

Biomedical Waste Disposal Guide

Table 1

Biomedical Waste Disposal Guide for BSL1 & BSL2 Research Laboratories			
Waste Type	On-site Treatment Required	Primary Biohazard Waste Container	Transport Container Type
Stock cultures, isolates, concentrated pure cultures of human or animal pathogens	Autoclave or place in a sharps container	Red bag [#]	Stericycle
Other microbial culture plates and tubes	N/A	Red bag [#]	Stericycle
Human/animal liquid cell culture waste	Autoclave or chemical disinfection	Sanitary Sewer	N/A
Human/animal solid cell culture waste	N/A	Red bag [#]	Stericycle
Vaccines-live and attenuated	Autoclave	Red bag [#]	Stericycle
Animal carcasses, body parts, solid waste	Follow AUSI	Red bag [#]	Label "Incinerate Only" Stericycle
Vials or tubes of blood or bloody body fluids	N/A	Sharps container → Red bag [#]	Stericycle
Sharps, needles, syringes, scalpel blades, (things that can puncture the red bag)	N/A	Sharps container → Red bag [#]	Stericycle
Contaminated* solid waste	N/A	Red bag [#]	Stericycle
Contaminated* disposable plasticware	N/A	Red bag [#]	Stericycle
Contaminated* lab clothing	N/A	Red bag [#]	Stericycle
Contaminated* disposable gloves	N/A	Red bag [#]	Stericycle
Contaminated* reusable glassware	Autoclave/chemical disinfection	Rigid, leak-proof container with lid	N/A
Disposable lab clothing – no contamination	N/A	N/A	N/A
Disposable pipettes, tips – no contamination	Corrugated box	N/A	Regular waste
Disposable gloves – no contamination	N/A	N/A	Regular waste

*contaminated refers to waste containing bulk blood, microbes, infectious agents, or other biological agents

[#] Red bag liner must pass ASTM-D testing

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Biomedical Waste Disposal Guide for BSL3 or Special Medical Waste Categories			
Waste Type	On-site Decontamination Required	Primary Biohazard Waste Container	Transport Container Type
Mycobacterium tuberculosis (cultures & solid waste)	Autoclave	Red bag [#]	Stericycle
Select Agents**	Autoclave	Red bag [#]	UAB HMF
HIV research lab solid waste	Autoclave	Red bag [#]	Stericycle
HIV research lab liquid waste	Autoclave	Sanitary Sewer	N/A
Category A Agents*** (i.e., Dengue, LCMV, Rift Valley Fever, Bacillus anthracis - Sterne)	Autoclave	Red bag [#]	Stericycle
Other Risk Group 3 microbial agents	Autoclave	Red bag [#]	Stericycle
Biological toxins	See Section 11.3 or Chemical Safety Manual	See Section 11.3 or Chemical Safety Manual	Label "Incinerate Only" Stericycle
CJD waste	N/A	Sharps container – Lab Red bag [#] - Surgery	Label CJD Incinerate Only UAB Red Barrel
Pathological specimens in ≤ 10% formalin	Dispose of formalin in the sanitary sewer	Red bag [#]	Label "Incinerate Only" Stericycle
Medical waste containing radioactive or chemical wastes	Consult with EHS	Consult with EHS	Consult with EHS

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Table 2. Biological Toxins

Toxins	Autoclave*	Chemical Inactivation			Comments
	1 hr at 121°C liquid cycle slow exhaust	2.5% NaO Cl + 0.25 N NaO H	2.5% NaO Cl	1.0% NaO Cl	See Chemical Safety Manual for handling, storing, or disposal of toxins.
Abrin	Yes	N/A	N/A	N/A	
Botulinum neurotoxins	Yes	Yes	Yes	Yes	
<i>Clostridium perfringens</i> epsilon toxin	Yes	N/A	N/A	N/A	*Methods of decontamination for the epsilon toxin do not appear to have been published.
Conotoxins	No	N/A	N/A	N/A	Inactivated by reactive disinfectants such as glutaraldehyde and formaldehyde.
Diacetoxyscirpenol	No	Yes	Yes		
Ricin	Yes	Yes	Yes	Yes	
Saxitoxin	No	Yes	Yes	Yes	
Shiga toxin and Shiga-like ribosome-inactivating proteins	Yes	Yes	Yes	Yes	Inactivated by oxidizing agents such as bleach and reactive sterilants such as glutaraldehyde.
Staphylococcal enterotoxins	Yes	Yes	Yes	Yes	
Tetrodotoxin	No	Yes	Yes	Yes	
T-2 toxin	No	Yes	No	No	The trichothecenes are very stable and resist heat-and ultraviolet-light-induced inactivation.