



National Institutes of Health

National Institute of Neurological Disorders and Stroke  
National Institute on Aging

# MarkVCID2 Shipping Human Biospecimens Guideline

V9.15.25

MarkVCID Consortium

[www.markvcid.org](http://www.markvcid.org)

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## MarkVCID Shipping Human Biospecimens Guideline

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## 1. Purpose

The purpose of this document is to provide guidelines for the shipping of MarkVCID biological specimens.

## 2. Scope

The policies and procedures described in this document pertain to all MarkVCID Consortium members who will be responsible for shipping biological specimens.

## 3. Procedures

### 3.1. Trainings

All staff who ship biosamples must maintain current training and certification in the shipping and handling of biological specimens as mandated by their institution.

All site staff who receive and process samples, print labels, scan and input information into the MarkVCID virtual repository must complete the virtual biorepository training.

(<https://markvcid.partners.org/4-virtual-biorepository-training>)

### 3.2. Shipping Requirements

Human samples fall under Category B “Infectious Substances.”

When possible, shipments should be sent on Mondays, Tuesdays, or Wednesdays with overnight delivery to avoid packages arriving on the weekend in the event of shipping delays. Please avoid thawing and refreezing of samples. Contact [Carissa Tuozzo](#) if this occurs.

Please follow the instructions for Processing Shipped Samples in the Biorepository Training Manual.

### 3.3. Shipping and Handling Overview

1. Remove samples from -80C and place on dry ice
2. Wrap each tube with parafilm
3. Place samples in tube boxes and keep on dry ice
4. Label boxes accordingly
5. Place boxes in a leak proof biohazard sample bag
6. Fill the cooler with dry ice completely
7. Attach a printed, itemized list of the included samples to the top of the cooler with 24-hour contact name and number
8. Place cooler in corrugated outer box. Do NOT air-seal the outer box. CO2 must be allowed to vent.
9. Place a shipment request with FedEx following guidelines below
10. Place shipping label on the top of the box with both the UN3373 Biological Substance, Category B and UN 1845 Dry ice and weight labels

### 3.4. Shipping and Handling Details

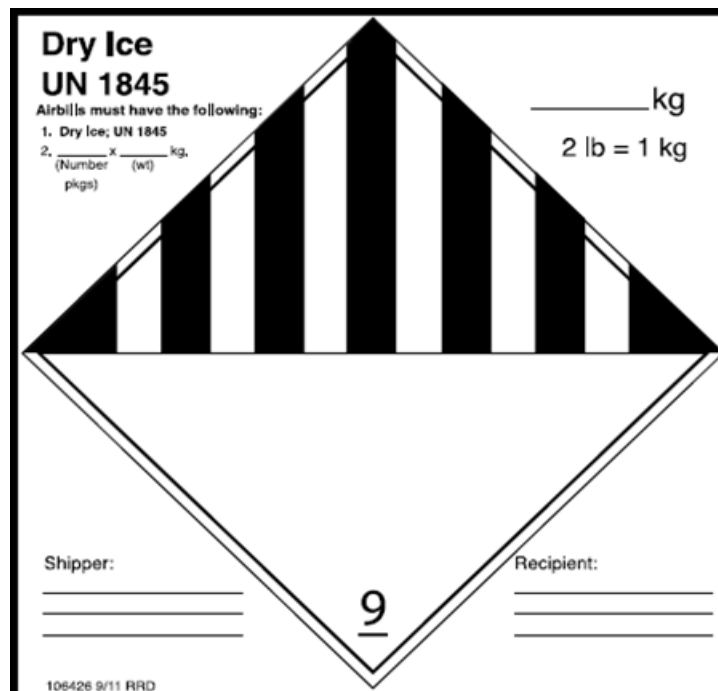
#### 3.4.1. Packaging Specimens

1. Put specimen in leak-proof primary container (cryovials for plasma/serum/CSF: [DWK W985874](#)), wrap individually (screw cap lid with parafilm around seal), and place in a labeled tube box
2. Use absorbent material sufficient to absorb entire contents of primary container ([SAF-T-PAK STP-152 SKU:34834](#))
3. Use a leak proof secondary container – Leak proof Biohazard sample bag ([VWR 11215-682](#))
4. Use a corrugated box around Styrofoam cooler
5. Include a manifest of items using the template under Section 4.2.

