HPX3002/HVTN706 LDMS Training Workbook

LDMS (Web)

frontier science

Contents

HVTN 706 version 1.6 102020

LDMS Setup

Before using the LDMS, it must be configured. Each new install of LDMS has a blank Storage page. This allows each lab to customize the Storage Unit to match the layout and capacity of the freezers, refrigerators, or cabinets at their facility. This process only occurs in a new LDMS install or if a new Storage Unit has been purchased.

Exercise 1: Setting the default label format

Review LDMS User Manual section **Labels— Setting the default label format for a project**

1. On the navigation menu, hover over **Labels**, and then click **Default Label Setup**
2. Set the following:
    a. **Project**   VTN
    b. **Format**   VTN1 Barcode
    c. **Label**   Barcode Label 19*
3. Click **Add Default**
4. Click **Save**

* We are using this barcode label during the training. Be sure to select the correct label stock in use at your laboratory

Exercise 2: Lab settings in Administration

Review LDMS User Manual section **Administration—Lab Settings**

1. On the navigation menu, hover over **Administration**, and then click **Lab Settings**
2. **Activate** the following options:
    a. Processing Tech Initials defaults to current user
3. Click **Save**

Exercise 3: Configuring a cryovial storage container template

Review LDMS User Manual section **Storage-- Storage templates--Creating storage item templates**

When adding a container to your freezer, using a template will populate the container options to simplify the process and reduce errors.

1. Select **Container Templates** from the **Storage** menu bar item.
2. Configure the desired box specifications, indicating the following:

   Name: 9 x 9 Box

   Dimensions: Rows: 9   Columns: 9

   Uncheck Positions Only

   Coordinate Order   Row/Column

   Column Labels: Numeric   Left to Right

   Row Labels: Numeric   Top to Bottom

   Fill Order: Left to Right, Top to Bottom

   Excluded Position(s):   None

3. Click **Save Template**.

The newly-created container template will be available in the Saved Templates listing.

Note: *The ability to create a template is also available when adding a new container.*

Exercise 4: Configuring a DBS card storage container template

In the LDMS each spot on a DBS card is considered a individual aliquot. In the template below each row represents a card and 5 locations per row are available for the 5 spots on a card.

1. Select **Container Templates** from the **Storage** menu bar item.
2. Configure the desired box specifications, indicating the following:

   Name: DBS box

   Dimensions: Rows: 16   Columns: 5

   Uncheck Positions Only

   Column Labels: Numeric   Left to Right

   Row Labels: Numeric   *Bottom to Top*

   Fill Order: Left to Right, *Bottom to Top*

   Excluded Position(s):   None

3. Click **Save Template**.

Exercise 5: Adding a storage unit

Review LDMS User Manual section **Storage—Assigning storage locations—Adding a new storage unit**

In this example we are going to add a freezer with 4 shelves. The shelf is configured in a separate step.

1. Select **Stored Samples** from the Storage menu bar item.
2. Select **Add Storage Unit** from the **Actions** box.
3. **Define** the following:
   a. Storage Unit Name: This is the name that will appear in the storage tree
   b. Type: Freezer
   c. Temperature: -80 C
   d. Rows: 4 (equals number of shelves)
   e. Columns: 1
4. Click **Save**.

Hint: When building a freezer the column equals one and the rows represent the number of shelves.

Exercise 6: Adding additional levels to a storage unit

Review LDMS User Manual section **Storage—Assigning storage locations—Adding a new level in a storage unit**

6

A shelf can be configured to hold racks or containers. When configuring for racks, the row is one and the columns represent the number of racks. For containers, the dimensions are increased to total the number of containers on the shelf. A 6x6 shelf can hold 36 containers.

Levels and containers can be added to an existing storage unit if space permits, based on its configuration. If the storage unit is configured to hold 4 shelves and there are currently 4 shelves in the unit, you will not be able to add additional shelves.

1. Click the **Edit button drop down arrow** to the right of the freezer created in the previous exercise
2. Select **Add new level**.
3. **Configure** the shelf to hold 25 containers (*See Note)*:
   a. Rows: 5 (how high can you stack the boxes)
   b. Columns: 5 (how many boxes fit across the shelf)
   c. Positions Only
   d. Fill, Left to Right, Bottom to Top
4. Click **Continue**.
5. In the **position selection menu**, place the shelf in the first position of the new freezer.
6. Click **Save**.
7. *To add more shelves*. Click the **Edit button drop down arrow** to the right of the freezer and select **Add new level**. Repeat steps 1-6

NOTE: If the lab's freezer contains racks, create a shelf with 1 row and set the number of columns to the number of racks that can fit on the shelf. Create the rack level template in the exercise below and add to the shelf.

