

UNITED STATES COURIER SHIPPING GUIDE



MAYO CLINIC
LABORATORIES

TRANSPORTING SPECIMENS
WITHIN THE UNITED STATES

OVERVIEW

THIS GUIDE HAS BEEN DEVELOPED TO MEET THE FOLLOWING OBJECTIVES:

- Provide instructions for packaging specimens.
- Provide information about supplies.
- Use as a tool for training additional staff members.

SPECIMEN INTEGRITY

Specimens must be packed and shipped properly for accurate testing, which helps ensure that patients receive optimal treatment. A specimen may not be viable for testing if it becomes too cold or too hot. It may be necessary to collect another specimen from the patient, which may delay treatment. People's lives may depend on our work.

Mayo Clinic Laboratories' goal is to ensure that all medical specimens arrive at the testing facility:

- At the correct temperature for testing.
- Intact in the container, without breakage or leakage.
- In the shortest possible time.
- In compliance with all applicable regulations.

COURIER SUPPORT

Mayo Clinic Laboratories' Global Logistics Specialists are available Monday through Friday, 6 a.m. to 4:30 p.m. CT. **For emergency support 24 hours a day, 365 days a year, call 800-533-1710.**

TABLE OF CONTENTS

STEP ONE PACKING	4
Packaging specimens	4
Preparing the Styros	6
Stool specimens	8
Muscle biopsy	9
Critical ambient specimens	10
Packing other materials	11
STEP TWO LABELING	12
Culture specimens	12
STEP THREE SHIPPING	14
Shipping instructions	14
Category B, Biological substances	15
Category A, Infectious substances	16
STEP FOUR LEAKS & SPILLS	18
Safety	18

STEP ONE | PACKING PACKAGING SPECIMENS

Clients will have specimens ready for pickup in Mayo's color-coded temperature bags. All specimens must be shipped in a leak-proof container regardless of transport temperature. The color-coded bags also contain material that can absorb the full liquid content of the specimens placed inside.



▲ T027 Ambient Specimen Bag

▲ T121 Frozen Specimen Bag

▲ T229 Refrigerate Specimen Bag

SPECIMENS MUST BE SEPARATED BY TEMPERATURE, AND EACH OF THESE TEMPERATURE BAGS MUST BE PACKAGED IN A SPECIFIC MANNER.

Mayo Clinic Laboratories provides raspberry-colored shipping boxes that can fit one or two Styrofoam (Styro) containers inside. Styro transportation coolers provided by Mayo Clinic Laboratories have corresponding color-coded labels and contain appropriate labeling for dry ice and biohazards. Styro containers may contain dry ice or cool packs (whether frozen or room temperature) and keep specimens at the appropriate temperature for up to 48 hours.

ORDER STARTER SUPPLY LIST

- T347 Ref/Froz 10LB Express Shipping Box Case
- T258 Tape - Packing
- T128 Gloves
- T127 Gloves M
- T126 Gloves L
- T129 Gloves XL
- T001 Frozen Stool Shipping Box, 10LB (Case)
- T160 Cool pack
- T549 "C" labels
- T684 "Contains no dry ice" labels
- T677 Sticker, Frozen Specimen
- T952 Self-adhesive plastic bags
- T951 "Room Temperature Only" labels
- T678 Sticker, Refrigerated Specimen
- Shipper's Declarations (if applicable)
- T570 Infectious Shipper (Category A boxes)
- T668 Ambient Shipping Box - Critical Specimens Only



▲ T347 Shipping Box

PREPARING THE **STYROS**

Prepare to pack all temperatures in separate Styro containers. The lids of the Styros may have multiple stickers on them for versatility. Specimens should be in color-coded bags according to temperature, which should match the color of the temperature stickers on the lid of the Styros. Put gloves on prior to placing the specimen bags into the clear sealable bag and do not seal the bag until all pickups are complete.

For the frozen Styro, which can be identified by the yellow label on the lid to indicate frozen specimens, pellet dry ice is preferred. Block dry ice must be reduced to small pieces (1 to 2 inches) to minimize the chance of damage to bags and vials. Place two inches of dry ice in the bottom and have additional dry ice in a bag that you can easily remove when collecting specimens. At every stop, remove the bag of dry ice, place the specimens inside the bag in the Styro, and place the dry ice bag on top so the specimens are surrounded by dry ice. Everything should be packed in the order shown below.

