

VISION[®] FOR YOUR EYES ONLY!



The International Commission on Radiological Protection (ICRP) recommends lowering lens of eye annual limit down to 20 mSv. This value has been included in the European directive 2013/59. In 2018, the directive is implemented in regulatory texts in most European countries.



flexible and light weight



Compact



Multiple ways to wear it

A DOSIMETER DESIGNED FOR YOU

- Worker monitoring and workstation study
- Multiple ways to wear it with or without PPE
- Adaptable to any support
- Clear, complete and nonerasable identification
- Individual dose equivalent $H_p(3)$
- Easy disinfection by immersion or brushing

Select an accredited service!

The VISION is part of our COFRAC accreditation scope.

Accreditation in accordance with the recognised international standard NF EN ISO/IEC 17025 demonstrates the technical competence of the laboratory for a defined scope and the proper operation in this laboratory of an appropriate management system.

VISION® monitoring your lens in discreet way

Ergonomic lens dosimeter without blocking your field of vision

SIMPLE AND PRACTICAL TO USE

Compact and flexible

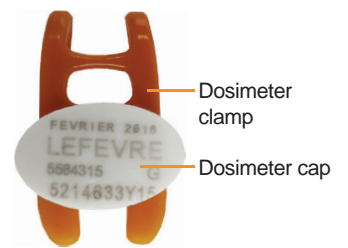
Ergonomic, light and small, VISION dosimeter does not affect participant's activity and view. It is made from a plastic resistant to torsion. Flexible, it can be carried closer to the eye.

Flexible design

VISION is adapted to workstation studies or worker monitoring. It is adaptable, you can configure it for measurements behind or in front of the PPE (Personal Protective Equipment).

Offered in two sizes, VISION is adapted to all supports: sealed glasses, visors, mob caps... Self-gripping pads ensure a maximum fit.

The cap can be oriented from vertical to horizontal position to fit your morphology and your PPE.



WITH OR WITHOUT PPE, VISION FITS YOUR VIEW



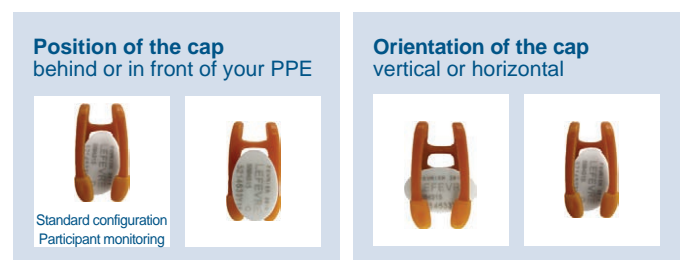
A MULTITUDE OF WAYS TO WEAR IT

You receive VISION standard configuration.

Following your use (participant monitoring, workstation studies, wearing of PPE, ...) you can adapt on the clamp:

- the position of the cap, in front or behind your PPE,
- the orientation of the cap, lateral or horizontal.

Once the position and orientation defined, clip the cap on the clamp.



COMPLETE AND NONERASABLE IDENTIFICATION

With the same color code than IPLUS® and MONORING®, VISION offers a clear identification of the worker and period of wear.

Particles of titanium oxide are injected into the polyethylene cap. They are revealed by laser for a permanent marking. Thus, it resists brushing and all disinfection procedures.



* Warning: clip and unclip the cap more than once or twice could damage it.



EASY TO DISINFECT

VISION dosimeter clamp is made with Polyamide 6 and SEBS* molding. TLD chip is sealed in a linear low density polyethylene cap. Thus, VISION is easy to clean and disinfect.

Maximum hygiene

Simple disinfection protocols are available on request.

We do not recommend heat sterilization whose temperature exceeds 40 °C.

Disinfection Box

LANDAUER provides you with a Disinfection Box that can accommodate a MONORING® dosimeter and a VISION dosimeter.

As part of its disinfection protocol, LANDAUER advocates the use of the Disinfection Box for decontamination bath or storage.



DISINFECTION PROTOCOL

Access helpful resources to keep informed on www.landauer.fr

TECHNICAL PERFORMANCE

Types of radiation measured	Result of the VISION dosimeter	
	Photons	Beta or electrons
Personal dose equivalent	$H_p(3)$	
Dose range	from 0.1 mSv to 10 Sv	
Minimum reporting value	0.1 mSv	
Linearity response	from 0.10 mSv to 10 Sv Standard deviation <9 %	
Angular and energy response	$\pm 60^\circ$ from 24 keV to 6 MeV	$\pm 45^\circ$; 0.8 MeV (E_{mean})

ENVIRONMENTAL RESISTANCE CHARACTERISTICS

Operating and storage temperature	No effect on detector dose up to 40 °C
Hygrometry	No effect on detector up to 90 % humidity
Exposure to light	No effect on detector

* SEBS: copolymer polystyrene-b-poly (ethylene-butylene) -b-polystyrene

Lithium fluoride-based dots are sensitive to neutrons. A personal dose equivalent $H_p(10) = 1$ mSv from thermal neutrons induces a personal dose equivalent $H_p(3)$ of 10 mSv. A personal dose equivalent $H_p(10) = 1$ mSv with a source of D_2O moderated ^{252}Cf induces a personal dose equivalent $H_p(3)$ of 0.6 mSv.

GENERAL CHARACTERISTICS

Manufacturer Dosimeter designed and manufactured in France by LANDAUER

Types of radiation measured Photons (X- and gamma rays) and beta

Detector Single element, one TLD chip

Chip material LiF:Mg,Ti (lithium fluoride doped with magnesium and titanium)

Clamp material Polyamide 6 (SEBS molding)

Cap material Polyethylene

Mechanical properties

Weight	M: 720 mg
	L: 770 mg
Two sizes	M: 4.6 mm
	L: 7.6 mm



MEASUREMENT METHOD

VISION dosimeter is composed of a polyamide clamp on which is clipped a cap. It contains a lithium fluoride TLD chip. This detector is placed inside a cavity on the cap which is sealed by ultrasound. The information is marked on the cap by laser, making it nonerasable.

The TLD (ThermoLuminescent Dosimeter) technology works on the basis of detector heating. When the chip is heated, visible light is emitted in proportion to the exposed dose.



COMPLIANCE WITH STANDARDS

EN 62387:2016 - Passive integrating dosimetry systems for personal and environmental monitoring.

QUALIFICATIONS OF OUR LABORATORY

- Participation in national and international inter-comparisons
- Dosimeter characterisation carried out by an independent reference laboratory: Henri Becquerel French National Laboratory (LNHB) - CEA
- Quality management system under NF EN ISO/IEC 17025