

Shipping VS Program Samples

This training is intended for those charged with shipping samples to a diagnostic laboratory on behalf of Veterinary Services. The training does not cover shipping category A infectious substances or shipping on dry ice.

This training is valid through December 31, 2014

SECTION: Background

LESSON: Syllabus

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Training Syllabus

- Contacts: For questions about training content, please contact the Professional Development Staff: 301-851-3545
- For help shipping to the National Veterinary Services Laboratories (NVSL), please contact NVSL Shipping: 515-337-7530
- For questions about conducting a foreign animal disease investigation, refer to Veterinary Services Guidance 12001.2, and the Foreign Animal Disease Investigation Manual (FAD PReP Manual 4-0) and contact the Assistant District Director and National Preparedness and Incident Coordinator Staff.
- This training is intended for those charged with shipping samples to a diagnostic laboratory on behalf of Veterinary Services. The training does not cover shipping Category A infectious substances or shipping on dry ice.
- No prior experience with shipping infectious substances is required or assumed
- **This training is valid through December 31, 2014**

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Training Syllabus (continued)

- Learning Outcomes: Upon completion of this training, you will be able to package, label, and ship potential category B infectious substances to a diagnostic laboratory for VS program activities
- Note: there is no audio for this training

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Course Navigation and Content

- At any time, you can click on Menu (at the bottom left of the screen) to see the course outline and navigate to any of the topics
- There is a knowledge review at the end of the course. The review is not graded but enables you to measure your comprehension of the course material.
- To view, save, or print a file with all the course screens, [click here](#)

LESSON: Topics

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Topics

1. Regulations, definitions, and training requirements
2. Process: how to classify, identify, select packaging, and mark, label & document for shipment
3. The Bottom Line: shipper's responsibilities, best practices, penalties, list of packaging manufacturers and distributors
4. Knowledge review, shipping with FedEx, references, and conclusion

LESSON: Regulations

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Regulations

1. Hazardous Materials Regulations (49 CFR; US Department of Transportation)
2. Dangerous Goods Regulations (IATA)

Regulations

Hazardous Materials Regulations (HMR; 49 CFR Parts 100-185)

- Issued by the U.S. Department of Transportation (US DOT)
- Establish requirements governing the commercial transportation of hazmat by highway, rail, vessel and air
- Link:
<http://www.phmsa.dot.gov/hazmat/regs>

Regulations

Hazardous Materials Regulations (HMR)

- Laboratory specimens are often considered hazardous materials by the US DOT
- Once you have collected specimens, you are responsible for complying with regulations for:
 - Classification
 - Identification
 - Packaging
 - Marking and Labeling
 - Documentation

Regulations

Dangerous Goods Regulations (DGR): Airlines - IATA

- Major air carriers (including FedEx and UPS) are members of the International Air Transport Association (IATA)
- IATA develops and publishes regulations in the IATA Dangerous Goods Regulations (DGR)
- The IATA DGR comply with international flight regulations promulgated by the United Nations

- Domestic flights are subject to each country's civil aviation authority. In the United States, the Department of Transportation and the Federal Aviation Administration regulate the transportation of hazardous materials.
- Link to the IATA web site:
<http://www.iata.org/publications/dgr/pages/index.aspx>

LESSON: Definitions

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Definitions

- Terms used throughout this course

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Definitions

- Biological substance: description of a Category B infectious substance
- Category A: an infectious substance transported in a form that, when exposure occurs, is capable of causing permanent disability, life-threatening or fatal disease in otherwise healthy humans or animals
- Category B: an infectious substance which does not meet the criteria for inclusion in Category A. A category B infectious substance is **not** in a form generally capable of causing permanent disability or life-threatening or fatal disease in otherwise healthy humans or animals.

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Definitions

- Cultures: result from a process by which pathogens are intentionally propagated
- Exempt patient specimen: direct patient specimen for which there is minimal likelihood that pathogens are present. Exempt from regulations if properly packaged and marked.
- Hazard classes: hazardous materials are divided into nine hazard classes, depending on the type of danger they pose

Definitions

- Hazardous material (dangerous goods): substance or material that poses a risk to health, safety, property, or the environment when transported in commerce
- Hazardous materials regulations (HMR). 49 CFR Parts 171 - 180. The HMR classify clinical specimens and biological substances in class 6, division 2 as either Category A or Category B infectious substances.
- Infectious substance: a material known or reasonably expected to contain pathogens (agents that can cause disease in humans or animals)
- Patient specimen: collected directly from humans or animals, including but not limited to excreta, secreta, blood, tissues and tissue fluid, swabs

Definitions

- Proper shipping name: a standard name used to identify the article or substance on the outside of the package and on the airbill
- UN number: every proper shipping name is assigned an identification number by the United Nations (UN) Committee of Experts
- Unregulated samples: specimens which are not expected to contain infectious agents. Examples of unregulated samples include dried blood spots for genetic testing and samples where any pathogens present have been neutralized or inactivated.

