the MIRACLE of SCIENCE with SOUL

City of Hope®

Clinical Laboratory

Refresher Safety Training

Occupational Safety & Health Department

Revised: 2017

Introduction

Welcome to the City of Hope clinical laboratory online refresher training.

This refresher training was developed for clinical staff working in a laboratory environment . This training covers, but not limited to, the following topics:

- General Safety
- Chemical Safety
- Biosafety (including Bloodborne Pathogen, Aerosol-Transmissible Disease Standard)
- Hazard Communication
- Waste Management
- Incident and Emergency Response

This is to supplement annual safety training, but not to replace other specific training as required by CAP, the Department of Pathology, and/or the institution.

Objectives

By the end of this training you should be refreshed on COH laboratory safety expectations covering :

Laboratory Safety Fundamentals

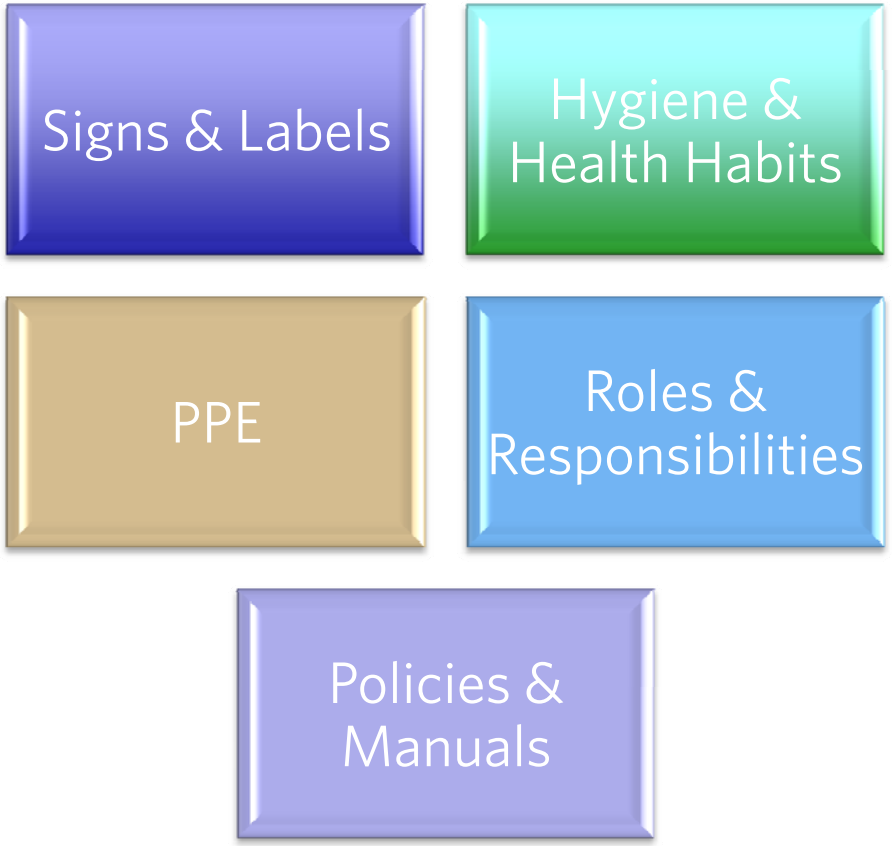
Laboratory Worker's Self-Esteem

Waste Management

Emergency Preparedness

Fundamentals of Laboratory Safety

This section is intended to provide a review of laboratory safety practices, hazard awareness, and preventive measures.



Signs & Labels

09/12/2014

EMERGENCY RESPONSE INFORMATION

FOR ALL EMERGENCIES CALL 55

PI: Dennis Weisenburger, M.D. Northwest / 2217

Department: ANATOMIC PATHOLOGY

Emergency Contact	Phone Ext.	After Hour Phone
Muirhead, David	6-2673	(214)796-0048

Primary hazard present:

BIOHAZARD

BSL-2

Human Tissue

Radioactive Materials

NFPA 3 2 0

Personal Protective Clothing Required:

Gloves

Lab Coat

Safety Glasses or Goggles

Other hazards that might be present:

Warning - Carcinogen

Warning - Flammable Liquid

Warning - Irritant

1

2

3

4

1. **STOP** to review the COH door placard for your area. This must be current especially emergency contact(s). Contact the Safety Department if needed to update.

2. **KNOW** the primary hazard:
   - Identify biological, radiological, and chemical hazards.
   - The NFPA rating represents the risk based on the laboratory chemical inventory.

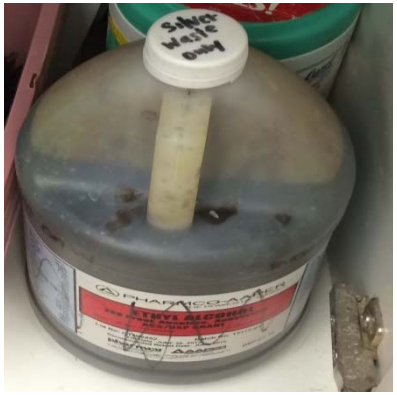
3. **WEAR** the required PPE when handling hazardous materials. PPE must be hazard and procedure based.

4. **BE AWARE** of secondary hazards which identify other health and physical hazards present in the lab.

Signs & Labels

Are these rubber bands infectious? No.

Is ethidium bromide waste biohazard? No.

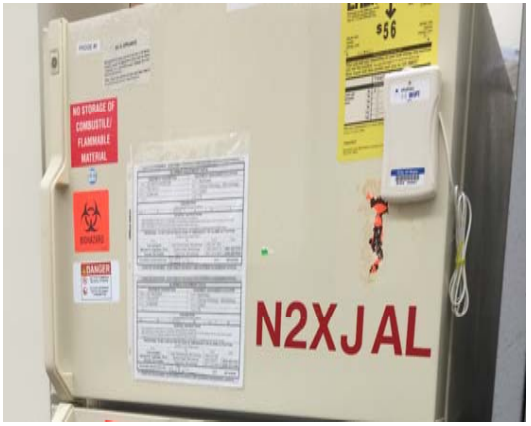


What is the hazard of silver waste? Toxic.

