

BioRAFT ChemTracker Module User's Guide

Prepared by BioRAFT Professional Services and University of Pennsylvania EHRS

Log-in to ChemTracker with your Pennkey at <u>https://penn.bioraft.com</u>

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BioRAFT ChemTracker Module Introduction

The BioRAFT ChemTracker module provides a method for tracking chemical inventory with connection to a central database that provides easily accessible links to hazard data.

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

Contact the Chemical Inventory Team

EHRS Chemical Inventory Team <u>cheminv@ehrs.upenn.edu</u>

EHRS Customer Service Links:

General Information about Penn's Chemical Inventory Program: https://ehrs.upenn.edu/health-safety/lab-safety/chemical-inventory-program

Barcode Sticker Requests (Free): https://ehrs.upenn.edu/health-safety/health-safety-forms/warning-sign-and-label-request-form

Problem Container Form (For chemicals not found in database): https://ehrs.upenn.edu/policies-resources/chemical-inventory-problem-container-request-form

Request Changes to BioRAFT Lab Locations (Spaces) https://ehrs.upenn.edu/request-changes-bioraft-lab-locations-spaces

Chemical Inventory Tip Sheets: See Resources for ChemTracker Users https://ehrs.upenn.edu/health-safety/lab-safety/chemical-inventory-program/resourceschemtracker-users

Request Search of Chemical Inventories on Campus (Borrow/surplus chemicals): https://ehrs.upenn.edu/health-safety/health-safety-forms/chemical-surplus-or-borrow-request

What Must Be Tracked in the Inventory?

Hazardous Chemicals

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.

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 <u>must</u> be tracked in your inventory.



Older chemical containers may not be labeled according to current standards. Some containers that do not have these hazard pictures are still hazardous and must be tracked in your inventory. If you're not sure, contact <u>cheminv@ehrs.upenn.edu</u> to ask!



For information about what these pictograms mean, see the chemical's SDS, or https://www.osha.gov/sites/default/files/publications/OSHA3491QuickCardPictogram.pdf

Tracking Hazardous Gases

ALL HAZARDOUS GASES must be tracked in your inventory.

See Appendix A for information about cylinder sizes.

Hazardous Gases Include any gas that is:

- Flammable
- Corrosive
- Toxic
- Oxidizing



Common examples of hazardous gases include:

Ammonia Boron trichloride Carbon monoxide Chlorine Dichlorosilane Fluorine Hydrogen (> 5%) Hydrogen fluoride Methane Nitric oxide



Oxygen (>20 %) Propane Silane Sulfur dioxide

Inert (non-hazardous) gases do not need to be tracked.



Examples of inert gases include:

Argon Carbon dioxide Nitrogen Helium

Exempt Chemicals

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 Amino acids Agar/Agarose Sodium chloride

Glass beads 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 <u>cheminv@ehrs.upenn.edu</u>.

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

Viewing and Editing Your Chemical Inventory

All containers

From the BioRAFT homepage, expand the left side menu to view information relevant to your lab.

Click the "ChemTracker" tab to view your lab's chemical inventory.

