

Brachytherapy QA Phantom

Model 045A



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

ZERDINE® Inside
A registered trademark of CIRS

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 128¹.

The phantom is made of CIRS' proprietary Zerdine®2 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.

Consistency Measurements with Model 045A

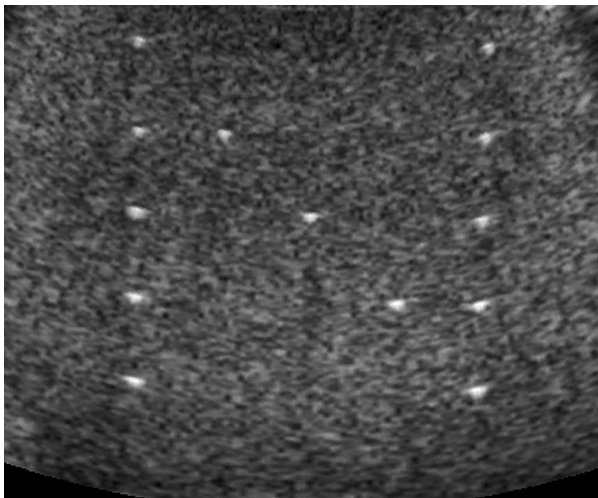
- Depth of Penetration
- Axial and Lateral Resolution
- Distance Measurement Accuracy
- Area Measurements
- Volume Measurements
- Geometric Consistency with the treatment-planning computer

References:

1. Pfeiffer, Douglas, et al., AAPM Task Group 128: Quality assurance tests for prostate brachytherapy ultrasound systems. Med. Phys., vol. 35 (12), pgs. 5471-5489, December 2008.
2. US Patent #5196343.

This product is available through:

JRT Associates 800-221-0111



SPECIFICATIONS

DIMENSIONS	15.2 cm x 11.4 cm x 11.4 cm (6" x 4.5" x 4.5")
PHANTOM WEIGHT	4 lbs. (1.5 kg)
HOUSING MATERIAL	PVC Plastic with ABS covers
MEMBRANE	Vinyl
TISSUE-MIMICKING MATERIAL	Zerdine® solid elastic hydrogel

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

MODEL 045A INCLUDES

QTY	DESCRIPTION
1	Brachytherapy QA Phantom
1	Carry Case
-	User Guide
-	48-Month Warranty
-	Certificate of Compliance

