Mid-Michigan District HEALTH DEPARTMENT

CLINTON • GRATIOT • MONTCALM

# Chemical Hygiene Plan

## Mid-Michigan District Health Department

The Hazard Communication Plan (Chemical Hygiene Plan) is required by Part 431 of the Michigan Occupational Safety and Health Act governing hazardous work in laboratories and supercedes federal regulations in Michigan to ensure that information is transmitted to employees about the chemical hazards that they are exposed to. This is accomplished through labels, material safety data sheets, instructions, written information, training, and other forms of warning.

## 1. BASIC RULES & PROCEDURES

The standard requires that Mid-Michigan District Health Department (MMDHD) employees work cooperatively in providing a safe and healthful work environment with training, evaluations and periodic meetings that ensure that all staff are aware of and comply with safeguards that are in place to limit accidents and injuries by the following basic rules:

- Institute a Chemical Hygiene Plan
- Understand exposure limits and monitoring procedures
- Avoid underestimation of risk
- Provide adequate ventilation when working with chemicals
- Participate in the annual training for employees
- Observe the Permissible Exposure Limits (PEL's) and Threshold Limit Values (TLV's) as defined by the SDS for all chemicals in use at the work site.

## 2. PROCUREMENT/HAZARD DETERMINATION/CHEMICAL INVENTORY

General Considerations:

- Before a substance is received, information on proper handling, storage, and disposal should be known to those who will handle, store, work with or dispose of the substance.
- Amounts stored should be as small as practical. A laboratory means 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 means 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.
- When chemicals are hand carried outside of the immediate work area, the container should be placed in an outside container or bucket.

Information supplied by the manufacturers will be relied upon for hazard determination.

- A hazardous chemical means a chemical for which there is statistically significant evidence based on at least one study conducted in accordance with established scientific principles that acute or chronic health effects may occur in exposed employees.
- A physical hazard means a chemical for which there is scientifically valid evidence that it is a combustible liquid, a compressed gas, explosive, flammable, an organic peroxide, an oxidizer, pyrophoric, unstable (reactive) or water-reactive.
- A health hazard includes chemicals which are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, hepatotoxins, nephrotoxins, neurotoxins, agents which act on the hematopoietic systems, and agents which damage the lungs, skin, eyes, or mucous membranes.

It is the policy of Mid-Michigan District Health Department to request a safety data sheet for each chemical that is used in the workplace.

Laboratory uses of hazardous chemicals that provide no potential for employee exposure. Examples of such conditions might include:

- Procedures using chemically-impregnated test media such as dip-and-read tests where a reagent strip is dipped into the specimen to be tested; and
- Commercially prepared kits, such as pregnancy tests, in which all the reagents needed to conduct the test are contained in the kit.
- Medications and drugs are considered exempt from the Hazard Communication Plan when it is determined that are in solid, final form, for direct administration to the patient (i.e., tablets, pills, capsules).
- Consumer products, when it is determined that they are used in the same manner and with no more frequency than a normal consumer would use them.

The chemical inventory is monitored, and training updates are coordinated by the Medical Director, or designee, and updated whenever one or more of the following occurs:

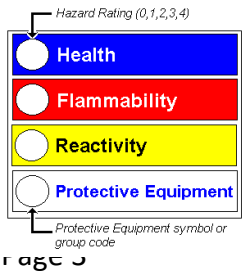
- A new hazard is introduced into the workplace.
- A hazard has been removed from use in the workplace.
- The hazard determination process is reviewed during annual self-inspection to ensure that it is current and that any new safety situations are promptly addressed.

