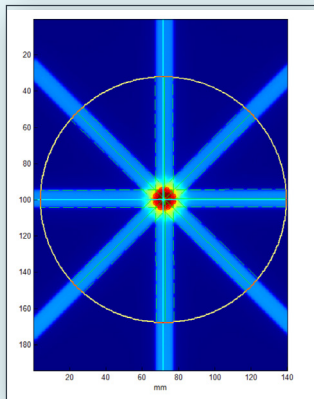
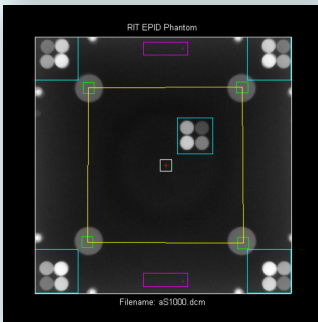
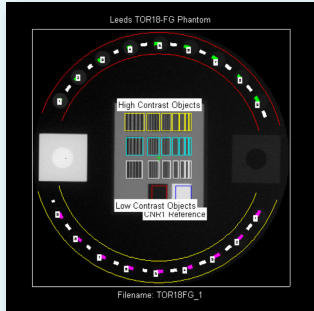
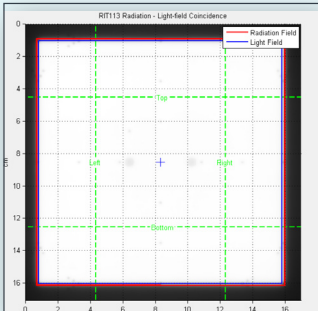


OPTIMIZED TG-142 QA



RIT software completely streamlines your TG-142 QA by maximizing precision and efficiency in your measurements. Use your EPID to perform all required machine QA tests, with both confidence and ease.

In addition, imaging QA phantoms are automatically scored with easy-to-use tracking and trending functions. Images are sorted and analyzed using Cerberus, a built-in automation feature, which can be used to significantly reduce QA time and lessen the burden of performing routine QA procedures. It can match many set criteria, such as file naming patterns, DICOM tag matches (up to 4 DICOM tags may be used), or file types.



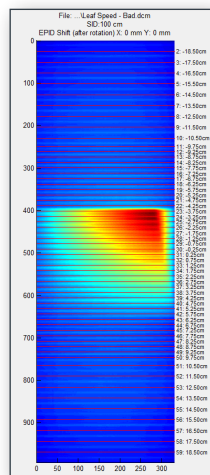
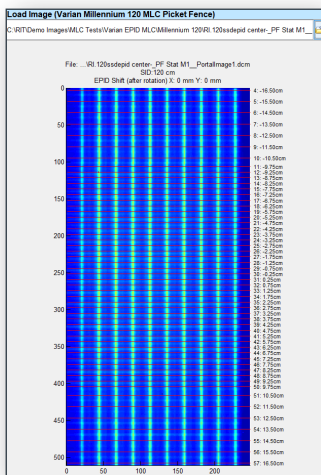
Monitor your system's behavior with powerful process control by exporting your results to the RITtrend™ statistical analysis database. Quickly and seamlessly export data with a single click. RITtrend™ is included in most RIT software packages.

RITtrend™ is a trademark of Radiological Imaging Technology, Inc.

AUTOMATED MLC QA

RIT conveniently supplies picket fence plans for Millennium 120, HD120, and Halcyon MLCs. These pre-made, automated plans allow for fast and accurate MLC QA, with minimal setup. Complete your MLC QA with the RapidArc and MLC Leaf Speed analysis routines.

- Automated Varian RapidArc® Tests**
 Images may be taken at any distance from EPID, Film, or CR Images. This includes: Tests 0.1, 0.2, 1.1, 1.2, 2, and 3. RIT's RapidArc QA routines support the Millennium 120, HD120 MLC, and Halcyon MLC models.
- Varian Leaf Speed Test**
 Without the use of log files, this test measures the consistency and accuracy of Varian MLC leaf speeds as they move across an imager.
- Varian Halcyon® MLC Analysis**
 Easily perform MLC QA, including a picket fence or comprehensive RapidArc analysis of the Varian Halcyon machine, used for image-guided radiation therapy (IGRT). RIT software will easily interface with the machine's dual-layer multi-leaf collimator.



