

Waived Testing Unit

**PURPOSE:**

To determine pH in vaginal pool.

**Vaginal/Amniotic Fluid:** pH determination is used as a screening system for detecting the rupture of the amniotic membrane in pregnant women. Rupture of the amniotic membrane can result in leakage of small volumes of amniotic fluid in the upper vagina. The presence of amniotic fluid tends to elevate the pH, and detection of a pH increase using pH paper may assist in determining the presence of amniotic fluid.

**PRINCIPLE:**

pH paper is a test strip used for the determination of pH. In the presence of fluid with normal pH (7.0), the paper will turn a yellow-green color. In the presence of acidic fluids, the paper will range from red-orange to orange in color; and in the presence of alkaline fluids, the paper will range from green to blue in color. The colors correlate to a pH range of 3 to 9 and indicate the pH of the specimen. The pH of the upper vagina is normally acidic, while amniotic fluid has a neutral pH.

**REAGENTS, EQUIPMENT AND MATERIALS:**

- pH paper (Hydrion 3 to 9 paper)
- pH Color Card
- Sterile Gloves

**STORAGE:**

pH paper must be stored in its container at room temperature. Avoid excessive heat.

**QUALITY CONTROL:**

The laboratory will complete all Quality Control. New orders will be QC'd prior to distribution to sites. Labels will be attached to the pH dispensers indicating that the quality control has been performed. **Do not** use pH paper from containers without a QC label.

**SPECIMEN AND TESTING PROCEDURE:**

- Remove 1-2 inches of pH paper from the holder for each test. **DO NOT** allow it to come into contact with any liquid or other substance, which might affect pH.
- The paper may be applied directly to the pooled vaginal fluid.
- Observe for immediate color change.
- Record the pH value, corresponding to the color change, in the patient's chart.

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**INTERPETATION OF RESULTS:**

The color of the pH paper after use should be compared to the sample colors on the pH paper container. pH results should be reported as numeric values as measured against the pH color chart.

<b>Color</b>	<b>Approximate pH value</b>
Red-Orange	3
Burnt-Orange	4
Orange	5
Light-Orange	6
Yellow-Green	7
Green	8
Blue-Green	9

Normal Vaginal pH 4.5-6.0

Ruptured Vaginal pH 7.1-7.3

**PROCEDURE NOTES:**

- Do not use pH paper that does not have a QC label on the dispenser.
- Following contact with the vaginal pool, the pH paper should be considered
- potentially infectious and standard precautions must be observed.
- Do not reuse paper.

**LIMITATIONS:**

- pH paper, used in the detection of vaginal pool fluid is intended for use by qualified medical and nursing staff and is intended as an aid to professional treatment.
- pH paper can only indicate a pH value and should be used only as a monitoring tool.
- Antibiotic therapy or infections of the vagina can lead to elevated vaginal pH resulting in a false interpretation for determining the presence of amniotic fluid. Where doubt exists, standard microbiological testing should be employed to exclude infection.
- pH testing cannot distinguish amniotic fluid from urine.

**REFERENCES:**

University of California at San Francisco Point of Care Website.  
Family Practice Notebook, LLC.