

**DUKE RADIATION DOSIMETRY LABORATORY
EQUIPMENT AVAILABLE FROM DRDL**

Equipment	Utilization
<p>MOSFET detector systems:</p> <p style="padding-left: 40px;">AutoSense System (model TN-RD-51) Mobile MOSFET system (model TN-RD-70-W)</p> <p style="padding-left: 40px;">High sensitivity diagnostic MOSFET detectors (model TN-1002-RN) Radiation therapy MOSFET detectors (model TN-502-RD)</p>	Real-time dosimetry; validation of Monte Carlo codes; small animal dosimetry, patient dosimetry, CT phantom dosimetry
<p>Adult and pediatric anthropomorphic phantoms (CIRS, Norfolk, VA):</p> <p style="padding-left: 40px;">Adult male (model 701-D) Adult female (model 702-D) 1-yr old ped (model 704-D) 5-yr old ped (model 705-D)</p>	Human dosimetry studies in CT, CT-fluoroscopy, pediatric/adult interventional and cardiac catheterization procedures, Cone beam CT, and radiation therapy.
<p>Harshaw automatic TLD reader and TLD-100 chips</p> <p style="padding-left: 40px;">Auto reader (model QS5500) TLD-100 chips (approx 250 chips)</p>	For R&D applications; human and animal dosimetry
<p>Dual Cs-137 calibration sources</p>	Calibration of survey meters and ion chambers
<p>Radcal 9015 monitor (x 2 units)</p> <p>Ion chambers:</p> <p style="padding-left: 40px;">6 cc (model 10x5-6) 0.18 cc (model 10x5-0.18) mammo (model 10x5-6M) 60cc scatter (model 10x5-60)</p>	X-ray applications and calibrations
<p>RTI</p> <p>Piranha (model 557)</p>	X-ray machine calibrations
<p>Victoreen</p> <p>Nero (model 8000)</p>	X-ray machine calibrations
<p>RadCal 9095</p>	X-ray machine calibrations
<p>Tissue equivalent blocks (custom made, CIRS)</p>	For dosimetry calibrations
<p>Tissue equivalent mice phantoms (custom made, CIRS)</p>	Small animal dosimetry
<p>CT head and body phantoms</p>	CTDI measurements
<p>Catphan CT phantom</p>	CT image quality
<p>AAPM CT phantom</p>	CT image quality

Equipment	Utilization
Radiochromic film technology GAFCHROMIC® EBT dosimetry film EPSON 10000XL flatbed photo scanner EPSON perfection V 700 PHOTO scanner	2-D film dosimetry application
Dedicated laptop for MOSFET data acquisition	Windows XP, Acquisition software