

## AGRILIFE ENVIRONMENTAL HEALTH AND SAFETY LABORATORY SAFETY INSPECTION CHECK LIST

### 1. **Electrical Safety (NFPA Code):**

- Improper use of extension cords. Extension cord used to provide electrical power to laboratory equipment..
- Improper use of extension cords. Extension cords are for temporary use only (*8hr workday or less*).
- Improper use of extension cords. Extension cords run above ceiling or under carpet or other similar materials.
- Improper use of extension cords/power strips. Extension cords and power strips must be plugged directly into a wall receptacle (*no daisy chaining permitted*).
- Repair electrical cords/outlet/plugs not in good condition (*pinched, cracked, burned*).
- Multiple adapter does not have surge protection.
- Non-GFCI receptacle within 6' of wet area.
- Electrical panel access is obstructed.
- Electrical panel missing blanks.

### 2. **Fire/Life Safety (NFPA Code):**

- Lab door open.
- Evacuation/exit routes obstructed. (*44" for primary egress routes, 32" for secondary egress routes*)
- Fire extinguisher access is obstructed.
- Fire extinguisher not wall mounted.
- Fire extinguisher needs service or annual inspection.
- Bunsen burner tubing deteriorated.
- Combustible storage within 24" of ceiling.
- Obstructed fire sprinkler heads (*storage within 18" of sprinkler head*).
- Damaged, missing or out of place ceiling tiles.

### 3. **Physical Hazards:**

- Tripping hazards present (*electrical cords, hoses, computer cables, missing/broken floor tiles, etc.*).

- Improperly secured compressed gas cylinders. (*Secure individually with sturdy strap or chain*)
- Gas cylinder safety cap missing.
- Vacuum pump missing belt and pulley guard.
- Vacuum pump leaking oil.
- Vacuum pump venting exhaust into lab.
- Unprotected glassware under vacuum pressure. (*Tape glassware under vacuum pressure [Rotovap or glass Dewars]*).
- Glass items on floor. .

**4. Safe Lab Practices:**

- Unlocked lab. (*Lock lab doors when no one is present*)
- Unlocked cabinets. (*Lock cabinets storing hazardous materials outside of the laboratory*)
- Personnel eating, drinking, or applying cosmetics in laboratory.
- Food and lab utensils cleaned in same sink.
- Inadequate hand washing facilities (*e.g. soap, towels, running water*).
- Unsecured or recapped sharps.
- Empty bottles not defaced.
- Housekeeping needed.

**5. Chemical Storage (NFPA Code, TDSHS HazCom Act):**

- Chemicals stored above eye level (*hazardous liquid chemicals*).
- Chemicals stored on floor.
- Chemicals stored on bench top when not in use.
- Faulty containers. (*Repackage or dispose of chemicals in faulty containers*)
- Improper accumulation of chemicals. (*Dispose of old or unneeded chemicals not in use*)
- Improper segregation of chemicals. (*Segregate chemicals by hazard class, segregate acids from bases and organics from inorganics*)
- Improper dating of chemicals (*date chemicals when received and again when*

opened).

\_\_\_ Improper dating/storage of chloroform (*chloroform should be used within a year of purchase or 6 months of opening*).

\_\_\_ Improper dating/storage of peroxide forming or oxidizing chemicals (*ethyl ether, THF, perchloric acid, cyclohexene, butadiene, isopropyl ether and dioxanes should be used within a year of purchase or 6 months of opening*).

\_\_\_ Improper storage of perchloric acid (*store away organic materials and other acids*).

\_\_\_ Chemicals stored with food or drink.

\_\_\_ Improper storage of flammables. (*Store in flammable storage cabinet*)

\_\_\_ Flammables stored in household refrigerator/freezer or walk in cooler.

\_\_\_ Duct on flammable storage cabinet made of combustible material.

\_\_\_ Improper venting of flammable storage cabinet. (*If vented, cabinet should not vent directly to the outside and should vent from the bottom of the cabinet with make-up air supplied from the top of the cabinet*)

**6. Personal Protective Equipment/Eyewash/Showers (ANSI Standards, TDSHS HazCom Act):**

\_\_\_ Safety shower/eyewash station access obstructed.

\_\_\_ Safety shower/eyewash station not tested. (*Safety showers should be tested annually, eyewash stations should be flushed routinely*)

\_\_\_ Inadequate eyewash station (*squeeze bottle eyewash is not adequate, does not conform to ANSI Z358.1*).

\_\_\_ Improper work attire or personal protective equipment.

**7. Fume Hood/Biological Safety Cabinet (BSC):**

\_\_\_ Fume hood requires annual inspection. (*Fume hoods must be inspected/certified for use annually*)

\_\_\_ BSC requires annual certification. (*BSCs must be certified for use annually*)

\_\_\_ Fume hood sash open when unattended.

\_\_\_ Electrical strips in fume hood.

\_\_\_ Open containers within fume hood/BSC while unattended.

\_\_\_ Chemicals stored in fume hood/BSC while unattended.

\_\_\_ Cluttered/dirty fume hood/BSC.

\_\_\_ Obstruction to airflow in fume hood/BSC. (*Equipment should be stored at least 4" from*

*face of hood, 6" of back of hood, and elevated 2-4" off the floor of the hood)*

Loose paper in fume hood/BSC.

Items stored on fume hood controls.

Items on front grill of biological safety cabinet.

Bunsen burner use in BSC.

**8. Laser Safety:**

Laser not registered (*class IIIb and class IV*).

No laser protective eyewear.

No laser training.

**9. Cryogenic Cylinder Safety:**

Cryogenic cylinder due for service.

Pressure release valve removed or otherwise compromised.

Blow-out disc removed or otherwise compromised.

**10. Warning Signs/Labels (TDSHS HazCom Act):**

Improper labeling of secondary containers. (*All containers should be labeled to indicate contents, even those that contain water or are part of equipments or experiments*)

Missing or deteriorated labels on primary containers.

Emergency contact information not posted.

Inadequate signage. (*Post specific warning signs [bio-hazard, radioactive, etc.] on lab door*)

Unlabeled microwave. (*Label as "Lab Use Only" or "Food Only"*)

Unlabeled refrigerator. (*Label as "Not Safe for Flammable Storage", "Lab Use Only" or "Food Only"*)

Unlabeled freezer. (*Label as "Not Safe for Flammable Storage", "Lab Use Only" or "Food Only"*)

**11. Waste Disposal (EPA/ TCEQ Regulations):**

Uncapped waste.

Old or out of date chemicals present.

Improper disposal of metal sharps. (*All sharp metal implements [razors, needles,*

*surgical blades, etc.] must be discarded by placing them in a hard-sided container and encasing them in a hard substance, e.g., concrete, plaster, paraffin, polymerized resin, etc.)*

\_\_\_ Improper disposal of glass. (*Glass should be placed in a cardboard box, which can be securely sealed with tape before disposal*)

\_\_\_ Old lecture bottles present.

\_\_\_ Improper labeled waste (*Label waste container "Hazardous Waste" and list contents*).

\_\_\_ Secondary containment required or

[**NFPA** - National Fire Protection Association, **EPA** - Environmental Protection Agency, **TCEQ** - Texas Commission on Environmental Quality, **ANSI** - American National Standards Institute, **TDSHS** - Texas Department of State Health Services]