



# LAB SAFETY SURVEY

Revision 2022

The new lab safety survey guide was developed to help researchers with preparation for the survey while raising awareness to the risks within the laboratory and promoting a safety culture. Principal Investigators can use this guide as a proactive approach while evaluating the labs. This guide explains each laboratory checklist question, provides regulatory references, and the best practices needed to satisfy the questions. It also establishes a ranking system for risks that may be associated with the lab. Questions in this guide are divided by topics:

- Chemical Hygiene Plan
- Chemical Inventory
- Training
- DBPR & DEA
- General Laboratory Safety
  - Signs & Postings
  - Housekeeping
  - Personal Protective Equipment (PPE)
- Safety Equipment
  - First Aid Kits
  - Fume Hoods
  - Eyewash & Emergency Shower
  - Fire Extinguishers
  - Chemical Spill Kit
- Chemical Safety
  - General Labeling and Storage
  - Flammables
  - Peroxide Forming Compounds
  - Perchloric Acid
  - Compressed Gas Cylinders
- Electrical Safety
- Fire Safety
- Waste Handling
  - Sharps
  - Hazardous Waste

<i>Reference</i>	<i>Question</i>	<i>Risk Ranking</i>
<p><b>Chemical Hygiene Plan</b> 29 CFR 1910.1450</p>	<p><b>Is the lab's LATCH created, reviewed, and updated annually?</b></p>	<p>Medium-2</p>
<p><b>Corrective Action:</b></p>	<p>Please complete, review, or update all components of LATCH (Laboratory Assessment, Training, &amp; Chemical Hygiene) by ensuring the lab's roster is up to date, the hazard assessment has been completed, finalized, signed by all lab personnel, and the location of the lab's SOPs is included in the Notes section of the hazard assessment. The hazard assessment must be completed at a minimum once a year.</p>	
<p>29 CFR 1910.1450</p>	<p><b>Does the current LATCH hazard assessment accurately account for the hazards present?</b></p>	<p>Medium-2</p>
<p><b>Corrective Action:</b></p>	<p>LATCH hazard assessment must be representative of the activities in your space. Please update the hazard assessment to include all applicable hazards or remove hazards which are no longer present. Remember that the PI must approve the new assessment and roster members must sign the new assessment.</p>	
<p>EH&amp;S Policy</p>	<p><b>Does the lab have an up-to-date roster?</b></p>	<p>Low -1</p>
<p><b>Corrective Action:</b></p>	<p>The roster must be kept up to date with the current laboratory/work area personnel. Ensure you assigned the role of a Lab Manager and Hazardous Waste Manager.</p>	
<p>EH&amp;S Policy</p>	<p><b>Has the lab personnel signed the completed LATCH hazard assessment?</b></p>	<p>Low -1</p>
<p><b>Corrective Action:</b></p>	<p>Roster members are required to read and digitally sign the LATCH hazard assessment before working in the laboratory or work area.</p>	
<p><b>Chemical Inventory</b> Prudence Practices</p>	<p><b>Has the lab's chemical inventory been created, reviewed, updated within the last year?</b></p>	<p>Medium-2</p>
<p><b>Corrective Action:</b></p>	<p>All UF entities must maintain an accurate inventory of all chemicals, including but not limited to cleaning products and gas cylinders within the Gator TRACS system. Inventories must be updated at a minimum of annually.</p>	

<p><i>EH&amp;S Policy</i></p>	<p><b>Is the inventory accurate as determined by an on-site audit?</b></p>	<p>Medium-2</p>
<p><b>Corrective Action:</b></p>	<p>The chemical inventory was found to be an inaccurate representation of the chemicals in the lab. All UF entities must maintain an accurate inventory of all chemicals, including but not limited to cleaning products and gas cylinders within the Gator TRACS system. Inventories must be updated at a minimum of annually.</p>	
<p><b>Training</b> <i>EH&amp;S Policy</i></p>	<p><b>Have all personnel completed Hazardous Waste Management and either Chemical Hygiene Plan or HAZCOM Training?</b></p>	<p>Low-1</p>
<p><b>Corrective Action:</b></p>	<p>All personnel must complete Hazardous Waste Management (EH&amp;S 809) training annually and the Chemical Hygiene Plan (EH&amp;S 861) for lab spaces or HAZCOM (EH&amp;S 814) training for shops.</p>	
<p><i>EH&amp;S Policy</i></p>	<p><b>Is all LATCH activity triggered training completed?</b></p>	<p>Low-1</p>
<p><b>Corrective Action:</b></p>	<p>Please have all personnel complete the required training established by the administrative controls section of the LATCH hazard assessment.</p>	
<p><b>DBPR &amp; DEA</b> <i>Florida Department of Business and Professional Regulations</i></p>	<p><b>Does the PI have a current FL Department of Business and Professional Regulations exemption letter if applicable (medical grade pharmaceuticals and gases, and/or controlled substances are present in the lab)?</b></p>	<p>Low-1</p>
<p><b>Corrective Action:</b></p>	<p>Renew/apply for DBPR registration. Each Principal Investigator must obtain his/her own registration. Please refer to the UF Controlled Substance policy and submit a copy of the DBPR exemption letter to EH&amp;S.</p>	
<p><i>Title 21 United States Code (USC) Controlled Substance Act</i></p>	<p><b>Does the PI have a current DEA Controlled Substances registration?</b></p>	<p>Low-1</p>
<p><b>Corrective Action:</b></p>	<p>Renew/apply for DEA registration. Each Principal Investigator must obtain his/her own registration. Please refer to the UF Controlled Substance policy and submit a copy of the DEA license to EH&amp;S. Please refer to (<a href="#">Controlled Substances &amp; Pharmaceutical Products » UF   EH&amp;S (ufl.edu)</a>).</p>	

