LabCollector

"Your Laboratory management solution"

User guide

October 2017

AGILEBIO
team solution

SUMMARY

1- INTRODUCTION

Thank you for choosing LabCollector system for the management of your lab information. LabCollector is an Intranet-based (totally web-based) application which 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, Mac OSX, 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.

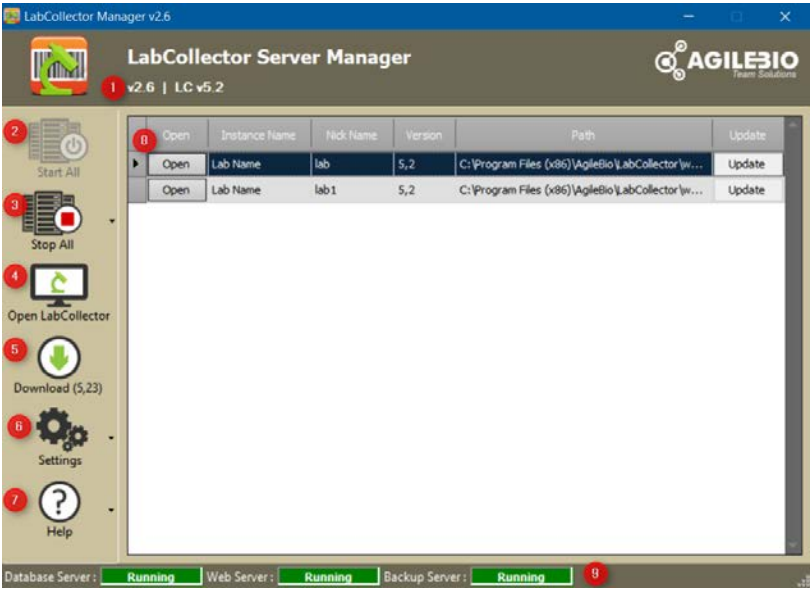
Don't hesitate to refer to our knowledge base for more details.

2- GETTING STARTED

2-1. First time access

LabCollector is a network based system like an Intranet. It can be accessed from all computers on the same local network. LabCollector can also be accessed through the Internet.

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 can also be useful for handling updates, backups and migrating data. You may also access LabCollector in an internet browser with one click from the LabCollector Server Manager.



The server manager provides the following information and options:

1. Version of server manager and version of LabCollector
2. Button to start servers
3. Button to stop servers

4. Button to access LabCollector in a web browser. The browser will open in a new window or browser tab.
5. Download/check for updates
6. Settings: various database and server settings may be viewed or changed
7. Help menu and link to latest help including the full manual for the LabCollector Server manager
8. Details and links for individual instances of LabCollector
9. Status of servers

For more information please refer to KB-20.

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

On the LabCollector server you have to call for example:

http://localhost or ***http://127.0.0.1*** or ***http://computer_name*** or ***http://computer_IP***

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

http://computer_name or ***http://computer_IP***

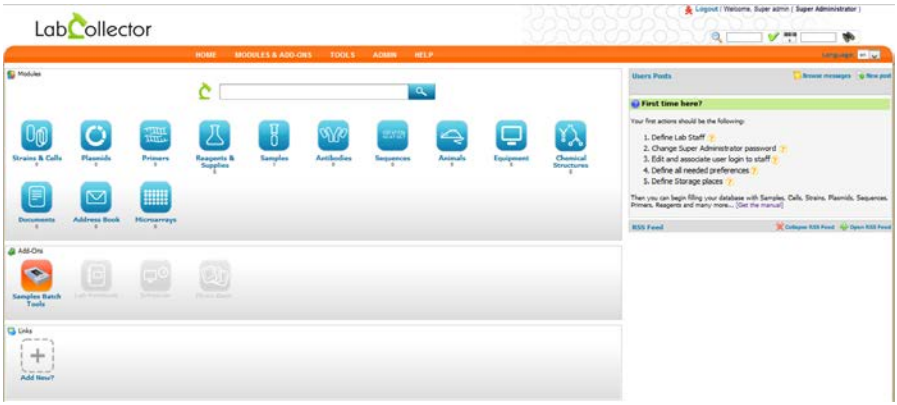
These methods for connecting apply if you used the setup wizard. However, this may change according to manual installation variations. The first time you select browse, you may be given a prompt to update. If this occurs, follow the onscreen instructions for updating and proceed as if you are updating the software.

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. You may use this default User Name for future logins, or you may configure individual User Names and Passwords for each user.

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

After logging into LabCollector, you will get the following screen:

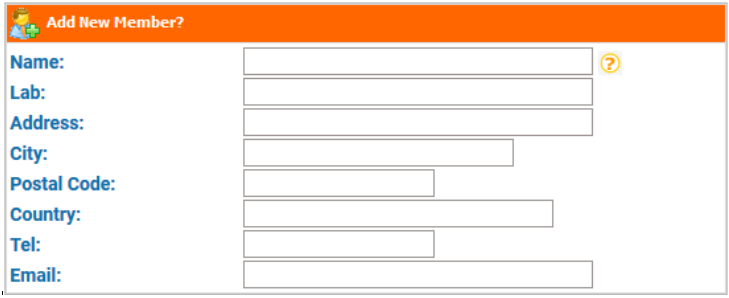


The main user name is the "**Super Administrator**". The account has full powers to make changes within all of LabCollector.

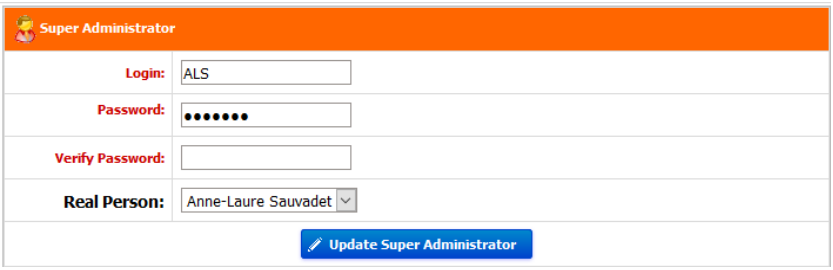
2-3. Super-administrator account

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***
   Fill the form. Don't forget to fill the email field in case of password failure.



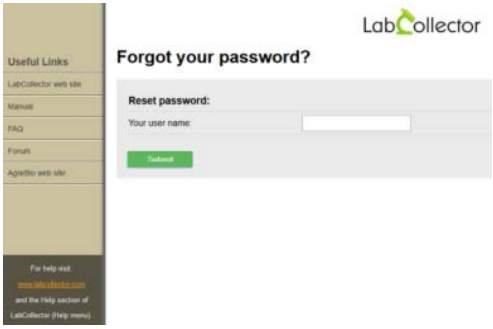
2. Go to: ***Admin > Users & Staff > Manage Users***
   Edit super administrator login information, change password and associate the super administrator to the corresponding staff contact (Real person).

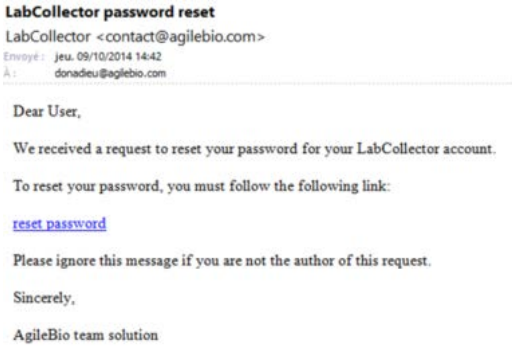


2-4. Password reset

If users forgot their passwords, they can click on the "*Forgot your password?*" link (Sending emails using LabCollector has to be setup, see chapter 3-1-2). They will be

redirected on a dedicated form they have to complete to receive a password reset mail.
If the user does not have an email associated to the account (see above), the super administrator must reset the password and deliver the new password to the user.





LabCollector password reset

LabCollector <contact@agilebio.com>

Envoyé : jeu. 09/10/2014 14:42

À : donadieu@agilebio.com

Dear User,

We received a request to reset your password for your LabCollector account.

To reset your password, you must follow the following link:

reset password

Please ignore this message if you are not the author of this request.

Sincerely,

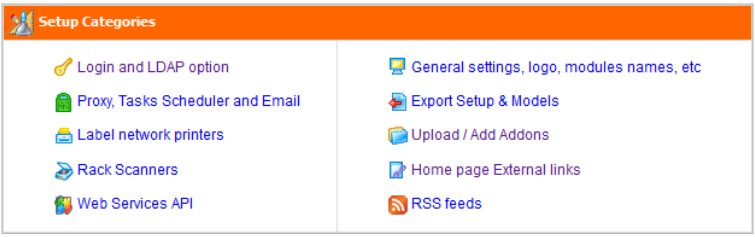
AgileBio team solution

3- SETUP

LabCollector comes with a ready-to-use environment, but some setup and configurations are needed to adapt it to your lab scheme. **Only the super-administrator can access this setup.**

3-1. Interface & LabCollector main 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.

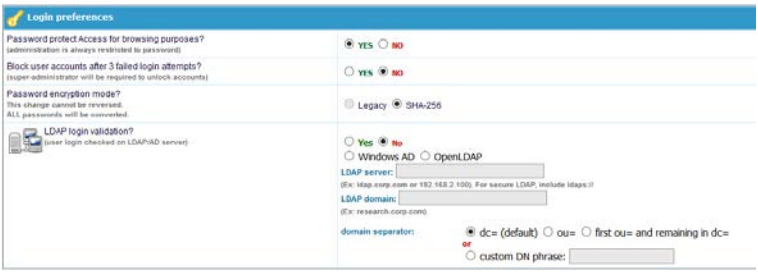


3-1-1. Login and LDAP options

There are two access modes, defined in ***Admin > Setup > Login and LDAP option.***

- Semi-open: In this configuration, data browsing is open to anyone who knows the IP or URL address for LabCollector. However administration tasks are always password protected.
- Fully locked: In this configuration, any access to LabCollector requires login authentication.

LabCollector can manage authentication and login in three ways:



3

- "*Password protect Access for browsing purposes*" option: with **YES**, you define total login protection, with **NO** you indicate a semi-open system in which Data browsing and search is unrestricted. Administration is always password protected.

- "*Block user accounts after 3 failed login attempts*" option: with **YES**, if a user fails three times in typing a password, the account will be blocked and the super-administrator will be required to unlock it.

- "*LDAP system"*: If you have a network using LDAP or Active Directory (AD) for users profile management, you can use it in LabCollector also. LabCollector login process will then check login/password validity on the LDAP or AD server. It works with standard LDAP protocol and only uses 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.

Users and Staff LDAP/AD can be directly imported: *Admin > Users & Staff > Import from LDAP/AD*.

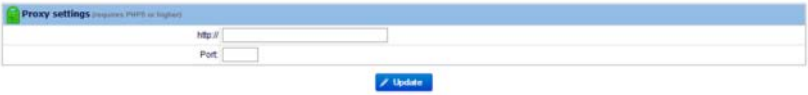
You can also choose between two password encryption modes: legacy or SHA-256. With SHA-256, all characters are available and a double password confirmation on super-administrator and new users is requested.

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

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.

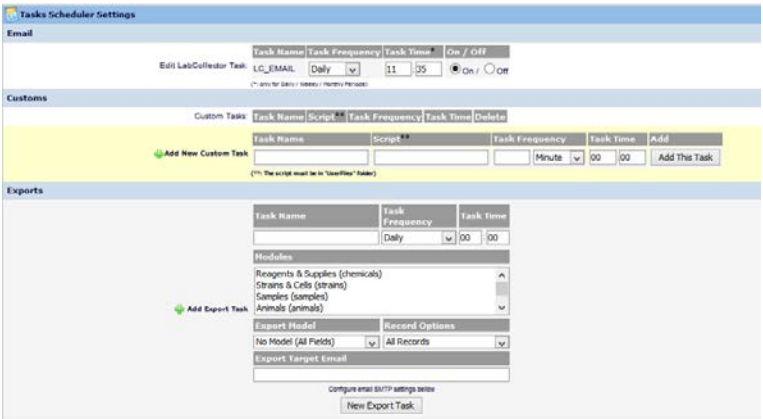


Tasks Scheduler (for Linux and Windows):

CRON is an automatic task system on Linux used for executing some tasks at specific intervals without your intervention every time (LabCollector uses the Windows schtasks engine on Windows servers). For example, you can create a task to send your email alerts every day at 11:00pm. If you do that, the cron manager sends an email everyday at 11:00pm until all the emails will be finished. If you want to send them monthly, you can schedule it. You can schedule any script to make 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 period.
Weekly: on each Monday. Monthly: on each first day of the month.

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



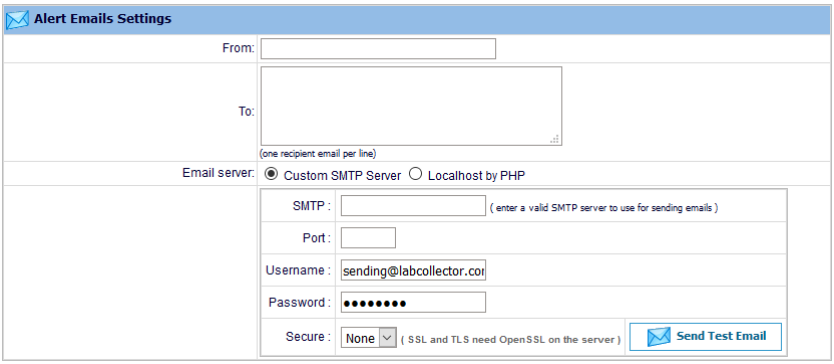
Email alerts settings:

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).
- **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.

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



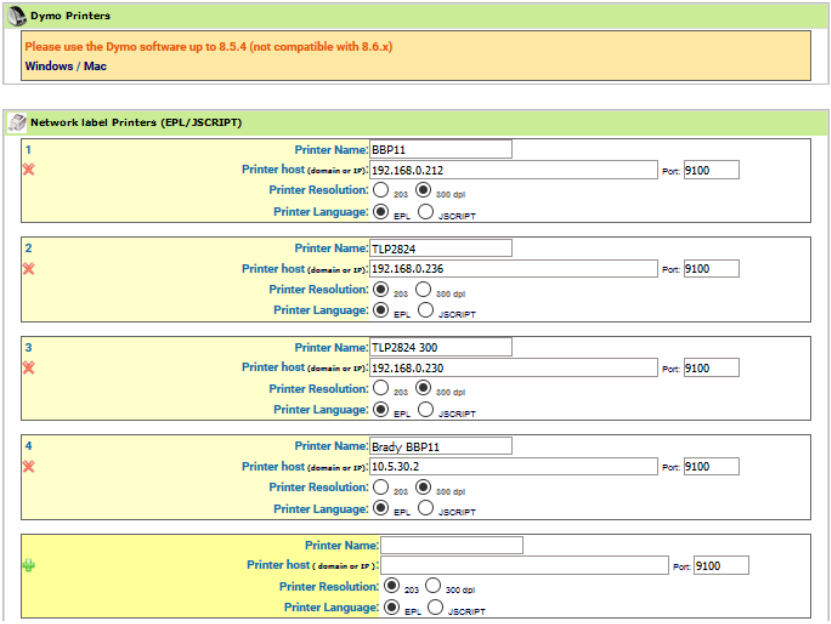
If your server is configured to use this function, you can also send email from localhost by PHP. You have to setup the PHP.INI section `[mail function]`.

3-1-3. Label network printers and roll types

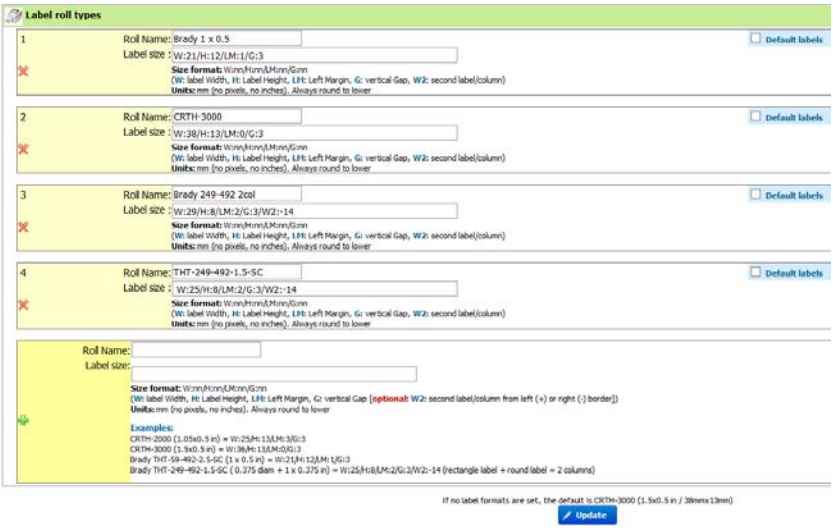
LabCollector is able to print barcode labels (see chapter 7-6). On this page, you can

- Update your Dymo printer to 8.5.4 version through the website

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



To add a label roll type, you have to fill out 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). Positive size will be considered as a left position and negative a right position. W2 size will add to W width of main label.

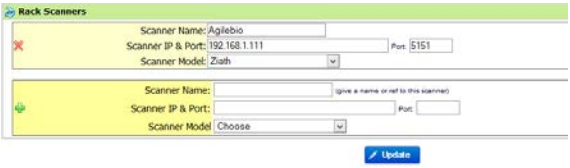


Parameters:

W: width of label
H: height of label
LM: left margin on roll
G: gap separating each label
W2: width of second label

3-1-4. Rack Scanners

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.



3-1-5. Web Services API

A new range of applications based on your LabCollector can be imagined and developed. Using LabCollector as a backend database, the laboratory can provide remote information in external catalogs, biological resources, etc. Web or mobile tools can be created. For more information please refer to this page and manual (or contact a representative from AgileBio).

3-1-6. Lab name, logo, modules name, google translation

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

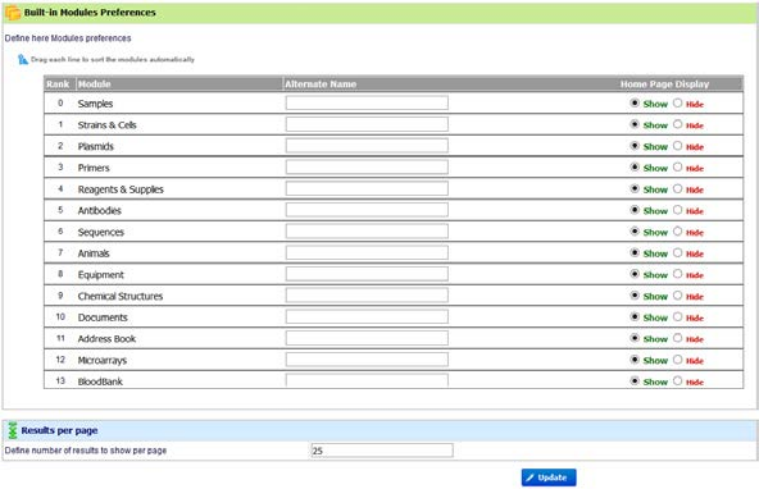
You also have access to language options. On top of each page in LabCollector, you have a language selector that you can turn off to block the language setup. A default language can also be chosen.
Language options are also possible as the Google *automatic* translation option for multilingual interface 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.

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

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

Strict search on MySQL content with HTML tags is possible. Just check the box to activate it.

You can also organize and rename the module icons on the home page. Modules' icons can be rearranged by clicking on them and dragging them up or down. You can also hide modules that you don't need. The number of search results shown per page can be changed as well.

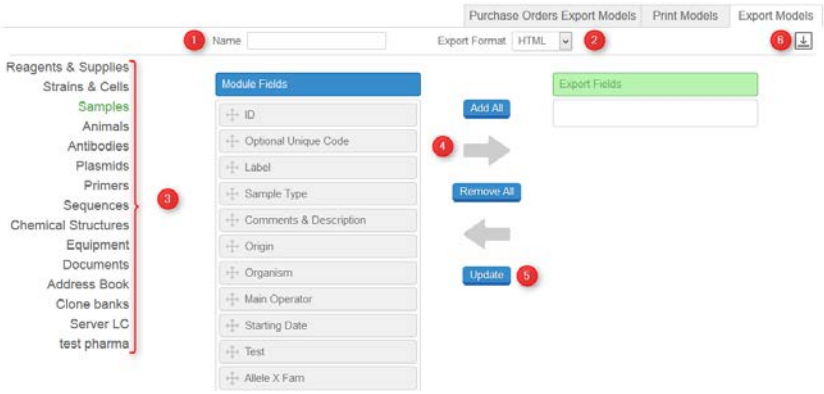


3-1-7. Export and Print Setup & Models

Models can be created to export and print data from any module.

1) Give a name to the model; 2) choose export file format; 3) choose the module to export 4) add/remove fields that you want to export; 5) click update to create the model; 6) The icon allows you to load an existing export model for editing.

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.

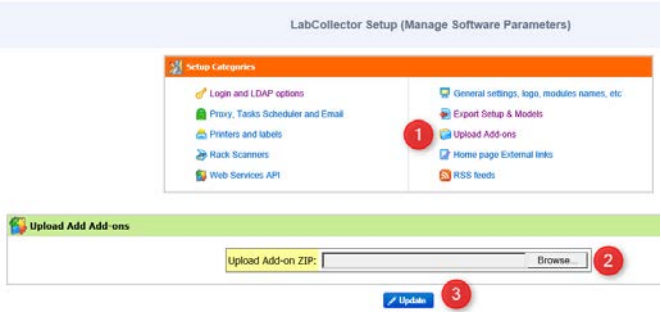


For more information, please read KB-95.

3-1-8. Upload / Add Add-ons

As a reminder it is a best practice to backup data prior to updating or installing new add-ons.

Download the add-ons that you need on the 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.



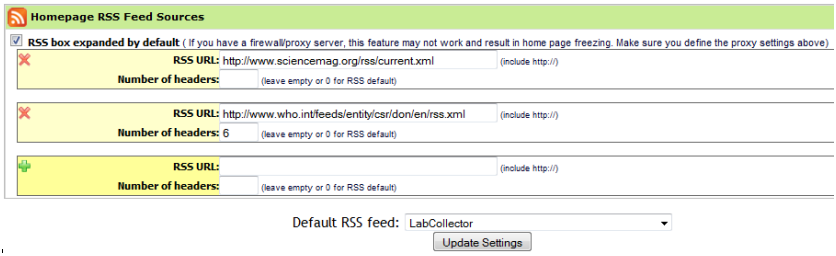
3-1-9. Home page links

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 saving intranet or websites that your lab commonly uses.

You can also create favorite site links through ***Tools > Lab Bookmarks > Add new bookmarks***. See chapter 10-10.

3-1-10. RSS feeds reader

"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.

