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The Shipping Infectious Substances program is designed to assist researchers in meeting all of the required regulations when shipping Division 6.2 – Infectious Substances. Information for this program is based on the International Air Transport Association’s (IATA) Dangerous Goods Regulations (DGR), 50th Edition, 2009. These regulations are primarily developed by air carriers and are updated yearly.

Definitions

- Infectious Substance:** A substance known to contain or can reasonably be expected to contain pathogens.
- Pathogen:** Microorganisms (including bacteria, viruses, rickettsia, parasites, fungi) and other agents such as prions, that can cause disease in humans or animals.
- Category A Infectious Substance:** 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.
- Category B, Biological Specimens:** An infectious substance which does not meet the criteria for inclusion in Category A.

Application

Biohazardous Material Transport through Public Areas Within a Building:

Safe biohazardous material transport is required to prevent spills and accidental exposure. Safe transport includes the following:

- Placing the biohazardous material in a primary specimen container secured with a tight-fitting cap, Parafilm, or tape.
- Placing the primary container (blood tubes, agar plates, flasks, test tubes, for example) in a secondary container with absorbent towels to cushion the primary container and absorb liquids in the event of a leak or spill. Acceptable secondary containers include plastic or metal devices with a lid or a plastic cap. If a small number of plates or tubes are involved, a ziplock bag containing absorbent material may be used.
- The secondary container must be labeled with a biohazard symbol and each primary container should be labeled with its contents. The secondary container should be a dedicated transport vessel.



Biohazardous Material Transport between Buildings on UI Campus

Biohazardous material being hand-carried and transported on foot by UI personnel from one building to another on campus must be packaged as indicated above. If the primary container is not labeled, documentation of the contents should be taped to the outside of the secondary container or placed inside.

Biohazardous Material Transport Off-campus:

When packages containing dry ice or infectious substances are shipped off campus, they are classified as “Dangerous Goods” and must be shipped according to federal agency regulations. It is the responsibility of the shipper to follow all

required regulations. Failure to comply with federal regulations could not only result in significant monetary fines, but also in exposing transport personnel and the public to biohazardous agents. Critical to this compliance is the requirement that shippers are properly trained prior to shipping these materials off campus.

If you ship:

- **By Air:** regulations are set by the [International Air Transport Association](#). IATA does not provide a copy of their DGR online, making it difficult to find and subsequently comply with the regulations. EHS's [Shipping Infectious Substances with or without Dry Ice](#) course will provide instruction on the proper preparation, packaging, labeling, and documentation requirements. FedEx and other carriers require that all shipments comply with IATA regulations.
- **By ground:** regulations are set by the [United States Department of Transportation](#) (DOT). Dangerous goods shipped by air must follow more stringent rules than those shipped using ground transport. However, if a shipper complies with air transport regulations, they have achieved shipment safety and are in compliance for ground transport. EHS's [Shipping Infectious Substances with or without Dry Ice](#) course will cover all necessary regulations to meet DOT compliance. Additional information can be found in the document, [Transporting Infectious Substances Safely](#), available from DOT, which discusses the classification of infectious substances as hazardous materials and the applicable regulations.

Please refer to a carrier's web site for more detailed information pertaining to that particular company. Links are provided below for the commonly used carriers.

Program Elements

- **Responsibilities**

The shipper is responsible for:

- Properly identifying, classifying, packing, marking, labeling and documenting the dangerous goods shipment.
- Being knowledgeable about the shipment's contents.
- Ensuring any required permits have been obtained by the receiver (consignee).

The carrier acceptance personnel are responsible for:

- Ensuring quick delivery.
- Refusing to accept the shipment, if s/he has any concern about its contents.
- Placing goods aboard an aircraft.

- **Training**

EHS's [Shipping Infectious Substances with or without Dry Ice](#) course, available online, fulfills the training requirement, regardless if one ships by air or ground. Refresher (re-certification) training is required at a minimum of every two years or with significant regulatory changes.

Documentation

Maintain accurate records of:

- **Training**

A record of employee training and certification for SIS course completion will be mailed to your departmental training coordinator. Upon receipt of this form, the employee must confirm s/he has completed all required training as listed on the certificate (e.g., BBP and/or Basic Biosafety courses). Departments must keep this training certificate to meet DOT/IATA requirements.

- **Shipper's Declaration**

A copy of the shipper's declaration must be kept on file for **2 years** after the shipment has been accepted by the initial carrier.

Assistance and Resources

- [Frequently Asked Questions](#) of EHS staff regarding the shipment of infectious substances.
- **Classifying Biological Material for Shipment**
 - A [flow-chart](#) assists in the classification of biological material for shipping requirements according to IATA's DGR.

- A [guideline](#) lists frequently shipped biological material used in research labs and their proper classification.
- [IATA Dangerous Goods Identification Chart](#) lists the shipment type/description and the associated UN number, proper shipping name, hazard class or division, hazard label, packing group, packing instructions, and maximum quantities for passenger and cargo aircraft.
- **Packing Instructions**
 - Category A, Infectious Substances affecting humans or animals must follow [Packing Instructions 602](#).
 - Biological Substances, Category B shipments must follow [Packing Instructions 650](#).
 - Exempt material should be shipped using [triple packaging](#).
 - Dry Ice shipments (without infectious substances) must follow [Packing Instructions 904](#).

References

- [Federal Aviation Administration](#)
- [FedEx](#)
 - FedEx – [Dangerous Goods Shipping](#)
- [International Air Transport Association](#)
- [United States Department of Transportation](#)
 - 49 CFR 171, 172, 173 and 175: Harmonization with the United Nations Recommendations, [Final Rule](#)
- [United Postal Service](#)
 - UPS – [Hazardous Materials Shipping](#)
- [United States Postal Service](#)
 - [39 CFR 111](#)