



H Series Urine Analyzer Operation Procedure

This operation procedure is applicable for H Series Urine Analyzer, hereinafter called “Analyzer”.

1 Startup Procedure

1.1 Check before startup

(1)Detergent

Check whether the detergent is enough, expired; Ensure that the detergent tubing are not bent, and are firmly connected.

(2)Waste liquid tank

Please ensure that the waste tank has enough space, if full, clear it immediately. Keep the waste tube vertical to the ground for a smooth flow of waste liquid.

(3)Waste box

Check whether the waste box has enough space for more strips, if full, clear it immediately.

(4)Printer

Check whether the printing paper of the built-in printer is sufficient. If there is an external printer connected, check whether it is installed correctly.

(5)Power supply

Check whether the power cable is correctly connected. Keep the input voltage within the range 100-240V~, 50Hz.

(6)Connection

Check whether the external hand-hold barcode reader connects the analyzer well, If connected with the computer, check whether the analyzer connects the host well.

1.2 Startup

Power on the analyzer, the screen appears “Self-Check...”. The analyzer runs a self-check. After a successful check process, the main menu will be displayed.

2 Conventional Operation Procedure

2.1 Strip anti-fake barcode verification

Press the key  on the main screen and then scan/input the barcode on the strip box, then press  to confirm. When the message “Input valid” appears, a test can be started.

120 strips can be tested with one anti-fake barcode. The number of strips will be displayed under the key  of the main screen.



• If the barcode entered has been used, press key , and a prompt “Used Check Code” will pop up.

• When entering manually, if barcode entering error occurs, press key , and a prompt “Invalid Check Code” will pop up.

• If entered barcode is overdue (test strip is out of expiry date), press key , and a prompt “Expired Check Code” will pop up.

2.2 Calibration Strip Test

2.2.1 Preparation

(1)Take out all the left strips in the sealed feeder and put them into strip bottle, then cap the bottle well.

(2)Put the calibration strip into the sealed feeder as the marked direction, the analyzer could calibrate.

2.2.2 Calibration Strip Test

Press the key “Menu” in main menu to switch to “Menu” interface and then press key  in front of “QC and Calibration”, “set option” will display.

After that, press the key  in front of “Check Calibration”, and a message “Check Strip Testing...” will pop up, and the analyzer starts to calibrate.

(1)If the calibration passed, “Calibration OK” will be shown;

(2)If not passed, “Calibration Not OK” will be shown.



• Do not dip the strips with water(or with other liquid) for tests;

• If dirty or damage strips were found, please contact the supplier other than a further use;

• For accurate test results, it is recommended to calibrate the analyzer with calibration strips every one or two weeks.

2.3 Refractometer Calibration (Refractometer is optional)

2.3.1 Preparation

(1)High specific gravity calibration liquid: pour 1.040 high specific gravity calibration liquid into the first tube. (not lower than the mark on the rack.)

(2)Low specific gravity calibration liquid: pour distilled water into the second tube (not lower than the mark on the rack.) as the low specific gravity calibration liquid.

(3)Place the high specific gravity liquid tube into the first position of tube rack and low specific gravity liquid into the second position of the rack, then place the rack on the feeder side.

2.3.2 Refractometer Calibration

Press the key in front of “Calibrate Refractometer”, the screen shows the high specific gravity value of 1.040 (High specific gravity calibration value should be input as the given value in the Calibrator instructions). After inputting the high specific gravity value, enter the low specific gravity value input interface by pressing confirmation key, and input 1.000 as the low specific gravity calibration liquid value and then press confirmation key. The analyzer will start to calibrate the refractometer.

If the calibration passed, the screen will show “calibration passed”, or it will show “calibration failed”



• Once calibration each month. If failed for two times, rinse the refractometer as stated in the Maintenance Procedure; If the failure remains after rinsing, contact the supplier please.

• If incorrect calibration value was input, the analyzer will prompt “Input error.” Input again is required.

