

# LDMS Training Guide for PHIA Specimens

LDMS (Windows)



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# Specimen Management

REFER TO QUICK REFERENCE GUIDE FOR SPECIMEN MANAGEMENT

## Overview of Specimen Management Screen

The screenshot displays the Specimen Management interface with three main data grids:

- Participant Grid:** Contains fields for Group (PHIA), TYPE1 (PTID), ID1 (HT112233), TYPE2 (Country), ID2 (HAITI), TYPE3 (HIVRT), ID3 (POS), Visit (1.00), Unit (PVL), OPID (CM001), and CLINIC (CM001).
- Primary Grid:** Lists specimens with columns for Specimen #, Global Spec ID, Primary, Additive, Volume, Units, Spec Time, Time Unit, Cond, and Other Spec ID.
- Aliquot Grid:** Lists aliquots with columns for Specimen #, Global Spec ID, Primary, Add, Der, Sub Add/Der, Volume, Units, Cond, Other Spec ID, and Group/ID.

### The Participant Grid

- **ID1:** The participant identifier (PTID). Validation checks run on this field.
  - 8 characters in length (XXNNNNNN format, XX=country code)
  - **Scanned** into field from Specimen Tracking Form label
- **ID2:** Country code; auto-selected based on PTID scanned
- **ID3:** HIVRT; hard-coded list of HIV status codes [POS, NEG, IND]
  - Indicated on Specimen Tracking Form
- **Visit:** auto-populated by preload.
  - Visit code 1.0
  - Visit code 1.1 *for very, very rare redraws*
- **Visit Unit:** auto-populated by preload.
  - PVL (plasma viral load)
  - DVL (DBS viral load)
- **Clinic:** IDs for satellite labs in each country (XX001, XX002, etc., where XX=country code)

## The Primary Grid

- **Control H:** This action can be performed on the preloaded combo boxes (e.g., Primary, Additive, etc.) in Specimen Management, to display a full description of the information
- **Specimen Date:** Date collected from participant; indicated on Specimen Tracking Form label
- **Specimen Time:** Enter the time the sample was collected from the participant; indicated on Specimen Tracking Form label
- **Condition:** The condition of the primary will be defaulted to SAT (satisfactory).
- **Global Specimen ID**
  - Unique identifier
  - Used in Shipment QA/QC
  - No two sample tubes should ever have the same Global Specimen ID on label

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*Primary Global Specimen ID: EC2007GP-00*

*Aliquot Global Specimen ID: EC2007GP-01-99*

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## The Aliquot Grid

- **Reprint Labels:** In right-click menu, select Print Labels for All Aliquots or Selected Aliquots
  - When using the selected aliquot feature double check the global specimen id
- **Condition:** Condition codes are used in the event not all expected specimens are collected or if the amount of specimen is less than expected. The condition of the aliquot will be defaulted to SAT (satisfactory). Adjust as necessary, see section below for further explanation.

## Details Buttons

The screenshot displays the 'Entry' window of the Specimen Management system. It features two main data grids: the 'Primary' grid at the top and the 'Aliquot' grid at the bottom. Both grids include columns for Specimen ID, Global Spec ID, Primary/Additive, Volume, Units, Spec. Time, Time Unit, and Condition. The 'Primary' grid shows a specimen with ID 500V15000029 and Global Spec ID FEQ006FG-00. The 'Aliquot' grid shows two aliquots with IDs 500V15000029 and 500V15000029, both with Global Spec ID FEQ006FG-02. Two callout boxes with arrows point to the 'Details' column in each grid, labeled 'Primary Details Button' and 'Aliquot Details Button' respectively.

### Primary Details Button

- **Comments:** Enter applicable comments
- **Condition** - If the condition of the primary tube is anything other than satisfactory, select the proper code from the Condition box.

## Aliquot Details Button

- **Condition** - If the condition of the primary tube is anything other than satisfactory, select the proper code from the Condition box.
- **Comments:** Enter applicable comments

**Note:** The Aliquot Details dialog box collects and displays all the information from other modules of LDMS in one menu

## Exercise 1: Specimen Entry with Preload

The Data Managers for PHIA have worked with Frontier Science to add preloads to the LDMS which assist in specimen entry. The preload will make entries for all expected specimens based on the age of the participant and the draw type indicated on the sample tracking form. In this example the preload will be triggered when the user moves from the ID2/Country field.

The screenshot shows the LDMS software interface. At the top, there is a form for entering specimen details. The 'Group' field is set to 'PHIA'. The 'ID1' field is 'HT112293'. The 'ID2' field is 'HAITI'. The 'ID3' field is 'FDS'. The 'Visit' field is '1.00 PVL'. The 'CLINIC' field is 'HT001'. Below this form, there are fields for 'Spec. Date' (03/Dec/2018), 'Rec. Date' (03/Dec/2018), 'Exp. Date', and 'Recd. Time' (20:45). There are also checkboxes for 'Remote', 'Imported', and 'Import date'. Below the form, there is a table of specimens. The table has columns for 'Specimen #', 'Global Spec ID', 'Primary', 'Additive', 'Volume', 'Units', 'Spec. Time', 'Time', 'Time Unit', 'Cond', 'Other Spec. Id', and 'Details'. The table contains 6 rows of specimen data.


