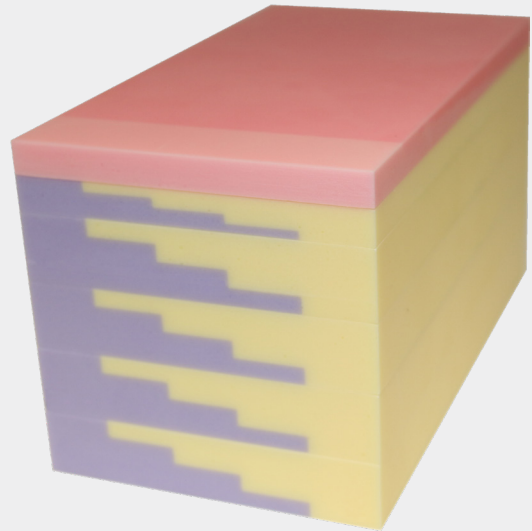


Mammo **CESM**[™] Phantom

QC for Contrast Enhanced Spectral Mammography

Independently verify different beam qualities across a range of iodine concentrations and breast glandularity with tissue-mimicking materials that are an exquisite match to breast tissues.

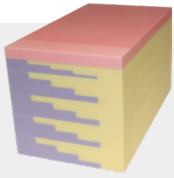


The Contrast Enhanced Spectral Mammography (CESM) Phantom is modular, composed of two types of step blocks: a Breast with Iodine contrast block, and Adipose-Glandular density blocks. Its modularity allows combinations of blocks to be arranged to represent the compressed breast for small to large patients.

The Breast Iodine Contrast block is 1 cm thick, composed of a breast equivalent material with 50% glandularity and divided into 11 steps with Iodine concentrations from 0 mg/cm² to 10 mg/cm² along its major axis.

The Adipose-Glandular blocks are 1 cm or 2 cm thick. Each block is divided into five different glandularity steps (0%, 25%, 50%, 75%, 100%) along a direction orthogonal to the iodine steps of the Breast with Iodine block.

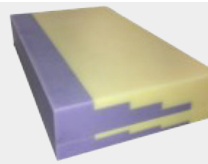
¹ACR Stereotactic Breast Biopsy Accreditation Requirements (<https://www.acr.org>)



Entire Phantom Stack - Featuring 55 Combinations of Contrast Glandularity



X-ray image of entire phantom stack



2 Stacks of 1 cm & 2 cm Thickness



X-ray image of 1 cm + 2 cm stack

Combine the blocks of glandular/adipose together with the breast-iodine block, on a 2D projection, to obtain rectangular areas with 55 different combinations of iodine concentration and glandularity. Without the iodine block, the phantom can be used as a breast density reference, with 1 cm increments for breasts up to 9 cm thick.

High Equivalency (HE) materials by Sun Nuclear are an exquisite match to Hammerstein compositions for breast materials over the entire mammographic energy spectrum.¹

Specifications

The Modular CESM Phantom is backed by a 5-year warranty and includes a durable hard-case.

	Breast-Iodine Step Block	GL/AD Step Block, 10 mm	GL/AD Step Block, 20 mm
Materials:	1454 HE Breast 50/50, 1454 HE Bresat 50/50 doped with 10 mg/ml Iodine (pink)	1453 HE Br. Adipose (yellow), 1466 HE Glandular (purple)	1453 HE Br. Adipose (yellow), 1466 HE Glandular (purple)
Quantity:	1	1	4
Length x Width:	180 x 100 mm	181 x 100 mm	181 x 100 mm
Thickness:	10 mm	10 mm	20 mm
Step Increments:	1 mm	2.5 mm	5 mm
Number of Steps:	11	5	5
Overall Weight:		1.8 kg (4 lbs)	
Carrying Case Weight:		1.4 kg (3 lbs)	
Overall Stack Dimensions (L/W/H):	181 x 100 x 100 mm (7-1/8 x 4 x 4 in)		

¹ Hammerstein R, Miller D, et al; Absorbed Dose in Mammography; RADIOLOGY: 1979;130:485-491