

Policies and Procedures Reference

DISPOSAL OF BIOLOGICAL MATERIALS

Questions and comments related to this guide can be directed to:

Chemical Control CentreLaboratory Safety Division401 Sunset AvenueWindsor, Ontario N9B 3P4e-mail:ccc@uwindsor.caweb:uwindsor.ca/labsafetyphone:519.253.300 ext. 3523

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Overview:

This guide is designed to outline the policies and procedures associated with the disposal of waste materials that have either contacted or contain biological agents. It was prepared with the goal to increase awareness of issues related to the treatment of biological materials in a safe, efficient, and effective manner.

Please note that individual departments on campus may have more stringent polices and procedures depending on the materials used in their research and teaching programs. In addition, specific individuals have been designated with the role of ensuring their departmental or research unit is properly operated, regularly maintained, records maintained, and that users are trained. It is important to meet with the proper individual within your department prior to using the instrument. If you are unable to determine who the appropriate point of contact is within your department, please contact the Chemical Control Centre (ext. 3523).

Contacts:

Department	Telephone Ext.
Chemical Control Centre – Client Services	Ext. 3523

Biological Safety Committee (2005 – 2007):

Name	Department	Telephone Ext.
Mrs. Leigh Harold	Occupational Health & Safety	Ext. 2055
Mr. Chris Busch	Chemical Control Centre	Ext. 3524

Responsibility:

Individual research and academic laboratories who utilize potentially hazardous biological agents and materials are responsible for the separation, packaging, and appropriate treatment of their own biological waste.

1. <u>Introduction:</u>

Biological waste is defined as waste material consisting of animal tissues, organs, body parts, carcasses, bedding, fluid blood and blood products, items saturated with blood, body fluids, and any material removed during surgery, treatment, autopsy, or for diagnosis that contains or are suspected of containing a serious pathogen. The Ministry of the Environment is the provincial authority responsible for the treatment and disposal of biomedical waste under the Environmental Protection Act. Under Ontario Regulation 558, residual wastes that are derived from the treatment of biomedical waste remain biomedical waste unless treated by methods such as incineration, steam sterilization, and chemical disinfection.

At the University of Windsor, individual research and academic laboratories are responsible for the separation, packaging, and treatment (if available) of their biological waste prior to its removal and disposal. The policies and procedures outlined within this guide apply to materials that have been deemed as waste and are contaminated with or contain biological agents only. If an item is contaminated with either chemicals or radioisotopes, please refer to the appropriate guidebook (<u>www.uwindsor.ca/labsafety</u>). For additional procedures for sharps waste, refer to the University of Windsor policy on Broken Glass and Sharps Disposal (<u>www.uwindsor.ca/safety</u>).

2. <u>Personal Protective Equipment:</u>

Individuals who are handle biological materials must take all reasonable steps to reduce exposure to biological agents, including the utilization of personal protective equipment (PPE).

Gloves: There are numerous different types of disposable gloves available from various manufactures. When handling biological materials, care should be taken to ensure that, an appropriate glove material is selected this ensures that the protective nature of the glove is maintained. Individuals should perform the following steps when handling biological material: (1) check the integrity of the glove; (2) do not wear gloves outside the laboratory; (3) use care when removing contaminated gloves; and (4) dispose of gloves within the appropriate waste stream.

Lab Coat: The utilization of a laboratory coat when handling biological materials reduces the risk of transmission of both biological agents and hazardous materials to research personnel. In addition, lab coats can be removed quickly in case of a spill or fire compared to personal clothing.

Safety Glasses: Are manufactured from shatter-resistant plastic lens, which are designed to protect the eye from flying debris, including biological material and contaminated liquids. It is recommended that individuals who are handling liquids that are comprised from or contaminated by biological agents utilize the appropriate type of eye protection.

Immunizations: Individuals who are working with biological agents should arrange to have their vaccination records reviewed with their personal physician. If a vaccination is available, the supervisor should make vaccination available to the employee/student. For example, anyone who handles human blood and/or tissues should be immunized for Hepatitis B. In some cases, the cost of immunization maybe covered by either public health agencies or private health plans.