Specimen #	Global Spec ID	Primary	Additive	Volume	Units	Spec. Time	Time	Time Unit	Cond	Other Spec. Id	Details
1	500V18000022	BLD	EDT	10.00	ML	09:15			SAT		ED
2	500V18000022	BLD	EDT	4.00	ML	09:15			SAT		ED
1	500V18000023	BLD	EDT	PL1	N/A				SAT	PHIA/HAITI	ED
2	500V18000023	BLD	EDT	PL1	N/A				SAT	PHIA/HAITI	ED
3	500V18000023	BLD	EDT	PL1	N/A				SAT	PHIA/HAITI	ED
4	500V18000023	BLD	EDT	PL1	N/A				SAT	PHIA/HAITI	ED
5	500V18000024	BLD	EDT	DBS	N/A				SAT	PHIA/HAITI	ELD
6	500V18000024	BLD	EDT	DBS	N/A				SAT	PHIA/HAITI	ELD

1. In the **Participant Grid**, enter the following information

- Group** PHIA
  - PID** scan into field from Specimen Tracking Form
  - Country** auto-selected based on PTID scanned
- The preload menu will appear. Select the preload in the dropdown menu, click **OK**.
- HIVRT** HIV field results
  - Visit Value/ Visit Units** determined by preload
  - Clinic** satellite lab ID (XX001, where XX=country code)

2. In the **Primary Grid**, enter the following information from the Specimen Tracking Sheet

- Specimen Date**
- Received Date**
- Received Time**
- Specimen Time**

3. Click the **Add**  button on the LDMS toolbar.
4. Click **Enroll** in the message box that appears.
5. Click **OK** in the Save message.
6. In the labels menu, Select a format and label size, and then click **Yes** on the dialog box.

The Crystal Reports window will open displaying the specimen labels.

Repeat this exercise for other specimens on your training Sample Tracking form. Disregard any draw issues at this time we will discuss this in the next exercises.

## Condition codes

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The condition code will always default to **SAT (Satisfactory)**. Any specimen collection that deviates from the expected draw on the specimen tracking form is recorded by adjusting the condition codes and adding comments. Comments are recorded in the Details menu.

### Volume Condition codes:

**SNC (Sample not Collected):** Add Comments in the Details button to explain why

**QNS (Quantity not Sufficient):** use for empty plasma samples and empty DBS cards

*For extra labels / tubes - return these to LDMS tech, so records can be updated with the QNS condition code*

**SHV (Short Volume):** use as follows:

- **Plasma:** <0.8 mL *Note: Always need 1.2 mL aliquot #1 for Viral Load testing*
- **DBS cards:**
  - 3-5 spots: SAT
  - 1-2 spots: SHV
  - 0 spots: QNS

### Other Condition Codes:

- HEM – Hemolyzed
- CLT – Clotted
- LIP – Lipemic

## Exercise 2: Using condition codes


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After processing the specimens, issues may come to light on the quality and/or quantity of the samples. In this example, after processing one of the plasma aliquots could not be created and another is <0.8 ml.

1. Select one of the participant's accessioned in Exercise 1.

**PTID:** \_\_\_\_\_

2. For plasma aliquot 3 (ie. -03) the volume is 0.5 ml. Which condition code should you use? \_\_\_\_\_

3. **Update** the condition code for aliquot -03
4. Plasma aliquot 4 is empty as the technologist did not have enough sample to create it. Which condition code should you use? \_\_\_\_\_
5. **Update** the condition code for aliquot -04
6. **Review** the pop up messages
7. Click the **Save**  button on the LDMS toolbar.
8. In the Print Labels menu, click **No**.

## Exercise 3: Incomplete Draw

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During an adult venous draw the vein collapses and only the 4 mL tube was collected. The patient refused a second draw. The following is entered in LDMS:

1. In the **Participant Grid**, enter the following information

<b>Group</b>	PHIA
<b>PID</b>	scan into field from Specimen Tracking Form
<b>Country</b>	auto-selected based on PTID scanned

The preload menu will appear. Select the **XX VEN 4ML ONLY** preload (XX =country code)

<b>HIVRT</b>	HIV field results
<b>Visit Value/ Visit Units</b>	determined by preload
<b>Clinic</b>	satellite lab ID (XX001, where XX=country code)

2. In the **Primary Grid**, enter the following information from the Specimen Tracking Sheet

**Specimen Date**  
**Received Date**  
**Received Time**  
**Specimen Time**

3. Enter a comment in the Primary Details button and cascade noting the refused draw and your initials.

4. Click the **Add**  button on the LDMS toolbar.
5. Click **Enroll** in the message box that appears.

Note: The same condition code rules apply after processing. If aliquots are short volume or QNS, the specimen record will be updated



# Searching for Specimens

Use one of the following methods to search for specimens in your lab database

## Scanning an LDMS-generated barcode

1. The user must be in the specimen management screen
2. Choose one of your aliquots created during the exercise above.
3. Scan the barcode



## Navigation buttons


## Browse feature

The screenshot shows the 'Browse Specimens' window with the following fields and values:

- Specimen #:
- Other Spec ID:
- Global Spec ID:
- Clinic:
- Group: PHIA
- OPID:
- Visit:
- Visit Type:
- Type 1: SPEC. DATE
- Type 2:
- Type 3:
- Type 4:
- ID 1:
- ID 2:
- ID 3:
- ID 4:
- Primary:
- Additive:
- Derivative:

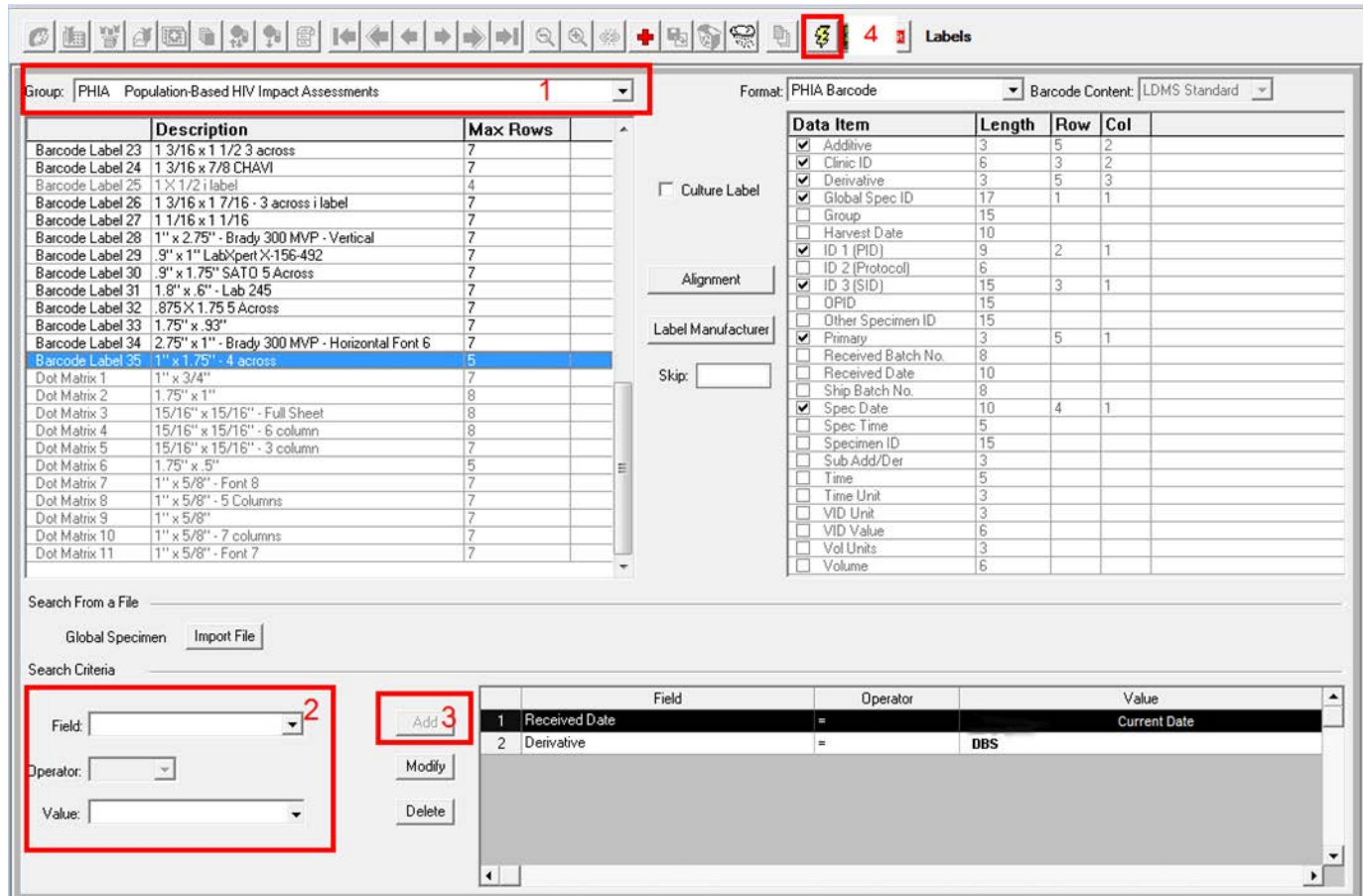
Spec. Id	Global Spec ID	Primary	Additive	Derivative	Volume	Specimen Date	Visit	PID/ID1	Prot/ID
----------	----------------	---------	----------	------------	--------	---------------	-------	---------	---------

Buttons at the bottom:  Show Aliquots, Run, Refresh, Select, Cancel

1. Click the **Browse** button  on the LDMS toolbar
2. Set the **Group** field to PHIA
3. In the **Type 1** field select **Spec Date**
4. In the **ID1** field select a **Spec Date** from the exercises above
5. Click **Run**

# Labels Module

Use this module to create duplicate DBS labels for the outside of the polybags.



1. In the **Group** drop down menu, select **PHIA**
2. Enter the search criteria:
 

<b>Field:</b> Received Date	<b>Field:</b> Derivative
<b>Operator:</b> '='	<b>Operator:</b> '='
<b>Value:</b> Current Day	<b>Value:</b> DBS
3. Click **Add** after each **Value** is set
4. Click **Execute**.

The external labels window will appear with all of the DBS specimens received that day, click print and close window.


# Storage Management

REFER TO QUICK REFERENCE GUIDE FOR STORAGE MANAGEMENT

## Storage Overview

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The Storage module is separated into several pages. These tabs are listed below with a brief description of the functions contained in that page.

- **Main View:** Allows you to view the contents of freezers, levels and containers, and to add boxes into storage.
  - By clicking on the + sign, a level can be expanded to see its components
  - Dependent upon the level - box or rack - the Execute button  displays a 2-D view of that level
- **Move:** Allows you to move specimens and containers from one storage unit to another.
- **Configuration/ Freezer Cfg:** The Storage Structure has already been configured by PHIA administration.
- **Bulk Add** – Allows you to add a large group of specimens to storage.
  - Specimen barcodes can also be scanned for direct add to a container
  - Highlight the desired box name, then scan the specimen barcode
- **Search:** Allows you to find the exact storage positions of specimens and print a report of their location. This feature only searches for specimens currently stored.

## Exercise 1: Adding containers into Storage

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Containers must be added in the LDMS in order to assign storage positions to the samples. When racks are filled the box names can be adjusted to note the current container in the rack position. All PHIA boxes must be labeled with the colored labels provided by the study on the top and bottom of the container.

1. Highlight a level to add the new container to.
2. Click the **Add**  button on the LDMS toolbar.
3. Click **Container**.
4. The Storage Add dialog box appears. Select either **PHIA Plasma** or **PHIA DBS** box
5. Enter number of boxes
6. Type in the box name from the colored labels on the container:

Please enter a name for the container.

Name:

PLA-P AL1 XX201 0024

OK Cancel

<Sample Type> dash<HIVRT result> <aliquot\*> <clinic ID> <Box #>

Examples: PLA-P AL2 XX203 0028 PLA-N XX203 0074 (XX=country)

\*Aliquot number is for positive samples only (CC200BPL-02, is aliquot 2)

7. The **Position Selection Menu** appears. The options are:

- **Put Here** – Choose the exact location for the specimen or container.
- **Automatic** – Allow the LDMS to choose the next available position based on the fill order of the level or container. You will be prompted each time if storing multiple specimens or containers.
- **Auto All** – Allow the LDMS to choose the next available position of all the selected specimens or containers based on the fill order of the level or container.