<p><i>Title 21 United States Code (USC) Controlled Substance Act</i></p>	<p><b>For Schedule I and II controlled substances, does the purchaser record on its copy of the DEA Form 222 the number of commercial or bulk containers furnished on each item and the dates on which the purchaser receives the containers?</b></p>	<p>Low-1</p>
<p><b>Corrective Action:</b></p>	<p>Keep a record on its copy of the DEA Form 222 the number of commercial or bulk containers furnished on each item and the dates on which the purchaser receives the containers</p>	
<p><i>Title 21 United States Code (USC) Controlled Substance Act</i></p>	<p><b>Are controlled substances stored in a secure location?</b></p>	<p>Medium-2</p>
<p><b>Corrective Action:</b></p>	<p>DEA substances are not stored appropriately. Please correct this immediately. Please refer to the UF controlled substance policy for more information on proper storage. Please refer to ( <a href="#">Controlled Substances &amp; Pharmaceutical Products » UF   EH&amp;S (ufl.edu)</a> )</p>	
<p><i>Title 21 United States Code (USC) Controlled Substance Act</i></p>	<p><b>Have authorized users completed the Screening Questionnaire?</b></p>	<p>Low-1</p>
<p><b>Corrective Action:</b></p>	<p>Employee Questionnaires must be completed for each person administering controlled substances under your DEA license or using novel compounds. The questionnaires can be found at <a href="#">Controlled Substances &amp; Pharmaceutical Products » UF   EH&amp;S (ufl.edu)</a> and shall be kept by the PI for the length of the employee's employment plus an additional 3 years.</p>	
<p><i>Title 21 United States Code (USC) Controlled Substance Act</i></p>	<p><b>Have all users signed the DEA Controlled Substances authorized user log?</b></p>	<p>Low-1</p>
<p><b>Corrective Action:</b></p>	<p>All users must sign the DEA Controlled Substances authorized user log.</p>	
<p><i>Title 21 United States Code (USC) Controlled Substance Act</i></p>	<p><b>Does the lab have a general use log for controlled substances in accordance with DEA requirements?</b></p>	<p>Low-1</p>
<p><b>Corrective Action:</b></p>	<p>An accurate summary of use for controlled substances shall be maintained from the time of acquisition to the end of use (e.g., administration and/or disposal), including recording expired or damaged controlled substances.</p>	

<p><i>Title 21 United States Code (USC) Controlled Substance Act</i></p>	<p><b>Is the lab completing an initial inventory form and the biennial (every 2 years) inventory form for all controlled substances?</b></p>	<p>Low-1</p>
<p><b>Corrective Action:</b></p>	<p>An initial and biennial inventory must be completed for each program using controlled substances. An initial inventory must list all the controlled substances currently stored at the DEA registered location. The biennial inventory must account for all the controlled substances, and this must equal to the general use log quantities. Perform every two (2) years after receiving the DEA registration.</p>	
<p><i>Title 21 United States Code (USC) Controlled Substance Act</i></p>	<p><b>Is the diluted solution usage log kept according to the requirements, if applicable?</b></p>	<p>Low-1</p>
<p><b>Corrective Action:</b></p>	<p>Please complete the log for diluted solution usage. Please refer to <a href="#">Controlled Substances &amp; Pharmaceutical Products » UF   EH&amp;S (ufl.edu)</a></p>	
<p><i>Title 21 United States Code (USC) Controlled Substance Act</i></p>	<p><b>Are outdated pharmaceutical products (including DEA) labeled as “Expired- Do not use” and stored properly while awaiting disposal?</b></p>	<p>Low-1</p>
<p><b>Corrective Action:</b></p>	<p>Please refer to the DEA Controlled Substances Disposal Policy (<a href="#">Controlled Substances &amp; Pharmaceutical Products » UF   EH&amp;S (ufl.edu)</a>). Outdated pharmaceutical products (including DEA) should be label as “Expired- Do not use”.</p>	
<p><b>Signs &amp; Postings</b> <i>Fire Code</i> <i>OSHA 1910.145(f)(3)</i></p>	<p><b>Are the notice board hazard warning labels and emergency call list up to date?</b></p>	<p>Low-1</p>
<p><b>Corrective Action:</b></p>	<p>The lab must have a notice board posted at the entrance containing 2 contacts which includes after-hour emergency phone numbers (one of the contacts must be the PI), laboratory hazard warning labels and required PPE. Notice Boards and hazard warning labels are provided by EH&amp;S, free of charge. Please contact <a href="mailto:labsafety@ehs.ufl.edu">labsafety@ehs.ufl.edu</a> to request needed items.</p>	
<p><b>Housekeeping</b> <i>OSHA 1910.22</i> <i>Prudent Practices</i></p>	<p><b>Are floors dry and free of slip, trip, or fall hazards?</b></p>	<p>Medium-2</p>

