

# ONYX® OSL RING DOSIMETER



Adapted to our OSLR dosimeter reader

The ONYX dosimeter is a passive ring that measures X-rays, gamma rays and beta radiation. The MP7 OSL Sensor can be easily annealed for immediate and long-term reuse.



Ring



MP7 OSL sensor



Cup

## UNIQUE COMFORT AND HYGIENE

- Fits the finger without pinching or deforming
- Smooth surface allows quick on/off of surgical gloves and is easy to clean
- Laser-engraved details prevents information from washing off

## DESIGNED FOR DOSIMETRY LABS

*Functional design minimizes your set-up time*

- Easy assembly
- Clip-on parts
- Reusable
- Holder and MP7 OSL Sensor tracability with 2D barcode

# OSLR



# OSLR COMPATIBLE

# OSL ring dosimeter

## Adjustable and hygienic ring

### PRACTICAL COMFORT COMBINES WITH ACCURACY

**This comfortable ring lets the exposed workers focus on your their work, not on their dosimeter**

The ONYX dosimeter ring is flexible, comfortably fitting the finger. It is available in two sizes to ensure comfort for everyone and in three colours for easier wear period identification.

The ring is light, easy to wear, and thin enough not to hinder your movements.

The ONYX ring has rounded edges ensuring comfort and eliminating the risk of tearing gloves or slipping off when gloves are removed. ONYX stands up to everyday wear and tear, even when washing hands. It cannot lose its shape.

#### Accuracy you can count on

The MP7 OSL sensor sensitivity is stable. It is not affected by repeated bleaching. The MP7 sensor is extremely robust and allows repetitive and long term use.



3 colours available for wear period identification

### GENERAL CHARACTERISTICS

<b>Energy range</b>	
<b>Photons</b>	± 60° incidence angle from 15 keV to 1.33 MeV
<b>Beta</b>	± 60° incidence angle ( $E_{\text{mean}} = 0.8 \text{ MeV}$ ; $^{90}\text{Sr}/^{90}\text{Y}$ )

<b>Dose range</b>	100 µSv to 10 Sv
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<b>Types of radiation measured</b>	Photons (X- and gamma rays) and beta
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<b>Detector</b>	Single MP7 OSL sensor
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<b>Sensor material</b>	Aluminium oxide doped with carbone, $\text{Al}_2\text{O}_3:\text{C}$
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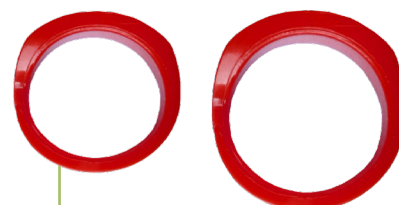
<b>Body and lens material</b>	Polyethylene
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<b>Weight</b>	M	1,05 g
	L	1,30 g

<b>Finger size</b>		Minimum	Medium	Maximum
<b>Circumference in mm</b>	M	44	47	63
	L	53	57	69

Size M

Size L



Two sizes to match worker finger shape

■ Performance assessment against NF EN 62387 (2016).

### MEASUREMENT METHOD

This ring uses a novel tissue equivalent MP7 OSL sensor. The OSL material is made from Aluminium oxide doped with Carbon ( $\text{Al}_2\text{O}_3:\text{C}$ ).

The dose is measured using the OSLR readers.

The read out process uses a LED (Light Emitting Diode) to stimulate the detectors. The light emitted by the OSL material is measured by a photomultiplier tube (PMT) using a high sensitivity photon counting system. The amount of light released during optical stimulation is directly proportional to the radiation dose.



MP7 OSL sensor