



## Infectious Waste Program

Department of Public Safety - Environmental, Health and Safety  
Standard Operating Procedure (SOP) #22

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# Lafayette College Infectious Waste Program

## Department of Public Safety – Environmental, Health and Safety

Standard Operating Procedure (SOP) #12 – Revised December 2019

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### **Purpose**

To ensure that infectious and biohazardous waste at Lafayette College is segregated and disposed of safely and properly.

### **Reference**

The College is required by the Pennsylvania Department of Environmental Protection (25 PA Code Chapters 284) and by the U.S. Department of Transportation (49 CFR 173) Hazardous Materials Regulations (HMR) to ensure the proper handling and disposal of infectious and biohazardous wastes.

### **Definitions**

Infectious and biohazardous waste is municipal and residual waste which is generated in the diagnosis, treatment, immunization, or autopsy of human beings or animals, in research pertaining thereto, in the preparation of human or animal remains for interment or cremation, or in the production or testing of biologicals, and which falls under one or more of the following categories:

Cultures and stocks - Cultures and stocks of infectious agents and associated biologicals, including the following: cultures from medical and pathological laboratories; cultures and stocks of infectious agents from research and industrial laboratories; wastes from the production of biologicals; discarded live and attenuated vaccines except for residue in emptied containers; and the culture dishes, assemblies and devices used to conduct diagnostic tests or to transfer, inoculate and mix cultures.

Pathological wastes - Human pathological wastes, including tissue, organs, body parts and body fluids which are removed during medical or laboratory procedures. The term does not include hair, nails or extracted teeth.

Animal wastes - Contaminated animal carcasses, body parts, blood, blood products, secretions, excretions and bedding of animals that were known to have been exposed to zoonotic infectious agents or nonzoonotic human pathogens during research (including research in veterinary schools and hospitals), production of biologicals or testing of pharmaceuticals.

Isolation wastes - Biological wastes and waste contaminated with blood, excretion, exudates or secretions from:

- Humans who are isolated to protect others from highly virulent diseases.
- Isolated animals known or suspected to be infected with highly virulent diseases.

Used sharps - Sharps that have been in contact with infectious agents or that have been used in animal or human patient care or treatment, at medical, research or industrial laboratories, including hypodermic needles, syringes (with or without the attached needle), Pasteur pipettes,

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scalpel blades, blood vials, needles with attached tubing, culture dishes, suture needles, slides, cover slips and other broken or unbroken glass or plasticware.

Mixed Waste - Infectious waste that is mixed with radioactive waste or chemical waste requires special handling.

***In summary, infectious and biohazardous waste can be any laboratory-generated waste that has been or may have been contaminated with disease-causing bacteria, viruses, fungi, or other pathogen; or any item that has been used in recombinant DNA work.***

### **Responsibilities**

#### **Environmental, Health and Safety**

- Environmental, Health and Safety (EHS) will monitor this program and provide assistance and training if needed.

#### **College Departments Generating Infectious Waste**

- Departments generating infectious waste must handle, store, and dispose of infectious waste in accordance with this policy.

### **Infectious Waste Handling Procedures**

Lafayette College retains a licensed infectious and biohazardous waste transportation and disposal vendor to provide services for all infectious waste generators on-campus. Materials should be managed according to the procedures described below.

#### **INFECTIOUS WASTE DISPOSAL GUIDELINES**

| ITEMS FOR DISPOSAL   | PROPER DISPOSAL METHOD              |
|--|-------------------------------------|
| <ul style="list-style-type: none"><li>• Hypodermic Needles (and attached syringes, barrels, and plungers),</li><li>• Tubing,</li><li>• Blades (scalpels, razors)</li></ul> | <b>Red Sharps Containers</b>        |
| <ul style="list-style-type: none"><li>• Plastic Syringes (and attached syringes, barrels, and plungers) contaminated with biohazardous material</li></ul>                  | <b>Red Biohazardous Bags</b>        |
| <ul style="list-style-type: none"><li>• Pipettes and plastic pipette tips contaminated with biohazardous material</li></ul>  | <b>Red Biohazardous Bags</b>        |
| <ul style="list-style-type: none"><li>• Biohazardous Liquids (not contaminated with chemicals),</li></ul>  | <b>Double Red Biohazardous Bags</b> |

