University of Colorado at Boulder

Shipping Biological Materials Certification Course

Environmental Health and Safety

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Introduction

The purpose of this training module is to familiarize the Principal Investigator and lab personnel with the regulations, different shipping categories; and proper labeling and packaging of biological materials. The information in the slides will provide just an overview. The links in the slides and the support resources and packing instructions at www.colorado.edu/ehs/training/biosafety.html will provide the necessary shipping details.
Outline of Course

Introduction

Packing & Shipping Infectious Substances
- Roles, Responsibilities, & Regulations
- Training Requirements
- Definitions
- Classifications & Identification of Infectious Substances
- Packing Instructions, Materials, & Labels
- Shipper’s Declaration for Dangerous Goods

International Aspects

Certification Quiz

Please contact EH&S at 492-6025 if you have questions or need assistance in completing this course.
✓ Requirements and regulations change frequently and are subject to interpretation.

✓ This training is required every two years unless requirements or regulations significantly change within this time frame.

✓ EH&S will notify you when training is due. Please make sure to keep your training records available.
Why Should We Follow Regulations?

- safety reasons
- legal reasons
- financial reasons

Authorities may examine
- laboratories
- documentation
- normal packages
- all “leakers”
Sources of Regulations

United Nations (UN) COETDG (~30 countries)

Model Regulations

Intl Civil Aviation Org (ICAO)

Technical Instructions

IATA

US

Canada

Other Countries

DGR

CFR 49

TDGR

Regs
The United States

Department of Transportation - DOT writes and enforces regulations. A Federal officer, employee, or agent authorized by the Secretary of Transportation to conduct inspections or investigations under the Federal hazardous material transportation law.

Federal Aviation Administration (FAA) can be given authorization by the Secretary of Transportation to enforce DOT regulations.
An infectious substance is regulated as a **Hazardous Material** under the U.S. Department of Transportation’s (DOT’s) Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). The HMR apply to any material DOT determines is capable of posing an unreasonable risk to health, safety, and property when transported in commerce. An infectious substance must conform to all applicable HMR requirements when offered for transportation or transported by air, highway, rail, or water. **Regulations are now consistent with international standards - IATA, UN, WHO**
Sources of Information

IATA Dangerous Goods Regulations current edition (annual)

- an airline trade publication
- developed directly from ICAO
- a guide recognized by the world’s airlines
- govern shipping regulated materials by air, nationally and internationally
- no legal authority
Guidance on Regulations for the Transport of Infectious Substances (2009-2010)
Applicable from 1 January 2009
WHO/HSE/EPR/2008.10

Sources of Information

Federal Register

- Title 49 - Transportation
- continually updated
- available on-line

http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&tpl=%2Findex.tpl
These regulations work, and workers are protected!

**WHO, 2005**

In 2003, **4,920,000** packages of infectious substances were shipped worldwide. Only **106** (0.002%) of the packages were reported damaged. **All** of the packages contained absorbent material which contained the leaking material. **NONE** of the secondary or outer containers was damaged.

**WHO, 2007**

To date, **NO** reported cases of illness due to the release of infectious substance during transport.
These regulations apply to anyone who...

- packs,
- ships,
- handles, or
- carries
dangerous goods.
USA: Regulations DO NOT apply to Category B substances and patient specimens transported by private or contract carrier in motor vehicles used only for transporting same.
Transport by Courier

- OSHA regulations apply
- biohazard labels
- double containers
- stabilized containers
- no passengers
- taxis OK
Transport by Airlines

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

State Variations
Each country or “state” may adopt more stringent regulations

Operator Variations
Every airline is allowed to adopt more rigid regulations in place
Who Is a Shipper?

A shipper can be anyone who
- offers dangerous goods for transport to a commercial carrier (DHL, FedEx, Delta, British Air, etc.) or
- signs a *Shipper’s Declaration for Dangerous Goods*.

could be you
could be courier
Training Requirements

Shippers of Category A infectious substances must:

- **be trained**
  - general: functions, regulations
  - function-specific: packing, handling
  - safety: hazards presented by infectious substances, safe handling, and emergency response procedures
  - security: if shipping Category A, or select agents, or otherwise appropriate
- **be tested** (documentation of passing)
- **receive a certificate** with details of training
- **be certified** by the employer (EH&S)
Retraining is required.