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

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

| | View Elit | ChemTracker | Darnboard | Members | | | | |
|-------------------------------|-----------------|------------------------------------------------------------|--------------------------------|---------------------------------------------|-------------------------|---------------------------|----------------------|-------------|
| | ChemTracker | Adamasia | ars Bulk Edit Fir | d Other Chemical | s | | | |
| nd Individual or Group Search | Passante L | ab Chemic | al Containe | ers | | | | |
| Research Management | 1 0 | | | | | Showi | ng 1-25 of 32 | results |
| Inspections | Filters | | | | | | | |
| Passante Lab | Chemical Name | : | CAS Number: | | Chemical Ha | zards: | | |
| Pieleziaele | | | | | Select Ha | azards(s) | ٣ | |
| ChemTracker | Chemical Synor | nym: | Database Linka | ge Status: 😡 | 🗘 🔲 Controlle | d Substance? | | |
| » Add Inventory | Physical State: | | Location (Spac | e): | | | | |
| » Bulk Edit | Select State | (s) 🔻 | Select Loca | tion(s) | ¥ | | | |
| » Chemical Containers | Bench: | | Shelf: | | Specific Loc | ation Note: | | |
| » Group Inventories | Last | | Loct | | | | | |
| » Totals | Updated | | Updated | | | | | |
| » Reports | After: 😡 | | Before: | | | | | |
| Research Tools | | | | | | | | |
| My Account | Container IDs: | | | | | | | |
| | • | | | | | | | |
| I | | | | | | | | |
| (| | | | | | | | |
| | | | | | | | | |
| | Comma-delimited | (or one per line) list o | f Container IDs | | | | | |
| | Comma-delimited | (or one per line) list o | f Container IDs | | | | | |
| | Comma-delimited | (or one per line) list o | f Container IDs | | | | Submit | |
| | Comma-delimited | (or one per line) list o | f Container IDs | | | | Submit | _ |
| | Comma-delimited | (or one per line) list o | f Container IDs | | Container | | Submit | |
| | Comma-delimited | (or one per line) list o | f Container IDs | is Location | <u>Container</u> Edi | t Remove | Submit | nelf |
| | Comma-delimited | (or one per line) list of CAS # State 67-64-1 Liquid | f Container IDs Amount Uni 4 I | ts Location Annenberg Center - 001 | Container Edi ID Edi | t Remove <u>Remove</u> | Submit | <u>helf</u> |

| Тс | edit a record, click on the "E | Edit" lin | k: | | | | | / |
|----|--------------------------------|-----------|--------|--------|---------------------------|-----------------|------|--------|
| | Chemical Name | CAS # | State | Amount | Location | Container ID | Edit | Remove |
| | Acetone 99% | 67-64-1 | Liquid | 41 | Annenberg Center - 001 | <u>23456789</u> | Edit | Remove |

Notice that you can scroll back and forth to view more headings for your list of containers.

You can view a subset of your containers by using the filters at the top of the ChemTracker page, and you can sort the results by clicking on any heading title that is underlined.



For a **full screen view** of your chemical inventory, click the pop-out icon at the top right of your inventory:

Searching for Chemicals Outside of Your Lab

You will be able to see all chemical containers within **your lab's** inventory. You will not be able to search for chemicals in other labs' inventories.

The EHRS Chemical Inventory Team can help you locate chemicals in our EHRS Surplus Inventory or in other labs across campus.

Search "Chemical Surplus or Borrow Request" on the <u>EHRS website</u> or <u>use the webform</u> to submit your search request. Remember that all chemical sharing is voluntary and requires the permission of the lab that owns the chemical as well as the approval of the PI for the lab that wishes to borrow or adopt the chemical.

Totals

Click on the **"Totals" link** to view the aggregate amount of each chemical in your lab's inventory.

Notice that the total number of containers of each chemical is shown on the right side.

Tip: The **"Display Units" dropdown** allows you to change the units for the table (i.e., display in grams).

