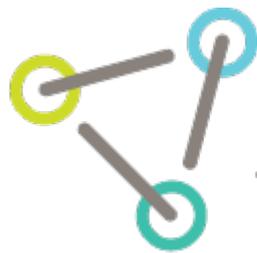


# ASHLAND



Ashland™  
always solving

peo MEDICAL

# Table of contents

<b>Analysis software</b> .....	<b>5</b>
FilmQA Pro™ Software version 7 – Ashland .....	6
<b>Blood irradiation indicators</b> .....	<b>7</b>
Rad-Sure™ Blood Irradiation Indicators .....	8
Rad-Sure™ ChromicVue™ .....	10
<b>Detectors &amp; miscellaneous</b> .....	<b>12</b>
Gafchromic XR-SP2 Industrial Radiographic Film – Ashland .....	13
<b>Blood irradiation indicators</b> .....	<b>14</b>
Rad-Sure™ Blood Irradiation Indicators .....	15
Rad-Sure™ ChromicVue™ .....	17
<b>Gafchromic Film QA</b> .....	<b>19</b>
FilmQA Pro™ Software version 7 – Ashland .....	20
Gafchromic EBT-XD .....	21
Gafchromic EBT-4 Dosimetry Film – Ashland .....	22
Gafchromic LD-V1 Film .....	23
Gafchromic XR-M2 Dosimetry Film – Ashland .....	25
Gafchromic XR-CT2 Dosimetry Film – Ashland .....	26
Gafchromic XR-RV3 Dosimetry Film – Ashland .....	27
Gafchromic HD-V2 Radiochromic Film – Ashland .....	28
<b>Gafchromic film QA</b> .....	<b>29</b>
FilmQA Pro™ Software version 7 – Ashland .....	30
Gafchromic EBT-XD .....	31
Gafchromic EBT-4 Dosimetry Film – Ashland .....	32
Gafchromic LD-V1 Film .....	33
Gafchromic XR-M2 Dosimetry Film – Ashland .....	35
Gafchromic MD-V3 Radiochromic Film – Ashland .....	36
Gafchromic EBT-3 Dosimetry Film – Ashland .....	37
Gafchromic HD-V2 Radiochromic Film – Ashland .....	38
Gafchromic RTQA2 Radiochromic Film – Ashland .....	39
Gafchromic EBT-XD Dosimetry Film – Ashland .....	40
<b>Software</b> .....	<b>41</b>
FilmQA Pro™ Software version 7 – Ashland .....	42
<b>Sterilization irradiation indicators</b> .....	<b>43</b>
Sterin Insect Irradiation Indicators – Ashland .....	44
<b>Proton</b> .....	<b>45</b>
Gafchromic HD-V2 Radiochromic Film – Ashland .....	46

<b>QA Phantoms</b> .....	<b>47</b>
Gafchromic Quick Phantom – Ashland .....	48
<b>QA Measurement systems</b> .....	<b>49</b>
FilmQA Pro™ Software version 7 – Ashland .....	50



Ashland is a global leader in specialty materials, offering innovative solutions that enhance safety, precision, and patient outcomes across various medical disciplines. Their portfolio supports healthcare providers in radiation therapy, diagnostic imaging, wound care, and regenerative medicine.

**[View all products from Ashland](#)**

**[Partner website](#)**

In the medical field, Ashland provides a broad range of specialty materials that support radiation oncology, diagnostic imaging, wound care, and regenerative medicine. In radiation therapy, their Gafchromic™ dosimetry films and FilmQA Pro™ software offer clinicians reliable tools for dose verification and quality assurance, enabling real-time monitoring and accurate treatment delivery. For diagnostic imaging, Ashland supplies radiology QA films that aid in equipment calibration and ensure consistent image quality, while their adhesives and coatings enhance the performance of medical disposables such as dressings and bandages. In regenerative medicine, Ashland's Viatel™ bioresorbable polymers are used in the development of degradable medical devices and scaffolds, providing temporary structural support that is safely absorbed by the body—facilitating tissue healing without the need for removal.

By integrating advanced chemistry with a commitment to innovation, Ashland delivers reliable and effective solutions that support critical decision-making and enhance patient care in medical environments.



# ANALYSIS SOFTWARE

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## Image Registration

	Measurement	Baseline	Difference	Status	Tolerances
on 	0.31	0.26	-0.05	✓ Passed	
	0.69	0.69	0.00	✓ Passed	
	-2.40	-2.80	-0.41	✓ Passed	
	1.13	0.98	-0.15	✓ Passed	



## FilmQA Pro™ Software version 7 - Ashland

### **a sophisticated, quantitative analysis tool for Gafchromic™ Film**

FilmQA Pro™ software is a sophisticated, quantitative analysis tool specifically designed to simplify and streamline the intensity-modulated radiation therapy quality assurance (IMRT QA). Our software is also effective for QA of SRS, SBRT and VMAT procedures. It allows you to scan or open images of exposed film and calculate the optimized dose maps.



FilmQA Pro™ software uses proprietary multi-channel dosimetry which eliminates or mitigates film and scanner artifacts by detecting whether errors are being made during scanning. In addition,, the software also has the one-scan analysis feature which combines calibration and plan verification in a single scan. The one-scan protocol requires only the patient film, a reference patch, and an unexposed patch. This protocol eliminates error sources such as interscan variability, which enables you to reduce errors to within 2 percent.

