



Laboratory Shipping Protocols

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1. PURPOSE

The purpose of this standard operating procedure (SOP) is to describe the procedures required to ship and receive specimens for the SSS Central Lab in Durham NC.

2. SCOPE

This SOP applies to all SSS lab staff members who perform tasks related to the receiving and shipping of specimens in the SSS Central Lab in Durham NC.

3. TRAINING REQUIREMENTS

Federal (DOT) and international regulations (IATA) require that those responsible for shipping dangerous goods must be appropriately trained. Training must be documented and is valid for **two years** for IATA and three years for DOT. SSS contracts with CargoPak to deliver the training every 2 years on-site. Certificates of completion are stored in the training compliance binder in the lab hallway.

SAMPLE CLASSIFICATIONS

4. REGULATED VS. UNREGULATED SAMPLES

It is important to consider whether a sample is regulated under DOT/IATA shipping regulations. Here is a partial list of specimen types commonly shipped by SSS and their designation.

4.1 Non-Regulated Samples

These samples are not subject to DOT/IATA regulations and do not have any special shipping requirements.

- DNA
- Tissue Blocks
- Slides
- Hair
- Dust
- Toenails
- Dried blood spots

4.2 Regulated Samples

These samples are governed by DOT/IATA regulations. Please refer to the appropriate sections in this document for the proper shipping procedures.

- Whole Blood
- Plasma
- Serum
- Blood Clots
- Urine
- Saliva
- PCV (packed cell volume)

5. CLASSIFYING SHIPPING CATEGORIES FOR HUMAN SPECIMENS

This procedure describes how to distinguish specimens as Human Exempt Specimens, Class B Human Specimens, and Category A Human Specimens. For further clarification, please refer to the IATA substances classification found in IATA training materials and the Steri-Safe OSHA program found in the laboratory. The lab supervisor will decide if a specimen must be shipped as a "Category B Biological Specimen or Category A Biological Specimen".

5.1 Exempt Human Specimens (Routine SSS Shipments)

The "Exempt Human Specimen" category relates to patient specimens for which there is minimal likelihood that pathogens are present and are not subject to the Dangerous Goods Regulations if the specimen is transported in Packaging for Exempt Human Specimen. In determining whether a patient specimen has a minimal likelihood that pathogens are present, an element of professional judgment is required. That judgment should be based on the known medical history, symptoms and individual circumstances of the source, human or animal, and endemic local conditions.

5.2 Category B Biological Specimen UN3373

A Category B Biological Specimen UN3373 is an *infectious substance*, which is transported in a form that, when exposure occurs, is *not* capable of causing permanent disability, life-threatening or fatal diseases in otherwise healthy humans or animals. Assignment to this class must be based on the known medical history and symptoms of the source human or animal, endemic local conditions, or professional judgment concerning individual circumstances of the source human or animal.

5.3 Category A Biological Specimen

Category A Biological Specimens are infectious substances which are transported in a form that, when exposure occurs, is capable of causing permanent disability, life threatening or fatal diseases in otherwise healthy humans or animals. Assignment to this class must be based on the known medical history and symptoms of the source human or animal, endemic

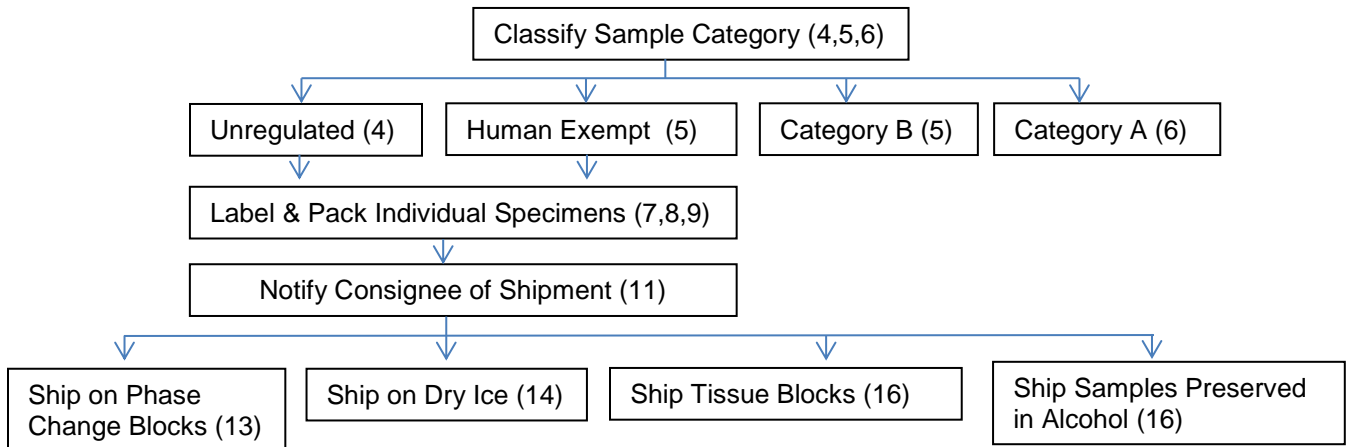
local conditions, or professional judgment concerning individual circumstances of the source human or animal.

6. EXAMPLE LIST OF CATEGORY A INFECTIOUS SUBSTANCES

UN # and Proper Shipping Name	Micro-organism	
UN 2814, Infectious Substances Affecting Humans (Category A)	<ul style="list-style-type: none"> - <i>Bacillus anthracis</i> cultures - <i>Brucella abortus</i> cultures - <i>Brucella melitensis</i> cultures - <i>Brucella suis</i> cultures - <i>Burkholderia mallei</i> & <i>Pseudomonas mallei</i> cultures - <i>Burkholderia pseudomallei</i> cultures - <i>Chlamydia psittaci</i> – avian strains cultures - <i>Clostridium botulinum</i> cultures - <i>Coccidioides immitis</i> cultures - <i>Coxiella burnetii</i> cultures - Crimean- Congo hemorrhagic fever virus - Dengue virus cultures - Eastern equine encephalitis virus cultures - Ebola virus - <i>Escherichia coli</i>, verotoxigenic cultures - Flexal virus - <i>Francisella tularensis</i> cultures - Guanarito virus - Hantaan virus - Hantavirus causing hemorrhagic fever with renal syndrome - Hendra virus - Hepatitis B virus cultures - Herpes B virus cultures - Highly pathogenic avian influenza virus cultures - Human immunodeficiency virus cultures - Japanese Encephalitis virus cultures 	<ul style="list-style-type: none"> - Junin virus - Kyasanur Forest disease virus - Lassa virus - Machupo virus - Marburg virus - Monkeypox virus - <i>Mycobacterium tuberculosis</i> cultures - Nipah virus - Omsk hemorrhagic fever virus - Poliovirus cultures - <i>Pseudomonas pseudomallei</i> cultures - Rabies virus cultures - <i>Rickettsia prowazekii</i> cultures - <i>Rickettsia</i> cultures - Rift Valley fever virus cultures - Russian spring-summer encephalitis virus cultures - Sabia virus - <i>Shigella dysenteriae</i> type 1 cultures - Tick-borne encephalitis virus cultures - Variola virus - Venezuelan equine encephalitis virus cultures - West Nile virus cultures - Yellow fever virus cultures - <i>Yersinia pestis</i> cultures
UN 2900, Infectious Substances Affecting Animals (Category A)	<ul style="list-style-type: none"> - African swine fever virus cultures - Avian paramyxovirus Type 1 - Velogenic Newcastle disease virus cultures - Classical swine fever virus cultures - Foot and mouth disease virus cultures - Lumpy skin disease virus cultures - <i>Mycoplasma mycoides</i> - Contagious bovine pleuropneumonia cultures - Peste des petits ruminants virus cultures - Rinderpest virus cultures - Sheep pox virus cultures - Goatpox virus cultures - Swine vesicular disease virus cultures - Vesicular stomatitis virus cultures 	

LABELING, PACKING & SHIPPING

Numbers in chart refer to sections in this SOP



7. LABELING AND PACKING SPECIMENS

7.1 Labeling Specimens and Placing Specimens in Boxes

Follow this procedure when labeling and storing biological samples. Always use Universal Precautions.

1. Specimen Labels

Each specimen must be labeled with at least the following information:

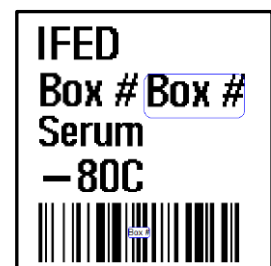
- BSI Id – Barcode + Human Readable
- Study Id – 3 Letter Study Code
- Subject Id
- Material Type



A sample label is shown on the right. Create labels using materials appropriate to the temperature at which the samples will be stored. Samples stored at -80C should only be labeled with cryogenic labels that can withstand those temperatures. Follow the labeling direction in the Label Standardization SOP.

2. Packing tubes for storage and shipment

- Before placing tubes in a storage box properly mark the outside of the box with the following information:
 - Study Name
 - Box Number (Human Readable)
 - Box Number (Barcoded)
 - Material Type
 - Storage Temperature
- Precool boxes at the appropriate temperature prior to placing samples in the box. Using a black Sharpie, mark the back left corner of the box (See diagram).
- Place and scan vials in boxes from left to right and back to front.
- Once a box has been filled, scan the box into a spreadsheet (see diagram) to record Box/Row/Column information for upload into BSI. Once the

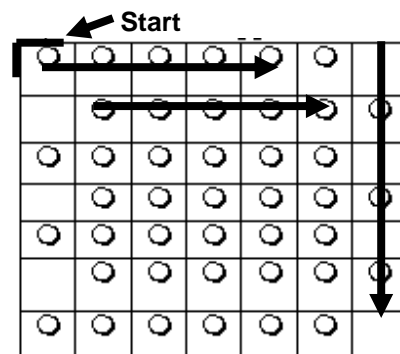


Box/Row/Column information has been entered and a requisition has been created, complete a sequential scan of the box prior to shipment.

7.2 Box Patterns

Full Box Tube Pattern - Fill all spaces in the box starting in the back left corner, going left to right and back to front (See Full Box Tube Pattern Diagram below). Put the box back into the freezer after adding vials.

Staggered Box Pattern - Fill the spaces in the box indicated in the Staggered Tube Box Pattern on the right. Samples are placed in a staggered manner starting in the back left corner, going left to right and back to front (See Staggered Box Tube Pattern Diagram below). Place the box into the freezer immediately after filling.



Staggered Tube Box Pattern

as

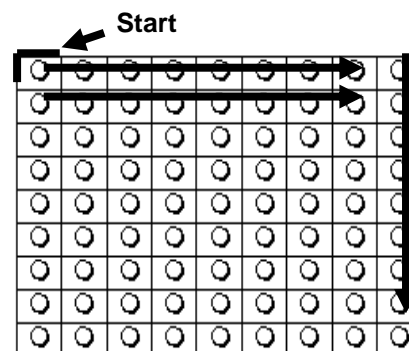
8. SPECIMEN FILES AND SHIPMENT

- BSI staff will create a ship-out file,
- Verify the shipping address with the shipper or person receiving the shipment.
- Double-check that the ship-out file matches the boxes being shipped. Resolve any discrepancies before shipping.
- Name the file according to the convention specified, e.g. Study_ date_initials.xls.
- Email the completed file to the recipient at the time of the shipment, and print a hard copy to accompany the shipment.

