NANODOT®

Single point radiation assessments

The nanoDot dosimeter is for use in single point radiation assessments based on the OSL (Optically Stimulated Luminescence) technology. It is designed to be read out using a microSTAR® ii reader.

nanoDot

nanoDot opened

nanoDot in microStar adaptor

DOT FOR AN IMMEDIATE DOSE ASSESSMENT

- **All OSL advantages**
  The nanoDot is not sensitive to heat or moisture. It can be reread many times. In addition, it is radiolucent and stable to read after 10 minutes following irradiation. It is not angular dependent.
- **Known and marked sensitivity**
  The sensitivity is indicated by a serial number.
- **Radiolucent dot**
  The nanoDot can't be seen on X-rays.
- **Hygienic**
  nanoDots are sealed in plastic pouches which can be cold sterilized without compromising the integrity of the dosimeter.

microSTAR®ii - portable reader for in situ reading

The microSTAR ii reader can be used anywhere to make immediate and accurate radiation dose assessments.

More information on demand.

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nanoDot

OVERVIEW

The nanoDot is a detector wich allows you to get an immediat dose assesment. It consists of just one 4 mm diameter dot of aluminium oxide chip doped with carbon (Al_2O_3:C). Each detector is identified on the front by a unique alphanumeric code.

When it is read, the dosimeter should be removed from its plastic pouch and inserted in an adaptor.

MEASUREMENT METHOD

During analysis, the Al_2O_3:C strip is stimulated with selected frequencies of light causing it to glow in proportion to the amount of radiation exposure and the intensity of the stimulating light source.

The optical stimulation keeps more than 99% of the information in the detector making possible multiple readings and the archiving of the dosimeter for later investigation.

Note: the aluminium oxide, Al_2O_3:C, used in our dosimeters is produced by LANDAUER®.

nanoDot in plastic pouch

TECHNICAL PERFORMANCE

The nanoDot analysis are based on the adjustment and calibration of the equipment carried out by you.

Type of radiation	Measurement range	Minimum value	Maximum value
Photons (X- and gamma rays)	From 15 keV to 25 MeV	0.05 mGy*	13 Gy*
Beta	> 250 keV	0.05 mGy*	13 Gy*

** Results expressed in absorbed dose*

TECHNICAL SPECIFICATIONS

microSTAR ii reader

Type of radiation measured	Photons (X- and gamma rays) et Beta
Detector	OSL (Optically Stimulated Luminescence)
Material	Aluminium oxide doped with carbon, Al_2O_3:C
Dimensions	Dot: 10 mm x 10 mm Thickness: 2 mm Package: 45 mm x 40 mm

APPLICATIONS

- Workstation studies
- Patient dosimetry
- PCB dosimetry

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