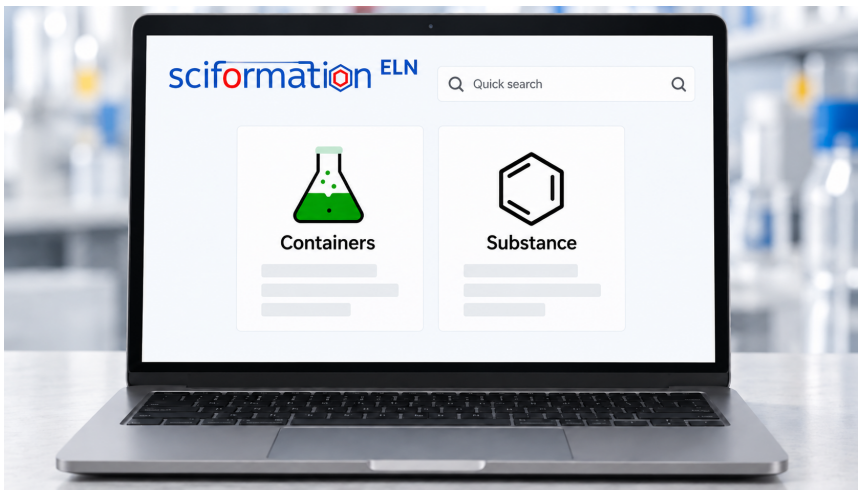
BOKU UNIVERSITY

sciformation

Find. Organize. Share.

User guide for general users at BOKU University

Welcome to Sciformation



Sciformation is BOKU's central LIMS (Laboratory Information Management Platform) for managing chemical inventories. It provides a unified system for tracking chemicals, containers, locations and users.

The main goal of Sciformation at BOKU is to make everyday laboratory work easier:

Find chemicals: Quickly check whether a chemical is available in your laboratory and where it is stored.

Identify storage locations: Found a chemical container but don't know where it belongs? Look it up in the system.

Share resources: If your laboratory doesn't have the chemical you need, check whether it is available in another department and can be borrowed.

BOKU UNIVERSITY

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1. Getting started

1.1. Sciformation domains

Sciformation currently has three domains:

- Production: https://sciformation.boku.ac.at
- Developer: https://sciformation-dev.boku.ac.at
- Test: https://sciformation-test.boku.ac.at

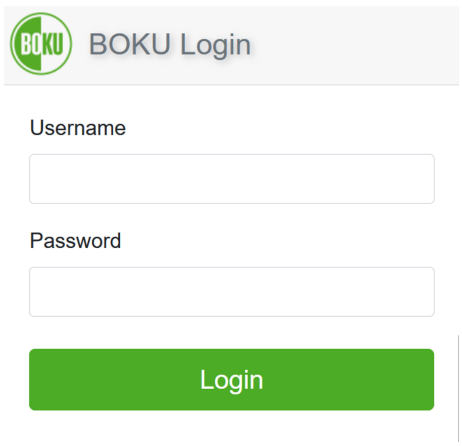
If you're new to Sciformation, we recommend starting in the Test domain. This environment is intended for practicing and getting familiar with the system without affecting real inventory data, meaning you can play around without consequences to the system.

Once you feel comfortable using Sciformation, you can switch to the Production domain, which contains the actual chemical inventory data and is used for everyday laboratory work. Each institute will receive guidance and support throughout this process as part of its initial onboarding.

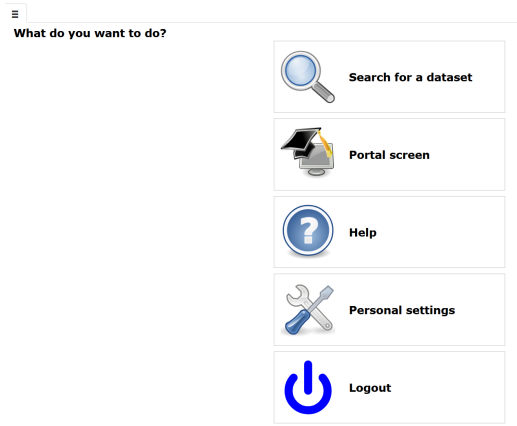
Any changes made in the Production domain affect real inventory records, so please make sure you are working in the correct environment!

1.2. Login and starting page

Open Sciformation using one of the links above and sign in with your BOKU account:



After logging in, you will arrive at the Easy Portal, the main starting page of Sciformation:



You can return to the Easy Portal from most parts of the system by clicking the rocket icon.

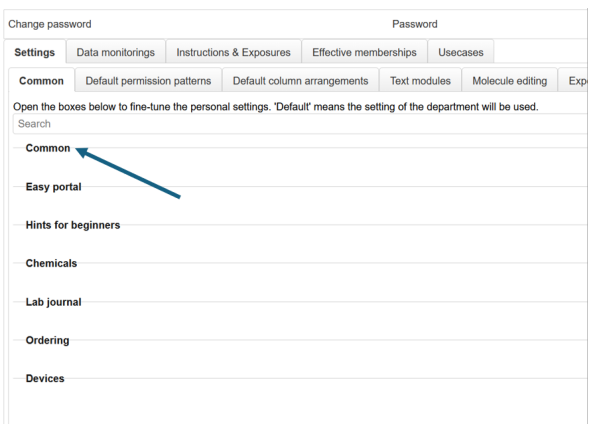


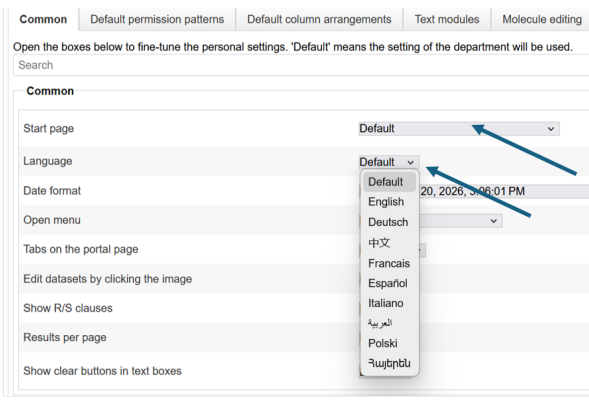
The Easy Portal provides access to several functions:

- **Search for a dataset:** Search for substances, containers, and storage locations using specific criteria.
- **Portal screen:** Access additional features and advanced functions.
- **Help:** Open Sciformation's official documentation, which provides a more comprehensive overview of the system. We recommend starting with this guide to become familiar with the basic functions.
- **Personal settings:** Customize your preferences, such as the interface language.
- **Logout:** Sign out of Sciformation.

