

1.0 Introduction

This Biosafety Standard Operating Procedure (BSOP) outlines procedures that should be followed for the movement and transport of biohazardous materials. Adherence to this procedure will ensure compliance with relevant biosafety and hazardous materials transportation legislation.

2.0 Scope

This BSOP applies to all staff and students in all locations authorized by Memorial University of Newfoundland's (MUN) Institutional Biosafety Committee (IBC) to work with biohazardous materials at any Risk Group (RG).

3.0 Definitions

Biohazardous material – any material of biological origin capable of causing illness in humans, animals or plants, as defined in MUN's Biological Safety Manual.

Movement of Biohazards - the action of moving biohazardous materials within a containment zone or between containment zones within the same building (or adjacent buildings as long as public roads are not used).

Transport of Biohazards - the action of moving biohazardous materials between buildings or locations along public roadways or through airplane/ship transport (domestic or internationally). Transportation of biohazardous materials requires training as outlined in the Transportation of Dangerous Goods (TDG) Regulations. TDG certificates for trained individuals must be in place prior to transport and must be maintained with in-lab records.

4.0 Responsibilities

This section outlines responsibilities within the university for the implementation of this BSOP.

a. Environmental Health and Safety (EHS)

- Review and amend this BSOP as necessary.

b. Department Heads

- Ensure that this BSOP is available and followed by staff/students within the department.
- The Department Head of each department that receives and/or ships dangerous goods, including hazardous waste, shall identify a person(s) who will be responsible for all aspects of handling the goods.
- Ensure that appropriate training is in place for individuals responsible for shipping and/or receiving hazardous materials.

c. Laboratory Supervisors/Principal Investigators

- Ensure that personnel under their responsibility follow this BSOP when moving and/or transporting biohazardous materials.
- Ensure that authorized personnel required to transport biohazardous materials are appropriately trained.
- Ensure that documentation of training is maintained with in-lab training records.

d. Authorized Workers

- Ensure that this BSOP is followed for any movement or transport of biohazardous materials.
- Ensure that applicable training is completed prior to transporting any biohazardous materials.

5.0 Procedure for movement of biohazardous materials

I. Movement of biohazards within a containment zone (CZ) or between CZs in the same building (or adjacent buildings not accessed via public roadways)

When moving biohazards within a CZ [e.g., from a laboratory freezer to the biosafety cabinet (BSC)], between CZs in the same building (e.g., between distinct labs in the HSC, from lab to autoclave facility), or between MUN buildings where public roads are **not** utilized, care shall be taken to avoid any spills/personal contamination.

- Movement of **RG2 and above** biohazards (non-waste) between researchers (i.e. between separate CZs) must be pre-approved by the BSO. Confirmation of approval will take the form of a completed **Biohazardous Agent Transfer Request form** (see MUNs Biosafety website; http://www.mun.ca/health_safety/OHSMS/BSMS/Biosafetyprogramforms.php). This ensures that the recipient facility is in compliance with the physical containment requirements outlined in the Canadian Biosafety Standards (CBS) and/or CFIA containment standards.
- Biohazardous materials shall be moved in labelled, leak-proof, covered containers.
- Movement of multiple containers (e.g., individual samples) requires secondary containment (e.g., box, cooler, etc).
- The outer surfaces of all containers must be appropriately disinfected prior to removal from the CZ.
- A cart is required when the number or size of the transported container(s) exceeds what can safely be carried with one hand.

- The transport route must utilize service corridors/elevators (if available). Alternatively, areas less frequented by members of the general public are to be used (see list of restricted areas for movement and transport in Section 6 of this BSOP).
- Transport of hazardous materials that must go through publicly accessible areas may only occur when there is a minimum of public present (i.e. no transport during class change times or in a full elevator).

II. Transport of Biohazards along public roadways or through airplane/ship transport (domestic or internationally)

Transportation of any hazardous material (biohazards included) along public roadways (this includes transport to and from the HSC, OSC and Marine Institute) or through air/ship transit is subject to TDG and/or International Air Transport Association (IATA) Regulations. Individuals required to transport hazardous materials must have up to date TDG training certificates appropriate to the type of transport utilized (i.e. TDG Road, TDG Air, etc.). Training certificates must be available at all times for inspection. TDG regulations alter the classification of an infectious substance from Risk Groups 1-4 to a two-category system in which Category A is for high-risk substances and Category B is for other substances. Some diagnostic or clinical specimens for which there is a minimal likelihood that infectious agents are present are exempt from these regulations (contact the BSO for more information on regulatory exemptions).

