



Sample Tracking System User's Manual

University of Pittsburgh
Graduate School of Public Health
Epidemiology Data Coordinating Center

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1. Introduction

The Sample Tracking System is a web-based modular system designed to streamline the tracking and shipment of samples from the clinical sites to the various laboratories working with the Pediatric Acute Liver Failure study. The modules included in this system include barcode initialization, sample entry, sample editing and sample shipment. The system was designed to facilitate direct entry of data at the time of the sample collection and processing either via keyboard or a pen/wand barcode scanner. The system also facilitates quick entry of multiple samples when barcode labels are used in sequential order by only requiring the first barcode along with the number of samples obtained to be entered by the user. Although the system will allow the user to enter one sample at a time each with a different non-sequential number, the recommended practice is to use labels sequentially.

This system is not intended to replace any inventory practices that are in place at your site. Sites will still be responsible to maintain accurate inventory logs to track sample location within the site and within sample storage boxes.

All data systems are located in a private and secure area of the PALF website. Access is limited to project personnel who utilize these systems. A valid username and password are required. Valid usernames and passwords are assigned by the Data Coordinating Center. Personnel who require permission to access the PALF Sample Tracking System must contact the Data Coordinating Center to request access. Username and passwords are to be kept private and are not to be shared internally or externally. If you feel your username and password has been compromised submit a help ticket via the Help Center to request a new username and password.

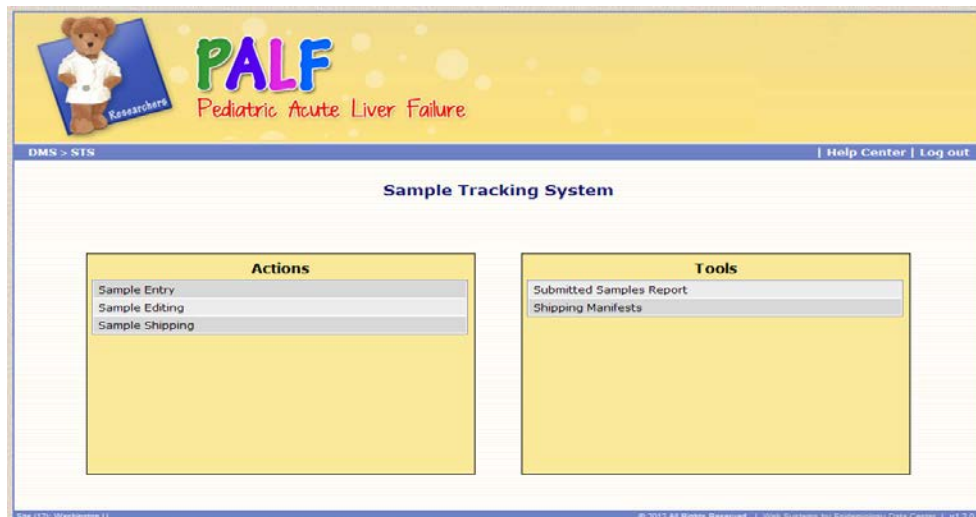
2. System Requirements and Recommendations

The system requirements and recommendations for the Sample Tracking System are those used for the Data Management System. Refer to Section 2 of the PALF Data Management System Guide for a full description of the system requirements and recommendations.

3. Accessing Sample Tracking System

To access the Sample Tracking System enter the researcher portal through the PALF project website at <http://www.palfstudy.org> and select 'Data System'. The Sample Tracking System can either be entered by selecting "Sample Tracking System" from the Data Systems Main Menu or you can select "Data Management System" from the Data System Main Menu and login using your PALF username and password. From the "Data Management System" page under "Tools" select "Sample Tracking System".

From the Sample Tracking System Menu you can access the Actions Menu and the Tools Menu.



4. Sample Tracking System Overview

The navigation bar is located at the top of each page, just under the PALF page header.