Optional Exercise 1: Configuring a level template [Rack]

Review LDMS User Manual section **Storage--Storage templates--Creating storage item templates**
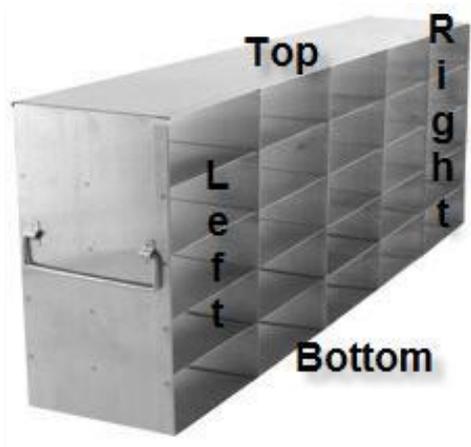
In this example we are building a template for a 5x5 stainless steel rack.

Name:	5 x 5 stainless steel rack	
Dimensions:	Rows: 5	Columns: 5
Column Labels (Circle):	Numeric	Alphabetic
	Left to Right	Right to Left
Row Labels (Circle):	Numeric, Alphabetic	Left, Right
	Top to Bottom	Bottom to Top
Fill Order (Circle):	Left to Right	Right to Left
	Top to Bottom	Bottom to Top

Excluded Position(s): _____

1. Select **Level Templates** from the Storage menu bar item.
2. **Configure** the rack specifications, indicating the following:
   a. Name
   b. Number of Rows, Number of Columns
   c. Select the fill order and labeling information (or positions only)
3. Click **Save Template**.

The newly-created rack template will be available in the Saved Templates listing.

Specimen Management

Review LDMS User Manual section **Specimen Management-- Using the Specimen Management page**

Exercise 1A: Main Study Visit 2 with PBMCs

Review LDMS User Manual section **Specimen management -- Quick add**

Review **HVTN 706 Site Laboratory Instructions for Specimen Processing**

Specimens were collected from a participant today at 07:25 for a Main Study 2 visit and received at the lab at 07:45. Use the Quick Add form to accession these specimens into your LDMS.

The information below was compiled from the *Processing Laboratory Requisition*, *Plasma/Serum Processing Worksheet*, and *PBMC Processing Worksheet*. When entering in the volume of the primary sample, the tubes from the clinic are pooled into one entry. For the number of aliquots enter the **# of aliquots made/frozen** recorded on the processing worksheet.

All information is given only as an example to use during this training. Protocol 998.0 is being utilized for the training, all specimens collected for 706 will be entered using 706.0 in Quick Add.

1. From the LDMS Menu Bar select Specimen Management then **Quick Add**.
2. In **Participant Information**, enter the following:.

Project:	VTN
ID1/PID:	[PID will be provided by VTN]

3. In **Enrollment Information**, enter the following:

ID2/Protocol:	998.0

4. In **Visit Information**, the **Clinic** and **Visit Units** will automatically populate, add the following:

Collection Date:	Current Date
Visit Value:	2

5. In **Primary Information** click **Add New 3 times** and add the following for Primary #1 :

Primary Type	BLD
Additive Type	SST
Collection Time	07:25
Received Date	Current Date

Received Time	07:45
Volume	25.5
Volume Unit	ML

6. In **Primary Information** , add the following for Primary #2:

Primary Type	BLD
Additive Type	EDT
Collection Time	07:25
Received Date	Current Date
Received Time	07:45
Volume	10
Volume Unit	ML

7. In **Primary Information** , add the following for Primary #3:

Primary Type	BLD
Additive Type	HEP
Collection Time	07:25
Received Date	Current Date
Received Time	07:45
Volume	100 *
Volume Unit	ML

* Enter *Usable whole blood volume* from PBMC processing worksheet

8. **Highlight** Primary #1, in **Aliquots** for Primary #1 click **Add New**.

