## **Dichloromethane Safety**

(EHS Program Manual 134.05)



#### 1.0 Overview

The Environmental Protection Agency (EPA), under the Toxic Substances Control Act (TSCA), has determined that methylene chloride, also known as Dichloromethane (DCM), poses an unreasonable risk of injury to health because cumulative exposures to DCM can cause cancer and damage to the liver and kidneys. Acute exposures to high concentrations of DCM vapor in poorly-ventilated spaces has caused central nervous system harm, up to and including unconsciousness and death through respiratory paralysis.

## 2.0 Policy

Environmental Health and Safety (EHS) at Weill Cornell Medicine (WCM) has developed this Dichloromethane Workplace Chemical Protection Program (DCM WCPP) to outline and promote a safe work environment for users who handle or are exposed to all forms of DCM. This DCM WCPP, in its entirety, shall constitute as WCM's policy which establishes rules, responsibilities, procedures, and plan to guide compliance with regulatory requirements on DCM safety. In accordance with the EPA's Final Risk Management Rule for Methylene Chloride (40 CFR Part 751), which lists industrial and commercial use as a laboratory chemical among the limited number of applications that may continue to utilize DCM, WCM requires all Workforce Members, and other DCM users, to comply with this WCPP.

## 3.0 Table of Contents

1.0	Overview	1
2.0	Policy	1
3.0	Table of Contents	1
4.0	Objectives	2
5.0	Applicability/Scope	2
6.0	Responsibilities	3
6.1	ENVIRONMENTAL HEALTH AND SAFETY (EHS)	
6.2	WORKFORCE HEALTH AND SAFETY (WHS) AND STUDENT HEALTH SERVICES (SHS)	
6.3	PRINCIPAL INVESTIGATORS (PIS), DICHLOROMETHANE OWNERS, AND LAB MANAGERS	
6.4	USERS	3
7.0	Dichloromethane Health Hazards Exposure Limits	3
8.0	Exposure Limits	4
9.0	WCM Dichloromethane Operations and Exposure Assessments	4
9.1	GENERAL OPERATIONS	4
9.1.1	Laboratory Operations	4
10.0	Exposure Monitoring	5
10.1.1	Determination of Monitoring Frequency Based on Initial Monitoring Results	
10.2	REPEATED MONITORING WHEN INITIAL RESULTS ARE BELOW THE ACTION LEVEL	
10.3	REPEATED MONITORING WHEN INITIAL RESULTS ARE ABOVE THE ACTION LEVEL	
10.4	TERMINATION OF MONITORING	
10.5	NOTIFICATION OF MONITORING RESULTS	6
11.0	Regulated Areas	6

 

 VERSION DATE:
 CLASSIFICATION & LOCATION: Chemical Safety, Laboratory Safety
 PAGE: T:\Documentation\EHS-Manual\4.5 Dichloromethane.docx
 1 of 12





11.1	POSTING	7
11.2	ACCESS	7
11.3	RESPIRATORY PROTECTION	7
12.0	Exposure Control Plan	7
12.1	ELİMINATION	7
12.2	SUBSTITUTION	
12.3	ENGINEERING CONTROLS	
12.4	ADMINISTRATIVE CONTROLS	
12.5	PERSONAL PROTECTIVE EQUIPMENT (PPE)	
12.5.1	Protective Equipment and Clothing	
12.5.2	Respiratory Protection	
12.6.1	Housekeeping	
12.6.2	Emergency Procedures and Spill Response	
13.0	Medical Surveillance	
13.1	REQUIREMENT FOR MEDICAL SCREENINGS	
13.2	MEDICAL SURVEILLANCE PROGRAM	
14.0	Training	
15.0	Compliance with this DCM WCPP	
16.0	Record Retention, Availability, and Revisions	11
16.1	RECORDKEEPING	
16.2	AVAILABILITY OF RECORDS	
16.3	PROGRAM REVIEW AND UPDATE	
16.4	PROGRAM APPROVAL	
17.0	Definitions	
18.0	References	
19.0	Version History	12

## 4.0 Objectives

The Dichloromethane Workplace Chemical Protection Program (WCPP) hereby referred to as the "Policy" aims to:

- Ensure the risks of exposure to Dichloromethane are adequately evaluated.
- Safeguard the health and safety of Workforce Members.
- Identify Dichloromethane hazards and control measures.
- Confirm compliance with local, state, and federal standards.
- Create guidelines for the implementation and maintenance of this Policy.

