

HAZARD ALERT FORM

Department: DEPARTMENTS OF PLANT PATHOLOGY AND NEMATOTOLOGY

I. Unsafe Condition or Hazard

Name: (optional) _____ Job: _____

Title: (optional) _____

Location of Hazard: _____

Building: _____ Floor: _____ Room: _____

Date and time the condition or hazard was observed:

Description of unsafe condition or hazard: _____

What changes would you recommend to correct the condition or hazard?

Employee Signature: (optional) _____

Date: _____

II. Management/Safety Committee Investigation

Name of person investigating unsafe condition or hazard:

Results of investigation (What was found? Was condition unsafe or a hazard?): (Attach additional sheets if necessary.)

Proposed action to be taken to correct hazard or unsafe condition: (Complete and attach a Hazard Correction Report, IIPP Appendix E)

Signature of Investigating Party: _____

Date: _____

**IIPP-Appendix A
January 2008**

Completed copies of this form should be routed to the appropriate supervisor and department Safety Coordinator, and must be maintained in department files for at least three years.

U C Davis Environmental Health and Safety Laboratory Safety Review Checklist

Principal Investigator:

Date:

Lab Contact:

Phone:

Building:

Room Number(s):

Department:

Lab Name/Function:

Please check Yes, No, Serious Violation or Not Applicable for each item. All No responses require follow-up within 30 days, unless otherwise noted and all Serious Violations require 3 day follow-up.

#	Y	N	S	NA	ITEM	REFERENCE
CARCINOGENS						
1					Work and storage areas properly marked and controlled	CCR Title 8 §5209(g)
2					California regulated inventory reported to EH&S	CCR Title 8 §5209
3					Carcinogen self audit complete	UCD Carcinogen Safety Manual
4					Carcinogen Standard Operating Procedures available	CCR Title 8 §5209
CHEMICAL						
5					Containers clearly labeled with contents and primary hazard(s)	CCR Title 8 §5191(h), SN19, SN42
6					Chemical storage containers in good condition	CCR Title 8 §5164(c), PP290-65
7					Corrosive chemicals stored below eye level	CCR Title 8 §5191A, SN42
8					Combustible materials not stored with flammable chemicals	CCR Title 24 §2703, NFPA30,SN19
9					Commonly used abbreviations posted in prominent location	
10					Hazardous chemicals not stored on floor	CCR Title 24 §2705, NFPA 400
11					Lab free of expired or unneeded chemical	CCR Title 8 §5191 A, SN19
12					Maximum of 60 gallons flammables per storage unit/ max 3/fire area	CCR Title 8 §5533(a),
13					Less than 10 gallons of flammables outside flammable storage	NFPA 30, NFPA 45, PP290-65,SN19
14					Flammables used away from ignition sources	
15					Flammable liquid storage containers 2 gallon or less	CCR Title 8 §5538
16					Flammable storage refrigerator/freezer approved and labeled	NFPA 45 12.2.2, PP290-65, SN31
17					Incompatible materials properly segregated	CCR Title 8 §5164(a), SN4, SN19, SN42
18					Pyrophoric chemicals segregated, contained and labeled; Entire building equipped with automatic sprinkler system	CCR Title 24 §2703 CCR Title 24 §2704.5, SN135
19					Chemical storage cabinets clearly labeled (flammables, corrosives, etc)	CCR Title 8 §5533(b), CCR Title 24 §2703.8.7, PP290-65

