

LabCollector User's guide

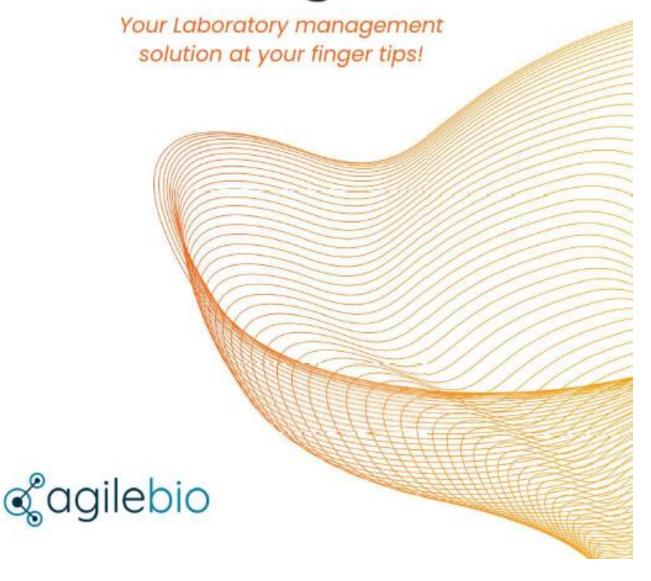


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LabCollector

v6.211 - Mar 2024





Download the manual (PDF)

Download the manual (PDF).

1. LabCollector Introduction

Thank you for choosing the LabCollector system for the management of your lab information. LabCollector is an Intranet-based (totally web-based) application that brings all the comfort and power of your lab network to access and manage a great variety of information. If you install it on one of your lab computers it can play the role of a server for the other computers in the lab.

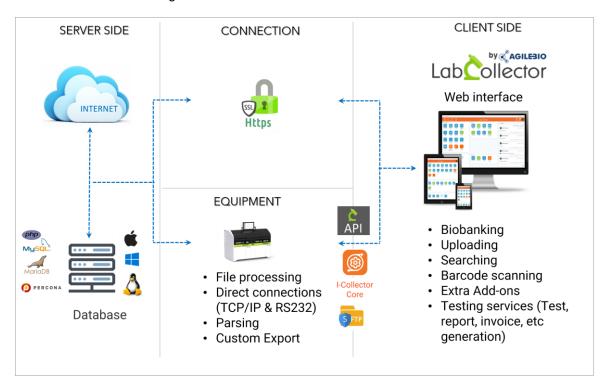
LabCollector has been created using Open Source tools and languages to keep it a low-cost solution, insofar as is possible, and so can be installed on any operating system (Windows, macOS X, Linux...). Furthermore, the use of web technology makes it a light solution, as no "client" applications have to be installed on each computer. The interface is accessed through a simple and recent Internet browser (Internet Explorer, Firefox, Safari ...). Therefore, lab information and data is accessible from anywhere. The support of wireless devices provides even more flexibility.

With the incorporation of the latest technologies such as Ajax, we expect to provide you with a dynamic and comfortable interface.

This manual will give you an overview of all the features available in LabCollector. All these functions will be described in detail and with step-by-step procedures in our KB: Knowledge Base.

1.1 IT Requirements

LabCollector architectural diagram is like below.



IT Requirements and other information:

Windows OS (Win 10 or WinServer 2012+)
For the CPU requirements:
CPU: Min. (2 Cores), Recommended (4 Cores)
Memory: Min. (4GB), Recommended (8GB)

•	Windows 7/10 and WinServer 2012 and up, Linux, Unix and	
MacOS X 10.x. and many others.		

- Apache, Nginx, IIS Web Server. IIS is a standard option of Windows. Apache runs on Windows too.
- PHP 5.3 to 5.6 for LabCollector V5.423; PHP 5.6 to 7.3 for LabCollector V6.0 (http://www.php.net)
- MySQL database server 5.x or MariaDB or PerconaSQL (http://www.mysql.com)
- Any recent Internet browser with Ajax technology support.

Login Validations:	 Supports LDAP & AD (SSO) Please click the KB: Knowledge Base link to see more about these options.
User level permissions in LC:	 Super-Admin; Admin; Staff; Staff+; Visitor Please click the KB: KnowledgeBase link to read more on it.
Data Backup (Automated):	Possible with LabCollector Server Manager

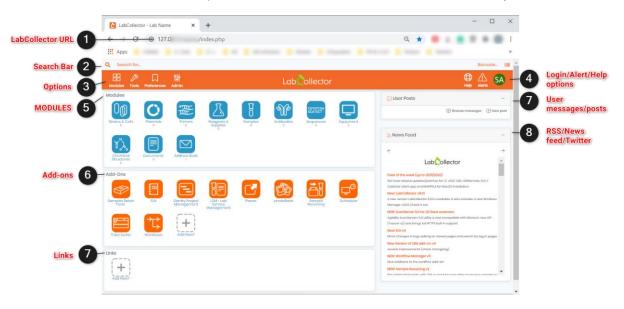
LabCollector can be accessed online in your choice of browser. It will look like this when you login into it.

1.2 LabCollector Interface

System requirements:

This is how LabCollector will look like when you login into it.

Below is an example of interface where add-ons are installed already.



You can read in detail about KB:Labcollector interface in our Knowledge Base.

1.3 Modules

A module in LabCollector helps labs to create inventory for their lab requirements. There are by default 11 modules in LabCollector.



All the modules are in blue colored boxes. Inside the modules you can create records and enter information inside the fields.

Records are explained in section 1.3.1 and fields are explained in section 1.3.2.

🔻 Tips / Hints

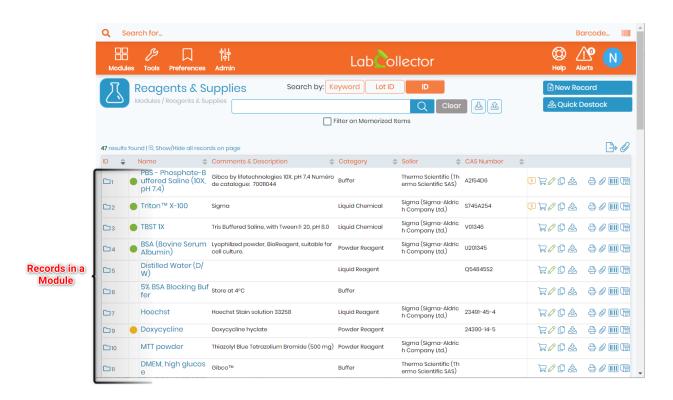
LabCollector has the possibility to create custom modules. These are modules that are not present inside the LabCollector by default. You can check this knowledge Base to see more KB: how to create a custom module.

1.3.1 Records

Records are lab items that you create an inventory for. It can reagents you use in the lab or chemicals, antibodies, etc. In LabCollector these data are stored inside respective module. Each record has "by default" fields.

Learn more about fields in Q section 5.3.

For example, in Reagents & Supplies, when you open the module which has previously entered records, you will see the records like below.



You can read about it in detail in our Knowledge Base KB: what are records.

1.4 Add-ons

Add-ons are additional applications that complement the modules. These need to be purchased from us. You can download the add-on and install them in your LabCollector.

The information how to upload add-ons in LabCollector is explained in section 3.1.8. You can read more about add-ons in Section 11.



🛣 Tips / Hints

We can also make a custom module for you, if you require. Please contact us.

1.3.2 Fields

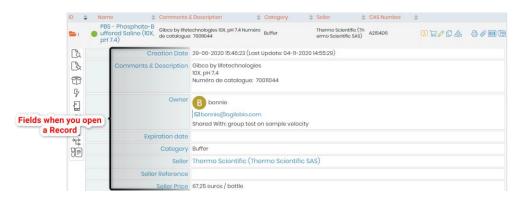
Fields are present inside a record in a module. When you create a new record, there are fields present where you can add specific information about the record. In each module, the fields are present by default.

Please read Knowledge Base to KB: know more about fields.

However, you can create custom fields if you require.

Please see the Knowledge Base to see KB: how to create custom fields.

For example if you have created a record, you can click on it to see the information inside each field.



2. Getting started

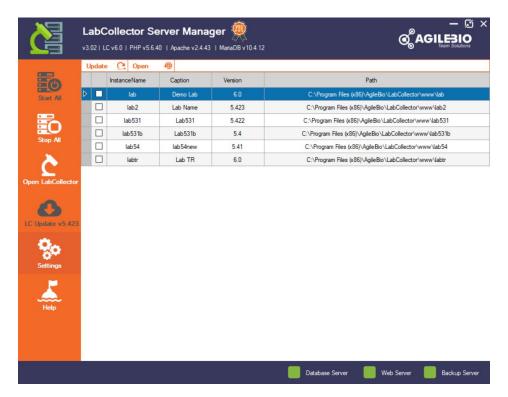
The below topics will help you to start with LabCollector: perform first time access, login, setting up users and passwords.

You can check all the Knowledge Base in the KB: category how to start with LabCollector.

2.1 First Time access

Be aware that on Windows local installations (i.e. not for other OS or hosted by AgileBio) the LabCollector Server manager will be the first part of LabCollector you see. It is also useful for handling updates, backups, and migrating data (For more details, please see the manual under the $Help \rightarrow User~Guide$ section of the LabCollector Server Manager).

You may also access LabCollector in an internet browser with one click from the LabCollector Server Manager.



LabCollector is accessed with a recent Internet browser (Firefox, Chrome, Edge, etc.).

A Warning

Internet Explorer can be used too but it's not supported anymore.

You can also open your LabCollector directly from the browser.

On the LabCollector server, you have to call for example:

- https://localhost or <a href="https://localhost
- https://computer_IP

On remote computers you have to call the server name or IP address, like:

https://computer_name or https://computer_IP

For other OS, please see our section \subseteq Manuals to find the right installation manual.

2.2 First login

When logging into LabCollector for the first time, you must enter admin for the User Name and admin for the Password. We strongly recommend modifying this default credential.





It's advised to change your password during your first LabCollector use.

After logging into LabCollector, you will enter on the homepage. The homepage is completely customizable (section 2-5).

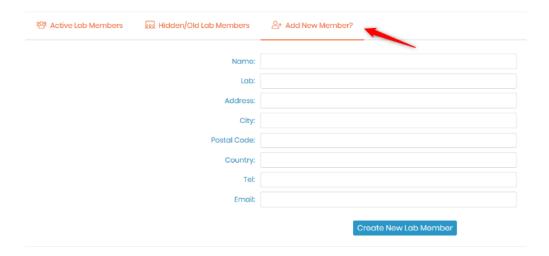
The main user name is the "Super Administrator". This account has full powers to make changes within all of LabCollector.

2.3 Super administrator account

One of the first steps is to define the Lab member corresponding to the super-administrator and change the password of this account.

- 1. Go to: Admin→Users & Staff→Manage Lab→Members→Add new member
- 2. Fill in the form.

Note Don't forget to fill in the email field to receive notifications.

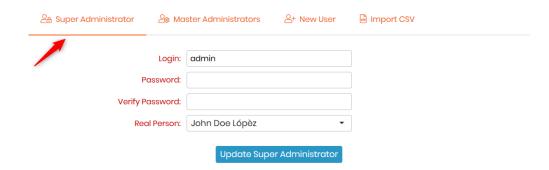


- 3. Go to: Admin \rightarrow Users & Staff \rightarrow Manage Users
- 4. Edit Super-Administrator login information, change the password, and associate the super-

administrator to the corresponding staff contact (Real person).

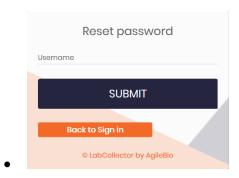
A Warning

Be careful about the password encryption mode used when you change your password.



2.4 Password reset

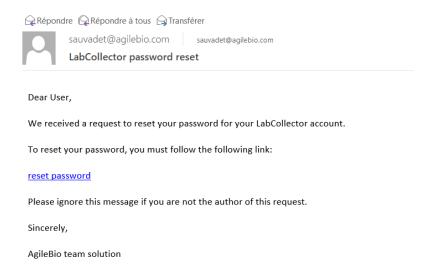
- If users forgot their passwords, they can click on the "Forgot your password?" link (Sending emails using LabCollector has to be set up, see chapter 3.1.2).
- They will be redirected on a dedicated form they have to complete with their username to receive a password reset email.



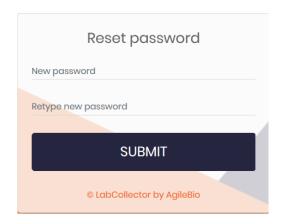
 If the user does not have an email associated with the account (see above), the super administrator must reset the password and deliver the new password to the user.



You will receive an email like below at your registered email ID.



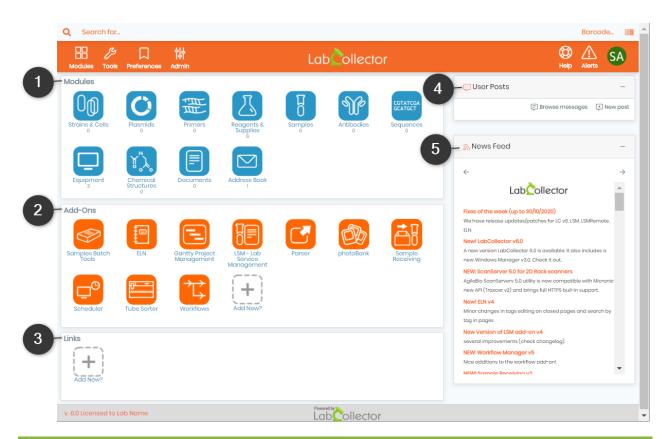
 When you click on the reset password link you will be redirected and you will see the below page in our browser.



2.5 Homepage customization NEW!

By default, the homepage of LabCollector is like the previous version composed of five sections:

- 1. Modules
- 2. Add-ons
- 3. Links
- 4. Posts
- 5. RSS feed

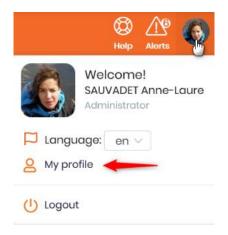


🗯 Tips / Hints

Now, each user can customize his homepage with panels.

You can also read the Knowledge Base KB: how to configure panel or read below.

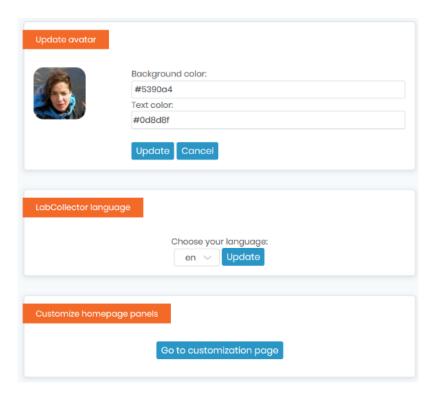
On the top right of the screen, click on the avatar icon. In this menu, you can select a new language, log out from your session and access your profile.



New! Lock-screen option added.

In your profile, you can modify your lab member information as you can do through *Admin→Users* & *Staff→Manage Lab Members*.

You can also modify your avatar, and if you have a Gravatar, it will automatically be used through your email address; your default language and go to the customization page.



On this page, you will create panels to organize your homepage. You can create as many panels as you want. In this panel, you can insert links to modules and custom modules, add-ons, link items (see section 3.1.9), and tools (see section 10).

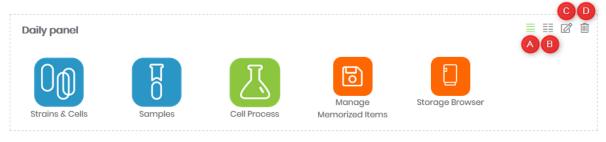
- 1. Click on Add a new panel
- 2. Give it a name
- 3. Navigate between tabs and click on the items of interest.



- 4. If you do a mistake, click on the minus icon to remove an item.
- 5. Save (or cancel all).



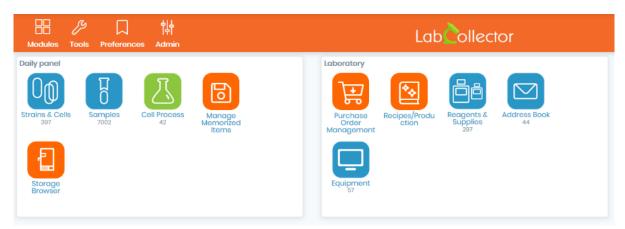
Once the panel is created, you can choose the display to:



A. One column display



B. Two column display



The other two options are used to:

- C. Edit
- D. Delete

As in the previous versions, the Super-Administrator can modify more items for the homepage of all users through $Admin \rightarrow Other \rightarrow Setup$.

Please see the next section and more precisely sections 3-1-6, 3-1-9, and 3-1-10.



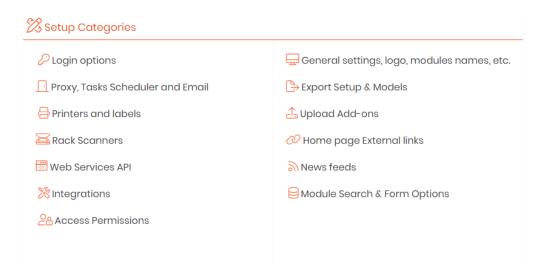
The general search is available on the top left. Click on the magnifying glass to search. The barcode search is available on the top right corner.

3. Setup & Configuration

The LabCollector system comes with a ready-to-use environment (insofar as is possible), but some setup and configurations are needed to adapt it to your lab scheme. Only the super administrator can access the totality of this setup.

3.1 Interface & main LabCollector setup

From the setup page, located at *Admin→Other→Setup*, you can control several definitions and settings for the general functioning and interface of LabCollector.



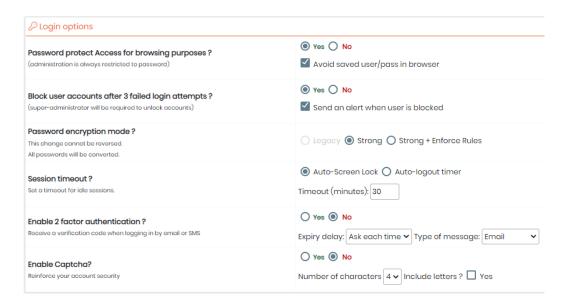
3.1.1 Login and LDAP Options

Two access modes can be defined here:

- SEMI-OPEN: In this configuration, data browsing are open to anyone who knows the IP or URL address for LabCollector. However, administration tasks are always password protected.
- o FULLY LOCKD: In this configuration, any access to LabCollector requires login authentication.

You can read about KB: LabCollector general setup-1. Login.

Authentication and login can also be managed with different options:



- "Password protect Access for browsing purposes" option:
 - O YES, you define total login protection
 - O NO you indicate a semi-open system in which data browsing and search are unrestricted.

The administration menu is always password protected.

You can also force internet browsers to not save login and password information.

- "Block user accounts after 3 failed login attempts" option:
 - YES, if a user fails three times in his password, his account will be blocked and the superadministrator will be required to unlock it. You can also choose to have an alert sent to the super-administrator when a user is blocked.
 - O NO: you can enter the password as many time as you want

A user locked appears in red like below in the user list. The super-administrator needs to unlock using the icon on the right.



Below is a screenshot of when the user tries to login after his/her account got blocked.



NEW! Once a user account is temporarily blocked after 3 login attempts, it will then get recorded in the

audit trail.

• "Password encryption mode" option: You can choose between three password-encryption modes: legacy (old one), SHA-256, or SHA-256 + strong rules. With the last two, all characters are available and a double password confirmation on super-administrator and new users is requested.

Strong rules mean that the password must contain:

- o at least 8 characters
- o at least 1 lowercase
- o at least 1 uppercase
- o at least 1 digit
- o at least 1 special character

Since version 5.42, in case of SHA-256 + strong rules, the super-administrator gives a temporary password to the user. During the first login, the new user has to change his password following the strong rules. The same password cannot be used between different user accounts.

The reset of the password is forced every 3 months.

A Warning

This change cannot be reversed. ALL passwords will be converted.

• "Session timeout" option: this option allows activating an automatic lock option or logout timer and set the number of minutes of idleness before locking occurs.





NEW! "Enable 2 factor authentication?" option: 2FA is an extra layer of security used to make sure that people trying to gain access to an online account are who they say they are. First, a user will enter their username and a password. Then, instead of immediately gaining access, they will be required to provide a verification code.

- You can set the expiry delay so that it asks you for the verification code either each time you try to login, everyday, every week or every month.
- You can also set the message so that you receive it via email or via email + SMS.

Tips/Hints

Please refer to this section of the KB to see how you can configure your email. Also, if you opted for the SMS option, you will need to set-up your TWILIO account (please, check this section of the KB for more details).

NEW! "Enable Captcha?" option: CAPTCHAs are tools you can use to differentiate between real users and automated users, such as bots. CAPTCHAs provide challenges that are difficult for computers to

perform but relatively easy for humans.

- You can set the number of characters to either 4, 6 or 8 and you can also choose whether or not you want to include letters in the verification code.

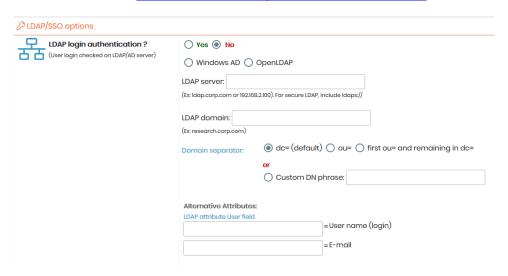
If you already have a system of login in your institute, you can probably connect it to LabCollector. Two systems are available: LDAP/AD server or Single Sign-On Authentication.

You can read about KB: how to use AD or LDAP for login authentication.

"LDAP system": If you have a network using LDAP or Active Directory (AD) for users profile
management, you can use it in LabCollector. LabCollector login process will then check login/password
validity on the LDAP or AD server.

It works with standard LDAP protocol and only uses the LDAP server and domain. If you use the LDAP system, you will not have to enter passwords in users' profiles as those are managed on the LDAP/AD server.

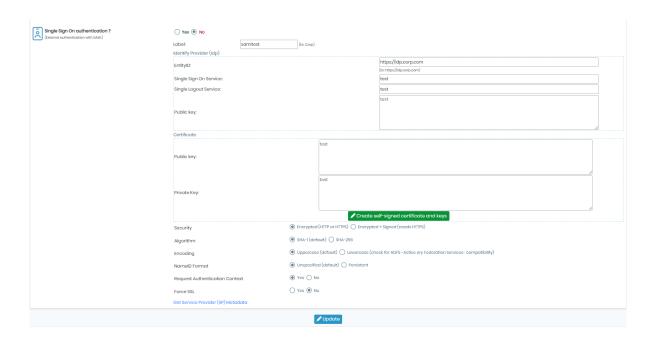
You can read more about KB: how to use LDAP & OpenSSL on windows 64bits.



Users and Staff LDAP/AD can be directly imported automatically: $Admin \rightarrow Users \& Staff \rightarrow Import from LDAP/AD$.

"Single Sign-On Authentication": This allows your lab to use SAML authentication for signing in. SAML provides a single point of authentication, which happens at a secure identity provider. SAML uses secure tokens which are digitally signed and encrypted messages with authentication and authorization data.

These tokens are passed from an identity provider to LabCollector with an established trust relationship. As in the case of LDAP, passwords (except for that of the super administrator) are managed outside of LabCollector.



You can read more about all the options mentioned in the screenshot above, by visiting our KB: <u>LabCollector General setup v6.11, what's new?</u>

NEW! You can set the algorithm to either SHA-1 (which is set by default) or SHA-256.

NEW! You can also choose whether or not you want to force the SSL.



When enabling SSO, you will have to fill out all mandatory fields to be able to save your changes.

You can read more about KB: PHP requirements for SSO in our Knowledge Base.

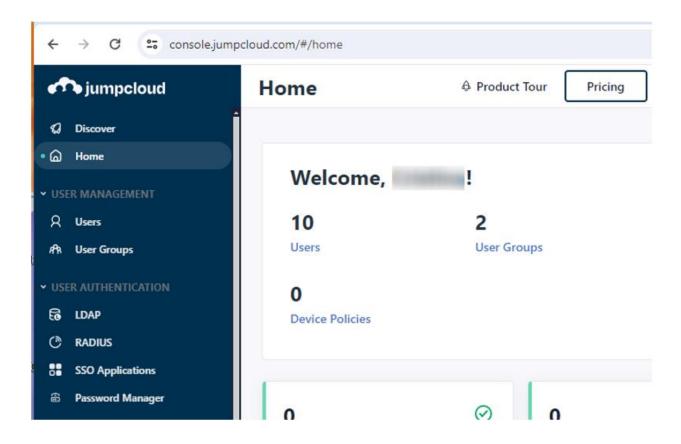


Don't hesitate to contact support@agilebio.com to help you with the setup of LDAP or SSO servers.

3.1.1.1 Configuring SSO for LabCollector with JumpCloud

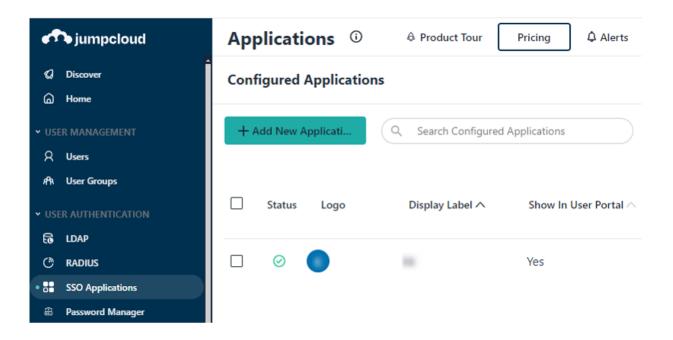
Step 1: Access JumpCloud

- 1. Navigate to [JumpCloud's website](https://jumpcloud.com/).
- 2. Log in using your administrator account credentials.



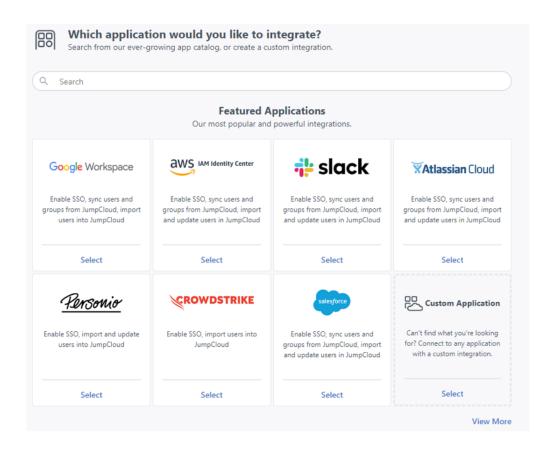
Step 2: Add New Application

- 1. Go to "SSO Applications" from the left menu.
- 2. Click the "Add New Application" button.



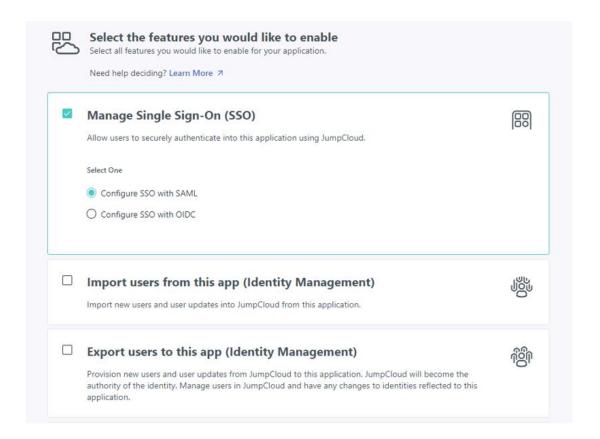
2.1. Select Custom Application

- Choose "Custom Application" and click "Next".



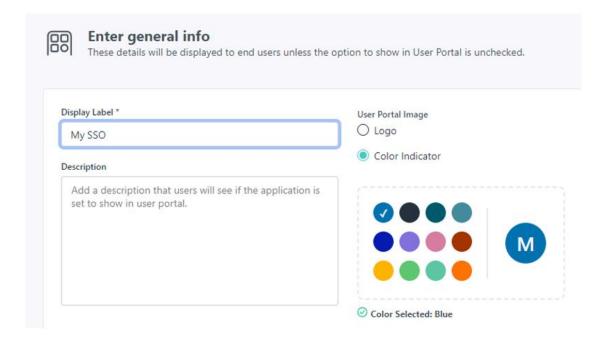
2.2. Check Manage Single-Sign-On (SSO)

- Select "Manage Single-Sign-On (SSO)" and choose SAML as the authentication method.
- Click "Next".



2.3. Write Display Label

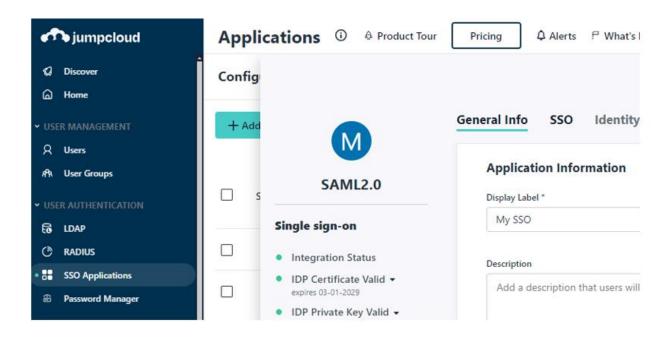
- Enter a display label for the application.
- Click "Save Application".



Step 3: Configure Application

3.1. Open Application

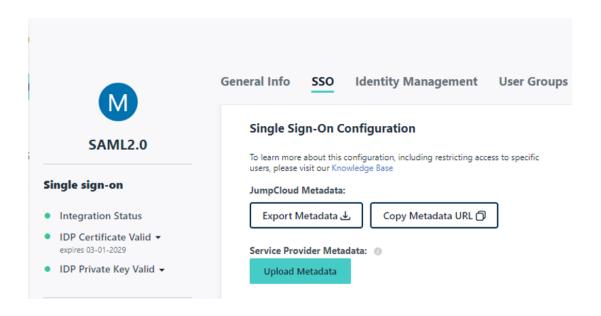
- Navigate to the SSO Applications section.
- Click on the name of the new SSO application from the list.
- Access the "SSO" tab.



3.2. Fill SP Data

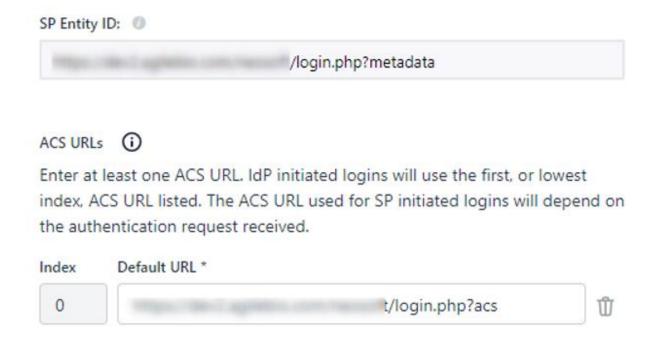
3.2.1. Option 1: Load Metadata File

- Download the metadata XML file from the LabCollector SSO page.
- Upload the downloaded metadata XML file using the "Load metadata" button on JumpCloud.



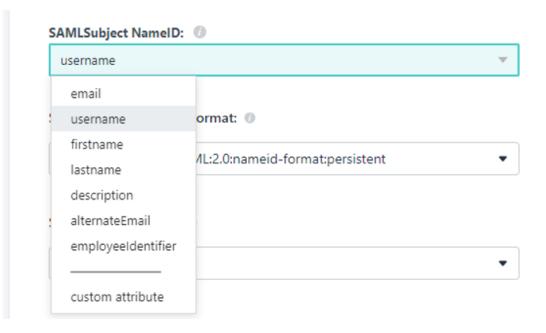
3.2.2. Option 2: Manual Configuration

- Manually fill in the following JumpCloud fields:
- SP Entity ID: Copy the metadata URL (e.g., *https://YOURINSTANCE/login.php?metadata*) from the LabCollector SSO Setup page.
- URL Assertion Consumer Service: Use the ACS URL provided by LabCollector (e.g., https://YOURINSTANCE/login.php?acs).



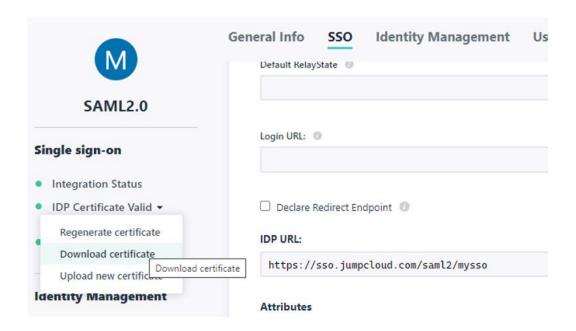
3.3. Choose Subject NamelD

- Select the user identifier (SAMLSubject's NameID) to be sent. By default, it is email, but you can choose other fields such as username.



Step 4: Exchange Information

- Copy and paste the following information from JumpCloud to the LabCollector SSO page:
- SSO JumpCloud URL (e.g., `https://sso.jumpcloud.com`) to LabCollector EntityID.
- IDP URL to LabCollector Single Sign-On Service.
- IDP URL to LabCollector Single Logout Service.
- Download IDP Certificate from JumpCloud and paste it into the Identity Provider Public Key section.



Step 5: Create Users in LabCollector

- Create or import user accounts in LabCollector ensuring that the same identifier is used in both systems (as defined in **Step 3.3**).

By following these steps, you can successfully configure SSO authentication for LabCollector with JumpCloud, enabling users to access LabCollector easily using their JumpCloud credentials.

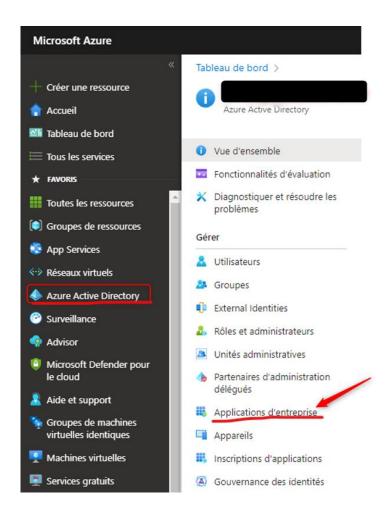
Additional Considerations

- User Provisioning: Ensure that user accounts exist in both JumpCloud and LabCollector for seamless SSO authentication.
- Testing and Troubleshooting: Perform thorough testing of the SSO setup and address any issues or errors encountered during the configuration process.

3.1.1.2 Configuring SSO for LabCollector with Azure Active Directory

Step 1: Access Azure Active Directory

- 1. Navigate to (https://portal.azure.com) and log in to your Azure account.
- 2. Go to the 'Azure Active Directory' section.

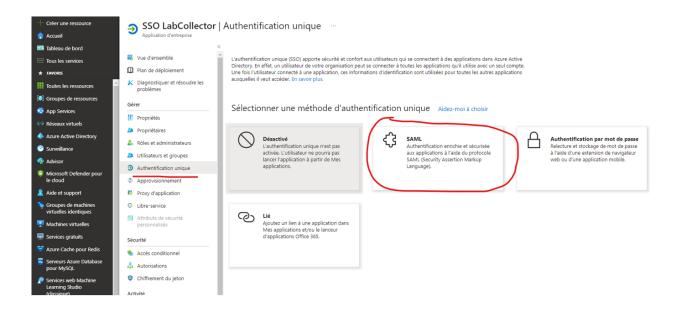


Step 2: Add a New Application

- 1. Click on 'Enterprise applications'.
- 2. Choose 'Create your own application'.

Step 3: Configure SAML Authentication

- 1. Select 'Integrate another application you don't find in the gallery (Azure Marketplace)'.
- 2. Click on 'Unique Authentication' and choose the 'SAML' method.

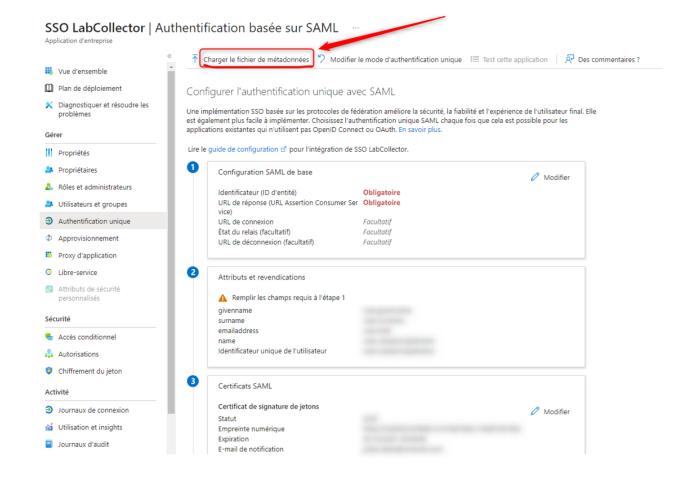


Step 4: Complete Azure Fields

You have two options for filling out the fields:

Option 1: Load Metadata File

- Download the 'metadata XML file' from the LabCollector SSO page.
- Upload the downloaded metadata XML file using the 'Load metadata file' button provided by Azure.



Option 2: Manual Configuration

- Fill in the following Azure fields manually:

- Entity ID: Copy the metadata URL (e.g., <u>`https://YOURINSTANCE/login.php?metadata</u>`) from the LabCollector SSO Setup page.
- URL Assertion Consumer Service: Use the ACS URL provided by LabCollector (e.g., `https://YOURINSTANCE/login.php?acs`).
- Connection URL: Enter the LabCollector login page URL (e.g.,

`https://YOURINSTANCE/login.php`).

- Disconnection Page URL: Provide the logout URL from LabCollector (e.g.,

`https://YOURINSTANCE/login.php.slo`).

Step 5: Exchange Information

- Copy and paste the following information from Azure to the LabCollector SSO page.
- Azure AD Identifier (Entity ID) to LabCollector EntityID.
- Single Sign-On Service URL to LabCollector Single Sign-On Service.
- Single Logout Service URL to LabCollector Single Logout Service.

Step 6: Download Base 64 Certificate

- Save the configuration in Azure. Download the 'Base 64 certificate' from the 'Certificate SAML' section on the Azure screen.
- Copy the content of the certificate (.cer) and paste it into the 'Public key' input field on the LabCollector SSO Setup page.

Step 7: Test the Configuration

- Save the settings on the LabCollector SSO Setup page.
- Ensure that a user with a valid email address exists in LabCollector.
- Test logging into LabCollector using an Azure AD account email address.

Additional Considerations

- Ensure that a user account with an email address as the username exists in LabCollector to be processed by the SSO.
- Adjust LabCollector SSO setup parameters, such as 'Request Authentication Context', if authentication errors occur, like 'PasswordProtectedTransport', during login due to Azure AD group policies.

3.1.2 Proxy, Tasks Scheduler and Email alerts settings

• Proxy:

If your internet access is protected by a cache or proxy server, you need to configure this option in LabCollector if you want to benefit from external tools like the RSS feeds reader or the NCBI GenBank importer.

You can read about KB: LabCollector general setup- 2. Proxy, Tasks scheduler & Email alert settings

• Tasks Scheduler (for Linux and Windows):

CRON is an automatic task system on Linux used for executing some tasks at specific intervals, without your intervention every time (we use the Windows schtasks engine on Windows servers).

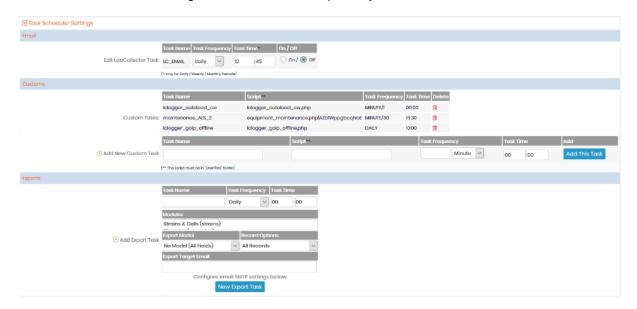
For example, you can create a task to send your email alerts every day at 11:00 pm. If you do that, the CRON manager sends an email every day at 11:00 pm until all the emails will be finished. If you want to send them monthly, you can schedule it.

You can schedule any script making it easy to automatically import data, report, etc. This task system is also used by the DATA LOGGER add-on.

CRON info > tasks hour: only for daily, weekly, and monthly periods.

Weekly: on each Monday. Monthly: on each first day of the month.

You can schedule email sending, custom tasks, and export of your data.



• Email alert settings:

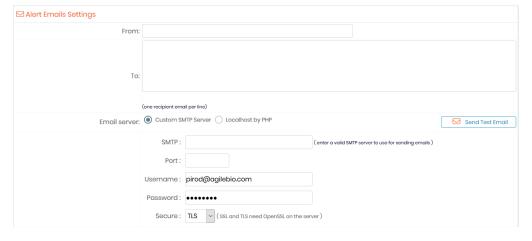
LabCollector has an internal alert system for minimum lot quantities, lot validity, and equipment maintenance. This can help your lab maintain routine tasks on time.