Search for a dataset and Portal screen options are explained in the sections below.

Under Personal settings you can adapt the system to your liking. For example, you can set up the start page layout or the language of choice:



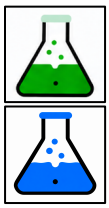


More examples for useful Personal settings can be found in chapter 7.

2. Understanding the system

Sciformation uses a set of recognizable icons to represent different types of information.

Here is a short list of the most relevant ones:

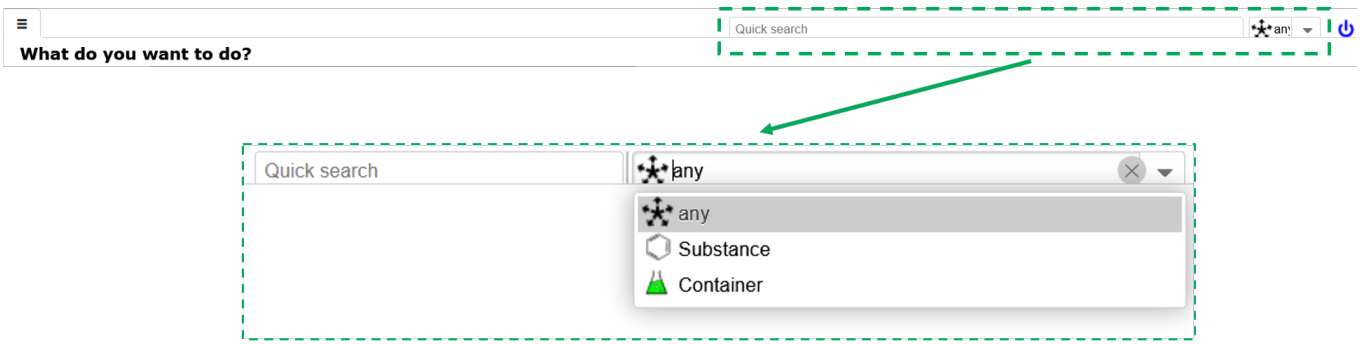
ICON / OBJECT	WHAT IT MEANS	EXAMPLE
 **Substance**	Represents the chemical itself, including its name, CAS number, physical and chemical properties, hazard classifications, and safety data sheets.	Ethanol (CAS 64-17-5), CH_3CH_2OH
 **Container**	Represents an individual physical container, such as a bottle or package, linked to a specific substance. Each container has its own unique barcode, quantity, and storage location. Container icons are color-coded: • **Green:** Containers across BOKU. • **Blue:** Containers belonging to your own department.	One 1 L ethanol container
 **Storage**	Represents the physical location where a container is kept. Storage locations follow BOKU's hierarchical structure, from buildings and floors to rooms and individual storage areas.	MUG2/02/14/Fridge_1/Shelf_A

One substance can be associated with multiple containers. Each container is identified by a unique barcode and assigned to a specific storage location.

3. Searching for substances and containers

3.1. Quick search

Quick search is the easiest way to find chemicals in Sciformation. It is accessible directly from Easy Portal.



In Quick Search, you can choose whether to search across all categories (Any) or limit your results to Substances or Containers. This allows you to find either substance information or specific containers available in the inventory.

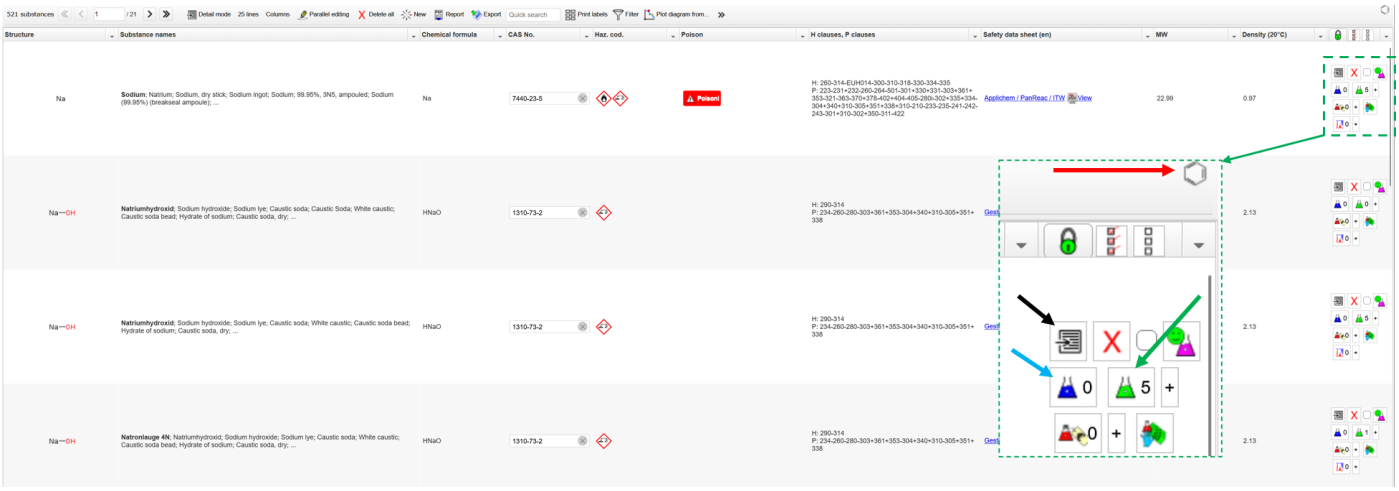
Using Quick search, you can search by:

1. Chemical name (including synonyms and names in different languages)
2. CAS number
3. Chemical formula
4. Container barcode

Searching by chemical name, CAS number, or formula

When searching by chemical name, CAS number, or formula, Sciformation displays a list of matching **SUBSTANCES**, with the closest match appearing first.

