

Model 84-555

Set for 2D and 3D Evaluation Ultrasound Phantoms

Technical Data



Model 84-555 Set for 2D and 3D Evaluation Ultrasound Phantoms consists of two phantoms as described in the AIUM publication "Standard Methods for Calibration of 2-Dimensional and 3-Dimensional Spatial Measurement Capabilities of Pulse Echo Ultrasound Imaging Systems." These phantoms were designed to evaluate measurements taken on ultrasound systems using newer spatial encoding algorithms. This is especially important for the 3D and 4D ultrasound systems currently on the market.

Both phantoms are manufactured from a water-based polymer called Zerdine^{®1} and housed in rugged ABS containers that minimize desiccation. The background is calibrated to mimic the ultrasound characteristics of human liver tissue. Unlike other phantom materials, Zerdine^{®1} is not damaged by changes in temperature.

Model 84-555A is a volumetric target phantom and contains a small egg and a large egg. There are two scanning surfaces and the targets are off centered within the background material.

Depending upon what side is scanned, the test objects are located at distances ranging from 2 cm to 6 cm from the scanning surface.

Model 84-555B is a wire-target phantom that can be used to measure linear and curved dimensions as well as perimeters, volumes and surface areas. It may also be used to determine image uniformity and depth of penetration.

The phantoms come with a rugged carrying case, a copy of the above referenced AIUM publication as a user's guide and handling instructions.

Phantoms may also be purchased separately.

Key Features

- Complies with AIUM standards
- Simulates characteristics of the human liver
- Perfect for QC/Service - not affected by changes in temperature
- Rugged carrying case included

Technical Specifications

Specifications 84-555A

Material

Zerdine, solid elastic water-based polymer;
Freezing point: 32 °F (0 °C), Melting point: above
212 °F (100 °C)

Attenuation Coefficient

0.50 dB/cm/MHz \pm 0.05 dB/cm/MHz

Speed of Sound

1540 m/s \pm 6 m/s

Targets

9 dB \pm 3 dB lower than background

Depth of Targets

2 cm to 6 cm from scanning surface

Volume of Targets

Small egg: 6.7 cc, Large egg: 65.0 cc

Scanning Membrane

Saran-based

Dimensions (nominal)

5.9 in L x 5.9 in W x 5.79 in H
(15 cm L x 15 cm W x 14.7 cm H)

Specifications 84-555B

Material

Zerdine, solid elastic water-based polymer;
Freezing point: 32 °F (0 °C), Melting point:
above 212 °F (100 °C)

Attenuation Coefficient

0.50 dB/cm/MHz \pm 0.05 dB/cm/MHz

Speed of Sound

1540 m/s \pm 6 m/s

Targets

See pattern

Scanning Membrane

Saran-based

Dimensions (nominal)

4 in L x 5.9 in W x 7.3 in H
(10 cm L x 15 cm W x 18.5 cm H)

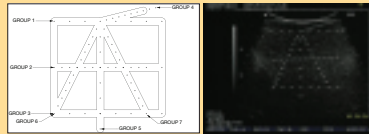


FIGURE 1-A

FIGURE 1-B

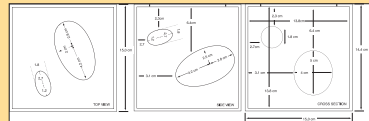


FIGURE 2-A



FIGURE 2-B

About Fluke Biomedical

Fluke Biomedical is the world's leading manufacturer of quality biomedical test and simulation products. In addition, Fluke Biomedical provides the latest medical imaging and oncology quality-assurance solutions for regulatory compliance.

Today, biomedical personnel must meet the increasing regulatory pressures, higher quality standards, and rapid technological growth, while performing their work faster and more efficiently than ever. Fluke Biomedical provides a diverse range of software and hardware tools to meet today's challenges.

Fluke Biomedical Regulatory Commitment

As a medical device manufacturer, we recognize and follow certain quality standards and certifications when developing our products. We are ISO 9001 certified and our products are:

- FDA Compliant
- CE Certified, where required
- NIST Traceable and Calibrated
- UL, CSA, ETL Certified, where required

FLUKE®

Biomedical

Ordering Information

Model

84-555: Ultrasound Phantoms for 2D and 3D Evaluation, set

84-555A: Volumetric Target Phantom

84-555B: Wire Target Phantom

Fluke Biomedical.

The accuracy you need from a company you can trust.

Fluke Biomedical

6045 Cochran Rd., Cleveland, OH 44139-3303

Fluke Biomedical Europe AS

Vegamot 8, N-7048 Trondheim, Norway

For more information, contact us:

In the U.S.A. (800) 850-4608 or

Fax (440) 349-2307

In Europe/M-East/Africa +47 73954700 or

Fax +47 73954701

From other countries +1 (440) 248-9300 or

Fax +1 (440) 349-2307

Email: rmsinfo@flukebiomedical.com

Web access: <http://www.flukebiomedical.com>

©2006 Fluke Biomedical. All rights reserved.
Specifications subject to change without notice.
Printed in U.S.A.

LIT033