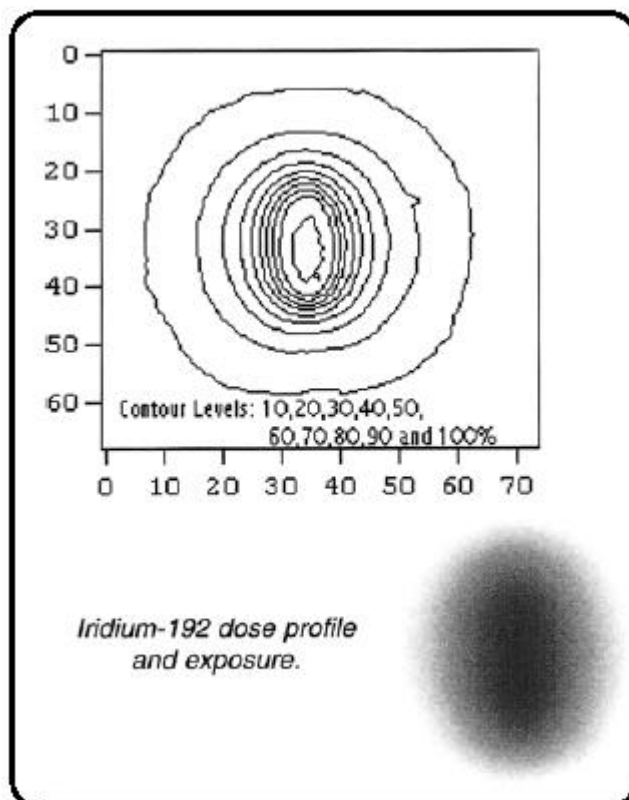




Nuclear Associates Model 37-040 Series GAFCHROMIC® Dosimetry Media

Radiation Oncology
37-040 Series



Superior uniformity and sensitivity
Dose rate and fractionation independent
Maps dose distribution
Provides quantitative measurements (via densitometer or scanner)
No darkroom (handle in room light, no chemicals, no waste)
Water-resistant
GAFCHROMIC Dosimetry media is transparent before exposure to radiation, and develops a blue color after exposure. The color intensity is a function of the radiation exposure; higher exposures result in progressively darker blue.

THERAPY DOSIMETRY MEDIA

GAFCHROMIC Therapy Dosimetry Media is a radiation sensitive imaging film that is colorless, grainless, and offers a very high spatial resolution, making it invaluable for measuring dose distribution around small brachytherapy sources and stereotactic radiosurgery fields. It is available in a variety of dose sensitivity and size formats.

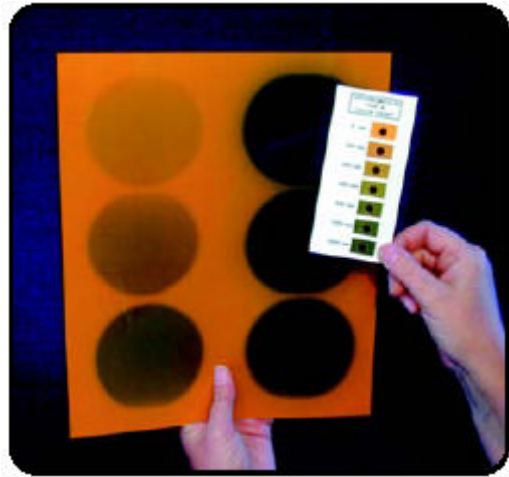
APPLICATIONS

- Can be used in plastic phantoms or (with special care) in water phantoms
- Can be used invivo for certain high-dose or multifraction applications
- Routine dosimetry, such as dose mapping, beam profiling and high resolution radiography
- Surface dose and buildup region

DIAGNOSTIC DOSIMETRY MEDIA

XR Type GAFCHROMIC Diagnostic Dosimetry Media is a revolutionary film that measures and maps skin dose during fluoroscopically guided procedures, allowing you to quickly and easily comply with the recommendations on patient exposure measurement. The diagnostic dosimetry film is self-developing with no post exposure processing and no waste disposal issues. It's not light-sensitive and it eliminates the need for a darkroom. It is available in two size and measurement formats.

- Dose distributions
- Penumbra characterizations
- Depth dose measurements
- Multi-Leaf Collimator shaped beams
- Stereotactic radiosurgery beam parameters



APPLICATIONS

Measure and map skin dose during fluoroscopically-guided procedures
Ensures facility compliance with all advisories on patient exposure measurement and documentation.

