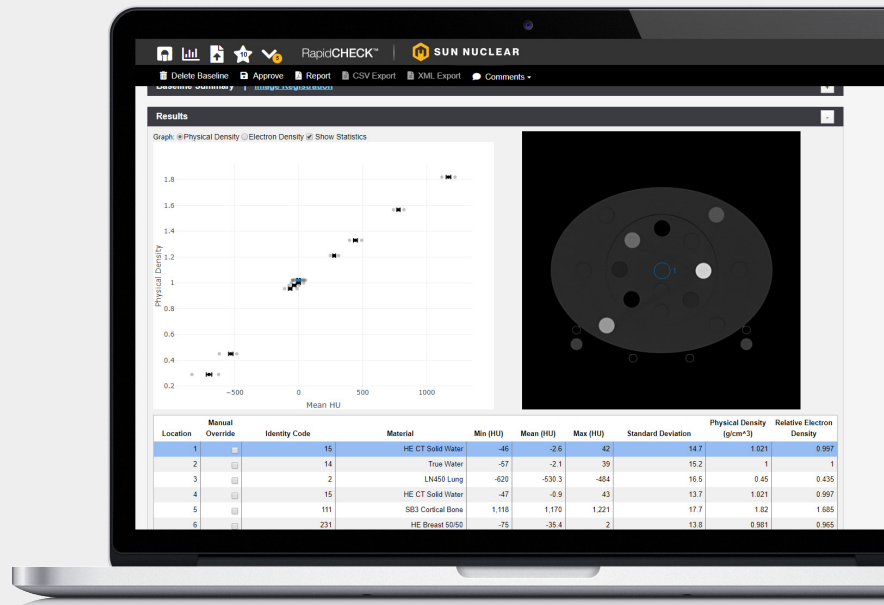# SUN NUCLEAR
A MIRION MEDICAL COMPANY

Rapid**CHECK**™

Automated Analysis for CT-to-Density Calibration & CT Image Quality

RapidCHECK™ is an automation platform that brings together intuitive software and QA phantoms for efficient and standardized QA workflows.

Use RapidCHECK with:

- The **IQphan Phantom** to quickly process CT data into results and reports

- The **CT ACR 464 Phantom** for faster analysis, trending reports, and an easily searchable permanent record

- The **Advanced Electron Density Phantom** for faster, less tedious calibration of the CT-to-electron density table.

Browser-Based

Access RapidCHECK from any browser in your clinical network to simplify workflow, regardless of clinic size. The platform is installed locally; data can be stored in the location of your choice; and there are no per-use fees.

RapidCHECK in Action

With IQphan, perform QA across CT imaging systems, from sophisticated diagnostic scanners to cone beam to on-board radiotherapy systems. Use with RapidCHECK for exacting CT imaging quality testing, with quick, consistent analysis.

Using RapidCHECK with Sun Nuclear's ACR 464 Phantom allows you to define a baseline with your initial scan. RapidCHECK will suggest tolerance values based on ACR guidelines and empirical measurements. With the baseline set, each scan is evaluated and scored against your defined tolerances, eliminating inter/intra-use variation.

With the Advanced Electron Density Phantom, RapidCHECK automatically finds and identifies the material of each rod – and streamlines the CT-to-electron density table report.

