

Get started with Inventory

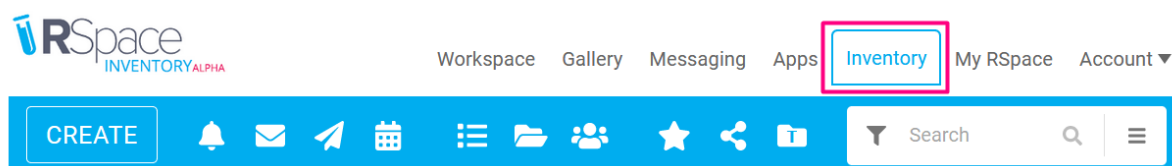
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How to get started with and use RSpace Inventory (LIMS)

What is RSpace Inventory?

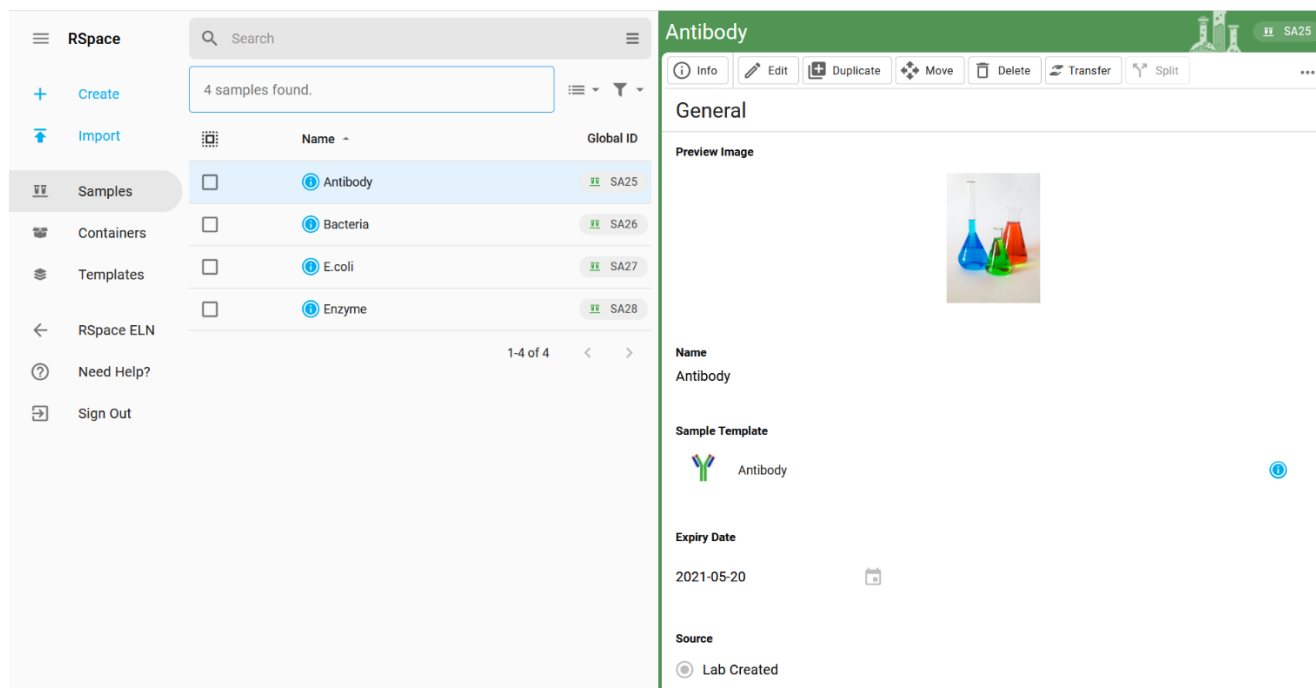
Inventory is a sample management system that enables you to record sample information, organize your samples and containers, and edit the data as you perform experiments. Inventory also integrates with RSpace so that you can refer to your samples from inside RSpace documents and easily keep track of all your work and works on both mobile and desktop devices. It will be launched on September 8th and have several updates during the fall and winter of 2021.

General overview



To access the Inventory integration, click on the Inventory tab marked in the picture. Once opened, you will be met by a three-panel layout.

- A collapsible sidebar (to collapse click on the three lines in the top right corner), for navigating between Samples and Containers, as well as for returning to RSpace, getting help, and signing out.
- The left panel, which is used for search and selecting an item to view.
- The right panel, where you can display and edit information about items.



