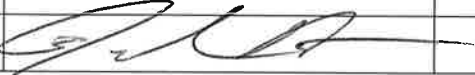


# Glass Use & Disposal

Environmental Health & Safety

## SOP No. 4.3

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### PURPOSE

The purpose of this SOP is to provide general safety guidance for the use of glassware in laboratory operations. The SOP will discuss proper management including inspection prior to use and adequate cleaning procedures for disposal. Specific glass handling operations should be outlined in the individual laboratory's SOPs or WASP.

### PROTECTIVE EQUIPMENT

Basic PPE for lab work includes laboratory coat, eye protection and appropriate gloves. Additional PPE may be needed depending on the operation.

### PROCEDURE

#### *Prior To Use & During Use*

- Always inspect glassware for chips, stars and cracks before use. Discard if you find any imperfections in the glass.
- Always wear thermo-protective gloves or appropriate tongs when handled hot glassware.
- Use caution when fitting glass with bulbs or into rubber stoppers. Use the correct tools and lubricate glassware when appropriate. Puncture-resistant gloves may also be needed for some operations.

#### *Disposal*

- Glass should never be disposed of in the regular trash. Always place glass in specific glassware disposal bins (see Figure 1).

- A sturdy cardboard box with a lid labeled as “Glass Waste” or “Broken Glass” is also appropriate. Tape the lid on and cut a flap in the top of the lid that can later be taped closed to seal the box for disposal (see Figure 1).



**Figure 1:** Glassware disposal bin examples.

- Glassware must be cleaned before disposal. No chemical or biological contaminants can remain on the glass being disposed of.
  - Chemically contaminated whole glassware (i.e., glassware without sharp edges) can be triple-rinsed with an appropriate solvent before disposal.
  - Chemically contaminated *broken* glassware is best disposed of as solid chemical waste. The risk of attempting to clean broken glassware outweighs the convenience of collecting the broken glass in a sturdy, puncture-resistant container for disposal through EHS.
  - Biologically contaminated glassware can be cleaned either by soaking in a container of freshly prepared 10% bleach for the appropriate contact time or by an appropriate autoclave cycle.
  - Biologically contaminated broken glassware should be cleaned by placing the glass in an autoclave bin and being autoclaved on an appropriate cycle.
- Do not overfill glass disposal bins. Remember there is a cardboard pop-out that must be able to be secured in place for disposal.
- Never reach into a glass disposal bin.
- Do not dispose of any other trash in a glass disposal bin.
- When full, tape completely closed and dispose of in a nearby dumpster. Disposal into a dumpster is the responsibility of the lab personnel.

### *Securing Glassware for Repair*

Some glassware is custom-made or very expensive to replace. At Texas Tech, the Chemistry Department Glass Shop <https://www.depts.ttu.edu/chemistry/Offices/glass.php> can repair most glassware. Secure the glassware to be repaired in a sturdy cardboard box or a drawer and label as “Glassware for Repair”.

## **EMERGENCY PRE-PLANNING**

Among the most common injuries in laboratory work are cuts from broken glass. Should an injury using glassware occur, follow the following steps:

1. Clean the cut with soap and water.
2. Bandage the cut to stop the bleeding.
3. Obtain medical treatment if necessary.
4. Complete the appropriate Incident Report Form found on <http://www.depts.ttu.edu/ehs/about/incident-reporting.php> and submit to EHS.

## **REFERENCES**

National Research Council of the National Academies. (2011). 4.E.9 Sharp Edges *Prudent Practices in the Laboratory*. Washington, DC: The National Academies Press, pp. 76-77.

Section A19.5 Glass Waste, University Laboratory Safety Manual

<http://www.depts.ttu.edu/ehs/academicsafety/labsafetydocs/LabSafetyManual.pdf>

