UCR Environmental Health & Safety

CHEMICAL INVENTORY PROGRAM DOCUMENT - EXTERNAL

CONTENTS

INTRODUCTION

A number of hazardous materials are used for research and instructional purposes at the University of California, Riverside (UCR). An accurate chemical inventory is required to comply with applicable state and federal laws. These laws are written for the safety of employees, the community, and first responders.

OBJECTIVES

The objectives of this program include, but are not limited to:

- Provide researchers with the knowledge and tools to keep an accurate inventory of all hazardous materials
- Provide university leadership with reports on hazardous material usage across campus
- Assist the Fire Prevention Team with ensuring the campus meets all applicable fire codes
- Comply with all necessary state and federal reporting obligations

RESPONSIBILITIES

Environmental Health and Safety

The Chemical Inventory Specialist is responsible for the management of the campus' chemical inventory and for the generation of reports based on the inventory data. EH&S will provide training to the campus on the use of *UC Chemicals*.

Supervisor/Principal Investigators (PIs)

An employee who may have authority to hire personnel, evaluate performance, direct work assignments, apply progressive discipline, direct resources to correct identified safety issues. This includes a Principal Investigator, area manager, unit manager, project manager, superintendent, and foreman/person. Unless specified in writing, the default "supervisor" in laboratory/technical areas is the Principal Investigator. The supervisor/PI is responsible for ensuring that designee upkeeps the inventory on a day-to-day basis. The supervisor/PI is also responsible for certifying that their inventory is accurate and up to date annually as part of the annual laboratory safety evaluation. As the person purchasing the material, it is the responsibility of the supervisor/PI to update the inventory.

Worker/Laboratory Personnel

For purposes of this policy, a worker is an individual who actively performs work functions with hazardous materials or equipment in a laboratory/technical area. A "worker" may be faculty, staff, student volunteer assisting in a non-academic class, or visitor/visiting scholar. Workers/laboratory personnel are responsible for the following:

- Familiarize with hazardous materials that are in the laboratory regardless of whether or not they work directly with them
- Upkeep the inventory on a day-to-day basis in between EH&S-led inventory updates
- Assist EH&S with spot checks

ACCESS

UC Chemicals will automatically grant inventory access to all personnel in the associated *Profile* group. Chemical inventories can have one or more *Profile* groups associated with them. The "Inventory Access" menu in the "Inventory Summary" page will allow an inventory owner to associate *Profile* groups.

Profile Delegates and Chemical Inventory Managers have access to all of the options for a chemical inventory allowing them to make changes to sublocations, rename the inventory, and use the import feature. Delegates can be added in *Profile*, but will have elevated access in other Risk and Safety Solutions (RSS) tools. Chemical Inventory Managers only have elevated access in *UC Chemicals*. They can be added in the "Inventory Access" menu in the "Inventory Summary" page.

NEW INVENTORIES

New PIs should request EH&S assistance with the creation of new chemical inventories. The Chemical Inventory Specialist will assist the PI with setting up the inventory and provide training to the lab staff on how to maintain and use the system. Additional barcodes can be requested from the EH&S website or by contacting the Chemical Inventory Specialist.

INVENTORY MANAGEMENT

Inventories should be updated by lab personnel on a day-to-day basis as new chemicals are purchased and old chemicals are used up. New lab personnel can request training from the ehslaboratory@ucr.edu.

INVENTORY CERTIFICATION

Inventory certification must be done annually by the supervisor/PI and will be verified during the EH&S annual lab evaluation. This certification cannot be delegated to lab managers. The supervisor/PI should ensure all of the containers in their lab have *UC Chemicals* barcodes and that their researchers have been removing chemicals from the inventory as they are used. The inventory certification button can be found in the top right section of the "Manage Inventory" page in *UC Chemicals*.

NON-LAB LOCATIONS

Hazardous Materials are not limited to labs and can also be found in areas like shops, restaurants and dining halls, and in Agricultural Operations. These locations will be managed on a case-by-case basis. Contact the Chemical Inventory Specialist for assistance with these locations.

SPOT CHECKS

Annual spot checks will be conducted by EH&S to ensure chemical inventories are accurately captured in UC Chemicals. A percentage of labs will be selected randomly at the beginning of each fiscal year for spot checks. A report will be sent to the appropriate department chair at the end of the year with statistics from the spot checks.