Total Aliquots	13 *
Derivative Type	SER
Sub A/D Type	N/A
Volume	1
Volume Units	ML

* Enter *# of aliquots made/frozen* from the Plasma/Serum Processing worksheet

9. **Highlight** Primary #2, in **Aliquots** for Primary #2 click **Add New**.

Total Aliquots	4 *
Derivative Type	PL1

Sub A/D Type	N/A
Volume	1.1
Volume Units	ML

* Enter *# of aliquots made/frozen* from the Plasma/Serum Processing worksheet

10. **Highlight** Primary #3, in **Aliquots** for Primary #3 click **Add New**.

Total Aliquots	13 *
Derivative Type	CEL
Sub A/D Type	DMS or FBS
Volume	10 **
Volume Units	CEL

* Enter *# of aliquots made/frozen* from the PBMC processing worksheet

** Enter *actual number of cells per vial* from the PBMC processing worksheet

11. Click the **Add** button.
12. Click **Print Labels**. A menu will appear and the fields will have the Default setting from Exercise 1 in LDMS Setup.
13. **Click Generate Labels** and review the PDF that is downloaded.
14. Proceed to Exercises 3,4,5.

Exercise 1B: Main Study Visit 2

Review LDMS User Manual section **Specimen management -- Quick add**

Review **HVTN 706 Site Laboratory Instructions for Specimen Processing**

Specimens were collected from a participant today at 07:25 for a Main Study 2 visit and received at the lab at 07:45. Use the Quick Add form to accession these specimens into your LDMS The information below was compiled from the *Processing Laboratory Requisition* and *Specimens Processing Worksheet*. When entering in the volume of the primary sample, the tubes from the clinic are pooled into one entry. For the number of aliquots enter the **# of aliquots made/frozen** recorded on the processing worksheet.

All information is given only as an example to use during this training. Protocol 998.0 is being utilized for the training, all specimens collected for 706 will be entered using 706.0 in Quick Add.

1. From the LDMS Menu Bar select Specimen Management then **Quick Add**.

2. In **Participant Information**, enter the following:.

   Project: VTN

   ID1/PID: [PID will be provided by VTN]

3. In **Enrollment Information**, enter the following:

   ID2/Protocol: 998.0

4. In **Visit Information**, the **Clinic** and **Visit Units** will automatically populate, add the following:

   Collection Date: Current Date

   Visit Value: 2

5. In **Primary Information** click **Add New 2 times** and add the following for Primary #1 :

   Primary Type   BLD

   Additive Type   SST

   Collection Time   07:25

   Received Date   Current Date

   Received Time   07:45

   Volume   25.5

   Volume Unit   ML

6. In **Primary Information** , add the following for Primary #2:

   Primary Type   BLD

   Additive Type   EDT

   Collection Time   07:25

   Received Date   Current Date

   Received Time   07:45

   Volume   10

   Volume Unit   ML

7. **Highlight** Primary #1, in **Aliquots** for Primary #1 click **Add New**.

   Total Aliquots   13 *

   Derivative Type   SER

   Sub A/D Type   N/A

   Volume   1

Volume Units	ML

* Enter *# of aliquots made/frozen* from the Plasma/Serum Processing worksheet

8. **Highlight** Primary #2, in **Aliquots** for Primary #2 click **Add New**.

Total Aliquots	4 *
Derivative Type	PL1
Sub A/D Type	N/A
Volume	1.1
Volume Units	ML

* Enter *# of aliquots made/frozen* from the Plasma/Serum Processing worksheet

9. Click the **Add** button.
10. Click **Print Labels**. A menu will appear and the fields will have the Default setting from Exercise 1 in LDMS Setup.
11. **Click Generate Labels** and review the PDF that is downloaded.
12. Proceed to Exercises 3,4,5.

Exercise 2: Main Study Visit 11 plus DBS card

Review LDMS User Manual section **Specimen management -- Quick add**

During the course of the study an additional sample may be collected during a visit, such as a dried blood spot during a Main Study visit or a discretionary whole blood sample during a redraw.

All information is given only as an example to use during this training. Protocol 998.0 is being utilized for the training, all specimens collected for 706 will be entered using 706.0 in Quick Add.

In this example we are going to add a Dried Blood Spot (DBS) to a participant's Main Study 11 visit.

1. From the LDMS Menu Bar select Specimen Management then **Quick Add**.
2. In **Participant Information**, enter the following:.