DMS > STS

| [Change site](#) | [Help Center](#) | [Log out](#)

The left hand side of the navigation bar shows the depth you are currently at in the system and provides a quick way to jump back to various pages.

[DMS](#) – returns you to the Data Management System page containing the Studies and Tools panels.

[STS](#) – returns you to the Sample Tracking System menu.

[Change Site](#) – displays the change site pop-up which allows you to select a different site. This link is only available if you have access to more than one site’s data.

[Help Center](#) – directs you to the PALF Website Help Center to report any issues encountered in the Sample Tracking System. An additional login using your PALF username and password will be required.

[Log out](#) – logs you out of the Sample Tracking System and returns you to the Sample Tracking Login page. It is important to properly log out of the Data Management System/Sample Tracking System when you are finished with a session. Proper logout practices are particularly important when a computer is shared between coordinators. The log out procedure forces the data management system and sample tracking system to clear all user specific information that is retained by the system when a session is in progress.

The Sample Tracking System utilizes the same form activity notifications, field navigation, required field checks, duplicate record checks, invalid value checks and unsaved data alerts as described in the PALF Data Management System Guide. For a full description of these features refer to Section 4 of the PALF Data Management System Guide.

5. Entering a Sample

To enter one or more samples select “Sample Entry” from the Sample Tracking System menu. Enter the following information and click “Next”.

Study:	Study associated with sample draw
Timepoint:	Evaluation timepoint
Laboratory:	Laboratory associated with sample
Sample Type:	The type of sample (serum, biopsy slide, Guthrie card, RNA later tissue, etc.)
Sample Date:	Date of sample draw
Sample Time:	Time of sample draw (24 hour). If time is unknown or not applicable, check “NA/Unk”.
Patient ID:	Patient ID
Number of Samples:	The number of samples of the sample type selected
First Barcode:	First barcode in the series for the type of samples
Default Sample Volume:	Sample volume assigned to all samples.

Note: A maximum of 50 samples of a given type, per patient, can be entered in the same step.

PALF
Pediatric Acute Liver Failure

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Sample Entry Reset

Study: Timepoint:
 Laboratory: Sample Date (mm/dd/yyyy):
 Sample Type: Sample Time (24h) (hh:mm): NA/Unk
 Patient ID: Number of Samples:
 First Barcode: Default Sample Volume:

Cancel Next >>

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The information entered into the sample entry screen as well as default values (set by the DCC) are used to pre-populate a table showing one row for each sample to be entered.

If some of the barcodes in the sequence have already been entered into the Sample Tracking System they will receive a notification pop-up and the sample(s) will be shown in blue in the table and will not be able to be modified or selected for submission to the database. To hide the used barcodes click the “Hide used/uninitialized/invalid Patient ID” in the lower right hand corner below the table of samples.

DMS > STS | Change site | Help Center | Log out

Sample Entry Reset

Study: Timepoint:
 Laboratory: Sample Date (mm/dd/yyyy):
 Sample Type: Sample Time (24h) (hh:mm): NA/Unk
 Patient ID: Number of Samples:
 First Barcode: Default Sample Volume: mL

Include (All)	Barcode	Patient ID	Study	Time Point	Sample Type	Date/Time	Volume	Condition	
<input type="checkbox"/>	P490000100	491001RGR	PALF	In Hospital	Serum	03/01/2012 12:15	0.50 mL		Edit
<input type="checkbox"/>	P490000101	491001RGR	PALF	In Hospital	Serum	03/01/2012 12:15	0.50 mL		Edit
<input checked="" type="checkbox"/>	P490000102	491001RGR	PALF	In Hospital	Serum	03/01/2012 12:15	0.50 mL		
<input type="checkbox"/>	P490000103	491001RGR	PALF	In Hospital	Serum	03/01/2012 12:15	0.50 mL		Edit
<input type="checkbox"/>	P490000104	491001RGR	PALF	In Hospital	Serum	03/01/2012 12:15	0.50 mL		Edit
<input type="checkbox"/>	<input type="text"/>	491001RGR	PALF	In Hospital	Serum	03/01/2012 12:15	0.50 mL	<input type="text"/>	Insert

Hide used/uninitialized/invalid Patient ID:

If some of the barcodes in the sequence are invalid for the Patient ID selected, the Sample Tracking System will provide a notification pop-up and the sample(s) will be shown in yellow in the table, and will not be able to be modified or selected for submission to the database. To hide the used invalid barcodes click the “Hide used/uninitialized/invalid Patient ID” in the lower right hand corner below the table.

