

Wet Mount Proficiency Test 2007B Critique



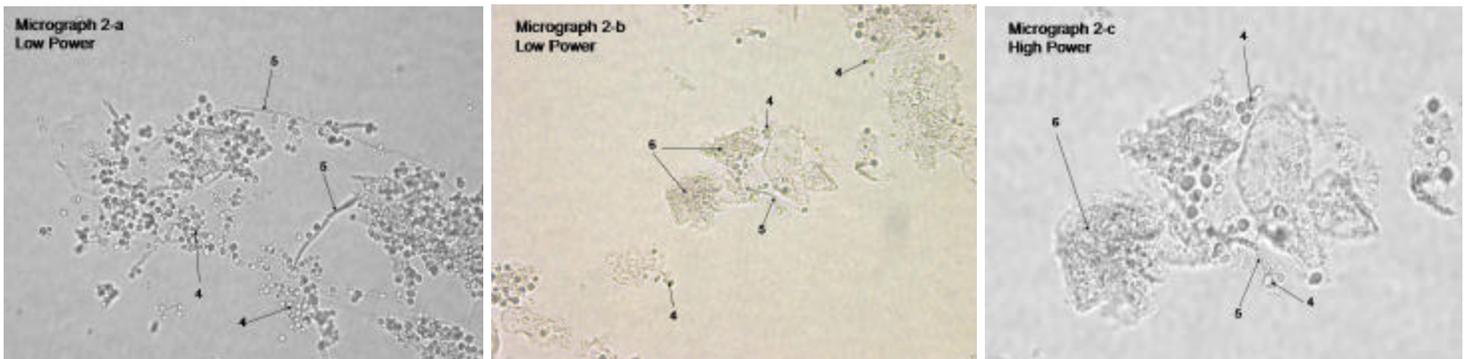
Expected Answers: Patient 1, Micrographs 1a, 1b, 1c

- Item #1: Red Blood cell
- Item #2: Yeast cell
- Item #3: Squamous epithelial cell(s) - not a clue cell

Red Blood Cell: RBC are slightly larger and more uniform in shape than yeast cells. In fresh samples, RBC will be round. Because of the biconcave nature of RBC, a dimple may be observed in the middle of the cell. After 5-10 minutes, the RBC will crenate and get a jagged appearance. The RBC in the upper portion of micrograph 1-a is severely crenated. A few sites misidentified Item #1 as a white blood cell. WBC contains a multi-lobed nucleus that is identifiable under the high power objective. Refer to item #9 for a description of white blood cells.

Yeast Cell: the cells vary in shape from circular to oval, they are smaller than a red blood cell usually up to 7.5 microns (μm) in diameter. In budding yeast cells, a single bud is observed.

Squamous Epithelial cell – not a clue cell: The squamous epithelial cell is a large cell with a clearly visible cell nucleus and a well defined cell boundary. The cell nucleus of the squamous epithelial cell is a handy tool which provides a size standard for the assessment of the size of red blood cells, white blood cells, and yeast cells.



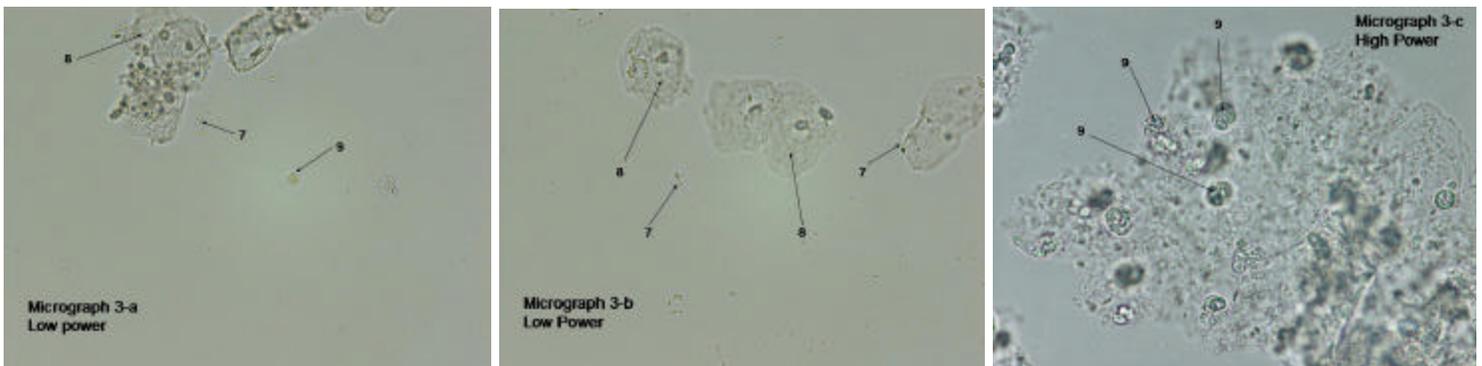
Expected Answers: Patient 2, Micrographs 2a, 2b, 2c

- Item #4: Yeast Cell
- Item #5: Pseudohyphae
- Item #6: Squamous epithelial cell(s) - a clue cell

Yeast Cell: See the comments in Micrograph 1 for a description of yeast.

Pseudohyphae: These are fragile tube-like structures that arise through elongation of the yeast form of *Candida*. They are called pseudohyphae because they lack true branching as seen with mold like fungi. The side walls are parallel to each other which is an important characteristic that helps separate pseudohyphae from artifact whose side walls vary in width. Small oval structures called blastoconidia are often seen attached along the length of the pseudohyphae. The blastoconidia are smaller in size when compared to the yeast form of *Candida*.