Project:	VTN
ID1/PID:	[PID will be provided by VTN]

3. In **Enrollment Information**, enter the following:

ID2/Protocol:	998.0

4. In **Visit Information**, the **Clinic** and **Visit Units** will automatically populate, add the following:

Collection Date:	Current Date
Visit Value:	11

5. In **Primary Information** click **Add New 2 times**. *The first line is for the expected specimen from this visit, the second for the addition of the DBS specimens*

6. Add the following for Primary #1 :

Primary Type	BLD
Additive Type	EDT
Collection Time	13:00
Received Date	Current Date
Received Time	14:00
Volume	10
Volume Unit	ML

7. In **Primary Information** , add the following for Primary #2:

Primary Type	BLD
Additive Type	EDT
Collection Time	13:00
Received Date	Current Date
Received Time	14:00
Volume	2
Volume Unit	ML

8. **Highlight** Primary #1, in **Aliquots** for Primary #1 click **Add New**.

Total Aliquots	4 *
Derivative Type	PL1
Sub A/D Type	N/A
Volume	1.1
Volume Units	ML

 * Enter *# of aliquots made/frozen* from the Plasma/Serum Processing worksheet

9. **Highlight** Primary #2, in **Aliquots** for Primary #2 click **Add New**.

Total Aliquots	5

Derivative Type	DBS
Sub A/D Type	N/A
Volume	25
Volume Units	UL

10. Click the **Add** button.
11. Click **Print Labels**. A menu will appear and the fields will have the Default setting from Exercise 1 in LDMS Setup.
12. **Click Generate Labels** and review the PDF that is downloaded.
13. Proceed to Exercises 3,4,5.

Exercise 3: Applying Filters

Filters are used to limit the information that is displayed in the working area on the page. For example, on the Specimen Management page, if a filter is applied with the value of VTN to the Project field, only participants enrolled in the VTN project will be displayed. The filters that are available will vary, depending on the current page. To remove a filter after it has been applied, click on it or click Remove all filters.

Practice applying and removing filters to see how they limit the specimens displayed in the on the Specimen Management page.

Question 1: What is the broadest filter a user can apply? _____

Question 2: What is the most restrictive? _____

Before proceeding, set the filters to find the specimens entered in the exercises above.

Exercise 4: Adding post-processing information

Review LDMS User Manual section **Specimen Management—Primary Specimens--Modifying a primary specimen** and **Specimen Management—Aliquot Specimens--Modifying an aliquot specimen**

1. Stay on the specimen page
2. Click the **Edit** button next to the **Primary**. Enter the following:
   - Verify Tech initials

- Processing Date/Time
- Total Cell Count (if collecting PBMCs)

3. Click the **Edit** button next to the **Aliquot**. Enter the following:

- Frozen Date/Time (appropriate for each sample type)

Adjust the following, as needed:

- Condition Code
- Comments

Multiple aliquots can be edited using the control key to highlight multiple samples.

4. Click **Save**

Exercise 5: Printing Labels

Review LDMS User Manual section **Labels--Printing labels anywhere**

1. Using the filters, locate a record entered during this training
2. In the Visit grid **Edit** button drop down arrow, click **Print Labels**. This option is available in each grid if specific labels are needed.
3. In the **Print Labels** menu, **Click Generate Labels**

A PDF file that contains the labels is generated and downloaded into the folder set by the internet browser. Instructions to set the default option in this menu are covered in the LDMS User Manual section **Labels-- Setting the default label format for a project**

Exercise 6: Redraw visit

Review LDMS User Manual section **Specimen management -- Quick add**

Review **HVTN 706 Site Laboratory Instructions for Specimen Processing**

After a participant's Main Study visit 10 a redraw request was received from the HIV Diagnostics Lab. Specimens were collected from a participant today at 13:30 for the Redraw visit and received at the lab at 14:45. Use the Quick Add form to accession these specimens into your LDMS.

 The information below was compiled from the *Processing Laboratory Requisition* and *Plasma/Serum Processing Worksheet*.   When entering in the volume of the primary sample, the tubes from the clinic are pooled into one entry. For the number of aliquots enter the **# of aliquots made/frozen** recorded on the processing worksheet.

All information is given only as an example to use during this training.

1. From the LDMS Menu Bar select Specimen Management then **Quick Add**.
2. In **Participant Information**, enter the following:.