## 5.0 Applicability/Scope

This Policy applies to all WCM Workforce Members and non-WCM individuals who handle or come in contact with Dichloromethane at WCM (collectively referred to as "DCM Users" or "Users").

See <u>Section 8</u> for a list of activities that have been evaluated for potential exposures and procedures for identifying areas of concern and implementing controls where exposures are found.

VERSION DATE:	CLASSIFICATION & LOCATION:	PAGE:
	Chemical Safety, Laboratory Safety	
11/18/2025	T:\Documentation\EHS-Manual\4.5 Dichloromethane.docx	2 of 12



## 6.0 Responsibilities

#### 6.1 ENVIRONMENTAL HEALTH AND SAFETY (EHS)

#### EHS shall:

- Conduct exposure monitoring for Dichloromethane and provide written reports of results to users.
- Provide recommendations for methods to reduce exposure levels where applicable, including appropriate work procedures, engineering controls, and personal protective equipment (PPE).
- Review engineering controls and work practices in areas with DCM use.
- Provide and track laboratory safety training.

## 6.2 WORKFORCE HEALTH AND SAFETY (WHS) AND STUDENT HEALTH SERVICES (SHS)

WHS and SHS responsibilities include:

- Provide medical screenings and surveillance as indicated in this Policy.
- Maintain medical records of individuals with DCM exposure per this Policy.

## 6.3 PRINCIPAL INVESTIGATORS (PIS), DICHLOROMETHANE OWNERS, AND LAB MANAGERS

Principal Investigators (PI), DCM owners, and lab managers are required to:

- Identify areas that utilize DCM and notify EHS for a review of potential exposures.
- Track and confirm that individuals who handle or are exposed to DCM are aware of the hazards and utilize appropriate work practices or controls.
- Notify EHS of all changes in DCM use, work practices, or controls that may impact DCM exposures.
- Ensure compliance with the <u>Laboratory Chemical Hygiene Plan</u> regarding the storage, handling and use of DCM-containing materials.

#### 6.4 USERS

Dichloromethane Users must:

- Follow the procedures outlined in this Policy.
- Use assigned Personal Protective Equipment (PPE).
- Complete and abide by annual laboratory safety training and lab specific training.

### 7.0 Dichloromethane Health Hazards

- The primary health hazards associated with Dichloromethane and the corresponding globally harmonized system (GHS) codes and risk categories (1 = most severe, 4 = least severe) include:
  - Causes skin irritation, H315 (Category 2)
  - Causes serious eye irritation, H319 (Category 2A)
  - May cause drowsiness or dizziness, H336 (Category 3, Specific target organ toxicity single exposure.
     Central nervous system)
  - o Suspected of causing cancer, H351 (Category 2, IARC Group 2A: Probably carcinogenic to humans)
- Cumulative exposures to DCM can cause cancer and damage to the liver and kidneys. Acute exposures to high
  concentrations of DCM vapor in poorly-ventilated spaces has caused central nervous system harm, up to and
  including unconsciousness and death through respiratory paralysis. Direct exposure to skin and eyes can
  cause irritation.
- The National Institute for Occupational Safety and Health (NISOH) considers 2300 ppm of Dichloromethane to be immediately dangerous to life and health (IDLH).

VE	RSION DATE:	CLASSIFICATION & LOCATION:	PAGE:
		Chemical Safety, Laboratory Safety	
11	/18/2025	T:\Documentation\EHS-Manual\4.5 Dichloromethane.docx	3 of 12



## 8.0 Exposure Limits

The exposure limits established by the EPA final ruling for DCM are based on the measured concentration of DCM in the air and the time of exposure and include:

- Existing Chemical Exposure Limit (ECEL) is 2 parts per million (ppm) for an 8-hour Time-Weighted-Average (TWA).
- Short-Term Exposure Limit (STEL) is 16 ppm averaged over 15 minutes.
- Action Level (AL) is 1 ppm for an 8-hour TWA.

