

Beaumont

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## Laboratory Chemical Hygiene Plan

Document Type: Plan

### I. PURPOSE AND OBJECTIVE:

- A. 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 supersedes 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, safety data sheets, instructions, written information, training and other forms of warning.
- B. The Laboratory Chemical Hygiene Plan references several Corewell Health safety policies from the hospital Environment of Care (EOC) department and the Laboratory. New or edited policies can be found in the Policy Management System and legacy policies can be found in the founding organization’s policy site.
  - 1. References to Michigan Occupational Safety and Health Administration (MIOSHA) Safety and Health Standards Part 431. Hazardous Work in Laboratories can be found at: [MIOSHA Standards, Part 431. Hazardous Work in Laboratories.](#)
  - 2. References to MIOSHA Occupational Health Standards, Part 430. Hazard Communication can be found at: [MIOSHA Standards Part 430. Hazard Communication.](#)
  - 3. References to MIOSHA Personal Protective Equipment (PPE) can be found at: [General Industry Safety and Health Standard Part 433. Personal Protective Equipment.](#)
  - 4. References to Occupational Safety and Health Administration (OSHA) 29 CFR Standards can be found at: [OSHA 29 CFR Standards.](#)
- C. The MIOSHA Safety and Health Standard requires that Corewell Laboratory 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. MIOSHA Standards, Part 431.

1. Institute a Chemical Hygiene Program at the work site
  2. Avoid underestimation of risk
  3. Provide adequate ventilation when working with chemicals
  4. Minimize chemical exposures
  5. Observe the Permissible Exposure Limits (PEL's) and Threshold Limit Values (TLV's) as defined by the Safety Data Sheets (SDS) for all chemicals in use at the work site.
- D. The College of American Pathologists (CAP) has specific requirements for the laboratory Chemical Hygiene Plan in the Laboratory General Checklist. This Chemical Hygiene Plan meets each of these requirements in Section XIII.

## II. PROCUREMENT/HAZARD DETERMINATION/ CHEMICAL INVENTORY:

- A. Refer to: [Hazard Communication Program](#)
- B. **Procurement:** 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.
- C. **Laboratory storage:** Amounts stored should be as small as practical. A laboratory means a facility where the 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.
- D. **Distribution:** When chemicals are hand carried outside of the immediate work area, the container should be placed in an outside container or bucket. Freight only elevators should be used if possible.
- E. Information supplied by the manufacturers will be relied upon for the hazard determination. It is the policy of Corewell Laboratory to request a safety data sheet for each chemical that is used in the workplace.
1. 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.
  2. A **physical hazard** means a chemical for which there is scientifically valid evidence that it is a combustible liquid, compressed gas, explosive, flammable, organic peroxide, oxidizer, pyrophoric, unstable (reactive) or water-reactive.
  3. 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.

- F. The laboratory uses some hazardous chemicals that provide no potential for employee exposure. Examples of such conditions include:
  - 1. 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 of the reagents needed to conduct the test are contained in the kit.
  - 2. Medications and drugs are considered exempt from the Laboratory Hazard Communication Plan when it is determined that are in solid, final form, for direct administration to the patient (i.e., tablets, pills, capsules, salts, etc.).
  - 3. 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.
- G. The chemical inventory is monitored and training updates are coordinated by the Chemical Safety Officer, Department Manager/Supervisor(s), and/or Laboratory Safety Officer(s) and updated whenever one or more of the following occurs:
  - 1. A new hazardous chemical is introduced into the workplace.
  - 2. A hazardous chemical has been removed from use in the workplace.
  - 3. The hazardous chemical determination process is reviewed during annual self-inspection to verify that it is current and any new safety situations are promptly addressed. The annual self-inspection of hazardous chemicals is delegated as per the department manager's discretion and communicated to the Laboratory Safety Officer(s).

