

## **Kamat Lab Procedures**

1. Each room needs to have at least 4 waste bottles:
  - a. Aqueous, Acid, Chlorinated Organics, Non-chlorinated organics (mark any if heavy metals are present)
  - b. Bottles should be labeled with what is put into them as you put it in. This means putting an official waste label on a waste container before placing any waste into it. Just a sharpie marker designation is not sufficient.
  - c. Store waste bottles in your own space until waste pickup
  - d. Waste bottles should be contained in plastic tubs (one for full bottles ready for pickup, one for partially full bottles which still may be added to)
2. After acids are used, neutralize with sodium carbonate or sodium hydroxide in an ice bath in a hood and wash them down the sink with a copious amount of running water, with the exception of nitric acid, which should be neutralized and stored for pickup. If heavy metals are present in any neutralized acid waste, keep solution in a labeled waste bottle.
3. Clean glassware often
  - a. Use proper cleaning technique. Use below methods, with priority given to the first listed method, i.e., only use aqua regia if no other methods properly clean your glassware
    - i. Rinse, soap and water, dishwasher, base bath, acid bath, aqua regia
  - b. Do not overkill the washing of glassware (dilute acid can be used most times in place of concentrated acid)
  - c. If using aqua regia, recycle it in a designated aqua regia container
  - d. Anything soaking in acid or base for cleaning should be in a contained receptacle like a plastic tub
4. Do not mix organics with acids
5. When in the laser room and the laser is on, proper safety goggles must be worn by everyone.
6. Place all unwanted needles, syringe tips, and razors in the sharps container. Unused needles, syringe tips, and razors to be used should be stored together in an organized container.
7. If you break a piece of equipment, replace it. If you break something that is commonly used by others, inform all users of the situation and when it will be fixed.
8. If someone from outside the lab wishes to take something from the lab they must check it out with the list near the door between rooms 202 and 206. They must also sign it back in when returned.
9. Use gloves when handling chemicals, do not use gloves when typing on a computer or writing with pens/pencils or touching any public item (like doorknobs/elevator buttons).
10. Replace chemicals from the shelf they were obtained, if you empty something replace it or order new material.

11. Do not wear open toed shoes in lab, take conversations to hallway if needed. Changing shoes at your desk first thing in the morning is ok.
12. Do not let any electrical outlets rest on the floor for flooding concerns.
13. Water hoses should be clamped to all fittings.
14. When using another lab put everything back where you found it and replace consumables.
15. When using a hood and are away from it for more than 1h, make a note who is working, what experiment is in progress (this includes acid or base cleaning), and any potential safety hazards.
16. If a power cord is cracked get it replaced (electronics shop).
17. Secure all gas cylinders to a wall or very sturdy table.
18. If there is a log book sign in and out of the piece of equipment and leave it a clean workstation.
19. If there is a spill that you can clean up, do it if you know the proper procedure. However, if a spill involves a dangerous gas cloud, call risk management (1-5037). Emergencies (injuries, immanent risk of injury), dial police/fire (1-5555).

**THE GOLDEN (LABORATORY) RULE:** Use common sense and think about what you are doing, ask questions if you are not sure about something, and ask before borrowing.