



Department of Occupational and Environmental Safety

NEWSLETTER

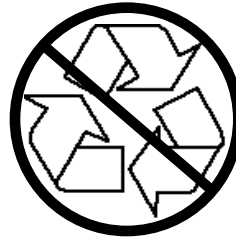
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CASE WESTERN RESERVE UNIVERSITY

VOL. 6 NO.2

Styrofoam Continued . . .

Last month's newsletter featured an article on the new "no recycling styrofoam" policy instituted at the university. Many researchers have called with questions concerning this announcement. To recap last month's article, as the "last user" of these containers, CWRU is held responsible for any residual contamination that may be discovered in them *en route* to recycling. For liability reasons, the university has opted to destroy these containers rather than taking the chance of sending out a contaminated box.



Here are some more details:

- 1) This policy does not refer to all styrofoam on campus, just the pre-labeled styrofoam containers in which samples are sent.
- 2) Furthermore, this policy refers only to styrofoam containers that are returned for recycling to Shipping and Receiving or to the Mail Center.

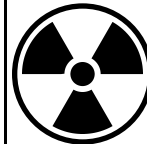
Other uses of these containers are possible; for example, it is acceptable to use them to mail out samples to other universities. This qualifies as "re-use," not recycling, and though the distinction may be small, it is important for regulatory and culpability reasons. Investigators must understand that they assume liability for personal shipments and must ensure that the packaging is neither radioactive nor contaminated with biohazardous materials.

Therefore, if you have no other use for these styrofoam containers, treat them as biohazardous waste and place them in biohazardous red bags for pick up (alternatively, you can place them in clear bags upon which "biohazardous materials" tape has been stuck). Shipping and Receiving will no longer accept these containers for return to vendors.

Hopefully this article clears up any remaining confusion about what you can do with styrofoam. If you have any further questions, please don't hesitate to contact us at x2907.

Personnel Monitors: Badge Info

Below are some general facts and tips about what badge you need to wear, how to care for your badge, and how to correctly exchange your badge. If you have questions about this topic, please call the Radiation Safety Office at x2906.



General Information

- All personnel must complete the CWRU

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What WASTE!

Spring Cleaning: Take Out the Trash!

Once again, we survived a winter and the month of March is upon us. With spring in the air, it is a good time to give your laboratory, storage areas, office, or shop a close look to see if any spring cleaning and fixing-up is needed.

Have you accumulated lots of empty cardboard boxes and/or loose papers over the winter? If so, make arrangements to dispose of them. Do you have any unneeded or broken machinery, equipment or apparatus that should be disposed of? Has any of your equipment wandered into places where it is obstructing your means of egress or blocking access to safety equipment or control panels? Rearrange the items to correct the problem.

Does any of your equipment and apparatus have worn or frayed power cords, defective power cord plugs, or worn or cracked hoses and belts? Repair or replace any defective items found. Also, check for excessive use of extension cords—try to rearrange equipment to do away with some of them.

Are your compressed gas cylinders secured in the upright position? Are your walking and working surfaces in good repair and free of obstructions? Make sure to put items back in their designated places after use and clean up any spills immediately and properly.

Call Safety Services at x2907 if you have any questions about how to correct these or other “spring cleaning” issues.

Safety Checks: Eyewash Stations and Safety Showers

These two emergency devices are often overlooked because they are not often needed. But to keep these vital safety features working properly when they are needed, a few pointers may be in order.

Eyewash Stations

The eyewash should provide a soft stream of aerated water for 15 minutes. **It should remain perfectly free of debris at all times—do not use it as a trash can!** Also, do not pour liquids down the eyewash—things like coffee or soda coagulate in drains that are seldom used and prevent them from working properly.

Since rust and bacteria build up in seldom-used drains, flush the eyewash regularly to ensure that a clean supply of water will flow if it is needed in an emergency. If the eyewash does not work, call Plant Services at x2580.

Safety Showers

Whereas self-checks of the eyewash is desirable every few months, NEVER check the safety shower yourself. Safety showers work by dous-

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Upcoming Training Sessions

Radiation (x2906)

- New Training:** Mar 14(1-4), 25(9-12)
- Retraining:** Mar 27(10-11); Apr 7(2-3), 17(9:30-10:30), 29(2-3)
- X-ray Training:** call office to set up training session

Chemical (x2907)

- OSHA Lab Standard:** Mondays 1-3 (Service Building Conference Room)

Bloodborne Pathogen (x2907)

- New Training:** Mondays 3-4:30 (Service Building Conference Room)
- **Retraining:** Mar 21(10-11:30); Apr 8(9-10:30), 16(2-3:30), 24(10-11:30) (Service Building Conference Room)

Non-Mercury Thermometers

Various companies, including Fisher and VWR Scientific, have created a non-

mercury “environment friendly” thermometer.