If you want alerts to be sent by email, you need to define email alerts settings here:

- FROM: A valid email from the administrator that is used on the "From" field of the email header.
- TO: All email addresses to which alerts should be sent. One address per line (in addition to persons in charge).
- O SMTP: On Windows servers, you need to indicate a valid SMTP server (outgoing email server) that will be used to send the emails. The SMTP server must accept mails from your LabCollector server or sender email address (the one set in the FROM field). Usually, on Linux servers, you don't need to set this if you have a mail server setup (like Sendmail or Qmail) which is usually the case.

The test email button can help you to check that the email settings are valid.

Use the task scheduler to define the frequency of sending emails and to automate this task.



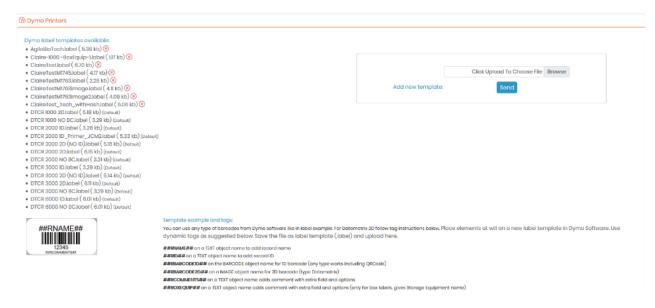
If your server is configured to use this function, you can also send email from localhost by PHP. You have to set up the PHP.INI section [mail function].

3.1.3 Printers & Labels

LabCollector is capable of printing barcode labels easily (Section 7.6).

Please read our Knowledgebase for KB: how to install & KB: how to use Dymo printer.

You can read about FKB: LabCollector general setup- 3. Printers



Define printers with EPL and JSCRIPT languages like Zebra, Brady, or CAB and label roll types.

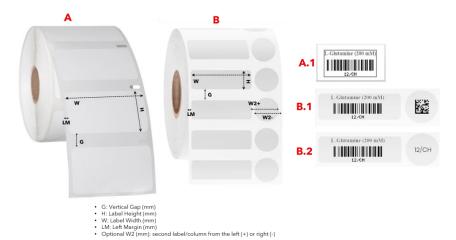


To add a label roll type, you have to fill in the form with the required information: roll name and label size (use the size format indicated). If you want to define this roll type as a default you need to check the default box.

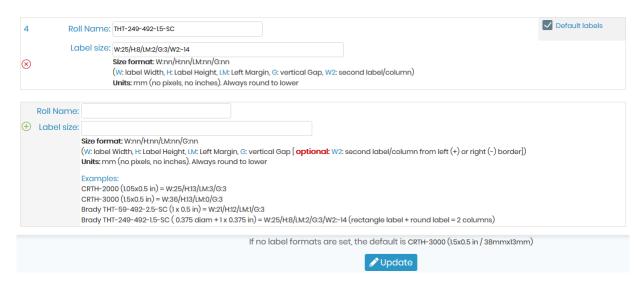
You can indicate that a label roll has 2 columns with the W2 parameter (width 2). The positive size will be considered as the left position and negative as the right position. W2 size will add to the W-width of the main label.

You can read more about KB: label network printers and roll types.

Labels parameters:



- W: width of the label
- H: height of the label
- LM: left margin on roll
- G: gap separating each label
- W2: width of the second label is for labels is for cryo labels where you can either print the barcode or the code to stick on the tube, as shown below (B – B.1 and B.2).



Tips/Hints

You can set a default label template for your automatic printing, just simply check the box located on the top right corner (as shown in the screenshot above).

You can learn more in our FKB: printing in our Category "Printing".

3.1.4 Rack Scanners

Rack Scanners are used for scanning barcode of the samples for example with the help of Scan Server.

You can read about KB: <u>LabCollector general setup-4</u>. Rack Scanners.

You can use the Scan Server utility and connect the Rack scanner to LabCollector.

In LabCollector there is a tool called Batch generator, which helps to add data from rack scanners into LabCollector.

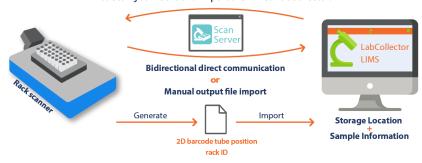


To do this, you need to register Rack scanner with the Batch Generator tool.

Please read the Knowledge Base to understand

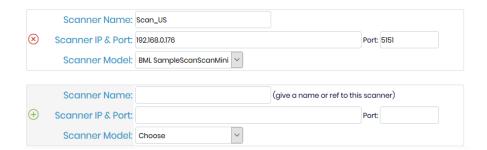
KB: how to install Rack scanners and configure Scan Server with LabCollector.

From Batch Generator (Rack Scanner) Tool, use the direct command to scan your racks and import them into LabCollector.



For Sample's batch tools users, a scanner has to be registered.

You have to fill out the form with the required information. To find the IP address of the PC connected to the scanner, launch the command prompt, type *ipconfig/all*. The IP number is listed under IPv4 Address. By default, the port is 5151.



In this section, you can also add plate templates. Upload a CSV file within order: the position in the plate, the sample name, the volume, and the sample type.



3.1.4.1 Scan Server

AgileBio offers you an application called scan server which helps you to connect Rack Scanners and connect them to the LabCollector.



Please read the Knowledgebase to understand FKB: how to install Rack scanners and configure Scan Server with LabCollector.

3.1.4.2 Ziath Scanner

LabCollector supports Ziath scanner and its software.

You need to connect it with Scan server, which will help connect it to LabCollector tool Batch Generator.

Please read the Knowledge Base to understand KB: how to install Ziath Scanner and scan the racks.

3.1.4.3 Fluidx Scanner

LabCollector supports FluidX scanner and its software.

You need to connect it with Scan server, which will help connect it to LabCollector tool Batch Generator.

Please read the Knowledge Base to understand KB: how to install FluidX Scanner and scan the racks.

3.1.4.4 Micronic Tracxer

LabCollector supports Micronic Tracxer scanner and its software.

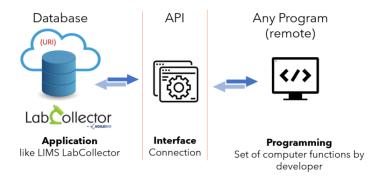
You need to connect it with Scan server, which will help connect it to LabCollector tool Batch Generator.

Please read the Knowledge Base to understand KB: how to install Micronic Tracxer Scanner and scan the racks.

3.1.5 Web services API

A new range of applications based on your LabCollector can be imagined and developed.

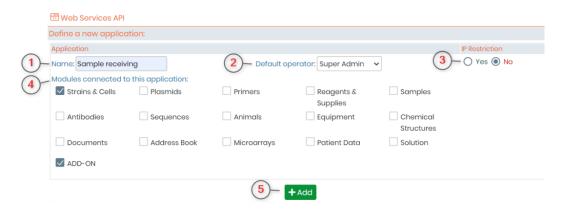
Using LabCollector as a back end database, the laboratory can provide remote information in external catalogs, biological resources, etc. Web or mobile tools can be created.



You can read about KB: <u>LabCollector general setup- 5</u>. Webservices. You can also read the KB: <u>an introduction to LabCollector API</u>.

The web-services option will look like below.

LabCollector

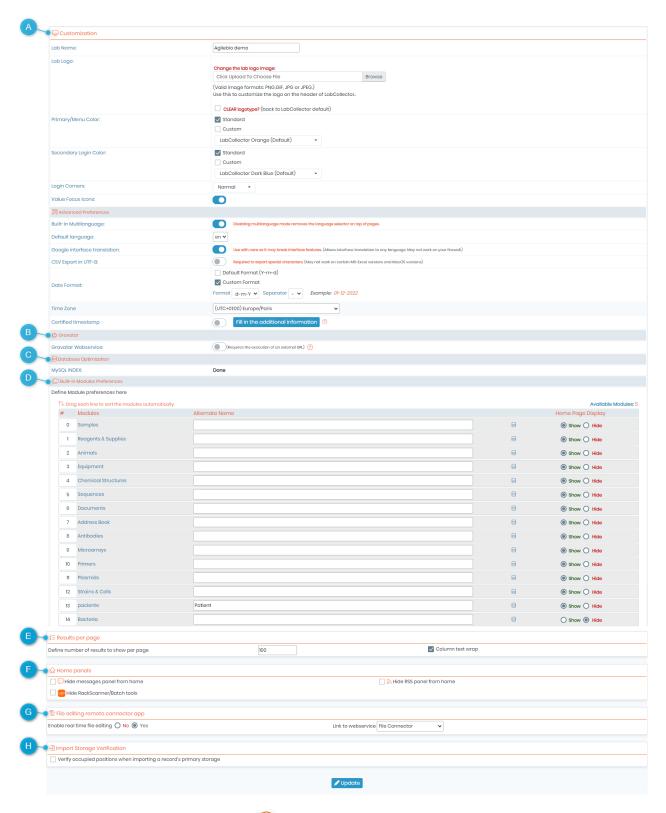


- **1.**NAME: Here you can add the name of your application. For example purpose, we have added the name of our add-on which is sample receiving.
- 2.DEFAULT OPERATOR: Here you can enter the person whom you want to be the operator for this API. If you don't add the operator here, then you will have to add it during each request that you will make through API.
- **3.**IP RESTRICTION: This option allows you a layer of security as you can define here which IP (internet protocol) addresses are allowed to work on the API you are defining. Remember that if you choose "yes" then the box to enter IP address will appear only after you save your setting.
- **4.**MODULES CONNECTED TO THIS APPLICATION: There are 12 by default modules present in LabCollector. Apart from this, you can also create new custom add-ons as per your requirements. All the defaults and custom modules and the add-ons will be present here and you can choose which modules you want to interact with the API.
- 5.ADD: once you have defined your settings you can click on add and you API will look like below.

For more information please refer to this LabCollector page and manual (or annual (or

3.1.6 Lab name, logo, modules name, google translation

In this section, you can change the Lab name and logo.



All the above points are explained in the KB: <u>LabCollector general setup- 6</u>. General settings, logo, modules names, etc.

• A.Language:

You also have access to *language options* in option A in above image. Each user will have the possibility to select his language by default and from time to time (see selection 2.5). The super-administrator can select a general default language and turn off the time-to-time selector.

Language options are also possible as the *Google interface translation* option for a multilingual interface to use LabCollector with a selected language. To do that, just tick the box "Google interface translation". The LabCollector interface will be translated by Google.

• A.CSV Export in UTF-8:

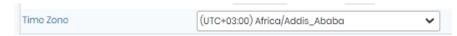
If you use special characters in your data, tick the box CSV Export in UTF-8 to have the possibility to export them in CSV.

A.Date format & Timezone:

NEW! Super-administrator can now define a custom date format. By default, the date format used in LabCollector is the SQL format so Y-m-d (Year-month-day). Now, you can select the separator between - and /, and one of the custom formats as below:



NEW! Now you can also adjust the time zone according to your region.



NEW! LabCollector also provide an easy method to apply RFC 3161 trusted timestamps to time-sensitive transactions through independently verified and auditable date and UTC (Coordinated Universal Time) sources.

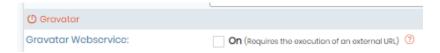
Time stamping can be used to independently and irrefutably prove the time of a transaction, the time a document was signed and when it was archived.

Tips/Hints

You can change the color of your instance's header by selecting the preferred primary/menu color, and also that of the login page by selecting the preferred secondary login color.

• B. Gravatar:

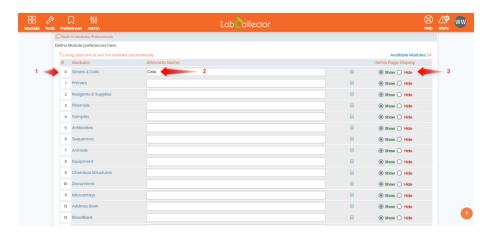
NEW! Now you can access the gravatar webservice as well in LabCollector to personalize your login image. If you don't want the gravatar to be used you can leave the box unchecked.



• C. Database optimization:

To optimize search and filter results in your database if you have a lot of data, check the box Yes, create Indexes to optimize searches. This option is automatically selected for new installations.

• D. Built-in module preferences:

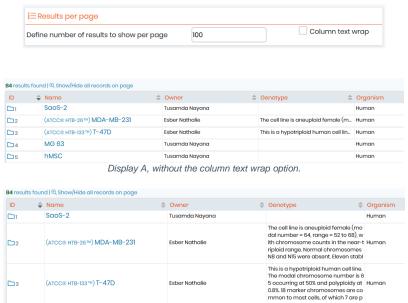


You can also organize and rename the module icons on the default home page. Please, refer to the numbers indicated in the screenshot above:

- 1: You can drag up or down any module and change it's order of appearance on your main LabCollector page.
- 2: You can change your module's name by typing an alternate one.
- **3:** You can decide whether you want to show or hide a certain module on the home page. When you hide a module, you obtain one credit to create a custom module (see section 5.4).

• E. Results per page:

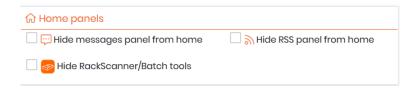
The number of search results shown per page can be changed as well. **NEW!** By default, the summary line truncate values that are too large (Display A). If you check the box "**Column text wrap**", the values will be displayed entirely on double lines (Display B).



Display B, with the column text wrap option.

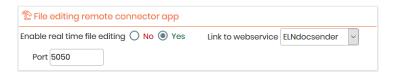
• F. Home Panels:

The super-administrator can choose to remove the messages and the RSS panels from the homepage by checking the boxes below and the Rack scanner/batch tools also.



• G. File editing remote connector app:

NEW! The File Connector application is a new Windows application to allow the user to modify the documents downloaded in LabCollector without uploading them and save them again.



Here, you have access to the setup from LabCollector. If you enable this application, you need to link it to a web service (see Usection 3.1.5) and select the port. By default, the port is 5050 and can be changed in the settings of the application.

All the above points are explained in the KB: How to download & install File Connector. You can read the KB: how to use the File Connector software.

• H. Import Storage Verification:

NEW! The last option on this page of setup is linked to the storage import. Using the import tool under Admin > Data > Import, you can in modules linked to the storage system import the main locations of the record. By checking this box, the system will check if the position in the box is already used. It is an option because it requests more resources than a simple import.

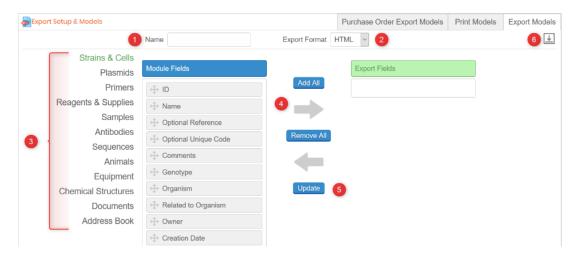


Once you are done, don't forget to "Update" the settings, for them to apply.

3.1.7 Export and Print Setup & Models

This option is also available to the administrator level through the Preferences menu.

Models can be created to export and print data from any module. Use these models to export or print your result search in each module. This allows you to quickly create exports for frequently required reports or information.



You can read more about export in the KB: Export print models

A few steps are necessary to create a model of export:

1. Give a name

- 2. Choose the file format
- 3. Select the module where you want to create the export model
- 4. Choose the fields with the button Add All, the arrow, or by dragging and dropping them in the Export fields column on the right.
- 5. Save your model "UPDATE"
- 6. To modify/upload a model click on

 ■.

3.1.8 Upload / Add Add-ons

Add-ons are complementary modules in LabCollector.

Please see section 1.4 for more information.

A Note

As a reminder, it is a best practice to back up data before updating or installing new add-ons.

You can download the add-ons that you need on the \subseteq LabCollector website. Then, upload the zip file on this page. Navigate into the add-on from the LabCollector home page to complete the installation. Refer to the manual of the add-on for additional details.

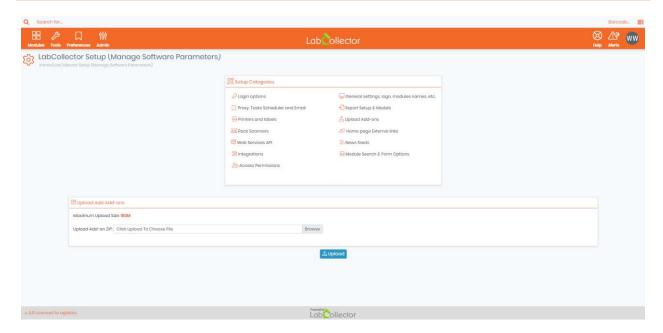
Read more about the add-ons in section 11.

苯 Tips / Hints

To install or update ELN add-on, just uncompress the zip folder under *extra_modules* folder. Please see the add-on manual.

A Note

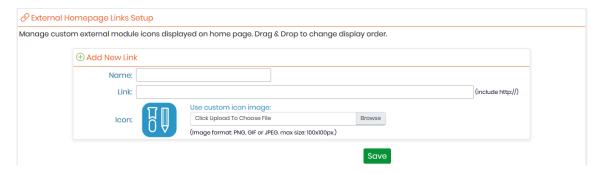
Please note that the maximum upload size for Add-ons zip files is 150Mb, you can upload the file corresponding to the Add-on you want to integrate into LabCollector by going to *Admin →Setup →Upload Add-ons* (as shown in the screenshot below).



NEW!: You can now receive alerts from add-ons directly into your LabCollector alerts menu.

3.1.9 Home page external links

External links positions on the home page can be defined in this section. They are like bookmarks for which you can define an icon. It can be useful for intranet or websites that your lab commonly uses.

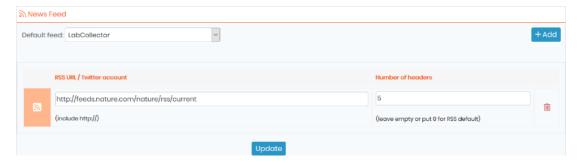


You can also create favorite site links through $Tools \rightarrow Lab\ Bookmarks$. See \square chapter 10.10.

3.1.10 Newsfeeds and Twitter

"RSS feeds" are now widely used on internet Portals. They are URLs pointing to XML-based content. Generally used for news, they allow insertion of contents on third party websites. With LabCollector you can keep informed of events relevant to your lab directly from the LabCollector home page.

For example, scientific journals can provide current contents headlines or you can list news or equipment promotions from your suppliers.

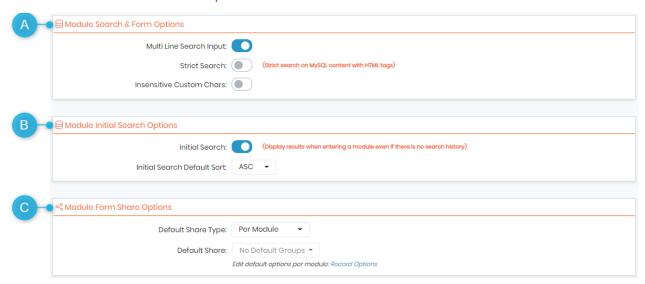


By default, we publish LabCollector's news topics (to keep you informed on our news and suggestions). If you define additional RSS entries, you can change the default RSS feed. Click on the +Add button on the right and fill in the form. You can also link your Twitter account.

🛕 Note

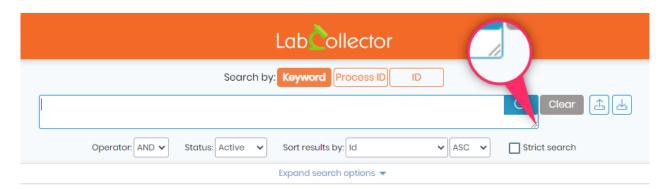
You may need to configure proxy settings if your network is protected by a firewall/proxy server. Contact your local network admin.

3.1.11 Module Search & Form Options



A: Module Search & Form Options

 LabCollector offers the option to input multiple lines into the search bar, a small icon will appear in the bottom right corner of the search bar once this option is activated, which allows you to configure its size.



- You can choose to activate the strict search option, which allows you to perform a strict search on MySQL content with HTML tags.
- You can set your search bar to be insensitive to certain characters (which are displayed in the screenshot below).



B: Module Initial Search Options

You can choose whether or not you want to display results when first accessing a module even if there is no search history, you can also set the default sort to ASC (ascending) or DESC (descending).

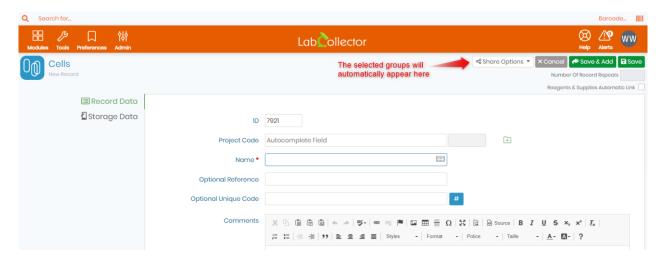
C: Module Form Share Options

Here you can set your default share type to be either Per Module or Global.

- If you choose the Per Module option, you will have to access to the Record Options page (by following these steps: *Admin -> Other -> Record Options*), and select the groups with which you want to share the module form for each individual module (as shown in the screenshot below).



– And if you choose the Global option, the Default share drop down menu will be accessible and you can then select the group(s) with which you want to share the module form. In this case, the selected group(s) will automatically appear in the share options of the module form, and this will be valid for all modules without exception (as shown in the screenshot below).



3.1.12 Access Permissions

A —	● Staff Access	
	Configure the permissions of staff level users to access designated areas.	
	Memorized Items (Worklists Only)	
В	PA Staff+ Access	
	Configure the permissions of staff+ level users to access designated areas.	
	Audit Trail	
	Addit Hull	
	28 Admin Access to Administration Setup	
	Configure the permissions of admin level users to access Admin > Setup.	
	Export Setup & Models Printers and labels	
	Rack Scanners Home page External links	
	Web Services API News feeds	
	Integrations Module Search & Form Options	
D –	28 Admin Access to Other Administration Areas	
	Configure the permissions of admin level users to access designated administration areas.	
	Custom Modules Default Fields	
	Custom Fields Fields Order	
	Preferences Menu	
E-	26 User Level Allowed to Delete Records	
	Configure the user levels that are allowed to delete records. Even with permission to delete non admin users can only delete their own records.	
	User, Staff, Staff+, Admin	
	Staff, Staff+, Admin	
	Staff+, Admin	
	Admin only	
	✓ Nobody (Super Admin only)	

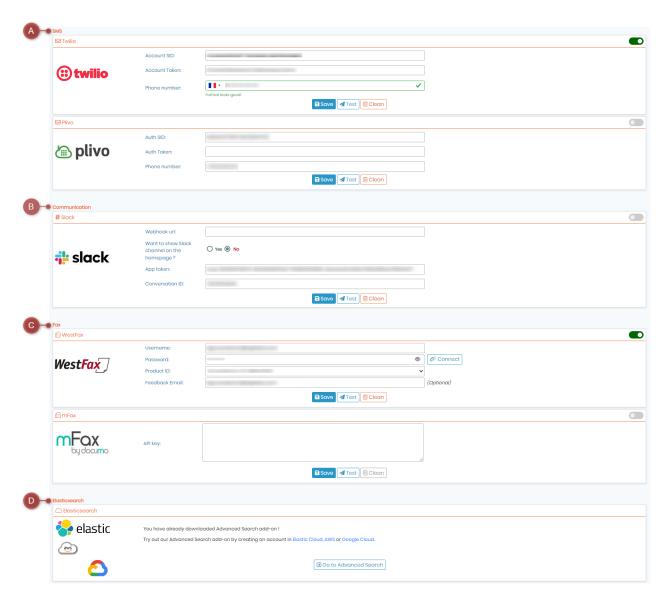
- A: The access to Memorized Items (Worklists Only) can now be opened to Staff level users.
- B: The access to the Audit Trail can now be opened to Staff+ level users, in addition to the super-administrator and administrators.
- C: The super administrator can authorize the access for admin level users to the setup menu, and also choose the exact tab that the admin level users can access (integrations page, Printers & labels page, ...etc.).
- D: The super administrator can also restrict the access for admin level users to other administration areas, such as: Custom Modules, Fields Order, ...etc.
- E: The super administrator have the ability to configure the user levels that are allowed to delete records.

Note

Even with permission to delete, non-admin users can only delete their own records.

3.1.13 Integrations

LabCollector offers the possibility to integrate third party apps diretcly into your instance, these apps can be set-up and configured to meet your needs in terms of improving your communication with other work colleagues, enhancing your search ability, ...etc.



A: You can set-up apps that have the ability to send SMS alerts and messages, such as: Twilio and Plivo.

B: You can also configure communication apps, such as: Slack, and choose whether or not you want to show the channels on the LabCollector's homepage.

*Please, take a look into this KB for more details on how to receive LabCollector notifications using Slack.

C: You can set Fax softwares, such as: West Fax and/or mFax.

D: You also have the possibility to add an advanced search add-on and integrate it directly into LabCollector, such as: Elastic Cloud, AWS or Google Cloud.

*Please, take a look into this KB for more details about the Advanced Search Manager.

3.1.13.1 Artificial Intelligence (AI)

In our continuous quest to improve your lab experience, <u>LabCollector</u> is thrilled to introduce the integration of **OpenAI**, a pioneer in artificial intelligence.

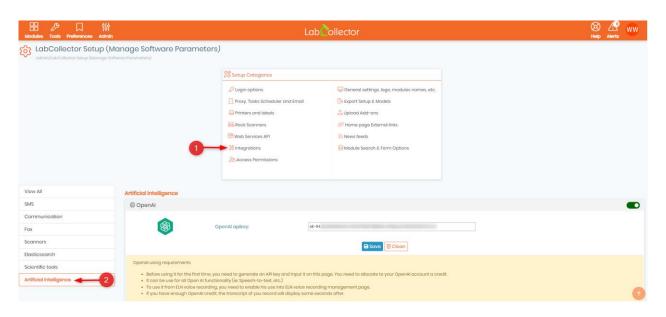
Note

Please note that this feature is only available starting from LabCollector v6.21, checkout our <u>blog post</u> to read about all the other exciting features included in this version.

If you want to update your current version, read the following knowledge base on <a href="https://example.com/how-to-upgrade-your-background-com/how-to-upgrade-your-background-com/how-to-upgrade-your-background-com/how-background-com/how-to-upgrade-your-background-com/how-backgr

Activating the Power of AI in LabCollector

• First of all, head to the Admin section, then find and click on Setup, finally explore the Integration tab, under which you can find the dedicated section for Artificial Intelligence (as shown in the screenshot below).



Once you click on the Artificial Intelligence tab, you'll encounter different Al options, each offering unique functionalities. Let's break down the options and the steps to activate them:

1) OpenAI:

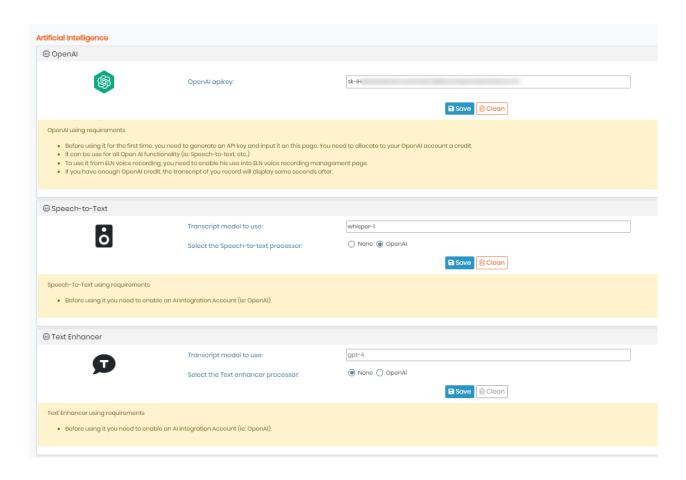
- Generate API Key: If you plan to use OpenAI, you'll need an API key. This key is like a secret code
 that allows LabCollector to connect to your OpenAI account. You can generate this key from your
 OpenAI account settings.
- Allocate OpenAl Credit: OpenAl operates on a credit system. To use OpenAl functionalities within LabCollector, you need to allocate a certain amount of credit to your OpenAl account.
- Input the generated API key in the corresponding tab, click on "save" and turn on the AI by switching ON the button located to the right.

2) Speech-to-text:

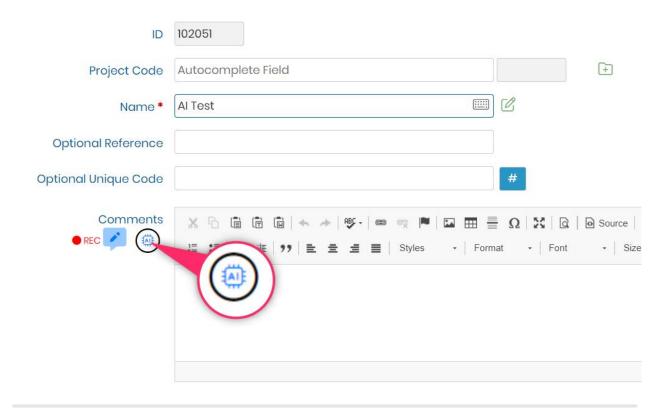
- For Speech-to-Text, LabCollector allows you to choose a specific transcript model. Think of this as selecting the 'voice' that will be transcribing your spoken words.
- Specify the speech-to-text processor whether None or OpenAI. This determines the underlying technology used for the transcription process.
- You will need to activate an AI integration account (OpenAI) before using this option.

3) Text Enhancer:

- For the Text Enhancer, you again choose a specific transcript model, determining the 'style' or 'intelligence' of the enhancement, such as "gpt-4".
- Similar to Speech-to-Text, specify the processor and activate an AI integration account before using the Text Enhancer with OpenAI.



Once activated, an AI symbol will appear next to the voice recording icon, which you will find inside ELN, LSM and within your records' comments, simply start speaking into the mic and the AI will handle the rest, your spoken observations will turn into written notes with high accuracy, which you can then copy/paste, modify, or save them exactly as they are.

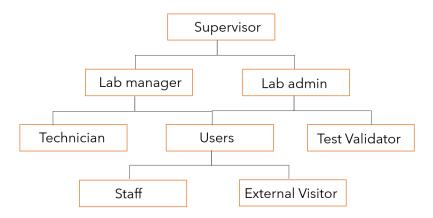


3.2 Users

Users are persons that have a hierarchy in the lab or institute. The hierarchy can start from the Supervisor or Personal Investigator (PI). There can be groups in Labs or Group Leaders that can be Lab Administrators. There can be other Researchers (Users), Lab Technicians or External Visitors.

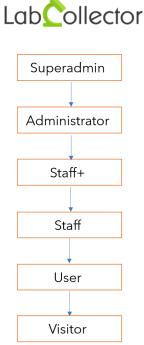
🗯 Tips / Hints

The below is just an example for a research institute. However, it can be related to any institutional hierarchy.



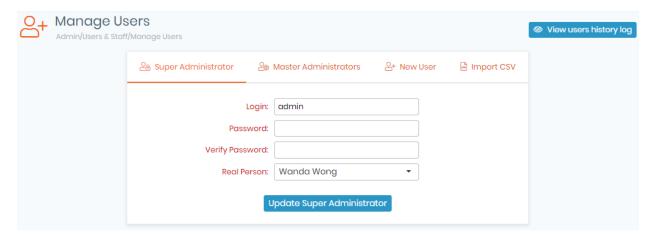
3.2.1 Manage users

LabCollector allows you to create hierarchy level users in LabCollector and allot them right to access levels. You can add various user levels and grant them permissions according to their hierarchy level.



This is how the manage users page will look like.

^{*}The image contains a pseudo name and login.

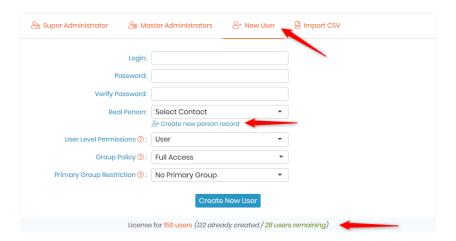


3.2.1.1 Add/Create Users

Use the Create New User section to associate login, passwords, and permission levels to each contact.

- Go to Admin → Users & Staff → Manage Lab Members → Add new member Enter basic contacts for lab staff members. Email is important. To see your staff directory, go to Tools → Staff Contacts. See section 10.9.
- Go to Admin → Users & Staff → Manage Users → New user
 Create or edit a user's login: change password, associate user names to staff contact. If you forget to create the contact, you can do it from here by using the "Create new person record" action.

Repeat this step for each person who needs to use LabCollector.



For each user you can choose one of 6 user-level permissions which are:

1. Super Administrator (only one user may have this permission)

This level can do everything in LabCollector: see all data, define and edit all user permissions and configurations, manage all data from all users, validate waiting for data, and manage settings.

🛕 Note

You have the possibility to set up multiple "super administrators", but there could only be one "Master super administrator" who can change the rights for all other users including other super administrators, whereas the rest of "normal" super administrators can only change the rights of other users who have a lower level permission than them.

2. Administrator

Just below the super administrator. They can see all data, manage all data from all users, and validate the waiting data. They have access to some "scientific" configurations mainly under the Preferences menu.

3. Staff +

Just below the administrator. They can see all data, process orders, follow budgets and invoices, use the memorize items function, create common boxes but only manage their data.

4 Staff

Just below the staff+. They can see all data, create common boxes but only manage their data.

5. User

This level allows the user to see data, manage their data but new and edited data will be added to the Waiting data and will require validation by administrators or the super administrator.

6. Visitor

No administration features. They can only search and view data. No modification is allowed with this profile.

You can also define the user as belonging to a group to restrict access to the data. For more information, please see Section 3.2.2.

On the bottom, you have indications of the number of users left.

NEW! The user list can also be imported using a CSV file. You can download a template. The separator of the CSV file must be the **comma**. Values for groups and levels of permission must be the same ones as the values in LabCollector.



NEW! Filters are now available to search more easily on the user list. You can filter on username, real person, group, primary group, permission level or IP.



3.2.1.2 Remove/Archive Users

1. Admin → Users and Staff → Manage Users

Archive a user ID by clicking on the trash icon and also archive associated contact by checking the box if this action is possible.



2. Admin → Users and Staff → Manage Lab Members

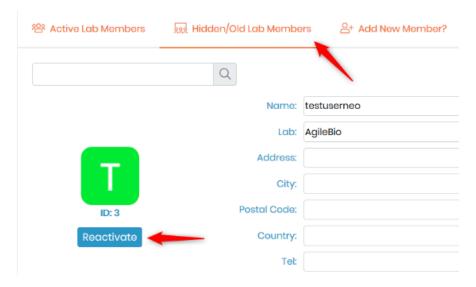
Archiving of the lab member is only possible when no data belongs to this member. You can transfer data from one member to another, see section 7.5.3. Once there is no more data associated, you can hide the member by clicking on the "hide" red button below the staff ID.



A Note

Lab member profiles and accounts can only be archived but not deleted to ensure traceability and quality compliance.

You can see old lab members in the *Hidden/Old lab personnel* tab through *Admin* \rightarrow *Users and Staff* \rightarrow *Manage Lab Members* and reactivate old member profiles if necessary.



You can also reactivate an archived user account if necessary by checking the box "Show Archived Users (At List's End)" and clicking on the



3.2.2 Groups definitions

The super administrator can define groups to manage user's general permissions (confidentiality). You can read more about KB: group policies in our Knowledge Base. By default, there is only the "Full Access" group. To define the groups:

Go to: Admin → Users and Staff → Manage group policies



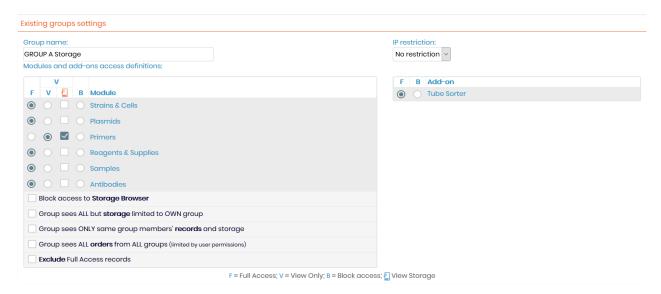
You can purchase additional groups if you need more. Please contact sales@agilebio.com.

Each group's rules can be defined to manage the user's module access, based on 3 options:

- F: Full Access
- V: View only User's access to the module is limited to only show data.
- B: Block access Users can't enter into the respective module.

Add-on access can also be set up based on 2 options:

- F: Full Access
- B: Block access Users can't enter into the respective add-on.



You can manage storage visualization (options View Only) and access to the storage browser. When you create a group with View Only access for some modules, you can also check the storage box to allow users to see the storage positions and locations.

If you want to restrict storage browser access, just check the "Block access to storage browser" box.

Groups can also be defined in such a way as to filter data access between groups:

Group Sees ALL

No option checked

Group Sees ALL except storage

By checking "Group sees all but storage limited to own group", the group members will see all records in LabCollector. However, storage information will be limited to the group members.

Group sees ONLY its data

By checking "Group sees ONLY the same group members' records and storage", the group members will only see records and storage information from their group. Data is therefore secured for the group. To take advantage of this you must have at least two groups.

Group sees ALL orders

By checking "Group sees ALL orders from ALL groups", all users can see all orders in the purchase order management. There is no limitation except by user permissions.

Exclude Full Access records

If you check this option with one of the over, the group will not see the records belonging to the Full Access users.

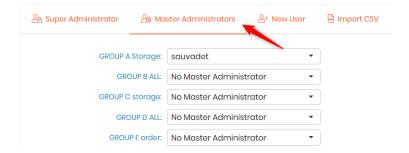
A Warning

Records made by users not affiliated to a group will not be restricted and will remain visible to ALL users in any group, except with the last option.

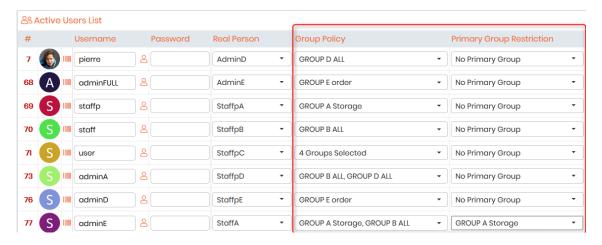
Permissions can be changed at any time through this menu.

Search filters will also use these group definitions to help filter data by group.

Super-administrator can assign master administrators to the groups under $Admin \rightarrow Users \& Staff \rightarrow Manage Users \rightarrow Master Administrators$. These master administrators can create and manage lab members and user accounts for their group.



Super-administrator can apply more than one group to a user. To come back to full access status, unchecked all the groups.



When a user is in multiple groups, the administrator can assign a Primary Group. This means that by default data are shared only with the Primary Group unless they explicitly choose to share individual records with their other group(s) as well.

If a user is in more than one group without the primary group then their data is shared with all these groups by default. The user can otherwise choose particular groups from the Share drop down while creating or editing a record.



Refer to our blog article for more details.

NEW! For a user belonging to multiple groups with conflicting permissions such as Full Access + view only or Full Access + blocked access, the super-administrator needs to choose between two options in the page of group definition.

- F > B/V means that the Full access status will take precedence over the View only or block status.
- F < B/V means that the View only or block status will take precedence over the Full access status.



For example, John Doe is in Group 1 and Group 2. In Group 1, he can access the Samples module whereas the Group 2 blocks this access.

- With the option F > B/V, John Doe can access the Samples module, whereas
- O With the option F < B/V, John Doe is blocked and can't enter in this module.

The option selected is for all modules, all groups, and all users.



Only the super-administrator cannot be assigned to a group.

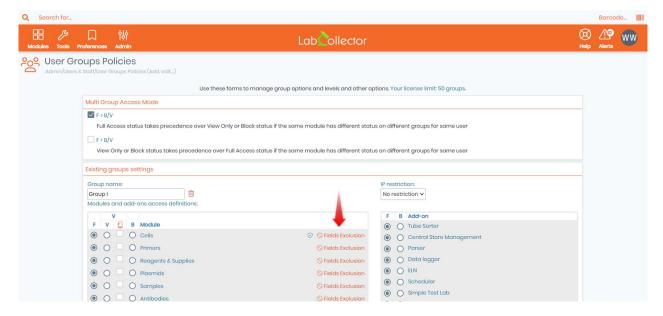
Tips/Hints

You can delete groups that are empty (do not contain any users).

