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1. Purpose

The Standard Operating Procedure (SOP) for sharps disposal was developed by the Department of Environmental Health & Safety in accordance with the University's Policy Statement on Health and Safety and to ensure compliance with all applicable legislation and guidelines.

This SOP applies to the disposal of all sharps at Queen's University to ensure the safety of all faculty, staff, students and external waste handlers.

2. Applicable Legislation

Occupational Health & Safety Act, 1990

Public Health Agency of Canada Laboratory Biosafety Guidelines, 3rd edition, 2004

Canadian Nuclear Safety Act and Regulations

Ontario Regulation 347, General – Waste Management

Guideline C-4: The Management of Biomedical Waste in Ontario

3. Responsibilities

3.1. Directors, Department Heads & Managers

Each has the following responsibilities under this SOP:

- To ensure that pertinent supervisors and employees are notified of their responsibilities when working with or disposing of sharps and glassware;
- To ensure that procedures, equipment and materials appropriate for the specific work locations under his/her authority are provided to protect the health and safety of all employees;
- To ensure that all employees are given adequate supervision and instruction on the hazards associated with the use and disposal of sharps and glassware;
- To ensure that the components of this SOP are implemented in all facilities under his/her authority.



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3.2. Supervisors

Supervisors must be knowledgeable about hazards and the appropriate standard operating procedures for work involving sharps and glassware in locations under his/her authority. In addition, he/she has the following responsibilities:

- To ensure that employees are familiar with the hazards associated with sharps and glassware, as well as the standard operating procedures for proper disposal;
- To ensure that all employees act in accordance with the standard operating procedures for sharps and glassware disposal;
- To ensure that appropriate PPE, equipment and materials are used by all employees;
- To promptly report known or suspected sharps related incidents, unsafe conditions or unsafe procedures, including improper disposal of sharps, to the Department of Environmental Health & Safety.

3.3. Employees and Students

Employees and students have the following responsibilities:

- To be familiar with the hazards and the pertinent standard operating procedures associated with using and disposing of sharps and glassware;
- To work in accordance with written standard operating procedures for sharps and glassware disposal;
- To use the appropriate PPE, equipment and materials provided for work with sharps;
- To promptly report any known or suspected accidents, unsafe conditions or unsafe procedures, including improper disposal of sharps, to his/her supervisor.
- For *Discarded/Medical Needles (Sharps)* found in public spaces, or outside a laboratory area where sharps are used,
 - During Weekday operating hours (7:00-16:30) Notify Fixit at **613-533-6757 (internal 77301)**
 - Outside of weekday hours (16:30-7:00), call Queen's Security at **613-533-6111**

3.4. Client Services (FIXIT)

Client Services has the following responsibilities:



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- During weekday operating hours (7:00-16:30), notify the appropriate department/individual(s) after receiving a call of a *Discarded/Medical Needles (Sharps)* or other sharps hazards;
 - For outdoor spaces and garages contact Grounds Maintenance;
 - For Indoor spaces contact Custodial Management;
 - For Residences contact Custodial Management;
 - Notifying Campus Security or EH&S as required.

3.5. Campus Security

Security staff must be knowledgeable about hazards and the appropriate standard operating procedures for handling sharps and glassware in locations under his/her authority. Queen's Security has the following responsibilities:

- During Weekday operating hours (7:00-16:30) Notify Fixit at **613-533-6757 (internal 77301)** when *Discarded/Medical Needles (Sharps)* are found in non-laboratory spaces or notify the appropriate department/individual(s) as required;
- Outside of weekday hours (16:30-7:00) Pick up *Discarded/Medical Needles (Sharps)* found or notify the appropriate department/individual(s) as required if there is no immediate hazard present.

3.6. Custodial Management

Managers must be knowledgeable about hazards and the appropriate standard operating procedures for handling sharps and glassware in locations under his/her authority. In addition, he/she has the following responsibilities:

- responsible for picking up *Discarded/Medical Needles (Sharps)* found in indoor spaces where sharps are generally not used as part of research or training;
- Responsible for emptying liners in secure *Discarded/Medical Needles (Sharps)* containers mounted in public washrooms and other public areas and replacing them with an empty container See *Appendix A: Public-Access Sharps Container Change Out Procedure*;
- Responsible for requesting a sharps pickup through EH&S.