For example, search for Sodium produces such a list:



Red arrow: The substance icon indicates that the available list is a list of substances. Within such a list, information such as Hazard codes, H clauses and P clauses, **Poison/CMR** indicator, **Safety data sheets** and different chemical properties are listed.

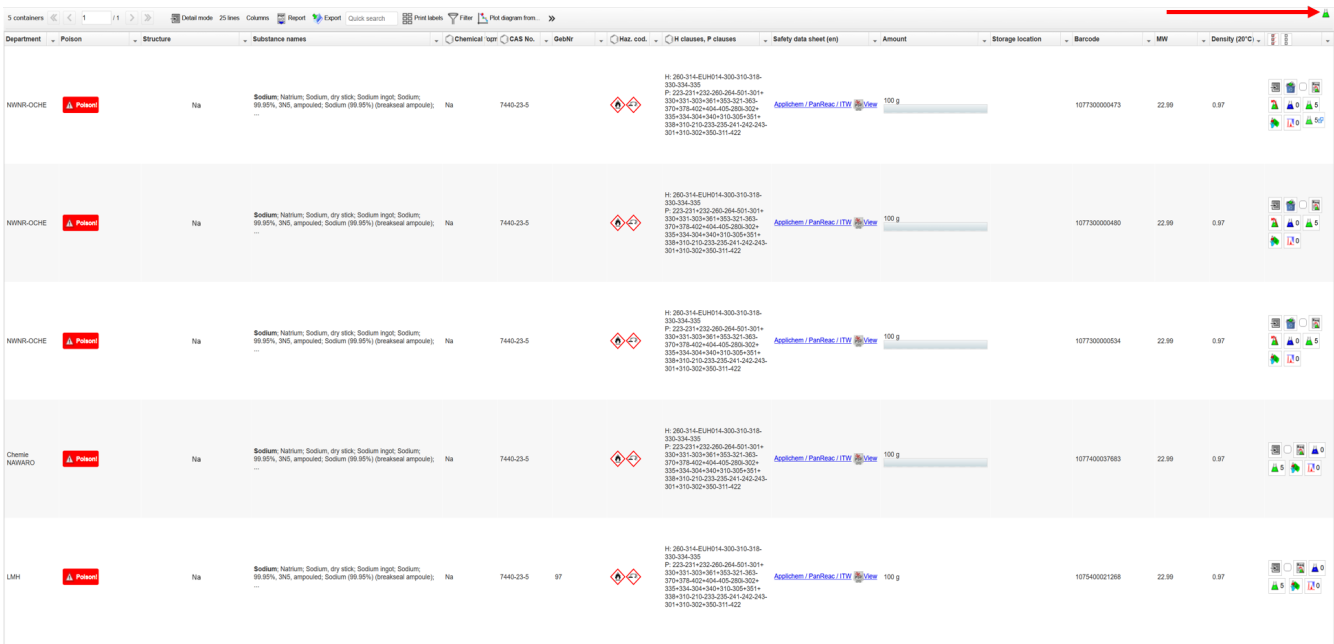
Black arrow: This symbol opens the detailed substance view, where full set of information is available.

Blue arrow: Displays the number of Sodium containers belonging to your department.

Green arrow: Displays the number of Sodium containers across BOKU (including your department as well).

Viewing available containers

Click on the **green container icon** (indicated with the green arrow in the **screenshot above**) to display all matching containers across BOKU. It will lead you to an overview such as this one:



This is now the list of **CONTAINERS**, as indicated by the container icon located at the same spot where the substance icon was in the substance list case. 

The container list includes:

- **Department:** Indicates which department/institute the container belongs to.
- **Storage location:** Shows where the container is stored, but only if the container belongs to your designated department/institute. You can see it is empty here, as there are 0 containers that belong to user's department (blue container icon on the far right).
- **Amount:** Shows the recorded amount of the substance in the container.
- **Barcode:** Uniquely identifies the individual container.
- **Detailed view:** Opens the complete container record, similar to the corresponding view for substances.

A CAS number is particularly helpful when different substances have similar names. Searching by name may return several different chemicals.

Searching by container barcode

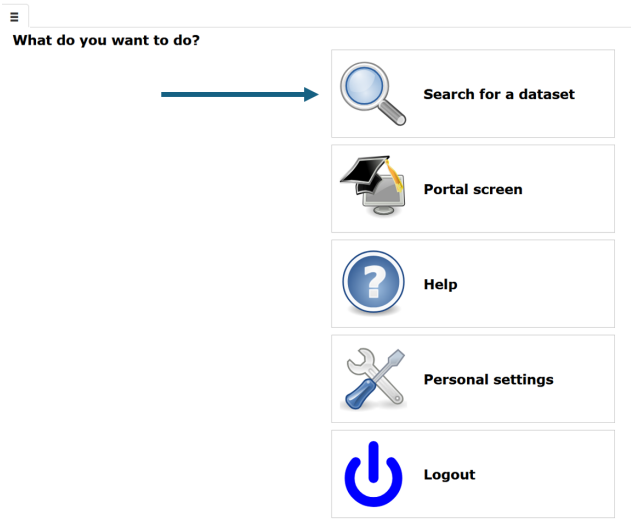
If you already have a container's barcode, you can enter it directly into Quick search.

Unlike a substance search, which may return several results, a **barcode search identifies the specific container** associated with that barcode.

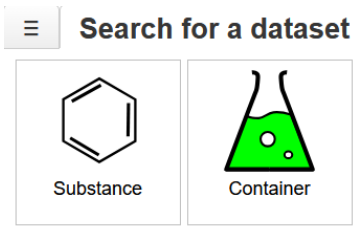
This is particularly useful when you have a physical bottle and want to check its storage location, quantity, or other details.

