



# Laboratory Waste Disposal Guide

(For use in Departments **outside** the College of Veterinary Medicine)

	Contaminated with: (See definitions on the back)				
Items	Biohazard <sup>A</sup>	Recombinant or Synthetic Nucleic Acid (r/sNA) <sup>B</sup>	Other Biological <sup>C</sup>	Chemical <sup>D</sup>	Chemotherapeutic <sup>E</sup>
(see all definitions from the above categories at the bottom of this table)					
<p><b><u>Regulated Sharps:</u></b></p> <p>Syringes with needles (For your safety <b>do not</b> remove needles from syringes unnecessarily) Scalpel blades Needles Glass blood vials Glass Pasteur pipettes</p>	<p>Red Sharps Disposal Container into Regulated Medical Waste (RMW) Bin</p>				<p>Yellow Sharps Disposal Container into RMW Bin</p>
<p><b><u>Other Sharps:</u> <sup>1</sup></b></p> <p>Serological pipettes Micropipette tips Swabs, sticks Glass slides, cover slips Glass vials with agar slant Broken or intact glassware Broken plasticware Razor blades Syringes without needles</p>	<p>Red Sharps Disposal Container into RMW Bin</p>	<p>Red Sharps Disposal Container into RMW Bin ----- OR ----- Puncture Resistant Container <b><u>Autoclave</u></b> into Regular Trash</p>	<p>Puncture Resistant Container into Regular Trash</p>		<p>Yellow Sharps Disposal Container into RMW Bin</p>
<p><b><u>Disposable Non-Sharps:</u></b></p> <p>Intact plasticware Plastic petri dishes with agar Gloves, disposable gowns Bench paper and towels Animal bedding</p>	<p>Red Biohazard Bag into RMW Bin</p>	<p>Red Biohazard Bag into RMW Bin ----- OR ----- Clear Bag <b><u>Autoclave</u></b> into Regular Trash</p>	<p>Clear Bag into Regular Trash</p>		<p>Yellow Biohazard Bag into RMW Bin</p>
<p><b><u>Plant Materials:</u></b></p> <p>Plants Seeds Used potting media Plant cultures</p>	<p>Red Biohazard Bag into RMW Bin</p>	<p>Red Biohazard Bag into RMW Bin ----- OR ----- <b><u>Autoclave</u></b> Into Regular Trash or Compost</p>	<p>Regular Trash or Compost</p>	<p>Consult hazardous waste manual or Contact EHS</p>	<p>Yellow Biohazard Bag into RMW Bin</p>
<p><b><u>Carcasses and Tissues:</u></b></p> <p>Animal carcasses <sup>2</sup> Animal and human tissues  (Paraffin blocks with fixed tissue can go directly to trash)  For human cadaver wastes contact EHS</p>	<p>Red Biohazard Bag into RMW or Designated Carcass Bin</p>	<p>Clear Bag into RMW or Designated Carcass Bin</p>		<p>Consult hazardous waste manual Or Contact EHS</p>	<p>Yellow Biohazard Bag into RMW Bin</p>
<p><b><u>Liquid Waste:</u></b></p> <p>Liquid media and cultures aspirated or decanted from flasks and dishes Body fluids  Solutions of biological toxins must be inactivated <sup>3</sup></p>	<p>Treat with disinfectant (e.g., 1:10 dilution of household bleach) or Autoclave, then dispose down the drain with a large volume of water</p>			<p>Consult hazardous waste manual or Contact EHS</p>	
<p><b><u>Mixed Wastes:</u></b></p> <p>Hazardous chemicals mixed with biohazard waste Radioisotopes mixed with infectious materials</p>	<p>Consult appropriate waste manual or Contact EHS <b>before</b> generating such waste</p>				



## Definitions of Contaminants:

- A.** Contains or potentially contaminated with human infectious agents, viral vectors used with human and animal cell culture, biologically-derived toxins, human blood and body fluids, all human and animal cell cultures, or fluids and tissues from infected animals.
- B.** Recombinant or synthetic nucleic acids or genetically modified micro/organisms (e.g., bacteria, plants, insects, and animals). If also infectious, refer to Biohazard column.
- C.** Not infectious to humans or animals, and non r/sNA. Contains or potentially contaminated with environmental microorganisms, plant and insect pathogens, or plant tissue cultures. If contaminated with chemical residue, refer to “Chemical” column.
- D.** Disposable items contaminated with **residual amounts** of non-acutely toxic chemicals only (e.g., phenol, chloroform, acrylamide, xylene). For acutely toxic waste items, including the original containers from manufacturer, consult the Hazardous Waste Manual or contact EHS. Ethidium bromide-contaminated waste must be deactivated or collected as chemical waste by EHS.
- E.** Disposable items contaminated with **residual amounts** of substances used to imitate a biochemical response in tissue culture or in animals and includes: antineoplastic agents (e.g., cisplatin, doxorubicin, cyclophosphamide); hormones or hormone-like drugs (e.g., estrogens, tamoxifen); synthetic analogs and other carcinogens (e.g., BrdU).

## Footnotes

- 1.** Non-glass biohazard items that can puncture bags (e.g., plastic pipettes, micropipette tips, swabs and sticks) may be placed in a puncture resistant container (e.g., cardboard box lined with biohazard plastic bag, biohazard labeled recycled plastic container) or manufactured “burn-up bin” and then finally packaged in a red biohazard bag for waste pick up. Serological pipettes can puncture bags when randomly mixed with other disposable items in plastic biohazard bags. Bundle the serological pipettes into a plastic sleeve conveniently placed inside the biohazard bag, which organizes them and prevents them from puncturing the outer red biohazard bag.
- 2.** Separate carcasses and tissues from other disposable items (e.g., plastic and paper) whenever possible. Decant liquid away from carcasses, and dispose of the liquid appropriately (e.g., formalin and ethanol as chemical waste through EHS, buffer solutions as biohazard liquid waste). Coordinate with animal facility manager, especially with large animal carcasses.
- 3.** Toxin Inactivation - below are commonly used inactivation procedures, though they may not be suitable for your particular toxin. Consult the product information sheet for your biological toxin for specific instructions on inactivation:
  - Autoclave, if heat labile (steam at  $\geq 121^{\circ}\text{C}$  for 1 hour, up to 1 liter volume), or
  - Treat with NaOCl (sodium hypochlorite) at 1 – 2.5% (w/v) for 30 minutes (commercially available bleach solutions typically contain 3 – 6% (w/v) NaOCl, or
  - Treat with NaOH (sodium hydroxide) at 1N for 30 minutes, or
  - Treat with a combination of 0.25% NaOCl and 0.25N NaOH for 30 minutes, or
  - Treat with another recognized inactivating solution.

Dispose of the inactivated toxin solution down the drain with a large volume of water. You must neutralize solutions with a pH outside the range 5.5 to 9.5 before disposal. Lastly, you can dispose of active biological toxins as chemical waste through EHS. Any further questions, contact EHS.

### Questions about Waste Disposal?

Call EHS! 255-8200, or [askEHS](http://sp.ehs.cornell.edu/ehs-quick-links/Pages/askEHS.aspx) (<http://sp.ehs.cornell.edu/ehs-quick-links/Pages/askEHS.aspx>)

To schedule a pickup of biohazardous, chemotherapeutic, or hazardous wastes, go to <http://sp.ehs.cornell.edu/lab-research-safety/waste/waste-pickups/Pages/default.aspx>