A Warning

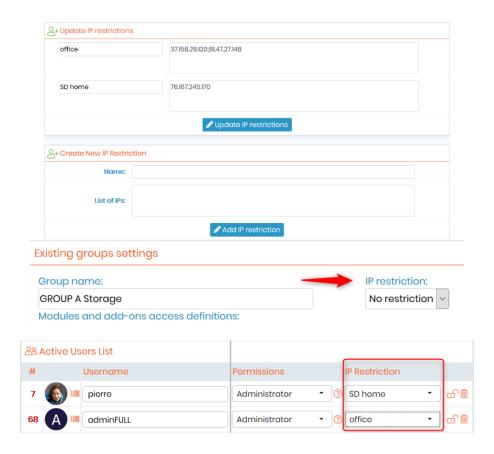
When only a particular group has access to a custom module and all other existing groups were blocked from editing/viewing it, and when this particular group gets deleted by the super administrator, the custom module will also get irreversibly deleted.

NEW! You can now select the fields that you don't want group members to view, by clicking on "Fields exclusion". You can do this for either the *main record tab*, the *analysis tab*, or even the *registry tab*. Disabled fields should not appear in records/exports of the corresponding module for users belonging to the selected group. See screenshot below.



3.2.3 Manage authorized IPs

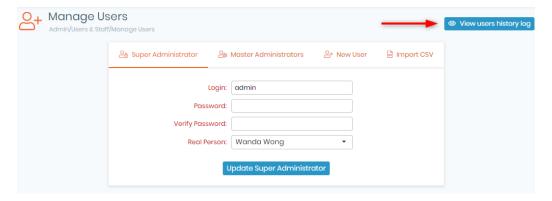
Restrictions to data can be set up based on the IP address used by the users. The super-administrator can create lists of IPs and restrain access to specific groups in Group settings or an individual user.



If the users are not using the right IP defined by the super-administrator, they cannot connect to LabCollector.

3.2.4 User action tracking

The system always stores actions done by any user in the audit trail. Super-administrator, administrators, and Staff+, if the option is selected, can check the history of the actions at any time.



History is accessed on the Admin \rightarrow Other \rightarrow Audit Trail menu.

History can be displayed for all or a particular user (by login or real name), for a defined period and can be filtered by the module. Exporting in excel format can also be done.



3.3 Licensing

Once you have paid for LabCollector you can obtain the license from your Client Area in two ways:

- 1. Link your Client Area service to your LabCollector directly.
 - 1) Go to Account this brings you to the Client Area login page.
 - 2) Link Account a popup will appear asking you to log into your client account. Choose your service from the drop-down and click on Apply. Your license will be automatically sent to LabCollector.

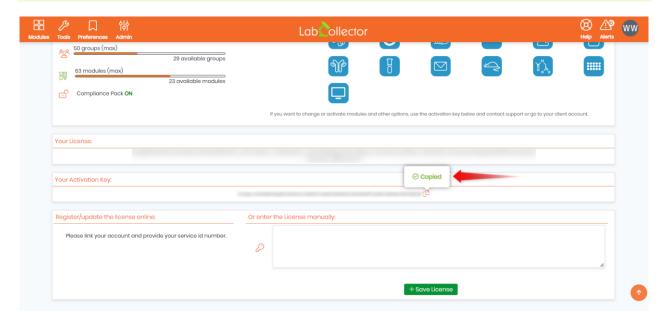


2. Log into ♣ https://www.labcollector.com/clientarea/login.php copy your license key and paste it into the license page Admin → Other → License. More details can be found in the KB: client.area.tutorial.



🗰 Tips / Hints

Once you copy your activation key, a tool-tip will pop-up to let you know that the key was successfully copied to your clipboard (as shown in the screenshot below).



4. Preferences

Preferences are the first customization level of LabCollector to your lab. They are used to define module options like organisms, sample categories, etc. Some options like primer labels are predefined, others are empty and need to be defined to add data.

It is recommended to explore the preferences options to create a LabCollector environment matching your laboratory activity when deploying or validating the initial use. You can always add or edit preferences as needed.

Preferences are defined in the Preferences menu.

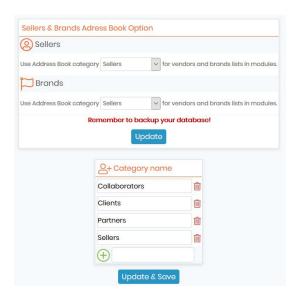
Only the super-administrator and the administrators can access this menu.



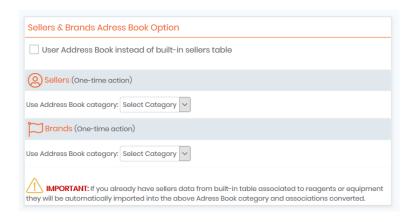
4.1 Address book options

Use these fields to manage the address book categories that are used in the Reagent & Supplies and Equipment modules. To make changes navigate to:

Admin → Preferences → Address Book Options



By checking the *User Address Book instead of the built-in sellers' table*, you have to define your contacts in the *Address Book* module. For more details, go to Seller's management.



To enter new categories, enter information in the Add new box \oplus and click update. Adding new categories is limited to administrator users.

Existing options may be removed only if they do not appear in any records. Click the icon to remove an option.

Existing options may be renamed. To rename an existing category, click the desired box and modify the name.

The change will take effect after clicking the *Update & Save* button.

The change in category name will be applied to all existing records.

4.2 Alerts use (on Screen or by email)

LabCollector has an internal alert system for:

- NEW! Reagent & supplies module (validity date and quantity)
- Orders
- Equipment module
- Custom field date (refer to Quehapter 5.4)
- Data validation (refer to Usection 7.1.1)
- NEW! Storage tube

This can help your lab maintain routine tasks on time.

Alerts are always displayed on all pages of LabCollector in a special menu item.



User and Staff levels do not see all alerts; they only see Reagents & Supplies quantities and expiration alerts. **NEW!** Alerts are also filtered by groups.

NEW! Memorize all button on the expiring storage list.

Note

Alert settings use both the preferences menu for alerts and setting days to expiration and/or quantity to trigger alerts for individual records.

A Warning

Any Equipment Record that has an active maintenance alert associated with it cannot be archived.

4.2.1 Expired and finishing lots/articles

Lot management is linked to the alerts system. Once activated, alerts will be displayed on LabCollector's homepage.

If you want alerts to be sent by email, you must associate an email to appropriate users under *Admin→Manage Lab Members* and define Usection 3.1.2 email alerts settings.

You can also disposed your lots.

Please read the Knowledge Base KB: how to dispose lots.

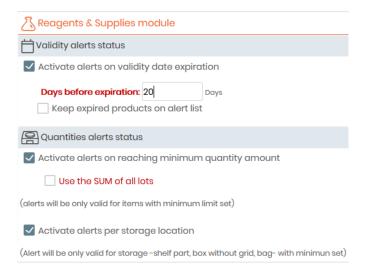
For Reagents & Supplies, you can establish 3 different alerts:

- 1. You can activate alert based on the validity date of the reagents. You must define the number of days before the expiry date of the product to use as a threshold. An option is available to keep the expired products on the alert list.
- 2. An alert based on the minimum quantity of units can be activated. This threshold must be defined in the main record to create alerts. Any single lot with a quantity lower than the threshold will raise the alert. You can also choose to check the "Use the SUM of all lots". In this case, when the stock total amount is less

than the product threshold, an alert will be activated.



Alerts and colored dots ignore the lots with custom units.



3. **NEW!** Alerts can also be activated per storage location. This alert ONLY works with SHELF PART, box WITHOUT GRID and BAG. When this type of storage location is added to a product, you can define a minimal quantity link to this location. The maximum quantity does not generate an alert. It is just for the user to know the maximum number of products that can fit in a storage location.

Please read the Knowledge Base on KB: how to create alerts with lots.



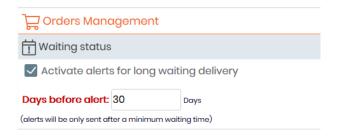
More information on alerts and lots, read our Knowledge Base KB: how to manage your reagent lots.

NEW! You can add alerts for lots that are on hold longer than the scheduled number of days.



4.2.2 Orders alerts

For the Orders Management, an alert based on the wait time for long delivery after ordering can be activated. You must define the number of days required for an alert.



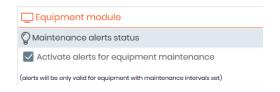
4.2.3 Equipment module

Another type of alert is linked to the equipment module.

If you activate the equipment alert feature, each time equipment needs maintenance, you will get a notification.

Maintenance intervals are defined for each equipment record and alerts are calculated according to the date stamp of the last maintenance entry log.

Alerts for equipment maintenance are sent to the person in charge of the equipment.



If you want to use this alert, you have to define the maintenance frequency through Admin \rightarrow Preferences \rightarrow Equipment Categories

Please read our Knowledge Base KB: how to start with equipment module.

You can also read more about maintenance with our Knowledge Base KB: <u>add/edit maintenance for equipment</u>.

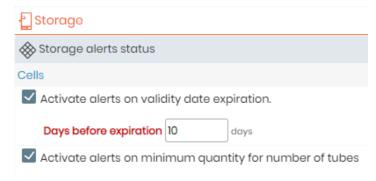
4.2.4 Storage tube alert

NEW! This alert is available in the following modules: Strains & Cells, Plasmids, Primers, Samples, Antibodies and Chemical Structures.

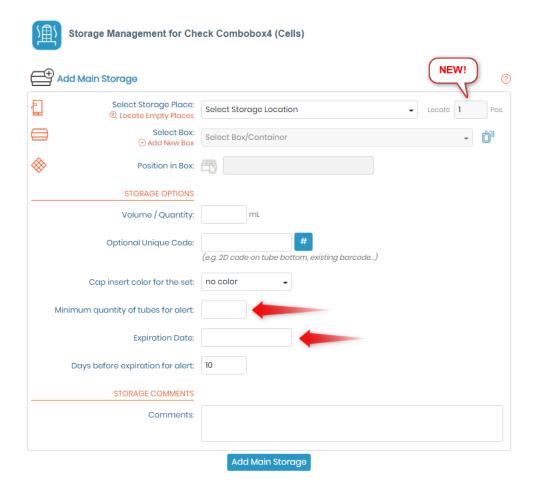
You can read more about it in our Knowledge Base to KB: create tubes with storage and mark their usage.

It works like the alerts on product lots in the Reagent & Supplies module based on the expiration date and the minimum quantity. Here, check the box to validate the options and indicate the default number of days before the expiration date to receive the alert.

Don't forget to update and save.



Each time you associated tubes to a record, you can enter a minimum quantity of tubes and the expiration date of this/these tube(s). The number of days before the alert can be modified here too.



NEW! Now you can locate multiple empty storage places at the same time. (As shown in the screenshot above).

Alerts are disabled in the Alerts tab.



You can read more about KB: creating alerts for tubes.

4.3 Animals options

Use these fields to manage animal categories and statuses. You can also define animal storage locations.

Admin → Preferences → Animals Options

Please read our Knowledge Base on KB: how to manage animal crossings.

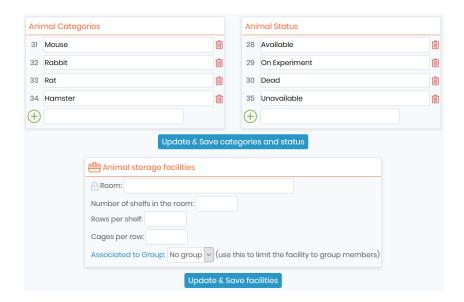
To create new Animal categories, status or storage facilities: enter information in the Add new box \oplus of the appropriate category and update.

Adding new animal options is limited to administrator users.

Existing options may be removed only if they do not appear in any records. Click the icon to remove the option.

Existing options may be renamed. To rename an existing option, click the desired box and edit the name. The change will take effect after clicking the *Update & Save categories and status or Update & Save facilities* button.

The change in option name will be applied to all existing records.



If you want to use the *Cages scheduler* in the Animal module, you have to define the room and shelves characteristics as described in the *Animal Storage Facilities* box. Just fill in the form.

4.4 Antibodies options

You can define some options in the Antibodies module. Navigate to:

Admin → Preferences → Antibodies Options

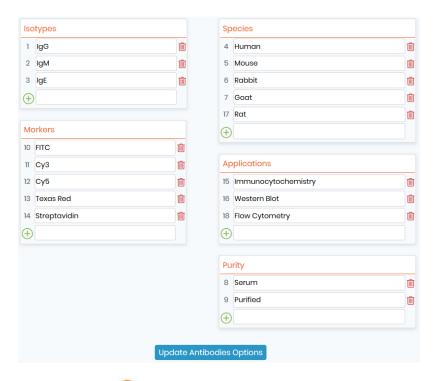
To create new isotypes, species, markers, applications or purity: enter information in the Add new box \oplus of the appropriate category and click update.

Adding new Antibodies options is limited to administrator users.

Existing options may be removed only if they do not appear in any records. Click the icon to remove the option.

Existing options may be renamed. To rename an existing option, click the desired box and edit the name. The change will take effect after clicking the *Update Antibodies Options* button.

The change in option name will be applied to all existing records.

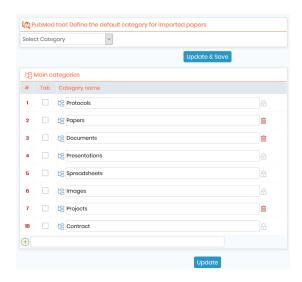


Please see our Knowledge Base on KB: how to start with antibody module.

4.5 Document categories

Use these fields to manage the categories of the documents that you will use in the documents module. This may be done by navigating to:

Admin → Preferences → Documents Categories

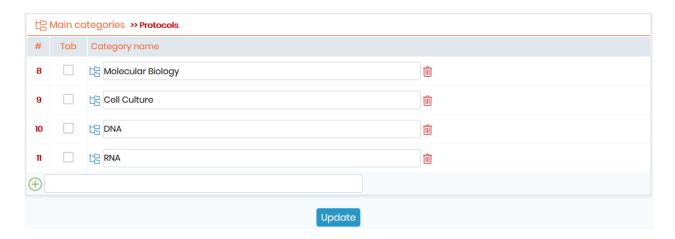


In this section, you can define the default category for imported papers via PubMed tools.

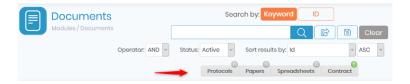
You can see our Knowledge Base on KB: how to start with Document module.

You can also add sub-categories by clicking on . This will bring up the options for the sub-category. Use Update to save changes.

Click on "Main categories" to return to the list of main categories.



If you check the box in the column *Tab*, this category will appear as a direct tab in the Documents module home page.

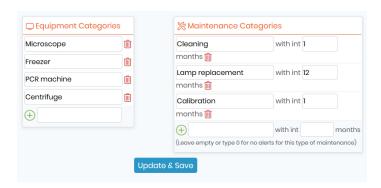


The tabs provide an ability to quickly find documents. The tab filters can be combined with the expandable search and filter options.

4.6 Equipment options

Use these fields to manage the equipment categories. Here you can define maintenance frequency to use maintenance alerts. (See section 4.2.3)

Admin → Preferences → Equipment Options



To enter new categories, enter information in the Add new box \oplus of the appropriate category and click update. Adding new options is limited to administrator users.

Existing options may be removed only if they do not appear in any records. Click the icon to remove an option.

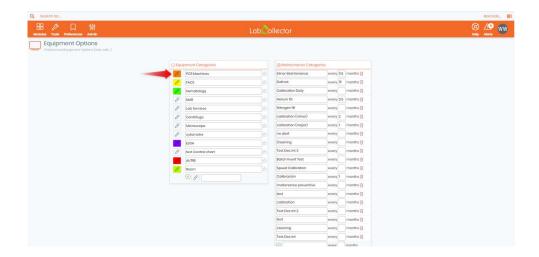
Existing options may be renamed. To rename an existing option, click the desired box and edit the name. The change will take effect after clicking the update button.

The change in option name will be applied to all existing records.

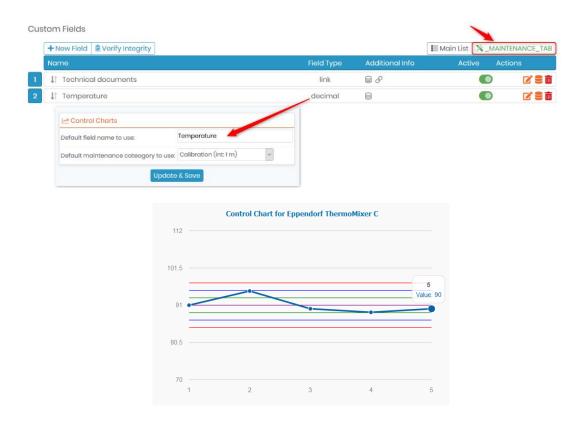


Leaving the interval empty will eliminate alerting for the category of maintenance.

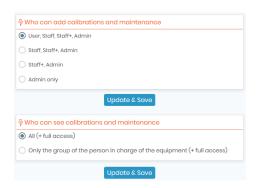
NEW!: You can now add a color for your equipment category, please note that the same color will be displayed in the equipment scheduler and also in the category field inside the module, only the super administrator is able to set choose and set a color. (See screenshot below).



You can also generate control charts in the maintenance tab based on the decimal custom field. Under *Admin* \rightarrow *Preferences* \rightarrow *Equipment Options*, choose this decimal field and the maintenance category for which you want a control chart. Then, on the maintenance tab in the Equipment module, once the maintenance's have been created and the decimal field fill in, click on Control Chart on the top right. Fill out the form and the control chart will be created.



The final settings boxes on this page specifies which user types can add calibrations and maintenance, and who can access and see theses entries in the Maintenance tab: All groups + Full access users (without a group) or only the group of the person in charge of the equipment + Full access users.



4.7 Export setup & models

Models can be created to export and print data from any module. Use these models to export or print your result search in each module. This allows you to quickly create exports for frequently required reports or information.

For more information, please read 3.1.7. Export and Print Setup & Models and read the Knowledge Base on KB: export models.

4.8 Lab Bookmarks

Use these fields to manage the lab's bookmarks and favorites categories.

LabCollector can be used to share a common set of Internet links and favorites with lab staff.

Note that Bookmarks are not the same as the links on the homepage.

First, you need to define categories in *Admin* → *Preferences* → *Bookmarks*.



Bookmarks are accessed on *Tools* \rightarrow *Lab Bookmarks* (see section \square chapter 10.10).

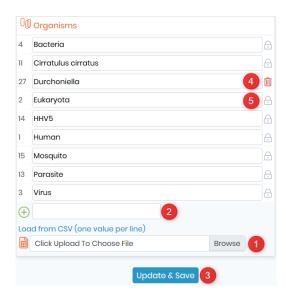
4.9 Organisms

Organisms are connected to the pre-built modules Strains & Cells and Samples.

You need to define a list of the organisms you work with. The list will help you to organize strains, samples and allow more efficient searches.

To use the organism preferences option:

- 1. Import your list of organisms from a CSV file containing one value per line.
- 2. Organisms will automatically be displayed in the module selection list. You can also add organisms one by one, just write the name in the box.
- 3. Then use the **Update & Save** button.
- 4. To delete an organism, use the bin icon.
- 5. This action is possible provided that the organism is not used in a record.



During record addition and record modification in the modules Samples and Strains & Cell, Staff+ users can also add organisms using the popup *Quick Add Organism*.

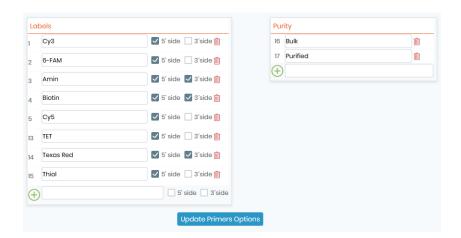
4.10 Primers options

Here you can manage options to be made available in the Primers module.

Admin → Preferences → Primers Options

To enter new labels or purity: enter information in the Add new box \oplus of the appropriate category and update. Adding New Primers options is limited to administrator users.

Existing options may be removed only if they do not appear in any records. Click the icon to remove the option.



Existing options may be renamed. To rename an existing option, click the desired box and edit the name. The change will take effect after clicking the *Update Primers Options* button.

The change in option name will be applied to all existing records.

4.11 Process & Actions type

Using this option you can add processes and action types to the record in the modules.

4.11.1 Add Process to one or a list of samples at once

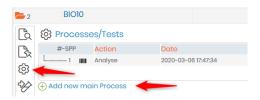
Use these fields to manage the process type definitions that you will use to categorize the process transformation of samples or storage action. These settings may be viewed and changed by navigating to:

Admin → Preferences → Process and Action Types



You can add sample process types and statuses that you will use on sample records. Similar to adjusting other preferences, fields may be edited by typing in the boxes and confirming by clicking the "Update & Save" button. Existing actions that are in use cannot be removed. You can also add a sub-process list by clicking on [15].

In the Samples module, go to Processes/Tests by clicking on the icon 🕲 in the left tab of your sample record.

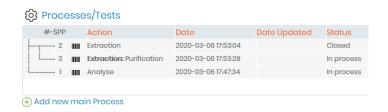


Then click on

Add New Main Process. Complete the form with the process details.



Processes will appear as a list.



You can also add up to 2 sub-process levels by clicking on the licon on each process line and a new storage location by clicking on This storage will be dedicated to the resulting products obtained with the process.

A report of the results for each process and sub-processes can be attached by clicking on \oplus . A file can be uploaded or you can use the text editor to write a new text document.

The file will be added to the Documents module. You must click Save to complete the addition of the document.

To display all sample processes, you can click on View list on the bottom right.

In LabCollector, you can add processes in bulk to a sample list. This functionality is very useful if you apply one process to samples and you need to update it quickly. For more information, please refer to Section 10.5.

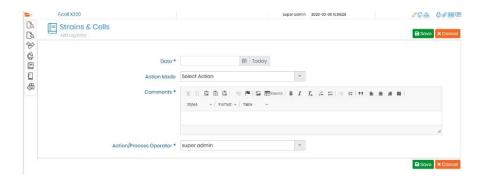
A Note

The default "Closed" status blocks the possibility to modify the process. In the same way, if the record is locked, the process panel is locked too.

4.11.2 Add activity log for storage actions

You can add storage activity log entries on *Strains & Cells*, *Samples* and any other module using storage. These storage logs are also automatically filled when you add, delete or move tubes/storage.

Click on the icon in the left tab of your record and Add New Log Entry.



You can add as many fields as you want in this log form under $Admin \rightarrow Data \rightarrow Custom fields$ in the Registry Book tab.



The history log will appear as a list. You can edit each line.



To display the complete activity log, you can use this button more ».

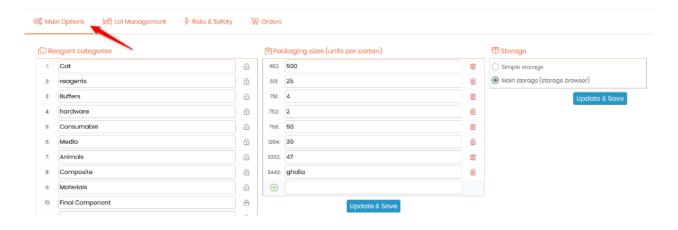
4.12 Reagents & Supplies preferences

Use this menu to define a list of reagents and/or supply categories that you will use in your lab and their packaging sizes.

Categories and packaging sizes will automatically be displayed in the module select list to create new records.

4.12.1 Main options

You can use the *Quick Add* function for adding new Categories or Packaging Units while creating a new Reagents & Supplies record.



A Note

When you create an order, the quantity ordered will be automatically multiplicate by the packaging size (if this one allows it).

See section 9.

Finally, through this section, administrators can define the storage mode between the simple storage or the use of the storage browser.

• The simple storage option corresponds to a simple list of locations that can be attributed to the reagent record. ONLY one storage can be assigned. This list is displayed under the storage options by going to Admin →Storage →Simple Reagent Storage

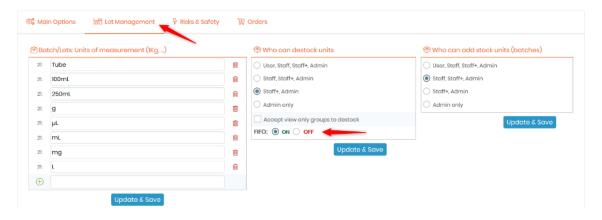
The main storage uses the general storage browser available in LabCollector. You have to create all the storage facilities needed.

The location is defined separately from the record, multiple locations are possible and other options too (e.g. alert).

More information in our Knowledge Base KB: manage storage for Reagent & Supplies module.

4.12.2 Lot management

In this section, administrators can generate a list of the units of measurement for the lots.



They can also define the stock management:

- Who can add stock units: select the level permission
- Who can destock units: select the level permission.

A Warning

If "Who can release lots" list is empty, everyone can release lot. Only admin level users can be added and archived users can not be added to the list

If you have groups with the option View Only on the module Reagent & Supplies, by checking the box, you allow the members of this group to destock. Finally, you can also activate the FIFO option (First In First out) for the destock action. In this case, if you don't destock the oldest lot in the list or the one with the first expiring date, this alert message will appear:

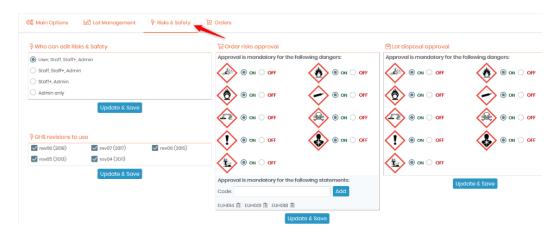


A Note

Alert on the minimal quantity for a product works only if the unit measurement for the lot is the one by default *unit*.

4.12.3 Risks and safety

The section Risks & Safety allows you to manage authorization and also actions link to risks.



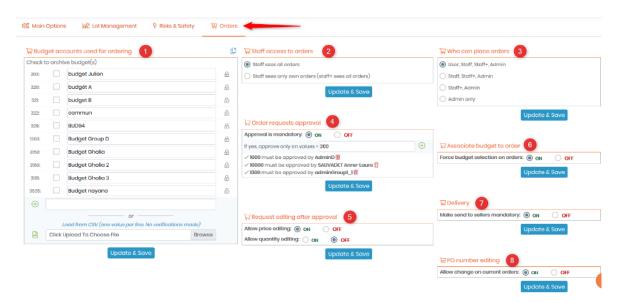
The administrators can:

- Select which level of permission can edit Risks & Safety
- Select which GHS revisions will be available in the lists of hazards statements, precautionary statements, and specific hazards statements.
- Order risks approval option. Select the risks and the statements for which you want approval by an administrator if the product ordered is concerned. For the statement, type the first code letters and click on add.
- Lot disposal approval option. When a lot is destroyed, administrators can request a mandatory approval link to the product risk.

New! Risk safety rev09 (2021) and rev10 (2023) are now supported!

4.12.4 Orders

This menu displays the option management needed to process orders.

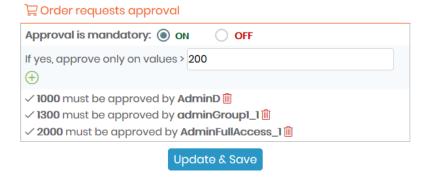


1. Budget accounts used for ordering

This section allows you to manage the budget accounts needed to process orders. Use this to define a list of your budget accounts that will automatically be displayed in the order list manager. To hide an account,

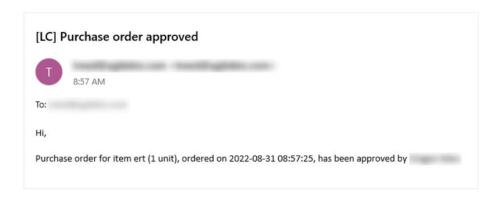
check the box to the left of the account and click on <u>Update & Save</u>. It will automatically be removed from the list. To view hidden budgets, click on the pages symbol on the top right corner. You can import all your budgets in a CSV (comma separated).

- 2. Staff access to orders, select the option of your choice.
- 3. Who can place orders, select the option of your choice.
- 4. **NEW!** Approval mandatory to order

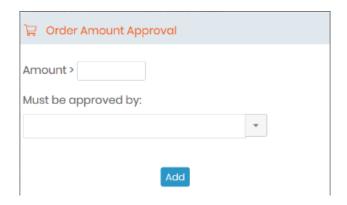


If you choose to enable this function, by default, all the orders, with a total more than the price indicates here, will need to be approved by an administrator. You can also add other approval options indicating a threshold value associated with a specific administrator.

NEW! Once a purchase order gets approved, a confirmation email will be sent to the requester using our LC default template. (As shown in the screenshot below).

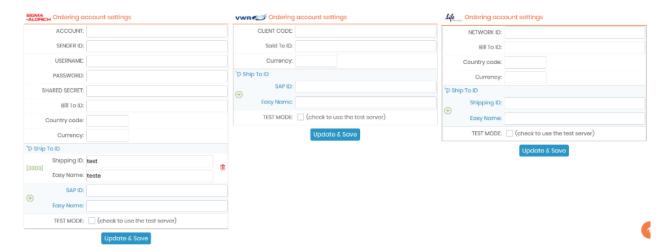


Click on \oplus to open the following popup. Don't forget to <u>Update & Save</u>.



- 5. Modification option after approval on the price and the quantity. Select the option of your choice.
- 6. Budget mandatory to order allows making budget selection mandatory during the ordering process.
- 7. **NEW!** "Send to sellers" mandatory option. If enabled, the purchase order management system will request the action "Send to sellers" before the delivery stage.
- 8. PO number modification on current orders. Select the option of your choice. The alternative PO can be used for other cases.

Through this menu, you can also manage account settings to automatically order from Sigma Aldrich, VWR, Life Technologies, Qiagen and Storage Accessories. These settings will be used to submit orders through the Purchase Orders Manager.



To obtain account settings please contact Life Technologies, Sigma Aldrich, Storage Accessories, VWR, Qiagen and/or your finance office.

For detailed information, refer to the Knowledge Base KB: <u>Reagent & Preferences-preferences</u> and KB: <u>Purchase Order Management</u>.

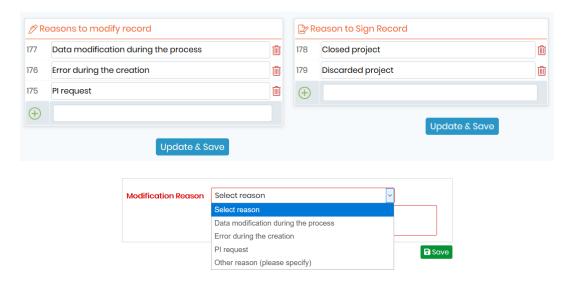
4.13 Reasons

If your lab purchased the compliance pack, the super-administrator can activate it in the modules of your

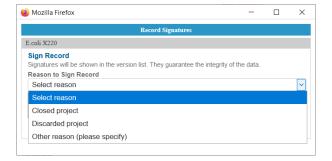
choice (please refer to the next QQ section 5.1).

Once activated, the versioning is available. Thus, for each modification of the record, the user has to indicate a reason to explain this modification.

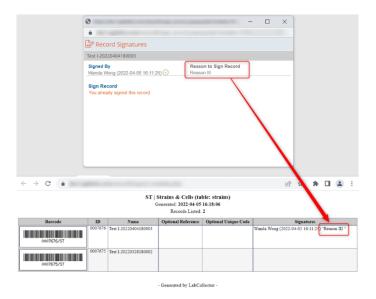
Default reasons can be recorded under *Admin* → *Preferences* → *Reasons*.



With this compliance pack, you can also lock and sign the records to comply with the CFR-21 and GxP standards. The user has to indicate a reason to explain why he signs.



NEW!: When you add a reason of signature on any record in any given module, it will appear when the record is printed and also when it's exported. (See screenshot below).

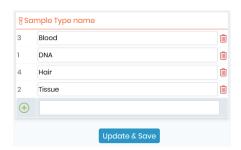


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4.14 Sample Types

Sample Types may be found by navigating to:

Admin \rightarrow Preferences \rightarrow Samples types



Use these fields to manage the sample type's definition that you will use to categorize sample records. To create a new sample type: type the name in the box to the right of the \oplus symbol and click on the <u>Update & Save</u> button. The addition of new sample types is limited to administrator users through this menu.

Existing sample types may be removed only if they do not appear in any records. Click the bin icon to remove the sample type.

Existing sample types may be renamed. To rename an existing sample type click the desired sample type and edit the name. The change will take effect after clicking the Update & Save button.

The change in sample type name will be applied to all existing records.

During record addition and record modification in the modules Samples, the super-administrator, administrators and Staff+ users can also add sample type using the popup *Quick Add Sample Type*.

4.15 Seller's management

To manage a seller's database system you can choose between two systems:

The first allows you to create an external seller address book database through Admin → Preferences
 → Sellers. Fill in the form "Add new" to add a new seller/brand. To update or delete some entries, click on the name to open the corresponding record.



If the address book module is used, you can switch the option by checking the box below.



The second allows you to manage the seller database using the Address book module. To do this, you need to identify a seller category through Admin → Preferences → Address Book Options. Check the box in Question 4.1.

🔭 Tips / Hints

It is recommended to use the Address Book module to manage seller contacts (used on reagents and equipment modules).

4.16 Microarray Options

In LabCollector $\stackrel{\frown}{\Box}$, you have the option to manage and configure your own microarray preferences.

Microarrays are powerful tools used in molecular biology research, enabling scientists to simultaneously analyze thousands of genes or proteins on a single chip. In this chapter, we will provide an in-depth guide on microarrays, their uses, and how to manage them in LabCollector.

• What are Microarrays?

Microarrays are small chips, usually made of glass or silicon, onto which thousands of nucleic acid or protein molecules can be immobilized in an organized manner. These chips can then be used to investigate the expression of genes or the presence of specific proteins, providing valuable information for researchers in various fields.

How are Microarrays used in Experiments?

Microarrays are commonly used in gene expression analysis, where researchers can analyze the activity of thousands of genes simultaneously to gain insights into how cells respond to different conditions or treatments. In addition, microarrays can also be used for genotyping, detecting mutations, and profiling protein expression. The results obtained from microarray experiments can help identify potential biomarkers for various diseases, improve drug discovery, and aid in the development of personalized medicine.

Managing Microarray Platforms in LabCollector

To access the Microarray Options section in LabCollector, simply go to *Preferences → Microarray Options*



Here, you can create new microarray platforms, delete existing ones, and even modify their name.

Creating a New Microarray Platform (±)

To create a new microarray platform, just enter a name for it, then click on the button.

To delete an existing microarray platform, locate the platform in the list and click the "trash bin" icon next to it . However, if the platform is currently in use, a lock icon will be displayed next to it , and you will not be able to delete it until it is no longer in use.



It is important to note that microarray platforms are a critical component of your experiments, so it is recommended that you use caution when making changes to this section. Always double-check that you are deleting the correct platform before clicking the corresponding button.

4.17 Storage Tooltip Fields

In LabCollector , the Storage Tooltip Fields section allows you to view and manage the custom fields that are displayed in the storage tooltip for each module. In this chapter, we will provide a detailed guide on how to access this section, view the custom fields for each module, and manage them accordingly.

To access the Storage Tooltip Fields section, navigate to *Preferences* → *Storage Tooltip Fields*. This will bring up a list of all the modules within your LabCollector instance.



Viewing Custom Fields for Each Module

To view the custom fields for a specific module, click on the module in the list. This will bring up a list of all the custom fields associated with that module. Each field is displayed with a checkbox, which allows you to select which fields should be displayed in the storage tooltip.

These custom fields can be set through the custom fields section, simply go to $Admin \rightarrow Custom \ Fields$, see chapter 5.4 for more details.

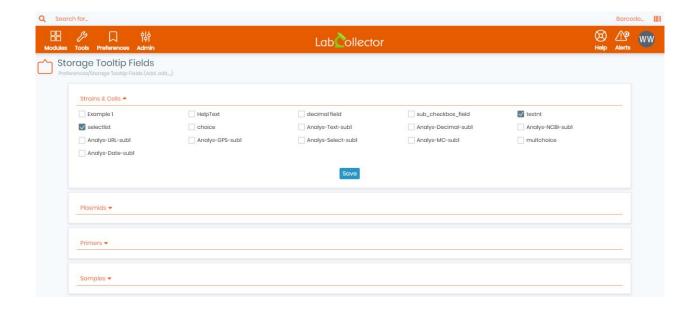
Managing Custom Fields in the Storage Tooltip

To manage the custom fields in the storage tooltip, simply check or uncheck the corresponding boxes for each field. Once you have made your changes, click Save to update the storage tooltip for that module.

It is important to note that some modules have default fields that are always displayed in the storage tooltip, and these cannot be removed. However, you can customize the order in which the fields are displayed by dragging and dropping them into the desired position.

Customizing Fields for Custom Modules

If you have created a custom module in LabCollector, you can also customize the fields that are displayed in the storage tooltip for that module. Simply click on the custom module in the list and then select the custom fields you want to display in the storage tooltip.



5. Customization

All modules are ready to use with a predefined data structure (fields) adapted to the expected content. Nevertheless, you may need some extra fields or numbering options for your lab-specific information. LabCollector allows you to create unlimited extra fields in each module to personalize your data forms by easily adding custom fields and by editing the default fields.

5.1 Record preferences (custom ID numbering/barcodes)

In some cases, your lab may need a specific incremental numbering scheme for records identification. All modules (except Address Book) can support the customization of the internal reference field.

Only super-administrator can access record preferences.

Go to: Admin → other → Record Options.



A Warning

This customization is very sensitive. Use it with care and only if you understand the effect it will have. We have added some features to reduce the risk of confusing automatic naming schemes.



Below, the record preferences are listed:

ID SETTING:

Note that the ID is used by default as the LabCollector generated barcode. The use of the Optional Unique Code as a barcode is also possible.

The option is fully automatic by default; it means that numbering is automatic and incremental starting from 0.

You can define it as semi-automatic, the numbering will be automatic but can be changed manually at each record entry. Only administrators, however, will be able to alter this field.

- Usages: You can set a new incremental start, such as to include the year, enter data with passed
 IDs not filled, etc.
- RISKS: auto-incremental uses the last and largest value already entered. Therefore, the major risk is to have records always being numbered after an incorrect starting ID.

ZEROFILL:

This option formats record ID with zeros filling non-used digits, e.g. 15 would be written as 000015 for a 6-sized field.

• FIELD SIZE:

You can determine the incremental capacity of the ID field. Used in conjunction with ZeroFill, it can give numbering like 060001 (size 6 and ZeroFill and manual start set to 60001).

Force waiting:

With this option, each record entered in LabCollector will be registered in a waiting list for verification and validation. This option is applied to ALL user levels. For more information, please read the section 7.1.1.

• Block Duplicates:

Record NAME duplication will be blocked. This option works on Add/Edit forms and import data.

Compliance (see next —section 5.2)

• Automatic naming:

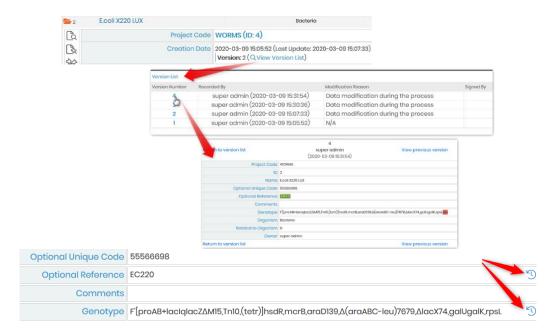
With this option, you can choose to increment the record name (YES - name will be equal to the ID) or add a prefix or a suffix to this number which will then be automatically used in name records.

5.2 The compliance pack

The compliance pack contains 6 items that are explained below.

Versioning of each record. Versioning keeps track of all changes saved to the record. Changes are also
tracked in the audit trail, however, versioning provides a simple method to quickly access information on
a record-by-record basis.

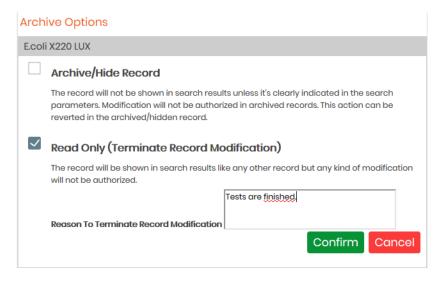
See the Knowledge Base KB: how to do versioning for more information.



2. Read-only or blocked record. Data are frozen: no modification is possible except for storage.

See KB: <u>how should I archive or delete records</u> for more information. The reason to lock the record is listed in the audit trail.

To lock a record click on the icon on the right of a record's line and check on Read Only. To confirm, you need to indicate the reason for the lock.



Once a record is locked, these icon appears to unlock the record and sign it. Only the duplication and the print of the record can be done.





A locked record can be unlocked ONLY by the super-administrator.

3. Electronic signature on blocked records to guarantee the integrity of the data. Signatures are shown in the version list and the audit trail.



