Initial Laboratory Safety Training
Inclusive of Bloodborne Pathogens Awareness

Safety, Health, Environment, and Risk Management
713.500.8100
A Unique Workplace

Multiple hazards exist in our teaching, research, and clinical environments

Remember!

Pull
Aim
Squeeze
Sweep
Environmental Health and Safety

http://www.uthouston.edu/safety/index.htm

713.500.8100

Employee Health Services
UCT 1620

Biological Safety
CYF G.102

Chemical Safety
CYF G.102

Risk Management and Insurance
OCB 1.330

Radiation Safety
CYF G.102

Occupational Safety and Fire Protection
OCB 1.330

Environmental Protection
OCB 1.330

Hospital and Clinic Safety Program
HCPC & OCB 1.330
Course Objectives

• Identify general hazards in the workplace.
• Describe evacuation procedures for fire alarm events.
• Describe common workplace chemical & biological hazards, and how to work with these hazardous agents safely.
• Describe the hazardous waste storage and disposal procedures.
Environmental Health and Safety

Safety, Health, Environment & Risk Management’s (SHERM) mission is to work in conjunction with the UTHealth community to ensure that education, research, and health care service activities take place in conditions that are optimally safe and healthy for all students, faculty, staff, visitors, surrounding community and the general public.

Put simply, we exist to help people go home as healthy and safe as they arrived.

Report any hazardous conditions to Environmental Health and Safety at 713.500.8100
Occupational Safety and Fire Prevention
In Case of Fire

Report

Activate

Confine

Evacuate

RACE
Have an Exit Strategy

Know:
• At least two escape routes
• Fire extinguisher locations
• Pull station locations
• Meeting place outside of building
Fire Extinguishers

If you have been trained, use fire extinguishers to put out small fires

Remember P.A.S.S.

P  pull the pin out
A  aim the hose at the base of the fire
S  squeeze the trigger
S  sweep from side to side

If you would like training on the proper use of a fire extinguisher, please us at 713.500.8100
High Rise Fire Alarm Notification

- Alarm sounds on the affected floor, the floor immediately above and the floor immediately below
- Fire alarms might be heard faintly on other floors, near speakers, or resonating through elevator shafts
- If the alarm is on your floor, you’ll know it -- it's really loud!
- Proceed to the nearest exit and wait for further instructions
- If smoke or fire is detected, evacuate the building
Area Safety Liaison Program

Volunteers that assist with identifying health and safety concerns in their work area

Duties include:
• Assist with drills and emergency evacuations
• Account for evacuated personnel in their area
• Assist with the identification and protection of mobility impaired individuals
• Assist with AEDs
• Notify EH&S of corridor and exit blockages
• Serve as a liaison between the University community and EHS

Volunteer to be an Area Safety Liaison, contact us at 713.500.8100
HOOP Policy 88 states that all building pathways, including but not limited to, corridors and stairways must remain unobstructed.

Storage of hazardous materials in hallways is not allowed.
Building Pathway Use

Why we need to keep the pathways clear?
1. Evacuation purposes
2. Keep emergency showers and eyewashes clear for use
Building Pathway Use

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“Insider Threats”

an insider threat arises when a person with authorized access to an entity’s resources, to include personnel, facilities, information, equipment, networks, and systems, uses that access to harm the security of the entity

» National Counterintelligence and Security Center
Different Types of Insider Threats

• **Malicious insider**
  - Nefarious intent

• **Coerced or sympathetic insider**
  - Actions caused by external forces

• **Oblivious insider**
  - Unaware of the impact of their actions or inactions
Behavioral Indicators of Insider Threats

- Taking items home without need or authorization
- Seeks information, supplies not related to job
- Expresses interest in matters outside scope of job
- Unnecessarily copies materials
- Disregards company policies on computer use

- Works odd hours
- Unreported foreign contacts, short trips to foreign countries
- Unexplained affluence
- Overwhelmed by life crises or disappointments
- Unusual interest in personal lives of others
- Concerns about being investigated, under surveillance
See Something, Say Something

Report any suspicious activities to your supervisor or contact UTPD at 713-792-2890
Hazardous Locations

- Laboratories
- Animal care facilities
- Hazardous waste accumulation areas
- Hazardous waste processing areas
- Housekeeping storage areas
- Maintenance shops
- Clinics
- Others
Door Postings

Door postings provide important hazard communication to you prior to entering a lab. In case of emergency, first responders can quickly know what the potential hazards are at this location. It is also important for personnel to maintain updated...
Texas / OSHA Hazard Communication Act

Requires employers to provide employees with specific information on the hazards of chemicals to which employees may be exposed in the workplace.

