

### 3.12. Glassware and Sharps – Procedures for Safe Handling and Disposal

#### 3.12.1. Definitions

**Sharps** - The term "sharps" refers to "any item having corners, edges, or projections capable of cutting or piercing the skin."

**Puncture Proof** – Commercial sharps containers intended for the disposal of broken glass, syringe needles, scalpels, etc.

**Puncture Resistant** – Re-used containers that, when carefully used, will resist puncture by the disposed item.

Examples of "sharps" include:

- Needles
- Syringes
- Lancets
- Scalpel blades
- Exacto knives
- Broken glass
- Razor blades
- Glass Pasteur pipettes
- Microtome blades
- Any other sharp lab waste

#### 3.12.2. Handling

- Glassware and sharps should be handled and stored carefully to avoid damage.
- Reusable syringes that are not biologically contaminated must be capped and put away after use. Cap syringes using the one-handed method of picking up the cap with the needle then carefully securing the cap onto the syringe. Retractable syringes are preferred. A disposable syringe should be used for biological materials and should be placed in a sharps container without recapping.
- Chipped, broken, or star-cracked glassware should be discarded or repaired. Damaged glassware should never be used unless it has been repaired.
- Because of the potential for catastrophic breakage resulting in sharp projectiles, only thick-walled, pressure-resistant glassware may be utilized under positive pressure or a vacuum.
- Use appropriate hand protection when inserting glass tubing into a rubber stopper or when placing rubber tubing on glass hose connections. Use of plastic or metal connectors should be considered.
- Use appropriate hand protection when picking up broken glass or other sharp objects. Small pieces should be swept up using a brush and dustpan.
- See SOP 3.14 Glass Apparatus and Plasticware Assembly for detailed instructions.

#### 3.12.3. Disposal

Sharps waste is categorized by the type of contamination present. Specific disposal methods are dictated by category, but all categories require packaging in puncture-resistant cardboard or plastic containers in order to minimize the risk of injuries.

##### 3.12.3.1. Uncontaminated Sharps

- Uncontaminated metal or glass sharps should be collected in puncture-proof containers, labeled, sealed, and disposed according to your campus procedures found in the [IU Waste Management Program](#).

Note: Disposable items such as pipette tips and wood swabs that are not sharps but may perforate the liners of the waste receptacles present a hazard to custodians. These may be placed in any puncture resistant container such as a non-breakable plastic jar, bottle, thick plastic bag or other type of container and placed in the waste receptacle. Custodial services will remove this waste.

### **3.12.3.2. Chemically Contaminated Sharps**

- Chemically contaminated metal or glass sharps that are grossly contaminated with hazardous chemicals, should be collected in puncture-proof containers, labeled, sealed, and disposed according to your campus procedures found in the [IU Waste Management Program](#).

Note: Spill residue with broken glass, spill absorbents, etc., must be collected as “Hazardous Chemical Waste” and not placed into the broken glass receptacles (see SOP 3.13 Chemical Spill Response Procedures).

Caution: To avoid dumpster fires, boxes may only be used if the chemical contamination is compatible with the organic cellulose of the box material. Materials contaminated with oxidants should be placed in glass, metallic, or chemically resistant plastic containers.

### **3.12.3.3. Radioactive Sharps**

Refer to the [Radiation Safety Manual](#) for disposal of materials with radioactive contamination.

### **3.12.3.4. Biohazardous items**

Refer to the [IU Biosafety Manual](#) for disposal of materials with biohazardous contamination.