



## RICE UNIVERSITY Environmental Health and Safety Laboratory Inspection Checklist

### Electrical Safety:

Relocate electrical cords (that present tripping hazards) or are pinched by door or other objects. <i>Cords must not cross walk areas unless they are taped or-fastened securely to the floor and must not run under doors or cabinets.</i>	
Install permanent wiring. <i>Do not use extension cords as permanent wiring. If permanent wiring is impossible use an electrical power surge strip with a fuse or circuit breaker.</i>	
Repair damaged electrical cords/outlets/plugs (pinched, cracked, burnt).	
Discontinue use of plugs without ground prongs.	
Discontinue use of three-way plugs.	
Remove extension cords above ceiling tiles	
Electrical panel and disconnects is accessible and labeled.	
Do not connect two or more extension cords, power strips, or combination to gain additional outlets or length. (Daisy chaining extension cords).	

### Fire/Life Safety:

Keep lab door closed and latched. <i>Reduces spread of fire/ smoke/ fugitive odors.</i>	
Remove any obstructions blocking fire extinguisher and/or pull station.	
Keep evacuation exit routes clear.	
Fire extinguisher: Missing/ needs mounting/ needs service. <i>EHS will take care of these issues.</i>	
Replace missing ceiling tiles. <i>Ceiling tiles are part of the-fire break and ventilation system. EHS will issue a work order if replacement is necessary.</i>	
Replace damaged/cracked tubing.	
Remove items that are stored within 18 inches of ceiling if room contains smoke detector or sprinklers.	

### Fume Hoods / Biological Safety Cabinet

Hoods have to be inspected within three years, and be in working order.	
Remove clutter in hood. <i>Clutter in a hood prevents a spill/splash hazard and can interfere with the airflow.</i>	
Pull down sash on fume hood to operating height or 14 inches. <i>Must be at or below marked level to operate correctly.</i>	
Remove electrical outlet strips in hood. <i>Power strips in a hood present a spark source and a potential fire hazards</i>	
Seal open containers in hood.	
Remove chemicals stored in hood. <i>Storing chemicals in a hood prevents a spill/splash hazard and can interfere with the airflow</i>	
Clean dirty fume hood. <i>Personal safety hazard and can damage hood</i>	

Remove loose paper and materials. <i>Any loose paper can be sucked into the hoods motor and damage the motor</i>	
Biohazard safety cabinet has not been inspected in more than one year. <i>Contact your Department Administrator to arrange certification of the biosafety cabinet</i>	
Excessive equipment should not be stored in hood.	
Fume hood should not be altered or modified from standard operation.	

### Waste Disposal

Seal open waste containers. <i>Close waste container with vented closures.</i>	
Dispose of old or unwanted chemicals / samples.	
Encapsulate sharps before disposal. <i>All sharps metal implements ( razors, needles, surgical blades, glass, etc.) must be discarded by placing them in a hard-sided container.</i>	
Dispose of waste as per Rice University's policies and procedures. <i>Do not allow volumes of waste to accumulate.</i>	
Glass waste disposal boxes should not contain liquids or hazardous materials (eg. Vial waste).	
Dispose of old lecture bottles.	
Treat (e.g. autoclave) biohazard waste before disposal.	
Do not recap used needles. <i>Carefully place uncapped needles into sharps container. Recapping needles exposes personnel to more opportunities for injury.</i>	
Use appropriate biological waste disposal container.	
Segregate chemical waste using appropriate waste stream. <i>Halogenated organic, non-halogenated organic.</i>	
All waste prepared for pickup must have an EHS waste sticker.	
Label all chemical waste containers with major components as soon as waste accumulation begins.	
Chemical containers must be triple rinsed and deface before disposal into general trash.	

### Personal Protective Equipment - Eyewash – Shower:

Remove any obstruction blocking shower and eyewash station.	
Provide an emergency shower within 100 feet travel distance.	
Provide continuous flow eyewash within 100 feet travel distance. <i>This means an eyewash that can produce a copious flow to both eyes for at least 15 minutes; a hand-held squeeze bottle eyewash is not acceptable.</i>	
The shower/eyewash has not been inspected in more than one year. <i>Facilities will test the shower/eyewash.</i>	
Provide appropriate Personal Protective Equipment. <i>Gloves, lab coats, eye protection, etc.</i>	
Lab personnel should wear Personal Protective Equipment at all times when working in the laboratory.	

### Safe Lab Practices

Limit eating or drinking to areas away from lab work areas.	
No smoking is permitted in any building area.	
Pour water into flood drains (where applicable). <i>This reduces any chance of sewer gas backing up into your lab.</i>	
Limit or eliminate the use of mercury thermometers.	

### Chemical Storage

Do not store hazardous liquid chemicals above eye level.	
Do not store food and chemicals in the same refrigerator.	
Remove flammable liquids stored in household refrigerator.	
Do not store chemicals on floor.	
Alphabetical storage should be used within same hazard class. <i>Segregate according to hazard class (corrosive, poison, reactive, flammable, etc.) before alphabetizing.</i>	
Segregate chemicals by hazard class.	
Minimize amounts of flammables.	
Label all containers in English.	
Perchloric acid must be stored separately from organic materials and other acids. <i>Perchloric acid is a strong oxidizing agent.</i>	
Nitric acid must be stored separately from organic materials and other acids. <i>Nitric acid is a strong oxidizing agent.</i>	
Picric acid must remain wetted. <i>Dry picric acid can be shock sensitive and presents a potential explosive hazard</i>	
Date chemicals when received and again when first open.	
Limit the storage of chemicals on the work bench.	
Store flammable liquids in a flammable storage cabinet.	
Dispose of expired peroxide forming compounds.	

### Warning Signs – Labels

Properly label secondary containers (eg. Wash bottles) to indicate contents.	
Replace missing or deteriorating labels.	
Post specific warning signs (biohazard, radioactive, etc.) on lab door.	
Label microwave “Lab use only” or “Food only”.	
Label refrigerator “Not safe for flammable storage” and/or “Food Only”.	
Generate a sign for each lab area using the EHS lab sign generator and ensure that all emergency contacts are up to date.	

### Hazard Communication – Material Safety Data Sheets (MSDS)

SDS for hazardous chemicals must be ready available within the work place.	
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Provide laboratory safety training to personnel. <i>You must provide lab-specific safety training to all personnel and it must be documented.</i>	
Create a lab safety folder to contain all safety materials.	

### Physical Hazards

Secure compressed gas cylinders.	
Apply safety cap to cylinders when not in use.	
When transporting a compressed gas cylinder, use a hand cart or dolly. Never roll one into place.	
Inspect vacuum pumps for proper operation.	
Store flammables away from sources of ignition (eg. Vacuum pumps and Bunsen burners)	

### Other

Provide a chemical spill kit.	
Provide a First Aid kit.	
General housekeeping needed.	
Discard all unnecessary storage (e.g. boxes, old equipment, etc.)	
Clear aisles from all obstructions.	
Change absorbent covering on work surfaces.	
Lock door when laboratory is unoccupied.	

### Training Requirements

General Lab Safety	
Bloodborne Pathogen	
Biosafety	
Radiation	
Laser	

### Approval for Regulated Research Activities

Select Agents and Toxins	
3B/4 Laser	
Radioactive Isotopes	
X Ray generating devices	
Storage of DEA regulated substances	

This checklist is not comprehensive. A laboratory is responsible for following all federal, state, local, and university guidelines and can be cited for any infraction of these guidelines.