Hazardous Waste Generators' Guide

Environmental Health & Safety
University of Colorado Boulder
303-492-6025
ehs@colorado.edu
http://ehs.colorado.edu
Eighth Edition, 2024

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The Basics

What is hazardous waste?

Hazardous waste is unwanted or discarded hazardous materials that may harm the health or well-being of people or the environment. The basic waste types are:

Chemical
Radioactive
Biohazardous

Whenever possible keep these types of waste separate from each other. Disposal of mixtures of these is difficult and expensive. Also, to help minimize hazardous waste generation - be sure to keep your hazardous wastes separated from normal non-hazardous wastes as much as possible.

What is chemical waste?

Chemical waste is any waste that is toxic, corrosive, ignitable or otherwise listed by the Environmental Protection Agency (EPA). This includes laboratory chemicals, cleaning products, paint, copier toner, batteries, fluorescent bulbs, electronic devices, photographic and shop chemicals. If you are unsure whether the waste you generate is hazardous, please contact EH&S.

Certain expired and unusable chemicals are hazardous waste and subject to regulations. Watch for expiration dates on containers of peroxide-forming chemicals including ethers.

What about radioactive waste? 

If your waste has a radioactive component, please contact Health Physics/Radiation Safety at 303-492-6523 or radsafety@colorado.edu for assistance and required training. Radioactive waste is managed under different procedures from those described in this booklet, see page 22.

What is biohazardous waste?

Biohazardous waste is biological, infectious, and some non-infectious waste. Biological waste includes cultures, plates, media, and other materials that contain or come in contact with living cells, body fluids, viruses, clinical materials, and other microorganisms. Infectious waste is biological waste that involves the presence of organisms containing recombinant DNA or other organisms hazardous to human health. Non-infectious waste includes all examples listed under biological waste that do not meet the criteria of infectious, or have been rendered non-infectious by chemical disinfection or autoclaving.

If your material/waste has a biohazardous component, please contact Biosafety at 303-492-6025, or email at ehsbio@colorado.edu.

Why do I need to know this information?

Anyone who handles or manages hazardous waste is considered a hazardous waste generator and is subject to the Federal and State Hazardous Waste regulations that are briefly described in this booklet. Important topics for hazardous waste generators include:

- Waste Disposal and Handling Procedures
- Spill Response
- Pollution Prevention
- Basic Lab Safety Information

Failure to properly manage Hazardous Wastes in your area of responsibility could result in fines and/or penalties which would be incurred by your department.

Hazardous Waste Generators' Responsibilities

- Receive initial hazardous waste training when beginning work with hazardous materials through EH&S or lab proctor.
- **Complete annual refresher training** as long as you are actively working with hazardous materials with proctor or online quiz.
- Manage hazardous chemicals and waste properly to prevent pollution, minimize waste and protect human health.
- Know your lab safety precautions, and safety equipment (SDS's, eyewashes, safety showers, personal protective equipment, etc.).

Pollution Prevention and Waste Minimization

Regulations require that, whenever possible, hazardous materials users reduce the amount of waste they generate. Some ways to do this are:

- Purchase less toxic materials.
- Use smaller quantities or reduce concentrations of hazardous material.
- Keep non-hazardous materials separate from hazardous constituents. For example, a small percent of hazardous material added to water would necessitate the entire container be disposed of as hazardous waste.
- Minimize bulk purchases. Chemicals not used within 6 months often end up as waste.

We are also required to handle hazardous materials in a manner that prevents releases to the environment. **It is critical that no hazardous materials are poured down drains or thrown in the domestic trash.** All chemicals should be stored with some means of containment, to prevent release of spills.

How EH&S Manages Waste

CU's Environmental Health & Safety Department (EH&S) operates an EPA-permitted waste Treatment Storage and Disposal Facility (TSDF). This facility allows EH&S to store waste collected from campus for up to one year before the waste is sent off site for disposal. When Hazardous Material/Waste (HMW) tags are submitted they are evaluated and classified based on compatibility, transportation regulations, and hazardous waste disposal requirements.

The waste you generate will either be mixed with similar chemicals or packaged in the original containers together with other waste. This is why it is important for EH&S to know exactly what is in your waste, so that safe, compliant disposal can be accomplished efficiently. Waste will also be evaluated for treatability and if possible, the hazards of the waste will be removed.

To help us avoid accidents and citations, please fill out ALL information on the HMW tag. If you have any questions or need assistance please give us a call at 303-492-7845.

How to Manage Hazardous Waste in Your Lab

All waste must be stored in a Satellite Accumulation Area (SAA)

SAA's should be…

- Near your point of waste generation.
- In a secure location under the control of the generator.
- **Inspected weekly** and tracked by using our online SAA tracking system. Please go to the EH&S website to access the online SAA tracking system. (https://ehs.colorado.edu/).
- To add/change/remove an SAA contact: Chemsafety@Colorado.Edu.