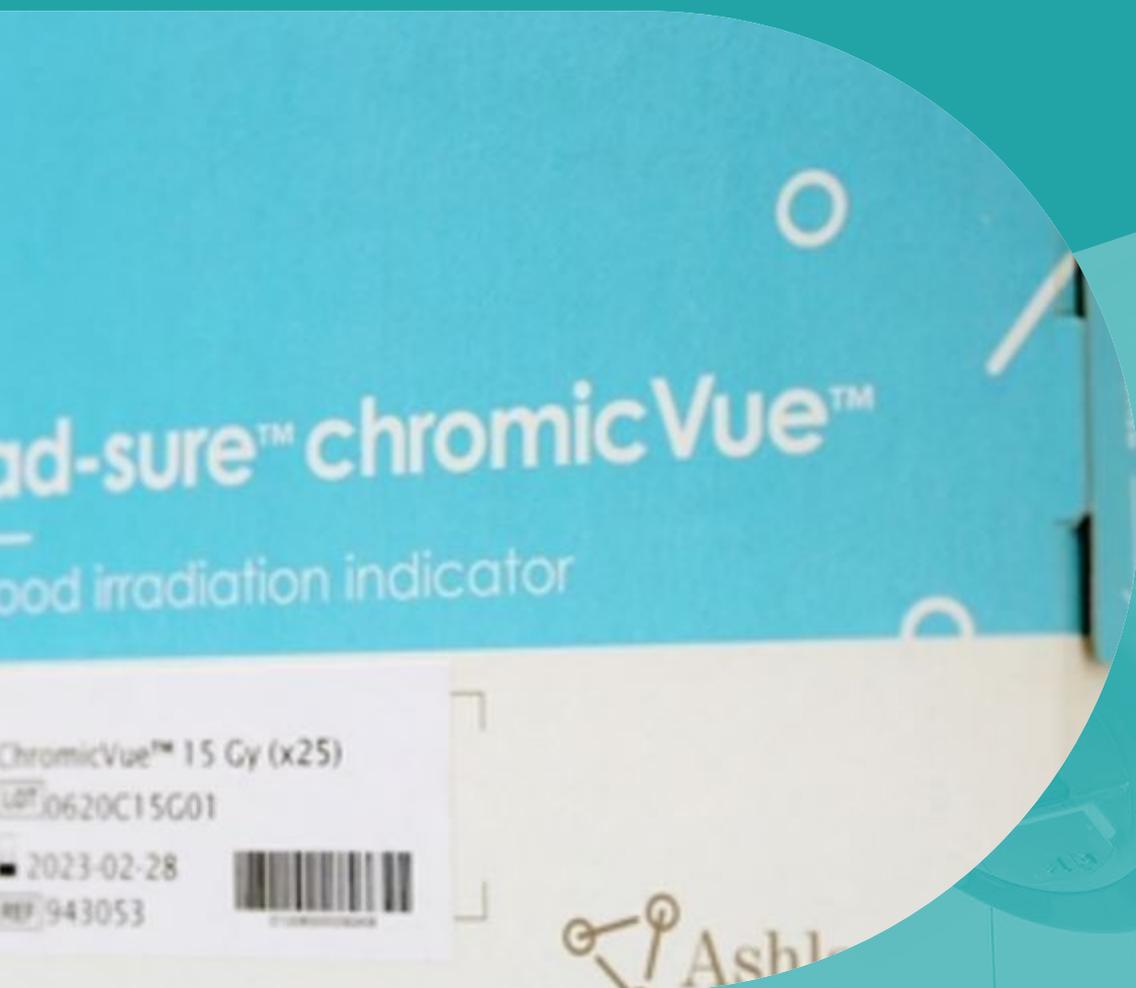
With FilmQA Pro™ software, you can get your results in minutes, post-exposure growth no longer is an issue and there is no waiting overnight for changes in the film to diminish. You can do an analysis any time you want, even at a moment's notice. The software delivers gamma passing rates  $\geq 95$  percent at 2 percent at 2 mm instead of using 3 percent at 3 mm.

### **key features and benefits**

- lateral scan correction: apply a correction to compensation for lateral artifacts that can show in the scan
- new user friendly interface with a quick start menu
- one-scan protocol: fast and efficient method to achieve dose accuracy within 2%
- triple-channel dosimetry: use three color channels to optimize accuracy of dose calculations
- accurately calibrate: an entire lot with just four strips of film using our film-specific mathematical function
- quick-start screen: easily access the module you need at start-up
- dose error recognition: ability to identify accuracy of delivered dose
- superior resolution: get 100 percent of the picture from millions of measurements instead of just 0.1 percent
- no angular dependence: shoot the film from all angles, an entire plan on a single Gafchromic™ film, and validate the plan in the same way that the patient receives it

*FilmQA Pro™ Software carries a CE Mark*

# BLOOD IRRADIATION INDICATORS





# Rad-Sure™ Blood Irradiation Indicators

## chemistry: radiochromic film

### look for the NOT

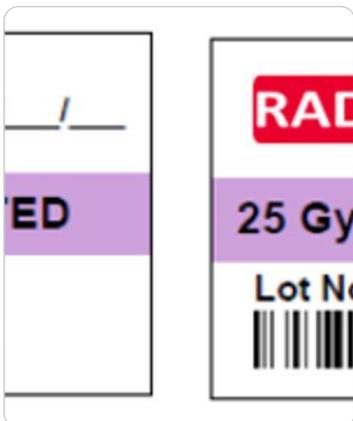
Rad-Sure™ is a blood irradiation indicator that provides positive visual verification of irradiation at the minimum specified dose. Rad-Sure™ is available in two types: Gamma and X-Ray. Gamma is compatible with Cesium-137 or Cobalt-60 radiation sources and X-Ray is compatible with x-ray irradiators that utilize x-rays generated from 160kVp sources that are filtered through 0.38 mm of copper, or 150kVp sources that are filtered through 1 mm of aluminum. Manufactured from Gafchromic™ film, the world's highest resolution dosimeter, Rad-Sure is the standard for blood irradiation indicators for over 25 years.

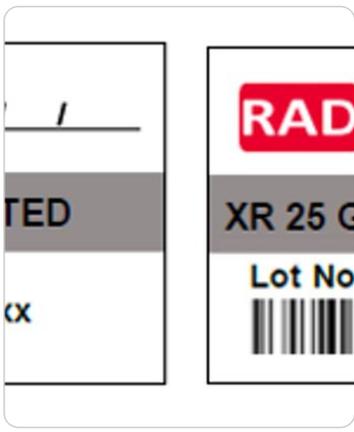


When attached to blood products, Rad-Sure™ blood irradiation indicators show whether the blood products have been irradiated. Before a blood product and its attached indicator are irradiated, the indicator reads "NOT IRRADIATED". After the blood product and its attached indicator are irradiated, the word "NOT" is obscured and the indicator reads "IRRADIATED".

### Product Features:

- indicators can now be stored at room temperature!
- meets cGMP requirements
- easy to use: just peel, stick, irradiate, and read!
- ISBT 128 bar-coded lot numbers
- minimum dose of 15 Gy or 25 Gy available
- Rad-Sure™ indicators adhere to AABB standards and hold the AABB seal of compliance



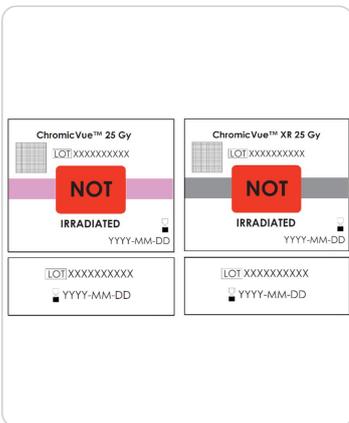




# Rad-Sure™ ChromicVue™

Rad-Sure™ ChromicVue™ blood irradiation indicators provide all the dependable features of the traditional Rad-Sure indicators in a compact size and new dispenser box to improve your ease of use. Rad-Sure™ ChromicVue™ introduces new features to improve your workflow, such as ISBT-128 2D barcodes, and labels containing lot number and expiration date for optional use in log books and documentation purposes. Rad-Sure™ ChromicVue™'s smaller format is ideally designed for use with standard blood bags, neonatal syringes and aliquot bags.

Rad-Sure™ ChromicVue™ indicators provide positive, visual verification of irradiation at the minimum specified dose. Manufactured from Gafchromic™ film, the world's highest resolution dosimeter, Rad-Sure™ has been the standard for blood irradiation indicators for over 25 years. Before a blood product and its attached indicator are irradiated, the word "NOT" is visible and the indicator reads "NOT IRRADIATED". After irradiation, the "NOT" is obscured and the indicator reads "IRRADIATED".