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| <ul style="list-style-type: none"><li>• Liquid Tissue Culture Media,</li><li>• Animal or Human Blood and Blood Elements,</li><li>• Animal or Human Body Fluids</li></ul>   |  |
| <ul style="list-style-type: none"><li>• Biohazardous Liquids (contaminated with chemicals, i.e. Mixed Waste)</li></ul>   | <b>Must be classified as a hazardous waste. Contact EHS X-5330 for assistance.</b> |
| <ul style="list-style-type: none"><li>• Clean Broken Glass (not exposed to biohazardous or chemical wastes),</li><li>• Rinsed Pasteur or Serological pipettes</li></ul>  | <b>Broken Glass Boxes – can be disposed of in regular trash</b>                    |
| <ul style="list-style-type: none"><li>• All other items contaminated with biohazardous materials, such as;<ul style="list-style-type: none"><li>• Petri Dishes,</li><li>• Gloves,</li><li>• Contaminated Paper Towels,</li><li>• Contaminated Bench Paper.</li></ul></li></ul> | <b>Red Biohazardous Bags</b>   |
| <ul style="list-style-type: none"><li>• Carcasses of Animals Exposed to Contagious Zoonotic Pathogens</li></ul>  | <b>Double Red Biohazardous Bags</b>  |
| <ul style="list-style-type: none"><li>• Non-contaminated Paper Wastes</li></ul>  | <b>Regular Trash</b>   |

**NOTE: Infectious waste may not go in the regular trash even if autoclaved.**

Contact Environmental, Health and Safety if any of the above wastes are radioactive or for additional information about what materials are regulated as infectious waste and how to store and dispose of them.

### **Storage Requirements**

Infectious waste shall be stored in a manner that:

1. Maintains the integrity of the containers, prevents the leakage or release of waste from the containers, and provides protection from water, rain and wind,
2. Prevents the spread of infectious agents, and
3. Maintains the waste in a non-putrescent state.

Storage containers must be:

1. Leak-proof,
2. Impervious to moisture,
3. Sufficient in strength to prevent puncturing, tearing or bursting during storage, and
4. Rigid and tightly lidded.

Time Limits:

- For less than 30 days: store at room temperature or in a refrigerator.
- For less than 90 days: store in a freezer.
- Sharps containers may be used until they are full.
- Waste that becomes putrescent (foul smelling) must be disposed of within 24 hours.
- Autoclaving (steam sterilizing) will generally prevent waste from becoming putrescent.

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### Recordkeeping Requirements:

- Infectious waste manifest records must be received within 20 days of shipment.
- Infectious waste manifest records must be maintained in a central location for 5 years from the date of shipment.

### **Mixed Waste**

Infectious waste that is mixed with radioactive waste or chemical waste requires special handling. Liquid infectious waste that contains radioactive material must be rendered biologically inactive before it will be accepted. This can be done by autoclaving or adding sufficient household bleach (5.25% sodium hypochlorite) to make up 10% of the total volume (i.e., 100 ml of bleach for each liter of liquid waste). Solid infectious waste containing radioactive material must be autoclaved prior to disposal.

Mixed infectious and chemical waste must also be rendered biologically inactive before disposal as hazardous chemical waste unless the generator can ensure that a denaturing environment exists in the chemical waste. Chemical compatibility must also be taken into account before adding bleach or any other chemical disinfectant.

### **DOT Regulations and Training Requirements**

Federal DOT regulations define infectious waste as a hazardous material that is subject to specific requirements for proper packaging, labeling, transportation and training.

Infectious waste is classified under hazard class 6.2 of the DOT regulations because it poses a risk of disease transmission to humans or animals.

The DOT defines infectious waste as a waste or reusable material, other than a culture or stock of an infectious substance that contains an infectious substance and is generated in:

- The diagnosis, treatment or immunization of human beings or animals;
- Research pertaining to the diagnosis, treatment or immunization of human beings or animals; or
- The production or testing of biological products.

All transportation of infectious waste in commerce by any party is regulated by the DOT under the Hazardous Materials Regulations (HMR). Generators must ensure that employees preparing infectious waste for shipment with a commercial transporter are trained in accordance with the HMR and that the waste packaging and labeling is also compliant with the HMR.

***Should there be any questions regarding the management of infectious/biohazardous waste, please contact Environmental, Health and Safety at 610-330-5330.***