

Multipurpose Chest Phantom N1 "LUNGMAN"

Broad range of possible applications in research and training.



Multipurpose

Applicable for both plain radiography and CT scanning.

Wide variety of uses in interpretation training, anatomical education, evaluation and assessment of devices and other research.

Accurate anatomy and high quality substitute materials

The phantom is an accurate life-size anatomical model of a human torso.

The thickness of the chest wall is based on measurement of clinical data.

The soft tissue substitute material and synthetic bones have x-ray absorption rates very close to those of human tissues.

Production supervision:

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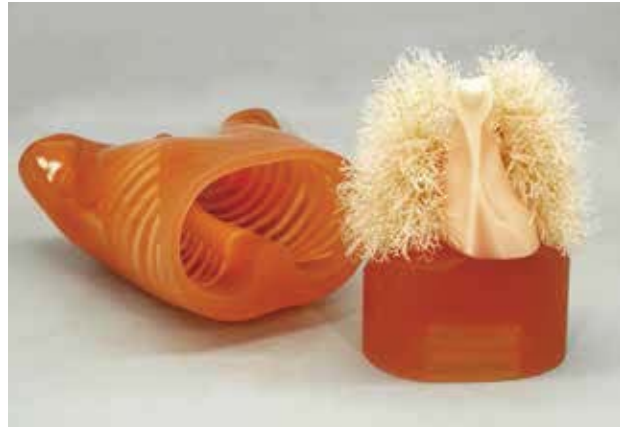
Shiga University of Medical Science



The phantom provides life-like radiographs very close to actual clinical images.

The three-dimensional structure allows both PA and LATERAL images to be obtained. The phantom bones and vessels show life-like contrast gradations on the image along with tube voltages.

PH-1 is used in a CT study by the FDA to create a database of scanned images.



Computed tomography

Arms-abducted position of the torso suits the CT scanning.

The pulmonary vessels are spatially traceable.

Assessment of computer-aided detection systems is possible.

3D reconstruction of CT data



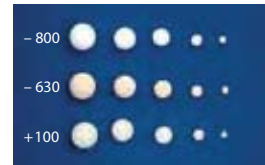
"LUNGMAN" Training



Attach the simulated tumors



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



Computed tomography

CT scan training
Interpretation training
Assessment of computer-aided detection systems

CT



PLAIN X-RAY



Plain radiography

Radiograph training
Interpretation training
Assessment of tube voltages, films and other devices

○ Simulated tumors (HU# 100)

Comparison



Review the plain X-ray



Specifications

Set Includes:

- 1 male chest torso
 - main body: synthetic bones are embedded
 - internal parts: separates into four parts
 - mediastinum: heart, trachea
 - pulmonary vessels (right and left)
 - abdomen (diaphragm) block: no internal structure

- 15 simulated tumors (15 variations)
 - 3 varieties of Hounsfield number: approx. -800, -630, +100
 - 5 sizes for each type:
 - diameters 3, 5, 8, 10, 12 mm
 - diameters 0.12, 0.2, 0.32, 0.39, 0.47 inch

phantom size:

- approx. 43W x 20D x 46H cm, chest girth 94 cm
- approx. 17W x 8D x 18H inch, chest girth 37 inch

phantom weight:

- approx. 18 kg
- approx. 39.6 lbs

packing size:

- approx. 65W x 55D x 29H cm, 25 kg
- approx. 26W x 22D x 11H inch, 55.1 lb.

Improve interpretation skills

Comparison between Plain X-ray and CT, as well as between these images and the direct observation of the phantom, helps trainees to have three dimensional understanding and to improve X-ray interpretation skills.

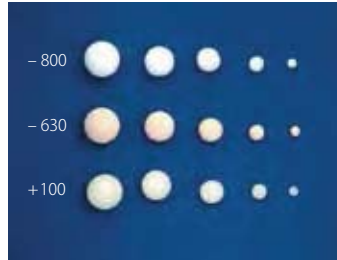
A48-1

Bronchus and Blood Vessels Model

Bronchus and Blood Vessels Model is a life size model that shows three dimensional structure of the bronchus, the pulmonary arteries, and veins in detail. Bronchial tree are made up to fourth bronchus and color-coded according to bronchopulmonary segments. Aortic valves and left ventricle are also shown on the model.



Multipurpose Chest Phantom N1 "LUNGMAN" Optional and replacement parts



41337-070 Simulated Tumors (standard set)

15 variations
(HU: -800, -630 and +100, each 3,5,8,10 and 12mm dia. / each 0.12, 0.2, 0.32, 0.39 and 4.7 inch dia.)

41337-010 Chest Plates

Chest plates can be attached to the phantom to simulate larger body type and to check the different body size parameters.

Specifications

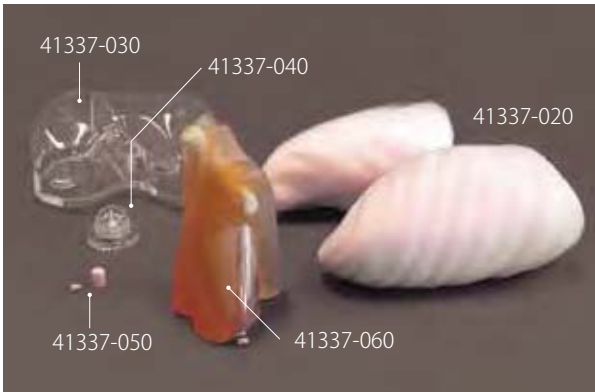
Optional Parts:
41363-020 Carrying case



Custom order simulated tumors

Custom order for tumors in different shapes and HU values is also available upon request.

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. The lungs of urethane foam can be worked easily to accommodate simulated nodules or other inserts.

Components for Radioisotope

- 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

CT



fusion



PET