FROZEN 20LB.*



- Fill the rest of the Styrofoam container with dry ice to the top



- T121 Frozen bags



- T952 Self-adhesive plastic bag(s)



- 2 inches of dry ice in Styrofoam container



REFRIGERATE 20LB.*



- 3 Frozen cool packs



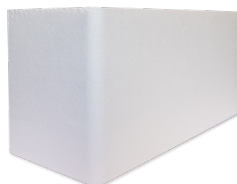
- T229 Refrigerate bags



- T952 Self-adhesive plastic bag(s)



- 3 Frozen cool packs



AMBIENT 10LB.*



- Room-temperature cool pack



- T027 Ambient bags



- T952 Self-adhesive plastic bag



- Room-temperature cool pack



AMBIENT 5LB.*



- Room-temperature cool pack with pink sticker



- T027 Ambient bags



- T952 Self-adhesive plastic bag



IMPORTANT: To avoid burns, always wear cloth gloves and safety glasses when handling dry ice.

*See next page for additional packing instructions

AMBIENT

- Locate the ambient specimens at the client site. If they are using Mayo Clinic bags, they will be white. Scan all batches.
- Open the lid of the ambient Styro (should be a separate box), and place specimen bags into a clear sealable bag. Do not seal the bag. Place on top of a room temperature cool pack in the Styro.
- Place a room temperature cool pack on top and close the Styro lid.
- Seal the clear bag when all pickups are complete and before tendering with the carrier.

FROZEN

- Locate the frozen specimens at the client site. If they are using Mayo Clinic bags, they will be yellow. Scan all batches.
- Open the lid of the frozen Styro, and place the specimen bags into a clear sealable bag. Do not seal the bag. Place on top of 2 inches of dry ice pellets in the Styro.
- Once pickups are complete, seal the clear bag and top off the Styro with dry ice.
- Under normal conditions, 2.2 kg of dry ice will keep the specimens frozen until they arrive at the laboratory.

REFRIGERATE

- Locate the refrigerated specimens at the client site. If they are using Mayo Clinic bags, they will be pink. Scan all batches.
- Open the lid of the refrigerate Styro, and place the specimen bags into a clear sealable bag. Do not seal the bag. Place on top of a frozen cool pack (3 cool packs for a 20-lb box) in the Styro.
- Place the frozen cool pack (3 cool packs for a 20-lb box) on top and close the Styro lid.
- Seal the clear bag when all pickups are complete and before tendering with the carrier.

REMINDER: Do not fill the frozen Styrofoam shipping container too full of specimen bags. Leave room for dry ice on top of the topmost specimen shipping bag and make sure the Styrofoam lid fits tightly.

STOOL SPECIMENS

Mayo Clinic Laboratories provides clients with special containers for stool specimens. We prefer that stool specimens be packed in these containers. Any substitute containers must have a screw cap and be leakproof. A special 10LB Styro in its own box is used for shipping one or two stool containers. Large-volume stool containers must not be mixed with other specimens. They must be shipped in a separate Styro. Special stool containers may be located in the client's freezer or refrigerator.

THE PROCEDURE FOR PACKING STOOL CONTAINERS IS AS FOLLOWS:

1. After packing all other specimens, couriers should discard latex gloves, wash their hands, and prepare a 10LB Styro out in the transport vehicle. (If there are more than two stool containers to pick up, use both Styros in a full-sized double 10LB box set.)
2. If the stool containers are in the freezer, put a 2-inch layer of dry ice in the bottom of the Styro. If the stool containers are in the refrigerator, put a cold cool pack in the Styro with two paper towels on top.
3. Bring the stool container box into the lab. Put on a fresh pair of latex gloves before entering the lab.
4. Pack the stool containers in the 10LB Styro.

REMEMBER: No other type of specimen can be packed in the same Styro with stool containers.

STOOL SPECIMEN



MUSCLE BIOPSY

Mayo Clinic Laboratories provides clients with special containers for muscle biopsy specimens. A special 10-lb. Styro in its own box is used for shipping these biopsies in a small container, completely surrounded by dry ice. They must be shipped as packaged by the client and must not be opened unless specifically directed by the client or by Mayo Clinic Laboratories (for example, to add dry ice in the case of a delayed shipment).