3.7. Custodial Staff

When custodial staff find a *Discarded/Medical Needles (Sharps)*, or are notified by a staff member, student or the public about a *Discarded/Medical Needles (Sharps)*:



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- Do not attempt to pick up, move, or dispose of the sharp yourself;
- If possible, keep others away from the area;
- Notify your manager;
- Custodial staff are also responsible for checking the level on secure sharps containers mounted in public washrooms and other public areas and notifying their supervisor when they are $\frac{3}{4}$ full.

3.8. Grounds Maintenance

Grounds staff must be knowledgeable about hazards and the appropriate standard operating procedures for handling sharps and glassware in locations under his/her authority. In addition, he/she has the following responsibilities:

- Pickup and dispose of *Discarded/Medical Needles (Sharps)* found outdoors and in garages;
- Contact Queen's Security or EH&S in circumstances when there are further hazards or dangers or there is evidence of criminal activity that requires documentation or a security response.

3.9. Community Housing

Community Housing appointed staff must be knowledgeable about hazards and the appropriate standard operating procedures for handling sharps and glassware in locations under his/her authority. In addition, he/she has the following responsibilities:

- Pickup and dispose of *Discarded/Medical Needles (Sharps)* found outdoors or student houses/rooms.
- Contact Grounds Maintenance where applicable
- Contact Queen's Security or EH&S in circumstances when there are further hazards or dangers or there is evidence of criminal activity that requires documentation or a security response.

3.10. Environmental Health & Safety (EH&S)

EH&S staff must be knowledgeable about hazards and the appropriate standard operating procedures for handling sharps and glassware in locations under his/her authority. In addition, he/she has the following responsibilities:



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- responsible for *Discarded/Medical Needles (Sharps)* pickup when necessary;
- investigating concerns regarding found *Discarded/Medical Needles (Sharps)*;
- providing *Discarded/Medical Needles (Sharps)* and general sharps waste disposal;
- conducting random audits for compliance with laboratory disposal of sharps;
- updating this SOP.

4.0 Definitions

Sharps

A sharp is any object or device having corners, edges, or projections capable of cutting or piercing the skin. Queen's University's definition of sharps includes both contaminated sharps (biohazardous, radioactive, chemical) and uncontaminated sharps that pose a threat to custodians or other personnel.

Discarded/Medical Needles (Sharps): Used hypodermic needles or syringes, often referred to as "**sharps**". These are dangerous items often found in public spaces (Buildings, parks, streets, parking lots) that require specific, safe disposal in approved sharps containers.

Uncontaminated Sharps

These are sharps that are free of biohazardous, chemical and radioactive contamination. However, for the protection of custodial, laboratory personnel and external waste handlers and to reduce public concern, uncontaminated sharps must be disposed of in accordance with this procedure.

Waste Glassware

Waste glassware is any item that cannot be recycled and is free of biohazardous, chemical and radioactive contamination, but could puncture a regular trash bag potentially causing injury to someone handling the trash bag. This includes intact glassware that could potentially break during waste handling activities.

Sharps Containers

Approved containers specifically designed for the disposal of sharps and meet the requirements of CSA Standard Z316.6.95(R2000). They must be puncture-resistant and leak proof. Approved sharp containers must also have a lid which cannot be opened once it has been permanently closed.



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Personal Protective Equipment (PPE)

Refers to the specialized protective gear worn to reduce the risk of cuts, punctures, and exposure to hazardous agents when working with items capable of penetrating the skin. When handling *Discarded/Medical Needles (Sharps)* and other sharps, the recommended PPE typically includes:

- Nitrile gloves for biological protection
- Nitrile or other appropriate gloves for chemical protection
- *Plus*, when needed and especially when handling *Discarded/Medical Needles (Sharps)*, cut-resistant or puncture-resistant gloves. Double layering might be necessary where a nitrile glove is placed over a puncture proof glove.
- Tongs should be used when practical to pick up *Discarded/Medical Needles (Sharps)* further reducing the risk of puncture.