RapidCHECK requires a system running Windows 10 (Pro, Enterprise, and Educational) or Windows 11 (Pro, Education, Enterprise, Pro Education)
with either Microsoft Edge or Google Chrome browsers, with at least an i3 processor, 8 GB RAM, and 10 GB of drive space.
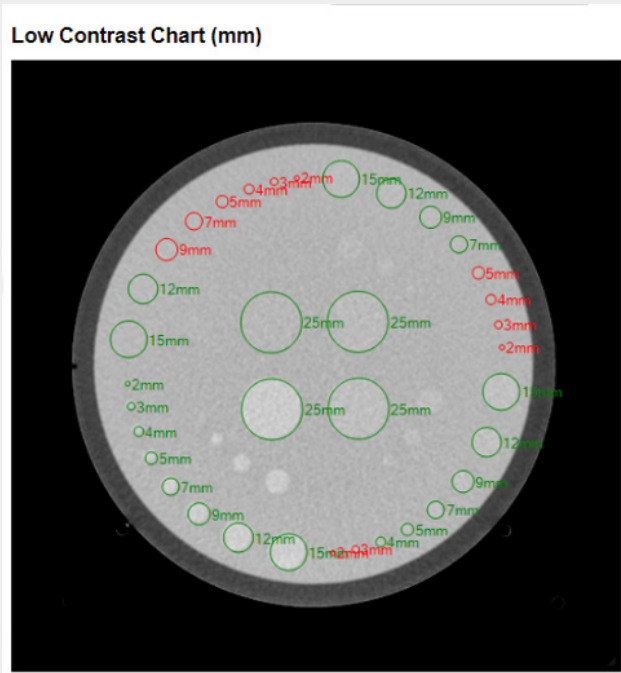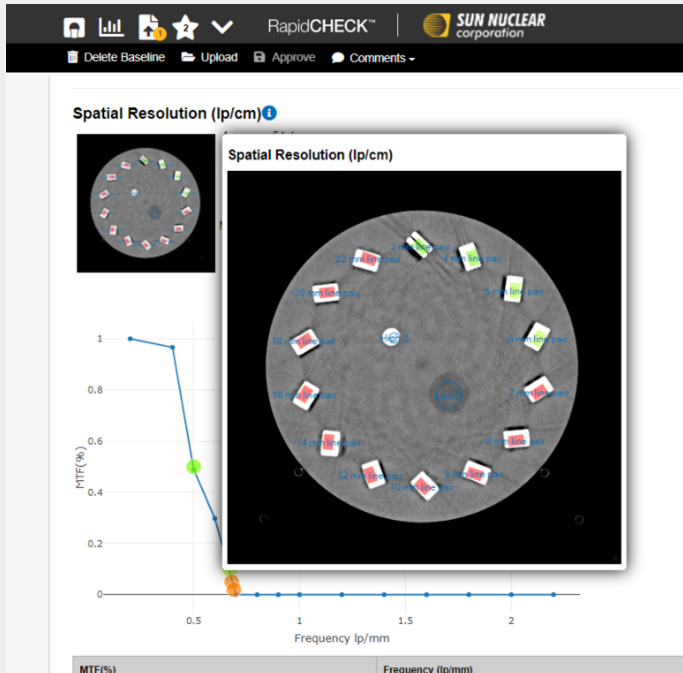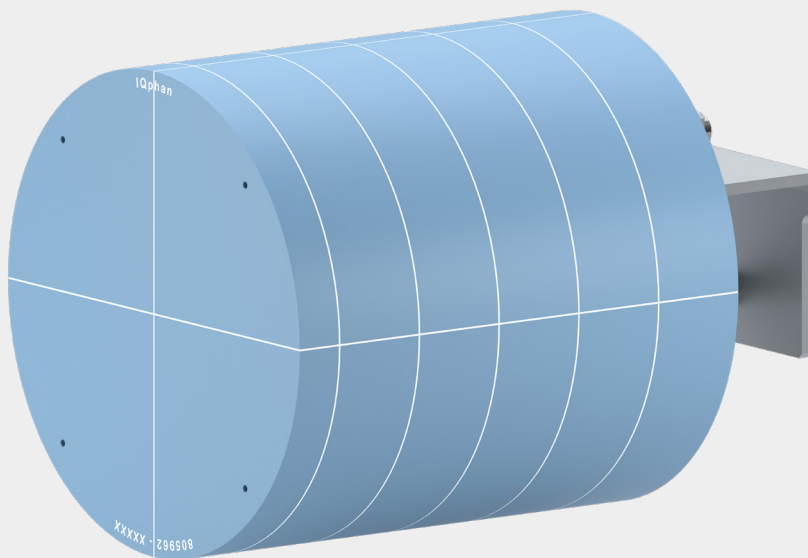
RapidCHECK_061523
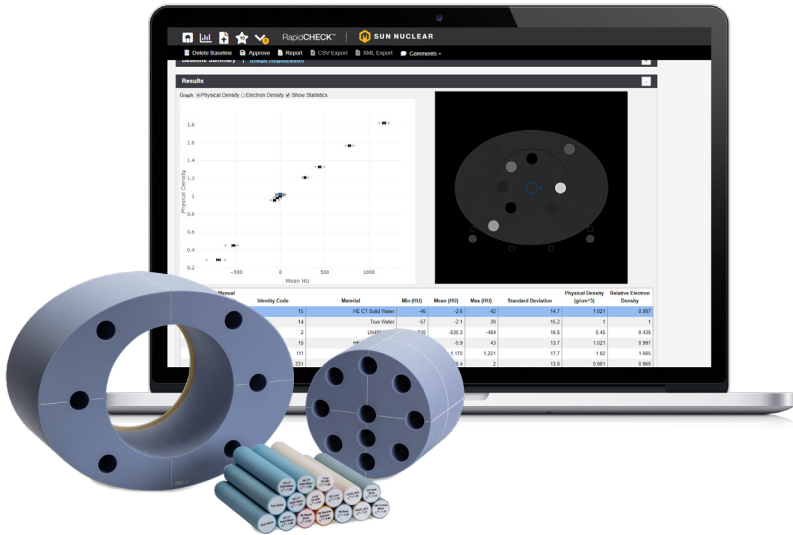
RapidCHECK Modules in Action