20				Strong acids and strong bases stored in secondary containers	CCR Title 24 §2705, NFPA400,SN42
21				Organic peroxides and other time sensitive materials dated when first opened; managed properly and disposed of promptly upon expiration	CCR Title 24 §2703.9.6 NFPA 45 9.2.3.4 , SN23
22				Water reactive chemicals segregated, contained and labeled	CCR Title 8 §1931, SN19, SN42
DOCUMENTATION					
23				Appropriate signage posted (Right to Know) at all entrances to lab	CCR Title 24 §2703.5, NFPA704
24				Building Emergency Evacuation Route posted	CCR Title 19 §3.09, SN19, SN111
25				Chemical Hygiene Plan updated within past 12 months	CCR Title 8 §5191, PP290-27, SN33
26				CIS updated within past 12 months	CCR Title 8 §5194(e), CCR Title 27 §15280, PP290-27, SN33
27				Emergency contacts posted at entrance to laboratory	CCR Title 8 §3220, SN111
28				Department Illness and Injury Prevention Plan available and up-to-date.	CCR Title 8 §3203, PP290-56
29				Emergency Action Plan available and up-to-date	CCR Title 8 §3220, PP290-56, SN19
30				Emergency assistance information posted	CCR Title 8 §3400(f)
31				Hazard Assessment completed	UCOP Policy, PP290-50
32				Medical Surveillance Program properly documented	CCR Title 8 §5191(g), PP290-60
33				Readily accessible SDS's (hard copy or online)	CCR Title 8 §5194(g), PP290-27, SN33
34				Annual self-inspection complete	CCR Title 8 §3203
35				Staff aware of procedure to report exposures or concerns	CCR Title 8 §5191
36				Staff aware of procedure to report incidents and near misses	CCR Title 8 §5191
37				Written Standard Operating Procedures available and current	CCR Title 8 §5191, PP290-56, SN33
ELECTRICAL					
38				3-prong plugs in 3-prong outlets	
39				Appropriate clearance in front of electrical panels (36")	NFPA 70-110.26/408.4, SN19
40				Electrical cords not a trip hazard	NFPA 70
41				Plugs, cords and receptacles in good condition	UCD PP290-85, SN20, Fire Net
42				Extension cords used only temporarily (<90 days)	CCR Title 8§2500.8, SN19, SN20
43				No overloaded outlets, no daisy-chained extension cords or strips	NFPA 70-400.7B, SN19, SN20
44				GFCI devices used within 6' of water source (post 2010)	NFPA 70-210.8(B)(5), SN19
45				High voltage equipment clearly labeled	CCR Title 8 §2932
46				High voltage equipment properly guarded	CCR Title 8 §2932
47				Major equipment plugged directly into outlet	UCD PP290-85, SN20
48				Appropriate personnel trained in Lock Out/Tag Out program	CCR Title 8 §3314
49				Power strips near liquids have surge protection	
EQUIPMENT					
50				Appropriate safety information posted on equipment	
51				Centrifuges are maintained to ensure safe operation	
52				Moving parts of equipment properly guarded (opening < 1/2")	CCR Title 8 §3944, SN115

Last updated 3/6/2014

53				Secondary containment for vacuum pump present	
FIRE					
54				Aisles, exits, adjoining hallways free of obstruction	CCR Title 8 §3272, SN19
55				Fire alarms, bells, horns and/or strobes free of obstruction	CCR Title 24 §901.8
56				Fire extinguisher properly mounted	CCR Title 8 §6151
57				Fire extinguisher maintenance tag current	CCR Title 8 §6151
58				Fire extinguisher available as required	CCR Title 8 §6151
59				Fire extinguisher fully charged; pin and/or security seal intact	CCR Title 8 §6151
60				Fire doors unobstructed and easily closed	CCR Title 8 §3225, SN19
61				18" of clearance between stored items and fire sprinklers, 24" w/o sprinklers	CCR Title 8 §6170(c)10
FUME HOODS					
62				Audible/visual alarm and/or visual airflow monitor functional	CCR Title 8 §5154.1(e),SN19, SN35
63				Chemical work done more than 6" from front of hood	CCR Title 8 §5191A, SN35
64				Certified within one year	CCR Title 8 §5154.1(e),SN19, SN35
65				Fume hood illumination is working	
66				Functional fume hood not used for storage, cluttered	CCR Title 8 §5191A, SN19, SN35
67				Users understand how to check for airflow and annual certification sticker	CCR Title 8 §5154.1
68				Fume hood users have completed specific fume hood training	CCR Title 8 §5154.1
69				Proper sash height indicated and adhered to	CCR Title 8 §5154.1
GAS					
70				Compressed gas cylinders stored upright and adequately secured	CCR Title 8 §4650, SN42, SN60
71				Compressed gas cylinders labeled with contents and hazards	CCR Title 8 §4650
72				Compressed gas cylinders have full/empty tags attached	CCR Title 8 §4649, SN42
73				Compressed gas cylinders stored separately	CCR Title 8 §4650, SN42, SN60
74				Toxic gases properly stored in ventilated cabinet/fume hood	CCR Title 8 §4650
75				Compressed gas cylinders capped when not in use	CCR Title 8 §4650, SN42, SN60
GENERAL SAFETY					
76				Ceiling tiles in place and in good repair	NFPA
77				Ergonomic evaluations done for computer work in excess of 4 hours	CCR Title 8 §5110
78				Food and drink stored away from haz mat; consumed outside of lab	CCR Title 8 §5191 A, PP290-65
79				Mechanical devices used for pipetting	CCR Title 8 §5191 A, SN19
80				Spills promptly cleaned by individuals trained to respond to spill	CCR Title 8 §5191A, SN13
81				Floor is in good repair to prevent slips, trips and falls	CCR Title 8 §5191A
82				Furnishings in lab easily decontaminated	CCR Title 8 §5191A
83				Lab surfaces clean, organized, free of chemical contamination	CCR Title 8 §3362, §5191A
84				Sink available near exit for hand washing (soap and paper towels)	CCR Title 8 §3366

