1.0 PURPOSE AND SCOPE

This procedure describes requirements for the safe handling and disposal of sharps waste.

2.0 DEFINITIONS

- **Biohazardous contaminated sharps** are sharps contaminated with biohazardous materials, including: recombinant DNA, select agents, and biological materials that are classified as Risk Group (RG) 2 or above.
- **Broken glass containers** are rigid containers (usually cardboard) with plastic liners designed for the safe disposal of broken laboratory glassware. These should be used for disposal of any broken glass not contaminated with chemical, biohazardous or radioactive material. Other rigid containers (such as plastic and steel) that are leak-proof can also be used to collect this type of broken glassware and do not need plastic liners.
- **Chemical contaminated sharps** are sharps containing hazardous chemicals, which are not biohazardous or radioactive. Note that sharps with residual chemical contamination that meets the definition of RCRA empty and is not defined as acutely hazardous waste should be classified as non-contaminated sharps (refer to WHOI’s Hazardous Waste Generator Procedure or contact EH&S at x3347).
- **Mixed contaminated sharps** are sharps contaminated with more than one class of waste material (e.g., chemical, biohazard, and/or radioactive)
- **Non-contaminated sharps** are sharps that are free of biohazardous and radioactive contamination. Sharps with residual chemical contamination that meets the definition of RCRA empty and not defined as acutely hazardous waste are also classified as non-contaminated sharps.
- **Radioactive contaminated sharps** are sharps contaminated with radioactive materials.
- **Sharps** are devices or objects capable of cutting or piercing. Examples include scalpels, razor blades, and some broken glass items such as Pasteur pipettes, capillary tubes, and microscope slides. This definition specifically excludes most broken laboratory and non-laboratory glassware and bottles which should be collected in broken glass containers. While hypodermic syringes/needles are classified as sharps, they must be disposed in a separate sharps container and not comingled with other sharps waste.
- **Sharps waste classifications** are based on whether the sharps are non-contaminated or contaminated with chemical, biohazardous, radioactive materials, or a mixture of more than one of these contaminants.
- **Sharps container** is generally a rigid container (e.g. plastic or cardboard) with a secure lid that can safely store sharps waste. Several sizes of containers are available from the stockroom.

3.0 REQUIREMENTS FOR HANDLING AND DISPOSING OF SHARPS

- Sharps waste should be segregated in separate sharps containers by the respective sharps waste classification. Whenever possible, avoid generating mixed contaminated sharps waste.
- Due to disposal restrictions for hypodermic syringes/needles, a red rigid plastic container needs to be dedicated for hypodermic syringes/needles ONLY. The container must be labeled as either: non-contaminated hypodermic syringes/needles or contaminated hypodermic syringes/needles. If hypodermic syringes/needles are contaminated with a hazardous substance, the collection container must be labeled with the full name of the substance (formulas are not allowed).
- Follow these safety rules for hypodermic needles and other sharps waste:
Do not recap, shear, clip, or bend hypodermic needles.
Do not remove hypodermic needles from the syringes - dispose as entire unit.
Do not overfill sharps containers – consider disposal when ¾ full.
Do not remove the sharps container top or remove the sharps from the container.
Do not put your hand into a sharps container that is already in use.
Before requesting a sharps waste pickup, ensure the container lid is securely closed, the container is properly labeled, and that no sharps are protruding from the container.

- Do not dispose hypodermic syringes/needles in the trash. Do not comingle hypodermic syringes/needles with other sharps - collect them in a separate, rigid, sharps container that is labelled appropriately. When the container is full, submit a Sharps Waste Pickup Request: [http://ehs.whoi.edu/ehs/DesktopDefault.aspx?tabindex=4&tabid=7&itemID=92](http://ehs.whoi.edu/ehs/DesktopDefault.aspx?tabindex=4&tabid=7&itemID=92)

3.1 NON-CONTAMINATED SHARPS:

- Dispose of non-contaminated sharps and broken glass in a manner that will prevent injury to anyone handling the waste.
- Non-contaminated sharps (excluding hypodermic syringes/needles) should be placed in a rigid plastic sharps container or a lined rigid cardboard container with the lid securely taped closed. All biohazard labels on the container must be removed or defaced. Label the container “non-contaminated sharps” with a permanent marker and dispose with the regular trash.
- Non-contaminated or decontaminated broken glass should be placed in broken glass containers or in a sharps container, with the lid securely taped closed and disposed with the regular trash.

3.2 CHEMICAL-CONTAMINATED SHARPS

- Chemical contaminated sharps that are determined to be hazardous waste shall be collected for disposal in a non-red sharps container. Avoid using red sharps containers for collection of chemical contaminated sharps, as they are not accepted by our hazardous waste contractor.
- Label the sharps container "Chemical Contaminated Sharps Waste" and list the chemicals present on a red hazardous waste label.
- Remove or deface all biohazard labels from the sharps container.
- Broken thermometers containing mercury should be double bagged (i.e., Ziploc bags), labeled with a red hazardous waste tag, and placed in a satellite accumulation area for pickup.
- Submit a Sharps Waste Pickup Request when the container is full.

3.3 BIOHAZARDOUS SHARPS

- Biohazardous sharps must be collected in a red sharps container that is labeled, "Biohazardous Sharps Waste." If known, mark the name of the biohazardous agent on the container.
- Biohazardous sharps (excluding hypodermic needles) shall be disinfected on-site by laboratory personnel via autoclaving or chemical disinfection and then disposed as non-contaminated sharps.

3.4 RADIOACTIVE SHARPS

- Label the sharps container "Radioactive Sharps Waste" and attach a yellow radioactive warning label.
- Ensure the yellow label is filled out and includes all isotopes present and the activity per isotope.
- Remove or deface all biohazard labels from the sharps container.
- Radioactive sharps waste should be segregated in accordance with the Radiation Safety Manual, e.g., separate containers for short-lived and long-lived isotopes.
- Submit a Radioactive Waste Pickup Request when the sharps container is full.
3.5 MIXED CONTAMINATED SHARPS

- Avoid creating sharps that are contaminated with multiple hazard classifications (e.g., chemical and radioactive, chemical and biohazard, radioactive and biohazard, etc), which are known as mixed contaminated sharps waste.
- Mixed contaminated sharps waste is difficult and expensive to dispose.
- If mixed contaminated sharps waste is generated, coordinate with EH&S (x3347) for possible decontamination methods. EH&S may require assistance from generators of mixed contaminated sharps before this waste can be removed from the lab.
- It may be possible to eliminate certain hazard classifications and, thus, eliminate the mixed contaminated sharps classification. Some examples are listed below:
  - Neutralize the mixed chemical and radioactive sharps to remove the corrosive chemical classification and manage as radioactive waste.
  - If half-life is less than 120 days, decay the short-lived radioactive sharps to remove the radioactive classification.