IATA  
every 2* years

DOT (USA)  
every 3* years

*Required sooner if requirements or regulations change within this time frame.
When you pack and ship you must ...

- **DECIDE** if Substance Is a Hazardous Material / Dangerous Good and Subject to Regulations
- **CLASSIFY** the Substance
- **IDENTIFY** the Substance
- **SELECT** Packing Instructions and Packaging
- **PACK** the Substance Correctly
- **MARK** and **LABEL** the Package
- **DOCUMENT** the Shipment if Category A
Definitions

dangerous goods -- articles or substances which are capable of posing a risk to health, safety, property or the environment and which are shown in the list of dangerous goods in the IATA Dangerous Goods Regulations
Definitions

*hazardous material* -- a substance or material that the Secretary of Transportation has determined is capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and has designated as hazardous under section 5103 of Federal hazardous materials transportation law (49 U.S.C. 5103).
**Definitions**

*infectious substance* -- substances known or reasonably expected to contain pathogens

*pathogens* -- microorganisms (including bacteria, viruses, fungi, parasites, rickettsiae, and prions) which can cause disease in humans or animals
Definitions

**culture** -- the result of a process by which pathogens are amplified or propagated

**patient specimen** -- human or animal material for diagnosis, research, treatment, or prevention purposes (e.g., serum, excreta, secreta, tissue, body fluids, organs, parts, and swabs of same, culture media).
**Definitions**

*toxic substance* -- a substance that is liable to cause death or injury or to harm human health if swallowed, inhaled or contacted by the skin.

**Note:** Toxins from plant, animal, or bacterial sources which do not contain any infectious substances OR toxins that are contained in substances which are not infectious substances must be considered for classification in Division 6.1 and assignment to UN 3172.

Contact EH&S for assistance if shipping a *toxic substance*
The First Question:
Is the Substance a Hazardous Material / Dangerous Good?

- **NO**: Regulations DO NOT apply
- **YES**: Regulations apply

Classify the substance
DOT & IATA Classes of Dangerous Goods

Class 1  Explosives
Class 2  Gasses
Class 3  Flammable Liquids
Class 4  Flammable Solids
Class 5  Oxidizing Substances
Class 6  Toxic / Infectious Substances
  6.1 Toxic Substances
  6.2 Infectious Substances
Class 7  Radioactive Substances
Class 8  Corrosive Substances
Class 9  Miscellaneous

Our Topic
Classification of Infectious Substances

- Infectious Substances
  - Category A Substances
    - Patient Specimens
  - Category B Substances
    - Exempt Substances
      - Patient Specimens
      - Exempt Human / Animal Specimens
    - Medical or Clinical Wastes
    - Infected Animals
  - Biological Products
    - Genetically Modified Micro-Organisms and Organisms
Classification of Infectious Substances

Category A Substances

- an infectious substance in a form that, when exposure to it occurs, is capable of causing permanent disability, life-threatening or fatal disease in healthy humans/animals
- assigned to UN 2814 (affecting humans) or UN 2900 (affecting animals only)
- follow Packing Instructions 620
- DOT and IATA include list of Category A substances
Classification of Infectious Substances

Examples of Category A Substances

**viruses** -- ebola, junin, lassa, machupo, marburg, monkeypox, variola

- **viruses** -- West Nile, polio, avian influenza, HIV, hepatitis B, rabies, Rift Valley fever

- **bacteria** -- *M. tuberculosis* *Rickettsia*, *S. dysenteriae* 1, VT, *E. coli*, *B. anthracis*, *B. abortus*, *B. pseudomalei*, *F. tularensis*, *Y. pestis*
Classification of Infectious Substances

Category B Substances

- an infectious substance which does not meet the criteria for inclusion in Category A
- assigned to UN 3373
- follow Packing Instructions 650

Examples -
- most clinical microbiology specimens & organs
- usually pure cultures
- specimens for HIV or HCV quantitation
- specimen to be cultured for organisms
- could be expected to cause infection
- serum tested for Antibodies to infectious agents
Classification of Infectious Substances

Exempt Human / Animal Specimens

Specimens for which there is minimal likelihood that pathogens are present... professional judgment is required.

