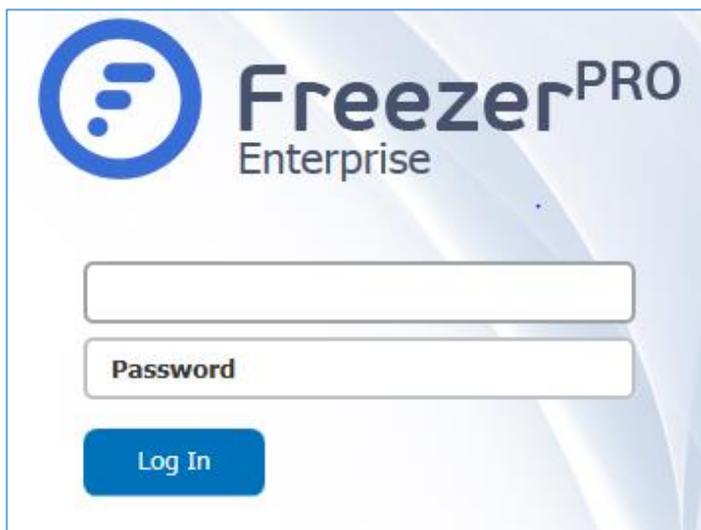# Freezer Storage System, FreezerPro, Brooks Inc

Freezer Pro is a Web-based software application, where you easily can create a freezing structure with shelves, racks, boxes, sample types and sample content. FreezerPro LIMS is managed by Stockholm's Medical Biobank and the Stockholm County Council. This course is for you to become a user of the system.

Introduction

FreezerPro (from Brooks Inc.) is a Laboratory Information Management System (LIMS), i.e. a data management system of Biobank samples. The system ensures traceability of Biobank material, which is required according to the Biobank law (220:297). In FreezerPro, you can create biological samples and associated information, and easily monitor and control the storage of samples and test data.

The system also handles other types of samples that do not fall under the Biobank law, for example. plasmids, antibodies, etc.

The purpose of this training is to provide an overview of the features that are available in the system.

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This training contains the following chapters:

1. Overview
2. The freezing structure
3. Sample handling
4. Search,
5. Add to favorite, statistics
6. Conclusion

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Chapter 1: Overview

Permissions in FreezerPro

There are three types of users with different permissions on the system:

Administrator: developing, updating the system, and have full access to all features of the system. Administer user permissions.

PowerUser: contact person for the maintenance organization, authorize user permissions. See next page what can be managed in the system.

User: See next page what can be managed in the system.
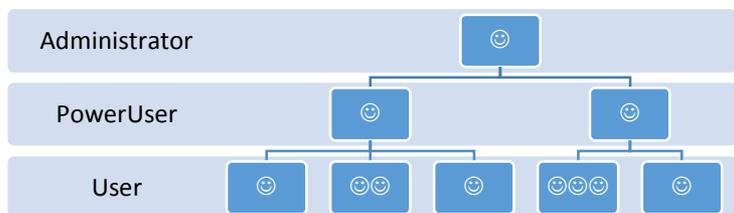
Permissions in FreezerPro cont.

| Rättighet	Förklaring
Manage Users	Add, Edit and Delete Users. Change passwords. Assig...
Manage Roles	Add, Edit and Delete Roles.
Manage Access Permissions	Manage access to Freezers, Boxes, User-Defined Fie...
Manage User-Defined Fields	Add, Edit and Delete User-Defined Fields
Manage Sample Types	Add, Edit and Delete Sample Types
Manage Sample Source Types	Add, Edit and Delete Sample Source Types
Manage Box Types	Add, Edit and Delete Box Types
Manage Report Templates	
Batch Imports/Updates	Import Sample Data in Batches or do Batch Updates
Manage Storage Configuration	Add, Edit and Delete Freezers or Freezer Subdivisions
Work With Boxes and Well Plates	Add, Edit and Delete Boxes or Well Plates from Stora...
Work With Samples	Add and Edit Samples
Delete Samples	Delete Samples
Change Samples Created By Other Users	Edit or Change Locations of a Samples Created By Ot...
View All Samples Locations	View Locations of a Sample Owned By Other Users
Work With Sample Sources	Add, Edit and Delete Sample Sources
Manage Sample Alerts	Add, Edit and Delete Samples Alerts
Print Barcode Labels and RFID Tags	Print Barcode Labels and RFID Tags
Edit Vial Identifiers	Change Barcodes and RFID Tags
Access Reports And Audit	Access Reports, Audit, Graphs and Statistics
System Administration	Manage System Settings, Licences, Database Backu...
Access Workflow Module	
Access Shipping Module	
Access Advanced Alerts Module	
Access Communication Module	
Access Clinical Data Module	Access Clinical Data Module
Manage Aliquoting Templates	Manage Aliquoting Templates
Access Samples in Archive	Access Samples in Archive

Power User
- Batch Imports/Updates
- Work With Boxes and Well Plates
- Work With Samples
- Delete Samples
- Move Samples Created By Other Users
- View All Samples Locations
- Work With Sample Sources
- Manage Sample Alerts
- Print Barcode Labels and RFID Tags
- Modify Vial and Box Identifiers
- Access Reports And Audit
- Access Workflow Module
- Access Shipping Module
- Access Advanced Alerts Module
- Access Clinical Data Module

User
- Batch Imports/Updates
- Work With Boxes and Well Plates
- Work With Samples
- Delete Samples
- Move Samples Created By Other Users
- View All Samples Locations
- Work With Sample Sources
- Manage Sample Alerts
- Print Barcode Labels and RFID Tags
- Access Workflow Module
- Access Shipping Module
- Access Advanced Alerts Module
- Access Clinical Data Module

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Permissions in FreezerPro cont.

