

# Nuclear Associates 18-228

Stereotactic Needle Biopsy Tissue-Equivalent Phantom

Instruction Manual



**CardinalHealth**

(Blank Page)

# Contents

---

Section 1:	<b>General Information .....</b>	<b>1-1</b>
1.1	Objective .....	1-1
1.2	Description of the Phantom.....	1-1
1.3	Use of the Phantom.....	1-1

(Blank Page)

# General Information

---

## 1.1 Objective

The Model 18-228 was designed to provide a tissue-equivalent, compressible medium for needle biopsy demonstration and training. It also serves as a useful tool to insure accurate needle placement with stereotactic biopsy systems.

## 1.2 Description of the Phantom

The Model 18-228 is fabricated from a flexible resin system that responds similar to BR12 (45 percent glandular/55 percent adipose) within the mammographic energy range. Each phantom contains approximately six solid masses, 2 mm to 8 mm in diameter, and six cystic masses, 3 mm to 10 mm in diameter. There are two microcalcification clusters on the right and left side of each phantom.

## 1.3 Use of the Phantom

1. Remove the phantom from its polyethylene packaging.
2. Compress and image the phantom using normal techniques.
3. Biopsy can be performed using manual procedures or stereotactic equipment.
  - Small red specks surrounding two blue spheres positioned on the right and left of the phantom simulate microcalcification clusters.
  - Black targets simulate cystic masses.
  - Green targets simulate cystic masses.

All targets are designed for removal.

4. It is not necessary to cover the phantom after use, it will not dry out.
5. If the phantom gets dirty, it may be washed with mild, soapy water.

**NOTE**

1. This phantom is a disposable product. It can be reused; however, as with any disposable training device, it will continue to deteriorate with each additional puncture. When not in use, the phantom must be stored in an airtight container, such as a ziplock bag to minimize desiccation.
2. This phantom is a shelf-life item. The manufacturer's warranty extends six months from the date of manufacture. Each phantom is marked with date of shelf-life expiration. For peak ultrasonic performance, the phantom should be used within the designated shelf-life period.
3. Warranty is void once the product is open and used.

(Blank Page)

# Radiation Management Services

For additional information, please contact  
Radiation Management Services business  
of Cardinal Health at 440.248.9300, or  
516.870.0100



© 2004 Cardinal Health, Inc. or one of its subsidiaries  
All rights reserved.  
Manual No. 18-228-1 Rev. 2 05 apr 04

Cardinal Health  
6045 Cochran Road  
Cleveland, Ohio 44139

120 Andrews Road  
Hicksville, New York 11801

[www.cardinal.com/rms](http://www.cardinal.com/rms)