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

3-2. Users

3-2-1. Manage users

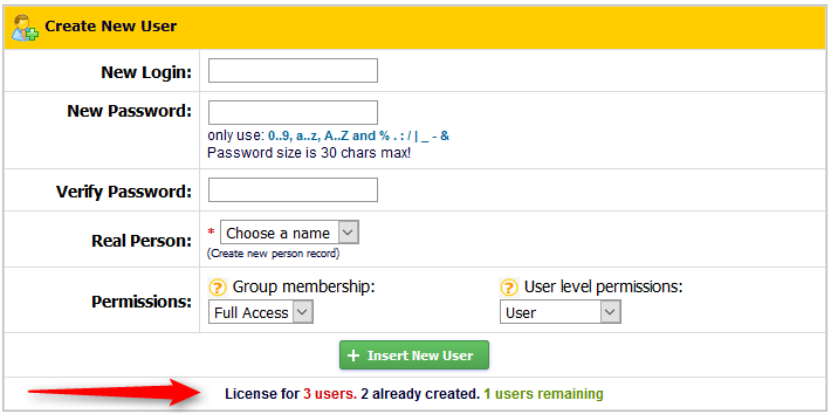
Create users:

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

1. Go to ***Admin > Users & Staff > Manage Lab Members***
   Enter basic contacts for lab staff members.
   To see your staff directory, go to *Tools > Staff Contacts.* See chapter 10-9.

2. Go to ***Admin > Users & Staff > Manage Users***
   Create or edit a user's login: change password, associate user names to staff contact.

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 data and manage settings.

2. **Administrator**

Just below the super administrator. They can see all data, manage all data from all users and validate waiting data.

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 own data.

4. Staff

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

5. User

This level allows the user to see data, manage their own data but new and edited data will be added to 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.

On the bottom, you have indications on the numbers of user left.

Remove users:

1. ***Admin > Users and Staff > Manage Users***
   Remove a user ID by clicking on the trash icon .

2. ***Admin > Users and Staff > Manage Lab Members***
   Hide users by clicking on the "hide" bottom below the staff ID.

Old lab personnel profiles can be removed but not deleted to insure traceability and quality compliance.

You can see removed users in the *Hidden/Old lab personnel* tab. You can also reactivate old user profiles if it is necessary.

3-2-2. Groups definitions

The super administrator can also define ONE group to manage user's general permissions (confidentiality). 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.

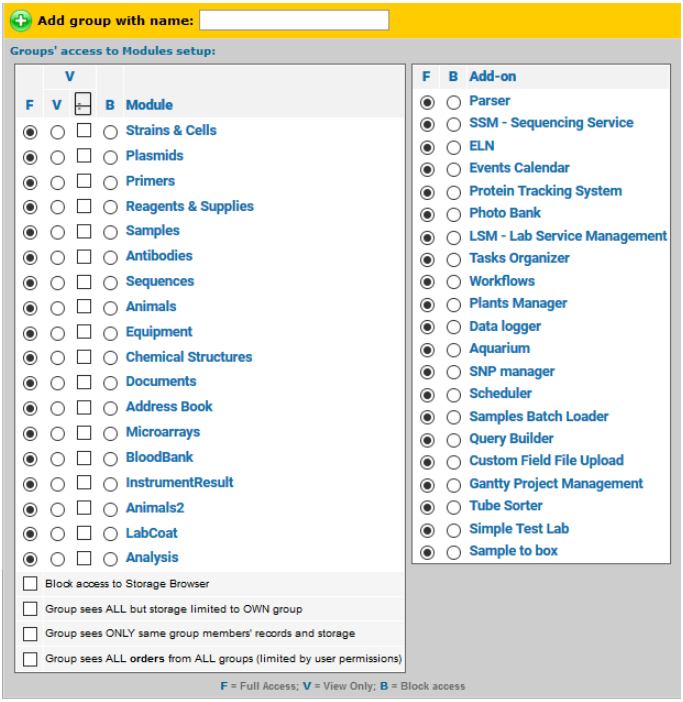
Each group's rules can be defined to manage the user's module access, based on 3 options:

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 setup based on 2 options: **F**: Full Access and **B**: Block access – Users can't enter into the respective add-on.



You can manage storage visualization (options View Only) and the 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 “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 group members.

- Group sees ONLY its own data

By checking “Group sees ONLY same group records and storage” the group members will only see records from their own group. Data is therefore secured by group.

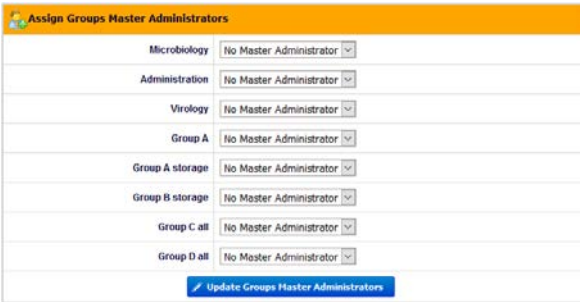
- Group sees ALL orders

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.

Records made by users not affiliated to a group will not be restricted and will remain visible to ALL users in any group.

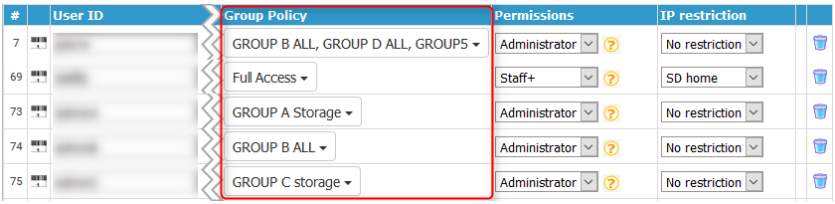
Permissions can be changed at any time through this menu.
Search filters will also use these group definitions to help filter data by group.

Super-administrator can assign master administrators to the groups under ***Admin > Users & Staff > Manage Users***.



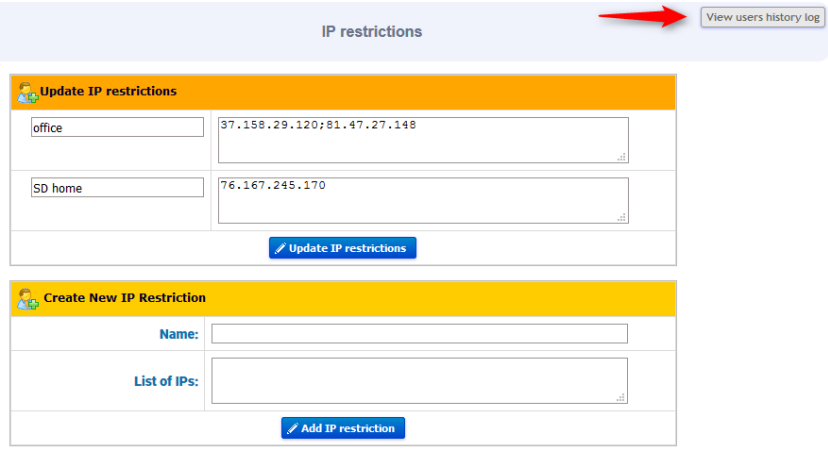
These administrators can create and manage lab members and user accounts for their own group.

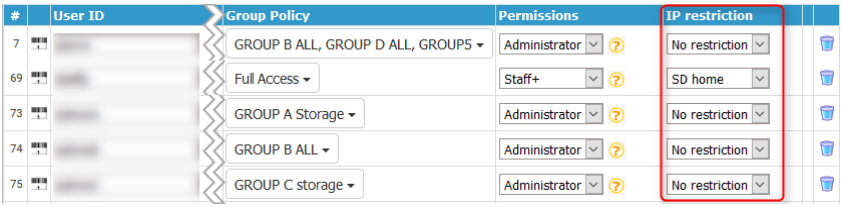
! NEW ! Since version 5.3, super-administrator and group master administrators can apply more than one group to a user.



3-2-3. Manage authorized IPs ! NEW !

Restriction to data can be setup 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 to an individual user.





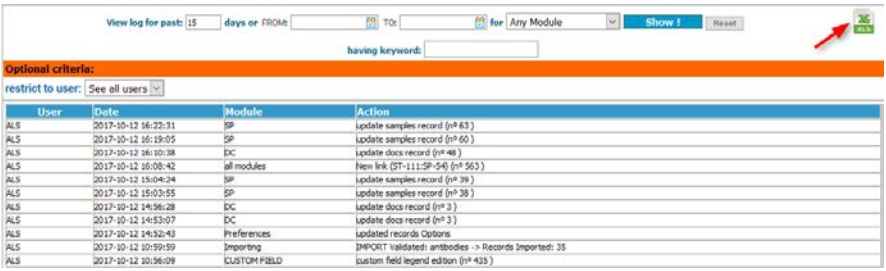
If the users are not using the right IP define by the super-administrator, they cannot connect to LabCollector.

3-2-4. User action tracking

The system always stores actions done by any user in an audit trail. The super-administrator can check the actions history at any time.
History is accessed on the ***Admin > Users & Staff > Manage Users*** menu.

Click on "*View users history log*".

History can be displayed for all or for a particular user, for a defined time period and can be filtered by module. Exporting in excel format can also be done.

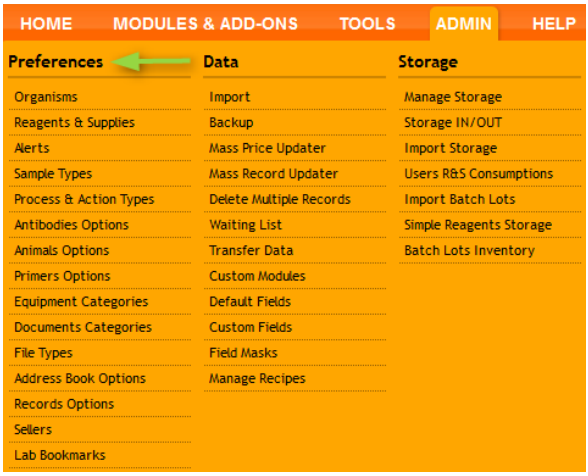


User	Date	Module	Action
ALS	2017-10-12 16:22:31	SP	update samples record (n° 63)
ALS	2017-10-12 16:19:05	SP	update samples record (n° 60)
ALS	2017-10-12 16:10:38	DC	update docs record (n° 48)
ALS	2017-10-12 16:08:42	all modules	New link (ST-111:SP-54) (n° 563)
ALS	2017-10-12 15:04:24	SP	update samples record (n° 39)
ALS	2017-10-12 15:03:55	SP	update samples record (n° 38)
ALS	2017-10-12 14:56:28	DC	update docs record (n° 3)
ALS	2017-10-12 14:53:07	DC	update docs record (n° 3)
ALS	2017-10-12 14:52:43	Preferences	updated records Options
ALS	2017-10-12 10:59:59	Importing	IMPORT Validated: antibodies -> Records Imported: 35
ALS	2017-10-12 10:56:09	CUSTOM FIELD	custom field legend edition (n° 435)

4- PREFERENCES

Preferences are the first customization level of LabCollector to your lab. They are used to define module options like organisms, sample categories…
Some options like primer labels are predefined; others are empty and need to be defined in order 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 ***Admin > Preferences***.

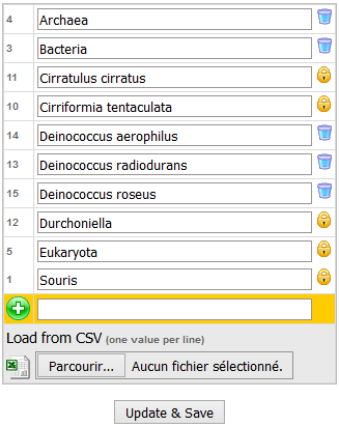


4-1. Organisms

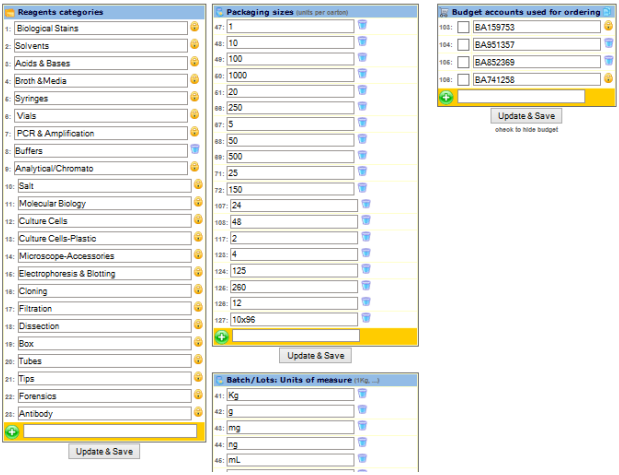
Organisms are connected to the following prebuilt modules: Strains & Cells, Samples.
You need to define a list of the organisms you work with. The list will help you to organize strains, samples and allow for more efficient searches.
Import your list of organisms from a CSV file containing one value per line, then use the **Update & Save** button. Organisms will automatically be displayed in the module selection list. Adding new organisms is limited to administrator level users.

You can also add organisms one by one, just write the name in the “Add new” box and click on the **Update & Save** button. During record addition and record modification in the modules Samples and Strains & Cell, you can also add organisms using the popup *Quick Add Organism.*

To edit an organism value, do the correction then click on the Update button. To delete an organism, use the bin icon. This action is possible provided that the organism is not used in a record.



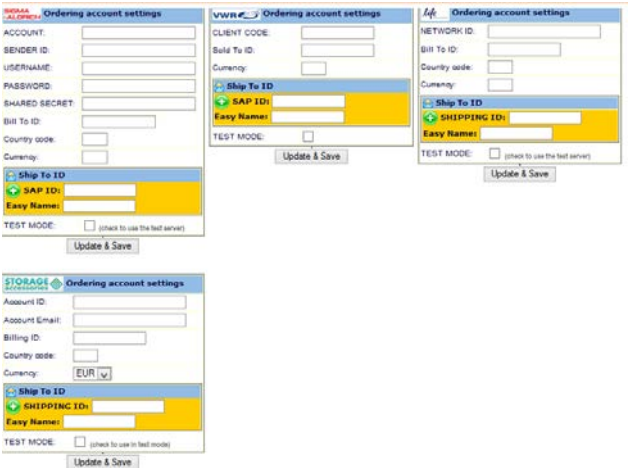
4-2. Reagents & Supplies / Budget accounts / Life Technologies, Sigma, Storage Accessories and VWR accounts settings / Staff access to orders



Use this menu to define a list of reagents and/or supplies that you will use in your lab, their packaging sizes and the units of measure. Categories and packaging sizes will automatically be displayed in the module select list to create new records.

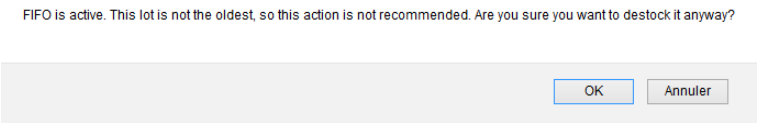
This menu also allows you to manage the budget accounts needed to process orders. Use it to define a list of your budget accounts that will automatically be display in the order list manager.
To hide/deleted accounts, check the box on the left and click on Update & Save. They will automatically be removed from the list.

More information about Orders List Management



Through this menu you can also manage account settings to automatically order from Sigma Aldrich, VWR, Life Technologies and Storage Accessories. These settings will be used to submit orders through the Purchase Orders Manager. More information about Orders List Management
To obtain account settings please contact Life Technologies, Sigma Aldrich, Storage Accessories, VWR and/or your finance office.

Finally, through the reagents and supplies preferences, you can define staff access to order management: if staff members can see all the orders or only their own orders in the *Purchase Orders Manager*, who can place orders and who can add stock or destock units. You can also activate for destock action, the FIFO option (First In First out). In this case, if you don't destock the oldest lot in the list, this alert message will appear:



Similarly, you can define who can edit risks and safety. Just check the appropriate box.

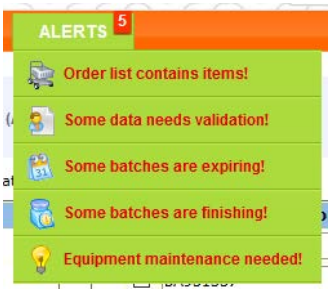
The last option defines the storage mode. For more information, see section 6-1-9.

4-3. Alerts use (on screen or by email)

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.

Admin > Preferences > Alerts

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



Alerts are also temporarily displayed each time you login to your account:

User and Staff levels do not see all alerts; User and Staff level users only see Reagents & Supplies quantities and expiration alerts.

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

4-3-1. Expired and finishing lots/articles

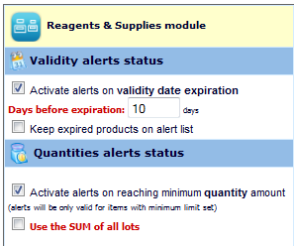
Lot management is linked to the alerts system. Once activated, alerts will be displayed on LabCollector's homepage.
If you want alerts to be sent by email, you must associate an email to appropriate users by using *Admin>Manage Staff* and define email alerts settings.

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

1. For quantities alerts, you can choose to check the *"Use the SUM of all lots"*. In this case, when stock total amount is less than the product threshold, an alert will be activated. Otherwise, any single lot with a quantity lower than the threshold will raise the alert.

   This threshold must be defined to create alerts.

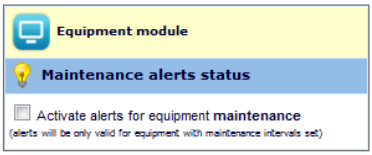
2. You can also use the validity alert for reagents. You must define the number of days before the expiry date of the product to use as a threshold.



3. An alert based on the wait time for delivery after ordering can be activated. You must define the number of days required for an alert.

4-3-2. Equipment maintenance

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 > Preferences > Equipment Categories***.

If you fill in the maintenance contract field in equipment records, alerts will be sent to the person in charge of the equipment when the contract end date is reached.

Under the tab *Display Maintenance* , there are several options: add maintenance and fill a type, a date, comment and operator. Select *Activate Alert On* if you want an alert. From the Display Maintenance tab you can click on the icon to attach a report. Only open maintenance events may have a report attached.

Once the alert is activated, you will receive a message in the Alerts tab. Use the icon in the display maintenance tab to close this alert.

You also have the possibility to add custom fields to your Maintenance form. Under **ADMIN > Data > Custom fields,** choose the Equipment module and access to the Maintenance tab on the right.

You can create all the custom fields that you need. For more information, please refer to the KB-97 and KB-118.

Please, read KB-105 to learn about the advanced features of the equipment module and maintenance.

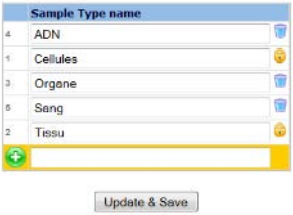
4-3-3. Waiting data alerts

When data are 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 need validation by an administrator.
To manage waiting data, refer to chapter 7-1-1.

4-4. Sample Types

Sample Types may be found by navigating to:

Admin > Preferences > 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 "add new" box to the right of the ⊕ symbol and click on the Update & Save button. Addition of new samples types is limited to administrator users.

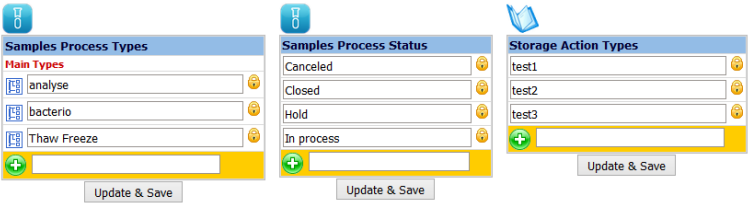
Existing sample types may be removed only if they do not appear in any records. Click the icon to remove the sample type.
Existing sample types may be renamed. To rename an existing sample type click the desired sample type and edit the name. The change will take effect after clicking the update & save button. The change in sample type name will be applied to all existing records.

4-5. Process & Actions Types

4-5-1. Add Process to one or a list of samples at once

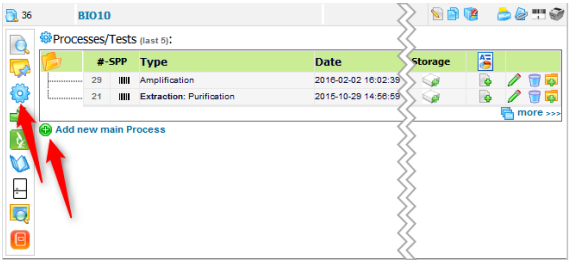
Use these fields to manage the process type definitions that you will use to categorize the process transformation of samples or storage action. These settings may be viewed and changed by navigating to:

Admin > Preferences > Process and Action Types

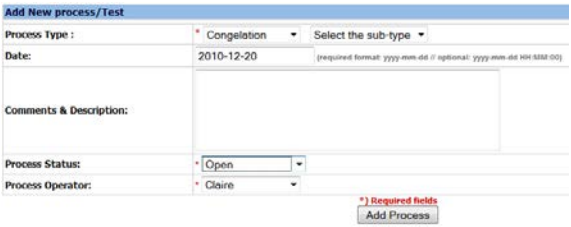


You can add sample process types and status that you will use on sample records. Similar to adjusting other preferences, fields may be edited by typing in the boxes and confirming by clicking the "*Update & Save*" button. Existing actions that are in use cannot be removed. You can also add a sub-process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

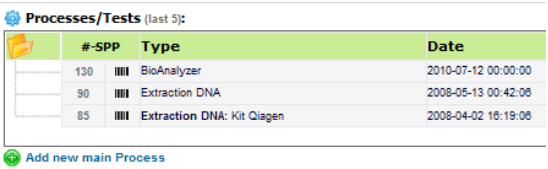
In the Samples module, go to Processes/Tests by clicking on in the left tab of your sample record.



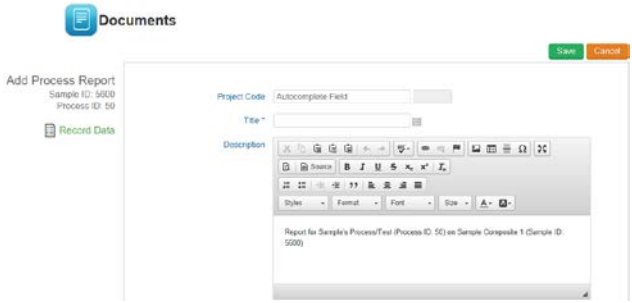
Then click on *Add New Main Process*. Complete the form with the process details.



Processes will appear as a list.



You can also add up to 2 sub-process levels by clicking on the icon 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 . 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.



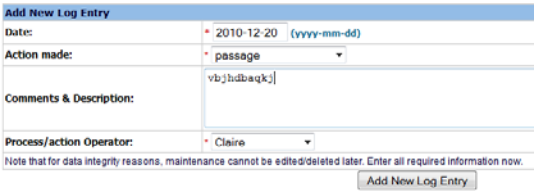
To display all samples processes, you can use this icon more >>>.

In LabCollector, you can add processes in bulk to a samples 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 chapter 10-5.

4-5-2. 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 in the left tab of your record and **Add New Log Entry**.



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 >>>.

4-6. 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* of the appropriate category and click update.

Adding new Antibodies options is limited to administrator users.

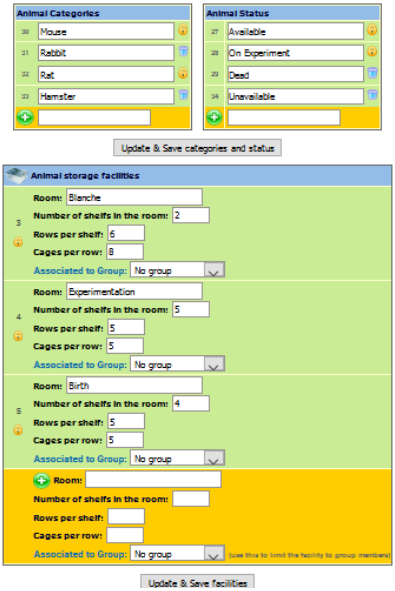
Existing options may be removed only if they do not appear in any records. Click the icon to remove the option.
Existing options may be renamed. To rename an existing option, click the desired box and edit the name. The change will take effect after clicking the *Update Antibodies Options* button. The change in option name will be applied to all existing records.