- FreezerPro is configured so that different hospitals in the region can not see what's in the freezers in other hospitals

- Owners of freezers can not see what's in other user's freezers within the same unit.

- Individual groups cannot see what other groups have in their boxes in the freezer even when sharing shelves or racks in a freezer.

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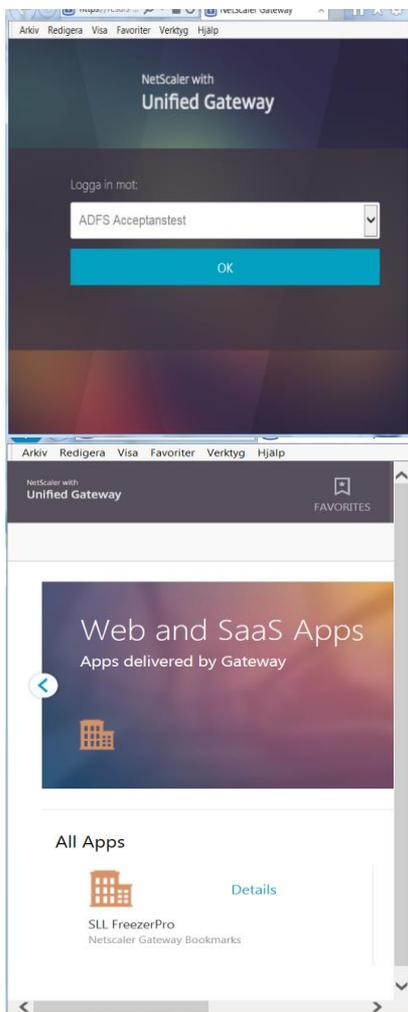
Login to FreezerPro

Login is done via a 2-way authentication with a eTjänstekort connected to your HSA id. The system (CITRIX Netscaler) is a Web-based application, it does not require any client installation. You need to be within SLL network. https://resurs.sll.se

When you are logged in with your eTjänstekort the FreezerPro app appears in Netscaler Unified Gateway.

Click the SLL FreezerPro app icon to redirect to the FreezerPro login page.

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Login to FreezerPro cont.

FreezerPro is a Web-based software application and it does not require any client installation.

You need to be logged in via the Netscaler and within SLL networks.

You get Login information to FreezerPro from the PowerUser on your research group. Powerusers gets this information from an administrator/ system maintenance team.

All activity is logged in FreezerPro all the time regardless of user permission and saved for traceability and for troubleshooting.

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Overview of the user interface

