

Transfer, Procurement & Transport of Dangerous Goods Class 6.2

SCOPE

This document provides the required procedures for meeting regulatory requirements by UBC researchers transferring, procuring or transporting biological substances falling within Dangerous Goods Class 6.2.

An information sheet “UBC Biological Substance Shipping Guidelines for UBC Collaborators” to be sent to collaborators that outlines specific requirements and procedures is provided on the [SRS Biosafety website](#).

Material Transfer documents to be completed prior to shipment of biological substances falling within Dangerous Goods Class 6.2 are provided on the [SRS Biosafety website](#).

PURPOSE

To provide a consistent, institutional standard for meeting due diligence requirements as participants in the Dangerous Goods Transport Chain.

BACKGROUND

The common goal of Dangerous Goods Transport Regulations and the Human Pathogen & Toxin Regulations is public safety. This is achieved through the institution of standards for the containment of infectious or potentially infectious substances and restriction of their transfer to people and facilities that demonstrate competency by meeting the applicable standards in maintaining their containment.

RESPONSIBILITY

Individual Biosafety Permit Holder’s bears responsibility for:

- Ensuring personnel handling, receiving, packaging, documenting and/or transporting hazardous or potentially hazardous substances are adequately trained and supervised.
- Ensuring to the best of their abilities, that all hazardous or potentially hazardous substances entering or leaving their inventories do so in accordance with applicable international, federal and provincial regulations and standards.
- ensuring all members of their study teams abide by the procedures outlined in this SOP
- Providing collaborators with the information sheet “UBC Biological Substance Shipping Guidelines for UBC Collaborators” and requesting confirmation of understanding and implementation.

- Procurement and use of materials, PPE and services listed in the SOP as necessary to comply with the procedures.

All UBC member bear responsibility for:

- Ensuring they are adequately trained and certified prior to handling, receiving, packaging, documenting and/or transporting hazardous or potentially hazardous substances;
- Reporting all unsafe conditions including breaches of containment, damaged or mispackaged / mislabeled / incorrectly documented dangerous goods shipments; and
- Abiding by the procedures outlined in section 8.

REFERENCES AND DEFINITIONS

Biological Material: Pathogenic and non-pathogenic bacteria, viruses, fungi, prions, toxins, genetically engineered organisms, nucleic acids, tissue samples, toxins, diagnostic specimens, live vaccines and isolates.

Biological Substance, Category B: An infectious substance that does not meet the criteria for inclusion in Category A (i.e., not capable of causing mortality or morbidity in healthy humans or animals).

Biological Safety Cabinet (BSC): A Primary Containment Device that provides protection for personnel, the environment and the product (depending on Class) when working with biological material.

Carrier: An individual or company that has possession of dangerous goods in transport.

Consignee: The recipient of a shipment.

Consignor: The individual who prepares a shipment.

Containment: The combination of physical space delineation and operational practices that protect personnel, the immediate work environment, and the community from exposure to biological material.

Contamination: the undesired presence of infectious material or toxins on a surface or within materials.

Dangerous Goods: a product, substance or organism included by its nature or by name in laws or regulations applicable to transport by road, rail or air including but not limited to the Transport of Dangerous Act and Regulations, the ICAO Technical Instructions, the IATA Dangerous Goods Regulations, the Packaging & Transport of Nuclear Substances Regulations.

Decontamination: The process by which materials and surfaces are rendered safe to handle and reasonably free of microorganisms, toxins or prions; this may be accomplished through disinfection, inactivation, or sterilization.

Disinfectant: A chemical used for the decontamination of surfaces and equipment that cannot be autoclaved. Correct selection and use of disinfectants is critical for effective decontamination.

Disinfection: Process that eliminates most forms of living microorganisms. The effectiveness of the disinfection process is affected by a number of factors including the nature and quantity of microorganisms, the amount of organic matter present, the type and state of items being disinfected, and the ambient temperature.

Exposure: Contact with, or close proximity to, infectious materials or toxins that may result in infection or intoxication, respectively. Routes of exposure include inhalation, ingestion, inoculation and absorption.

Genetically Engineered (GE): An organism is considered genetically engineered if it was modified using techniques that permit the direct transfer or removal of genes in that organism. Such techniques are also called recombinant DNA or rDNA techniques.

Gross Contamination: The accumulation of organic material on a surface that can be removed by physical methods such as scraping, wiping and brushing.

Importation: The procurement, whether from a commercial supplier or a collaborator, of materials from sources outside of Canada.

Infectious Substance: A substance known or reasonably believed to contain viable microorganisms such as bacteria, viruses, rickettsia, parasites, fungi, and other agents such as prions that are known or reasonably believed to cause disease in humans or animals. The infectious substance might be contained in blood, tissue, organs, body fluids, vaccines or cultures.

Infectious Substance, affecting humans (Category A): An infectious substance that is being transported in a form such that, when released outside its means of containment and there is physical contact with humans or animals, it is capable of causing permanent disability or life-threatening or fatal disease in humans or animals.

