



n o t e s

ENVIRONMENTAL HEALTH and SAFETY

MSDS Management

Federal regulations require manufacturers of hazardous chemicals (or commercial products with hazardous ingredients) to communicate these hazards through a Material Safety Data Sheet (MSDS). Before the proliferation of the World Wide Web, users of chemicals usually kept these MSDSs in a binder. The internet gave users a new way to access these MSDSs, although it created confusion as to whether physical hard copies still had to be maintained. OSHA says that the MSDSs must be "readily accessible" and clarifies the regulation by stating that employees should not have to go through a supervisor to access the MSDS. EHS endorses both physical and electronic maintenance of MSDSs.

For labs that use chemicals only from major suppliers like Fisher, Sigma-Aldrich and Mallinckrodt Baker, having quick access to the internet should suffice. But be sure to take the time to familiarize yourself with the locations of MSDSs on your supplier's web site, so that you can obtain an MSDS quickly in an emergency. For work places with a limited number of products, maintaining hard copies may be the best solution for you. But the more chemicals you have, the more difficult it is to keep those hard copies current. For those seeking a way to replicate the concept of an MSDS binder electronically, EHS sponsors use of a commercial product called MSDSonline.

MSDSonline uses the concept of an electronic binder (or eBinder) to store the MSDSs you use most, while also providing access to an extensive database of additional MSDSs. Full use of the

product requires the commitment of a departmental contact who will take the time

to create the department's initial eBinder and update it with new products. But once the MSDS is in your eBinder, the system will update the MSDSs in your eBinder automatically. MSDSonline can also be used as a secondary source to obtain an MSDS either for safety information or in an emergency.

Please Note: To prevent access from persons outside the University, access to MSDSonline requires PawPrint authentication. This may require accepting a security certificate in your browser, so access the system prior to needing it in an emergency. Security certificates vary by browser and computers so access the system from each computer and browser you use in advance.

EHS can be your source for MSDSs either through major manufacturers or the use of MSDSonline. Our main MSDS web page (<http://ehs.missouri.edu/chem/msds.html>) is ideal to bookmark for electronic MSDS access. It also provides more information about MSDSs and their management. As always, EHS is here to assist in providing a safe and healthful environment.

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Todd Houts
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EHS*Director's Desk***Safety and the Economy**

If you have been like me, you have probably spent much more time than you want worrying about MU's budget and how it will affect your work and that of those around you. Everyone seems to be a bit on edge because of the budget, and the winter weather doesn't help spirits either.

In times like these it is more important than ever to focus on priority issues. For EHS, our two major priorities have been to keep the campus community safe and to keep the campus in compliance with a variety of government regulations. The last thing we need is an increase in employee injuries, an increase in property damage, or fines for non-compliance with regulations. In some places, safety may be viewed as an add-on or optional program. I have been pleased to see that the vast majority of the MU community does not feel that way, instead considering safety an essential part of our jobs. Clearly we do not want to subject our students, staff or faculty to hazardous conditions when preventive steps could have been taken.

On the regulatory front, even though we have new administrations on the state and federal level, I am not expecting to see many changes from previous experience with the exception that we may see inspectors more frequently for oversight of various biosafety issues. It would be unusual to see the regulatory impact on campus activities reduced—that just does not seem to be an option with regulations. EHS continues to explore opportunities for simplifying our guidance and programs for regulatory compliance. If you feel any of the EHS programs are unnecessarily onerous, feel free to contact me about how compliance might be achieved in a less burdensome way. I won't guarantee we will make the changes you suggest, but we will

give serious consideration to constructive suggestions.

In these times of lean budgets and thin staffs, I want to remind you that EHS operates a chemical redistribution program through which we take unwanted chemicals from campus researchers and make them free to other campus researchers who can use them (see <http://ehs.missouri.edu/haz/recycling.html>). Also, note that the Radiation Safety Refresher and Chemical Management Online Refresher classes are available on line for those who would prefer to meet refresher training requirements on their own schedule (see <http://ehs.missouri.edu/train/>).

Peter Ashbrook**Death of UCLA Lab Assistant****A Reminder of Laboratory Hazards**

On December 30, 2008, Sheri Sangji, a 23-year old laboratory assistant died from severe burns she received while working with pyrophoric materials in UCLA's Molecular Sciences Building. She received third-degree burns to 43 percent of her body and died on January 16, 2009.

Ms. Sangji had been employed at UCLA for only three months prior to the incident that took her life. She was removing t-butyl lithium dissolved in pentane from a 250 mL bottle when the material was released into the air and onto her body. Not all the details surrounding the incident have been released, but the following facts are known.

First, Ms. Sangji did not use the emergency shower that was located only 6 feet from the fume hood where she was working. A co-worker reported that instead of moving toward the shower, she ran in the opposite direction. Second, we know that she was wearing a synthetic sweater and was not wearing a lab coat. A lab coat is easier to remove than a sweater and may have lessened her injuries from the fire.