A. Home

B. Bookmarks

C. Bookmarks
   - My Samples
   - My Boxes
   - User Preferences

D. Left side
   - Freezers And Boxes
   - Samples, groups and Sources
   - Customers and Shipping
   - Reports and Audit

   - Settings and Preferences
     (only Administrator)
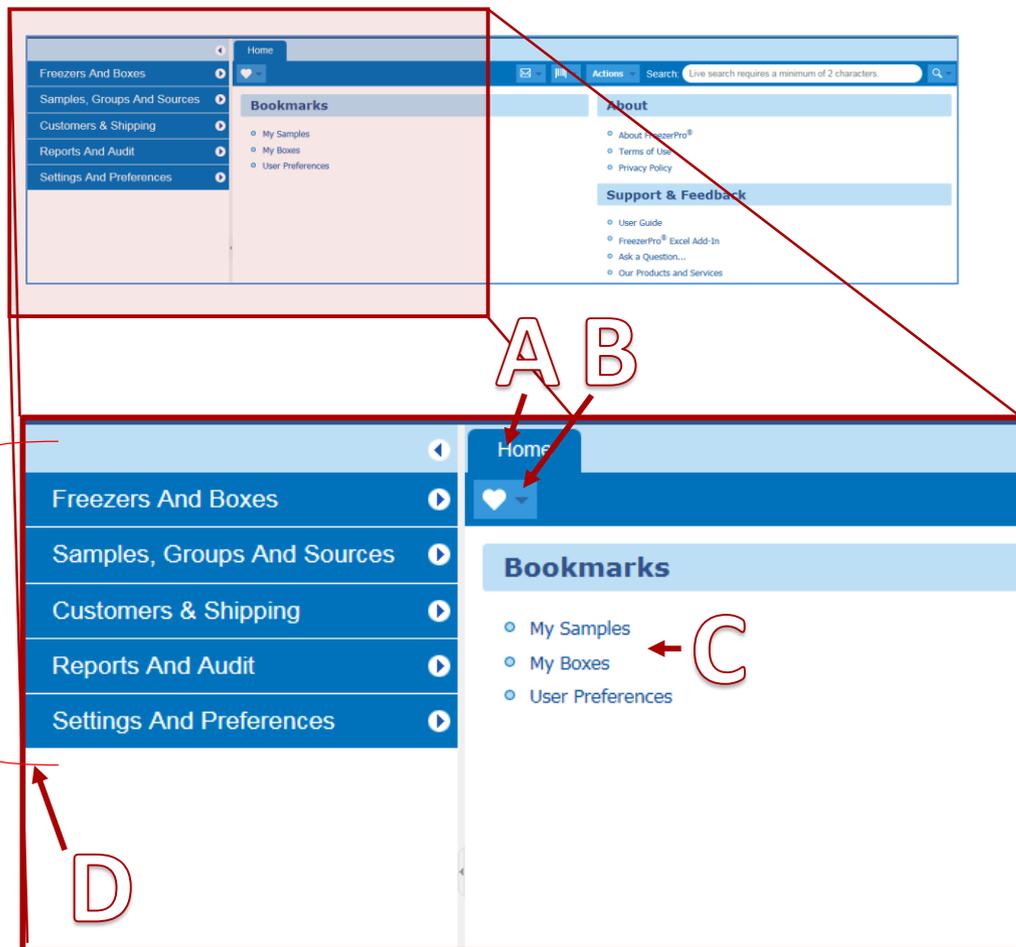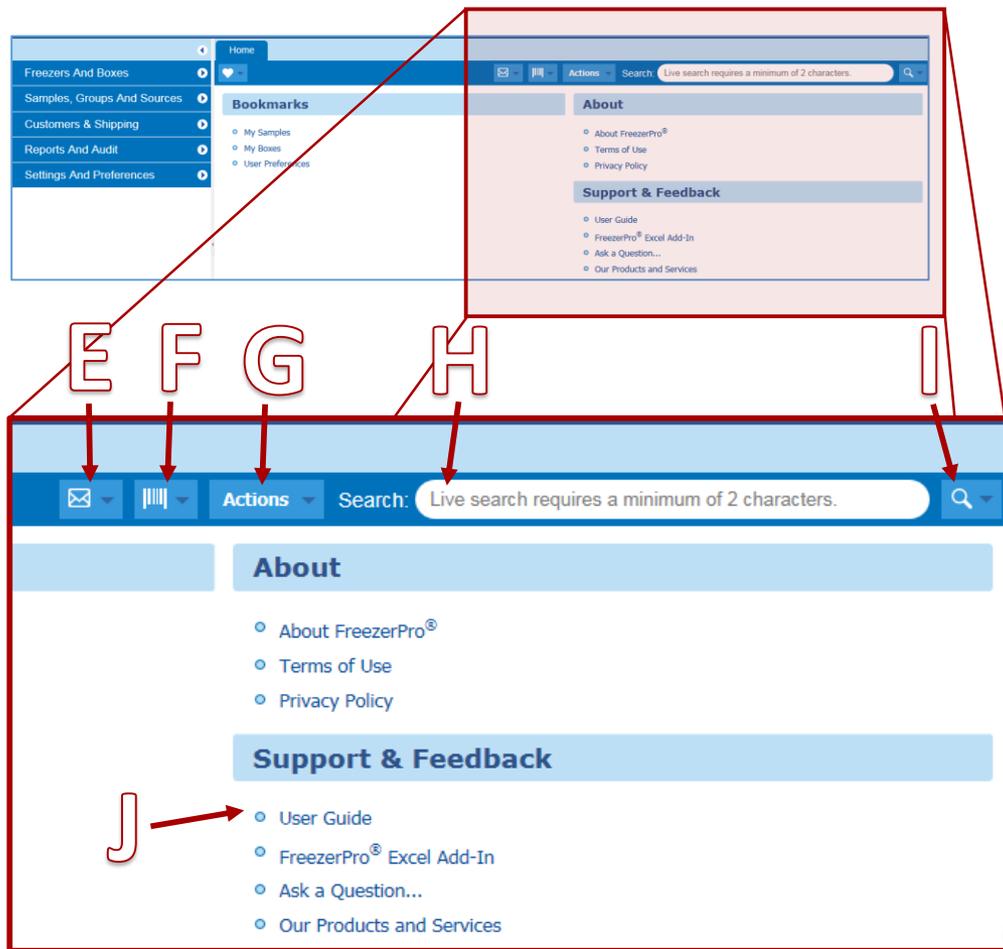
Overview of the user interface

E. Communications
(Not available right now)

F. Barcode search

G. Actions

H. Search

I. Advanced search

J. User guide (from supplier)

Chapter 2: The Freezer structure

The Freezer structure – naming of freezers and facilities

In order to facilitate traceability and location for freezers in hospitals, a standardized method of naming the freezers is required.

A freezer group contains freezers that are located within a hospital. A freezer group should contain abbreviation for a hospital. Below the freezer group are the freezers that you have permission to work with.

Sjukhus i Stockholmsregionen förkortas:

K-S	Karolinska Universitetssjukhuset, Solna
K-H	Karolinska Universitetssjukhuset, Huddinge
DS	Danderyds sjukhus
SöS	Södersjukhuset
StG	St Görans sjukhus
SöT	Södertälje sjukhus
NoT	Norrtälje sjukhus

Exempel

K-S_U220_05_3200_frys_05A

K-S = Karolinska Universitetssjukhuset, Solna
U2 =forskningshuset Bioclinicum
2 = står för kärna/huskropp
05 = Plan 5
3200 = Rumsnummer
frys_05A = Frysens benämning

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Freezer structure in freezer

RADER

K
O
L
U
M
N
E
R

Rack dras ut från frys i denna kortsida
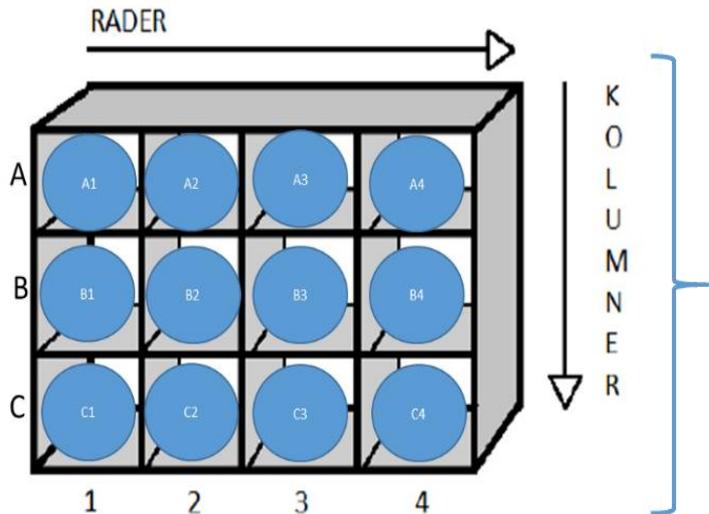
Illustrationen visar ett rack med 4 kolumner och 3 rader.

