

<b>UT Health Science Center: RS105 - Procedure for New Laboratories</b>	
<b>Version 2</b>	<b>Publication Date: 05/13/2024</b>

## Objective

To establish a procedure whereby Principal Investigators will be introduced to regulatory requirements and Office of Research practices related to employee health, safety, and environmental compliance.

## Scope

This procedure shall apply to all Principal Investigators new to Memphis campus of University of Tennessee Health Science Center and existing Principal Investigators who are moving research operations into new laboratory space.

## Roles

- I. Principal Investigators or Laboratory Supervisors shall:
  - Ensure that personnel within their lab comply with UTHSC procedures for safety and regulatory compliance. This includes complying requirements of the IACUC, IBC and RSC as well as meeting all requirements pertaining to the completion of training requirements, the use of PPE, hazardous materials handling, and waste disposal.
  - Complete the Research Laboratory Move-In Checklist or delegate the completion of the checklist to the Laboratory Safety Manager.
  - Delegate the responsibilities of the Laboratory Safety Manager to a researcher within their lab. If no employees are available to act as Laboratory Safety Manager, the Principal Investigator or Laboratory Supervisor shall personally assume the role to ensure completion of those responsibilities.
  - Review the performance of the Laboratory Safety Manager and research personnel as part of the annual employee performance review process.
- II. The Laboratory Safety Manager (if appointed) shall:
  - Ensure that laboratory activities are conducted at the appropriate chemical safety level or biosafety level and ensure that work practices comply with the institutional requirements expressed in the Chemical Hygiene Plan, Exposure Control Plan, IBC and IACUC protocol requirements and other UTHSC procedures.
  - Ensure that all laboratory personnel complete the required safety training.
  - Complete the UTHSC Research Laboratory PPE Procedure Template to articulate the laboratory procedure for PPE use and the consequences for non-compliance with PPE requirements.

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- Enforce PPE requirements and waste disposal practices within the laboratory on behalf of the Principal Investigator.
- Maintain an accurate hazardous chemical inventory for the hazardous chemicals in the lab using the EHS Assistant web application.
- Perform and document the weekly flush of emergency eyewash stations in the work area.
- If applicable, use EHS Assistant to maintain accurate use and disposal records for radioactive materials.

III. Office of Research Safety Affairs shall:

- Meet with Principal Investigators to introduce Office of Research requirements for the preparation and filing of research protocols, employee safety training, PPE requirements and other Office of Research Safety Affairs policies.
- Inspect research laboratories prior to the initiation of research, including research on IACUC, IBC or RSC protocols. This inspection is to ensure completion of the Research Laboratory Move-In Checklist, safety training requirements, the availability of PPE, that equipment has been properly set up and certified, and that standard operating procedures (SOPs) have been established for activities involving highly hazardous materials including highly reactive compounds (e.g. pyrophoric materials) or acutely toxic compounds.
- Confirm that a Laboratory Safety Manager has been delegated to monitor or perform routine safety responsibilities.
- Assist with risk assessments and provide guidance for the preparation of IACUC, IBC and RSC protocol preparation.

## Definitions

**Biological Safety Level (BSL)** – A combination of laboratory practices, techniques, safety equipment and laboratory facility features employed to mitigate risk of work with biohazardous agents.

**Chemical Safety Level (CSL)** – A combination of laboratory practices, techniques and safety equipment employed to mitigate the risk of working with hazardous chemicals.

**EHS Assistant** – Web-based software application maintained by the Office of Research Safety Affairs and accessible to researchers. EHS Assistant is used to maintain hazardous chemical and radioactive material inventories, document training, and track other regulatory requirements.

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**Hazardous Chemical** - Any substance that capable of causing an acute or chronic health condition in humans or adversely impacting the environment. Substances that are considered physical hazards (flammable substances, explosives, shock sensitive, etc.) are included in the definition of a hazardous substance. The OSHA Hazard Communication Standard, 29 CFR 1910.1200 and the OSHA Chemical Hygiene Plan 29 CFR 1910.1450 are the two main standards that define a hazardous substance.

**Institutional Animal Care and Use Committee (IACUC)** - UTHSC committee responsible for oversight of the animal care and use program and its components as described in the Public Health Service (PHS) Policy on Humane Care and Use of Laboratory Animals (Policy) and the Guide for the Care and Use of Laboratory Animals (Guide).

