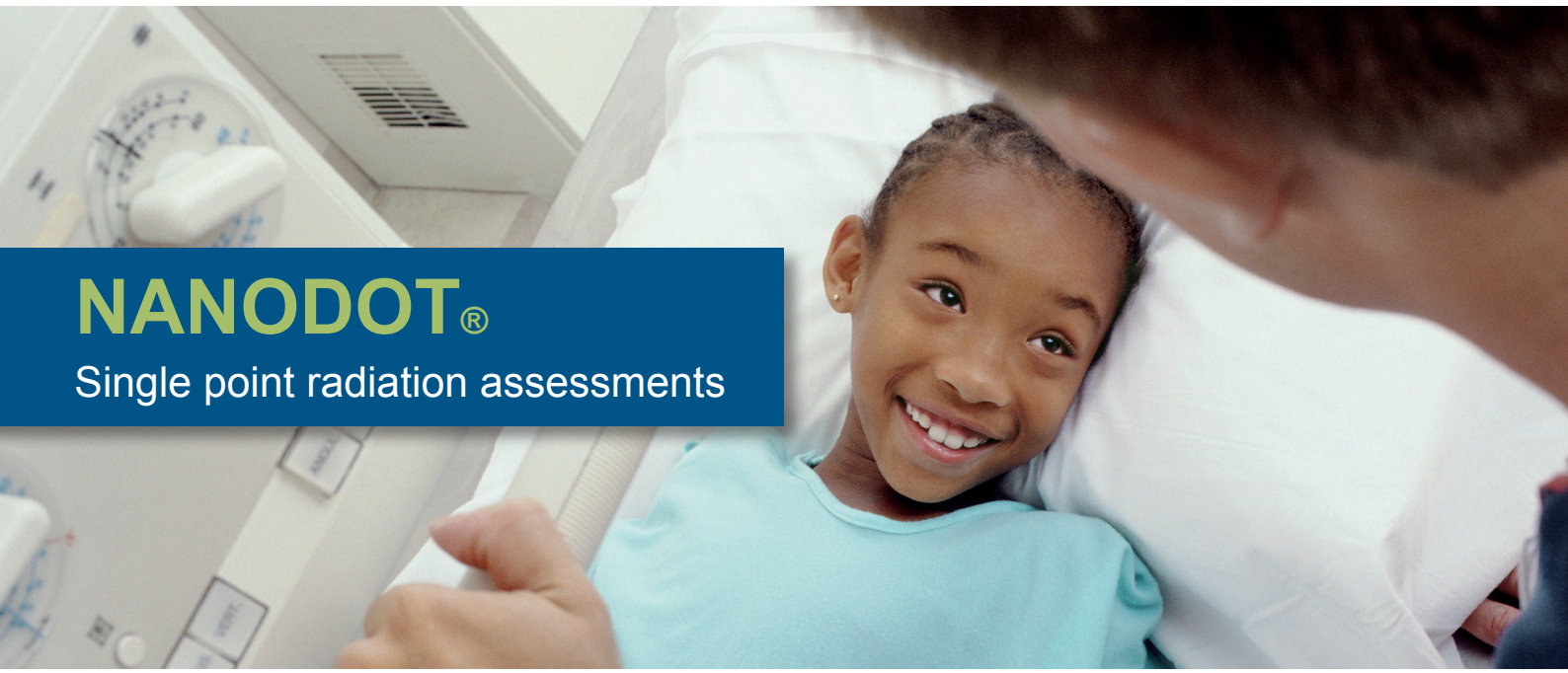


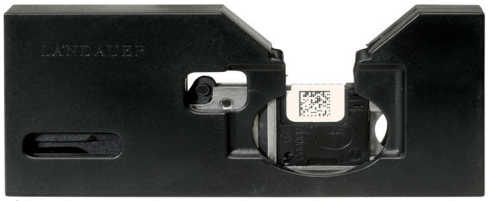
NANODOT®

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® 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 - portable reader for in situ reading

The microStar reader can be used anywhere to make immediate and accurate radiation dose assessments. It can read nanoDot and IPLUS dosimeters.

More information on demand.

LANDAUER | +44 (0) 1865 373008 | admin@landauer.co.uk | www.landauer.co.uk

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 pwder doped with carbon, Al_2O_3:C. Each detector id identified on the front by a unique alphanumeric code.

When it is read, the dosimeter must be removed from its plastic pouch and inserted in an adaptor. Consisting of just one OSL dot, the measure does not allow differentiation between X- and gamma rays, and beta. Unlike the IPLUS dosimeter, you need to know in advance the energy type being measured

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 carefully 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*	10 Gy*
Beta	> 250 keV	0.05 mGy*	10 Gy*

** Results expressed in absorbed dose*


microStar reader

TECHNICAL SPECIFICATIONS

Type of radiation measured	X- and gamma rays, 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
- Radiology emergency
- Patient dosimetry*

**The microStar dosimetry reader is classified as a Radiologic quality Assurance Instrument, and should not be used to adjust the radiation dose delivered to a patient.*