

CLINITEK Advantus Urine Chemistry Analyzer

Product Training



Key Components and Features

Auto-Checks® Overview

- Installing the Analyzer

Configuring the Analyzer

Performing a Urinalysis Test

- Performing a Quality Control Test
- Entering a Sample Loadlist
 - Running a STAT Test
- Data Entry
 - Barcode Data Entry
 - Microscopic Results
 - Recalling Results
- Performing Maintenance
- Software Upgrades

Key Components and Features

Siemens Healthineers Urinalysis Provides Peace of Mind via Our End-to-end Solutions

Atellica® 1500 Automated Urinalysis System*

Automated urine chemistry and sediment



CLINITEK Novus® Analyzer

Automated high-volume urine chemistry testing



CLINITEK Advantus® Analyzer

Semi-automated urine chemistry testing



CLINITEK Status®+ Analyzer

Instrument-read urine chemistry testing



From visual-read to full automation—using the same urine chemistry dry pads enables consistent results.



*Product availability varies by country.

Why the CLINITEK Advantus Analyzer?



Improved
Data
Integrity

Improved
Quality Control

Enhanced
Productivity

Microscopy
Consolidation

Flexible
Operation

CLINITEK Advantus Urine Chemistry Analyzer

Key Components and Features



CLINITEK Advantus Urine Chemistry Analyzer

Key Components and Features

Memory Card Slot
Used to update
the analyzer software

Keyboard/Barcode Connector
Connect an external keyboard
and hand held barcode reader

Interface Connectors
Used to connect the analyzer to
a PC, LIS, or HIS

Power Switch
Turns the analyzer on and off

Power Supply Connector
Plug in the power supply to
provides power to the analyzer



Auto-Checks Overview

What is the Auto-Checks feature?

Improved
Data
Integrity

Automatic identification and reporting

CLINITEK Advantus Analyzer delivers automated quality checks (Auto-Checks® feature):

- Strip type automatic identification and reporting
- Automatic error message if test strip is degraded from exposure to humidity (only available with test strips that have the leukocyte pad)



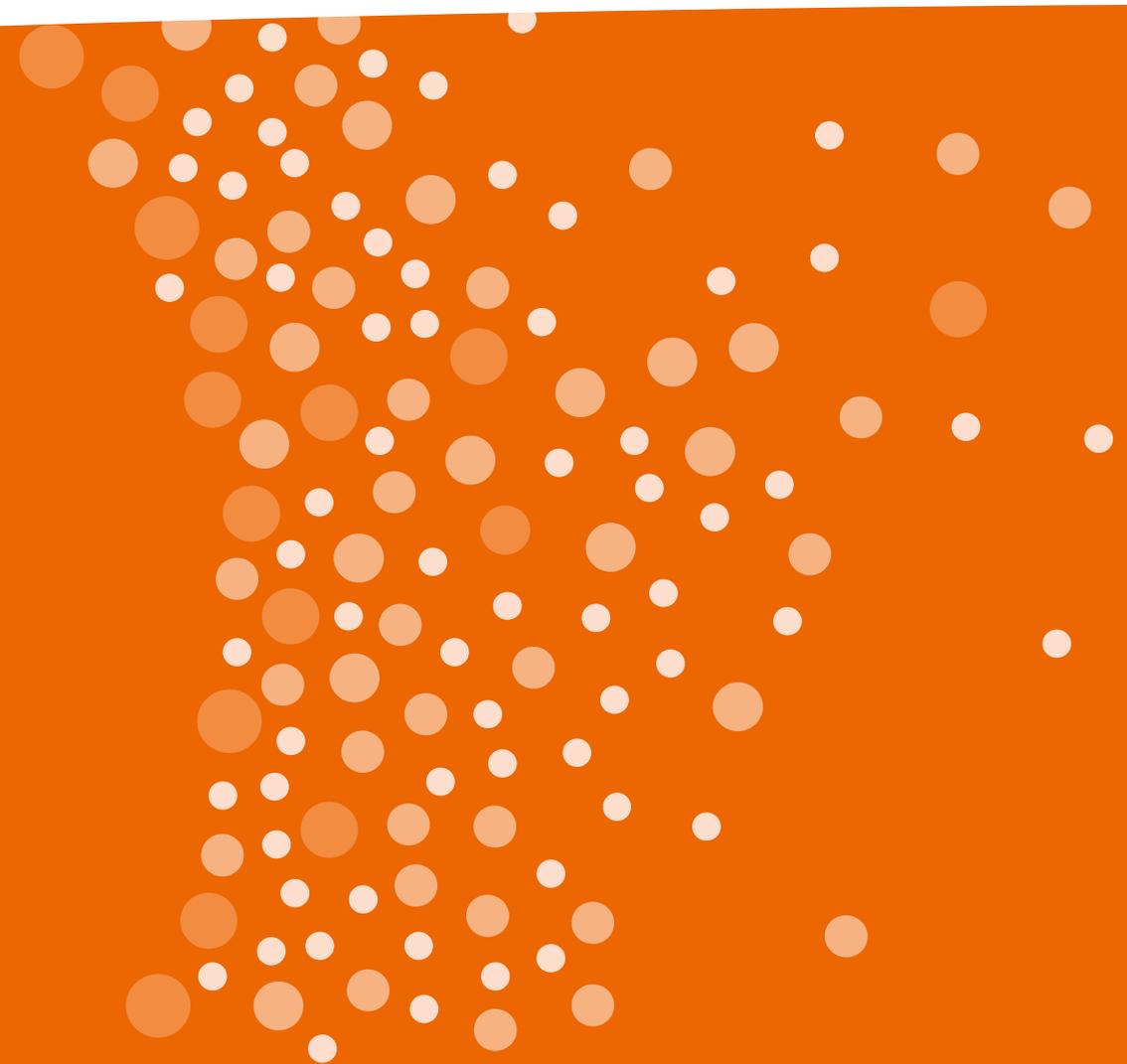
Menu of Auto-Checks Enabled Test Strips For Use With CLINITEK Advantus Analyzer

