MapCHECK® 3
The New Benchmark for 2D IMRT QA

SUN NUCLEAR corporation
Your Most Valuable QA and Dosimetry Tools
THE NEW BENCHMARK FOR 2D IMRT QA

The MapCHECK family is the world’s most selected independent 2D measurement array, setting the standard for modern, efficient and stringent QA. Building upon this legacy, with MapCHECK 3 we’ve continued to innovate by reducing the effects of volume averaging while providing high resolution 2D measurements.
Ensuring Physician Prescriptions and Intended Doses are Accurately and Consistently Delivered to the Patient

MapCHECK 3 is the next evolution in the MapCHECK family--the world’s most chosen 2D array.

MapCHECK 3 provides the highest detector density, smallest detector size, and largest field size of any 2D array for IMRT QA. Over 1,527 SunPoint® 2 Diode Detectors measure only 0.48 mm each, and measure up to a 32 x 26 cm field. SNC Patient™ software allows rapid analysis of QA measurements against plan.

Patient Plan QA
SNC Patient™ software allows rapid analysis of QA measurements against plan.

INTRODUCING
SunPoint® 2
Diode Detectors

Smallest diode available ✓
Increased small field accuracy ✓
MapCHECK® 3
The New Benchmark for 2D IMRT QA

Features and Benefits

- 2D patient plan QA
  - Conventional IMRT and 3D conformal
- 1,527 SunPoint® 2 Diode Detectors uniform throughout the array
  - Smallest detector (0.007 mm³)
  - High sensitivity
  - Less drift
  - No dose volume average
- Field Size: 26 x 32 cm
- Real time electrometer measures every pulse with 50 ms updates
- Includes SNC Patient™ software
  - Compare measured dose to planned dose with a single click
  - Compare relative or absolute dose data using Distance-to-Agreement or Gamma Analysis
- Quick and reproducible isocentric measurements at any gantry angle with IMF or GMF
SNC Patient™ Software

Simply import the QA files from your treatment planning system (TPS) and SNC Patient software compares the dose distribution of the treatment plan file to the actual measured values. Measured points that do not fit within the acceptance criteria are highlighted red for high dose and blue for low dose.

Ease of Use

- Single power/data cable
  - Manages all power and data in one connection
- Integrated electronics
  - Self-contained with no separate electronics to set up
- Lightweight (5.6 kg)
- Patented user calibration
  - Clinically proven Wide-field Calibration™ is performed on site and does not require disassembly of the MapCHECK device
- No pre-irradiation or warm-up required for absolute dose measurements
Accessories

MapPHAN™
A water equivalent phantom that adapts any MapCHECK 3 for RapidArc®, VMAT, and TomoTherapy®. Setup time is fast and measurement may occur in coronal and sagittal orientations.

<table>
<thead>
<tr>
<th>Construction:</th>
<th>Solid Water® HE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Available Depths (cm):</td>
<td>5.0, 10.0</td>
</tr>
<tr>
<td>Area: (cm²)</td>
<td>35.0 x 38.0</td>
</tr>
</tbody>
</table>
| Weight without MapCHECK 3: | • 5 cm MapPHAN 8.0 kg  
| | • 10 cm MapPHAN 21.0 kg |

IMF™ / GMF™
- Measure at any gantry angle
- Fast, efficient, reproducible setup
- Measure at 100 cm SDD ± 0.5 mm
- Compatible with electron cones (GMF)
- Aluminum alloy construction
- Adjustable buildup clamps
Specifications

Detector Type: SunPoint® 2 Diode Detectors
Detector Quantity: 1527
Field Size (cm): 26 x 32
Array Geometry (cm):
- Detector spacing parallel to X and Y axes: 1.0
- Row spacing offset: 0.5
Detector Spacing (mm): 7.07
Active Detector Area (mm²): 0.23
Active Detector Area (mm x mm): 0.48 x 0.48
Detector Sensitivity (nC/Gy): 15
Sampling Frequency (ms): 50
Detector Stability: 1%/kGy at 6 MV
Dose Rate Dependence: +/-1.5% over the range 100 MU/min to 1400 MU/min
Inherent Buildup (g/cm²): 1.5
Inherent Backscatter (g/cm²): 2.3
Radiation Measured: Photons: Co-60 to 25 MV
Number of Connection Cables: Single power/data cable
Dimensions (L/W/H): 56.0cm x 29.2cm x 3cm
Weight (kg): 5.6

System Requirements (SNC Patient)

CPU: Recommended 2.4 GHz or better, multi-core (2 or more cores)
RAM: Recommended 4 GB or more
Hard Drive Space: Recommended 5 GB or more

MapCHECK 3 Compatibility
- Rotational Therapy: RapidArc®, VMAT, TomoHelical™
- IMRT, TomoDirect™, 3D Conformal, Dynamic Wedge
- Treatment Planning Systems: Pinnacle®, Eclipse®, Monaco®, iPlan®, RaySearch and any TPS system that can export DICOM data
- FFF & non-FFF Deliveries

RapidArc® and Eclipse® are trademarks of Varian Medical Systems, Inc.; TomoTherapy®, TomoHelical® and TomoDirect® are all trademarks and/or registered trademarks of Accuray Incorporated. Pinnacle® is a trademark of Philips. Monoco® and iPlan® are trademarks of Elekta AB.