

Department of Occupational and Environmental Safety NEWSLETTER

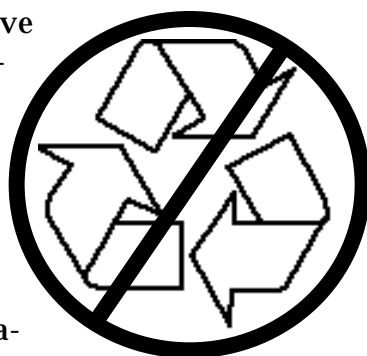
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CASE WESTERN RESERVE UNIVERSITY

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Recycle Styrofoam? Not Any More

In the past, we have encouraged researchers to recycle the pre-labeled styrofoam containers in which samples are sent. However, due to uncertainty concerning potential contamination, we ask that you no longer recycle these but treat them as red-bag biohazardous waste.



This is basically a case of "better safe than sorry." These containers are re-used by the companies—in other words, the box that you get has most likely been used before. It is this previous use that concerns us: there may be contamination of some sort in the container of which we are unaware. Rather than ship boxes out again with that chance of contamination, we have opted to destroy them, just in case.

Although your shipment may have arrived in good shape, we cannot be sure that previous ones have, and as the "last user" CWRU is held responsible. Therefore, place these containers in biohazardous red bags for pick up.

Shipping and Receiving will no longer accept these containers. If you have any other questions about recycling, please contact Safety Services at x2907.

See "What Waste " on p.2 for related news about recycling and biohazardous waste.

Radioactive Waste Segregation

It is vital for the safe disposal of radioactive waste that it be properly segregated and labeled. Below is a listing of each type of radioactive waste and how it must be disposed of.

1) **Dry solids.** Separate dry waste by isotope and waste characteristics.

- Any contaminated needles or hypodermic syringes must be disposed of in a red SHARPS container, keeping these separate from sharps that are not contaminated. Any other "sharps" can be placed in a securely sealed cardboard box.

- Radioactive waste that contains regulated chemicals, such as acrylamide gels, must be separated from non-regulated waste. After it is no longer considered radioactive, it may still require special disposal procedures if it contains a regulated substance.

- Any biohazardous materials must be rendered non-biohazardous before pick-up.

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What WASTE!

Biohazardous "Red Bag" Waste

Recycling Micro-pipette Tips

Admirable as it is to recycle everything possible, in the lab there are certain restrictions to what can be safely recycled. Problems have arisen lately with plastic micro-pipette tips. We ask that all researchers cease from collecting these to be recycled.

Like the styrofoam containers, these can be contaminated without researchers knowing it. CWRU is responsible for all material shipped from it, and the possibility of one out of a multitude of these being unknowingly contaminated is high. Numerous New England colleges have been cited and fined after the recycler of the material discovered they were contaminated, both with low-level radioactive contamination and biological contamination. In one shipment the recycling worker found part of a finger!

To prevent any chance of contaminated waste being sent out, place pipette tips in reg bags as biohazardous waste.

Collecting Biohazardous Waste

If you have biohazardous waste that needs to be picked up, follow these procedures:

1) Make sure your waste is appropriately collected and bagged. There should be no sharps in the red bags; these should be collected in the red rigid SHARPS containers specifically designed for that purpose.

2) Call Custodial Servies at x6299 before 4:30 p.m. if you want your waste picked up that evening.

3) Leave the waste in the room—do not under any circumstances place it in the hallway. Similarly, do not take the waste yourself to the Biohazardous Pick-up Room but leave it to be picked up.

Odors in the Open

Odor control in the lab isn't something you may think about very often, especially since if you use a certain chemical regularly you may be used to its smell or any other peculiarities accompanying working with it. But it is important to remember that no one should work with any chemical that is odorous or potentially hazardous except inside a fume hood.

The reasoning behind this premise is simple. You may know that the chemical with which you are working is low or no hazard, but others around you do not. This uncertainty often causes great anxiety which in turn leads to time-consuming and often unnecessary investigations by the Safety Office. While you may be used to the smell of a commonly used chemical, other laboratory workers or building occupants around you may find that same odor unbearable. Be courteous to those around you, especially since odors often waft beyond one's control or intentions.

