



## Biomedical Waste Plan

Florida Institute of Technology (Florida Tech)

Environmental Health & Safety (EH&S)

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## REVISION HISTORY

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Revision Number	Revision Date	Revised By	Description of Change
00	2019-07-12	Charles Cherrito	Initial plan creation and implementation.
01	2019-12-05	Charles Cherrito	Updated waste transporter to MSE Group.
02	2021-01-21	Charles Cherrito	Periodic review.

## INTRODUCTION

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This biomedical waste plan is Florida Institute of Technology's (Florida Tech) plan for management of biomedical waste production, safety, and disposal. Biomedical waste requires careful containment and disposal before collection and consolidation for treatment. The Occupational Safety & Health Administration (OSHA) has dictated initial measures for discarding regulated medical-waste items. These measures are designed to protect the workers who generate medical wastes and who manage the wastes from point of generation to disposal ([29 CFR 1910.1030](#)).

The State of Florida under [Chapter 64E-16 Florida Administrative Code \(FAC.\)](#) outlines the minimum sanitary practices relating to the management of biomedical waste—including segregation, handling, labeling, storage, transport, and treatment. This chapter applies to all facilities that generate, transport, store, or treat biomedical waste to ensure that the waste is properly handled to protect public health. Further, this chapter prescribes minimum standards for permitting biomedical waste generators, storage, and treatment facilities, and for registering biomedical waste transporters.

## PURPOSE

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The purpose of this plan is to ensure that proper management of handling, storing, treating, or transporting biomedical waste at Florida Tech and to provide protection for environmental-service staff, waste handlers, and laboratory staff from risks associated with potentially infectious biomedical waste. Lastly, to remain in compliance with all Federal and/or State laws, as well as Chapter 64E-16 of the Florida Administrative Code.

## DEFINITIONS

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### **Biomedical Waste (BMW)**

Any solid or liquid waste which may present a threat 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. The following are also included:

- Absorbent materials saturated with blood, blood products, body fluids, or excretions or secretions contaminated with blood or blood products that have dried. Absorbent materials include items such as bandages, gauze, sponges, wound care material, and cast material.
- Non-absorbent materials disposable devices that have been contaminated with blood, internal body cavity fluids, or secretions visibly contaminated with internal body cavity blood, but have not been treated by an approved method. Non-absorbent materials include items such as flexible tubing, disposable gloves, intact glass, and intact hard plastic.

Examples of biomedical waste that may be found at Florida Tech include:

- Needles
- Razor blades
- Scalpels
- Syringes with needles
- Gauze
- Bandages
- Gloves
- Petri dishes and plates
- Pipettes

### **Sharps**

Objects capable of puncturing, lacerating, or otherwise penetrating the skin. Sharps include items such as needles, razors, contaminated broken glass (slides and test tubes), and contaminated broken plastic.

## **PROCEDURE FOR CONTAINMENT & IDENTIFICATION OF BIOMEDICAL WASTE**

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Under Chapter 64E-16.004(2) FAC, filled red bags and filled sharps containers will be sealed at the point of origin. After sealed, they are not to be reopened. Ruptured or leaking containers of biomedical waste should be placed in a larger container without disturbing the original seal. All packages containing biomedical waste shall be visibly marked with the international biological hazard symbol and one of the following phrases: “BIOMEDICAL WASTE”, “BIOHAZARD”, “INFECTIOUS WASTE”, or “INFECTIOUS SUBSTANCE”. The symbol will be red, orange, or black and the background color shall contrast with that of the symbol or comply with the regulations of the Occupational Exposure to Bloodborne Pathogen Standard. Biomedical waste red bags must also exhibit the following physical properties:

- The international biological hazard symbol must be at least six inches in diameter on bags 19”x14” or larger, and at least one inch in diameter on bags smaller than 19” x 14”.
- Impact resistance of 165 grams and tearing resistance of 480 grams in both the parallel and perpendicular planes with respect to the length of the bag.
- Incidental sum concentration of lead, mercury, hexavalent chromium, and cadmium will be no greater than 100ppm for dyes used in the coloration of red bags.

Additional Requirements:

- All sharps are required to be disposed of into leak proof, puncture-resistant containers;
- All non-sharp BMW shall be disposed of in red, impermeable bags.

### **Segregation and Handling**

Biomedical waste will be identified and segregated from other waste from its point of origin (where it is generated) to its proper container per Chapter 64E-16.004(2) FAC.

## **BMW RED BAG INFORMATION:**

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### Manufacturers:

M.H.M.S. Corporation

Product ID: BS3GRH

14003 Lake Magdalene Blvd., Tampa, FL 33168

(813) 961-1966

Fisher Brand (Fisher Scientific)

### **Unused Biohazard Bag Location:**

Office of Environmental Health & Safety (EH&S) - Quad 407; Room 108

Olin Life Sciences Building (OLS) – First floor utility hall

## **CO-MIXING**

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- Biomedical waste mixed with hazardous waste shall be managed as hazardous waste;
- Biomedical waste mixed with radioactive waste shall be managed in a manner that does not violate the provisions of Chapter 64 E-5, FAC;
- Any solid waste, other than hazardous and radioactive, that has been mixed with biomedical waste shall be managed as biomedical waste.