85				Sinks labeled "Industrial Water – Do Not Drink"	CCR Title 8 §1524
86				Lab air negative to hallway	CCR Title 8 §5191 A
87				Refrigerators/freezers appropriately labeled according to use	CCR Title 8 §5191 A, SN31
88				Ergonomic evaluations done for repetitive motion activities	CCR Title 8 §5110
89				Vacuum systems fitted with traps or protective filter	
PERSONAL PROTECTIVE EQUIPMENT (PPE)					
90				Appropriate gloves available for use with hazardous activities	CCR Title 8 §3384, PP290-50,SN50
91				Equipment or process sound levels that may exceed 85 dBA	CCR Title §5096,PP290-53, SN112
92				Face shield available if required	CCR Title 8 §3382, PP290-50
93				Gloves worn when skin contact with hazards may occur	CCR Title 8 §3384, PP290-50,SN50
94				Lab coats, appropriate to activity are worn	CCR Title 8 §3383, PP290-50
95				Lab coats, properly fitted, are available	CCR Title 8 §3383, PP290-50
96				Glove(s) removed prior to exiting lab, handling telephone, etc.	CCR Title 8§5193(4)(F), PP290-50
97				Long pants worn as required by UCD PPE policy	UCOP PPE, PP290-50
98				PPE properly cleaned and disinfected or properly disposed of	CCR Title 8 §3387, §3383, SN13
99				Respirator users have been evaluated by EH&S and included in campus respiratory protection program	CCR Title 8 §5144, PP290-50, SN88
100				Eye protection available and used as required by UCD PPE policy	CCR Title 8 §3382, PP290-50,SN5
101				Adequate supply of specialty PPE available (i.e. UV/IR glasses, lab aprons, cryogenic gloves)	CCR Title 8 §3380(f), PP290-50
SAFETY EQUIPMENT					
102				Emergency eyewash/showers accessible within 10 sec (55 feet)	CCR Title 8 §5162(c), SN19
103				Emergency eyewash and shower stations free of obstruction	CCR Title 8 §5162(c), SN19, SN66
104				Tests for eyewash and shower current and documented	CCR Title 8 §5162(e) , SN66
105				Appropriate chemical spill kits available	CCR Title 8 §5191A, SN13, SN42
106				Calcium gluconate paste available for HF exposure	
107				First Aid Kit accessible, stocked with unexpired products	CCR Title 8 §3400(c)
SEISMIC					
108				Heavy items are stored on lower shelves	CCR Title 8 §5191 A, SN83
109				Shelving, file cabinets 5' or over and other tippable items anchored	CCR Title 8 §5191 A, SN83
110				Overhead storage is secured	CCR Title 8 §5191 A, SN83
111				Hazardous material storage shelves have lip or guard	CCR Title 24 §2703.9.9,SN52,SN83
TRAINING					
112				All personnel completed Fundamentals of Lab Safety	UCOP Policy
113				Specialized training for lab specific hazards documented	CCR Title 8 §3203, §5191, §5194
114				Spill training documented	CCR Title 8 §5191
115				Training on lab specific SOPs documented	CCR Title 8 §5191
116				Training on Chemical Hygiene Plan documented	CCR Title 8 §5191