The recommended way to build the rack structure in the system.

Columns have numbers 1, 2, etc. Rows have letters A, B, etc.

Example:

Rack 01

Row A

-Column 1 (position) = A:01
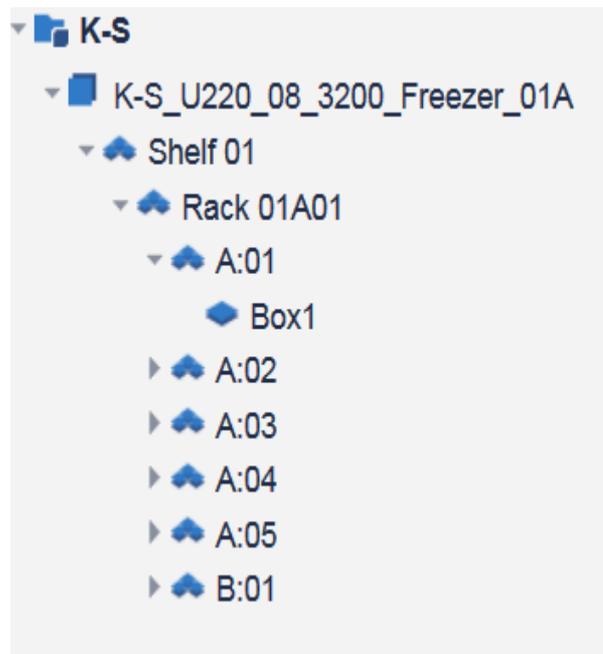
-Column 2 = A:02

-Column 3 = A:03

14

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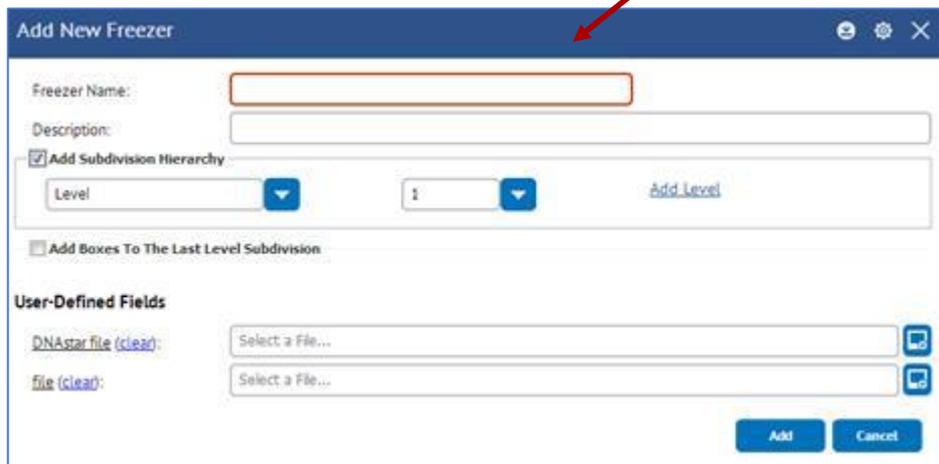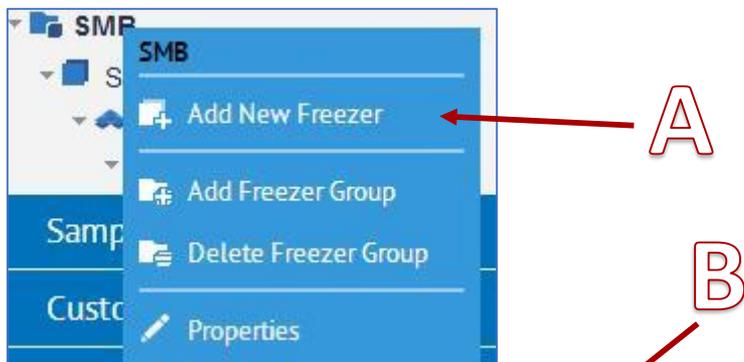
Freezer structure – Add New Freezer

Select and right-click the hospital/freezer group you want to place the freezer in.

A. Select Add New Freezer.

B. Fill in the freezer name, description, and number of shelves (levels) the freezer must have.

Only an administrator can build this structure.

Freezer structure (example)

```
▼ 📦 K-S
    ▼ ■ K-S_U220_08_3200_Freezer_01A
        ▼ ♠ Shelf 01
            ▼ ♠ Rack 01A01
                ▼ ♠ A:01
                    ◆ Box1
                ▶ ♠ A:02
                ▶ ♠ A:03
                ▶ ♠ A:04
                ▶ ♠ A:05
                ▶ ♠ B:01
```

A freezer should be created according to the recommended freezer structure.

See the following example:

K-S_U220_05_3200_frys_05A

    Levels under freezer:

     - Shelf (If it is a freezerer with shelves)

      - Rack

       - Position (Row:Column)

        - Box

Only an administrator can build this structure.