- Removes the uncertainty of dose estimation
- Shows the maximum dose and its location
- Shows how the total dose was distributed
- Provides a quantitative record for patient files
- Provides physician guidance to enable the safe planning of future fluoroscopically-guided procedures
- Dynamic Wedge profiles
- IMRT (Intensity Modulated Radiotherapy Treatment) dose distributions
- Dose distributions near traditional and new endovascular brachytherapy sources

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THERAPY RANGE DOSIMETRY MEDIA TYPES

GAFCHROMIC MD-55 (Model 37-041) very high resolution; tissue equivalent; dynamic range (1.0 to 100 Gy); energy independent (> 0.2 MeV); dose rate independent; no dose fractionation effects; available in 5 x 5 inch sheets

GAFCHROMIC MD-22 (37-041-2525) very high resolution; tissue equivalent; dynamic range (1.0 to 100 Gy); energy independent (> 0.2 MeV); dose rate independent; no dose fractionation effects; available in 2.5 x 2.5 inch octagonal shaped sheets (ideal for IMRT Phantom applications)

GAFCHROMIC HD-810 (Model 37-040) very high resolution; tissue equivalent; dynamic range (5 Gy to 400 Gy); energy independent (> 0.2 MeV); dose rate independent; no dose fractionation effects; available in 8 x 10 inch sheets

GAFCHROMIC D-200 (Model 37-043) very high resolution; tissue equivalent; dynamic range (5 Gy to 400 Gy); energy independent (> 0.2 MeV); dose rate independent; no dose

fractionation effects; available in film strips that have an overall size of 12 x 60 mm with an active area (window) of 8 x 22 mm (well suited for spectroscopy applications)

GAFCHROMIC HS (high sensitivity*) (Model 37-044) very high resolution; tissue equivalent; dynamic range (0.5 Gy to 40 Gy); energy independent (> 0.2 MeV); dose rate independent; no dose fractionation effects; available in 5 x 5 inch sheets

GAFCHROMIC HS-14 (high sensitivity*) (Model 37-044-1400) very high resolution; tissue equivalent; dynamic range (0.5 Gy to 40 Gy); energy independent (> 0.2 MeV); dose rate independent; no dose fractionation effects; available in film strips measuring 0.5 x 3.875 inch

DIAGNOSTIC RANGE DOSIMETRY MEDIA TYPES



GAFCHROMIC XR - Type R (Model 37-046) is an opaque radiochromic dosimetry film; assures compliance with 1994 FDA advisories regarding patient exposure measurement and tracking during fluoroscopically-guided procedures; dynamic range (0.1 Gy to 15 Gy); no significant energy dependence (60 keV to 120 keV); dose rate and fractionation independent; very high resolution; available in 14 x 17 inch sheets

GAFCHROMIC XR - Type T (Model 37-045) is a transparent radiochromic dosimetry film optimized for measuring and mapping low-energy photons; ideal for low-dose rate brachytherapy; dynamic range (0.1 Gy to 10 Gy); no significant energy dependence (60 keV to 120 keV); dose rate and fractionation independent; very high resolution; available in 5 x 5 inch sheets

SPECIFICATIONS

Temperature Store below 77°F (25°C). Do not use above 131°F (55°C)

Humidity Below 77°F (25°C), no humidity effect, 50% relative humidity or less is preferred

Available Models

Therapy Dosimetry Media

Model 37-041** GAFCHROMIC MD-55 Therapy Dosimetry Media, package of five 5 x 5 inch sheets

Model 37-041-2525** GAFCHROMIC MD-22 Therapy Dosimetry Media, package of twenty 2.5 x 2.5 inch octagonal shaped sheets

Model 37-040** GAFCHROMIC HD-810 Therapy Dosimetry Media, package of five 8 x 10 inch sheets

Model 37-043** GAFCHROMIC D-200 Therapy Dosimetry Media, package of two-hundred film strips. Each strip has an overall size of 12 x 60 mm with an active area (window) of 8 x 22 mm

Model 37-044** GAFCHROMIC HS Therapy Dosimetry Media, package of five 5 x 5 inch sheets

Model 37-044-1400** GAFCHROMIC HS-14 Therapy Dosimetry Media, package of twenty-five 0.5 x 3.875 inch film strips

Diagnostic Dosimetry Media

Model 37-046*** GAFCHROMIC XR - Type R Diagnostic Dosimetry Media, package of twenty-five 14 x 17 inch sheets

Model 37-046-5000*** GAFCHROMIC XR - Type R Diagnostic Dosimetry Media Starter Kit, package of five 14 x 17 inch sheets and one Rad Estimator Comparison Strip

Model 37-045** GAFCHROMIC XR - Type T Diagnostic Dosimetry Media, package of five 5 x 5 inch sheets

See Model 37-443 Radiochromic Densitometer data sheet for complete specifications.

** 2x the sensitivity of MD-55.*

*** Use Model 37-443 Radiochromic Densitometer for these models.*

**** For use with Reflective Densitometer, Rad Estimator Comparison Strip, or film scanner.*

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