RELATED REGULATIONS

Hazard Communication Standard from Cal/OSHA 8CCR5194(e)(1)(A)
Emergency Planning and Community Right-to-Know Act (EPCRA)
Department of Homeland Security Chemical Facility Anti-Terrorism Standard (CFATS)
California Fire Code
Air Quality Management Mandated Toxic Air Contaminant Emissions

DEFINITIONS

Hazardous material is generally defined as any substance that could adversely affect the safety of the public, handlers or carriers during transportation. Hazardous material, as defined by the DOT, is any substance that appears in the 49 CFR Hazardous Materials Table.

Hazardous material regulations may apply to commercial products, chemical mixtures, and newly synthesized compounds. Various types of batteries, fuel containers and cleaning products are examples of materials that are regulated for shipment.

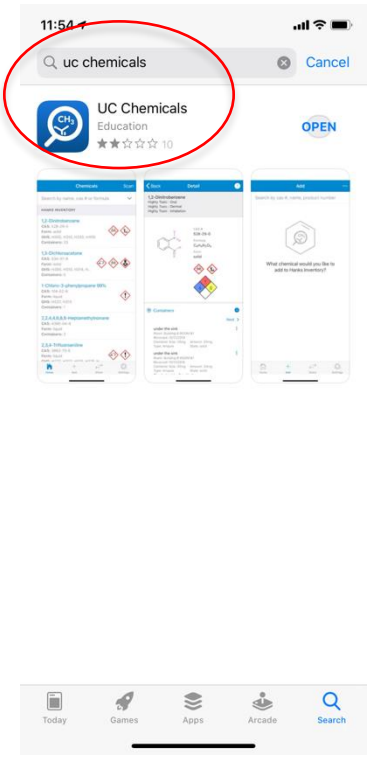
About UC Chemicals

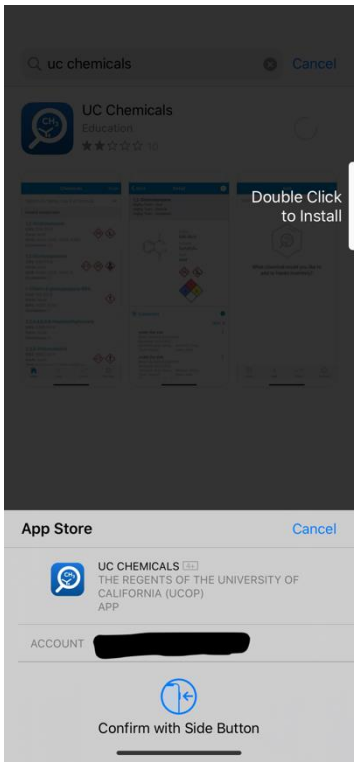
UC Chemicals is a cloud-based chemical inventory management tool developed with a researcher-centric approach. It allows easy tracking and maintenance of containers using a barcoding system. Chemical and safety information, such as hazard codes and first aid, are added from safety data sheets. The application enables users to create chemical networks to easily share chemicals while controlling access. UC Chemicals includes a complementary web application that works in sync with the mobile app and has additional features such as structure search and export capabilities.

Installing the UC Chemicals Application

For iOS users

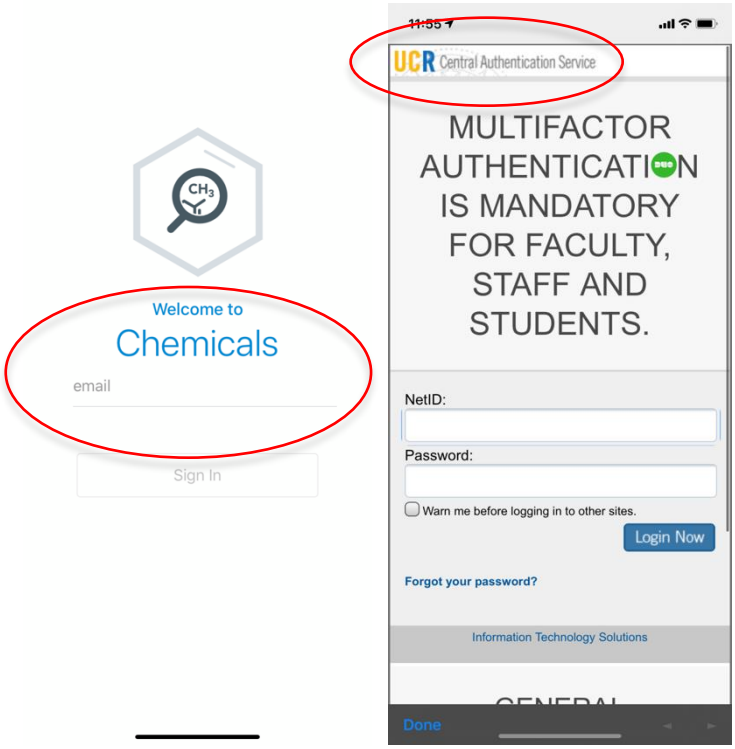
1. Navigate to the App Store
2. Search for UC Chemicals
3. Select **Install**