Under this Policy, long-term exposures to DCM will be kept below 2 ppm (8-hour TWA) and short-term exposures will be kept below 16 ppm (15-minute TWA). Additional monitoring will be implemented whenever long-term exposures exceed 1 ppm. Any deviation from these limits must be approved by EHS and will be documented in a separate Exposure Control Plan written and maintained by the chemical owner. This documentation will include a respiratory protection program to be implemented in work areas receiving a variance.

## 9.0 WCM Dichloromethane Operations and Exposure Assessments

All processes, tasks, or work locations with the potential for DCM exposure must be assessed. It is the responsibility of the Manager/PI to notify EHS of activities that may result in DCM exposures not included in this section, as well as of any changes in work practices or procedures that may affect exposures for those processes listed.

#### 9.1 GENERAL OPERATIONS

Whenever possible DCM should be handled in a working chemical fume hood. When performing tasks such as preparing solutions or cleaning spills of DCM outside of the hood, variations in environmental conditions may result in elevated exposures.

Before using DCM outside of a chemical hood, contact EHS to assess the workspace's environmental conditions and perform exposure monitoring.

EHS has conducted exposure assessments of routine operations that utilize DCM. The following tables show the activities monitored and whether results exceeded the exposure limits (ECEL, STEL or AL).

## 9.1.1 Laboratory Operations

Task Description	Location	Engineering Controls Utilized / Required		Exposure Levels Exceeded		
·				STEL	PEL	
Transfer of DCM from 19 L steel can to 4 L glass bottle	BB1644	General Room Exhaust, Ground Level Local Exhaust Ventilation, Grounding Equipment	No	No	No	
Transfer of DCM from reagent bottle to sample vials	Lab	Fume Hood	No	No	No	
Extraction, Rotovap, Column Preparation within a chemical fume hood	Lab	Fume Hood	No	No	No	

VERSION DATE:	CLASSIFICATION & LOCATION:	PAGE:
	Chemical Safety, Laboratory Safety	
11/18/2025	T:\Documentation\EHS-Manual\4.5 Dichloromethane.docx	4 of 12



Automated Chromatography outside of chemical fume hood	Lab	General Room Exhaust	No	No	No
Use of Rocking-Shaker with sealed vials of DCM outside of chemical fume hood	Lab	General Room Exhaust	No	No	No
Transfer of DCM or DCM-containing samples to waste carboy outside or inside of a chemical fume hood	Lab	General Room Exhaust or Fume Hood	No	No	No

## 10.0 Exposure Monitoring

EHS will conduct air monitoring in the user's breathing zone to determine the 8-hour and 15-minute exposure levels. The results of initial monitoring will determine how frequently Periodic Monitoring must occur. Periodic Monitoring can range from every 3 months, every 6 months or every 5 years depending on the conditions detailed in Table 9.1.1.

## 10.1.1 Determination of Monitoring Frequency Based on Initial Monitoring Results

2	Concen monitor	tration ring results)	Remonitoring Frequency
8-hr TWA (ECEL)		15-min TWA (STEL)	
< 1 ppm	and	≤ 16 ppm	ECEL and EPA STEL Periodic Monitoring at least once every 5 years
< 1 ppm	and	> 16 ppm	ECEL monitoring at least once every 5 years AND EPA STEL Periodic Monitoring required every 3 months
≥ 1 ppm & ≤ 2 ppm	and	≤ 16 ppm	ECEL monitoring every 6 months
≥ 1 ppm & ≤ 2 ppm	and	> 16 ppm	ECEL Periodic Monitoring every 6 months AND immediate suspension of tasks causing the 15-min TWA to exceed 16 ppm in the monitored lab
> 2 ppm	and	> or ≤ 16 ppm	Immediate suspension of use of DCM in the monitored lab

VERSION DATE:	CLASSIFICATION & LOCATION:	PAGE:
	Chemical Safety, Laboratory Safety	
11/18/2025	T:\Documentation\EHS-Manual\4.5 Dichloromethane.docx	5 of 12



