

Occupational Health and Safety

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Director



UNIVERSITY OF ARKANSAS
FOR MEDICAL SCIENCES

To: New Radiation Dosimeter Recipients

From: Radiation Safety Office
Occupational Health & Safety – Mail Slot 617

RE: Radiation Dosimeters -- General Information

Enclosed is the new radiation dosimeter and/or ring that you requested. In the future you will receive your replacement dosimeter at the first of each month with the rest of your department.

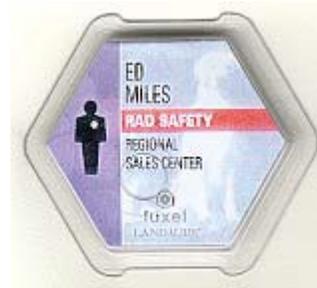
1. Please take a moment now to look at your dosimeter holder and note how the dosimeter fits into the holder. The tamper proof dosimeter “snaps” into the holder with ease. Your name, department, and institution should be visible.
2. At the first of each month, when you have received your replacement dosimeter, please return your old dosimeter immediately to your **Department Coordinator** or to Radiation Safety at slot 617.
3. Do not return your old dosimeter until you receive a new one. If for some reason, you do not receive a new dosimeter at the first of each month, please notify OH&S immediately at 686-5536.
4. As an employee working with or potentially exposed to ionizing radiation, you may wish to obtain a copy of the UAMS Radiation Safety Manual. The manuals are available on line at: <http://intranet.uams.edu/safety/policy/safetyman/RadiationSafetyManual.pdf>.
5. All female employees should receive a copy of the UAMS Policy 11.4.10, Pregnant Employees Working with Ionizing Radiation. Please contact Radiation Safety, 686-5536, if you did not receive a copy.

RADIATION DOSIMETER – LUXEL® BADGE

Holder



Badge Insert



Inside of badge



Do's

- **Always** wear your dosimeter when conducting procedures using radioactivity or ionizing radiation.
- Return your dosimeter (but not the holder) ***promptly*** at the first of each month after you receive a replacement. Dosimeters must be returned by the 8th of the month. If you do not receive a replacement, keep your old dosimeter and contact Radiation Safety at 686-5536 immediately for a new one.
- Wear your dosimeter on the side of your body nearest the radiation source. The badge identifies the area where the badge should be located (collar, waist).
- If you are assigned two badges, one badge will be worn at on the outside of your collar and the second will be worn under the apron at your waist. **DO NOT** mix up the location of the badges. Improper location of badges will result in incorrect calculations and assignment of incorrect exposures. The badge with the red body goes at your collar and the badge with the yellow body goes at your waist. **REMEMBER** Red Neck & Yellow Belly.

Sample Icons Show
Dosimeter Placement



Whole Body



Collar



Waist



Fetal



Area

Don'ts

- **Never** share your dosimeter with another individual. Each person should have his or her own assigned dosimeter.

3.4 RESPONSIBILITY OF APPROVED USERS

Those persons who are permitted by the Radiation Safety Committee to use radioactive materials under the UAMS license are responsible for the safe use of radiation sources by individuals under their control. The authorized user is responsible for:

- 1) Compliance with the UAMS rules and regulations for radiation safety and the State “Rules and Regulations for the Control of Sources of Ionizing Radiation.”
- 2) Instruction of employees under their control in the use of safety devices and procedures. Ensuring **all** radiation workers complete a radiation safety orientation prior to working with radioisotopes.
- 3) Adequate planning of an experiment, or procedure, to assure that appropriate safety precautions are taken.
- 4) Notify the OH&S of any personnel changes, including addition or termination of employees, or changes in operational procedures, new techniques, or changes of areas where radioactive materials may be used or stored.
- 5) Direction of personnel under their control to comply with all recommendations to wear film badges, to survey their hands and clothing, to submit to bioassay, etc. which are designed to control and to reduce their total exposure.
- 6) Limitation of use of radioisotopes under the permit to those over whom he has supervisory control.
- 7) Maintenance of required current records of receipt, use, storage, and disposal of radioisotopes.
- 8) Preparing a quarterly inventory of radioactive materials on hand and at other times when requested by the RSO.
- 9) Segregation, containment, and labeling of all radioactive waste in accordance with the guidelines of OH&S.
- 10) Cleanup of contaminated equipment or areas is the responsibility of the authorized user and the persons creating the contamination. It may not be assigned or delegated to staff outside the laboratory, such as housekeeping or maintenance workers.
- 11) Promptly notifying the Radiation Safety Office of any accidents or incidents.

