BioRAFT ChemTracker Module

User's Guide

Prepared by BioRAFT Professional Services and University of Pennsylvania EHRS

AMP Rev 6.2019

Contents

BioRAFT ChemTracker Module Introduction

The BioRAFT ChemTracker module provides a method for tracking chemical inventory with connection to a central database.

About This Guide

The screenshots on this Quick Start Guide are representative of a general BioRAFT site. Each BioRAFT site may differ in terms of specific modules enabled and IT integrations. For specific questions about Penn's instance of BioRAFT, please contact the Chemical Inventory Team at cheminv@ehrs.upenn.edu.

All inventory records entered prior to Summer 2019 were migrated into ChemTracker from the CISProLive Chemical Inventory Program.

Contact

EHRS Chemical Inventory Team
cheminv@ehrs.upenn.edu

EHRS Customer Service Links:

1. Additional Barcode Requests: https://ehrs.upenn.edu/health-safety/health-safety-forms/warning-sign-and-label-request-form
2. Problem Container Form: https://ehrs.upenn.edu/health-safety/health-safety-forms/chemical-inventory-problem-container-request-form

What Must Be Tracked in the Inventory?

You must track inventory of any research chemicals that are **physical, environmental, or health hazards.** This includes all solvents and other flammables, reactive substances, corrosives, irritants, toxics, etc.

The *minimum* that must be tracked for each container in your inventory

- Chemical identity
- Container size
- Building and Room number

Examples of the new GHS hazard pictograms and the older CHIP hazard pictograms are shown below.

If a manufacturer has labeled a chemical container with one or more of these symbols, the chemical must be tracked in your inventory.

For information about what these pictograms mean, see the chemical's SDS, or
https://www.osha.gov/Publications/HazComm_QuickCard_Pictogram.html

This also includes ALL HAZARDOUS GASES. See Appendix A for information about cylinder sizes.

Hazardous Gases Include:

Oxygen (> 21%) Hydrogen (> 5%)

Any Concentration of:

Carbon Monoxide	Methane	Nitric Oxide
Chlorine	Fluorine	Boron Trichloride
Ammonia	Propane	Silane
Sulfur Dioxide	Dichlorosilane	Hydrogen Fluoride

Non-Hazardous Gases (that do NOT need to be tracked) Include:

Argon Nitrogen Carbon Dioxide Any inert gas

Below are some examples of containers that **do not** need to be tracked in the inventory system:

- Chemicals in small quantity that are sold as part of **a kit**
- **Stock solutions** and other mixtures of chemicals that were prepared in your lab and/or transferred into a new container (such as **wash bottles** of solvents)
- **Household products** such as Clorox, Windex, baking soda, paints, etc.
- Products with **no chemical hazards**, such as:
    - Growth media
    - Agar/Agarose
    - Amino acids
    - Sodium Chloride
    - Glass beads, sand, etc
    - Glucose, sucrose, starch, etc.

These are just a few examples. If you're not sure whether a material is hazardous, check if the container has a hazard warning on the label. If you are still unsure, inquire at cheminv@ehrs.upenn.edu.

Remember: You are welcome to track non-hazardous materials in your inventory. Contact EHRS or use the Problem Container Form on the EHRS website if you cannot find the product in ChemTracker!