<p><b>Corrective Action:</b></p>	<p>Floors must be clear of spilled materials, excessive dust, and other items that could cause a slipping hazard. Remove or relocate items which may present a tripping hazard (example: extension and power cords). If the trip hazard cannot be removed, signage warning of this hazard must be posted (i.e., permanently installed wiring).</p>	
<p><i>Prudent Practices in the Laboratory 6.C.5 OSHA 1910.1030(d)(2)(x)</i></p>	<p><b>Are refrigerators/freezers, microwaves and ice makers labeled appropriately and are the contents compliant?</b></p>	<p>Low-1</p>
<p><b>Corrective Action:</b></p>	<p>All laboratory refrigerators, freezers, microwaves, and any other devices that could be used for the storage, preparation, and human consumption of food or drink must be labeled appropriately (“No Food or Drink” or “Food Only” sticker). Icemakers intended for use in research must have a “Not for Human Consumption” sticker. If the refrigerator/freezer is not designed by the manufacturer for flammable material storage, it must be labeled “Not Suitable for Flammable Materials.” Contents in fridges/freezers must match the applicable labeling i.e., no flammable liquids stored in a non-flammable rated fridge/freezer.</p>	
<p><i>Laboratory Design Handbook Prudent Practices in the Laboratory 8.C, 8.D NFPA 45,6.4.4</i></p>	<p><b>Are laboratory entrance doors kept closed?</b></p>	<p>Low-1</p>
<p><b>Corrective Action:</b></p>	<p>Laboratory areas should be under negative pressure. Laboratory doors must be kept closed to maintain the proper room pressurization and prevent possible contamination of external areas. Keeping doors closed ensures the best possible ventilation efficiency, temperature, and humidity controls.</p>	
<p><i>OSHA 1915.81 Prudent Practices in the Laboratory I.A.4</i></p>	<p><b>Does the laboratory have good housekeeping (work surfaces and storage areas are uncluttered and orderly)?</b></p>	<p>Medium-2</p>
<p><b>Corrective Action:</b></p>	<p>Good housekeeping practices should be used in the laboratories (should be kept clean and well organized). The laboratory must be maintained clean and free of clutter. Adequate space must be provided between benches, cabinets, and equipment to facilitate cleaning.</p>	
<p><i>OSHA 1910.212 Prudent Practices in the Laboratory I.A.6</i></p>	<p><b>Are all points of operation, rotating components, and other moving parts properly guarded to prevent injury?</b></p>	<p>High-3</p>

<p><b>Corrective Action:</b></p>	<p>Rotating components, and other moving parts (like belts and pulleys on vacuum pumps) are sources of potential pinch points. These moving parts must be equipped with a guard. If the original guard cannot be located or attached, please contact the manufacturer, or have one made as a replacement.</p>
<p><i>Personal Protective Equipment (PPE)</i> OSHA 1910.132</p>	<p><b>Are lab personnel and students wearing full coverage, closed-toe shoes, and appropriate clothing?</b></p>
<p><b>Corrective Action:</b></p>	<p>When working in the lab, closed-toe shoes shall be worn to help prevent serious injury. Exposed skin should be minimized. The appropriate attire should be based on the hazard.</p>
<p>OSHA 1910.138</p>	<p><b>Are protective gloves available, stored in a way that prevents damage or contamination, and are the gloves appropriate for the hazards found in the lab?</b></p>
<p><b>Corrective Action:</b></p>	<p>Glove selection shall be based on an appropriate risk assessment and must be stored in a manner to prevent damage or contamination.</p>
<p>OSHA 1910.138</p>	<p><b>Is there no evidence of reusing disposable (single use) gloves?</b></p>
<p><b>Corrective Action:</b></p>	<p>Disposable (single use) gloves must be discarded properly after use.</p>
<p>OSHA 1910.133</p>	<p><b>Is eye/face protection available, stored in a way that prevents damage or contamination, and used by lab staff?</b></p>
<p><b>Corrective Action:</b></p>	<p>Hazard appropriate eye/face protection shall be worn in the lab and must be stored in a manner to prevent damage or contamination. Lab personnel are responsible for knowing the location and proper use of the PPE they are required to use. The Principal Investigator or supervisor shall determine and provide the appropriate PPE.</p>
<p>OSHA 1910.132</p>	<p><b>Is hazard specific PPE available (i.e., UV/IR glasses, face shields, lab coats, aprons, cryogenic or oven gloves, hearing protection) and stored in a way that prevents damage or contamination?</b></p>