IMAGING TESTS

CATPHAN® 504 & 604 FOR VARIAN OBI

RIT's Catphan® analysis has been carefully designed to provide automated CBCT QA for the Varian OBI. Analyze all relevant slices of the Catphan® 504 or 604 in one easy step, and quickly get comprehensive reports for:

- HU constancy and linearity
- Geometric accuracy
- Slice thickness
- Spatial resolution
- Uniformity and noise

PLANAR MV (EPID) IMAGING

For EPID phantoms, RIT provides quality imaging QA and performs all tests recommended in TG-142. Results are accurate and consistent. Quickly perform measurements of resolution, contrast, noise, uniformity, and geometric scaling all in one image. RIT software supports Las Vegas, QC-3 (now capable of analyzing magnified images), and PTW EPID phantoms. TG-158 and Varian QA acceptance criteria have been added for the Las Vegas EPID.

PLANAR kV IMAGING

RIT software is designed to support vendor-supplied phantoms for planar kV imaging. Using your Leeds TOR-18 FG phantom, you can quickly and easily meet all TG-142 recommendations for planar kV imaging QA in one exposure. Analysis of the QC-kv1 phantom is also supported, with consistent, quantitative, and repeatable results that can be tracked in RIT*trend*™.

IGRT / kV-MV COINCIDENCE

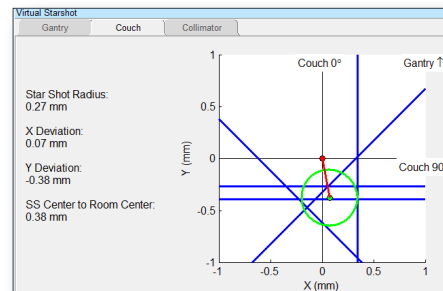
Perform precision IGRT daily QA with the Standard Imaging ISOcube phantom and RIT software. Quickly and quantitatively perform positioning-repositioning, laser alignment, field size checks, kV and MV coincidence measurements, CBCT isocenter coincidence, ODI accuracy, and 6 Degree-of-Freedom Couch Test.

Analysis of the Penta-Guide phantom is supported for kV/MV/CBCT image coincidence.

ISOCENTER OPTIMIZATION

Using only a set of 3-16 EPID Winston-Lutz images, the RIT system will calculate deviations between radiation and mechanical isocenter, determine ball/BB setup error, and suggest couch alignment adjustments to optimize your system's accuracy. This routine enables individual component (gantry, collimator, couch) characterization to better understand distinct contributions to isocenter deviation, giving insight into adjustments that can be made to improve delivery performance, if needed. Increased angle flexibility allows you to mimic more clinically relevant angles to determine isocenter at specific treatment configurations.

Eliminate your need for films, and increase your accuracy by using RIT's Virtual Starshot, reconstructed using a set of Winston-Lutz images!



Integrate the Cerberus feature with Isocenter Optimization for hands-free, fully automated image analysis.

US 9192784, JP 6009705, CA 2918045, and other international patents pending.

OTHER RELEVANT TG-142 TESTS

BAYOUTH MLC TEST

This test analyzes the MLCs that require leaf gaps between banks.

RADIATION VS. LIGHT FIELD ALIGNMENT

Perform quick easy EPID-based radiation vs. light field alignment with the L-Rad phantom. Fiducial markings for 5 x 5 cm, 10 x 10 cm, 15 x 15 cm, and 20 x 20 cm provide a wide range of testing.

BEAM PROFILES

Perform quick and easy measurements for starshots, flatness and symmetry, FWHM, penumbras, depth-dose curves, and more.

RIT*trend*™ is a trademark of Radiological Imaging Technology, Inc.
Catphan® is a registered trademark of The Phantom Laboratory