#### 10.2 REPEATED MONITORING WHEN INITIAL RESULTS ARE BELOW THE ACTION LEVEL

If the initial monitoring results are below the Existing Chemical Exposure Limit (ECEL), Short-Term Exposure Limit (STEL), and Action Level (AL), monitoring must be repeated every 5 years or whenever there are changes to the work that may increase exposure levels, including:

- 1. **Change in Use.** Monitoring will be repeated when changes in the length of exposure or the concentration or volumes of DCM are used.
- 2. **Operational Change**. Monitoring will be repeated within 30 days when there are changes to the equipment, process, control measures, or Personal Protection Equipment (PPE) utilized.
- User Request. Monitoring will be repeated at a user's request or when a user reports signs or symptoms associated with DCM exposure.

## 10.3 REPEATED MONITORING WHEN INITIAL RESULTS ARE ABOVE THE ACTION LEVEL

Appropriate engineering controls must be implemented if initial monitoring results show exposure at or above the action level.

If exposure remains at or above the action level or STEL after implementation, EHS will conduct additional monitoring as follows:

- 1. Levels below the ECEL but above the AL require follow-up monitoring every six months if the Workforce Member's previous exposure was at or above the action level.
- 2. Levels above the STEL but below the AL require follow-up STEL monitoring every 3 months if the Workforce Member's previous exposure was at or above the STEL.
- 3. Levels below the ECEL but above the AL in combination with levels above the STEL require follow-up ECEL monitoring every six months and suspension of tasks causing STEL to exceed 16 ppm.
- 4. Levels above the ECEL regardless of STEL exposure leads to immediate suspension of use of DCM in the monitored lab.

## 10.4 TERMINATION OF MONITORING

- Following the guidelines in Table 9.1.1, the frequency of Periodic Monitoring may be reduced if **two consecutive samples** taken at least **7 days apart** show the 8-hour TWA exposure has decreased from between 1 and 2 ppm to below 1 ppm or the STEL has decreased to less than 16 ppm.
- Lifting of a suspension of DCM use similarly requires that two consecutive samples taken at least 7 days apart show the 8-hour TWA exposure has decreased to below 2 ppm AND that the 15-minute TWA exposure has decreased to below 16 ppm.
- Monitoring may be suspended if work with DCM will not occur during the timeframe where monitoring would be required under this Policy. In this case, the next use of DCM must be monitored. The PI, instructor, or lab supervisor who oversees the location where DCM is used is responsible for notifying EHS in advance and may not proceed with use of DCM until monitoring has been scheduled.

## 10.5 NOTIFICATION OF MONITORING RESULTS

EHS will provide written notice of all exposure monitoring results to Workforce Members and supervisors within 15 days of receiving the final monitoring results.

## 11.0 Regulated Areas

Work areas where monitoring results show the concentration of Dichloromethane is above the ECEL and/or STEL will be designated as a "Regulated Area." Regulated Areas are only allowed by variance under this Policy, with additional required controls as outlined below.

VERSION DATE:	CLASSIFICATION & LOCATION:	PAGE:
	Chemical Safety, Laboratory Safety	
11/18/2025	T:\Documentation\EHS-Manual\4.5 Dichloromethane.docx	6 of 12



#### 11.1 POSTING

EHS will post signs at all entrances and access ways to an established Regulated Area that read as follows:

# METHYLENE CHLORIDE WARNING AUTHORIZED PERSONNEL ONLY

Airborne Concentrations may exceed:

ECEL: 2 ppm STEL: 16 ppm

## **Avoid Exposure**

Follow Safety Protocols

Respiratory Protection Required When Methylene Chloride is in Use

## 11.2 ACCESS

Access to Regulated Areas shall be limited to authorized persons who have been trained to recognize the hazards of DCM. These personnel must be trained in hazard communication, safe handling practices, emergency procedures, and proper use of PPE prior to entering the Regulated Area.