5.0 Training &PPE

All staff responsible for the pickup or handling of sharps must receive appropriate training and must be knowledgeable about potential hazards, risks, safe handling and mitigation strategies when handling sharps as outlined in this procedure. Further they must be provided with the appropriate PPE and equipment necessary to safely handle sharps and mitigate any potential hazards.

Staff responsible for the pickup of public facing sharps containers or discarded needles must further complete “*Sharps Awareness: Risks of Infectious Materials, Chemical Exposure and Physical Injuries*” training.

6.0 Discarded/Medical Needles (Sharps) Found in Public Spaces

If a *Discarded/Medical Needles (Sharps)* is found outdoors, in garages, public accessible spaces, or spaces other than areas where sharps are used:

- Do not attempt to pick up, move, or dispose of the sharp yourself.
- If possible, keep others away from the area until trained personnel arrive.

During Weekday Operating Hours (7:00 AM – 4:30 PM) contact Fixit at **613-533-6757**.

- Provide the following information:

- Your name and contact number
- Exact location of the sharp
- Description of the item, if known
- Any immediate hazards (e.g., children nearby, heavy foot traffic)

Outside of weekday hours (4:30 PM – 7:00 AM) Contact Queen’s Security at **613-533-6111**



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- Provide the same information as listed above.

7.0 General Sharps Disposal Procedures

Non contaminated sharps can be generated in many areas on campus such as laboratories, clinics, shops, residences, and offices. These sharps, even though they are not contaminated with biohazardous, radioactive or chemical waste, must be disposed in approved sharps containers

Typical non-contaminated sharps include:

- Needles
- Needles with syringes
- Blades (razor, xacto, scalpels, etc.)

In order to ensure the safety of everyone in, or accessing, a work area, sharps must not be left unattended where they could injure others.

Used disposable needles and syringes must be placed, intact, directly into an approved sharps container without attempting to recap, cut, shear, bend or remove the needle.

Since these are noncontaminated sharps, remove or cover any biohazard symbols or labeling that states biohazardous or infectious waste. Label the container "Uncontaminated Sharps".

Sharps, or Sharps containers for needles, syringes, blades, etc., should never be placed in the regular garbage. Sharps must not be put into glass jars, bottles cans, etc. These items can break or be punctured leading to potential injuries during the disposal process. This procedure is in place to protect custodians, other Queen's employees and external waste handlers from puncture wounds, see section 6.0 Waste Disposal for final disposal instructions.

7.1. Biohazardous Sharps and Glassware

Biohazardous sharps and glassware are contaminated with biohazardous material, but are not chemically or radioactively contaminated.

Biohazardous sharps and Glassware include the following:

- Needles
- Needles with syringes
- Needles from vacutainers



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- Needles and with attached tubing
- Blades (scalpels, razors, etc.)
- Contaminated Pasteur pipettes
- Contaminated glass slides
- Contaminated broken glass

In order to ensure the safety of everyone in, or accessing, a work area, sharps must not be left unattended where they could injure others.

Used disposable needles and syringes must be placed, intact, directly into an approved sharps container without attempting to recap, cut, shear, bend or remove the needle.

Biohazardous sharps must be disposed of in approved containers and must be labeled with the words "Sharps Waste", the biohazard symbol and the word "Biohazard".

Sharps containers must be placed in the laboratory as close a possible to the area where sharps waste is generated.

Do not overfill sharps containers. Sharps must not be forced into sharps receptacle, but should fit easily into the container being used. Close the lid on the sharps container when it is 3/4 full. Often the appropriate fill line is indicated on the sharps container.

Prior to requesting a Hazardous Waste Pickup for a full sharps container, its entire outer surface must be disinfected using a disinfectant that is effective for all biohazardous material in use in that laboratory.