LESSON: Training Requirements

Training Requirements

1. Depend on the type of material being shipped
2. This presentation covers shipping Category B substances (49 CFR 173.199)

Training Requirements

- Regulations require that personnel involved in packaging and shipping of infectious substances have appropriate training
- Training requirements vary depending on category of infectious substances that are being shipped
- Each person who offers or transports a Category B infectious substance must know about the requirements of [49 CFR 173.199](#)

Training Requirements

- This presentation is intended for persons offering Category B substances for transport
- Shipping Category B substances does not require certification
- This training does not cover shipping Category A substances or shipping with dry ice. If you suspect you have a Category A substance, or are not certain of the Category, contact your Assistant District Director (ADD).

SECTION: Process

LESSON: Process Overview

Process Overview

1. Classification

2. Identification
3. Packaging
4. Marking, Labeling, and Documentation

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Process Overview

Steps:

1. Use the flowchart to classify the sample (based on whether it contains infectious material or not)
2. Determine how to identify the sample
3. Obtain proper packaging materials and supplies
4. Prepare the sample and the package for shipping

LESSON: Classification

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Process

1. Classification
 - Determine the hazard class (e.g. Class 6, Division 6.2)
 - Use the classification flow chart

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Classification of Samples

- Shippers must classify substances to determine whether a material is a dangerous good or not

- There are nine hazard classes. Other hazard classes such as toxins may be encountered in VS disease programs
- See the [Classification Flow Chart](#) for guidance on how to classify samples

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Classification: Infectious Substances

- Division 6.2 substances are divided into 2 categories
 - Category A: if you suspect you have a Category A substance, or are not certain of the Category, contact your ADD
 - Category B: any substance that does not meet the definition of Category A ([link to indicative examples of infectious substances included in Category A](#))

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Classification: Infectious Substances

- Some examples of materials that would be included in Category B are:
 - BSE surveillance samples
 - FAD investigation samples
 - Samples from on-farm mortalities
 - Diagnostic samples (testing for whether sample contains an infectious substance)
 - Samples from high-risk animals or animals considered exposed to a pathogen

*Most specimens sent to NVSL (Ames or Plum Island) are considered to be infectious substances (either Category A or Category B)

[Link to Diagnostic Testing at NVSL](#)

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Classification: Exempt Patient Specimen

- Patient specimens are substances that are unlikely to contain pathogens
- Samples are obtained from apparently healthy animals
- Minimal risk samples for: blood or urine tests, serology, liver/ kidney function, cytology, serum chemistries, antibody detection in the absence of any concern about infection, etc.

Classification: Exempt Patient Specimen

- Ship as an exempt patient specimen when:
 - Specimen is from an animal unlikely to be infected or exposed to a pathogen
 - Specimen is unlikely to contain a pathogen
 - Samples are obtained from apparently healthy animals
- Samples for Gamma Interferon testing and slaughter blood samples will generally be classified as patient (animal) exempt specimens

*Most specimens sent to NVSL (Ames or Plum Island) are considered to be infectious substances (either Category A or Category B)

[Link to Diagnostic Testing at NVSL](#)

LESSON: Identification

Process

2. Identification: assign a proper shipping name

- Infectious substance (UN 3373)
- or
- Exempt animal specimen

Identification: Infectious Substances

- Division 6.2 Infectious substances are defined as “substances known or reasonably expected to contain pathogens”
- IATA requires that Infectious Substances be classified in Division 6.2 and assigned the appropriate UN codes:
 - **UN 3373: biological substance, category B**
 - UN 2814: infectious substance, affecting humans
 - UN 2900: infectious substance, affecting animals
- All dangerous goods must be assigned only one proper shipping name which identifies the dangerous goods on the package and shipping paperwork

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Identification: Exempt Patient Specimen

- Exempt specimens are not assigned proper shipping names or UN numbers, but the term “**Exempt animal specimen**” must appear on the package

LESSON: Packaging

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Process

3. Packaging

- Select proper packaging
- Packages have 3 basic components:
 - 1° receptacle
 - 2 ° packaging
 - outer packaging

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Packaging Requirements

- This section emphasizes packaging for Category B, Biological Substances
- Preparation for shipping Category A, Infectious Substances requires additional training!
- Packaging of exempt patient specimens does not have a training requirement

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Packaging Requirements

- The packaging for both Category B and exempt patient specimens consists of three basic components:
 - Leakproof primary receptacle(s) (specimen container)
 - Leakproof secondary packaging with sufficient absorbent for liquids
 - An outer packaging of adequate strength for its capacity, mass, and intended use, and with at least one surface having minimum dimensions of 100 mm x 100 mm (4 in x 4 in)
- Leakage or loss of contents from packages containing unregulated biological materials will likely be perceived and handled as hazardous materials by commercial carriers. Liability for losses/ damage related to these leaking packages will most likely fall on to the shipper. Bottom line.....even unregulated materials must be packaged appropriately.

