Guidelines for Disposal of Sharps, Biological, and Medical Waste

Sharps
Sharps waste is composed of instruments used to puncture, cut, or scrape body parts, that when disposed of can cause punctures or cuts. Sharps improperly handled or disposed can represent an obvious injury hazard but can also be a source of infectious, chemical, or radiologic aerosol and surface contamination. Before using sharps or potential sharps (glassware) in your experiments, perform a risk assessment that includes careful consideration of alternatives. With some thought and modifications of engineering controls and work practices you may be able to eliminate this very significant hazard completely from your research. If sharps use is still necessary, you can avoid injuries and exposure to contaminants from sharps completely if you handle and dispose sharps correctly. The four rules of safe sharps handling are:

1. Never bend, shear, break, recap, or remove a needle from a disposable syringe, or otherwise manipulate a needle by hand before disposal. This avoids the generation of aerosols and also eliminates unnecessary handling that could cause sharps injury.

2. Place used disposable needles and syringes in conveniently located puncture-resistant containers designed for sharps disposal.

3. Transport non-disposable sharps in a hard walled container to a processing area for decontamination, preferably by autoclaving.

4. Do not handle broken glassware directly. Instead, use a brush and dustpan, tongs, or forceps to remove broken glassware. Substitute plasticware for glassware whenever possible.

Safe disposal of sharps
Never throw treated or untreated sharps containers or sharps directly into garbage cans or dumpsters. A variety of red and non-red sharps containers are available through the campus central storehouse. Contact EH&S for advice on the proper management of needles and syringes with any combination of biological, chemical or radiological materials.

Needles and Syringes
- Containing nonhazardous materials:
  1. Place into a hard walled sharps container (non-red without biohazard label).
2. Label contents, room number and building and place in approved medical waste accumulation container or contact EH&S for pick-up.

- Containing biohazardous materials:
  1. Place into a hard walled sharps container (with biohazard label).
  2. Label with room number and building and place in approved medical waste accumulation container or contact EH&S for pick-up.

- Containing chemical carcinogens or hazardous chemicals:
  1. Place into a hard walled sharps container (non-red without biohazard label).
  2. Label with a hazardous waste label, and contact EH&S for pick-up as a hazardous chemical waste.

- Containing radioactive materials:
  1. Place into a hard walled sharps container (non-red without biohazard label).
  2. Label with radioactive tape, and place full sealed container in a dry radioactive waste box.
  3. Contact EH&S for pick-up as radioactive waste.

**Laboratory Glass**

Laboratory glass could puncture regular waste bags and endanger waste handlers. Do not pick up broken glass with your hands. Wear cut-resistance gloves, use tongs, or a disposable broom and dustpan to pick up broken glass. Collect broken glass as carefully and completely as possible.

- Clean or contaminated with nonhazardous materials:
  1. Place clean glass into a sturdy container marked “Clean Lab Glass.”
  2. Custodial will dispose as nonhazardous waste.
  3. See SafetyNet #12 [1], “Why Didn’t the Custodian Pick Up my Trash” for more information.

- Contaminated with biohazardous agent:
  1. Place into a hard walled sharps container (with biohazard label).
  2. Label contents, room number and building and place in approved medical waste container or contact EH&S for pick-up.

- Contaminated with toxic or hazardous chemicals:
  1. Place into a hard walled sharps container (non-red without biohazard label).
  2. Label with a hazardous waste label, and contact EH&S for pick-up as a hazardous chemical waste.

- Contaminated with radioactive material:
  1. Place into a hard walled sharps container (non-red without biohazard label).
  2. Label with radioactive tape, and place full sealed container in a dry radioactive waste box.
  3. Contact EH&S for pick-up as radioactive waste.

- Contaminated with biohazardous agent and carcinogenic or hazardous material:
  1. If the chemical disinfectant for the biohazardous agent is compatible with the hazardous material, disinfect the material and place into a hard walled sharps container (non-red without biohazard label).
2. Label with a hazardous waste label, and contact EH&S for pick-up as a hazardous chemical waste.

3. If the disinfectant is not compatible with the hazardous material, cover the spill with paper towels and call EH&S for assistance.

- Contaminated with biohazardous agent and radioactive material:
  1. Cover the spill with paper towels and call EH&S for assistance.