Under the Act, UTHealth must:

- Notify employees of their rights under the Act
- Compile workplace chemical lists (inventories)
- Provide safety training to employees and information on your exposures
- Maintain Safety Data Sheets
- Supply emergency personnel with information on chemical hazards
- Provide protective equipment
- Allow employees to file complaints, assist inspectors, or testify against your employer
Globally Harmonized System (GHS)

The Globally Harmonized System of Classification and Labeling of Chemicals was recently adopted by OSHA under 29 CFR 1910.1200 (Hazard Communication Standard)

The GHS is a system for standardizing and harmonizing the classification and labeling of chemicals
Globally Harmonized System (GHS)

Three major elements of GHS:

**Hazard Classification:** Provides specific criteria for classification of health and physical hazards, as well as classification of mixtures.

**Labeling System:** Chemical manufacturers and importers are required to provide a label that includes a harmonized signal word, pictogram, hazard statement, and precautionary statements for each hazard class and category.

**Safety Data Sheet (SDS):** 16 specific sections ensuring consistency in presentation of important safety information.
GHS Chemical Labeling System

(1) Harmonized signal word: The signal words used are “Danger” and “Warning.” “Danger” is used for the more severe hazards, while “Warning” is used for less severe hazards.

(2) GHS pictogram

(3) Hazard statement: a statement assigned to a hazard class and category that describes the nature of the hazard(s) of a chemical, including, where appropriate, the degree of hazard.

(4) Precautionary statement: Describes recommended measures to minimize or prevent adverse effects resulting from exposure to a hazardous chemical; or improper storage or handling of a hazardous chemical.

(5) Supplier identification
GHS Chemical Labeling System

Be sure to:

- Read labels and Safety Data Sheets (SDS) before beginning work
- Not deface or remove the label
- Replace labels if necessary
- Label new bottle when transferring chemical
GHS Hazard Classification

Hazard Category: Each classification may be given a category from 1-5.

1 is most hazardous and 5 is least hazardous

For Example:
Acute Toxicity: Inhalation

- Category 1: Danger, Fatal if inhaled
- Category 2: Danger, Fatal if inhaled
- Category 3: Danger, Toxic if inhaled
- Category 4: Warning, Harmful if inhaled
- Category 5: Warning, May be harmful if inhaled
Safety Data Sheets (SDS)

SDSs: Are documents that contain information on the potential hazards and how to work safely with the chemical product

- Available to all UTHealth personnel
- Can be accessed through EHS MSDS/SDS link utilizing CHEMWATCH software
- Can be obtained from the manufacturer
- Can be obtained by calling EHS at 713.500.5832
Safety Data Sheets (SDS)

Step 1. Enter Chemical Name
Step 2. Select Search
1. Identification of the substance or mixture and of the supplier
2. Hazards identification
3. Composition/information on ingredients
   - Substance/Mixture
4. First aid measures
5. Firefighting measures
6. Accidental release measures
7. Handling and storage
8. Exposure controls/personal protection
9. Physical and chemical properties
10. Stability and reactivity
11. Toxicological
12. Ecological information
13. Disposal considerations
14. Transport information
15. Regulatory information
16. Other information including information on preparation and revision of the SDS
SDS (Section 2): New GHS Format

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards
Flammable liquid, Target Organ Effect, Toxic by inhalation, Toxic by ingestion, Toxic by skin absorption

Target Organs
Eyes, Kidney, Liver, Heart, Central nervous system

GHS Classification
Flammable liquids (Category 2)
Acute toxicity, Oral (Category 3)
Acute toxicity, Inhalation (Category 3)
Acute toxicity, Dermal (Category 3)
Specific target organ toxicity - single exposure (Category 1)

GHS Label elements, including precautionary statements

Pictogram
Signal word: Danger

Hazard statement(s)
H225: Highly flammable liquid and vapour.
H301 + H311 + H331: Toxic if swallowed, in contact with skin or if inhaled
H370: Causes damage to organs.