Container position selection

Put Here Automatic Auto All Start here

	1	2	3	4	5
A					
B					
C					
D					
E					

POSITIVE PLASMA AL1

This rack is configured to hold containers of any type.

Cancel

## Exercise 2: Adding specimens in Bulk Add

The screenshot shows the 'Bulk Add' window with the following components:


- Storage Structure:** A tree view on the left showing storage locations like '-80 FREEZER', 'PHIA FREEZER 1 POSITIVE', and 'PHIA Rack 1'. A red arrow labeled '2' points to the entry 'PLA-N UG001 001' with coordinates 'A, 005'.
- Storage Options Dialog:** A modal dialog box in the center with two checked options: 'Set Frozen Date/Time to Current Date/Time' and 'Automatically Assign Positions'. A red arrow labeled '1' points to the 'Options' button in the bottom toolbar.
- Main Form:** Fields for 'Global Spec ID', 'Spec ID', 'Group', 'Visit', 'Type 1-4', 'ID 1-4', 'Derivative', 'Sub Add/Der', 'Batch', and 'Receive'.

1. Set Storage **Options** to **Automatically Assign Positions**, **Set Frozen Date/Time** should already be selected
2. **Highlight** the Box you wish to add specimens
3. **Scan** specimen barcode with your scanner, place item into container

## Exercise 3: Searching for specimens in Storage

Use the Storage **Search** tab to search for the exact position of specimens in storage.

Freezer	Level	Level	Container	Position	ID1	Spec ID	Global Spec ID	Primary	Additive	Derivative	Sub Add/Der	Spec
PHIA SAT LAB FREEZER	SHELF 2 POSITIVE DBS	PHIA Rack 1	DBS-P ZW001 001	018.001	Zw100343	500V15000027	DEQ006F9-03	BLD	EDT	DBS	N/A	20/Aug/
PHIA SAT LAB FREEZER	SHELF 1 POSITIVE PLASMA	PLASMA ALIQUOT 1	PLA-P AL1 ZW001 001	A.002	Zw100343	500V15000026	DEQ006F9-01	BLD	EDT	PL1	N/A	20/Aug/
PHIA SAT LAB FREEZER	SHELF 2 POSITIVE DBS	PHIA Rack 1	DBS-P ZW001 001	017.001	Zw100343	500V15000027	DEQ006F9-04	BLD	EDT	DBS	N/A	20/Aug/
PHIA SAT LAB FREEZER	SHELF 1 POSITIVE PLASMA	PLASMA ALIQUOT 2	PLA-P AL2 ZW001 001	A.002	Zw100343	500V15000026	DEQ006F9-02	BLD	EDT	PL1	N/A	20/Aug/

1. Set the **Group** field to PHIA
2. In the **Type 1** field select PTID
3. In the **ID1** field enter in a PTID from the sample tracking form
4. Click **Run**
5. Click the **Report** button  on the LDMS toolbar.
6. **Close** the Crystal Reports window.

## Exercise 4: Using barcodes to locate a specimen's position

The LDMS barcode can be scanned to locate a specimen in the storage structure on the **Main View** tab.

1. Go to the **Main View** tab in Storage
2. **Scan** a specimen barcode


## Exercise 5: Container Details button

Use the Details button at the bottom of the Storage Structure to rename the container and mark containers to ship.

### Part 1: Rename container

1. Click to **select** the box added in Exercise 1
2. Click **Details**
3. Enter a new name for the container/box in the **Name** field
4. Click **Modify**

## Part 2: Marking a Storage Item for Shipping

1. **Highlight** a container with specimens
2. Click **Details**
3. Click **Mark to Ship**. An envelope icon  appears next to the storage container that has been marked for shipping.

*Mark full boxes with "X" on box label*

### Notes on Marking to Ship:

Once a storage item is marked for shipping, its contents cannot be modified.

To change the contents of a marked container: Open the details menu, click Unship (the envelope icon will disappear). The contents of the box can be changed.

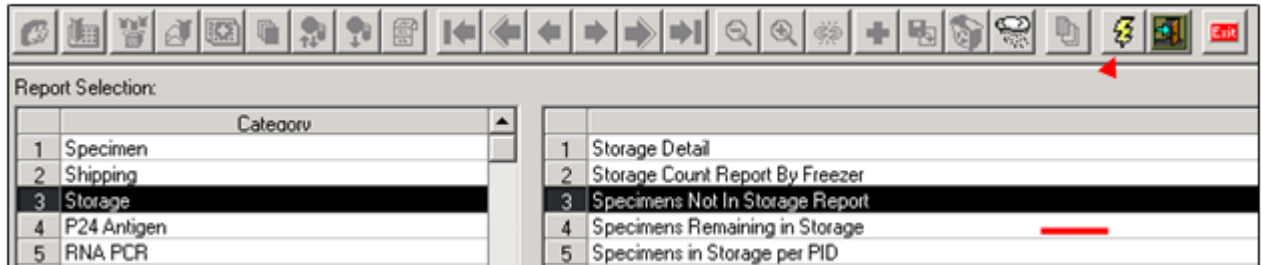
The LDMS will not allow a storage item that has already been added to a shipping batch to be marked for shipment

# Reports

The Reports module contains many pre-defined reports separated by category.

## Exercise 1: Specimens Not in Storage Report

Generate this report every day. Reconcile until all specimens have a storage location or the status code is updated to QNS or SNC.



