

## Dosimetry and Personnel Monitoring

"Radiation badges" (dosimeters) are generally used to monitor personnel and areas where radiation sources are used. The Nuclear Regulatory Commission (NRC) requires that personnel monitoring be performed if a worker is "likely to receive, in 1 year...doses in excess of 10 percent of the applicable limits." University policy requires personnel to wear radiation badges when using more than 1 mCi of radioactive material which decays by gamma or beta emission with  $E_{max} > 200$  keV.

These dosimeters are used to monitor not just whole body exposure, but also exposure to a worker's hands. Extremity monitors are ring badges with a single chip. **Persons working with small amounts of radioactivity or low energy emitters such as  $^{14}\text{C}$ ,  $^3\text{H}$  or  $^{63}\text{Ni}$  do not need to wear dosimetry badges.**

Whole body and extremity dosimeters are available from the Radiation Safety Program free of charge. To obtain a dosimeter, contact Radiation Safety and request a "[Personal Dosimeter Application](#)" form; complete the form and return it to Radiation Safety. Note, all persons requesting dosimeters must have successfully completed the radiation safety exam.

If you have been issued a dosimeter to monitor your radiation exposure, you should follow a few simple rules to ensure that the dosimeter accurately records your radiation exposure.

- Wear only your assigned dosimeter; never wear another worker's badge.
- Wear your whole body badge between your collar and waist. Wear your ring badge beneath your gloves with the label on the palm side of the hand that handles the radiation source and thus has the greatest potential for exposure.
- Do not store your badge near radiation sources or heat sources.
- If you suspect contamination on your badge, return it immediately to Radiation Safety; you will be given a new, uncontaminated badge.
- Never intentionally expose your badge to any radiation.
- Do not wear your badge when receiving medical radiation exposure (e.g., x-rays, tests, nuclear medicine, etc.)
- Return your badge to Radiation Safety at the end of the monitoring period. The vendor charges for lost badges and Radiation Safety passes this fee on to the laboratory.
- Badges are exchanged on a quarterly basis.
  - First Quarter Badges: **Blue**
  - Second Quarter Badges: **Green**
  - Third Quarter Badges: **Yellow**
  - Fourth Quarter Badges: **Red**

Dosimetry reports are sent to the Radiation Safety Program office monthly and quarterly from the processing lab. You will be notified immediately of any overexposure or of levels that warrant investigation. Permanent records of actual doses recorded by the dosimeters assigned to individuals during their affiliation with the University are maintained by Radiation Safety. You can request your exposure history at any time by calling 430-7507.