4-7. Animals options

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

Admin > Preferences > Animals Options

To create new Animals categories, status or storage facilities: enter information in the *Add new box* 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* you have to define the room and shelves characteristics as described here.

4-8. Primers options

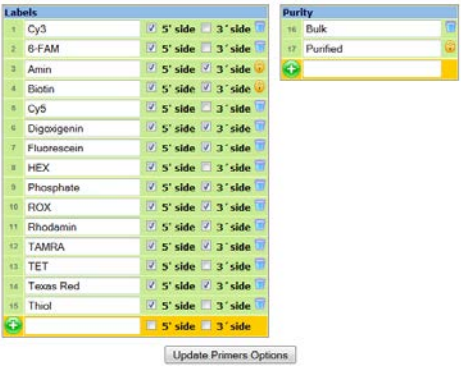
Here you can manage options to be made available in the *Primers* module.

Admin > Preferences > Primers Options

To enter new labels or purity: enter information in the *Add new box* 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.

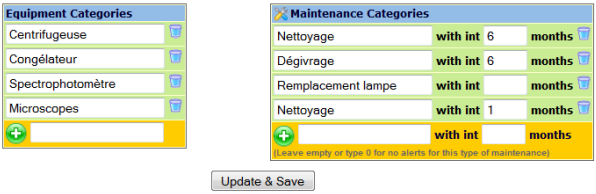


4

4-9. Equipment categories

Use these fields to manage the equipment categories. Here you can define maintenance frequency in order to use maintenance alerts. (See chapter 4-3-2)

Admin > Preferences > Equipment Categories

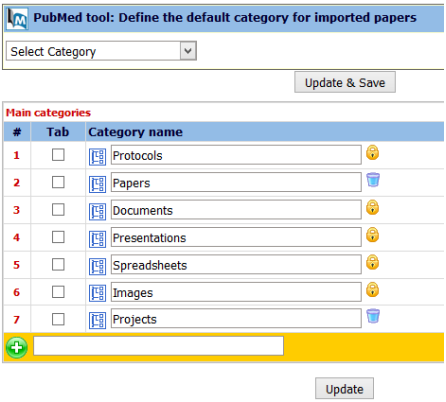


To enter new labels: enter information in the *Add new box* of the appropriate category and click update. Adding new options is limited to administrator users.
Existing options may be removed only if they do not appear in any records. Click the icon to remove an option.
Existing options may be renamed. 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.
Note that leaving the interval empty will eliminate alerting for the category of maintenance.

4-10. Document categories

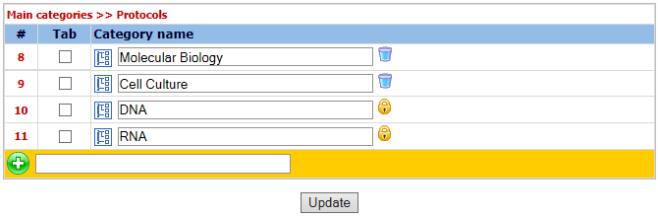
Use these fields to manage the documents categories that you will use in the documents module. This may be done by navigating to:

Admin > Preferences > Documents Categories



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

You can 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.



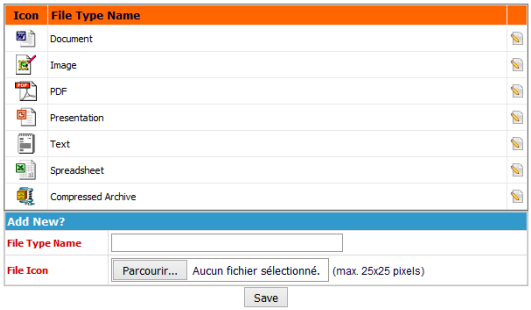
If you check the box *Tab*, this category will appear as a direct tab in document module home page.

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

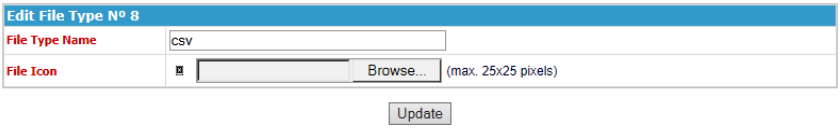
4-11. Files types

Option for version older than 5.2.
Use these fields to manage files types that you will handle in the Documents module. Note that some options are pre-configured. To make changes navigate to:

Admin > Preferences > File types



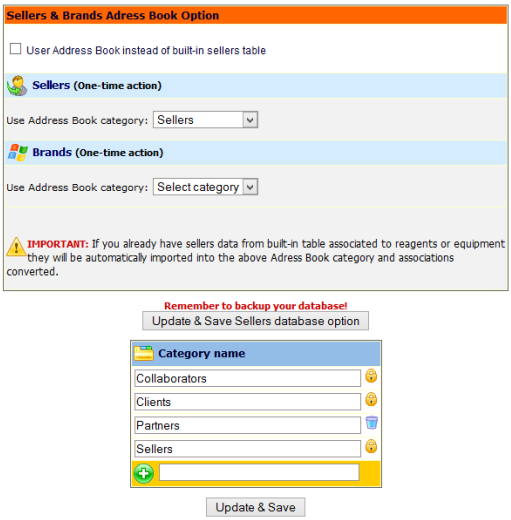
Add new types using the add new box. An icon can be updloaded and associated to the file type. Existing types may also be edited in a similar manner.



4-12. Address book options

Use these fields to manage the address book categories. To make changes navigate to:

Admin > Preferences > Address Book Options



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

To enter new categories: enter information in the *Add new box* of the appropriate 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 edit 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.

Note that leaving the interval empty will eliminate alerting for the category of maintenance.

4-13. Record preferences (custom ID numbering/barcodes)

In some cases, your lab may need a specific incrementing numbering scheme for records identification. Some modules can support customization of the internal reference field.

Only super-administrator can access record preferences.

Go to: ***Admin > Preferences > Records Preferences.***

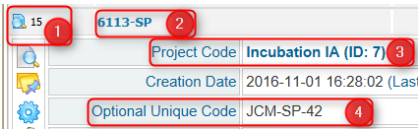
Records references/ID Options

Module	ID setting	ZEROFILL	FIELD SIZE	Force Waiting	Block Duplicates	Versioning	Automatic Naming
Strains & Cells	◉ Full-Automatic ID ○ Semi-Automatic ID (editable)	○ Yes ◉ No	INT(8)	☐	☐	☐	none
Primers	◉ Full-Automatic ID ○ Semi-Automatic ID (editable)	○ Yes ◉ No	INT(9)	☐	☐	☐	none
Plasmids	◉ Full-Automatic ID ○ Semi-Automatic ID (editable)	○ Yes ◉ No	INT(8)	☐	☐	☐	none
Samples	◉ Full-Automatic ID ○ Semi-Automatic ID (editable)	○ Yes ◉ No	INT(9)	☐	☐	☐	none
Antibodies	◉ Full-Automatic ID ○ Semi-Automatic ID (editable)	○ Yes ◉ No	INT(9)	☐	☐	☐	none
Animals	◉ Full-Automatic ID ○ Semi-Automatic ID (editable)	○ Yes ◉ No	INT(9)	☐	☐	☐	none
Equipment	◉ Full-Automatic ID ○ Semi-Automatic ID (editable)	○ Yes ◉ No	INT(9)	☐	☐	☐	none
Reagents & Supplies	◉ Full-Automatic ID ○ Semi-Automatic ID (editable)	○ Yes ◉ No	INT(9)	☐	☐	☐	none
Sequences	◉ Full-Automatic ID ○ Semi-Automatic ID (editable)	○ Yes ◉ No	INT(9)	☐	☐	☐	none
Chemical Structures	◉ Full-Automatic ID ○ Semi-Automatic ID (editable)	○ Yes ◉ No	INT(9)	☐	☐	☐	none
Clone banks	◉ Full-Automatic ID ○ Semi-Automatic ID (editable)	○ Yes ◉ No	INT(9)	☐	☐	☐	none
CEA	◉ Full-Automatic ID ○ Semi-Automatic ID (editable)	○ Yes ◉ No	INT(9)	☐	☐	☐	none
Server LC	◉ Full-Automatic ID ○ Semi-Automatic ID (editable)	○ Yes ◉ No	INT(9)	☐	☐	☐	none

Do Update

CAUTION! 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.

CAUTION! The record name, record ID, project code and optional unique code are distinct.



1: ID
2: Name
3: Project Code
4: Optional Unique Code

4

- **ID SETTING:**

Note that the ID is used as the LabCollector generated barcode.
The option is full automatic by default; it means that numbering is automatic and incrementing starting from 0.
You can define it as semi-automatic, numbering will be automatic but can be changed manually at each record entry.
Only administrators however, can alter this field.
Usages: You can set a new incrementing start, such as to include the year, enter data with passed IDs not filled, etc.
RISKS: auto-incrementing 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:**

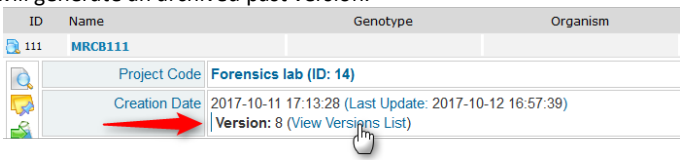
With this option, each record entered in LabCollector will be registered in a waiting list for verification and validation. This option is applied to ALL user levels.

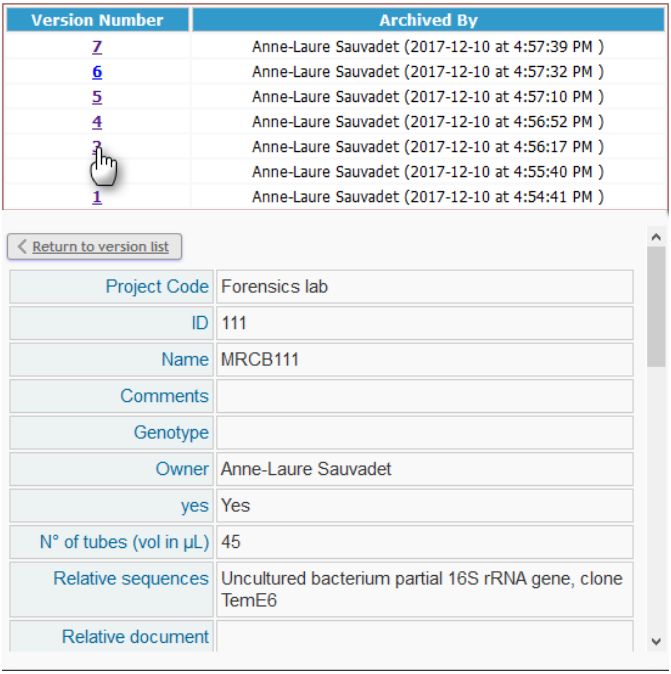
- **Block Duplicates:**

Record ***name*** duplication will be blocked. This option only works on Add/Edit forms. Import actions with duplicates will **NOT** be blocked.

- **Versioning:**

This option requests a special LabCollector license. With this option, each record update will generate an archived past version.





Version Number	Archived By
7	Anne-Laure Sauvadet (2017-12-10 at 4:57:39 PM)
6	Anne-Laure Sauvadet (2017-12-10 at 4:57:32 PM)
5	Anne-Laure Sauvadet (2017-12-10 at 4:57:10 PM)
4	Anne-Laure Sauvadet (2017-12-10 at 4:56:52 PM)
3	Anne-Laure Sauvadet (2017-12-10 at 4:56:17 PM)
2	Anne-Laure Sauvadet (2017-12-10 at 4:55:40 PM)
1	Anne-Laure Sauvadet (2017-12-10 at 4:54:41 PM)

Return to version list

Project Code	Forensics lab
ID	111
Name	MRCB111
Comments	
Genotype	
Owner	Anne-Laure Sauvadet
yes	Yes
N° of tubes (vol in µL)	45
Relative sequences	Uncultured bacterium partial 16S rRNA gene, clone TemE6
Relative document	

- **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.

4-14. 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 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.

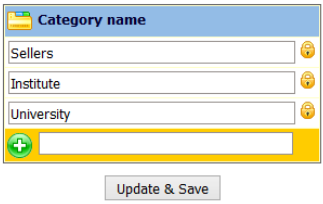
- The second allows you to manage the seller database by means of the *Address book* module. In order to do this you need to identify a seller category through ***Admin > Preferences > Address Book Options***. Check the box on this page or in Address Book options.

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

4-15. 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 > Lab Bookmarks*** (see chapter 10-10).

5- CUSTOMIZATION

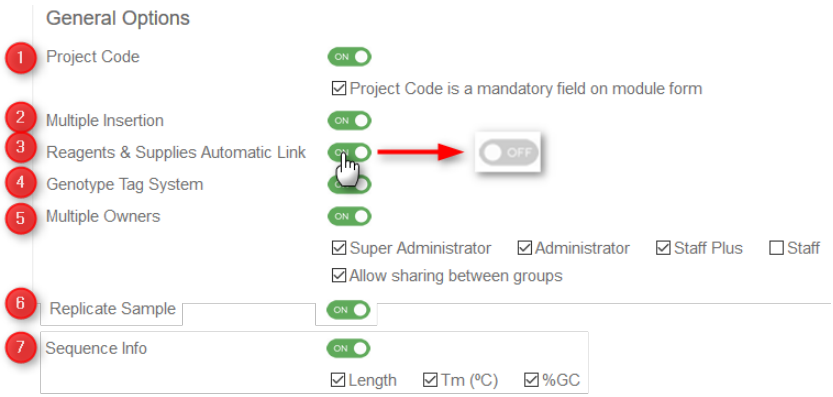
All modules are ready to use with a predefined data structure (fields) adapted to the expected content. Nevertheless, you may need some extra fields or numbering options for your lab specific information.
LabCollector allows you to create unlimited extra fields in each module in order to personalize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

5-1. Default fields

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

5-1-1. General options

You can activate and deactivate these options using the switch button on the right. Note that these fields cannot be completely removed; only hidden by de-activation. Note that there is some variation in the prebuilt options depending on the selected module. Also available in KB-115.



1. <u>Project code</u>

This allows you to have the project code field in the form to use the **Project Code** tools. **Project Codes** will associate your data to a project. It's an autocomplete field

but if the value is not in the Project Codes list, you may write it in and it will be automatically created (For super-admin and admin only). If you want to set up this field as mandatory, check the box.

A dedicated project code management page is available in ***Tools > Manage Project Codes.*** For more information, refer to chapter 10-6.

2. Multiple insertions

With this option, you can replicate the same record x times in your database.
For example, here, the record with the Name field "Multiple insertions" will be repeated 3 times.

Three records with the same Name values but different IDs (barcodes) will be created.

3. Reagents & Supplies Automatic Link

Creating this link allows you to order directly from modules other than Reagent & Supplies.
Check the box on the top right, then fill the form of your product (strain, plasmid, animals, chemical structure...).

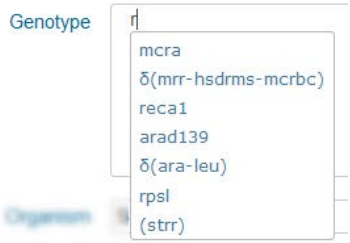
When you save, a form in Reagent & Supplies module automatically opens. Fill out this form too and save.

You now have access to ordering tools in the module.

4. Genotype Tag System (only available in Animals and Strain & Cells modules)

When you activate this function, 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 available tag separators are comma and space. Spaces and commas **cannot** be part of the genotype name. The genotype tags accept most special characters and punctuation marks.

The choice of delimiters for data import from files and updates includes TAB, comma (,) and semicolon (;) or your choice of custom separator. Make sure that when importing genotypes that an appropriate tag and separator combination is chosen to import data as intended.



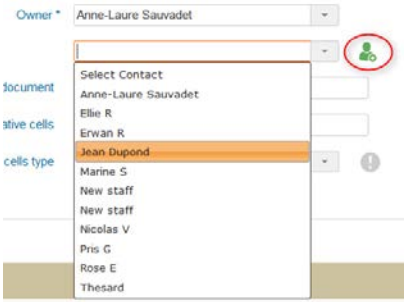
You can edit a tag just by clicking on it.

You can drag & drop tags to move them in the genotype sequence.
When you add tags, you can use the autocomplete function to avoid errors. Simply begin typing and then click the correct genotype. Autocomplete will find existing genotypes with any part matching what was typed, as in the picture above.

Through **TOOLS > Manage genotype tags**, you can find an admin area. More information can be found here.

5. Multiple owners

This function is useful when you are using group policies or strict level permission.
First, in general option default fields (see above), the super-administrator or administrator have to define who are the people who can add secondary owners: super-administrator only, administrator, staff + or staff, just by checking the box.
Then, when the owner of the record fills out the form, he has the possibility to add secondary owners with this icon image . A new owner field opens with a select list. This list is dependent on the user group.

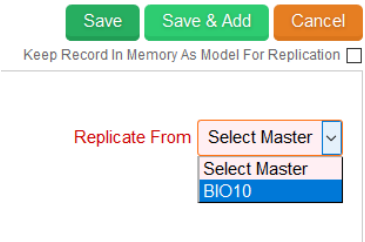


The secondary owners have the same rights to view, edit and use the record as the main owner.

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

6. Replicate sample (only available in Samples module)

When you activate this function, you have the possibility to create a record model. Check the box on the top right of your record (new or already in the database). Fill out the sample form and save it.



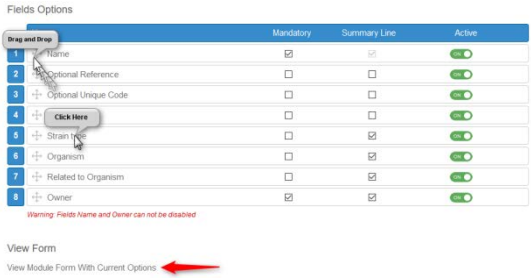
When you create a new record, you have the possibility to use one of your saved models available in the select list. Choose one and the form is automatically filled out with the same model values. A link between the record model and the new record will be created.

7. Sequence Info (only available in the 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.

5-1-2. Field options

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



- You can choose to activate or deactivate fields using the switch button on the right (name and owner cannot be disabled).
- Fields can be reordered by drag and drop.
- 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 238 is highlighted in red.

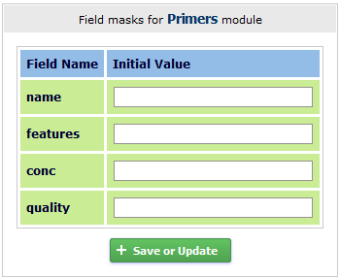
At any time, you can see the form with your current options by following the link on the bottom part.

All the functions are saved automatically.

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

5-1-3. Field mask

If you want to have some pre-filled information in module fields use the *Field Masks* preferences located in ***Admin > Data > Field Masks***.



Select the module in which you want to manage the field masks. Fill in text in the field of interest. The text will appear automatically when a new record will be created or edited. This way, each time a user creates a new record, preset data will be presented in the corresponding field. For example, this allows you to set a preferred concentration unit to be used by everybody.
If you want to change or delete a field mask, clear text data and save/update.

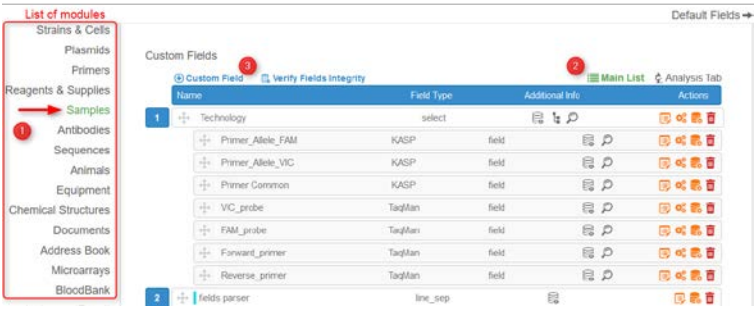
5-2. Custom fields ! NEW !

LabCollector enables you to add custom fields to all modules in a very easy way.
To have all the information on custom fields, please refer to the KB-118.

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 in the Analysis tab (see below)/Maintenance tab (Equipment)/Risk tab (Reagent & Supplies).
3. Click ⊕ **Custom Field** to create a new custom field.

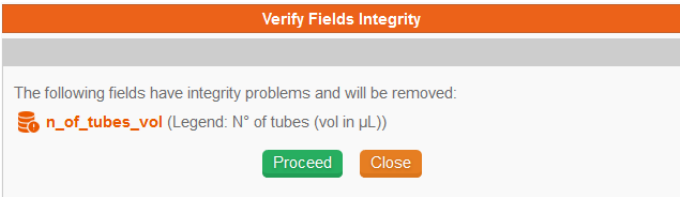


When you add a new custom field, a form opens:

1. Specify the field name.
2. You have the possibility to add helper text which is visible in edition mode (appears when hovering the mouse on the field and below the field name).
3. You have the possibility to add postfix text as units visible in edition/view mode and on export and print report.
4. Choose the custom field type. For more information, please read the knowledge base KB-97.
5. Choose the category of your fields if needed. For more information, there are multiple KB posts. You can also define that the field is only available in the Analysis tab
6. 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, dropdown select lists, and date types.

To learn more about the options, please read KB-118.

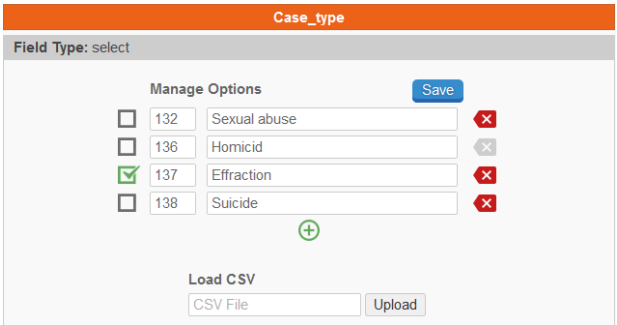
If you encounter an issue after creating/deleting or editing the name of a custom fields (e.g. the module doesn't work anymore), you can check the fields integrity with the link of the same name. Use with caution. This action cannot be undone.



5-2-1. Custom fields group

Fields can be grouped into specific categories. This helps organizing custom fields for specific usage for different type of records.

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



Default values can be configured. To define a default value, just select it by clicking in the left square.
CSV/text file of preselected values can also be imported.
IDs of each value are on the left if you need it in some import function.

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

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

Now go back to the module and edit a new record. Only common and category related custom fields will be displayed.

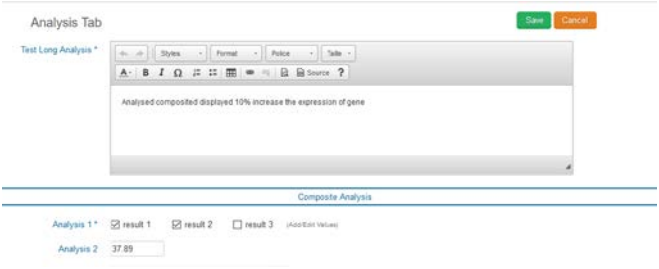
5-2-2. Analysis tab group

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 (green microscope).
Custom fields are presented in the module by creation order. All fields can receive preset values (field masks).
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 line separator and check analysis tab option. It will be used as tab title separator in the analysis tab.

