



Lab Safety

Spectrum

November 2001

Volume 1 Issue 5

UW - Madison Safety Department Chemical and Radiation Protection
30 N. Murray St. 262-8769 <http://www.fpm.wisc.edu/safety>

Help Line 265-5518

NRC License: 48-09843-18

Winter Waste Reminder

Winter in Wisconsin is cold. Although some of our waste cabinets are inside buildings, several of our waste cabinets are still located outside. Aqueous liquids freeze rapidly below 32°F (0°C) and we often experience -20°F (-29°C) temperatures. To prevent your liquid waste from freezing and breaking the container, fill containers only ¾ full and place liquid wastes in outside cabinets between 11:30 AM and 12:30 on the pick-up day (Monday and Wednesday).

LabScan

If you're interested in obtaining free chemicals for your research, delivered directly to your lab, contact Greg Zukowski at gzukowski@fpm.wisc.edu or call him at 265-5519. Ask about the LabScan program for redistributable chemicals.

CORD Christmas Schedule

CORD will be CLOSED Monday, December 24, 2001 through Tuesday, January 1, 2002 for the Christmas holidays.

Plan ahead. Phone orders will NOT be taken for items from any vendor or for "fresh lot" deliveries during the time CORD is closed.

CORD orders may be placed via <http://www.fpm.wisc.edu/safety> and delivered on arrival (vendors may also be closed during this period).

Only backordered items and internet orders that are received from vendors will be delivered during the time CORD is closed.

The Annex (room 19 Biochemistry) will also be closed beginning Monday, 24 December. Call Safety at 5-5518 for assistance or to set up an appointment.



Contact dermatitis

(from Lab Safety Supply's TECHlines, October 2001)

Contact dermatitis is the main cause of occupational skin diseases and affects workers in just about every industry. The number of cases of occupational skin diseases has been increasing during the last decade. Estimated total annual costs (including lost productivity) may reach \$1,000,000,000 annually.

Occupational contact dermatitis is a local inflammation of the skin with symptoms such as itching, pain, redness, swelling and the formation of small blisters. This inflammation is an allergy or irritation caused by skin contact with a substance present in the workplace that comes into direct contact with the skin. There are two common types of contact dermatitis: irritant and allergic.

Irritant dermatitis is a localized inflammation of the skin and is caused by contact with irritating chemicals like acids, bases and fat-dissolving solvents. Factors such as the type of chemical, the chemical concentration and the length of exposure can affect the development of contact dermatitis.

Allergic contact dermatitis is different because it is an allergic response to skin contact by an allergy-causing material, such as latex. Also, allergic dermatitis can occur in places on the body that did not come in contact with the specific allergy-causing material.

To minimize incidents of occupational contact dermatitis, it is important to identify irritants and allergens in the workplace. Then you can take proactive steps such as encouraging personal hygiene, implementing engineering controls, practicing good housekeeping and using personal protective equipment.

Personal hygiene, which includes hand washing, is very important to prevent contact dermatitis. It is also important to note that excessive hand washing with cleansers or detergents can dry out and damage the skin.

To minimize worker exposure engineering controls such as local exhaust systems should be used where harmful chemicals are present. Substituting nonhazardous or less irritating or allergenic chemicals can also help minimize contact dermatitis.

Implementing good housekeeping procedures that include proper storage of chemical substances, frequent disposal of waste, prompt clean up of spills and proper equipment maintenance can further reduce worker exposures.

Select personal protective equipment that is appropriate for the specific chemical hazards.

Establishing an effective safety program to minimize exposing the skin to allergens and irritants is crucial to reduce cases of occupational contact dermatitis.

From a safety perspective, it is important that all workers understand the potential hazards they will be working with and take protective measures.

Remember, although good quality latex gloves provide an excellent biological barrier, they are not intended for applications involving prolonged, direct exposure to harsh chemicals, where heavy duty or industrial gloves are required. The issue of Personal Protective Equipment is discussed in Part D (Chapter 4) of the Chemical Safety and Disposal Guide. There is a Glove Chemical Resistance table there and on our web site <http://www.fpm.wisc.edu/chemsafety/gloves.htm>

Gloves age like any other substance. One vendor states, "Store at less than 50% humidity and at temperatures less than 104 °F (40 °C). Open box should be shielded from exposure to direct sunlight, intense artificial light, x-ray machines and other sources of ozone."

