

FIU Biohazardous Waste Plan

PURPOSE

The purpose of this Biohazardous Waste Plan is to provide guidance and describe requirements for the proper management of biohazardous waste generated by FIU sites. Guidelines for the management of biohazardous waste are found in Chapter 64E-16, Florida Administrative Code (F.A.C.), and in section 381.0098, Florida Statutes.

SCOPE

This Biohazardous Waste Plan covers all FIU sites that generate and/or store biohazardous waste.

DEFINITION

The F.A.C. 64E-16.002(2) defines biohazardous waste as any solid or liquid waste which may present a threat of infection to humans, including non-liquid tissue, body parts, blood, blood products, and body fluids from humans and other primates; laboratory and veterinary wastes which contain human disease-causing agents, and discarded sharps.

RESPONSIBILITY

It is the responsibility of the waste generator to properly handle, contain, and dispose of biohazardous waste in compliance with the requirements of F.A.C. 64E-16 and the guidelines provided in the plan. EH&S is responsible for providing oversight and ensuring the disposal of biohazardous is done in accordance with the regulatory requirements, and that proper documents and permits are maintained

PERMITS

All biohazardous waste generating facilities are inspected and required to obtain a permit from the Miami Dade County Health Department on an annual basis. Because FIU is a state-owned and operated facility, FIU is exempt from paying the annual permit fee. Permits are issued in October and expire in September of the following year. EH&S is responsible for obtaining and managing the permit information for all FIU sites generating biohazardous waste.

INSPECTIONS

The Department of Health conducts unannounced annual inspections. EH&S is required to be notified when DOH is on the premises to conduct inspections. Please contact EH&S Lab Safety at (305) 348-6849 for more information.

ENFORCEMENT AND PENALTIES

Any person who generates, transfers, treats, stores, transports or disposes of biohazardous waste in violation of Chapter 64E-16, F.A.C.; or who interferes with, hinders, or opposes any employee of the Department of Health in the discharge of his duties, or who impersonates an employee of DOH, is chargeable with a misdemeanor of the second degree. Violation of any provision of Chapter 64E-016, F.A.C., may result in denial, suspension or revocation of the university's biohazardous waste permits or an administrative fine of up to \$2500 per day for each violation of this chapter or other enforcement action authorized by law.

GENERATOR LOCATIONS

Biohazardous waste is generated at four Florida International University sites:

Modesto Maidique Campus
11200 SW 8th Street

Miami, FL 33199

Biscayne Bay Campus
3000 NE 151st Street
North Miami Beach, FL 33181

The Engineering Center
10555 West Flagler Street
Miami, FL 33174

Center for Translational Sciences
11350 SW Village Parkway,
Port St. Lucie, FL 34987

The points of origin that generate biohazardous waste are as follows:

Campus	Buildings
Modesto Maidique (MMC)	Owa Ehan; Academic Health Centers 1-5; Chemistry and Physics; College of Arts, Sciences & Education; Student Health Center; FIU Health Mobile Unit; Recreation and Wellness Center; FIU Stadium
Biscayne Bay (BBC)	Student Health Services; Academic Two; Marine Science Building
Engineering Center (EC)	Operations and Utility; Engineering Center
Center for Translational Sciences (CTS)	Center for Translational Sciences Building

COLLECTION

The collection schedule for FIU campuses and satellite locations ranges from once a month to every week. The pick-up schedule can be customized to the needs of the generating area as long as the pick-up is within the 30-day requirement as mandated by FAC 64E-16. Collection of generated waste is scheduled through EH&S.

CONTAINMENT

The following minimum containment practices apply:

- Place medical waste into impermeable red plastic bags, sealed, and placed into cardboard boxes supplied by the medical waste transporter.
- Place sharps in sharps containers at the point of origin, sealed, and placed into the designated cardboard boxes.
- Label red bags and outer cardboard boxes with the generator's name and address.
- Identify the outer cardboard box with the international biohazard symbol.

LABELING

- Label biohazardous waste bags and sharps containers with the generator's name, building, and room number.
 - Bags and sharps containers placed into larger bags prior to transport are not required to be labeled with the generator's information. The outer bag shall be labeled with the generator's information.
 - Labels provided by the transporter for bags and sharps containers that are generator-specific satisfy the labeling requirements.