ChemTracker User Guide

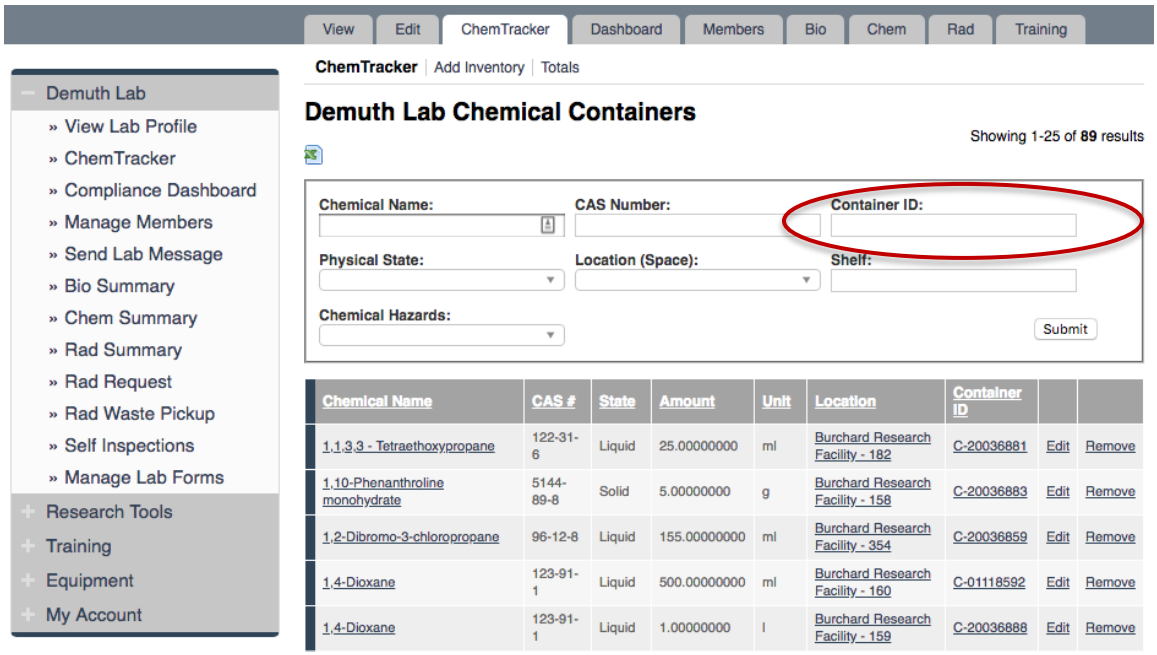
Viewing Chemical Inventory

From the BioRAFT homepage, open the left side menu to open information relevant to your lab. Click “ChemTracker” to view your current chemical inventory.

If the lab menu is missing, please contact your institution safety and compliance team for assistance in getting your lab added to BioRAFT.

Containers

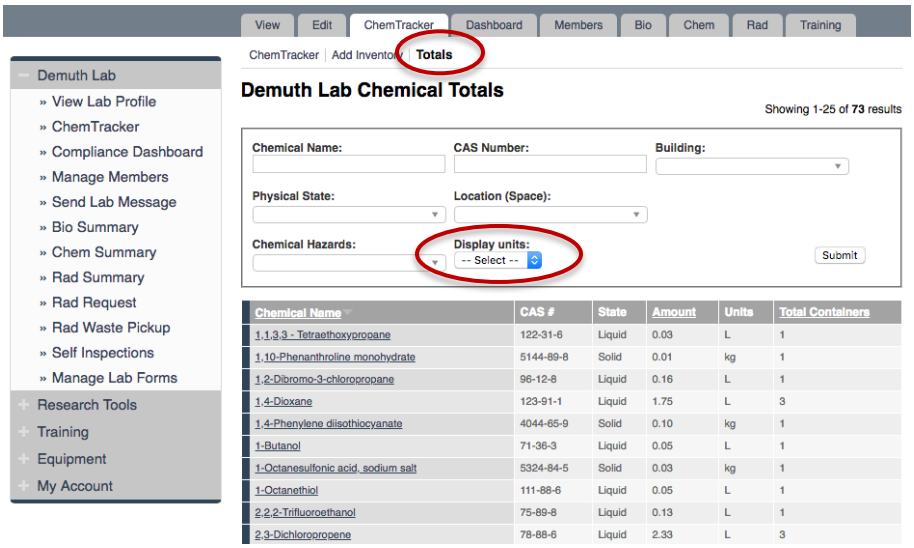
This page displays every chemical container in your lab’s inventory.



Note: You can search for a specific record by clicking in Container ID and scanning or typing a barcode number.

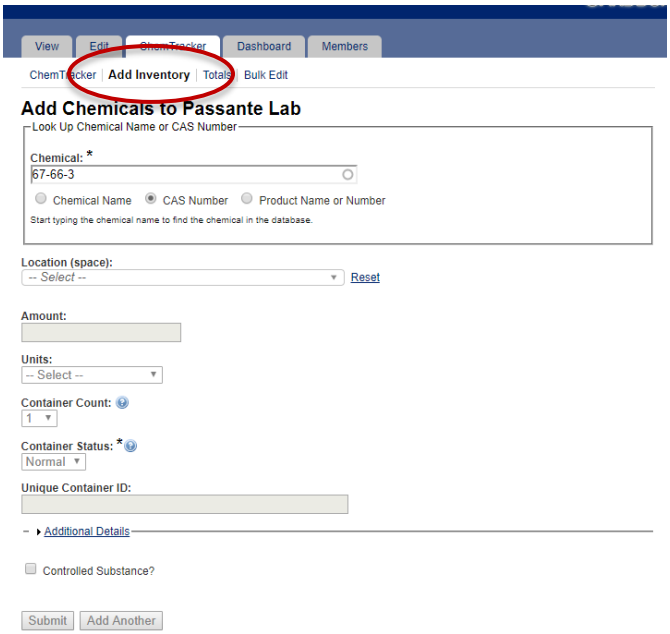
Totals

This page adds up the total amount of each chemical in your laboratory's inventory. The "Display Units" dropdown allows you to change the units for the table (i.e., display in grams).



Adding Inventory

To add new inventory, click **"Add Inventory"** from the ChemTracker page. Start typing the chemical name, CAS number or Product Number of the chemical you are adding to search the central database.