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View the contents of a subdivision in a freezer

1. Double-click a subdivision, e.g. rack position.

2. A list will appear to the right of the contents of the selected subdivision.
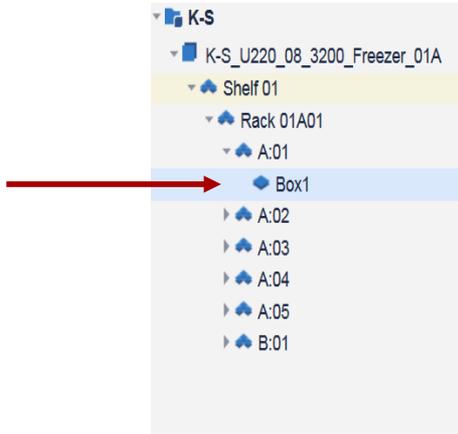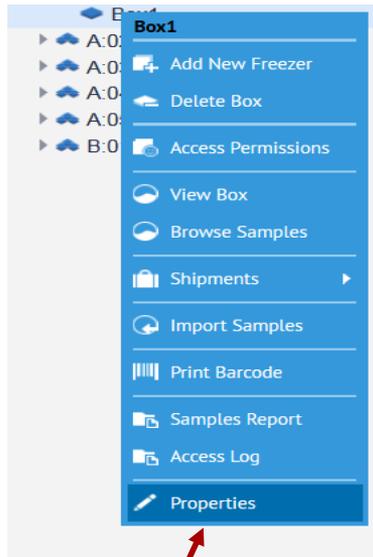
Management of box

- When you double-click, a box displays a visual overview of the box (10 x 10). You can also right click on the box and choose View Box.

- If you choose to Browse Samples from the same menu you get a list of the content instead.
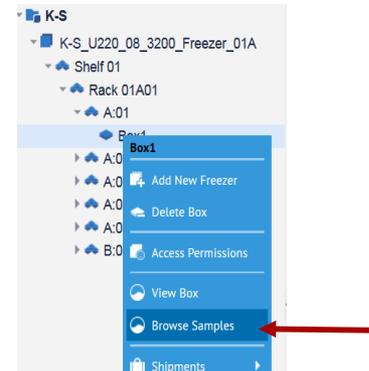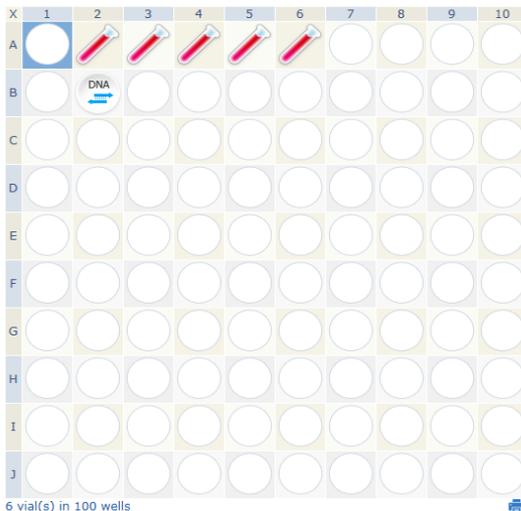
Summary information for a box you can get by hovering over a box without clicking (known as tooltip).

6 vial(s) in 100 wells

Management of box cont.

Change box

If you need to make changes to the box, right-click the box and a menu shows.

Select Properties.

A Change Box shows up and here you have the possibility to make changes to the box.

If the box includes samples, you can not change the box type.

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Chapter 3: Handling samples
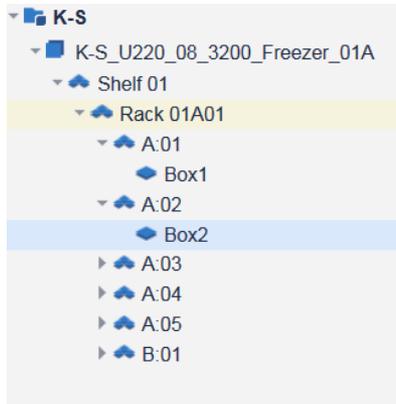
Create sample

1. Select the box were a sample shall be added and double click on the box to open it (or left-click and select view box).

2. Select the sample type – in this example, a Human sample - click the icon and a box will appear where the information can be added to the new sample.
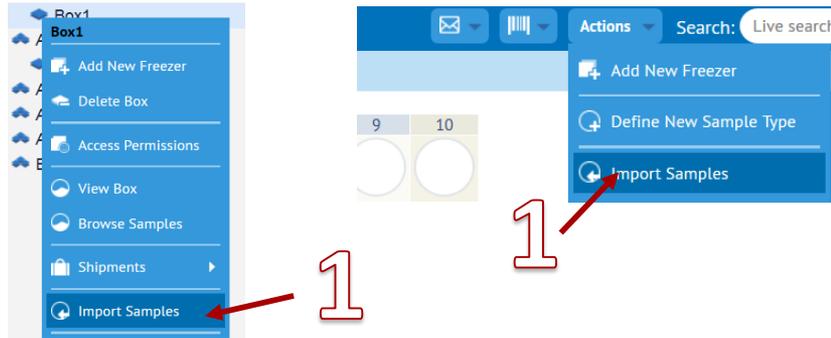
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Create sample.

3. You name the sample with information such as

- Name

- Description

- Volume

- Sample source (for human samples)

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Create sample

4. You can also import several samples simultaneously via a CSV file

- Click on Action at the box menu or right-click on the box, select Import Samples

- Select the CSV file and the separator (, or ;). In the picture at number 6 you can see an example if you click on the link. Press the Import button after selecting the import file and import the samples.

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Humanprov 19991
ID: 54817
Position: **A / 1**
Human Sample Types (Sample Types)

Description: Human Blod från Adam
Barcode: **1053239**
RFID Tag: **355AB1CBC00000100000CFF7**
Volume: **15.0 Ex. 1,1.5,2...** (Total volume in all vials: **15.0** Ex. 1,1.5,2...)
Source: **-100676776**
Total number of **Humanprov 19991** vials in all freezers **1**

Created: 2018-04-18   Updated: 2018-04-18
Notes: Add Note

Units	mL
SampleType	Blood
Collection Date	2018-04-01
Expiration Date	2020-09-18
Comments	kommentar till provet. Samtal med Adam.

