



Non-Indigenous Species Disposal

Purpose

This procedure provides a protocol for the disposal of non-indigenous organisms or materials containing or potentially containing these organisms.

Scope

This protocol is applicable to all departments and administrative units with laboratories where non-indigenous species are used for research purposes.

Non-indigenous species can be defined as species that are not native (indigenous) to an area and have been introduced through human activities either on purpose or by accident. The term includes targeted species of organisms whether from a distant or nearby source (e.g., the Fraser Valley). Although a species of organism may occur naturally at a UBC site, the introduction of foreign populations of the same species can have a negative impact on local populations. Therefore, these organisms are also regarded as non-indigenous.

Materials that may contain non-indigenous species include:

- Soils – all types
- Single pass and re-circulating fresh and saltwater cooling or aquarium systems
- Algae and plants
- Terrestrials and aquatic plants and animals including those on baits, nets and sampling equipment
- Cultured organisms, microorganisms, and plants
- Cloned and genetically altered organisms – all types

Background

Numerous species and clones of microorganisms, plants and soils are used in research projects and in student laboratories at the University of British Columbia (UBC). Many are not native to this area and are classified as “Non-Indigenous” or “Exotic”. Currently, there is very limited regulation of non-indigenous species or biological materials which have the potential to introduce non-indigenous species. Many potential non-indigenous species are tolerated in a wide range of environments and when accidentally or intentionally introduced, have the ability to colonize and displace existing native species. Since indigenous species are essential in maintaining a healthy, balanced ecosystem, non-indigenous species have the potential to cause significant ecological or financial damage.

There are many examples which clearly demonstrate the extensive damage that non-indigenous invaders may have on an ecosystem, such as purple loosestrife and the Norway maple. Purple loosestrife, introduced during the 19th century, made an explosive migration across the continents through marshy environments, displacing many native plants. The Norway maple was first introduced to North America from Europe in the mid-1700s for cultivation as an ornamental tree. It is a fast growing species, adaptable to a wide variety of urban sites and more tolerant to urban stresses than many native trees. Its ability to grow in deep shade makes it particularly threatening to native forest habitats. Examples such as these have resulted in increased regional, national, and international concern about the effects of non-indigenous species. As a result UBC has established a series of protocols for the disposal of non-indigenous organisms or material containing or potentially containing these organisms.



Procedure

Use the RMS Environmental Biological Hazards Tool to determine if the animal or plant species you are working with are invasive.

A. Non-Indigenous Animal Species

Refer to the **Uncontaminated Pathological Animal Waste** detailed procedure for details.

B. Non-Indigenous Plant Species

Some non-indigenous plant species may be autoclaved and then trashed.

- Generators must first determine if autoclaving is the appropriate method.
- Collect plant species in clear autoclave bag with no markings and loosely close using autoclave tape.
- **Autoclave all waste for 60 minutes at 121°C and 15 psi.** Use other appropriate parameters if necessary (i.e. longer time and/or higher temperature).
- At the end of the autoclave cycle check to ensure the chemical indicator had turned black at the end of the autoclave cycle
- Dispose of bags in regular trash.

Note: autoclaves must be tested monthly for efficacy by using biological indicators. (Refer to the Treatment and Disposal of Biohazardous Waste for details).

C. Non-Indigenous Plant Species (resistant to autoclaving)

Non-indigenous plant species that are resistant to autoclaving will be sent for incineration in the same way as **Uncontaminated Animal Waste**, and therefore will be treated as such.

1. All Non-Indigenous Species **MUST** be contained in a black polypropylene bag (6 mil thick, 40 cm x 40 cm - available through Plant Operation Stores). Double bag to prevent leakage.
2. Ensure that each bag does not weigh more than **10 kg**.
3. Do not put glass or sharps in with this waste.
4. Bags must be tagged with the UBC Environmental Services **Biological Waste Disposal tag (Red)** (as shown below). Affix the waste generator number sticker where indicated. On the tag, check off the box marked "**Uncontaminated Animal Carcasses**" and in the Other Section describe the waste (e.g. "non-indigenous plant"). Place bags in the building's designated area for pick-up by ESF. (Contact the ESF Technician at 604-827-5389 if you require more barcodes or Biological Waste Disposal Tags).



Biological Waste Disposal Tag



BIOLOGICAL WASTE DISPOSAL

The University of British Columbia, Environmental Services Facility

B0811000001

Parcel Identification No:

BIOLOGICAL WASTE DISPOSAL



B0811000001

Parcel Identification No:

GENERATOR TO COMPLETE THIS SECTION ONLY

AFFIX IDENTIFICATION BARCODE LABEL HERE

WASTE CONTENT (Please ✓)

- Uncontaminated Animal Carcasses
- BIOMEDICAL (TDG Class 6.2, 6.1)** **BIOHAZARDOUS**
- Anatomical - Human Pathological
- Blood & Body Fluids * Autoclaved Risk Group 1
- Primates ** Autoclaved Risk Group 2
- Sharps *** Autoclaved Risk Group 3 **
- Pharmaceuticals (Non-narcotic)

Other **** _____

NOTES:

- * Human or Animal
- ** Special arrangements must be made for Primates and RG 3 (Contact ESF)
- *** Scalpel/razor blades, needles, syringes (no glass)
- **** Contact ESF

Office use only:

Weight _____ Kg



a place of mind

Environmental Services Facility (ESF)
Phone 604.822.1285

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