Precautionary statement(s)
P210: Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P260: Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P280: Wear protective gloves/ protective clothing.
P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
P307 + P311: IF exposed: Call a POISON CENTER or doctor/ physician.

Example:
Methanol
Types of Exposure

- **Acute** (immediate) effects usually occur rapidly as a result of short-term exposures, and are of short duration.

- **Chronic** (months or years later) effects generally occur as a result of long-term exposure, and are of long duration.

Routes of Entry

- **Ingestion**
- **Absorption**
- **Inoculation**
- **Inhalation**
Chemical Exposure Controls

Risk of exposure can be minimized or eliminated by using the following controls:

- Engineering controls
- Chemical fume hoods
- Administrative controls
- Good work practices
- Personal Protective Equipment
Engineering Controls: Chemical Fume Hoods

- Keep procedures and equipment at least 6 inches inside hood
- Keep sash at proper level and lowered when not performing work
- Power failure – stop work, cover or close chemicals, close hood, notify supervisor
- Hood is **NOT** a storage area
- Keep flammable cabinets in good working condition and not overstocked
Administrative Controls: Good Work Practices

• Create and follow Standard Operating Procedures (SOPs)
• No eating or drinking in laboratories
• Receive training for proper use of specific chemicals in your lab from your supervisor and utilize the Safety Data Sheet
• Keep compressed gas cylinders secured (have empty cylinders picked up immediately)
• Properly package and label waste for pick-up by EHS
• No drain disposal
• Maintain chemical inventory by room
• **Always** wash hands before leaving lab area
Safe Handling of Chemicals

• Store chemical according to category first (acid, base, etc.), then in alphabetical order within category

• Flammables should be stored in flammable cabinets and/or explosion-proof refrigerators – not in regular refrigerators! No more than 5 gallons should be outside flammable cabinets

• Keep updated chemical inventory and submit to EHS annually during lab safety surveys

• Label all chemicals
Personal Protective Equipment

• Keep body covered
• Long pants that completely cover the leg. No shorts
• Lab coat – Fire resistant lab coat should be worn when working with flammable chemicals
• Eye/face protection
• Footwear that completely covers the foot
• Proper gloves – latex examination gloves are rarely appropriate for chemicals (see glove compatibility guide for proper glove selection)
Glove Compatibility Chart

1. Select Chemical of interest
2. Look for Green Square
3. Select Glove Type
Emergency Procedures - Chemical Spill Clean-Up

• **Minor Spill:** Alert people in immediate area; Avoid breathing vapors from spill; Wear protective equipment; Use appropriate spill kit; Clean spill area. Call 713.500.5832 for assistance.

• **Major Spill:** Call UTPD Office at 713.792.2890 or 911; Alert people to evacuate; Close doors to affected area; Attend to injured personnel.

• Call EHS at 713.500.5832
Precursor Chemicals and Equipment

Preventing the dispersion of laboratory chemicals and apparatus for illegal drug production.

