QRM A PTW COMPANY

QRM-BDC/6

Bone Density Calibration Phantom

For the HU vs. CaHA calibrations with respect to Bone Mineral Densitometry evaluation of bones

The Bone Density Calibration Phantoms house six fixed 18 mm cylindrical inserts providing 0 (water), 100, 200, 400, 600 and 800 mg HA/ccm.

The phantoms are directly placed under an object to evaluate the Bone Mineral Density (BMD) by CT.

CTwater®, a solid water equivalent plastic offering the same X-ray attenuation properties as water is used as base material for the inserts. The shape of the phantom is slightly bended for most convenient positionings under the object.

The phantoms are available in different lengths and different HA concentrations on request.

Each phantom is separately calibrated with respect of its Bone Mineral Density and comes with an acceptance protocol.

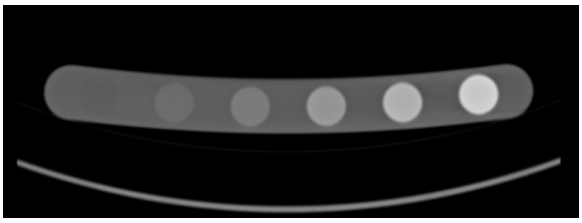
Specifications

Phantom cross section ..... 225 mm x 25 mm
Available length ..... 200 - 700 mm
Phantom weight (200 mm)..... 800 g
Housing ..... soft tissue-equivalent (at 120 kV)
Insert diameter ..... 18 mm
Insert I ..... CTwater® (0 mg HA / cm^3)
Insert II ..... 100 mg HA/cm^3
Insert III ..... 200 mg HA/cm^3
Insert IV ..... 400 mg HA/cm^3
Insert V ..... 600 mg HA/cm^3
Insert VI ..... 800 mg HA/cm^3

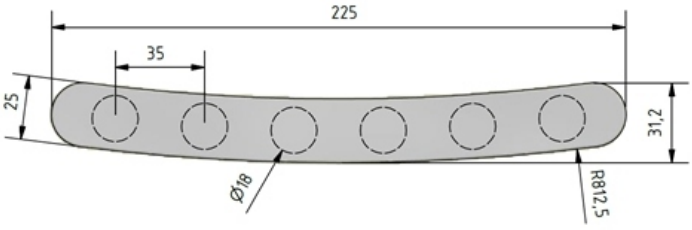
References

[1] Museyko, O., Heinemann A., Krause M.,Wulff B., Amling M., Püschel K., Glüer C. C., Kalender W., Engelke K.: A low-radiation exposure protocol for 3D QCT of the spine. Osteoporosis International 2013; 10.1007/s00198-013-2544-x

QRM-BDC Phantom 200 mm length



CT-image of the BDC Phantom (120 kV)



Different versions in length of QRM-BDC (200, 300 and 700 mm)

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