RapidCHECK modules get results immediately. Load data. Get analysis. Print a report. Track changes over time. If issues are detected, you can easily review prior scans, analyze trends, and investigate anomalous results.

Comprehensive CT Image Quality Module

RapidCHECK software performs automated analysis on the IQphan, including High Contrast Resolution (HCR), Slice Thickness, Low Contrast Detectability (LCD), Uniformity, Noise, and HU value constancy.

The results — images that are easy to visually inspect and approve.
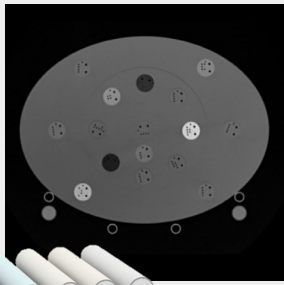
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CT-to-Density Module

Accurate dose delivery requires precision and care. CT-to-electron density calibration remains an area where tighter dosimetric tolerances could be achieved. With RapidCHECK and Advanced Electron Density Phantom integration, your team can automate tedious, repetitive, and error-prone tasks for more efficient and precise treatment planning calibration.

Our patent-pending rods with unique markers automatically identify materials during the CT scan – minimizing risks from rod misplacement, phantom rotation or incorrect selection of ROIs. RapidCHECK software then automatically generates physical and electron density tables for export.
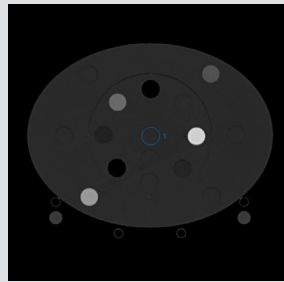
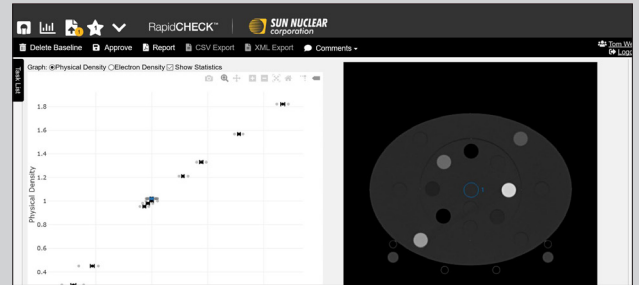## CT-to-Density Table Automation

Rod Identification Slice

Rod Analysis Slice(s)

1 Automatically identifies phantom and location of rods.

2 Automatically detects HU Analysis slice.

3 Automatically generates physical and electron density tables for export.

CT Image Quality Module

Combine RapidCHECK with the CT ACR 464 Phantom to automate CT image quality testing. Generate a complete report in seconds, with analysis that complies with ACR testing requirements, including slice thickness, resolution, uniformity and more. Built-in evidence-based metrics remove subjectivity from evaluations.

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