

# Lehigh University

## Environmental Health and Safety

### Laboratory Newsletter

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#### Mercury Thermometers



Mercury thermometers at one time were a vital part of laboratory equipment. The mercury inside the thermometer is a heavy metal and can be hazardous if not properly handled. Since technology has developed accurate electronic thermometers, there is no need to use the mercury thermometers. Departments should review their labs and collect the mercury thermometers so they can be disposed of safely. Contact EH&S if you need to dispose of your mercury thermometers.

**Did you know you are only allowed one back up cylinder of compressed gas for each gas used in a lab?**

#### Keeping Your Lab Safe

Conduct inventories of chemicals, powders and gases and post on the outer door along with emergency contact information.

Store flammables in cabinets.

Separate acids and bases.

Keep the eyewash station clear.

Review laboratory safety plans.



#### What is Chemical Loading?

Chemicals are found in nearly every laboratory on campus. There are specific chemicals and gases that are a concern to a safety inspector. Flammable, toxic and corrosive gases, chemicals and powders have limitations to the amount that can be stored in an area. (This ensures there are no caches of explosive, flammable or toxic materials stored indoors.) Assessing what that limit may be is determining the chemical loading of that area.

Some labs may use more hazardous chemicals or gases than others, so inventories must be conducted to ensure we stay within the legal limits.

Laboratories that require more storage may store some of their chemicals in other areas of the building where there is less chemical loading. To do so requires departmental permission as well as approval from LU Facilities and Environmental Health and Safety.



If wearing earbuds or headphones in a lab, keep one ear open!

#### Storing Compressed Gas



Compressed gases must be stored in accordance with NFPA and OSHA standards. Some simple rules to follow will help you stay in compliance.

- 1) Separate flammables from oxidizers by 20 feet or half hour rated fire-wall. The photo above shows a flammable stored next to an oxidizer.
- 2) When nesting cylinders three point contact must be maintained (floor, wall and/or another cylinder). The chain must be snug.
- 3) Cylinders must have the PI's name or it will be sent back.
- 4) Flammable gases should be stored away from ignition sources.
- 5) O2 alarms should be used where there is a chance of asphyxiating gases from displacing air. This is especially true with cryogenics such as liquid nitrogen dewars which may off gas periodically as a safety feature.