

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

Biomedical Waste Disposal Guide

| 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 |
| <u>Select Agents**</u> | See Section 5.0 Biosafety Manual | See Section 5.9.7 Biosafety Manual | See Table 5-2 Biosafety Manual |
| HIV research lab solid waste | Autoclave | Red bag [#] | Stericycle |
| HIV research lab liquid waste | Autoclave | Sanitary Sewer | N/A |
| <u>Category A Agents***</u> (e.g., 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 5.0 Biosafety Manual | See Section 5.9.7 Biosafety Manual | See Table 5-2 Biosafety Manual |
| 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 |

Biomedical Waste Disposal Guide

Table 5-2 Inactivation of Biological Toxins

| TOXIN | AUTOCLAVE 1hr @ 121°C | NaOCl (30 min) | NaOCl + NaOH (30 min) | Comments |
|---|-----------------------------|----------------------|----------------------------|--|
| Abrin | Yes | ND | ND | Decontaminate work surfaces and spills with soap and water; autoclave all waste and disposable materials |
| Anthrax Lethal Toxin (PA, LE) | Yes | ≥0.5% | ND | Decontaminate work surfaces and spills with ≥0.5% NaOCl for 30 min; autoclave all waste and contaminated disposable materials |
| Botulinum neurotoxin | Yes ^a | >0.1% | ND | Decontaminate work surfaces and spills with >0.1% NaOCl or 0.25N NaOH for 30 min; autoclave all waste and disposable materials |
| Brevetoxin (PbTx-2) | No ^c | ≥2.5% b,c,d | 0.25%+0.25N b,c,d | Decontaminate work surfaces and spills with ≥2.5% NaOCl for 30 min; decontaminate and manifest solid and liquid waste (EHS); contaminated disposables go in a Stericycle burn bin |
| Cholera toxin | Yes | 0.50% | ND | Decontaminate work surfaces and spills with 0.5% NaOCl for 30 min; autoclave all waste and disposable materials |
| Clostridium perfringens epsilon toxin | Yes | ND | ND | Decontaminate work surfaces and spills with soap and water; autoclave all waste and disposable materials |
| Conotoxin | ND ^c | 0.50% ^c | ND | Decontaminate work surfaces and spills with 0.5% NaOCl for 30 min; decontaminate and manifest solid and liquid waste (EHS); contaminated disposables go in a Stericycle burn bin |
| Diacetoxyscirpenol (DAS), Deoxinolenol (DON), Zearalenone (ZEA) | No ^c | ≥2.5% ^c | 0.25%+0.25N ^c | Decontaminate work surfaces, and spills with ≥2.5% NaOCl for 30 min; decontaminate and manifest solid and liquid waste (EHS); contaminated disposables go in a Stericycle burn bin |
| Diphtheria toxin | Yes | 0.50% | ND | Decontaminate work surfaces and spills with 0.5% NaOCl for 30 min; autoclave all waste and disposable materials |
| Microcystin | No ^c | ≥0.5% ^{b,c} | 0.25%+0.25N ^{b,c} | Decontaminate work surfaces, and spills with ≥0.5% NaOCl for 30 min; decontaminate and manifest solid and liquid waste (EHS); contaminated disposables go in a Stericycle burn bin |
| Palytoxin | No ^c | ≥0.1% ^{b,c} | 0.25%+0.25N ^{b,c} | Decontaminate work surfaces and spills with ≥0.1% NaOCl for 30 min; decontaminate and manifest solid and liquid waste (EHS); contaminated disposables go in a Stericycle burn bin |
| Pertussis toxin | Yes | 0.50% | ND | Decontaminate work surfaces and spills with 0.5% NaOCl for 30 min; autoclave all waste and disposable materials |
| Ricin | Yes | >1.0% ^b | >0.1%+0.25N ^b | Decontaminate work surfaces and spills with >1% NaOCl for 30 min; autoclave all waste and disposable materials |
| Saxitoxin | No ^{c,e} | ≥0.1% b,c,e | 0.25%+0.25N b,c,e | Decontaminate work surfaces, and spills with ≥0.1% NaOCl for 30 min; decontaminate and manifest solid and liquid waste (EHS); contaminated disposables go in a Stericycle burn bin |
| Shigatoxin and Shiga-like ribosome inactivating proteins | Yes | 0.50% | 2.5%+0.25N | Decontaminate work surfaces and spills with 0.5% NaOCl for 30 min; autoclave all waste and disposable materials |
| Staphylococcal Enterotoxins | Yes ^a | >0.5% | ND | Decontaminate work surfaces and spills with >0.5% NaOCl for 30 min; autoclave all waste and disposable materials |
| T-2 mycotoxin | No ^c | ≥2.5% ^{b,d} | 0.25%+0.25N ^{b,d} | Decontaminate work surfaces and spills with 0.25% NaOCl + 0.25N NaOH for 30 min; decontaminate and manifest solid and liquid waste (EHS); contaminated disposables go in a Stericycle burn bin |
| Tetanus toxin | Yes | 0.50% | ND | Decontaminate work surfaces and spills with 0.5% NaOCl for 30 min; autoclave all waste and disposable materials |
| Tetrodotoxin | No ^{c,e} | ≥0.5% b,c,e | 0.25%+0.25N b,c,e | Decontaminate work surfaces and spills with ≥0.5% NaOCl for 30 min; decontaminate and manifest solid and liquid waste (EHS); contaminated disposables go in a Stericycle burn bin |