9. PACKING A SPECIMEN BOX PRIOR TO SHIPPING

To prepare a frozen sample for shipping follow these procedures.

- Allow frozen samples to freeze at least 12 hours prior shipment.
- Ship specimens Monday-Wednesday; NEVER ship on Thursday or Friday.
- Pack the specimen boxes as follows:
 - Place a rubber band around each box
 - Place the frozen specimen box in a biohazard labeled Ziploc bag that is IATA rated for shipping.
 - Place an absorbent pad inside the Ziploc bag that is rated to absorb the volume of liquid in the specimen box. (ex. If you have 91 1ml vials in a box, use an absorbent pad rated at 100ml.)



Full Box Tube Pattern

to

10. NOTIFY CONSIGNEE OF SHIPMENT

Prior to making shipping arrangements, the BSI staff or person setting up the shipment will verify the shipping address with the shipper and the address of the person receiving the shipment. Whenever you ship out samples, you MUST notify the Consignee and Principal Investigator that the shipment is in route. E-mail them the tracking number, and tell them when to expect the shipment. Attach a copy of the specimen list to this electronic correspondence. Track the shipment electronically using the FedEx Tracking Number located at the top of the Airbill. After delivery to the final destination has been confirmed follow up with the Consignee to assure

everything was satisfactory and with the Principal Investigator that the shipment arrived in good order. Record all of this information in Squish.

11. LOCAL TRANSPORTATION OF SPECIMENS

Use S-3 company vehicles to transport samples locally (ex. transferring samples to the NIEHS). Do not use private vehicles since private insurance will not cover you in the case of an exposure/accident. Tell the S-3 staff person transporting the samples what they are transporting.

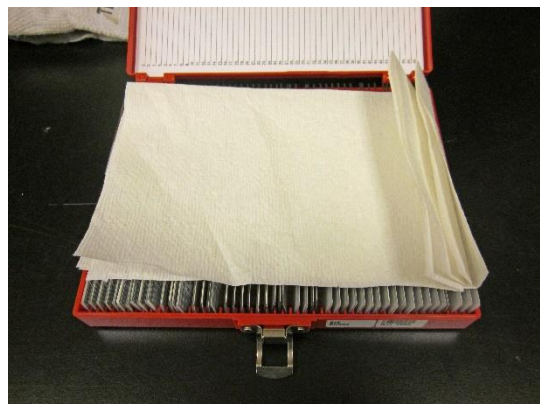
12. SHIPPING SLIDES

Item	Vendor	Part #
Bubble Wrap		
Insulated Shipping Container	VWR	89413-488
Microscope Slide Box	Fisher	03-448-1

Place folded paper towels or other thin packing material on top of the slides to prevent movement in the slide box during shipping. (See photo). Place a rubber band around the closed slide box.

Wrap the slide box in bubble wrap and place it into an insulated container. Make sure that the entire container is filled with either bubble wrap or packing peanuts. Place the top onto the inner container.

Secure the top of the box with packing tape and apply the FedEx label. Ship Priority Overnight, ambient to minimize temperature exposure.



13. PROCEDURE FOR SHIPPING SPECIMENS ON PHASE CHANGE FOAM BRICKS

Note: Freeze phase change foam bricks for at least 24 hours at -20C prior to shipment. Use a sufficient number of Phase Change Foam Bricks to maintain 4°C during transit.

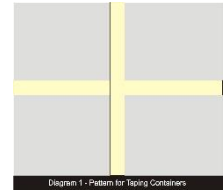
13.1 Equipment & Supplies

- 4G type fiberboard outer box
- Styrofoam secondary container
- Frozen Phase Change Foam Bricks

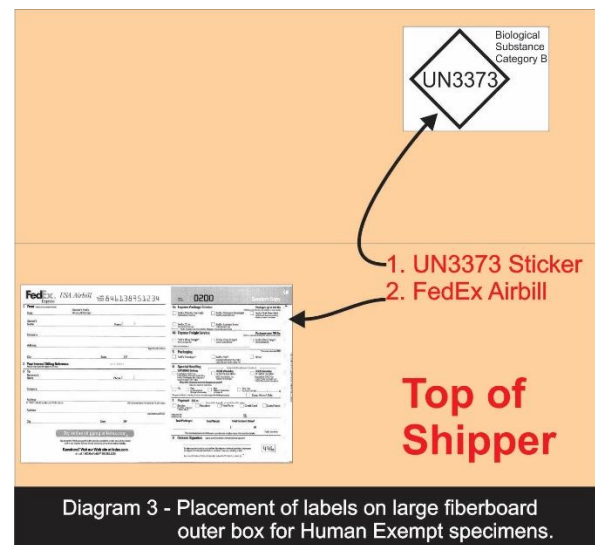
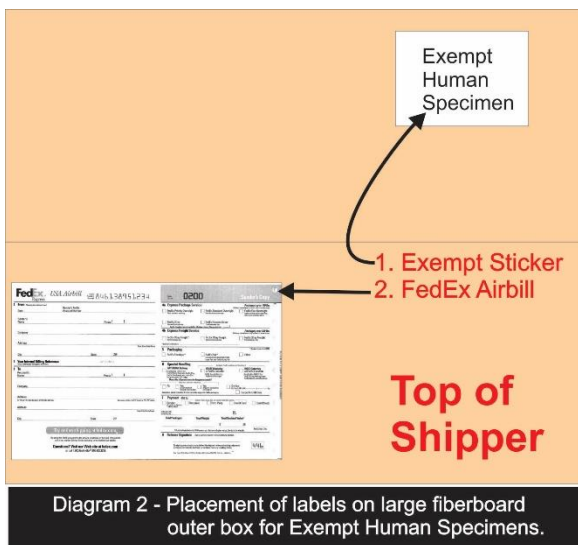
13.2 Procedure

1. Place the large Styrofoam liner (ex. 24L x 17W x 117H") in the large fiberboard outer box. Cover the inside bottom of the Styrofoam liner with a layer of Frozen Phase Change Foam Bricks (See Photo).

- Place the specimen box(es) in the center of the Styrofoam liner and pack additional Frozen Phase Change Foam Bricks around the side and top of the box (~ 40-50 cold packs). You do not need to completely fill the container, however the more you use the better. Leave room for the Styrofoam lid to fit flat.
- If shipping multiple specimen boxes in the shipper, place them side by side in the Styrofoam liner and pack additional Frozen Phase Change Foam Bricks around the side and top of the boxes (~ 30 cold packs).
- Replace the top of the Styrofoam container and place any correspondence on top of the Styrofoam container.



2. Securely tape the top of the large fiberboard outer box shut as in Diagram 1.
3. Label the top of the large fiberboard outer box with the three labels as depicted in Diagram 2 on next page (Exempt Human Specimens) or Diagram 3 on next page (Class A or B Dangerous Goods).
4. Weigh the filled large fiberboard outer box to determine its final shipping weight in lbs. Complete the FedEx Airbill either On-Line ([Section 26](#) - complete steps 1-10) or using a printed Airbill ([Section 27](#) - Complete steps 1-9)
5. Notify FedEx at 1-800-463-3339 or at www.fedex.com for a package pick-up or take the package to the nearest FedEx facility. E-mail the tracking number to the recipient.



14. SHIPPING SPECIMENS ON DRY ICE

Dry ice is considered dangerous goods by the Department of Transportation and IATA. The shipping box must therefore be labeled to indicate that it contains dry ice alerting the shipper to its special handling instructions.

14.1 Equipment and Supplies

- Dry Ice (25-30 lbs.)
- Cryo protective gloves
- Styrofoam secondary container
- 4G type fiberboard outer box
- Dry Ice labels (Dangerous Goods, Category 9, UN1845, White with Black)
- Human Exempt Specimen or UN3373 label
- The FedEx Airbill: www.FedEx.com.

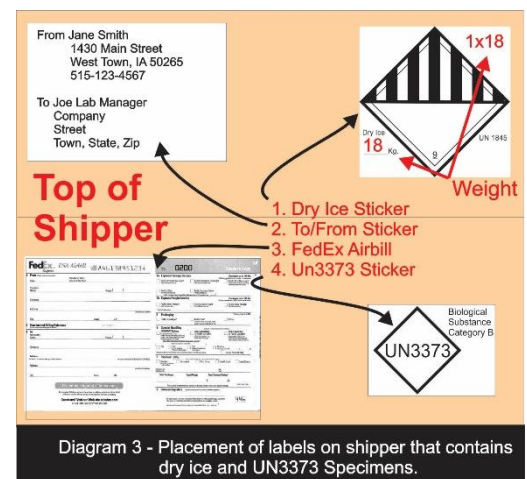
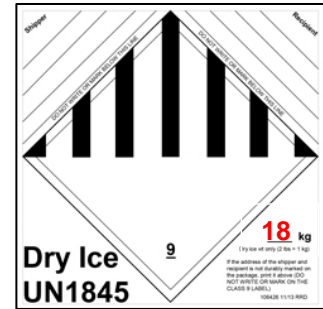
14.2 Safety Precautions

Dry Ice is -80°C . It can cause 3rd degree burns when it contacts exposed skin. Wear cryo protective gloves when handling.

14.3 Packing Procedure

1. Triple Packaging Specifications

- **Leak-proof primary** – Leak-Proof Primaries are containers such as NUNC vials, Sarstedt Tubes, etc. that hold the actual specimen and are normally stored in 5"X5" holding boxes at -80°C .
 - **Leak-proof secondary** (not subject to pressure test) – are plastic biohazard bags.
 - **Absorbent material** to contain all liquid in package. Place an **absorbent sheet** that is rated to hold the entire liquid in a box (ex. If a box contains 81 1mL vials, use a 100mL absorbent sheet) into the biohazard bag prior to placing the specimen box in the bag
 - **Outer packaging** of adequate strength for its capacity. Package must have one surface with minimum dimensions of at least 4" x 4"
2. Pack each specimen box as per instruction on page 5.
 3. Calculate the combined weight of the 4G Shipper, the Styrofoam inner container and the specimens being shipped. (There should be no dry ice in the container at this point). This will be your "Tare Weight".
 4. Remove the Styrofoam container from the outer 4G cardboard box. Cover the bottom of the Styrofoam liner with a layer of dry ice. (See photo)
 5. Place the specimen box in the center of the Styrofoam liner and pack additional dry ice around the side and top of the specimen box (~ 25-30 lbs.). You do not need to completely fill the container, however the more you use the better. Leave room for the Styrofoam lid to fit flat.



