

QA FANTOMEN

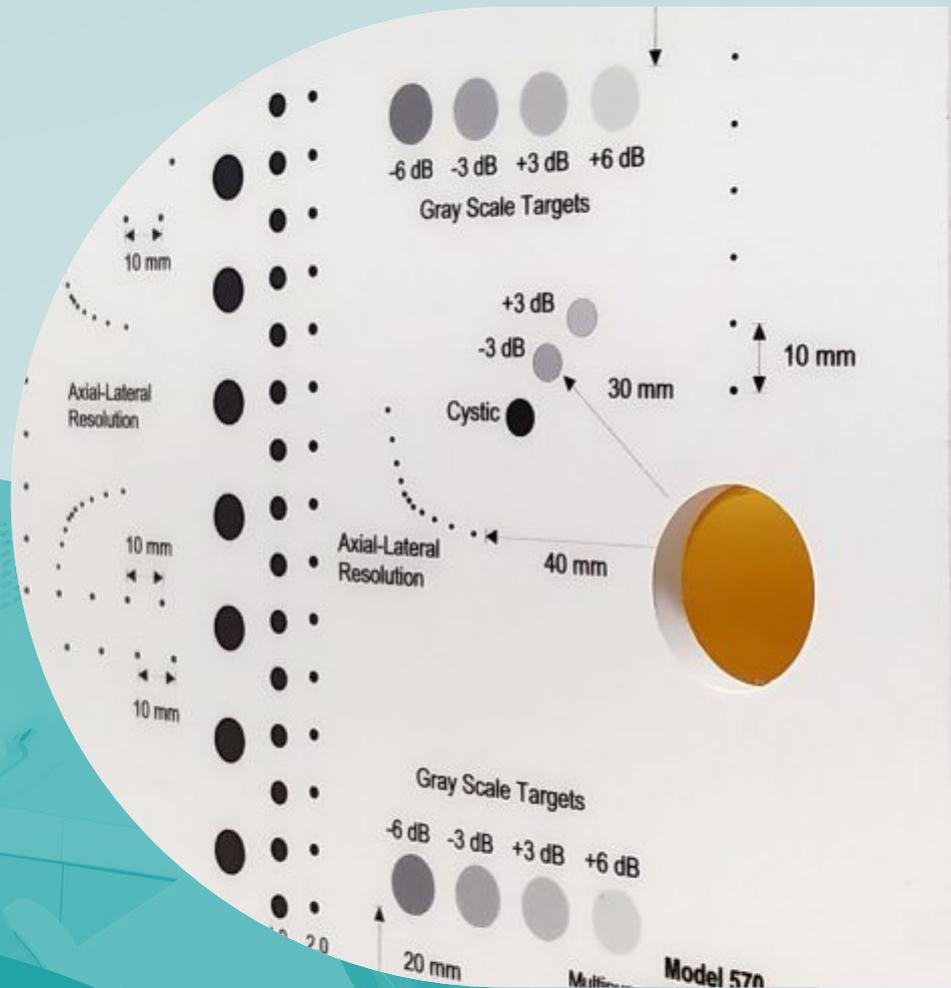


Table of contents

Bertin Technologies	4
Model 057A Triple Modality 3D Abdominal Phantom – CIRS	5
Model 551 Accreditation Phantom for Uniformity – CIRS	6
Model 040GSE Multi-Purpose, Multi-Tissue Ultrasound Phantom – CIRS	7
Models 014A, 014AD, 014B, 014F Mammography Phototimer Consistency Testing Slabs – CIRS	9
Model 020 BR3D Breast Imaging Phantom – CIRS	10
Sun Nuclear Corporation	10
Elasticity QA fantoom (model 049) – CIRS	14
Beeldgestuurde buikbiopsie Fantoom (model 071B) – CIRS	15
Model 1425 – Doppler Flow System – Sun Nuclear	17
Model 1430 – Mini-Doppler Flow System – Sun Nuclear	18
Advanced iqModules™ – Sun Nuclear	19
Model 164A – Stereotactic Breast Biopsy Phantom – Sun Nuclear	21
Mercury 4.0 Phantom – Sun Nuclear	22
Model 711-HN ATOM Max Dental & Diagnostic Head Phantom – CIRS	23
Model 083 – Soft Carrying Case – Sun Nuclear	24
Model 404 – Precision Small Parts Grey Scale Phantoms – Sun Nuclear	25
Model 405 – Precision Resolution Grey Scale Phantom – Sun Nuclear	26
Model 406 – Dual Attenuation Phantom – Sun Nuclear	27
Model 408 – Spherical Lesion Phantom – Sun Nuclear	28
Model 416 – Ultrasound Transducer Evaluation Device UTED – Sun Nuclear	29
Model 411 – LE Tissue Mimicking QC Phantom – Sun Nuclear	30
Model 410 – Multi-Purpose Accreditation Phantom – Sun Nuclear	31
Model 1151 – Radiographic Contrast / Detail Phantom – Sun Nuclear	32
Model 170NJ – Radiographic Survey Phantom – Sun Nuclear	33
Model 610 – Neonatal Chest Phantom – Sun Nuclear	34
Model 464-Ring – CT Phantom Extension – Sun Nuclear	35
CT ACR 464 Phantom – Sun Nuclear	36
Model 464 – ACR CT Accreditation Extension Plates – Sun Nuclear	38
Model 183 – Routine Mammographic QC Kit – Sun Nuclear	39
Model 182M – Mammographic QC Kit – Sun Nuclear	40
Model 179 – Artifact Identification Phantom – Sun Nuclear	41
Model 118 – Mammographic Aluminum Stepwedge – Sun Nuclear	42
Model 159A / 159A-BR – Mammographic Phototimer Consistency Tool – Sun Nuclear	43
Model 150K – Mammographic DCF Test Tool – Sun Nuclear	44
Model 429 – Ultrasound Biopsy Phantom – Sun Nuclear	45
Model 156D – Stereotactic Mammographic Accreditation Phantom – Sun Nuclear	46
Model 157A – Mammographic Film/Screen Contact Test Tool – Sun Nuclear	47
Model 156 – Mammographic Accreditation Phantom – Sun Nuclear	48
Model 468 – CT Dose Index Phantom – Sun Nuclear	49
Quart	49

QUART DVTap DIN 6868-161	51
QUART IAEA-EFOMP-ESTRO Test Set	53
Overige	54
IQphan™ Uitgebreide CT-beeldkwaliteit Phantom	56



Partner Bertin Technologies



Bertin Technologies is een wereldwijde leverancier van geavanceerde oplossingen voor stralingsdetectie en milieumonitoring, gespecialiseerd in handmonitoren, persoonlijke elektronische dosimeters, milieumonitoringsystemen en afval- en recyclingbeheertechnologieën. Hun instrumenten zijn ontworpen om te voldoen aan de strenge eisen van nucleaire faciliteiten, emergency response teams en milieu-instanties.

Product offering

Model 057A Triple Modality 3D Abdominal Phantom - CIRS



Model 551 Accreditation Phantom for Uniformity - CIRS



Model 040GSE Multi-Purpose, Multi-Tissue Ultrasound Phantom - CIRS



Models 014A, 014AD, 014B, 014F Mammography Phototimer Consistency Testing Slabs - CIRS



Model 020 BR3D Breast Imaging Phantom - CIRS





Model 057A Triple Modality 3D Abdominal Phantom - CIRS

The CIRS Triple Modality 3D Abdominal Phantom is constructed of a self-healing formulation of Zerdine®(1) that allows multiple biopsy insertions with minimal needle tracking, and is ideal for demonstrating image-guided navigation technologies.



Abdominal imaging is useful for diagnosing disease and monitoring treatments. The Model 057A is representative of a small adult abdomen and can be imaged under CT, MR and ultrasound. This feature makes the phantom a useful tool for applications such as image fusion studies; imaging protocol developments; scan technique training; and system testing, validation and demonstration.

The Model 057A simulates the abdomen from approximately the thorax vertebrae (T9/T10) to the lumbar vertebrae (L2/L3) using simplified anthropomorphic geometry. The materials provide contrast between the structures under CT, MR and ultrasound. The solid polymer background gel will not leak when punctured.*

Internal structures include the liver, the portal vein, two partial kidneys, a partial lung, the abdominal aorta, the vena cava, a simulated spine and six ribs. The liver has six lesions and the kidneys each have one lesion. A muscle layer and outside fat layer surround these structures and plastic end caps make the phantom durable enough for extended scanning. Blood vessels have CT contrast added to provide enhanced auto registration in image fusion applications

The Phantom includes a foam lined hard carry case. To accommodate image fusion techniques, CIRS can offer value-added options and services such as phantom specific CMM, reference CT or MRI data sets, attachment of customer specific registration devices and inclusion of special point markers.

Features

- Demonstrate CT, ultrasound and MRI scan techniques
- Assess image fusion algorithms
- Test new equipment
- Validate automated biopsy systems
- Optimize imaging protocols
- Improve performance of freehand abdominal biopsies

Contact our product specialist or download the datasheet.



Medische beeldvorming / Radiologie > QA fantomen

Model 551 Accreditation Phantom for Uniformity - CIRS

A continuous QC program identifies problems before they impact the diagnostic value of ultrasound exams and assures equipment is functioning properly. Research has demonstrated that the most common failure in the ultrasound imaging system is the transducer as they are easily damaged by stress, dropping and kinked cables¹. Accreditation programs now recommend all scanners and all transducers be tested quarterly and must be tested at least semiannually by performing an image uniformity and artifact survey².



