

APPENDIX P-1

SAFE USE OF UNSEALED RADIOACTIVE MATERIAL

The Radioactive Material Licensee must develop and implement a procedure in the radiation safety program that includes safe use of unsealed radioactive material. Licensees are responsible for developing, documenting, and implementing procedures to ensure the security and safe use of all radioactive material from the time it arrives at their facilities until it is used, transferred, and/or disposed. The written procedures must provide reasonable assurance that only appropriately trained personnel will handle and use radioactive material without undue hazard to themselves, other workers, or members of the public.

Section 9	Applicability
RH-8500	Y
RH-8530	Y
RH-8550	Y
RH-8600	
RH-8620	
RH-8630	
RH-8670	Y

In addition, licensees must develop, implement, and maintain procedures for protective measures to be taken by occupational workers to maintain their doses ALARA. Protective measures may include:

- Use of syringe shields and/or vial shields;
- Wearing laboratory coats and gloves when handling unsealed radioactive material; and
- Monitoring hands after handling unsealed radioactive material.

Example Procedures for Safe Use of Unsealed Licensed Material

This example provides acceptable procedures for safe use of unsealed licensed material.

- Wear laboratory coats or other protective clothing at all times in areas where radioactive materials are used.
- Wear disposable gloves at all times while handling radioactive materials.
- Either after each procedure or before leaving the area, monitor your hands for contamination in a low-background area using an appropriate survey instrument.
- Use syringe shields for reconstitution of radiopharmaceutical kits and administration of radiopharmaceuticals to patients, except when their use is contraindicated (e.g., recessed veins, infants). In these and other exceptional cases, use other protective methods, such as remote delivery of the dose (e.g., use a butterfly needle.)

- Do not eat, store food, drink, smoke, or apply cosmetics in any area where radioactive material is stored or used.
- Wear personnel monitoring devices, if required, at all times while in areas where radioactive materials are used or stored. These devices shall be worn as prescribed by the RSO. When not being worn to monitor occupational exposures, personnel monitoring devices shall be stored in the work place in a designated low-background area.
- Wear extremity dosimeters, if required, when handling radioactive material.
- Dispose of radioactive waste only in designated, labeled, and properly shielded receptacles.
- Never pipette by mouth.
- Wipe-test unsealed radioactive material storage, preparation, and administration areas weekly for contamination. If necessary, decontaminate the area.
- Survey with a radiation detection survey meter all areas of radioactive material use, including the generator storage, kit preparation, and injection areas daily for contamination. If necessary, decontaminate the area. Areas used to prepare and administer therapy quantities of radiopharmaceuticals must be surveyed daily in accordance with RH-8408 (except when administering therapy dosages in patients' rooms when patients are confined).
- Store radioactive solutions in shielded containers that are clearly labeled.
- Radiopharmaceutical multi-dose diagnostic and therapy vials must be labeled in accordance with RH-8406 and RH-1303.
- Syringes and unit dosages must be labeled in accordance with RH-8406 and RH-1303. Mark the label with the radionuclide, the activity, the date for which the activity is estimated, and the kind of materials (i.e., radiopharmaceutical). If the container is holding less than the quantities listed in RH-2793, the syringe or vial need only be labeled to identify the radioactive drug (RH-8406). To avoid mistaking patient dosages, label the syringe with the type of study and the patient's name.
- For prepared dosages, assay each patient dosage in the dose calibrator (or instrument) before administering it (RH-8403).
- Do not use a dosage if it does not fall within the prescribed dosage range or if it varies more than 20% from the prescribed dosage, except as approved by an authorized user.

- When measuring the dosage, you need not consider the radioactivity that adheres to the syringe wall or remains in the needle.
- Check the patient's name and identification number and the prescribed radionuclide, chemical form, and dosage before administering. If the prescribed dosage requires a written directive, the patient's identity must be verified and the administration must be in accordance with the written directive (RH-8308).
- Always keep flood sources, syringes, waste, and other radioactive material in shielded containers.
- Secure all radioactive material when not under the constant surveillance and immediate control of an individual authorized under the Department license (or such individual's designee).