Sample Tracking System Users Manual

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Sample Entry Reset

Study: PALF **Timepoint:** In Hospital
Laboratory: NIDDK **Sample Date (mm/dd/yyyy):** 03/01/2012
Sample Type: Serum **Sample Time (24h) (hh:mm):** 12:15 NA/Unk
Patient ID: 491001RGR **Number of Samples:** 5
First Barcode: P490000298 **Default Sample Volume:** 0.50 mL

Include (All)	Barcode	Patient ID	Study	Time Point	Sample Type	Date/Time	Volume	Condition	
<input type="checkbox"/>	P490000298	491001RGR	PALF	In Hospital	Serum	03/01/2012 12:15	0.50 mL		Edit
<input type="checkbox"/>	P490000299	491001RGR	PALF	In Hospital	Serum	03/01/2012 12:15	0.50 mL		Edit
<input type="checkbox"/>	P490000300	491001RGR	PALF	In Hospital	Serum	03/01/2012 12:15	0.50 mL		Edit
<input type="checkbox"/>	P490000301	491002							
<input type="checkbox"/>	P490000302	491002							
<input type="checkbox"/>		491001RGR	PALF	In Hospital	Serum	03/01/2012 12:15	0.50 mL		Insert

Hide used/uninitialized/invalid Patient ID:

The generated table should be reviewed by the user for accuracy. Make necessary changes by modifying the sample information above the table (see section 5.1 for more details) or using the edit option next to each row (see section 5.2 for more details). You may also enter additional sample(s) for the same patient and sample type, for samples that are not part of the sequential barcode sequence (see section 5.3 for more details).

After all sample information is correct, select the samples that you wish to submit to the database by clicking the "Include" check box next to the sample(s). To select all the samples in the table for submission to the database check the "All" check box at the top of the "Include" column.

DMS > STS | Change site | Help Center | Log out

Sample Entry Reset

Study: PALF **Timepoint:** In Hospital
Laboratory: NIDDK **Sample Date (mm/dd/yyyy):** 03/01/2012
Sample Type: Serum **Sample Time (24h) (hh:mm):** 12:15 NA/Unk
Patient ID: 491001RGR **Number of Samples:** 5
First Barcode: P490000110 **Default Sample Volume:** 0.50 mL

Include (All)	Barcode	Patient ID	Study	Time Point	Sample Type	Date/Time	Volume	Condition	
<input type="checkbox"/>	P490000110	491001RGR	PALF	In Hospital	Serum	03/01/2012 12:15	0.50 mL		Edit
<input type="checkbox"/>	P490000111	491001RGR	PALF	In Hospital	Serum	03/01/2012 12:15	0.50 mL		Edit
<input type="checkbox"/>	P490000112	491001RGR	PALF	In Hospital	Serum	03/01/2012 12:15	0.50 mL		Edit
<input type="checkbox"/>	P490000113	491001RGR	PALF	In Hospital	Serum	03/01/2012 12:15	0.50 mL		Edit
<input type="checkbox"/>	P490000114	491001RGR	PALF	In Hospital	Serum	03/01/2012 12:15	0.50 mL		Edit
<input type="checkbox"/>		491001RGR	PALF	In Hospital	Serum	03/01/2012 12:15	0.50 mL		Insert

Hide used/uninitialized/invalid Patient ID:

Cancel Submit

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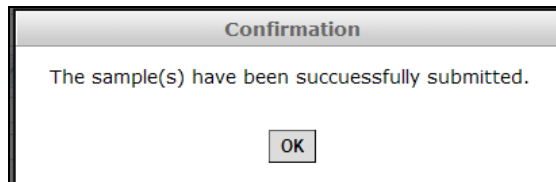
Once the appropriate samples have been selected, click "Submit" to submit the sample(s) to the Sample Tracking database. You will then be asked to confirm the number of samples you are about to submit to the database. Click 'Confirm' to continue the submission process or cancel to return to the sample selection table.

