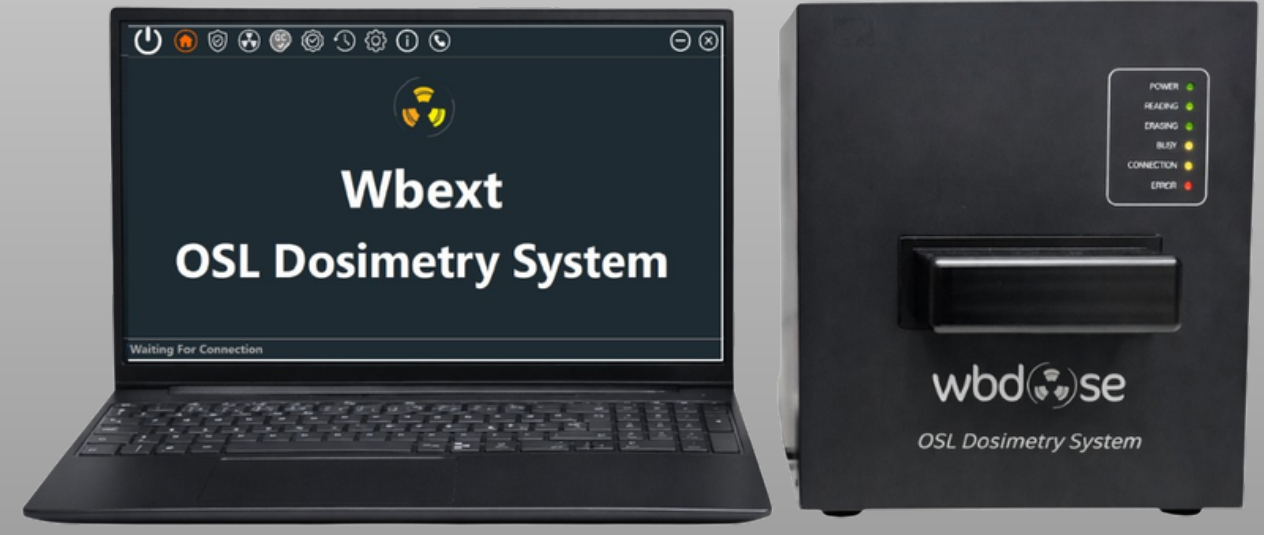


WBEXT OSL DOSIMETRY SYSTEM



The **WBEXT OSL Dosimetry System** has been developed to perform measurements of extremity and eye lens dosimeters using Optically Stimulated Luminescence (OSL) technology. The system consists of passive dosimeters, the WBDose OSL Reader/Eraser device, and dedicated software modules. The main component of the system, the WBDose OSL Reader/Eraser, is designed to support extremity (ring, wrist) and eye lens dosimeter measurements through the WBEXT adapter, which can be placed inside its drawer.

When used in integration with the WBDose OSL Reader/Eraser, the WBEXT Adapter enables both reading and erasing operations of passive extremity (ring, wrist) and eye lens dosimeters on the same device. This feature enhances the modularity and functionality of the system by eliminating the need for two separate devices.

The **QC and QA systems** have been developed in accordance with the ISO/IEC 14146 standard to perform the inspection, verification, and calibration procedures of the WBDose Reader/Eraser device.

Extremity (ring, wrist) and eye lens dosimeters are designed for the measurement of skin dose $H_p(0.07)$ and eye lens dose $H_p(3)$. In this system, Beryllium Oxide (BeO) is used as the detector material due to its tissue-equivalent characteristics.

Beryllium Oxide (BeO) enables reliable and accurate dose measurements in low-energy radiation fields thanks to its high energy response accuracy, low energy dependence, and wide measurement range.



APPLICATION AREAS

- Nuclear Medicine (radiopharmaceutical preparation and administration procedures)
- Radiology (fluoroscopy and angiography applications)
- Industrial applications requiring dose monitoring

WBEXT OSL Dosimetry System Software Features

- Dosimeter Preparation/Readout Mode
- QC/QA Mode
- User Settings
- Dosimeter History (Preparation/Readout Data)
- User Manual
- Contact Information

TECHNICAL SPECIFICATIONS

Detector:	Beryllium Oxide (BeO) crystal ($Z_{eff} = 7.11$)
Device:	Reader and Eraser in a single device
Radiation Type:	Foton (Gama ve X-Işını), Beta
Dose Measurement Range:	0.05 mSv – 10.0 Sv
Dose Equivalent:	$H_p(0.07)$, $H_p(3)$
Energy Range:	16 keV – 6.7 MeV
Detector Structure:	Reusable
Reading Time:	≤ 2 s (low dose), ≤ 20 s (high dose)
Operating Temperature:	From -10 °C to $+40$ °C
Power Input:	USB-B
Protection Class	IP 41
Weight:	19.1 kg
Dimensions:	Drawer Open: 205 × 640 × 255 mm (W × D × H) Drawer Closed: 205 × 501 × 255 mm (W × D × H)

Quality Standards

- ISO 9001:2015
- ISO/IEC 17025:2017
(Irradiation and calibration laboratories)

Proficiency Tests

- IEC 62387
- ISO 14146
- IEC 61000
- IEC 60950