117				Training on IIPP documented	CCR Title 8 §3203
118				Training to manage or handle hazardous waste documented	
WASTE					
119				Biomedical waste (red bag) properly disposed of	HSC §117600-118360
120				Secondary containment used for biomedical waste	CCR Title 8 §5193
121				Chemical waste containers compatible with contents; good condition	CCR Title 22 §66265.171, SN8, SN43
122				Chemical waste containers closed except when in use	CCR Title 22§66265.173, PP290-65
123				All hazardous waste disposed of by EH&S	UCD PP290-65, SN8, SN43
124				Hazardous waste in secondary containment	CCR Title 24§2705, PP290-65,SN43
125				Chemical waste containers properly tagged/dated/labeled for disposal	CCR Title 22§66262.34, PP290-65, SN8, SN42, SN110
126				All wastes within regulatory time limits	CCR Title 22§66262.34, SN43
127				Sharps containers appropriately labeled with contents, hazards	HSC§ 118285
128				Sharps container's contents are not past the fill line	CCR Title 8 §5193, SN3, SN62
129				Sharps disposed of in appropriate sharps container	CCR Title 8 §5193
130				Tight fitting lid in place on biomedical waste	HSC§ 118280
131				Universal waste properly labeled/discarded/contained; < 1 year	CCR Title 22§66273.35, SN122
Comments:					
Corrective Action Items:					
Follow Up:					
Laboratory Survey Conducted by:					
PI or Lab Supervisor/Manager Signature:				Date:	

CCR California Code of Regulations
HSC Health and Safety Code
NFPA National Fire Protection Association
PP UCD Policy and Procedure
SN Safety Net

WORKSITE SELF INSPECTION FORM

General Office Environment

Location: _____ Date: _____

Inspector: _____ Phone: _____

Department: PLANT PATHOLOGY AND NEMATOLOGY

Administration and Training

Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	1.	Are all safety records maintained in a centralized file for easy access? Are they current?
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	2.	Have all employees attended Injury & Illness Prevention Program training? If not, what percentage has attended? _____
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	3.	Does the department have a completed Emergency Action Plan? Are employees being trained on its contents?
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	4.	Are chemical products used in the office being purchased in small quantities? Are Material Safety Data Sheets needed?
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	5.	Are the Cal/OSHA information poster, Workers' Compensation bulletin, annual accident summary posted?
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	6.	Are annual workplace inspections performed and documented?

General Safety

Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	7.	Are exits, fire alarms, pullboxes clearly marked and unobstructed?
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	8.	Are aisles and corridors unobstructed to allow unimpeded evacuations?
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	9.	Is a clearly identified, unobstructed, charged, currently inspected and tagged, wall-mounted fire extinguisher available as required by the Fire Department?
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	10.	Are ergonomic issues being addressed for employees using computers or at risk of repetitive motion injuries?
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	11.	Is a fully stocked first-aid kit available? Is the location known to all employees in the area?
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	12.	Are cabinets, shelves, and furniture over five feet tall secured to prevent toppling during earthquakes?
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	13.	Are books and heavy items and equipment stored on low shelves and secured to prevent them from falling on people during earthquakes?
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	14.	Is the office kept clean of trash and recyclables promptly removed?

Electrical Safety

Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	15.	Are plugs, cords, electrical panels, and receptacles in good condition? No exposed conductors or broken insulation?
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	16.	Are circuit breaker panels accessible and labeled?
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	17.	Are surge protectors being used? If so, they must be equipped with an automatic circuit breaker, have cords no longer than 6 feet in length, and be plugged directly into a wall outlet.
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	18.	Is lighting adequate throughout the work environment?
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	19.	Are extension cords being used correctly? They must not run through walls, doors, ceiling, or present a trip hazard.
Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	20.	Are portable electric heaters being used? If so, they must be UL listed, plugged directly into a wall outlet, and located away from combustible materials.

ACCIDENT INVESTIGATION FORM

Name of Injured Person: _____ Date of Injury: _____

Name of Supervisor: _____ Telephone #: _____

Department: _____ Location of Injury: _____

Brief Description of Accident:

Nature of Injury (describe all body parts affected):

Was Training Provided?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	NA	<input type="checkbox"/>
Were established procedures followed?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	NA	<input type="checkbox"/>
Were tools or equipment adequate for task?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	NA	<input type="checkbox"/>
Were environmental conditions a factor in the incident?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	NA	<input type="checkbox"/>

Elaborate on Responses:

Proposed Corrective Action:

Supervisor: _____ Date of Report: _____

Signature: _____

IIPP-Appendix D
January 2008

Completed copies of this form should be routed to the department Safety Coordinator and kept in department files for at least three years.

