Lab Safety Overview

Rubel/Stone Lab Meeting

Thursday, March 22, 2018

EMERGENCY PROCEDURES

UNIVERSITY OF WASHINGTON

EVACUATION INFORMATION

- Evacuate the building using the nearest exit (or alternate if nearest exit is blocked).
- Do not use elevators!
- Take personal belongings (keys, purses, wallets, etc.)
- Secure any hazardous materials or equipment before leaving.
- Follow directions given by evacuation wardens.
- Go to Evacuation Assembly Point (EAP) designated in this building's evacuation plan and on building emergency evacuation signs.
- Assist persons with disabilities or special needs.

UW Office of Emergency Management
www.washington.edu/emergency
January 2006

EARTHQUAKE

- Drop, Cover, Hold under a table or desk or against an inside wall—not in a doorway—until the shaking stops.
- After the shaking stops, check yourself and others for injuries and move toward the nearest exit or alternate.
- Evacuate the building.
- Do not leave the area/campus without reporting your status to your instructor, building coordinator or Fire/Floor Warden.
- Go to your nearest campus Mass Assembly Area for more information and critical updates.

FIRE

- Activate the nearest fire alarm pull station and call 9-1-1 if possible.
- Evacuate the building.
- Do not enter building until authorized by emergency personnel.

HAZARDOUS MATERIALS RELEASE

- If an emergency or if anyone is in danger, call 9-1-1.
- Move away from the site of the hazard to a safe location.
- Follow the instructions of emergency personnel.
- Alert others to stay clear of the area.
- Notify emergency personnel if you have been exposed or have information about the release.

POWER OUTAGE

- Remain calm; provide assistance to others if necessary.
- Move cautiously to a lighted area. Exits may be indicated by lighted signs if the emergency power is operating.
- Turn off and unplug computers and other voltage sensitive equipment.
- For information about a prolonged outage, tune to radio KIRO 710 AM, and/or call UW 206-897-INFO (4636).

SUSPICIOUS PERSON

- Do not physically confront the person.
- Do not let anyone into a locked building/office.
- Do not block the person's access to an exit.
- Call 9-1-1. Provide as much information as possible about the person and their direction of travel.

SUSPICIOUS OBJECT

- Do not touch or disturb object.
- Call 9-1-1.
- Notify your supervisor and/or the building coordinator.
- Be prepared to evacuate.

Points to Remember About Your Role in Lab Safety

- Wear the PPE appropriate for your work
- Take the appropriate training needed
- Follow the SOPs and guidelines
- Culture of safety: Ask questions if you don't know
- Do not eat or drink in the lab
- Report accidents/injuries, "near misses," and safety concerns
- Think of your safety and others' safety

Have Fun, Do Great Research, and Go Home Safe

	Are you UW Faculty, staff, or student....	Complete this EH&S Training Requirement (See Key Below)																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Fire Ext.	working in a lab, unless written policy is to not use extinguisher and evacuate.	◆																	
	working with flammable, combustible, pyrophoric, or reactive materials.		○																
Elec.	working with electrical equipment or apparatus.			○															
Chemical Safety	using chemicals or working in wet lab?				◆				◆										
	working in fume hood?				○		○												
	working around compressed gases?				○			○											
	using a respirator?				◆					◆									
	in a laboratory supervisor role?			○	◆	◆	○	○			○								
	who may be required to administer first-aid as a duty of your work or working in a remote location?										◆								
	shipping or transporting hazardous materials?				◆							◆	◆	◆	◆				
Biosafety	working in a lab where biohazardous materials are present?				◆											◆			
	working with bloodborne pathogens?				◆											◆	◆		
Radiation	working in a lab with radioactive materials?				◆													◆	
	working in a lab with class 3b or 4 lasers?																		◆

Key	Requirements	Frequency
1	Fire Extinguisher Online	Annual
2	Fire Extinguisher Hands On	Initial
3	Electrical Safety, Basic Online	Initial
4	Online Managing Laboratory Chemicals	Initial
5	Laboratory Safety Standard Compliance	Initial
6	Online Fume Hood Training	Initial
7	Compressed Gas Safety	Initial
8	Globally Harmonized System / HazCom	Initial
9	Respiratory Training and Fit Testing	Annual
10	First Aid and CPR Certification	2 Years

