


## Performing a QC Test on the Nova StatStrip® Glucometer

**Purpose:**

This procedure provides instructions for how to perform Quality Control (QC) tests on the Nova StatStrip® Glucose Hospital Meter System.

<p><b>Quality Control Materials</b></p> 	<p>Two levels of ready-to-use liquid StatStrip® Glucose Control Solutions are available for routine use:</p> <p>Level 1 (low range) - <b>GREEN</b>          Level 3 (high range) - <b>RED</b></p> <p>QC materials are ordered by wards/clinical sites directly from Supply Stores.</p> <p>ALWAYS write the DATE OPENED and DISCARD DATE on the vial.</p> <p>Do NOT use QC materials that have been opened for more than 90 days.</p>
<p><b>When to Perform a QC Test</b></p>	<p>All levels of QC solutions must be run and pass successfully within 24 hours prior to testing patient specimens.</p> <p>QC must also be performed:</p> <ol style="list-style-type: none"> <li>1. When opening a new vial of test strips and/or control solution</li> <li>2. When the meter is dropped</li> <li>3. When changing the battery</li> <li>4. When troubleshooting</li> <li>5. When there is a concern for inaccurate results</li> <li>6. As part of the annual ongoing competency requirement for all meter operators</li> </ol>
<p><b>Important Points</b></p>	<p>Failing one level of the QC requires that BOTH low and high levels be repeated.</p> <p>QC needs to be done every 24 hours. Meter will prompt operator 2 hours prior to time with a <b>BLUE</b> message.</p>

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	QC LOCKOUT message in <b>RED</b> will appear if QC was not performed in the last 24 hours. Meter will not allow patient testing until QC is done.
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**Materials:**

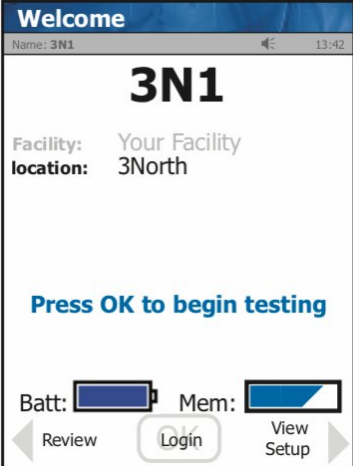

1. Nova StatStrip® Glucose Meter
2. StatStrip® Glucose Control Solutions
3. StatStrip® Glucose Test Strips


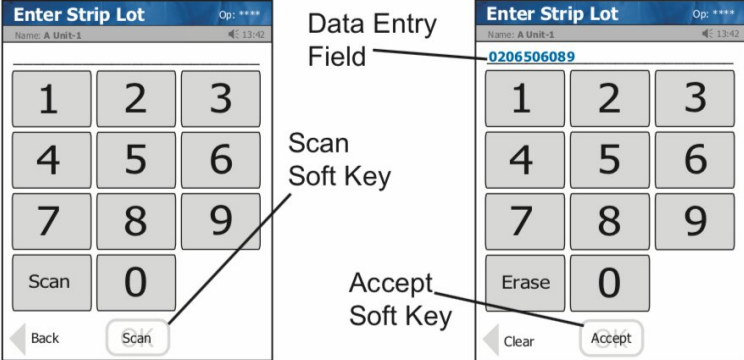
**Safety Precautions**

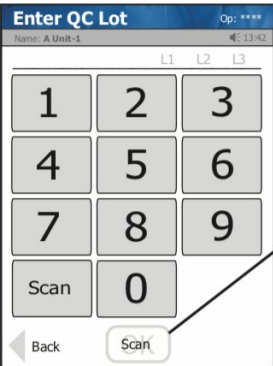


1. Always adhere to Universal Safety Precautions. All materials are considered potentially infectious and can possibly transmit blood-borne pathogens.
2. Follow all operating instructions. Do not attempt to operate any equipment unless training has been successfully completed.