### Pipette Tips

Waste Pipette Tips Disposal Policy:

**Preferred**

<table>
<thead>
<tr>
<th>Medical</th>
<th>Infectious (animal/plant)</th>
<th>Chemical</th>
<th>Radiological</th>
<th>NOS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Primary Disposal</strong></td>
<td>Red hard-walled sharps container</td>
<td>White hard-walled sharps container</td>
<td>Hard walled container</td>
<td>Hard walled container with appropriate label</td>
</tr>
<tr>
<td><strong>Treatment</strong></td>
<td>optional: autoclave</td>
<td>none allowed</td>
<td>none allowed</td>
<td>none allowed</td>
</tr>
<tr>
<td><strong>Waste Stream</strong></td>
<td>Medical waste</td>
<td>EH&amp;S pickup</td>
<td>EH&amp;S pickup</td>
<td>EH&amp;S pickup</td>
</tr>
<tr>
<td><strong>Terminal</strong></td>
<td>Approved medical waste treatment site</td>
<td>Vendor autoclave</td>
<td>EH&amp;S packaging and disposal</td>
<td>EH&amp;S packaging and disposal</td>
</tr>
</tbody>
</table>

**“Allowed”**

<table>
<thead>
<tr>
<th>Medical</th>
<th>Infectious (animal/plant)</th>
<th>Chemical</th>
<th>Radiological</th>
<th>NOS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Primary Disposal</strong></td>
<td>Leak-proof heavy bag IN red medical waste bag</td>
<td>Leak-proof heavy bag IN clear autoclave bag (TIPS ONLY!!!)</td>
<td>Leak-proof heavy bag IN another leak-proof bag</td>
<td>Leak-proof heavy bag, rad dry waste box</td>
</tr>
<tr>
<td><strong>Treatment</strong></td>
<td>optional: autoclave</td>
<td>none allowed</td>
<td>none allowed</td>
<td>none allowed</td>
</tr>
<tr>
<td><strong>Waste Stream</strong></td>
<td>Medical waste</td>
<td>Lab trash</td>
<td>EH&amp;S pickup</td>
<td>EH&amp;S pickup</td>
</tr>
<tr>
<td><strong>Terminal</strong></td>
<td>Approved medical waste treatment site</td>
<td>Landfill</td>
<td>EH&amp;S packaging and disposal</td>
<td>EH&amp;S packaging and disposal</td>
</tr>
</tbody>
</table>

### Biological Waste

Includes any material that once contained or now contains living organisms, or that is a product, portion, or waste of a living or once-living organism.

### Biological waste that is infectious to humans must be managed and disposed of as medical waste.

- Animal Carcasses and Waste Products
  - Healthy animals not treated with chemicals, radioisotopes, or biohazardous agents:
1. Place animal parts, tissue, waste and carcasses (small and large animals) in tightly sealed plastic bags in designated disposal containers.

2. Carcasses will be sent off campus to a rendering company or incinerated. Contact your department for more information

- Animals treated with chemical, radioactive, or biohazardous agents:
  1. Contact EH&S to develop a written handling, transportation and treatment and/or disposal procedure.

- Blood and Body Fluids
  - Non-infectious blood and body fluids in tubes, bags, vacutainers, etc.:
    1. Treat with bleach (10% final concentration for at least 30 minutes) and pour into a sink drain connected to the campus sewage system. Be sure to follow the treated material with copious amounts of water. **Do not pour into a storm drain.**
    2. Place the empty containers in autoclavable bags with autoclave tape and autoclave. **Do not dispose of containers of liquids in garbage cans or dumpsters.**
    3. Dispose of autoclaved waste in solid waste container.

- Non-infectious blood or fluid soaked materials:
  1. Place bandages, gauze, paper towels, etc. in autoclavable bags with autoclave tape and autoclave. **There should be no dripping or leakage of liquid from bagged waste.**
  2. Dispose of solid autoclaved waste in solid waste container.

- Blood, fluid or fluid soaked materials that contains chemical, radioactive, or biohazardous agents:
  1. Contact EH&S to develop a written handling, transportation and treatment and/or disposal procedure.

- Tissue Culture Media
  - Culture media used to transfer, inoculate, and prepare non-infectious cultures:
    1. Place solid tissue culture media waste in autoclavable bags with autoclave tape and autoclave. **Do not dispose of untreated materials in garbage can or dumpsters.**
    2. Dispose of autoclaved waste in solid waste container.
    3. Autoclave or treat liquid tissue culture media waste with bleach (10% final concentration for at least 30 minutes) and pour liquids into a sink drain connected to the campus sewage system. Be sure to follow the treated material with copious amounts of water. **Do not pour into a storm drain.**

- Culture material that contain chemical, radioisotopes or biohazardous agents:
  1. To develop a written handling, transportation and treatment and/or disposal procedure, contact EH&S.

**Medical Waste**

Includes waste containing biological agents known or suspected of being a human pathogen. All wastes that are classified as medical waste (infectious human waste and sharps waste) must be stored, handled, transported and treated in accordance with the Medical Waste Management Act.
To develop a written medical waste handling, transportation and treatment and/or disposal procedure, contact EH&S.

References
Biosafety in Microbiological and Biomedical Laboratories, 5th edition. National Institutes of Health, Centers for Disease Control. [2]

Contact

Biological Safety Office
biosafety@ucdavis.edu 530-752-1493
FAX: 530-752-4527

More information
/biological-safety-staff-listing [3]

Related content
1. Why Didn’t the Custodian Pick Up My Trash?

External links

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