Key	Requirements	Frequency
11	Shipping Hazardous Materials	2 Years
12	Online Shipping Biological Substance Category B	2 Years
13	Online Shipping Dry Ice with non-dangerous goods for Exempt Patient Specimens	2 Years
14	Online Shipping Dangerous Goods in Excepted Quantities	2 Years
15	Online Biosafety Training	3 Years
16	Online Bloodborne Pathogens for Researchers	Annual
17	Radiation Safety Training	Initial
18	Laser Safety	Initial

This document outlines the EH&S training classes required (◆) or recommended (○) for all personnel working in a lab setting. Answer the questions below with your PI/supervisor to determine which tasks are part of your job. If your answer is yes to a question, the diamond or circle to the right represents a training class that supports that task.

EH&S Training Classes for Lab Staff

Use the chart below to select EH&S training classes and as a record of completion. Have your supervisor sign off below once all requirements have been completed. Maintain this document in your lab training records.

Lab staff name (printed):_____ _____ Lab staff signature: _____

Supervisor Signature:_____ Date:_____

Please find the links to all of the EH&S courses at http://www.ehs.washington.edu/psotrain/corsdesc.shtm.

Key	Training Requirement	Necessary for your position		Date Completed
1	Fire Extinguisher Training Online - Initial	Yes ☐	No ☐	
2	Fire Extinguisher Training Hands-On	Yes ☐	No ☐	
3	Electrical Safety, Basic-Online	Yes ☐	No ☐	
4	Managing Lab Chemicals Online	Yes ☐	No ☐	
5	Laboratory Safety Standard Compliance	Yes ☐	No ☐	
6	Fume Hood Training Online	Yes ☐	No ☐	
7	Compressed Gas Safety	Yes ☐	No ☐	
8	Globally Harmonized System / HazCom	Yes ☐	No ☐	
9	Respirator Protection and Fit Testing	Yes ☐	No ☐	
10	First Aid & CPR Certification	Yes ☐	No ☐	
11	Shipping Hazardous Materials	Yes ☐	No ☐	
12	Shipping Biological Substance Category B Online	Yes ☐	No ☐	
13	Shipping Dry Ice with non-dangerous goods or Exempt Patient Specimens Online	Yes ☐	No ☐	
14	Shipping Dangerous Goods in Excepted Quantities Online	Yes ☐	No ☐	
15	Biosafety Training Online	Yes ☐	No ☐	
16	Bloodborne Pathogens for Researchers Online	Yes ☐	No ☐	
17	Radiation Safety	Yes ☐	No ☐	
18	Class 3b or 4 Laser Safety	Yes ☐	No ☐	

My training records: My EH&S Training

Evacuation Route and Evacuation Assembly Area

Basement:

KEY:

- Evacuation Route
- Exit
- Restroom
- Fire Extinguisher
- FA Fire Alarm
- Fire Alarm Control Panel
- Symbol of Accessibility

