

UCR Laboratory Safety Evaluation Checklist

Personal Protective Equipment (PPE)

- Long pants (legs and ankle covered) and closed-toed closed-heel shoes are worn in the lab.
- Safety glasses or chemical splash goggles are worn in the laboratory.
- Lab coats, appropriate to the activity, are worn.
- Properly fitted personal protective equipment (PPE) are used.
- Gloves are worn for laboratory procedures where skin contact with hazards may occur.
- Appropriate gloves are available for use with hazardous activities conducted within this lab.
- PPE contaminated with hazardous materials is disposed of appropriately.
- Lab workers were not observed wearing gloves while accessing common items, door knobs, elevator buttons, etc.
- Hazard assessment identified that specialty personal protective equipment (PPE) (i.e. UV/IR glasses, laser safety glasses, lab apron, cryogenic gloves) is needed and is properly being used.
- Face shields are available and used, as appropriate.
- Respirator identified in use with documentation of voluntary use or participation in campus respiratory protection program.

Laboratory Practices

- No evidence of eating or drinking in the laboratory where hazardous materials are being used or stored.
- Food and drinks are not stored with hazardous materials.
- No evidence of mouth pipetting.
- Furnishings used in laboratory are covered with a material that is easily decontaminated.
- Hand wash sink is available with soap and paper towels.
- Evidence suggests spills are promptly or properly cleaned.
- Good chemical hygiene practices are observed.
- General housekeeping in laboratory is maintained.
- Chemical work is conducted more than 6" from front of hood.
- Fume hood is free of clutter, not used for storage, and rear ventilation slots within the hood are not blocked nor covered.
- Lab workers are using a fume hood in good working conditions.

General Safety

- Heavy items and precariously situated items are not stored overhead.

- Large equipment/Shelving units are seismically anchored/restrained.
- Overhead shelving and storage is secured and prevents items from falling.
- Ceiling tiles/panels are provided and/or in good condition.
- Floors preclude slipping, tripping or falling.
- Moving parts of equipment are properly guarded.
- Laboratory ventilation pressure is negative with respect to corridors and offices.
- Safety hazards are not present.
- Power tools and/or shop equipment do not present a safety hazard.

Fire/Life Safety

- Fire alarm bells, horns, and/or strobes are not obstructed or tampered with.
- Aisles, exits, and/or hallways are not obstructed. Minimum clearance guideline of thirty-six (36) inches is being met.
- Materials are stored 2 feet or more below the ceiling in nonsprinklered areas of buildings or not less than 18 inches below sprinkler head deflectors in sprinklered areas of buildings.
- Appropriate fire extinguishers are available, as required.
- Fire extinguisher is fully charged, pin and/or security seal is not missing.
- Fire extinguisher is properly mounted.
- Fire extinguisher maintenance tag is present and up-to-date.
- Fire extinguishers are being visually inspected on a monthly basis.
- Fire-rated doors are not propped open.

Emergency Equipment/First Aid

- A plumbed emergency eyewash/safety shower or emergency eyewash is available within 10 seconds (approximately 55 feet).
- Access to emergency eyewash/shower is not obstructed.
- Annual test and monthly activation of emergency eyewash/shower has been completed and documented.
- Appropriate chemical and/or biological spill kit is available and is adequately supplied.
- Calcium gluconate paste for hydrofluoric acid (HF) exposure is available and not expired.

Hazard Communications

- Safety Placard is current in the last 12 months and posted at the entrance(s) with appropriate hazard communication, emergency contacts, and PI/Supervisor information.
- Refrigerators/freezers are labeled appropriately for the use of the refrigerator/freezer.
- Storage cabinets are clearly labeled as to contents.

- Common abbreviations used on container labels are identified in a prominent place in the lab.
- Appropriate safety information posted on equipment.

Chemicals

- Compatible chemicals are appropriately stored together.
- Chemical storage containers are in good condition.
- Corrosive and other potentially hazardous liquids are not stored above eye level.
- Containers of hazardous chemicals are not inappropriately stored on the floor.
- Flammable liquid storage outside of the flammable storage cabinet do not exceed 10 gallons.
- Flammables are not used in close proximity to ignition sources.
- Flammable liquids in 5-gallon cans are stored in the flammable cabinet.
- Time sensitive chemicals/peroxide formers stored appropriately.
- Pyrophoric chemicals are properly labelled, segregated and contained.
- Chemical inventory has been completed or updated within the past 12 months.
- Excess unused chemicals are not stored in the laboratory.
- Class 1A flammable liquids are not stored in containers greater than 1 gallon (4 Liters).

Compressed Gas

- Compressed gas cylinders are adequately secured.
- Valves of gas cylinders are capped when not in use.
- Compressed gas cylinders are properly labeled with contents and hazards.
- Highly toxic gas cylinders are stored in a gas cabinet, ventilated enclosure, or fume hood.
- Incompatible compressed gas cylinders are stored separately.