3.2. Search for a dataset

For more specific searches, Sciformation provides the Search for a dataset function, accessible from the Easy portal. Unlike Quick Search, this function allows you to combine multiple search criteria to narrow down your results:



This opens the following options:

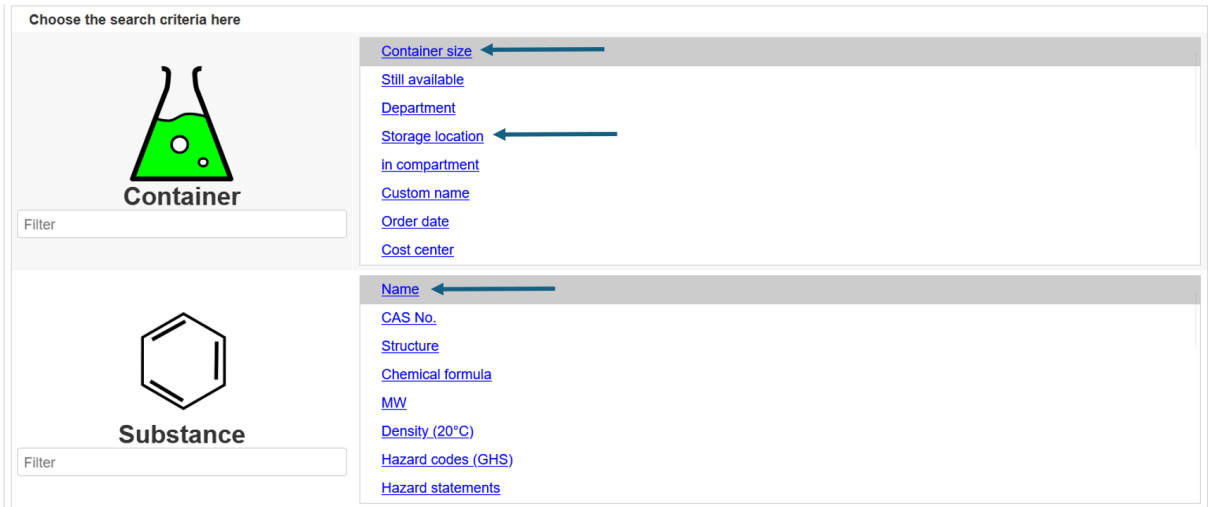


Example: Finding methanol containers in MUG2

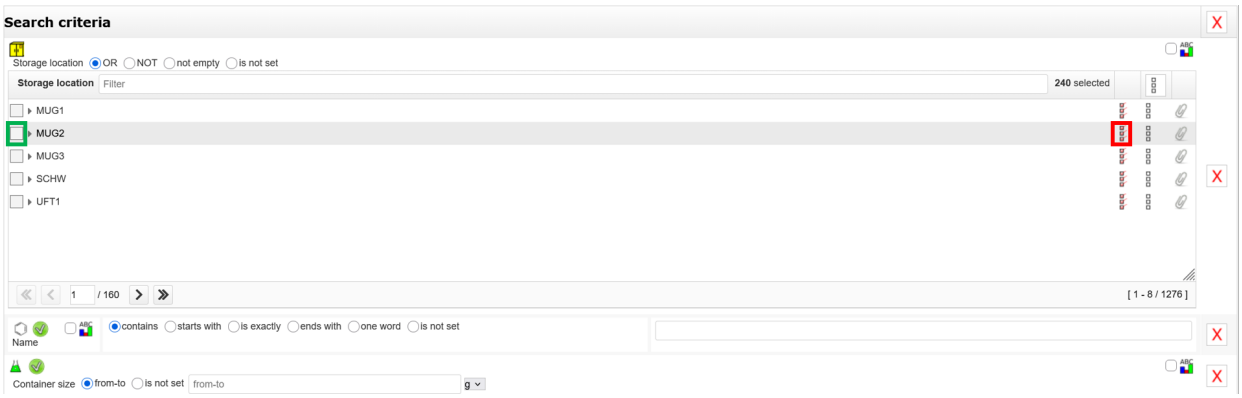
Let's say you want to find all methanol containers with a capacity of up to 2 L located in the MUG2 building.

Start by selecting Search for a dataset, then choose Container.

You can now add the wanted search criteria:



Clicking each criterion opens a corresponding search field on the right-hand side of the screen.



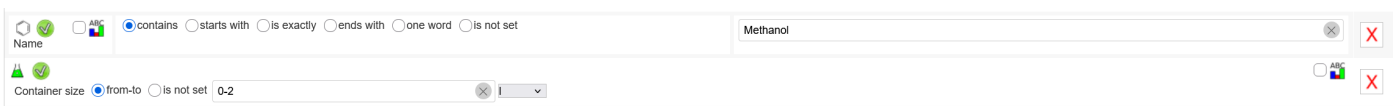
The first box shows **storage location**. BOKU storage is organized hierarchically, starting from buildings down to floors, rooms, and specific locations within the rooms. In case you want to select a location of higher hierarchy and everything that belongs to it (so all the floors and rooms and downstream storages in MUG2), you need to select the symbol depicted in **red square**. This will result in such a selection:



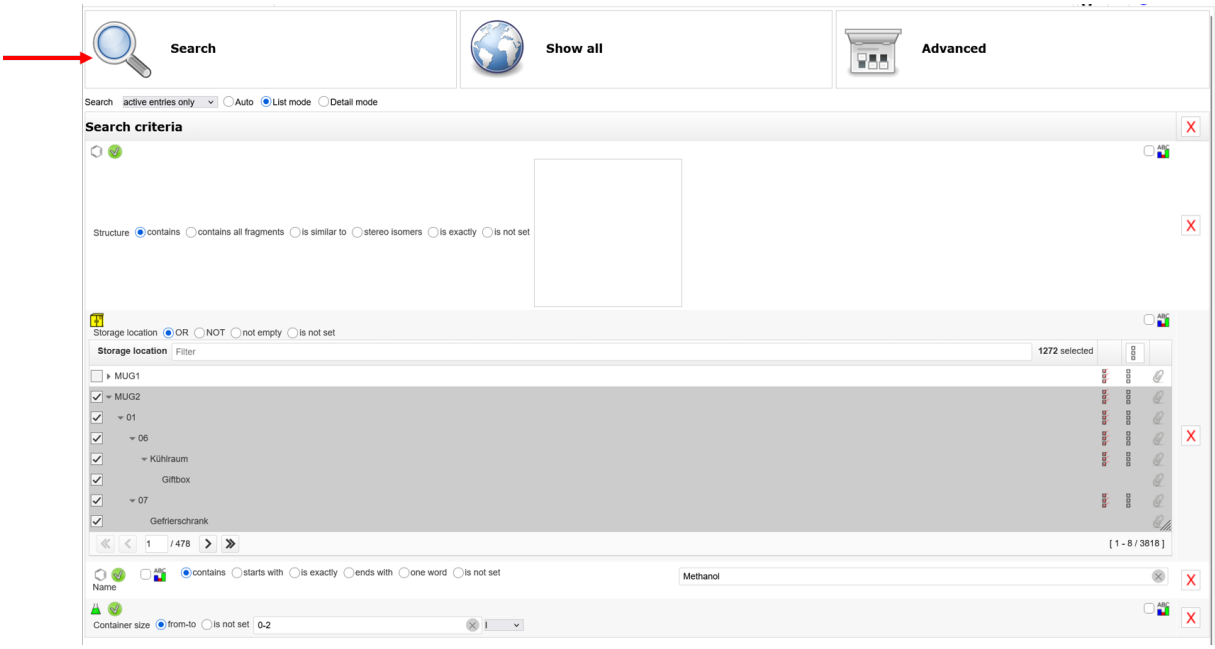
In case you tick only the box depicted in **green square**, you would get results only for that hierarchical level. In this case you would see all the containers in MUG2 that are not assigned to any floor, room, or specific shelf, which is likely to be an empty list. This kind of selection is applicable to any down hierarchical selection in the system.

If you want to deselect any of the storages, click on the symbol on the right side of the **yellow square**.

The remaining filtering criteria we used are filled in as such:



Once all the criteria are set, click on the Search option above:

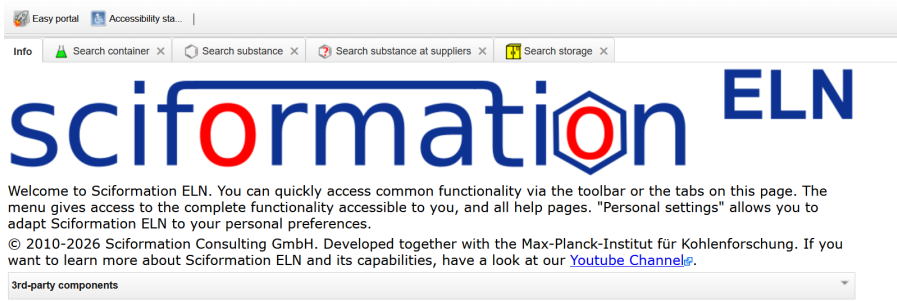


If you click on Show all instead, you will see all the containers that exist at BOKU, not the ones you tried to filter. Again, this is something that is present throughout the system, so be sure you click on Search and not Show all in case you have a search criterion in mind.

If your search was done correctly, you would get to the list of Containers that contain methanol.

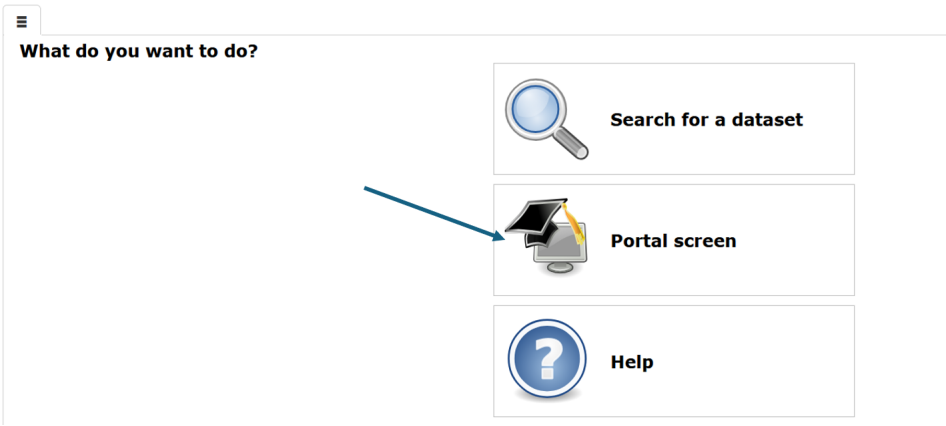
This example demonstrates how multiple search criteria can be combined. We encourage you to explore the available filters in the Test environment to become familiar with the different search options.

3.3. Portal screen



For most users, the Easy Portal provides everything needed to search for chemicals and navigate the inventory.

The Portal Screen is another way to navigate Sciformation and search for substances, containers, and storage locations. You can access it directly from the Easy Portal:

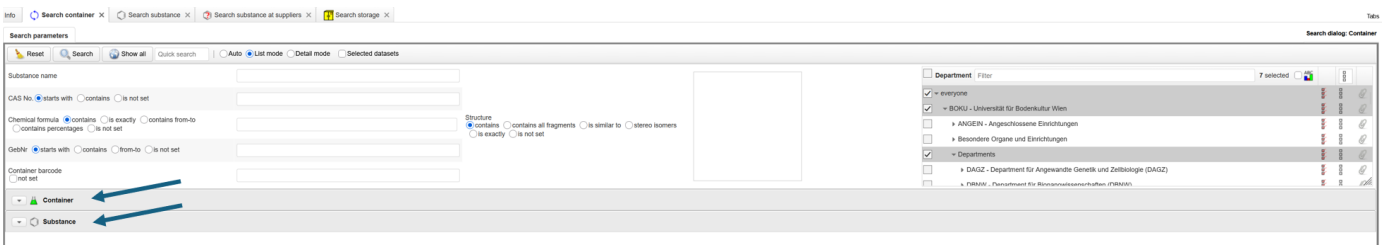


Alternatively, you can open it from anywhere in the system by clicking the icon in the top-left corner:



Once you open the Portal Screen, you can choose whether to search for **Containers**, **Substances**, or **Storages**. As an example, let's look at the **Container Search**:

Here, you can combine a wide range of search criteria, from basic options available in Quick Search to more advanced filters similar to those in Search for a dataset.



