GAFCHROMIC FILM QA

peo MEDICAL

Table of contents

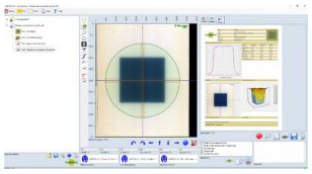
Ashland **3**

FilmQA Pro™ Software version 7 – Ashland 5
Gafchromic EBT-XD 6
Gafchromic EBT-4 Dosimetry Film – Ashland 7
Gafchromic LD-V1 Film 8
Gafchromic XR-M2 Dosimetry Film – Ashland 10
Gafchromic XR-QA2 Dosimetry Film – Ashland 11
Gafchromic MD-V3 Radiochromic Film – Ashland 12
Gafchromic EBT-3 Dosimetry Film – Ashland 13
Gafchromic HD-V2 Radiochromic Film – Ashland 14
Gafchromic RTQA2 Radiochromic Film – Ashland 15
Gafchromic EBT-XD Dosimetry Film – Ashland 16

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.

Product offering

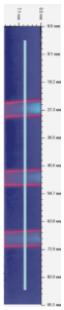
FilmQA Pro™ Software version 7 – Ashland



Gafchromic EBT-XD

Gafchromic EBT-4 Dosimetry Film – Ashland

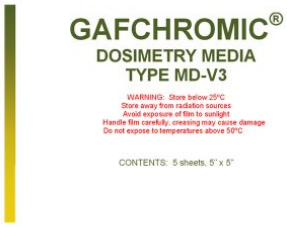
Gafchromic LD-V1 Film



Gafchromic XR-M2 Dosimetry Film – Ashland

Gafchromic XR-QA2 Dosimetry Film – Ashland

Gafchromic MD-V3 Radiochromic Film – Ashland



Gafchromic EBT-3 Dosimetry Film – Ashland

Gafchromic HD-V2 Radiochromic Film – Ashland

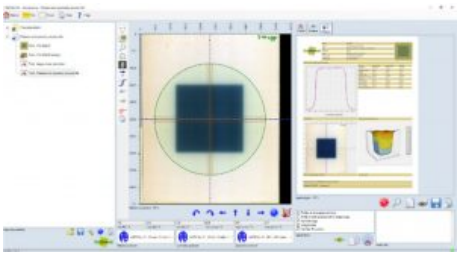
Gafchromic RTQA2 Radiochromic Film – Ashland

Gafchromic EBT-XD Dosimetry Film – Ashland

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 ≥ 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.

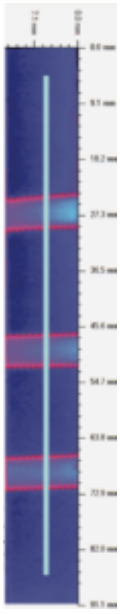
For measurement of doses substantially greater than 10 Gy EBT-XD or MD-V3 are preferred while the use of HD-V2 is indicated for still higher dose measurement.

product	format	product code
EBT4 8×10	8”x10”, 25 sheets per box	973857
EBT4P 8×10	8”x10”, 25 sheets per box	973858
EBT4 – 1417	14”x17”, 10 sheets per box	973882
EBT4 8×10 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.

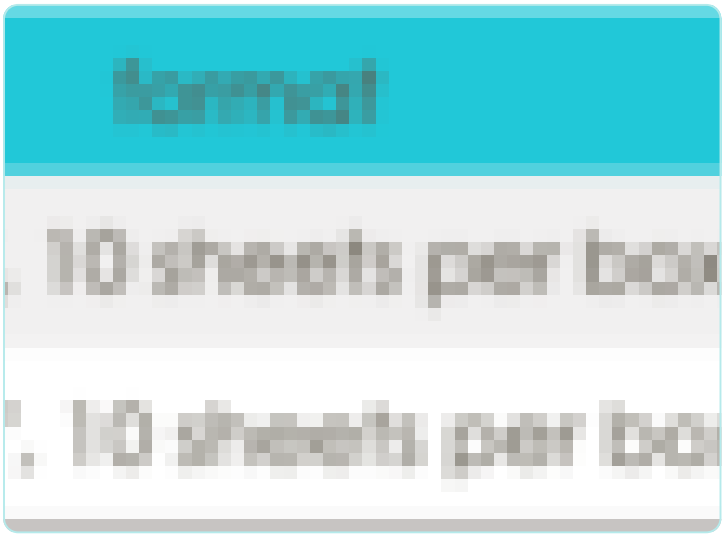
- Dose range of 2 cGY to 20 cGY
- Energy range of ~20 keV to ~200 keV.

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



Gafchromic XR-M2 Dosimetry Film – Ashland

XRM2 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.

XRM2 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?

Contact PEO!

Gafchromic XR-QA2 Dosimetry Film – Ashland

This product is not available anymore. The renewed version of XR-QA2 can be found HERE.

Ashland designed Gafchromic XRQA2 dosimetry film specifically as a QA tool for radiology. You can cut the film into different sizes and you can handle it in room light.

IMAGING DETAIL WITH HIGH RESOLUTION & CONTRAST

This radiology film assures consistent and reliable high contrast result because of the state-of-the-art quality production techniques. The images have a quality greater than 5.000 dpi, so you can easily read and understand the results. There are two different sizes:

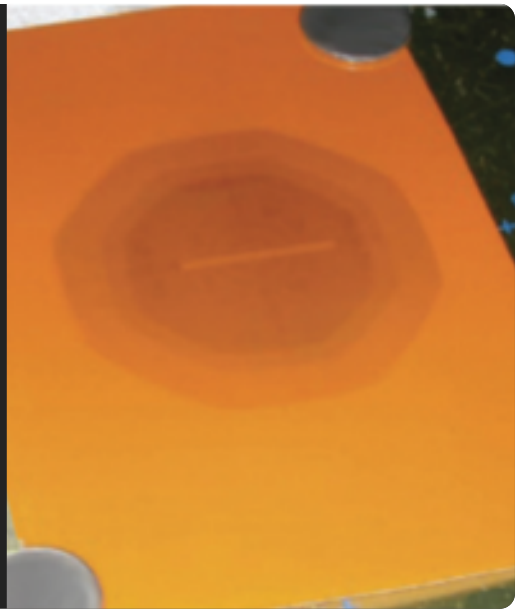
- *25,4 cm x 20,48 cm (10″x 12″)*
- *20,32 cm x 25,4 cm (8″ x 10″)*

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

GAFCHROMIC XRQA2 DOSIMETRY FILM BENEFITS

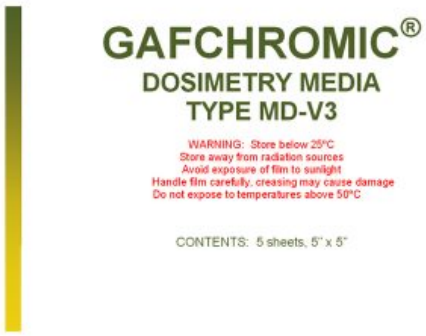
- *No processor required*
- *Instant calibration results*
- *High data integrity*
- *Improved contrast*
- *Two convenient film sizes to choose from*
- *Cost effective*
- *User-friendly*
- *Can be handled in room light*

For more information about Ashland's radiology film, visit our partner's website!



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

Go here!

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 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 unformity correction by using multichannel dosimetry
- near tissue equivalent
- size: 20,32 cm x 25,4 cm (8” x 10”)
- quantity: 25 sheets (box)