

UNIVERSITY OF HOUSTON

Radiation Safety Manual

Radioactive Material Receipt, Package Check-In, Inventory Number, Record of Use, Transfer, and Lab Storage Procedures

Receipt

All radioactive material packages must be delivered to Environmental Health and Risk Management. No radioactive material packages are accepted before or after normal business hours on weekends or holidays. Environmental Health and Risk Management is located in the General Services Building, Room 183.

Package Check-In

A package survey and wipe test is performed by Radiation Safety within three hours of receipt. This is documented on the Radioisotope Package Survey and Wipe Test & Radioisotope Tracking Form. Radiation Safety delivers the radioactive material packages as soon as possible directly to the labs. High exposure rate packages may be held for partial decay and then delivered.

Radiation Safety personnel performing package surveys and wipe tests must wear personal protective equipment and a radiation badge. Packages are opened in a functional fume hood and behind a lead shield as required. The check-in procedure is as follows:

The package is visually inspected for any sign of damage.

The exposure rate at the surface of the package is measured.

All radioactive packages will be wipe tested on the outside surfaces for removable radioactive contamination. A wipe test using a cotton swab will be taken over an area of 300 square centimeters with an action level of 6600 dpm for beta-gamma emitting radionuclides and 660 dpm for alpha emitting radionuclides. All wipes will be counted in a liquid scintillation counter. If the action level is exceeded, the RSO will immediately notify the final delivery carrier and the Agency as required.

The exposure rate of the empty box and packing materials is measured.

The exposure rate of each vial container is measured.

A wipe test of each vial is taken and counted for removable contamination.

Any radioisotope found to have significant contamination may be repackaged and returned to the vendor or properly disposed.

Inventory Number

Each radioisotope is assigned a specific inventory number. This is recorded on the vial, any vial container, and the Radioisotope Package Survey and Wipe Test & Radioisotope Tracking Form. A Radioisotope Logbook is maintained by Radiation Safety and a quarterly inventory of all radioisotopes is routinely performed.

Record of Use

The recorded use of each radioisotope is maintained on the Radioisotope Package Survey and Wipe Test & Radioisotope Tracking Form. This form must be kept up to date and filled out completely. The form must be returned to Radiation Safety at EHRM-1005 upon completion of the original stock solution. Upon receipt of the completed form, the radioisotope will be deleted from the radioactive material inventory. Disposal of all radioactive waste must follow the Radioactive Waste Disposal Procedures in the Radiation Safety Manual.

Transfer

All transfers of radioactive material between PIs or other institutions must be documented and approved by Radiation Safety. The Transfer of Radioisotope Form is to be used for all transfers. A new Radioisotope Package Survey and Wipe Test & Radioisotope Tracking Form will be issued for the transferred radioisotope.

Lab Storage

All radioactive material must be kept in a secure area to prevent unauthorized removal. Radioisotopes must be stored behind sufficient shielding to reduce radiation exposures to less than 2 mR/Hr. Radiation Safety personnel inspect all radioactive material labs to insure that appropriate safety features are in place and proper safety procedures are being followed prior to allowing work with radioisotopes.