### dependable features:

- film-based indicator - made with highly accurate Gafchromic™ film used in radiation oncology centers around the world
- less subjective - the product has been properly irradiated when the "NOT" is completely obscured
- indicators can be stored at room temperature
- Color-blind friendly - no need to match colors
- 30 years of reliable film technology

#### benefits

- optimal for any blood unit in
- efficient size allows for more
- 2D barcode reads lot # and
- linear ISBT 128 barcode still c
- indicators dispensed one at
- no lid necessary - indicators
- sustainable packaging – bo
- smaller box format allows fo
- additional 50 indicators per
- for optional use in log books

# DETECTORS & MISCELLANEOUS





# Gafchromic XR-SP2 Industrial Radiographic Film - Ashland

Ashland designed XR-SP2 Industrial Radiographic Film specially for the current demand for security and industrial x-ray imaging applications.

This film is particularly effective in field applications and remote environments, for example, security and non-destructive testing (NDT). This film is at your service when other imaging may not be available.



## FILM SENSITIVITY

The film's response depends on the output spectrum of the x-ray generator, or the type and strength of the isotopes. But it also depends on the thickness and composition of the object that you are imaging.

## XR-SP2 BENEFITS

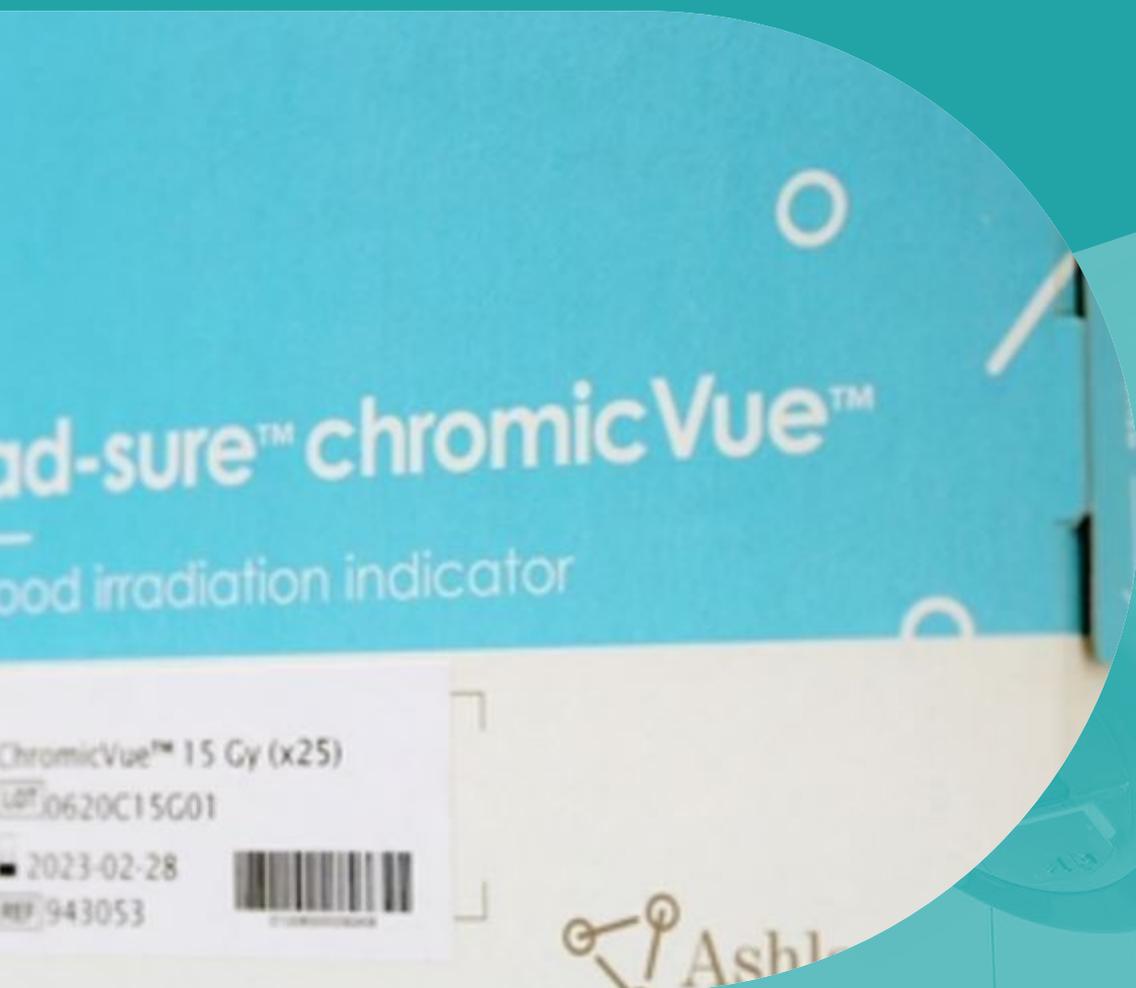
- Stand-alone imaging tool
- No screens required
- No cassettes required
- Instantly self-developing
- Resolution >10 microns
- Water and scratch resistant
- Usable in daylight
- Can withstand temperatures from 4,5 °C to 60°C (40°F to 140°F)
- Stable in real world environment
- The shelf life is over a year

This film comes in boxes of 10 pc. and it's available in two sizes:

- 20,32 cm x 25,4 cm (8" x 10")
- 25,4 cm x 30,48 cm (10" x 12")

**For more information on Ashland radiology film...**

# BLOOD IRRADIATION INDICATORS





# Rad-Sure™ Blood Irradiation Indicators

## chemistry: radiochromic film

### look for the NOT

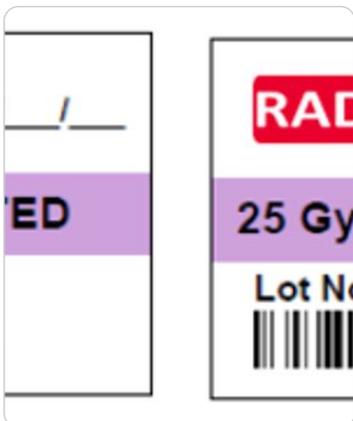
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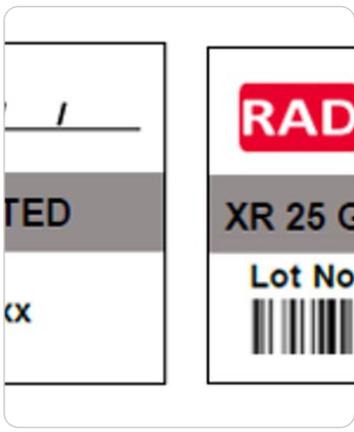


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### Product Features:

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- meets cGMP requirements
- easy to use: just peel, stick, irradiate, and read!
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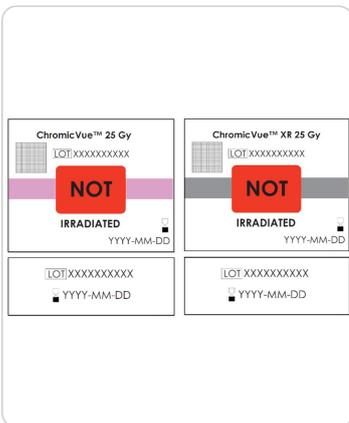




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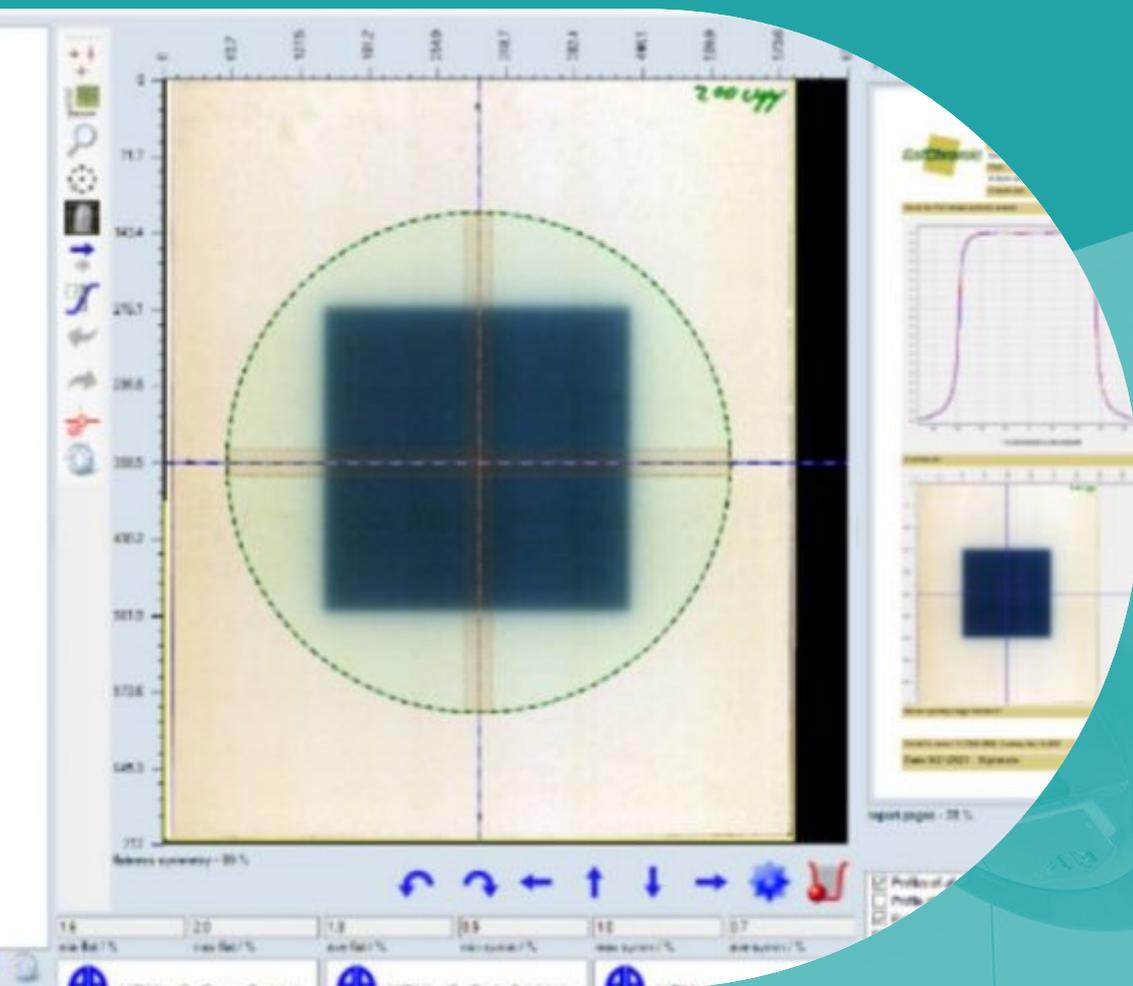
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# GAFCHROMIC FILM QA





## FilmQA Pro™ Software version 7 - Ashland

### a sophisticated, quantitative analysis tool for Gafchromic™ Film

FilmQA Pro™ software is a sophisticated, quantitative analysis tool specifically designed to simplify and streamline the intensity-modulated radiation therapy quality assurance (IMRT QA). Our software is also effective for QA of SRS, SBRT and VMAT procedures. It allows you to scan or open images of exposed film and calculate the optimized dose maps.



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With FilmQA Pro™ software, you can get your results in minutes, post-exposure growth no longer is an issue and there is no waiting overnight for changes in the film to diminish. You can do an analysis any time you want, even at a moment's notice. The software delivers gamma passing rates  $\geq 95$  percent at 2 percent at 2 mm instead of using 3 percent at 3 mm.

### key features and benefits

- lateral scan correction: apply a correction to compensation for lateral artifacts that can show in the scan
- new user friendly interface with a quick start menu
- one-scan protocol: fast and efficient method to achieve dose accuracy within 2%
- triple-channel dosimetry: use three color channels to optimize accuracy of dose calculations
- accurately calibrate: an entire lot with just four strips of film using our film-specific mathematical function
- quick-start screen: easily access the module you need at start-up
- dose error recognition: ability to identify accuracy of delivered dose
- superior resolution: get 100 percent of the picture from millions of measurements instead of just 0.1 percent
- no angular dependence: shoot the film from all angles, an entire plan on a single Gafchromic™ film, and validate the plan in the same way that the patient receives it

*FilmQA Pro™ Software carries a CE Mark*



## Gafchromic EBT-XD

The Gafchromic EBT-XD Dosimetry Film from Ashland has been developed for the measurement of absorbed doses of ionizing radiation specifically suited for high-energy photons.

The dynamic range of this film is particularly designed for best performance in the dose range from 0.4 to 40 Gy. This makes it best suited for applications such as SRS and SBRT.

The incorporation of a yellow marker dye, when used in conjunction with an RGB film scanner and FilmQAPro™ software, the EBT-XD film enables all the benefits of multi-channel dosimetry.

### Advantages

- high spatial resolution
- develops in real time without post exposure treatment
- excellent uniformity
- near tissue equivalent

### Characteristics

- energy dependence: minimal response difference from 100keV into the MV range
- dynamic dose range: 0.1 Gy to 200 Gy
- optimum dose range: 0.4 Gy to 40 Gy
- stable at temperatures up to 60°C

Would you like to know more about the EBT-XD Dosimetry Film?

Download the EBT-XD datasheet or contact one of our product specialists.

Stay informed about product news, which is related to your field of expertise. Go to the PEO news sign up form and select your areas of interest.





