

# DOSIMETRY USE

## WHAT IS A DOSIMETER?

A dosimeter is a device used to measure a received dose of ionizing radiation. It does not protect you, absorb radiation, nor monitor equipment.

## WHY IS A DOSIMETER NEEDED?

Dosimeters are needed for a variety of reasons. Dosimeters are required for compliance. Radiation cannot be seen, felt or heard and also scatters; therefore, dose can only be monitored using dosimeters. Additionally, dosimeters aid in the University's commitment to staying under ALARA limits.

## ALARA

As a requirement of our license, regulations require that WKU maintain a program whereby every reasonable effort is made to keep occupational exposures As Low As Reasonably Achievable (ALARA). The University's ALARA Program provides a process for the Radiation Safety Committee and the Radiation Safety Officer (RSO) to review the radiation safety program annually, review all proposals for radioactive material usage, review all occupational radiation exposure reports, and investigate any occurrences where occupational exposures exceed established program action levels.

## EXCHANGE OF BADGES

Dosimeters are issued on a monthly or every three month rotation. Dosimeters will be exchanged automatically, unless a participant is requested to be deactivated or removed.

## STORAGE OF BADGES

Dosimeters are issued to monitor your occupational dose. All dosimeters should be stored in one location, applicable to their use, and away from sources of radiation. Do not store your badge at your workstation or on a laboratory bench. And, do not take your badge home with you.

## CONTROL BADGES

Control badges provide a background measure of radiation exposure. Control badges should not be worn by a participant and should be stored in the same location as all other issued badges. Control badges will be rotated at the same time as participant dosimeters. Control badges are not area monitors.

## RING DOSIMETERS

Ring dosimeters should be worn beneath gloves and turned towards the radiation source. This would mean that the ring is usually worn upside down or facing the palm side of the hand. Typically, if a person is right-handed, the dosimeter would be worn on the right hand.

## WHOLE BODY BADGES (INCLUDING EYE, UPPER EXTREMITY AND FETAL BADGES)

A whole body badge is to be worn on the front of the torso between the shoulders and the waist near the portion of the body that is most likely to receive the maximum radiation exposure and under any protective clothing. If a protective apron is worn, the dosimeter should be near the midline of the body under the apron.

An additional dosimeter will be worn for the purpose it was issued such as eye, upper extremity or fetal monitoring. A dosimeter issued to monitor an upper extremity will be worn on the sleeve. Fetal monitors will be worn at the waist line.

## LOST/STOLEN, BROKEN, ACCIDENTALLY EXPOSED BADGES

Contact the RSO immediately if a badge is lost, misplaced or cannot be found, or if the badge becomes broken or shows defects, or if the badge is exposed to radiation sources while not in use.

## ADDING A PARTICIPANT

To add a radiation participant, Authorized Users should submit appropriate Appendix to RSO via email, [sarah.grant@wku.edu](mailto:sarah.grant@wku.edu) on behalf of future Supervised Users.

Submit Appendix D, Dosimetry and Training Request Form, for Radiation Producing Machines (RPM) Users out of the RPM Manual. Likewise, use Appendix S from the Radioactive Materials (RAM) Safety Manual for RAM users.

Users will be added to Blackboard Organization to take training quiz and be issued their dosimeter upon earning a passing score of 70%.