The following Siemens test strips can be used on the CLINITEK Advantus analyzer.

The Auto-identification feature allows seamless switching between test strip types.

Multistix [®] 10SG Strips
Multistix [®] 8SG Strips
Multistix [®] Strips
Multistix PRO [®] 10LS Strips

Installing the Analyzer



Unpacking the CLINITEK Advantus Analyzer

Shipping Carton Contents

Accessories Box
CLINITEK Advantus Analyzer
Quality Package (Printed Docs)
Waste Bin Liner Pack
Line Cord, Power 100-125V 10A
Line Cord, Power 220-250V 10A
Unpacking Guide

Accessories Box Contents

Operator Guides CD
Fixed Platform Assembly
Moving Table
2 Push bars
Roll of Printer Paper
Tube of lubricant

The CLINITEK Advantus analyzer is delivered in one shipping carton, with an accessories box inside.

Make sure all items are included with your analyzer, and keep them for future use.

Installing the Analyzer (1/4)

1. Ensure the analyzer is on a firm, level work surface and at least 7.6cm (3in) away from any adjacent surface
2. Locate the piece of foam packing that is under the read area cover and remove it by gently pulling the tag down and forward
3. Install the moving table:
 - Hold the table with the small rectangular tab facing to the back.
 - Align the 2 grooves on the bottom of the table with the edges of the platform on which the table rests.
 - Gently push the table in until you hear the tab latch into the hold position.
 - Check that the table is secure.



4. Install the holddown plate onto the fixed platform:

- Position the holddown plate with the arrow side facing up and the arrow pointing to the back.
- Place the pin on the front of the plate into the hole at the front of the platform.
- Align the tab at the back of the plate with the slot at the back of the platform.
- Snap the hold down plate into place. Listen for a loud click and ensure that the white calibration bars are visible.



5. Install the fixed platform:

- Align the 2 grooves on the bottom of the fixed platform with the arms extending forward from the analyzer. The flanges on the sides of the holddown plate align just outside the read area cover.
- Gently push the platform in as far as possible. Push past the ridge to correctly position the platform.



Installing the Analyzer (3/4)

6. Install the push bar:

- Hold the push bar at the indented end.
- With this end slightly upward, insert the peg on the other end of the bar into the hole in the pusher mechanism.
- Lower the push bar into place.



7. Install the Waste Bin Liner:

- Take a waste bin liner from the pack delivered with the analyzer.
- Place the liner into the waste bin.



8. Connect the analyzer power

- Ensure that the analyzer power switch is in the off position.
- Select the correct power cord for your use. Two power cords are packed with the analyzer.
- Connect the power cord to the analyzer and to an appropriate, grounded AC electrical outlet.
- Dispose of the other power cord.



