



# Scott & White Institutional Biosafety Committee Compliance Program

## Biohazardous Waste Disposal

### Policy #IBC.003

#### **I. Purpose**

Scott & White Division of Research requires that all biohazardous waste be managed in and disposed of in accordance with all pertinent federal and local standards to minimize the risk of exposure to personnel and the environment. The policy contained herein describes how biohazardous waste is to be handled by research personnel covered by the Scott & White IBC.

#### **II. Scope**

This procedure covers all individuals doing research-related activities with biohazardous material on the Scott & White campus.

#### **III. Definitions**

Biohazardous Waste – materials of a biological origin that are capable of producing an infectious disease in humans or animals and includes at a minimum, blood, body fluids, discarded sharps, and inoculated tissue culture media. Biohazardous waste is composed of two broad categories to include sharps and non-sharps:

1. Biohazardous sharps waste: discarded items: a) derived from human patient diagnosis, care, or treatment; b) derived from infected animals whether naturally occurring or through research activities; and c) contaminated from research laboratories not involving human or animal materials. These items include those such as hypodermic needles, scalpels, plastic pipettes, Pasteur pipettes, pipette tips, vacutainer tubes, glass containers, or any other item which can potentially transmit disease by cutting or piercing the skin. These contaminated items are to be placed into an approved sharps container prior to disposal into red biohazard bags.
2. Non-sharps waste:
  - a) Blood and body fluids – Blood, blood products, and body fluids shall be classified as infectious. The term body fluids shall include semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, peritoneal fluid, pericardial fluid, amniotic fluid, and any other body fluid visibly contaminated with blood. Items contaminated with the above fluids are considered infectious only when a pourable quantity is present. A pourable quantity is further defined as the ability of a liquid or semi-liquid form to drip or flow. Items that are caked with dried blood or other body fluids and are capable of releasing these materials during handling are considered infectious.
  - b) Infectious laboratory waste – All cultures, and stocks of infectious agents, including specimens from medical and pathological laboratories, wastes from the production of biological, discarded live and attenuated vaccines, and culture dishes and devices used to transfer, inoculate and mix cultures shall be defined as laboratory waste.
  - c) Animal waste – Animal waste derived from animals afflicted with zoonotic disease, or purposely infected with agents infective to humans or animals, shall be classified as infectious waste. Infectious animal waste shall include blood, body fluids, carcasses, body parts, and bedding of animals that were infected with a disease communicable to humans or other animals.



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#### **IV. Procedures-non-sharps solid waste**

1. Solid infectious waste, except for sharps, shall be contained in disposable plastic bags or containers that are tear-resistant, leak-proof, and secured to prevent leakage or expulsion of solid or liquid waste during storage, handling or transport.

2. Waste is placed into the biohazard bag and when the bag is  $\frac{3}{4}$  full, it should be closed by twisting and tying in a single knot. This bag should then be placed into an outer biohazard bag, which is similarly closed.

3. Bags will meet current tear and impact resistance requirements as outlined by the supplier, will conform to current maximum size and weight restrictions, and will be labeled as biohazardous.

4. Biohazard bags should be placed into rigid, leak-proof cardboard boxes supplied by Medsharps. These containers will be clearly marked and labeled in accordance with DOT and OSHA regulatory requirements. All containers will be closed and completely sealed.

5. Infectious waste must be transported in carts designated for biohazardous waste. Infectious waste should be stored in areas of low personnel traffic to minimize exposure. The area should be clearly marked as biohazardous waste storage.

6. When infectious waste is ready for collection by Medsharps, a licensed biohazard waste contractor employed by Scott & White, laboratory personnel should contact the Biosafety Office to arrange pickups.

#### **V. Procedures sharps solid waste**

1. Refer to policy #IBC.005 for specific instructions on sharps handling.

2. When sharps containers are  $\frac{3}{4}$  full they should be sealed and then placed into a biohazard bag. This bag should then be sealed by twisting the top and tying into a knot. This bag should then be placed inside a second biohazard bag, which is similarly closed.

3. Once sealed in biohazard bags, sharps waste should be treated as solid biohazard waste as described above in section IV.

#### **VI. Procedures-liquid waste**

1. Liquid waste containing biohazardous material (culture fluid, body fluids, etc) should only be handled within a Biosafety Cabinet (BSC).

2. Within the BSC, there should be a sturdy container which has a volume of undiluted bleach equal to 10% of the total volume of the container (eg. 100 mls of undiluted bleach for a 1 liter container). (The container can either be an open container, if fluids are poured out, or it can be a vacuum flask setup if aspiration is used). If not used, the bleach should be discarded on a daily basis and replaced with fresh bleach.

3. Liquid waste is placed into the container as needed. If using a vacuum aspiration system, after the last liquid waste is aspirated, undiluted bleach should be drawn through the pipette and tube into the flask to ensure decontamination of these items. When done, allow the mixture to decontaminate for 30 minutes. The liquid can then be disposed of down the sanitary sewer system.



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#### **VII. Special Considerations**

1. Autoclaving. Solid biohazardous waste can be autoclaved for decontamination purposes. If this is the case, for solid waste, the biohazard bag should not be sealed with a knot, but the top should be loosely fastened with tape so that steam can enter the bag. The bag should then be placed into a sturdy, autoclave-safe container. Waste that is decontaminated by autoclaving must include a process of verification to ensure that the sterilization process is adequate. Please follow the Scott & White Division of Research policy on autoclave operation for correct autoclaving instructions.

2. Mixed biohazardous waste. Mixed biohazardous waste (eg biohazardous waste that is also radioactive) must be treated in a different manner. Please contact the Biosafety Office if you need to dispose of such mixed waste.