| Passante Lab | | | | | | | |
|------------------------|---------------------------------------------------------|-----------------|--------|-----------|-----------|------------------------|--|
| » View Lab Profile | Passante Lab Chemical T | otals | | | | Chouing 1 14 of 14 ro | |
| » ChemTracker | Citere . | | | | | Showing 1-14 of 14 re. | |
| » Compliance Dashboard | - Filters | | | | | | |
| » Manage Members | Chemical Name: CA | S Number: | | Building: | Building: | | |
| » Send Lab Message | Phase and Phase | | | | and an | -, | |
| » Self Inspections | Physical State: Lo | Select Space(s) | | * | | | |
| » Managa Lab Forme | | | | | | | |
| » Manage Lab Forms | Chemical Hazards: Dis | play units: | | | | Submit | |
| Hesearch Tools | | | | / | | | |
| My Account | Chemical Name 💌 | CAS# | State | Amount | Units | Total Containers | |
| | Acetone | 67-64-1 | Liquid | 4.00 | L | Total Containers | |
| | Acetonitrile | 75-05-8 | Liquid | 4.10 | L | | |
| | Chloroform | 67-66-3 | Liquid | 12.00 | L | | |
| | Ethyl alcohol | 64-17-5 | Liquid | 1.89 | L | | |
| | Ethyl ether | 60-29-7 | Liquid | 20.00 | L | | |
| | Formaldehyde buffered aqueous solution, 3-2 % in H2O | 0 wt. | Liquid | 0.19 | L | | |
| | Formaldehyde, 37% solution with 10-15% methanol | | Liquid | 4.00 | L | | |
| | Formic acid | 64-18-6 | Liquid | 2.00 | L | | |
| | Hexaethylene glycol monodecyl ether | 5168-89-8 | Liquid | 0.95 | L | | |
| | Hydrazine, anhydrous | 302-01-2 | Liquid | 39.60 | L | | |
| | Hydrofluoric acid aqueous solution, 71-75% | 7664-39-3 | Liquid | 16.00 | L | | |
| | Microposit 1400 series photoresist | | Liquid | 0.47 | L | | |
| | Mixture of Nitric acid (90%) and Hydrofluoric a (10%) | icid | Liquid | 4.00 | L | | |
| | Water | 7732-18-5 | Liquid | 113.27 | L | | |

Adding New Inventory

Chemical Look-Up

To add new inventory, click "Add Inventory" from the ChemTracker page.

Select your search criteria (Chemical Name, CAS Number, or Product Name or Number)

| CAS Number | Product Number | Chemical Name |
|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <u>Best for</u> | <u>Best for</u> | <u>Best for</u> |
| Pure substances (not mixtures, | Mixtures, solutions, or specialty | When CAS or Product number is |
| solutions, or specialty products) <u>Tip</u> Requires hyphens | products <u>Tip</u> May or may not require punctuation (e.g. hyphens and commas), try both ways if needed | not available or is not found $\underline{\text{Tip}}$ As you continue to type, the list of options in the dropdown menu will change; keep an eye out for your chemical in the list as you type |

Start typing the chemical name, CAS number or Product Number of the chemical you are adding. A list of options will appear based on your search. If there are no results, see the section of this manual regarding <u>Chemicals Not Found in Database</u>.

| View Edit Chemmasure Dashboard Members Chemmacker Add Inventory Totals Bulk Edit Find Other Chemicals | |
|----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Add Chemicals to Passante Lab | |
| Chemical: " Chemical Name CAS Number Product Name or Number Start typing the chemical name to find the chemical in the database. | Select the chemical from the dropdown list. |
| Location (space): | Then select the room number (from the "Location (space)" drondown) to |
| Amount: Units: | specify where this container will be stored. |
| Container Count: 1 | If the space you are looking for is not listed, please use the Request Changes |
| Unique Container ID: | to BioRAFT Lab Locations Webform to have it added: <u>https://ehrs.upenn.edu/request-</u> |
| Controlled Substance? | changes-bioraft-lab-locations-spaces |

Note: Specific-location information (bench, cabinet, FLSC, refrigerator, etc) is added later. See <u>Adding Additional Details</u> for more information.

Chemicals Not Found in Database

If the database does not have the chemical you are searching for, the dropdown will show **"None of the above."**

Add Chemicals to Passante Lab

Look Up Chemical Name or CAS Number-



Select "—none of the above—" only after you have searched by <u>name, CAS</u> <u>Number, and Product</u> <u>number, and you still do not</u> see the correct chemical on the list.