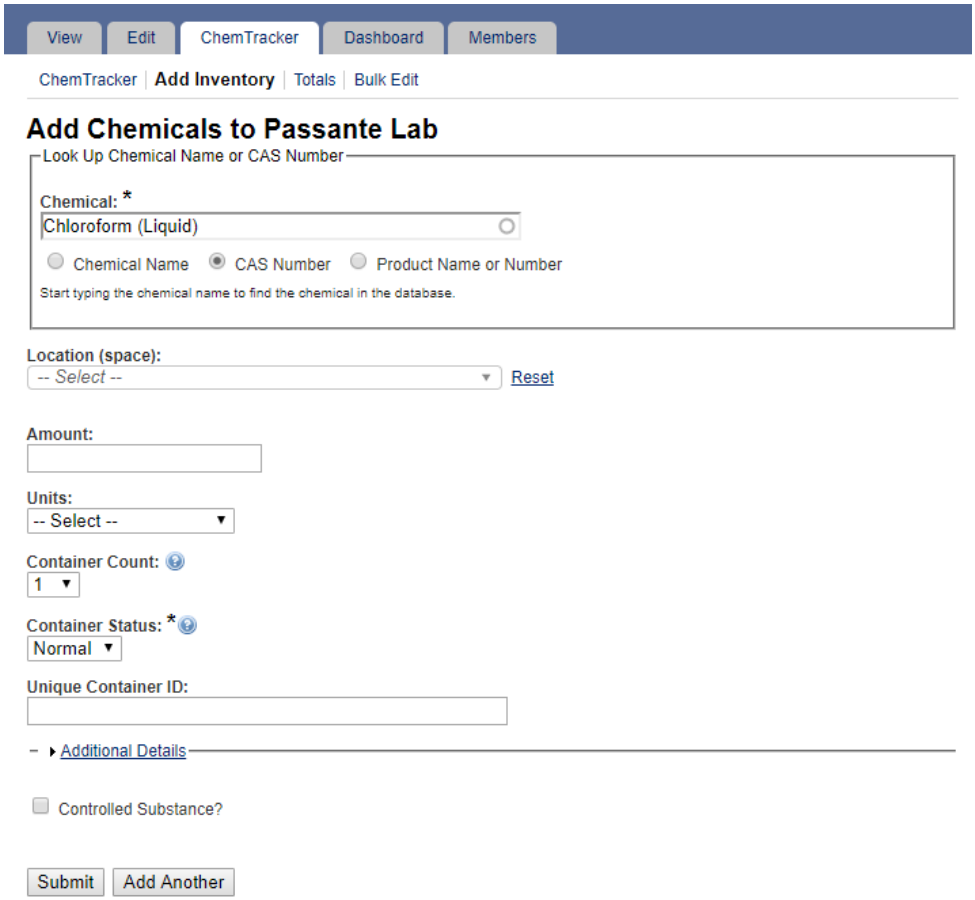


EHRS recommends a CAS Number or Product Number search to find the appropriate chemical record.

If the database does not have the chemical you are searching for, the dropdown will show "None of the above." Use the Problem Container Form and the Chemical Inventory Team will create the record for you.

Select the chemical from the dropdown list, then select the room number (from the **"Location (space)"** dropdown) where this container will be stored. If the space you are looking for is not listed, please contact cheminv@ehrs.upenn.edu to get your lab added to the space.

Note: Specific location information (bench, cabinet, FLSC, refrigerator, etc) is added later.



If you are adding a gas, you must add the amount in a specific volume. **Do NOT use the unit designations *cylinder large, cylinder medium, cylinder small.*** Consult Appendix A

for common gas cylinder volumes. If you do not see the cylinder you are entering, contact the Chemical Inventory Team.

The **"Container Status"** is default set to *"Normal."* This designation means that other lab groups will be able to view that your lab has this chemical; **you are NOT required to share the chemical with another lab**. By designating a container *"Hidden,"* the container will not appear in other lab's inventory searches. Designating a container *"Surplus"* denotes it is available for anyone to use.

