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**WS**

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

**WS/T 465-2015**

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**Method for iron deficiency screening  
(English Translation)**

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### Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

Drafting organizations of this standard. Institute of Nutrition and Health, Chinese Center for Disease Control and Prevention, Peking Union Medical College Hospital, Zhejiang Provincial Center for Disease Control and Prevention, Beijing Center for Disease Control and Prevention, Capital Institute of Pediatrics, Shenzhen Children's Hospital, School of Public Health, Peking University Health Science Center, Beijing Hospital, Institute of Nutrition Science, Chinese Academy of Sciences, UNICEF.

### 1 Scope

This standard specifies the screening indicators, judgment values and detection methods for population iron deficiency.

This standard applies to the investigation, determination and evaluation of iron deficiency in the population.

### 2 Normative references

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

WS/T 225 Collection and processing of blood samples for clinical chemistry tests

### 3 Terms and definitions

The following terms and definitions apply to this document.

Iron deficiency

Decreased iron reserves in the human body are insufficient to maintain the normal physiological function of blood, brain and muscle tissues, which may lead to anemia and decrease Cognitive function and physical activity ability, etc.

Serum (plasma) ferritin A protein that stores iron in the blood can reflect the body's iron storage status. When the iron reserve is insufficient, the level drops. Inflammation or disease in the body Under disease conditions, serum (plasma) ferritin levels will increase.

C-reactive protein

An acute-phase reactive glycoprotein that is significantly elevated when the body has inflammation, infection or certain diseases. This standard is used as the judgment of body inflammation the indicators of disease or certain diseases are also used as reference indicators to judge whether the serum (plasma) ferritin level is falsely elevated.

alpha1-acid glycoprotein an acute-phase reactive acid glycoprotein whose level rises in the body under inflammation, infection or disease conditions. This standard is used to judge the body the index reflected by the time phase is also used as a reference index to judge whether the serum (plasma) ferritin level is falsely increased.

## 4 Judgment index and judgment value of population iron deficiency screening

See Table 1.

**Note:** When the measured serum (plasma) ferritin content is less than the judgment value, it is judged as iron deficiency.

## 5 Detection method

The detection methods of serum (plasma) ferritin, C-reactive protein and alpha1-acid glycoprotein are performed in accordance with Appendix A.

Appendix A

(Normative appendix) Detection method A.1 Take blood A.1.1 Collection of blood samples. venous blood.

A.1.2 Serum (plasma) is used in this method, and the serum (plasma) can be divided.

A.1.3 The amount of serum (plasma) per tube is  $\geq 150\mu\text{L}$ .

**Note:** Refer to WS/T 225 for blood sampling method.

A.2 Serum (plasma) preservation the specimen can be stable for 7 days at  $2^{\circ}\text{C}\sim 8^{\circ}\text{C}$ , and for 12 months at  $-20^{\circ}\text{C}$ . If the specimen cannot be detected in time, it is recommended to store at  $-70^{\circ}\text{C}$  the specimen was frozen and thawed only once.

### A.3 Operation

A.3.1 The serum (plasma) specimen should reach room temperature, and the measurement should be carried out after mixing uniformly to ensure that there are no bubbles in the sample cup.

A.3.2 According to the detection methods of serum (plasma) ferritin, C-reactive protein, and alpha1-acid glycoprotein, test instrument operation instructions and kits Use instructions to prepare instruments, standards, quality control products, reagents, etc.

A.3.3 In order to prevent liquid volatilization from affecting the results, all samples, standards, and quality control products should be tested within 2h after they are put on the machine.

A.3.4 Strictly carry out the determination of standard products, quality control products and samples according to the requirements of the instrument and kit operating instructions, and read, save or print for inspection result.