Breadcrumb trail

Breadcrumb links are included when viewing containers or subsamples, to make the hierarchical location of an item visible at a glance. There is a breadcrumb trail for each of the panel. Samples do not have breadcrumb links, as their subsamples might be located in different containers.

The right panel: In the screenshot below, we can see that Antibody.02 can be found in the tube rack that is inside a big box. We also have a link to the sample the aliquot belongs to lower down. Clicking on one of these links will open that specific container or sample.

Antibody.02

big box

 /

tube rack

 /

Antibody.02

Info

Edit

Duplicate

Move

Delete

Transfer

Split

...

General

Preview Image



Name

Antibody.02

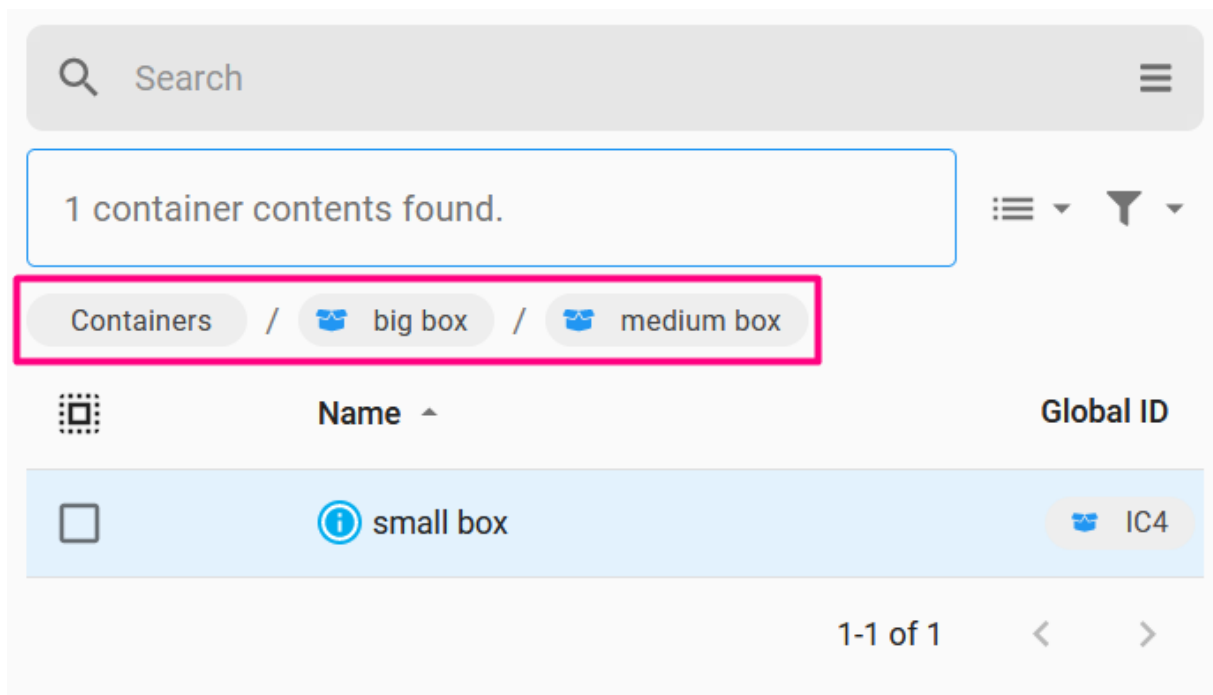
Quantity

1 ml

Sample

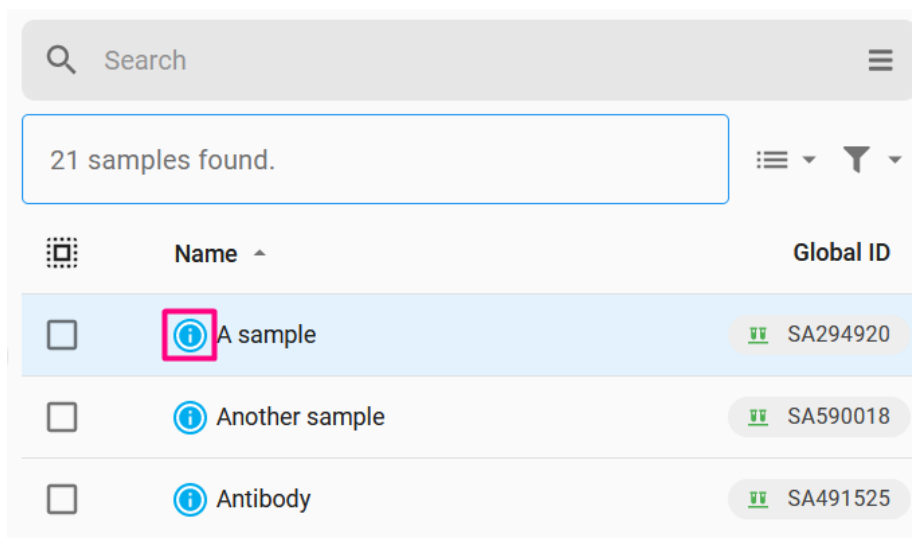
Antibody

The left panel: To navigate container hierarchies: click on a breadcrumb to move up in the hierarchy.

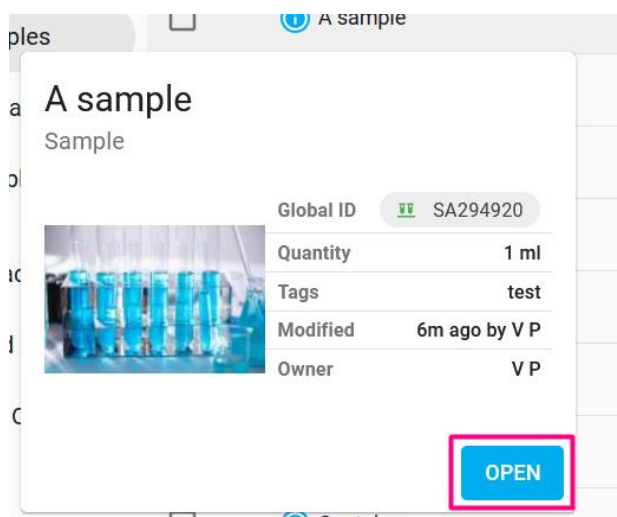


Info panel

Info icons are available throughout the interface. Hovering over the info icon (click and hold on mobile) enables you to quickly view information about a particular item.



You can click on Open to directly view that item.

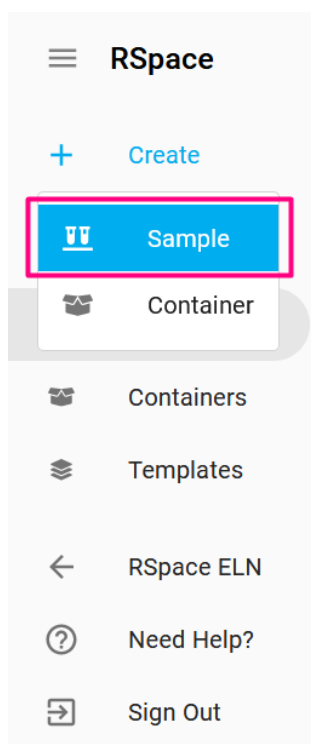


If you own the item, the icon will default to an information icon. If the item is not owned by you, the info icon will display as a people icon to indicate that this is an item shared with you.