The thermometers vary in temperature range, scale (Fahrenheit or Celsius), length, and price. Though they are slightly less accurate than mercury thermometers, they are also much cheaper—about one fourth the cost. The liquid is usually composed of non-toxic liquids colored by a dye. Because the thermometers contain no mercury, a highly toxic chemical, clean-up is easy if an accident occurs and no hazardous waste is created.

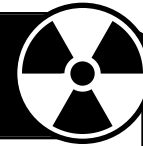
Even a small mercury spill poses a health hazard since its vapors are *odorless, colorless, and tasteless*, making them impossible to detect without a special meter. Your body cannot rid itself of these toxins, making the effect of the poison cumulative.

Equipment used in conjunction with thermometers—heat blocks, ovens, incubators—becomes contaminated if a mercury thermometer should break during the experiment. Usually the equipment must be thrown out since mercury may bond with metal and permeate it completely.

While it may seem a very small step towards reducing hazardous waste, buying a non-mercury thermometer will save you and DOES a lot of time and money should one break. Please consider purchasing one for your laboratory.



HOT TIPS



NO FOOD OR DRINK

Several instances of food, drink, and cosmetics in laboratory areas were noticed during recent inspections by our office. We want to emphasize that this is not allowable under any circumstances. This includes evidence of eating or drinking (candy wrappers or styrofoam coffee cups in trash) and the application of hand lotion.

The “lab area” in which eating and drinking is not allowed should be self-explanatory in most cases. For those in the BRB, this includes the area beginning with set of double doors leading to the lounge.

Both the Nuclear Regulatory Commission (NRC) and the Occupational Safety and Health Administration (OSHA) have strict safety guidelines; the Radiation Safety Manual and Chemical Safety Manual define CWRU’s safety policies and procedures. Both safety manuals prohibit eating, drinking and applying cosmetics in laboratories.

Accidental ingestion of a harmful substance occurs most readily when food or drink is on hand, and contamination of food can occur without your knowledge. It is vital that you keep these sorts of items out of the lab area.

Hand lotion may be kept in a different part of the lab—in the eating area or in a “clean” place. Alternatively, the lab can invest in a lotion soap that is not as drying as traditional soap.

Any **medicines** must be kept out of the lab—again, keep this in a secure place in the eating area.

Make sure that **common consumer items**, such as vasoline or powdered milk, that were purchased for a specific laboratory use are clearly labeled “Not For Human Use.” This may cut down on confusion as to what is allowable in the lab.

Call DOES at x2906 with any questions.

Personnel Monitors: Badge Information

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New Radiation Worker Training course before working with radioactive materials. An Occupational Exposure History form must be completed before a badge is issued to an individual.

- Personnel dosimeters are issued through the Radiation Safety Office to a single user; do not share your badge with anyone else.

- Individual reports of dose history are given annually, at termination of employment, and upon request.

- Store your badge in a radiation-free area when it is not being worn. Do not take it home.

- Report lost or damaged dosimeters (crushed, broken, melted, contaminated, or heated in any way) to the Radiation Safety Office as soon as you are aware of the situation. If you lose your badge, file a Lost Badge Notice as soon as possible. Unaccounted dosimetry records will result in reducing the annual Total Efficient Dose Equivalent (TEDE) limit by 1.25 Rem/quarter or 100 mRem/week. This reduction will also be implemented for badges that are not returned.

- Pregnant personnel should declare their pregnancy to initiate fetal monitoring and show compliance with NRC fetal dose limits.

What badge to wear and when

Personnel dosimeters are issued to monitor and record long term occupational radiation exposure. Both the NRC and the Ohio Department of Health (ODH) specify exposure and dose limits to different body parts.

- Personnel in laboratories using radionuclides emitting only beta particles with a maximum energy less than 173 keV (H3, C14, S35) are not required to wear badges.

- All personnel who have the potential of receiving an exposure greater than 125 mRem/

calendar quarter must wear a badge. This is the ODH exposure limit for minors and the general public.

- The whole body dosimeter must be worn on the maximally exposed portion of the body trunk. For routine laboratory bench use of radioactive materials, wearing the dosimeter on the lapel of your lab coat is appropriate.