<p><b>Corrective Action:</b></p>	<p>Personal Protective Equipment (lab coats, gloves, hearing protection, etc.) should be worn when working with hazard specific items/equipment. The OSHA regulation requires a hazard assessment to be completed whenever Personal Protective Equipment is necessary. Personnel are responsible for knowing the location and proper use of the PPE they are required to use. The Principal Investigator or supervisor shall determine and provide the appropriate PPE.</p>	
<p>OSHA 1910.134 EH&amp;S Respiratory Protection Policy)</p>	<p><b>Are respirators required and in compliance with EH&amp;S policy?</b></p>	<p>Medium-2</p>
<p><b>Corrective Action:</b></p>	<p>Lab staff required to use respiratory protective equipment must follow established UF procedures. To use this type of PPE, users must be properly trained, fit tested, and complete a medical evaluation prior to wearing a respirator. Call EH&amp;S for further details about enrolling in the respiratory protection program (352) 392-1591.</p>	
<p><b>Safety Equipment- First Aid Kits</b> OSHA 1910.151</p>	<p><b>Are First aid kits available, properly stocked, adequate, and not expired in designated areas?</b></p>	<p>Low-1</p>
<p><b>Corrective Action:</b></p>	<ul style="list-style-type: none"> <li>▪ First aid kits shall be available and maintained for treatment of minor injuries or for short-term emergency treatment before getting medical assistance. First aid kits must conform to EH&amp;S first aid kit requirements (Chemical Spills and Exposure » UF   EHS (ufl.edu).</li> <li>▪ First aid kits should have appropriate supplies for the research taking place and should be checked on a regular basis to make sure that the supplies have not expired (Burn cream and triple antibiotic ointment).</li> <li>▪ Over the counter medicines should not be present in first-aid kits and removed if present.</li> </ul>	
<p>EH&amp;S- Lab Safety Manual</p>	<p><b>Are any hazard specific first aid materials required and available (e.g., Calcium Gluconate for Hydrofluoric Acid)?</b></p>	<p>Medium-2</p>
<p><b>Corrective Action:</b></p>	<ul style="list-style-type: none"> <li>▪ A first aid treatment for hydrofluoric acid (HF) is required to be kept on hand in labs that use hydrofluoric acid. Calcium gluconate gel is recommended for use after dermal exposure to HF.</li> <li>▪ Exposed areas to hydrofluoric acid should be washed with water for 1-2 minutes and then calcium gluconate gel should be continuously massaged into the affected area.</li> <li>▪ Call 911 for emergency medical care and notify your PI/supervisor.</li> <li>▪ Calcium gluconate gel can be purchased from the Student Health Care Center Pharmacy (392-1760) or an online retailer.</li> </ul>	

**Safety Equipment- Fume Hoods**

OSHA 1910.1450(e)(3)(iii)  
ANSI/ASHRAE 110,1995.  
ANSI/AIHA Z9.5.,1992  
*Prudent Practices in the Laboratory: Handling and Management of Chemical Hazards*  
*Fundamentals of Industrial Hygiene, 4th Edition (1996).*

**Corrective Action:**

**Are fume hoods operational and inspected annually?**

Medium-2

A fume hood in the lab has been marked “out of service” and may not be providing adequate protection against chemical vapor exposure. Please follow these steps to address the issue:

1. Stop using the fume hood immediately. Close all containers in the fume hood and ensure all work in the hood has stopped until it has been repaired.
2. Place a work order with Facility Services to have the fume hood airflow corrected. For Main Campus work orders please go to <https://gatorworks.facilitieservices.ufl.edu/request/>. For IFAS work orders please go to <https://fpo.ifas.ufl.edu/>.
3. Once the work order has been placed, close this corrective action by writing the work order number in the comment box and clicking the green "complete" button.
4. Once repairs have been completed, contact EH&S at [labsafety@ehs.ufl.edu](mailto:labsafety@ehs.ufl.edu) to re-test the airflow.

*American Chemical Society  
Prudent Practices in the Laboratory*

**Are fume hoods in use uncluttered?**

Medium-2

**Corrective Action:**

The interior of the fume hood is cluttered. Lack of workspace in the hood can potentially lead to spills or accidents and interrupt airflow allowing hazardous vapors to escape. Please minimize what is stored in the hood. Fume hood airfoils must not be blocked to ensure adequate airflow is present to contain chemical vapors.

