



Radioactive Waste Preparation and Tagging

1. Minimize the disposal of non-radioactive material as radioactive waste (e.g., survey waste for contamination prior to disposal).
2. Do not discard any radioactive material or a potentially contaminated item into regular trash containers or wastebaskets.
3. Maintain a running estimate of the radioactivity placed in a waste bag or container. Use waste logs (available on the web site).
4. Package lead separately for pick-up by the Radiation Protection Office (RPO).
5. Deface radioactive material symbols, labels and markings. Labels may be torn off, scratched or painted with a marker so that they cannot be identified.
6. Segregate waste by radionuclide (32P, 125I, 35S, note that 14C and 3H may be combined) and physical characteristics (e.g., solid waste, absorbed liquids, scintillation vials, sharps, etc).
7. Package solid waste, excluding iodine and animal carcasses, in clear 4 mil plastic bags. Place iodine waste in two individually sealed 4 mil clear plastic bags. Place animal carcasses into 4 mil black plastic bags. Seal the waste bags. The RPO provides bags.
8. Place sharps in a Biosafety approved sharps container that is individually packaged in a clear plastic bag.
9. Segregate scintillation vials by radionuclide (3H and 14C in one bag). For vials that contain only 3H and 14C segregate those with an activity of less than 0.05 μCi per milliliter, less than about 100,000 disintegrations per minute.
10. Tightly cap scintillation vials and pack in vial-boxes or double bag in 4 mil plastic bags with no more than 200 full-sized or 400 mini-vials per container. Use tape or the completed radiation waste tag to close the bag. Specify the brand name of the scintillation fluid.
11. For liquids other than scintillation fluids, absorb nonflammable, pH neutral (5.5 to 9.5) aqueous radioactive wastes that contain no hazardous chemicals in RPO-provided liquid absorbent containers. Ensure that the container does not have freestanding liquid. Place the container into a sealed clear plastic bag.
12. For liquid radioactive wastes that contain organics or other hazardous chemicals, place the liquid in a non-breakable container appropriate for the material. Do not use absorbent. Disposal instructions are determined on a case-by-case basis by the RPO. Consult the RPO before generating such liquid waste. Store any flammable liquid radioactive waste in a flammable materials storage cabinet.
13. Store waste prior to pick-up by EH&S in tight containers away from work areas and conventional trash. Post the container with radioactive materials and multi-language "Do Not Empty" signs. Where possible, use additional shielding around or as part of the container design to minimize personnel exposure (e.g. Lucite for beta emitters, lead for gamma emitters).
14. Attach a completed waste tag (see instructions on following page). For scintillation vials, specify the brand name of the scintillation fluid.



Laboratory Safety

Tagging Radioactive Waste

When preparing your radioactive waste for pickup, it's important to fill out the waste tag properly. When your waste is carefully prepared and tagged, removal is quick and efficient. Fill in all the required areas to avoid problems or delays in removal. The waste tag is shown below with a brief description of each field:

The image shows a yellow radioactive waste tag with a red radiation symbol and the word "CAUTION". The tag contains several fields for information, with arrows pointing from these fields to a list of descriptions on the right. The fields on the tag are: "Name of person preparing waste for pick-up (optional)", "Purchase Order Number", "Permit Holder's Name", "Three digit series code", "Waste category", "Radioactive material name", "Estimated total activity", "Date tag filled out", "List any chemical or hazardous components", "Building and Department", and "Room number".

Name of person preparing waste for pick-up (optional) (Optional)

Purchase Order Number (not required for pick-up)

Permit Holder's Name

Three digit series code (found on RP map or on the back of the Luxel Dosimeter)

Waste category (find correct category on back of tag)

Radioactive material name (e.g. P-32, H-3, C-14, etc...)

Estimated total activity (enter the activity in μCi)

Date tag filled out

List any chemical or hazardous components (toluene, xylene, methanol, etc.)

Building and Department

Room number (where waste was generated)

Contact the RPO at 617.496.3797 or radiation_protection@harvard.edu with questions or concerns.