A robust quality assurance prostate brachytherapy QA program is essential to ensure accurate image-guidance and dosimetry calculations. The CIRS Model 045A, offers a complete solution for implementing a QA program specific to transrectal ultrasound used for guidance of prostate brachytherapy, as recommended by AAPM Task Group 128.

The phantom is made of CIRS’ proprietary Zerdine® hydrogel polymer, which has been formulated to provide tissue mimicking properties including compatibility with harmonic imaging. To maximize phantom lifetime, this gel is contained in a rugged ABS plastic housing with a Saran-based laminate membrane.

CIRS Ultrasound QA phantoms come standard with a robust housing, rugged carry case, 48-month warranty and user’s guide.

Part of a Complete Solution as Described by AAPM TG128

- Designed for use with biplane transrectal ultrasound probes
- Ensure over ten years of reliable use through reinspection and repair services

Includes best in industry four-year warranty

Consistency Measurements with Model 045A

- Depth of Penetration
- Axial and Lateral Resolution
- Distance Measurement Accuracy
- Area Measurements
- Volume Measurements
- Geometric Consistency with the treatment-planning computer

References:
2. US Patent #5196343.
# Brachytherapy QA Phantom

## Model 045A

### Specifications

<table>
<thead>
<tr>
<th>DIMENSIONS</th>
<th>15.2 cm x 11.4 cm x 11.4 cm (6&quot; x 4.5&quot; x 4.5&quot;)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHANTOM WEIGHT</td>
<td>4 lbs. (1.5 kg)</td>
</tr>
<tr>
<td>HOUSING MATERIAL</td>
<td>PVC Plastic with ABS covers</td>
</tr>
<tr>
<td>MEMBRANE</td>
<td>Vinyl</td>
</tr>
<tr>
<td>TISSUE-MIMICKING MATERIAL</td>
<td>Zerdine® solid elastic hydrogel</td>
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</tbody>
</table>

### Model 045A Includes

<table>
<thead>
<tr>
<th>QTY</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Brachytherapy QA Phantom</td>
</tr>
<tr>
<td>1</td>
<td>Carry Case</td>
</tr>
<tr>
<td>-</td>
<td>User Guide</td>
</tr>
<tr>
<td>-</td>
<td>48-Month Warranty</td>
</tr>
<tr>
<td>-</td>
<td>Certificate of Compliance</td>
</tr>
</tbody>
</table>

### Zerdine® Properties
- Freezing point: 0°C
- Melting point: Above 100°C
- Speed of Sound: 1540 m/s
- Other: Compatible with harmonic imaging

### Internal "N" Grid
- Number of targets: 13
- Wire: 500-micron, nylon monofilament

### Probe Retraction Grid
- Number of targets: 5
- Wire: 100-micron, nylon monofilament
- Spacing: 0.5 cm and 1 cm

### Volume Targets
- Material: Zerdine® gel–hyperechoic with respect to back ground
- Size of target 1: ~4 cc
- Size of target 2: ~9 cc
- Size of target 3: ~20 cc

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