident Reports

- 1. The Human Resources Department will maintain copies of all Accident/Incident Reports involving the Science Department personnel.**