

## Workshop Wizard Handbook

### Microfluidics Lab Routine Maintenance

#### Chores

##### 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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