3. <u>Segregation:</u>

Due to the unique characteristics of various biological materials, specific steps must be taken to ensure that they are disposed in accordance to local, provincial, and federal regulations. As such, the University of Windsor separates its biological waste into seven distinct groups:

- A. General Biomedical Waste: Liquids and Solids,
- B. Human Anatomical Waste,
- C. Infected Animal Anatomical Waste,
- D. Non-Infected Animal Anatomical Waste,
- E. Human Blood and/or other biological fluids,
- F. Animal Blood and/or other biological fluids, and
- G. Biohazardous Sharps.

A graphical representation of the segregation of biological materials is contained in Appendix A.

4. <u>General Biological Waste:</u>

4.1 Examples:

- liquids such as used cell culturing media, blood or blood fractions (serum), etc., which contain viable biological agents;
- non-sharp, solid laboratory waste (empty plastic cell culture flasks and Petri dishes, empty plastic tubes, gloves, wrappers, absorbent tissues, etc.) which may be, or is known to be, contaminated with viable biological agents.

Color Code: (White)

4.2 Approved Packaging/Containment:

Liquids: Collect liquid biological waste (i.e. culture media) in leak-proof containers such as flasks or bottles which is designed to withstand autoclaving temperatures (if applicable). To allow pressure equalization, they should not be sealed. Please refer to the "Safe operations of autoclaves in the treatment of biomedical waste" for compatibility information (www.uwindsor.ca/labsafety).

Liquid biological waste which is either not chemical or heat/pressure treated must be placed in a container provided by the Chemical Control Centre for disposal/treatment.

Solids: Non-sharp, solid laboratory waste (empty plastic cell culture flasks and Petri dishes, empty plastic tubes, gloves, wrappers, absorbent tissues, etc.) which may be, or is known to be, contaminated with viable biological agents should be collected in autoclavable bags.

The bag/container must be labeled on the outside with the generator's name, room, and building indicating the material's location of origin. Alternatively, a biohazardous materials control tag can be securely attached to the outside of the container.

If treatment facilitates are unavailable, solid general biological waste must be placed within a double-lined single-use corrugated biohazard box, provided by the Chemical Control Centre. A biohazardous materials control tag must be securely attached to the outside of the container indicating the following: (1) Room-Building (origin); (2) Principle Investigator; (3)

Contact Information; (4) Department; (5) Biological Permit Number; (6) Details of deposits; and (7) Transportation date.

4.3 Sterilization / Disinfection:

Steam Sterilization: The University of Windsor's Biological Safety Program recommends that individuals not utilize steam sterilization for the treatment of biological waste, which may be contaminated with significant amounts of either hazardous chemical or radioactive materials.

For detailed information regarding the sterilization of biomedical waste by steam sterilization, please refer to the "Safe operations of autoclaves in the treatment of biomedical waste" for (www.uwindsor.ca/labsafety).

Chemical Disinfection: Biomedical waste can be treated by utilizing chemical disinfectants, which destroy infectious agents. The contact time, concentration, and quantity of the chemical utilized in the treatment process is directly correlated with the ability to treat the materials. Individual researchers must seek approval from the University of Windsor's Biological Safety Committee to use this method in the treatment of general biomedical waste.

4.4 Transportation / Disposal:

Treated Materials:

As per the Ontario Regulations, the majority of biohazardous materials that have been successfully treated by steam sterilization are not considered biohazardous; therefore, these items can be disposed within the appropriate non-hazardous waste stream. Any innocuous liquids may be disposed of by depositing it down the laboratory drainage system and flush with a significant amount of clean water to purge waste material.

For solid materials, the hazard awareness signage and symbols must be changed after successful treatment to reflect the "non-hazardous" status prior to disposal. This can be completed by two methods: (1) defacement of the hazardous symbols; or (2) application of a University of Windsor "Treated Biological Materials – Non-Hazardous" sticker (preferred).

Once labeled, the material can be placed within a black plastic garbage bag and disposed within the general solid waste stream.