- Transport of biohazards between researchers must be pre-approved by the BSO. Confirmation of approval will take the form of a completed Biohazardous Agent Transfer Request form (see MUNs Biosafety website; http://www.mun.ca/health_safety/OHSMS/BSMS/). This ensures that the recipient facility is in compliance with Canadian Biosafety Standards.
- Biohazardous materials offered for transport must be packaged in accordance with the applicable regulations based on the class of biohazardous material. An example of a typical Type 1A triple-containment system is given in Figure 1.
- The outer surfaces of all packages shall be disinfected prior to transport from the CZ.
- A shipping document, as outlined in the TDG Regulations, must accompany applicable biohazardous consignments and copies must be retained with in-lab records.

6.0 Prohibited Areas for Biohazard Movement

The movement of hazardous materials is prohibited in the following areas:

- Food and beverage consumption areas
- Washrooms
- Carpeted areas
- Libraries
- Recreational facilities
- Meeting rooms
- Personal and administrative offices

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- Common areas accessible or used as a gathering location by the public
- Patient waiting and treatment areas
- Stores (except where hazardous materials are purchased)
- Mailrooms

In Canada, infectious materials are not permitted in the regular mail.

Shipping Infectious Substances

A Type 1A container is a triple packaging system consisting of:

- watertight primary receptacle(s);
- a watertight secondary packaging;
- absorbent material; and
- an outer packaging.

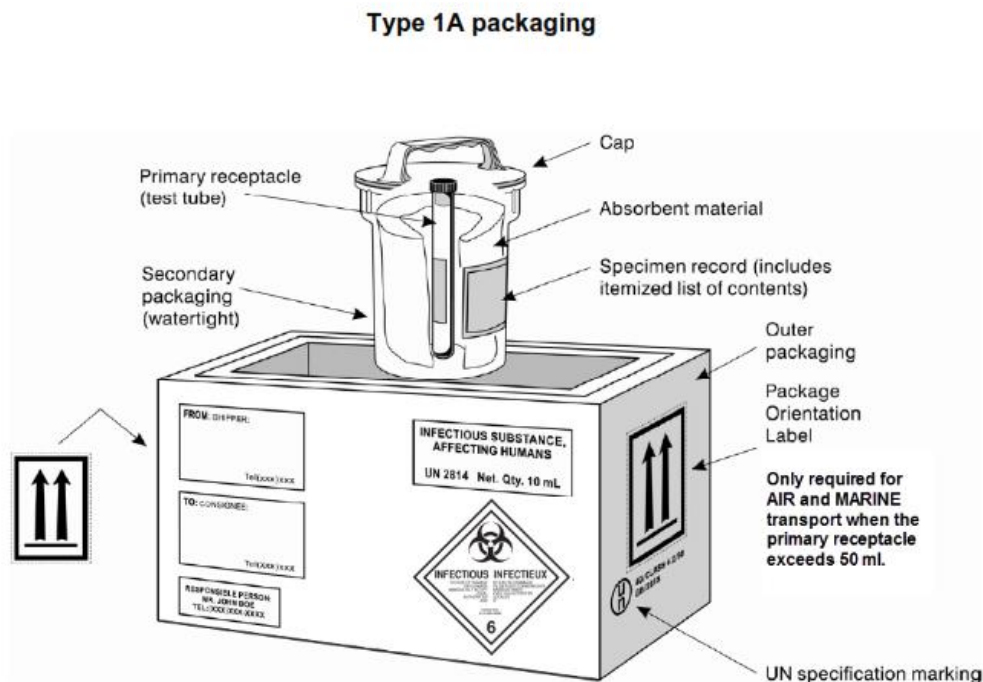


Figure 1: Example of triple packaging system for the packaging and labelling of Category A infectious substances (Figure provided by IATA, Montreal, Canada)



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References:

1. Canadian Biosafety Standards and Guidelines, 1st Ed. 2013.
2. University of Calgary – Movement of hazardous materials within buildings. 2009-09-09.

Version History:

Version	Date	Author(s)	Notes
1.0	2015-09-22	Rod Hobbs	First writing.
1.1	2015-11-05	Rod Hobbs	Final edits from IBC.