

Control dosimeters

Control dosimeters are used to measure exposure from non-occupational sources such as cosmic radiation, irradiation that may occur during badge shipment and natural radioactive material found in building materials and soil.

A complimentary control dosimeter is provided for each type of whole body badge (TLD, film, neutron, extremity) for each account. If all of your group badges are stored in the same area, one control for each whole badge type and wear period will suffice. However, if your account is split into groups, and badges are re-shipped to other locations, it is appropriate to have control dosimeters accompany those badges. Not having control dosimeters (for dosimeters that are re-shipped) may result in doses that do not represent the actual dose received by the individual(s) being monitored. For this purpose, additional control dosimeters may be purchased.

Control dosimeters should be stored in a location away from the radiation at your facility. Break rooms or reception areas are good examples of areas that are typically appropriate. Never store the control dosimeter in a lead box or safe. Never issue a control dosimeter to an individual or use one as an area monitor.

The control dosimeter should be returned along with the dosimeters for the same wear period.

Proper use of the control badge is crucial for the accurate analysis of your personnel dosimeters and for assigning accurate dose results.

Below are the answers to frequently asked questions regarding control dosimeters.

What does it mean when my control dosimeter records a dose?

It is normal to receive dose on the control dosimeter. It represents the background and transit dose received on the badge from the time it left our facility and until it was returned. The dose recorded on a control dosimeter is usually low, and relatively constant from report to report. A control dosimeter will usually record a small dose (5 - 20 mrem per month).

What is the role of the measurement recorded on the control dosimeter in calculating occupational dose?

The dose recorded by a control dosimeter is a measurement of the background dose received during shipment and storage. To obtain the occupational dose, the measurement recorded on the control dosimeter is subtracted from the doses recorded on the other badges in the group. The difference is the occupational dose.

What happens if I return my badges without the control dosimeter?

For badges returned without a control, the reported dose will include background and transit dose along with the occupational dose received by the individuals.

Upon receipt, I split up my badge shipment and send them to different facilities. What do I need to do regarding control dosimeters for these badges?

In these cases, it is suggested you purchase an additional control dosimeter for each group of badges that will be sent elsewhere and include a control dosimeter with each group of badges when they are shipped. To purchase additional control dosimeters, contact Customer Care.

Find out more at thermofisher.com/dosimetrieservices