6. If shipping multiple specimen boxes in the shipper, place them side by side in the Styrofoam liner and pack additional dry ice around the side and top of the box.
7. Use a sufficient amount of dry ice to maintain temperature during transit. Tape the top of the Styrofoam container as in Diagram 1. DO NOT tape the sides of the lid as this may cause a buildup of pressure which can result in an explosion of the package.
8. Place the sealed Styrofoam box back into the outer fiberboard box.
9. Securely tape the top of the large fiberboard outer box shut as in Diagram 1.
10. Label the top of the large fiberboard outer box with the three labels as depicted in Diagram 2 (Exempt Human Specimens) or Diagram 3 (Biological Substances, Class B).
11. Weigh the filled large fiberboard outer box to determine its final shipping weight in lbs. Subtract the tare weight to determine the weight of the dry ice in the package. Convert the weight in lbs. to kilograms.
- 12. Total Shipping Weight (lbs.) - Tare Weight (lbs.) = Weight of Dry Ice (Kg)**
13. Enter the weight of the dry ice in Kg on the Dry Ice Label
14. Enter the weight of the dry ice in Kg on the Dry Ice Label
15. Complete the FedEx Airbill either On-Line ([Section 26](#)) or manually ([Section 27](#))
 - Notify FedEx that Shipment is Ready. Place the package just inside the glass door of the lab prior to 9:30 for the FedEx driver if you already expect a shipment. If you do not expect a delivery or the shipment is ready after 9:30, notify FedEx by phone at 800-463-3339 or electronically at www.fedex.com that a pick-up is needed.
 - Durham FedEx Drop Off – If you are shipping with dry ice, you can drop it off at the FedEx Office in RTP (2311 Englert Drive, Durham, NC 919-698-6024) or any other FedEx shipping location. You CAN'T drop off dry ice shipments to FedEx Kinko's locations
16. Complete the FedEx Airbill either online ([Section 26](#) - complete steps 1-16) or using a printed Airbill ([Section 27](#) - Complete steps 1-9)

15. SHIPPING TISSUE BLOCKS

When returning tissue blocks and slides to the originating pathology lab, follow these procedures:

1. Place the tissue blocks into a plastic block holder (Fisher #NC0258625 Lab Storage Systems Plastic Block Mailer).
2. Place the slides into a 5-place slide mailer (Fisherbrand™ 5-Place Slide Mailer, PP, End Opening, Natural # HS15986)
3. Place the tissue block mailer and the slide mailer inside a biohazard bag.
4. Place the slides/block mailers into a padded envelope along with a frozen Uline Cold Pack #S-13376.
5. Place a "Human Exempt" label on the outside of the envelope.
6. Ship FedEx Priority Overnight to the destination lab.

NOTE: SSS has a stockpile of the slide/block mailers if needed.



16. SHIPPING SPECIMENS PRESERVED IN ALCOHOL (NO DRY ICE)

This procedure describes how to ship non-hazardous specimens containing alcohol or other flammable liquid. Handle all specimens as if capable of transmitting disease. Wear gloves and eye protection.

16.1 Requirements

The Department of Motor Vehicles and IATA considers alcohol Dangerous Goods. The shipping box must therefore be labeled that it contains a flammable liquid alerting the shipper to its special handling instructions.

If the sample being shipped contains less than 2 L of alcohol and the individual containers do not exceed 30ml each, then the samples can be shipped by normal FedEx delivery. If the samples exceed these limits then it is considered dangerous goods and the Shippers Declaration of Dangerous Goods must be completed.

The Shippers Declaration of Dangerous Goods form must be printed out on a color printer. The shipper must sign all corrections to the Airbill with his or her full name. Sender's name and address, receiver's name and address and the information in the Dangerous Goods Identification of the Airbill must appear on one side of the 4G cardboard shipping box. See [Section 25: Instructions for Completing the Shippers Declaration Form](#) for instruction on how to fill out the Dangerous Goods Form.

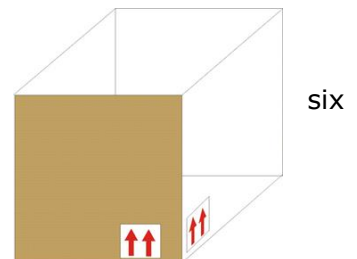
If the package contains dry ice, the Airbill and package labels must also reflect this.

16.2 Equipment and Supplies

- Eye protection
- Styrofoam secondary container
- 4G type fiberboard box
- Shippers Declaration of Dangerous Goods (full page size domestic use) 3 copies
- Appropriate labels as specified in this document

16.3 Packing Procedure

1. Primary containers are tubes holding the actual specimen in alcohol and are normally stored at room temperature. Pack each specimen box as per instruction on page 5. Place into the shipping box. [The primary container or the secondary packaging must be capable of withstanding, without leakage, an internal pressure of 95 kPa in the range of -40°C to 55°C. Cryovials used at SSS meet this specification.]
2. Pack the space between each plastic bag and the cardboard box with supplementary cushioning material such as cardboard, foam or bubble wrap.
3. If shipping the alcohol specimens follow the directions in [Section 15](#).
4. Tape any correspondence for the Consignee or Excel spreadsheet used as a packing list to the top of the specimens or Styrofoam container. If used, place the Styrofoam container into the 4G fiberboard box. Securely tape the top of the large fiberboard outer box shut as in Diagram 1 in [Section 13](#).
5. Complete the FedEx Shippers Declaration Form as per [Section 25](#).
6. Label the top and sides of the large fiberboard outer box with the labels as depicted in diagrams below. Make sure that no labels overlap.
 - UN3373 Label for Dangerous Goods or the Human Exempt Specimen label
 - UN Label for Alcohol type being shipped



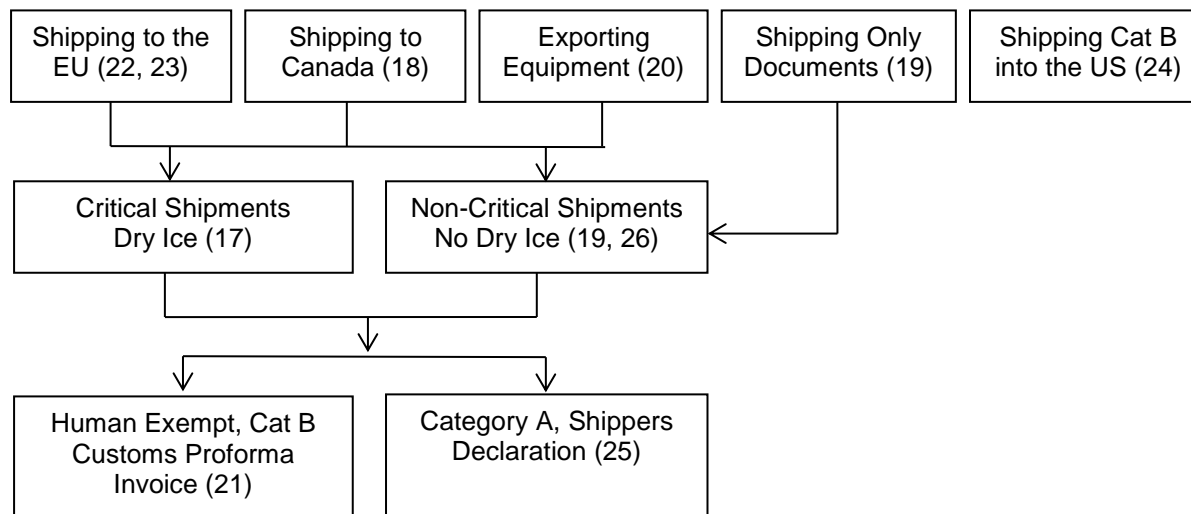
- To/From Label
- FedEx Airbill and two copies of the Shippers Declaration Form in an airbill pouch
- #3 red diamond shaped Flammable Label
- Up Arrow Labels on two sides of the box
- If dry ice is part of the shipment, affix the #9 black and white Dry Ice Label directly under the Flammable Liquid label. Write in the weight of the dry ice in the space provided on the label. (Not shown in Diagram)



- Weigh the filled large fiberboard outer box to determine its final shipping weight in lbs. Complete the FedEx Airbill either On-Line ([Section 26](#)) or using a printed Airbill ([Section 27](#)) and make sure you place a shippers declaration inside the box.

INTERNATIONAL SHIPPING

Numbers in brackets refer to sections in this document



16. INTERNATIONAL SHIPPING OF SPECIMENS AND GOODS VIA FEDEX

This procedure describes how to ship non-hazardous specimens/goods outside the United States. This procedure only applies to shipments that do not contain dangerous goods.

Complete the FedEx International Air waybill on-line at www.fedex.com. Ensure that Sender's name and address, and Recipient's name and address Identification (if applicable) appear on two sides of the Cardboard shipping container.

➤ Equipment and Supplies

- Styrofoam secondary container as applicable.
- 4G fiberboard box
- FedEx international Air waybill completed on-line
- Commercial / *proforma* invoice form (required for Customs officials)
- CDC Statement

➤ Safety Precautions

Universal Safety Precautions. Handle all specimens as if capable of transmitting disease. Dry Ice is -80°C . It can cause 3rd degree burns when it contacts exposed skin. Wear cryo protective gloves when handling.

➤ Packing Procedure

1. Pack and label the shipping containers as per the appropriate specimen type in this document. (ex. Exempt Human Specimens – Shipping on Dry Ice) Pack the container the same as you would for a domestic shipment. If you are shipping with dry ice, use an insulated shipping container that is three inches thick and is completely packed with dry ice. Put enough dry ice to last at least two days. Block dry ice, if available, will last longer than pelleted dry ice.
2. Place a complete inventory of the contents, a 3 copies of a signed and dated commercial invoice – 2 copies included with the waybill and 1 copy inside the 4G box before taping (a sample commercial invoice can be found on www.FedEx.com / Business Solutions / Go to FedEx Global Trade Manager/ Commercial Invoice), and any other required correspondence on top of the insulated container inside the 4G box before taping.

3. Secure container with sufficient cellophane tape.
4. Weigh the fiberboard box to determine its final shipping weight.
5. For International Shipments: Use World Courier, 1-800-231-7227 or FedEx. World Courier specializes in international regulations that vary by country of destination.
6. For FedEx shipments go to www.fedex.com and click on International Tools. Click on "Prepare an International Shipment". Fill in the required information then call 877-339-2774 for help on filling out the rest of the paperwork. You will need the following information to complete the international waybill:
 - Date and Sender's information, Account Number
 - Recipient's information
 - Commodity description (ex. Calipers), value for Customs (Declared value must be at least \$1) and total value for Customs in U.S. dollars (ex. 252.00 U.S. dollars)
 - For express package service, check FedEx Intl. Priority box
 - Check box stating absence of dangerous goods.
 - For payment, check Sender
 - For payment of duties (varies by country), check Sender
7. You will need the following information for the FedEx Customs Invoice:
 - Shipper: Sender's name
 - Consignee: Recipient's name
 - Full description of Goods: ex. "Calipers"
 - Total number of packages: enter appropriate number
 - Total weight: enter pre-determined weight
 - Date: today's date
8. Prior to making shipping arrangements, the BSI staff person setting up the shipment, will verify the shipping address with the shipper and the address of the person receiving the shipment.
9. Print To / From address labels containing the sender and consignee address information exactly as they appear on the Airbill. Affix To / From address label to upper left corner of the 4G box.
10. Affix the "UP" arrows labels on the two opposite sides of the box from all other labels.
11. Shipping to Canada – See [Section 18](#) – SHIPPING INFECTIOUS SUBSTANCES TO CANADA
12. Logging Tracking Information and Confirmation of Receipt

Enter the Tracking information, including tracking number, materials being shipped, and recipients into SQUISH.

17. SHIPPING INTERNATIONAL WITH WORLD COURIER

1. WC Account information

- Account
- Customer Service 800-221-6600

2. Packing the Shipment

It is mandatory that the inner package contents do not shift after the dry ice has dissipated. You can use cardboard to secure the boxes or you can cut an X in a piece of cardboard and secure the box in the middle of the X.