Connecting a Barcode Reader

1. Turn analyzer power off.
2. Connect the interface cable to the opening at the bottom of the barcode reader
3. Connect the other end of the cable to the barcode reader port at the back of the analyzer
4. Press in firmly until the connection is secure and you hear a slight click.
5. Turn analyzer power on.

Connecting a Keyboard

1. You can use any US QWERTY keyboard with a PS2 connection with the CLINITEK Advantus analyzer. Connect the appropriate end of the keyboard cable to the keyboard port.

Ensure that the settings on the CLINITEK Advantus Analyzer match the settings on the computer

1. Plug one end of a 9-pin serial cable¹ into the computer, and the other end into the back of the analyzer.
2. Select **Menu**, then **Setup**. Press the arrow 7 times and select **Computer port options**.
 - Press the toggle button next to **Port** until it says “**Port – COMPUTER PORT**”.
 - Select the appropriate **Baud** and **Data, Parity** for the interface.
 - Press the **Output Format** button to select CT200, CT200+ or CCS. If CCS is chosen choose the correct option for **Checksum** and **Handshake** using the toggle buttons .
3. Press the  button to save the settings.

¹ Specifications for the serial cable can be found in the interface specification document

Connecting to an LIS or data management system (DMS) via the network port

Ensure that the settings on the CLINITEK Advantus Analyzer match the settings on the LIS or DMS

1. Plug the RJ45 Ethernet cable into the analyzer.
2. Select **Menu**, then **Setup**. Use the toggle button next to **Computer port** until it says “**Computer port – ETHERNET PORT**”.
3. Press the right arrow 7 times and select **Network Settings**.
 - Press the toggle button next to **IP Configuration** and choose either DHCP or Static.
 - If using a static IP, select the button next to **IP Address** to enter the IP address number.
 - If using DHCP, select the button next to **DHCP name** to enter the name of the DHCP server.
4. Press the  button to save the settings.

Configuring the Analyzer

The analyzer can be configured to meet the unique needs of each facility

1. Analyzer settings can be accessed by selecting **Menu**, and then **Setup**. Configurable options include:
 - Tech ID and Sample ID
 - QC lockout
 - Color/Clarity (see next slide)
 - Criteria for confirmatory result flags
 - Computer port settings
2. Arrows at the bottom right corner of the screen are used to advance between pages.

Entry of Sample Color and Clarity

1. Select **Menu** and then **Setup**
2. Use the  button to navigate to the **Tests to report and their order** option
3. Use the toggle buttons next to each number to choose which result will be reported in that position
4. Ensure that **COL** and **CLA** are included on the list

Sample Color Determined by Analyzer

1. Select **Menu** and then **Setup**
2. Use the  button to navigate to the **Color** option

Note: this button will only be active if color and clarity have been added as tests

3. Use the toggle button to switch between **Color – determined by analyzer** and **Color – entered by tech**

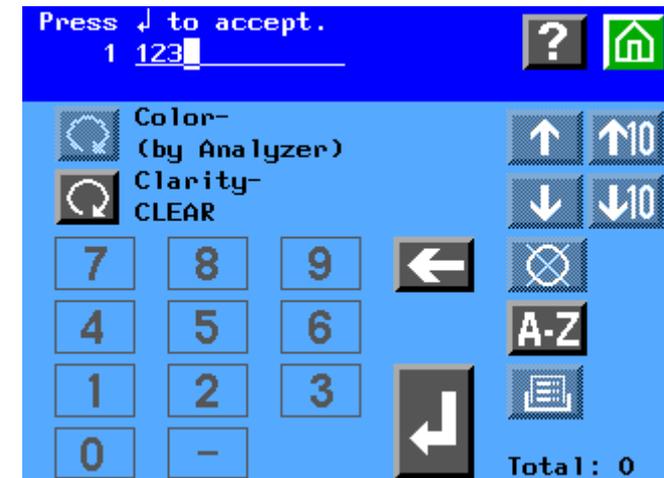
Performing a Urinalysis Test

The CLINITEK Advantus Urine Chemistry Analyzer removes subjectivity by reading, interpreting, and documenting up to 500 results per hour.

- Test strips can be inserted into the analyzer every 7 seconds.
- Results available in less than a minute.
- Barcode reader and color touchscreen allow for easier data entry.
- Analyzer memory stores 500 patient results.
- Results can be automatically transmitted through a serial or network connection.