When you choose "—none of the above—", ChemTracker **may suggest unlinked chemical records that match your search**. If one of these looks correct, select it and continue adding your container to your inventory.

| Add Chemicals to Passante Lab Lock Up Chemical Name or CAS Number | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Chemical Name of CAS Number | |
| Chemical Name CAS Number Product Name or Number | |
| Start typing the chemical name to find the chemical in the database. | |
| * | |
| The following are results manually entered by users and not verified in the database. Adding a chemical not matched to the database has consequences for accuracy of regulatory reports. | |
| ChemTracker Example Unlinked Chemical (Solid) | |
| None of the above | |
| Cancel Continue Submit Add Another | If you <u>still</u> do not see a match, the EHRS Chemical Inventory Team will create a chemical record for you. Submit your request through the <u>Problem</u> |
| 11 | Container Form on the EHRS website. |

Specifying Amount

| 5 | |
|------------------|----------|
| Units: | - |
| Select | |
| g | |
| kg | |
| ml | |
| L | |
| CC | |
| OUET | |
| CTLINDER, LARGE | |
| CYLINDER, MEDIUM | |
| CYLINDER, SMALL | |
| FI Oz | |
| gals | |
| lbs | |
| mg | ? |
| ng | |
| Oz | |
| PT | |
| QT | |
| Ton | 4 |
| μg | itly Add |
| μΙ | |
| UNIT | VINL |

The size of the container must be specified.

Enter the amount, then select the units from the dropdown.

When adding a gas to your inventory, you must add the amount as a <u>specific volume</u>.

Do NOT use the unit designations cylinder large, cylinder medium, cylinder small.

Consult <u>Appendix A</u> in this manual for common gas cylinder volumes. If you do not see your cylinder in Appendix A, contact the <u>Chemical Inventory Team</u> to ask what amount and unit to use.



Container Status

Attention! As of August 2019, the ability to view other labs' inventory records has been disabled. No containers will be visible to other labs regardless of the container status.

Normal

This is the default container status. This designation means that other lab groups will be able to view that your lab has this chemical and the container location; you are NOT required to share the chemical with another lab.

Hidden

By designating a container "Hidden," the container will not appear in other labs' inventory searches.

Surplus

Designating a container "Surplus" denotes that it is available for anyone to use.

Unique Container ID (Barcode Number)

All containers of hazardous materials are required to be labeled with EHRS-provided barcode labels.

To request additional quantities of barcode labels, use the form on the EHRS website: <u>Warning Sign and Label Request Form</u>. *(Inventory Barcode requests are at the bottom of the form)*

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 the barcode label on the container and will make it difficult to identify the container in the future. If you notice this has occurred, you can edit the barcode number after the container is created.

| Container Count: 🥹 | |
|----------------------|--|
| Container Status: * | |
| Unique Container ID: | |
| | |

Hint: If you have more than 1 identical container, select the appropriate "Container Count". You will only need to scan the *first* EHRS-provided barcode. The system will automatically generate the rest of the sequential "Container IDs." You must still affix the corresponding labels to each container.

Look out for this!

Some barcode scanners are programmed to immediately "enter" after they scan. If yours does this, your container will be automatically submitted to the inventory when you scan the barcode. You'll know this happens if the screen jumps to the "Chemical Inventory Recently Added" table at the bottom of the page.

If you still want to add additional details such as location specifics, expiration dates, or notes, just click the "edit" link and continue editing the container record.

If you do not need to enter additional details, your container entry is complete.

| C | Chemical Inventory Recently Added | | | ~ | | | 7 | |
|---|-----------------------------------|---------|--------|--------|---------------------------|--------------|------|--------|
| | Chemical Name | CAS # | State | Amount | Location | Container ID | Edit | Remove |
| | Acetone 99% | 67-64-1 | Liquid | 41 | Annenberg Center - 001 | 23456789 | Edit | Remove |

Adding Additional Details

Assigning location within room

More detailed location information (refrigerators, benches, shelves, etc.) can be added in the "Additional Details" section.

The "Bench" location field is only *required* for Flammable Liquids Storage Cabinets (FLSCs) and for Acid Cabinets (ACs) in the high-rise biomedical buildings:

| Stellar-Chance | Anat-Chem | Johnson | BRB |
|----------------|-----------|---------|-----|
| John Morgan | CRB | Smilow | |

In all other locations, this field is optional.