Examples – collected directly from humans or animals for purposes such as research, diagnosis, investigational activities, disease treatment and prevention:

- biopsies for cancer testing
- excreta, secreta, blood and its components, tissue and tissue fluid swabs, body parts
- serum for non-ID Ab / serology tests
- blood and urine for chem, glu, hor, PSA, preg, TDM, organ function tests, drugs, insurance purposes
Classification of Infectious Substances

Patient Specimens

Must be classified as one of these:

Category A Substances
- an infectious substance which is transported in a form that, when exposure to it occurs, is capable of causing permanent disability, life-threatening or fatal disease in otherwise healthy humans or animals
- assigned to UN 2814 or UN 2900

Category B Substances
- likely to contain or being tested for pathogen(s) or has reasonable potential to cause disease in humans or animals
- assigned to UN 3373

Exempt Human / Animal Specimens
- does not contain an infectious substance or that is likely to cause disease in humans or animals
Classification of Infectious Substances

Exempt Substances

Because of the low hazard they present, the following substances of biological origin are exempted from hazardous material regulations (DOT) and dangerous goods requirements (IATA).

- do not contain an infectious substance
- will not cause human or animal disease
- contain inactivated / neutralized pathogens, no longer pose a health risk
- environmental samples (water, soil, food, etc.)
- blood / components for transfusion or transplant
- dried blood spots & fecal occult blood specimens
- decontaminated medical waste
If known or reasonably expected to contain a pathogen that meets the definition of a Category A or B infectious substance must be assigned the identification number UN 2814, UN 2900, or UN 3373, as appropriate.

- derived from living organisms which are manufactured and distributed in accordance with the appropriate national authorities, which may have special licensing requirements
- used either for prevention, treatment, or diagnosis of disease in humans or animals
- for development, experimental or investigational purposes related thereto
- include, but not limited to finished or unfinished products such as vaccines
Genetically Modified Micro-Organisms (GMMOs) and Organisms (GMOs)

- genetic material has been purposely altered through genetic engineering in a way that does not occur naturally
- do not meet the definition of “toxic” or an “infectious substance” but are capable of altering animals, plants or microbiological substances in a way not normally the result of natural reproduction
- assigned to UN 3245
- follow Packing Instructions 959
Classification of Infectious Substances

Medical or Clinical Wastes

- wastes derived from the medical treatment of animals or humans or from bio-research
- medical or clinical wastes containing Category A infectious substances - assigned to UN 2814 or UN 2900 as appropriate
- medical or clinical wastes containing Category B infectious substances, or which are reasonably believed to have a low probability of containing infectious substances – assigned to UN 3291 and follow Packing Instructions 622
Classification of Infectious Substances

Infected Animals

- a live animal that has been intentionally infected and is known or suspected to contain an infectious substance
- transport by air is prohibited unless infectious substance contained can be consigned by any other means
- may only be transported under terms and conditions approved by the appropriate national authority
- animal carcasses affected by pathogens of Category A or which would be assigned to Category A in cultures only, must be assigned to UN 2814 or UN 2900 as appropriate
- other animal carcasses affected by pathogens included in Category B must be transported in accordance with provisions determined by the competent authority
Classification of Infectious Substances

Miscellaneous Dangerous Goods

DRY ICE
Classification of Infectious Substance Being Shipped

### Patient Specimen
(professional judgement should be used; if unable to make professional judgement, consider Category B)
- for tests not related to an infectious disease
- or no reason to suspect the specimen is infectious
- or unlikely to cause disease in humans or animals
- or does not contain, has minimal likelihood of containing, or is not being tested for pathogens

### Patient Specimen or Culture
(professional judgement should be used)
- likely to contain or being tested for pathogen(s)
- or has reasonable potential to cause disease in humans or animals

### Biological Substances
- does not contain infectious substance
- contains inactivated or neutralized pathogens
- contains nonpathogenic organisms
- environmental samples
- dried blood spots
- fecal occult blood specimens
- decontaminated medical waste
- to be used for transplant or transfusion

### Exempt Substance

### Exempt Human or Animal Specimen

### Category A Infectious Substance
(UN2814 or UN2900)
- known or suspected Cat A
- or is being tested for Cat A
- or has characteristics of Cat A
- or cannot rule out Cat A
- or uncertain if Cat A or Cat B
- or is a serious health risk to carrier