All containers of hazardous materials are required to be labeled with EHRS-provided labels. Click in the **"Unique Container ID"** field and type or scan a barcode from the provided labels. *If this field is left blank, the system auto-generates a unique ID number, which will not correspond to a barcode label on the container and will make it difficult to identify the container in the future.*

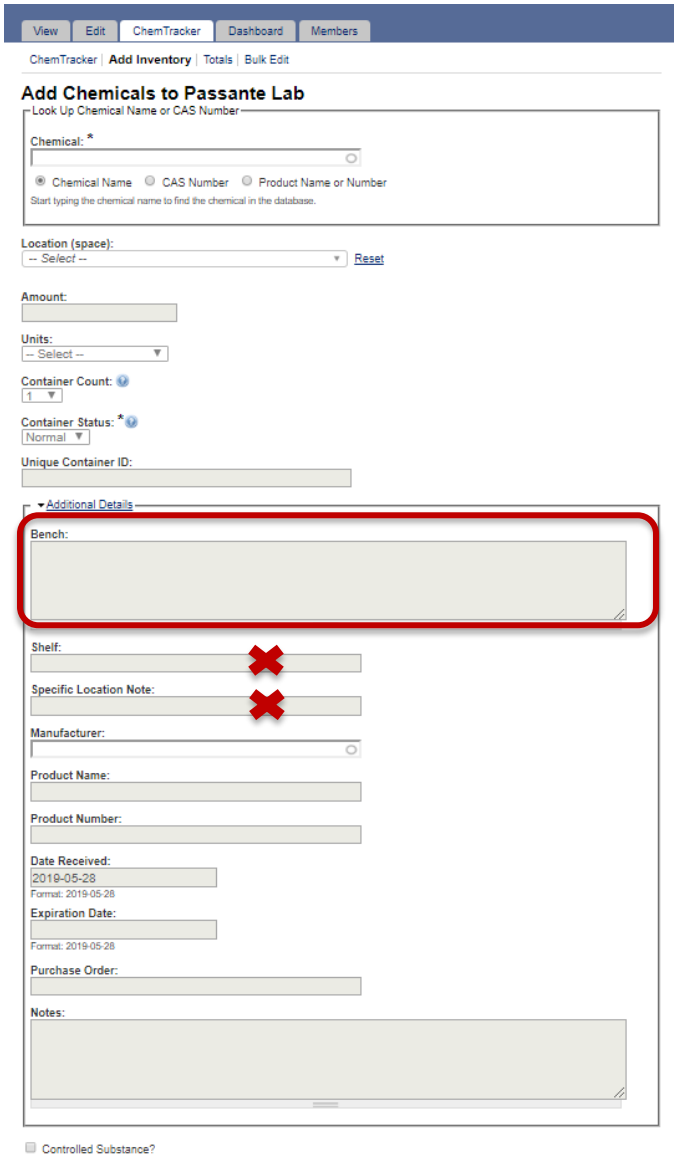
If you select a **"Container Count"** greater than 1, you only need to scan 1 EHRS-provided barcode. The system will automatically generate the requisite sequential **"Container IDs."**

If your lab has run out of barcode labels, submit a request for more on the Warning Sign and Label Request Form.

More detailed location information (refrigerators, benches, shelves, etc.) can be added in the "**Additional Details**" section. *All additional location information should be added to the "Bench" section.* Adding location information to the other fields will lead to difficulties in searching the inventory by location.

All containers moved from CISPro have the sublocation information added to the **"Bench"** section.

The "Bench" field is free-form fillable text and therefore if a sublocation name is entered differently it will create a new sublocation. <u>BioRaft does **NOT** alert users when a sublocation name is entered differently or incorrectly.</u> Inconsistencies in sublocation names can lead to difficulties in locating containers and in EHRS reporting.



Several sublocation names have been standardized by EHRS.

Flammable Cabinet → FLSC

Acid Cabinet → AC

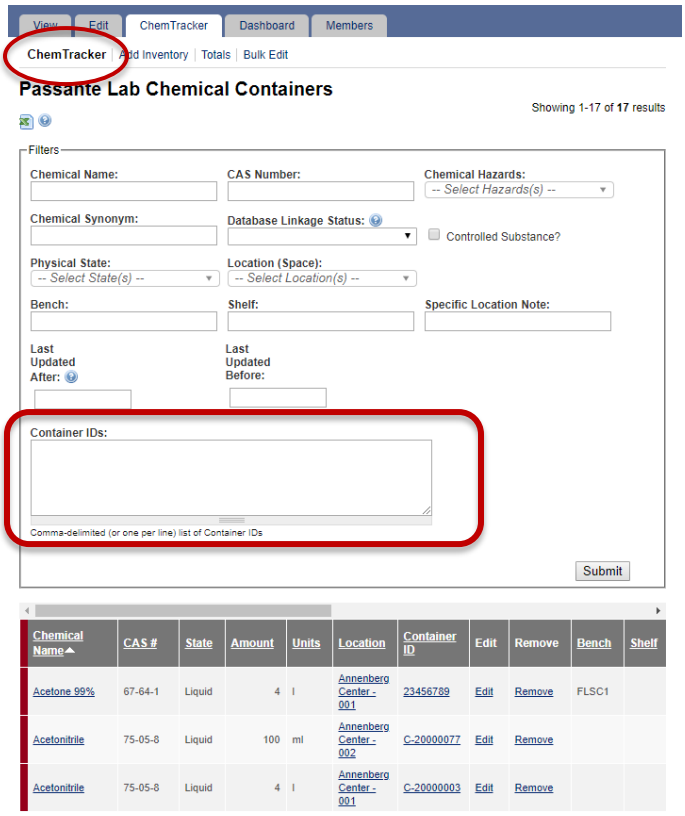
Base Cabinet → BC

These name changes have been standardized across campus.

