

Multi-Energy CT QA Phantom (MECT)

Model 662

Multi-Energy CT基于在不同X射线能量下的线性衰减，在人体组织和不同造影剂的高级识别，区分，定量方面提供了极大的改进。使用适当的模型的质量保证程序对于确保ME CT扫描仪性能的准确性和可重复性很重要。CIRS多能量CT QA (MECT) 体模旨在确保多能量CT扫描的准确性能和一致性。幻影有助于评估扫描仪的性能，从而使用户能够验证多能量扫描的定量准确性，检查扩展视野中的伪影并比较不同扫描仪的一致性和稳定性。我们的幻影包含一系列的水中7碘，5当量血液中的碘和6水中当量钙。所有刀片均在PlasticWater®-LR内部包含一个直径为10 mm的核心靶材，以最大程度地减少“光束硬化”的影响，并可将其放置在扫描区域内的17个不同位置。此外，水瓶塞可装满任何液体。还提供血液，脂肪，肌肉和水等价插入物。CIRS标准电子密度幻影（型号062M / MA）的插入件可在广泛的能量范围内实现 $\pm 1\%$ 的组织等效性，因此可用于扩展测试。

COMPREHENSIVE QA FOR MULTI-ENERGY CT

Multi-Energy CT offers a great improvement in advanced recognition, differentiation, quantification of human tissues and different contrast agents based on their linear attenuation at the different X-Ray energies. A Quality Assurance program using appropriate phantoms, is important to ensure accuracy and reproducibility for ME CT scanner performance.

The CIRS Multi-Energy CT QA (MECT) phantom is designed to assure accurate performance and consistency of Multi-Energy CT scans. The phantom facilitates evaluation of scanner performance allowing users to verify the quantitative accuracy of multi-energy scans, check for artifacts in an extended field-of-view and compare the consistency and stability across different scanners.

Our phantom features a series of 7 Iodine in water, 5 Iodine in blood equivalent inserts and 6 calcium in water equivalent inserts. All inserts contain a core target of $\varnothing 10$ mm inside Plastic Water® -LR for minimizing effects of “beam hardening” and can be positioned in 17 different locations within the scan field. In addition, a water vial plug that can be filled with any fluid. Blood, Adipose, Muscle and Water equivalent inserts are also provided. Inserts from the CIRS standard Electron density Phantom (model 062M/MA) can be used for extended testing due to their tissue equivalency of $\pm 1\%$ within a wide energy range.

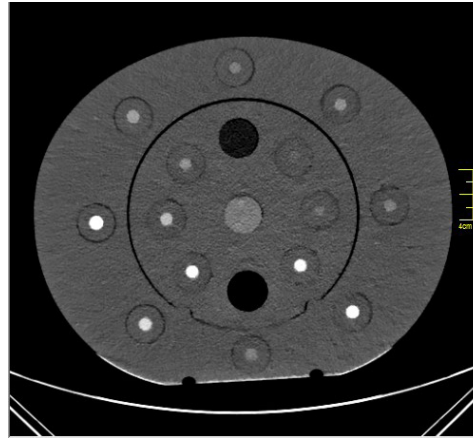
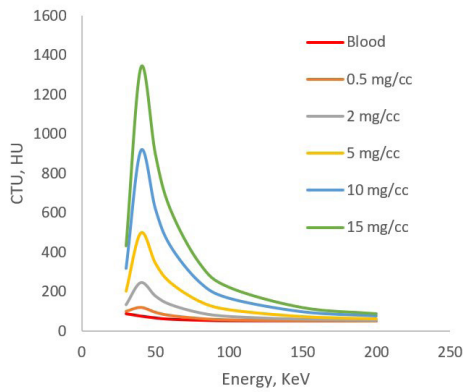
Our phantom consists of nested disks made from CIRS Plastic Water® -LR, representing both head and abdomen configurations. Two 10 cm thick sections surround a 5 cm target section for proper scattering conditions.

A holder/support stand (062MA-30) that allows for adding additional sections from CIRS model 062 phantom and a soft carry case are also included with our phantom.

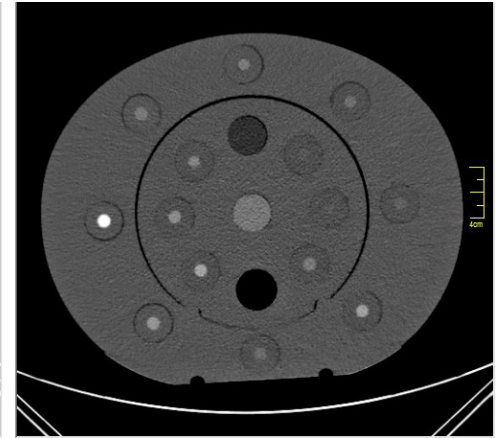
Benefits

- Iodine, calcium, blood, & adipose inserts allow for testing tissue discrimination
- Verify quantitative accuracy & clinical protocols
- Verify performance reproducibility for a single scanner and across departments
- High accuracy in Iodine and Calcium inserts by minimizing “beam hardening”
- Allows for variable insert positioning
- Various inserts from CIRS 062M/MA can be used for extensive testing
- Imaging QA Phantom (CIRS 062QA-35) can be nested inside scattering section

CT Numbers for Iodine in Blood targets



MONO-ENERGETIC 50 KEV SCAN



MONO-ENERGETIC 100 KEV SCAN

SPECIFICATIONS

DIMENSIONS	33 cm x 27 cm x 25 cm (13" x 11" x 10")
DIAMETER OF HEAD	18 cm (7.1 in)
MATERIAL	Plastic Water®- LR
INSERTS	22 solid inserts & 1 water fillable insert (each insert is labeled accordingly)
7 IODINE IN WATER INSERTS	Concentrations of 0.2, 0.50, 1.00, 2.00, 5.00, 10.00 & 15.00 mg/cc
5 IODINE IN BLOOD INSERTS	Concentrations of 0.50, 2.00, 5.00, 10.00 & 15.00 mg/cc
6 CALCIUM INSERTS	Concentrations of 10, 20, 40, 60, 120 and 240 mg/cc
4 TISSUE EQUIVALENT INSERTS	Blood, Muscle, Adipose & Water
PHANTOM WEIGHT	49 lbs

MODEL 662 INCLUDES

QTY	DESCRIPTION
1	Body (50 mm thick)
1	Head (50 mm thick)
2	Annulus Head Insert (100 mm thick)
2	Annulus Body Insert (100 mm thick)
7	Iodine in Water Plugs (Ø 10 mm Core)
5	Iodine in Blood Plugs (Ø 10 mm Core)
6	Calcium Plugs (Ø 10 mm Core)
1	Blood Equivalent Plug
1	Muscle Equivalent Plug
1	Adipose Equivalent Plug
1	Water Equivalent Plug
1	Water-fillable Plug, Ø 1" removable vial inside (Real water data provided)
1	Holder/Support set
1	Soft Carry Case
1	User Guide
-	60 Month Warranty*

*Inserts excluded.