4. Launch the application
5. Select your campus

6. Log in with your campus credentials

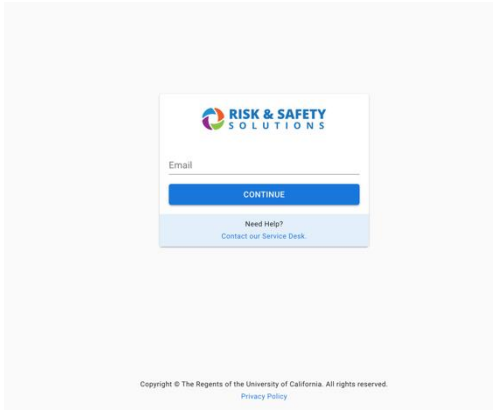


For Android users

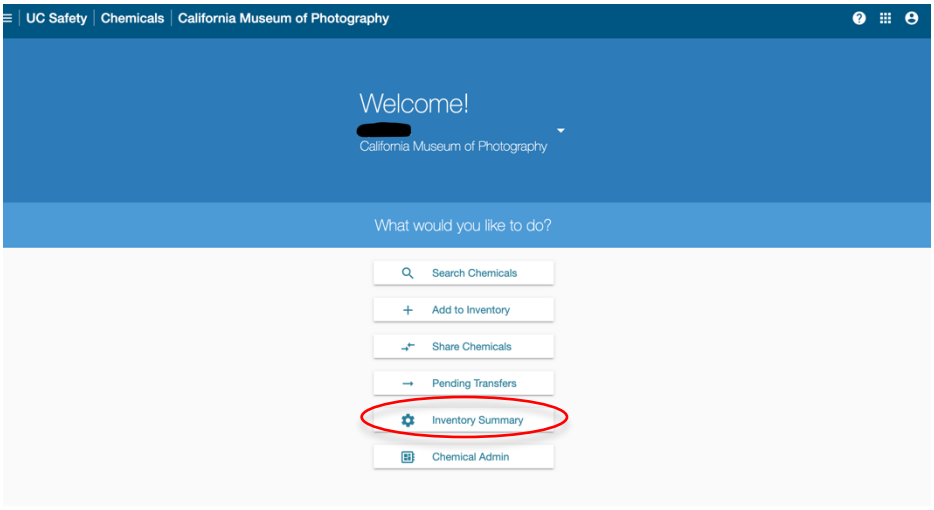
1. Navigate to the Google Play Store
2. Search for UC Chemicals
3. Select **Install**
4. Launch the application
5. Select your campus
6. Log in with your campus credentials

Adding Inventory Managers (For PIs and Inventory Managers-- Desktop)

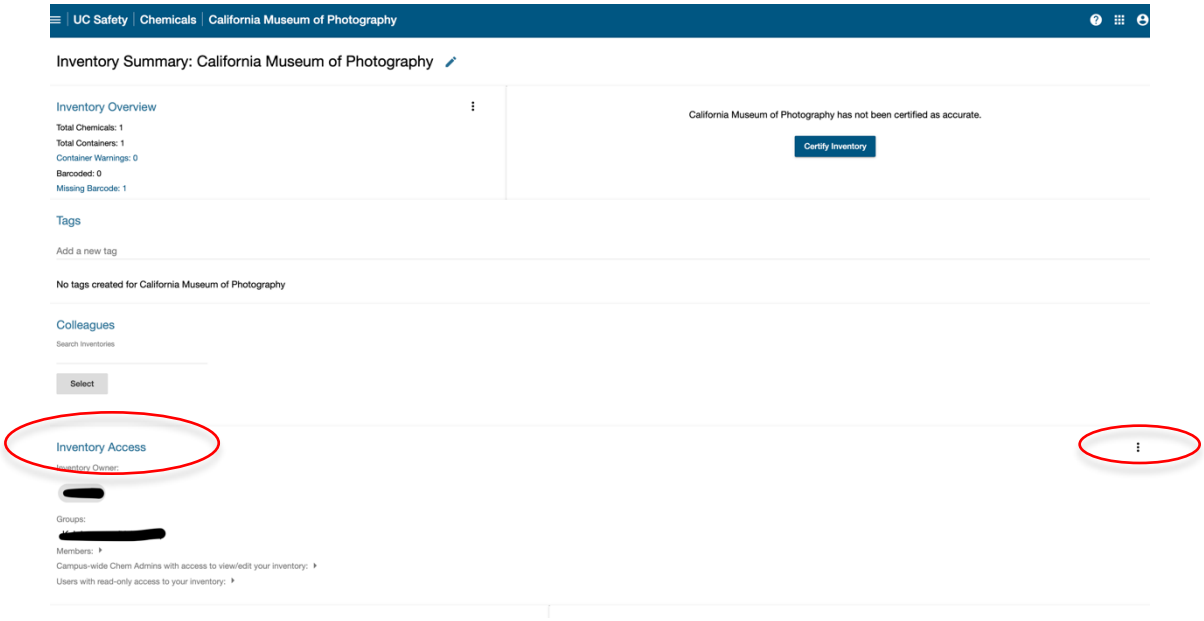
1. Log in to http://ehs.ucop.edu/chemicals