## 11.3 RESPIRATORY PROTECTION

A NIOSH Approved Supplied-Air Respirator (SAR) or Self-Contained Breathing Apparatus (SCBA) is required to enter a Regulated Area. EHS will assess each use case and determine the appropriate respiratory protection based on the EPA final rule and in compliance with Weill Cornell Medicine's Respiratory Protection Program.

## 12.0 Exposure Control Plan

This Exposure Control Plan (ECP) covers safety practices to be followed for use of DCM as a laboratory chemical at Weill Cornell Medicine. Any deviation from this ECP requires approval in writing from Environmental Health and Safety and the Chemical Owner. The use of DCM is subject to pre-approval by the Principal Investigator (PI) and/or Supervisor responsible for the laboratory in which it will be used. **DO NOT USE DCM UNTIL YOU HAVE OBTAINED THE NECESSARY PRE-APPROVALS.** 

## 12.1 ELIMINATION

Use of DCM is allowed under this Policy as a laboratory chemical. Some laboratory uses cannot be eliminated because of DCM's unique chemical properties. Continued use of DCM is needed to ensure results from ongoing experiments can be compared with previously obtained experimental results. In accordance with EPA regulation, all uses not explicitly permitted under this Policy shall be eliminated.

### 12.2 SUBSTITUTION

The following substitutes have been considered for DCM:

- 2-Methyltetrahydrofuran
- Cyclopentylmethyl ether

VERSION DATE:	CLASSIFICATION & LOCATION:	PAGE:
	Chemical Safety, Laboratory Safety	
11/18/2025	T:\Documentation\EHS-Manual\4.5 Dichloromethane.docx	7 of 12



- Ethanol
- Ethyl acetate
- Isopropanol
- Methanol
- Methyl isobutyl ketone
- Methyl tert-butyl ether
- Toluene

Alcohols, methyl isobutyl ketone, and ethyl acetate cannot be substituted for DCM as a reaction solvent due to undesirable reactivity. Ethers cannot be substituted for DCM in column chromatography due to their high boiling points and the risk of peroxide formation. Toluene cannot be substituted for DCM in processes that require a polar solvent. Finally, any process that replicates previous work may continue to use DCM in order to maintain reproducibility and comparability of previous results.

#### 12.3 ENGINEERING CONTROLS

DCM exposure must be controlled by implementing or utilizing engineering controls wherever feasible. Such controls include a properly functioning chemical fume hood, local exhaust ventilation, glove box, exhausted enclosure, or snorkel hood, and physical barriers to prevent splashes of liquid solutions from contacting the skin.

EHS conducts annual certification of chemical fume hoods and snorkel hoods. If a chemical fume hood is alarming: stop work, close the sash, post signage, and contact EHS. Do not work again in the chemical hood until it has been re-certified by EHS.

Where engineering controls are not yet in place or are not feasible, administrative controls or PPE must be utilized.

#### 12.4 ADMINISTRATIVE CONTROLS

Administrative controls include measures that limit user exposure, such as restricting the amounts used or time spent working with Dichloromethane or by limiting access to areas of potential exposure.

- All occupants of laboratories that use DCM shall review this WCPP and ECP prior to entry, complete annual laboratory safety training, receive lab specific training, and agree to abide by the training provided to them.
- Storage of DCM must be compliant with requirements outlined in the Chemical Hygiene Plan.
- Stop all use of DCM and contact EHS if any malfunction of the local exhaust ventilation devices (e.g., chemical fume hood or snorkel) is suspected. Post signage that the equipment is not to be used until the issue is resolved.
- Any PPE suspected of coming in contact with DCM must be changed immediately.

## 12.5 PERSONAL PROTECTIVE EQUIPMENT (PPE)

#### 12.5.1 Protective Equipment and Clothing

Users must comply with laboratory dress code regarding personal attire as outlined in Section 12.5 of the <a href="Chemical Hygiene Plan">Chemical Hygiene Plan</a> and utilize PPE as follows:

- DCM may only be handled while wearing a lab coat, safety glasses or splash goggles, and either <u>DOUBLE</u> <u>NITRILE</u> gloves or polyvinyl alcohol gloves when there is no reasonable anticipated exposure.
- LLDPE laminate or butyl viton gloves may be used for procedures involving strong oxidizing acids.
- Polyvinyl alcohol or LLDPE laminate gloves may be used for procedures involving significant risk of fire.
- Pls, instructors, and supervisors are responsible for final glove selection. All PPE must be provided at no cost to Workforce Members.