- **<u>Users must verify containers are:</u>**

  - Labeled as "HAZARDOUS WASTE"
  - Labeled with complete chemical contents (**attaching a completed HMW tag satisfies these two requirements**).
  - In secondary spill containment
  - Closed and not leaking
  - Segregated by compatibility
  - Less than 55 gallons total, per SAA
  - Less than one quart of pure, acutely toxic material (see EPA "P" list on EH&S website)

The Hazardous Material/Waste Tag (HMW)

- Under container contents, list full chemical names, one compound per line. List ALL chemical compounds in the waste, no matter how small the concentration.

- Constituents MUST be labeled with full chemical names in English - no symbols, formulas, or abbreviations.

- Components must total 100%. Less than 0.5% can be labeled as “trace”. Use an exact concentration such as ppm if it is known. For example: “100% water and trace acetone”, or “100% water and 5 ppm acetone” are acceptable entries.

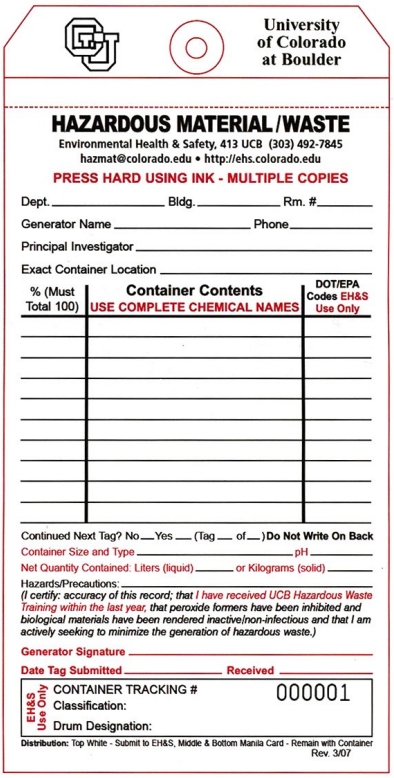
- Usually there will be only one container per tag; however, if there are multiple containers of the same waste with the same constituents, then you may submit one tag for multiple containers - be sure to note this on the tag.

- Small containers of different chemicals can not be placed in a larger container and submitted with one tag for the large container.

- Tags submitted to EH&S **must be certified by the TRAINED generators original signature.**

- Attach tag to the container with the provided wire and send the top copy to EH&S at 413 UCB.

- Waste will be picked up by the Hazardous Materials Management Unit within 2 weeks.



University of Colorado at Boulder

HAZARDOUS MATERIAL/WASTE

Environmental Health & Safety, 413 UCB (303) 492-7845
hazmat@colorado.edu • http://ehs.colorado.edu

PRESS HARD USING INK - MULTIPLE COPIES

Dept. _____ Bldg. _____ Rm. # _____

Generator Name _____ Phone _____

Principal Investigator _____

Exact Container Location _____

% (Must Total 100)	Container Contents USE COMPLETE CHEMICAL NAMES	DOT/EPA Codes EH&S Use Only

Continued Next Tag? No ___ Yes ___ (Tag ___ of ___) **Do Not Write On Back**

Container Size and Type _____ pH _____

Net Quantity Contained: Liters (liquid) _____ or Kilograms (solid) _____

Hazards/Precautions: _____

(I certify: accuracy of this record; that I have received UCB Hazardous Waste Training within the last year, that peroxide formers have been inhibited and biological materials have been rendered inactive/non-infectious and that I am actively seeking to minimize the generation of hazardous waste.)

Generator Signature _____

Date Tag Submitted _____ **Received** _____

EH&S Use Only
CONTAINER TRACKING # 000001
Classification:
Drum Designation:

Distribution: Top White - Submit to EH&S, Middle & Bottom Manila Card - Remain with Container
Rev. 3/07

Chemical Waste

Chemical waste should be collected and separated into the following categories. Be sure to **minimize your hazardous waste by keeping non-hazardous components separate wherever possible.** If you have more specific questions about waste segregation, please don't hesitate to give us a call at 303-492-7845.

- AEROSOL CANS: can be disposed by EH&S using the HMW tag system.

- BATTERIES: Deposit in battery collection containers around campus (https://ehs.colorado.edu/resources/battery-collection-sites-on-campus/), or store, and dispose of them via the EH&S Haz Waste Program using the HMW tag. All small sealed batteries are accepted in the collection containers. EH&S recycles all battery types. For large and/or unsealed batteries, use the HMW tag for disposal. If possible, please help us by covering battery terminals with tape to avoid potential short circuits.

