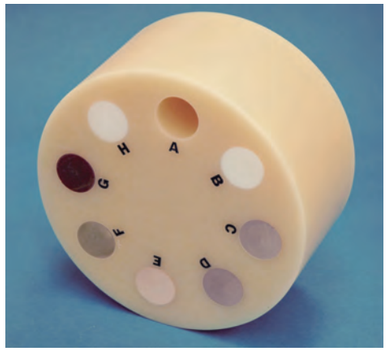
Specifications

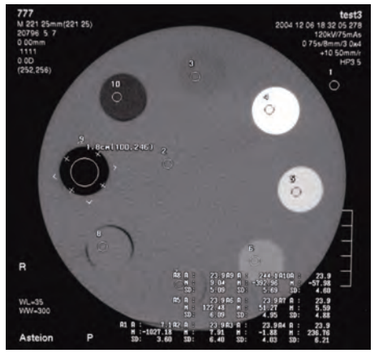
2 Linearity Phantom

The phantom is to assess the density curve of the image.

Size:
200mm dia., 100mm high
Materials:
Background: human tissue substitute…HU≒60
8 steps contrast cylinders…30mm dia. each.

A	-1000	air
B	-850	urethane foam
C	-600	polyurethane
D	-400	polyurethane
E	-200	polyurethane
F	100	polycarbonate
G	250	bakelite
H	350	polyacetal





■ Main Office and Factory (World Wide)

KYOTO KAGAKU co.,LTD

WEB • www.kyotogagaku.com
E-MAIL • rw-kyoto@kyotokagaku.co.jp

15 kitanekoya-cho Fushimi-ku Kyoto 612-8388, Japan
TEL: +81-75-605-2510
FAX: + 81-75-605-2519

2016.09

■ North and South American regions:

KKAmerica
Kyoto Kagaku America Inc.

WEB • www.kkamerica-inc.com
E-MAIL • info@kkamrica-inc.com

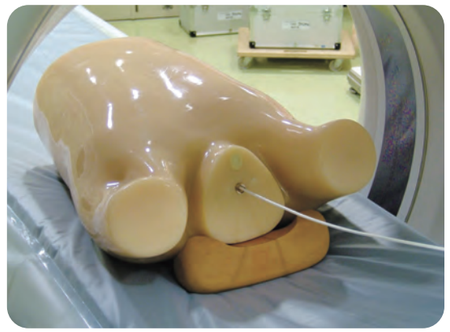
3109 Lomita Boulevard, Torrance, CA 90505-5108, USA
TEL: +1-310-325-8860
(Toll-free in North America: 877-648-8195)
FAX: + 1-310-325-8867

PH- 8

Lung Cancer Screening CT Phantom LSCT001

Caution:
Don't mark on the phantom with pen or leave printed materials contacted on its surface.
Ink marks on the phantom will be irremovable.

Instruction Manual



Contents

LSCT001 is a CT phantom developed to facilitate optimizing the radiation dose and other scanning conditions for Lung Cancer Screening CT examination with Helical CT or MDCT, which is aiming at early detection of lung cancers.

LSCT001 is a unique phantom dedicated for optimizing lung cancer CT screening conditions, as well as setting the standard conditions between multiple equipments or facilities for mass screening.

Original human tissue substitute material creates life-like artifact under CT scanning.

Simulated GGA type tumors with different sizes and densities are prepared in the vicinity of three main sections of bilateral lungs.

Dose meter holder on the central axis of the phantom allows housing a pencil type chamber dose meter.

8-step cylindrical linearity phantom to control density curve as a scale can be attached to the chest phantom base.

