



EXTDOSE OSL Dosimetry System

Quick and easy dose measurement by OSL Technology

Regulatory authorities (IAEA, ICRP, AAPM, EURATOM) recommends monitoring and measuring the doses exposed by those of working in the field of radiation. For this purpose, **Extdose OSL dosimetry system**, has smooth and stable design, was developed to measure personal radiation dose using the **Optically Stimulated Luminescence (OSL)** technique.

Extdose OSL dosimetry system technologically enhanced by using tissue equivalent **Beryllium-Oxide (BeO)** crystal for personal monitoring.

The Extdose OSL dosimeter is all purpose and made available for radiation workers for dose measurement of skin dose $H_p(0.07)$ and eye dose $H_p(3)$.

The International Commission on Radiological Protection (ICRP) remarks tracking the eye dose by reducing its permitted limits on their last researches. Annual dose limits of radiation workers are shown at the table as below.

Annual dose limits of radiation workers	
Equivalent dose for skin $H_p(0.07)$	500 mSv/year
Equivalent dose for eye $H_p(3)$	20 mSv/year

*As reference to the International Commission on Radiological Protection (ICRP)

BeO crystal provides biggest advantage is lower photon energy dependency through effective atomic number (perfect tissue equivalent).

Current **QUALITIES** of **BeO** become it an excellent chose in field of personal and environmental dosimetry applications. Also OSL System consist of high optic sensitivity, accurate dose measurement, portable size and advanced mechanical strength.

Extdose OSL Reader/Eraser;



Extdose OSL Dosimetry System content:

- Extdose OSL reader-eraser
- Computer
- Software
- Dosimeters and holders
- QC & QA sets

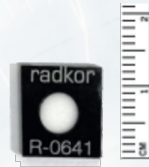
The special QC-QA sets are improved for radiation quality control tests according ISO IEC standarts (Radiation Performance Tests / ISO 14146).



Specifications of the Extdose OSL dosimetry system are given as;

System Technical Specifications

- Use of crystals that have Optically Stimulated Luminescence (OSL) features,
- Tissue equivalent BeO crystal, (effective atomic number $Z = 7.11$),
- Measuring all photons in 16 keV-6.7 MeV energies,
- Measuring in 0.05mSv-10 Sv doses,
- < 20 sec dosimeter reading time,
- Verification with re-reading (second read),
- Re-erasing and using several times,
- Give dose results in SI units (mSv).



*Extdose Dosimeter



*Holder of Extdose Dosimeter

The Extdose OSL Dosimetry system was special designed with the intent of availability measurement light protective holders (ring, wrist, eye).

The Extdose OSL dosimetry system provides proficiency tests;

- ISO/IEC 62387:2012 standart
- ISO/IEC 61000:2019 standart
- ISO/IEC 60950:2019 standart
- CE

Usage steps of the specially developed Extdose OSL dosimetry system;

- performing daily quality test automatically
- measuring dosimeters into the reader
- erasing dosimeters into the eraser
- doing verification process as second readout
- saving data

The RADKOR Quality system provides proficiency tests;

- ISO 9001:2015
- ISO/IEC 17025:2017

(For irradiation and calibration laboratories)