2. Define custom fields in analysis tab.

3. Add/edit or import values in *Analysis tab* by clicking on .



4. Click on tab icons and 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.

CAUTIONS:

- If you delete a field, all data stored in that field will be lost! There is a warning prior to confirming 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.

5-3. 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. A module editor is located in ***Admin > Data > Custom modules***. It is accessible to the Super-Administrator and Administrators.

You have the following interface:

A module is defined by a name, a two-letter code (for the record identification) and an icon.

You can also choose whether to include the following options:

- **Comments tab**: for each record, you can add some comments. Comment field is displayed in a tab.
- **Action registry book tab**: for each record, you can add activity log (not linked to the storage system)
- **Include in storage system and log registry**: your samples can be added in the storage system.
- **Use the animal system storage**: your data can be linked with the animal storage.
- **Direct sample conversion**: For an initial record, you can create a derived sample as a new record recorded in the *Samples* module.
- **Direct reagent, batch and safety data link**: your record 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-120 section Analysis Tab.

By default you must have a *Name* field for the module. Once the module is defined, you can add an unlimited number of custom fields for the module.

It requires a **valid license** that covers this optional feature. For version 5.21 onwards in full license, if you hide a default module under ***ADMIN > Setup > General settings, logo, modules names***, it is replaced by a custom module within the limit of 13 modules.

6- STORAGE SYSTEM MANAGEMENT

There is a storage browser tool to visualize the storage organization of your lab: ***Tools > Storage Browser*** to view storage and use ***Admin > Manage Storage*** to edit and define storage.

The hierarchy tree on the left side of the storage browser can be expanded or collapsed. There are 4 levels:

Location → Equipment → Rack/Drawer/Shelf → "Box"

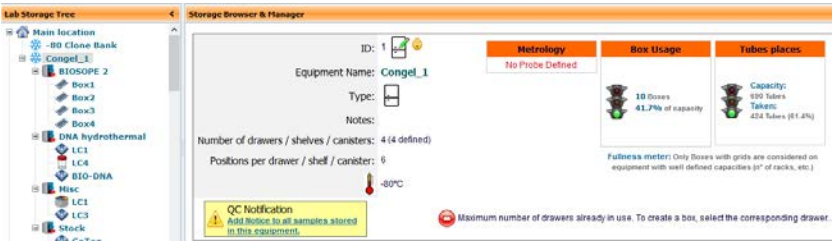
Location level:

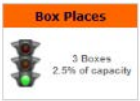
The first level gives details about the storage location. You can define buildings, rooms or any location unit. Locations can be renamed on this screen by double-clicking on the location name (except for *Main location*, by default).

Equipment level:

This level gives details about the equipment used as the storage device (freezer, shelf, container, cupboard…). You can define new racks or boxes inside this level. Equipment can be renamed from this screen by double-clicking on the equipment

name or by editing its profile. This is also connected to the Equipment module and can be used in connection with the Data Logger add-on.



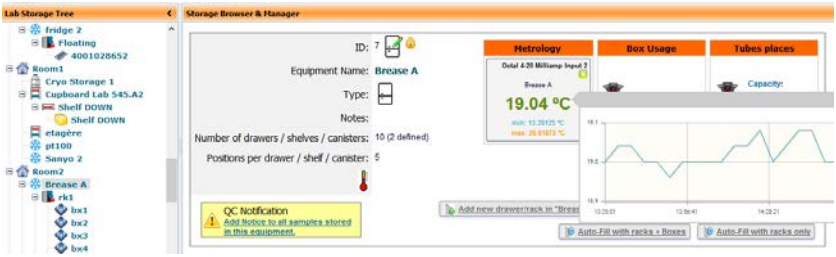


A capacity meter visually indicates how full or empty the equipment is. The meter only works when there is a defined number of racks (number + position, floating equipment is not counted).

A capacity meter gives a quick indication of total tubes capacity on all boxes and occupied places.

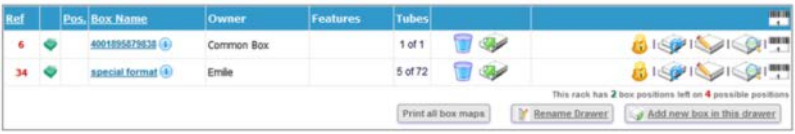
Only boxes with grids and defined capacities are considered.

Moreover, if your equipment has a temperature sensor related to the LabCollector Data Logger add-on: you can track the actual equipment temperature from the storage browser. For more details see the [Data Logger manual](#).



Racks/Drawers level:

A list of existing boxes is displayed for each rack in the storage equipment.



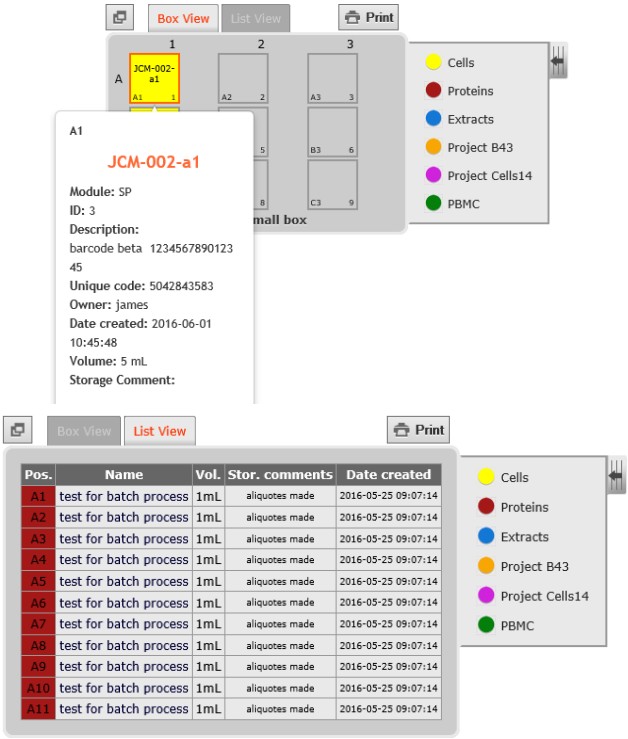
From there you can add a new box , duplicate box structure, edit or delete existing boxes (you can only delete boxes not currently in use) and delete all empty boxes in the rack. Box owner can throw away their full boxes (box + content) using . Whole box content can also be replicated as secondary storage .

You can rename the rack by double-clicking on the rack name in the tree or by editing its profile .

You can print all box maps by clicking on the "*Print all box maps*" button. One box map per page will be printed.

If there are space limitations for the rack, it is indicated once this is reached.

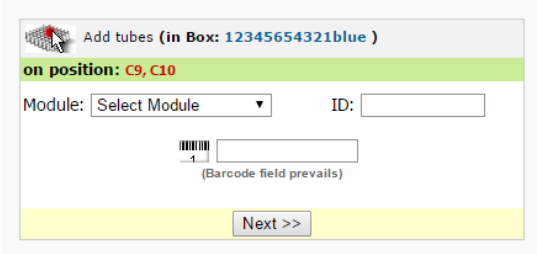
Racks can easily be moved, deleted (if they are empty) or added without needing existing boxes. The box map display allows a quick glance at available tube positions on each box stored in the rack as shown in the following pictures. The box can be viewed graphically or as a list. The Box view allows hovering the mouse to provide additional information. Clicking on a sample will direct you to the record's page. If color coding has been implemented a legend will appear.

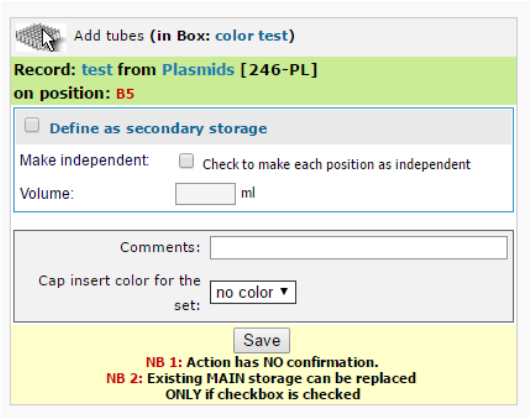


Box level:

The final level shows box details and a box map. From there you can edit the box parameters (if you need to move it for example), add samples main and secondary storage by selecting one or more cells and clicking on Add tube and define a cap insert color for the tube. When adding a tube you need to know the module and either the ID or barcode. These values may be scanned from a barcode reader.

Before using cap insert color options you need to define them through the storage system options: ***Admin > Storage > Manage Storage > Options*** (See below).





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.

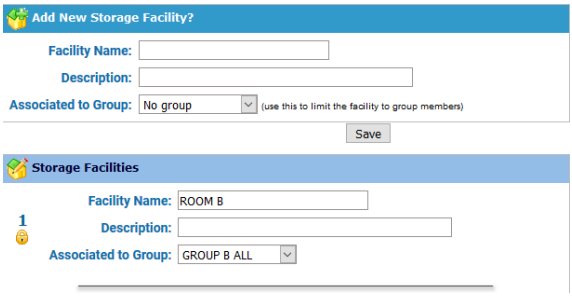
Go to ***Admin > Storage > Manage Storage***

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

6-1-1. Defining facilities and locations

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 > Storage > Manage Storage > Facilities***

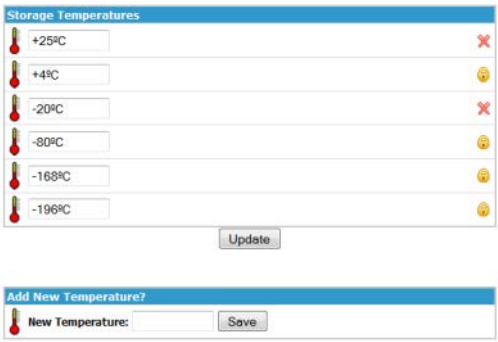


Here you can add new main locations or edit existing places. Give a short name for the location and a description. The storage facility may also be associated to a group to limit access (see Groups definitions).

6-1-2. Defining temperatures

You can define temperatures through:

Admin > Storage > Manage Storage > Temperatures

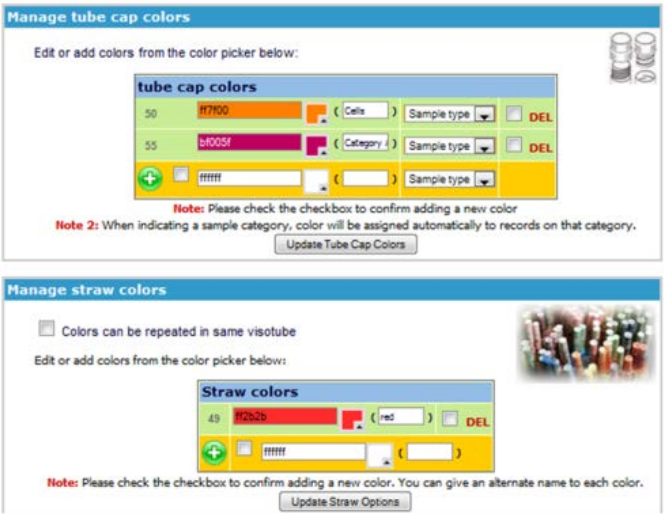


Temperatures are going to be used for managing your storage equipment. Some of them are predefined and locked. Note that this temperature definition is meant as the ideal temperature for the equipment.

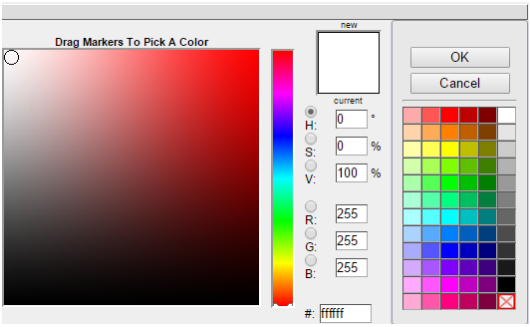
6-1-3. Define storage system options

Through this menu you can define options for storage method, replication storage, tube cap colors and straw colors. Tube cap colors collection will be displayed on the box maps. Here you can define tube cap colors, associate it with sample type (defined under ***Admin > Preferences > Sample Types***) and straw colors.

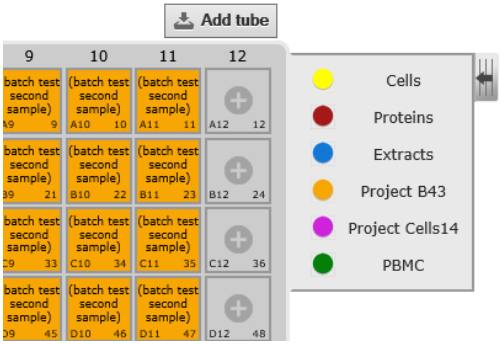
Go to ***Admin > Storage > Manage Storage > Options***



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.

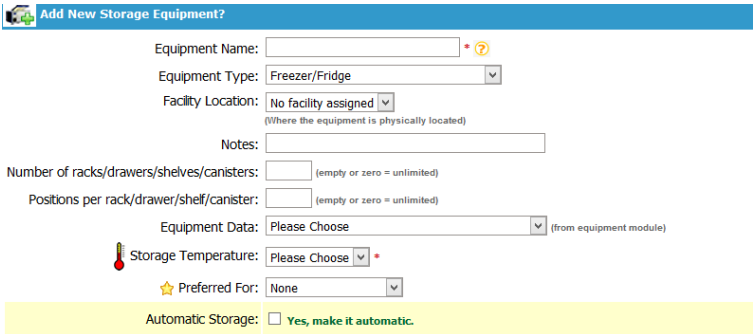


Box view showing color legend.

List view showing legend.

6-1-4. Creating storage equipment

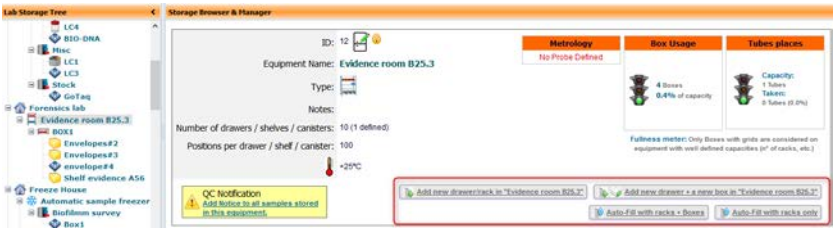
Go to ***Admin > Storage > Manage Storage > Storage Equipment***



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 in order 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 above).
Then click on *Save*. The new equipment will be immediately available on the storage browser.

6-1-5. Creating boxes and racks

You can create new boxes through
Admin > Storage > Manage Storage > Create New Box or Tools > Storage Browser
The window is displayed in the Storage Browser & Manager.

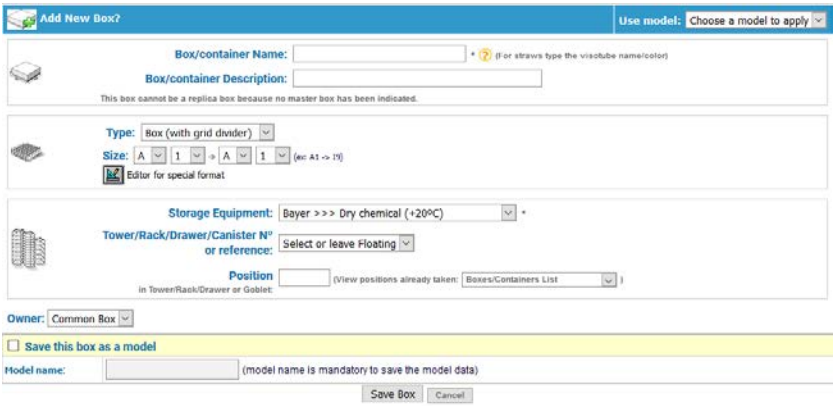


Choose the equipment where a new box is required. The same form may be used to create a box and a new rack/drawer at the same time.

1) *Add new drawer/rack in...* 

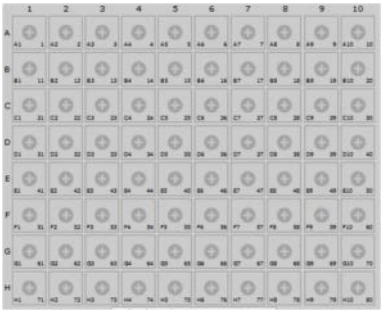
Indicate a rack name and add.

2) Add new drawer + a new box in... 



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:



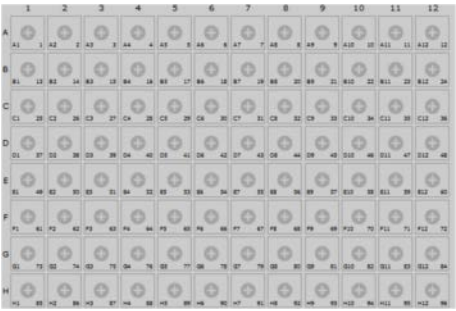
- Box with no grid

Position	Content

- Bag/Container

Position	Content
#1	2-T1

- Microplate or tube tray

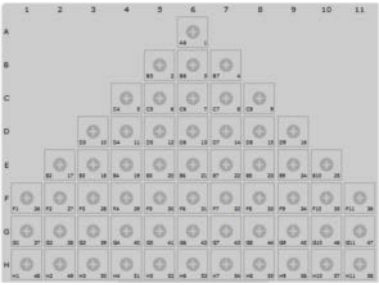


- Visotube for straws (See chapter 6-1-6)

Position	Content
#1	Mouse_ALS256/euk5
#2	lignee A1245 45478 45478
#3	CC13 NKY330 27/7 A

- Special format:

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



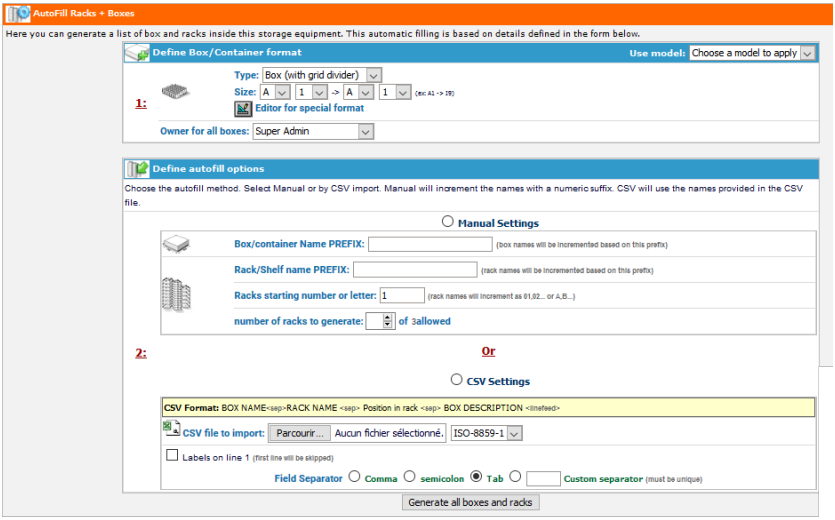
You can also change storage equipment if you want to create a new box in another place. Select a rack and the position where the new box will be created.

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.

You can easily move boxes (multiselect mode) between racks by dragging and dropping them in the Lab Storage Tree. It is also possible to use 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 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> Storage> Mange Storage> Models*** and can be edited or deleted through this menu.

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



6

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.

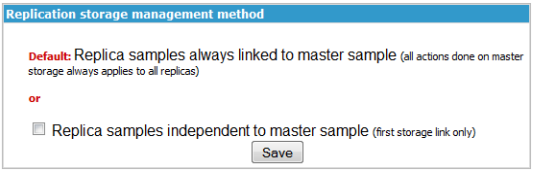
6-1-6. Creating visotubes for straws

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.

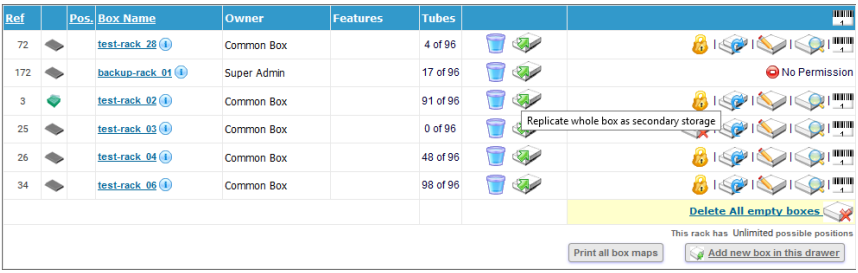
Before adding straws in the visotube, you have to define color options through:
Admin > Storage > Manage storage > **Options**

6-1-7. 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.

6-1-8. Delete or clean a box

With the icon, you have different options.

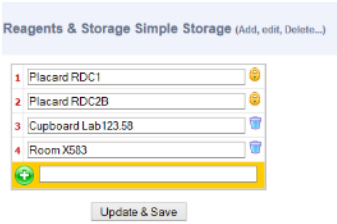
- Clean the box from associated records BUT without deleting the box or the records
- Delete the box only
- Delete the box with associated records

BE CAREFUL, this action is definitive and cannot be reversed.

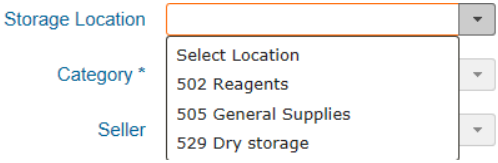
6-1-9. Manage storage for Reagent & Supplies module

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

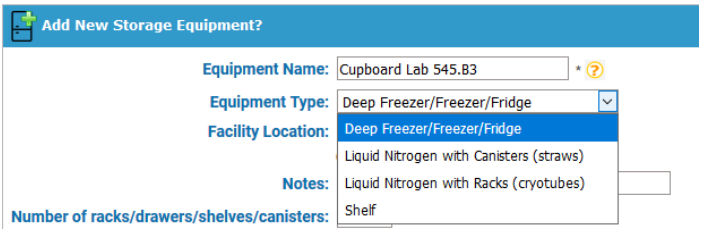
If you choose to select the *Simple storage* option, navigate to ***Admin > Storage > Simple Reagent Storage*** and define the list of reagent storage locations in main storage places. These will be single locations without any sub-locations.



The list becomes available when creating or editing a record:

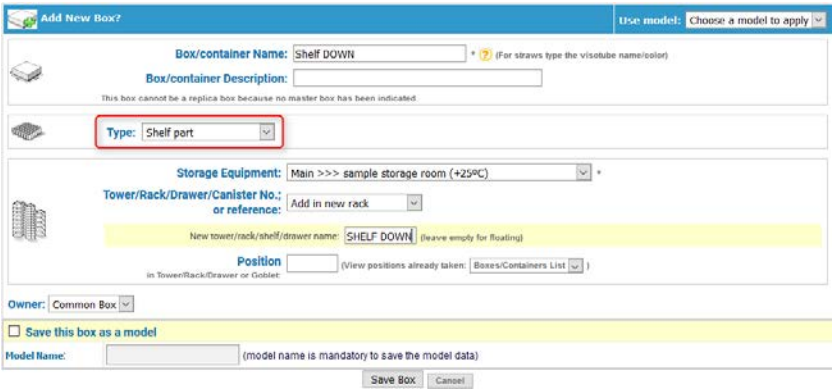


When you select *Main storage* option, you have to define your storage in ***Admin > Storage > Manage storage***.
Add new storage equipment, and select *Shelf* as *Equipment type.*



In *Storage Browser* (Tools), under your new equipment, *add new drawer + a new box*. Name your box, choose ***Shelf part*** as box type and choose/create a shelf.