☐	 Bacteria	 SA26
☐	 E.coli	 SA27

How to: Create a Sample

1. In the sidebar, click on Create > Sample. You can open the sidebar on mobile using the top-left menu icon.



- The right panel will open the sample creation wizard, which you can advance through by scrolling. Give your sample a name and pick a sample template, and optionally, add a preview image, an expiry date, and the source of the sample. You can also create your own sample templates: see [How to: Create and Use Sample Templates](#).

New sample

CREATING

General

Preview Image

The image displayed in the thumbnail.

 ADD IMAGE

 EDIT IMAGE

Name

Antibody

Sample Template

Template name ^

☒		Antibody	
☐		Bacteria	
☐		Sample	

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< BACK

NEXT >

- When you are done, click on **Next**, or simply scroll down to the next section.

New sample



CREATING

General

Preview Image

The image displayed in the thumbnail.

 ADD IMAGE

 EDIT IMAGE

Name

Test Antibody

Sample Template

Template name ^

☒  Antibody 

☐  Bacteria 

☐  Sample 

1-3 of 3 < >

< BACK

NEXT >

4. Fill in the relevant template fields, then click **Next** or scroll down. You can also add custom fields that are not part of the template, by scrolling to the bottom of the page (see [Add a Custom Field to a Sample or Container](#)).

