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Ashland introduces GafChromic™ EBT3+ Radiochromic Dosimetry Film

Improves dose measurement accuracy to better than 1 percent

WILMINGTON, Del. - Ashland Specialty Ingredients, a commercial unit of Ashland Inc. (NYSE: ASH), is introducing GafChromic EBT3+ dosimetry film now available for delivery.

This new offering is an enhanced version of GafChromic EBT3 film that has been conveniently formatted for application of the "One-Scan" protocol recently published in the Journal of Medical Physics¹. By combining measurement with calibration and eliminating many inter-scan variables, the "One-Scan" protocol improves dose measurement accuracy to better than 1 percent. Moreover, this protocol allows the user to obtain dose measurements within a few minutes of exposure. No more waiting overnight for results.

All these advantages, plus the inherent advantages of radiochromic film - high spatial resolution, water/tissue equivalence, minimal energy dependence and no angular dependence - make GafChromic EBT3+ film the ideal choice for patient-specific QA of treatment plans for IMRT, VMAT, SRS, etc.

GafChromic EBT3+ film is configured with an active layer between two, 125 µm matte polyester substrates, and is identical to GafChromic EBT3 film. In addition, sheets of GafChromic EBT3+ films are perforated to allow each piece to be separated into an 8 x 9.5-inch sheet and a matched 8 x 1.5-inch strip. The sheet is intended for exposure with the treatment plan, while the strip is for the exposure of a reference dose. With this arrangement, the reference and treatment films are in perfect correspondence. By scanning these films together with a strip of unexposed film (also included with each box of GafChromic EBT3+ film) and using FilmQAPro 3.0 film dosimetry software, all of the advantages of the "One-Scan" protocol are available.

FilmQAPro 3.0 software is designed specifically to take advantage of what is built into EBT3+ and other GafChromic films. By utilizing the multichannel dosimetry method², the software automatically corrects film and scanner artifacts; the user receives immediate feedback of the integrity of their results by employing consistency maps to display the coherence of the dose measurements in the three color channels. Multichannel dosimetry means the user gets three gamma maps, three DTA maps, three differential maps, three iso-dose maps, etc. -- three values showing measurement consistency - all for the price of one. Boxes of GafChromic EBT3+ film contain 20 8 x 11-inch films paired for separation into 8 x 9.5-inch sheets and matched 8 x 1.5-inch strips, plus an additional 10 8 x 1.5-inch films for use as calibration or reference strips.

1. "An efficient protocol for radiochromic film dosimetry combining calibration and measurement in a single scan," D. Lewis, A. Micke, X. Yu and M. F. Chan, *Medical Physics* 39(10) p6339-50, October 2012
2. "Multichannel film dosimetry with non-uniformity correction," Andre Micke, David F. Lewis and Xiang Yu, *Medical Physics*, 38(5), p 2323-34, May 2011.

About Ashland Specialty Ingredients

Ashland Specialty Ingredients is the No. 1 global producer of cellulose ethers and a global leader in vinyl pyrrolidones. It offers industry-leading products, technologies and resources for solving formulation and product-performance challenges. Using natural, synthetic and semisynthetic polymers derived from plant and seed extract, cellulose ethers and vinyl pyrrolidones, Specialty Ingredients offers comprehensive and innovative solutions for today's demanding consumer and industrial applications. Key customers include pharmaceutical companies; makers of personal care products, food and beverages, and cosmetics; manufacturers of paint, coatings and construction materials; and oilfield service companies. See ashland.com for more information.

About Ashland Inc.

In more than 100 countries, the people of Ashland Inc. (NYSE: ASH) provide the specialty chemicals, technologies and insights to help customers create new and improved products for today and sustainable solutions for tomorrow. Our chemistry is at work every day in a wide variety of markets and applications, including architectural coatings, automotive, construction, energy, food and beverage, personal care, pharmaceutical, tissue and towel, and water treatment. Visit ashland.com to see the innovations we offer through our four commercial units - Ashland Specialty Ingredients, Ashland Water Technologies, Ashland Performance Materials and Ashland Consumer Markets.

FOR FURTHER INFORMATION:

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