

# SHARPS, GLASSWARE, AND POINTED PLASTIC DISPOSAL

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UNIVERSITY OF  
**GEORGIA**

Office of Research  
*Research Integrity and Safety*

## I. Purpose & Scope

This policy is meant to provide waste management guidelines for the types of wastes typically generated in a laboratory, which can pose a health or physical hazard to waste handlers and other laboratory personnel, but are not necessarily considered hazardous waste by regulatory agencies. These types of waste include but are not limited to the following: non-hazardous laboratory glass (broken or unbroken), sharps, and pointed plastics. These items are further defined in Section 2. The management and disposal of these items must be in accordance with this policy, which is a reflection of the University of Georgia's commitment to providing a safe and compliant workspace for all of its faculty and staff as outlined in Academic Affairs Policies 6.01 and 6.02.

## II. Definitions

- a. **Biohazardous Waste** – The Georgia Department of Natural Resources (DNR), Environmental Protection Division (EPD) manages State Solid Waste Regulations. Rule 391-3-4-.15, [Biomedical Waste](#), defines disposal methods for biomedical wastes and provides definitions and disposal requirements for sharps (please refer to the current version of UGA's Institutional Biosafety Manual).
- b. **BSW** - Building Services Worker.
- c. **Common Trash** - Non-hazardous laboratory trash (no biological, chemical or radiological hazard) that under normal circumstances will not puncture the waste bag. Any item that is contaminated with biological, chemical, or radiological hazardous materials is not considered common trash.
- d. **Glass Disposal Box**- A lined cardboard box that is used to dispose of non-hazardous laboratory glass.
- e. **Non-hazardous laboratory glass** – Uncontaminated glass items that are broken or have the potential to break when placed in a normal waste stream and consequently present a physical hazard to the waste handlers. Only glass that is not contaminated with chemical, biological, or radioactive materials is considered non-hazardous. These items include used lab glass such as microscope slides, Pasteur pipettes, glass vials, glass Petri dishes, empty reagent bottles, and ANY uncontaminated broken glass.
- f. **Original Container** – The original rigid packaging that the product or material was delivered in.
- g. **Pointed plastics** - Any item that is not glass or a “sharp” by the Biomedical Waste definition but

that could potentially puncture a regular waste bag and pose a physical hazard to the waste handlers. These items must be free from biological, chemical and radiological contamination before going into the standard trash. Examples include syringes without needles attached and plastics such as vials, serological plastic pipettes, pipette tips, and other similar items that when placed in the regular trash can potentially pierce the plastic liner.

- h. **Sharps** – by the State of Georgia Biomedical Waste Rules (Refer to O.C.G.A 391- 3-4.15 [E]), a sharp is any discarded article that may cause punctures or cuts. Such waste includes, but is not limited to needles, IV tubing and syringes with needles attached, scalpels, razor blades, and X-acto blades. For UGA this includes contaminated glass Pasteur pipettes and glass slides.
- i. **Sharps Disposal Containers** – A container for storage, transportation, treatment and subsequent disposal, which is leak-proof, rigid, puncture-resistant and is capable of being taped closed or tightly lidded to prevent loss of contents. Rigid containers of discarded sharps are either red or orange in color OR are clearly identified with the universal biohazard symbol OR are clearly marked with the word “Biohazard”.

### III. Common Trash & Pointed Plastics Disposal

- a. Non-hazardous pointed plastics that can readily penetrate a regular trash bag, such as plastic pipette tips and transfer pipettes, must be placed in a disposable rigid plastic container or lined cardboard container that can be securely sealed. Once full, the disposal container must be labeled “OK to trash, non-hazardous waste” and the lid securely closed. Then, the waste container can either be placed in the common trash receptacle or taken to the dumpster by laboratory personnel. The container must meet the specifications in Section III.b below. Laboratory glassware and sharps must never be discarded with non-hazardous pointed plastics disposal. Facilities Maintenance Division (FMD), upon request, will supply a consistent texture, moderately thick bag for laboratory wastes.

BSWs will receive orientation training appropriate for laboratory waste pick-up in the Building Service Worker Academy. If there are special waste considerations, please contact the building supervisor, or call the FMD Services Department at 2-0293. For biohazardous pointed plastics, please see the [Autoclave Waste Disposal](#) guidelines in Section IV of this document.