- METAL SHARPS (needles, scalpels, and blades): Must be rendered non-infectious and **separated into approved puncture-proof containers** (plastic containers designed for sharps, or alternatively glass or metal containers only) for disposal using the HMW tag. **All metal sharps must be disposed through EH&S whether contaminated with hazardous materials or not (e.g. clean).**

- BROKEN GLASS, PLASTIC PIPETTES TIPS, OTHER POSSIBLE PUNCTURE HAZARDS: Must be rendered non-infectious and **separated into puncture-resistant containers** (e.g., cardboard, plastic containers, etc.) for disposal via the HMW tag if contaminated or for direct trash disposal if non-contaminated.

- BIOMEDICALLY APPEARING WASTE: Must be collected as Hazardous Waste

- CORROSIVES: Separate acids and bases, and record pH and concentration/volume percentages on the HMW tag. EH&S will neutralize and treat certain aqueous acid and base wastes - please help us by keeping your acid and base waste streams free of organics and metals whenever possible.

- CYANIDES, SULFIDES, AND ISOCYANATES: Separate from other materials and **never** store with acids.

- ELECTRONIC DEVICES: Must not be thrown out with the regular trash! Most electronic devices contain heavy metals such as lead, silver, and chromium and are regulated waste. Facilities Management - Property Services has a program to recycle or resell all electronic devices from University operations. Please call Property Services at 303-492-6524 for disposal of electronic equipment including CRT's (computer monitors), circuit boards, hard drives and other electronic devices or parts, regardless of their condition.

- EMPTY CONTAINERS: If contaminated with acutely toxic material (EPA "P Listed" waste or if the oral LD50 is less than 50mg/kg) fill out HMW Tag and submit for disposal. P-List Link: (https://www.gpo.gov/fdsys/pkg/CFR-2012-title40-vol27/xml/CFR-2012-title40-vol27-sec261-33.xml) Examples include sodium cyanide, potassium cyanide, osmium tetroxide, etc. If containers are not contaminated with acutely hazardous material, radioactive material, or biologically infectious material: empty containers can be thrown away with regular trash. Obliterate the labels and mark "empty". Place glass directly into dumpster or in a glass receptacle - **Do not place glass in lab or office trash cans.**

- EXTREME HAZARDS: Explosive, unstable, highly reactive, or extremely toxic materials may require special disposal. Examples include dry picric acid, arsine, silane, bromine, and acrolein. **Contact EH&S before purchasing any extremely hazardous compounds.**

- FLAMMABLES/SOLVENTS: Separate halogenated from non-halogenated solvents and water wherever possible.

- FLUORESCENT BULBS/COMPACT FLUORESCENT LAMPS (CFLS) : Contain mercury and are a regulated waste. Bulbs/ Lamps generated from University operations can be picked up by EH&S using the HMW tag. Please package the bulbs in their original packing or other protective container to prevent breakage.

- MERCURY: Separate elemental mercury and mercury compounds from other materials. Disposal of all forms of mercury is extremely costly. As a pollution prevention and safety measure, UCB encourages the use of non-mercury thermometers and other measuring devices. Check with EH&S regarding a free exchange for non-mercury thermometers.

- METALS: Must be kept separate from other materials whenever possible, e.g. Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Copper, Lead, Mercury, Molybdenum, Nickel, Selenium, Silver, Thallium, Zinc.

- OXIDIZERS: Keep separate from organics, flammables, and combustibles. Examples include nitrates, oxides, peroxides, permanganates, perchlorates, bromates, bromine, chromates, chlorites, etc.

- PAINTS: Oil based paints/stains and latex paints can be picked up by EH&S using the HMW tag. Please separate latex paints from oil based paints.

- PEROXIDE FORMERS: Ethers and other peroxide-forming compounds must be inhibited and certified as such. Do not open containers which may have formed explosive peroxide crystals or may have become unstable! Contact EH&S for special handling, inhibiting, and disposal information; a list of peroxide formers can also be found on the EH&S website.

- PHOTOGRAPHIC WASTES: Fixer should be separated from developer. This waste will be treated and discharged to the city's water treatment plant by EH&S - please help us by keeping your photographic wastes separate from other waste streams.

- PRESSURIZED GAS CYLINDERS - **Be aware that disposal of gas cylinders is extremely expensive! Please order only what you absolutely cannot do without. Order your gases in "rental" cylinders that can be returned and reused instead of lecture bottles that can only be disposed.** Your department may be responsible for the cost of cylinder disposal. The EH&S hazardous waste facility is not permitted to store cylinders. If you have cylinders to dispose of, contact hazmat@colorado.edu.

- SOLIDS (debris including gloves, paper, agarose gels, etc.): should be kept separate from liquid waste.

- TOXINS: Keep neurotoxins and other extremely dangerous materials separate. Also keep stock reagents in a secure area.

Chemical Inventories

To comply with Department of Homeland Security regulations and assist with emergency response on campus, EH&S requires all labs and shops to maintain a chemical inventory. The inventory must include the chemical name, container size, storage location, and expiration date if applicable.