Remember too that your neighbors have the right to protect themselves from hazardous emissions and may not have access to respirators. The best policy therefore is to use odorous or hazarous materials **inside the fume hood only.**

Upcoming Training Sessions

Remember to call our office first to register for one of the training sessions.

Radiation (x2906)

•**New Training:** Jan. 30(9-12); Feb.7(1-4), 12(9-12), 27(1-4)

•**Retraining:** Jan.21(10-11); Feb.3(10-11), 20(2-3)

•**X-ray Training:** call office to set up training session

Chemical (x2907)

•**OSHA Lab Standard:** Mondays 1-3 (Adelbert Room 2)

Bloodborne Pathogen (x2907)

•**New Training:** Mondays 3-4 (Adelbert Room 2)

•**Retraining:** call office to reserve videotape

Household Hazardous Waste

A study done by Oregon's Department of Environmental Quality found that each U.S. home contains an average of three to eight gallons of hazardous materials in its kitchens, bathrooms, garages and basements. Common household products—paint and paint thinner, nail polish and remover, batteries, motor oil, even some oven cleaners—are considered hazardous waste, and if thrown away into a landfill, may leach into the soil, polluting surface and groundwaters. When poured down the drain or flushed down the toilet, hazardous wastes can seriously damage sewer systems and septic tanks, or pass through the treatment systems and pollute waterways.

So if you can't simply throw these things away, what should you do when clean-up time comes around? Here are some helpful ways to reduce the amount of hazardous materials in your home and how to dispose of them safely.

- Buy only what you need. It is tempting to stock up on items when they are on sale, but often the extra antifreeze or paint simply goes to waste.

- Use or give away leftovers. If you have extra paint, put another coat on your walls to use it up, or donate it to a local group—drama clubs, for example, would probably be glad to receive paint donations.

- Find a safe alternative. Try to select non-toxic items when purchasing household items. Use a vinegar

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HOT TIPS



Radioactive Materials Reminders

Below are a couple of reminders about radioactive materials safety issues for the new year. While these may seem mundane and old issues, they can become potential violations if we stop checking and let our guard down.

Security. Ensure that all radioactive material is secure and that licensed material in use is closely supervised. A large number of universities have recently been fined by the NRC for failure to provide adequate security of radioactive materials, and problems of this sort were noted in the BRB at our last NRC inspection. Limited access to restricted areas is required to prevent unauthorized access to licensed materials, and these must always be secured from public access.

Accountability. PIs are responsible for all radioactive materials in their possession. It is vital that records are accurately kept, including waste records, so that everyone can account for all radioactive materials receipt, inventory, and disposal. Samples of record-keeping forms are in the Radiation Safety Manual. Any theft or loss of materials must be reported immediately to the Radiation Safety Office.

Survey Procedures. Conducting surveys with appropriately calibrated equipment is a crucial step in safe operations. Be sure that you are using the appropriate probe for your survey meter (depending upon the isotope) and that you use the proper procedures. It is prudent to survey outside designated RAM-usage areas for cross-contamination. Instructions on the proper use of a survey meter are attached to the meter when it is calibrated by the RSOF.

Food and beverage storage. Eating, drinking and smoking are prohibited in all laboratories. Be very careful that food (especially lunches, snacks and beverages) are stored elsewhere.

If you have questions concerning the issues outlined above, please call the Radiation Safety Office to discuss them (x2906). We are happy to address concerns about these or any other radiation issues that may affect you and your lab.

Radioactive Waste Segregation

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- Scintillation vials and betaplate mats must be kept out of dry waste (see below).

- Place dry radioactive waste (other than sharps) in the large dry solid bags, being careful not to overfill them.

2) **Scintillation "vials."** Scintillation fluid and any item containing scintillation fluid must be disposed of separately from dry waste. Put all vials in the bags specifically provided for that purpose—the bags we give out for dry solid waste are inappropriate for disposing vials. Also, do not use the small desktop bags which look similar to vial bags; they are very thin and break easily. Vial bags are available on request.

- Vials should be double bagged to control leakage. They should not be topped off; a number of small bags is preferred over one overfilled bag. They should not contain anything but vials—no gloves, pipette tips, tissue trays, etc.

- Scintillation fluid does not need to be separated from the vial itself before disposal; the entire vial (cocktail included) can simply be thrown away.