The CIRS Model 551, Accreditation Phantom for Uniformity, aids appropriately trained personnel in identifying the presence of lateral and/or axial streaks, i.e. artifacts, on any ultrasound transducer. Presence of artifacts is an indication of transducer damage and triggers corrective action.

The phantom consists of a uniform block of Z-SkinTM that is elastic enough to conform to any shape transducer. Z-Skin is durable enough to withstand the probe pressure to maintain coupling with all the elements of even the tightest curvilinear arrays.

1. American College of Radiology. (2013, October 28). Ultrasound Accreditation Program Requirements. Retrieved from <http://www.acr.org/~media/ACR/Documents/Accreditation/US/Requirements.pdf>

2. Hangiandreou NJ, Stekel SF, Tradup DJ, Gorny KR, King DM. Four-year experience with a clinical ultrasound quality control program. *Ultrasound Med Biol.* 2011;37(8):1350-7.

Features

- Simple, compact design makes phantom easy to transport and store
- Cost-effective solution to fulfill accreditation Routine QC Program requirements
- Durable materials for extended phantom life
- Soft phantom material conforms to shape of most ultrasound transducers

Contact our product specialist or download the datasheet.

← Back to partner

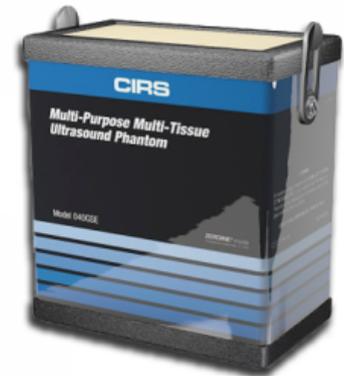


Medische beeldvorming / Radiologie > QA fantomen

Model 040GSE Multi-Purpose, Multi-Tissue Ultrasound Phantom - CIRS

The CIRS Model 040GSE Multi-Purpose, Multi-Tissue Ultrasound Phantom is the most complete solution available for performance and quality testing. It contains nine performance measurements, including grey scale targets, anechoic stepped masses and elasticity targets.

This is the only QA phantom on the market that provides both elasticity targets and all the standard B-mode imaging test objects.



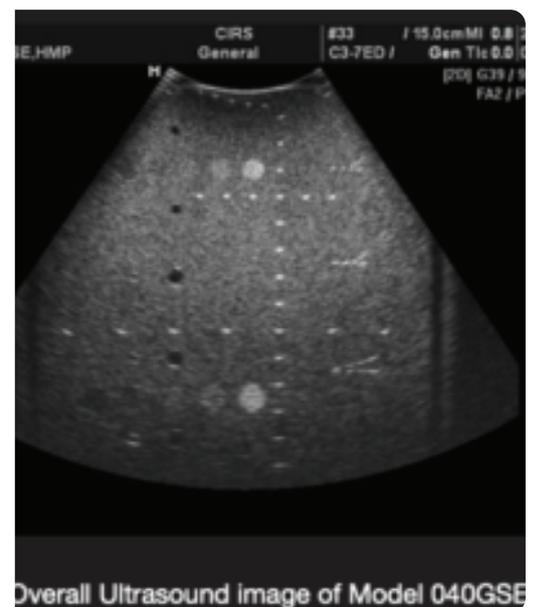
FEATURES

The unique dual attenuation of the background gel allows for evaluation of transducers that range from 2 MHz - 15 MHz. A removable water well and endocavity cover extends the use of the phantom by allowing evaluation of all transducer configurations: linear, curvilinear and intercavity.

All of CIRS' ultrasound QA phantoms come standard with a robust housing, rugged carry case, 48-month warranty, and a userguide.

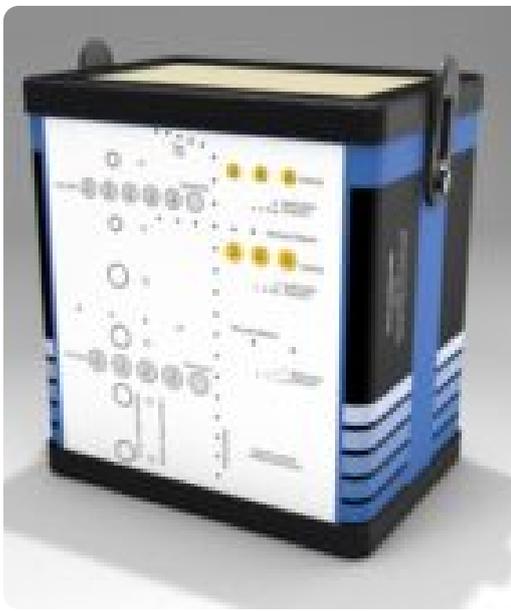
BENEFITS

- Unique dual attenuation design allows testing on low frequency abdominal probes up to 5 MHz and high frequency probes to 15 MHz and higher.
- Detachable water wells allow for testing curvilinear and endocavity probes.
- Only general purpose QA phantom on the market with elasticity.
- Ensure over ten years of reliable use through reinspection and repair services.



KEY TESTS WITH MODEL 040GSE

- Uniformity
- Depth of penetration



- Beam profile/ Focal zone/ Lateral response width
- Vertical distance measurement
- Horizontal distance measurement
- Axial and lateral resolution
- Elevational resolution
- Contrast resolution
- Grayscale contrast sensitivity
- Elasticity sensitivity
- Dead zone assessment

If you want more information, go to [our partner's site!](#)

[← Back to partner](#)



Medische beeldvorming / Radiologie › QA fantomen

Models 014A, 014AD, 014B, 014F

Mammography Phototimer Consistency Testing Slabs - CIRS

CIRS Phototimer Consistency Testing Slabs / Test Tool are designed for precise assessment of AEC system performance in accordance with American College of Radiology and MQSA recommendations. BR-12 (47% glandular / 53% adipose) is most commonly used but other glandular equivalencies are available. Unlike acrylic, these testing slabs are manufactured with very tight thickness tolerances and more accurately simulate real breast tissue over the range of energies used in mammography.



Models 014A, 014AD, 014B, 014F Mammography Phototimer Consistency Testing Slabs features

- assess AEC system performance
- comply with ACR & MQSA recommendations
- available in multiple configurations

Contact one of our product specialists.



Model 020 BR3D Breast Imaging Phantom - CIRS

The Model 020 BR3D Breast Imaging Phantom has been designed to assess discoverability of different size lesions within a tissue equivalent, heterogeneous, complex background. This phantom delivers more realistic challenges for standard screen and FFDM mammography systems as well as Breast Computed Tomography and Tomosynthesis.



Model 020 BR3D Breast Imaging Phantom features:

- complex background provides greater challenge for target detection
- slabs with different gland-to-adipose ratios by weight are available by request
- tests Breast Computed Tomography and Tomosynthesis
- more representative than standard homogenous phantoms

Read more about the Model 020 BR3D Breast Imaging Phantom on the [CIRS website](#)



Partner Sun Nuclear Corporation



Sun Nuclear is een toonaangevende leverancier van uitgebreide Quality Management oplossingen voor bestralingstherapie en diagnostische beeldvorming. Hun portfolio omvat positioneringssystemen,

dosimetrie-hulpmiddelen, QA fantomen, detectoren, apparatuur voor dosistempobewaking, analysesoftware en trainingsfantomen. Deze oplossingen zijn ontworpen om medische professionals te ondersteunen bij het garanderen van nauwkeurige, veilige en efficiënte patiëntenzorg.

Product offering

Elasticity QA fantoom (model 049) - CIRS



Beeldgestuurde buikbiopsie Fantoom (model 071B) - CIRS



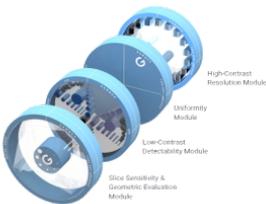
Model 1425 - Doppler Flow System - Sun Nuclear



Model 1430 - Mini-Doppler Flow System - Sun Nuclear



Advanced iqModules™ - Sun Nuclear



Model 164A - Stereotactic Breast Biopsy Phantom - Sun Nuclear



Mercury 4.0 Phantom - Sun Nuclear



Model 711-HN ATOM Max Dental & Diagnostic Head Phantom - CIRS



Model 083 - Soft Carrying Case - Sun Nuclear



Model 404 - Precision Small Parts Grey Scale Phantoms - Sun Nuclear



Model 405 - Precision Resolution Grey Scale Phantom - Sun Nuclear



Model 406 - Dual Attenuation Phantom - Sun Nuclear



Model 408 - Spherical Lesion Phantom - Sun Nuclear



Model 416 - Ultrasound Transducer Evaluation Device UTED - Sun Nuclear



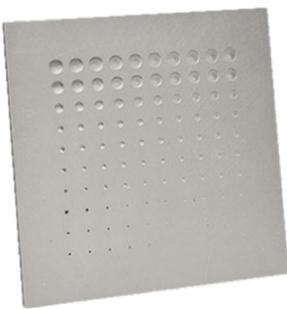
Model 411 - LE Tissue Mimicking QC Phantom - Sun Nuclear



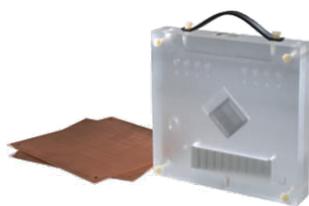
Model 410 - Multi-Purpose Accreditation Phantom - Sun Nuclear