NFPA 45 8.8.3  
ANSI/AIHA Z9.5  
*Laboratory Ventilation*

**Are fume hoods used correctly?**

Medium-2

<b>Corrective Action:</b>	<ul style="list-style-type: none"> <li>When operators are away from fume hoods the sash should be closed. Sash operation should be unhindered by cords, tubing, or equipment. Fume hood baffles and slots shall be no more than 25% obstructed. When operators are using a hood, the sash should be positioned to shield the operator.</li> <li>The airfoil at the front of the fume hood must be kept free of obstruction so that the airflow into the hood can keep vapors and fumes from escaping.</li> <li>Sash visibility is obscured. Please have the sash glass cleaned as soon as possible.</li> <li>Unattended active experiments conducted in the fume hood must have a warning sign stating the hazards of the experiment.</li> <li>When actively manipulating chemicals in the fume hood, the sash shall be open no more than 16".</li> </ul>
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<b>Safety Equipment- Eyewash &amp; Emergency Shower</b>	<b>Is the safety shower or eyewash station unobstructed, operational, and in good condition (including clean &amp; capped)?</b>	High-3
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<b>Corrective Action:</b>	<ul style="list-style-type: none"> <li>Safety showers and eyewashes shall be within 10 seconds of travel for immediate emergency use. Please remove any obstruction from your laboratory, which are restricting access to eyewash or safety shower.</li> <li>Eyewash stations must have dust covers in place in order to protect the nozzles from airborne contaminants. If the dust covers are missing or damaged, please submit a work order to have the covers replaced.</li> </ul>
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<b>Are the eyewash stations and safety showers tested on schedule?</b>	Medium-2
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<b>Corrective Action:</b>	Eyewash stations and safety showers shall be checked routinely to ensure proper working condition.
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<b>Safety Equipment- Fire Extinguisher</b>	<b>Are fire extinguishers available, unobstructed, operational, and inspected?</b>	High-3
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**Corrective Action:**

- Fire extinguishers should be readily available, located strategically, in good working condition and properly labeled.
- Fire extinguisher(s) were found to be obstructed. Please remove the obstruction(s) to ensure that this equipment is easily accessible by lab personnel during an emergency.

**Safety Equipment-  
Chemical Spill Kit**

*EH&S- Lab Safety Manual*

**Is an appropriate chemical spill kit available?**

Medium-2

**Corrective Action:**

Spill kits, appropriate for the chemicals in the area, must be available and fully stocked. A chemical spill kit must be obtained and kept in the lab. Spill kits may be ordered at: <https://www.ehs.ufl.edu/forms/lab-safety-forms/spill-kit-order-form/>

**Chemical Safety- General  
Labeling and Storage**

*OSHA 1910.1450 (h) (i)*

**Are all containers appropriately and clearly labeled with their contents?**

Medium-2

**Corrective Action:**

- All chemical containers (including but not limited to preparations and working solutions) must be clearly labeled with their contents regardless of hazard.
- Unlabeled containers were found in the lab and should be identified and labeled. If the contents are not known, affix a hazardous waste label and list the contents as "unknown." Submit a waste pick-up request to EHS Hazardous Materials Management as soon as possible.

*Prudent practices in the  
Laboratory 6.C.3*

**Are all chemical containers in good condition?**

Medium-2

**Corrective Action:**

All containers must be in good condition (not corroded or leaking). Containers were found in the lab with deterioration and/or in poor condition. Transfer the chemical to another container and discontinue use of improper containers.

*Prudent practices in the  
Laboratory 6.C.3*

**Are chemical containers closed if not currently in use?**

Medium-2

<p><b>Corrective Action:</b></p>	<ul style="list-style-type: none"> <li>▪ Containers containing chemicals, regardless of hazard, should be capped and securely closed when not in active use.</li> <li>▪ Improperly capped chemical container(s) were found in the lab. Cap and/or seal chemical containers securely when not in use. If a container must have tubes going into it, holes may be drilled into a cap to allow for the tubes. Parafilm and aluminum foil are not considered to be sufficient caps or seals.</li> </ul>	
<p><i>American Chemical Society; National Research Council's Prudent Practices in the Laboratory</i></p>	<p><b>Are corrosive, pyrophoric, toxic, flammable, sensitizers, or carcinogens stored below eye level?</b></p>	<p>Medium-2</p>
<p><b>Corrective Action:</b></p>	<ul style="list-style-type: none"> <li>▪ Chemicals which are pyrophoric, toxic, corrosive, sensitizers, carcinogens, shall not be stored above eye level.</li> <li>▪ Other chemicals, liquids or solids, that do not have the hazards listed previously may be stored above eye level if the following criteria are met:             <ul style="list-style-type: none"> <li>- Container sizes are less than 1 L or 1Kg,</li> <li>- No lower storage locations are available, and a ladder or step ladder is available.</li> </ul> </li> </ul>	
<p><i>American Chemical Society; National Research Council's Prudent Practices in the Laboratory</i></p>	<p><b>Are chemicals stored and segregated by chemical compatibility?</b></p>	<p>Medium-2</p>
<p><b>Corrective Action:</b></p>	<ul style="list-style-type: none"> <li>▪ Segregate and store chemicals by compatibility to prevent incompatible materials from reacting with each other.</li> </ul>	
<p><i>American Chemical Society; National Research Council's Prudent Practices in the Laboratory</i></p>	<p><b>Are appropriate secondary containers used for liquids stored on the floor?</b></p>	<p>Medium-2</p>
<p><b>Corrective Action:</b></p>	<ul style="list-style-type: none"> <li>▪ To prevent accidents, spills, or leaks, liquid chemicals regardless of hazard should not be stored on the floor. If chemicals must be stored on the floor, they should be stored in a chemically compatible secondary container.</li> <li>▪ Secondary containment helps prevent chemicals from mixing and reacting with each other in the event of an accident or spill. Secondary containers must be of a volume to contain a leak of the contents.</li> <li>▪ Keep containers in designated laboratory space, so that they are not in pathways and subject to being knocked over. Do not store chemicals in hallways, corridors, or exit ways. Proper storage of all shared chemicals is a shared responsibility. For shared labs, proper management of the chemical storage on the floor is a shared responsibility</li> </ul>	

