

Employee Name: _____ Lab PI: _____

DEPARTMENT OF PLANT PATHOLOGY, ENTOMOLOGY & NEMATOLOGY ANNUAL REFRESHER SAFETY TRAINING

The Departments of Plant Pathology, Entomology and Nematology, pursuant to State Law, has instituted an **Injury and Illness Prevention Program [IIPP]**. This program is designed to help mitigate health related problems associated with the work place. In general, it is the Department's responsibility to provide information and resources so that you, the employee, can perform your job in a safe manner. (see E. H. & S. SafetyNet #33 and others listed below)

Your responsibility is to:

1. Participate in safety training sessions.
2. Study, learn, and understand the hazards associated with your job and the appropriate health and safety precautions, protective equipment, and emergency measures for your workplace.
3. Follow all rules, safety guidelines and established safe work practices.
4. Report unsafe work practices or conditions to your supervisor or Department Safety Coordinator.
5. Offer suggestions and/or comments to improve and maintain a safe work environment.

This check list must be completed with your supervisor as you take a "walk through" of your work area. Make certain that you have identified the following safety features and that you have been introduced to following general safe lab practices. Lab orientation will be followed by training on safety procedures that you will need for your specific job.

I. EMERGENCY PROCEDURES

- Access & Egress – Evacuation Procedures.** Location of exits noted.
 - Importance in maintaining clear exits, doors and aisle ways.
 - Train to lab specific **Emergency Action Plan**.
 - Primary and secondary assembly areas noted
 - Evacuation of disabled explained (if applicable)
 - Train location and activation of fire alarm pull station
- Fire extinguishers.** Location(s) noted.
- Emergency Eye Wash and Showers.** Location(s) and operation. (SafetyNet #66)
- General Earthquake Safety, Bomb Threat, Active Shooter, and Disaster Procedures**
 - Earthquake: Shelter in place, watch for falling objects
 - Attend an active shooter training workshop: <https://police.sf.ucdavis.edu/active-shooter-survival-workshop>
 - UC Davis Police Department
 - o Cell phone registration recommended at: <https://warnme.ucdavis.edu/>
- Chemical spill kits.** Location(s) noted. SafetyNet #13 posted in the lab. SafetyNet #127 (if applicable).
 - Procedures regarding response to an accidental spill should be described
 - Neutralization of strong acid or strong base
 - Mercury (SafetyNet #16)
- First aid kit.** Location noted, components described and use explained.
- Emergency Response**
 - Obtain medical care – **Call 911**
 - Phone location noted and dialing instructions covered
 - Emergency Response Guide use explained and location noted
 - Report injury or symptoms of illness to supervisor within 24 hours.
 - Report all serious work related injuries or illnesses to EH&S within 8 hours 752-1493 or after hours at 752-1230**
 - o **Explain serious injury or illness (amputation, surgery, hospitalization > 24 hours, death)**

☐ Safety Documents

- ☐ Safety Data Sheets (formerly material safety data sheets, MSDS) , importance and sections explained. Employees must read and understand all sections of Safety Data Sheets (MSDS) before working with any chemicals.
 - Please review the SDS from the manufacturer if available. Here are a few SDS sources:
 - Millipore Sigma - <https://www.sigmaaldrich.com/united-states.html>
 - Thermo Fisher - <https://www.fishersci.com/us/en/home.html>
 - <https://ehs.ucop.edu/sds/#/>
- ☐ Location of lab safety training materials and records
 - Employee must read and understand Chemical Lab Safety Manual/Chemical Hygiene Plan at: <https://safetyservices.ucdavis.edu/article/laboratory-safety-manual>
- ☐ Explain the importance and confirm deadlines for completing UC Laboratory Safety Fundamentals course, the Laboratory Hazard Assessment Tool, Initial Site Specific Laboratory Safety training, Site Specific Annual Refresher Laboratory Safety training, Greenhouse and Field Safety training (at: <https://greenhouses.sf.ucdavis.edu/greenhouse-safety>), Heat Illness Prevention training, any Specialized Safety training necessary (biosafety cabinet, safe driver, radioactive materials, cryogenic liquids, etc.)
 - Consult [UC Davis Training Matrix for Laboratory Personnel](#) to determine appropriate coursework
- ☐ Employee must read, understand, and sign the Injury and Illness Prevention Plan, the Emergency Action Plan
- ☐ Standard Operating Procedures (protocols) for all hazardous procedures performed in lab, Chemical Standard Operating Procedures for all hazardous chemicals in lab
 - Location noted, importance, applicable signatures, and procedures explained