Does the flammable cabinet contain pathogens? No.

- Hazard labels are important hazard communication tools.
- Mislabeling can lead to improper handling, storage, disposal, and incident response.
- Do not use bags with hazard labels (e.g., biohazard specimen bag, biohazard waste bag, radioactive bag, chemo bag, etc) to store clean items, cover equipment, or to transport non-hazardous items.
- Only label equipment, storage, and waste containers with the appropriate hazard label. If the affixed hazard label is not needed, it must be completely removed or defaced rendering it unrecognizable.

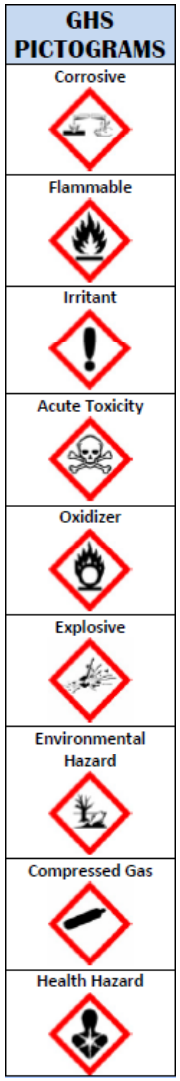
Signs & Labels



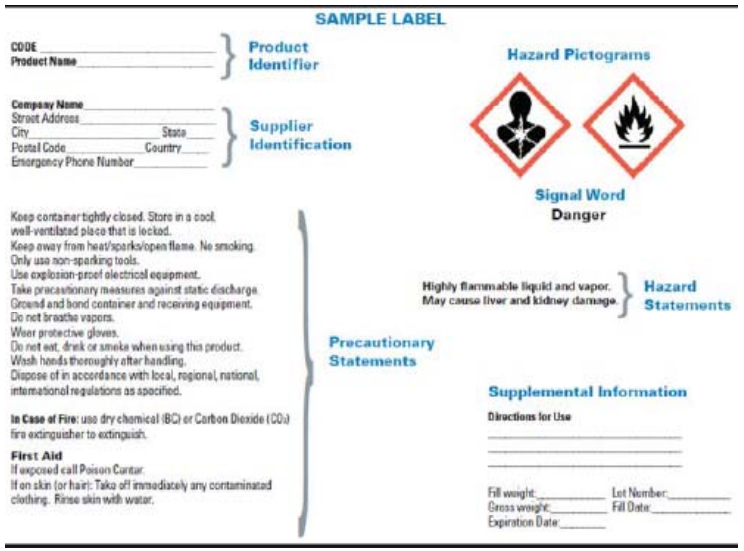
- Avoid duplicate signage. If signage is not being followed, report to supervisor as this can be a near miss safety issue and could get elevated to non-compliance if not addressed in a timely manner.

- Best practices when labeling:
  - ✓ Applicable dates for reagents, disinfectants, spill kits: Received date, Open/Preparation date, Expiration date
  - ✓ If food/liquids/equipment can be mistaken for human consumption or use, label "LAB USE ONLY"
  - ✓ Storage requirements, if any (e.g., corrosive, flammable, room temp, fridge, freezer) must be posted with applicable hazard labels. If applicable, keep emergency contact info and inventory info up to date.
  - ✓ Equipment must be BIS tag prior to use and with a current Preventative Maintenance (PM) due date.

Signs & Labels - GHS



GHS is an international approach that standardizes chemical hazard classification, labeling and safety data sheets. For more information visit OSHA's GHS website at www.osha.gov/dsg/hazcom/ghs.html.



- Cal/OSHA Hazard Communication has adopted the GHS requirements and all labs who are working with hazardous chemicals must comply.
- Suppliers of hazardous chemical labels must include signal words, pictograms, hazard statements, and precautional statements for chemicals based on their hazard classification and category.
- Hazardous chemicals transferred from the supplier container to another container will require the same GHS label unless the transferred hazardous chemical will be used by one worker within a short timeframe.
- Safety's Webpage has a template for creating GHS labels using the chemical's identifier number (CAS).

Hygiene & Health Habits

Food & Drink

No eating.

No drinking.

No smoking.

No chewing gum.

No handling of contact lenses or applying of cosmetics including lip balm.

No storing of food or drinks. If food or drinks are for lab use, then label "LAB USE ONLY."

Hand Washing

Wash hands frequently to minimize exposure through ingestion and direct contact with skin.

Wash hands before leaving the laboratory.

Wash hands after spill response.

Wash hands for at least 10 – 15 seconds with soap and water. Do not use solvents.

Plants & Animals

Animals and plants not associated with the work being performed must not be permitted in the laboratory.

No plants as soil or water can harbor pest and source for mold.

No pets are allowed.

Contact housekeeping for pest control issues.

Personal Electronic Devices

Use of cell phones and musical headphones must be avoided while working in the lab.

They can be distracting and thereby increase the potential for an accident to occur. They can also become contaminated if handled while working with hazardous materials.

Personal Protective Equipment (PPE)

PPE is a vital tool in keeping us safe when working with hazardous materials. COH has two policies relating to the use of PPE: Dress Code and Personal Grooming and Personal Protective Equipment (PPE). You should read and be familiar with these two policies.

DO

- ✓ Know which PPE to use for what hazard and when.
- ✓ Understand PPE limitations.
- ✓ Know how to put on and take off PPE that avoids contamination.
- ✓ Make sure PPE fits well.
- ✓ Properly store PPE.
- ✓ Label disposable lab coats if reused, but do not reuse when torn or soiled.

