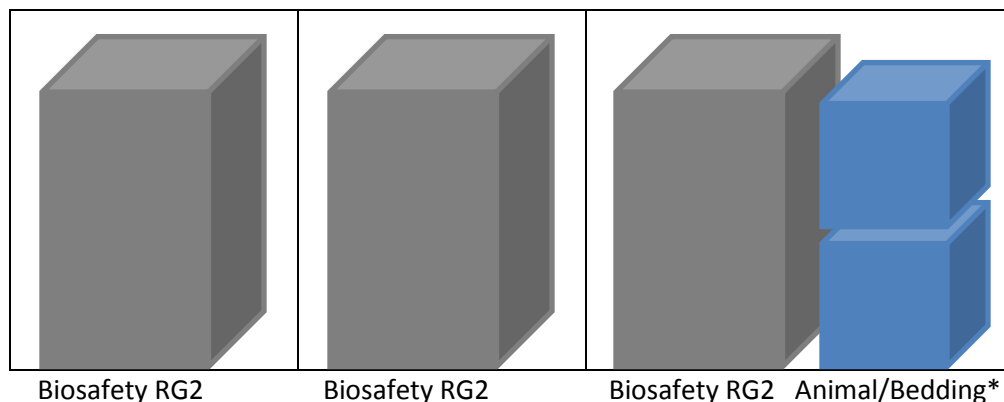




UTSC Biological Waste Procedures

In the SW111K Hazardous waste storage facility, a grey cabinet is designated as the Biohazard Risk Group 2 (RG2) Waste Cabinet. There are 3 compartments in the cabinet, each housing a grey biohazard waste tote. The grey totes are periodically picked up by an external waste contractor for disposal. In the rightmost compartment, 2 blue rectangular boxes designated for holding animal/animal bedding waste are placed on the right hand side*.



*Animal/Bedding waste is RG2/toxic and should ONLY be handled by Vivarium staff. This waste is periodically incinerated onsite.

Biological waste includes:

- Liquids such as used cell culturing media, supernatant, blood or blood fractions (serum), etc., which contain viable biological agents;
- Materials considered pathological, including any part of the human body, tissues and bodily fluids, but excluding fluids, extracted teeth, hair, nail clippings and the like that are not infectious;
- Any part of an animal infected [or suspected to be infected] with a communicable disease;
- Non-sharp, solid laboratory waste (empty plastic cell culture flasks and petri dishes, empty plastic tubes, gloves, wrappers, absorbent tissues, etc.) which may be, or is known to be, contaminated with viable biological agents;
- All sharp and pointed items used in medical care, diagnosis, and research, including the manipulation and care of laboratory animals, which should be considered potentially infectious;
- Laboratory glassware that is known or suspected to be contaminated with hazardous biological agents.

Containment level 1 labs generate risk group 1 waste and containment level 2 labs may generate both risk group 2 and risk group 1 biowaste.



A. Disposal of Biosafety RG1 waste

NOTE: Risk group 1 biowaste is NOT considered hazardous

Biosafety RG1 waste from containment level 1 labs should **NOT** be disposed of in the Biosafety RG2 waste cabinet (Except for sharps – Please refer to Disposal of Sharps – needle and blade waste section below). Biosafety RG1 waste should be collected in an appropriate bag or container that can withstand autoclave temperatures and autoclaved.

Note: Autoclavable bags and containers must be closed but **not sealed airtight** before they are placed into the autoclave chamber. This will allow proper steam penetration and equalization.

- a. Liquid waste – container with loose covering (aluminum foil).
- b. Solid waste – autoclave bag or other autoclavable container without the biohazard symbol. For items which may puncture an autoclave bag (e.g. disposable pipette tips), use a box or pail.

Please remember that significant amounts of chemicals should never be autoclaved.

2. After autoclaving:

- a. Liquid waste made innocuous can be disposed of via the laboratory drainage system. Flush with sufficient clean water to purge the drain immediately after disposal of all liquids.
- b. Solid waste can be disposed of in the normal garbage stream.



B. Disposal of Biosafety RG2 waste

1. Biosafety RG2 waste should be collected and sealed in an appropriate bag or container:
 - a. Liquid waste – must be autoclaved (see above) or chemically disinfected.
 - b. Solid waste – use autoclave bags with the biohazard symbol; for items which may puncture an autoclave bag (e.g. disposable pipette tips), use a box or pail.
2. Biohazard autoclave bags or containers must be placed in a secondary containment bag with an appropriate biohazardous waste label adhered to the bag.
3. Waste labelling: Biosafety Certificate number and Room Number MUST be legibly and accurately recorded on the accompanying tag as waste is added.
4. Waste must be transported to the Biosafety RG2 waste cabinet located in SW111K.
5. Gloves should be changed before leaving a RG2 lab to avoid contamination outside the lab.
6. Proceed to central stores to ask staff for keys for SW111K and the biosafety waste cabinet.
7. Put the RG2 waste and gloves into a grey tote.
8. When a grey tote gets filled to the top, flip over the “Full” tag on the cabinet to notify others that the tote is full. When 2 out of 3 totes are full, notify Central Stores staff to arrange for waste pick-up.
9. Disinfect all contacted surfaces and keys with the Virox Accel wipes – dispenser located on top of the grey cabinet.
10. Wash hands at the sink outside SW111K after leaving the facility.

C. Disposal of Sharps – needle and blade waste

“True” sharps, those items which pose a risk of cutting the skin such as scalpel blades, lancets, and syringes must be discarded in the yellow puncture resistant sharps containers. These containers are disposed of in the biohazardous waste totes in SW 111K (Please follow “Disposal of Biosafety RG2 waste” procedures above). Ensure the lid is on securely for safe transport.



D. Disposal of Mixed Waste

- Biohazardous (RG2) materials contaminated with a significant amount of chemical(s) must be chemically disinfected and disposed of as chemical waste with the appropriate chemical waste label. In some cases, the chemical waste may have to be deactivated following the MSDS instructions.
- Biohazardous (RG2) materials contaminated with radioactive materials must be chemically disinfected and disposed of as radiation waste with the appropriate radiation waste label.
- When **chemical disinfectants** are used to sterilize waste, the principle investigator must assure the U of T Biosafety Committee that the routines and methods achieve the desired objective.
- Waste containing or contaminated by radioactive materials must be treated as radioactive waste after biological disinfection then chemical deactivation (when significant amount of chemical contamination is present).

For general information on handling laboratory hazardous waste please see the “Laboratory Hazardous Waste Management Manual” <http://www.ehs.utoronto.ca/resources/wmindex.htm>

Or contact the persons below:

Primary Contact	Secondary Contact	Biosafety Officer	EHS Office	Campus Police
Rob Provost	Shelley Brunt	Ayoob Ghalami	Holly Yuen	Emergencies & Off-hour contact
UofT Hazardous Waste Management Coordinator	UTSC Local Biosafety Coordinator	UofT Senior Biosafety Officer	UTSC Environmental Health & Safety Manager	
416-978-7000	416-208-2794	416-978-3981	416-208-5141	416-287-7333