

WELCOME TO LABFORWARD

**Step-by-step guide to set up
your laboratory inventory
system with Labregister**

Organization is key – how to start setting up an inventory system with Labregister

In many research labs, valuable resources are getting lost in boxes, buried in freezers beneath layers of ice, because lab members don't know they exist or where to find them. The reason for that is that numerous labs still maintain their inventory on paper or spreadsheets. This makes it hard to properly track inventory items in a team setup, as these tools lack the possibility to work collaboratively and in a standardized way. Therefore, an **effective system for managing lab inventory** such as **Labregister** is essential for every lab. Not only does it prevent the loss of expensive reagents, double buying and over- and understocking, but it also increases team efficiency and overall helps to optimize lab processes. The key is to create a **single source of truth for your lab inventory** that is shared and managed in a productive manner, so all lab members are up to date. At Labforward, we want to support you with the crucial task of lab inventory management and have created a **step-by-step guideline on how to set up and maintain your inventory with Labregister**.

1. Create a starting point

No matter if you start a new laboratory or transfer your inventory from paper or spreadsheets to Labregister, it is a good time to create a starting point and **take stock of everything in your lab**. Sort out all consumables and samples that are not needed anymore (e.g. expired materials, unlabeled samples, old sample dilutions of former lab members, etc.) and **continue with an up-to-date stock list** of your lab.

2. Define storage space and locations for your inventory items

It is crucial to keep track of where all inventory items are stored in the laboratory. There is no way to be too rigorous with this. First, **map out all storage spaces** that exist in your lab (lab rooms, cold rooms, hallways, etc.). Then, **list and label all storage locations** in these different spaces (freezers, refrigerators, closets, shelves, cabinets, cryotanks, etc.). Finally, **define sublocations for each storage location** (e.g. Lab room 1, freezer 1, rack 1-4, Box 1 or Cold room, shelf 1, upper level) and **label them** accordingly, so that all team members know where to find and put back items. Create a digital map for your lab's storage spaces, storage locations and sublocations and make it available for the entire team. You could create a *Storage space* Labregister category and define all their storage locations and sublocations as items accordingly (see below how to set up categories).

3. Define your categories

To make your stock list easier to use, you can **group your inventory into categories** in Labregister. These can be categories for consumables, reagents or samples (e.g. solutions, pipettes, tubes, cell culture dishes, gloves, well

plates, chemicals, model organisms, cell lines, plasmids, antibodies, bacteria), depending on your type of research.

4. Define relevant attributes for your categories

For each of your inventory categories, you can [set up individual descriptive metadata fields](#), called **attributes**, in Labregister. For example, when adding a new category for patient samples, you may want to know the diagnosis, sex, blood type, and age of the sample donors. To cover all the different item information, [Labregister features seven pre-configured attribute types](#) to choose from. Besides being able to create your own attributes to describe items in categories, **Labregister auto-generates individual item IDs for each added item**. Therefore, together with the name attribute, the item ID attribute is mandatory.

Besides **defining very specific attributes** for your individual categories, make sure to always **add generic attributes** to all your categories. Examples for generic attributes are *storage space (room)*, *location* and *sublocation* to define the item's storage location or *expiration date* and *availability* to define the item's status. Specifying the attributes for each category in advance will help you to populate and maintain your inventory in an efficient way afterward.

Tip: In case you create various similar categories, you can [duplicate an existing category](#) (with or without items) to save some time.

5. Populate your categories

In case you have maintained your inventory list in an Excel sheet up until now, **Labregister provides you with an easy and intuitive import method**. You simply need to make sure that your [Excel sheet is correctly formatted](#) before being able to import items to Labregister category wise. Alternatively, you can [add your inventory items manually](#).

6. Define access rights for your categories and assign team duties

After you have set up a category in Labregister, you can **manage permissions for this category** by assigning 4 different roles to your team members. You can assign single users or whole groups/subgroups to be the **viewer, editor, manager, or owner** of a category. Depending on the role team members have, you can **assign team members individual responsibilities**. For example, one team member could have the duty of ordering new consumables and therefore updating the availability of items. Other members could be placed in charge of checking on a regular basis if the inventory is up to date when it comes to item storage location.

7. Define rules to keep your inventory up-to-date

Once your inventory is set up in Labregister, it is mandatory to **define rules on how to use the system**. Only then you can make sure your lab inventory stays well organized and the whole team can profit from it. Rules may contain but are not restricted to:

- ★ New storage locations such as boxes or racks have to be labeled and added to the inventory at all times.
- ★ Changing the storage location of an item has to be updated in the inventory immediately.
- ★ Newly arrived items have to be added to the system immediately and all relevant attribute values for the item have to be filled (you can decide if an attribute should be **mandatory** or not).

- ★ In case newly arrived items come with material safety data sheets or other important documents, they always have to be [attached under Files](#) in the item details page.
- ★ A material item that has been consumed entirely has to be marked as *out of stock* (you can use a Dropdown attribute and add different availability statuses such as *Available*, *Out of stock* and *Ordered* as options).
- ★ Items such as working dilutions of antibodies or samples that have been consumed entirely have to be [hidden](#) or [deleted](#) from the inventory.
- ★ If one item derives from another (e.g. you create a dilution of an antibody stock), the child item has to be added to the inventory and the respective [parent-child relationship](#) has to be defined.

You could **schedule an initial training session with your team** on how to use the inventory system or summarize your rules in a short **user manual**. Also make sure to train new employees on how to use your inventory system upon their arrival.

8. Schedule periodic inventory accounting

With your new inventory system in place, it might be thought that you can let it run on its own without direct influence. However, that is not always the case, unfortunately. Mistakes do happen at times. And, software and inventory applications can only go so far. That is why it is important, periodically, to **physically check all materials and their amounts currently in stock**. Make sure there is no waste of costs in your lab and that records are being kept properly. Check expiration dates and if storage locations are recorded correctly. You might do this inventory audit semi-annually, quarterly, or even monthly, depending on your lab's size and needs.

Additional tips for managing your lab inventory

- ★ Once your inventory contains hundreds or even thousands of items, it becomes more difficult to find them back. You can use the [Simple](#) and [Advanced Search](#) feature in Labregister to streamline your search, making it easier for you to filter and find specific materials and items quickly and efficiently.
- ★ In case you need a list of category items outside of Labregister, you can [export a selection of certain items](#) in a category or the [entire category](#) at any point in time (the export and import format is XLSX).