Dosimeter Placement: Wearing Lead

Collar (red) and Waist (yellow) Dosimeters **MUST** be worn correctly as a set for correct dose determination when wearing lead garments. Contact radiation safety immediately if any dosimeters are worn incorrectly or lost, (646) 962-4567.

Dosimeter Placement: NOT Wearing Lead
Dosimeter Program Overview

Radiation monitoring devices are provided by the Radiation Safety Office to measure an individual's radiation exposure from X-ray or radioactive sources. The standard monitoring device is a clip-on dosimeter badge or ring badge bearing the individuals name & date of the monitoring period.

A radiation dosimeter badge does not protect the worker from radiation, but detects and measures radiation to which you have been exposed. The badge will detect high energy beta, gamma or x-ray radiation. These dosimeters cannot detect low energy beta radiation from some isotopes including tritium (H-3).

In order to minimize your exposure to radiation from radioactive materials or radiation-producing devices, always practice ALARA, which includes minimizing time near a source, maximizing distance and the use of shielding between you and the source.

Monitoring Requirements

- It is expected that a person will receive a dose in excess of 10% of any of the following annual occupational dose limits:

<table>
<thead>
<tr>
<th>Description</th>
<th>Dose Limit</th>
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<tbody>
<tr>
<td>Whole Body</td>
<td>5,000 mrem/yr</td>
</tr>
<tr>
<td>Skin</td>
<td>50,000 mrem/yr</td>
</tr>
<tr>
<td>Extremity</td>
<td>50,000 mrem/yr</td>
</tr>
<tr>
<td>Lens of the eye</td>
<td>15,000 mrem/yr</td>
</tr>
</tbody>
</table>

- Are less than 18 years of age and are likely to receive a radiation dose in any calendar quarter in excess of 1 percent of the occupational dose limits listed above.
• Are radiation workers and have declared a pregnancy or planned pregnancy.
• Enter a High Radiation Area (exposure to greater than 100 millirem in any one hour).
• Operate analytical X-ray devices (ring and whole body badges).
• Meet special criteria as assessed by the Radiation Safety Officer.

**Badge Exchange and Processing**

Badges are exchanged **monthly or bimonthly** (except for Declared Pregnant Workers whose badges are exchanged monthly). The departmental badge coordinator shall distribute and collect dosimeters, and facilitate new dosimeter requests.

When a new badge is received snap the old badge out of the gray holder and return just the badge itself. Keep the gray holder so that you snap the new badge into it.

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**Guidelines for Wearing and Storing Monitoring Badges**

• Never share your badges or wear another person’s badges. Each badge is intended to be worn by only the designated person.
• Do not intentionally expose badges to radiation. Intentional tampering with badges is a very serious matter.
• No matter how curious you are, do not wear your badges when you receive a medical x-ray or other medical radiation treatment. Your badges are intended to document occupational dose, not medical dose.
• Store your badges in a safe place at work, rather than at home. Be sure to store badges away from sources of radiation. Be careful to consider all sources of radiation. For example, if you store your badge clipped to your lab coat, make sure that your lab coat (or any other lab coat near it) is not contaminated.
• Wear your body badge on the part of the body between your neck and waist most likely to be exposed to the greatest amount of radiation. Wear it so that the name tag faces toward the source of radiation.
• If you are issued waist and collar dosimeters, the collar dosimeter shall be worn outside your lead on the collar. The waist dosimeter shall be worn under lead on your waist.
• Your ring badge should be worn so that the label is facing out from the side of the hand most likely to receive a radiation exposure. In most cases, this means that the label will face out from the palm side of your hand. To avoid contaminating your ring badge when using open sources, wear your ring under the glove. Additionally, take care not to dispose of the ring in the trash when you remove your gloves.
• If you lose your badge notify the Radiation Safety Office at 646-962-4567, to obtain a replacement badge as soon as possible.
Radiation Labeling

Indicates the presence of a radiation source.

Measurable radiation is in the area, usually from an x-ray machine.

Indicates the presence of a licensable amounts of radioactive materials.

ALARA

ALARA= As Low as reasonably achievable. Radiation doses are kept as low as reasonably achievable. Stems from Linear-No-Threshold dose model. An ALARA program is required by Federal and State regulations.

Reducing Your Dose: ALARA Techniques

Time: Reduce your time spent near radiation sources

Distance: Increase your distance from radiation sources

Shielding: place appropriate shielding materials between the radioactive source and your body.

EHS/ Office of Health Physics:  646-962-4567 Room: A0053
Radiation Safety Officer:  212-746-5756