phantomx

Article Number
53-08

ABDOMEN PHANTOM PV MIXED CYLINDERS

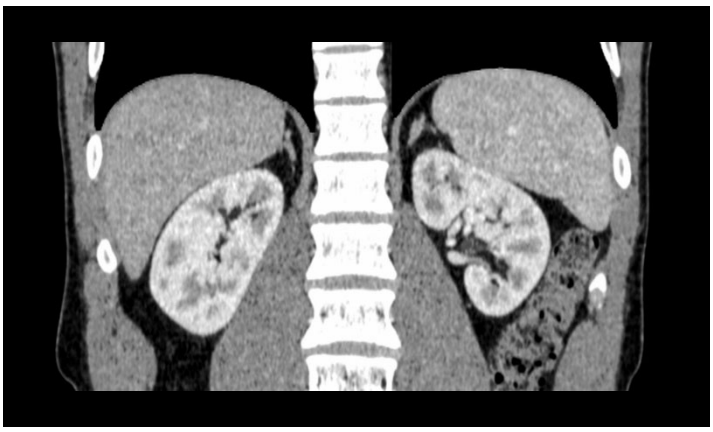
Age Category	Adult
Body Region	Abdomen
Target Modality	CT
Diagnostic Features	Vasculature, soft and bone tissue

This phantom simulates a contrast medium enhanced abdomen in portal venous phase. It covers the eleventh thoracic vertebra to the fourth lumbar vertebra (partially included).

The phantom has 35 rod-shaped liver lesions with 5 to 15 mm diameter and lesion contrasts of 25 to 110 HU to the surrounding liver.

The phantom can be used in CT (including CBCT) to evaluate and optimize imaging performance and post-processing applications, including AI-enabled applications. It is also suited for training purposes.

The phantom provides a detailed and realistic simulation of soft and bone tissue. Air voids are filled with a cellulose-polymer composite of approx. -160 HU.



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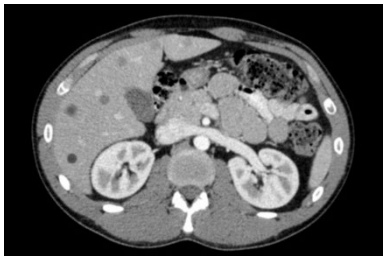

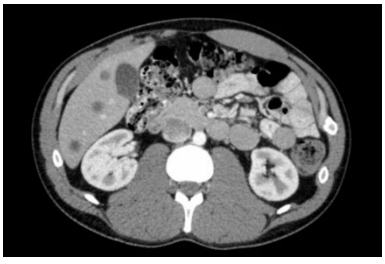

Specifications

Size	Approx. 268 x 189 x 150 mm
Weight	Approx. 4950 g
Base material	Cellulose-polymer composite
Optimal tube voltage	120 kVp (cf page 6) - adaptable upon request -

Diagnostic features

Realistic simulation of vasculature, bone and soft tissues, including the liver, gallbladder, pancreas, spleen, adrenals, kidneys, stomach, small intestine and colon.

35 rod-shaped liver lesions in 5 sections.

Lesion diameter:	5 to 15 mm
Lesions contrasts:	25 to 110 HU at 120 kVp

Section 1:	8 lesions	Section 4:	6 lesions
Section 2:	9 lesions	Section 5:	3 lesions
Section 3:	9 lesions		