Performing a Urinalysis Strip Test (1/2)

1. If enabled, enter or scan the Tech ID (**Menu > Tech ID**).
2. If enabled, press the **ID** button, and enter or scan the patient ID.
3. If enabled, use the circles to toggle through the **Color** and **Clarity** choices. If the analyzer is setup to automatically detect the urine color, the **Color** toggle will not be selectable.
4. Select the **Enter** button. The pushbar will move to the left.



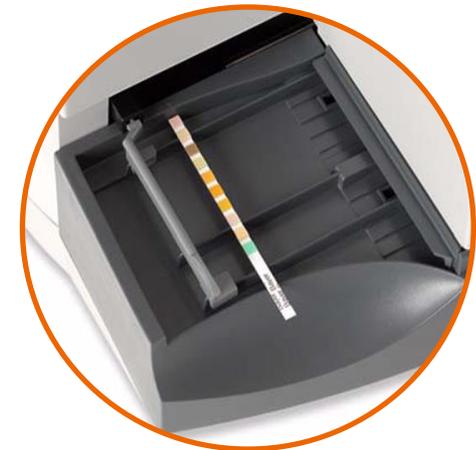
Performing a Urinalysis Strip Test (2/2)

4. Prepare the test strip for analysis

- Completely immerse all reagent pads into the specimen
- Immediately remove the test strip
- Drag the edge of the strip against the tube sample collection tube or container when removing



5. Place the test strip onto the loading station to the right of the pushbar with the reagent pads facing up. Ensure the end of the strip is against the back wall



Performing a Quality Control Test



The CLINITEK Advantus Urine Chemistry Analyzer ensures compliance with flexible QC lockout functionality

- Analyzer can be programmed to lock out users from testing if QC regimen is not followed
- Automatically prompts technicians when QC testing is required



Siemens Chek-Stix Control Strips can be used to verify integrity of results

Preparing Siemens Chek-Stix QC Material:

1. Label two urine tubes **Positive** and **Negative**.
2. Place a positive control strip in the appropriate tube, and a negative control strip in the other tube.
3. Add 12 mL of DI water to each tube.
4. Cap the tubes and invert gently for 2 minutes.
5. Allow the tube to stand for 30 minutes and then invert the tube once more.
6. Uncap the tube and discard the control strip per laboratory procedure.

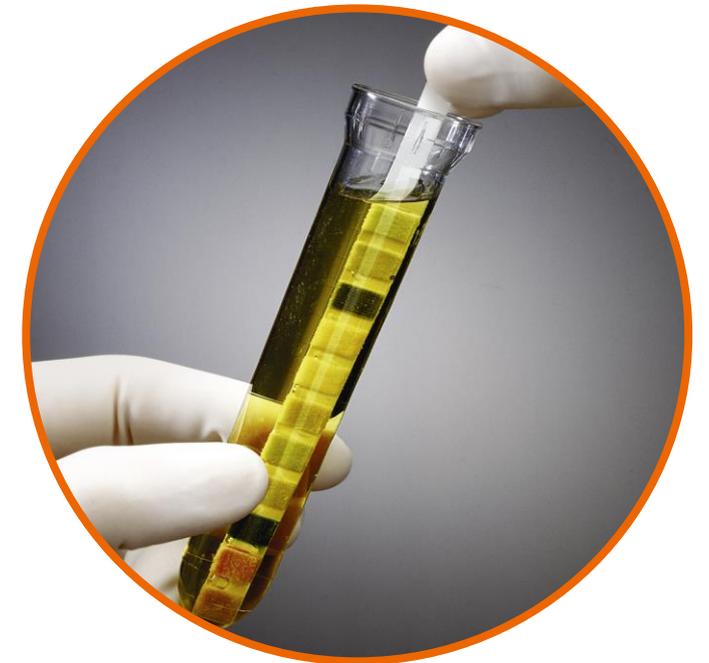


Performing a QC Test

1. Select **Menu** and then **QC**.
2. Enter **QC Lot ID** and select **Enter** to return.
3. Enter the **Expiration Date** and select **Enter**.

