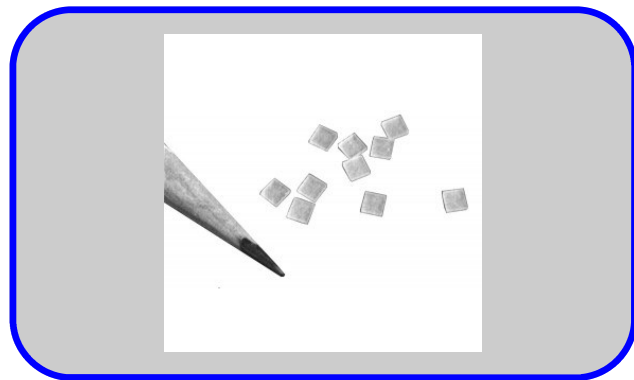


# TLD 100-H High Sensitivity LiF Detectors



TLD-100H material is approximately fifteen times more sensitive than standard LiF TLD-100 and due to its improved energy response it is ideal for low dose assessment work for low energy radiation and does not suffer from Supralinearity

## TLD 100-H HIGH SENSITIVITY LiF DETECTORS — Part #: SCP18835

### SPECIFICATIONS: TLD-100H

Square Chips dimensions are: 1/8" x 1/8" x 0.035" (3.2 mm x 3.2 mm x 0.89 mm)

Sensitivity at 662 keV relative to LiF:Mg,Ti, times/unit mass in solid form >15

Sensitivity to thermal neutrons, Relative to TLD-700 ≈1

TL emission spectrum (max), nm ≈400

Temperature of main glow peak, °C ≈230

Fading per year, with recommended preheat Negligible

Useful dose range 1μGy-10Gy

Background, μGy <1

Effective atomic number ≈8.2

Energy response (photons) 30keV/662 keV ≈1.06

Light induced fading at 150 lux for 1 min, % of signal <.05

Reproducibility at 1 cGy, % ≤3

Standard response is +/- 15% (+/- 2 sigma) for these sizes per batch unless otherwise noted ≤8

Re-use at low dose with less than 10% loss in sensitivity, times 50

Residual after total dose above 1 cGy; % of signal <.1%

### Recommended oven anneal cycle, after total dose above 1 cGy

Temperature, ° 240

Time, min 10- 40

### Recommended Reader Readout Cycle:

Preheat temperature, °C 150

Preheat time, sec 10-15

Heating rate, °C/sec 25

Maximum temperature 240-260

Readout time sec 10-15

Anneal temperature, °C if required 240-260

Anneal time, sec 20

### **Residual subsequent to a second re-read**

**Recommend 240 ° max for Manual Plonchet Readers and up to 260 ° for Hot Gas Readers**



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