



*New Mexico VA Healthcare
System
Pathology & Laboratory Medicine
Service*

Issue Date:
01/26/11

Document Identifier
SOP POC.0030

Authorized by: **Larry Massie**

Owner/DM: **Maria Montaña**

Version: **2**

Page 1 of 2

Title: Vaginal Wet Mount Examination

Hard copies are not official– paper copies are not document controlled

*Document Status: **APPROVED - For Operational Use-***

I. Principle:

An emulsion of vaginal fluid is prepared and examined for the presence of Trichomonas species, Monilia (yeast), Gardnerella, or vaginosis. Although the most practical method to confirm a diagnosis of trichomonas is based on the wet prep exam of a **fresh, warm specimen**, this direct exam for Trichomonas is only approximately 60% sensitive in the best of circumstances with specimens that have not cooled prior to the examination. This procedure is also used for the rapid detection of Monilia (yeast), Gardnerella and vaginosis.

This procedure is performed by Physician, PA, or CNP only.

II. Sample Collection/Handling

- A. Prior to collecting the specimen, confirm the patient's identity using two unique identifiers.
- B. Collect vaginal fluid with a swab and emulsify immediately in a test tube with a few drops of saline to prevent drying. **DO NOT ALLOW SPECIMEN TO DRY BEFORE TESTING.**
- C. If the test is to be performed by provider: see procedure under section V.
- D. If the test is to be performed by Laboratory: send specimen to lab immediately.

III. Materials/Equipment

- A. Microscope with a 10X and 40X objective
- B. 0.85% saline
- C. Microscope coverslips
- D. Microscope slides
- E. 10%-20% Potassium Hydroxide (KOH) - Obtain from Microbiology Laboratory.

IV. Quality Control

- A. Individuals performing wet mounts should be knowledgeable in the morphological characteristics of trichomonas, yeast, and clue cells. Discard saline if contaminated (i.e., turbid). Adequate reference material must be available in order to compare and correctly identify microscopic elements.
RESULTS MUST BE CONFIRMED BY A QUALIFIED ON-SITE PHYSICIAN.

V. Procedure

- A. Apply one drop of the emulsion to two separate areas of a glass slide. Add one drop of KOH to one drop of the emulsion sample. Apply a coverslip to each drop of emulsion. **DO NOT ALLOW SPECIMEN TO DRY PRIOR TO READING.**
- B. **IMMEDIATELY** examine the drop without the KOH for Trichomonas and Clue cells (for vaginosis) using the 10X microscope objective with reduced light. Use the 40X objective to confirm questionable objects observed under 10X.
- C. Examine the drop with KOH for yeast.

VI. Interpretation of Results:

- A. Yeast appear as oval to slightly elongated cells ranging from 2.5 to 6 um in diameter. They reproduce asexually by fission to form buds (blastoconidia). Filamentous blastoconidia (pseudohyphae) may also be observed. Budding and pseudohyphae easily distinguish yeast cells from RBC's.
- B. Look for the presence of actively motile organisms. Trichomonas are an oval or "teardrop" shaped flagellated protozoa which move in a short, rapid, jerky motion. They possess an undulating membrane, usually extending half the length of the organism. As the jerky motility of the organism begins to diminish the undulating membrane may become more apparent, especially under the 40X objective. In old specimens they may be nonviable or distorted and can be confused with host white cells.
- C. Clue cells are epithelial cells containing bacteria (cocco-bacillary organisms) indicative of Gardnerella.

VII. Expected Results:

- 1. Normal: No Trichomonas species or yeast present.
- 2. Abnormal: Trichomonas species or yeast present in few, moderate, or large amounts.

VIII. Limitations: Dried smears or swabs are unsatisfactory for examination.IX. References:

- A. Cooper, B.H. and Silva-Hunter, M. 1985, Yeasts of Medical Importance, pp 526-541. In E. H. Lennette (ed.), Manual of Clinical Microbiology, 4th ed., American Society for Microbiology, Washington, DC.
- B. Melvin, D.M. and Healy, G.R. 1985, Intestinal and Urogenital Protozoa, pp 631-650. In E.H. Lennette (ed.), Manual of Clinical Microbiology, 4th ed., American Society for Microbiology, Washington, DC.