### III. HOUSEKEEPING, INSPECTION & MAINTENANCE RESPONSE:

- A. Refer to MIOSHA Part 431, Appendix A, Part D, Section 4, Inspection Program.
- B. Housekeeping: Floors should be cleaned regularly.
- C. Inspections: Lab Department safety and chemical hygiene inspections should be held annually. Refer to: [Laboratory Annual Safety Assessments](#)
- D. Passageways: Stairways and hallways should not be used as storage areas. Access to exits, emergency equipment, and utility controls should never be blocked.
- E. Maintenance (as applicable): Eye wash fountains and safety showers should be inspected at regular intervals and routinely tested
  - 1. Hospital Safety Manual: Eye Wash Stations and Shower Equipment.
  - 2. Other safety equipment should be inspected regularly (e.g., every 3-6 months).
  - 3. Respirators (if supplied) for routine use should be inspected periodically by the laboratory manager. Refer to: [Respiratory Protection Plan](#).
  - 4. Procedures to prevent restarting of out of service equipment must be










established. Refer to: [Lock Out/Tag Out Policy](#). These records are maintained by the Corewell Health Facilities Management departments.

## IV. HAZARD LABELING SYSTEM:

- A. In accordance with the MIOSHA Standards, Part 431 and Part 430, 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 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.
- B. Globally Harmonized System of Classification and Labeling of Chemicals (GHS) pictograms are displayed below:

1. [OSHA Hazard Communication Standard Pictogram](#)
2. Hazard Communication Standard (HCS)

### HCS Pictograms and Hazards

<b>Health Hazard</b>  <ul style="list-style-type: none"> <li>• Carcinogen</li> <li>• Mutagenicity</li> <li>• Reproductive Toxicity</li> <li>• Respiratory Sensitizer</li> <li>• Target Organ Toxicity</li> <li>• Aspiration Toxicity</li> </ul>	<b>Flame</b>  <ul style="list-style-type: none"> <li>• Flammables</li> <li>• Pyrophorics</li> <li>• Self-Heating</li> <li>• Emits Flammable Gas</li> <li>• Self-Reactives</li> <li>• Organic Peroxides</li> </ul>	<b>Exclamation Mark</b>  <ul style="list-style-type: none"> <li>• Irritant (skin and eye)</li> <li>• Skin Sensitizer</li> <li>• Acute Toxicity (harmful)</li> <li>• Narcotic Effects</li> <li>• Respiratory Tract Irritant</li> <li>• Hazardous to Ozone Layer (Non-Mandatory)</li> </ul>
<b>Gas Cylinder</b>  <ul style="list-style-type: none"> <li>• Gases Under Pressure</li> </ul>	<b>Corrosion</b>  <ul style="list-style-type: none"> <li>• Skin Corrosion/ Burns</li> <li>• Eye Damage</li> <li>• Corrosive to Metals</li> </ul>	<b>Exploding Bomb</b>  <ul style="list-style-type: none"> <li>• Explosives</li> <li>• Self-Reactives</li> <li>• Organic Peroxides</li> </ul>
<b>Flame Over Circle</b>  <ul style="list-style-type: none"> <li>• Oxidizers</li> </ul>	<b>Environment (Non-Mandatory)</b>  <ul style="list-style-type: none"> <li>• Aquatic Toxicity</li> </ul>	<b>Skull and Crossbones</b>  <ul style="list-style-type: none"> <li>• Acute Toxicity (fatal or toxic)</li> </ul>

- C. A label will be provided for each chemical product on a primary container that will include the following:
1. Product identifier/name of chemical
  2. Signal word (either Danger or Warning)
  3. Hazard statement(s)
  4. Pictogram(s)
  5. Precautionary statement(s)
  6. Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party
- D. A label will be created for any secondary container that contains the information specified on shipped containers or the product identifier/name and words, pictures, symbols, or combination thereof, which provide at least general information regarding the hazards of the chemicals, and which, in conjunction with the other information immediately available to employees in the Hospital Safety Manual Hazard Communication Program, will provide employees with the specific information regarding the physical and health hazards of the hazardous chemical.
- E. Prominent signs or labels of the following types must be posted:
1. Emergency telephone numbers of emergency personnel/facilities, managers, and laboratory workers
  2. Identity labels, showing contents of containers (including waste receptacles) and associated hazards
  3. Location signs for safety showers, eyewash stations, other safety and first aid equipment, exits and areas where food and beverage consumption and storage are permitted
  4. Warnings at areas or equipment where special or unusual hazards exist

## V. CHEMICAL SPILL RESPONSE:

- A. Refer to: MIOSHA Part 431, Appendix A, Part D, Section 8, Spills and Accidents
- B. Refer to: [Laboratory Spill Response](#)
- C. Refer to: [Hazardous Material Spill Response Plan](#)
- D. The initial step in controlling any type of spill is prevention. All hazardous chemicals should be handled with care and with appropriate Personal Protective Equipment (PPE) as stated on the chemical's safety data sheet. The cleanup process for spills is much more costly than slowing down to be cautious when working with these items.
- E. All accidents or near accidents should be carefully analyzed with the results distributed to all who might benefit.
- F. 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 particular product.

