# Workshop Wizard Handbook

Microfluidics Lab Routine Maintenance

<u>Chores</u>

- 1. Check and replenish paper towels in dispensers
  - Paper towels are stocked in brown paper packages on the shelves along the wall by the entrance.
- 2. Check and replenish gloves
  - Check if any glove boxes are about to run out. If they are, open up the next one on top of the stack and add a new box of gloves to the bottom of the stack.
  - Make sure there are both nitrile and latex gloves to use.
  - Gloves are stocked on the shelves along the wall by the entrance, as well as above the vacuum furnace.
- 3. Tidy up bench spaces
  - Properly dispose of sharps and put away tools/supplies.
- 4. Sweep and mop
  - Walkways and under benches
  - Use the general maintenance cart located in the hallway outside the lab. Cleaner is stored in the cabinet under the sink.
- 5. Check and replenish hazardous waste labels
- 6. Check sharps containers
  - If full, tape off the top and place in the hazardous waste bin.
- 7. Check glass waste bin
  - If full, seal and tape off the top.
- 8. Make sure all cabinets are locked
- 9. Check and replenish Kim wipes at every station
  - Kim wipes are stocked on the shelves along the wall by the entrance.
- 10. Refill solvent squirt bottles in fume hood
  - Fume hood should have 3 bottles of IPA, 2 bottles of Ethanol, Acetone.
  - Large jugs under the hood in the cabinet.
  - New jugs in the cabinet labeled "extra solvents."
  - Wear gloves and lab coat; do all refilling in the fume hood.
  - Keep empty solvent bottles as waste bottles.
  - NOTE: Acetone will drip when refilled due to pressure differences.

## 11. Monitor the hazardous waste jugs

- Place in hazardous waste bin if needed.
- 12. Top off the Sonicator with DI water
- 13. Replace the paper towels in the spin coaters if needed
  - Paper towels will have oil streaks if the spinner has been used.
- 14. Top off cutting fluid in diamond cutter
  - The blue fluid by the CNC drill.
- 15. Restart the Objet Printer
  - IN THIS ORDER:
  - Turn computer and Objet off.
  - Turn Objet on (use mirror to find power switch in the back).
  - Turn computer on.
  - Open remote desktop.
  - Open Objet application on remote desktop.
  - Open Object Studio software on main desktop.
- 16. Replace empty resin and waste containers in the printer
  - Check software. If the resin level is red or has an hourglass, it cannot be put back in once taken out. Avoid wasting resin.
  - Restock spare materials in the grey bin under the printer.
  - Print new labels if necessary.
- 17. Clean the pressure washing station
  - Make sure water is off (both levers should be down).
  - Check the yellow gloves and replace torn.

## 18. Restock Thinky Mix Uline jars

- Stored below the workbench.
- 19. Replace dirty bench liners
  - Remove, wipe area, and place a new one shiny side down.
  - Stored under the workbench near gloves.
- 20. Turn off Olympus microscope
- 21. Turn off Keyence light
  - Power button.
- 22. Refill CNC drill squirt bottle
  - Use blue coolant.

#### 23. Clean the laser cutter

• Take out the (layer with a bunch of hexagons) and vacuum small bits from the bottom.

### 24. Clean laser cutter lens

- Tools in yellow bin.
- Place bubble wrap under the laser (in case the lens drops)
- Unscrew the cap
- Use 1 drop of cleaner and a lint-free cloth to polish both sides of the lens.
- Replace the lens, convex side should be facing down. Do not overtighten.
- NOTE: The convex side of the lens will have a more prominent (relative to the concave side) dot in the center.
- The grey knob on the laser will release the mirror for cleaning if necessary.

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