

ICS 11.020
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**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

WS/T 662-2020

**Technical requirements for clinical body fluids analysis
(English Translation)**

Issued on: March 26, 2020

Implemented on: October 1, 2020

Issued by: National Health Commission

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Foreword

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

The main drafting units of this standard. Clinical Laboratory Center of National Health Commission, Renji Hospital Affiliated to Shanghai Jiaotong University School of Medicine, Shanghai Zhong Longhua Hospital Affiliated to Medical University, Yangpu Hospital Affiliated to Tongji University, Yunnan Provincial Clinical Laboratory Center, Peking University People's Hospital, Sun Yat-sen University the First Affiliated Hospital, West China Hospital of Sichuan University.

1 Scope

This standard specifies the clinical examination of body fluid specimens such as cerebrospinal fluid, serous cavity fluid, joint cavity fluid, stool, semen, and vaginal secretions.

skills requirement.

This standard applies to clinical laboratories that carry out the testing of the above-mentioned types of body fluid samples.

2.1 Specimen collection, transportation and storage

2.1.1

The laboratory should discuss with the clinic and formulate standard operating procedures for the collection and processing of cerebrospinal fluid specimens.

2.1.2

The clinician should indicate the relevant information of the location where the cerebrospinal fluid sample was collected (such as the lumbar spine or ventricle) on the application form.

2.1.3

Sterile test tubes should be used for the collection of cerebrospinal fluid specimens (glass containers should not be used for specimens used for cytological examination).

Collect enough specimens and divide them into 3 to 4 test tubes. Each tube should take 3 mL to 5 mL. Generally, no anticoagulant is needed.

2.1.4

The first tube is used for chemical and immunological examinations (such as protein, glucose, etc.), the second tube is used for microbiological examination, and the third tube is used for cell counting and classification counting. If other examinations (cytopathological examinations, etc.) are required, the fourth tube specimen should be collected. If the first

tube is mixed Puncture bleeding should not be used for the diagnosis of diseases based on protein tests (such as multiple sclerosis).

2.1.5

If it is not possible to collect a sufficient amount of specimens, it is not necessary to carry out sub-packaging, and the inspection items are determined by the doctor; if microbiological examination is required, it is preferable Do it first, and then perform other checks as soon as possible.

2.1.6

The cerebrospinal fluid samples should be transported as soon as possible at room temperature, and the cell count and classification count should be completed within 1 hour to avoid cell destruction.

damage. Only specimens used for protein and nucleic acid analysis can be stored in frozen conditions (below -20 °C).

2.1.7

The specimens of cerebrospinal fluid microbiology examination should not be refrigerated. They should be submitted for examination immediately at room temperature or inoculated at the patient's bedside.

2.2 Physical examination

The physical examination of cerebrospinal fluid mainly includes color, transparency, and coagulability. The laboratory shall stipulate the standard terminology for the description and report of cerebrospinal fluid physical examination indicators.

2.3 Chemical and immunological examination

2.3.1

The chemical examination of cerebrospinal fluid mainly includes glucose, protein, chloride, enzyme determination and protein electrophoresis, etc. The immunological examination mainly Including immunoglobulin, myelin basic protein determination, etc.

2.3.2

The laboratory should pay attention to the differences in sensitivity and specificity of the detection methods of different principles for each item, and select appropriate methods to carry out the detection.

2.3.3

When performing the determination of CSF glucose, albumin and immunoglobulin, it is advisable to detect the corresponding substances in the serum at the same time to calculate the CSF/Serum glucose ratio, cerebrospinal fluid/serum albumin quotient (Qalb),

cerebrospinal fluid/serum IgG quotient (QIgG) and IgG index (that is, the ratio of QIgG to Qalb).

2.4.1 Manual cell counting

2.4.1.1

It is advisable to use a quantitative blood cell counting plate with a marked volume for cell counting, including total cell count, red blood cell count, and nucleated cells Counting and classification of nucleated cells.

2.4.1.2

The specimens with normal appearance do not need to be diluted, and the turbid and bloody specimens need to be diluted 1.10~1.200, the dilution factor is even higher (When needed). For cell counting, use isotonic saline to dilute the specimen; for nucleated cell count, use 3% glacial acetic acid to process the specimen.

2.4.1.3

The cell count is performed according to the following procedures.

- a) Mix the specimens thoroughly, and mix them with a rotary stirrer before filling (the time should not exceed 2 min~5 min) or mix upside down manually Do it for 10-15 times to avoid cell damage caused by excessive shaking and no air bubbles.
- b) Take a small amount of well-mixed specimens respectively, fill them into the counting pools on both sides of the counting plate (make sure the counting plate is clean), and let stand for 5 min~ 10 min (the length of time depends on the effect of cell precipitation).
- c) Use a low power lens (10x) to browse the cell distribution. The cell distribution should be even (the difference in the number of cells in each large square should not exceed More than 10), the cells should not overlap, otherwise they should be refilled.
- d) Select a suitable area under high magnification (40x) to count cells as soon as possible. The principle of determining the cell counting area of each counting cell Yes. If it is estimated that the number of cells in the 9 large squares is less than.200, then count 9 large squares (the counting area is equivalent to 9mm²);
If it is estimated that the number of cells in 9 large squares is greater than.200, then count the large squares with 4 corners (the counting area is equivalent to 4mm²);
If it is estimated that the number of cells in a large square is greater than.200, count the 4 corners in the central large square and 1 middle square in the center (count the area is equivalent to 0.2mm²). When counting the pressure line cells, you should follow the principle of "count the top but not the bottom, count the left but not the right".