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

Urine Dipsticks- Multistix® 7 and Uristix®
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 (clean catch/random/midstream/first morning)
2. States specimen collection and labeling requirements (2 patient identifiers on container, not the lid)

II. STORAGE AND STABILITY REQUIREMENTS

1. States specimen testing time requirements (<1 hour from collection)
2. States urine dipstick storage and handling requirements
   a. Date bottle when opened
   b. Date bottle when weekly Quality Control is performed
   c. Keep bottle tightly capped when not in use
   d. Store bottle at room temperature until expiration date
3. States Control storage and handling requirements
   a. "Opened date" and "new expiration date" required on bottles when opened (bottles good for 30 days at room temperature, opened or unopened)

III. EQUIPMENT REQUIREMENTS

1. States what kind of timer required for testing (watch or clock with second hand, mechanical timer)
2. States where testing should be performed (well-lit area to facilitate reading the dipstick color changes)
3. States additional materials required for testing.
   a. Gauze or Kimwipes (for Quality Control testing)
   b. Ink Pen to record Quality Control results
   c. Urine Dipstick Quality Control Log sheets
   d. Gloves (to be worn during testing of controls and patient samples)
   e. Urine Control Lot and Ranges Sheet

IV. QUALITY CONTROL PROCEDURE

1. States the frequency of performing Quality Control:
   a. Weekly on each opened bottle of urine dipsticks
   b. Initially when opening a new bottle of urine dipsticks
2. Dates Urine Dipstick and Control bottles when opened.
3. Affixes JHMI Quality Control label to the newly opened bottle of urine dipsticks.
4. Checks expiration dates of Urine Dipsticks and Urine Controls.
5. Verifies that the Urine Controls have been opened less than 30 days.
6. Properly records date, time, lot numbers and manufacturer's expiration dates of urine dipsticks and controls on the Urine Dipstick QC Log sheet.
7. Removes 1 dipstick from bottle and immediately recaps bottle.
8. Lays dipstick on flat, absorbent surface of a gauze or Kimwipe.
9. Mixes the Level 1 Control gently by inversion.
10. Uncaps bottle of Level 1 Control, inverts bottle, and gently squeezes bottle until a large drop of control appears at the tip of the bottle.
11. Keeping the bottle inverted, lightly touches the first reagent pad on the dipstick (glucose) and pulls the drop of control across the strip, saturating each pad.

IV. QUALITY CONTROL PROCEDURE (continued)

12. Turns dipstick on its side on a gauze pad or Kimwipe to remove excess Control solution.
13. Starts timing the test using a clock or watch with second hand, or a mechanical timer.
14 Wipes off the tip of the Control bottle and recaps the bottle.
15. Holds dipstick level to avoid mixing reagents from adjacent pads.
16. Reads the urine dipstick at the specified time intervals.
17. Properly records the results of each test on the Urine Dipstick QC Log sheet.
18. Repeats steps 7-17 with the Level 2 Control.
19. **Verifies that all of the Quality Control Results are within acceptable range by comparing results to the Control ranges found on the Urine Control Lot and Ranges Sheet.**

V. QUALITY CONTROL FAILURES/CORRECTIVE ACTION

1. **Patient testing <u>is not performed</u> until Quality Control is acceptable <u>for each reagent pad.</u>**
2. Verifies that all of the Quality Control Results are within acceptable range.
3. If any test result falls outside of the acceptable range, the control is repeated **<u>for all tests</u>**. Operator records the results of the repeated Quality Control results on the Urine Dipstick QC Log sheet. The actions taken are documented in the Comment section of the Urine Dipstick QC Log sheet.
4. If Quality Control continues to fail, **<u>patient testing is suspended</u>**.
5. Follows the troubleshooting guidelines available in the test procedure on the Hopkins Policies Online website and documents all failed QC results and corrective actions on the Urine Dipstick QC Log sheet.
6. Contacts the Point-of-Care Testing Office for assistance in resolving the failed quality control problems.

VI. PATIENT TESTING

1. States that the open and expiration dates on the bottle of urine dipsticks are checked prior to testing.
2. Conveys that the JHMI QC label on the bottle of urine dipsticks is checked to verify that Quality Control has been performed on that bottle within the previous week.
3 Explains that if QC has not been performed, patient testing stops and Quality Control is performed on the bottle. States that QC results are recorded on the Urine Dipstick QC log sheet.
4. Expresses that the patient sample is to be at room temperature prior to testing.
5. States that one dipstick is removed from the bottle and the cap immediately replaced on the bottle.
6. Explains that the pads on the dipstick are immersed in the patient sample and removed immediately.
7. Describes that while removing the dipstick, the edge of the dipstick is wiped across the container rim to remove excess urine.
8. Explains that the dipstick is held in a level position to avoid mixing reagents from adjacent pads.
9. Articulates that the tests on the dipstick are read at the specified time intervals.

VII. DOCUMENTATION OF PATIENT RESULTS

1. Records patient results and care actions on:
   a. An Admission/progress note
   b. The Nursing Flow Sheet
   c. The Electronic Patient Record
2. Records all patient results (including negative results) with the date, time, operator initials and a "√" or "QC okay" to note that acceptable Quality Control has been performed on that bottle of dipsticks within the previous week.
3. Records negative results as "Neg" or "Negative" and positive results as "Pos" or "Positive".
4. Notes results as Point-of-Care results in order to differentiate these results from laboratory results.

VIII. LIMITATIONS OF TESTING

1. Does Not Perform Urine Dipstick testing on Bloody urines or urines that are highly colored (i.e. orange, green). These specimens should be sent to the main laboratory for testing as visual dipstick results on these specimens can not be interpreted correctly.
2. Specifies the limitations and interferences of each analyte.

IX. HANDLING ABNORMAL RESULTS

1. States that any value greater than negative for glucose, ketones, blood, protein, nitrite or leukocytes is considered an Abnormal result.
2. Questionable urine dipstick results, problems with the testing procedure or results that do not match the clinical condition of the patient should be reported to the physician/provider to determine if additional follow-up is needed (i.e. sending a sample to the main laboratory).
3. In the event of Abnormal or questionable urine dipstick results, document in the patient's record that the Physician/provider has been notified of the results.

X. CRITICAL ACTION VALUE

1. Ketones: Large amount (80-160 mg.dL)
2. Notifies the patient's physician/provider to determine if additional follow-up is needed.
3. Documents in the patient's record that the physician/provider was notified and that a read-back of the critical action value occurred and was verified.

XI. OPERATOR COMPETENCY

1. States the requirements for competency to perform Urine Dipstick testing.
   a. Each operator's competency is assessed by two methods. One method is the annual performance of successful quality control (two levels of urine controls). The second method will be one of the following:
      - Testing an unknown specimen.
      - Having the supervisor or qualified delegate periodically observe routine work.
      - Written test.
2. States that operator competency is documented in the employee's Developmental Resume.

XII. 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

XIII. QUALITY CONTROL RESULTS DOCUMENTATION

	Glucose	Ketones	Blood	pH	Protein	Nitrite	Leukocytes
Level 1:	_____	_____	_____	____	_____	_____	_____
Lot#:							
Level 2:	_____	_____	_____	____	_____	_____	_____
Lot#:							

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 operating procedure.

Instructor Signature: _____ Title: _____ Date: _____