DO NOT

- ✘ Wear PPE in common areas (e.g., restrooms, break rooms, cafeteria, conference rooms, offices, hallways, elevators, etc.)
- ✘ Reuse soiled or contaminated disposable lab coat or gloves.
- ✘ Use torn or broken PPE.
- ✘ Bring PPE home to be laundered.

Personal Protective Equipment (PPE)

Observed Misuses of PPE

PPE must be a correct fit.
Hair should be restrained.

How many times can you reuse disposable lab coat - a month, a week? What does your lab SOP says?

Must wear long pants or equivalent.
Must wear shoes that completely cover the feet.
Sandals with socks are not acceptable.

- You may be convinced the gloves are not contaminated, but the person standing next to you may not be.
- The exterior of any container used for transporting hazardous materials in the public areas should not be contaminated, so protective gloves or clothing should not be necessary.

Roles & Responsibilities

OSHA General Duty Clause: Each employer shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees.

To reduce to an acceptable level, the risk associated with using materials or systems that have inherent danger by controlling or eliminating hazards. This is an ongoing process.

Adopt the COH Laboratory Worker's Self-Esteeem

Visit the Dept of Pathology Plan of Care Policies & Procedure Manual.

Visit COH Policies & Procedures – Environment of Care

Stewards of Safety Culture at COH – Visit Safety Webpage for Safety Manuals and Procedures

Safety is everyone's responsibility.

Safety Policies & Manuals

This is not an exhaustive list:

- Injury and Illness Prevention Program
- Chemical Hygiene Plan
- Infection Control Manual (Bloodborne Pathogen Exposure Control Plan)
- Aerosol Transmissible Disease Standard
- Personal Protective Equipment
- Respiratory Protection Program
- Medical Waste Management Plan
- Emergency Operations Plan
- Safety Manuals (Visit COH Safety Webpage)

Policy and Procedure Manual
Administrative Manual – Section 05
Administrative Institutional
Environment of Care (EOC)
Department: Occupational Safety and Health

City of Hope

Written: 02/01/03
Reviewed: 3/06; 05/01/07; 06/04/14
Revised: 08/15/07; 07/09/14
Page: 1 of 7 (Attachments)
APPROVALS:
SLT: 07/09/14; BOD: 3Q-14
Scope: _X_ Medical Center _X_ Beckman Research _X_ Philanthropy/External Relations _X_ Foundation

Injury and Illness Prevention Program (IIPP)

Policy and Procedure Manual
Administrative Manual – Section 05
Administrative Institutional
Environment of Care (EOC)
Department: Occupational Safety and Health

City of Hope

Written: 06/01/10
Reviewed: 04/28/14
Revised: 07/21/10; 06/10/14
Page: 1 of 9
APPROVALS:
SLT: 06/10/14; BOD: 2Q-14
Scope: _X_ Medical Center _X_ Beckman Research

Laboratory Chemical Hygiene Plan

Policy and Procedure Manual
Administrative Manual - Section 05
Administrative Institutional
Environment of Care (EOC)
Department: Infection Prevention

City of Hope

Written: 04/07/10
Reviewed: 03/23/11; 04/17/12; 03/26/14
Revised: 04/19/11; 10/31/12; 05/21/14
Page: 1 of 15 (Attachments)
APPROVALS:
MEC: 04/07/14; SLT: 05/21/14; BOD: 2Q-14
Scope: _X_ Medical Center _X_ Beckman Research _X_ Philanthropy/External Relations

Aerosol Transmissible Disease (ATD) Plan

Topics

Laboratory Safety Fundamentals

Laboratory Worker's Self-Esteem

Waste Management

Emergency Preparedness

Laboratory Worker's Self-Esteem

A Process for working safely with any material or in any environment. This is part of the Culture of Safety at City of Hope.

1. **Know what you are working with**
2. **Learn about the hazards**
3. **Employ appropriate work practices**
4. **Finish the job**
5. **Respond properly to problems**
6. **Reassess your work practices**

Know what you are working with

Chemical

- Know the reagents/solvents/disinfectant you are working with.
- Determine the characteristics of the chemical if it is toxic, carcinogenic, flammable, irritant, corrosive, acid/base, reproductive hazard, etc.

Biohazard

- Know what could be infectious (blood, body fluids covered under the bloodborne pathogen standard, tissues, etc).
- Determine the biohazard material/agent that could be present: bacteria, virus, fungi, biotoxin, prion protein, etc.

Radiological

- Know what are radioactive materials and sources of ionizing/ non-ionizing radiation
- Assess if specimen is radioactive or if equipment can emit radiation.

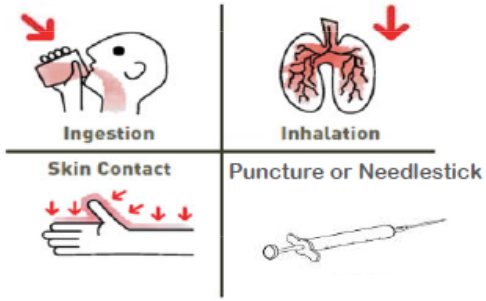
Physical

- Electrical, Extreme Temperatures (hot/cold)
- Sharps (Cut/Puncture Hazard)
- Splash/Projectile Hazard
- Pressure System, Compressed gas cylinders
- Ergonomic stressor (e.g., repetitive motion, lift, push, pull, bend, etc.)

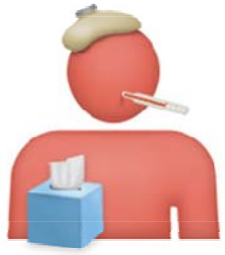
Learn about the hazards

Right to Know!

Access the Safety Data Sheet/ Pathogen Agent Summary Sheet



Understand Routes of Exposure/Transmission



Identify Signs & Symptoms

(Acute vs. Chronic Exposure / Incubation Period, etc.)