Once created, you can see your shelf in your equipment under this  icon.



For more details for particular situations, refer to the knowledge base.

6

6-2. Managing storage equipment contents

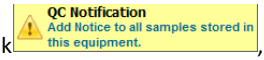
At the equipment level, in ***Tools > Storage browser***, it is possible to perform a variety of actions.

Move drawers:
When drawers must be transferred to other equipment (in case of equipment change, 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.

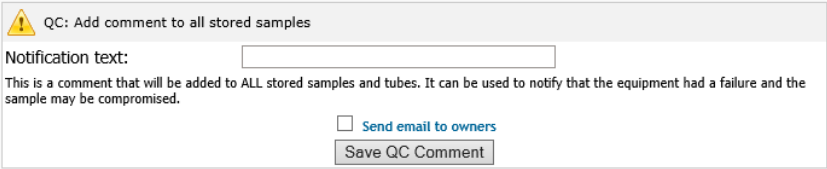
You can also easily move racks/drawers (multiselect mode) between equipment by dragging and dropping in the Lab Storage Tree

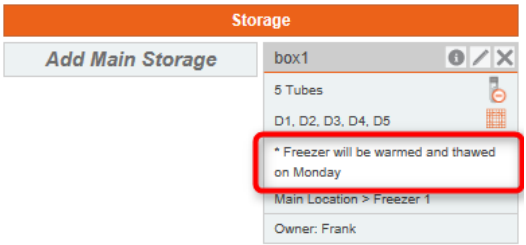
Add notification to all samples stored in this equipment:

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.





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

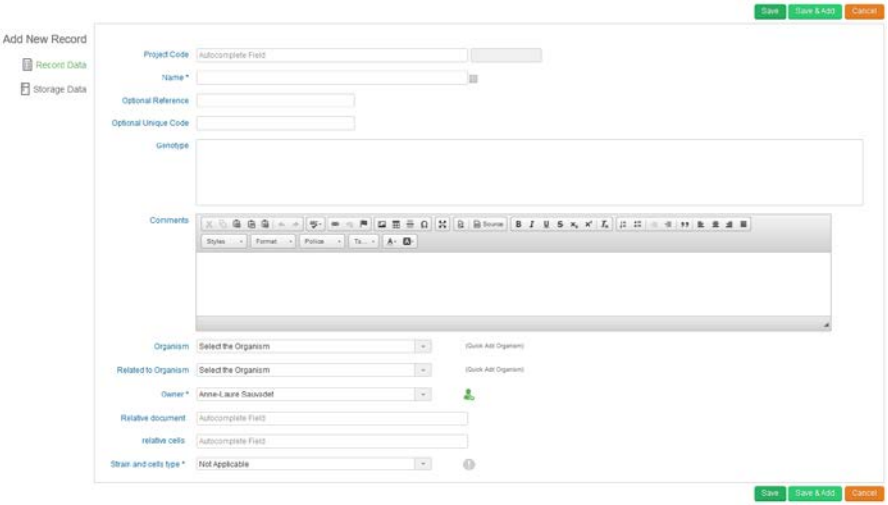
7- ENTERING AND MANAGING DATA

You have already made preferences definitions; 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 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 

. 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.



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.
In this case, Storage data is accessible with the tab on the left. Please see section 7-3 for more information on storage.

Default field options can be activated or deactivated. Please refer to the section 5-1.

Record names can add Greek letters using the special keypad on the right.

Each record can be duplicated by clicking on the icon . A new duplicate record will be created with a unique code.
You can choose to link (normal link at the bottom) your duplicate to the master record (Check the box). You must confirm the record by clicking *Save* on the form.

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.
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:

Edit record. Clicking here will open the form to edit a record

Duplicate record. This allows you to duplicate some information about a record. If present the following are *not* duplicated: Storage locations, activity log, processes, annotations, associated files, crossings, Blast tools results, Lots, photobank links, ordering information, display spectrum, equipment schedule, and equipment maintenance.
The duplicated record will automatically link to the original record; however, no other links will be present.

Archive/hide record. The record will not be shown in search results unless it's clearly indicated in the search parameters. Edition will not be authorized. This action can be reverted in the archived/hidden record.
Read-only record. The record will be shown in search results like any other record but any kind of edition will not be authorized. This action is irreversible and so the record will always stay in the current version.

Unarchive record. Moves a record from the archive back to the normal listing.

Delete record. Availability of this action is limited to minimize unintentional data loss.

Print record. Allows printing of a single record.

Memorize record. Places record in a list of memorized items. Accessed via ***Tools > Manage memorized items***.

Generate barcode label. Brings up a menu for barcode printing.

Add to order list. Allows adding the item to the purchase management system.

Indicates item is in the order list.

The following icons appear at the left of a record. Clicking these icons will provide particular details. Some of the icons are module specific.


Open record. Opens record for viewing.


Display record. Returns to the record view after viewing other tabs.


Display related records. Note: requires specific naming conventions.


Derive sample. Creates a new record in the samples module. Some information relating to the original record will be prefilled, including a link to the original record.


Analysis tab. A location for custom fields relevant to analytical results.


Activity Log. Records actions for storage. Also allows user to enter customized activity.


Display Storage. Shows a list of all storage information. Multiple viewing options are available.


Photobank link. Link to photos, albums and other media stored in photobank linked to the record. Requires photobank 3.0 or higher.


Display Reagent & ordering information. Creates a link to Reagent and supplies to allow ordering.


Display lots. Shows lots of the product.


ELN link. Link to where record appears in the ELN. Requires ELN and LabCollector 5.24 or higher.


Display Processes. Shows a list of processes done with a sample.


Display crossings. Shows the crossings with an option to view the geneology tree.


Display comments. Tab for comments.


Manage sequence annotation. For plasmid or sequence annotations.


Sequence and map. Displays the sequence and map. Multiple viewing options are possible.


Add to synthesis order. Primers module only. Quick link for ordering for Primers.


Primer in the synthesis order list. Primers module only.


Display sequence bioinformatics tools


Display sequence blast tools


Display related files


Display spectrum. Displays a spectrum. Note: JDX format required.


Indicates stock. Reagent & Supplies module only. Indicates as available, low number of units, out of stock.


Link to other data.


Display Maintenance. Equipment Module only. Shows the record of

maintenance and allows updates to maintenance.
Equipment Schedule. Equipment Module only. Shows the schedule for the equipment.

7-1-1. Waiting data

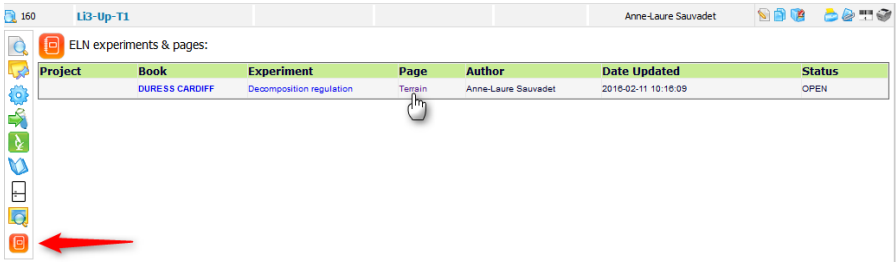
When data is entered by users with "*User*" level it is flagged on the database as temporary. An alert is displayed on the homepage indicating that some data awaits validation by an administrator.

Open waiting list: ***Admin > Data > Waiting List***

This page gives a list of records waiting 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. Electronic Lab Notebook link

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



Note: Requires ELN and LabCollector 5.24 or higher.

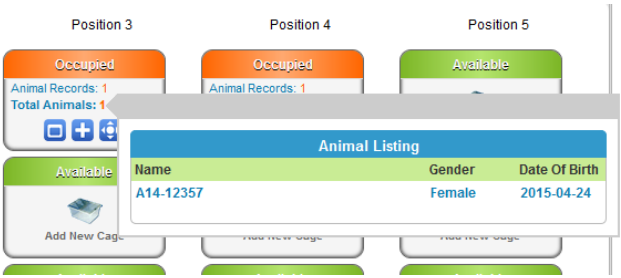
7-2. Animal management

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

To add new animal records click on the top-right link ***Add New Record***. A form will be displayed to enter data according to the module.
OR
You can add animal records through the **Cage facility plan (Cage options)** by clicking on **Add New Cage > Create New Record** if you want to add animals in a new cage or on if you want to fill an existing cage.

Before adding animals through the cage facility plan you need to define animal storage facilities through ***Admin > Preferences > Animals options***. For more information, see the chapter 4-7.

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.

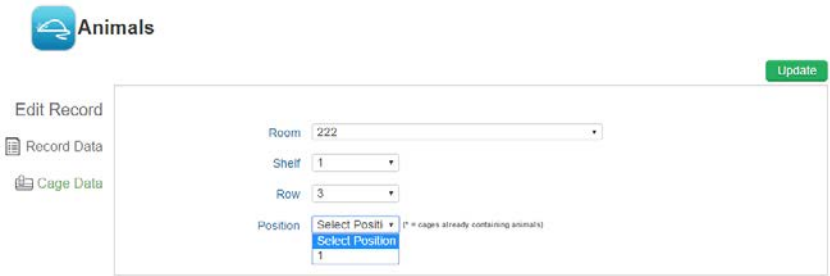


You can also easily move cages between rows, shelves and rooms by drag and drop. Clicking the icon will memorize a selection of the animals in one cage and allow movement to any other cage. This can be useful for organizing or consolidating animals into a different group of cages.

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 a record.

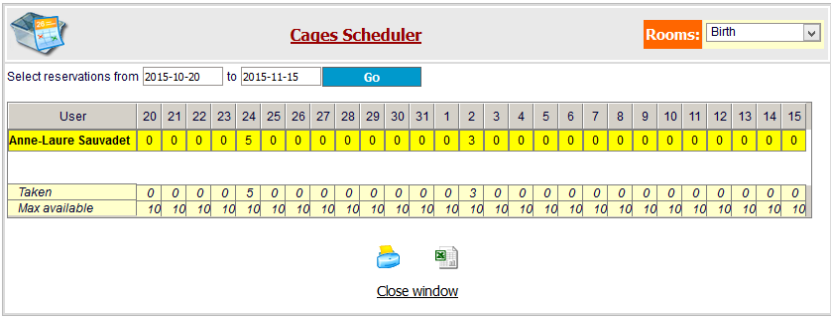


Also look at our video online.

7-2-1. Room Scheduler

Before using this application, you need to define animal storage facilities like room and shelf characteristics (***Admin > Preferences > Animals options***). For more information, see the chapter 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.



User	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Anne-Laure Sauvadet	0	0	0	0	5	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
Taken	0	0	0	0	5	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
Max available	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10

1. Choose a room where you want to schedule locations.
2. If you make your first reservation, click on **Add me to this Schedule!**
3. Choose your reservation dates using the calendar.
4. Click on the date and replace 0 by the number of locations that you need.
5. Close the window when finished.

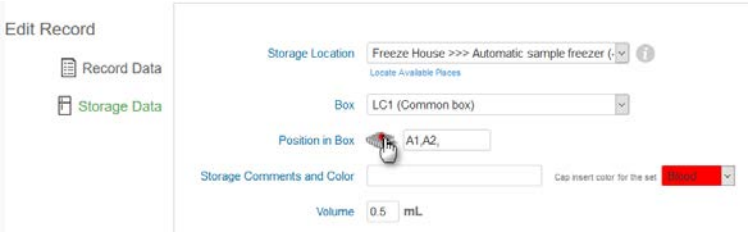
Note:
Taken = number of locations already reserved
Max Available = total number of locations

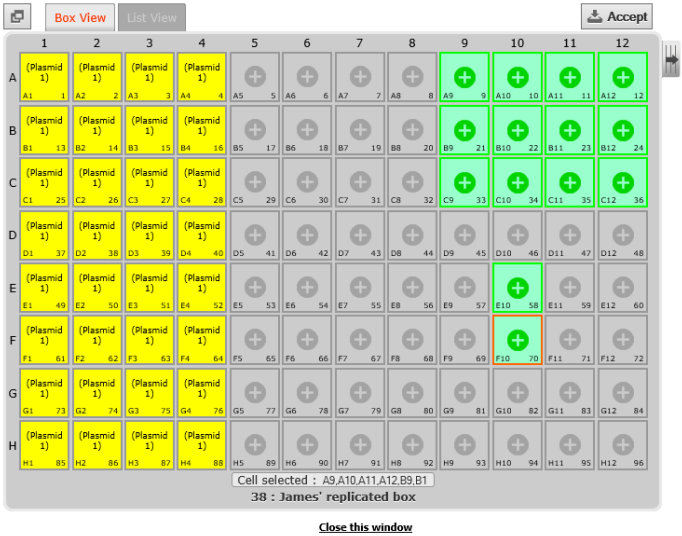
7-3. Storage stock

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 dropdown menus. Then indicate vial

coordinates on the storage selector by clicking the box to the right of 'Position in Box'.





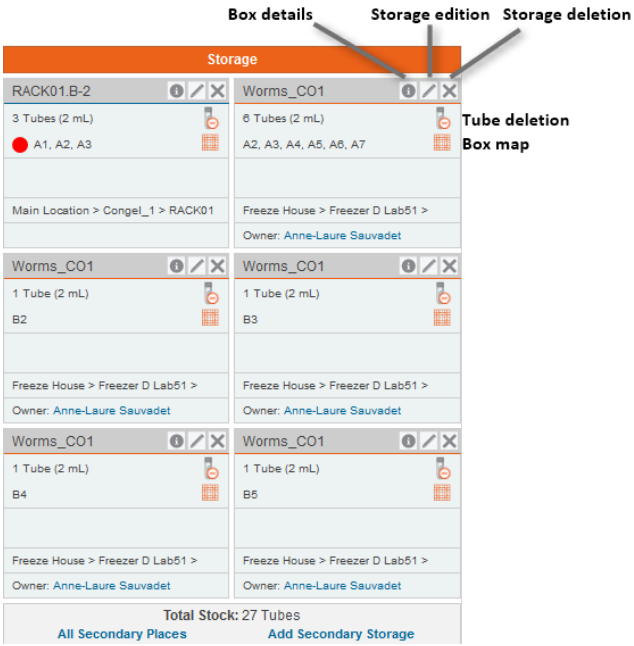
Generic steps for assigning tubes/vials:

- 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.
- 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.
- Indicate an optional commentary on this particular storage.

- 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***).
- Indicate a volume. Only in mL for the moment.
- Save the record or the storage by clicking update/save.

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:

1) Through record display:

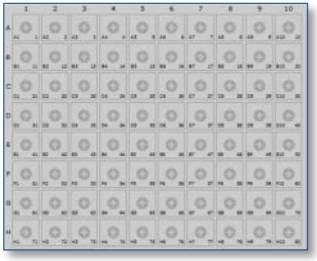
You can define a storage place directly from the record entry in a module:

- Search for the record you want to manage in the module.
- Expand the record data.

- 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).

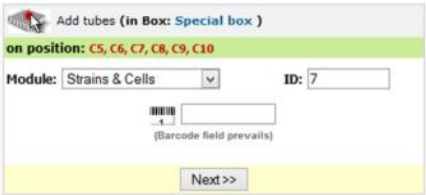
- Follow generic steps for assigning tubes/vials:
  - Select the location.
  - Select a box from the resulting list.
  - Fill the box grid or visotube on the interactive map (open the map by clicking the grid icon).
  - Close the interactive pop-up map window by clicking on the "*Keep selection…*" button.
  - 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.
  - 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*)
  - Save the main storage by clicking the Add Main Storage button Add Main Storage.

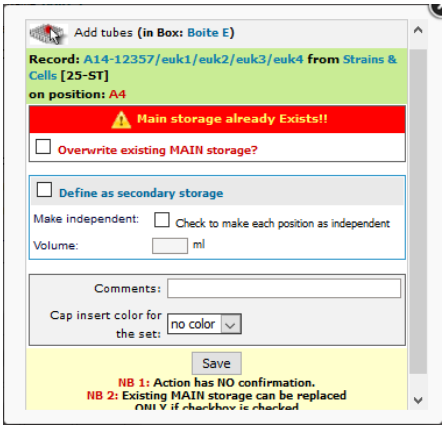
2) Items may be added through the storage browser. Find the desired box in the storage browser. Then click to select one or more slots  and Add tube:



A pop-up will open and you can select the record to add by typing the ID or scanning a barcode. Through this pop-up, 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***.

The ID and the barcode are different. The ID number is found at the far left of the record entry next to the icon when viewing records. The barcode also includes the module identifier code and can be checked manually by clicking the barcode icon when viewing a record.





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.

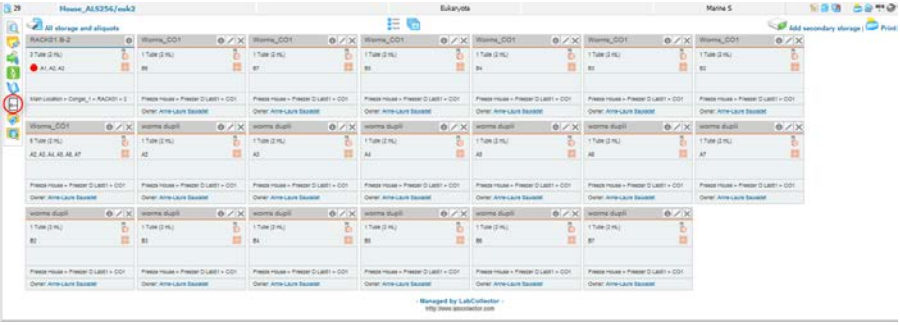
There are two ways to define a secondary storage:

Through modules:

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

- Follow steps as described for main storage above.

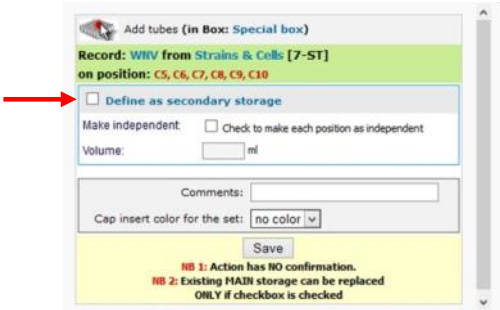
To display all storage boxes, click on *"All secondary places".*



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

Edit via the storage browser by clicking on  **and**  **:**

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 check the box.

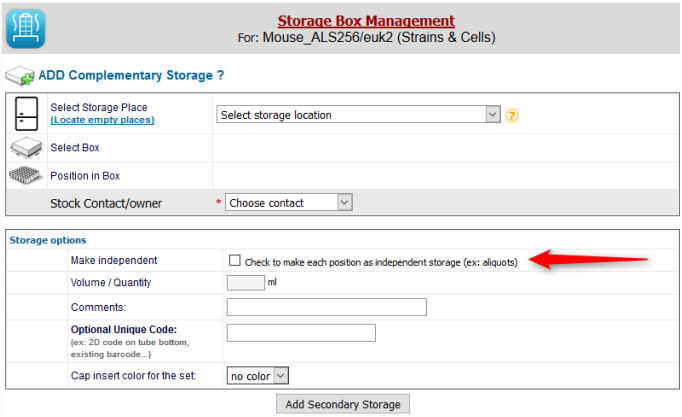


7-4. Removing and adding aliquots, tubes or main storage

7-4-1. Aliquots management

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

- Click on the "*Add secondary storage*" link as described above (see chapter 7-3-3)
- Once the storage place, box and box position is selected, check the "Make independent" box.

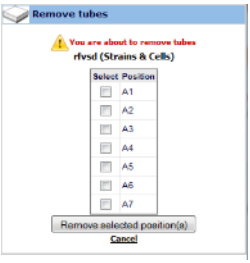


This option allows the independent management of each tube which will be assigned its own editable barcode and can, in addition, have an existing barcode associated to the tube. The unique identifier/barcode and any additional information can be seen when viewing the storage details.

7-4-2. 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.

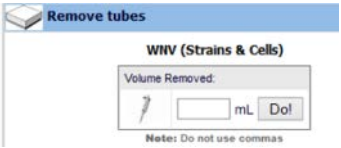
To remove one or more tubes, a quick icon is provided . When you click on it, a pop-up appears:



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.

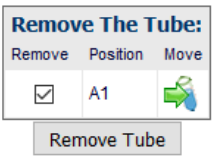
7-4-3. Volume deduction

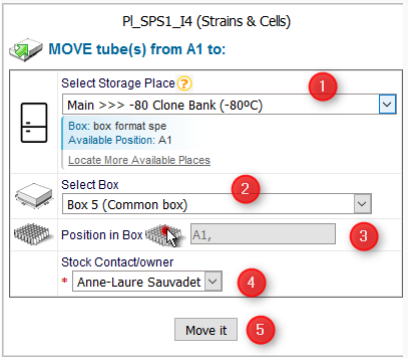
An automatic removed volume option can be used if tube volumes quantities are defined. To use this option, you have to click on the remove tube icon .



7-4-4. Move tube

Tubes can be moved from one position to another or from one position to many positions by using the same icon . The popup offers you the option of moving the tube by clicking on . Then, as before, fill out the storage form then click on *Move it*.





7-4-5. 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 chapter 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 > 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 chapter 7-6)
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 on the user history log.

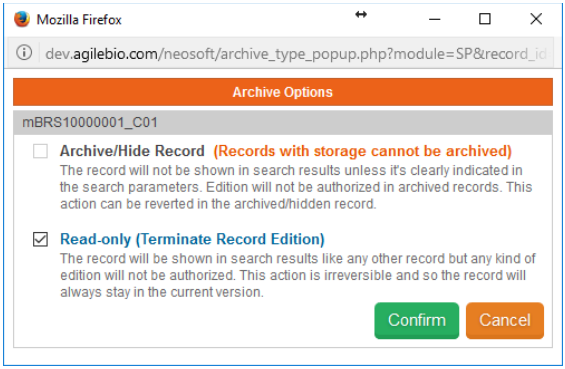
7-4-6. Adding new tubes/vials

To add new tubes to the box, use the 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.

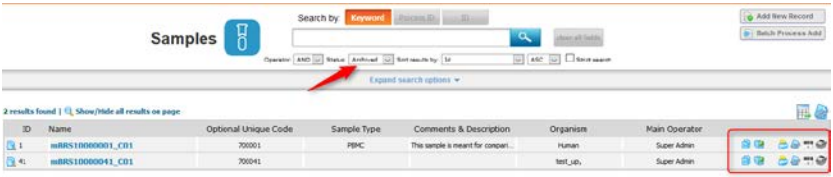
7-5. Edit, archive and delete records !NEW!

Once records have been added to the database, you can edit, archive, setup as read-only or delete these records. When a record list is displayed in a module, each one is associated with the edit ( ), archive/read-only ( ) and delete ( ) 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. 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. Records can only be duplicated, printed or memorized; the storage is always active (creation, modification and deletion are possible).

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 chapter 10-5). This function is available for all modules.