If pointed plastics have been used for radioactive materials, they must be packaged in disposable rigid containers and then those containers placed in an appropriate dry radioactive waste container. For more information, see the Radiation Safety Manual or contact the Radiation Safety Office.

#### b. **Acceptable Disposable Containers for Pointed Plastics**

- The ‘original container’ (refer to Definitions) with a black liner placed inside. Tape closed when full.

- Rigid cardboard with black plastic liner to prevent leaking. Double box or tape seams with heavy-duty tape. Tape closed when full.
- Any rigid leak proof container with a lid.

**c. Common Trash**

Only common trash (refer to Definitions) will be picked up by the BSW for disposal. The BSW **will not** dispose of any trash that is placed inside of a sharps container. Biohazard bags will only be picked up if the bag has been managed following the autoclave waste disposal guidelines (see Section IV).

If a BSW encounters an obvious hazard while collecting common trash, they will request that a member of the laboratory staff remove the hazard before collecting the common trash.

**IV. Autoclave Waste Disposal**

- This procedure applies only to the disposal of routine autoclave wastes that do not require special handling according to the UGA Biosafety Committee guidelines.
- Materials that will be autoclaved must be placed in double autoclave bags, each 1.5 mil thick, and placed into secondary containment, prior to autoclaving. The name of the laboratory P.I. must be clearly identified- either written directly on the bag or on a piece of tape using permanent ink (*i.e.* written with “Sharpie”). Heat sterilization indicator tape must be placed on the waste bag before autoclaving. Autoclave bags must be put into a secondary container that is stable in an autoclave. Stainless steel pans are recommended for this use since they are stable to long term autoclave usage. The waste bag must not extend outside the pan when placed in the autoclave. The autoclave bag must remain open by at least 3 inches during autoclaving and should be closed with a tie after the bag is cooled, prior to disposal.
- Autoclaved waste must be placed in the red portable autoclave waste cans, designated and labeled as “Autoclave Waste Only”, that are provided by Building Services. These cans will be located inside each autoclave room or in laboratories. The autoclave waste can must have a black liner in it prior to placing any autoclaved waste bags inside. Black liners will be provided by the BSW but must be placed in the autoclave waste cans by laboratory personnel. Sharps must not be placed in these autoclaved waste containers. Any waste bag that is waiting to be autoclaved must be stored in a way that prevents leaking (*i.e.* double-bagged and placed in a leak-proof Nalgene pan).
- Red portable autoclave waste cans must never reach more than  $\frac{3}{4}$  full prior to being emptied or replaced with another empty can. If the can is reaching its maximum capacity, please contact a BSW and set other autoclaved wastes aside until the trash can is emptied. Once the can is full, laboratory personnel are to tie up the black liner containing the autoclaved waste and transport the bag directly to a dumpster or, if allowed in the particular building, place the bag outside the autoclave room in the hallway for pickup by a BSW. BSWs will not enter an

autoclave room to gather wastes.

- e. Autoclaved waste that is leaking, improperly contained, improperly labeled, or contains sharps, will not be picked up by a BSW.
- f. Only inert, non-hazardous autoclaved waste will be picked up by BSW for disposal. Under no circumstances will a BSW dispose of any autoclave waste bags or containers that are not placed inside of a red trash bin lined with a black bag.
- g. Biohazardous waste containers, boxes, bags, associated tape, and labels to be used for packaging are the responsibility of the laboratories. The BSWs are responsible for the retrieval, transport, and disposal of non-hazardous solid waste only.
- h. The use of an autoclave with dispersible radioactive materials may only be approved by Radiation Safety on a case by case basis. Please see their website in Section 7.2 for contact information.

**V. Non-hazardous Laboratory Glass Disposal**

- a. Non-hazardous laboratory glass must be drained of liquid and placed in a Glass Disposal Box lined with a strong plastic bag. Prior to transport, the container must be securely sealed, labeled "Glass" or "Broken Glass", and taken to the dumpster by laboratory personnel when it is full. Do not overfill this container. BSWs do not handle Glass Disposal Boxes.
- b. Laboratories will only discard *non-hazardous* glass (no biological, chemical or radiological contamination). Large amounts of biohazardous broken glass can be disposed of in an appropriate sharps container, or decontaminated via appropriate liquid disinfection or through autoclaving. Once decontaminated, the lab must follow the procedure outlined in section V.a.
- c. To reduce waste generated by University laboratories, UGA's Green Labs Program manages an initiative that seeks to take decontaminated, intact or unused glassware, and unopened lab consumables (e.g., gloves or pipette tips) and redirect them from waste streams to local schools and other areas to be utilized. For more information about this program and other waste diversion initiatives, see the [Green Labs Program website](#).