MUSCLE BIOPSY



- Styrofoam lid
- Fill the rest of the Styrofoam container with dry ice to the top
- T121 Frozen bags
- T952 Self-adhesive plastic bags
- 2 inches of dry ice
- Styrofoam container
- External shipping box

CRITICAL AMBIENT SPECIMENS

Mayo Clinic Laboratories provides clients with special containers for critical ambient specimens, such as bone marrow and some whole blood specimens that would be ruined if allowed to get too cold.

A 10-lb. Styro inside a white fibreboard shipping box (T668) is used for shipping these critical ambients, which are completely surrounded by six room-temperature cool packs. They must be shipped as packaged by the client and should not be opened by the courier unless specifically directed to do so by the client or by Mayo Clinic Laboratories. If the client has critical ambient specimens but does not have a Mayo Clinic Laboratories Critical Ambient white box, the courier should package those bags surrounded by six room-temperature cool packs in a separate Styro and box.

NOTE: If the client attaches any batches or patient information to the outside of the box, ask the lab to remove before leaving their site.

CRITICAL AMBIENT SPECIMENS



PACKING OTHER MATERIALS

Sometimes materials that do not fit into Mayo Clinic Laboratories specimen bags or specimen containers must also be packed and transported. Examples include a box of glass slides or X-ray films in a large envelope.

Following are instructions for preparing these materials:

1. Document the specimens you are picking up by stating the number of items you are picking up as well as a description of the items in your scanning device.
2. Place the materials in the appropriate Styro (usually ambient). It may be necessary to use an extra box.
3. Place envelopes inside of the Styro if they fit. Do not place envelopes alongside the Styros in the box.
4. Ship X-ray films or envelopes that do not fit in the Styro via FedEx in a separate X-ray envelope. Mayo Clinic Laboratories provides special X-ray envelopes to couriers and clients who request them. The supply number is T531.

STEP TWO | LABELING

CULTURE SPECIMENS

You will see a blue “C” sticker on the bag and batch sheet of any culture specimen. In this case, place a blue “C” sticker on the Styro containing the culture and also on the outside of your berry box. Be sure not to obscure any other labels on the box.



GENERAL INSTRUCTIONS FOR PACKING SPECIMENS:

- Never take the lids off both Styros at the same time. When both lids are removed, it is easy to mistakenly place the lids on the wrong Styros.
- Never overfill a Styro or compress the specimens. If the lid will not fit securely on a Styro, use another box.
- If the temperature of a specimen does not match its label (for example, if a specimen with a pink refrigerate label is in the freezer), ask a laboratory staff person how it should be transported. If it is in the wrong bag or container, ask the person to repackage it.
- Do not leave a box containing specimens in an unlocked car. Always enter a facility carrying the box.
- Do not place any documents, packages, envelopes, and so forth, outside of the Styros in the box.
- Pack extra cool packs.

IMPORTANT: Refrigerated specimens cannot be shipped without a frozen cool pack, so it is very important to have extras.

For additional assistance or questions regarding specimen packaging, supplies, or shipping, contact **Mayo Clinic Laboratories at 800-533-1710 or visit www.mayocliniclabs.com**.

SAFETY IN THE LABORATORY

Mayo Clinic Laboratories' packaging materials are designed to protect everyone who handles them. However, couriers should always take special precautions in a laboratory:

- Wear latex gloves in the laboratory. Cover any existing cuts or scrapes with a bandage.
- Wash hands before leaving each laboratory.
- Do not wear open-toed shoes.
- Do not put the box down in a spill (wet) area.
- Do not touch any specimen bag or container that appears soiled. Ask a laboratory staff person to place the specimens in another bag for safe transportation.
- In the event of a cut or puncture to the skin in the lab, tell a laboratory staff person immediately.

STEP THREE | SHIPPING

SHIPPING INSTRUCTIONS

Preparing the box to tender

1. Seal the plastic bag holding all other specimen bags.
2. Dump the dry ice from the bag directly over the bags to cover the specimens in the frozen Styros with pellet dry ice.
 - Wear safety glasses and cloth gloves when handling dry ice.
 - If no frozen specimens are being shipped, carefully transfer the dry ice from the frozen Styro to the dry ice container and ship that Styro empty. Do not place empty Styros upside-down.

IMPORTANT: Never leave dry ice where people might burn themselves on it. Do not dump it in a parking lot, a drinking fountain, or a restroom.