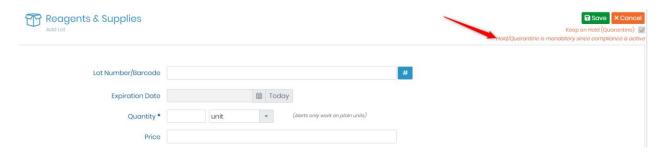
- 4. For each modification, the user must give a reason to edit and a reason to sign. These reasons will be visible in the versioning and audit trail. Please see Q section 4.13.
- 5. Data in a custom field type text, decimal number, URL link or GPS coordinates can be read-only in the database. Once this option is selected, a value in this field cannot be added when you select Add New Record or modified when you select Edit Record. Value can only be added or changed via an API, a balance's input, a barcode reader...
- 6. Data in a custom field type text can be encrypted in the database and is only visible in the UI. Search filters and searchable options are not possible in this case.

Compliance Pack for Reagents & Supplier Lots

1- There is a option in Preferences > R&S > Lot management, to activate or deactivate the mandatory quarantine for lots. When the compliance pack is disabled for R&S, this option will stay grey.



2-When R&S compliance is active, new lots are automatically put on hold.



5.3 Defaut fields

Default fields are editable and some options are available to set up the form record. Go to *Admin →Data → Default fields*.

5.3.1 General options

You can activate and deactivate these options using the switch button on the right. Note that there is some variation in the pre-built options depending on the selected module.

Retrieve all this information in KB: how can I use default fields.

General Options	
1 Project Code	•
	Multiple Project Codes per record
	Project Code is a mandatory field on module form
	Show Project Code in module summary line
2 Multiple Insertion	•
Reagents & Supplies Automatic Link	•
4 Genotype Tag System	•
5 Multiple Owners	•
	Super Administrator Administrator Staff Plus Staff
	Allow sharing between groups
6 Tube Count In Summary Line	•

Project code. This option allows you to have the project code field in the form to use the Project Code tools. The dedicated project code management page is available in *Tools → Manage Project Codes*. For more information, refer to Usection 10.6.

Project codes will associate your data with a project. It's an auto-complete field but if the value is not in the Project Codes list, you may write it in and it will be automatically created. You can set up this option to be mandatory, to attribute multiple project code to the same record, and to display the project code in the summary line.

NEW!: Now records can have multiple project codes.

- 2. Multiple insertion. With this option, you can replicate x times the same record in your database. Records with the same *Name* values but different IDs will be created.
- 3. Reagent & supplies automatic link. Creating this link allows you to order directly from modules other than Reagent & Supplies.
- 4. Genotype tag system (only available in Animals and Strain & Cells module).

When you activate this function, the Genotype field is not a text field but allows you to deal with tags. Tags are automatically created when you copy/paste the genotype. The tag separators are comma and space. Spaces and commas <u>cannot</u> be part of the genotype name. The genotype tags accept most of the special characters and punctuation marks. Through $TOOLS \rightarrow Manage genotype tags$, you can find an admin area. More information can be found \square section 10.7.

5. Multiple owners. This function is useful when you are using group policies or strict level permission. First, the super-administrator or the administrators have to define in general option default fields (see above)

who are the people who can add secondary owners: super-administrator only, administrator, staff + or staff, just by checking the corresponding box(es). Then, when the owner of the record fills in the form, he can add secondary owners. The secondary owners have the same rights to view, edit, and use the record as the main owner.

With the option "Allow sharing between groups", the list of secondary owners will indicate staff from other groups.

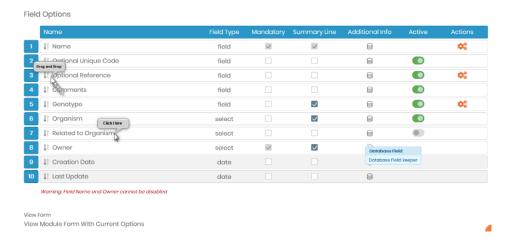
6. Tube count in the summary line. As soon as a module is associated with the storage system and if the record is linked to tubes, with this option, the number of tubes can be displayed in the summary line.



- 7. Sequence info (only available in Primers module). The sequence info will be displayed as a field. The sequence entered will be available to other tools for visualization and analysis within LabCollector including a calculation of Length, Tm, and %GC.
- 8. Replicate sample. (only available in Samples module). When you activate this function, you can create a record model. When you create a new record, you can use one of your saved models available in the select list. Choose one and the form is automatically filled in with the same model values. A link between the record model and the new record will be created.

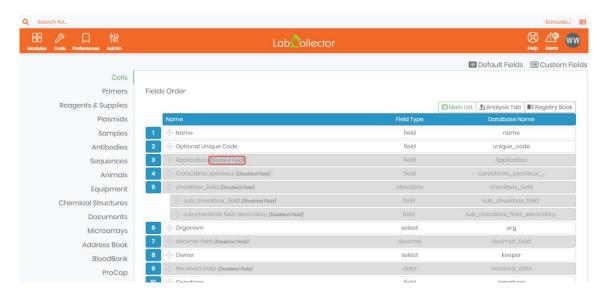
5.3.2 Field options

In this part, you have access to the default field structure:

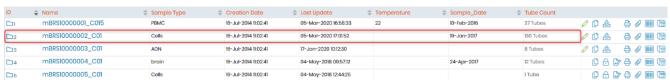


- You can choose to activate or deactivate fields using the switch green button on the right (name and owner cannot be disabled). Note that these fields cannot be completely removed; only hidden by deactivate.
- Fields can be reordered by drag and drop.
- By going to Admin → Fields Order, all the disabled fields will appear to be Grey with the mention
 "Disabled Field" next to their name, contrary to enabled ones which are colored in white (as shown in the

screenshot below):

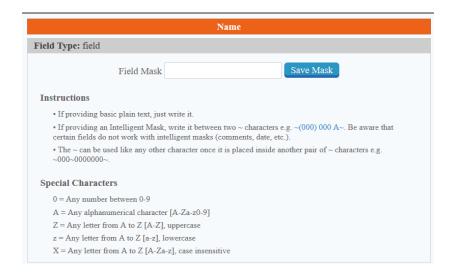


- You can edit the field name by clicking on the text.
- Fields can be mandatory. Select the *Mandatory* box to activate the feature.
- If you want to see the values of the field in the summary line, select the Summary Line box.



The summary line for record 2 is highlighted in red.

- Field types and database names are also visible here.
- For some text fields, the orange icon allows you to activate an input mask.





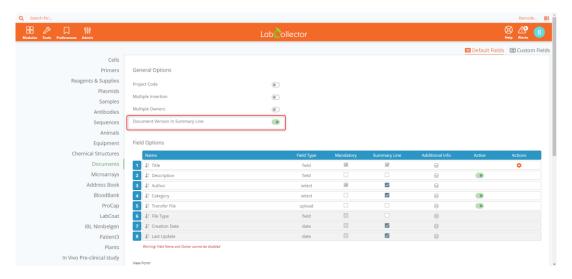
The Owner field in the Reagent & Supplies module can be activated/deactivated (Owner field exists in Reagents & Supplies since version 5.423).

At any time, you can see the form with your current options by following the link on the bottom part. All the functions are saved automatically.



Selecting a field as mandatory will apply to all situations when records are created, imported, or modified.

NEW! You now have the ability to add the document version within the summary line inside the documents module (when compliance is active).

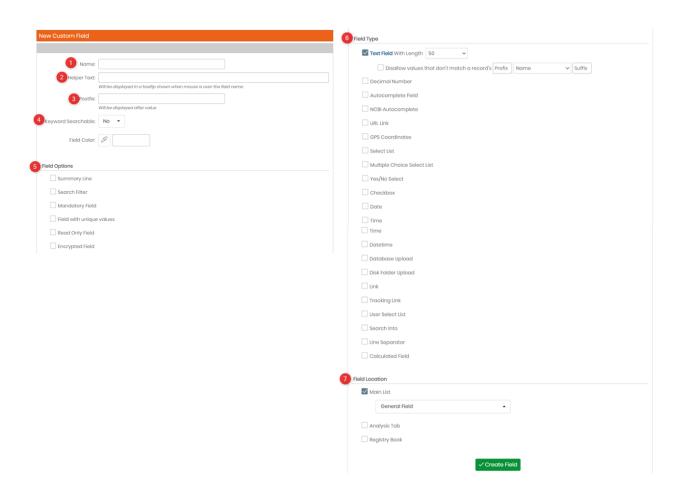


5.4 Custom fields

LabCollector enables you to add custom fields to all modules in a very easy way.

Go to Admin → Data → Custom Fields.

- 1. Select the module where you want to add or edit custom fields in the list to the left.
- 2. If possible (module dependent), choose if you want a custom field in the main form or the Analysis tab (see <u>Section 5.3.2</u>)/Maintenance tab (Equipment)/Risk tab and Lots tab (Reagent & Supplies)/Registry book tab (in all modules with storage option).
- 3. Click + New Field to create a new custom field.



When you add a new custom field, a form opens:

- 1. Specify the field name.
- 2. You can add helper text which is visible in modification mode (appears when hovering the mouse on the field and below the field name). For example, see below image:



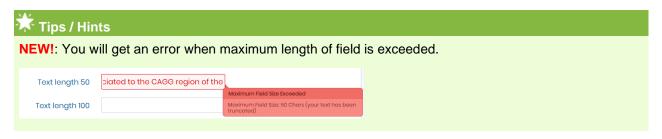
3. You can add post-fix text as units visible in modification/view mode and on export and print reports. For example, see below image:



- 4. Keyword Searchable allows you to be able to search the field name. You can also change the color of the field using "Field Color".
- 5. Choose the custom field type. You can also see the Knowledge Base on KB: different custom field types.

6. Choose the category of your fields if needed. For more information, please refer to the chapter below. You can also define here the location of the field (Analysis tab or Registry book tab). See

■ section 5.4.1 and ■ section 5.4.2



^{*} If you want to include the field value in the Module Summary line. The following field types can be selected for the Module Summary Line: Textbox, checkbox, drop down select lists, and date types.

7. Field location helps you set the location of the field. You can set it in the main list or analysis or registry book.

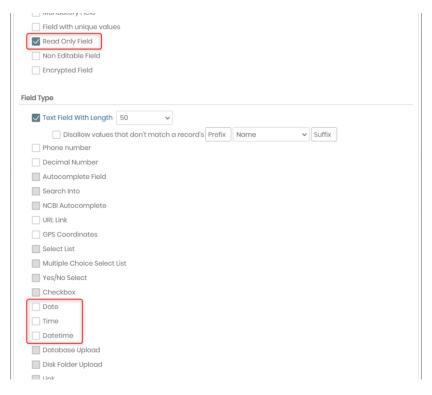
To have all the information on custom fields, please refer to KB: how to create custom field.

If you encounter an issue after creating/deleting or editing the name of a custom field (e.g. the module doesn't work anymore), you can check the field's integrity with the link of the same name. Use with caution. This action cannot be undone.

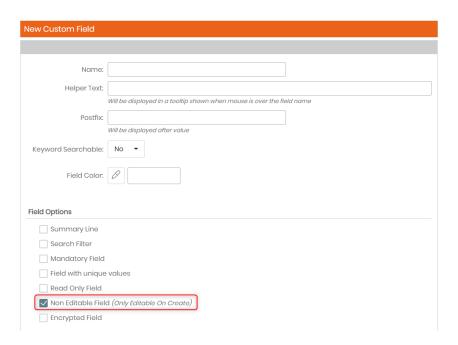


NEW!: The three following fields now support Read Only attribute: Date, Time and Datetime. (See screenshot below).

1. LabCollector

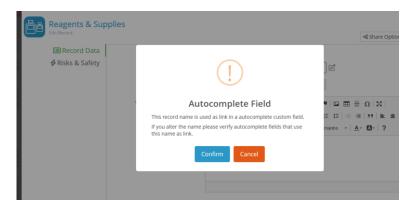


NEW!: There's now a new field option that you can select, which allows you to have a non editable field that only allows modification upon creation.



A Note

When activating the name modification (which is disabled by default) in the module form, it will now display a warning if the name is currently used in an auto-complete custom field. (See screenshot below).



NEW!: Calculated fields can now be rebuilt within admin area, just go to *Admin -> Custom fields* and click on the gear icon click on Rebuild Formula (as shown in the screenshot below).



5.4.1 Custom fields group

Fields can be grouped into specific categories. This helps to organize custom fields for specific usage for different types of records.

- 1. First, create a custom field in a module. Choose "Select List" as field type and check "FIELD CATEGORY". Validate the field modification.
- Edit the values list that will represent the categories (⁴⁴).



Default values can be configured. To define a default value, just select it by clicking in the left square.

CSV/text file of pre-selected values can also be imported.

IDs of each value are on the left if you need it in some function to import data.

Once the fields are created, each new field can be assigned to a general category or to a specific category that you have defined.



Common fields to all categories can still be edited. To do this, just leave the GROUP Field choice as "General Field".

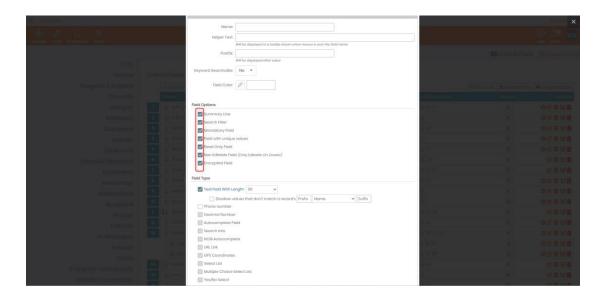
You can create 3 levels: parent field, sub-field, and sub-sub-field.



For more details, refer to the KB: custom field category option.

Note

Please note that you also have the possibility to select multiple field options for your custom fields (see screenshot below).



5.4.2 Analysis tab group

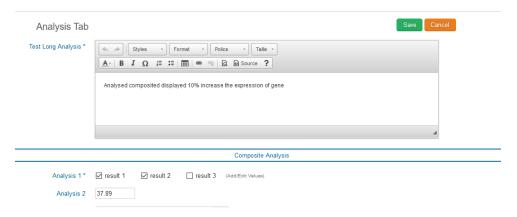
This option allows you to create a specific data form separated from the main record form. You can use it to save secondary data like analysis results. If you want to use the analysis tab, you have to define custom fields and save them under the analysis tab option (microscope icon).

Custom fields are presented in the module by creation order. All fields can receive preset values (field masks).

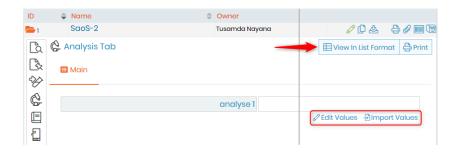
Read more in our KB: about tab analysis option.

You can use text, select list, checkbox, and decimal custom field types to create an analysis tab according to your needs.

- 1. Create a custom field as a line separator and check the analysis tab option. It will be used as a tab title separator in the analysis tab.
- 2. Define custom fields in the analysis tab.
- 3. Add/edit or import values in the *Analysis tab* by clicking on ...



4. Click on tab icons View in TAB format or View in List format on the right to toggle between viewing analysis as tabs or the complete list. Tabs correspond to the line separator. The tab automatically titled 'Main' covers everything appearing before the first separator.



A Warning

- If you delete a field, all data stored in that field will be lost! There is a warning before confirming the field deletion.
- When editing a field, if you reduce its size, longer data will be truncated.
- Changing an existing field length or type can cause a loss of data or format data in the field such that the original meaning is lost.
- Some field names can induce MySQL errors. If this occurs use another name.
- The analysis tab can be used by some LabCollector add-on modules.

5.5 Custom modules design

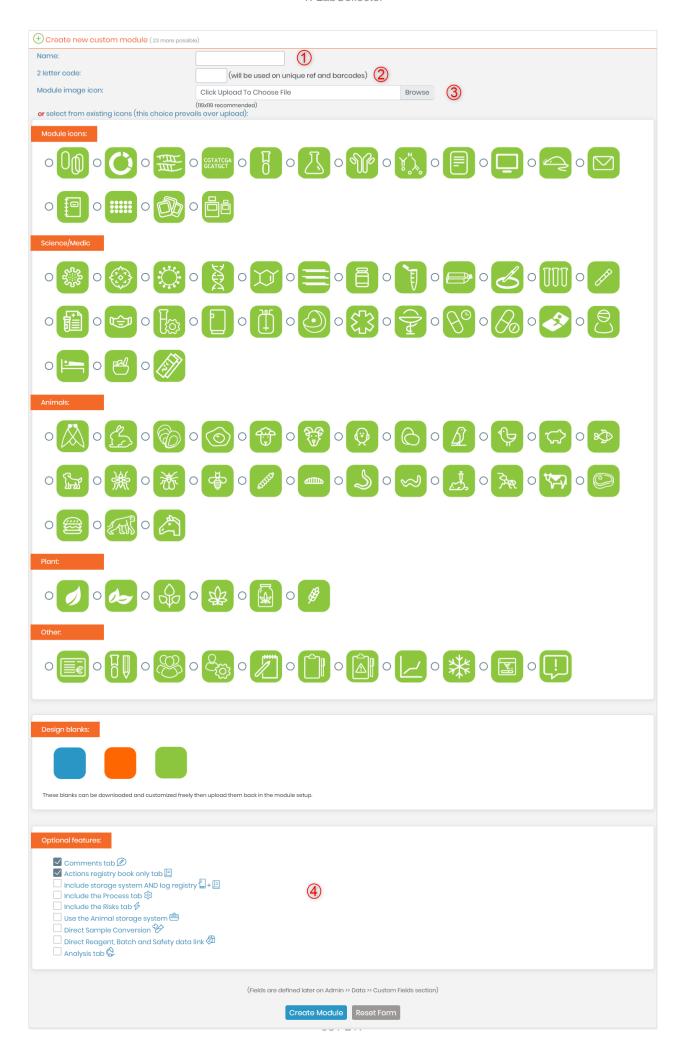
LabCollector integrates predefined modules to store specific types of data. Real situations are endless and therefore LabCollector includes the possibility to create and design custom modules.

Note

This option requires a valid license that covers this optional feature. For version 5.21 onward in a full license, if you hide a default module under $ADMIN \square Setup \square General settings$, logo, modules names, it is replaced by a custom module within the limit of 13 modules.

A module editor is located in $Admin \rightarrow Data \rightarrow Custom modules$. It is accessible to the Super-Administrator and Administrators. Once inside, you will get the following interface:

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- 1. Give a name to your module.
- 2. Define a two-letter code (for the record identification).

3. Select an icon:

- Upload an icon of your choice, note that the size 119x119 is recommended.
- Choose from a variety of predefined green background icons.
- Use the design blanks (blue, orange or green) to create your own icon (right click and save). Add text/graphics etc. to the blank using any application. Save the final icon as an image, then upload it.

4. You also have 9 optional features:

- Comments tab: for each record, you can add some comments. A comment field is displayed in a tab.
- Action registry book tab: for each data, you can add activity log (not link to the storage system).
- Include storage system and log registry: your samples can be added in the storage system.
- Use the animal storage system: your data can be linked with the animal storage.
- *Direct sample conversion*: From an initial data record, you can create a derived sample as a new data record in the *Samples* module.
- Direct reagent, batch and safety data link: your data will be associated to the Reagents and Supplies module record for ordering purposes.
- Analysis tab: for each type of data, you can add analysis fields in a specific tab. More details on the KB <u>Custom fields-tab analysis</u> section Analysis Tab.
- *Include the process tab*: for each record, display processes/tests.
- Include the risks tab: once this box is ticked, the custom module you are creating would be able to import and display risks & safety data for each record. (As shown in the screenshot below).



Check more details in the KB: creating a custom module.

6. Storage System Management

Labs have a lot of reagents, samples, antibodies and various other supplies that they always store in a relevant environment and in stocks. Some chemicals need a particular temperature and some supplies need to be maintained in a particular stock.

For this purpose LabCollector offers you to create a storage system management.

6.1 Configure the storage system

LabCollector comes with an empty storage system. You need to configure it to reflect your lab facilities, equipment, and organization.

Go to Admin → Storage → Manage Storage

Here you can create boxes, list and manage existing boxes, define new locations and facilities, and temperature options.



You can also read our KB: on how to configure storage in LabCollector.

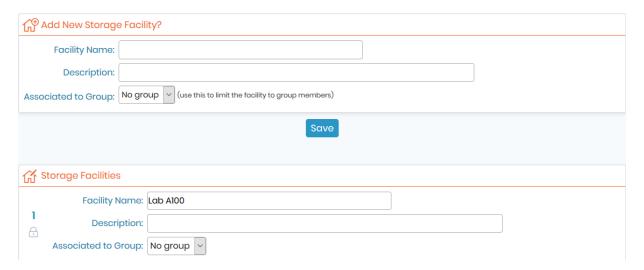
6.1.1 Defining facilities and locations

Facilities can be, for example, places where you keep your storage items. Labs can have rooms where they store their items.

For example, let's say the storage room for a lab is ROOM_Lab01 and it is a room where you store your sample like biology cell/bacterial/tissue/chemical/soil/etc samples.

The first level is created and edited from the Admin menu. If no location is defined, all storage places are referred to as under "No location assigned" or "Main location".

Go to Admin \rightarrow Storage \rightarrow Manage Storage \rightarrow Facilities



Here you can add new main locations or edit existing places. Give a short name for the location and a description.

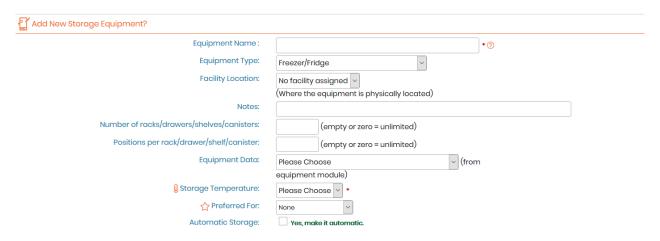
The storage facility may also be associated with a group to limit access (see Groups definitions in $\frac{3.2.2}{1.000}$).

6.1.2 Creating storage equipment

LabCollector allows you to create racks, drawers, shelves and canisters.



To create equipment go to Admin → Storage → Manage Storage → Storage Equipment

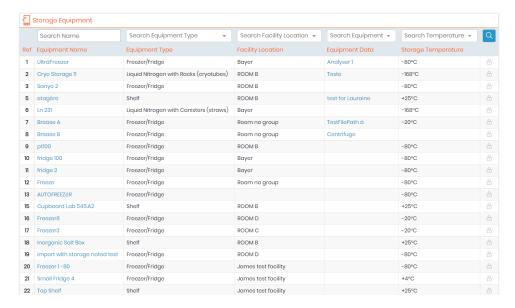


Complete the form. If you want to manage the available rack space and box positions on racks, you'll have to indicate this information.

You can link to an equipment record from the Equipment's module to manage maintenance.

You can also select a module to have this equipment as the storage location by default. If you select the option for *Automatic storage*, the position in the box will be given automatically following the option defined in the storage system (see \square section 6.1.4 to define storage system options.).

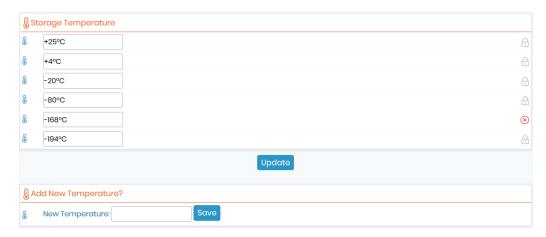
Then click on *Save*. The new equipment will immediately be available on the storage equipment list. (See screenshot below).



6.1.3 Defining temperatures

You can define temperatures through:

Admin → Storage → Manage Storage → Temperatures



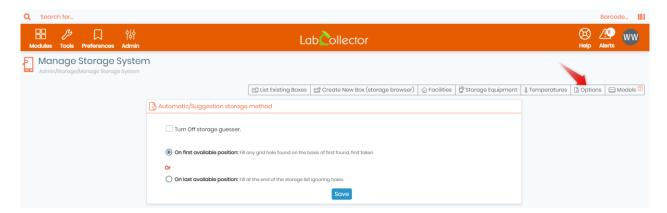
Temperatures are going to be used for managing your storage equipment. Some of them are predefined and locked.



This temperature definition is meant as the ideal temperature.

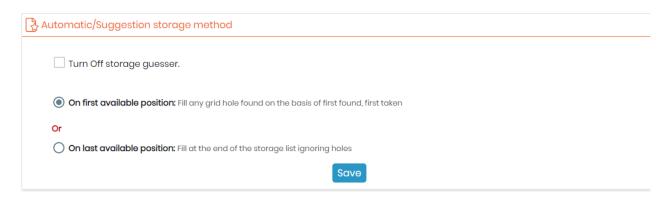
6.1.4 Define storage system options

Through this menu, you can define multiple storage system options, such as: storage method, replication storage method, tube cap colors, straw colors, plus the option to disable aliquot barcode display. To access it, go to $Admin \rightarrow Storage \rightarrow Manage Storage \rightarrow Options$. (as shown in the screenshot below).



 <u>Automatic/Suggestion storage method:</u> The storage guesser feature allows you to optimize your storage usage by automatically filling any empty spaces (or "holes") in your storage grid. You can choose to turn this feature ON or OFF depending on your preferences.

Additionally, you have the option to select the "first available position" or "last available position" filling method. The "first available position" method will fill any holes in the storage grid in the order in which they are found. The "last available position" method, on the other hand, will fill holes at the end of the storage list, ignoring any empty spaces that may be present elsewhere in the grid. The choice of filling method will affect the way the storage guesser organizes your items and may impact the overall efficiency of your storage system. (As shown in the screenshot below).

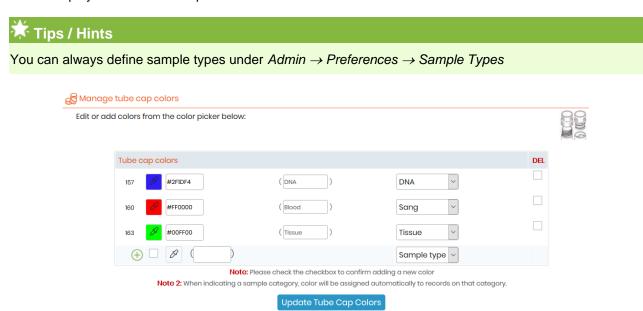


Replication storage mangement method: here you can control the relationship between master samples and replica samples in your storage system. Please note that by default, all actions performed on the master sample will automatically be applied to all replica samples. This means that if you move, delete, or update the master sample, the same changes will be made to all replicas. This is useful for keeping your samples organized and ensuring consistency across all replicas.

On the other hand, "Replica samples independent to master sample" means that replica samples will only be linked to the master sample based on the first storage. This means that any further actions or modifications made to the master sample will not be automatically applied to replicas. This option might be useful if you want to have more control over the replica samples, and make changes to them without affecting the master sample. However, it may lead to discrepancies or inconsistencies between the master and replica samples over time. It's up to you to decide which one fits your use case best.

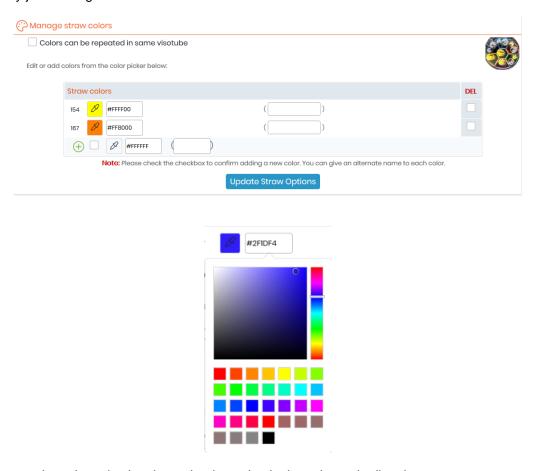
Pefault: Replica samples always linked to master sample (all actions done on master storage always applies to all replicas) Or Replica samples independent to master sample (first storage link only)

Manage tube cap colors: this feature allows you to easily identify and organize your samples by
associating different tube cap colors for specific sample types. This feature will be displayed on the box
maps, making it easy for you to quickly locate and identify your samples. For example, red for blood
samples and blue for DNA samples (as shown in the screenshot below). tube cap color collection will
be displayed on the box maps.



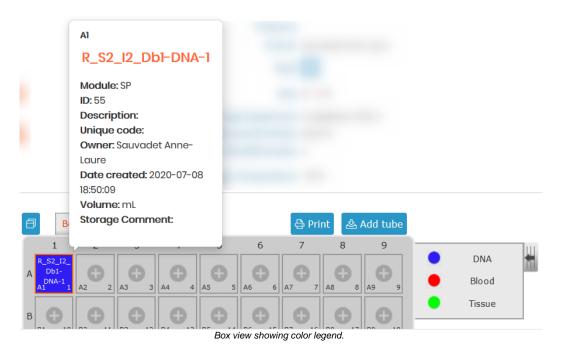
• Manage straw colors: this feature allows you to customize and organize your straws by selecting your

preferred color (which can be done from a predefined color palette) and setting rules for color usage. Additionally, you can decide whether colors can be repeated in the same visotube or not. This means you can choose to have multiple straws of the same color in the same visotube. This can be useful for keeping track of multiple samples that are stored together, so you can easily differentiate between them by just looking at the color of the straws.



The colors can be selected using the tool or by typing in the color code directly.

The text within the parentheses will be displayed on the expandable legend tab of the box view and list view (as shown below).





List view showing legend.

• NEW! Display Aliquot Barcode: here you have the option to disable aliquot barcode display (which is located to the right of the record's name inside the module).



6.1.5 Box models

Box or plate models can be created and use when a box is added to the storage browser. Just fill in the form clicking on *Add model*. Models can also be created directly from the box creation form.

Please check our KB: how to create box models for storage.



6.1.6 Creating boxes & Racks

You can create new boxes through

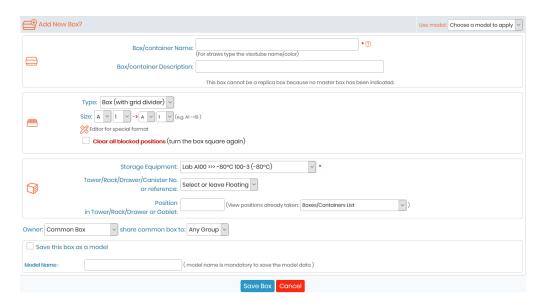
Admin \rightarrow Storage \rightarrow Manage Storage \rightarrow Create New Box or Tools \rightarrow Storage Browser The window is displayed in the Storage Browser & Manager.



Choose the equipment where a new box is required. The same form may be used to create a box and a new rack/drawer at the same time.

- 1. Add new drawer/rack in... Indicate a rack name and add.
- 2. Add new drawer + a new box in...

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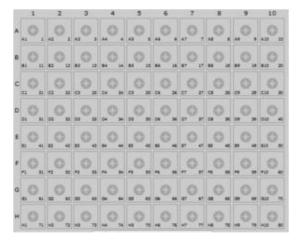


Choose the box name and add a description.

Then choose the box type (Box with grid divider, Box with no grid, microplate or tube tray, visotube for straws, bag/container, and shelf part) and size:



• Box with grid divider:



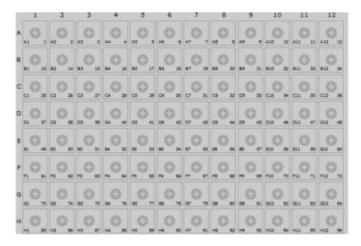
Box with no grid



Bag/Container



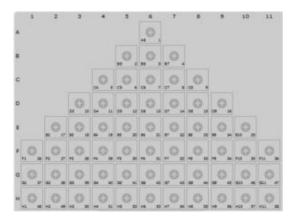
Microplate or tube tray



Position	Content
#1	Mouse ALS256/euk5
#2	lignee A1245 45478 45478
#3	CC13 NKY330 27/7 A

Special format:

If a special format is needed click on the % icon to lockbox positions by point & click (see the example image below).



You can also change storage equipment if you want to create a new box in another place. Select a rack and the position where the new box will be created.

⚠ Note

The new rack will be created along with the new box. If the rack already exists, it will be automatically filled on the form. If you leave the rack field empty, the box will be assumed to be floating.

A Note

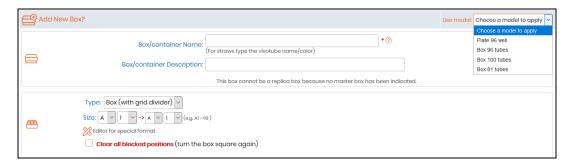
You can easily move boxes (multi-select mode) between racks by dragging and dropping them in the Lab Storage Tree. It is also possible to use the edit box to change the location.

Finally, if you want to save this box as a model, choose the option and give the box a name, then click on the save box as a model. Next time a new box needs to be created, you have the option to choose any of the models you have created.

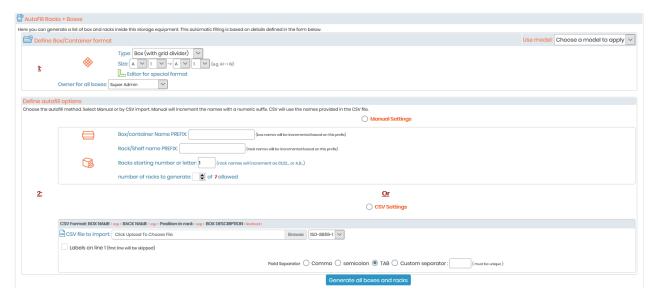


Note that several common box models are preloaded.

Saved models are displayed in *Admin* \rightarrow *Storage* \rightarrow *Manage Storage* \rightarrow *Models* and can be edited or deleted through this menu.



You can also generate a list of boxes and racks inside a piece of storage equipment by choosing *Auto-fill* . This automatic filling is based on details in the form below.



First, you need to define your box/container format (you can apply a model). Then, choose the auto-fill method according to your needs.

- Manual settings will increment the names based on a prefix.
- CSV will use the names provided in your file.

A Warning

If you create a bow with a name already in use, you will have a warning popup saying: *Box name already taken*. In this popup you will have two options to cancel or to replicate the name. If you chose to replicate you will have another popup to confirm the replication.

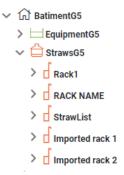
New! Now is possible to add the expiration date and minimum quantity options in the replicate box tool.

6.1.7 Creating visotubes for straws

Go to Tools → Storage Browser.

- 1. Choose the equipment where you want to create visotubes.
- 2. Click on Add new drawer with new box. The same form may be used to create a box (visotube) and a new drawer (canister) at the same time.
- 3. Indicate a box name (for straws: indicate the visotube name and color) and description.
- 4. Choose a box type: Visotube for straws and define the number of straws allowed (required).

- 5. Canister: select Add in new rack or existing rack and define a rack name.
- 6. Define a position in goblet.
- 7. You can also save this box as a model, then save.



Before adding straws in the visotube, you have to define color options through: $Admin \rightarrow Storage \rightarrow Manage storage \rightarrow Options$

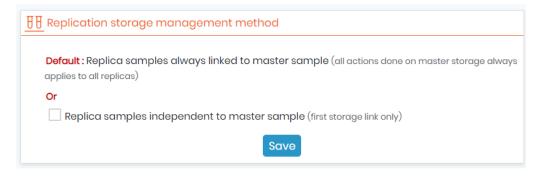
NEW!: The storage now displays total stock of Straws



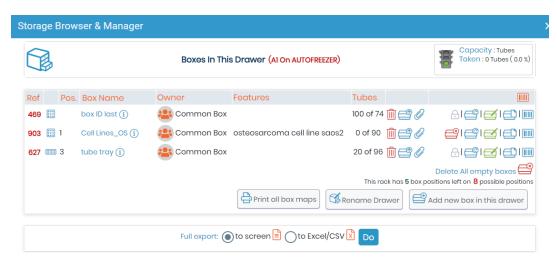
6.1.8 Replicating box structures

To speed up the box definition process, complete box structures can be replicated automatically. At first, you need to define replicating box options through

Admin → Storage → Manage storage → Options



To replicate a box, you need first to display the box list in a given rack and then click on the replication icon



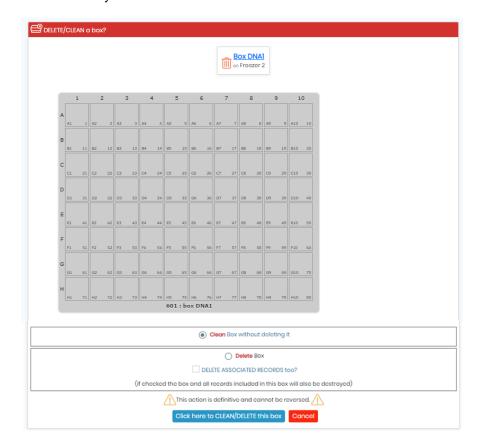
All settings from the original box will be predefined including the special grid format. You just need to give a new name and rack location. Whole box content can also be replicated as secondary storage using the icon . When clicking the replicate box icon you will be given a prompt to define some details about the name and storage information.

You can also export the storage to screen (in a new tab) or to excel/CSV(download the file).

6.1.9 Delete or clean a box

You have 2 options:-

- 1. The icon gives you option to:
 - Clean the box from associated records BUT without deleting the box or the records
 - Delete the box only + Delete the box with associated records



A Warning

This action is definitive and cannot be reversed.

2. The icon gives you option to delete the box on empty box definition.



A Warning

This action is definitive and cannot be reversed.

6.1.10 Manage storage for Reagents & Supplies module

To manage storage for this module, you have two options:

- · Simple storage: these will be single locations without any sub-locations; and
- Main storage: to define in Admin → Storage → Manage storage.

For more details, refer to KB: manage storage for reagent & supplies module.

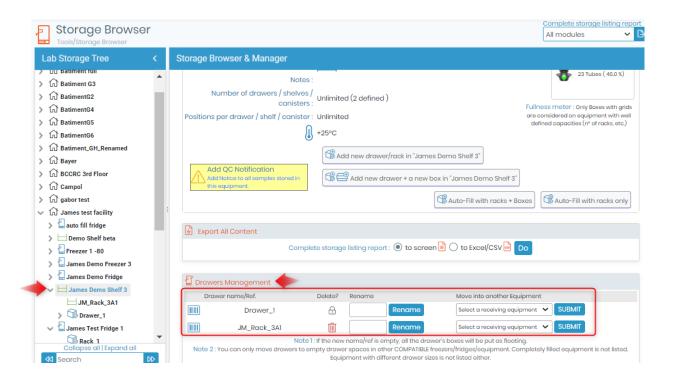
6.2 Managing storage equipment contents

At the equipment level, in *Tools* → *Storage browser*, it is possible to perform a variety of actions.

Move drawers:

When drawers must be transferred to other equipment (in the case of equipment changes, failure, reorganization, etc.) you can manage it by selecting the target equipment in the drop-down list. Only compatible equipment will be listed.

You may need to create the new equipment prior to transfer. All drawer contents will be transferred. The drawers list is displayed for each piece of equipment. You can rename or delete them if needed.





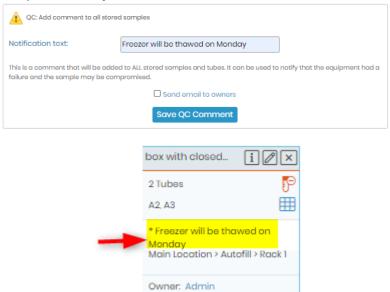
You can also easily move racks/drawers (multiselect mode) between equipment by dragging and dropping them in the Lab Storage Tree, and move equipment to one facility to another.

Add notification to all samples stored in this equipment:

Add QC Notification

By clicking on this link you can notify all samples stored in this equipment with specific information. For example, you can use this function to make a note that the storage equipment has failed, so samples stored in this equipment could be damaged.

The notification will appear on each sample record stored in this equipment. There is an option to have an email sent to the owner/operator of any items stored in the location.



⚠ Note

The notification field is limited to 150 characters. Notifications are saved unless field is full.

New! Now you can sort the storage tree as you want by drag and drop items at any level!

7. Entering & Managing data

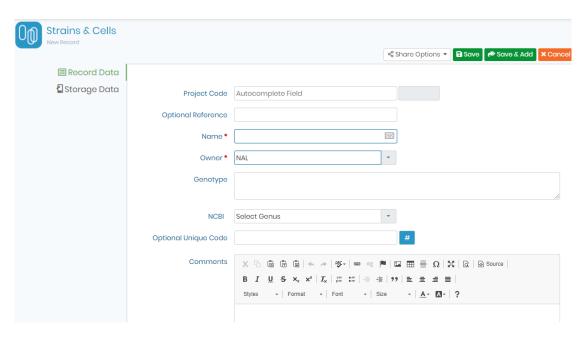
You have already defined your preferences; you are now ready to enter new records into the modules.

This can be done one by one or by using CSV files to import large amounts of data.

7.1 Enter a new record

All modules are constructed in a similar way. To add new records click on the top-right link "Add New

Record" in the menu bar New Record. A form will be displayed to enter data. The fields will vary based on the default fields for the module as well as any custom fields that may have been created. You can read in our KB: how to create a record.