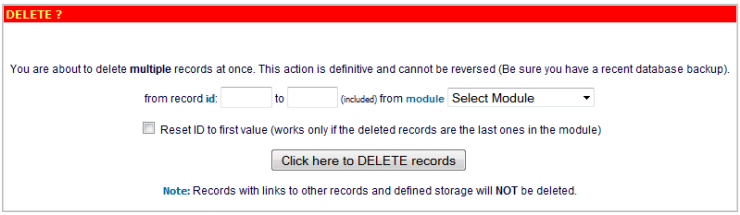
1. Go to the relevant module(s) to select records that you need to archive by using the memorize record icon .
2. Go to ***Tools > Manage memorized items***.
3. Select records that you need to archive by checking the corresponding box.
4. Generate a worklist (for more information about this tool, refer to chapter 7-6)
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 modules' search engine to find records to delete. Use the memorized record icon to memorize all records you want to delete. Once done, go to ***Tools > Manage memorized items*** (for more information about this tool, refer to chapter 10-5)

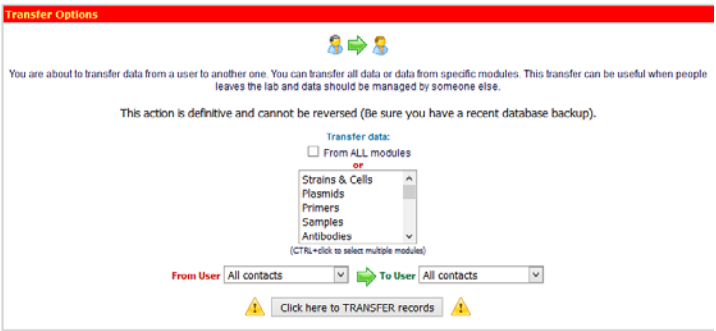
On this screen you can check/confirm the records to delete. You then have to choose the "*Delete from Database*" option.

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 existent 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

7-6-1. Barcode types

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

LabCollector edits two barcode types:

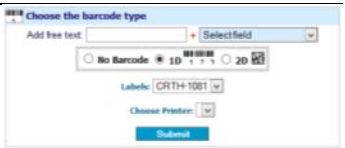
- **Linear or 1D barcodes:** These are classic barcodes. They are read from any CCD or laser barcode reader (plus many smartphones). 1D barcodes can be large so they only can be placed on sufficiently sized surfaces. The large size may also accommodate the inclusion of the record name and/or free text.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

- **DataMatrix or 2D barcodes:** 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:

Click on	Click on
• A new window opens with different barcode printing choices. 	A pop-up opens for the direct print mode application on EPL or JSCRIPT capable printers. To install it: ***Admin > Setup > Label network printers.*** A new window is opened.

 • You can generate label with barcode only or check *"Add name to label"* to have the record name and/or add free text on the field beneath. You also can print label with no barcode. • You can choose your labels and your label printer. • To print, click on *"Open in a new window"*.	 Here you can add free text, add the text of a select field and choose your barcode and labels roll types (defined in *Admin > Setup > Label network printers*). You can print label with no barcode. You can change the barcode size for a better output.

NOTE: LabCollector offers the possibility to print several barcode labels at once. For more information, refer to chapter 10-2.

7-7. Importing data

7-7-1. Import data of external files (batch) !NEW!

In order to facilitate the transition from other applications or databases, LabCollector can receive data from external sources. The importing feature can also be used to import batch sample lists from equipment or devices for example.
For more information and examples, see KB-141.

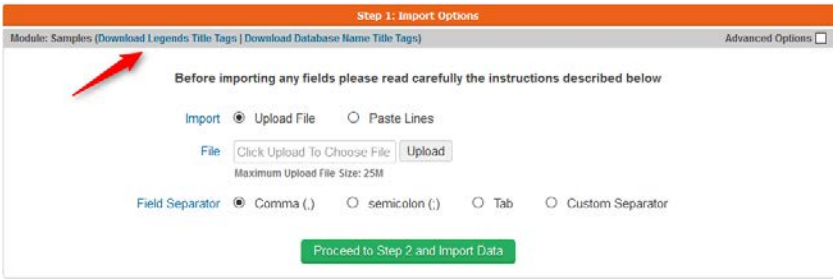
1. Open the Import interface: ***Admin > Data > Import***
2. On the Import screen select the module where you want to import data.
3. Prepare the LabCollector database: before importing data, you have to configure the module you chose. You need to previously create all the fields you need. Go to ***Admin > Data > Custom fields and Default fields.*** Then, go back to ***Admin > Data > Import***.

4. 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 KB-118.
   - The order of the columns is not relevant.
   - Imported data **MUST CONTAIN** title tags/fields related to **name** (if you have set up your module with Automatic naming, 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 **DON'T NEED TO USE ALL TITLE TAGS** but only those containing values you want to import.

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



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.

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 KB-71).

5. 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.

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.

6. Select the data file to upload through *"Browse"*.
7. Choose the field separator used in your data file.
8. Under Advanced options, you can access to the file encoding. With the "Import to waiting list" option, all users will be able to import data which will be store in a waiting list before their validation.
9. Click on *Proceed to Step 2*.
10. 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.
11. Submit the "Step 2" form by clicking on *Confirm* to validate the data.
12. Data import is completed.

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.

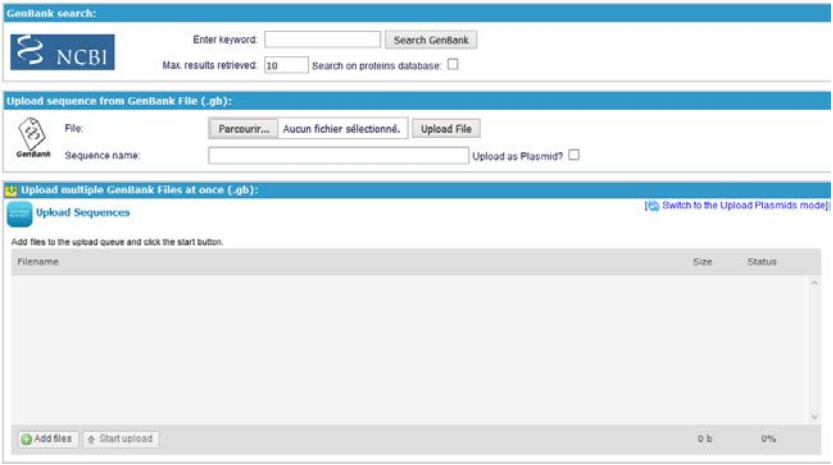
Import action in 2 steps. Data to import can first be browsed and displayed on screen for checking. This way you can visually confirm that data is correctly parsed before permanently saving into the database.

NOTE: 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).**

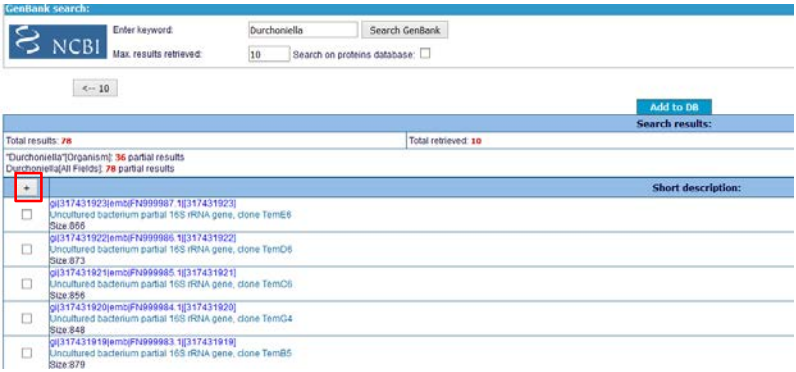
7-7-2. Import data from GenBank (with annotations)

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 plasmid, respectively in the **Sequences** and **Plasmids** modules (if you check the box **Upload as Plasmid**).

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: just select the appropriate file (.gb), give a name to the sequence and click on **Upload File**. Don't forget to tick the box if you want to upload plasmid.

- Import multiple GenBank files at once: click on **Add file** to select the appropriate file. Repeat this step as many times as you need and then click on **Start Upload**

to upload files. Don't forget to "Switch to the Upload Plasmids" mode to import data in **Plasmid** module.

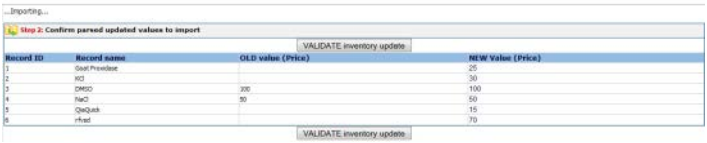
This application can be very useful if you need to import large amounts of data from GenBank files.

7-8. Mass data update

7-8-1. Mass price updater

LabCollector includes an administrative tool for updating price field from several records of Reagents & Supplies module.
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 > Data > Mass price updater.***
3. Select your file to import, field separator and record references.
4. *"Import & Update"*



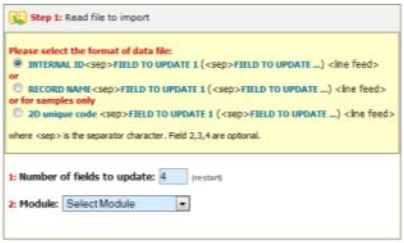
5. Check your data import and validate.

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 includes an administrative tool for updating one or more fields from several records at once on any module.

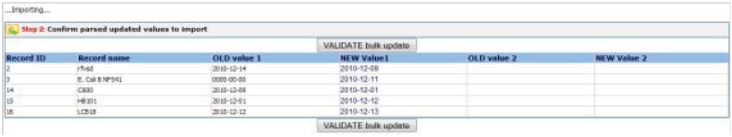
It works with 3 modes:
- **Internal ID** (records identified by LabCollector numbering)
- **Record Name** (records matching the name. It must be unique)
- **2D barcode** (records identified by tube barcode numbering)



1. Choose records on a module and generate a full or filtered list of data by exporting to excel (from module page).
2. ***Admin > Data > Mass record updater***
3. Select data file format, module, field 1, other fields (optional), select file to import and field separator.

Select ISO 8859 or UTF8 for special character support.

4. *"Import and Update".*



5. Check your data import and validate.

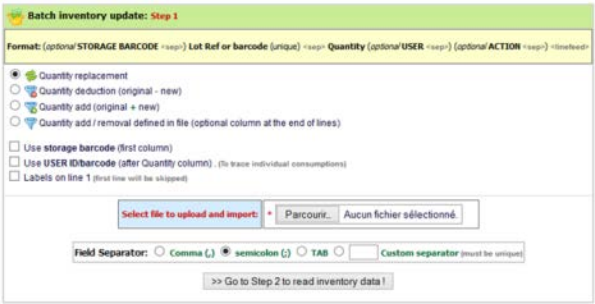
Data file must be a text file with columns delimited by a separator character that can be a comma, semicolon, TAB or any other.

Suggestions: use this tool to update/import storage, analyses results, corrections … All fields are accessible.

7-9. Inventory updater tool

You can generate your batch lists using our mobile app by scanning the lots barcode 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.

Access this tool from ***Admin > Storage > Batch Lots Inventory***



<u>Step 1:</u> Read and import data
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.

<u>Step 2:</u> Choose between 3 options: quantity <u>replacement</u>, quantity <u>deduction</u> or <u>add</u> quantity.

Note: 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.

<u>Step3:</u> 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.

7-9-1. Quick destock

Quick stock movement can also be done using the Reagents & Supplies Quick Destock button 

:

1. Enter the product or the lot barcode.
2. Enter the quantity.
3. Choose between quantity replacement, quantity deduction and quantity add.
4. Process.

7-9-2. Internal consumptions

Internal consumptions management with rebill option on budget accounts can be made with the Users Reagents & Supplies Consumptions tool.

Go to ***Tools > Users R&S Consumptions***

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

7-9-4. 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.

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.

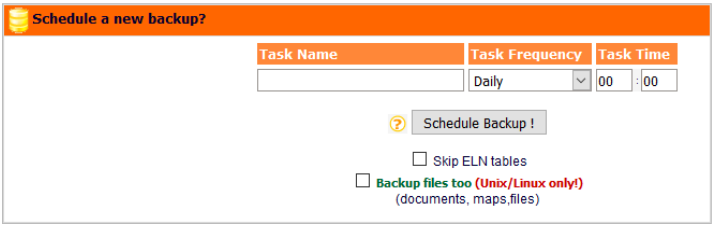
7-10-1. Database dumping

LabCollector provides an easy tool to create backups. Go to ***Admin > Data > Backup***. Then click on the "*Start New DB Backup*" button.

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 > 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"

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.*

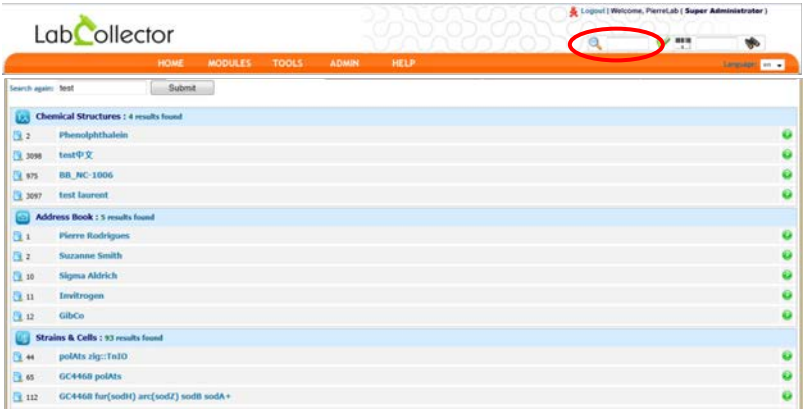
Recover backup! *Compressed backup files from the manager backup utility can be recovered simply by decompressing them and replacing the original folders (www and /mysql/data/labcollector).*

8- SEARCHING DATA

One essential goal of LabCollector after storing data is to easily find and retrieve it when and where you need it. You can find data from the LabCollector home page and in each module using keywords search or from the barcode search field. You can also find data through the PDA interface on pocket PC devices.

8-1. Keyword cross-search between modules

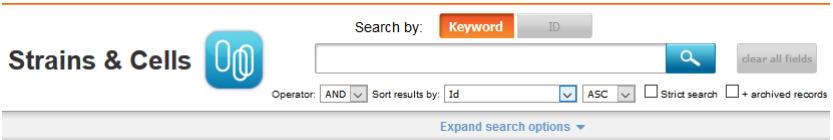
On the LabCollector home page, you can access information stored in the database with a keyword search.



Results are displayed as a list found per module.

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 specificities of data stored.



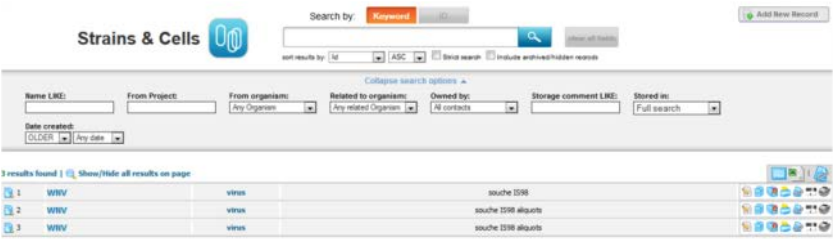
You can use none, one or several keywords separated by spaces. The search does not accept any logical operator. Select between the two operators **AND/OR** in the select list. You can refine the search with specific optional criteria (Expand Search Options).

To list all data, do a blank search.

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.



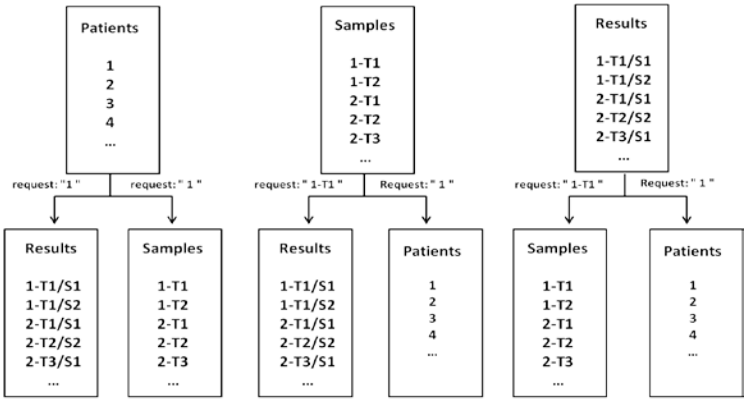
You can expand one or more items by clicking on the magnifier icon ( ) next to each item name. You can also expand all results on the page on the small magnifier icon ( ) on top of the results page ("*Show/Hide all results on page*").

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.).

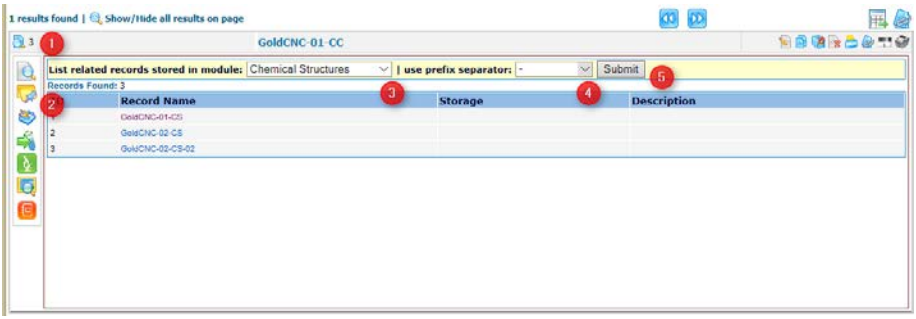
Super-admin can change the number of results displayed per page. Go to Admin > Setup > General setting, logo, modules names and choose the number of results you want to see per page.

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.
This function can be very practical to create and manage biobanking 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.

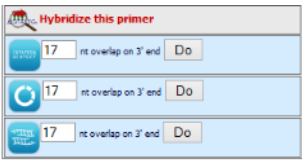


1. Select record
2. *Display all related results* tab
3. Select module to find related records
4. Select separator
5. *Submit*

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.

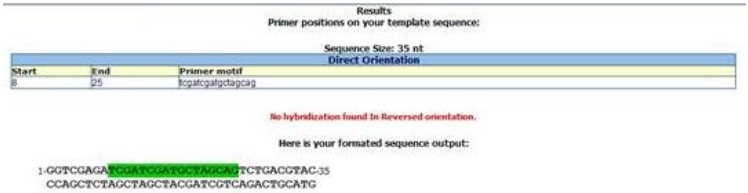
8-4. Primers and sequences cross-search

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 localizations on the sequence.



Results
Primer positions on your template sequence:

Sequence Size: 35 nt

Direct Orientation		
Start	End	Primer motif
8	25	tcgatcgatgctagcag

No hybridization found In Reversed orientation.

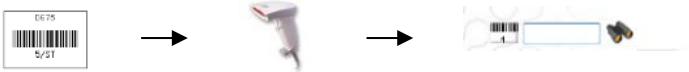
Here is your formated sequence output:

1-GGTCGAGATCGATCGATGCTAGCAGTCTGACGTAC-35
CCAGCTCTAGCTAGCTACGATCGTCAGACTGCATG

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

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 harbor 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

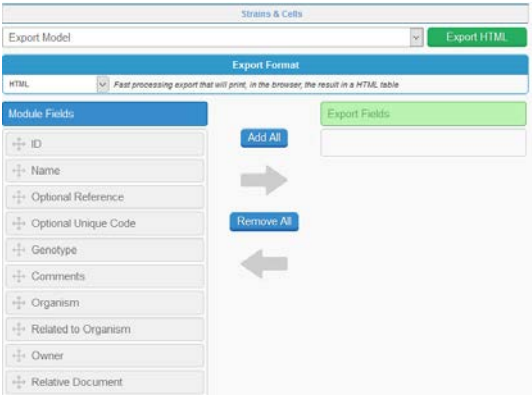
8-7. Exporting/Reporting

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.

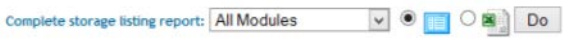
Moreover, if the super-administrator has created an export model, you can select it from the list.



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.

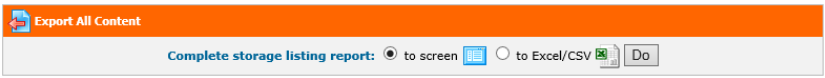
8-7-2. Storage report

You can also generate a storage report listing all the stored tubes.
Go to ***Tools > Storage Browser***.

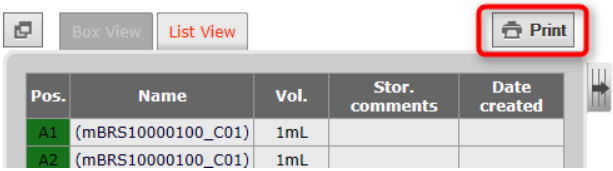


Reports are performed for all modules or one specific module.

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 printed 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 > 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 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 (must be pre-made 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. Combinations are endless and unlimited. In some situations a link will automatically be made between records.

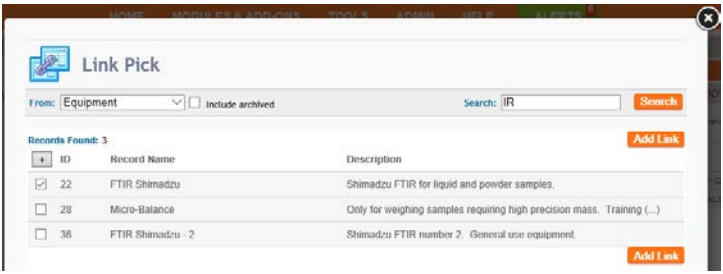
8-9-1. Generic tab links

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**.

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

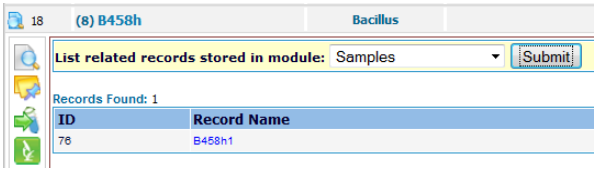
You have to first create appropriate custom fields through ***Admin > Data > Custom Fields***. Custom fields can be set to autocomplete or link to other record custom fields.

To visualize these links in the Treeview just click on (custom links) or (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 derivate name, LabCollector creates an automatic link.

To see this link, click on . See chapter 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.

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.

9- ORDER LIST MANAGEMENT

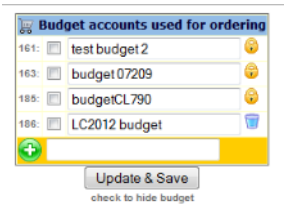
9-1. Ordering articles

The **Reagents & Supplies** and **Primers** modules are linked to an order management system (read also alerts part). 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: ***Admin > Preferences > Reagents and Supplies***.



This 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/delet accounts, check the box on the left and click on Update & Save button. They will automatically be removed from the 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.

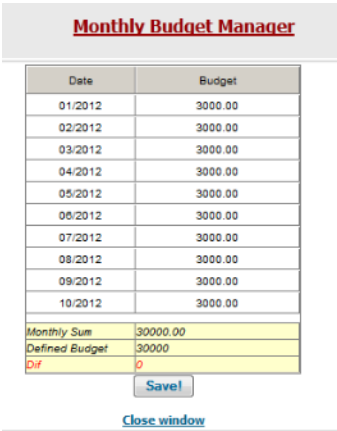
Go to: ***Tools > Purchase Orders Management > Budgets Follow-up tab***

Before using this Budgets Follow-up tool, you need to configure it:

1. Add a new budget period by clicking on the corresponding icon **Add New Budget Period**
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, responsible person and permission access. Click Save to add the budget period.
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.
Please note: to enter a new value, double click on the existing value and save.