**Institutional Biosafety Committee (IBC)** - The UTHSC committee is responsible for reviewing research activities utilizing recombinant or synthetic DNA (rDNA), infectious agents, biological toxins, and other biohazardous materials to ensure that UTHSC principal investigators and lab personnel utilize appropriate best practices when performing this type of work. All research by UTHSC investigators that utilizes rDNA, as defined in the [NIH Guidelines](#), and other biohazardous materials must be registered with the UTHSC IBC according to policies established in the NIH Guidelines for Research Involving Recombinant or Synthetic Nucleic Acid Molecules.

**Laboratory Animal Care Unit (LACU)** - The Laboratory Animal Care Unit (LACU) functions as a full-service core supported by the Office of Research, serving all animal related research on the UTHSC campus. The core operates several animal facilities throughout the campus, to best serve the individual research departments and to maintain health status of the colonies.

**Laboratory Safety Manager** - Individual with safety and compliance responsibilities assigned to them by their supervisor or Principal Investigator.

**Principal Investigator (PI)** - The holder of an independent grant administered by a university and the lead researcher for the grant project, usually in the sciences, such as a laboratory study or a clinical trial. The phrase is also often used as a synonym for "head of the laboratory" or "research group leader."

**Radiation Safety Committee (RSC)** - The UTHSC committee responsible for reviewing research activities using ionizing and non-ionizing radiation. The RSC will serve as the general procedure forming body for the activities which involve the use of radioactive materials and/or other sources of ionizing and non-ionizing radiations.

## Procedure

- I. Upon opening a research laboratory at UTHSC new Principal Investigators shall arrange an orientation meeting with the Office of Research Safety Affairs. This meeting is intended to provide the new Principal Investigator with an introduction to UTHSC policies,

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- procedures, training requirements and filing requirements for research protocols subject to the oversight of the IACUC, IBC, IRB, and RSC.
- II. Complete the [safety training requirements](#) assigned by the Office of Research Safety Affairs. Training requirements are determined based on the hazardous materials to be handled and procedures to be performed in the lab. The IACUC also maintains training requirements that must be completed by research personnel prior to entering LACU facilities.
  - III. New Principal Investigators and Principal Investigators moving into new laboratory space must complete the Research Laboratory Move-In Checklist included as an attachment to this procedure. Upon completion and prior to initiating research activities this checklist must be emailed to [labsafety@uthsc.edu](mailto:labsafety@uthsc.edu).
  - IV. Job responsibilities often prevent Principal Investigators from providing a routine presence in their labs. To adequately maintain the laboratory environment and ensure compliance with regulatory requirements the Principal Investigator must delegate a Laboratory Safety Manager. The responsibilities that the Laboratory Safety Manager must meet in the effort to support the Principal Investigator are articulated in the Responsibilities section of this procedure.
  - V. Obtain PPE for personnel and visitors entering the lab. PPE requirements are identified in the UTHSC Chemical Hygiene Plan. At a minimum this includes gloves, a lab coat and eye protection for each researcher or visitor. A hazard risk assessment must be performed to determine if additional PPE is required for activities performed in the lab. The PPE must be appropriate for the work to be performed and the materials being handled. Each individual is responsible for maintaining their PPE in clean and useable condition.
  - VI. Establish a laboratory procedure for the use of PPE. Minimal requirements for PPE use are detailed in the UTHSC Chemical Hygiene Plan. Principal Investigators may opt for more protective and more easily enforceable PPE requirements for their lab. Examples of such alternate policies would be to require the wearing of a gloves, a lab coat and eye protection whenever working at the bench or whenever in the lab. The laboratory procedure for PPE use must include an escalation procedure for staff members not properly wearing PPE in accordance with laboratory procedure. It must also articulate the procedure for when lab coats must be changed out and how this protective equipment is to be laundered. All laboratory personnel must be familiar with this procedure and the consequences for non-compliance.
  - VII. Contact the Office of Research Safety Affairs to schedule a work area inspection prior to the initiation of research activities in new laboratory space. The intent of this inspection is to verify completion of the UTHSC Laboratory Move-In Checklist, to identify the name of the Laboratory Safety Manager and ensure that the lab is compliant and ready for research activities.