Know Compatibility, Reactivity, and Stability/Viability

Adopt Control Measures & Safe Practices

RIGHT TO KNOW: Safety Data Sheet (SDS)

HAZARDOUS CHEMICALS

- Material Safety Data Sheets (MSDS) are now known as Safety Data Sheets (SDS) under the GHS.

- SDS identifies the substance and its hazardous properties and outlines appropriate safety precautions.
- A SDS is comprised of 16 standardized sections.

1.Identification of Substance
2.Hazard Identification
3.Composition of Ingredients
4.First-Aid Measures
5.Fire-Fighting Measures
6.Accidental Release Measures
7.Handling & Storage
8.Exposure Controls/PPE
9.Physical/Chemical Properties
10.Stability & Reactivity
11.Toxicological Information
12.Ecological Information
13.Disposal Considerations
14.Transport Information
15.Regulatory Information
16.Other Information

PATHOGEN AGENT SUMMARY


Public Health Agency of Canada
www.publichealth.gc.ca

HUMAN IMMUNODEFICIENCY VIRUS

PATHOGEN SAFETY DATA SHEET - INFECTIOUS SUBSTANCES

SECTION I - INFECTIOUS AGENT

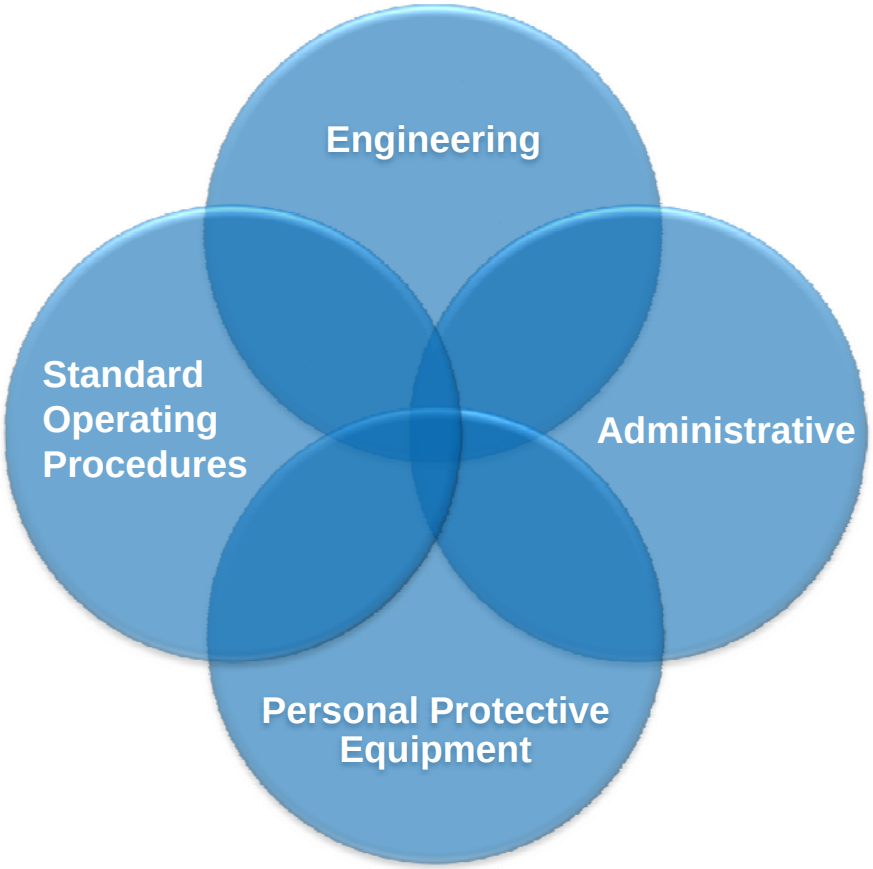
SECTION II - HAZARD IDENTIFICATION

- Pathogen Agent Summary for common infectious substances can be available from CDC, NIH, Canada Public Health Agency websites that summarizes the risk, route of exposure, treatment exposure, disposal/ decontamination of an infectious agent.

Employ appropriate work practices -- General

- ✓ Keep an organize and clean work area.
- ✓ Prepare all equipment and supplies including appropriate waste containers ahead of time.
- ✓ Avoid storing of personal items from contaminated areas.
- ✓ Inspect work area and equipment.
- ✓ Avoid horseplay, practical jokes and/or startling others.
- ✓ Avoid working alone (when possible).
- ✓ Assess ergonomic stressors such as repetitive motions, heavy pushing/ pulling/ lifting, etc. and communicate to Supervisor.

Employ appropriate work practices -- Specific



APPLY 4 PRIMARY CONTROLS TO MINIMIZE RISK:

Engineering controls

- HVAC, biosafety cabinets, fume hoods, door, intact/coved floors, intact ceiling, and sinks

Administrative controls

- Practice universal precaution (treat human-source materials as infectious)
- medical surveillance, vaccinations (offer HepB vaccination)
- Training (general, lab-specific to hazard/ procedure, annual refresher)

Personal Protective Equipment (PPE)

- gloves, eye protection, and protective clothing, mask, hair cover, shoe cover.

Standard Operating Procedures (SOPs)

- emergency response & evacuation, equipment use, waste management, donning and doffing PPE, injury/exposure response

Finish the job

Who?

- Clean up your work area at the end of each procedure and before the end of the day, so it is clutter free and organized.

What?

- Wipe down work surfaces, equipment, transport container, etc.
- Put away hazardous materials in appropriate storage cabinets or shelves with proper segregation (compatibility) close lids, make sure all containers are labeled, and legible. Unplug equipment as needed.

When?

- After each procedure and/or at the end of your shift.

How?

- Dispose of hazardous waste in designated containers;
- Dispose used PPE, and if reused, such as disposable gown, check if it is not contaminated or stained, label with user name, and store in designated area.
- If disinfectant or neutralizer is used, know application and limitation, concentration, and contact time.