This example illustrates the form for entering new strains and cells. Required fields are marked with an asterisk *. Additional tabs on the left hand side of the form reveal different forms for entering particular types of information.

Multiple records can be added successively with the Save & Add button.

Storage data is accessible with the tab on the left. Please see \square section 7.3 for more information on storage.

Default field options can be activated or deactivated. Please refer to the Usection 5.1.

- Generally, when you open a module you see the page with no records. When you just click on 'Search' icon (empty search field), all the records will be displayed below.
- Records are the name of the samples, antibodies, chemical structures, reagents, and supplies, etc.
- Each record will have its own record ID, which will be used for barcode creation . For example to barcode all samples in the lab.
 - * Read in our KB; how to create barcodes in LabCollector.
- You can create a new record by clicking on the button.
- You can edit the record by clicking on icon.
- You can duplicate the record using this icon.

• You can delete the record using this icon.

A Warning

Take care as you cannot delete records that are in use in LabCollector. For example, if the sample is being used for some analysis then you will not be able to delete it.

- You can print the record using this icon.
- ullet You can also memorize the record using this ${\mathscr O}$ icon, which can be used further in LabCollector.

A Note

- Depending on the module the edit record options can change. For example, the Reagents & Supplies module have a purchase order icon in the edit option.
- Staff+, Staff, Users and Visitors can only memorize their own records, therefore the memorize icon will not appear for these user level permissions.

When viewing records, there are several icons on the left hand side as well as on the right hand side. The availability of these icons varies by module.

NEW! You can now see exactly which records were assigned to a storage and which ones were not, the following icon will show up next to the record's name (in case it had a storage), which will help you avoid having to open up the record's content table to see whether it is stored or not. You can also choose whether you want to display the icon or not in any given module.

Records contain some of the following icons. Note that some icons are module specific.

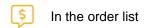
The following icons can appear on the right hand side of a record:

Open record
Display record
Display all related records
Create a derived sample, Origin field automatically fills
Derive record
Analysis tab. Create analytics custom fields and find them here.
Activity log
Display all secondary storage places
Display reagent & ordering info
T Display lots

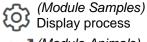
Order icons

H

Add to order list



Module dependent



(Module Animals)
Display crossings

Display comments

(Module Plasmids/Sequences)

Manage sequence annotations

(Module Plasmids)
Sequence and map

(Module Documents/Reagents & Supplies/Samples/Antibodies)
Used in Lab Service Manager (LSM)

(Module Reagents & Supplies/Samples)
Used in Stability Test Manager

(Module Primers)
Add to synthesis order

(Module Primers)
Primer in the synthesis order list

(Module Sequences)
Display sequences and bioinformatics tools

(Module Sequences)
Display sequence Blast tools

(Module Sequences)
Display related files

(Module chemical structure)
Display spectrum

(Module reagent & Supplies)
Available/Few units/out of stock

(Module reagent & Supplies)
Display risk and safety data

Link back to other data from Reagent & Supplies module.

(Module Equipment)
Display maintenance

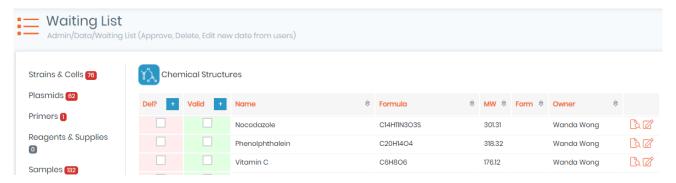
(Module Equipment)
Alert status: In maintenance/Out of service/Unavailable

7.1.1 Waiting data

When data is entered by users with "User" level it is flagged on the database as temporary. An alert is displayed on the homepage indicating that some data awaits validation by an administrator.

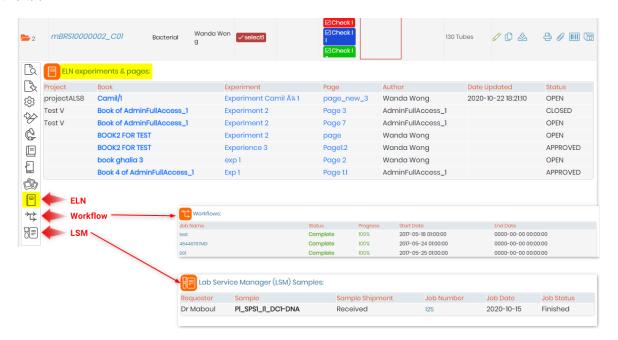
Open waiting list: Admin → Data → Waiting List

This page gives a list of records awaiting validation, organized by module. Each record can be marked for deletion (to be rejected) or manually edited. Validation is done per module in batch.



7.1.2 ELN, Workflow and LSM link

When data is referenced in the Electronic Lab Notebook, Workflow or Lab Service Management using the LabCollector data section, a direct link to the corresponding pages/experiments or Job is available under this tab.



A Note

Requires latest version of the add-ons and LabCollector 5.24 (ELN) or higher.

7.2 Animal management

The Animals module stores all the information about your animals: sex, age, genotype, genealogy tree, status, storage... Barcode tagging on cages or animals provides easy data retrieval.

You have three options in Animals module:

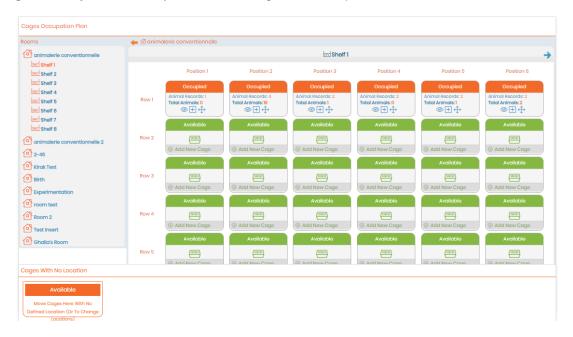
- To add new animal records click on the top-right link data according to the module.
- 2. For adding a new crossing between animals. You can read more in our KB: how to manage animal crossing.
- You now have now the cages options which allows you to schedule the cages for incoming animals and to access the cages facility plan.



A Note

Before adding animals through the cage facility plan you need to define animal storage facilities through Admin \rightarrow Preferences \rightarrow Animals options. For more information, see the \square section 4.7.

The Cages Facility Plan allows you to see the cages in the respective room.



The occupation plan shows the number of animal records contained in each cage and the total number of animals and the free locations.

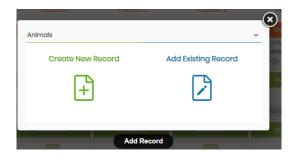
By clicking on , you can display all the records in the cage in a new browser tab.

Hovering the mouse over the number of animals will provide the animal listing for that cage.



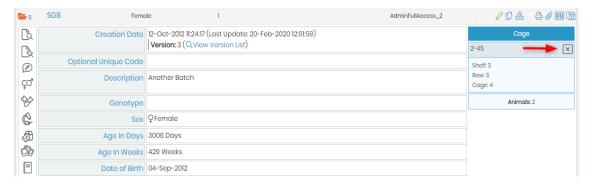
You can also easily move cages between rows, shelves and rooms by drag and drop. Clicking the icon will memorize a selection of the animals in one cage and allow movement to any other cage. This can be useful for organizing or consolidating animals into a different group of cages.

To add a new animal record from this page or to add an existing record you can click the $\stackrel{\square}{=}$, which will show you the below pop-up.

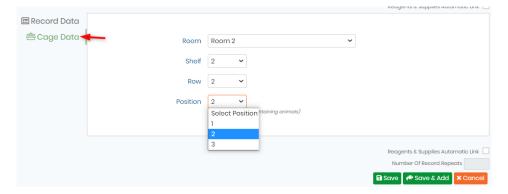


When a record location is defined, it can be removed from the cage. To remove it, click on the cross icon through the records file, a pop-up window appears to confirm cage removal.

The following view of the cage location appears when viewing the record in the Animals module:

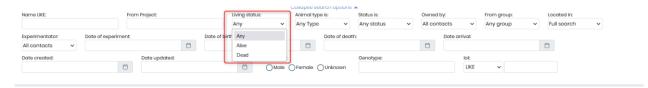


The following view shows the ability to edit or define an animal's cage from the popup that appears when editing or creating a record.



Also look at our video <u>aonline</u>.

New! Now in the Animals module you have the possibility to search for animals filtering by Alive or Dead.



Moreover in the summary line of the records there is the option to show age in days or in weeks. To activate/deactivate this option go to ADMIN -> Default Fields -> Animals



7.2.1 Room Scheduler

Before using this application, you need to define animal storage facilities like room and shelf characteristics ($Admin \rightarrow Preferences \rightarrow Animals options$). For more information, see the \square Section 4.7.

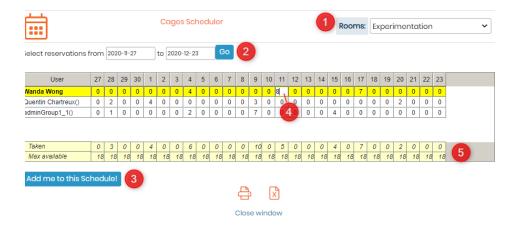
This application is completely independent of the cage's facility management.

The room scheduler allows users to plan arrival of animals and to schedule cage locations, on the Animal Modules page.



You can access the Cages Scheduler from the cages options and pre-schedule your cage if you know when and how many animal are going to arrive in the near future.

- 1. You can select the "Rooms" from right top corner
- 2. Then select the reservation dates.
- 3. Once you have selected that you can go to "Add me to this scheduler" and your user name will be reflected in bright yellow, like in below image.
- 4. You can double click under the date you want to to add the number of animals that will arrive.
- 5. Down below you can see see the amount of places taken in the given cage at given date and the maximum slots available. Close the window when finished.



A Note

Taken = number of locations already reserved

Max Available = total number of locations

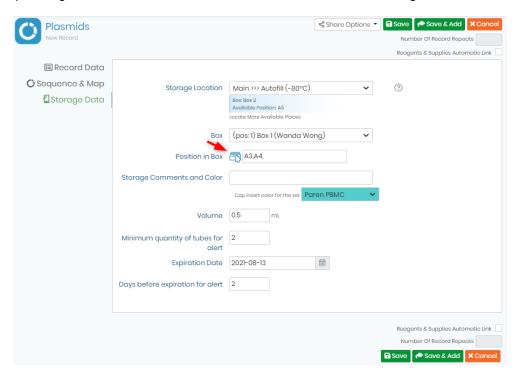
7.3 Storage stock

You can create stocks of lab supplies and chemicals using LabCollector. See section 6 to see more on how to configure storage.

7.3.1 Define storage at data entry time

You can assign storage tubes or vials when creating a new record. (Storage may also be defined or updated for existing records.) On the new record form, in the Storage Data tab, you can select the location with the drop-down menus. Then indicate vial coordinates on the storage selector by clicking the box to the right of 'Position in Box'.

Below example image is from the Plasmid module → New/edit Record → Storage Data





Generic steps for assigning tubes/vials:

- Select the location.
- Select a box from the resulting list.
- Fill the box grid or visotube on the interactive map (open the map by clicking the grid icon).

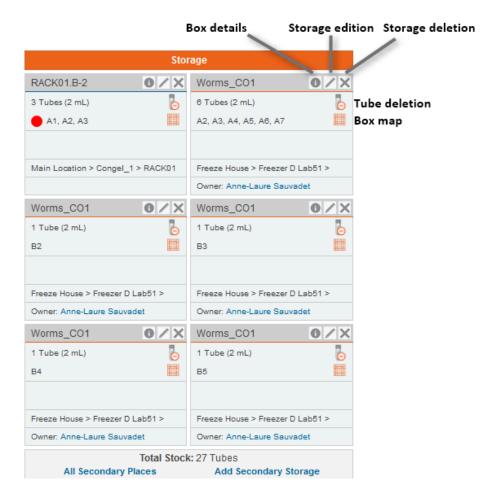
Newly selected positions appear green. Slots already taken will have the record name indicated.

- O Close the interactive pop-up map window by clicking on the Accept button. Click Close this window or click the X in the top corner to avoid adding the storage.
- o Indicate an optional commentary on this particular storage.
- O Define a cap insert color for the tube (before using this function you need to define cap insert colors through $Admin \rightarrow Storage \rightarrow Manage storage \rightarrow Options$).
- o Indicate a volume. Only in mL for the moment.
- Save the record or the storage by clicking update/save.

A Note

You can have a general view of empty and available box spaces with the storage browser. A direct link is available by clicking "Locate Available Places".

The total stock corresponds to tubes in main and secondary storage.



7.3.2 Define storage on existing record

There are two ways to assign vial storage on existing records:

A. Through record display:

You can define a storage place directly from the record entry in a module:

*Below is an example image from a module where the record has no defined storage position.



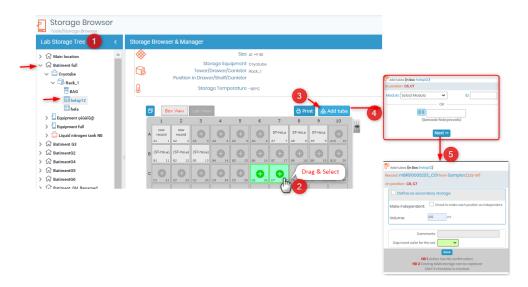
- Search for the record you want to manage in the module.
- Expand the record data by clicking on the name or the magnifying glass icon near the record name.
- On the right, a storage table is provided.
- Click on the "Add main storage" link if available (only admins, the super-admin and the record owners
 can add main storage).

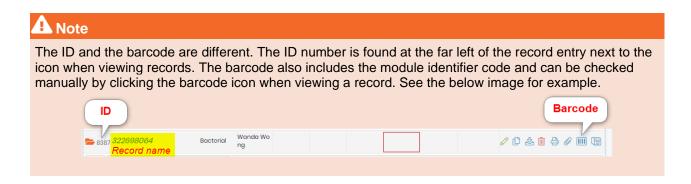
Follow generic steps for assigning tubes/vials:

- 1. Select the location.
- 2. Select a box from the resulting list.
- 3. Fill the box grid or visotube on the interactive map (open the map by clicking the grid icon).
- 4. Close the interactive pop-up map window by clicking on the "Keep selection..." button.
- 5. Indicate an optional commentary on this particular storage. The comment will appear in the storage information when viewing the record and will also be visible when looking at the storage location in the storage browser.
- 6. Define a cap insert color for the tube (before using this function you need to define cap insert colors through *Admin > Storage > Manage storage > Options*)
- 7. Save the main storage by clicking the Add Main Storage button.

B. Items may be added through the storage browser

- 1. Find the desired box in the storage browser.
- 2. Then click to select one or more slots by dragging the mouse hand.
- When done, click on Add tube.
- A pop-up will open and you can select the record to add by typing the ID or scanning a barcode and click on Next.
- 5. Another pop-up will open, from where, you can also define a tube position as secondary storage by checking the box. Additionally, a cap color can be selected. Before using cap insert color options you need to define them through the storage system options: Admin → Storage → Manage Storage → Options.





7.3.3 Secondary Storage

Each record can have one main storage place. But any lab member can have their own backup or secondary storage locations that are different from the record owner.

There are two ways to define a secondary storage:

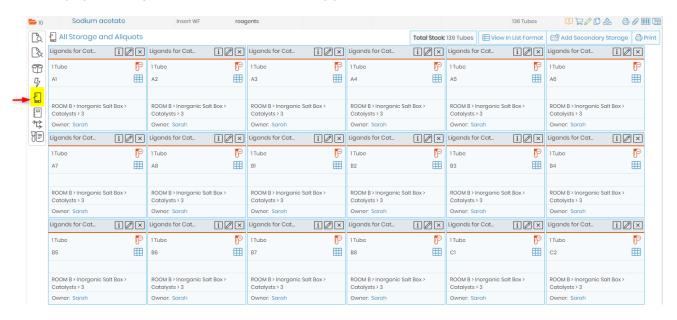
Through modules:

- Search for the record.
- Expand the record data by clicking on the record name.
- On the right, follow "Add storage" link.



Follow steps as described for main storage above.

To display all storage boxes, click on "All secondary places".



Any main or secondary storage can be edited and deleted. Use the <u>specific icons</u> (this can only be done by administrators and the record owner).

To edit via the storage browser see \square section 6.1.4.

A pop-up will open and you can add a tube in storage easily by entering its ID or scanning a barcode. Through this pop-up, you can also define a tube position as secondary storage by checking the box. See Usection

7.3.2.

7.4 Removing & adding aliquots, tubes or main storage

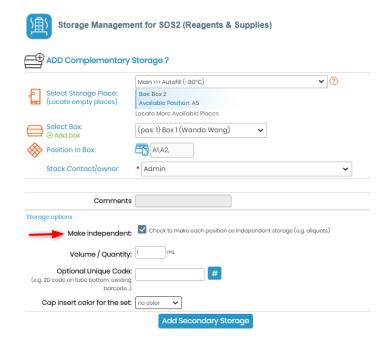
Every lab deals with numerous supplies and reagents which you need to aliquot or store.

With LabCollector you can add, remove aliquots tubes or main storage.

7.4.1 Aliquots management

To manage aliquots, you can use the secondary storage system:

- Click on the "Add storage" link as described above (see section 7.3.3)
- Once the storage place, box and box position is selected, check the "Make independent" box. (storage
 options will only appear when you select the storage place and box)



This option allows the independent management of each tube which will be assigned its own editable barcode and can, in addition, have an existing barcode associated to the tube. The unique identifier/barcode and any additional information can be seen when viewing the storage details.



7.4.2 Storage Check-in/out System

In the lab, we know how samples can go on a little journey for experiments. LabCollector's Storage Check-In/Check-Out is like a helper to make sure everyone knows where things are, especially when something is borrowed for a while.

Imagine a researcher takes some samples out for an experiment. Now, they're not in the storage, and someone else might get confused looking for them. This is where our new tool intervenes to help organize your lab storage even better!

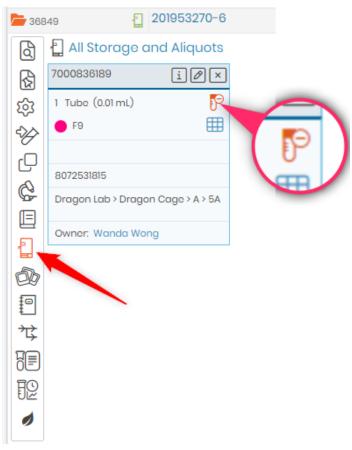
Note

Please note that this feature is only available starting from LabCollector v6.21, checkout our <u>blog post</u> to read about all the other exciting features included in this version.

If you want to update your current version, read the following knowledge base on how to upgrade your babcollector.

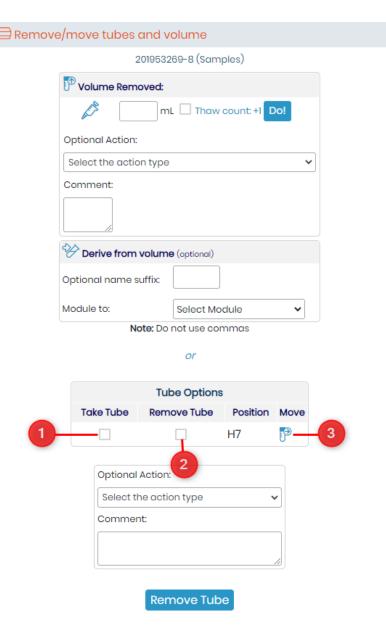
See the video of our KB: <u>Storage Check-in/out System</u> for a detailed review on how the check-in/out system works.

First of all, in order to check-in/out a tube, you should navigate to the desired record, then click on the storage icon and finally select the "Minus tube" icon located on the top right corner of the corresponding tube (as shown in the screenshot below).



When you click on the "Minus tube" icon, a pop-up appears (see screenshot below). Here's what you can do to enhance your lab management:

- Select Volume:
 - Choose the exact volume you want to remove.
- Add Comments:
 - Document essential notes related to the tube.
- Derive from Volume:
 - o If needed, derive from the existing volume for further experimentation or analysis.
- Transfer to Another Module:
 - o Easily transfer the tube to another module, where it's needed.



In the same pop-up, you'll find a handy table with several options (please refer to the numbers in the screenshot above):

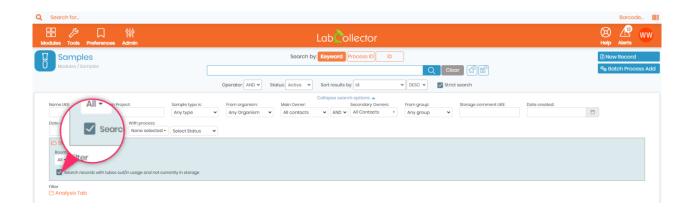
- 1. Take Tube for Check-Out:
 - Opt to take the tube for check-out, signaling its temporary absence for experimentation.
- 2. Remove Tube from Storage:
 - O Remove the tube from its current storage spot.
- 3. Move Tube to Another Storage Location:
 - o Relocate the tube to a different storage location.

1. Search Function:

You have the option to search for all the records with tubes that are in/out of usage and are currently not in storage. To do so, simply follow the below steps:

- 1. Navigate to Your Desired Module:
 - O Head to the module you want to explore, whether it's Samples, Primers, Strains, or another.
- 2. Expand Search Options:
 - Look for the "Expand search options" button. It allows you to have more search capabilities.
- 3. Select Your Search Criteria:
 - O Tick the box that says "Show tubes currently in/out of usage and not in storage."
- 4. Hit That Search Button:

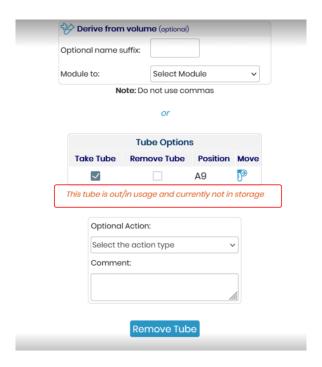
Click on the search button, and let LabCollector unveil the details.



2. Tube Status Message:

You will also see a message under the tube options' table, this tells you that the tube you picked is currently on duty, being used somewhere in the lab, and it's not in its usual storage slot.

No need to dig deep, the message gives you a quick snapshot, and would help you decide whether to wait for the tube's return or look for an alternative.

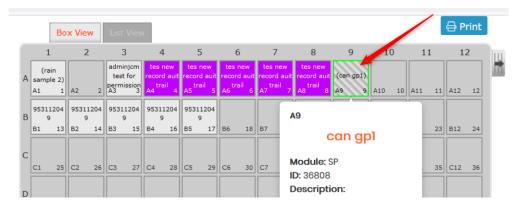


3. Color Cues in the Grid Viewer:

LabCollector not only tells you but shows you with a subtle yet effective visual cue about the status of a tube. Here's the breakdown:

- Navigate to Storage Browser:
 - Open up the grid viewer to see a comprehensive layout of your tubes.
- Check for Color Variations:
 - Tubes that are currently not in storage but in/out of usage will stand out with grey strips across, this indicates that they are either being used or has been taken out for an experiment.

Instantly spot tubes that are actively involved in lab activities, and easily distinguish between them and those in storage, facilitating your decision-making.

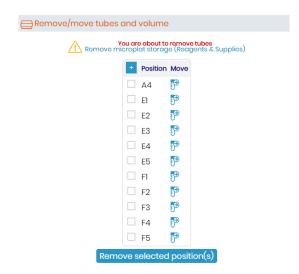


7.4.3 Removing tubes

When a storage location is defined, single tubes, vials or aliquots can be removed or added. Any identified user can remove tubes.

The action is logged on the history or the activity log registry for strain records.

To remove one or more tubes, a quick icon is provided . When you click on it, a pop-up appears:



Here, you can select one or more tubes to remove from the box. You can display the box map using to help you to visualize the tubes to be removed.

7.4.4 Volume deduction

An automatic remove volume option can be used if tube volumes quantities are defined.



To remove volume your tube should have only 1 per position or storage. If you have more than 1 tube , the volume option wont be seen.



To use this option, you have to click on the remove tube icon .You have then to fill in the form:

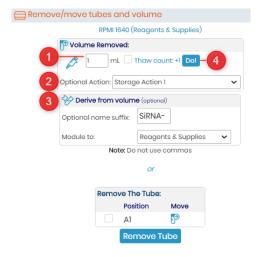
Indicate the volume to remove. here you can also click on thaw count. This is to ensure for the chemicals or regents that get affected by continuously Freeze-thaw cycles. Checking the box will ensure to keep a count of thaw cycle. This will allow you to discard the constituent that has gone through many free-thaw cycles. If you check this box you will see the thaw icon like below image.





If you have decimals, please DO NOT USE commas.

- 2. You can choose an action relative to your deduction
- You can create a derive record based on this volume. A link will be create between both records.
- 4. Click on Do! to validate.



All the information is then summarized in the activity log of the record.



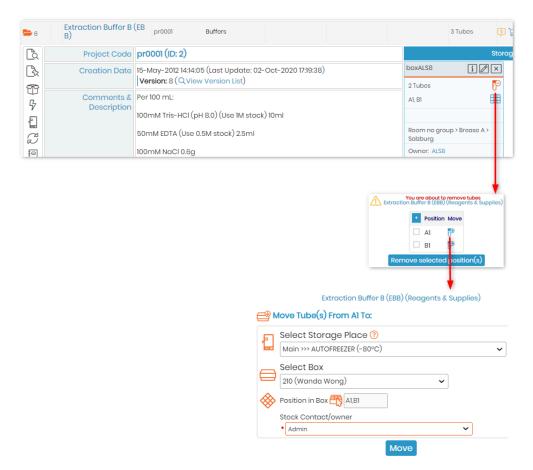


Activity log option is present only in some modules.

7.4.5 Move tube

Tubes can be moved from one position to another or from one position to many positions by using the same

icon $\frac{1}{6}$. The popup offers you the option of moving the tube by clicking on $\frac{1}{6}$. Then, as before, fill out the storage form then click on *Move*.



7.4.6 Remove multiple sample's main storage with the worklist tool

In LabCollector, you can now remove a list of samples from storage at once using worklist (for more information about this tool, refer to section 10.5).

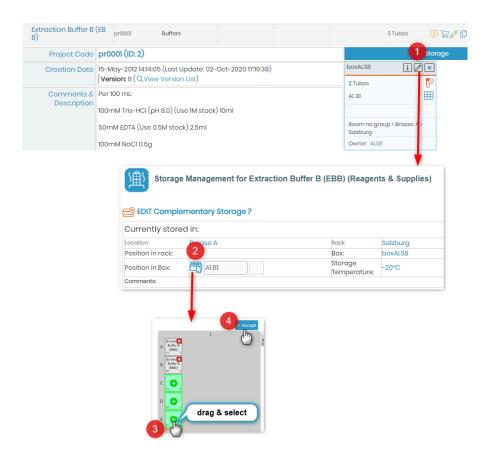
This function is available for all modules.

- 1. Go to the relevant module to select samples that you need to remove for storage by using the memorized record tool .
- 2. Go to Tools \rightarrow Manage memorized items.
- 3. Select records that you need to remove from the storage by checking the corresponding box.
- 4. Generate a worklist (for more information about this tool, refer to <u>usection 10.5</u>)
- 5. Now click on the "Remove all from storage" button. A pop-up opens to inform you this action cannot be undone and to choose main storage or secondary storage.

Your sample's storage is now removed. The removal of tubes from storage will be saved as an action in the audit trail/user history log.

7.4.7 Adding new tubes/vials

To add new tubes to the box, use the edit icon on the box table. Newly added tubes will be saved as an action on the activity registry log if it exists in the module.

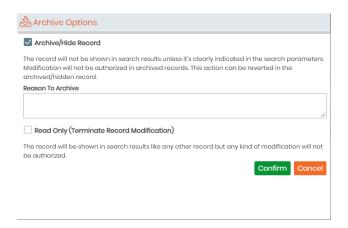


7.5 Edit, archive and delete records

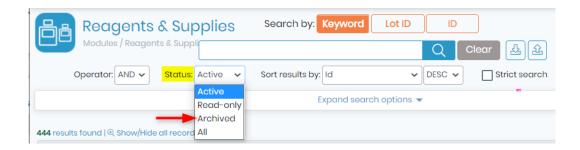
Once records have been added to the database, you can edit, archive, set up as read-only or delete these records. When a record list is displayed in a module, each one is associated with the edit ($^{\bigcirc}$), archive/read-only ($^{\triangle}$) and delete ($^{\stackrel{\frown}{\square}}$) icons. They are only accessible to administrators and data owners.



Data deletion has limitations. The "delete" icon will only be accessible if the record has no storage assignments and no links to other records. You will have to remove the links and the storage prior to record deletion. Deleting a record is not possible if more than 5 actions have been performed with the record. Information about the deleted record is retained in the audit trail.



Archive/Hide Record. The record will not be shown in search results unless it's clearly indicated in the search parameters (see below). Modification will not be authorized in archived records; records can only be duplicated, printed or memorized. This action can be reverted in the archived/hidden record. Records with storage cannot be archived.



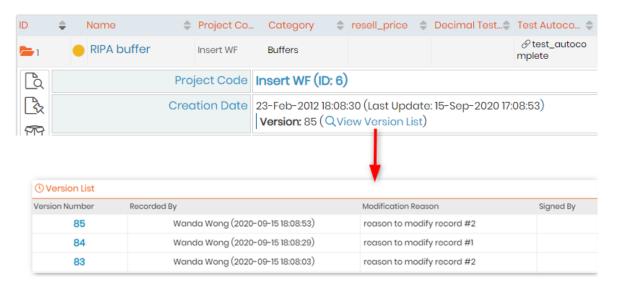
Read-only Record. Only available with the Compliancy Pack. The record will be shown in search results like any other record but any kind of modification will not be authorized. This action is irreversible and so the record will always stay in the current version.

Only the super-administrator can reverse this action, indicating a reason that will be available in the audit trail.

Records can only be duplicated, printed or memorized; the storage is always active (storage creation, modification and deletion are possible).

Locked records can also be signed. Signatures will be shown in the version list. They guarantee the integrity of the data.

Locked and signed records can be archived if you click on the lock icon.



For more information, please read the KB: on what is compliance pack

7.5.1 Multiple record archives

You can archive multiple selected records at once using a memorized worklist (for more information about this tool, refer to Section 10.5). This function is available for all modules.

- 1. Go to the relevant module(s) to select records that you need to archive by using the memorize record icon .
- 2. Go to Tools \rightarrow Manage memorized items.
- 3. Select records that you need to archive by checking the corresponding box.
- 4. Generate a worklist (for more information about this tool, refer to Q Section 10.5.
- 5. Click on the "Archive all records" button. A pop-up opens to inform you that all records will be set as archived.

Your records are now archived. Archived records will not appear unless specifically requested.

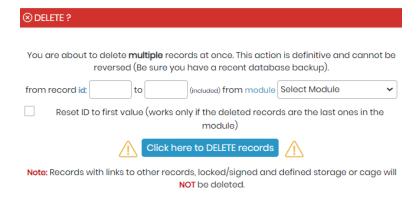
7.5.2 Multiple record deletions

You can delete several records at once by two distinct methods. Both are only accessible to administrator

and super-administrator.

Delete record sets:

You can delete record ranges from inside a module. Go to: Admin → Data → Delete Multiple Records.



Enter the first and last record numbers from the range to delete and choose the module containing those records.



Check "reset ID" if you want to reset ID to the first value.

Range Data deletion has limitations. The records within the selected range will only be deleted if the record has no storage assignments and no links to other records. You'll have to remove the links and the storage prior to record deletion.

Delete multiple discrete records from multiple modules:

Use the module search engine to find records to delete. Use the memorized record icon $\frac{6}{2}$ to memorize all records you want to delete. Once done, go to $\frac{1}{2}$ Manage memorized items (for more information about this tool, refer to $\frac{1}{2}$ section $\frac{10.5}{2}$)

On this screen you can check/confirm the records to delete. You then have to choose the "*Delete from Database*" option.

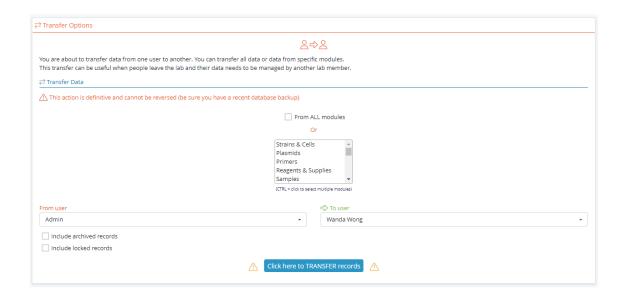
A Note

Multiple Data deletion has limitations. The memorized records will only be deleted if the record has no storage assignments and no links to other records. You'll have to remove the links and the storage previously to record deletion.

7.5.3 Data transfer between users

There are situations where lab members move into or out of the team. Data managed by such users can therefore be migrated or transferred to other current users. All data from all modules can be reassigned to another single user or selected modules can be indicated and be assigned to different users.

Go to: Admin → Data → Transfer data.



7.6 Barcodes editing

All data and records saved in LabCollector have a unique barcode. All of them can be edited and printed.

7.6.1 Barcodes types

LabCollector edits two barcode types:

 <u>Linear or 1D barcodes:</u> These are classic barcodes. They are read from any CCD or laser barcode reader (plus many smartphones). 1D barcodes can be large so they only can be placed on sufficiently sized surfaces. The large size may also accommodate the inclusion of the record name and/or free text. Eppendorf and cryo tubes may be too small.

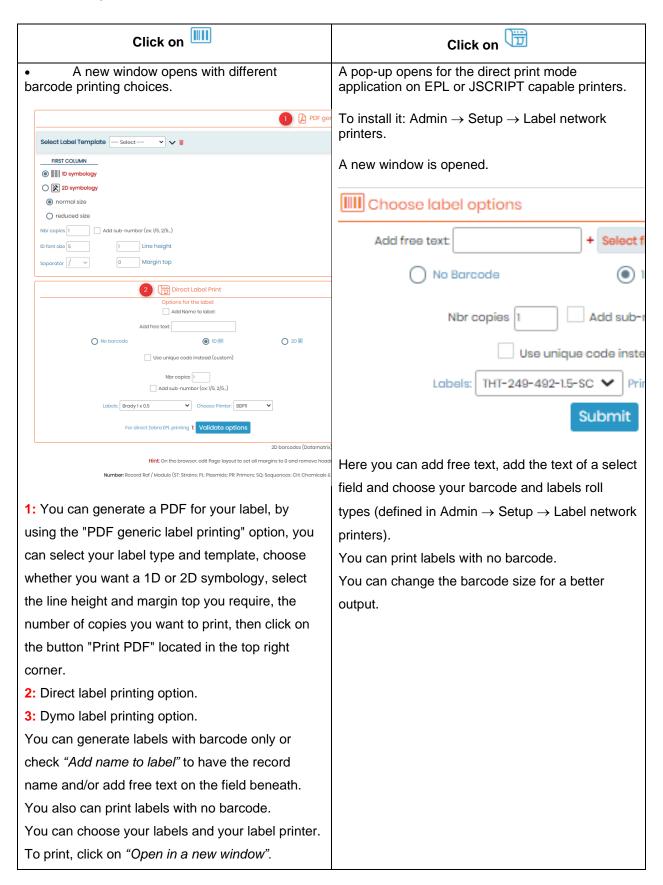


<u>DataMatrix or 2D barcodes:</u> 2D barcode are small and square. They are newer and can only be read by
more sophisticated imaging devices (including some smartphones). They hold more information and are
usually sufficiently small to be placed on tube caps for example. These can be printed as barcode only,
or with additional information.



7.6.2 Single barcode label printing

Printing varies slightly depending on your printer. The printer may need to be set up by the super-admin and/or local IT staff depending on the model. According to your printer system, to edit and print a single barcode label you can:



苯 Tips / Hints

LabCollector offers the possibility to print several barcode labels at once. For more information, refer to section 10.2.

7.7 Importing data

In order to facilitate the transition from other applications or databases, LabCollector can receive data from external sources.

The import feature can also be used to import batch sample lists from equipment or devices for example.

For more information and examples, see on KB: how to import data.

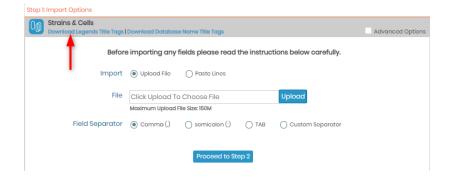
7.7.1 Import data of external files

- 1. Open the Import interface: Admin → Data → Import
- 2. On the Import screen select the module where you want to import data.
- 3. Prepare the LabCollector database: before importing data, you have to configure the module you chose. You need to previously create all the fields you need. Go to Admin → Data → Custom fields and Default fields.
- 4. Then, go back to Admin → Data → Import.
- 5. Follow these instructions to create your import file:
 - The first line of the import file MUST BE title tags that MATCH EXACTLY either the field database name (real field name, database format) or the field legend (exact name that you give to the field). See our KB: on recipe manager.
 - The order of the columns is not important.
 - Imported data <u>MUST CONTAIN</u> title tags/fields related to name (if you have set up your module with Erreur! Source du renvoi introuvable., leave the column empty) and *owner* (unless you select to overwrite imported owners in advanced options or the module doesn't use the owner field as Reagent & Supplies module).
 - Besides name and owner you <u>DON'T NEED TO USE ALL TITLE TAGS</u> but only those containing values you want to import.

NEW!: Import now allows the selection of used title tags.

To help you, you can download one of the excel files "Legend Title Tags" or "Database Name Title Tags" and fill it. Deactivated default fields will not be in those files.

NEW!: Import can now detect mandatory fields.



⚠ Note

Each imported record can have a project code. Each project code used must already exist in LabCollector for a correct importation.

Custom fields such as Database Upload and Disk Folder Upload cannot be imported. You can use the

free add-on KB Custom Field File Upload.

Date must be formatted as yyyy-mm-dd or yy-mm-dd.

Ensure your PHP has increased limits: max_input_vars = 10000 or more (See our KB: on importing large files).

- 1. Save your excel file as .txt or .csv file. You may need to choose a delimiter option at this point. Make sure the choice does not appear in the data you want to import. Data cannot have separator characters in it (e.g. if you select commas, you cannot have commas in your data values). Separators must therefore be unique and present as data delimiters ONLY!
 Some data need separator characters inside (like genotype, multiselect or GPS fields)! In this case the separator characters "|" or ":" must be used. This separator character CANNOT BE THE SAME as the separator character used as a unique data delimiter.
- 2. If you want to import data without uploading a file, you can use the paste area to copy-paste the rows you want to import.
- 3. Select the data file to upload through "Browse".
- 4. Choose the field separator used in your data file.

 Under Advanced options, you can access the file encoding. With the "Import to waiting list" option, all users will be able to import data which will be stored in a waiting list before their validation.
- 5. Click on Proceed to Step 2.
- 6. Carefully check the temporary import data displayed on screen. This helps you decide if data have been well parsed and can be permanently saved on the database.
- 7. Submit the "Step 2" form by clicking on Confirm to validate the data.
- 8. Data import is completed.

NEW!: Import now supports associated owners.

NEW!: Import now takes into account the parent category field value when validating mandatory sub-fields when those sub-fields are present inside the file.

A Note

DISCARD invalid temporary data! Always remember to discard temporary data which is invalid. Temporary data is stored on temporary database tables that need to be deleted when you discard or cancel the import action. This way you avoid accumulating unnecessary temporary tables.

Imported data owner. Administrators can import data under any name. Staff can import under their own name only.

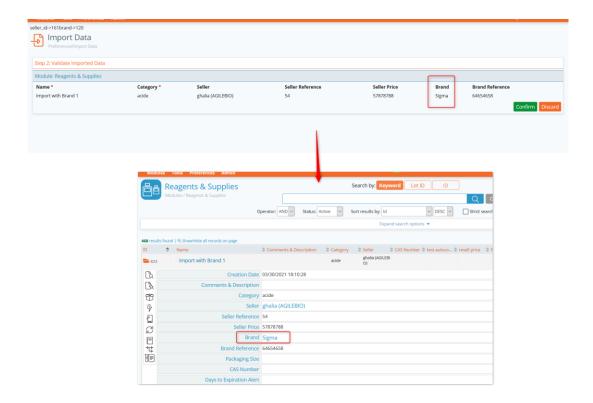
Import action in 2 steps. Data to import can first be browsed and displayed on screen for checking. This way you can visually confirm that data is correctly parsed before permanently saving it on the database.

苯 Tips / Hints

On the home page you have access to a special add-on to generate a rack/tray to be loaded into the module Sample of LabCollector. This accelerates sample registration with direct storage definition. For more information, please see Batch Generator (Rack Scanner).

You can now import Main storage using this function as of version 5.421. Fill in the relevant details in the following columns: Box ID/Box Name, Position in Box and Volume.