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### Contact Information

IBC Chairperson: Dr. Mark Miller	ibc@uthsc.edu
IACUC Chairperson:	Jeff Stekete, PhD. jstekete@uthsc.edu
IRB Reporting/IRB Director	Cameron Barclay, cbarclay@uthsc.edu
Occupational Health:	Evelyn Wright-Lewis, eohs@uthsc.edu
Office of Research Safety Affairs:	(901) 448-6114 <a href="mailto:labsafety@uthsc.edu">labsafety@uthsc.edu</a>

### Responsible Official & Additional Contacts

Subject Matter	Office Name	Telephone Number	Email/Web Address
Policy Clarification and Interpretation	Research Safety Affairs	901-448-6114	<a href="mailto:labsafety@uthsc.edu">labsafety@uthsc.edu</a>
Policy Training	Research Safety Affairs	901-448-6114	<a href="mailto:labsafety@uthsc.edu">labsafety@uthsc.edu</a>
Procedure for New Laboratories	Research Safety Affairs	901-448-6114	<a href="mailto:labsafety@uthsc.edu">labsafety@uthsc.edu</a>

### Appendices

UT Health Science Center Laboratory Move-In Checklist



## UTHSC Research Laboratory Move-In Checklist

Prior to initiating work on research protocols this checklist must be completed to ensure that new research laboratories are set up properly, safety training has been completed and research personnel have completed the orientation necessary to safety handle hazardous materials. Upon completion this checklist must be emailed to [labsafety@uthsc.edu](mailto:labsafety@uthsc.edu).

Building: \_\_\_\_\_ Room #(s) \_\_\_\_\_

Principal Investigator: \_\_\_\_\_ Department: \_\_\_\_\_

Lab Safety Manager for Lab: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_

Item	Completed			Date Completed
<b>Research</b>				
1. All research projects utilizing recombinant or synthetic DNA, infectious agents, biologically derived infectious materials or biologically active agents (i.e. toxins, allergens, venoms) are registered with the <a href="#">UTHSC Institutional Biosafety Committee (IBC)</a> .	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
2. All human materials have been registered with the <a href="#">UTHSC Institutional Review Board</a> . (except cell lines from <a href="#">exempt vendors</a> ).	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
3. All animal protocols are registered with <a href="#">UTHSC Institutional Animal Care and Use Committee (IACUC)</a> . <a href="#">Review the Guide to Animal Research at UTHSC to get started.</a>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
4. All research projects involving the use of radioactive materials or ionizing radiation (e.g. x-rays, gamma irradiator, etc.) have been registered with the <a href="#">UTHSC Radiation Safety Committee</a> .				
5. The Responsible Official (RO) for the institution, must be notified of all quantities (including exempt quantities) of Select Agent Toxins. (i.e. Tetrodotoxins, Botulinum neurotoxins) as well as the quantify of each. Contact her by emailing <a href="mailto:jstabeno@uthsc.edu">jstabeno@uthsc.edu</a> .	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
<b>Training</b>				
1. New hires have attended HR orientation for your school/department/division/faculty.	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
2. All staff members, including PI, have completed <a href="http://www.uthsc.edu/research/safety/training.php">Laboratory and Chemical Hygiene training</a> <a href="http://www.uthsc.edu/research/safety/training.php">http://www.uthsc.edu/research/safety/training.php</a>	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
3. All staff members, including PI, working with rDNA or materials to be handled at BSL2 have completed <a href="#">Principles of Biosafety (BSL2)</a> training. <a href="http://www.uthsc.edu/research/safety/training.php">http://www.uthsc.edu/research/safety/training.php</a>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
4. All staff members, including PI, working with human materials including cell lines have completed <a href="#">Bloodborne Pathogen</a> training. <a href="http://www.uthsc.edu/research/safety/training.php">http://www.uthsc.edu/research/safety/training.php</a>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
5. All staff members, including PI, working with radioactive materials, x-rays or lasers have completed <a href="#">Radiation Safety</a> Training. <a href="http://www.uthsc.edu/research/safety/training.php">http://www.uthsc.edu/research/safety/training.php</a>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
6. All staff members responsible for shipping infectious substances or dry ice have completed <a href="#">IATA Dangerous Goods and Hazardous Materials Shipping</a> . <a href="http://www.uthsc.edu/research/safety/training.php">http://www.uthsc.edu/research/safety/training.php</a>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
7. All Principal Investigators and staff members that handle DEA controlled substances must complete <a href="#">Handling Controlled Substances in Research</a> . <a href="http://www.uthsc.edu/research/safety/training.php">http://www.uthsc.edu/research/safety/training.php</a>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
8. Research personnel accessing LACU facilities have completed the <a href="#">Research Personnel Training Requirements</a> and completed the training mandated by the IACUC.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	