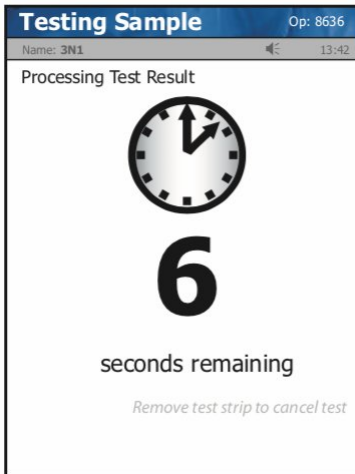
**Procedure:**

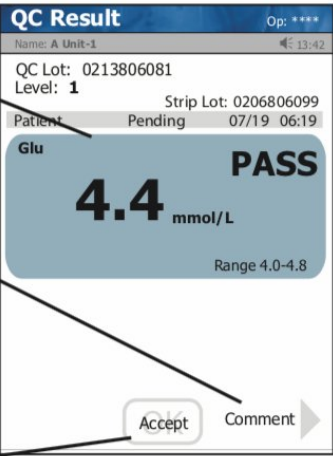
	<b>Action</b>	<b>Related Documents</b> Title Number
1.	Perform hand hygiene and don on clean gloves.  Gather all materials. Lay the meter on a flat surface to prevent the QC material from entering the test strip port.	

	<b>Action</b>	<b>Related Documents</b> Title Number
2.	From the Home screen, press <b>Login</b>	
3.	Enter Operator ID, and press <b>Accept</b> . <ul style="list-style-type: none"> <li>• <b><u>To Manually Enter Operator Number:</u></b> Press the <b>0–9</b> soft keys to enter numbers or the <b>ABC</b> soft key to enter letters. Then, press the <b>Accept</b> soft key at the bottom of the screen.</li> <li>• <b>Always</b> confirm your name on the meter. Never use another person's login.</li> </ul> <p><b>NOTE:</b>            If your user ID is not recognized by the meter, make sure you have:</p> <ol style="list-style-type: none"> <li>a. An active user ID after completing the LearningHub course, quiz and user ID form</li> <li>b. Completed one set of QC and three patients in the past year</li> </ol> <p>Contact <a href="mailto:POCTLab@cw.bc.ca">POCTLab@cw.bc.ca</a> for further assistance.</p>	

	<b>Action</b>	<b>Related Documents Title Number</b>
4.	From the Patient Test screen, press <b>QC</b> .	
5.	<p>The Enter Strip Lot screen displays. Scan the test strip barcode by pressing the <b>Scan</b> soft key.</p> <p>If the Strip Lot Number is invalid, the screen displays the invalid number with <i>“is not a valid Strip Lot # Try again”</i> message. Try scanning again, then contact Point-of-care Tech at ext. 7821 or <a href="mailto:POCTLab@cw.bc.ca">POCTLab@cw.bc.ca</a> for assistance during regular hours.</p>	

	<b>Action</b>	<b>Related Documents Title Number</b>
	<p><b>6.</b> The Enter QC lot screen displays. Scan the QC vial barcode by pressing the <b>Scan</b> soft key.</p> <p>If the QC Lot Number is invalid, the screen displays the invalid number with <i>“is not a valid QC Lot Try again”</i> message. Try scanning again, then contact Point-of-care Tech at ext. 7821 or <a href="mailto:POCTLab@cw.bc.ca">POCTLab@cw.bc.ca</a> for assistance during regular hours.</p> <div style="display: flex; justify-content: space-around; align-items: center;">   </div>	
	<p><b>7.</b> The Insert Strip screen displays.</p> <p>Remove a test strip from the bottle and recap the bottle. Insert a test strip as shown on the screen.</p> <p><b>NOTE:</b></p> <ol style="list-style-type: none"> <li>Insert the gold end to the meter.</li> <li>Avoid touching the white front end of the test strip.</li> <li>The Apply Sample screen will display once the test strip is inserted.</li> <li>Meter will go to sleep mode after 90 seconds of inactivity.</li> <li>Wake meter up by touching the screen. The meter wake-up time is 4 seconds.</li> </ol>	

	<b>Action</b>	<b>Related Documents</b> Title Number
	<p><b>8.</b> With the test strip correctly inserted, the Apply Sample screen displays.</p> <p>Gently mix the StatStrip® Glucose Control Solution 2-3x by inversion before each use. Wipe the QC vial tip with tissue paper and discard the first drop to avoid contamination.</p>	
	<p><b>9.</b> Place a drop of control solution from the bottle at the end of the test strip until the solution is drawn into the well of the test strip.</p> <p>When enough sample has been drawn into the strip, an audible beep is sounded by the meter.</p> <p><b>NOTE:</b> Apply the QC material to the white front end of the test strip.</p>	
	<p><b>10.</b> Recap the control solution.</p> <p>The Testing Sample screen displays. Result will appear within 6 seconds.</p>	

