Sutter Health
Sutter Roseville Medical Center

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Owner:	*Lindsey Westerbeck: Dir, Lab*
Policy Area:	*Lab - Chemistry*
References:	
Applicability:	*Sutter Roseville Medical Center*

Manual Fluid pH, CM.ANA10.03-/-RV.XX

PURPOSE

Fluid pH studies on various types of biological fluids are a convenient screening tool to assess various physiological or pathological problems. The use of pH indicator papers makes this test quick and easy to perform.

POLICY

- All CLS and MLT staff may perform fluid pH testing.
- Order code: **FPH** *(Fluid pH)*

SPECIMEN REQUIREMENTS

Serum and body fluids, including: urine, pleural, abdominal, pericardial, joint fluid or any dialysate are acceptable.

- Specimen should be collected in a sterile, leak proof container or red top tube (no additive).
- Specimen should be free of any hemolyzed blood or other contaminate that may interfere with the interpretation of the color development on the pH indicator strip.
  - If excess cellular debris is present, centrifuge body fluid prior to testing
  - Whole blood is **not** acceptable for testing

REAGENTS, EQUIPMENT AND SUPPLIES

- pH Indicator Strips - Manufactured by Macherey-Nagel, Ref# 92118
- pH Buffer Solutions 4.0 & 7.0
- 12x75mm Test Tubes

QUALITY CONTROL

- Two buffers, one at 4.0 and another at 7.0, are used to assess the ability of the pH paper to accurately detect a specific pH
  - Treat the buffers as you would a patient specimen
- Run both levels of QC with each test performed and document results on *Form A: Fluid pH Log*
- Enter QC results in the LIS, using function MEM, worksheet RVMPH
  - pH buffer 4.0 = C-PH4

        - Acceptable range: 4.0 +/- 0.5 pH units
    - pH buffer 7.0 = C-PH7
        - Acceptable range: 7.0 +/- 0.5 pH units
- The pH strips should be able to detect the buffer pH readings to 0.5 pH units
- No patient testing is to be performed if the QC is out of acceptable limits

PROCEDURE

1. Pour a small amount of buffer or body fluid into a 12x75mm test tube.
2. Immerse the pH indicator strip into the buffer or body fluid. If the test solution is weakly buffered, leave test strip in solution until color no longer changes.
3. Determine pH by matching the color strip with the color on the chart.
4. Record all results and patient information on *Form A: Fluid pH Log.*
5. Enter patient results to the nearest 0.5 pH unit in the LIS, using function MEM, worksheet RVMPH.

REFERENCE RANGE

- There is no normal range or critical value range for this test

REFERENCES

- Clinical Guide to Laboratory Tests, N.W. Tietz, 2nd Edition, W.B. Saunders 1990.
- pH-Fix 2.0-9.0 Package Insert, Macherey-Nagel, Ref 92118.

All revision dates: 8/27/2019

Attachments:

Form A: Fluid pH Log

Approval Signatures

Step Description	Approver	Date
Medical Director	Lindsey Westerbeck: Dir, Lab	8/27/2019
Laboratory Director	Lindsey Westerbeck: Dir, Lab	8/14/2019