Response properly to problems

Do you know how to respond to…

Electrical Issues

Facility/Engineering Issues

Equipment Issues

Signage Issues

Laboratory Issues

- Report immediately to your supervisor if you find any health and safety issues. Contact the Safety Department for assistance.
- End-users of equipment must be familiar with department-specific policies on equipment management, and what to do if a piece of equipment fails.
- Contact the Supervisor to submit work order ticket(s) electrical, facility, engineering, seismic restraint issues, equipment (e.g., broken or overdue PMs, etc.), emergency signage, etc.

Reassess your work practices

An important tool in preventing injuries, incidents, or recurrence is to identify the risk and potential non-compliance and enhance safety practices.

Examples:

- Participate in safety briefings. Engage in discussions and raise awareness about safety issues and current events. Safety topics are available in the COH Safety webpage.

- Perform self-inspection. Don't wait for the Safety Inspector or CAP inspection. Be proactive. A checklist is available in the COH Safety webpage.

- Verify SOPs – Are there best practices or alternative safer procedures and/or equipment that can be implemented. Are there less hazardous materials that can be substituted?

Topics

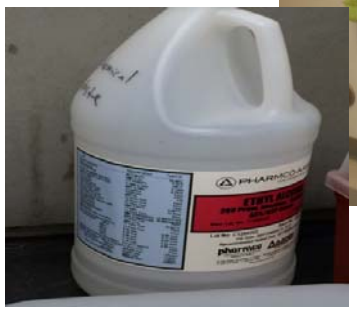
Laboratory Safety Fundamentals

Laboratory Worker's Self-Esteem

Waste Management

Emergency Preparedness

Waste Management



Reason for improper waste disposal:

- Not sure what is trash, biowaste, or chemical waste.
- Right container is too far, not enough containers, or too small.
- EVS will take care of it.
- If it is in the red biohazard bag, it will be incinerated.
- No time to segregate.
- Don’t know what label to use.
- This is the way we’ve done it.

COH Laboratory Waste Segregation Guidelines

MUNICIPAL WASTE		REGULATED MEDICAL WASTE			HAZARDOUS WASTE		
Regular Trash	Clean Glass Box	Biohazard	Sharps	Pharmaceutical	For Waste Pick Up	Lab Debris Trash	Radioactive Waste
							
• Paper, plastic, & other office waste • Packaging materials • PPE (Non-hazardous) • Plastic lab wares such as tubes, tips, plastic bottles with non-toxic chemicals (e.g., buffer, media, reagents,) • Waste from BSL-1 work (no cultured plates)	• Empty glass bottles (empty chemical bottles) • Glass pipets, slides, cover slips ✗ No sharps (needles, razor blades, scalpels) ✗ No PPE, plasticware ✗ No biohazard or radioactive waste	• Infectious materials • Contaminated Blood, blood products • Cultured BSL1 organisms • Waste generated from BSL2 work or higher	• Non-infectious and infectious sharps • Items capable of puncturing, cutting or piercing contaminated with infectious materials • Glass items contaminated with infectious materials	• Waste Contaminated Medication • Sharps waste containing medication (e.g., needles, vials, syringes) • Unused/Expired meds are returned to Pharmacy **Note:** Saline, vitamin, electrolytes, glucose, dextrose are not pharmaceutical waste.	• Waste that exhibits the characteristics of toxicity, ignitability, corrosivity, reactivity, or carcinogenicity • Bulk quantities of chemo drugs **Note:** Hazardous waste label must be affixed to the container at the first drop of waste generation. Must provide content description.	• Dry solid waste (Contaminated PPE and plasticware) • Waste contaminated with trace amounts of hazardous chemicals (e.g., Chloroform, Phenol, EtBr, DMSO) • Gels containing toxic/carcinogenic materials (EtBr labeled gel) **Not** for the disposal of: ✗ Biohazard, sharps, hazardous liquids, reactive or unstable materials, or loose powder.	• Low level radioactive dry solid waste only (PPE, plastic labwares, towels) • Proper radionuclide segregation is required • LSC Vials are to be separated. • No free liquids or absorbed liquids • Proper radionuclide segregation is required • **Note:** Some wastes may require shielding.

- This details the various waste streams at COH labs. **Available from the Safety webpage.**
- The cost to treat waste becomes very expensive for COH as you go from left to right, so it is important that we segregate accordingly at the point of waste generation.

Medical Waste

BIOHAZARD WASTE

- Human blood and blood products, including serum, plasma, and blood components
- Body fluids considered infectious
- Lab wastes that have been in contact with infectious wastes, including gloves, aprons, gowns, pipette, tips, tubes, tubings,
- Cultures or stocks of any virus, bacterium or other organism including discarded live attenuated vaccines and the items used to transfer, inoculate or mix cultures

SHARPS WASTE

- Can be glass, metal, or plastic with rigid corners, sharp edges, or protruding pieces that can slice, scrape or pierce the skin.
- Sharps may include (but not limited to):
  - Needles
  - Blood vials
  - Capillary tubes
  - Slides
  - Lancets
  - Scalpel blades
  - Syringes with needles
  - Tubing with needles

OTHERS

- **Pathology Waste –** surgical or autopsy tissues, organs, body parts
- **Pharmaceutical Waste** – meds (No controlled substances or hazardous drugs)
- **Trace Chemo Waste -** chemotherapy remaining in all needles, bags, tubing, containers, gloves, and gowns used during chemotherapy infusions. No bulk chemo.

Biohazard Waste Containerization

Liner (BIOHAZARD BAG)

- Must be **red** with a biohazard symbol and the word “BIOHAZARD”.
- Must only be used for biohazard waste only and not for other purposes such as covering equipment or for trash disposal.

