

# 18-222

## Tissue-Equivalent Mammography Phantom



Proven simulation technology enables the use of tissue-equivalent, realistically-shaped phantoms for mammographic quality control.

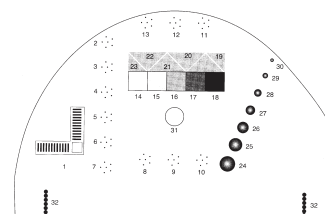
The 18-222 Tissue-Equivalent Mammography Phantom contains targets that are engineered to test the threshold of the new generation of mammography machines.

The phantom is 4.5 cm thick, simulates a 50 % glandular tissue composition and is designed to test the performance of a mammographic system by a quantitative evaluation of the system's ability to image small structures similar to those found clinically. The phantom is designed to determine if your system can detect small structures that are important in early detection of breast cancer. Test objects within the phantom range in size from those that should be visible on any system to objects that will be difficult to see in the best mammographic systems.

The 18-222 includes a 30x hand-held microscope and mammography QA documents for recording image evaluations and scores.

### Key features

- Breast phantom to test new generation of mammography machines
- A refined quality control for today's advanced imaging systems
- Objects within the phantom simulate calcifications, fibrous calcifications in ducts, and tumor masses



## Specifications

<b>Line-pair target</b>	1: 20 lp/mm		
<b>Calcium carbonate specks</b>	2: 0.13	3: 0.165	4: 0.196
	5: 0.23	6: 0.275	7: 0.4
	8: 0.23	9: 0.196	10: 0.165
	11: 0.23	12: 0.196	13: 0.165
<b>Step wedge (1 cm thick)</b>	14: 100 % gland	15: 70 % gland	16: 50 % gland
	17: 30 % gland	18: 100 % gland	
<b>Nylon fibers</b>	19: 1.25 mm Ø	20: 0.83 mm Ø	21: 0.71 mm Ø
	22: 0.53 mm Ø	23: 0.3 mm Ø	
<b>Hemispheric masses (75 % glandular/ 25 % adipose)</b>	24: 4.76 mm thick	25: 3.16 mm thick	26: 2.38 mm thick
	27: 1.98 mm thick	28: 1.59 mm thick	29: 1.19 mm thick
	30: 0.9 mm thick		
<b>Optical density</b>	31: reference zone		
<b>Edge beam</b>	32: localization target		
<b>General</b>			
<b>Material</b>	Epoxy		
<b>Dimensions (WxDxH)</b>	18.5 cm x 12.5 cm x 4.5 cm (7.28 in x 4.92 in x 1.77 in)		
<b>Weight</b>	1 kg (2.2 lb)		

### References

Skubic S.E., Fatouros P.P., "Absorbed Breast Dose: Dependence on Radiographic Modality and Technique, and Breast Thickness," *Radiology*, 61 (1986), 263-270.  
 Fatouros P.P., Skubic S.E., Goodman H., "The Development and Use of Realistically Shaped, Tissue-Equivalent Phantoms for Assessing the Mammographic Process," *Radiology*, 32 (1985), 157.

### Included accessories

#### 18-222

Handheld microscope and mammography QA recording documents

#### 18-223

Tissue-equivalent phantoms 4 cm, 5 cm, and 6 cm thick, and phototimer compensation plates from 0.5 cm to 7 cm

### Ordering information

18-222 Tissue-Equivalent Mammography Phantom

18-223 Mammography Phantom Research Set