- G. SPILLED acronym is included in the employee safety training: Secure the area, Protect yourself, Inspect the spill, Locate spill kit, Lay down barrier and absorbents, Extract the spill clean-up waste, Dispose of waste properly.

## VI. MEDICAL PROGRAM:

- A. Refer to: MIOSHA Standards, Part 431 Medical Consultation and Examinations.
- B. Regular medical surveillance will be established to the extent required by regulations (per SDS's) at the Corewell Health Laboratories.
- C. Routine surveillance - as necessary (Per SDS's). Anyone at a Corewell Health Laboratory 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.
- D. Personnel trained in first aid will be available during working hours and an emergency room with medical personnel should be nearby. The nearest emergency room is located at:
  - 1. Corewell Health - Canton, 7300 N. Canton Center Rd, Canton, MI 48187
  - 2. Corewell Health - Dearborn, 18101 Oakwood Blvd., Dearborn, MI 48124
  - 3. Corewell Health - Farmington Hills, 28050 Grand River Ave., Farmington Hills, MI 48336
  - 4. Corewell Health - Grosse Pointe, 468 Cadieux Rd., Grosse Pointe, MI 48230
  - 5. Corewell Health - Lenox, 36555 26 Mile Rd., Lenox, MI 48048
  - 6. Corewell Health - Livonia, 39000 W. 7 Mile Rd., Livonia, MI 48152
  - 7. Corewell Health - Royal Oak, 3601 W. 13 Mile Rd., Royal Oak, MI 48073
  - 8. Corewell Health - Taylor, 10000 Telegraph Rd., Taylor, MI 48180
  - 9. Corewell Health - Trenton, 5450 Fort St., Trenton, MI 48183
  - 10. Corewell Health - Troy, 44201 Dequindre Rd., Troy, MI 48085
  - 11. Corewell Health - Wayne, 33155 Annapolis St., Wayne, MI 48184

## VII. PERSONAL PROTECTIVE EQUIPMENT (PPE) SELECTIONS, PROVISION, USE AND ACCESSIBILITY:

- A. Refer to: MIOSHA Standards, Part 431 and Appendix A, Part A-General Principles.
- B. Refer to: [Laboratory Personal Protective Measures](#)
- C. Refer to: [Personal Protective Equipment - MIOSHA](#) .
- D. PPE is provided to employees of Corewell Health 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.
- E. The PPE for employees is selected based upon the specific laboratory task or procedure the

employee is performing and the degree of hazard exposure anticipated. Equipment is maintained in accordance with manufacturers' guidelines to ensure its proper functioning and is available in sizes to fit all staff.

- F. The use of personal protective equipment is a condition of employment. Employees who disregard the proper use of personal protective equipment when required for their job assignment may be subjected to retraining and follow up at the manager's discretion.
- G. Annual review regarding personal protective equipment will include:
  - 1. When PPE is required to be used
  - 2. What PPE is necessary for specific tasks
  - 3. How to properly wear, use and adjust PPE
  - 4. The proper care, maintenance, limitations, useful life and disposal of PPE
  - 5. Other items designated by the laboratory manger may be required
- H. Examples of PPE provided and their intended use at Corewell Health Laboratory are as follows:
  - 1. Lab coats
  - 2. Protective eye wear (safety goggles/glasses), face shields, masks
  - 3. Gloves
- I. Lab coats, gowns or other protective clothing are worn whenever there is the 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.
- J. Protective Eye Wear, Shields and Masks: Protective eye wear, face shields, and/or masks are worn whenever there is the 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, masks, or shields will be worn as recommended by the manufacturer of a hazardous product.
- K. Gloves: When working with hazardous chemicals, blood or body fluids, gloves will be worn according to manufacturer recommendations. General-purpose gloves, not used in direct patient care, 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.
- L. Maintenance and Replacement of PPE: The Corewell Health Laboratories will periodically survey PPE to ensure its condition allows for the intended protection of the employee. Employees will immediately notify managers 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.
- M. Necessary cleaning, laundering or disposal of personal protective equipment is provided by the Corewell Health laboratories. Linens are NOT to be taken home by the employee for laundering.
- N. 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.