   Project: VTN
   ID1/PID: [PID will be provided by VTN]

3. In **Enrollment Information**, enter the following:

   ID2/Protocol: 998.0

4. In **Visit Information**, the **Clinic** and **Visit Units** will automatically populate, add the
   following:

   Collection Date: Current Date
   Visit Value: 10
   Visit Unit: RDW

5. In **Primary Information** click **Add New 3 times** and add the following for Primary #1 :

   Primary Type   BLD

   Additive Type   SST

   Collection Time   13:30

   Received Date   Current Date

   Received Time   14:45

   Volume   17

   Volume Unit   ML

6. In **Primary Information** , add the following for Primary #2:

   Primary Type   BLD

   Additive Type   EDT

   Collection Time   13:30

   Received Date   Current Date

   Received Time   14:45

   Volume   20

   Volume Unit   ML

7. In **Primary Information** , add the following for Primary #3:

   Primary Type   BLD

   Additive Type   EDT

Collection Time	13:30
Received Date	Current Date
Received Time	14:45
Volume	6
Volume Unit	ML

8. **Highlight** Primary #1, in **Aliquots** for Primary #1 click **Add New**.

Total Aliquots	13 *
Derivative Type	SER
Sub A/D Type	N/A
Volume	1
Volume Units	ML

   * Enter *# of aliquots made/frozen* from the Plasma/Serum Processing worksheet

9. **Highlight** Primary #2, in **Aliquots** for Primary #2 click **Add New**.

Total Aliquots	7 *
Derivative Type	PL1
Sub A/D Type	N/A
Volume	1.1
Volume Units	ML

   * Enter *# of aliquots made/frozen* from the Plasma/Serum Processing worksheet

10. **Highlight** Primary #3, in **Aliquots** for Primary #3 click **Add New**.

Total Aliquots	5
Derivative Type	BLD
Sub A/D Type	N/A
Volume	1
Volume Units	ML

   * Two aliquots of whole blood will be sent to the HIV Dx lab

11. *If you would like to add PMBCs to this entry follow the steps for Primary #3 in Exercise 1A for the 100 ml NaHep specimen*

12. Click the **Add** button.

13. Click **Print Labels**. A menu will appear and the fields will have the Default setting from Exercise 1 in LDMS Setup.

14. **Click Generate Labels** and review the PDF that is downloaded.
15. Proceed to Exercises 3,4,5.

Labels

Use the Print Labels page to re-print many labels across several specimens and participants. This is an alternative to printing labels from the Specimen Management page.   Instructions to set the default label options are covered in the LDMS User Manual section **Labels-- Setting the default label format for a project**

Exercise 1: Bulk reprint of labels

Review LDMS User Manual section **Labels--Generating labels**

1. From the LDMS menu select **Labels**, and then click **Print Labels**
2. After setting the appropriate **filters**, specimens matching the criteria populate in the grid.
3. Set filters to show all specimens created during this training.
4. Use the check boxes to mark the specimens that need labels.
5. Click **Print Labels**.
6. In the **Print Labels** menu, select the **Format** (VTN1 Barcode) and **Size**, if not already highlighted.
7. Click **Generate Labels.**

Storage

The Storage page is used to create a virtual representation of the biorepository at your lab. This allows the Data Managers to ensure the specimen is being stored correctly while the specimen is in the lab's possession. The stored boxes are used as the basis for your shipments. Accurate storage creates accurate shipments.

Exercise 1: Adding a container to a level

Review LDMS User Manual section **Storage--Assigning storage locations--Adding a container to a level**

Levels and containers can be added to an existing storage unit if space permits, based on its configuration. If the rack is configured to hold 25 containers and there are currently 25 containers in the rack, you will not be able to add additional containers. Containers can be added to both racks and shelves.

1. Select **Stored Samples** from the **Storage** menu bar item
2. Click the **down arrow** next to the **Edit** button on the level that will hold the container, and then click **Add New Container**.
3. The Create container window will open.
4. Enter the number of new containers to add in the **Number to add** field.
5. In the **From template** field, select the template created in the *LDMS Setup* exercise.
6. The information from the template will be populated into the remaining boxes.
7. Click the **Continue** button.
8. The containers will automatically be loaded into the storage tree based on the fill order of the rack (or shelf if racks are not used)
9. Click the **Edit** button to the right of a container.
10. Change the Container name, see examples below
    a. 706 SER PLA OTH
    b. 706 PBMC
    c. 706 HIV DX
    d. 706 DBS (use DBS Card template)
11. Repeat for all containers added in this exercise.

