



GEX B3 Radiochromic Film Dosimeter

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



Practical. Easy-to-use. High-quality. Consistent.



Key Benefits

- Versatile, flexible thin radiochromic film.
- Fast, simple measurements.
- Unique dosimeter ID and protective pouch.
- Ideal for routine monitoring, testing, qualification, and dose mapping.
- Easily measure dose to product.
- GEX has a certified ISO 9001:2015 Quality Management System



Why GEX B3?

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

Key Features

- ✓ Robust design
- ✓ UV and moisture barrier packaging
- ✓ Produced in large batch sizes and production volumes
- ✓ Managed, sustainable supply chain
- ✓ Easy to handle
- ✓ Encoded and printed with unique dosimeter batch and ID number
- ✓ Shelf stable signal before irradiation
- ✓ Post-irradiation long-term stability



B3 Dosimetry Modernized!

The GEX B3 is a B3 radiochromic film dosimeter, with proven reliability and used in commercial industrial applications worldwide since 1999.

Merging the original WINdose and the individually barcoded DoseStix, the GEX B3 combines the best features of our legacy products.

Improvements in design, manufacturing, and materials make the GEX B3 more robust and advantageous for a wide range of users.

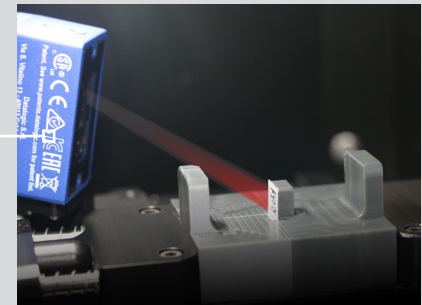


Get the full benefits using our DoseControl® System

Capture GEX B3 absorbance and ID at the same time!



Place.
Click.
Measure.
Dose!



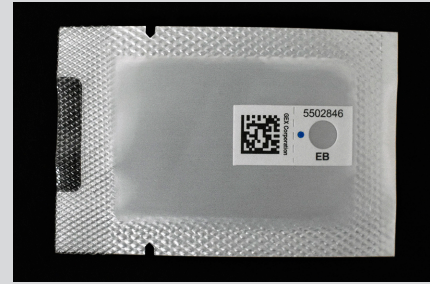


GEX CORPORATION

GEX B3 Dosimeter Product Overview

View/Download product specifications from <https://library.gexcorp.com>

Dosimeter type	Radiochromic film
Materials	Polyvinyl butyral (PVB) polymer film with Risø proprietary B3 dye, paper, ink
Dose range	1.0 kGy to 160 kGy
Absorbed dose rates	> 0.01 Gy/s
Photon energy range	0.1 to 50 MeV
Electron energy range	70 KeV to 50 MeV
Type of radiation sources	Gamma, X-ray, and Electron beam
Applications	Process monitoring, dose mapping, research and development
Spatial resolution	Dependent on the spectrophotometer's light beam spot size at the sample. Approximately 2.5mm diameter
Aids in compliance with standards and directives	ISO 9001 and ISO 13485 Quality Management Systems ISO 10012 Measurement Management Systems ISO 11137 Part 1 & 3. Sterilization of Health Care Products - Radiation ISO/ASTM 51275 Standard Practice for Use of a Radiochromic Film Dosimetry System FDA 21 CFR Part 11 and cGMP EU Annex 11

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	0.035 to 1.700 A
B3 film thickness	Nominal thickness (t) 0.0180mm
Dosimeter dimensions	10mm x 20mm
Pouch dimensions	39mm x 58mm
Packaging	UV and Relative Humidity (RH). Tear-open pouch 
Shelf-life	5 years from the month of manufacture
Pre-irradiation signal stability	Stable with controlled storage conditions
Post-irradiation signal stability	Stable upon heat treatment after irradiation and controlled storage conditions
Calibration	Calibrate under conditions approximating actual usage. For guidance, see: NPL Report CIRM 29 and ASTM 51261 Standard Practice for Calibration of Routine Dosimetry Systems for Radiation Processing
Measurement	Remove dosimeter from pouch. Measure Absorbance (A) value in spectrophotometer. Calculate the Response (R) value, $R = A / t$