**Texas Department of Public Safety requirements:**
- Keep purchase records of controlled substances, precursor drugs and laboratory apparatus, including glassware
- Report any theft or loss to the UT Police
- Keep accurate inventories of controlled substances and document disposal
- Provide secure storage for controlled substances, precursor drugs and laboratory apparatus
- Prevent the sale or distribution of precursor materials and glassware to unauthorized individuals
Lab Security

Report Suspicious Activity

• Unknown/unauthorized individuals attempting to access lab
• Missing supplies, chemicals or equipment
• Unauthorized requests to borrow chemicals or equipment
• Unsolicited requests for technical information
• Chemical purchases charged to the lab but never delivered
• Unsolicited delivery to the lab without a corresponding purchase
Working Safely with Acutely Toxic/Physically Dangerous Chemicals

• All work with Acutely Toxic/Physically Dangerous Chemicals must be reviewed and approved by the UTHealth Chemical Safety Committee.
• Chemicals requiring mandatory protocol review include:
  - Suspected or confirmed carcinogen
  - Pyrophoric
  - Highly Toxic
  - Poison gas
  - Nanomaterial
  - Antineoplastic
  - Explosive
  - Pesticide
  - Select agent toxin
• Specific engineering controls, personal protective equipment, and standard operating procedures may be necessary, depending upon research to be completed.
• For questions about Chemical Safety Committee protocol reviews, please visit us on the web, or call 713.500.5832.
Bloodborne Pathogens (BBP) Safety Standard

Texas Department of State Health Services Bloodborne Pathogen Control
• These regulations protect employees from potential exposure to Bloodborne Pathogens
• Prevention of contaminated sharps injuries, needlesticks
• http://www.dshs.texas.gov/idcu/health/infection_control/bloodborne_pathogens/plan/

OSHA
• http://www.osha.gov/SLTC/bloodbornepathogens/index.html
• Equivalent Federal regulation
Defining Bloodborne Pathogens (BBP)

Definition:
- Pathogenic microorganisms that are present in human blood or other potentially infectious material (OPIM), and can infect and cause disease in humans.

- Example: HIV, HBV, HCV, T. pallidum, Herpes Virus, M. tuberculosis
- Human cell lines also apply
Potential Sources of Exposure to BBP

Body fluids that can harbor BBP:
- Blood
- Semen and vaginal secretions
- Saliva involved in dental procedures
- Synovial fluid
- Cerebrospinal fluid
- All body fluids containing blood
- Urine, with visible signs of blood

Any human cell line (examples: HeLa, HEK293, Phoenix cells)
Routes of exposure to BBP

- Mucous membrane contact - splash to the eyes, nose or mouth
- Percutaneous inoculation - misuse of sharps (broken glass, needles, scalpels)
- Exposure to broken/damaged skin - risk increases if contact involves a large area of broken/damaged skin or if contact is prolonged

* Risk increases with high titer levels in the source
Preventative Measures

Risk of exposure can be minimized or eliminated by using the following controls:

- Engineering controls
- Personal protective equipment (PPE)
- Administrative controls
- Work place practices
Engineering Controls

- Leakproof containers
  - Use for storage & transport of bloodborne pathogen material
- Sharps containers
  - Fill no greater than ¾ full
- Needleless devices
  - Use retractable syringes, self-sheathing needles
- Directional flow of air from hall to room
- Use of Biosafety cabinet (BSC)
- High efficiency particulate air (HEPA) filtration
- Access control
Personal Protective Equipment

Face protection
• Goggles or safety glasses with side shields

Clothing
• Lab coats, scrubs, disposable gowns (long pants only and footwear that completely covers the foot!)
• Replace immediately if contaminated & restrict to work area

Gloves
• Replace immediately if torn
• Do not wear outside the lab area
Administrative Controls

Training

• **EHS**
  Initial Laboratory and Safety Training, Annual Refresher Training

• **Principal Investigator/Supervisor**
  Trained on documented Standard Operating Procedures (SOP), lab hazards

• **Background checks, security clearance**
Hepatitis B Vaccination Series

- For personnel who have routine exposure to BBP
- Vaccine provides protection in 90-95% of healthy adults
- Offered at no cost to employees with potential exposure
- Vaccine process:
  - Three shot series
  - Second shot given one month after the first
  - Third shot six months after the first
  - Immunity builds gradually
- Reported to provide lifetime immunity
Good Work Practices

- Do **NOT** eat, drink or apply cosmetics in work area
- Decontaminate work surfaces
  - At start and end of procedures, immediately after spill, and before removal of equipment
- Dispose of waste properly
- Label containers as necessary with biohazard sticker
- Wash hands frequently & always before leaving work area!
Good Work Practices