VERSION DATE:	CLASSIFICATION & LOCATION:	PAGE:
	Chemical Safety, Laboratory Safety	
11/18/2025	T:\Documentation\EHS-Manual\4.5 Dichloromethane.docx	8 of 12



#### 12.5.2 Respiratory Protection

Based on initial needs assessments and initial monitoring conducted by EHS, there are no laboratory activities involving DCM that require respiratory protection being carried out at WCM. The current DCM WCPP does not permit any laboratory operations or activities where DCM exposure might exceed EPA limits, thereby requiring respiratory protection.

Under the EPA ruling, if respiratory protection is needed, a NIOSH Approved Supplied-Air Respirator (SAR) or Self-Contained Breathing Apparatus (SCBA) is required.

#### 12.6 HOUSEKEEPING AND SPILLS

## 12.6.1 Housekeeping

- The workplace will be maintained clean and free from DCM-contaminated debris.
- Use standard laboratory cleaning and decontamination at the end of each procedure and each day to clean the work area and lab ware.
- Order DCM in the smallest quantity needed to perform work and use within a reasonable time frame.
- All chemical containers must be appropriately labeled as outlined in the Laboratory Chemical Hygiene Plan.
- Keep reagent, sample, and waste containers closed when not performing active work.
- Return chemical containers to the appropriate storage location when the experiment is over.
- Maintain a clear path of egress to the eyewash and emergency shower. Access to emergency equipment must never be blocked.

## 12.6.2 Emergency Procedures and Spill Response

Review the Exposure and Spill Response Guide prior to working with Dichloromethane.

- In case of exposure:
  - Flush the skin or eyes with an eyewash or safety shower for 15 minutes;
  - o For immediate medical assistance, contact NYP EMS at 212-472, 2222 or go to NYP Emergency Room;
  - For non-emergency care, go to Workforce Health and Safety or Student Health and Safety during normal business hours.
  - For any exposure, visitors and volunteers are instructed to go to the NYP Emergency Room.
- Contact EHS 646-962-7233 immediately to report the exposure or in the case of a spill.
- **Large spill or spill outside of a chemical hood: DO NOT** attempt to clean such a spill. Alert others, evacuate the area, close the door or isolate the immediate area, and call EHS 646-962-7233.
- Small spill (<500mL) inside a chemical hood: Workforce members may attempt to clean small spills of DCM inside of a properly functioning chemical fume hood if they are trained, wear appropriate PPE, and use spill supplies (e.g. absorbent pads and tongs). Collect debris in an appropriate container, label as hazardous chemical waste, and submit a waste collection request. Report the spill to the chemical owner and EHS. If these conditions cannot be met, <u>DO</u> <u>NOT</u> attempt to clean the spill. Shut the sash and contact EHS for further instruction.

For additional information, please refer to EHS **Chemical Spill Planning and Response Manual.** 

VERSION DATE:	CLASSIFICATION & LOCATION:	
	Chemical Safety, Laboratory Safety	
11/18/2025	T:\Documentation\EHS-Manual\4.5 Dichloromethane.docx	9 of 12



### 13.0 Medical Surveillance

### 13.1 REQUIREMENT FOR MEDICAL SCREENINGS

Medical Screenings or surveillance is required whenever:

- Workforce Members are exposed to concentrations at or above the action level (AL) and/or STEL.
- Workforce Members develop signs and symptoms of potential exposure.
- Workforce Members are exposed to DCM during emergencies.