# Gafchromic EBT-4 Dosimetry Film - Ashland

Gafchromic™ EBT4 is designed for the measurement of absorbed doses of ionizing radiation. It is particularly suited for high-energy photons.

The dynamic range of this film is designed for best performance in the dose range from 0.2 to 10 Gy, making it suitable for many applications in IMRT, VMAT and brachytherapy.

For measurement of doses substantially greater than 10 Gy EBT-XD or MD-V3 are preferred while the use of HD-V2 is indicated for still higher dose measurement.



product	format	product code
EBT4 8x10	8"x10", 25 sheets per box	973857
EBT4P 8x10	8"x10", 25 sheets per box	973858
EBT4 - 1417	14"x17", 10 sheets per box	973882
EBT4 8x10 unlaminated	8"x10", unlaminated 25 sheets per box	973860
EBT4 ballcube I	10 pr	973883
EBT4 ballcube II	10 pr	973884
EBT4 AQA	100 sheets per box	973885
EBT4 mini ballcube	10 pr	973886
EBT4 XLT	10 pr	973887

Key technical features of gafchromic™ EBT4 include:

- optimum dose range: 0.2 Gy to 10 Gy, best suited for applications such as IMRT and VMAT
- develops in real time without post-exposure treatment
- energy-dependence: minimal response difference from 100 keV into the MV range
- near tissue equivalent
- high spatial resolution - can resolve features down to 25 µm, or less
- proprietary new technology incorporating a marker dye in the active layer
  - enables non-uniformity correction by using multi-channel dosimetry
  - decreases UV/visible light sensitivity
- stable at temperatures up to 60 °C



## Gafchromic LD-V1 Film

The new, low-dose Gafchromic LD-V1 film from Ashland provides superior spatial resolution to give you added confidence during your critical QA analysis. The LD-V1 replaces the XR-QA2 Gafchromic film.

LD-V1 film now includes better contrast and imaging detail. This provides instant calibration results which are easy to read with data that is even easier to understand.

The launch of this film is geared specifically as a QA tool for radiology in a processor-less environment. But the film is also suitable for security x-ray applications, non-destructive testing, and machine QA for dental equipment.

This film is available in two sizes: 8"x10" or 10"x12". But you can cut the film sheets into different sizes and handle them in room light. One package contains 10 sheets of film.

- Dose range of 2 cGY to 20 cGY
- Energy range of ~20 keV to ~200 keV.

For more information, go to our partner's website!

Or for our other Gafchromic film, go [here!](#)



### Gafchromic LD-V1 Benefits

- High spatial resolution and contrast
- Excellent tool for the processor-less environment
- Easy to use film
- Can be handled in room light
- Water resistant
- No electronic components
- U.S. FDA listed medical device

format

0 sheets per b

0 sheets per k

← [Back to partner](#)



Diagnostic Imaging > Gafchromic Film QA

## Gafchromic XR-M2 Dosimetry Film - Ashland

XR-M2 Dosimetry Film is especially developed for mammography QA testing. With a single film strip you can determine the location of the radiation field, light field and the position of the detector with respect to each other.

The film has a dose range of 0,1 cGy to 20 cGy.



### **XR-M2 DOSIMETRY FILM FEATURES**

- 50 pc. in a package
- The size of a strip is 1"x3,5" (2,54 cm x 8,89 cm)
- Instant calibration results
- Real-time self-developing
- User-friendly
- Energy range of 20 KVp to 200 KVp

Read more at our partner's website!

**Do you have any questions?**

[← Back to partner](#)



Diagnostic Imaging > Gafchromic Film QA

## Gafchromic XR-CT2 Dosimetry Film - Ashland

The Gafchromic XR-CT2 Dosimetry Film (Ashland) has been designed for the measurement of radiation beam slice width on CT scanners in real time.

### Gafchromic XR-CT2 Dosimetry Film features:

- dose range 0.1 cGy to 20 cGy
- self-developing in real time
- cost effective
- excellent for CT QA
- easy to use
- high data integrity
- improved contrast
- 50 sheets per package
- size: 3/4" x 5"

Gafchromic XR Film Ashland

[← Back to partner](#)



Diagnostic Imaging > Gafchromic Film QA

## Gafchromic XR-RV3 Dosimetry Film - Ashland

The Gafchromic XR-RV3 Dosimetry Film (Ashland) is used to measure and record patient skin exposure during interventional procedures where a high degree of precision in measuring skin dose is mainly not required.

### **Gafchromic XR-RV3 Dosimetry Film features:**

- available with comparator strip
- can be used with scanner or densitometer

Gafchromic XR Film Ashland



## Gafchromic HD-V2 Radiochromic Film - Ashland

Gafchromic HDV2 radiochromic film is designed for quantitative measurement of absorbed doses of high-energy photons. This self-developing film is perfect for a processorless environment.

Because this film doesn't require post-exposure processing, there are no chemicals to dispose of and you don't need a dark room.

To get the most accurate dosimetric measurement with this film, you can combine it with Ashland's FilmQAPro™ software.



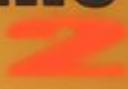
This film comes in boxes of 5 pc. with sheets of 20,32 cm x 25,4 cm (8" x 10").

### **GAFCHROMIC HDV2 RADIOCHROMIC FILM BENEFITS**

- Dynamic dose range from 10 Gy to 1.000 Gy
- Develops in real time without any post-exposure treatment
- Near tissue equivalent
- High spatial resolution
- Active coating exposed for detection of low energy photon and electron
- Marker dye in the active layer
- Stable at temperatures up to 60°C
- No dark room needed

If you want to know more about this film, take a look at our partner's website!

# GAFCHROMIC FILM QA

**GafChromic**  
**RTQA** 

QA+

Quality assurance plus:

- instant results
- very easy to use
- size the film to your exact requirement and save

SHEETS, EACH 10" X 10"



## FilmQA Pro™ Software version 7 - Ashland

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### key features and benefits

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- accurately calibrate: an entire lot with just four strips of film using our film-specific mathematical function
- quick-start screen: easily access the module you need at start-up
- dose error recognition: ability to identify accuracy of delivered dose
- superior resolution: get 100 percent of the picture from millions of measurements instead of just 0.1 percent
- no angular dependence: shoot the film from all angles, an entire plan on a single Gafchromic™ film, and validate the plan in the same way that the patient receives it

*FilmQA Pro™ Software carries a CE Mark*



## Gafchromic EBT-XD

The Gafchromic EBT-XD Dosimetry Film from Ashland has been developed for the measurement of absorbed doses of ionizing radiation specifically suited for high-energy photons.

The dynamic range of this film is particularly designed for best performance in the dose range from 0.4 to 40 Gy. This makes it best suited for applications such as SRS and SBRT.

The incorporation of a yellow marker dye, when used in conjunction with an RGB film scanner and FilmQAPro™ software, the EBT-XD film enables all the benefits of multi-channel dosimetry.

