

PH-1 | 41337-000

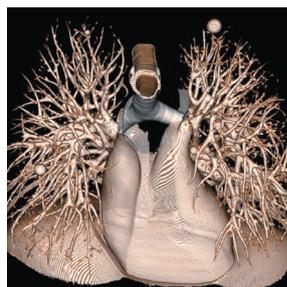
Multipurpose Chest Phantom N1 "LUNGMAN"



PH-1 is used in a study by the FDA to create a database of CT scans with different scanners and protocols, as a resource for assessment of lung nodule size estimation method



SHOW MORE!



CHEST PHANTOMS

FEATURES

APPLICATIONS

- | Radiation absorption and HU number approximate to human body
- | Simulated tumors and other targets can be attached at any points in the lung fields
- | Wide variety of uses in interpretation training, anatomical education, evaluation and assessment of devices and other research
- | Arms-abducted position of the torso suits the CT

- | CT
- | Plain X-ray
- | Radiographic interpretation

ANATOMY

Chest includes;

- | main body: synthetic bones are embedded
- | mediastinum: heart, trachea, pulmonary vessels
- | abdomen (diaphragm) block: no internal structure

Simulated tumors



Simulated tumors in five-size and three-HU-number variations can be attached to arbitrary position in the lung field.



DESCRIPTIONS

SET INCLUDES

- 1 chest torso
- 15 simulated tumors (15 variations 1 piece each)
- 1 set of sample X-ray data (DVD)
- 1 manual

MATERIALS

Soft tissue: urethane based resin (density: 1.06)
 Synthetic bone: epoxy resin (density: 1.31)
 *Phantom has no metal parts or liquid structure

SPECIFICATIONS

Phantom size:	Packing size:
43 x 20 x 48 cm, chest girth 94 cm	63 x 50 x 29 cm
17 x 8 x 18 in, chest girth 37 in	24.8 x 19.7 x 11.4 in
Phantom weight:	Packing weight:
18 kg/ 39.6 lb	25 kg / 55.1 lb

OPTIONAL PARTS

- 41337-010 Chest plates
- 41363-020 Storage case
- 41337-070 Simulated tumors



PUBLICATION REFERENCES

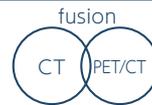
Xie, X., Zhao, Y., Snijder, R. A., van Ooijen, P. M., de Jong, P. A., Oudkerk, M., ... Greuter, M. J. (2013). Sensitivity and accuracy of volumetry of pulmonary nodules on low-dose 16- and 64-row multi-detector CT: an anthropomorphic phantom study. *European radiology*, 23(1), 139-147. doi:10.1007/s00330-012-2570-7

Gomi, T., Nakajima, M., Fujiwara, H., Umeda, T. (2011) Comparison of Chest Dual-energy Subtraction Digital Tomosynthesis Imaging and Dual-energy Subtraction Radiography to Detect Simulated Pulmonary Nodules with and without Calcifications. *Academic Radiology*, 18(2), 191-196. doi:10.1016/j.acra.2010.09.021



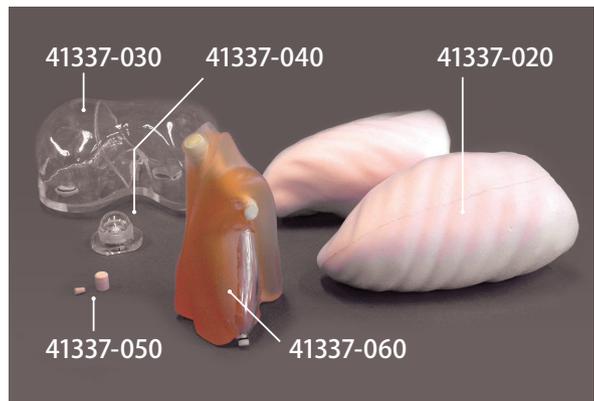
41337-020-

Optional Parts for PH-1



Components for Radioisotope

The set of RI container inserts can be set in the chest phantom in place of standard inserts allowing wider research applications including PET/CT fusion evaluation