Infectious Substance, affecting animals only (Category A): An infectious substance that is being transported in a form such that, when released outside its means of containment and there is physical contact with humans or animals, it is capable of causing permanent disability or life-threatening or fatal disease in animals.

Laboratory: An area within a facility or the facility itself where biological material is handled for scientific or teaching purposes.

Shippers Declaration of Dangerous Goods: A document specifically required for shipping Category A substances by air.

Sterilization: Process that eliminates all living microorganisms, including spores.

Transport Chain: The individuals and organizations that act to move a dangerous good from one location to another location via public roads. Comprised of importers, consignors, carriers and consignees as well as their respective employers.

MATERIALS/EQUIPMENT

- Certified packaging.
 - Shift proof/leak proof primary receptacles
 - Absorbent packing material
 - Shift proof/leak proof secondary receptacles
 - Cushioning materials
 - Rigid outer packaging
- Shipper's Declaration of Dangerous Goods
- Safety Mark Labels
- Packaging Tape.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Minimum PPE – lab coat, long pants, and fully covering shoes

PROCEDURE

Supplying Infectious Substances to another UBC laboratory

Verify the Infectious Substances is listed on an active UBC Biosafety Permit held by the recipient laboratory. ***NOTE*** the transfer cannot proceed until this requirement is met. Determine if transport of the substance on a public road will be required.

If transfer does not require transport of the substance on a public road:

- Complete a UBC Internal Biological Materials Transfer Form indicating that the package will be moved on foot.
- Retain a copy for lab inventory records and submit an electronic copy to the UBC Biosafety Office.
- Don at least minimum PPE, where facility operating procedures require additional PPE, these requirements must be met.
- Working in appropriate containment (this may be at a Bunsen burner or inside a certified biosafety cabinet, depending on the substance), aliquot amount of substance in a leak proof/shift proof primary container labeled with contents.

- Place this primary container inside a leak proof/shift proof secondary container.
- Wipe down secondary container with disinfectant.
- Doff PPE and carry secondary container to designation laboratory.

If transfer DOES require transport of the substance on a public road:

- The Permit Holder must designate a TDG Class 6.2 trained and certified individual to act as CONSIGNOR for the shipment. ***NOTE***If no one meets this criteria, the Permit Holder must designate a study team member to attend training. The transfer cannot proceed until this requirement is met.
- The Permit Holder in conjunction with the Consignor must complete a UBC Internal Biological Materials Transfer Form indicating how the transfer will proceed, the classification of the shipment, the name of the consignor and their training certificate expiry date.
- Retain a copy for lab inventory records and submit an electronic copy to the UBC Biosafety Office.
- Obtain certified packaging of Type 1A or 1B as appropriate to the classification of the shipment.
- Don at least minimum PPE, where facility operating procedures require additional PPE, these requirements must be met.
- Working in appropriate containment (this may be at a Bunsen burner or inside a certified biosafety cabinet, depending on the substance), aliquot amount of substance in a leak proof/shift proof primary container labeled with contents.
- Wrap the primary container with absorbent material. If there are multiple primary containers, wrap each individually or provide another means of separation to provide cushioning.
- Place this primary container plus the absorbent material inside a leak proof/shift proof secondary container.
- Wipe down secondary container with disinfectant.
- Place in rigid outer packaging (Styrofoam is not adequate) with an itemized list of contents and seal.
- Doff PPE.
- Apply safety marks and complete documentation.
- Hand off to CARRIER.

Transfer of Infectious Substances to a laboratory outside of UBC but within Canada

- The Permit Holder must designate a TDG Class 6.2 trained and certified individual to act as CONSIGNOR for the shipment. ***NOTE***If no one meets this criteria, the Permit Holder must designate a study team member to attend training. The transfer cannot proceed until this requirement is met.

- The Permit Holder in conjunction with the Consignor must complete a UBC Domestic Biological Materials Transfer Form. It must be signed by the Consignor as well as Permit Holders and Biosafety Officers from both institutions prior to shipment.
- Retain a copy for lab inventory records and submit an electronic copy to the UBC Biosafety Office.
- Obtain certified packaging of Type 1A or 1B as appropriate to the classification of the shipment.
- Don at least minimum PPE, where facility operating procedures require additional PPE, these requirements must be met.
- Working in appropriate containment (this may be at a Bunsen burner or inside a certified biosafety cabinet, depending on the substance), aliquot amount of substance in a leak proof/ shift proof primary container labeled with contents.
- Wrap the primary container with absorbent material. If there are multiple primary containers, wrap each individually or provide another means of separation to provide cushioning.
- Place this primary container plus the absorbent material inside a leak proof/shift proof secondary container.
- Wipe down secondary container with disinfectant.
- Place in rigid outer packaging (Styrofoam is not adequate) with an itemized list of contents and seal.
- Doff PPE.
- Apply safety marks and complete documentation.
- Hand off to CARRIER.