Model 1151 - Radiographic Contrast / Detail Phantom - Sun Nuclear



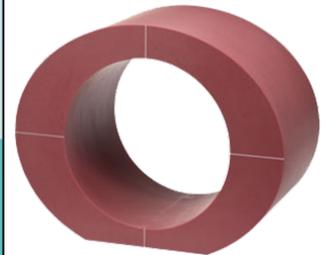
Model 170NJ - Radiographic Survey Phantom - Sun Nuclear



Model 610 - Neonatal Chest Phantom - Sun Nuclear



Model 464-Ring - CT Phantom Extension - Sun Nuclear



CT ACR 464 Phantom - Sun Nuclear



Model 464 - ACR CT Accreditation Extension Plates - Sun Nuclear



Model 183 - Routine Mammographic QC Kit - Sun Nuclear



Model 182M - Mammographic QC Kit - Sun Nuclear



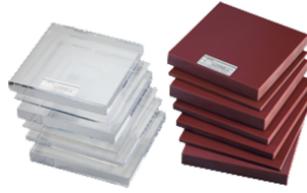
Model 179 - Artifact Identification Phantom - Sun Nuclear



Model 118 - Mammographic Aluminum Stepwedge - Sun Nuclear



Model 159A / 159A-BR - Mammographic Phototimer Consistency Tool - Sun Nuclear



Model 150K - Mammographic DCF Test Tool - Sun Nuclear



Model 429 - Ultrasound Biopsy Phantom - Sun Nuclear



Model 156D - Stereotactic Mammographic Accreditation Phantom - Sun Nuclear



Model 157A - Mammographic Film/Screen Contact Test Tool - Sun Nuclear



Model 156 - Mammographic Accreditation Phantom - Sun Nuclear



Model 468 - CT Dose Index Phantom - Sun Nuclear



← [Back to partner](#)



Medische beeldvorming / Radiologie > QA fantomen

Elasticity QA fantoom (model 049) - CIRS

De Elasticity QA fantoom (model 049 & 049A) is een hulpmiddel dat u kunt gebruiken voor zowel shear wave- als compressie-elastografie. Deze modellen zijn de enige fantomen die commercieel verkrijgbaar zijn voor de kwaliteitsborging van sono-elastografie. De fantomen bevatten doelen met een bekende stijfheid ten opzichte van het achtergrondmateriaal en variëren in stijfheid, diameter en diepte.

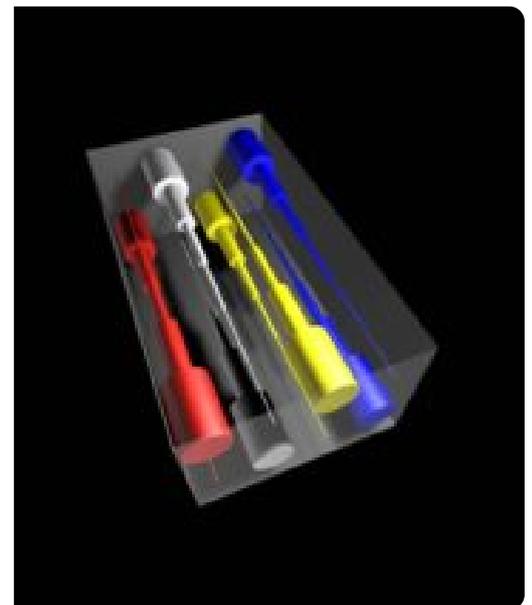


Beide fantomen worden standaard geleverd met vier jaar garantie en draagtas.

Model 049 is een basis QA-fantoom omdat het twee maten bollen bevat die op twee verschillende diepten zijn geplaatst. Op elke diepte zijn er twee bollen die zachter zijn dan de achtergrond en twee die harder zijn dan de achtergrond.

Model 049A heeft een breder scala aan doelgroottes dan de 049. Dit fantoom heeft getrapte massadoelen in plaats van bollen. Elke getrapte massa bestaat uit zes diameters, zodat u het vermogen kunt evalueren om doelen te visualiseren die zich op dezelfde diepte bevinden en dezelfde relatieve stijfheid hebben maar in diameter variëren.

Beide modellen zijn ondergebracht in een container van hetzelfde formaat als het originele Model 049.



ELASTICITEIT QA PHANTOM-EIGENSCHAPPEN

- Vier soorten laesies met discrete elastische moduli
- Compatibel met zowel schuifgolf- als compressie-elastografie
- Aangepaste versies beschikbaar voor magnetische resonantie-elastografie
- Garandeer meer dan tien jaar betrouwbaar gebruik door middel van herinspectie en reparatieservice

De fantomen zijn geschikt voor het bepalen van het dynamisch bereik, het controleren van de systeemprestaties in de loop van de tijd, training en demonstratie, en onderzoek en ontwikkeling.

[Wil je meer lezen over deze modellen, kijk dan eens op de website van onze partner!](#)



Beeldgestuurde buikbiopsie Fantoom (model 071B) - CIRS

Het beeld gestuurde buikbiopsiefantoom is een vereenvoudigd buikbiopsiefantoom. Het is geschikt voor het trainen en demonstreren van beeld gestuurde naaldbiopsie-navigatiehulpmiddelen of -procedures waarbij een constante visuele referentie vereist is voor het plaatsen van de naald. Het fantoom maakt in de loop van de tijd vele toepassingen mogelijk omdat de achtergrondgel de naaldsporen minimaliseert wanneer deze wordt doorboord.

Het fantoom bevat 12 laesies met een diameter van 5-12 mm, gepositioneerd in groepen van drie op consistente locaties binnen het fantoom. Het bevat ook gesimuleerde wervelkolom en ribben, en een "H"-markering in de wervelkolom om te helpen bij het bepalen van de kopzijde binnen een CT-beeld. Je kunt de laesies en wervelkolom zien onder echografie, CT en MRI. De vaste polymeergelachtergrond is echovrij en zal ook niet lekken als deze wordt doorboord.

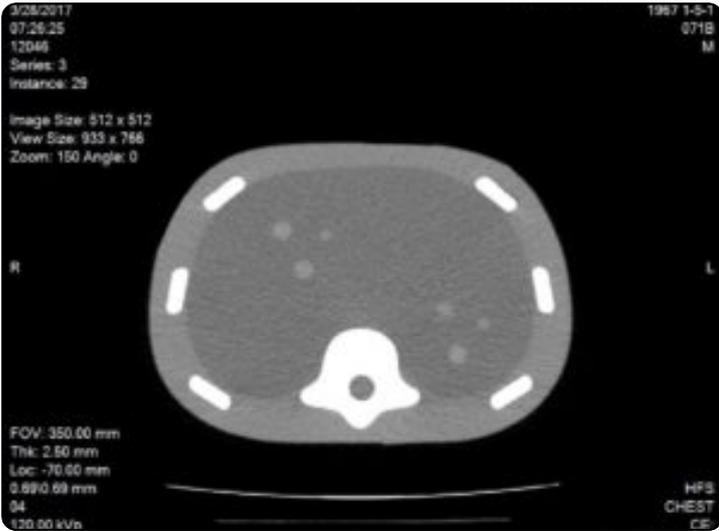
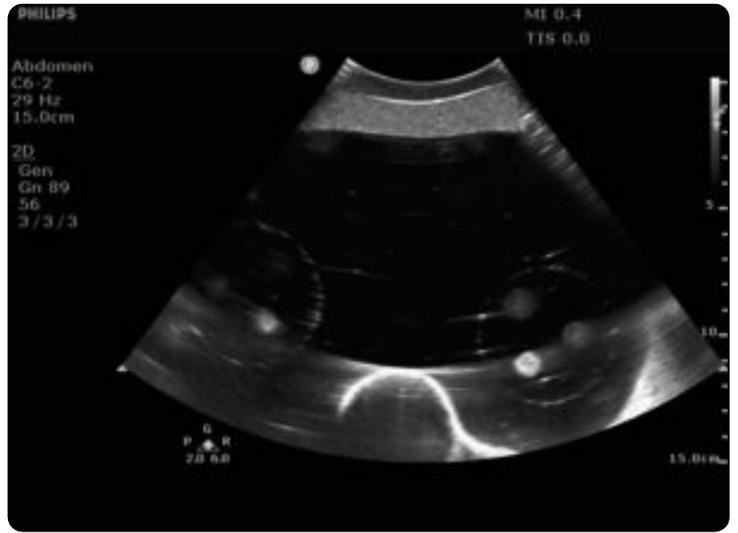
Het fantoom bevat ook een met schuim gevoerde harde draagtas en is op meerdere terreinen bruikbaar. Het fantoom is perfect voor CT, echografie en MRI, live scannen en biopsietraining.

BEELDGELEIDE ABDOMINALE BIOPTIE FANTOOMFUNCTIES

- Verbeter de prestaties van buikbiopsies uit de vrije hand
- Minimale naaldtracking - Z-huidvetlaag en zachtere gel zorgen voor betere zelfherstellende eigenschappen
- Valideer geautomatiseerde biopsiesystemen
- Geschikt voor CT, MRI en echografie

[Wil je meer lezen over dit fantoom, kijk dan eens op de website van onze partner!](#)





← Back to partner



Medische beeldvorming / Radiologie > QA fantomen

Model 1425 - Doppler Flow System - Sun Nuclear

The Doppler Flow System from Sun Nuclear (formerly Gammex) tests both Doppler and B-mode ultrasound systems in a single unit. The compact, easy to store and transport designed system combines the flow system, phantom and electronic flow controller into a single unit. Scanner selection, quality control testing, training and research can all be performed using this multi-faceted ultrasound tool. A wide range of targets and vessels are included in the unit.