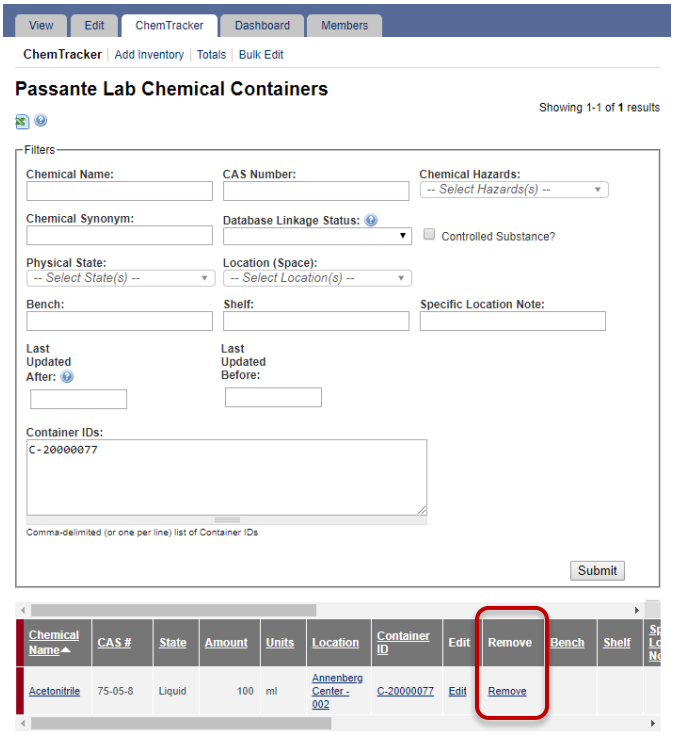
Disposing of Chemical Inventory

Disposing of a Single Container

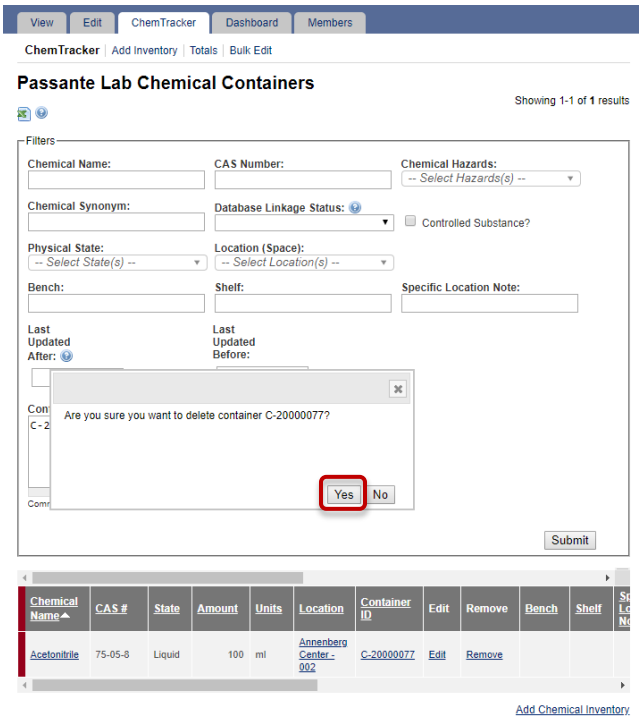
Select "**ChemTracker**" and enter the Container ID to find the chemical of interest and click Submit.



Click “**Remove**”.

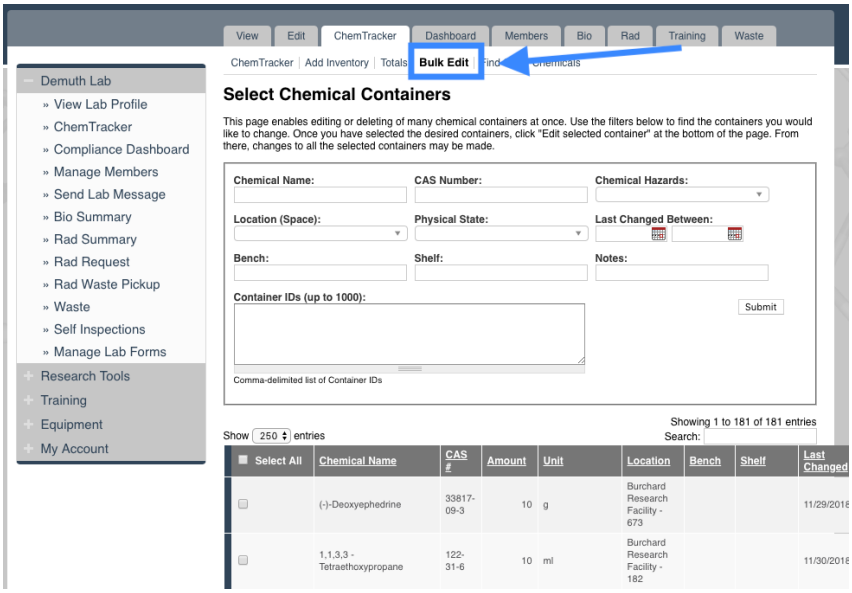


Select “**Yes**.”