2.4 Turbidimeter Calibration(Turbidimeter is optional.)

2.4.1Preparation

(1)High specific gravity calibration liquid: pour 400NTU high specific gravity calibration liquid into the first tube (not lower than the mark on the rack).

(2)Low specific gravity calibration liquid: pour distilled water into the second tube as the low specific gravity calibration liquid (not lower than the mark on the rack).

(3)Place the high specific gravity liquid tube into the first position of the tube rack and low specific gravity liquid into the second position of the rack, and then place the rack on the feeder side.

2.4.2 Turbidity Calibration

Input 400 as the high turbidity value and then press the confirmation key (High turbidity calibration value should be input as the given value in the instructions), then access the low turbidity calibration value interface.

Input “000” as the low turbidity value, then press the confirmation key, the analyzer will start to calibrate the turbidimeter. If calibration passed, the screen will show “calibration passed”, or it will show “calibration failed”.



• If the analyzer shows the warning message “calibrate turbidimeter”, please perform calibration as above described. If calibration failed two times, please clean the turbidimeter according to the instructions in the user manual. After cleaning, if the calibration still failed, please contact the local supplier.

• If a wrong calibration value is entered, the analyzer will show “Input Error”. User can input the correct calibration value again.

• If turbidity is heavy turbidity, it will affect the color and SG testing values. In that case, the color and SG values are just for reference. If “abnormal value” option is “ON”, the test result will be printed “*” mark in front of turbidity and “!” mark will be printed in front of specific gravity and color.

• If analyzer does not install hardware of densimeter, turbidimeter and color sensor, it is no need to perform SG Control measurement, turbidity control measurement, color control measurement and refractometer calibration, turbidimeter calibration.



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2.5 Test of Negative, Positive Control

Perform Control Test after every startup. If the test result is in the target value range, you can start sample testing.

2.5.1 Strips Preparation

For the strip feeder, enough strips are required.

2.5.2 Controls Preparation

Prepare the Controls as stated in the Control Instructions.

Pour some Control into a test tube and ensure that the liquid level is no less than the scale lines on the rack.

2.5.3 Controls Test

(1)Positive QC

Place a test tube with Positive Control inside into a rack. Find“Menu”in the main screen and press it, and then press“QC and Calibration”to enter setup interface. Then press“Controls”and select “Run Control- Positive”:

a)Positive Control No. Setting: Press the key in front of “Control No.” in the “Run Control-Positive” interface. You can manually input the positive control number and click the key “Enter”, the Control No. is then set.

b)Run Control-Positive: Press “Start” in the “Run Control-Positive” screen, a message “Measuring” pops up representing that the Positive Control Test starts.

(2)Negative QC

Place a test tube with Negative Control inside into a rack. Find“Menu”in the main screen and press it, and then press“QC and Calibration”to enter setup interface. Then press“Controls”and select “Run Control-Negative”:

a)Negative Control No. Setting: Press the key in front of “Control No.” in the “Run Control- Negative” interface. You can manually input the negative control number and click the key “Enter”, the Control No. is then set.

b)Run Control- Negative: Press “Start” in the “Run Control- Negative” screen, a message “Measuring...” pops up representing that the Negative Control Test starts.

(3)Negative/Positive QC

Place two test tubes into a rack in order, one with Positive Control and the other Negative Control. Find “Menu” in the main screen and press it, and then press “QC and Calibration” to enter setup interface. Then press “Controls” and select “Run Control-Negative/Positive”:

a)Positive Control No. Setting: Press the key in front of “Positive Control No.” in the “Run Control- Negative/Positive” interface. You can manually input the positive control number and click the key “Enter”, the Control No. is then set.

b)Negative Control No. Setting: Press the key in front of “Negative Control No.” in the “Run Control- Negative/Positive” interface. You can manually input the negative control number and click the key “Enter”, the Control No. is then set.

c)Run Control-Negative/Positive: Press “Start” in the “Run Control-Negative/Positive” screen, a message “Measuring...” will pop up which represents that the Negative/Positive Control Test starts.