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Packaging Category B Specimens

- The proper shipping name of UN 3373 is Biological Substance, Category B
- Category B is an infectious substance which does not meet the criteria for inclusion in Category A
- Suspected Category B materials must be assigned to UN 3373
- See [Packing Instruction 650](#) (from IATA; for shipment by air) for details
- 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

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Packaging Category B Specimens

- Adequate absorbent material must be used for liquid shipments. Maximum volume allowed per primary receptacle is 1 L (34 oz) and maximum allowed per box (outer packaging) is 4L (1 gal).
- Absorbent is not required for solid shipments unless residual liquid possible (e.g. sample liquefaction)
- Solid shipments: Max allowable weight per box (outer packaging) is 4 kg (8.8 lbs)
- Packages require orientation arrows only if a primary receptacle exceeds 50 ml.
- For fresh tissues and swabs, place a frozen ice pack (not dry ice, not ice cubes) next to the samples. Ice packs are not needed for formalin-fixed samples.

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Packaging Exempt Patient Specimens

- Patient samples: blood, serum, milk
- Minimal likelihood that pathogens are present
- Must be properly packaged
- If the patient specimen contains or is reasonably expected to contain Category A or B pathogens, then it cannot be packaged as an exempt patient specimen
- If in doubt, contact destination lab for guidance

LESSON: Marking, Labeling, and Documentation

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Process

4. Marking, Labeling, and Documentation

- Marking: “Exempt animal specimen” – or – “Biological substance, Category B” and UN 3373 mark
 - [Link to Word document](#) for exempt animal specimen labels (Avery 5160)

- Itemized list of contents (between 2° and outer packagings)
- Airbill or shipping document

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Marking and Labeling Requirements for Shipping Category B Substances

- The proper shipping name, Biological Substance, Category B must be marked in letters at least 6 mm high adjacent to the UN 3373 mark
- Samples inactivated by fixation in 10% formalin do not require the UN3373 mark

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Marking and Labeling Requirements for Shipping Category B Substances

- The name and telephone number of a person who is either
 - knowledgeable about the material being shipped and has comprehensive emergency response and incident mitigation information for the material, or
 - has immediate access to a person who possesses such knowledge and information,
- **must** be included on a written document (such as an air waybill or bill of lading) or on the outer packaging

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Documentation Requirements for Shipping Category B Substances

- An itemized list of contents (e.g. VS 10-4 or BSE submission form) must be enclosed between the secondary and outer packagings

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NVSL Packages for Shipping Category B Substances

BSE (and CSF) Fresh Tissue Kit (comes in 5, 10, and 25 tube sizes):

- Conical tubes (primary receptacle)
- Barcode labels
- Ice pack
- Absorbent material
- Sealable plastic bag (secondary packaging)
- Submission forms
- Styrofoam box
- UN 3373 label
- Rigid outer packaging
- Packing and shipping instructions

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NVSL Packages for Shipping Category B Substances

CSF (classical swine fever) kit:

- Use the BSE (CSF) Fresh Tissue Kit

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NVSL Packages for Shipping Category B Substances

Small diagnostic kit (use for FAD investigations):

Note: Primary receptacles are NOT included

- Ice pack
- Absorbent material
- Sealable plastic bag (secondary packaging)
- Submission form
- Styrofoam box
- UN 3373 label

- Rigid outer packaging
- Packing and shipping instructions

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NVSL Packages for Shipping Category B Substances

Large diagnostic kit (use for FAD investigations):

Note: Primary receptacles are NOT included

- Ice packs
- Absorbent material
- Sealable plastic bag (secondary packaging)
- Submission forms
- Styrofoam box
- UN 3373 label
- Rigid outer packaging
- Packing and shipping instructions

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NVSL Packages for Shipping Category B Substances

TB kit, slaughter:

- 6x6 zip lock bag for ear tag
- Borate buffer jar and formalin jar (primary receptacles)
- Absorbent material
- Sealable plastic bag (secondary packaging)
- Submission forms
- Rigid outer packaging with required markings
- Packing and shipping instructions
- Return label

