phantomx

Article Number
502-01

HEAD PHANTOM

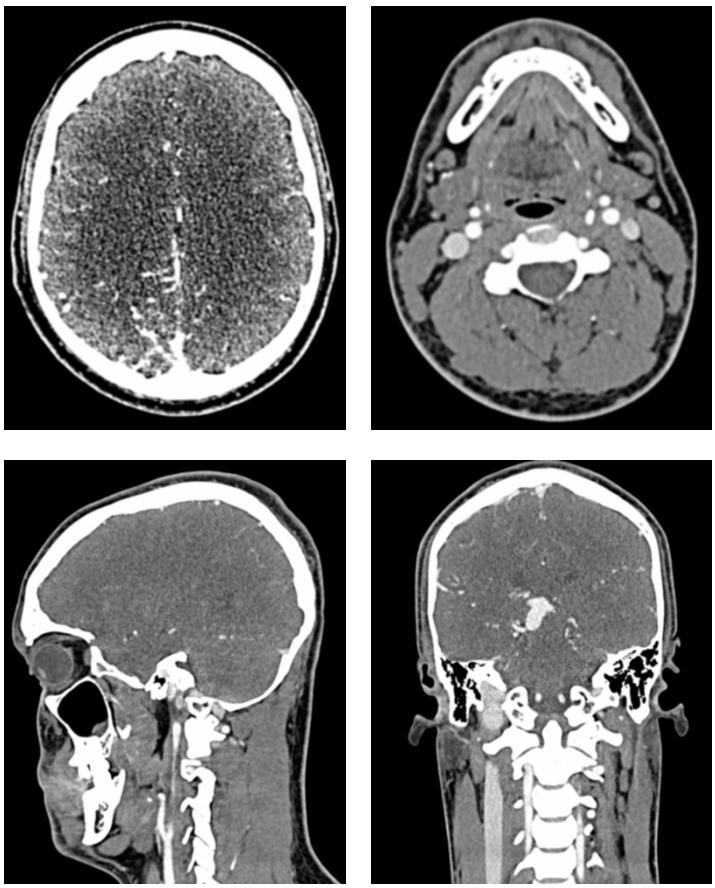
Age Category	Adult
Body Region	Head
Target Modality	CT
Diagnostic Features	Arteriovenous malformation

This head phantom can be used in CT for image quality evaluation and for training. It was also designed to enable evaluation of diagnostic software, including AI tools.

The phantom simulates a contrast medium enhanced head in arterial phase (CT angiography). The neck is included up to the fifth cervical vertebra.

The phantom provides a detailed and realistic simulation of soft and bone tissue, including small details such as lymph nodes. The right hemisphere has an arteriovenous malformation. Air voids are filled with a cellulose-polymer composite of approx. -80 HU.

The phantom can be used for common methods of image quality evaluation such as visual grading analysis or contrast-to-noise ratio measurement.



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HEAD PHANTOM

Specifications

Size	Approx. 186 x 234 x 269 mm
Weight	Approx. 5500 g
Base material	Cellulose-polymer composite
Optimal tube voltage	120 kVp (cf page 3) - adaptable upon request -

Diagnostic features

- Arteriovenous malformation of the right hemisphere

Similar products

- Head phantom with brain lesions

For more information visit
www.phantomx.de

HEAD PHANTOM

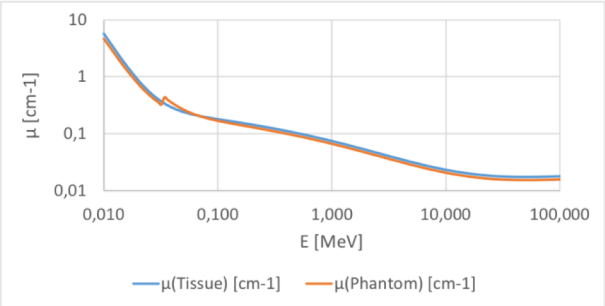
General indications

- The phantom is made of a cellulose-polymer composite material with properties similar to hardwood. If handled carefully, it will last a long time.
- The phantom is coated with a protective layer. If the protective layer is undamaged, the phantom can be cleaned using a damp cloth (water or mild detergent).
- Protect from direct sunlight.
- Maintain a storage temperature of 10 °C to 30 °C. If the phantom is exposed to temperatures below -10 °C or above 45 °C, it can be severely damaged.
- The phantom is not equipped for dose measurements with dosimeters and it is not suited for material characterization with dual energy CT.
- The phantom is not certified as medical device.
- Air voids are filled with cellulose-polymer composite of approx. -80 HU.

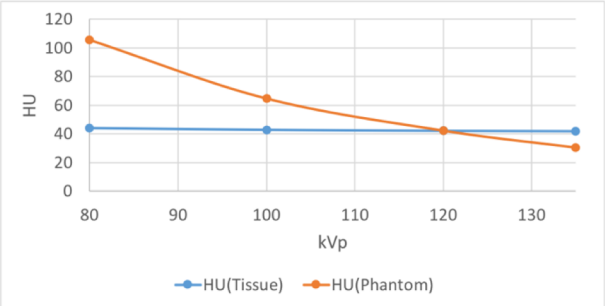
Attenuation properties

Soft Tissue

Linear attenuation coefficients [cm^{-1}] (calculated)

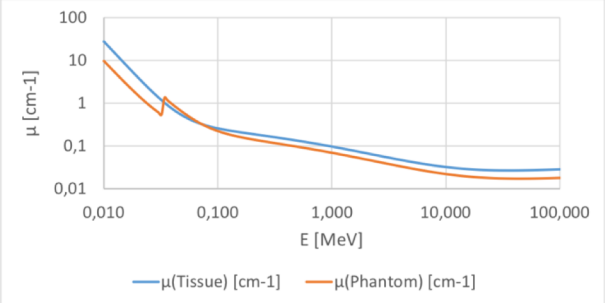


Hounsfield units (calculated)

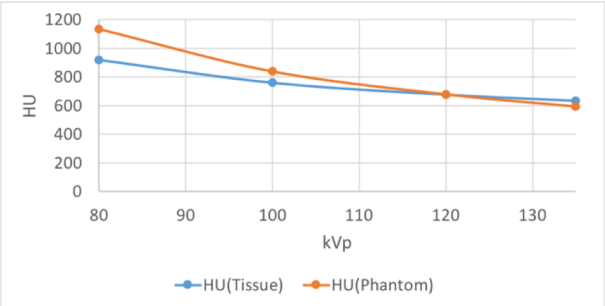


Bone Tissue

Linear attenuation coefficients [cm^{-1}] (calculated)



Hounsfield units (calculated)



Phantom based on modified data, originally from "Vascular test" by helpsalot licensed under CC BY 4.0.

Tissue Reference: Woodard HQ, White DR. The composition of body tissues. Br J Radiol. 1986.