3. Completing an On-line Shipment

- Go to www.worldcourier.com
- Click on "Customer Resource Center / Tracking"
- Enter your User Name and Password
- Click on "Online Order Entry"
- Fill in the Account # and select **Y** for all notifications, then click "**Continue**".
- Prior to making shipping arrangements, the BSI staff person setting up the shipment will verify the shipping address with the shipper and the address of the person receiving the shipment. Fill in or Select pickup and delivery addresses.
- On the online Order Entry Page enter the following information
 - Ready date: = date of pickup
 - Ready Time: = Time of pickup
 - Requested Delivery date:
 - Delivery Time:
 - Charge Code:
 - Reference: = a name for the shipment
 - Click on **Assign HWB#**
 - Click on **Continue**

B/C: NYC Acct No: 7670 Project: On-Demand_NYC 007670

Ready Date: Monday OCT 19 Ready Time: 00 : 00 AM

REQUESTED Delivery Date: UNKNOWN Delivery Time: 00 : 00 AM

Charge Code: Reference:

Does this Shipment contain Dangerous Goods?

☒ No

☐ Yes (Per attached Shipper's Declaration)

☐ Yes (Shipper's Declaration not required)

HWB#: 0

Enter the number of the pre-printed World Courier HWB to be used by the shipper or click [Assign HWB#](#) to generate the HWB on-line.

Be sure the HWB# entered here is the number of the HWB attached to the package.

[Continue](#)

- On the Descriptions of Goods Page enter the following information for each box being shipped
 - Description of what is being shipped
 - Number of pieces in the box (ex. # of paraffin blocks)
 - Weight (UOM = Unit of Measure)
 - Temperature (what is the temperature of the contents of the box)
 - Refrigerant (ex. Dry Ice)
 - Length / Width / Height
 - Declared Value (Put \$50 to cover the cost of the shipper)
 - Click on Save after each box has been entered.
 - Click on Continue once all boxes have been entered.
- Use the Email page to enter and control who should be receiving emails about Order Placement, Pickup, and Delivery. Revise as needed.
- Review the information that you have just input.

4. CDC Statement

If you are shipping Exempt Human Specimens into the US from a foreign country you must fill out a CDC statement. The following information must appear on the statement and must be printed on SSS letterhead. See [Section 24](#) – CDC Letter for an example.

CDC – To Whom It May Concern

Date:

Shipper:

Consignee:

Contents: Non Hazardous/Non Infectious Human Blood / Serum / Urine /

Quantity: _____mL

For Laboratory Testing only

This material is not known or suspected to contain an etiological agent, host, or vector of human disease.

Shipment has been packaged, labeled and transported in accordance with all applicable regulations.

5. Shipping Instructions

- Before sending any international shipments, **contact customer service** at World Courier (1-800-221-6600) and ask them if there are any import permits or other special requirements required to ship to the destination country. (e.g., for all EU countries the *proforma* invoice must state that there are no animal specimens or animal byproducts)
- **Collect and document** the following information for the Customs Invoice before proceeding. The customs invoice must be printed on SSS letterhead and must be signed.
 - World Courier Job#
 - World Courier Reference Name (Create a descriptive name to help you identify individual shipments)
 - Total volume of shipment (ex. 62.4ml)
 - Material type of shipment (ex. serum)
 - Classification of shipment (ex. non-infectious Human Exempt or Class B)
 - Destination (consignee) contact information:
 - Consignee Name, Title, and telephone number
 - Consignee Address (complete address)
 - Sender's contact information
 - Dimensions of shipper (WxLxH)
 - Total weight of shipper with samples and dry ice
 - Weight of dry ice in shipper in kg if being used
 - Date to ship and Date to arrive
 - Customs Value = \$100 (Use \$100 or \$1/vial not to exceed a total value of \$500)
 - SSS Account #
 - Billing Reference
 - Indicate if SSS or World Courier will be supplying the shippers and dry ice.

- “Dry Ice Replenishment” is always included on World Courier shipments involving dry ice.

To see an example of a filled-out customs invoice for World Courier go to [Section 21 – Customs Pro Forma Invoice](#).

- Fill out a World Courier formatted [proforma invoice](#) (W:\Lab_Specimens\07_SOPs\Joint_SOPs\ Shipments\World Courier)
- Call World Courier to arrange the pickup (contact information above) and set replenishment schedule for dry ice.
- Produce a shipping manifest listing all of the specimens in the shipment
- Email the following documents to documents@worldcourier.com
 - Word Document listing the information collected in step 17.5.2 above
 - Proforma Invoice
 - Shipping Manifest with list of samples being shipped
- Call World Courier International Customer Service at 1-800-221-6600
 - Give them our customer Account #
 - The rep will walk you through all of the information they will need
 - They will send you an e-mail confirming the shipmentIf you need to change the date of the pickup, call World Courier International Customer Service at 1-800-221-6600
- The day of the pickup
 - Pack the shipment according to IATA standards
 - Include copy of the shipping manifest in a Ziploc bag on top of the Styrofoam shipper
 - Place the appropriate stickers on the box
 - Dry Ice label with weight of dry ice marked in kg
 - Human exempt sticker
 - Place three copies of the Proforma Invoice sticking out of an airbill pouch on top of the shipper
 - Note the exact weight of the entire package and the dry ice for the courier
 - When the courier arrives he will have you sign the waybill and take the package
- Destination country specific information
 - **EU** – make sure you write the following on the proforma invoice “This shipment does not contain any animal products or byproducts”.
 - Human Exempt – UK does not require import permit. Check each country for requirements
 - Class B – Import permit required. Check each country for requirements.
 - **US** – make sure you write the following on the proforma invoice “This shipment does not contain any animal products or byproducts.
 - Human Exempt –Does not require import permit
 - Class B – Import permit required from CDC

18. SHIPPING INFECTIOUS SUBSTANCES TO CANADA

When you are exporting human specimens to Canada follow the following guidelines depending on the Biological substance classification. Shipments of human, animal, or plant pathogens to Canada will require a Canadian import permit. Allow sufficient lead-time for the Canadian recipient to obtain the proper permits. Packaging of shipments needs to comply with the Canadian Transport of Dangerous Goods Regulations. See the Transport Canada Web site for details, <http://www.tc.gc.ca/eng/tdg/clear-tofc-211.htm>.

18.1 Public Health Agency of Canada (PHAC)

18.1.1 Website: <http://www.phac-aspc.gc.ca/lab-bio/permits/imp-permit/>

18.1.2 Phone: 613-957-1779

18.1.3 Email: permit-permis@phac-aspc.gc.ca

18.2 Human Exempt Specimens

Human exempt specimens for Canada are classified as biological specimens from healthy individuals that contain no known pathogens. Follow these steps before shipping exempt specimens to Canada.

18.2.1 **IATA** – Package the specimens according to IATA International shipping standards and label with “Human Exempt Specimens” label.

18.2.2 Canada – Public Health of Canada (PHC) and Border Services of Canada require the following:

- Create a label on the outside of the package that states **“This package is from Healthy Individuals and Contains No Pathogens”**.
- Have the receiving lab send an **e-mail** to permit-permis@phac-aspc.gc.ca (PHC) stating that the samples they are receiving are from healthy individuals and contain no pathogens. The PHC will send them an e-mail authorizing the shipment(s). This e-mail must then be placed on the outside of the shipping package so that Border Security of Canada can read it.

18.3 Biological Substances Class B UN3373

Whenever you are shipping Class B Specimens to Canada the receiving lab needs to apply for an import permit.

18.3.1 **IATA** – Package the specimens according to IATA International shipping standards and label with a “UN3373” diamond label.

18.3.2 **The receiving lab must fill out an “Application for permit to import human and/or terrestrial animal pathogen(s)”**. Below are links to the instructions and permit application. After receiving the permit the receiving lab must send the permit to the shipper so that it can be applied to the **exterior of the package**.

- <http://www.phac-aspc.gc.ca/lab-bio/permits/index-eng.php>
- <http://www.phac-aspc.gc.ca/lab-bio/permits/imp-permit/how-comment-eng.php>
- <http://www.phac-aspc.gc.ca/lab-bio/permits/assets/pdf/permit-permis-eng.pdf>

19. SHIPPING A FEDEX INTERNATIONAL DOCUMENTS PACKAGE

1. Login to www.fedex.com
 - UN:
 - PW:
2. From – Select your name
3. To – Either select a destination that has been previously saved or enter a new location. If you enter a new location check the following boxes
 - Perform detailed address check
 - Save new recipient in address book
 - Save changes in address book
4. Package Shipment Details
 - Prior to making shipping arrangements, the BSI administrator or person setting up the shipment, will verify the shipping address with the shipper and the address of the person receiving the shipment.
 - Select Service Type
 - International priority – usually takes 3 days if no customs issues
 - International economy – usually takes 1 week unless there are customs issues
 - Package Type – select one of the following
 - Your Packaging – then enter the # of packages, weight and dimensions
 - FedEx Packaging
 - No. of Packages – 1
 - Dimensions – Enter L/W/H
 - Carriage Value – enter \$0
 - Package Contents
 - Documents – Select if documents/papers/manuals
 - Document Description – select Data Sheets
 - Shipment Purpose – Commercial
 - Products/Commodities – If it is other than documents please see Nick Verna for instructions.
 - Total Customs Value – Put in a reasonable value here but do not exceed \$500
5. Billing Details
 - Bill Transportation to – Our account number
 - Bill Duties/taxes/fees to – Sender (prepaid)
 - Your Reference – Enter the charge code for the project you are shipping for
6. E-Mail notifications
 - Sender – Enter your E-mail Address and check off Ship / Exception / Delivery
 - Recipient – Enter the receivers E-mail Address and check off Ship / Exception
 - Add a Personal Message – Put in what is in the box you are shipping
7. Customs Documentation

Select Commercial Invoice. This will generate the required commercial invoice.
8. SHIP

This will bring up the airbill print screen.
9. Airbill Screen – Click on PRINT.

This will bring up your printer dialog box. Print one copy and make sure that you are printing single sided. The printout will give you 2 copies of the airbill and four copies of the Commercial Invoice. Keep one copy of the airbill and the commercial invoice. Fold the remaining 4 sheets of paper in half and place them in a purple edged international documents airbill pouch with the airbill facing up. Peel off the backing and place on the top of the box being shipped.
10. E-Mail

Send the tracking number to the recipient with a description of the contents.

20. TEMPORARY EXPORT OF EQUIPMENT

Many countries impose a tariff on any goods brought into a country, even if the equipment is only going to be there for a short period of time and returned to the country of origin. This tariff can range from 25% to 100% of the value of the produce. To avoid this tariff you must follow the following procedure.

20.1 Obtain an ATA Carne

An ATA Carne is an internationally recognized document that documents that goods shipped from a country return to that country in a specified period of time and will not be sold while in the destination country. The carne travels with the goods and is signed by customs whenever the goods leave or enter a country. To obtain a carnet contact the following company. You will have to set up an account with the company prior to obtaining the carne.

Boomerang Freight Solutions

<http://www.atacarnet.com/>

800-282-2900

20.2 Contract with a Freight Forwarder

If FedEx or any other express carrier can't handle the paper documentation that is required to get customers signatures at departure and entry points. You must use a freight forwarder that specializes in this type of business. Our experience is that you have to set up an account and have a POA (power of Attorney) signed by a corporate executive to give the freight forwarder the authority to represent you at customs. Leave a week to get this done. We have an established account with the following freight forwarder.

