SAFETY AND COMPLIANCE INSPECTION CHECKLIST

Department:
Building/ Room:
Inspection Date:
PI:
Laboratory Manager:
Department Safety Coordinator:
EHS Team Member(s):

HAZARD COMMUNICATION

1. Laboratory hazard communication complies with the OSHA Hazard Communication Standard.

A. ☐ Laboratory Hazard Assessment is complete and up-to-date (initial or reviewed within 1 yr.). https://forms.office.com/r/y0FYF3Jg8e
B. ☐ Laboratory sign in posted in color on all entrances.
C. ☐ Employees are aware of how to access Safety Data Sheets (SDSs) for all chemicals.
D. ☐ Laboratory Supervisors/PI and Managers have completed a PPE assessment through https://www.k-state.edu/safety/docs/KSU-PPE-Hazard-Assessment-Certification.pdf

☐ **In Compliance** ☐ **Action Required** ☐ **Not Applicable**

Inspector Notes:

Laboratory Follow-Up:

☐ **Inspector Confirmation of Corrective Action** **Date:**

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CHEMICAL SAFETY

1. Chemical containers, including compressed gas cylinders, are adequately labeled.

A. ☐ Labels present, legible, and complete.

B. ☐ Full chemical names or abbreviation with reference sheet in laboratory.

C. ☐ Chemicals are dated from when they are received and again when opened. If date of acquisition or opening is unknown, then a back-dated time to the oldest known date for a reference point is labeled.

2. Chemicals are stored in a safe and proper manner.

A. ☐ Segregated by chemical compatibility.

B. ☐ Chemicals are stored in rated cabinets and fridges/freezers when required.

C. ☐ Smallest feasible volume of chemicals stored in laboratory for operations.

D. ☐ Chemicals that may become hazardous upon prolonged storage are dated, tested at the appropriate interval(s), and have not been stored for an excessive period.

E. ☐ Controlled substances are stored in a locked cabinet or safe.

F. ☐ Corrosive, liquid, and heavy chemicals that pose a risk of injury, if accidently exposed, are stored on the lower shelving/cabinets (as available) in the laboratory.

G. ☐ Any flammable chemicals in excess of 10 gallons are stored properly in a rated flammable storage cabinet or fridge/freezer.

H. ☐ Any flammable chemical not in immediate use is stored in a rated flammable storage cabinet or fridge/freezer.

I. ☐ Unused/unwanted chemicals are labeled and are in process of being properly disposed of through EHS

3. Compressed gas cylinders are properly stored and maintained.

A. ☐ Toxic, corrosive, or pyrophoric gases are used/stored in a fume hood or gas cabinet.

B. ☐ Compressed gas cylinders are properly restrained.

C. ☐ Tubing, regulators, and other ancillary equipment are in good condition and appropriate.

D. ☐ Valve caps are replaced when cylinders are not in immediate use.

4. Cryogenic cylinders and dewars are properly stored and maintained

A. ☐ Free from ribbing, excessive ice buildup on tank, cracked gaskets, excessive rust, etc.

B. ☐ Cryogenic cylinder pressure relief valve is not plugged or compromised.

C. ☐ Cryogenic cylinder blow-out disc is not plugged or compromised.

5. Emergency shower and eyewash station are present, available, and maintained.

A. ☐ Immediately available and unobstructed (within 55ft/ 10 seconds of the hazard).

B. ☐ Eyewash stations have been tested weekly with testing documented.

C. ☐ Safety showers have been tested at least bi-annually with testing documented.

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D. ☐ Eyewash provides continuous-flow (plumbed), hands-free, and is ANSI Z358.1 compliant.

6. Special considerations

A. ☐ Chloroform should be used within 1 year of purchase or 6 months after opening, because it can form phosgene gas upon decomposition.

B. ☐ Perchloric acid is stored away from organic materials (including other chemicals, wooden shelves, and paper lining) and other acids. Storage in secondary containment is strongly recommended.

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BIOLOGICAL SAFETY

1. Documentation is updated and complete.

A. ☐ Room is authorized for current use of registered materials by IBC.
B. ☐ Biohazard signage is posted on the door.
C. ☐ Training records are documented.
D. ☐ Project-specific SOPs are available in the laboratory.
E. ☐ Agent-specific fact sheets are available in the laboratory.
F. ☐ Inventory control process is in place.
G. ☐ Biohazard symbol sticker is placed on all equipment that is used with biohazardous materials (e.g., centrifuge, refrigerator, incubator, etc.)