Finally, if symptoms such as hives, itching, running nose, watery eyes, facial swelling, abdominal cramps, diarrhea, nausea, difficulty breathing, rapid heart rate, sudden drop in blood pressure, dizziness, or anaphylactic shock occur, discontinue use of the product and consult a physician.



Room Warning Signs

Recently radioactive material was inadvertently lost from a lab at the University. The radioactive material was Americium-241 that had been plated on a very small, about 3/16 inch diameter, button.

Radioactive sources identical to this are used in smoke detectors.

Because of the small amount of radioactivity and because it was a plated source instead of a powder or liquid

form, the lost radioactivity does not pose an exposure hazard to the general public. However, it exceeded the reportable quantity for this radioactive element and did result in the University receiving a fine from the Nuclear Regulatory Commission.

This loss occurred despite the fact that the room and apparatus was properly labeled with Caution Radioactive Materials signs and instructions on who should be contacted regarding the device. What happened is that a researcher asked the researcher who owned the radioactive equipment if it was O.K. to use the room. When told that it was O.K., the new researcher reorganized the room and, in the process of moving the equipment, several of the sources fell onto the floor and were probably swept up and disposed to the land fill. Safety conducted several surveys, spending about 20 man-hours checking the lab, nearby rooms, hallways, elevators, stairways, loading docks, and dumpsters, but only found 2 of the 6 sources.

As a corrective action and to try to reduce the risk of such events happening in the future, we decided to change our door signs. The new sign will be a single sign and it will replace the three that are currently posted on radioactive use rooms.

The significant difference is the notation to "Call Radiation Safety, 5-5518, before removing anything from this room."

Generally speaking, this is already being done when SWAP comes to remove

equipment, they require that Safety inspect all equipment and "certify" that it is O.K. to remove. Similarly, when labs need to send a piece of equipment out for repair, Safety is often called to sign the Return Material Authorization (RMA) certifying the item is contamination-free.

Some rooms are infrequently used and may even appear to be unoccupied. It is hoped that this revised warning sign will make the Safety Department the final point of contact before a "posted" room is returned to uncontrolled use.



Shipping Radioactive Material

Shipping radioactive material is complicated. Depending upon where the material is going, different Federal and State agencies are involved. If shipped improperly, the material may be returned by the commercial shipper several days later (and it may be not viable any longer), or you may be subject to fines or other investigations by the DOT or FAA. The Safety Department has a good record of shipping hazardous materials safely. If you need to send a radioactive sample off campus, the Safety Department will package and ship it for you free of charge and adjust your CORD balance. To pay for shipping fees, we can use your FedEx shipping account. Call Leola DeKock (2-9180) for shipping questions.



Laser Safety

Lasers produce very narrow, intense monochromatic (i.e., one color) and coherent (i.e., in phase) beams of light. Today, laser devices are commonly found in many work areas. Properly emplaced and operated, laser devices can be of great benefit. Lasers are regulated by the Food & Drug Administration and OSHA. The FDA attempts to insure marketed lasers can be operated safely. However, even when operated properly, some lasers are capable of causing injury. Chapter 14 in the Radiation Safety for Radiation Workers manual addresses laser safety. We have a Health Physicist with special training in laser safety. If you have questions about the lasers in your lab, need special training in laser safety, etc., call Arne Jansen at 2-9608.



Training

Chemical and Radiation Protection offers training classes. The Chemical Safety Training class begins at 9:30 (with a quiz about 11 AM) on the same day as the Radiation Safety Training class which begins at 12:30. The training schedule from 1 December through 1 May (all classes are held at Union South) December 6, 12, 21; January 3, 9, 14, 22; February 7, 13, 19, 25; March 7, 13, 19, 25; April 5, 11, 18, 23; and May 9, 15, 21, 29. Note, the schedule flips for 2 additional classes. On **18 and 28 January**, the Radiation Class begins at 8 AM and the Chemical Safety begins at 1:00 PM. There is no sign-up; merely show up on one of the scheduled class dates. Booklets and schedules can be picked up at Room 19, Biochemistry from 11 - 2:30. The quiz used to document training is given the last hour of the class and usually begins about 11 AM for Chemical and 3:15 PM for Radiation. For a complete schedule, see our web site

<http://www.fpm.wisc.edu/safety/Radiation/schedu.html>

UW-Safety Dept.
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