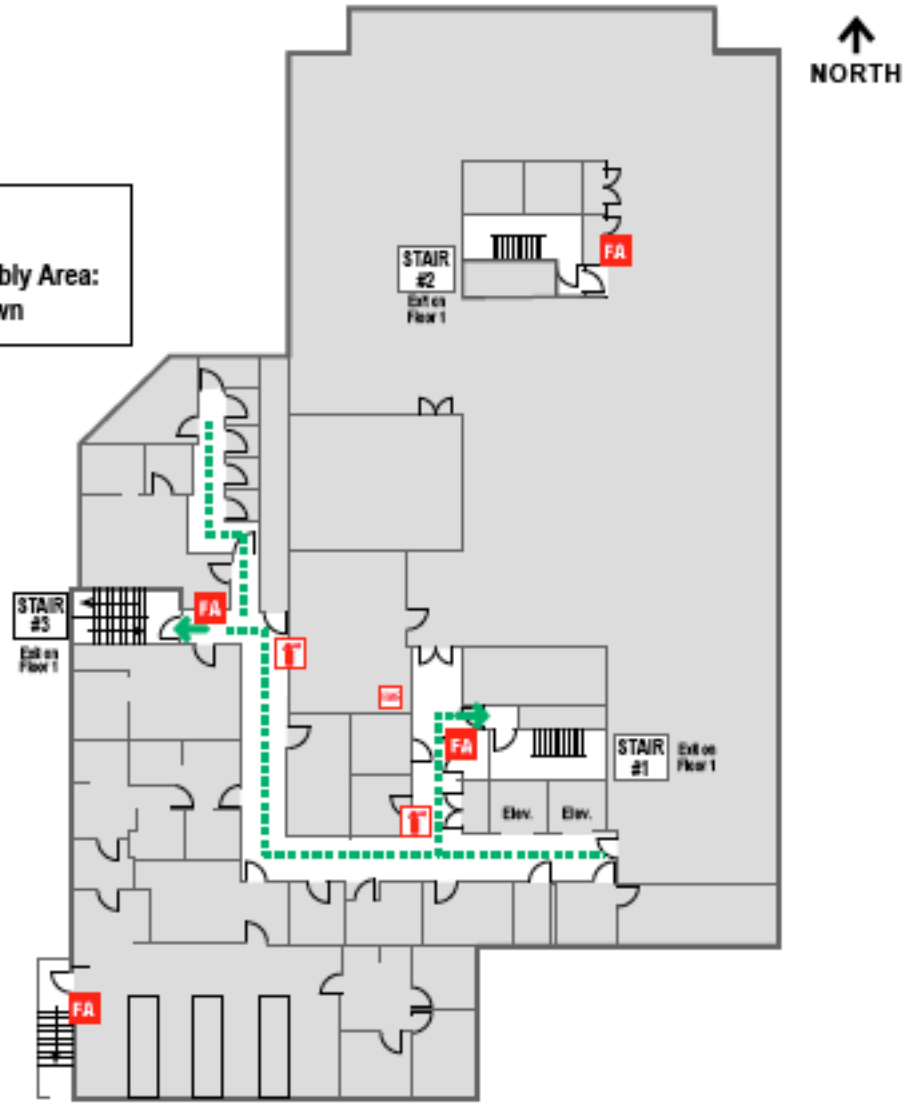
Evacuation Assembly Area: South Building Lawn

IF THERE IS AN EMERGENCY:

- Sound fire alarm.
- Assist persons with disabilities.
- Exit the building using the nearest exit.

  DO NOT USE ELEVATORS!
- Report to the nearest designated outside assembly area.
- Do not re-enter until authorized to do so.

Fire Alarm Control Panel is located in Switchgear Room #CD11A on Basement Level



Center on Human Development & Disability

Basement

Evacuation Route and Evacuation Assembly Area

CHDD 1st Floor:

KEY:

- Evacuation Route
- Exit
- Restroom
- Fire Extinguisher
- FA Fire Alarm
- FACP Fire Alarm Control Panel
- Symbol of Accessibility

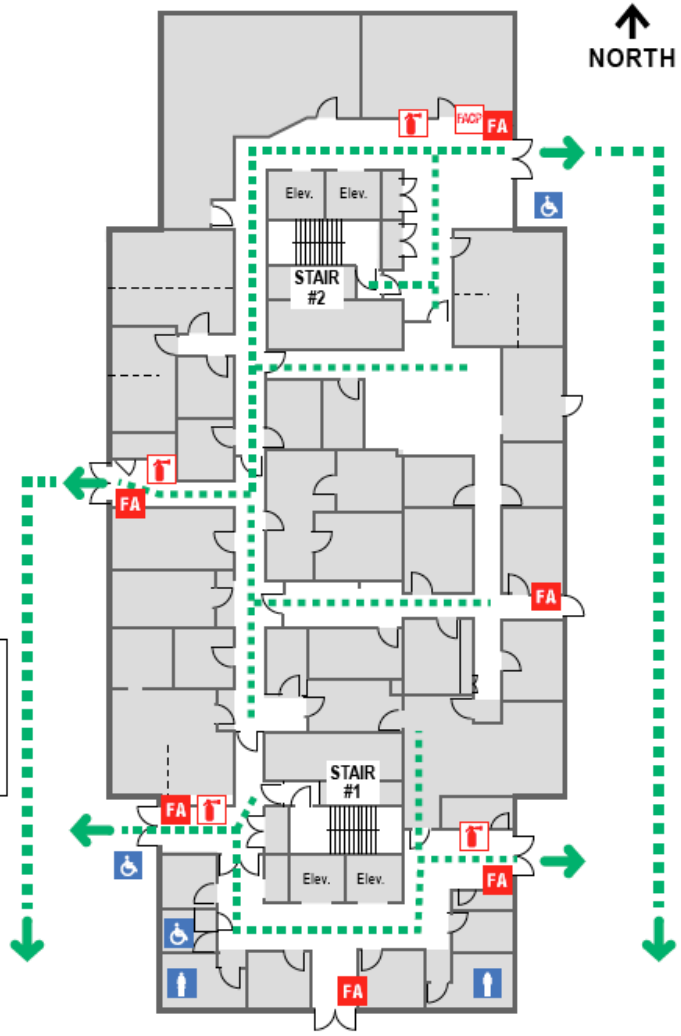
IF THERE IS AN EMERGENCY:

- Sound fire alarm.
- Assist persons with disabilities.
- Exit the building using the nearest exit.

  DO NOT USE ELEVATORS!
- Report to the nearest designated outside assembly area.
- Do not re-enter until authorized to do so.

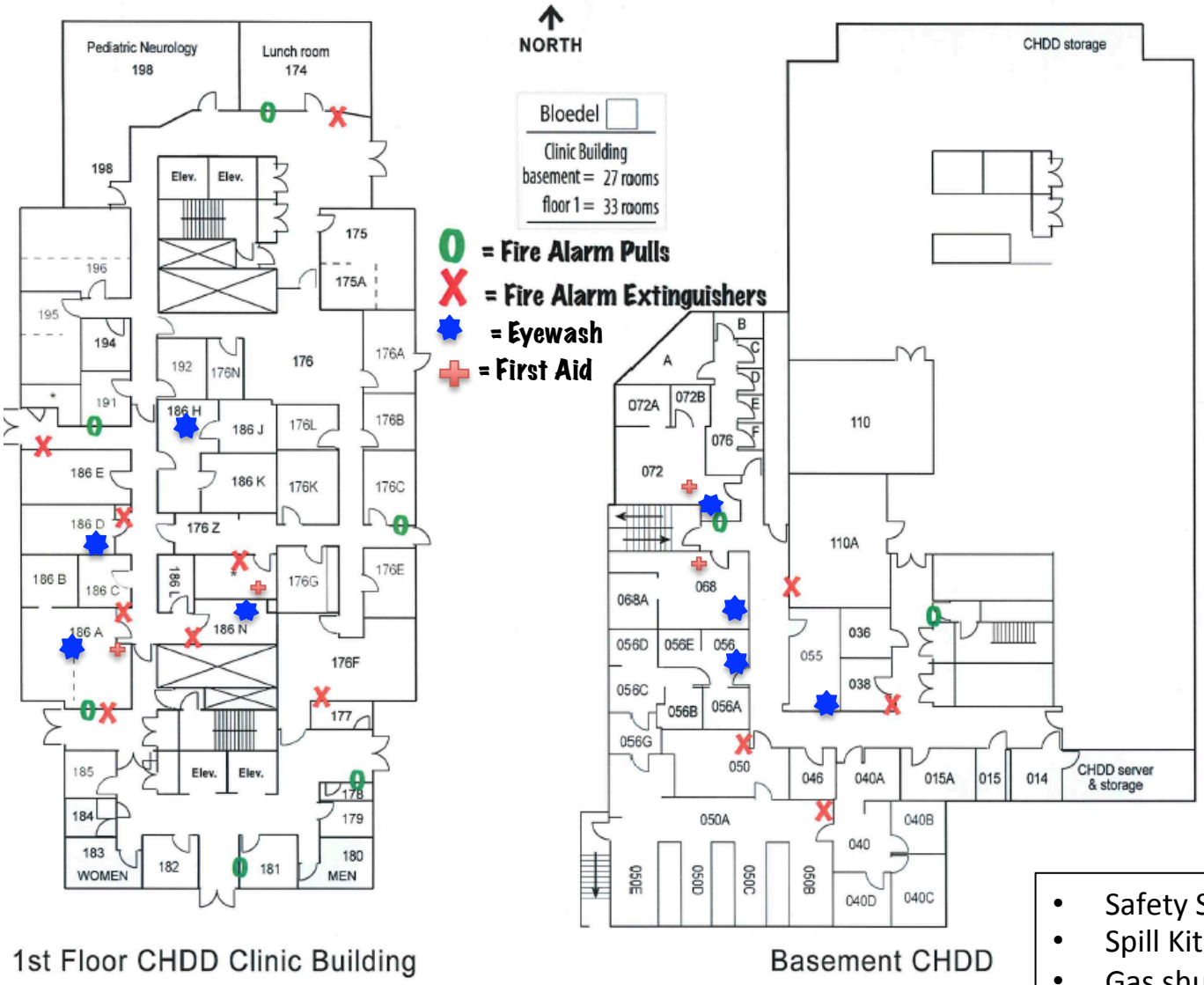
FACP Fire Alarm Control Panel is located in Switchgear Room #CD11A on Basement Level