**UTHSC Laboratory  
Checklist (continued)**

Item	Completed			Date Completed
	Yes	No		
1. UTHSC Emergency Response Plan is available at <a href="http://www.uthsc.edu/research/safety/safety-information.php">http://www.uthsc.edu/research/safety/safety-information.php</a>	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
2. UTHSC Chemical Hygiene Plan is available at <a href="http://www.uthsc.edu/research/safety/safety-information.php">http://www.uthsc.edu/research/safety/safety-information.php</a>	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
3. UTHSC Exposure Control Plan is available (if applicable) at <a href="http://www.uthsc.edu/research/safety/safety-information.php">http://www.uthsc.edu/research/safety/safety-information.php</a>	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
4. UTHSC Biosafety Manual is available at: <a href="https://www.uthsc.edu/research/safety/documents/campus-safety-biosafety-manual.pdf">https://www.uthsc.edu/research/safety/documents/campus-safety-biosafety-manual.pdf</a>				
<b>Occupational Health</b>				
1. Complete the Occupational Exposure to Bloodborne Pathogens or Hepatitis B vaccine (acceptance/declination) form at Occupational Health. Keep records of vaccination offer with Exposure Control Plan.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
2. All staff members entering LACU facilities must complete <a href="#">Initial Health Questionnaire</a> and submit it to Occupational Health for review.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
3. All staff members required to wear a respirator (N95, half-face, full-face or PAPR) must complete the <a href="#">Medical Evaluation Questionnaire for Respirator Users</a> and submit it to Occupational Health for review and approval prior to wearing a respirator.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
4. Complete the Occupational Exposure to Bloodborne Pathogens or Hepatitis B vaccine (acceptance/declination) form at Occupational Health.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
<b>Safety Equipment</b>				
1. The lab has the correct and adequate Personal Protective Equipment (PPE) in the lab. (i.e. gloves, safety glasses and/or goggles, lab coats or disposable gowns, UV protective face shield, N95 respirator, etc.)	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
2. Personnel required to wear a tight-fitting respirator (e.g. N95) must be fit tested by the Office of Research Safety Affairs. Email <a href="mailto:labsafety@uthsc.edu">labsafety@uthsc.edu</a> to schedule fit testing.	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
3. All PPE (e.g. lab coat and gloves) must be removed before entering non-research areas (i.e. offices, bathrooms)	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
4. Laboratory policy for PPE policy use, including the escalation procedure for non-compliance, has been completed and reviewed with staff members.	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
5. Each eyewash station or drench hose in each lab must be inspected, flushed, and documented weekly. Weekly documentation form is located at <a href="http://www.uthsc.edu/research/safety/safety-information.php">http://www.uthsc.edu/research/safety/safety-information.php</a>	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
6. All staff members have received orientation to the location of the nearest emergency eyewash station, safety shower, fire extinguisher, fire alarm pull station and the area of refuge where personnel will congregate in the event of a fire alarm or other emergency in the building.	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
7. The safety shower been inspected and documented for its annual inspection by facilities?	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
8. Centrifuges used to handle large volumes or high concentrations of potentially infectious material are equipped with safety cups or sealed rotors with O-rings to contain accidental spills or the potential release of infectious aerosols.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
9. The fume hood been inspected within the last 12 months?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
10. All Biosafety Cabinets (BSC) have been certified within the last 12 months?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
11. An appropriate disinfecting agent (e.g. bleach or hydrogen peroxide-based solution) is available to clean the work surface and grill inside the BSC? (The UTHSC IBC prohibits the use of alcohol as a surface disinfectant IBC-approved protocols.)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
<b>Chemicals</b>				