NEW!: The brand name is now supported by Import. Once added in your CSV file, you will notice that all new records now contain a field entitled "Brand" (see screenshot below for an example).



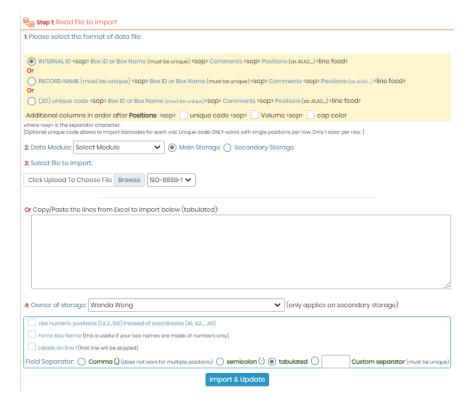
7.7.2 Import storage

Import storage via a CSV file is possible using the Import Storage function found in $Admin \rightarrow Storage \rightarrow Import Storage$.



Be aware that importing into a position that already has a tube assigned to that position will result in the original value being replaced by the new tube.

Numeric positions (1,2,3...100) can be used instead of coordinates (A1, A2,...,J10).



- 1. Select format of the data to be imported.
- 2. Select the module and if it's to be added as Main or Secondary storage.
- 3. Add your file and choose its encoding or Copy and Paste lines from Excel.
- 4. Select the owner. You can also choose to use numeric positions instead of coordinates, force Box naming, specify that there are labels on the first line of your file/pasted lines, and finally choose the field separator of your file.



Import storage in Reagent & Supplies module works ONLY with Secondary storage.

NEW!: Import system now has the option to verify if the imported box positions are free or already occupied.

7.7.3 Import data from GenBank (with annotations)

In the Sequences modules, it's possible to import files from GenBank (with annotations) to LabCollector database.

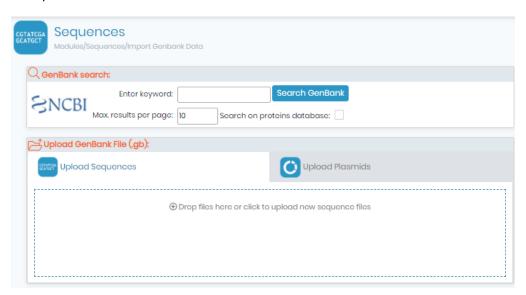
Depending on your choice, you can import sequences or plasmids, respectively in the Sequences and Plasmids modules (if you check the box *Upload as Plasmid*).

Please see our KB: how to upload sequences in plasmid and sequences module.

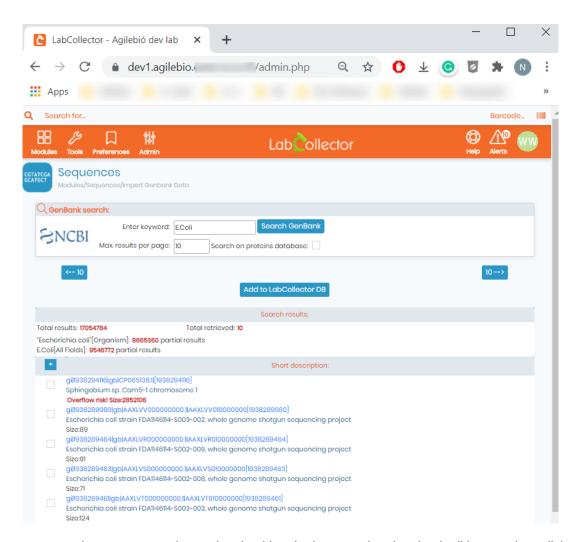
Click on Import GenBank Data at the top right.



A new window opens:



You can now search a sequence through GenBank and import it into your LabCollector database:



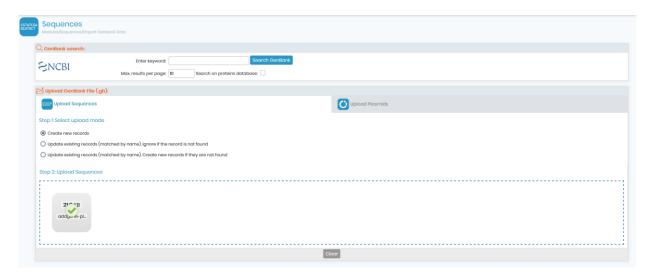
Select sequences that you want to import by checking the box or using the check all button, then click on *Add to DB*. The box(es) go green which indicates that the sequences are now in your LabCollector database.

• Import sequences/plasmid by uploading GenBank file

You have three options to choose how to upload the files:

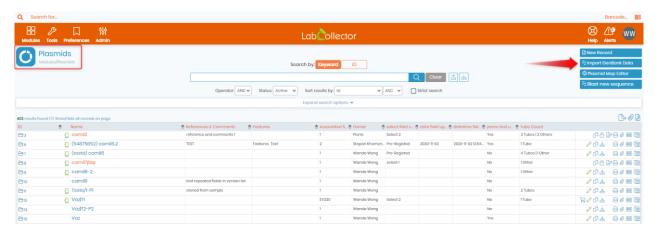
- Create a new record.
- Update existing records (matched by name). Ignore if the record is not found: In this case, if there's
 already a record in your LC database with the exact same name as the one your are uploading from
 GenBank, it'll automatically get updated. But if no record was found, nothing happens.
- 3. Update existing records (matched by name). Create new records if they are not found: Contrary to the first option, if no record was found, a new one will be created and added to your database.

After selecting the desired option you can upload the appropriate files (.gb) by clicking on *Drop files or click to upload new files* and automatically the files will be uploaded in the selected module. The green check confirms the success of the uploading. Repeat this step as many times as you need . Don't forget to switch to the "Upload Plasmids" mode to import data in *Plasmid* module.



This application can be very useful if you need to import large amounts of data from GenBank files.

NEW!: It is now possible to perform an NCBI search inside the Plasmids module. Once done, you can then select the plasmid you want and add into your LC database, the plasmid will then get automatically added alongside its map and annotation. (See screenshot below).



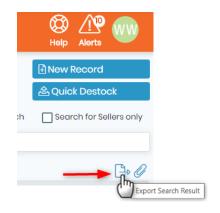
7.8 Mass data update

LabCollector includes an administrative tool for updating the price field of several records in the Reagents & Supplies module.

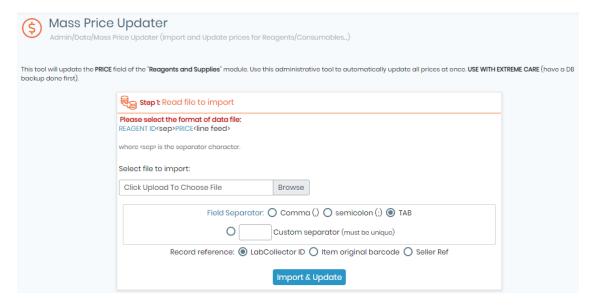
7.8.1 Mass price updater

It allows an automatic price update for every record in a list.

1. Generate a full or filtered list of reagents by exporting data to excel (from reagents & supplies module page).



- 2. Admin \rightarrow Data \rightarrow Mass price updater.
- 3. Select your file to import, field separator and record references.
- 4. "Import & Update"
- 5. Check your data import and validate.

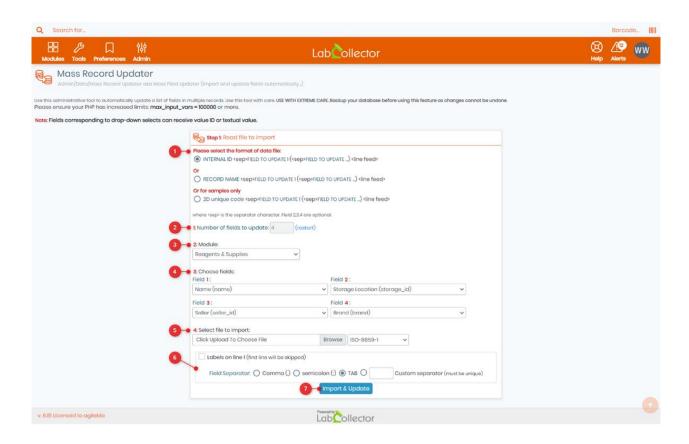


Data file must be a text file with two columns delimited by a separator character that can be a comma, semicolon, TAB or any other.

7.8.2 Mass record updater

LabCollector offers an administrative tool called Mass Record Updater. This tool allows you to update one or more fields for several records at once on any module of your choice.

To access the tool, simply navigate to *Admin -> Data -> Mass Record Updater*, the tool's interface should look something like this:



Here are the steps that you need to follow in order to successfully import and update your records (please refer to the numbers on the screenshot above):

- 1. The Mass Record Updater tool offers you the possibility to import files with three different formats: Internal ID, Record Name, and 2D barcode.
 - The Internal ID format identifies records by their LabCollector's ID number.
 - o Record Name format matches records by their unique name.
 - The 2D barcode format identifies records by their tube's barcode number.
- 2. After selecting the file format, you need to select the number of fields to update. Please note that if you ever wanted to reselect the number after validating it, simply click on **restart**.
- Select the module for which you want to update the records. The Mass Record Updater tool allows users to update records on any module of their choice.
- 4. After selecting the module, select in order the fields you want to update.
- 5. Select the file you want to import.

🛣 Tips / Hints

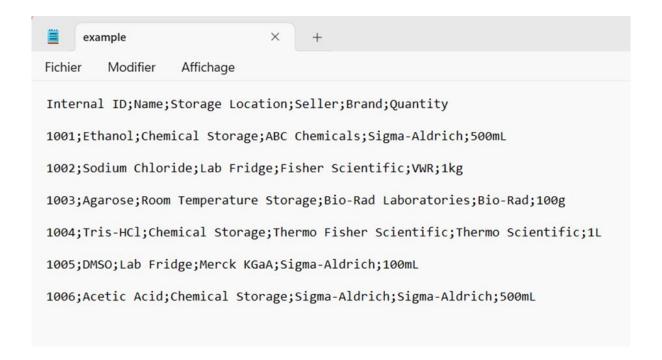
You can use either ISO 8859 or UTF-8 character encoding standards to ensure proper support of special characters in your data. Please note that ISO 8859 is suitable for a range of European languages, while UTF-8 is suitable for a much wider range of languages and characters.

- 6. If your file contains labels on the first line, you can skip them by checking the box "Labels on line1". Otherwise, keep it unchecked. Also, select the appropriate field separator, whether it's a comma, semicolon, a TAB, or any other custom separator that you require. This separator must be unique and consistent throughout the file.
- 7. Once you have completed all the steps, click on Import & Update. The Mass Record Updater tool will update the records based on the selected fields and the data in the imported file.

A Note

USE THIS TOOL WITH EXTREME CARE. Backup your database before using this feature as changes cannot be undone.

 Here's an example of a .txt file using semicolon (;) as a field separator and choosing Internal ID as our file format.



After clicking on Import & Update, a new tab will appear in which you can view and compare the
older values of your records with the newer ones (as shown in the screenshot below), once you
finish reviewing the changes, you can click on "Validate bulk update" to confirm your choice.



🔭 Tips / Hints

You can use this tool to update/import storage, analyses results, corrections, or any other data you want to update.

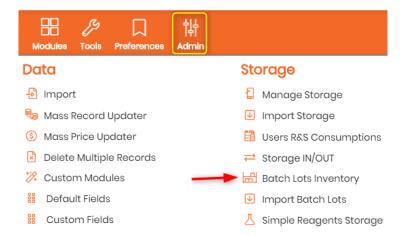
7.9 Inventory updater tool

You can generate your batch lists using our mobile app by scanning lot barcodes and associating the quantities.

Then import the list using this page. This import form works with CSV or other text file with delimited data. You can convert your data to text format (text file with DOS line break) with field delimiters of your choice from Excel or other database types. See your application documentation.

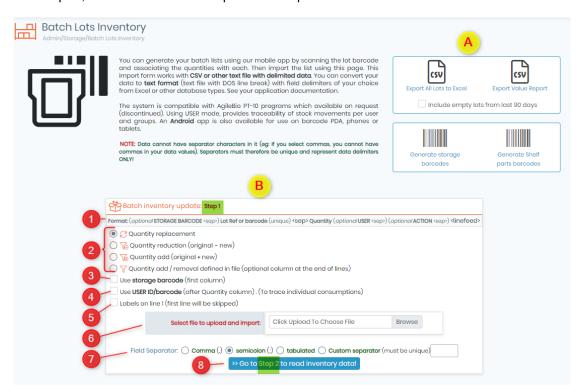
System is compatible with AgileBio PT-10 programs available at request. Using USER mode, provides traceability of stock movements per user and groups.

Android app is also available for use on barcode PDA, phones or tablets.



7.9.1 Quick destock

Access this tool from $Admin \rightarrow Storage \rightarrow Batch \ Lots \ Inventory.$ A. You can export, all lot information or export value report excel.



B. Here you can import the lot data.

Step 1: Here you can import batch inventory.

- Here you will find the options to import, which you can make while creating your CSV file. Data file has
 two columns. First column is for LabCollector internal Lot ID or Lot unique reference or barcode.
 Second column stores the real stock quantity. You can now also import the storage location by adding
 the storage box ID which is the barcode too.
- 2. Choose between 3 options: quantity replacement, quantity deduction or add quantity.
- 3. If you are adding the storage location, you can add the barcode (Box ID) in the first column of CSV.
- 4. After the quantity column you can add the User ID/barcode to track individual consumption.

- 5. If you have labels on first line (the name of the column) then the first row will be skipped.
- 6. Here you can select the CSV file to upload.
- 7. You can specify the field separator used in the CSV.
- 8. After you are done you can proceed to step 2.



You can choose ADD mode and have a list of mixed positive and negative values. This will do subtractions and additions in a single step to lot values in the database.

Step2: You will see the data imported and if all values are good, you will be asked to proceed to step 3.

Step3: Confirm stock update

You are presented with a table with the full inventory list parsed from the list. You are notified of errors (if a product is not found in LabCollector or if there is a redundant ID). Current quantity and new quantity are presented and there is a check box to confirm or reject the update for each item.

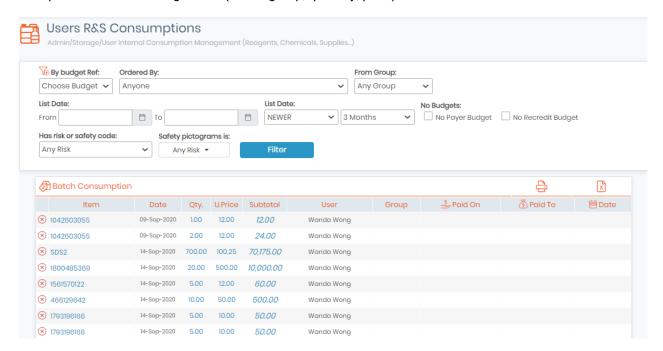
7.9.2 Internal consumptions

Internal consumption management with re-bill option on budget accounts can be made with the Users Reagents & Supplies Consumption tool.

Go to Admin →Storage →Users R&S Consumptions

To use this tool, reagents and supplies price and packaging have to be configured as well as budgets accounts (see Desction 9.1.1).

Each product destock is registered (user ± group, quantity, price) and can be rebilled.



7.9.3 Export all lots/stock



With this option you get an Excel file with all stock (lots) from all reagents and supplies. This allows you to create a stock list and update quantities manually.

You need to tick mark the checkbox below the image.

(see <u>section 7.9.1</u>)

7.9.4 Export Value Report



Export Value Report

With this option you get an Excel file with all stock (lots) from all reagents and supplies together with value indication based on item price. You need to tick mark the checkbox below the image.

(see <u>section 7.9.1</u>)

7.10 Backups

Data integrity is crucial to maintain information accuracy.

Administrators should perform regular backups (at least if the database changes). Those backups should be stored on separate media such as secondary hard drives, CD-R, DVD-R, etc.

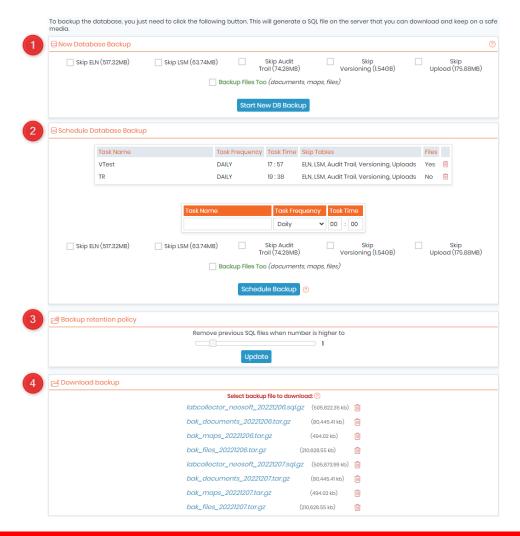
7.10.1 Database dumping

LabCollector provides an easy tool to create backups. Go to $Admin \rightarrow Data \rightarrow Backup$. Then click on the "Start New DB Backup" button. You can choose whether or not to backup ELN tables here and also, if using UNIX/LINUX, whether or not to backup documents, maps and files that are stored outside of the database.

Please read more on our Knowledge Base KB: backup of LabCollector database.

The Backup Retention policy section controls how many previous backups you want to keep from 0 to 7 when running manual backups.

1. LabCollector



🚹 Warning

UNIX/LINUX systems only! Check the "Backup files too" checkbox to create a compressed archive of the documents and maps folders.

Windows: Users have to manually backup the documents and maps folders. They are located in LabCollector's root folder.

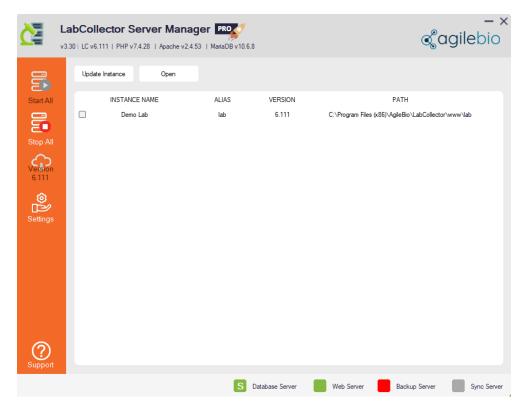
The files generated from the backup are listed on this screen and you can save them anywhere you want.

You can also set up automatic backup. Just define a name task, a frequency and a time then validate using the *Schedule Backup* button.

7.10.2 Automatic full backups (with LabCollector Manager)

An easier manual and automatic backup can be done through the Server Manager on Windows platforms.

Open the LabCollector Manager application on the LabCollector server and go to Settings \Rightarrow Automatic backups.



This backup utility will compress the MySQL database folder directly (mysql/data/labcollector) and the "www" folder located in "C:\Program Files\AgileBio\LabCollector" to the destination and with the periodicity defined in the settings.

- Choose the directory for the backup folder
- Choose between short-term or long-term backups or both
- Fill out the form with your requirements
- Click on "Save and close"

Please read our KB: how to use server manager.

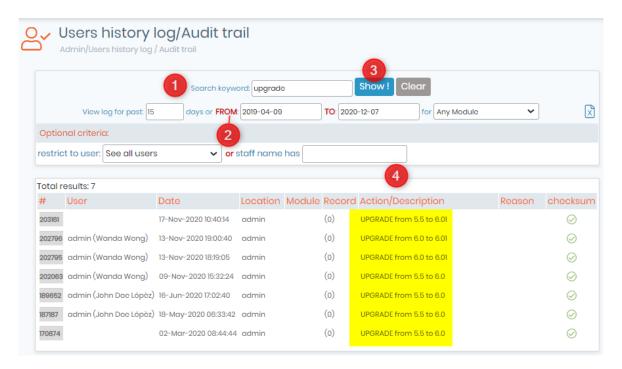
Note

Network backup! With this utility you can backup directly to any storage device over the network. The device must be unprotected (no password). If you must work with a password protected system get in contact with AgileBio to discuss solutions.

Recover backup! Compressed backup files from the manager backup utility can be recovered simply by decompressing them and replacing the original folders (www and /mysql/data/labcollector).

7.11 Audit trail

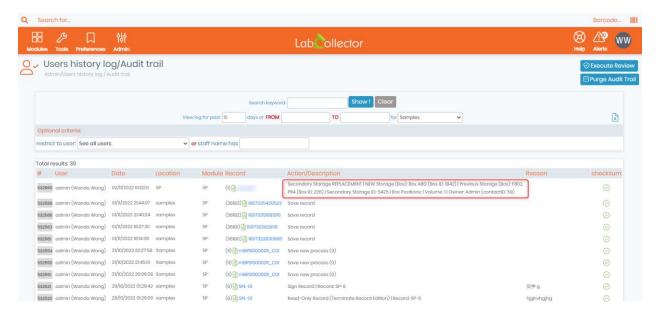
LabCollector allows you to have audit trail log for all the changes in the LabCollector. To view it go to $Admin \rightarrow Other \rightarrow Audit trail$.



- You can search the trail according to a specific keyword.
 NEW!: The audit trail log now includes the upgrades to LabCollector versions as well. As seen in the above image.
- 2. You can chose the date you want to see the audit trail for or the specific module or days.
- 3. Once you are done you can click on "Show" and you will see all the log related to your search.
- 4. For example, you can see under the actions or description of each audit trail.

▲ Note

When moving a record into another storage location, the action will get registered on the audit trail with a full description on who did the action, when, and to exactly which new location the record was moved.



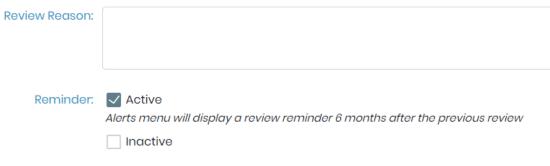
NEW! You can review your audit trails. This will guarantee that the audit trail logs were visualized and approved at this date. Reviewing is allowed only after an audit trail log visualization.



Once you click on Execute Review, a new tab appears (as shown in the screenshot below).

Audit Trail Review

Audit trail review will guarantee that the audit trail logs were visualized and approved at this date.



Review not allowed! Audit trail log visualization is required before proceeding with the review



- First, write the reason you want to review the audit trail.
- You can then select two reminder options, either Active, which mean that the Alerts menu will display a
 review reminder 6 months after the previous review, or Inactive, which means that the Alerts menu
 won't display any reminder.
- Finally, click on Confirm Review.

Note

- First, you will have to visualize the audit trail before being able to proceed with the review.
- When an audit trail hasn't been reviewed for over six months, you will receive an alert.

NEW! You can purge audit trail logs, this will help reduce database table's size and increase performance. But purging is only allowed after an audit trail review and audit trail export. Also, keep in mind that this action is irreversible, so please be aware of your compliance obligations and ensure your retention period is covered.



Once you click on Purge Audit trail, a new tab appears (as shown in the screenshot below).

Purge Audit Trail

Purging the audit trail logs will reduce database table's size and increase performance. But purging is only allowed after an audit trail review and audit trail export. Also keep in mind that this action is irreversible so please be aware of your compliance obligations and ensure your retention period is covered.

Purge Timeframe Type:	√ Full Year
	_ Date Range
Purge Timeframe:	Select Years ▼
Purge Method:	Archive Audit trail logs will be archived in a separated table. This will reduce audit trail table size and increase table performance but won't reduce the complete database size. Complete Deletion
Purge Reason:	

Purge not allowed! Audit trail review is required before proceeding with the purge.



- You can select the purge timeframe type to be either Full Year or during a certain time frame (Date Range).
- You also have the option to select the preferred purging method:
 - whether by Archiving: In this case, the audit trail logs will be archived in a separate table, which will help reduce the audit trail table size and increase performance but won't reduce the complete database size.
 - Or by complete deletion: In this case, the audit trail logs will be completely and irreversibly deleted, so please make sure to keep the exported logs.
- Finally, write the reason why you want to purge the audit trail and click on Confirm Purge.

A Note

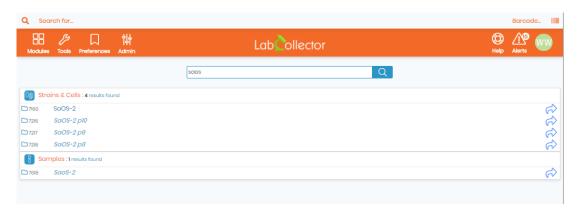
First, you will have to perform an audit trail review before being able to proceed with the purge.

8. Searching data

With advanced search options, you can search data very easily in LabCollector. Moreover, there are options to search the data with ID or barcode as well.

8.1 Keyword cross-search table between modules

On the LabCollector home page, you can access information stored in the database with a keyword search.



Results are displayed as a list found per module.

Open a quick view of the record with the icon at left and go to the record in the module with the blue arrow to the right.

8.2 Search in each module

All modules are built in a similar way. The only difference is that the organization of the default fields reflects the specificity of data stored.

Please read our KB: how to search data in LabCollector.



You can use none, one or several keywords separated by spaces. The search does not accept any logical operator. Select between the two operators **AND/OR** in the select list. You can refine the search with specific optional criteria (Expand Search Options).

The select list STATUS allows to filter on the record status: Active (by default), Read-only, Archived, and All.

To list all data, do a blank search.

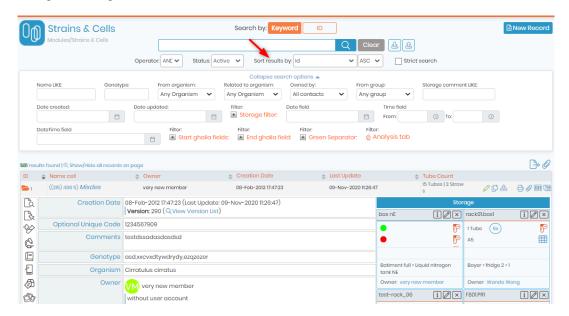
Main default fields are presented as optional filters as well as owner and group data. Reagent & Supplies module allows filtering on lot entry.

- Storage filters are included: room, equipment, rack/drawer and box.
- Custom fields are included in the search if they have been defined as searchable. Custom list options are presented as additional optional filters if they have been defined as filters.

If you know the record number you can type it directly in the ID field to access the record directly.

Results are displayed as a list of one item per line with basic information. You can sort results as ascending

or descending according to several criteria.



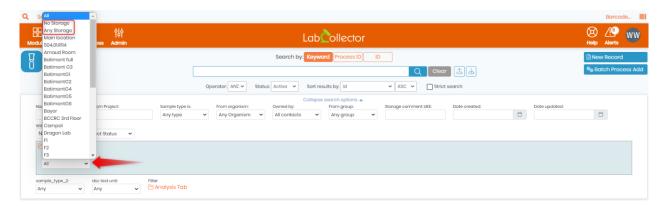
You can expand one or more items by clicking on the magnifier icon () next to each item name. You can also expand all results on the page on the small magnifier icon () on top of the results page ("Show/Hide all results on page").

Once expanded, you have all information available for the chosen item, including storage places, logs, etc. Data may be presented as sub-folders. You have access to additional information by clicking on the side icons (logs, secondary storage, lots, etc.).

Note

Super-admin can change the number of results displayed per page. Go to Admin \rightarrow Setup \rightarrow General setting, logo, modules names and choose the number of results you want to see per page.

NEW! You can now filter records by storage, you can either choose "No storage": this option shows all the records that has no storage, or "Any storage": this option shows all the records that were attributed to any storage. (See screenshot below).



NEW! You can now filter records by process within custom modules for which the process tab was added. (See screenshot below).



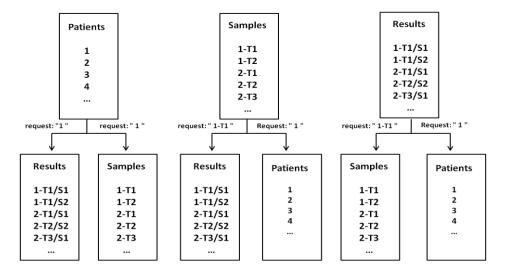
8.3 Automatic relation between records

From each record you can find related information/data concerning this record present in other modules. Click on the *Display all related records* icon (()), select the module in which you want to search and the prefix separator you used to list your data.

🔭 Tips / Hints

This function can be very practical to create and manage bio-banking but needs a special data organization using prefix separator.

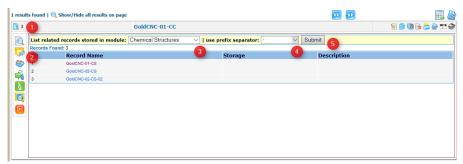
Here is an example:



Patient 1= 1

First sample derived from patient 1 = 1-T1. In this example, we chose the dash to separate patients and samples.

First result derived from patient 1 sample 1 = 1-T1/S1. Here the slash separates samples and results associated to this sample.



- Select record
- 2. Display all related results tab
- 3. Select module to find related records

- Select separator
- 5. Submit

With this type of organization, a cross search with a well formatted request, you can find all related records from one module in a second module.

8.4 Primers and sequences cross-search

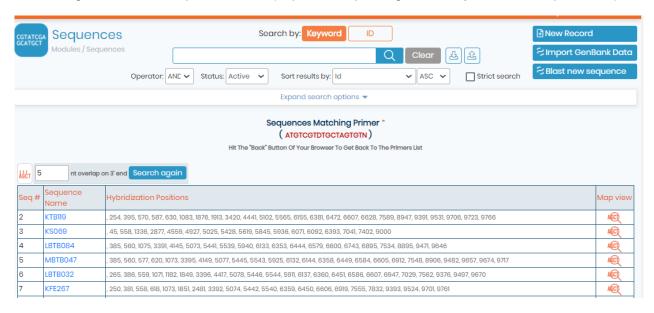
From primers, sequences or plasmids you can make a cross-search between modules to find primers that match or hybridize sequences. Locate the cross-search launch forms on each record.



You can set the nucleotide overlap/matching limit on the primer 3' end.

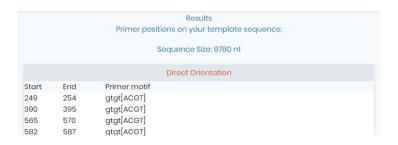
This can be useful for primers containing tags or for detecting primer leakage. Furthermore, the search engine accepts the universal primer's degenerate code.

The result gives the list of sequences found (or primers depending on the way the search is performed).





If you click on this icon you can access a graphical display of the localization on the sequence.



8.5 Barcode search

LabCollector generates unique barcodes for any information stored in the database. Those codes can be read from any barcode scanner.

The barcode search engine has a search field that is always available on the top-right of the screen (with the exception of some add-on modules).



So anywhere in LabCollector you can directly access any specific record when you scan a barcode.



You can also access the contents of a storage box from the box's barcode.

8.5.1 Reagents and supplies specificities

The Reagents & Supplies module has some specific search features.

You can find items with the original product barcode using a barcode reader.

If the barcode reference is different for each lot, enter the barcode reference of the new lot on the lot's reference field.

Then you can find lots directly from the module's keyword search field (you need to place the cursor in the keyword field then point the barcode reader to the product's barcode).

8.6 Wireless access (Mobility)

It is sometimes useful to get information near the storage source.

For example, you may want to have a content list and map of a box that you get in the freezer, and you have no computer nearby and don't want to go forth and back to get this information.

If your lab has access to a wireless network, you can use Palm, Pocket PC devices. You can even use PDA or smartphone devices that have a barcode scanner (or camera) and Wi-Fi networking support, providing quick and real-time access to data.

On the PDA device, use an Internet browser and get the page:

http://[IP or network address of server]/pda.php

This page is especially formatted to the screen size of PDA devices. You can do barcode searches and

storage manipulations such as removing tubes.

LabCollector supports use of tablets such as the IPad. You can switch between normal or PDA simplified screens.

For modern TOUCH devices you can try:

http://[IP or network address of server]/touch.php

Remember to visit our page on Google play to find all our apps.

8.7 Exporting/Reporting

8.7.1 Export data

If you need to share or print some information stored in LabCollector's database you can export it. You can export all or specific items, as the export action is linked to the keyword's search engine. On the top of the search result list, you have a report icon

You can choose the export format (for all modules: html, CSV, XML, PDF, Excel; Sequences module: GB, FASTA; Plasmids module: GB; Chemical Structures module: SDF), you can also choose the fields that you want to export and their order in your final file.

Moreover, if the super-administrator has created an section 3.1.7 export model, you can select it from the list.



Only the selected fields from the search results will be exported (to export all data, perform a blank search and add all fields).

In the Reagents & Supplies module, the exports include the risk icons and/or phrases.

8.7.2 Storage report

You can also generate a storage report listing all the stored tubes. Go to *Tools* \rightarrow *Storage Browser*.

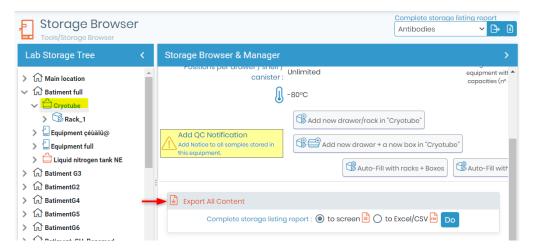


Reports are performed for all modules or one specific module.

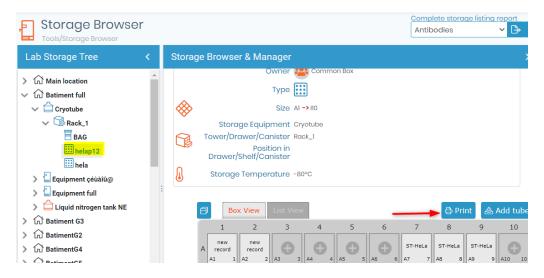
Reports for individual storage equipment can also be made. In the storage browser, select the desired equipment. Then choose the export view as either excel or onscreen.



The content of individual storage locations may be exported as well. See the below example image.

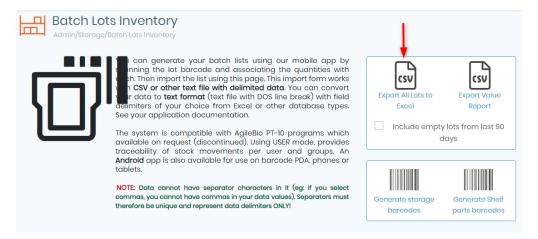


The content of individual storage locations may be exported as well. To do this, use the storage browser to navigate to the desired box/visotube/plate/shelf part. Click the icon and then select the print button.



8.7.3 Stock report

Go to *Admin à Storage* → *Batch Lots Inventory*, click on the icon to get the complete list of stock/lots. A file is generated for download.

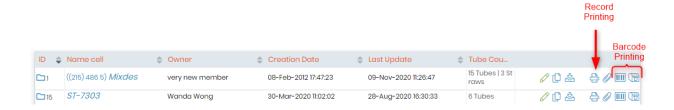


8.8 Printing records

Each record can be printed. Use the printer icon $\stackrel{\square}{=}$ on the item you want to print. A new window identical to the export one opens. In the same way, you can choose fields and order in the print version.

A print model can also be selected (it must be pre-configured by a super-admin). You can add a signature line (select Yes).

The print out will include the record barcode.



8.9 Linking records

You may need to link several records to each other.

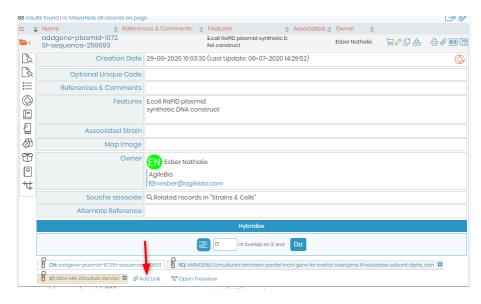
For example, you can link different reagents to a home-made culture media. Or, you can link sequence records to a sample.

You may also link a sample to a client, a reference manual to an equipment record.

The combinations of links are endless and unlimited. In some situations a link will automatically be made between records.

8.9.1 Generic tab links

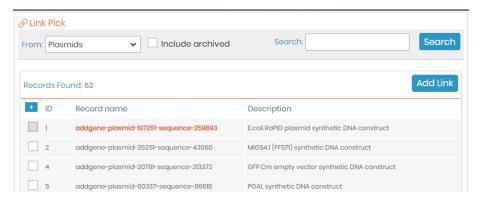
Links are displayed as tabs below record information fields.



To link records, you can use the linking option Add Link.

You will get an embedded screen to search for the record to link to. Simply search for the desired record in the appropriate module. A search list will appear for you to check the required record and click "Add link". The link will be automatically saved.

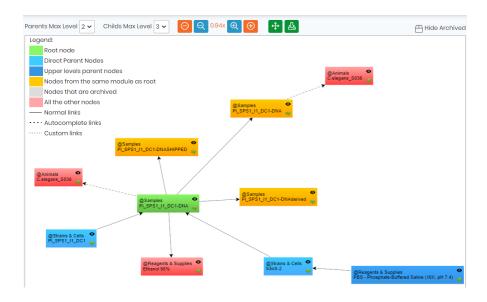
Links on a record are useful to jump to related records. Just click on the link(s) on a record to see the details of the related record. Click the black cross on the top right to exit record linking.



You can see the full record relationship in a tree-like presentation by clicking on the link Open Treeview next to "add link" option.



This will open a popup which can be used to navigate between records and display the relations between records. Single clicking items will open the tree of the selected record. Double clicking will open the selected record.



8.9.2 Custom field links

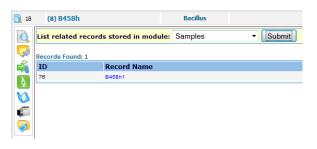
You have to first create appropriate custom fields through $Admin \rightarrow Data \rightarrow Custom$ Fields. Custom fields can be set to autocomplete or link to other record custom fields.

To visualize these links in the Treeview just click on \mathcal{A} (custom links) or \mathcal{A} (autocomplete links). This will remove all records in the Treeview lacking the chosen links.

8.9.3 Automatic relation

When you add some records with the same derivative name, LabCollector creates an automatic link.

To see this link, click on.



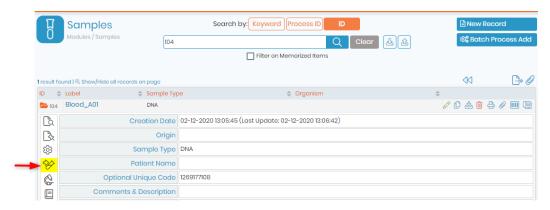
For more information please refer to QQ section 8.3.

8.10 Derived samples

From Strains & Cells, Samples, Animals, Chemical Structures and custom module records, you can directly create derived samples by clicking on .

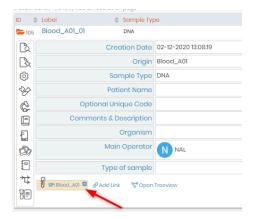
A form will open to create a record in the samples module derived from the record you selected. For example in below image we derive a blood sample.

1. LabCollector



A new record is automatically created in the Samples module and a link tab appears on the record file to note the link between those samples.

Below the new blood record has link to the parent sample.



9. Order list management

9.1 Ordering articles

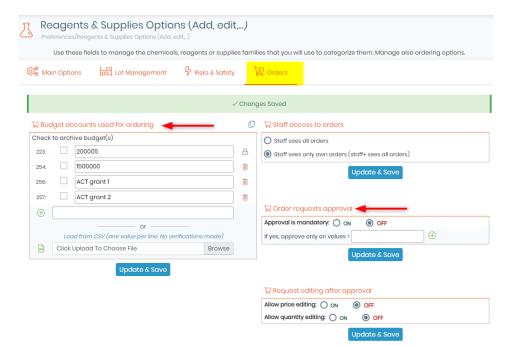
The Reagents & Supplies and Primers modules are linked to an order management system (read \square section 4.12.4).

This tool can simply be used to notify that articles need to be purchased or it can be a real order management tool.

According to your lab management needs regarding reagents orders, some of this information will be useful for you or not.

9.1.1 Create budget accounts

Before using the purchase order manager, you need to define your lab budget accounts in LabCollector LIMS.



Go to: Preferences → Reagents and Supplies.

This "Budget accounts used for ordering" menu also allows you to manage the budget accounts needed to process orders. Use it to define a list of your budget accounts that will automatically be display on the order list manager.

To hide/delete accounts, check the box on the left and click on Update & Save button. They will automatically be removed from the list. To view hidden budgets, click on the icon in the top right corner.

There is also the option "Order requests approval" of enforcing approval on items which cost more than a certain amount. There are two possible thresholds – one which can be approved by any administrator (see screenshot above) and the second is approved by the manager of the budget (see section 9-1-2). Depending on the cost of an order request an email will be sent to either all administrators or to the budget manager informing them that there are item(s) to be approved in the order list.

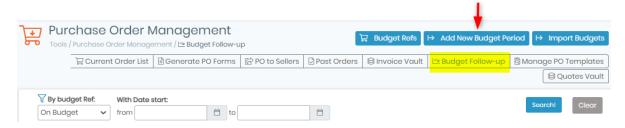
9.1.2 Budgets follow up

This tool will help you to manage all your budget accounts at any moment and plan monthly budget according to the initial budget amount.