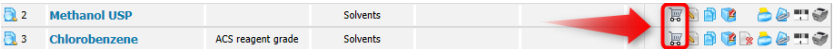
This tool displays the budget follow-up for this period with what was spent.

Please note: to see 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:

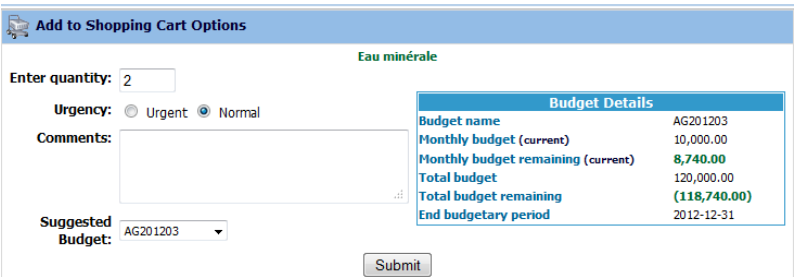


If this icon appears the item is already in the order list (i.e. ordered). This icon gives a quick visual way to know that the item is waiting for delivery.

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 ***Admin > Preferences > Reagents & Supplies*** (more information about budget definition).
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 icon will take you to the order list. See the following sections for details.

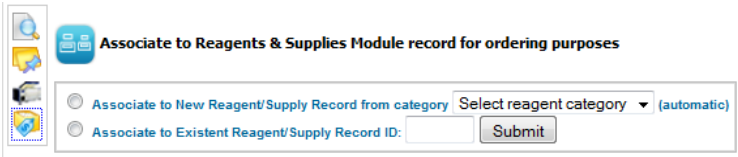
9-2. Ordering from other modules

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.

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.

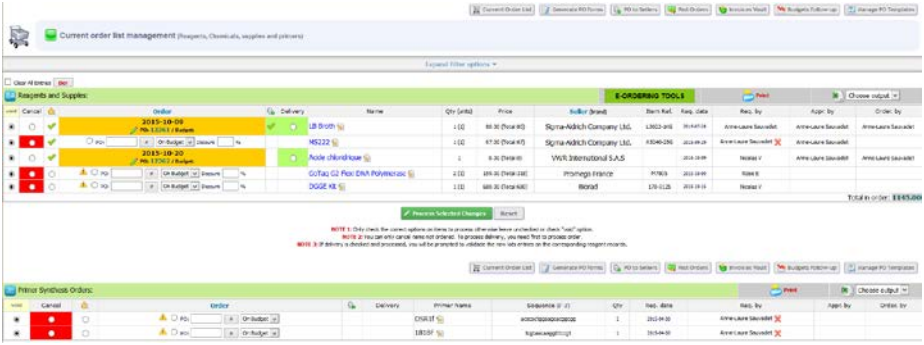
When no reagent association has been defined a prompt will be provided for it. It can create an automatic entry in the Reagents & Supplies module or you can indicate which existing reagent record to use with this record. (See figure below).



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 and Storage Accessories), to manage and generate PO forms, to manage lots and invoices.

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 module data.

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.

9-3-1. Manage an order

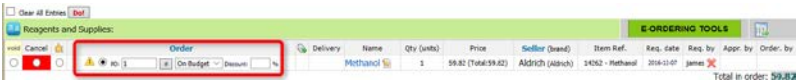
The order management process flow is as follows:

Item order requests → Cancel or Ordered → Delivered or Canceled

1. Add items that you want to order by clicking on 

and write the internal PO number or use 

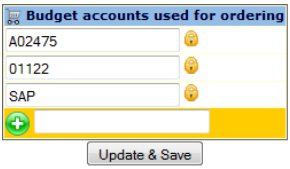
to create one. PO number assignment remains optional.



All items sharing the same PO number are gathered on the same PO form.

2. Each ordered item can be assigned to an optional budget reference.

***You can manage budget accounts through* Preferences > R & S > Budget.**



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 change"*.

You can clean the whole list using "clear all". Items go directly to "Past orders".

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.

5. You can also manage the delivery by clicking on delivery when your products arrive. Then, click on *"Process selected change"*, a window opens:

"Ignore batch": check this if you do not want to register the lot/batch.

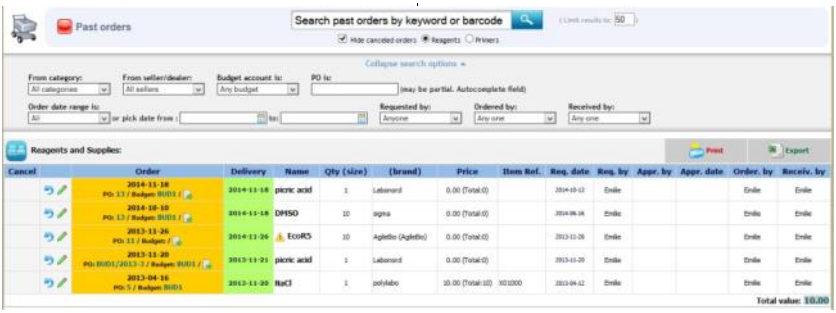
"Partial": click on it if some items are on partial delivery, you can check it and enter the received quantity. The remaining difference will be stored for future delivery.

This option will be ignored if quantity entered is higher or equal to the amount ordered.
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 barcodes have been scanned to avoid unwanted automatic submission).
If you don't want to fill out this form you can *"Skip this step".*

6. Once order is marked as *"Delivery"*, it is removed from order list and placed into the database.

Past Orders 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)

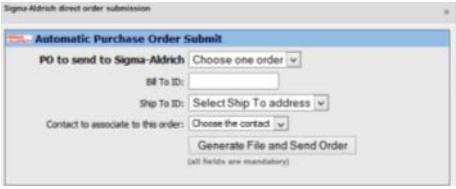
9-3-2. Order directly from Sigma, VWR, Life Technologies and Storage Accessories

Before using this service, you have to define your account settings through "Admin > Preferences > Reagents and Supplies" (see chapter ***4-2).***

LabCollector allows you to order your supplies directly via Sigma, VWR, Life Technologies 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.

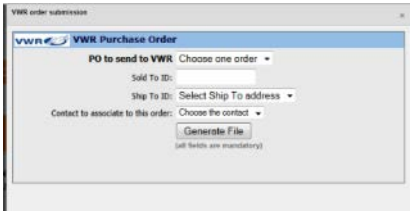
In this menu, there are 4 buttons that you can use to order directly:

Sigma Aldrich:



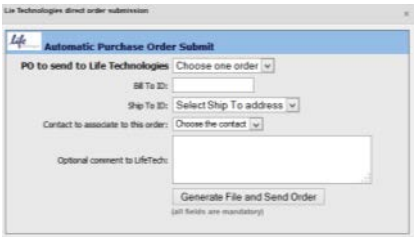
Complete this form and click on *Generate File and Send Order*. Your order will be sent directly to Sigma Aldrich.

VWR:



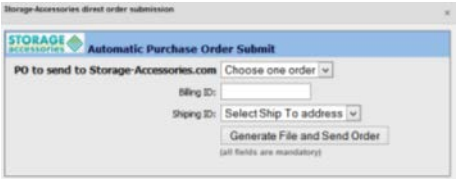
Complete this form and click on *Generate File*. Your order will be sent directly to VWR.

Life Technologies:



Complete this form and click on *Generate File and Send Order.* Your order will be sent directly to Sigma Aldrich.

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

In order to generate dedicated a PO that follows your company or institute guidelines, LabCollector can use templates. They can be HTML files or Excel files.

Go to: ***Tools > Purchase Orders Management > Manage PO Templates***

HTML templates:

Templates are coded in normal HTML language plus specific LabCollector pointers for the dynamic information. Just place these pointers anywhere in the template where you need the corresponding information to be placed.

The table below lists pointers recognized by LabCollector:

9

You can also activate automatic email sending to sellers, with PO PDF file as an attachment under the tab **PO to Sellers**.

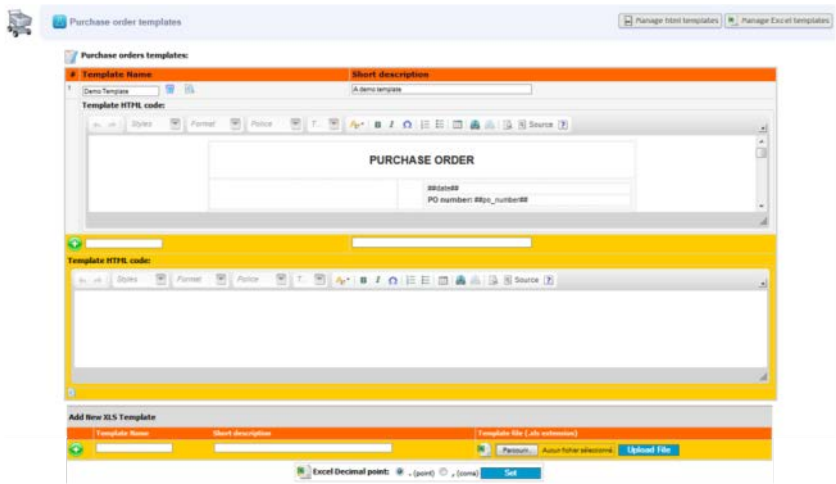
TAG	Replacement action in template
##date##	Inserts date
##items##	Inserts ordered items list (table with name, seller reference, quantity and unit price)
##total_order##	Total amount of the order (sum of the item prices x quantity)
##po_number##	Inserts PO number
##po_number_barcode##	Inserts PO number as barcode
##comment##	Inserts comment
##budget##	Budget account reference
##chem_name##	Item name *
##chem_ref##	Item reference *

##qty##	Item quantity *
##chem_seller_price##	Item unit price *
##discount##	Price discount *
##brand_name##	Brand name*
##Seller_company##	Seller company name
##seller_address##	Complete seller mailing address (Name, company, street, post code, city, country)
##seller_email##	Seller email
##seller_tel##	Seller telephone number
##seller_fax##	Seller fax number

* Applies only to Excel templates.

Excel templates:

Place tags as cell names in Excel templates. Data needs to be inserted (removed) like: ##seller_tel## needs to be written as 'seller_tel' for example.



To add a new excel PO templates, fill in *"Template name", "Short description"*, browse and upload your file.

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.

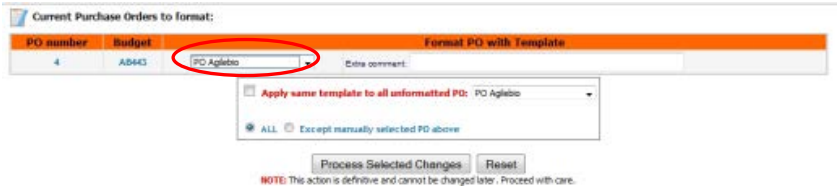
Use this icon to delete the template.
Use this icon to download and see your template.

You can also activate automatic email sending to sellers, with a PO Excel file as an attachment under the tab **PO to Sellers**.

Sent to seller: visual indication
Email to seller: enabled if you tick the box under Manage PO Templates. Send your PO automatically (in PDF or excel format) to the seller.
CC To Requester: Send the same email to the requester
CC To Orderer: Send the same email to the person who did the order
Custom CC: any email addresses

9-3-4. Generate PO forms

1. Do your order following 9-1-3 paragraph.
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.

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 .

Bon de commande

Facturation
AgileBio comptabilité
16 quai Jean-Baptiste Clément
94140 ALFORTVILLE
Tel:

Livraison:
A L'ATTENTION DE XXX
AgileBio
Adresse

Tel:
Mail:
Fax :

N° bon de commande: 4
Références devis:

Fax commande:
Fournisseur: TEBU

Article	Quantité	Description	% de remise	Prix unitaire H.T.	Prix total H.T.
4567	1	KCl (Sigma Aldrich)	0	0	0
1234556	2	DMSO (Sigma Aldrich)	10	90	180
67854	1	NaCl (TEBU)	0	50	50
					0
					0
					0
					0
					0

Example of Excel PO form after automatic formatting.

9-3-5. Lots management

When you order items it is sometimes useful to trace each lot in the Reagents & Supplies module. 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.

Lots can only be edited/removed by staff or admin

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 must have original barcodes entered for a search on the original barcode to work.

Lot management is linked to the alerts system. See the chapter on Alerts use.

For additional information, please see the KB-107.

9-3-6. Manage Invoices

In the Purchase Order Manager, you can manage invoices through the "Invoice Vault" tool: Invoices Vault. This tool allows you to store invoice copies, notify real value paid, etc.

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 in budget follow-up tool) 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

9

10- TOOLS

10-1. Storage Browser

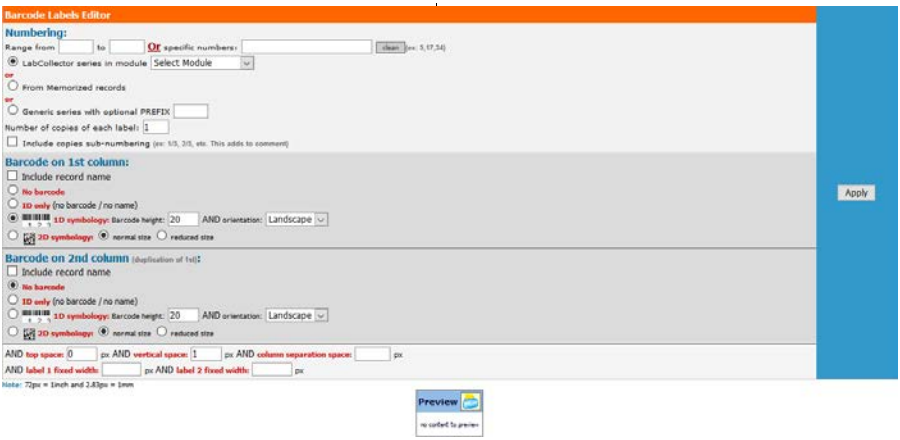
For detailed information see chapter 6.

10-2. Barcode Label Series

LabCollector offers the possibility to print several barcode labels at once.

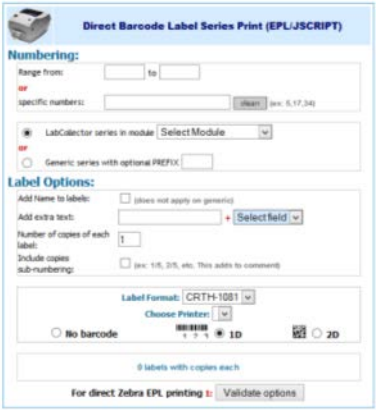
With the Memorize Records functionality, you can search for records in a module, click on the memorized items icon and go to ***Tools > Barcode labels series*** to print a batch of barcodes.
Record IDs are automatically added to the barcode labels series. If you don't want to use these records, click on clean and select other records.

Generic printing
Choose your numbering option (continue or discontinue list or generic series), the type of barcode and some additional parameters.



Label layout can be refined by defining top spacing and the distance between each label. Barcode labels can be linear or 2D type.
It also allows editing labels on 2 columns if you want to print labels for tube sides and caps for example.
Once all is defined, the Apply button generates a WYSIWYG screen preview that can be printed immediately.

- Direct EPL printing
Choose your numbering option (continued or discontinued list or generic labeling).



You can also add name and date, the text of a selected record field or free text to labels, choose the number of copies, choose whether or not to include copy sub-numbering and choose the label format (roll types need to be defined before through ***Admin > Setup > Label network printers***).

If you define a label size that includes a second label (2 columns), the second label will automatically be a 2D data matrix barcode. This is useful for example for a round label to put on top of tubes.

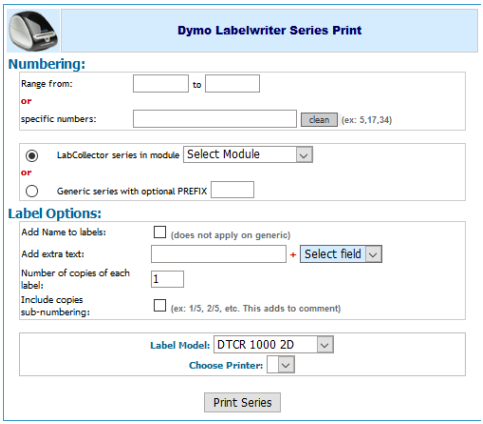
Example of double label:

Barcode symbol is fixed by the printer preferences in Admin > Setup > Network Printers.

- 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 KB-76.

10-3. Purchase order management

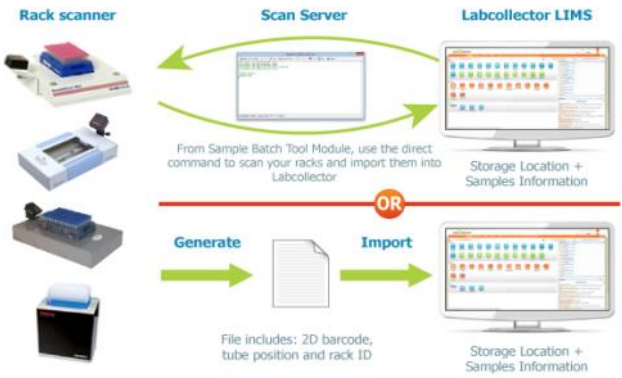
For detailed information see chapter 9.

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



10-4-1. Direct Scanner Trigger

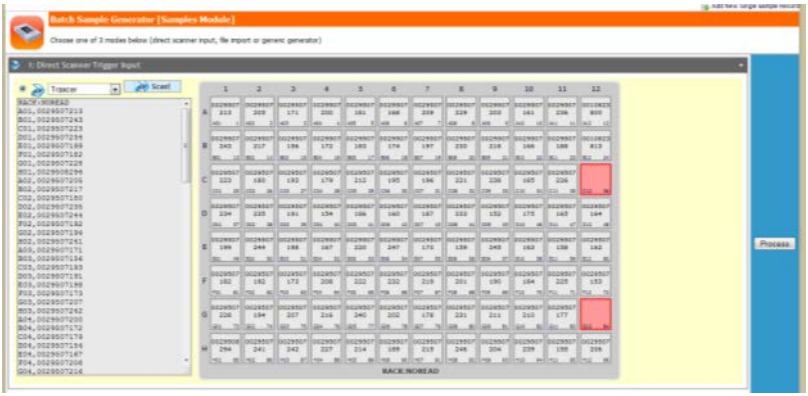
This tool allows direct imports of scanned well rack/trays from several manufacturers. Trays/racks have Datamatrix (2D barcodes) pre-labeled unique tubes or RFID tagged tubes. The scanner generates a rack/tray map file that is loaded into

LabCollector. This accelerates sample registration with direct storage definition. LabCollector recognizes scanner file formats automatically.

This tool is compatible with many suppliers of precoded tubes and scanners including Micronic, BioMicroLab, FluidX, Thermo, Ziath, Biotillion…

1. ***Home > Sample batch tools***
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.

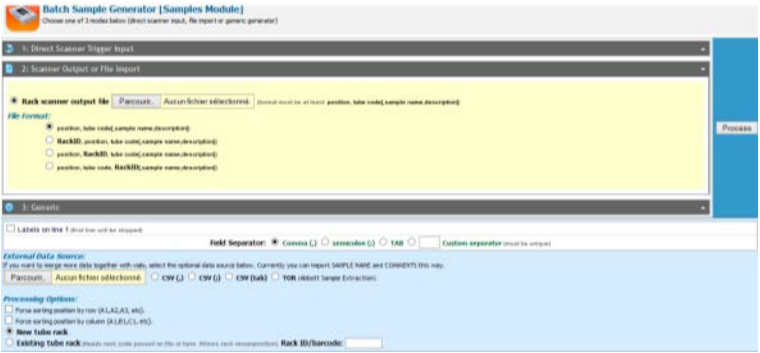
When using direct trigger you will view the scanner output directly.



10-4-2. File Import

It is also possible to import rack/box maps from files (scanner output, csv or Excel).

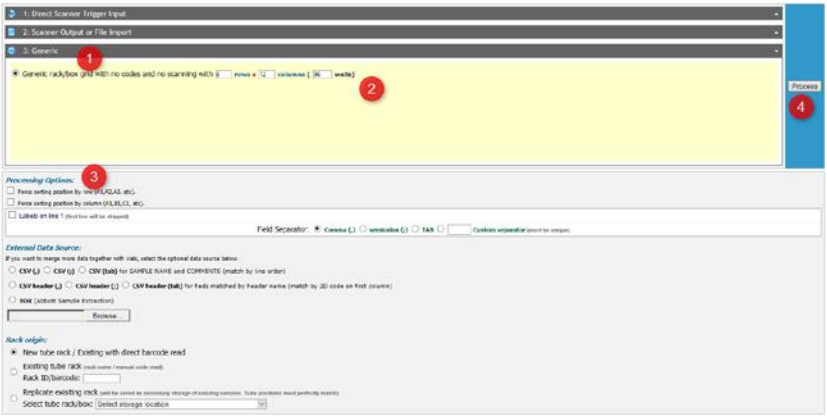
1. Go to the *"2.Direct Scanner Trigger Input"* section.
2. Choose the file to upload (TXT or CSV). Check the Field Separator option in "processing options" part.
3. Choose your file format.
4. Click on "Process" to complete the import.



This tool is compatible with many suppliers of precoded tubes and scanners including Micronic, BioMicroLab, FluidX, Thermo, Ziath, Biotillion…

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.
2. Indicate the rack/plate size (rows x columns).
3. You can specify other choices in the Processing options section.
4. Click on "Process".

10-4-4. Process rack import

***** Red asterisks represent fields that must be filled.

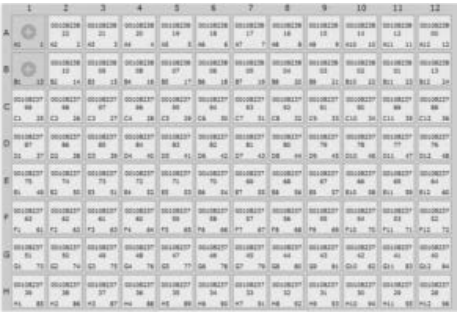
5. Give a rack name / box name / plate name or ID.
6. Choose a storage location for the rack / tray /plate.
7. Identify the drawer where the rack is stored.
8. Define box owner. Check *"Common box"* if you want to share your data.
9. A cap insert color could be chosen (see chapter 6-1-3).

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.

10. Go to the bottom of the page to validate the data import.

11. *"Click to submit form"* to finish.
12. The rack/box layout is displayed.

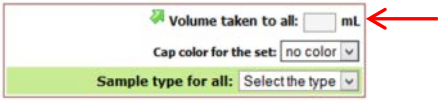


13. Click on the name of a sample to display details.

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 have just to scan a rack with existing tubes and complete the “Volume taken to all” section before submission.

