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JY

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

JY/T 0162-2011

Replacing JY 162-1984

**Alveolar structure model
(English Translation)**

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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 162-1984 "Technical Conditions for Alveolar Enlargement 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 naming, requirements, test methods, inspection rules and signs, packaging, transportation, and storage of alveolar structural models.

This standard applies to the alveolar structure model for human anatomy teaching.

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 alveolar structure model is named.

SM-FPJG-CR-400

Product height, 400 mm Product Feature Code, Adult Product name Pinyin prefix, "Alveolar Structure" Product model classification code, biological model Model example.

SM-FJG-CR-400 represents biological model, alveolar structure model, adult, 40mm 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 an adult alveolar structure model with a height of 40mm ± 2mm and is mounted on the base.

4.2.1.2

shows the end of the bronchioles (ie terminal bronchioles) together with its branches at various levels (respiratory bronchioles, alveoli, alveolar sacs) and the alveolar three-dimensional structure, in which the alveolar duct is used as a longitudinal section, the alveolar sac is used as a longitudinal and transverse section, and a part of the pleural viscera is shown.

4.2.1.3

shows the gradual branches of the pulmonary arteries and pulmonary veins and the formation of a capillary network surrounding the alveolar wall, and showing the bronchial arteries and veins.

The morphological and structural characteristics of each part should be correctly displayed, as well as the structural characteristics of arteries from thick to thin, veins from thin to thick, and the arterial ends of the capillaries and the static A network of capillaries formed at the ends of the veins.

4.2.2 Specific requirements

4.2.2.1

The smooth muscle bundles of the terminal bronchioles and respiratory bronchioles should gradually show a continuous circular layer, and the oblique rows Around the pipe wall, and has more structural characteristics of elastic fibers.

4.2.2.2

The alveolar duct is a branch of the respiratory bronchioles, and it is also the common channel of several alveolar sacs. The alveolar septum margin should be displayed correctly.

Formation of swollen structures with a small amount of smooth muscle and elastic fiber bundles.

4.2.2.3

The alveolar sac is a common opening of several alveoli, and the structural characteristics of the alveolar septum end without expansion should be correctly displayed.

4.2.2.4

The alveoli are polyhedral vesicles with open walls. The wall of the alveoli is a single-layered cell structure. It should show the cross section of the capillaries in the alveolar septum.

4.2.2.5

The longitudinal and transverse sections of the alveolar duct (sac) shall show sections of different positions of the alveoli.

4.2.2.6

The distribution of capillary networks should be uniform and reasonable, the connection and direction between arteries and veins, and the connection between pulmonary arteries and pulmonary veins the system should be correct, natural and proportionate.

4.2.2.7

The following parts of the model shall be affixed with name tags or number tags. bronchioles, respiratory bronchioles, alveolar ducts, alveolar sacs, alveoli, Septum, pulmonary artery, pulmonary vein, alveolar capillary network, bronchial artery, bronchial vein, smooth muscle, elastic fibers.

4.3 Materials and processes

4.3.1

The model should be made of rigid PVC material, and glass fiber reinforced plastic (FRP) or fragile and deformable materials should not be used.

4.3.2

The content of heavy metals in the coating of the model shall conform to GB 5.2.5.4 of GB 21746-2008.

4.3.3

The structure of each part indicated on the model shall be accurately positioned, and the joints shall be modified naturally and correctly. Bonding and splicing should be firm.

4.3.4

The color of the structure of each part should be correct and clear, and the spraying transition should be natural and there should be no spillage.