

***LAB ORIENTATION GUIDE FOR
SCALE-UP & CHARACTERIZATION (SU&C)
AND SYSTEMS INTEGRATION (SI) TESTBEDS***

1) PPEs for SU&C

- **General outfit:** Safety glasses, lab coat, long pants, closed shoes, booties and nitrile gloves
- **Specifics:**
 - ✓ **lab coats:** disposable, non-woven provided by the lab are preferred, but personal, clean cotton lab coats are acceptable
 - ✓ **safety glasses:** must be worn at all times. Use face shields for high volumes (> 100 mL) of solvents
 - ✓ **gloves:** latex and/or nitrile are provided, but proper chemical compatible gloves for your chemicals must be listed in your process standard operating procedure (SOP), and must be brought by you, if not available

2) TRANSIT IN, OUT AND BETWEEN THE LABS

- Always use the entrance doors through the changing room to enter the labs
- You can exit the lab through the same doors or through the double door in the characterization room - remember to properly dispose lab coat and booties
- Backpacks and other items must be left outside the lab. Jackets and coats can be hung up in the rack in the changing room. Lockers are provided in the collaborative office space across from the characterization room
- Never touch external doors with gloves!
- Foods and drinks are not allowed!
- Never leave doors propped opened

3) CHEMICAL HANDLING AND STORAGE

- You must inform staff about every chemical brought into the lab
- There are 5 cabinets for storing chemicals in the Scale-up testbed:

Cabinet 1 (yellow) – Flammables

Cabinet 2 (blue) – Organic Acids and Oxidizers

Cabinet 3 (blue) – Inorganic Acids

Cabinet 4 (blue) – Bases

Cabinet 5 (black) – General chemicals

*See section D page 2-9 of the Laboratory Safety Manual (LSM) for detailed information on chemical storage

- **Empty solvent bottles** must be left in the fume hood to **vent**; **label** should be **immediately crossed out**; and they can be **stored in any storage cabinet** after all liquid and odors disappear.
- Empty solid chemical containers should always be discarded in the appropriate place
- Use of hazardous chemicals and processes (e.g. aqua regia, piranha, HF and lead-containing materials) is allowed, but specific care must be reviewed with lab staff
- **Safety shower and Eye-washers in room 112**

4) WASTE DISPOSAL

- Pipette Tips and Glass go in glass waste
- **Hazardous waste (kim wipes, towels, gloves, foil, etc)** goes into the **yellow or white hazardous waste bins**
- Sharps (needles, syringes, razor blades, etc) go into the red plastic sharp containers located inside the fume hoods
- Solvents can be disposed of in the appropriate waste container, located inside fume hoods:
 1. Non-halogenated organics
 2. Halogenated organics
 3. Aqueous Waste / Acids and Bases
 4. Lead-contaminated
- Batteries must be disposed in the special container near the walk-in hood
- **Only Lead-containing materials** should be disposed in the solid and liquid lead waste currently **in Fume Hood #4**.

5) HOUSEKEEPING

- **Clean-up:** always clean your working area up after you finish your work
- **Sample storage:** every user can have a **plastic box and some dedicated space** in the wire shelves, central cabinets in Room 112 or drawers
- **Labeling** (see section E page 2-13 of the LSM for more details):
 - accurate** - full description of the content
 - complete** - name, date, any major risks
 - always** - label your samples during and after your lab-work
 - * a label maker machine is available in the lab
 - ** **use available label templates (yellow and white)!**

6) EQUIPMENT USE AND OTHER RECOMMENDATIONS

- Most pieces of equipment require a separate training and qualification that needs to be conducted by lab staff members
- never work alone with chemicals (buddy system)
- do not touch electrical boxes, switchers, gas regulators or any facilities infrastructure

7) LAB DOCUMENTATION

- A copy of the full Chemical Hygiene Plan (CHP), including Laboratory Safety Manual (LSM) is available in the User's Information Station computer
- All laboratory training, orientation, safety (SDSs), and procedural documents are also available at this station.

8) EMERGENCY CONTACTS

- immediately communicate emergencies to WCET staff. Alert other users in the lab, and execute any applicable action first (for instance, in a chemical spill event)
 - report any problems to WCET staff (i.e. low nitrogen or argon pressure, malfunctioning equipment, etc)
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- Michael Pomfret: 206-685-6833 – mpomfret@uw.edu
 - Felipe Pavinatto: 206-685-8798 – felippe@uw.edu
 - Phil Cox: 206-616-7008 - coxp51@uw.edu
 - wcet.washington.edu - wcet@uw.edu
 - User's e-mail list: scheduled outages, closures, cancellations, or equipment shut down