SOS Global Express, 800-628-6363

21. CUSTOMS PRO FORMA INVOICE

Use Letterhead of Shipper

CUSTOMS INVOICE

INTERNATIONAL AIRWAY BILL NO.:																									
SHIPPER:			CONSIGNEE:																						
COUNTRY OF ORIGIN:																									
DESCRIPTION OF GOODS:			QTY.	UNIT VALUE	TOTAL VALUE																				
<p><u>Items 1,2 and 3</u> Frozen human thyroid tissue blocks and blood samples in individual, sealed cryotubes packed in specimen bags in dry ice within 3 polystyrene boxes. For medical research only. Non-hazardous. Non-infectious. Packed in accordance with IATA Packing instructions 650. Dry ice UN1845, III, 9</p> <p><u>Item 4</u> - Blocks of formalin-fixed paraffin embedded human thyroid tissue packed in a box, sealed in a biobag, wrapped in bubble wrap and contained in an external box, carried at ambient temperature. For medical research only. Non-hazardous. Non-infectious.</p> <p>NOT RESTRICTED UNDER IATA REGULATIONS</p> <table border="0"> <tr> <td>GROSS WGT</td> <td>Item (Box) 1 (frozen)</td> <td>18 x 18 x 19 ins</td> <td>15KG;</td> </tr> <tr> <td></td> <td>Item (Box) 2 (frozen)</td> <td>18 x 18 x 19 ins</td> <td>15KG;</td> </tr> <tr> <td></td> <td>Item (Box) 3 (frozen)</td> <td>16 x 15.6 x 16.4 ins</td> <td>12KG</td> </tr> <tr> <td></td> <td>Item (Box) 4 (ambient)</td> <td>16 x 15.6 x 16.4 ins</td> <td><u>6KG</u></td> </tr> <tr> <td></td> <td colspan="2">TOTAL</td> <td>48 KG</td> </tr> </table> <p>TOTAL VALUE : US\$ 310</p> <p>These packages do not contain any animal or agricultural products. This material is not known or suspected to contain an etiologic agent, host, or vector of human disease. This material has been packaged, labelled, and transported in accordance with all applicable regulations.</p>			GROSS WGT	Item (Box) 1 (frozen)	18 x 18 x 19 ins	15KG;		Item (Box) 2 (frozen)	18 x 18 x 19 ins	15KG;		Item (Box) 3 (frozen)	16 x 15.6 x 16.4 ins	12KG		Item (Box) 4 (ambient)	16 x 15.6 x 16.4 ins	<u>6KG</u>		TOTAL		48 KG	1 -151 vials 2 -148 vials 3 - 140 vials 4- 339 blocks		US\$80 US\$75 US\$65 US\$90
GROSS WGT	Item (Box) 1 (frozen)	18 x 18 x 19 ins	15KG;																						
	Item (Box) 2 (frozen)	18 x 18 x 19 ins	15KG;																						
	Item (Box) 3 (frozen)	16 x 15.6 x 16.4 ins	12KG																						
	Item (Box) 4 (ambient)	16 x 15.6 x 16.4 ins	<u>6KG</u>																						
	TOTAL		48 KG																						
			TOTAL QUANTITY: 778		TOTAL: US\$310																				

THESE COMMODITIES ARE LICENSED FOR THE ULTIMATE DESTINATION AS SHOWN.
DIVERSION CONTRARY TO THE UNITED STATES LAW IS PROHIBITED.
I DECLARE ALL INFORMATION CONTAINED IN THIS INVOICE TO BE TRUE AND CORRECT.

PRINT/TYPE NAME OF SHIPPER/EXPORTER

SIGNATURE

DATE _____

22. SHIPPING SPECIMENS TO EU COUNTRIES

Please see the DIRECTIVE 2002/98/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 January 2003 setting standards of quality and safety for the collection, testing, processing, storage and distribution of human blood and blood components and amending Directive 2001/83/EC <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32002L0098&qid=1508507907628&from=EN>

22.1 GERMANY

Customs authorities:

Customs' Information and Knowledge Management (Customs' IKM)
Carusufer 3-5
DE - 01099 Dresden
Tel.: +49 (0)351 44834 530
Fax: +49 (0)351 44834 590
E-mail: enquiries.english@zoll.de
http://www.zoll.de/EN/Home/home_node.html

Health authorities:

Federal Ministry for Health
Rochusstr. 1
DE - 53123 Bonn
Tel.: +49 301 84 410
+49 228 99441 0
E-Mail: poststelle@bmg.bund.de
<http://www.bundesgesundheitsministerium.de/en/en.html>

For additional information, you can consult the following link:

<http://eur-lex.europa.eu/legal-content/EN/LSU/?uri=celex:32004L0023>

23. DECLARATION LETTER FOR SHIPMENTS TO THE EU

Include the following letter on **SSS letterhead** in every shipment to the EU.
Be sure to customize the contents of the letter to match the shipment.

To Whom It May Concern**Date:****Shipper:****Consignee:**

Contents: Non Hazardous/Non Infectious Human *Blood Buffy Coats* for DNA Extraction and Laboratory Testing only

Quantity: 649mL which are considered non-regulated Human Exempt biological samples.

This material is not known or suspected to contain an etiological agent, host, or vector of human disease.

These human samples were not obtained from humans that have been inoculated with or exposed to any livestock or poultry disease agent exotic to the United States. These samples are not of tissue culture origin, and are not zoonotic. They contain no plant products. They are for research use only and have no commercial value. Shipment has been packaged, labelled and transported in accordance with all applicable IATA regulations.

These samples meet the standards set by the DIRECTIVE 2002/98/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 January 2003 setting standards of quality and safety for the collection, testing, processing, storage and distribution of human blood and blood components and amending Directive 2001/83/EC. Social & Scientific Systems, Inc. has been authorized by the US National Institutes of Health – National Institute of Environmental Health Sciences in Durham, North Carolina to collect, and distribute these Human Blood Buffy Coat samples for research purposes only. These samples are being shipped to XXX for DNA extraction. They will then be returned to XXX.

Responsible Person Signature and Job Title

Printed Name**24. CDC LETTER**

This is required when shipping Category A or Category B biological substances **into** the US.

Use Letterhead of Shipper

CDC Statement – To Whom It May Concern**Date:**

Lab Shipping Protocols

Shipper:

Consignee:

Contents: Non Hazardous/Non Infectious Human:
 Thyroid tissue (frozen) - 246 blocks
 Blood - 72 x 3ml samples
 FFPE tissue blocks - 270

For Laboratory Testing only

These packages do not contain any animal or agricultural products. This material is not known or suspected to contain an etiological agent, host, or vector of human disease. Shipment has been packaged, labelled and transported in accordance with all applicable regulations.

SHIPPING FORMS

25. INSTRUCTIONS FOR COMPLETING THE SHIPPER'S DECLARATION FORM FOR CATEGORY A SHIPMENTS

SHIPPER'S DECLARATION FOR DANGEROUS GOODS						
Shipper A				Air Waybill No. Page of Pages Shipper's Reference Number (optional)		
Consignee B						
Two completed and signed copies of this Declaration must be handed to the operator.				WARNING Failure to comply in all respects with the applicable Dangerous Goods Regulations may be in breach of the applicable law, subject to legal penalties.		
TRANSPORT DETAILS						
This shipment is within the limitations prescribed for: (delete non-applicable)		Airport of Departure				
<div> <div>PASSENGER AND CARGO AIRCRAFT</div> <div>CARGO AIRCRAFT ONLY</div> </div> C						
Airport of Destination			D Shipment Type (delete non-applicable) <div> <div>NON-RADIOACTIVE</div> <div>RADIOACTIVE</div> </div>			
NATURE AND QUANTITY OF DANGEROUS GOODS						
Dangerous Goods Identification						
UN or ID No.	Proper Shipping Name	Class or Division (Subsidiary Risk)	Packing Group	Quantity and Type of Packing	Packing Instructions	Authorization
E	F	G	H	I	J	K
Additional Handling Information L						
Emergency Telephone Number				Name/Title of Signatory		
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 the applicable international and national governmental regulations. I declare that all of the applicable air transport requirements have been met.				Place and Date M		
				Signature		
				(see warning above)		

Created by Andy Glode at the University of New Hampshire Office of Environmental Health and Safety

25.1 Step #1:

You can complete the Shippers Declaration Form using a PDF from FedEx or on-line at www.FedEx.com:

PDF - W:\Lab_Specimens\07_SOPs\Joint_SOPs\Shipments\ Dangerous Goods form and instructions.pdf

On-Line -

<http://www.fedex.com/us/services/options/express/dangerousgoods/declarationforms.html>.

Remember - the FedEx PDF or on-line form can't be saved electronically. You must print it out when you have completed filling it out.

25.2 Step #2:

Begin by placing the cursor in the "Shipper" block in the upper left corner of the Shipper's Declaration (A) and keying information as appropriate. Using the **TAB** key to move from one field to another, complete all required fields. For a detailed explanation of information required on a Shipper's Declaration, refer to **IATA Section 8 - Documentation (Paragraph 8.1.6)**. Using the sequence the **TAB** key will follow, a general explanation of how to complete the form is provided below:

- **(A) Shipper** - Full name and address of the shipper (The name and address must be *exactly* the same as that which appears on the To/From label on the outside of the box)
- **Air Waybill Number** - The number of the Air Waybill to which the declaration form will be attached
- **Page of Pages** - The page number and the total number of pages (For a single page Shipper's Declaration, enter "**Page 1 of 1 Pages**").
- **Shipper's Reference Number** - Optional field providing the shipper with an opportunity to enter an internal organization reference number (Insert a Study Code here)
- **(B) Consignee** - Full name and address of the consignee (The person receiving the shipment, not the PI)
- **(C) Transport Details** - Tab to the appropriate field, and using the capital letter "X," enter X's to block out "Passenger and Cargo Aircraft" (*for shipments which must travel on Cargo Aircraft Only*) or to block out "Cargo Aircraft Only" (*for shipments which may travel on either Passenger or Cargo aircraft*).
- **Airport of Departure** - Enter the full name of the airport or city of departure. (For a package being shipped out of Chicago using O'Hare Airport, this field may be completed as: "O'Hare," "O'Hare Airport," "O'Hare International Airport," "Chicago," "Chicago, IL," etc.).
- **Airport of Destination** - Enter the full name of the airport or city of destination. (For a package being shipped to Chicago using O'Hare Airport, this field may be completed as: "O'Hare," "O'Hare Airport," "O'Hare International Airport," "Chicago," "Chicago, IL," etc.).

