

Luxel+ Dosimeter

OSL dosimeter for personnel and area monitoring by Landauer

Luxel+ dosimetry service provides x, gamma, and beta radiation monitoring with optically stimulated luminescence (OSL) technology. OSL technology is the newest advancement in passive radiation protection dosimetry that improves on the best features of traditional film and TLD technologies. **Luxel+** can be packaged for personnel monitoring, area monitoring, emergency response or other specialized services.

Luxel+ offers complete reanalysis to confirm the radiation dose measurement, imaging of unique filter patterns that provide diagnostic capabilities to identify static or dynamic states during radiation exposure, increased sensitivity and precision, a wide dynamic range of measurement, and excellent long-term stability. In addition to these technological advancements, **Luxel+** can be customized to meet the administrative needs of a radiation monitoring program through graphic, color, and packaging design options.

Landauer's services includes a full range of diagnostic evaluation and reporting services, including direct computer access via the Internet to Landauer's database for exposure reports, shipment tracking and account maintenance transactions



Technical Specifications

Radiations Measured	Photon (X and Gamma Ray)	Beta Particle	Neutron
Detector	Al ₂ O ₃ (Aluminum Oxide)	Al ₂ O ₃ (Aluminum Oxide)	Optional Neutrak® 144 detector inside dosimeter (CR-39)
Analysis Method	Optically Stimulated Luminescence (OSL)	Optically Stimulated Luminescence (OSL)	Chemical etching followed by track counting (Track-Etch®)
Energies Detected	5 keV to in excess of 40 MeV	150 keV to in excess of 10 MeV (Expressed as Average Energy)	Fast: 40 keV to 40 MeV Thermal/Intermediate: 0.25 eV to 40 keV
Dose Measurement Range	1 mrem to 1000 mrem (10 µSv to 10 Sv)	10 mrem to 1000 mrem (100 µSv to 10 Sv)	Fast: 20 mrem to 25 rem (200 µSv to 250 mSv) Thermal/Intermediate: 10 mrem to 5 rem (100 µSv to 50 mSv)
Accuracy	Deep Dose (HP10) ±15% at the 95% confidence interval for photons above 20 keV Shallow Dose (HP 0.07) ±15% at the 95% confidence interval for photons above 20keV and beta particles above 200 keV		
Accreditations, Approvals, Licenses	NVLAP (NVLAP Lab Code 100518-0) for Whole Body (ANSI HPS N13.11-2001) in the comprehensive subcategory "General" in all categories including VI when neutron component is added; and for extremity (ANSI HPS N13.32-1995). HSE (Health and Safety Executive) United Kingdom approved for Whole Body (OSL) and Whole Body Neutrons. DOELAP (Department of Energy Laboratory Accreditation Program).		