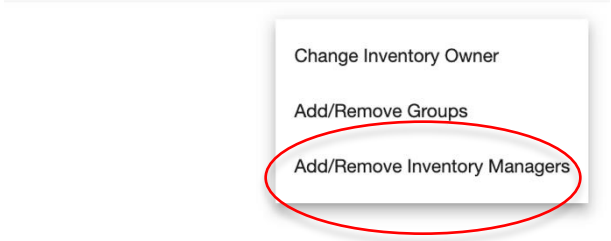
2. Select the **Inventory Summary** button



3. Select the ••• menu icon located to the right of Inventory Access



4. Select **Add/Remove Inventory Managers**



5. Select the members you wish to add or remove as Inventory Managers
6. Select **Done**

Manage Lab (For PIs and Inventory Managers-- Desktop)

PIs, Inventory Managers, and Delegates have access to the Manage Lab section to perform administrative functions and can be accessed on the desktop version

Inventory Summary

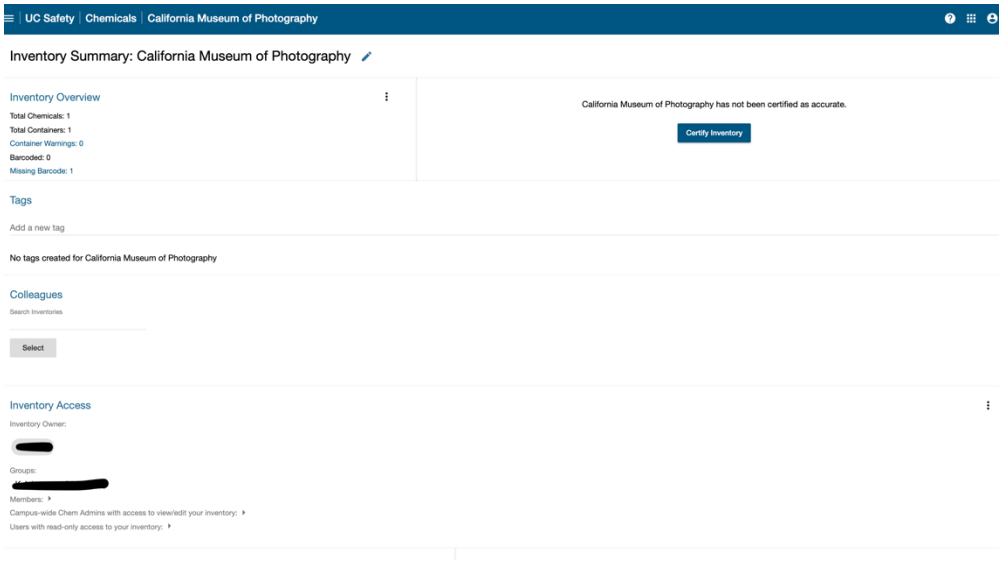
- Provides a summary of Total Chemicals and Total Containers in your lab
- View containers currently barcoded
- View containers missing barcodes