Note: QC Lot ID can be entered using a keyboard or scanned from a barcoded label

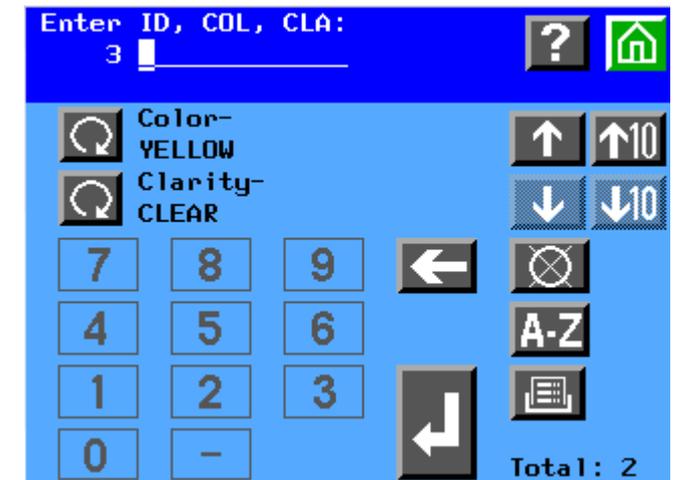
4. Enter the **Expiration Date** and select **Enter**.
5. Prepare the test strip for analysis using the same workflow as a patient sample.
6. Place the test strip onto the loading station to the right of the push bar with the reagent pads facing up, and the end of the strip against the back wall.
7. Repeat for the second level of QC.



Entering a Sample Loadlist

Entering a sample load list from the display, barcode reader, or computer keyboard

1. At the Ready/Run screen, select ID
2. Enter the ID for the first specimen
 - Select A-Z to enter alphabetic characters. You can also enter the ID from a keyboard, or scan from a barcoded label using the handheld barcode reader.
3. If needed, enter or scan the color and clarity
 - Enter initial color and clarity values at the same time as the patient ID. You can edit color and clarity while running the specimens immediately prior to dipping each strip.
4. Select Enter, or scan the Enter code
5. Repeat steps 2 to 4 for each specimen



Receiving a sample load list from a host, LIS, or DMS (1/3)

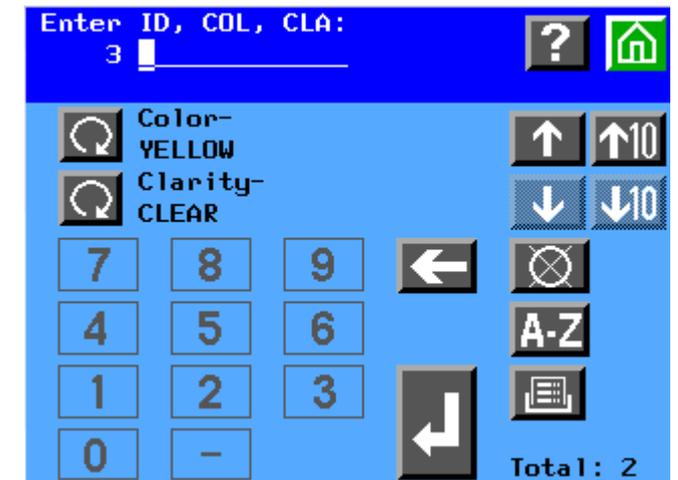
1. Before sending a load list from a host, LIS, or DMS system, ensure that the following conditions are met:
 - The analyzer is at the Ready/Run screen
 - The computer port is set to Ethernet port and is properly configured
 - See the section “Connecting to an LIS or data management system (DMS) via the network port” for assistance with setup
 - The output format is set to CCS. The load list data is only transferred if it is formatted correctly.



Receiving a sample load list from a host, LIS, or DMS (2/3)

2. After the load list is transmitted, the user can review the list, print the list, or add a color and clarity description to an ID

- At the Ready/Run screen, select ID.
- Use up and down arrows to display the ID number. Use the load list order number to locate the proper location.
- If needed, enter or scan the color and clarity.
- Select Enter to accept the new color and clarity.
- Select  to print the ID list.



Receiving a sample load list from a host, LIS, or DMS (3/3)

2. Select Return to Ready/Run to begin testing specimens.
 - Note: You must make changes to the load list before starting testing. To edit remaining IDs in the load list, enter a load list from the analyzer display or a computer keyboard and then cancel the run. Add new IDs when the run is complete.
3. Test each specimen. The Ready/Run screen displays each ID number and the color/clarity descriptions in the same order as they were entered into the load list.
4. Check that the ID number, color, and clarity descriptions are correct for the specimen and edit the color and clarity, if necessary.
5. When the strip for the last load listed specimen is moved to the read area, you are not allowed to place any additional strips on the table. The push bar stays at the right side, and the analyzer completes the run.