- Outer containers should be labeled with the transporter's name, address, registration number, and 24-hour telephone number.
- **NOTE:** Secondary containment for biohazardous waste should also be labeled with the biohazard symbol and the type of waste.

STORAGE

- Store sealed red bags, sharps containers, and outer containers in areas that are restricted through the use of locks, signs, or location.
 - FIU waste generating facilities cannot store biohazardous waste for more than 30 days. The 30-day period commences when the first non-sharps item of biohazardous waste is placed into a red bag or sharp container, or when a sharps container containing only sharps is sealed. Biohazardous waste remains at the generating facility until it is removed by the transporter.
- Restrict access to indoor storage areas
 - Locate away from pedestrian traffic and maintain in a sanitary condition.
 - The areas should be constructed of smooth, easily cleanable materials that are impervious to liquids.
- In addition to the above criteria, mark outdoor storage areas (containers) with the international biohazard symbol and secure against vandalism and unauthorized entry. The biohazard symbol on an outdoor container should be a minimum of six inches in diameter.

TRANSFER

Biohazardous waste should not be transferred from the generating facility to other buildings on campus. However, if transfer is unavoidable, generators must adhere to the following requirements:

- Transfer of biohazardous waste within the generating facility should be conducted safely and with appropriate care. Minimum protective equipment for handling biohazardous waste is disposable latex gloves.
- Place bags of waste and sharps containers in a leak-proof secondary container with a secure lid (i.e., latchable, secured with tape, etc.) for transport. The secondary container must be labeled with a biohazard symbol and an emergency contact name and phone number.
- Use the shortest available route, and move the materials with the aid of a cart. Do not use public elevators if at all possible and avoid traveling with the waste through common public areas.
- Do not touch door handles, elevator buttons or other common contact surfaces with gloved hands. (Use the one-gloved hand technique, or get assistance from other staff for opening doors, etc.)

TREATMENT AND DISPOSAL

Autoclave Use

In accordance FAC 64E-16, all biohazardous waste must be inactivated before it is disposed of by waste disposal services. This can only be achieved if the waste is exposed to the right temperature for the right amount of time, and if the autoclave is working correctly.

Responsibility for validating autoclave performance lies with those who use the autoclave for treating biohazardous waste. EH&S recommends that a designated individual be identified among the lab staff who will be responsible for the validation of the autoclave and the training of personnel who use the autoclave.

For more information on, please refer to the [Autoclave Safety Guidelines](#).

Chemical Treatment of Biohazardous Liquids

Disinfectants, such as household bleach, may be used for treatment of biohazardous liquids. Add the bleach to the container so that the bleach makes 10% of the final volume. Allow a contact time of at least 30 minutes. Carefully discharge the mixture to the sanitary sewer by way of the lab sink, then thoroughly rinse down the sink with water. **Remember to wear splash goggles, gloves, and a lab coat for handling of bleach and bleach-treated liquids.**

NOTE: Diluted bleach solutions may go down the drain in most cases. However, many chemicals used for disinfection cannot be discarded down the drain. Contact EH&S Lab Safety at (305)348-6849 to determine if sink disposal of disinfectants other than diluted bleach solutions is acceptable.

Autoclave Treatment of Biohazardous Liquids

Biohazardous liquids may also be autoclaved for treatment. The collection container should be closed, placed in a secondary container, and transported by cart to the autoclave facilities. Treat by autoclave using the liquid cycle. **(Remember to loosen or remove the closure on the container before placing in autoclave.)** Wait for the treated liquid to cool prior to discharging to the sanitary sewer by way of the lab sink.

Note: Only personnel who have received training regarding the operation of the autoclave should use this device. Autoclave treatment should not be used if the liquid is mixed with chemical or radioactive materials.