Tags

- Add or remove tags for your lab

Inventory Access

- View lab members in your group

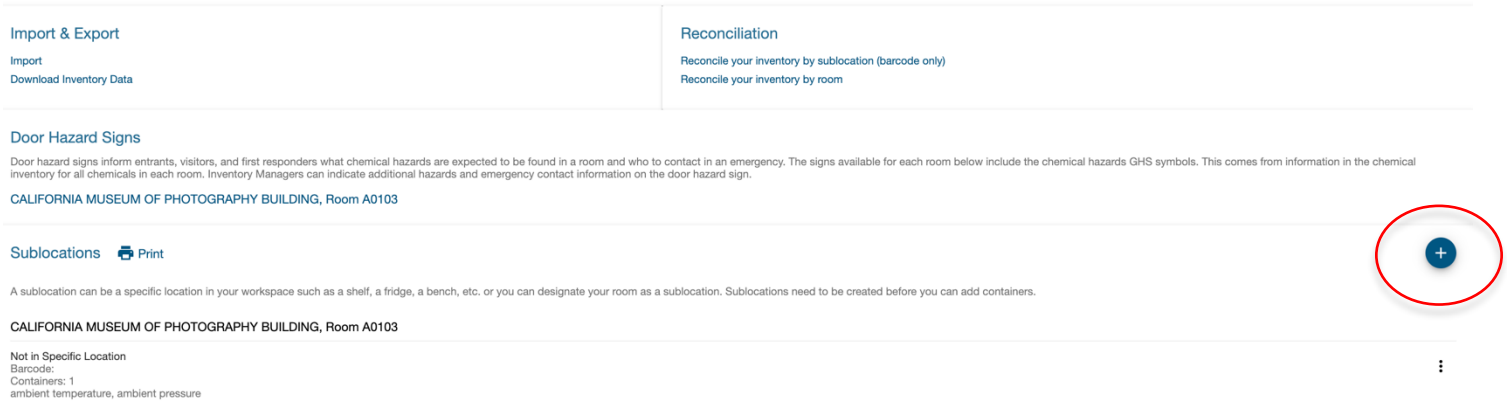


Colleagues

- Add labs you work closely with to share chemicals

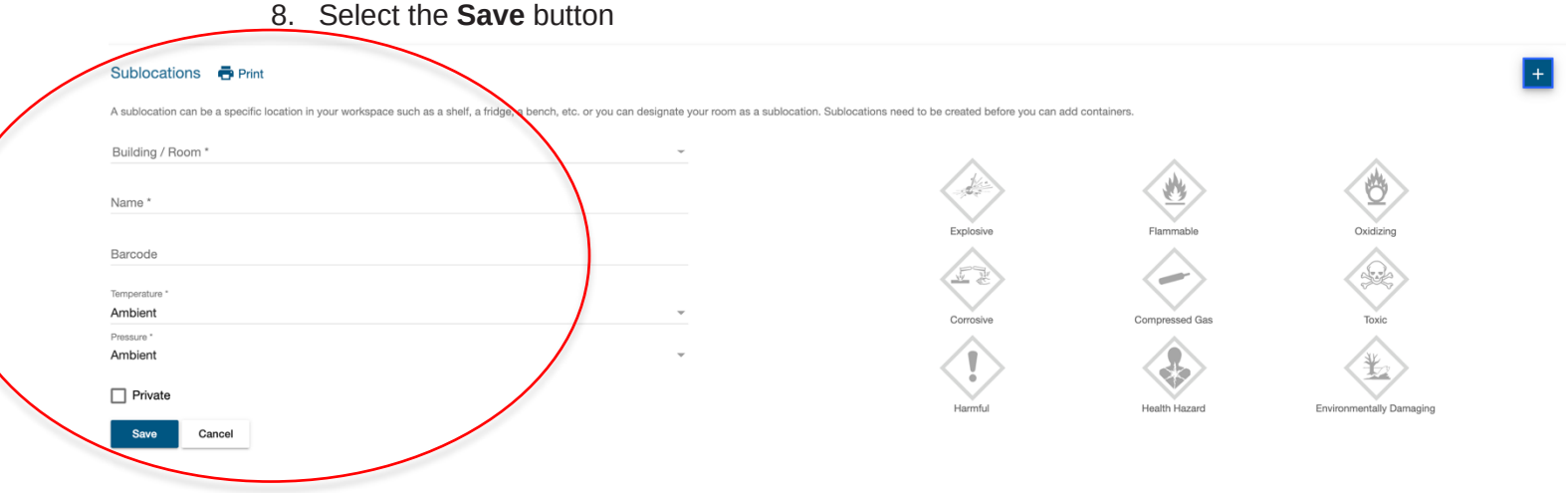
PIs have the ability to mark containers as private for chemicals they wish not to share **Defining Sublocations**

- Adding a sublocation
    1. Select the ⊕ button to the right of the Sublocations