Go to: Tools → Purchase Orders Management → Management →

Before using this Budgets Follow-up tool, you need to configure it:

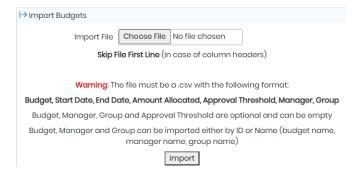
1. Add a new budget period by clicking on the corresponding icon.



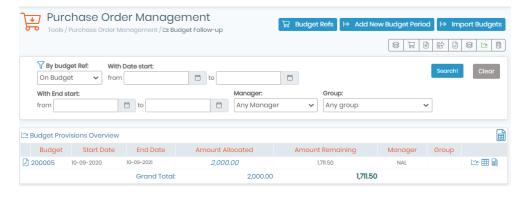
2. A pop-up opens. You need to complete the form in order to configure the budget period: select a budget, start and end dates, amount allocated, budget manager, approval threshold and group permission access. Click Save to add the budget period.

To import budgets click on the icon next to Honort Budgets

It's also possible to import a list of budget periods via CSV file via the Import Budgets button.



3. Your created budget period is now available on the main screen. You can retrieve information that you enter in the form.



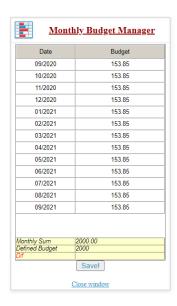
Once the budget period is defined, you can use follow-up tools:



This tool is the Monthly Budget Manager. You can use it to define a specific sub-budget for each month. Just replace the monthly amount by your customized data.



To enter a new value, double click on the existing value and save.



This tool displays the budget follow-up for this period with what was spent.



To see the spending on a budget, you need to process one or more orders in the Purchase Orders Management.

This icon allows you to export the Budget Follow-up as an Excel/CSV file.

9.1.3 Put item in the order list

Records from many modules have an ordering icon:



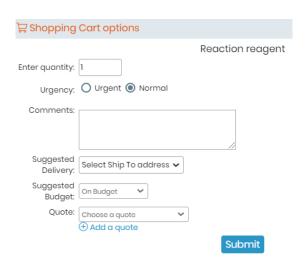
If this icon appears the item is already in the order list (i.e. ordered). This icon gives a quick visual way to know that the item is waiting for delivery.

🔚 Put item in the order list. If this icon appears without 👂 this means that item is available.

When you click on the ordering icon you get a pop-up window to define quantity/units, order urgency and suggested budget. Budgets are defined through **Preferences** \rightarrow **Reagents & Supplies** (see $\[\]$ <u>section 4.12</u>).

If you select a suggested budget, a table opens to display budget details.

You can also add a comment for the people who manage orders.



Once validated, the ordering request is entered in the order list.

Clicking on the [5] icon will take you to the order list. See the following sections for details.

9.2 Ordering from other modules

It is possible to use the order system from *Strains & Cells, Plasmids, Primers, Antibodies, Animals and Chemical Structures (molecules)* modules. Each record from these modules can be associated to and replicated into the Reagents & Supplies module.

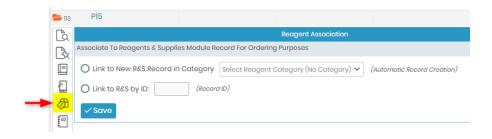
Then ordering can be performed from within the Reagents & Supplies module as any other reagent or directly from the parent record.

lacktriangledown This icon lists the lots as from the Reagents & Supplies module directly into the parent module.



This icon gives access to ordering and reagent information taken from the Reagents & Supplies module directly into the parent record.

When no reagent association has been defined a prompt will be provided for it. It can create an automatic entry in the Reagents & Supplies module or you can indicate which existing reagent record to use with this record. (See figure below).

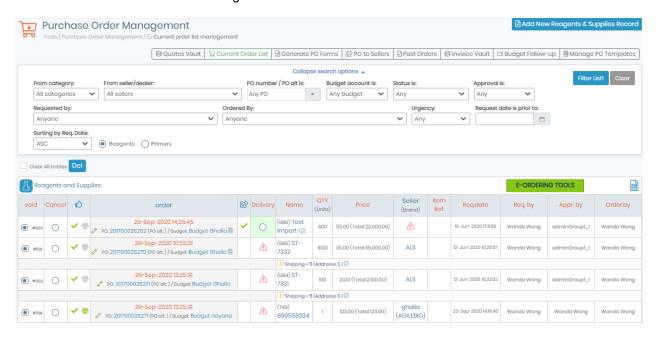


9.3 Purchase order list management

Through the Purchase Order Manager, you will be able to manage an order, to order reagents and products directly from different sellers (Sigma, VWR, Life Technologies, Qiagen and Storage Accessories), to manage and generate PO forms, to manage lots and invoices.

See our KB: Purchase order management.

Go to Tools → Purchase Order Management.



On this order list you can see your "Reagents and supplies orders" and your "Primer synthesis orders".

The order list can be exported to Excel in the same manner as for \square section 9.3.



Depending on your permission level, you may only be able to see your own orders list. To view, search and filter all the orders lists you need to be logged in as an administrator. This is also subject to the permissions of your group.

9.3.1 Manage an order

The Order Management process flow is as follows:

Item order requests → Cancel or Approve items → Assign PO number → Generate PO Document → Order by sending PO to Seller → Receive Delivery or Cancel order

1. Once items have been added to the order list they can be approved or canceled. Approval of an item depends on the total cost of the item (see sections 9-1-1 and 9-1-2). Once approved the requester will

be notified by email. Add items that you want to order by clicking on on and write the internal PO number or use to create one. PO number assignment remains optional.



PO numbers

Go to: Admin → Preferences → Reagents and Supplies ☐ PO number editing Allow change on current orders: ③ ON ○ OFF

Update & Save



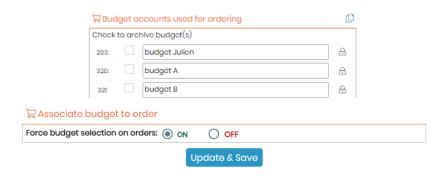
All items sharing the same PO number are gathered on the same PO form.

PO numbers cannot be reused after a PO has already been formatted

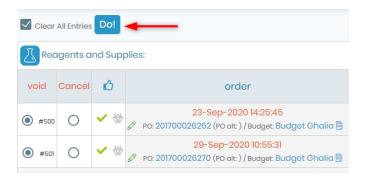
2. Each ordered item can be assigned to a budget reference.

A Note

You can manage budget accounts through *Preferences* \rightarrow *Reagents* & *Supplies* \rightarrow *Budget*. Budget assignment can be made mandatory in *Preferences* \rightarrow *R* & *S* \rightarrow *Associate budget to order.*



- 3. If you have a discount on your product purchase, you can add it by filling Discount: _____ icon.
- 4. When your purchase order is done click on Process Selected Changes



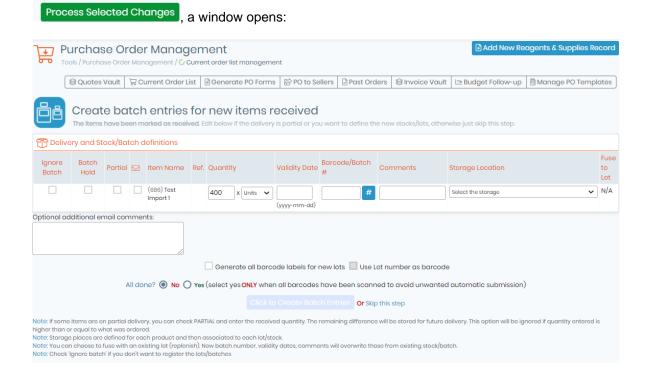


You can clean the whole list using "clear all". Items go directly to "Past orders" if you confirm your action.

If you use the Budgets Follow-up tool, once orders are requested, the amount will be added to this tool.

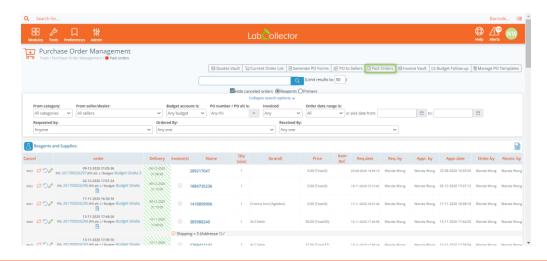
To do another order, use the same process.

4. You can also manage the delivery by clicking on delivery when your products arrive. Then, click on



- "Ignore batch": check this if you do not want to register the lot/batch.
- "Batch Hold": check this box if you wish to keep the batch in quarantine.
- "Partial": click on it if some items are on partial delivery, you can check it and enter the received quantity. The remaining difference will be stored for future delivery. This option will be ignored if quantity entered is higher or equal to the amount ordered.
- Click on the checkbox under the envelope to send an email to the requester to alert them that their order has arrived.
- You can add item "Validity date", "Barcode/Batch" and "comments".
- You can also define "Storage location" and fuse this new lot with an existing one.
- "All done?": choose between NO or YES (when all barcode have been scanned to avoid unwanted automatic submission).
- If you don't want to fill out this form you can "Skip this step".
- 5. Once order is marked as "Delivery", it is removed from order list and placed into the database.

This menu will give you access to browse or search the past orders history. You can also check for canceled orders. You can review PO forms and prices by order date. Several filtering options are available, including a free text keyword field and a date field to make a search on a defined period.





Records from Reagents & Supplies module cannot be deleted if present in order list (past or current)

9.3.2 Order directly from Sigma, VWR, Life Technologies, Qiagen and Storage Accessories

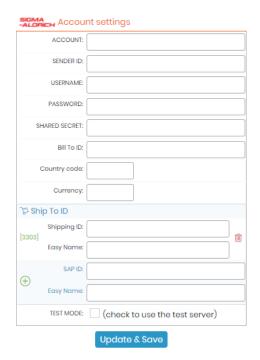
LabCollector allows you to order your supplies directly via Sigma, VWR, Life Technologies, Qiagen and Storage Accessories. This E-ordering tool has direct punch-out orders to suppliers. To do that, put your items in the order list as above and go to the Purchase Orders Management menu.



Before using this service, you have to define your account settings through "Preferences à Reagents and Supplies" (section 4.12).

In this menu, there are 5 buttons that you can use to order directly:

• Sigma Aldrich:



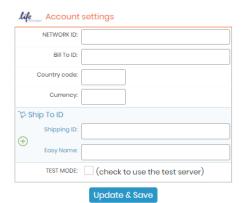
Complete this form and click on *Generate File and Send Order*. Your order will be sent directly to Sigma Aldrich.

VWR:



Complete this form and click on Generate File. Your order will be sent directly to VWR.

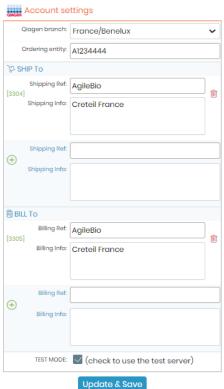
• <u>Life Technologies:</u>



Complete this form and click on *Generate File and Send Order*. Your order will be sent directly to Sigma Aldrich.

• Qiagen:

Complete this form and click on *Generate File and Send Order*. Your order will be sent directly to Qiagen.



• Storage Accessories:



Complete this form and click on *Generate File and Send Order*. Your order will be sent directly to Storage Accessories.

9.3.3 Manage PO templates

LabCollector uses templates in order to generate a dedicated PO that follows your company or institute guidelines. They can either be HTML or Excel files.

Simply navigate to: Tools → Purchase Orders Management → Manage PO Templates

The table below lists all pointers recognized by LabCollector:

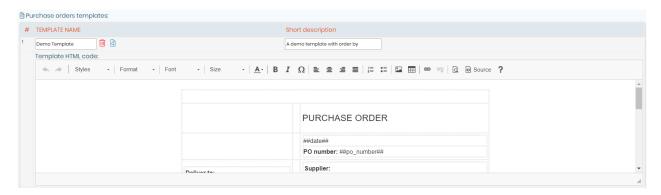
TAG	Replacement action in template
##date##	Inserts date (yyyy-mm-dd)
##date_dd-mm-yyyy##	Inserts date (dd-mm-yyyy)
##date_mm-dd-yyyy##	Inserts date (mm-dd-yyyy)
##items##	Inserts ordered items list (table with name, seller
	reference, quantity and unit price)
	Inserts ordered items list (table with name, seller
##itemsandrequesters##	reference, quantity and unit price) + indication of
	users who ordered/requested
##total order##	Total amount of the order (sum of the item prices
	x quantity)
##quote_number##	Inserts QUOTE number
##po_number##	Inserts PO number
##order_by##	Inserts name, email and tel of the person who
·	ordered (place it on each item line) XLS*
##po_number_barcode##	Inserts PO number as barcode
##comment##	Inserts comment
##budget##	Budget account reference (global)
##budget_line##	Budget account reference (for each item line) XLS*
##shom_nomo##	Item Name XLS* (name or ref are mandatory top
##chem_name##	column)
##abam rof##	Item reference XLS* (name or ref are mandatory
##chem_ref##	top column)
##cas_number##	CAS XLS*
##qty##	Item quantity XLS*
##item_pack_size##	Item packaging size XLS*
##chem_seller_price_original##	Unit price XLS*
##chem_seller_price##	Unit price discounted XLS*
##chem_special_code##	R&S Code XLS*
##discount##	Discount rate XLS*

##brand_name##	Brand name XLS*
##seller_company##	Seller company name
##seller address##	Complete seller mailing address (Name,
##Sellel_address##	company, street, post code, city, country)
##seller_email##	Seller email
##seller_tel##	Seller telephone number
##seller_fax##	Seller fax number
##{custom_field}##	Replace {custom_field} by the database name of custom field of type TEXT XLS*

*XLS: Applies only to Excel templates.

HTML templates:

- Click on Manage html templates (located on the top right corner), to see all your HTML templates, you can also create new ones, edit/delete already existing ones.
- Templates are coded in normal HTML language, specific LabCollector pointers/tags can then be implemented to add dynamic information. Simply place these pointers (listed above) anywhere in the template where you need the corresponding information to appear.
- Click on the red trash bin icon to delete a template.
- Click on the blue magnifying glass icon to preview your template.



Excel templates:

- Click on Variable Street templates (located on the top right corner), to see all your Excel templates, you can also create new ones, edit/delete already existing ones.
- To add a new Excel PO templates, simply fill in the "Template name" and add a "Short description".
- Click on the red trash bin icon to delete a template.
- Click on the blue arrow icon to download a template.



Tips / Hints

- Place tags as cell names in Excel templates. Data needs to be inserted as follows: For example, ##seller_tel## needs to be written as 'seller_tel'.
- Choose Excel engine. For simple Excel templates, use "Generic". For complex Excel templates (with
 macros, protections, signatures ...), you must use "Windows COM" library. This requires MS office to
 be installed on the server.

A Note

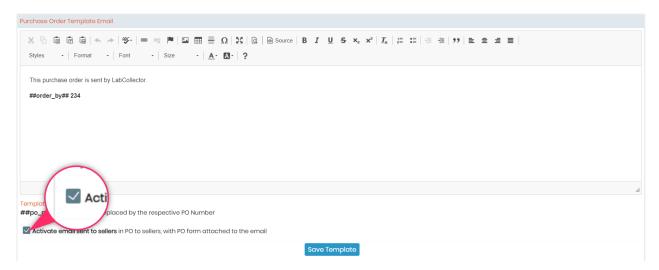
Item Name (##chem_name##) and item Reference (##chem_ref##) tags need to be inserted at the top of your XLS PO templates.

Warning

Name the excel sheet as: LabCollector

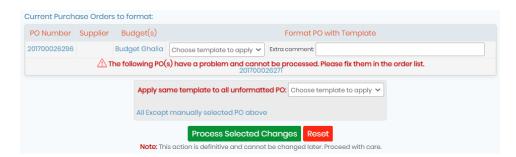
Pay attention to the uppercase of the L and C, since is case sensitive.

You can also find an option to activate automatic emails that will be sent directly to sellers (located at the bottom of the page). Plus, you can configure your own PO template email as you require.



9.3.4 Generate PO forms

- 1. Do your order by following Usection 9.1.3.
- 2. Click on Generate PO Forms



3. Choose the PO template you want to apply to your purchase order. You can also add extra comments.

If you have several POs that are not formatted you can choose to "Apply same template to all" by checking this case.

A Note

PO numbers that have been assigned to items with different sellers cannot be processed. Ensure you have only items for the same seller included in a single PO.

- 4. Click on "Process selected changes".
- 5. If you want to download and see your purchase orders go back to your "Current Order List" and click on



Example of Excel PO form after automatic formatting.

9.3.5 Lots management

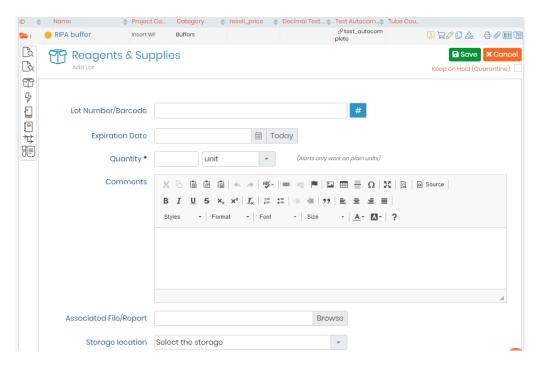
When you order items it is useful to trace each lot. You can manage quantities and expiration dates in this way.

Users can also add and edit comments on lots to provide notes on quality assessments for the reagents used in the lab. User and date stamps are also stored each time a unit is removed to give some view on the product usage rhythm.

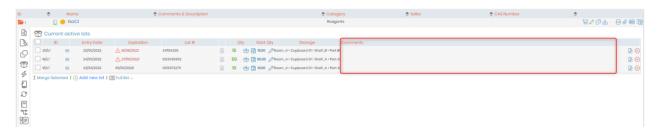
Click on this icon on the left part of the record data you wish to list and manage the corresponding lots. Lots can be searched for by original or LabCollector assigned-barcodes.



Lots can only be edited/removed following the rules chosen in Reagents & Supplies preferences. Lots must have original barcodes entered for a search on the original barcode to work.



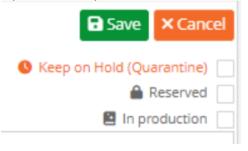
You have the ability to add a comment in the "current active lots" section for any record inside R&S. (See screenshot below).



Lot management is linked to the alerts system. See the chapter on QQ section 4.2.

For additional information, please see the KB: lot management and KB: for lot disposal.

New! In *Reagents&Supplies* model you have specific status that you can select when you create a lot. For instance: i) On Hold (Quarantine); ii) Reserved; iii) In Production.

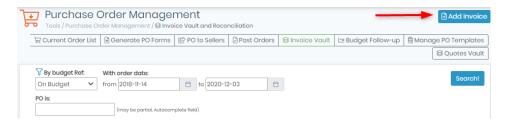


9.3.6 Manage Invoices

In the Purchase Order Manager, you can manage invoices through the "Invoice Vault" tool:

To save an invoice, you need to:

1. Click on the "Add invoice" button.



- 2. Fill out the form with your information: PO number, Seller invoice number, Invoice Date, Real invoice value (that will replace order lists amount see <u>Section 9.1.2</u>) and import an invoice scan.
- 3. Validate by clicking on the "Update" button.

Your invoice and notifications are now saved in LabCollector database and displayed in the budget follow-up tool.

If needed, you can use the search engine to find what you are looking for.

9.3.7 Primers specific ordering management tool (synthesis order)

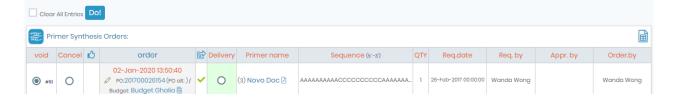
Primers can be ordered like any other reagent (see above) or be ordered through the specific ordering icon.

This icon inserts an ordering request on the primer synthesis order list.

This icon means that a synthesis order has been placed and links to the order list.

The synthesis order list looks the same way as for reagents, but includes the sequence and eventual primer labels. Primer supplier is not mentioned as it is usually unique for all the lab or institution. It also does not generate lots.

Tools → Purchase Orders Management



10. Tools

10.1 Storage Browser

For detailed information please read section 6.

10.2 Barcode Label Series

LabCollector offers the possibility to print several barcode labels at once.

Please read our KB: on compatible printers with LabCollector.

With the Memorize Records functionality, you can search for records in a module, click on the memorized items icon and go to **Tools** → **Barcode labels series** to print a batch of barcodes. Record IDs are automatically added to the barcode labels series. If you don't want to use these records, click on clean and select other records.

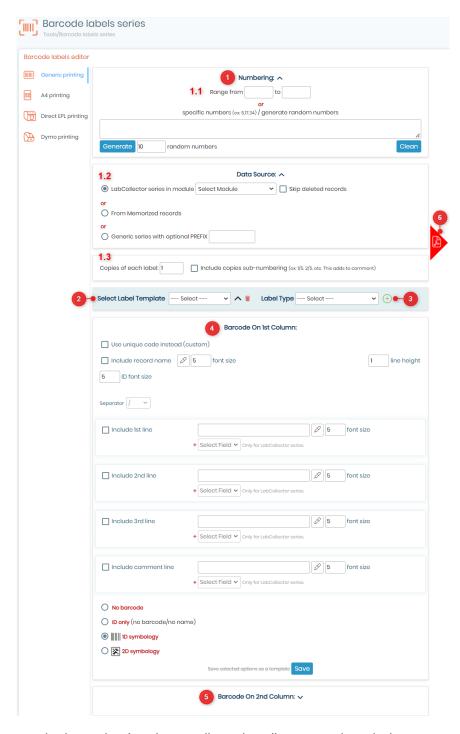
Please read our KB: on how to configure a printer with LabCollector.

For Brady and Zebra printers you can use a "Raw Network bridge" utility by LabCollector in order to connect to the printer.

Please check our KB: on how to connect to a USB printer.

10.2.1 Generic printing

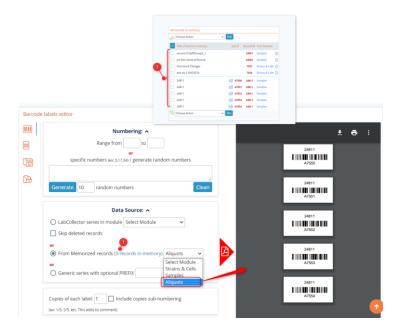
Generic printing:



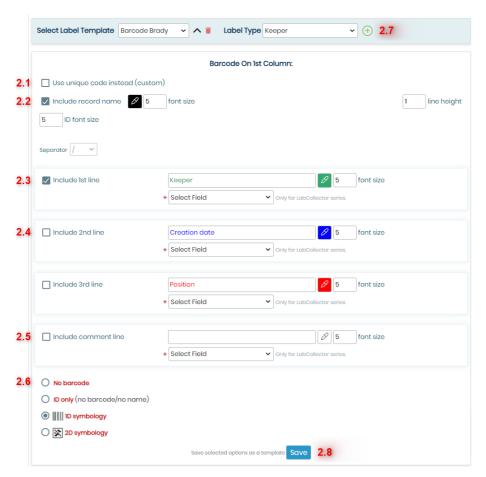
- 1. Choose your numbering option (continue or discontinue list or generic series).
 - 1.1. You can choose the range of the records ID or specific numbers or you can generate random numbers.
 - 1.2. Here you can choose the series from any module in labCollector. You can choose to skip deleted records or from memorized records or a generic series with a prefix.
 NEW!: Now you can also skip the barcodes for deleted records.

环 Tips / Hints

You have the possibility to manage and print all memorized items at once. (As shown in the screenshot below).



- 1.3. You can choose how many copies of the label you need.
- 2. Here you can create or select the template associated with the label. To create the label template click on the icon, and you will see the below drop-down. *In the below example we have created the fields for example purposes.



- 2.1. You can choose to use the unique LC code of your record within the first column.
- 2.2. Here you can choose to include the record's name and even choose its color, font size and line height.



The maximum line height you can set for 1D barcode is 3.

- 2.3. You can choose the 1st line options with the field you want + 1 field of choice from the drop down with its color and font size.
- 2.4. Here you can check the box to include a 2nd line and choose the field you want + 1 field of choice from the drop down with its color and font size.
- 2.5. This option includes a comment with the field you want + 1 field of choice from the drop down with its color and font size.
- 2.6. Here you can choose whether you want no barcode, an ID only or you want a 1D or 2D barcode.
- 2.7. You can choose the labels. You can add new labels with the ⊕ sign or *Admin* → *Other* → *Setup* → *Printer* & *labels*.
 - See our KB: how to add label types.
- 2.8. Once you have added the option of your choice you can click on save the template and you will see the below pop-up to name the template. You can also choose to set the template by default. Once you name it you can click on save.



- 3. Here you can select or add the labels.
- 4. The choice of template you made in point 2, will be the barcode one where you can select to add the record name with color and font size and if you want a barcode or 1D or 2D barcode.
- 5. You can choose 2 barcodes by selecting the barcode. You can choose the name of the record or duplicate the information from barcode on 1st column.
- 6. You can click here to print the pdf. See the example image below. The settings are same as the *point 2* image above.

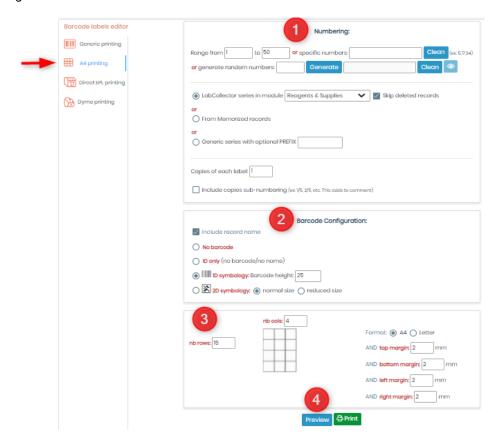


NEW!: You have the option to include the project code of your record when label printing, you must first enable the "project code" field in your module, by going to "*Admin -> Custom fields*", when you are ready to print your record label, all you have to do is include the project code as a line within your label.

NEW!: You also have the ability to add the main storage box positions, main storage box, box details and even box ID to your labels, by simply selecting the corresponding field in any of the lines.

10.2.2 A4 printing

A4 printing:



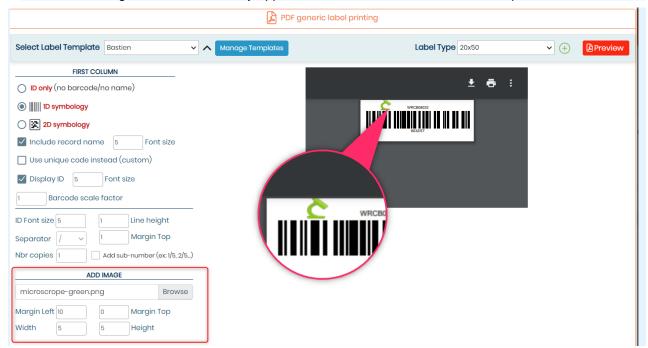
- 1. Its the same as for generic printing. See U section 10.2.1
- 2. You can configure to have no barcode or 1D, 2D barcode.
- 3. You can choose the organization of barcodes on an A4 size paper. Here you can define the number of rows and number of columns, which format you want (A4 and letter), and you can define the margin from 4 sides of paper.
- 4. Once you are done you can directly print or preview the barcodes. If you preview, you will see the barcodes like below. (*Below is just an example, your barcodes may vary according to the setting in above image).



Note

LabCollector now offers you the ability to insert images within labels. This feature allows for more visually appealing and informative labels. Here's how you can insert images into labels and configure various parameters:

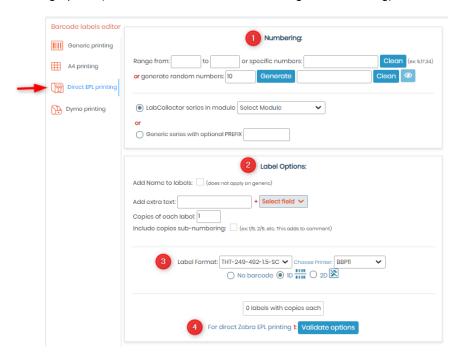
- Select Image: Users can select the option to insert an image into their label. This option is located in the 'ADD IMAGE' section (as shown in the screenshot below).
- Choose Image: Upon selecting the "add image" option, users can browse their system to choose the
 desired image they want to insert into the label.
- Set Margin Left and Top: Users can configure the margin of the inserted image from the left and top edges of the label. This adjustment allows for precise placement of the image within the label area.
- Define Width and Height: Users can set up the width and height of the inserted image to ensure it fits appropriately within the label and aligns with the overall design.
- Preview and Test: Before finalizing the label design, users should preview and test the label with inserted images to ensure that they appear as intended and meet the desired specifications.



10.2.3 Direct EPL printing

• Direct EPL printing:

Choose your numbering option (continued or discontinued list or generic labeling).



- 1. Its the same as for generic printing. See Section 10.2.1
- 2. Here you can choose the label options.
- 3. You can select the label type and printer to print barcode (1D or 2D).
- 4. See our KB: how to add label types.
- 5. Once you are done you can click on validate options. Roll types need to be defined before through *Admin → Setup → Network Printers.*



Barcode symbol is fixed by the printer preferences in Admin \rightarrow Setup \rightarrow Network Printers.

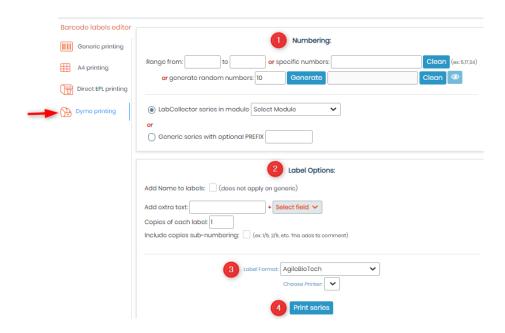
10.2.4 Dymo printing

Dymo printing:

The Dymo LabelWriter 450 Turbo (US model) is a plug and play printer. Dymo is a local printer, so the printing should be ordered from the local computer connected with the Dymo.



LabCollector only supports this model at the time of writing this manual.



More information on Dymo printing is available in our **EXE**: how to use the Dymo and customize Dymo label template tags.

10.3 Purchase Order Management

For detailed information see section 9.

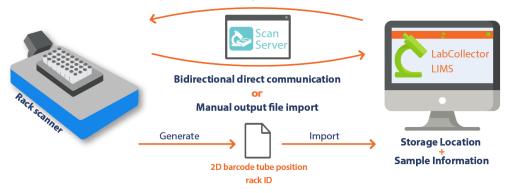
10.4 Batch Generator (Rack Scanner)

On the home page you have access to a special Add-on tool to generate a rack/tray to be loaded into LabCollector. This accelerates sample registration with direct storage definition.

This tool has three usage modes:

- 1. Direct
- 2. Manual import
- 3. Generic map generation

From Batch Generator (Rack Scanner) Tool, use the direct command to scan your racks and import them into LabCollector.



10.4.1 Direct Scanner Trigger

This tool allows direct imports of scanned well rack/trays from several manufacturers. Trays/racks have Datamatrix (2D barcodes) pre-labeled unique tubes or RFID tagged tubes. The scanner generates a rack/tray map file that is loaded into LabCollector.

This accelerates sample registration with direct storage definition. LabCollector recognizes scanner file

formats automatically. You can connect it to Scan server which is a server listener from AgileBio, that helps connect Rack Scanners with Scan servers.

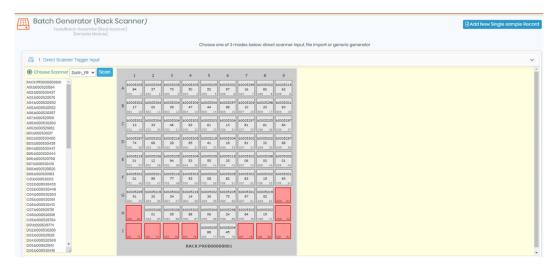
Please read out KB: how to configure Scan server with LabCollector.



This tool is compatible with many suppliers of precoded tubes and scanners including Micronic, BioMicroLab, FluidX, Thermo, Ziath, Biotillion Please see our KB: how to connect to FluidX, Ziath and Micronic Traxer rack scanners.

- Tool → Batch generator (Rack Scanner)
- 2. Choose your scanner in the "1.Direct Scanner Trigger Input" section.
- 3. You can generate a new tray entry or existing tray/rack update (check option part).
- 4. Click on "Scan!". The rack/box map preview appears.
- 5. Click on "Process" to complete the import.

When using direct trigger you will view the scanner output directly.

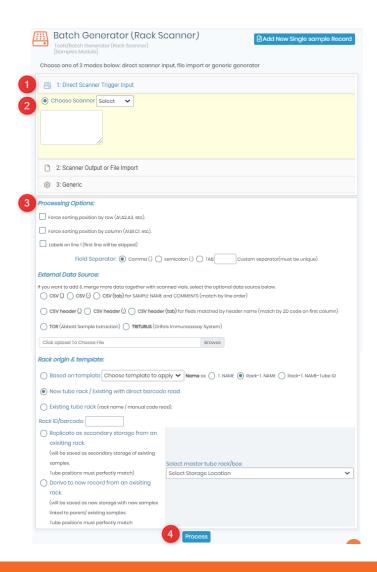


10.4.2 File Import

It is also possible to import rack/box maps from files (scanner output, CSV or Excel).

- 1. Go to the "1.Direct Scanner Trigger Input" section.
- 2. Choose the file to upload (TXT or CSV). Check the Field Separator option in "Processing Options" part.
- 3. Choose your file format.
- 4. Click on "Process" to complete the import.

All the steps are explained in our **EXE**: section: Scanning the rack.

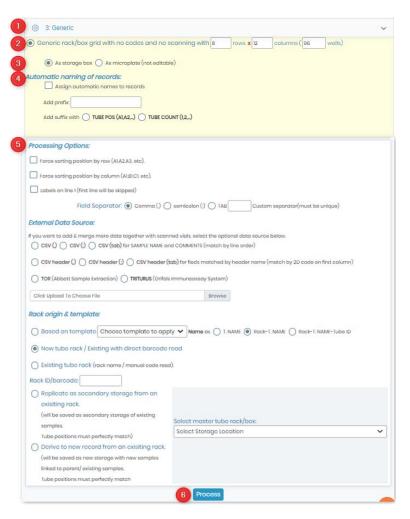


A Note

This tool is compatible with many suppliers of precoded tubes and scanners including Micronic, BioMicroLab, FluidX, Thermo, Ziath, Biotillion Please see our KB: how to connect to FluidX, Ziath and Micronic Traxer rack scanners.

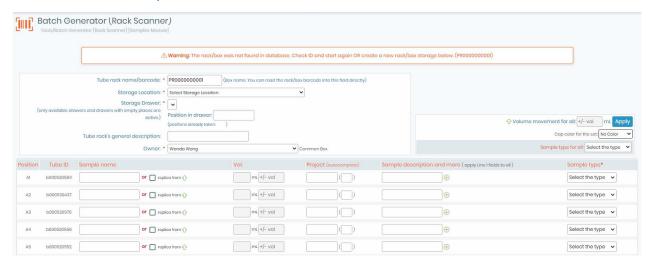
10.4.3 Generic rack/Box import

This section allows you to define different sizes of boxes/plates filled with samples in an easy single form.



- 1. Go to the "3. Generic" section.
- Indicate the rack/plate size (rows x columns).
- 3. Choose to import as a storage box or microplate.
- 4. Automatic naming of records can be chosen in this section.
- 5. You can specify other choices in the "Processing Options" section.
- 6. Click on "Process".

10.4.4 Process rack import



- * Red asterisks represent fields that must be filled.
- 1. Give a rack name / box name / plate name or ID.
- 2. Choose a storage location for the rack / tray /plate.
- 3. Identify the drawer where the rack is stored.
- 4. Define box owner. Check "Common box" if you want to share your data.
- 5. A cap insert color could be chosen.

Fill in sample name, sample type, sample volume and project name/number (can be selected individually or can be chosen for all). Mouse drag can be used to multiple checks.

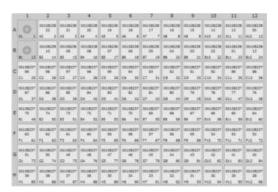
A sample description can be added, click on green icon to display more fields.



1. Go to the bottom of the page to validate the data import.



- 2. "Click to submit form" to finish.
- 3. The rack/box layout is displayed.



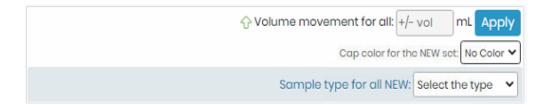
4. Click on the name of a sample to display details.

A Note

Check the color code on the rows. Unique 2D codes are checked and therefore should not be replicated. If existing codes are found the row color will be RED, ORANGE, GREEN or BLUE as described. Overlapping tubes on taken positions will be indicated by a blinking attention mark.

10.4.5 Volume deduction

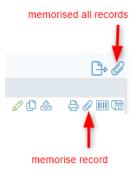
You can use the Sample Batch tool for automatic volume deduction. You just have to scan a rack with existing tubes and complete the "Volume taken to all" section before submission.



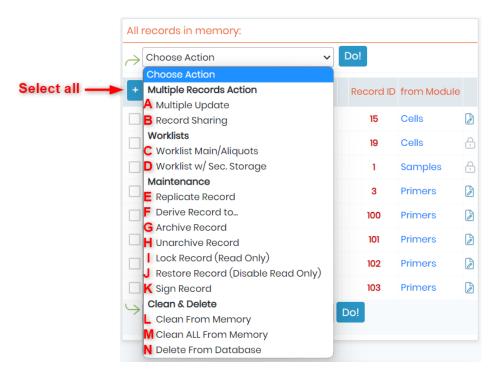
10.5 Manage memorized items

In all modules, you have the possibility to memorize records to process them in batch.

- 1. Go to the module of your choice.
- 2. Memorize records one by one with the icon @ (in tabs on the right hand side) or do a search and memorize the result with the same icon on the top of the list.



3. Then, in *Tools* → *Manage memorized items*, you select all or a part of your memorized records (check box), you choose one action in the select list and click on **Do!**.



A. Multiple Update: with this option, you can mass update multiple memorized records at once. First, you will have to select them, then it'll ask you to choose the module to which they belong (in case multiple modules were detected), then you will have to choose the fields you want to update, and finally click on "next" to input your changes.

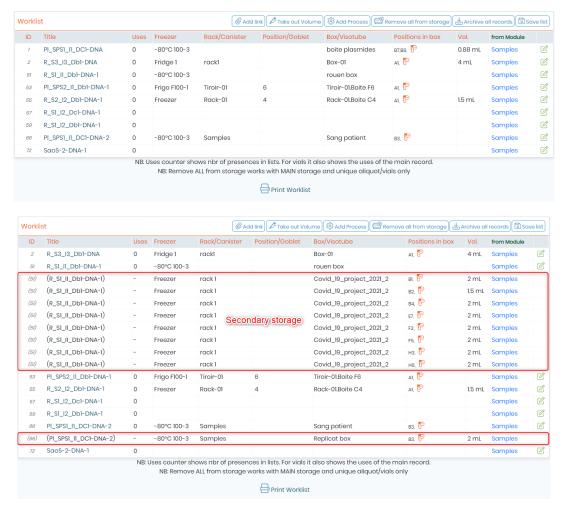
B. Record Sharing: you also have the option to share the memorized records with secondary owners or even other groups.



If records that belong to a module with disabled "secondary owners" were detected, they will be ignored, and therefore not shared.

- C. Worklist Main/aliquots
- D. Worklist w/sec storage

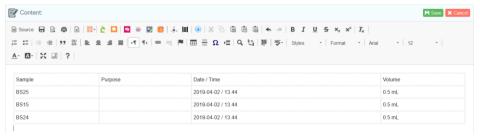
Records with secondary storage will each have a row in the following table. If secondary storage is not selected, only a single row will appear for the record, even if secondary storage is defined.



With this worklist, you can:

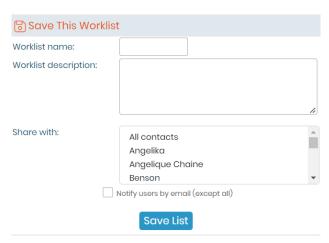
- Add a link (normal link on the bottom of each record) in batch. For example, link a set of primers to a DNA sample. Please refer to section 7.5.1
- Take out volume by clicking on the corresponding button (for more information, please refer to section 7.4.3). When you use this function in batch, you can access to a summary table that you can print or easily copy to use in our ELN for example.