Example of a "Treated Biological Materials – Non-Hazardous" waste tag

Additional Treated Biological Materials – Non-Hazardous waste labels can be requested from the **Chemical Control Centre**, free of charge.

 Phone:
 519.253.3000 ext. 3523

 Fax:
 519.973.7013

 E-mail:
 ccc@uwindsor.ca

Untreated Materials:

The Chemical Control Centre has the ability to treat general biomedical waste by steam sterilization if the facilities are not available. All hazardous waste material must be packaged appropriately in an approved container for transportation by Facilities Services to Chemical Control (see below).

ID No.	Description	Treatment	
LAB1245	Small Box - Cardboard – Non-anatomical	Autoclave	
Item # LAB 1245 must be lined with a yellow non-anatomical waste bag (LAB1246)			
LAB1246	Yellow Bag - non-anatomical waste	Autoclave	
LAB0895	Autoclave bags – biohazard 19 x 23"	Autoclave	
LAB0018	Autoclave bags – biohazard 38 x 47"	Autoclave	
LAB1165	Autoclave tape – 25mm x 13M		

To request pick-up of untreated biological materials, please contact the Chemical Control Centre

Phone: Ext. 3523 / Fax: 519-973-7013 / e-mail: <u>ccc@uwindsor.ca</u> / In-person: Essex Hall B-37

5. <u>Human Anatomical Waste:</u>

5.1 Examples:

• materials which are considered anatomical include any recognizable part of the human body, tissues, extracted teeth, hair, nail clippings, etc. which are <u>not infectious</u>, but exclude fluids.

Color Code: (RED)

5.2 Approved Packaging / Containment:

All anatomical materials must be placed within a five-gallon "Red Bio-Pail" (CCC Part # LAB1251). These materials must be disposed through incineration by a third-party contractor. Bio-pails must be either frozen or refrigerated if incineration is not immediate. If you are using a preserved carcass, the preserving liquid must be separated and submitted as chemical waste.

A biohazardous materials control tag must be securely attached to the outside of the container indicating the following: (1) Room-Building (origin); (2) Principle Investigator; (3) Contact Information; (4) Department; (5) Biological Permit Number; (6) Details of deposits; and (7) Transportation date. Additional control tags can be acquired by contacting the Chemical Control Centre at ext. 3523.

5.3 Sterilization / Disinfection:

Human Anatomical Waste must be held for disposal (incineration) by an authorized biological waste management firm. All materials that fall under this classification are to remain within the above-mentioned "Bio-Pail" and transported to the Chemical Control Centre for storage.

5.4 Transportation / Disposal:

To arrange transportation, complete a request for pick-up of hazardous goods form and submit to the Chemical Control Centre either by fax (519.973.7013) or by e-mail

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(ccc@uwindsor.ca). A customer service representative will contact you to confirm packaging, records, and schedule your collection.

Please note that for safety purposes, we are unable to transport items that are not contained within the appropriate "Bio-Pail" container. If you have questions about packaging material for transport, please feel free to contact Chemical Control directly.

To request pick-up of untreated biological materials, please contact the Chemical Control Centre **Phone:** Ext. 3523 / **Fax:** 519-973-7013 / **e-mail:** <u>ccc@uwindsor.ca</u> /

In-person: Essex Hall B-37

6. Infected Animal Anatomical Waste:

6.1 Examples:

 materials which are considered anatomical include any recognizable part of the animal such as tissues, extracted teeth, hair, nail clippings, etc. which are infectious, but exclude fluids. For further information, please refer to the University of Windsor's Animal Care Committee guidelines (www.uwindsor.ca/acc).

Color Code: (Orange)

6.2 Approved Packaging / Containment:

All infected animal anatomical materials must be placed within a five-gallon "Red Bio-Pail" (CCC Part # LAB1251). These materials must be disposed through incineration by a third-party contractor. Bio-pails must be either frozen if disposal is not immediate. If you are using preserved carcasses, the preserving liquid must be separated and submitted as chemical waste.

