UWO Guide to Classifying Unwanted Materials

Normal trash: Gloves, towels, gauze, plastic ware, rinsed chemical containers (with labels blacked out), or other durable intact glassware, pipet tips, empty microfuge tubes, wipes, petri dishes containing non-infectious agents, alkaline batteries.

Broken glass, uncontaminated waste glass or hard plastics with sharp edges: should go into a broken glass box. Small amounts of chemical residue may be on the glassware. When the box is full the inner plastic liner must be tied shut and the cardboard lid closed and taped down before custodial services will take the box. The box should weigh less than 50 lbs when full. Do not overload the box. *Broken mercury thermometers are cleaned up with a spill kit and collected as hazardous waste.*

Electronics/instrumentation: unwanted electronics should be picked up via a work order. These materials are recycled.

Rechargeable Batteries: cover the terminals with tape or seal individual batteries in a plastic bag and collect them in a sturdy cardboard box labeled "Universal Waste: Batteries." These will be picked up and recycled.

Lamps (bulbs) from instruments or electronics: are regulated wastes if they contain mercury. If you are unsure, contact the device manufacturer. Lamps should be boxed and labeled "Universal Waste: lamps"

Sharps: needles, scalpels and razor blades whether contaminated with biological agents or not must be placed in a sharps container. Other metal, glass or hard plastic items must go into a sharps container only if they are contaminated with biological materials. See "Broken Glass" above.

BioHazards (Red bag waste): All non-sharp laboratory materials contaminated with biological materials (e.g., microorganisms, recombinant DNA, cell cultures, etc.) must be treated prior to disposal by an approved decontamination method such as autoclaving. After autoclaving, any bag displaying the biohazard symbol should be placed in a non-transparent plastic bag or other secondary non-transparent container prior to disposal into the normal trash. Normal trash should NEVER go into a red bag.

Chemicals in original containers: Opened unused chemicals in original containers that have not been contaminated and have not expired or degraded will be picked up and redistributed whenever practical.

Spent Chemicals (approved as non-hazardous): may be placed in the **trash** in a sturdy container, or dissolved in water and flushed **down the drain** in *typical laboratory quantities*. Compounds containing the following list of cations and anions in any combination are non-hazardous and may be dissolved in water and sewered. Insoluble material goes in the trash.

Cations	Anions		Other Materials
Aluminum	Acetate	Lactate	Agar
Ammonium	Bicarbonate	Nitrate	Aluminum oxide (alumina)
Calcium	Bisulfate	Nitrite	Amino acids
Cesium	Borate	Phosphate	Buffer solutions
Iron	Bromide	Salicylate	SDS (sodium dodecyl sulfate)
Lithium	Carbonate	Silicilate	Solutions pH >2 or <12
Magnesium	Chloride	Sulfate	Sugars/carbohydrates
Manganese	Citrate	Sulfite	Sulfur
Potassium	Dihydrogen phosphate	Tartrate	Urea
Rubidium	Hydrogen phosphate	Thiosulfate	Bleach (<10%)
Sodium	Iodide	Tungstate	Dry latex paint
			Ethanol solutions (below 24%)

Other Spent Chemicals: any used or expired laboratory materials which are **EPA *listed wastes*,** or ***characteristic wastes*** (meaning the waste is flammable, corrosive, toxic or reactive) are managed as a hazardous waste. EHS staff will make this determination. Spent chemicals may be comingled if they are compatible with each other. Care should be taken when comingling highly concentrated materials (to avoid generation of excess heat) even when materials are compatible.

Profiles for materials that may be comingled

- **Non-halogenated organic waste** may contain acetone, acetonitrile, all liquid alcohols, diethyl ether, ethyl acetate hexane, petroleum ether, toluene, xylene, paint thinner, kerosene, gasoline and soluble organic materials. The waste should not exceed 5% halogen content and water not to exceed 10%. Wastes with high water or halogen content should not be comingled.
- **Halogenated/TC organic waste** is waste that meets the EPA Toxicity characteristic. **All** wastes containing halogenated organic compounds (ex. Chloroform, dichloromethane), cresols, and phenols should be placed in this waste stream.
- **Aqueous corrosives (no restricted metals)** may be neutralized by ***qualified personnel*** in your lab. Acids such as hydrochloric, acetic (and other organic acids), sulfuric or phosphoric can be neutralized with sodium hydroxide or sodium bicarbonate and sewered once the pH is between 5 and 12. **Nitric acid must NOT be comingled with other acids**.
- **Aqueous caustics (no metal ions)** may be neutralized by ***qualified personnel*** in your lab. All hydroxides can be comingled, neutralized, and sewered when the pH is between 5 and 12. Qualified personnel can comingle this waste stream with aqueous corrosives to neutralize each stream.
- **Aqueous TC:** ANY aqueous waste that contains arsenic, barium, cadmium, lead, selenium, arsenates, chromium, chromates, vanadates, cyanides or silver. These wastes meet the *EPA Toxicity Characteristic*. Be sure to list all components separately.
- **Aqueous sewer restricted:** contains the following aqueous metals: strontium, copper, cobalt, nickel, zinc, germanium, cerium, vanadium. These are not EPA hazardous wastes, but the Oshkosh POTW bans them from the sewer.

If a waste does not fit one of the above profiles, do not comingle it.

Requirements for Unwanted Materials Accumulation and Pick Up:

- Material must be stored in a sturdy, sealable container free of leaks. Re-used empty chemical containers are ideal. Be sure to remove the label or black out the black out the label with a marker if the contents do not match the label.
- The container should NOT be filled more than 90% full.
- The cap should fit securely. Containers must be capped when not in use.
- The container must have either its original manufacturer label with “Surplus” or an Unwanted Material label.
- The description should indicate the profile (see above) being used or the process that generated the material.
- The contents must be identified on the label. If different materials are comingled in the container, each component and the amount should be identified at the time the waste is added.
- Containers should be stored in secondary containment (tubs or trays) to contain leaks or spills (see image at right).
- Incompatible materials must not be stored in the same tub.
- The storage area must be labeled “Satellite Accumulation” or “Material for Pick up.”
- Material should be removed from the lab when the accumulation area is full or as a best practice, every six months.

Containers that are unlabeled or improperly capped or overfilled will not be picked up.

Scheduled waste pickups or questions about disposal should be directed to Greg Potratz, potratzg@uwosh.edu