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

WS/T 661-2020

**Guidelines of venous blood specimen collection
(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. Zhongshan Hospital of Fudan University, Xijing Hospital of Air Force Military Medical University, China-Japan Friendship Hospital, Sichuan University West China Hospital, Guangdong Provincial Hospital of Traditional Chinese

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1 Scope

This standard specifies the pre-collection preparation, collection operation, and post-collection processing of adult venous blood samples for clinical laboratory testing.

Use technical guidance.

This standard is applicable to the collection of adult venous blood samples by medical and health institutions.

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 document.

For undated references, the latest version (including all amendments) applies to this document.

GBZ/T 213 Guidelines for occupational exposure to blood-borne pathogens
WS/T 225 Collection and processing of blood samples for clinical chemistry tests
WS/T 311 Hospital isolation technical specifications
WS/T 313 Hand Hygiene Specification for Medical Staff
WS/T 367 Disinfection technical specifications for medical institutions
WS/T 433 Intravenous treatment and nursing technical operation specification
WS/T 503 Clinical Microbiology Laboratory Blood Culture Operation Specification

3 Terms and definitions

The following terms and definitions apply to this document.

Vacuum blood collection system Using the principle of vacuum negative pressure, it is a device combination that transfers human venous blood to the specimen container through a specific connecting device. Core group Parts include vacuum blood collection tube, blood collection needle and needle holder.

Blood collection needle Needles used to puncture veins and vacuum blood collection tube caps to inject blood into vacuum blood collection tubes, mainly including straight blood collection needles and butterfly wing collection tubes Blood needles are referred to as straight needles and butterfly wing needles.

Needle holder

Used to fix the straight blood collection needle for the blood collection personnel to hold the instrument for venipuncture; and ensure that the needle on the side of the puncture vacuum blood collection tube cover Inside the protective sleeve, avoid accidentally injuring blood collection personnel when puncturing the tube cover of the vacuum blood collection tube.

Blood transfer device Without using the original needle of the syringe, the collected blood sample is injected into the vacuum blood collection tube device, which pierces the needle of the vacuum blood collection tube cap. Inside the protective cover, avoid accidentally injuring blood collection personnel when puncturing the tube cover of the vacuum blood collection tube.

Sharps container

The puncture-resistant and leak-proof container is designed to contain and facilitate the destruction of sharps used in medical procedures such as blood specimen collection, therapeutic injection and infusion.

Occupational exposure A condition that is exposed to dangerous factors due to occupational relationships, which may harm health or life-threatening.

4.1 Diet

4.1.1

Patients should not change their eating habits before blood sampling, and should not drink alcohol within 24 hours.

4.1.2

The test items that require fasting blood sampling include (not limited to).

- a) Glucose metabolism. fasting blood glucose, fasting insulin, fasting C-peptide, etc.;
- b) Blood lipids. total cholesterol, triglycerides, high-density lipoprotein cholesterol, low-density lipoprotein cholesterol, apolipoprotein A1, and Lipoprotein B, lipoprotein a, apolipoprotein E, free fatty acids, etc.;
- c) Hemorheology (blood viscosity);
- d) Bone metabolism markers. osteocalcin, type I collagen carboxyl terminal peptide beta special sequence, bone alkaline sulfatase, etc.;
- e) Platelet aggregation rate (turbidimetric method).

Fasting requires at least 8 hours of fasting, preferably 12 hours to 14 hours, but not more than 16 hours. It should be arranged to collect blood from 7.00 to 9.00 am.

Drink a small amount of water during fasting.

4.2 Movement and mood

24 hours before blood collection, the patient should not exercise vigorously. The patient should avoid being emotional on the day of blood collection, and rest for at least 5 minutes before blood collection. If needed Take blood after exercise, follow the doctor's advice and inform the inspector.

4.3 Blood collection time

Test items with special requirements for blood collection time include (not limited to).

- a) Blood culture. At the beginning of chills or fever, it is best to collect before antibiotics. For other special requirements, see WS/T 503;
- b) ACTH and Cortisol. Physiological secretion is circadian rhythm, routine blood collection time points are 8.00, 16.00 and 24.00;
- c) Female sex hormones. There are significant differences in the different stages of the menstrual cycle. The date of blood collection should follow the doctor's advice. Check the menstrual cycle with the patient before blood collection;
- d) Drug concentration monitoring. The specific blood collection time should follow the doctor's advice, and the patient should check the last administration time before blood collection;
- e) Oral glucose tolerance test. normal diet 3 days before the test, blood was collected on an empty stomach on the test day, and then 75 g of anhydrous glucose (phase when 82.5 g (containing dextrose monohydrate) is dissolved in 300 ml of warm water, drink it within 5 minutes. Time the first oral sugar, and Blood is collected at 2 hours. Blood collection at other time points should follow the doctor's advice;
- f) Other functional tests. blood is collected at the time set by the functional test protocol recommended by the relevant clinical guidelines;
- g) Blood Plasmodium examination. The best time for blood collection is when chills occur.

4.4 Blood collection position

Blood is collected in sitting position for outpatients and supine position for patients in ward. The position of certain test items (such as renin, angiotensin, aldehyde the test results of sterone, etc.) have a significant impact, and blood should be collected in the position required by the doctor.

4.5 Infusion

Blood should be collected 3 hours after the end of the infusion; for the slow metabolism of the infusion components and severely affect the test results (such as fat emulsion), it should be in the next infusion Take blood before injection. In an emergency, when blood must be collected during infusion, it is advisable to collect blood from the contralateral limb or the distal end of the infusion point of the ipsilateral limb, and inform the inspector.