

**UConn  
LABORATORY  
CHEMICAL  
INVENTORY  
PROGRAM**

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Lab Chemical Inventory Program	
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<b>Applies To:</b>	Employees, students, and others involved in the purchasing, delivery, management, and disposal of laboratory chemicals at the UConn Storrs and Depot campuses
<b>Contact:</b>	<a href="#">EHS Chemical Health and Safety Manager</a>

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## Laboratory Chemical Inventory Program

### I. Introduction

Environmental Health and Safety (EHS) designed the *Laboratory Chemical Inventory Program* (LCIP) to create and maintain an accurate inventory of chemicals in research and teaching and laboratories at the UConn Storrs and Depot campuses. EHS uses the [Vertére Inventory Management System](#) to administer the program. The LCIP is designed to meet compliance with the requirements in the University [Chemical Hygiene Plan](#) and [Health and Safety Policy](#).

### II. Scope and Applicability

This program applies to the Central Warehouse-Chemical Receiving Staff, principal investigators, laboratory/facility managers, lab workers, chemical purchasers/fiscal officers, students and other individuals purchasing, delivering, managing, or disposing of laboratory chemicals at the UConn Storrs and Depot campuses. This program excludes the Chemistry Department, which maintains its own chemical inventory system through Verteré.

The inventory includes all chemicals delivered to laboratories with the exception of buffers, cleaning products, compressed gases, drugs, microbiology media (e.g., agars, broths, serums, yeasts, etc.), solutions prepared on-site, radioisotopes, and test kits.

### III. Definitions

- **Central Receiving Area**- offices or areas within buildings where chemical packages are delivered by Central Warehouse and signed for by University personnel.
- **Hazardous chemical**- any chemical classified as a physical hazard, a health hazard, a simple asphyxiant, combustible dust, pyrophoric gas, or hazard not otherwise classified.
- **Health Hazard**- means a chemical that is classified as posing one of the following hazardous effects: acute toxicity (any route of exposure); skin corrosion or irritation; serious eye damage or eye irritation; respiratory or skin sensitization; germ cell mutagenicity; carcinogenicity;

reproductive toxicity; specific target organ toxicity (single or repeated exposure); or aspiration hazard.

- **Laboratory-** a facility where small quantities of hazardous chemicals are handled, mixed or transferred on a non-production basis.
- **Lab Personnel-** department heads, principal investigators, laboratory/facility managers, lab workers, and other individuals assigned by UConn to perform specific duties in laboratories where hazardous chemicals are used or stored. This does not include maintenance, custodial, or other workers not actively engaged in laboratory activities.
- **Physical Hazard-** a chemical that is classified as posing one of the following hazardous effects: explosive; flammable (gases, aerosols, liquids, or solids); oxidizer (liquid, solid, or gas); self-reactive; pyrophoric (gas, liquid or solid); self-heating; organic peroxide; corrosive to metal; gas under pressure; in contact with water emits flammable gas; or combustible dust.

## IV. Roles and Responsibilities

The *Laboratory Chemical Inventory Program* requires compliance from multiple departments and individuals to generate an accurate chemical inventory. The responsibilities of each group involved with the program are outlined below:

### A. Central Warehouse- Chemical Receiving Staff

- Completes *Hazard Communication* and *Personal Protective Equipment* training through EHS prior to involvement with the *Laboratory Chemical Inventory Program*.
- Inspects chemical packages prior to acceptance.
- Rejects packages with signs of leaks, odors, or other damage.
- Contacts the principal investigator, laboratory/facility manager, or other lab personnel if chemicals were damaged and unable to be delivered.
- Generates barcodes through the Verté Inventory Management System.
- Affixes barcodes to the chemicals to be delivered or exterior packaging (if applicable).
- Delivers chemicals to the locations listed on the packing slips on the same day as received, unless circumstances prevent same-day delivery (e.g., severe weather, late delivery to Central Warehouse, lab personnel unavailable, etc.).
- Follows all guidelines in the *Central Warehouse-Standard Operating Procedure* for the barcoding, handling, and transport of chemicals.