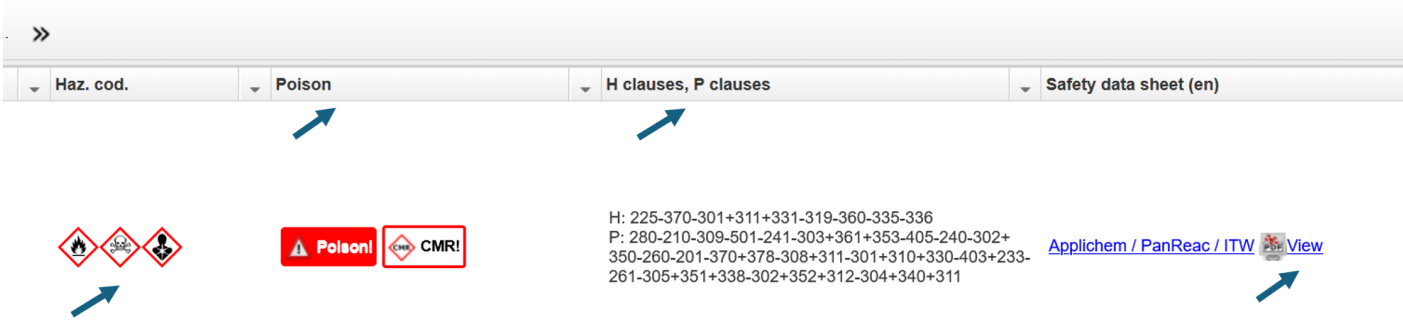
Additional search options are available by expanding the **Container** and **Substance** sections, as indicated by the arrows in the screenshot above.

Note here again that once you have defined your search criteria, you should click on Search rather than Show all if you want your criteria to be applied. If you want to display all containers, substances, or storages, simply click on Show all.

4. Checking safety information

Sciformation provides access to chemical safety information, including hazard classifications, hazard pictograms, and Safety Data Sheets (SDS).

You can find this information directly in the substance search results, as shown below:



- **Poison/CMR indicators**: A corresponding symbol appears in the Poison column if the substance is classified as poisonous or as a CMR substance.
- **H- and P-statements**: Display the corresponding hazard (H) and precautionary (P) statement codes.
- **Hazard codes**: Display the corresponding hazard pictograms.
- **Safety Data Sheets (SDS):** Click View to open the available safety data sheet.

5. Recording chemical usage

It is up to each institute to decide how accurately chemical quantities should be tracked and updated in Sciformation. A common practice is to keep quantities up to date for **CMR and poisonous substances**, while other containers are recorded at their original capacity and removed from the system once empty.

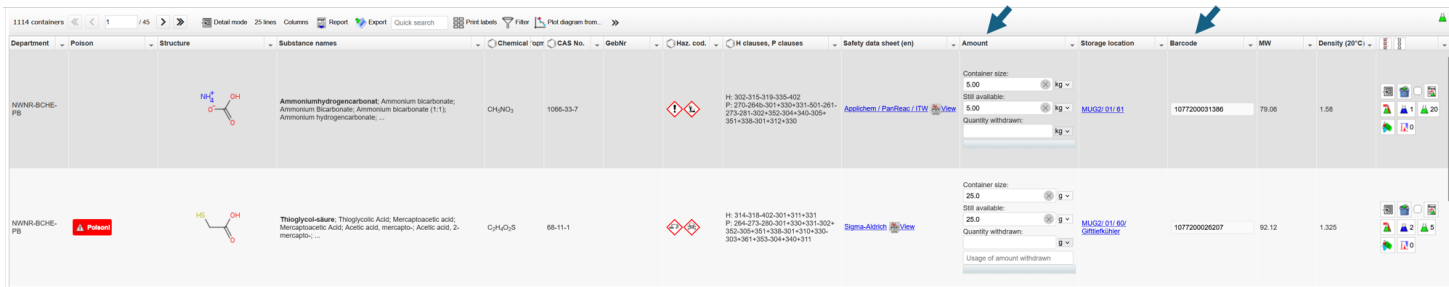
Nevertheless, the amount of chemical used is entered in the same way in both cases, with one additional request for Poisonous substances.

The procedure is the following:

1. Find the **correct container** in Sciformation.

   You can either:

   - Search for its barcode using Quick Search.
   - Search for the substance name, select your own containers, and identify the correct one from the list.
2. Find the Amount column:



3. Enter the Quantity withdrawn (make sure the unit in the system is the same as the unit in which you recorded it yourself), and press Enter to save the entry.
   For Poisonous substances, you will not be able to save the entry in case you didn't specify the Usage of the amount withdrawn. This is the additional info you can see in the second example of the screenshot above. Such usage can be for example: Chromatography experiment
4. Check that the remaining amount has been updated as expected.

The recording of CMR substances usage is of particular importance, as it automatically gets linked to the personal CMR report

6. Borrowing and returning containers

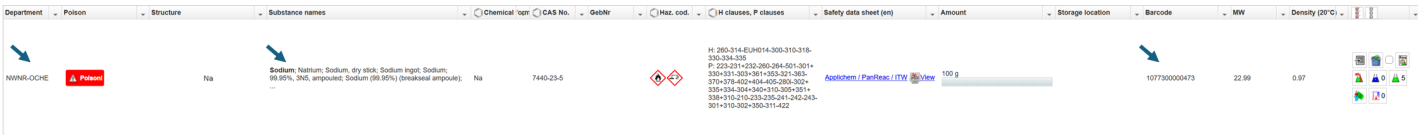
If your own department does not have a chemical you need (indicated by the number next to the blue container icon in the substance search results), you can check whether it is available in another department and request to borrow it through Sciformation.

Depending on the borrowing permissions assigned to a container, you can either **borrow it directly** or **request approval** from the person responsible. **Direct borrowing** is intended for internal use within the **same institute.** For borrowing containers from **other institutes**, **a request** must be submitted and approved by the person responsible. The available option is displayed in the last column of the container results list.