General Lab Safety

1) **Personal Protective Equipment (PPE)-** Personal protective equipment should be provided by your supervisor and be appropriate for the type of work you do. Common types of PPE include:

- Safety Glasses or Goggles– all laboratories
- Gloves– type of glove will depend on chemicals used
- Lab Coat, Apron, Face Shield– all protect your body against dangerous chemical spills and splashes
- Hearing Protection
- Respiratory when approved by EH&S

Safety glasses, closed-toe shoes, and long pants should be worn in all laboratories on campus. Lab coats are recommended as well - especially when working with flammable or highly reactive substances. You must verify the proper level of protection recommended for each process you do to ensure your personal safety.

2) **Safety Data Sheets (SDS)-** SDS's have information provided by chemical manufacturers, including hazard information, type of PPE required, possible reactions and storage precautions. An alphabetized binder of SDS's for your lab should be visible and readily available, online access is acceptable.

3) **Gas Cylinders–**

- All gas cylinders must remain secured to a wall or a stationary object via chains, straps, or mounts.
- Keep them labeled, and use a "Status" tag on it (empty, in use, full).
- Keep them away from sources of heat or ignition, especially flammable gases.
- Keep different gas types segregate according to their chemical compatibility.
- Attach its metal cap when not in use, and always when moving the cylinder.
- Gas cylinders larger than lecture bottles should never lie on their side nor be rolled.

4) **Safety Showers/Eyewashes–** Safety showers and eyewashes can save your life or your sight. You MUST familiarize yourself with the equipment in your work area. Eyewashes should be flushed weekly by lab personnel to avoid sediment buildup that could damage your eyes. Ensure safety showers and eyewashes are easily accessible and not blocked by lab equipment. Safety showers are tested by EH&S periodically, and should only be activated by lab personnel in true emergencies.

5) **General Hygiene–** No eating or drinking is permitted in laboratory spaces. Although some labs have desks close to research spaces, care must be taken to keep your desk area clean and chemical free. Remove gloves and lab coats when leaving hazardous work areas to prevent contamination.

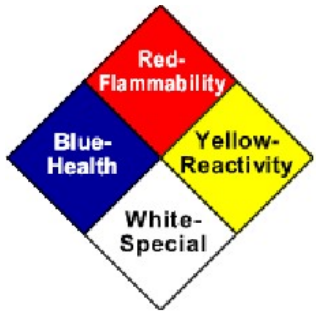
6) **Refrigerators–** No flammable materials are allowed in regular, household refrigerators. If you need to refrigerate flammables, they MUST be in a flammable rated refrigerator, designed to prevent vapor ignition.

7) **Spill Kits/Spill Clean-Up Materials–** Lab personnel should keep materials on-hand and readily available to clean up **small, incidental chemical spills**, such as paper towels, absorbent pads or pillows, drain plugs/covers, dust pan, tongs to pickup broken glass, etc. Don't allow chemicals to go down drains—stop materials from releasing to drains during a spill if you can safely do so. Clean-up supplies are available commercially or contact EH&S for assistance with creating a spill kit. All materials generated and collected during clean-up of a small chemical spill should be put in a sealed container or plastic bag and disposed of through EH&S using a HMW tag. Always wear proper PPE during these activities, and never clean-up a spill unless you have the proper experience, equipment, and materials to do it, and can avoid injuries to yourself and others.

For large spills, fires, or incidents involving life/safety follow the emergency spill procedures on page 17.

Chemical Safety

1) Store flammables, oxidizers, acids, and bases all separate from each other. Flammables should be in flammable cabinets. All liquids should be in secondary containment. Incompatible chemicals should never be stored together.



NFPA Placard

2) Follow standard procedures for chemical use in your work area. Deviations from standard protocols have caused serious accidents.

3) All containers MUST be labeled with FULL, ENGLISH NAMES. No abbreviations, symbols, or formulas are permitted. Empty containers must have labels crossed out and be labeled “EMPTY”. Even water must be labeled.

4) “Unknowns” or unidentified containers occasionally turn up in labs, and cause huge problems for personnel who have to determine what substances are involved. It is important to label your chemicals and waste at all times. Call EH&S if you have found a suspicious container (bulging, crusty, unlabeled, etc.).

5) Hydrofluoric Acid, Perchloric Acid, and Trifluoroacetic Acid use requires additional precautions. These are extremely dangerous chemicals that are commonly used on campus. If you will be using these materials, ensure you are fully trained by your supervisor and have researched the material’s hazards.

6) Mercaptan use must be done in a hood! Opening mercaptans without proper ventilation causes false fire-alarms due to the gas like odor.

Basic Emergency Response

Here are some basic Emergency Actions for your reference. If in doubt, evacuate and call 911. Never perform any actions you feel unsafe or uncomfortable doing. Always notify EH&S and your supervisor for all emergencies.