## **LABELING**

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- Biomedical waste shall be labeled prior to transport off-site at the generating facility.
- The label shall be securely or permanently printed on each bag and sharps container and be clearly legible.

The following information is what is included on our current labels:

### **GENERATOR:**

Florida Institute of Technology

150 West University, Boulevard, Melbourne, FL, 32901

Permit: 05-65-1438694

- ✓ If a bag or sharps container is placed in to a larger bag prior to transport, the label for the exterior bag shall comply with the above labeling information.
- ✓ The outer containers shall be labeled with the transporter's name, address, registration number, and 24-hour phone number prior to transport (which will be provided by the transporter).

## **STORAGE OF BIOMEDICAL WASTE**

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Biomedical waste shall be stored for no longer than 30-days. The 30-day period will begin when the first item of biomedical waste is placed into a red bag or sharps container.

Indoor storage shall have restricted access from general traffic flow patterns and be accessible only to authorized personnel using locks, signs, and/or location. Outdoor storage areas and containers shall be secured from vandalism and shall be conspicuously marked with a greater or equal to 19 inches by 14 inches in diameter international biological hazard symbol. All areas primarily used for the storage of BMW shall be constructed of smooth, easily cleanable materials that are impervious to liquids, vermin and insect free, and maintained in sanitary conditions.

Currently, there are 3 BMW storage areas on the main campus:

1. Link Building (3<sup>rd</sup> Floor Breezeway);
2. Olin Life Sciences Building (1<sup>st</sup> Floor Utility Hall);
3. The Scott Center for Autism Treatment.

## **ONSITE TREATMENT METHOD OF BMW**

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Not applicable for Florida Institute of Technology.



## TRANSPORT

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Florida Tech has contracted with an off-site transportation company, which is registered with the Department of Health. EH&S has the pick-up receipts (manifests) from the transporter and keeps them on file for 3 years. Florida Tech's registered biomedical waste transporter who removes our waste under contract is:

### **MEDIGREEN Medical Waste Management (MSE Group)**

(407) 548.7019 (24-Hour)

(855) 629.8180

FLDOH#: TR#7512

On-site relocation of full sharps containers is routinely performed by the hazardous waste-handling teams of the EH&S using the following procedure:

- Affix generator label to the outside of sharps container
- Place immediately into a red bin marked with appropriate biomedical waste labeling.
- They are then placed into the bin for transport to the Olin Life Sciences Building (OLS) (1<sup>st</sup> Floor Utility Hall) to wait for pickup and disposal by the contracted vendor.

## SATELLITE OFFICES

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Not applicable for Florida Institute of Technology.

## PROCEDURES FOR DECONTAMINATING BIOMEDICAL WASTE SPILLS

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Surfaces contaminated with spilled or leaked BMW shall be decontaminated as part of the cleaning process. The procedure at Florida Tech is:

- Put on protective clothing and gloves.
- Broken glass is never to be picked up with the hands. Glass should be removed using dustpan and whiskbroom only (mechanical means). Place all contaminated glass and/or sharps in the sharp's container
- Pour bleach over spill and allow to sit for 30-minutes.
- Wash hands
- Don new gloves
- Dry floor with paper towels
- Discard gloves and wet paper towels in a biomedical waste red bag
- Wash hands thoroughly
- Report incident to EH&S at [ehs@fit.edu](mailto:ehs@fit.edu)

Liquid waste created by these chemical disinfections operations shall be disposed of into a sewage system. The disinfectant utilized at Florida Tech:

- **Bleach** (10% solution) for a minimum contact time of 30 minutes.

If the biomedical waste is in a liquid form, the waste may be disposed of into a sanitary sewer system after disinfection with a 10% bleach solution in a one to one ratio of BMW to bleach or into another system approved to receive such waste by the Department of Environmental Protection (DOH).

## CONTINGENCY PLAN FOR EMERGENCIES

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Florida Tech's contingency plan for disposal of biomedical waste, in the event our current methods fail, even temporarily, will be to contact:

**Brevard County Health Department - Environmental Health Services**

2725 Judge Fran Jamieson Way Suite A116, Viera, FL 32940-6605

Phone: (321) 633-2100

## TRAINING

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The Biomedical Waste Plan will act as the main resource for training material; however, there may be times when more in-depth training is required (in-person, PowerPoint, etc.).

Personnel who will handle biomedical waste as part of their work responsibilities will be given initial training in the Florida Tech's biomedical waste plan. This training will be performed annually to all personnel handling biomedical waste. Should our biomedical waste management procedures change, or if there is a revision to Chapter 64E-16, FAC, employees will be trained on the revision.

Florida Tech will provide documentation that employees have been properly trained.

## RECORDS

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All BMW records are retained for 3 years and shall be available for review by the Department of Health. Florida Tech will maintain an accessible current copy of the below documents:

- Biomedical Waste Plan
- Permit Certificate
- Transporter Permit
- Most recent copy of Chapter 64E-16, FAC
- Contract of Registered Biomedical Waste Transporter
- Biomedical Waste Manifests and Receipts of Chain of Custody Form
- Inspection Reports
- Training Records

**BMW records are located:**

Office of EH&S – Quad 404; Room 108.