

**Effective Date:** December 7, 2018

**Purpose:** To outline procedures for personnel to obtain, use, maintain and return assigned personal radiation dosimetry to ensure compliance with Personal Radiation Dosimetry Policy 11-025.

**Related Documents:** Personal Radiation Dosimetry Policy 11-025

All forms/documents are available from <https://health.uconn.edu/radiation-safety/> unless otherwise noted.

Contact information for the Radiation Safety Officer (RSO) and Office of Radiation Safety (ORS):

Location: L-5048

Phone: 860-679-2250

## A. Obtaining a Personal Radiation Dosimeter

1. Review the Personal Radiation Dosimetry Policy (11-025).
2. Complete Radiation Badge training, and other Radiation Safety training as required by the ORS.
  - If you will be operating fluoroscopy units, complete Fluoroscopy training
  - Training may be completed online or in person with records maintained by the ORS.
3. Consult with your Supervisor and/or the RSO to confirm your monitoring requirements if unclear.
4. Accurately complete a 'Request for Dosimetry Services' form.
  - If dosimetry was issued to you at another facility during the current calendar year, complete and sign a release form so that the ORS can obtain your previous exposure history.
5. Present the completed form to the ORS.
  - Dosimetry will not be issued if all requested information is not properly completed on the form.
6. Collect assigned dosimetry from ORS or designee.

## B. Correct Use of Personal Radiation Dosimetry

### Initializing your Dosimeter(s)

#### *Landauer Badges*

Upon receipt of your badge, remove the plastic tab from the top of the badge and place the badge securely within the badge holder.

- This must be completed whenever a new badge is issued depending on your monitoring frequency (monthly or quarterly).

### ***Mirion Instadose+***

Follow the procedures provided with the dosimeter (also available online).

### **Wearing your Dosimeter(s)**

1. All assigned dosimetry should be on your person throughout your work day unless otherwise approved by the RSO or designee (exception ring dosimeter assigned – see below).
2. Do not wear another individual's personal dosimetry
3. Dosimetry shall not be worn during non-occupational radiation exposures (e.g. when an individual undergoes a personal radiological and/or Nuclear Medicine procedure).
  - An individual who has undergone a Nuclear Medicine procedure involving radioactive material but needs to wear dosimetry to monitor occupational radiation exposure shortly after the procedure shall inform the RSO/ORS.
4. Do not take dosimetry off campus. (Exception: RSO/ORS approved individuals whom are required to wear radiation dosimeters at other facilities where exposure to ionizing radiation is possible).
5. Cooperate with the ORS during periodic audits conducted to verify that dosimetry is being worn correctly.
  - If dosimetry is found to be worn incorrectly, ORS staff will provide immediate retraining.

### ***One (1) whole body dosimeter assigned***

1. Secure the dosimeter between your chest and waist, facing forwards.
  - Ensure that your dosimeter is not covered or blocked.
2. If you are required to wear a protective (e.g. lead) apron(s) for any reason, secure your badge on your collar outside of your apron facing the radiation source.

### ***Two (2) dosimeters assigned – Chest (Torso) and Collar***

Take care not to switch your collar and chest badge

1. When wearing protective (e.g. lead) aprons:
  - Secure your chest dosimeter between your chest and waist underneath your protective apron(s).
  - Secure your collar dosimeter on your neck region outside of your protective apron(s) (including thyroid guard).
2. When NOT wearing protective aprons:
  - Secure both dosimeters between your chest and waist.

### ***Ring dosimeter assigned***

1. When working with or near radioactive material (RAM) or radiation generating devices (RGD):
  - Place your ring dosimeter on any finger of the hand most likely to receive the highest exposure with the label facing the radiation source.

2. When NOT working with or near radioactive material or radiation generating devices:
  - Wear your ring dosimeter as above or
  - Store your ring dosimeter as per section 'C. Storing your Dosimeter(s)'.

## **C. Maintenance of Personal Radiation Dosimetry**

### **Storing your Dosimeter(s)**

1. Before leaving UConn Health (e.g. at the end of your work day, personal appointment, lunch off campus) store your badge(s):
  - on the provided badge rack/board in your department
  - other location approved by RSO or designee
2. Do not leave/store your badge(s) on protective (e.g. lead) aprons when not in use.
3. Keep badge(s) away from radiation sources, sunlight, and heat when not being used.
4. Do not take your badge(s) off campus unless you will be working at another UConn facility where exposure to ionizing radiation is possible.
5. If your job requires you to travel by air with your badge, place it in your carry-on luggage. It can go through the hand luggage scanner. It should not be placed in your checked luggage.