#### 13.2 MEDICAL SURVEILLANCE PROGRAM

Medical surveillance will be conducted as mandated by OSHA regulations, including:

- Workforce Members covered under the medical surveillance program must complete a medical disease questionnaire.
- Workforce Members required to wear a respirator must undergo an annual medical evaluation.
- When a Workforce Member is removed/transferred or restricted to work due to significant symptoms or medical conditions from exposure, the supervisor shall assure that the exposure to DCM at the new location is not at/or above the action level (AL) and/or STEL.
- Any Workforce Member not working because of a medical condition due to DCM exposure must arrange for a follow-up
  medical examination within six months of the removal to determine if they can return to the original job status or if the
  removal of DCM-related job functions is permanent.
- Workforce Members have the right to seek a second medical opinion regarding medical removal or restrictions.
- Workforce Members exposed in an emergency will receive a medical evaluation as soon as possible. If there is a lifethreatening condition resulting from exposure, they are to seek immediate attention at the nearest emergency room, then follow up the next business day at WHS.

## 14.0 Training

Workforce members conducting wet bench research must complete annual laboratory safety training. Individuals working with DCM must receive DCM specific safety training prior to or at the time of initial assignment to a task involving potential exposure to DCM.

EHS will impart annual laboratory safety training, which includes:

- Discussion of applicable regulations, Safety Data Sheets, and labels.
- The purpose for and a description of the medical surveillance program, as well as signs and symptoms of exposure.
- Discussion of health hazards, such as cancer, irritation, and sensitization of the skin and respiratory system, eye and throat irritation, and acute toxicity.
- Instructions to report to the Supervisor the development of any adverse signs or symptoms suspected to be attributable a chemical exposure.
- Description of engineering controls and safe work practices appropriate for limiting chemical exposures.
- The purpose of proper use and limitations of PPE.
- Instructions for the handling of spills, emergencies, and clean-up procedures.
- The importance of engineering controls and safe work practices in reducing chemical exposures.

Training is available upon request for groups by contacting EHS. Individuals may also complete the online version of the <u>Laboratory Safety Training</u>.

**Pls or chemical owners will impart** DCM task specific training that includes approved activities, and required engineering controls, administrative controls and personal protective equipment.

• In addition to EHS annual laboratory training and the lab's task specific training, PIs will instruct DCM users to complete the online DCM Safety training available on the Learning Management System.

Chemical Safety, Laboratory Safety  11/18/2025 T:\Documentation\EHS-Manual\4.5 Dichloromethane docy  10 of 12	VERSION DATE:	CLASSIFICATION & LOCATION:	PAGE:
11/18/2025 T:\Documentation\EHS-Manual\4.5 Dichloromethane docx		Chemical Safety, Laboratory Safety	
1.75/2020 1.75/2	11/18/2025	T:\Documentation\EHS-Manual\4.5 Dichloromethane.docx	10 of 12



- DCM specific training is required to be repeated as necessary to ensure that each Workforce member exposed above
  the action level or the STEL maintains the requisite understanding of the principles of safe use and handling of DCM
  in the workplace.
- When there are workplace changes, such as modifications of tasks or procedures or new procedures, which can reasonably be expected to increase the exposure level, the PI shall notify EHS to arrange for initial monitoring of activities and update the training as necessary to ensure that each affected Workforce Member has the requisite proficiency.

Workforce Members for whom exposure monitoring results exceed the EPA action level or EPA STEL shall be re-trained as necessary to ensure that each Workforce Member maintains the requisite understanding of the principles of safe use and handling of DCM.

## 15.0 Compliance with this DCM WCPP

Failure to comply with this DCM WCPP will be evaluated on a case-by-case basis and could lead to corrective action, including but not limited to: audit, study suspension, study termination, reporting, sanctions, and employment termination, as consistent with other relevant regulations, WCM, and University Policies. Instances of non-compliance that potentially involve a lapse of professionalism may also lead to engagement of the Office of Professionalism for evaluation and intervention.

## 16.0 Record Retention, Availability, and Revisions

#### 16.1 RECORDKEEPING

EHS has maintained copies of Exposure Monitoring, Training Attendance, and Respirator Fit Test records for 30 years. WHS maintains copies of employee medical surveillance records for the length of employment, plus 30 years.

#### 16.2 AVAILABILITY OF RECORDS

Exposure monitoring or medical records will be provided to a Workforce Member, former Workforce Member, or representative upon written request.