*American Chemical Society;  
National Research Council's  
Prudent Practices in the  
Laboratory*

**Are chemicals that are old and no longer needed disposed?**

Low-1

**Corrective Action:**

- Chemicals that may no longer be used, possess questionable purity, or that are, outdated, should be removed from the lab. They should be disposed to minimize the risk of future spills, chemical reactions, and chemical exposures (as chemicals age, they can become unstable, possibly forming explosive byproducts, or undergoing rapid and violent decomposition).
- Complete the annual chemical inventory review and decide which chemicals should be discarded.

*EH&S- Lab Safety Manual*

**Is storage in cold rooms compliant?**

Low-1

**Corrective Action:**

- Cold rooms have closed air-circulation systems and are subject to damage from corrosive atmospheres. Cold rooms are not acceptable for storage of compressed gas cylinders or dry ice. Flammable liquid storage should be kept to a minimal amount. DO NOT store cardboard or any paper products in cold rooms. DO NOT store items on the floor.
- All items in shared cold room must be labeled with the Principal Investigator's (PI) name.

*Chemical Safety-  
Flammables*

*EH&S- Lab Safety Manual*

**Are flammable and combustible liquids exceeding ten (10) gallons stored inside an approved flammable storage cabinet?**

Medium-2

**Corrective Action:**

Quantities of flammable and combustible liquids in excess of 10 gallons must be stored in a flammable storage cabinet.

*Prudent Practices in the  
Laboratory,  
NFPA 45*

**Are flammables stored in refrigerators and/or freezers that are appropriately designed and designated?**

Medium-2

**Corrective Action:**

Flammable materials refrigerators and freezers are designed to prevent ignition of flammable vapors inside the storage compartment and should be purchased whenever a refrigerator is needed to store flammable liquids. Flammable liquids should not be stored or cooled in a

	refrigerator or freezer unless it is specifically designed for this purpose. If these materials must be kept cold, they must be stored in a certified flammable refrigerator/freezer or approved cold room.	
OSHA 1910.106(a)(29)	<b>Are gasoline and diesel stored in approved safety cans?</b>	High-3
<b>Corrective Action:</b>	<ul style="list-style-type: none"> <li>Storage of gasoline and diesel must be in metal safety cans. Red (or yellow) plastic gas cans are only permitted for transferring fuels and are not intended for storage.</li> <li>OSHA defines a safety can as "an approved container, of not more than 5-gallons capacity, having a spring-closing lid and spout cover and so designed that it will safely relieve internal pressure when subjected to fire exposure".</li> </ul>	
<i>Chemical Safety- Peroxide Forming Compounds</i> EH&S- Lab Safety Manual	<b>Are proper dating, storage, use, and disposal procedures followed for peroxide forming compounds?</b>	High-3
<b>Corrective Action:</b>	Peroxides formed in organic compounds can cause serious accidents and can become explosive. In some circumstances, peroxides are reactive to shock, sparks, and flames. Peroxide forming compounds must be dated when received and again when opened and disposed of after 1 year of receipt or 6 months of opening, whichever occurs first.	
<i>Chemical Safety- Perchloric Acid</i> EH&S- Lab Safety Manual	<b>Are proper dating, storage, use, and disposal procedures followed for perchloric acid?</b>	High-3
<b>Corrective Action:</b>	<ul style="list-style-type: none"> <li>Perchloric acid should be kept to a minimum and stored in its original container with its label intact and be placed in an appropriate container (ceramic or plastic) large enough to contain the entire contents. It should be inspected monthly and if discolored (yellow) should be disposed of immediately.</li> <li>Perchloric acid is to be dated when received and again when opened. It must be disposed of within 1 year of receipt or 6 months of opening, whichever occurs first.</li> </ul>	

*Chemical Safety-  
Compressed Gas Cylinders*

CGA 3.4.4  
OSHA 1910.101(b),253  
American Chemical Society;  
NFPA 45

**Are cylinders stored in upright positions and secured properly?**

Medium-2

**Corrective Action:**

Compressed gas cylinders shall be secured at all times. Secure cylinders, whether full or empty, upright by straps or chains connected to a wall bracket or other fixed surface, or by use of a cylinder stand to prevent them from falling.

CGA 3.3.7  
OSHA 1910.101

**Are incompatible compressed gas cylinders in storage segregated?**

Medium-2

**Corrective Action:**

Incompatible gases must be stored by hazard class in separate areas, even when the cylinders are empty. Separate the incompatible cylinders by a distance of at least 20 feet, or a non-combustible partition extending not less than 18 inches above and to the sides of the stored materials.

OSHA 1910.101(b)  
OSHA 1926.35(a)(10)

**Do all compressed gas cylinders have their contents and precautionary labeling clearly marked on their exteriors?**

High-3

**Corrective Action:**

All compressed gas cylinders must be legibly marked to identify the gas contained. Please return the compressed gas cylinder to the vendor.