### Specimens Not in Storage Report

Searched on: Group = PHIA

Group/Prot: PHIA UGANDA

Specimen ID	Global Spec ID	Pid/Id1	Spec Date	Pri	Add	Der	Sub A/D	Vid	Volume	Condition
410V16000146	AC2006FP-01	UG123458	05/Oct/2015	BLD	EDT	PL1	N/A	1.00 DVL	1.00 ML	SAT
410V16000013	AC2006H1-01	UG123479	05/Oct/2015	BLD	EDT	PL1	N/A	1.00 Vst	1.00 ML	SAT
410V16000029	AC2006HK-01	UG123487	05/Oct/2015	BLD	EDT	PL1	N/A	1.00 Vst	1.00 ML	SAT
410V16000122	AC2006KF-01	UG123516	05/Oct/2015	BLD	EDT	PL1	N/A	1.00 EID	1.00 ML	SAT
410V16000130	AC2006KP-01	UG123520	05/Oct/2015	BLD	EDT	PL1	N/A	1.00 PVL	1.00 ML	SAT
410V16000064	AC2006ML-01	UG123548	05/Oct/2015	BLD	EDT	PL1	N/A	1.00 DVL	1.00 ML	SAT

### For Evening Shift

- In Report Selection:  
**Category:** Storage  
**Report:** [3] Specimens Not in Storage
- Enter the following search criteria:  
**Field:** Derivative  
**Operator:** '='  
**Value:** PL1
- Click **Add**
- Click **Execute**

### For Day Shift

After DBS cards have been scanned in, click the **Execute** button to run the report with **NO** search criteria


### Common issues

- Specimens are on processing bench
- Empty aliquots not set to QNS
- Duplicate entry in Specimen Mgmt

- Specimens missed scanning in Bulk Add

## Exercise 2: Resolving a duplicate entry

When reviewing the Specimens Not in Storage Report a set of specimens is included on the report. There are no specimens left on the bench and it is very likely a duplicate entry. Follow the steps below to reconcile the report.

- In Specimen Management, Click the **Browse** button  on the LDMS toolbar
- Set the **Group** field to PHIA
- In the **Type 1** field select PTID
- In the **ID1** field enter the PTID from the Specimens Not in Storage report
- If two sets of specimens are present, open one of the records and see if the specimens are stored.
- For the unstored specimens, Set the **Primary** condition code to **SNC** (cascade to aliquots)
- Open **Primary Details** window and enter a comment noting this was a duplicate entry
- If there is another primary (ie. 10 and 4 ml draw) update this specimen
- Rerun the Specimens Not in Storage report

## Exercise 3: Specimen Log Report (QNS report)

This report provides the user with a list of all aliquots the lab has logged into their LDMS with the condition code QNS for a specific date.

Specimen Log Report										
Searched on: Specimen Date = 27/Apr/2018, Condition = QNS										
PID/ID1	Group/Prot	SID/ID3	VID	Clinic	OPID					
NG555555	PHIA NIGERIA	NEG	1.00 EID	NG000						
Primary Spec ID	Global Spec ID	Spec Time	Spec Date	Rec Date	Primary Volume/Unit	Time/Time Unit	Other Spec ID	Comments		
350V18000019	DAA006JJ-00	07:00	27/Apr/2018	27/Apr/2018	1.00 ML					
Aliq Spec ID	Global Spec ID	Other Spec ID	Pri/Add	Der / Sub A/ID	Current Volume	Cond	Grp/Prot	Test(s) Ordered	Shipped	Comments
350V18000020	DAA006JJ-02		BLD/EDT	DBS / N/A	1.00 CRD	QNS	PHIA NIGERIA	None	No	
									Total Number Of Aliquots:	1

- In Report Selection:
  - Category:** Specimen
  - Report:** [3] Specimen Log Report
- Enter the following search criteria:
  - Field:** Specimen Date
  - Operator:** '='
  - Value:** current date
  
  - Field:** Condition
  - Operator:** '='
  - Value:** QNS
- Click **Add**
- Click **Execute**



## Exercise 4: Time to Freeze QA/QC Summary

This report provides the user with a summary of the Draw Dates and Times, Frozen Dates and Times, Specimen Types and the calculated amount of time from the time of draw to the freezing start time. This report should be run for plasma specimens.

<b>PHIA Time To Freeze QA/QC Summary</b>									
Searched on: Specimen Date = 03/Dec/2018									
<b>Note: Time to freeze values marked with an asterisk (*) are higher than the expected value (1440 minutes)</b>									
<u>Patid</u>	<u>Draw date</u>	<u>Draw time</u>	<u>Frozen Date</u>	<u>Frozen Time</u>	<u>Time to freeze (minutes)</u>	<u>Tech</u>	<u>Additive</u>	<u>Derivative</u>	<u>Comments</u>
HT112233	03/Dec/2018	09:15	03/Dec/2018	22:00	765		EDT	PL1	
HT123456	03/Dec/2018	09:25	03/Dec/2018	22:00	755		EDT	PL1	

1. In Report Selection:  
**Category:** PHIA  
**Report:** [1] PHIA Time to Freeze QA/QC Summary
2. Enter the following search criteria:  
**Field:** Specimen Date  
**Operator:** '='  
**Value:** current date
3. Click **Add**
4. Click **Execute**
5. In the pop-up window select **Plasma** and click **OK**.

Select a sample type to report on. SampleType

Plasma

# Shipping

*REFER TO QUICK REFERENCE GUIDE FOR SHIPPING*

Use the Shipping module to batch specimens for shipping, prepare shipping files, view shipping history and print shipping related reports.

## Shipping Overview

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The Shipping module is separated into several pages. These tabs are listed below with a brief description of the functions contained in that page.