1. *Print, place in a plastic sheet protector, and place the manifest between the secondary and outer container.*
2. *Email a digital copy of the manifest to the recipient and Coordinating Center.*
3. *Store a local copy electronically for your site's records.*
4. *Make sure to include a 24hr contact name and number.*

### 3.4.2. Labeling Outer Container

1. Include two labels in each package. The site packaging supplier will provide the following:
  - UN3373 label with adjacent statement "Biological Substance, Category B"
  - Completed Dry Ice UN 1845 label



A rectangular label form for Dry Ice UN 1845. The top left corner contains the text "Dry Ice" and "UN 1845". Below this, it says "Airbills must have the following:" followed by two numbered items: "1. Dry Ice; UN 1845" and "2. \_\_\_\_\_ x \_\_\_\_\_ kg." with subtext "(Number (pkgs)) (wt)". To the right of the form, there is a line for weight in kg and the conversion "2 lb = 1 kg". The center of the label features a large triangle with vertical black and white stripes. At the bottom, there are fields for "Shipper:" and "Recipient:" with lines for text. In the center of the bottom, there is a large number "9" inside a circle. The bottom left corner has the text "106426 9/11 RRD".

### 3.4.3. Shipping Label

1. Login to [FedEx](#). Request the login and password from the Coordinating Center. Note you must be the designated MarkVCID site representative to use this account.
2. Click on Shipping > Create a Shipment > Edit highlighted fields in EXAMPLE:

\*Sender and Recipient **MUST** be registered with the Coordinating Center before any shipments are sent or received.

The screenshot displays the FedEx shipping label creation interface, divided into several sections with annotations:

- Ship from:** Carissa Tuozzo, Mass General Brigham - Boston, MA, United States. An annotation points to a dropdown arrow: "Click on the arrow to select a saved sender, if applicable."
- Deliver to:** Search in address book. Contact details for Tiffany Kautz (7702 FLOYD CURT DR, MC 8070 - UT Health San Antonio, TX 78229-3501). An annotation points to the magnifying glass icon: "Click on the magnifying glass to select a saved contact. Always double-check the recipient's address with the point of contact via email before shipment."
- Package details:** Packaging: Your Packaging. A table shows 1 package with weight 3 lb and dimensions 1 x 10 x 11. An annotation points to the 'EDIT PACKAGE OPTIONS' link: "You are required to indicate when a package contains dry ice. Click on the 3 vertical dots next to the package dimensions, select 'Edit package options', and select 'Dry Ice'."
- Service details:** Ship date: Wednesday, January 30, 2025. Service: FedEx Priority Overnight. An annotation points to the hamburger menu icon: "Click on the hamburger and search for '1200-GR0240887'. Select the matching Reference ID."
- Pickup/drop-off:** Pickup/drop-off: All drop off my shipment at a FedEx location. Location: FedEx Drop Box, 168 Cambridge St, Boston, 02114, MA, United States. An annotation points to the location field: "Use feature as needed."
- Billing details:** Billing transportation cost to: My account. Shipper email address: carissa.tuozzo@mgh.harvard.edu. Recipient email address: kautz@uthscsa.edu. An annotation points to the 'Add shipment notifications' checkbox: "Use this feature to notify the site recipient of a shipment."
- Notifications:** Checkboxes for shipment status updates (created, received, delivery, exceptions).
- Buttons:** SAVE and FINALIZE buttons at the bottom right. An annotation points to the FINALIZE button: "Once the fields are complete, select 'Finalize' to submit the shipment and print the label."