Glassware that is contaminated with biohazardous material must be decontaminated through autoclaving or chemical disinfection before disposal. After decontamination, glassware can be disposed of using the procedures listed below for glassware.

Long pasture pipettes contaminated with biohazardous material should be disinfected, either through autoclaving or chemical disinfection, before disposal. Due to the unique hazards associated with long pasteur pipettes, after decontamination, they should be disposed of as oversized glassware using the procedures below for waste glassware.

If it is not feasible to disinfect long pasture pipettes, then they must be disposed as biohazardous waste. Contaminated long pasture pipettes can be collected in a box that is not made from glass (such as those available through lab equipment suppliers) or a cardboard box sized to fit pipettes. Boxes must be lined with a 4-6 ml bag to prevent leaks. Boxes must be



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labeled with the words “sharp”, the biohazard symbol or the word “biohazard” on at least two sides. Boxes must be disposed of as biohazardous waste in accordance with EH&S SOP-CHEM-01 (Hazardous Waste Disposal).

7.2 Chemically Contaminated Sharps and Glassware

These are sharps that are contaminated with hazardous chemicals, but are free from biohazardous or radioactive contamination.

These sharps must be disposed of using an approved sharps container labeled with the phrase “Chemically Contaminated Sharps”. Deface or remove any biohazard labels or markings.

When disposing of chemically contaminated sharps, chemical incompatibility needs to be considered. It may be necessary to segregate chemically contaminated sharps in different sharps containers based on compatibility/reactivity. Full sharps containers must be disposed of as chemical waste in accordance with EH&S SOP-CHEM-01 (Hazardous Waste Disposal).

Broken mercury thermometers should not be placed in a sharps container. After the sharp edges are taped over, it may be placed in a plastic bag to prevent the mercury from being released. Dispose as chemical waste as per EH&S SOP-CHEM-01.

Chemically contaminated glassware must be disposed in approved white bins labeled as Laboratory glass/plastic/debris in accordance with EH&S SOP-CHEM-01

7.3 Radioactive Sharps and Glassware

These are sharps contaminated with radioactive materials, but are free from biohazardous contamination.

Radioactive sharps must be placed in an approved sharps container and labeled with a yellow radioactive waste tag. Deface or remove any existing biohazard labels or markings.

As with all radioactive material, radioactive sharps must be disposed of in accordance with the Radiation Safety Manual.

7.4 Mixed Contamination



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If sharps become contaminated with a mixture of hazardous components during use, treat as follows:

- Biohazardous and hazardous chemical: Decontaminate the biohazard agent, if it safe to do so, and manage as chemically contaminated.
- Radioactive and hazardous chemical: Manage as a radioactive sharp.
- Biohazardous and radioactive: Decontaminate the biohazardous agent, if it safe to do so, and manage as a radioactive sharp.
- Biohazardous, radioactive and hazardous chemical: Decontaminate the biohazardous agent, if it is safe to do so, and manage as a radioactive sharp.

7.5 Waste Glassware

Waste glassware is any broken item that could puncture regular trash bags and potentially cause injuries to someone handling the trash bag. Waste Laboratory glassware also includes intact glassware that has the potential break during waste handling activities. Waste laboratory glassware included, but is not limited to:

- Broken glass
- Bottles
- Flasks
- Pasteur pipettes
- Glass slides and cover slips
- Glass vials

If waste glassware is contaminated by a biohazard, radioactive and/or chemical, refer to the appropriate subsection under Section 5.0 for the appropriate disposal procedures.

Small amounts of laboratory glassware that cannot be recycled and is free from biohazardous, radioactive and chemical contamination can be disposed in approved white bins labeled as Laboratory glass/plastic/debris in accordance with EH&S SOP-CHEM-01

Large amounts of glassware

Large amounts of non-contaminated glassware or oversized waste laboratory glassware may be carefully boxed for regular waste collection by custodial services using an ordinary cardboard box. The box must be sturdy, with the bottom seams taped. Before pick-up the box lid must be closed and the seams secured with tape. The box must be labeled on two sides with the



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words “Non-contaminated glass”. Items placed in the box must be free from biohazardous, radioactive and chemical contamination.