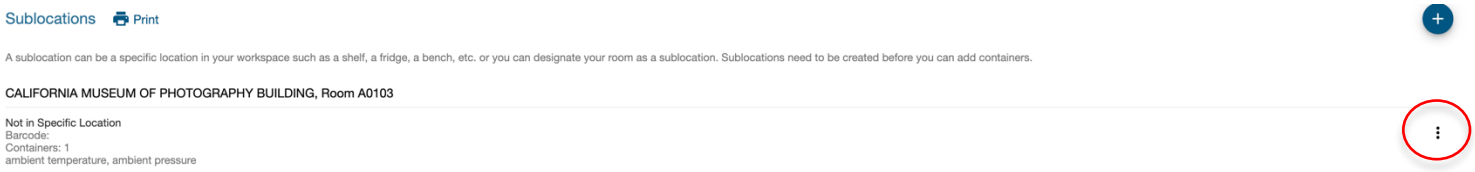


    2. Select the **Building Name and Room Number**

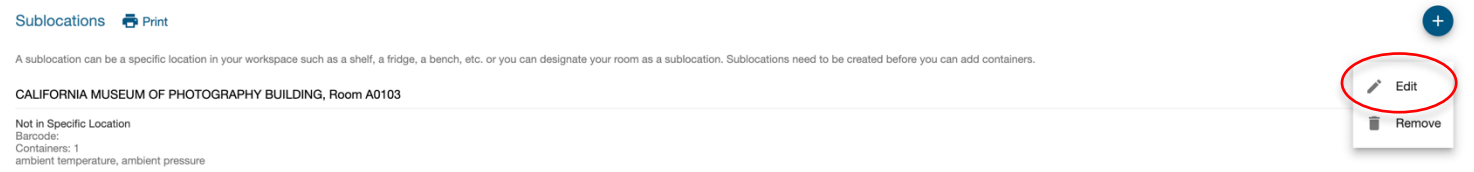
3. Enter in a **Sublocation Name**
4. **Barcode** – The barcode can be entered in manually or scanned at a later time with your mobile device
5. **Temperature** and **Pressure** default to Ambient and can be edited as needed
6. Mark the sublocation as private to prevent sharing
7. Select the appropriate hazard pictograms associated with the chemicals stored in the sublocation
8. Select the **Save** button



- Editing a sublocation
    1. Select the ⋮ menu icon to the right of the sublocation you wish to edit



    2. Select **Edit**



    3. Edit information as needed
    4. Select the **Save** button

- Removing a sublocation
    1. Select the ⋮ menu icon to the right of the sublocation you wish to remove
    2. Select **Remove**

    3. Select the **Save** button

Note: Before a sublocation can be deleted, the PI or delegate will be prompted to move the

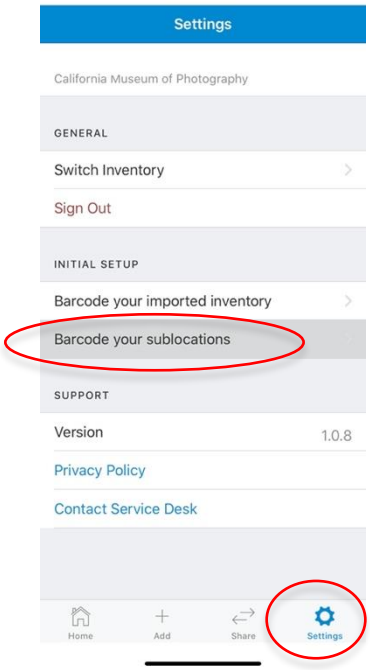
associated containers to a sublocation.

Barcoding Sublocations (For PIs and Lab Managers-- Mobile only)

Barcoding sublocations allow users to enter specific location by scanning a barcode and is also crucial to the reconciliation process. Reconciliation relies on scanning the sublocation barcode followed by scanning all containers at this sublocation. Therefore it is recommended to barcode all sublocation during initial set-up of the lab. Use the same barcode labels that are used for barcoding containers.

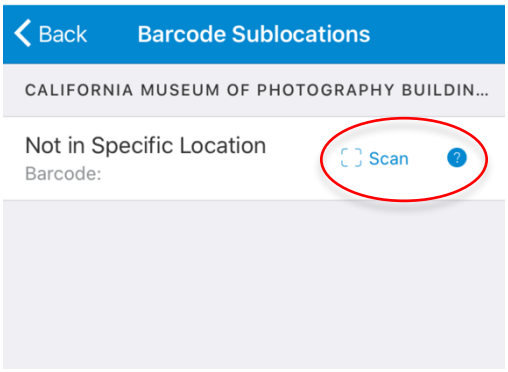
1. Place a barcode on your sublocation

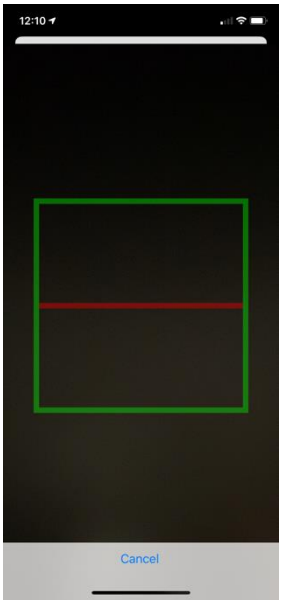
2. Launch the app on your mobile device
   a. Select the settings icon in the lower right hand corner
   b. Select the **Barcode your sublocations** link