2. Laboratory practices support biosafety and biosecurity.

A. ☐ Hand washing sink and supplies are available.
B. ☐ Access to the laboratory is limited.
C. ☐ The lab is designed to be easily cleaned.
D. ☐ Benchtops are impervious to water and chairs are covered with non-fabric material.
E. ☐ Appropriate PPE is readily available.
F. ☐ Biosafety cabinet certification is current.
G. ☐ Broken glass is disposed of correctly.
H. ☐ Sharps are stored correctly.
I. ☐ Proper disinfectants are available – labeled with expiration date; expired are not in use.
J. ☐ Lab coats and scrubs are laundered properly.
K. ☐ A biological spill kit is available.
L. ☐ Eyewash stations are tested weekly and testing is documented.
M. ☐ Vacuum traps are protected with in-line HEPA filters.
N. ☐ Only animals or plants associated with the work are present in the laboratory.
O. ☐ Bunsen burners or other open flames are not used in biosafety cabinets.

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ELECTRICAL SAFETY

1. Power strips and extension cords are used in a compliant, safe manner.

A. ☐ Plugged directly into a permanently installed electrical outlet (no daisy chaining).
B. ☐ Extension cords are restricted to temporary use (< 90 days).
C. ☐ UL or FM approved and used solely for low-power operations.
D. ☐ Cords are protected from damage and are in good repair.
E. ☐ Power strips and extension cords are not overloaded and are fuse-protected.
F. ☐ Three-way plugs and multi-plug adapters are not in use.

2. Electrical equipment is used in a compliant, safe manner.

A. ☐ Cords are protected from damage and are in good repair.
B. ☐ Equipment and appliances are UL or FM approved and have not been altered.
C. ☐ Equipment with high voltage (> 600 V) or equipment with exposed live parts of > 50 V is guarded against accidental contact and labeled with an electrical shock hazard warning.

3. Electrical outlets are protected against shock or electrocution.

A. ☐ Ground Fault Circuit Interrupters (GFCI) are installed on outlets/circuits in damp/wet locations.
B. ☐ Outlets in damp/wet locations are protected by watertight housings.
C. ☐ Unused openings in electrical panels, boxes, and outlets are closed with appropriate covers, plugs, or plates.

4. Electrical panels, breaker boxes, and emergency shut-off controls are accessible.

A. ☐ Three feet of clearance is maintained in front of electrical panels and breaker boxes.
B. ☐ Emergency shut-off controls for equipment are unobstructed.

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LABORATORY SECURITY

1. Laboratory security is observed.

A. ☐ The laboratory door is locked when the laboratory is unattended/ unoccupied.
B. ☐ Laboratory storage, if present, is locked.
C. ☐ Visitors are escorted in the laboratory space.
D. ☐ Laboratory access requirements noted on the laboratory sign are observed.

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EMERGENCY RESPONSE & FIRE AND LIFE SAFETY

1. The following emergency response preparedness considerations are observed:

A. ☐ Posted evacuation routes, designated muster points, and shelter areas for severe weather.
B. ☐ Exits are clearly marked when not immediately apparent.
C. ☐ A clear walking path of 3’ is maintained in the laboratory.
D. ☐ Laboratory doors and corridors are unobstructed.
E. ☐ Means of egress are maintained free of all obstructions or impediments.
F. ☐ Staff know the locations of fire pull stations, fire extinguishers, fire blankets, emergency exits.
G. ☐ Fire alarm pull stations and fire strobes are unobstructed.
H. ☐ 18" of clearance maintained from the ceiling in sprinklered spaces.
I. ☐ 24" of clearance is maintained from ceiling in non-sprinklered spaces.
J. ☐ Fire-rated doors are kept shut (not propped open).

2. Fire extinguishers are present, maintained and appropriate for the operations.

A. ☐ Fire extinguishers are present.
B. ☐ Fire extinguishers are of the appropriate class.
C. ☐ Fire extinguishers are mounted in their intended cabinet or bracket and are accessible.
D. ☐ Fire extinguishers are fully charged (have not been discharged).
E. ☐ Fire extinguishers have been inspected monthly and annually.

3. Spill kits are maintained for the materials in the laboratories.

A. ☐ A chemical spill kit is present where chemicals are used or stored.
B. ☐ A biological spill kit is present where biological hazards are used or stored.

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LABORATORY BEST PRACTICES AND ENGINEERING CONTROLS

1. Laboratory safety best practices are followed.

A. ☐ No evidence of food or drink consumption in areas where chemicals are used or stored.
B. ☐ Mercury thermometers are not used in the laboratory.
C. ☐ Handwashing sink is available and handwashing supplies are available.
D. ☐ General housekeeping is observed: free of clutter; work surfaces routinely cleaned.
E. ☐ Effective pest management is observed.
F. ☐ Furnishings and equipment are stable, designed for the intended load, and secured.
G. ☐ Integrity of building systems (electrical, HVAC, plumbing, etc.) is intact and not compromised.
H. ☐ Laboratory ceiling tiles are not missing or damaged.
I. ☐ Refrigerators, freezers, and microwaves are clearly labeled “Chemicals Only”.
J. ☐ Machines and equipment have proper guarding to prevent injury.
K. ☐ Defective equipment is labeled as “DO NOT USE”. Defective equipment must be repaired, replaced, or submitted for surplus in a timely manner.

