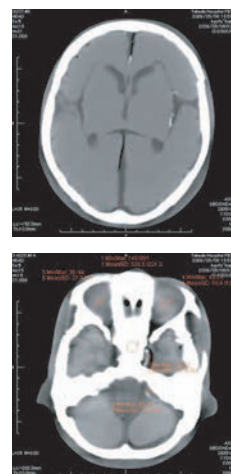


## PH-3 Angiographic CT Head Phantom ACS

Simulated arteries for CT scanning with contrast medium (41309-100)  
 Simulated arteries for Angiography scanning with contrast medium (41309-200)  
 Simulated arteries for Multi energy CT (41903-300)

### ● Specifications

- a. CT head phantom ..... 1
  - Life-size adult phantom
  - weight: 6.5kg
  - height: approx. 33cm
  - material: Urethane base resin, Epoxy base resin
- Sample X-ray images ..... 1
- Carrying case ..... 1
- Instruction manual ..... 1



### ● Introduction

- This ACS head phantom is designed for image evaluation in CT angiography scanning and can be used an educational tool for medical image interpretation.
  - Three kinds of head phantoms with different density of arteries are available : CT type
  - (41309-100) / Angiography type (41309-200)/MECT type (41903-300)

### ● Features

- The head phantom includes a synthetic skull, cervical vertebrae (C1-C7) , brain and arteries, along with arteries with contrast medium embedded in the left half of the head.
- Simulated arteries cover left anterior cerebral arteries and middle cerebral artery.
- Diameters of simulated arteries range from approx.0.5 mm to 4.0 mm.
- State-of-the-art synthetic skull. (Substantia spongiosa is not reproduced. )

## ⚠ CAUTION

### ● Handle with care

The models consists of special compositions of resin. Please handle them with the utmost care at all times.

- Even if color on its surface might be changed **across the ages, this does not affect the quality** of its performance.

### ● Storage

Store model at room temperature, away from shock, heat, moisture and direct sunlight.

- 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.

• For inquiries and service, please contact your distributor or KYOTO KAGAKU CO.,LTD.  
 KYOTO KAGAKU CONTACT & ORDERING INFORMATION



URL●<http://www.kyotokagaku.com>  
 e-mail●[rw-kyoto@kyotokagaku.co.jp](mailto:rw-kyoto@kyotokagaku.co.jp)

Worldwide Inquiries & Ordering  
**Kyotokagaku Head Office and Factories:**  
 15 Kitanechoya-cho, Fushimi-ku, Kyoto, 612-8388, JAPAN  
 Tel: +81-75-605-2510 Fax: +81-75-605-2519

All American regions  
**KYOTOKAGAKU AMERICA INC.**  
 3109 Lomita Boulevard, Torrance, CA 90505-5108, USA  
 Tel: 1-310-325-8860 Fax: 1-310-325-8867

## Storage Important Notes

Thank you for choosing our Phantom for CT.

Since this phantom is made of resin, contraction and expansion of resin may occur due to changes in temperature. A slight gap between organs may appear by contraction of resin. This air gap may be seen in the areas of resin in radiographic images.

**To avoid this problem, store the phantom in environment of between 20 (68°F) and 25 degrees Celsius (77°F).**

**Please store away from direct sunshine, high temperature low temperature and high humidity**

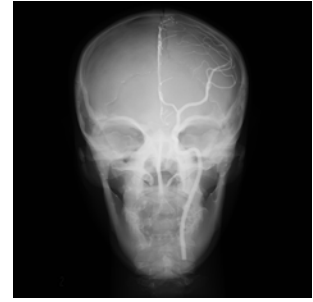
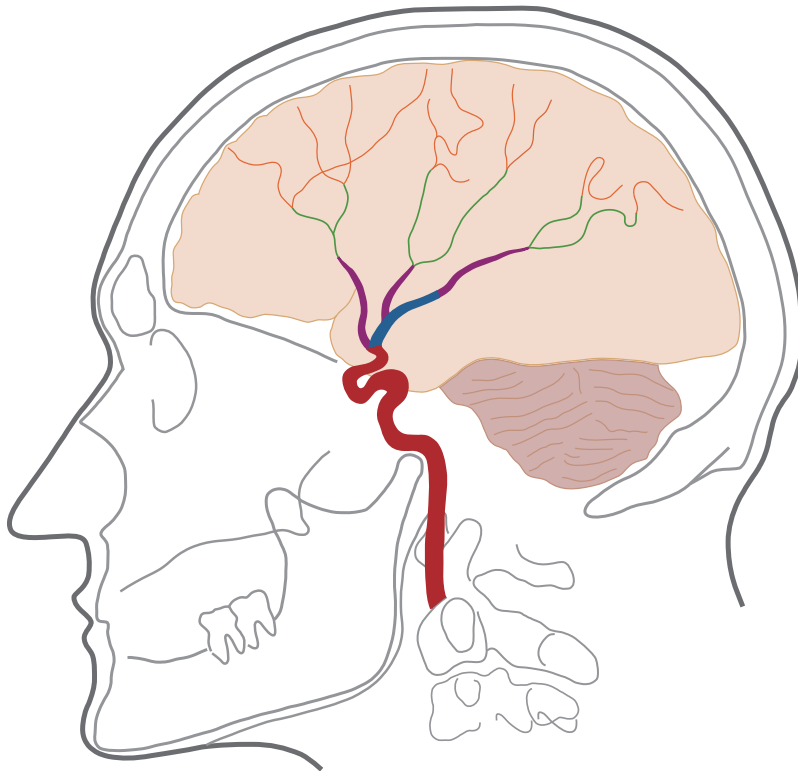
If the air gap image appears in unexpected position, keep the phantom in environment of between 20 (68°F) and 25 degrees Celsius (77°F). for minimum one week.