3.5 RESPONSIBILITY OF THE INDIVIDUAL USER OF RADIOISOTOPES

One of the basic tenets of safety is that all individuals must take responsibility for their own safety, and ensure that any actions taken do not constitute a hazard to others or to the environment. Each person at UAMS who has any contact with sources of ionizing radiation has a responsibility to:

- 1) Keep his exposure to radiation at the lowest practical value and specifically below the maximum permissible exposure as stated in Section 6.2.2.
- 2) Wear the recommended radiation detectors for personnel, such as film badges and thermoluminescent dosimeters.
- 3) Survey his hands, shoes, body and clothing for radioactivity and remove all loose contamination **before** leaving the laboratory.
- 4) Use all recommended protective measures such as protective clothing, respiratory protection, remote pipetting devices, ventilated and shielded glove boxes and hoods.
- 5) No smoking, eating, drinking, chewing gum or application of make-up is permitted in radioisotope laboratories. If evidence of food or drink is found during a lab audit it will result in an immediate one-week suspension of all radioactive material use. No food item shall be stored in a radioactive material use or storage area.
- 6) Maintain clean working habits. Work surfaces must be covered with plastic backed absorbent paper, plastic side down. Where practical, an impervious tray or pan should be used under the paper in order to ensure containment of spills.
- 7) Check working areas for contamination periodically or after each radioisotope procedure in conformity with Section 6.5.
- 8) Maintain good housekeeping practices in the laboratories.
- 9) Label radiation equipment and segregate radiation waste and equipment to avoid cross contamination.
- 10) Report immediately to the RSO the details of a spill or other accidents involving radioactivity. Ext. 686-5299.
- 11) Conduct decontamination procedures. (See 10.2, Emergency Procedures)
- 12) Workers must practice ALARA (As Low As Reasonably Achievable) in their work, and minimize the potential for exposures, contamination or release of radioactive materials.
- 13) Workers are responsible for maintaining security of radioactive materials. (See section on Security of Radioactive Materials, Section 5.6).

Services Available from the Radiation Safety Office

The following services are available from the Radiation Safety Office (RSO) in the Department of Occupational Health and Safety. Many of the services are required in order to comply with the radioactive materials license.

1. **Radiation Exposure monitoring** - using film badge and ring TLD dosimetry.
2. **Radioisotope Bioassay** - using thyroid scans and bioassay techniques to detect radioactive material in the body.
3. **Radioactive Material purchasing** - purchase orders must be approved by the RSO and all radioactive packages must be processed through the Department.
4. **Radioactive Material transfers** - all radioactive materials transferred to or from the campus must be processed through the Radiation Safety Office.
5. **Radioactive Material inventory** - The RSO maintains a computerized inventory tracking system for radioactive materials on the campus.
6. **Surveys** for contamination and exposure hazards on request.
7. **Set-up audits** for new laboratories using radioactive material.
8. **Radiation Safety Laboratory audits** are conducted routinely.
9. **Close-out audits** are conducted when a researcher no longer wishes to use radioactive materials in a laboratory. A two week notice is required.
10. **Consultation** to researchers, laboratory staff, nurses, as well as other employees and students about matters pertaining to radiation safety such as: pregnancy, an employee's personal radiation exposure, safe handling of radioactive materials, or segregation and packaging of radioactive waste for disposal.
11. **Radioactive Waste Disposal** on the UAMS campus is processed through the Radiation Safety Office.
12. **Emergency response** to major spills of radioactive material on campus **and assistance** with clean-up of minor spills.
13. **Microwave ovens surveys** for ovens that are used occupationally or that are suspected of leakage.
14. **Calibration** of all GM survey meters on campus annually.
15. **Radiation Safety Training** for laboratory and campus personnel.