   c. On your mobile device, select **Scan** on the sublocation you wish to barcode
   d. This will enable the camera feature on your mobile device

e. Scan the barcode



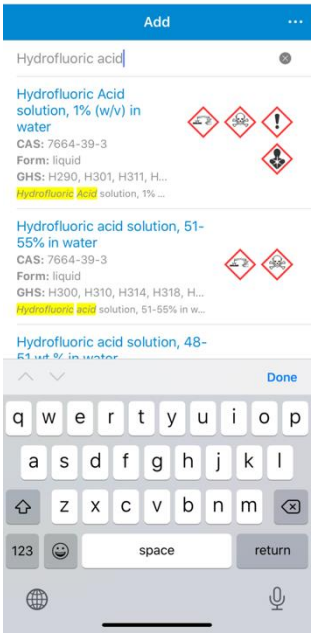


Note: The mobile app must be restarted after adding new sublocations

Adding Chemicals

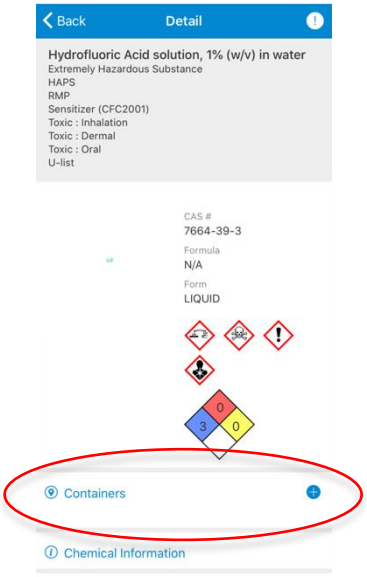
To Add Chemicals

1. Select **Add** from the home page
2. Search chemicals by CAS number, product ID or name

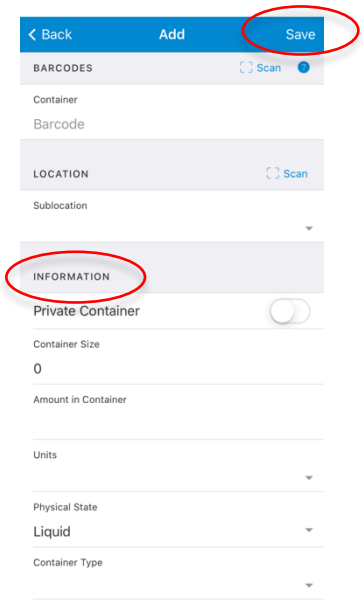


3. Select the chemical

4. Select the add icon ⊕ on the right of the container section



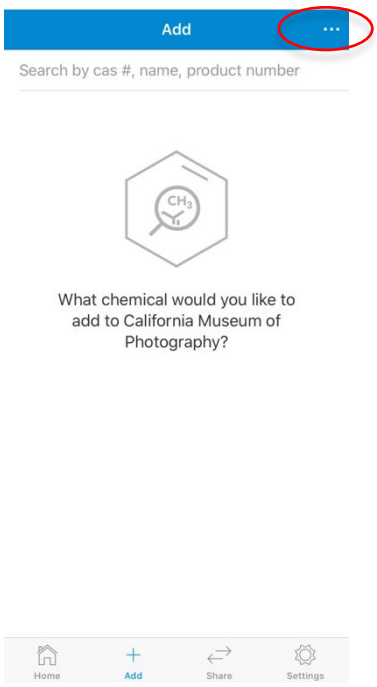
5. Enter container information
6. Select **Save**