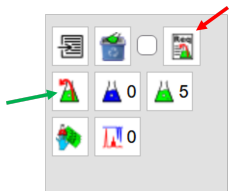
6.1. Borrowing a container

The procedure is as follows:

1. Find the container you need in the search results and verify its barcode and department.

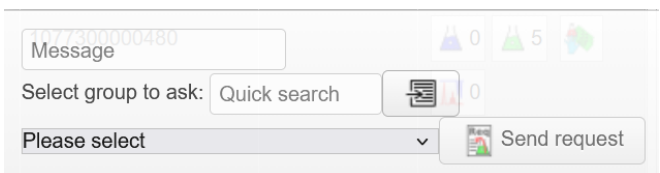


2. Check which option is available for the container:
   a. **Borrow (green arrow):** Allows you to borrow the container directly, without requiring additional approval.
   b. **Request container (red arrow):** Allows you to send a borrowing request to a responsible person, who must approve it before you can borrow the container.



Borrow: Selecting this option immediately assigns the container to you in the system, without any further action or approval required.

Request container: Selecting this option opens the following window:



The mandatory step is to **select the person to whom the request should be sent.**

Each container has a list of responsible people who can handle borrowing requests. These are available in the **Please select** dropdown menu. Select one of the listed people and click **Send request**. This automatically generates an email notification to the selected person, who can then review and approve your request.

The email looks like this:

Dear [redacted]

the user [redacted] has just asked for Sodium - Na - 7440-23-5 (barcode 1077300000480) located in MUG2/02/24.1/H. Contact the person directly via [redacted] if further information is required.

Best regards,

Sciformation

You can also include an additional message in the Message field if you want to provide more information about your request.

Alternatively, you can select a group instead of an individual person. However, you should make sure that the selected group includes someone authorized to approve the request. Selecting a responsible person directly is therefore the recommended option.

6.2. Returning a container

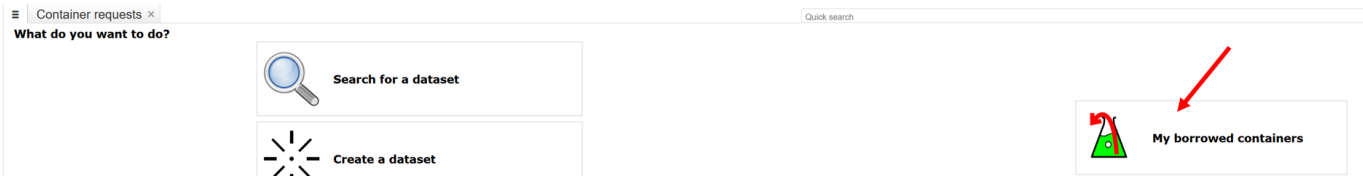
Once you have finished using the chemical, return the physical container to its designated storage location and make sure to **register the return in Sciformation** as well. Regardless of whether the container was borrowed directly or required prior approval, the same **Return** icon is available:



During the return process, you can also enter the amount of substance used and its purpose (important feature for CMR substances for example).

6.3. Overview of borrowed and requested containers

An overview of your borrowed containers and pending borrowing requests is available from the Easy Portal.



Sciformation currently does not send an automatic notification when your borrowing request has been approved. You therefore need to check the request status manually in the system.

In practice, borrowing is usually coordinated through direct communication between the container owner and the person requesting it. After the initial request email has been sent, both parties can arrange the handover and discuss any necessary details regarding the chemical.

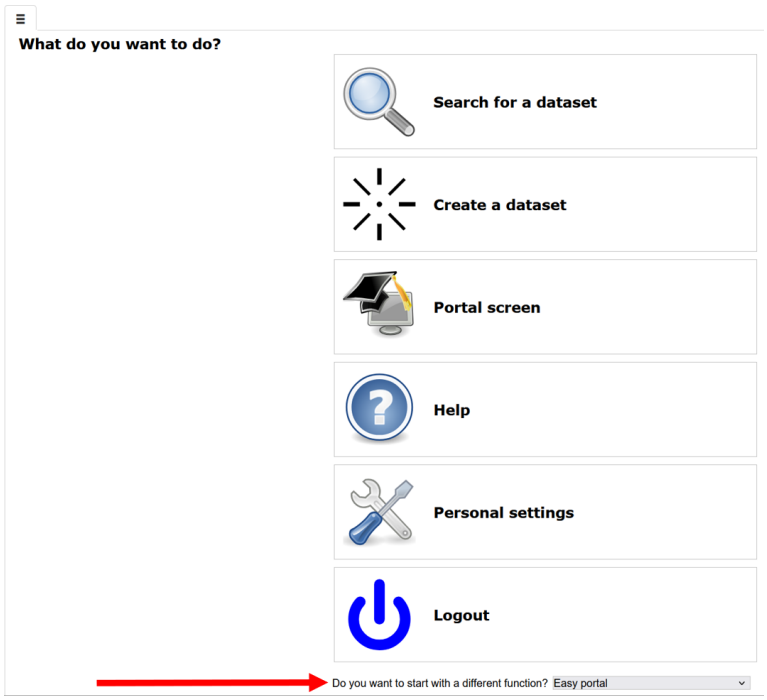
Always follow your department's procedures for borrowing, handling, and transporting chemicals between laboratories.

7. Personalizing your view

As an expert user you are after getting this far in the User guide, you could get the feeling of how the data is organized within Sciformation. The system offers several personalization options that can make navigating the system easier and your daily work more efficient. Here are a few we find to be the most useful:

7.1. Starting layout

At the bottom of the Easy Portal, you will find an option to choose which screen Sciformation displays when you log in.



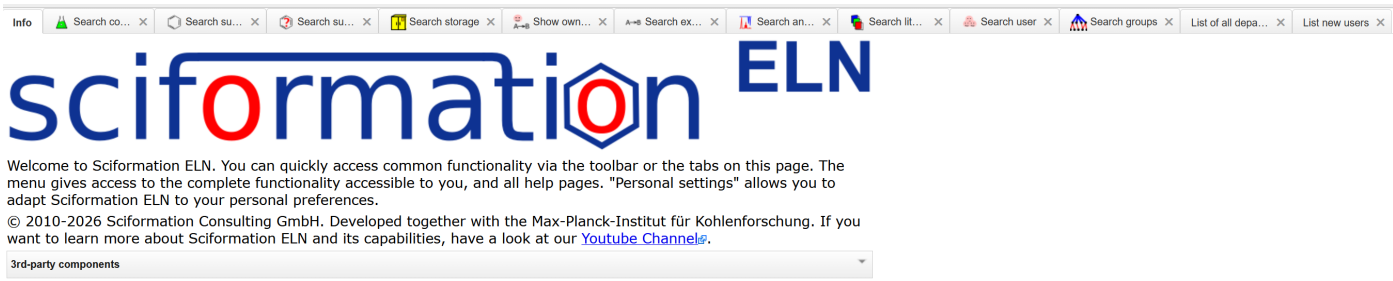
By default, the starting layout is set to Easy Portal, as it provides direct access to Quick Search, the most frequently used search tools.