NVSL Packages for Shipping Category B Substances

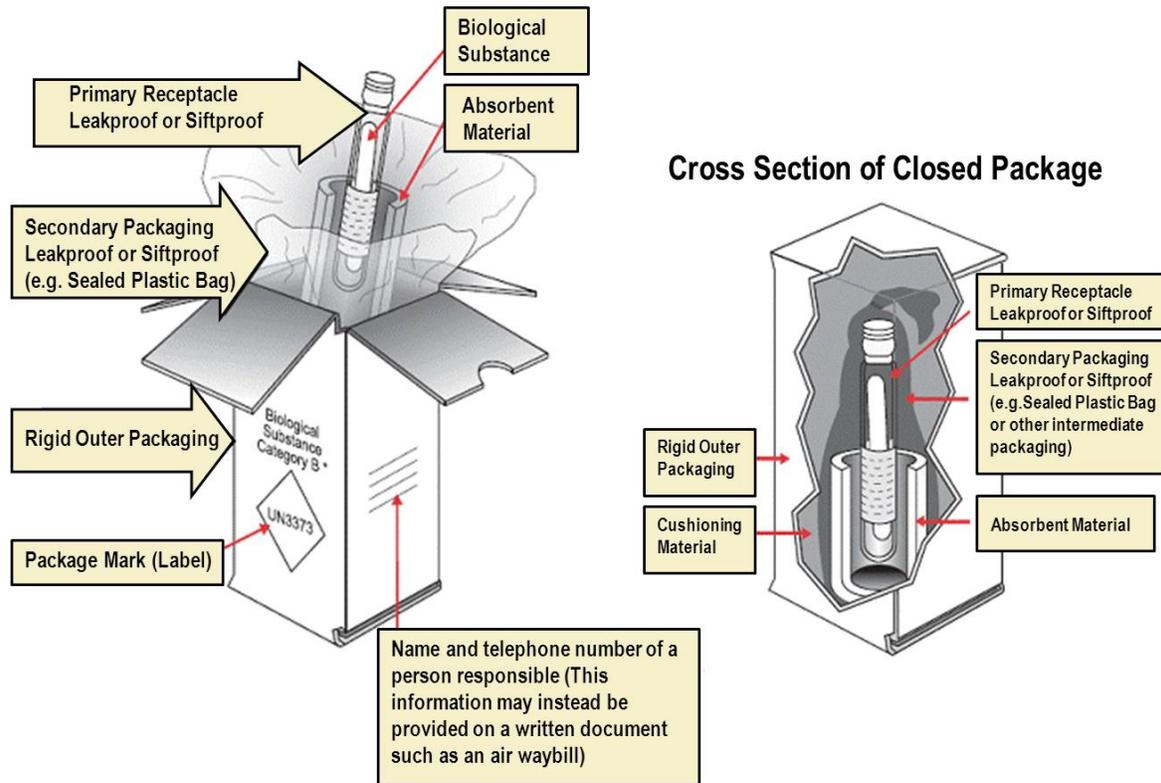
TB kit, deer:

- Retained tag
- Formalin jar and whirl-pak bag (primary receptacles)
- Absorbent material
- Ice pack
- Return label
- Sealable plastic bag (secondary packaging)
- Submission forms
- Rigid outer packaging with required markings
- Packing and shipping instructions

Packing and Labeling of Category B Substances

Image of proper packaging and labeling for Category B substances

Packing and Labeling of Category B Substances



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Packing and Labeling: Sample FedEx Shipping Papers (Category B Substances)

Image of properly filled out FedEx Airbill for shipping Category B substances

Packing and Labeling: Sample FedEx Shipping Papers (Category B Substances)

Example: FedEx Shipping Document for Biological Substance, Category B

The following information must be identified on the FedEx Airbill.

1 From (Sender's Name, Address, City, State, ZIP) **A**

2 To (Receiver's Name, Address, City, State, ZIP) **D**

3 (Sender's Name, Address, City, State, ZIP) **B**

4 (Express Package Service, Express Freight Service) **C**

5 (Packaging) **C**

6 (Special Handling) **C**

7 (Payment) **F**

8 (Residential Delivery Signature Options) **F**

9 (Does this shipment contain dangerous goods?) **D**

10 (Dry Ice, Cargo Aircraft Only) **F**

11 (Number of Packages, Total Weight, Total Declared Value) **F**

12 (Sender's Copy) **E**

- “A” “To”/“From” information: Complete “To” and “From” information.
- “B” Priority Shipping: The fastest shipping service must be selected (e.g., Priority Overnight).
- “C” Other Packaging: Select “Other” packaging. FedEx packaging cannot be used to ship these materials.
- “D” Dangerous Goods Designation: Select the “Yes”, “Shipper’s Declaration not required” box.
- “E” Proper Shipping Name and UN3373: For FedEx USA Airbills, the text “Biological Substance, Category B, UN3373” must be written in any free area of the Airbill.
- “F” Number of Packages: Enter the number of packages shipped (typically “1”) and the total weight.

Packing and Labeling: Sample UPS Shipping Papers (Category B Substances)

Image of properly filled out UPS shipping document for Category B substances

Packing and Labeling: Sample UPS Shipping Papers (Category B Substances)

Example: UPS Shipping Document for Biological Substance, Category B

Instructions on completion of the form are provided on its reverse side.

Please Note: In addition, the text "Biological Substance, Category B, UN3373" must be written in any free area of the Shipping Document.

3	WEIGHT	LTR	PAX	WEIGHT	DIMENSIONAL WEIGHT # Fractions	LARGE PACKAGE	4	SHIPPER RELEASE
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					

UPS Next Day Air[®]
UPS Worldwide Express[®]
Shipping Document

See Instructions on back. Visit UPS.com or call 1-800-PICK-UPS[®] (800-742-5877) for additional information and UPS Terms and Conditions.

