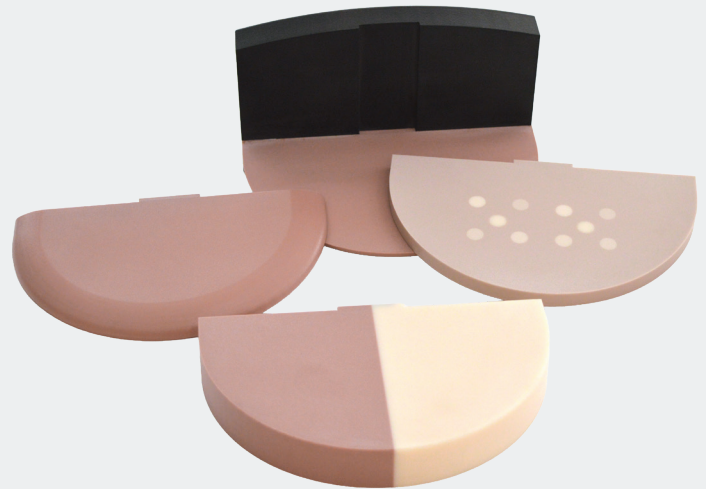




Contrast Enhanced Spectral Mammography Phantom

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- Supports routine QA for CEDM systems
- Demonstrates the presence and absence of clinically relevant iodine concentrations



The Contrast Enhanced Spectral Mammography (CESM) Phantom supports quality control of Contrast-Enhanced Digital Mammography (CEDM) systems. The phantom enables visualization and verification of iodine presence and absence within tissue-equivalent backgrounds by incorporating multiple iodine concentrations alongside non-iodinated breast tissue substitutes. Four stacked slabs combine to represent the size and shape of an average human breast.

The target slab is manufactured from breast-equivalent material with an approximate 50/50 glandular-to-adipose tissue ratio. It contains two groups of five cylindrical plugs. Within each group, four plugs include iodine concentrations representative of the clinical range (0.2, 0.5, 1.0, and 2.0 mg/cm³). The fifth plug, positioned at the center of each group, is composed of 100% glandular tissue-equivalent material to simulate a non-enhancing glandular lesion.

A dedicated contrast slab consists of equal halves of 100% adipose and 100% glandular tissue-equivalent materials, allowing evaluation of iodine separation from background tissue across a broad range of breast densities. The top and bottom slabs are constructed from 100% adipose-equivalent material and feature rounded edges to simulate the shape of a compressed breast.

The phantom includes a magnetic alignment fixture to ensure repeatable positioning and consistent setup during imaging and quality control evaluations.

Key Benefits

- Represents both dense and fatty breast tissue
- Target slab with a 50/50 glandular to adipose ratio and varying iodine concentrations (0.2 – 2.0 mg/cm³)
- Contrast slab with half adipose and half glandular material for testing iodine separation from the background
- Adipose top and bottom slabs.
- Includes a magnetic positioning holder

References: ¹ Klausz, R, et al. Introduction of a Comprehensive Phantom for the Quality Control of Contrast Enhanced Spectral Mammography. 2018. Poster No.: ECR 2018, DOI: 10.1594/ecr2018/C-2647b

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Specifications

Dimensions	18 x 12.7 x 10 cm (7" x 5" x 4")
Weight	1.4 kg (3.1 lbs)
Materials	Epoxy resin BR50/50, 100% gland, and 100% adipose
Slabs	2 – Solid homogeneous slabs, 10 mm thick 1 – Target slab, 10 mm thick 1 – Contrast slab, 25 mm thick
Targets	4 with iodine, 1 with 100% glandular equivalent material Size: 10 mm x 10 mm Concentration: 0.2, 0.5, 1.0, and 2.0 mg/cm ³

Optional Accessories

- 021-01 BR3D Background Slab
- 021-02 Solid Homogeneous Slab (50/50% Glandular-Adipose ratio)