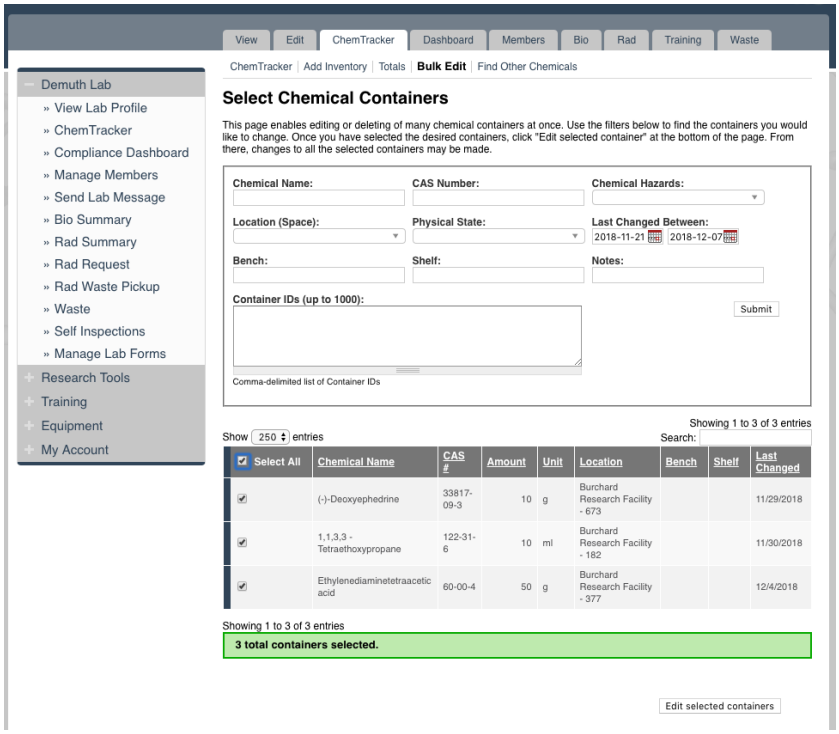


Disposing of Multiple Containers

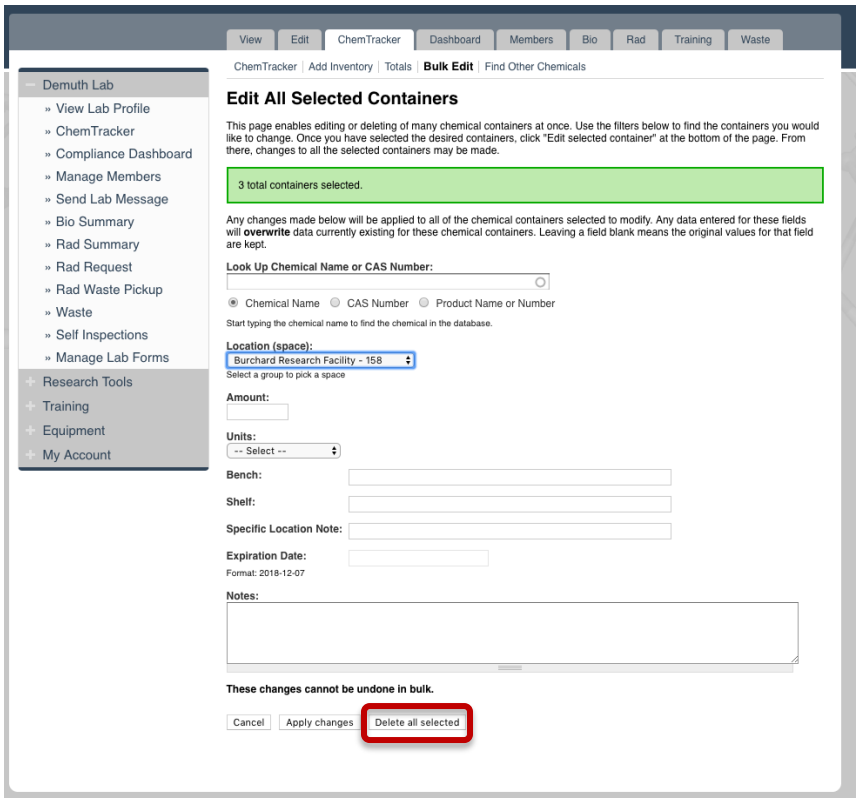
The bulk edit function is valuable for editing or deleting many records all together. Click **"Bulk Edit"** from your lab's ChemTracker menu.



