

# Sono403™ Multi-Purpose Phantoms

Ensure accurate screening,  
diagnosis and monitoring.

- Perform efficient QA testing of ultrasound systems and transducers
- Use across a variety of applications, including General Radiology, Musculoskeletal, Cardiology, Emergency, Pediatrics, Radiotherapy and Surgical
- Helps you exceed ACR, ECR, AIUM and other international program requirements



Sono403 Phantoms, with patented HE (High Equivalency) Gel™, provide advanced technology for measuring image quality of small parts and intra-cavity ultrasound scanning systems.

The Sono403 family offers:

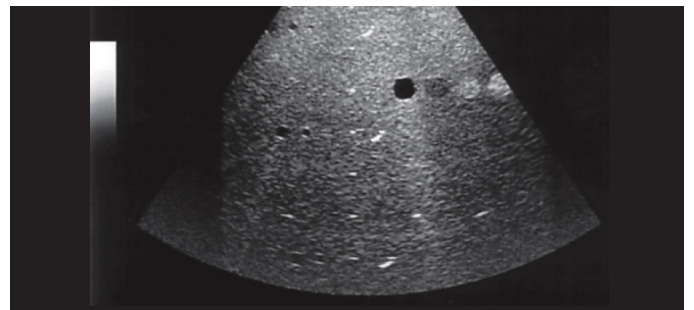
- A near-linear response of attenuation-to-frequencies between 2 to 18 MHz, due to our HE Gel
- Response of attenuation-to-frequencies over 8 MHz to support accurate axial resolution and penetration depth representative of human tissue<sup>1,2</sup>

Performance measures:

- Image uniformity
- Artifact survey
- Axial and lateral resolution
- Horizontal and vertical distance
- Dead zone
- Depth of penetration
- Signal-to-noise ratio
- Anechoic and echogenic mass resolution
- Gray scale contrast resolution

*"The tissue-like properties in Gammex ultrasound phantoms make them ideal for testing the performance of scanners."*

James A. Zagzebski, Ph.D., FAAPM  
Professor Emeritus, Retired Chair  
Department of Medical Physics,  
Wisconsin Institutes for Medical Research



Our proven SONO403 Phantoms have precision-placed targets and zero defects.

## Sono403 Multi-Purpose Phantoms

- Designed for QA testing of ultrasound systems and transducers in General Radiology, Musculoskeletal, Cardiology, Emergency, Pediatrics, Radiotherapy and Surgical applications
- HE Gel can be rejuvenated and your phantom re-validated any time to strengthen your investment
- HE Gel is very uniform and has a nonlinearity parameter (B/A) that is equivalent to human liver

## Specifications

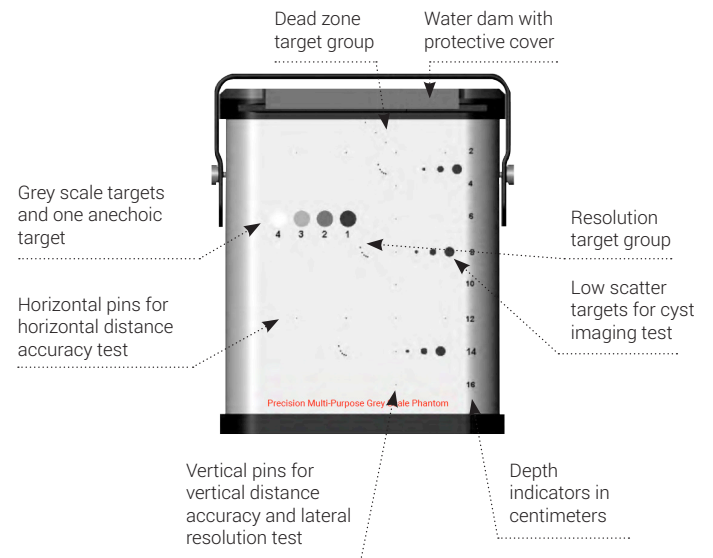
HE Gel™: Gammex's multi-frequency tissue mimicking material

Attenuation Coefficient <sup>1</sup> :	0.5 or 0.7 dB/cm/MHz
Variation of Attenuation with Frequency <sup>2,3</sup> :	f <sup>1.08</sup> at 0.5 dB/cm/MHz f <sup>1.1</sup> at 0.7 dB/cm/MHz
HE Gel Freezing Point:	<0°C
HE Gel Melting Point:	>100°C
Frequency Range <sup>2</sup> :	2 - 18 MHz
Speed of Sound:	1540 m/s

Feature	Sono403 SCG	Sono403 SC
Tissue Mimicking Material, Patented Multi-Frequency HE Gel™:	✓	✓
Scanning Surface, Patented Composite Film:	✓	✓
Uniformity Assessments:	✓	✓
Geometry Assessments:	✓	✓
Sensitivity Assessments:	✓	✓
Resolution Assessments:	✓	✓
Depth of Penetration:	✓	✓
Dead Zone Detection:	✓	✓
Harmonic Imaging:	✓	✓
Anechoic Cysts:	✓	✓
Grey Scale Targets:	✓	✓

## Accessories

- Precision Sono Transducer Holder
  - Securely holds a transducer in a precise location for reproducible tests over time
  - Fits most Gammex B-Mode & Doppler Flow phantoms
- Padded travel case with shoulder strap



<sup>1</sup> An attenuation coefficient of 0.5 dB/cm/MHz represents healthy human liver tissue and 0.7 dB/cm/MHz represents fatty liver tissue.

<sup>2</sup> Browne, J., Ramnarine, K., Watson, A., Hoskins, P., Assessment of the Acoustic Properties of Common Tissue-mimicking Test Phantoms. Ultrasound in Medicine and Biology, Vol. 29 (7), pp. 1053-1060, 2003.

<sup>3</sup> Near-linear responses of attenuation with frequencies between 2 to 18 MHz support accurate axial resolution and penetration depth representative of human tissue.