Transfer of Infectious Substances to a laboratory outside of Canada

- The Permit Holder must designate a TDG Class 6.2 trained and certified individual to act as CONSIGNOR for the shipment. ***NOTE*** If no one meets this criteria, the Permit Holder must designate a study team member to attend training. The transfer cannot proceed until this requirement is met.
- The Permit Holder in conjunction with the Consignor must complete a UBC International Export Biological Materials Transfer Form. It must be signed by the Consignor as well as Permit Holders and Biosafety Officers from both institutions prior to shipment.
- Retain a copy for lab inventory records and submit an electronic copy to the UBC Biosafety Office.
- Obtain certified packaging of Type 1A or 1B as appropriate to the classification of the shipment.
- Don at least minimum PPE, where facility operating procedures require additional PPE, these requirements must be met.

- Working in appropriate containment (this may be at a Bunsen burner or inside a certified biosafety cabinet, depending on the substance), aliquot amount of substance in a leak proof/shift proof primary container labeled with contents.
- Wrap the primary container with absorbent material. If there are multiple primary containers, wrap each individually or provide another means of separation to provide cushioning.
- Place this primary container plus the absorbent material inside a leak proof/shift proof secondary container.
- Wipe down secondary container with disinfectant.
- Place in rigid outer packaging (Styrofoam is not adequate) with an itemized list of contents and seal.
- Doff PPE.
- Apply safety marks and complete documentation.
- Hand off to CARRIER.

Acquisition of Infectious Substances from outside of UBC but within Canada

- Verify the infectious substance is listed on an active UBC Biosafety Permit held by the recipient laboratory.
- The Permit Holder must provide the Information Sheet ([UBC Biological Substance Shipping Guidelines for Collaborators](#)) to the Supplier Laboratory and confirm that the Supplier Laboratory has designated a TDG Class 6.2 trained and certified individual to act as CONSIGNOR for the shipment. *NOTE* The transfer cannot proceed until this requirement is met.
- The Permit Holder must complete a UBC Domestic Biological Materials Transfer Form or its equivalent from the Supplier Institution. It must be signed by the Permit Holders and Biosafety Officers from both institutions prior to shipment.
- Retain a copy for lab inventory records and submit an electronic copy to the UBC Biosafety Office.
- Upon receipt of the shipment, the shipping documentation must be retained in the laboratory's biological inventory records.
- Don at least minimum PPE, where facility operating procedures require additional PPE, these requirements must be met.
- Working in appropriate containment (this may be at a Bunsen burner or inside a certified biosafety cabinet, depending on the substance), examine the package for evidence of damage and/or seepage that would indicate potential for exposure. If evidence of damage is found, report it to the Biosafety Office immediately at 604-822-2029.
- Open the shipping container and remove the itemized list of contents.
- Remove and inspect the secondary container for damage/leakage.
- Open the secondary container and inspect the secondary container for damage/leakage.

- Verify the contents match the list of contents, then log into the lab inventory system and store as appropriate.
- Disinfect packaging, then deface safety marks to indicate it no longer contains or is contaminated with dangerous goods. If it is in good condition it may be retained for future shipments as desired.

Acquisition of Infectious Substances from outside of Canada

- Verify the infectious substance is listed on an active UBC Biosafety Permit held by the recipient laboratory. *NOTE* The transfer cannot proceed until this requirement is met.
- The Permit Holder must provide the Information Sheet ([UBC Biological Substance Shipping Guidelines for Collaborators](#)) to the Supplier Laboratory and confirm that the Supplier Laboratory has designated a TDG Class 6.2 (or local equivalent) trained and certified individual to act as CONSIGNOR for the shipment. *NOTE* The transfer cannot proceed until this requirement is met.
- The Permit Holder must complete a UBC International Import Biological Materials Transfer Form or its equivalent from the Supplier Institution. It must be signed by the Permit Holders and Biosafety Officers from both institutions prior to shipment.
- Retain a copy for lab inventory records and submit an electronic copy to the UBC Biosafety Office.
- Upon receipt of the shipment, the shipping documentation must be retained in the laboratory's biological inventory records.
- Don at least minimum PPE, where facility operating procedures require additional PPE, these requirements must be met.
- Working in appropriate containment (this may be at a Bunsen burner or inside a certified biosafety cabinet, depending on the substance), examine the package for evidence of damage and/or seepage that would indicate potential for exposure. If evidence of damage is found, report it to the Biosafety Office immediately at 604-822-2029.
- Open the shipping container and remove the itemized list of contents.
- Remove and inspect the secondary container for damage/leakage.
- Open the secondary container and inspect the secondary container for damage/leakage.
- Verify the contents match the list of contents, then log into the lab inventory system and store as appropriate.
- Disinfect packaging, then deface safety marks to indicate it no longer contains or is contaminated with dangerous goods. If it is in good condition it may be retained for future shipments as desired.

REVIEW AND RETENTION

This Guideline is reviewed annually or whenever deemed necessary by the UBC Biosafety Committee or the UBC Biosafety Office.