- **(D) Shipment Type** - Tab to the appropriate field, and using the capital letter "X," enter X's to block out "NON-RADIOACTIVE" (for shipments which contain radioactive material) or to block out "RADIOACTIVE" (for shipments which do not contain radioactive material).
- **Nature and Quantity of Dangerous Goods** - Enter the required information strictly in accordance with IATA 8.1.6.9. Begin by entering the UN or ID Number(E) . Use the **SPACE BAR** to move from one column to another as you enter information across the page. Per IATA 8.1.6.10 (b), the information in this field "**must** be entered in sequence within the columns provided." If your information will not fit without going over the lines separating the columns, use the **ENTER** key and enter text on another line. See [Section 34](#) for details.
- When shipping Biological Substances, Category B
 - (E) UN or ID No. = UN 3373
 - (F) Proper Ship Name = Biological Substances, Category B
 - (G) Class or Division = 6.2
 - (H) Packing Group = II
 - (I) Qty/Type of Pkg. = Just give total (Ex. 3 fiberboard boxes at 1.0 liter per pkg.)
 - (J) Packing Inst. = Y305
 - (K) Authorization = Limited Qty.
- When shipping alcohol (<5L)
 - (E) UN or ID No. = UN 1987
 - (F) Proper Ship Name = Alcohols, n.o.s. Limited Quantity.
 - (G) Class or Division = 3
 - (M) Packing Group = II
 - (I) Qty/Type of Pkg. = Just give total (Ex. 3 fiberboard boxes at 1.0 liter per pkg.)
 - (J) Packing Inst. = Y305
 - (K) Authorization = Limited Qty.
- Isopropyl Alcohol information (<5L)
 - Proper Ship Name = Isopropyl alcohol
 - Class or Division = 3
 - UN or ID No. = UN 1219
 - Packing Group = II
 - Qty/Type of Pkg. = Just give total (Ex. 3 fiberboard boxes at 1.0 liter per pkg.)
 - Packing Inst. = Y305
 - Authorization = Limited Qty.
- Ethyl Alcohol information (<5L)

- Proper Ship Name = Ethyl alcohol
- Class or Division = 3
- UN or ID No. = UN 1170
- Packing Group = II
- Qty/Type of Pkg. = Just give total (Ex. 3 fiberboard boxes at 1.0 liter per pkg.)
- Packing Inst. = Y305
- Authorization = Limited Qty.
- **(L) Additional Handling Information** - Enter any special handling information relevant to the shipment in accordance with IATA 8.1.6.11.
- **(L) Emergency Telephone Number** - All dangerous goods shipments to, from, within, or transiting through the U.S. must include 24-hour emergency response information as described in IATA 2.9.2, USG-12.
- **(M) Name and Title of Signatory** - Enter the name and title of the person actually signing the Shipper's Declaration.
- **(M) Place and Date** - Enter the place and date to indicate where and when the form is actually signed.
- **(M) Print and sign the form.** Per IATA 8.1.4.1, a typewritten signature is not acceptable.

25.3 Step #3:

Provide at least three (3) signed copies of the completed Shipper's Declaration (with diagonal hatchings printed in red on color printer) to FedEx Express for shipping. (Refer to FedEx Express IATA Variation FX-14).

26. ELECTRONIC CREATION OF A FEDEX AIRBILL

To electronically create a FedEx air bill and schedule a pickup for an ambient or Gel-Pack shipment, log onto the FedEx Ship Manager Login Page at [FedEx Ship Manager](#) .

1. Enter your User ID and Password and click LOGIN.
2. If your name and address do not show, click on Edit, Type in your address information.
3. Type in the address information for the recipient. Make sure you click on "Perform detailed address check" and "Save new recipient in address book" if you will be sending to this address again.

4. Packaging & Shipping Details

- **Service type.** If you are shipping specimens always select **Priority Overnight**.
- Package Type. Select **Your Packaging**
- Enter No. of Packages
- Enter **Weight** in lbs
- **Dimensions.** Click on dropdown and select **Enter Dimensions**.
- Enter **length, width, and height** of the shipper rounded up to the nearest inch.
- **Declared Value.** Enter **\$0** U.S. Dollars

The screenshot shows the '3. Package & Shipment Details' section of the FedEx Ship Manager interface. It includes the following fields and options:

- Service type:** A dropdown menu set to 'Priority Overnight'.
- Package type:** A dropdown menu set to 'Your Packaging'.
- No. of packages:** A dropdown menu set to '1'.
- Weight:** A text input field followed by 'lbs'.
- Dimensions:** Three text input fields for Length (L), Width (W), and Height (H), followed by 'in'. Below these is a checkbox for 'Save dimensions profile'.
- Declared value:** A text input field set to '0' followed by 'U.S. Dollars'.
- Ship date:** A text input field set to '08/06/2008' with a calendar icon to its right.

5. Billing Details: Type in the SSS Study Code for this shipment in the "Your Reference" box.
6. E-mail Notification: Click on Edit and make sure that your email address is correct as the sender and check Ship/Exception/Delivery notifications if desired. (If another e-mail address is listed, enter your e-mail address). You can also have the consignee receive electronic notification if desired. You can click on Add a Personal Message and enter a short message with the item being shipped, name of the study, and the PO# if appropriate.

7. If you are shipping with Dry Ice, click on Edit on the Special Services Box.

- Click next to Dry Ice
- Enter the weight of the dry ice in pounds

Special Services (optional) [Help](#) [Edit](#)

Select additional services for your shipment

Special Services (optional) [Help](#) [Hide](#)

☐ Saturday delivery

☐ COD (Collect on Delivery) [+](#)

☐ Hold at FedEx location [+](#)

☒ Dry ice [+](#)

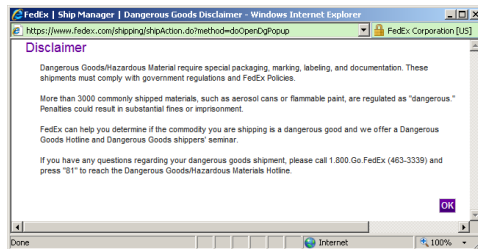
* Total dry ice weight lbs

☐ Dangerous goods [+](#)

☐ Process a return shipment

8. If you are Shipping Dangerous Goods, click on Edit on the Special Services Box.

- Click next to Dangerous Goods
- A pop up box will appear, click on OK



Special Services (optional) [Help](#) [Hide](#)

☐ Saturday delivery

☐ COD (Collect on Delivery) [+](#)

☐ Hold at FedEx location [+](#)

☐ Dry ice [+](#)

☒ Dangerous goods [+](#)

☐ Process a return shipment

9. Complete Your Shipment: Click on Ship.

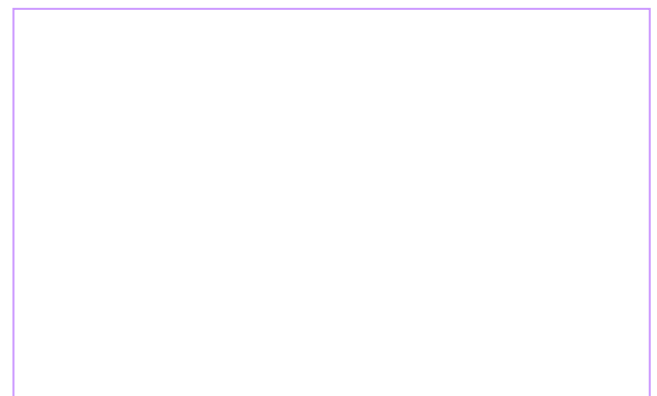
5. Complete your Shipment [Help](#)

☐ Create a Shipment Profile to store recipient, package and other details of this shipment for future use.

Save for later Ship

10. **Prepare a Shipment:** Click on the **PRINT** button. A label will appear on your screen.

- Click on **File / Print** and select your printer.
- Click on **Properties**
- Click on the **Paper** tab
- Select Source is: Manual Feed and click on OK
- Click OK to print.
- Peel off label and place on the top of your package. FedEx protocol dictates that packages are oriented so



Lab Shipping Protocols

that the Airbill is pointed up. If you place the Airbill on the side of the package, your package may be shipped on its side.

27. SHIPPING USING A FEDEX USA PAPER AIRBILL – NO SHIPPER DECLARATION REQUIRED

Fill in the following section of the FedEx USA Airbill prior to shipping specimens that do not require a shippers declaration (Exempt Human Specimens & Biological Substance Category B). The number at the left refers to the corresponding section of the Airbill.

1. Fill in **Date of shipment**
Fill in **Your name, phone number, and address**
2. Fill in **Project Code**
3. Fill in **Recipient's address**
- 4a. Check off **Priority Overnight**
5. Check off **Other**
6. Place an **X** in **NO (Does this Shipment Contain Dangerous Goods?)**
7. Put an **X** in **Sender (Payment)**
Fill in SSS **FedEx Number**
Total Packages = **1**
Total Weight = **Total Weight of package in pounds**
Total Declared Value = **\$0**
8. **DO NOT** check anything on this line
9. Complete this if you are shipping with **dry ice only**
Put an **X** in **Dry Ice**
Total # of Packages = **1**
Total Weight of Dry Ice Only = **Total Weight of dry Ice in package in KG**

28. SHIPPING USING A FEDEX USA PAPER AIRBILL – SHIPPING DECLARATION REQUIRED

Fill in the following section of the FedEx USA Airbill prior to shipping specimens require a shippers declaration (Biological Substance Category A, Alcohol). The number at the left refers to the corresponding section of the Airbill.

1. Fill in **Date of shipment**
Fill in **Your name, phone number, and address**
2. Fill in **Project Code**
3. Fill in **Recipient's address**
- 4a. Check off **Priority Overnight**
5. Check off **Other**
6. Place an **X** in **Yes – As per attached Shippers Declaration**
7. Put an **X** in **Sender**
Fill in SSS **FedEx Number**
Total Packages = **1**

Total Weight = **Total Weight of package in pounds**

Total Declared Value = **\$0**

8. **DO NOT** check anything on this line
9. Complete this if you are shipping with **dry ice only**
Put an **X** in **Dry Ice**

Total # of Packages = **1**

Total Weight of Dry Ice Only = **Total Weight of dry Ice in package in KG**

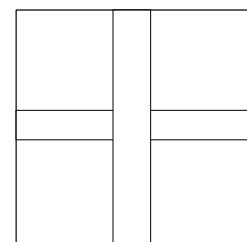
LOCAL TRANSPORTATION

29. TRANSPORTING SPECIMENS IN PRIVATE VEHICLES

1. Exercise Universal Precautions. Latex or Nitrile gloves and lab coat are required for the packing of any packages being shipped.
2. Equipment and Supplies
 - Gloves
 - IATA Approved transportation container
 - Packing Tape
3. Only transport specimens in **SSS company vehicles**. Insurance companies will not cover privately owned cars in the event of an accident involving the transportation of Human Exempt, Category B or Category A specimens.
4. Procedure

This procedure applies to SSS employees who are responsible for the transportation of biological specimen to other local affiliated facilities who are using their own vehicles. Individual should follow the following procedures:

- Tape Top of IATA Approved Styrofoam Shipping container in an X Pattern and secure outer fiberboard box with additional tape.
- Label the outside of the box with a Dry Ice Label (if required) and a Biohazard Label.
- Secure the package in the car so that it can't tip over. This may include using a cargo net, seat belts, or firmly wedging the package.
- Don't keep dry ice in the car for a prolonged period of time without opening a window.
- Never leave samples in the car unattended.



SHIPPING CHECKLISTS

30. CHECKLIST FOR SHIPPING HUMAN EXEMPT SPECIMENS



Social & Scientific Systems

Shipping Checklist

Study Name _____

Project Squish _____

Project Name _____

Date Shipped: _____

Prior to any shipment, ensure that all items on this list have been completed, or marked as Not Applicable (NA). Place a ✓ or "NA" in each box.