For more information visit
www.phantomx.de

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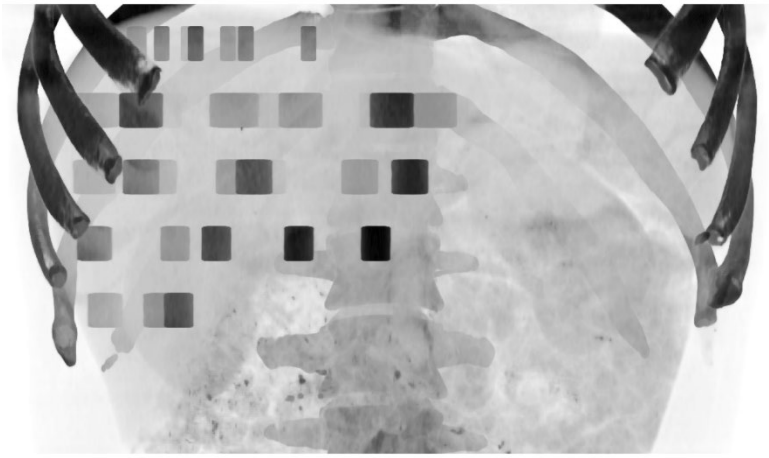
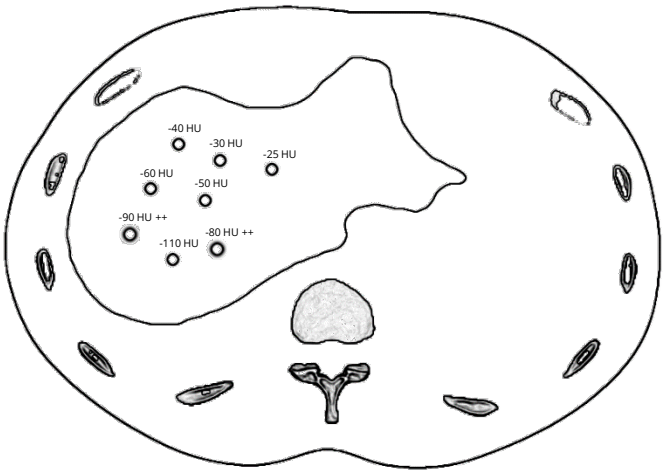
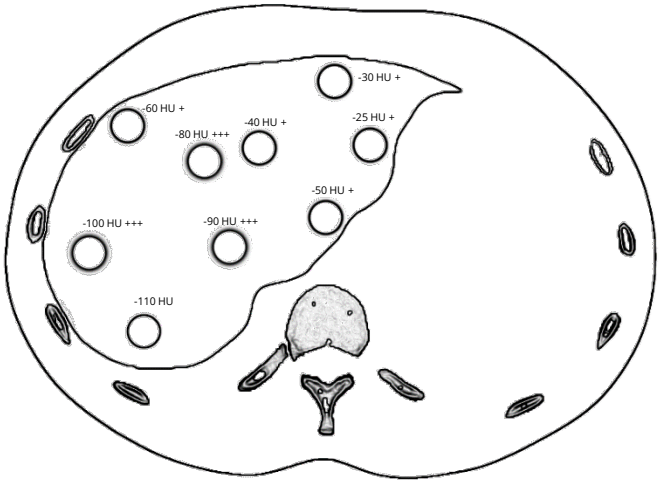


Exemplary image of section 1



Drawing indicates lesion contrast to surrounding liver tissue.
Crosses indicate edge blurr.