The second prominent option we can recommend is Portal screen. This provides direct access to a wider range of functionalities and may be more convenient for experienced users.

7.2. Portal screen tabs

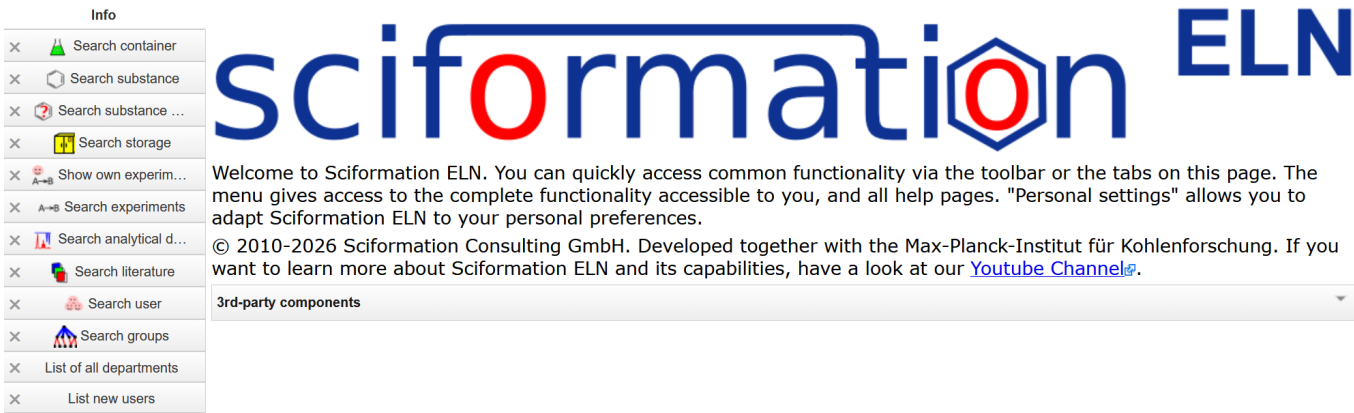
You can also customize how the tabs on your Portal Screen are displayed.

If you want your Portal screen tabs to be displayed **horizontally**, keep the settings as they are:



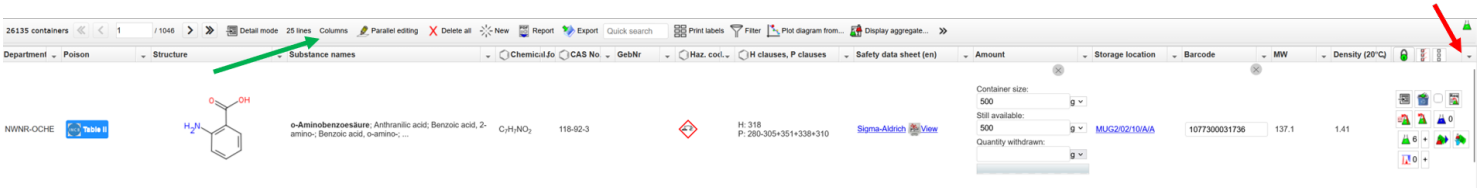
If you prefer **vertical** arrangement, follow these steps:

1. Open **Personal Settings** from the Easy Portal.
2. Navigate to **Common → Tabs on Portal Page**.
3. Select **Vertical**:



7.3. Customizing displayed columns in substance and container Lists

When searching for substances or containers, Sciformation displays the results in a table with predefined columns:



During the initial onboarding, a default column layout can be configured for each institute upon request. This is particularly useful if you want information such as assigned projects or container comments to be directly visible in the search results.

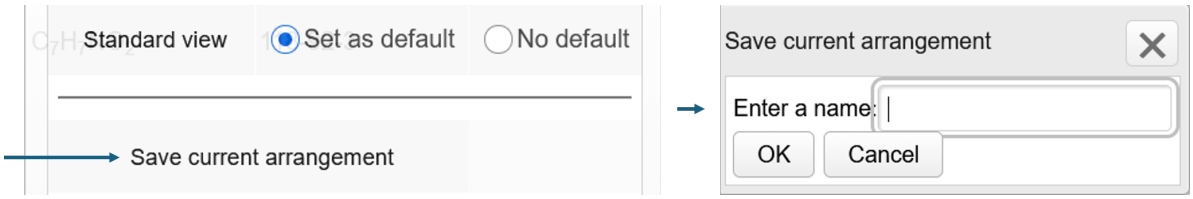
Depending on your individual work, you can further customize which columns appear in your search results.

- Start with the small triangle box assigned with the red arrow
- There, enter the first option (Search available columns), and the full list of all the columns available, with the ones that are displayed being ticked, will become available:



- Choose the columns you wish to see and click OK to apply the changes.

This will allow you to see your wanted columns for that search only. Now, if you want to save the arrangement you chose so the same columns show up in each of your searches, go to Columns (indicated with green arrow in the upper screenshot). This will allow you to save your current arrangement:



You can name your arrangement and save it by clicking OK button. After that it will appear in the Columns selection, and, as you see it here for Standard view, you can set your arrangement as default one.

8. Quick reference and help

8.1. Which search should I use?

- I know the CAS number → quick search by CAS number.
- I know the chemical name → quick search or container search by name.
- I need to find a physical bottle → quick search by CAS number if you know it, if not by chemical name.
- I need hazard information → open the substance details or SDS.
- I used some chemical → quick search by barcode and record the withdrawal if required.
- I took a bottle temporarily → use Borrow or Request container, and later Return.

8.2. If something does not work or if you need any help

Please contact chemical_db@boku.ac.at