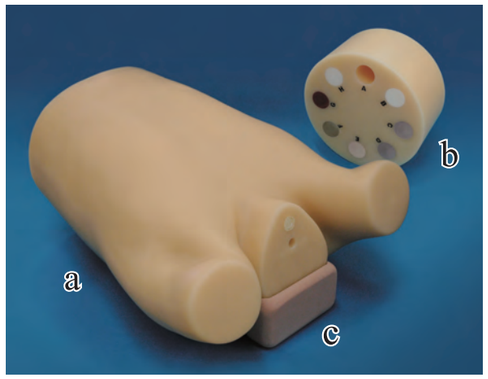
KYOTO KAGAKU co.,LTD

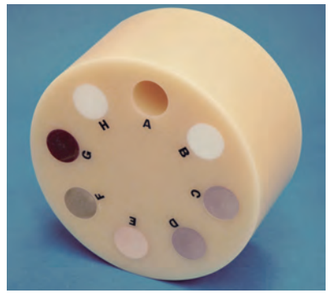
Please read

General information

Set includes

Before your first use, please ensure that you have all components listed below.





Linearity Phantom

a Chest Phantom ····· 1
b Linearity Phantom ····· 1
c Adjustment Base ····· 1
d Urethane cylinder ····· 1
Instruction manual (this leaflet)

Materials

Chest wall: human tissue substitute
Bones: synthetic bones
Alveoli: styrene foam and urethane foam

Size

Chest measurement 930mm, Hight450mm
(based on measurement of Japanese men)

⚠ CAUTION

- **Handle with care**
  The models consists of special compositions of resin. Please handle them with the utmost care at all times.
- **Storage**
  Store model at room temperature, away from shock, heat, moisture and direct sunlight.
- **Change of the color of the phantom, which may occur across the ages, does not affect the quality of the phantom.**
- **Don't mark on the models with pen or leave any printed materials in contact with their surface. Ink marks on the models are not removable.**

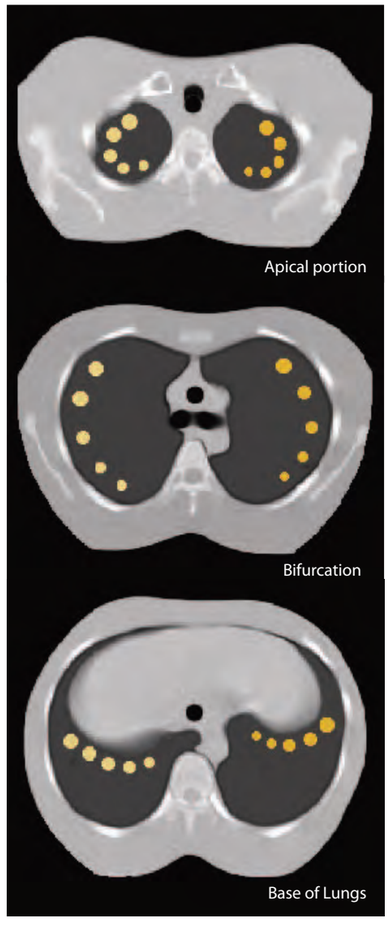
Specifications

1 Simulated Tumors

Simulated Tumors are embedded in the lung fields at apical portion, bifurcation and base of lungs (see the images below).
Alveoli are made of styrene foam mixed with urethane powder to create realistic back ground image.
Contrast of the simulated tumors against the background (alveoli: HU-900):
Right lung: -100HU
Left lung:-270HU

Sizes of simulated tumors
Right lung: 6,8,10,12mm dia.
Left lung: 2,4,6,8,10mm dia.

Materials of simulated tumors
Right lung: urethane foam
Left lung: polyurethane



Simulated tumors

	HU contrast with the lung back ground	size	materials
tumors in the right lung	Δ HU=100	4, 6, 8, 10, 12 mm dia.	urethane resin
tumors in the left lung	Δ HU=270	2, 4, 6, 8, 10 mm dia.	urethane resin

Chamber hole

A dose meter hole to accommodate a pencil chamber is made in the middle of the phantom.
The dose meter hole is designed to come on the rotation center of the scanner.

The diameter of the hole is 13mm.
Insert a pencil chamber for CT to assess the dose.

Accessories

Adjustment base to support the phantom neck, to keep the chest phantom horizontal.
Urethane cylinder to plug in the dose meter hole.