

**UCONN
LABORATORY
CHEMICAL
INVENTORY
PROGRAM**

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Laboratory Chemical Inventory Program	
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Applies To:	Faculty, staff, and others involved in the purchasing, delivery, management, and disposal of laboratory chemicals at the UConn Storrs and Depot campuses
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Laboratory Chemical Inventory Program

I. Overview

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 laboratories at the UConn Storrs and Depot campuses. EHS and Central Warehouse staff generate [barcodes](#) to link chemicals to specific laboratories using the [Vertére Lab Inventory Management Software](#). The types and quantities of chemicals in the inventory are used to:

- Identify threshold levels of extremely hazardous substances and hazardous chemicals and provide annual reports to the Environmental Protection Agency to comply with the Emergency Planning and Community Right-to-Know Act (EPCRA). The information submitted in the reports is used to assist with emergency planning to help firefighters and emergency personnel respond safely and effectively to emergencies involving hazardous substances.
- Identify chemicals of interest at or above screening threshold quantities to comply with the Chemical Facility Anti-Terrorism Standard (CFATS) through the federal Cybersecurity and Infrastructure Security Agency (CISA). The goal of CFATS is to identify and regulate high-risk facilities to ensure security measures are in place to reduce the risk that certain dangerous chemicals are weaponized by terrorists.

The LCIP is designed to meet compliance with the requirements of the UConn [Health and Safety Policy](#) and [Chemical Hygiene Plan](#), and requires the cooperation of multiple departments and individuals to ensure that chemical inventories remain up-to-date.

II. Scope

This program applies to Central Warehouse Chemical Receiving staff, EHS staff, principal investigators, laboratory/facility managers, lab workers, chemical purchasers/fiscal officers, and other individuals purchasing, delivering, managing, or disposing of laboratory chemicals at the Storrs and Depot campuses. This program excludes the Chemistry Building at Storrs, that maintains

a separate chemical inventory database, and the regional campuses at Avery Point, Hartford, Stamford, and Waterbury.

The program excludes the inventorying of chemicals in secondary containers (e.g., beakers, flasks, vials, etc.), chemical samples, cleaning products (e.g., bleach, detergent, soap, etc.), compressed gases, controlled substances and other drugs, hazardous wastes, microorganisms and other biological materials (e.g., antibodies, enzymes, primers, etc.), paints, 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.
- **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.
- **Laboratory**- a facility where small quantities of hazardous chemicals are handled, mixed, or transferred on a non-production basis.
- **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. Responsibilities

The LCIP 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 LCIP.
- 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 Vertére.
- Affixes barcodes to the chemicals 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, unavailable recipients, etc.).
- Follows all guidelines in the Central Warehouse Standard Operating Procedure regarding the barcoding, handling, and transport of chemicals.

B. Environmental Health and Safety (EHS)

- Maintains and manages the Vertére database.
- Provides Hazard Communication and Personal Protective Equipment training to Central Warehouse staff.
- Provides Lab Safety and Chemical Waste Management training to lab personnel.
- Grants Vertére access to principal investigators, laboratory/facility managers, and other personnel.
- Barcodes and reconciles chemicals existing in labs.
- Uses inventory data to generate reports for compliance with the Emergency Planning and Community Right-to-Know Act (EPCRA).

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- Evaluates the inventory to identify chemicals of interest (COI) at or above screening threshold quantities to comply with the Chemical Facility Anti-Terrorism Standards (CFATS) regulation.
 - Provides consultation, resources, and training to personnel involved with the program.

C. Lab Personnel

- Follows the steps for ordering chemicals through HuskyBuy or Procurement Cards to ensure chemicals are barcoded by Central Warehouse.
- Places chemical orders separately from orders for laboratory supplies/non-chemical purchases.
- Verifies that information on the Chemical Notice Card is correct upon receipt of chemical packages.
- Reorders chemicals from vendors when leaking or damaged chemicals arrive at Central Warehouse and were unable to be delivered.
- Contacts EHS to transfer barcoded chemicals to another laboratory.
- Disposes of chemical barcodes through Vertère when containers become empty or are disposed of through EHS.
- Contacts EHS to restore barcoded chemicals that were disposed of in error.

D. Purchaser/Fiscal Officer

- Follows the steps for ordering chemicals through HuskyBuy or Procurement Cards to ensure chemicals are barcoded by Central Warehouse.
- Trains lab personnel on the proper procedures for placing chemical requisitions.
- 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

Laboratory chemicals should be purchased through HuskyBuy. If circumstances do not allow purchases through HuskyBuy, laboratory chemicals may be purchased through Procurement Cards. The steps to order chemicals through HuskyBuy and Procurement Cards are below:

A. HuskyBuy

Lab personnel, purchasers, and fiscal officers purchasing laboratory chemicals through HuskyBuy must [log in](#) and follow the directions in the [HuskyBuy Laboratory Chemical Purchase Instructions](#) job aid provided through the [Purchasing Department](#). Laboratory chemicals purchased through HuskyBuy must:

1. Use commodity code 85.
2. List the name of the principal investigator or lab manager (i.e., no student names).
3. Identify the building and room number where the chemical will be stored (i.e., do not use an office or central receiving area room).
4. Address chemical purchases to CS Chem at 3 Discovery Drive, Unit 6114, Storrs, CT 06269-6114 to ensure the chemicals are barcoded at Central Warehouse.

