

# UTK Lab Hazards Posting Guidelines:

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The following will serve as a guide for completing the laboratory hazard door placards. Please note that a responsible party may elect to post a hazard (if below the threshold for reporting) if he or she considers the hazard to pose a potential threat to emergency personnel.

## General Information:

**Building:** Enter the official Building Name. The building list is available on the Facilities Services website: <http://fs.utk.edu/buildlist.asp>. Some abbreviations are acceptable. The style should be modelled on the style already in use in the building (SERF, Hesler, Dabney-Buehler, etc.).

**Room #:** Enter the official room number. Rooms should not be combined unless there is no clear differentiation between two areas (there is no door or there is no suitable to place individual signs. When in doubt EHS should be consulted. A combined can appear as "501-502". Sometimes rooms have alternate door numbers such as in Walters Life Sciences. Such cases are noted with the official floor plan number followed by the alternate parenthetically, e.g. C501(D501). This example would be for a room primarily identified to C corridor but with an alternate designation on the door opening to D corridor.

**Department:** Department name or its abbreviation. Use whatever styling is currently in use in your department

**Lab Type:** A short description of the laboratory type. Some possible examples: Machine Shop, Genetic Sequencing, Microbiology, Organic Chemistry, Inorganic Chemistry, Cell Culture. Generic terms such as "Research" are discouraged.

**Rev. Date:** Date of revision in the format **MM/DD/YYYY**. The revision date should be within one year.

## Biological and Radiological Hazards

**Radioactive Materials:** If marked, additional signage should be present. Radioactive Materials can be selected and/or X-Ray generating equipment as appropriate. Contact the Radiation Safety Office for more information: 974-5580.

**Biohazards:** Selected if biohazards are present, and note Biosafety Level. Only BSL 2 or 3 requires additional signage through the Biosafety Office. Consult the Biosafety Office 974-5547.

## Chemical Hazard Pictograms:

The Globally Harmonized System of Hazard Communication adopted by OSHA includes the use of new pictograms on chemical containers. As of June 1, 2015 all chemical labels will be required to incorporate these pictograms. Door placards will incorporate them to make a more cohesive representation of hazards present. However, it is recognized that de minimis levels of hazardous materials do not represent a hazard to first responders, and as such, thresholds for reporting hazards are set in terms of concentration and/or quantity by Environmental Health and Safety. The following table is to be used in conjunction with chemical container labels, and Material Safety Data Sheets/ Safety Data Sheets. If a threshold for reporting is met in the table, the corresponding pictograms should be checked.

# GHS-Hazard Communication Standard Pictograms



**Health Hazard:** Carcinogen, Mutagenicity Reproductive Toxicity, Respiratory Sensitizer, Target Organ Toxicity, Aspiration Toxicity

***The minimum amount required for posting is 100 grams***



**Flame:** Flammables, Pyrophorics, Self-Heating, Emits Flammable Gas, Self-Reactives, Organic Peroxides

***The minimum amount required for posting is 5 Gallons (~20 Liters) or one lecture bottle***



**Exclamation Mark:** Irritant (skin and eye), Skin Sensitizer, Acute Toxicity (harmful), Narcotic Effects, Respiratory Tract Irritant, Hazardous to Ozone Layer (Non-Mandatory).

***The minimum amount required for posting is 500 grams***



**Gas Cylinder:** Gases under Pressure

***The minimum amount required for posting is One Lecture bottle (aerosol cans are not counted here)***



**Corrosion:** Skin Corrosion/Burns, Eye Damage, Corrosive to Metals

***The minimum amount required for posting is 5 Gallons (~20 Liters)***  
*If conc. strong acids or bases, a lower threshold of ~1-2 Gal is advised*



**Exploding Bomb:** Explosives, Self-Reactives, Organic Peroxides

***The minimum amount required for posting is Any Amount***



**Flame Over Circle:** Oxidizers

***The minimum amount required for posting is 500 grams or one lecture bottle***



**Skull and Crossbones:** Acute Toxicity (fatal or toxic)

***The minimum amount required for posting is 100 grams or one lecture bottle***

## Other Hazards:

**Laser(s) (Class \_\_\_\_\_):** Check if class IIIa , IIIb and IV lasers present and enter the class of lasers used. Contact Radiation Safety for more information. *Note: Do not include consumer products sealed-source lasers. This is oriented towards research lasers only.*

**High Pressure Equipment:** Check if using pressurized equipment or apparatus under vacuum operating in excess of 30 psi-absolute (15 psi gauge). This does not apply to building utilities (steam pipes, waterlines, natural gas, and low pressure pneumatic lines). 100 psi pneumatic lines should be included. This section should not include a compressed gas cylinder in and of itself.

**High Voltage  $\geq$  480 Volts:** Check if using greater than or equal to 480 Volts AC. This includes the presence of 480V electrical distribution panels.

**Natural Gas:** Check if Natural Gas is supplied or is in use in the room. It may be advisable to include cut-off locations in the Special Hazards Section

**Air/Water Reactive:** Check if using Air or Water Reactive Compounds. If pyrophoric chemicals are involved, a special hazard statement may be prudent.

**Hazardous Waste Storage:** Check if hazardous waste is stored in this room. In the special hazards section, the Hazardous Waste Storage location may be provided (e.g. "Hazardous Waste Storage is under fume hood").

**Cryogenics:** – substances that exist in a closed container below  $-150\text{ }^{\circ}\text{C}$ ,  $-238\text{ }^{\circ}\text{F}$  or 123 K. Examples include liquid nitrogen and liquid helium. The minimum reporting threshold for this category is 4 liters.

**Special Hazards or Precautions:** Enter any additional Special Hazards in the room that might not be evident from the selections provided. Some examples of Special Hazards could include: Exposed electrical circuits/High magnetic fields within 5 feet of NMR/Hydraulic equipment in use, trained personnel only/poisonous by inhalation gases present etc. Remember to consider the perspective of emergency responders.

**Required PPE:** Enter any required PPE or precautions. Examples could include. Safety Glasses and lab coats are required in this room. Special glove requirements may be required in this lab.

## Contact Information:

Contacts shall be provided as available. The primary contact should be the Supervising Staff member or Principle Investigator. The Secondary Contact can be another person strongly associated with the lab such as a staff laboratory manager, the senior Post-Doc, or managing graduate student. The contact for the departmental chemical hygiene or safety officer shall be provided. The department head or administrative contact shall be provided as the final contact.

**For each lab entry a department name and at least primary contact names should be provided.**

*Sensitive contact information may be sent directly to EHS to be stored on-file as necessary such that is not posted on the actual door placard. This option is not common and may delay emergency response. Please consult with EHS to arrange this option.*