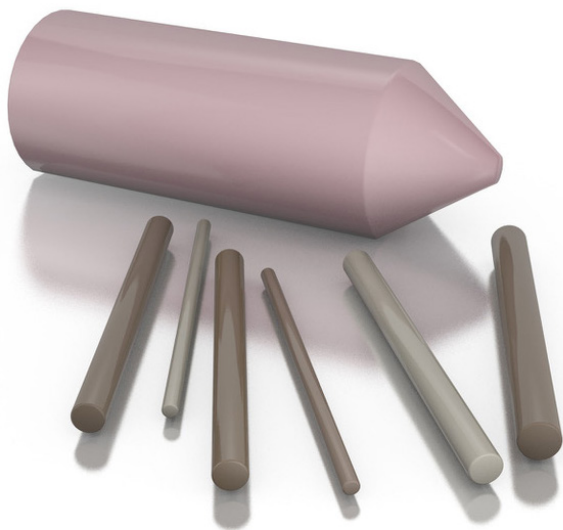


MICROMOUSE PHANTOM

Models 090



USER GUIDE

CIRS

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OBJECTIVE

The CIRS Model 090 MicroMouse Phantom serve two functions:

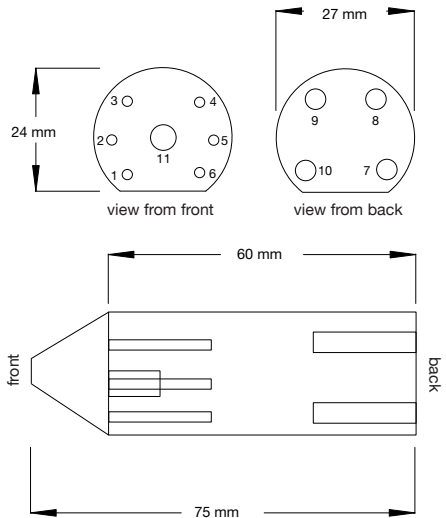
1. Evaluate mineral density with Micro-CT scanners.
2. Determine contrast detectability and estimating low-contrast resolution

PHANTOM DESCRIPTION

The phantom consists of 11 rods in three diameters: 2, 4, and 5mm at various lengths. The rods range from inhale lung to rods loaded with Hydroxyapatite (HA) between 0mg/cc and 750mg/cc in a soft tissue equivalent epoxy background. Targets are embedded in a muscle equivalent material, approximately the size of a small rodent.

SPECIFICATIONS

OVERALL DIMENSIONS	20 mm Ø x 60 mm
ROD DIMENSIONS:	
RODS 1- 6	2 mm Ø x 20 mm
RODS 7-10	4 mm Ø x 20 mm
ROD 11	5 mm Ø x 10 mm
MATERIAL	Tissue Equivalent Epoxy



COMPONENT:	COMPOSITION:
Body	Muscle
Rod 1	0 mg/cc
Rod 2	50 mg/cc
Rod 3	100 mg/cc
Rod 4	250 mg/cc
Rod 5	500 mg/cc
Rod 6	750 mg/cc
Rod 7	0 mg/cc
Rod 8	50 mg/cc
Rod 9	250 mg/cc
Rod 10	750 mg/cc

ELECTRON DENSITY DATA			
DESCRIPTION	PHYSICAL DENSITY, G/CC	ELECTRON DENSITY PER CC, X 10 ²³	RED (RELATIVE TO H2O)
0 mg/ cc	1.083	3.564	1.067
50 mg/cc	1.115	3.653	1.094
100 mg/cc	1.146	3.743	1.121
250 mg/cc	1.241	4.011	1.201
500 mg/cc	1.400	4.459	1.335
750 mg/cc	1.558	4.907	1.469
Lung	0.205	0.668	0.200
Muscle	1.063	3.483	1.043

* Physical Density - The actual physical density of the insert can vary within $\pm 1\%$ of the manufacturing target density.

Note: CIRS strongly recommends that the user inputs the electron density whenever prompted for material data by the TPS.

CLEANING

Cleaning may be accomplished by using mild soap and water solutions. Avoid contact with corrosive substances and with radiographic contrast media. Wash thoroughly if such contact occurs.

HANDLING AND STORAGE

Your phantom is manufactured from epoxy resin. Various other chemicals and fillers have been added to the resin using a proprietary tissue simulation technology. As with most other epoxy plastics, your phantoms may discolor over time. This process can be accelerated by direct exposure to sunlight or extreme temperatures. Discoloration does not affect tissue equivalent performance. Epoxy is quite durable, but can still be damaged if it is dropped on a hard surface so handle with care! Most phantoms can be easily repaired. If damaged, contact CIRS.

TECHNICAL SUPPORT

Contact CIRS customer service at (800) 617-1177.

WARRANTY

All standard CIRS products and accessories are warranted by CIRS against defects in material and workmanship for a period as specified below. During the warranty period, the manufacturer will repair or, at its option, replace, at no charge, a product containing such defect provided it is returned, transportation prepaid, to the manufacturer. Products repaired in warranty will be returned transportation prepaid.

There are no warranties, expressed or implied, including without limitation any implied warranty of merchantability or fitness, which extend beyond the description on the face hereof. This expressed warranty excludes coverage of, and does not provide relief for, incidental or consequential damages of any kind or nature, including but not limited to loss of use, loss of sales or inconvenience. The exclusive remedy of the purchaser is limited to repair, recalibration, or replacement of the product at manufacturer's option.

This warranty does not apply if the product, as determined by the manufacturer, is defective because of normal wear, accident, misuse, or modification.

NON-WARRANTY SERVICE

If repairs or replacement not covered by this warranty are required, a repair estimate will be submitted for approval before proceeding with said repair or replacement.

RETURNS

If you are not satisfied with your purchase for any reason, please contact Customer Service or your local distributor prior to returning the product. Visit <https://www.cirsinc.com/distributors/> to find your local distributor. Call 800-617-1177, email rma@cirsinc.com, or fax an RMA request form to 757-857-0523. CIRS staff will attempt to remedy the issue via phone or email as soon as possible. If unable to correct the problem, a return material authorization (RMA) number will be issued. Non-standard or "customized" products may not be returned for refund or exchange unless such product is deemed by CIRS not to comply with documented order specifications. You must return the product to CIRS within 30 calendar days of the issuance of the RMA. All returns should be packed in the original cases and or packaging and must include any accessories, manuals and documentation that shipped with the product. The RMA number must be clearly indicated on the outside of each returned package. CIRS recommends that you use a carrier that offers shipment tracking for all returns and insure the full value of your package so that you are completely protected if the shipment is lost or damaged in transit. If you choose not to use a carrier that offers tracking or insure the product, you will be responsible for any loss or damage to the product during shipping. CIRS will not be responsible for lost or damaged return shipments. Return freight and insurance is to be pre-paid.

WITH RMA NUMBER, ITEMS MAY BE RETURNED TO:

CIRS
Receiving
900 Asbury Ave
Norfolk, Virginia, 23513 USA

PRODUCT	WARRANTY PERIOD
Model 090	60 Months