Confirmation

You are about to submit 5 sample(s).

Do you want to continue?

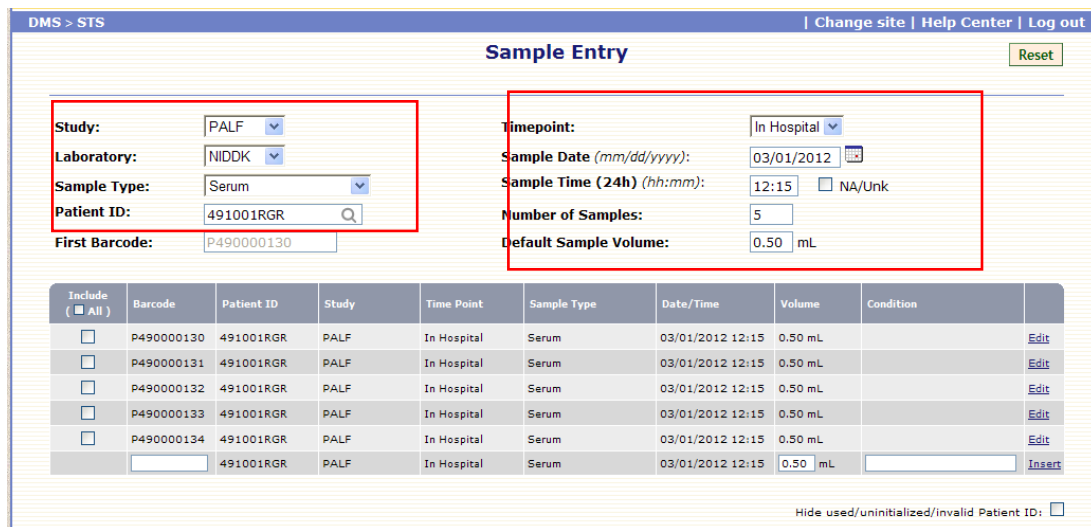
The samples are not submitted to the database until you have received the following message.



After you click 'OK' you will be returned to the sample entry screen to continue to enter another batch of samples. All fields will be populated with the information that was previously entered except for sample type, first barcode and number of samples. This enables the user to enter samples for the same patient without having to re-enter all fields in the entry screen. Change the appropriate fields to reflect the information related to the next batch of samples you want to enter or select "Cancel" to return to the Sample Tracking System menu.

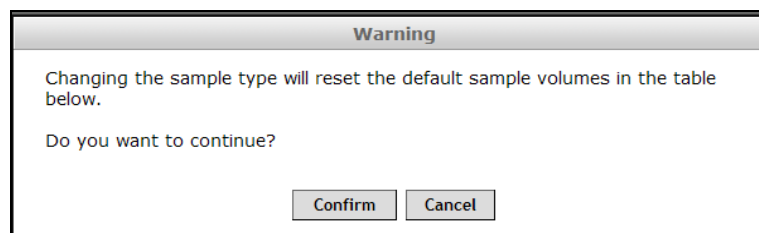
5.1. Modifying Sample Entry Information

To change the study, timepoint, sample type, sample date/time, Patient ID or number of samples, simply change the information above the table and the change will be applied to all rows in the table.



5.1.1 Change Sample Type

When the sample type is changed you will be prompted with the following message.