Our Phantom for CT is inspected by an X-ray CT scanner and the radiographic images. Please accept that the slight air gap is permissible range under our quality standard.






For any issues or inquiries, please contact us at any time.

# Specifications

## ◆ Middle cerebral artery



### ● Arteries range

	3~4 φ
	2 φ
	1.5 φ
	1 φ
	0.5 φ

## ● Specifications

### • A synthetic skull

- Skull bones : Urethane base resin
- Cervical vertebrae (C1-C7): Epoxy base resin

### • Soft tissue

- Urethane base resin

### • Simulated arteries with contrast medium

- Left anterior cerebral arteries
- Left middle cerebral arteries
- Internal carotid artery
- Diameters of simulated 0.5~4.0 mm

\* Arrangement of both arteries of CT type and Angiography type are the same.

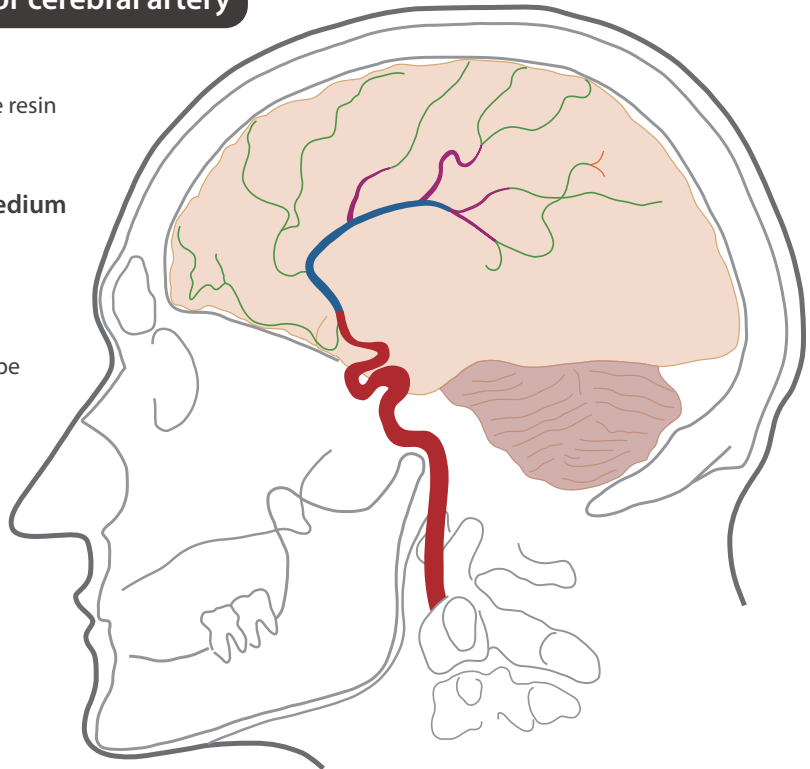
### ○ Artery density

- CT type: Hounsfield about 280 ※1
- Angiography type: hounsfield 4700 ※2
- MECT type: contains 13mg/ml Iodine

### ○ Hounsfield# ※3

Soft tissue	0
Cerebrum	40
Mesencephalon	40
Cerebellum	40
Cerebral ventricles	10
Eye balls	20

## ◆ Anterior cerebral artery



※1 and ※2 are the measurement value of the blood vessel materials.

※3 is the value of calculation value.

## Information of product inspection

### Head Phantom for CT imaging equipment

This is information regarding product inspection of our Head Phantom for CT imaging equipment. Head Phantom was inspected under the following condition.

---

X-ray tube voltage	120 KV
mAs	220 mAs
Table Speed	1.5 sec/rot
DAS	0.6mm x 16 DAS
Pitch	1.0mm
Slice Thickness	0.75 mm

---

CT image reconstruction was made by 2 different Window Level (WL) and Window Wide (WW) in order to check air bubbles and similarity to human brain. Both the width is 5mm.

Composition of Head Phantom is as follows.

---

Tissue	Estimated HU Value
Brain (White matter and Gray matter)	40
Ventricle	10
Gel as filler between skull and brain	0

---

---

1) Similarity Check	WL 40	WW 2000 (-960HU ~ -1040HU)
2) Air bubbles Check <sup>*)</sup>	WL 40	WW 300 (-110HU~ 190HU)

---

Please give us your understanding that it is impossible to manufacture the phantom with no air bubble.

If you have any inquiry, please contact us at any time.