## 3. HOUSEKEEPING, INSPECTIONS & MAINTENANCE

- Floors should be cleaned regularly. The cleaning schedule with particulars listed for MMDHD is detailed in the Housekeeping Procedures Policy 404.0.
- Formal housekeeping and chemical hygiene inspections should be held at least annually; informal inspections should be continual.
- Hallways should not be used as storage areas. Access to exits, emergency equipment, and utility controls should never be blocked. The inspection schedule for Mid-Michigan District Health Department is annually and is conducted by the Branch Office Supervisors.
- Maintenance, as applicable and should be documented.
- Eye wash fountains should be inspected at intervals of not less than three months.
- Other safety equipment should be inspected regularly (e.g., every 3-6 months). Procedures to prevent restarting of out-of-service equipment must be established. These records are maintained in the CLIA Manual.

## 4. HAZARD LABELING SYSTEM

In accordance with the hazardous work in laboratories standard, chemical hazard labels are to be legible, in English, and displayed either on the container (of the product) or readily available in the work area throughout each work shift. The immediate work area is defined as the room where the product will be used by the employee. In keeping with the interpreted intent of the law, it is policy to ensure that the employee is familiar with the hazards they have contact with and that there is a label available to remind or warn them of the hazards.




A label will be provided for each chemical product that will include an indication of the hazards presented by the product in each of four areas fire, reactivity, health and special hazards (see example). Special safety equipment, which is required to handle the hazardous products, must be indicated on the label.

Prominent signs and labels of the following types must be posted:

- Emergency telephone numbers of emergency personnel/facilities, supervisors, and laboratory workers
- Identity labels, showing contents of containers (including waste receptacles) and associated hazards
- Location signs for eyewash stations, other safety and first aid equipment, exits and areas where food and beverage consumption and storage are permitted
- Warnings at areas or equipment where special or unusual hazards exist.

## 5. CHEMICAL SPILL RESPONSE

The initial step in controlling any type of spill is prevention. All hazardous chemicals should be handled with care and with appropriate PPE. The cleanup process for spills is much more costly than slowing down to be cautious when working with these items.

Spill Control Policy for Mid-Michigan District Health Department

All accidents or near accidents should be carefully analyzed with the results distributed to all who might benefit. In the event of a chemical spill, the safety data sheet will be referred to for proper spill response procedures. These will include appropriate materials to be used for collection of the material (i.e., absorbents, spill kit materials), as well as protective measures to be taken with the product. Outlined below are some basic steps for responding to a chemical spill should one occur:

- Location signs for eyewash stations, other safety and first aid equipment, and exits.
- Warnings at areas or equipment where special or unusual hazards exist.
- Determine what has been spilled and locate the safety data sheet (SDS) for the product.
- If the product is toxic, evacuate personnel from the area.
- Provide adequate ventilation as described on the SDS. Try to contain the spill from spreading with absorbent material.
- Cleanup personnel must use proper personal protective equipment as described for spill response (within the SDS).
- If the SDS is incomplete, professional judgment will be used in the absence of specific spill response information. The manufacturer may be contacted for further information if time allows.
- Dispose of clean up materials as recommended by the manufacturer and in accordance with local, state, and federal regulations. Ensure that materials saturated with flammable liquids are placed into containers that will limit the potential for combustion and subsequent fire hazards.
- An incident report must be completed and turned into management for review and discussion with other staff so that recurrence of the incident can be avoided.

Spill kits are in the laboratory in each branch office.

## 6. MEDICAL PROGRAM

Regular medical surveillance will be established to the extent required by regulations (per SDS's).

Routine surveillance - as necessary (Per SDS's). Anyone at MMDHD whose work involves regular and frequent handling of toxicologically significant quantities of a chemical will be referred to a qualified physician to determine on an individual basis whether a regular schedule of medical surveillance is desirable.

- Personnel trained in first aid will be available during working hours and an emergency room with medical personnel should be nearby. A list for the nearest emergency room is in the CLIA manual.

