

UNIVERSITY OF DENVER  
REGULATED MEDICAL WASTE PLAN

## SCOPE

The University of Denver contains areas where instruction, research and medical treatment occur. These areas generate waste materials that may contain blood, recombinant and/or synthetic nucleic acids, transgenics, tissues, body fluids or other potentially infectious material. Therefore, a written plan to properly manage this waste and control the spread of infection is required under NIH guidelines and by the Colorado Department of Public Health and Environment (CDPHE) specifically 6 CCR 1007-2.

This plan provides minimum sanitary practices relating to the management of biological waste, including segregation, handling, labeling, storage, transport and disposal. This applies to all areas on campus where biological waste is generated. Currently this includes the Health and Counseling Center, Athletics, S.G. Mudd building and Olin Hall.

## DEFINITIONS

- 1) Biological Waste - Waste materials generated from teaching, research or health care activities, which may present a threat of infection to humans. Examples include tissues, blood and blood products, body fluids from humans and other primates and waste materials, which may contain human disease causing agents or be saturated with blood or body fluids (sharps, wipes, bandages, absorbents, gloves, etc.).
- 2) Body Fluids - Human secretions that have the potential to harbor pathogens such as HIV and hepatitis. Examples include blood, blood products (plasma), lymph, semen and vaginal secretions, cerebrospinal, synovial (joint), pleural (lung), peritoneal (abdomen), pericardial (heart) and amniotic (birth) fluids. Unidentifiable body fluids shall also be considered Biological waste.
- 3) Decontamination - a process or treatment that renders a medical device, instrument, or environmental surface safe to handle.
- 4) Disinfection - eliminates virtually all pathogenic non-spore-forming microorganisms but not necessarily all microbial forms on inanimate objects (work surfaces, equipment, etc.).
- 5) Puncture Resistant - Containers that are able to withstand punctures from contained sharps.
- 6) Segregated - The process of separating Biological waste from all other wastes.
- 7) Sharps - Biological waste that is capable of puncturing, lacerating or penetrating the skin. Examples include scalpels, syringes, needles, razor blades, pipettes, petri dishes, flasks and test tubes.

8) recombinant and synthetic nucleic acid molecules are defined as:

- (i) molecules that a) are constructed by joining nucleic acid molecules, and b) can replicate in a living cell (i.e. recombinant nucleic acids);
- (ii) nucleic acid molecules that are chemically or by other means synthesized or amplified, including those that are chemically or otherwise modified but can base pair with naturally occurring nucleic acid molecules (i.e. synthetic nucleic acids); or
- (iii) molecules that result from the replication of those described in (i) or (ii) above

9) Sharps Containers - A rigid, leak and puncture resistant container, designed primarily for the containment of sharps and clearly labeled with the biohazard symbol.

10) Sterilization - the use of a physical or chemical procedure to destroy all microbial life.

11) Storage - The holding of packaged Biological waste for a period of more than three days.

## PACKAGING

Biohazard bags are used for the collection of non-sharps Biological waste at all points of origin. All biohazard bags meet the impact and tear resistance requirements of ASTM D-1709-91 and ASTM D-1922-89, respectively. These red, biohazard bags are placed into leak proof, puncture resistant outer containers with lids. These containers are then removed by a licensed Biological waste disposal firm. Clean containers and new bags are then replaced at each point of origin.

Biological sharps waste is collected in puncture resistant containers at the point of origin, as needed. All biohazard containers are red in color and contain the international biohazard symbol and the phrase: Biohazardous Waste or equivalent.

Autoclave use shall be limited to disinfection of glassware, instruments, and other reusable material.

## LABELING AND STORAGE

All Biological waste bags and sharps containers must be labeled with the generator's name and address. If the labeled bag is placed in a box or leak proof tub, the box or tub must also be labeled with the transporter's name, address, registration number and 24-hour telephone number. Items placed in the Biological waste bag or sharps containers are exempt from labeling when the waste bag itself is labeled.