A biohazardous materials control tag must be securely attached to the outside of the container indicating the following: (1) Room-Building (origin); (2) Principle Investigator; (3) Contact Information; (4) Department; (5) Biological Permit Number; (6) Details of deposits; and (7) Transportation date. Additional control tags can be acquired by contacting the Chemical Control Centre at ext. 3523.

6.3 Sterilization / Disinfection:

Infected animal anatomical waste must be held for disposal (incineration) by an authorized biological waste management firm. All materials that fall under this classification are to remain within the above-mentioned "Bio-Pail" and transported to the Chemical Control Centre for storage.

6.4 Transportation / Disposal:

The disposal of infected animal anatomical waste is regulated by the University of Windsor's Animal Care Committee. Please refer to your Animal Care Permit for specific disposal requirements.

To arrange transportation of infected animal anatomical waste, complete a request for pickup of hazardous goods form and submit to the Chemical Control Centre either by fax (519.973.7013) or by e-mail (<u>ccc@uwindsor.ca</u>). A customer service representative will contact you to confirm packaging, records, and schedule your collection.

Please note that for safety purposes, we are unable to transport items that are not contained within the appropriate "Bio-Pail". If you have questions about packaging material for transport, please feel free to contact Chemical Control directly.

To request pick-up of untreated biological materials, please contact the Chemical Control Centre Phone: Ext. 3523 / Fax: 519-973-7013 / e-mail: ccc@uwindsor.ca /

In-person: Essex Hall B-37

7. Non-Infected Animal Anatomical Waste:

7.1 Examples:

 materials which are considered anatomical include any recognizable part of the animal such as extracted teeth, hair, nail clippings, etc. but are <u>not deemed to be</u> <u>infectious</u>. For further information, please refer to the University of Windsor's Animal Care Committee guidelines (<u>www.uwindsor.ca/acc</u>).

Color Code: (Blue)

7.2 Approved Packaging / Containment:

All non-infected animal anatomical materials must be placed within a five-gallon "Red Bio-Pail" (CCC Part # LAB1251). These materials must be disposed through incineration by a third-party contractor. Bio-pails must be either frozen if disposal is not immediate. If you are using preserved carcasses, the preserving liquid must be separated and submitted as chemical waste.

A biohazardous materials control tag must be securely attached to the outside of the container indicating the following: (1) Room-Building (origin); (2) Principle Investigator; (3) Contact Information; (4) Department; (5) Biological Permit Number; (6) Details of deposits; and (7) Transportation date. Additional control tags can be acquired by contacting the Chemical Control Centre at ext. 3523.

7.3 Sterilization / Disinfection:

Non-infected animal anatomical waste must be held for disposal (incineration) by an authorized biological waste management firm. All materials that fall under this classification are to remain within the above-mentioned "Bio-Pail" and transported to the Chemical Control Centre for storage.

7.4 Transportation / Disposal:

The disposal of non-infected animal anatomical waste is regulated by the University of Windsor's Animal Care Committee. Please refer to your Animal Care Permit for specific disposal requirements.

To arrange transportation of non-infected animal anatomical waste, complete a request for pick-up of hazardous goods form and submit to the Chemical Control Centre either by fax (519.973.7013) or by e-mail (ccc@uwindsor.ca). A customer service representative will contact you to confirm packaging, records, and schedule your collection.

Please note that for safety purposes, we are unable to transport items that are not contained within the appropriate "Bio-Pail". If you have questions about packaging material for transport, please feel free to contact Chemical Control directly.

To request pick-up of untreated biological materials, please contact the Chemical Control Centre Phone: Ext. 3523 / Fax: 519-973-7013 / e-mail: ccc@uwindsor.ca /

In-person: Essex Hall B-37

8. <u>Human blood and/or body fluids:</u>

8.1 Examples:

 human liquid blood or semi-liquid blood and blood products, items contaminated with blood that would release liquid or semi-liquid blood if compressed, body fluids contaminated with blood and body fluids removed for diagnosis or removed during surgery, treatment, autopsy or embalming, exclusive of feces and urine.