After the STAT test, the analyzer will resume testing from the load list

1. At the Ready/Run screen, select STAT.
2. Enter an ID for the STAT test.
3. The SEQ # shown is the next number available after the end of the loadlist.
4. Edit the color and clarity, if necessary.
5. Dip and place a urine strip.
6. The result is printed when the STAT test is complete. The analyzer displays any confirmatory or microscopic flags from the STAT test.
7. Run another STAT test or resume load list testing.



Data Entry

The CLINITEK Advantus handheld barcode reader can be used to input:

- Patient and Tech IDs
- Sample color and clarity (using barcodes from the card that is included with the reader)
- Lot and expiration information

The software in the barcode reader automatically distinguishes between barcode formats.



Barcode Data Entry Supported Formats

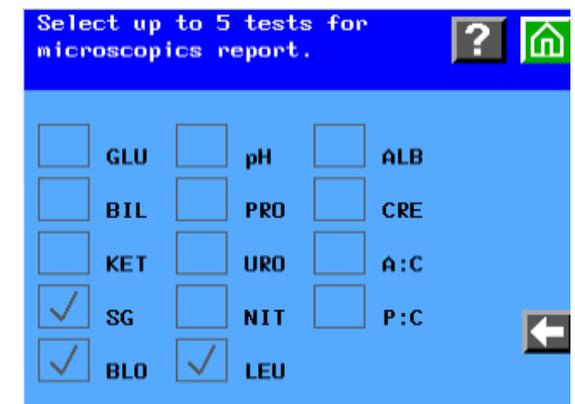
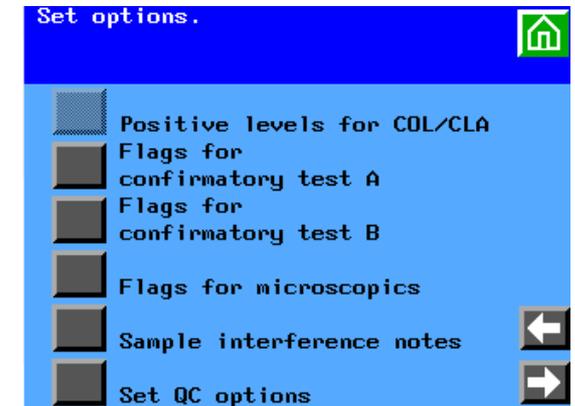
The CLINITEK Advantus barcode reader meets the requirements of ASTM E1466-92 “Standard Specification for Use of Bar Codes on Specimen Tubes in the Clinical Laboratory”

- The barcode reader can read up to 30 data characters, but a maximum of 13 can be displayed, stored or transmitted by the analyzer.
- Excess characters must be removed as leading or trailing characters.



User defined criteria can be used to filter results and identify those samples requiring follow-up microscopy analysis

- Automatically flags samples requiring microscopy analysis based on user defined criteria.
- Provides a printed report of patient samples requiring microscopy follow-up
- Allows the user to manually enter the microscopy results using color touch screen, barcode, or PC keyboard
- Prints or transmits a consolidated patient report with urine test strip and microscopy results.

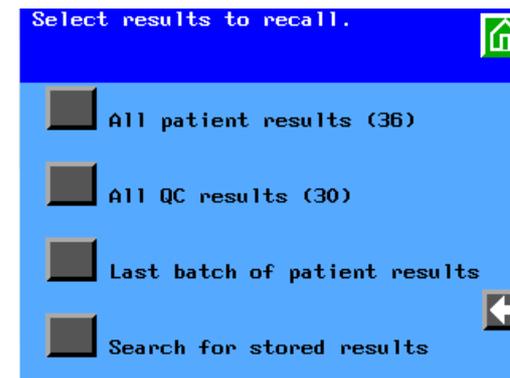


Recalling Patient Results

1. Select **Menu** from the Ready/Run screen, then select **Memory**
2. Select results to recall:
 - **All patient results** – all results will be listed
 - **Last batch of patient results** – patient results between the last pause in testing and latest test
 - **Search for stored results** – search for a specific patient ID.
3. Patient results can be printed, transmitted, and deleted

Recalling Quality Control Results

1. Select **Menu** from the Ready/Run screen, then select **Memory**
2. Select **All QC Results**:
3. QC results can be printed, transmitted, and deleted



Performing Maintenance



Clean the following at least once per day or after running 300 strips, whichever is more frequent:

- Push bar
- Fixed platform
- Urine strip hold down plate
- Moving table

Clean the display screen once a day if it is used to enter ID, color, or clarity during the run

Clean the Exterior and Touchscreen

1. Turn the analyzer power OFF.
2. Clean the exterior of the analyzer using a damp cloth and a mild detergent.
3. Clean the touch screen, with a soft, nonabrasive cloth dampened with a mild glass cleaner.

