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Multipurpose Chest Phantom N1 "LUNGMAN"

Item No.	PH-1
Weight	18 kg
Brand	KYOTO KAGAKU, JAPAN

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SKU:

Categories: Radiology Phantom

Product Description

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.

Features	1. Radiation absorption and HU number approximate to human body, in an arms-abducted position suits the CT. 2.Simulated tumors and other targets can be attached at any points in the lung fields. 3. Wide variety of uses in interpretation training, anatomical education, evaluation and assessment of devices and other research.
Set includes	(41337-100) 1 chest torso / 15 simulated tumors (15 variations 1 piece each) / 1 set of chest plates / 1 set of sample X-ray data (DVD) / manual (41337-000) 1 chest torso / 15 simulated tumors (15 variations 1 piece each) / 1 set of sample X-ray data (DVD) / manual
Size (approx.)	W43xH48 cm / W16.9xH18.9 in chest girth: 94 cm / 37 in
Packing size (approx.)	(41337-000) W63 x D50 x H29cm / W24.8 x D19.7 x H11.4inch
Weight (approx.)	18kg / 39.6lb
Packing weight (approx.)	25kg / 55.1lb
Materials	Soft tissue: urethane based resin (density: 1.06) / Synthetic bone: epoxy resin (density: 1.31) / *Phantom has no metal parts or liquid structure
Replacement parts	41337-010 Chest Plates for PH-1 / 41363-020 Carrying case for PH-1 / 41337-070 N1 Simulated tumors for PH-1
Related products	PH-1C Pediatric Chest Phantom PH-8 Lung Cancer Screening CT Phantom LSCT001 Breast plate for Chest Phantom N-1 LUNGMAN Pneumonia module for Chest Phantom N-1 LUNGMAN Components for Radioisotope
Production ? Development Supervision	Kiyoshi Murata, Professor, Department of Radiology, Shiga Medical University / Norihisa Nitta, Director of Angiography Center, Kyoto Okamoto Memorial Hospital
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
Update	July 26, 2020

Why Choose the Multipurpose Chest Phantom N1 "LUNGMAN" for Lung Nodule Research and CT Training in India?

The Multipurpose Chest Phantom N1 "LUNGMAN" (Item No. PH-1, Brand: Kyoto Kagaku, Japan) is a research-grade chest phantom used in an FDA-related study to build a multi-scanner, multi-protocol

database of CT scans for lung nodule size estimation research. Developed under the supervision of Kiyoshi Murata, Professor, Department of Radiology, Shiga Medical University, and Norihisa Nitta, Director of Angiography Center, Kyoto Okamoto Memorial Hospital.

The phantom's radiation absorption and HU values closely approximate the human body, positioned with arms abducted to suit CT scanning. Simulated tumors and other targets can be attached at any point in the lung fields, supporting a wide range of applications from interpretation training to anatomical education and device evaluation research. The phantom contains no metal parts or liquid structure.

Training applications:

- CT interpretation training
- Anatomical education
- Device evaluation and research
- Lung nodule detection and volumetry research

Set includes (two SKU options):

- 41337-100: Chest torso, 15 simulated tumors (15 variations, 1 each), chest plates set, sample X-ray data (DVD), manual
- 41337-000: Chest torso, 15 simulated tumors (15 variations, 1 each), sample X-ray data (DVD), manual

Specifications:

- Size approx. W43×H48cm (W16.9×H18.9in); chest girth 94cm (37in)
- Packing size approx. W63×D50×H29cm (W24.8×D19.7×H11.4in) [41337-000]
- Weight approx. 18kg (39.6lb)
- Packing weight approx. 25kg (55.1lb)
- Materials: Soft tissue — urethane-based resin (density 1.06); synthetic bone — epoxy resin (density 1.31)

Replacement parts: Chest plates for PH-1 (41337-010), carrying case for PH-1 (41363-020), N1 simulated tumors for PH-1 (41337-070).

Backed by published research: This phantom's design and validation are documented in two peer-reviewed publications — Xie et al. (2013), "Sensitivity and accuracy of volumetry of pulmonary nodules on low-dose 16- and 64-row multi-detector CT," European Radiology, 23(1), 139-147; and Gomi et al. (2011), "Comparison of Chest Dual-energy Subtraction Digital Tomosynthesis Imaging and Dual-energy Subtraction Radiography," Academic Radiology, 18(2), 191-196.

Why Buy from SEM Trainers? SEM Trainers & Systems is an authorized distributor of Kyoto Kagaku products in India with over 30 years of experience supplying research-grade chest phantoms and CT training equipment to 1,500+ institutions across 28 states. We provide pan-India delivery and dedicated after-sales support.

Frequently Asked Questions

Q: Is this phantom safe for use near MRI equipment? A: The phantom contains no metal parts or liquid structure, though we'd recommend confirming specific MRI-suite compatibility requirements with your facility before use.

Q: What's the difference between the two available set options? A: 41337-100 includes a set of chest plates in addition to the core phantom, tumors, and X-ray data; 41337-000 does not include chest plates.

Q: How do I order from SEM Trainers? A: Contact us at sem@semtrainers.com or call +91-88495 63724 for pricing and availability.