#### 16.3 PROGRAM REVIEW AND UPDATE

This Policy shall be reviewed annually and updated as necessary.

#### 16.4 PROGRAM APPROVAL

This policy was reviewed and approved by the WCM-Executive Policy Review Group on November 18, 2025.

### 17.0 Definitions

- As Needed Monitoring: Exposure measurements taken when there is a change of use.
- **De minimis:** The threshold concentration for which the regulatory restrictions are not required. For DCM this concentration is 0.01% by weight.
- Dichloromethane (DCM): Also known as methylene chloride means the chemical substance, CH<sub>2</sub>Cl<sub>2</sub>, Chemical Abstracts Service Registry No. 75-09-2.
- Exposure Control Plan (ECP): This documents actions taken to mitigate occupational exposures and comply with the WCPP at the lab, department, or institute level.
- Owners/Operators: Anyone who owns, leases, operates, controls, or supervises a workplace. This includes Weill Cornell Medicine and each PI, instructor, or supervisor who oversees a location where DCM is used or a person who uses DCM. The WCM EHS Department is responsible for writing and updating this Program. Pls, instructors, and

VERSION DATE:	CLASSIFICATION & LOCATION:	PAGE:	
	Chemical Safety, Laboratory Safety		
11/18/2025	T:\Documentation\EHS-Manual\4.5 Dichloromethane.docx	11 of 12	
	·		



supervisors are responsible for implementing this Program and for approving and enforcing any Exposure Control Plans applicable to their work area.

- Periodic Monitoring: Dependent upon the results of the initial and/or repeat monitoring; the frequency for gathering new monitoring data ranges from 3 months to 5 years.
- Potentially Exposed Person: Any person who may be exposed to a chemical or mixture in a workplace as a result of a condition of use of that chemical substance or mixture. This applies regardless of whether a person is a user of the chemical or an employee. Potentially exposed persons are responsible for complying with the provisions of this Program.
- Prohibited Uses: The EPA has established exposure limits for DCM for some conditions of use, including "use as a laboratory chemical." Nearly all other commercial and industrial uses, such as use as a solvent or paint remover, are prohibited. EPA has a full list of prohibited uses in its Guide to Complying with the 2024 Methylene Chloride Regulation.
- Regulated Area: An area demarcated where airborne concentrations exceed, or there is a reasonable possibility they
  may exceed, the Existing Chemical Exposure Limit (ECEL) of 2 ppm or EPA Short Term Exposure Limit (STEL) of 16
  ppm.
- Retailer: An entity that distributes or makes available products to consumers.
- Time-Weighted Average (TWA): The potentially-exposed person's average airborne exposure in any 8-hour work shift
  of a 40-hour work week (8-hour TWA), or in any 15-minute reference period covering a specific task where airborne
  concentrations may instantaneously exceed the full-shift exposure limit (15-minute TWA).
- Workforce Members: Faculty; Staff; Students; Volunteers; Trainees; and others whose conduct in the performance of work for WCM, is under its direction and control, whether or not they are paid by WCM.
- Workplace Chemical Protection Program (WCPP): A written program to protect Potentially Exposed Persons in the workplace who are engaged in conditions of use that are not prohibited.

#### 18.0 References

- EHS Chemical Spill Planning and Response Manual
- EHS Laboratory Chemical Hygiene Plan
- EHS Respiratory Protection Program
- A Guide to Complying with the 2024 Methylene Chloride Regulation
- EPA Fact Sheet: Methylene Chloride or Dichloromethane
- FACT SHEET: 2024 Final Risk Management Rule for Methylene Chloride under TSCA
- OSHA Methylene Chloride Standard 29 CFR 1910.1052
- Ansell Chemical Glove Resistance Guide
- Risk Evaluation for Methylene Chloride See Appendix F for details on glove materials

## 19.0 Version History

Date	Author	Revisions
11/18/2025	Environmental Health and Safety	Original date of issue.

VERSION DATE:	CLASSIFICATION & LOCATION:	PAGE:
	Chemical Safety, Laboratory Safety	
11/18/2025	T:\Documentation\EHS-Manual\4.5 Dichloromethane.docx	12 of 12