## VIII. RECORDS:

- A. Refer to MIOSHA Standards, Part 431 Recordkeeping.
- B. Accident records must be written with any follow up or corrective actions taken. Refer to: [Laboratory Employee Incident Investigation and Root Cause Analysis](#)
- C. Chemical Hygiene Plan records must document that the facilities and precautions were compatible with current knowledge and regulations.
- D. Inventory and usage records for high risk substances, if present, will be kept by the Corewell Health laboratories. 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.
- E. Medical records – The Corewell Health Employee Health and Safety department 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 the MIOSHA Recordkeeping standard. The Corewell Health Employee Health and Safety department will assure that such records are kept, transferred, and made available. All medical records will be retained by the Corewell Health Employee Health and Safety department in accordance with the requirements of state and federal regulations for at least the duration of employment plus 30 years. MIOSHA Recordkeeping standard in accordance with OSHA 29 CFR 1910.1020(d)(1)(i) Sub part Z, Toxic and Hazardous Substances, Assess to employee exposure and medical records.

## IX. SAFETY DATA SHEETS (SDS):

- A. Refer to MIOSHA Standards, Part 431 Employee Information and Training section h - Hazard Identification and Part 430 Hazard Communication, section 14k - Safety Data Sheets.
- B. Safety data sheets (SDS) are maintained at the Corewell Health laboratories to comply with MIOSHA's Hazardous Work in Laboratories Standard. Hospital Safety policy: [Hazard Communication Program](#).
  - 1. SDS for Corewell Health are located in the SDS Vault application and can be accessed from the Corewell Health Intranet (also known as "The Well") , under the Tools and Resources tab.
- C. The information contained in safety data sheets, such as associated hazards, will aid employees in the safety handling of hazardous products and chemicals. 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 (spill clean-up).
- D. It is the responsibility of the Corewell Health laboratories to have safety data sheets available for each hazardous chemical or product used in the facility. The suppliers and manufacturers of such products are required to supply material 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.
  - 1. The annual review of the Laboratory department's hazardous chemicals' SDS in the



SDS Vault application is delegated as per the department manager's discretion. Completion of the review and any new chemical SDS that needs to be uploaded into the SDS Vault application is communicated to the Laboratory Safety Officer(s). Refer to: [Laboratory Annual Safety Assessments](#)

2. In order for hazard labeling to be completed, hazardous information must be provided on the SDS. If any necessary information is missing, the manufacturer will be contacted in order to obtain it.
3. The location of the safety data sheets must be posted in the laboratory. Refer to: [Hazard Communication Program](#)
4. When new or revised data sheets are received, they should be posted on the employee bulletin board for review by employees before they are included in the designated SDS file.
  - a. MIOSHA Part 430: Not later than 5 working days after receipt of a new or a revised safety data sheet, the employer shall post for a period of 10 working days a notice of the existence of the new or revised sheet and directions for locating the new or revised sheet according to the method used by the employer for organizing safety data sheets.
5. If an SDS is removed because of revision or the product is no longer used, the data sheet is marked as "Not in use" in the SDS Vault application for the specific Laboratory location. Safety data sheets are to be retained for 30 years from the date of removal from the active file. Refer to: [Laboratory Annual Safety Assessments](#)
6. If the SDS Vault system is not accessible due to computer issues, scheduled maintenance or power failure, Customer Support can be contacted to request a fax or email SDS.
  - a. Customer support number: 1.888.362.7416 (24 hrs/day, 7 days/week). Be prepared to provide the product and manufacturer name.
    - i. The customer support number can also be found on the LARA Right to Know posters that are posted in each laboratory.
    - ii. Additional Customer Support information can be found in the policy: [Hazard Communication Program](#)

## **X. DISPOSAL OF INFECTIOUS WASTE, SHARPS AND HAZARDOUS CHEMICALS:**

- A. Refer to: MIOSHA Part 431, Appendix A, Part D - Chemical Hygiene, Section 3-Waste Management.
- B. Refer to Environment of Care (EOC) and Infection Prevention and Epidemiology policies:
  1. [Hazardous Materials and Waste Management Plan](#)
  2. [Management and Disposal of Infectious Waste & Sharps](#)
  3. [Hazardous Chemical and Waste Management](#)
  4. [Standard Precautions](#)

