


Sharps Handling & Disposal

Environmental Health & Safety

SOP No. 4.1

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PURPOSE

This SOP is to guide the safety use of sharps in work areas at Texas Tech University. If sharps cannot be engineered out of a procedure, then use sharps with engineered safety features built in such as retractable needles or guards.

Sharps – any metal object / device used to puncture or cut. Examples include any type of injection device and whatever is attached to it, razors, X-Acto knives, pointed scissors, scalpels, etc. While broken glass can puncture/cut, it is not a metal sharp and is to be disposed of differently according to TTU policy. If you have questions about sharps safety/handling/disposal or how to manage broken glass, please refer to the University Laboratory Safety Manual or call/email EHS at 806.742.3876 / ehs.lab.safety@ttu.edu.

NOTES

These guidelines are discussed in both the Chemical Hygiene Plan (section A10.3) and the Biosafety Manual (section B8.3.5); both documents are found within the Texas Tech University Laboratory Safety Manual on the EHS homepage: www.ehs.ttu.edu.

The Occupational Safety and Health Administration (OSHA) also has a FactSheet reference for protecting yourself when handling sharps (<https://www.osha.gov/OshDoc/data/BloodborneFacts/bbfact02.pdf>) as does the Centers for Disease Control (CDC), https://www.cdc.gov/sharpsafety/pdf/sharpsworkbook_2008.pdf.

PROTECTIVE EQUIPMENT

PPE

Basic PPE generally applies:

- lab coat,
- disposable gloves appropriate to the hazards present, and
- eye protection.

Other PPE that may be needed when using sharps includes:

- puncture /cut-resistant gloves
- mesh aprons

ENGINEERING CONTROLS

Safer sharps with built-in one-handed guarding mechanisms, selecting disposable scalpels rather than replacing blades. If blades need to be replaced, used pliers/ forceps or some other mechanical means to do so. Avoid handling sharps directly with your hands.

MATERIALS

Prepare **everything** you need for your procedure from start to waste disposal- disposable supplies, equipment, substrates, etc. Before beginning works. The sharps disposal container needs to be within arm's reach in the sharps handling area so that sharps can be safely disposed of immediately after use.

PROCEDURES FOR SAFE SHARPS HANDLING

These procedures are outlined in A10.3 and B8.3.5 of the University Laboratory Safety Manual. The University Laboratory Safety Manual outlines the University safety policies for work areas.

1. Avoid using sharps whenever possible; use blunted needles and plastics when possible. When use is unavoidable, use devices with safety features built-in to the device.
2. Use disposable sharps to avoid the hazards associated with decontamination or blade/needle replacement.
 - a. Used sharps must be discarded immediately after use into a puncture-resistant sharps container.
 - i. Do not overfill sharps containers. Remove from service when container is 3/4 full, close, and dispose of in accordance with TTU OP 60.10.
 - ii. Sharps containers must be easily accessible.
3. Be prepared to use the device the moment the sharp is exposed and secure or discard immediately after use.
4. Do not bend, break or otherwise manipulate sharps by hand.
5. Needles must not be recapped and should not be removed from a syringe.
 - a. If there is a need to recap needles, a valid written reason and protocol must be submitted to and approved by EHS.
 - i. Appropriate documented training in a one-handed recapping technique must be given to each individual and documented demonstration of proficiency must be recorded.
6. Do not remove needles. Discard needle and syringe as an intact unit immediately after use into puncture resistant sharps container.
 - a. If needles are to be removed from a syringe, an SOP should be posted in the area where this performed. A mechanical means of removal must be used.
 - b. Do not purchase or use "needle-cutter" devices; use of such devices can generate aerosols and is never allowed.
7. Reusable sharps must be placed in a closeable, rigid container for transport or decontamination. The sharp end must be secured in such a manner so as to prevent accidental injury.

