

## UC Chemicals User Guide

**UC Chemicals General Information:** UC Chemicals is a chemical inventory management system in use at the UCI campus. It allows for facile inventory management using a barcoding system. This system provides users with easy and quick access to prepopulated chemical and safety information. UC Chemicals can be accessed using a web browser application and a mobile application.

**Desktop/Web Browser:** Use for full functionality to add/delete chemical containers, view chemical container information, set up inventories, assign inventory/delegate roles to lab personnel, create sublocations, view/download reconciliation reports, and certify your inventory.

**Mobile Application:** Limited functionality and should only be used to add/delete chemical containers and view chemical container information, which is easier to do with the mobile app. You can use it to scan barcodes and identify chemicals in your lab.

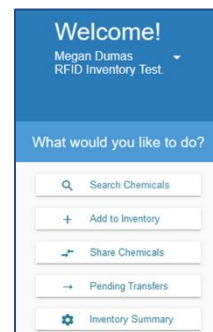
## UC Chemicals Web Browser

### Login to UC Chemicals Web Browser

- Go to <https://app.riskandsafety.com/chemicals/> to access UC Chemicals.
- Select **University of California, Irvine** from the drop down menu.
  - Check the box next to **Remember my selection permanently**.
  - Click **Next**.
- Log in with your UCInetID.
- Authenticate using Duo Mobile.
  - Check the box next to **Remember me for 24 hours**.
- This will open the UC Chemicals window.

### Home Page Navigation – Existing Inventory with Sublocations

- **Search Chemicals:** Search for chemical containers within your current inventory, your colleagues' inventories, the storeroom's inventory, and the campus inventory.
- **Add to Inventory:** Add new chemical containers to your inventory.
- **Share Chemicals:** Check for active requests to borrow chemicals.
- **Pending Transfers:** Accept ownership for chemicals given to you by another lab.
- **Inventory Summary:** Check the total number of chemicals, certify your inventory is accurate, check the activity log, manage tags, add/remove colleagues, export your inventory, reconcile your inventory, add/remove/edit sublocations, etc.



### Inventory Summary

**Inventory Overview:** Provides an overview of your inventory information.

- **Total Chemicals:** Total number of chemicals in your inventory.
- **Total Containers:** Total number of chemical containers in your inventory.
- **Container Issues:** Total number of container warnings, clicking this link will bring you to a list of all the containers that have warnings associated with them (e.g. peroxide former has expired).
- **Barcoded:** Total number of containers with barcodes.
- **Missing Barcode:** Total number of containers that are missing barcodes, clicking this link will bring you to the inventory search page with an active filter showing only containers missing a barcode.

**Ellipsis (⋮)** Next to the **Chemical Inventory Summary** Heading: Edit inventory name, remove containers by location, or remove all of the containers missing a barcode.

### Inventory Access & Permissions

- **Owner:** Change the owner of the inventory.

- **Members:** View and modify users' permissions to access different functionalities within your chemical inventory
- **Groups:** Quickly add any other groups you may own to your inventory.
- **Colleagues:** Colleagues can see each other's inventory. If there is another lab on campus that you frequently share chemicals with you can add them as a colleague. Once both labs accept the colleague request, they can view each other's inventories.
  - **To send a request:** Search the inventory owner's name and then click select.
  - **To cancel the request:** Click the **Ellipsis** (⋮) to the right of the request.
  - **To accept or reject request:** Click the **Ellipsis** (⋮) to the right of the request.

**Inventory Certification:** Certify that your inventory is accurate. This should be done after an inventory reconciliation has been completed.

**Import & Reconcile & Export:** Allows you to import (i.e. upload) an inventory or export (i.e. download) your inventory data, and links to the reconciliation report page.

- **Reconcile your inventory:** Accesses the inventory reconciliation page where you can upload a scanned inventory. The software will analyze the data and generate a reconciliation report that you can use to identify inventory discrepancies within your lab. Reconciliation must be done at least annually.
- **Reconcile your inventory by sublocation (barcode only):** Allows you to reconcile your inventory via sublocations that are barcoded with 2D barcodes. This is not the preferred method on campus, but some labs choose to organize sublocations this way.
- **Import:** Allows you to import a spreadsheet with your inventory data so you can update your inventory all at once. The page will allow you to download the spreadsheet template and access a step-by-step guide. Note that this template must be used, and this is not a place to access or upload reconciliation reports.
- **Export Inventory:** Allows you to download your entire inventory into an editable spreadsheet.