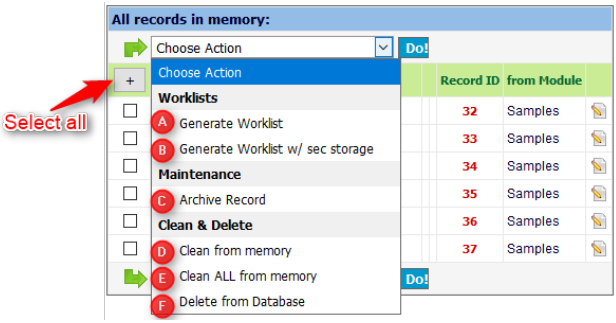


10-5. Manage memorized items

In all modules, you have the possibility to memorize records to process them in batch.

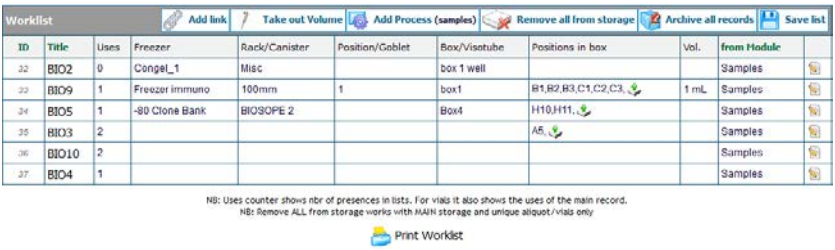
1. Go to the module of your choice.
2. Memorize record one by one with the icon (in right tabs) or do a search and memorize the result with the same icon on the top of the list.

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. **Generate worklist**
b. **Generate worklist with secondary 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.



Worklist — Add link | Take out Volume | Add Process (samples) | Remove all from storage | Archive all records | Save list

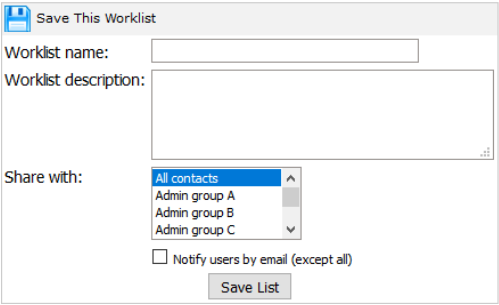
ID	Title	Uses	Freezer	Rack/Canister	Position/Goblet	Box/Visotube	Positions in box	Vol.	from Module	
32	BIO2	0	Congel_1	Misc		box 1 well			Samples	
33	BIO9	1	Freezer immuno	100mm	1	box1	B1,B2,B3,C1,C2,C3,	1 mL	Samples	
(33)	(BIO9)	-	Automatic sample freezer	DNA hydrothermal		BIO-DNA	A4,A5,		Samples	
34	BIO5	1	-80 Clone Bank	BIOSOPE 2		Box4	H10,H11,		Samples	
35	BIO3	2					A5,		Samples	
(35)	(BIO3)	-	Automatic sample freezer	DNA hydrothermal		microplate DNA	A1,A2,A3,A4,		Samples	
(35)	(BIO3)	-					A7,		Samples	
(35)	(BIO3)	-					A8,		Samples	
(35)	(BIO3)	-					A9,		Samples	
(35)	(BIO3)	-					A10,		Samples	
(35)	(BIO3)	-					A11,		Samples	
(35)	(BIO3)	-					A12,		Samples	
36	BIO10	2							Samples	
37	BIO4	1							Samples	

Secondary storage

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 chapter 8-9-1
- Take out volume by clicking on the corresponding button (for more information, please refer to chapter 7-4-3).
- For samples worklist, add a process to all data by clicking on the corresponding button (for more information, please refer to chapter 4-5-1).
- Remove storage by clicking on the corresponding button. A popup will ask you for main, secondary or both storages.
- Archive records by clicking on the corresponding button (for more information, please refer to chapter 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.



10

Saved lists are available through ***Tools > Lists and series***. See chapter below.

c. Archive record directly (Careful, there is no step of validation).

d. Clean from memory
e. Clean ALL from memory

If you need to work with a different list, clean some record (check the right box) or all records from the memory.

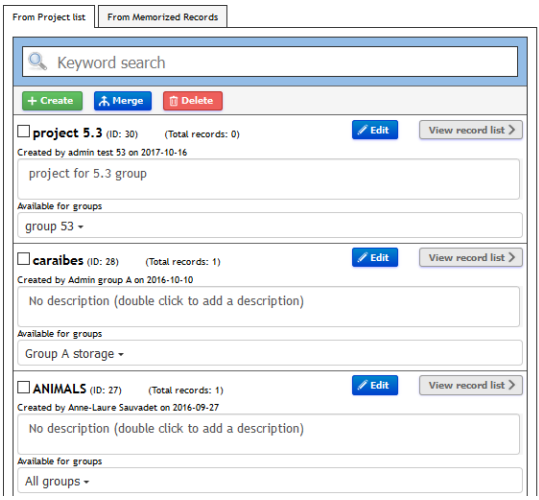
f. Delete from database

As for other delete action, if record has link or storage, it can't be deleted. For more information, see the KB-67.

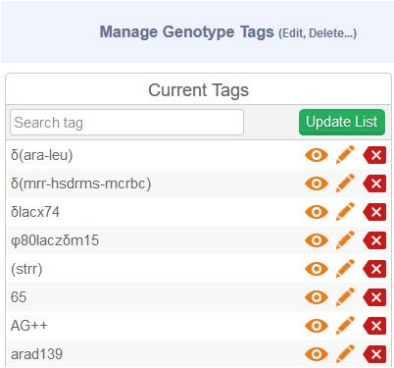
An edit icon appears on worklists and in the management on memorized items allowing edit records one by one.

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.
! NEW ! You can also create project associated to groups (group rules are applied).



10-7. Manage Genotype tags

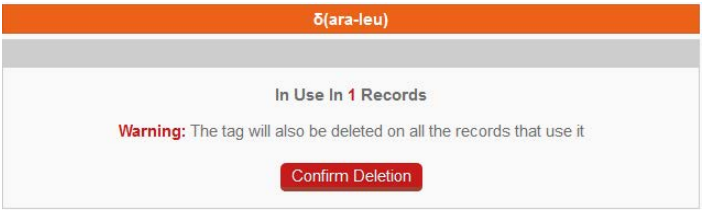


Super-administrator and administrators can:

- Check where the tag is used

- Edit the tag

- Delete it .



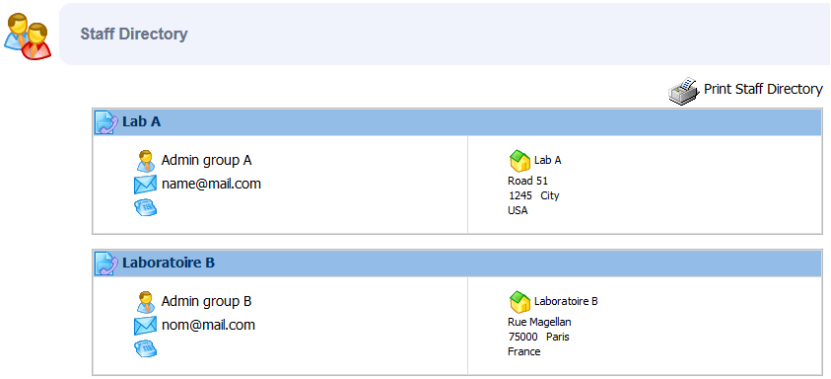
Think to update the list before to use it.
Staff + users have only the possibility to check tag use. Other user levels can't access to this area.

10-8. Lists and series

Here, you can retrieve all the lists of records and have the list available later to edit with . Each list has a barcode to be searched more easily.

10-9. Staff Contacts

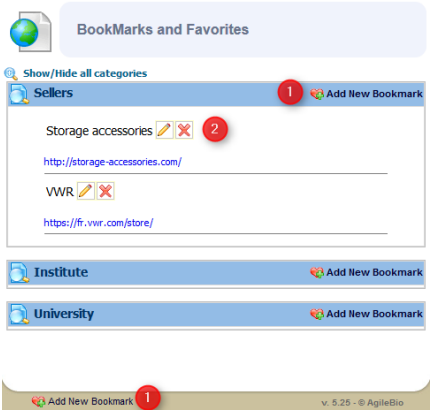
Consult or print your staff list easily.



10-10. Lab Bookmarks

Bookmarks can be added by clicking on the *Add new bookmarks* (1) either at the bottom or for each category. To define category, refer to chapter 4-15.

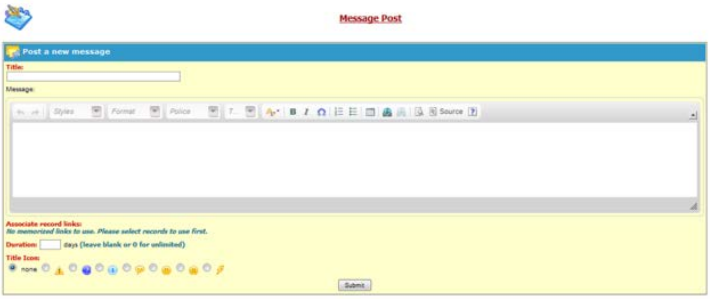
You can also edit or delete each bookmark (2).



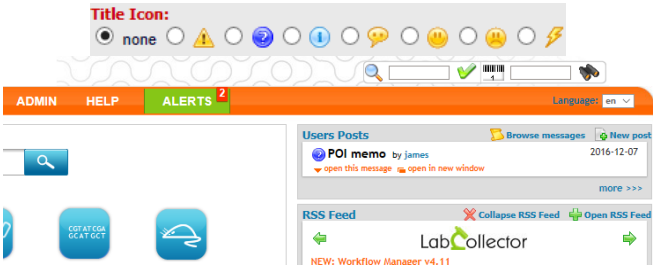
10-11. Message center

A simple and practical messaging system allows users to post messages addressed to everybody on the main page. Users Posts Browse messages New post

Users can add new messages by clicking on the New 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 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".

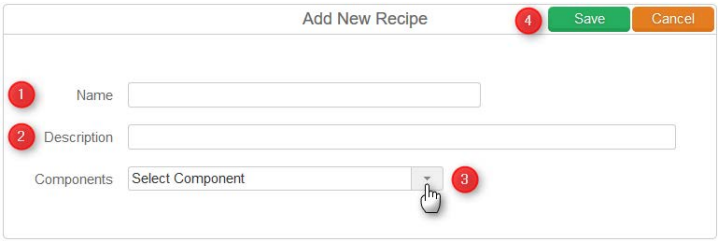
Before using Recipes, they must be setup and created by a user with admin access by using ***Admin > Data > Manage Recipes***. In addition, several records with lot/batch information must also exist in the Reagents & Supplies module.

Only the super-administrator and administrators can create recipes (Part 1). All users can then use these recipes (Part 2).

Part 1: Managing Recipes

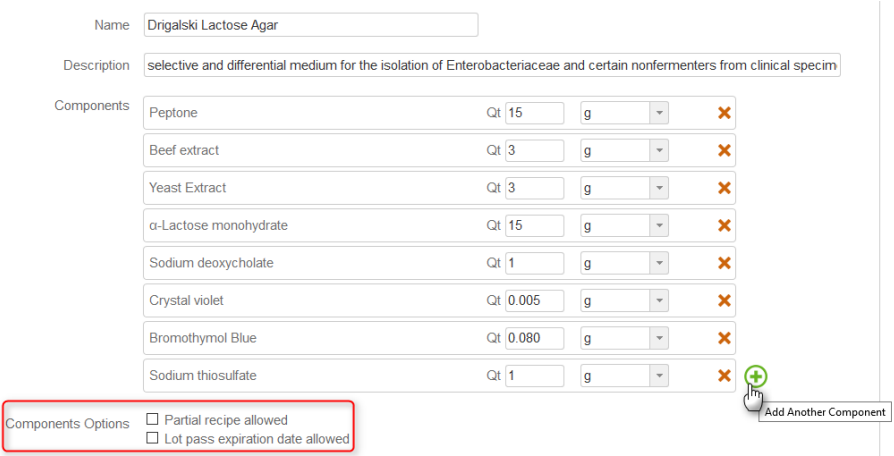
With admin or super-admin access navigate to ***Admin > Data > Manage Recipes***. You will be presented with this screen:

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:



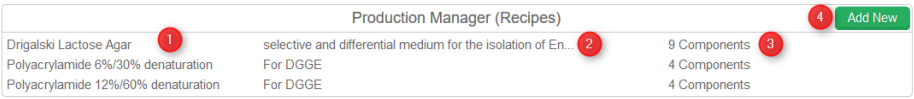
A name and description of the recipe must be provided.
Components of the recipe are selected by either clicking the arrow to see a drop down list or by typing to use the form as an autocomplete field.

After a component is selected options must be determined for the recipe. The quantity (Qt) and unit must be specified.
You can also decide if 1) partial recipes are allowed and 2) only lots within their expiration dates may be used.
Click the image icon to add and define additional components.



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 > Data > Manage Recipes***. The recipe will also be available for other users who can find it by navigating to ***Tools > Recipes/Production***. The recipe manager provides the option to select a recipe to edit and to view the list of recipes.

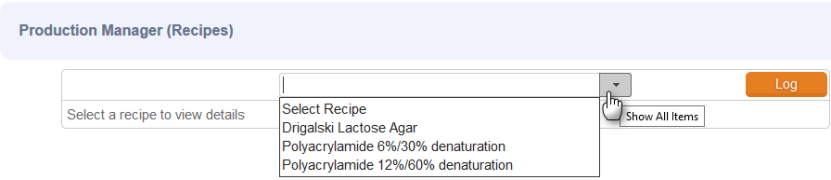


1. List of recipe names. Clicking the recipe name will navigate to the full recipe details where you will have the option to edit the recipe.
2. Recipe description.
3. Number of components. Hovering the mouse over the number of components will reveal the record names of the reagents and supplies required for the recipe.
4. Button to add a new recipe.

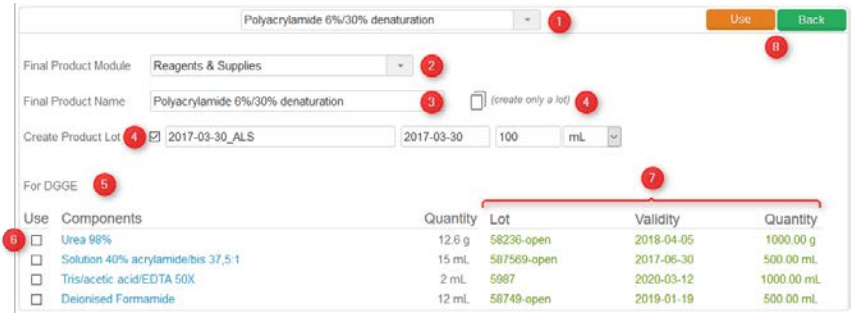
Part 2: Using Recipes

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 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).

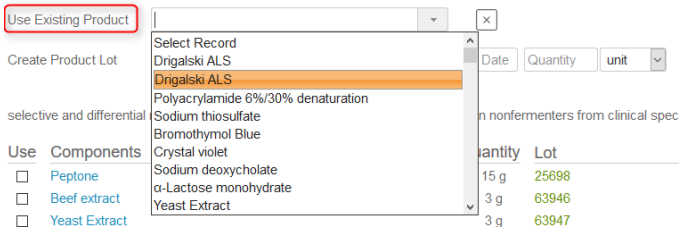


The recipe selection search bar is both an autocomplete and dropdown menu. Type in the search bar to see autocomplete results or click to view all recipes. After selecting a recipe the following screen will appear.



The screen shows the following:

1. The recipe name
2. Module selector for where the recipe product record will be created
3. Place to enter the name of the final product
4. Fields to add new product lot information: number, expiration date, quantity.
   You can also only add a lot to an existing product, for that click on *create only a lot* and choose a product in the select list near *Use Existing Product*.



5. Description of the product
6. Users must check the box to confirm use of each component
7. Details of lot, validity and initial and needed quantities of each component. The entries are color coded to make it clear if quantities and validity are appropriate for the recipe.

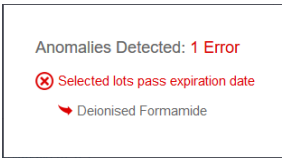
Quantity	Lot	Validity	Quantity
15 g	Insufficient Stock		
3 g	63946	2019-03-15	91.00 g

Quantity	Lot	Validity	Quantity
15 g	Out Of Stock		
3 g	63946	2019-03-15	91.00 g
2 mL	5987	2020-03-12	998.00 mL
24 mL	58749-open	⚠ 2017-03-28	488.00 mL

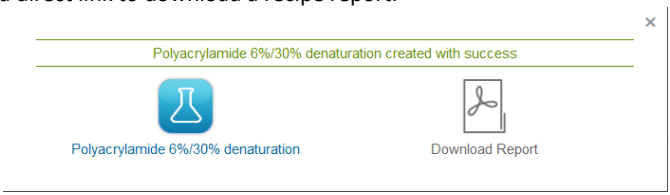
Hovering the mouse over the lot or validity information will provide information about the current lot and other available lots. If present, clicking on the icon for a component will allow a selection of a different lot to use.

8. Clicking the “Use” button will confirm the recipe. Using “Back” 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.

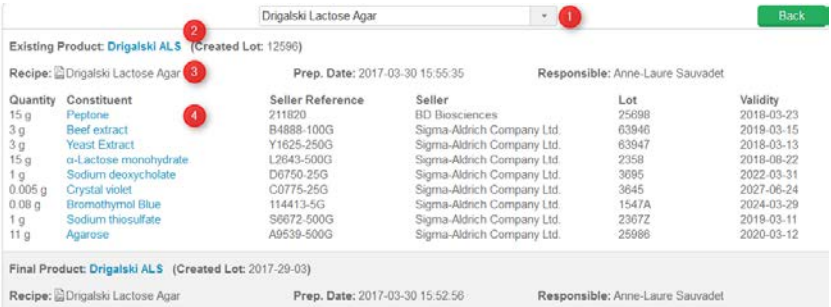
If you attempt to use a recipe with a lot that has a warning of some kind you will be blocked or forced to confirm despite the warning with a screen such as this:



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.



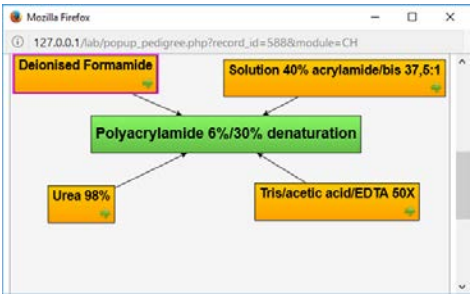
You may search the history of recipes that have been used by selecting log from the home screen of the Recipes.



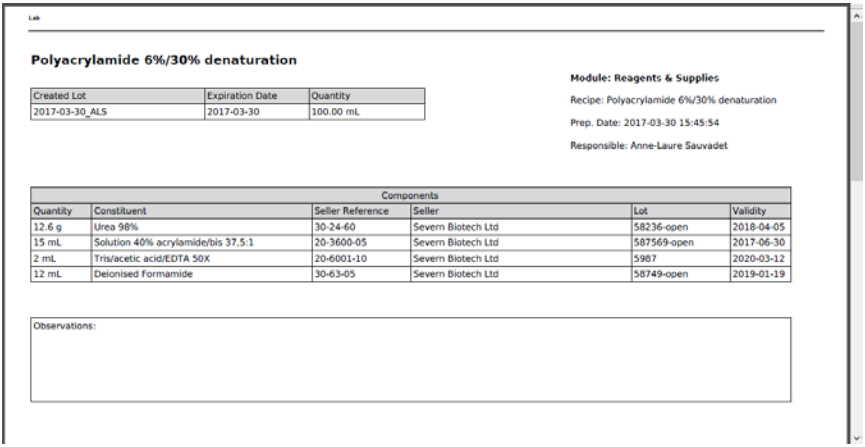
The log may be searched and will show which components were used as well as lots and quantity information. Each component and product may be clicked to go directly to the relevant record.

1) Search bar for recipes that have been used
2) Name of final product. Clicking will navigate to the product record.
3) Name of recipe used. Clicking will prompt for a download of the report for making this recipe. The date and user is also indicated.
4) List of components. 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.



Lab

Polyacrylamide 6%/30% denaturation

Created Lot	Expiration Date	Quantity
2017-03-30_ALS	2017-03-30	100.00 mL

Module: Reagents & Supplies

Recipe: Polyacrylamide 6%/30% denaturation

Prep. Date: 2017-03-30 15:45:54

Responsible: Anne-Laure Sauvadet

Components					
Quantity	Constituent	Seller Reference	Seller	Lot	Validity
12.6 g	Urea 98%	30-24-60	Severn Biotech Ltd	58236-open	2018-04-05
15 mL	Solution 40% acrylamide/bis 37,5:1	20-3600-05	Severn Biotech Ltd	587569-open	2017-06-30
2 mL	Tris/acetic acid/EDTA 50X	20-6001-10	Severn Biotech Ltd	5987	2020-03-12
12 mL	Deionised Formamide	30-63-05	Severn Biotech Ltd	58749-open	2019-01-19

Observations:

11- 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.

11-1. Add-on modules


Samples Batch Tools (Import rack information into database)
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!


Tube Sorter
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.

A 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.

KoriViewer

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 interest 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.

11-2. Add-ons loading requirements

Download add-ons that you need on LabCollector, 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.

12- UPDATING AND UPGRADING

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.

12-1. 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 5.2**1** to 5.2**2**.

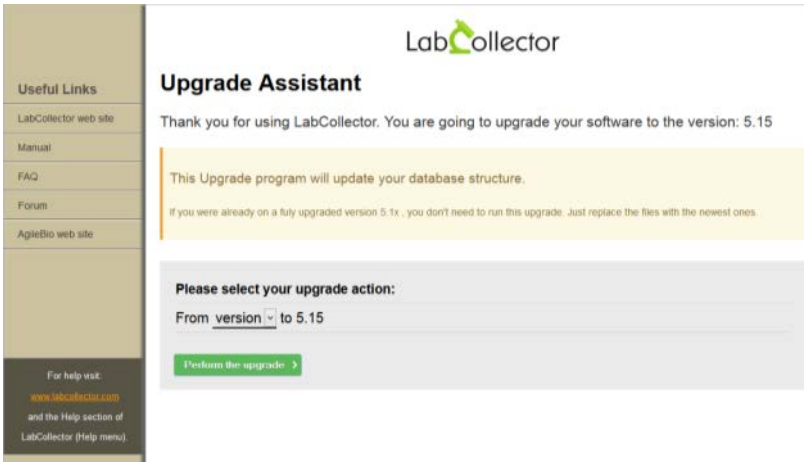
Do not touch the "*documents*", "*backup*" and "*maps*" folders. Also, take care not to alter, delete or destroy "*config.php*" file.

12-2. 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.n to X.z, for example from 4.**6**x to 4.**7**x.
On the server computer, access the following address from the browser:

http://127.0.0.1/upgrade.php

Do not touch to "*documents*", "*backup*" and "*maps*" folders. Also, take care not to alter, delete or destroy "*config.php*" file.


LabCollector
Useful Links
LabCollector web site
Manual
FAQ
Forum
AgileBio web site
For help visit:
www.labcollector.com
and the Help section of
LabCollector (Help menu).
Upgrade Assistant
Thank you for using LabCollector. You are going to upgrade your software to the version: 5.15
This Upgrade program will update your database structure.
If you were already on a fuly upgraded version 5.1x , you don't need to run this upgrade. Just replace the files with the newest ones.
Please select your upgrade action:
From version to 5.15
Perform the upgrade

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