1) **Gas smell:** This is common, especially with many labs on campus using mercaptans. If you smell gas, pull fire alarm and evacuate immediately. Do not use light switches or phones, or anything that causes sparking within the building.

2) **Large Spills or Fires:**
Life Safety First
Evacuate Immediate Area
Pull Fire Alarm
Execute 911 call From Safe Location
Remain Available for Emergency Personnel

3) **Eyewash and Safety Shower Use:**

Using an Eyewash– Flush eyes for 15 minutes. Take care to hold eyes open with hands, and roll your eyes to allow water to rinse your eye thoroughly. Seek medical attention immediately.***

Using a Safety Shower– Remove all clothing and PPE immediately while activating the shower. Remain under the shower for 15 minutes unless Emergency Personnel direct otherwise. Seek medical attention immediately.***

***Note: It is always wise to grab your SDS binder for your work area when there is any incident involving chemicals. Emergency Personnel will request this information.

Biohazardous Waste

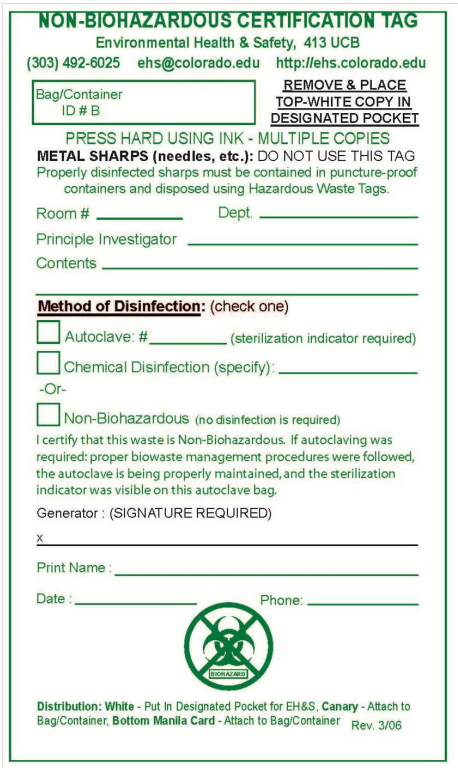
Determine if your waste is infectious. Render all infectious waste non-infectious by using effective chemical disinfection methods or by autoclaving. **If in doubt, be conservative and autoclave or chemically treat all non-radioactive biological waste. Do NOT use an autoclave if your waste contains radioactive material.** If you have questions, contact Biosafety at 303-492-6025.

Autoclaves

- Infectious waste must be autoclaved in an EH&S certified autoclave. These autoclaves have a sticker on the front signifying an "EH&S Autoclave #".
- All certified autoclaves must be spore tested every 90 days and have a Vendor perform maintenance every 6 months according to the campus Biological Laboratory Waste Management Disposal Policy and Procedure - which can be found on the EH&S website. Contact EH&S to add an autoclave to the program or if you have questions regarding this policy and procedure.

Non-Biohazardous Waste Tags

- These tags are available from EH&S, and need to be filled out completely and attached to each autoclave bag. Bags without a completed and signed tag attached will be considered infectious and WILL NOT BE PICKED UP FOR DISPOSAL.
- This waste will be going to a landfill, therefore it is very important that the waste is non-infectious and no chemical or radioactive contaminants are included.



NON-BIOHAZARDOUS CERTIFICATION TAG

Environmental Health & Safety, 413 UCB
(303) 492-6025 ehs@colorado.edu http://ehs.colorado.edu

Bag/Container ID # B

REMOVE & PLACE TOP-WHITE COPY IN DESIGNATED POCKET

PRESS HARD USING INK - MULTIPLE COPIES

METAL SHARPS (needles, etc.): DO NOT USE THIS TAG
Properly disinfected sharps must be contained in puncture-proof containers and disposed using Hazardous Waste Tags.

Room # _____ Dept. _____

Principle Investigator _____

Contents _____

Method of Disinfection: (check one)

☐ Autoclave: #_____ (sterilization indicator required)

☐ Chemical Disinfection (specify): _____

-Or-

☐ Non-Biohazardous (no disinfection is required)

I certify that this waste is Non-Biohazardous. If autoclaving was required: proper biowaste management procedures were followed, the autoclave is being properly maintained, and the sterilization indicator was visible on this autoclave bag.

