DOsimetry
Radiation Monitoring for Workers

State and federal government agencies set limits for permissible radiation exposure to employees during a calendar year. Additionally, at UC Riverside, every effort is made to maintain radiation exposure As Low As Reasonably Achievable (ALARA). With the exception of embryo or fetus exposure, the exposure goals are to keep exposures to less than one-half the state and federal limits.

Radiation Exposure Limits

<table>
<thead>
<tr>
<th>Exposure Area</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole Body</td>
<td>2.5 rem/yr</td>
</tr>
<tr>
<td>Lens of the Eye</td>
<td>7.5 rem/yr</td>
</tr>
<tr>
<td>Skin and Extremities</td>
<td>25 rem/yr</td>
</tr>
<tr>
<td>Embryo/Fetus</td>
<td>0.5 rem/entire period of gestation</td>
</tr>
<tr>
<td>Age 18 &amp; below</td>
<td>Less than 10% of limits</td>
</tr>
</tbody>
</table>

Documentation of Radiation Exposure

- An EH&S representative determines if you are assigned a dosimeter based on potential radiation exposure (don’t take dosimeters home)
- Wear dosimeter any time near a radiation source (or throughout work day)
- Always wear your whole body dosimeter on the trunk of the body between collar and waist level
- If you work with x-ray machines, wear the single badge on collar, outside of lead apron or the double badge— one on the collar outside lead apron, and one on the waist under lead apron
- To speed up reporting process, please make every effort to exchange dosimeters during the first week of each month or calendar quarter (January, April, July, October)
- If dosimetry is not turned in by the 8th of the month, compliance points will be assessed
- If your dosimeter is exposed to radiation/ contaminated with radioactive material, or your physician gives you a radiopharmaceutical for a nuclear medicine scan, inform EH&S as soon as possible
- When you terminate your use of radiation sources at UCR, leave your dosimeter with your department dosimetry coordinator or contact EH&S
- Keep dosimeters dry, contamination free, and away from sources of heat
- If you work with radiation sources outside of UCR, contact EH&S to track total radiation dose for the year
- If a dosimeter is damaged or lost, EH&S will estimate dose and add to the worker’s exposure record
- Workers who operate mobile x-ray machines must wear dosimeters (fluoroscopy operators performing interventional procedures may be assigned 2 badges as determined by EH&S
- Various radionuclides and experimental activities require dosimeters, but not for beta emitters with $E_{\text{max}}$ energies less than 1500 keV

Visit [www.ehs.ucr.edu](http://www.ehs.ucr.edu) for additional information or call EH&S at 827-5528 if you have any questions.