2. Administrative safety practices:

A. ☐ Room is only used for authorized materials/uses.
B. ☐ All laboratory staff, including the PI, have completed EHS-required safety training.
C. ☐ Laboratory-specific protocols and procedures are available.
D. ☐ Laboratory staff know how to access the University Safety documents (LSM, CHP).
E. ☐ Laboratory staff know how and when to report accidents, incidents, or near-misses on KSU EHS website. https://www.k-state.edu/safety/reporting/incident-reporting-form.html
F. ☐ Class IIIb and Class IV laser are registered with EHS.

3. Fume hoods and biosafety cabinets are maintained and used in a manner consistent with their design.

A. ☐ Inspected (FH) or certified (BSC) within the past year.
B. ☐ Certification or inspection sticker is present and legible.
C. ☐ Not cluttered / do not have excessive materials stored.
D. ☐ Cabinet has not been compromised.
E. ☐ Heated perchloric acid operations are restricted to a wash-down hood.
F. ☐ Sash is closed except when immediately working at the hood
G. ☐ During work, the sash is closed to the indicated working height.
H. ☐ Engineering controls are available, appropriate, effective, and consistently used.
I. ☐ Equipment does not block the airflow.
J. ☐ Chemicals are not stored in fume hood.
K. ☐ Loose paper (paper towels, Kim wipes, notebook paper) is not present in fume hood.

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L. ☐ No use of perchloric acid (70% or greater, or heated) in a regular chemical fume hood which can lead to formation of explosive peroxides in the duct work.
M. ☐ Perchloric acid of 70% or greater concentration or when heating is used only in a perchloric acid approved fume hood that is in proper working condition, with a functioning wash down system.
N. ☐ No items are hanging on fume hood control knobs.
O. ☐ Power strips are not used in fume hoods.

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HAZARDOUS WASTE MANAGEMENT

1. Waste containers are appropriately labeled, managed, and are compatible with contents.

A. ☐ Marked “Hazardous Waste”.
B. ☐ Full chemical name of waste (no abbreviations or formulas).
C. ☐ Start date of waste container fill.
D. ☐ Collection containers are in good condition.
E. ☐ Collection containers are compatible with contents.
F. ☐ Chemical waste is disposed of through EHS (no evidence of improper disposal).
G. ☐ Abandoned chemicals are not present (e.g., unknown, unlabeled, unwanted, unneeded).
H. ☐ All treated and untreated hazardous waste has secondary containment.
I. ☐ Containers are closed when not immediately adding waste.
J. ☐ Full containers have pick-up requests submitted.
K. ☐ Waste is stored in same area as generated and does not exceed accumulation limits.

2. Sharps are properly maintained.

A. ☐ Stored in a rigid, leak-proof container.
B. ☐ Needles are not re-capped.
C. ☐ Re-useable sharps are secured.
D. ☐ Dedicated broken glassware disposal container.
E. ☐ Pipette tips are collected in hard-walled container lined with plastic bag for EHS pick-up. Pipette tips are considered sharps and may puncture bags.

3. Waste stream special considerations:

A. ☐ Solder waste and solder-contaminated materials are collected and tagged for EHS pickup.
B. ☐ Radioactive wastes are stored in a container with the isotope name, trefoil symbol, and “Caution Radioactive Material”.

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PERSONAL PROTECTIVE EQUIPMENT

1. Personal protective equipment is available, accessible, and appropriate.
A. ☐ PPE is available in the laboratory for all operations conducted.
B. ☐ Laboratory staff consistently use PPE.

2. Standard attire is appropriate for the laboratory.
A. ☐ Clothing covers the torso and legs.
B. ☐ Closed-toe shoes are worn.

3. Respiratory protection program guidelines are met, when applicable.
A. ☐ An exposure evaluation has been conducted.
B. ☐ All individuals wearing respirators are enrolled in the EHS Respiratory Protection Program.
C. ☐ Annual fit testing has been completed.
D. ☐ Training has been completed.

4. Hearing protection program guidelines are met, when applicable.
A. ☐ A hearing assessment has been conducted of the space/ activities.
B. ☐ All individuals wearing hearing protection are enrolled in the EHS Hearing Protection Program.
C. ☐ Training has been completed.

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HOUSEKEEPING

1. General laboratory cleanliness and order is well maintained.

A. ☐ Items are not stored directly on the floor.

B. ☐ Flooring is free of electrical cords, cables, and/or hoses that present tripping hazards.

C. ☐ Laboratory benchtops are maintained free of clutter.

D. ☐ Laboratory supplies and chemical/biological/radiological materials are stored properly when not in immediate use.

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PICTURES OF LABORATORY FINDINGS

Section (i.e. PPE 3C)	Picture	Section (i.e. PPE 3C)	Picture

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