



UNDER THE MICROSCOPE

The Dartmouth College laboratory safety newsletter

Specific questions? Ask EHS: 603-646-1762 or ehs@dartmouth.edu

Electrical Safety in the Lab

Hazardous materials aren't the only dangers in a lab! We're surrounded by all sorts of equipment that pose their own hazards, including a common one: **electricity**. Here are some key things to know:

- Electrical panels must be readily accessible.
- Electric cords must be intact and undamaged.
- Cords and power strips must be positioned so they aren't a trip hazard.
- Keep electrical equipment away from water. If water is nearby, orient equipment so that water will not flow towards it, for example by traveling down cords.
- Keep cords away from hazardous materials to avoid damage and/or contamination. (Cords have been found hanging inside biohazard waste bins...)
- Power strips must be plugged directly into a wall outlet and not overloaded. Don't exceed the rated total capacity marked on the strip.
- Extension cords are for temporary use only. They also have a rated capacity that must not be exceeded.
- Never link power strips and/or extension cords in series ("daisy chaining"). This increases resistance and reduces capacity, making overheating and equipment damage more likely, even if it doesn't happen right away.
- Contact facilities for repairs or if additional outlets are needed. Never attempt your own electrical work!

These sample pictures are all from Dartmouth labs within the past three years. Periodically check electrical equipment you use to make sure it is in good condition, plugged in properly, and safe to use.



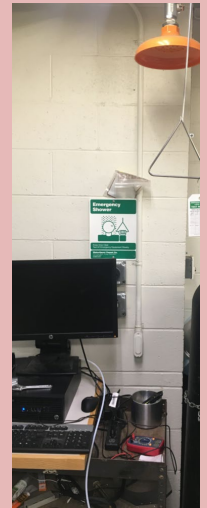
Long daisy chain:
Three full power strips in series on an extension cord



Melted power strips:
Top: sum of devices > capacity
Bottom: single device > capacity



Power strip cord frayed at both ends, also daisy chained and underneath an eyewash



Computer station under emergency shower and obstructing access