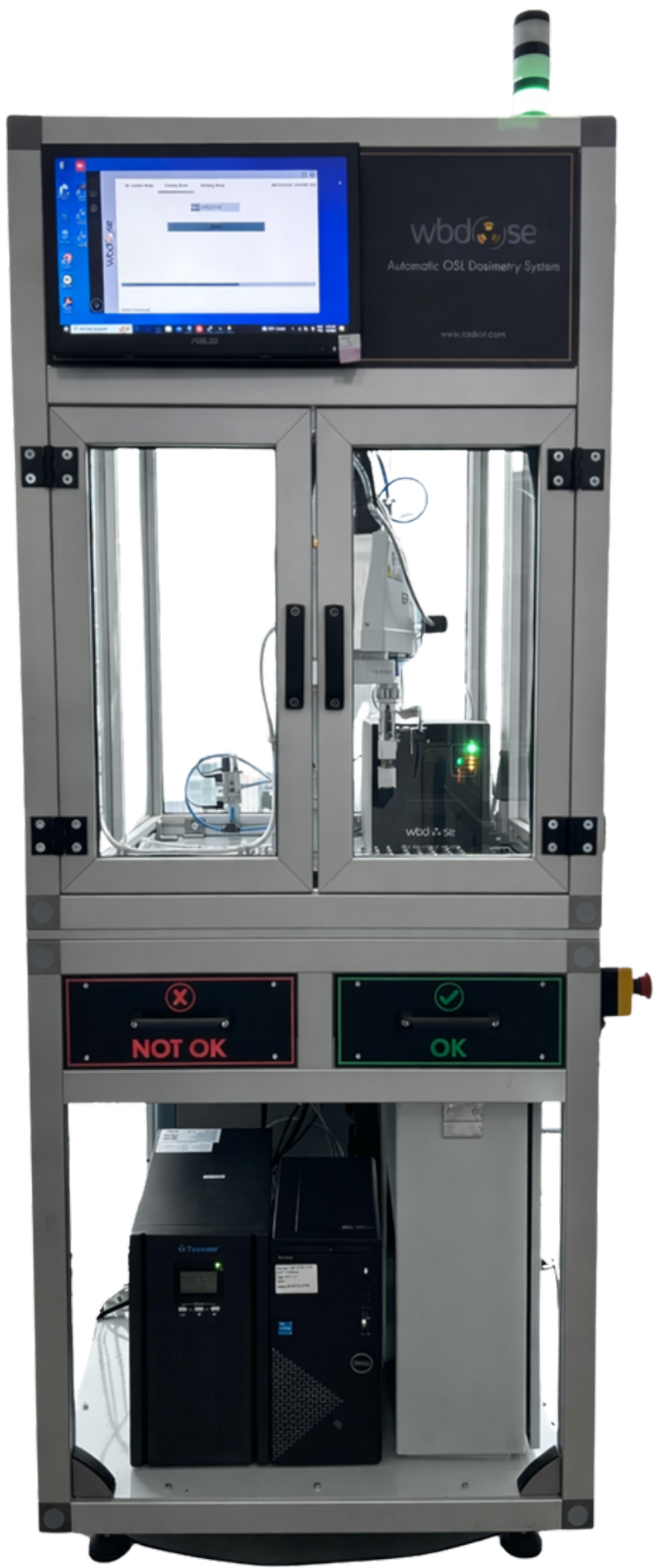


WBDOSE AUTOMATIC OSL DOSIMETRY SYSTEM



The **WBDOSE Automatic OSL Dosimetry System** has been developed to perform fully automated measurements of whole-body and environmental dosimeters using Optically Stimulated Luminescence (OSL) technology. The system consists of passive dosimeters, the WBDOSE OSL Reader/Eraser device, a robotic arm, and dedicated control automation software modules. Thanks to its fully automated structure, the system performs the readout and erasing processes of dosimeters in a short time and with high throughput, without the need for operator intervention. The WBDOSE Automatic OSL Dosimetry System is fully compliant with ISO/IEC standards (IEC 62387-1 and ISO 14146).

TEKNİK ÖZELLİKLER	
Detector	Beryllium Oxide (BeO) crystal ($Z_{eff} = 7.11$)
Device	Reader and Eraser in a single device
Radiation Type	Photon (Gamma and X-ray), Beta
Dose Measurement Range	0.05 mSv – 10.0 Sv
Dose Equivalent	Hp (10), Hp (0.07), H*10
Energy Range	16 keV – 6.7 MeV
Detector Structure	Reusable
Reading Time	≤ 2 s (low dose), ≤ 20 s (high dose)
Operating Temperature	-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)

Proficiency Tests

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

Quality Standards

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

(Irradiation and calibration laboratories)

WBDOSE OSL dosimeters are designed for the measurement of whole-body dose Hp(10), skin dose Hp(0.07), and *ambient dose equivalent H(10)*. 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.

WBDOSE Automatic OSL Dosimetry System Components

- Robotic Arm and WBDOSE OSL Reader/Annealer Device
- Magazine (250–1000 dosimeters capacity)
- Power Unit
- Safety Control Unit
- Vacuum Generator, Vacuum Control Unit, and Vacuum Sensor
- Monitor (for controlling the robot and the WBDOSE Automatic OSL Dosimetry System)
- Emergency Response System

WBDOSE OSL Dosimetry System Software Features

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

Application Areas

- Nuclear facilities and nuclear power plants
- Medical radiology and nuclear medicine departments
- Medical isotope production facilities
- Industrial applications requiring dose monitoring