**7. PPE SELECTIONS, PROVISION, USE AND ACCESSIBILITY**

Personal protective equipment (PPE) is provided to employees for the protection of eyes, face, head, and extremities, where there is a potential for injury or impairment in the function of the body through absorption, inhalation, or physical contact. The PPE for employees has been selected based upon the type of task being performed and the degree of exposure anticipated from the hazard to which the employee has been exposed. Equipment is maintained in accordance with manufacturers' guidelines to ensure its proper functioning and is available in sizes to fit all staff.

The use of personal protective equipment is a condition of employment. Employees who choose to disregard the importance of personal protective equipment may be subject to discipline and potential dismissal from their position.

Annual employee training regarding personal protective equipment will include:

- when PPE is required to be used,
- what PPE is necessary for specific tasks,
- how to properly wear, use and adjust PPE,
- proper care, maintenance, limitations, useful life, and disposal of PPE.
- other items designated by the Medical Director may be required.

Examples of PPE provided and their intended use at Mid-Michigan District Health Department are as follows:

| Item | Location |
|---|---|
| Fire Extinguishers | In hallways and storage rooms |
| Fire Alarms | On hallway walls |
| Eyewash Fountain(s) | In the laboratory |
| Safety Goggles/glasses | Storage rooms |
| Lab Coats | Storage rooms |
| Masks | Storage rooms |
| Gloves | Clinic rooms and laboratories |

Lab coats, gowns or other protective clothing are worn whenever there is reasonable potential for the soiling of clothes when working with hazardous chemicals or blood and body fluids. The protective garments have been selected to meet the type and amount of soiling expected to be present during a specific task. The safety data sheets of hazardous chemicals will be reviewed to select proper PPE for a given product.

**Protective Eye Wear and Masks**
Protective eye wear and/or masks are worn whenever there is potential for the generation of splashes, spills, spray, splatter, droplets, or aerosols of chemicals and there is the potential for eye, nose, or mouth contamination. Appropriate eye wear or masks will be worn as recommended by the manufacturer of a hazardous product.

**Gloves**
When working with hazardous chemicals, blood or body fluids, gloves will be worn according to manufacturer's recommendations. General-purpose gloves, not used for healthcare purposes, may be decontaminated, and reused. Gloves are not to be used if they are peeling, cracking or discolored, or if they have punctures, tears, or other evidence of deterioration.

**Maintenance and Replacement of PPE**
The Branch Office Supervisor will periodically survey PPE to ensure its condition allows for the intended protection of the employee. Employees will immediately notify supervision of any damage or defects that make the PPE incapable of properly protecting them. Repair and/or replacement of personal protective equipment are provided by the employer as needed to maintain its effectiveness.

Necessary cleaning or disposal of personal protective equipment is provided by Mid-Michigan District Health Department. Linens are **NOT** to be taken home by the employee for laundering.

Employees will not be responsible for the cost of any personal protective equipment that is required to protect them from exposure to chemical or biohazards in the workplace.

## 8. RECORDKEEPING

- Accident records must be written with any follow-up or corrective actions taken noted.
- Chemical Hygiene Plan records must document that the facilities and precautions were compatible with current knowledge and regulations.
- Inventory and usage records for high-risk substances, if present, will be kept. Records of the amounts of these materials on hand, amounts used, and the names of the workers involved (if an accident occurs) will be maintained.

Medical records – MMDHD will establish and maintain for each employee an accurate record of any measurements taken to monitor employee exposures and any medical consultation and examinations including tests or written opinions required by this standard. MMDHD will assure that such records are kept, transferred, and made available. All medical records will be retained by MMDHD in accordance with the requirements of state and federal regulations for at least the duration of employment plus 30 years.

- All training records will include the following information and will be maintained for three years from the date on which the training occurred:
    - The dates of the training sessions
    - The contents or a summary of the training sessions
    - The names and qualifications of people conducting the training
    - The names and job titles of all people attending the training sessions

- Safety Data Sheets are to be retained for 30 years from the date of removal from the active file

Documentation of the training will be maintained in employee personnel files or in a master training file.