Pre-Shipment (Specimen Technical Coordinator or Technical Specialist T.C. or T.S.) Initials _____

- ☐ A pull list has been created and all samples are at the Chelsea Lab.
- ☐ All samples have been pulled according to the BSI Requisition.
- ☐ The Technical Coordinator/Specialist has reviewed/approved label format and content.
- ☐ If samples are being blinded the T.C. or T. S. has reviewed the blinded labels to ensure that they are correct.
- ☐ All samples have been labeled, if necessary.

Sample Verification (Lab Tech, Specimen Technical Coordinator)

Initials _____

- ☐ All samples are in the final box configuration and a sequential scan has been completed after the final sample have been boxed or moved.
- ☐ The shipping address has been verified by T.C/T.S.

Packaging (IATA Certified Lab Tech)

Initials _____

- ☐ The shipping boxes are appropriate and sufficient to protect the samples during shipping.
- ☐ Each shipping box has been placed in a biohazard shipping bag with sufficient absorbent material to absorb all of the liquid content in the box.
- ☐ The packed boxes have been placed in an insulated shipping container that is sufficiently large (at least 30% of the volume is taken up with either dry ice or frozen gel packs).
- ☐ The top of the Styrofoam shipper has been taped in an X pattern across the top of the shipper. The sides of the shipper liner should not be taped.

Lab Shipping Protocols

- ☐ A shipping manifest been placed in a Ziploc bag on top of the Styrofoam shipper prior to closing the fiberboard box.
- ☐ The FedEx label has been prepared as follows:
 - Lists weight of dry ice (if applicable)
 - Email address of person receiving shipment and description of what is being shipped
 - Proper charge code for the study
- ☐ The appropriate labels been applied to the exterior of the shipper.
 - Exempt Human Specimen
 - Dry Ice (if applicable)
 - FedEx Label
- ☐ FedEx Tracking Number _____

Shipping Address

Contact_____

Company_____

Address 1_____

Address 2_____

City/State/Zip_____

Phone #_____

Email Address_____

Shipment Pickup

Initials_____

- ☐ Pickup scheduled with FedEx
- ☐ DRI to verify pickup_____
- ☐ Package picked up by FedEx
- ☐ Package delivered to FedEx by DRI

International Shipments

Initials_____

- ☐ Customs Commercial Invoice (3 Copies)
- ☐ Shipper Paperwork
- ☐ CDC Importing Etiologic Agents Documents
- ☐ Country Specific Documentation

EPL Only

Initials_____

- ☐ EPL has received a requisition for this shipment which includes the specimen pull and box locations?

Lab Shipping Protocols

- ☐ EPL has received the shipping destination
- ☐ EPL has received the shipping specifications
 - Pack on dry ice or cold packs
 - Type of shipping container

Deliver Completed Checklist to Laboratory Director

Laboratory Director initials and date

32. CHECKLIST FOR SHIPPING CATEGORY A INFECTIOUS SUBSTANCES

Specimen Packaging

- ☐ Specimen in leak proof primary container
- ☐ Absorbent material is sufficient to absorb entire contents of primary container(s)
- ☐ Primary containers are wrapped individually
- ☐ Leak proof secondary container
- ☐ Itemized list of contents placed between secondary and outer container

Labeling Outer Container

- ☐ Infectious Substance, Class 6 label
- ☐ "Infectious Substance Affecting Humans", "UN 2814" or "Infectious Substance Affecting Animals, "UN 2900" and net quantity of infectious substance
- ☐ Miscellaneous Class 9 label if shipment contains dry ice, "UN 1845" and amount used in kg
- ☐ Name and telephone number of the responsible party, knowledgeable of the package contents and available 24 hours a day
- ☐ If shipment includes >50mL or 50g of a Category A infectious substance, then add a "Danger, do not load in passenger aircraft" label to the outer container

Dangerous Goods Declaration Form

- ☐ Verify name, address and phone number of shipper and recipient
- ☐ Mark out non-applicable "Aircraft Box"
- ☐ Mark out non-applicable "Radioactive" box
- ☐ 24-hour emergency response telephone number for the responsible party, knowledgeable of the package contents
- ☐ Name and title of signatory, place, and date
- ☐ Shipper's signature

"Nature and Quantity of Dangerous Goods" section of the Declaration Form

- ☐ Complete this section using the information provided on Pages 5, 9 & 10 of this Guide

33. CHECKLIST FOR SHIPPING CATEGORY B INFECTIOUS SUBSTANCES

Specimen Packaging

- ☐ Specimen in leak proof primary container
- ☐ Absorbent material is sufficient to absorb entire contents of primary container(s)
- ☐ Primary containers are wrapped individually
- ☐ Leak proof secondary container
- ☐ Itemized list of contents placed between secondary and outer container

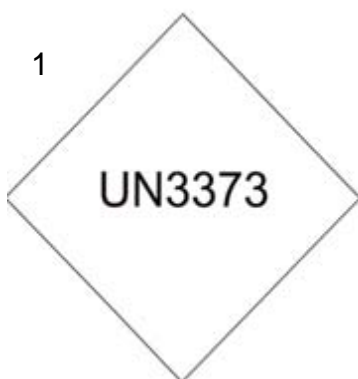
Labeling Outer Container

- ☐ UN 3373 label (1)
- ☐ Statement: "Biological Substance, Category B" adjacent to UN 3373 label
- ☐ Miscellaneous Class 9 label (2) if shipment contains dry ice, "UN 1845" and amount used in kg

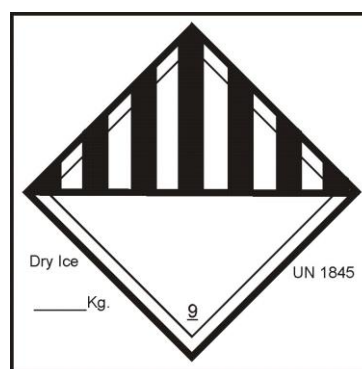
Completing the Airbill

- ☐ Verify name and address of shipper and recipient
- ☐ Check "Saturday Delivery" box if applicable
- ☐ In Section 6 (Special Handling) of the airbill, indicate that the shipment is a dangerous good, which does NOT require a Shipper's Declaration
- ☐ Check the "Dry Ice" box if applicable and indicate "UN 1845" and the quantity of dry ice in kg
- ☐ Shipper's signature (optional)

1



2



35. HOW TO RECEIVE CHELSEA LAB SPECIMENS FROM EPL

1. If you are not authorized to receive shipments from EPL you must call one of the following people to receive the shipment. You must talk to a live person. Do not leave a voice mail.
2. The authorized person will do the following:
 - Open the shipping containers and count the number of boxes
 - Sign the EPL Transfer Form
 - Document the receipt of the shipment on the [Specimen Receipt at CPL Form](#)
 - Place the boxes in the freezer (or appropriate storage conditions) and write the location on the whiteboard on the freezer
 - Write the freezer number or location on the transfer form
 - Staple the EPL Transfer Form and Specimen Receipt at CPL Form together and place on the appropriate laboratory specialist's desk for signature.
 - After being signed, place the EPL Transfer Form and Specimen Receipt at CPL Form into the shipments binder in the hall.

SHIPPER MANUFACTURERS

36. MANUFACTURERS OF CERTIFIED SHIPPING CONTAINERS

DG Supplies

4 Corporate Drive - Suite D
Cranbury, NJ. 08512
1-800-347-7879
www.dgsupplies.com

Inmark Packaging

675 Hartman Road, Suite 100
Austell, GA 30168
1-800-646-6275
www.inmarkpackaging.com/

SaftPak

7466 Candlewood Road
Suite E
Hanover, MD 21076

Customers Service - 800.814.7484; 8AM - 6PM EST (5AM - 3PM PST)

Technical Support - 855.877.7714; 9AM - 7PM EST (6AM - 4PM PST)

www.saftpak.com/

Sonoco Thermosafe

1-800-323-7442

www.thermosafe.com/

This has been the preferred vendor and is available through VWR

Therapak, LLC

4305 Hamilton Mill Road
Suite 200
Buford, Georgia 30518
www.therapak.com
Tel: (770) 614-2931

IATA DOCUMENTATION PERTAINING TO SSS

The information contained in this section is the key information relating to the transport of dangerous goods as it relates to the types of samples typically transported by SSS. It is extracted from the [IATA Dangerous Goods Regulations](#) (DRG).

37. IATA DRG SHIPPING INFORMATION SUMMARY



Shipment Type	Proper Shipping Name	UN Number	Hazard Class	Packing Group (PG)	Packing Instruction (PI)	Hazard Label(s)	Max. Net qty./pkg. for Passenger Aircraft	Max. Net qty./pkg. for Cargo Aircraft	Special Provisions (**)
Category A infectious substance, affecting humans	Infectious substance, affecting humans, (*)	UN 2814	6.2	-	602	Infectious substance	50mL / 50g	4L / 4kg	A81, A140
Category B infectious substance	Biological substance, category B	UN 3373	6.2	-	650	UN3373	4L / 4kg	4L / 4kg	-
Dry Ice	Dry Ice	UN 1845	9	III	904	Miscellaneous	200kg	200kg	A48
Exempt Human Specimens (minimal likelihood that pathogens are present)	N/A	N/A	N/A	N/A	See Checklist on Pg.6	N/A	N/A	N/A	N/A

*** Identify technical name of agent in parenthesis**

**** Special Provisions:**

A81 – The maximum quantity of infectious substance that can be shipped by air in one package is 4L or 4kg. The maximum quantity that may be shipped via passenger aircraft is 50mL or 50g. The Special Provision A81 allows the shipment of body parts, organs or whole bodies to not be restricted based on quantity limits, however the shipment must still comply with Packing Instruction 602. Specimens transported in accordance with this Special Provision must be noted on the Shipper's Declaration of Dangerous Goods in the "Authorization" column of the Declaration form.

A48 – Packaging tests are not considered necessary.

A47 – Genetically modified micro-organisms and genetically modified organisms, which meet the definition of an infectious substance and the criteria for inclusion in Division 6.2 (Category A or Category B Infectious Substances), must be transported as UN 2814, UN 2900 or UN 3373, as appropriate.

A140 – For the purposes of documentation, the proper shipping name must be supplemented with the technical name. Technical names need not be

shown on the package. When the Infectious Substances to be transported are unknown, but suspected of meeting the criteria of Category A, and assigned to UN 2814 or UN 2900, the words "Suspected Category A Infectious Substance" must be shown in parenthesis following the proper shipping name on the Shipper's Declaration of Dangerous Goods, but not on outer package.

38. [PACKING INSTRUCTION 650](#) (2018)

STATE VARIATIONS: BHG-02, CAG-05, DQG-03, GBG-05, GHG-02, IDG-02, VCG-04

OPERATOR VARIATIONS: 4C-04, 4M-04, AM-06/10, AR-02, AS-08, BR-14, BZ-07, CM-05, E9-03, FX-04, G3-02, GH-02, IP-03, JJ-04, KC-08, KE-06, L7-04, LA-07, LH-05, LP-04, LU-04, M3-04, M7-04, MN-03/10, MS-06, OS-05, OU-12, PX-08, S7-02, SQ-10, SV-12, TN-05, TZ-05, UC-04, UU-05, XG-05, XL-04, XQ-05

This instruction applies to UN 3373 on passenger and cargo aircraft and Cargo Aircraft Only.