- C. Refer to Laboratory safety policies:
1. [Laboratory Waste Disposal](#)
  2. [Laboratory Infection Control](#)
  3. [Laboratory Precautions and Control Measures for Handling Chemicals and Chemical Waste](#)
- D. The waste disposal policies at Corewell Health specify how waste is to be collected, segregated, stored, and transported.
1. Waste should be removed from laboratories to a central waste storage area at least once per month and from the central waste storage area at regular intervals.
  2. Containers of chemicals and solutions (primary and secondary) must undergo prompt and proper disposal according to the product's SDS and local, state, and federal regulations.
  3. Should the SDS fail to provide adequate instruction, the manufacturer is contacted by telephone or email for further information on proper disposal of the product.
  4. Chemical fume hoods must not be used as a means of disposal for volatile chemicals.
  5. Refer to policy [Laboratory Precautions and Control Measures for Handling Chemicals and Chemical Waste](#) for chemical fume hood function verification information.
  6. Disposal by recycling or chemical decontamination should be used when possible.
  7. 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 policies located in the laboratory and hospital safety manual. To assure that minimal harm to people, other organisms, and the environment that may result from the disposal of waste laboratory chemicals, transport from the institution must be in accordance with Department of Transportation (DOT) regulations.

## **XI. EMPLOYEE INFORMATION AND TRAINING:**

- A. Refer to MIOSHA Standards, Part 431 Employee Information and training
- B. The Laboratory Safety Committee will determine the safety training and education program conducted for the Corewell Health laboratories. The Laboratory New Employee Safety Training Checklist can be found in the Laboratory policy: [Laboratory Education - New Hire Orientation](#) .
- C. All Safety training records will be retained as per the CAP (College of American Pathologists) Personnel Training accreditation standards. Documentation of the training will be maintained in employee personnel files or in a master training file.
- D. 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 training.
- E. Before starting work, at the time of their initial assignment, each new employee at a Corewell Health laboratory will be assigned to a series of training modules.

1. In those modules, each employee will be given information on:
  - a. Location and availability of this Chemical Hygiene Plan.
  - b. Details of the written Chemical Hygiene Plan.
  - c. Chemicals and their hazards in the workplace.
  - d. PEL's for MIOSHA regulated substances or exposure limits in use at the Corewell Health laboratories. This information is found in the SDS.
  - e. How to lessen or prevent exposure to these chemicals.
  - f. Signs and symptoms associated with exposure to hazardous chemicals.
  - g. What Corewell Health has done to lessen or prevent workers' exposure to these chemicals.
  - h. Protective measures employees can take to protect themselves from chemical exposures, such as PPE, work practices, and emergency procedures.
  - i. 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.
  - j. Procedures to follow if they are exposed to hazardous chemicals.
  - k. How to read and interpret labels and SDS's.
  - l. Where to locate SDS for the chemicals used in the Corewell Health laboratories and from whom they may obtain copies.
- F. The employee will be informed that:
  1. Corewell Health is prohibited from discharging, or discriminating against, an employee who exercises the rights regarding information about hazardous chemicals in the workplace.
  2. As an alternative to requesting an SDS from Corewell Health, the employee may obtain a copy from Consumer and Industrial Services at the Michigan Department of Community Health. A sign labeled "LARA" (Licensing and Regulatory Affairs) will be posted with the address and telephone number of the department/individual responsible for such requests.

## XII. ADDITIONAL CHEMICAL OR PHYSICAL HAZARDS IN THE LABORATORY:

- A. **Compressed Gases:** Compressed gases, both flammable and non-flammable, are used in many areas of the laboratory. Regardless of the size of tank or type of gas used, hospital safety policies should be observed. Refer to [Portable Medical Gas Cylinders](#).
- B. **Sodium Azide:** Sodium azide is used as a chemical preservative in laboratories. The amounts involved are generally very small. Waste products containing low concentrations of sodium azide are commonly discarded into a laboratory's drain system. Sodium azide can slowly react with both copper and lead to produce explosive metal azides. Brass or copper drain pipes or

cast iron pipes with lead joints may form copper or lead azides. The explosive azides may be detonated directly by shock, friction, heat, electrical discharges, and other energy sources such as concussion from hammers, chisels and wrenches. Formation of metallic azides is minimized by thoroughly flushing drains with water when discarding solutions containing sodium azide. Discard while flushing with a fast flow of water and allow water to run for 2-3 minutes after dumping.

