

UCSC Laboratory Self Inspection Form

PI: <u>Yat Li</u>	Department: <u>Chemistry & Biochemistry</u>
Building: <u>PSB</u>	Room(s): <u>198</u>
Inspector(s): <u>Tianyu Liu</u>	Inspection Date: <u>04/12/13</u>

Documentation and Records

Yes No

INJURY & ILLNESS PREVENTION PROGRAM / CHEMICAL HYGIENE PLAN

Yes The lab's written Injury & Illness Prevention Program (IIPP) and Chemical Hygiene Plan (CHP) are available for review by lab personnel.

Yes The PI is identified on Appendix A of the IIPP Binder as the responsible person, the form has appropriate signatures and it documents the current Lab Safety Representative (LSR).

Yes The lab's written Chemical Hygiene Plan (CHP) is current and has been edited to be specific for the lab group operations. The edited plan should address the lab specific PPE policy, food policy, and procedures that require PI authorization prior to conducting alone or leaving unattended.

TRAINING RECORDS

Yes Documented employee **training is completed and available for all members of the lab:

New employee training shall include documentation that the individual:

- Has reviewed the IIPP and Chemical Hygiene Plan
- Knows how to access MSDS for the lab
- Knows the laboratory PPE policy
- Knows the laboratory food policy
- Knows the location of the fire alarm pull station and fire extinguishers
- Knows the emergency evacuation route from the lab
- Knows the location of the emergency eyewash safety shower (EESS)

**Training is required for all new employees and whenever new substances, processes, procedures or equipment are introduced in the workplace that present a new recognized hazard

New Employee Training documentation is available for previous three years.

OTHER ITEMS TO CHECK

Yes Required written Standard Operating Procedures (SOPs) are available for
Hazardous laboratory work processes and equipment (lasers, X-ray units, etc)

Yes Hazardous chemical, biological or radioactive materials

Current Emergency Response (ER) procedures and contact information is posted for the laboratory via the "flip chart" (new cover sheets for contact info are available from EH&S).

Yes Emergency Door Card(s) are posted as necessary and contact information is current and correct.

Yes A laboratory chemical inventory is available. You may access your inventory on line or request a copy from EH&S (http://ehs.ucsc.edu/lab_research_safety/chemical_inventory.php).

Yes Laboratory safety self-inspections are performed and documented (Recommended minimum is quarterly).

Laboratory Practices, Equipment & Facilities

Yes No

- Yes Is good housekeeping practiced in the work area? Is it free of debris, combustibles, excessive storage and obstructions? Are spills promptly cleaned up?
- Yes Are food and beverages prepared and consumed away from lab workspaces and stored out of chemical storage refrigerators and cabinets?
- Yes Is proper Personal Protective Equipment (PPE) readily available for all personnel, including visitors, and worn when working in the lab? (Safety glasses or goggles, appropriate gloves, lab coat, apron, face shield, etc. NO SHORTS OR SANDALS)
- Yes Are eye wash/safety showers available in areas where corrosives and toxics are used?
Blocked Not Apparent Needed but not available
- Yes Do lab personnel know the location and how to operate the safety shower/eye-wash and is it accessible (not blocked)?
- Yes Do lab personnel have access and understand how to use Material Safety Data Sheets (MSDSs)? (Access database at: http://ehs.ucsc.edu/MSDS_and_Chemical_Info/)
- Yes Is the fume hood sash at a proper operating level and is a quantitative flow device (magnehelic gauge, visual indicators w/ red & green warning lights, low flow alarm, etc) present to verify the hood is drawing air properly?
- Yes Is storage of chemicals and equipment kept to a minimum in the fume hood so airflow is not impeded or excessive turbulence generated?
- Yes Are all of the lab facilities in good repair, including light fixtures, plumbing and ceiling tiles?
- Yes Comments: _____
- Yes Are microwave ovens, refrigerators and freezers properly labeled based on storage classification (NON-FLAM CHEM ONLY, FOOD ONLY, etc.)?

Hazardous Materials Storage & Labeling

- Yes Do chemical containers have legible, current labels to identify contents and hazards of the material?
- Yes Are chemicals segregated according to hazard class and compatibility (oxidizing from organic acids, bases, flammables, etc.), into appropriate storage cabinets (corrosives, flammables) or labeled secondary containment trays?
- Yes Are peroxide forming chemicals (ethyl ether, tetrahydrofuran, dioxane) managed in the lab (date of purchase, date opened, disposed when expired)?
- Yes Are flammable liquids used / stored away from sources of heat and ignition?
- Yes Are approved, spark-proof, lab-safe refrigerators and freezers used for storage of flammable liquids that require them?
- ~~Yes~~ No Are all excess flammable liquids (dispensing reagent containers and aggregate > 10 gal.), including wastes, kept in approved flammable liquid storage rooms or cabinets?
- Yes Do flammable liquid cabinet doors close and latch properly?
- Yes Are corrosives, flammables, skin-absorbable poisons and heavy equipment kept below eye level?