## UTHSC Laboratory Checklist (continued)

Item	Completed			Date Completed
1. A chemical inventory for materials in the lab has been created and emailed to <a href="mailto:labsafety@uthsc.edu">labsafety@uthsc.edu</a> or entered into EHS Assistant. (Up-to-date chemical inventory must be maintained.) <a href="http://www.uthsc.edu/research/safety/safety-information.php">http://www.uthsc.edu/research/safety/safety-information.php</a>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
2. Safety Data Sheets (SDS) for all hazardous chemicals handled in the lab are available on a community computer or in a binder that is accessible to staff members. The <a href="#">MSDS Online internet database</a> can be used to access SDS for the materials in your lab.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
3. All containers (including water) must be labeled to identify their contents. Containers of hazardous chemical must be labeled to identify both the contents and the hazards.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
4. All chemical containers must be closed when not actively in use.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
5. Chemical containers must be <a href="#">properly segregated</a> to separate incompatible materials (i.e. acids from bases, oxidizers from flammables, inorganic acids from organic acids, etc.)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
6. Flammable liquid materials stored outside of a flammable liquid storage cabinet must be limited to materials that are "in use."	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
7. No more than 10 gallons of flammable liquid chemicals are permitted from being stored outside an NFPA approved cabinet.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
8. Flammable materials can ONLY be stored in an NFPA rated refrigerator or freezer.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
9. Organic peroxide-forming chemicals (e.g. diethyl ether, THF, 1,4-dioxane, etc.) must be labeled with a received and opened date. Peroxide test strips must be available to periodically test the peroxide concentration in containers of these compounds. Containers with >30ppm of organic peroxides must immediately be discarded as hazardous waste.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
10. Chemical containers stored on the floor must be stored in secondary containment.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
11. Standard operating procedures (SOPs) created for the handling of highly hazardous materials and procedures. These must be reviewed and followed by laboratory staff performing these procedures.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
<b>Controlled Substances</b>				
1. Must have a current DEA Registration and TN Board of Pharmacy license to purchase and handle all controlled substances.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
2. All controlled substances must be properly secured and stored when not actively being used.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
3. Access to controlled substances is limited to only Authorized Users.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
4. All Authorized Users must be properly trained in handling, documentation, and how to report lost, stolen or missing controlled substances.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
5. An inventory of all controlled substances must be kept as well as a usage form for each container. A documented audit of this inventory must be performed at least every 2 years.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
6. All expired controlled substances must be properly disposed of by contacting <a href="mailto:labsafety@uthsc.edu">labsafety@uthsc.edu</a> . An accompanying DEA Form 41 must be completed for this disposal and the documentation retained with the DEA registrant's records.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
<b>Select Agent Toxins</b>				
1. All Select Agent Toxins must be properly secured when not in active use.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
2. Labs that store Select Agent Toxins must keep the lab door locked when nobody is in the lab.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	



3. An inventory and usage log must be kept for each container of material.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
4. All unwanted Select Agent Toxins must be deactivated prior to disposal.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
<b>Compressed Gases</b>				
1. Each cylinder must be stored upright and secured to the wall or bench counter with chain or a strap.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
2. Cylinder caps must be placed and secured onto the cylinder when the regulator is not attached.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
<b>Chemical Waste</b>				
1. All chemical waste must be stored in a container that is in good condition and compatible with the contents to be stored within it.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
2. All chemical waste containers must be closed kept closed when not actively being filled with waste.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
3. All chemical waste containers must be labeled as "hazardous waste" and their contents listed. Labels available at <a href="http://www.uthsc.edu/research/safety/safety-information.php">http://www.uthsc.edu/research/safety/safety-information.php</a>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
<b>Biohazardous Waste Handling and Disposal</b>				
1. You must decontaminate reusable glassware prior to washing.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
2. Liquid biohazardous waste must be chemically disinfected (e.g. 10% bleach solution) for an appropriate time period, disposed of down the drain, and rinsed with a suitable quantity of water.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
3. All biohazardous solid waste must be collected in a red or orange bag labeled with the biohazard symbol. Biohazard bags are available for purchase at General Stores in the General Education Building (GEB).	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
4. Biohazard bags containing solid waste must be placed in Stericycle boxes for shipment and disposal as Regulated Medical Waste. Contact your Business Manager or the Institutional Biosafety Officer ( <a href="mailto:rray3@uthsc.edu">rray3@uthsc.edu</a> ) for the location of the Stericycle collection site nearest to you. (BSL2 solid waste does not have to be autoclaved prior to be disposed of into the Stericycle shipment box.)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
5. All biohazardous waste containers must be closed when not actively collecting waste. A nonporous lid must be used for easy decontamination.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
6. All sharps containers must be made of leak proof and puncture resistant material and must be covered when not actively adding material to container.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
7. If using the autoclave for sterilization of glassware please familiarize each staff member with the proper procedures. Located at <a href="http://www.uthsc.edu/research/safety/safety-information.php">http://www.uthsc.edu/research/safety/safety-information.php</a>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
<b>General Safety</b>				
1. A Laboratory Safety Manager has been appointed to complete ongoing safety and compliance responsibilities such as eyewash station flushing, chemical inventory updates, enforcement of PPE requirements and other items on this checklist.	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
2. No food or drinks may be stored or consumed inside the lab. Lab staff should be informed where they may take breaks involving food or drink.	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
3. All staff must wear closed-toed shoes while in the lab	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
4. All staff must wear long pants or a dress that providing body coverage to at least below the knee. Hair longer than shoulder length must be tied back.	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
5. Each lab should have available a small first-aid kit for minor incidents.	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
6. The lab should be free of clutter and organized.	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
7. Aisles in the lab must be unobstructed at least 36" wide.	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
8. Minimize the storage of items above eye level, including chemicals.	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
9. Cloth chairs not capable of being disinfected are not permitted in the lab space.	<input type="checkbox"/> Yes	<input type="checkbox"/> No		