Storage areas at each point of origin are located in buildings under contract with a licensed pest control firm. The storage areas have tile floors and can be easily decontaminated should a leak or spill occur. Each point of origin has controlled access away from student and pedestrian traffic.

A 30-day storage limit (90-day limit if stored below 45 degrees) is in force at each point of origin. For biohazard bags, the clock begins when the first waste item is placed in the receptacle. For sharps, the clock starts when the container is full and sealed. Waste containers should not have to be dated because pick-ups are pre-arranged with a licensed Biological waste disposal firm. The following information outlines the pick-up schedule for each storage area.

Generators, who do not receive pick up by the appointed time, should contact Stericycle at 866-783-7422.

No Biological waste shall be compacted by the generator at the point of origin.

No Biological waste shall be removed from the receptacle or point of origin except by licensed Biological waste disposal firm.

An experiment or class demonstration will define a waste stream of *like materials* that can be bagged together. For record keeping purposes a label should be placed on the bag that identifies the nature and generator of the waste.

Waste streams of dissimilar biohazards should never be mixed

Hazardous wastes should never be mixed with biohazardous wastes unless these are an unavoidable outcome of the generating process. In addition to the biohazard label, a label must be affixed to the bag that identifies the chemical hazard.

Radioactive wastes should never be mixed with biohazardous wastes (the sole exception being biological wastes coming from a process that used radioactive tracers). Selection of the tracer nuclide must be approved by the Radiation Safety Officer.

## SPILLS, LEAKS, DECONTAMINATION AND EMERGENCY PROCEDURES

All spills of and surfaces contaminated with Biological wastes shall be decontaminated immediately upon discovery. Decontamination can be accomplished with a 1:10 mixture of ordinary household bleach and water (5,000 ppm chlorine). This can be used on solids and in liquids. Exercise caution, as chlorine gas can be irritating to the mucous membranes and eyes. Use in a well-ventilated area with protective gloves, gown and goggles. All contaminated materials should be treated as Biological waste and be disposed of in Biological waste containers. Liquids can be decontaminated as above and flushed down a sanitary sewer. Surfaces should be wet wiped with the bleach solution above and allowed to air dry to ensure sufficient contact time. Spill response supplies shall include absorbent material, biological waste bags, disinfectant and personal protective equipment and must be in place prior to any spill event requiring their use.

Upon discovery of a spill or leak:

- 1). Don protective gear such as gloves, safety goggles, lab coat or gown.

2). Use disposable sorbets such as pillows or granules (kitty litter) to soak up any fluids present. Dispose of as Biological waste. Solids and sharps should be scooped up or picked up with tongs, forceps, etc. Place sharps in sharps container.

3). Cleanse the area with soap and water for gross removal. Dispose of materials as Biological waste.

4). Decontaminate the area with the bleach solution above or equivalent. Dispose of all material as Biological waste. Non-disposable items should be decontaminated with the bleach solution above.

Requests for assistance or reports of spills should be directed to EH&S at 1-7501. After-hours reports should go to Campus Safety at 1-3000.

Spills or releases that may impact the environment or present a clear and imminent public health hazard should be reported to the Colorado Department of Public Health and Environment's 24-hour spill reporting hotline at 1-877-518-5608 and to the local response authorities where the spill or release occurred. Spills or releases in the sanitary sewer must also be reported to your local wastewater treatment facility.

## TRAINING

In general, any employee that generates biological waste, places waste in containers or bags, works in an area where waste is generated or stored, prepares waste for off-site transport, self-transport, treats or is involved with biological waste recordkeeping should complete online **hazard communication training** from the Stericycle website. Please see training registration instructions on EHS website.

Customer #: 6132449

Zip code: 80210

Training should be taken before starting a new position with job responsibilities involving some aspect of biological waste and every three years thereafter.