Employee Name: _____ Lab PI: _____

DEPARTMENT OF PLANT PATHOLOGY, ENTOMOLOGY & NEMATOLOGY INITIAL SAFETY TRAINING FOR NEW EMPLOYEES

The Departments of Plant Pathology & 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 (see your "right-to-know" SafetyNet #40).
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
 - UC Davis Police Department [Warn Me.](#)
 - o Cell phone registration recommended
- 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.

❑ 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.
 - Location within the lab or website - <http://www.ucmsds.com/?X>
- ❑ Location and training on the Chemical Hygiene Plan, including Training Materials and Safety Forms.
 - Employee must read and understand Chemical Lab Safety Manual
- ❑ Explain the importance and confirm deadlines for completing UC Laboratory Safety Fundamentals course, the Laboratory Hazard Assessment Tool, Initial Laboratory Safety training, Refresher Laboratory Safety training, Greenhouse and Field Safety training, 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 or assignment of appropriate equipment. (see general chemical lab safety manual or SafetyNet #19)
 - 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, Fume Hood Safety training)
- ❑ 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)
 - ❑ Campus-regulated **Chemical Carcinogen Plan** – chemical & SOP specific.
 - ❑ Reproductive toxins, highly toxic chemicals and chemicals of unknown toxicity
 - ❑ 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 Global Harmonized System (GHS) for chemical labels

- Hazardous waste. Procedures outlined and explained. Autoclaving and double containment explained. Labeling procedures explained (school, department, lab PI, room #, contact phone #, date)
 - o **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 (SafetyNet #62)
 - 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 85°F 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. <http://safetyservices.ucdavis.edu/tr/lmsL/hip>
- Greenhouse and field safety training. Offered periodically from Ron Lane at Environmental Horticulture, watch for email notifications of when and where

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

- ✓ Return the ORIGINAL signed form to PLP-NEM business office, rm 350 Hutchison
- ✓ Account Manager forward original to Safety Coordinator, Andrew Ross
- ✓ Place a copy in your Laboratory Safety & Training Manual to document training

SAFETY TRAINING ATTENDANCE RECORD

Departments of Plant Pathology and Nematology

Training Topic: _____ Date: _____
(attach a copy of the training session curriculum)

Instructor: _____ Training Aids: _____

Location: _____ Time: _____

Attendees – Please print and sign your name legibly. Use additional sheets if necessary.

No.	Print Name	Signature
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
6.	_____	_____
7.	_____	_____
8.	_____	_____
9.	_____	_____
10.	_____	_____
11.	_____	_____
12.	_____	_____
13.	_____	_____
14.	_____	_____
15.	_____	_____
16.	_____	_____
17.	_____	_____
18.	_____	_____
19.	_____	_____
20.	_____	_____
21.	_____	_____
21.	_____	_____
22.	_____	_____
23.	_____	_____
24.	_____	_____
25.	_____	_____
26.	_____	_____
27.	_____	_____
28.	_____	_____
29.	_____	_____
30.	_____	_____

HAZARD CORRECTION REPORT

Department: DEPARTMENTS OF PLANT PATHOLOGY AND NEMATOTOLOGY

This form should be used in conjunction with the “Hazard Alert Form” (IIPP Appendix A), as appropriate, to track the correction of identified hazards.

All hazards should be corrected as soon as possible, based on the severity of the hazard. If a serious imminent hazard cannot be immediately corrected, evacuate personnel from the area and restrict access until the hazard can be addressed.

Supervisor/Safety Coordinator Name: _____ Telephone: _____

Supervisor/Safety Coordinator Signature: _____ Date: _____

Description and Location of Unsafe Condition	Date Discovered	Required Action and Responsible Party	Completion Date	
			Projected	Actual

**IIPP-Appendix E
January 2008**

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Employee Name: _____ Lab PI: _____

DEPARTMENT OF PLANT PATHOLOGY & NEMATOLOGY HEAT ILLNESS PREVENTION TRAINING

The Departments of Plant Pathology & 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 EH&S SafetyNet #123 Heat Illness Prevention)

Heat Related Illnesses, Recognition, and Prevention Safety Training

Supervisors: Supervisors are required to have heat illness, recognition and prevention training before training their employees. The supervisor of this employee is _____ and the supervisor received his/her safety training on _____ date.