Containment Equipment

- Audible/visual alarm of fume hood is functional or visual airflow detector is working.
- Fume hood has been certified within the past year.
- Fume hood illumination is normal.
- Proper sash height is indicated or sash position does not exceeds approved working height, and is closed when not in use.
- Secondary containment is provided for oil-based vacuum pump.
- Flammable cabinets are self-closing.
- Flammable cabinets are marked *FLAMMABLE-KEEP FIRE AWAY*
- Refrigerators/freezers for flammable or pyrophoric chemicals are UL certified and approved for the storage of flammable materials.

- Vacuum systems used with hazardous materials are protected by HEPA/hydrophobic filters, as appropriate.

Electrical Safety

- A minimum clearance of thirty-six (36) inches in front of electric panel/breaker box is being maintained.
- Equipment does not have damaged cords; plugs or other condition that constitutes an electrical hazard.
- Major appliances/equipment are plugged directly into outlet.
- Extension cords are not being used as semi-permanent wiring.
- Extension cords or power strip are plugged directly into outlet.
- High voltage (>120V) equipment are clearly labeled.
- Ground Fault Circuit Interrupter (GFCI) protection are installed with receptacles that are within 6 feet of the sink.
- High voltage (>120V) equipment are properly guarded.
- Power strips near liquids have surge protection.
- 3-Prong plugs have not been modified to plug into 2-prong receptacle.
- Personnel, working on hard-wired equipment are trained in accordance to the Lock Out/Tag Out (LOTO) program.
- Electrical cords do not pose trip hazard.
- Junction boxes are closed.

Hazardous Waste

- Chemical waste containers are in good condition, free of contamination and compatible with waste.
- Hazardous waste container remains closed when not in use.
- Hazardous waste is properly disposed.
- Hazardous waste properly labeled.
- Hazardous wastes accumulated and disposed of within regulatory time limits.
- Sharps containers are properly labeled, as to contents, hazard, etc.
- Sharps container's contents is not filled past the fill line.
- Sharps are properly disposed in rigid, leak-proof container.
- Hazardous waste is stored in rigid, leak-proof secondary containment that is clean and free of debris.
- Universal waste is properly labeled/discarded/contained; under 1 year

Biosafety

- Research involving recombinant DNA and/or biological materials are listed in the approved Biological Use Authorization (BUA).

- Biosafety cabinet(s) has been certified within the last year.
- Biosafety cabinets (BSCs) are located away from doors, heavily traveled areas, and other airflow disruptions.
- Biohazard stickers are posted on equipment used with biohazardous materials.
- Biohazardous waste is properly disposed of in dual-tested compliant red biohazardous bags.
- Biohazardous waste is stored in a properly labeled, rigid, leak-proof secondary container with a tight-fitting lid.
- All researchers working with biological materials have completed the Biosafety training.
- All researchers working with bloodborne pathogens or other potentially infectious materials have completed Bloodborne Pathogens Online training.
- Exposure Control Plan is accessible to and reviewed annually by all researchers working with bloodborne pathogens, other potentially infectious materials, and/or aerosol transmissible diseases.

Controlled Substances

- A Controlled Substance Use Authorization (CSUA) is current and maintained.
- Controlled substances are not stored outside of approved storage locations.

Radiation/Lasers

- A current Laser Use Authorization is on file and current.
- All researchers working with lasers have completed the Laser Safety training.
- A Radiation Use Authorization (RUA) is current and approved.
- All researchers working with radiological materials and radiation-producing machines have completed Radiation Safety training.
- Radiological waste is properly disposed.

Approvals/Documents/Manuals/Plans

- UC Laboratory Hazard Assessment Tool (LHAT) is certified and all members are included on the roster.
- All group members have acknowledged the LHAT.
- All group members have completed PPE training within LHAT.
- Laboratory Safety Manual is easily accessible.
- The current Injury and Illness Prevention Plan (IPP) is available.
- Lab members are aware of how to obtain Safety Data Sheets for hazardous chemicals.
- Hazard-specific Standard Operating Procedures (SOPs) are available, approved (signed) by PI, and signed by lab members.
- Emergency Procedures poster is posted.
- Lab members are aware of how to report incidents and near misses.
- Field safety plans are completed and filed with the Field Safety Program.

Lab Safety Training

- Training on the Chemical Hygiene Plan is documented.
- Laboratory Site-specific Safety Checklist has been completed and documented.
- All researchers have completed “Laboratory Safety Fundamentals” training.
- All researchers in the lab have completed Hazardous Materials and Waste management training.
- All researchers have completed Fire Extinguisher training.
- Fume hood users know how to check their airflow monitor to verify that the hood’s airflow is functioning properly. Users know how to check the certification sticker for annual testing.
- Labs working with Hydrofluoric acid (HF) have completed all HF program requirements.