8. Sharps that are to be stored must be secured in such a manner so as to prevent accidental injury.
9. Do not hand-pass exposed sharps. Place sharps in a predetermined neutral zone to be picked up by others when sharing sharps.
10. Use care and caution when cleaning up after procedures that require the use of sharps.
11. Sharps containers shall be immediately accessible. Locate sharps containers in areas in which needles are commonly used or position a sharps container in the immediate working area prior to work beginning if sharps are to be used.
12. Near misses shall be reported to EHS by submitting a SCAN form on the EHS website at <http://www.depts.ttu.edu/ehs/about/scan.php>.
13. In the event of a needle stick or other sharps-related injury: Notify the PI and seek treatment, if needed. An incident report must be filed with EHS within 24 hours of the event. A pdf of the incident report form is available online on the EHS website at <http://www.depts.ttu.edu/ehs/about/incident-reporting.php>.

WASTE DISPOSAL

Sharps Containers

Disposal of sharps requires a special container by law. In BSL2 and BLS3 laboratories, a FDA-cleared sharps container is required. They are available in various sizes and have the following features:

- Puncture-resistant rigid plastic
- Red
- Labeled as containing a "Biohazard" and "Sharps"
- Lid design traps items so they cannot be retrieved, is puncture/leak resistant and locks tightly
- Have a line that indicates when the container should be considered full.

These containers may be purchased from local sources, including the Physical Plant Central Warehouse and medical supply stores, as well as from laboratory product distributors.

An alternative to FDA-approved sharps disposal containers, appropriate for use in chemical and BSL1 laboratories is a heavy-duty, household container such as a liquid laundry detergent container. Milk jugs, and similar containers of this thickness, are not rigid enough to be used for sharps disposal. The container used must have the following features:

- Heavy-duty plastic (not a milk jug);
- Must stay upright during use;
- Able to close with a tight-fitting, puncture resistant lid which doesn't allow sharps to come out; and
- Leak-resistant.

Disposal

Properly disposed sharps are:

- secured in puncture-proof containers.
- In general, needles are not removed from syringes or recapped.

- sharps containers are not filled beyond the indicator line on container or 3/4 full for containers without an indicator line.
- Sharps that have contacted chemicals can be rinsed or flushed once (collect rinse as hazardous waste).
- Sharps that have contacted radioactive materials require a separate sharps container appropriately labeled for the radioactive hazard. When full, dispose of sharps container through EHS as "Radioactive" waste. See the radiation safety manual for details.

When full, request a waste pickup for dispose through EHS. Dispose of ALL sharps containers through EHS waste disposal.

Near misses shall be reported to EHS by submitting a SCAN form on the EHS website at <http://www.depts.ttu.edu/ehs/about/scan.php>.

EMERGENCY PRE-PLANNING

For moderate to severe injuries,

1. Remove PPE.
2. Thoroughly wash the effected area with soap and water.
3. Apply pressure to the wound until bleeding stops.
4. Notify the PI and seek treatment when/if needed.
5. Submit an incident report to EHS within 24 hours.

For minor injuries,

1. Remove PPE.
2. Thoroughly wash the affected area with soap and water.
3. Apply pressure to the wound until bleeding stops.
4. If available, apply triple antibiotic and a fresh bandage.
5. Notify the PI and seek further treatment if needed.
6. Submit an incident report to EHS within 24 hours.
7. Watch the area for infection if biological materials are involved.

A pdf of the incident report form is available online on the EHS website at <http://www.depts.ttu.edu/ehs/about/incident-reporting.php>.

REFERENCES

Sections A10.3 (use), B8.3.5 (use at BSL2), B7.4.1.1 (container requirements), B7.4.7 (disposal) of the TTU Laboratory Safety Manual. Found on the Academic Safety section under Resources: <http://www.depts.ttu.edu/ehs/academicsafety/lab/index.php>

OSHA FactSheet: https://www.osha.gov/OshDoc/data_BloodborneFacts/bbfact02.pdf

CDC Workbook: https://www.cdc.gov/sharpssafety/pdf/sharpsworkbook_2008.pdf.