Note: Do not spray cleaner directly on the screen or use bleach to clean the display.



Remove and Clean the Push bar

1. Tilting slightly upwards, pull the push bar straight out
2. Clean with warm water and a mild detergent
3. Rinse thoroughly and pat dry with a paper towel or soft cloth



Remove the Fixed Platform and Holddown Plate

1. Ensure that the analyzer is OFF
2. Remove the waste bin container and discard the used test strips appropriately
3. Remove the fixed platform by pulling the entire assembly towards you
4. Remove the holddown plate from the fixed platform:
 - Press upwards on the tab at the back of the plate
 - Pull the other end from its retaining hold

Note: the holddown plate must be removed for proper cleaning



Clean the Fixed Platform and Holddown Plate

1. Clean the platform and holddown plate with warm water and mild detergent

Caution: when cleaning the platform, avoid wiping across the 2 white calibration bars. Use a cotton-tipped swab, wetted with plain water, to clean the bars. Cleaning solution can damage the bars

2. If the holddown plate or pushbar is extremely dirty, soak it in warm water and mild detergent to loosen the dried residue
3. Rinse each piece and dry with a paper towel or soft cloth. Allow the calibration bars to air dry.
4. After cleaning, inspect the calibration bars for scratches, marks, or discoloration. If you cannot clean the bars, discard the current platform and replace it with a new one.

Remove and Clean the Moving Table

1. Ensure that the analyzer is OFF
2. Remove the fixed platform (refer to the section *Remove and Clean the Fixed Platform and Holddown Plate*)
3. Pull the moving table toward you
4. Clean the moving table with warm water and a mild detergent
5. Rinse thoroughly and dry with a paper towel or soft cloth. Use care when drying around the pins.



Reinstall the Moving Table

1. Hold the table with the small rectangular tab facing to the back
2. Align the two grooves on the bottom of the moving table with the edges of the platform on which the table rests
3. Gently push the table in until you hear the tab latch into the hold position
4. Check that the table is secure



Reinstall the Holddown Plate

1. Position the holddown plate with the arrow side facing up and the arrow pointing toward the back
2. Place the pin on the front of the holddown plate into the hold at the front of the fixed platform.
3. Align the tab at the back of the holddown plate with the slot at the back of the platform.
4. Snap the holddown plate into place. Listen for a loud click, indicating proper installation.
5. Ensure the white calibration bars are visible.



Reinstall the Fixed Platform and Push Bar

1. Align the two grooves on the bottom of the fixed platform with the arms extending forward from the analyzer

2. Gently push the platform in as far as possible.

Caution: Do not force the platform. You may damage the moving table or fixed platform if incorrectly positioned.

3. Hold the push bar at the indented end

4. With the end slightly upward, insert the peg into the hold in the push mechanism.

5. Lower the push bar into place.



Replacing the Printer Paper (1/3)

1. Press the tab on the back of the printer cover and lift the cover off.
2. Remove the paper roll:
 - Lift up the roll. Tear the paper between the roll and the printer.
 - Remove the core and remaining paper on the roll.
3. Remove any paper remaining in the printer:
 - Locate the printer paper release lever. This lever is colored green and is located on the right of the printer when looking at the front of the analyzer.
 - Push down on the back of the lever to unlock the roller.
 - Pinch and lift the front of the lever to raise the paper guide.
 - Carefully pull paper through the printer in its normal direction of travel.



Replacing the Printer Paper (2/3)

4. Obtain a new paper roll and unroll sufficient paper to feed the printer.
5. Hold the roll just above the printer, with the paper unrolling from underneath. Push the paper gently under the roller at the back of the printer.
6. The printer automatically pulls the paper into the printer and behind the paper guide on the top of the printer.



Replacing the Printer Paper (3/3)

7. If necessary, feed more paper through the printer cover:
 - Carefully pull sufficient paper through the printer to enable you to feed it through the printer cover.
 - Ensure the edges of the paper are aligned with the edges of the printer.
 - Return the printer paper release lever to its locked position by pressing firmly down on the front of the lever.
8. Set the paper into position behind the printer.
9. Place the front tabs of the cover into their slots.
10. Feed the end of the paper through the opening in the cover and snap the cover into place.