NOTE: new employees cannot work in lab, greenhouse, or field until all applicable safety training is complete

II. STANDARD OPERATING PROCEDURES FOR LABORATORIES

- ☐ **Introduction to the work area, safety features and safe working practices.**
 - ☐ Personal protective equipment (PPE) Location and reassignment of existing equipment or PPE voucher and recharge # to room 1139 Haring Hall for new PPE's
 - Lab coat and safety eye wear to be worn when working with or within 3 meters of someone working with hazardous materials
 - Lab coat types and uses explained (flame resistant, barrier, standard)
 - Safety eyewear types and uses explained (face shield, eye goggles, safety glasses)
 - Gloves how to do on and off, types and uses explained, online glove selection guide (safety net #50)
 - Other PPE's location noted and uses explained (autoclave gloves, leather gloves, knee pads, aprons, etc.)
 - ☐ Fume hoods, location noted controls and equipment explained (SafetyNet #35, UC Laboratory Safety Fundamentals)
 - ☐ Laminar Flow Hoods
 - Clean/Sterile Benches, locations noted instructions for use provided
 - Biosafety Cabinets, specialized training certification required

II. STANDARD OPERATING PROCEDURES FOR LABORATORIES

- ☐ **Introduction to the work area, safety features and safe working practices.**
 - ☐ Chemical storage & handling [including transport]. (SafetyNet#33, #42)
 - ☐ Flammables
 - ☐ Corrosives and contact hazardous chemicals (Phenol, SafetyNet #22)
 - ☐ Reactive and incompatible chemicals (SafetyNet #4)
 - ☐ Carcinogens, Reproductive toxins, Acutely toxic chemicals and chemicals of unknown toxicity, (details for Ethidium Bromide, Sodium Azide, etc.)
 - ☐ Explain proper containment, handling and labeling of chemicals; emphasize the need to

label solutions properly (full chemical name, manufacturer, known hazards, date prepared)
 Explain the Globally Harmonized System (GHS); H-codes and pictograms for chemical labels <https://www.sigmaaldrich.com/safety-center/globally-harmonized.html>

- Hazardous waste. Procedures outlined and explained. Autoclaving and double containment explained. Labeling procedures explained (school, department, lab PI, room #, contact phone #, date)

NOTE: Plant Pathology and Nematology do not use the red biohazard waste bags, only clear or orange autoclave bags are allowed for disposal of hazardous waste from plant material

- Chemical Waste, Sharps and Broken Glass containers (SafetyNets #3, 43, 110).
 - Location(s) of receptacles noted.
- Other laboratory hazards. Location(s) noted.
 - Syringes & Needles
 - Potential electrical hazards
 - Cryogenic liquids, dry ice, ultra-low freezers (SafetyNet #58)
 - Autoclaves (SafetyNet #26), Hot Plates
 - Compressed Gas Cylinders (SafetyNet #60)
 - Ultraviolet Radiation (SafetyNet #106)

Introduction to personal hygiene practices and behavior.

- Smoking is prohibited on all UC campuses across California
- Wash hands before leaving laboratory.
- Note where food and drink consumption and storage is allowed and prohibited.
- Appropriate dress for the work place – **closed toe & closed heel shoes, long pants, no sandals, no bare midriffs, and no bare shoulders**
- The removal of one glove to open doors, operate elevators, etc. is recommended in all common areas
- Emphasize safety aspects of keeping neat, clean and organized work stations.
- Back safety (lifting hazards)
- Falling, tripping, slipping hazards. Never stand/climb on chairs
- Other laboratory hazards. Location(s) noted.

III. HEAT ILLNESS PREVENTION, GREENHOUSE, AND FIELD SAFETY TRAINING

- Employees who are exposed to temperatures of 80°F (26.7 C) and higher must be given Heat illness prevention training.** This is likely to include greenhouses, agricultural fields and the Armstrong field station. A separate training module is required. <https://safetyservices.ucdavis.edu/training/heat-illness-prevention>
- Greenhouse safety training. Offered periodically from the Plant Sciences department. You can find details by contacting the greenhouse manager at this site: <https://greenhouses.sf.ucdavis.edu/greenhouse-safety>

I have completed my Initial Safety Training and have been informed of the above safety considerations.

Signature of Employee

Printed Name

Date

Signature of Lab Safety Contact / PI

Printed Name

Date

- ✓ Place a copy in your Laboratory Safety & Training Manual to document annual refresher training