If you *want* to specify sub-locations take note: All additional location information should be added to the "**Bench**" section.

Adding location information to the other fields will lead to difficulties in searching for inventory by location.

Look out for this!

The "Bench" field is free-form text; therefore, if the name of a location is entered differently for the same location, it will create a new sub-location name.

There is no alert to tell you whether you are entering a new sub-location name, and no option to select from existing sub-locations within the room.

Inconsistencies in sub-location names can lead to difficulties in locating containers and in EHRS reporting.

To help avoid errors, common sub-location names have been standardized by EHRS. Use these abbreviations for chemical storage cabinets

Flammable Cabinet \rightarrow FLSC

Acid Cabinet \rightarrow AC

Base Cabinet \rightarrow BC

| Bench: FLSC | The sub-location information has been added to the "Bench " section for all containers that were imported from your lab's previous records in CISPro |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Shelf: | |
| Specific Location Note: | |
| — | |
| Manufacturer: | |
| | 0 |
| Product Name: | |
| | |
| Product Number: | |
| | |
| Date Received | |
| 2019-05-28 | |
| Format: 2019-05-28 | |
| Expiration Date: | |
| | |
| Format: 2019-05-28 | |
| Purchase Order: | |
| | |
| Notes: | |
| | |
| | |
| | |
| | |
| | 11 |

| Tip: If your lab has multiple |
|-----------------------------------|
| chemical storage cabinets of the |
| same type or any sub-location |
| names that are more specific or |
| complex, you should create a |
| "cheat sheet" for lab members to |
| reference when entering container |
| information. |
| |



Don't forget to label your cabinets and shelves with the names, too!

14

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.

Then click "**Remove**" and click "yes" to confirm.