• Develop and follow Standard Operating Procedures (SOPs)
• Use standard precautions
• Treat all human blood and body fluids as if known to be infectious
• Familiarize yourself with the work area
• Note locations of all necessary equipment, waste containers, disinfectants, soaps
• Establish and maintain clean and dirty zones
• **NEVER** recap needles!
Hand Hygiene

Prevention of laboratory associated illness

Methods for contamination
- Failure to wash hands
- Using your phone or computer
- Wearing gloves outside of the lab
- Touching elevator buttons and doo handles
Proper Handwashing

Wet hands with warm (not hot) water
Apply soap on hands
  • Liquid soap is better because germs can live on wet soap bars
  • Rub hands together for at least 15 seconds
    • Wash longer if there is visible dirt on hands
    • Cover all surfaces of hands and fingers - including between fingers, backs of hands, thumbs, under fingernails
Rinse hands thoroughly with warm water
  • Dry hands thoroughly
    • If using blow dryer, push button with elbow
    • If available, use towel to turn off water

Think of a song that is about 15 seconds long…i.e. “Happy Birthday” song.
Handwashing - Where do we miss?
Alcohol Hand Sanitizers

Alternative when hand washing is not possible.

- Should not be used when visible dirt, grime or blood are present
- >62% alcohol
Needlestick or Possible Exposure Procedure

Apply routine first aid immediately

- Clean site of injury with soap and flush with warm water for at least 15 minutes
  - Antiseptics may be used if available
  - Flush mucous membranes with water or saline for at least 15 minutes

Notify supervisor

- Complete Supervisor’s First Report of Injury
  - Used to process insurance claims, helps identify trends

Seek medical attention

- Needlestick Hotline (24hr): 1-800-770-9206
- Employee Health: 713-500-3267
- Students call: 713-500-OUCH (6824)
Potential Medical Surveillance in the Event of an Exposure

All treatment will be determined in conjunction with Healthcare Providers and Employee Health Clinical Services or Student Health Services.

Baseline Labs
- HIV antibody (with consent)
- RPR (Syphilis)
- Hepatitis B surface antibody
- HCV antibody
  - If source is known to be Hepatitis C+, also obtain liver function & HCV RNA tests
  - CBC with differential and platelets, chemistry profile, urine pregnancy test if source is known HIV+ and if exposed personnel chooses to utilize post-exposure prophylaxis
Common Causes of Reported Injury at UTHealth – Needlesticks

**Improper sharps disposal**
- Overfilled sharps containers
- Recapping

**Improper handling**
- Improper passing of sharps to other personnel
- Improper suture technique

**Improper animal restraint during injection**
Transmission Rates of BBP

If you were exposed to a BBP, what is the “chance” you’ll experience a transmission?

Percutaneous injury transmission rates with blood or blood products:

- HBV 6-30% -Vaccination is available
- HCV ~1.8%
- HIV 0.1- 0.3%
Employee Rights in the Event of an Exposure

In the event of a possible exposure to bloodborne pathogens, the employee is entitled to:

- Confidential medical evaluation and follow-up
- Documentation of routes of exposure
- Identification, documentation, testing and results of the source individual
- Counseling
- Evaluation of reported illness
Signs and Symptoms of Tuberculosis (TB)

In a lab that handles cultures or specimens self monitor for:

- Cough
- Chest pain
- Coughing up blood
- Weakness
- Fever and/or night sweats
- Weight loss
Signs and Symptoms of Tuberculosis (TB)

In a clinical setting:

Routinely ask all patients:
• History of TB disease?
• Symptoms suggestive of TB?