Generator : (SIGNATURE REQUIRED)

x _____

Print Name : _____

Date : _____ Phone: _____

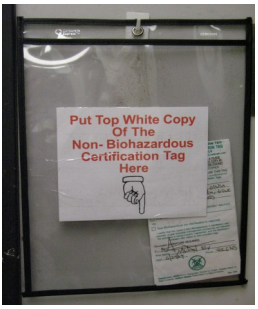
Distribution: White - Put In Designated Pocket for EH&S, **Canary** - Attach to Bag/Container, **Bottom Manila Card** - Attach to Bag/Container Rev. 3/06

Biological Waste

- Any container or trash can used in the lab to store the waste prior to autoclaving or putting the bag into a designated "Certified Non-biohazardous Materials" receptacle must be properly labeled to indicate whether it is "Non-Infectious Waste" or "Biohazardous Waste". These labels can be obtained from EH&S by calling 303-492-6025.

- Whether it is a waste that is just biologically appearing but non-infectious or a waste that was disinfected - it must be sealed in an autoclave bag. A Non-biohazardous waste tag must be filled out, and the correct box needs to be checked accordingly to what kind of waste it is.

- Attach the tag to the bag, and put the top white copy into the designated pocket. Put the bag into a designated "Certified Non-biohazardous Materials" receptacle.



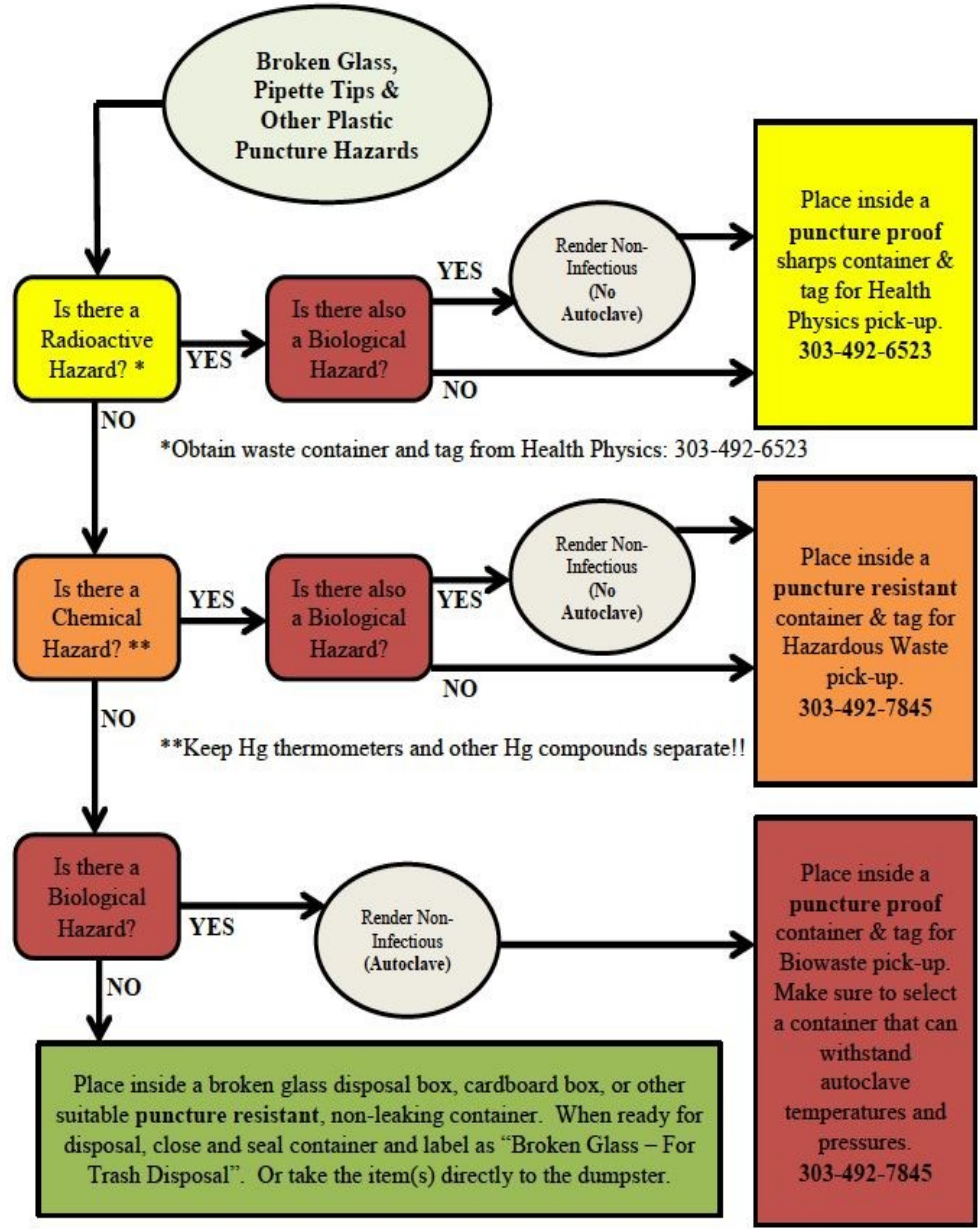
- Autoclave bags must have a sterilization indicator built into the bag or have a piece of autoclave tape attached to the bag or container for the waste to be picked up - the only exception to this rule is for disposal of wastes that are biologically appearing but non-infectious and do not need to be autoclaved for disposal.