Solid Biohazardous Waste

- **Infectious, potentially infectious, or rDNA waste:**

- a) human pathogens
- b) animal pathogens
- c) plant pathogens
- d) recombinant DNA
- e) human and primate blood, blood products and other potentially infectious material (OPIM)
- f) any material containing or contaminated with any of the above (test tubes, needles and needle/syringe combinations*, syringes, tubing, culture dishes, flasks, gloves, other PPE, etc.)

- **Non-infectious**

This category includes waste that is **NOT** contaminated with any of the biological wastes listed above. Sterile or unopened *biohazardous* materials that require disposal are also considered biological waste.

gloves	test tubes	petri dishes
needles*	razor blades*	Tissue culture flasks
syringes	culture dishes	Serological pipettes
scalpels*	Pasteur pipettes**	Micropipette tips
broken glass and plastic ware **	Needle/syringe combinations *	

* Must be placed in FDOH-approved sharps container

**Must be placed in approved broken glass container for disposal

- **Mixed radioactive/biological waste**

- Manage biohazardous waste mixed with radioactive waste in a manner that does not violate the provisions of Chapter 64E-5, F.A.C.
- The radioactive component takes precedence over the Biohazardous component, and must be managed as such until the radioactive component has decayed in storage. Please check with the Radiation Safety Office (348-6625) regarding the disposal and storage of radioactive waste.

- **Mixed chemical/biological waste**

- Manage biohazardous waste mixed with hazardous waste, as defined in Chapter 62-730, F.A.C., Hazardous Waste, as hazardous waste.
- Autoclaving is not recommended because of flammable or reactive compounds and potential explosion hazards. Please check with the EH&S Lab Safety (348-6849) for guidance regarding particular chemicals.

- **Animal carcasses and materials**

- Freeze animal carcasses prior to removal and packaging. Dispose of animal carcasses and other animal materials and tissue by requesting a pick-up through EH&S.
- Do not dispose of any animal bodies or material as regular trash.
- Contain animal carcasses and other animal material that may spread an animal or human pathogen appropriately before disposal.

- **Human remains**

Please contact EH&S Lab Safety (348-6849) for information regarding the final disposition of human remains and body parts.

DISPOSAL

Disposal of biohazardous waste is coordinated through EH&S. Biohazardous waste is stored on-site until removed by a licensed transporter for disposal. Refer to the Biohazardous Waste Disposal Flowchart for more information or contact EH&S Lab Safety. To request pick-up service, complete this form: [Request for Biohazardous Waste Disposal](#).

Transportation and treatment services for FIU biohazardous waste is provided by **Daniels Health, Inc.** In the event that Daniels Health cannot provide disposal services or there is a spill of material that cannot be contained, secondary emergency response services will be provided by **Triumvirate Environmental Services**.

RECORDKEEPING

FIU biohazardous waste disposal records are maintained at:

Environmental Health and Safety
Modesto Maidique Campus, Academic Health Center 4, 123
Miami, FL 33199
Tel: (305) 348-2621

The records maintained by Environmental Health and Safety include waste manifests, monthly account statements, annual operating permits, and FDOH inspection reports. Environmental Health & Safety and waste generating locations are required to maintain training records and manifests for 3 years.

TRAINING

Biohazardous waste training is provided as required by paragraph 64E-16.003(2)(a), F.A.C, and details compliance with this biohazardous waste plan and with Chapter 64E-16, F.A.C. The main components of the training cover:

- Definition and Identification of Biohazardous Waste
- Segregation
- Storage
- Labeling
- Transport
- Procedure for Decontaminating Biohazardous Waste Spills
- Contingency Plan for Emergency Transport
- Procedure for Containment
- Treatment Method

Environmental Health & Safety provides on-line training for biohazardous waste generators/handlers. Employees handling biohazardous waste must complete training (**Safe Management of Biohazardous Waste**) at the time initial assignment and annually thereafter. For more information on how to access the training, please visit the EH&S Online Safety Training Website at <https://ehs.fiu.edu/Training/Pages/default.aspx>

REFERENCES

[FAC Chapter 64E-16 Biohazardous Waste](#)

[FIU Biosafety Manual](#)

[FIU Blood-borne Pathogen Exposure Control Plan](#)

[FIU Autoclave Use and Safety](#)

Biohazardous Waste Disposal

