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GEX B3 Radiochromic Film Dosimeter

Our proprietary B3 radiochromic film dosimeter is a superior product choice for most industrial gamma, e-beam, and x-ray radiation applications.





One dosimeter. Many functions!

Key Benefits

- Use one product for all your dosimetry activities - routine monitoring, testing, qualification and dose mapping.
- Shorter lead times. GEX B3 is a standard, off-the-shelf product.
- Manage and calibrate one dosimeter batch
- Long-term cost savings

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Automatic Dose Traceability

Using the GEX B3 dosimeter, you can capture each dosimeter's absorbance measurement and ID at the same time, with a simple click of the 'Measure' button.

The GEX B3 is designed to fulfill current industry expections for data integrity for measurement systems. For each dosimeter measurement, the critical information can be automatically linked and recorded, providing data traceabiltiy and reducing risk.

B3 Dosimetry Modernized!

The GEX B3 combines the features of our legacy B3 products into one dosimeter. It combines the small, robust 'WINdose' dosimeter with the individually barcoded 'DoseStix' dosimeter.

The product design minimizes the possibility of dents, deformation, fingerprints, and punctures to the film, improving on previous B3 products. (Use as directed.)

The GEX B3 is a B3 radiochromic film dosimeter, with proven reliability and used in commercial industrial applications worldwide since 1991.

Features & Benefits

- Increases data integrity
- Reduce risk of operator error
- Each dosimeter has a unique dosimeter ID barcode (dosimeter batch ID + unique number)
- Visible dosimeter in UV/RH protective clear-side pouch
- Versatile size for multiple uses
- Flexible, thin film
- High-quality, consistent dose measurements
- Robust design made for high volume processes
- Easy to handle

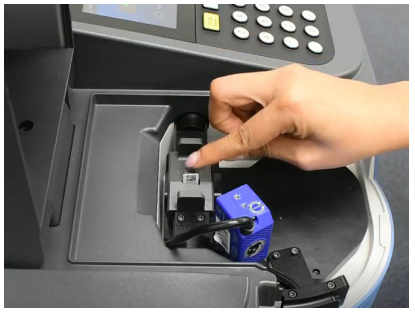
Place.

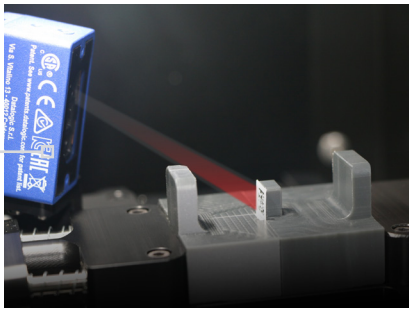
Click.

Scan & Measure.

Dose!







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GEX B3 Dosimeter Product Details*

*Overview of product details. See B3 Film Dosimeter Product Specifications Sheet GEX Doc #100-101.

Influence Quantities	Temperature, UV exposure, and %RH
Dosimeter batch calibration	Recommend calibrate under conditions approximating actual usage. For guidance, see: ISO/ASTM 51261 and NPL Report CIRM 29.
Measurement	Remove dosimeter from pouch. Measure Absorbance (A) value in spectrophotometer. Calculate the Response (R) value, R = A/t. Calculate absorbed dose (D) value as R = f(Dose).
Calculating absorbed dose	Follow guidance in ISO/ASTM 51261 Standard Practice for Calibration of Routine Dosimetry Systems for Radiation Processing ISO/ASTM 51275 Standard Practice for Use of a Radiochromic Film Dosimetry System
Spatial Resolution in Ebeam	All dosimeters report dose to the dosimeter not to the product. B3 dosimeters are the ideal way to infer dose to the product in E-beam because you can place the dosimeter directly on the product surface.
Design to meet industry standards and guidance	ISO 10012 Measurement Systems ISO 11137 part 1 & 3. Sterilization of health care products ISO/ASTM 52628 Standard Practice for Dosimetry in Radiation Processing ISO/ASTM 51261 Standard Practice for Calibration of Routine Dosimetry Systems for Radiation Processing ISO/ASTM 51275 Standard Practice for Use of a Radiochromic Film Dosimetry System cGMP and FDA 21 CFR Part 11/EU Annex 11

Dosimeter type	Radiochromic thin film. Polyvinyl butyral (PVB) polymer film with proprietary B3 dye
Dose range	approx. 1.0 kGy to 160 kGy
Absorbed dose rates	> 0.01 Gy/s
Photon energy range	approximately 0.1 to 50 MeV
Electron energy range	approximately 70 KeV to 50 MeV
Type of radiation sources	Gamma, X-ray and Electron beam sources, including low energy electron sources of 80 keV or lower
Applications	Routine monitoring, dose mapping, IQ/OQ/PQ, testing, research
Measurement instrument	Spectrophotometer
Spectral Bandwidth (SBW)	4nm or greater. Best performance with 8nm or better. Large SBW is required to reduce variability from optical interference fringing
Wavelength Setting	The absorbance wavelength peak of B3 film is 552 nm
Photometric Range	Approx. 0.035 to 1.700 A
B3 film thickness	Thin film nominal thickness (t) approx. 0.0180mm. Uniform thickness value assigned to each B3 dosimeter batch.
GEX B3 dosimeter dimensions	10mm x 20mm
GEX B3 pouch dimensions	approx. 38.1mm x 57.9mm
Pouch	Protects dosimeter from UV and Relative Humidity (RH) in environment. Dosimeter is visible through clear side of pouch.
Shelf-life	GEX B3 dosimeter product in pouch has a shelf life of 5 years Expiration date printed on product box
Pre-irradiation signal stability	Stable with controlled storage conditions.
Post Irradiation signal tability	Stable with heat treatment after irradiation and controlled storage conditions

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