Exercise 2: Storing specimens

Review LDMS User Manual section **Storage--Assigning storage locations--Assigning a storage location to specimens**

Review **Specimen Processing, LDMS Entry, Storage, and Shipping for Blood Specimens-- EDTA Specimens for HIV Diagnostic of Lab Instructions:**

Routine: *First three (3) plasma aliquots are stored in the HIV Dx box*

Redraw: *First three (3) plasma aliquots and two (2) whole blood aliquots are stored in the HIV Dx box. Box is shipped as early as possible.*

1. **Click** on the box name. The barcode image at the top of the screen will display a plus sign
2. **Scan** LDMS barcode.
3. If *Auto Assign* is **not checked** then the **Select position** for specimen window will open. Follow the next two steps:
    a. **Select the position** where the specimen will be stored from either the Position box or the Preview image.
    b. Click **Continue**.
4. If *Auto Assign* is **checked**, proceed to scan the next specimen.

Exercise 3: Reports

Review LDMS User Manual section **Storage--Assigning storage locations--Generating a printable list of what is in storage** and **Container report**

1. In the storage tree, **locate the container** for which you need to generate a report.
2. To the right of the storage item, click **Edit**.
3. Click the **down arrow** next to the **Reports** button, and then click either **Storage Detail, Container, or Empty Storage Location**.
4. In the **File Type box**, select **PDF** (*.pdf) and then click **Generate Report**.
5. Repeat until you have successfully generated all three reports

NOTE: The Container Report for **DBS containers** is **two pages**, ensure you refer to the full report when storing your specimens.

Exercise 4: Applying Filters in Storage

Practice applying and removing filters to see how they limit the specimens displayed in the on the Stored Specimens page.

Question 1: What do the filters in the Storage Filter category apply to? _____

Question 2: What do the other filters apply to? _____

Question 3: For all filters, what is the most restrictive filter? _____

Exercise 5: Moving items in storage

Review LDMS User Manual section **Storage--Moving items in storage**

1. From the **Actions Box** select **Move Storage Item(s)**
2. **Select the items** to be moved using the checkboxes to the right. Specimens, containers, racks, or shelves can be moved.
3. Click next to **select the destination**. If specimens are selected, a container must be the destination. If containers are selected a rack or shelf must be the destination.
4. Proceed through the position selection menu. **Assign a location** to the specimen(s) in the container or containers on a rack or shelf.

[Optional] Exercise 6: Edit button functions

Part 1: Specimen position
1. Click the **Edit** button to the right of a specimen.
2. In the Edit Stored Specimen window, **select a new position**.
3. Before saving the new position, click **Edit Specimen**, note the options available.
4. **Close** the **Edit Aliquot** window.
5. Click **Save** in the Edit Stored Specimen window.

Part 2: Edit Storage Container
1. Click the **Edit** button to the right of a container.
2. The user is able to **adjust** the following:
   a. Name
   b. Dimensions*
   c. Labeling of Columns/Rows
   d. Fill order
   e. Excluded Positions*
   f. Comment

   * Limited if specimens are stored

   Note: *To change the positon of a specimen, click in the position field or the edit button in the Stored Specimens grid. The Edit Stored Specimen window will pop-up (See Part 1). The user can also consolidate a container by selecting the Consolidate Container button.*

3. Click **Save**.

Part 3: Edit Level
1. Click the **Edit** button to the right of a rack or shelf.
2. The user is able to **adjust** the following:
    a. Name
    b. Dimensions*
    c. Labeling of Columns/Rows
    d. Fill order
    e. Excluded Positions*
    f. Comment

    * Limited if positions are occupied

3. In the SubLevels grid:
    a. Change position by clicking in the Position field
    b. Click the Edit button to bring up the item's Edit menu
4. Click **Save**.

[Optional] Exercise 7: Storing specimens by selection

Review LDMS User Manual section **Storage--Assigning storage locations--Assigning a storage location to specimens**

All HVTN specimens are expected to have functional barcode scanners and specimen labels. In the event of a scanner malfunction the steps below can be used to assign a storage position. This process should only be used for this extenuating circumstance and not become part of the lab's workflow.

