

QUALITY ASSURANCE IN RADIATION THERAPY

Product Overview Pictures & Texts



LAP: QUALITY ASSURANCE IN RADIATION THERAPY

General Information

Short Version:

Quality Assurance in Radiation Therapy

LAP has developed sophisticated phantoms and software for the widest range of QA tasks - for precise and reliable testing.

Long Version:

Quality Assurance in Radiation Therapy

Phantoms are an essential component of quality assurance in radiation therapy. Medical devices and patient treatment plans require continuous testing, using phantoms, in everyday clinical use.

Software QA is already in standard use in many countries. Treatment plan parameters and a calculated radiation dose, for example, are verified with what are known as “secondary checks.” The repetitive software inspection verifies your calculated data or identifies deviations.

Phantoms and software from LAP are intelligently designed and versatile in their application. A modular design and compatibility with conventional detectors (such as ionization chambers, diodes, etc.) provide extensive coverage of quality assurance tasks.

LAP: QUALITY ASSURANCE IN RADIATION THERAPY

Products and Information

Products for QA in radiation therapy



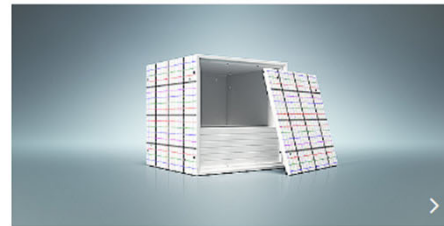
RADCALC® DOSIMETRIC VERIFICATION SOFTWARE

Verify the dose and prove the treatment plan with our powerful QA software.



THALES 3D MR SCANNER

Motorized water phantom for commissioning and quality assurance at MR-guided LINACs



EASY CUBE

A cube-shaped test phantom with four modular expansion options



EASY SLAB

The slab phantom for repetitive QA tasks on the linear accelerator



AQUARIUS

MR phantom for quality assurance of coincidence of DORADOnova MR3T and MRT

QUALITY ASSURANCE IN RADIATION THERAPY

Products and Information: RadCalc



Picture Name: RadCalc_BC_Logo_1504x752_Ebene1

Text for Picture Description:

RadCalc

Independent Dosimetric Verification Software for Secondary Check

Further information/ text:

How do you verify your TPS calculations?

Safety is a priority in radiation therapy. Every measurement has to be as accurate as possible. Various QA processes can produce different results; therefore it is imperative to independently verify calculations a second time. This is exactly what RadCalc® does: Independently verify dosimetric calculations in an easy to use software platform.

Here is a selection of RadCalc® advanced features:

IMRT support

MLC support

VMAT support

3D dose volume Brachytherapy module

TomoTherapy® verification module

CyberKnife® support

Gamma Knife® module

The software was developed to simplify the QA process which has become more complex and expansive. Choose the modules and features you need, import your data, calculations can then be fully automated once exported from your TPS. RadCalc® takes the lead for your secondary check.

Demos are available on request.

QUALITY ASSURANCE IN RADIATION THERAPY

Products and Information: Thales 3D MR Scanner



Picture Name: Thales_1504x752_Ebene1

Text for Picture Description:

THALES 3D MR SCANNER

Motorized water phantom for commissioning and quality assurance at MR-guided LINACs

Further information/ text:

STRINGENT REQUIREMENTS FROM NEW MR LINAC TECHNOLOGY

The age of MRI-based radiation therapy is upon us. This also means new challenges in terms of quality assurance, as existing water phantoms for commissioning and annual inspection of MR LINACs are not suited to this environment. On the one hand, repeatable and precise control in the magnetic field is virtually impossible with conventional water phantoms; on the other, the accelerator design imposes geometric limits.

The demands placed on a motorized water phantom for MR LINACs are therefore high:

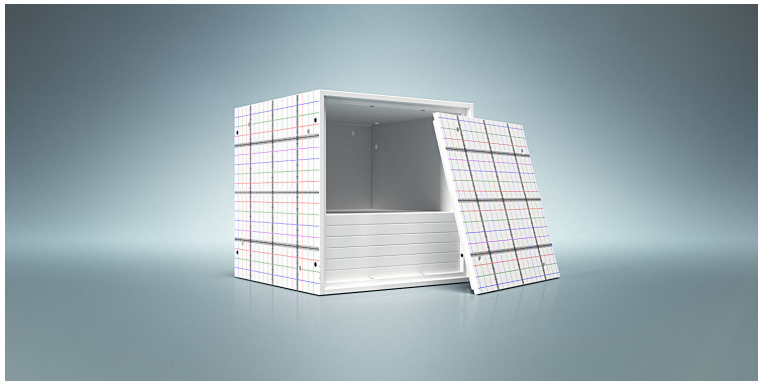
- no ferromagnetic components
- radiation-resistant components
- lightweight and compact design

DEVELOPMENT IN PROGRESS

THALES 3D MR SCANNER is developed for and with ViewRay MRIdian users. Prototypes are being tested worldwide by renowned institutions. Sales launch is planned for the end of 2019.

QUALITY ASSURANCE IN RADIATION THERAPY

Products and Information: Easy Cube



Picture Name: EASYCube_offen_1504x752_Ebene1-2

Text for Picture Description:

EASY CUBE

Multi-modular phantom in water-equivalent RW3 material for quality assurance in radiation therapy

Further information/ text:

For regular quality assurance in radiation therapy

Repeated machine and treatment plan QA, in accordance with legal requirements, is an essential part of radiotherapy. Patients can only be irradiated with precision if each measurement is accurate.

EASY CUBE is a water-equivalent phantom for the widest variety of quality assurance tasks: commissioning, dosimetry, machine QA, and patient treatment plan QA.

Verification of the entire treatment chain is possible with the universal phantom design. From dose distribution verification to a complete end-to-end test - EASY CUBE adapts to your individual quality assurance requirements.

QUALITY ASSURANCE IN RADIATION THERAPY

Products and Information: Easy Slab



Picture Name: EASYSlab_1504x752_Ebene1

Text for Picture Description:

EASY SLAB

Slab phantom in water-equivalent RW3 material for regular dosimetry on the LINAC

Further information/ text:

Easy dosimetry implementation

Dosimetric measurements on the LINAC are a recurring, standard quality assurance task. It should be simple and reliable to implement - without requiring long setup times or phantom configuration. EASY SLAB is made up of 29 stackable plates with thicknesses of 10 mm, 1 x 5 mm, 2 x 2 mm, and 1 x 1 mm (30 x 30 cm version). These allow millimeter-accurate dose measurement.

For your specific measurement, 40 chamber adapters are available. Precise adapter plates are available as well, or can be manufactured individually. Water-equivalent RW3 material (polystyrene with titanium oxide admixture) has excellent properties for dose verification.

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Products and Information: Aquarius



Picture Name: _Aquarius_4000x2000_Ebene1_02

Text for Picture Description:

AQUARIUS

Phantom for quality assurance of the coincidence of laser system and MRT

Further information/ text:

Align your lasers precisely and easily with AQUARIUS

Check the alignment of your DORADOnova MR3T laser system easily, safely and reliably with the AQUARIUS phantom. The alignment of the lasers to the central axis of the MRT is uncomplicated and fast thanks to the practical levelling aids. A mark that is clearly visible from all perspectives indicates the centre of the MRT. Aquarius can be used in any combination of magnetic resonance tomographs and lasers in an MR environment.

LAP LÜNEBURG

Company headquarters and production



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