



UMBC

Waste Disposal Guide

Section 1— Contact Information & Spill Response

Pertinent Contact information

- ESH: 52918 Web: safety.umbc.edu
- Housekeeping: 52701/ 52550
- Facilities: 52550

Emergency Assistance:

- Campus Police: (410) 455-5555
- Enviro Safety & Health (410) 455-2918

Spill Response:

- Establish what chemicals are involved, the quantity of the spill, and the exact location of the spill
- Isolate the area to prevent further spread of contamination or exposure
- Follow spill SOP specific to your laboratory. If there is any doubt about the safety of the individual in the lab, call campus police so the proper resources can be notified.
- Evacuate the area if the spill cannot be contained

Spill Clean-up:

- In order to place your laboratory in a position to be able to handle a small spill, pre-planning is necessary. Labs must have a minimum amount of personal protective equipment (PPE) and appropriate clean-up materials present prior to an incident
- Ensure lab has proper PPE to include; splash goggles, lab coat with sleeves rolled down, nitrile or neoprene gloves-in good condition
- Mercury spills require special handling. Do not attempt clean up of mercury without mercury spill control supplies.

Spill Cleanup Supplies:

- Absorbent pads and Clay absorbent
- Heavy duty trash bags
- Dustpan with broom
- Gallon container with lid

Section 2 – General Waste

Definition: Any non hazardous waste that is not contaminated with infectious agents, hazardous chemicals or radioactive materials.

Examples:

- Office waste
- Disposable cloth, paper, plastic and glass items
- Uncontaminated animal bedding
- Laboratory materials and media which have been properly decontaminated



Recyclable Items:

- Ensure that they are clean and place in the appropriate receptacle

Non-Hazardous Liquid Media:

- Pour down sink drain
- Flush with large amounts of water
- Place empty container in sturdy, closable cardboard box for disposal

Glass and broken plasticware

- Utilize proper glassware disposal container
- Close box and secure with filament tape and label container

Section 3 –Hazardous Waste Labeling

Definition: Any waste with properties that make it dangerous or capable of having a harmful effect on human health or the environment.

Examples:

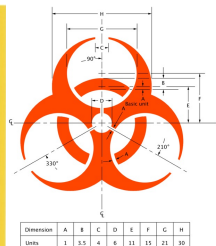
- Solvents
- Heavy metals
- Motor oil & Coolant
- Laboratory chemicals

Chemical Waste Labeling Requirements:

Containers should be labeled with the following information:

- The words "Hazardous Waste"
- Building and room where the waste was generated
- Full names of all constituents within the container
- Relative percentages of each constituent
- Point of contact name and phone number
- Date of waste production

UMBC HAZARDOUS WASTE ACCUMULATION CONTAINER			
BUILDING	ROOM#	CONTACT	EXT.
CHEMICAL NAME	PERCENT		
	%		
	%		
	%		
	%		
	%		
	%		
DATE	HANDLE WITH CARE		
CALL 52918 FOR PICKUP - ENV. SAFETY AND HEALTH			



Biohazard Waste Labeling Requirements:

Containers should be labeled with the following information:

- The universal biohazard symbol
- The type and origin of waste is recommended

Services:

- ESH provides yellow chemical waste labels (pictured above) as well as 5 gallon carboys and buckets for larger quantities of chemical waste generated.
- ESH will pick up properly labeled chemical waste containers as well as sharps containers. Please email esh@umbc.edu to schedule a pickup. Please ensure to include the location of the waste, type of waste, number of containers, and any additional pertinent information.
- Visit safety.umbc.edu for additional resources and printouts concerning hazardous waste.

Section 4 – Bio/Medical Waste

Definition: Waste contaminated or potentially contaminated with infectious agents, potentially biohazardous agents, or sharps (devices that can or have the potential to puncture membranes).

Examples:

- Microbiological cultures
- Clinical specimens (urine, feces, blood, etc.)
- Animal carcasses (note: those containing radioactive materials require additional management)
- Contaminated animal bedding
- Contaminated glass and plastic labware
- Disposable clothing, towels, absorbent liners, etc.
- Sharps not contaminated with radioactive materials

Sharps

- Place needles and syringes **intact** in a facility approved sharps container.
- Do NOT recap, bend, or clip needles
- Fill $\frac{3}{4}$ full, snap lid closed and secure with filament tape (overfilling or force filling may result in puncture wounds)
- Contact ESH to schedule a pickup

Contaminated Disposable Glassware

- Decontaminate the glass via autoclave or chemical methods
- Place in sturdy closable cardboard box, secure with filament tape and label broken glass

Animal Carcasses/ Tissues

- Place animal carcass/tissues into a leakproof container or bag. Do not add paper or plastics. Do not exceed 35lbs per bag. Add additional bag or container around the primary container (Double bag)
- Place bag in designated freezer
- Call UMB (410) 706-7055 for assistance/ instructions

General instructions:

- Place contaminated materials in a biohazardous waste disposal bag, double bag wet waste
- Place contaminated materials in autoclave pan, process according to facility SOP utilizing appropriate autoclave validation indicators.