Color Code: Yellow

8.2 Approved Packaging / Containment:

Any human derived liquid biological products, such as urine, feces, and blood products must be must be placed within a double-lined single-use corrugated biohazardous box (CCC Part # LAB1245).

8.3 Sterilization / Disinfection:

Human blood and/or body fluids can be sterilized by individual departments, the Chemical Control Centre, or by an authorized biological waste management firm. Please refer to both the University of Windsor's "General Principles of Steam Sterilization" and your site-specific operating procedures for details related to sterilization. In addition, the disposal of human blood and/or body fluids is regulated by the University of Windsor's Biological Safety Committee. Please refer to your Biological Materials Permit for specific sterilization and disinfection requirements.

Treated Materials:

As per the Ontario Regulations, the majority of biohazardous materials that have been successfully treated by steam sterilization are not considered biohazardous; therefore, these items can be disposed within the appropriate non-hazardous waste stream.

After successful sterilization, the hazard awareness signage and symbols must be changed to reflect the "non-hazardous" status prior to disposal. This can be completed by two methods:

(1) defacement of the hazardous symbols; or (2) application of a University of Windsor "Treated Biological Materials – Non-Hazardous" sticker (preferred). Once labeled, the material can be placed within a black plastic garbage bag and disposed within the general waste stream.



Untreated Materials:

The Chemical Control Centre has the ability to treat human blood and/or body fluids by steam sterilization if the facilities are not available. All hazardous waste material must be packaged appropriately packaged in an approved secondary container for transportation by Facilities Services to Chemical Control (see section 8.4).

ID No.	Description	Treatment	
LAB1245	Small Box - Cardboard – Non-anatomical	Autoclave	
Item # LAB 1245 must be lined with a yellow non-anatomical waste bag (LAB1246)			
LAB1246	Yellow Bag - non-anatomical waste	Autoclave	
LAB0895	Autoclave bags – biohazard 19 x 23"	Autoclave	
LAB0018	Autoclave bags – biohazard 38 x 47"	Autoclave	
LAB1165	Autoclave tape – 25mm x 13M		

8.4 Transportation / Disposal:

To arrange transportation of biological waste, complete a request for pick-up of hazardous goods form and submit to the Chemical Control Centre either by fax (519.973.7013) or by e-

mail (<u>ccc@uwindsor.ca</u>). A customer service representative will contact you to confirm packaging, records, and schedule your collection.

9. <u>Animal blood and/or body fluids:</u>

9.1 Examples

 animal blood, blood products, animal body fluids contaminated with blood and other body fluids removed during research or autopsy. For further information, please refer to the University of Windsor's Animal Care Committee guidelines (www.uwindsor.ca/acc).

Color Code: (Yellow)

9.2 Approved Packaging / Containment:

Any animal derived liquid biological products, such as urine, feces, and blood products must be must be placed within a double-lined single-use corrugated biohazardous box (CCC Part # LAB1245).

9.3 Sterilization / Disinfection:

Animal blood and/or body fluids can be sterilized by individual departments, the Chemical Control Centre, or by an authorized biological waste management firm. Please refer to both the University of Windsor's "General Principles of Steam Sterilization" and your site-specific operating procedures for details related to sterilization. In addition, the disposal of animal blood and/or body fluids is regulated by the University of Windsor's Animal Care Committee. Please refer to your Animal Care Permit for specific sterilization and disinfection requirements.

Treated Materials:

As per the Ontario Regulations, the majority of biohazardous materials, which have been successfully treated by steam sterilization, are not considered biohazardous; therefore, these items can be disposed within the appropriate non-hazardous waste stream. Any innocuous liquids may be disposed of by depositing it down the laboratory drainage system. Flush the drain with a significant amount of clean water to ensure that the drain has been purged of waste materials.

For solid material, the hazard awareness signage and symbols must be changed after sterilization to reflect the "non-hazardous" status prior to disposal. This can be completed by two methods: (1) defacement of the hazardous symbols; or (2) application of a University of Windsor "Treated Biological Materials – Non-Hazardous" sticker (preferred). Once labeled, the material can be placed within a black plastic garbage bag and disposed within the general waste stream.