Click "Cancel" to return to the Sample Entry table or "Confirm" to change the Sample Type. If 'Confirm' is selected "Sample Type" will be changed in the table and the volume for each entry in the table will be reset to the default volume associated with that sample type.

5.2. Modifying Volume and Condition for Individual Samples

To change the volume or add a sample condition to an individual sample click the 'Edit' button next to the row that you wish to modify. The row being modified will be displayed in pink. Modify the volume and/or add a condition and then click 'Update' to apply the change or 'Cancel' to disregard the change.

The screenshot shows the 'Sample Entry' form with the following fields: Study: PALF, Laboratory: NIDDK, Sample Type: Serum, Patient ID: 491001RGR, First Barcode: P490000130, Timepoint: In Hospital, Sample Date: 03/01/2012, Sample Time: 12:15, Number of Samples: 5, Default Sample Volume: 0.50 mL. Below these fields is a table with columns: Include (All), Barcode, Patient ID, Study, Time Point, Sample Type, Date/Time, Volume, Condition, and an action button. The first row is highlighted in pink and has 'Update' and 'Cancel' buttons circled in red.

Include (All)	Barcode	Patient ID	Study	Time Point	Sample Type	Date/Time	Volume	Condition	
<input type="checkbox"/>	P490000130	491001RGR	PALF	In Hospital	Serum	03/01/2012 12:15	0.65 mL	Cloudy	Update Cancel
<input type="checkbox"/>	P490000131	491001RGR	PALF	In Hospital	Serum	03/01/2012 12:15	0.50 mL		Edit
<input type="checkbox"/>	P490000132	491001RGR	PALF	In Hospital	Serum	03/01/2012 12:15	0.50 mL		Edit
<input type="checkbox"/>	P490000133	491001RGR	PALF	In Hospital	Serum	03/01/2012 12:15	0.50 mL		Edit
<input type="checkbox"/>	P490000134	491001RGR	PALF	In Hospital	Serum	03/01/2012 12:15	0.50 mL		Edit
<input type="checkbox"/>		491001RGR	PALF	In Hospital	Serum	03/01/2012 12:15	0.50 mL		Insert

5.3. Entering Additional Non-sequential Samples

To enter additional sample(s) of the same sample type that are not part of the sequential barcode sequence enter the barcode via keyboard or pen/wand scanner into the last row of the table, change the volume (if applicable) or add a sample condition (if applicable) and click 'Insert'.

The screenshot shows the 'Sample Entry' form with the same fields as above. The table below has the last row highlighted in pink, and the 'Insert' button is circled in red.

Include (All)	Barcode	Patient ID	Study	Time Point	Sample Type	Date/Time	Volume	Condition	
<input type="checkbox"/>	P490000130	491001RGR	PALF	In Hospital	Serum	03/01/2012 12:15	0.50 mL		Edit
<input type="checkbox"/>	P490000131	491001RGR	PALF	In Hospital	Serum	03/01/2012 12:15	0.50 mL		Edit
<input type="checkbox"/>	P490000132	491001RGR	PALF	In Hospital	Serum	03/01/2012 12:15	0.50 mL		Edit
<input type="checkbox"/>	P490000133	491001RGR	PALF	In Hospital	Serum	03/01/2012 12:15	0.50 mL		Edit
<input type="checkbox"/>	P490000134	491001RGR	PALF	In Hospital	Serum	03/01/2012 12:15	0.50 mL		Edit
<input type="checkbox"/>		491001RGR	PALF	In Hospital	Serum	03/01/2012 12:15	0.50 mL		Insert

6. Sample Editing

To edit one or more previously entered sample records select "Sample Editing" from the Sample Tracking System menu. To locate the sample record(s) supply one or more of the following search criteria and click "Next".

- Patient ID
- Barcode Range
- Laboratory (default all labs)
- Sample Date Range (default start date is 9/1/10 and default end date is current date)
- Type of Sample (default is all samples)
- Sample State (default is all states)
- Include Shipped Records (includes shipment date range or shipment batch)
- Include Deleted Records

A table showing those samples that met your search criteria will be displayed. The criteria used to create the table is shown above the sample table.