**Tags:** Create tags that can be associated with chemical containers and used as an additional search filter when searching your inventory. Tags must be created on the inventory summary page before they can be associated with containers in your inventory.

- **To add a tag:** Type the desired tag and click **Enter** (on your keyboard).

**Manage Sublocations:** A sublocation is a specific location in your room (e.g. shelf, fridge, bench, cabinet, the entire room, etc.). Sublocations must be created before you can add containers to your inventory.

- Add new sublocations using the blue plus sign button, **+**, in the bottom right corner of the page. Your inventory must have a room associated with it before sublocations can be added. Locations can be added in your group profile.
- Click the **Ellipsis** (⋮) to the right of each sublocation to edit or remove the sublocation or move containers to another sublocation.
- Click the **Ellipsis** (⋮) at the top right of the page to download a printable webpage with all of your sublocations listed. (Note: If the sublocations are barcoded, the QR code will appear under each sublocation on the document.)

**View recent inventory activity:** Clicking this link will bring you to a new page that shows up to 100 recent inventory actions (e.g. adding/removing/editing containers).

**Door Hazard Signs:** Print door hazard signs that provide a list of the chemical hazards present within the room.

## Creating/Editing/Removing Sublocations [PIs, Delegates, Inventory Managers Only]

### Creating a Sublocation

- Select the **Inventory Summary** Button.
- Select the plus sign button, **+**, to the right of the **Sublocations** heading.
- Select the **Building Name** and **Room Number**.
- Enter the **Sublocation Name**.
- (Note: **Barcode** – if you would like to barcode your sublocations, you can enter it manually here on the desktop or scan it later on your mobile device.)
- **Temperature** and **Pressure:** default is set to Ambient, set to the appropriate value for the sublocation.
- To prevent sharing and make containers unable to be searched by other researchers on campus, mark the sublocation as **Private**.
- Select the appropriate hazard pictograms for the sublocation.

- Click **Save**.

### Editing a Sublocation


- Click the **Ellipsis** (⋮) to the right of the sublocation you want to edit.
- Select **Edit**.
- Edit the necessary information.
- Click **Save**.

### Removing a Sublocation

- Click the **Ellipsis** (⋮) to the right of the sublocation you want to remove.
- Select **Remove**.
- *(Note: If there are containers in the sublocation, you will be prompted to move the containers to a new sublocation within your inventory prior to deletion.)*
- Click **Remove**.

## Adding Chemicals

### Add a Chemical Container

- Select **Add to Inventory**.
- Search by the **CAS Number, Chemical Name, or Product Name**.
- Select the **Chemical**.
  - Review the details before selecting and choose the most appropriate chemical profile, as there may be several entries for the same chemical. Look for indicators such as CAS number, GHS hazard symbols, and chemical property information availability.
- Select the add button  on the right of the **Container** heading.
- Enter the container information.
  - Required information (labeled with a star \*): Number of containers (default set to 1), Container size, Amount in container, Units, Physical state, Container type, Location
  - Barcode: if you have barcoded the container you can type the barcode number
- Click **Save**.

**Add a Commercial Substance [PIs, Delegates, Inventory Managers]:** If you cannot find the desired chemical it needs to be added as a commercial substance.

- Select **Add to Inventory**.
- Select the **Ellipsis** (⋮) on the top right.
- Select **Add Commercial Substance**.
- Enter the chemical information.
  - Required information includes Name, Vendor, Product Number, Physical State
- Click **Save**.
- This will bring you to the **Chemical Detail Page**, then follow the steps for “**Add a Chemical Container**” above to add the chemical container.

**Add a Novel Compound:** Add a novel compound if it is not available from any manufacturer.

- Select **Add to Inventory**.
- Select the **Ellipsis** (⋮) on the top right.
- Select **Add a Novel Compound**.
- Enter the chemical information.
  - Required information includes Compound Name and Physical State
- Click **Save**.
- This will bring you to the **Chemical Detail Page**, then follow the steps for “**Add a Chemical Container**” above to add the chemical container.

**Search Chemicals:** Search through the chemical containers in your inventory, your colleagues’ inventories, the storeroom, or the entire campus. Click the dropdown menu at the top left of the page to toggle between these databases. Clicking the dropdown menu to the right of the search bar allows you to select search parameters (e.g. location, tags, barcode status, physical state, classification, etc.).

### Search Chemicals by Name, CAS Number, formula, barcode, etc.

- **Search Inventory:** Search the chemical containers in your inventory.

