

Instrumentation Development Lab  
Standard Operation Procedures (SOP)

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# Fume Hood Operation

1. The fume hood must be used when working with hazardous chemicals located in room WAT 214A.
2. Refer to Chemical Hygiene Plan located in room WAT214 next to the telephone.
3. Refer to the respective MSDS sheets before handling any chemical in the fume hood.
4. Gloves, goggles, and closed toed shoes must be worn when operating the fume hood.
5. Fume hood door must be lowered to the appropriate effective height for proper operation. This height is labeled on the fume hood next to the sash.
6. The WAT 214A door must be closed to prevent abnormal airflow within the fume hood.
7. If any injuries occur, immediately call for help and notify Gary Varner or Matt Andrew.

# Soldering Iron Operation

1. When not in use the soldering iron should be placed in holder and turned off.
2. Once finished at the soldering station be sure to turn off the iron, microscope light and fan (if used) before leaving the station.
3. Clean up station after use.
4. Never leave a hot soldering iron unattended.
5. When handling chemicals at the soldering station be sure to refer to the respective MSDS sheets.
6. Practice extreme care when using flammable chemicals near an operating soldering station.
7. Refer to the Chemical Hygiene Plan when handling chemicals.
8. If any injuries occur, immediately call for help and notify Gary Varner or Matt Andrew.

# Chemical Spill Procedure

1. In the event of a chemical spill first make sure none of the chemicals have come in contact with any part of your body or clothing.
2. If the spill is controllable use the “spill kit” located in room WAT 214A.
3. After opening the “spill kit” put on rubber gloves and isolate the spill using the absorbent pillows.
4. Then tear the bag of vermiculite open and pour on the affected region.
5. Once all the liquid has been absorbed by the vermiculite and absorbent pillows discard the pillows in the yellow bags.
6. Then sweep up all the vermiculite and dispose in a yellow bag.
7. Then neutralize the spill area with the appropriate cleaning agent and use paper towels or Kimwipes to clean up the remaining residue.
8. Dispose all materials in contact with spill in yellow bag.
9. Label and notify EHSO's Hazardous Materials Management (956-3198) for proper disposal of hazardous substances, also notify Gary Varner or Matt Andrew of the incident.

# Electrical Safety

1. Be sure to turn off all electrical devices when not in use.
2. Do not overload electrical outlets and do not connect multiple power strips in unison.
3. Circuit breakers are located in the back hallway of the lab.
4. Never operate electrical devices with wet hands.
5. Never touch anybody under electrical shock without proper insulation; instead turn off the circuit breakers in the back of the hallway lab.
6. If any electrical shock occurs. Immediately call for help and notify Gary Varner or Matt Andrew.

# Fire Safety

1. A fire extinguisher is located inside room WAT 214 outside the doorway to room WAT 214A.
2. Fire alarms are located outside room WAT 214 at the two stairwells and elevator.
3. In case of a fire, sound the fire alarm. If the fire is small, sound the fire alarm and if you have been trained in the use of a fire extinguisher, use the fire extinguisher. In case of an uncontrollable fire, exit the room, sound the fire alarm, and evacuate the building.
4. In case of a lab worker on fire drop him/her to the ground and smother with a fire retardant towel.
5. Contact the UH ESHO Fire Safety Officer at 956-4953.

# Evacuation Plan

1. In the event of an evacuation, exit the room and immediately head to the nearest stairwell.
2. Do not take the elevator.
3. Exit the building through one of the two stairwells located throughout the building,
4. Be sure to tell all people in the building to evacuate as needed.
5. Sound the fire alarm during your exit.
6. Meet outside of the building at the Watanabe courtyard.

# Emergency Procedures for Laboratories during Power Outages

It is important to remember that some equipment cannot be turned off and certain other pieces of equipment do not shut themselves off when there is a power outage. Pre-plan specific procedures for your laboratory while adhering to the following:

1. Close chemical fume hood sashes. No work is allowed in fume hoods during a power outage.
2. Ensure that all chemical containers are secured with caps, parafilm, etc.,
3. All non-essential electrical devices should be turned off. Keep the doors of refrigerators and freezers closed. Check to ensure large lasers, radio frequency generators, etc. have been turned off.
4. Turn off all gas cylinders at the tank valves. If a low flow of an inert gas is being used to "blanket" a reactive compound or mixture, it may be appropriate to leave the flow of gas on. The decision to do this should be part of the written SOP specific for each lab and included in this CHP.
5. Check all cryogenic vacuum traps (N<sub>2</sub>, CO<sub>2</sub> + solvent). The evaporation of trapped materials may cause dangerous conditions.
6. Check all pressure, temperature, air, or moisture sensitive materials and equipment. This includes vacuum work, distillations, glove boxes used for airless/moistureless reactions, etc.

# UH MANOA EMERGENCY TELEPHONE NUMBERS

***CAMPUS EMERGENCY (24 Hours) x 66911***  
**POISON CENTER 1-800-222-1222**

## **Environmental Health & Safety Office (EHSO) Resources**

***Laboratory Safety*** x 65097

Chad Gushikuma, Chemical Hygiene Officer

***Biological Safety*** x 63197

Hubert Olipares, Biological Safety Officer

***Radiation Safety*** x 66475

Irene Sakimoto, Radiation Safety Officer

***Industrial Hygiene*** x 63204

Emma Kennedy, Industrial Hygienist

***Hazardous Waste Disposal*** x 63198

Tim O'Callaghan, Hazardous Material Management Officer

***HMMP Training/Auditing*** x 65180

Hans O. Nielsen, Chemical Hygiene Officer

***Diving Safety*** x 66420

Dave Pence, Diving Safety Officer

***Fire Safety*** x 64953

Irineo "Junior" Gappe, Fire Safety Officer

***Environmental Compliance*** x 69173

Stacie Cheramie, Environmental Compliance Officer

## **Facilities Planning and Management Office (FPMO)**

***Work Coordination*** x 67134

# Requirements for Storage and Handling of Flammable and Combustible Liquids

Please see the UHM Chemical Hygiene Plan, Appendix VII at <http://www.hawaii.edu/ehso/lab/Flammable.pdf> for this section (attached to the end of this document).