Guidelines for Disposal of Radioactive Waste
SafetyNet #: 9

Scintillation Vials

- Separate scintillation vials with activities less than 0.05 µCi/ml of $^3$H or $^{14}$C from other scintillation vials.
- If you buy vials in bulk and need empty flats or boxes, submit a radioactive waste pickup request [1] via the EH&S website and use the comments section. If you are located at UCDHS, call Health Physics at (916) 734-3355.
- Pack the vials in the original shipping boxes or in boxes supplied by EH&S. Seal the boxes with tape. Clearly identify the radionuclides and activities contained in each box on the Radioactive Waste Label.
- Non-radioactive, environmentally safe scintillation cocktails may not be disposed of down sink drains.
- To request a waste pickup, use the EH&S website [2]. If you are located at UCDHS, call Health Physics at (916) 734-3355 to request a waste pickup.

Radioactive Waste Containing Biological Material

- Double bag biological waste in 4 mil, clear plastic bags (Central Storehouse SN# 89121-146) for disposal. Seal the bags and attach a completed Radioactive Waste label. Clearly identify the radionuclide and activity contained in each bag.
- Contact EH&S prior to generating biohazardous radioactive waste.
- Freeze carcasses, tissue sample, etc. until pickup.
- If you anticipate generating large volumes of biological waste, please call the Environmental Services Facility (754-5058) or UCDHS Health Physics (916-734-3355) before beginning the experiment. It may be possible to arrange same-day pickup for large items.

Radioactive Solid Waste

- Separate all radionuclides when possible. Questions on waste segregation can be answered by calling EH&S at 754-5058.
- Dispose of solid waste in an EH&S two cubic foot dry waste box with 4 mil clear plastic liners. Seal box bottom with tape before adding liner or any waste. Clearly identify the radionuclides and activities.
contained in each box on the waste tag. Waste tags are available from the ESF or UCDHS Health Physics. Central Storehouse stocks clear plastic bags for use as box liners, SN # 89121-146.

- Syringe needles, razor blades, and broken glass must be put in sealed, hard-walled containers before placing them in a dry waste box. Use the white sharps containers and place a radiation label on the container. **Do not use red containers unless you are located at the UCDMC.**

- **Do not** throw hazardous materials, including chemicals, ether cans, biological materials, broken thermometers or liquids of any kind into solid waste containers. Call the ESF (754-5058) or UCDHS Health Physics (916-734-3355) if you have any questions about what can and cannot be disposed of as solid waste.

- **Do not** put lead or metal into dry radioactive waste containers. Check for contamination and decontaminate if necessary. Lead will be recycled and there is no charge for this service. Use the comments section of your waste request for pickup.

- Seal the liner and box top with tape. Complete the EH&S radioactive waste tag before submitting a pickup request. To request a waste pickup, use the [EH&S website](#). If you are located at UCDHS, call Health Physics at 734-3355 to request a waste pickup.

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**Radioactive Liquid Waste**

- Aqueous liquids counted with a gamma well or liquid scintillation counter showing less than: are considered nonradioactive. Aqueous liquids such as water, detergents, and mild buffers meeting this criterion can be disposed of down the drain.

- Separate aqueous liquids with a half-life of less than 120 days from aqueous liquids with other radioisotopes.

- Clearly identify on the waste tag the radionuclides, activities, and constituents by percent contained in each jug. Remember that aqueous refers to water and that the total of all percentages must add up to 100. The waste cannot be removed from your laboratory without this information.

- Dispose of radioactive liquid waste in an EH&S 5 gallon black jug. The lids on radioactive liquid waste containers must be always securely fastened expect when adding liquid radioactive waste. Do not fill the containers higher than the fill line that is indicated on the jug. Always use plastic secondary containers to prevent spills when filling radioactive liquid waste containers. **Do not** place pipette tips, magnetic stirrers or other solids into jugs. These jugs are available from the ESF or UCDHS Health Physics. Central Storehouse stocks secondary containers.

- **Do not** place liquid from a primary vial into a liquid waste jug. The primary vial will be picked up separately.

- Seal the jug and complete an EH&S waste tag. To request a waste pickup, use the [EH&S Web site](#). If you are located at UCDHS, call Health Physics at (916) 734-3355 to request a waste pickup.

- **Mixed Wastes:** Mixed waste is defined as a waste that has a chemical hazard (i.e., corrosive, toxic, flammable) in addition to radioactivity. These wastes are extremely expensive to dispose of. If your laboratory anticipates generating any amount of mixed waste, please contact EH&S at 754-5058 for disposal options prior to generating waste.

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**Waste Minimization Techniques**
• Use smaller (10 ml) scintillation vials instead of the larger (20 ml) vials.

• Use radioisotopes with half-lives less than 120 days.

• Dry waste contaminated with short-lived radioisotopes is incorporated into the EH&S decay-in-storage program. This reduces the amount of waste at radioactive waste disposal sites. Separate short-lived radioisotopes (half-life less than 120 days) from long-lived radioisotopes in dry waste.

• Separate organic, toxic, or corrosive solutions from aqueous nontoxic or noncorrosive solutions.

• Do not put dry radioactive waste containers near regular trash containers. This will reduce the possibility that non-radioactive waste will be inadvertently put into the radioactive waste container.

• If applicable, carefully run a count rate meter at a rate of two inches per second and one-half inch above the surface of potentially contaminated dry waste. If the dry waste is indistinguishable from background, deface all radioactive symbols and put in a regular trash container.

• Aqueous solutions with pH between 2 and 5 or 10 and 12.5 should be normalized prior to placement in the approved Office of Environmental Health and Safety/UCDHS Health Physics waste jug. For aqueous solutions with pH less than 2 or greater than 12.5, contact EH&S for disposal instructions.

Contact

Hazardous Materials & Waste Management
hazwaste@ucdavis.edu 530-754-5058
FAX: 530-752-4527

More information

External links


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