

General Purpose Ultrasound Phantom

The CIRS series of ultrasound phantoms, unlike human subjects or random scannable materials, offers a reliable medium which contains specific, known test objects for repeatable qualitative assessment of ultrasound scanner performance over time.

This phantom is constructed from the patented solid elastic material Zerdine^{TM(1)}. Zerdine^{TM(1)}, unlike other phantom materials on the market, is not affected by changes in temperature. It can be subjected to boiling or freezing conditions without sustaining significant damage. Zerdine^{TM(1)} is also more elastic than other materials and allows more pressure to be applied to the scanning surface without subsequent damage to the material. At normal or room temperatures, the Zerdine^{TM(1)} material found in the Model 54 will



Model 054

Complies with AIUM Standard for Quality Assurance.

accurately simulate the ultrasound characteristics found in human liver tissue.

The Model 54 was designed to allow for axial resolution, lateral response

width, uniformity, dead zone measurements, depth of visualization, high and low contrast mass imaging, and distance calibration.

⁽¹⁾ US PAT# 5196343

Model 054 Specifications

MATERIAL: Zerdine™⁽¹⁾, solid elastic water-based polymer
Freezing Point: 0° C
Melting Point: Above 100° C

ATTENUATION COEFFICIENT:
0.5 dB/cm/MHz
0.7 dB/cm/MHz available upon request

SPEED OF SOUND:
1540 m/s

SCANNING WELL:
1 cm Deep

SCANNING MEMBRANE:
Saran

VERTICAL PLANE TARGETS:

Number of Groups: 1
Number of Targets Per Group: 9
Depth Range: 18 cm
Spacing: 2 cm
Material: .1 mm Nylon monofilament

HORIZONTAL PLANE TARGETS:

Number of Groups: 1
Number of Targets Per Group: 7
Depth Range: 9 cm
Spacing: 2 cm
Material: .1 mm Nylon monofilament

NEAR FIELD TARGETS:

Number of Groups: 1
Number of Targets Per Group: 6
Depth of Targets: 1 mm, 2 mm, 3 mm, 4 mm, 5 mm, and 6 mm.
Material: .1 mm Nylon wire

AXIAL RESOLUTION TARGETS:

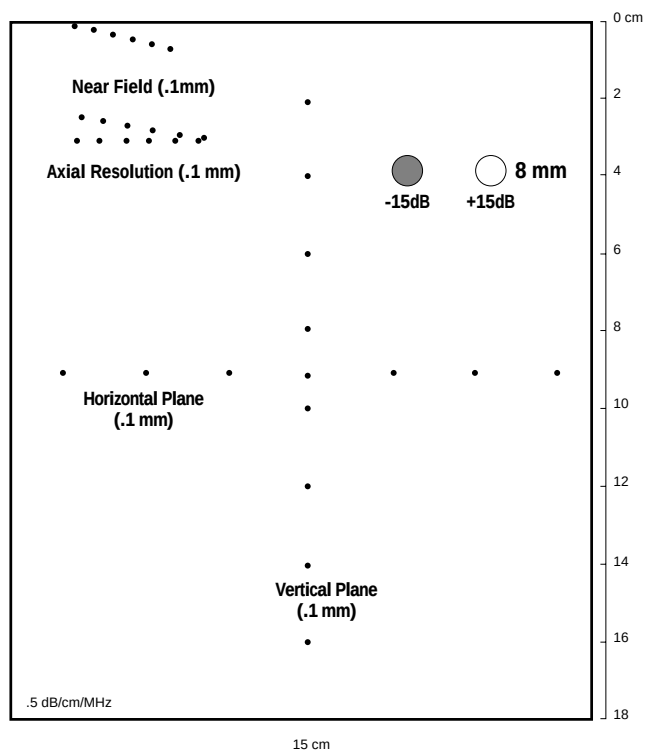
Number of Groups: 1
Number of Targets Per Group: 12
Depth: 3 mm
Spacing: .5 mm, 1 mm, 2 mm, 3 mm, 4 mm, and 5 mm
Material: .1 mm Nylon wire

ANECHOIC TARGETS:

Number of Targets: 1
Diameter of Target: 8 mm
Depth of Target: 4 cm
Contrast: -15dB to Background
Material
Speed of Sound: 1540 m/s

HIGH CONTRAST TARGETS:

Number of Targets: 1
Diameter of Target: 8 mm
Depth of Target: 4 cm
Contrast: +15dB to Background
Material
Speed of Sound: 1540 m/s



Phantom comes with detachable scanning wells and air tight case.

⁽¹⁾ US Patent # 5196343