Create sample

5. The sample icon will appear in the box position. The sample received a box with information

- Name

- ID

- Barcode

- Volume

- Source

- User-defined fields will be displayed below the original information if it contains values (as in picture).

Remove sample

Select sample (when removing several samples, select the first and hold down the Ctrl key while selecting additional sample).

Drag the selected sample or samples to the trash can, or just click on the trashcan.

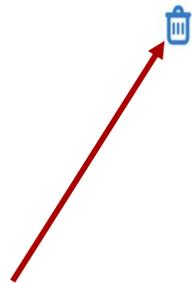You can also right-click the sample and click Delete sample.
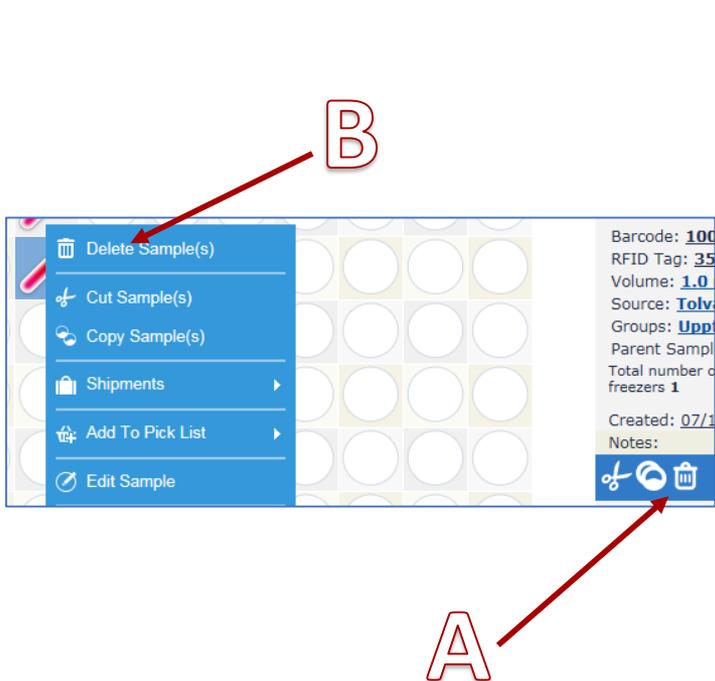
Restore samples

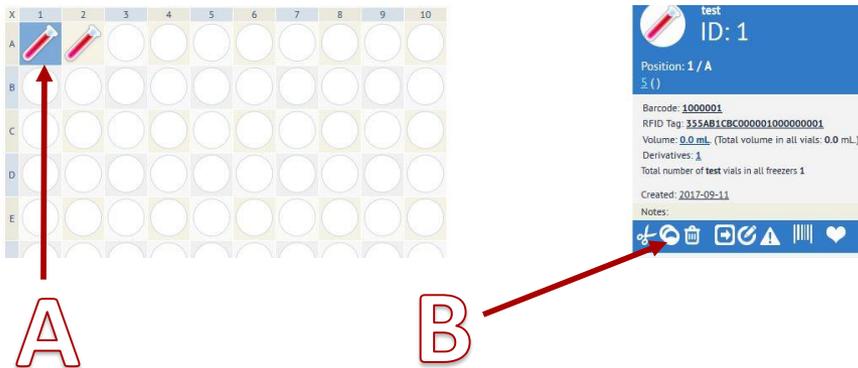It is possible to restore the samples you deleted.

Double-click on Recycle Bin, select the sample and click Restore icon (grid of arrow).

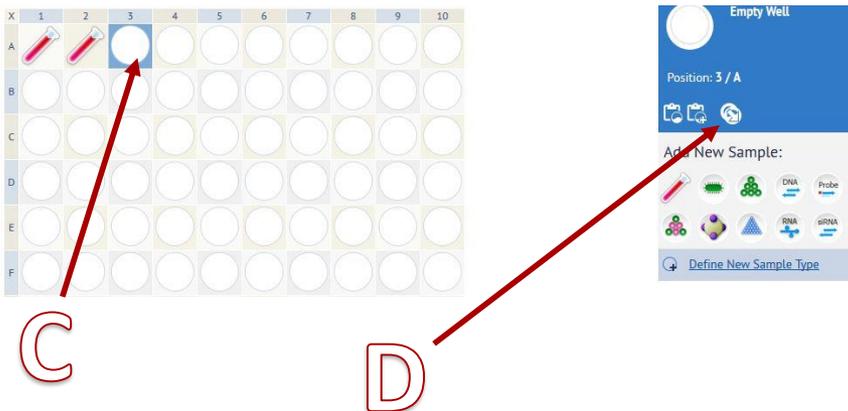The sample moves back into the original position.
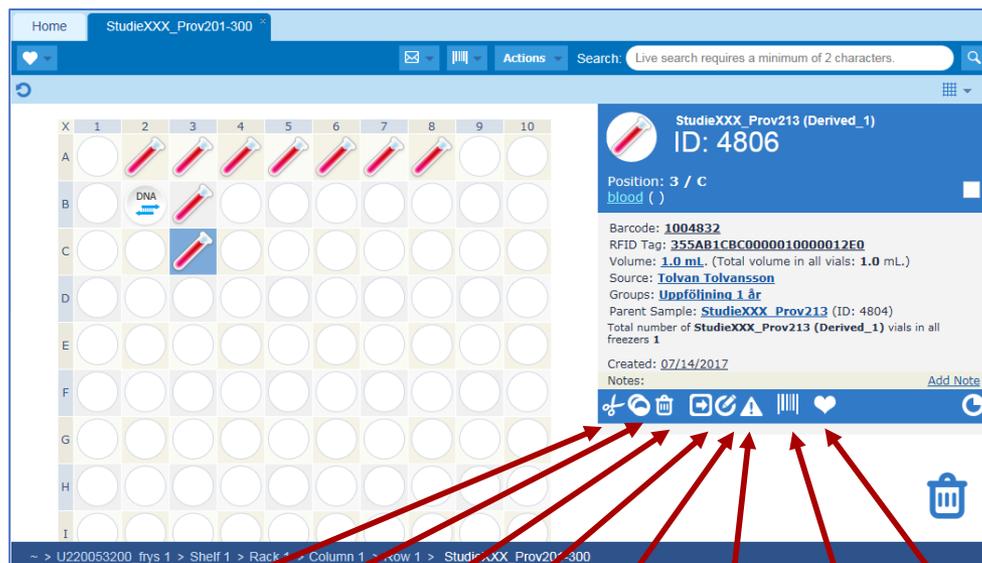
One sample at a time can be restored.

