

DXA-Spine-QA-Phantom

A Phantom for Quality Assurance of DXA Bone Mineral Density Measurements of the Spine.

Designed on the basis of the well established European Spine Phantom (ESP) the QRM-DXA-Spine-QA-Phantom incorporates a simplified and more cost effective design of the vertebrae specifically developed for quality assurance (QA) and stability monitoring of Dual X-ray Absorptiometry (DXA) devices.

With the QRM-DXA-Spine-QA-Phantom, areal Bone Mineral Density (aBMD) can be easily determined in AP and lateral projections.

Benefits

- ✓ bone mineral content (BMC) in g
- ✓ bone mineral areal density (BMD) in g/cm^2 for DXA AP and lateral projections
- ✓ projected area (A) in cm^2

Specification

Phantom body tissue-equivalent plastic

at 120 kV (CT)

L1- L3 3 fully homogeneous

Phantom body 260 mm x 180 mm
($\pm 2\text{mm}$)

Phantom weight 4300 g

Version 1

3 identical vertebrae:

aBMD (AP) $1.0 \text{ g}/\text{cm}^2$

Version 2

3 different vertebrae:

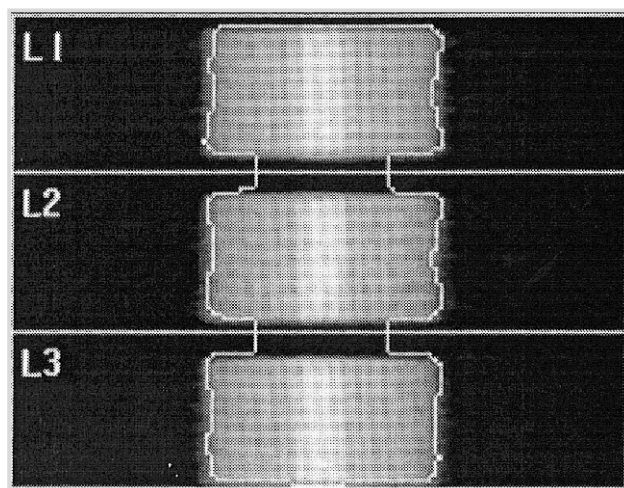
aBMD (AP) $0.5, 1.0 \text{ and } 1.5 \text{ g}/\text{cm}^2$

Accuracy $\pm 3\%$ of specified values
 $\pm 1\%$ of certified values

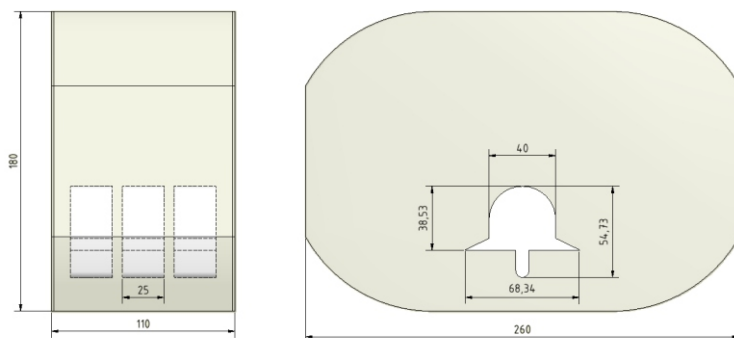
Different HA concentrations for the vertebrae



The QRM-DXA-Spine-QA-Phantom



DXA AP scan of the phantom (3 identical vertebrae)



Measures of the QRM-DXA-Spine-QA-Phantom