Example:

CS Chem

Attn: Dr. Jane Doe

Biophysics Building Room 842

3 Discovery Dr. Unit 6114

Storrs, CT 06269-6114

B. Procurement Cards

Lab personnel, purchasers, and fiscal officers purchasing laboratory chemicals through Procurement Cards (Pro-Cards) must follow the guidelines in the [Procurement Card Laboratory Chemical Purchase Instructions](#) document. Laboratory chemicals purchased through a Pro-Card must:

1. List the name of the principal investigator or lab manager (i.e., no student names).
2. Identify the building and room number where the chemical will be stored (i.e., do not use an office or central receiving area room).
3. Address chemical purchases to CS Chem at 3 Discovery Drive, Unit 6114, Storrs, CT 06269-6114 to ensure the chemicals are barcoded at Central Warehouse.

Example:

CS Chem

Attn: Dr. Jane Doe

Biophysics Building Room 842

3 Discovery Dr. Unit 6114

Storrs, CT 06269-6114

VI. Chemical Receiving

Laboratory chemicals ordered through HuskyBuy or through a Pro-Card must be routed to Central Warehouse for barcoding. Central Warehouse employees will follow all guidelines in the Central Warehouse Standard Operating Procedure and the steps below during processing and delivery of the chemicals to the labs:

A. Processing

1. Inspect packages containing laboratory chemicals identified by Department of Transportation (DOT) hazardous material warning labels and markings upon arrival at Central Warehouse for leaks, odors, or other signs of damage. Packages with signs of damage will not be accepted.
2. Contact the individual that placed the order if a damaged package is identified and unable to be delivered.
3. Move packages with no signs of damage to the chemical receiving area for barcoding.
4. Enter applicable information (e.g., chemical name, manufacturer, CAS number, product number, amount, etc.) into [Vertére](#) for each chemical and generate barcodes.
5. Don appropriate personal protective equipment, open packages, and affix barcodes directly to chemical containers.
6. Do not open packages stored in dry ice or with inner protective packaging designed to ensure chemical integrity. For these chemicals, attach barcodes to the exterior packaging with instructions for lab personnel to affix the barcodes to the inner container upon opening.
7. Reseal original packaging after barcodes have been affixed.

8. Include a [Chemical Notice Card](#) for each chemical package listing the investigator, building, room number, barcode number and instructions for researcher compliance.
9. Move and secure chemical packages on trucks for delivery to labs.

B. Delivery

1. Place copies of the packing slips for each chemical order in the compartment next to the driver-side door of the delivery truck prior to transport.
2. Deliver packages containing dry ice directly to the end user first.
3. Deliver packages containing barcoded chemicals to building central receiving areas or the location on the packing slip. Deliver packages containing dry ice directly to the end user.
4. Receive a signature from the individual accepting the chemical package(s).
5. Return receipts of delivery confirmation to Central Warehouse.

VII. Chemical Management

Once barcoded chemicals have been received in the laboratory, lab personnel are responsible for proper management as follows:

A. Receipt of Packages

1. Examine the chemicals for leaks or other signs of damage. If a spill has occurred, follow the emergency procedures in the [Chemical Hygiene Plan](#).
2. Review the [Chemical Notice Card](#) to ensure the information is correct. Notify Central Warehouse (cs_dock@uconn.edu) or EHS (LCIP@uconn.edu) if the information is incorrect.
3. If the chemical is stored in dry ice or with inner protective packaging, affix the barcode provided by Central Warehouse to the chemical container upon opening.

B. Barcode Disposal

Lab personnel must dispose of [chemical barcodes](#) from Vertére when containers become empty, or when chemicals will be disposed of through [EHS](#).

1. Identify barcodes for disposal. The [Barcode Collection Sheet](#) can be used to collect barcodes.
2. Follow the steps in the [Vertére User Guide](#) and [Instructional Video](#) to dispose of chemical barcodes through [Vertére](#).
3. If any chemical barcodes were disposed of in error, email LCIP@uconn.edu to have EHS restore the barcodes to inventory.

C. Barcode Transfers

Lab personnel must email LCIP@uconn.edu to notify EHS before [chemical barcodes](#) are relocated to another laboratory (e.g., moving to a new lab, giving chemicals to another lab from a lab cleanout, etc.). EHS will follow up with lab personnel and provide additional information to ensure the chemicals are properly transferred.

VIII. Waste Disposal

After chemical barcodes have been disposed of through [Vertére](#), lab personnel are responsible for properly disposing of empty chemical containers and hazardous chemical wastes.

A. Empty Container Disposal

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.

All empty chemical containers that are not indicated on the [P-List](#) must meet the following four criteria prior to disposal in the regular trash, lab glass, or other suitable waste receptacle:

1. All waste has been 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 remains in the container or inner liner; and
4. The empty container must not have a residual, noxious odor.

If all four criteria are met and the chemical barcode has been disposed of through [Vertére](#), 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.

B. Chemical Waste Disposal

1. If chemicals in original containers require disposal, dispose of the barcode on the chemical container through [Vertére](#).
2. Ensure "Hazardous Waste" tags or stickers, full chemical names, hazard classes, approximate percentages, and a signature are legible and prominently displayed on each waste container.
3. Submit a Chemical Waste Pickup Form through the [EHS website](#).

IX. Appendices

- A1. [Vertére User Guide](#)
- A2. [Vertére Instructional Video](#)
- A3. [HuskyBuy Laboratory Chemical Purchase Instructions](#)
- A4. [Procurement Card Laboratory Chemical Purchase Instructions](#)
- A5. [Chemical Barcodes Guide](#)
- A6. [Chemical Notice Card Guide](#)
- A7. [Barcode Collection Sheet](#)