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Aliquoting

A. To aliquote a sample select a sample.

B. Click the icon copy in order to aliquote.

C. Click on an empty well where you want to place the sample.

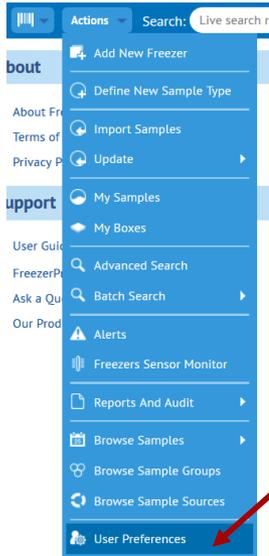D. Click create derivatives samples. Select create derivatives of the type, volume and update comments.

Sample toolbar

A. Cut

B. Copy (aliquote)

C. Delete sample

D. Take sample out of the freezer

E. Edit sample

F. Set alerts

G. Print barcode

H. Add to favorites

Print label

A. Before you print the labels, it's a good idea to set your default printer you use most often. Go through the Action menu and select User Preferences.

B. Select the printer you want to set as the default printer when you print the labels.

C. Click Save.

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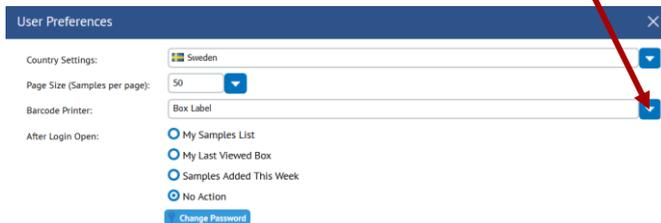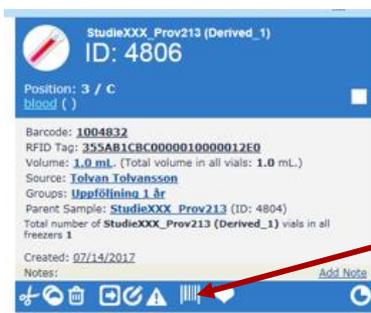
Print label

A. To print a barcode label of a sample, click your way to a box and select a sample. Select the print icon print barcode.

B. To print a barcode label of an object (e.g. freezer, shelf, rack or box), right-click the object and select print Print Barcode in the drop-down menu.

C. Select the printer, and the number of copies. Click Ok to print.
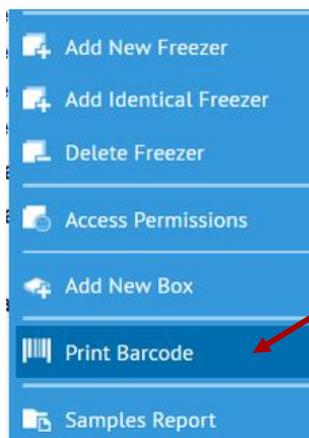
Chapter 4: Search, add to favorites, reports

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Search for sample

There are a number of ways to search for samples:

- Search
- Advanced search
- Barcode search

A. Search

You can search for samples from most data fields (e.g. sample name).
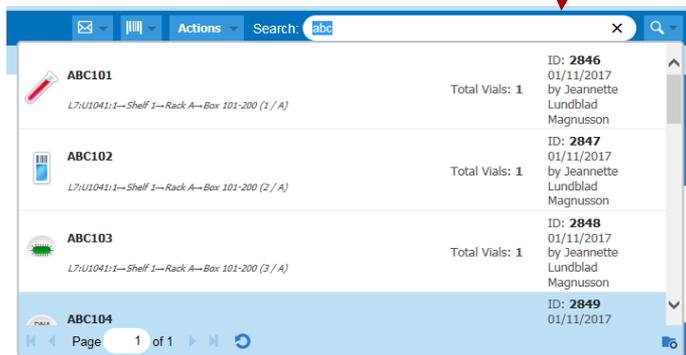
Advanced search for sample

B. Advanced search

Click on the search icon to the right. Up comes a selectable menu depending on what you want to search:

- Samples

- Sample Sources

- Boxes

In the view that now appears, you can build a search by selecting and adding different search criteria.