Sharps

- All radioactive sharps must go to Radiation safety for disposal.
- Sharps (needles, syringes, blades, scalpels) CANNOT be disposed of with a Non-Biohazardous Waste Tag; they must be disposed of with a HMW Tag.
- **Sharps cannot be trash disposed, even if clean.** They must be placed in puncture-proof, sealed containers (no plastic or autoclave bags) and tagged for hazardous material/waste pickup.
- Due to their biomedical appearing nature, syringe bodies must also be HMW tagged for EH&S pick-up (although it is not necessary to put these into puncture-proof containers).
- **Infectious sharps must be autoclaved.** Chemical disinfection is not effective for needles and small syringes; these must be autoclaved in a puncture-proof container with a built in sterilization indicator, or have autoclave tape on the container. **Be sure that the container is not completely sealed during autoclaving so that the sharps won't puncture it due to the heat and pressure**.
- Even sharps that have been used to administer chemicals, or draw fluids from "clean" animals must be autoclaved. This is for protection of personnel handling the waste.
- Write in the word "Autoclaved" under the chemical constituents section of the HMW Tag if the sharps were autoclaved. Autoclaved sharps containers must also have a sterilization indicator included.

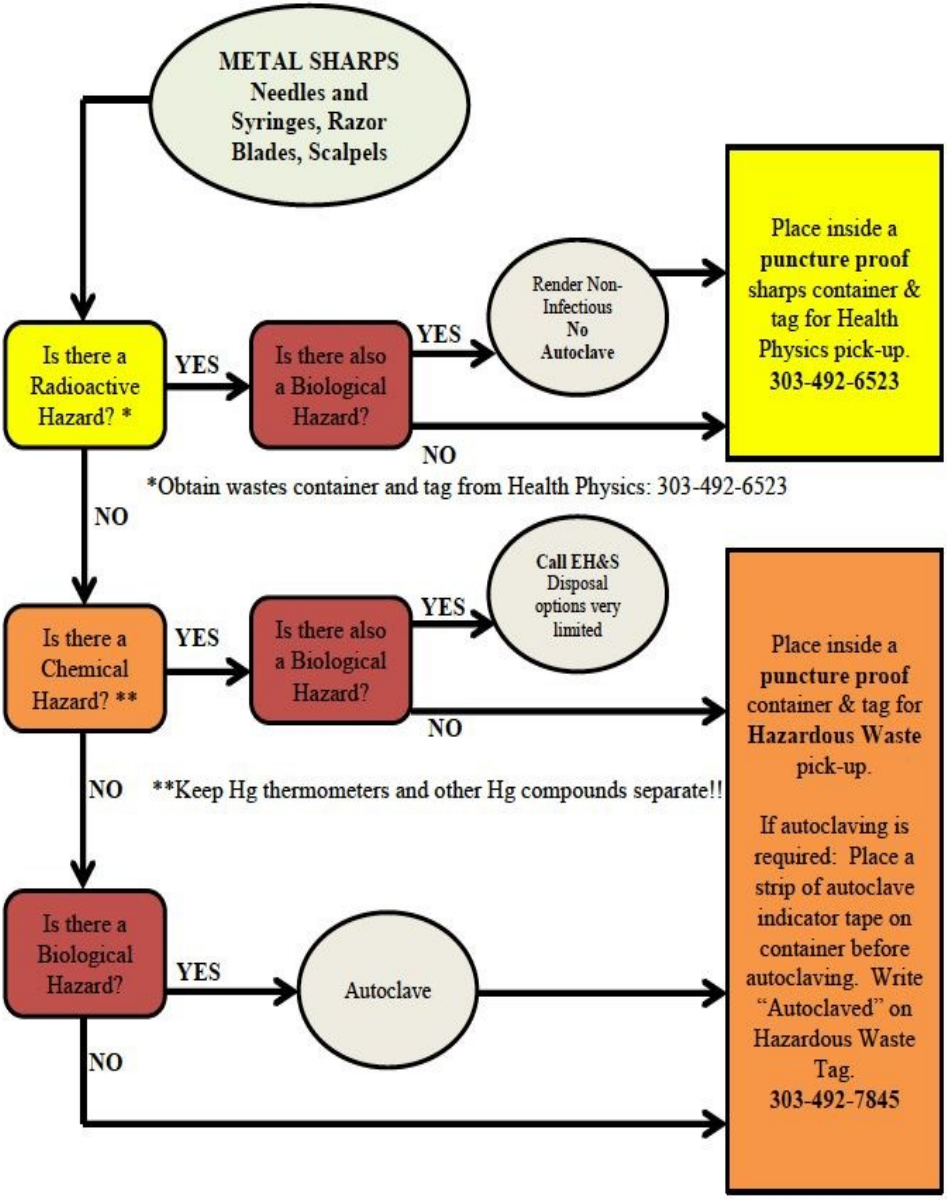
BROKEN GLASS AND PLASTIC SEGREGATION REQUIREMENTS

(Not to be used for metal sharps – refer to separate segregation chart.)