OSHA 1910.101(b)

**Are all compressed gas cylinder valves closed and the cylinder cap in place when cylinders are not in use?**

Medium-2

**Corrective Action:**

Compressed gas cylinders when not in use must be valves closed and capped. Gas cylinders which have regulators attached are considered "in use."

Prudent practices in the  
Laboratory 7.D.2.2

**Are regulators, connections, and tubing in good condition?**

Low-1



<p><b>Corrective Action:</b></p>	<ul style="list-style-type: none"> <li>All the components must be in good condition. Only regulators approved for the specific gas should be used. When gases are not in use valves should be closed with all pressure released from equipment connected to the cylinder.</li> <li>Do not use Teflon tape on compression fittings. Teflon tape reduces the sealing ability of compression fittings.</li> <li>Ensure that the plumbing / tubing used downstream of regulator is designed to withstand the maximum discharge pressure of the regulator. Only use plumbing / tubing material that is compatible with the gas.</li> </ul>	
<p>CCR, Title 24, Part 9, Section 8003.3 CCR, Title 24, Part 9, Section 8003.1.12</p>	<p><b>Are highly toxic gas cylinders stored in a ventilated gas cabinet or fume hood?</b></p>	<p>High-3</p>
<p><b>Corrective Action:</b></p>	<p>Highly toxic compressed gas cylinders must be stored and used in an approved gas cabinet or fume hood. Toxic and corrosive gasses must have a Bonnet vent on the regulator which must be vented to the outside through a ventilation duct or fume hood.</p>	
<p>OSHA 1910.110 OSHA 1910.101 NFPA 58 Liquefied Petroleum Gas Code-2017 NFPA 1-617-770-3000</p>	<p><b>Is the quantity of propane gas tank less than two 1lb cylinders loose in the lab with another two 1lb cylinders in a flammable cabinet?</b></p>	<p>Medium-2</p>
<p><b>Corrective Action:</b></p>	<p>Labs are limited to two 1lb propane cylinders loose in the lab with another two 1lb propane cylinders in a flammable cabinet. Empty propane cylinders should be picked up as hazardous waste. No cylinders larger than 1lb are allowed in any UF lab, shop, or studio.</p>	
<p><i>Electrical Safety</i></p>		
<p>OSHA 1910.303 (g) National Electrical Code (NFPA 70 110.26)</p>	<p><b>Are electrical circuit breaker panels accessible?</b></p>	<p>High-3</p>
<p><b>Corrective Action:</b></p>	<p>OSHA and the National Electrical Code, require that electrical panels have a minimum of 3 feet (36 inches) of clearance and a minimum headroom of 6.5 feet or the height of the equipment whichever is greater.</p>	
<p>OSHA 1910.305(b)(2)</p>	<p><b>Are all openings (on breaker panels, receptacle boxes, faceplates) in electrical enclosures and fittings appropriately plugged or covered?</b></p>	<p>High-3</p>

<b>Corrective Action:</b>	Openings on electrical panels and boxes were not sealed. Submit a work order for repairs. For Main Campus work orders please go to <a href="https://gatorworks.facilitieservices.ufl.edu/request/">https://gatorworks.facilitieservices.ufl.edu/request/</a> For IFAS work orders please go to <a href="https://fpo.ifas.ufl.edu/">https://fpo.ifas.ufl.edu/</a> .	
<p><i>OSHA 1910.334(a)(2)(i)</i> <i>OSHA 1910.303 (c)</i></p> <p><b>Corrective Action:</b></p>	<p><b>Are electrical cords and plugs in good condition (not frayed or damaged, not missing the grounding plug, exposing internal conductors)?</b></p> <p>Ensure electrical cords and plugs are not damaged. If damaged, unplug and do not use. Replace or contact an electrical vendor for repair.</p>	High-3
<p><i>OSHA 1910.305(g)</i> <i>NEC 400.8(1) – 2014</i></p> <p><b>Corrective Action:</b></p>	<p><b>Are extension cords only used temporarily (not as permanent wiring)?</b></p> <p>An extension cord was found to be in permanent use. OSHA regulations and fire codes prohibit the use of extension cords as a substitute for fixed wiring. Extension cords are only to be used for temporary wiring and should be unplugged and put away between uses. Please find an alternate means of supplying power and remove the extension cord from service as soon as possible. If additional power outlets are needed, submit a Work Order to Facilities Services.</p>	High-3
<p><i>OSHA 1910.303(b)(2)</i></p> <p><b>Corrective Action:</b></p>	<p><b>Are extension cords or power strips never daisy-chained to each other?</b></p> <p>Extension cords are designed to carry a certain amount of current over a fixed distance (length of the cord). Extension cords, power strips, and surge protectors are not allowed to be connected to each other. Surge protectors with longer cords should be purchased.</p>	High-3
<p><i>NEC 210.8</i></p> <p><b>Corrective Action:</b></p>	<p><b>Are ground fault circuit interrupters installed near sinks?</b></p> <p>All 15 or 20-amp, single phase, 125-volt receptacles “within 6 ft.” of a sink must be GFCI protected. Please submit a work order for a GFCI.</p>	High-3
<p><i>Florida State Fire Marshall</i></p>	<p><b>Is equipment with high amperage (refrigerators, motors, heaters) plugged directly into a receptacle?</b></p>	Medium-2