3. Close the shipping box and seal it with packaging tape.
 - Do not fold the handles down and tape the box until finished with all pickups.
 - Do not seal all the edges of the box. Dry ice emits a gas, which must be allowed to escape. Do not tape the Styro lids.
4. Mayo Clinic Laboratories boxes used for frozen shipping have the words “Dry Ice” next to the Class 9 hazard label and include a place to write the weight of dry ice (in kilograms) on the box. In this space, write “2.2” for the kilograms of dry ice.

IMPORTANT: If the shipment does not include dry ice, the Class 9 dry ice label must be completely covered with supply item T684 “Contains no dry ice” sticker.

IMPORTANT: Always ship both Styros in the Mayo Clinic Laboratories box set, even if one Styro is empty. Never take one or both Styros out or put specimens directly in the box. Wear latex gloves any time you reach into a Styro that contains specimens. Entering pictures of the boxes in your scanning app is strongly recommended. In case there are issues with the shipment, they help on the investigation showing that the courier followed the process correctly.

The end of the courier’s route is the carrier’s drop-off location. Take the shipping boxes inside and hand them over to the airline’s receiving person.

CATEGORY B

BIOLOGICAL SUBSTANCES

This is a Mayo Clinic Laboratories box properly labeled for a Biological Substance, Category B shipment, along with the FedEx shipping label.

Before shipping a Biological Substance, Category B package, make sure to remember the following:

- 1 The UN3373 marking must be visible on all boxes shipped by air and containing Biological Substance, Category B. The words “Biological Substance, Category B” must be written legibly on the outside of the box for both air and ground shipments.
- 2 Write the complete shipper information, including the name and telephone number of the person responsible for the shipment.
- 3 If you are shipping dry ice, the Class 9 label is required.
- 4 Write the amount of dry ice in kilograms. If you are NOT shipping dry ice, obscure this label completely with supply item T684 “Contains no dry ice” sticker.



▲ Properly labeled, certified Biological Substance, Category B package

CATEGORY A

INFECTIOUS SUBSTANCES

The following information describes Mayo Clinic Laboratories' methods of packaging and shipping Category A Infectious Substances. We also provide detailed Dangerous Goods Training.

The packaging certified to transport infectious specimens legally and safely is a combination package consisting of inner and outer containers that have passed all tests required by IATA and DOT. Mayo Clinic Laboratories provides a certified shipping container (T570).

This combination package is certified to transport Category A Infectious Substances only if it is used properly. The box and the inner container by themselves are not considered certified.

LABELING CATEGORY A INFECTIOUS SUBSTANCE SHIPMENTS

Before shipping a Category A Infectious Substance package, make sure to remember the following:

- 1 The UN2814 marking must be on all boxes shipped by air and containing Infectious Substances Affecting Humans, Category A.
- 2 Write the complete shipper information.
- 3 A Shipper's Declaration is required with all Category A shipments.
- 4 Fill out three copies of the Shipper's Declaration. Keep one and place the other two inside a plastic pouch attached to the box, so the paperwork will arrive safely at the destination.



CLIENT PREPARATION

It is not up to the courier driver to decide what is Category A Infectious Substance or Biological Substance, Category B. The physician or send-out staff at the hospital lab will perform that function. Couriers will know that they are handling and transporting a box marked UN2814 Infectious Substance Affecting Humans.

The client places the specimen in a primary receptacle (such as a tube or a vial) and puts the primary receptacle into a certified container. The container is placed in one of Mayo Clinic Laboratories' color-coded bags. The client will place the bagged container in the white certified box.

PACKING CATEGORY A INFECTIOUS SUBSTANCES

Do not package Category A Infectious Substance specimens with Biological Substance, Category B specimens. Category A Infectious Substance specimens must be shipped in certified packaging. Because many passenger airlines have restrictions or exclusions on shipping Dangerous Goods, Mayo Clinic Laboratories recommends that any infectious shipments sent to our laboratories are sent via FedEx. Never ship Category A Infectious Substance specimens via UPS.

Follow this procedure:

- When making a pickup at a hospital, place the certified containers with infectious specimens inside a certified T570 box.
- Remember that shipping the infectious box via air will involve filling out a Shipper's Declaration as well as a paper FedEx airbill.
- Biological Substance, Category B specimens may be shipped as usual via the courier's scheduled carrier in another box.