- To avoid accidental misuse of the account, **please do not save the FedEx login and password in your browser**
- Once the form is submitted, the website will create a printable label.  
See example below:

The screenshot shows the FedEx 'Prepare a shipment' interface. At the top, there's a purple navigation bar with the FedEx logo and links for Shipping, Tracking, Printing Services, Locations, and Support. Below this, the 'Prepare a shipment' section has two steps: 'Enter shipping information' and 'Print label(s)'. A confirmation message states: 'Thank you for shipping with FedEx. Your tracking number: 772802409652'. There are checkboxes for 'Label' (checked) and 'Receipt' (unchecked), with a 'View' link next to the receipt option. A row of buttons includes 'Print', 'Create return shipment', 'Edit shipment', 'Cancel shipment', 'Repeat last', 'Create new', and 'Schedule a Pickup'. The main area displays a shipping label for a Priority Overnight shipment. The label includes a large barcode, the tracking number 7728 0240 9652, and the destination address: TO TIFFANY LEE, UNIVERSITY OF KENTUCKY, 800 S LIMESTONE ST, SANDERS-BROWN 233, LEXINGTON KY 40536. It also shows the origin address: ORIGIN: LMA, 500 WEST STREET, MASSACHUSETTS GENERAL HOSPITAL, 375 CAMBRIDGE ST, BOSTON, MA 02114, UNITED STATES. The label specifies the service as PRIORITY OVERNIGHT, the date and time as WED - 25 JUL 10:30A, and the weight as 0.44 KG. The FedEx logo is at the bottom right of the label.

- Verify the information is correct and print the label
- Keep a receipt of your shipment
- Attach the shipping label to the package and ensure the required UN3373 and Dry Ice labels are also attached (see labels in Section 3.4.2.). Add information to the Dry Ice label as appropriate
- Track your shipment as needed through the FedEx online tracker
- If you cannot access the online FedEx label generator, please contact the Coordinating Center project manager

## 4. Attachments

### 4.1. Approved Site Addresses

For the recipient's name and contact information, click [here](#).

### 4.2. Template Manifest (use word document or excel sheet for table below)



#### Biosample Template Manifest

www.markvcid.org

1. Enter the information below for each item (use word document or excel sheet). Site ID can be found in the [Site IDs & Approved Shipping Contacts Table](#) on the MarkVCID Resource Hub.
2. Print, place in a plastic sheet protector, and include this document in each shipment.
3. Email a digital copy of the manifest to the **recipient and Coordinating Center**.
4. Store a local copy electronically for your site's records.

SITE ID#

— — —

*Items included in this shipment:*

Shipment Date	Subject ID	Vial ID	Sample Type	Sample Volume

Shipping site's 24-hour contact: \_\_\_\_\_

Phone #: \_\_\_\_\_

## Document History

<b>Summary of Changes</b> <b>MarkVCID2 Shipping Human Biospecimen Guideline</b>			
<b>Version</b>	<b>Description of Changes</b>	<b>Reason for Change</b>	<b>Version Date</b>
1.0	N/A – original version	N/A	12.14.2021
2.0	Revised manual to reflect updated guidance including: <ul style="list-style-type: none"><li>Section 3.4.3: Updates to section 4. Billing Details on the example shipping label and addition of guidance to not save the CC FedEx login or password on the browser</li><li>Section 4: Addition of link to the Site IDs &amp; Approved Shipping Contacts Table</li></ul>	Revised to reflect updated MarkVCID2 procedures	03.13.2023
3.0	Revised manual to reflect updated guidance including: <ul style="list-style-type: none"><li>Section 3.2: Addition of preferred shipment days and contact info if sample thaw or refreeze occurs.</li><li>Section 3.4.3: Updates to the billing info section of the shipping label.</li></ul>	Revised to reflect updated procedures	01.31.25
4.0	Revised manual to reflect guidance including: <ul style="list-style-type: none"><li>Section 3.4.1: Clarification that samples should be placed in a tube box after parafilm wrap</li><li>Section 3.4.3: Updated FedEx Shipping Manager platform and CC billing info.</li></ul>	Revised to clarify and reflect updated procedures	09.15.25