

RADIOACTIVE MATERIAL INVENTORY TRACKING

(For assistance, please contact EHS at (402) 472-4925, or visit our web site at <http://ehs.unl.edu/>)

The purpose of this document is to provide guidance for proper inventory tracking of open source radioactive material (RAM). Inventory tracking of RAM is required by State and Federal regulation. Inventory tracking requirements apply to source material and standards. Inventory tracking requirements do not apply to experimental units.

When RAM is ordered, it must be shipped to the Radiation Safety Office (RSO) for proper receipt. Never have RAM directly shipped to your laboratory. Your designated department buyer is aware of RAM ordering procedures.

A documented contamination survey is required for each month in which RAM is used. Sewer disposal is considered use.

The following steps are provided to guide laboratory personnel in tracking RAM inventory.

Step 1: Receipt of RAM Package from RSO staff

- RSO staff will deliver the package after it is received at EHS.
- A current radiation worker from the laboratory that placed the order will be required to sign for the RAM package. RSO staff will not leave an unattended package in a laboratory.
- Don appropriate PPE (e.g., lab coat, eye protection, gloves) and remove the source and inventory tracking form (see Appendix A for an example of a completed tracking form) from the box. Place the source in a secure location when unattended.
- De-mark all radioactive material labeling from the package and dispose as regular trash.
- Post or place the RAM inventory tracking form in the appropriate location based on laboratory use practices.

Step 2: Document RAM Use and Remaining Inventory

- Each time RAM is removed from the source material or standard, this use and the remaining inventory must be documented. The RAM inventory tracking form provided with the package is used for this purpose.
- The "Package Receipt and Survey Record" section of the form is completed by Radiation Safety Staff. The remainder of the form is completed by laboratory staff.

- Enter the “Date of Use” in the appropriate column.
- Enter the “Quantity Used” in the appropriate column.
- Enter the “Quantity Remaining” of the standard or source material in the appropriate column.
- Enter the “Quantity Unit” that is used to track the inventory in the appropriate column. The “Quantity Used” and “Quantity Remaining” should be of the same units (e.g., both in units of mCi). Multiple units may be used to track inventory (e.g., μ l, mCi, μ Ci, g) as long as the same unit is consistently used on the tracking form. The units of μ l and mCi are most common.
- Store the source material or standard in a secure location when not being used. Do not leave source material or standard unattended in a non-secure location.
- If you should lose or misplace the original tracking form, contact EHS for a replacement. Continue to document use and remaining inventory using an equivalent log until a replacement form is issued.

Step 3: Complete Inventory Tracking Records

- An example of a completed RAM inventory tracking form is provided in Appendix A.
- When the inventory is completely used (quantity remaining is zero) or no longer needed, obliterate all radioactive material labels and transfer the container to the appropriate radioactive waste container.
- If there is remaining RAM that will be transferred to radioactive waste or sewer disposed (e.g., the entire standard was not needed), then note on the tracking form that the remaining quantity was transferred to radioactive waste or sewer disposed, as appropriate.
- Fax (472-9650) or mail (EHS 0824) a copy of the completed form to the Radiation Safety Office. Retain the original form with your Radiation Safety records.
- The source material or standard will not be removed from the Authorized User’s inventory until a copy of the completed form is received at EHS.

Appendix A: Example of Completed Inventory Tracking Form

- *Items highlighted in yellow are completed by the Radiation Safety Office.*
- *Items highlighted in green are completed by the Authorized User or Radiation Worker.*

AU RSO
 AU # R-00375

RSO Number: 100323001

PO Approved: TM

Package Receipt and Survey Record

Survey By: <u>RSO</u>	Date Received: <u>3/23/2010</u>	Radionuclide: <u>P-32</u>
Amount (mCi): <u>0.25</u>	Assay Date: <u>3/23/2010</u>	Lot/Batch: <u>105C</u>
Volume (µl) <u>25</u>		
Package Surface Exposure Rate (mR/hr): <u>0.5</u>	Contamination Survey Required? <u>Yes</u> / No	
Contamination Survey Results (DPM) <u>53</u>	Package Damaged or Leaking? Yes / <u>No</u>	

Radioactive Material Use and Inventory Log

Date of Use	Quantity Used	Quantity Remaining	Quantity Unit (e.g., µl, µCi, mCi)
<u>3/23/2010</u>	<u>5</u>	<u>20</u>	<u>µl</u>
<u>3/25/2010</u>	<u>5</u>	<u>15</u>	<u>µl</u>
<u>3/27/2010</u>	<u>5</u>	<u>10</u>	<u>µl</u>
<u>3/28/2010</u>	<u>5</u>	<u>5</u>	<u>µl</u>
<u>3/29/2010</u>		<u>*0</u>	
Comments	<u>*Remaining quantity transferred to radioactive waste on 3/29/2010</u>		

- *When the inventory is completely used (quantity zero) or no longer needed, obliterate all radioactive materials labels, transfer the container to the appropriate radioactive waste container, and fax (472-9650) or mail (EHS 0824) a copy of this form to the Radiation Safety Office.*
- *This standard or source materials will not be removed from your inventory until a copy of the completed form is received at EHS.*

(Created 4/10)