- Do not mix these in with solid waste.

3) **Liquid waste.** Liquid waste should also be separated by isotope and chemical class (regulated, non-regulated) to facilitate disposal. No solids should be present.

- Every container of liquid waste must be accompanied by a separate completed Disposal Listing for Liquid Radioactive Materials form. Be sure to list all the chemical constituents of the waste so we may determine specific disposal procedures after it decays. "Aqueous waste" is NOT a sufficient description. (If the waste is 100% water, say so.) Liquid waste must also be noted on the Radiation Waste Disposal form.

- Aqueous radioactive liquids ready for disposal should have a pH between 6 and 8.

- Put liquid waste in containers no larger than 4L. It is too difficult to carry and pour if the container is larger than 4L; larger sizes will be accepted only for decay in storage and will not be returned to the researcher until the waste is disposed of. Be careful that the plastic container used is not soluble in organic materials. Those with high chemical resistance include unmodified polypropylene, polytetrafluoroethylene (Teflon) and polytri-fluorochloroethylene.

- All radioactive liquid waste must be double-contained to serve as a precaution against leaking. The outer container must be leakproof and able to hold all the liquid should a breach of the inner container occur. A Lucite shielded container or even a five-gallon bucket is suitable for this job.

- Use recyclable containers whenever possible rather than single-use containers such as milk jugs or tissue culture flasks, which must be disposed of after the liquid waste is poured out. This creates large amounts of unnecessary radioactive waste. Instead, use reusable containers

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Segregated waste being stored for decay.

❄️ WATCH YOUR STEP! ❄️

Along with winter weather comes increased potential for injuries caused by slips and falls on icy outside walkways and wet floors, especially near doorways.

The key to reducing the risk of injury from any hazard is to be aware of problem areas or situations and exercise extra caution. This includes eliminating or reducing hazards when possible, and protecting yourself against unavoidable ones. Here are some ways to reduce the risk of seasonal injury:

- Be sure to wear proper footwear and use handrails when possible;
- Be more observant and deliberate while walking;
- Clear up danger spots by removing ice and snow from walkways, mopping wet areas, removing or replacing ineffective floor mats, repairing leaks that result in ice formation, and displaying signs or barricades to warn others of slippery areas.

While Plant Services does an admirable job of keeping areas of the university clear of ice and snow, the rapidly changing winter weather makes it impossible for them to keep conditions safe at all times. We can help by notifying them (368-2580) of any hazardous situations.

Radioactive Waste Segregation

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(sold by Fisher Scientific and other companies) to hold waste. Each lab should have two such containers; when one is ready for disposal, the other can be used. We will return the first as quickly as possible.

- When ordering, pick sizes that are easy to handle and that are appropriate to the amount of waste your lab produces. We recommend one-gallon containers unless your lab produces a large amount of short-term waste; then we can supply five-gallon containers.

4) Animals or animal waste.

These are usually disposed of through the Animal Research Center (ARC), which can provide more information at x3490. Laboratories in University Hospital buildings may make arrangements for disposal during regular waste pick-ups.

All containers prepared for disposal must be properly sealed and labeled; also make sure the accompanying forms are completely filled out before you call for a waste pick-up. We encourage all labs to arrange for frequent pick-ups in order to reduce the potential hazard that exists when large amounts of waste are present in the lab. This also reduces the amount that must be picked up at one time.

As you can see, there are many segregation and disposal issues to consider when dealing with radioactive waste. Make sure everyone in your lab is aware of the procedures involved and knows how to properly prepare waste for disposal. Call the Radiation Safety Office (x2906) if you have any questions.

Household Hazardous Waste

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and water mix to wash windows; buy rechargeable batteries instead of disposable ones.

- Recycle your motor oil. According to the Environmental Protection Agency, used oil from a single oil change can ruin 1 million gallons of fresh water—a year's supply for 50 people. Furthermore, if the 180 million gallons of motor oil Americans throw away every year were recycled, it would save the U.S. thousands of barrels of oil per day. Call your state or local environmental agency for used-oil programs.

- Call your County Solid Waste Department for information on how to properly dispose of household hazardous waste. They can answer any specific questions you may have. In Cleveland, call the Department of Hazardous Materials at 443-7597.

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