

ICS 03.180
CCS Y51

JY

**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

JY/T 0159-2011

Replacing JY 159-1984

**Human skeleton model
(English Translation)**

Issued on: July 11, 2013

Implemented on: July 11, 2013

Issued by: Ministry of Education of the People's Republic of China

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009 "Guidelines for Standardization Work_Part 1. Structure and Preparation of Standards" this standard replaces JY 159-1984 "Technical Conditions for Human Skeleton Model". In addition to editorial changes, the main technical changes are as follows.

-Appearance size has increased allowable tolerances;

-Added the requirement that the main parts of the model should be affixed with name or

number tags;

-Specifies the materials that should and should not be used for the model;

-Specify the limit of heavy metal content in the paint of the model.

Please note that some elements of this standard may involve patents. The issuer of this standard is not responsible for identifying these patents.

This standard was proposed by the National Technical Committee for Standardization of Teaching Instruments (SAC/TC125).

This standard is under the jurisdiction of the National Technical Committee for Standardization of Teaching Instruments (SAC/TC125).

1 Scope

This standard specifies the nomenclature, requirements, test methods, inspection rules and signs, packaging, transportation and storage of human bone models.

This standard applies to human bone models used in biology teaching in middle schools.

2 Normative references

The following documents are essential for the application of this document. For dated references, only the dated version applies to this article Pieces. For undated references, the latest version (including all amendments) applies to this document.

GB 21746-2008 General requirements for safety requirements of teaching instruments and equipment
JY 0001-2003 General quality requirements for teaching instruments and equipment
products JY 0002 Inspection rules for teaching instruments and equipment
products JY 0026-1991 teaching instrument and teaching equipment product model naming
method JY 0213-1994 Teaching mechanical, thermal instrument transportation, storage
environmental conditions and test methods

3.1 Naming rules

The model name of the product is JY 0026-1991.

3.2 Nomenclature

The human skeleton model is named.

SM - RGG - N - 1700/850 Product height, 1700mm/850mm Product Feature Code, Male
Product name Pinyin prefix, "Human skeleton" Product model classification code, biological
model Model example.

SM-RGG-N-1700/850 stands for biological model, human skeleton model, male,

170mm/850mm in height.

4.1 Use environmental conditions

Temperature. -10 °C ~ 40 °C, relative humidity. not more than 90%.

4.2.1 General requirements

4.2.1.1

The product is a male adult skeletal model. The height is 1700mm ± 20mm/850mm ± 10mm, and the string is made to stand on the stand in a normal upright posture.

4.2.1.2

The ratio of the height of the skull to the height of the body shall be 1. 7, and the proportion and size of the bones of the skull shall be appropriate.

4.2.1.3

Bone sutures should be clear. Bone nasal cavity, orbit and all holes, tubes, grooves and fissures should be displayed correctly and naturally.

4.2.1.4

The texture and color of bone and cartilage should be clearly different. On the same model, components of the same color must not be visually visible.

Chromatic aberration.

4.2.1.5

The morphological characteristics of each part of the bone shall be correct, clear and full of realism.

4.2.2 Specific requirements

4.2.2.1

Skull. It is composed of brain skull and facial skull, cross the skull along the upper side of the eyebrow arch to the top of the temporal scales, and back to the herringbone suture.

The temporomandibular joint is movable.

4.2.2.1.1

The distance between the two jaw angles is. 1150mm ± 50mm/570mm ± 50mm.

4.2.2.1.2

The occlusion of teeth should be normal, with a total of 32 upper and lower teeth.

4.2.2.2

Spine. It consists of seven cervical vertebrae, twelve thoracic vertebrae, five lumbar vertebrae, one sacrum, one coccyx and intervertebral disc.

4.2.2.2.1

The leading edge of the first cervical vertebra, the leading edge of the second thoracic vertebra, the leading edge of the twelfth thoracic vertebra, and the promontory point shall be on the same vertical line.

4.2.2.2.2

The four physiological curvatures of the spine should be correctly represented.

4.2.2.3

Thoracic. It consists of a sternum, twelve pairs of ribs and twelve thoracic vertebrae and the connection between them.

4.2.2.3.1

The main dimensions and tolerances shall conform to Table 1.

Table 1 Main dimensions and tolerances of thoracic bones

project

Main dimensions and tolerances mm Upper and left diameter $(1000 \pm 20)/(500 \pm 20)$ Front and rear diameter $(500 \pm 20)/(250 \pm 20)$ Left and right diameter at the eighth rib $(2500 \pm 50)/(1250 \pm 50)$ Left and right diameter at the tenth rib $(2300 \pm 50)/(1150 \pm 50)$ Ninth thoracic vertebral body from the lower edge of the sternum $(1200 \pm 50)/(600 \pm 50)$

4.2.2.3.2

The upper edge of the sternal stem is flat to the intervertebral disc between the second and third thoracic vertebrae.

4.2.2.3.3

The rib bow shall be symmetrical to the left and right, and the shape and position of the floating rib shall be correct. The lower angle of the thorax should be 73° to 75° .

4.2.2.4

Pelvis. It consists of two hip bones, sacrum and coccyx, and the bone connection between them.

4.2.2.4.1

The upper mouth plane of the pelvis forms a 50° to 55° angle with the horizontal plane.