Patients with history or symptoms of undiagnosed TB:
• Refer promptly for medical evaluation of possible active infection
• Follow established procedures for potential active TB
• Provide urgent care in TB isolation areas (i.e., negative pressure rooms)
TB Surveillance

Purified Protein Derivative (PPD) or Montaux skin test

**BCG vaccine** - false positive

**Positive test** - A test is positive based on the induration size based on the risk group of the patient.

- High risk group >5mm (HIV, recent TB infection)
- Medium risk group >10mm (Clinical personnel)
- Low risk group >15mm

**PPD test reading**

- Poor test follow-up: 2 visits necessary
- Each Healthcare worker may read the test slightly different
Blood or Potentially Infectious Material Spill Clean-Up Procedures

• All spills should be cleaned up using a fresh 10% dilution of household bleach or any other approved EPA disinfectant.

• Apply the approved disinfectant to the perimeter of the spill and slowly proceed inwards.

• The disinfectant should be allowed to soak for at least 15 minutes.

• Materials used to clean up the spill, like towels, should be disposed in a biohazard bag.
Infectious Substance Shipping (ISS)

• Training required for all persons wanting to ship infectious or diagnostic samples

• Refresher training for ISS required every two years or as regulations change

• For additional help or training information please contact Biological Safety at 713-500-8100
Biological Agents or Recombinant DNA Protocol Approval

Institutional Biological Safety Committee (IBC)

- Reviews all research that involves recombinant or synthetic DNA
- Research is categorized using the NIH Guidelines for Research Involving Recombinant or Synthetic Nucleic Acid Molecules
- Reviews research that involves potentially infectious agents, cell lines and blood
- Meets first Thursday of each month
- Protocols can be submitted online here: https://ehs.uth.tmc.edu/EHSAWeb/EhsaWebISAPI.dll
- For assistance call Biosafety at: 713-500-8170
Scope and Applicability of NIH Guidelines

If your institution receives NIH funding for rDNA research, then it must comply with the *NIH Guidelines*. Even if a project is privately sponsored, that research must still be conducted in accordance with the *NIH Guidelines* if conducted at an institution subject to the *NIH Guidelines*. 
Experiments Covered by the NIH Guidelines

III-A: Transfer of drug resistance

III-B: Cloning of lethal toxin

III-C: Human Gene Transfer

III-D: Infectious agents as host-vector systems & transgenic

III-E: Transgenic animals, whole plants, <2/3 genome eukaryotic virus

III-F: Exemptions
NIH Reporting Requirements

Any significant problems, violation or any significant research-related accidents and illness must be reported to the NIH OBA within 30 days.

Accidents to be reported immediately to NIH Office of Science Policy by EHS:

- Spills or accidents in BSL-2 laboratories resulting in an overt exposure
- Spills or accidents occurring in high containment (BSL-3) resulting in an overt or potential exposure
- Transgenic animal outside containment (I.E. mouse, frog, or insect)
Managing Hazardous Waste

Environmental Protection
713.500.8100
Hazardous Waste Collection
713.500.5837
Regulated Medical Waste

Regulated medical waste is often referred to as: biological, biohazardous, or infectious wastes and includes:

- Microbiological waste (cultures and stocks of infectious agents)
- Bulk human blood and blood products >100ml, free flowing, or saturated disposable products
- Infectious animal carcasses, body parts, and bedding
- Pathological Waste (human tissues or specimens)
- Urine with visible signs of blood
- Sharps (hypodermic needles, scalpels, contaminated broken glass)
- Patient isolation wastes
Autoclaving Microbiological Waste from Labs

- Training by EHS is available for everyone who will be using autoclaves for biowaste disposal
- Autoclaves may be utilized for treatment of most solid and liquid biological wastes
- Do not autoclave chemicals, nanoparticles, radioactive materials, fecal material, or animal carcasses
- Record autoclave runs in the log book provided by EHS
- Wastes, once autoclaved, are non-infectious and may be disposed into the regular trash can with a black liner
Disposing of Sharps

Sharps include needles, razor blades, contaminated glass pasteur pipettes, specimen tubes, and broken glass contaminated with infectious materials.

Sharps must be placed into rigid plastic containers which are provided at no cost by EHS.

Call the Hazardous waste line at 713.500.5837 to request collection or place closed sharps containers in a biohazardous waste box.

Researchers at locations other than the Medical School may obtain sharps containers at biological waste storage rooms located at: SOD 1266, RAS B01a, SON 510, BBS 1406, and SRB 120.

