Inspect Checklist

Approvals/Documents/Manuals/Plans

☐ Chemical Hygiene Plan is available.
☐ Field safety plans are completed when working in the field.
☐ Emergency Procedure poster is posted.
☐ The Injury and Illness Prevention Plan (IIPP) is available.
☐ Laboratory Safety Manual is easily accessible.
☐ Laboratory Hazard Assessment is complete.
☐ All group members are listed on the Lab Hazard Assessment.
☐ Safety Data Sheets for hazardous chemicals are easily accessible.
☐ Hazard-specific Standard Operating Procedures (SOPs) are available and signed.
☐ Research involving biological materials are listed in the approved Biological Use Authorisation (BUA).
☐ A current Laser Use Authorisation is on file.
☐ A Carcinogen Use Authorisation (CUA) is current.
☐ Biosafety Manual is available.
☐ Exposure Control Plan is accessible to all lab members and reviewed annually.
☐ A Radiation Use Authorisation (RUA) is current and approved.
☐ A Controlled Substance Use Authorisation (CSUA) is current and maintained.

Lab Safety Training

☐ Fume hood users know how to check the airflow monitor to verify that the hood airflow is functioning properly. Users know how to check the certification sticker for annual testing.
☐ Fume hood users have completed specific fume hood training.
☐ Training on hydrofluoric acid (HF) first aid is documented.
☐ Laboratory Site-Specific Safety Checklist has been completed and documented.
☐ All researchers in the lab have completed Hazardous Waste Management training.
☐ 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 training.
☐ All researchers have completed Fire Extinguisher training.
All researchers working with lasers have completed the Laser Safety training.
All researchers have completed the Spill Prevention, Control and Countermeasure Plan (SPCC).
All researchers have completed the Laboratory Safety Fundamentals training.
Training on laboratory specific Standard Operating Procedures (SOPs) is documented.
Training on the Chemical Hygiene Plan is documented.
Training on the Illness and Injury Prevention Plan (IIPP) is documented.
All researchers using X-Ray diffraction units or electron microscope have completed X-Ray training.

**Personal Protective Equipment (PPE)**

- Lab coats, appropriate to the activity, are worn.
- Properly fitted lab coats are available.
- Face shields are used, as appropriate.
- Safety glasses or chemical splash goggles are worn in the laboratory.
- Appropriate gloves are available for use with hazardous activities conducted within the lab.
- Gloves are worn for laboratory procedures where skin contact with hazards may occur.
- Hazard assessment identified that specialty PPE is appropriate (eg. UV/IR glasses, laser safety glasses, cryogenic gloves, pyrophoric gloves, etc).
- Lab workers were not observed wearing gloves while accessing common items, door knobs, elevator buttons, etc.
- Long pants (legs covered) and closed-toe/heel shoes are worn in the lab.
- PPE contaminated with hazardous materials are disposed of appropriately.
- Respirator identified in use with documentation of voluntary use or participation in campus respiratory protection programme.
- A plumbed emergency eyewash/safety shower or emergency eyewash is available within 10 seconds.
- Access to emergency eyewash/shower is not obstructed.
- Annual test of emergency eyewash/shower has been completed and documented. Monthly activation of eyewash/shower is documented.
Lab Practises

- Hand wash sink is available with soap and paper towels.
- No evidence of eating or drinking in the laboratory where hazardous materials are being used or stored.
- Food is not stored with hazardous materials.
- No evidence of mouth pipetting.
- Staff is aware of how to report incidents and near misses.
- Good chemical hygiene practices are observed.
- General housekeeping in laboratory is maintained.
- Chemical work is conducted more than 6 inches from the front and back of the hood.
- Fume hood is free of clutter, not used for storage, or rear ventilation slots within the hood is not blocked or covered.
- Lab workers are using a hood in good working condition.
- Non-assistive animals and plants not associated with the work being performed are not permitted in the laboratory.

General Safety

- Moving parts of equipment are properly guarded.
- Furnishings used in laboratory are covered with a material that is easily decontaminated.
- Vacuum systems (both house systems and stand-alone vacuum pumps) are fitted with traps and/or protection (HEPA/hydrophobic) filter, if required.
- Sharps are stored and disposed of in appropriate rigid, leak-proof containers.
- Evidence suggests spills are promptly or properly cleaned.
- Ceiling tiles/panels are in good condition.
- Floors preclude slipping, tripping, or falling.
- Laboratory ventilation pressure is negative with respect to corridors and offices.
- Laboratory sinks, delivering non-potable water, are labelled “Industrial Water – Do Not Drink”.
- Overhead storage is secured.
- Shelves have restraints to prevent items from falling.
- Heavy items and precariously situated items are not stored overhead.
- Large equipment is seismically anchored/restrained.
Fire/Life Safety

- Fire alarm bells, horns, and/or strobes are not obstructed and could not hamper proper operation or reduce the sound.
- Items are stored in a manner such that the minimum clearance of 18 inches of a ceiling with sprinklers.
- Aisles, exits, and/or hallways are not obstructed (minimum clearance guidelines of 36 inches is being met).
- Fire extinguisher is properly mounted.
- Fire extinguisher maintenance tag is present and up-to-date.
- Fire extinguishers are visually inspected on a monthly basis.
- Fire extinguishers are available as required.
- Fire extinguishers are fully charged, pin and security seal are not missing.
- Fire rated doors are not propped open.