Untreated Materials:

The Chemical Control Centre has the ability to treat animal blood and/or body fluids by steam sterilization if the facilities are not available. All hazardous waste material must be packaged appropriately packaged in an approved secondary container for transportation by Facilities Services to Chemical Control (see below).

ID No.	Description	Treatment	
LAB1245	Small Box - Cardboard – Non-anatomical	Autoclave	
LAB1249	Small Drum	Autoclave	
Items # LAB 1245 & LAB 1249 must be lined with a yellow non-anatomical waste bag (LAB1246)			
LAB1246	Yellow Bag - non-anatomical waste	Autoclave	

9.4 Transportation / Disposal:

Version Number: 1

To arrange transportation of biological waste, complete a request for pick-up of hazardous goods form and submit to the Chemical Control Centre either by fax (519.973.7013) or by e-mail (ccc@uwindsor.ca). A customer service representative will contact you to confirm packaging, records, and schedule your collection.

10. <u>Biohazardous Sharps:</u>

10.1 Examples:

- all sharp and pointed items used in medical care, diagnosis, and research, including the manipulation and care of laboratory animals, which should be considered potentially infectious;
- laboratory glassware which is known or suspected to be contaminated with hazardous biological agents.

Color Code: (Yellow)

10.2 Approved Packaging / Containment:

All biohazardous sharps (i.e. needles, syringes, blades, etc) must be placed within an approved sharps container prior to disposal. The approved containers are available from the Chemical Control Centre in two sizes, either 2.25L or 13.2L. These containers must be securely sealed prior to transportation.

10.3 Sterilization / Disinfection:

Biohazardous sharps can be effectively treated by steam sterilization. Please refer to both the general principles of steam sterilization and your site-specific operating procedures for details related to sterilization.

Treated Materials:

As per the Ontario Regulations, the majority of biohazardous materials that have been successfully treated by steam sterilization are not considered biohazardous; therefore, these items can be disposed within the appropriate non-hazardous waste stream. Any innocuous liquids may be disposed of by depositing it down the laboratory drainage system. Flush the drain with a significant amount of clean water to ensure that the drain has been purged of waste materials.

For biohazardous sharps, the hazard awareness signage and symbols must be changed after sterilization to reflect the "non-hazardous" status prior to disposal. This can be completed by two methods: (1) defacement of the hazardous symbols; or (2) application of a University of Windsor "Treated Biological Materials – Non-Hazardous" sticker (preferred). Once labeled, the material can be placed within a black plastic garbage bag and disposed within the general waste stream.



Example of a "Treated Biological Materials – Non-Hazardous" waste tag

Additional Treated Biological Materials – Non-Hazardous waste labels can be requested from the **Chemical Control Centre**, free of charge.

 Phone:
 519.253.3000 ext. 3523

 Fax:
 519.973.7013

 E-mail:
 ccc@uwindsor.ca

Untreated Materials:

The Chemical Control Centre has the ability to treat biohazardous sharps by steam sterilization if departmental/research facilities are not available. All hazardous waste material must be packaged appropriately packaged in an approved secondary container for transportation by Facilities Services to Chemical Control (see below).

ID No.	Description	Treatment
LAB0617	Sharps container – 13.2L (3.5G)	Autoclave
LAB0618	Sharps container – 2.25L	Autoclave
LAB1165	Autoclave tape – 25mm x 13M	

10.4 Transportation / Disposal:

To arrange transportation of biological waste, complete a request for pick-up of hazardous goods form and submit to the Chemical Control Centre either by fax (519.973.7013) or by e-mail (ccc@uwindsor.ca). A customer service representative will contact you to confirm packaging, records, and schedule your collection.

Please refer to the University of Windsor's

Broken Glass and Sharps Policy for more information.

www.uwindsor.ca/safety

www.uwindsor.ca/biosafety

Version Number: 1

11. <u>Sterilization and Disinfection</u>

Individual permit holders may elect to inactivate biological agents by employing either chemical disinfection or steam sterilization procedures. The University of Windsor's Biological Safety Committee outlines the primary method for decontamination on each permit. Please refer to your biological materials permit for more information.