CREATING

Template Fields

Antigen

Peptide

monopeptide

Applicable-species

☒ bovine

☐ fly

☒ human

☒ mouse

☐ nematode

☐ rat

☐ xenopus

☐ yeast

☐ zebrafish

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5. Specify the **number of aliquots** and the **quantity per aliquot** and select a **storage temperature**. The total quantity will be automatically calculated. You can also add custom temperatures. Optionally, add a description and tags. When done, click on **Save**. You will get confirmation that your sample has been created.

Aliquots

Number of aliquots

10

Aliquot quantity
Quantity units can also be changed by editing templates.

1 ml per aliquot

Quantity
10.00 ml in total

Storage Temperature
Frozen min: -30°C max: -18°C

Tags

Description

< BACK

SAVE

6. The left panel will refresh so you can view your newly created sample. You might want to place the sample into a container: to achieve this, see [Move Samples and Containers](#). You can also link to a specific sample: see [Link to a Sample or Container \(Global ID\)](#).

Search		
23 samples found.		
	Name	Global ID
☐	M4	SA753721
☐	Reagent	SA786434
☐	Test Antibody	SA786433

10 21-23 of 23 < >

How to: Create a Container

There are three different types of containers:

List containers are the most flexible container type, and simply show the contents as a list. You can store as many items as you want in a list container.

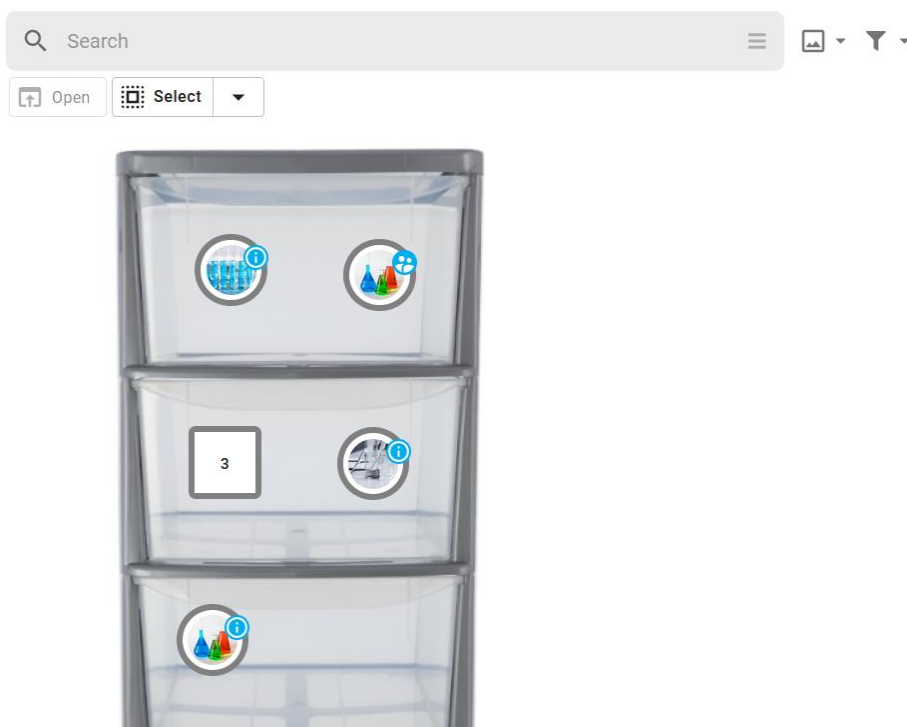
	Name ^	Global ID
☐	 Antibody.01	 SS524311
☐	 Antibody.01.1	 SS622998
☐	 Antibody.01.2	 SS623008
☐	 Antibody.01.3	 SS623009
☐	 Antibody.02	 SS524312
☐	 Antibody.03	 SS524313

All 1-6 of 6 < >

Grid containers represent containers with a defined structure, for example, 96 well plates or 70 freezer boxes, and show the contents in a grid of a specified size.

	1	2	3	4	5	6
A						6
B					11	12
C					17	18

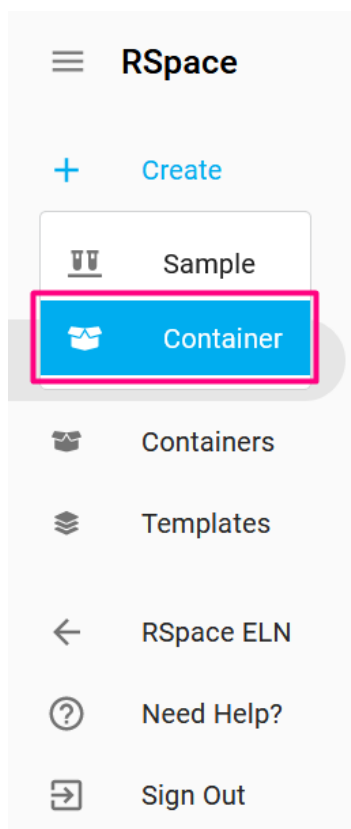
Visual containers allow you to specify locations onto an image you upload. More about how to edit locations in visual containers [here](#).