SHIPPER'S DECLARATION

Fill out the required sections of the Shipper's Declaration, including:

- 1 The airbill number.
- 2 The airport of departure.
- 3 Total volume. If unknown, enter 10.
- 4 The printed name and title of the person making the shipment, city, state, date, and the signature of the person making the shipment.

IMPORTANT: Do not write anything other than what is instructed above, or shipment may be rejected, delaying patient results.

▼ Shipper's Declaration

SHIPPER'S DECLARATION FOR DANGEROUS GOODS				(Provide at least three copies to the airline.)		
Shipper		1 Air Waybill No.				
Consignee		Page 1 of 1 Pages Shipper's Reference Number (optional)				
Mayo Clinic Laboratories 3050 Superior Drive NW Rochester, Minnesota 55905 (800) 533-1710		MAYO CLINIC LABORATORIES				
Two completed and signed copies of this Declaration must be handed to the operator		WARNING				
TRANSPORT 2		Failure to comply in all respects with the applicable Dangerous Goods Regulations may be in breach of the applicable law, subject to legal penalties.				
This shipment is in limitations prescri (delete non applic)		Shipment type: (delete non-applicable)				
PASSENGER AND CARGO AIRCRAFT		NON-RADIOACTIVE				
Airport of Destination: Rochester, Minnesota						
NATURE AND QUANTITY OF DANGEROUS GOODS						
Dangerous Goods Identification				Quantity and type of packaging	Packing Inst.	Authorization
UN or ID No.	Proper Shipping Name	Class or Division (Subsidiary Risk)	Pack- ing Group			
UN2814	Infectious substance, affecting humans (Suspected Category A, Infectious Substance)	6.2	3	ONE (1) FIBREBOARD BOX Total Volume _____mL	620	
Additional Handling Information 24 hour number (800) 535-5053 InfoTrac Account #104136						
I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labelled/placarded, and are in all respects in proper condition for transport according to applicable International and National Governmental Regulations. I declare that all of the applicable air transport requirements have been met.				Responsible Person: Dr. William G. Morice, II (800) 533-1710		
Name/Title of Signatory				Place and Date		
Signature (A typed signature may be used if the origin and destination are in the United States or its territories.)				4		
InfoTrac Account # 104136 (800) 535-5053 Emergency Telephone Number						

STEP FOUR | LEAKS & SPILLS

SAFETY

TO BE SAFE, TREAT EVERY SPILL AS IF IT WERE INFECTIOUS. IF ANY SPECIMEN CONTAINER IN THE LABORATORY APPEARS TO BE LEAKING, DO NOT TOUCH IT. BRING IT TO THE ATTENTION OF LAB PERSONNEL FOR REPACKAGING. DO THIS EVEN IF THE LEAKING CONTAINER IS INSIDE ANOTHER BAG.

If something spills in the lab, immediately bring it to the attention of a laboratory staff person. Apologize, but let the laboratory staff clean it up. Make sure no one touches or walks through the spill.

IF A LEAK OR SPILL OCCURS AWAY FROM A LABORATORY, THE COURIER WILL HAVE TO CLEAN IT UP, USING EITHER A COMMERCIAL CLEANUP KIT OR BLEACH AS FOLLOWS:

- Always wear latex gloves when dealing with a spill.
- If a spill is large, blot up as much as possible with a paper towel.
- Any materials used to clean up a spill, including paper towels and gloves, should be sent to Mayo Clinic Laboratories in a separate Styro and box.
- Put a large note on top of the Styro with the words “LEAKING SPECIMEN.” If the specimen was infectious, put all of the contents into a certified container/box with the infectious substance label and write “INFECTIOUS LEAKING SPECIMEN” on top of the Styro.
- On the note, include the courier’s name, whose specimen it was, where the leak or spill occurred, and any other relevant details.
- Be sure to note on the appropriate Specimen Control Document that one specimen from that box has been shipped in a separate Styro and why.
- If a container is leaking inside a bag, immediately secure it inside another Mayo Clinic Laboratories bag and ship it in a separate Styro.

ANY LEAK OR SPILL SHOULD BE REPORTED IMMEDIATELY TO MAYO CLINIC LABORATORIES OR THE COURIER’S EMPLOYER. DO NOT WAIT FOR THE END OF THE RUN.