### Category B Infectious Substance
(UN3373)
- known or suspected Cat B
Identification of the Substance (Proper Shipping Name)

- >3,000 dangerous goods and **proper shipping names**
- Only 6 names apply to Classified Substances.
- each name…
  14 items of info needed to identify, pack, ship, and document
# 6 Proper Shipping Names
For Infectious Substances and Dry Ice

## Category A Substances

<table>
<thead>
<tr>
<th>Classification</th>
<th>UN ID No.</th>
<th>Proper Shipping Name</th>
<th>Pack Inst</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category A</td>
<td>2814</td>
<td>Infectious Substance, Affecting Humans (liquid)</td>
<td>620</td>
</tr>
<tr>
<td></td>
<td>2814</td>
<td>Infectious Substance, Affecting Humans (solid)</td>
<td>620</td>
</tr>
<tr>
<td></td>
<td>2900</td>
<td>Infectious Substance, Affecting Animals (liquid)</td>
<td>620</td>
</tr>
<tr>
<td></td>
<td>2900</td>
<td>Infectious Substance, Affecting Animals (solid)</td>
<td>620</td>
</tr>
<tr>
<td>Category B</td>
<td>3373</td>
<td>Biological Substance, Category B</td>
<td>650</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>1845</td>
<td>Dry Ice</td>
<td>954</td>
</tr>
</tbody>
</table>

## Category B Substances

- **Dry Ice**

## Note

- Category A Substances are substances that pose a significant health risk to humans.
- Category B Substances are substances that pose a moderate health risk to humans.
- Dry Ice is a substance used for cooling and is not considered a hazardous material for shipping purposes.

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### Example

**Infectious Substance, Affecting Humans (liquid)**

- UN ID: 2814
- Proper Shipping Name: Infectious Substance, Affecting Humans (liquid)
- Pack Inst: 620
Only 5 Packing Instructions

620 ---- Infectious Substance, Category A
650 ---- Biological Substance, Category B
954 ---- Dry Ice
959 ---- GMMOs and GMOs
Other -- Exempt Human & Animal Specimens

These Packing Instructions have been included as separate documents at
http://www.colorado.edu/ehs/training/biosafety.html
Packing Instruction 650

10% Formalin

≤30 mL of 10% formalin may be packed in each primary container containing infectious substances.
TABLE 7
Comparison of IATA and DOT Packing Requirements for Infectious Substances

<table>
<thead>
<tr>
<th>Packing Requirement</th>
<th>Exempt Human Specimens</th>
<th>Category B</th>
<th>Category A</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inner Containers</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>leakproof primary (1&lt;sup&gt;o&lt;/sup&gt;) and secondary (2&lt;sup&gt;o&lt;/sup&gt;) containers</td>
<td>yes d</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>pressure-resistant 1&lt;sup&gt;o&lt;/sup&gt; or 2&lt;sup&gt;o&lt;/sup&gt; container</td>
<td>--</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>absorbent between 1&lt;sup&gt;o&lt;/sup&gt; and 2&lt;sup&gt;o&lt;/sup&gt; containers e</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>list of contents between 2&lt;sup&gt;o&lt;/sup&gt; and outer package</td>
<td>--</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>positively sealed 1&lt;sup&gt;o&lt;/sup&gt; container</td>
<td>--</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td><strong>Outer Container</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>rigid outer packaging</td>
<td>--</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>strict manufacturing specifications</td>
<td>none f</td>
<td>few</td>
<td>many</td>
</tr>
<tr>
<td>name and number of responsible person</td>
<td>--</td>
<td>yes g</td>
<td>yes</td>
</tr>
<tr>
<td>markings and labels</td>
<td>yes h</td>
<td>Less</td>
<td>more</td>
</tr>
<tr>
<td><strong>Quantity Limits for Either Passenger or Cargo Aircraft</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>maximum for each 1&lt;sup&gt;o&lt;/sup&gt; container</td>
<td>--</td>
<td>1 L (1 kg)</td>
<td>50 mL (50 g)</td>
</tr>
<tr>
<td>total maximum for outer package</td>
<td>--</td>
<td>4 L (4 kg)</td>
<td>50 mL (50 g)</td>
</tr>
<tr>
<td><strong>Documentation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shipper’s Declaration for Dangerous Goods</td>
<td>--</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>emergency response telephone number</td>
<td>--</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td><strong>Costs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>cost of labor and materials to pack substance</td>
<td>least</td>
<td>more</td>
<td>most</td>
</tr>
</tbody>
</table>