- Clicking the chemical will bring you to the **Chemical Detail Page** which will display the chemical information and the containers that are present in your inventory.
- **Search Colleagues:** Search the chemical containers in your colleagues' inventories.
- **Search Stockroom:** Search the chemical containers in stockrooms (e.g. PS [Physical Sciences] Stores).
- **Search Campus:** Search the public chemical containers in the entire campus inventory.

**Search Chemicals by Substructure:** Search for chemicals using the chemical structure or substructure.

**Chemical Detail Page:** If you select one of the chemicals from the search page, you will be brought to the **Chemical Detail Page**.

**Container Options:** Clicking the **Ellipsis** (⋮) to right of the container will provide you with a list of actions.

- **Checkout:** Loan out a container (this feature keeps track of who has the container).
  - **Recall:** Send a notification to the individual who has borrowed the container with a request that the container is returned (option for a checked out container).
  - **Return:** Return a container that has been checked out (option for a checked out container).
- **Transfer:** Permanently transfer ownership of chemical containers from one lab to another lab.
- **Dispense:** Keep track of the amount of chemical that has been removed from the container.
- **Clone:** Duplicate the exact container. Easily add more containers if you have multiples of the same chemical.
- **Edit:** Change/update container details.
- **Remove:** Delete containers.
- **Move:** Move containers from one sublocation to another.
- **Reassign:** Change the container to the correct chemical entry.
- **History:** Provides a history of the container (who added, edited, borrowed, etc.).

## UC Chemicals Mobile Application

### Install the UC Chemicals Application





- Open the App Store (iOS Users) or Google Play Store (Android Users)
- Search for UC Chemicals
- Install and launch the application



### Login to UC Chemicals Application

- Launch the UC Chemicals application
- Type your email and Click **SIGN IN**.
- Log in with your UCInetID and password
- Click **Login**.
- Use Duo Mobile to authenticate your account
  - Check the box next to **Remember me for 24 hours**.
- This will open the UC Chemicals Application home page.

**Navigating the Menu Bar (bottom of application):** The navigation bar at the bottom of the application allows you to navigate the UC Chemicals Application.

-  (Inventory): Search for chemical containers within your current inventory, your colleagues' inventories, and the UC Chemicals chemical database.
-  (Scan): Scan barcodes that are associated with chemical containers or sublocations.
-  (Warnings): Shows any container issues you may have (e.g. missing opened dates for peroxide formers).
-  (More): Allows you to add a commercial substance not found in the chemical database and sign out of the application.

**Inventory** :

**Search Chemicals by Name, CAS Number, formula, barcode, etc.:** Search through the chemical containers in your inventory or your colleagues' inventories. Select an inventory using the dropdown menu in the top left, above

the search bar. Clicking the filter menu next to the search bar allows you to choose search filters including rooms, sublocations, tags, and physical state.


- **Inventory:** Search the chemical containers in your inventory, or a colleague's inventory if selected.
  - Clicking the chemical name will bring you to the **Chemical Detail Page** which will display the chemical information and the containers that are present in your inventory. Click the **Details** and **Containers** tabs to toggle between the two. You can add new containers of chemicals you already have in your inventory here by clicking into the chemical you want to add.
- **Chemical Database:** Search for chemicals listed in the UC Chemicals **Chemical Database**. Use this tab to add new containers of chemicals you do not already have in your inventory.
  - Sometimes several chemical profiles are created for the same substance. Please ensure you select the profile with the most information available that aligns accurately with your chemical. Look for identifiers such as CAS number, GHS hazard symbols, and complete/available data on the **Chemical Detail Page**.

**Chemical Detail Page:** If you select one of the chemicals from your inventory or the **Chemical Database**, you will be brought to the **Chemical Detail Page**. The **Chemical Detail Page** contains a large amount of chemical information.

- **Details:** Includes information such as CAS#, hazard statements, synonyms and chemical properties.
- **Containers:** View containers of the selected chemical in your inventory. Click the container you wish to view, and several options will pop up.
  - **View Container Details:** See details of container including barcode #, container size, units, and received/opened dates.
  - **Clone:** Allows you to copy an existing container's details if you need to add more containers of the same chemical.
  - **Edit:** Allows you to edit the details of the selected container.
  - **Remove:** Delete the container.

### Add a Chemical Container

(Note: Sublocations must be created [using the web browser] before you can add containers to your inventory.)