Doppler Flow System features:

- the Choice of attenuations of 0.5 or 0.7 dB/cm/MHz
- combines low echo matrix with line reflectors and anechoic cyst targets at 2, 4 and 6 mm depths
- two 5mm vessels in the system adhere to FDA Doppler sensitivity recommendations.
- flow controller with a range of 1 to 12.5 ml/sec
- 5 preset pulse flow patterns

Do you want to know more about the Doppler Flow System?

If you want to continue your search for additional information on this product try this [link](#).



← Back to partner



Medische beeldvorming / Radiologie › QA fantomen

Model 1430 - Mini-Doppler Flow System - Sun Nuclear

The Doppler Flow System tests both Doppler and B-mode ultrasound systems in a single unit. The compact, easy to store and transport designed system combines the flow system, phantom and electronic flow controller into a single unit. Scanner selection, quality control testing, training and research can all be performed using this multi-faceted ultrasound tool. A wide range of targets and vessels are included in the unit.



Mini-Doppler Flow System features:

- the Choice of attenuations of 0.5 or 0.7 dB/cm/MHz
- includes 404GS LE components with Grey Scale targets
- combines low echo matrix with line reflectors and anechoic cyst targets at 2, 4 and 6 mm depths
- two 4 mm vessels in the system adhere to FDA Doppler sensitivity recommendations.
- flow controller with a range of 0 to 10 ml/sec
- 8 preset pulse rates

Do you want to know more about the Mini-Doppler Flow System?

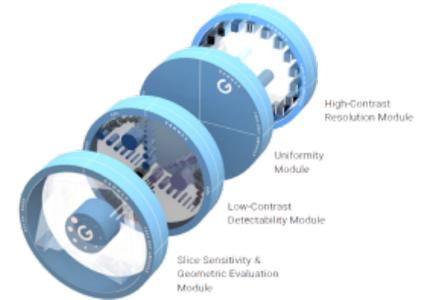
If you want to continue your search for additional information on this product try this [link](#).



Advanced iqModules™ - Sun Nuclear

Expanded Image Quality CT QA

Perform robust image quality testing of advanced CT systems with Advanced iqModules from Sun Nuclear (formerly Gammex). This set of 4 modules provides comprehensive testing of high-contrast resolution, low-contrast detectability, slice sensitivity, geometric evaluation, and uniformity.



Unmatched Image Quality Testing

Versatile and unique, the Advanced iqModules offer resolution up to 32 lp/cm, the widest range of test objects to evaluate low contrast detectability, and a broad range of methods to evaluate Slice Sensitivity.

Modular CT QA Support

Combine modules with the CT ACR 464 Phantom for expanded, independent CT QA. Or, combine them with the Advanced Electron Density Phantom or the Multi-Energy Phantom, to create a robust system for testing image quality and other parameters such as dose distributions concurrent with evaluating Multi-Energy CT performance and performing HU calibrations.

Low-Contrast Detectability Module

Use this module to test the low-contrast detectability of the most demanding CT scanners.

- Test performance across scanners and protocols with 3 different contrast levels 0.3%, 0.6%, and 1.0% (3 HU, 6 HU, and 10 HU)
- Ensure robustness against noise with multiple contrast objects

Sized from 1.5 to 25 mm with two of each size

High-Contrast Resolution Module

Use this module to expand your CT ACR 464 testing.

- Includes all resolutions from the CT ACR 464 Phantom, plus high resolution up to 32 lp/cm
- Large bar patterns offer easy visualization and analysis
- Zinc high-contrast material provides visibility without over-ranging scanners

Slice Sensitivity & Geometric Evaluation Module

Use this module to validate slice thickness, slice sensitivity profile, and system geometry.

- Measure slice thickness and slice sensitivity profile with an opposed pair of wire ramps and 2 opposed pairs of bead ramps
- Calculate Modulation Transfer Function with one-off vertical wire
- Check geometric accuracy with 8 acrylic spheres
- Perform MTF measurements with BBs of two different sizes

Uniformity Module

Use this module to assess CT number uniformity.

- Measure uniformity and noise
- Measure distance and calibrate pixel size using 2 embedded BBs spaced 100 mm apart
- Calculate MTF, NPS, and other noise-related metrics
- Doubles as an extension plate for use with the CT ACR 464 Phantom and other Advanced iqModules

Read the full specifications, benefits and scope in datasheet.

Links

Advanced Electron Density Phantom link -

<https://www.sunuclear.com/products/advanced-electron-density-phantom>

CT ACR-464 Phantom link - <https://www.sunuclear.com/products/ct-acr-464-phantom>

RapidCHECK Diagnostic QA Software - <https://www.sunuclear.com/products/rapidcheck-software>

View Sun Nuclear website: <https://www.sunuclear.com/products/multi-energy-ct-phantom>

← Back to partner



Medische beeldvorming / Radiologie › QA fantomen

Model 164A - Stereotactic Breast Biopsy Phantom - Sun Nuclear

The Stereotactic Breast Biopsy Phantom from Sun Nuclear (formerly Gammex) is designed to be used as a training phantom for performing biopsy procedures. It provides a good representation of breast tissue.

Multiple radiopaque lesions are impeded in the phantom to permit multiple uses of the phantom by different personnel.



Model 164A Stereotactic Breast Biopsy Phantom features:

- made of clear gel encased in a soft vinyl for easy compression and a skin-like resistance to needle insertion
- embedded in the gel are radiopaque lesions ranging in size for practicing core biopsies
- liquid dye filled lesions allow for the practice of fine needle aspiration
- compressible within a biopsy instrument

If you want to continue your search for additional information on this product try this [link](#).

← **Back to partner**



Medische beeldvorming / Radiologie > QA fantomen

Mercury 4.0 Phantom - Sun Nuclear

This Advanced CT Performance Assessment Phantom makes it possible to characterize advanced CT features, including Automatic Exposure Control and Iterative Reconstruction, to support protocol optimization and proper dose management for your patients.



Characterization for Effective Dose Management

The Mercury 4.0 Phantom addresses performance and effectiveness of Automatic Exposure Control / Tube Current Modulation, and evaluates image quality for Iterative Reconstruction.

TG-233 Compliance

Meet AAPM Task Group 233 requirements for performance evaluation of CT systems.

Advanced CT Metrics

Collect and analyze data for advanced CT testing recommended by AAPM Task Group 233:

- Automatic Exposure Control
- Noise Power Spectrum
- Modulation Transfer Function & Task Transfer Function
- Detectability (d')
- Cone-beam artifacts
- Superior-Inferior resolution

If you want to know more, take a look at [our partner's website!](#)



Model 711-HN ATOM Max Dental & Diagnostic Head Phantom - CIRS

The Model 711-HN ATOM Max Dental & Diagnostic Head Phantom is a standard of reference for diagnostic radiology of the head. The phantom has been developed to assist clinical and technical staff in the monitoring, selection, verification and training of scanning parameters common to most radiological procedures requiring fine anatomical details.

Model 711-HN ATOM Max Dental & Diagnostic Head Phantom features:

- tissue Equivalent from 50 keV to 25 MeV
- carrying case included
- includes detailed anatomical features
- Frankfurt plane identified to ensure proper alignment
- positioning stand with six degrees-of-freedom
- easy to set up and use

Read more about the Model 711-HN ATOM Max Dental & Diagnostic Head Phantom on the [CIRS website](#)



← [Back to partner](#)



Medische beeldvorming / Radiologie › QA fantomen

Model 083 - Soft Carrying Case - Sun Nuclear

This Soft Carrying Case is designed to protect and transport the Gammex/ Sun Nuclear Ultrasound phantom that is placed in it. It is compact and easy to clean if it becomes soiled.

The case can be used with any of the Gammex/ Sun Nuclear Ultrasound phantoms except the Doppler Flow System (1425A LE) or the (1430LE).

Soft Carrying Case features:

- shoulder strap for easy carrying
- foam-lined for protection of the phantom and other contents
- specifically designed for holding the Gammex Ultrasound phantoms
- made of durable material for long lasting protection of the phantom





Model 404 - Precision Small Parts Grey Scale Phantoms - Sun Nuclear

The 404GS LE precision Small Parts Grey Scale Phantom provides advanced technology for measuring image quality of small parts and intra-cavity ultrasound scanning systems. The phantom also contains grey scale parts for additional measurement capability.

The 404 LE has the same general target layout and specifications as the 404GS LE but it does not include grey scale targets.

Both Sun Nuclear phantoms incorporate the latest Gammex Tissue Mimicking gel technology to provide a smoother background texture than what is provided by conventional tissue mimicking gels.

The convertible water dam permits easy changeover for its use or non-use. It is included on both the 404GS LE and the 404 LE.



Precision Small Parts Grey Scale Phantoms features:

- the phantom utilizes the unique Tissue Mimicking gel of Gammex
- combination of anechoic cyst, grey scale and pin targets to permit a wide range of testing.
- convertible water dam
- measure to depths of up to 9 cm
- varying sizes and depths of each type of target
- resolution patterns and all vertical and horizontal targets are made of 0.1 mm nylon fibers
- low scatter cysts of 1, 2, 4 and 7 mm diameters to better evaluate system noise and distortion



Model 405 - Precision Resolution Grey Scale Phantom - Sun Nuclear

The Precision Resolution Grey Scale Phantom is designed to work with high resolution ultrasound systems.