<p><b>Corrective Action:</b></p>	<p>High amperage equipment should be plugged directly into a receptacle rather than a surge protector or power strip. Please plug the equipment directly into a receptacle.</p>	
<p><b>Fire Safety</b> 1910.37(a)(3) OSHA 1910. 37 (f) (3) Prudent Practices in the Laboratory</p>	<p><b>Are means of egress free from obstruction?</b></p>	<p>Medium-2</p>
<p><b>Corrective Action:</b></p>	<p>Means of egress shall not be obstructed in any manner. The lab shall have a minimum aisle clearance of at least 24 inches. Main aisles used for emergency egress must have a clearance width of at least 36 inches. Please remove the obstruction to allow adequate egress.</p>	
<p>Fire Code NFPA 5.2.1.2.1</p>	<p><b>Does storage provide adequate clearance from ceiling?</b></p>	<p>Medium-2</p>
<p><b>Corrective Action:</b></p>	<p>Clearance from a sprinkler head must be 18 inches for sprinklered spaces and 24 inches from the ceiling when sprinkler heads are not present. If storage or other obstructions are too close to a sprinkler head, it will not be able to deploy water in the coverage area intended to extinguish a fire. Please remove or relocate the obstructing materials.</p>	
<p>Fire Code NFPA 101 8.5.1 OSHA 1910.165(b)(1)</p>	<p><b>Are the ceiling tiles intact and in place?</b></p>	<p>Medium-2</p>
<p><b>Corrective Action:</b></p>	<p>Ceiling tiles provide a barrier for fire and smoke in all spaces and are required to be intact and in place. Please replace missing ceiling tiles or contact Facilities services.</p>	
<p><b>Waste Handling- Sharps</b>  Florida Administrative Code Chapter 64E-16 64E-16.002(24)</p>	<p><b>Are broken glass and sharp (needles, razors blades, pipettes) items collected, handled, and disposed in an appropriate manner?</b></p>	<p>Medium-2</p>
<p><b>Corrective Action:</b></p>	<ul style="list-style-type: none"> <li>▪ Broken glass and sharps have the potential to puncture and/or lacerate.</li> <li>▪ Handle broken glass carefully. Collect broken glassware in a plastic bag lined cardboard box.</li> <li>▪ Collect sharps in a rigid plastic container with a sealable lid (do not overfill or have items sticking out).</li> </ul>	

	<ul style="list-style-type: none"> <li>▪ Cutting tools (razor blades, exacto knives, box cutters, etc.) should be stored in a manner to prevent harm (i.e. in a drawer or box). Whenever possible use a utility knife with a retractable blade.</li> </ul>	
<p><i>Waste Handling- Hazardous Waste</i> 40 CFR Part 262 EH&amp;S Policy</p>	<p><b>Are waste containers in good condition and compatible with their contents?</b></p>	<p>Medium-2</p>
<p><b>Corrective Action:</b></p>	<ul style="list-style-type: none"> <li>▪ Inspect waste containers and closures regularly for degradation. If necessary, transfer waste to a new container. Damaged or defective containers/closures may cause a leak, spill, or compliance violation during a federal or state inspection. Contact EH&amp;S Hazardous Materials Management at 392-8400 for a replacement container or assistance.</li> <li>▪ Waste must be chemically compatible with the waste container. Hydrofluoric acid waste must be stored in plastic containers only. All other corrosive waste must be stored in plastic or glass containers.</li> </ul>	
<p>40 CFR Part 262 EH&amp;S Policy</p>	<p><b>Are waste containers closed and properly labeled with a hazardous waste label?</b></p>	<p>Medium-2</p>
<p><b>Corrective Action:</b></p>	<ul style="list-style-type: none"> <li>▪ Waste containers must be closed at all times except while waste is being actively added or removed. Waste containers must be fitted with properly fitting caps. Parafilm, foil, tape, and other make-shift lids should never be used to close a waste container.</li> <li>▪ Hazards associated with the waste contents must be indicated on the container. This can be accomplished by using the EH&amp;S standard “yellow” label and checking the applicable hazard boxes. For hazardous waste in original product containers, make sure that the product labeling includes a clear symbol or markings indicating the chemical hazards present and write the words “hazardous waste” on the container.</li> <li>▪ Contents do not need to add up to 100% until it is submitted for pick-up (liquid or solid).</li> </ul>	
<p>40 CFR Part 262 EH&amp;S Policy</p>	<p><b>Are hazardous waste containers and contents segregated by compatibility?</b></p>	<p>Medium-2</p>
<p><b>Corrective Action:</b></p>	<p>Ensure waste is compatible with other wastes in the container. Segregate hazardous waste containers by chemical compatibility to reduce the risk of “dangerous” reactions.</p>	