

Introduction

This guide provides information on selecting and purchasing appropriate containers for different types of laboratory hazardous waste. Proper waste containers help ensure compliance with regulations, prevent chemical reactions, and maintain a safe laboratory environment.

General Requirements for All Hazardous Waste Containers

1. Material Compatibility
 - a. Containers must be compatible with the waste they will hold
 - b. Must resist corrosion, degradation, or reaction with contents
 - c. Must maintain structural integrity during normal handling and storage
2. Structural Integrity
 - a. Must be free of cracks, dents, or other damage
 - b. Must have secure, leak-proof lids or caps
 - c. Must be able to withstand normal transportation and handling
3. Labeling Requirements
 - a. All containers must be capable of accommodating proper hazardous waste labels
 - b. Labels must remain firmly attached to containers
 - c. Clear space must be available for content information and dates

Container Types by Waste Category

- Liquid Chemical Waste Recommended Containers:
 - High-Density Polyethylene (HDPE) Bottles
 - Suitable for most acids, bases, and aqueous solutions
 - Available sizes: 1L, 2.5L, 4L, 10L, 20L
 - Vendor examples: Uline, VWR, Fisher Scientific, Grainger
 - Approximate cost: \$5-30 depending on size
 - Glass Bottles with Compatible Caps
 - Suitable for organic solvents and other materials incompatible with plastic
 - Available sizes: 500mL, 1L, 2.5L, 4L
 - Vendor examples: VWR, Fisher Scientific, Sigma-Aldrich
 - Approximate cost: \$10-40 depending on size
 - Fluorinated HDPE Containers
 - For aggressive solvents that may permeate regular plastic
 - Available sizes: 1L, 2.5L, 4L, 10L
 - Vendor examples: VWR, Fisher Scientific, Cole-Parmer
 - Approximate cost: \$15-50 depending on size
- Solid Chemical Waste Recommended Containers:
 - HDPE Wide-Mouth Containers
 - For solid chemical waste, contaminated materials
 - Available sizes: 1L, 2.5L, 4L, 10L, 20L
 - Vendor examples: VWR, Fisher Scientific, Uline
 - Approximate cost: \$8-35 depending on size

- Metal Containers
 - For reactive solids requiring metal containment
 - Available sizes: 1L, 2.5L, 5L
 - Vendor examples: Justrite, Lab Safety Supply
 - Approximate cost: \$35-80 depending on size
- Sharps and Biohazardous Waste Recommended Containers:
 - Puncture-Resistant Sharps Containers
 - Must be red or appropriately labeled
 - Available sizes: 1 quart to 8 gallon
 - Vendor examples: VWR, Fisher Scientific, Covidien
 - Approximate cost: \$5-50 depending on size
 - Biohazard Bags and Containers
 - Must be red or properly labeled with biohazard symbol
 - Available in various sizes
 - Vendor examples: VWR, Fisher Scientific, Grainger
 - Approximate cost: \$10-60 depending on type and size
- Specialized Waste Recommended Containers:
 - Safety Cans for Flammable Liquids
 - Must be FM or UL approved
 - Available sizes: 1L to 20L
 - Vendor examples: Justrite, Eagle, Lab Safety Supply
 - Approximate cost: \$50-200 depending on size
 - Acid/Base Storage Bottles
 - Specially designed for corrosives
 - Available sizes: 500mL to 4L
 - Vendor examples: Nalgene, VWR, Fisher Scientific
 - Approximate cost: \$20-60 depending on size

Container Selection Guide by Chemical Type

| Waste Type | Recommended Container Material | Not Acceptable |
|--------------------------|--|----------------------------------|
| Strong Acids | Glass, HDPE | Metal, LDPE |
| Strong Bases | HDPE | Aluminum, Glass (for some bases) |
| Halogenated Solvents | Glass, Fluorinated HDPE | Regular HDPE, PVC |
| Non-halogenated Solvents | Glass, Fluorinated HDPE | Regular HDPE, PVC |
| Heavy Metals | HDPE, Glass | Depends on solution properties |
| Oxidizers | Glass (occasionally, HDPE is acceptable – consult EHS) | Most metals, some plastics |
| Reactive Materials | Consult EHS | Varies by reactivity |

Purchasing Procedures

1. Determine Waste Type
 - a. Assess chemical compatibility requirements
 - b. Estimate volume of waste generated
2. Select Appropriate Container Size
 - a. Choose containers that will accommodate waste generation for no more than 3 months
 - b. Do not overfill containers (leave 10% headspace minimum)
3. Vendor Information
 - a. University-approved vendors include:
 - i. Uline
 - ii. VWR
 - iii. Fisher Scientific
 - iv. Grainger
 - b. Purchase through university procurement system where possible
4. Budget Considerations
 - a. Include waste containers in research grant proposals
 - b. Factor in container costs when planning experiments
 - c. Consider department bulk ordering for cost savings

Container Preparation Before Use

1. Ensure containers are clean and free of contaminants
2. Apply appropriate hazardous waste labels before adding any waste
3. Keep containers closed except when adding waste

Questions and Additional Support

For specific questions about waste containers or to request an evaluation of a specific container type for your waste stream, please contact the EHS Department at ehs@rowan.edu or 856-256-5105.

NOTE: This guide is subject to updates based on regulatory changes and best practices. Always refer to the most current version available from EHS.