Sun Nuclear's 405GSX LE incorporates the latest Gammex Tissue Mimicking gel technology to provide a smoother background texture than what is provided by conventional tissue mimicking gels. The phantom contains all of the quality indicators for performing a wide range of evaluations. Grey scale targets are included in the phantom.

The convertible water dam permits easy changeover for its use or non-use.

Precision Resolution Grey Scale Phantom features:

- the phantom utilizes the unique Tissue Mimicking gel of Gammex
- combination of anechoic cyst, grey scale and pin targets to permit a wide range of testing.
- convertible water dam
- reference markers within the phantom permits exact alignment of transducer each time testing is performed
- measure to depths of up to 16 cm
- varying sizes and depths of each type of target



← Back to partner



Medische beeldvorming / Radiologie › QA fantomen

Model 406 - Dual Attenuation Phantom - Sun Nuclear

The Sun Nuclear (formerly Ga Dual Attenuation Phantom) is essentially 2 phantoms in 1. The phantom permits quality control tests over a wide range of frequencies.

The 406 LE is a highly effective instrument for demonstrating superior image quality while challenging high performance ultrasound systems. The phantom provides a comprehensive profile of the scanner's overall image quality.

Dual Attenuation Phantom features:

- contains both 0.5 and 0.7 dB/cm/MHz attenuations in a side-by-side configuration
- the phantom uses the Gammex Tissue Mimicking gel with a smoother background texture.
- the Phantom uses a composite film scanning surface with improved transmission properties
- the phantom has target depths to 16 cm deep
- resolution patterns and all vertical and horizontal targets are constructed of 0.1 mm nylon fiber.
- three sets of axial resolution targets.
- scatter-free cylinders of 2, 4 and 6 mm diameter that mimick blood vessels

Do you want to know more about the Dual Attenuation Phantom?

If you want to continue your search for additional information on this product try this [link](#).



← Back to partner



Medische beeldvorming / Radiologie > QA fantomen

Model 408 - Spherical Lesion Phantom - Sun Nuclear

This Spherical Lesion Phantom from Sun Nuclear (formerly Gammex) is used to test the resolution of Ultrasound scanners. It tests in 3 dimensions: axial, lateral and elevational.

The phantom contains both 2mm and 4mm diameter tissue mimicking spherical lesions which lie in a single plane at the center of the phantom. Axial, lateral and elevational resolution are accounted for simultaneously and equally for all types of ultrasound systems and configurations.

Spherical Lesion Phantom features:

- contains both 2mm and 4mm diameter tissue mimicking spherical lesions
- the 2mm section contains 105 anechoic spheres at 0.5cm depth intervals
- the 4mm section contains 211 anechoic spheres at 0.75 depth intervals
- tissue Mimicking gel used provides smoother background texture
- lesions produced with negligible echogenicity while producing no distal enhancement or shadowing
- TM gel optimized for use with tissue harmonics imaging technology
- composite film scanning surface provides improved transmission properties permitting more of the ultrasonic beam to be transmitted and received.

Do you want to know more about the Spherical Lesion Phantom?

If you want to continue your search for additional information on this product try this [link](#).



[← Back to partner](#)



Medische beeldvorming / Radiologie > QA fantomen

Model 416 - Ultrasound Transducer Evaluation Device UTED - Sun Nuclear

The Ultrasound Transducer Evaluation Device UTED provides an EASY, FAST & ECONOMICAL way to test your transducer elements.

Ultrasound Transducer Evaluation Device

UTED features:

- silicone-based phantom
- varying surfaces and chambers
- compact



← [Back to partner](#)



Medische beeldvorming / Radiologie › QA fantomen

Model 411 - LE Tissue Mimicking QC Phantom - Sun Nuclear

The Tissue Mimicking QC Phantom 411 LE is designed to meet the needs of the small ultrasound lab. This phantom provides a standard of quality assurance required for routine testing of ultrasound scanning systems.

411 LE Tissue Mimicking QC Phantom features:

- the phantom utilizes the unique Tissue Mimicking gel of Gammex
- one mid-depth axial resolution target at 6 cm with pins spaced at 0.5, 1 and 2 mm.
- single 6 mm diameter anechoic cyst at 5 cm
- all pin targets are constructed of 0.374 mm nylon fibers



← Back to partner



Medische beeldvorming / Radiologie › QA fantomen

Model 410 - Multi-Purpose Accreditation Phantom - Sun Nuclear

The 410 family of Multi-Purpose Accreditation Phantom lets you pick and choose what level of testing is right for your quality assurance program. All 410 phantoms will allow you to evaluate uniformity and artifacts, geometric accuracy and system sensitivity. This phantom provides a standard of quality assurance required for routine testing of ultrasound scanning systems.

Multi-Purpose Accreditation Phantom features:

- the phantom utilizes the unique Tissue Mimicking gel of Gammex
- multiple scanning surfaces to easily test all types of transducer shapes
- uniformity Assessments
- sensitivity Assessment Dead zone Assessments
- harmonic Imaging

Do you want to know more about the Multi-Purpose Accreditation Phantom?

If you want to continue your search for additional information on this product try this [link](#).



← [Back to partner](#)

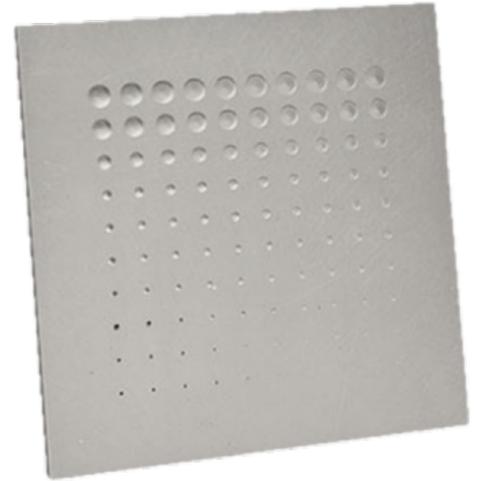


Medische beeldvorming / Radiologie › QA fantomen

Model 1151 - Radiographic Contrast / Detail Phantom - Sun Nuclear

This Radiographic Contrast / Detail Phantom from Sun Nuclear (formerly Gammex) is used to determine the threshold contrast characteristics and to monitor performance of a radiographic or fluroscopic system.

The phantom is an aluminum plate with a matrix of holes. All of the holes in a given row have a constant depth. All of the holes in a given column have a constant diameter. From this a 10 point curve is constructed by observing the shallowest depth hole that can be seen for each hole diameter.



Radiographic Contrast / Detail Phantom features:

- aluminium construction
- easy to use tool
- easy to transport

← [Back to partner](#)

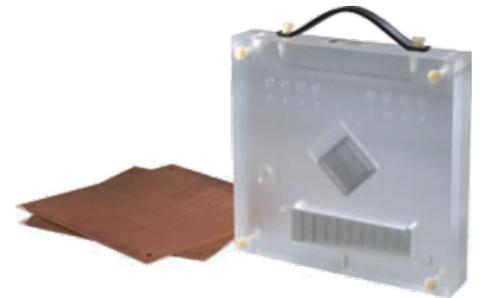


Medische beeldvorming / Radiologie › QA fantomen

Model 170NJ - Radiographic Survey Phantom - Sun Nuclear

The Sun Nuclear (formerly Gammex) 170NJ phantom provides a simple and reproducible test tool for interfacility surveys and intra-department comparison of radiographic systems.

For routine quality control, the phantom images provide a rapid assessment of high contrast resolution, low contrast detectability, radiographic exposure consistency as well as radiation light-field alignment and collimation accuracy.



Radiographic Survey Phantom features:

- designed to optimize portability and ease of use
- designed for use in 3 ranges of clinical settings:
 - 60 kVp
 - 75 kVp
 - 120 kVp
- each phantom is equipped with a carrying strap, tripod mounting assembly and built-in levels for quick set up and orientation in a variety of clinical settings
- includes 2 thicknesses of Copper plate.



Model 610 - Neonatal Chest Phantom - Sun Nuclear

The Gammex 610 Neonatal Chest Phantom is designed for routine quality assurance monitoring of computed and digital radiography systems.

The phantom replicates both the anatomic structure and the tissue attenuation characteristics of a real neonate. The 610 phantom can be imaged using clinical protocols, requiring in a test of the entire imaging chain, including image processing parameters.

The phantom is the first anthropomorphic neonatal phantom that adequately represents a 1-2 Kg neonate in its transmission characteristics, histogram, physical size and structure.



Neonatal Chest Phantom features:

- accurate representation of neonate in transmission characteristics.
- interchangeable lung insert pieces that permit imaging examination of pneumothorax and hyaline membrane conditions
- compact size
- composed of Solid Water material
- light weight custom carrying case

← Back to partner



Medische beeldvorming / Radiologie › QA fantomen

Model 464-Ring - CT Phantom Extension - Sun Nuclear

Users of Sun Nuclear's (formerly Gammex) 464 CT phantom frequently want a better indication of the scanner's performance with a phantom that more accurately mimics a torso. The optional 464-Ring torso adapter permits the use of the 464 Accreditation in this type of application.

The 464 phantom can easily be inserted into the 464-Ring adapter to permit quick imaging in these situations. Users gain the advantage of being able to check the Quality Assurance on 16 different parameters with an anthropomorphic testing phantom in addition to other QA applications they may be required to perform, thus saving money that would otherwise be required for purchase of an entirely new phantom.

