

**SUBJECT: FLUID pH TESTING USING
pH TEST PAPER**

Original Date: 2/1997
Effective Date: 2/1997

I. PURPOSES:

pH test paper is used to make a qualitative determination of the pH content of body fluids other than blood.

II. DEFINITION:

pH test paper is formulated and calibrated for color matches at specific pH values that correspond to a color chart.

III. POLICY:

A. GENERAL

1. Staff who have documented evidence of training and competency may perform the pH analysis using pH test paper. All personnel performing the test must be tested for difficulty with visual color discrimination. Because this test is visually read and requires visual color differentiation, it should not be interpreted by the visually impaired.
2. New personnel will be oriented to the procedures for performing pH analysis using pH test paper during orientation.
3. Skill validation in testing procedures will occur on nursing units during orientation. Thereafter, all personnel will be validated annually. Individual records will be maintained on the unit documenting current satisfactory performance.
4. Patient specimens, and all materials that come in contact with them, should be handled as potentially infectious and disposed of according to Standard Precautions guidelines.

B. SPECIMEN

Acceptable specimens include gastric, pleural, pericardial, vaginal (Amniotic), ascitic, synovial, cerebrospinal and seminal fluids; and feces.

C. REAGENTS AND EQUIPMENT

pH Paper (i.e. Nitrazine-vaginal, etc.)
Store at room temperature
Stable until manufacturer's expiration date printed on container

D. QUALITY ASSESSMENT

1. pH test paper will be quality control checked:

- a. Each day of patient testing;
 - b. Each time a new container of pH test paper is opened.
2. pH Buffer Solution (4) and pH Buffer Solution (7) will be used for quality control testing. pH Buffer Solutions may be obtained from the laboratory (call ext. 85117).

E. RESULT REPORTING AND REVIEWING

1. A numeric value for the pH is reported as determined by the color comparison of the test paper to the color chart.
2. pH results should be reconfirmed by testing personnel at the time of transfer to the patient chart.
3. If an error is detected upon review of the test result by a licensed professional, corrective action must be initiated immediately. The corrective action involves making the correction to the chart and initialing it.
4. Point-of-care testing results that do not correlate with patient condition should be followed up with confirmatory testing in the main laboratory.

IV. PROCEDURES

PROCEDURE A: PATIENT TESTING

Requisites:

pH test paper
Gloves

Testing Procedure:

1. Wash hands with soap and friction for 15 seconds. Put on gloves.
2. Write the patient name and medical record # (or other patient-specific identifier) on the specimen container.
3. Dip pH test paper into the specimen.
4. Remove pH test paper.
5. Once the pH paper stops turning colors, determine the pH by comparing the paper to the scale on the container.
6. Remove gloves, wash hands and document the pH in the patient's medical record.

PROCEDURE B: QUALITY CONTROL TESTING

Requisites:

pH paper
pH Buffer Solution (4)
pH Buffer Solution (7)
Gloves

Procedure:

1. Wash hands with soap and friction for 15 seconds. Put on gloves.
2. Place a drop of pH Buffer Solution (4) on a pH test paper and place a drop of pH Buffer Solution (7) on a second pH test paper.
3. Once the pH paper stops turning colors, determine the pH of each by comparing the papers to the scale on the container.
4. Remove gloves, wash hands and document the quality control on the Quality Control Tracking Log.

V. APPENDIX:

APPENDIX A: ABOUT THE TEST

Reference Range:

Gastric fluid	< 2
Pleural fluid	~ 7 – 8
Pericardial fluid	~ 7 – 8
Ascitic fluid	~ 7 – 8
Synovial fluid	Parallels plasma (about 7)
Cerebrospinal fluid	~ 7
Seminal fluid	~ 7 – 8
Vaginal fluid	(3.8-4.2) Normal Amniotic Fluid Present: >=6.5

VI. REFERENCES:

Micro Essential Laboratory Inc.
Tietz Textbook of Clinical Chemistry, 2nd Edition, Philadelphia, PA 19106, 1994.
Procedure: Gastric Analysis, Hematology Laboratory, and Medical College of Virginia Hospitals (PCAW Clinic). Pointofcare.net-procedure for Nitrazine paper.

VII. RESOURCES:

Department of Clinical Pathology