### Advantages

- high spatial resolution
- develops in real time without post exposure treatment
- excellent uniformity
- near tissue equivalent

### Characteristics

- energy dependence: minimal response difference from 100keV into the MV range
- dynamic dose range: 0.1 Gy to 200 Gy
- optimum dose range: 0.4 Gy to 40 Gy
- stable at temperatures up to 60°C

Would you like to know more about the EBT-XD Dosimetry Film?

Download the EBT-XD datasheet or contact one of our product specialists.

Stay informed about product news, which is related to your field of expertise. Go to the PEO news sign up form and select your areas of interest.





# Gafchromic EBT-4 Dosimetry Film - Ashland

Gafchromic™ EBT4 is designed for the measurement of absorbed doses of ionizing radiation. It is particularly suited for high-energy photons.

The dynamic range of this film is designed for best performance in the dose range from 0.2 to 10 Gy, making it suitable for many applications in IMRT, VMAT and brachytherapy.

For measurement of doses substantially greater than 10 Gy EBT-XD or MD-V3 are preferred while the use of HD-V2 is indicated for still higher dose measurement.



product	format	product code
EBT4 8x10	8"x10", 25 sheets per box	973857
EBT4P 8x10	8"x10", 25 sheets per box	973858
EBT4 - 1417	14"x17", 10 sheets per box	973882
EBT4 8x10 unlaminated	8"x10", unlaminated 25 sheets per box	973860
EBT4 ballcube I	10 pr	973883
EBT4 ballcube II	10 pr	973884
EBT4 AQA	100 sheets per box	973885
EBT4 mini ballcube	10 pr	973886
EBT4 XLT	10 pr	973887

Key technical features of gafchromic™ EBT4 include:

- optimum dose range: 0.2 Gy to 10 Gy, best suited for applications such as IMRT and VMAT
- develops in real time without post-exposure treatment
- energy-dependence: minimal response difference from 100 keV into the MV range
- near tissue equivalent
- high spatial resolution - can resolve features down to 25 µm, or less
- proprietary new technology incorporating a marker dye in the active layer
  - enables non-uniformity correction by using multi-channel dosimetry
  - decreases UV/visible light sensitivity
- stable at temperatures up to 60 °C



## Gafchromic LD-V1 Film

The new, low-dose Gafchromic LD-V1 film from Ashland provides superior spatial resolution to give you added confidence during your critical QA analysis. The LD-V1 replaces the XR-QA2 Gafchromic film.

LD-V1 film now includes better contrast and imaging detail. This provides instant calibration results which are easy to read with data that is even easier to understand.

The launch of this film is geared specifically as a QA tool for radiology in a processor-less environment. But the film is also suitable for security x-ray applications, non-destructive testing, and machine QA for dental equipment.

This film is available in two sizes: 8"x10" or 10"x12". But you can cut the film sheets into different sizes and handle them in room light. One package contains 10 sheets of film.

- Dose range of 2 cGY to 20 cGY
- Energy range of ~20 keV to ~200 keV.

For more information, go to our partner's website!

Or for our other Gafchromic film, go [here!](#)



### Gafchromic LD-V1 Benefits

- High spatial resolution and contrast
- Excellent tool for the processor-less environment
- Easy to use film
- Can be handled in room light
- Water resistant
- No electronic components
- U.S. FDA listed medical device

format

0 sheets per b

0 sheets per k

← [Back to partner](#)



Diagnostic Imaging > Gafchromic Film QA

## Gafchromic XR-M2 Dosimetry Film - Ashland

XR-M2 Dosimetry Film is especially developed for mammography QA testing. With a single film strip you can determine the location of the radiation field, light field and the position of the detector with respect to each other.

The film has a dose range of 0,1 cGy to 20 cGy.



### **XR-M2 DOSIMETRY FILM FEATURES**

- 50 pc. in a package
- The size of a strip is 1"x3,5" (2,54 cm x 8,89 cm)
- Instant calibration results
- Real-time self-developing
- User-friendly
- Energy range of 20 KVp to 200 KVp

Read more at our partner's website!

**Do you have any questions?**



# Gafchromic MD-V3 Radiochromic Film - Ashland

The Gafchromic MD-V3 Radiochromic Film (Ashland) can be used for the measuring absorbed dose of ionizing radiation particularly suited for high-energy photons.

## **Gafchromic MD-V3 Radiochromic Film features:**

- 1 Gy to 100 Gy (dose range)
- no post-exposure treatment, develops in real time
- near tissue equivalent
- no darkroom needed
- mitigates lateral response dependence
- stable at temperatures up to 60°C
- eliminate Newton's rings
- energy-dependence: minimal response difference from 100keV into the MV range
- high spatial resolution
- size: 5" x 5", 12,7 cm x 12,7 cm
- quantity: 5 sheets (box)



## Gafchromic EBT-3 Dosimetry Film - Ashland

Ashland designed Gafchromic EBT-3 Dosimetry Film specially for medical physicists and dosimetrists working in radiotherapeutic departments. You use this gafchromic film to measure absorbed doses of ionizing radiation and it's especially suited for high-energy photons.

It perfectly meets the needs of external beam radiotherapy and supports the processor-less environment of the modern hospital. This product is suitable for many applications because of the optimum dose range of 0.2 Gy to 10 Gy.

This gafchromic film is very easy-to-use, especially in combination with Ashland's FilmQA Pro software.



### FEATURES & BENEFITS:

- Helps avoid Newton's rings
- Symmetrical
- Optimum dose range of 0.2 Gy to 10 Gy
- Dynamic dose range of 0.1 Gy to 20 Gy
- Near tissue equivalent
- Water resistant (so it can be used with water phantoms)
- User-friendly
- No need for a darkroom
- Density changes stabilise fast
- Withstands temperatures up to 60°C
- Supports all RT technologies
- Large measurement area
- High spatial resolution
- Reduces scattered radiation

**If you want to know more about this film**

← [Back to partner](#)



Diagnostic Imaging > Gafchromic Film QA

## Gafchromic HD-V2 Radiochromic Film - Ashland

Gafchromic HDV2 radiochromic film is designed for quantitative measurement of absorbed doses of high-energy photons. This self-developing film is perfect for a processorless environment.

Because this film doesn't require post-exposure processing, there are no chemicals to dispose of and you don't need a dark room.

To get the most accurate dosimetric measurement with this film, you can combine it with Ashland's FilmQAPro™ software.



This film comes in boxes of 5 pc. with sheets of 20,32 cm x 25,4 cm (8" x 10").

### **GAFCHROMIC HDV2 RADIOCHROMIC FILM BENEFITS**

- Dynamic dose range from 10 Gy to 1.000 Gy
- Develops in real time without any post-exposure treatment
- Near tissue equivalent
- High spatial resolution
- Active coating exposed for detection of low energy photon and electron
- Marker dye in the active layer
- Stable at temperatures up to 60°C
- No dark room needed

If you want to know more about this film, take a look at our partner's website!



Radiotherapy › Gafchromic film QA

## Gafchromic RTQA2 Radiochromic Film - Ashland

RTQA2 film is a self-developing film designed for commissioning and quality assurance of radiotherapeutic modalities.