Definition: Non-radioactive chemicals and wastes contaminated with hazardous

Examples:
chemicals

- Waste and opened surplus chemicals
- Antineoplastic agents and other prescription drugs (non-controlled substances)
- Pesticides
- Non-returnable gas cylinders and lecture bottles
- Nonradioactive lead shielding and lead scrap
- Photographic film processing solutions
- Spent solvents
- Residue of spill materials
- Contaminated, used pump and/or mineral oils
- Batteries

General Instructions:

- Transport chemical waste to a pre-identified hazardous waste satellite accumulation area within your lab or to a designated facility storage room
- Label and segregate based on compatibility (see Section 3 for labeling requirements).
- Contact ESH to schedule a pickup.

Chemical in Original Container:

- Confirm identity of chemical
- Follow general instructions listed above

Chemicals in Containers Other than the Original:

- Deface the original label (Mark XXX or otherwise cover such that it is not recognizable)
- Complete and attach new label
- Follow general instructions listed above

Flammable Solvents and Mixtures

Containing Flammable Solvents:

- Separate acids, bases, oxidizers, and acutely toxic materials.
- Do not mix contaminated solvents with aqueous solvent mixtures
- Complete and attach label listing contents on outside of container
- Follow general instructions listed above

Chemically Contaminated Solid Waste (includes chemically contaminated silica gel)

- Line a cardboard box or other appropriate container with a clear plastic bag. Don't use orange infectious waste bags
- Twist bag at top, bend twisted portion to form a loop and seal loop with filament tape
- Affix label identifying the contents to the box



Mercury:

- Mercury spill kits have been distributed to all departments. These include instructions.
- Broken thermometers should be placed in sealed containers and labeled "mercury waste"

Chemically Contaminated glassware and containers:

- Rinse all broken and small intact C.C. glassware with appropriate solvents several times before discarding in broken glass box.
- Dispose of wash solvents in appropriately labeled containers

Glass bottles and metal drums:

- Rinse all containers 3 times with appropriate solvents to remove all chemicals. Allow to dry in hood or well-ventilated area
- Detace the original label and note "Trash-washed 3X"
- Puncture metal containers on bottom, discard caps.
- Clean bottles and drums will be disposed of as trash by housekeeping
- Dispose of wash solvents in appropriately labeled waste containers

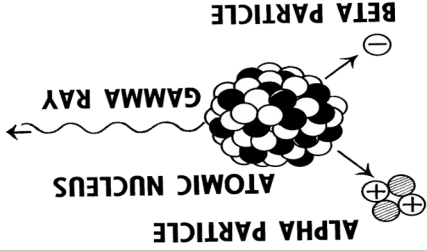
Batteries, Used Pesticides, Mercury thermostats, PCB-containing Lamp Ballast:

- These items will be managed as chemical waste
- Please contact the Office of Environmental Safety and Health for packing instructions.

Definition: Any waste that contains or is contaminated with radioactive material.

Examples:

- Liquid scintillation counting fluids and vials
- Animal Carcasses and excreta
- Experimental or clean-up materials contaminated with radioactive material



General Instructions:

- Review disposal procedures with the UMB Radiation Safety Office in the planning stages of your experiment.
- Segregate waste accordingly
- Affix a "Caution Radioactive Material" label to outer container
- Attach a "Caution-Radioactive Material" usage form to each waste container and write the requested information on the form.
- Contact UMB EHS for waste removal



Definition: Waste with multiple types of hazardous constituents including either infectious agents or hazardous chemicals or both.

Examples:

- Aqueous radioactive wastes with trace levels of chloroform or toxic heavy metals
- Radioactive methanol/acetic acid solutions from HPLC or gel rinse procedures
- Spent cocktail from continuous liquid scintillation counting
- Radioactive trichloroacetic acid solutions from protein precipitations
- Phenol/chloroform mixtures used to extract DNA from radiolabeled cells
- Spent chromic acid from critical cleaning of contaminated glassware contaminated with radioactive materials
- Vacuum pump oil contaminated with radioactive materials
- Chemical or radioactive wastes containing blood products



General Instructions:

- Avoid generating mixed waste or combining chemicals, radioactive and infectious waste.
- Receive permission from UMB EHS prior to the creation of multihazard radioactive waste.
- If generation of mixed wastes can't be avoided:
 - Keep volume to a minimum
 - Keep aqueous and organic wastes separate
 - Don't combine reactive chemicals such as strong oxidizers with organic compounds
 - Keep liquid and solid wastes separate
- Keep short half-life (<30 days) isotopes separate from longer half-life isotopes
- Identify all constituents