- For samples worklist, add a process to all data by clicking on the corresponding button (for more information, please refer to section 4.11.1).
- Remove storage by clicking on the corresponding button. A popup will ask you for main, secondary or both types of storage.
- Archive records by clicking on the corresponding button (for more information, please refer to section 7.5.1).

Your list can be printed and/or saved by clicking on the dedicated icon. When you save a pop-up will open and you can name your worklist, add a description and define restricted access.



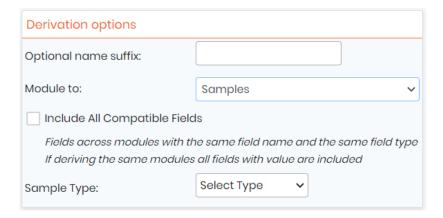
Saved lists are available through *Tools* → *Lists and series*. See $^{\square}$ section 10.8.

E. Replicate record

F. Derive record to. Select, in the section below the list of memorized records, the module where you want to create the derive records and an optional name suffix.

NEW!: You now have the possibility to include all compatible fields when deriving a record into another

module.



Note

If you derive in Samples module, you also have to select the sample type.

- G. Archive record directly (Careful, there is no step of validation).
- H. Unarchive record
- I. Lock record. Terminate record Edition
- J. Restore record
- K. Sign record



It is possible to perform all these actions in batch in any module.

- L. Clean from memory
- M. Clean ALL from memory



If you need to work with a different list, clean the records (check the correct box(es)) or all records from the memory.

N. Delete from database

As for the other delete action, if a record has a link or storage, it can't be deleted.

For more information, see our KB: delete data.

An edit icon appears on worklists and in Manage memorized items page allowing the modification of records one by one.

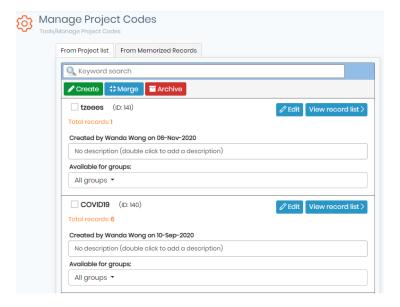


Non-admin users cannot delete, archive or lock records through **Tools** → **Manage memorized items**.

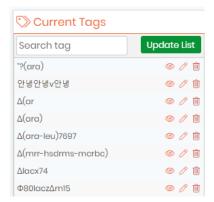
10.6 Manage project code

The Manage Project Codes page tool allows you to search records by project code, create codes and merge projects. The tool also works with memorized records.

You can also create projects and associate them to groups (group rules are applied).



10.7 Manage Genotype tags

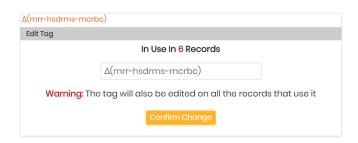


Super-administrator and administrators can:

Check where the tag is used



Edit the tag



Delete it



Remember to update the list before using it.

Staff + users have only the possibility to check tag use. Other user levels can't access to this area.

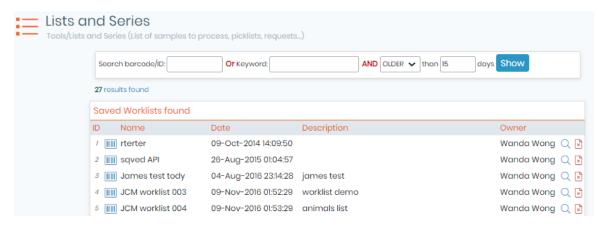


When the genotype tags are imported, they have to be separated by a space.

10.8 Lists and Series

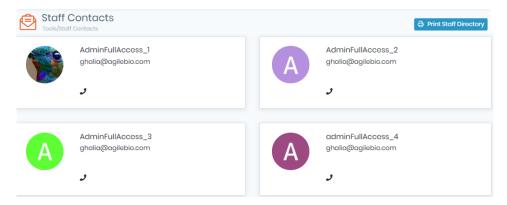
Here, you can retrieve all the lists of records and have the list available later to edit with ${ extstyle Q}$.

Each list has a barcode allowing to be searched more easily.



10.9 Staff Contacts

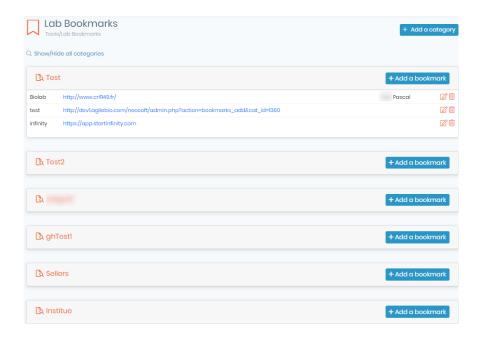
Consult or print your staff list easily.



10.10 Lab Bookmarks

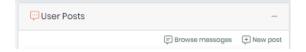
Bookmarks can be added by clicking on the define category, refer to section 4.13.

You can also edit or delete @ @ each bookmark.

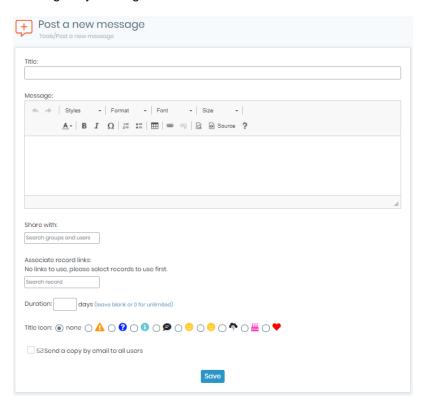


10.11 Message center

A simple and practical messaging system allows users to post messages addressed to everybody on the main page.



Users can add new messages by clicking on the PNew post .



Messages can be formatted as on any word processor. Messages can automatically be removed with a time limit expressed in days. A small icon can be selected to give some extra visibility to the message title

on the messages' list.



Finally, messages can have links to LabCollector records. This can be useful to link to additional information or data commented in the message.

For example, you may want to link to a registration form for a meeting reminder message.

To use this, users must first memorize records (using the memorization icon on search results) to link before creating a new message.

You may associate an icon to the message to help users understand the intent.

You can also use From messages icon to browse messages.

10.12 Recipes/Production

This "recipe" tool is available to manage production of media, complex reagents, product assemblies and much more. This recipe tool is based on a catalogue of recipes with the components from specific lots within Reagent & Supplies module defined for each "recipe".

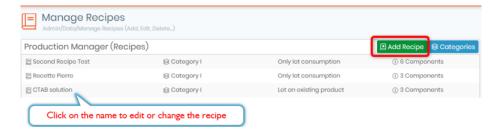
Before using Recipes, they must be set up and created by a user with admin access by using $Admin \rightarrow Data \rightarrow Manage\ Recipes$. In addition, several records with lot/batch information must also exist in the Reagents & Supplies module.

Only the super-administrator and administrators can create recipes (Part 1: Section 10.12.1). All users can then use these recipes (Part 2: Section 10.12.2).

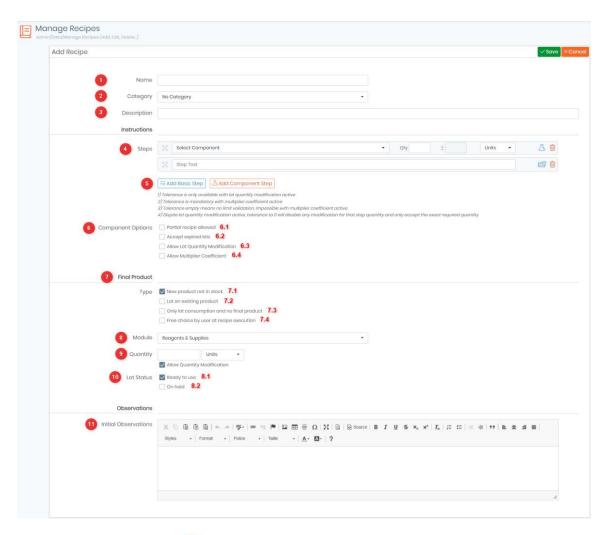
10.12.1 Managing Recipes

Part 1: Managing Recipes

With admin or super-admin access navigate to *Admin → Data → Manage Recipes*. You will be presented with this screen:



On the first use, you will only have the option to add a new recipe. Clicking 'Add New' will provide a screen to define a new recipe:



All the steps are explained in the KB: recipe manager.

- 1. A name of the recipe.
- 2. The category for the recipe.
- 3. Description of the recipe must be provided.
- 4. Here you can see all the steps, whether they are basic or component steps, you can also select the quantity, tolerance and the unit you are working with.
- 5. You can select to add a basic step or a component step.

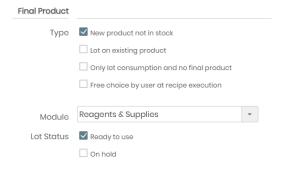
After a component is selected, options must be selected for the recipe. The quantity (Qt) and unit (if one is given in the reagent lot) must be specified.

- 6. Component options: You can also decide if:
 - o Partial recipes are allowed
 - Only lots within their expiration dates may be used
 - o Quantities modification are allowed.
 - Allow Multiplier Coefficient: by activating this options, the quantities of your recipe components will get multiplied by the factor you have defined.

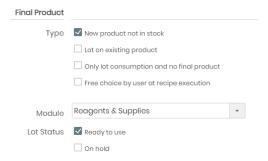
Click on the icon Add Component Step to add and define additional components.

- 7. Final Product type choose from four options.
- New products not in stock: this allows the user to add a new record in the module specified in Module
 dropdown and add a new lot in that record. Only the Reagents & Supplies module will have the Final
 Product Lot Status option. Putting the lot on hold will automatically assign the lot a quarantine status.

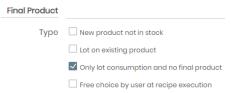
You can indicate an expiration interval in days (from the recipe production date) to automatically set up the expiration date.



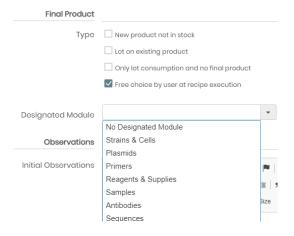
• Lot on existing products: this allows the user to add a new lot to an existing record in the module chosen in the *Module* dropdown. Again, only the Reagents & Supplies module will have the Final Product Lot Status option. Putting the lot on hold will automatically assign the lot a quarantine status.



• Only lot consumption and no final product: as stated, there is no final product.



Free choice by user at recipe execution: the user gets to choose whether to add a new record or add it
to an existing one if the Final product module is Reagents & Supplies. The module can be left as a
choice as well or it can be designated here.



- 8. You can choose the module you want to assign the recipe to.
- 9. You can select the quantity of your final product, and choose whether you want to allow quantity modification or not.

- 10. This option allows you to change the lot status.
- This allows you to use the recipe directly that you have created.
- This option allows you to hold the recipe and not allow it to be used. This can be done for example
 when you want to save the lot for a specific experiment.

11. Observations: this section allows the user to add instructions on the method of the recipe or any other information needed.

After all components and options have been entered click "Save" to save the recipe.

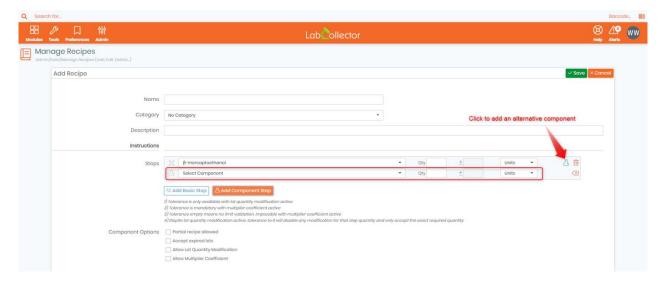
After saving, the recipe will appear in a list when navigating to $Admin \rightarrow Data \rightarrow Manage\ Recipes$. The recipe will also be available for other users who can find it by navigating to Tools \rightarrow Recipes/Production. The recipe manager provides the option to select a recipe to edit and to view the list of recipes.



- 1. List of recipe names. Clicking the recipe name will navigate to the full recipe details where you will have the option to edit the recipe.
- 2. Recipe description.
- 3. Final Product option.
- 4. Number of components. Hovering the mouse over the number of components will reveal the record names of the reagents and supplies required for the recipe.
- 5. Button to add a new recipe.
- 6. To view categories.

NEW!: When there are multiple products coming from different suppliers for the same component, you may choose to add an alternative one inside your recipe step by clicking on this icon located to the right of the component step (See screenshot below).

NEW! Recipe now allows multiple lots and takes into consecration lots status i.e. on hold (quarantine), on production and reserved.



NEW!: You can now use generic quantities, by clicking on located to the right of the basic step, you can then input the quantity and the corresponding unit.

Tips/Hints

You now have the possibility to show the seller and/or brand when adding a component step, by going to *Preferences -> Reagents & Supplies -> Recipes*. (See screenshot below).



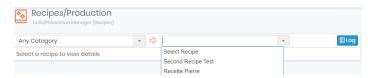
New! Recipes now have an option to calculate the recipe cost!

10.12.2 Using Recipes

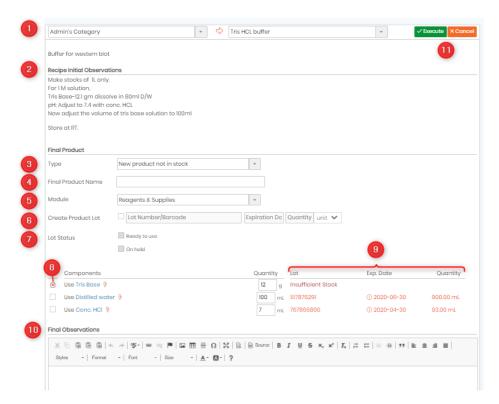
Part 2: Using Recipes

After recipes have been created, the recipe tool may be used. First, navigate to *Tools* → *Recipes/Production*.

The production Manager/Recipes main screen is a simple search tool. This provides an option to search for a recipe by categories from the list (created in part 1). The page also allows you to navigate to the log of recipes that have been used (see log section).



The recipe selection search bar is both an autocomplete and dropdown menu. Type in the search bar to see autocomplete results or click to view all recipes. After selecting a recipe the following screen will appear.



The screen shows the following:

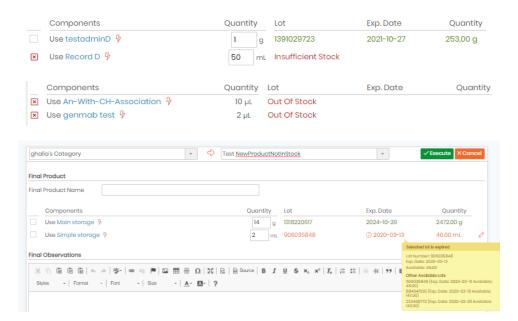
- 1. The recipe category and name.
- 2. The recipe initial observations.

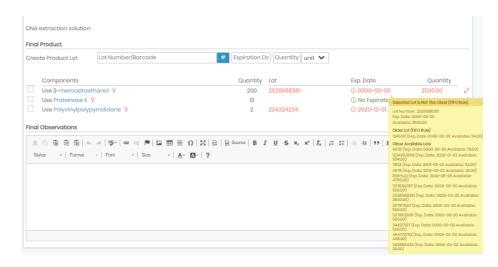


In case of free choice, there are 3 options to choose from New product not in stock, Lot on existing product and Only lot consumption and no final product.



- 3. To select the type of new product.
- 4. Place to enter the name of the final product.
- 5. Module selector for where the recipe product record will be created
- 6. Fields to add new product lot information: number, expiration date, quantity. Depending f the options, but expiration can be not editable.
- 7. Choose the status of the lot Ready to use or On hold.
- 8. Users must check the box to confirm use of each component
- 9. Details of lot, validity and initial and needed quantities of each component. Depending of the options, the quantity can be modified. The entries are color coded to make it clear if quantities and validity are appropriate for the recipe.





Hovering the mouse over the lot or validity information will provide information about the current lot and other available lots. If present, clicking on the icon of a component will allow a selection of a different lot to use.

- 10. You can also include any final observations for the recipe if you have.
- 11. Clicking the "VEXECUTE" button will confirm the recipe. Using "VEXECUTE" button will cancel your action. A new record will be created with links connecting to each component. A log entry will be created. Quantities will be deduced from the indicated lots.

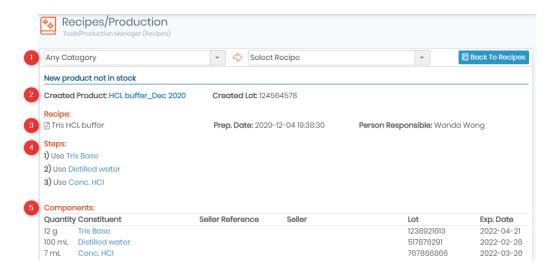
If you attempt to Execute a recipe with a lot that has a warning of some kind you will be blocked or forced to confirm despite the warning with a screen such as this:



After completing a recipe the following screen will appear to indicate the record was created and provide two links. One link will take you to the newly created record the other is a direct link to download a recipe report.



You may search the history of recipes that have been used by selecting log from the home screen of the Recipes.

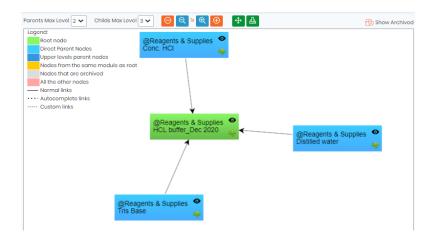


The log may be searched and will show which components were used as well as lots and quantity information. Each component and product may be clicked to go directly to the relevant record.

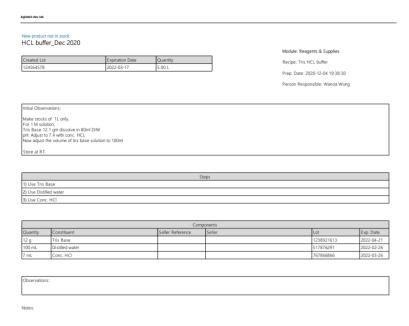
- 1. Search for the category and recipe.
- Indication of the Final Product type New Product not in stock/ Lot on existing product/ Only lot consumption and no final product. Created Lot and Product. Clicking on the hyperlink will navigate to the product record.
- 3. You can download the recipe pdf file. You can also see the prep date and person responsible.
- 4. Different steps performed to make the recipe.
- 5. List of components with lot number, quantity and expiry date. Clicking will navigate to each component.

An example of a record for a product with links and the tree view showing the connection of the components to the product.





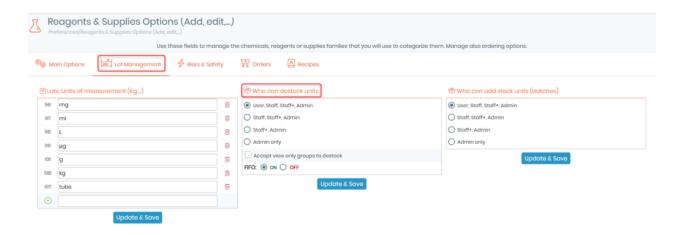
An example of the PDF report:



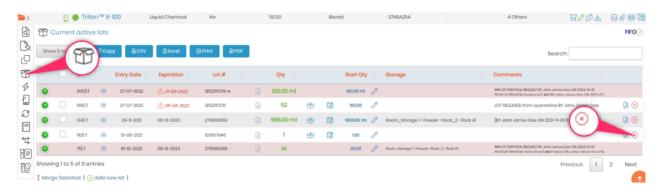
10.13 Disposal List Management

LabCollector offers the possibility to dispose of lots, that could potentially be contaminated, expired, or that has any other issue.

Please note that only certain user levels that were specified in *Admin -> Preferences -> Reagents & Supplies* can destroy a lot, request its disposal or approve ongoing disposal requests, (this is possible starting from **version 5.4** and above). See screenshot below.



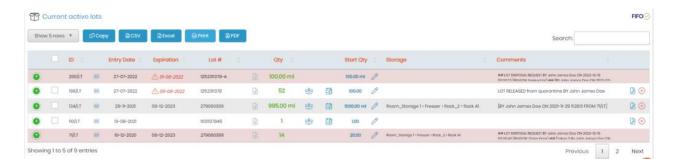
1. To fully dispose of a lot, you will need to first go to the module of your choice, then click on the "display lots" icon located to the left of the record. After that, click on the red "X" button located to the right of a lot to dispose of it. (As shown in the screenshot below).



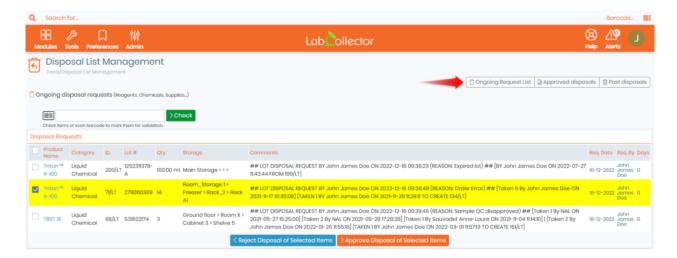
2. You will then need to give a reason for disposing the lot. Once done, you can choose between confirming its disposal or requesting for it to be disposed.



3. After confirming your choice, the chosen lot will be highlighted in red (as shown in the screenshot below).



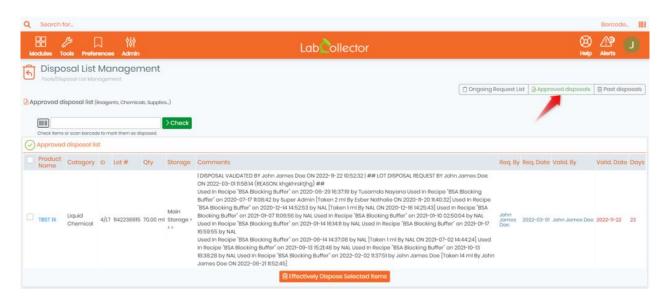
- **4.** Now, to manage the disposal list, go to *Tools -> Disposal List Management*.
- **5.** Select the lot from the *Ongoing request* list and choose whether you want to reject the disposal of the selected item or approve of it. (See screenshot below).



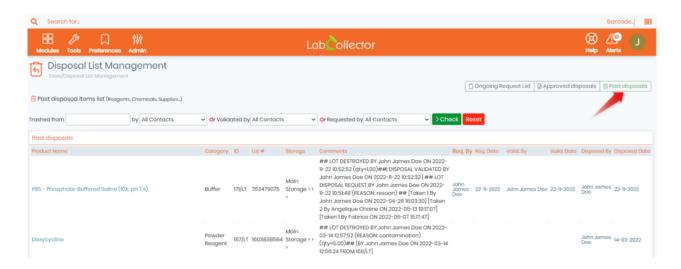
Tips/Hints

If you have a long list of lots, you can also scan the barcode of your lot to find it.

6. You can then go to the "Approved disposals" list and click on "Effectively Dispose Selected Items" to destroy the lot after selecting it.

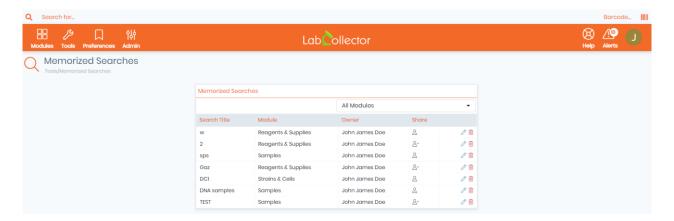


7. You can also view the list of all lots that were disposed of, by clicking on "Past disposals".



10.14 Memorized Searches

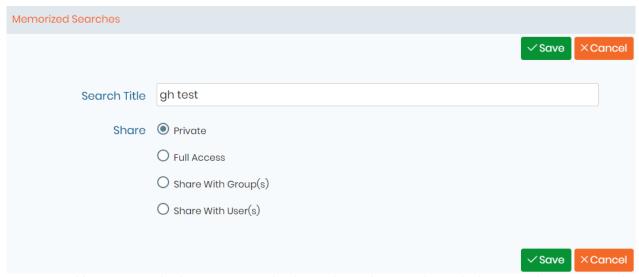
LabCollector offers the possibility to memorize your searches, so that you can easily and quickly find what your colleagues have been searching. Down below is a screenshot of the memorized searches page accessible via *Tools -> Memorized Searches*.



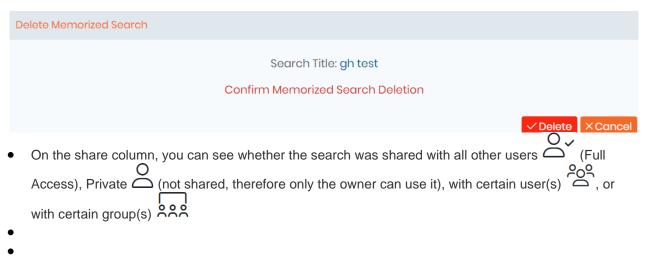
Here you will find a table with the search title, the corresponding module in which the search was performed, the owner, and share options.

- You can filter the results by selecting the module in which the searches were executed, by clicking on the tab located at the top right corner of the table.
- You can click on the pencil icon to edit your memorized searches, you have the option to edit the search title and/or the share options, you may select one of the 4 following share options.

1. LabCollector



- You may set sharing your memorized search to private so that only the owner has access to it.
- o Full access: All users can access the memorized search.
- O You can also choose want to share it with certain group(s) or user(s).
- Click on the bin icon to delete a memorized search. A new tab will appear asking you to confirm the deletion. (See screenshot below).



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11. Security

LabCollector LIMS offers a variety of security and integrity features to ensure that your laboratory data is protected, accurate, and reliable. This chapter will provide an overview of these features, along with detailed explanations and examples of how to use them.

User Access Management



One of the key security features of LabCollector LIMS is user access management. With this feature, you can control who has access to your laboratory data and what they can do with it. Our software allows you to create user accounts with different levels of access, including super administrator, administrator, staff plus, staff, user, and visitor.

Please refer to sub-chapter 3.2.1.1 for more details on LabCollector's hierarchical user management system.

For example, you might create an administrator account for yourself or another authorized person in your laboratory, who would have full access to all data and functionality within LabCollector. You might also create user accounts for laboratory staff members who need access to specific data, such as creating or editing certain records, running reports, or managing inventory.

Data Backup and Recovery 2.



Another important security feature of LabCollector is data backup and recovery. With this feature, you can ensure that your laboratory data is safe and secure, even in the event of a system failure or other unexpected event.

LabCollector allows you to create automatic backups of your data at regular intervals, which can be stored either locally or in the cloud. You can also manually create backups of your data at any time, which can be downloaded and stored on your local system.

Please refer to <u>sub-chapter 7.10</u> for more details on how to perform backups.

Audit Trail 3.

The audit trail is a feature that allows you to track all changes made to your laboratory data. With this feature, you can ensure that your data is accurate and reliable, and that any changes made to it are recorded and tracked.

We made sure that our audit trail tracks all changes made to your data, including who made the changes, when they were made, and exactly what changes were made. This information is stored in a secure, tamper-evident format, and can be accessed at any time.

For example, if a laboratory staff member makes a mistake when entering data into LabCollector LIMS, you can use the audit trail to identify the mistake and correct it. You can also use the audit trail to track changes made to your data over time, and to ensure that your laboratory processes and procedures are being followed correctly.

Please refer to sub-chapter 7.11 for more details on how to use audit trails.

Data Encryption 4

Data encryption is another important security feature of LabCollector. With this feature, you can ensure that your laboratory data is protected from unauthorized access and interception.

Our LIMS uses industry-standard encryption algorithms to encrypt your data both during transmission and while it is stored in the system. This ensures that your data is protected from interception by unauthorized parties, and that it cannot be accessed or read without the appropriate decryption key.

For example, if you need to transmit sensitive laboratory data over the internet, you can be confident that it will be protected from interception by unauthorized parties.

Two-Factor Authentication 5.

Two-factor authentication is a security feature that adds an extra layer of protection to your laboratory data by requiring two forms of authentication to access it. With this feature, you can ensure that only authorized users are able to access your laboratory data, even if their passwords are compromised.

LabCollector offers two-factor authentication as an optional security feature. When enabled, users will be required to enter a password and a second form of authentication, such as a security token or biometric authentication, to access their account.

Please refer to <u>sub-chapter 3.1.1</u> for more details about 2FA.

6. CAPTCHAS

CAPTCHA (Completely Automated Public Turing test to tell Computers and Humans Apart) is a security feature that helps prevent automated bots from accessing your laboratory data. With this feature, you can ensure that only real human users are able to access your data, helping to protect it from unauthorized access.

LabCollector offers CAPTCHA as an optional security feature. When enabled, users will be required to complete a CAPTCHA challenge before accessing their account. The challenge may involve identifying objects in an image, solving a puzzle, or answering a question that only a human would be able to answer.

For example, if an unauthorized user is attempting to access your laboratory data using an automated bot, CAPTCHA can prevent them from gaining access. By requiring users to complete a challenge that is difficult for bots to solve but relatively easy for humans.

Please refer to sub-chapter 3.1.1 for more details on how to set-up CAPTCHAs.

7 LDAP/AD and SSO



LDAP/AD (Lightweight Directory Access Protocol/Active Directory) and SSO (Single Sign-On) are features that enable users to log in to LabCollector using their existing corporate login credentials, such as their Microsoft Active Directory or LDAP account. This helps to simplify the login process and provides an additional layer of security.

LabCollector LIMS offers LDAP/AD and SSO as optional security features. When enabled, users can log into our LIMS using their existing corporate login credentials, eliminating the need to create a separate username and password. This can help to reduce the risk of password fatigue and increase user adoption.

For example, if your laboratory already uses LDAP/AD for user authentication, enabling LDAP/AD integration in LabCollector can simplify the login process for your laboratory staff. Similarly, if your laboratory uses SSO for authentication across multiple applications, enabling SSO integration with LabCollector can help to ensure a consistent and streamlined user experience.

Please refer to sub-chapter 3.1.1 for more details about LDAP/AD and SSO options.

8. Regular pentests and security audits



Regular pentests (penetration tests) and security audits are essential components of our security program. These tests help to identify vulnerabilities in your laboratory data systems and applications, as well as the underlying network infrastructure.

LabCollector offers regular pentests and security audits as part of its security program. These tests are conducted by experienced security professionals and cover both the LIMS application and underlying network infrastructure. The results of these tests are used to identify and remediate any vulnerabilities that are identified.

For example, if a security vulnerability is identified during a pentest, we will work with your laboratory to develop and implement a remediation plan to address the issue. This may involve updating the application code or network infrastructure, or implementing additional security controls to mitigate the risk.

Regular pentests and security audits are essential for ensuring the ongoing security and integrity of your laboratory data. By identifying and addressing vulnerabilities before they can be exploited by attackers, LabCollector helps to keep your laboratory data safe and secure.

9. HTTPS

HTTPS (Hypertext Transfer Protocol Secure) is a security feature that encrypts the communication between a user's web browser and the web server hosting the LabCollector LIMS application. This helps to protect sensitive laboratory data from interception or tampering by attackers.

LabCollector offers HTTPS as a standard security feature. When enabled, all communication between the user's web browser and the web server hosting our software is encrypted using SSL/TLS encryption. This helps to ensure that sensitive laboratory data is protected in transit.

For example, if a laboratory staff member is accessing LabCollector over an unsecured public Wi-Fi network, HTTPS can help to protect their login credentials and any sensitive laboratory data that is transmitted between their browser and the software.

10. Protection against XSS and SQL Injections



XSS (Cross-Site Scripting) and SQL injections are two common types of attacks that can compromise the security of web applications like that of our LIMS. XSS attacks involve injecting malicious code into web pages viewed by other users, while SQL injections involve injecting malicious SQL commands into web applications to gain unauthorized access to databases.

LabCollector LIMS includes built-in protections against XSS and SQL injection attacks. The application uses input validation and parameterized queries to help prevent these types of attacks.

For example, if an attacker attempts to inject malicious code into our web page using an XSS attack, the built-in protections will identify and block the malicious code before it can be executed. Similarly, if an attacker attempts to inject malicious SQL commands into a LabCollector LIMS web application, the application's built-in protections will prevent the SQL injection from being successful.

We go to great lengths to ensure that your laboratory data is always safe and secure, because we understand just how critical it is to your research and operations. With LabCollector LIMS, you can trust that your data is protected with a comprehensive suite of security features, including regular pentests and security audits, HTTPS encryption, built-in protections against XSS and SQL injections, LDAP/AD and SSO integration, and more. So you can focus on what you do best - advancing scientific discovery - with the peace of mind that comes from knowing your data is in safe hands.

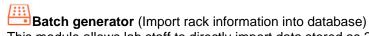
12. Expanding LabCollector

LabCollector capacities can be expanded by integrating Add-on modules which can be 3rd party modules, i.e. created in house or by others to perform tasks not originally included in LabCollector.

AgileBio also releases add-ons that are easily integrated into LabCollector. All use the automatic add-on loading system.

In this chapter we describe succinctly the different modules and the few parameters needed to dynamically load components or modules into LabCollector interface.

12.1 Add-on modules



This module allows lab staff to directly import data stored as 2D data matrix barcodes of well plates/racks. Use it to catalogue samples information (name, tube position and rack ID) into LabCollector LIMS. This is compatible with most scanners on the market (FluidX, BioMicroLab, Micronic, Thermo ...). FREE/INCLUDED by default in LabCollector license!



This add-on helps you recover dispatched samples on storage and placing them on a working tray. It generates a pick list automatically and the necessary instruction files for the tube sorter robot (Micronic/BioMicroLab, etc). Join the scanner and tube sorter to really improve your efficiency in recovering samples in quantity.

The module also generates Fluidigm EP1 files!

Electronic Lab Notebook

Now you can save and manage your experiment results with our ELN module. Built as a collaborative platform you can create books and share them with lab collaborators. It is versatile with the possibility to generate Workflows based on specific templates. Use Workflow and page templates for routine work or free and flexible experiment records for your research activity. Organization of experimental data is made in 3 levels displayed by a tree-like browser and easy searched by keywords. Includes integrated certificates management and digital signature content validation.

Events Calendar

This add-on module will add a calendar system to LabCollector LIMS. Every user can create and share several calendars to manage events. A general shared calendar is visible to all the lab members for common events. Events can be recurrent. Calendar sharing is defined user by user allowing groups to be formed around project calendars. All events can be linked to existent LabCollector records, allowing scheduling of events related to biological actions (ex: blood sampling on patients or animals).

Equipment Scheduler

Based on our equipment scheduling system LabCal, it adds scheduling & reservation calendar to equipment stored on LabCollector LIMS, Users can quickly check & add reservations to any equipment or facility in the lab. It supports recurrent events (like every day or specific days on the week). It includes a reporting tool to give equipment usage statistics in the past or upcoming events (by user, by equipment or by categories).

It easily integrates by simple copying the files into a folder and automatic database setup from inside LabCollector LIMS. LabCollector v3.912 required.

Photo Bank

This module gives you a way to store and organize all photos that you generate on your projects like microscopy, electrophoresis, animals, etc. You can create unlimited galleries, into unlimited categories, upload several photos in a click, commenting, etc. It can support TIFF format (and normal JPEG, PNG, GIF) and Movies. It also allows custom media formats definition to help you store/archive any raw image. Linking to samples in LabCollector is possible.

+ Photo Uploader Tool for Windows is also available to speed up charging images to the PhotoBank directly from image source computers.

Aquarium Facility Management

This module is a complete animal facility management system dedicated to fish growth and transgenese. You can manage fish entries, transfers and exits from tanks, growth, feeding (including live food production), custom and unlimited alerts, etc. It gives inventory and several types of reports. You can manage all kind of aquatic animals including mutants or transgenic breedings. Integrates easily into LabCollector LIMS and it was our first multilingual module.

LSM - Lab Services Management (Jobs/Assays)

This module will allow a lab to keep track of client samples, gather them on jobs (with workflows/task lists), manage plates and generate or export data into reports and have service history for billing purposes, etc. It will manage any kind of lab service or core facility (analysis, microbiology, chemistry, molecular biology, etc.).

SSM - Sequencing Service Management

This module provides the tools to a lab to manage clients and sequencing orders. Users will be able to place orders and check sequencing status and download results. Service admin will manage orders, organize them on plates or single tubes and easily upload results.

It comes with an ABI chromatogram file viewer, integrated for efficient results management. SSM is composed of 2 main interfaces: Sanger sequencing and NGS service managements. The NGS part gives project follow-up tools with result delivery.

PTS - Protein Tracking System (Jobs/Production/Purification/Analysis...)

This module is a protein production management system. Integrated into LabCollector PTS allows the lab to follow up different process and task progression in several projects. Users can follow all steps of protein production, purification, analysis...

Tasks Organizer

This collaborative tool allows a lab to manage and follow-up any service or tasks. It allows multiple custom forms to be created for a project level and tasks/services level. Progress is monitored and results are uploaded to each item/sample. Remote access for the requesters/clients is possible from an external page.

Plants Management

This module allows a lab to keep track of seeds, plant growing (trays management). All seeds generations will be tracked. Barcode support and storage management is included. Plant generation navigation is included.

SNP Genotyping Management

This module allows the management of typical workflow for SNP genotyping labs. It includes assays vials storage and retrieving (pick lists) using machine pickers, preparing plates for Fluidigm EP1, re-ordering of assays to suppliers, etc.

Data logging (metrology)

This add-on centralizes temperature, pressure, humidity and many more sensors values over time. It includes automatic import from network loggers. All temperature data is stored and displayed graphically. LabCollector samples are then easily associated to temperature charts. GSM/SMS and email alerts can be used for alerting.

Sample to Box (Free)

This add-on allows to sequentially populate plates or boxes from single vial tubes. Just read tube/vial barcode to automatically insert in a new plate/box map.

Report Query Builder

This add-on is a visual database query builder to create custom data reports/exports. It follows relations between modules. You can design any type of query with filters to extract part or total of your record relations. You can save queries for later reuse for regular reporting. Reports can be sent to Excel.

Workflows Management

This module allows the management of workflow templates (a catalog of job workflows) that can be used to start new jobs. All jobs are stored and then status and advancement are monitored. Step validation is possible. Steps are linked to LabCollector data modules for record storage and edition.

Parser

Parser provides file parsing anywhere using shared folders (local or cloud). Selected values can be automatically imported into LabCollector. Users may defined reader models (templates) within the interface. Only a few details about the the input files and where the data will go in LabCollector are required.

Collaborative Catalog for Multiple LabCollector implementations

This collaborative catalog allows LabCollector LIMS users to share data from modules across all users of all LabCollector instances. Therefore a LabCollector user can search if a product like antibody, primer, plasmid... is available on other labs or groups of the institute/campus/department, for example. Each lab team chooses which information they want to share with the lab community through an extensible configuration file.

KoriViewe

This complementary application provides a graphical interface to analyze BLAST results stored in LabCollector LIMS.

Multi-Purchase Orders Manager

This application allows administrative department manager to have access to all the purchase lists form the different instances of LabCollector on the enterprise server.

The Purchase Orders Manager will help you to manage the order lists, the reagents, chemicals and supplies but also sellers contact details.

Public Database from LabCollector

LabCollector is user access restricted. However in some cases a public database may be interesting to provide a list of lab resources to the community.

For those who need a catalog of resources for the other labs in the same network (same institution for example), we propose a template page that can be customized and giving access to defined custom modules. Users can log in as visitors (you can define a group of external users) to that page and will be given access to "public" modules.

Features include the search engine, but storage and other information were removed.

12.2 Add-ons loading requirements

Download add-ons that you need on <u>LabCollector</u>, and simply upload the zip file on your labCollector page. Go to the add-on from your home page and continue the installation.

Instances hosted by AgileBio may also contact AgileBio to have the add-on included.

13. Updating and uploading

LabCollector is easily updated and upgraded.

The procedure is not exactly the same for an update and an upgrade, but both are performed from the same package.

If your instance of LabCollector is hosted by AgileBio, the upgrade will be performed by AgileBio staff.

13.1 Intermediate or corrective updates

Updates are considered for corrective releases and improvements made to the interface while the database structure remains untouched. Therefore, you just need to replace the software files and folders in LabCollector's root folder.

To recognize an update, it is when the LabCollector's version changes from X.xn to X.xz, for example: from 5.21 to 5.22.



Do not touch to "documents", "backup" and "maps" folders. Also, take care not to alter, delete or destroy "config.php" file.

13.2 Upgrades

Upgrades are evolutions in which the database structure has changed (and other files also). So you need to replace the files and folders as for updates. You also need to run the "upgrade.php" file through the internet browser.

On this page you will select the upgrade level you are doing and it will automatically execute the changes in the database structure.

Upgrades are identified when LabCollector's version goes from X.nx to X.zx, for example from 4.6x to 4.7x.

On the server computer, access the following address from the browser: http://127.0.0.1/upgrade.php

A Warning

Do not touch to "documents", "backup" and "maps" folders. Also, take care not to alter, delete or destroy "config.php" file.