## UTHSC Laboratory Checklist (continued)

Item	Completed			Date Completed
	Yes	No		
10. Needles and razor blades must be properly stored to prevent accidental punctures and cuts.	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
11. If using P <sup>32</sup> or I <sup>125</sup> radioactive isotopes in the lab you must have available a Geiger counter which Radiation Safety will calibrate every 12 months.	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
12. Work surface covers must be discarded when dirtied/contaminated.	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
13. Aspiration flasks on the floor must be stored in secondary containment.	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
14. An in-line hydrophobic filter must be used when connected to the in-house vacuum line.	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
15. Purchase a "Broken Glass" box from general stores for all non-biohazardous broken glass. No chemicals, syringes, or biological contaminated materials are permitted in broken glass boxes.	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
16. A laboratory hazard assessment placard must be completed and posted at the main entrance door to the lab(s). Email <a href="mailto:labsafety@uthsc.edu">labsafety@uthsc.edu</a> if additional placards are needed.	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
17. Equipment used to store or handle biohazardous material must have a biohazard label affixed.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
18. Equipment and areas used to store and handle radioactive material, including waste, must have a radioactive label affixed. Lab doors must have a radioactive door placard affixed.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
19. The Tennessee Regulation for Radiation Notice signage "Notice to Employees" and "Pregnant Workers" sheet must be posted in labs storing and handling radioactive materials. Located at <a href="http://www.uthsc.edu/research/safety/safety-information.php">http://www.uthsc.edu/research/safety/safety-information.php</a>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
20. All refrigerators, freezers, microwaves located in each lab must have a "NO Food" label affixed. Located at <a href="http://www.uthsc.edu/research/safety/safety-information.php">http://www.uthsc.edu/research/safety/safety-information.php</a>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
21. All ice machines must be labeled "Ice Not for Human Consumption". Located at <a href="http://www.uthsc.edu/research/safety/safety-information.php">http://www.uthsc.edu/research/safety/safety-information.php</a>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
22. Electrical panels or breaker panels must not be obstructed. At least 36" of unobstructed space must be provided in front of the panel.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
23. Missing or damaged electrical outlet face plates located in the lab must be identified and reported to Facilities by contacting your Business Manager or completing an work order request using the Archibus system.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
<b>Emergency Response</b>				
1. The Emergency Contact Numbers sheet posted in the lab. Located at <a href="https://www.uthsc.edu/research/safety/documents/emergency-contact-numbers.pdf">https://www.uthsc.edu/research/safety/documents/emergency-contact-numbers.pdf</a> .	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
2. Post biological spill procedures and review them with staff. Located at <a href="http://www.uthsc.edu/research/safety/safety-information.php">http://www.uthsc.edu/research/safety/safety-information.php</a>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
3. Post chemical spill procedures and review them with staff. Located at <a href="http://www.uthsc.edu/research/safety/safety-information.php">http://www.uthsc.edu/research/safety/safety-information.php</a>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
4. Post radiological spill procedures and review them with staff. Located at <a href="http://www.uthsc.edu/research/safety/safety-information.php">http://www.uthsc.edu/research/safety/safety-information.php</a>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	