

NWC EMSS Skill Performance Record
CAPILLARY GLUCOSE TESTING (Microdot Xtra® Meter)

| | |
|-------|--|
| Name: | 1 st attempt: <input type="checkbox"/> Pass <input type="checkbox"/> Repeat |
| Date: | 2 nd attempt: <input type="checkbox"/> Pass <input type="checkbox"/> Repeat |

Instructions: An adult is tremulous, light headed, tachycardic and diaphoretic. You are asked to assemble the equipment and obtain a blood glucose reading using the Microdot Xtra monitoring system.

| Performance standard | Attempt 1 rating | Attempt 2 rating |
|---|---------------------|---------------------|
| 0 Step omitted (or leave blank) 1 Not yet competent: Unsuccessful; required critical or excess prompting; marginal or inconsistent technique 2 Successful; competent with correct timing, sequence & technique , no prompting necessary | | |
| Verbalize indications for glucose testing <input type="checkbox"/> All pts with AMS, neuro deficits; diaphoresis/tachycardia <input type="checkbox"/> Seizures | | |
| * Prepare and assemble equipment <input type="checkbox"/> Microdot Xtra meter <input type="checkbox"/> Lancet (no lancing device) <input type="checkbox"/> Microdot Test strips <input type="checkbox"/> CHG/IPA prep | | |
| Verbalizes correct procedure for storage and handling of test strips <input type="checkbox"/> Store test strips in original vial in cool, dry place 50°- 86° F. <u>Keep away from sunlight and heat, do not refrigerate or freeze.</u> <input type="checkbox"/> Record the discard date on each vial (90 days from date opened) <input type="checkbox"/> When removing strip from vial, close cap immediately. Use strip immediately. <input type="checkbox"/> Discard unused test strips 90 days from date opened; don't use strips beyond expiration date printed on vial | | |
| Verbalize correct procedure to storage and handling of high and low test solutions <input type="checkbox"/> Record the discard date on each vial (90 days from date opened). <input type="checkbox"/> Discard unused control solution 90 days from date opened; don't use solution beyond expiration date printed on vial. <input type="checkbox"/> Store at room temperature below 86° F; keep vials of test solution tightly closed when not in use | | |
| Verbalize need for quality control procedures using control solution testing <input type="checkbox"/> Frequency: DAILY (every 24 hours) if strips are opened plus... <input type="checkbox"/> Any time a new vial of test strips is opened <input type="checkbox"/> Whenever meter is not operating properly <input type="checkbox"/> If pt's S&S differ from test results <input type="checkbox"/> Question if test results are accurate <input type="checkbox"/> If meter is dropped or damaged <input type="checkbox"/> Test strip vial has been left open for >2 hours <input type="checkbox"/> Verbalize that daily tests are documented on MicroDot Quality Control Daily Check form | | |
| <input type="checkbox"/> BSI: Apply gloves <input type="checkbox"/> Obtain a complete set of VS; include SpO ₂ to put test results into context | | |
| Perform procedure *Open bottle and retrieve test strip. Inspect and discard if bent, scratched, wet, or damaged Close lid tightly to maintain integrity of strips. | | |
| * Insert contact bars of test strip firmly into monitor test port so white fill chamber faces upward. (Place strip directly onto black tongue-shaped platform before inserting into meter) | | |
| * Advance test strip until it stops. Observe monitor turn on; all lights will perform a self-diagnostic test. | | |
| Troubleshoot monitor if error (E 1-5) codes appear before applying blood. Eject test strip by pressing eject button and follow instructions for E code identified. | | |
| Select site: Avoid sites that are swollen, bruised, cyanotic, cold, scarred, or calloused (poor blood flow) * Cleanse side of patient's finger with CHG/IPA prep. Allow to dry completely. | | |
| <input type="checkbox"/> *Obtain a blood drop using a lancet and correct technique (side of finger) (600 microliters) *Do not squeeze, milk finger past most distal knuckle or apply strong repetitive pressure to site. May cause hemolysis or increase tissue fluid in blood sample causing incorrect results. <input type="checkbox"/> *Dispose of lancet in a sharps container | | |
| <input type="checkbox"/> If skin did not dry thoroughly, wiped away first drop of blood and used second drop to run test. <input type="checkbox"/> *Hold strip next to drop of blood; allow blood to wick into test strip. Do not smear blood onto strip or place blood on top of strip. Wait for meter to beep when test zone is full. | | |
| Test starts automatically when blood sample is detected. Verbalize that monitor will display --- -- - followed by a countdown from 10 | | |
| *Observe display; correctly interpret significance of reading after 10 secs Reportable ranges: Meter is accurate from 20-525. If <20 = LO; > 525 mg/dL meter displays HI If LO or hypoglycemic: ensure vascular access ASAP (IO if needed); infuse D10% IVPB per SOP | | |
| Turn off monitor: Hold meter vertically above a safe disposal container with strip pointing down; press eject button | | |