## 9. SAFETY DATA SHEETS

Safety data sheets are maintained in the CLIA Manual to comply with MIOSHA's Hazardous Work in Laboratories Standard. Safety data sheets contain useful information regarding the hazards associated with products or chemicals used in the facility. Employees are not required to memorize the information contained within the data sheets but are provided with training so that they can locate them and find information such as:

- Flammability Hazard, Reactivity Hazard, Health Hazard, Precautions for Safe Handling and Use, and Control Measures.

This information will ensure that chemicals and products are used in a safe manner and that employees are aware of the hazards associated with those items.

- It is the responsibility of Purchasing to collect safety data sheets for each hazardous chemical or product that is used in the facility. Suppliers and manufacturers of such products are required to supply safety data sheets along with the first order of each product. If a safety data sheet is not received with a first order, one will be requested.
- For hazard labeling to be completed, certain information must be provided on the SDS. If any necessary information is missing, the manufacturer will be contacted to obtain it.
- When new or revised data sheets are received, they will be placed in the designated SDS file.

If an SDS is removed because it has been revised or the product is no longer used, the data sheet must be marked with the date it was removed and then placed in a separate file of archived data sheets. These data sheets are to be retained for 30 years from the date of removal from the active file.

SDS sheets for MMDHD are in the laboratory in each branch office.

## 10. WASTE MANAGEMENT

Chemical waste (or hazardous products) is disposed of in accordance with information provided on the SDS by the products manufacturer at MMDHD. Should the SDS fail to provide adequate instruction, the manufacturer is contacted by telephone for further information on proper disposal of the product.

If the chemical waste has become contaminated with blood or other potentially infectious materials, then it will be disposed of in accordance with the guidelines set forth in the medical waste management plan.

- Content: The waste disposal program at the MMDHD must specify how waste is to be collected, segregated, stored, and transported and include consideration of what materials can be incinerated.
- Aim: To ensure that minimal harm to people, other organisms, and the environment will result from the disposal of waste laboratory chemicals. Transport from the institution must be in

accordance with DOT regulations.

- Discarding Chemical Stocks: Unlabeled containers of chemicals and solutions must undergo prompt disposal; if partially used, they should not be opened.
- Method of Disposal: Incineration in an environmentally acceptable manner is the most practical disposal method for combustible laboratory waste. Indiscriminate disposal by pouring waste chemicals down the drain or adding them to mixed refuse for landfill burial is unacceptable.
- Disposal by recycling or chemical decontamination should be used when possible.

## 11. EMPLOYEE INFORMATION AND TRAINING

Annually, CHED Leadership will provide training to all CHED staff. All records of training are provided to HR to put into the employee's file. The training and education program will be a regular, continuing activity.

- Before any new hazardous chemical is introduced into the workplace, each employee will be given information in the same manner as during the initial safety class.
- Before starting work, at the time of their initial assignment, each new employee will receive training.
- <u>Each employee will be given information</u> on:
  - < Location and availability of this Chemical Hygiene Plan
  - < Details of the written Chemical Hygiene Plan
  - < Chemicals and their hazards in the workplace
  - < PEL's for MIOSHA regulated substances or exposure limits in use at MMDHD. This information is in the SDS
  - < How to lessen or prevent exposure to these chemicals
  - < Signs and symptoms associated with exposure to hazardous chemicals
  - < Protective measures employees can take to protect themselves from chemical exposures, such as PPE, work practices, and emergency procedures
  - < Methods and observation that may be used to detect the presence of, or release of a hazardous chemical such as monitoring and the visual or odor of hazardous chemicals when being released
  - < Procedures to follow if they are exposed
  - < How to read and interpret labels and SD.
  - < Where to locate SDS at MMDHD and from whom they may obtain copies.

<u>The employee will be informed that:</u>

MMDHD is prohibited from discharging, or discriminating against, an employee who exercises their rights regarding information about hazardous chemicals in the workplace.