| Juentitacker | And invent | | IS BUIK EOI | L. | | | | | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|------------------------------------------|-------------------------|------------------|------------------------------------------------------------------------------------------------|-----------------------------------------------------------|------------------|----------------------------|------------------------|---------------|
| assante | Lab Ch | emica | I Conta | iners | 5 | | | | | |
|) 😡 | | | | | | | | Show | ng 1-1/ of | 17 resu |
| Filters | | | | | | | | | | |
| Chemical Nam | e: | | CAS Numb | er: | | Chemic | al Haza | irds: | | |
| | | | | | | Sele | ect Haz | ards(s) | • | |
| Chemical Syno | onym: | | Database L | inkage : | Status: 🔞 | | | | | |
| | | | | | | Con | trolled | Substance? | | |
| Physical State | | | Location (S | Space): | a/a) | | | | | |
| Select Sta | (e(s) | * | Select | Location | 1(8) | • | | 100000000 | | |
| Bench: | | | Shelf: | | | Specific | Locat | ion Note: | | |
| | | 0 | | | | | | | | |
| Updated | | | Updated | | | | | | | |
| After: 😡 | | | Defense | | | | | | | |
| | | | Before: | | | | | | | |
| | | | Before: | | | | | | | |
| Cantainan IDa | | | Before: | | | | | | | |
| Container IDs: | | | Before: | | | | ١ | | | |
| Container IDs: | | | Before: | | | |) | | | |
| Container IDs: | | | | | | |) | | | |
| Container IDs: | | | Before: | | | 4 | | | | |
| Container IDs: | (or one per line | e) list of Con | tainer IDs | | | h |) | | | |
| Container IDs: | (or one per line | e) list of Con | tainer IDs | | | 4 |) | | | |
| Container IDs: | (or one per line | e) list of Con | tainer IDs | | | h |) | | Subm | it |
| Container IDs: | (or one per line | a) list of Con | tainer IDs | | | A |) | | Subm | it |
| Container IDs: | (or one per line | e) list of Con | Before: | | | A |) | | Subm | it |
| Container IDs: | (or one per line | e) list of Con | tainer IDs | Units | Location | Zentainer ID | Ed | Remove | Subm | it Shel |
| Container IDs: | (or one per line | e) list of Con | tainer IDs | Units | Location | 2 Container ID | Ed | Remove | Subm Bench | it <u>She</u> |
| Container IDs: Comma-delimited Chemical Name A Acetone 99% | (or one per line <u>CAS #</u> 67-64-1 | e) list of Con <u>State</u> Liquid | tainer IDs Amount 4 | Units | Location Annenberg Center - | Container ID 23455759 | Ed Edi | Remove <u>Remove</u> | Subm Bench FLSC1 | it Shel |
| Container IDs: Comma-delimited Chemical Name A Acetone 99% | (or one per line <u>CAS #</u> 67-64-1 | e) list of Con State Liquid | tainer IDs | <u>Units</u> | Location Annenberg Center_ 001 | Container ID 23455759 | Ed | Remove Remove | Subm Bench FLSC1 | it Shel |
| Container IDs: Comma-delimited Chemical Name A Acetone 55% Acetonitrile | (or one per line <u>CAS #</u> 67-64-1 75-05-8 | e) list of Con State Liquid | tainer IDs Amount 4 100 | Units I ml | Location Annenberg Center_ 001 Annenberg Center_ | 23456789 C-20000777 | Ed Edi | Remove Remove | Subm Bench FLSC1 | it Shel |
| Container IDs: Comma-delimited Chemical Name A Acetonitrite | (or one per line CAS # 67-64-1 75-05-8 | E) list of Con State Liquid | tainer IDs Amount 4 100 | Units I ml | Location Annenberg Center_ 001 Annenberg Canter_ 002 | Container ID 23456759 C-20000077 | Ed Edi | Remove Remove Remove | Subm Bench FLSC1 | it Shel |
| Container IDs: Comma-delimited Chemical Name A Acetonitrile | (or one per line <u>CAS #</u> 67-64-1 75-05-8 75-05-8 | | tainer IDs Amount 4 100 | Units 1 ml | Location Annenberg Center. 901 Annenberg Center. 902 Annenberg Center. | Container 10 23455759 C-200000777 C-200000777 | Ed Edi Edi | Remove Remove | Subm Bench FLSC1 | it Shel |

Disposing of Multiple Containers (and Bulk Edit)

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

| Passante Lab | Chemmacker Add inventory Tonis | Buik Edit Ind Other Chemicals | | 2 |
|-----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|---|
| » View Lab Profile » ChemTracker » Compliance Dashboard | Select Chemical Conta This page enables editing or deleting of like to charge. Once you have selected there, charges to all the selected contai | niners many chemical containers at once. Use the desired containers, click "Edit selec ners may be made. | the filters below to find the containers you would ted container" at the bottom of the page. From | |
| Manage Members Send Lab Message | Chemical Name: | CAS Number: | Chemical Hazards: | |
| » Self Inspections » Manage Lab Forms | Chemical Synonym: | Database Linkage Status: 🥹 | Location (Space): Select Location(s) * | |
| Research Tools My Account | Physical State: Select State(s) * | Bench: | Shelf: | |
| | Notes: | Last Changed After: | Last Changed Before: | |
| | Container IDs (up to 1000): | | | |
| | | | 4 | |
| | Comma-delimited list of Container IDs | | | |
| | | | Showing 1 to 30 of 30 entries | |

You can scan multiple barcodes into the container ID box (one per line) or use the filters to search for the containers you want to remove or edit.

