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

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**Detection of *Schistosoma japonicum* miracidium - Egg hatching
method after nylon mesh bag concentration**
(English Translation)

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Table of Contents

- Foreword
- 1 Scope
- 2 Normative references
- 3 Terms and definitions
- 4 Instruments
 - 4.1 Light incubator
 - 4.2 Microscope
 - 4.3 Magnifier
- 5 Reagent materials
 - 5.1 Hatching water
 - 5.2 Nylon bag
 - 5.3 Sieve
 - 5.4 Flask
 - 5.5 Other
- 6 Detection steps
 - 6.1 Sample preparation
 - 6.2 Sample testing
 - 6.3 Result determination

Foreword

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

This standard was proposed by the National Health Standards Committee Parasitic Diseases Standards Committee.

This standard was drafted. Institute of Parasitic Diseases, Zhejiang Academy of Medical Sciences, China Center for Disease Control and Prevention, Institute of Parasitic Diseases Prevention and Control, Anhui Institute of Schistosomiasis Control, Jiangxi Institute of Parasitic Diseases, Zhejiang Kaihua County Center for Disease Control and Prevention.

1 Scope

This standard specifies the incubation method for the collection of eggs in the nylon sputum bag for detecting schistosomiasis in human feces.

This standard applies to the detection of *Schistosoma japonicum* ticks in disease prevention and control institutions and medical institutions at all levels.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only the dated version applies to this article.

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

WS 233 Pathogenic Microbiology Laboratory General Guidelines for Biosafety

3 Terms and definitions

The following terms and definitions apply to this document.

Schistosoma japonicum egg it is oval, pale yellow, and has a size of (74-106) μm x (55-80) μm . The egg shell is thin and uniform, with no egg cover and a small side.

Thorns, edulis can be seen in mature eggs.

Schistosoma japonicum miracidium the earliest stage of the development of *Schistosoma japonicum* larvae is pear-shaped or long-elliptical, symmetrical, silver-gray, and the size is (78-120).

Mm x (30 ~ 40) μm , the front end has a tapered protrusion, and the body surface has cilia.

Buttercup hatching miracidium hatching the phenomenon that the edulis breaks out after the embryo is developed in the eggs of *Schistosoma japonicum*.

4.1 Light incubator

Light intensity. 1 Lx ~ 5000 Lx

4.2 Microscope

Optical microscope. 40 x ~ 400 x

4.3 Magnifier

Magnification. 10x

5.1 Hatching water

Use clean water with no protozoa, residual chlorine below 0.3 mg/L and pH 6.8-7.2, see Appendix A.

5.2 Nylon bag

57 μm /25.4 mm (260 mesh) nylon bag, see Appendix B.

5.3 Sieve

The pore size is 250 μm /25.4 mm (60 mesh).

5.4 Flask

250 mL or 500 mL triangular or long neck flasks.

5.5 Other

Tongue depressor or bamboo stick, clip, capillary straw, slide, 2% iodine, etc.

6.1 Sample preparation

Collect the fresh feces of the subject, weigh not less than 30 g, and store it in a closed container with a wide-mouth cover and anti-leakage cleansing.

This information (name, number, date of inspection) is marked outside the container. Samples collected should be submitted for inspection in time. If they are not detected in time, they should be Store under refrigeration at 4 ° C for no more than 24 h.

6.2.1 Acceptance registration

Check the weight, quality and label of the feces, check the number after registration, and register.

6.2.2 Water rinse

6.2.2.1

Lay the sieve on the nylon bag and clip the lower mouth of the nylon bag with a clip.

6.2.2.2

Take 30 g of the stool of the subject and place it in a sieve. Rinse with water, tongue depressor or bamboo stick to adjust the slurry, and filter the feces into the nylon bag.

6.2.2.3

Remove the sieve, continue to rinse the dung in the bag with water, and gently shake the nylon bag with a tongue depressor or bamboo stick to accelerate the filtration until it is filtered out.

The liquid becomes clear.

6.2.2.4

Move the lower mouth of the nylon bag into the mouth of the flask, remove the clip, rinse the filter residue in the bag with the incubation water into the flask, and continue to incubate.

Use water to fill 1 cm from the mouth of the bottle.

6.2.3 Butter hatching

Place the flask containing the filter residue in a light incubator (20 ° C ~ 30 ° C) or incubate at the same room temperature, at 3 600 Lx ~ 3 800 Lx light Under the intensity, hatching for 4 h to 12 h (range 0.5 h to 24 h), need to observe 2 to 3 times, see Appendix C.

For each batch of experiments, schistosomiasis-positive feces should be set as a control.

6.2.4 observation

Remove the flask, the bottle mouth is facing the light source, the backing is on a black background, and the plankton is observed in the range of 0 to 4 cm below the water surface.

The observation time is not less than 3 min. If necessary, use a magnifying glass to observe. After the hair is found, it is sucked out with a capillary pipette and evenly divided onto the glass slide.

Observe the swimming state, then add 1 drop of iodine to fix and observe the morphology under the microscope (40 x ~ 100 x). Buttercup should be associated with protozoa in the water for identification, see Appendix D.

In order to improve the detection rate, such as negative hatching, the sediment can be examined for eggs.

6.3 Result determination

It was found that the sputum of *Schistosoma japonicum* was positive.

Appendix A

(informative appendix) Hatching water, utensils and waste disposal A.1 hatching water treatment A.1.1 Tap water treatment Put tap water in an open container for 24 h to allow it to naturally dechlorinate or add thiosulfur in tap water.

Sodium (4 mg/L to 8 mg/L) was used after standing for 30 min.

A.1.2 Well water treatment If the water quality is turbid, it can be left to clarify or add alum to clarify the water quality (30 mg/L ~ 40 mg/L). If it contains Protozoa in water, can be added to 65% effective chlorine bleach tablets (3.4 mg/L) or 30% effective chlorine bleach (7 mg/L) for insecticide, Then it was allowed to stand for 24 h for natural dechlorination or desulfation