You can also view the contents of all containers as a tree, cards, or list view. You can also search container contents. Note that advanced search is not available in grid/visual views.

To create a container:

1. In the sidebar, click on **Create > Container**.



2. The right panel will display the container creation menu. Fill in the relevant fields, such as adding a **name**, and filling in relevant optional fields. Specify the container type, and whether it can store samples and/or containers. You can't change the container type once it's chosen.

New container

CREATING

General

Name

container

Can Store

☒ Subsamples

☒ Containers

Type

☒ List

☐ Grid

☐ Visual

Details

Preview Image

The image displayed in the thumbnail.

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For a **list container**, you don't need to specify additional properties.

- Type**
- ☒ List
- ☐ Grid
- ☐ Visual

For a **grid container**, specify the number of columns and rows in the grid.
You can also click on "Configure grid layout" to edit the row and column labels; by

default, rows will be alphabetical and columns will be numerical.

Type

- ☐ List
- ☒ Grid
- ☐ Visual

Grid dimensions

Rows 1	Columns 1
Configure grid layout	

For a **visual container**, add an image and edit it if needed. You will need to use **Edit Locations** either during or after creation to define the locations of items within this container in order to use it (see [Edit Locations in Visual Containers](#)).

Type

- ☐ List
- ☐ Grid
- ☒ Visual

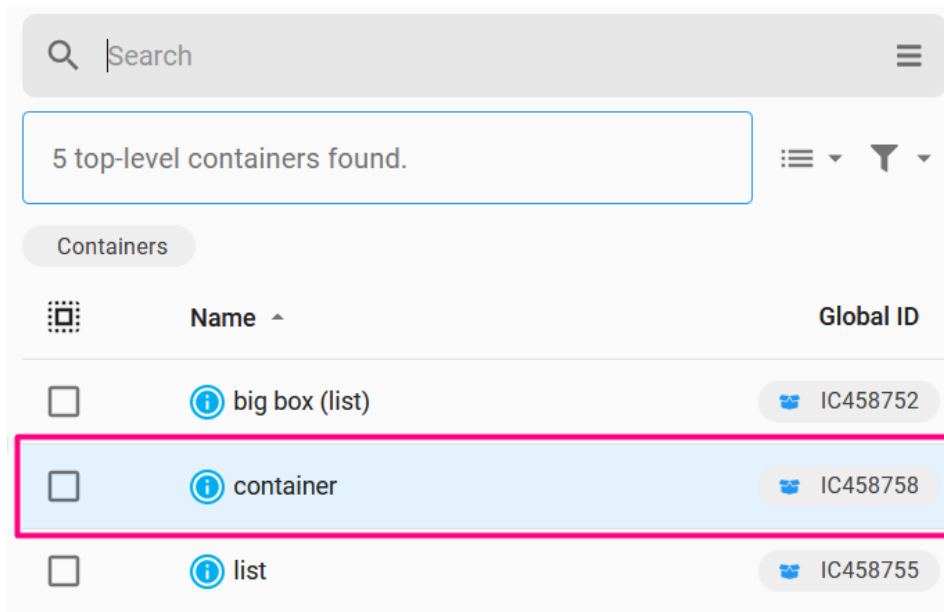
Locations Image

The image for adding locations to.

 ADD IMAGE	 EDIT IMAGE
EDIT LOCATIONS 	

 Visual containers require an image to add locations to. Click on 'Add Image' (above) to provide one.

3. Scroll down and click **Save** once you have filled in all relevant details.
4. The left panel will refresh so you can view your newly created container. You might want to move items into the container, or move the container itself: to achieve this, see [Move Samples and Containers](#). You can also link to this container: see [Link to a Sample or Container \(Global ID\)](#).