(a) General Requirements

The packagings must be of good quality, strong enough to withstand the shocks and loadings normally encountered during transport, including trans-shipment between transport units and between transport units and warehouses as well as any removal from a pallet or overpack for subsequent manual or mechanical handling. Packagings must be constructed and closed so as to prevent any loss of contents that might be caused under normal conditions of transport, by vibration, or by changes in temperature, humidity or pressure.

The packaging must consist of three components:

- (b) a primary receptacle(s);
- (c) a secondary packaging; and
- (d) a rigid outer packaging.

Primary receptacles must be packed in secondary packagings in such a way that, under normal conditions of transport, they cannot break, be punctured or leak their contents into the secondary packaging. Secondary packagings must be secured in outer packagings with suitable cushioning material. Any leakage of the contents must not compromise the integrity of the cushioning material or of the outer packaging.

Packages must be prepared as follows:

(a) For liquid substances:

1. The primary receptacle(s) must be leakproof and must not contain more than 1 L;
2. The secondary packaging must be leakproof;
3. If multiple fragile primary receptacles are placed in a single secondary packaging, they must be either individually wrapped or separated to prevent contact between them;
4. Absorbent material must be placed between the primary receptacle and the secondary packaging. The absorbent material, such as cotton wool, must be in sufficient quantity to absorb the entire contents of the primary receptacle(s) so that any release of the liquid substance will not compromise the integrity of the cushioning material or of the outer packaging;
5. The primary receptacle or the secondary packaging must be capable of withstanding, without leakage, an internal pressure of 95 kPa in the range of -40°C to 55°C.
6. The outer packaging must not contain more than 4 L. This quantity excludes ice, dry ice or liquid nitrogen when used to keep specimens cold.

(e) Note:

The capability of a packaging to withstand an internal pressure without leakage that produces the specified pressure differential should be determined by testing samples of primary receptacles or secondary packagings. Pressure differential is the difference between the pressure exerted on the inside of the receptacle or packaging and the pressure on the outside. The appropriate test method should be selected based on receptacle or packaging type. Acceptable test methods include any method that produces the required pressure differential between the inside and outside of a primary receptacle or a secondary packaging. The test may be conducted using

Lab Shipping Protocols

internal hydraulic or pneumatic pressure (gauge) or external vacuum test methods. Internal hydraulic or pneumatic pressure can be applied in most cases as the required pressure differential can be achieved under most circumstances. An external vacuum test is not acceptable if the specified pressure differential is not achieved and maintained. The external vacuum test is a generally acceptable method for rigid receptacles and packagings but is not normally acceptable for:

- flexible receptacles and flexible packagings;
- receptacles and packagings filled and closed under a absolute atmospheric pressure lower than 95 kPa.

(b) For solid substances:

1. The primary receptacle(s) must be siftproof and must not exceed the outer packaging weight limit;
2. The secondary packaging must be siftproof;
3. If multiple fragile primary receptacles are placed in a single secondary packaging, they must be either individually wrapped or separated to prevent contact between them;
4. Except for packages containing body parts, organs or whole bodies, the outer packaging must not contain more than 4 kg. This quantity excludes ice, dry ice or liquid nitrogen when used to keep specimens cold;
5. If there is any doubt as to whether or not residual liquid may be present in the primary receptacle during transport then a packaging suitable for liquids, including absorbent materials, must be used.

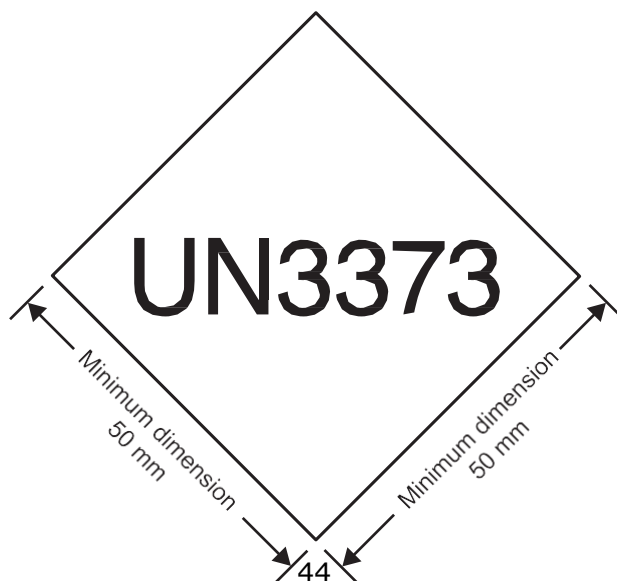
An itemized list of contents must be enclosed between the secondary packaging and the outer packaging. At least one surface of the outer packaging must have a minimum dimension of 100 mm × 100 mm.

The completed package must be capable of successfully passing the drop test described in 6.5.4.4 as specified in 6.5.4.2 except that the height of the drop must not be less than 1.2 m. Following the appropriate drop sequence, there must be no leakage from the primary receptacle(s) which must remain protected by absorbent material, when required, in the secondary packaging.

For transport, the mark illustrated below must be displayed on the external surface of the outer packaging on a background of a contrasting colour and must be clearly visible and legible. The mark must be in the form of a square set at an angle of 45° (diamond-shaped) with each side having a length of at least 50 mm, the width of the line must be at least 2 mm and the letters and numbers must be at least 6 mm high. The proper shipping name "Biological Substance, Category B" in letters at least 6 mm high must be marked on the outer packaging adjacent to the diamond-shaped mark.



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Unless all package marks are clearly visible, the following conditions apply when packages are placed in an overpack:

- the overpack must be marked with the word "Overpack"; and
- the package marks must be reproduced on the outside of the overpack. A Shipper's Declaration for Dangerous Goods is not required.

Alternative packagings for the transport of animal material may be authorized by the competent authority in accordance with the provisions in 5.0.6.7.

(f)

(g) Specific Requirements

Refrigerated or frozen specimens: Ice, dry ice and liquid nitrogen:

- When dry ice or liquid nitrogen is used to keep specimens cold, all applicable requirements of these Regulations must be met. When used, ice or dry ice must be placed outside the secondary packagings or in the outer packaging or an overpack. Interior supports must be provided to secure the secondary packagings in the original position after the ice or dry ice has dissipated. If ice is used, the outside packaging or overpack must be leakproof. If dry ice is used, the packaging must be designed and constructed to permit the release of carbon dioxide gas to prevent a build-up of pressure that could rupture the packagings.
- The primary receptacle and the secondary packaging must maintain their integrity at the temperature of the refrigerant used as well as the temperatures and the pressures, which could result if refrigeration were to be lost.

Infectious substances assigned to UN 3373 which are packed and marked in accordance with this packing instruction are not subject to any other requirement of these Regulations except for the following:

- (a) the name and address of the shipper and of the consignee must be provided on each package;
- (b) the name and telephone number of a person responsible must be provided on the air waybill or on the package;
- (c) the classification must be in accordance to 3.6.2;
- (d) the incident reporting requirements in 9.6.1 must be met; and
- (e) the inspection for damage or leakage requirements in 9.4.1 and 9.4.2.

(h) Note:

When the shipper or consignee is also the 'person responsible' as referred to in b) above, the name and address need be marked only once in order to satisfy the name and address marking provisions in both a) and b), above.

Passengers and crew members are prohibited from transporting infectious substances as or in carry-on baggage, checked baggage or on their person.

If an Air Waybill is used, the "Nature and Quantity of Goods" box must show "UN 3373", the text "BIOLOGICAL SUBSTANCE, CATEGORY B" and the number of packages.

Clear instructions on filling and closing such packages must be provided by packaging manufacturers and subsequent distributors to the shipper or to the person who prepares the package (e.g. patient) to enable the package to be correctly prepared for transport.

Other dangerous goods must not be packed in the same packaging as Division 6.2 Infectious Substances unless they are necessary for maintaining the viability, stabilizing or preventing degradation or neutralizing the hazards of the infectious substances. A quantity of 30 mL or less of dangerous goods included in Classes 3, 8 or 9 may be packed in each primary receptacle containing infectious substances provided these substances meet the requirements of 2.6. When these small quantities of dangerous goods are packed with infectious substances in accordance with this packing instruction, no other requirements in these Regulations need be met.

39. GUIDE 158 INFECTIOUS SUBSTANCES

This section contains the guidelines from the IATA Transportation guidelines that SSS must comply to when shipping hazardous substances.

POTENTIAL HAZARDS

- **HEALTH**
- Inhalation or contact with substance may cause infection, disease, or death.
- Category A Infections Substances (UN2814 or UN2900) are more hazardous, or are in a more hazardous form, than infectious substances shipped as Category B Biological Substances (UN3373) or clinical waste / medical waste (UN3291).
- Runoff from fire control may cause pollution.
- Note: Damaged packages containing solid CO as a refrigerant may produce water or frost from condensation of air. Do not touch this liquid as it could be contaminated by the contents of the parcel.
- Contact with solid CO₂ may cause burns, severe injury and/or frostbite.
- **FIRE OR EXPLOSION**
- Some of these materials may burn, but none ignite readily.
- Some may be transported in flammable liquids.

PUBLIC SAFETY

- **CALL EMERGENCY RESPONSE Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 10 to 25 meters (30 to 80 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Obtain identity of substance involved.
- **PROTECTIVE CLOTHING**
- Wear respiratory protection, such as fit-tested N95 respirator (at minimum), powered air purifying respirator (PAPR), or positive pressure self-contained breathing apparatus (SCBA).
- Wear full coverage body protection (e.g., Tyvek suit), faceshield, and disposable fluid-resistant gloves (e.g., latex or nitrile).
- Wear appropriate footwear; disposable shoe covers can be worn to protect against contamination.
- Puncture- and cut-resistant gloves should be worn over fluid-resistant gloves if sharp objects (e.g., broken glass, needles) are present.
- Wear insulated gloves (e.g. cryo gloves) over fluid-resistant gloves when handling dry ice (UN1845).
- Decontaminate protective clothing and personal protective equipment after use and before cleaning or disposal with an appropriate chemical disinfectant (e.g., 10% solution of bleach, equivalent to 0.5% sodium hypochlorite) or through a validated decontamination technology (e.g., autoclave) or process.
- Structural firefighters' protective clothing will only provide limited protection.

EMERGENCY RESPONSE

- **FIRE**
- *Small Fires*
- Dry chemical, soda ash, lime or sand.
- *Large Fires*
- Use extinguishing agent suitable for type of surrounding fire.
- Move containers from fire area if you can do it without risk.
- Do not scatter spilled material with high-pressure water streams.
- **SPILL OR LEAK**
- Do not touch or walk through spilled material.
- Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Absorb with earth, sand or other non-combustible material.
- Cover damaged package or spilled material with damp towel or rag and keep wet with liquid bleach or other disinfectant.
- DO NOT CLEAN-UP OR DISPOSE OF, EXCEPT UNDER SUPERVISION OF A SPECIALIST.
- **FIRST AID**
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
- Move victim to a safe isolated area.
- *CAUTION: Victim may be a source of contamination.*
- Call 911 or emergency medical service.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed. Victim should consult medical professional for information regarding symptoms and treatment.
- **For further assistance, contact your local Poison Control Center.**