Exemplary image of section 2



Drawing indicates lesion contrast to surrounding liver tissue.
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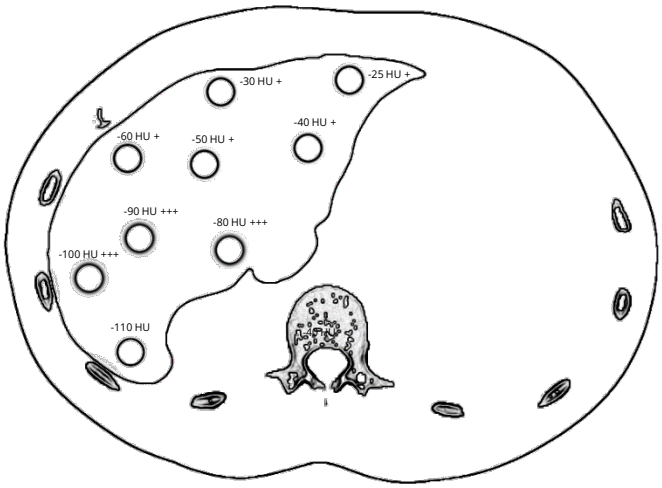
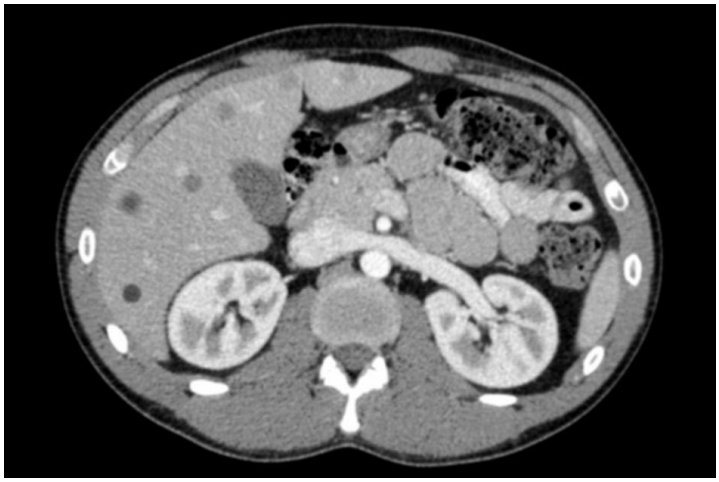
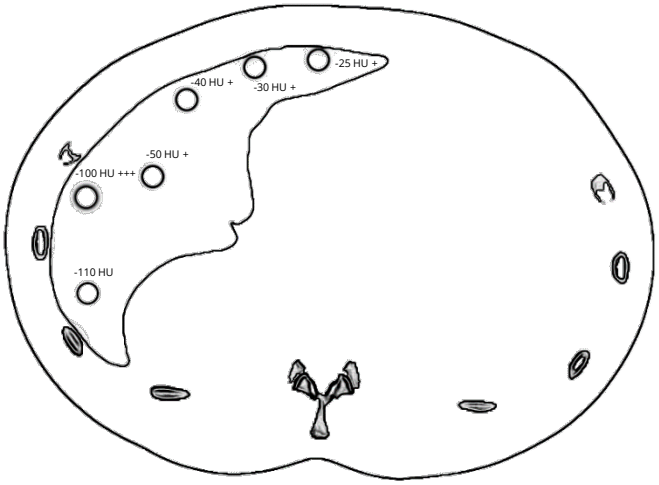
Exemplary image of section 3



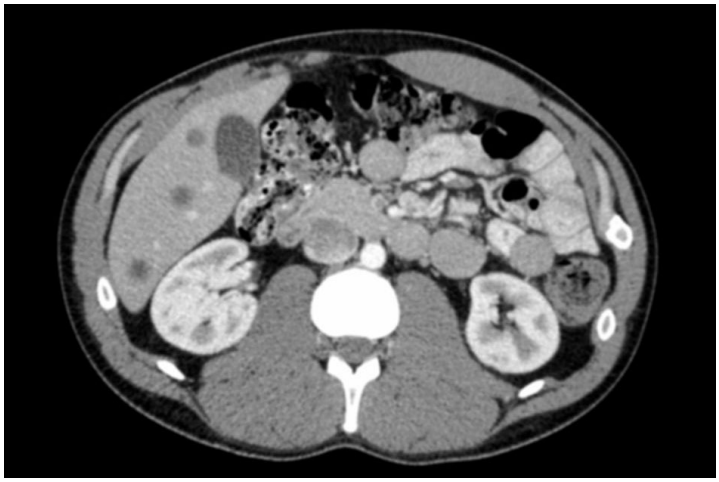
Drawing indicates lesion contrast to surrounding liver tissue. Crosses indicate edge blurr.