Select the relevant search parameters and select the desired containers. Click **"Edit selected containers"** in the bottom right corner. From there, indicate the changes you would like to make.



To **dispose** of the containers, click “Delete all selected”.



Once a container is disposed, the barcode is also disposed and cannot be used again.

Bulk edits to **Location (space)**, **Amounts**, **Units** and **Bench** can also be made in ***Bulk Edit***.

Once the changes are complete, click “Apply changes” and follow the prompts to complete.

Any changes indicated here will be applied to all the containers and overwrite existing data for those containers (such as replacing the existing notes). These changes cannot be bulk undone.

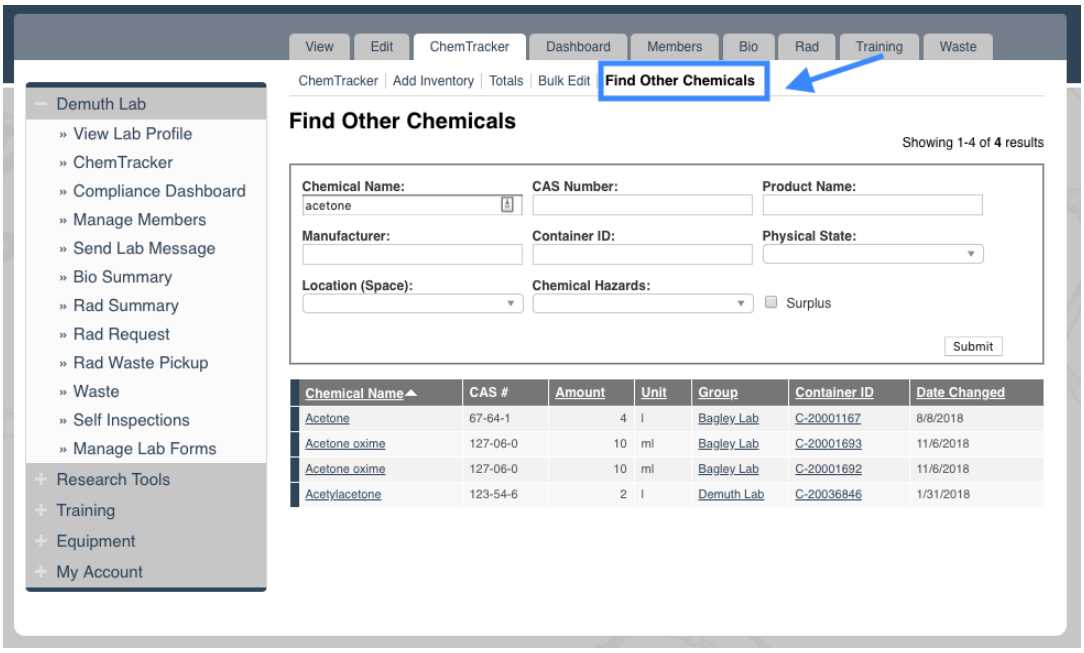
Searching for Inventory in other Laboratories

These instructions show you how to search for a chemical in your lab, in another lab, and in EHRS Surplus Chemicals.

All containers set to status *"Normal"* will be viewable a **"Find Other Chemicals"** search.

You are NOT required to share materials with another lab. See *Adding Inventory section* for more information. Borrowers MUST confirm with a supplying-lab contact that they are permitted to borrow the material.

To search for inventory in another lab, visit your lab's ChemTracker tab, and click on **"Find Other Chemicals"**. From here, you can search for a chemical based on any of the filters provided.



Requesting FREE Chemicals from EHRS Surplus Chemicals

To dispose of commercial chemicals that are in their original container (labeled and in good condition) AND are not expired:

- Mark the container as "disposed" in ChemTracker
- Place the upright container in the secondary containment bin in your lab's satellite waste accumulation area.
- Label the container with a waste tag and request an EHRS chemical waste pick-up.

EHRS will remove the container during your waste pick-up. If they determine it is suitable for redistribution, they will add the container to their inventory location: "EHRS SURPLUS CHEMICALS".

When you search for a material in ChemTracker, containers within the EHRS SURPLUS CHEMICALS location are available for request, free of charge!

Request containers by emailing: cheminv@ehrs.upenn.edu

The following information must be provided in your message:

- Chemical Name
- Barcode Number
- Container size
- Name of person making request
- P.I.'s name and email address
- *The name of the ChemTracker Location where you will be storing the chemical: *Building Name & Room Number*

*EHRS will change the container's location and owner in ChemTracker and deliver the chemical to the specified room.