## B. Environmental Health and Safety (EHS)

- Maintains and manages the Vertère Inventory Management System.
- Provides *Hazard Communication* and *Personal Protective Equipment* training to Central Warehouse staff involved in the program.
- Grants access to principal investigators, laboratory/facility managers, and other lab personnel to view their inventories online through Vertère upon request.

## C. Lab Personnel

- Follows the steps for ordering chemicals through [HuskyBuy](#) or [Procurement Cards \(ProCards\)](#) to ensure chemicals are barcoded by Central Warehouse prior to use.
- Places chemical orders separately from orders for laboratory supplies/non-chemical purchases.
- Ensures chemical orders identify the receiving address as:

**CS Chem, 3 Discovery Drive, U-6114, Storrs, CT 06269-6114**

- Verifies that chemicals are delivered to the correct location(s).
- Contacts EHS if barcoded materials are relocated to another location.
- Provides barcode numbers to EHS ([ehs@uconn.edu](mailto:ehs@uconn.edu), FAX 860-486-1106, or Unit 4097) when containers are empty.
- Reorders chemicals from vendors when leaking or damaged chemicals arrived at Central Warehouse and were unable to be delivered.
- [Disposes](#) of empty containers properly.

## D. Purchasers/Fiscal Officers

- Trains lab personnel on the proper procedures for placing chemical requisitions.
- Ensures all chemical orders identify the receiving address as:

**CS Chem, 3 Discovery Drive, U-6114, Storrs, CT 06269-6114**

- Confirms chemical orders are placed separately from orders for laboratory supplies/non-chemical purchases.
- Denies approval to chemical orders that fail to identify the **CS Chem** receiving address.

## V. Purchasing Laboratory Chemicals

### A. HuskyBuy

Laboratory chemicals, excluding buffers, cleaning products, compressed gases, drugs, microbiology media (e.g., agars, broths, serums, yeasts, etc.), solutions prepared on-site, radioisotopes, and test kits, purchased through the HuskyBuy must list the following information to be barcoded for the *Laboratory Chemical Inventory Program*:

1. CS Chem address (auto-populated upon selection);
2. Principal investigator's or lab/facility manager's name;
3. Building abbreviation; and
4. Room number.

The step-by-step [procedure for ordering laboratory chemicals](#) through HuskyBuy is provided through the [Purchasing Department](#).

### B. Procurement Cards

Laboratory chemicals being purchased for the Storrs and Depot campuses (with the exception of the Chemistry Department) should be ordered through HuskyBuy to ensure the accuracy of the *Laboratory Chemical Inventory Program*. When circumstances do not allow purchases through HuskyBuy, laboratory chemicals ordered on Procurement Cards (Pro-Cards) must identify *CS Chem* as the receiving address. When placing orders via Pro-Card, the information below must be provided:

**CS Chem**  
**Attn: Principal Investigator's Name**  
**Building and Room Number**  
**3 Discovery Dr. Unit 6114**  
**Storrs, CT 06269-6114**

## VI. Chemical Processing, Delivery, and Management

Laboratory chemicals ordered through the HuskyBuy or through a Procurement Card will be delivered to Central Warehouse for barcoding. Central Warehouse will follow the steps below during processing and delivery of the chemicals to the labs. Once barcoded chemicals have been delivered to laboratories or central receiving areas, lab personnel are responsible for proper management and disposal.

