

Elasticity QA Phantoms

Developed to provide users with acoustic targets of varying, known stiffness



The Model 049 and 049A Elasticity QA Phantoms are tools developed for sonoelastography systems. These are the only phantoms commercially available for sonoelastography quality assurance. The phantom contains targets of known stiffness relative to the background material and range in stiffness, diameter and depth.

The Elasticity QA Phantoms are suitable for determining the dynamic range of the system, checking system performance over time, demonstrating system features and training personnel and customers on this rapidly growing field. The phantoms can also be used by researchers developing and verifying new techniques.

The Model 049 is a basic QA phantom as it contains two sizes of spheres positioned at two different depths. At each depth there are two spheres that are softer than the background and two that are harder than the background.

For a broader range of target sizes, the Model 049A is now available. The Model 049A has stepped mass targets instead of spheres. Each stepped mass consists of six



Model 049

diameters so that you can evaluate the ability to visualize targets that are located at the same depth and have the same relative stiffness but vary in diameter. The Model 049A is housed in the same

size container as the original Model 049.

Both phantoms come standard with a four-year warranty and a hard-sided, foam-lined carry case.

Benefits

- 4 separate hardnesses
- Targets appear almost isoechoic on standard B-mode imaging
- Phantom includes rugged carrying case

Model 049 & Model 049A Specifications:

BACKGROUND

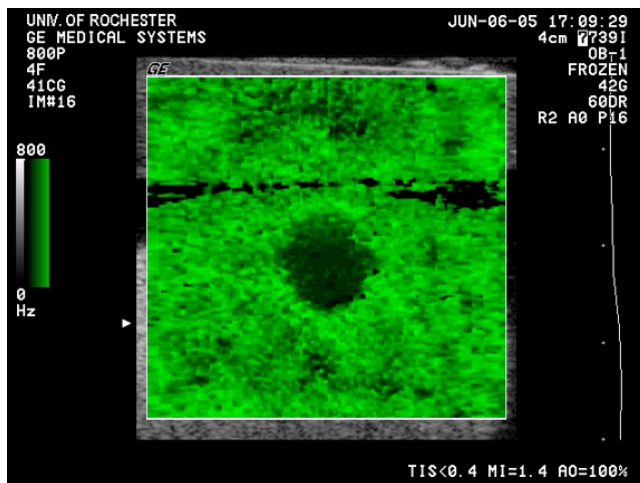
Material: Zerdine^{®(1)}
 Speed of Sound:
 1545 m/s ± 10 m/s
 Attenuation Coefficient:
 0.50 dB/cm-MHz

ELASTICITY:

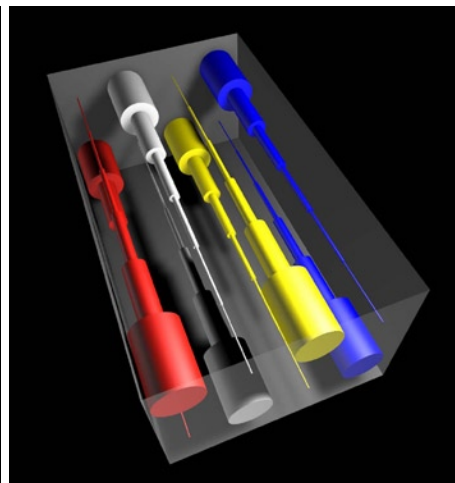
Background: 25 kPa
 Lesion Type I: 8 kPa
 Lesion Type II: 14 kPa
 Lesion Type III: 45 kPa
 Lesion Type IV: 80 kPa

LESIONS:

Material: Zerdine[®]
 Attenuation Coefficient:
 0.50 dB/cm-MHz

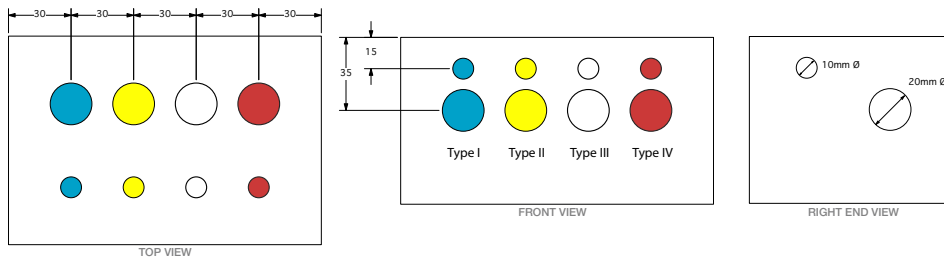


Model 049 (Elastography image courtesy of C. Wu at University of Rochester)

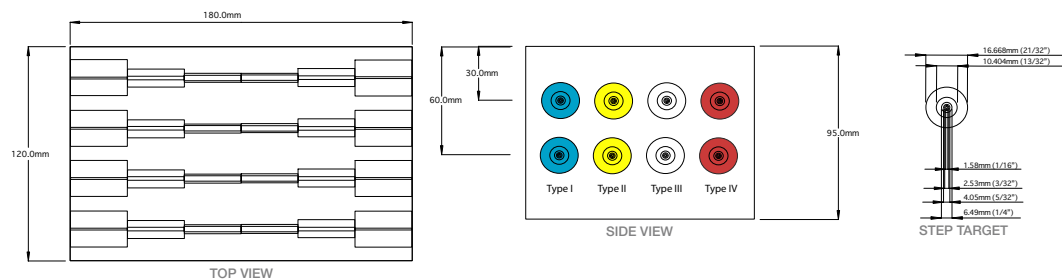


Model 049A Internal Layout

MODEL 049 ELASTICITY QA PHANTOM - SPHERICAL



MODEL 049A ELASTICITY QA PHANTOM - STEPPED CYLINDER



(1) US Patent # 5196343