Requests will generally be processed within 1 week.

Notice: EHRS will contact the PI of the lab making the request. The PI must authorize the transfer of the chemical before we can process your order.

High-Turnover Containers

THIS METHOD MAY NOT BE USED FOR FLAMMABLE LIQUIDS IN BIOMEDICAL LABORATORY BUILDINGS. Those buildings are required to track individual containers of all flammable liquids!

Some labs have a high turnover of certain commodity chemicals, especially solvents. If you keep a stock of these chemicals—and the quantity is consistent—you may wish to have a *representative* inventory of those containers.

Contact the Chemical Inventory Team (cheminv@ehrs.upenn.edu) to create container records for these materials.

Example: At any time, you have a maximum of five 4-liter bottles of acetone in your flammable liquids storage cabinet. You empty these at a rate of 1 bottle every week or two, and you don't want to keep entering them into ChemTracker and then marking them as disposed.

Rather than adding each container to your inventory as you receive it and removing it as you use it.

- EHRS would create five *representative* containers in your ChemTracker inventory.
- The information and high-turnover barcodes would be on a *sheet of paper* instead of on the bottles.
- The paper is attached to the flammable liquids storage cabinet where the bottles are stored.

Example:

Material	Package information	Size	Barcode
Acetone [67-64-1]	Sigma-Adrich Chromsolv for HPLC >99.9%	4 Liter	
Acetone [67-64-1]	Sigma-Adrich Chromsolv for HPLC >99.9%	4 Liter	
Acetone [67-64-1]	Sigma-Adrich Chromsolv for HPLC >99.9%	4 Liter	
Acetone [67-64-1]	Sigma-Adrich Chromsolv for HPLC >99.9%	4 Liter	
Acetone [67-64-1]	Sigma-Adrich Chromsolv for HPLC >99.9%	4 Liter	

- Now you don't need to add new containers or dispose of empty ones unless your maximum quantity or package-information changes

Include the following information when contacting the Chemical Inventory Team about High-Turnover containers:

1. The name of the material
2. The volume/amount of *a single container*
3. The number of containers of the above stated size
4. Any additional label information you would like included (for example: grade, vendor, etc)
5. The location where these materials will be housed

Contact EHRS with any changes to your high-turnover inventory.

High-turnover inventories will be checked by Inventory Team members periodically to ensure accuracy.

Appendix A: Gas Cylinders

Use the following table to enter the volumes of your hazardous gases.

Gas	Cylinder Description	Cylinder Size	Amount	Units
Oxygen Gas (greater than 21%)		Cylinder size 10	340	L
Oxygen Gas (greater than 21%)	9 inch x 51 inch	Cylinder Size 200	7107	L
Oxygen Gas (greater than 21%)	9 inch x 55 inch	Cylinder size 300	9543	L
Oxygen Gas (greater than 21%)	7 inch x 33 inch	Cylinder Size 80	2407	L
Oxygen Gas (greater than 21%)		Cylinder Size E	660	L
Hydrogen Gas (greater than 5%)	9 inch x 51 inch	Cylinder Size 200	5578	L
Hydrogen Gas (greater than 5%)	9 inch x 55 inch	Cylinder Size 300	7391	L
Hydrogen Gas (greater than 5%)	7 inch x 19 inch	Cylinder Size 35	878	L
Hydrogen Gas (greater than 5%)	7 inch x 33 inch	Cylinder Size 80	2095	L
Carbon Monoxide		Cylinder Size 150A	400	L
Carbon Monoxide	9 inch x 51 inch	Cylinder Size 200	5100	L
Carbon Monoxide	9 inch x 55 inch	Cylinder size 300	6800	L
Carbon Monoxide	7 inch x 33 inch	Cylinder Size 80	2000	L
Carbon Monoxide	6 inch x 23 inch	Size 10 cylinder	850	L
Methane	9 inch x 51 inch	Cylinder Size 200	7400	L
Methane	9 inch x 55 inch	Cylinder size 300	10100	L
Methane	7 inch x 19 inch	Cylinder Size 35	1132	L
Methane	7 inch x 33 inch	Cylinder Size 80	2831	L
Nitric Oxide		Cylinder Size 35	226	L
Ammonia	9 inch x 51 inch	Cylinder Size 200	5578	L
Ammonia		lecture bottle	283	L
Propane Gas	Liquefied Gas		300	G
Propane Gas	Liquefied Gas		100	G
Propane Gas	Single use Fatboy tank with standard torch fitting		16.92	oz

If you do not see the specifications for the gas cylinder you are trying to enter, contact the Chemical Inventory Team, cheminv@ehrs.upenn.edu.