- If necessary, place a barcode on the desired chemical container. (RFID barcodes are double-sided stickers that are intended to 'stick out' like a flag from the chemical container.)
- Search by the **CAS Number**, **Chemical Name**, or **Product Name**.
- Select the **Chemical**.
- Click the **Add Container** button at the bottom
- Enter the container information.
  - Required information includes Location, Container Size, Units, Physical State, Container Type.
  - To scan the barcode, click the **Scan** button on the right of the **Barcodes** heading 
    - Note that you can use this feature to replace a barcode on an existing container. You may need to do this if the barcode is compromised and needs to be replaced or if you discard the container and add a new barcode to an identical replacement.
- Click **Add to Inventory**.



### Scan :

**Scan a barcode to access the container details directly:** It will read the barcode automatically once you put the camera over it and the barcode number will be displayed.

**Remove/View Container:** Click the dropdown menu to either remove or view the container.

- This feature allows you to quickly remove containers and see and edit chemical container details without the need to search in your inventory.
- You can scan multiple barcodes, and they will show up all together at the bottom of the screen so you can remove multiple containers at the same time.

## Warnings


**Warnings will appear in this tab if there are problems with a container:** Certain hazard classes have additional required details that will show as a warning if they are missing. Warnings will also indicate if a container is expired.

- **Expiration Date:** A container will be flagged if it is missing a required expiration date. Expiration dates are required for certain hazard classes, such as peroxide formers.
- **Opened Date:** A container will be flagged if it is missing a required opened date. Opened dates are required for certain hazard classes, such as peroxide formers.
- **Last Tested Date:** Peroxide formers are required to be discarded or tested within 12 months of receipt (or 3 months for Class A). A container may be flagged if the last tested date is absent.
- **Expired:** A container will be flagged as expired if it is past its expiration date as noted in the chemical details.

## More

**Add a Commercial Substance [PIs, Delegates, Inventory Managers]:** If you cannot find a chemical you are trying to input, you should add it as a commercial substance.

**Barcode Your Sublocations:** This feature works only if using 2D barcodes, which is not the preferred method on this campus. Reconciling your inventory with a QR scanner using 2D barcodes requires all sublocations to be barcoded.

- Place a barcode on your sublocation.
- Click **Barcode your sublocations** in the **More** tab.
- Click the **Scan** button, , next to the sublocation you are barcoding.
- Use the camera to scan the QR code on the barcode.

**Sign Out:** Log out of the application.

## Frequently Asked Questions

### Why should I barcode my inventory?

UC Chemicals, the inventory system, will not properly interact with your chemical containers if they are not barcoded. Barcoding provides a unique identifier to each container within your laboratory. Barcoding your containers allows inventory reconciliation to be done with a scanner in a facile and easy manner.

### Why should I barcode my Sublocations?

Barcoding your sublocations provides each sublocation with a unique identifier and allows lab members to easily and quickly locate their chemicals and sublocations. Sublocations must be barcoded to reconcile your inventory using QR barcodes. This method is not compatible with the RFID tag method.

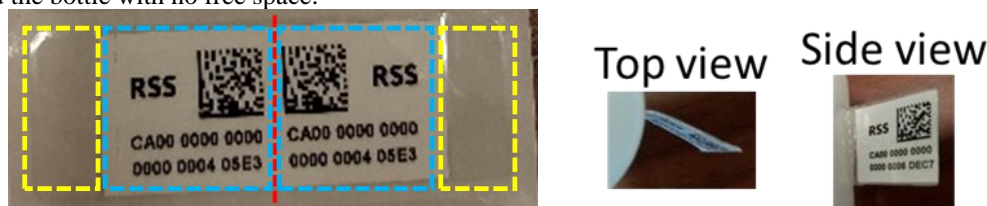
### How do I attach the RFID barcodes?

RFID barcodes are double-sided stickers that are intended to ‘stick out’ like a flag from the chemical container. This is due to the characteristic of the antenna and how the signal is affected by the type of material in the container. Sticking the barcode out from the bottle reduces variation/interference and increases the accuracy of scanning the RFID barcodes. This also decreases the size of the barcode, allowing it to be attached to small vials without any issues.