Heat Illness, Recognition, First Aid and Prevention – Heat illnesses can become very serious and life threatening if untreated. The following are definitions and prevention measures:

Acclimatization means temporary adaptation of the body to work in the heat that occurs gradually when a person is exposed to it. Acclimatization peaks in most people within four to fourteen days of regular work for at least two hours per day in the heat.

First aid: If exertion in the heat makes your heart pound and leaves you gasping for breath, STOP all activity. Get into a cool area or at least in the shade and rest, especially if you become lightheaded, confused, weak or faint.

Prevention – To avoid heat illnesses always start working in a warm to hot environment slowly, pace yourself, take frequent breaks in the shade and stay hydrated by frequent drinking of water and a sports drink. Notify your co-workers with you or your supervisor if you feel unwell.

Heat Illness means a group of serious medical conditions resulting from the body's inability to cope with a particular heat load, and includes heat cramps, heat exhaustion, heat syncope and heat stroke. Heat illnesses can occur more frequently when employees are not acclimatized to a hot or increasingly warming environment.

- A. Heat Cramps** – Heat cramps are muscle pains or spasms – usually in the abdomen, arms or legs – that may occur in association with strenuous activity. People who sweat a lot during strenuous activity are prone to heat cramps. This sweating depletes the body's salt and moisture. The low salt level in the muscles causes painful cramps. Heat cramps may also be a symptom of heat exhaustion. If you have heart problems or are on a low-sodium diet, seek medical attention for heat cramps.

First aid for heat cramps if medical attention is not necessary:

- Stop all activity and sit quietly in a cool place.
- Drink clear juice or a sports beverage. (1 cup per 15 minutes)

- Do not return to strenuous activity for a few hours after the cramps subside.
 - Further exertion may lead to heat exhaustion or stroke.
 - Seek medical attention for heat cramps if they do not subside in 1 hour.
 - If you develop heat cramps, notify your co-workers and your supervisor.
- Prevention for heat cramps** – Drink a sports beverage and water frequently to stay hydrated and keep the body's salt level normal. Take breaks in the shade and rest. Become acclimatized to the environment.

B. Heat Exhaustion – Heat exhaustion is a milder form of heat-related illness that can develop after several days of exposure to high temperatures and inadequate or unbalanced replacement of fluids. Those most prone to heat exhaustion are elderly people, those with high blood pressure, and those working or exercising in a hot environment. The warning signs of heat exhaustion are:

- heavy sweating
- paleness
- muscle cramps
- tiredness
- weakness
- dizziness
- headache
- nausea or vomiting
- fainting

The skin may be cool and moist. The pulse rate will be fast and weak, and breathing will be fast and shallow. If heat exhaustion is untreated, it may progress to heat stroke. Seek medical attention if symptoms worsen or last longer than 1 hour. The person may also feel thirsty, sick and anxious and have a decreased urine output. Heat exhaustion can become heat stroke if not properly treated.

First aid – Drink cool, nonalcoholic beverages like water and sports beverages (1 cup per 15 minutes). Rest and cool the body with a cool shower, bath or sponge bath. Seek a cool, air conditioned environment. Notify your co-workers with you and your supervisor if you have the above symptoms. Heat exhaustion victim should be closely monitored to make sure their temperature does not go above 103 degrees F (39 degrees C).

Prevention for heat exhaustion – Wear lightweight clothing. Pace yourself and take frequent breaks in the shade. Keep hydrated by frequently drinking water and a sports beverage. Become acclimatized to the environment.

C. Heat Syncope – Heat syncope (fainting) is a form of heat illness that results from physical exertion in a hot environment. As the body tries to cool itself, skin blood vessels dilate to such an extent that blood flow to the brain is reduced. Symptoms are faintness, dizziness, headache, increased pulse rate, restlessness, nausea, vomiting, and possibly even a brief loss of consciousness. Inadequate fluid replacement which leads to dehydration contributes significantly to this problem.

First aid – The person should lie or sit down in the shade or a cool environment. Elevate the feet and give fluids particularly those containing salt. (1 cup per 15

minutes) The person should not engage in vigorous activity for at least the rest of that day. A person should completely have their body fluids and salt restored and have normal urinary output before working again in a hot environment and then cautiously and slowly. Notify your co-workers with you if you have the symptoms of heat syncope. Notify your supervisor.

Prevention for heat syncope – Keep hydrated with frequent drinking of water and a sports beverage. Take frequent breaks in the shade. Pace yourself. Wear lightweight clothing. Become acclimatized to the environment.