TRACKING NUMBER 231 300 707 5

1 SHIPMENT FROM
SHIPPER'S UPS ACCOUNT NO.
REFERENCE NUMBER
Biological Substance, Category B, UN3373

NAME TELEPHONE
COMPANY
STREET ADDRESS
CITY AND STATE ZIP CODE

2 EXTREMELY URGENT DELIVERY TO
NAME TELEPHONE
COMPANY
STREET ADDRESS DUPL./FOR
CITY AND STATE (INCLUDE COUNTRY IF INTERNATIONAL) ZIP CODE

3 SERVICE
DATE OF SERVICE
NEXT DAY AIR
FOR WEEKENDS, SERVICES
SATURDAY PICKUP
SCHEDULED VALUE
INSURANCE
F.O.D. (See instructions on back for details regarding F.O.D. tag in package)

4 SERVICE
DATE OF SERVICE
EXPRESS (INTL)
DOCUMENTS ONLY
SATURDAY DELIVERY (See instructions)

5 SERVICE
DATE OF SERVICE
SATURDAY DELIVERY (See instructions)

6 SERVICE
DATE OF SERVICE
SATURDAY DELIVERY (See instructions)

7 ADDITIONAL HANDLING CHARGE
TOTAL CHARGES

8 METHOD OF PAYMENT
No Payment
Bill to Account
Bill to Third Party
Credit Card
American Express
Check

9 RECEIVER'S/THIRD PARTY'S UPS ACCT. NO. OR MAJOR CREDIT CARD NO.
THIRD PARTY'S COMPANY NAME
STREET ADDRESS
CITY AND STATE ZIP CODE

10 SHIPPER'S SIGNATURE X DATE OF SHIPMENT
All shipments are subject to the terms contained in the UPS Terms and Conditions of Service, which are available at ups.com and local UPS offices.

010191120 1/10 © UPS COPY

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Packing and Labeling: Sample FedEx Shipping Papers (Exempt Animal Specimen)

Image of properly filled out FedEx Airbill for shipping Exempt Animal Specimens

Packing and Labeling: Sample FedEx Shipping Papers (Exempt Animal Specimen)

Example: FedEx Shipping Document for Exempt Animal Specimen

“A” “To”/“From” information: Complete “To” and “From” information.

“B” Priority Shipping: Priority Overnight shipping is not required.

“C” Other Packaging: Select “Other” packaging. FedEx packaging cannot be used to ship these materials.

“D” Dangerous Goods Designation: Select the “No” box. This material is not technically classified as a dangerous goods as long as the patient specimen is packaged and labeled as an Exempt Animal Specimen.

“E” Number of Packages: Enter the number of packages shipped (typically “1”) and the total weight.

Infectious Substances

- An exposure occurs when an infectious substance is released outside of the protective packaging, resulting in physical contact with humans or animals
- **Improperly packaged samples, regardless of their classification, will be considered as a potential hazard if there is leakage of package contents**

SECTION: The Bottom Line

LESSON: The Bottom Line

The Bottom Line

- Shipper's Responsibilities
- Best Practices
- Penalties
- Packaging Manufacturers and Distributors

LESSON: Shipper's Responsibilities

Shipper's Responsibilities

- Your primary responsibility as a shipper is to comply with all the requirements of 49 CFR, IATA, and your carrier (FedEx or UPS)
- The regulations are clear that it is the responsibility of the shipper (not the courier or the recipient) to assure that the contents are properly packaged
- Carriers may refuse to accept materials that are improperly packaged

LESSON: Best Practices

Best Practices

- Do not send specimens inside syringes; use proper 1° receptacles
- Use gel packs to keep samples cold; never use wet ice
- Do not wrap submission form (itemized list of contents) around the individual samples; enclose the form in a watertight bag and place it on top of the specimens, between the 2° and outer packagings

- Even if materials are unregulated, you should always prepare packages so as to avoid leakage of contents
- Label each specimen (animal ID, owner's name, or other identification)
- Remove any old or conflicting labels on the package

LESSON: Penalties

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Penalties

- Violations of the Hazardous Materials Regulations may result in civil penalties ranging from \$450 to \$175,000 per violation, and criminal penalties of fines and up to ten years in prison

LESSON: Packaging Manufacturers and Distributors

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Packaging Manufacturers (1 of 2)

Air Sea Atlanta

1234 Logan Circle

Atlanta, GA 30318

Phone: 404-351-8600

Web: www.airseatlanta.com

Casing Corporation

P.O. Box 820369

Dallas, TX 75382-0369

Phone: 800-358-6866

Web: www.casingcorp.com

Cargo Pak Corporation
306-A White Street South
Wake Forest, NC 27587
Phone: 800-266-0652
Web: www.cargopak.com

DG Supplies, Inc.
28 C Industrial Drive
Hamilton, NJ 08619
Phone: 800-347-7879
Web: www.dgsupplies.com

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Packaging Manufacturers (2 of 2)

EXAKT Technologies, Inc.
7416 North Broadway
Extension, Suite E
Oklahoma City, OK 73116
Phone: 800-866-7172
Web: www.exaktpak.com

Inmark, Inc.
220 Fisk Drive, S.W.
Atlanta, GA 30336
Phone: 404-267-2020;

800-646-6275 (outside Georgia)

Web: www.inmarkinc.com

SAF-T-PAK, Inc.

