

OREGON HEALTH & SCIENCE UNIVERSITY
Hospitals and Clinics
Point of Care

Microscopic Examination for Pinworm

Principle

Enterobiasis is best diagnosed by microscopic examination of specimens taken from the perianal region to identify *Enterobius vermicularis* eggs or adult female worms if present.

Specimen Requirements

1. Specimen must be collected at night or first thing in the morning before a bowel movement or bath. Female pinworms deposit eggs sporadically so specimens must be collected on a least four consecutive days to rule out a false negative result.
2. Wear gloves when performing this procedure. Pinworm eggs are infective.

Cellulose Tape Method

1. Stretch a piece of transparent cellulose tape, 2-3 inches in length, over the end of a tongue depressor, adhesive side out. (DO NOT use "Magic Tape").
2. Press the adhesive surface to the right and left perianal folds.
3. When finished, remove tape from tongue depressor and stretch out lengthwise on a glass slide, adhesive side down.

SWUBE[®] Paddle (TM of Becton-Dickinson and Co.)

1. Hold paddle by the cap and remove from tube.
2. Press sticky surface to the right and left perianal folds.
3. Replace paddle in the tube until microscopic examination.

Interferences

None

Reference Range

Negative – *Enterobius vermicularis* ova and adult worms are not normally present.

Quality Control

N/A

Test Accuracy and Reliability Verification

All providers performing Pinworm Exam must be enrolled in the on-line training with Medtraining. Please contact Point of Care at 4-6035 to be enrolled.

Procedure

Cellulose Tape Method

1. Lift tape from slide at one end, leaving the other end attached to the slide.
2. Add 1 drop of toluene or xylene to the slide, underneath the tape, and replace tape onto the slide.
3. Smooth down tape with cotton or gauze.
4. Using a microscope, examine the slides for eggs and female adults under the low power objective.

SWUBE[®] Paddle

1. Remove paddle from the tube.
2. Using a microscope, examine the entire paddle for eggs or female adults under the low power objective.

Results Reporting

1. Pinworm eggs are elongate and flattened on one side, with a thick, colorless shell.
2. The adult female pinworms may also be seen on the tape preparation. They are characterized by a long, pointed tail.
3. Result as Negative – no *Enterobius vermicularis* ova or adults seen, or Positive - *Enterobius vermicularis* ova or adults present.

Reagents

1. Clean, sterile glass slide.
2. Transparent cellulose tape.
3. Wooden tongue depressor.
4. SWUBE[®] Paddle (TM of Becton-Dickinson and Co.)
5. Toluene or xylene:
 - a. Store in closed container at room temperature.
 - b. Keep away from heat.
6. Microscope with low power objective.

References

1. John Bernard Henry, M.D., Clinical Diagnosis and Management by Laboratory Methods, 20th ed., W.B. Saunders Co., Philadelphia, 2001.
2. Ash, L. and Orihel, T., Manual of Clinical Microbiology, 9th ed., 2007.
3. SWUBE[®] Paddle Product Insert. Becton-Dickinson and Co., 1986.

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