

QCT-BONE MINERAL™ PHANTOM

Solid Calcium Hydroxyapatite Design

The solid Image Analysis QCT-Bone Mineral™ Phantom is manufactured with calcium hydroxyapatite incorporated into our water equivalent solid compound (CT-Water™). The solid phantom does not form bubbles, and provides a highly stable bone reference for calibration in QCT. Calcium hydroxyapatite is closely equivalent to actual human bone in composition and has become the accepted bone mineral standard throughout the bone densitometry field. The solid phantom design results in major improvements in the accuracy and reliability of QCT. More solid QCT phantoms have been sold by Image Analysis than any other company in the industry.

FEATURES:

- * Long term phantom stability is assured. Bubble formation does not occur.
- * Phantom and patient are scanned simultaneously.
- * Calcium hydroxyapatite has a comparable energy response to bone for improved precision in patient studies.
- * Water equivalent compound (CT-Water™) takes water equivalence to a new standard for CT imaging.
- * Tissue equivalence reduces artifacts and improves patient/phantom coupling.
- * Greatly reduced size for improved patient/phantom interface. Reduced x-ray attenuation produces less beam hardening and scattered radiation.
- * Mineral ash weights are measured for each manufactured concentration.
- * Manufacturing techniques produce high consistency in material homogeneity.
- * Designed for automated ROI operation with Image Analysis software packages.
- * Integration of couch pad and phantom for ease in patient positioning.

U.S. Patents No. 4,985,906 and 4,922,915.



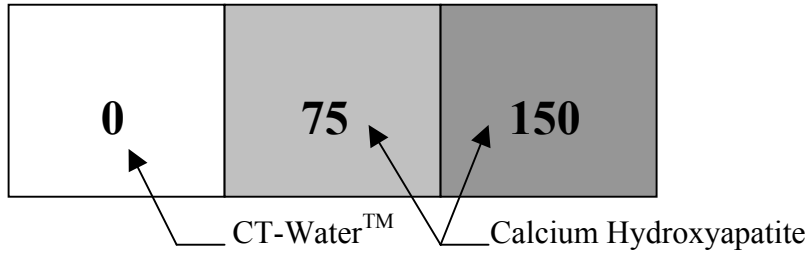
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PHANTOM SPECIFICATIONS

PHANTOM CROSS SECTION



CT-WATER™: The base material is composed of our proprietary water equivalent solid compound in terms of x-ray attenuation properties. Water equivalence is at the level required for CT such that the HU number is very close to true distilled water and often indistinguishable by CT imaging.

CALIBRATION SAMPLES: Three sample concentrations of 0 mg/cc, 75 mg/cc and 150 mg/cc of calcium hydroxyapatite homogeneously blended into the CT-Water™ compound. The base material forms the 0 mg/cc concentration sample.

QUALITY CONTROL: Each phantom is strictly quality controlled through a set of procedures to ensure consistency in performance. A QA report is provided for each phantom showing the results of the final QA check.

Quality Assurance Report

Accept/Reject

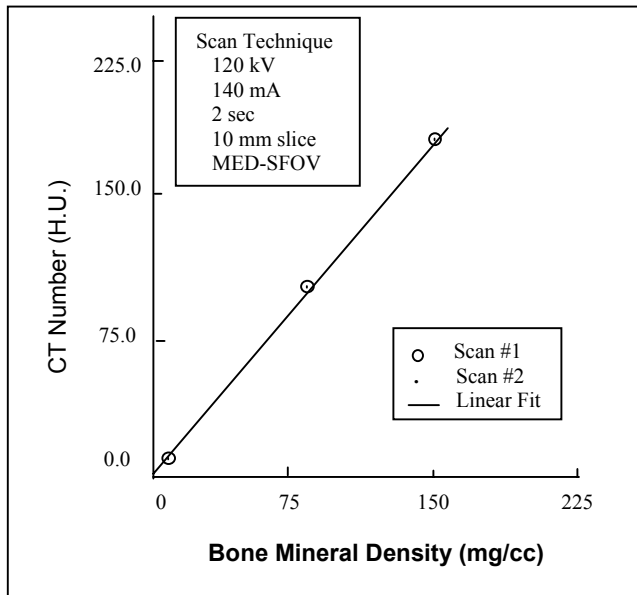
Ser. No. **G1651**

Lot No. L2/B1

By: _____

Date:

Image Analysis, Inc. QCT-Bone Mineral Analysis



	0	75	150	R	Torso Phantom	Measured BMD
Scan # 1	8.7	97.6	190.2	1.000	129.4	100.3
Scan # 2	7.3	96.9	189.4	1.000	128.9	100.6