Autoclaving:

An autoclave is a pressurized chamber that is designed to heat aqueous solutions above their boiling point. The high pressure and heat has penetrative power to enter bacterial cell walls and their dormant heat-resistant forms (endospores). The use of a pre-vacuum autoclave allows for the removal of air in several stages to allow for complete steam penetration of solid objects making it the preferred and most reliable method of sterilizing biological waste.

The University of Windsor's Biological Safety Program recommends that individuals not utilize steam sterilization for the treatment of biological waste that may be contaminated with biological agents and/or significant amounts of either hazardous chemical or radioactive materials.

Please refer to site-specific guidelines related to the operation of individual autoclaves.

General requirements/guidelines are listed below:

Requirements:

- Autoclaves used in the sterilization or disinfection of biologically active materials, such as general biomedical waste, human blood and/or animal fluids must be certified annually.
- An autoclave log must be maintained outlining the following: (1) Principle Investigator; (2) Name of User; (3) Contents; (4) Room number; and (5) Telephone number.

Guidelines:

- Autoclavable bags should be closed but not sealed airtight to allow steam penetration before they are placed into the autoclave chamber. After autoclaving and cooling, these bags of autoclaved waste a "Non-Hazardous" sticker must be applied over the biohazardous warning symbol prior to disposing of the autoclave bag in the normal non-hazardous waste stream.
- Materials must be placed into a tray of sufficient capacity to contain all liquid in the event of vessel failure or breakage inside the autoclave chamber. Use extreme caution when handling autoclaved liquids since they are hot and may boil over.

Please refer to the University of Windsor's Autoclave Procedures for more information.

www.uwindsor.ca/labsafety

www.uwindsor.ca/biosafety

12. <u>References</u>

"The Laboratory Biosafety Guidelines", 3rd Edition (2004) Health Canada

"Biosafety in Microbiological and Biomedical Laboratories", 4th Edition (1999) U.S. Department of Health and Human Service.

"Regulations to amend regulation of 347 of the revised regulations of Ontario made under the Environmental Protection Act". Ontario Regulation 558/00 (2000) Ontario Ministry of the Environment

"University of Windsor's General Principles of Steam Sterilization" (2006) Chemical Control Centre, University of Windsor.

"University of Windsor's Broken Glass Policy" (2006) Occupational Health and Safety, University of Windsor.





Non-Anatomical Materials:

ID No.	Description	Treatment	Code	
LAB1245	Small Box - Cardboard – Non-anatomical	Autoclave	*LAB1245*	
LAB1249	Small Drum	Autoclave	*LAB1249*	
Items # LAB 1245 & LAB 1249 must be lined with a yellow non-anatomical waste bag (LAB1246)				
LAB1246	Yellow Bag - non-anatomical waste	Autoclave	*LAB1246*	

The following materials can be placed in the above mentioned "Biological Waste" containers.

- 🛠 General Biomedical Waste: Liquids and Solids
- Human Blood and/or other biological fluids
- ★ Animal Blood and/or other biological fluids
- ✤ Biohazardous Sharps

Anatomical Materials:

ID No.	Description	Treatment	Code
LAB1251	Red "Bio" Pail	Incineration	*LAB1251*
LAB1249	Small Drum	Incineration	*LAB1249*
Items	s # LAB 1245 & LAB 1249 must be lined with a red a	anatomical waste bag	(LAB1253)
LAB1253	Red Bag - Anatomical Waste	Incineration	*LAB1253*
Items # LAB 1251 & LAB 1249 must be identified with anatomical or pharmaceutical labels for identification.			
LAB1250	Anatomical Labels	Incineration	*LAB1250*
LAB1252	Pharmaceutical Labels	Incineration	*LAB1252*

The following materials can be placed in the above mentioned "Biological Waste" containers.

- ★ Human Anatomical Waste
- ✤ Infected Animal Anatomical Waste
- ★ Non-Infected Animal Anatomical Waste

Please charge all supplies to account # 17880 and indicate End-User within issue notes