  Must be tied in a gooseneck knot (do not tie using bunny ears method). For benchtop-size red biohazard bag, taped-closed is acceptable.
- Biohazard waste bag cannot be hand-carry and cannot be on the floor.
- Cannot be taped or clipped to a benchtop, container, or equipment.

Container

- Rigid with a fitting-lid. No wire or rack holder.
- Labeled with a biohazard sticker on all visible lateral sides. If container is round, label on the front and lid.
- Container must be lined with a red biohazard bag. If double bagging, use two red biohazard bags.
- Must be kept clean and sanitary. No cracks on the lid/container. If foot-pedal operated, it must be in working condition.
- Kept at ¾ full. Biowaste must be completely inside the container.
- Close container when not in used.
- Do not place in public hallways or public corridors.

Common Biohazard Waste Violations

What is wrong with this biowaste container?

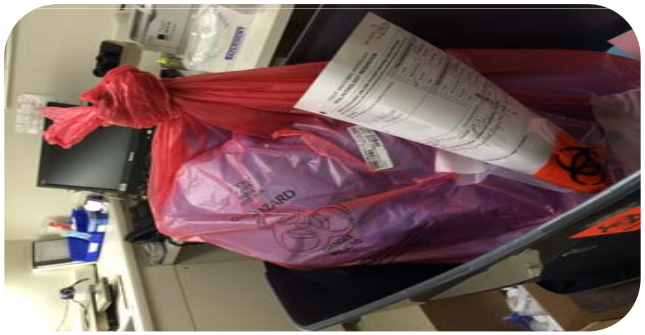
No overfilled. Biowaste must be completely containerized.

Can you find the biohazard waste container?

Do not store items on top of biowaste containers. For infection control, keep away clean items.

Are biospecimen bags biohazard?

If there is no contact with infectious materials or there is no recognizable blood/bodily fluids (see biohazard waste definition), the bags can be disposed as trash. Biohazard symbol can be defaced.



Can red biohazard bag be used to transport specimen or cover equipment?

No. Red biohazard bag must be used for biowaste only.

Sharps Waste

- Sharps containers come in different sizes. Select the size to completely containerize the sharps waste like the blue lid (with needle) from urine specimen cups.
- Sharps must be entirely disposed inside sharps container. Nothing can be on the lid, closer, or sticking out. This has caused sharps injuries.
- Sharps container is single use only. It cannot be lined with a biohazard bag. It should not be emptied out by the users. It comes affixed with a biohazard label, so there is no need for additional biohazard labels.
- Do not store items on top.
- Dispose when ¾ full or at the fill line.

COH Medical Waste Transport Containers

Biohazard waste

- Do not store items on top.
- Kept clean and in working condition.
- Close when not in use.
- EVS will transport.

Reusable Sharps Containers

- Sharps container must be completely closed shut when full.
- Picked-up by COH contracted medical waste hauler.

Pathology waste

- Picked-up by COH contracted hazardous waste hauler.

Hazardous Waste

We must manage chemical wastes in a safe and environmentally sound manner that complies with all applicable federal, state and local regulations.

Hazardous waste is regulated from the moment it is generated inside the lab until it reaches its final destination for disposal or treatment at an offsite facility.

Hazardous Waste Determination

A hazardous waste is a solid, liquid, or gaseous material that displays:

- Hazardous Characteristic or specifically “listed” by name as a hazardous waste
- Chemicals included on the U-list (hazardous due to toxicity), P-list (hazardous due to acute toxicity) and F-list are considered hazardous

Hazardous waste also includes:

- Chemicals (stocked or diluted solutions) no longer used, expired, abandoned, residuals, damaged or deteriorated container
- Debris contaminated with a hazardous material (rags, paper towels, lab diapers, gloves, etc.)

HAZARDOUS CHARACTERISTICS

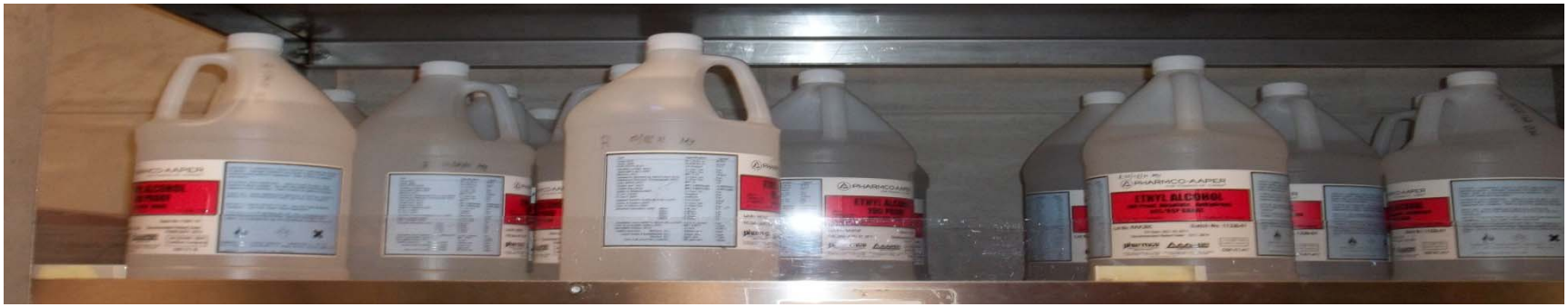
Ignitable - generally are liquids with a flash point below 60°C or 140°F

Corrosive - generally aqueous wastes with a pH of ≤ 2 or ≥ 12.5

Reactive - reactive wastes are those wastes that are unstable, explosive, capable of detonation or react violently with water.

Toxic - a chemical that poses a hazard to health or the environment.

Hazardous Waste Minimization



Ways to reduce the volume of chemical waste generated:

1. Practice the concept of *Source Reduction by ordering the smallest quantity of chemical materials for your work whenever possible.*
2. Keep a current inventory of chemicals on hand.
3. Share surplus chemical with other labs whenever possible.
4. Purchase mercury-free instruments.
5. Substitute hazardous chemicals with non-hazardous chemicals whenever possible.

