The Johns Hopkins Medical Institutions
Department of Pathology-Core Laboratory
Point-of-Care Testing Program

pH Hydrion Paper
Operator Competency Checklist

Instructions: *Instructor will supervise performance of skills by employee. All steps must be performed as indicated in order for competency to be determined adequate. Instructor will sign the form when all steps are performed correctly. The completed Competency Checklist and a copy of the e-Learning certificate can be faxed to 410-502-1913 or delivered to the Point-of-Care Testing Program Office, CMSC SB-201.*

REQUIRED PERFORMANCE SKILLS

I.   SPECIMEN REQUIREMENTS

1.   States acceptable specimen type (ocular secretions).
2.   States specimen collection and labeling requirements (2 patient identifiers on container, not the lid).

II.   STORAGE AND STABILITY REQUIREMENTS

1.   States pH Hyrion paper storage and handling requirements:
    a.   Does not touch pH paper with bare fingers.
    b.   Dates pH paper dispenser when opened.
    c.   Stores paper at room temperature. Protects paper from excessive heat.
    d.   Protects pH paper from exposure to light when not in use.
    e.   Protects pH paper from exposure to acid or alkaline fumes
    f.   Does not use pH paper after the manufacturer's expiration date.
2.   States pH buffer storage and handling requirements:
    a.   Dates pH buffer bottles when opened.
    b.   Stores buffers at room temperature.
    c.   Keeps bottles tightly capped when not in use.
    d.   Does not use buffers after the manufacturer's expiration date.

III.   EQUIPMENT REQUIREMENTS

1.   States the proper location for pH testing to be performed (well-lit area to facilitate reading color changes).
2.   States that color comparison of the pH results should not be done under fluorescent light.
3.   States that the color chart included with each dispenser should only be used for tests performed with that particular pH paper dispenser.
4.   States additional materials required for testing:
    a.   Ink pen to record Quality Control results
    b.   pH Hydrion Quality Control Log sheets
    c.   Gloves (to be worn during testing of pH buffers and patient samples)
    d.   Container to store paper when not in use (to protect paper from light)

IV.   QUALITY CONTROL PROCEDURE

1.   States the frequency of performing Quality Control:
    a.   Weekly on each opened dispenser of pH Hydrion paper.
    b.   Initially when opening a new package of pH paper or pH buffer.
2.   Checks that the control buffer solutions are at room temperature and not expired.
3.   Dates and initials the package of pH Hydrion paper and/or pH buffers when opened.
4.   Records the date, time, lot numbers and expiration dates of the control buffer solutions and the pH Hydrion paper on the pH Hydrion Quality Control Log Sheet.
5.   Wearing gloves, tears off two strips of pH Hydrion paper from the dispenser.
6.   Mixes the control buffers gently by inversion.
7.   Applies one drop of pH 6.0 buffer to one strip of Hydrion (6.0-9.5) paper and one drop of pH 9.0 buffer to one strip of Hydrion (6.0-9.5) paper.

IV. QUALITY CONTROL PROCEDURE (continued)

8. Immediately matches the color of the pH paper with the closest color in the chart supplied with the dispenser.
    a. Results should be read within 60 seconds as colors are unstable.
    b. Avoids color comparisons under fluorescent lights.
9. **Records the actual pH number of the buffer results** on the pH Hydrion Quality Control Log sheet.
10. Verifies that all of the Quality Control buffer results are within acceptable range by comparing results to the Control Ranges on the pH Hydrion Quality Control Log sheet.

V. QUALITY CONTROL FAILURES/CORRECTIVE ACTION

1. **Patient testing is not performed until Quality Control is acceptable.**
2. Remixes the buffer solutions and repeats the test with a fresh aliquot of buffer.
3. If results are acceptable, records the results, notes corrective actions taken on the pH Hydrion Quality Control Log sheet, and continues with patient testing.
4. If repeat buffer results are unacceptable, opens and performs Quality Control on a new bottle of pH buffer solution(s).
5. If results are acceptable, records the results, notes corrective actions taken on the pH Hydrion Quality Control Log sheet and continues with patient testing.
6. If the newly opened bottle of pH buffer(s) result is unacceptable, opens and performs Quality Control on a new dispenser of pH Hydrion paper using the newly opened buffer(s).
7. If results are acceptable, records the results, notes corrective actions taken on the pH Hydrion Quality Control Log sheet and continues with patient testing.
8   If Quality Control results are still unacceptable, **patient testing is suspended**.
9. Follows the troubleshooting guidelines available on the Point-of-Care Testing website and documents all failed QC results and corrective actions on the pH Hydrion Quality Control Log sheet.
10. Contacts the Point-of-Care Testing Program Office for assistance in resolving the failed Quality Control problems.

VI. PATIENT TESTING

1. Uses two identifiers to verify the patient's identity when collecting the sample for testing.
2. Wearing gloves, tears off a strip of pH Hydrion paper from the dispenser.
3. Brings specimen in contact with the pH paper in one of the following ways:
    a. Places the pH paper into the eye cul-de-sac.
    b. Dips the pH paper into the eye lavage collection cup labeled with the patient's name, history number, date and time of collection.

VII. DOCUMENTATION OF PATIENT RESULTS

1. **Records the actual number value of the patient result** and any care actions on:
    a. An Admission/progress note
    b. The Nursing Flow Sheet
    c. The Electronic Patient Record
2. Records the patient results with the date, time, operator initials and a check mark (√) or "QC okay" to note that acceptable Quality Control has been performed on that pH Hydrion paper dispenser within the week.
3. Notes results as Point-of-Care results in order to differentiate these results from the laboratory results.

VIII.   LIMITATIONS OF TESTING

1.   States that Reference ranges are dependent upon the specific body fluid being tested.
2.   States that pH Hydrion paper is not to be used for pH determinations of urine and gastric fluids.
3.   States that the accuracy of the pH Hydrion paper is affected by the presence of salts, proteins and other factors.
4.   States that color comparison should be avoided under fluorescent light.

IX.   HANDLING ABNORMAL RESULTS

1.   Questionable pH Hydrion results, problems with the testing procedure, or results that do not match the clinical condition should be reported to the physician/provider to determine if additional follow-up is needed (i.e. repeating the point-of-care test, sending a sample to the main laboratory etc.)

X.   OPERATOR COMPETENCY

1.   States the requirements for competency to perform pH Hydrion testing.
    a.   One method is the successful performance and documentation of quality control (two levels of pH buffer solution). The second method will be one of the following:
          ● Written test
          ● Having the supervisor or qualified delegate periodically observe routine work.
          ● Testing an unknown specimen
2.   States that operator competency is documented in the employee's Developmental Resume.

XI.   POINT-OF-CARE RESOURCES

1.   Can access and use the Point-of-Care Testing Web site for information.
2.   States the location of the Point-of-Care Testing Policies and Procedure Manual.

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Name: _____**Title:** _____**Operator ID:** _____

Date Trained: _____ **Nursing Unit:** _____

Written Test Score: _____ O Pass   O Fail   **QC Practical:** O Pass   O Fail

Attach e-Learning Certificate of Completion

_____

XII.   QUALITY CONTROL RESULTS DOCUMENTATION
_____

	6.0 Control Buffer Result:	**9.0 Control Buffer Result:**
pH Paper Range (6.0-9.5)	_____	_____

_____

All of my questions have been addressed and I feel confident in performing the test.

Employee Signature: _____ **Title:** _____ **Date:** _____

The employee has performed the test satisfactorily according to the standard operation procedure.

Instructor Signature: _____**Title:** _____ **Date:** _____

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