101, 17872 - 106 Avenue

Edmonton, Alberta, Canada

T5S 1V4

Phone: 800-841-7484

Web: www.saftpak.com

ThermoSafe Brands

3930 N. Ventura Drive

Arlington Heights, IL 60004

Phone: 866-484-4394

Web: www.thermosafe.com

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Instructions for Knowledge Review

To answer the following questions, you may want to print the following for reference (click on the link to open a copy of the file):

- [Classification Flow Chart](#)
- [Shipping Checklist](#)

SECTION: Knowledge Review, References, and Conclusion

LESSON: Knowledge Review

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Question 1

Completing this training prepared me to package:

- A. Category A infectious substances
- B. Category B infectious substances
- C. dry ice
- D. all of the above

Correct answer:

B) Category B infectious substances

This course covers shipping Category B substances, not Category A substances or shipping with dry ice

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Question 2

Who is ultimately responsible for assuring the integrity of the packaging of Category B substances?

- A. the shipper
- B. the packaging manufacturer
- C. the courier
- D. the recipient

Correct answer:

A) the shipper

The regulations are clear that it is the responsibility of the shipper to assure that the contents are properly packaged

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Question 3

The carrier may refuse to accept any package for any reason pertaining to contents, packaging, labeling, markings or documentation

- A. true
- B. false

Correct answer:

A) TRUE

Carriers may refuse to accept packages that are improperly prepared

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Question 4

If you incorrectly package, label or document your package you may incur:

- A. fines
- B. time in prison
- C. refusal of the carrier to accept the package
- D. all of the above

Correct answer:

D) all of the above

You risk all of the above

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Question 5

List (in order) the necessary components of the basic triple package in order from inside to outside of the package:

secondary packaging

absorbent material

itemized list of contents

rigid outer packaging

primary receptacle

Correct answer:

- 3) secondary packaging
- 2) absorbent material
- 4) itemized list of contents
- 5) rigid outer packaging
- 1) primary receptacle

In order:

- 1. primary receptacle: must be sealed and leakproof
- 2. absorbent material: inside each secondary packaging
- 3. secondary packaging: must be sealed and leakproof
- 4. itemized list of contents: between secondary and outer packaging
- 5. rigid outer packaging

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Question 6a

You have collected a dried blood sample for shipment to a contract lab for genotyping. How will this sample be classified?

- A. exempt animal specimen
- B. biological substance, Category B
- C. unregulated
- D. Category A infectious substance

Correct answer:

C) unregulated

Dried blood spots are unregulated (not subject to the requirements as Division 6.2 materials)

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Question 6b

Now, based on your classification and identification of this sample, how will it be packaged for shipment? (Select all that apply)

- A. leakproof primary receptacle
- B. leakproof secondary packaging with sufficient absorbent for liquids
- C. rigid outer packaging
- D. none of the above apply

Correct answer:

D) none of the above apply

Dried blood spots are unregulated, so there are no packaging requirements

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Question 6c

You've packaged your sample and are now ready to ship; what mark and label will need to be affixed to the package? (Select all that apply)

- A. UN 3373 mark
- B. no marks are required
- C. "exempt animal specimen"
- D. name and telephone number of person responsible

Correct answer:

B) no marks are required

Dried blood spots are unregulated, so there are no marking and labeling requirements

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Question 7a

You received an RSSS obex sample in formalin from a state slaughter plant to be submitted to a contract lab for scrapie testing. How will you classify and identify it (based on the Classification Flow Chart)?

- A. exempt animal specimen
- B. biological substance, Category B
- C. unregulated
- D. Category A infectious substance

Correct answer:

A) exempt animal specimen

Slaughter samples from apparently healthy animals have a minimal likelihood of containing a pathogen and are classified and identified as exempt animal specimens

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Question 7b

Now, based on your classification and identification of this sample, how will it be packaged for shipment? (Select all that apply)

- A. leakproof primary receptacle
- B. leakproof secondary packaging with sufficient absorbent for liquids
- C. rigid outer packaging
- D. none of the above apply

Correct answer:

A) leakproof primary receptacle

B) leakproof secondary packaging with sufficient absorbent for liquids

C) rigid outer packaging

Exempt animal specimens must be properly packaged to prevent any leakage

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Question 7c

You've packaged your sample and are now ready to ship; what mark and label will need to be affixed to the package? (Select all that apply)

- A. UN 3373 mark
- B. no marks are required
- C. "exempt animal specimen"
- D. name and telephone number of person responsible

Correct answer:

C) "exempt animal specimen"

Exempt animal specimens must be properly marked with the words "exempt animal specimen"

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Question 8a

You have collected the obex from a found dead cow on a farm. The sample is fresh and will be sent on ice to a contract lab for BSE surveillance testing. How will you classify and identify it (based on the Classification Flow Chart)?