Search barcode for sample

C. Search by barcode

Click the icon for barcode search and select

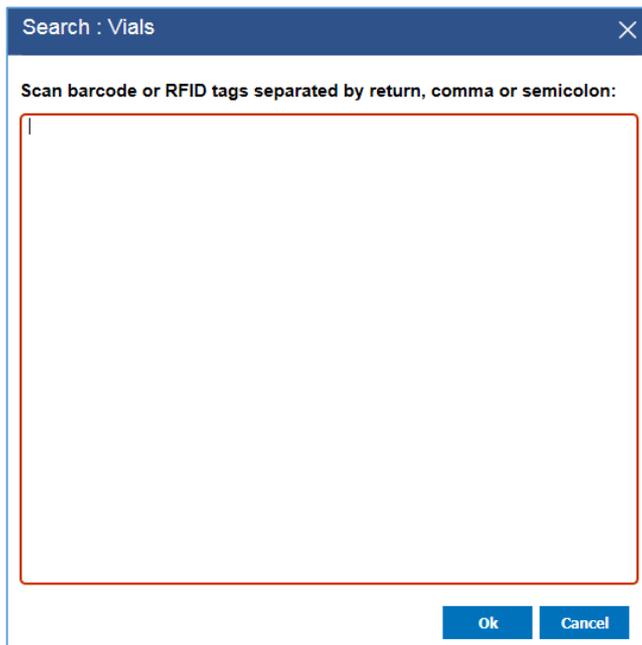- Search: Vials or

- Search: boxes.

In the text box, you can either type in one or more barcode numbers manually or scan it with a hand scanner.

Add a favorite

By choosing one or more boxes as favorites, you can quickly find and open them in FreezerPro.

A. Pick a box. Click the heart symbol. A dialog box to add box to Favorites comes up.

B. A list of boxes marked as favorites appears if you click on the heart icon just to the right of the menu Freezers And Boxes.

Mallversion 2.0
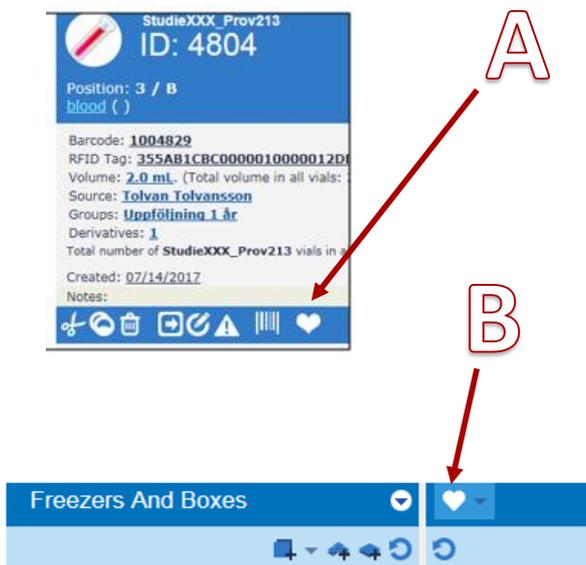
Deleting a favorite
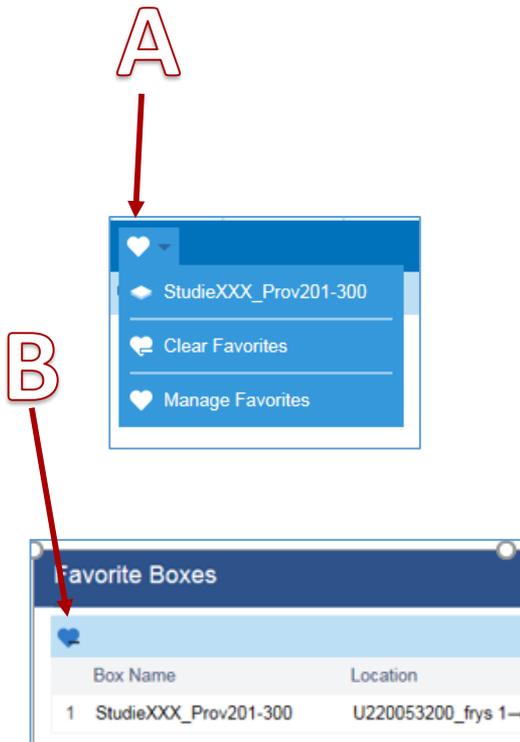
A. In order to delete one of your boxes marked as favorite, open the shortcut menu and select Manage Favorites

B. Select the box and then click on the little heart with a minus sign to remove the selected favorite.

Reports

In FreezerPro there is the opportunity to review the data over the freezers and freezer content.

Select Reports and Audit in the main menu. There are several ways to choose different categories.

Double-click on a category you want to review. It can for example be samples by sample type.

You can choose to export the list to a CSV file.

Please note! Only SuperUser or user with higher permissions can manage reports.

Reports And Audit
- Samples
  - Samples By Creation Date
  - Samples By User (Owner)
  - Samples By Sample Type
  - Samples By Sample Source
  - Samples By Sample Group

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More information about FreezerPro

To read more about FreezerPro, visit the product provider's website.

Click on the link to the right to get to the link.

Tip! On Youtube, there are several short films about how to use the functionality of FreezerPro. (Search FreezerPro training videos)

http://www...

Suppliers website

Freezer Pro

https://www.freezerpro.com/index

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Chapter 5: Conclusion

Sources

Content, text

Stockholms Medicinska Biobank: https://biobankstockholm.se

BROOKS INC: https://www.freezerpro.com/product-tour

https://www.brooks.com

Other media

SMB Freezerpro
https://resurs.sll.se/

Date	Designed by	Reviewed by	Approved by
2017-10-06	Dennis Hellgren/SMB	Jeannette Lundblad Magnusson FoU-Ledningen, Karolinska Universitetssjukhuset	Mirela Borndalen/SMB

Date	Revised by	Revision reviewed by	Revision approved by
2017-10-09	Dennis Hellgren/SMB	Mirela Borndalen/SMB	Mirela Borndalen/SMB
2018-09-06	Boris Schubert/SMB		

Utbildningen är utformad, granskad och godkänd i ett samarbete mellan Stockholms medicinska biobank och FoU Karolinska,

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