- **View Shipment:** displays history of shipments, generate Manifest Report and Container Report, and generate LDMS shipping file
- **Setup Shipment:** this tab is used to search your lab database for marked containers to ship. Only boxes marked to ship will be available to add to your shipment
- **Shipment Destination:** select your country's central lab in the drop down menu or typing the lab number
- **Import:** This tab is used by the Central Lab to Process the shipment
- **Shipment QA/QC:** This tab will display the container contents. The user will scan the LDMS barcode to ensure the physical item matches the item on the manifest

## Exercise 1: Create a new shipping batch

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Generate shipping batches each day to limit number of boxes being shipped. Follow these guidelines when setting up a new batch:

- 12 or less boxes per batch
  - One batch for NEG plasma boxes
  - One batch for NEG DBS boxes
  - One batch for all POS specimens
1. In the **View Shipments** tab, select the bottom, blank row from the batch listing
  2. Change to the **Setup Shipment** tab. At the prompt box, select **Storage Items**  
**Note:** If you click the wrong button, use the **Refresh** button to return to the prompt box
  3. To add a storage item to the batch, click to highlight the marked storage item in the **Items Marked in Storage** listing and click **Add to Batch**. One or more containers may be highlighted at one time.
  4. Change to the **Shipment Destination** tab.
  5. Under **Lab Number** type in the **Central Lab ID** of \_\_\_\_\_
  6. Select a contact at the laboratory.
  7. Set a contact at sending lab.
  8. Click the **Add**  button on the LDMS toolbar.

## Exercise 2: QC shipping batch

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This process confirms the shipment contents by using the LDMS barcode

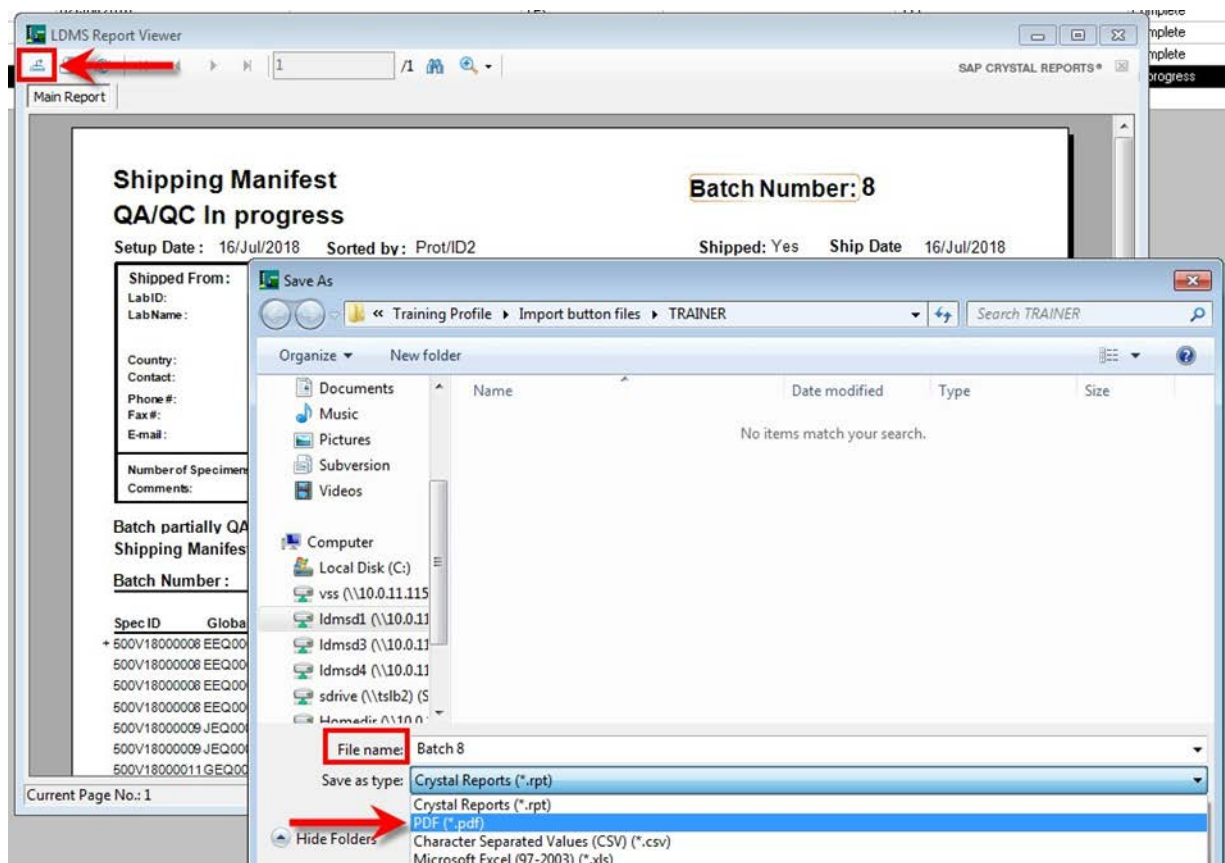
1. Use the manifest report button in **View Shipment** tab to create dummy manifest report and close – **Do not print**
2. Change to **QA/QC** tab
3. Enter in **Tech initials**
4. Start in the first container on the batch and **scan** the following positions
  - **Plasma** – A1, C2, F4, G9
  - **DBS** – one random card each box
5. **Continue** to next container and repeat
6. Click the **Save**  button
7. The View Shipment tab will always display **In Progress**
8. Perform QC on any remaining batches

## Exercise 3: Shipping file and documents

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1. Select **LDMS** from the **Shipment Type** box.
2. Click **Ship**. The Attention message appears.
3. Click **OK**. A message appears asking you to verify that you wish to ship the batch.
4. Click **Yes** to create the shipment, or click No.
5. Select the appropriate temperature from the **Select Temperature** menu and click **OK**. The Select Drive dialog box appears.
6. Click **C:\** and click **OK**. (This file will later be transferred to a thumb drive)
7. At the success message click **OK**.
8. Generate the required paperwork. Only the first page is printed. See next exercise
  - a. Highlight the batch. Click **Manifest Report**. The Shipping Manifest appears.
  - b. **Close** the Crystal Reports window.
  - c. Click **Shipping Container Report**. The Shipping Box Report appears.
  - d. **Close** the Crystal Reports window.