### **Lost, Damaged or Accidentally Exposed Dosimetry**

1. Immediately notify the ORS if you have lost control of your dosimetry (i.e. your dosimetry is lost, damaged or is suspected to have been accidentally exposed to radiation (i.e. left near an x-ray unit while that unit was in operation)).
2. Details of the event need to be reported to the ORS, as soon as possible after the event, by completing/submitting a 'Report of Lost, Damaged or Accidentally Exposed Dosimetry' form or sending an email with all relevant information to the RSO.
3. If your dosimeter(s) are lost, the fee as outlined below may apply:
  - Landauer whole body, chest or collar badge \$20
  - Landauer ring badge \$20
  - Mirion Instadose+ \$75
4. Receive replacement dosimetry from ORS.
  - Landauer Dosimetry – you will be issued a provisional badge(s) to use until the next badge exchange. Make sure the badge(s) is labeled with your name.
  - Mirion Instadose+ – you will be issued a guest Instadose+ badge(s) until your replacement badge(s) arrives. Make sure the badge(s) is labeled with your name.
5. If a badge is later located, then you should personally return it to the ORS. You are required to provide details on this badge as requested by the ORS. This can be done by completing a "Return of Uncontrolled Dosimeter" form.

### **Collection of Exposure Data**

Personnel are responsible for the timely return of dosimetry for processing/readout of exposure data.

## **Landauer Dosimetry**

1. During the first week of the monitoring period (month or quarter) exchange the previous monitoring period's dosimetry with the new monitoring period's dosimetry with the ORS or designee.
  - If you have lost/damaged/accidentally exposed your badge – see *Lost, Damaged or Accidentally Exposed Dosimetry* procedure above.
2. If your dosimetry is not received by the ORS by the second Friday of the new monitoring period, it will be marked as 'absent' and the ORS will contact you and your supervisor/manager.
  - If you receive notification from ORS, respond with the requested information within the specified timeframe.
3. If your dosimetry was unused for the monitoring period (tab at the top was not removed and therefore, the badge was never placed into a clip), provide an explanation to the ORS when returning your badge.
  - If an explanation is not provided, the ORS will follow up with you and your supervisor/manager.
  - If you receive notification from ORS, respond with the requested information within the specified timeframe
4. If a dosimeter is returned more than 30 days after the end of the monitoring period, you are required to provide details to ORS on the location and control of a badge.
  - If an explanation is not provided, the ORS will follow up with you and your supervisor/manager.
  - If you receive notification from ORS, respond with the requested information within the specified timeframe
5. If the ORS does not receive a response to any request for information regarding your personal radiation dosimetry from either yourself or your department head/supervisor/manager in the time frames specified further action shall be taken up to and including withdrawal of your authorization to work with and/or be present in areas where RAM and RGD are used or termination of employment.

## **Mirion Instadose+ Dosimetry**

1. Follow the procedures provided with the dosimeter (also available online).
  - If you have lost/damaged/accidentally exposed your badge – see *Lost, Damaged or Accidentally Exposed Dosimetry* procedure above.
  - If your reading is not recorded within seven (7) days post your read date, the ORS or designee will contact you.
  - If you receive notification from ORS, respond with the requested information within the specified timeframe
2. If the ORS does not receive a response to any request for information regarding your personal radiation dosimetry in the time frame specified further action shall be taken up to and including withdrawal of your authorization to work with and/or be present in areas where RAM and RGD are used or termination of employment.

## D. Return of Personal Radiation Dosimetry

1. Return all assigned personal radiation dosimetry to the ORS or your department's badge coordinator:
  - At the conclusion of your employment/privileges at UConn Health,
  - As instructed by the RSO or designee.
2. If you do not return your dosimetry within one week of the above, or your badge is not received by the ORS by the second Friday of the new monitoring period, it will be considered 'lost' and the fee outlined in the *Lost, Damaged or Accidentally Exposed Dosimetry* procedure above, may apply.

## E. Personal Radiation Dosimetry Reports

### Review of Personal Radiation Dosimetry Records

1. The RSO or designee will review all radiation exposure records and investigate as required by UConn Health policy and procedures, and Federal and State Regulations at least quarterly.
  - If you receive notification from ORS that requires a response, respond as requested within the specified timeframe.
2. If the ORS does not receive a response to any request for information regarding your personal radiation dosimetry in the time frame specified further action shall be taken up to and including withdrawal of your authorization to work with and/or be present in areas where RAM and RGD are used or termination of employment.

### Obtaining a copy of your Personal Radiation Dosimetry History

#### Landauer Dosimetry

- Your exposure history records are available at any time online. Follow the Radiation Dosimetry Badge Exposure History Report Access Procedures.

#### Mirion Instadose+

- Your exposure history records are available at any time online/via the app. Follow the procedures provided with the dosimeter (also available online).

If you have any problems accessing your dose history, contact the ORS.

**Approved**

*Signed*

*12/7/18*

\_\_\_\_\_  
Radiation Safety Officer

\_\_\_\_\_  
Date Signed

### **Revision History**

1. New Procedure Approved by RSO: \_\_\_\_\_
2. Revised: \_\_\_\_\_