1. **Highlight** the desired box and click the **Edit** button **drop-down arrow**.
2. Select **Store Specimens**
3. Select **Filters** to locate the new record. E.g., Project, Received Date
4. Specimens available to be stored will populate the **Available Specimens** grid.
   Note: *The number of specimens per page can be increased using the drop-down in the bottom corner. The default page size can be set in Administration—Lab Settings.*
5. Select the desired specimens by clicking the check box next to the grid.
   Note: *As specimens are selected, the number of available spaces are calculated dynamically below the checklist. The Specimens will remain selected until they are either unchecked or the Clear Selected button is clicked. This allows the user to perform multiple filter searches.*
6. After the specimens are selected. Click **Continue**.
7. Select the box **position** for the indicated specimen or click to select Auto-fill all from selected position. Click **Continue**.
8. The samples will be stored in the designated positions within the box.
9. Click **Edit** for the box in which samples were just stored.
10. Click the **Report** dropdown arrow to generate the **Container Report** to assist in the physical storage of the specimens.

Shipping

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

Exercise 1: Creating a new Batch

Review LDMS User Manual section **Shipping—New Shipments—Creating new shipments**

Review **Appendix 8, 11, and 12 of Lab Instructions**

1. Create the first batch for HIV Diagnostics shipment to the **HIV Dx** lab. Repeat these steps to create another batch to use in Exercise 3 to the **CSR**. On the navigation menu, hover over **Shipping**, and then click **Pending Shipments**
2. Select **Create Shipment** in the **Actions** box. The **Pending Shipment Preview** window opens.
3. On the **General tab** complete the following:
   a. **Shipment Date**
   b. **Format:**
      ▪ For labs requiring an **e-manifest** set to **LDMS**
      ▪ For labs requiring a **Cross-LIMS** e-manifest set to **xLIMs**
   c. **Temperature:** Dry Ice
4. Click on the **Shipping Destination** tab. Set destination by Lab number,
5. Click on the **Contact at Sending Lab** tab and complete the information: **Name, Phone Number, and E-mail**.
6. Enter any desired **Shipment comments** on the **Shipment Notes** tab.
7. Scroll to bottom of the screen, click **Save**.
8. After the two batches are created proceed to the next exercises.

Exercise 2: Shipment to HIV Dx lab

Review LDMS User Manual section **Shipping—New Shipments—Creating new shipments**

1. Click the **Edit/Ship button** of a batch created in the **Pending Shipments** page.
2. Click to open the **Shipment Contents** tab.
3. Click **Add New** above the **Storage Containers** grid. The available Storage Containers appear.
4. **Locate** the HIV Diagnostic specimen container and click the checkbox, and **Add Selected to Shipment** to add the container to the shipment. The selected storage container will display in the Pending Shipment Preview.
5. Scroll down. Click **Save** to save the batch.
6. Perform QA/QC – Exercise 4

Exercise 3: Stored specimens to CSR

Review LDMS User Manual section **Shipping—New Shipments—Creating new shipments**

1. Click the **Edit/Ship button** of a batch created in the **Pending Shipments** page.
2. Click to open the **Shipment Contents** tab.
3. Click **Add New** above the **Storage Containers** grid. The available Storage Containers appear.
4. **Locate** the desired storage container and click the checkbox, and **Add Selected to Shipment** to add the container to the shipment. The selected storage container will display in the Pending Shipment Preview.

    Note: If you assigned the Mark to Ship flag to a storage item, apply the filter to assist in selection.

5. Scroll down. Click **Save** to save the batch.
6. Perform QA/QC – Exercise 4

Exercise 4: Performing shipment QA/QC

Review LDMS User Manual section **Shipping— Shipment QA/QC—Performing QA/QC**

The QA/QC process verifies the content of the shipment against the manifest. This process is utilizes the global specimen ID which is scanned and then compared to the manifest. The chain of cold must be maintained at all time. The user may stop and start this process if s/he is concerned about sample integrity by clicking the save button and returning to the QA/QC menu when s/he is ready to continue scanning.

1. Click the **Edit/Ship button dropdown arrow** to select QAQC. The **QAQC Entry** window opens.
2. If empty, **enter initials** in the **Performed By** box.
3. Click on the **first position** in the 2D box image.
    a. For serum, plasma, and HIV DX: Scan all specimens
    b. For PBMC: scan 1 random specimen per row (10 %)
4. Scan the barcode of the specimen that is highlighted in the box. If the specimen is in a cryovial box, ensure the location is correct.
    If you cannot scan a barcode, carefully check the global specimen id and click the pass button.
5. *For PBMC boxes: QC all other samples by using the pass button prior to creating shipping file.*
6. If the batch has multiple containers, **choose the next container** in the drop down menu.
7. Click **Save**. Generate the QAQC report, if needed.

