

Clarkson Green Labs

Clarkson's Green Labs Initiative trains lab users to implement sustainable practices that minimize their environmental impact by conserving resources, and reducing waste. Use the following guide to see what sustainable practices can be adopted in labs and to learn how to identify and manage big energy consumers.

Resource Saving Tactics - The Big 3

Ultra-Low Freezers - turn them up!

If your lab has an ultra-low freezer, increase the temperature from -80° to -70° . This small increase in temperature **reduces energy consumption by 20-30%**. Remember to defrost and clean freezers regularly to ensure that they are running efficiently.



Autoclaves - check for leaks!



If your lab has an autoclave, routinely check for leaky valves and solenoid issues. A failed solenoid valve could waste **2.6 million gallons of water a year!** Watch for signs of faulty valves. If you hear a gurgling sounds near the drain between cycles, the valve may be faulty. Report and replace any broken equipment.

Fume Hoods - Shut the sash!

Fume hoods alone account for about half of all energy consumed in labs. An open fume hood uses **as much energy as 3.5 homes!** To minimize energy consumption of fume hoods, keep the fume hood sash shut, or at the lowest possible level. Shutting the sash of fume hoods not only saves energy, but also offers lab users more protection from unexpected accidents in the fume hood. The lower the sash, the less energy is consumed. Keep these practices in mind in the lab. Contact the ISE if you'd like a fume hood sticker (shown to left).



Solid Waste - Make sure you have the right streams!



- Glass - metal bin
- Landfill - black bin
- Recycling - blue bin
- Biohazards & Sharps - options shown below



Recycling rules in the lab:

- Containers are empty and dry
- Caps are discarded
- Containers only contained acetone, alcohols, cleaning products, hexane, non-toxic buffers, nutrients, salts, sugars, toluene, or xylene
- Rinse containers before recycling
- DON'T RECYCLE containers with hazardous or radioactive materials
- DON'T RECYCLE sharps that could puncture plastic bags

Inventory and Green Purchasing

Communication and coordination between labs are a vital part of lab sustainability. Updating department inventory and bulk ordering supplies reduces the carbon footprint of packaging and transportation of lab supplies.

- MIT's "[Green Chemistry Wizard](#)" identifies alternatives for hazardous chemicals
- Check Clarkson's electronic chemical inventory and safety data sheet management system ([MSDSonline](#)) before purchasing new chemicals
 - Keep the system up to date by completing a [Chemical Inventory Update form](#) every time a new chemical is purchased or moved into your lab
- Partner with [Kimberly Clark's RightCycle program](#) to recycle:
 - Lab gloves
 - Pipettes
 - Other lab apparel