Evacuation Assembly Point:
South Building Lawn



Center on Human Development & Disability
Floor 1

Location of Fire Extinguishers, Eyewash Stations and First Aid Kits



- Safety Shower locations.
- Spill Kit (186A).
- Gas shut off locations.
- Lab Safety Manual (186A).

Lab Safety Manual, SOPs and Guidelines

- How to access the LSM
  - It is on cajal_shared under EH&S
- How to find lab specifics SOPs
- How to access MSDS:
  - Login to MyChem:
    - Go to EH&S UW and search for MyChem.
    - Login with UWNetID

MyChem

Introduction

University of Washington employees who use chemicals or chemical containing products at any UW owned or leased facility must maintain chemical inventories in MyChem, the University of Washington's campus-wide chemical tracking system.

MyChem is designed for emergency planning efforts and helps faculty and staff comply with federal, state, and local hazardous material regulations such as Fire Department Hazardous Material Storage and Use Permits (occupancy permits), Hazard Communication, EPA Community Right-To-Know reporting, and the Department of Homeland Security Facility Anti-Terrorism Standard.

MyChem also contains a central Material Safety Data Sheet (MSDS) library. MSDSs provide an overview of the hazards of chemical. All employees should be able to readily access an MSDS for any chemical they are using.

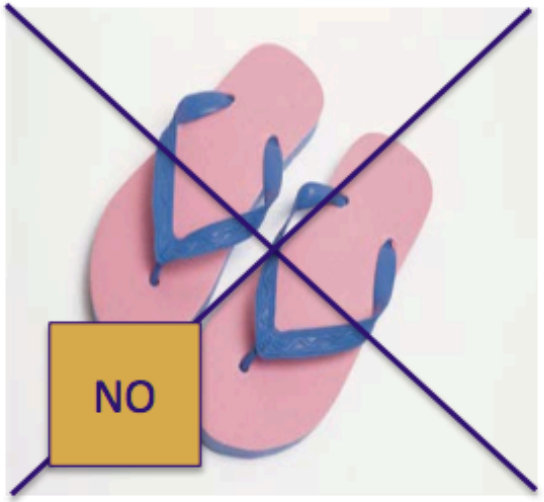
A Safety Data Sheet (SDS) generated in accordance with the Globally Harmonized System of Classification and Labeling of Chemicals provides similar information to an MSDS and is an acceptable alternative to an MSDS.

Dress for Success

Wear Appropriate Clothing, Shoes, and PPE

Video: Outfit for Safety (UCSD) 5:26 minutes:

https://www.youtube.com/watch?v=RXmG8mjUvil



Report Accidents, Near Misses, and Safety Concerns

- Tell your PI, lab manager, or supervisor about accidents, near misses, and safety questions or concerns

- Enter accidents and near misses in the Online Accident Reporting System (OARS)
  http://www.ehs.washington.edu/ohsoars/index.shtm

- Contact your UW Safety Committee to learn more about safety or to bring a safety issue to your department's attention
  http://www.ehs.washington.edu/ohssafcom/hsclist.shtm

Near Misses at UW: Improper Disposal of Hazardous Materials

Improper disposal of hazardous waste ("lab glass") **posed a potential $10,000 fine/day**. UW EH&S avoided fine by recovering materials at the waste transfer station.