D. Heat Stroke – Heat stroke is the most serious heat-related illness. It occurs when the body becomes unable to control its temperature: the body's temperature rises rapidly, the sweating mechanism fails, and the body is unable to cool down. Body temperature may rise to 106 degrees F or higher within 10 to 15 minutes. Heat stroke can cause death or permanent disability if emergency treatment is not provided. The warning signs are:

- An extremely high body temperature (above 103 degrees F) (39 degrees C)
- Red, hot, and dry skin (no sweating)
- Rapid, strong pulse
- Throbbing headache
- Dizziness
- Nausea
- Confusion
- Unconsciousness

If you see any of these signs, you may be dealing with a life-threatening emergency. **Have someone call for immediate medical assistance while you begin cooling the victim.** Notify your supervisor as soon as possible.

First aid – While someone is calling for emergency help:

- Get the victim to a shady area
- Cool the victim rapidly, using whatever methods you can. For example, immerse the victim in a tub or cool water; place the person in a cool shower; spray the victim with cool water from a garden hose; sponge the person with cool water; or if the humidity is low, wrap the victim in a cool, wet sheet and fan them vigorously.
- Monitor body temperature and continue cooling efforts until the body temperature drops to 101-102 degrees F.
- If emergency medical personnel are delayed, call the hospital emergency room for further instructions.
- Do not give the victim alcohol to drink. (sports beverage 1 cup per 15 minutes if conscious)
- Get medical assistance as soon as possible.

Prevention for heat stroke – Work slowly until acclimatized and pace yourself. Take frequent breaks in the shade. Keep hydrated by frequent drinking of water and a sports beverage. Wear lightweight clothing.

Environmental and Personal Risk Factors for Heat Illness – Environmental risk factors for heat illness means working conditions that affect the possibility that heat illness could

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occur, including air temperature, relative humidity, radiant heat from the sun and other sources, conductive heat sources such as the ground, air movement, workload severity and duration, protective clothing and personal protective equipment worn by employees. Personal risk factors for heat illness means factors such as an individual's age, degree of acclimatization, health, water consumption, alcohol consumption, caffeine consumption, and use of prescription medications that affect the body's water retention or other physiological responses to heat. The other factors affect one's ability to adjust to heat:

- age (Those 65 and older and those 0-4 years old.)
- obesity
- fever
- state of hydration
- heart disease
- mental illness
- poor circulation
- sunburn

When the humidity is high, sweat will not evaporate as quickly, preventing the body from releasing heat quickly. Electric fans may provide comfort, but when the temperature is in the high 90s, fans will not prevent heat related illness. Little air movement and heavy protective equipment worn by an employee can increase the risk of heat related illness. Long work days in the heat increase the risk of heat related illnesses. The risk for heat-related illness and death may increase among people using the following drugs: (1) psychotropics, which affect psychic function, behavior or experience (e.g. haleoperidol or chlorpromazine); (2) medications for Parkinson's disease, because they can inhibit perspiration; and (3) tranquilizers such as phenothiazines, butyrophenones, and thiozanthenes.

Prevention of heat illness – If you have one of the personal risk factors for heat illnesses or the environmental factors are multiplied to increase heat stress on the body, work slowly and pace yourself becoming acclimatized to the environment. Use common sense. Take frequent breaks in the shade to cool off and rest. Keep hydrated by frequent drinking of water and a sports beverage. If you feel unwell, notify your coworkers immediately. Also let medical personnel know if you are taking any drugs or have a medical condition that may increase your susceptibility to heat related illness.

Recovery Period – Recovery period means a period of time to recover from the heat in order to prevent heat illness. Employees who feel they are becoming ill or believe a preventative recovery period is needed, shall be provided access to an area with shade that is either open to the air or provided with ventilation or cooling for a period of no less than five minutes. Such access to shade shall be permitted at all times. Employees who begin to feel ill or feel they need a rest in the shade are allowed to have at least 5 minutes. A longer period of time may be needed if the person is already feeling the affects of heat. The recovery period varies with the heat related illness. Heat cramps has a recommended recovery period of a few hours. Heat exhaustion has a recommended recovery period of no work the rest of the day and further until the person has recovered their hydration and body salt levels. Heat syncope victims should not work the rest of the day. Heat stroke victims must be released by their doctor. All heat related illness recovery periods are subject to medical advice and restrictions for each employee.