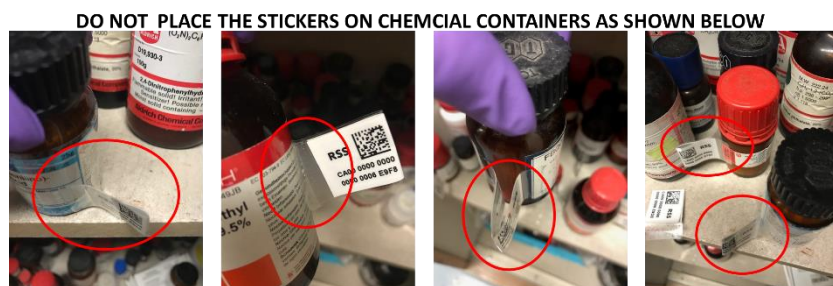




The image below shows how to fold the RFID tag appropriately, the tag must be folded in half along the red line, the two blue boxes should be stuck to each other, and the two orange boxes should be stuck onto the container. A top view and a side view of an appropriately placed label are also shown below. Ensure that the sticker is completely attached to itself and the bottle with no free space.



It is important that the sticker is placed properly. If the sticker is not placed properly it will fall off. Examples of incorrectly placed barcodes are shown below.



#### **Will the barcodes knock over other bottles, does it cause problems for storage?**

These RFID tags and their placement should not cause any issues within your inventory and storage. These tags are quite flexible and do not knock containers over or take up much space within the cabinet, shelf, etc. We have not received any complaints or issues from labs that have converted over to UC Chemicals using these RFID tags. If you observe an issue with your inventory after implementing the new system, please contact Sara Willman, [swillman@uci.edu](mailto:swillman@uci.edu).

#### **Will the RFID barcodes fit on small containers?**

The RFID tags when placed properly should fit on a container of any size.

#### **Are the barcodes chemical resistant?**

Yes, these barcodes were specifically designed for use in a chemical laboratory.

#### **Can I search the inventory of other research labs?**

Researchers can add other laboratories as colleagues, (colleagues can search each other's inventories). UC Chemicals also provides you with the option to search the entire campus, you will not be able to see which inventory the chemical is in, but you can send a request for the chemical through UC Chemicals.

#### **Can I make containers unsearchable?**

Yes, chemical containers or sublocations can be made private which makes them unsearchable in the system. This feature must be used for controlled substances.

#### **Can I search by structure or substructure?**

Yes, you can search by substructure. This feature is only available in the web browser. To access this feature select **Substructure** in the search menu.


#### **The chemical information page is incorrect, how do I fix it?**

For the web browser, select the **Ellipsis** (⋮), in the top right of the **Chemical Detail Page** and select **Report a Problem**. Fill in the necessary information and click **Submit**.


### How do I add/remove inventory managers?


Login to <https://app.riskandsafety.com/>, then select your LHAT assessment from the **Workspace** on the home page. Select **Roster** from the options on the right sidebar. If you would like to add or remove a **Lab Hazard Contact** (Delegate) click the person on the list and checkmark the box next to **Delegate**, click **Save**, and click **Continue**. This will make the person a laboratory **Delegate**, which provides them access to make changes in the LHAT.

To give someone delegate access to the inventory but not to other RSS products, log in to the web browser, <https://app.riskandsafety.com/chemicals/>. Select **Inventory Summary**, then click **Inventory Access & Permissions**.

Select the pencil icon  to the right of **Members** and checkmark the members you want to be **Inventory Managers**.

### How do I add/remove members of my lab?

Login to <https://app.riskandsafety.com/>, then select your LHAT assessment from the **Workspace** on the home page. Select **Roster** from the options on the right sidebar. To add a new member, select the add button  in the bottom right. Search for lab members using their name or email address. *(Note: If members are recognized by LHAT, their names will populate as you begin typing in the search field. If members are not recognized by LHAT, have them log into the LHAT application (<https://app.riskandsafety.com/>) using their UCI email address so they become searchable.)*

To remove a member, select the lab member you wish to remove and click the trash icon  in the top right next to **Save** to remove the person from your LHAT.

### How do I add/remove a building or room for my lab?

Login to <https://app.riskandsafety.com/>, then select your LHAT assessment from the **Workspace** on the home page. Select **Locations** from the options on the left sidebar. Search for building and select from dropdown. Search for room and select from dropdown. Click **Continue**.

## Additional Information or Questions

If you have questions related to UC Chemicals: FAQs and tutorials created by the developers can be found at <https://app.riskandsafety.com/help> or [submit a ticket](#). RSS has also developed [video guides](#).

If you have any suggestions for the developers or believe the browser or app is not functioning properly, please contact the UC Chemicals service desk at [service@RiskandSafetySolutions.com](mailto:service@RiskandSafetySolutions.com).