---

- **a** packing directions (IATA and DOT provide only minimal standards [i.e., no detailed and numbered packing instructions] for packing and shipping Exempt Human Specimens.)
- **b** packing instructions 650
- **c** packing instructions 620
- **d** requirement not specified by IATA or DOT
- **e** not required for solid substances such as tissue and solid agar media cultures or slant
- **f** should be “of adequate strength for its intended capacity, mass, and intended use” (IATA quote)
- **g** may be placed either on the outer package or on the air waybill
- **h** Only “Exempt Human Specimen” or “Exempt Animal Specimen” is required.
Appropriate Packaging Materials

Examples of Commercial Sources For Packing Materials

http://www.dgsupplies.com/
http://www.air-sea.co.uk/
http://www.saftpak.com/

http://www.thermosafe.com/
http://www.exaktpak.com/
http://www.fishersci.com/wps/portal/HOME
http://www.airseaatlanta.com/
Packaging Containers

- The smallest external dimension of the outer packaging must not be less than 100 mm x 100 mm (3.9 inches x 3.9 inches)
- Packaging may be re-used as long as previous markings are completely defaced
Packaging Options

1. Primary culture receptacle
2. Secondary receptacle (watertight)
3. Packing material
4. Specimen record/List of contents
5. Address label
6. Orientation label (not required for shipments of 50 mL or less)
7. UN spec marking
8. Infectious Substance label

OUTER
Packaging Options

OUTER

OUTER

OUTER
Packaging Options

Shipping with Ice and Dry Ice

Place ice and dry ice OUTSIDE the secondary container.
Class 6 Infectious Substance Label
Outer Container Labels

Outer packaging used to ship a Cat A substance must have a UN label like this. The label must be printed by the manufacturer.

Outer Container Labels

Outer packaging used to ship a Cat A substance must have a UN label like this. The label must be printed by the manufacturer.

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Outer Container Labels

Outer packaging used to ship a Cat A substance must have a UN label like this. The label must be printed by the manufacturer.
Labels and Markings on Outer Container

Exempt Human Specimen

- Sender
- Receiver
- Name & number of responsible person

Exempt Human Specimen or Exempt Animal Specimen

Follow Exempt Human Specimen Directions
Labels and Markings on Outer Container

Follow Packing Instructions 650

Biological Specimen, Category B

UN3373

Sender
Receiver

name & number of person responsible for the 6.2 shipment

Biological Substance, Category B

DRY ICE, UN 1845
3 KG NET WT
Shipping with Dry Ice

NEVER TIGHTLY SEAL A CONTAINER WHICH CONTAINS DRY ICE! NEVER!

- Dry ice is a CLASS 9 dangerous good.
- ALWAYS vent outer package!
- Package must be marked and labeled.

DRY ICE
UN 1845
3 KG NET WT
### Maximum Quantity Limits for Either Passenger or Cargo Aircraft

<table>
<thead>
<tr>
<th></th>
<th>Liquids</th>
<th></th>
<th>Solids</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1°</td>
<td>Outer</td>
<td>1°</td>
<td>Outer</td>
</tr>
<tr>
<td>Cat A</td>
<td>50 mL</td>
<td>50 mL</td>
<td>50 g</td>
<td>50 g</td>
</tr>
<tr>
<td>Cat B</td>
<td>1 L</td>
<td>4 L</td>
<td>n/s</td>
<td>4 kg</td>
</tr>
<tr>
<td>n/s, not specified</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Special Provisions

**A47** - Genetically Modified Micro-organism (GMMO) and Genetically Modified Organism (GMO) which are packed in accordance with Packing Instruction 959 are not subject to any other requirements. If GMMO or GMO meet the definition of *toxic substance* or *infectious substance* and the criteria for inclusion in Class 6.1 or 6.2 (Category A or B), then DOT and IATA Regulations apply.