Note: Broken glass from laboratories not contaminated with infectious materials may be placed into a broken glass box and removed by housekeeping staff. Broken glass boxes are available at the Cyclotron Building and regional biological waste storage areas listed above.
Utilizing Biohazardous Waste Boxes

Biohazardous waste boxes are available for areas that do not have access to an autoclave or are disposing of waste that should not be autoclaved.

Biohazardous waste boxes and liners can be requested by calling the hazardous waste line at 713-500-5837 or obtained from the biological waste storage rooms: SOD 1266, RAS B01a, SON 510, BBS 1406, and SRB 120.

When utilizing a biohazardous waste box for disposal, you must securely close the inner liner by tying into a single knot and closing the box.

Animal carcass wastes should be disposed through Animal Care.
Hazardous Chemical Waste

Researchers must determine if their chemical waste is a hazardous waste according to EPA regulations. Assistance is available from EHS.

Hazardous chemical waste is either identified by being listed by the EPA or due to one of the following hazardous characteristics:

- Toxicity (TCLP test)
- Corrosivity (pH <2 or >12.5)
- Ignitability (flash point <140F)
- Reactivity (unstable under normal conditions)
Chemical Waste Disposal

When storing chemical waste:

• Utilize original container or safety container provided by EHS
• Label all wastes with the chemical name including components - include the word “WASTE” or “Hazardous Waste” in the description
• Keep waste container closed and utilize secondary containment

To request waste pickup

• Call EHS’ Waste Line (713-500-5837) select option #2, Include building, room number, and description of waste ready for pickup including amount
• EHS collects chemical waste on Monday, Wednesday, & Friday

* Note: Empty containers which held acute hazardous materials which are P listed wastes (e.g. sodium azide, osmium tetroxide, warfarin) are considered hazardous wastes and must be collected by EHS.
Disposal of Controlled Substances

• Call UTHealth Hazardous Waste Line 713-500-5837
• Press 2 for chemical waste disposal, leave a message with drugs ready for disposal.
• Include registrant’s name and DEA registration number, contact information, building and room number, or clinic address
• EHS will contact the registrant and confirm the inventory for disposal
• EHS utilizes a reverse distributor for disposal of controlled drugs
• Registrant must keep records of disposal for at least three years
Hazardous Waste Disposal Supplies

In order to make hazardous waste disposal as easy, safe, and compliant, EHS provides supplies at no charge to UTHealth.

**Supplies include:**
- Chemical waste containers & safety cans
- Biological waste containers
- Radioactive waste containers
- Ethidium bromide filters and thick trash bags for ethidium bromide gels
- Broken glass boxes
- Secondary containment pans
- Waste container labels
- Silver recovery units
Waste Minimization

Waste minimization is required by the Environmental Protection Agency (EPA) for generators of hazardous wastes.

This means you should always:
- Plan experiments to limit waste
- Reduce wastes through use of microscale protocols
- Segregate hazardous and non-hazardous wastes
- Prevent orphaned chemicals through proper labeling
- Avoid spills and leaks
- Take advantage of free chemical reuse and alcohol thermometer replacement programs by EHS
Unwanted Equipment - Surplus Transfer Process

To transfer equipment to surplus fill out and submit an e-transfer form

Equipment must be empty, cleaned, and decontaminated

EHS will inspect potentially hazardous equipment within three business days, affix an approval tag, and forward request to Capital Assets Management.

Surplus request for items that are non hazardous such as office equipment will be forwarded to Capital Assets Management upon receipt.

Please do NOT store equipment awaiting surplus removal in hallways or egress corridors.
Are you planning on using Radiation?

Training documentation required for all persons working with:

- Radioactive materials
- X-rays &
- Lasers (Class 3B & 4)

For additional information please contact Radiation Safety at 713-500-5840
Questions?

EHS Main Office 713.500.8100
Biological Safety 713.500.8170
Chemical Safety 713.500.5832
Hazardous Waste Collection 713.500.5837
Radiation Safety 713.500.5840