## **A. Processing- Central Warehouse**

1. Packages containing laboratory chemicals identified by [Department of Transportation \(DOT\) labels and markings](#) must be inspected upon arrival at Central Warehouse for leaks, odors, or other signs of damage. Packages with signs of damage will not be accepted.
2. Central Warehouse must contact the individual that placed the order if a damaged package is identified and unable to be delivered.
3. Packages with no signs of damage will be moved by trained employees to the Central Warehouse- Chemical Receiving Area for barcoding.
4. Trained employees will generate barcodes for each chemical after entering applicable information (e.g., chemical name, manufacturer, CAS Number, product number, etc.) into the Vertère Inventory Management System.
5. Barcodes will be affixed directly to each chemical container by trained employees wearing appropriate personal protective equipment.
6. Central Warehouse employees will not open packages stored in dry ice or with inner protective packaging designed to ensure chemical integrity. For chemicals stored in dry ice or with inner protective packaging, barcodes will be attached to the exterior packaging with instructions for researchers to affix the barcodes to the inner container upon opening.
7. Chemicals that are not stored in dry ice or with inner protective packaging will be resealed in their original packaging by Central Warehouse after barcodes have been affixed.
8. Chemical packages will be moved and secured on trucks for delivery to labs.

## **B. Delivery- Central Warehouse**

1. Central Warehouse will place copies of the packing slips for each chemical in the compartment next to the driver-side door of the delivery truck prior to transport.
2. Packages containing barcoded chemicals will be delivered to the location on the packing slip. Packages containing dry ice will be delivered directly to the end user.
3. Central Warehouse will include a notice on each chemical package listing the investigator, building, room number, barcode number and instructions for researcher compliance. A copy of the notice is displayed below:



## NOTICE

The chemical container within this package has been bar coded in order to track its location. This container has been assigned to:

Investigator: \_\_\_\_\_  
Building: \_\_\_\_\_  
Lab/Room Number: \_\_\_\_\_  
Bar Code #: \_\_\_\_\_

If any of the information entered above is incorrect contact Central Stores at 6-6297 or [cs\\_dock@uconn.edu](mailto:cs_dock@uconn.edu) to provide the correct information.

Once the container is empty, the PI/Lab Manager or designee must contact EHS and provide the bar code number. Barcode stickers may be removed from empty containers and affixed to a sheet of paper and forwarded to EHS by mail (Unit 4097), FAX (6-1106) or scanned for email ([ehs@uconn.edu](mailto:ehs@uconn.edu)).

Thank you for your cooperation.

4. Central Warehouse will receive a signature from the individual receiving the package(s).
5. Receipts of delivery confirmation will be returned to Central Warehouse.

### C. Management- Lab Personnel

Once chemicals arrive in laboratories, lab personnel are responsible for:

1. Affixing barcodes to chemical containers stored in dry ice or with inner protective packaging upon opening.
2. Notifying Central Warehouse (860-486-6297) or EHS (860-486-3613) if the barcode location or recipient is incorrect.
3. Contacting EHS if the barcoded materials are relocated to another laboratory or building.

## VII. Disposal

Lab personnel are responsible for contacting EHS ([ehs@uconn.edu](mailto:ehs@uconn.edu), FAX 860-486-1106, or Unit 4097) with barcode number(s) when containers are empty. EHS will remove the empty containers from the online inventory once barcodes are received. Any hazardous chemicals remaining in bottles must be managed as hazardous waste and be disposed of through EHS. Empty chemical containers must be managed based on the chemical(s) originally present in the container.

## **A. Acutely Hazardous Chemicals**

Empty containers of acutely hazardous chemicals (i.e., [P-listed chemicals](#)) must be properly labeled as hazardous waste and be discarded through EHS. Wastes that fall on the P-List include only those products that contain the listed constituent as the sole active ingredient. Prior to disposal of any empty container, lab personnel must determine if the empty container is listed on the Environmental Protection Agency's [P-List](#).

## **B. Non-Acutely Hazardous Chemicals**

All empty containers, **not identified on the P-List**, must meet the following four criteria prior to disposal in the regular trash:

1. All waste must be removed using practices commonly employed to remove materials from the container (e.g., pouring, pumping, and aspirating);
2. No more than 2.5 centimeters (one inch) of residue may remain on the bottom of the container or inner liner;
3. No more than 3% by weight of the total capacity of the container may remain in the container or inner liner; and
4. The empty container must not have a residual, noxious odor.