## Exercise 4: PDF copy of manifest and container report



1. **Highlight** the batch. Click **Manifest Report**. The Shipping Manifest appears.
2. In the Crystal Reports window. Click the **Export** button.
3. In the Save As window. **Go to** the folder in the C:\ drive with the LDMS Shipping file
4. **Change Save as type to PDF**
5. **Enter filename:** Batch [Shipment number] manifest
6. Click **Save**. Close Crystal Report window.
7. **Highlight** the batch. Click **Container Report**. Repeat process to save PDF.

## Exercise 5: Storage clean up

### Part 1: Removing shipped specimens

After the specimens are shipped their positions in storage are reserved. Before a new box can be added to the rack, the shipped specimens must be removed.

1. In **Storage**, click the **Search** tab.
2. Click **Shipped Check**. The Ship Check dialog box appears.
3. Leave the **date range** blank
4. Click **OK**. The Storage dialog box appears notifying you that there are currently specimens in storage that have been shipped within the specified range of dates, and confirming if you wish to remove the specimens from storage.

5. Click **Yes**.

## **Part 2: Renaming the box**

After a box is shipped to the central lab, its position in the rack is now empty. When it is time to add a new box into that position, use the details button to change the box name.

1. Click to **select** the shipped box.
2. Click **Details**
3. Type in the name from the box label in the **Name** field
4. Click **Modify**

# Test Result Entry Module (TREM)

REFER TO QUICK REFERENCE GUIDE FOR TREM

This module manages the lab workflows of the Household Tester QC, Pima, and Geenius bench. The LDMS will calculate which specimen's need further testing, provide worksheets, and capture the results.

## Exercise 1: Adding the Household Tester ID

Each PTID entered in the LDMS will be given a row in the TREM. After adding the Household Tester ID for the PTID, the LDMS will calculate which specimens must be sent to the QC bench.


Select a template: PHIA FIELD PRACTICE Load Results

Optional Filter Criteria

PTID	HIVRT	VID	Household Tester	QA	QA Tester	Geenius Tester	HBV/Syphilis Tester	Final Result	QA Discrepancy	CD4 Tester	CD4 Done
			not set								

Uploaded ID1/Global Spec ID Filter File: <none>

Load Filter File Unload Filter File Clear Filters


1. From the **Tools** menu select **Test Result Entry**
2. In the **Results Tab**, select the **template** in the drop down menu.  
**Note:** The user will be entering data in the Results tab. The Template tab is for PHIA admin use only.
3. In **Filter Criteria**, set the **Household Tester** filter to 'not set'
4. Click **Load Result**
5. Refer to your **specimen tracking form**. Add the **household tester id** to each PTID
6. Click the **Save**  button

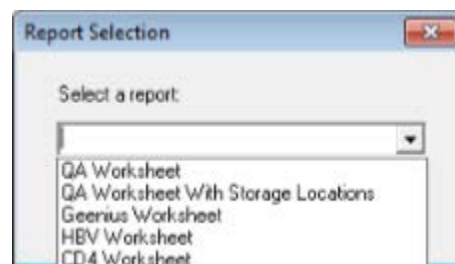
	PTID	HIVRT	VID	Household Tester	QA	Geenius Tester	QA Tester	CD4 Done	CD4 Tester	CD4	Geenius	Determine	Uniqold	Final Result
1	1999999	NEG	PVL	ABC123	Y			N			N/A			
2	1888888	NEG	PVL	ABC123	Y			N			N/A			
3	1777777	NEG	PVL	ABC123	Y			N			N/A			
4	1666666	POS	PVL	ABC123	Y			Y						
5	1555555	NEG	PVL	ABC123	Y			N			N/A			
6	1444444	POS	PVL	ABC123	Y			Y						

## Exercise 2: Generating worksheets

Worksheets are created to organize and record the test results at the bench. These are then returned to the LDMS and entered into the system.

1. If starting from previous exercise, click **Clear Filters**
2. Click **Load Results**

3. Click the **Report** button  on the LDMS toolbar.
4. From the menu select one of the following reports:
  - a. QA Worksheet
  - b. Geenius Worksheet
  - c. CD4 worksheet
5. Click **OK**
6. The Crystal Reports window will open. We will not be printing the worksheets for this exercise. Close after viewing worksheet



## Filters

As the study progresses, the number of participants in the TREM will grow. It will be necessary to use the filters in order to organize and manage the increasing number of rows.

**Household Tester:** Displays all specimens by the unique Household Tester ID; not set will display new specimens that need Household Tester to be entered

**QA/QA Tester:** QA status is Y or N; QA Tester displays all specimens by unique tester ID; For entering QA results, set QA status to Y and QA tester to not set. After loading results, click the PTID header to sort (see image)

**QA Discrepancy:** QA discrepancy is Y or N; setting the filter to Y will show all specimens with a discrepancy and the remaining QA fields (Report Date, Time) can be completed once the lab supervisor has been notified.

**Geenius:** Set Geenius Tester to not set, then click twice on the HIVRT header to bring the POS specimens to the top

**CD4:** Set CD4 Tester as not set and CD4 Done to Y

After setting the filters, **apply** them to the list by clicking **Load Results**.


**Reset** the filters by clicking **Clear Filters**

## Exercise 3: Adding Results


When the worksheets are returned from the bench, the results are added into the TREM

	PTID	HIVRT	VID	Household Tester	QA	Geenius Tester	QA Tester	CD4 Done	CD4 Tester	CD4	Geenius	Determine	Uniqold	Final Result
1	999999	NEG	PVL	ABC123	Y		XYZ999	N			N/A	NR	N/A	NEG
2	888888	NEG	PVL	ABC123	Y		XYZ999	N			N/A	NR	N/A	NEG
3	777777	NEG	PVL	ABC123	Y		XYZ999	N			N/A	NR	N/A	NEG
4	666666	POS	PVL	ABC123	Y	DEF456	XYZ999	Y	GHI789	1850	P HIV-1	R	R	POS
5	555555	NEG	PVL	ABC123	Y		XYZ999	N			N/A	NR	N/A	NEG
6	444444	POS	PVL	ABC123	Y	DEF456	XYZ999	Y	GHI789	3625	P HIV-1	R	R	POS


