



SPECT Volume Phantom equivalent Jaszczak*

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Field of Application

- Constancy tests on SPECT Gamma Camera systems according to Guideline of Radiation Protection in Medicine of 17th of October 2011 :
- **“The tomographic image quality has to be tested with a suitable volume phantom and reproducible reconstruction parameters“.**
- The knowledge of the tomographic characteristics is an important criterion of decision before and after technical service operation.

Product Specifications

- Compact and universal usable SPECT Test Phantom
- Intelligent construction

Benefits

- ✓ Find out the tomographic characteristics of a SPECT Gamma Camera system in one measuring cycle (resolution, contrast, inhomogeneity)
- ✓ Easy handling and fast mixing process, cost efficiency.

Product Description

The SPECT Volume Phantom contains three compartments of measuring in accordance with performance requirements:

1. For evaluation of the tomographic resolution rods of acrylic glass of different diameter, arranged in six circular segments.
2. For evaluation of the tomographic contrast six spheres of acrylic glass of different diameter, arranged sector wise.
3. For evaluation of the tomographic inhomogeneity an area of homogeneous radioactive fluid.

The phantom consists of the phantom body (regarding to IEC 61675-1) and the insert with the described measuring objects. The cover plate with the filling port is tightly screwed with the phantom body and contains further ports for bubble free filling, ventilating and emptying the phantom body.

Flanges are located at the base plate and at the cover plate for fast mixing of the radioactive solution by rotating the phantom body and for precise positioning during measurement.

Specifications

Outer diameter of the phantom:	236 mm
Outer diameter of the phantom cylinder:	200 mm
Height of the phantom (including filling port and screw plug):	252 mm
Height of the phantom body:	214 mm
Wall thickness of the cylinder:	3 mm
Wall thickness of the surface plates:	12 mm
Material of the phantom:	Acrylic glass
Weight, in filled condition:	approx. 6.3 kg

Area of rods

Number of sectors:	6
Diameter of rods [mm]:	4.0; 6.0; 8.0; 10.0; 12.0; 15.0

Area of spheres

Number of spheres:	6
Diameter of spheres [mm]:	9.5; 14.4; 19.0; 25.4; 31.8; 38.1

Area of homogeneity

Height:	26 mm
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*The SPECT Volume Phantom contains metric components. The Jaszczak Phantom contains components of inches because of its US origin.