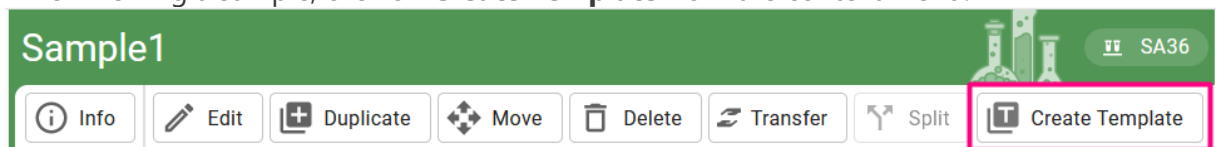
How to: Create and Use Sample Templates

When working with samples, you might add custom fields to a sample to include relevant information about it, and notice that you're regularly duplicating that sample to reuse the same custom fields for new samples. This is where using sample templates comes in handy.

All templates are created from existing samples. By creating a template and editing it to your liking, you can reuse the structure of a specific sample for future samples. This enables you to create samples with a consistent format, as well as ensuring that fields that are required for safety or regulatory purposes are included for each sample of that type.

Create a Template from a Sample:

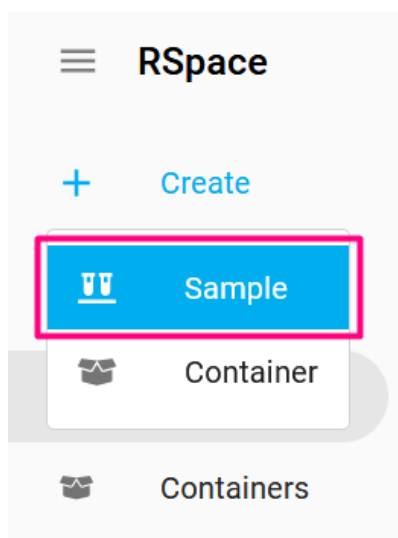
1. When viewing a sample, click on **Create Template** from the context menu.



2. You can now give your template a name. The template will contain all the fields of the sample. You can use the checkboxes to select which template fields should have default values; you can edit this later. Click on **Create Template** once you are happy.
3. Your template will be created, and you can now use it when creating samples.

Create a Sample from a Template:

1. In the sidebar, select **Create > Sample**.



2. Select the sample template you want from the template list. You can use the info button on the right of the template entries to view what fields that template has. The arrows at the bottom-right of the table let you browse through templates.

New sample

CREATING

General

Preview Image
The image displayed in the thumbnail.

ADD IMAGE

EDIT IMAGE

Name

Sample1

Sample Template

Template name ^		
☐	New template from rpace-import-example	
☐	New template from rpace-import-example	
☐	Sample	
☒	Sample1 Template	

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3. The template fields will now be available for you to fill in.

CREATING

Template Fields

Alternative name

Clonality

☐ monoclonal

☐ polyclonal

Internal id

Dummy Data

Creation Date

Creation Time

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Learn more about templates [here](#).

Using Inventory Lists of Material in the ELN

By adding Lists of Materials to documents in the ELN, you can easily associate Inventory items to the experimental write-up in which they were used. The List of Materials feature enables tight integration between the ELN and Inventory, enhancing traceability and reproducibility of your work. What is more, Lists of Materials are automatically included when printing ELN documents, and can also be printed out on their own!

The purpose of a List of Materials is two-fold:

1. To link experiments with samples, in order to aid experimental reproducibility and provenance.
2. To easily update quantities of Inventory items while editing an ELN document.

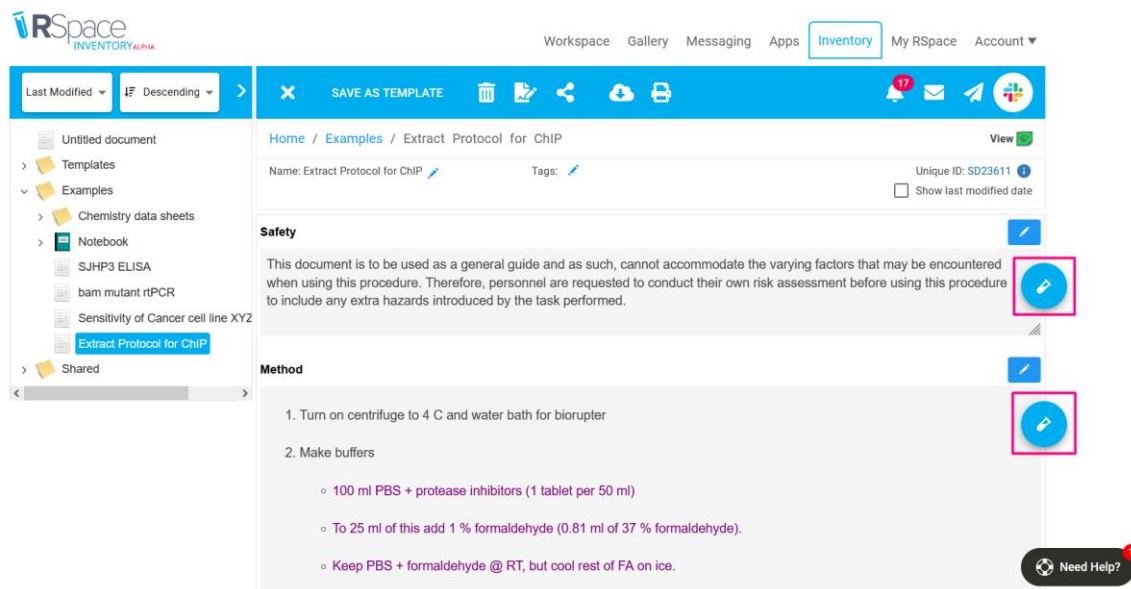
Note that:

- Lists of Materials are linked to document fields, and each field can have multiple lists linked to it.

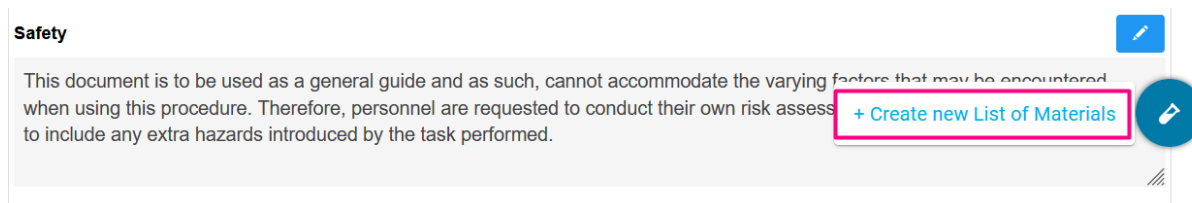
- Users with view-only permissions to a document will only be able to view the List, not edit it.

Add a List of Materials to an ELN document field

1. Open a document in RSpace ELN. Each field will have an Inventory icon next to it; click on the icon of the field you wish to add a List of Materials to.



2. Click on **Create new List of Materials**. You can add several Lists of Materials to the same field



3. You can give the list a custom name and description, to help differentiate between various lists (1). Click on **Add items** to start populating the list (2).

New List of Materials (Inventory)

List Name: Safety Check Materials 1

Description: This is a list containing the samples used in the experiment that require safety checks. Review this before starting!

Add Items 2

Name	Consumed Quantity	Inventory Quantity	Location	Global ID	Owner
Use "Add Items" to add materials to this list.					

CANCEL SAVE

- This will open the Inventory Picker. You can then browse your samples, subsamples, and containers, and select items to add to this list. The searching and selection works exactly like in Inventory: see [Search Inventory](#) and [Select Items in Inventory](#). Once you are happy with your selection, click **Choose**. You can always add or remove items later

New List of Materials (Inventory)

List Name: Safety Check Materials

Description: This is a list containing the samples used in the experiment that require safety checks. Review this before starting!

Add Items

Name

Inventory Picker

SAMPLES SUBSAMPLES CONTAINERS

Search

Select Duplicate Split

☒	a.01	SS2228224
☐	anti-ABHD6_HUMAN.01	SS1377411
☒	anti-ABHD6_HUMAN.02	SS1377412
☒	anti-ABHD6_HUMAN.03	SS1377413
☐	anti-ABHD6_HUMAN.04	SS1377414
☐	anti-ABHD6_HUMAN.05	SS1377415
☐	anti-ABHD6_HUMAN.06	SS1377416
☐	anti-ABHD6_HUMAN.07	SS1377417

CHOOSE CANCEL

- Your chosen items have been added to the List of Materials table, which includes basic information such as the item's location, global ID, owner, and the consumed and inventory quantities. Click on **Save** to confirm the creation of this List.

New List of Materials (Inventory)

List Name
Safety Check Materials

ID
-

Description
This is a list containing the samples used in the experiment that require safety checks.
Review this before starting!

Add items

Tip: to edit an item click its Global ID, then the Edit button in the new browser tab.
You can update the cumulative used quantity for a subsample by clicking the Consumed Quantity button.

