



B3106 10 INCH UNIFORMITY STRIP

Technical and Usage Information

Instructions for Use

Keep the B3106 package sealed until just prior to use so that the environmental conditions of the packaging are maintained. For consistent results using a scanned electron beam, always target the same dose of approximately 30 kGy. Mount the uniformity strips on an appropriate thickness of uniform absorber material such as Ethafoam.

When you are ready to irradiate the dose uniformity scan strip card, open the B3106 packages and remove the strips. Unfold the needed quantity of strips. Tape the strips together, (the strips are pre-cut to maintain equal gaps between dosimeters when joining strips) until the desired overall length is achieved. The standard distance between dosimeters is 1 inch. The 1-inch interval is appropriate for most scanned beam systems. Higher resolution may be obtained by overlapping and taping strips together at half-distance intervals or less.

NOTICE!

If dosimeters are not covered with absorber material, face dosimeter surfaces inward in direct contact with the uniform absorber material surface to reduce particulate buildup on the dosimeter surfaces and to prevent dosimeters from being damaged or dislodged during irradiation.

Scan Coverage Analysis Using B3106 Dosimeter Strips for Perpendicular and Horizontal Dose Uniformity Measurements:

Scan Width/Height - When validating the usable scan portion, the strip assembly should be longer than the expected scan width/height in order to determine the points where the scan uniformity falls away from the average. Orient the strip or assembly so that it is lined up perpendicular to the direction of travel through the electron beam (i.e. carrier/tote travel or down web). Tape the strip so that it is snug against its carrier material as it passes through the beam. Mark the orientation and order (1st, 2nd, etc.) of the strip(s) on at least one end to identify the proper order in which to measure the dosimeters for analysis. Perform a single-sided irradiation of the strip or assembly only.

Uniformity in the Direction of Travel - Strips can also be used in experiments to measure the uniformity of dose delivered in the direction of travel and the impact of planned and unplanned process interruptions.

Orient the strip or assembly so that it is lined up in the direction of travel through the electron beam (i.e. carrier/tote travel or down web). Tape the strip so that it is snug against its carrier material as it passes through the beam. Mark the orientation and order (1st, 2nd, etc.) of the strip(s) on at least one end to identify the proper order in which to measure the dosimeters for analysis. Perform a single-sided irradiation of the strip or assembly only.

Post Irradiation Handling

Minimize exposure to ultraviolet sources and follow a post-irradiation protocol as with all B3 dosimeter products.

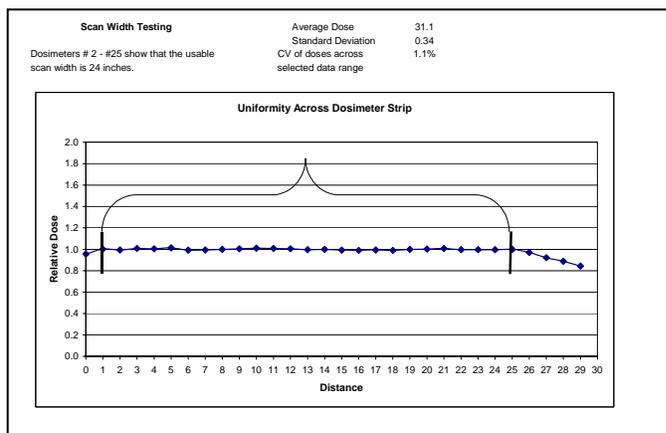
Measuring the Strip

Use our *WINdose for Excel* software program (S5100) to automate the dose measurement readout process with automated plotting of your results. For information, contact GEX Corporation.

References

ISO/ASTM 51649 - Standard for Dosimetry in an Electron Beam Facility for Radiation Processing at Energies Between 300 keV and 25MeV.

ISO/ASTM 51818 - Practice for Dosimetry in an Electron Beam Facility for Radiation Processing at Energies Between 80 and 300 keV



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