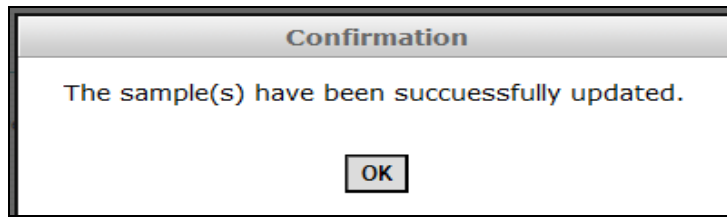
Barcode	Patient ID	Study	Time Point	Lab	Sample Type	Sample Date (mm/dd/yyyy) Time (hh:mm)	Volume	Condition	Shipment Date	
P490000102	491001RGR	PALF	In Hospital	NIDDK	Serum	03/01/2012 12:15 <input type="checkbox"/> NA/Link Time	0.50 mL		Not Shipped	Update Cancel
P490000110	491001RGR	PALF	In Hospital	NIDDK	Serum	03/01/2012 12:15	0.50 mL			Edit Delete
P490000111	491001RGR	PALF	In Hospital	NIDDK	Serum	03/01/2012 12:15	0.50 mL			Edit Delete
P490000112	491001RGR	PALF	In Hospital	NIDDK	Serum	03/01/2012 12:15	0.50 mL			Edit Delete
P490000113	491001RGR	PALF	In Hospital	NIDDK	Serum	03/01/2012 12:15	0.50 mL			Edit Delete
P490000114	491001RGR	PALF	In Hospital	NIDDK	Serum	03/01/2012 12:15	0.50 mL			Edit Delete
P490000300	491001RGR	PALF	In Hospital	NIDDK	Serum	03/01/2012 12:15	0.50 mL			Edit Delete

To edit a sample record click 'Edit' next to the record you want to modify. The record available for modification will be highlighted in pink. Make changes to all fields which require modifications and click "Update" to lock in the changes or "Cancel" to dismiss the changes.

Note: When the "Study" is changed you will need to reselect the Timepoint and Sample Type.

Next click "Submit" to commit the modified sample records to the database or "Cancel" to cancel all changes in the session and return to the Sample Editing Search page.

After clicking "Submit" you will be asked to confirm the changes. The edits have not been applied to the database until the following message is received. Click 'OK' to return to the Sample Editing Search page.

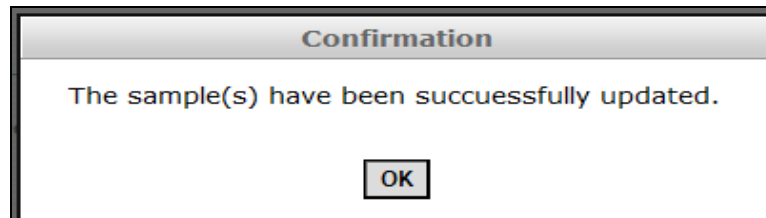


6.1. Delete/Restore a Sample Record

Select "Sample Editing" from the Sample Tracking System menu. To locate the sample(s) record you wish to delete supply one or more of the following search criteria and click "Next".

- Patient ID
- Barcode Range
- Laboratory (default all labs)
- Sample Date Range (default start date is 9/1/10 and default end date is current date)
- Type of Sample (default is all samples)
- Sample State (default is all states)
- Include Shipped Records (includes shipment date range or shipment batch)
- Include Deleted Records

Select "Delete" or "Restore" link next to the record that you wish to delete/restore and click "Submit". After clicking "Submit" you will be asked to confirm the changes. The delete or restore has not been applied to the database until the following message is received. Click 'OK' to return to the Sample Editing Search page.