	<b>Action</b>	<b>Related Documents Title Number</b>				
<b>11.</b>	<p>When the meter completes the test, the QC Result screen displays with the results in mmol/L. Result is displayed with either PASS or FAIL.</p> <p>To add a comment to the result, press the <b>Comment</b> soft key. To accept the result, press <b>Accept</b>.</p> <div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> <p>Glucose Result</p> <p>Comment Soft Key</p> <p>Accept - Soft Key</p> </div>  </div>					
	<p>The following pre-configured comments are available to use:</p> <ol style="list-style-type: none"> <li>a. Procedure error</li> <li>b. Expired reagent</li> <li>c. To repeat test</li> <li>d. Repeated test</li> <li>e. Rpt new strip vial</li> <li>f. To remix QC vial</li> <li>g. Incorrect QC vial</li> </ol>					
<b>12.</b>	Remove the used test strip from the meter either manually or by using the strip release button on the back of the meter, and discard it into a biohazard container.					
<b>13.</b>	Repeat steps 4 to 12 to run the other QC level.					
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"><b>IF</b></th> <th><b>THEN</b></th> </tr> </thead> <tbody> <tr> <td>All QC levels pass</td> <td>Proceed to patient testing</td> </tr> </tbody> </table>	<b>IF</b>	<b>THEN</b>	All QC levels pass	Proceed to patient testing	Performing a
<b>IF</b>	<b>THEN</b>					
All QC levels pass	Proceed to patient testing					

	<b>Action</b>		<b>Related Documents Title Number</b>						
	Any QC level fails	Troubleshoot: <ul style="list-style-type: none"> <li>• Does the tested QC level match to what was scanned?</li> <li>• Are the strips in date?</li> <li>• Is the QC material in date?</li> <li>• Was the first QC drop discarded?</li> <li>• Was the QC vial mixed well?</li> </ul> Repeat testing the failed QC with a fresh test strip and QC material.	Patient or Proficiency Test on the Nova StatStrip® Glucometer  Nova StatStrip® Glucose meter Troubleshooting Procedure						
		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%; text-align: center;">IF</th> <th style="width: 50%; text-align: center;">THEN</th> </tr> </thead> <tbody> <tr> <td style="vertical-align: top;">QC passes</td> <td style="vertical-align: top;">               Repeat the QC test for the other level that previously passed, when applicable.                 Proceed to patient testing if both QC levels passed.             </td> </tr> <tr> <td style="vertical-align: top;">QC fails again</td> <td style="vertical-align: top;">               Do not use meter.                 Alternatively, either use another properly-controlled meter or request for a lab-drawn plasma glucose test.                 Send the problematic meter to the POCT Lab for further troubleshooting.             </td> </tr> </tbody> </table>	IF	THEN	QC passes	Repeat the QC test for the other level that previously passed, when applicable.  Proceed to patient testing if both QC levels passed.	QC fails again	Do not use meter.  Alternatively, either use another properly-controlled meter or request for a lab-drawn plasma glucose test.  Send the problematic meter to the POCT Lab for further troubleshooting.	
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QC fails again	Do not use meter.  Alternatively, either use another properly-controlled meter or request for a lab-drawn plasma glucose test.  Send the problematic meter to the POCT Lab for further troubleshooting.								
<b>14.</b>	Clean and disinfect the meter after use. Remove gloves and perform hand hygiene.		Nova StatStrip® Glucose Meter Maintenance and Cleaning Procedure						

**References:**

1. Nova Biomedical. StatStrip® Glucose Hospital Meter System: Instructions for Use Manual. REF 55848. September 2018.
2. Nova Biomedical. StatStrip® Glucose Monitoring System Quick QC Guide.

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3. Nova Biomedical. StatStrip® Operator Training Presentation.

**Revision Log**

<b>Version</b>	<b>Description of Change</b>	<b>Revised by</b>	<b>Revision Date</b>
1.00	<ul style="list-style-type: none"><li>• New document</li></ul>	Julieto Tumulak	Feb 15, 2021

**Attention: This document is published on the PHSA ePOPS website**

**Revisions made to this document require an update to the corresponding document published on ePOPS website**