This is a high performance film with exceptional accuracy and outstanding cost effectiveness. This gafchromic film is real-time self-developing, so your results are available in only seconds (0,5-2.0 sec.). Without need of a darkroom or chemicals. So, this film is not only user-friendly, but also environmentally friendly.

This film is specifically developed for light and radiation field alignment, precision star shots, position verification and autoradiography.



### **BENEFITS**

- Dynamic range from 0,02 Gy to 8 Gy
- Large measurement area
- Real-time self-developing
- Near tissue-equivalent
- High spatial resolution
- Can be handled in room light
- Water resistant (useable with water phantoms for example)
- Withstands temperatures up to 70°C
- No processor or darkroom needed
- Convenient to handle and easy to cut
- Easily noted on with marker

If you want to know more, take a look at our partner's website!



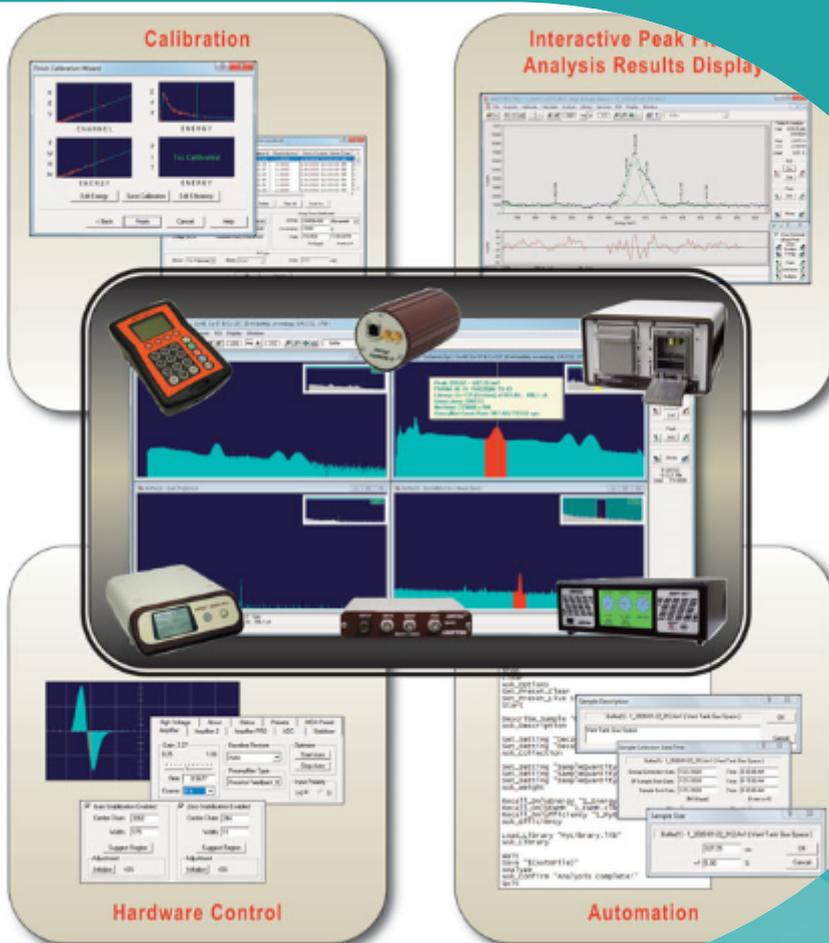
## Gafchromic EBT-XD Dosimetry Film - Ashland

The Gafchromic EBT-XD Dosimetry Film (Ashland) has been developed for the measurement of absorbed doses of ionizing radiation specifically suited for high-energy photons.

### Gafchromic EBT-XD Dosimetry Film features:

- energy dependence: minimal response difference from 100keV into the MV range
- high spatial resolution
- develops in real time without post exposure treatment
- dynamic dose range: 0.1 Gy to 200 Gy
- optimum dose range: 0.4 Gy to 40 Gy
- excellent uniformity
- stable at temperatures up to 60°C
- proprietary new technology incorporating a marker dye in the active layer
- enables non uniformity correction by using multichannel dosimetry
- near tissue equivalent
- size: 20,32 cm x 25,4 cm (8" x 10")
- quantity: 25 sheets (box)

# SOFTWARE





## FilmQA Pro™ Software version 7 - Ashland

### a sophisticated, quantitative analysis tool for Gafchromic™ Film

FilmQA Pro™ software is a sophisticated, quantitative analysis tool specifically designed to simplify and streamline the intensity-modulated radiation therapy quality assurance (IMRT QA). Our software is also effective for QA of SRS, SBRT and VMAT procedures. It allows you to scan or open images of exposed film and calculate the optimized dose maps.



FilmQA Pro™ software uses proprietary multi-channel dosimetry which eliminates or mitigates film and scanner artifacts by detecting whether errors are being made during scanning. In addition,, the software also has the one-scan analysis feature which combines calibration and plan verification in a single scan. The one-scan protocol requires only the patient film, a reference patch, and an unexposed patch. This protocol eliminates error sources such as interscan variability, which enables you to reduce errors to within 2 percent.

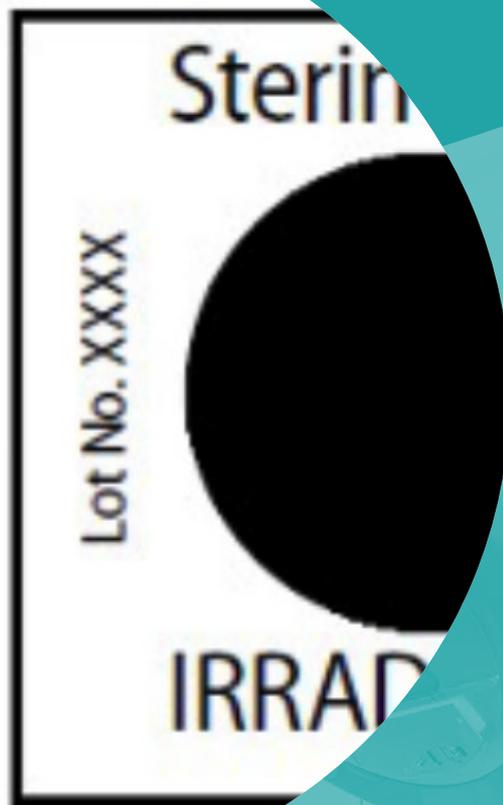
With FilmQA Pro™ software, you can get your results in minutes, post-exposure growth no longer is an issue and there is no waiting overnight for changes in the film to diminish. You can do an analysis any time you want, even at a moment's notice. The software delivers gamma passing rates  $\geq 95$  percent at 2 percent at 2 mm instead of using 3 percent at 3 mm.

