

4 THINGS TO CONSIDER WHEN CHOOSING A RADIATION BADGE

by Radiation Detection Company

What to Look for Before Getting a Dosimeter

There are many radiation dosimeters on the market these days. Which makes it important that you do your research to find out what your business needs. From the type of dosimeter, frequency for wear time, and the badge wear location, there are many decisions to be made.



Work with Your Organization's Radiation Safety Office

To understand your organization's needs, you should consult your Radiation Safety Office or Committee.

The RSC is ultimately the governing body for all aspects of radiation protection in the workplace. Your Radiation Safety Committee will make assessments based on your workplace and the needs of the organization in conjunction with local, state, and federal requirements.

Assess Your Workplace's Potential for Radiation Exposure

Dosimeters are chosen based on the type(s) of radiation present in the workplace, the radiation levels, and compliance requirements. Another important factor is NVLAP accreditation for the radiation type that the dosimeter is measuring. The dosimeter needs to be appropriate for the radiation work environment. Meaning for example, if photons and neutrons are present, you would want to wear a radiation badge that monitors those energies.

Measuring Radiation Dose

The U.S. Nuclear Regulatory Commission (NRC) has established and maintains a dose limit for occupational exposure for people working with radioactive materials. States regulate X-rays and X-ray generating devices to also comply. These limits function as a form of radiation protection for monitoring personnel.

People in contact with radioactive materials or x-ray generating devices during the course of their employment (or those who may be exposed to radiation) normally carry personal dosimeters to measure radiation emitted during their work. These dosimeters are specifically designed to record and indicate the radiation dose received.

Absorbed dose is generally the most important measure for radiation personnel. Absorbed dose is the measure of the radiation energy deposited in matter by ionizing radiation per unit mass. Absorbed dose is a measurable quantity and a key component of radiation protection as well as radiology.



Is Digital or Passive Dosimeters Better for Your Organization?

There are two main types of dosimeters for the everyday practice: digital and passive. Passive dosimeters record how much radiation an individual is exposed to over a specific period of time (month, quarter, or year) – known as accumulated dose. These badges are collected and analyzed after the fact. After each wear period, a new badge is issued and used, and the old one is collected to analyze occupational

dose. These dosimeters are considered "passive" because they give an estimate of cumulative dose over the course of a wear period.

Digital dosimeters, on the other hand, can measure real time doses which provides quick feedback to the worker of the exposure. Another major benefit with these dosimeters is they don't have to be shipped back and forth for dose report reading (like a TLD or OSL passive dosimeter) since the user has the capability of initiating the reading themselves. Digital dosimeters give autonomy to the practice to choose dose report generation times, convenience of badge reassignments, and peace of mind with quicker exposure insights.

Let Us Help Find the Right Dosimeter for You

Radiation Detection Company is dedicated to your safety and the safety your staff. We have almost 75 years of experience providing quality radiation dosimetry solutions to over 27,000 companies across the United States.