7. Sample Shipping

To prepare a shipping manifest, select "Sample Shipping" from the Sample Tracking System menu. To locate the sample(s) you wish to ship supply one or more of the following criteria and click "Next".

- Laboratory: Laboratory to which the samples will be shipped
- Study: Study associated with the samples to be shipped (default is 'All Studies')
- Barcodes: Select all, even or odd barcodes of samples to be shipped (default is 'All Barcodes')
- Type of Sample: Type of samples to be shipped (serum, biopsy slides, Guthrie card, RNA Later tissue, etc.) (default is 'All Samples')
- Sample State: State of the samples to be shipped (frozen or ambient)
- Sample Collected Through: Date range when samples were drawn (default start date is 9/10/2010 and the default end date is the current date)

Based on the criteria provided a table will be generated showing all samples that met the criteria and are available for shipping. The number of samples that are selected for shipment is provided in a table.

The user should reconcile the listing with the samples that will be shipped. If an error is identified in the listing and needs to be corrected before the shipping manifest is created click the 'Generate List' button to print a PDF version of the table shown. Then use the Sample Editing module to make the appropriate changes to the sample records (see section 6) and return to the Sample Shipping module and regenerate the table after the changes have been made.

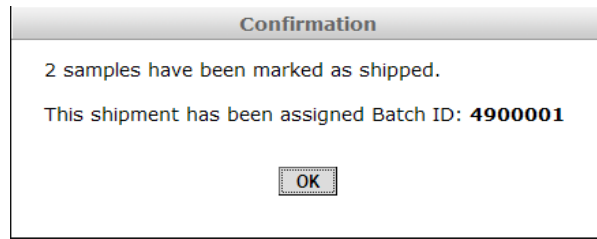
All samples in the listing will automatically be selected for shipment. You may deselect one or more samples for shipment by clicking the check box in the 'Sample Selection' column to uncheck the box. To deselect all samples click the 'All' check box in the 'Sample Selection' column to uncheck all samples in the listing.

Once all appropriate samples are selected and the information in the listing is correct click the 'Ship Samples' button. You will receive the following confirmation message.

Select 'Confirm' to continue the creation of the shipping manifest or 'Cancel' to return to the sample selection table. When 'Confirm' is selected the user will be prompted for a ship date. The ship date may be a date in the near future to allow time to organize samples and arrange for shipment.

Enter the anticipated ship date and click 'OK' to continue or 'Cancel' to return to the sample selection table. When 'OK' is selected the user will receive a confirmation message of the number of samples to be shipped and a Batch ID will be assigned to identify all samples as belonging to the same shipment.

Note: The shipment date cannot be more than 7 days after the current date.