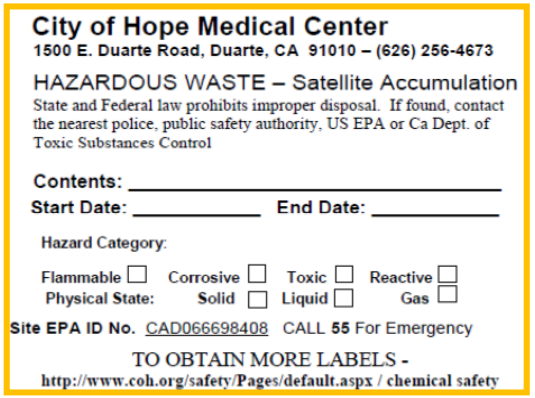
Hazardous Waste Prepare, Label, and Pick-Up

Prepare the Waste

- Designate a waste collection area close to where the waste is generated (e.g., fumehood or near equipment)
- Use hazard compatible container to collect liquid waste. If an empty chemical container is used such as a supplier's bottle , old label(s) must be completely defaced.
- Liquid waste container on the floor must be stored in a secondary leak-proof container.
- Hazardous waste containers must be kept closed at all times unless in used.

Label the Waste

- Complete a hazardous waste label at the point of waste generation and affixed to the container.
- Waste will not be picked-up without a hazwaste label.
- Available in the Safety webpage.


City of Hope Medical Center
1500 E. Duarte Road, Duarte, CA 91010 – (626) 256-4673

HAZARDOUS WASTE – Satellite Accumulation
State and Federal law prohibits improper disposal. If found, contact the nearest police, public safety authority, US EPA or Ca Dept. of Toxic Substances Control

Contents: _____
Start Date: _____ End Date: _____

Hazard Category:

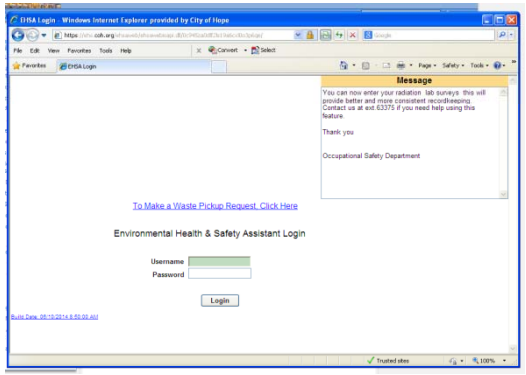
Flammable ☐ Corrosive ☐ Toxic ☐ Reactive ☐
Physical State: Solid ☐ Liquid ☐ Gas ☐

Site EPA ID No. CAD066698408 CALL 55 For Emergency

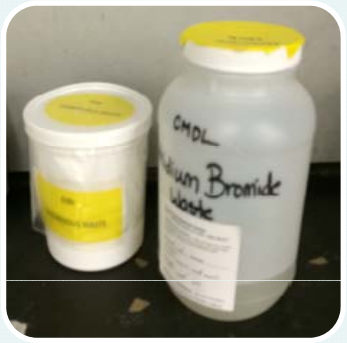
TO OBTAIN MORE LABELS -
http://www.coh.org/safety/Pages/default.aspx / chemical safety

Pick-up the Waste

- Do not keep hazardous waste for more than 12 mos from the day the first waste was placed in the container.
- When full, submit an online pick-up request (see Safety webpage)
- Print the completed request form and affixed to the waste container.



Common Laboratory Hazardous Waste Containers



Benchtop Hazardous Waste Containers

- An example of a container dedicated to a specific hazardous waste.
- Provided by the lab.

Lab Debris Container

- Container is provided and lined by the Safety Department.
- Use for dry waste (e.g., gloves, gowns, kimwipes, plastic labwares, etc contaminated with hazardous chemicals).

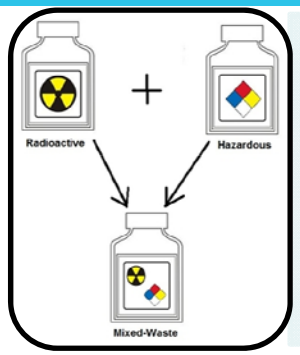
Lab Pack Hazardous Waste

- Contact the Safety Department ahead of time when doing a lab clean out to coordinate the hazardous waste segregation and pick-up. Place in a bin or designated area.

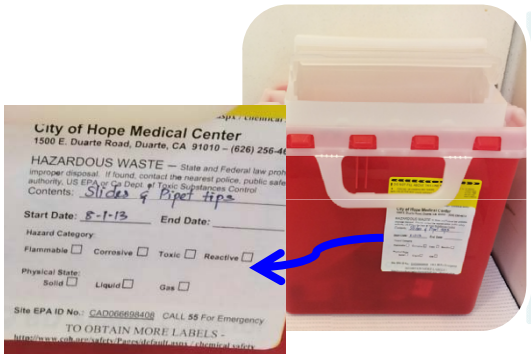
Carboys

- Carboys can be used for large quantities of liquid waste, but must be compatible. Write the lab building and room # on the carboys for returns.
- Hazardous waste labels must specify all the mixed liquids.
- Contact the Safety Dept for organic solvents or organic acid waste.

Hazardous Waste with Special Procedures



- Hazardous waste and a biohazard waste must be disposed as hazardous waste. Do not add bleach to any hazardous waste mixed with biohazard as bleach could react to the hazardous chemical and release hazardous vapors.
- For hazardous waste and radioactive waste, contact the Safety Department prior to generating this waste stream.



- Dispose of chemically contaminated needles, syringes and razor blades in a sharps container marked with a Hazardous Waste Label.
- Clearly identify the contents and the chemical hazard. Submit an online pickup request when ¾ full or at the fill line.