PACKAGING SHARPS AND LAB GLASS WASTE

SHARPS

ALWAYS sharps waste:

- needles and IV tubing with needles
- syringes without needles
- lancets
- scalpel blades

Sharps waste if CONTAMINATED with biohazards (including recombinant or synthetic DNA/RNA):

- razor blades
- broken glass
- fragile glass items, Pasteur pipettes, slides and cover slips

When no more than two-thirds full, close lid and place autoclave tape over lid and sides. Do not block vent holes.

Label with PI name and room number.

BIOHAZARDOUS LAB GLASS & PLASTIC

CONTAMINATED with biohazards (including recombinant or synthetic DNA/RNA) and could puncture a plastic bag

- micropipette tips
- serological pipettes
- test tubes
- swabs and sticks
- other items that could puncture a biohazard bag

Place items in pipette box/keeper or sturdy cardboard box.

Line cardboard box with biohazard bag, and label as "LAB GLASS" with biohazard symbol, PI name and room number.

NON-HAZARDOUS LAB GLASS & PLASTIC

NOT contaminated with biohazards and could puncture a plastic bag

- micropipette tips
- serological pipettes
- test tubes
- swabs and sticks
- non-contaminated razor blades, broken glass, fragile glass items, Pasteur pipettes, slides and cover slips

Use sturdy boxes. Label as "LAB GLASS" with PI name and room number.

Do not use for disposal of sharps or biohazardous waste, liquid waste, chemicals, or radioactive waste.

ENVIRONMENTAL HEALTH & SAFETY
UNIVERSITY of WASHINGTON

See Sharps and Lab Glass for more detailed definitions and packaging instructions.
Refer to your Biohazardous Waste Flow Chart for treatment and disposal information.
Contact EH&S Research and Occupational Safety at ehsbio@uw.edu or 206.221.7770. Rev 05/2014

Non-Hazardous Laboratory Glass and Plastic

Non-hazardous laboratory glass and plastic waste includes items not contaminated with biohazardous material that could puncture a plastic bag:

- micropipette tips
- serological pipettes
- test tubes
- swabs/sticks
- non-contaminated broken glass, razor blades, fragile glass items including glass Pasteur pipettes, glass slides and cover slips

Glass disposal:
Package non-hazardous lab glass and plastic waste items in sturdy cardboard boxes. **Empty chemical containers (including pipette tips and centrifuge tubes) can be packaged as non-hazardous lab glass.** Use any cardboard box, provided the box is sturdy and will not weigh more than **25 pounds** when full. **Label boxes with the room number and PI name** and seal with **"Laboratory Glass"** tape. If printed tape is not available, seal the box with other packaging tape and clearly label as "Laboratory Glass." **Place the Laboratory Glass box next to the regular trash container for custodial pick-up and disposal via municipal waste.** Boxes and tape are available in the Chemistry stockroom and from several UW vendors, and **tape is available from Biochemistry stores.**

LAB RECYCLING

BOTTLES

CONTAINERS

PACKAGING

HOW TO PROPERLY RECYCLE IN YOUR MIXED RECYCLING BIN

***DO NOT* RECYCLE ANYTHING THAT:**

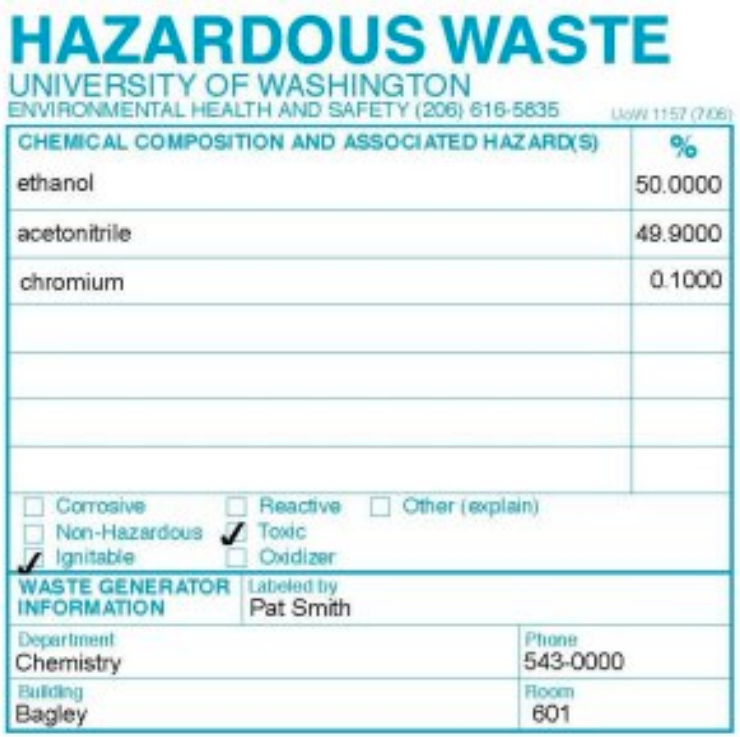
- contained biohazards (including recombinant DNA), hazardous chemical residues, radioactive materials
- could puncture plastic bags