**A48** - Dry Ice: Packaging tests are not necessary.

**A140** - The technical name must follow in ( ) in association with the Proper Shipping Name on Shipper’s Declaration (NOT on outer package). If it is a suspected Category A substance and if technical name not known, use: “Suspected Category A Infectious Substance” in ( ) following the Proper Shipping Name on Shipper’s Declaration (NOT on outer package).
DOT Exception

Specimen packages marked as “Exempt Human Specimen” or “Exempt Animal Specimen” according to the ICAO Technical Instructions are not regulated under the Hazardous Material Regulations. In the United States, the mark “Exempt Human/Animal Specimen” is an indication that there is no infectious substance in the package. Packages bearing these marks may be accepted by an air carrier that has made a business decision not to accept hazardous materials.
DOT Classification Example

Substance for classification

- Is it known NOT to contain an infectious substance?
- Are any micro-organisms present non-pathogenic to humans and animals?
- Have the pathogens present been neutralized or inactivated so they no longer pose a health risk?
- Is it an environmental sample (e.g., food or water) that is not considered to pose a significant health risk?
- Is it a biological product or a biological material (e.g., blood product, tissue, or organ) subject to U.S. Department of Health and Human Services or U.S. Department of Agriculture regulation?
- Is it a dried bloodspot or fecal occult blood?
- Is it laundry or medical equipment, or a used health care product that conforms to 29 CFR 1910.1030?
- Is it forensic material that complies with U.S., state, local, or Indian tribal government regulations?
- Is it an agricultural product or food defined under the federal Food, Drug, and Cosmetics Act?
- Is it intended for transplant/transfusion?

Does it meet the definition of a Category A substance?

Is it a patient specimen that is unlikely to cause disease in humans or animals or for which there is only a minimal likelihood that pathogens are present; or is it a patient sample transported by private or contract carrier in a motor vehicle used exclusively for these materials?

UN2814 Infectious substance, affecting humans; or UN2900 Infectious substance, affecting animals (as appropriate)

UN3373 Biological substance, Category B

Not subject to the requirements as Division 6.2 material
Shipper’s Declaration for Dangerous Goods

ALL shipments of **Category A** substances MUST be documented on this form.
**Shipper Declaration**

Must Include:

Name and telephone # of a person who can provide emergency response and accident mitigation information

**OR**

an immediately available person or company with such knowledge.

**e.g. InfoTrac**
Incident Reporting

DOT requires that any release of an infectious substance (Category A or B) in any mode of transportation be reported.

Contact EH&S at 492-6025 to notify immediately.
EH&S has the following shipping labels available:

- Class 6 – Infectious Substance
- Class 9 - Miscellaneous
- UN3373
- Exempt Human Specimen
- Exempt Animal Specimen

Request labels at ehsbio@colorado.edu
International Shipping & Regulations...
International Travel

The transport of Infectious Substances on board an aircraft in checked or carry-on baggage or on a person is strictly prohibited and is enforced by international air carriers.
International regulations are not meant to supersede any local or national laws

http://www.colorado.edu/ehs/training/WHO_guidance.pdf
http://www.colorado.edu/ehs/training/IATA_guide_doc.pdf
http://www.colorado.edu/ehs/training/IATA_division_6.2.pdf
Consignee Responsibilities

• Obtain an import/export permit as necessary
  - you may still need to apply for the appropriate import, export, Material Transfer Agreement for the transport of these agents. Check with the Technology Transfer Office - https://www.cu.edu/techtransfer/, and
  - check with the Office of Research Integrity and Regulatory Compliance – Export Control Guidance
    http://www.colorado.edu/VCRresearch/integrity/exportcontrols/index.html

• Provide the shipper with a copy of the permit
• Ensure someone will be available to receive the package
• Let the sender know that the package arrived safely
More Stringent Regulations

- Each country or “state” may adopt more stringent regulations
- Operator Variations - every airline is allowed to adopt more rigid regulations in place
- Shipper’s Declaration – must be written in English (may also include the country of origin’s language as prescribed by national/local laws)
Refrigeration

When scheduling the shipment, keep in mind that over a long distance, replenishing of dry ice may be necessary

- is dry ice available enroute?
- can someone (typically a courier agent) replenish dry ice

Use ice packs instead of wet ice

- PREVENT leaky packages
- freeze in -70 freezers to extend life
A final reminder why these regulations exist....
I think I’m done!

Please Take Quiz