Note:

Control No. range: 1~500.

2.6 Other Control Test

2.6.1 Controls Preparation

(1)Prepare the Controls as stated in the Control Instructions.

(2)Pour some Control into a test tube and ensure that the liquid level is no less than the scale lines on the rack.

(3)Place the rack which has Control inside to the loading part of the sample feeder.

2.6.2 SG Control Test

Press the key in front of “Run Control-SG”, the screen will display “Testing...”. The test results will be printed out after the testing. Please refer to the target results in the instructions of Control-SG.

To get the accurate results, you can perform QC test with SG Control under the following conditions:

(1)One test for each month;

(2)When the test result is doubtful.

2.6.3 Turbidity Control Test

The Turbidity Control test should be performed every month as a cycle. If there is any question to the test result, you can perform Control

measurement at any time.

2.6.4 Color Control Test

The Turbidity Control test should be performed every month as a cycle. If there is any question to the test result, you can perform Control measurement at any time.

3 Sample Test

3.1 Urine Samples

Caution for urine samples:

(1)Before testing, make sure the urine sample is mixed well, but do not use centrifugal analyzer, or it will affect the sensitivity of testing result.

(2)Please use fresh urine sample. If no test performed after one hour of urine sample collected, please seal the urine sample and refrigerate. Please restore the samples to room temperature before assay.

(3)Please do not add preservative, disinfectant or detergent.

(4)Keep away from direct sunshine.

(5)If urine sample contains V.C, it may affect the result to be lower than the true value.

3.2 Strips

Open the strip bottle, and then place the strips into the strip feeder in order as the mark shows. Then put the enclosed desiccant into the desiccant box.

3.3 Sample Test

3.3.1Sample barcode input

Press the key “ID”, the sample numbers will be displayed on the left. The number with “*” is the sample number that has ID input. You can scan the barcode on the sample tube with external barcode reader; manually input is also available by pressing the key “ID”. Then the barcode will be shown next to the sample number.

3.3.2 Routine Sample Test

Place a test tube filled with urine sample into a rack, and then place the rack to the loading side of the sample feeder. Then press “Start” to start sample testing. After the process, the analyzer will generate test reports automatically!

3.3.3 STAT Sample Test

Pour the urine sample into the test tube, and then insert the test tube to the rack and put the rack on the STAT port. Move the port forward to the lock position. Press “STAT” and then “Start” to start the STAT test.

Set the STAT sample No. and ID in the STAT screen.

4 Power-off Procedure

Click  on the right-bottom corner of the screen after finishing test everyday. Then the screen will display “Washing.....”. A auto-tubing cleaning will be conducted. After that, a message “Please Turn Off The Power” will pop up. Then cut off the power supply and pull out the power cable.

5 Caution During Testing Process

(1)The sample volume should be not lower than scale mark on tube.

(2)If the bubble level is higher than 5mm inside the testing sample, please wait until the bubble settled below 5mm to perform test.

(3)Do not test ropy sample, it may block the probe.

(4)If there is some obvious urine blood sample, please place this sample to the last position of last tube rack. After analyzer automatically absorbed the urine blood sample, press the “stop” button on screen, then, the analyzer will automatically cleaned. After that, please proceed to the next normal testing.

(5)Do not move the rack during testing to avoid disordered test.

(6)Avoid unnecessary contact with the sample probe during testing.

(7)Strip should be placed flatly in the feeder, or it will block the operation. If there is any strip blocking during operation, please open the feeder cover and re-place strips in feeder to continue test.

(8)When the solid precipitation occurs in the sample for visual, artificial mixing is recommended.

(9)The required ambient temperature range is 15°C~35°C for normal working, otherwise, the test result will be affected.