### key features and benefits

- lateral scan correction: apply a correction to compensation for lateral artifacts that can show in the scan
- new user friendly interface with a quick start menu
- one-scan protocol: fast and efficient method to achieve dose accuracy within 2%
- triple-channel dosimetry: use three color channels to optimize accuracy of dose calculations
- accurately calibrate: an entire lot with just four strips of film using our film-specific mathematical function
- quick-start screen: easily access the module you need at start-up
- dose error recognition: ability to identify accuracy of delivered dose
- superior resolution: get 100 percent of the picture from millions of measurements instead of just 0.1 percent
- no angular dependence: shoot the film from all angles, an entire plan on a single Gafchromic™ film, and validate the plan in the same way that the patient receives it

*FilmQA Pro™ Software carries a CE Mark*

# STERILIZATION IRRADIATION INDICATORS





## Sterin Insect Irradiation Indicators - Ashland

Sterin Insect Irradiation indicators provide positive, visual verification of irradiation. The indicators are manufactured using Gafchromic film.

Ashland designed the indicators for the Sterile Insect Technique (SIT) program to provide visual verification of irradiation.



### HOW DOES IT WORK?

Sterin shows whether a container with insects has been irradiated when it's attached to the container. Before the insects are radiated, the indicator reads "NOT IRRADIATED", but after the insects are radiated, it reads "RADIATED".

One box of Sterin, contains 500 indicators and has a shelf life of 3 years.

### BENEFITS

- Film-based indicator
- Easy to read
- Color-blind friendly
- Indicators can be stored at room temperature
- Dispenser box keeps indicators protected from room light
- Sustainable packaging (boxes can be recycled)

Sterin is available for 4 different doses: 70 Gy, 100 Gy, 125 Gy, and 145 Gy.

If you have any questions about this product, go to our partner's website!

# PROTON





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To get the most accurate dosimetric measurement with this film, you can combine it with Ashland's FilmQAPro™ software.



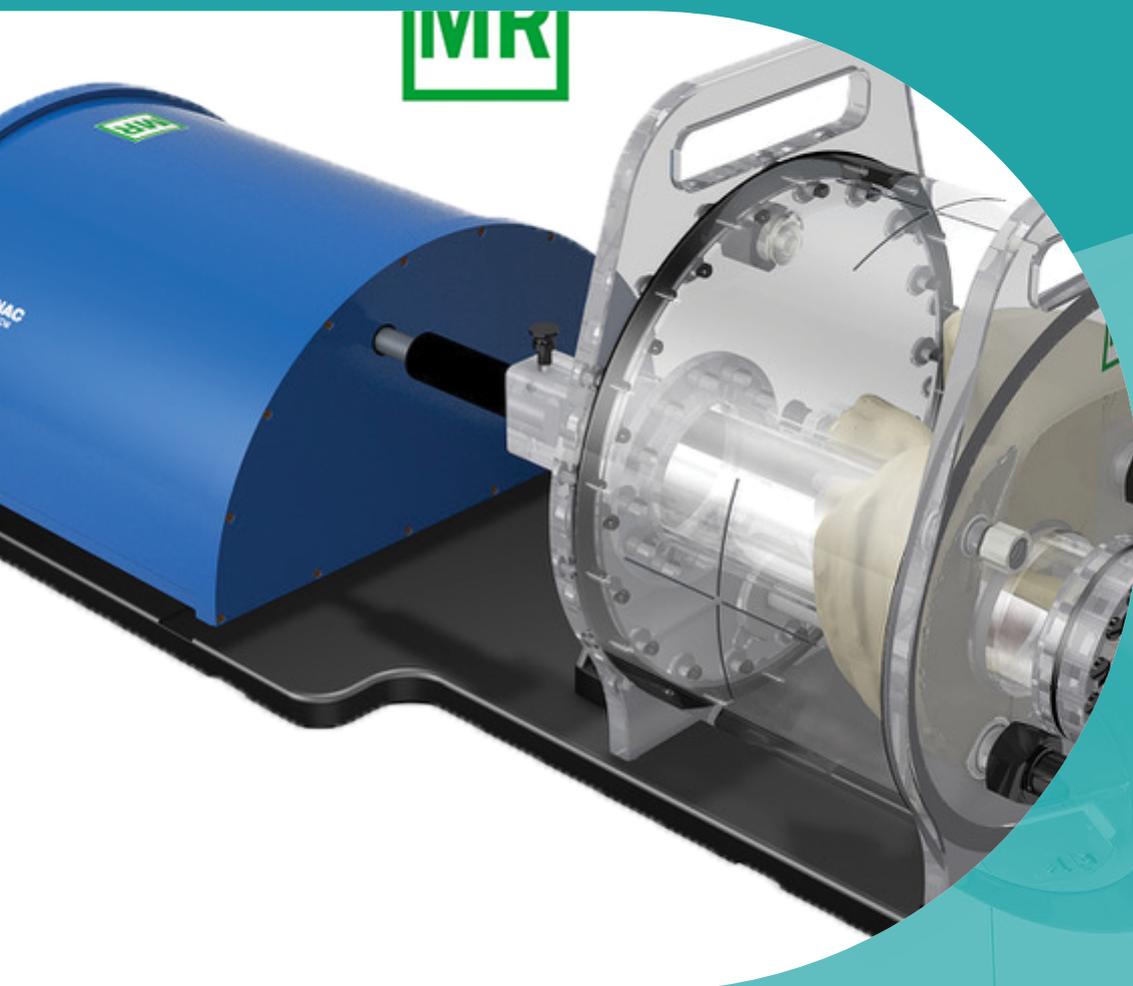
This film comes in boxes of 5 pc. with sheets of 20,32 cm x 25,4 cm (8" x 10").

### **GAFCHROMIC HDV2 RADIOCHROMIC FILM BENEFITS**

- Dynamic dose range from 10 Gy to 1.000 Gy
- Develops in real time without any post-exposure treatment
- Near tissue equivalent
- High spatial resolution
- Active coating exposed for detection of low energy photon and electron
- Marker dye in the active layer
- Stable at temperatures up to 60°C
- No dark room needed

If you want to know more about this film, take a look at our partner's website!

# QA PHANTOMS





## Gafchromic Quick Phantom - Ashland

The Gafchromic Quick Phantom (Ashland) is used for accurate and fast radiation therapy QA procedures. The device works with Gafchromic EBT-3 film.

### **Gafchromic Quick Phantom features:**

- dimensions: 29 x 32 x 5 cm<sup>3</sup>
- two-pin indexing bar
- provides accurate, quick and repeatable positioning of the phantom on both treatment couches and CT
- phantom body: two slabs of CIRS Plastic Water water-equivalent to within 1% from 150 keV to 25
- accurate and quick setup

# QA MEASUREMENT SYSTEMS





## FilmQA Pro™ Software version 7 - Ashland

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### key features and benefits

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- new user friendly interface with a quick start menu
- one-scan protocol: fast and efficient method to achieve dose accuracy within 2%
- triple-channel dosimetry: use three color channels to optimize accuracy of dose calculations
- accurately calibrate: an entire lot with just four strips of film using our film-specific mathematical function
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