

# PET-CT PHANTOM™



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The PET-CT Phantom™ includes internal structures (three rods and six spheres) which, when imaged with both modalities, can demonstrate how accurately the two image sets are aligned.

In addition, a single sample of radioactive water is attenuated by water, bone and CT contrast material (as well as air only) to determine how accurately the CT-based PET attenuation correction works.

#### The Phantom is used for:

- Acceptance testing of PET/CT and SPECT/CT systems
- Routine quality evaluation of PET/CT and SPECT/CT systems
- Evaluation of new image fusion software
- Evaluation of new attenuation correction algorithms
- Aluminum tubes are for registration
- The outer 2" OD micro cylinder is for comparing attenuation region to non attenuation region
- The 6" ring is for contrast solution
- Research

#### SPECIFICATIONS:

##### Main Cylinder:

Interior length of phantom: 180 mm  
Fillable spheres (5) inner diameter: 10 mm, 13 mm, 17 mm, 22 mm, and 28 mm.

Distance from sphere plane to inside wall: 70 mm

Volume of empty cylinder: 9.7 liters

##### Main Cylindrical insert dimension:

Outside diameter: 51 mm  
Length: 180 mm

##### Top Cylinder:

Cylinder outside diameter: ~5.1 cm  
Cylinder inside diameter: ~4. cm  
Cylinder inside height: ~8.2 cm  
Cylinder outside height: ~12.0 cm  
Volume of empty cylinder: 408 cm<sup>3</sup>

##### Three Aluminum Tubes:

One 5 inch long: ~1.7 cc  
Two 7 inch (ea): ~ 2.5 cc

##### Stepped Bone Ring:

Pre-filled with liquid bone composition, not to be opened  
The volumes for the bone ring are:  
Outer volume: 15.6 cu inch: ~256 cc  
Inner volume: 6.7 cu inch: ~110 cc

043-771 Phantom, PET-CT

PET-CT Phantom™包括内部结构（三根杆和六个球体），当用两种模式成像时，它们可以证明两个图像组的准确对准。

另外，放射性水的一个样本被水，骨骼和CT造影材料（以及仅空气）衰减，以确定基于CT的PET衰减校正工作的准确度。

#### PET-CT Phantom, PET CT模体用于:

- PET / CT和SPECT / CT系统的验收测试
- PET / CT和SPECT / CT系统的常规质量评估
- 评估新的图像融合软件
- 评估新的衰减校正算法
- 铝管用于注册
- 外部2 "OD微型圆柱用于将衰减区域与非衰减区域进行比较
- 6 "环用于对比解决方案
- 研究

#### PET-CT Phantom, PET CT模体技术参数:

##### 主缸:

- 体模内部长度: 180毫米
- 可填充球体 (5) 内径: 10毫米, 13毫米, 17毫米, 22毫米和28毫米。

从球面到内壁的距离: 70毫米

空缸体积: 9.7升

##### 主圆柱形刀片尺寸:

- 外径: 51毫米
- 长度: 180毫米

##### 顶部气缸:

- 气缸外径: ~5.1厘米
- 气缸内径: ~4. 厘米
- 圆柱体内部高度: ~8.2厘米
- 圆柱体外部高度: ~12.0厘米
- 空圆柱体积: 408厘米<sup>2</sup>

##### 三个铝管:

- 一个5英寸长: 约1.7cc
- 两个7英寸 (ea): 约2.5cc

##### 阶梯状骨环:

- 预先填充液态骨组合物, 不要打开

##### 骨环的体积为:

- 外容积: 15.6立方英寸: ~256立方厘米
- 内容积: 6.7立方英寸: ~110立方厘米

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