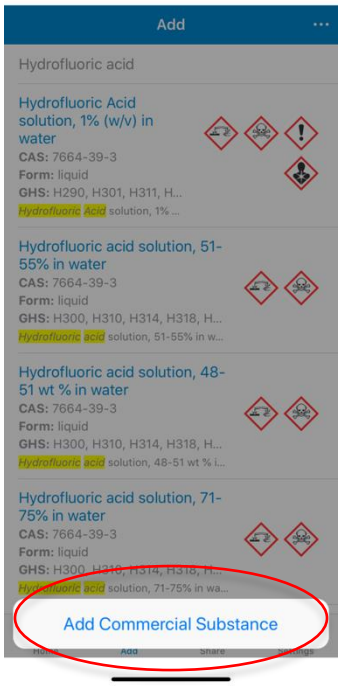
To Add Commercial Substances (for Lab Managers and PIs only)

1. Select **Add** from the home page

2. Select the ••• menu icon

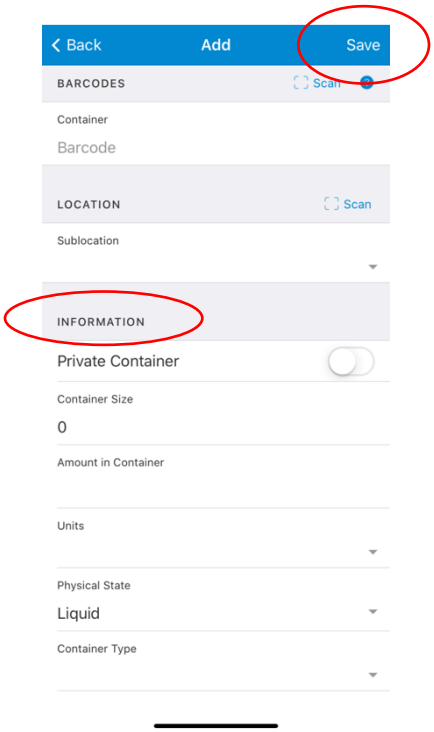


3. Select **Add Commercial Substance**



4. Enter chemical information

5. Select **Save**



To Add a Novel Compound

1. Select **Add** from the home page
2. Select the ⋮ menu icon
3. Select **Add Novel Compound**
4. Enter chemical information
5. Select **Save**

Frequently Asked Questions

1. Why barcode your inventories?
   a. Barcoding allows you to uniquely identify each container in your laboratory. Once completed, inventory reconciliation can be done with a scanner which is both fast and accurate. Barcoding chemicals is mandatory at UCR.
2. Why barcode your sublocation?
   a. Barcoding allows you to uniquely identify each sublocation in your laboratory. Lab members can easily and quickly locate their chemicals when a sublocation is barcoded. Barcoded sublocations and inventories provide faster and accurate inventory reconciliation. Barcoding sublocations is mandatory at UCR.
3. Who will be responsible for purchasing the barcodes?
   a. EH&S will provide barcodes for labs upon request.
4. Do the barcodes scan on curved surfaces?
   a. Yes. The barcode format and size has been chosen specifically for scanning on chemical containers of every size, shape, and material.
5. Does the system support sharing?
   a. Yes. PIs can add colleagues within the application. Once established, this relationship allows researchers to search for chemicals within their colleagues labs and to submit requests to borrow.
6. Are the barcodes chemical resistant?
   a. Yes. The materials have been chosen specifically for use in the chemical lab environment.
7. Can certain chemicals be marked as not shareable so friend labs cannot see them when searching?
   a. Yes. A container can be marked as private which prevents view of that chemical by any friend lab.
8. Is UC Chemicals available as a mobile application?
   a. Yes. UC Chemicals is available as a native mobile application for iOS and Android devices and also as a web-based application.
9. Does the app provide substructure searching?
   a. Substructure searching is available on the desktop version. Select **Search**, then select the **Substructure** link.
10. The chemical information is incorrect. How do I correct this?
    a. If chemical information is incorrect, users can report an issue. For mobile devices, select the **Message** icon located to the right of the chemical name to report an issue. For desktop, select the **menu icon** in the upper right hand corner and select **Report A Problem**.
11. How do I add/delete members for my lab?
    a. Members of your lab can be managed through the UC Safety Profile page http://ehs.ucop.edu/profile. PIs can also designate a Delegate who can manage users and create groups on behalf of the PI.
12. I have a new building or room for my lab, how do I add this?
    a. A PI or Lab Manager can manage locations for through the UC Safety Profile page http://ehs.ucop.edu/profile. Select the **Locations** tab for your group and select the **Add** button to add a buildings/rooms.
13. How can I get access to the Manage Lab section?

a. The Manage Lab section is available to only PIs and their lab managers. Please ask your PI to add you as a Lab Manager.

14. How do I correct a chemical that was incorrectly added to my inventory? Do I need to delete the chemical and add a new one?
    a. The **Reassign** feature allows you to update an existing chemical to the correct chemical.