If all four criteria are met, the caps on the empty containers must be removed and the chemical name(s) must be crossed out/defaced before the containers can be disposed of in the regular trash, lab glass, or other suitable waste receptacle.

## **VIII. Emergency Procedures**

### **A. Central Warehouse**

#### **1. Central Warehouse- Chemical Receiving Area**

If a package is delivered to the Central Warehouse Chemical Receiving Area and shows signs of damage, deterioration, smoke, and/or emits a noxious odor, the following procedure must be carried out:

**Table 1. Central Warehouse Chemical Receiving Area**

Emergency Procedure	
1.	Evacuate the room/area.
2.	Close door(s) to the chemical receiving area (if applicable) and call <b>911</b> .
3.	If safe to do so, post a <b>"NO ENTRY"</b> sign(s) or other warning information on the outside of the door(s) to prevent entry by other employees.
4.	Evacuate the building through the nearest exit. Do not run.
5.	Do not re-enter area until instructed to do so by the UConn Fire Department or other emergency personnel.
6.	Report the incident to supervisor and EHS (860-486-3613)

**2. Central Warehouse Delivery Truck**

If a package found on a Central Warehouse delivery truck shows signs of damage, deterioration, smoke, and/or emits a noxious odor, the following procedure must be carried out:

**Table 2. Delivery Truck**

Emergency Procedure	
1.	Turn off ignition, grab copies of the packing slips, evacuate vehicle, and move to a safe distance.
2.	Call <b>911</b> .
3.	Do not re-enter vehicle until instructed to do so by the UConn Fire Department or other emergency personnel.
4.	Report the incident to supervisor and EHS (860-486-3613)

**B. Central Receiving Area/Laboratory**

If a package is delivered to a **central receiving area** or **laboratory** and shows signs of damage, deterioration, smoke, and/or emits a noxious odor, the following procedure must be carried out:

**Table 3. Central Receiving Area or Laboratory**

Emergency Procedure	
1.	Evacuate the room/area.
2.	Close door(s) to the receiving area or laboratory (if applicable) and call <b>911</b> .
3.	If safe to do so, post a “ <b>NO ENTRY</b> ” sign(s) or other warning information on the outside of the door(s) to prevent entry by other employees.
4.	Evacuate the building through the nearest exit. Do not run.
5.	Do not re-enter area until instructed to do so by the UConn Fire Department or other emergency personnel.
6.	Report the incident to supervisor and EHS (860-486-3613)

## IX. First Aid Procedures

The following procedures must be followed by UConn personnel when exposure to a hazardous chemical in transport, delivery or in storage occurs.

**Table 4. First Aid Procedures**

COURSE OF ACTION	
<b>First Aid- Eyes</b>	<ol style="list-style-type: none"> <li>1. Move to the nearest eyewash, forcibly hold eyelids open, and begin flushing both eyes.</li> <li>2. Remove contact lenses and eyewear (if applicable) while flushing.</li> <li>3. Dial <b>911</b> or have someone else dial <b>911</b>.</li> <li>4. Keep flushing eyes under the eyewash until emergency personnel arrives.</li> <li>5. Report the incident to supervisor and EHS.</li> </ol>
<b>First Aid- Skin</b>	<ol style="list-style-type: none"> <li>1. Move to the nearest safety shower, pull shower handle, and flush the affected area(s) with water.</li> <li>2. Remove contaminated clothing (if applicable) while flushing.</li> <li>3. Dial <b>911</b> or have someone else dial <b>911</b>.</li> <li>4. Keep rinsing affected area until emergency personnel arrives.</li> <li>5. Report the incident to supervisor and EHS.</li> </ol>

**First Aid-  
Inhalation**

1. Move to fresh air.
2. Dial **911** or have someone else dial **911**.
3. Report the incident to supervisor and EHS.