LANDAUER®

# Environmental/Low Level Dosimetry—Accurate reporting to 0.1 mrem (1 µSv)

Landauer has developed a unique InLight® dosimeter rugged enough to withstand the rigors of outdoor usage and environmental extremes, and sensitive enough to provide accurate reporting to 0.1 mrem (1 µSv). Many organizations have measured in environmental and low-level exposure conditions with dosimeters known to be better suited for the needs of personnel monitoring. Now Landauer provides a significantly improved dosimeter designed for use in environmental and other low level applications.

Landauer's environmental/low level dosimetry service meets or exceeds the requirements of ANSI, NRC and HPS standards for environmental dosimetry. Laboratory and field testing validated the effectiveness of the highly sensitive aluminum oxide detectors ($Al_2O_3$:C) and found them to be superior for this purpose, with distinct advantages over other available materials.


## Design

The Environmental/Low Level dosimeter is for both indoor and outdoor use, and is designed to withstand extremes of temperature, humidity, precipitation, and other environmental conditions. InLight dosimeters are built on an assembly of a case component with copper and plastic filters along with a four-positioned aluminum oxide detector slide component. Both the case and slide are uniquely bar coded with serial numbers for chain of custody and sensitivity identification. The InLight dosimeter is sealed within a heavy-duty vinyl tamper resistant pouch that has multiple slots to permit several methods of attachment for easy deployment.

A minimum of two controls are provided per shipment free of charge. The first is for field deployment/retrieval used to measure exposure during shipment and placement/collection. The second is for transit used to measure exposure during shipment only. Dosimetry reports show gross and net dosage. Gross dosage includes the dosage to the controls. The deployment/retrieval control is used to calculate net exposure.

## Terms and Conditions

Dosimeters remain the property of Landauer. Charge for lost or damaged dosimeters is $18.00 per dosimeter. Credit will be applied if a lost badge is found and returned in good condition.

Terms and conditions as shown in the Radiation Dosimetry Rates effective October 1, 2006 (or later revised) apply.

## Technical Specifications

- Fully meets ANSI N545-1977, NRC Regulatory Guide 4.13, and HPS Draft Standard N13.29 for environmental dosimetry.
- Minimum Detectable Dose - nominally 0.1 mrem (1 µSv), reporting to tenths of a millirem ambient dose equivalent.
- Detection Capabilities:
  Photons (x and gamma rays) with energies above 15 keV: 0.1 mrem to 1000 rem (1 µSv to 10 Sv).
  Beta particles with energies greater than approximately 500 keV average energy: 20 mrem to 1000 rem (200 µSv to 10 Sv).

## Applications

- Environmental Monitoring—site characterization, site boundaries, off-site, compliance with administrative and regulatory requirements.
- Low Level Exposure Studies—area monitoring, shielding studies, special studies. Low minimum detectable dose permits shorter exposure period and faster study.
- Determining Exposure to Members of the Public—ensures compliance with current guidelines and the Code of Federal Regulations (10CFR20) that limits dose for non-occupationally exposed persons to 100 mrem annually.

## Order Form - Mail or Fax to: (708) 755-7016

**Pricing Effective December 1, 2007**

- 1 to 10 dosimeters per shipment - $45 per unit each shipment
- 11 and over dosimeters per shipment - $35 per unit each shipment

Prices are stated in US dollars.

Quantity _____ $ _____

Shipment will be: ☐ Onetime only ☐ Monthly for 12 months ☐ Quarterly for 4 Quarters

Company Name _____ Phone _____

Address _____

City _____ State _____ Zip _____

Method of Payment: ☐ Check enclosed in the amount of $ _____ ☐ Bill to P.O. Number _____

☐ Credit: Card Type ____ Visa ___ Mastercard Card No. _____ Expiration Date _____

Name on Card _____

Authorized Signature _____ Date _____

Print Name _____ Email _____