- A. exempt animal specimen
- B. biological substance, Category B
- C. unregulated
- D. Category A infectious substance

Correct answer:

B) biological substance, Category B

Samples from on-farm mortalities are considered likely to contain pathogens, so they are classified as Class 6.2, infectious substances and identified as biological substance, Category B

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Question 8b

Now, based on your classification and identification of this sample, how will it be packaged for shipment? (Select all that apply)

- A. leakproof primary receptacle
- B. leakproof secondary packaging with sufficient absorbent for liquids

C. rigid outer packaging

D. none of the above apply

Correct answer:

A) leakproof primary receptacle

B) leakproof secondary packaging with sufficient absorbent for liquids

C) rigid outer packaging

The packaging for both Category B and exempt patient specimens consists of three basic components:

1. Leakproof primary receptacle(s) (specimen container)

2. Leakproof secondary packaging with sufficient absorbent for liquids

3. An outer packaging of adequate strength for its capacity, mass, and intended use, and with at least one surface having minimum dimensions of 100 mm x 100 mm (4 in x 4 in)

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Question 8c

You've packaged your sample and are now ready to ship; what mark and label will need to be affixed to the package? (Select all that apply)

A. UN 3373 mark

B. no marks are required

C. "exempt animal specimen"

D. name and telephone number of person responsible

Correct answer:

A) UN 3373 mark

D) name and telephone number of person responsible

For Category B substances, the name and telephone number of a person who is either knowledgeable about the material being shipped and has comprehensive emergency response and incident mitigation information for the material, or has immediate access to a person who possesses such knowledge and information, must be included on a written document (such as an air waybill or bill of lading) or on the outer packaging. The UN 3373 mark and the proper shipping name (biological substance, Category B) must also appear on the package.

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Question 9a

You have collected whole blood from a tuberculin responder that will be submitted to a **contract laboratory** for gamma interferon testing. How will you classify and identify it (based on the Classification Flow Chart)?

- A. exempt animal specimen
- B. biological substance, Category B
- C. unregulated
- D. Category A infectious substance

Correct answer:

A) exempt animal specimen

Samples going to a state or contract laboratory that are direct patient specimens with minimal likelihood of containing a pathogen are classified as exempt animal specimens

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Question 9b

Now, based on your classification and identification of this sample, how will it be packaged for shipment? (Select all that apply)

- A. leakproof primary receptacle
- B. leakproof secondary packaging with sufficient absorbent for liquids
- C. rigid outer packaging
- D. none of the above apply

Correct answer:

A) leakproof primary receptacle

B) leakproof secondary packaging with sufficient absorbent for liquids

C) rigid outer packaging

Exempt animal specimens must be properly packaged to prevent any leakage

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Question 9c

You've packaged your sample and are now ready to ship; what mark and label will need to be affixed to the package? (Select all that apply)

- A. UN 3373 mark
- B. no marks are required
- C. "exempt animal specimen"
- D. name and telephone number of person responsible

Correct answer:

C) "exempt animal specimen"

Exempt animal specimens must be properly marked with the words "exempt animal specimen"

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Question 10a

After collecting whole blood for genotyping from a sheep flock, you're instructed to send the blood to NVSL. How will you classify and identify it (based on the Classification Flow Chart)?

- A. exempt animal specimen
- B. biological substance, Category B
- C. unregulated
- D. Category A infectious substance

Correct answer:

B) biological substance, Category B

Most samples going to NVSL, when pathogens have not been inactivated, are classified as Class 6.2, infectious substances and identified as biological substance, Category B

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Question 10b

Now, based on your classification and identification of this sample, how will it be packaged for shipment? (Select all that apply)

- A. leakproof primary receptacle
- B. leakproof secondary packaging with sufficient absorbent for liquids
- C. rigid outer packaging
- D. none of the above apply

Correct answer:

- A) leakproof primary receptacle
- B) leakproof secondary packaging with sufficient absorbent for liquids
- C) rigid outer packaging

The packaging for both Category B and exempt patient specimens consists of three basic components:

1. Leakproof primary receptacle(s) (specimen container)
2. Leakproof secondary packaging with sufficient absorbent for liquids
3. An outer packaging of adequate strength for its capacity, mass, and intended use, and with at least one surface having minimum dimensions of 100 mm x 100 mm (4 in x 4 in)

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Question 10c

You've packaged your sample and are now ready to ship; what mark and label will need to be affixed to the package? (Select all that apply)

- A. UN 3373 mark
- B. no marks are required
- C. "exempt animal specimen"
- D. name and telephone number of person responsible

Correct answer:

- A) UN 3373 mark
- D) name and telephone number of person responsible

For Category B substances, the name and telephone number of a person who is either knowledgeable about the material being shipped and has comprehensive emergency response and incident mitigation information for the material, or has immediate access to a person who possesses such knowledge and information, must be included on a written document (such as an air waybill or bill of lading) or on the outer packaging. The UN 3373 mark and the proper shipping name (biological substance, Category B) must also appear on the package.