### Part 1: QA results

- Set the following filters
  - QA** Y
  - QA Tester** Not set
  - PTID** PTID from worksheet
- Check the PTID, and click on the **QA Tester** field and **enter** the **tester ID**.
- Use the tab key to move the cursor to the **first household test, enter result**.
- [If needed] Use the tab key to move to the remaining tests and enter results.
- Set the **Final Result**.
- Click the **Save**  button

### Part 2: Geenius results

- Set the following filters
  - HIVRT** POS (or IND)
  - Geenius Tester** Not set
- Check the PTID, and click on the Geenius Tester field and enter the tester ID.
- Use the tab key to move the cursor to the Geenius field, select results from drop down menu.
- Click the **Save**  button

### Part 3: CD4 results


- Set the following filters
  - HIVRT** POS (or IND)
  - CD4 Tester** Not set
- Check the PTID, and click on the CD4 Tester field and enter the tester ID.
- Use the tab key to move the cursor to the CD4 field, enter result
- Click the **Save**  button



## [Optional] Exercise 4: QA Discrepancy

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If the QA bench findings differ from the household tester, further investigation must occur and a NCE form is completed. Record the date and time the form was completed.

1. For a QA result set a Final Results that differs from the HIVRT.
2. The QA Discrepancy field populates with 'Y'. The QA Report Date and Time fields will open
3. Complete fields. Note: the date format is dd/mmm/yyyy
4. Click the Save  button

# Backing up the LDMS

LDMS automatically creates a backup of the database once per day at Noon and places it in:

**C:\fstrf\backup**

In this folder you will find a file named: **[LabID]\_[year][month][day].BK** If there are files in this folder that end with something other than .BK, this indicates the backup has failed. Please contact LDMS User Support.

*The most recent file is to be copied daily to a thumb drive provided by ICAP. The thumb drive should be stored in a secure location separate from the laptop.*

The backup is created automatically but a new file can be generated in the LDMS using the following steps

- Click Administration > Backup Tracking from the LDMS menubar
- Click the Create Backup button in the upper-right corner
- A Windows command prompt window will open. This is the backup tool.
- Wait until the backup tool finishes creating the backup

## LDMS User Support

LDMS User Support is available 24/7 except for some US national holidays:

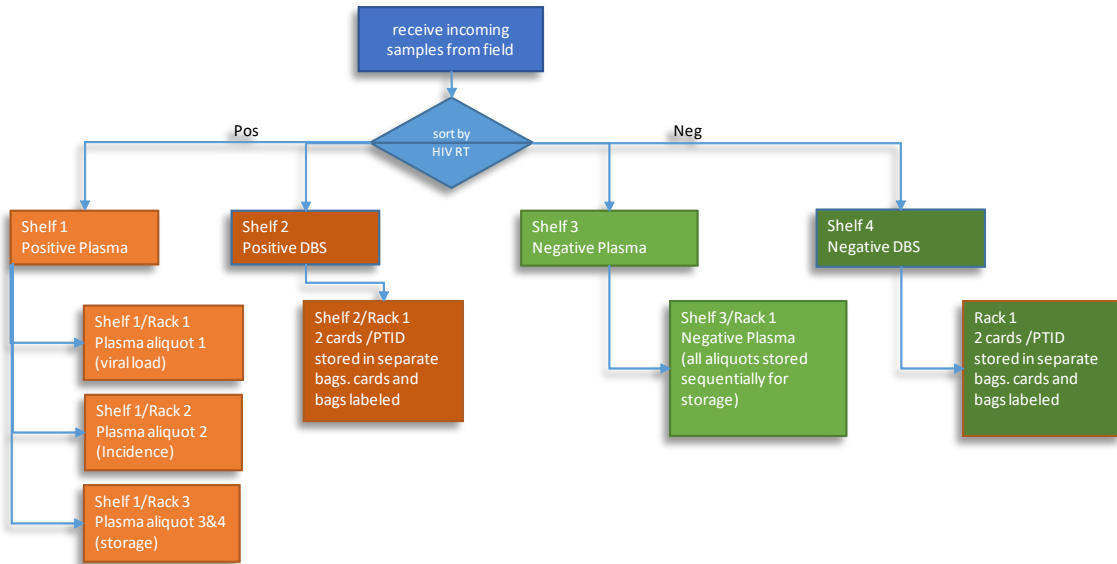
**E-mail: [ldmshelp@fstrf.org](mailto:ldmshelp@fstrf.org)**

**Phone: +1 7168340900 x7311**

In all communications with LDMS User Support, include the Lab ID, which is printed on the outside of the laptop.

**When emailing User Support please cc Melissa Metz: [mm33@cumc.columbia.edu](mailto:mm33@cumc.columbia.edu)**

# Appendix I: Storage overview



Storage	Coordinates	
PHIA SAT LAB FREEZER		Freezer
SHELF 1 POSITIVE PLASMA		Shelf
PLASMA ALIQUOT 1		Rack
L PLA-P AL1 HT001 0001	A,005	Container
PLASMA ALIQUOT 2	A,005	
L PLA-P AL2 HT001 0001	A,005	
PLASMA ALIQUOT 3,4	A,005	
L PLA-P AL3 HT001 0001	A,005	
SHELF 2 POSITIVE DBS		
PHIA Rack 1	A,005	
L DBS-P HT001 001	A,005	
PHIA Rack 2		
PHIA Rack 3		
SHELF 3 NEGATIVE PLASMA		
PHIA Rack 1	A,005	
L PLA-N HT001 001	A,005	
PHIA Rack 2		
PHIA Rack 3		
SHELF 4 NEGATIVE DBS		
PHIA Rack 1		
L DBS-N HT001 001	A,005	
PHIA Rack 2		
PHIA Rack 3		

## Appendix II: Preloads

Country (ID2)	Preload Name	Description

## Appendix III: LDMS Lab Numbers

LDMS Lab	Lab Name