Note: It is expected that all PBMC shipments will display In Progress in the QA/QC column.

Exercise 5: Generating the e-Manifest

Review LDMS User Manual section **Shipping—New Shipments— Sending a pending shipment**

1. Click the **Edit/Ship button** for the batch in the **Pending Shipments** list.
2. At the bottom of the Pending Shipment Preview page, scroll down, and click **Ship**, Click **OK.** The shipment message appears and the shipping file generates. Save the shipping file to the desired location.
3. This file must be sent to the Receiving lab.
4. The batch is automatically transferred to the **Shipment History** page.

Exercise 6: Shipment paperwork

Review LDMS User Manual section **Shipping—New Shipments— Generating a shipping manifest**

1. Select **Shipment History** in the **Shipping** menu listing.
2. Click the **View button dropdown arrow** and select **Generate Manifest**.
3. File type should be set to **.PDF**. Click **Generate Report**. Save the report to the desired location.
4. A printed copy of this report must be included in the shipment
5. **Repeat** steps 1-3 for the **Container** report
6. These files must be sent to the Receiving lab.

Reports

Review LDMS User Manual section **Reports--Generating a report**

Exercise 1: Specimen processing report

Review LDMS User Manual section **Reports--Specimen reports**

Generate this report at the end of the day and check it against the tracking forms to insure the data was entered accurately and completely.

1. On the LDMS menu bar, hover over **Reports** and click **Standard Reports**.
2. Select **Specimen** in the Report Categories box.
3. Select **Specimen Processing Report** in the Report box.
4. In **Filter Criteria**:
   a. **Field**: Project   **Operator**: '='   **Value**=VTN
   b. **Field**: Received Date   **Operator**: '='   **Value**=Current Date
5. Set **File Type** to PDF
6. Click **Generate Report**

Exercise 2: Specimens not in storage report

Review LDMS User Manual section **Reports--Storage reports**

1. On the LDMS menu bar, hover over **Reports** and click **Standard Reports**.
2. Select **Storage** in the Report Categories box.
3. Select **Specimens Not in Storage** in the Report box.
4. Set **File Type** to PDF
5. Click **Generate Report**

Exercise 3: LDMS codebooks

Review LDMS User Manual section **Reports--Miscellaneous reports**

1. On the LDMS menu bar, hover over **Reports** and click **Standard Reports**.
2. Select **Miscellaneous** in the Report Categories box.
3. Select **LDMS abbreviated codes report** –or- **LDMS primary, additive, derivative, sub additive/derivative codes Report** in the Report box.
4. Set **File Type** to PDF
5. Click **Generate Report**

Advanced Exercise 1: Custom Inventory Report

Review LDMS User Manual section **Reports--Custom Report Builder**

The custom report builder is used to export specimen data into a generic format to import into other programs such as Excel. The data fields listed under All Fields are available to include in the report under (Fields To Display) or to sort the data (Sort Fields By). The Name of the field will become the header in the export file.

To make the list of fields more manageable, limit the view by selecting/deselecting the category. Use the **Fields to Display** check boxes to include the data item in their respective columns. The order the fields are listed is the order they will appear in the report**. Select the following**:

Category	Information to Display
Specimen	ID1 Protocol Collection Date Collection Time Primary Additive Derivative
Storage	Stored (storage status) Storage Unit (Freezer) Level (i.e. Shelf) Sub-level (i.e. Rack) Container Position
Shipping	Shipment number Shipment date Destination Lab ID

Note: In the field list, the primary participant identifier (PID, PTID, Subject ID) is ID1; the study identifier (protocol or study) is ID2; and the optional participant identifier is ID3

1. In **Filter Criteria**:
    a. **Field**: Collection Date   **Operator**: '='   **Value**=Current Date
    b. **Field**: Specimen Type   **Operator**: '='   **Value**=Aliquot
2. Set **File Type** to CSV
3. Click **Preview**. Review contents of the window. If everything looks correct, close window and proceed to next step.
4. Click **Generate Report**