Name	Consumed Quantity	Inventory Quantity	Location	Global ID	Owner
a.01	0 ml	0.5 ml		SS2228224	V P
anti-ABHD6_HUMAN.02	0 ml	11.74 ml	Lab Antibodies - mitosis	SS1377412	Vaida DemoUser
anti-ABHD6_HUMAN.03	0 ml	11.74 ml	Lab Antibodies - mitosis	SS1377413	Vaida DemoUser

Unsaved changes

CANCEL
SAVE

6. The Inventory icon updates to indicate how many Lists have been added to a field.

Safety

This document is to be used as a general guide and as such, cannot accommodate the varying factors that may be encountered when using this procedure. Therefore, personnel are requested to conduct their own risk assessment before using this procedure to include any extra hazards introduced by the task performed.

7. To open the List to view or edit it, or create a new List, simply click on the Inventory icon, then on the list.

Safety

This document is to be used as a general guide and as such, cannot accommodate the varying factors that may be encountered when using this procedure. Therefore, personnel are requested to conduct their own risk assessment before using this procedure to include any extra hazards introduced by the task performed.

1: Safety Check Materials
This is a list containing the sa...
+ Create new List of Materials

Add Items to a List of Materials

Click on the **Inventory icon** next to the field the List belongs to, then select the list you want to update.

Safety

This document is to be used as a general guide and as such, cannot accommodate the varying factors that may be encountered when using this procedure. Therefore, personnel are requested to conduct their own risk assessment before using this procedure to include any extra hazards introduced by the task performed.

1: Safety Check Materials
This is a list containing the sa...
2: Equipment
Borrowed from the main lab
+ Create new List of Materials

Click on Add items.

List of Materials (Inventory)

List Name: Safety Check Materials ID: 393218

Description: This is a list containing the samples used in the experiment that require safety checks. Review this before starting!

Add items Tip: to edit an item click its Global ID, then the Edit button in the new browser tab. You can update the cumulative used quantity for a subsample by clicking the Consumed Quantity button.

Name	Consumed Quantity	Inventory Quantity	Location	Global ID	Owner
a.01	0 ml	0.5 ml		SS2228224	V P
anti-ABHD6_HUMAN.02	0 ml	11.74 ml	Lab Antibodies - mitosis	SS1377412	Vaida DemoUser
anti-ABHD6_HUMAN.03	0 ml	11.74 ml	Lab Antibodies - mitosis	SS1377413	Vaida DemoUser

DELETE LIST ⚠ Unsaved changes **CANCEL** **SAVE**

This will open the Inventory Picker. You can then browse your samples, subsamples, and containers, and select items to add to this list. The searching and selection works exactly like in Inventory: see [Search Inventory](#) and [Select Items in Inventory](#). Once you are happy with your selection, click **Choose**. You can always add or remove items later.

List of Materials (Inventory)

List Name: Safety Check Materials

Description: This is a list containing the samples used in the experiment that require safety checks. Review this before starting!

Add items Tip: to edit an item click its Global ID, then the Edit button in the new browser tab. You can update the cumulative used quantity for a subsample by clicking the Consumed Quantity button.

Inventory Picker **SAMPLES** **SUBSAMPLES** **CONTAINERS**

Search

Select **Duplicate** **Split**

☐	a.01	SS2228224
☒	anti-ABHD6_HUMAN.01	SS1377411
☐	anti-ABHD6_HUMAN.02	SS1377412
☐	anti-ABHD6_HUMAN.03	SS1377413
☒	anti-ABHD6_HUMAN.04	SS1377414
☐	anti-ABHD6_HUMAN.05	SS1377415
☐	anti-ABHD6_HUMAN.06	SS1377416
☐	anti-ABHD6_HUMAN.07	SS1377417

CHOOSE **CANCEL**

The selected items will be added to the list. Click on Save to confirm the changes to this List.

[More information here.](#)

How to: Import Samples into Inventory

The import process is as follows:

- Firstly, you'll need to export your existing data as CSV, and ensure it fits the CSV format requirements.
- Then, you'll be able to upload the CSV to Inventory, and specify which columns you want to import and what data type each column should have. This will generate a new sample template with the chosen Inventory field types and import the samples.

CSV format requirements

First row must be a row containing column names. No columns in the header row can be blank.

- All rows must have the same number of columns.
- All columns must contain non-blank values.
- Blank rows are ignored.
- Blank values are fine.
- Maximum number of rows is 1000.

For a detailed tutorial of the process: [View video on YouTube](#) or [Researchspace.helpdocs](#).

Overview of common questions and explanations [here](#).