

84-317

Multipurpose Tissue-Cyst Ultrasound Phantom



The 84-317 Multipurpose Tissue/Cyst Ultrasound Phantom helps provide both quantitative and qualitative information on the performance of all diagnostic ultrasound imaging systems. When used on a regular basis, it promotes uniform system performance, better patient data, and more productive work schedules. Imaging equipment can be evaluated for axial and lateral resolution, vertical and horizontal distance calibration and linearity, and ring down.

This updated and improved phantom is filled with Zerdine®, a solid-elastic, water-based polymer that exhibits echogenic patterns similar to those encountered in

human liver parenchyma. Unlike other phantom materials, Zerdine is elastic and is not damaged by heavier scanning pressures. It is also highly-resistant to damage by extreme temperatures.

Key features

- Complies with the AIUM standard for quality assurance
- The best-performing phantom in the industry, for evaluating system and transducer performance
- Includes cyst-like and solid structures in various sizes
- Simulates liver tissue scattering and attenuation
- Now available with 0.5 or 0.7 dB/cm/MHz attenuation coefficients
- Provides resolution targets at several depths
- Compatible with all types of imaging equipment, including small parts scanners
- Withstands extreme temperatures, making it ideal for service and quality control use
- Three large scanning surfaces

Specifications

Phantom body	
Phantom material	Zerdine ¹ ; solid-elastic water-based polymer
Freezing point	0 °C
Melting point above	100 °C
Storage temperature	0 °C to 66 °C (32 °F to 150 °F)
Speed of sound	1540 m/s ± 6 m/s
Attenuation coefficient	0.5 dB/cm/MHz or 0.7 dB/cm/MHz
Scatter	Mimics healthy liver parenchyma
Positional tolerance of wires (monofilaments)	Stated distance ± 0.1 mm
Diameter of cylindrical targets	Stated Diameter ± 5 %
Base material	Cork
Phantom dimensions (WxHxT)	20 cm x 2 cm x 8 cm (7.87 in x 8.26 in x 3.15 in)
Weight	3.36 kg (7.4 lb)
Optional scanning trough	
For scanning with a liquid coupling agent (water or coupling oil)	
Optional carrying case	
This insulated case is large enough to hold the phantom and trough and also protects the phantom from extreme heat or cold	
Optional acoustic standoffs	
A fast, easy, accurate way to bring the focal zone closer to the surface, for enhanced diagnostic detail during ultrasound examinations	
Material	Sonolucent gel
Dimensions	10 cm x 15 cm
Weight	0.42 kg (1 lb)

¹US Patent #5196343.

Optional accessories

- 84-318** Scanning Trough: for Oil and Water
- 89-317** Carrying Case: insulated for phantom and trough
- 84-325-1000** Acoustic Standoff, 1.0 cm
- 84-325-2000** Acoustic Standoff, 2.0 cm
- 84-325-3000** Acoustic Standoff, 3.0 cm
- 84-325** Acoustic Standoff, 4.0 cm
- 84-325-1234** Acoustic Standoff Set, includes all four: 1 cm, 2 cm, 3 cm and 4 cm

Ordering information

- 84-317** Multipurpose Tissue/Cyst Ultrasound Phantom, 0.5 dB/cm/MHz
- 84-314** Multipurpose Tissue/Cyst Ultrasound Phantom Kit, consists of phantom (either 0.5 dB/cm/MHz or 0.7 dB/cm/MHz), scanning trough, carrying case, and the "AIUM Quality Assurance Manual"