

Calvin College Medical Waste Management Plan		Revision 1	
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1.0 Policy

The following medical waste management plan has been established for Calvin College. This program is in compliance with Michigan Department of Environmental Quality Waste and Hazardous Materials Division. It addresses requirements set forth in Part 138, Medical Waste Regulatory Act (MMWRA), of the Michigan Public Health Code, 1978 PA 368.

2.0 Definitions

In accordance with MMWRA, medical waste includes:

1. Cultures and stocks of infectious agents and associated biologicals, including laboratory waste, biological production wastes, discarded live and attenuated vaccines, culture dishes, and related devices.
2. Liquid human and animal waste including blood, blood products, and body fluids but not including urine or materials stained with blood or body fluids.
3. "Pathological waste" means human organs tissues, body parts other than teeth, products of conception, and fluids removed by trauma or during surgery, autopsy, or other medical procedure.
4. "Sharps" means needles, syringes, scalpels, and intravenous tubing with needles attached.
5. Contaminated wastes from animals that have been exposed to agents infectious to humans, these being primarily research animals.

3.0 Responsibilities

Biology

- Cell Culture flasks and plates and Petri dishes of microbiological cultures are placed in containers for on-site treatment in the autoclave. After treatment the liquid is flushed down the sanitary sewer. Solid wastes (plastic components) are discarded in the general waste stream.
- Plastic pipettes and glass Pasteur pipettes are collected in plastic lined, puncture proof plastic containers. The containers are labeled with the Biohazard symbol. The pipettes undergo on-site treatment in the autoclave. The collection containers may also contain plastic culture tubes, plastic pipette tips and other small miscellaneous disposable plastic ware. The plastic bags of solid waste are removed from the plastic container and the bag is placed in an appropriately labeled, puncture proof container. The waste is disposed of in the general waste stream.

- Liquid cultures of microbiological agents are treated on-site in the autoclave. After treatment the cultures are flushed into the sanitary sewer. The empty glass tubes are discarded in a “Broken Glass” container. The container is then disposed of in the general waste stream.
- Liquid supernatants, aspirated from cell cultures, are aspirated into a flask containing liquid EPA approved disinfectant (currently Roccall). The contents of the flasks are periodically flushed into the sanitary sewer.
- Human blood is used 2-4 times per year in very limited quantities. Liquid human blood is flushed into the sanitary sewer system. Sharps associated with these procedures are placed in puncture proof plastic, biohazard labeled boxes. When the boxes are 2/3 full they are closed/locked and placed in plastic-lined, cardboard medical waste boxes. Solid wastes (non-sharp) generated during these procedures are disposed of in medical waste boxes. The medical waste is treated off-site by Stericycle.
- Other miscellaneous solid wastes, whether from human blood or body fluids or infectious biological wastes are disposed of in plastic-lined, cardboard medical waste boxes.

Campus Safety

- Personnel carry a sharps container in every medical bag. Sharps that are encountered during routine patrol or in response to medical emergencies are placed in the sharps container. The containers are brought to the Biology Dept. for disposal when 2/3 full.
- Incident responses may require handling of contaminated glass or metal. Large pieces of broken glass or metal that are contaminated with blood or other bodily fluids are placed in a puncture proof container and then placed in a red “Biohazard” bag. The bag is brought to Biology for disposal.

Health Services

- Microscope slides, throat culture swabs, pipettes for mono and pipettes for cultures are disposed of in plastic lined, puncture proof, “Biohazard” labeled containers.
- Live and attenuated vaccine containers are disposed of in sharps containers. Sharps containers that are 2/3 full are placed in a biohazard medical waste box in Health Services.
- Wound dressings, patient paper gowns, blue pads and disposable speculums that are saturated in blood or body fluids are placed in leak proof plastic containers that are labeled “Biohazard”.
- Needles, syringes, disposable scalpels and blood collection systems are disposed of in sharps containers. Sharps containers that are 2/3 full are placed in a biohazard medical waste box in Health Services.
- All biohazard waste materials and sharps containers are placed in cardboard medical waste boxes. The waste is collected quarterly by Stericycle.

HPERDS

- A sharps container is used in the training room for collection of sharps associated with wound care. The container is collected quarterly by Stericycle.
- Blood and bodily fluids associated with wound care, clean up of a bodily fluid or first aid are collected in a leak proof container lined with a red "Biohazard" bag. The waste is collected quarterly by Stericycle.

Nursing

- Needles and other contaminated sharps generated in the Nursing Lab are disposed of in a Sharps container. The container is brought to the Biology Dept. for disposal when 2/3 full.

Physical Plant

- Waste generated in the cleanup of blood or bodily fluid is bagged in a red biohazard bag and placed in a leak proof container. The contaminated waste is brought to Biology for disposal.

WMRL

- Sharps associated with surgical procedures are collected in sharps containers. The container is collected quarterly by Stericycle.
- All waste generated by human cadavers is collected and placed in sealed, plastic lined cardboard containers. The containers are emptied quarterly by Stericycle.

4.0 Packaging Procedures

Puncture

- Items with the potential to puncture are placed in puncture proof plastic containers. Containers are marked with red "Biohazard" labels.

Leakage

- Items with the potential to leak are placed in leak-proof plastic containers. Containers are marked with red "Biohazard" labels.

Sharps

- Sharps containers/boxes are used for all sharps. Sharps containers that are 2/3 full are brought to Biology for disposal by Stericycle. Containers are marked with red "Biohazard" labels.

Aerosols

- Items with the potential for aerosol exposure are placed in a biological safety cabinet.

Collection/Storage

- Regulated waste is placed in containers which are closable, constructed to contain all contents and prevent leakage, appropriately labeled, and closed prior to removal to prevent spillage or protrusion of contents during handling.
- Sharps containers that are 2/3 full shall be sealed and moved to one of the biohazard medical waste boxes in Health Services or Biology DH206 or SB 215.

- Regulated waste that does not contain contaminated sharps must be placed in red biohazard bags and placed in one of the biohazard medical waste boxes in Health Services, or Biology DH 206 or SB 215.

5.0 Decontamination

- The Biology Department operates an onsite autoclave. It is operated according to manufacturer's instructions with consideration of the load size. Routine and preventative maintenance is performed quarterly by Steris to ensure that operating parameters used for waste treatment are sufficient and effective for biohazardous waste decontamination. In addition the Biology Lab Manager periodically tests the function of the unit with a biological indicator unit.
- Environmental Protection Agency (EPA) approved disinfectants are used where decontamination of a surface or substance is required. Disinfectants are used in accordance with EPA and the Center for Disease Control (CDC) guidelines.

Off-site Decontamination

Off-site decontamination is contracted with:

Stericycle, Inc
1040 Market Avenue Southwest
Grand Rapids, MI 49503
(616) 454-9405

6.0 Methods to Minimize Exposure

In accordance with MIOSHA regulations, Calvin College has implemented an Exposure Control Plan (ECP) for Bloodborne Pathogens. The ECP covers the areas of protocols, procedures, training, personal protective equipment and clothing, physical containment or isolation devices and prevention or control of aerosols regarding bloodborne pathogens. See the BBP Exposure Control Plan for more information.

7.0 REVISIONS

Revision	Date	Description
2	12/20/2009	Reformatting of policy - SV
3	10/11/2010	Midwest Waste Services replaced by Stericycle – HPERDS waste is collected by Stericycle (not brought to biology) WMRL waste is collected by Stericycle (not brought to Biology) BT-Sure vials replaced with biological indicator unit “Broken Glass” container replaced with appropriately labeled, puncture proof container