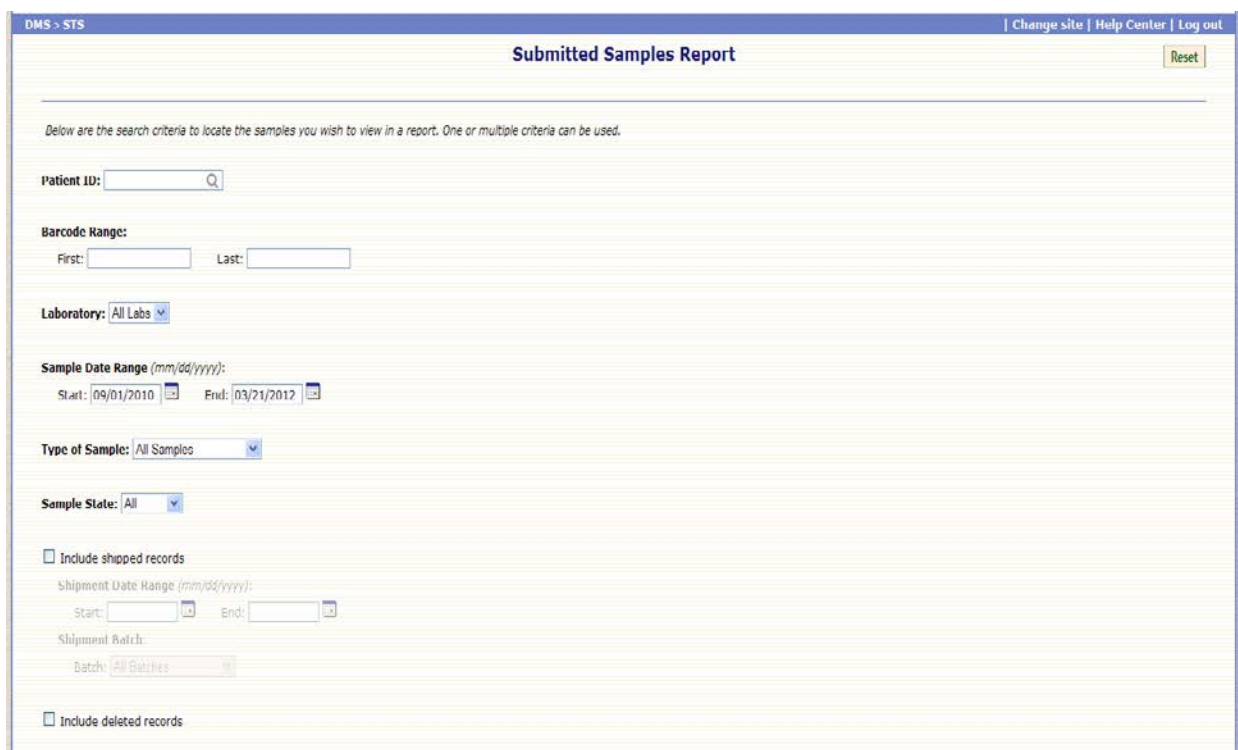


Click 'OK' to generate the shipping manifest in MS Excel format and then click the 'Save' button to save this file to your computer. You will be required to provide a paper copy of the shipping manifest inside the shipping box. Oftentimes an electronic version of the shipping manifest will also be forwarded to the laboratory at the time of shipment. The name of the laboratory that the samples are being shipped to will appear in the header of the shipping manifest.

8. Submitted Samples Report

To generate a report listing samples already entered into the Sample Tracking System select "Submitted Samples Report" under Tools from the Sample Tracking System menu. To generate the report supply one or more of the following search criteria and click "Generate".

- Patient ID
- Laboratory (default all labs)
- Barcode Range
- Sample Date Range (default start date is 9/1/10 and default end date is current date)
- Type of Sample (default is all samples)
- Sample State (default is all states)
- Include Shipped Records (includes shipment date range and shipment batch)
- Include Deleted Records



Based on the criteria provided a PDF will be generated showing all submitted samples that met the criteria. Click the 'Save' button to save this file to your computer or click 'Open' to open the PDF without saving the file.

9. Shipping Manifests

To recreate a previously generated shipping manifest select "Shipping Manifests" under Tools from the Sample Tracking System menu. To generate the manifest supply one or more of the following search criteria and click "Generate".

- Laboratory: Laboratory to which the samples were shipped
- Study: Study associated with the samples shipped (default is 'All Studies')
- Barcodes: Select all, even or odd barcodes of samples shipped (default is 'All Barcodes')
- Type of Sample: Type of samples shipped (plasma, serum, whole blood, liver tissue, etc.) (default is 'All Samples')
- Sample State: State of the samples shipped (frozen or ambient)
- Shipment Batch: Groups of samples belonging to the same shipment
- Sample Shipped Through: Date range when samples were shipped (default start date is 9/1/2010 and the default end date is the current date)



Based on the criteria provided, a shipping manifest in MS Excel format will be generated. Click the 'Save' button to save this file to your computer. The name of the laboratory to which the samples are being shipped will appear in the header of the shipping manifest.

You are required to provide a paper copy of the shipping manifest inside the shipping box, with all shipments. Most often the laboratories also require an electronic version of the shipping manifest at the time of shipment.