DOSImetrics

The BeOSL Reader measures radiation exposure using a state-of-the-art technology, called optically stimulated luminescence (OSL). The detector material is beryllium oxide (BeO). BeO is more tissue equivalent than any other commercially used OSL material and therefore ideal for personal dosimetry. During the read out process the material is exposed to light from a light emitting diode (LED). This stimulus causes instantaneous light emission from the BeO detectors which is measured by photomultiplier tubes (PMT). For a given stimulus the amount of released light is directly proportional to the radiation dose to which the dosimeter was exposed.

BeOSL Reader

KEY FEATURES
- COMPLIANT TO IEC 62387
- EXTREMELY FAST READOUT
- MULTIPLE READOUTS
- EASY TO LEARN, USE, AND MAINTAIN
- NO NEED OF NITROGEN

BeOSL Reader

Our BeOSL Technology allows multiple dosimeter readouts (re-read) for dose result verification, dosimeter archiving or dose tracking.

The BeOSL Reader is the core piece of every BeOSL System. A well-engineered design, top class components, and manufacturing in Germany ensure millions of readouts without a noticeable down time.

The BeOSL Reader can be operated either manually or in a cluster in conjunction with a commercially available robot. It is designed to read 2- and 4-element BeOSL Dosimeters. Already the 2-element version measures Hp(10) and Hp(0,07) simultaneously within the limits of IEC 62387. The 4-element version offers valuable information about the radiation energy which provides a flattened energy response. The dose algorithms are linear and not based on distinction of cases.

The BeOSL Reader is CE compliant. It is part of a dosimetry system that is PTB type tested (Physikalisch-Technische Bundesanstalt, Braunschweig, Germany) under reference number 23.52 11.01.

Unlike other systems, the BeOSL Reader automatically extracts the card with the detector elements from the dosimeter assembly and pushes it back after readout. Time-consuming and cost-intensive processes are eliminated from your read out process. Practically the detector elements are permanently protected against environmental influences. In manual operation the extremely short readout time allows an operator to process 90 dosimeters per hour or more.

The operational software - see separate data sheet for details - is extremely intuitive and more than easy to use. The software leads the operator through the entire process with on-screen messages that are supported by self-explanatory pictographs. The same software also controls the reader calibration and numerous quality management functions.

In the rare event of a failure our experts are able to access the BeOSL Reader via internet. Access is subject to customer's permission. The equipment can be remotely checked, monitored and serviced. Fault identification and correction is as easy as it was never before!

BeOSL Technology is used by leading dosimetry services around the world!

Technical Specifications

Dosimeter identification: Internal bar code reader (Code 128 C), internal RFID reader on request

Measurement range (Dose): 0,05 mSv - 10 Sv

Measurement range (Energy, Angle): 16 keV - 7 MeV 0° - ±60°

Repeatability: σ < 3% for 1 mSv of Cs-137

Throughput: 90/hour in manual operation

Size:
Width: 20,5 cm / 8,1"
Height without optional handle: 20,6 cm / 8,1"
Length, drawer closed: 47,9 cm / 18,9"
Length, drawer open: 57,5 cm / 22,6"

Weight: 18,6 kg, 41 lbl

Electrical Supply Data: 100 - 240 V, 50 - 60 Hz

Maximum nominal power: 30 VA @ 100 V, 40 VA @ 240 V

Fuse: 1 A, slow

PC Connectivity: 1.1 full speed (USB 2.0 compatible), USB type B

IP 41