



RÉPUBLIQUE
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IRSN [DOSIMÉTRIE

INSTITUT DE RADIOPROTECTION
ET DE SÛRETÉ NUCLÉAIRE



THE EYE LENS DOSIMETER



DOSIRIS, THE ESSENTIAL SOLUTION TO ESTIMATE
THE DOSE EQUIVALENT $H_p(3)$ IN YOUR SPECIAL
WORKING CONDITIONS.

Some professional activities are identified «at risk» regarding the exposure of eye lens to ionising radiation. These specific situations require the implementation of an appropriate radiation monitoring because the indication provided by the chest dosimeter is not sufficient, and the wearing of a eye dosimeter is required.

DOSIRIS, the eye dosimeter developed by IRSN, is the solution to achieve this monitoring in the best conditions.

ERGONOMICS - TIPS FOR USING

- ➔ DOSIRIS can be worn **either left or right**. You place it on the side of the most exposed eye to radiations.
- ➔ The headband and its articulated arm allow to **ideally place DOSIRIS** to obtain **the best possible dosimetry** with an unrivaled wearing comfort.
- ➔ The **optimum position** is obtained when **the detection part** (white cap) is **placed as close to the eye corner**, against the temple and under the glasses, visors or protective mask.



> Clear identification of the wearer with the label resistant to decontamination baths.



> DOSIRIS is modular, the last axis is detachable for use without headband (inside masks for example).

THE BENEFITS OF DOSIRIS

- ⊕ Lightweight, ergonomic ; adapted to all head morphologies.
- ⊕ Adjustable in 3 axes, it can be ideally placed close to the eye and in contact with skin.
- ⊕ It can be worn behind glasses or protective mask.
- ⊕ Completely waterproof, it can be cold decontaminated.
- ⊕ The identification of the wearer appears clearly on the label.

WORKPLACE STUDY

DOSIRIS

IS AVAILABLE FOR **WORKPLACE STUDY** OR FOR **OCCUPATIONAL DOSIMETRY, CONTACT US !**

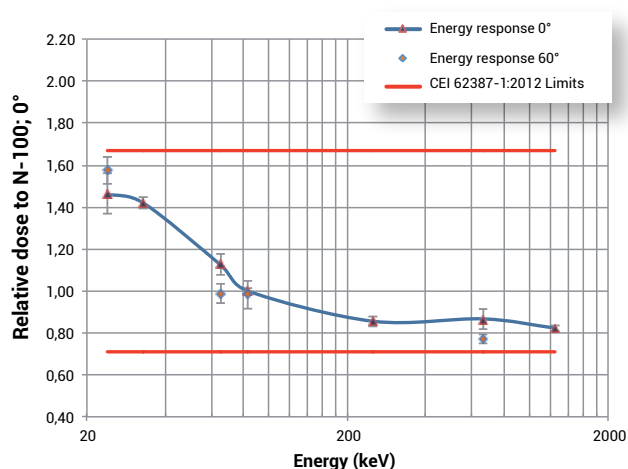


PRINCIPLE OF DETECTION AND PERFORMANCE OF DOSIRIS

- ⊕ DOSIRIS uses a Thermo Luminescence Dosimeter (TLD).
- ⊕ The detector is a TLD (7LiF : Mg,Ti) integrated in a 3 mm thick polypropylene cap.
- ⊕ The system is calibrated to measure operational quantity for individual monitoring Hp(3).
- ⊕ It complies with the requirements of IEC 62387-1: 2012 between 20 keV and 1.3 MeV.
- ⊕ The identification of each detector is provided by a circular bar code that ensures traceability.



Hp(3) - Angular and energy response of DOSIRIS eye lens dosimeter.



Energy	Energy range ^(A)	Dose equivalent range
Photons (X and γ)	De 20 keV à 1,3 MeV	From 100 μ Sv to 50 Sv
Beta	>700 keV	Form 100 μ Sv to 50 Sv

(A) - **IMPORTANT:** These values are not operating limits, but satisfy the minimum and maximum energy available in the reference facilities which allowed to perform the tests.