Select the containers of interest or choose "select all", then click **"Edit selected containers"** in the bottom right corner. From there, indicate the changes you would like to make.

| Select All | Chemical Name | CAS | Amount | <u>Unit</u> | Location | Bench | Shelf | Last Change |
|------------------|----------------------|---------|--------|-------------|---------------------------|-------|-------|----------------|
| | CHLOROFORM, 99.8% | 67-66-3 | 4 | 1 | Annenberg Center - 001 | | | 5/31/201 |
| | CHLOROFORM, 99.8% | 67-66-3 | 4 | 1 | Annenberg Center - 001 | | | 5/31/201 |
| | CHLOROFORM, 99.8% | 67-66-3 | 4 | I. | Annenberg Center - 001 | | | 5/31/201 |
| howing 1 to 3 of | 3 entries | | | | | | | |
| 3 total contai | ners selected. | | | | | | | |

To dispose of the containers, click "Delete all selected".

| | ChemTracker Add Inventory Totals Bulk Edit Find Other Chemicals |
|-----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Passante Lab | Edit All Selected Containers |
| View Lab Profile ChemTracker Compliance Dashboard | This page enables editing or deleting of many chemical containers at once. Use the filters below to find the containers you wou like to change. Once you have selected the desired containers, click "Edit selected container" at the bottom of the page. From there, changes to all the selected containers may be made. |
| » Manage Members » Send Lab Message | 3 total containers selected. |
| » Self Inspections» Manage Lab Forms | Any changes made below will be applied to all of the chemical containers selected to modify. Any data entered for these fields will overwrite data currently existing for these chemical containers. Leaving a field blank means the original values for that field are kept. |
| Research Tools | Chemical |
| My Account | Look Up Chemical Name or CAS Number: |
| | 0 |
| | Chemical Name CAS Number Product Name or Number |
| | Start typing the chemical name to find the chemical in the database. |
| | Location (space): |
| | Amount: |
| | Units: |
| | Select 0 |
| | Bench: |
| | |
| | Shelf: |
| | Specific Location Note: |
| | Expiration Date: |
| | Format: 2019-08-06 |
| | Notes: |
| | |
| | These changes cannot be undone in bulk. |
| | Cancel Apply changes 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 made 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. However, single container records can be edited individually.

If a field is left blank on the edit page, the existing information in that field will be preserved for all records being edited.

Reactivating Deleted Records

If you accidentally remove a record from ChemTracker, go to the "View Inventory" window.

Click on "Show Advanced Filters."

| CAS Number | Chemical Synonym | |
|------------|------------------|---------------------------------------------------|
| | Spaces: | |
| | Select one | - |
| - | | CAS Number Chemical Synonym Spaces: Select one |

Then select "Show Deleted Chemical Containers."

| Comma-delimited (or one per line) list of Container IDs | | |
|------------------------------------------------------------|------------------------|----------------------------------------|
| arts with | | |
| ide Selected Columns: | Controlled Substance?: | Show Deleted Chemical 🗹 Containers: |
| | | |
| | | Hide Advanced Filters |

| 1 | | | | | | | | |
|---|---------------|---------|--------|--------|---------------------------|--------------|-------------|--------|
| | Chemical Name | CAS # | State | Amount | Location | Container ID | Edit | Remove |
| | Acetone 99% | 67-64-1 | Liquid | 41 | Annenberg Center - 001 | 23456789 | <u>Edit</u> | Remove |

Click "Reactivate" at the bottom of the screen.

| Update | • | Reactivate | Cancel |
|--------|---|------------|--------|
| | | | |

Managing High-Turnover Containers (not available in all buildings) THIS METHOD MAY NOT BE USED FOR FLAMMABLE LIQUIDS IN HIGH-RISE

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.

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 when empty:

- EHRS would create five *representative* containers in your ChemTracker inventory. (Starting with the letters "HT")
- The information and high-turnover barcodes would be on a *sheet of paper* instead of on the bottles.
- The paper is attached to the cabinet where the bottles are stored.

| Example: | | | |
|-------------------|----------------------------|---------|----------------------------|
| Material | Package information | Size | Barcode |
| Acetone [67-64-1] | Sigma-Adrich Chromsolv for | 4 Liter | |
| | HPLC >99.9% | | |
| Acetone [67-64-1] | Sigma-Adrich Chromsolv for | 4 Liter | |
| | HPLC >99.9% | | |
| Acetone [67-64-1] | Sigma-Adrich Chromsolv for | 4 Liter | |
| | HPLC >99.9% | | |
| Acetone [67-64-1] | Sigma-Adrich Chromsolv for | 4 Liter | |
| | HPLC >99.9% | | |
| Acetone [67-64-1] | Sigma-Adrich Chromsolv for | 4 Liter | |
| | HPLC >99.9% | | Five unique bareade labels |
| | | | rive unique barcode labels |

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

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 stored.

