

InLight® Complete Dosimetry System Solution

microStar® Dosimetry Reader



The microStar reader is a compact, lightweight, portable reader that can be taken anywhere immediate results are required. It uses aluminum oxide (Al_2O_3) detectors to measure radiation exposure and reads the measurement with optically stimulated luminescence (OSL) technology.



The InLight Dosimetry System is an example of LANDAUER Fleximetry, the industry's most flexible dosimetry program. This flexibility lets you choose from the options below that best meet your organizational requirements.



Overview

The microStar reader simplifies radiation dose measurement with a simple three-step process: you need only place the dosimeter in its drawer and close the drawer; turn the knob; and read the dose from the display. The uncomplicated design and durable equipment help reduce costs in maintenance, training and power consumption.

The microStar quickly and efficiently reads InLight nanoDot, whole body or environmental dosimeters. Its software stores multiple calibrations, allowing the microStar to establish a variety of radiation environments for accurate analysis; and providing flexibility to incorporate correction factors based on the clinical environment. The transparent, non-linear calculations are designed to account for non-linear response of Al_2O_3 at “high” doses (>300cGy) and allow the user to “see” how the dose is computed from the measurement. There are a variety of measurement units available (mrem, mrad and cGy), and the reports are customizable to download in XLS, PDF, XML or CSV formats.

Features and benefits

- Portable—ideal for in-field use or in locations requiring immediate analysis, whether for emergency response activities or for patients in a clinical setting
- Appropriate for small laboratories (<10,000 participants; little or no automation)
- High throughput (readout in 13 seconds); approx. 180/hour
- Works with a laptop computer; can be networked with additional microStar readers
- Non-destructive readout allows for reanalysis
- No dosimeter preparation required
- No annealing required
- No heating parameters to maintain
- No gas required
- Effective replacement for older radiation measuring technologies (e.g., TLD)

Technical specifications

Operation:	Al_2O_3 with OSL is linear from 10 μ Gy to >100 Gy
Speed:	Readout in 13 sec.
Capacity:	1 slide (1 dosimeter)
Energy dependence:	Within $\pm 10\%$ over diagnostic energy range; within $\pm 1\%$ for photons and electrons from 5 MeV–20 MeV
LED array:	36
Size:	4.3"Hx12.9"Wx9.1"D
Power requirements:	110–220V, 1.5 amps, 50–60 Hz
Weight:	17.7 lb.
Bar code input:	Keyboard; external bar code reader; file upload

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