- C. **Cryogenic Materials:** Working with cryogenic materials (e.g., liquid nitrogen, dry ice) involves significant health and safety hazards. Refer to the hospital safety policy: [Safe Use and Handling of Cryogenic Materials](#) and [Dry Ice Handling](#).
- D. **USP (United States Pharmacopeia) 800 Hazardous Drugs-Handling in Healthcare Settings (2017):** "Describes practice and quality standards for handling hazardous drugs to promote patient safety, worker safety and environmental protection. Handling HDs includes, but is not limited to, the receipt, storage, compounding, dispensing, administration and disposal of sterile and non-sterile products and preparations." A risk assessment was performed to evaluate how these guidelines applied to laboratory services. Current laboratory requirements for handling specimens and spill clean-up are appropriate for specimens that may contain hazardous drugs. No changes to current laboratory practices are needed to comply with the USP 800 guidelines. Risk assessment attached. For further information, refer to: [USP General Chapter <800> Hazardous Drugs-Handling in Healthcare Settings](#).
- E. **Flammable Liquids:** Refer to [Flammable Liquids in the Laboratory](#).

## **XIII. CHEMICAL HYGIENE PLAN REQUIREMENTS FOR THE COLLEGE OF AMERICAN PATHOLOGISTS (CAP):**

### **A. Laboratory Director**

1. Implementation and on-going support of safe practices in the laboratory.
2. Provide facilities and equipment adequate to reasonably protect employees against potential hazards posed by chemicals in the laboratory.
3. Inform supervisors of any new policies, procedures or other requirements of outside agencies.
4. Encourage a positive attitude toward safe laboratory practices through periodic inspections, review of procedures, onsite inquiries about safety issues and exhibition of a concern for their well-being.
5. May delegate responsibilities to a Chemical Hygiene Officer, who may also serve as Laboratory Safety Officer.

### **B. Manager/Supervisor/Coordinator**

1. Implementation of safe practices in the areas under their direction.
2. Inform the employee of proper procedures and protocols and verify that necessary safety equipment is available and properly functional.
3. Monitor compliance with established safety requirements and counsel employees

who are not complying by re-instructing and, if necessary, instituting disciplinary action.

4. Maintain an up-to-date list of hazardous chemicals used in their section and ensure that reagents containing any such chemicals are properly labeled as to hazard.
5. Work with the safety officer or laboratory director to establish new procedures for safety as appropriate and may delegate this function to a section representative, if desired.

**C. Employee**

1. Inform themselves of any safety requirements in their work area.
2. Follow required practices and procedures and should encourage similar safe practices among their coworkers.
3. Participate with their supervisor in developing new recommendations for safe practice by noting any unaddressed hazards.

**D. Laboratory Safety Committee**

1. Reviewing operations within the laboratory through periodic meetings and inspections and making appropriate recommendations both the chemical hygiene plan and the laboratory safety manual, as necessary.

**E. Designation of a chemical hygiene officer (or designee) for the following locations:** Current list of assigned officers can be found on the Laboratory Safety Committee Meeting Agenda

1. Corewell Health - Dearborn (Anatomic Pathology)
2. Corewell Health - Dearborn (Clinical Pathology)
3. Corewell Health - Farmington Hills
4. Corewell Health - Grosse Pointe
5. Corewell Health - Lenox
6. Corewell Health - Livonia
7. Corewell Health - Royal Oak (Anatomic Pathology)
8. Corewell Health - Royal Oak (Clinical Pathology)
9. Corewell Health - Taylor
10. Corewell Health - Trenton
11. Corewell Health - Troy
12. Corewell Health - Wayne

**F. Policies for all operations that involve chemicals**

1. The information for using specific chemicals is found in the individual procedures.

**G. Criteria for the use of personal PPE and control devices**

1. The information for using PPE and control devices can be found in the laboratory and hospital safety documents.

**H. Policies for exposure monitoring criteria when permissible levels are exceeded**

1. The information for hazardous gases and vapor monitoring criteria can be found [Laboratory Monitoring for Hazardous Gases and Vapors](#).