## VI. Sharps Disposal

- a. **Non-hazardous Sharps** must be discarded in a rigid container, designed specifically for sharps. If biohazardous sharps are intended to be discarded, the sharps container must be clearly identified with the universal biohazard symbol OR clearly marked with the word “Biohazard”, and follow the instructions in section VI.b.
- b. **Biohazardous sharps treatment and disposal** - The Biomedical Waste rules state that biohazardous sharps must be treated to render them noninfectious. For biohazardous sharps that do not require incineration, heat sterilization indicator tape must be placed on biohazardous sharps containers before sterilization, and the sharps must be steam sterilized in an autoclave at 121°C for a minimum of 30 minutes (or longer, as needed to inactivate the biological hazard). Once treated, contact an appropriate collection vendor for final disposal of sharps containers. For more information on biosafety regulations please refer to the Office of Biosafety website listed in Section VII.
- c. **Radioactive sharps disposal:** If sharps have been used with radioactive materials, they must be packaged in disposable rigid containers and then disposed of in an appropriate dry radioactive waste container. For more information, see the Radiation Safety Manual or contact the Radiation Safety Office.

## VII. Contact Information

Biosafety	706-542-7265
Radiation Safety	706-542-0107
Research Safety	706-542-9088
FMD Support Services	706-542-7584
Green Labs Program	706-542-7884

## VIII. References

Research-Exposure Control Plan, University of Georgia, Office of Biosafety, 2016.

Institutional Biosafety Manual, University of Georgia, Office of Biosafety, 2017.

Solid Waste Management, Rule 391-3-4-.01, Georgia Rules and Regulations.

# Sharps, Pointed Plastics and Laboratory Glass Waste Management

**Sharps**—Any discarded article that may cause punctures or cuts in accordance with the Georgia Biomedical Waste Rules



## Examples:

Needles, Syringes with needles, Lancets, Scalpels and razor blades, biohazardous glass vials, hematocrit tubes

## Disposal Procedure

- Collect all sharps in a sharps container (see image below) regardless of the use.
- When 3/4 full, seal the container, autoclave, and contact ESD or a sharps vendor for pickup.
- **SHARPS SHOULD NEVER BE DISPOSED OF WITH COMMON TRASH.**



**Pointed Plastics**— Item that is not glass or a sharp but that could potentially puncture a regular waste bag and pose a physical hazard to waste handlers.



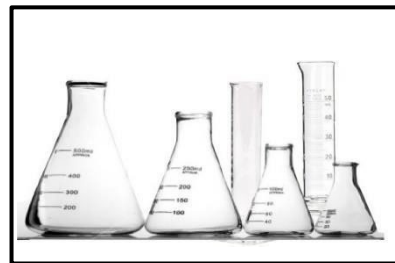
## Examples:

Plastic serological pipettes, other pipettes and tips

## Disposal Procedure

- Non-hazardous items must be emptied of liquid and placed in a disposable rigid container (such as a coffee can) or a lined cardboard box. When full, the container should be closed, sealed and placed in the common trash by lab personnel
- Biohazardous items must be placed in double autoclave bags with the PI name written on the bag (or a piece of tape affixed to the bag). The bag should be autoclaved, and then placed into an autoclaved waste can lined with a black liner. When full, lab personnel are to tie up the black liner and then either take the bag to the dumpster or place the can in the hallway to be picked up by a BSW.

**Laboratory Glass**— Glass items that are broken or have the potential to break when placed in the trash.



## Examples:

Decontaminated petri dishes, slides and cover slips, empty bottles, glass tubes, glass pipettes

## Disposal Procedure

- Empty items of liquid; if the container held an [acutely hazardous chemical](#), it must be triple rinsed prior to disposal and the rinsate collected as hazardous waste. If it has been used with biohazards, then it should be autoclaved.
- Place into laboratory glass disposal container (see image below)
- When full, lab personnel will seal the box tightly and carry it out for disposal