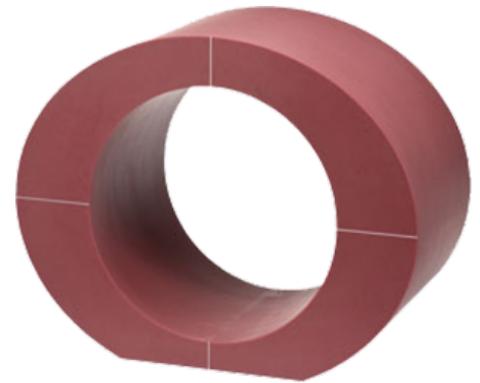
The Torso adapter is not a requirement for use in any Quality Assurance testing program.

CT Phantom Extension features:

- Solid Water construction
- made of multiple modules and shaped to better mimic a torso
- white scribed markings help ensure proper alignment
- designed to work exclusively with the 464 CT Phantom

Do you want to know more about the CT Phantom Extension?

If you want to continue your search for additional information on this product try this [link](#).



← **Back to partner**



Medische beeldvorming / Radiologie > QA fantomen

CT ACR 464 Phantom - Sun Nuclear

The ACR CT Accreditation Phantom from Sun Nuclear (Gammex) is designed to be an integral part of the American College of Radiology (ACR) CT Accreditation Program. This voluntary program provides physicians with an opportunity for a comprehensive peer review of their CT facility, personnel qualifications, image quality and quality assurance programs.

The phantom can be used for initial QA assessment and routine monthly QA testing to help ensure that patients are receiving the lowest possible CT dose.

The Gammex ACR CT phantom is the only phantom authorized for use in the ACR CT Accreditation Program. Gammex submits the phantoms to rigorous quality control testing standards, as outlined by ACR, to assure users of the high level of performance and integrity of each phantom.

ACR CT Accreditation Phantom features:

- designed to meet specifications of ACR for CT accreditation
- Solid Water construction
- made of 4 modules designed to measure a wide range of scanner parameters
- white scribed markings on the axial coronal and sagittal axis help ensure proper alignment
- measure
 - positioning
 - CT number accuracy
 - alignment
 - slice thickness
 - low contrast resolution
 - CT number uniformity
 - high contrast resolution

Do you want to know more about the ACR CT Accreditation Phantom?

If you want to continue your search for additional information on this product try this [link](#).

Links

RapidCHECK Diagnostic QA Software

- <https://www.sunnuclear.com/products/rapidcheck-software>

Advanced iq modules -

<https://www.sunnuclear.com/products/advanced-iqmodules>



Multi Energy CT Phantom -
<https://www.sunnuclear.com/products/multi-energy-ct-phantom>

View Sun Nuclear
website: <https://www.sunnuclear.com/products>

← Back to partner



Medische beeldvorming / Radiologie › QA fantomen

Model 464 - ACR CT Accreditation Extension Plates - Sun Nuclear

Accurately represent scatter effects from widebeam CT scanners with the ACR 464 extension plates from Sun Nuclear (Gammex). Made from identical solid water materials, these extension plates allow images to begin and end in the same material to eliminate artifacts that may be introduced by scanning in air.



ACR CT Accreditation Extension Plates features:

- this kit includes two Extension Plates with an adjustable stand to accurately represent scatter effects from wide-beam CT scans. The extension plates allow images to begin and end in the same material to eliminate artifacts that may be introduced by scanning in air.
- Solid Water construction
- designed to work exclusively with the 464 CT Phantom

Do you want to know more about the ACR CT Accreditation Extension Plates?

If you want to continue your search for additional information on this product try this [link](#).

[← Back to partner](#)



Medische beeldvorming / Radiologie › QA fantomen

Model 182M - Mammographic QC Kit - Sun Nuclear

Quality control provides the necessary assurance that your images contain all the information possible for the delivered dose. Sun Nuclear's (formerly Gammex) 182M Mammographic QC Kit can be used at every type of mammography facility, from small clinics to large medical centers.

Each kit is complete and will provide you with the tools used to perform essential tests.



Model 182M Mammographic QC Kit features:

- image quality
- film/screen contact
- kVp accuracy
- automatic exposure control reproducibility
- timer accuracy
- half value layer
- focal spot size
- output reproducibility and linearity

[← Back to partner](#)



Medische beeldvorming / Radiologie › QA fantomen

Model 179 - Artifact Identification Phantom - Sun Nuclear

Sun Nuclear's (formerly Gammex) 179 Artifact Identification Phantom is a full field device that allows for a grey film to be produced when the phantom is imaged. This will indicate any artifacts that may be caused by a mammographic system's grid or filters.

Model 179 Artifact Identification Phantom features:

- acrylic design



[← Back to partner](#)



Medische beeldvorming / Radiologie › QA fantomen

Model 118 - Mammographic Aluminum Stepwedge - Sun Nuclear

Sun Nuclear's (formerly Gammex) 118 Mammographic Aluminum Stepwedge is constructed from a single piece of High Purity Aluminum. The nine steps have thickness ranging from 0.3 mm to 2.27 mm.



Model 118 Mammographic Aluminum

Stepwedge features:

- made of High Purity Aluminum Alloy and Copper
- made from a single piece of High Purity Aluminum
- compact design

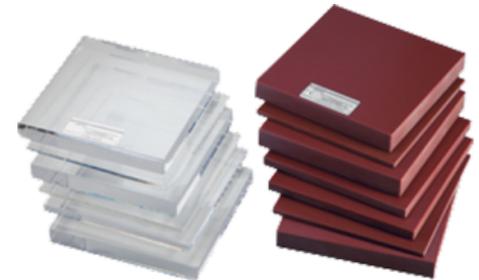
← Back to partner



Medische beeldvorming / Radiologie > QA fantomen

Model 159A / 159A-BR - Mammographic Phototimer Consistency Tool - Sun Nuclear

Sun Nuclear's (formerly Gammex) model 159A and 159A-BR Mammographic Phototimer Consistency Tools are designed to test Automatic Exposure Control (AEC) performance.



Model 159A / Model 159A-BR Mammographic Phototimer Consistency Tool features:

- test tools come in either 7 pieces of acrylic (159A) or 7 pieces of breast tissue equivalent material (159A-BR)
- multiple thicknesses and densities

If you want to continue your search for additional information on mammography accessoires, try this [link](#).

[← Back to partner](#)



Medische beeldvorming / Radiologie › QA fantomen

Model 150K - Mammographic DCF Test Tool - Sun Nuclear

Sun Nuclear's (formerly Gammex) Model 150K Mammographic Density Control Function (DCF) test tool enables a quick and accurate assessment of a film-screen mammography unit's Automatic Exposure Control (AEC).



Model 150K Mammographic DCF Test Tool features:

- engraved density scale and sliding exposure plate
- can slide exposure plate without moving the cassette
- the tool consists of a base plate with a sliding exposure plate which contains a small window
- design permits sliding the exposure plate without moving the plate
- light weight and convenient to use



Model 429 - Ultrasound Biopsy Phantom - Sun Nuclear

The same eye and hand coordination skills required to perform ultrasound-guided biopsies of other organs can be learned using this phantom from Sun Nuclear (formerly Gammex).

The use of ultrasound-guided needle biopsy to diagnose the form and structure of lesions is growing worldwide.

The Ultrasound Biopsy Phantom simulates the look and feel of a human breast.



Model 429 Ultrasound Biopsy Phantom features:

- 11 test objects on three different levels, allowing you to practice identification, aspiration and biopsy procedures on cysts, high-contrast and low-contrast lesions
- simulates the look and feel of a human breast
- the lesions are:
 - 3 fluid-filled cysts
 - 4 high contrast lesions
 - 4 low contrast lesions
- material in the solid lesions are colored to differentiate them from the surrounding tissue
- designed for multiple uses

If you want to continue your search for additional information on this product try this [link](#).

← Back to partner



Medische beeldvorming / Radiologie › QA fantomen

Model 156D - Stereotactic Mammographic Accreditation Phantom - Sun Nuclear

Sun Nuclear's 156D Stereotactic Mammographic Accreditation Phantom with Gammex technology, is used for monitoring digital mammography systems currently used for stereotactic biopsy and localization.

The 156D is accredited by the ACR.

Model 156D Stereotactic Mammographic Accreditation Phantom features:

- compact size
- wax insert contains 12 sets of test objects
- approximates the size of a 4.2 cm compressed breast of 50% glandular and 50% adipose composition
- wax insert contains
 - simulated micro-calcifications of Aluminum oxide specks
 - 4 different size nylon fibers to simulate fibrous structures
 - 4 different size lens-shaped masses to simulate tumors
- replaceable wax insert which contains the targets

Do you want to know more about the Stereotactic Mammographic Accreditation Phantom?

If you want to continue your search for additional information on this product try this [link](#).



← Back to partner



Medische beeldvorming / Radiologie › QA fantomen

Model 157A - Mammographic Film/Screen Contact Test Tool - Sun Nuclear

Today's mammography film/screen systems from Sun Nuclear (with Gammex technology) have higher resolution than diagnostic radiography x-ray systems and require test tools with finer detail. Regular testing with the Gammex 157A detects problems and artifacts early.

Use of the tool and the evaluation of the resulting images is simple. Areas of poor screen contact appear darker than areas of good contact. Any dark areas greater than 1 cm should be investigated and corrective action taken.

Sun Nuclear recommends testing cassettes every six months or when new or repaired cassettes are put into service.