- 41337-020 Lungs of urethane
- 41337-030 Liver RI container
- 41337-040 Gallbladder RI container
- 41337-050 Pulmonary nodule RI container
- 41337-060 Mediastinum with left myocardium RI container

DESCRIPTIONS

MATERIALS

- Container: acrylic resin
- Liver: acrylic resin
- Heart: urethane based resin
- Lung and pulmonary nodule: urethane based resin

PH-58

Optional Parts for PH-1

Subsolid Nodules Phantom

Both mixed and pure GGO are provided in a variety of sizes and HU numbers

Subsolid Nodules Phantom is a set of simulated lesions designed for study and training in Grand-Glass Opacity (GGO) detection and interpretation. Both mixed and pure GGO are provided in a variety of sizes and HU numbers. The set also includes 3-D GGO modeled on clinical CT data. The simulated lesions can be attached to the pulmonary vessels of the Chest Phantom N1 "LUNGMAN" or in the CT Lung Phantom.

41923-000 No.1-7 Concentric

Item No.	GGO field		Solid field		Type
	Diameter	HU	Diameter	HU	
1	1.5 cm 0.59 in	-650	0.5 cm/0.20 in	-50	Concentric
2				0	
3				50	
4	2.0 cm 0.79 in	-650	0.3 cm/0.12 in	0	
5				0	
6				0	
7				0	

41923-100 No.8-10 Eccentric

Item No.	GGO field		Solid field		Type
	Diameter	HU	Diameter	HU	
8	1.5 cm 0.59 in	-650	0.5 cm/0.20 in	-50	Eccentric
9				0	
10				50	

41923-200 No.11-12 Eccentric

Item No.	GGO field		Solid field		Type
	Diameter	HU	Diameter	HU	
11	2.0 cm 0.79 in	-650	0.3 cm/0.12 in 0.5 cm/0.20 in	0	Eccentric
12				0	

41923-300 No. a-h Pure GGO

Item No.	GGO field		Solid field		Type
	Diameter	HU	Diameter	HU	
a	1.5 cm 0.59 in	-750	-	-	Pure GG
b		-650	-	-	
c		-550	-	-	
d		-450	-	-	
e		-350	-	-	
f		-250	-	-	
g		-150	-	-	
h		-50	-	-	

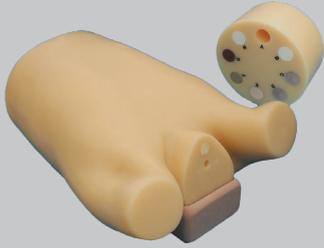
41923-400 3D GGO

Item No.	GGO field		Solid field		Type
	Diameter	HU	Diameter	HU	
3D-GGO	1.5 x 1.5 cm 0.59 x 0.59 in	-590	-	-	

Kyoto Kagaku Chest Phantom Family

Thorax contains organs crucial for our lives, and lung cancer remains to be the top cancer. Here's a family of chest phantoms that support pursuit for better diagnosis and treatment.

Pursuit of low-dose



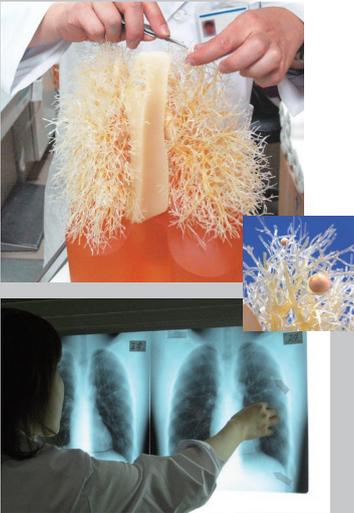
PH-8 Lung Cancer Screening CT Phantom LSCT001



PH-58 Subsolid Nodules

Extensive possibilities for study and training

Attach the simulated tumors & Improve interpretation skills



PH-1 Multipurpose Chest Phantom N1 "LUNGMAN"

Body size variation



PH-1C Pediatric Chest Phantom



Chest plates for "LUNGMAN"



Modality variation

Radiotherapy



PH-39 Dynamic Thorax Phantom



Components for Radioisotope for "LUNGMAN"



PH-63 Thorax Phantom for RI