Contact EHRS if you need us to make any changes to your high-turnover inventory.

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

Lab Moves/Reconciling Your ChemTracker Inventory

If a lab is discarding any containers as part of their lab move/relocation, they are responsible for scanning them out/removing them from their ChemTracker records.

Labs should notify the chemical inventory team (<u>cheminv@ehrs.upenn.edu</u>) prior to giving away containers to other labs. The chemical inventory team will provide guidance on how the involved labs can add/remove ChemTracker records, or they can complete the electronic transfer on the labs' behalf.



The chemical inventory team offers a service called "reconciliation" which helps labs to "true-up" inventory records that are believed to be out-of-date due to poor record keeping, poor training, relocation, etc.

If your lab recently moved, the first step would be to submit a <u>Request Changes to BioRAFT Lab</u> <u>Locations (spaces) webform</u>.

Next, the chemical inventory team will electronically bulk edit your inventory and send you an export of your inventory on a spreadsheet. You will then annotate on the spreadsheet what has been disposed of and the new locations for your other chemicals and send back to the chemical inventory team.

Another option for labs that have moved or with out-of-date inventories would be for your lab to scan the chemicals that remain in your lab, and the chemical inventory team will reconcile it remotely for you. Instructions for this are included below:

- 1. Decide the room(s) where your chemicals will be stored.
- 2. Create a text document (e.g in MS Word) or Excel file.
 - a. Type in the name of a storage location (e.g. "Bench"). Remember to use names that are consistent with those you are already using in ChemTracker.

b. Under the location name, list all the barcode numbers for the containers that you want "moved" to that location. **One barcode number per line.**

- i. You can easily do this by using your barcode scanner. Just put the cursor where you want the barcode number to go and scan the EHRS inventory barcode sticker that's on the container. The scanner should "type" the number into the document for you.
- c. Repeat this process for each of the locations.
- d. Send the chemical inventory team (<u>cheminv@ehrs.upenn.edu</u>) your document as an attachment.
- 3. EHRS chemical inventory staff will then process your request and let you know when it's complete.

Appendix A: Gas Cylinders

Reference the following table to enter the volumes (in liters) or weights 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%) | | Cylinder Size E | 660 | L |
| Oxygen Gas (greater than 21%) | 7 inch x 33 inch | Cylinder Size 80 | 2407 | 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 |
| 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 |
| 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 |
| Carbon Monoxide | | Cylinder Size 150A | 400 | L |
| Carbon Monoxide | 6 inch x 23 inch | Cylinder Size 10 | 850 | L |
| Carbon Monoxide | 7 inch x 33 inch | Cylinder Size 80 | 2000 | 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 |
| Methane | 7 inch x 19 inch | Cylinder Size 35 | 1132 | L |
| Methane | 7 inch x 33 inch | Cylinder Size 80 | 2831 | L |
| Methane | 9 inch x 51 inch | Cylinder Size 200 | 7400 | L |
| Methane | 9 inch x 55 inch | Cylinder size 300 | 10100 | L |
| Nitric Oxide | | Cylinder Size 35 | 226 | L |
| Ammonia | | lecture bottle | 283 | L |
| Ammonia | 9 inch x 51 inch | Cylinder Size 200 | 5578 | L |
| | Single use Fatboy tank with | | | |
| Propane Gas | standard torch fitting | | 16.92 | oz |
| Propane Gas | Liquefied Gas | | 100 | G |
| Propane Gas | Liquefied Gas | | 300 | G |

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