

Glassblowing area guidelines

Gladysz Research Group

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The glassblowing area (GA) is available for scientific glassblowing to all members of the JAG group who feel qualified to handle the heat and molten glass. Please, follow these basic guidelines of use:

1. Before you start any glassblowing work, please, take a moment to check for the position of the safety equipment (fire extinguisher, fire blanket, first aid kit, exit door...). Try to inform someone of your presence in the GA or keep the door open if possible. Dress appropriately!
2. The gas cylinders are set up to the appropriate pressures (see below). Please do not change these values unless previously discussed with the person in charge (PiC) of the Glassblowing area or the departmental glassblower. If you need to change the pressure of any gas cylinder, please, return it to the original level.
 - 2.1 Pressured gases:
 - 2.1.1 Propane (5 psi)
 - 2.1.2 Oxygen (10-15 psi)
3. Please check to see if anyone is using H₂ or a flammable gas in the same room; if yes, check that the experiment is appropriately vented.
4. The raw glass material is to be used efficiently. Always cut the smallest amount necessary to work with, but large enough to be safe. Spare parts are located in the drawers. If you want to use any of the parts in the box labeled “glassware to be repaired”, please, consult with the PiC first, as some parts might belong together.
5. Keep the hot glass on the working sheet or resting on the cooling rack; never place a hot piece of glass directly on the bench. Keep all hot glass or tools in a safe distance from your body.
6. When done working, let all the tools cool and then place them to their appropriate place in the drawers.
7. All scrap glass that can be used for future work should be placed into the metallic container labeled “usable glass”
8. All waste glass should be placed in the metallic container labeled "broken glass". Never place hot glass into a regular glass-recycling box provided in the stockroom (paper burns).

The JAG members can get their broken glass repaired in the JAG GA, depending on the difficulty and availability of equipment and spare parts. All in house repaired glassware intended

for high pressure work (or similar) will be submitted for re-fire in the departmental facility to ensure maximum quality and safety. Rules for glass repairs:

1. Before submitting any glass parts for repair, please, **wash your glassware thoroughly from any and all chemicals and then with water** (extremely important for the safety and health of the repairer).
2. Keep all the broken parts of a specific piece of glassware together. Place it on the shelves/boxes labeled “glassware to be repaired.”

GENERAL RULES FOR GLASSWARE

- Glassware is not anybody's personal property but should be shared with other group members. Personal drawers are not the appropriate place to store excess glassware, the glassware storage room is.
- Take only the glassware you need from the storage room.
- Return excess glassware to the storage room, especially if it is "one of a kind". Make sure it is CLEAN (no grease!) and place it in the appropriate bin.
- Broken glassware: Always consider a repair and don't just dispose of glassware. If in doubt, ask an experienced group member or the department's glassblower (Bill Merka).
- Glassware will not be repaired if it is not clean. Pay special attention to the removal of vacuum grease. To make repairs, the glassblower attaches the piece to a tube and mouthpiece to control of pressure in the glass. Its considered rude to submit dirty glassware and poses an unknown threat to the glassblower by exposing them to chemical fumes when working.
- Before ordering new glassware ask other group members if they have any excess in their drawers (email works best to reach everyone).

GLASSBLOWING RESOURCES

- [This is a great introduction to glassblowing methods and techniques](#)