| Performance standard | | Attempt 1 rating | Attempt 2 rating |
|--|--|------------------|------------------|
| 0 | Step omitted (or leave blank) | | |
| 1 | Not yet competent: Unsuccessful; required critical or excess prompting; marginal or inconsistent technique | | |
| 2 | Successful; competent with correct timing, sequence & technique , no prompting necessary | | |
| Clean and disinfect meter after each use by thoroughly wiping surface of unit with an approved 1 minute disinfectant wipe and then wrap in wipe, place in disinfection case and activate 1 min timer. Wet dwell time per wipe. | | | |
| Verbalize steps to take if meter malfunctions and/or gives persistent suspected incorrect readings despite appropriate troubleshooting: Follow Medical Device Malfunction policy. Remove meter and strips from service; contact EMS MD and EMS Admin Director. Contact Frederick W. Engimann, President, Cambridge Sensors USA LLC Cell: 815-341-8094; fengimann@microdotcs.com to collect meter/strips and do an analysis. | | | |
| Critical Criteria - Check if occurred during an attempt <ul style="list-style-type: none"> <input type="checkbox"/> Failure to take or verbalize appropriate body substance isolation precautions prior to performing skin puncture <input type="checkbox"/> Contaminates equipment or site without appropriately correcting the situation <input type="checkbox"/> Performs any improper technique resulting in potential for incorrect test result/patient harm <input type="checkbox"/> Failure to dispose/verbalize disposal of blood-contaminated sharp immediately in proper container <input type="checkbox"/> Exhibits unacceptable affect with patient or other personnel | | | |

Scoring: All steps must be independently performed in correct sequence with appropriate timing and all starred (*) items must be explained/ performed correctly in order for the person to demonstrate competency. Any errors or omissions of these items will require additional practice and a repeat assessment of skill proficiency.

Rating: (Select 1)

- ☐ **Proficient:** The paramedic can sequence, perform and complete the performance standards independently, with expertise and to high quality without critical error, assistance or instruction.
- ☐ **Competent:** Satisfactory performance without critical error; minimal coaching needed.
- ☐ **Practice evolving/not yet competent:** Did not perform in correct sequence, timing, and/or without prompts, reliance on procedure manual, and/or critical error; recommend additional practice

CJM 1/20

Preceptor (PRINT NAME – signature)

Expected competencies for Point of Care glucose Testing (POCT):

- Only qualified and credentialed EMS personnel perform POCT.
- Only test strips (within expiration date) recommended by the glucometer manufacturer are used in testing.
- **EMS takes appropriate action if the results are not within the normal ranges.**
- **Treat the patient – not the monitor.** If pt is symptomatic, but reading is normal, REPEAT TEST on another arm/hand.
- EMS effectively problem solves error messages displayed on the device and possible incorrect readings.

Microdot error messages – See manufacturer's instruction

Complete and document **daily quality control checks** in compliance with CLIA regulations for professional use meters.

Control solution test procedure:

1. **Shake test solution well** before using. Wipe dispenser tip then waste first drop of Control Solution to ensure an accurate result.
2. Insert a test strip into the Microdot Xtra meter. Black contact bars must go fully into the meter.
3. Remove cap, invert bottle and squeeze out one drop of control solution. Apply the drop to the strip by bringing the meter and the strip to the drop. Touch drop with the top edge of the test strip and wait until the test pad fills with the solution. Results appear in 10 seconds.
4. Compare results with the ranges of expected results shown on the test strip vial. (Low=Blue cap; High=Red cap)
5. **If results outside of expected range**, repeat test. If second test falls outside of normal range, repeat test with new bottle of control solution and test strips. Verify that strips are not part of recalled lots and that strips and test solutions are not damaged and/or past their expiration dates. Verify that strip test vials have not been left open and meters are in correct mode. **Error persists: implement medical device malfunction policy.**

Glucose log completion and submission:

May use System's current paper form, a fillable PDF document (paper form as template), or third party software such as ImageTrend, Target Solutions, or other program that meets these criteria:

- Original electronic documentation must include all data on the System's current Glucometer Quality Control Daily Check Form including signatures (written or electronic).
- A monthly summary log must be exported to an Excel file, one page per vehicle, in an easily viewable format to show that all information is complete. Daily electronic signatures are not required on the end of month report, but agencies must be able to produce an electronic signature for individual daily checks if requested.
- PEMSCs will provide a written or electronic signature at the end of their agency monthly glucometer report to attest to their review and verification of data completeness and accuracy.

Due date: Submit Glucometer logs to the assigned HEMSC/educator by the 4th week of the following month.



MicroDot® Glucometer Quality Control Daily Check Form

EMS Agency: _____ Vehicle ID # _____ Month/Year: _____

Instructions: Test meters daily if strips are open and per procedure. **Begin a new log on the first day of each month.**

| Date | LEGIBLE Signature | EMS license # | Low Result | Low Range | High Result | High Range | Strip Lot # | Exp. Dates for BOTH Strips / Solutions |
|------|-------------------|---------------|------------|-----------|-------------|------------|-------------|--|
| EX | PM J. Doe | 060000046 | 33 | 29-59 | 320 | 260-420 | 7103002 | 7-15-20 / 8-29-20 |
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PEMSC signature: _____ Date: _____ (Rev.1/20)