**I. Provisions for medical consultations and examinations (Emergency Department)**

1. Corewell Health - Canton, 7300 N. Canton Center Rd, Canton, MI 48187
2. Corewell Health - Dearborn, 18101 Oakwood Blvd., Dearborn, MI 48124
3. Corewell Health - Farmington Hills, 28050 Grand River Ave., Farmington Hills, MI 48336
4. Corewell Health - Grosse Pointe, 468 Cadieux Rd., Grosse Pointe, MI 48230
5. Corewell Health - Lenox, 36555 26 Mile Rd., Lenox, MI 48048
6. Corewell Health - Livonia, 39000 W. 7 Mile Rd., Livonia, MI 48152
7. Corewell Health - Royal Oak, 3601 W. 13 Mile Rd., Royal Oak, MI 48073
8. Corewell Health - Taylor, 10000 Telegraph Rd., Taylor, MI 48180
9. Corewell Health - Trenton, 5450 Fort St., Trenton, MI 48183
10. Corewell Health - Troy, 44201 Dequindre Rd., Troy, MI 48085
11. Corewell Health - Wayne, 33155 Annapolis St., Wayne, MI 48184

**J. Provision for training personnel on the elements of the Chemical Hygiene Plan:** The aspects are covered annually within the on-line training modules.

**K. Access to the Occupational Safety and Health Administration (OSHA) Laboratory Standard, for laboratories subject to US regulations, or for non-US laboratories a copy of appropriate local standard.**

1. [OSHA Laboratory Standards](#)
2. OSHA 1910.1450 [Occupational exposure to hazardous chemicals in laboratories](#)

**L. Evaluation of the carcinogenic potential, reproductive toxicity and acute toxicity for all chemicals used in the laboratory.** The product label, safety data sheet (SDS), or for chemicals purchased prior to June 1, 2015 with no appropriate SDS, records of investigation by the safety officer may be used for this evaluation. Refer to the SDS Vault application located on the Corewell Health Intranet (also known as "The Well"), under the Tools and Resources tab.

**M. Specific handling requirements for all hazardous chemicals used in the laboratory:** Refer to the laboratory department specific training and the department SDS located in the SDS Vault.

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## Attachments

[OSHA HCS Pictogram.pdf](#)

[Risk Assessment Lab PPE for USP 800](#)

## Approval Signatures

Step Description	Approver	Date
CLIA Site Licensed Medical Directors	Muhammad Arshad: Chief, Pathology	5/7/2024
CLIA Site Licensed Medical Directors	Ann Marie Blenc: System Med Dir, Hematopath	4/18/2024
CLIA Site Licensed Medical Directors	Jeremy Powers: Chief, Pathology	4/17/2024
CLIA Site Licensed Medical Directors	Subhashree Mallika Krishnan: Staff Physician	4/12/2024
CLIA Site Licensed Medical Directors	Ryan Johnson: OUWB Clinical Faculty	4/12/2024
CLIA Site Licensed Medical Directors	Kurt Bernacki: System Med Dir, Surgical Path	4/11/2024
CLIA Site Licensed Medical Directors	Hassan Kanaan: OUWB Clinical Faculty	4/11/2024
CLIA Site Licensed Medical Directors	Masood Siddiqui: Staff Pathologist	4/11/2024
CLIA Site Licensed Medical Directors	John Pui: Chief, Pathology	4/11/2024
Policy and Forms Steering Committee Approval (if needed)	Christopher Ferguson: Dir, Lab Operations B	4/11/2024
	Sarah Britton: VP, Laboratory Svcs	4/11/2024
Operations Directors	Joan Wehby: Dir, Lab Operations C	4/9/2024
Operations Directors	Brittnie Berger: Dir Sr, Lab Operations	4/2/2024
Operations Directors	Amy Knaus: Dir, Lab Operations C	3/26/2024
Operations Directors	Elzbieta Wysteppek: Dir, Lab Operations B	3/25/2024
Operations Directors	Christopher Ferguson: Mgr, Laboratory	3/21/2024
	Christopher Ferguson: Mgr, Laboratory	3/21/2024



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## Applicability

Dearborn, Farmington Hills, Grosse Pointe, Royal Oak, Taylor, Trenton, Troy, Wayne

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