MATERIALS ARE ONLY ACCEPTABLE IF:

- Empty and dry
- Labels are defaced
- Caps are discarded
- Contained only acetone, alcohols, cleaning products, hexane, non-toxic buffers, nutrients, salts, sugars, toluene, or xylene

Hood Etiquette: Please Label Your Waste

- All containers used to accumulate Hazardous Waste or Universal Waste must have a completed label. Containers need to be labeled as soon as waste begins to be accumulated in them.



HAZARDOUS WASTE

UNIVERSITY OF WASHINGTON
ENVIRONMENTAL HEALTH AND SAFETY (206) 616-5835 UW 1157 (7/06)

CHEMICAL COMPOSITION AND ASSOCIATED HAZARD(S)	%
ethanol	50.0000
acetonitrile	49.9000
chromium	0.1000

☐ Corrosive ☐ Reactive ☐ Other (explain)
☐ Non-Hazardous ✓ Toxic
✓ Ignitable ☐ Oxidizer

WASTE GENERATOR INFORMATION | Labeled by: Pat Smith

Department: Chemistry | Phone: 543-0000
Building: Bagley | Room: 601

- Blank labels may be printed from the EH&S website (word templates are available if you prefer to type your labels.)

Upcoming Inspection: Checklist (5 pages)

Environmental Health and Safety
UNIVERSITY of WASHINGTON

Laboratory Safety Checklist

Survey# 1288 Survey Date: 9/11/2014 | Surveyor: Harvey tdy@uw.edu (206) 616-3778

Building: CHDD CLINIC

Rooms Surveyed: CD055, CD056, CD056A, CD056E, CD068, CD175, CD186A, CD186B, CD186C, CD186D, CD186F, CD186H, CD186J, CD186K, CD186L, CD186N

RP: Edwin Rubel (206) 543-8360 | Box: 357923 Dept: Otolaryngology-Head and Neck Surgery

Lab Contact: Robin Gibson

#	Yes	No	N/A	Question	Risk	Survey Comments	Date Corrected
Administrative Plans/Materials							
1	☐	☑	☐	Do the lab staff have access to the current version of the UW Lab Safety Manual?	General	Update to current version in all rooms.	
2	☑	☐	☐	Do all lab personnel have access to written SOPs that document safety procedures?	General		
3	☑	☐	☐	Are lab accidents and near misses reported to the OARS system?	General		
Signage							

Upcoming Inspection: Checklist (5 pages)

Hazardous Waste and Disposal						
28	☑	☐	☐	Are chemical waste containers in good condition and compatible with their contents?	General	
29	☑	☐	☐	Are chemical waste containers closed?	General	
30	☑	☐	☐	Are incompatible chemical wastes segregated by hazard class ?	General	
31	☑	☐	☐	Are all chemical waste containers labeled with a completed UW hazardous waste label?	General	
32	☐	☐	☑	Are hazardous chemicals that are treated for disposal via sewer documented in a Chemical Treatment Log posted near the sink or discharge point?	General	
33	☐	☑	☐	Is lab glass placed in sturdy cardboard boxes that are labeled with the room number and Principal Investigator's name?	General	Please label.
Chemical Storage/Process						

Lab Training						
13	☑	☐	☐	Has a safety training assessment been completed for laboratory personnel?	General	
14	☑	☐	☐	Has EHS safety training been completed and documented for all lab staff?	General	
15	☐	☑	☐	Has lab specific training been completed and documented?	General	