Model 157A Mammographic Film/Screen Contact Test Tool features:

- screen size of 24 x 30 cm
- mesh size of #40 copper makes the tool ideal for testing new cassettes.
- compact and easy to store

If you want to continue your search for additional information on this product try this [link](#).



← Back to partner



Medische beeldvorming / Radiologie › QA fantomen

Model 156 - Mammographic Accreditation Phantom - Sun Nuclear

Sun Nuclear's (formerly Gammex) Model 156 Mammographic Accreditation Phantom has been #1 phantom listed by the ACR since the start of the MQSA program in 1994. The Gammex 156 provides the physical standard baseline for assuring the quality of the images produced by your mammographic system.

The 156 simulates the x-ray attenuation of a 4.2 cm slab of compressed human breast composed of 50% adipose tissue and 50% glandular tissue. Target objects in the phantom are of known size, shape, and density. These represent the different structures or malignancies found when imaging the breast.

Image quality and system sensitivity is evaluated using these targets and following ACR/MQSA guidelines.

Model 156 Mammographic Accreditation Phantom features:

- the 156 simulates the x-ray attenuation of a 4.2 cm slab of compressed human breast composed of 50% adipose tissue and 50% glandular tissue
- acrylic construction with a replacable wax insert
- test objects composes of nylon fibrils and simulated micro-calcification specs
- provides the test step needed to measure density differences

If you want to continue your search for additional information on this product try this [link](#).



← Back to partner



Medische beeldvorming / Radiologie › QA fantomen

Model 468 - CT Dose Index Phantom - Sun Nuclear

The Model 468 CT Dose Index Phantom from Sun Nuclear (formerly Gammex) has been designed to meet specifications outlined by the Food and Drug Administration (FDA 21CFR 1020.33) and the International Electrotechnical Commission (IEC 60601-2-44). The phantom is offered as a 2-piece or 3-piece nested configuration. Each configuration includes a custom case with nested modules, allowing the user to adapt the phantom to the desired size required by the protocol in use.



CT Dose Index (CTDI) Phantom features:

- easy to use design
- measures absorbed dose and monitor scanner output very fast
- includes a custom hard case for safe storage and easy transportation
- material: polymethyl methacrylate (PMMA/Acrylic)
- adult body 32 cm diameter: 32 cm diameter x 14.5 cm thick
- adult head/pediatric body: 16 cm diameter x 14.5 cm thick
- pediatric head (model 468-BHP only): 10 cm diameter x 14.5 cm thick
- weight: 13.9 kg (30.5 lbs)

If you want to continue your search for additional information on this product try this [link](#).



Partner **Quart**



QUART X-Ray QA Solutions is een in Duitsland gevestigde leverancier van kwaliteitsborgingstechnologieën voor diagnostische beeldvorming en radiologische toepassingen. Hun aanbod omvat QA fantomen, dosimetrie tools, meetsystemen en analysesoftware, die medische professionals ondersteunen bij het handhaven van hoge standaarden voor patiëntveiligheid en nauwkeurigheid van beeldvorming.

Product offering

**QUART DVTap DIN
6868-161**



**QUART IAEA-EFOMP-
ESTRO Test Set**





Medische beeldvorming / Radiologie

QUART DVTap DIN 6868-161



QUART DVTap DIN 6868-161

De DVTap, ontwikkeld gedurende een periode van 2 jaar in een project waarbij grote tandheelkundige fabrikanten betrokken waren, en al in 2007 door QUART uitgebracht, is uitgegroeid tot een nationale en internationale standaardoplossing voor CBCT – gebaseerd op de innovatieve aanpak van ons bedrijf.

Het QUART DVTap-fantoom is ontworpen om te worden gebruikt als universeel hulpmiddel voor 3D-beeldapparatuur, inclusief CT-toepassingen. Het fantoom voldoet volledig aan DIN 6868-161 voor acceptatietests in DVT/CBCT.

In combinatie met speciaal ontwikkelde software (QUART DVTtec) kunnen snelle en uitgebreide CBCT IQ-testen worden uitgevoerd.

Er is slechts één opname nodig om een 3D-gegevensset te creëren die alle vereiste parameters bevat om de CBCT-beeldkwaliteit te evalueren. Geautomatiseerde evaluatie wordt uitgevoerd met de unieke QUART DVTtec-software.

Het fantoom kan worden gebruikt voor veldgroottes van 4×4 cm tot grote gezichtsvelden (FOV). Er zijn een universele houder of op maat gemaakte fantoomhouders verkrijgbaar voor eenvoudige en reproduceerbare positionering.

Technische specificaties

- Ruimtelijke resolutie: lijnspreidingsfunctie
- Resolutie: Z-resolutie
- Standaard testobjecten: PMMA / Lucht / PVC
- Materiaalequivalenten: vrije lucht / zacht weefsel / bot
- Positioneringshulpmiddelen: lineair (boven) / selectieve markeringen
- Afmetingen: doorsnede 16 cm, hoogte: 15 cm
- Verstrooiingsstralingsmodules: 1x 6 cm / 1x 5 cm

Parameters

- Nyquist-frequentie (NF)
- Contrast-ruisverhouding (CNR)
- Homogeniteit / Beelduniformiteit
- Z-resolutie
- Modulatieoverdrachtsfunctie (MTF)
- Artefacten, beeldfouten

- Figuur van verdienste/acceptatie-indicator

<https://peomedical.com/webinar/quality-control-in-cone-beam-computed-tomography-cbct-efomp-estro-iaea-protocol/attachment/quart-dvt-kp/>



QUART IAEA-EFOMP-ESTRO Test Set

QUART IAEA-EFOMP-ESTRO Test Set

De testset is gemaakt op basis van de aanbevelingen van de drie organisaties, IAEA, EFOMP en ESTRO, voor snelle en tijdefficiënte QA-prestaties op CBCT-beeldvormingsapparatuur.

Deze aanbevelingen zijn voornamelijk gebaseerd op DIN 6868-161 en 6868-15 voor CBCT-kwaliteitsborging.

Deze aanbevelingen zijn voornamelijk gebaseerd op DIN 6868-161 en 6868-15 voor CBCT-kwaliteitsborging.

Er is slechts één opname nodig om een 3D-gegevensset te creëren die alle vereiste parameters bevat om de beeldkwaliteit te evalueren. Geautomatiseerde evaluatie van de beeldkwaliteit wordt uitgevoerd via de unieke QUART CTtec QA/QC-software.

Het DVTkp-fantoom kan worden gebruikt voor veldgroottes van 4x4 cm tot grote gezichtsvelden (FOV). Er zijn aangepaste houders beschikbaar voor verschillende CBCT-systemen.

Technische specificaties:

Ruimtelijke resolutie: lijnspreidingsfunctie

Standaard testobjecten: PMMA / Lucht / PVC

Materiaalequivalenten: vrije lucht / zacht weefsel / bot

Positioneringshulpmiddelen: lineair (boven) / selectieve markeringen

Afmetingen: doorsnede 16 cm, hoogte: 15 cm

Parameters:

- Nyquist-frequentie (NF)
- Contrast
- Lawaai
- Contrast-ruisverhouding (CNR)
- Homogeniteit / Beelduniformiteit
- Ruimtelijke resolutie/modulatieoverdrachtsfunctie
- (MTF) bij 10% en 50% modulatie
- Modulatieoverdrachtsfunctie (MTF) volgens IEC 62220-1-2
- CT-nummers / Hounsfield-eenheden
- Z-asresolutie / NF en MTF in axiale richting



- Artefacten, beeldfouten, enz.
- Systeeminindicator / acceptatie-indicator (graad van verdienste)
- Nauwkeurigheid van patiënt-/fantompositionering
- Aanvullende QA/QC-gerelateerde tests zoals geometrie- en afstandsmetingen etc. moeten worden uitgevoerd in een externe DICOM-viewer

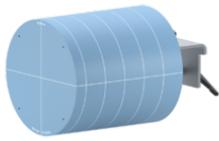
<https://www.sciencedirect.com/science/article/abs/pii/S1120179717301837>



Partner **Overige**

Product offering

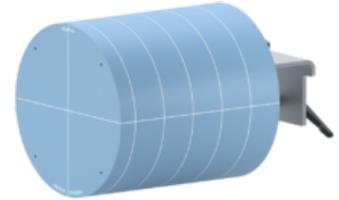
**IQphan™ Uitgebreide
CT-beeldkwaliteit
Phantom**



IQphan™ Uitgebreide CT-beeldkwaliteit Phantom



- Voer kwaliteitscontrole uit op CT-beeldvormingssystemen, van geavanceerde diagnostische scanners tot cone beam-systemen en ingebouwde radiotherapiesystemen
- Gebruik met RapidCHECK™ Image Quality Analysis-software voor veeleisende CT-beeldkwaliteitstests, met snelle, consistente analyse
- Gemaakt van echt weefsel-nabootsend HE CT Solid Water®



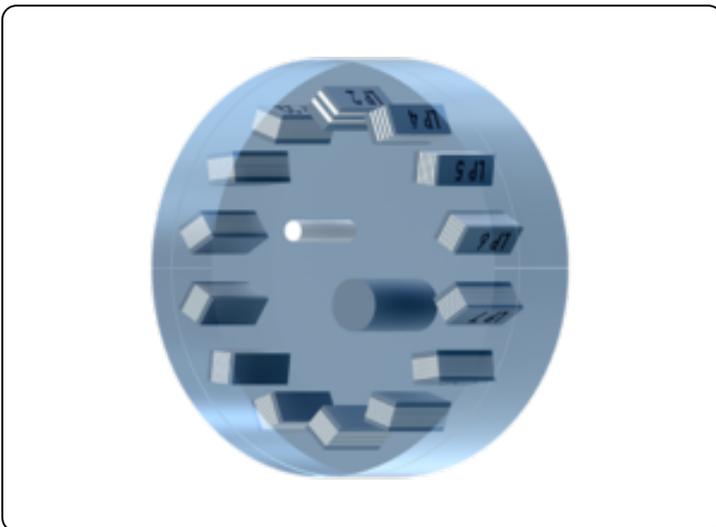
Er is een groot aantal CT-beeldvormingssystemen, die de diagnostische en radiotherapieruimten bestrijken. Deze breedte was een uitdaging voor QA vanwege de verschillende prestatiekenmerken van deze systemen. Met IQphan adresseert één enkel fantoom QA over het hele bereik van specificaties van verschillende CT-scanners, waardoor u meer QA-informatie kunt verkrijgen dan mogelijk beschikbaar is met andere fantomen.

