
The Waste-Paper

The Hazardous Waste Disposal Monthly Update

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Mercury Alternatives

The Environmental, Health and Safety office continues to advocate for minimizing the use of elemental mercury on campus, including in the lab. Thermometers and manometers are the most common lab uses of elementary mercury, and in many cases, there are suitable non-mercury alternatives available.

Differential manometers

Depending on the measurement range, labs can substitute water or calibrated oils for mercury. Pressure transducers or electronic pressure gauges may also be an alternative to a conventional manometer.

Thermometers

There is a wide selection of mercury-free thermometers available, including spirit thermometers (filled with petroleum-based mineral spirits) and alcohol-based thermometers. In some cases, these alternative thermometers have a more limited temperature range. Some spirit thermometers have a history of the thread breaking more easily than a mercury thermometer, but some of the newer formulations minimize this issue. In all cases, the non-mercury thermometers are just as accurate as mercury counterparts.



Digital thermometers available through EHS.

In addition to thermometers with mercury-alternative liquids, long stem digital thermometers are available with probes resistant to acids, bases, solvents and most laboratory chemicals and provide a certificate indicating traceability to NIST standards. They read in both °F and °C, with ranges from -58 to 302°F and -50 to 150°C. Digital thermometers have excellent accuracy.

Where a mercury thermometer is the only option, armor cases (pictured at left), which protect against breakage without affecting accuracy, or Teflon-coated mercury thermometers are recommended. These are particularly useful in high temperature ovens, oil baths and autoclaves, where cleaning up a mercury spill can be challenging.



Thermometer Exchange

EHS will exchange most mercury thermometers with comparable non-mercury alternatives at no cost. If interested, send an e-mail to Steve Elwood at selwood@princeton.edu with the specification of the thermometer(s) for replacement. EHS will send your mercury thermometer for reclamation.

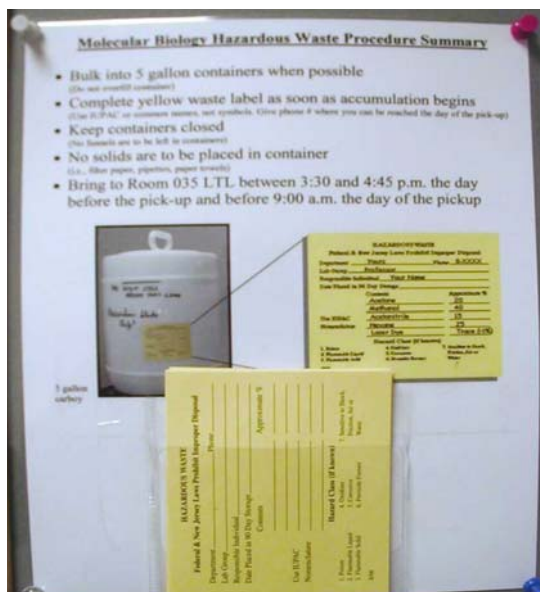
Next Waste Pickup:
October 26, 2006

*Bring waste to collection area on
October 25, 2006*

Frick Loading Dock: 1PM – 2 PM
E-Quad Room-7: 2 PM to 3 PM
LTL Loading Dock: 1pm to 4:30 PM

Waste Posters

EHS provides posters that include brief instructions on how to manage hazardous waste along with a pouch to hold waste labels. If you do not have one in your laboratory, contact Steve Elwood at 8-6271 or selwood@princeton.edu. Include the location of your laboratory, since the instructions are specific to the building or department.



Who's the New Guy?



EHS is pleased to introduce the newest addition to our office, Jim Boehlert, Program Manager for Laboratory Safety and Industrial Hygiene.

Jim relocated from Richmond, Virginia to take on this position, but he is quite familiar with Princeton University from his work here as a consultant and contractor for chemical waste and environmental issues.

Jim comes to us with more than five years experience in the field of chemical safety and management, including work as a field chemist and reactivities specialist in the chemical waste industry. He has a BS in Natural and Synthetic Polymer Chemistry from Syracuse University and Explosives Handling Certification from New Mexico Tech.

Aside from work, he enjoys mountain biking, snowboarding, and weight lifting. He has recently started learning to play electric guitar, and enjoys listening to all types of music. He's a fairly accomplished cook; enjoys grilling even into the depths of the winter and entertaining friends with a fine wine over good cuisine.

Please join us in welcoming Jim to the Princeton community. Be sure to invite him to all of your barbecues!

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Reminder

November and December will have a combined pickup.

The December pickup will be Thursday, December 7, 2006

Waste Collection will take place on Wednesday, December 6, 2006

There will not be a pickup in November