Pasteur Pipettes

Due to the unique hazards associated with long glass pasteur pipettes, they should be considered oversized waste laboratory glassware. Uncontaminated long glass pasteur pipettes can be placed in a box (such as those available through lab equipment suppliers) or a cardboard box that is sized to fit the pipette. The requirements for securing and labeling the box are the same as those listed above.

Oversized waste laboratory glassware and long pasteur pipettes will not be collected if they are not packaged as described above.

8.0 Waste Disposal

Please collect sealed full sharps containers in a location accessible to the waste contractor. Clearly label as “Waste for Pickup” and indicate the location on the waste form. Sharps disposal can be arranged by completing the Hazardous Waste Disposal Form on the EH&S website <http://www.safety.queensu.ca/hazwaste/wasteform.htm>. For non-contaminated or chemical sharps, deface all biological markings and label container with either “Non-Contaminated Sharps” or “Chemically contaminated Sharps”. Sharps from public areas are considered to be contaminated and treated as biohazardous waste.

9.0 Emergency Response

If the skin is punctured by a syringe or needle or you are cut by a sharp that could be contaminated, encourage the wound to bleed and do not suck the wound.

Immediately locate a sink, water hose or fountain and rinse thoroughly with running water. If water may not be accessible, carry and use alcohol wipes.

Get prompt medical assistance or treatment at KGH. Report the Incident to your supervisor.

10. Auditing

The Department of Environmental Health and Safety reserves the right to randomly select departments for inspection to verify compliance with this procedure.

Revision History



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February 2007 – Initial Release

January 2008 – Revision 2.0 (addition of Appendix A)

April 2026 - Revision 3.0



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Appendix A. Public-Access Sharps Container Change Out Procedure

When changing full sharps containers in public areas (washrooms, lobbies, outdoor locations, etc.), workers should wear appropriate protective equipment to prevent contact with needles, bodily fluids, or accidental punctures and use tongs when directly handling sharps. Check the level of sharps containers regularly and change them when $\frac{3}{4}$ full. This will eliminate the need to directly handle any sharps.

Required PPE

1. Two layers of gloves

- **Layer 1:** Wear puncture-resistant gloves as the base layer,
- **Layer 2:** Wear nitrile gloves on top of the puncture-resistant gloves to prevent exposure to biological hazards, fluids etc. If the outer nitrile glove becomes contaminated, it can be removed and replaced, preventing the need to decontaminate the inner, more complex puncture-resistant glove.

2. Closed-Toe Footwear

- Wear shoes that cover the entire foot and provide protection from dropped sharps.

Additional Tools - Tongs may be necessary to pickup loose sharps or deal with overfilled containers. The use of tongs greatly reduces the potential of a puncture.

Checking The Level of A wall Mounted Secure Sharps Container (Custodial staff)

- 1.0 Locate the sharps container and the top opening. If necessary, use a light to look inside the top opening to check the fill level. If it is $\frac{3}{4}$ full it requires changing, please notify your manager.





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Changing The Inner Sharps Container (Custodial Managers)

1.0 Don the appropriate PPE mentioned above. Unlock protective metal container and pull back the front cover to reveal yellow sharps container.



2.0 Grab the bottom of the yellow container and pull the container out.





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3.0 Ensure there are no needles sticking above the opening of the container. If they are sticking out use tongs to gently push them back in or gently shake the container. This will settle the sharps. Alternatively, some sharps will need to be removed using tongs and placed in a different container. Carefully screw on the white lid to close the container.



4.0 Mark the container as full.

5.0 Place the lid on top of an empty yellow container ensuring the lid is tightly snapped into place. Note the picture in step in 2 shows an improperly attached lid. Place the yellow container back into the metal rack, with the cap off to the side.



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6.0 Close and lock the metal cover

7.0 Submit a request for hazardous waste pickup through the EH&S website.