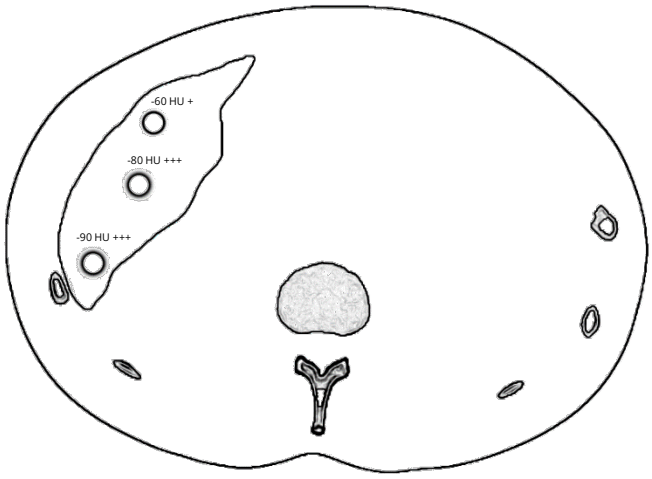
Exemplary image of section 4



Drawing indicates lesion contrast to surrounding liver tissue. Crosses indicate edge blurr.



Exemplary image of section 5



Drawing indicates lesion contrast to surrounding liver tissue. Crosses indicate edge blurr.

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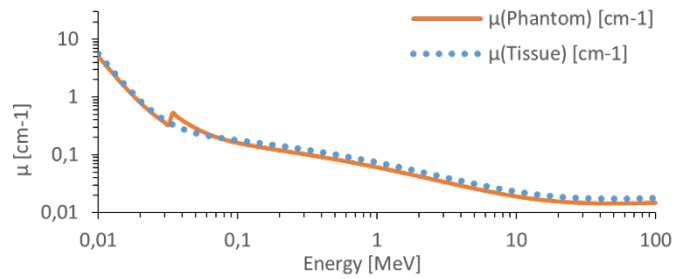
General indications

- 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. -160 HU.

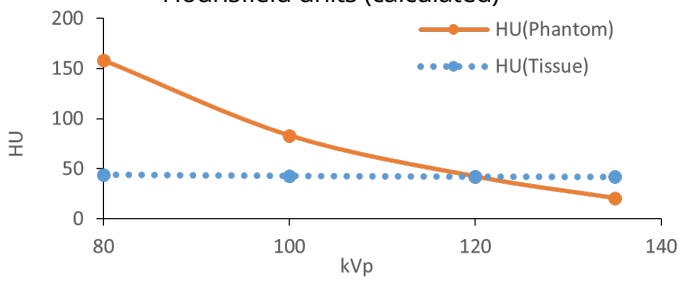
Attenuation properties

Soft Tissue

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

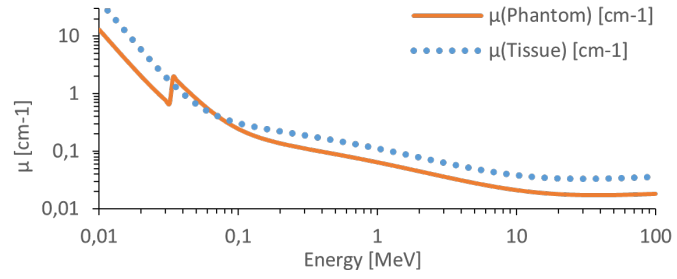


Hounsfield units (calculated)

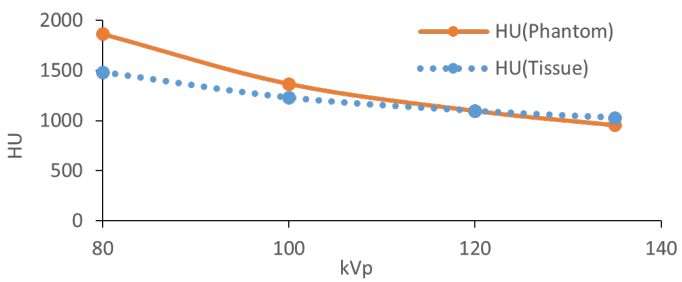


Bone Tissue

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



Hounsfield units (calculated)



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

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