Software Upgrades

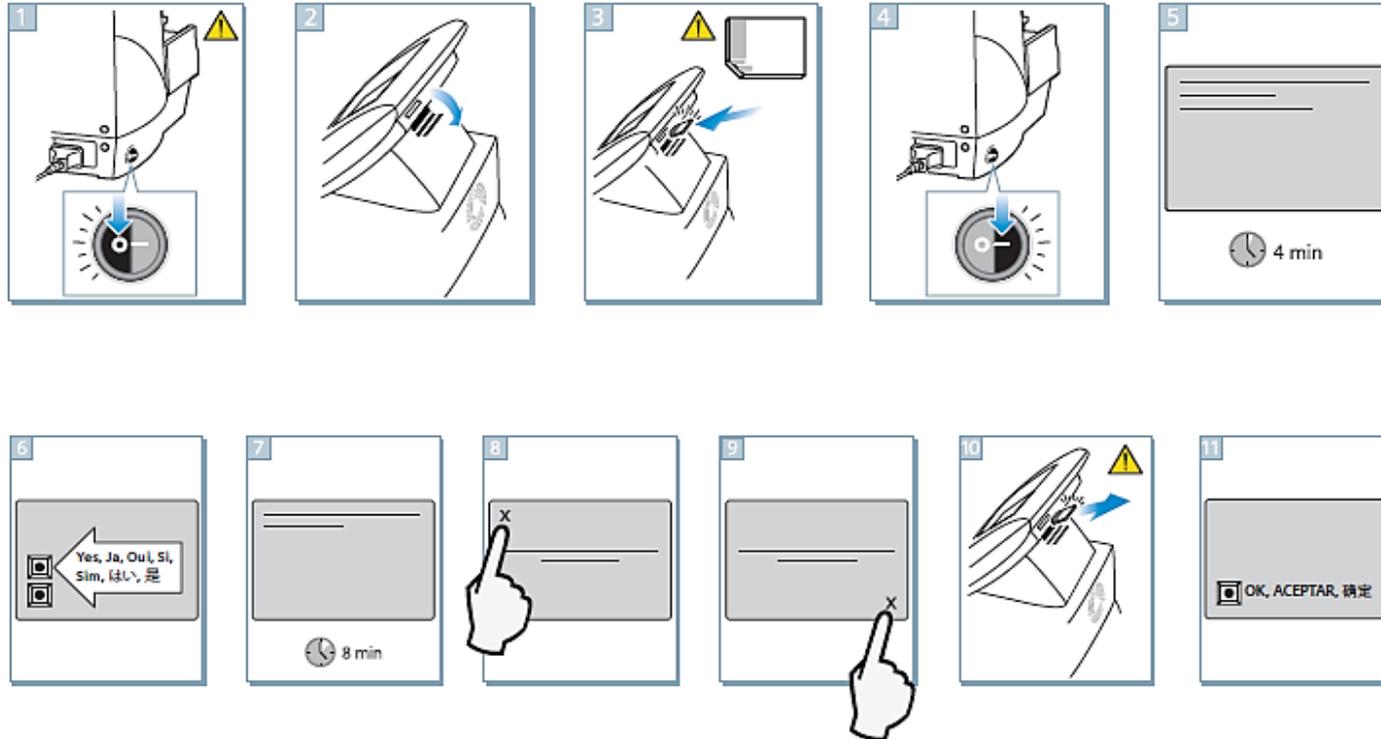


Software Upgrade Instructions

Software Upgrade Instructions

 20 minutes

CLINITEK Advantus[®]
Analyzer



Ordering Information

CLINITEK Advantus® Analyzer and Accessories				
10636672	1420	CLINITEK Advantus Analyzer w/ Bar-code Reader	–	1
10320867	1421	CLINITEK Advantus Bar-code Reader	–	1
10844730	N/A	CLINITEK Advantus Analyzer Software v3.11	–	1
10311542	6472	Waste Bin Liner for CLINITEK Advantus Analyzer	–	5/pk = 1 EA
10311269	5256	CLINITEK® Form Printer Ribbon Cartridge	–	3/pk
10311546	6511	CLINITEK 50 Optional Battery Pack Accessory	–	1

Thank you

Visit siemens-healthineers.us/clinitekadvantus to learn more.

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