METAL SHARPS SEGREGATION REQUIREMENTS

(Not to be used for broken glass or plastic sharps—keep these separated as much as possible and refer to separate segregation chart for these.)



Radioactive Waste

Please contact Health Physics/Radiation Safety at 303-492-6523 or radsafety@colorado.edu for information regarding radioactive material/waste. Radiation training is a SEPARATE training from the hazardous waste training, and is required if you are working with radioactive materials.

- Radioactive materials and machines that emit radiation are sometimes used in campus research laboratories. It is important for all researchers to be aware of its presence and the need for security of materials. For more information please visit: https://ehs.colorado.edu/lab-support/radioactive-materials/

- **Radioactive waste** can only be generated by laboratories that hold a Radioactive Materials License issued by the UCB Radiation Safety Committee. EH&S Health Physics/Radiation Safety provides oversight of the license(s) ensuring compliance with federal, state, and local regulations.

- **Mixed waste,** defined as waste with radioactive material components combined with hazardous chemical and/or biological components, must be managed in compliance with regulations pertaining to hazardous, biological, and radioactive materials. **Mixed waste disposal is extremely difficult and costly. Every attempt should be made to avoid mixing radioactive and hazardous materials. ALWAYS contact Health Physics/Radiation Safety for information about mixed material/waste.** As with radioactive waste, mixed waste may only be generated by laboratories holding a Radioactive Materials License. Using biodegradable scintillation cocktail is strongly encouraged as an alternative to solvent scintillation cocktail.

FAQ's

How can I get more waste tags? Call our front desk at 303-492-6025 and they will ask for your name and campus box and send them to you via campus mail. They are also available in departmental store rooms.

Do I need to save my old SAA logs? No. You only need the current year's log posted in your SAA.

How do I complete annual hazardous waste refresher training? This will vary, depending on how involved your lab may be. Generally, you can review the slideshow online or with your proctor, and take the quiz online at our website, or send in a paper quiz to 413 UCB.

I don't generate waste. Do I need to do annual training? If you are a supervisor of other waste generators, then Yes. If not, contact EH&S at ECIH@colorado.edu and we can update your information in our database.

How do I schedule a Hazardous Material/Waste pickup? To dispose of your hazardous material/waste, complete the HMW Tag as described in this guide and send EH&S the top white copy ONLY (413 UCB). The card stock and secondary copy must remain with the material/waste, attached to the waste item with the provided wire. EH&S will generally pick up the waste within 10 business days.

Can EH&S provide some assistance with getting rid of a large amount of chemical waste? For large volumes of surplus of chemicals that need disposal, contact the Hazardous Materials group at 303-492-7845 for assistance and helpful suggestions. We have a pre-segregation process for large volumes of chemicals that can greatly reduce the number of HMW tags that need to be filled out.

FAQ's

Does EH&S Supply Containers for Waste? EH&S does not supply containers for waste, however we encourage the re-use of suitable containers that products are shipped in for waste collection. Hazardous material/waste must be stored in non-leaking chemically resistant containers, capped and separated by hazard class. Chemistry Stores sells 19L carboys which are appropriate waste disposal containers. Examples of inappropriate collection containers are milk cartons, juice containers, mason jars, and soft cartons or plastic trash bags for sharps. If you are going to be generating significant quantities of a particular waste stream, EH&S can supply a 30 or 55 gallon drum on a case-by-case basis. Contact the Hazardous Materials group for assistance at 303-492-7845.

How do I dispose of equipment such as petri dishes, rubber gloves, and razor blades that are used in experiments which mix radioactive materials with biologically hazardous materials? Render everything non-infectious with bleach, and hold for separate Health Physics disposal.

What can I do if I don't know what it is? EH&S will assist in the identification and classification of unknown chemicals to assure proper management and disposal. Fill out a waste tag with as much info as possible, for instance "unknown clear liquid, pH = 4, unknown yellow powder" etc. and submit to EH&S, 413 UCB. Where an unknown material requires substantial analysis, costs incurred may be the responsibility of the generating department.

Is secondary containment for chemicals required? Generators are required to provide appropriate spill-prevention measures, such as secondary containment devices, and to segregate stored hazardous material/waste containers by chemical compatibility: oxidizers, flammables and combustibles, acids, bases and reactives. EH&S can assist in the selection of secondary containment and has a limited supply of secondary containment devices that may be provided on a case-by-case basis.

Environmental Health & Safety
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