Emergency Equipment/First Aid

- Calcium gluconate paste for hydrofluoric acid (HF) exposure first aid is available.
- Calcium gluconate paste has not expired.
- First aid kit is available and the items are not expired.
- Appropriate chemical/biological spill kit is available.
- Spill kit materials are adequately supplied.

Hazard Communication

- Pyrophoric chemicals are properly labelled.
- Common abbreviations used on container labels are identified in a prominent place in the lab.
- Storage cabinets are clearly labelled as to contents.
- Refrigerators/freezers are labelled appropriately for the use of the refrigerator/freezer.
- Safety Placard is current and posted at the entrance(s) with appropriate hazard communication, emergency contacts, and PI/Supervisor information.
- Biosafety door sign is posted when agents are in use or in storage.
- Machine shop equipment does not present a safety hazard.
- Biohazard stickers are posted on equipment used with biological hazards.
Carcinogens
- Access to designated carcinogen work and storage areas is properly marked or controlled.
- California-regulated carcinogen inventory is reported to EH&S.
- Standard operating procedure(s) specific to the carcinogen(s) in use are available and being followed.
- California-regulated carcinogen inventory is maintained in Chemical Inventory.

Chemicals
- Expired or unneeded chemicals are not stored in the laboratory.
- Chemical storage containers are in good condition.
- Chemicals are not stored above eye-level.
- Containers of hazardous chemicals are not stored on the floor.
- Flammable liquid storage in the lab does not exceed allowable quantities as determined by the Campus Fire Marshall.
- Flammable liquid storage outside of the flammable storage cabinet does not exceed 10 gallons.
- Flammables are not stored in large containers.
- Flammables stored in "laboratory safe" refrigerator/freezer.
- Compatible chemicals are appropriately stored together.
- Combustible materials are not stored with flammable chemicals.
- Time sensitive chemicals/peroxide formers stored appropriately.
- Pyrophoric chemicals are segregated or contained.
- Flammables are not used in close proximity to ignition sources.
- Chemical containers are clearly labelled with contents and primary hazard(s).
- Flammable liquids in 5 gallon cans are stored in the flammable cabinet.
- Chemical Inventory has been completed or updated within the past 12 months.

Containment Equipment
- Audible/visual alarm is functional or visual airflow indicator is working.
- Fume hood has been certified within the past year.
- Fume hood illumination is functional.
- Proper sash height is indicated or sash position does not exceed approved working height, and is closed when not in use.
- Appropriate safety information is posted on equipment.
Secondary containment is provided for vacuum pump.
Biosafety cabinet(s) have been certified within the last year.
Biosafety cabinets are located away from doors, heavily travelled areas, and other airflow disruptions.
Flammable cabinets are self-closing.
Flammable cabinets are marked “FLAMMABLE – KEEP FIRE AWAY”.

**Compressed Gas**
- Compressed gas cylinders are adequately secured.
- Oxygen and combustible cylinders are not stored together.
- Valves of gas cylinders are capped when not in use.
- Compressed gas cylinders are properly labelled 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.

**Controlled Substances**
- Controlled substances are stored securely.
- Controlled substances are accurately inventoried.

**Electrical Safety**
- A minimum clearance of 36 inches in front of electrical 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 outlets.
- Extension cords are not being used as semi-permanent wiring.
- Extension cords or power strips are plugged directly into outlets.
- Ground Fault Circuit Interrupter (GFCI) protection is installed with receptacles that are within 6 feet of the sink.
- High voltage (>120 V) equipment is clearly labelled.
- High voltage (>120 V) equipment is properly guarded.
- Power strips near liquids have surge protection.
- 3-prong plugs have not been modified to plug into 2-prong receptacles.
Personnel working on hard-wired equipment are trained to the Energy Isolation - Lock Out/Tag Out (LOTO) programme.

Electrical cords do not pose trip hazards.

Junction boxes are closed.

**Hazardous Waste**

- Biohazardous waste in red biohazardous bags is properly disposed.
- Biohazardous waste is properly disposed of in red biohazard bags.
- Biohazardous waste bag is stored in a rigid, leak-proof container with a tight fitting lid.
- Biohazardous waste is properly labelled.
- Biohazardous waste secondary containment is used.
- Chemical waste containers are in good condition and compatible with waste.
- Hazardous waste container or secondary containment is free of contamination.
- Hazardous waste container remains closed when not in use.
- Hazardous waste is properly disposed.
- Hazardous waste is properly labelled.
- Hazardous waste is disposed of within regulatory time limits.
- Radiological waste is properly disposed.
- Sharps containers are properly labelled as to contents, hazard, etc.
- Sharps container contents are not filled past the fill line.
- Sharps are properly disposed in an appropriate sharps container.
- Hazardous waste is stored in rigid, leak-proof secondary containment.
- Waste container tight fitting lid is in place.
- Universal waste is properly labelled/discarded/contained under 1 year.