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Question 11a

You've just completed an FAD investigation and have collected blood, serum and tissue samples for submission to NVSL. All samples will be shipped together. How will you classify and identify the samples (based on the Classification Flow Chart)?

- A. exempt animal specimen
- B. biological substance, Category B
- C. unregulated
- D. Category A infectious substance

Correct answer:

B) biological substance, Category B

Unknown samples of infectious substances shipped for testing and diagnosis (prior to confirmation of a foreign animal disease by NVSL) are classified as Class 6.2, infectious substances and identified as biological substance, Category B.

Note:

- 1. If you strongly suspect the sample contains a Category A infectious substance, see your ADD first.
- 2. After NVSL confirms the presence of a Category A infectious substance, the classification of any further shipments will change.

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Question 11b

Now, based on your classification and identification of the samples, how will they be packaged for shipment? (Select all that apply)

- A. leakproof primary receptacle
- B. leakproof secondary packaging with sufficient absorbent for liquids
- C. rigid outer packaging
- D. none of the above apply

Correct answer:

- A) leakproof primary receptacle
- B) leakproof secondary packaging with sufficient absorbent for liquids
- C) rigid outer packaging

The packaging for both Category B and exempt patient specimens consists of three basic components:

1. Leakproof primary receptacle(s) (specimen container)
2. Leakproof secondary packaging with sufficient absorbent for liquids
3. An outer packaging of adequate strength for its capacity, mass, and intended use, and with at least one surface having minimum dimensions of 100 mm x 100 mm (4 in x 4 in)

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Question 11c

You've packaged your samples and are now ready to ship; what mark and label will need to be affixed to the package? (Select all that apply)

- A. UN 3373 mark
- B. no marks are required
- C. "exempt animal specimen"
- D. name and telephone number of person responsible

Correct answer:

- A) UN 3373 mark
- D) name and telephone number of person responsible

For Category B substances, the name and telephone number of a person who is either knowledgeable about the material being shipped and has comprehensive emergency response and incident mitigation information for the material, or has immediate access to a person who possesses such knowledge and information, must be included on a written document (such as an air waybill or bill of lading) or on the outer packaging. The UN 3373 mark and the proper shipping name (biological substance, Category B) must also appear on the package.

LESSON: References and Conclusion

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Shipping with FedEx

- Although the Veterinary Services contract for overnight shipping is with UPS, we have permission to ship Biological Substance, Category B (UN 3373) samples using FedEx if that is more practical than shipping by UPS. Samples submitted to the Veterinary Services Foreign Animal Disease Diagnostic Laboratory (FADDL) at Plum Island must always be shipped by FedEx.
- Not all staffed FedEx locations accept packages marked with the UN 3373 diamond. Dangerous goods shipments are not accepted at FedEx Office® Print and Ship Center locations, FedEx Authorized ShipCenter® locations or FedEx ShipSite® locations (such as OfficeMax).
- Packages can be accepted by FedEx Express drivers making a scheduled pickup at a customer location.
- To find FedEx locations that accept UN 3373 packages, use this link: [Find FedEx Locations](#). Enter a ZIP code, city, or address. Select the “Filter” button, then select “Additional services”, and “Ship dangerous goods”. We recommend that you verify the last drop-off time for the day.
- For additional information on shipping dangerous goods and hazardous materials with FedEx, follow this link: <http://www.fedex.com/us/service-guide/our-services/dangerous-goods-hazmat/>

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References

The following are links to information you may want to save or print:

- [Classification Flow Chart](#)
- [Shipping Checklist](#)
- [Exempt Animal Specimen labels \(Avery 5160 format\)](#)
- [Example FedEx Airbill for Biological Substance, Category B](#)
- [Example FedEx Airbill for Exempt Animal Specimen](#)
- [Example UPS Airbill for Biological Substance, Category B](#)
- [Hazard Classes](#)
- [Indicative Examples of Category A Infectious Substances](#)
- [Link to PHMSA \(DOT\) Hazardous Materials Regulations website](#)
- [Link to IATA website](#)
- [49 CFR 173.99 DOT regulations for shipping Category B infectious substances](#)
- [IATA Packing Instruction 650 for shipping Category B infectious substances by air](#)
- [FedEx brochure: "Your Guide to Proper Packaging"](#)
- [Supporting documentation for transporting specimens for routine testing](#)

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