



Safety Gram

January
2019

Lab Assessments

Over 500,000 workers are employed in laboratories in the US. The laboratory environment can be a hazardous place to work. With a new year comes new year resolutions, a chance to become better in every aspect of life, including in the workplace. Throughout this new semester, lab assessments will be done by the Chemistry/Biochemistry Department, so now is the time to make the new year resolution to practice better safety procedures in the lab. The improper practice of safety procedures can lead to fines, injuries, and even death. Assessments and inspections are performed to ensure the safety of all personnel working in the workspace. Inspections may be done by multiple organizations and may also be done without notice. Some of these organizations include:

- DEA (Drug Enforcement Administration)
- National Homeland Security
- OSHA (Occupational Safety and Health Administration)
- State and local government
- RCRA

Lab Safety Story

Failure to follow safety procedures, as mentioned before, can have serious consequences, as illustrated by the incident that occurred at the University of Hawaii in 2016. A postdoctoral researcher was attempting to prepare a gas mixture of 55% hydrogen, 38% oxygen, and 7% carbon dioxide in a 49-L steel tank designed for compressed air and not electrically grounded. An electrostatic discharge likely ignited the mixture and caused an explosion. As a result, the researcher lost one of her arms, and, after assessing the lab for 15 workplace safety violations, the University of Hawaii faces a total \$115,500 fine. It is also wise to learn that even accidents happen with postdoctoral researchers. Whether you are a beginner or an expert, always make sure to practice proper safety procedures.



We're Here to Help!

It may be daunting to think about the pressure of inspections, but there is a difference between inspections and assessments. The assessments done by the Chemistry/Biochemistry Department are to help you prepare for inspections done by risk management or by any of the organizations listed above. To help you prepare for the upcoming assessments, please review the list of questions below. Also, as a new incentive to help everyone keep their labs cleaner and safer, we will award **Chem Cash** (money that can be used exclusively at Chem Stores) to the cleanest and safest lab per floor.

General Lab and Training	Laboratory Equipment	Unwanted Lab Material (ULMs)
Lab sign (posted on the wall outside the lab) is it complete and accurate?	Do refrigerators and freezers have only suitable items in storage?	Are all ULM containers closed except when using?
Subpart K - Unwanted Lab Material	Are refrigerators/freezers labeled "No Food Allowed"?	Are all ULM properly labeled with the "Unwanted Lab Material"?
Laboratory Standard Training	Are all gas cylinders secured with two straps, and cap in place when not using?	Are all ULM stored in secondary containers?
Does the lab have a Chemical Hygiene Plan?	Are chemical fume hoods kept uncluttered for proper air flow?	Electrical
Are Standard Operating Procedures used?	Are chemical fume hoods inspected?	
Does the lab know how to find an SDS?	Are chemical fume hoods closed when not in use?	
Does the lab computer have a link to msds.online?	Is required PPE available, used consistently and correctly?	
General Hazards	Is the spill kit readily available?	Are cables in good shape (not frayed or melted)?
	Chemicals	Miscellaneous
Are aisles, exits, and adjoining halls free of obstructions that would hinder emergency access or exiting?		
Are approved sharps containers available for disposal of needles, blades, and other sharps and not overflowing?		
Are there containers available for broken glass, and are they not overflowing?		Is pressurized glassware in good condition?
Emergency Equipment	Are all chemical containers (including squirt bottles) clearly labeled with their contents and primary hazards?	Do all rotating machinery and/or high-temperature devices have the appropriate guards on them (belt driven vacuum pumps)?
	Are all chemical bottles in good condition (not corroded or leaking)?	Are walkway surfaces dry?
	Are old and obsolete chemicals removed?	General Housekeeping (are the benches, sinks, etc. relatively clean)?
	Are flammables, acids, bases etc. stored in their designated cabinets?	
Is all emergency equipment free of obstruction that would prevent quick access?		
Are eyewashes and safety showers inspected?		
Is there a fire extinguisher in the lab?		
Is the First Aid Kit (optional) updated and inspected?		