Battery, Mercury, UV Bulbs, etc.

- Batteries for disposal cannot be thrown in the regular trash. Collect in a plastic or cardboard box and submit an online pick-up request with the Safety Department.
- Mercury containing items (e.g., thermometers, thermostat switches and manometers) and UV bulbs must be collected for proper disposal and not placed in the regular trash. Submit an online pick-up request with the Safety Department.

Topics

Laboratory Safety Fundamentals

Laboratory Worker's Self-Esteem

Waste Management

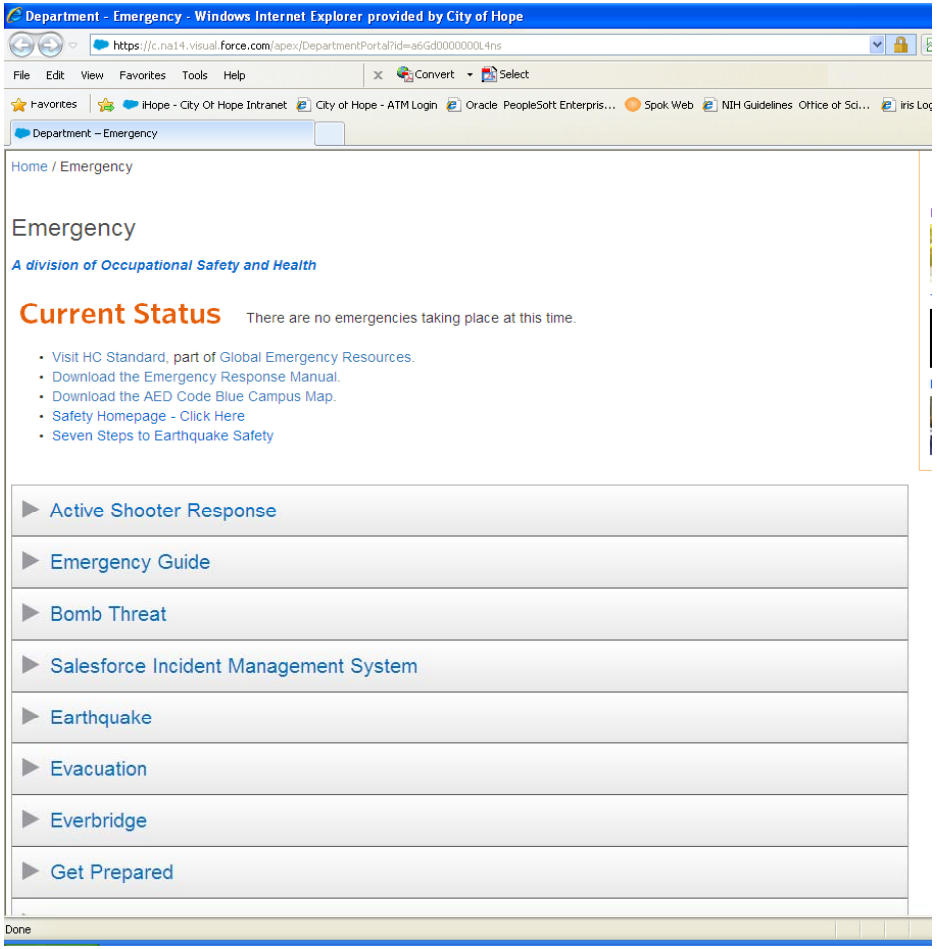
Emergency Preparedness

Emergency Preparedness Overview

COH's Emergency Preparedness describes our readiness to various emergency scenarios from spills to evacuation procedures.

Departments have created their own specific emergency preparedness plan to cover reporting and evacuation meeting place for staff.

Employees need to develop a family disaster plan to prepare you and family members in an event of an emergency both at home or at work. A template is available in the COH Emergency Preparedness webpage.



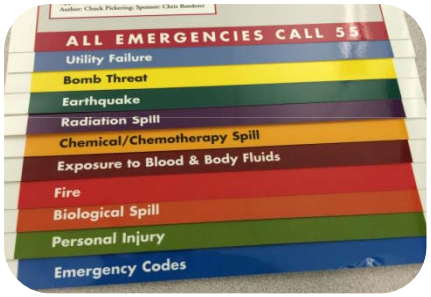
Emergency Equipment Expectation

1. Know the location of your laboratory's emergency equipment/supply, exit, and evacuation meeting place.
2. Emergency equipment must be readily accessible and unobstructed at all times.
3. Know how to operate the specific emergency equipment in your laboratory.
4. Maintain and/or test on a timely manner according to laboratory-specific operations.
5. Participate in departmental emergency drills and spill clean-up training.

Emergency Preparedness and Response

BEFORE (MUST KNOW)

- Exits for the lab and building.
- Location and how to use emergency equipment.
- Employee ID (with you at all times) and emergency codes.
- Be familiar with lab gathering point in the event of an evacuation.



DURING (MUST DO)

- Secure the hazard and turn off any equipment (if possible) when fire alarm goes off or need to evacuate the building.
- Leave the area if there is a sudden and unexpected odor.
- Follow COH Emergency Procedures.
- **For all emergencies call 55.**

AFTER (MUST FOLLOW)

- Report injuries including near misses to Supervisor.
- Seek medical attention:
- Employee Health x62713 (work hours)
- Evaluation Treatment Center x65200 (after hours).

Occupational Exposure and Injuries

AFTER AN EXPOSURE OR INJURY, DO NOT WAIT TO SEEK MEDICAL ATTENTION!!!

Consult:

- EHS is located in Modular 90, open Monday – Friday 8:00am to 5:00pm.
- ETC is located in Brawerman 1A for after hours, weekends, and holidays.

END!

Complete the Safety Refresher Training Quiz.