Comments: _____

The Three bottles of methanol ~~are~~ have been removed to flammable liquid storage room.

Fire and Electrical Safety

Yes No

- Are fire doors unobstructed and closed during work?
- Are fire extinguishers mounted, clearly visible and fully charged?
- Is emergency equipment (alarm pull boxes, fire alarms, etc.) accessible and not blocked?
- Are supplies and equipment stored at least 18 inches from fire detection and suppression devices?
- Are electrical boxes, panels, receptacles, and fittings properly covered to prevent shock?
- Are the electrical appliances and lab equipment in good repair or removed from service?
- Are electrical extension cords used only for temporary operations, UL listed, equipped with a 3-prong plug, kept out of walkways and run directly to outlet (no daisy chain)?
- Are all multiple-outlet surge suppressers/power strips approved, UL-listed and used only for computers, peripherals and small equipment (not to power high wattage equipment)?
- Are electrical outlets within 6 feet of a water source or "wet area" equipped with a GFCI-type outlet (consider water baths, aquariums, & other operations with electrocution risk)?
- Are electrical cords free from damage, fraying, tape, or cracking; grounded with 3-prong plugs and not run through walls, ceilings, doors, across walkways or under equipment?
- Is there at least a 30-inch clearance in front of electrical panels/breaker boxes?
- Are hot plates, temp-blocks and other temporary heating units unplugged when not in use?

Illumination and Egress

- Are exit signs visible and illuminated?
- Are exit aisles clear and free of obstructions (44", 36" or 24" clearance as required)?
- Are the windows, doors and automatic door closing devices in good repair?

Seismic Safety

- Are shelves and equipment greater than 4 ft. tall seismically braced to prevent falling?
- Do shelves and cabinet tops have lips or bungee restraints to prevent items from falling?
- Are shelf tops > 5 feet high without bungee or other restraints free of storage?

Comments:

Razor blades used for cutting glass should be stored in containers labeled "SHARPS" when not in use.

Hazardous Materials Storage & Labeling (continued)

Yes No

- Yes Are all flammable liquid cabinets located away from evacuation routes; heat or ignition sources and combustible materials storage (i.e., no paper stored on or around cabinet)?
- Yes Are all gas cylinders properly secured with 2 metal straps or chains (top 1/3, bottom 1/3) or other adequately engineered system to prevent tipping or falling?
- Yes Are fuel gas cylinders and oxygen cylinders separated by distance and fire-resistant barriers, while in storage?
- Yes Are cylinder valves shut off, gauges removed and valve caps in place when not required for ongoing experiments?
- Yes Are cylinder contents labeled and labels easily seen?
- Yes Are flammables, corrosives and skin-absorbable poisons kept off the floor in common practice and secondarily contained if temporary placement on the floor is necessary?
- No. Are glass and sharps (needles, syringes, razor blades, etc.) stored in approved puncture resistant containers and properly labeled (biohazardous sharps, sharps, etc.)?
- Yes Are secondary containment trays clean and free of visible contamination?

Hazardous Waste Storage & Disposal

- Yes Are hazardous materials disposed of properly, rather than by sewer, evaporation or ordinary trash, (including containers with any remaining chemicals)?
- Yes Are all waste containers w/ liquid in secondary containment? Is the containment free of spills and contamination? Is the storage location visible or identified to EH&S? Yes
- Yes Is the size of the container appropriate for the rate of waste accumulation?
- Yes Are incompatibles segregated (e.g. acids and bases in separate trays)?
- Yes Are all containers sealed with the proper fitting lids/caps at all times except when adding hazardous waste?
- Yes Are container tops and sides free of spillage or visible contamination?
- Yes Are the containers no more than 80% full?
- Yes Are all containers, lids and caps compatible with hazardous waste (e.g., strong acids or bases stored in glass containers as opposed to plastic.)?
- Yes Are all hazardous waste containers stored in a safe location (e.g. not in high traffic areas, away from any heat source)?
- Yes Are all hazardous waste containers disposed of within 6 months of accumulation start date and/or are all full containers listed on a chemical waste pickup form to be submitted to EH&S?
- Yes Are Extremely Hazardous Wastes properly identified and kept in quantities of < 1 quart? Are all full containers disposed of within three days? (List of Extremely Hazardous Wastes at: http://ehs.ucsc.edu/Waste_Management/ehs.asp?page=pubs/Determination_Guide/b51)

Hazardous Waste Labeling

- Yes Do all hazardous waste containers have an EH&S Hazardous Waste Tag attached before waste is added to the container?
- Yes Are all chemical ingredients listed as part of the waste composition? Are chemical names and not formulas used?