RADIOLOGICAL WASTE SEGREGATION GUIDANCE

General Rules for Handling and Disposing of Radioactive Wastes

All waste is to be brought to the waste facility per the instructions on the <u>Hazardous</u> Waste page.

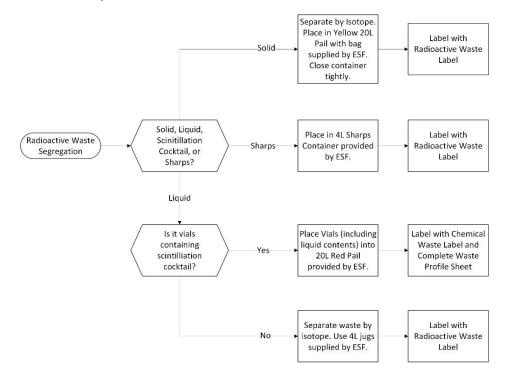
You must use the <u>Waste Booking Calendar</u> to book an appointment to dispose of waste at our waste facilities.

Follow these guidelines when generating and disposing of wastes:

- Segregate radioactive wastes based on the segregation flowchart in this guideline.
- 2. **Label** all waste containers with a complete waste label or radioactive waste label (dependent on type).
- 3. **Ensure** the containers you use are compatible with the wastes you put in them.
- 4. **Deface** any radioactive labels on your waste (e.g., radioactive tape used on instruments), except the waste label itself. Radioactive tape and other labels may be wrapped in duct tape or covered in marker to deface.

Waste Segregation and Packaging

The flowchart below outlines how radioactive waste can be properly segregated. If after reviewing the flowchart, you are unsure how to classify your waste, please contact the waste facility at esf@uwaterloo.ca.

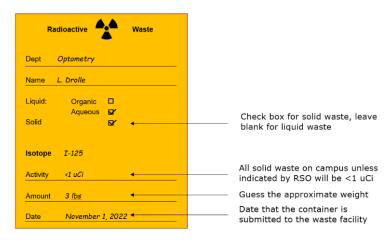


Packaging Guidance

Liquid Wastes

Follow this process when packaging and segregating liquid radioactive wastes:

- 1. Separate according to isotope
- 2. Place in a 4L jug supplied by the Environmental Safety Facility (ESF)
 - Do not fill containers more than 70% full
 - Do not put solid waste in the containers
- 3. Affix and complete the radioactive waste label as depicted below



Solid Wastes

Follow this process when packaging and segregating solid radioactive wastes:

- 1. Separate solid waste according to isotope
- 2. Place in a yellow 20L pail lined with a 6-mil poly bag supplied by the ESF (see image to the right)
 - Remove or deface any radioactive warning labels on vials or containers prior to disposal
 - Place sharps (e.g., needles, razors) in a separate sharps container (see image to the right)
 - Containers must be closed tightly, and liner bags secured with a twist tie
 - Do not put liquid waste in the containers
- 3. Mark external containers with a radioactive waste label (see waste label image above)
 - All waste containers, unless otherwise specified by the RSO, may have their activity written as <1 uCi



Source Vials

When radiation vials are completed, they must be returned to the waste facility for proper disposal. Follow these steps to dispose of the source vial:

- If the vial is completely empty of liquids, place it in the solid waste container
- If the vial still contains liquids, contact the RSO for the best way to dispose of the vial
- Collect the vials Inventory Sheet and Radiation Contamination Monitoring Sheets to send with the waste to ESF
- Write on the Inventory Sheet "Sent to ESF on <insert disposal date>"
- Continue with your regular waste disposal procedures

Vials Containing Scintillation Cocktail

Follow this process when packaging and segregating vials containing scintillation cocktails:

- 1. Place scintillation vials in a red 20L pail lined with a 6-mil poly bag supplied by the ESF (see image to the right)
 - These are the same pails used for solid radioactive waste
 - Vials can be of any isotopes
 - Pails must be closed tightly
 - Mark container with a University of Waterloo chemical waste label (see image below)
- 2. Fill out a Waste Profile Form (see image below) for this item as Liquid Scintillation Vials are considered chemical waste



Container Identifier: Vials	Multiple Containers Y	
Total Quantity: 20 Unit (L)	# of Containers : 1	
Chemicals/Compounds		Max %
Vials containing Scintillation Cocktail		100
SAFETY OFFICE USE ONLY – DRUM	IDENTIFIER	
SAFETT OFFICE USE ONLT - DROW	IDENTIFIER	