Uitgebreide beeldkwaliteit Phantom

Met IQphan kunnen gebruikers QA uitvoeren op CT-beeldvormingssystemen, van geavanceerde diagnostische scanners tot cone beam-systemen en ingebouwde radiotherapiesystemen. Een combinatie van modules ondersteunt een robuuste verscheidenheid aan tests.

Geautomatiseerde analyse

Gebruik IQphan met RapidCHECK™ Image Quality Analysis-software voor veeleisende CT-beeldkwaliteitstests, met snelle, consistente analyse.

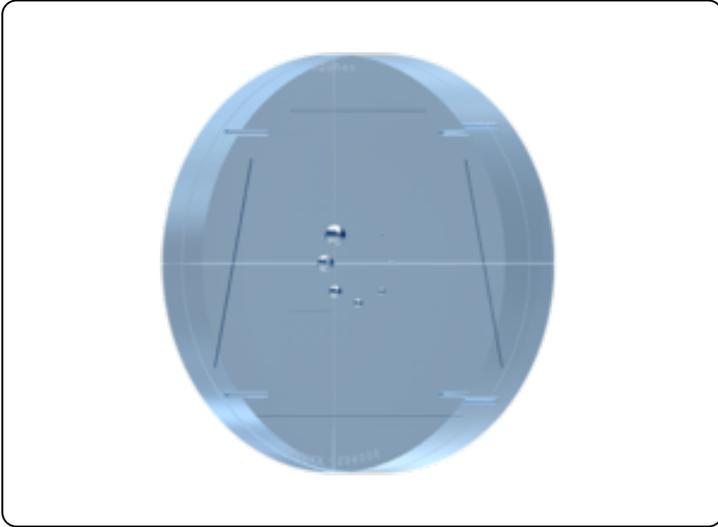


Resolutiemodule met hoog contrast

Deze module is ontworpen voor handmatige en geautomatiseerde analyse en beschikt over lijnparen met hoge resolutie, grote 3D-patronen die gemakkelijk te visualiseren zijn

en robuuste gegevensanalyse in de RapidCHECK-software.

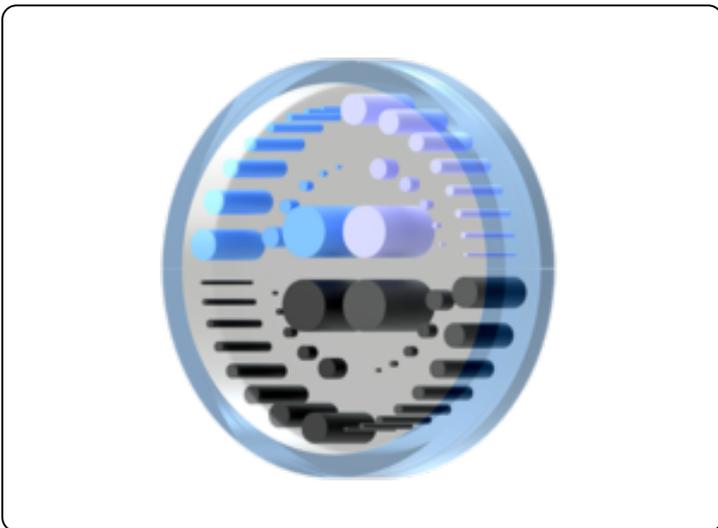
- Alle lijnpaardoelen zijn 45° ten opzichte van de radiale lijn gericht voor een consistente balans tussen radiale en omtrekresolutie
- Inclusief hoge resoluties tot 22 lp/cm
- Ontworpen voor automatisering: Inclusief solide monsters van resolutiemateriaal voor nauwkeurige resultaten tijdens softwareanalyse¹
- Zink-materiaal met hoog contrast zorgt voor zichtbaarheid zonder scanners die te ver gaan



Module voor segmentdikte- en geometrische evaluatie

Dankzij meerdere draadrampmaterialen en -diameters kan deze module de plakdikte analyseren op scanners variërend van diagnostische CT tot CBCT en MVCT.

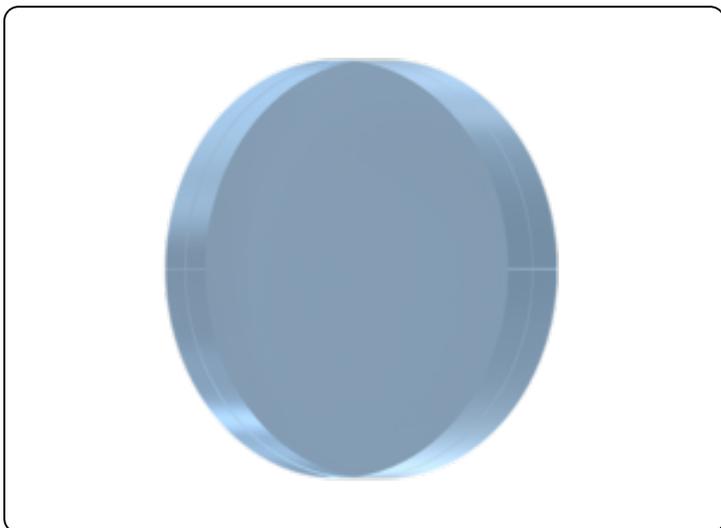
- Meet de snijdikte met twee tegenover elkaar liggende paren draadhellingen, één paar dunner en één paar dikker
- Maakt modulatieoverdrachtsfunctie mogelijk met eenmalige verticale draad
- Controleer de geometrische nauwkeurigheid met een set van 8 acrylbollen
- Voer MTF-metingen uit met BB's van twee verschillende maten
- Robuust voor een breed scala aan CT-systemen, van diagnostisch tot RT



Detectiemodule met laag contrast

Eindelijk een test met laag contrast die zowel werkt voor radiotherapiesystemen als voor diagnostische CT. Daag uw high-end systemen uit met contrasten van 0,3% en 0,6%. Test uw CT-systemen voor radiotherapie met lichaamsachtige contrasten van 1,0% en 2,0%, in formaten variërend van 2,0 tot 25,0 mm.

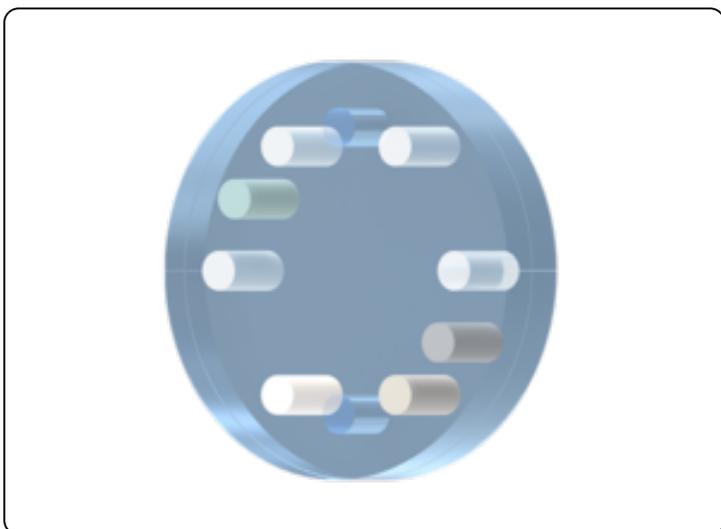
- Evalueer de detecteerbaarheid van laag contrast op vier verschillende contrastniveaus: 0,3%, 0,6%, 1,0% en 2,0% (3 HU, 6 HU, 10 HU en 20 HU)
- De afmetingen van elk contrastobject variëren van 2 tot 25 mm
- Op lage Z-dichtheid gebaseerde contrasten
- De vier nauwkeurig geformuleerde contrastniveaus maken gebruik van dichtheidsvariaties van lage-Z-materialen voor consistentie tussen CT-energieën



Uniformiteitsmodule

Beoordeel ruis en uniformiteit in ons HE CT Solid Water-materiaal.

- Meet uniformiteit en ruis
- Gemaakt van HE CT vast water voor ongeëvenaarde waterequivalentie over het hele energiespectrum



HU-module

Test de consistentie van bekende HU-materialen en meet de effectieve energie van de scan.

- 12 materiaalmonsters
- Materialen omvatten Tissue-Mimicking Materials (TMM's) en veelgebruikte kunststoffen
- Bot is niet alleen maar compact plastic; TMM's bevatten materialen met een hogere Z die de kalibraties en effectieve energiemetingen kunnen verbeteren