In addition to these facts, it is unclear whether she had been trained appropriately for the

level of the hazard. By all accounts Ms. Sangji was a bright and hard working individual, but questions have been raised about whether she really understood the nature of t-butyl lithium or understood the specific hazards associated with the type of work she was performing. The Principal Investigator (PI) who supervised Ms. Sangji could not produce any records that she had ever been trained.

At MU, PIs and supervisors are accountable for safety when work is conducted with chemicals. Among other things, PIs and supervisors must ensure that their employees know how to use available safety appliances and that equipment such as eyewashes and safety showers is tested on a regular basis.

Additionally, PIs and supervisors must ensure that employees understand the hazards related to their job duties. On the MU campus there are several locations where pyrophoric materials are used. Employees working with hazardous materials must have a good understanding of the material being used and be trained specifically on handling procedures for that material.

Finally, persons working with hazardous materials are responsible for understanding the risks associated with their jobs. In addition to general safety, employees must also understand specific procedures established by the PI or supervisor for a particular work area or procedure. When procedures are not clear or risks are not understood, the worker must bring this to the attention of his or her supervisor.

Sometimes the answer to a safety question is not that obvious. When such a situation arises, EHS should be contacted for assistance. Our personnel have a wealth of knowledge and experience and will provide on-site assistance.

As a university safety professional, I read accounts of laboratory accidents on a regular basis and know that they are more common than most people would like to think. No one wants to see a tragedy like this repeated. Please do your part to make sure an event like this never happens here.

Dennis Elmore
Manager, Industrial Hygiene/Occupational Safety

Automated External Defibrillators

First, let me congratulate the department of Intercollegiate Athletics for their successful use of an Automated External Defibrillator (AED) at a recent women's basketball game. Athletics has had AEDs at their facilities for years and their safety efforts paid off in the form of saving a fan's life. This illustrates the importance of such devices for a victim of sudden cardiac arrest. The unit used in this incident is just one of over 60 that are scattered throughout campus.

An AED is a device that delivers an electrical shock to an individual who has been determined by the instrument to need such a shock. The reason why defibrillation is important is because every minute a victim of sudden cardiac arrest goes without defibrillation, their chance of survival drops by approximately 10%. (Just as a reminder, a heart attack is when a person's heart is still beating, but having problems functioning normally. Cardiac arrest is when a person's heart stops beating.) Use of an AED is part of the "Cardiac Chain of Survival" which includes early recognition that someone has gone into cardiac arrest and early access to that individual, early CPR, early defibrillation, and early advanced medical care.

AED units are fully automated and easy to follow. However, having safety equipment and using it properly are two different things. It is important to enroll in a certified cardiopulmonary resuscitation (CPR) course that includes AED use before attempting to use one. American Red Cross certified training is available through EHS and is free of charge to all MU faculty, staff, and students. If you don't have training and find yourself in an emergency situation where use of an AED is needed, always call 911. The professionals on the line can walk you through the steps needed to use the AED properly.

Please contact EHS if you have specific questions about purchasing an AED. One can register for a prescheduled CPR course at the following web site <http://mubsweb.missouri.edu/ehsweb/training/>. Alternatively you can contact EHS to set up a specific course for your group.

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Radioactive Material Security

EHS reminds all users to maintain a high level of alertness to radioactive material security matters. The Nuclear Regulatory Commission (NRC) continues to emphasize security of radioactive materials as their number one priority. Security concerns apply to ALL radioactive materials regardless of quantity.

What is being done?

Radioactive materials must be locked up or overseen by a person who knows they are responsible for security. For more information see page 42 of the Radiation Safety Manual (<http://ehs.missouri.edu/rad/manuals/radsafety.pdf>). To facilitate material control and security, EHS maintains accurate inventories of all radioactive materials on campus. Additionally EHS is working with members of the Radiation Safety Committee on implementing a new Security and Awareness Program.

Who is responsible for security?

Every person who has access to radioactive materials has the responsibility to keep the material from unauthorized access or removal.

This includes Radiation Workers, Authorized Users and Ancillary Workers. Persons who don't actually work with radioactive material but are left in charge of a room or area with unsecured radioactive material must receive appropriate safety and security training. Note that the Authorized User and their assigned Radiation Workers are ultimately responsible for making radioactive material secure by assuring either that it is locked up when no one is around or that it is in the constant line of sight of a trained individual.

What can you do?

Ensure material is locked and secured at all times when the material is not in use or under direct observation. Security requires a continual effort from everyone to ensure control of radioactive material. As always, we appreciate your help and cooperation. If you have specific questions concerning security matters in any of your labs, or you want to report suspicious activities please notify the RS Office (882-7018) or MUPD (882-7201)

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EHS appreciates campus support of environmental and safety issues. If you have any special needs regarding the format of this publication, or have any comments regarding newsletters, training programs or services, please direct your communications to Rebecca Bergfield, Editor at the above address.