

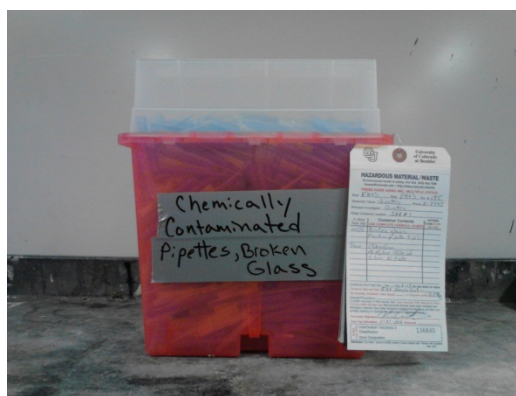
Segregation and Disposal of Broken Glass, Pipette Tips and other Plastic Puncture Hazards

This guidance document provides instruction on segregation and disposal of broken lab glassware, broken reagent bottles, glass capillary tubes, microscope slides, glass pipettes, plastic pipette tips and other potential puncture hazards. All of these items must be separated from other wastes and placed into puncture resistant, non-leaking containers such as cardboard, plastic, or metal containers that can be properly closed when filled. **This guidance document does not cover segregation and disposal requirements for metal sharps!** Metal sharps (needles, scalpels, blades, etc.) must be segregated separately from all other wastes, refer to the separate guidance document titled “Segregation and Disposal of Metal Sharps” for instruction. Please see the segregation flow chart for broken glass and plastic sharps at the end of this guidance document for further reference.

Radioactive: Broken glass and pipette tips that are contaminated with radioactive materials must be disposed through the Health Physics/Radiation Safety program. They should be placed in sharps containers provided by Health Physics and submitted for disposal. Questions? Call 303-492-6523 or email: hpl@colorado.edu.

Biohazardous: Broken glass and pipette tips contaminated with an infectious substance or rDNA molecules must be disinfected for disposal. Autoclaving is the most effective method of disinfection for this type of waste. Chemical disinfection is not always effective and therefore chemical disinfection methods must be pre-approved with EH&S if an autoclave is not available to your lab. Broken glass and pipette tips must be placed into a puncture proof container (i.e. a biohazard sharps container) that can withstand autoclave temperatures and has a built in sterilization indicator or autoclave tape attached. Once the waste has been disinfected, dispose of through the Biohazardous Waste program, using a Non-Biohazardous Waste Certification Tag.

Chemically contaminated: Broken glass and pipette tips that are contaminated with any of the following: heavy metals, acutely toxic hazardous material (EPA “P-Listed” waste or if the oral LD50 is less than 50mg/kg), or contaminated with other hazardous chemicals must be segregated from other wastes and sent for disposal through the Hazardous waste program using a Hazardous Materials/Waste (HMW) tag. The EPA “P-list” can be viewed [here](#). The waste must be separated into a puncture resistant container (cardboard, plastic, metal, or glass container) for disposal. Container contents on the HMW tag must list the chemical contaminants and their approximate percentages. These wastes are consolidated in the EH&S facility, please use reasonably sized containers and keep the total weight of each container below 30 pounds.



Mercury thermometers: **IMPORTANT!!** All laboratory wastes contaminated with any mercury or mercury compounds must be segregated from everything else and handled as a hazardous waste for

disposal. Broken or intact mercury thermometers must be segregated and disposed of separately from all other broken glassware. Mercury is regulated as a hazardous waste at extremely low concentrations, and disposal is very difficult and expensive. Please keep mercury separate from everything else. If in doubt call us and ask what to do.

Non-chemically contaminated: Broken glass and pipette tips that are either clean or contaminated with non-hazardous materials*, and **do not contain liquids** can be disposed of in the regular garbage.

They must be placed inside a puncture resistant container or broken glass specific receptacle and disposed directly into the dumpster, or sealed closed and marked with the statement “broken glass for disposal/trash” or similar and stored for custodians to dispose. You must ensure that your containers holding broken glass and pipette tips are safe for the custodians to handle!

NO METAL SHARPS can be disposed of in the regular garbage – **keep metal sharps segregated by themselves.** Do not place glass in laboratory or office trash cans. There are no laboratory glassware, plastics, or chemical reagent bottles that are recyclable at the time of this writing – do not place these items inside or near the recycling collection bins.



It is always important to inform EH&S of any chemical contaminants in your waste streams. The only way we can ensure the correct method of disposal is from accurate information listed on the HMW tag or Radioactive Materials pick-up request form. Often we don't need to know the exact concentrations of chemicals, but if there is a chance that a chemical exists in your waste – even in very small amounts, we need to know about it.

*If you are not sure whether or not the contamination on your broken glass or pipette tips is considered a hazardous material, give us a call at 303-492-7845 or email: hazmat@colorado.edu.

PLEASE don't hesitate to give us a call and ask questions – we are here to help you!

Here is an example of a HMW tag that has been properly completed for chemically contaminated broken glass and plastic pipette tips:

HAZARDOUS MATERIAL/WASTE		
Environmental Health & Safety, 413 UCB (303) 492-7845 hazmat@colorado.edu • http://www.colorado.edu/ehs		
PRESS HARD USING INK - MULTIPLE COPIES		
Dept. <u>EH&S</u>	Bldg. <u>EH&S</u>	Rm. # <u>175</u>
Generator Name <u>Quattro</u>		Phone <u>2-7345</u>
Principal Investigator <u>Quattro</u>		
Exact Container Location <u>SAA #1</u>		
% (Must Total 100)	Container Contents USE COMPLETE CHEMICAL NAMES	DOT/IEPA Codes EH&S Use Only
<u>100%</u>	<u>Broken glass</u>	
	<u>Plastic pipette tips</u>	
<u>Trace</u>	<u>Chloroform</u>	
	<u>Methylene Chloride</u>	
	<u>Silver Nitrate</u>	
Continued Next Tag? No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> (Tag <u>1</u> of <u>1</u>) Do Not Write On Back		
Container Size and Type <u>5qt Sharps Cont.</u> pH <u></u>		
Net Quantity Contained: Liters (liquid) <u></u> or Kilograms (solid) <u>0.5kg</u>		
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 <u>[Signature]</u>		
Date Tag Submitted <u>1-31-2012</u> Received <u></u>		
CONTAINER TRACKING #		<u>136840</u>
Classification: <u></u>		



Broken Glass and Plastic Sharps Segregation Requirements

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