Clue Cell: Clue cells are squamous epithelial cells that are covered with a thick mat of bacterial cells and is associated with bacterial vaginosis. The traditional definition of a clue cell is that the bacterial overgrowth is so thick that all cell detail (such as the cell nucleus and the cellular edge) are totally obscured. It is possible, however, to detect the nucleus in a clue cell by using the fine focus to focus through several focal lengths. Refer to the educational challenge in Wet Mount Challenge 2007A for additional information on clue cells.



Expected Answers: Patient 3, Micrographs 3a, 3b, 3c

- Item #7: Sperm cell
- Item #8: Squamous epithelial cell – not a clue cell
- Item #9: White blood cell(s)

Sperm Cell: The characteristic shape of a sperm cell is a tapered tail attached to an oval head.

Squamous epithelial cell – not a clue cell: See the comment for item #3.

White Blood Cell: These cells are larger than Red Blood Cells and are approximately the same size as the nucleus of a squamous epithelial cell. You can most easily compare the relative size of the white blood cell with the size of the squamous epithelial cell nucleus by screening on low power. Switch to the high power objective, however, to make a definitive identification of White Blood Cells. Under high power, the nuclear detail of the WBC becomes apparent. The WBC is characterized by a multilobed nucleus (usually three distinct lobes can be identified). A white blood cell is approximately the same size as the nucleus of the squamous epithelial cell

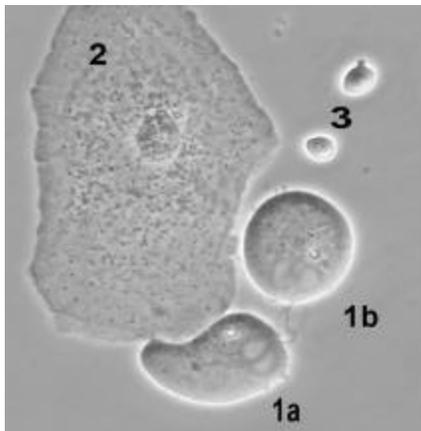
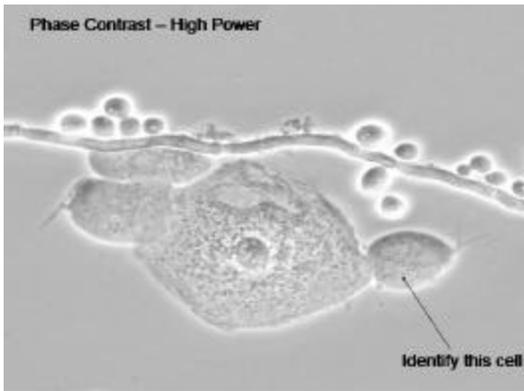
Educational Purposes Only – *Trichomonas vaginalis*

- *Trichomonas* are parasitic protozoa.
- They can be very motile
- When they begin to die (within 10 minutes of specimen collection), they become sedentary and begin to round up.
- Cells also fatten when grown in culture medium (refer to the slides in the Powerpoint file).

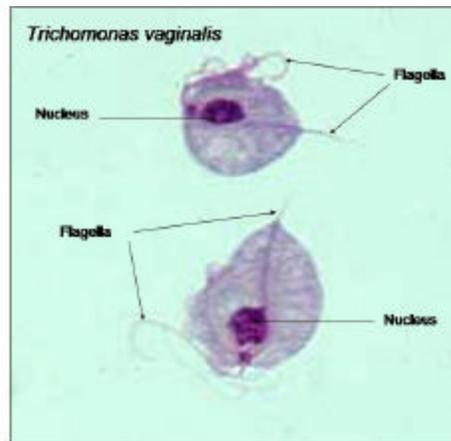
- Trichomonas should only be reported when motility is observed
- Trichomonas have a very complex structure.
- They have four flagella facing 'forward' and a fifth facing 'backward' which is attached to an undulating membrane.
- Sometimes, an 'axiostyle' or structural shaft can be seen – often it can't be seen.
- The cells are oval in shape, 10-23 μm in length

Assessment of cell size:

- Use nucleus of Squamous Epi Cell as size marker
 - Nucleus = 15 microns
 - Yeast = 5-7 microns
 - RBC = 6-8 microns
 - WBC = 15 microns
 - Trichomonas = 20 microns



1a – Healthy Trichomonas
 1b – Dying Trichomonas (rounded up)
 For size reference:
 2 – Squamous Epi
 3 = Yeast cell

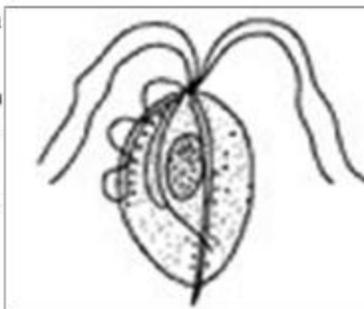


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Results Reviewed with Staff

To be completed after results have been received from the laboratory director or designee. Results must be shared with all staff performing wet mount analysis. By signing below, testing staff acknowledge that the results of the wet mount proficiency samples have been reviewed and when appropriate, corrective action has been documented.

Testing Person: _____

Date: _____

Testing Person: _____

Date: _____