- Those personnel who use more than 1.0 mCi of a gamma emitter or P32 at one time must wear a regular (body) badge and a ring badge. The ring badge must be worn under the glove of the hand most likely to come in contact with the containers of radioactive material.

- For experiments and procedures involving the use of neutron sources, personnel must wear badges

sensitive to neutron radiation. These can be obtained from the Radiation Safety Office.

Badge Exchange Procedures

Routine badge exchanges are scheduled quarterly (January, April, July and October) except for special badges exchanged monthly. Follow these procedures:

1) For personnel still in the lab:

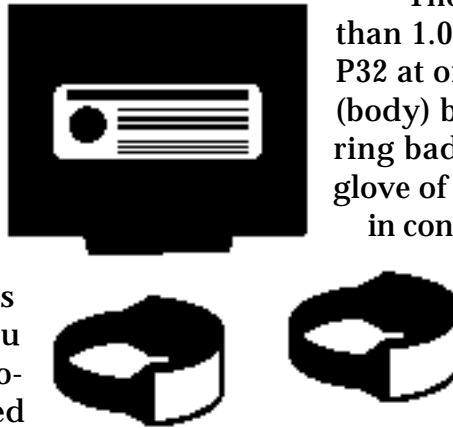
- Exchange new badge for old badge or new ring for old ring.

2) For personnel who have lost a whole body or ring dosimeter:

- If during badge exchange, fill out a copy of the Lost Badge Notice. A new badge will be given to you.

- If after badge exchange, come to the Radiation Safety Office and fill out Lost Badge Notice; then pick up a replacement dosimeter.

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Take a Good Look at Those Chemical Warning Labels

You've probably looked at hundreds of chemical warning labels since you started working in a lab. You may have seen so many that you no longer notice the label. If so, we'd like to remind you that those chemical warnings are important to your health and safety.

More than a Name

Chemical warning labels provide important information about the chemicals you use in the lab. While you can get the same information and more from an MSDS, only a warning label can tell you exactly which chemical is inside that particular container. When you transfer a hazardous chemical from one container to another, the label you put on the new container warns and therefore protects others who may use the chemical in the future—including you.

The Key Word

The most important information on the label is the single word that indicates how hazardous the chemical is. "Danger" means it is the most hazardous kind of chemical. "Warning" signifies a somewhat less hazardous chemical and "Cau-

tion" the least. But even chemicals labeled "Caution" can be harmful to your health if you do not follow proper procedures.

Basic Label Information

Labels list basic information, such as the chemical's name, its hazards (such as whether or not it's toxic or flammable), the manufacturer's or distributor's name, address and phone number, a list of ingredients, and parts of the body that can be affected by the chemical. Other important information may be given, such as:

- Reactivity of the chemical (what causes it to catch fire, explode, or become a dangerous gas)
- Type of fire extinguisher to use in case of fire
- Type of protective clothing and equipment needed
- Procedures for the safe usage, handling, storage and disposal of chemical
- First aid instruction
- What to do if the chemical spills or leaks

Missing or Damaged Labels

The most dangerous chemical is one without a label: never handle a chemical until you know what it is. If a label is missing or damaged so that it cannot be read completely, notify your supervisor. Label any solutions you create in the lab with at least your name and the bottle's contents, even if it is something innocuous like a salt and water solution. The cost of disposing "unknowns" is great because of the often unnecessary precautions that must be taken.

It's a good idea to get in the habit of reading the warning label before you begin working with a potentially hazardous chemical, even if you've worked with the chemical before—the manufacturer may have changed the formula or concentration. The MSDS for that chemical can give you even more information vital to your health and safety—it is your responsibility to read it.

Personnel Monitors: Badge Information

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Check to make sure that you do not pick up any new badges for personnel who have left your lab within the past two months; new dosimetry may have arrived for them (there is about a six-week delay).

If you find any old badges in your lab belonging to personnel who are no longer there, you may drop these off during badge exchange as well.

Safety Checks: Eyewash Stations and Safety Showers

(continued from p.2)

ing the victim with 20 nonstop gallons of water. This means that even if one lets go of the pull-chain, the water will keep pouring out until all 20 gallons have been released.

The location of the eyewash station and safety shower in each lab should be clearly marked and all lab personnel should be familiar with their location and function. Do not place items such as chairs or equipment in a way that may block the path to or hinder the ability to use these safety devices.

Safety Services checks during laboratory inspections to make sure that eyewash stations and showers display up-to-date inspection tags. However, if your sticker is out of date, call Plant Services (x2580) to have the item tested.

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