Radiation Dosimetry – Technical Details

Luxel OSL Whole Body Dosimeter

Luxel's optically stimulated luminescence (OSL) dosimeter measures radiation exposure due to X-ray, beta, and gamma radiation through a thin layer of aluminum oxide and different filters. The dosimeter is enclosed in a water-resistant blister pack. After use, the RPO returns them to Landauer for processing, where the aluminum oxide is stimulated with a blue-laser causing it to become luminescent. This luminescence is proportional to the amount of the radiation exposed to the dosimeter during use. This luminescence is measured and a report of the exposure results is generated.

TLD Ring

Thermoluminescent dosimeter (TLD) rings measure radiation exposure to your extremities due to X-ray, beta, and gamma radiation with an encased lithium fluoride chip. The TLD chip is sealed beneath the identification cover of the ring.

After use, the RPO returns them to Landauer, where the chip is removed and carefully heated causing the chip to become luminescent. The luminescence is proportional to the amount of radiation exposure during use.

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